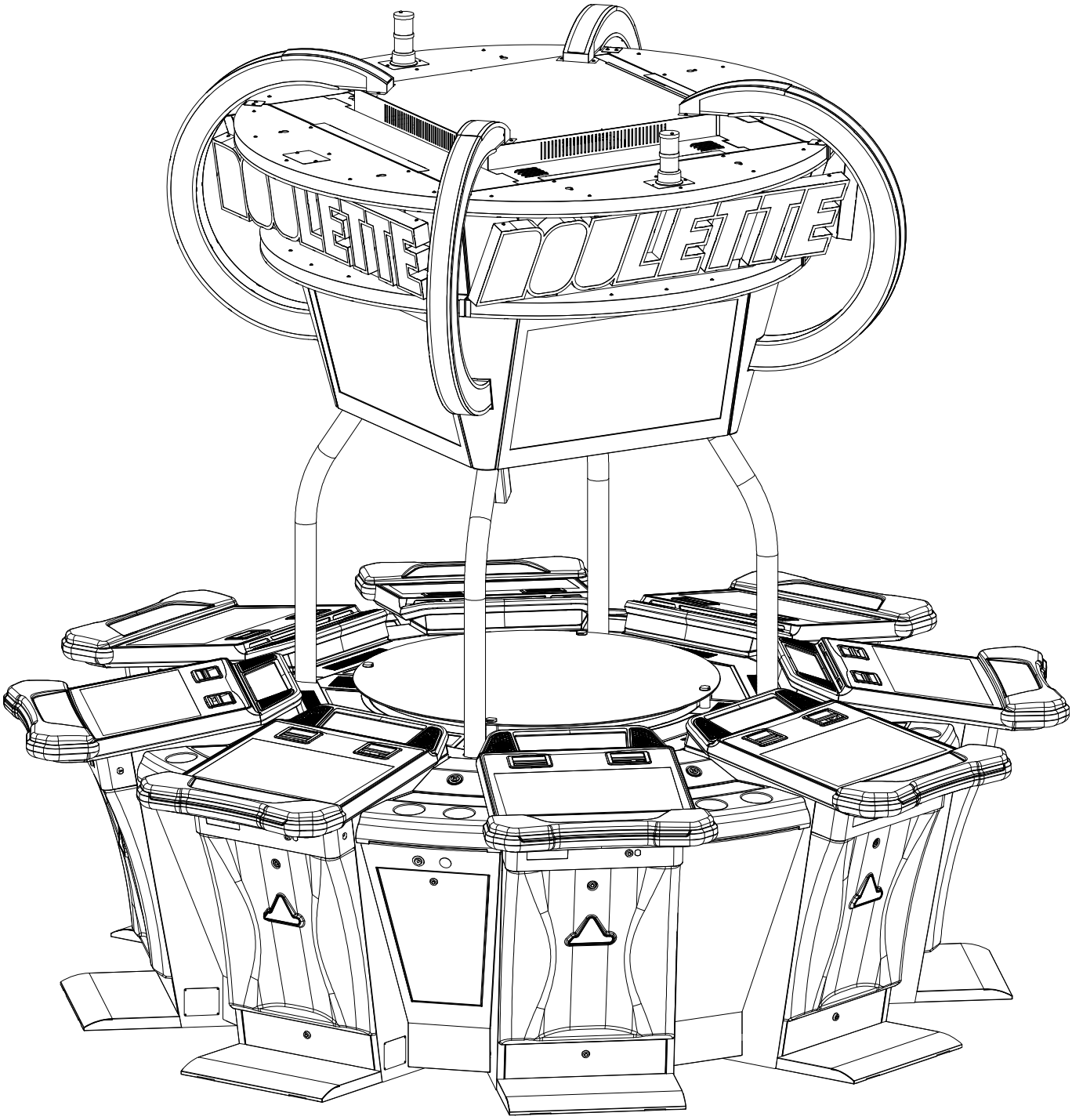
interblock
LUXURY GAMING PRODUCTS

SERVICE MANUAL

ROULETTE XPLOSION



Important notice

ATTENTION!

It is necessary to periodically clean the Wheel Bank, Dice Field etc., according to the prescribed procedure.
It is also strongly recommended to replace the Ball (for Roulette), Clapper (pointer for Big Wheel or Wheel of Wealth) and Dice (for Sic Bo and Craps) if these items are suspected to have developed any abrasions or damage, and to replace these items when their defined usage period has expired.

Furthermore, if abnormal behavior of the machine is observed despite adherence to the prescribed maintenance procedures previously described, please immediately contact the Customer Technical Support or your Sales Representative/Representative Agent. Please notice that failure to adhere to the aforementioned prescribed procedures could result in machine trouble that may not be covered under the conditions of the guarantee.

For any questions regarding maintenance, machine check-up, or the expendable replacement parts, please contact the Customer Technical Support or your Sales Representative/Representative Agent in your area.

重 要 通 知

Wheel Bank、Dice Field 等部件需要按照指定方法定期的进行清理。
除了因为磨损或者损坏进行更换以外，我们也非常建议您在使用了超出规定时间后，定期的更换小球(轮盘)，拍板，骰子(骰寶，花旗骰)等部件。

并且，当进行上述维护步骤时如果游戏机有任何异常时，请迅速与我们的营销人员，服务窗口，供应商取得联系。如果没有按照上述规定的步骤从而引起游戏机发生任何的故障问题，不包含在保修之内。请见谅。

关于本公司游戏机的整备，点检以及消化品的交换，如果您有任何疑问，请联系我们的销售人员，服务窗口或者您所在区域的代理商。

Important notice during operation

ATTENTION!

Please fully understand the statement on this page, otherwise serious financial loss could be caused to the casino.

Please be aware that **a critical problem has occurred in the basic function of the machine and there is a high possibility that the problem could potentially cause serious financial loss to the casino** even if one of the following errors occurs only once.

CALL SERVICE IMMEDIATERY!

Immediately turn off the machine and please contact the Customer Technical Support or your nearest distributor even if one of the following errors occurs only once.
All the errors are the result of monitoring by important machine control functions and are indicating that a critical problem has occurred on the machine.

Error messages: Power OFF. **CALL SERVICE IMMEDIATELY!**	
GAME INIT ERROR	ZERO SENSOR DETECT ERROR
BALL START ERROR	ZERO SENSOR ERROR
BALL FALL ERROR	AROUND SENSOR ERROR
COMPRESSOR ERROR	ENCODER COUNT ERROR
BALL COUNT ERROR	POCKET SHUFFLE ERROR
MOTOR ERROR	WHEEL DIRECTION ERROR
POSITION SENSOR ERROR (REF0130)	WHEEL ORIGIN DETECT ERROR
POSITION SENSOR ERROR (REF0430)	
POSITION SENSOR ERROR (REF0730)	
POSITION SENSOR ERROR (REF1030)	


interblock
LUXURY GAMING PRODUCTS

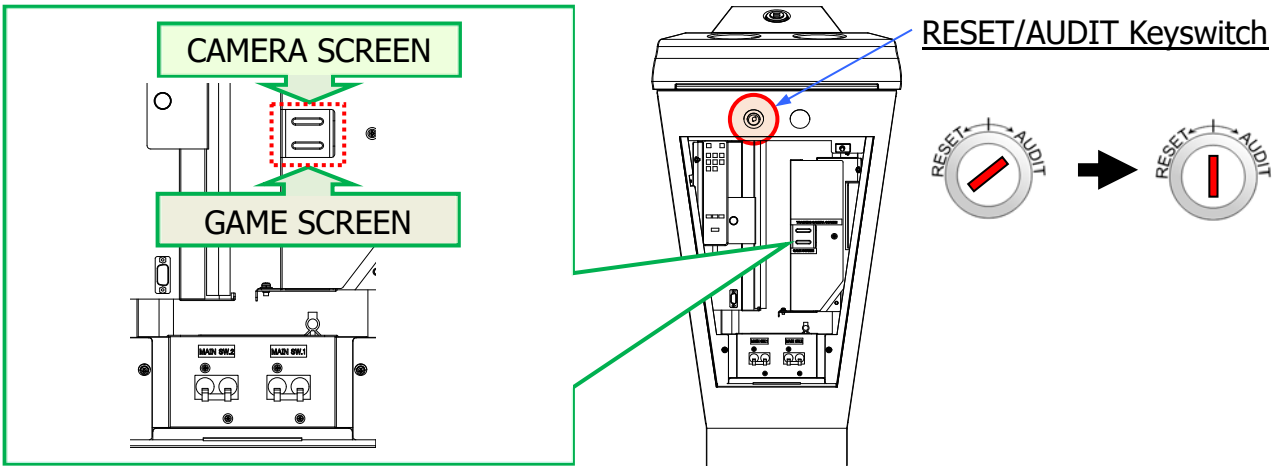
Safe Power OFF

NOTE:
Automatically turns POWER OFF the machine after all the data is correctly saved (Standby shutdown) just by an AUDIT operation, without using the Power Switch. **(Refer to 4.12 or 5.12)**

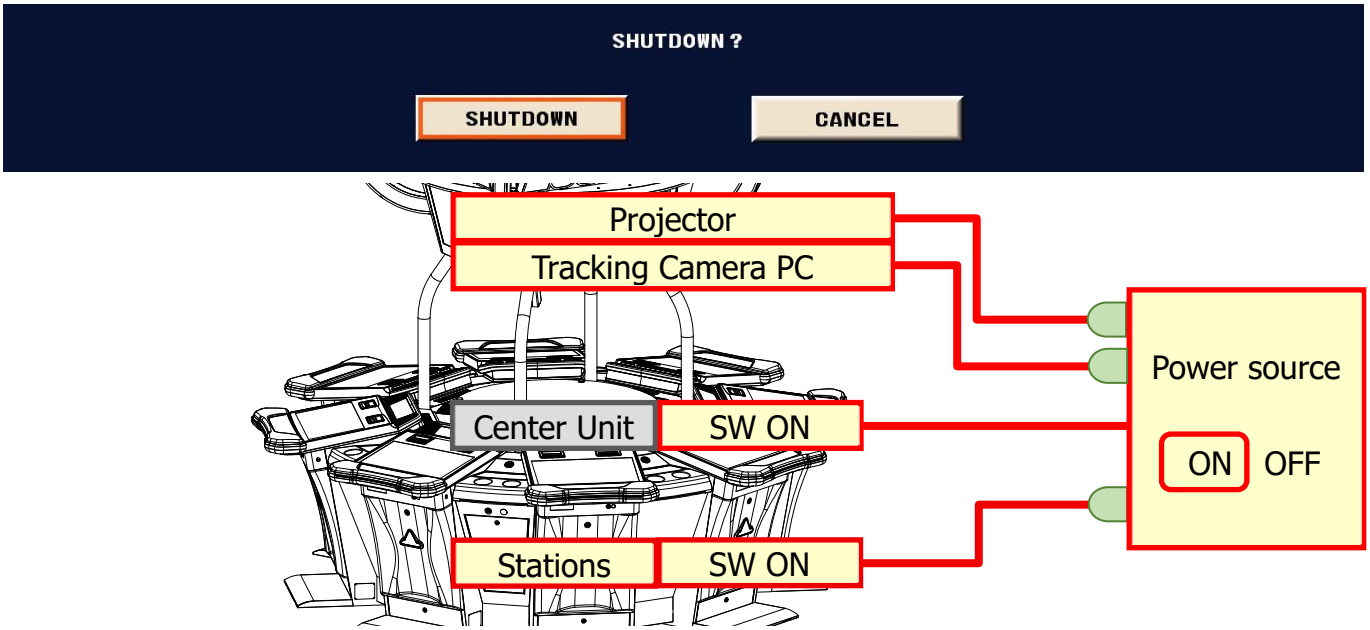
A. Turn off the Center Unit

[From the operating state]

1. Remove the Control Spacer Door, then press the [GAME SCREEN] button of the PC Changer. Turn the RESET/AUDIT Key Switch to AUDIT and then return it to neutral to enter AUDIT mode.



2. Select TOP MENU>SHUTDOWN, then press the [SHUTDOWN] Button displayed on the screen to put on standby shutdown the Center Unit.



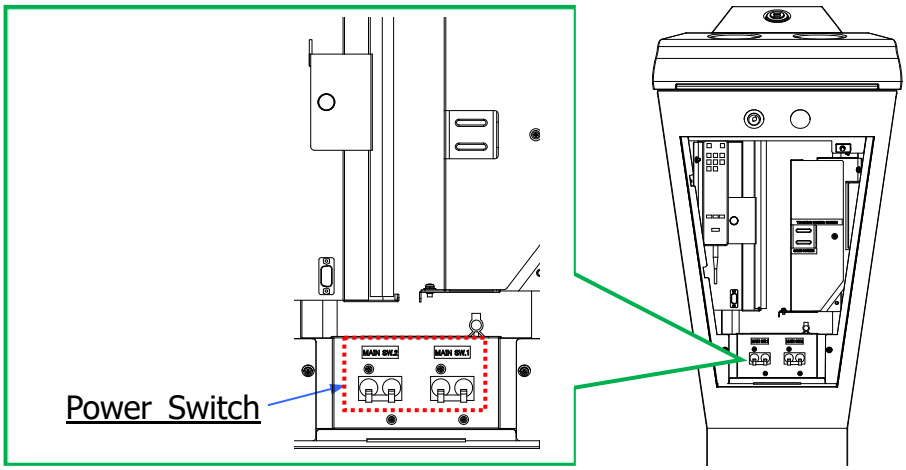
NOTE:

[For immediate reboot after the standby shutdown]

Turn OFF and ON the Power Switch of the Center Unit. Then, close all the doors that were opened.

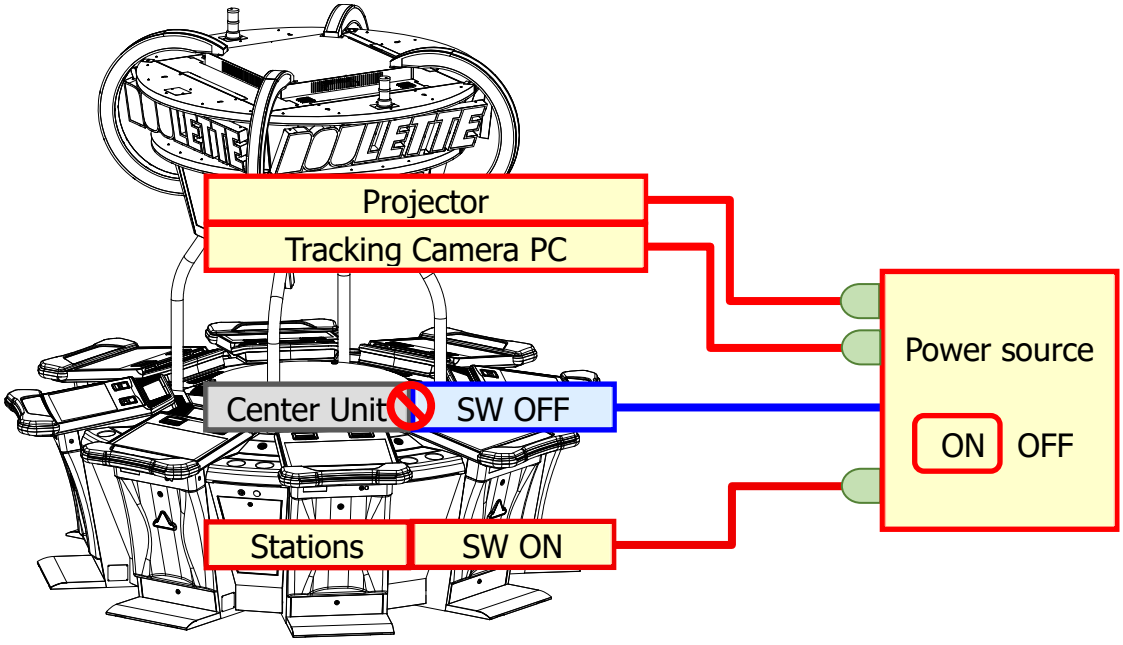
・When doing "Power OFF-ON" wait at least 15 seconds before power On.

・Do not turn ON the 2 Power switches at the same time. Doing so can result in a start-up error of the machine.



[For complete shutdown after the Standby shutdown] NOT standby shutdown

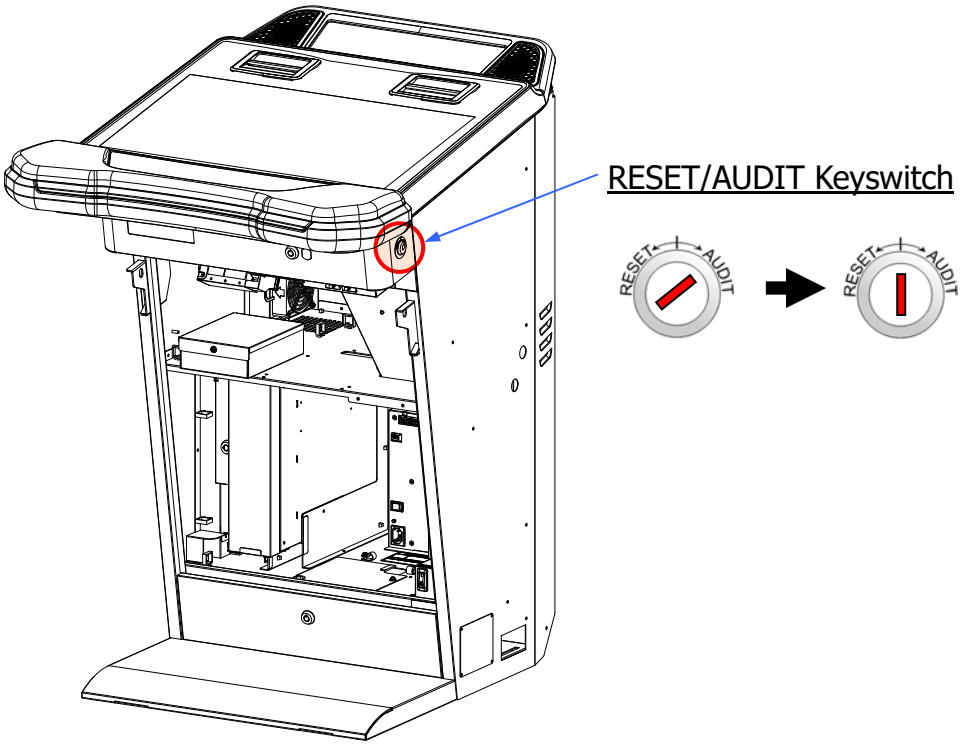
Turn OFF the Power Switch of the Center Unit.



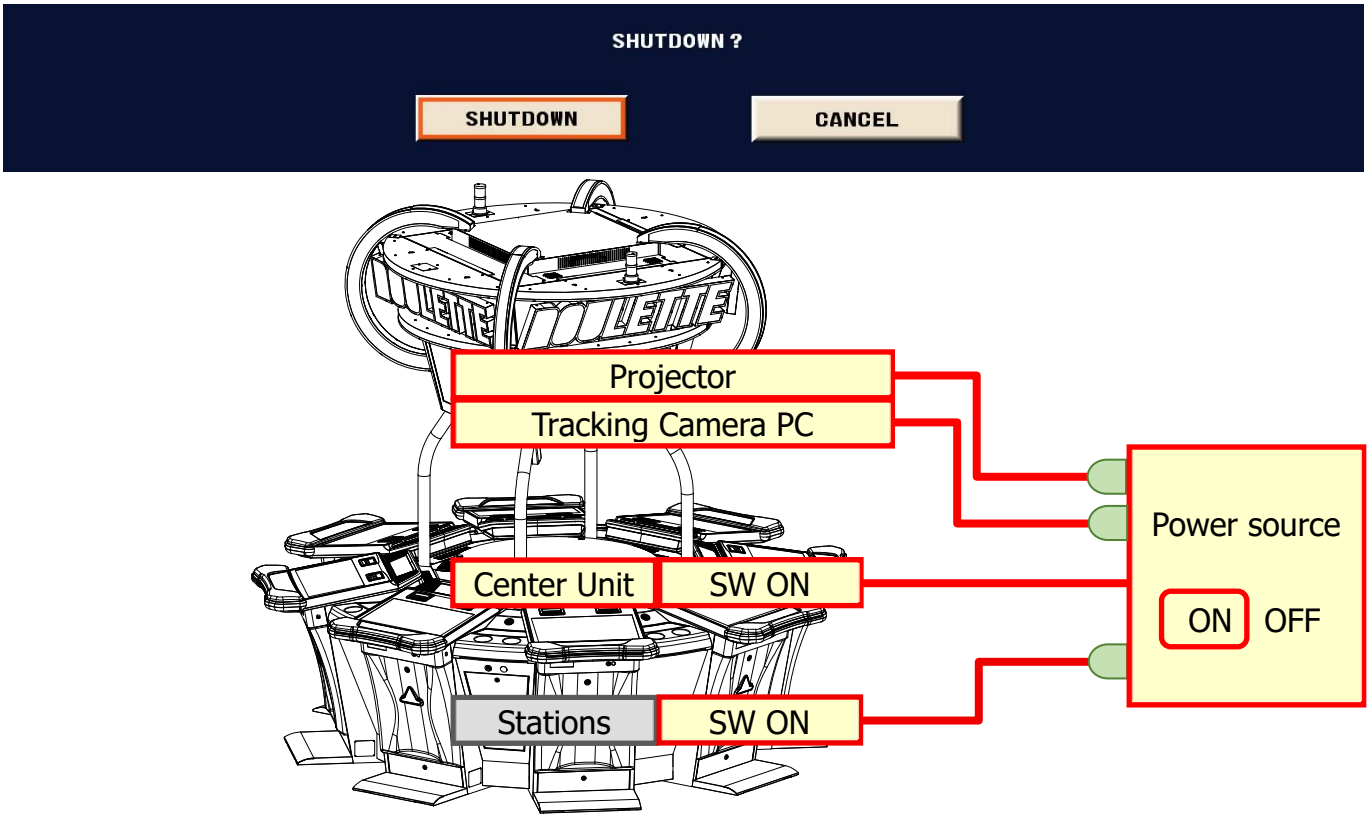
B. Turn off the Station

[From the operating state]

1. Remove the Front Door of the Station. Turn the RESET/AUDIT Key Switch to AUDIT and then return it to neutral to enter AUDIT mode.



2. Select TOP MENU>SHUTDOWN, then press the [SHUTDOWN] Button displayed on the screen to put on standby shutdown the Station.

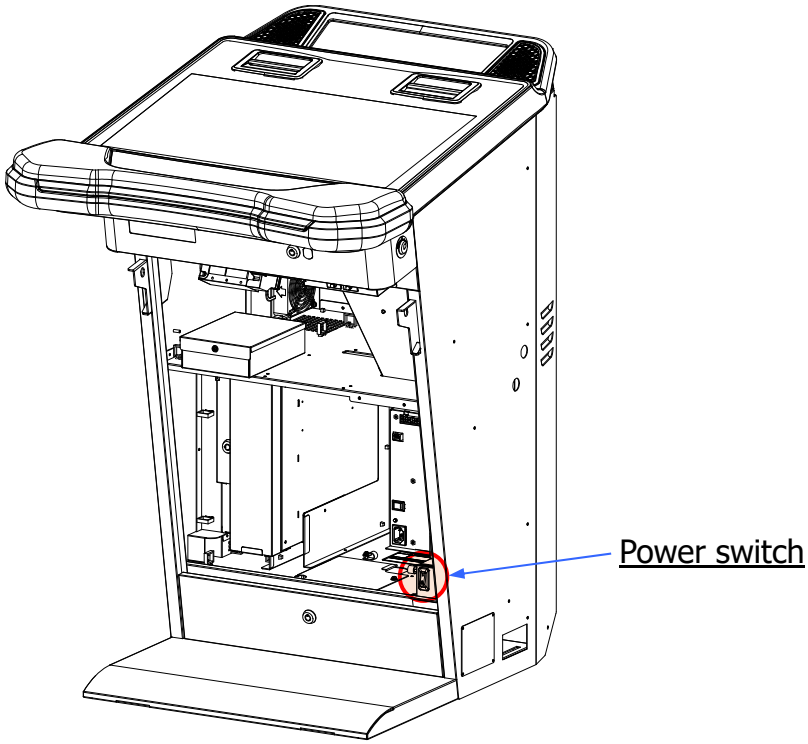


NOTE:

[For immediate reboot after the standby shutdown]

Turn OFF and ON the Power Switch of the Station. Then, close all the doors that were opened.

・When doing "Power OFF-ON" wait at least 15 seconds before power On.



[For complete shutdown after the Standby shutdown] NOT standby shutdown

Turn OFF the Power Switch of the Station.

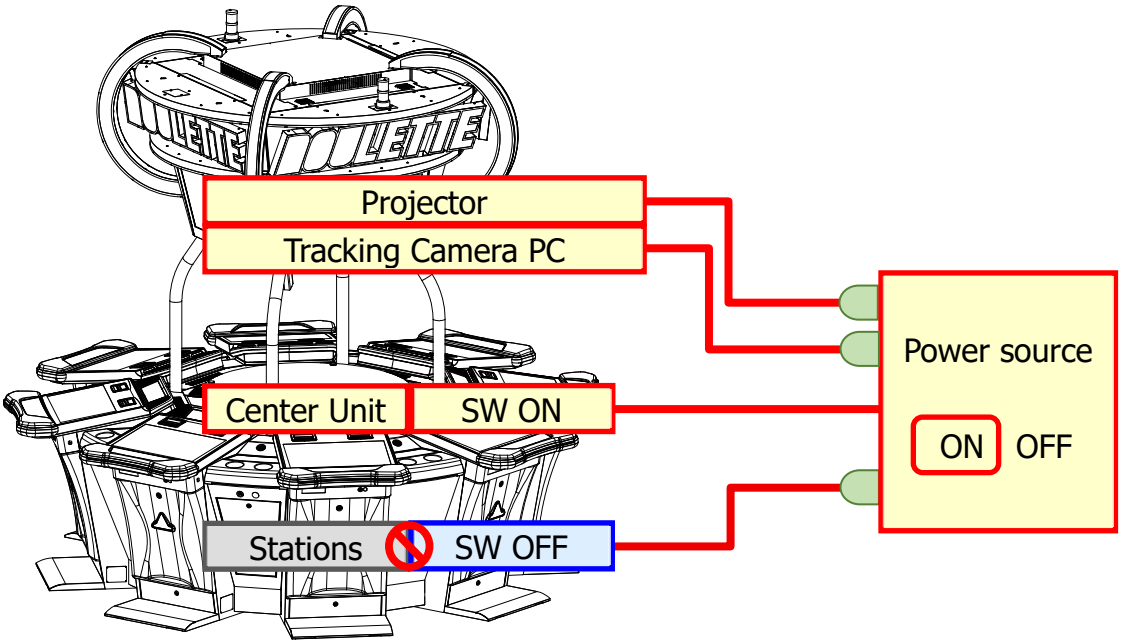


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Roulette Xplosion Projector Update Instructionsl 1
Projector User's Manual 1

Block Diagram and Wiring Diagram

General Information

Introduction

This manual is intended to provide information regarding machine operation for operators, owners, and qualified maintenance/service personnel.
It is strongly recommended that this manual be read thoroughly before starting up the machine. Please keep this manual at hand to be used whenever necessary.

Technical Support

INTERBLOCK Luxury Gaming Products d.d., INTERBLOCK ASIA PACIFIC Pty Ltd, INTERBLOCK CASINO PRODUCTS CANADA Inc., INTERBLOCK ASIA PACIFIC Pty Ltd, INTERBLOCK USA L.C. are all dedicated to providing high quality service and maintenance. Please feel free to contact your local distributor office at any time. (See back page for contact listings)

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This manual may be subject to change without prior notice.

Safety Instructions

Definition of Safety Vocabulary

The words DANGER, WARNING, and CAUTION are used in this manual to indicate hazard levels.

DANGER!

The DANGER mark warns of immediate hazards, which WILL result in severe personnel injury or death.

WARNING!

The WARNING mark warns of immediate hazards, which may result in severe personnel injury or death.

CAUTION!

The CAUTION mark warns of hazards or unsafe practices, which may result in minor personnel injury or product/property damage.

CALL SERVICE IMMEDIATERY!

This message implies that the operator is recommended to contact the Customer Technical Support. (See back page for contact listings.)

NOTE:

The NOTE mark brings to attention important operation points.

Installation

WARNING!

To prevent an accident or a fire;

- ◇ Install the machine on flat, stable, well-constructed floor.
- ◇ Keep the machine away from direct sunlight.
- ◇ Keep the machine away from dust.
- ◇ Keep the machine away from water and other liquids.
- ◇ Do not install the machine outdoors.
- ◇ Keep the machine away from vibration.
- ◇ Keep the machine away from dangerous articles.
- ◇ Keep the machine away from disaster prevention facilities. (e.g. emergency exits/stairs, fire hydrants, fire extinguishers)
- ◇ **If the Projector is installed, please use the machine in an ambient with a temperature below 30℃. If the ambient temperature exceeds 30℃, the security function of the Projector may put it into a light off status.**

Replacement of Lithium Batteries

CAUTION!

Risk of Explosion.

When exchanging the lithium batteries, use an officially provided lithium battery.

Risk of Explosion if lithium battery is Replaced by an Incorrect type.

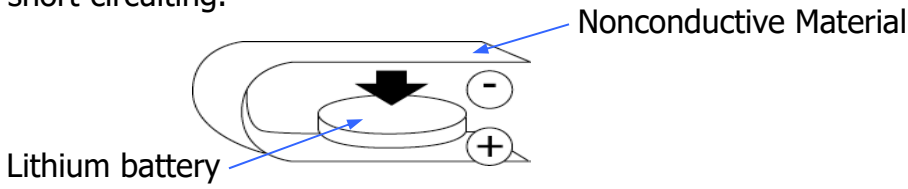
Disposal of Lithium Batteries

WARNING!

Risk of Injury or Fire.

Proper care is necessary with the disposal of lithium batteries. Improper disposal may result in the heating or ignition of the batteries, which may cause personal injury or fire. CR Coin Lithium Batteries contain Perchlorate material – special handling may apply.

Lithium batteries contain flammable substances (e.g. lithium metal and organic solvents). Electric power may remain in used batteries. Wrap the + and – electrodes with nonconductive material to prevent short-circuiting.



Environmental Specifications

Refer to **"Machine Specifications"**.

Grounding

The machine must be grounded to prevent current leakage.

WARNING!

Risk of Electric Shock. The warranty is not valid for accidents (including failures) caused by improper grounding.

Others

WARNING!

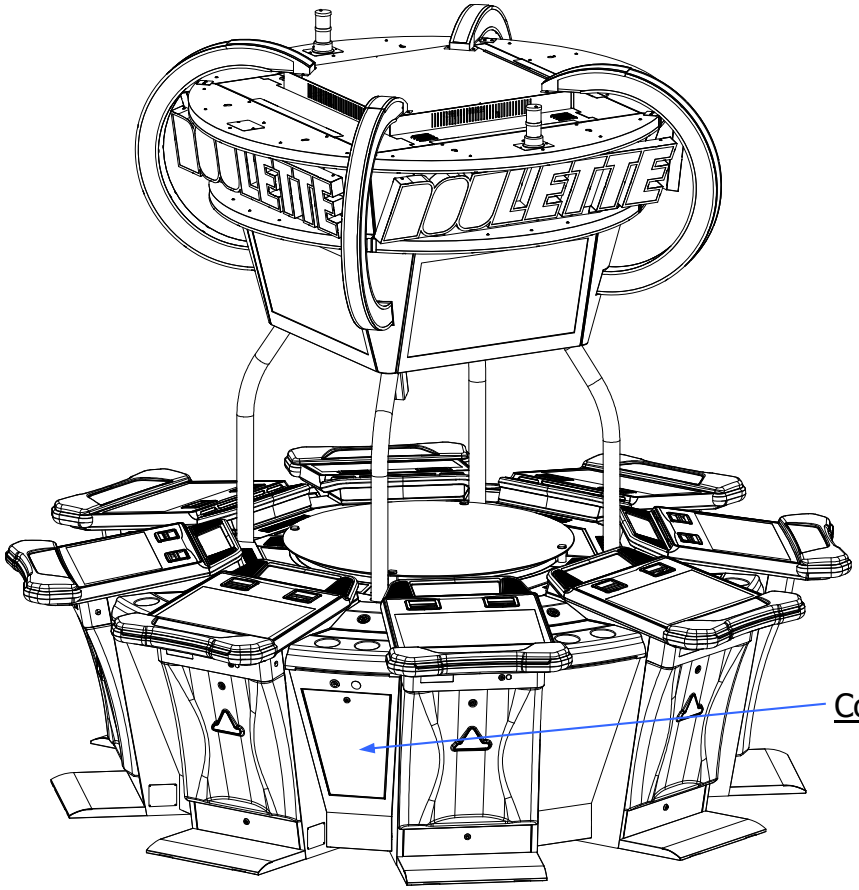
The machine should never be modified in any way.
Modification may cause accident or failure.
The warranty is not valid for accidents (including failures) caused by modification.

- ◇ Only qualified personnel shall assemble, install, maintain, inspect, and/or enact any troubleshooting measures to the machine.
- ◇ Do not sit, stand or put heavy objects on the machine. A dented machine may cause malfunctioning.
- ◇ When smoke and/or an unknown malfunction is detected, immediately turn off the power switches and then turn off the power source breakers in that order.
- ◇ Before servicing the machine, turn off the power switches to prevent electricity-related accidents and hazards.
- ◇ Never use chemical dusters, paint thinner, benzine, alcohol, or synthetic detergent for cleaning the machine. Damage may be caused to the machine surface.
- ◇ Electrostatic discharges may damage the internal components of the machine. Anti-static measures (e.g. touching a metal door knob, use of non-static gloves) are necessary when accessing the inside of the cabinet.
- ◇ This machine is for use in commercial areas. Use in residential areas is prohibited.

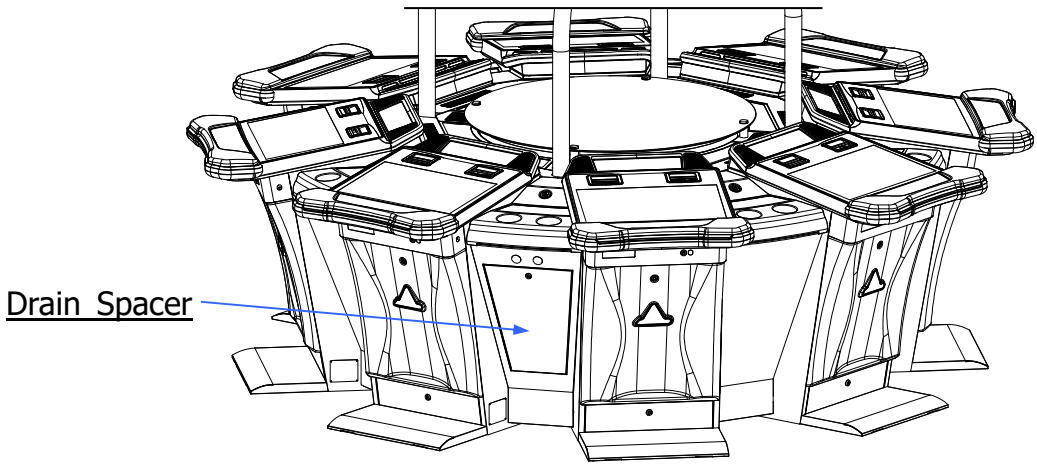
Chapter 1

Major Components

1. 1: Appearance of Whole Machine

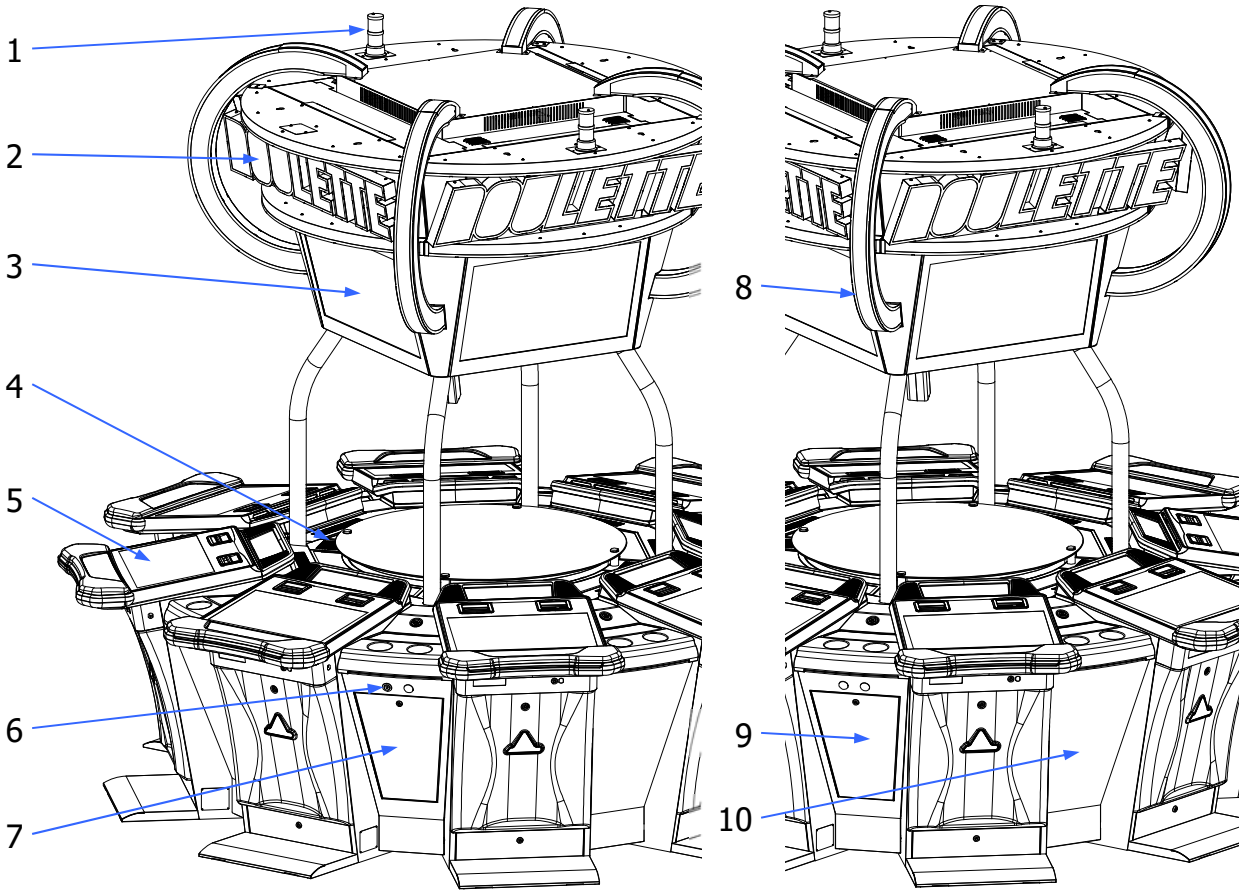


(Control Spacer side)



(Drain Spacer side)

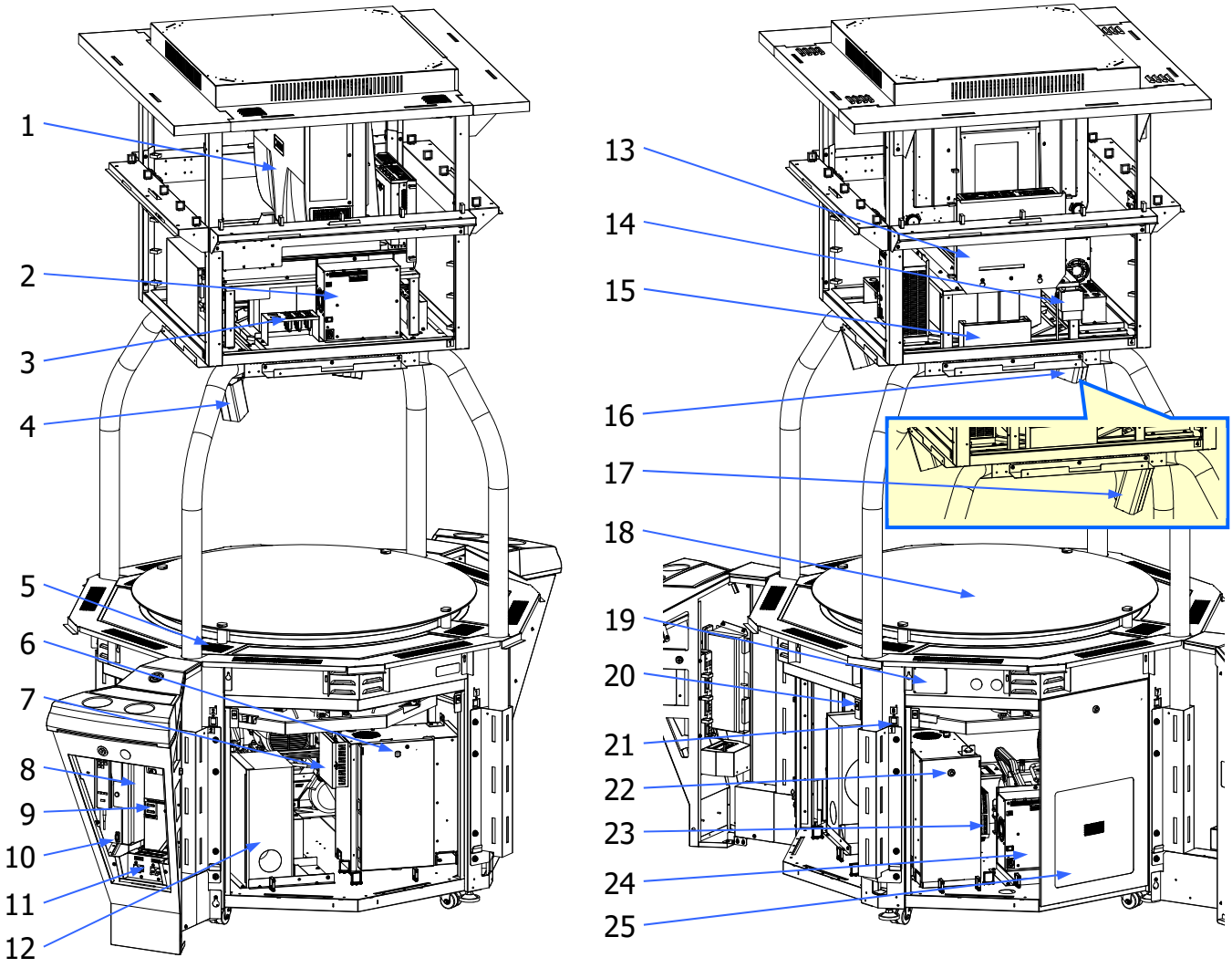
1. 2: Outside View of Center Unit



(Control Spacer side) **(Drain Spacer side)**

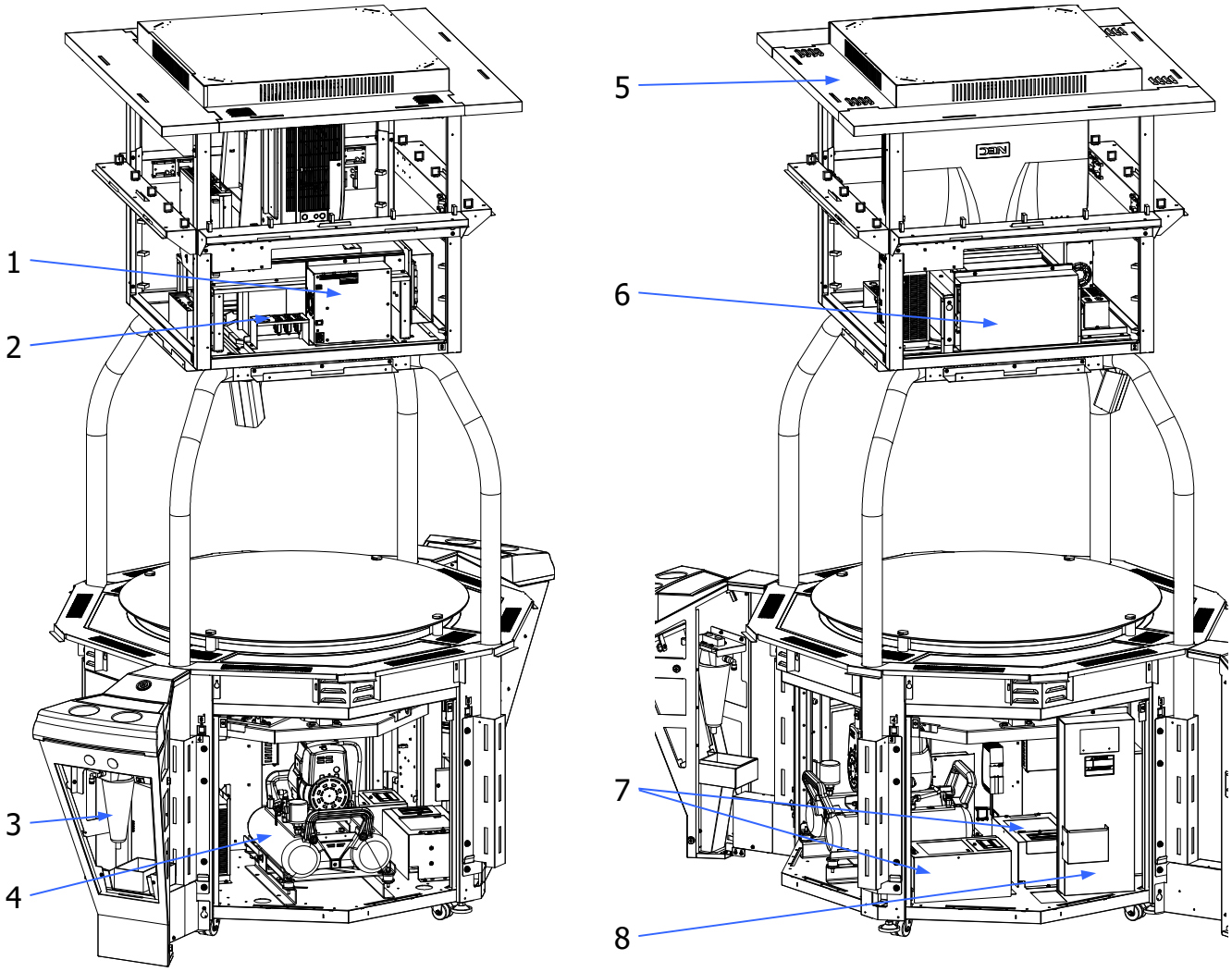
1. Tower Light(Option)
2. Top Sign Unit
3. LCD Unit
4. Center Unit
5. Station
6. RESET/AUDIT Keyswitch
7. Control Spacer Door
8. Ring Unit
9. Drain Spacer Door
10. Spacer Unit

1. 3: Inside View of Center Un it



(Control Spacer side View)

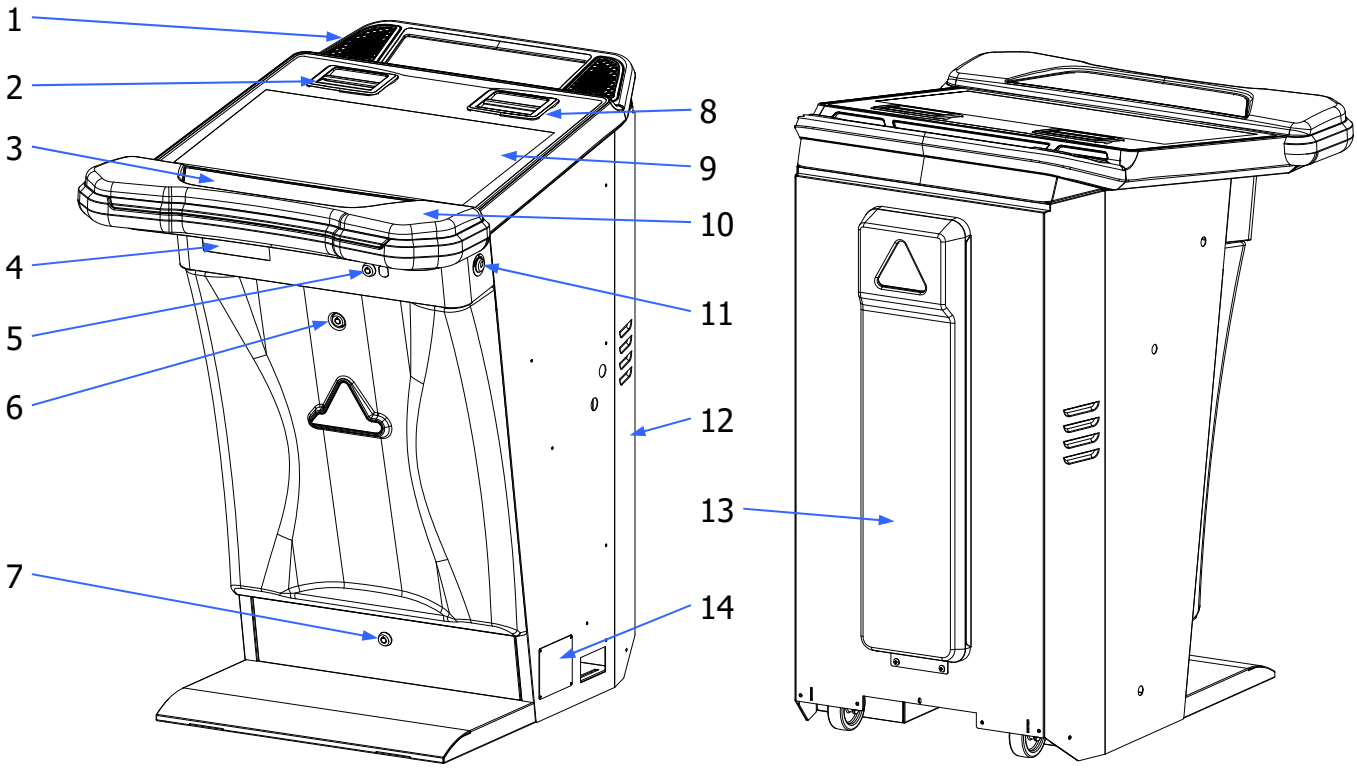
1. Projector
2. Power Box A
3. Breakers
4. Tracking Camera
5. Speakers
6. IO Case Unit
7. AMP Case
8. Keyboard / Remote Commander
9. PC Changer
10. GAT3(D SUB) Connector(Option)
11. Power Switch(MAIN SW 1, MAIN SW 2)
12. Woofer Speaker
13. Tracking Camera PC Unit
14. TINKER Unit(for HBVCAM-F2028HD-V11)
15. DVI Splitter
16. Live Camera (HBVCAM-F2028HD-V11)
17. Live Camera (HD-NDI-200)
18. Wheel Unit
19. Serial Plate
20. Center Door Switches
21. LAN Ports
22. Security Cage Door Lock
23. Switching Hub
24. Main Power Unit
25. Center Unit Doors



(Drain Spacer side view)

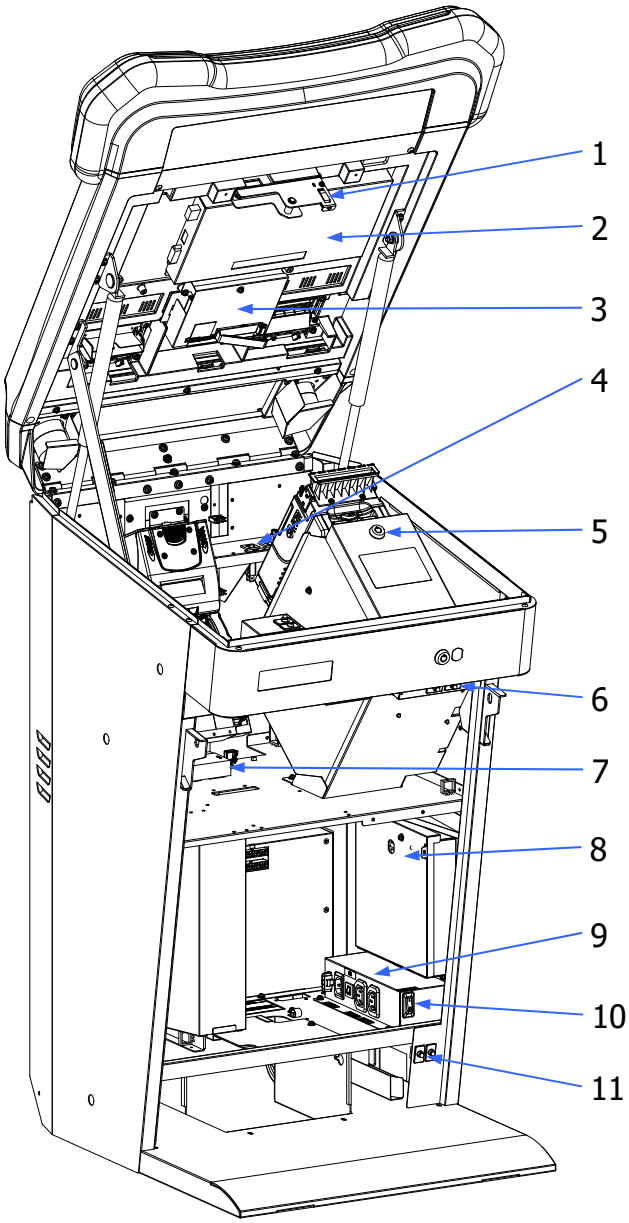
1. Power Box B
2. Breakers
3. Separator Filter Unit
4. Air Compressor Unit
5. Top Base Unit
6. Top PCB Box
7. Transformer Box
8. Switch Board Unit

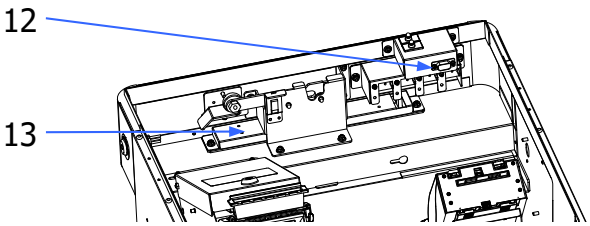
1. 4: Outside View of Station

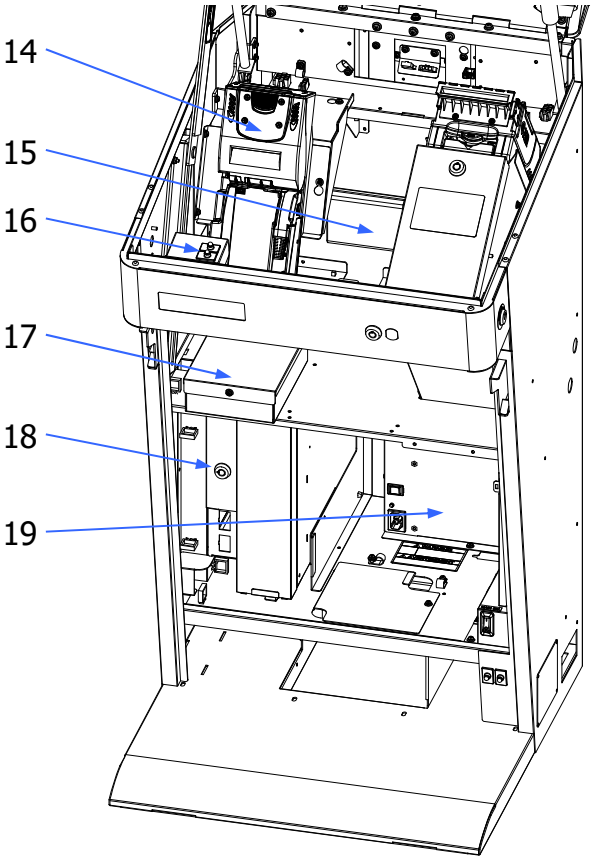


1. Speakers
2. Printer Chute
3. Control Panel
4. Mechanical Meters(Counter)
   :Used only in the regions that use the mechanical meters.
5. Top Door Lock
6. Front Door Lock
7. Bottom Door Lock
8. BILL Chute
9. Top Door
10. Arm Rest(Pad)
11. RESET/AUDIT Key Switch
12. Cabinet
13. Back LED(Option)
14. Serial Plate

1. 5: Inside View of Station







1. Top Door Sensor
2. LCD Monitor
3. Touch Screen PCB
4. Breakers
5. BILL Case(BV CASE) Door Lock
6. Front Door Switch and Sensor
7. DDC/EDID Emulator
8. IO Case
9. Plug-in Unit(AC Base)
10. Power Switch
11. Bottom Door Switch
12. GAT3(D SUB) Connector(Option)
13. Front LED
14. Ticket Printer
15. Audio Module PCB
16. Top Door Switch
17. SUB IO Case(Option)
18. Security Cage Front Cover Lock
19. Power Supply

Chapter 2

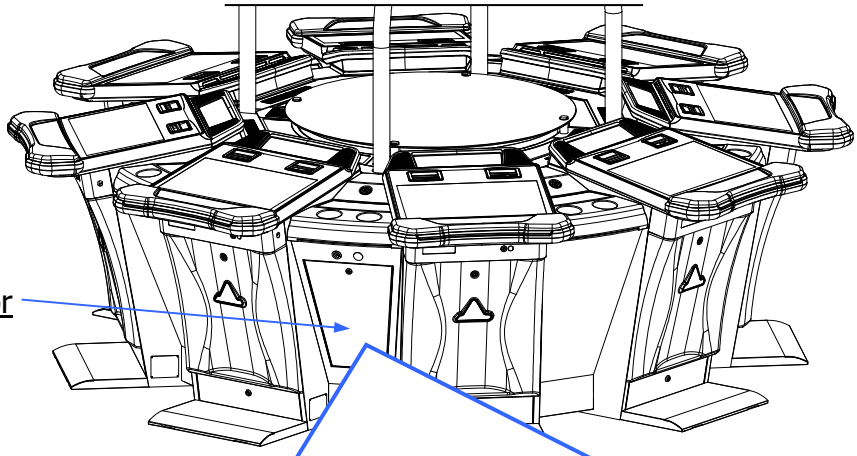
Hardware Instruction for Center Unit

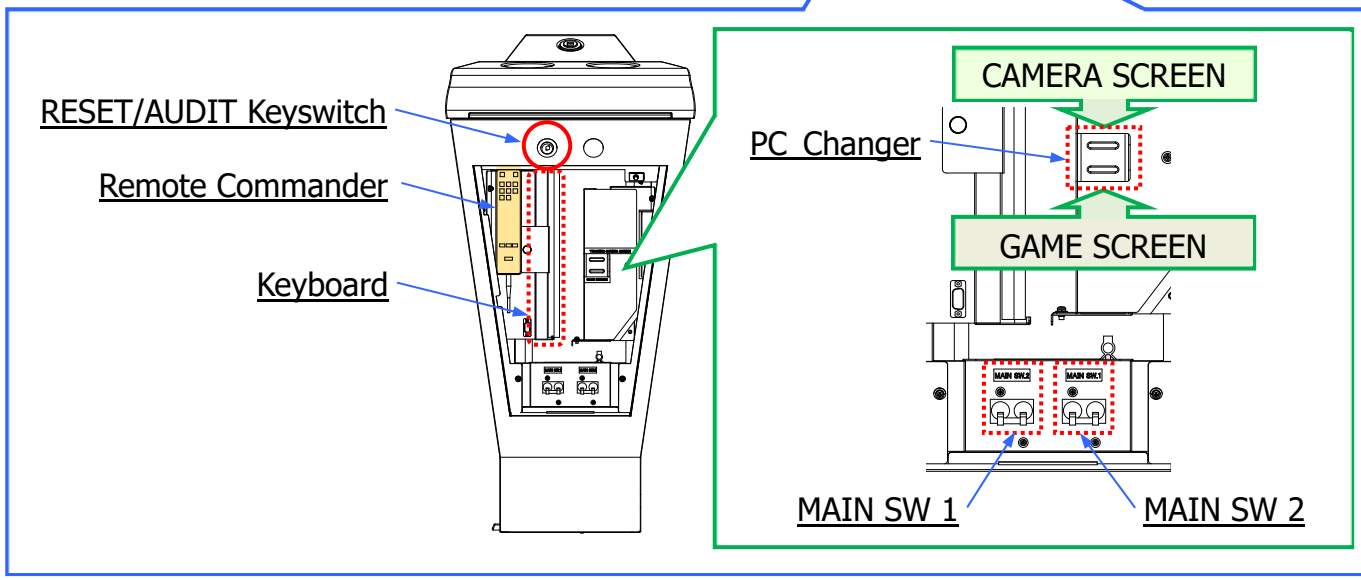
2. 1: Opening Doors of the Center Unit

NOTE:
Refer **"Disassembly"** at Chapter 6 for the location of the Door Switch of each section.

- How to Open the Control Spacer Door-

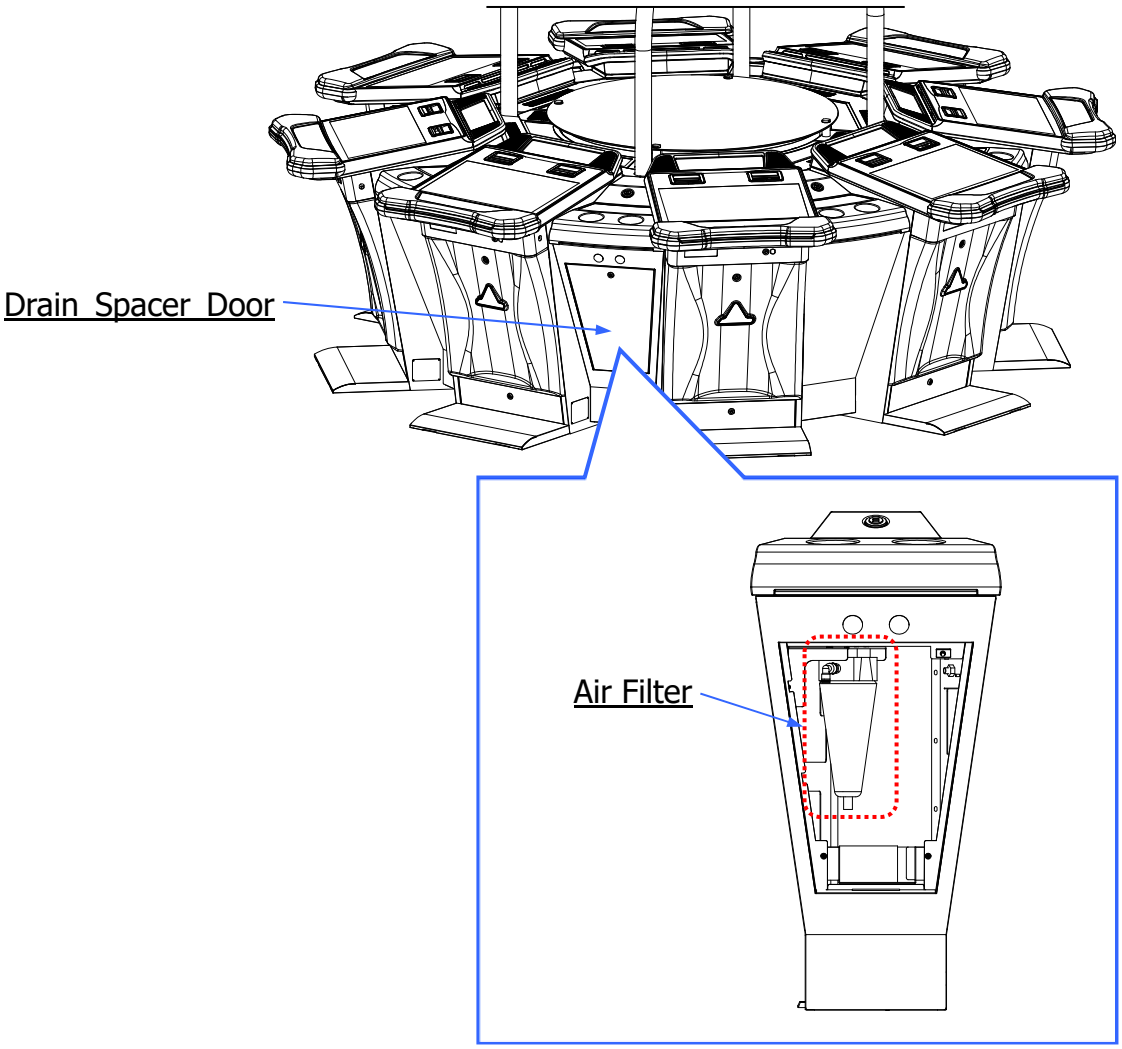
Unlock and remove the Control Spacer Door.





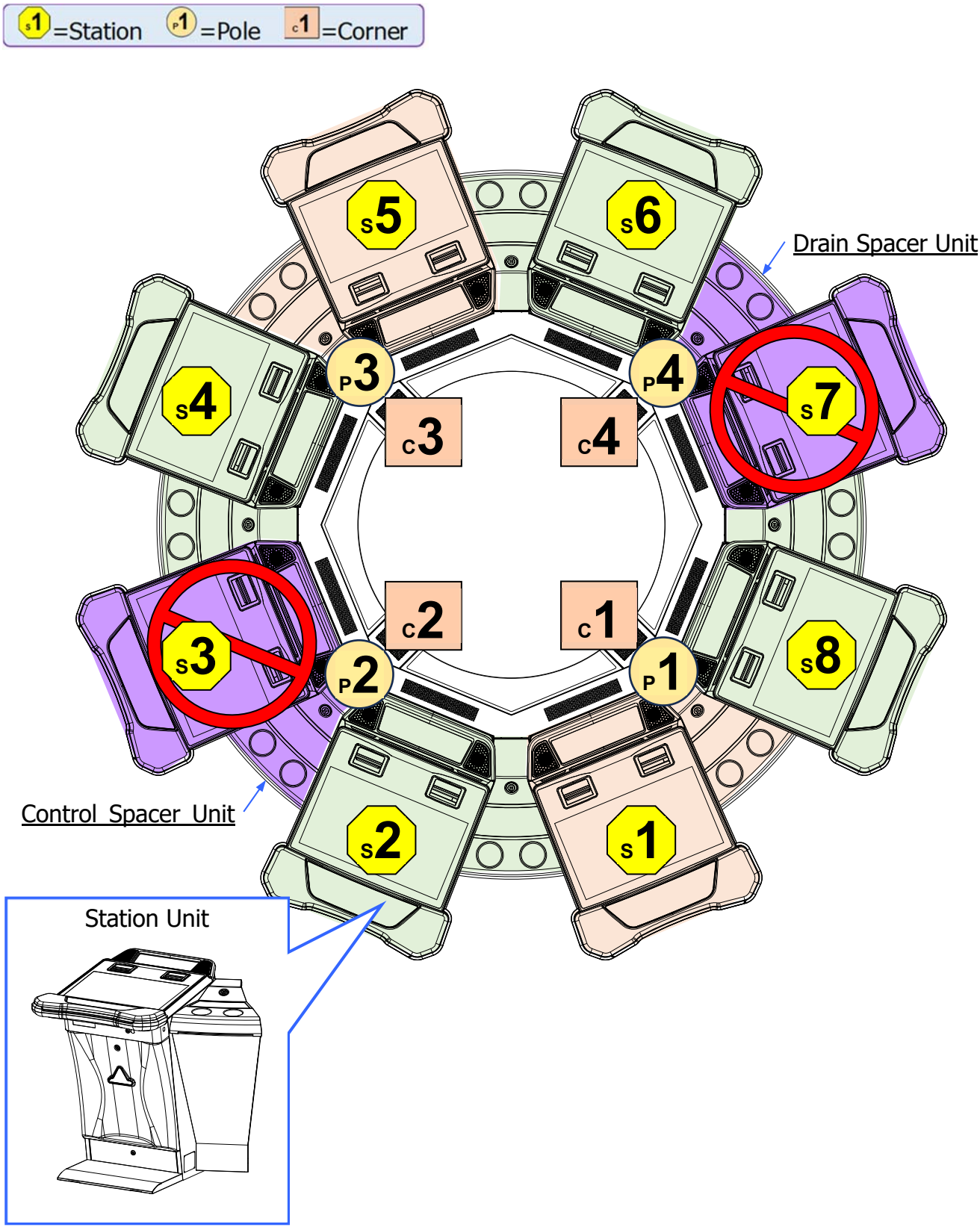
- How to Open the Drain Spacer Door-

Unlock and remove the Drain Spacer Door.



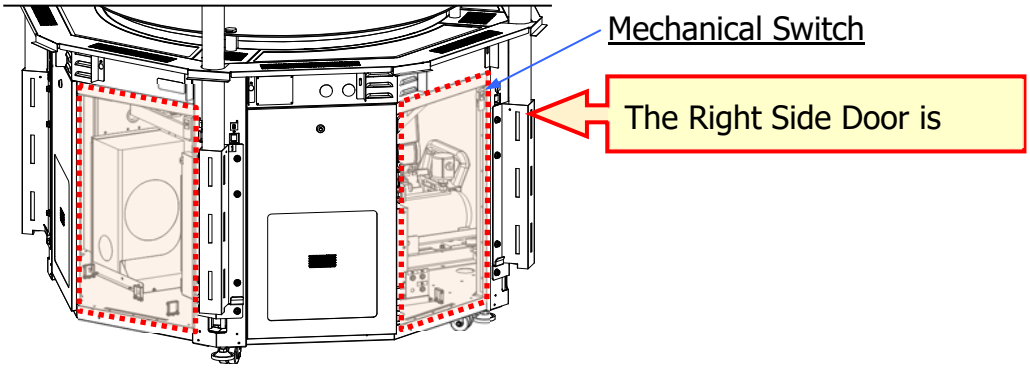
- How to Open the Center Unit Doors -

1. Refer to "**Disassembly**" on Chapter 6, to detach the Station Units from the Center Unit.



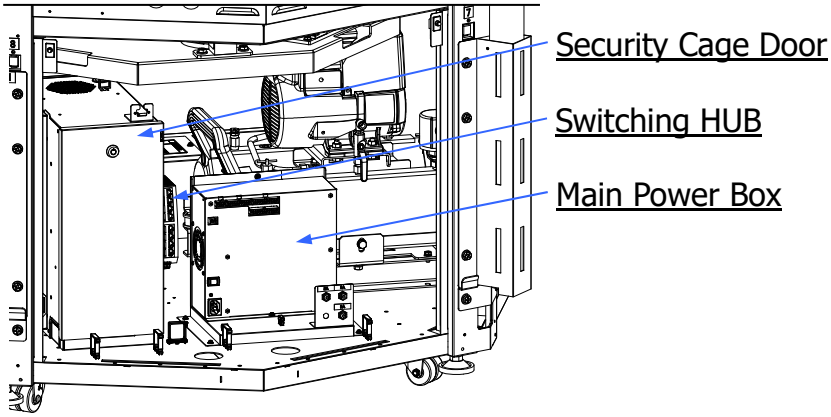
2. Unlock and remove the Doors of the Center Unit.

> **NOTE:**
> Remove first the door on the right side, and then the one on the left side.



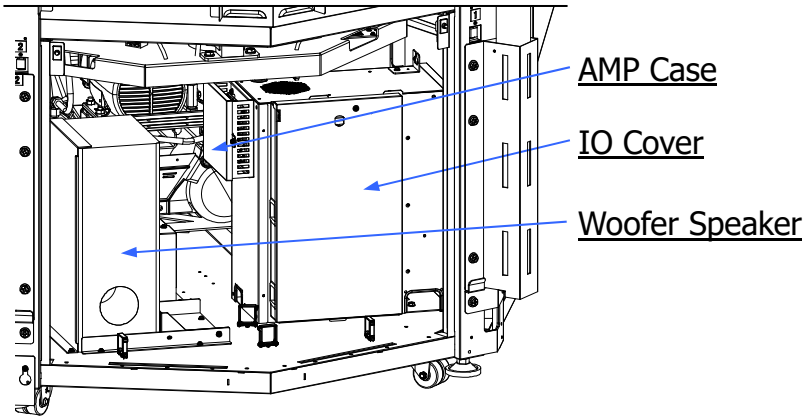
- How to Open the Security Cage Door –

Refer to **"Accessing the Security Cage, the Switching HUB, the Main Power Box and the Drive PCB"** at Chapter 6



- How to Open the IO Cover and AMP Case –

Refer to **"Accessing the IO Case, the AMP Case and the Woofer Speaker"** at Chapter 6



2. 2: Dimensions

2. 2. 1: Whole Machine Dimension

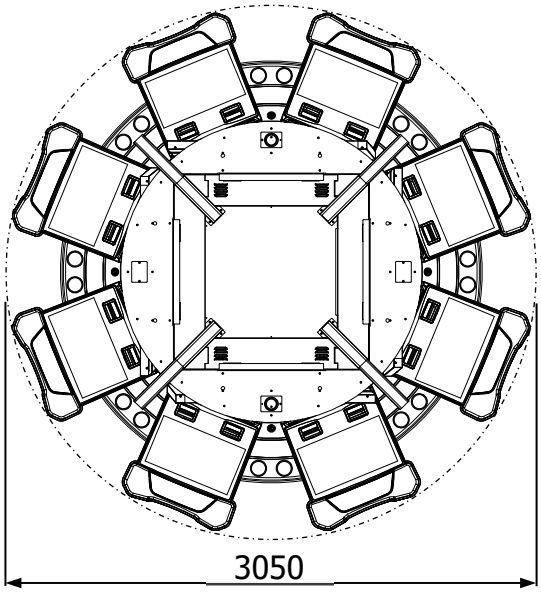
The whole Machine dimensions are depicted below.

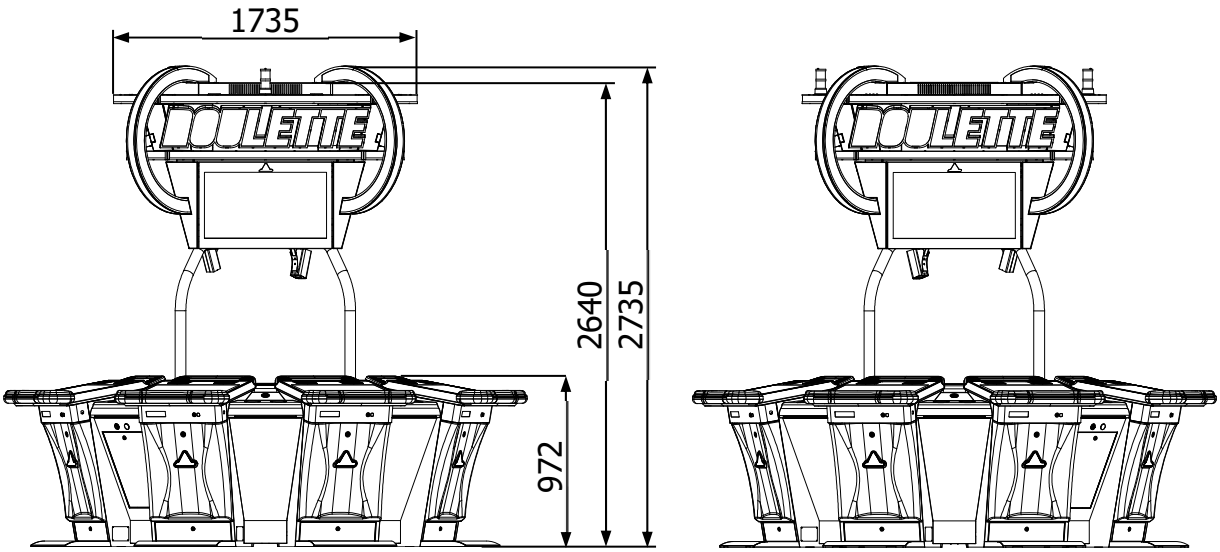
Secure enough space so that the doors can be easily opened for POWER-ON/OFF, maintenance, and so on.

- Outer Dimension - Unit: mm (excluding all parts sticking out)

The TOWER LIGHT is optional.

Layout 8 Stations





2. 3: Key Locks

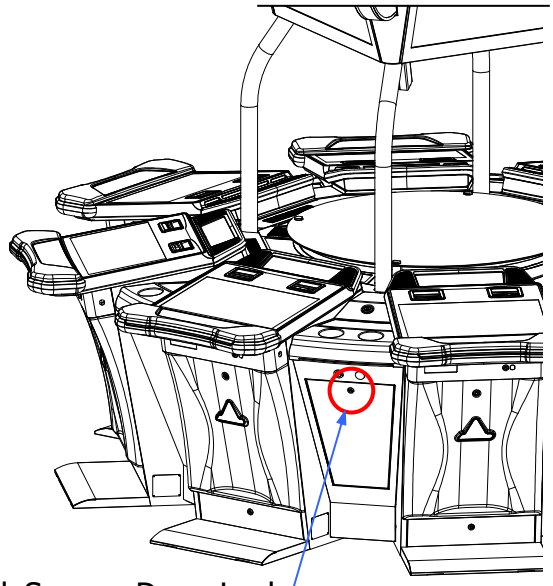
- Location of Locks -

The machine is shipped with generic door locks installed.

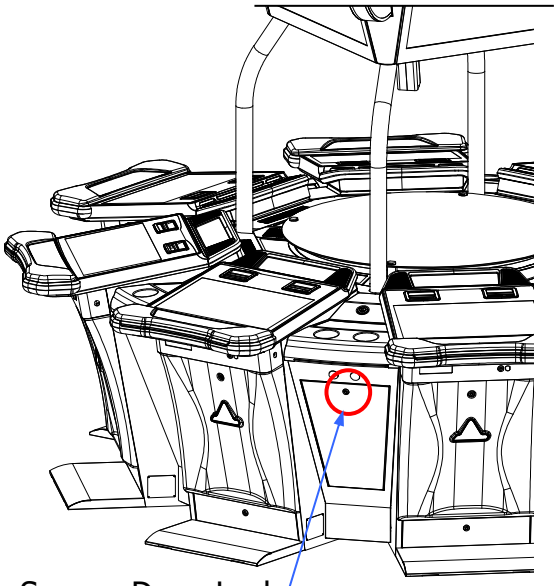
For increased security, the following door locks should be replaced:

※For the Station, refer to "**Key Locks**" on Chapter 3.

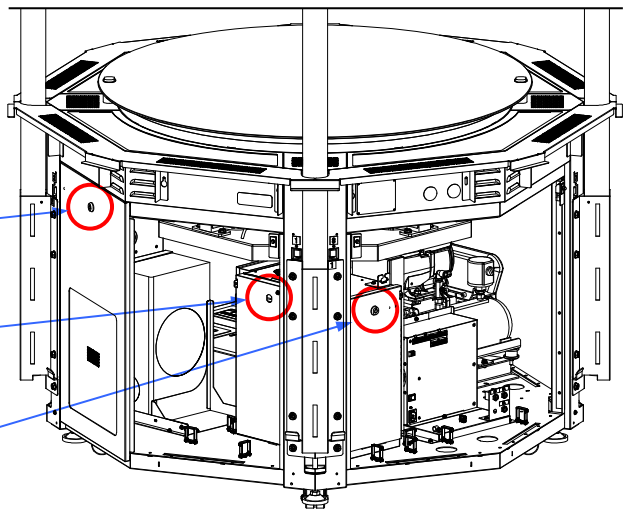
Location of locks	Number of locks
Control Spacer Door	1
Drain Spacer Door	1
Center Unit Doors	8
IO Cover(by Jurisdictions)	1
Security Cage Door	1



Control Spacer Door Lock



Drain Spacer Door Lock

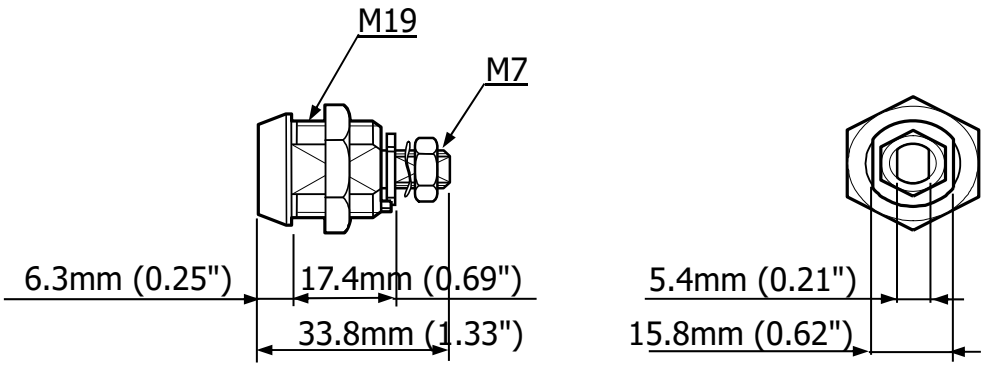


Center Unit Door Locks

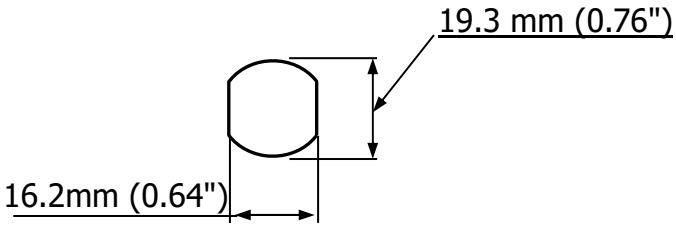
IO Cover Lock

Security Cage Door Lock

- Lock Dimensions -



- Lock Installing Hole -



2. 4: Hardware Setting

Hardware Settings are necessary for factory shipped products to be operational. Before commencing with operation, make sure to do the settings explained below.

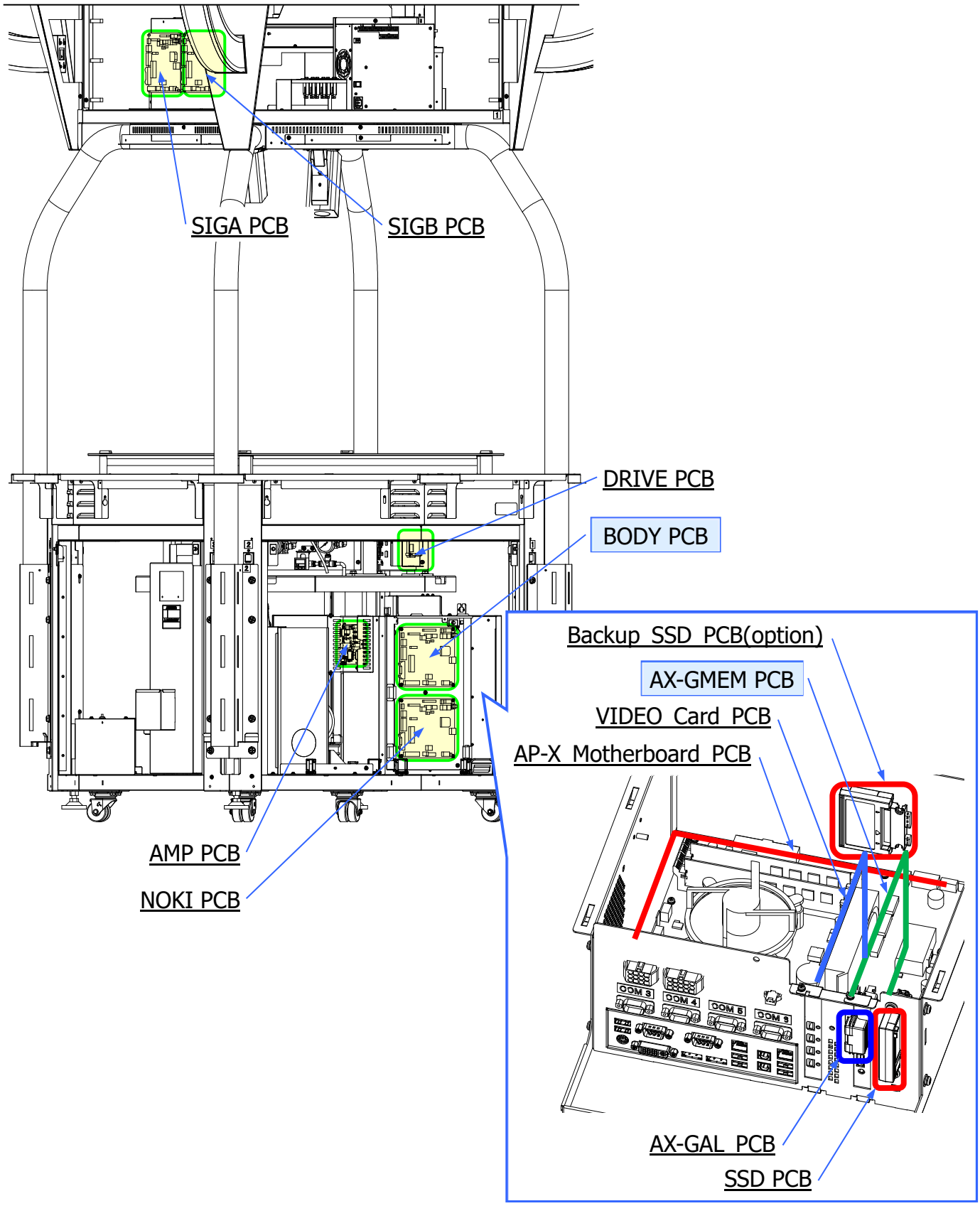
⚠ CAUTION!

Hardware Settings must be done by authorized personnel.

Once Hardware Settings are updated, all the Software Meters will be cleared to zero. Make sure to take note of all necessary Software Meters before updating.

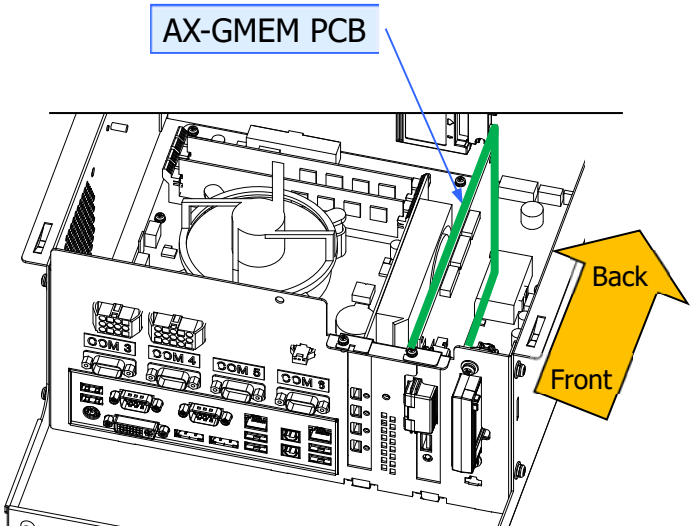
- Location of PCBs -

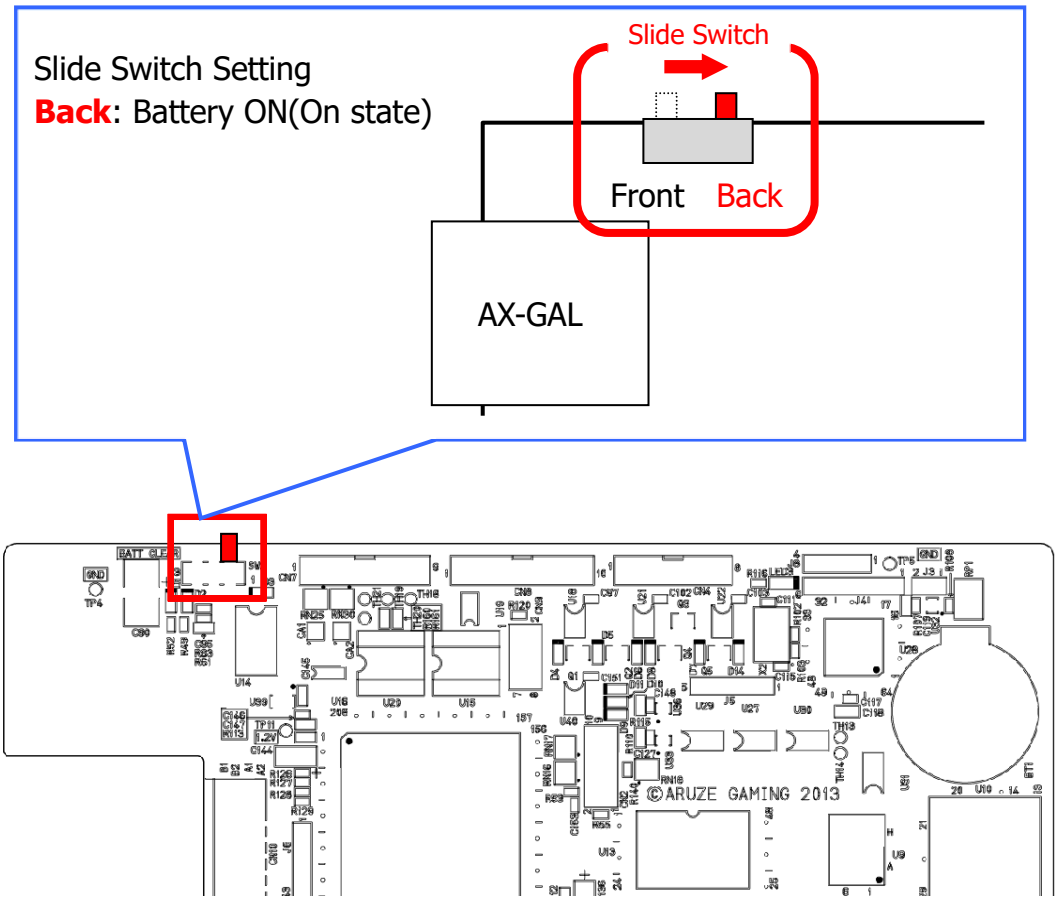
The PCBs that require setting are shown inside a box below.



- AX-GMEM PCB -

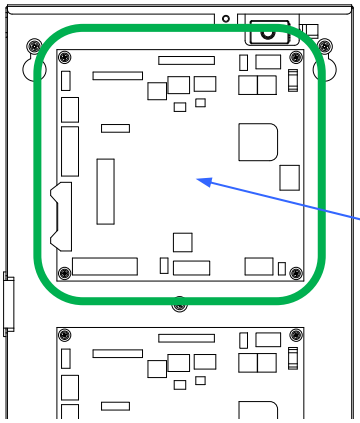
PCB	Onboard Switch/Jumper	Factory Setting	Setting for Operation	Description
AX-GMEM PCB	S2 (Slide Switch)	Front (Battery OFF)	Back (Battery ON)	The switch for Backup Battery ON-OFF



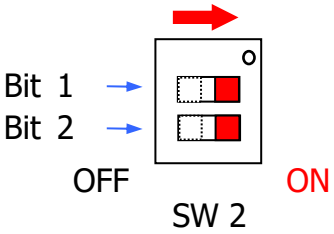


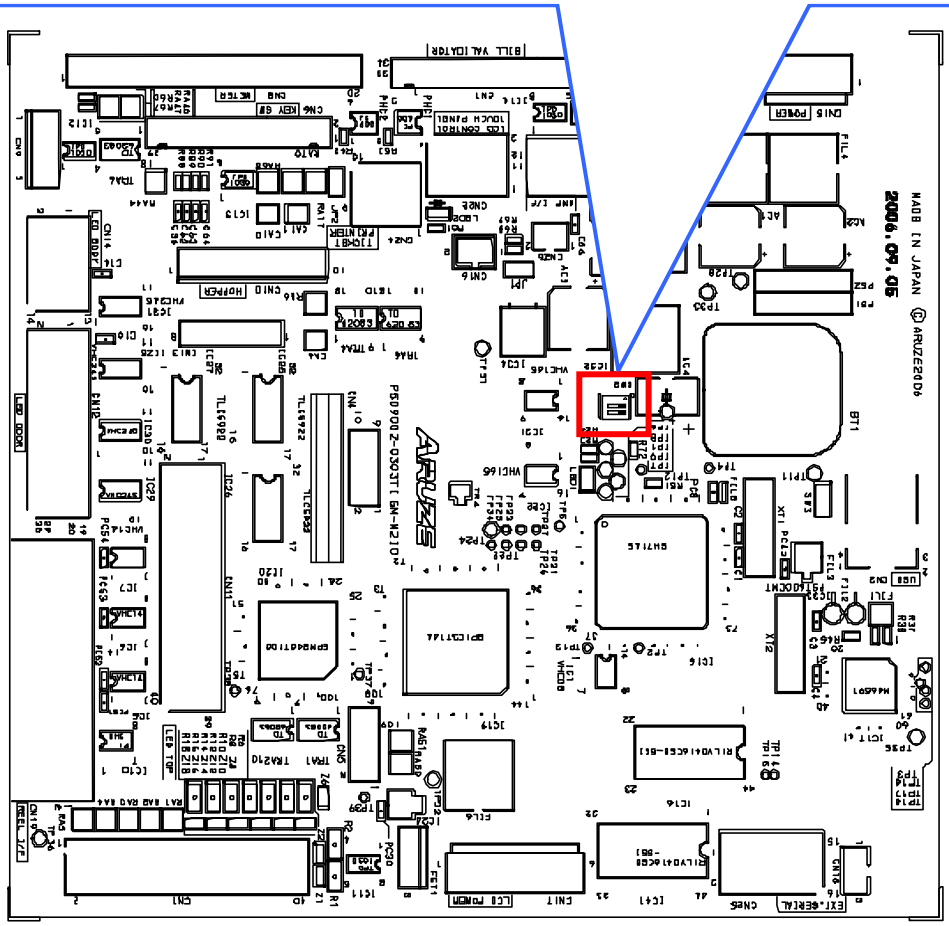
- BODY PCB -

PCB	Onboard Switch/Jumper	Factory Setting	Setting for Operation	Description
BODY PCB	SW2(2 Bit Dip Switch)	All OFF (Invalid)	All ON	The switch for enabling the Backup Battery



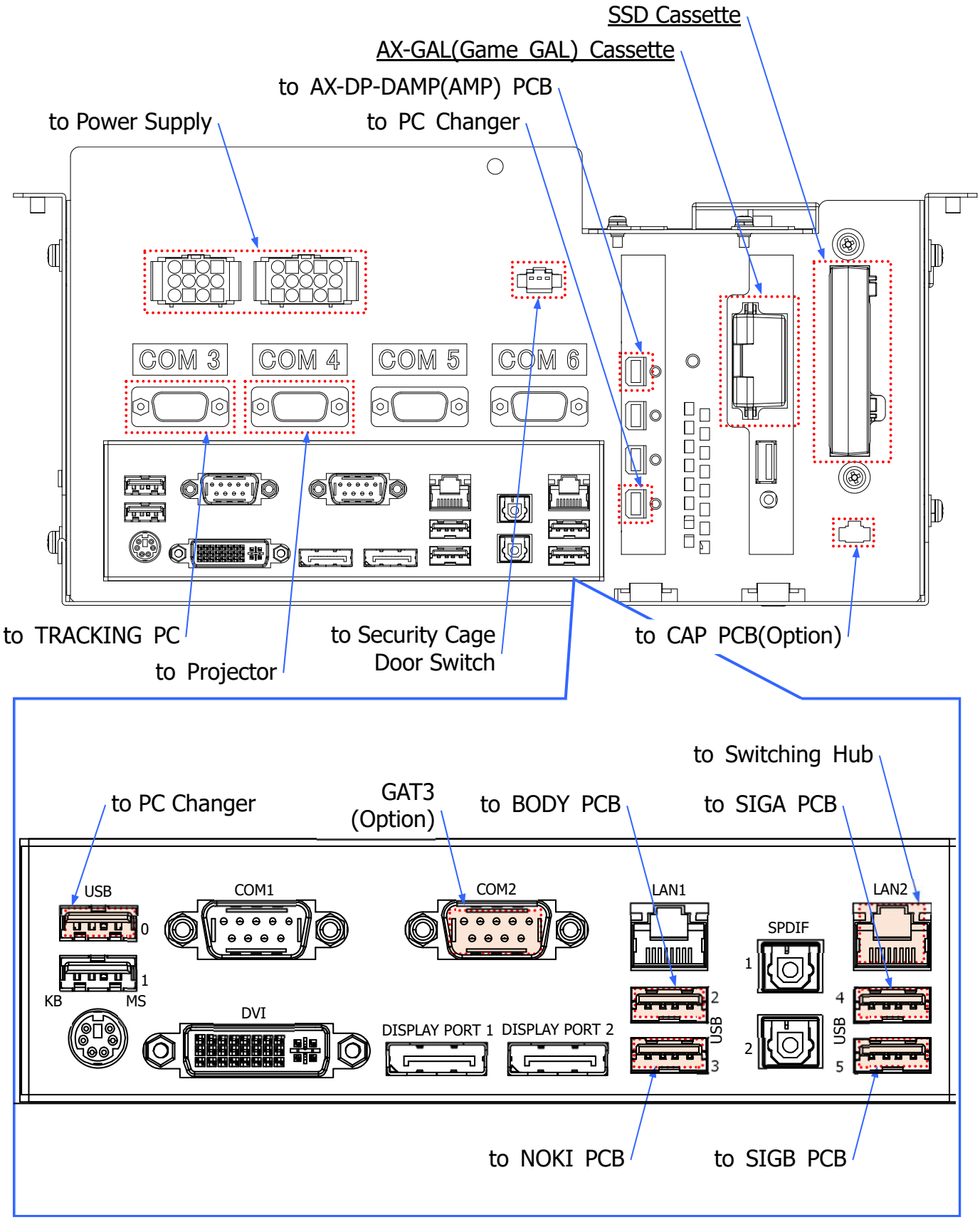
SW2 Dip Switch Setting
Bit 1 **ON**: Battery ON(On state)
Bit 2 **ON**: Battery ON(On state)



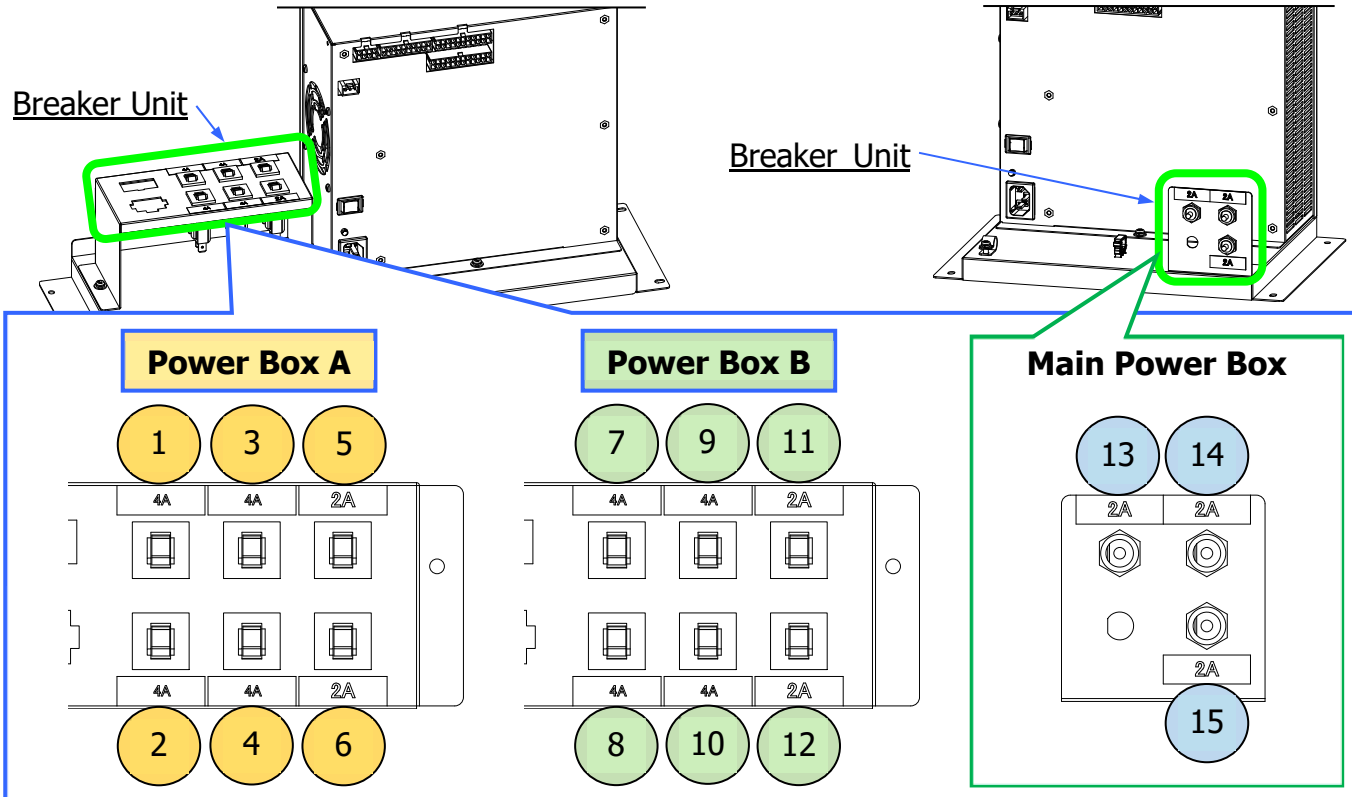


2. 5: Cable Connections

- Front View of SECURITY CAGE -



- Front View of Breaker Unit -



①	24V system	32 inch LCD
②	24V system	32 inch LCD
③	12V system	Tape LED(Circle LED A Unit) x2, DC Fan x2
④	24V system	SIGB PCB, Title Unit x4
⑤	12V system	SIGB PCB, DC Fan x4
⑥	12V system	Tape LED(Circle LED A Unit) x2
⑦	24V system	32 inch LCD
⑧	24V system	32 inch LCD
⑨	12V system	Live Camera Tape LED(Circle LED B Unit) x2,
⑩	24V system	SIGA PCB, Ring Unit x4
⑪	5V system	DVI Splitter Unit
⑫	12V system	SIGA PCB, Tape LED(Circle LED B Unit) x2
⑬	12V system	Tower Light
⑭	24V system	Wheel Unit
⑮	5V system	PC Changer

2. 6: Install Check List

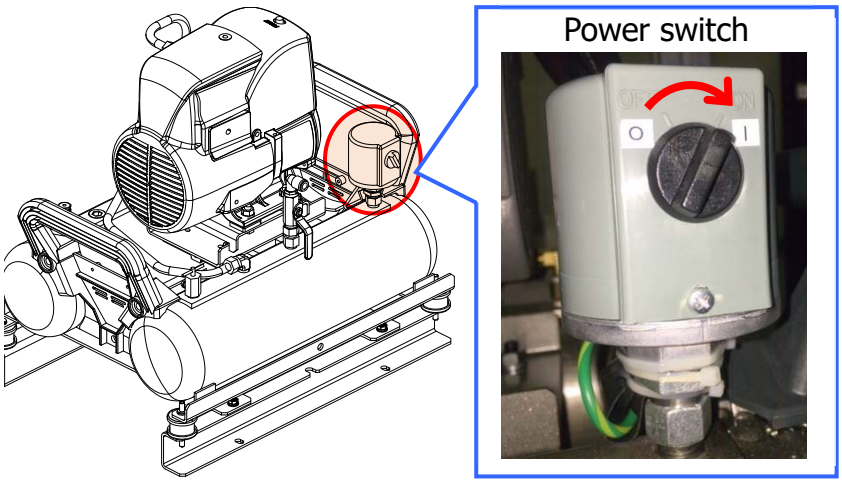
Check that the following steps have been taken before turning on the power.

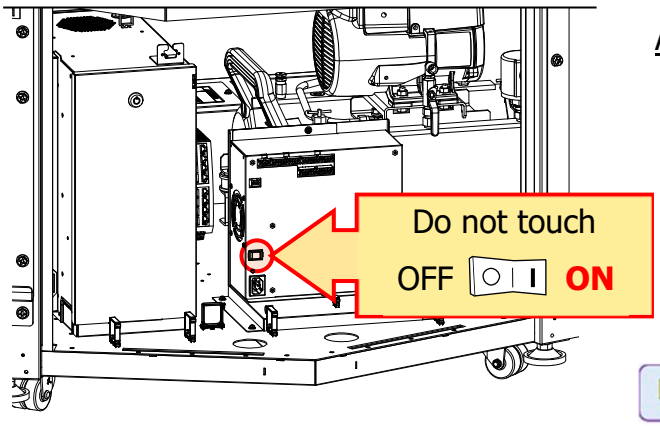
- ◇ Replacement of the locks. **(Refer to 2.3)**.
- ◇ Set the Slide Switch on the AX-GMEM PCB to the back position. **(Refer to 2.4)**.
- ◇ Set the DIP Switches on the BODY PCB to ON. **(Refer to 2.4)**.
- ◇ All the cable connectors are securely connected and the machine is properly grounded.

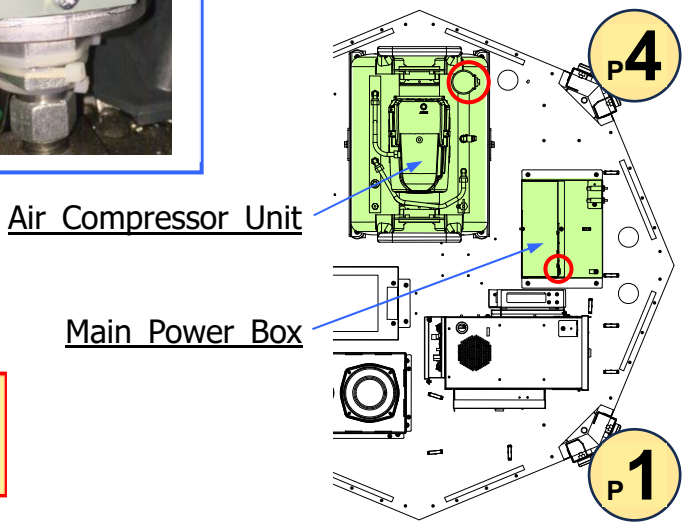
CAUTION!

Make sure that the Switches of the Air Compressor Unit and of the Main Power Box inside the Center Unit are switched to ON.

Please leave these switches to ON and do not change their status.



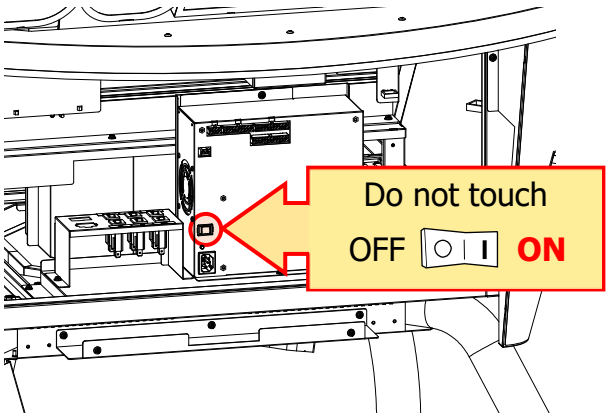


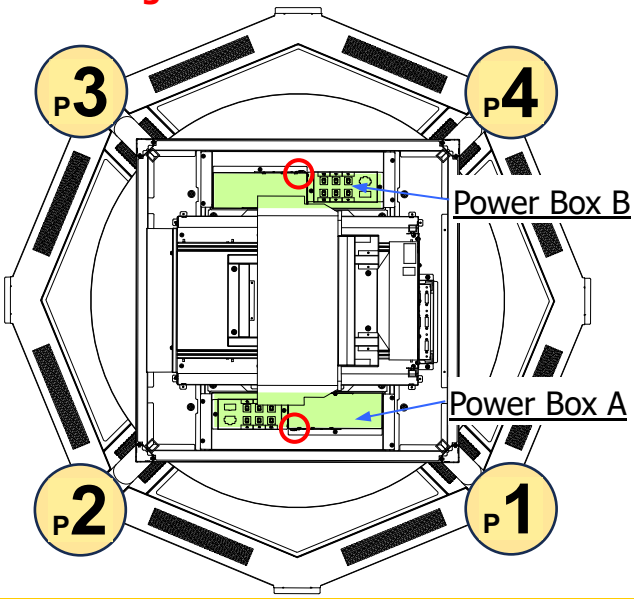


S1=Station P1=Pole C1=Corner

Make sure that the 2 Switches of the Power Box A and Power Box B, that are inside the Top Sign Unit, are switched to ON.

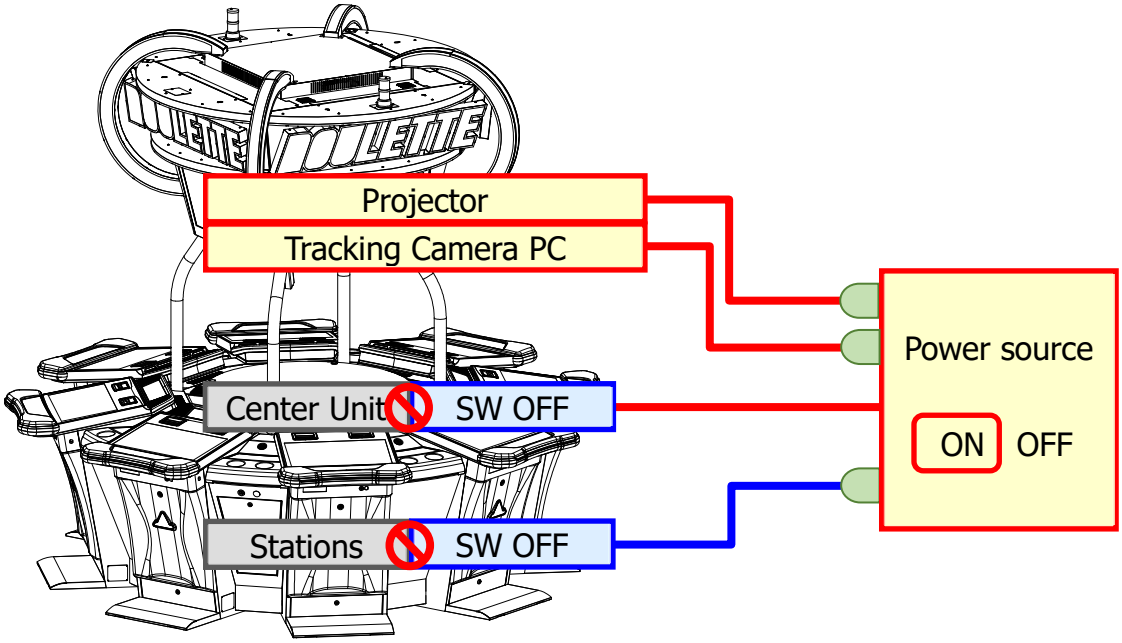
Please leave these switches to ON and do not change their status.



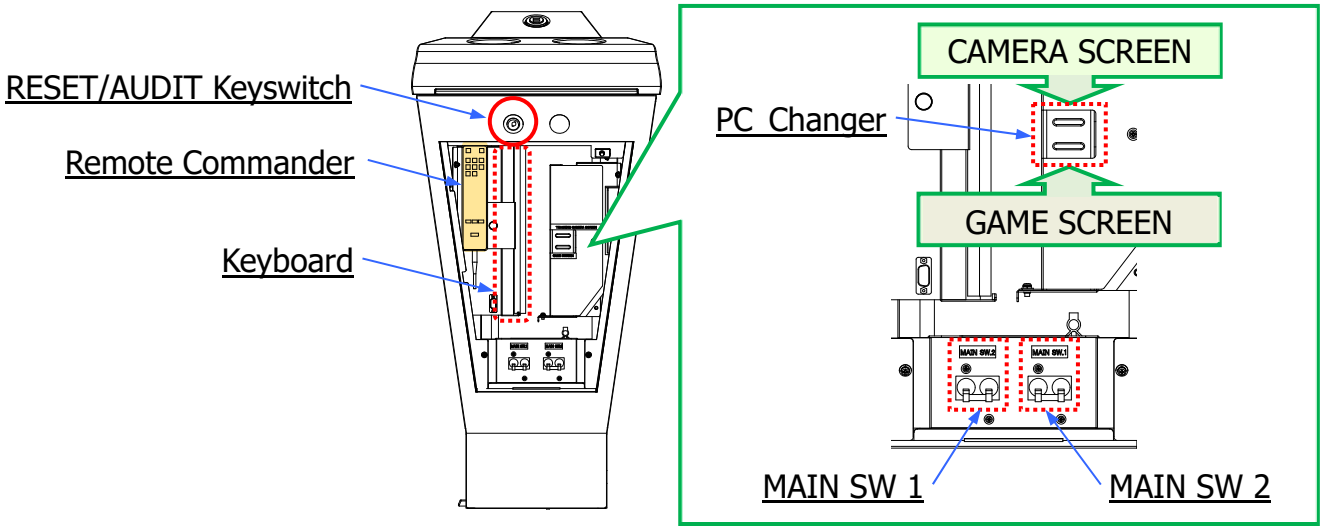


2. 7: Turn on the Center Unit

1. Before turning ON the machine, make sure that all the checkpoints have been covered. **(Refer to 2.6)**.
2. First turn ON the power source. The devices directly connected to the power source will boot up.



3. Unlock and detach the Control Spacer Door, then turn ON the Power Switches of the Center Unit. **(Refer to 2.1)**. Close the Control Spacer Door. While the POWER UP SELF TEST is performed, the item [Program test] is displayed as [NOW CHECKING]. When the check is successfully completed the display turns to [OK].

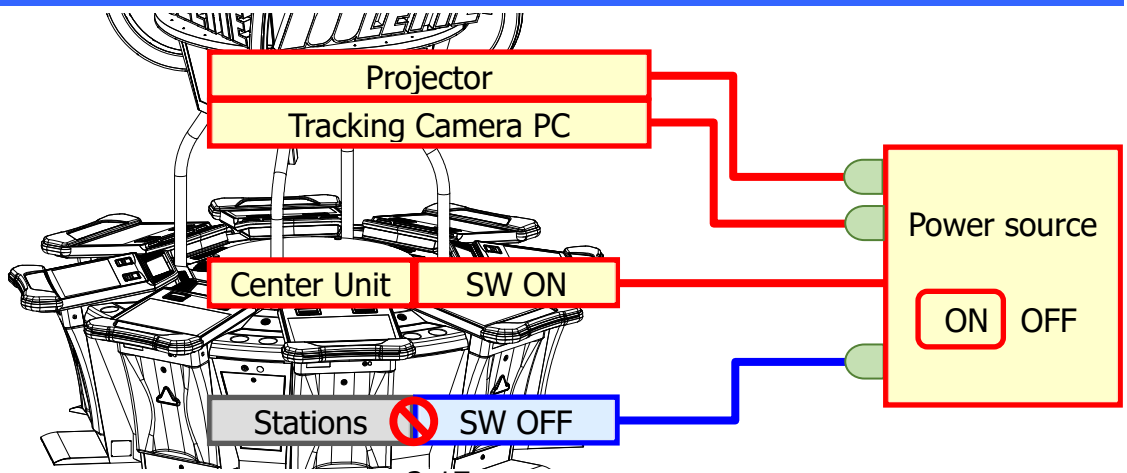


CAUTION!

- Do not turn ON the 2 Power switches at the same time. Doing so can result in a start-up error of the machine.
- When doing "Power OFF-ON" wait at least 15 seconds before power On.
- Stations power should be OFF at this stage.

NOTE:

- If an error appears during the POWER UP SELF TEST, the activation of the Machine halts. Refer to OPERATION Manual Chapter 8 **"Error Messages"** to clear it.
- If it is necessary to perform the RAM Clear (Memory Clear), refer to **"Memory Clear Procedure"** on Chapter 6.
- If it is necessary to adjust the image from the Projector or the Camera, refer to "**Adjusting"** on Chapter 6.



2. 8: Checking Machine

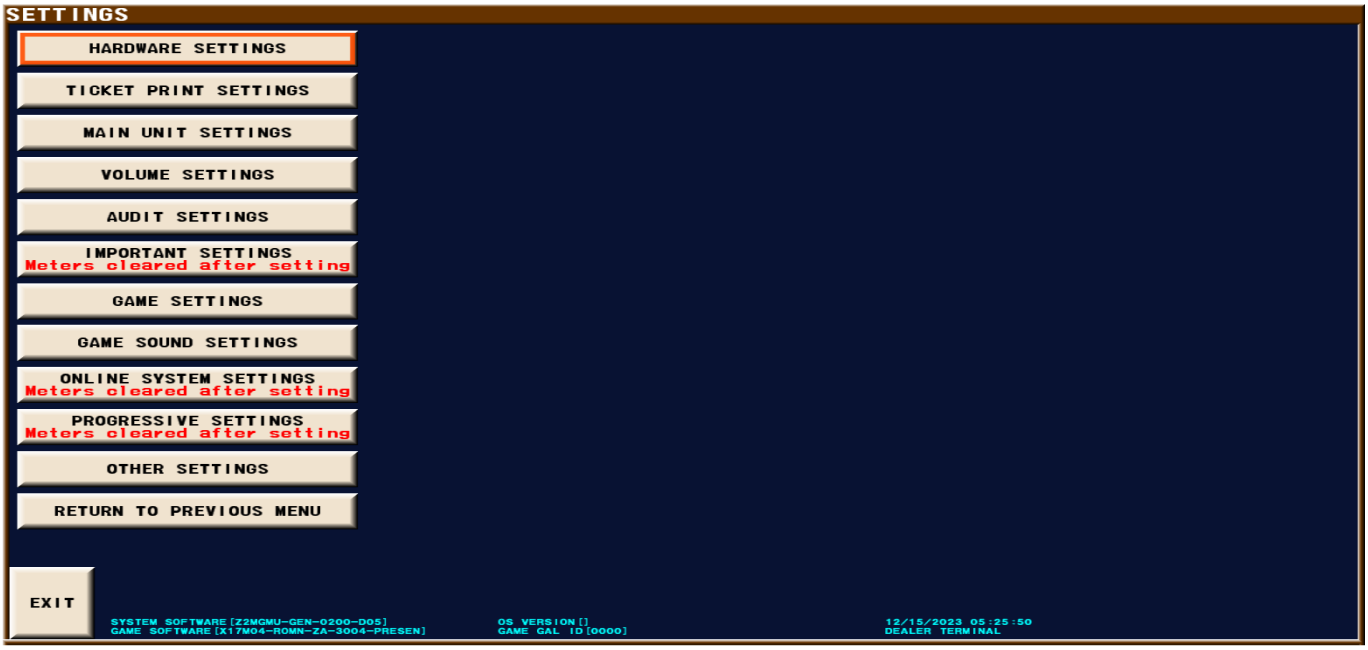
After power up, check the points below to make sure that there are no problems or errors before formal operation.

- ◇ Are there any door events or errors during power up?
- ◇ Are there any strange sounds or smells coming from the machine?
- ◇ Is the Monitor displaying correctly?
- ◇ Are all the luminaries lighting up properly?
- ◇ Does the Roulette spins properly?
- ◇ Does the Air Compressor work properly?
- ◇ Does the Projector work properly?
- ◇ Refer to "**Version Information**" at Chapter 6 of the OPERATION Manual, to check that the Software version is the same as the Software Version approved for installation.
- ◇ Refer to "**Input Test**" and "**Output Test**" at Chapter 4 to test the proper functionality of Sensors, RESET/AUDIT key switches etc.
- ◇ Refer to **"Sound Test"** at Chapter 4 to test that the Game sounds play correctly.

2. 9: Machine Setup (Software Setting) for Operation

The following settings should be checked and/or configured depending on the jurisdiction of use.

TOP MENU>SETTINGS> SETTINGS



Hardware Settings (Refer to 4.8.1)

Change the settings of each hardware device of the Center Unit.

Main Unit Settings (Refer to 4.8.3)

Change the settings of different functions of the Center Unit.

Volume Settings (Refer to 4.8.4)

Adjust the volume of each Sound.

Audit Settings (Refer to 4.8.5)

Change the settings of functions relative to the credit transfer.

Important Settings / Basic Settings (Refer to 4.8.6)

Change the settings and check the information relative to Currency, Denomination etc.

Game Settings (Refer to 4.8.7)

Change the settings relative to the Game specifications.

Game Sound Settings (Refer to 4.8.8)

Change the game sound settings.

Online System Settings (Refer to 4.8.9)

Change the settings relative to the Online System.

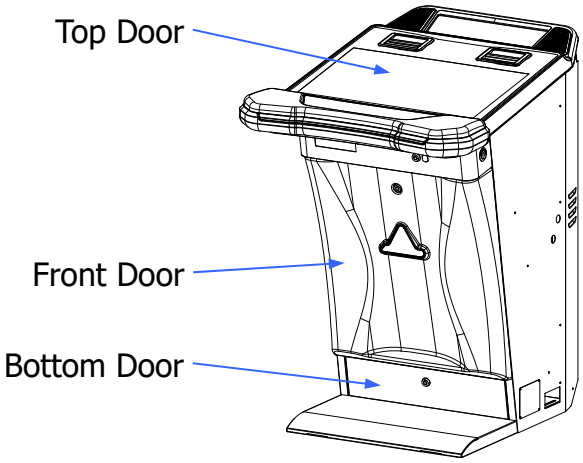
Other Settings (Refer to 4.8.10)

Change the settings of extra functions.

Chapter 3

Hardware Instruction for Stations

3. 1: Opening the Doors of the Station

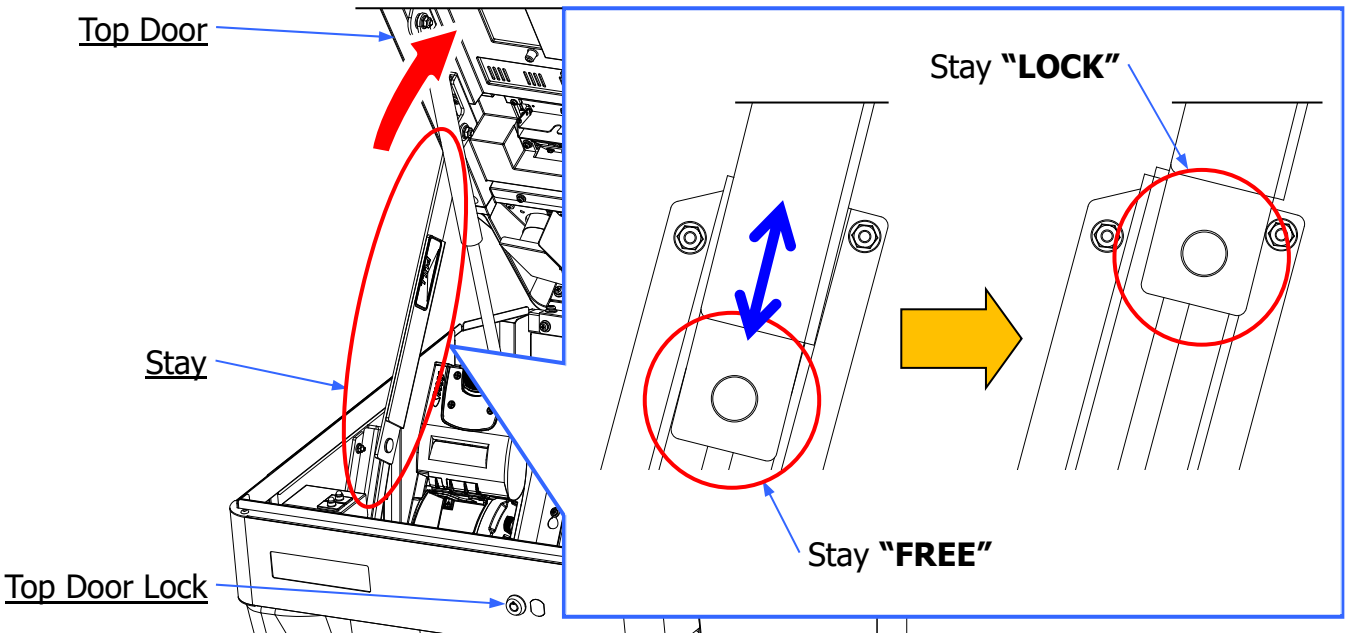


- How to Open the Top Door of the Station -

Unlock the Top Door Lock on the front of the Cabinet, and then open the Top Door.

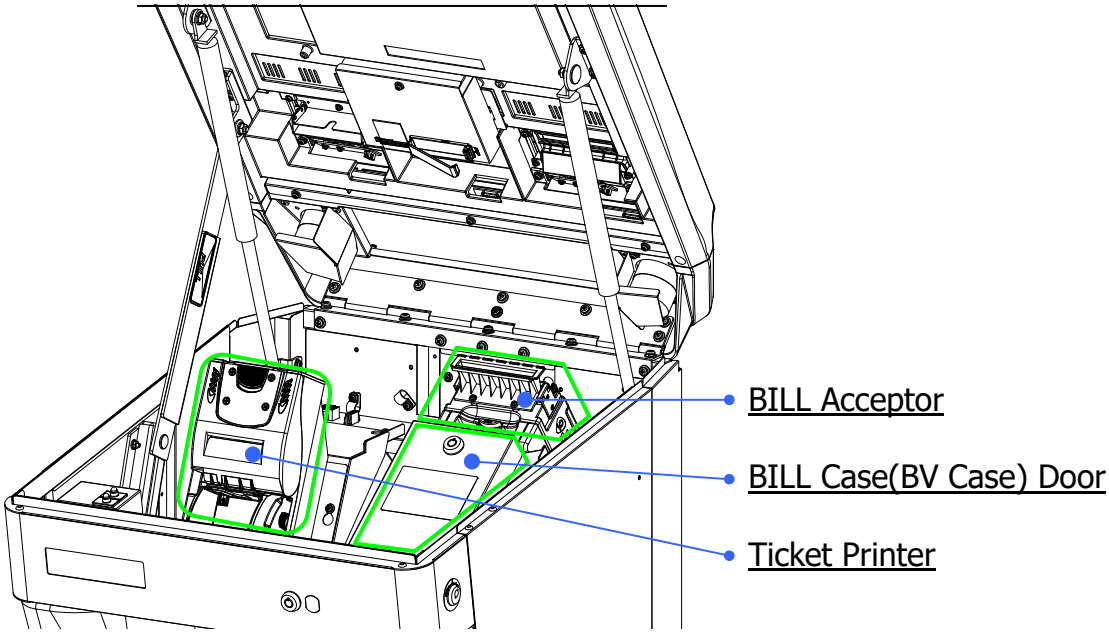
CAUTION!

Hold the Top Door until you are sure that the Stay bar is locked, which will ensure that the Top Door will not suddenly close.



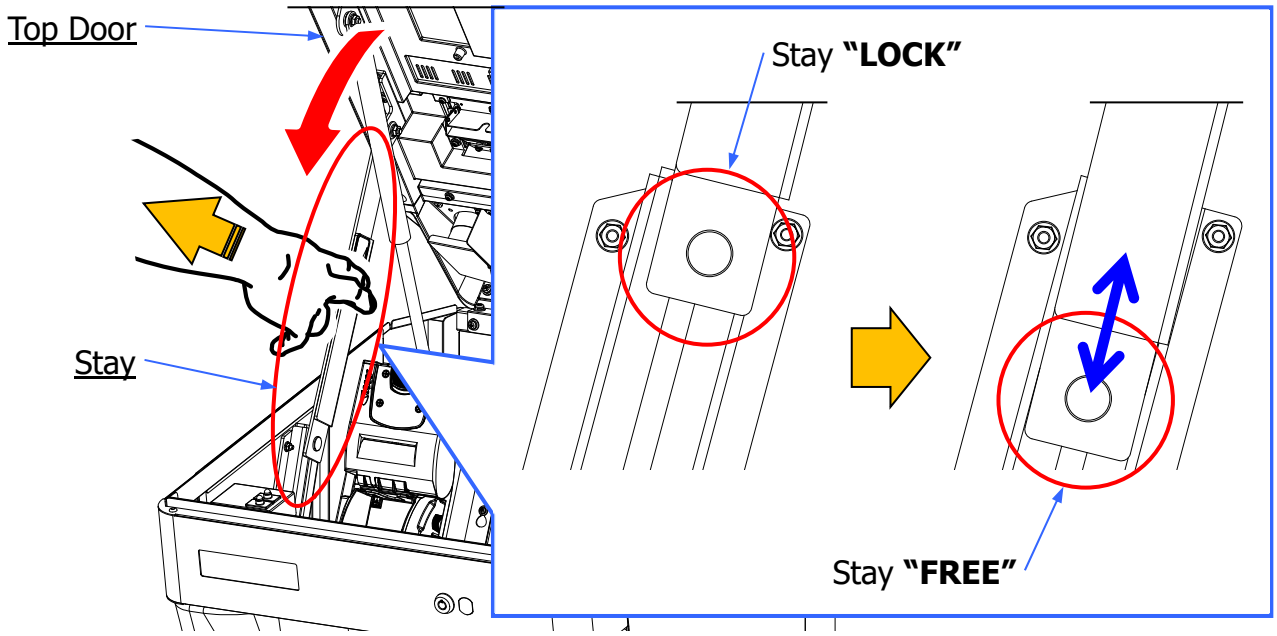
- How to Close the Top Door of the Station -

1. Confirm that the Ticket Printer, Bill Acceptor and BILL Case (BV CASE) Door are all fixed back in their designed place before closing the door.



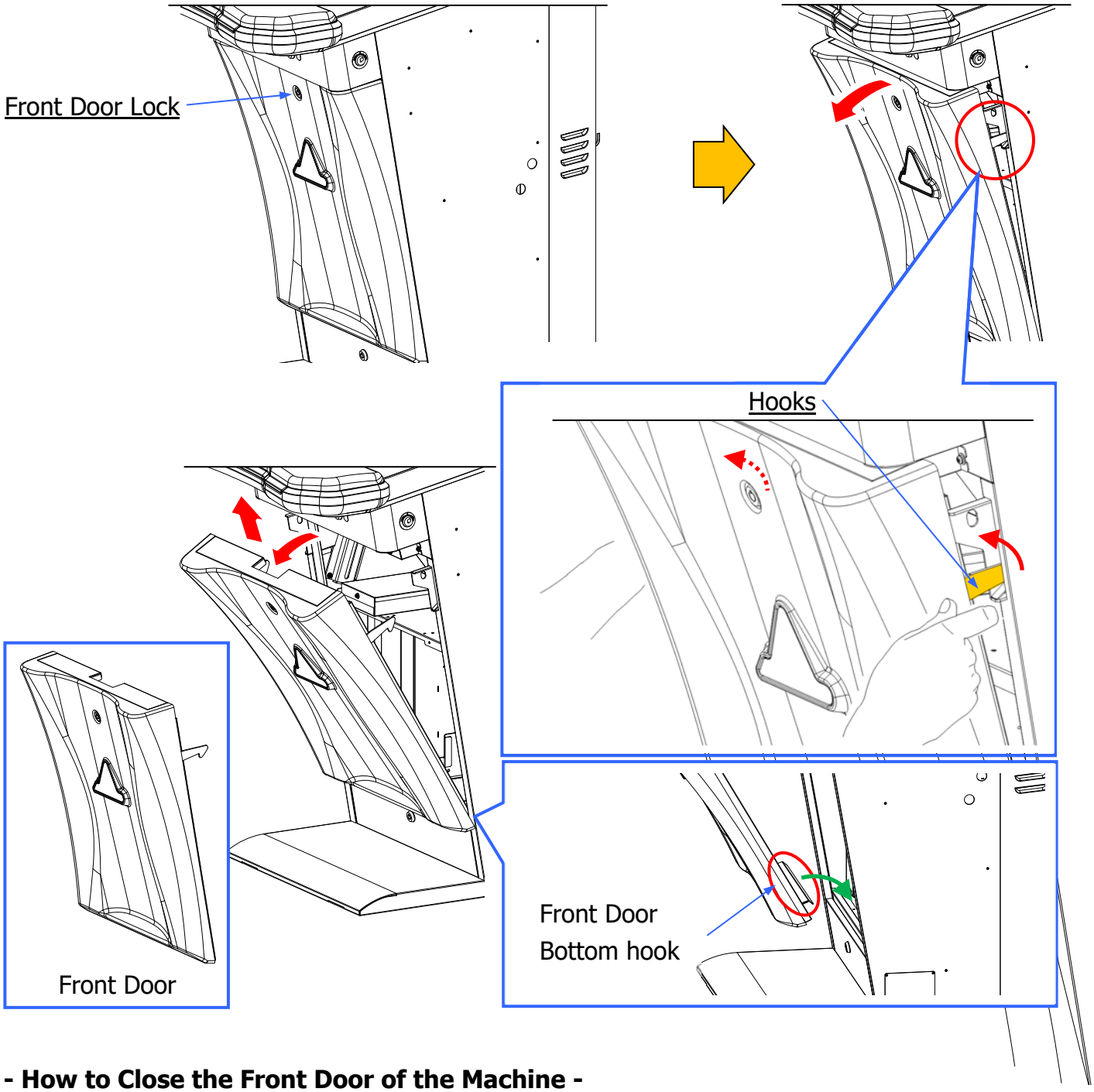
2. Before closing the Top Door, pull the Top Door Stay bar to unlock it.

> ⚠ **CAUTION!**
> In order to avoid injury or machine damage, always keep a hand on the door until it is firmly closed.



- How to Open the Front Door of the Machine -

Unlock the Front Door Lock on the front of the Cabinet, and the Front Door will slightly drop forward, kept by the hooks inside the Machine. While holding the Front Door, lift the yellow hooks on both the sides to detach the door.

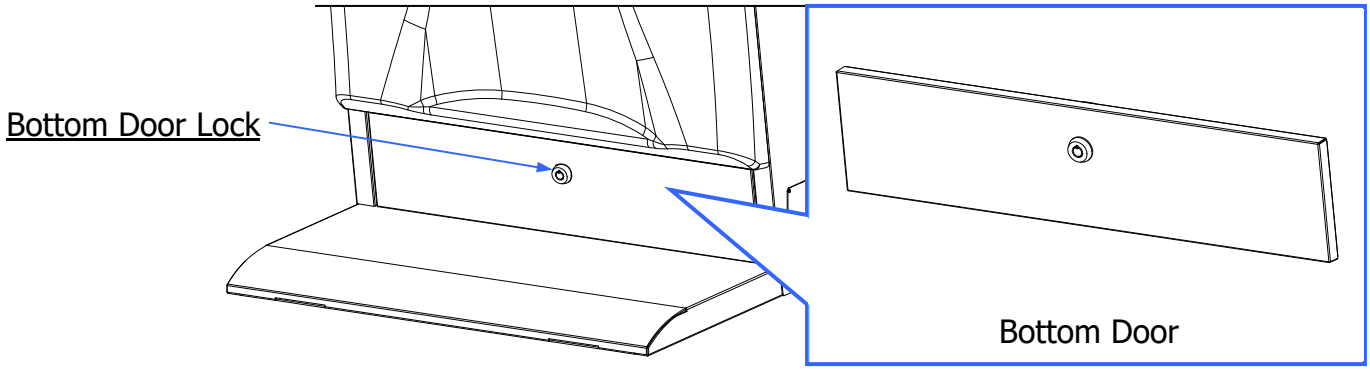


- How to Close the Front Door of the Machine -

Stuck the Bottom Hook of the Front door on the cabinet, and use it as a pivot to completely close the door. (Once the Front Door has been completely closed, even letting go of it, the door will catch on the yellow hooks on both sides and only slightly drop forward). When the Front Door is completely closed, lock the Front Door Lock.

- How to Open the Coin Bottom Door of the Station -

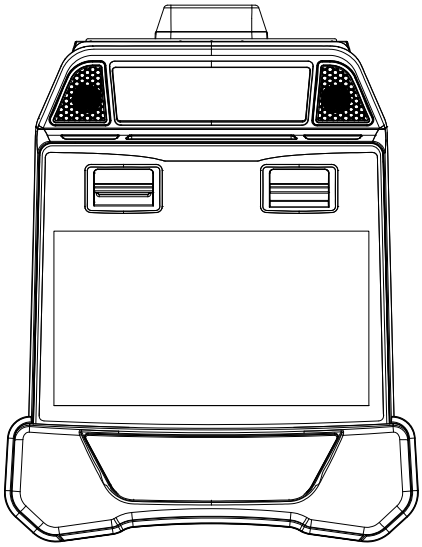
Unlock the Coin Bottom Door Lock on the front of the Cabinet, and then remove it.

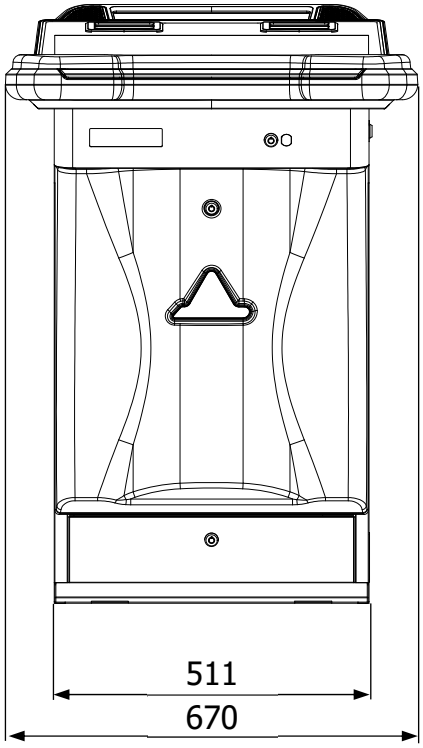


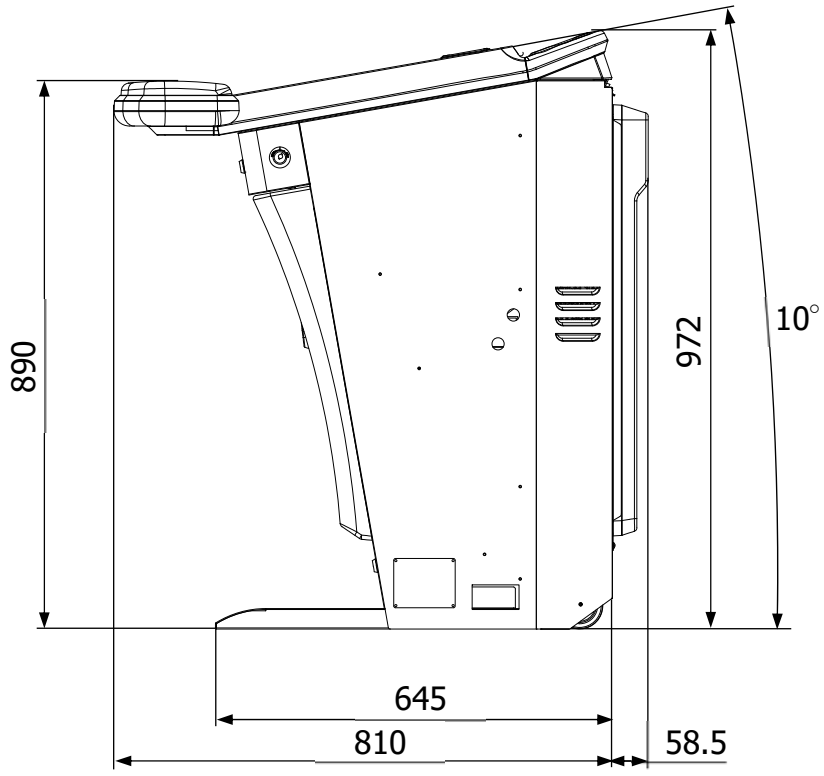
3. 2: Dimensions

The cabinet dimensions are depicted below.

- Outer Dimension - Unit: mm (excluding all parts sticking out)







3. 3: Key Locks

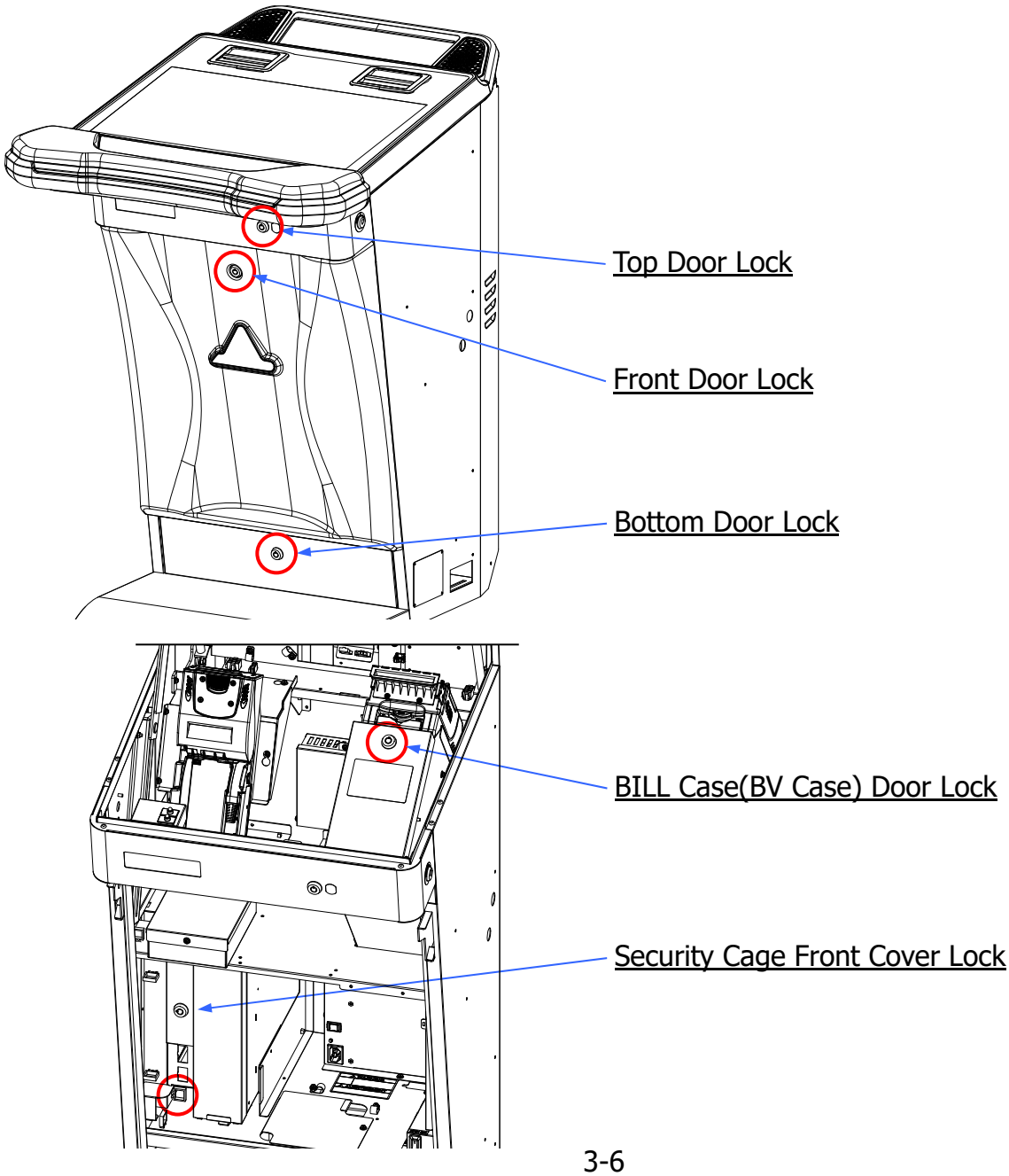
- Location of Locks -

The machine is shipped with generic door locks installed.

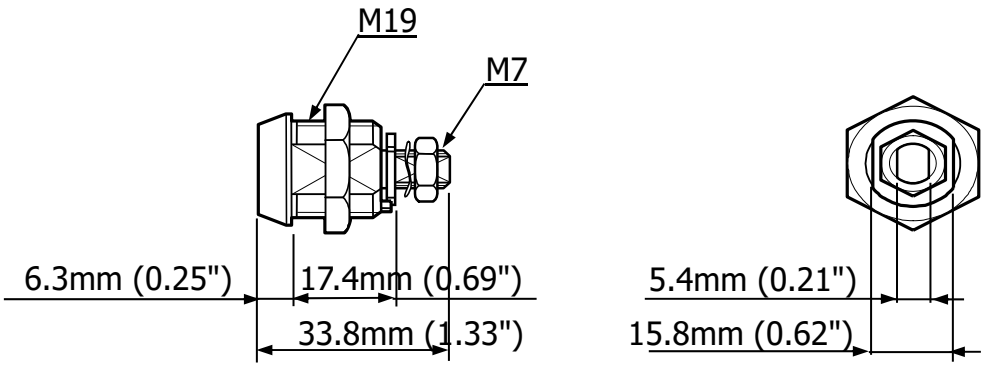
For increased security, the following door locks should be replaced:

※For the Center Unit, refer to "**Key Locks**" on Chapter 2

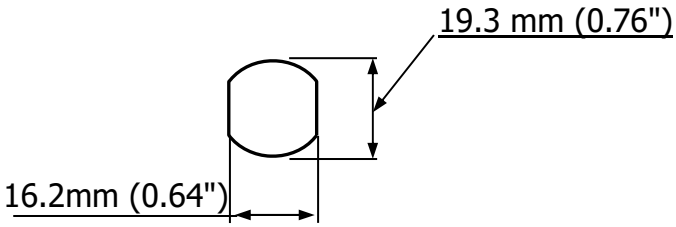
Location of locks	Number of locks
Top Door	1
Front Door	1
Bottom Door	1
BILL Case (BV Case) Door	1
Security Cage Front Cover	1



- Lock Dimensions -



- Lock Installing Hole -



3. 4: Hardware Setting

Hardware Settings are necessary for factory shipped products to be operational. Before commencing with operation, make sure to do the settings explained below.

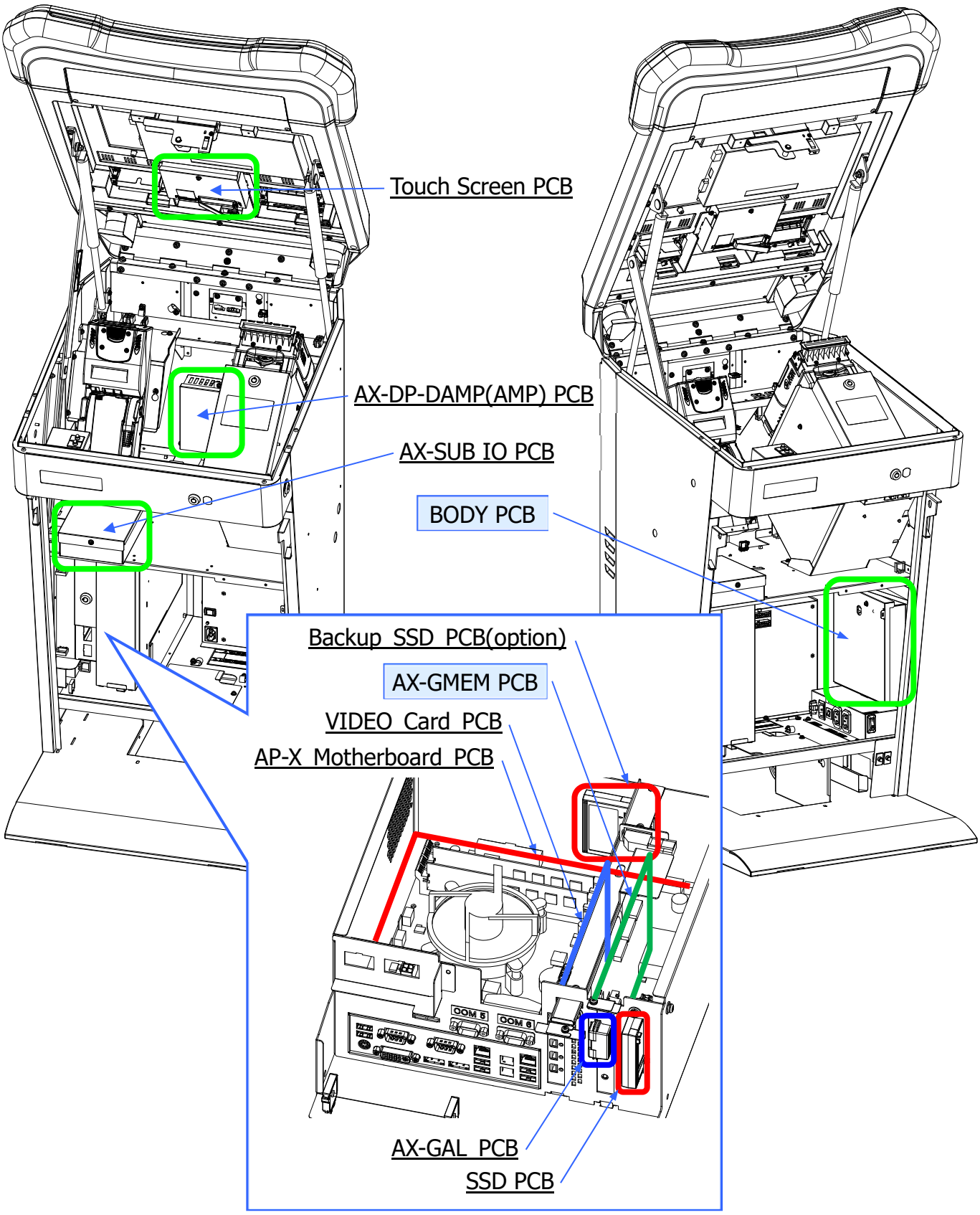
CAUTION!

Hardware Settings must be done by authorized personnel.

Once Hardware Settings are updated, all the Software Meters will be cleared to zero. Make sure to take note of all necessary Software Meters before updating.

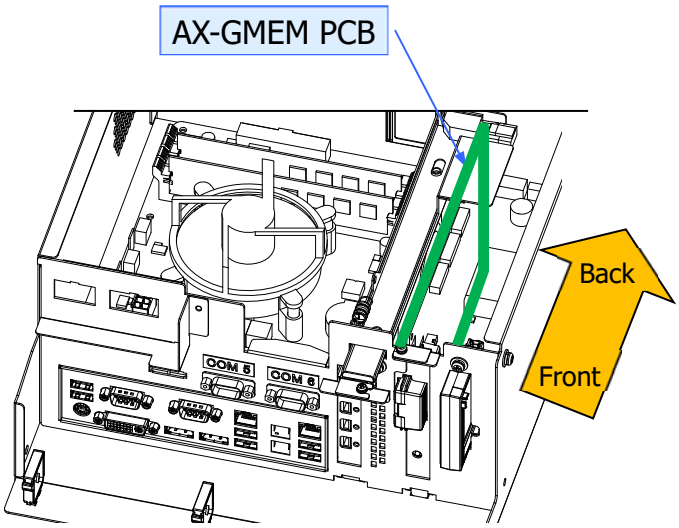
- Location of PCBs -

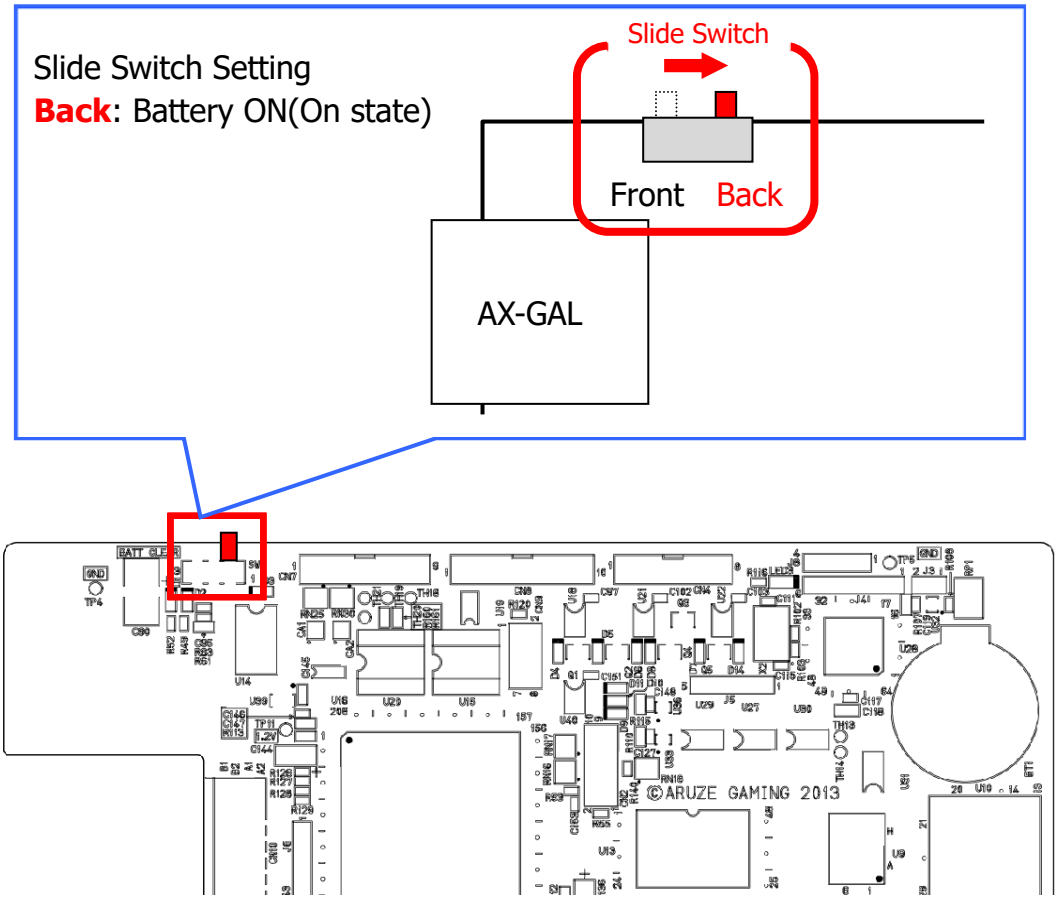
The PCBs that require setting are shown below inside a frame.



- AX-GMEM PCB -

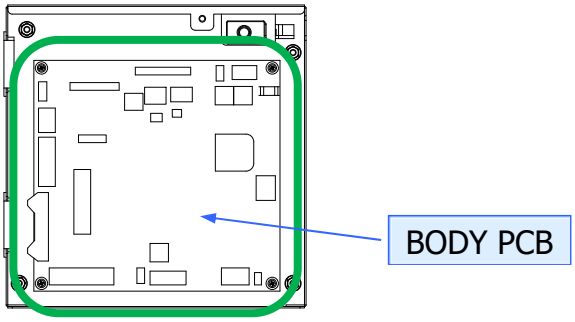
PCB	Onboard Switch/Jumper	Factory Setting	Setting for Operation	Description
AX-GMEM PCB	S2 (Slide Switch)	Front (Battery OFF)	Back (Battery ON)	The switch for Backup Battery ON-OFF



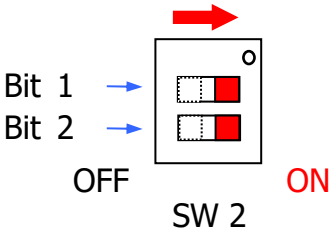


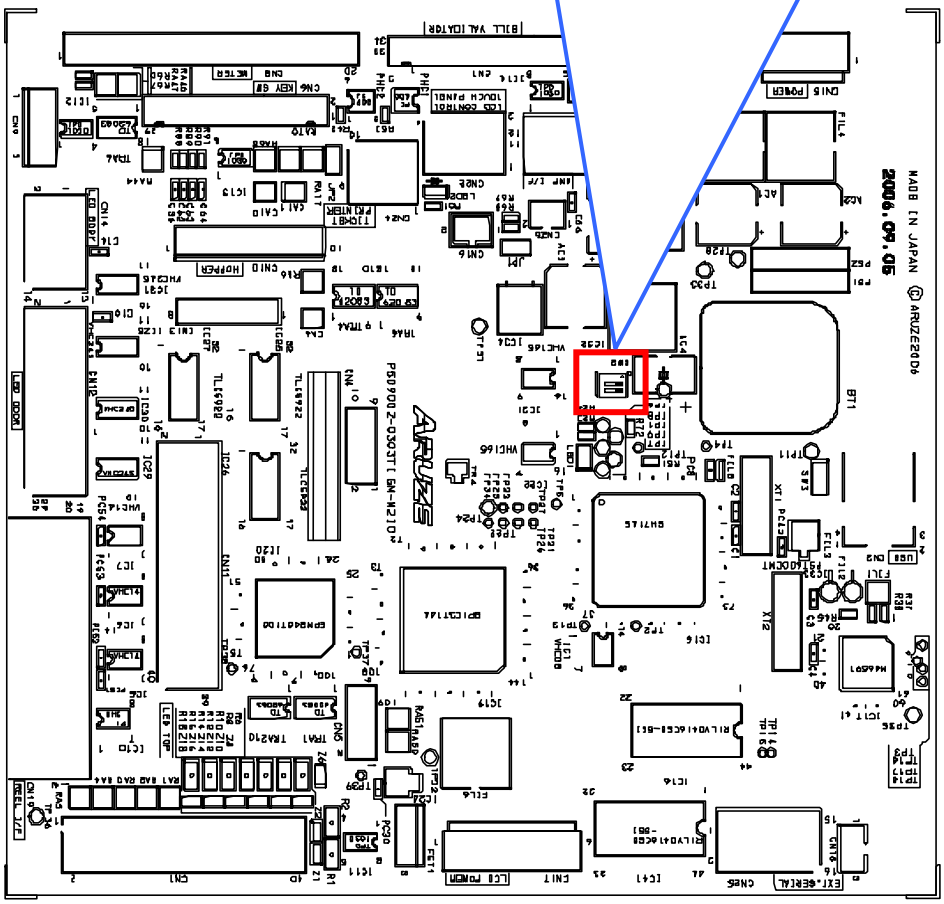
- BODY PCB -

PCB	Onboard Switch/Jumper	Factory Setting	Setting for Operation	Description
BODY PCB	SW2(2 Bit Dip Switch)	All OFF (Invalid)	All ON	The switch for enabling the Backup Battery



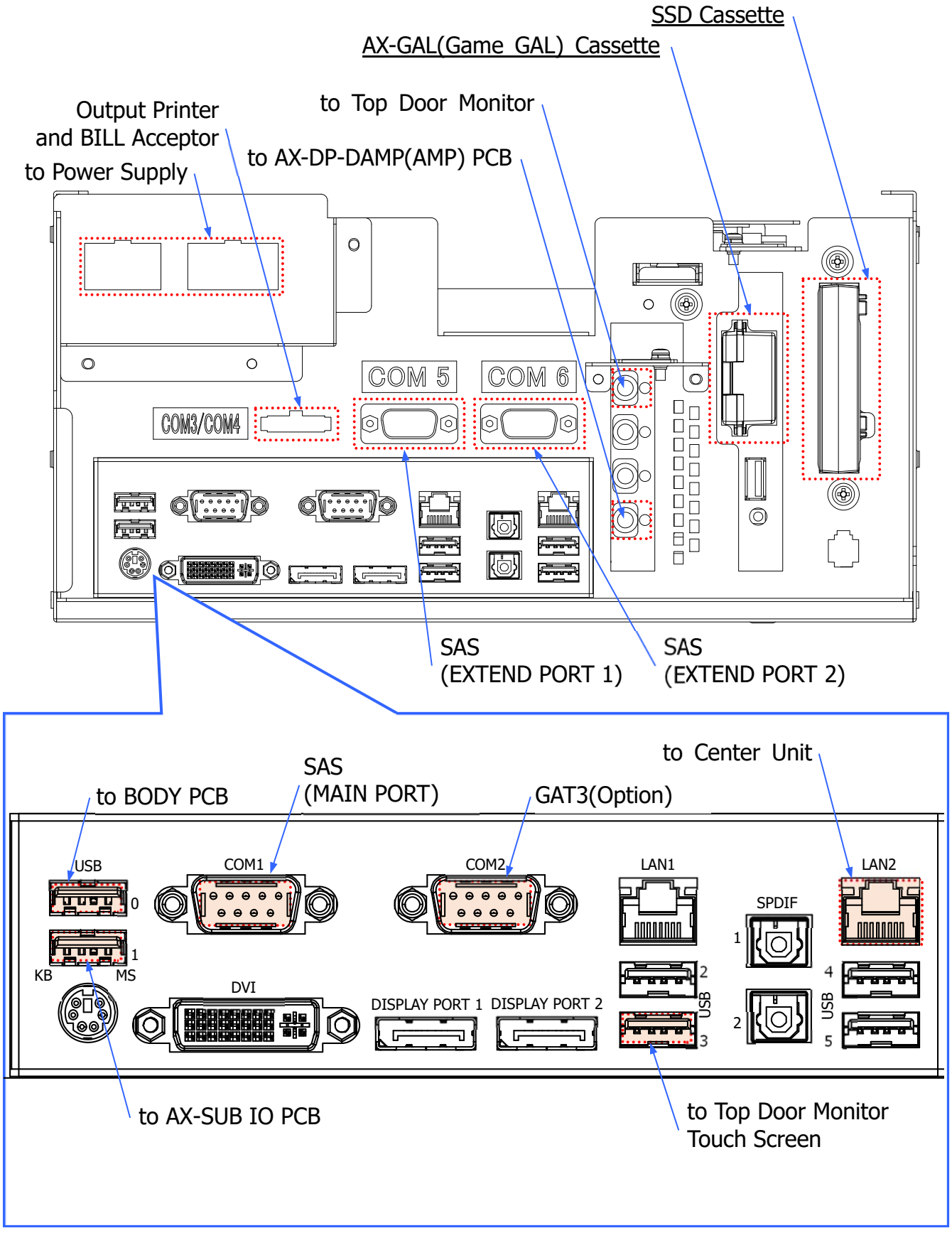
SW2 Dip Switch Setting
Bit 1 **ON**: Battery ON(On state)
Bit 2 **ON**: Battery ON(On state)



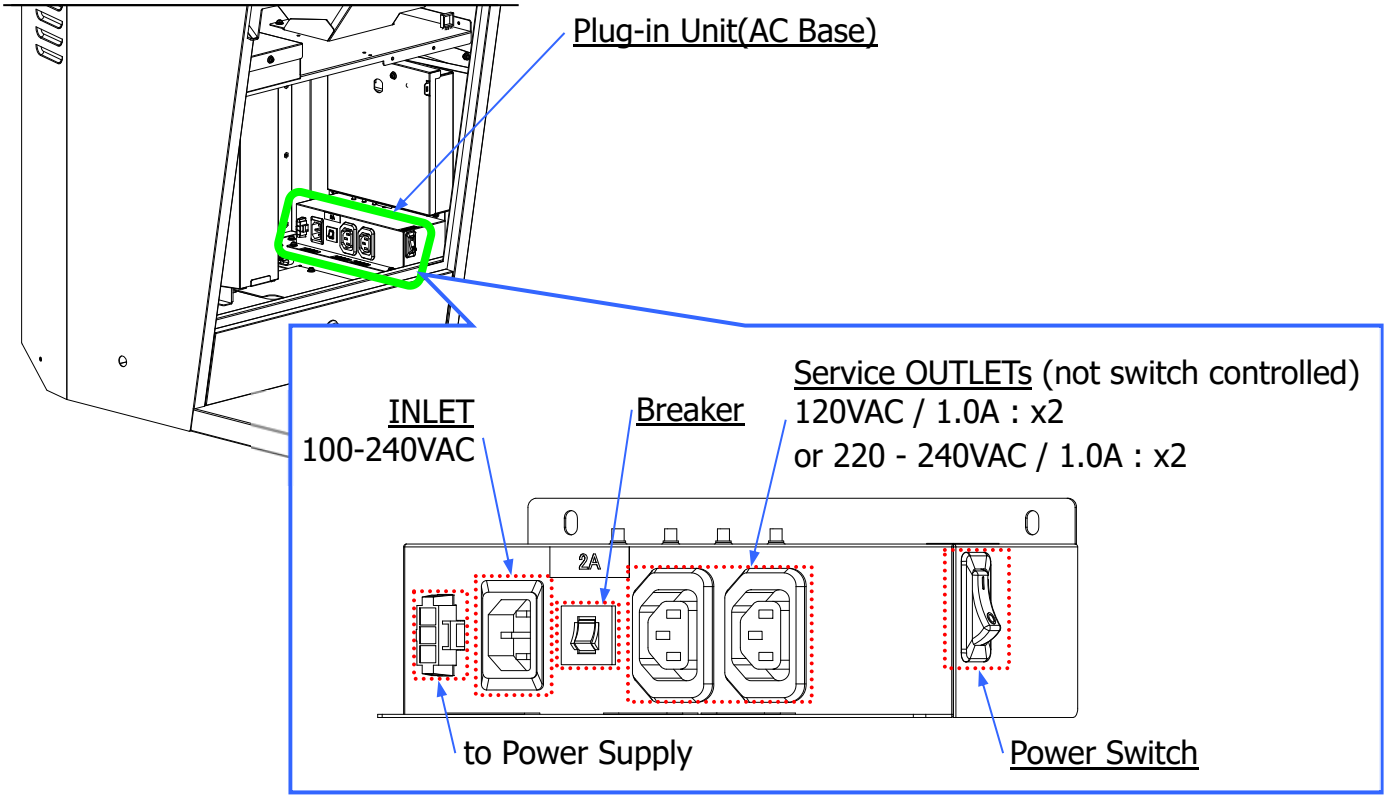


3. 5: Cable Connections

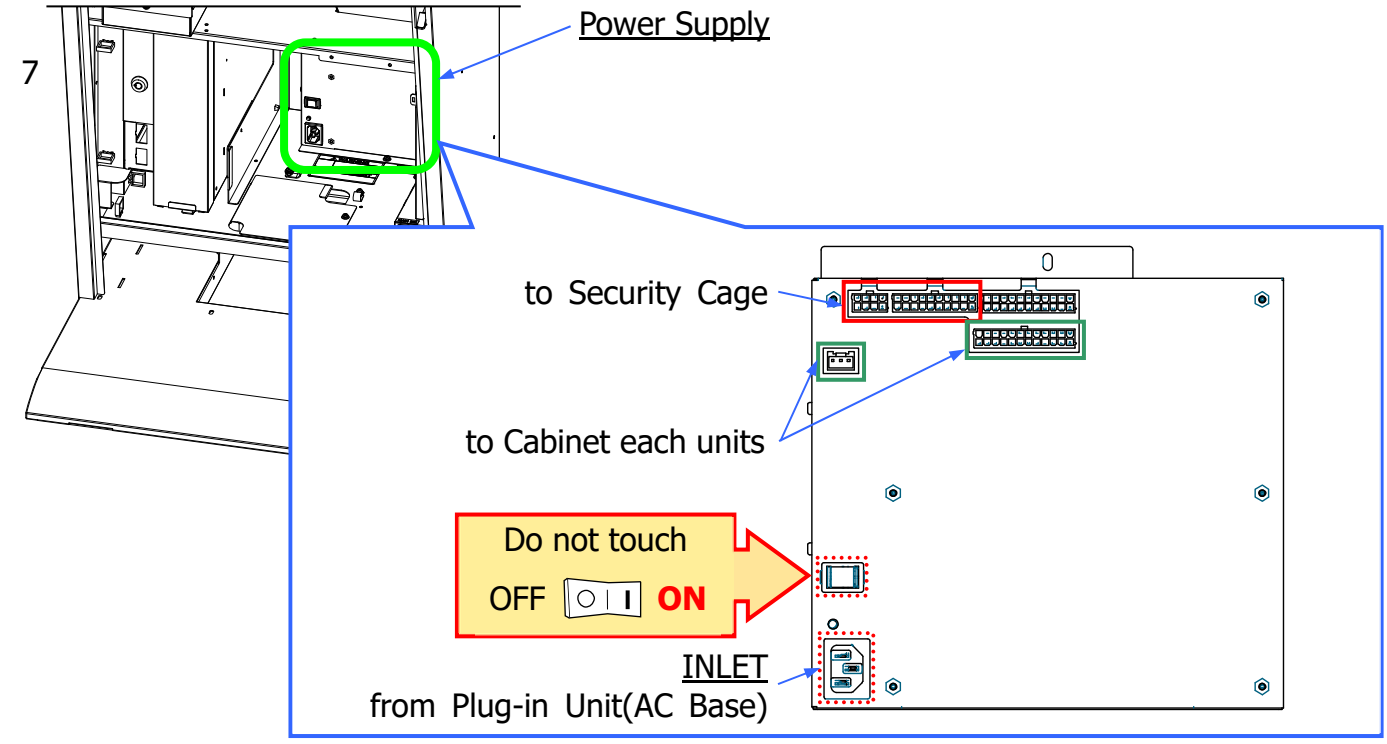
- Front View of SECURITY CAGE -



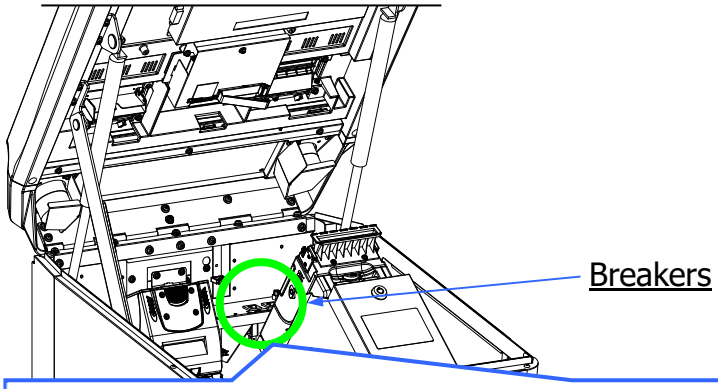
- Front View of Plug-in Unit(AC Base) -

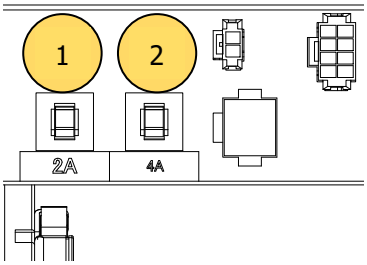


- Front View of Power Supply -



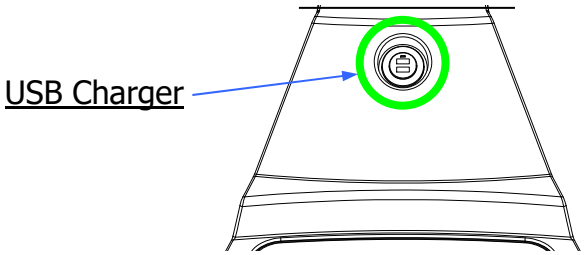
- Front View of Breakers -





①	12V DC system	Tape LED(Back LED Unit)
②	5V DC system	LED PCB(Back LED Unit, Spacer Unit) Photo Sensor(Lever Spacer Unit)

- USB Charger on the each Spacer Unit -



CAUTION!

Please do not use USB cables longer than 3m on the USB Charger.

3. 6: Install Check List

Check that the following steps have been taken before turning on the power.

- ◇ Replacement of the locks. **(Refer to 3.3)**
- ◇ Set the Slide Switch on the AX-GMEM PCB to the Back Position. **(Refer to 3.4)**
- ◇ Set the DIP Switches on the BODY PCB to ON. **(Refer to 3.4)**
- ◇ All the cable connectors are securely connected and the machine is properly grounded.

3. 7: Turn on the Stations

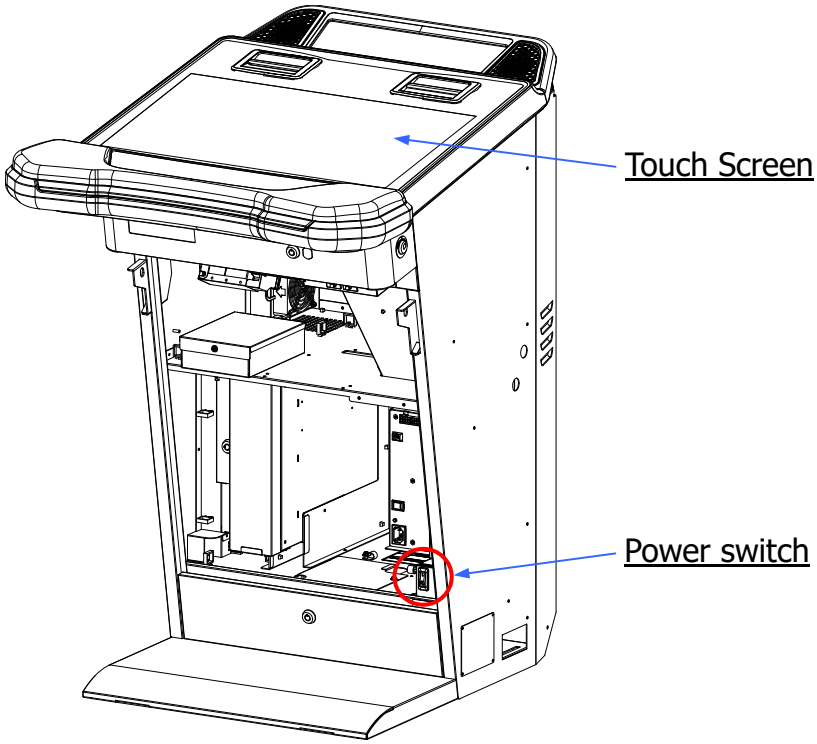
1. Before turning ON the machine, make sure that all the checkpoints have been covered. **(Refer to 3.6)**.
2. Turn ON the Power Switch and close the Front Door. While the POWER UP SELF TEST is performed, the item [Program test] is displayed as [NOW CHECKING]. When the check is successfully completed the display turns to [OK].

CAUTION!

- When doing "Power OFF-ON" wait at least 15 seconds before power On.
- Do not touch the Touch Screen when [NOW CHECKING] is displayed. This may lead to Touch Screen malfunction.

NOTE:

- If an error appears on the Center Unit, refer to OPERATION Manual Chapter 8 **"Error Messages"** to clear it.
- If it is necessary to perform the RAM Clear (Memory Clear), refer to **"Memory Clear Procedure"** on Chapter 7.



3. 8: Checking the Machine

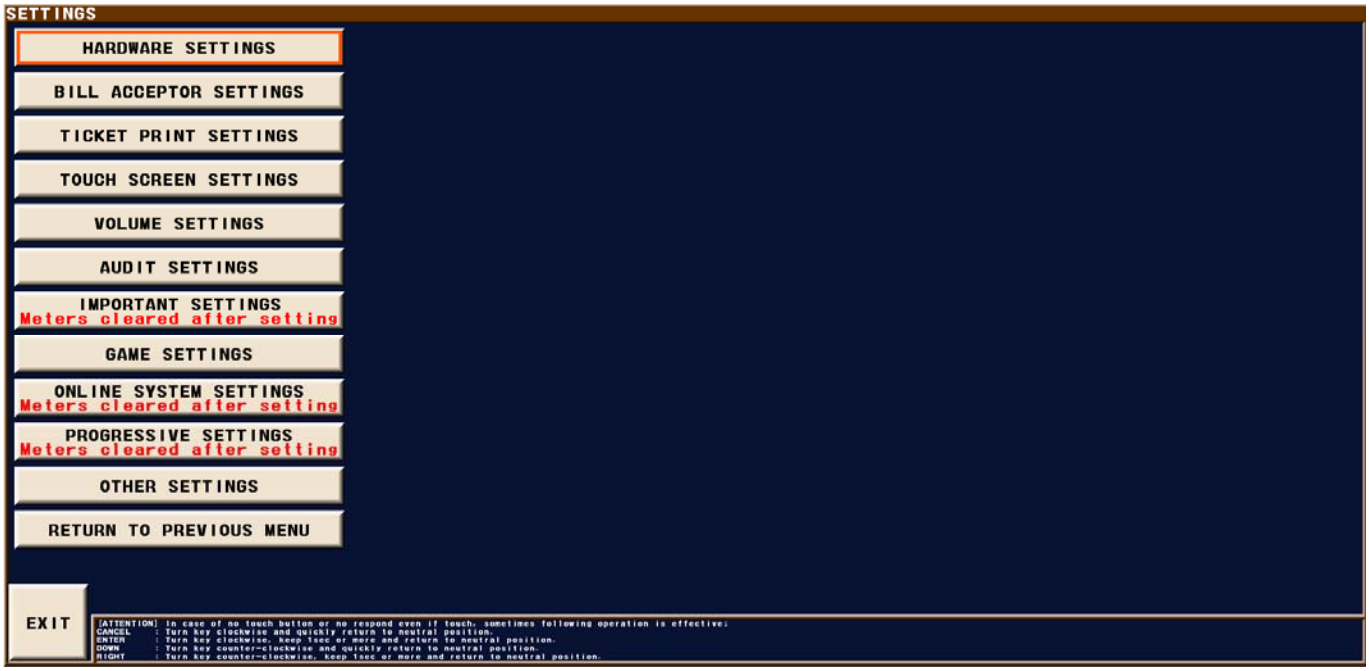
After power up, check the points below to make sure that there are no problems or errors before formal operation.

- ◇ Are there any door events or errors during power up?
- ◇ Are there any strange sounds or smells coming from the machine?
- ◇ Is the Monitor displaying correctly?
- ◇ Are all the luminaries lighting up properly?
- ◇ Refer to ”VERSION INFORMATION” on **“MACHINE IDENTIFICATION”** at Chapter 7 of the OPERATION Manual, to check that the Software version is the same as the Software Version approved for installation.
- ◇ Refer to “**Input Test**” and “**Output Test**” at Chapter 5 to test the proper functionality of Game buttons, RESET/AUDIT key switches etc.
- ◇ Refer to **”Sound Test”** at Chapter 5 to test that the Game sounds play correctly.
- ◇ Refer to **”BILL Acceptor Test”** and **“Ticket Print Test”** at Chapter 5 to test that the BILLs and Tickets inserted in the machine are counted correctly.

3. 9: Machine Setup (Software Setting) for Operation

The following settings should be checked and/or configured depending on the jurisdiction of use.

TOP MENU>SETTINGS>SOFTWARE SETTINGS



Hardware Settings (Refer to 5.9.1)

Change the settings of each hardware device of the Station.

BILL Acceptor Settings (Refer to 5.9.2)

Change the settings relative to the BILL Acceptor.

Ticket Print Settings (Refer to 5.9.3)

Change the settings relative to the Ticket Printer.

Touch Screen Settings (Refer to 5.9.4)

Adjust the Touch Screen.

Volume Settings (Refer to 5.9.5)

Adjust the volume of each Sound.

Software Settings (Refer to 5.9.6)

Not used in this machine

Audit Settings (Refer to 5.9.7)

Change the settings of functions relative to the credit.

Important Settings / Basic Settings (Refer to 5.9.8)
Change the settings and check the information relative to Currency, Denomination etc.

Game Settings (Refer to 5.9.9)
Change the settings relative to the Bet Type function.

Online System Settings (Refer to 5.9.10)
Change the settings relative to the Online System.

Progressive Settings (Refer to 5.9.11)
Check the settings relative to the Progressive Game set on the Center Unit.

ARUZE Link Server Settings (Refer to 5.9.12)
Not used in this machine

Other Settings (Refer to Refer to 5.9.13)
Change the settings of extra functions.


interblock
LUXURY GAMING PRODUCTS

Chapter 4

AUDIT Mode for Center Unit (Service)

Accessing – AUDIT mode - Top Menu

When the Machine is in idle mode (not during game or error status), the AUDIT menu can be accessed by the following procedure:

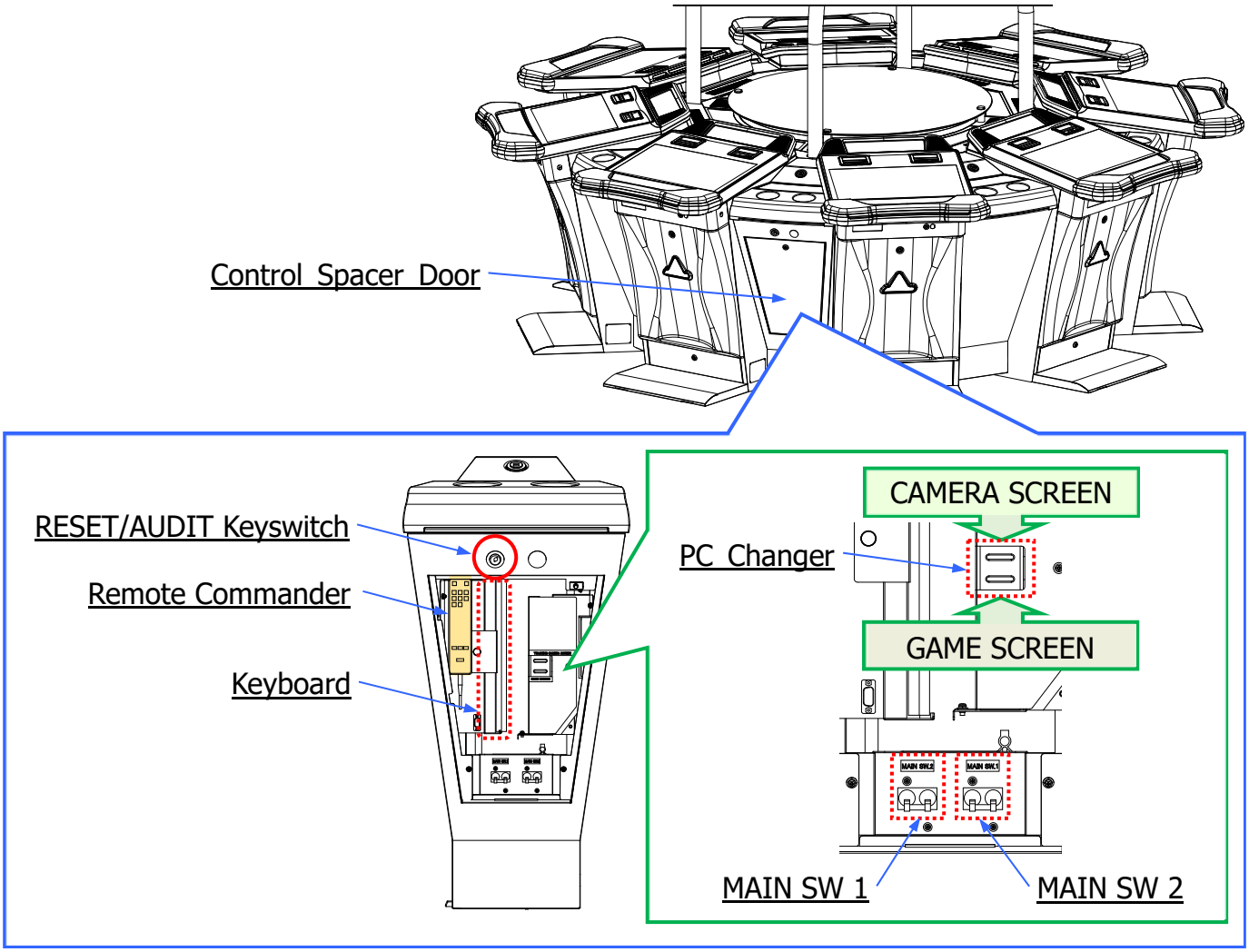
CAUTION!

To change the settings there should be no credit on the Stations connected to the Center Unit.

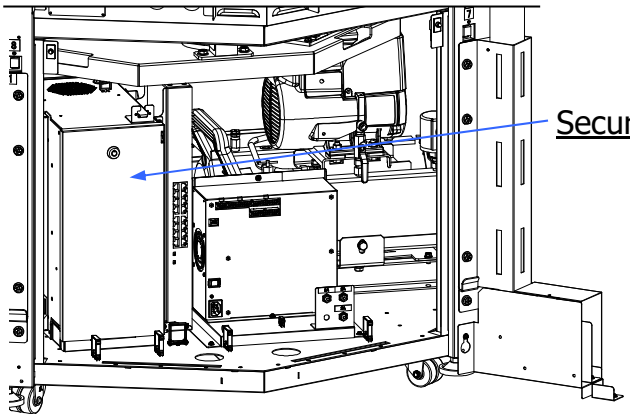
NOTE:

When the AUDIT mode is invoked, the games on this machine and on the connected stations are halted.

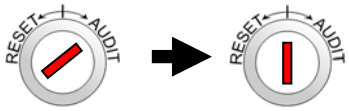
1. Refer to **"Opening Doors of the Center Unit"** on Chapter 2 to unlock and detach the Control Spacer Door in order to access to the Keyboard.



2. Open the doors as indicated by the instructions for each AUDIT setting item.



3. To call the AUDIT mode, turn the RESET/AUDIT Key Switch to the AUDIT position, and return it to the neutral position.



4. Select SETTING by using the following keys of the keyboard.

#	Item Name	Functionality
1	↑	Used to move up the cursor.
2	↓	Used to move down the cursor.
3	ENTER	Used to enter your selection.
4	ESC	Used to cancel your selection.



Structure of Audit Mode

The items explained in this manual are written in blue.

NOTE:
The items listed above may vary or not be displayed, according to the different jurisdictions.

ROOT MENU	SUB MENU
MAIN METERS See OPERATION Manual, Chapter 6	**MASTER METERS**
	ROULETTE DATA
	RESULT LIST
	SIDE GAME METERS
ERROR METERS See OPERATION Manual, Chapter 6	**SYSTEM ERRORS**
	ROULETTE ERRORS
	DOOR EVENTS
	ONLINE COMMUNICATION ERRORS
	NETWORK CONDITION METERS
	LIVE CAMERA ERRORS
RECALL METERS See OPERATION Manual, Chapter 6	**DOOR HISTORY**
	ERROR HISTORY
	ALL EVENT HISTORY
	PROGRESSIVE HISTORY
	SAS COMMUNICATION LOG
	SNAPSHOT – GAME DATA
	SNAPSHOT – ERROR DATA
	CHI SUQARE TEST
MACHINE IDENTIFICATION See OPERATION Manual, Chapter 6	**VERSION INFORMATION**
	PSD VERIFICATION (MD5 & CRC)
	PSD VERIFICATION (HMAC-SHA1)
	PSD VERIFICATION (SHA1)
	GAME INFORMATION
	HARDWARE INFORMATION
	SUBMISSION INFORMATION

ROOT MENU	SUB MENU
TEST (Can be performed only if the Control Spacer Door is open)	**MONITOR TEST**
	INPUT TEST
	OUTPUT TEST
	SERIAL TEST
	SOUND TEST
	ROULETTE UNIT TEST
SETTINGS (Can be set only if the Control Spacer Door is open)	**HARDWARE SETTINGS**
	MAIN UNIT SETTINGS (Set only if the Security Cage is open)
	VOLUME SETTINGS (Can be set also if there is credit on the stations)
	AUDIT SETTINGS
	IMPORTANT SETTINGS (Set only if the Security Cage is open)
	GAME SETTINGS **BET SETTINGS** **TIME SETTINGS** **EXTRA SETTINGS**
	GAME SOUND SETTINGS
	ONLINE SYSTEM SETTINGS (Set only if the Security Cage is open)
	OTHER SETTINGS (Can be set also if there is credit on the stations) **CLOCK SETTINGS** **ADDITIONAL SETTINGS** **MACHINE INFORMATION SETTINGS**
PERIOD METER CLEAR (Can be performed only if the Control Spacer Door is open)	
OUT OF SERVICE (Can be performed only if the Control Spacer Door is open)	
EXPORT LOG DATA (See 4.11)	(option for MACAU version)
SHUTDOWN (Can be performed only if the Control Spacer Door is open)	

4. 1: Audit Mode Differences based on Settings

NOTE:
The name of some AUDIT items changes according to the jurisdiction.

Jurisdiction	GLI、SABS、MACAU	CA	NV/AZ
IMPORTANT SETTINGS	IMPORTANT SETTINGS	IMPORTANT SETTINGS	BASIC SETTING

4. 2: Settings Menu Differences between NV GAL or SETTING GAL

NOTE:
For specific jurisdictions, when changing the settings of the SUB MENUS in the light blue areas of the chart below, please refer to **"Configuring Settings by using a Setting GAL: for NEVADA/ARIZONA"** on Chapter 6 to change from the GAME GAL Cassette in use to the SETTING GAL Cassette.

ROOT MENU	SUB MENU
SETTINGS	**HARDWARE SETTINGS**
	MAIN UNIT SETTINGS
	VOLUME SETTING
	AUDIT SETTINGS
	IMPORTANT SETTINGS or **BASIC SETTING**
	GAME SETTINGS
	GAME SOUND SETTINGS
	ONLINE SYSTEM SETTINGS
	OTHER SETTINGS

4. 3: Main Meters

TOP MENU >MAIN METERS

Refer to OPERATION Manual Chapter 6.1 **"Main Meters"** to check the Meters recorded by the machine.

4. 4: Error Meters

TOP MENU >ERROR METERS

Refer to OPERATION Manual Chapter 6.2 **"Error Meters"** to check the logs of each Error category.

4. 5: Recall Meters

TOP MENU >RECALL METERS

Refer to OPERATION Manual Chapter 6.3 **"Recall Meters"** to check records of each Event.

4. 6: Machine Identification

TOP MENU >MACHINE IDENTIFICATION

Refer to OPERATION Manual Chapter 6.4 **"Machine Identification"** to check various Information.

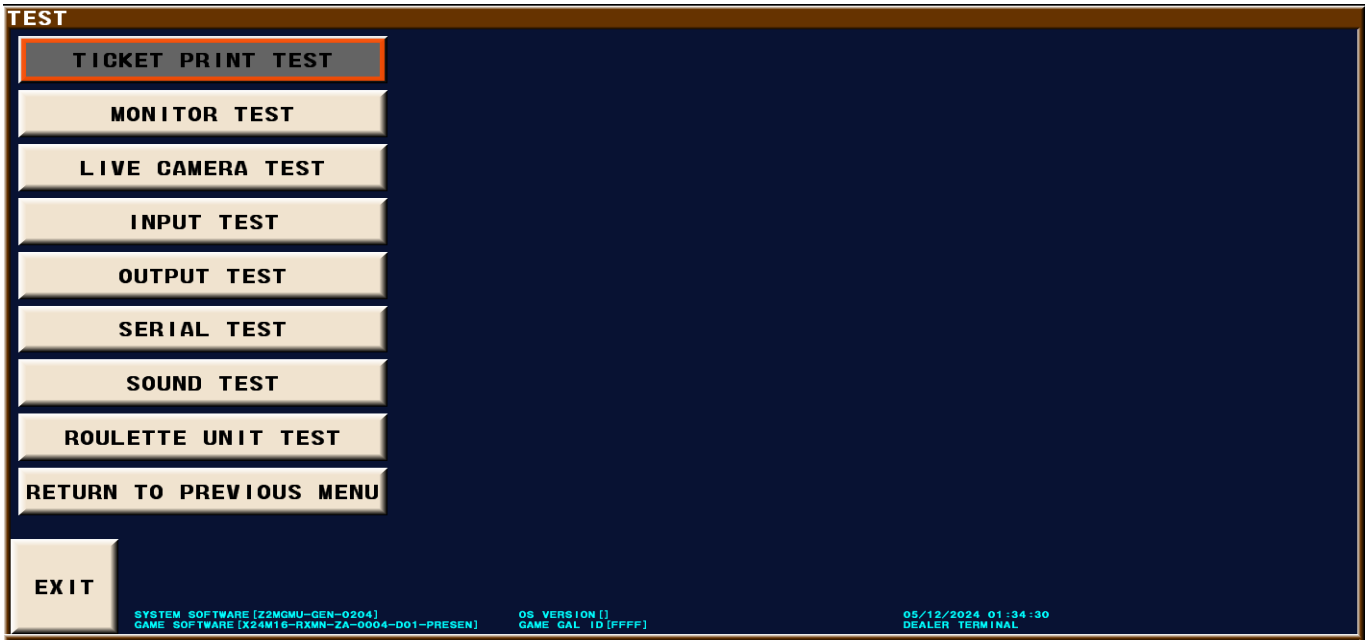
4. 7: Test

TOP MENU>TEST

NOTE:

・To perform this operation the Control Spacer Door must be open.

・In ONTARIO version, if all the doors are closed when displaying any Test screen except Input Test, the game will automatically return to the game screen.



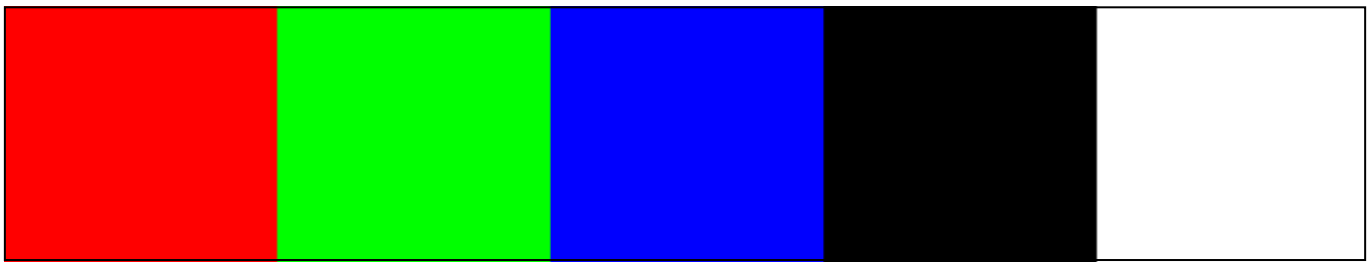
4. 7. 1: Monitor Test

TOP MENU>TEST>MONITOR TEST

Select one of the Buttons below to display the relative color on the screen.



Example screenshot



4. 7. 2: Live Camera Test

TOP MENU>TEST>LIVE CAMERA TEST

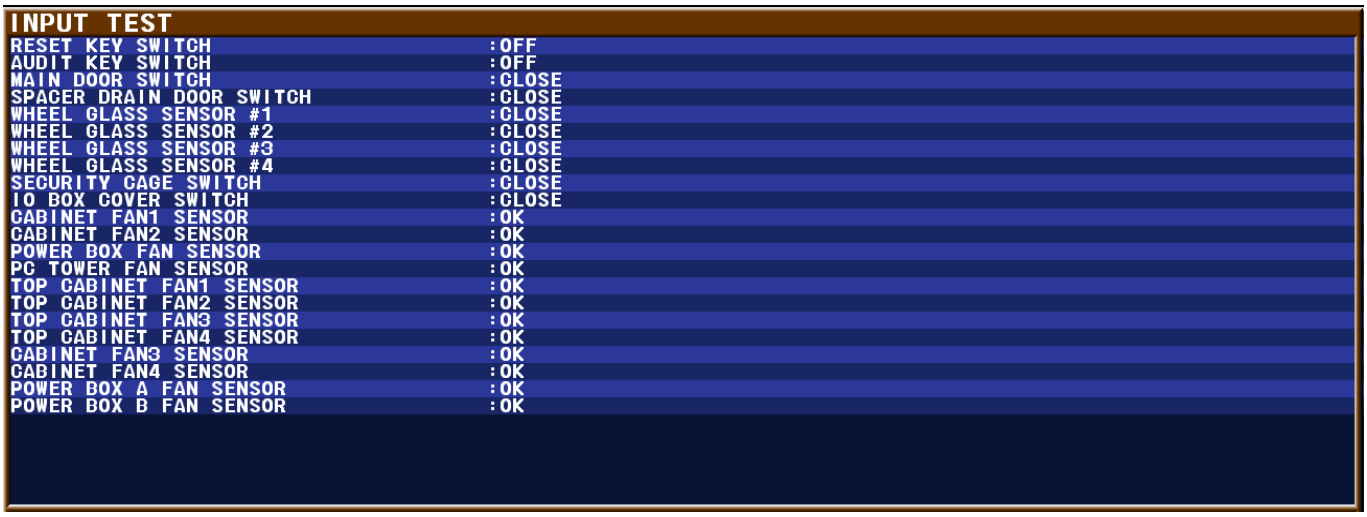


ITEM	DESCRIPTION
EXIT	Exit Live Camera Test.
LIGHT ON	Sets the field light ON.
LIGHT OFF	Sets the field light OFF.

4. 7. 3: Input Test

TOP MENU>TEST>INPUT TEST

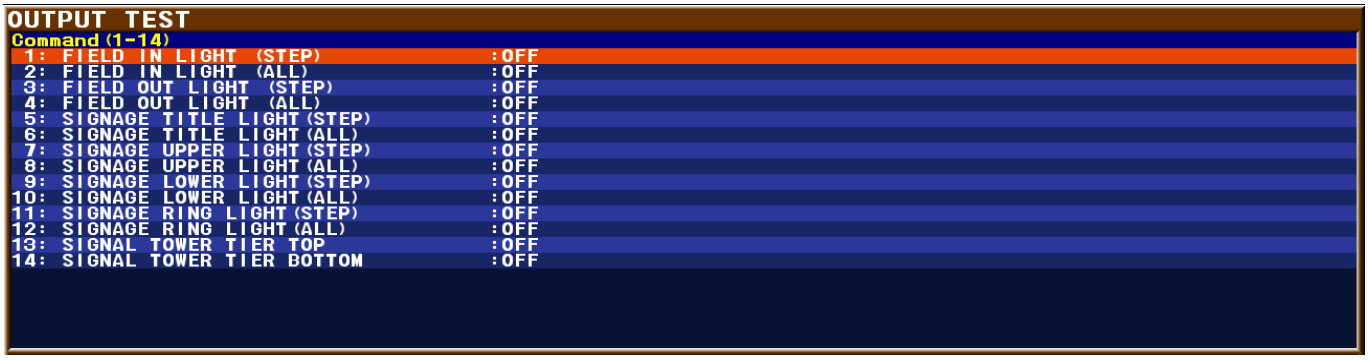
This item allows to check the operation of various functions.



4. 7. 4: Output Test

TOP MENU>TEST>OUTPUT TEST

This item allows to select each function in order to check the operation of the relative device.

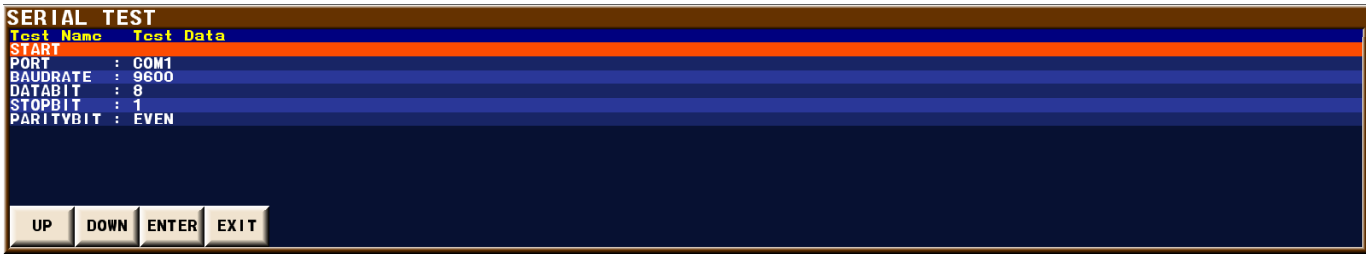


4. 7. 5: Serial Test

TOP MENU>TEST>SERIAL TEST

This item allows to perform a functionality test of the ports COM1-COM6.

> **NOTE:**
> This item is displayed only if on **"Online System Settings"(refer to 4.8.9)** the setting "SYSTEM TYPE" is set to **NONE**.



ITEM	Options
START	Start the serial test.
PORT	COM1 / COM2 / COM3 / COM4 / COM5 / COM6 / CANCEL
BAUDRATE	9600 / 19200 / 38400 / 115200 / CANCEL
DATABIT	7 / 8 / CANCEL
STOPBIT	1 / 2 / CANCEL
PARITYBIT	NONE / ODD / EVEN / CANCEL

4. 7. 6: Sound Test

TOP MENU>TEST>SOUND TEST

Select one of the Buttons below to play the relative sound.



Example screenshot of **SOUND TEST>SPEAKER TEST**



Example screenshot of **SOUND TEST>SOUND FILE TEST**

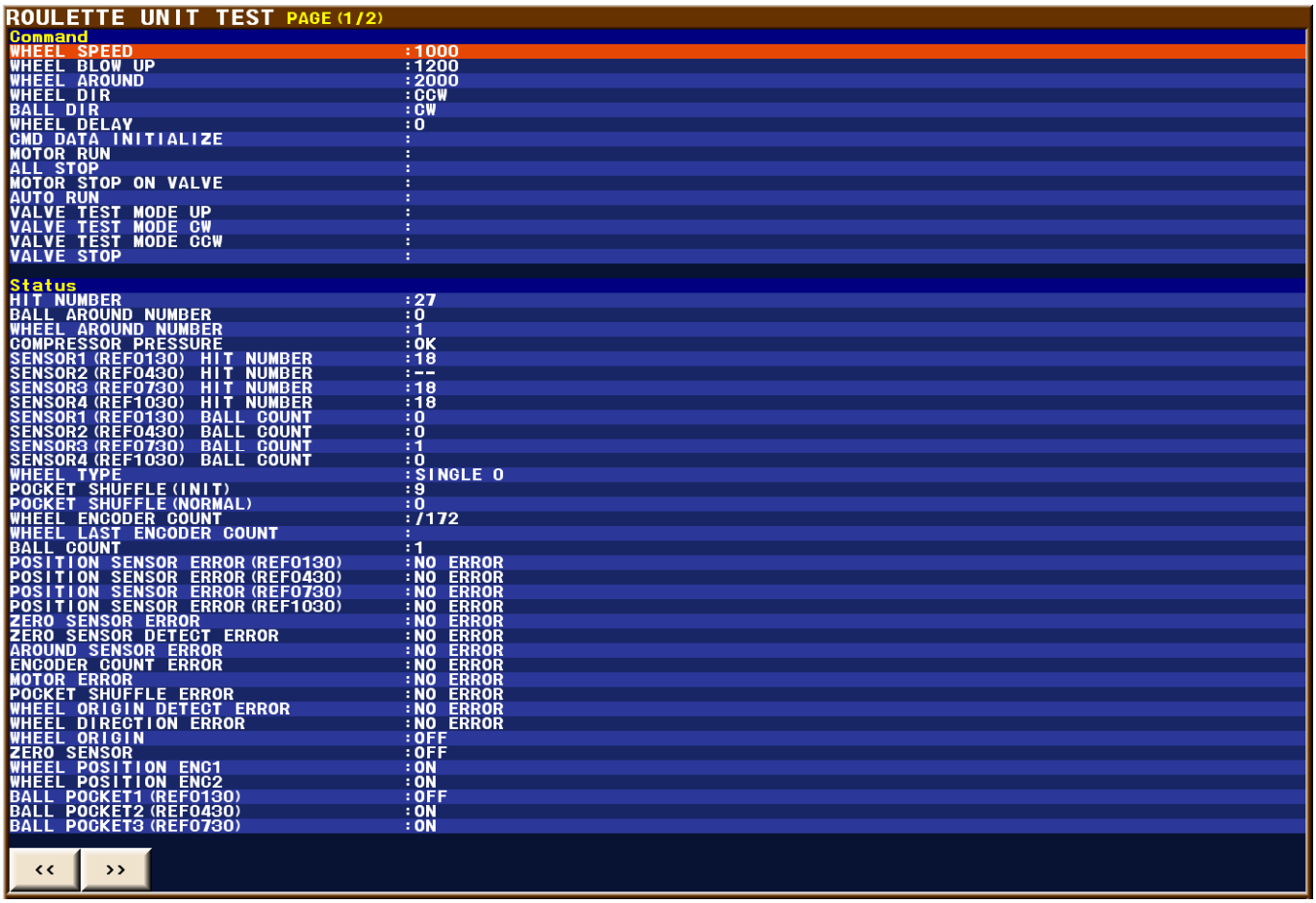


4. 7. 7: Roulette Unit Test

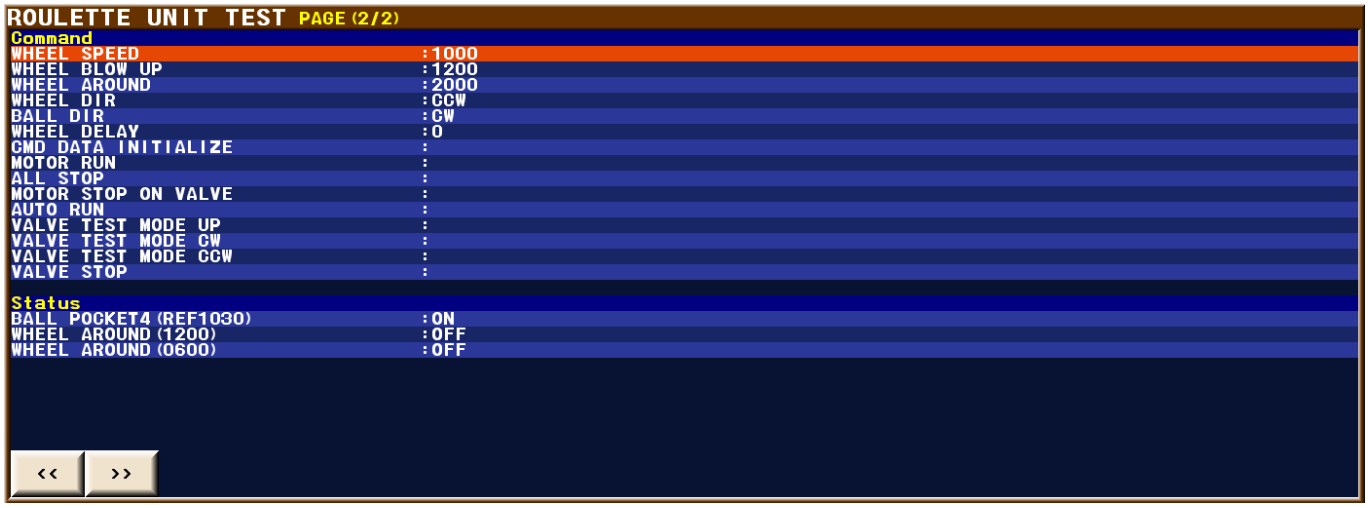
TOP MENU>TEST>SERIAL TEST

This item allows to check the operation of various functions of the Roulette Wheel.

Page 1



Page 2



COMMAND

ITEM	Options
WHEEL SPEED	The wheel rotation speed.
WHEEL BLOW UP	The operating time of the air valve for rising the ball.
WHEEL AROUND	The operating time of the air valve for spinning the ball.
WHEEL DIR	The spinning direction of the wheel. CW (Clockwise)/ CCW (Counterclockwise)
BALL DIR	The spinning direction of the ball. CW (Clockwise)/ CCW (Counterclockwise)
WHEEL DELAY	The time interval between the rising of the Ball and the start of the spinning.
CMD DATA INITIALIZE	Initialize the data.
MOTOR RUN	Start the wheel spinning.
ALL STOP	Stop all the test operations.
MOTOR STOP ON VALVE	The Wheel stops at the Ball rising position.
AUTO RUN	Execute a test of the wheel routine motion during game.
VALVE TEST MODE UP	Activate the air valve for ball rising is activated.
VALVE TEST MODE CW	Activate the air valve for ball spinning clockwise.
VALVE TEST MODE CCW	Activate the air valve for ball spinning counterclockwise.
VALVE STOP	Stop the air valve.

STATUS

ITEM	Options
HIT NUMBER	The number of the pocket where the ball finally stopped.
BALL AROUND NUMBER	The number of rotations run by the ball.
WHEEL AROUND NUMBER	The number of spins of the wheel.
COMPRESSOR PRESSURE	The status of the compressor.

ITEM	Options
SENSOR1 (REF0130) HIT NUMBER – SENSOR2 (REF0430) HIT NUMBER – SENSOR3 (REF0730) HIT NUMBER – SENSOR4 (REF1030) HIT NUMBER –	The number of the pocket where the ball stopped, that is identified by the sensors 1 to 4.
SENSOR1 (REF0130) BALL COUNT – SENSOR2 (REF0430) BALL COUNT – SENSOR3 (REF0730) BALL COUNT – SENSOR4 (REF1030) BALL COUNT –	Display the number of balls identified by the sensors 1 to 4.
WHEEL TYPE	The wheel type.
POCKET SHUFFLE(INIT)	The pocket shuffle initial value.
POCKET SHUFFLE (NORMAL)	The pocket shuffle normal value.
WHEEL ENCODER COUNT	The position of the Wheel encoder.
WHEEL LAST ENCODER COUNT	The last wheel encoder is displayed.
BALL COUNT	The number of balls.

ITEM	Options
POSITION SENSOR ERROR (REF0130) – (REF0430) – (REF0730) – (REF1030) –	The status of each Position Sensor.
ZERO SENSOR ERROR	Zero sensor does not respond despite the rotation of the wheel, or the state does not change for 3 seconds or more.
ZERO SENSOR DETECT ERROR	The Zero sensor does not react even if the wheel rotates twice at the wheel initialization time.
AROUND SENSOR ERROR	Two sensors react at the same time, or one sensor reacts 15 times in a row.
ENCODER COUNT ERROR	The encoder count does not change although the motor is moving.
MOTOR ERROR	The origin cannot be found even if the wheel circulates, and the encoder sensor does not change.
POCKET SHUFFLE ERROR	The pocket position at initialization differs from the pocket position at the game.
WHEEL ORIGIN DETECT ERROR	The Wheel Home position was not detected at the initialization.
WHEEL DIRECTION ERROR	Detection of a Wheel rotation different from the setting.
WHEEL ORIGIN	Becomes [ON] when the Wheel Home position is detected.
ZERO SENSOR	Becomes [ON] when the Sensor detects the "0" Pocket.
WHEEL POSITION ENC1 – ENC2	The status of each wheel position sensor.
BALL POCKET1 (REF0130) – BALL POCKET2 (REF0430) – BALL POCKET3 (REF0730) – BALL POCKET4 (REF1030) –	The status of each Ball Pocket sensor.
WHEEL AROUND(1200) – (0600)	The status of each Wheel Around Sensor.

4. 8: Settings

TOP MENU>SETTINGS

NOTE:

・To perform this operation the Control Spacer Door must be open.

・Most items cannot be set if the Security Cage is closed; refer to the indications for each item for more details.

・To change the settings there should be no credit on the Stations connected to the Center Unit.

・Updating the following settings will reset all soft meters. After the update it will be necessary a **[reboot]** of the machine. **(Refer to the Opening insert Safe Power OFF)**.

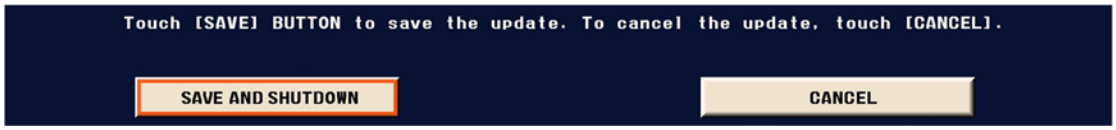
IMPORTANT SETTINGS

ONLINE SYSTEM SETTINGS

※ The settings above require a **[reboot]**, therefore it is necessary to pay attention at the order the settings are inputted. Please follow the procedure below.

① First, complete only the settings above (listed in green uppercase fonts). When completed, press the [RETURN TO PREVIOUS MENU] button, and exit [SETTINGS] once.

② The display will change to the following screen. Press [SAVE and SHUTDOWN] button. The Center Unit will turn into standby shutdown.



③ Turn OFF and ON the Power Switch of the Center Unit and do **[reboot]**. Close the Security Door of the Center Unit.

④ Open again the AUDIT [SETTINGS] and perform the remaining settings. When completed, exit the AUDIT and close the Doors.

※ In NEVADA version, "IMPORTANT SETTINGS" is displayed as "BASIC SETTINGS".

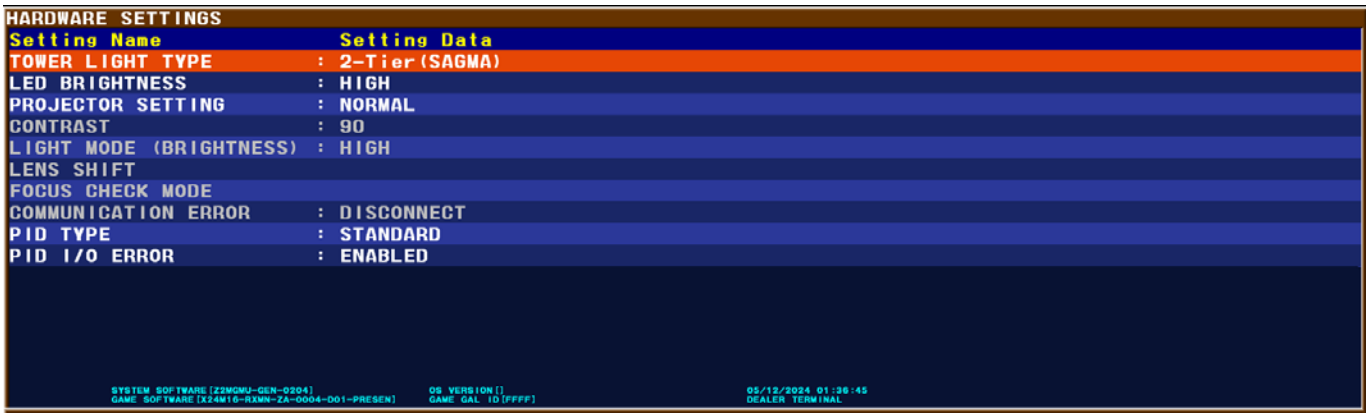


※The description of items not relevant to this Game will be omitted.

4. 8. 1: Hardware Settings

TOP MENU>SETTINGS>HARDWARE SETTINGS

This item allows to change the settings of each hardware device.



ITEM	DESCRIPTION
TOWER LIGHT TYPE	Set the Tower Light functions: **NONE** **2-TIER(SAGMA) [DEFAULT]** **2-TIER(USA)** **2-TIER(CANADA)** **3-TIER** **NOTE:** For NEVADA, the default is set to **"2-Tier(USA)"**. For ONTARIO the default is set to **"2-Tier(CANADA)"** Not displayed in WEST VIRGINIA.
LED BRIGHTNESS	The brightness of the LED illumination. **OFF** **LOW** **MIDDLE** **HIGH [DEFAULT]**
PROJECTOR SETTING	Select the Projector that is installed. **NORMAL [DEFAULT]** **OTHER** **NONE**
CONTRAST	Set the contrast of the projected image. **1-100 [DEFAULT: 90]**
LIGHT MODE (BRIGHTNESS)	Set the brightness of the projected images. **HIGH [DEFAULT]** **NORMAL**

ITEM	DESCRIPTION
LENS SHIFT	Change the position of the projector lens.
FOCUS CHECK MODE	Project a special display useful to check the focus of the projector.
COMMUNICATION ERROR	The status of the connection to the projector.
PID TYPE	**NOTE:** This item is for maintenance purpose only, do not change from its **[DEFAULT]** setting. **STANDARD [DEFAULT]** **NONE**
PID I/O ERROR	**NOTE:** This item is for maintenance purpose only, do not change from its **[DEFAULT]** setting. **ENABLED [DEFAULT]** **DISABLED**

4. 8. 2: Ticket Print Settings

Not used for this title.

4. 8. 3: Main Unit Settings

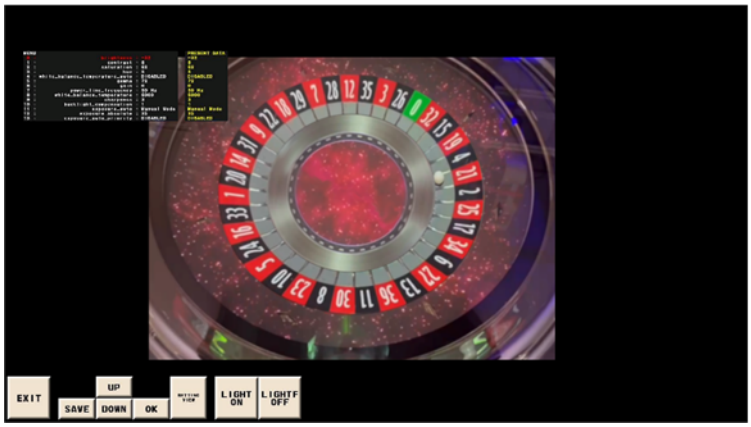
TOP MENU>SETTINGS>MAIN UNIT SETTINGS

This item allows to change the settings of different functions of the Center Unit.



ITEM	DESCRIPTION
ROTATIVE DIRECTION	Set the direction of the rotation of the wheel and the ball. **BALL: CW WHEEL:CCW [DEFAULT]** The ball rotates clockwise and the wheel rotates counter clockwise. **BALL: CCW WHEEL:CW** The ball rotates counter clockwise and the wheel rotates clockwise. **ALTERNATE** The direction of the rotation changes at each spin.
RISE VALVE OPEN TIME (100ms)	Set how long the air jet rising the ball will be activated. The unit of measurement is 100ms. **10-30 [DEFAULT: 12]**
TURN VALVE OPEN TIME (100ms)	Set how long the air jet blowing the ball for spinning will be activated. The unit of measurement is 100ms. **18-40 [DEFAULT: 20]**
VALVE DELAY TIME (100ms)	Set the time interval between the air jet rising the ball and the air jet blowing the ball for spinning. The unit of measurement is 100ms. **0-10 [DEFAULT: 0]**
NUMBER OF SECONDS BEFORE BET TIME CLOSED	Set if the ball will start spinning before the closing of the bets. **OFF [DEFAULT]** The ball will start spinning after the closing of the bets. **5** The ball will start spinning 5 seconds before the closing of the bets.
ERROR FOR 5 TIMES OF SAME WIN NUMBER IN A ROW	If the ball falls 5 times in a row in the same pocket, after all the wins are paid, [CONSECUTIVE SAME RESULT OF A WHEEL] is displayed and the machine locks up. The error message can be cleared by using the Reset Key. **ENABLED [DEFAULT]** **DISABLED**

ITEM	DESCRIPTION
CHI SQUARE TEST	Set the behavior of the machine in case the Chi Square Test failed. For the result of the Chi Square Test, refer to **"Chi Square Test"** on Chapter 6 of the OPERATION MANUAL. **WARNING ENABLD 1 [DEFAULT]** [SELF CHI SQUARE TEST FAILURE] is displayed every time an error occurs. This error can be reset by using the Reset Key. **WARNING ENABLED 2** [SELF CHI SQUARE TEST FAILURE] is displayed the first time an error occurs. From the second time the error occurs, [WHEEL MAINTENANCE REQUIRED] is displayed. Both errors can be reset by using the Reset Key. **WARNING DISABLED** The game operations will continue without displaying any error message. **NOTE:** The "CHI SQUARE TEST" item is not displayed in NEVADA version, and the setting is fixed on **"WARNING ENABLED 2"**.
LIVE CAMERA TYPE	Set the camera to use. **BRICKCOM (FBH200NP-WDRPeo) [DEFAULT]** **BRICKCOM (FBH200NP-S-WDRPeo)** **AIDA (HD-NDI-200)** **TINKER BOARD USB CAMERA** **OTHER CAMERA**
LIVE CAMERA ADDRESS	Set the IP address of the Live Camera. **NOTE:** This item is active only if "LIVE CAMERA TYPE" is set to **BRICKCOM (FBH200NP-S-WDRPeo)**, **AIDA (HD-NDI-200)** or **OTHER CAMERA**.

ITEM	DESCRIPTION
LIVE CAMERA SETTINGS	Adjust image settings of the Live Camera.  **EXIT** Exit Live Camera Settings. **SETTING VIEW** Shows the Setting menu of the Camera on the top left of the screen. **LIGHT ON** Sets the field light ON. **LIGHT OFF** Sets the field light OFF. **NOTE:** This item is active only when "LIVE CAMERA TYPE" is set to **TINKER BOARD USB CAMERA**
LIVE CAMERA ERROR	Set the machine behavior in case a Camera Error occurs. **WARNING [DEFAULT]** The machine does not lock up. [LIVE CAMERA DISCONNECTED] is displayed. **LOCK UP** The machine locks up and [LIVE CAMERA DISCONNECTED] is displayed. **DISABLED** No error will be displayed.
WHEEL UNIT TYPE	**NOTE:** This item is for maintenance purpose only, do not change from its **[DEFAULT]** setting. **NORMAL [DEFAULT]** **DUMMY HOST**

4. 8. 4: Volume Settings

TOP MENU>SETTINGS>VOLUME SETTING

This item allows to adjust the volume of each Sound.



ITEM	DESCRIPTION
MASTER VOLUME	Set the volume of general sounds. **1 - 30 [DEFAULT: 25]**
BGM VOLUME	Set the volume of the BGM. **0 - 30 [DEFAULT: 15]**
SE VOLUME	Set the volume of the sound effects can be set. **0 - 30 [DEFAULT: 15]**
VOICE VOLUME	Set the volume of the Voice sound. **0 - 30 [DEFAULT: 15]**
SYSTEM VOLUME	Set the volume of the error sounds. **1 - 30 [DEFAULT: 15]**

4. 8. 5: Audit Settings

TOP MENU>SETTINGS>AUDIT SETTINGS

This item allows to check the number used for money transactions.



ITEM	DESCRIPTION
ASSET NUMBER	The number used to verify the Machine for transactions such as AFT transfers. **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 4.8.9)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

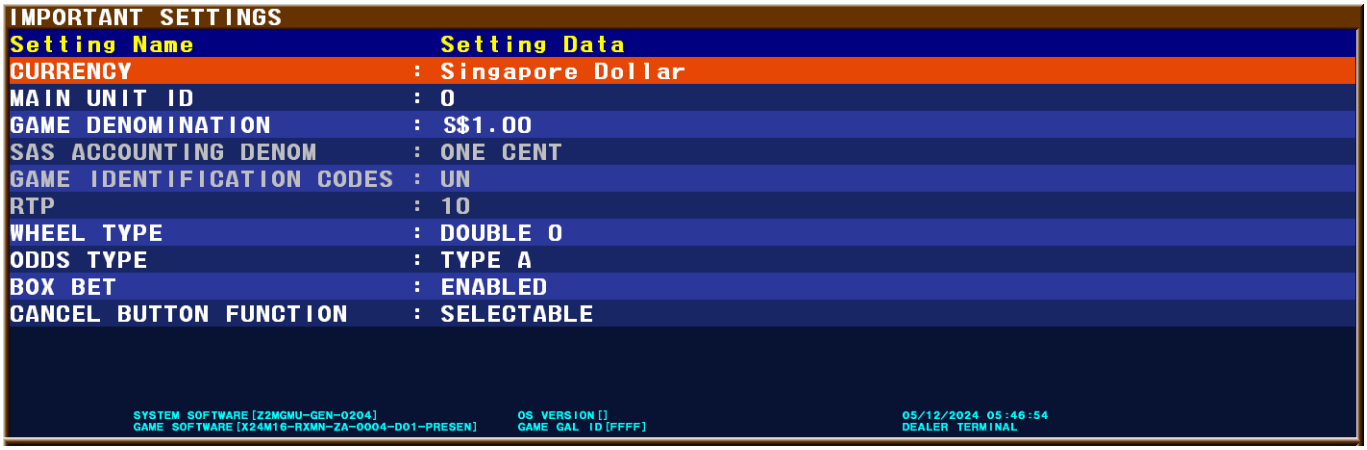
4. 8. 6: Important Settings / Basic Settings

TOP MENU>SETTINGS>IMPORTANT SETTINGS

This item allows to set the information relative to Currency, Denomination etc.

NOTE:

- To perform this operation, the Security Cage Door must be open.
- When using NEVADA GAL, the IMPORTANT SETTINGS will be displayed as BASIC SETTINGS.
- All meters will be cleared when any changes are made to the **"Important Settings / Basic Settings"**.
- The value of progressive prizes will be reset to their base values when any changes are made to the **"Important Settings / Basic Settings"**. Use ADJUST VALUES on **"Progressive Setting"** to input the correct value.
- In specific jurisdictions, a Setting GAL is required to change the setting of some items. Please refer to **"Configuring Settings by using a Setting GAL: for NEVADA/ARIZONA"** on Chapter 6 to change from the GAME GAL Cassette in use to the SETTING GAL Cassette.



ITEM	DESCRIPTION
CURRENCY	Set a currency out of the options displayed as **"Currency" (Refer to 4.8.6.1)**. The currency setting also affects how the date will be displayed.
MAIN UNIT ID	Set the Id number of the Center Unit. The ID number must be changed from the **DEFAULT** value to start the game operation. **0001-9999 [DEFAULT: 0000]**

ITEM	DESCRIPTION
GAME DENOMINATION	Set the value of 1 credit. (The actual correspondence of the numeric value to the monetary value varies according to the currency). Supported denominations (all currencies except Kangwon Land) : **10c, 15c, 20c, 25c, 40c, 50c, $1, $2, $5, $10, $20, $25, $50, $100 CANCEL [DEFAULT: $1]** Supported denominations for Kangwon Land : **w1, w2, w5, w10, w20, w25, w50, w100, w200, w500, w1000, CANCEL [DEFAULT: w1]**
SAS ACCOUNTING DENOM	Set the SAS Accounting Denominator. **ONE CENT [FIXED]**
JURISDICTION	Input the jurisdiction. **NOTE:** This item is displayed only in ONTARIO version.
GAME IDENTIFICATION CODES	Set the game identification code. **UN [DEFAULT]** **IB** **EL** **NOTE:** This item can be set only after the ALL RAM Clear.

<table>
<tr><th>ITEM</th><th>DESCRIPTION</th></tr>
<tr><td>RTP
※The percentage listed under [VARIATION] is the average RTP of the Side Game.</td><td>Shows the [VARIATION], according to [WHEEL TYPE], [ODDS TYPE] and [BOX BET] settings, described below. The RTP% for the Side Game depends on the [VARIATION].
<table>
<tr><th>VARIATION</th><th>WHEEL TYPE</th><th>ODDS TYPE</th><th>BOX BET</th></tr>
<tr><td>1 (N/A)</td><td>SINGLE 0</td><td>NONE</td><td>DISABLED</td></tr>
<tr><td>2 (97.30%)</td><td>SINGLE 0</td><td>TYPE A</td><td>DISABLED</td></tr>
<tr><td>3 (97.30%)</td><td>SINGLE 0</td><td>TYPE B</td><td>DISABLED</td></tr>
<tr><td>4 (97.30%)</td><td>SINGLE 0</td><td>TYPE C</td><td>DISABLED</td></tr>
<tr><td>5 (N/A)</td><td>SINGLE 0</td><td>NONE</td><td>ENABLED</td></tr>
<tr><td>6 (97.30%)</td><td>SINGLE 0</td><td>TYPE A</td><td>ENABLED</td></tr>
<tr><td>7 (97.30%)</td><td>SINGLE 0</td><td>TYPE B</td><td>ENABLED</td></tr>
<tr><td>8 (97.30%)</td><td>SINGLE 0</td><td>TYPE C</td><td>ENABLED</td></tr>
<tr><td>9 (N/A)</td><td>DOUBLE 0</td><td>NONE</td><td>DISABLED</td></tr>
<tr><td>10 (94.68%)</td><td>DOUBLE 0</td><td>TYPE A</td><td>DISABLED</td></tr>
<tr><td>11 (94.80%)</td><td>DOUBLE 0</td><td>TYPE B</td><td>DISABLED</td></tr>
<tr><td>12 (94.71%)</td><td>DOUBLE 0</td><td>TYPE C</td><td>DISABLED</td></tr>
<tr><td>13 (N/A)</td><td>DOUBLE 0</td><td>NONE</td><td>ENABLED</td></tr>
<tr><td>14 (94.68%)</td><td>DOUBLE 0</td><td>TYPE A</td><td>ENABLED</td></tr>
<tr><td>15 (94.80%)</td><td>DOUBLE 0</td><td>TYPE B</td><td>ENABLED</td></tr>
<tr><td>16 (94.71%)</td><td>DOUBLE 0</td><td>TYPE C</td><td>ENABLED</td></tr>
</table></td></tr>
<tr><td>WHEEL TYPE</td><td>Set the wheel type. The Wheel type to use depends to the jurisdiction.
<u>SINGLE 0</u>
<u>DOUBLE 0</u></td></tr>
</table>

ITEM	DESCRIPTION
ODDS TYPE	Set the property of the Odds Up Side Game. For more details about the Side Game, refer to OPERATION Manual Chapter 3 **"How to play"**. **TYPE A [DEFAULT]** Quantity of spots with increased Odds: **Middle** / Odds Up range (40-500) **TYPE B** Quantity of spots with increased Odds: **Low** / Odds Up range (50-500). **TYPE C** Quantity of spots with increased Odds: **High** / Odds Up range (53-500). **NONE** Side Game not available. The game operates as a standard Roulette Game.
BOX BET	Allows Box Bets. **DISABLED** **ENABLED [DEFAULT]**
CANCEL BUTTON FUNCTION	Set the functionality for the [CANCEL] or [ALL CANCEL] button. **ONE CHIP CANCEL MODE** [CANCEL] button is displayed. Bet Chips can be canceled one by one. **ALL CHIPS CANCEL MODE** [ALL CANCEL] button is displayed. All the bet Chips are canceled together. **SELECTABLE [DEFAULT]** A pop-up menu is displayed to let the player chose one of the two options.

4. 8. 6. 1: Currency

TOP MENU>SETTINGS>IMPORTANT SETTINGS>CURRENCY

NOTE:

・To perform this operation, the Security Cage Door must be open.

・The Currency setting determinates the Date format.

For example, when the currency setting is set to **"Euro"**, the displayed date will be DD/MM/YYYY hh:mm:ss. Therefore the date and time displayed at a quarter past 2 and 28 seconds on the afternoon of August 16th, 2013 will be displayed as: 16/08/2013 14:15:28

The following are the possible options for currency.



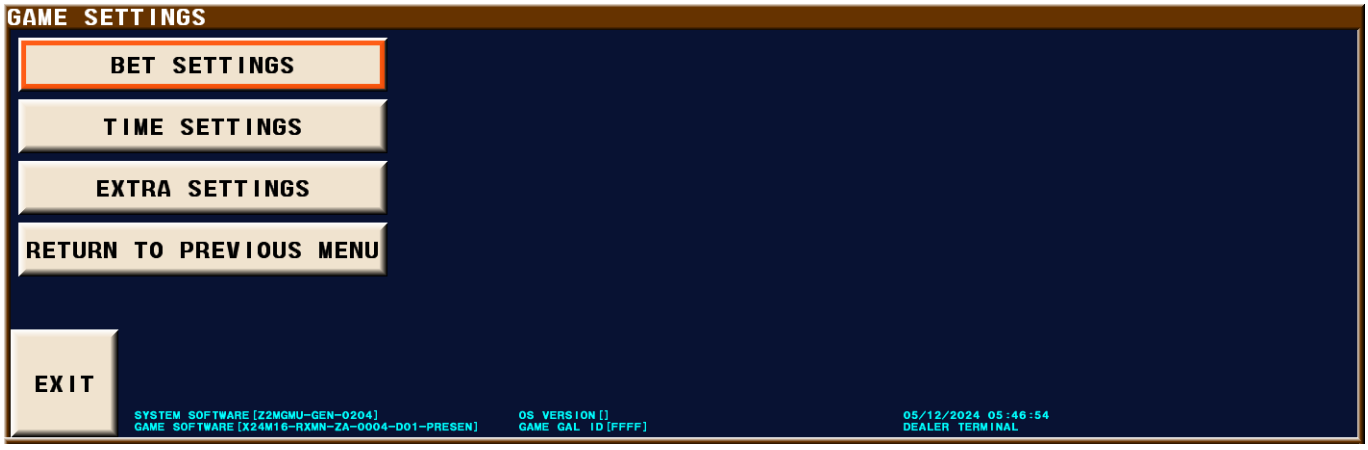
Currency Name	Displayed Currency	Displayed Date
Dollar **[DEFAULT]**	$0.00	MM/DD/YYYY hh:mm:ss (special)
Hong Kong Dollar	HK$0.00	DD/MM/YYYY hh:mm:ss (common)
South African Rand	R0.00	DD-MM-YYYY hh:mm:ss (special)
Philippine Peso	P0.00	DD/MM/YYYY hh:mm:ss (common)
Singapore Dollar	S$0.00	DD/MM/YYYY hh:mm:ss (common)
Botswana Pula	P0.00	DD/MM/YYYY hh:mm:ss (common)
Euro	€0.00	DD/MM/YYYY hh:mm:ss (common)
Macau Pataca	MOP0.00	DD/MM/YYYY hh:mm:ss (common)
Malaysian Ringgit	RM0.00	DD/MM/YYYY hh:mm:ss (common)
Peso	$0.00	DD/MM/YYYY hh:mm:ss (common)
Korean Won	W0	DD/MM/YYYY hh:mm:ss (common)
Korean Won (Kangwon Land)	W0	DD/MM/YYYY hh:mm:ss (common)
Thailand Baht	0.00B	DD/MM/YYYY hh:mm:ss (common)

Currency Name	Displayed Currency	Displayed Date
Russian Ruble	0.00R	DD/MM/YYYY hh:mm:ss (common)
Turkish Lira	L0.00	DD/MM/YYYY hh:mm:ss (common)
Suriname Dollar	SRD 0.00	DD/MM/YYYY hh:mm:ss (common)
Georgia Lari	0.00GEL	DD/MM/YYYY hh:mm:ss (common)
Kazakhstan Tenge	T0.00	DD/MM/YYYY hh:mm:ss (common)
Poland Zloty	0.00zł	DD/MM/YYYY hh:mm:ss (common)
Canadian Dollar	$0.00	DD/MM/YYYY hh:mm:ss (common)
Macedonia Denar	0 MKD	DD/MM/YYYY hh:mm:ss (common)
Czech Koruna	0 CZK	DD/MM/YYYY hh:mm:ss (common)
Pound	£ 0.00	DD/MM/YYYY hh:mm:ss (common)
Rupee	Rs0	DD/MM/YYYY hh:mm:ss (common)
Swiss Franc	CHF0.00	DD/MM/YYYY hh:mm:ss (common)
Seychelles Rupee	SR0.00	DD/MM/YYYY hh:mm:ss (common)
Romanian Leu	Lei0.00	DD/MM/YYYY hh:mm:ss (common)
Chinese Yuan	¥0	YYYY/MM/DD hh:mm:ss (special)
Nothing	0	DD/MM/YYYY hh:mm:ss (common)

4. 8. 7: Game Settings

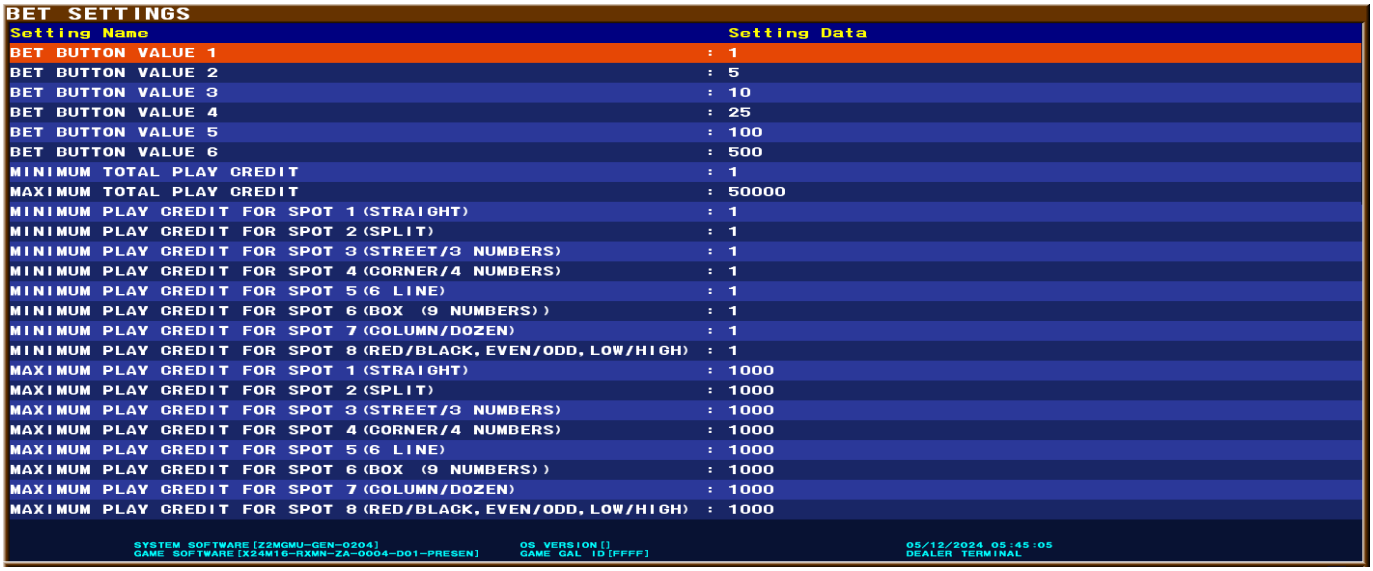
TOP MENU>SETTINGS>GAME SETTINGS

This item allows to change the settings relative to the Game specific functions.



4. 8. 7. 1: Bet Settings

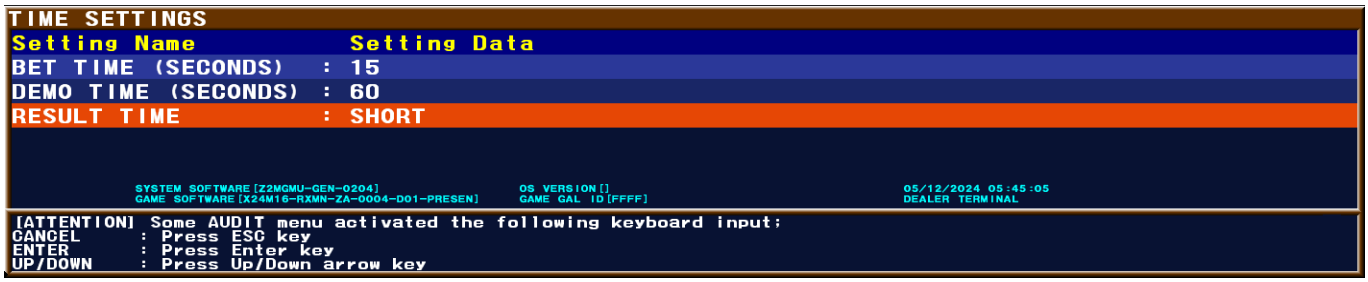
TOP MENU>SETTINGS>GAME SETTINGS>BET SETTINGS



ITEM	DESCRIPTION
BET BUTTON VALUE xx	Set the value for each bet button. **1, 5, 10, 20, 25, 50, 100, 500, 1000, 5000, 10000, 50000, 100000, DISABLED (not available for Bet Button 1)** **NOTE:** Setting value options varies according to the "CURRENCY".
MINIMUM TOTAL PLAY CREDIT	Set the minimum bet needed to play the game. This setting is limited to values equal or less than the setting of "MAXIMUM TOTAL PLAY CREDIT". **[DEFAULT: 1]**
MAXIMUM TOTAL PLAY CREDIT	Set the maximum bet allowed for a Game play. The setting rage goes from the setting of the "MAXIMUM PLAY CREDIT for xx" for the Bet Spot with the higher setting, up to 1,000,000. **[DEFAULT: 50,000]**
MINIMUM PLAY CREDIT FOR xx	Set the minimum bet needed to play on each Bet Spot. This setting is limited to values equal or less than the setting of " MAXIMUM PLAY CREDIT FOR xx" for the relative bet spot. **[DEFAULT: 1]**
MAXIMUM PLAY CREDIT FOR xx	Set the maximum bet allowed on each Bet Spot. The setting rage goes from the setting of "MINIMUM PLAY CREDIT for xx" relative to the same spot, up to 100,000 or the setting value of "MAXIMUM TOTAL PLAY CREDIT". **[DEFAULT: 1000]**

4. 8. 7. 2: Time Settings

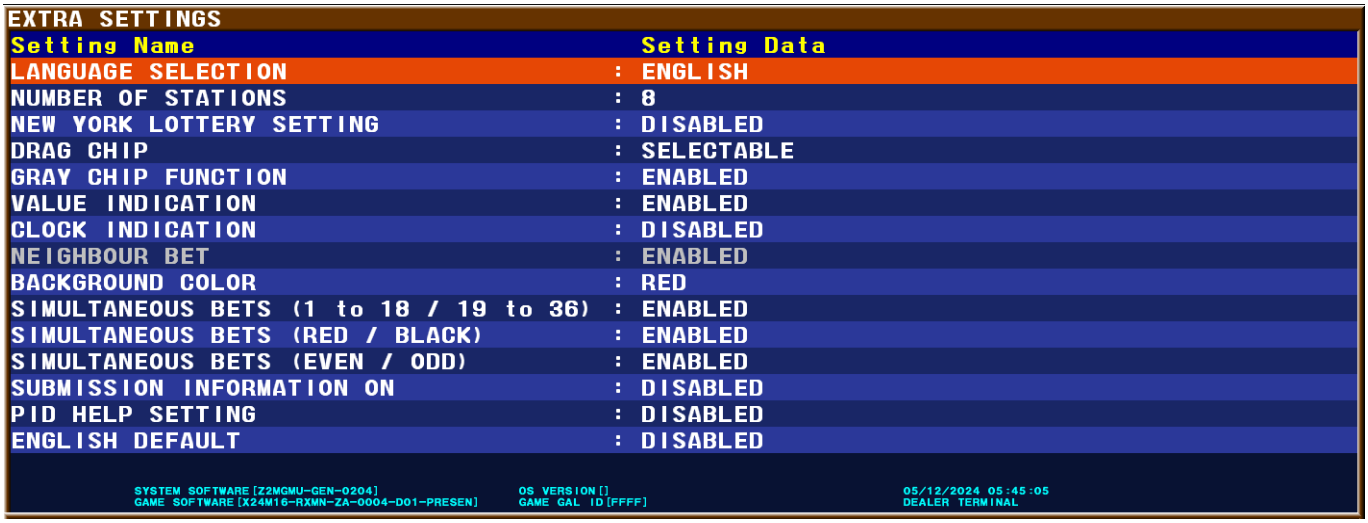
TOP MENU>SETTINGS>GAME SETTINGS>TIME SETTINGS



ITEM	DESCRIPTION
BET TIME (SECONDS)	Set the length of the Bet Time in seconds. **15 - 120 [DEFAULT: 15]**
DEMO TIME (SECONDS)	Set after how many seconds the machine will wait before starting the count down for bet close and then spin the wheel when there is no player.
RESULT TIME	Set how long the game results will be displayed. **LONG** About 7 seconds. **SHORT [DEFAULT]** About 4 seconds.

4. 8. 7. 3: Extra Settings

TOP MENU>SETTINGS>GAME SETTINGS>EXTRA SETTINGS



ITEM	DESCRIPTION
LANGUAGE SELECTION	Select the language to be displayed on the game screen. **CHINESE** **ENGLISH [DEFAULT]** **NOTE:** This item may not be settable according to the jurisdiction.
NUMBER OF STATIONS	Set the number of stations connected to the Central Unit. **8-120 [DEFAULT:8]**
NEW YORK LOTTERY SETTING	Set to **ENABLED** only for jurisdictions that require the message [This is a lottery game and the results are not affected by any element of skill]. The wording displayed in the Help will change. **DISABLED [DEFAULT]** **ENABLED**
DRAG CHIP	Allows to move Chips already placed to other Bet Spots. **DISABLED** **ENABLED** **SELECTABLE [DEFAULT]** A pop-up menu is displayed to let the player chose one of the two options.
GREY CHIP FUNCTION	Chips that do not reach the minimum allowed for the bet are displayed in grey and returned to the player at the start of the game. **DISABLED [DEFAULT]** for NEVADA and WEST VIRGINIA version **ENABLED [DEFAULT]**

ITEM	DESCRIPTION
VALUE INDICATION	The monetary value is displayed over the chips even when the screen display is changed to credit value. **DISABLED** **ENABLED [DEFAULT]**
CLOCK INDICATION	Display the clock on the stations. **DISABLED [DEFAULT]** **ENABLED**
NEIGHBOUR BET	Shows the neighbor bet buttons. **ENABLED [FIXED]**
BACKGROUND COLOR	Set the color of the background for the Game. **BLUE** **RED [DEFAULT]** **GREEN** **YELLOW** **ORANGE** **VIOLET** **LIGHT BLUE**
SIMULTANEOUS BETS (1 to 18 / 19 to 36)	Allows to bet on numbers from 1 to 18 and from 19 to 36 at the same time. **DISABLED** **ENABLED [DEFAULT]**
SIMULTANEOUS BETS (RED / BLACK)	Allows to bet on RED and BLACK at the same time. **DISABLED** **ENABLED [DEFAULT]**
SIMULTANEOUS BETS (EVEN / ODD)	Allows to bet on EVEN and ODD numbers at the same time. **DISABLED** **ENABLED [DEFAULT]**
SUBMISSION INFORMATION ON	Set to **ENABLED** to display "SUBMISSION INFORMATION" in the AUDIT page **"MACHINE IDENTIFICATION"**. It will be displayed wile [GAME INFORMATION] is displayed as well. (For more information, please refer to **"Submission Information"** at chapter 6 of OPERATION Manual.) **DISABLED [DEFAULT]** **ENABLED**

ITEM	DESCRIPTION
PID HELP SETTING	Shows the Game Information pages of the Help (Player Information Display). **DISABLED** **ENABLED [DEFAULT]** 
ENGLISH DEFAULT	Set if the language will automatically switch to English, in case it was set to another language and one minute has passed since the credits were cashed out. **DISABLED [DEFAULT]** **ENABLED**

4. 8. 8: Game Sound Settings

TOP MENU>SETTINGS>GAME SOUND SETTINGS

This item allows to change the Game Sound settings.



ITEM	DESCRIPTION
SOUND TYPE	Set the sound type to play during the game. **DANCE [DEFAULT]** **ORCHESTRA** **PERCUSSIVE** **CHINESE** **POPS** **JAZZ** **LATIN**
STATION COUNT DOWN SOUND	Plays a Countdown sound at the end of the Bet time. **ENABLED [DEFAULT]** **DISABLED**
VOICE TYPE	Set the voice type to play during the game. **HIGH** **LOW [DEFAULT]**
BALL SE	Play a sound effect during the Ball rotation. **DISABLED** **ENABLED [DEFAULT]**

4. 8. 9: Online System Settings

TOP MENU>SETTINGS>ONLINE SYSTEM SETTINGS

This item allows to change the settings relative to the Online System.

NOTE:
- To perform this operation, the Security Cage Door must be open.
- The value of progressive prizes will be reset to their base values when any changes are made to the **"Online System Settings"**. Use ADJUST VALUES on **"Progressive Setting"** to input the correct value.
- (Except in ONTARIO version) All meters will be cleared when any changes are made to the **"Online System Settings"**.



ITEM	DESCRIPTION
SYSTEM TYPE	Set the Online System. **NONE [DEFAULT]** **IGT SAS 6.02** **NOTE:** ·If this item is set to **NONE**, other items will not be displayed. ·To use Paltronics connection, set this item to **IGT SAS 6.02**.
GAMING MACHINE ADDRESS (MAIN PORT)	Set the ID that identifies the cabinet for the SAS communication (with the basic SAS Port). **1 - 127 [DEFAULT: 1]** **NOTE:** In WEST VIRGINIA version this item can be modified only at the first access to the AUDIT after the RAM clear. After exiting the audit once, the item will be gray out.
LOCKUP DURING OFFLINE	When the SAS System OFFLINE, the machine will lock up. **NO** **YES [DEFAULT]** **NOTE:** This item is not displayed in WEST VIRGINIA version.

ITEM	DESCRIPTION
LOCK UP WHEN NOT RECEIVING ACK	Set the behavior in case a [HOST COMMUNICATION LINK DOWN] error occurs. **NO [DEFAULT]** A [Warning] will be displayed on the top left of the game screen, but the game continues. **YES** The machine locks up. **NOTE:** This item is not displayed in WEST VIRGINIA version.
LOCK UP WHEN EXCEPTION BUFFER OVERFLOW	Set the behavior of the machine when an [EXCEPTION BUFFER OVERFLOW] error occurs. **NO** A [Warning] will be displayed on the top left of the game screen, but the game continues. **YES [DEFAULT]** The machine locks up.

4. 8. 9. 1: SAS Port Settings

TOP MENU>SETTINGS>ONLINE SYSTEM SETTINGS>SAS PORT SETTINGS



ITEM	DESCRIPTION
SYSTEM TYPE	The SAS System Type
GAMING MACHINE ADDRESS (MAIN PORT)	The address of the main SAS Port. **1 - 127 [DEFAULT: 1]**
GAMING MACHINE ADDRESS (EXTEND PORT 1)	The address of Extend Port 1. **1 - 127 [DEFAULT: 1]**
GAMING MACHINE ADDRESS (EXTEND PORT 2)	The address of Extend Port 2. **1 - 127 [DEFAULT: 1]**
PRIMARY PORT (Wait Startup From Host)	Set which port is used for the connection to the Main Host. **NOT USE [DEFAULT]** not displayed in WEST VIRGINIA version **MAIN PORT [DEFAULT]** for WEST VIRGINIA version **EXTEND PORT 1** **EXTEND PORT 2**

4. 8. 10: Other Settings

TOP MENU>SETTINGS>OTHER SETTINGS

This item allows to change the settings of extra functions.



ITEM	DESCRIPTION
CLOCK SETTINGS	The date and time are displayed according to the input from the SAS System. The date format is displayed is dependent on the Currency Setting. The time is displayed as (hour:minute:second)
ADDITIONAL SETTINGS	Change the Additional Settings. More details are described at **"Additional Settings" (Refer to 4.8.10.1)**.
MACHINE INFORMATION SETTINGS	Displays the Asset Number, and can be used to input the Floor Location and the Serial Number. **ASSET NUMBER** The Machine Authentication number used for AFT transfers. (Read Only) **FLOOR LOCATION** The Floor Location can be set. SAS LP B7 **SERIAL NUMBER** The Serial Number can be set. SAS LP 54

4. 8. 10. 1: Additional Settings

TOP MENU>SETTINGS>OTHER SETTINGS>ADDITIONAL SETTINGS



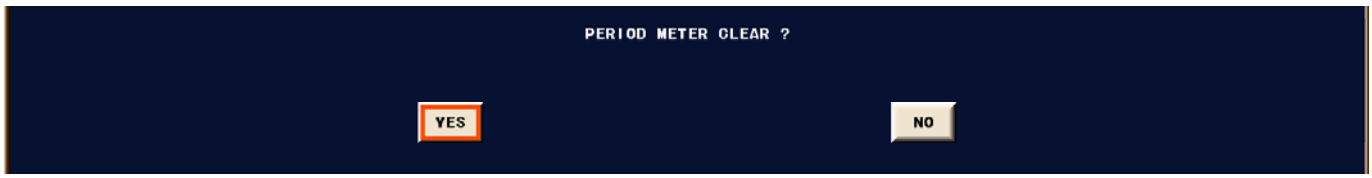
ITEM	DESCRIPTION
ERROR CONTINUES SOUNDING	Set how the Error sound will play. **NO [DEFAULT]** The sound will play for only a few seconds. **YES** The sound will play until the error is cleared.
SAS COMMUNICATION LOG OUTPUT	Refer to **"SAS Communication Log"** at Chapter 6.3 of the OPERATION Manual and set the number of data entries to display. To check a new communication log, set this item to **256** or **2048** and then see the **"SAS Communication Log"**. When set on **DISABLE** it is possible to check the log already recorded by pressing [SAVE]. **DISABLE [DEFAULT]** **256** **2048** **CAUTION!** Before restart the game operation, make sure to set this item to **DISABLE**. **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 4.8.9)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.
SAS EVENT LOG OUTPUT	Refer to **"SAS Communication Log"** at Chapter 6.3 of the OPERATION Manual and set the contents to display. **DISABLED [DEFAULT]** Only the request from the Host and their response from the machine are displayed. **ENABLED** With the request from the Host and their response from the machine, also the Machine events are displayed. **NOTE:** This item is operative only when "SAS COMMUNICATION LOG OUTPUT" is set to 256 or 2048. When set on **DISABLE** it is possible to check the log already recorded by pressing [SAVE].

4. 9: Period Meter Clear

TOP MENU>PERIOD METER CLEAR

> **NOTE:**
> To perform this operation the Control Spacer Door must be open.

Select this item to display the screen below.
When touching [YES], all Period Meters will be cleared. Take NOTE of all necessary period meter information before selecting [YES].



4. 10: Out of Service

TOP MENU>OUT OF SERVICE

> **NOTE:**
> To perform this operation the Control Spacer Door must be open.

1. Select this item to display the screen below.



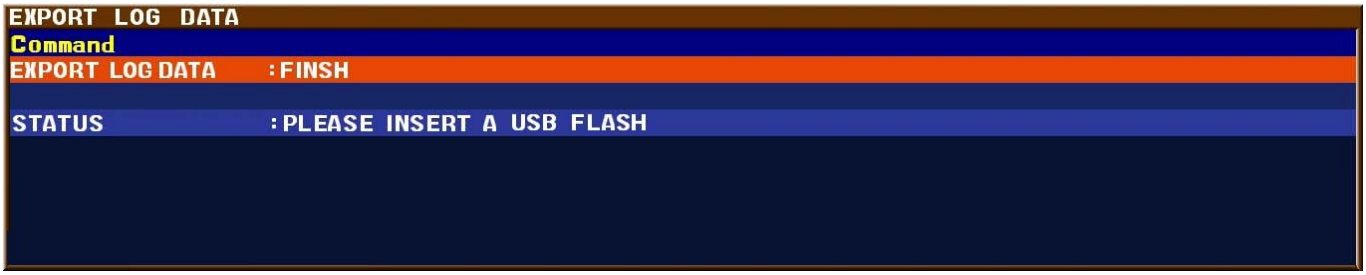
2. Turn the RESET/AUDIT Key Switch on the Reset position and then on the neutral position to return to the normal screen.



4. 11: Export Log Data

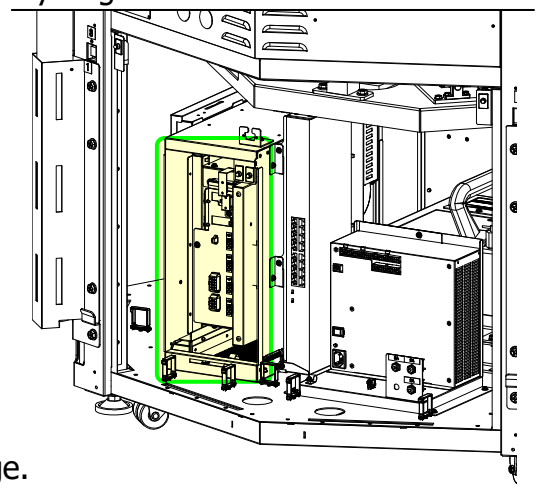
TOP MENU>EXPORT LOG DATA

> **NOTE:**
> This item is an option for MACAU Version.



[PROCESS]

1. Refer to **"Accessing the Security Cage, the Switching HUB, the Main Power Box and the Drive PCB"** at Chapter 6 to remove the Security Cage Door.



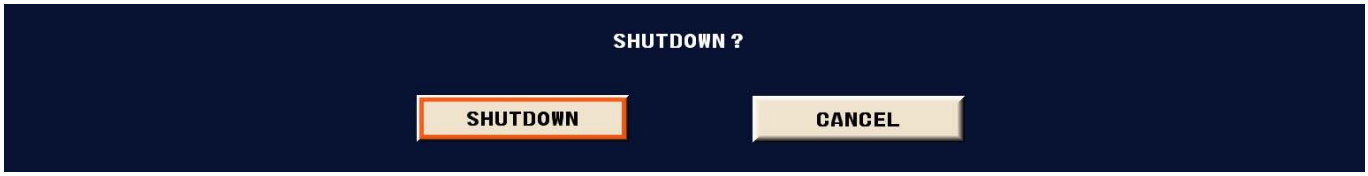
2. Insert the USB memory in any port of the Security Cage.
3. Select "EXPORT LOG DATA" on **"EXPORT LOG DATA"** to export an Information Log. (During the exporting process, it will be displayed the message [PLEASE WAIT].)
4. When the message [FINISH REMOVE USB] is displayed, the exporting process is completed. At this point, it is possible to extract the USB memory.

> **NOTE:**
> The following messages will be displayed in case an error occurs. Please handle the problem according to its content.
>
> [PLEASE INSERT A USB FLASH] is displayed if no USB memory is fully inserted in the USB port.
>
> [FAILED FIVE TIMES CHECK] is displayed if the CVS DATA export process failed.
>
> [CSV DETECTED IN USB PLEASE CLEAR THE USB] is displayed if a different CSV Data was left in the USB memory.

4. 12: Shutdown

TOP MENU>SHUTDOWN

NOTE:
Turns POWER OFF the machine (Standby shutdown), without using the Power Switch.
(Refer to the Opening insert Safe Power OFF)



By selecting [SHUTDOWN], the machine will automatically turn POWER OFF (standby shutdown) after all the data are completely saved.
Touch [CANCEL] to return to the Top Menu.


interblock
LUXURY GAMING PRODUCTS

Chapter 5

AUDIT Mode for Stations (Service)

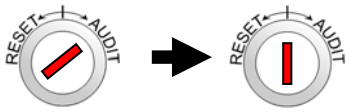
Accessing – AUDIT mode - Top Menu

When the target station is in idle mode (not during game or error status), the AUDIT menu can be accessed by the following procedure:

CAUTION!
It is not possible to change the settings if credit is left in the Stations.

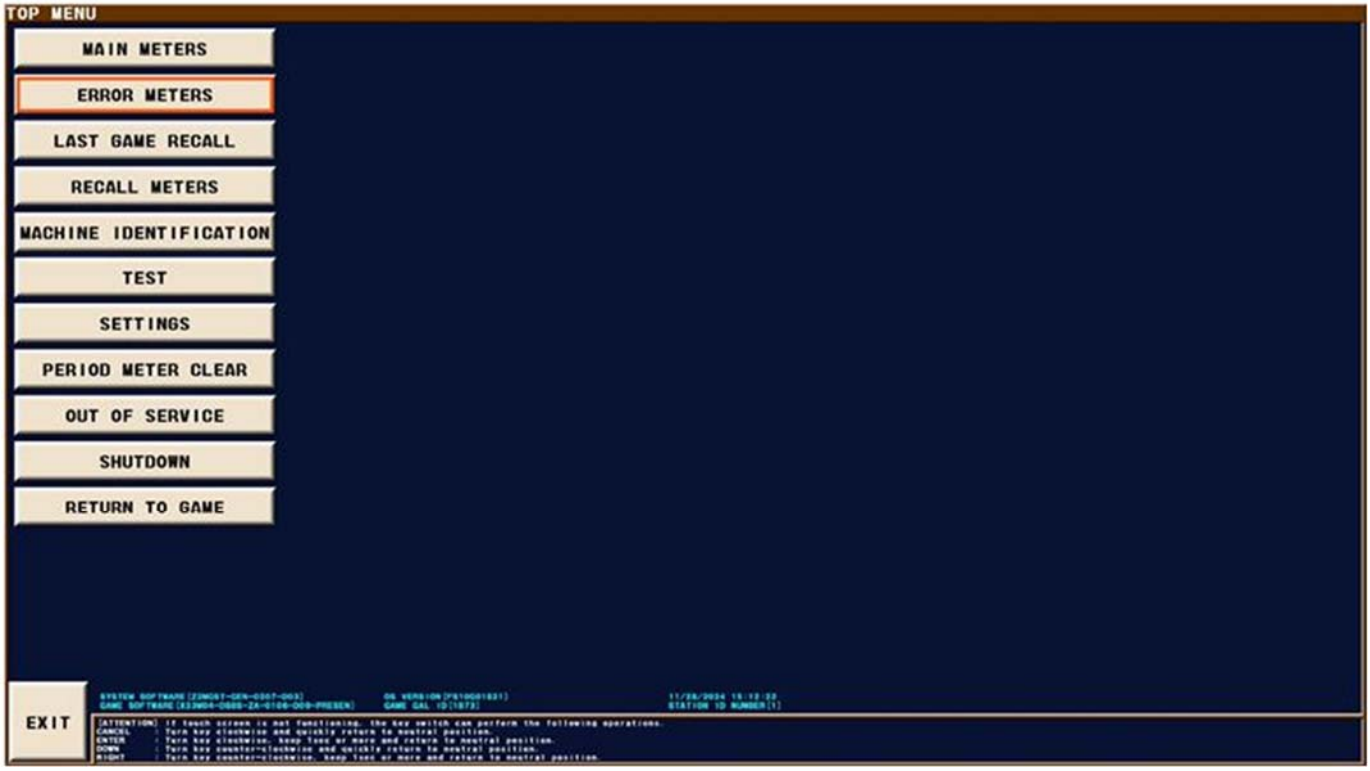
NOTE:
It is not necessary to open the Front Door to just display the AUDIT mode.

1. Open the door (Front door, Security Cage door) indicated by the instructions for each AUDIT setting item.
2. To call the AUDIT mode, turn the RESET/AUDIT Key Switch to the AUDIT position, and return it to the neutral position.



NOTE:
When the currency is set to Hong Kong $ or Macau Pataca, the error alarm that sounds when the **"DOOR OPEN"** error occurs can be turned off. Select **"MUTE (SOUND)"** from the top-right part of the screen. To turn the error alarm back on, select **"UNMUTE (SOUND)"**.

3. The menu can be selected by touching the buttons on the screen, or by using the buttons on the control panel (if the model allows it).



Structure of Audit Mode

The items explained in this manual are written in blue.

NOTE:
The items listed above may vary or not be displayed, according to the different jurisdictions.

ROOT MENU	SUB MENU
MAIN METERS See OPERATION Manual, Chapter 7	**MASTER METERS**
	NEVADA(or MACAU) **METERS**
	FRENCH METERS
	BILL METERS (Accessible only if the BILL Acceptor is Enabled)
	SYSTEM RELATED IN/OUT METERS
	ONLINE COMMUNICATION METERS
	GAME METERS
	WAGER CATEGORY METERS
ERROR METERS See OPERATION Manual, Chapter 7	**MECHANICAL METER ERRORS**
	SYSTEM ERRORS
	DOOR EVENTS
	ONLINE COMMUNICATION ERRORS
	BILL ACCEPTOR ERRORS/EVENTS (Accessible only if the BILL Acceptor is Enabled)
	TICKET PRINTER ERRORS (Accessible only if the Ticket Printer is Enabled)
	NETWORK CONDITION METERS
	LIVE CAMERA ERRORS

ROOT MENU	SUB MENU
LAST GAME RECALL See OPERATION Manual, Chapter 7	**CURRENT GAME**
	LAST GAME
	2nd LAST GAME
	3rd LAST GAME
	4th LAST GAME
	5th LAST GAME ↓ **50th LAST GAME AME**
RECALL METERS See OPERATION Manual, Chapter 7	**BILL RECALL**
	TICKET IN
	TICKET OUT
	CASHLESS TRANSACTION
	PROMOTIONAL TRANSACTION
	HOST BONUS TRANSACTION
	DOOR HISTORY
	ERROR HISTORY
	ALL EVENT HISTORY
	HAND PAY HISTORY
	PROGRESSIVE HISTORY
	SAS COMMUNICATION LOG
	RETURN BET
MACHINE IDENTIFICATION See OPERATION Manual, Chapter 7	**VERSION INFORMATION**
	PSD VERIFICATION (CRC)
	PSD VERIFICATION (HMAC-SHA1)
	PSD VERIFICATION (SHA1)
	GAME INFORMATION
	HARDWARE INFORMATION
	SUBMISSION INFORMATION
TEST (Can be performed only if the Front door is open)	**BILL ACCEPTOR TEST**
	TICKET PRINT TEST
	MONITOR TEST
	TOUCH SCREEN TEST
	INPUT TEST
	OUTPUT TEST
	SERIAL TEST
	SOUND TEST

ROOT MENU	SUB MENU
SETTINGS (Can be set only if the Front door is open)	**HARDWARE SETTINGS**
	BILL ACCEPTOR SETTINGS
	TICKET PRINT SETTINGS
	TOUCH SCREEN SETTINGS (Can be set if the Front door is closed)
	VOLUME SETTING (Can be set if the Front door is closed)
	AUDIT SETTINGS
	IMPORTANT SETTINGS (Set only if the Security cage is open)
	GAME SETTINGS **BET SETTINGS** **TIME SETTINGS** **EXTRA SETTINGS**
	ONLINE SYSTEM SETTINGS (Set only if the Security cage is open)
	OTHER SETTINGS **CLOCK SETTINGS** (Read only) **CELEBRATION SETTINGS** (Set only if the Security cage is open) **ADDITIONAL SETTINGS** (Set only if the Security cage is open) **MACHINE INFORMATION SETTINGS** (Set only if the Security cage is open)
PERIOD METER CLEAR (Can be performed only if the Front door is open)	
OUT OF SERVICE (Can be performed only if the Front door is open)	
SHUTDOWN (Can be performed only if the Front door is open)	

5. 1: Audit Mode Differences based on Settings

NOTE:
The name of some AUDIT items changes according to the jurisdiction.

Jurisdiction	GLI、SABS、MACAU	CA	NV/AZ
MASTER METERS	MASTER METERS	MASTER METERS	NEVADA METERS
NEVADA/MACAU METERS	MACAU METERS	NEVADA METERS	Not Displayed
FRENCH METERS	FRENCH METERS	FRENCH METERS	Not Displayed
IMPORTANT SETTINGS	IMPORTANT SETTINGS	IMPORTANT SETTINGS	BASIC SETTING

5. 2: Settings Menu Differences between NV GAL or SETTING GAL

No settings require the use of a SETTING GAL Cassette.

5. 3: Main Meters

TOP MENU >MAIN METERS

Refer to OPERATION Manual Chapter 7.1 **"Main Meters"** to check the Meters recorded by the machine.

5. 4: Error Meters

TOP MENU >ERROR METERS

Refer to OPERATION Manual Chapter 7.2 **"Error Meters"** to check the logs of each Error category.

5. 5: Last Game Recall

TOP MENU >LAST GAME RECALL

Refer to OPERATION Manual Chapter 7.3 **" Last Game Recall"** to check records of the past games, including the game ongoing.

5. 6: Recall Meters

TOP MENU >RECALL METERS

Refer to OPERATION Manual Chapter 7.4 **"Recall Meters"** to check records of each Event.

5. 7: Machine Identification

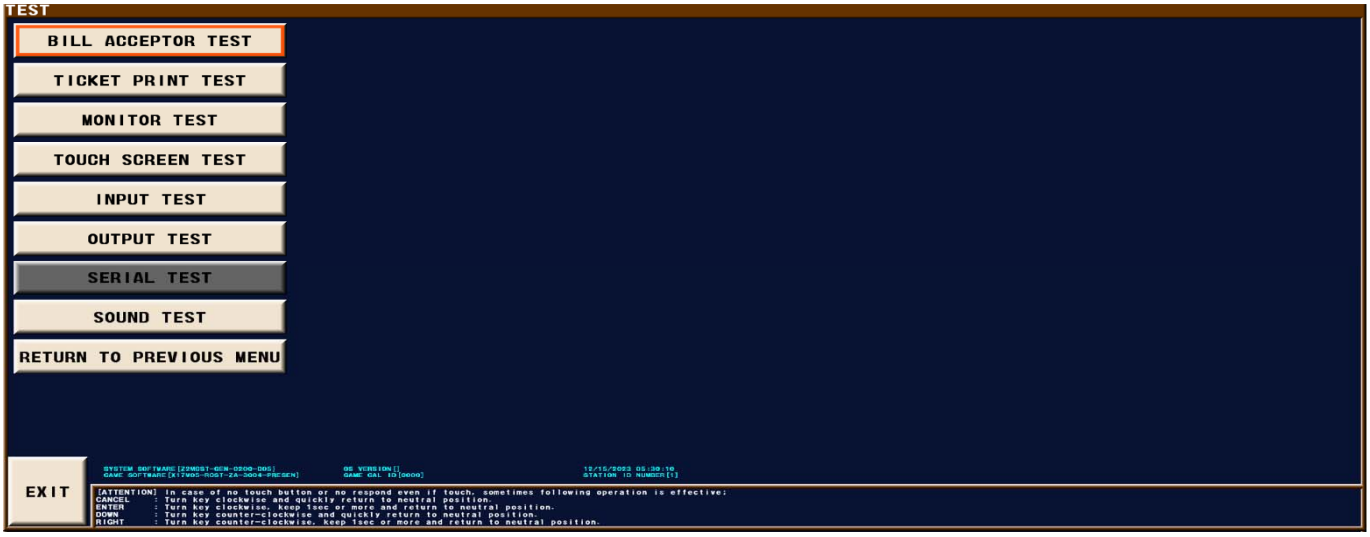
TOP MENU >MACHINE IDENTIFICATION

Refer to OPERATION Manual Chapter 7.5 **"Machine Identification"** to check various Information.

5. 8: Test

TOP MENU>TEST

> **NOTE:**
> To perform this operation, the Front Door must be open.



5. 8. 1: BILL Acceptor Test

TOP MENU>TEST>BILL ACCEPTOR TEST

> **NOTE:**
> ・This item is displayed only if on **"BILL Acceptor Settings"(refer to 5.9.2)** the setting " BILL ACCEPTOR" is set to **ENABLED**.
> ・This test displays the BILL/ticket type and code when a BILL or ticket is inserted.

5. 8. 2: Ticket Print Test

TOP MENU>TEST>TICKET PRINT TEST

> **NOTE:**
> ・This item is displayed only if on **" Ticket Print Settings"(refer to 5.9.3)** the setting " PRINTER TYPE" is set to **ENABLED**.
> ・The Ticket Print Test is started when [TEST START] is pressed.

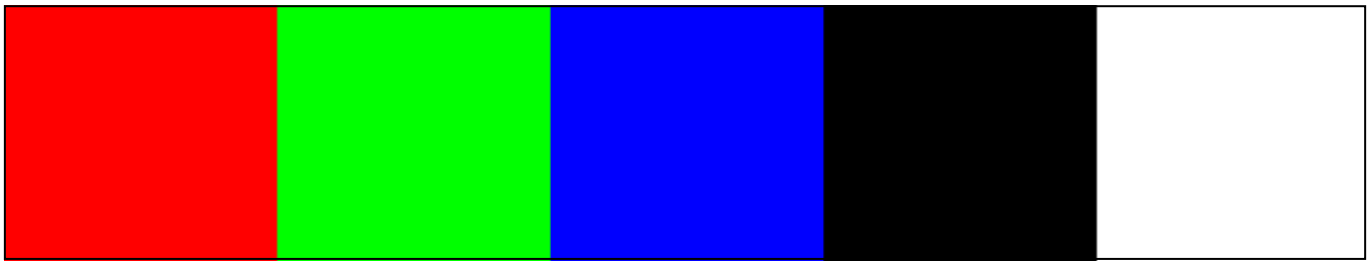
5. 8. 3: Monitor Test

TOP MENU>TEST>MONITOR TEST

Select one of the Buttons below to display the relative color on the screen.



Example screenshot



5. 8. 4: Touch Screen Test

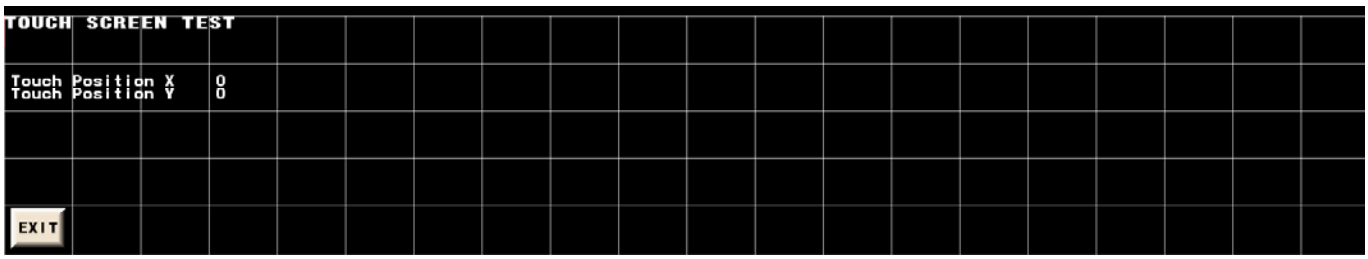
TOP MENU>TEST>TOUCH SCREEN TEST

CAUTION!

It is not possible to properly calibrate the screen if the following conditions are not fulfilled. If the difference is relevant, repeat again the calibration procedure.

·When performing the Calibration settings, the Top Door must be locked.

·Do not touch the cabinet with any part of the body except the finger touching the screen.



ITEM	DESCRIPTION
TOUCH SCREEN TEST	Displays a cursor on the screen and the coordinates of the point of touch.

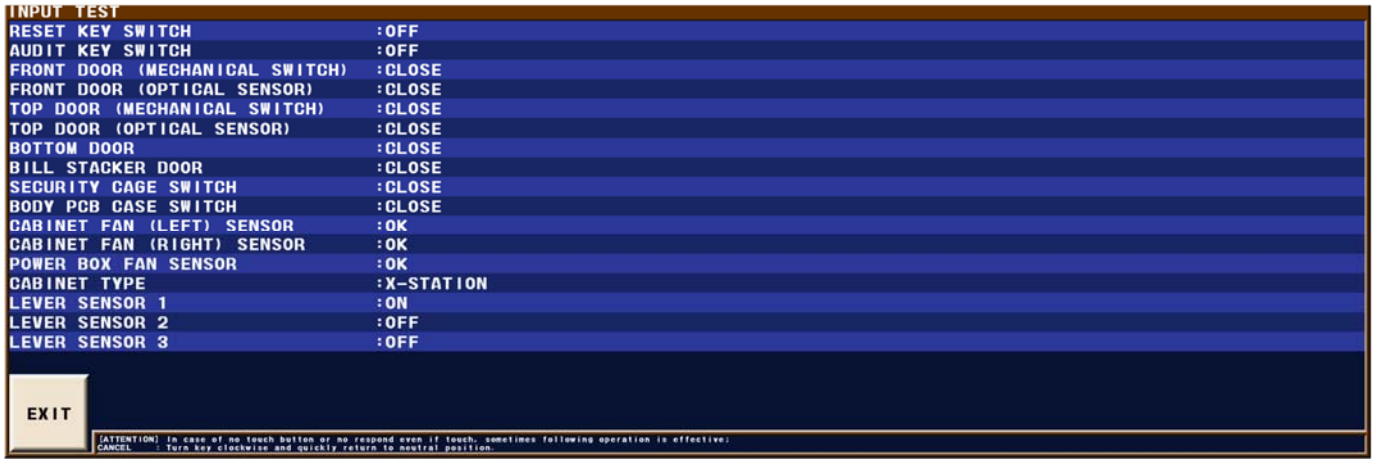
5. 8. 5: Reel Test

Not used on this machine

5. 8. 6: Input Test

TOP MENU>TEST>INPUT TEST

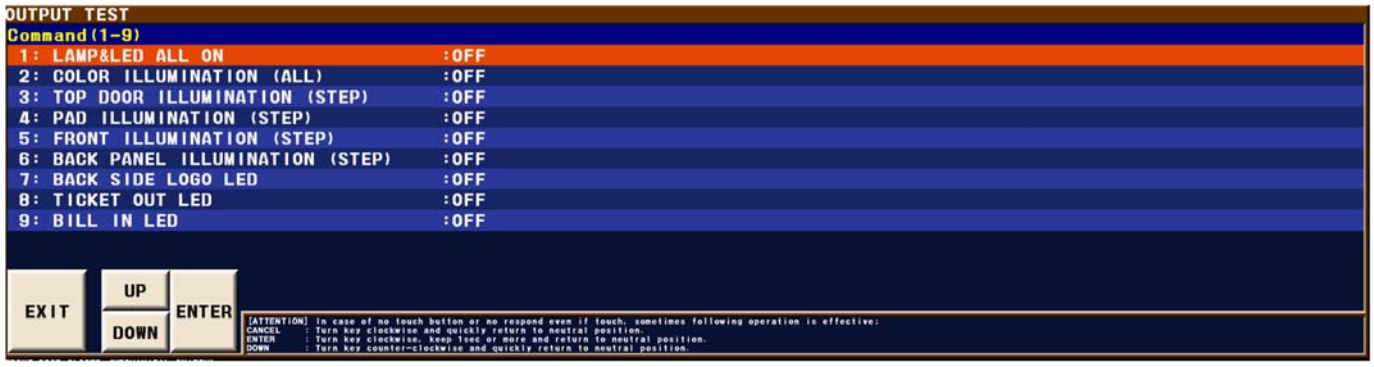
This item allows to check the operation of various functions.



5. 8. 7: Output Test

TOP MENU>TEST>OUTPUT TEST

This item allows to select each function in order to check the operation of the relative device.



5. 8. 7. 1: Illumination LED

This item allows to check the Illumination LED. Select one item to automatically turn on the LED.

Structure of LED Test

TOP MENU>TEST>OUTPUT TEST>LAMP&LED ALL ON

>COLOR ILLUMINATION (ALL) ※no function

>TOP DOOR ILLUMINATION (STEP)

>PAD ILLUMINATION (STEP)

>FRONT ILLUMINATION (STEP)

>BACK ILLUMINATION (STEP)

>TICKET OUT LED

>BILL IN LED

>BACK SIDE LOGO LED

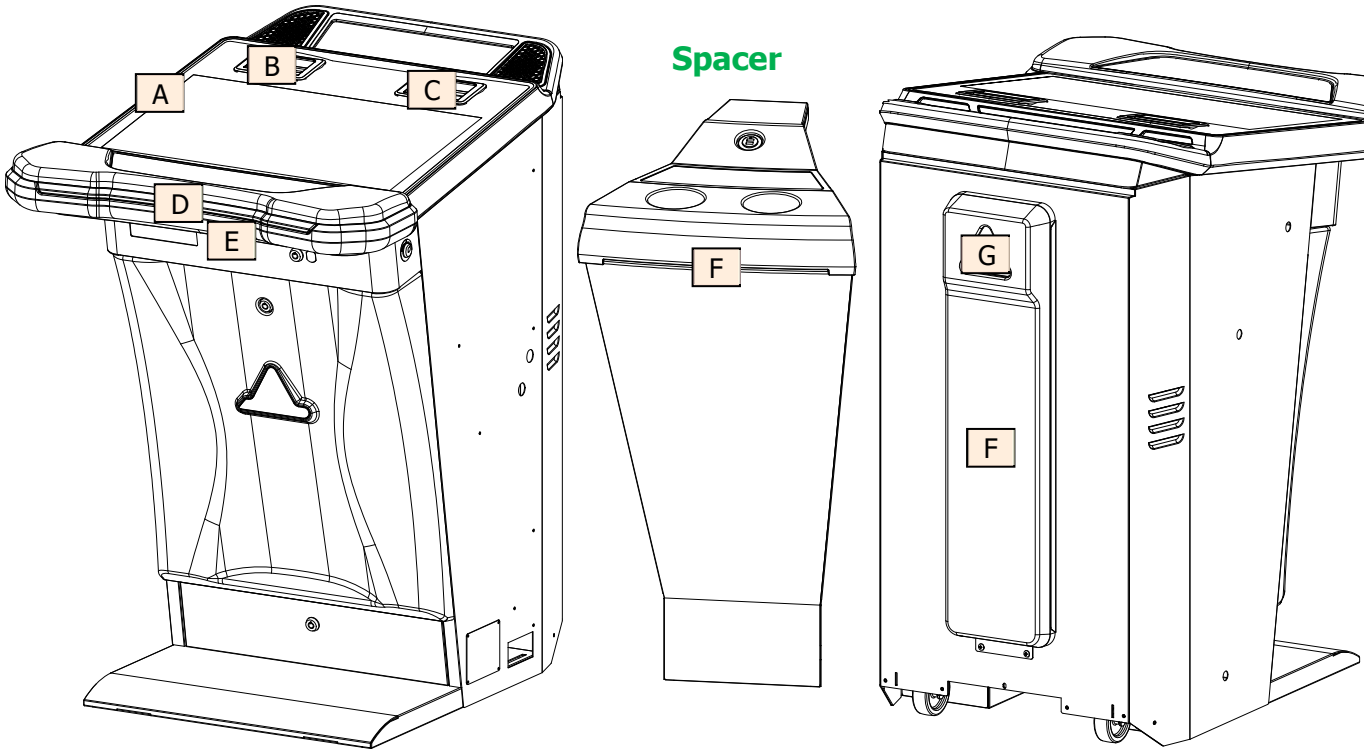
TOP MENU>TEST>OUTPUT TEST>LAMP&LED ALL ON

The LEDs position is as indicated in the map.

The LEDs illuminate following the order indicated by the numbers on the table.

NOTE:
According to the machines, also a Spacer may be attached to the Stations as shown below.

The LEDs location map



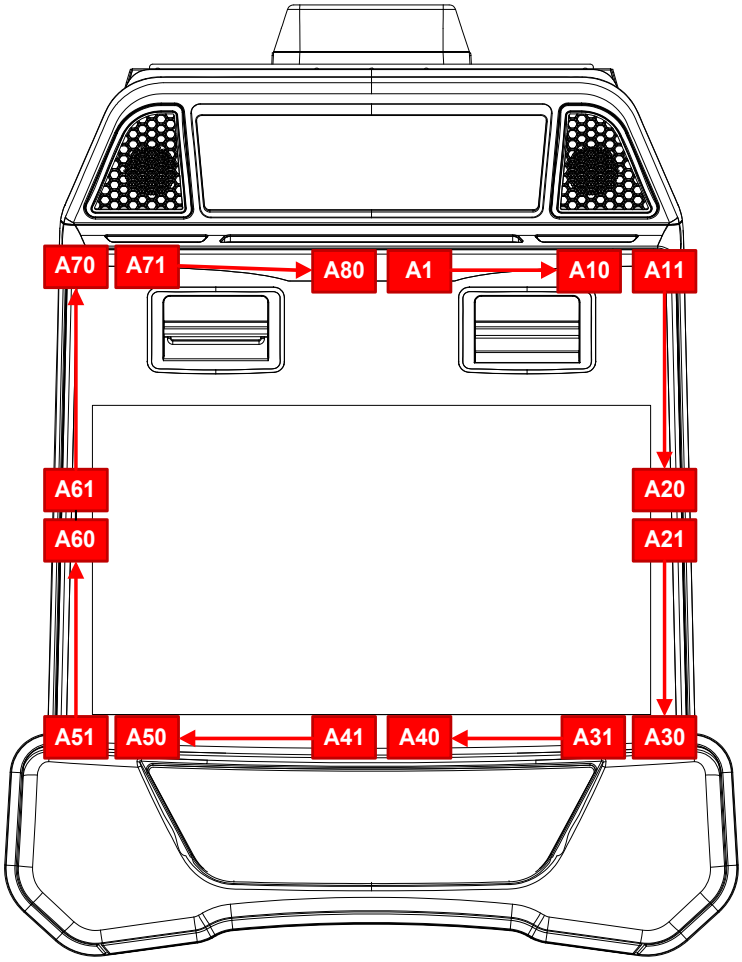
LAMP&LED ALL ON		
Rotation	No.	NAME
	1	A : WHITE
		B : BLUE
		C : BLUE
		D : WHITE
		E : WHITE
		F : WHITE
		G : WHITE

TOP MENU>TEST>OUTPUT TEST>TOP DOOR ILLUMINATION (STEP)

The LEDs position is as indicated in the map.

The LEDs illuminate following the order indicated by the numbers on the table.

The LEDs location map (TOP VIEW)



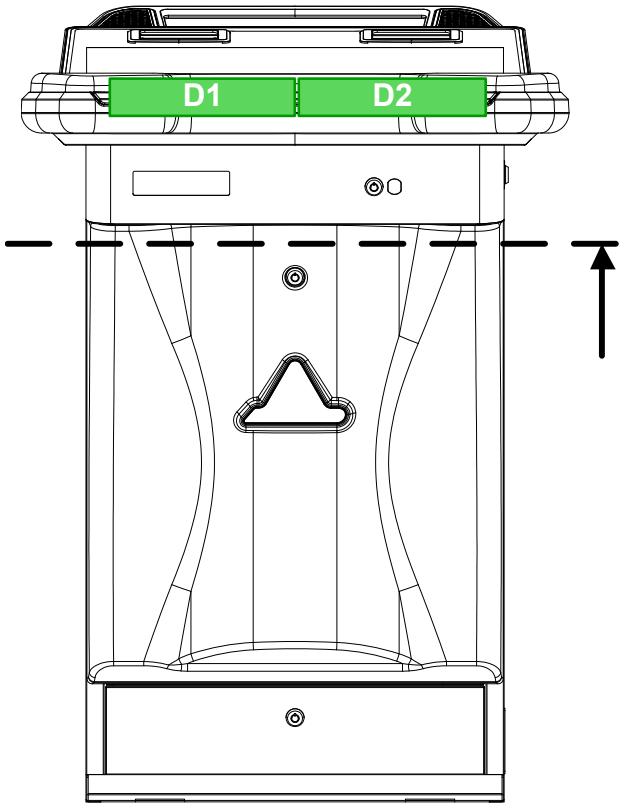
TOP DOOR ILLUMINATION (STEP)		
Rotation	No.	NAME
	1	A1
	|	|
	9	A9
	10	A10
	11	A11
	12	A12
	|	|
	78	A78
	79	A79
	80	A80

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

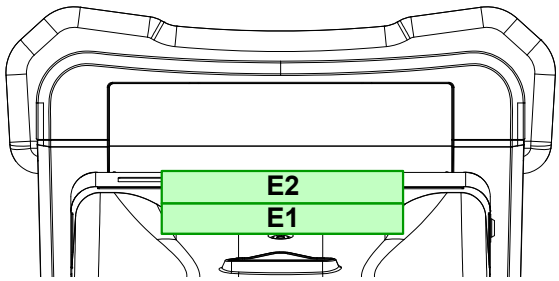
TOP MENU>TEST>OUTPUT TEST>PAD ILLUMINATION (STEP)
>FRONT ILLUMINATION (STEP)

The LEDs position is as indicated in the map.
The LEDs illuminate following the order indicated by the numbers on the table.

The LEDs location map (FRONT VIEW)



The LEDs location map (BOTTOM VIEW)



Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

PAD ILLUMINATION (STEP)		
Rotation	No.	NAME
↓	1	D1
	2	D2

FRONT ILLUMINATION (STEP)		
Rotation	No.	NAME
↓	1	E1
	2	E2

TOP MENU>TEST>OUTPUT TEST>BACK ILLUMINATION (STEP)

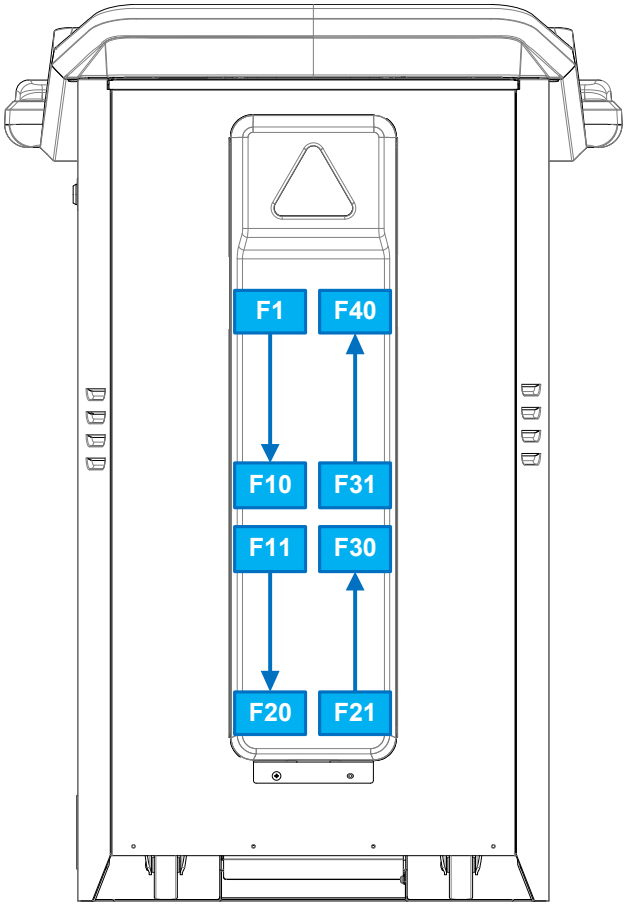
The LEDs position is as indicated in the map.

The LEDs illuminate following the order indicated by the numbers on the table.

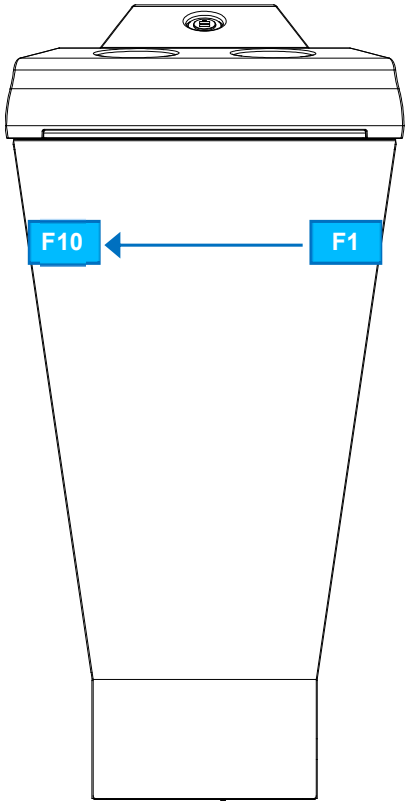
NOTE:

If a Spacer is attached to the Station, the LED of the Spacer is synchronized with the BACK ILLUMINATION (STEP)

The LEDs location map (BACK SIDE VIEW)



The LEDs location map (on The SPACER)



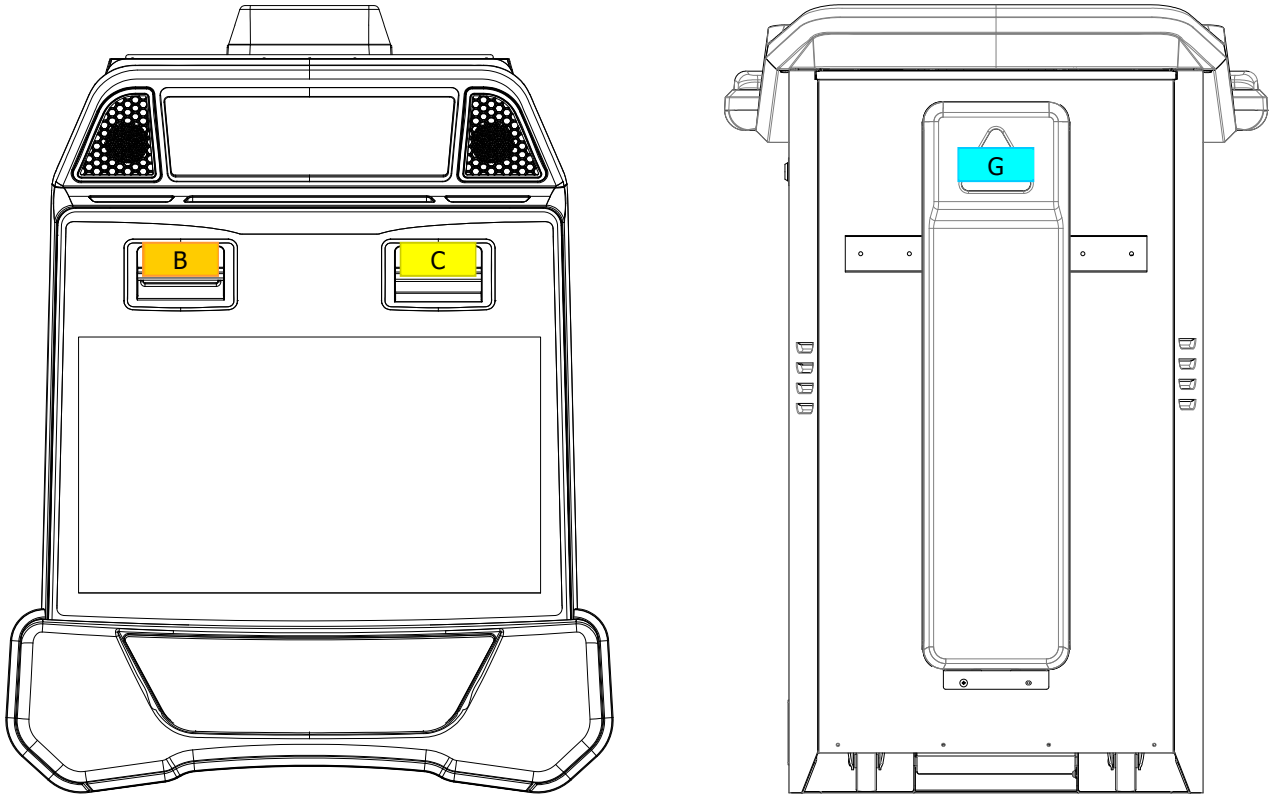
BACK ILLUMINATION (STEP)		
Rotation	No.	NAME
↓	1	F1
↓	2	F2
↓	|	|
↓	39	F39
↓	40	F40

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

TOP MENU>TEST>OUTPUT TEST>TICKET OUT LED
>BILL IN LED
>BACK SIDE LOGO LED

The LEDs position is as indicated in the map.
The LEDs illuminate following the order indicated by the numbers on the table.

The LEDs location map



TICKET OUT LED		
Rotation	No.	NAME
	1	B : BLUE

BILL IN LED		
Rotation	No.	NAME
	1	C : BLUE

BACK SIDE LOGO LED		
Rotation	No.	NAME
	1	G : WHITE

5. 8. 8: Serial Test

TOP MENU>TEST>SERIAL TEST

This item allows to perform a functionality test of the ports COM1-COM6.

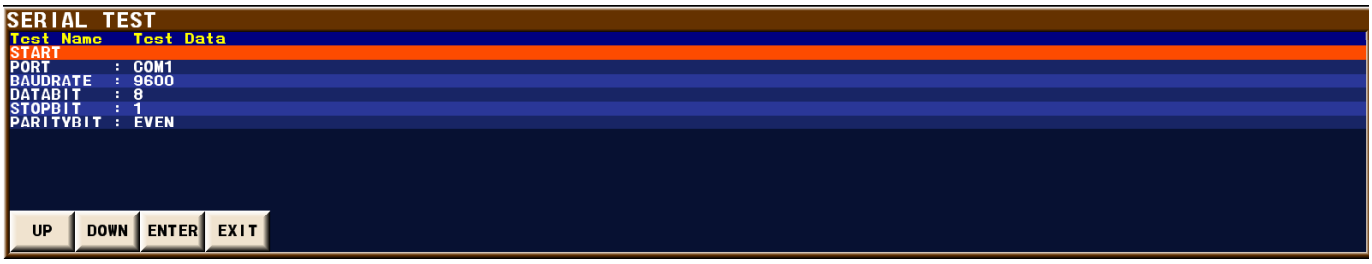
NOTE:

This item is displayed only if on

"BILL Acceptor Settings"(refer to (5.9.2) the setting " BILL ACCEPTOR" is set to **DISABLED**,

"Ticket Print Settings"(refer to 5.9.3) the setting " PRINTER TYPE" is set to **DISABLED**,

"Online System Settings"(refer to 5.9.10) the setting "SYSTEM TYPE" is set to **NONE**



ITEM	Options
START	Start the serial test.
PORT	COM1 / COM2 / COM3 / COM4 / COM5 / COM6 / CANCEL
BAUDRATE	9600 / 19200 / 38400 / 115200 / CANCEL
DATABIT	7 / 8 / CANCEL
STOPBIT	1 / 2 / CANCEL
PARITYBIT	NONE / ODD / EVEN / CANCEL

5. 8. 9: Sound Test

TOP MENU>TEST>SOUND TEST

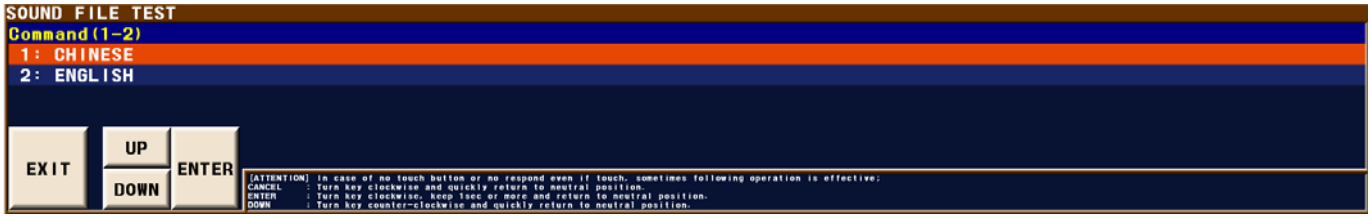
Select one of the Buttons below to play the relative sound.



Example screenshot of **SOUND TEST>SPEAKER TEST**



Example screenshot of **SOUND TEST>SOUND FILE TEST**



5. 8. 10: LCD Button Test

Not used on this machine

5. 8. 11: Extension Unit Test

Not used on this machine

5. 8. 12: Extend LED Test

Not used on this machine

5. 9: Settings

TOP MENU>SETTINGS

NOTE:

・To perform this operation, the Front Door must be open.

・Most items cannot be set if the Security Cage is closed; refer to the indications for each item for more details.

・To change the settings there should be no credit on the Stations.

・Updating the following settings will reset all soft meters. After the update it will be necessary a **[reboot]** of the machine. **(Refer to the Opening insert Safe Power OFF)**.

IMPORTANT SETTINGS

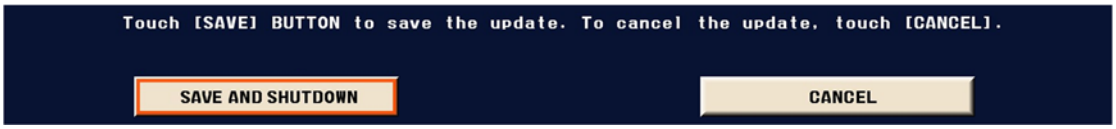
ONLINE SYSTEM SETTINGS

CELEBRATION SETTINGS

※ The settings above require a **[reboot]**, therefore it is necessary to pay attention at the order the settings are inputted. Please follow the procedure below.

① First, complete only the settings above (listed in green uppercase fonts). When completed, press the [RETURN TO PREVIOUS MENU] button, and exit [SETTINGS] once.

② The display will change to the following screen. Press [SAVE and SHUTDOWN] button. The Station Unit will turn into standby shutdown.



③ Turn OFF and ON the Power Switch of the Station Unit and do **[reboot]**. Close the Security Door of the Station Unit.

④ Open again the AUDIT [SETTINGS] and perform the remaining settings. When completed, exit the AUDIT and close the Doors.

※ In NEVADA version, "IMPORTANT SETTINGS" is displayed as "BASIC SETTINGS".

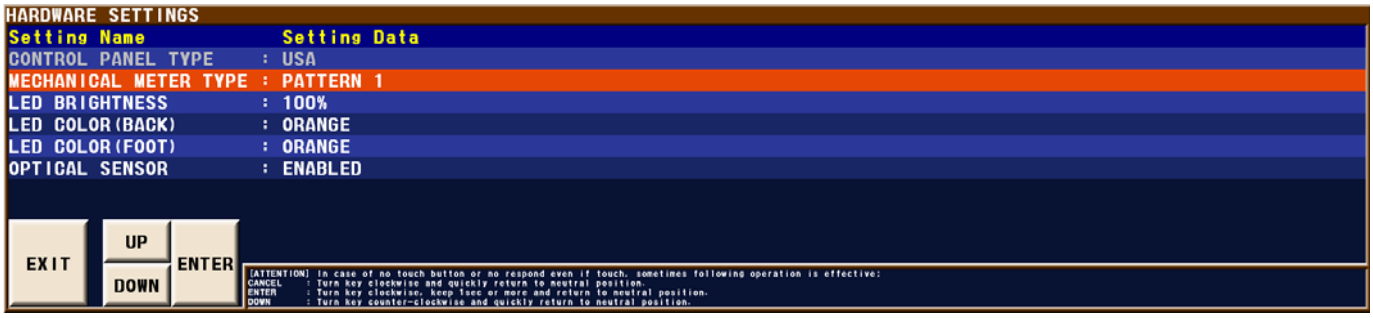


※The description of items not relevant to this Game will be omitted.

5. 9. 1: Hardware Settings

TOP MENU>SETTINGS>HARDWARE SETTINGS

This item allows to change the settings of each hardware device.



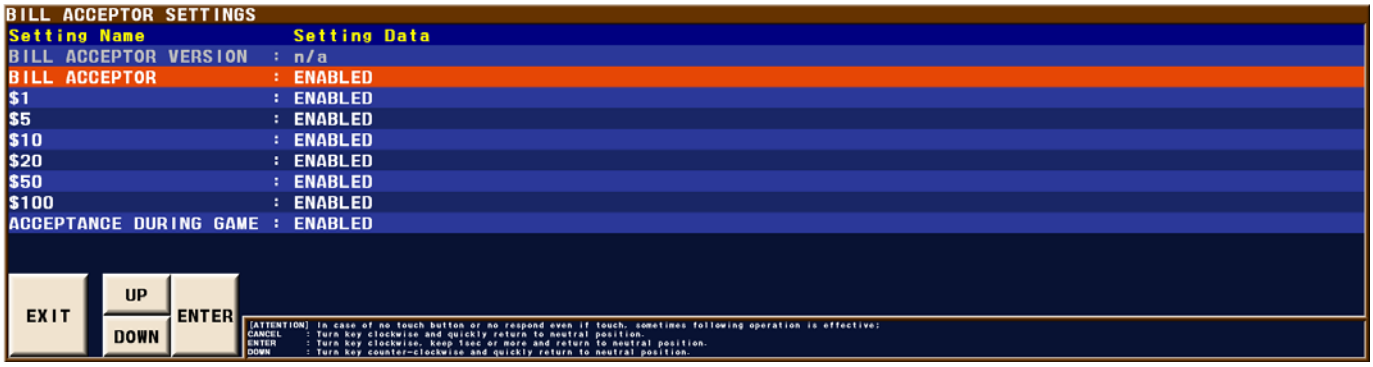
ITEM	DESCRIPTION
CONTROL PANEL TYPE ※Option	Read Only. **USA [FIXED]** **NOTE:** This item is not displayed in NEVADA and ARIZONA version, and is read only in all the other jurisdictions.
MECHANICAL METER TYPE	Set one of the PATTERNS for the display of the Mechanical meters. **NONE** The mechanical meters are N/A. **PATTERN 1** Hand pay/Jackpot Pay, Total Out, Total In, Total Bill. **PATTERN 2** Total cash in, Total cash out, Wagered, Game won. **NOTE:** The default value is dependent on the jurisdiction. This item is not displayed in NEVADA and ARIZONA version.
LED BRIGHTNESS ※Option	Set the intensity of the LED lights: **100%, 80%, 64%, 46%, 36%, 18%, Cancel** **[DEFAULT: 100%]**

ITEM	DESCRIPTION
LED COLOR (BACK) ※Option	Set the color of the Back Illumination LED **ORANGE [DEFAULT]** **RED** **BLUE** **GREEN** **YELLOW** **CYAN** **VIOLET** **WHITE** **OFF**
LED COLOR (FOOT) ※Option	Set the color of the Front Illumination LED. **ORANGE [DEFAULT]** **RED** **BLUE** **GREEN** **YELLOW** **CYAN** **VIOLET** **WHITE** **OFF**
OPTICAL SENSOR	Set the use of the Front Door Optical Sensor function. **ENABLED** **DISABLED [DEFAULT]**

5. 9. 2: BILL Acceptor Settings

TOP MENU>SETTINGS>BILL ACCEPTOR SETTINGS

This item allows to change the settings relative to the bill acceptor functions.



ITEM	DESCRIPTION
BILL ACCEPTOR VERSION	The Firmware version of the bill acceptor.
BILL ACCEPTOR	Set the use of the bill acceptor function. **ENABLED [DEFAULT]** **DISABLED**
$xx	Set if bills of each value can be accepted by the validator. **ENABLED [DEFAULT]** **DISABLED**
ACCEPTANCE DURING GAME	Set if the bills will be accepted during play. **ENABLED [DEFAULT]** **DISABLED**
PROMOTIONAL COUPON	Set if promotional coupons can be accepted. **NO** **YES [DEFAULT]** **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 5.9.10)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

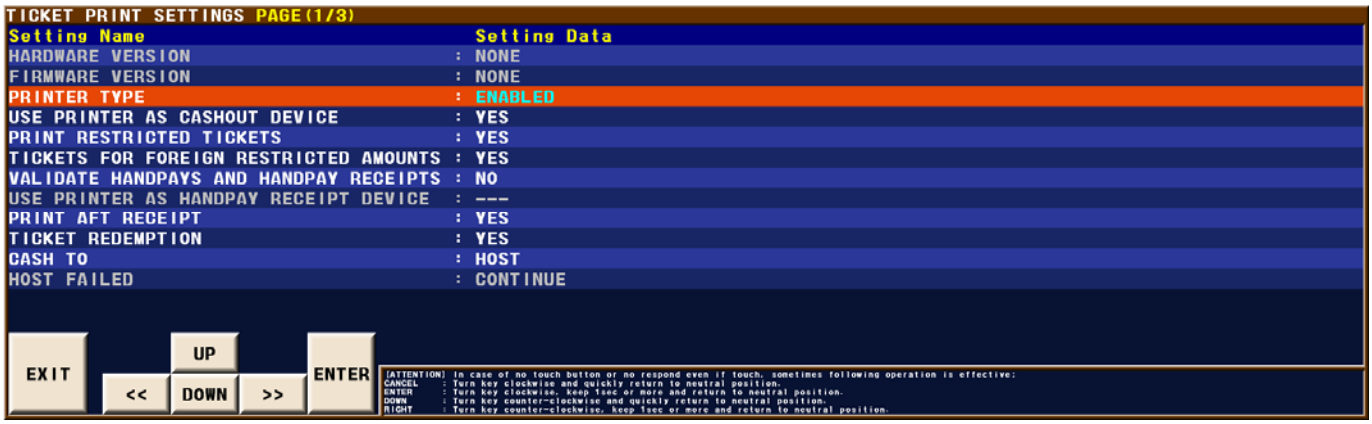
5. 9. 3: Ticket Print Settings

TOP MENU>SETTINGS>KET PRINT SETTINGS

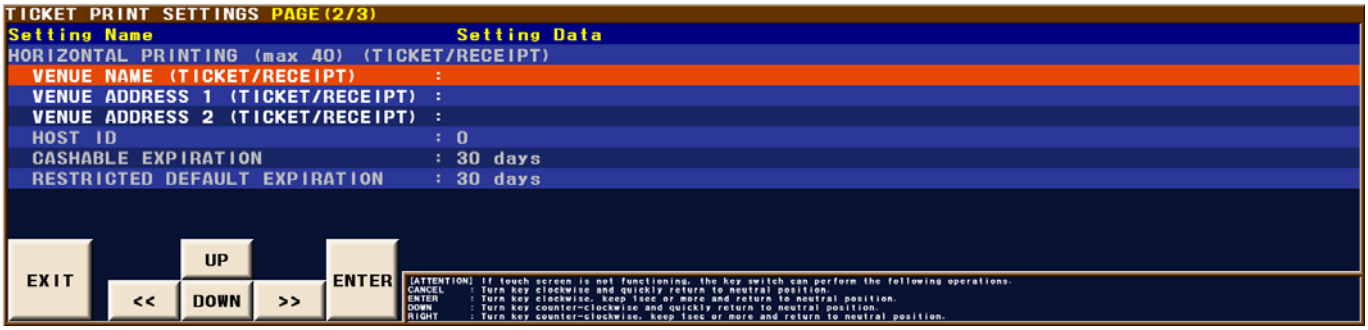
This item allows to change the settings relative to the ticket printer functions.

> **NOTE:**
> The display of this item depends on the setting of "PRINTER TYPE" and on the setting of "SYSTEM TYPE" and "CASHOUT VALIDATION" on "**Online System Settings**" that is described later on this chapter.

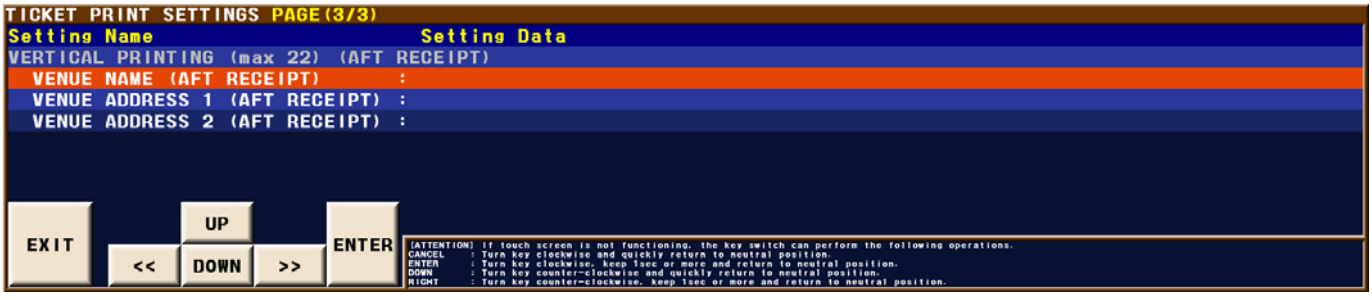
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ITEM	DESCRIPTION
HARDWARE VERSION	The hardware version of the ticket printer.
FIRMWARE VERSION	The firmware version of the ticket printer.
PRINTER TYPE	Set the use of the ticket printer function. **ENABLED** **DISABLED [DEFAULT]**
USE PRINTER AS CASHOUT DEVICE	Set the use of the cashable tickets print function. **YES [DEFAULT]** **NO**
PRINT RESTRICTED TICKETS	Set the use of the restricted tickets print function. (For restricted credits from Ticket In) **YES [DEFAULT]** **NO** **NOTE:** This item is displayed only if "USE PRINTER AS CASHOUT DEVICE" described above is set to **YES**.
TICKETS FOR FOREIGN RESTRICTED AMOUNTS	Set the use of the restricted tickets print function. (For restricted credits from AFT) **YES [DEFAULT]** **NO** **NOTE:** This item is displayed only if "USE PRINTER AS CASHOUT DEVICE" described above is set to **YES**.
VALIDATE HAND PAYS AND HAND PAY RECEIPTS	Hand Pay Validation Information is sent to the Host. **YES** **NO [DEFAULT]**
USE PRINTER AS HAND PAY RECEIPT DEVICE	Prints Hand Pay and Jackpot Hand Pay receipts. **YES [DEFAULT]** **NO** **NO (FORCE)** **YES (FORCE)** **NOTE:** This item is displayed only if "VALIDATE HAND PAYS AND HAND PAY RECEIPTS" described above is set to **YES**.

ITEM	DESCRIPTION
PRINT AFT RECEIPT	Prints AFT receipts. **YES [DEFAULT]** **NO**
TICKET REDEMPTION	Set the use of the Ticket redemption function. **YES [DEFAULT]** **NO**
CASH TO	Set the priority cash out device. **HOST [DEFAULT]** **PRINTER (OR OTHER)** **NOTE:** This item is displayed only when "PRINTER TYPE" is set to **ENABLED** and "CASHLESS TRANSFER FROM HOST (EX BONUS)" of **"Online System Settings"** is set to **YES**.
HOST FAILED	The AFT Connection Status.
HORIZONTAL PRINTING (max 40) (TICKET/RECEIPT)	Set the following items to be printed horizontally. **VENUE NAME**: (Up to 40 characters) The VENUE NAME. **VENUE ADDRESS 1**: (Up to 40 characters) The VENUE ADDRESS 1. **VENUE ADDRESS 2**: (Up to 40 characters) The VENUE ADDRESS 2. **HOST ID** The SAS Host ID. **CASHABLE EXPIRATION**: (default: 30 days) The expiration date of a cashable tickets and hand pay receipts. **RESTRICTED DEFAULT EXPIRATION**: (default 30 days) The expiration date of a promotional ticket.
VERTICAL PRINTING (max 22) (AFT RECEIPT)	Set the following items to be printed vertically. **VENUE NAME (AFT RECEIPT)**: (Up to 22 characters) The VENUE NAME. **VENUE ADDRESS 1(AFT RECEIPT)**: (Up to 22 characters) The VENUE ADDRESS 1. **VENUE ADDRESS 2 (AFT RECEIPT)**: (Up to 22 characters) The VENUE ADDRESS 2.

5. 9. 4: Touch Screen Settings

TOP MENU>SETTINGS>TOUCH SCREEN SETTINGS

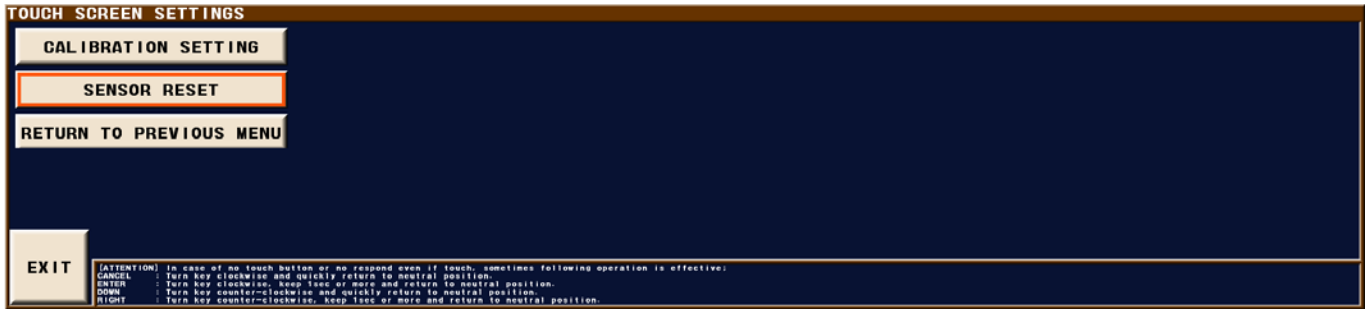
This item allows to calibrate the Touch screen.

⚠ CAUTION!

It is not possible to properly calibrate the screen if the following conditions are not fulfilled. If the difference is relevant, repeat again the calibration procedure.

・When performing the Calibration settings, the Top Door must be locked.

・Do not touch the cabinet with any part of the body except the finger touching the screen.

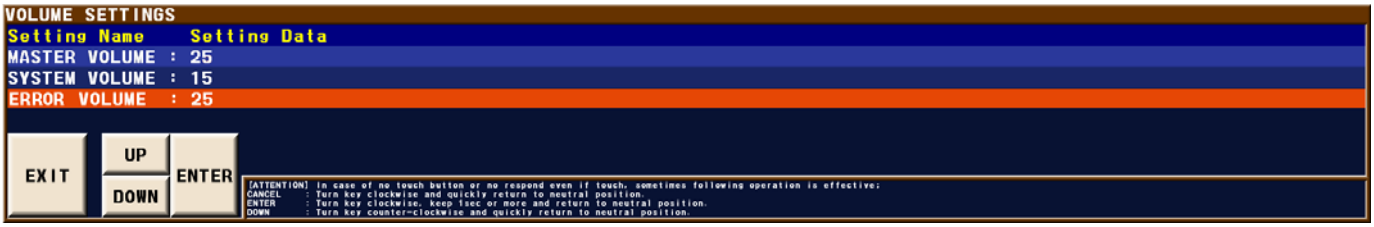


ITEM	DESCRIPTION
CALIBRATION SETTING	Calibrate the Touch screen. Follow the instruction displayed on the screen.
SENSOR RESET	Reset the sensor for the screen is reset. After reset, the screen changes to "CALIBRATION SETTING".

5. 9. 5: Volume Settings

TOP MENU>SETTINGS>VOLUME SETTING

This item allows to adjust the volume of each Sound.



ITEM	DESCRIPTION
MASTER VOLUME	Set the volume of the game sounds. **1 - 30 [DEFAULT: 25]**
SYSTEM VOLUME	Set the volume for the system related sounds. **1 - 30 [DEFAULT: 15]**
ERROR VOLUME	Set the volume for the error sounds. **1 - 30 [DEFAULT: 15]**

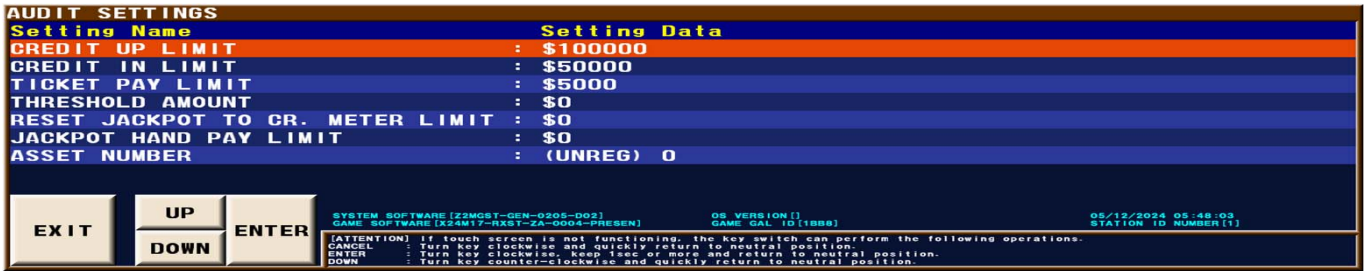
5. 9. 6: Software settings

Not used on this machine

5. 9. 7: Audit Settings

TOP MENU>SETTINGS>AUDIT SETTINGS

This item allows to change the settings relative to the Credit.



Example screenshot of **AUDIT SETTINGS>CREDIT UP LIMIT**



ITEM	DESCRIPTION
CREDIT UP LIMIT	The maximum number of Credits that can be accumulated by the CREDIT METER. If this limit is exceeded by increasing credits to the Current Credit as result of a Win, the Credit is automatically cashed out. If this item is set lower than "CREDIT IN LIMIT", an error occurs. Please repeat one of the two settings. **0 - 40,000,000** **[DEFAULT: 100,000 DEFAULT for ONTARIO: 3000]**
CREDIT IN LIMIT	The maximum number of CREDITS that can be added to the CREDIT METER. If this limit is exceeded by increasing credits to the Current Credit by BILLs or Card, the Credit is automatically cashed out. If this item is set higher than "CREDIT UP LIMIT", an error occurs. Please repeat one of the two settings. **0 - 40,000,000** **[DEFAULT: 50,000 DEFAULT for ONTARIO: 3000]**
TICKET PAY LIMIT	The maximum value that can be paid out by tickets. **0 - 40,000,000** **[DEFAULT: 5,000 DEFAULT for ONTARIO: 3000]**

ITEM	DESCRIPTION
THRESHOLD AMOUNT	If an amount exceeding "THRESHOLD AMOUNT" is cashed out without playing any game after inserting coins, bills or tickets, the "THRESHOLD AMOUNT EXCEEDED" error message appears and the machine locks up. The error can be reset by turning the RESET keyswitch.) Set to **0** to disable this function. **0 - 40,000,000 [DEFAULT: 0]**
RESET JACKPOT TO CR. METER LIMIT	If the Jackpot win exceeds the value of this setting, the machine locks up and Hand Pay is necessary to pay the won Credits. If a value lower than the setting of "JACKPOT HAND PAY LIMIT" is input, an error will occur. **0 - 40,000,000 [DEFAULT: 0]**
JACKPOT HAND PAY LIMIT	If the Jackpot win exceeds the value of this setting, a response from the SAS host is expected. According to that response, the machine will lock up and Hand Pay will be necessary to pay the won Credits, or it will be added to the credit meter without lock up. If a value higher than the setting of "RESET JACKPOT TO CR.LIMIT" is input, an error will occur. If set to **0** all wins will be paid by the machine. **0 - 40,000,000 [DEFAULT: 0]**
ASSET NUMBER	The number used to verify the Machine for transactions such as AFT transfers. **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 5.9.10)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

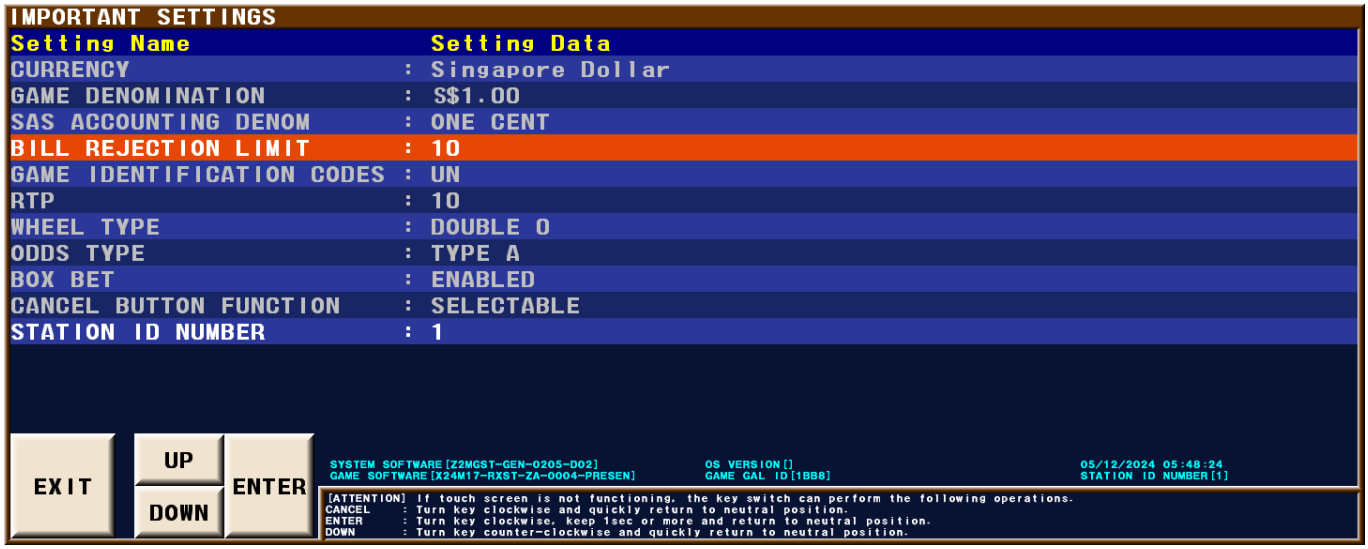
5. 9. 8: Important Settings / Basic Settings

TOP MENU>SETTINGS>IMPORTANT SETTINGS

This item allows to set and check the information relative to Currency, Denomination etc.

NOTE:

- To perform this operation, the Security Cage Door must be open.
- When using NEVADA GAL, the IMPORTANT SETTINGS will be displayed as BASIC SETTINGS.
- All meters will be cleared when any changes are made to the **"Important Settings / Basic Settings"**.



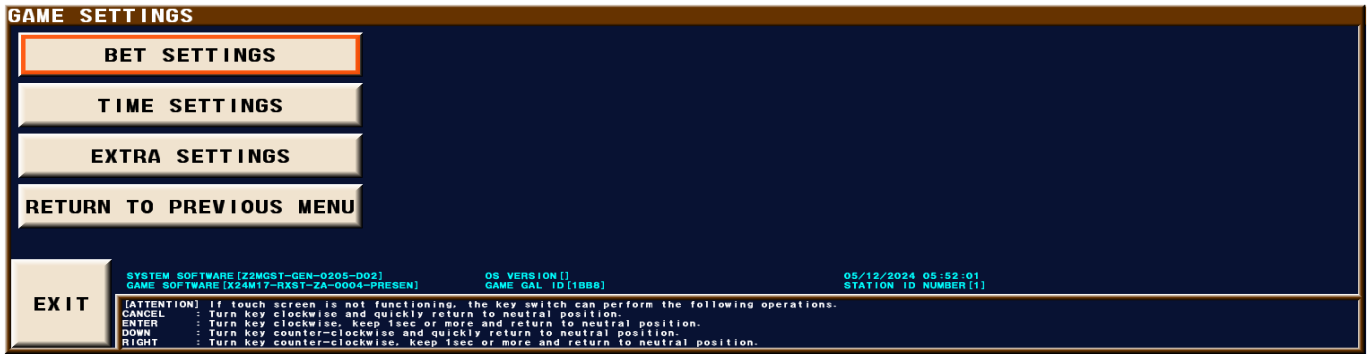
ITEM	DESCRIPTION
CURRENCY	Shows the setting of the Center Unit. Please refer to "CURRENCY" on "**Important Settings / Basic Settings**" at Chapter 4.
GAME DENOMINATION	Shows the setting on the Center Unit. Please refer to the relative item on "**Important Settings / Basic Settings"** at Chapter 4.
SAS ACCOUNTING DENOM	Same as above
JURISDICTION	Input the jurisdiction **NOTE:** This item is displayed only in ONTARIO version.
BILL REJECTION LIMIT	Set the number of times a same BILL will be rejected. The machine locks up when the limit is reached. **1 - 99 [DEFAULT: 10]**

ITEM	DESCRIPTION
GAME IDENTIFICATION CODES	Set the game identification code. **UN [DEFAULT]** **IB** **EL** NOTE: This item can be set only after the ALL RAM Clear.
RTP	Shows the setting on the Center Unit. Please refer to the relative item on "**Important Settings / Basic Settings"** at Chapter 4.
WHEEL TYPE	Same as above
ODDS TYPE	Same as above
BOX BET	Same as above
CANCEL BUTTON FUNCTION	Same as above
STATION ID NUMBER	Set the ID number of the station. Be careful not to use the same ID of other Stations.

5. 9. 9: Game Settings

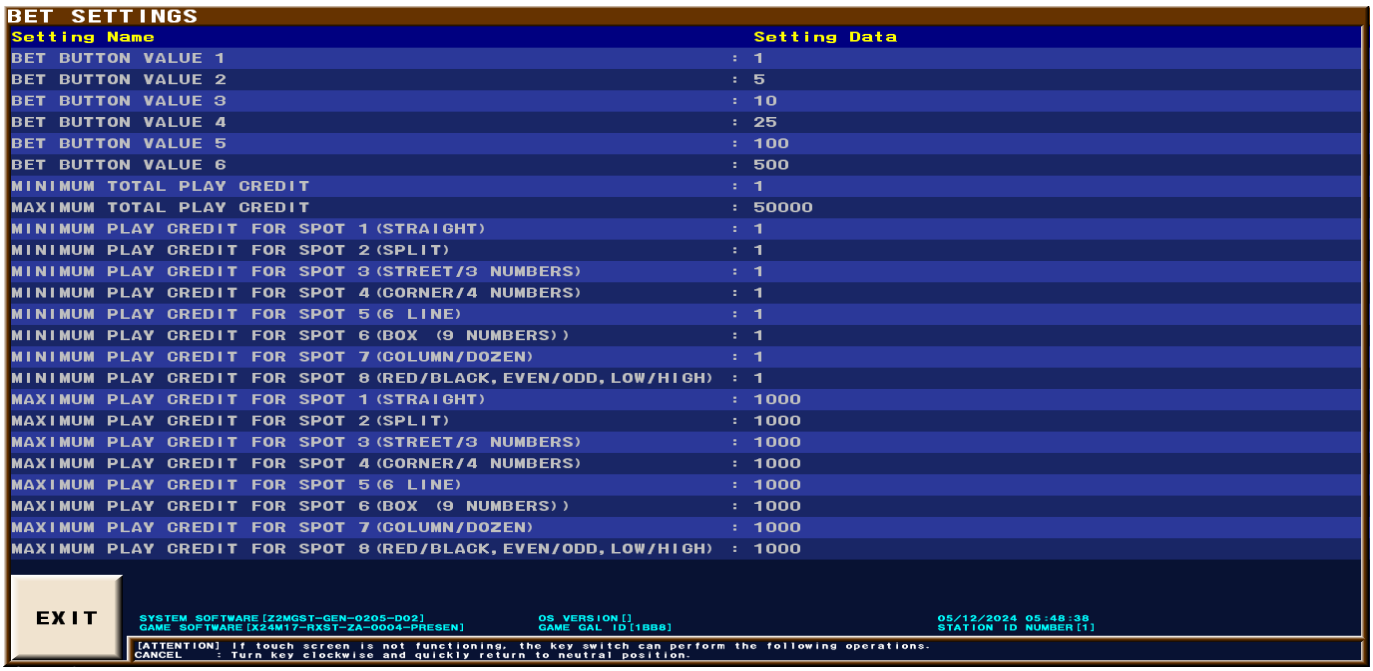
TOP MENU>SETTINGS>GAME SETTINGS

This item allows to change the settings relative to the Bet type.



5. 9. 9. 1: Bet Settings

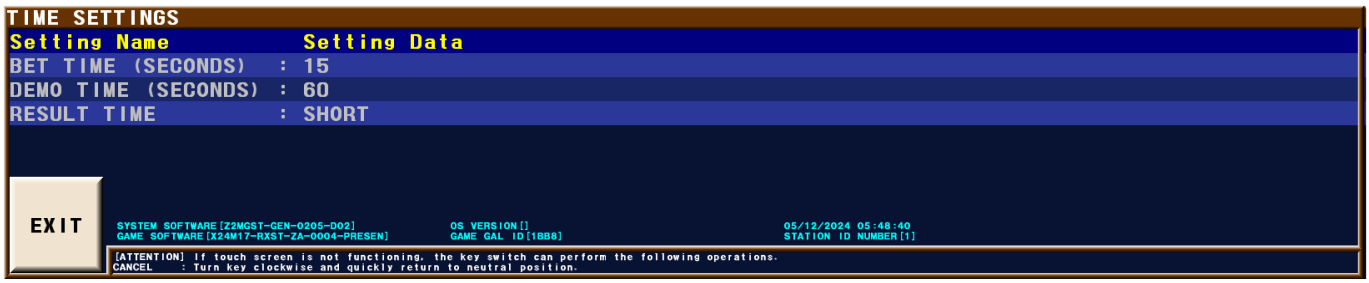
TOP MENU>SETTINGS>BET SETTINGS



ITEM	DESCRIPTION
BET BUTTON VALUE xx	Shows the setting on the Center Unit. Please refer to the relative item on **"Game Settings"** at Chapter 4.
MINIMUM TOTAL PLAY CREDIT	Same as above
MAXIMUM TOTAL PLAY CREDIT	Same as above
MINIMUM PLAY CREDIT FOR xx	Same as above
MAXIMUM PLAY CREDIT FOR xx	Same as above

5. 9. 9. 2: Time Settings

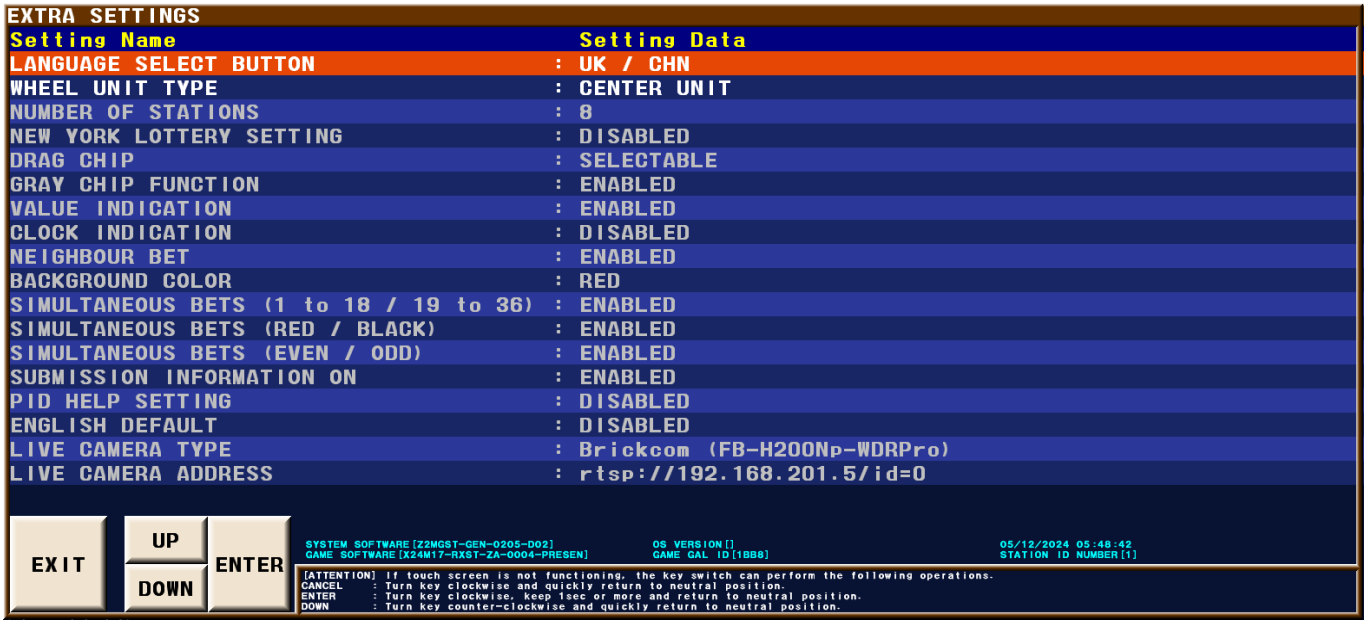
TOP MENU>SETTINGS>TIME SETTINGS



ITEM	DESCRIPTION
BET TIME (SECONDS)	Shows the setting on the Center Unit. Please refer to the relative item on **"Game Settings"** at Chapter 4.
DEMO TIME (SECONDS)	Same as above
RESULT TIME	Same as above

5. 9. 9. 3: Extra Settings

TOP MENU>SETTINGS>EXTRA SETTINGS



ITEM	DESCRIPTION
LANGUAGE SELECT BUTTON	Set the language for voices and texts, and the display of the button for the player's language selection. **DISABLED** The language is fixed on English, and no selection button is displayed **UK/CHN [DEFAULT]** **USA/CHN [DEFAULT for ARIZONA, NEVADA, ONTARIO and WEST VIRGINIA version]**
WHEEL UNIT TYPE	**NOTE:** This item is for maintenance purpose only, do not change from its **[DEFAULT]** setting. **CENTER UNIT [DEFAULT]** **STANDALONE**
NUMBER OF STATIONS	Shows the setting on the Center Unit. Please refer to the relative item on **"Game Settings"** at Chapter 4.
NEW YORK LOTTERY SETTING	Same as above
DRAG CHIP	Same as above
GREY CHIP FUNCTION	Same as above
VALUE INDICATION	Same as above

ITEM	DESCRIPTION
CLOCK INDICATION	Same as above
NEIGHBOUR BET	Same as above
BACKGROUND COLOR	Same as above
SIMULTANEOUS BETS (1 to 18 / 19 to 36)	Same as above
SIMULTANEOUS BETS (RED / BLACK)	Same as above
SIMULTANEOUS BETS (EVEN / ODD)	Same as above
SUBMISSION INFORMATION ON	Same as above
PID HELP SETTING	Same as above
ENGLISH DEFAULT	Same as above
LIVE CAMERA TYPE	Shows the setting on the Center Unit. Please refer to the relative item on **"Main Unit Settings"** at Chapter 4.
LIVE CAMERA ADDRESS	Same as above

5. 9. 10: Online System Settings

TOP MENU>SETTINGS>ONLINE SYSTEM SETTINGS

This item allows to change the settings relative to the Online System.

NOTE:
- To perform this operation, the Security Cage Door must be open.
- (Except in ONTARIO version) All meters will be cleared when any changes are made to the **"Online System Settings"**.



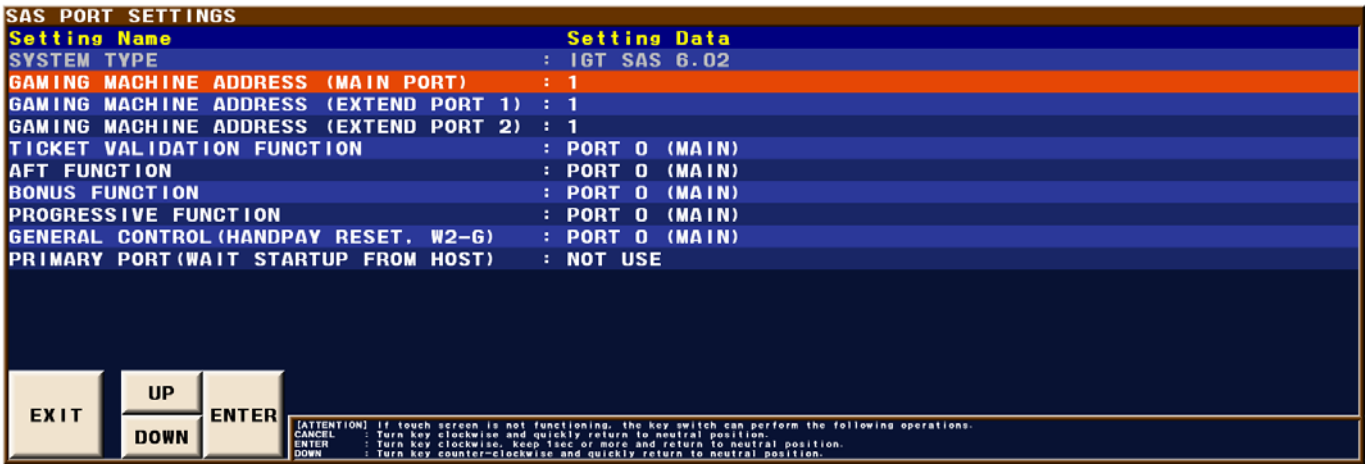
ITEM	DESCRIPTION
SYSTEM TYPE	Set the Online System. **NONE [DEFAULT]** **IGT SAS 6.02** **NOTE:** ·If this item is set to **NONE**, other items will not be displayed. ·To use Paltronics connection, set this item to **IGT SAS 6.02**.
GAMING MACHINE ADDRESS (MAIN PORT)	Set the ID that identifies the cabinet for the SAS communication (with the basic SAS Port). **1 - 127 [DEFAULT: 1]** **NOTE:** In WEST VIRGINIA version this item can be modified only at the first access to the AUDIT after the RAM clear. After exiting the audit once, the item will be gray out.
CASHLESS TRANSFER FROM HOST (EX BONUS)	EFT/AFT can be used. **NO** **YES [DEFAULT]**
LEGACY BONUS FROM HOST	[Legacy Bonuses / MJT from the Host] can be accepted. **NO** **YES [DEFAULT]**

ITEM	DESCRIPTION
AFT BONUS FROM HOST	[AFT Bonuses from the Host] can be accepted. **NO** **YES [DEFAULT]**
CASHOUT VALIDATION	Set the [Cashout Validation process setting] for the SAS System. **NONE [DEFAULT] :** TITO cannot be used **SECURED ENHANCED :** Processed in Secure Enhanced Mode **SYSTEM :** Processed in System Mode
TICKET DATA TRANSFER MODE	Set when the GP0x3D command should be sent. **MODE 1 TICKET FIRST [DEFAULT]** Send after the ticket is printed. **MODE 2 DATA FIRST** Send before the ticket is printed.
REPRINT TICKET	Allows re-printing of tickets. **NO [DEFAULT, fixed for ONTARIO version]** **YES**
SEND EXCEPTION (7E/7F) (Non-RTE)	When the mode is not set to RTE Mode, the 7E/7F (Game Start, End) events are sent to the host. **NO** **YES [DEFAULT]**
SEND EXCEPTION (54) WHEN PROGRESSIVE HANDPAID	Set if to send Exception 54 when a Handpay occurs. **NO [DEFAULT]** No Exception 54 is sent. But if during the same Game cycle at least one No Handpay Progressive occurs, the Exception 54 is sent only once. **YES** The Exception 54 is sent. An Exception 54 is sent for any Progressive WIN that occurs.
LOCKUP DURING OFFLINE	When the SAS System goes OFFLINE, the machine will lock up. **NO** **YES [DEFAULT]** **NOTE:** This item is not displayed in WEST VIRGINIA version.

ITEM	DESCRIPTION
LOCK UP WHEN NOT RECEIVING ACK	Set the behavior in case a [HOST COMMUNICATION LINK DOWN] error occurs. **NO [DEFAULT]** A [Warning] will be displayed on the top left of the game screen, but the game continues. **YES** The machine locks up. **NOTE:** This item is not displayed in WEST VIRGINIA version.
LOCK UP WHEN EXCEPTION BUFFER OVERFLOW	Set the behavior of the machine when an [EXCEPTION BUFFER OVERFLOW] error occurs. **NO** A [Warning] will be displayed on the top left of the game screen, but the game continues. **YES [DEFAULT]** The machine locks up.
CASHOUT DURING LOCKUP FROM HOST	Cashout is possible when the host has locked up the machine. **ENABLED [DEFAULT]** **DISABLED**
RESPONSE OF SEND TOKEN DENOMINATION (B3)	Set the response of the machine to the SAS System command LP 0xB3 (Token Denom). **00 [DEFAULT]** **01**
SEND HANDPAY RETRY	Setting not active as the item is not relevant for this game.
RESET TICKET VALIDATION	Select this function in case the ticket validation process does not complete. Follow the indications on screen to restore the game. For more details refer to chapter "TICKET VALIDATION STOPS" at Chapter 8.
SEND EXTRA GAME START EXCEPTION	Set if a temporary Exception 7E will be sent in the moment when the first chip is placed during the bet time. **ENABLED** **DISABLED [DEFAULT]** **NOTE:** This item is displayed only when "SEND EXCEPTION (7E/7F) (Non-RTE)" is set to **YES**.

5. 9. 10. 1: SAS Port Settings

TOP MENU>SETTINGS>ONLINE SYSTEM SETTINGS>SAS PORT SETTINGS



ITEM	DESCRIPTION
SYSTEM TYPE	The SAS System Type
GAMING MACHINE ADDRESS (MAIN PORT)	The address of the main SAS Port. **1 - 127 [DEFAULT: 1]**
GAMING MACHINE ADDRESS (EXTEND PORT 1)	The address of Extend Port 1. **1 - 127 [DEFAULT: 1]**
GAMING MACHINE ADDRESS (EXTEND PORT 2)	The address of Extend Port 2. **1 - 127 [DEFAULT: 1]**
TICKET VALIDATION FUNCTION	Set which port is used to communicate the [Ticket Validation Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
AFT FUNCTION	Set which port is used to communicate the [AFT Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**

ITEM	DESCRIPTION
BONUS FUNCTION	Set which port is used to communicate the [Bonus Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
PROGRESSIVE FUNCTION	Set which port is used to communicate the [Progressive Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
GENERAL CONTROL (Hand Pay Reset, W2-G)	Set which port is used to communicate the [JACKPOT LOCKUP]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
PRIMARY PORT (Wait Startup From Host)	Set which port is used for the connection to the Main Host. **NOT USE [DEFAULT, not displayed in WEST VIRGINIA Ver.]** **MAIN PORT [DEFAULT for WEST VIRGINIA]** **EXTEND PORT 1** **EXTEND PORT 2**

5. 9. 11: Progressive Settings

Not used on this machine

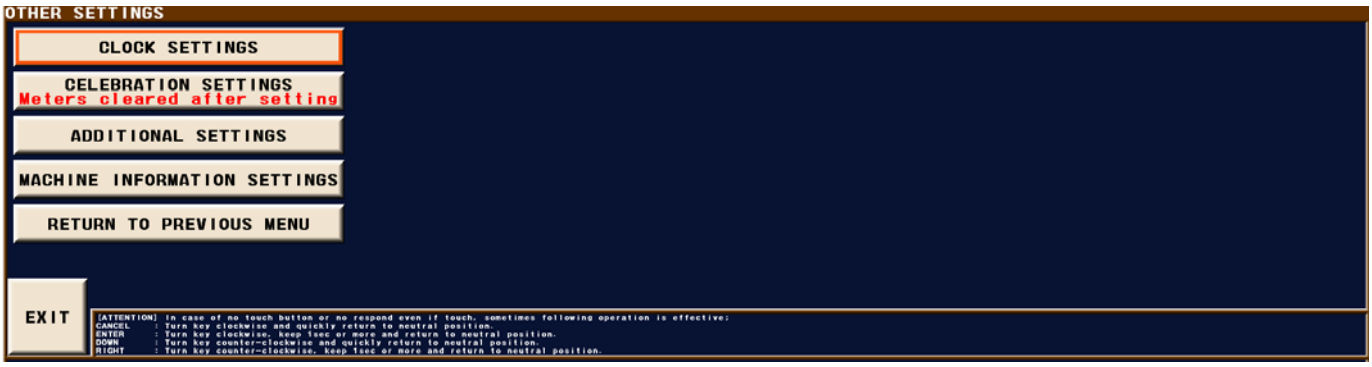
5. 9. 12: ARUZE Link Settings

Not used on this machine

5. 9. 13: Other Settings

TOP MENU>SETTINGS>OTHER SETTINGS

This item allows to change the settings of extra functions.



ITEM	DESCRIPTION
CLOCK SETTINGS	Shows the setting of the Center Unit.
CELEBRATION SETTINGS	Change the Celebration settings. More details are described at **"Celebration Settings" (Refer to 5.9.13.1)**. **NOTE:** This item may not be displayed according to the jurisdiction.
ADDITIONAL SETTINGS	Change the Additional Settings. More details are described at **"Additional Settings" (Refer to 5.9.13.2)**.
MACHINE INFORMATION SETTINGS	Displays the Asset Number, and can be used to input the Floor Location and the Serial Number. **ASSET NUMBER** The Machine Authentication number used for AFT transfers. (Read Only) **FLOOR LOCATION** The Floor Location can be set. SAS LP B7 **SERIAL NUMBER** The Serial Number can be set. SAS LP 54

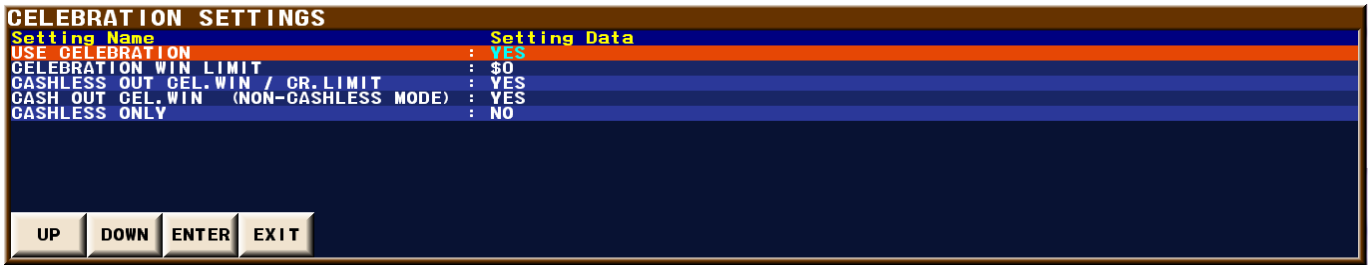
5. 9. 13. 1: Celebration Settings

TOP MENU>SETTINGS>OTHER SETTINGS>CELEBRATION SETTINGS

NOTE:

・To perform this operation, the Security Cage Door must be open.

・All meters will be cleared when any changes are made to the **"Celebration Settings"**.



ITEM	DESCRIPTION
USE CELEBRATION	Set the Celebration function. **NO [DEFAULT]** **YES**
CELEBRATION WIN LIMIT	When a win over the set value occurs, a [CELEBRATION WIN] is displayed and the machine locks up. **0 - 40,000,000 [DEFAULT: 0]**
CASHLESS OUT CEL. WIN / CR. LIMIT	A Cashless payout will be made in case a Celebration Win or Credit Limit occurs. **NO** **YES [DEFAULT]**
CASH OUT CEL. WIN (NON-CASHLESS MODE)	When Cashless Payouts (EFT transfer) are not possible, Celebration wins are paid out. **NO** **YES [DEFAULT]**
CASHLESS ONLY	Set to "CASHLESS ONLY" mode. **NO [DEFAULT]** **YES**

5. 9. 13. 2: Additional Settings

TOP MENU>SETTINGS>OTHER SETTINGS>ADDITIONAL SETTINGS



ITEM	DESCRIPTION
DISPLAY MESSAGE FOR STACKER FULL	Set if a [STACKER FULL] message will be displayed when the BILL stacker becomes full. When the setting is set to **NO**, the information will be sent to the SAS system without any message appearing on the screen. **NO** **YES [DEFAULT]**
ERROR SOUND SETTINGS	Select which errors will be target of the setting of "Error sound". **ALL ERRORS [DEFAULT for currencies except HKD or MOP]**. The "error sound" stops after 3.5 seconds. This will happen for any kind of error. **BILL AND STACKER DOORS** Select on "BILL/STACKER LV 1" the special "error sound" to play when the Bill Door or the Stacker Door are open. When any other error occurs, the "error sound" stops after 3.5 seconds. **BILL, STACKER, MAIN DOORS [DEFAULT when currency is set to HKD or MOP]** Select on "BILL/STACKER LV 1" and "BILL/STACKER LV 2", it can be set the special "error sound" to play when the Bill Door or the Stacker Door are open. Then set on "MAIN DOORS" the length of the "error sound" to play when the Main Door, Lower Door, Lcd Door are open. When any other error occurs, the "error sound" stops after 3.5 seconds.

ITEM	DESCRIPTION
BILL/STACKER LV 1	Set the time length of the ”1st Error sound” that plays when the Bill Door or the Stacker Door are open. **[CASE 1]** If “ERROR SOUND SETTINGS” is set to **BILL AND STACKER DOORS**. When the time set below for the “1st error sound” is passed, it changes into the “2nd error sound”. Then, after 180 seconds it changes again to a Buzzer. The Buzzer continues until the error is cleared. **0 - 10000 [DEFAULT: 30 sec]**  **[CASE 2]** If “ERROR SOUND SETTINGS” is set to **BILL, STACKER, MAIN DOORS**. When the time set below for the “1st error sound” is passed, it changes into the “2nd error sound”. The “2nd error sound” continues until the error is cleared or after the time set at “BILL/STACKER LV2” (next item). **0 - 10000 [DEFAULT: 180 sec]** **CONTINUOUS**  **NOTE:** This item is displayed only if the setting ”ERROR SOUND SETTINGS” is set to **BILL AND STACKER DOORS** or **BILL, STACKER, MAIN DOORS**.
BILL/STACKER LV 2	Set the time length of the “2nd error sound” that plays when the Bill Door or the Stacker Door are open. **3 – 10000** **CONTINUOUS [DEFAULT]**  **NOTE:** ·This item is displayed only if the setting ”ERROR SOUND SETTINGS” is set to **BILL, STACKER, MAIN DOORS**. ·Set this item together with “MAIN DOORS”.

ITEM	DESCRIPTION
MAIN DOORS	Set the time length of the "error sound" that plays when the Main Door, Lower Door or Lcd Door are open. **3 – 10000** **CONTINUOUS [DEFAULT]**  **NOTE:** ·This item is displayed only if the setting "ERROR SOUND SETTINGS" is set to **BILL, STACKER, MAIN DOORS**. ·Set this item together with "BILL/STACKER LV 2".
LINK PROGRESSIVE LOCK UP TIME	Set how long the EGM should wait to receive the SAS Progressive current value. When the set time expires, the machine will lock up. **5 SEC [DEFAULT]** **10 SEC** **20 SEC** **UNLIMITED** **CANCEL**
SAS COMMUNICATION LOG OUTPUT	Refer to **"SAS Communication Log"** at Chapter 7.4 of the OPERATION Manual and set the number of data entries to display. To check a new communication log, set this item to **256** or **2048** and then see the **"SAS Communication Log"**. When set on **DISABLE** it is possible to check the log already recorded by pressing [SAVE]. **DISABLE [DEFAULT]** **256** **2048** **CAUTION!** Before restart the game operation, make sure to set this item to **DISABLE**. **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 5.9.10)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

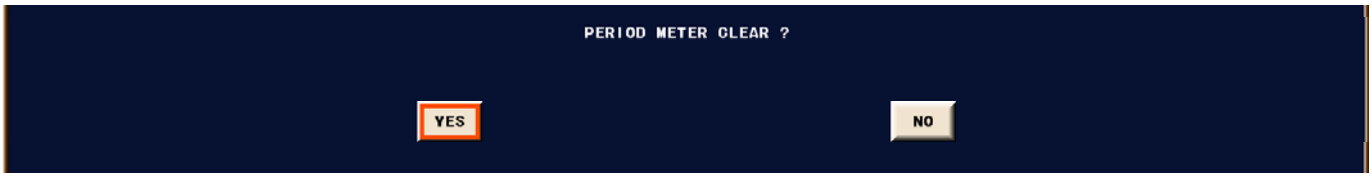
ITEM	DESCRIPTION
SAS EVENT LOG OUTPUT	Refer to **"SAS Communication Log"** at Chapter 7.4 of the OPERATION Manual and set the contents to display. **DISABLED [DEFAULT]** Only the request from the Host and their response from the machine are displayed. **ENABLED** With the request from the Host and their response from the machine, also the Machine events are displayed. **NOTE:** This item is operative only when "SAS COMMUNICATION LOG OUTPUT" is set to 256 or 2048. When set on **DISABLE** it is possible to check the log already recorded by pressing [SAVE].
NON-CASHABLE ELECTRONIC PROMOTIONAL IN SOUND EFFECT	Set if a sound will be played when a Non-Cashable AFT is received. **DISABLED** **ENABLED [DEFAULT]**

5. 10: Period Meter Clear

TOP MENU>PERIOD METER CLEAR

> **NOTE:**
> To perform this operation, the Front Door must be open.

Select this item to display the screen below.
When touching [YES], all Period Meters will be cleared. Take NOTE of all necessary period meter information before selecting [YES].



5. 11: Out of Service

TOP MENU>OUT OF SERVICE

> **NOTE:**
> To perform this operation, the Front Door must be open.

1. Select this item to display the screen below.



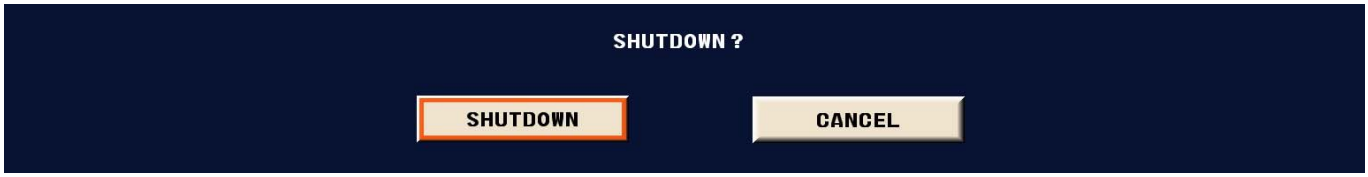
2. Turn the RESET/AUDIT Key Switch on the Reset position and then on the neutral position to return to the normal screen.



5. 12: Shutdown

TOP MENU>SHUTDOWN

> **NOTE:**
> Turns POWER OFF the machine (Standby shutdown), without using the Power Switch.
> **(Refer to the Opening insert Safe Power OFF)**



By selecting [SHUTDOWN], the machine will automatically turn POWER OFF (standby shutdown) after all the data are completely saved.
Touch [CANCEL] to return to the Top Menu.


interblock
LUXURY GAMING PRODUCTS

Chapter 5

AUDIT Mode for Stations (Service)

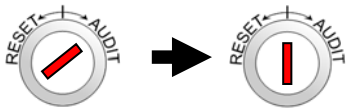
Accessing – AUDIT mode - Top Menu

When the target station is in idle mode (not during game or error status), the AUDIT menu can be accessed by the following procedure:

CAUTION!
It is not possible to change the settings if credit is left in the Stations.

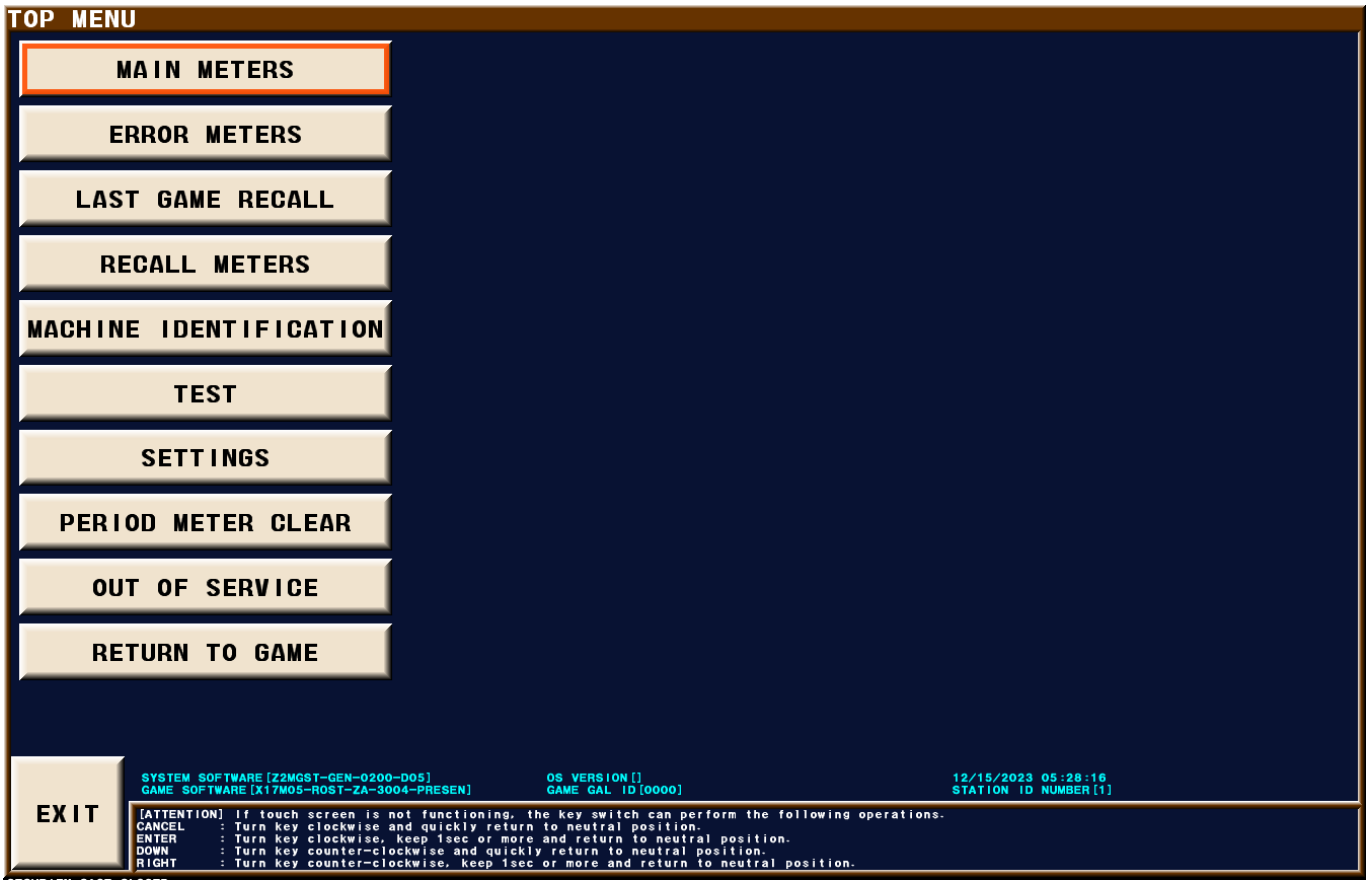
NOTE:
It is not necessary to open the Front Door to just display the AUDIT mode.

1. Open the door (Front door, Security Cage door) indicated by the instructions for each AUDIT setting item.
2. To call the AUDIT mode, turn the RESET/AUDIT Key Switch to the AUDIT position, and return it to the neutral position.



NOTE:
When the currency is set to Hong Kong $ or Macau Pataca, the error alarm that sounds when the **"DOOR OPEN"** error occurs can be turned off. Select **"MUTE (SOUND)"** from the top-right part of the screen. To turn the error alarm back on, select **"UNMUTE (SOUND)"**.

3. The menu can be selected by touching the buttons on the screen, or by using the buttons on the control panel (if the model allows it).



Structure of Audit Mode

The items explained in this manual are written in blue.

NOTE:
The items listed above may vary or not be displayed, according to the different jurisdictions.

ROOT MENU	SUB MENU
MAIN METERS See OPERATION Manual, Chapter 7	**MASTER METERS**
	NEVADA(or MACAU) **METERS**
	FRENCH METERS
	BILL METERS (Accessible only if the BILL Acceptor is Enabled)
	SYSTEM RELATED IN/OUT METERS
	ONLINE COMMUNICATION METERS
	GAME METERS
	WAGER CATEGORY METERS
ERROR METERS See OPERATION Manual, Chapter 7	**MECHANICAL METER ERRORS**
	SYSTEM ERRORS
	DOOR EVENTS
	ONLINE COMMUNICATION ERRORS
	BILL ACCEPTOR ERRORS/EVENTS (Accessible only if the BILL Acceptor is Enabled)
	TICKET PRINTER ERRORS (Accessible only if the Ticket Printer is Enabled)
	NETWORK CONDITION METERS
	LIVE CAMERA ERRORS

ROOT MENU	SUB MENU
LAST GAME RECALL See OPERATION Manual, Chapter 7	**CURRENT GAME**
	LAST GAME
	2nd LAST GAME
	3rd LAST GAME
	4th LAST GAME
	5th LAST GAME **50th LAST GAME AME**
RECALL METERS See OPERATION Manual, Chapter 7	**BILL RECALL**
	TICKET IN
	TICKET OUT
	CASHLESS TRANSACTION
	PROMOTIONAL TRANSACTION
	HOST BONUS TRANSACTION
	DOOR HISTORY
	ERROR HISTORY
	ALL EVENT HISTORY
	HAND PAY HISTORY
	PROGRESSIVE HISTORY
	SAS COMMUNICATION LOG
	RETURN BET
MACHINE IDENTIFICATION See OPERATION Manual, Chapter 7	**VERSION INFORMATION**
	PSD VERIFICATION (CRC)
	PSD VERIFICATION (HMAC-SHA1)
	PSD VERIFICATION (SHA1)
	GAME INFORMATION
	HARDWARE INFORMATION
	SUBMISSION INFORMATION
TEST (Can be performed only if the Front door is open)	**BILL ACCEPTOR TEST**
	TICKET PRINT TEST
	MONITOR TEST
	TOUCH SCREEN TEST
	INPUT TEST
	OUTPUT TEST
	SERIAL TEST
	SOUND TEST

ROOT MENU	SUB MENU
SETTINGS (Can be set only if the Front door is open)	**HARDWARE SETTINGS**
	BILL ACCEPTOR SETTINGS
	TICKET PRINT SETTINGS
	TOUCH SCREEN SETTINGS (Can be set if the Front door is closed)
	VOLUME SETTING (Can be set if the Front door is closed)
	AUDIT SETTINGS
	IMPORTANT SETTINGS (Set only if the Security cage is open)
	GAME SETTINGS **BET SETTINGS** **TIME SETTINGS** **EXTRA SETTINGS**
	ONLINE SYSTEM SETTINGS (Set only if the Security cage is open)
	OTHER SETTINGS **CLOCK SETTINGS** (Read only) **CELEBRATION SETTINGS** (Set only if the Security cage is open) **ADDITIONAL SETTINGS** (Set only if the Security cage is open) **MACHINE INFORMATION SETTINGS** (Set only if the Security cage is open)
PERIOD METER CLEAR (Can be performed only if the Front door is open)	
OUT OF SERVICE (Can be performed only if the Front door is open)	

5. 1: Audit Mode Differences based on Settings

NOTE:
The name of some AUDIT items changes according to the jurisdiction.

Jurisdiction	GLI、SABS、MACAU	CA	NV/AZ
MASTER METERS	MASTER METERS	MASTER METERS	NEVADA METERS
NEVADA/MACAU METERS	MACAU METERS	NEVADA METERS	Not Displayed
FRENCH METERS	FRENCH METERS	FRENCH METERS	Not Displayed
IMPORTANT SETTINGS	IMPORTANT SETTINGS	IMPORTANT SETTINGS	BASIC SETTING

5. 2: Settings Menu Differences between NV GAL or SETTING GAL

No settings require the use of a SETTING GAL Cassette.

5. 3: Main Meters

TOP MENU >MAIN METERS

Refer to OPERATION Manual Chapter 7.1 **"Main Meters"** to check the Meters recorded by the machine.

5. 4: Error Meters

TOP MENU >ERROR METERS

Refer to OPERATION Manual Chapter 7.2 **"Error Meters"** to check the logs of each Error category.

5. 5: Last Game Recall

TOP MENU >LAST GAME RECALL

Refer to OPERATION Manual Chapter 7.3 **" Last Game Recall"** to check records of the past games, including the game ongoing.

5. 6: Recall Meters

TOP MENU >RECALL METERS

Refer to OPERATION Manual Chapter 7.4 **"Recall Meters"** to check records of each Event.

5. 7: Machine Identification

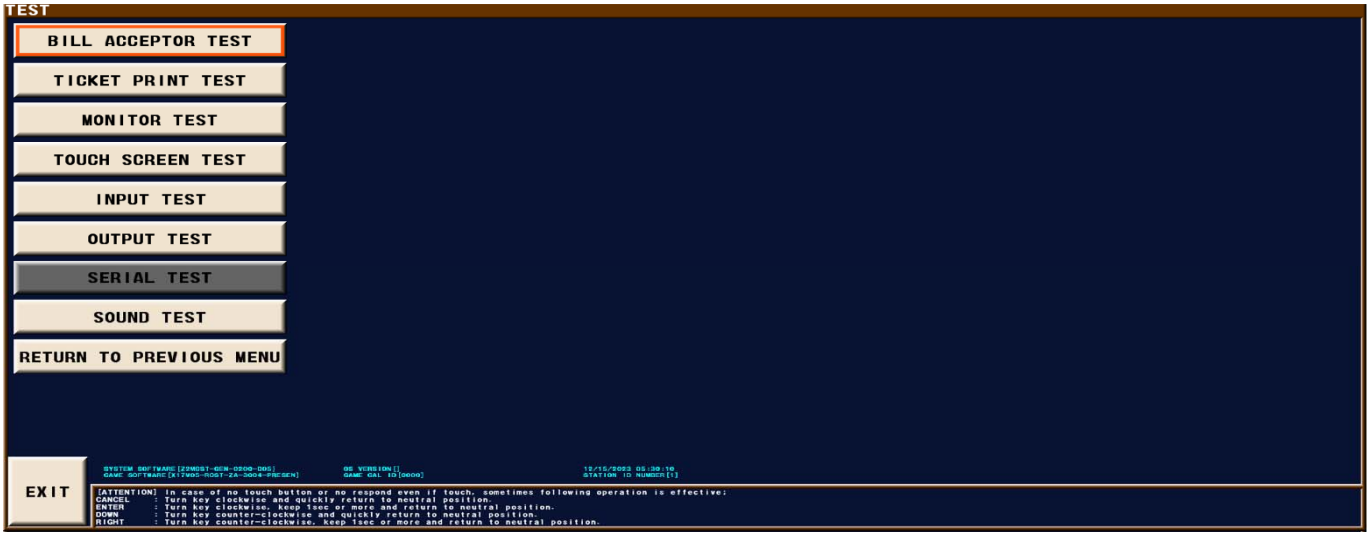
TOP MENU >MACHINE IDENTIFICATION

Refer to OPERATION Manual Chapter 7.5 **"Machine Identification"** to check various Information.

5. 8: Test

TOP MENU>TEST

> **NOTE:**
> To perform this operation, the Front Door must be open.



5. 8. 1: BILL Acceptor Test

TOP MENU>TEST>BILL ACCEPTOR TEST

> **NOTE:**
> ・This item is displayed only if on **"BILL Acceptor Settings"(refer to 5.9.2)** the setting " BILL ACCEPTOR" is set to **ENABLED**.
> ・This test displays the BILL/ticket type and code when a BILL or ticket is inserted.

5. 8. 2: Ticket Print Test

TOP MENU>TEST>TICKET PRINT TEST

> **NOTE:**
> ・This item is displayed only if on **" Ticket Print Settings"(refer to 5.9.3)** the setting " PRINTER TYPE" is set to **ENABLED**.
> ・The Ticket Print Test is started when [TEST START] is pressed.

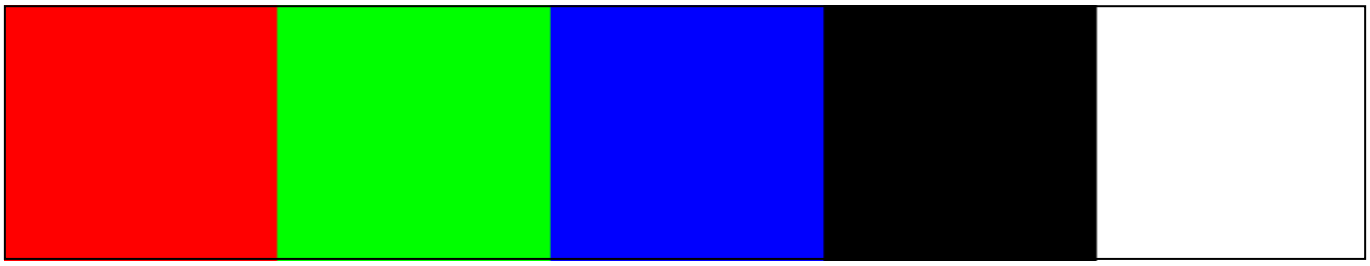
5. 8. 3: Monitor Test

TOP MENU>TEST>MONITOR TEST

Select one of the Buttons below to display the relative color on the screen.



Example screenshot



5. 8. 4: Touch Screen Test

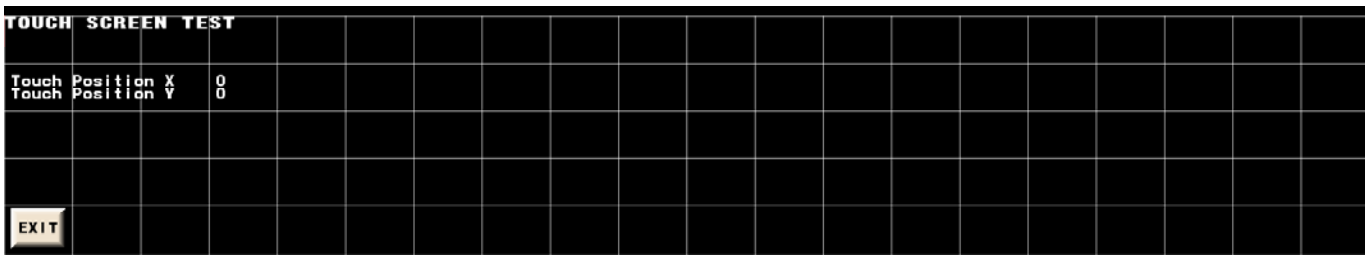
TOP MENU>TEST>TOUCH SCREEN TEST

⚠ CAUTION!

It is not possible to properly calibrate the screen if the following conditions are not fulfilled. If the difference is relevant, repeat again the calibration procedure.

・When performing the Calibration settings, the Top Door must be locked.

・Do not touch the cabinet with any part of the body except the finger touching the screen.



ITEM	DESCRIPTION
TOUCH SCREEN TEST	Displays a cursor on the screen and the coordinates of the point of touch.

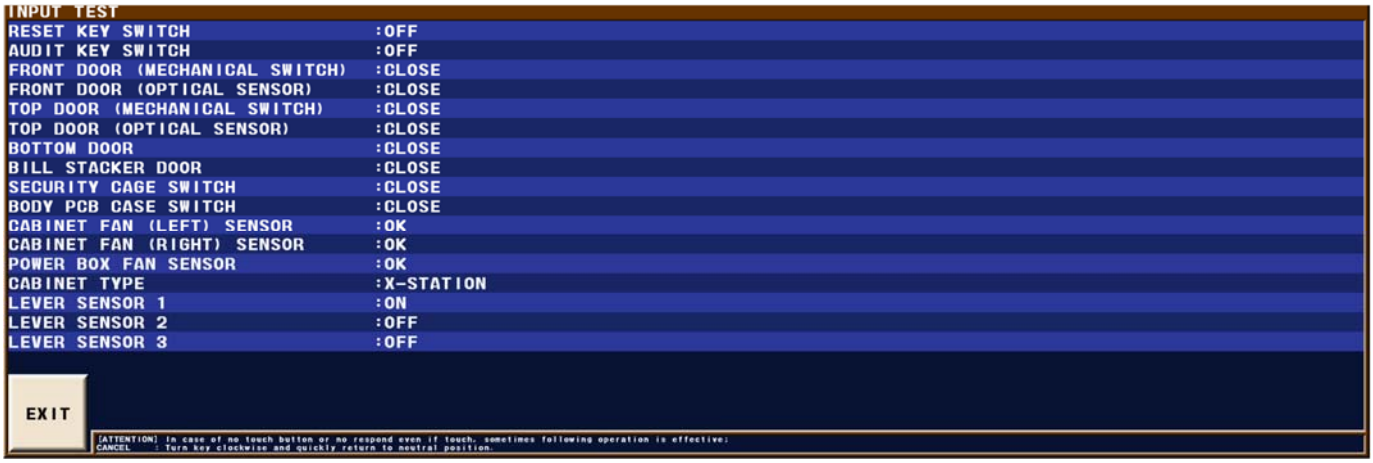
5. 8. 5: Reel Test

Not used on this machine

5. 8. 6: Input Test

TOP MENU>TEST>INPUT TEST

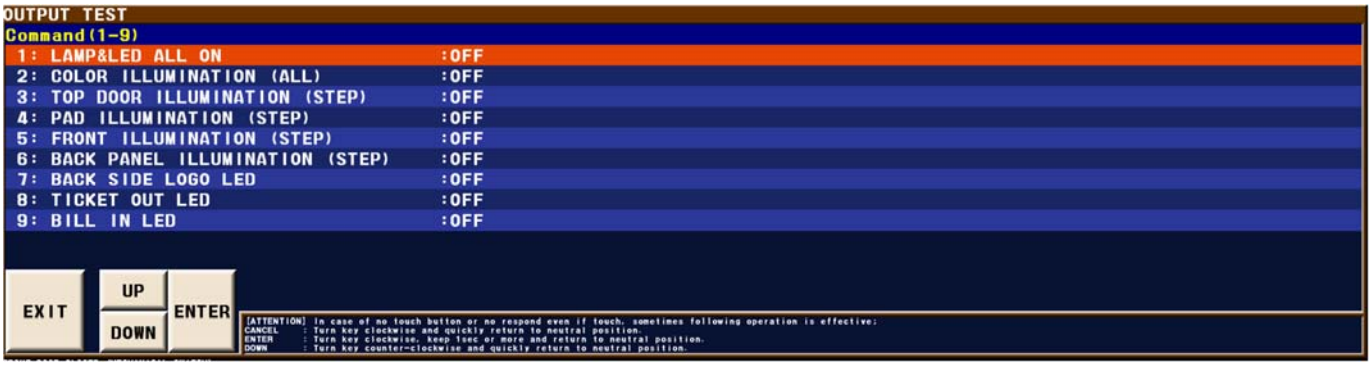
This item allows to check the operation of various functions.



5. 8. 7: Output Test

TOP MENU>TEST>OUTPUT TEST

This item allows to select each function in order to check the operation of the relative device.



5. 8. 7. 1: Illumination LED

This item allows to check the Illumination LED. Select one item to automatically turn on the LED.

Structure of LED Test

TOP MENU>TEST>OUTPUT TEST>LAMP&LED ALL ON

>COLOR ILLUMINATION (ALL) ※no function

>TOP DOOR ILLUMINATION (STEP)

>PAD ILLUMINATION (STEP)

>FRONT ILLUMINATION (STEP)

>BACK ILLUMINATION (STEP)

>TICKET OUT LED

>BILL IN LED

>BACK SIDE LOGO LED

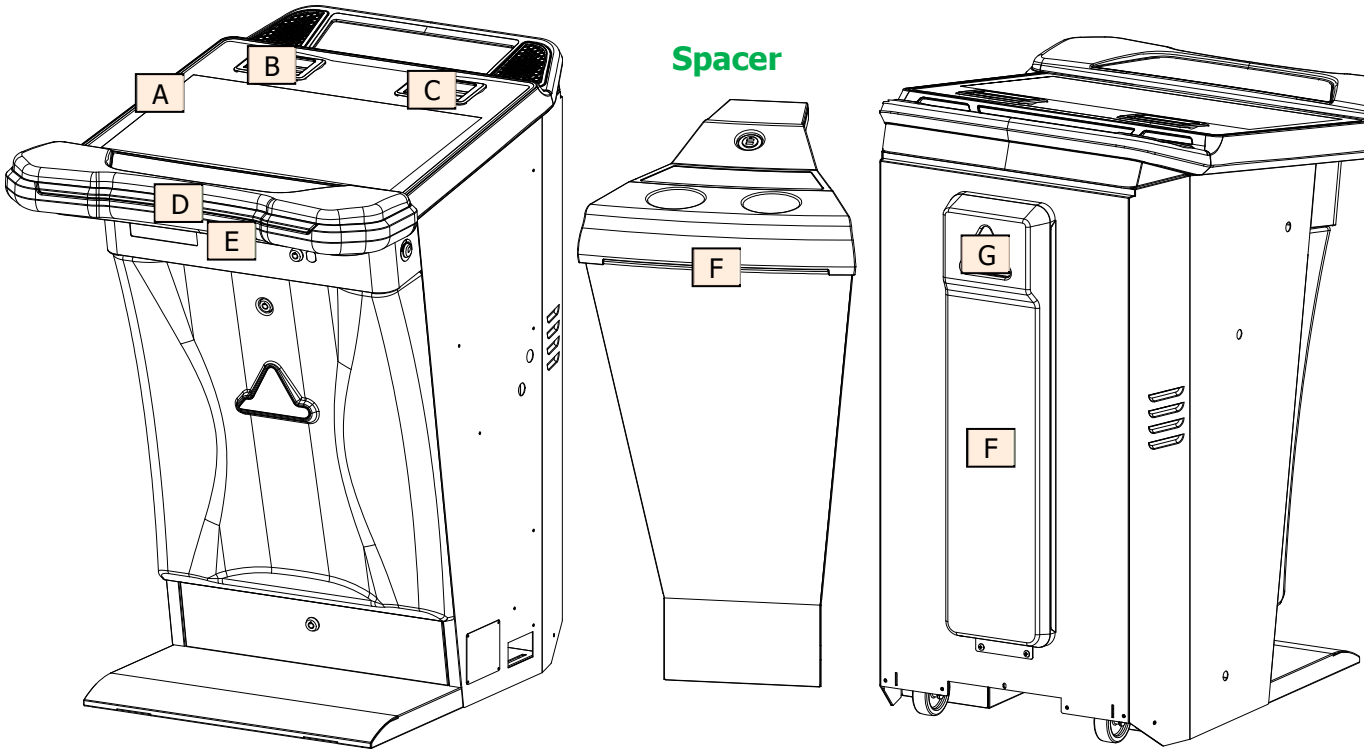
TOP MENU>TEST>OUTPUT TEST>LAMP&LED ALL ON

The LEDs position is as indicated in the map.

The LEDs illuminate following the order indicated by the numbers on the table.

NOTE:
According to the machines, also a Spacer may be attached to the Stations as shown below.

The LEDs location map



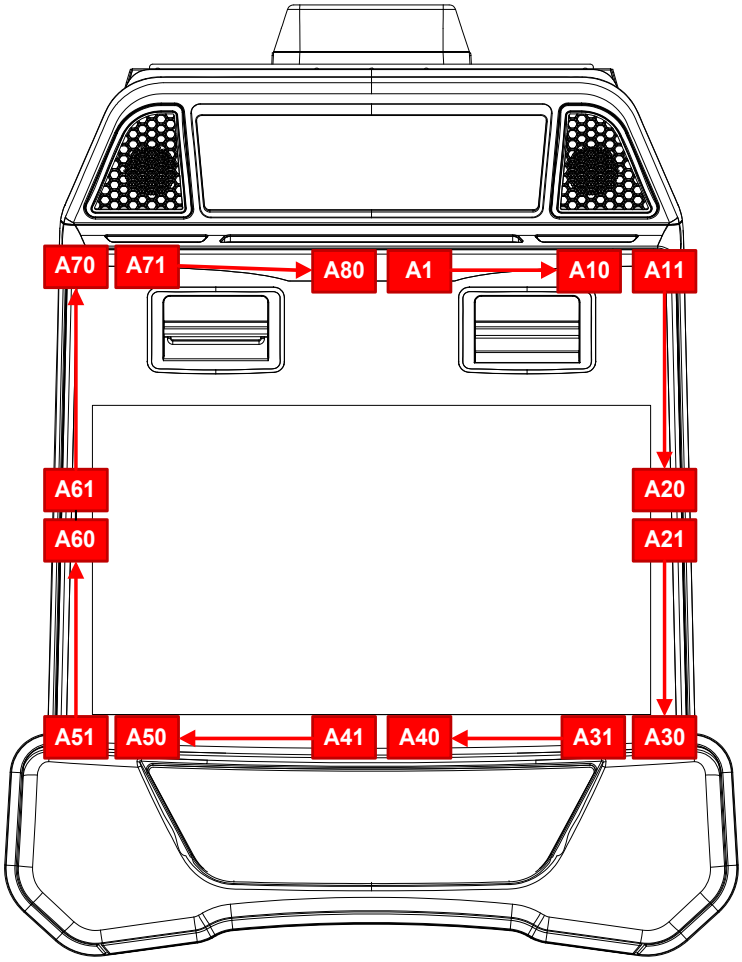
LAMP&LED ALL ON		
Rotation	No.	NAME
	1	A : WHITE
		B : BLUE
		C : BLUE
		D : WHITE
		E : WHITE
		F : WHITE
		G : WHITE

TOP MENU>TEST>OUTPUT TEST>TOP DOOR ILLUMINATION (STEP)

The LEDs position is as indicated in the map.

The LEDs illuminate following the order indicated by the numbers on the table.

The LEDs location map (TOP VIEW)



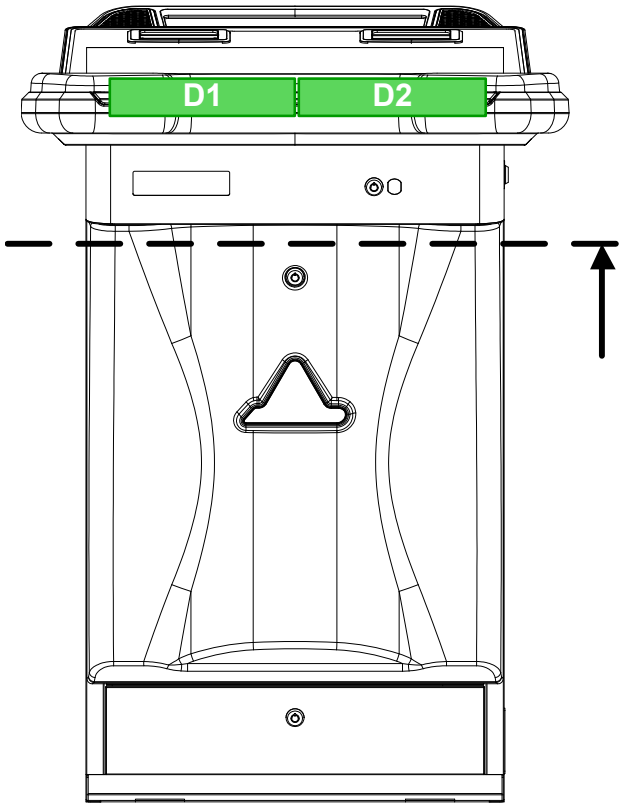
TOP DOOR ILLUMINATION (STEP)		
Rotation	No.	NAME
	1	A1
	|	|
	9	A9
	10	A10
	11	A11
	12	A12
	|	|
	78	A78
	79	A79
	80	A80

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

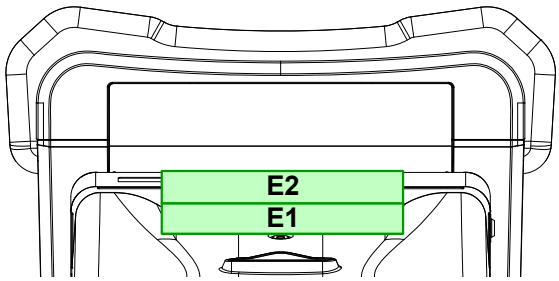
TOP MENU>TEST>OUTPUT TEST>PAD ILLUMINATION (STEP)
>FRONT ILLUMINATION (STEP)

The LEDs position is as indicated in the map.
The LEDs illuminate following the order indicated by the numbers on the table.

The LEDs location map (FRONT VIEW)



The LEDs location map (BOTTOM VIEW)



Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

PAD ILLUMINATION (STEP)		
Rotation	No.	NAME
↓	1	D1
	2	D2

FRONT ILLUMINATION (STEP)		
Rotation	No.	NAME
↓	1	E1
	2	E2

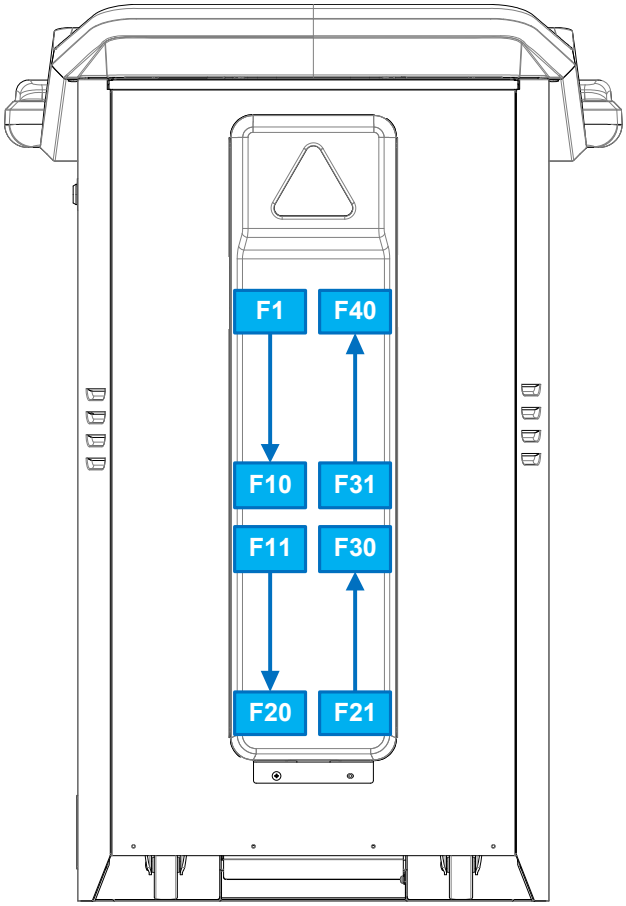
TOP MENU>TEST>OUTPUT TEST>BACK ILLUMINATION (STEP)

The LEDs position is as indicated in the map.

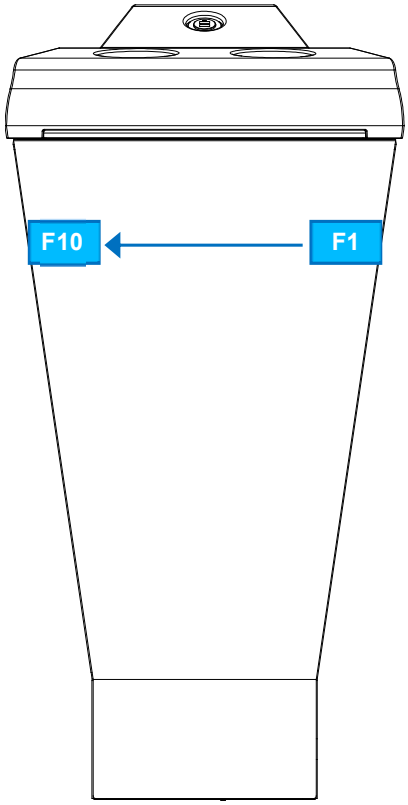
The LEDs illuminate following the order indicated by the numbers on the table.

NOTE:
If a Spacer is attached to the Station, the LED of the Spacer is synchronized with the BACK ILLUMINATION (STEP)

The LEDs location map (BACK SIDE VIEW)



The LEDs location map (on The SPACER)



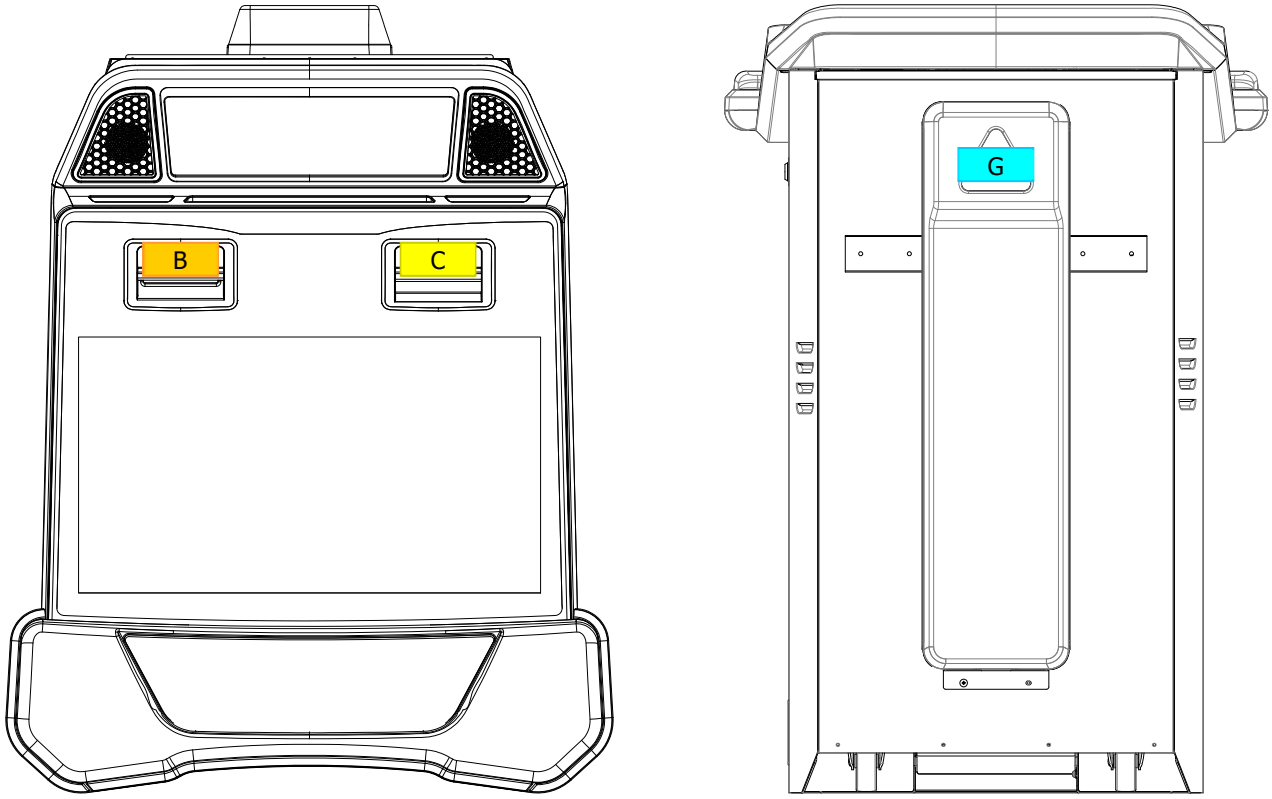
BACK ILLUMINATION (STEP)		
Rotation	No.	NAME
↓	1	F1
↓	2	F2
↓	|	|
↓	39	F39
↓	40	F40

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

TOP MENU>TEST>OUTPUT TEST>TICKET OUT LED
>BILL IN LED
>BACK SIDE LOGO LED

The LEDs position is as indicated in the map.
The LEDs illuminate following the order indicated by the numbers on the table.

The LEDs location map



TICKET OUT LED		
Rotation	No.	NAME
	1	B : BLUE

BILL IN LED		
Rotation	No.	NAME
	1	C : BLUE

BACK SIDE LOGO LED		
Rotation	No.	NAME
	1	G : WHITE

5. 8. 8: Serial Test

TOP MENU>TEST>SERIAL TEST

This item allows to perform a functionality test of the ports COM1-COM6.

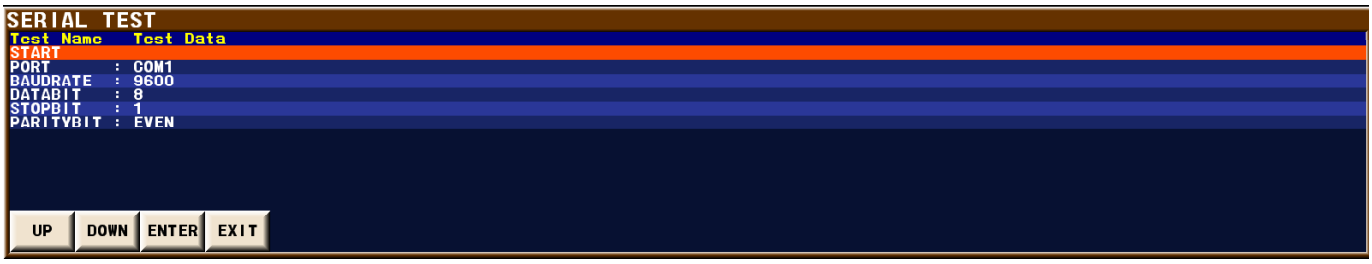
NOTE:

This item is displayed only if on

"BILL Acceptor Settings"(refer to (5.9.2) the setting " BILL ACCEPTOR" is set to **DISABLED**,

"Ticket Print Settings"(refer to 5.9.3) the setting " PRINTER TYPE" is set to **DISABLED**,

"Online System Settings"(refer to 5.9.10) the setting "SYSTEM TYPE" is set to **NONE**



ITEM	Options
START	Start the serial test.
PORT	COM1 / COM2 / COM3 / COM4 / COM5 / COM6 / CANCEL
BAUDRATE	9600 / 19200 / 38400 / 115200 / CANCEL
DATABIT	7 / 8 / CANCEL
STOPBIT	1 / 2 / CANCEL
PARITYBIT	NONE / ODD / EVEN / CANCEL

5. 8. 9: Sound Test

TOP MENU>TEST>SOUND TEST

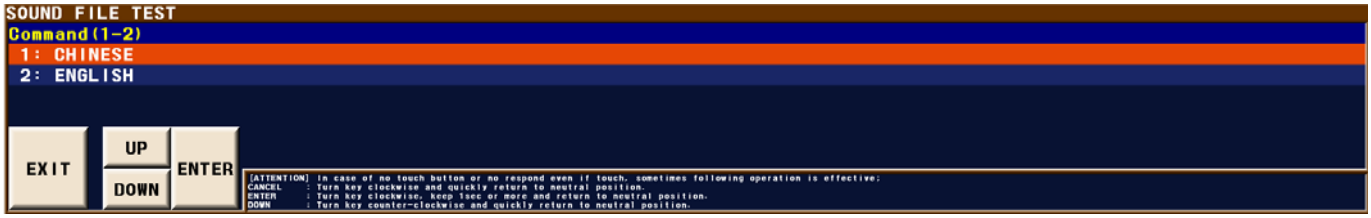
Select one of the Buttons below to play the relative sound.



Example screenshot of **SOUND TEST>SPEAKER TEST**



Example screenshot of **SOUND TEST>SOUND FILE TEST**



5. 8. 10: LCD Button Test

Not used on this machine

5. 8. 11: Extension Unit Test

Not used on this machine

5. 8. 12: Extend LED Test

Not used on this machine

5. 9: Settings

TOP MENU>SETTINGS

NOTE:

・To perform this operation, the Front Door must be open.

・Most items cannot be set if the Security Cage is closed; refer to the indications for each item for more details.

・It is not possible to change the settings if credit is left in the Stations.

・Updating the following settings will clear all soft meters and reset them to zero. After the update it will be necessary to reboot the machine.

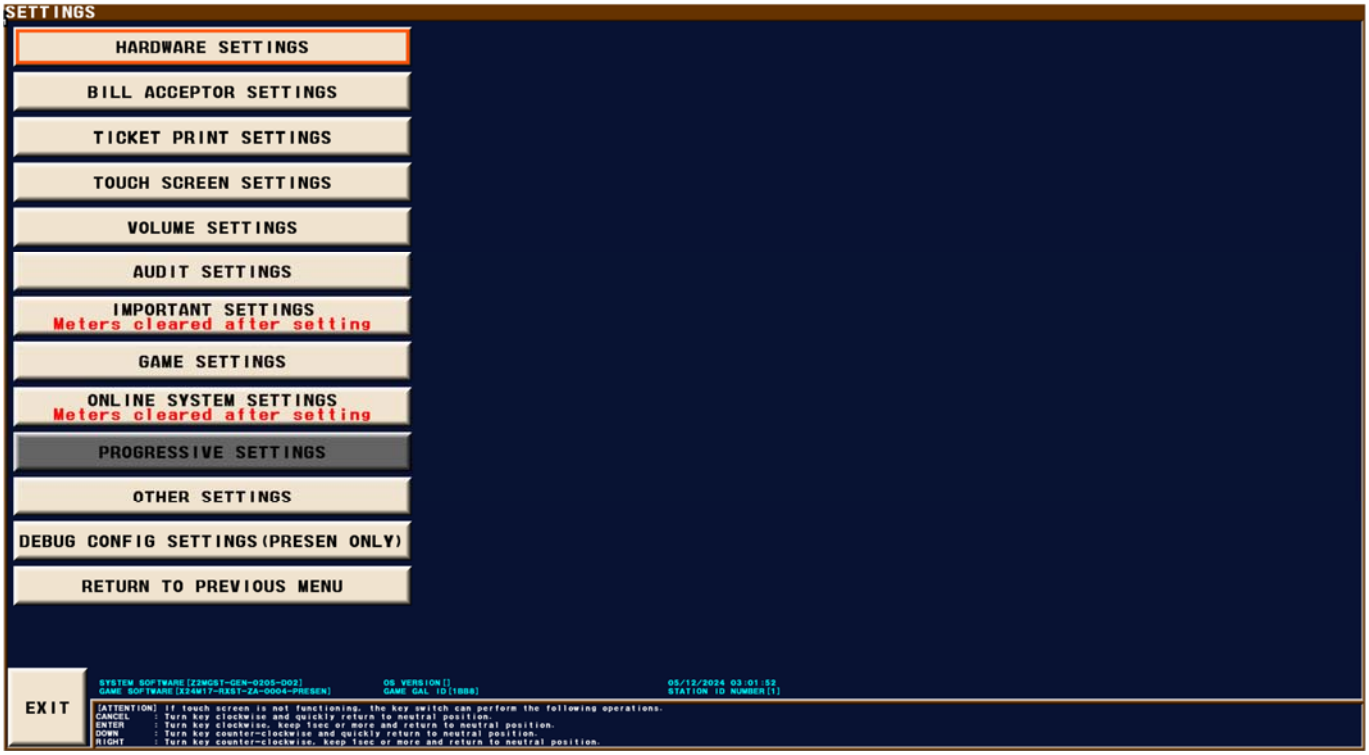
IMPORTANT SETTINGS

GAME SETTINGS

ONLINE SYSTEM SETTINGS

CELEBRATION SETTINGS

※ When using NEVADA GAL, the "IMPORTANT SETTINGS" will be displayed as "BASIC SETTINGS".

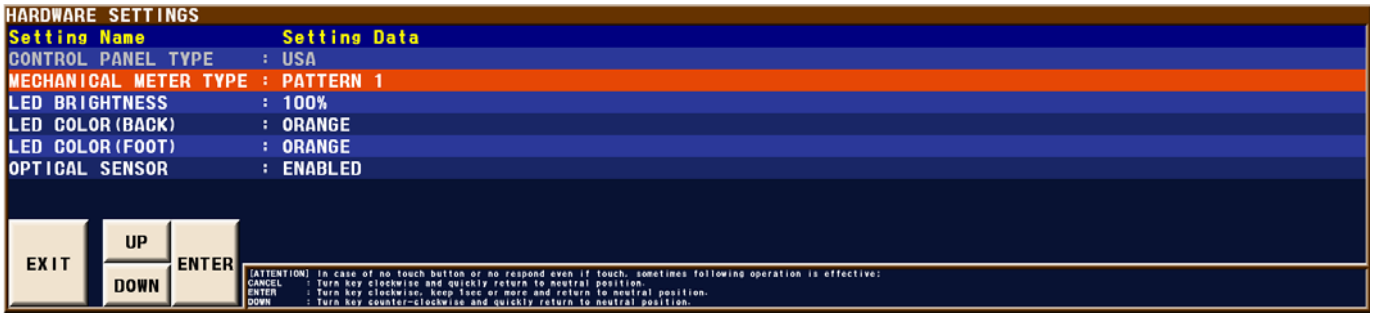


※The description of items not relevant to this Game will be omitted.

5. 9. 1: Hardware Settings

TOP MENU>SETTINGS>HARDWARE SETTINGS

This item allows to change the settings of each hardware device.



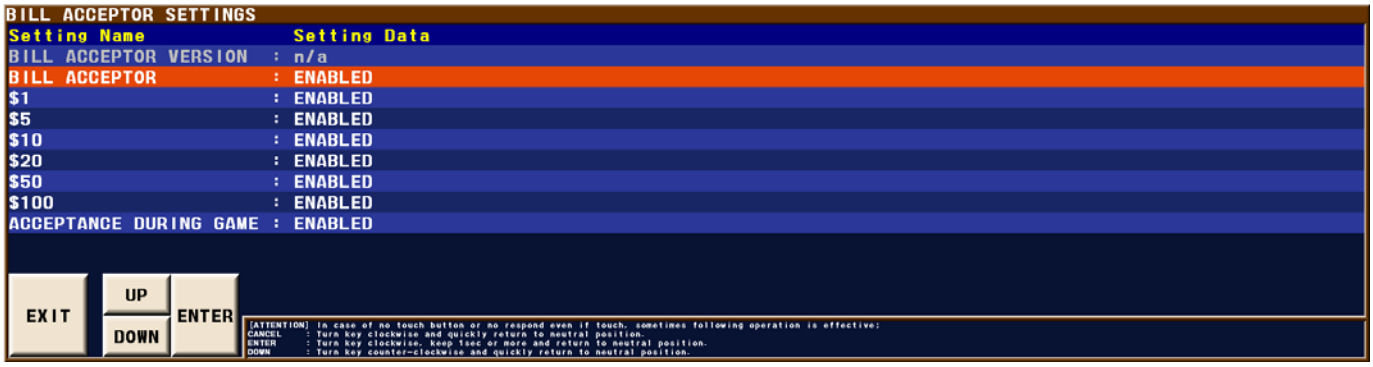
ITEM	DESCRIPTION
CONTROL PANEL TYPE ※Option	Read Only. **USA [FIXED]** **NOTE:** This item is not displayed in NEVADA and ARIZONA version, and is read only in all the other jurisdictions.
MECHANICAL METER TYPE	Set one of the PATTERNS for the display of the Mechanical meters. **NONE** The mechanical meters are N/A. **PATTERN 1** Hand pay/Jackpot Pay, Total Out, Total In, Total Bill. **PATTERN 2** Total cash in, Total cash out, Wagered, Game won. **NOTE:** The default value is dependent on the jurisdiction. This item is not displayed in NEVADA and ARIZONA version.
LED BRIGHTNESS ※Option	Set the intensity of the LED lights: **100%, 80%, 64%, 46%, 36%, 18%, Cancel** **[DEFAULT: 100%]**

ITEM	DESCRIPTION
LED COLOR (BACK) ※Option	Set the color of the Back Illumination LED **ORANGE [DEFAULT]** **RED** **BLUE** **GREEN** **YELLOW** **CYAN** **VIOLET** **WHITE** **OFF**
LED COLOR (FOOT) ※Option	Set the color of the Front Illumination LED. **ORANGE [DEFAULT]** **RED** **BLUE** **GREEN** **YELLOW** **CYAN** **VIOLET** **WHITE** **OFF**
OPTICAL SENSOR	Set the use of the Front Door Optical Sensor function. **ENABLED** **DISABLED [DEFAULT]**

5. 9. 2: BILL Acceptor Settings

TOP MENU>SETTINGS>BILL ACCEPTOR SETTINGS

This item allows to change the settings relative to the bill acceptor functions.



ITEM	DESCRIPTION
BILL ACCEPTOR VERSION	The Firmware version of the bill acceptor.
BILL ACCEPTOR	Set the use of the bill acceptor function. **ENABLED [DEFAULT]** **DISABLED**
$xx	Set if bills of each value can be accepted by the validator. **ENABLED [DEFAULT]** **DISABLED**
ACCEPTANCE DURING GAME	Set if the bills will be accepted during play. **ENABLED [DEFAULT]** **DISABLED**
PROMOTIONAL COUPON	Set if promotional coupons can be accepted. **NO** **YES [DEFAULT]** **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 5.9.10)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

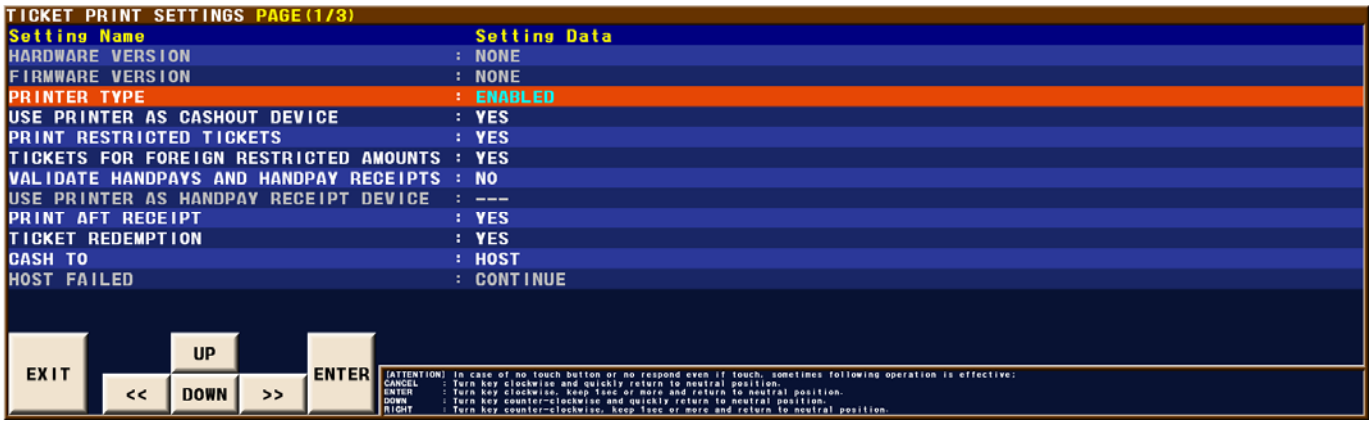
5. 9. 3: Ticket Print Settings

TOP MENU>SETTINGS>KET PRINT SETTINGS

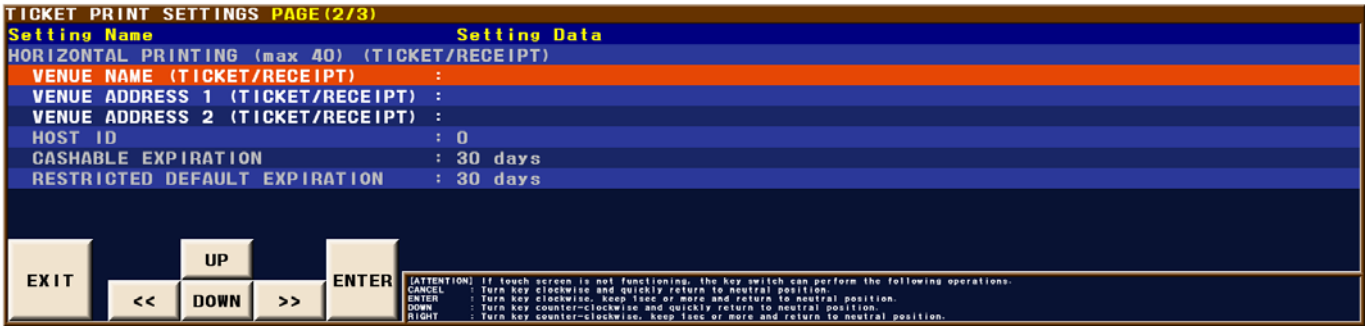
This item allows to change the settings relative to the ticket printer functions.

> **NOTE:**
> The display of this item depends on the setting of "PRINTER TYPE" and on the setting of "SYSTEM TYPE" and "CASHOUT VALIDATION" on "**Online System Settings**" that is described later on this chapter.

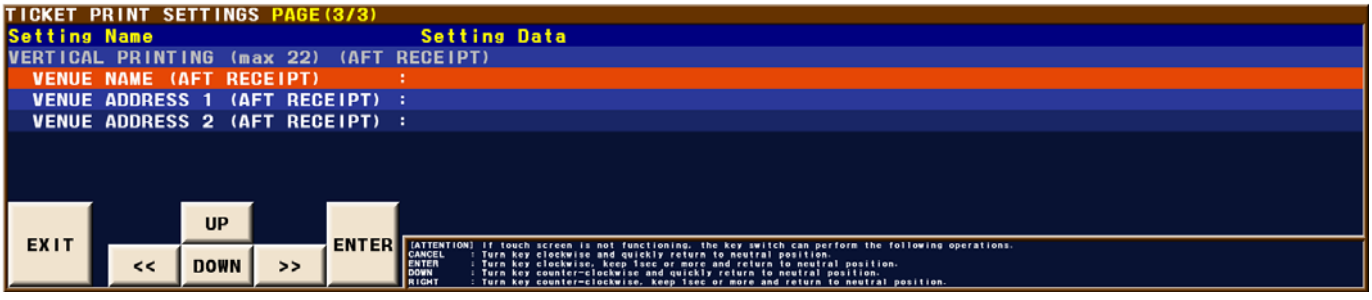
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ITEM	DESCRIPTION
HARDWARE VERSION	The hardware version of the ticket printer.
FIRMWARE VERSION	The firmware version of the ticket printer.
PRINTER TYPE	Set the use of the ticket printer function. **ENABLED** **DISABLED [DEFAULT]**
USE PRINTER AS CASHOUT DEVICE	Set the use of the cashable tickets print function. **YES [DEFAULT]** **NO**
PRINT RESTRICTED TICKETS	Set the use of the restricted tickets print function. (For restricted credits from Ticket In) **YES [DEFAULT]** **NO** **NOTE:** This item is displayed only if "USE PRINTER AS CASHOUT DEVICE" described above is set to **YES**.
TICKETS FOR FOREIGN RESTRICTED AMOUNTS	Set the use of the restricted tickets print function. (For restricted credits from AFT) **YES [DEFAULT]** **NO** **NOTE:** This item is displayed only if "USE PRINTER AS CASHOUT DEVICE" described above is set to **YES**.
VALIDATE HAND PAYS AND HAND PAY RECEIPTS	Hand Pay Validation Information is sent to the Host. **YES** **NO [DEFAULT]**
USE PRINTER AS HAND PAY RECEIPT DEVICE	Prints Hand Pay and Jackpot Hand Pay receipts. **YES [DEFAULT]** **NO** **NO (FORCE)** **YES (FORCE)** **NOTE:** This item is displayed only if "VALIDATE HAND PAYS AND HAND PAY RECEIPTS" described above is set to **YES**.

ITEM	DESCRIPTION
PRINT AFT RECEIPT	Prints AFT receipts. **YES [DEFAULT]** **NO**
TICKET REDEMPTION	Set the use of the Ticket redemption function. **YES [DEFAULT]** **NO**
CASH TO	Set the priority cash out device. **HOST [DEFAULT]** **PRINTER (OR OTHER)** **NOTE:** This item is displayed only when "PRINTER TYPE" is set to **ENABLED** and "CASHLESS TRANSFER FROM HOST (EX BONUS)" of **"Online System Settings"** is set to **YES**.
HOST FAILED	The AFT Connection Status.
HORIZONTAL PRINTING (max 40) (TICKET/RECEIPT)	Set the following items to be printed horizontally. **VENUE NAME**: (Up to 40 characters) The VENUE NAME. **VENUE ADDRESS 1**: (Up to 40 characters) The VENUE ADDRESS 1. **VENUE ADDRESS 2**: (Up to 40 characters) The VENUE ADDRESS 2. **HOST ID** The SAS Host ID. **CASHABLE EXPIRATION**: (default: 30 days) The expiration date of a cashable tickets and hand pay receipts. **RESTRICTED DEFAULT EXPIRATION**: (default 30 days) The expiration date of a promotional ticket.
VERTICAL PRINTING (max 22) (AFT RECEIPT)	Set the following items to be printed vertically. **VENUE NAME (AFT RECEIPT)**: (Up to 22 characters) The VENUE NAME. **VENUE ADDRESS 1(AFT RECEIPT)**: (Up to 22 characters) The VENUE ADDRESS 1. **VENUE ADDRESS 2 (AFT RECEIPT)**: (Up to 22 characters) The VENUE ADDRESS 2.

5. 9. 4: Touch Screen Settings

TOP MENU>SETTINGS>TOUCH SCREEN SETTINGS

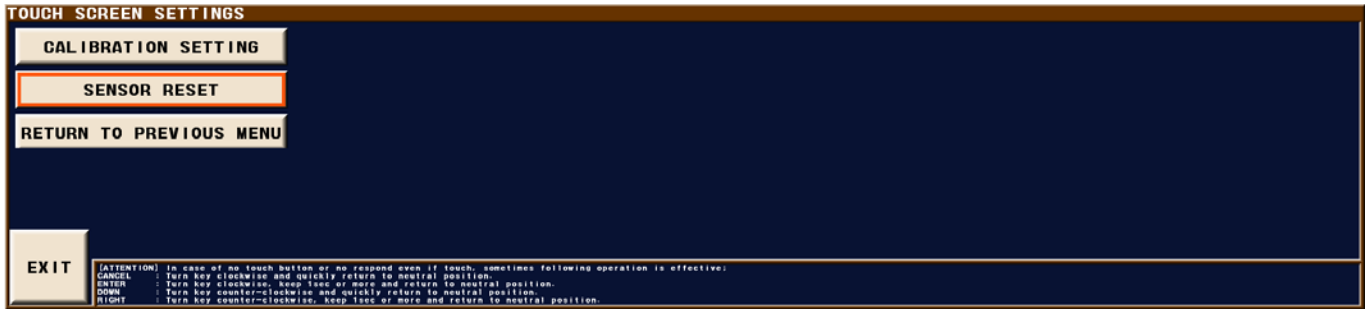
This item allows to calibrate the Touch screen.

⚠ CAUTION!

It is not possible to properly calibrate the screen if the following conditions are not fulfilled. If the difference is relevant, repeat again the calibration procedure.

・When performing the Calibration settings, the Top Door must be locked.

・Do not touch the cabinet with any part of the body except the finger touching the screen.

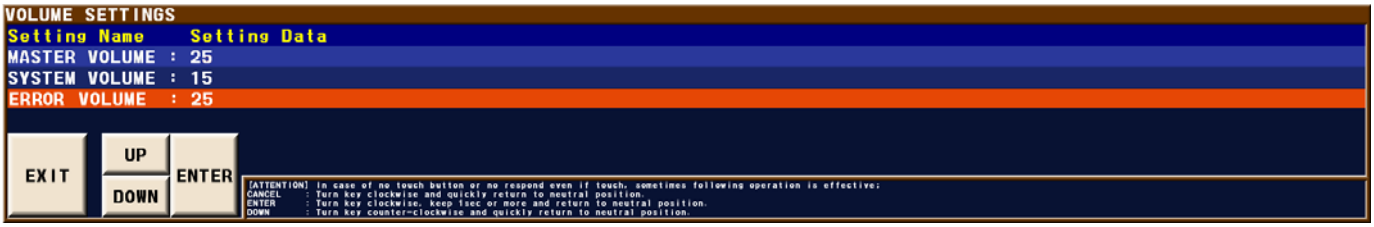


ITEM	DESCRIPTION
CALIBRATION SETTING	Calibrate the Touch screen. Follow the instruction displayed on the screen.
SENSOR RESET	Reset the sensor for the screen is reset. After reset, the screen changes to "CALIBRATION SETTING".

5. 9. 5: Volume Settings

TOP MENU>SETTINGS>VOLUME SETTING

This item allows to adjust the volume of each Sound.



ITEM	DESCRIPTION
MASTER VOLUME	Set the volume of the game sounds. **1 - 30 [DEFAULT: 25]**
SYSTEM VOLUME	Set the volume for the system related sounds. **1 - 30 [DEFAULT: 15]**
ERROR VOLUME	Set the volume for the error sounds. **1 - 30 [DEFAULT: 15]**

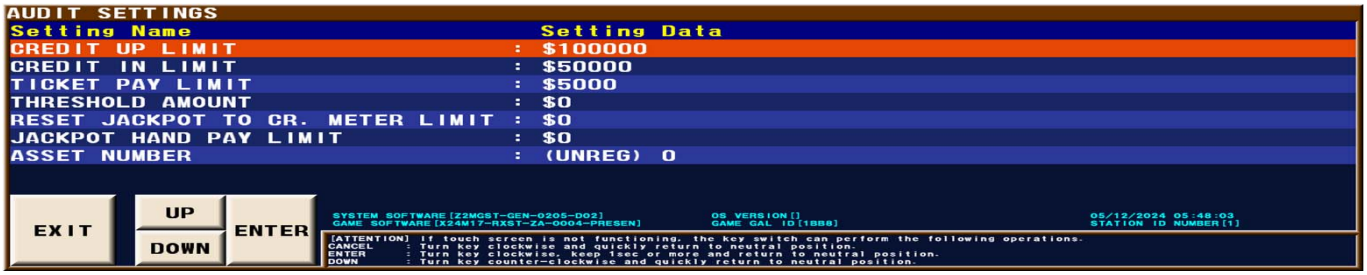
5. 9. 6: Software settings

Not used on this machine

5. 9. 7: Audit Settings

TOP MENU>SETTINGS>AUDIT SETTINGS

This item allows to change the settings relative to the Credit.



Example screenshot of **AUDIT SETTINGS>CREDIT UP LIMIT**



ITEM	DESCRIPTION
CREDIT UP LIMIT	The maximum number of Credits that can be accumulated by the CREDIT METER. If this limit is exceeded by increasing credits to the Current Credit as result of a Win, the Credit is automatically cashed out. If this item is set lower than "CREDIT IN LIMIT", an error occurs. Please repeat one of the two settings. **0 - 40,000,000** **[DEFAULT: 100,000 DEFAULT for ONTARIO: 3000]**
CREDIT IN LIMIT	The maximum number of CREDITS that can be added to the CREDIT METER. If this limit is exceeded by increasing credits to the Current Credit by BILLs or Card, the Credit is automatically cashed out. If this item is set higher than "CREDIT UP LIMIT", an error occurs. Please repeat one of the two settings. **0 - 40,000,000** **[DEFAULT: 50,000 DEFAULT for ONTARIO: 3000]**
TICKET PAY LIMIT	The maximum value that can be paid out by tickets. **0 - 40,000,000** **[DEFAULT: 5,000 DEFAULT for ONTARIO: 3000]**

ITEM	DESCRIPTION
THRESHOLD AMOUNT	If an amount exceeding "THRESHOLD AMOUNT" is cashed out without playing any game after inserting coins, bills or tickets, the "THRESHOLD AMOUNT EXCEEDED" error message appears and the machine locks up. The error can be reset by turning the RESET keyswitch.) Set to **0** to disable this function. **0 - 40,000,000 [DEFAULT: 0]**
RESET JACKPOT TO CR. METER LIMIT	If the Jackpot win exceeds the value of this setting, the machine locks up and Hand Pay is necessary to pay the won Credits. If a value lower than the setting of "JACKPOT HAND PAY LIMIT" is input, an error will occur. **0 - 40,000,000 [DEFAULT: 0]**
JACKPOT HAND PAY LIMIT	If the Jackpot win exceeds the value of this setting, a response from the SAS host is expected. According to that response, the machine will lock up and Hand Pay will be necessary to pay the won Credits, or it will be added to the credit meter without lock up. If a value higher than the setting of "RESET JACKPOT TO CR.LIMIT" is input, an error will occur. If set to **0** all wins will be paid by the machine. **0 - 40,000,000 [DEFAULT: 0]**
ASSET NUMBER	The number used to verify the Machine for transactions such as AFT transfers. **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 5.9.10)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

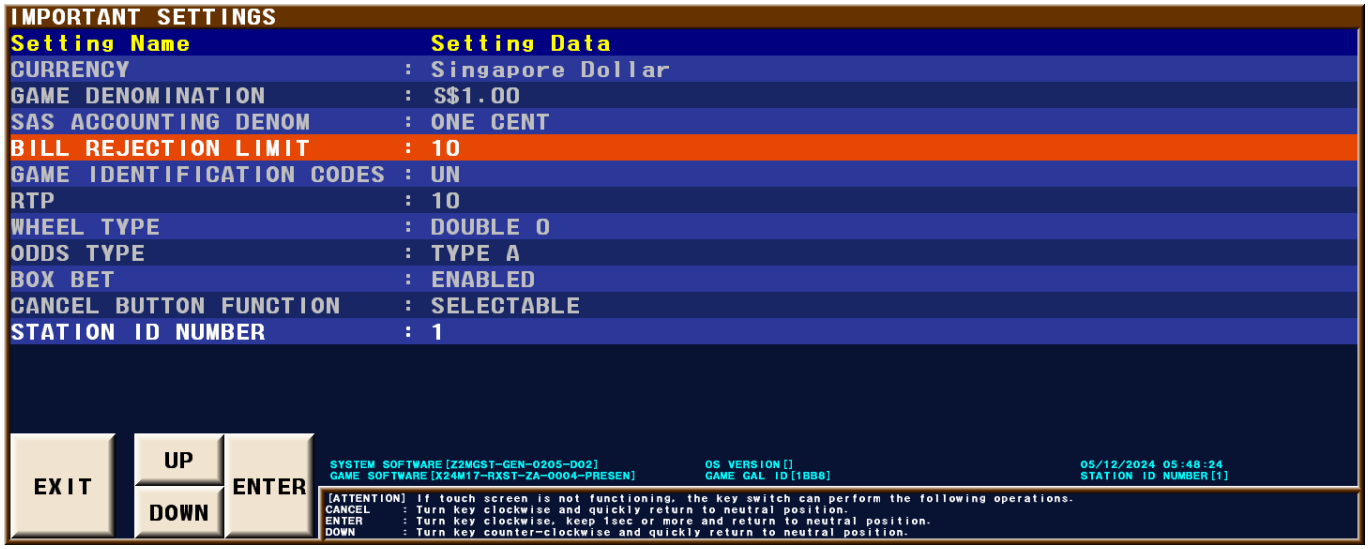
5. 9. 8: Important Settings / Basic Settings

TOP MENU>SETTINGS>IMPORTANT SETTINGS

This item allows to set and check the information relative to Currency, Denomination etc.

NOTE:

- To perform this operation, the Security Cage Door must be open.
- When using NEVADA GAL, the IMPORTANT SETTINGS will be displayed as BASIC SETTINGS.
- All meters will be cleared when any changes are made to the **"Important Settings / Basic Settings"**.



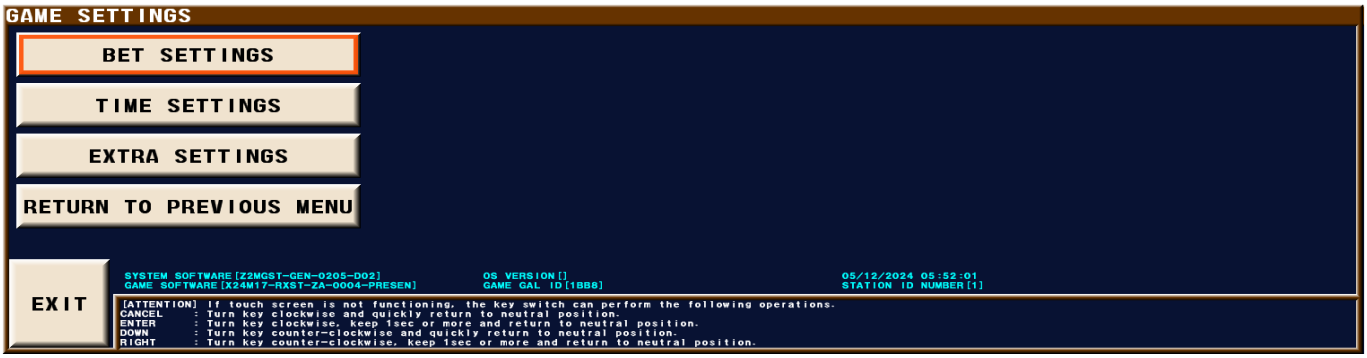
ITEM	DESCRIPTION
CURRENCY	Shows the setting of the Center Unit. Please refer to "CURRENCY" on "**Important Settings / Basic Settings**" at Chapter 4.
GAME DENOMINATION	Shows the setting on the Center Unit. Please refer to the relative item on "**Important Settings / Basic Settings"** at Chapter 4.
SAS ACCOUNTING DENOM	Same as above
JURISDICTION	Input the jurisdiction **NOTE:** This item is displayed only in ONTARIO version.
BILL REJECTION LIMIT	Set the number of times a same BILL will be rejected. The machine locks up when the limit is reached. **1 - 99 [DEFAULT: 10]**

ITEM	DESCRIPTION
GAME IDENTIFICATION CODES	Set the game identification code. **UN [DEFAULT]** **IB** **EL** NOTE: This item can be set only after the ALL RAM Clear.
RTP	Shows the setting on the Center Unit. Please refer to the relative item on "**Important Settings / Basic Settings"** at Chapter 4.
WHEEL TYPE	Same as above
ODDS TYPE	Same as above
BOX BET	Same as above
CANCEL BUTTON FUNCTION	Same as above
STATION ID NUMBER	Set the ID number of the station. Be careful not to use the same ID of other Stations.

5. 9. 9: Game Settings

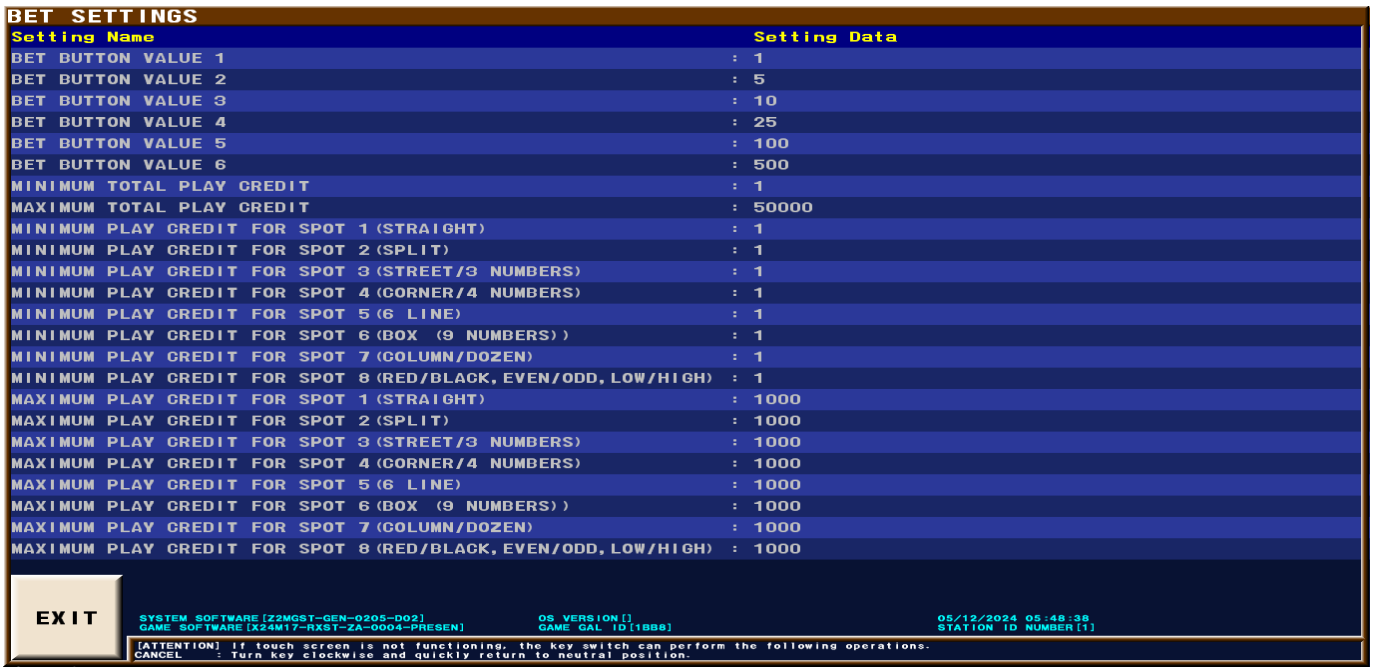
TOP MENU>SETTINGS>GAME SETTINGS

This item allows to change the settings relative to the Bet type.



5. 9. 9. 1: Bet Settings

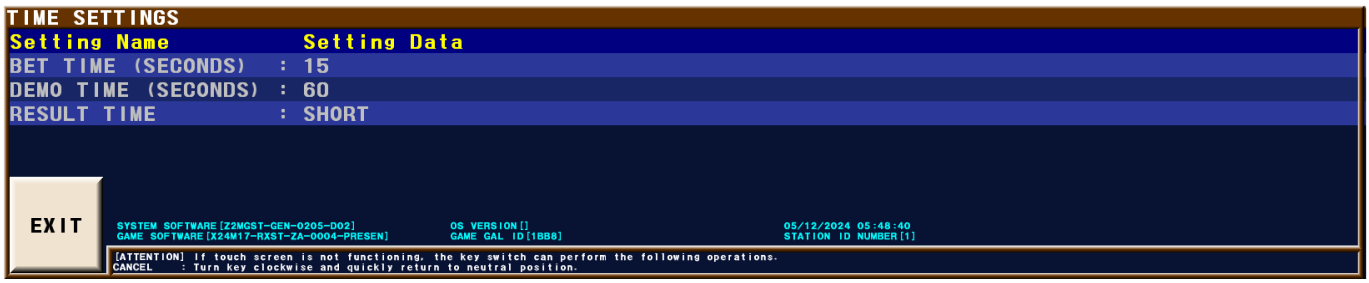
TOP MENU>SETTINGS>BET SETTINGS



ITEM	DESCRIPTION
BET BUTTON VALUE xx	Shows the setting on the Center Unit. Please refer to the relative item on **"Game Settings"** at Chapter 4.
MINIMUM TOTAL PLAY CREDIT	Same as above
MAXIMUM TOTAL PLAY CREDIT	Same as above
MINIMUM PLAY CREDIT FOR xx	Same as above
MAXIMUM PLAY CREDIT FOR xx	Same as above

5. 9. 9. 2: Time Settings

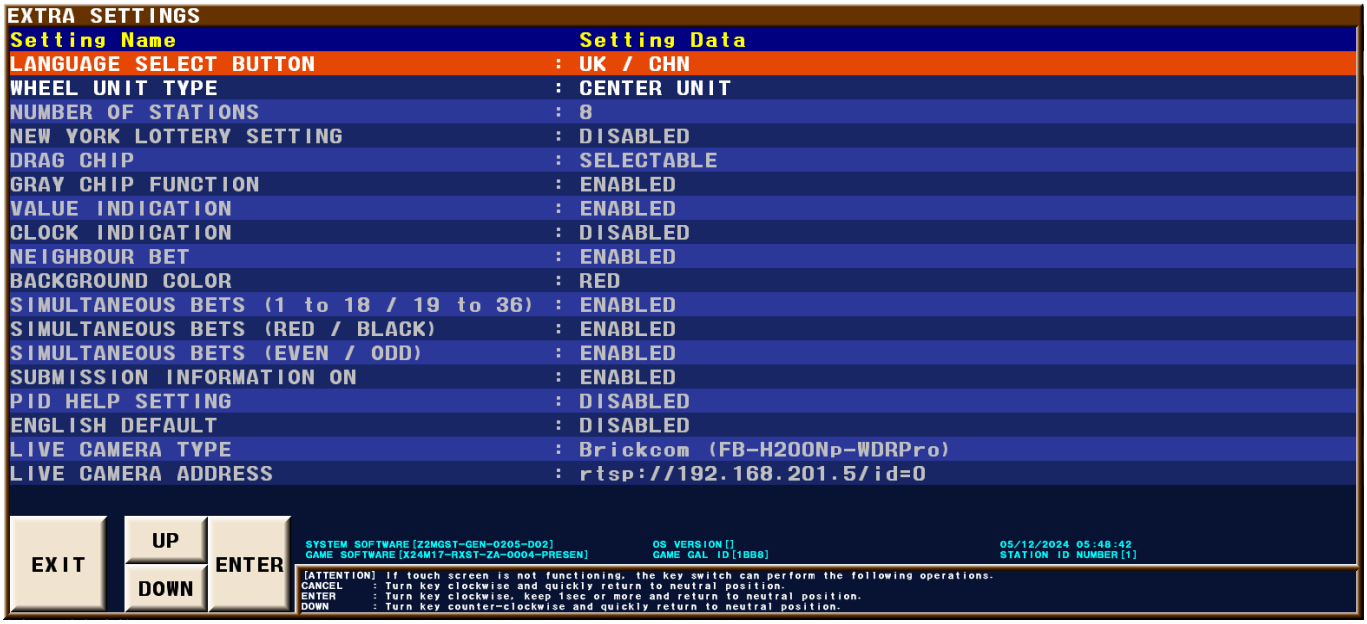
TOP MENU>SETTINGS>TIME SETTINGS



ITEM	DESCRIPTION
BET TIME (SECONDS)	Shows the setting on the Center Unit. Please refer to the relative item on **"Game Settings"** at Chapter 4.
DEMO TIME (SECONDS)	Same as above
RESULT TIME	Same as above

5. 9. 9. 3: Extra Settings

TOP MENU>SETTINGS>EXTRA SETTINGS



ITEM	DESCRIPTION
LANGUAGE SELECT BUTTON	Set the language for voices and texts, and the display of the button for the player's language selection. **DISABLED** The language is fixed on English, and no selection button is displayed **UK/CHN [DEFAULT]** **USA/CHN [DEFAULT for ARIZONA, NEVADA, ONTARIO and WEST VIRGINIA version]**
WHEEL UNIT TYPE	**NOTE:** This item is for maintenance purpose only, do not change from its **[DEFAULT]** setting. **CENTER UNIT [DEFAULT]** **STANDALONE**
NUMBER OF STATIONS	Shows the setting on the Center Unit. Please refer to the relative item on **"Game Settings"** at Chapter 4.
NEW YORK LOTTERY SETTING	Same as above
DRAG CHIP	Same as above
GREY CHIP FUNCTION	Same as above
VALUE INDICATION	Same as above

ITEM	DESCRIPTION
CLOCK INDICATION	Same as above
NEIGHBOUR BET	Same as above
BACKGROUND COLOR	Same as above
SIMULTANEOUS BETS (1 to 18 / 19 to 36)	Same as above
SIMULTANEOUS BETS (RED / BLACK)	Same as above
SIMULTANEOUS BETS (EVEN / ODD)	Same as above
SUBMISSION INFORMATION ON	Same as above
PID HELP SETTING	Same as above
ENGLISH DEFAULT	Same as above
LIVE CAMERA TYPE	Shows the setting on the Center Unit. Please refer to the relative item on **"Main Unit Settings"** at Chapter 4.
LIVE CAMERA ADDRESS	Same as above

5. 9. 10: Online System Settings

TOP MENU>SETTINGS>ONLINE SYSTEM SETTINGS

This item allows to change the settings relative to the Online System.

NOTE:
- To perform this operation, the Security Cage Door must be open.
- (Except in ONTARIO version) All meters will be cleared when any changes are made to the **"Online System Settings"**.



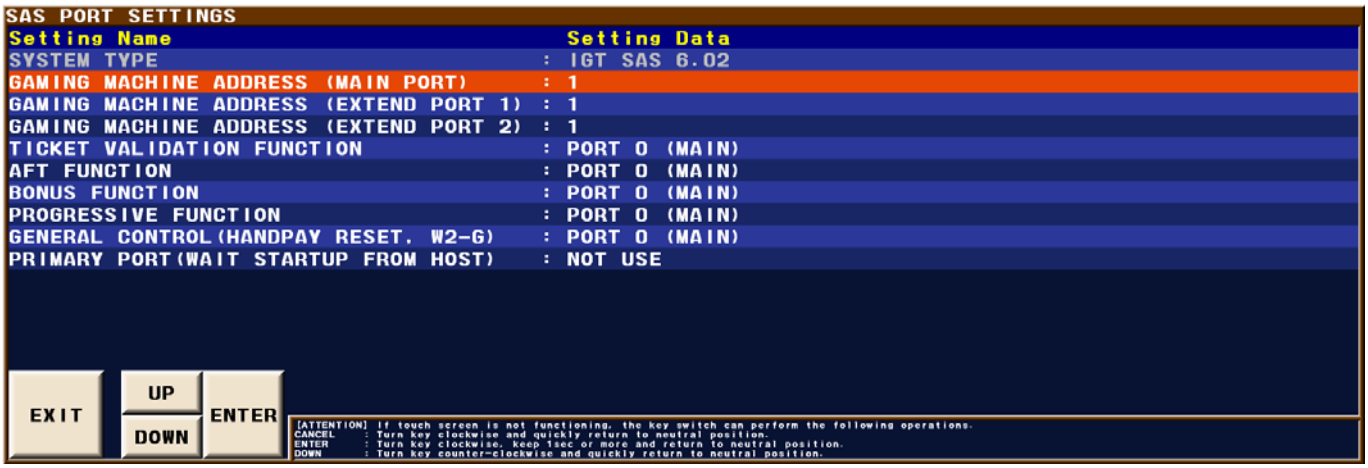
ITEM	DESCRIPTION
SYSTEM TYPE	Set the Online System. **NONE [DEFAULT]** **IGT SAS 6.02** **NOTE:** ·If this item is set to **NONE**, other items will not be displayed. ·To use Paltronics connection, set this item to **IGT SAS 6.02**.
GAMING MACHINE ADDRESS (MAIN PORT)	Set the ID that identifies the cabinet for the SAS communication (with the basic SAS Port). **1 - 127 [DEFAULT: 1]** **NOTE:** In WEST VIRGINIA version this item can be modified only at the first access to the AUDIT after the RAM clear. After exiting the audit once, the item will be gray out.
CASHLESS TRANSFER FROM HOST (EX BONUS)	EFT/AFT can be used. **NO** **YES [DEFAULT]**
LEGACY BONUS FROM HOST	[Legacy Bonuses / MJT from the Host] can be accepted. **NO** **YES [DEFAULT]**

ITEM	DESCRIPTION
AFT BONUS FROM HOST	[AFT Bonuses from the Host] can be accepted. **NO** **YES [DEFAULT]**
CASHOUT VALIDATION	Set the [Cashout Validation process setting] for the SAS System. **NONE [DEFAULT] :** TITO cannot be used **SECURED ENHANCED :** Processed in Secure Enhanced Mode **SYSTEM :** Processed in System Mode
TICKET DATA TRANSFER MODE	Set when the GP0x3D command should be sent. **MODE 1 TICKET FIRST [DEFAULT]** Send after the ticket is printed. **MODE 2 DATA FIRST** Send before the ticket is printed.
REPRINT TICKET	Allows re-printing of tickets. **NO [DEFAULT, fixed for ONTARIO version]** **YES**
SEND EXCEPTION (7E/7F) (Non-RTE)	When the mode is not set to RTE Mode, the 7E/7F (Game Start, End) events are sent to the host. **NO** **YES [DEFAULT]**
SEND EXCEPTION (54) WHEN PROGRESSIVE HANDPAID	Set if to send Exception 54 when a Handpay occurs. **NO [DEFAULT]** No Exception 54 is sent. But if during the same Game cycle at least one No Handpay Progressive occurs, the Exception 54 is sent only once. **YES** The Exception 54 is sent. An Exception 54 is sent for any Progressive WIN that occurs.
LOCKUP DURING OFFLINE	When the SAS System goes OFFLINE, the machine will lock up. **NO** **YES [DEFAULT]** **NOTE:** This item is not displayed in WEST VIRGINIA version.

ITEM	DESCRIPTION
LOCK UP WHEN NOT RECEIVING ACK	Set the behavior in case a [HOST COMMUNICATION LINK DOWN] error occurs. **NO [DEFAULT]** A [Warning] will be displayed on the top left of the game screen, but the game continues. **YES** The machine locks up. **NOTE:** This item is not displayed in WEST VIRGINIA version.
LOCK UP WHEN EXCEPTION BUFFER OVERFLOW	Set the behavior of the machine when an [EXCEPTION BUFFER OVERFLOW] error occurs. **NO** A [Warning] will be displayed on the top left of the game screen, but the game continues. **YES [DEFAULT]** The machine locks up.
CASHOUT DURING LOCKUP FROM HOST	Cashout is possible when the host has locked up the machine. **ENABLED [DEFAULT]** **DISABLED**
RESPONSE OF SEND TOKEN DENOMINATION (B3)	Set the response of the machine to the SAS System command LP 0xB3 (Token Denom). **00 [DEFAULT]** **01**
SEND HANDPAY RETRY	Setting not active as the item is not relevant for this game.
RESET TICKET VALIDATION	Select this function in case the ticket validation process does not complete. Follow the indications on screen to restore the game. For more details refer to chapter "TICKET VALIDATION STOPS" at Chapter 8.
SEND EXTRA GAME START EXCEPTION	Set if a temporary Exception 7E will be sent in the moment when the first chip is placed during the bet time. **ENABLED** **DISABLED [DEFAULT]** **NOTE:** This item is displayed only when "SEND EXCEPTION (7E/7F) (Non-RTE)" is set to **YES**.

5. 9. 10. 1: SAS Port Settings

TOP MENU>SETTINGS>ONLINE SYSTEM SETTINGS>SAS PORT SETTINGS



ITEM	DESCRIPTION
SYSTEM TYPE	The SAS System Type
GAMING MACHINE ADDRESS (MAIN PORT)	The address of the main SAS Port. **1 - 127 [DEFAULT: 1]**
GAMING MACHINE ADDRESS (EXTEND PORT 1)	The address of Extend Port 1. **1 - 127 [DEFAULT: 1]**
GAMING MACHINE ADDRESS (EXTEND PORT 2)	The address of Extend Port 2. **1 - 127 [DEFAULT: 1]**
TICKET VALIDATION FUNCTION	Set which port is used to communicate the [Ticket Validation Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
AFT FUNCTION	Set which port is used to communicate the [AFT Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**

ITEM	DESCRIPTION
BONUS FUNCTION	Set which port is used to communicate the [Bonus Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
PROGRESSIVE FUNCTION	Set which port is used to communicate the [Progressive Function command]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
GENERAL CONTROL (Hand Pay Reset, W2-G)	Set which port is used to communicate the [JACKPOT LOCKUP]. **NOT CONTROL** **PORT 0 (MAIN) [DEFAULT]** **PORT 1 (EXTEND)** **PORT 2 (EXTEND)**
PRIMARY PORT (Wait Startup From Host)	Set which port is used for the connection to the Main Host. **NOT USE [DEFAULT, not displayed in WEST VIRGINIA Ver.]** **MAIN PORT [DEFAULT for WEST VIRGINIA]** **EXTEND PORT 1** **EXTEND PORT 2**

5. 9. 11: Progressive Settings

Not used on this machine

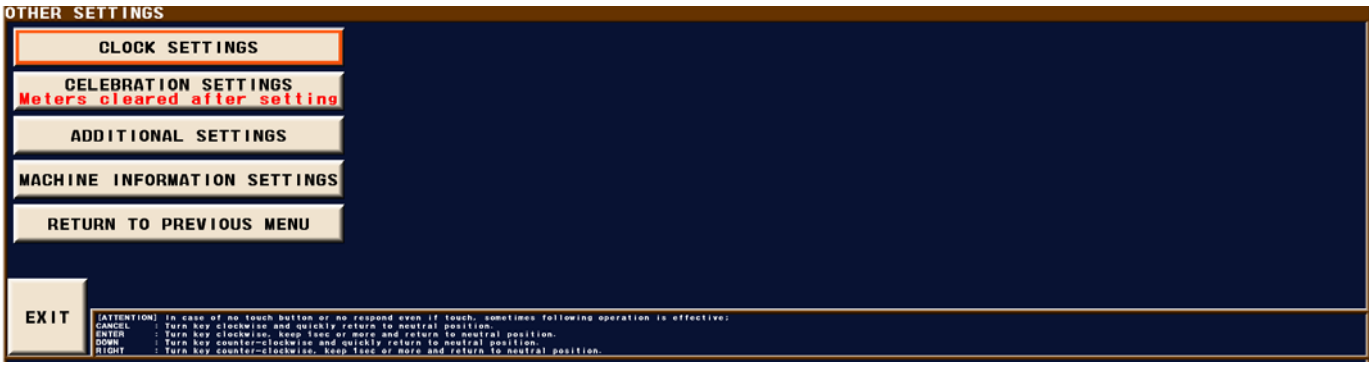
5. 9. 12: ARUZE Link Settings

Not used on this machine

5. 9. 13: Other Settings

TOP MENU>SETTINGS>OTHER SETTINGS

This item allows to change the settings of extra functions.



ITEM	DESCRIPTION
CLOCK SETTINGS	Shows the setting of the Center Unit.
CELEBRATION SETTINGS	Change the Celebration settings. More details are described at **"Celebration Settings" (Refer to 5.9.13.1)**. **NOTE:** This item may not be displayed according to the jurisdiction.
ADDITIONAL SETTINGS	Change the Additional Settings. More details are described at **"Additional Settings" (Refer to 5.9.13.2)**.
MACHINE INFORMATION SETTINGS	Displays the Asset Number, and can be used to input the Floor Location and the Serial Number. **ASSET NUMBER** The Machine Authentication number used for AFT transfers. (Read Only) **FLOOR LOCATION** The Floor Location can be set. SAS LP B7 **SERIAL NUMBER** The Serial Number can be set. SAS LP 54

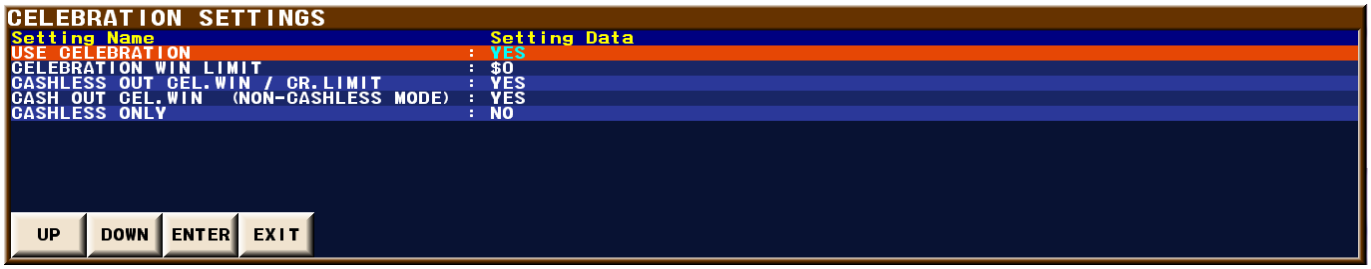
5. 9. 13. 1: Celebration Settings

TOP MENU>SETTINGS>OTHER SETTINGS>CELEBRATION SETTINGS

NOTE:

・To perform this operation, the Security Cage Door must be open.

・All meters will be cleared when any changes are made to the **"Celebration Settings"**.



ITEM	DESCRIPTION
USE CELEBRATION	Set the Celebration function. **NO [DEFAULT]** **YES**
CELEBRATION WIN LIMIT	When a win over the set value occurs, a [CELEBRATION WIN] is displayed and the machine locks up. **0 - 40,000,000 [DEFAULT: 0]**
CASHLESS OUT CEL. WIN / CR. LIMIT	A Cashless payout will be made in case a Celebration Win or Credit Limit occurs. **NO** **YES [DEFAULT]**
CASH OUT CEL. WIN (NON-CASHLESS MODE)	When Cashless Payouts (EFT transfer) are not possible, Celebration wins are paid out. **NO** **YES [DEFAULT]**
CASHLESS ONLY	Set to "CASHLESS ONLY" mode. **NO [DEFAULT]** **YES**

5. 9. 13. 2: Additional Settings

TOP MENU>SETTINGS>OTHER SETTINGS>ADDITIONAL SETTINGS



ITEM	DESCRIPTION
DISPLAY MESSAGE FOR STACKER FULL	Set if a [STACKER FULL] message will be displayed when the BILL stacker becomes full. When the setting is set to **NO**, the information will be sent to the SAS system without any message appearing on the screen. **NO** **YES [DEFAULT]**
ERROR SOUND SETTINGS	Select which errors will be target of the setting of "Error sound". **ALL ERRORS [DEFAULT for currencies except HKD or MOP]**. The "error sound" stops after 3.5 seconds. This will happen for any kind of error. **BILL AND STACKER DOORS** Select on "BILL/STACKER LV 1" the special "error sound" to play when the Bill Door or the Stacker Door are open. When any other error occurs, the "error sound" stops after 3.5 seconds. **BILL, STACKER, MAIN DOORS [DEFAULT when currency is set to HKD or MOP]** Select on "BILL/STACKER LV 1" and "BILL/STACKER LV 2", it can be set the special "error sound" to play when the Bill Door or the Stacker Door are open. Then set on "MAIN DOORS" the length of the "error sound" to play when the Main Door, Lower Door, Lcd Door are open. When any other error occurs, the "error sound" stops after 3.5 seconds.

ITEM	DESCRIPTION
BILL/STACKER LV 1	Set the time length of the ”1st Error sound” that plays when the Bill Door or the Stacker Door are open. **[CASE 1]** If “ERROR SOUND SETTINGS” is set to **BILL AND STACKER DOORS**. When the time set below for the “1st error sound” is passed, it changes into the “2nd error sound”. Then, after 180 seconds it changes again to a Buzzer. The Buzzer continues until the error is cleared. **0 - 10000 [DEFAULT: 30 sec]**  **[CASE 2]** If “ERROR SOUND SETTINGS” is set to **BILL, STACKER, MAIN DOORS**. When the time set below for the “1st error sound” is passed, it changes into the “2nd error sound”. The “2nd error sound” continues until the error is cleared or after the time set at “BILL/STACKER LV2” (next item). **0 - 10000 [DEFAULT: 180 sec]** **CONTINUOUS**  **NOTE:** This item is displayed only if the setting ”ERROR SOUND SETTINGS” is set to **BILL AND STACKER DOORS** or **BILL, STACKER, MAIN DOORS**.
BILL/STACKER LV 2	Set the time length of the “2nd error sound” that plays when the Bill Door or the Stacker Door are open. **3 – 10000** **CONTINUOUS [DEFAULT]**  **NOTE:** ・This item is displayed only if the setting ”ERROR SOUND SETTINGS” is set to **BILL, STACKER, MAIN DOORS**. ・Set this item together with “MAIN DOORS”.

ITEM	DESCRIPTION
MAIN DOORS	Set the time length of the "error sound" that plays when the Main Door, Lower Door or Lcd Door are open. **3 – 10000** **CONTINUOUS [DEFAULT]**  **NOTE:** ·This item is displayed only if the setting "ERROR SOUND SETTINGS" is set to **BILL, STACKER, MAIN DOORS**. ·Set this item together with "BILL/STACKER LV 2".
LINK PROGRESSIVE LOCK UP TIME	Set how long the EGM should wait to receive the SAS Progressive current value. When the set time expires, the machine will lock up. **5 SEC [DEFAULT]** **10 SEC** **20 SEC** **UNLIMITED** **CANCEL**
SAS COMMUNICATION LOG OUTPUT	Refer to **"SAS Communication Log"** at Chapter 7.4 of the OPERATION Manual and set the number of data entries to display. To check a new communication log, set this item to **256** or **2048** and then see the **"SAS Communication Log"**. When set on **DISABLE** it is possible to check the log already recorded by pressing [SAVE]. **DISABLE [DEFAULT]** **256** **2048** **CAUTION!** Before restart the game operation, make sure to set this item to **DISABLE**. **NOTE:** This item is displayed only if on **"Online System Settings"(refer to 5.9.10)** the setting "SYSTEM TYPE" is set to **IGT SAS 6.02**.

ITEM	DESCRIPTION
SAS EVENT LOG OUTPUT	Refer to **"SAS Communication Log"** at Chapter 7.4 of the OPERATION Manual and set the contents to display. **DISABLED [DEFAULT]** Only the request from the Host and their response from the machine are displayed. **ENABLED** With the request from the Host and their response from the machine, also the Machine events are displayed. **NOTE:** This item is operative only when "SAS COMMUNICATION LOG OUTPUT" is set to 256 or 2048. When set on **DISABLE** it is possible to check the log already recorded by pressing [SAVE].
NON-CASHABLE ELECTRONIC PROMOTIONAL IN SOUND EFFECT	Set if a sound will be played when a Non-Cashable AFT is received. **DISABLED** **ENABLED [DEFAULT]**

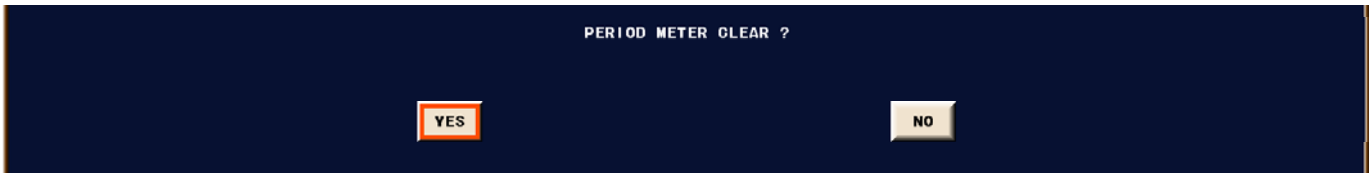
5. 10: Period Meter Clear

TOP MENU>PERIOD METER CLEAR

> **NOTE:**
> To perform this operation, the Front Door must be open.

Select this item to display the screen below.

When touching [YES], all Period Meters will be cleared. Take NOTE of all necessary period meter information before selecting [YES].



5. 11: Out of Service

TOP MENU>OUT OF SERVICE

> **NOTE:**
> To perform this operation, the Front Door must be open.

1. Select this item to display the screen below.



2. Turn the RESET/AUDIT Key Switch on the Reset position and then on the neutral position to return to the normal screen.




interblock
LUXURY GAMING PRODUCTS

Chapter 6

General Servicing and Disassembly for Center Unit

6. 1: Memory Clear Procedure

6. 1. 1: Memory Clear Types

There are 2 types of Memory Clear Processes for deleting stored data.

◇ **RAM Clear** - Deleting the Permanent Meters while keeping the setting information intact.

◇ **All RAM Clear (ALL Memory Clear)** - Deleting all memory including setting information and backup data.

CAUTION!

- For both types of Memory Clear, all meter information stored will be deleted and reset.
- When updating software on the machine, always perform a **All RAM Clear**.
- After **All Ram Clear(All Memory Clear)**, all meter information stored and all of the settings will be deleted and reset. Taking note of all settings before executing **All Ram Clear(All Memory Clear)** is recommended.

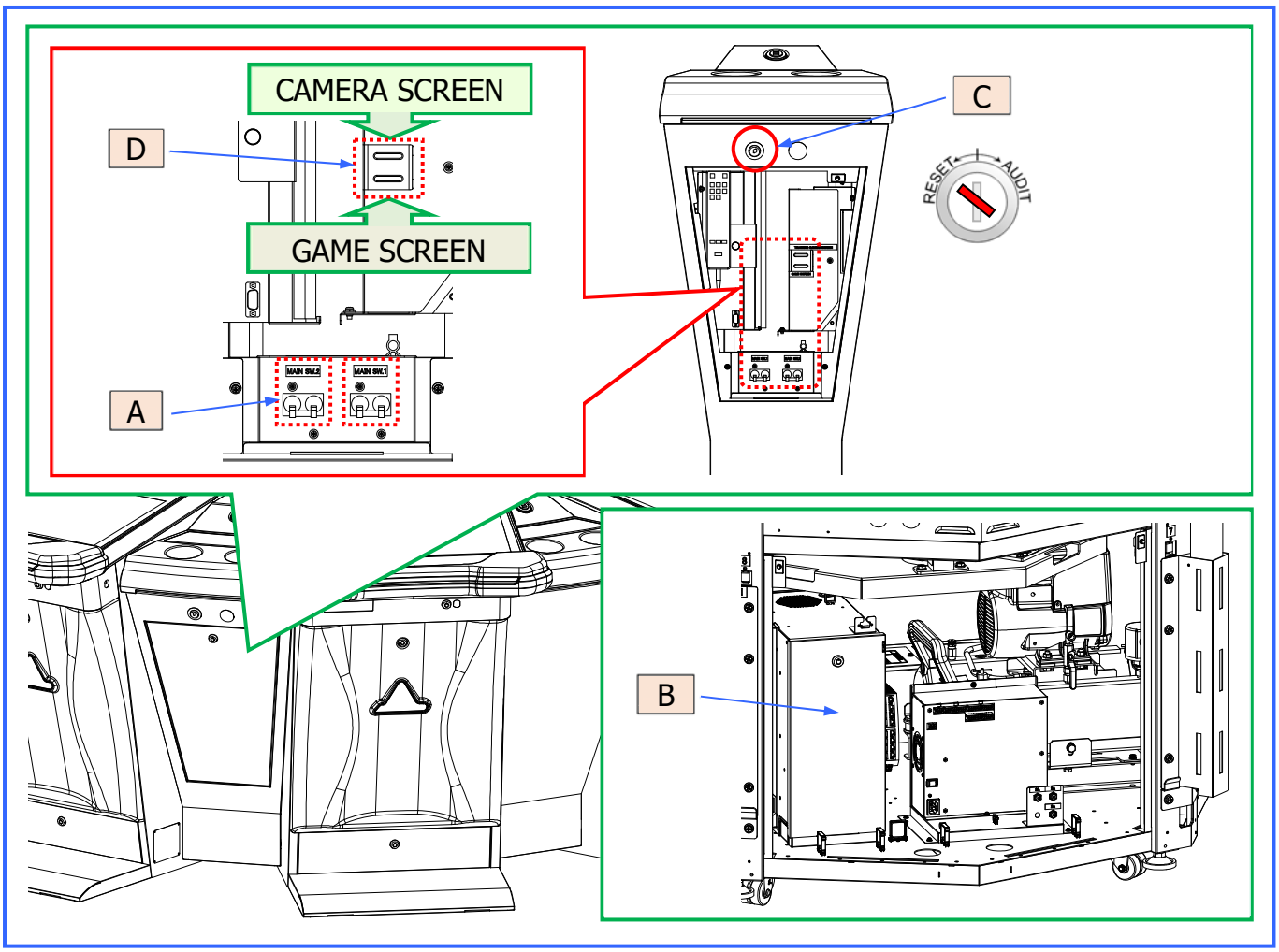
NOTE:

When performing the **RAM Clear** on the Station, please refer to **"Memory Clear Procedure"** on Chapter 7.

6. 1. 2: Common Memory Clear Procedure

The process to execute Memory Clear is different for **Ram Clear** and **All Ram Clear**.
The procedure is as described below.

1. Remove the Control Spacer Door, and refer to the Opening insert **"Safe Power OFF"** to turn OFF the Power Switch of the Center Unit. **(Fig A)**
2. Detach the [Station No.7 Unit] and the [Station No.8 Unit] from the Center Unit **(Refer to 6.5.1)**.
3. Remove the Door of the Center Unit, and then remove the Security Cage Door. **(Fig B)**
4. Turn the RESET/AUDIT Key Switch to RESET. **(Fig C)**

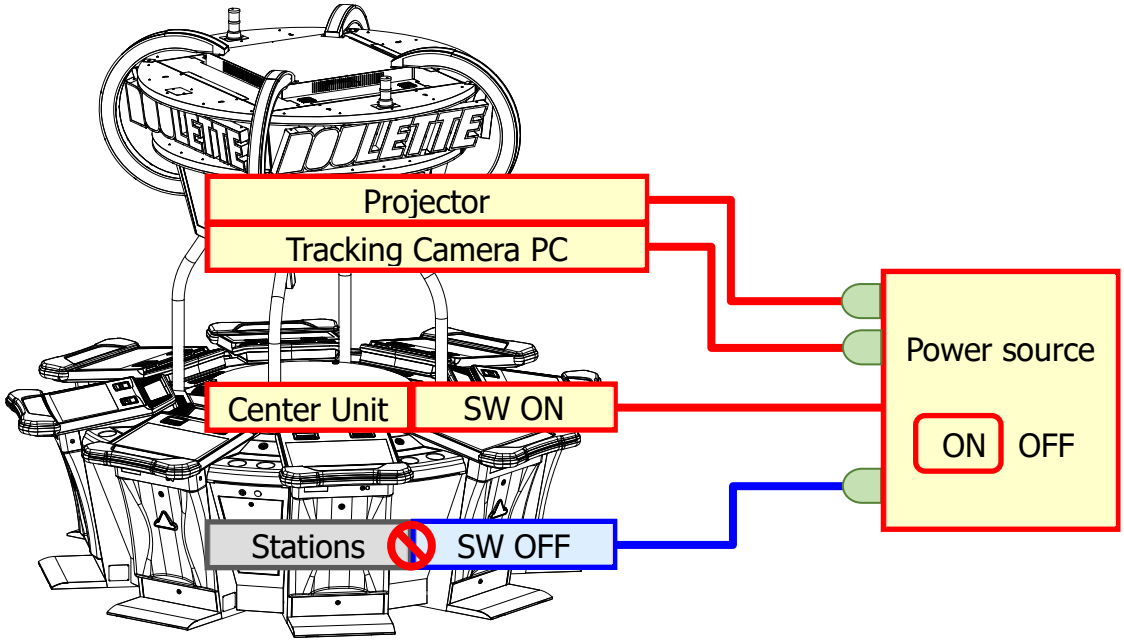


5. Turn ON the Power Switch of the Center Unit and press the [GAME SCREEN] Button of the PC Changer **(Fig D)**

CAUTION!

・Do not turn ON the 2 Power switches at the same time. Doing so can result in a start-up error of the machine.

・When doing "Power OFF-ON" wait at least 15 seconds before power On.



6. The message [Turn the key to the neutral position. The memory Clear method is selected by the next key operation] is displayed.

The procedure above is the same for both **RAM Clear** and **All RAM Clear**.
Which Memory Clear is done depends on the next procedure.

< In the case of RAM Clear >

7. Turn the RESET/AUDIT Key Switch to neutral.



8. Next, turn the key switch to AUDIT.



9. Finally, turn the key switch to neutral.



10. **RAM Clear** is completed when [RAM CLEAR completed.] is displayed on the screen.

NOTE:

To cancel RAM Clear in the middle of the process, turn the key switch towards RESET at step 11.



< In the case of All RAM Clear (ALL Memory Clear) >

7. While pressing the key [A] of the keyboard.

8. Turn the RESET/AUDIT Key Switch to neutral.



9. Next, turn the key switch to AUDIT.



10. Finally, turn the key switch to neutral.



11. Let go of the [A] key.
12. **All RAM Clear** is completed when [ALL RAM CLEAR completed.] is displayed on the screen.

NOTE:

If the [A] key is released during the process explained in steps 8 and 9, only the **Ram Clear** operation will be done.

NOTE:

To cancel All RAM Clear in the middle of the process, turn the key switch towards RESET at step 9.



When the game is booted up, on the screen the [SETTINGS] and [RETURN TO GAME] buttons are displayed. If it is necessary to change the settings, first please read carefully the **NOTE** at the beginning of **4.8**, then press the [SETTINGS] button and refer to Chapter 4 **"Settings"** to make the changes. If no setting is needed, press the [RETURN TO GAME] button and turn the power OFF, then close all the doors and return the Station Units to their position.

6. 2: Changing the GAME

To change the Game, follow the procedure below to change the SSD of the Program Storage Media and the AX-GAL Cassette necessary to boot up the game.

WARNING!

Electrostatic discharge may damage internal components. When accessing the inside of the Cabinet, take anti-static measures (as wearing antistatic wrist band, etc.) before proceeding.

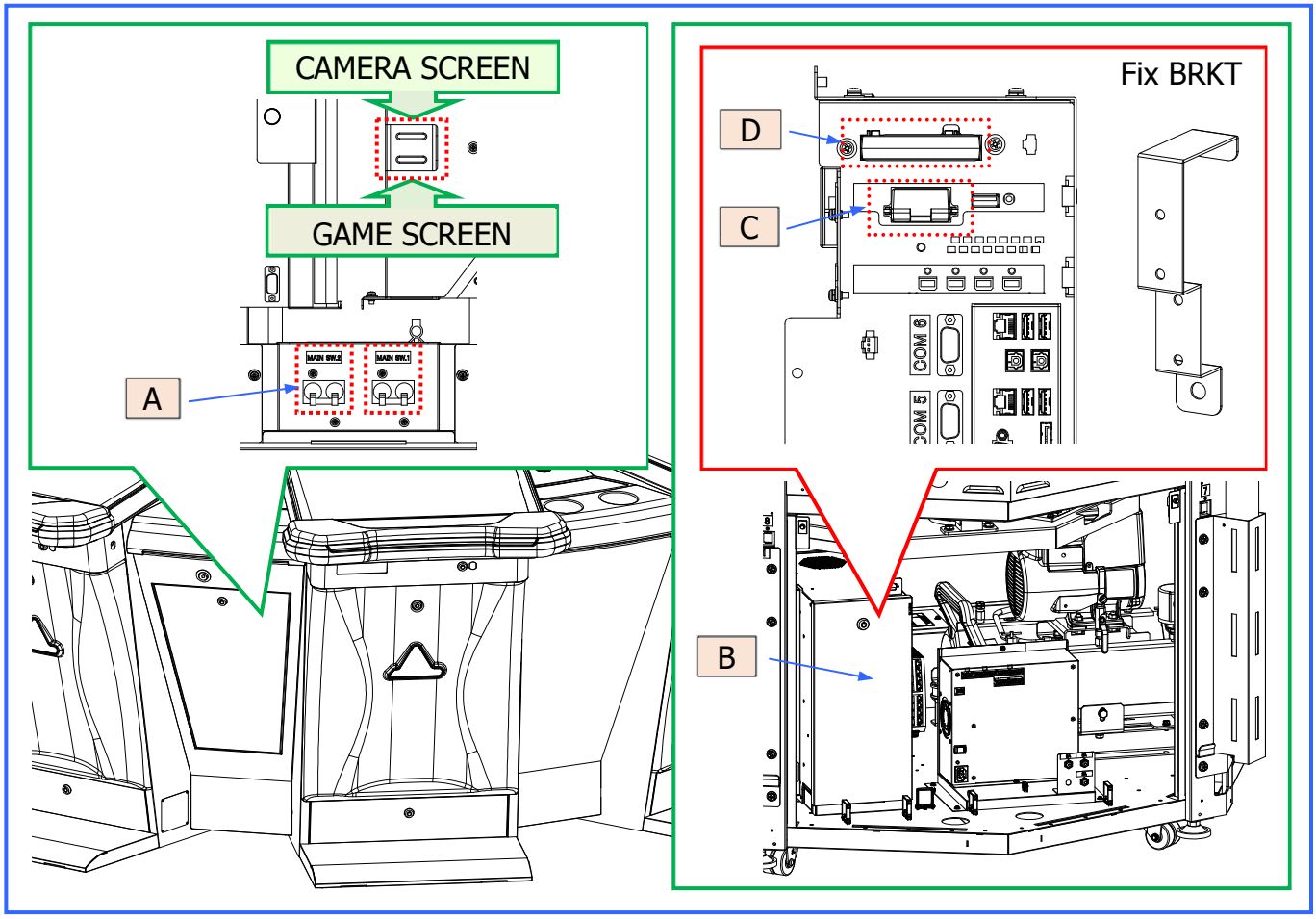
CAUTION!

After **All Ram Clear(All Memory Clear)**, all meter information stored and all of the settings will be deleted and reset. Taking note of all settings before executing **All Ram Clear(All Memory Clear)** is recommended.

NOTE:

To change the game on the Station, please refer to "**Changing the GAME**" at Chapter 7.

1. Prepare the replacement AX-GAL(Game GAL) Cassette and SSD Cassette.
2. Remove the Control Spacer Door, and refer to the Opening insert **"Safe Power OFF"** to turn OFF the Power Switch of the Center Unit. **(Fig A)**
3. Detach the [Station No.7 Unit] and the [Station No.8 Unit] from the Center Unit **(Refer to 6.5.1)**.
4. Remove the Door of the Center Unit, and then remove the Security Cage Door. **(Fig B)**
5. Detach the Fix BRKT and remove the AX-GAL(Game GAL) Cassette currently inserted into the machine **(Fig. C)**, and replace it with the AX-GAL (GAME GAL) Cassette previously prepared.
6. Remove the SSD Cassette currently inserted into the machine **(Fig. D)**, and replace it with the SSD Cassette previously prepared.



7. Perform the **All RAM Clear(All Memory Clear)**. **(Refer to 6.1.2)**

6. 3: Configuring Settings by using a Setting GAL : for NEVADA/ARIZONA

NOTE:
This chapter refers to procedures needed only for specific jurisdictions.

A SETTING GAL Cassette and a Password are necessary to change specific ITEMs. Please refer to **(6.3.1)** for the ITEMs and to **(6.3.2)** for the procedure.

6. 3. 1: Settings That Require a Setting GAL Cassette

To change the ITEMs that are listed in the white cells of the chart below, it is necessary to replace the GAME GAL Cassette in use with a SETTING GAL Cassette. The other ITEMs can be changed without replacing the GAL Cassette.

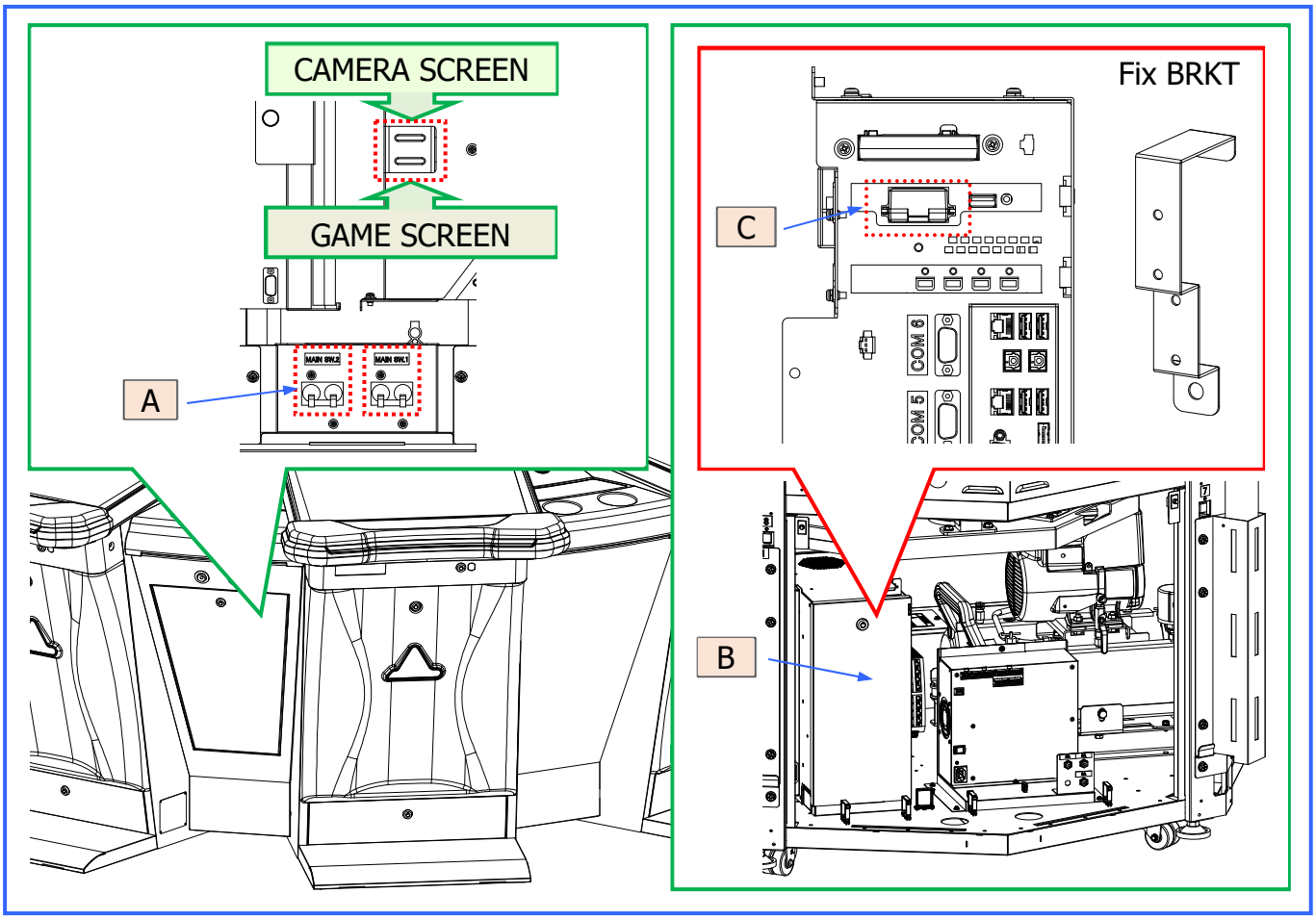
SUB MENU of SETTINGS	ITEM
HARDWARE SETTINGS	(ALL)
MAIN UNIT SETTINGS	(ALL)
VOLUME SETTINGS	(ALL)
AUDIT SETTINGS	(ALL)
IMPORTANT SETTINGS or **BASIC SETTING**	GAME DENOMINATION
	SAS ACCOUNTING DENOM
GAME SETTINGS	(ALL)
GAME SOUND SETTINGS	(ALL)
ONLINE SYSTEM SETTINGS	(ALL)
OTHER SETTINGS	(ALL)

6. 3. 2: How to Configure Settings using a Setting GAL

WARNING!

Electrostatic discharge may damage internal components. When accessing the inside of the Cabinet, take anti-static measures (as wearing antistatic wrist band, etc.) before proceeding.

1. Prepare a Setting GAL Cassette and the Setting Password.
2. Remove the Control Spacer Door, and refer to the Opening insert **"Safe Power OFF"** to turn OFF the Power Switch of the Center Unit. **(Fig A)**
3. Detach the [Station No.7 Unit] and the [Station No.8 Unit] from the Center Unit. **(Refer to 6.5.1)**
4. Remove the Door of the Center Unit, and then remove the Security Cage Door. **(Fig B)**
5. Detach the Fix BRKT and remove the AX-GAL (Game GAL) Cassette currently inserted into the machine **(Fig. C)**, and replace it with the Setting GAL Cassette previously prepared.



6. Turn ON the Power Switch and perform the **RAM Clear** if necessary. **(Refer to 6.1)**
7. The password input screen will automatically appear. Follow the directions on the screen and input the password by using the keyboard. On the screen will be displayed the buttons [SETTINGS] and [RETURN TO GAME].
8. First please read carefully the **NOTE** at the beginning of **4.8**, then press the [SETTINGS] button and refer to Chapter 4 **"Settings"** to make the changes.

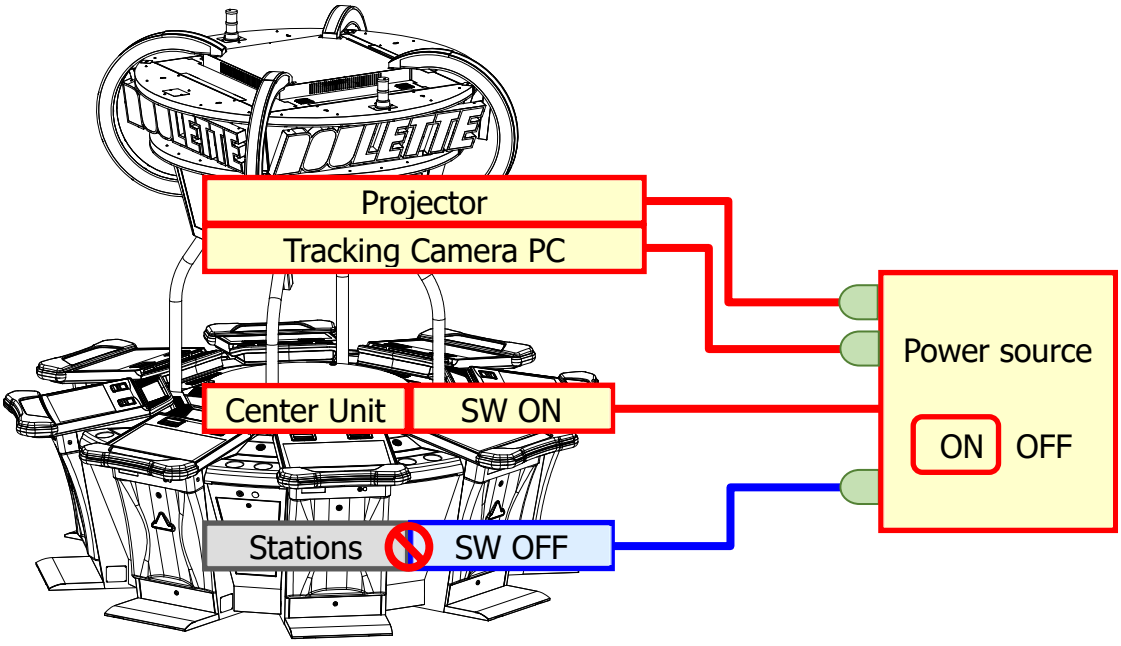
CAUTION!

Do not turn ON the power after the shutdown.

9. Remove the Setting GAL Cassette change it with the Game GAL Cassette back in.
10. Close the Security Cage Door and the Center Unit Door, the return the Station Unit previously detached to its original position.
11. Turn ON the Power Switch of the Center Unit and finally close all the doors.

CAUTION!

- Do not turn ON the 2 Power switches at the same time. Doing so can result in a start-up error of the machine.
- When doing "Power OFF-ON" wait at least 15 seconds before power On.



The Setting Procedure is finished.

6. 4: Maintenance Schedule

WARNING!

Maintenance stated in the following chart "Machine check list (Roulette)" must be done within the restrictive period.

To continue the use without performing the maintenance can cause unstable operation of the machine and could potentially cause serious financial loss to the casino.

For regular maintenance and parts replacement, please send a request to the official customer service.

In case one of the following Critical errors occurred even just once, turn immediately OFF the machine, refer to **"Roulette Errors"** at Chapter 6 of the OPERATION Manual, and contact the official customer service.

CALL SERVICE IMMEDIATERY!

GAME INIT ERROR
BALL START ERROR
BALL FALL ERROR
COMPRESSOR ERROR
BALL COUNT ERROR
MOTOR ERROR
POSITION SENSOR ERROR (REF0130): (REF0430): (REF0730): (REF1030)
ZERO SENSOR ERROR
ZERO SENSOR DETECT ERROR
AROUND SENSOR ERROR
ENCODER COUNT ERROR
POCKET SHUFFLE ERROR
WHEEL ORIGIN DETECT ERROR
WHEEL DIRECTION ERROR

#	**Machine check list (Roulette)** Item Name	After installation	Periodic inspection	Replacement cycle
1	Drain box	○	1 week	
2	Ball condition	○	1 months	3 months
3	Pocket shuffle		3 months	
4	Cleaning inside cabinet	○	3 months	
5	Cleaning glass	○	3 months	
6	Bank sheet condition	○	3 months	36 months
7	Number sheet condition	○	3 months	36 months
8	Pocket sheet condition	○	3 months	36 months
9	Ball pocket and wall condition	○	3 months	
10	Wheel pin (Cat's eye) condition	○	3 months	
11	Center cap condition (Crack,distortion)	○	3 months	36 months
12	Wheel level	○	3 months	
13	Ept Sealer of the canter cap	○	6 months	12 months
14	Sensor hole condition	○	6 months	
15	Clearance between bank and pocket	○	6 months	
16	Gap between bank and pocket	○	6 months	
17	Dead rebound position	○	6 months	
18	Roller Assy and motor (Wheel)	○	6 months	24 months
19	Fiber sensors condition	○	6 months	
20	Projector filter condition	○	6 months	12 months
21	Tracking ball condition	○	6 months	
22	Compressor filter condition	○	3 months	6 months
23	Compressor condition	○	12 months	5 years
24	Separator filter(corner) condition		6 months	12 months
25	Air pressure and ball rotation	○	6 months	
26	Air regulator condition	○	6 months	24 months
27	Air tube condition	○	6 months	36 months
28	Air nozzle condition	○	6 months	36 months
29	Projector (Placement/angle of image,focus)	○	6 months	24 months
30	Projector setting before shipment		-	
31	Live camera image (Focus, blur, brightness)	○	6 months	
32	Perform I/O test	○	6 months	
33	Confirm error meter	○	6 months	
34	RNG test (10000games)		-	
35	Wheel unit (Repair)		-	36 months

6. 4. 1: Daily Servicing (Regular check by Operator)

Clean the Machine

◇ Clean the machine surface.

CAUTION!

Never use chemical dust cloth, thinner, benzine or alcohol.

Damage may be caused to the surface of the machine.

◇ Clean the monitor screen with clean, soft cloth.

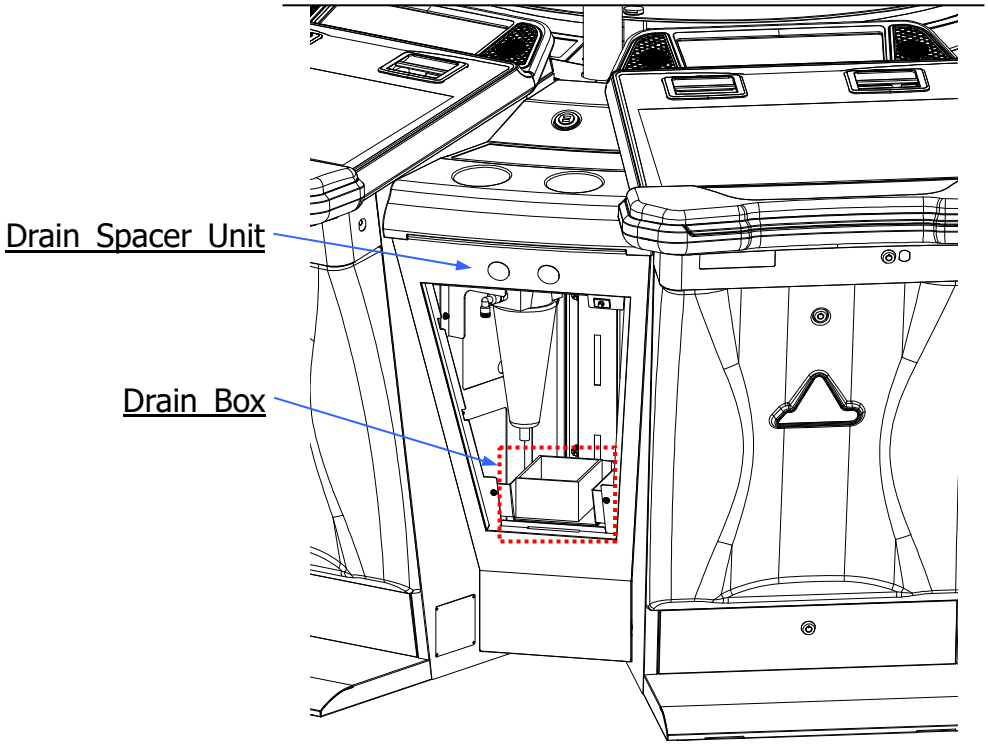
CAUTION!

Do not use a wet cloth or rub the screen.

Damage may be caused to the screen surface.

6. 4. 2: Weekly Servicing (every 1 week)

◇ Open the Drain Spacer Door and dispose of the drainage water.



6. 4. 3: Monthly Servicing (every 1 month)

WARNING!
The maintenance tasks stated in "**Machine check list (Roulette)**" must be performed within the restrictive period. **(Refer to 6.4).**

6. 4. 4: Quarterly Servicing (every 3 months)

WARNING!
The maintenance tasks stated in "**Machine check list (Roulette)**" must be performed within the restrictive period. **(Refer to 6.4).**

Check the Condition of the AC Cord

- ◇ Has the cord been damaged in any way?
- ◇ Is the plug securely plugged in?
- ◇ Is there any dust, garbage, or metal pieces accumulated in or around the plug?
- ◇ Are there any peeling parts or burn marks on the cord?

DANGER!
Damage to the cord may lead to fire or electric shock. If any damage is found or detected, immediately turn off the machine and contact your local office or distributor.

Check the Harnesses, Connectors, and Clamps of each Cabinet Part

- ◇ Are there any harnesses stuck between doors?
- ◇ Are all connectors properly and securely connected?
- ◇ Are all harnesses securely fastened by clamps?

Check the Conditions of the Doors

- ◇ Are all the Door Switches operating properly?
- ◇ When lightly shaking the cabinet while the door is closed, does any Door Open Event occur?
- ◇ Are any of the doors distorted or damaged in any way?

6. 4. 5: Biannual Servicing (every 6 months)

WARNING!
The maintenance tasks stated in "**Machine check list (Roulette)**" must be performed within the restrictive period. **(Refer to 6.4)**.

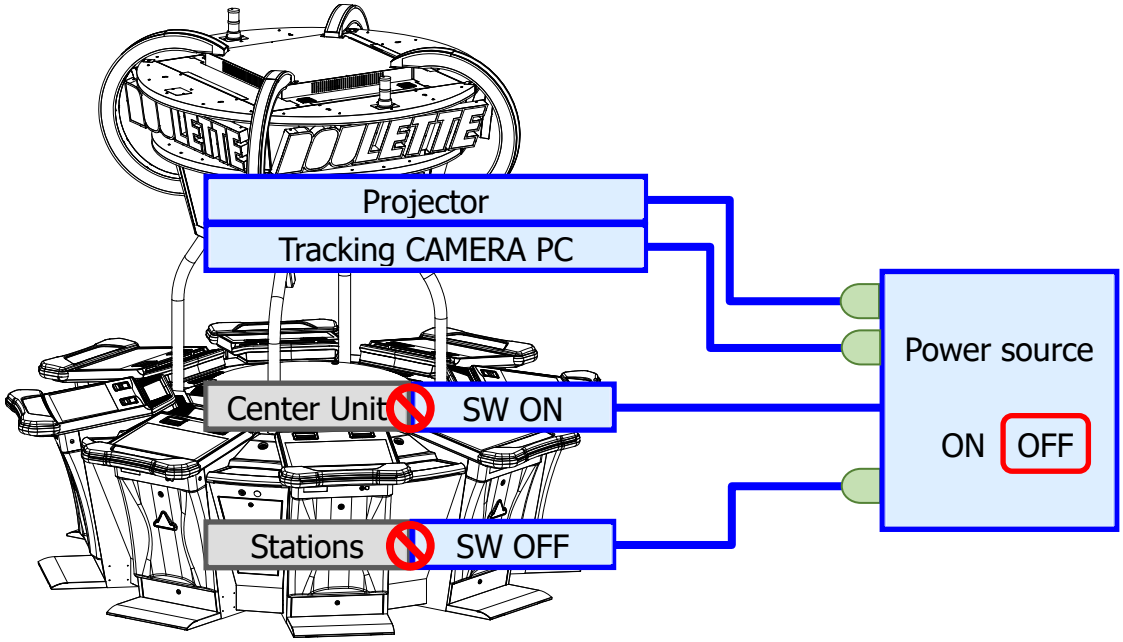
6. 4. 6: Yearly Servicing (every 12 months)

WARNING!
The maintenance tasks stated in "**Machine check list (Roulette)**" must be performed within the restrictive period. **(Refer to 6.4)**.

6. 5: Disassembly

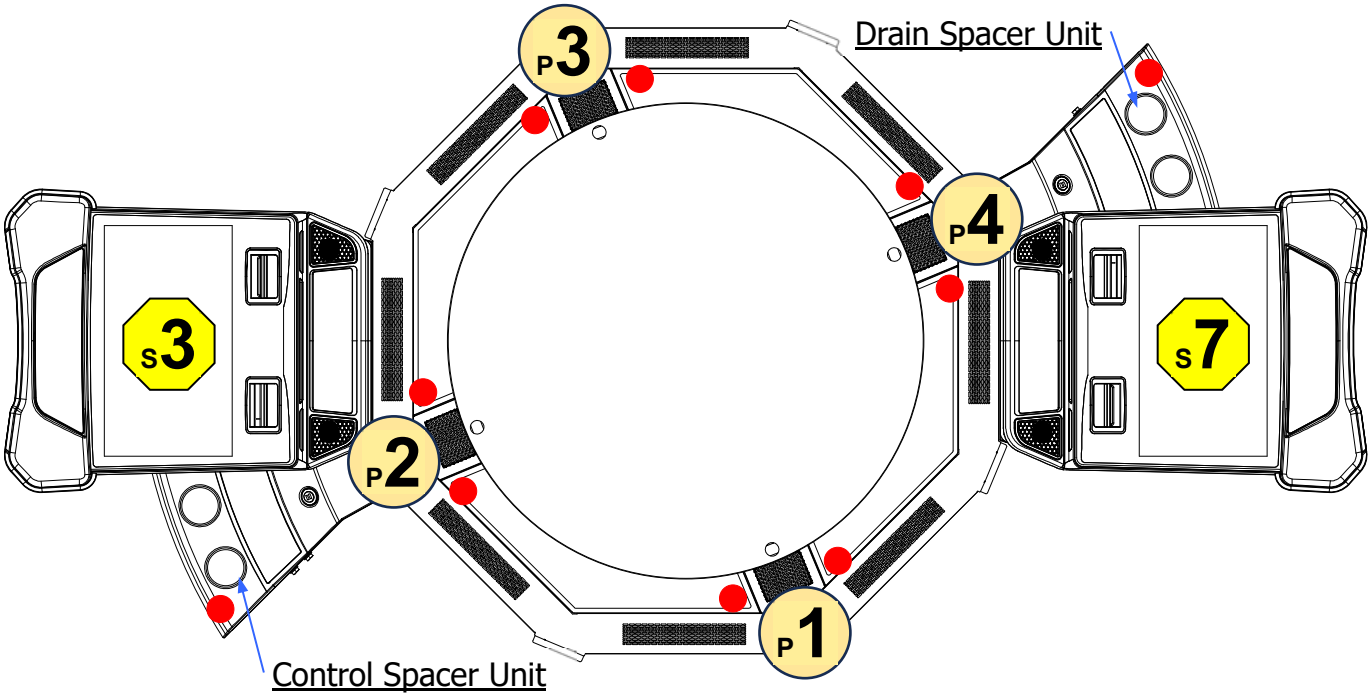
DANGER!

- Make sure that the machine is turned off before disassembling any components. **(Refer to the Opening insert Safe Power OFF)**
- Electrostatic discharge may damage internal components. When accessing the inside of the Cabinet, take anti-static measures (as wearing antistatic wristband etc.) before proceeding.

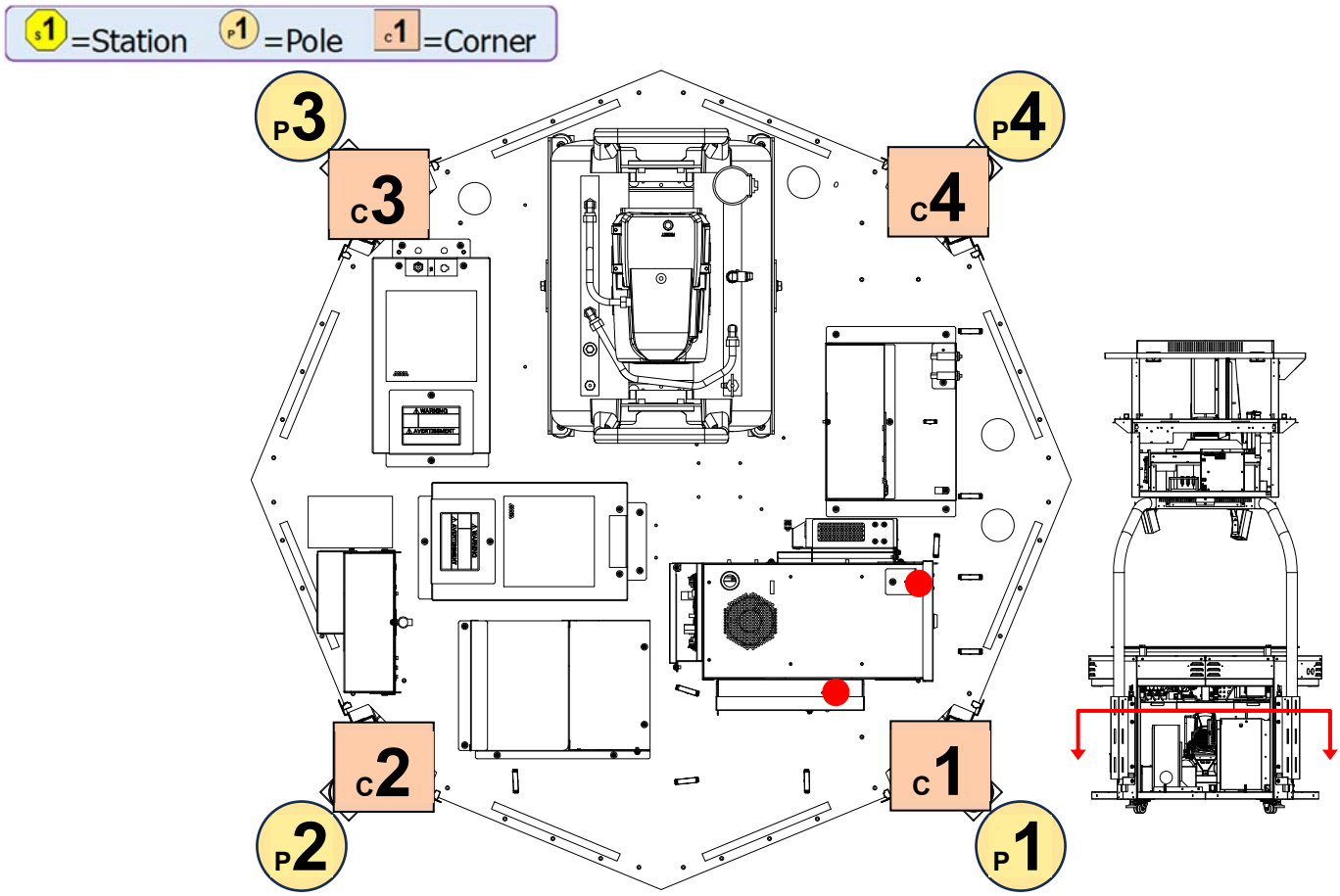


- Location of the Door Switch (●)in the Center Unit -

(Refer to 6.5.1)

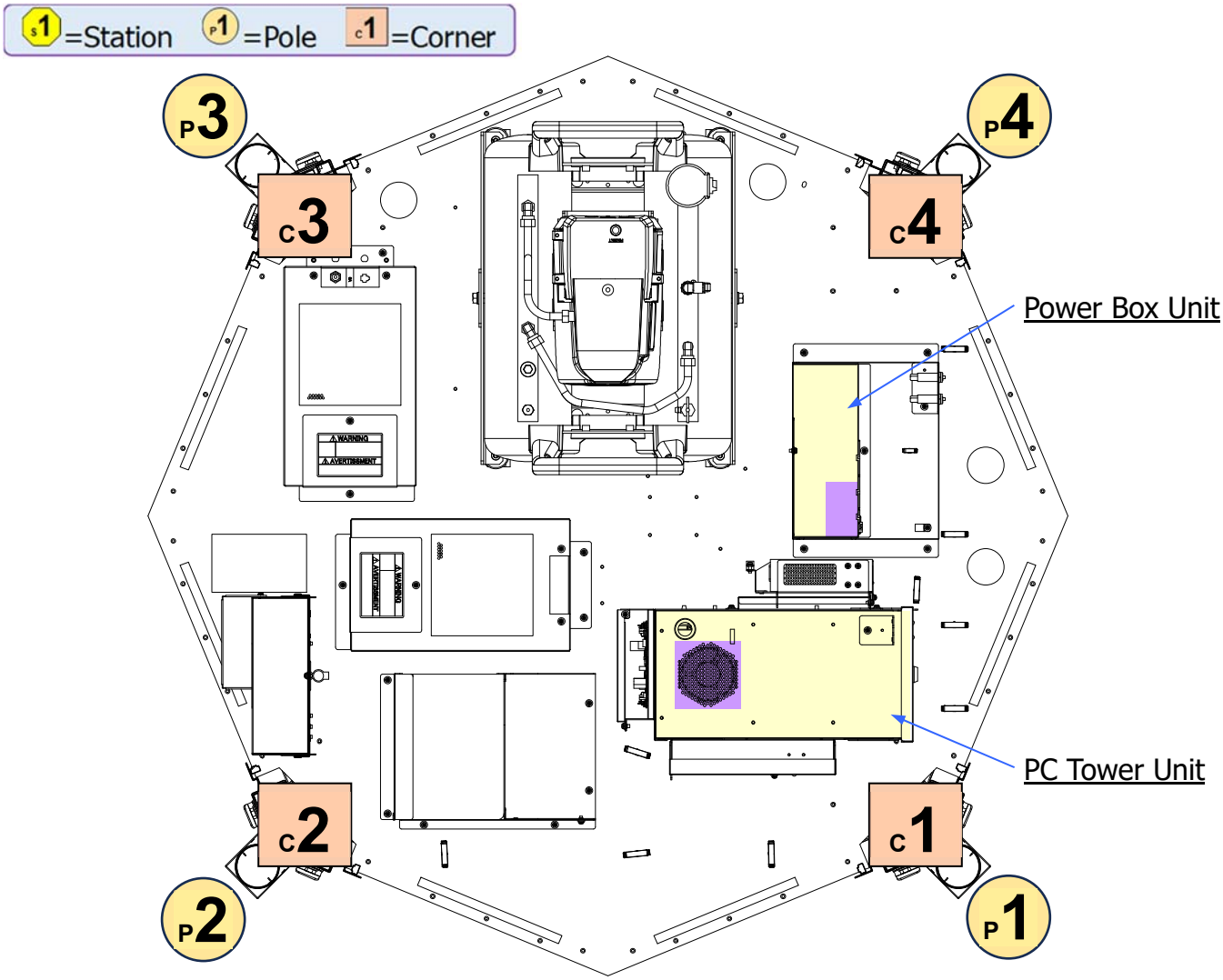


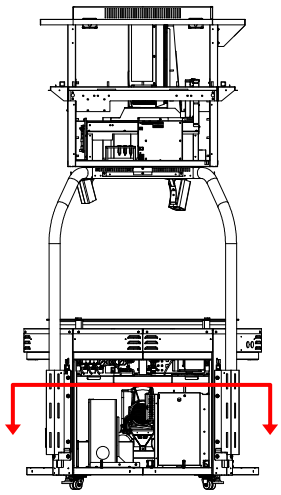
(Refer to 6.5.1.1 or 6.5.1.4)



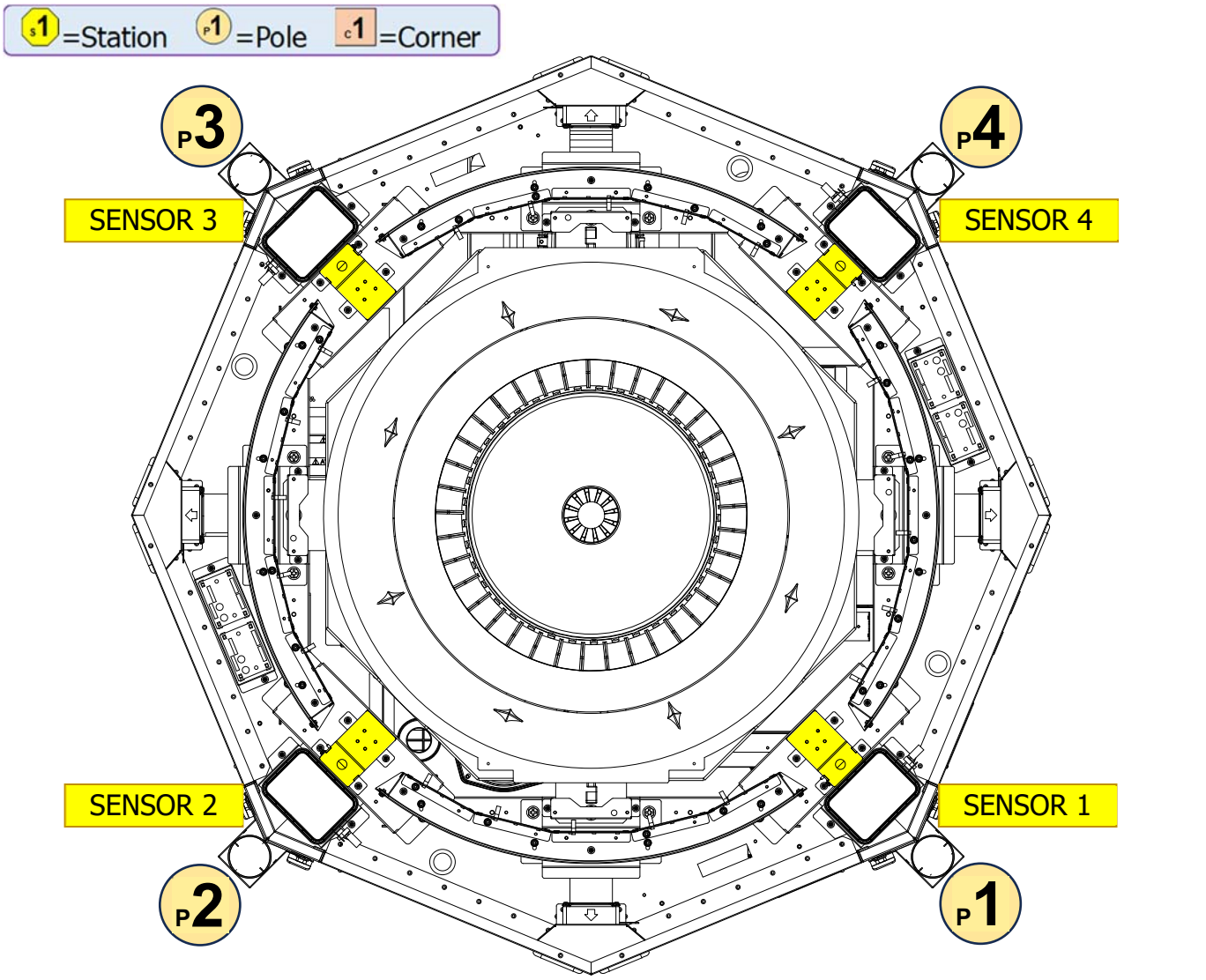
- Location of the Fans ( ) in the Center Unit -

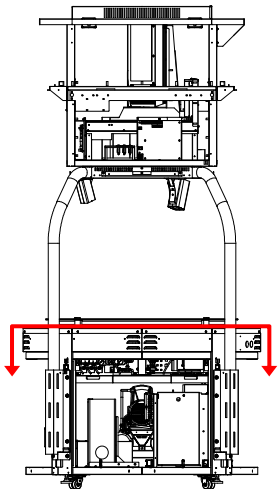
(Refer to 6.5.1.4)



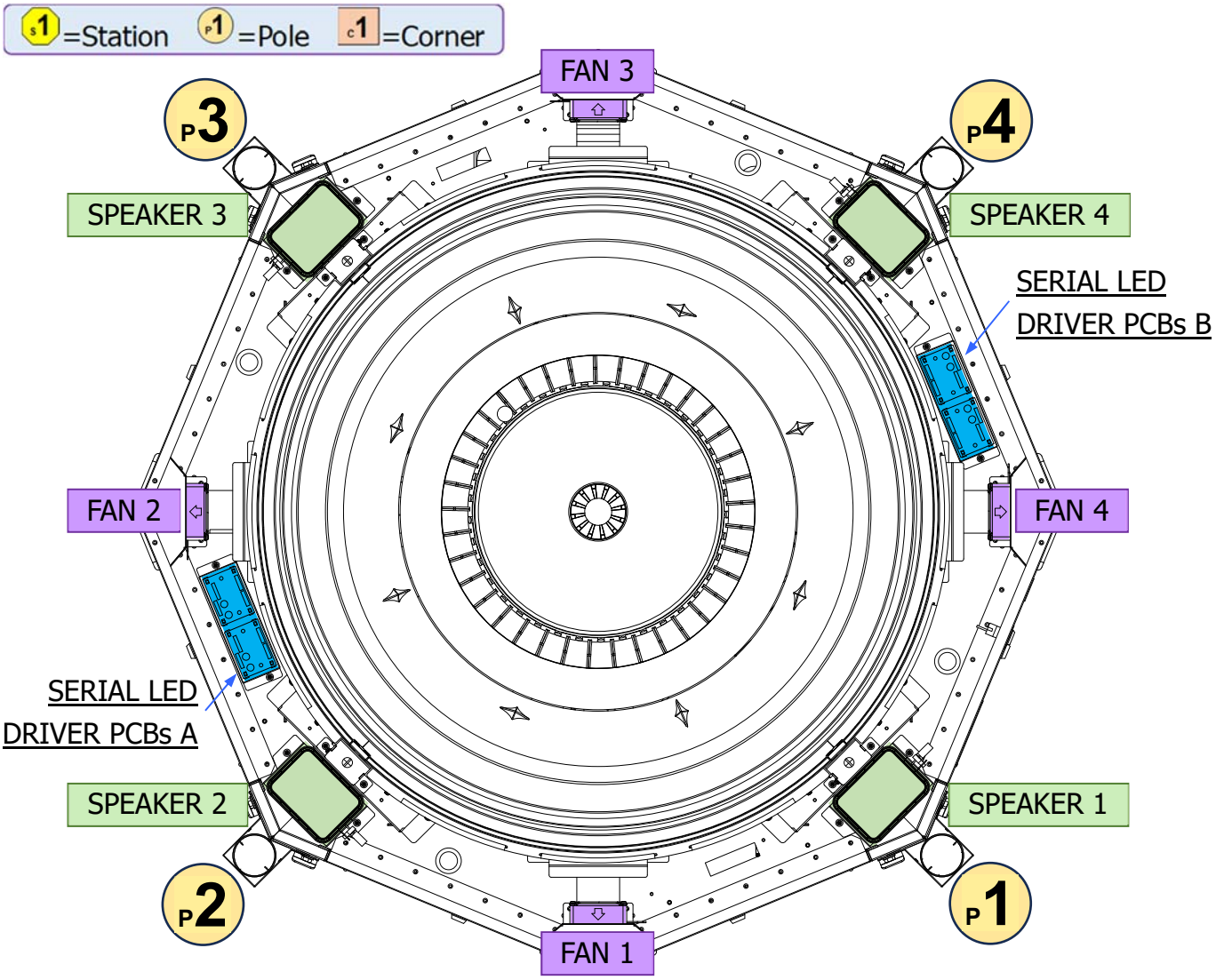


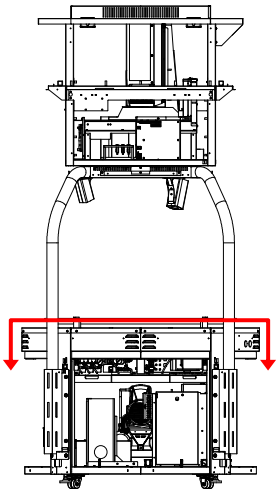
- Location of the Wheel Glass Sensors at the top of the Center Unit -
(Refer to 6.5.4)



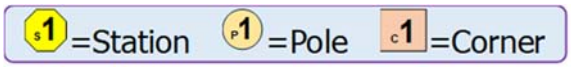


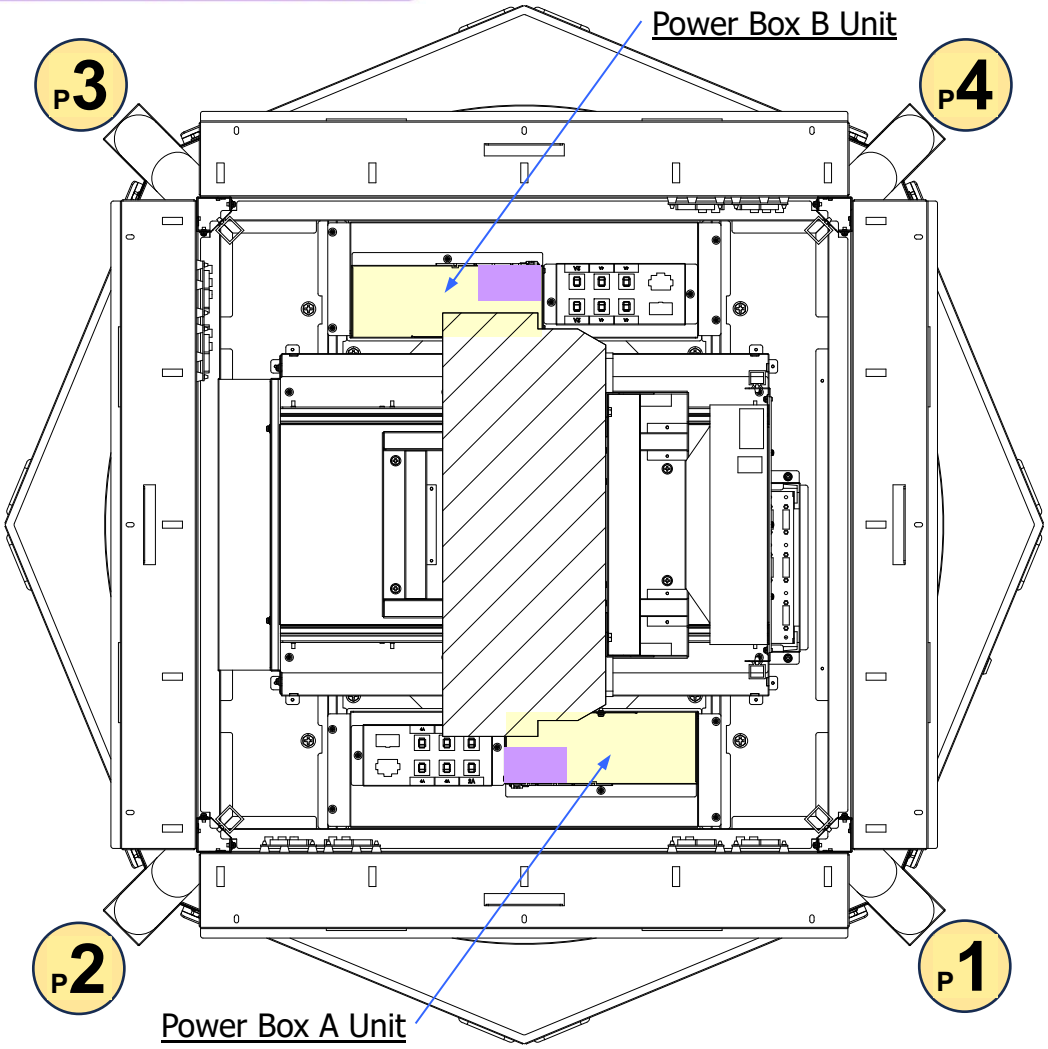
- Location of the Fans and the Speakers at the top of the Center Unit -
(Refer to 6.5.3)

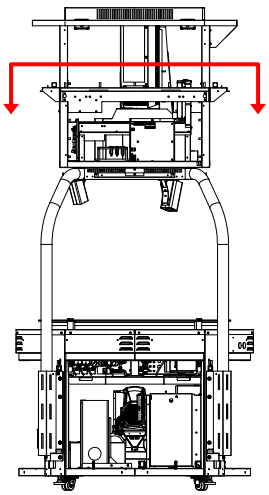




- Location of the Power Box Fans ( ) in the Top Sign Unit -
(Refer to 6.5.6 or 6.5.8)

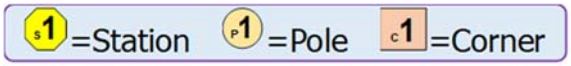


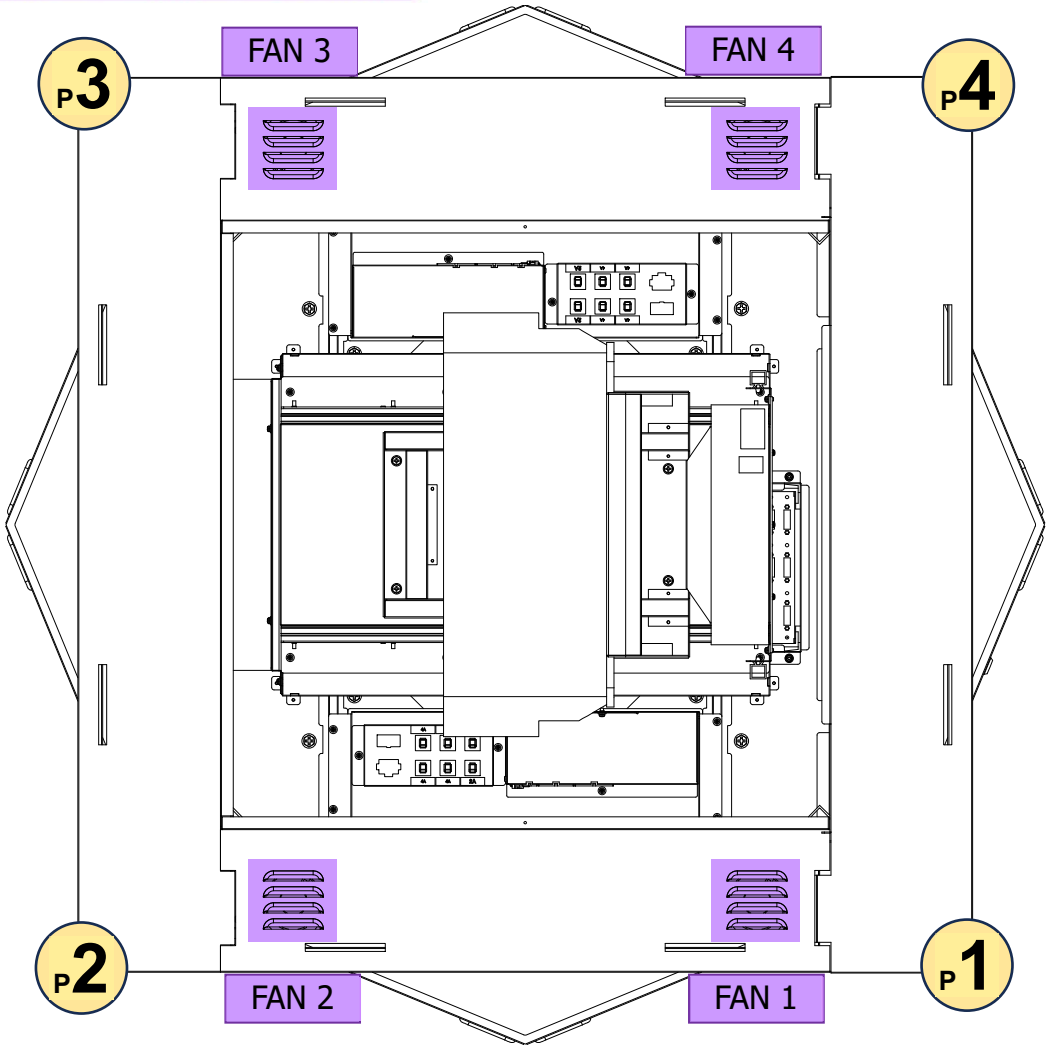


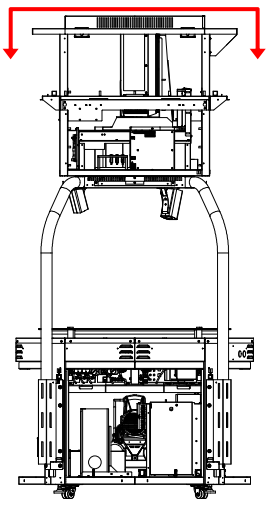


- Location of the Fans at the top of the Top Sign Unit -

(Refer to 6.5.12)

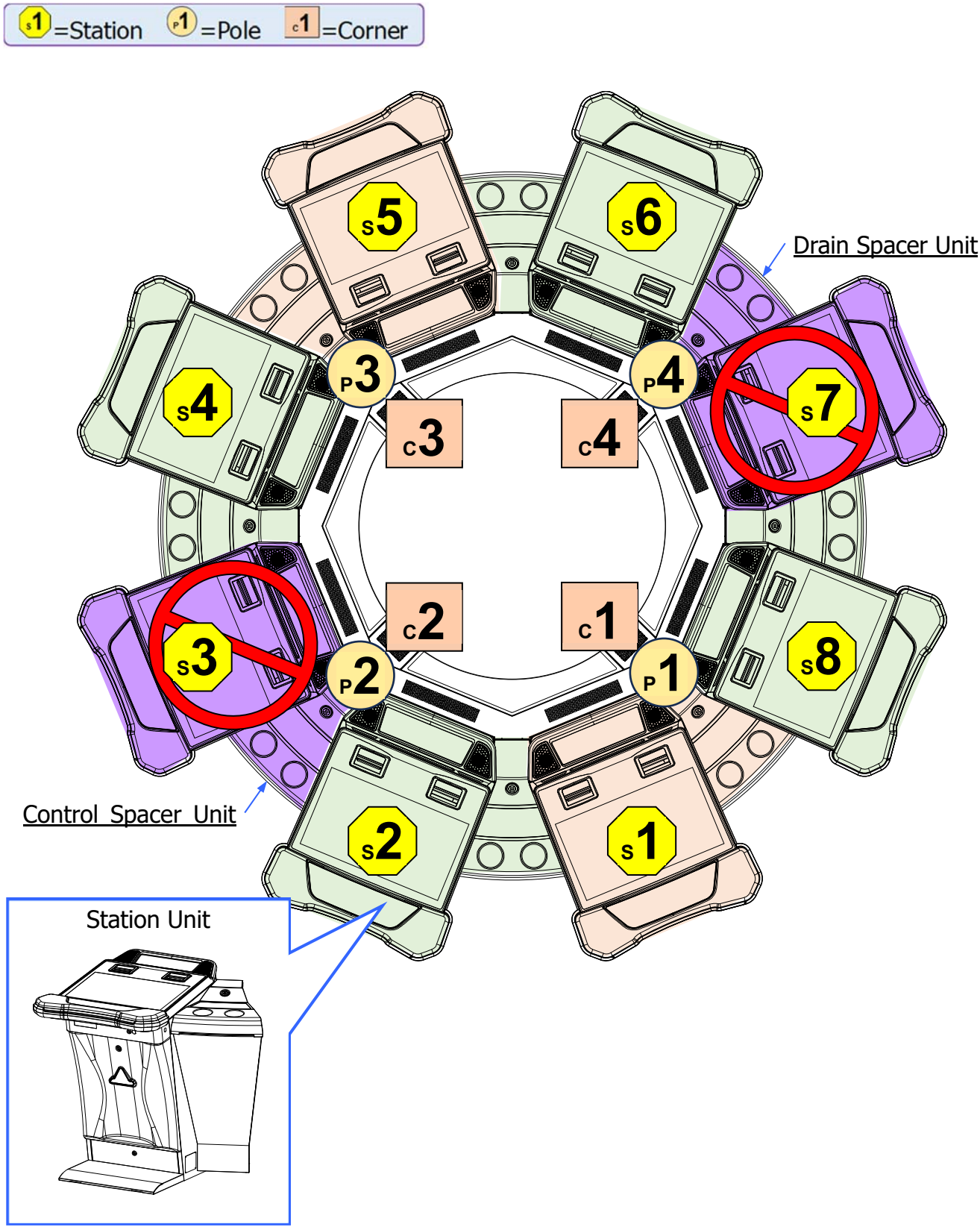






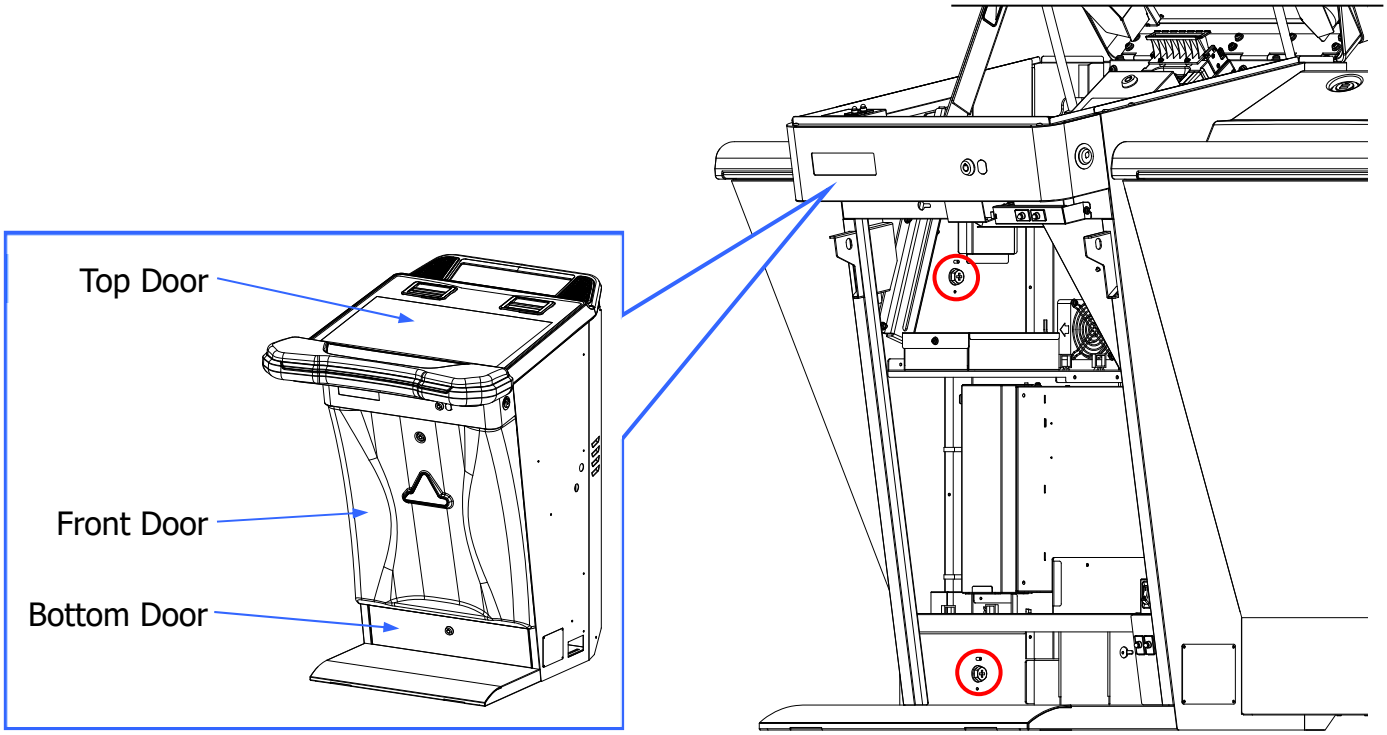
6. 5. 1: Separating the Stations from the Center Unit

Refer to the illustration below and check the layout of each Station Unit composed by Station and Spacer.

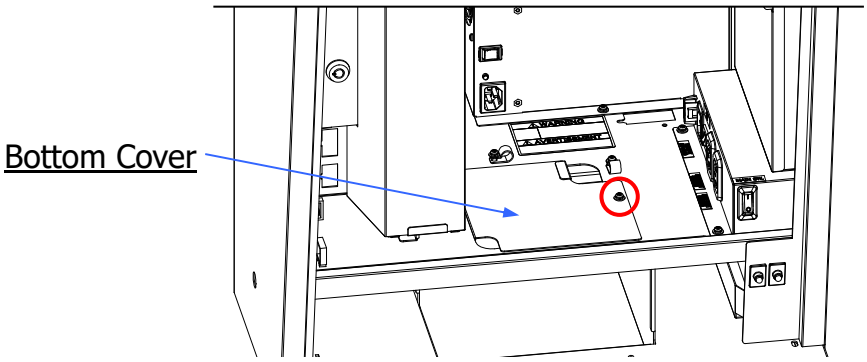


NOTE:
Separate each Station Unit from the Center Unit in the order indicated below.
The [Station 3 Unit], and the [Station 7 Unit] are connected by dedicated cables, so they will be the last to be detached. Refer to **"Station 3 Unit (Control Spacer Unit)"** for details about the [Station 3 Unit], and to **"Station 7 Unit (Drain Spacer Unit)"** for details about the [Station 7 Unit].

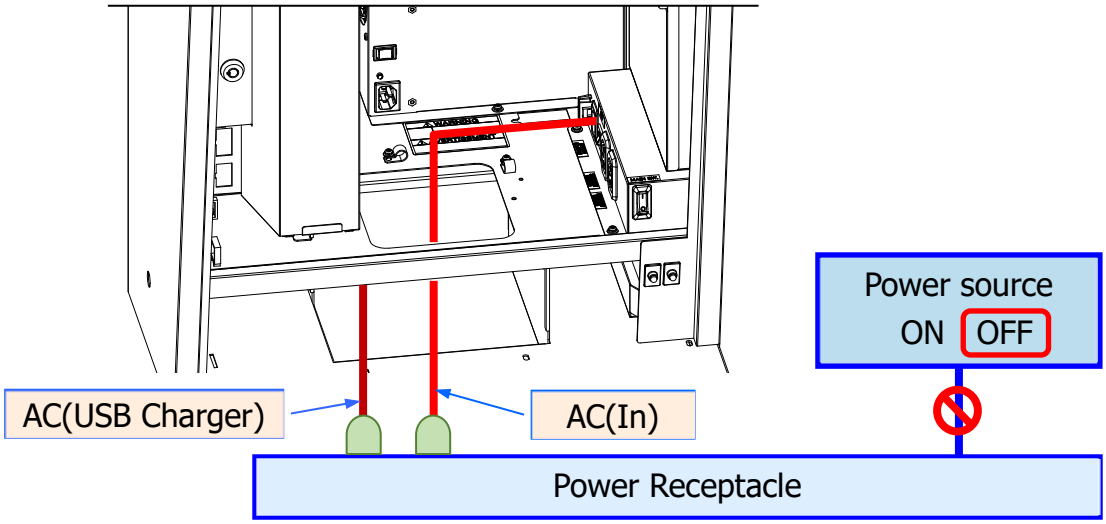
1. Unlock and remove the Front Door and the Bottom Door of each Stations, and then remove the 2 Bolts that affix the Station Unit.



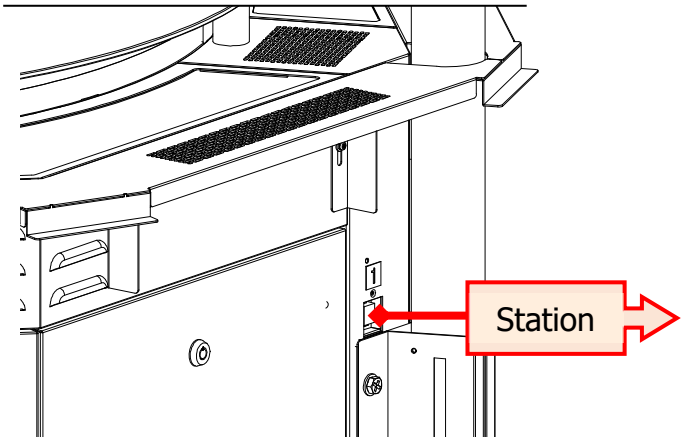
2. Remove 1 screw and detach the Bottom Cover on each station.



3. Unplug the AC Cable of each station from the Power Receptacle. If the USB Charger is connected, unplug it as well. Arrange the unplugged cables so that they will not get in the way of the procedures.

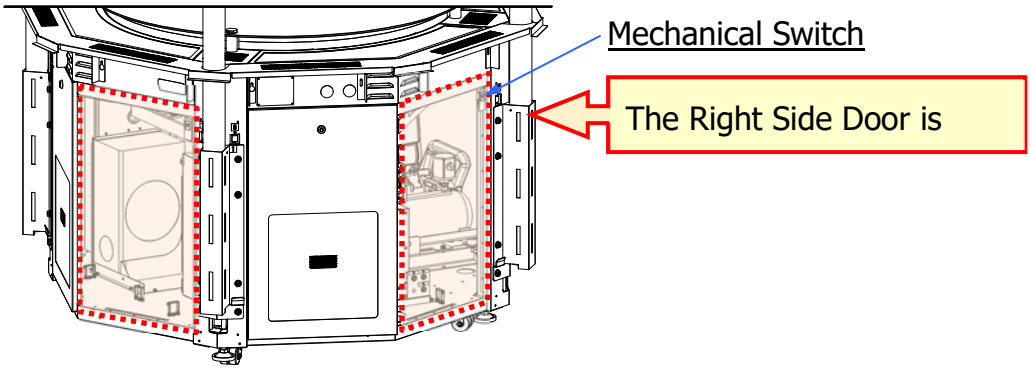


4. Pull all the stations except [Station 3 Unit] and [Station 7 Unit] at a distance of 30 cm from the Center Unit. Unplug the LAN Cables of each station connected to the LAN Port of the Center Unit, and then separate the Station Units.

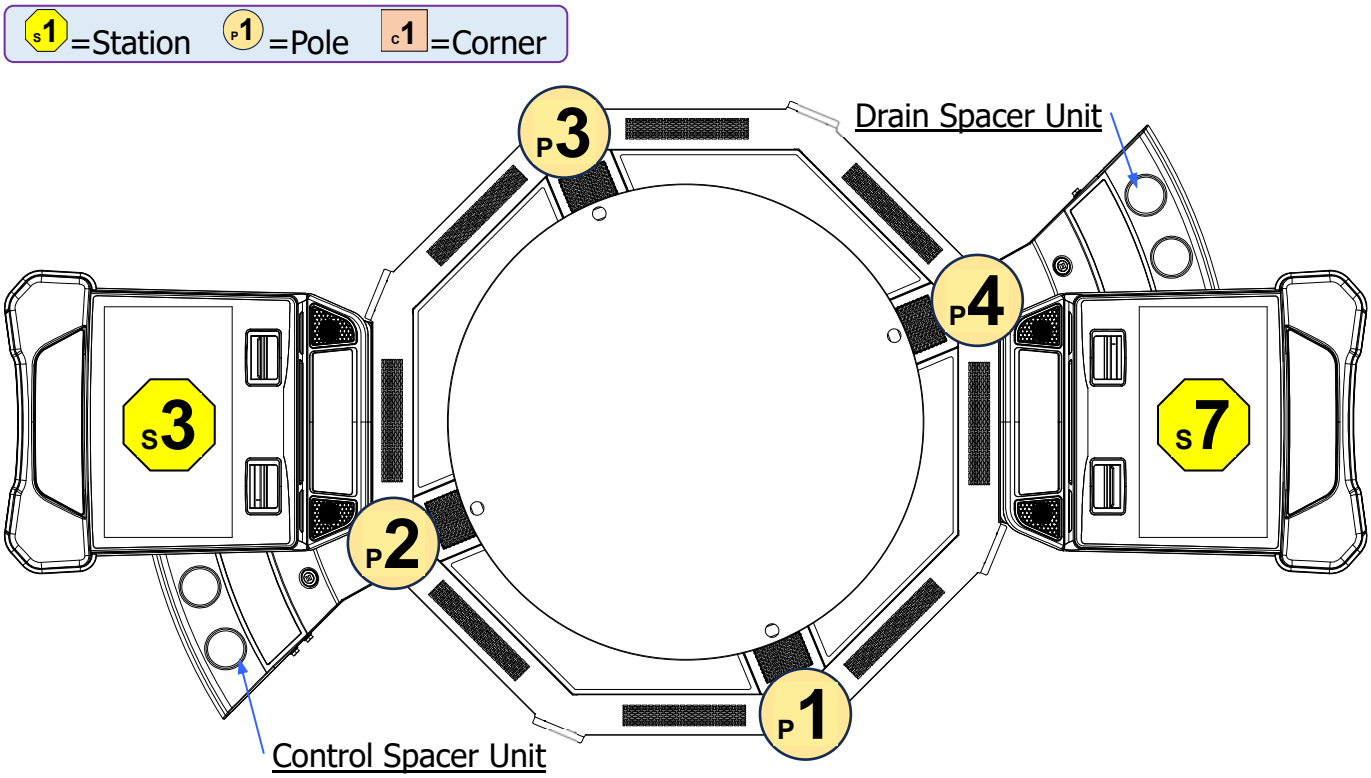


5. Unlock and remove the Doors of the Center Unit.

NOTE:
Remove first the door on the right side, and then the one on the left side.

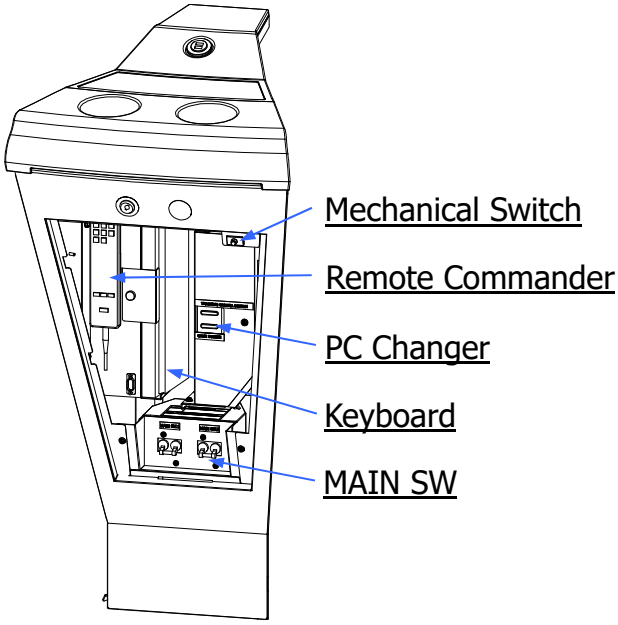


NOTE:
Each of [Station 3 Unit] (Control Spacer Unit) and [Station 7 Unit] (Drain Spacer Unit) are connected with a specific cable. Refer to the following procedure to separate them.

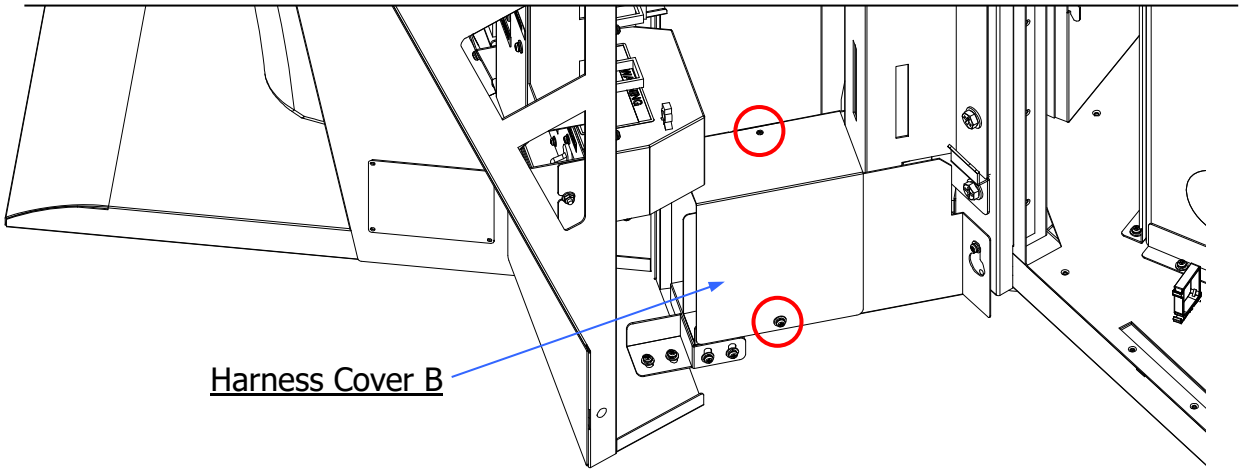


- Station 3 Unit (Control Spacer Unit) -

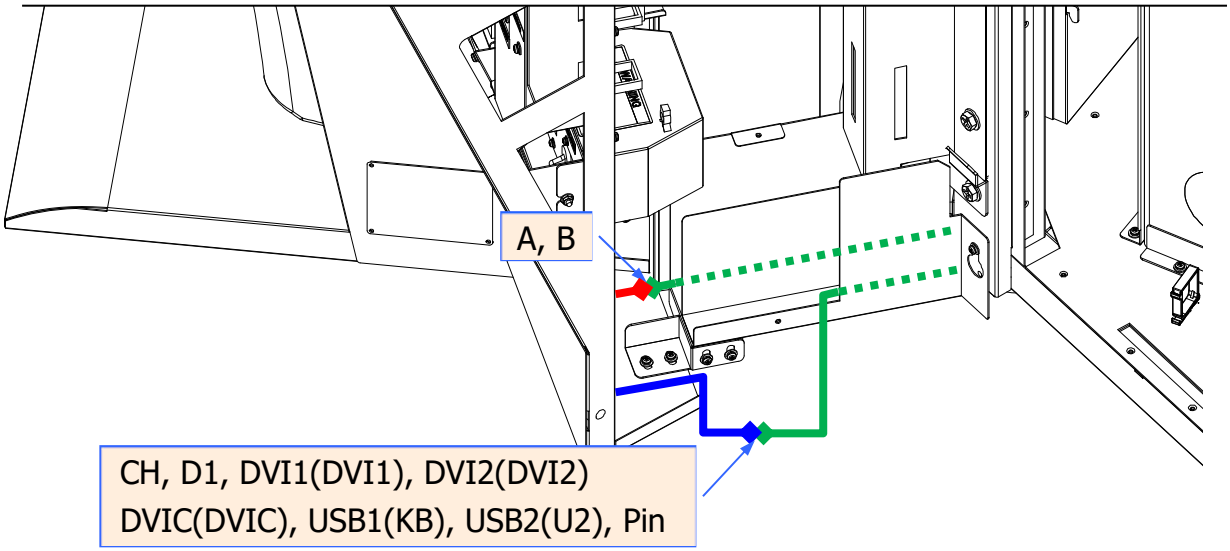
A. Unlock and detach the Control Spacer Door.



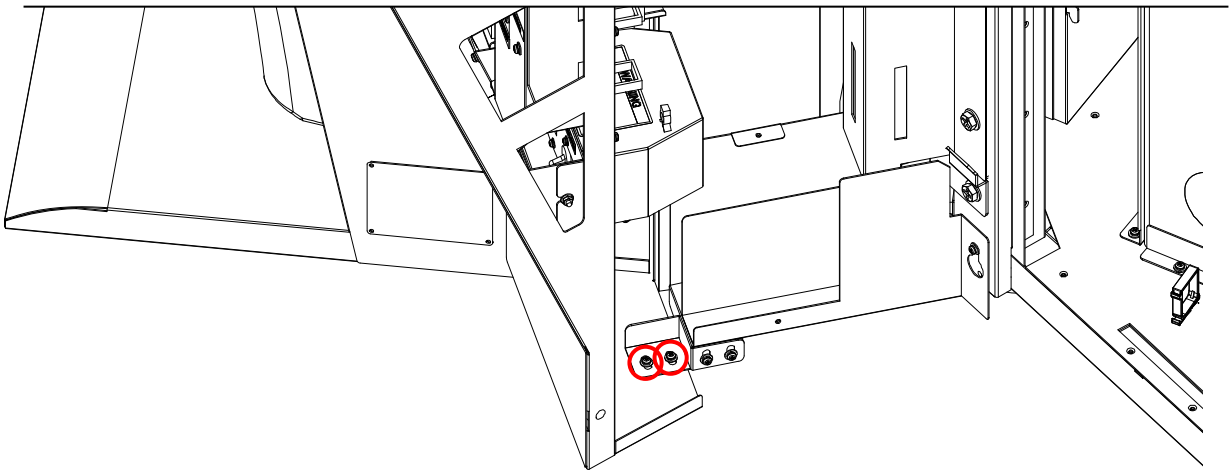
B. Remove the screw that is below the [Control Spacer Unit] to remove the Harness Cover B.



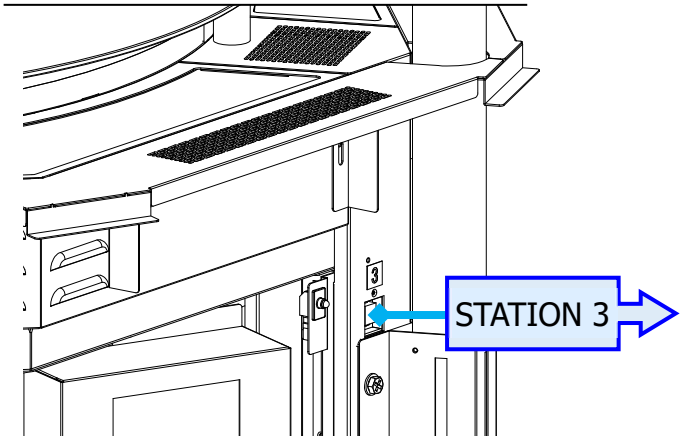
C. Unplug the Connectors that are connected to the [Control Spacer Unit] as showed in the image below, and arrange them so that they do not interfere with the next procedures.



D. Remove the 2 screws in the bottom of the [Control Spacer Unit].

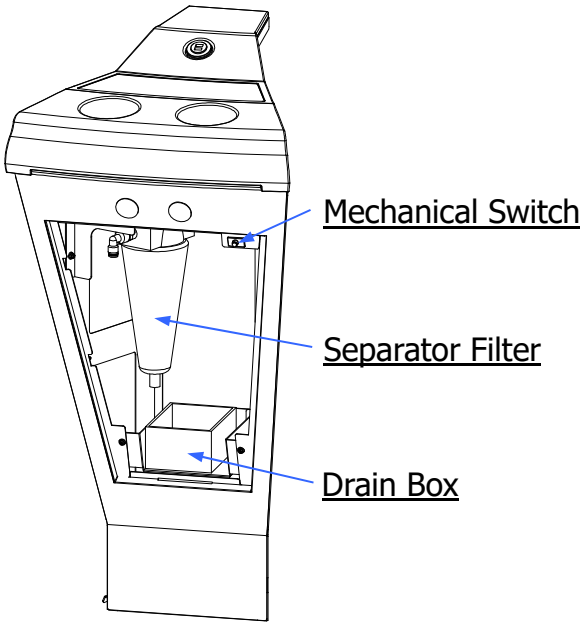


E. Pull the stations at a distance of 30 cm from the Center Unit. Unplug the LAN Cables of the station connected to the LAN Port of the Center Unit, and then separate the Station Unit.

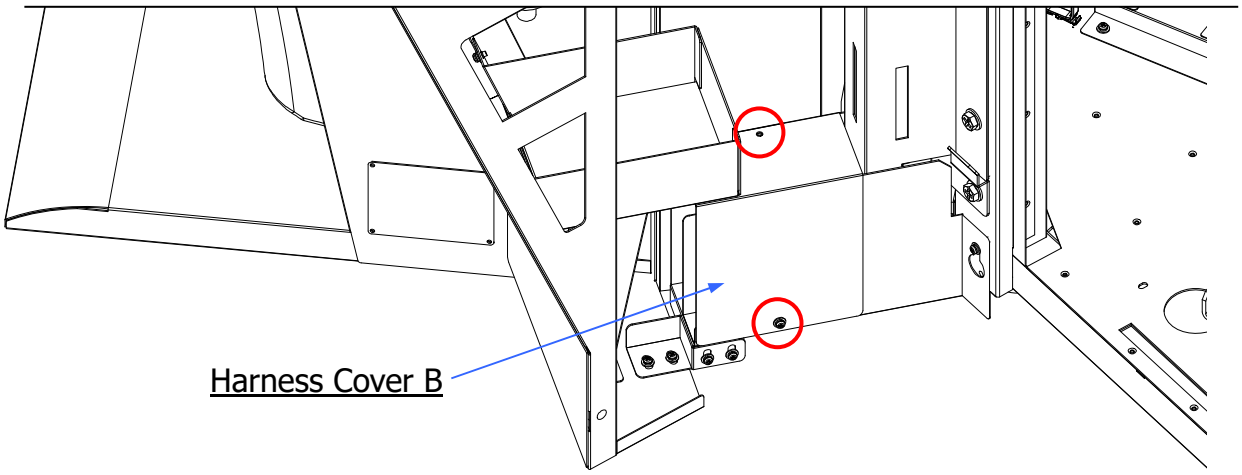


tation 7 Unit (Drain Spacer Unit) -

A. Unlock and detach the Control Spacer Door.

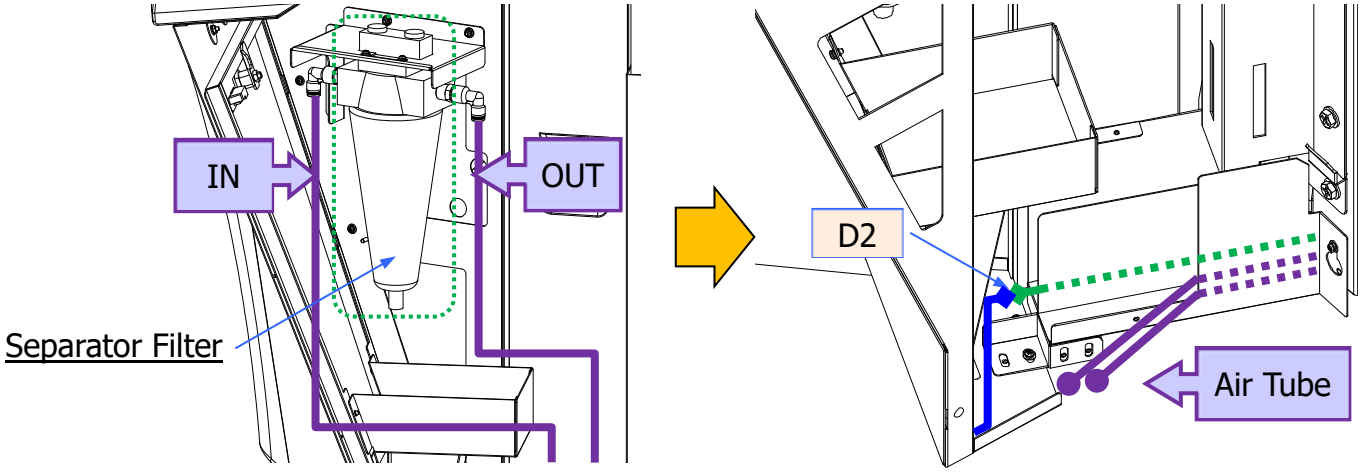


B. Remove the screw that is below the [Drain Spacer Unit] to remove the Harness Cover B.

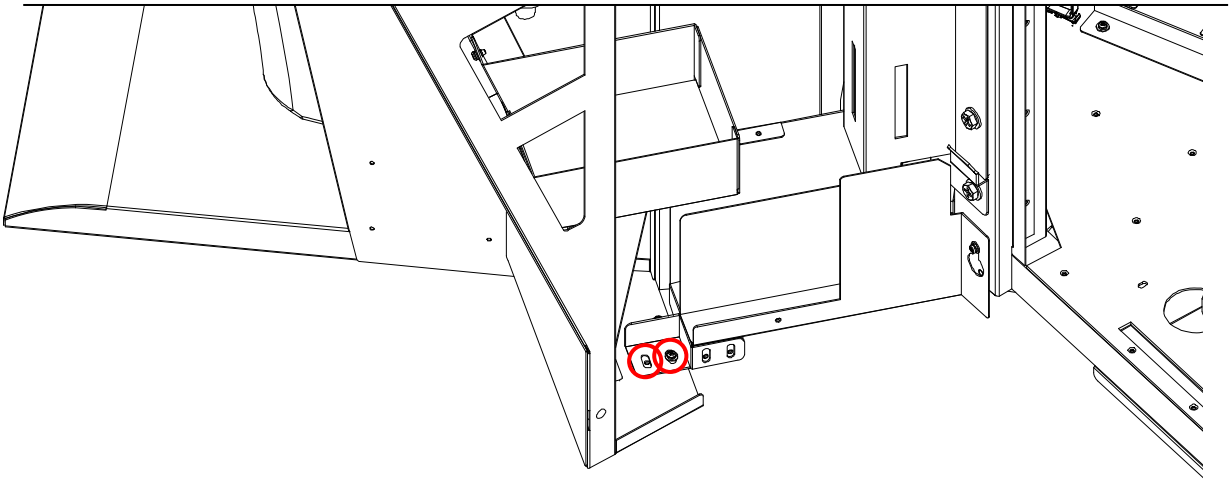


C. Unplug the Air Tube connected to the Separator Filter inside the [Drain Spacer Unit], and the Connector illustrated below, then arrange them so that they do not interfere with the next procedures.

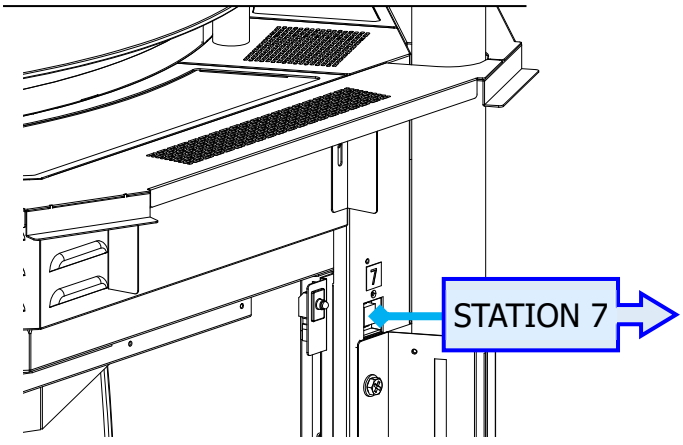
NOTE:
IN: from the Compressor. **OUT:** to the Wheel Unit.



D. Remove the 2 screws in the bottom of the [Control Spacer Unit].

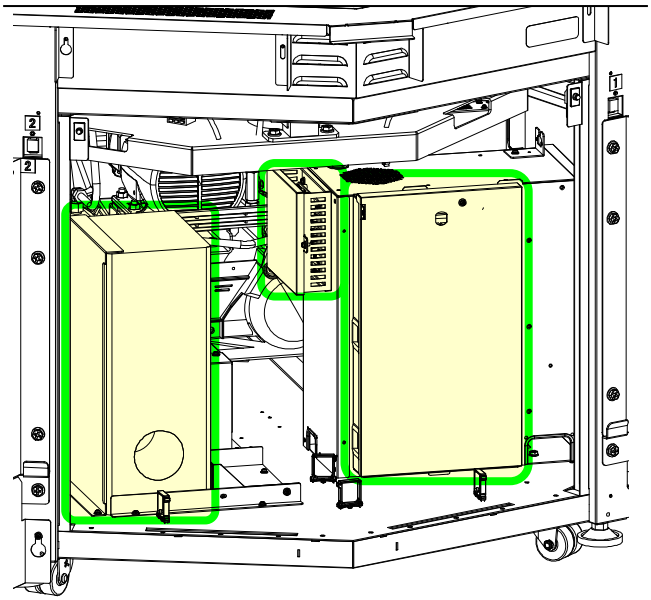


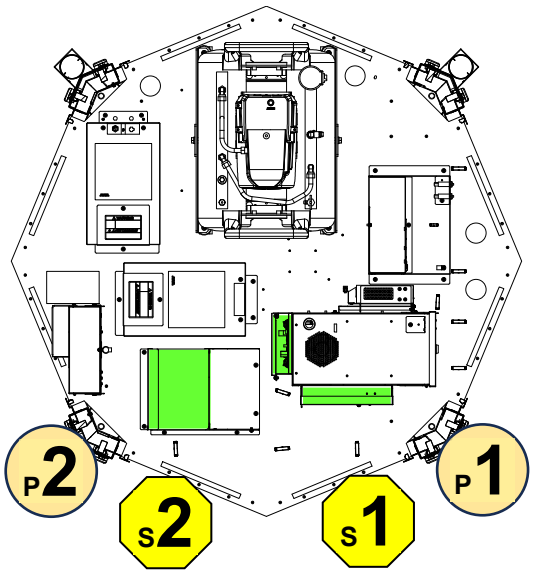
E. Pull the stations at a distance of 30 cm from the Center Unit. Unplug the LAN Cables of the station connected to the LAN Port of the Center Unit, and then separate the Station Unit.



6. 5. 1. 1: Acessing the IO Case, the AMP Case and the Woofer Speaker

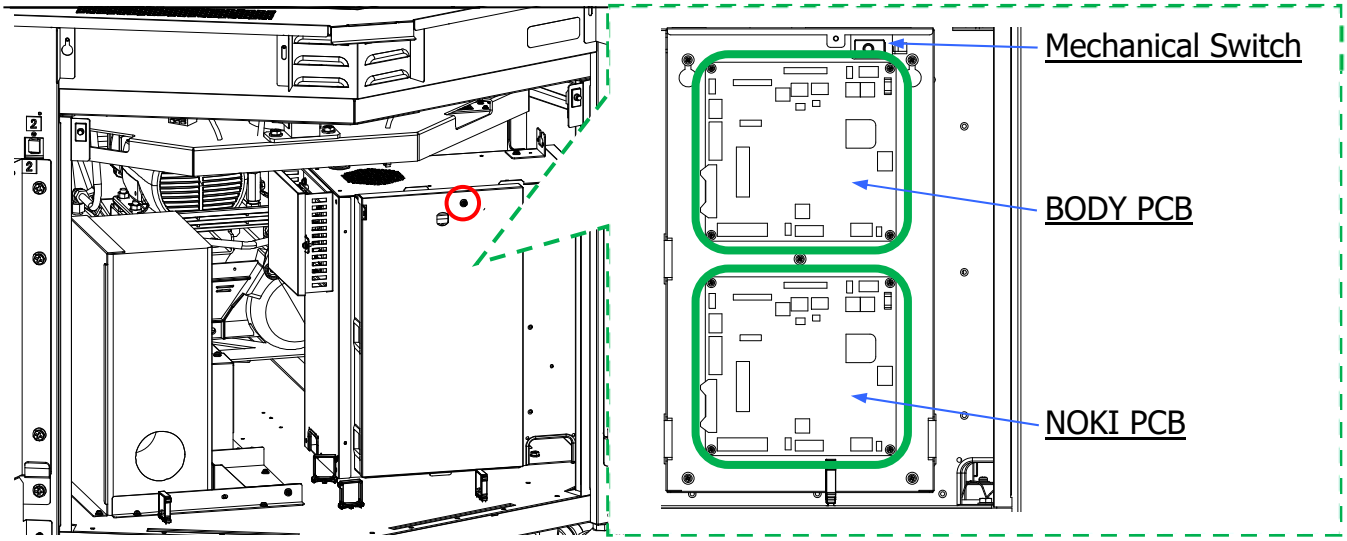
1. It is possible to access to the IO Case, the AMP Case and the Woofer Speaker by detaching the [Station 1 Unit] and the [Station 2 Unit] from the Center Unit. **(Refer to 6.5.1)**.





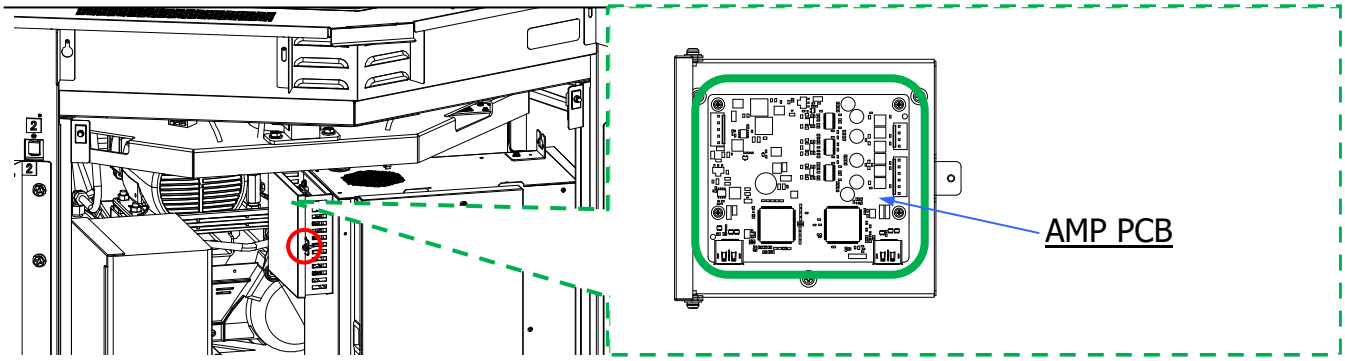
- IO Case -

A. Remove 1 screw (or open the lock) to detach the IO Case Cover.



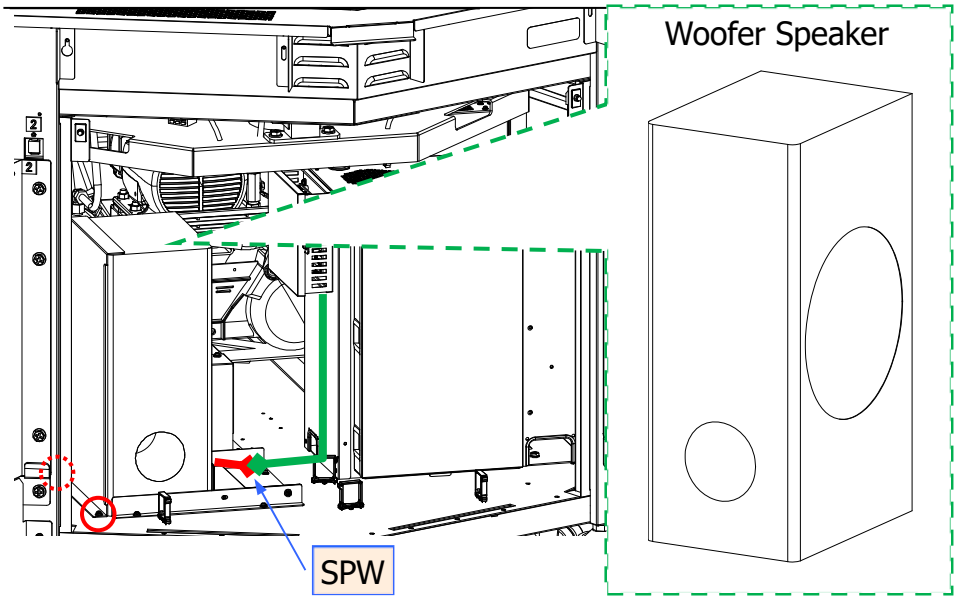
- AMP Case -

A. Remove 1 screw to open the AMP Case Cover.



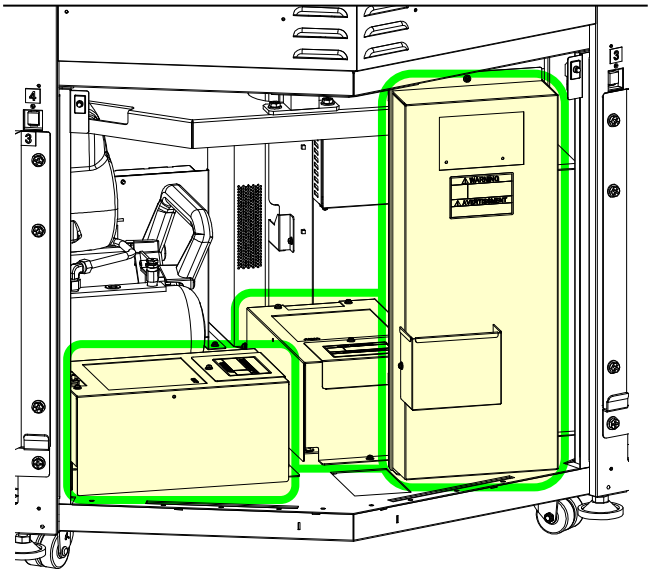
- Woofer Speaker -

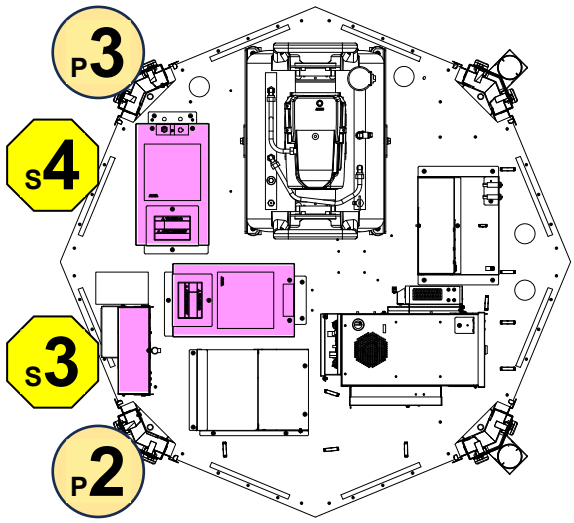
A. Unplug the [SPW] connector and remove 2 screws to detach the Woofer Speaker.



6. 5. 1. 2: Accessing the Switch Board Unit and the Transformer Box

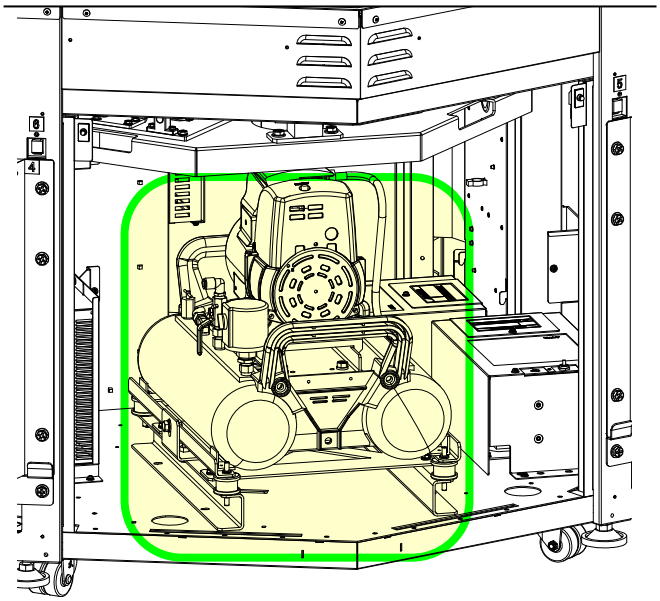
1. It is possible to access to the Switch Board Unit and the Transformer Box by detaching the [Station 3 Unit] and [Station 4 Unit] from the Center Unit. **(Refer to 6.5.1)**.

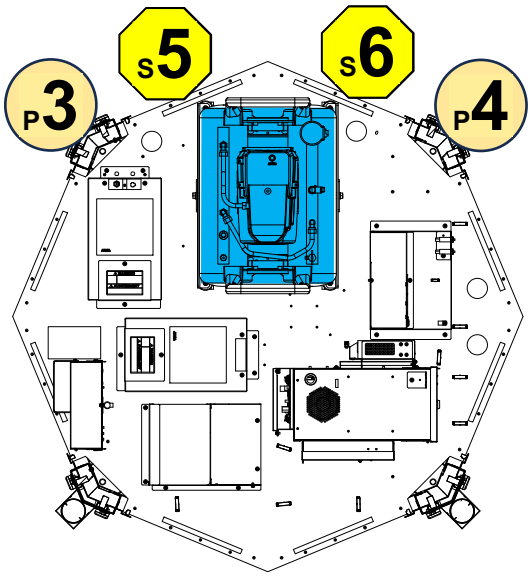




6. 5. 1. 3: Accessing the Air Compressor Unit

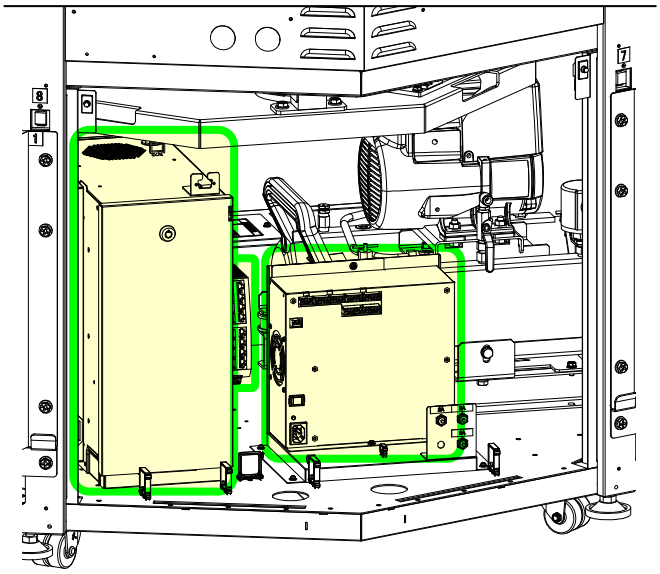
1. It is possible to access to the Air Compressor Unit by detaching the [Station 5 Unit] and [Station 6 Unit] from t he Center Unit. **(Refer to 6.5.1)**.

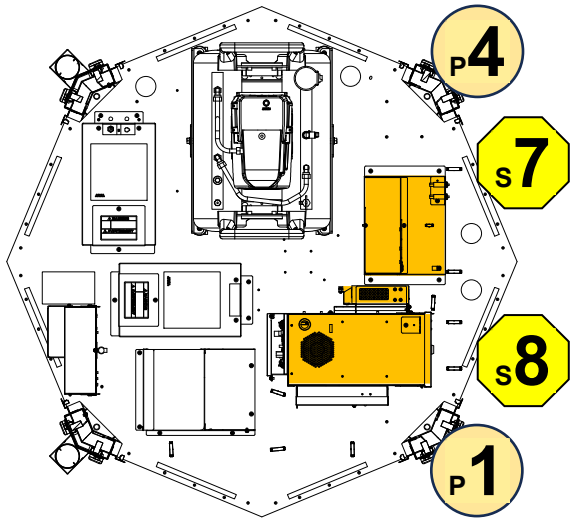




6. 5. 1. 4: Accessing the Security Cage, the Switching HUB, the Main Power Box and the Drive PCB

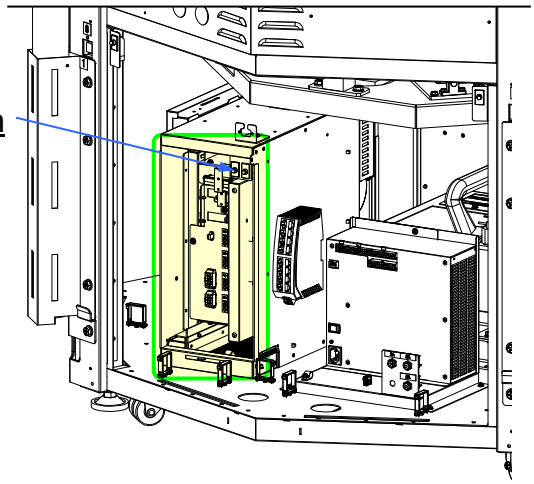
1. It is possible to access to the Security Cage, the Switching HUB and the Main Power Box by detaching the [Station 7 Unit] and [Station 8 Unit] from the Center Unit. **(Refer to 6.5.1)**.



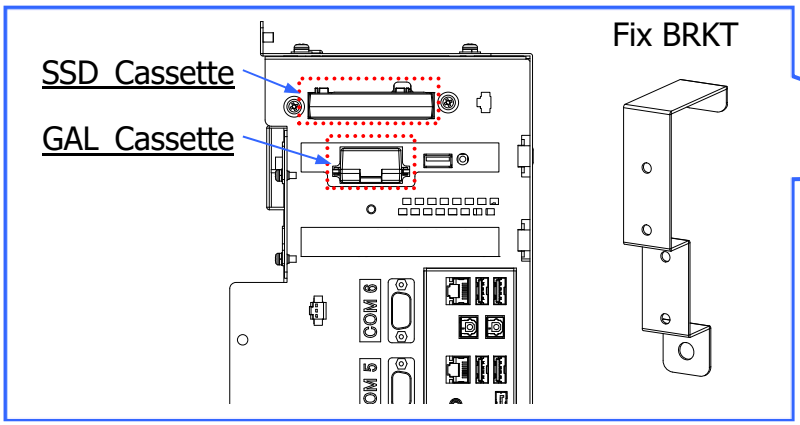


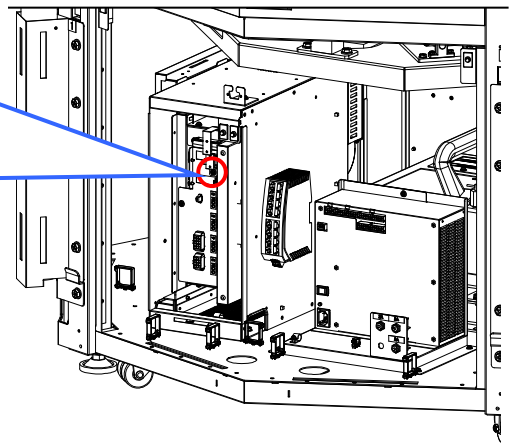
- Security Cage -

A. Remove the Security Cage Door.



B. Remove 1 screw and detach the Fix BRKT, to remove also the SSD and GAL Cassettes.



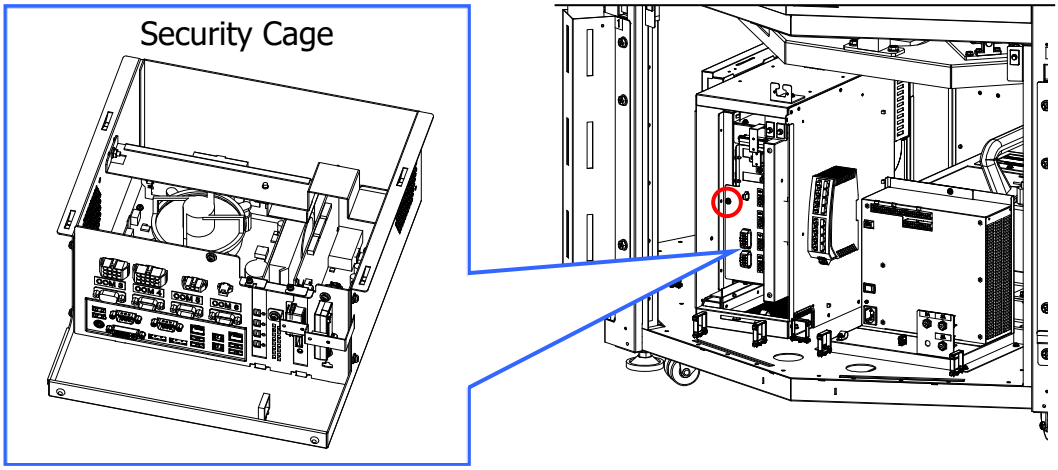


C. Disconnect all the Connectors linked to the Security Cage, and put them out of the way.

NOTE:
Refer **"Cable Connections"** on Chapter 2 for the reconnection procedures of the connectors.

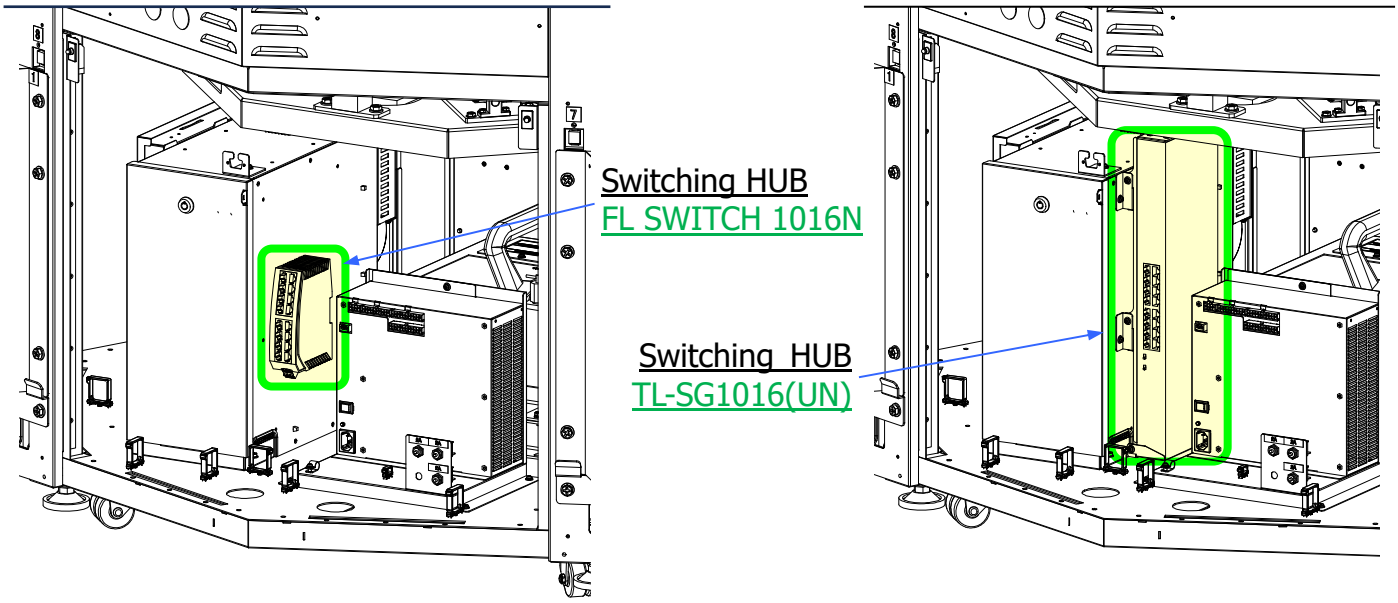
D. Draw out the Security Cage by removing 1 screw.

WARNING!
Electrostatic discharge may damage internal components. When accessing the inside of the Cabinet, take anti-static measures (as wearing antistatic wrist band, etc.) before proceeding.

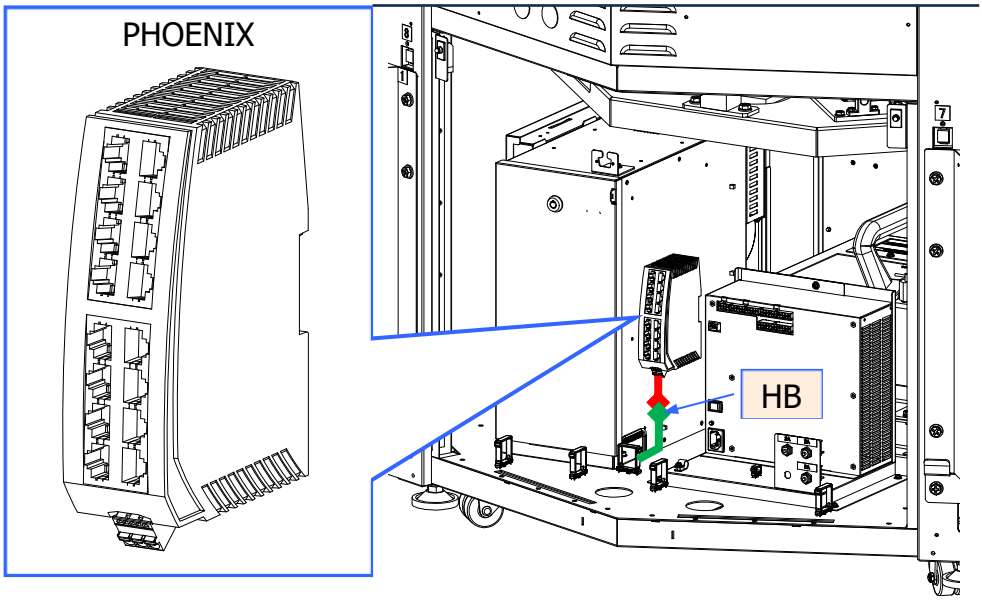


- Switching HUB -

A. Unplug the LAN Cable that is connected to the Switching HUB.

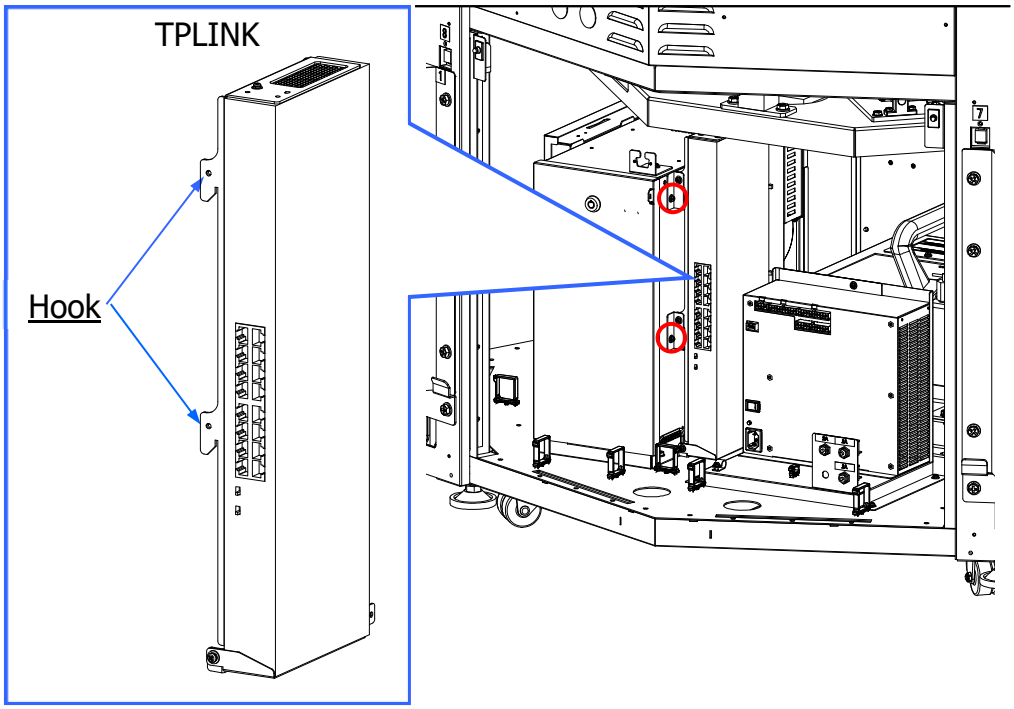


B. To detach the FL SWITCH 1016N: PHOENIX HUB Unit, unplug the [HB] Connecter, then peel out the Ring fix tape.



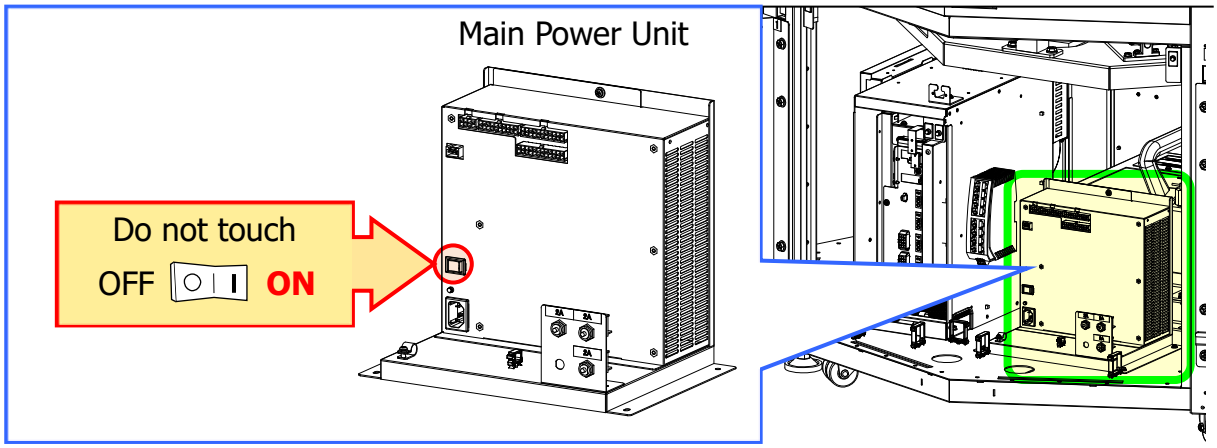
C. To detach the TL-SG1016(UN): TPLINK HUB Unit, remove the 2 screws, then pull upward the unit to unfasten the hooks.

NOTE:
An AC Cable is connected to the backside of the Switching HUB. Handle with care.



- Main Power Unit -

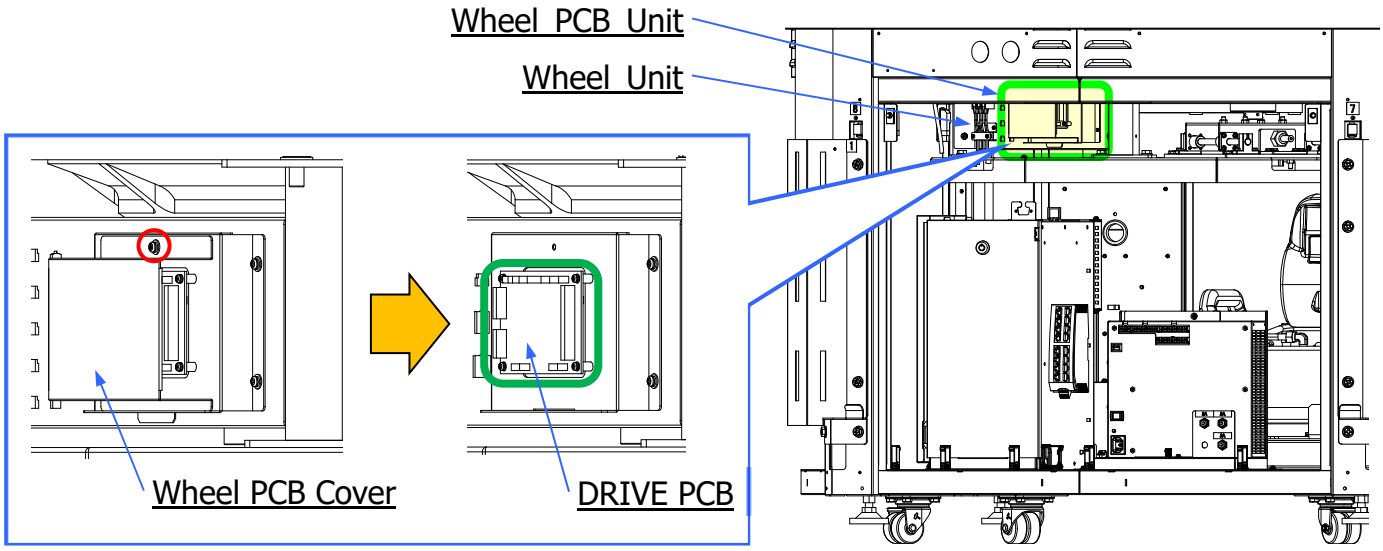
A. There is a power switch on the Main Power Unit.
Please leave the switch on ON and do not change its status.



- Drive PCB -

A. Locate the Wheel PCB Unit positioned on the side of the Wheel Unit.

B. Remove 1 screw and detach the Wheel PCB Cover to access to the Drive PCB.

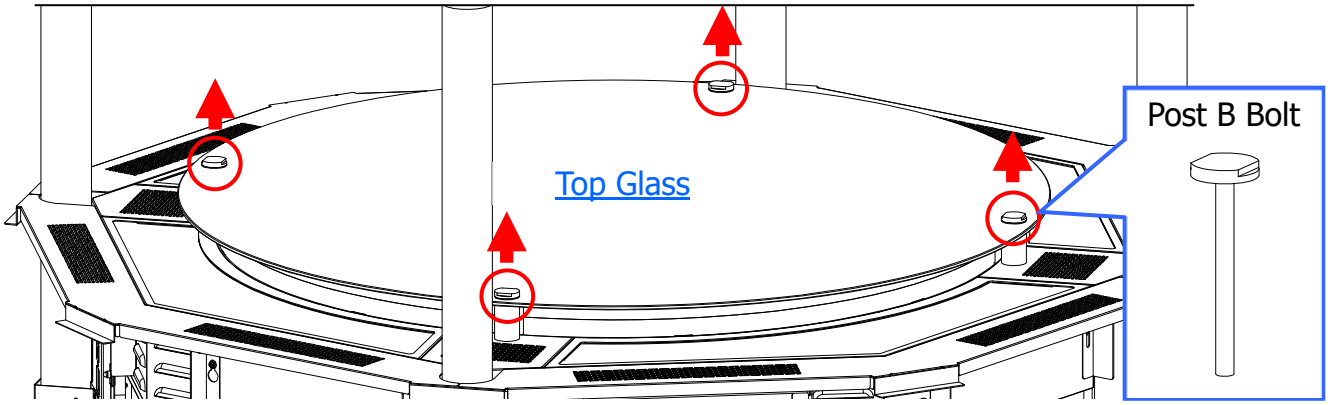


6. 5. 2: Top Glass

WARNING!
The Top Glass is very heavy and requires careful attention when handling. At least 4 persons are required for the installation.

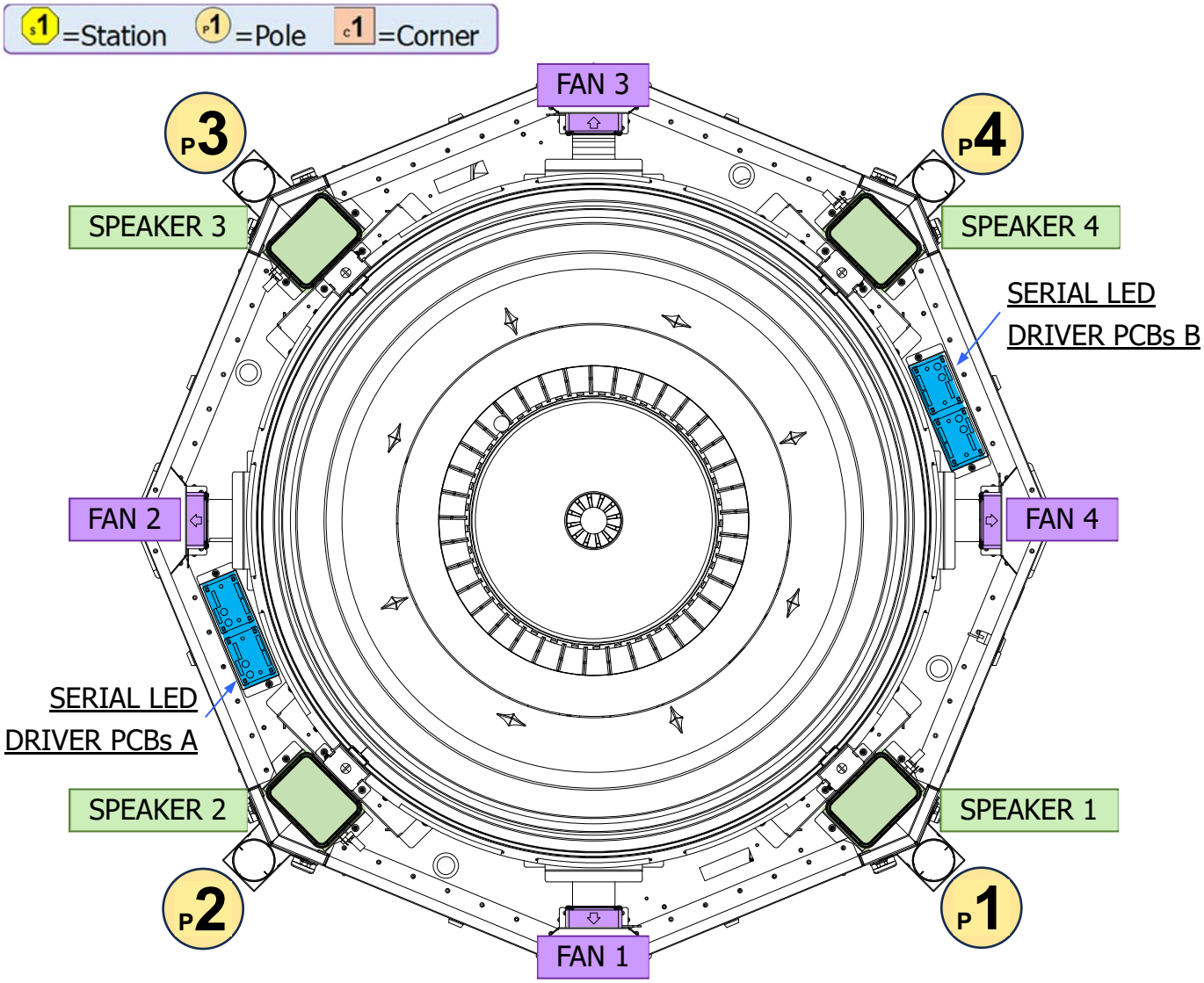
1. Separate the Station Units from the Center Unit. **(Refer to 6.5.1)**
2. Remove the 4 Post B Bolts and detach the Top Glass.

NOTE:
Use a wrench to remove the Post B Bolts toward upside.

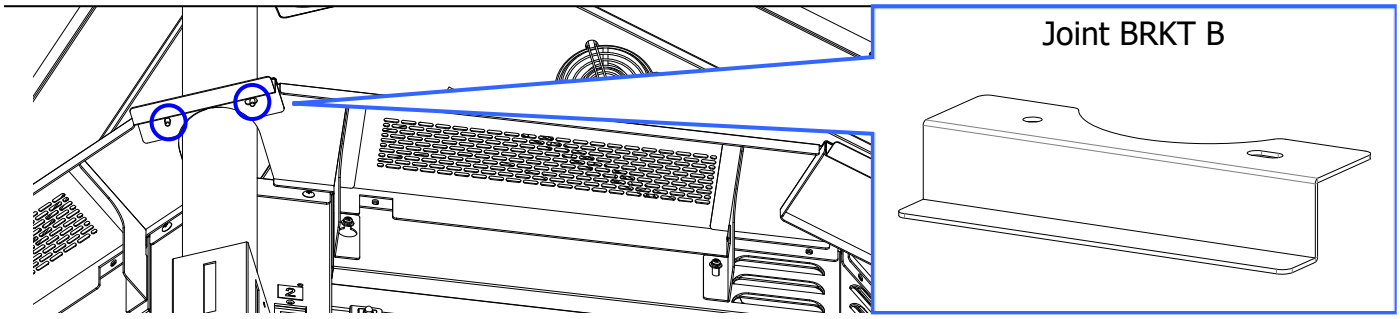


6. 5. 3: Speaker and Cabinet Fan

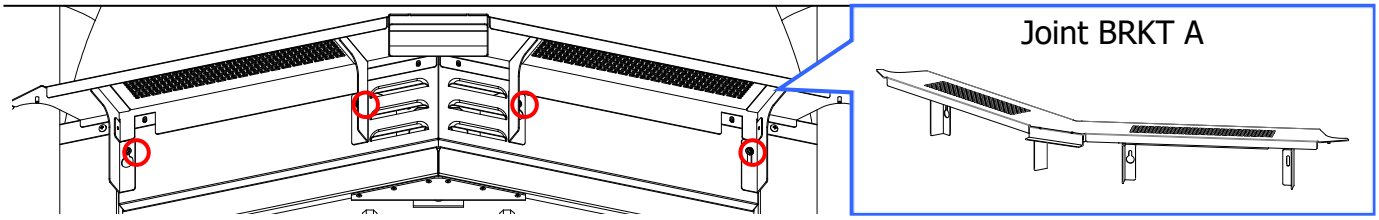
1. Remove the Top Glass. **(Refer to 6.5.2)**
2. Refer to the illustration below to identify the position of the target Speaker and Cabinet Fan.



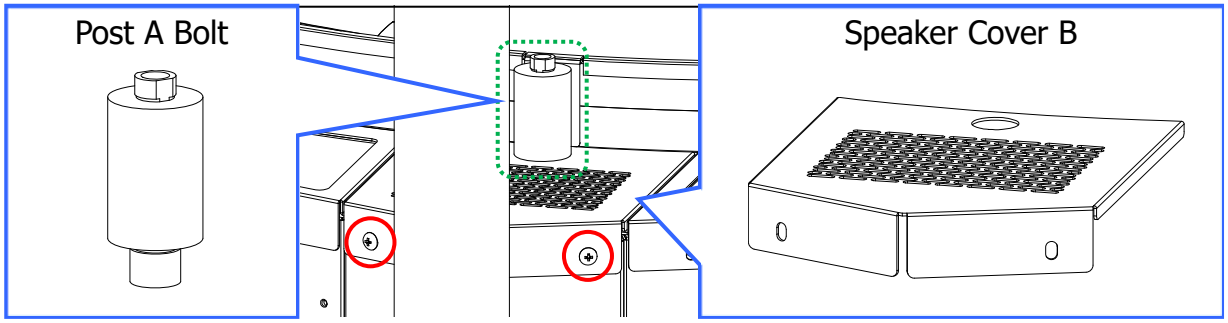
3. Detach the Joint BRKTs B by removing 2 nuts for each one.



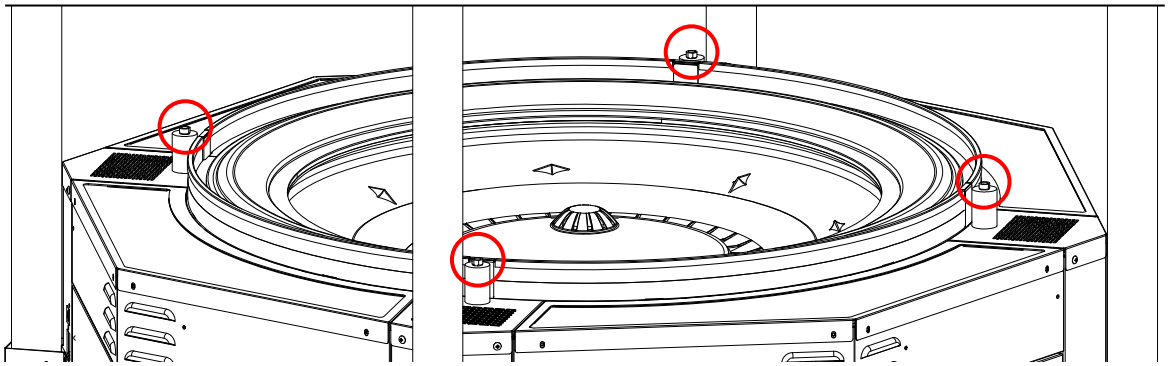
4. Detach the Joint BRKTs A by removing 4 screws for each one.



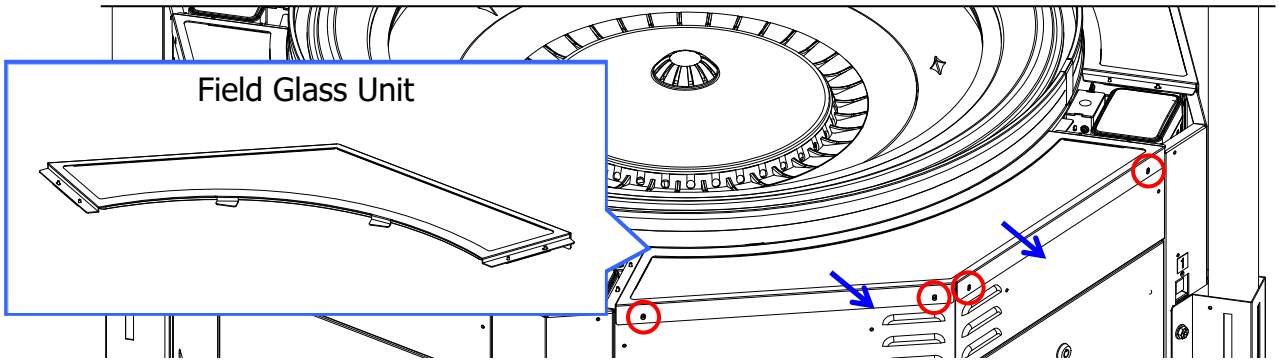
5. Detach the Speaker Covers B by removing 4 Post A Bolts for each one.



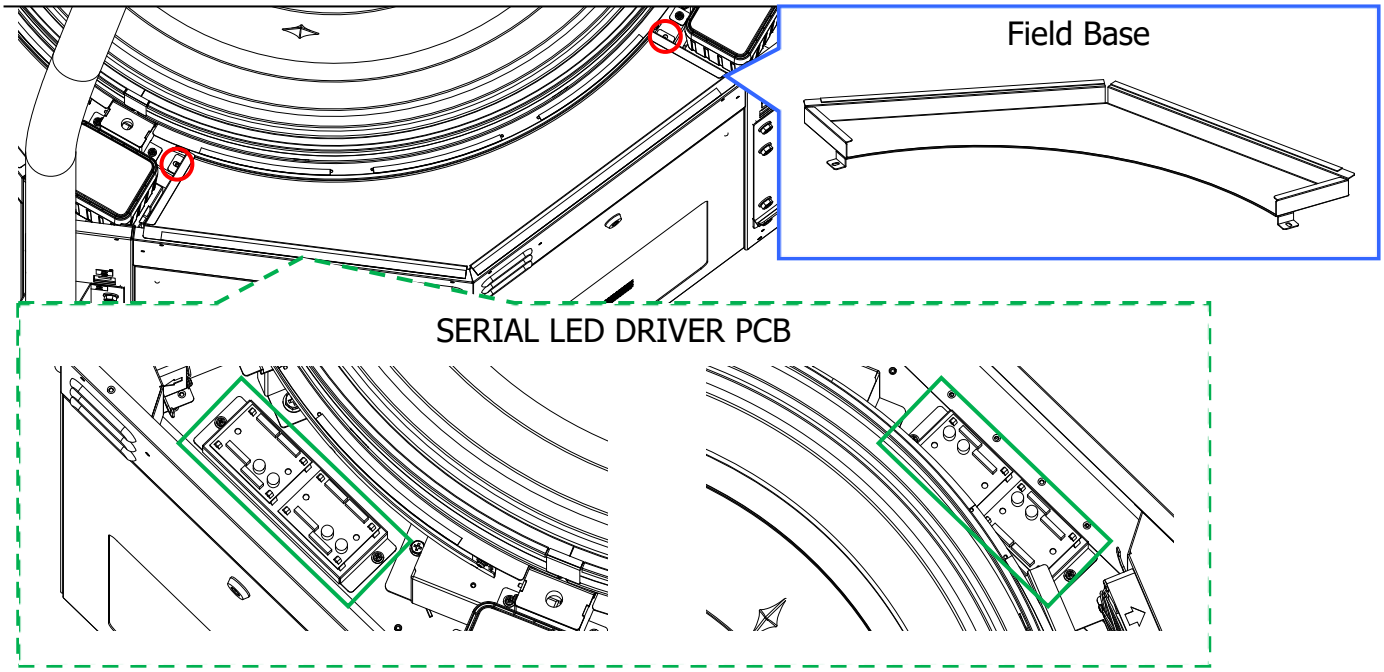
NOTE:
Use a wrench to remove the Post A Bolts from the upside.



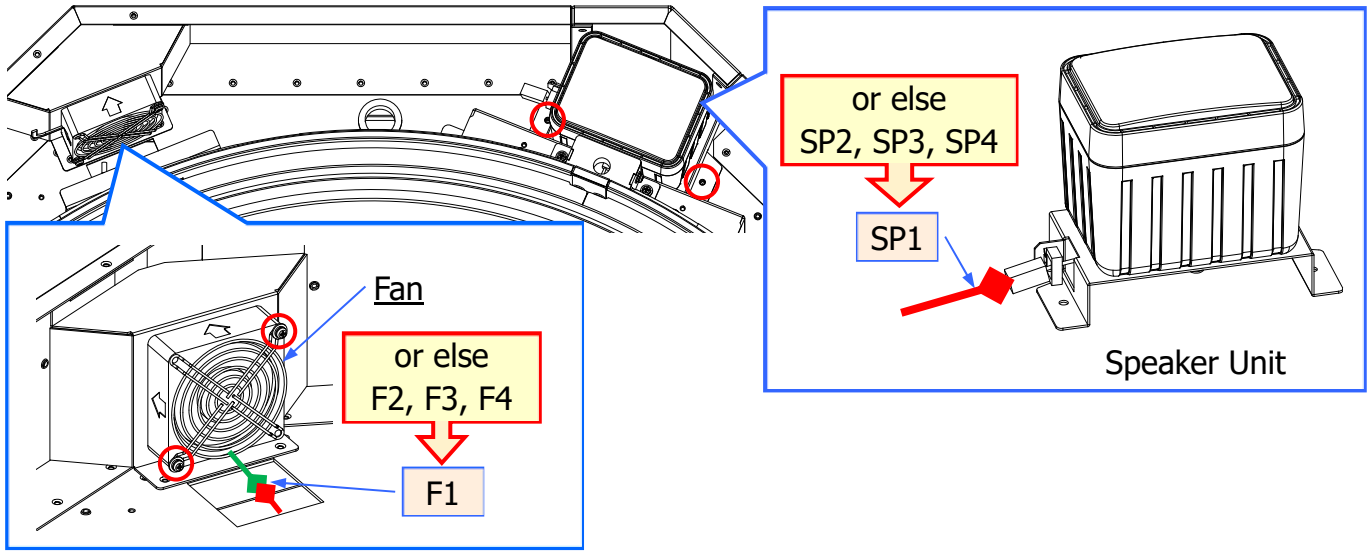
6. Detach the Field Glass Units by removing 4 screws for each one.



7. Detach the Field Bases by removing 2 screws for each one, to access to the SERIAL LED PCBs.

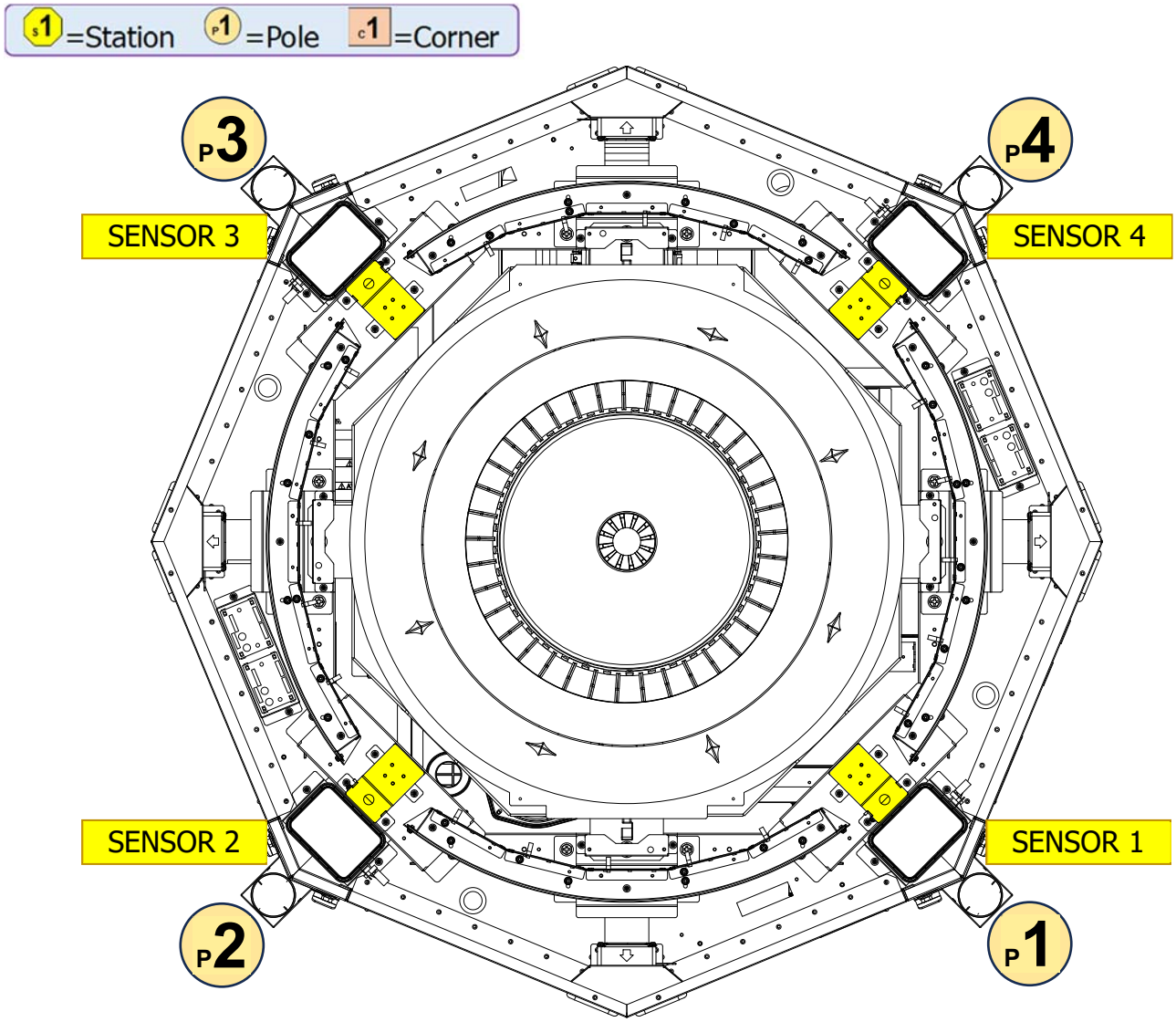


8. Unplug the Connector [SP1] (and then [SP2], [SP3], [SP4]), and detach the Speakers by removing 2 screws for each one. Then unplug the Connector [F1] (and then [F2], [F3], [F4]), and detach the Fans by removing 2 screws for each one.

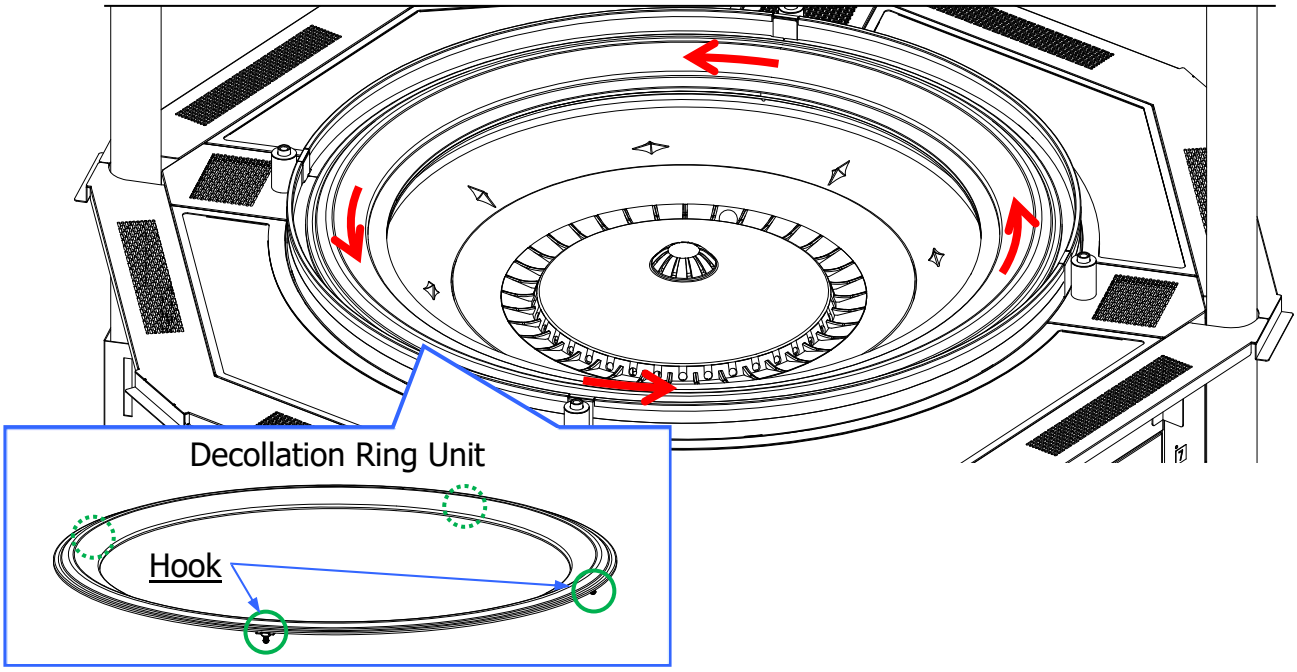


6. 5. 4: Glass Sensor Unit

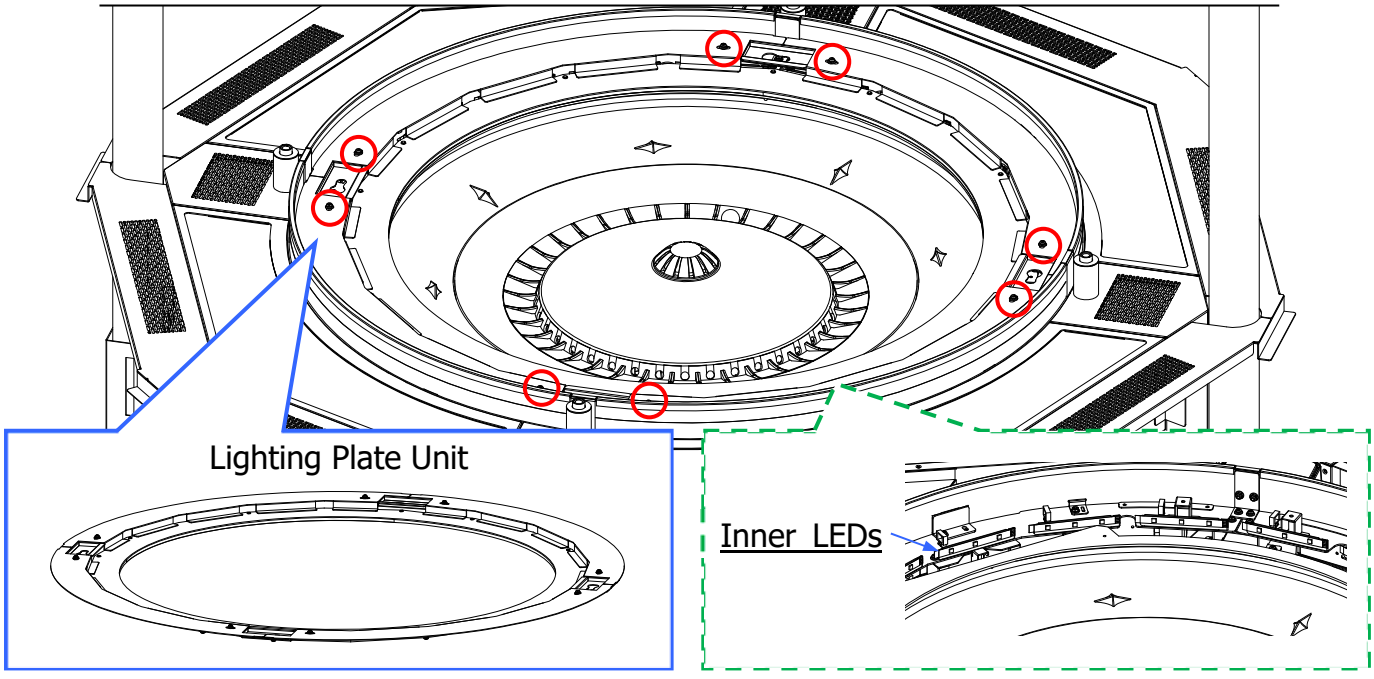
1. Detach the Top Glass. **(Refer to 6.5.2)**
2. Refer to the illustration below to identify the position of the target Glass Sensor.



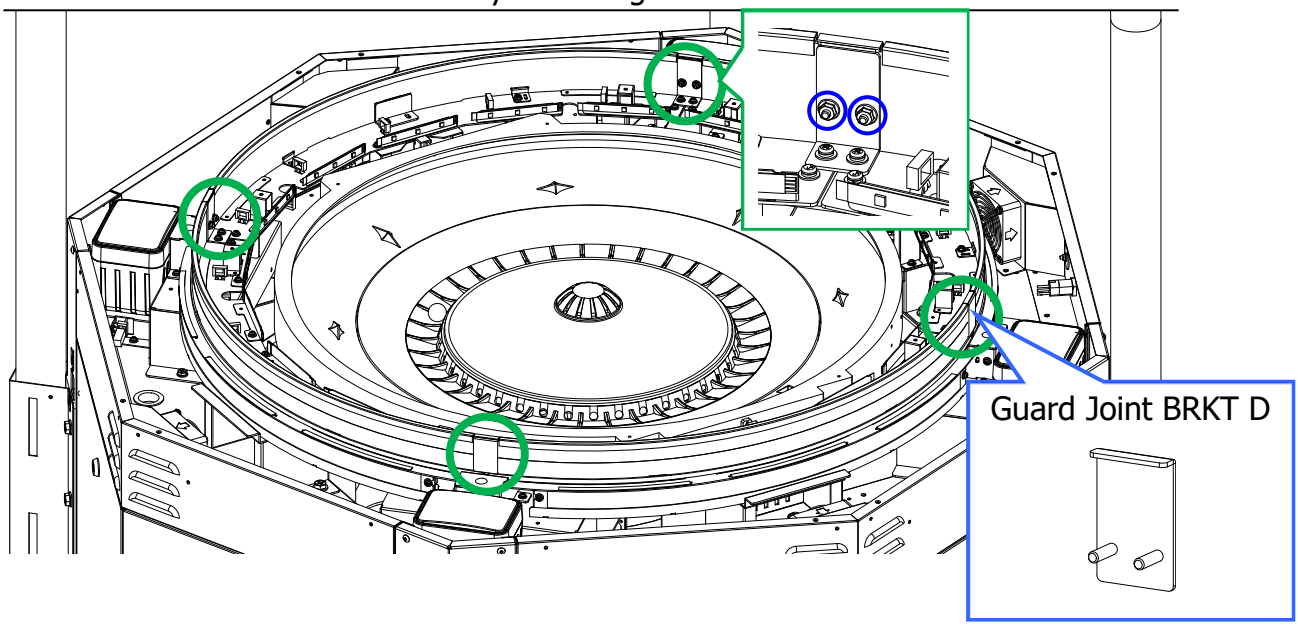
3. Turn the Decollation Ring Unit counter clockwise to free it from the 4 hooks and detach it.



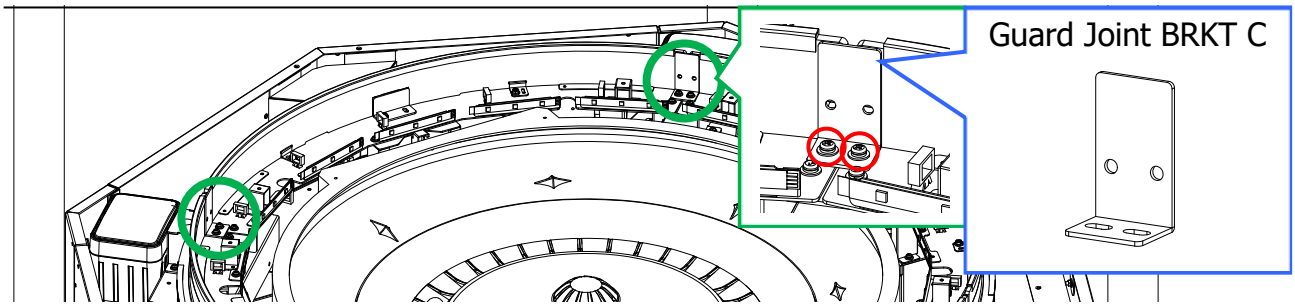
4. Detach the Lighting Plate Unit by removing 8 screws to access to the Inner LED.



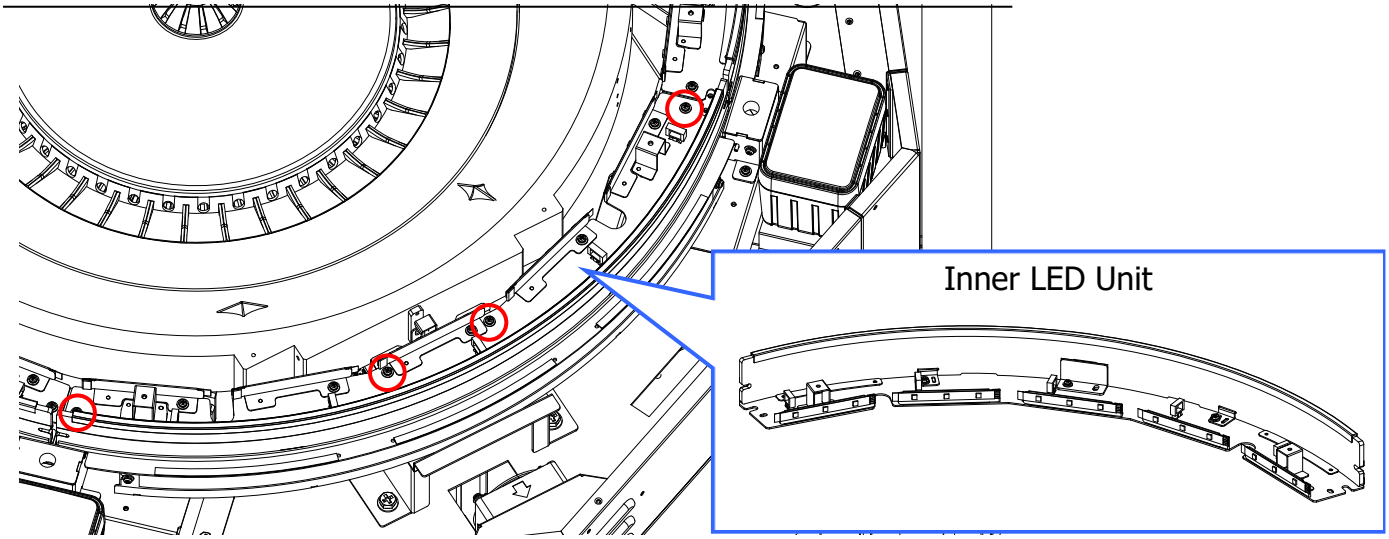
5. Detach the Field Base. **(Refer to 6.5.3)**
6. Detach the Guard Joint BRKTs D by removing 2 nuts for each one.

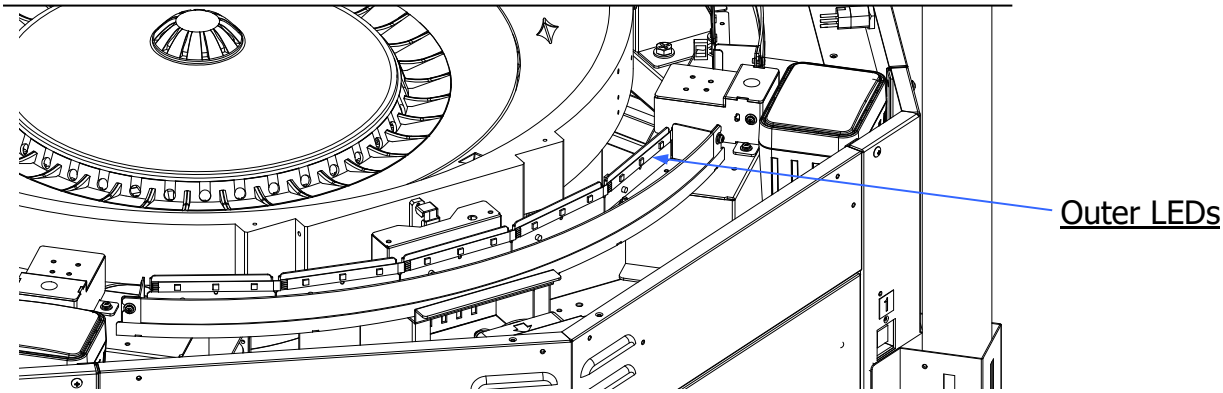


7. Detach the Guard Joint BRKTs C by removing 2 screws for each one.

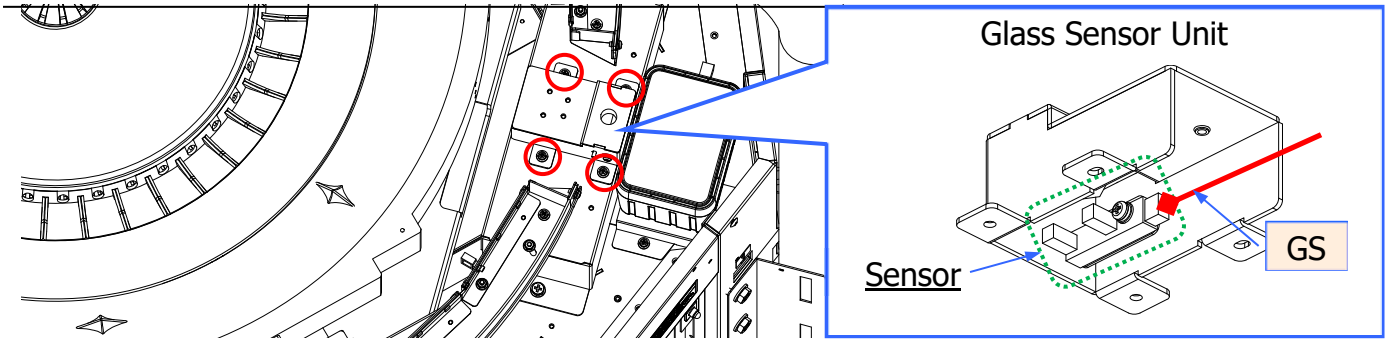


8. Detach the Inner LED Units by removing 4 screws for each one, to access to the Outer LEDs.





9. Detach the Glass Sensor Units by removing 4 screws for each one and disconnecting the GS Connectors from the Sensors on the inner side.



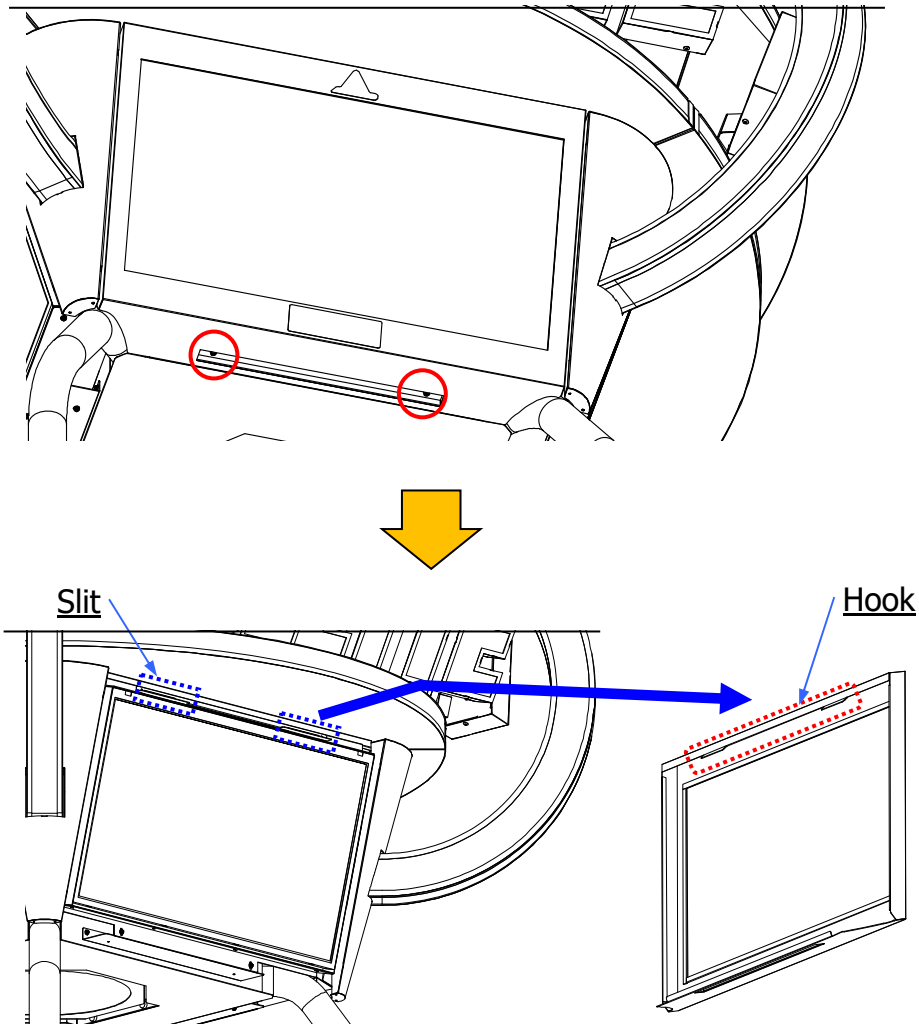
6. 5. 5: Detaching the Monitor Units from the Top Sign Unit

1. Separate the Stations from the Center Unit. **(Refer to 6.5.1)**

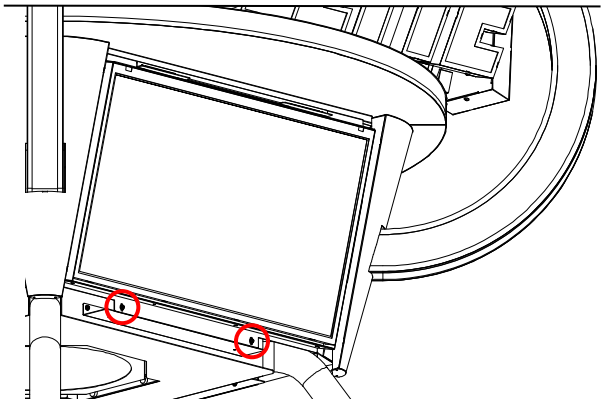
WARNING!

- Secure the Center Unit so that it will be securely fixed and not moving during the procedures.
- Since the operation will be performed in a high place, pay enough attention also to the safety of the surrounding area.

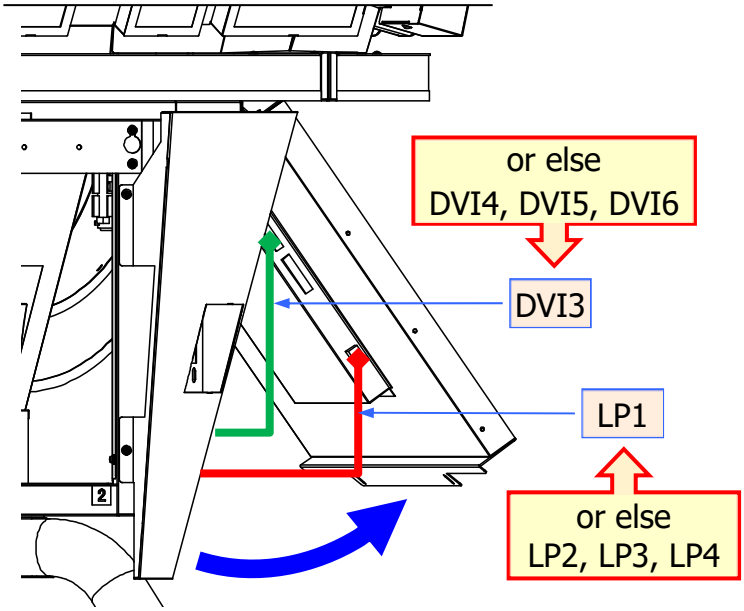
2. Detach the Bezel by removing the 2 screws.



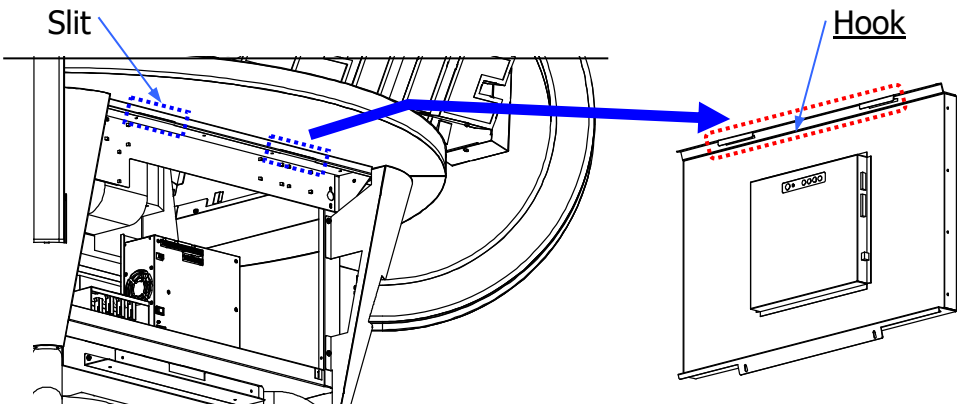
3. Removing the 2 screws of Monitor Unit.



4. Raise the bottom of the Monitor Unit by holding it, and then disconnect the [DVI3] and [LP1] connectors.

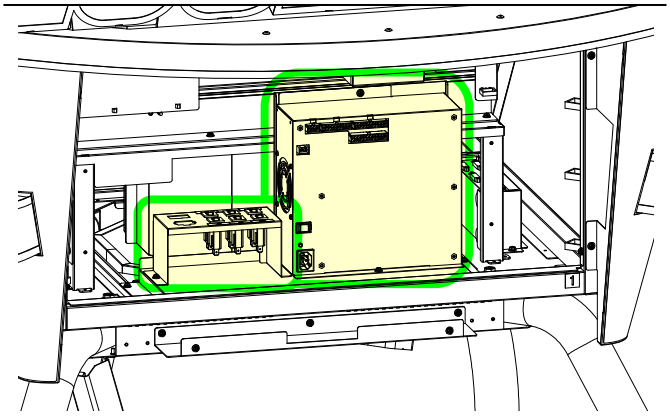


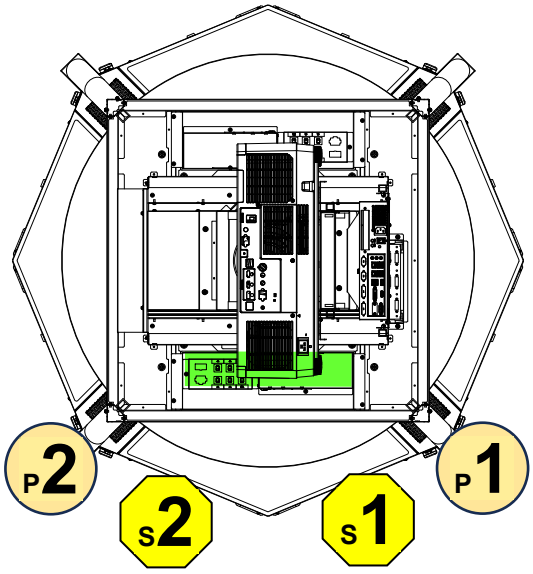
5. Detach the Monitor Unit.



6. 5. 6: Accessing the Power Box A and the Breakers

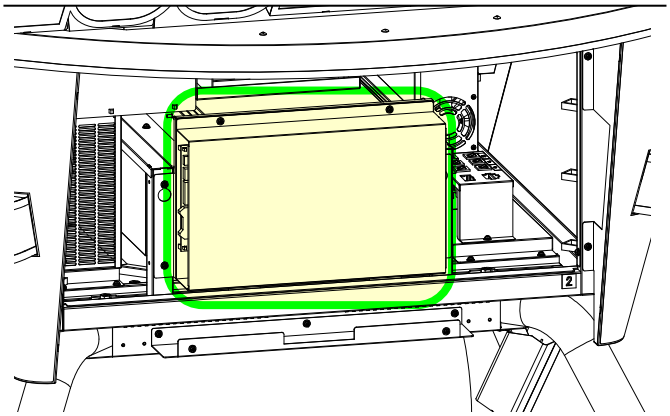
1. Separate the [Station 1 Unit] and [Station 2 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Monitor Unit and access to the Power Box A and the Breaker. **(Refer to 6.5.5)**

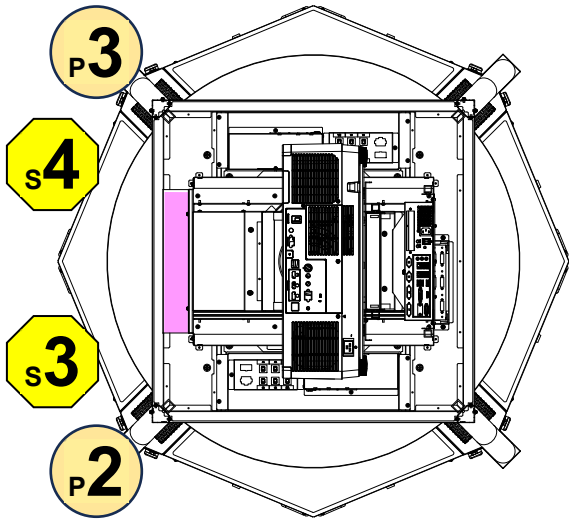




6. 5. 7: Accessing the Top PCB Box

1. Separate [Station 3 Unit] and [Station 4 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Monitor Unit and access to the Top PCB Box. **(Refer to 6.5.5)**

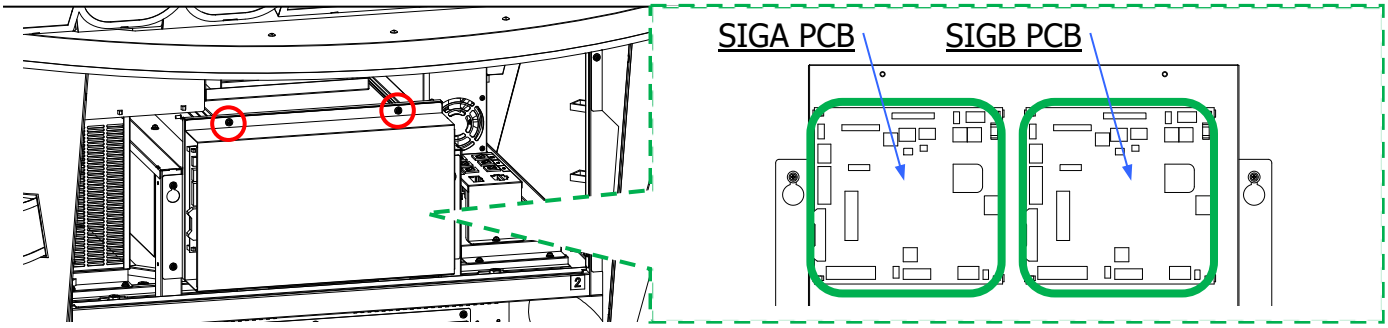




3. Remove 2 screws to detach the Top PCB Cover.

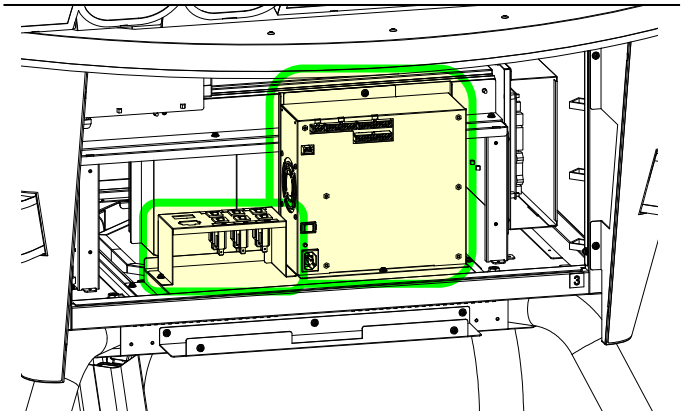
WARNING!

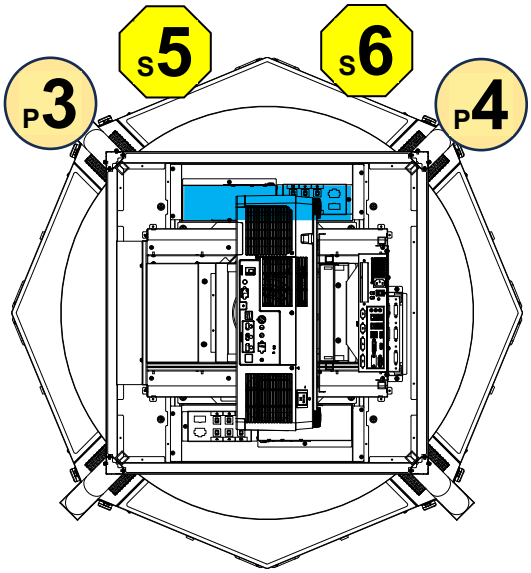
Electrostatic discharge may damage internal components. When accessing the inside of the Cabinet, take anti-static measures (as wearing antistatic wrist band, etc.) before proceeding.



6. 5. 8: Accessing the Power Box B and the Breakers

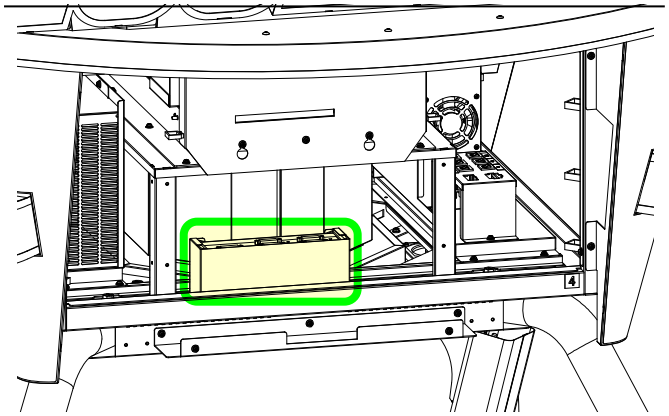
1. Separate the [Station 5 Unit] and [Station 6 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Monitor Unit and access to the Power Box B and the Breaker. **(Refer to 6.5.5)**

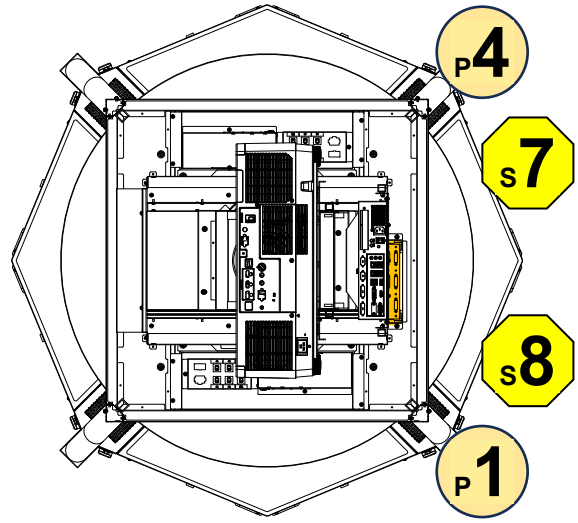




6. 5. 9: Accessing the DVI Splitter

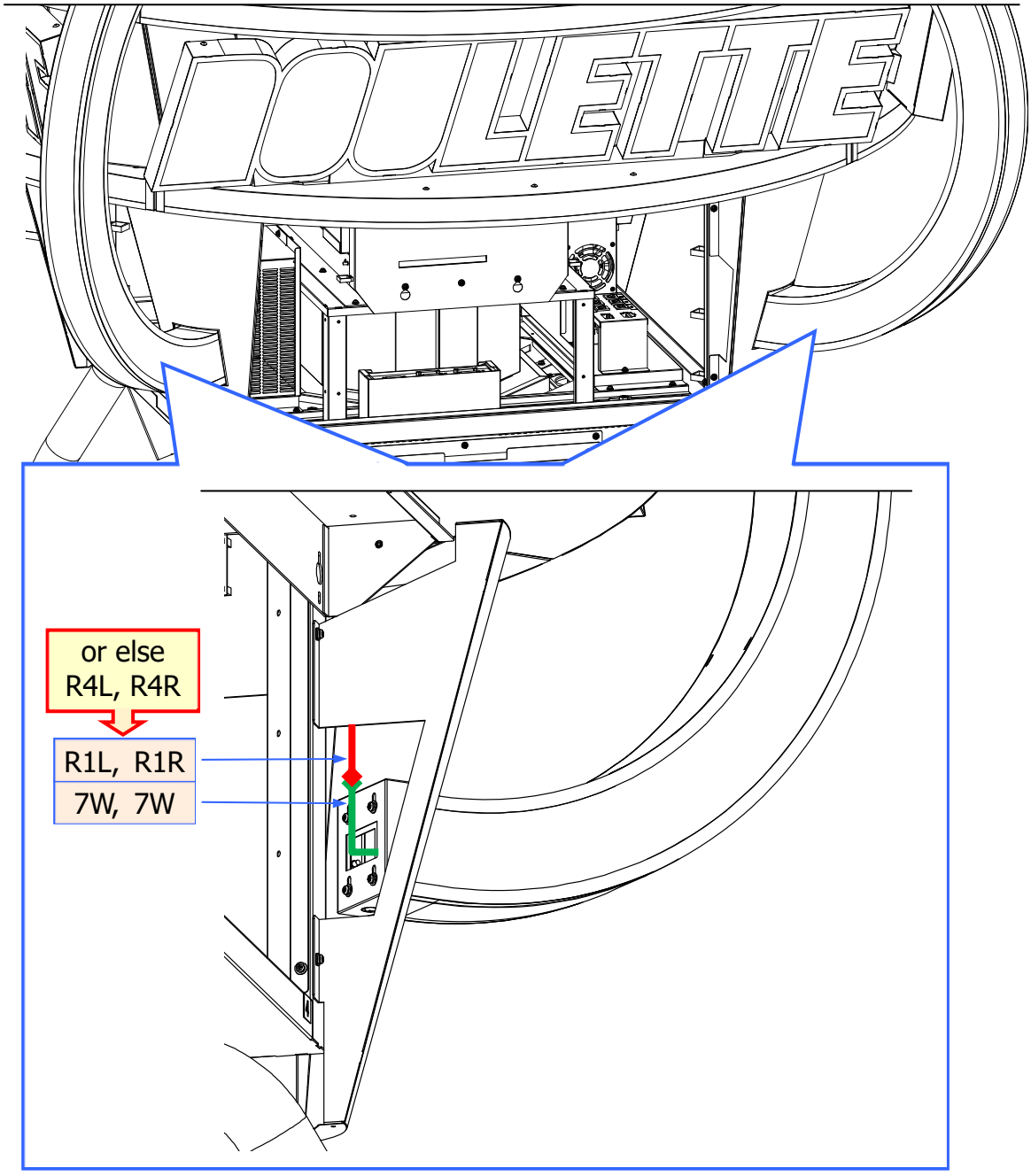
1. Separate the [Station 7 Unit] and [Station 8 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Monitor Unit and access to the DVI Splitter. **(Refer to 6.5.5)**



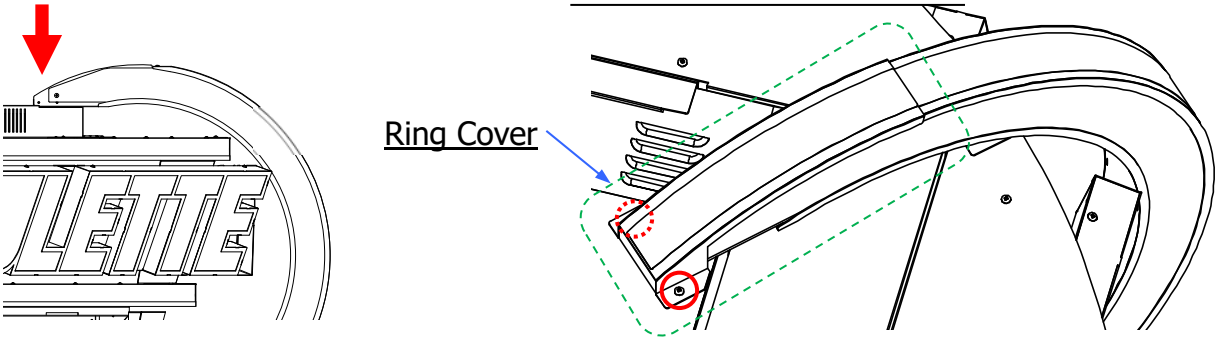


6. 5. 10: Detaching the Ring Units from the Top Sign Unit

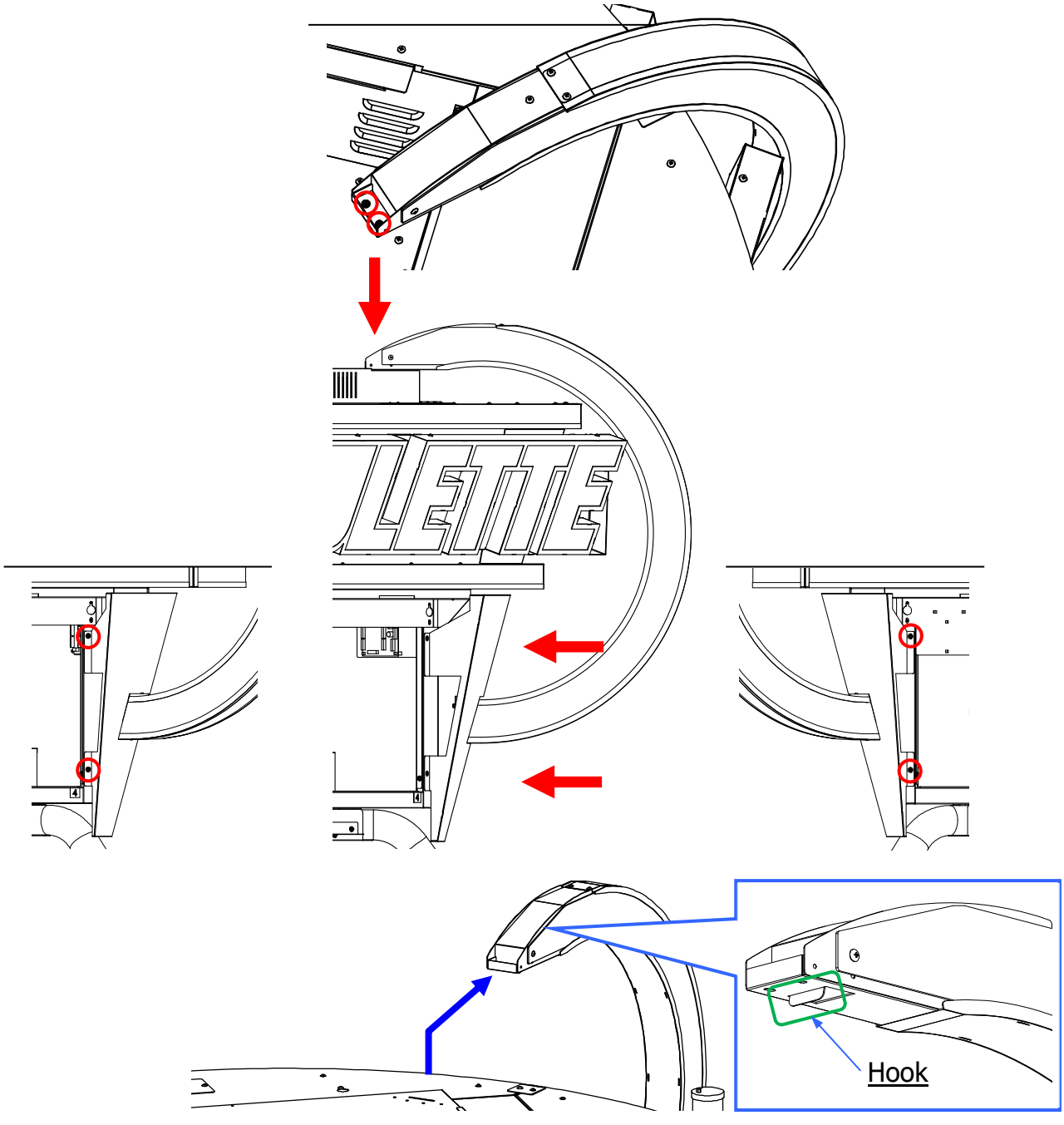
1. Detach the Monitor Unit. **(Refer to 6.5.5)**
2. Disconnect the Ring Unit connector.



3. Remove the 2 screws and detach the Ring Cover.

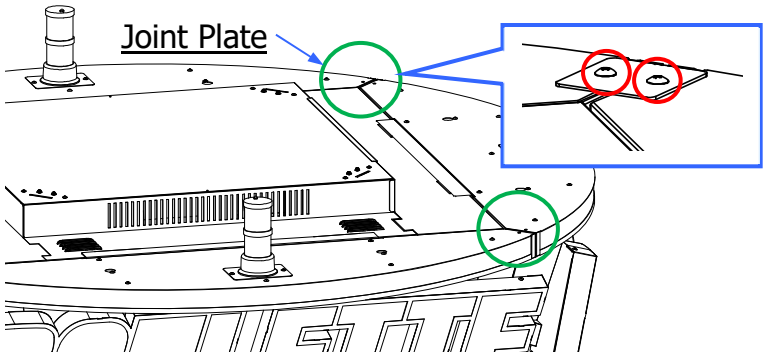


4. Remove the 6 screws and detach the Ring Unit.

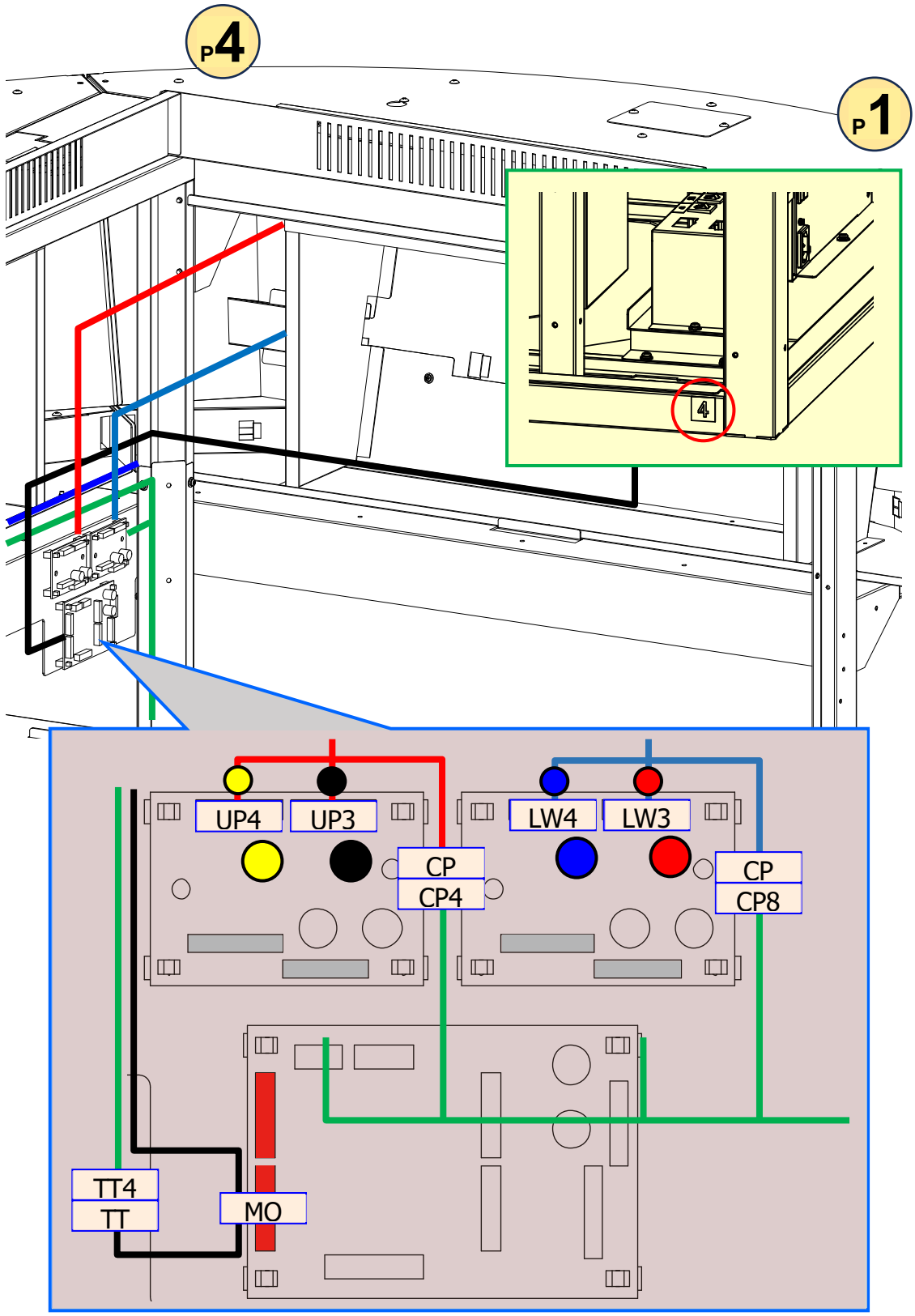


6. 5. 11: Accessing the Tracking Camera PC Unit and Projector Unit

1. Separate the [Station 7 Unit] and [Station 8 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Ring Unit. **(Refer to 6.5.10)**
3. Remove the 2 screws and detach the Joint Plates.



4. Refer to the image below to disconnect the connectors from the DIV Splitter side (Pole 1 and Pole 4 side) of the Sign Unit (**refer to 6.5.9**), and arrange them so that they will not get in the way during the next procedures.

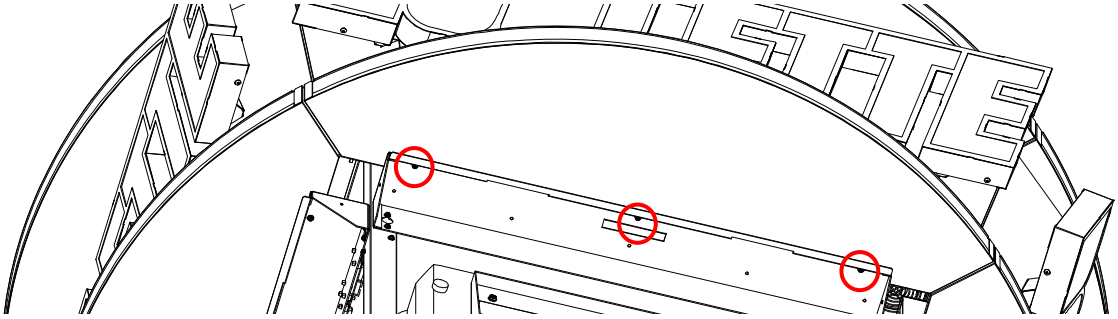


On the connectors of the PCB and on the Tags of each harness there is a round color label. Please connect the connectors, matching the same color.

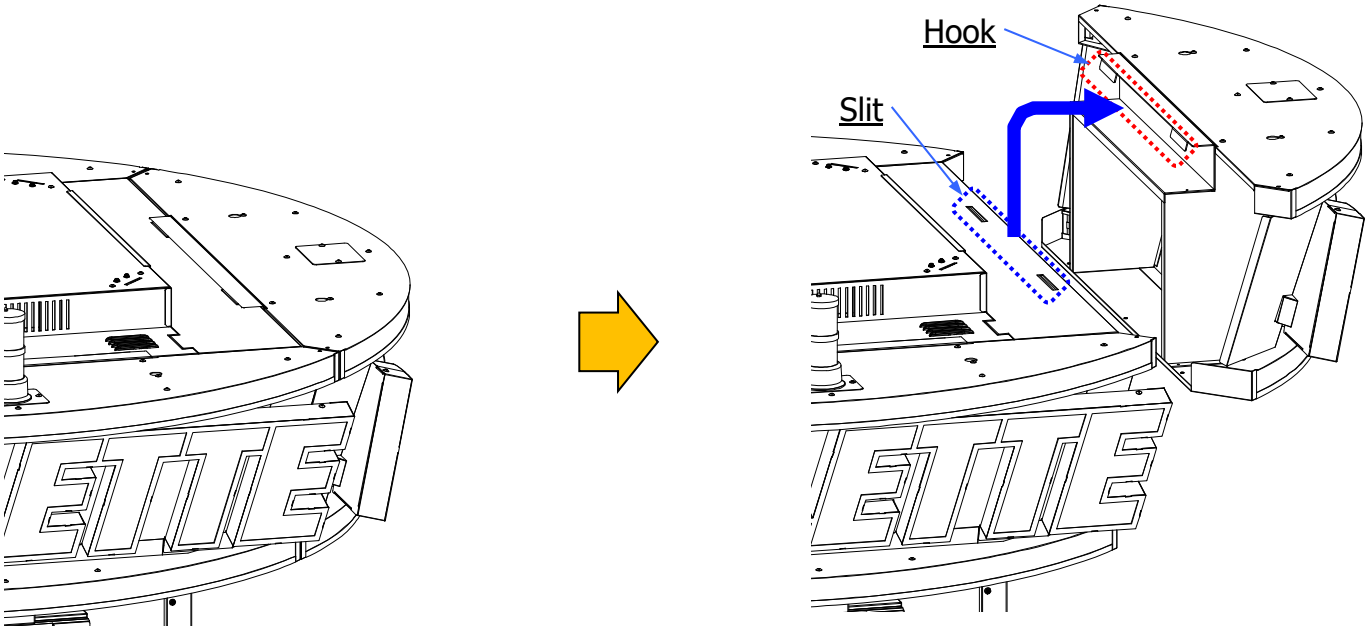
5. Remove the 3 screws.

CAUTION!

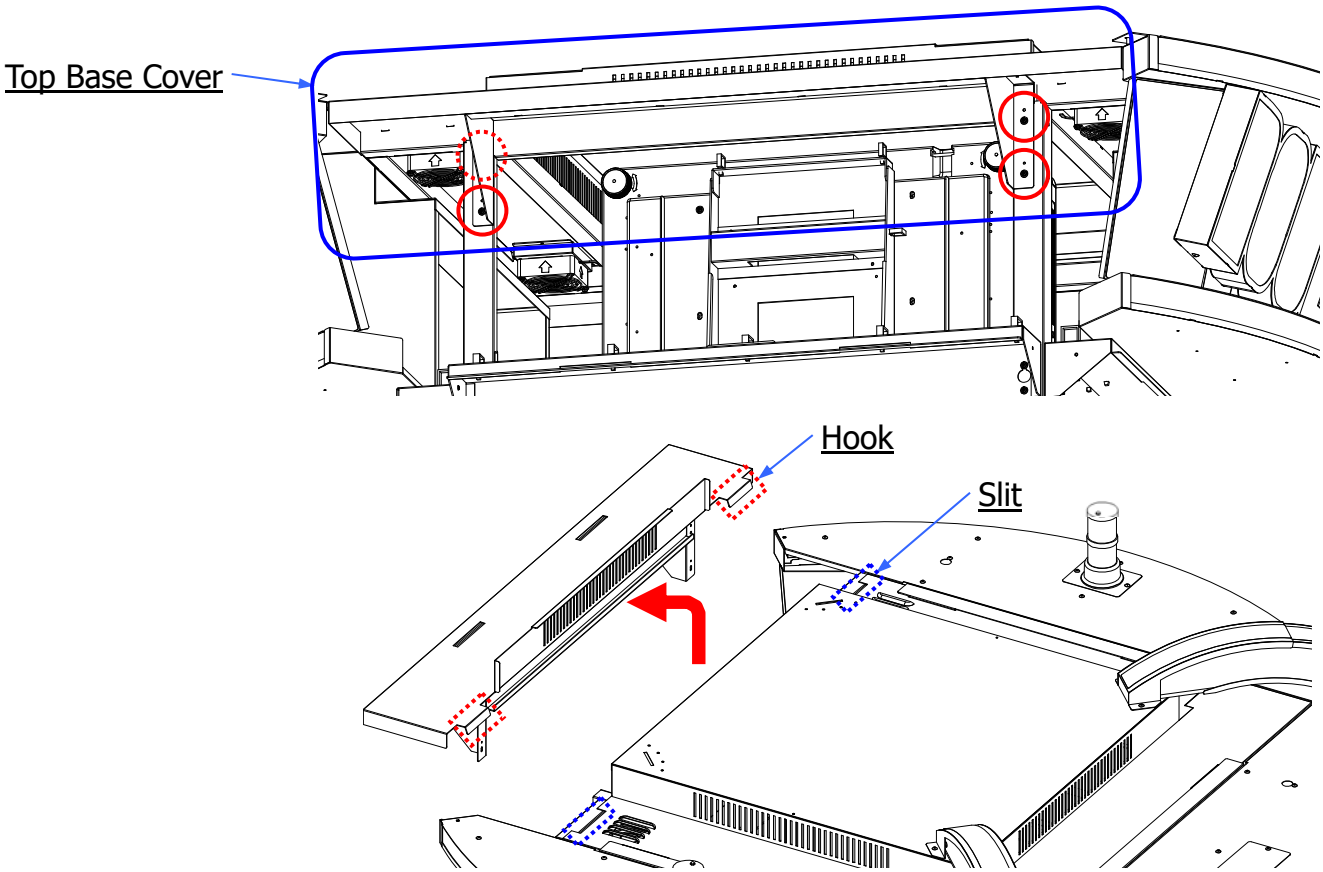
Pay attention that during the operations, the Sign Unit will not slip from the hooks it is hanging to.



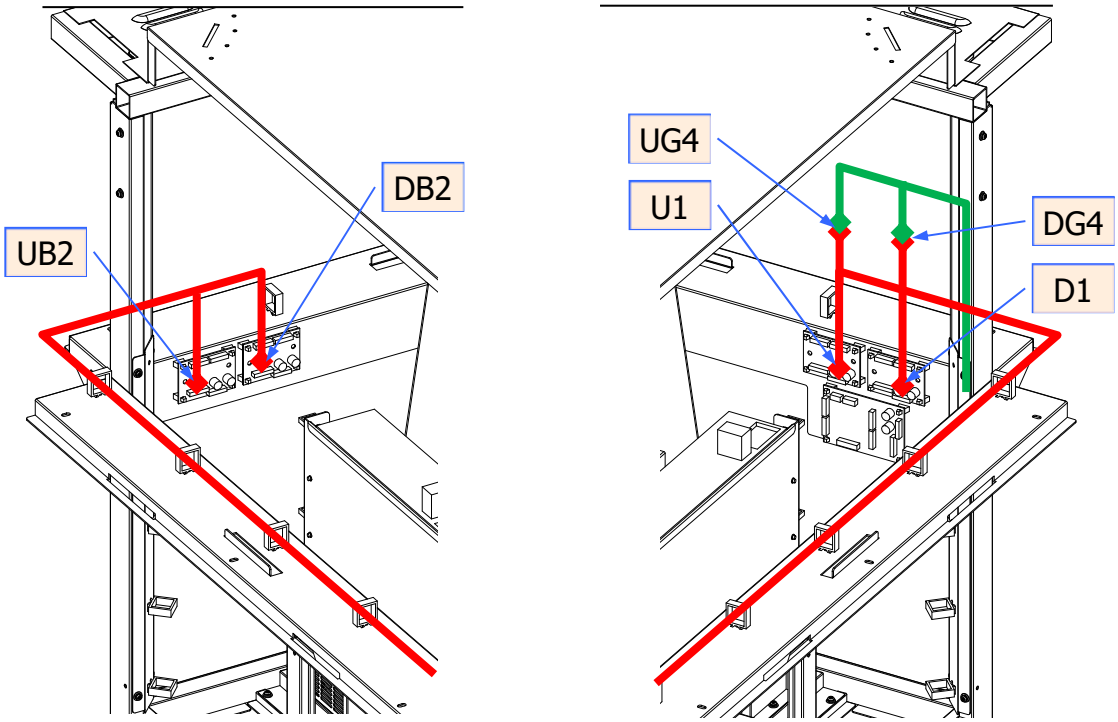
6. Remove the Sign Unit from the hooks situated in the inner side, and detach it.



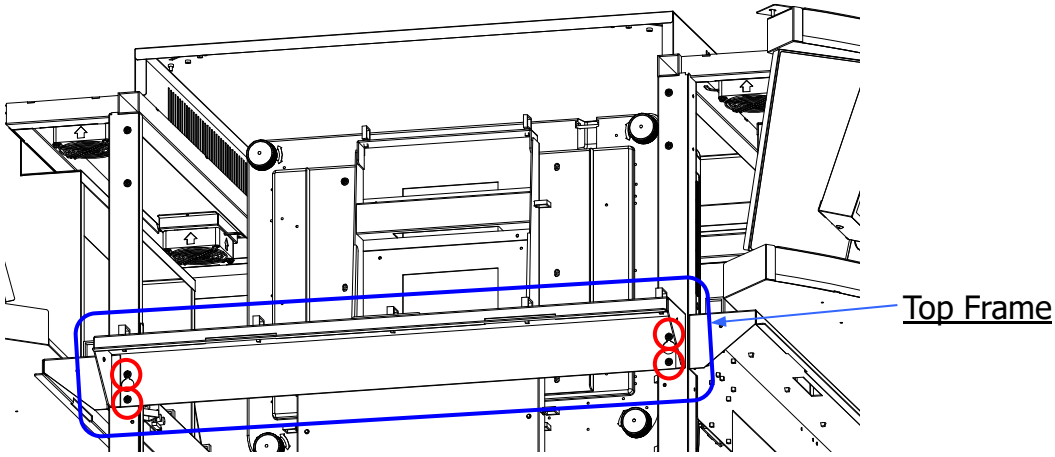
7. Detach the Top Base Cover by removing the 4 screws.



8. Remove the connector by referring to the image below.

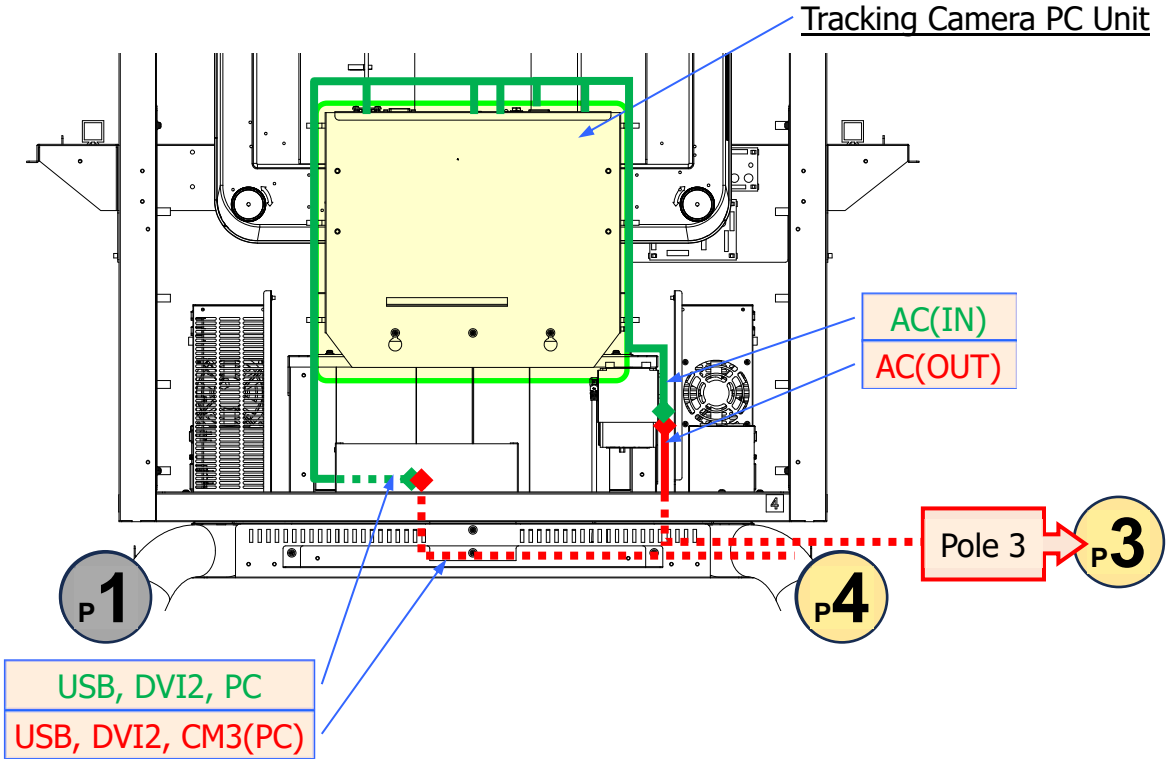


9. Detach the Top Frame by removing the 4 screws.



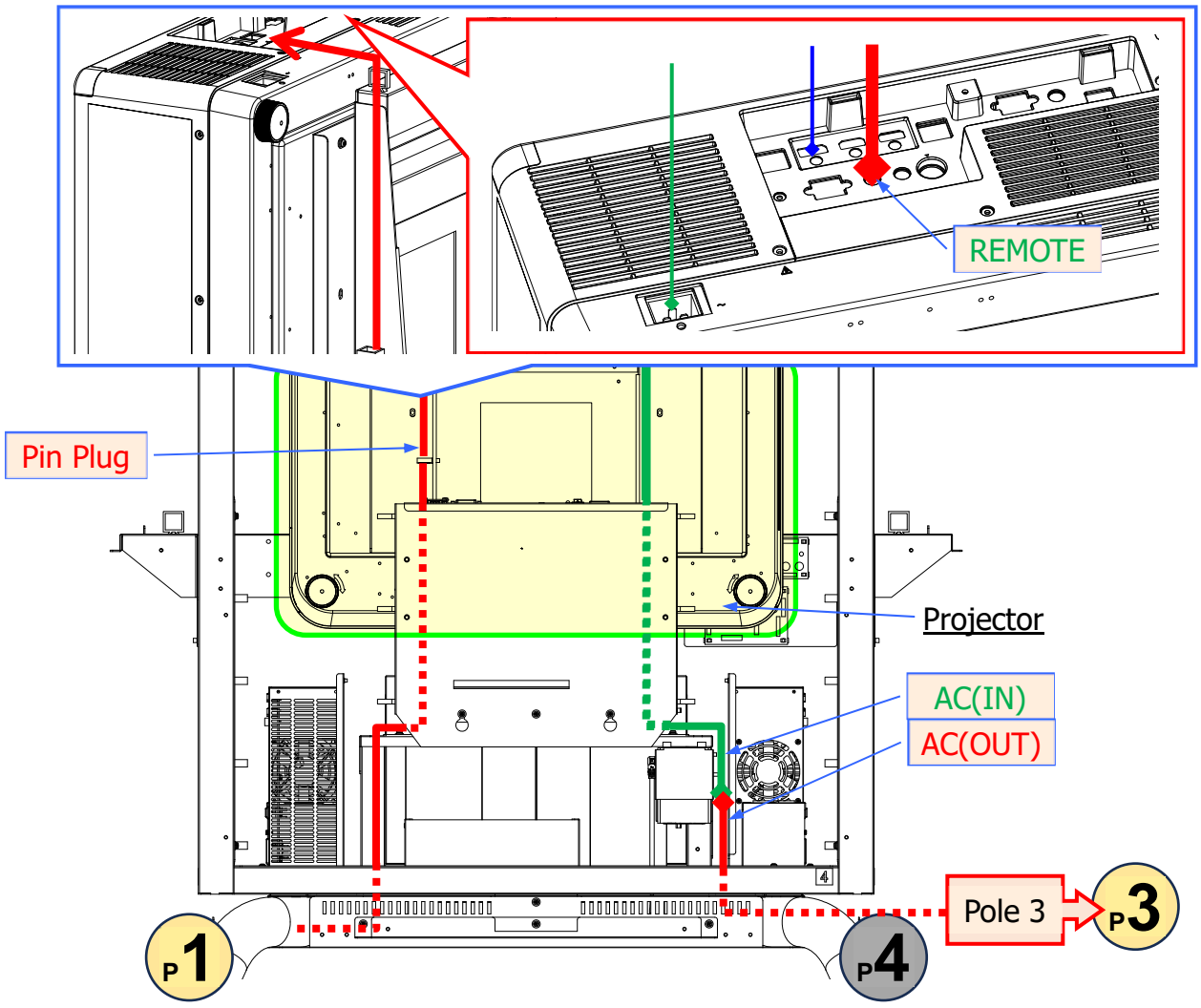
10. Refer to the illustration below to disconnect the [AC(OUT)] Cable, the [USB], [DVI2] and [CM3(PC)] Connectors that were connected to the [AC(IN)] for TRACKING CAMERA PC Unit, and to the [USB], [DVI2] and [PC] Connectors. Then arrange them so that they will not get in the way of the next procedures.

Pole's label	Connectors from Poles	Connectors of Top Base Unit
1		
2		
3	[AC(OUT)]	[AC(IN)] for Tracking Camera PC
4	[USB], [DVI2], [CM3(PC)]	[USB], [DVI2], [PC]

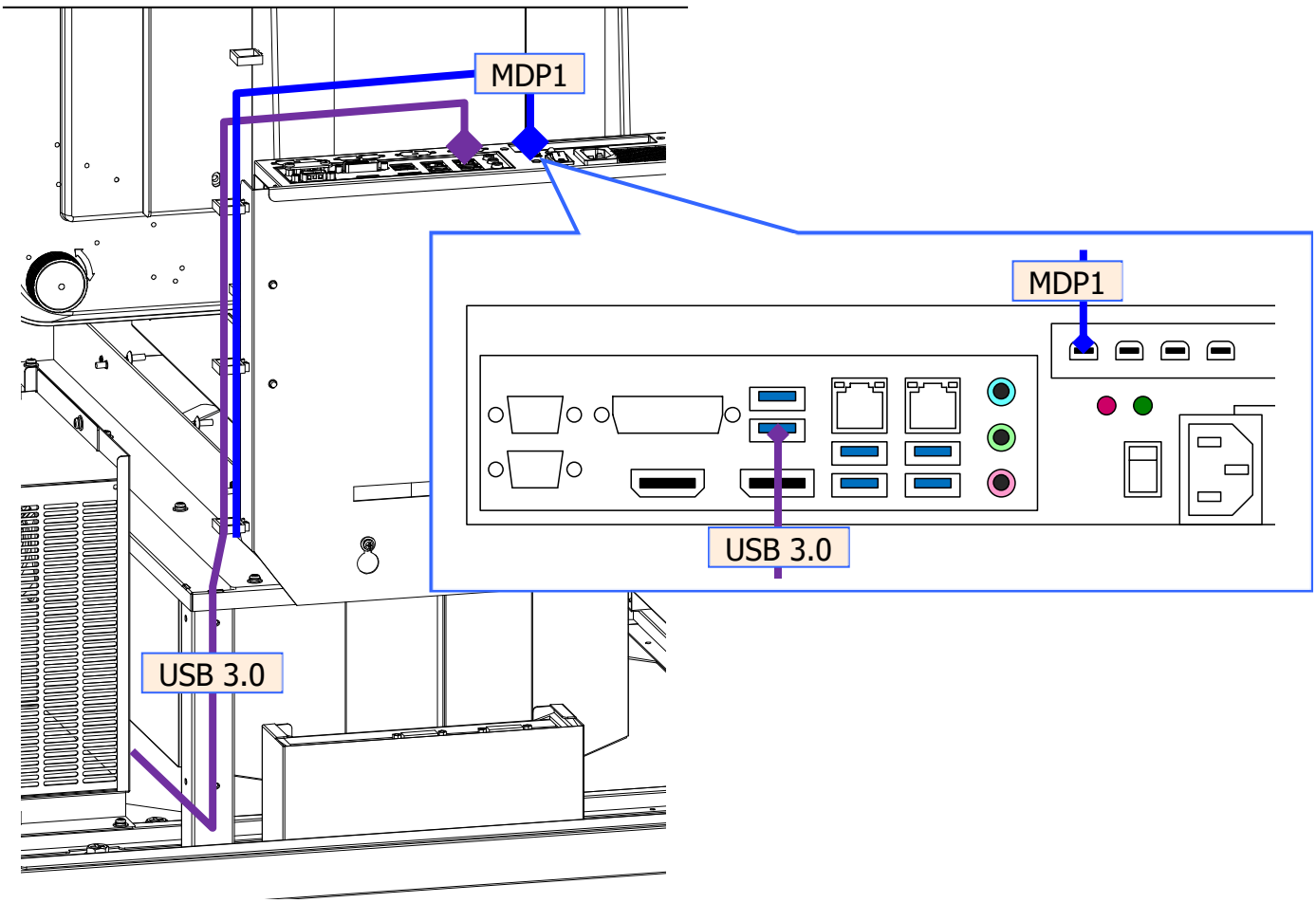


11. Refer to the illustration below to disconnect the [AC(OUT)] Cable that was connected to the [AC(IN)] Cable from the Projector, and the [Pim Plug] that was connected to the [REMOTE] Socket of the Projector. Then arrange it so that they will not get in the way of the next procedures.

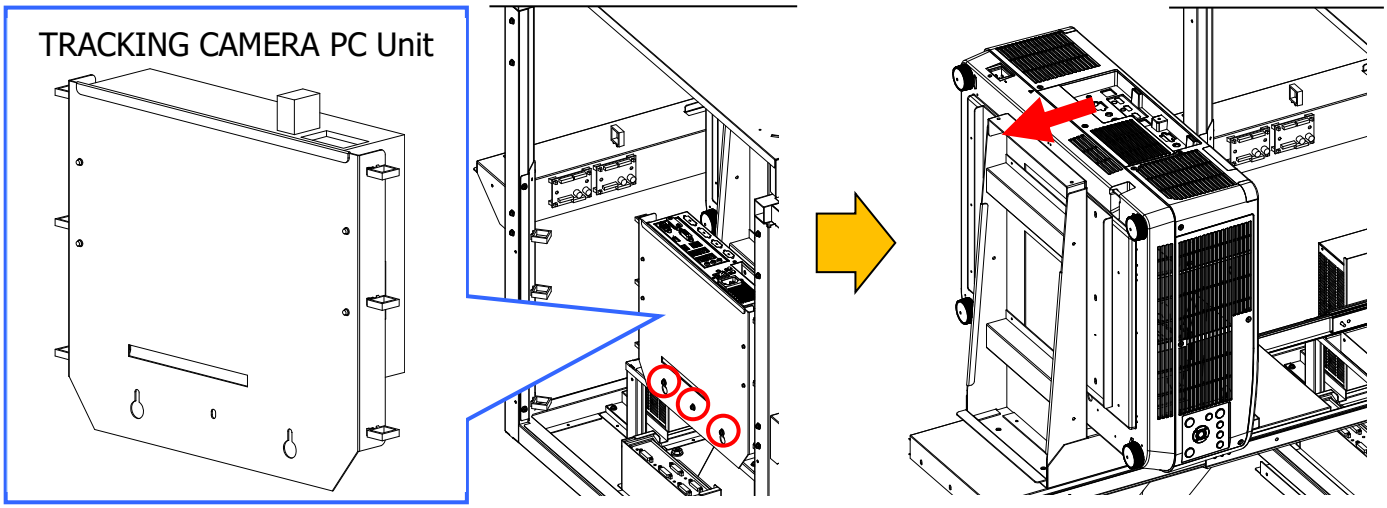
Pole's label	Connectors from Poles	Connectors of Top Base Unit
1	[Pin Plug]	[REMOTE]
2		
3	[AC(OUT)]	[AC(IN)] for Projector
4		



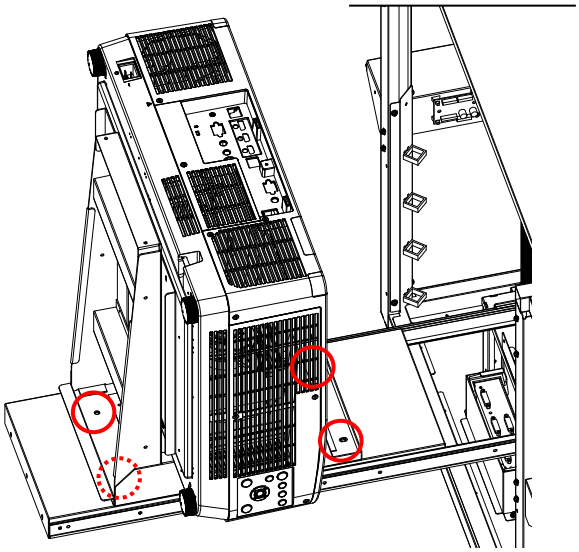
12. Refer to the illustration below to disconnect the [MDP1] and the [USB 3.0] Connectors from the Tracking Camera PC Unit, and arrange it so that it will not get in the way of the next procedures.



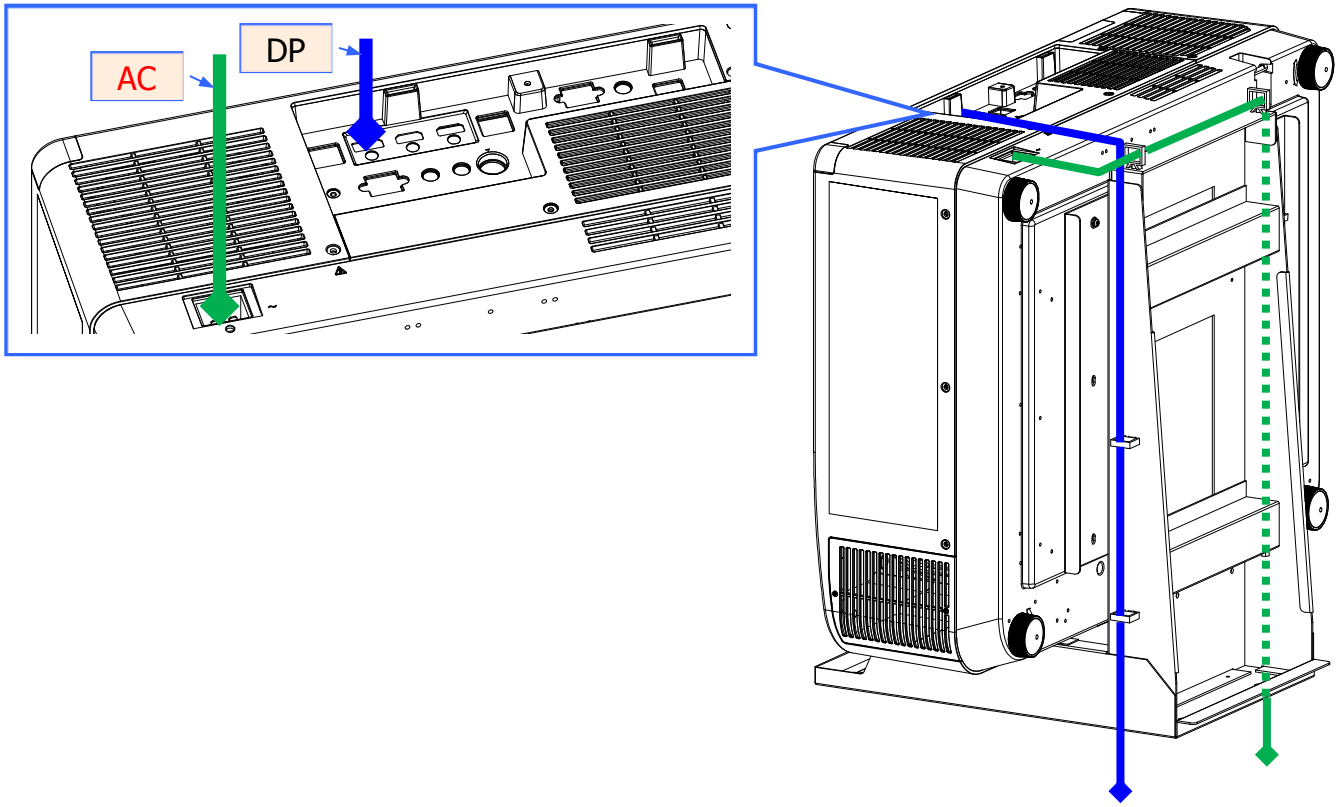
13. Remove 3 screws to detach the Tracking Camera PC Unit, and then pull out the Slide Base.



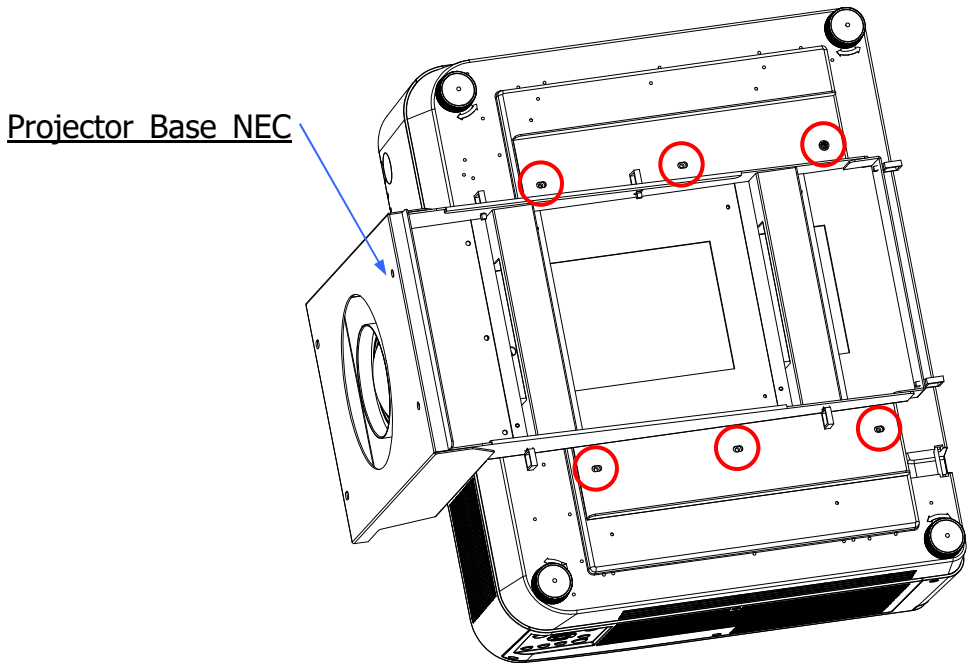
14. Detach the Projector Unit by removing the 4 screws.



15. Unfasten the clamps and unplug the [DP] and [AC](for Projector) Cable.



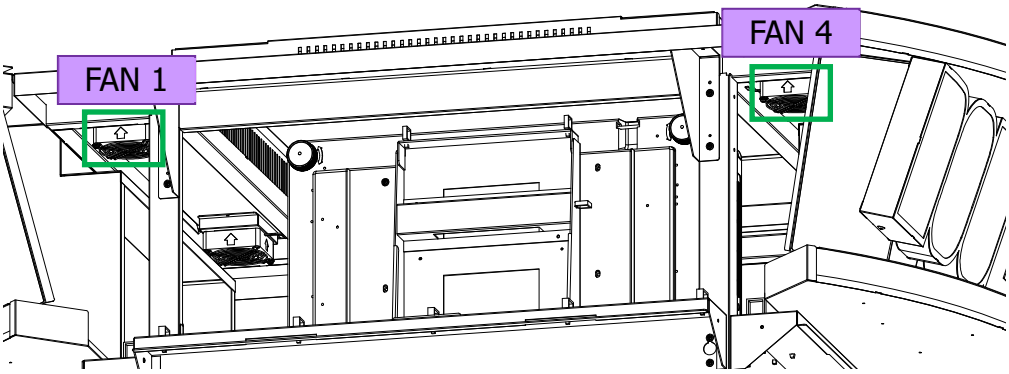
16. Detach the Projector Base NEC by removing the 6 screws.

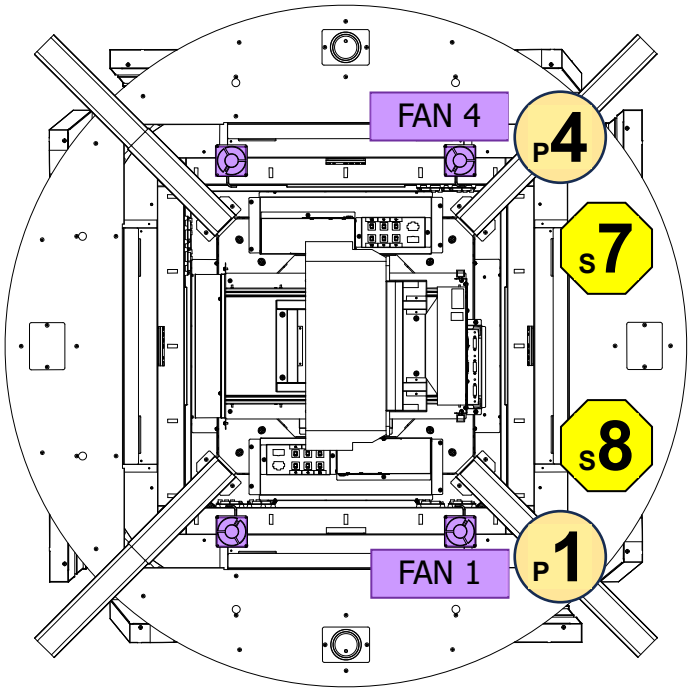


6. 5. 12: Fans in the Top Sign Unit

- Fan 1 and Fan 4 -

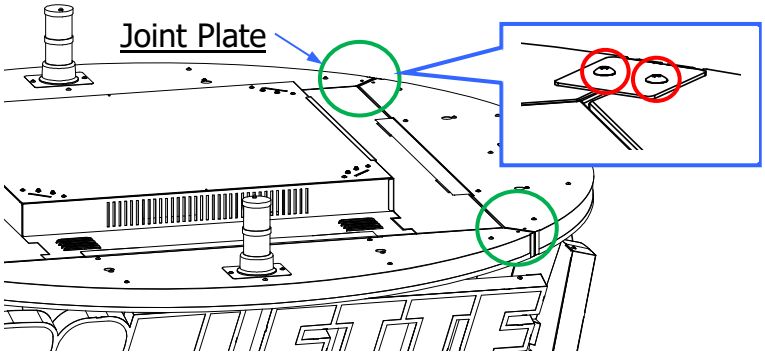
1. Separate the [Station 7 Unit] and [Station 8 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Ring Unit. **(Refer to 6.5.10)**
3. Detach the Sign Unit and access to the [Fan 1] and [Fan 4]. **(Refer to 6.5.11)**



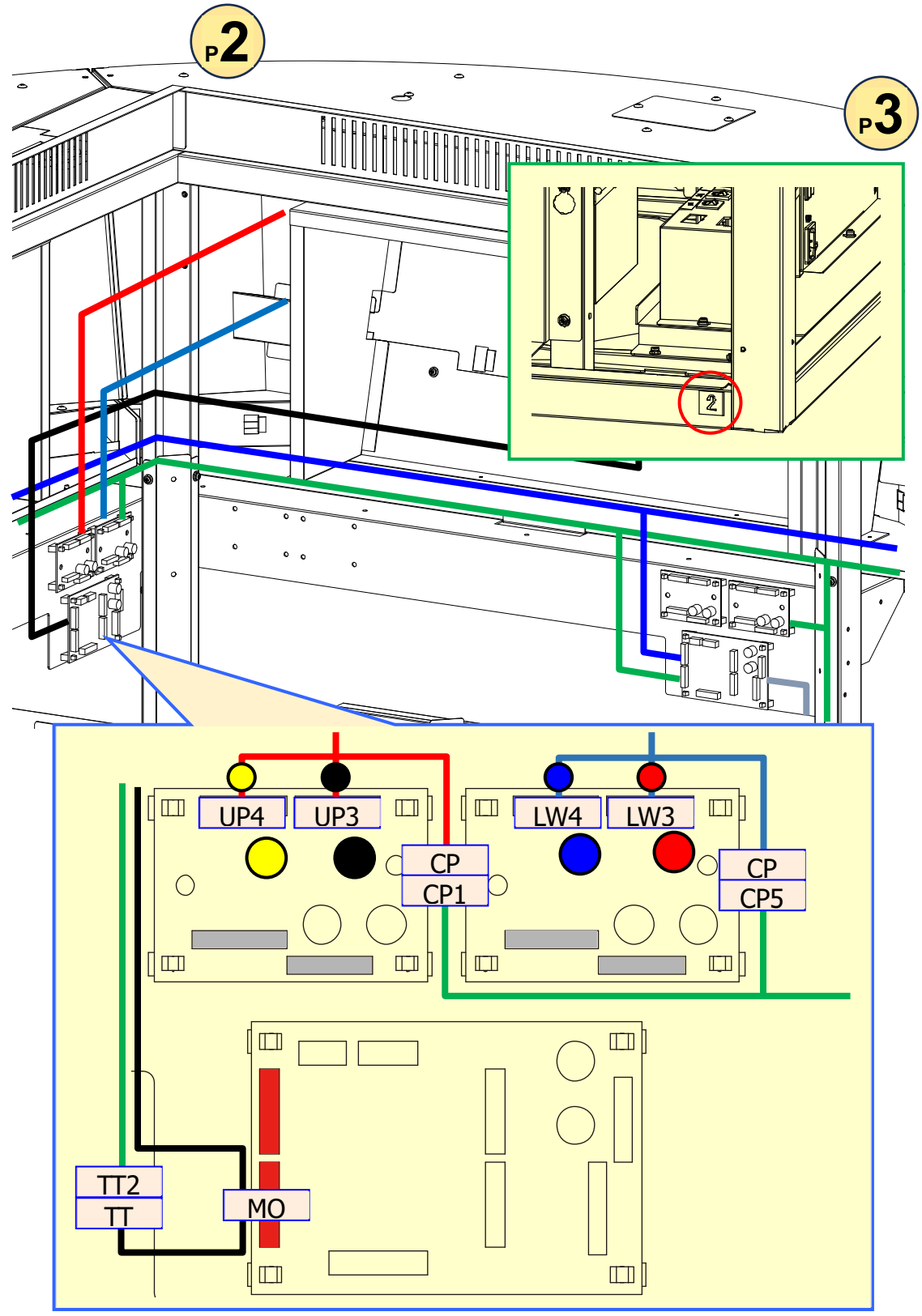


- Fan 2 and Fan 3 -

1. Separate [Station 3 Unit] and [Station 4 Unit] from the Center Unit. **(Refer to 6.5.1)**
2. Detach the Ring Unit. **(Refer to 6.5.10)**
3. Remove the 2 screws and detach the Joint Plates.

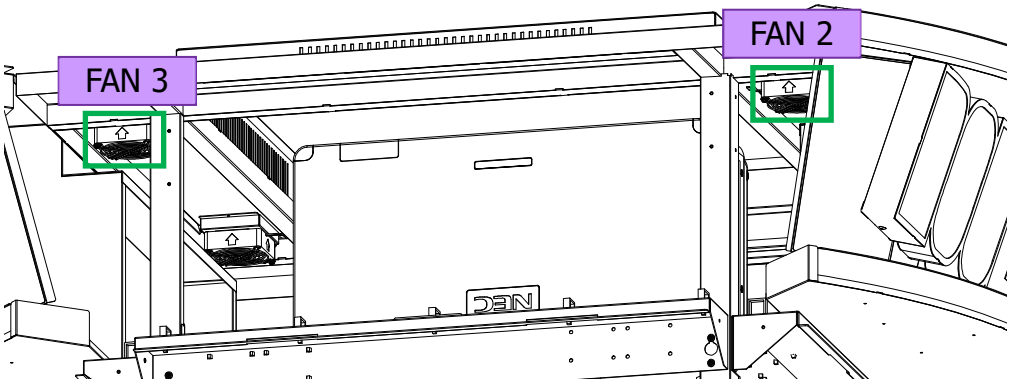


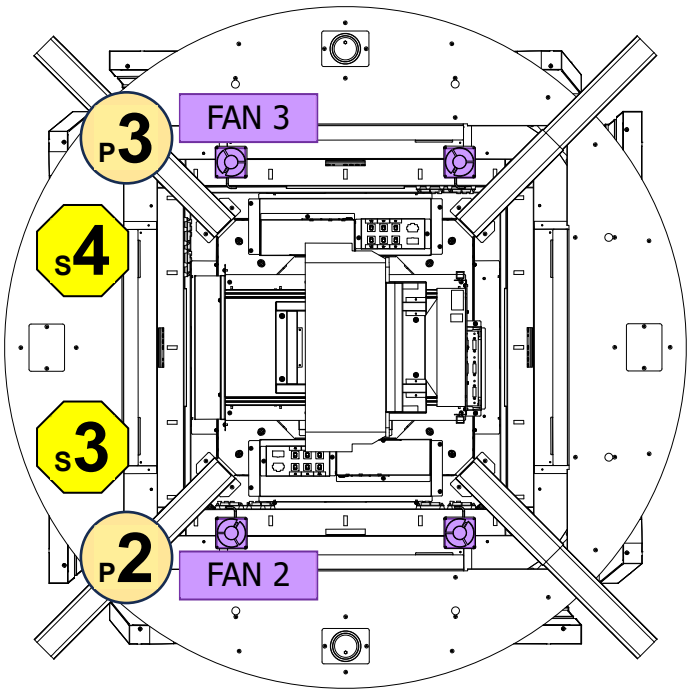
4. Refer to the image below to disconnect the connectors of the Top PCB Box side (Pole 2 and Pole 3 side) of the Sign Unit (**refer to 6.5.7**), and arrange them so th at they will not get in the way during the next procedures.



On the connectors of the PCB and on the Tags of each harness there is a round color label. Please connect the connectors matching the same color.

5. Detach the Sign Unit and access to the [Fan 2] and [Fan 3].

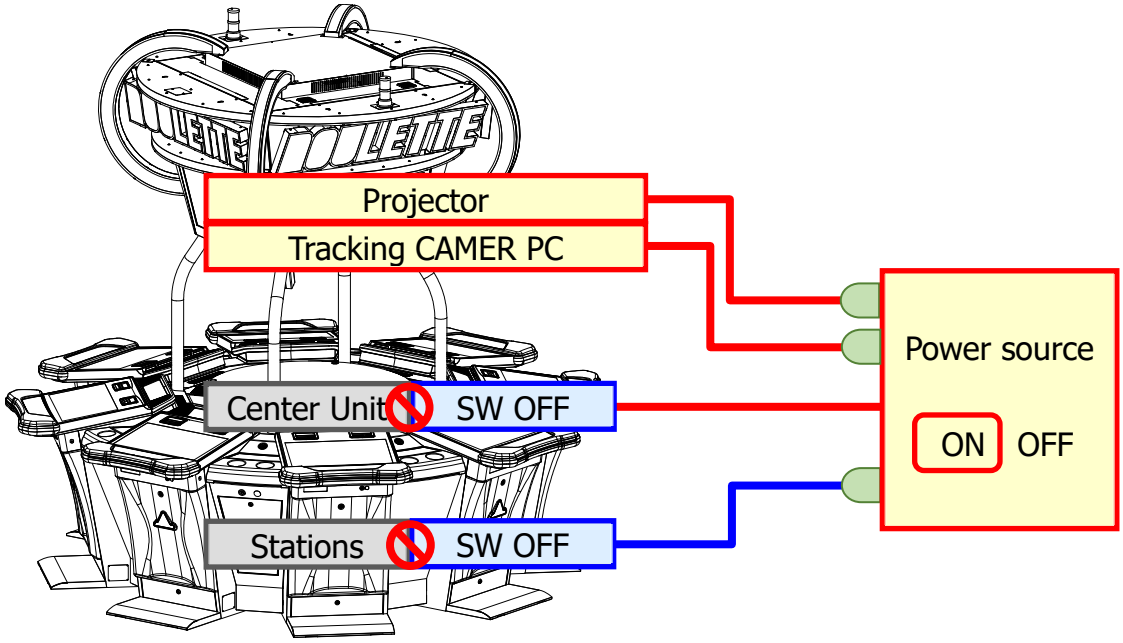




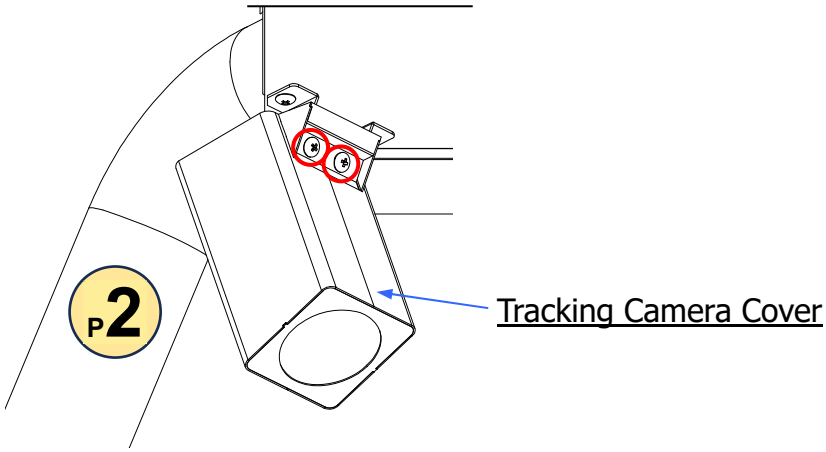
6. 5. 13: Tracking Camera (HS Camera) Unit

NOTE:

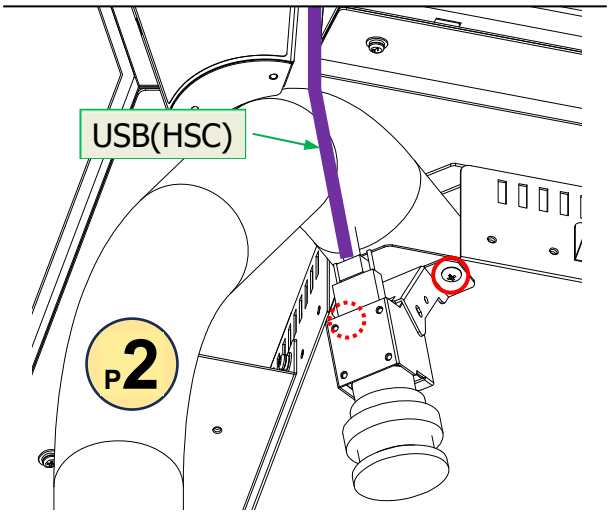
The Tracking Camera PC is not connected to the Power Switch of the Center Unit. Before the procedure, disconnect the AC Plug of the Tracking Camera PC from the power source and turn OFF the power.



1. Separate [Station 1 Unit] and [Station 2 Unit] from the Center Unit. **(Refer to 6.5.1)**.
2. Detach the Tracking Camera Cover.



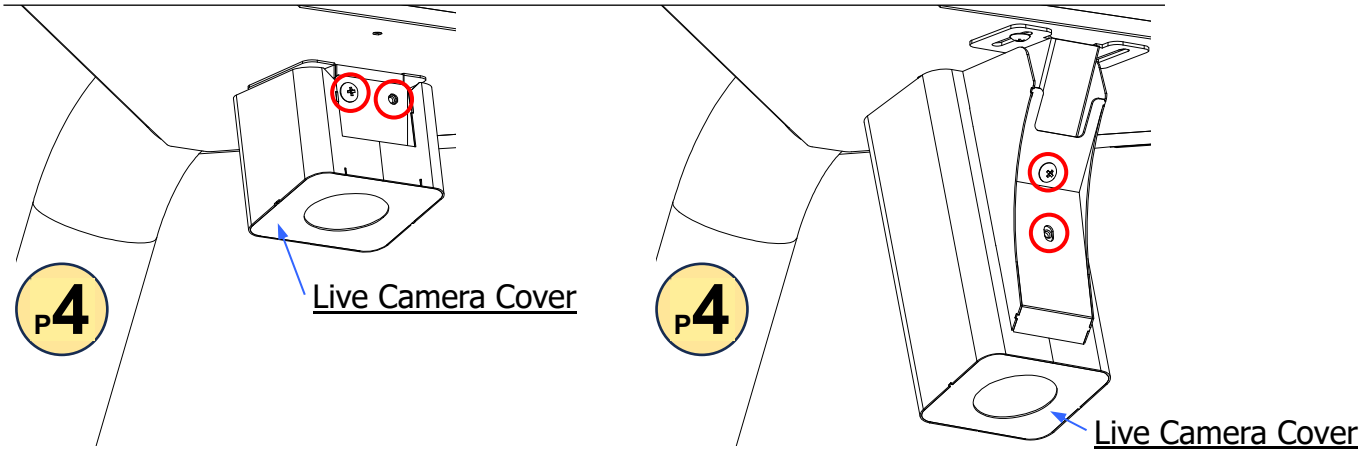
3. Remove 2 screws that affix the Tracking Camera Unit, then unplug its [USB(HSC)] Connector.



4. Set the Tracking Camera in case of replacement (**refer to 6.7.3**).
5. After the setting is completed, re-install the Tracking Camera Cover to its original position.

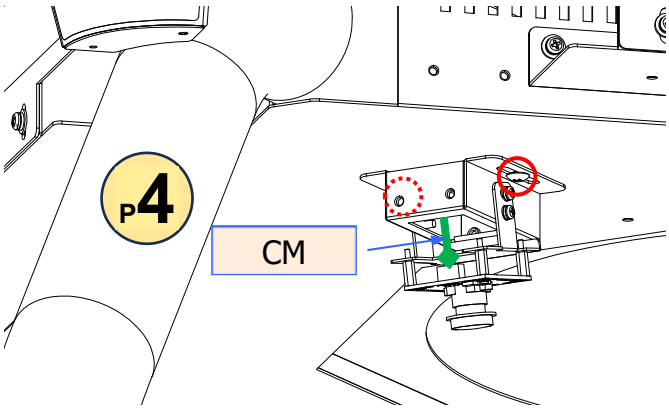
6. 5. 14: Live Camera Unit (HBVCAM-F2028HD-V11 / HD-NDI-200)

1. Separate [Station 5 Unit] and [Station 6 Unit] from the Center Unit. **(Refer to 6.5.1)**.
2. Detach the Live Camera Cover.

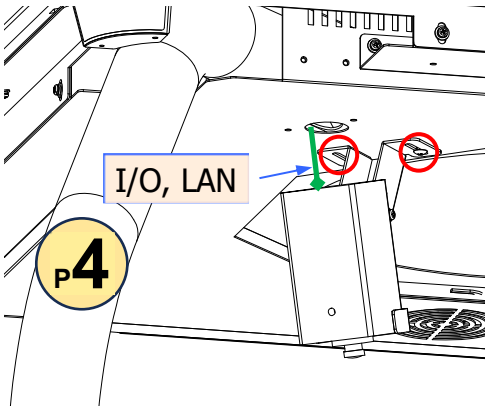


3. Remove the 2 screws that affix the Live Camera Unit, then unplug its Connector.

[HBVCAM-F2028HD-V11]



[HD-NDI-200]



4. Set the Live Camera in case of replacement (**refer to 6.7.4**).
5. After the setting is completed, re-install the Live Camera Cover to its original position.

6. 6: Replacement of Expendable Supplies

DANGER!

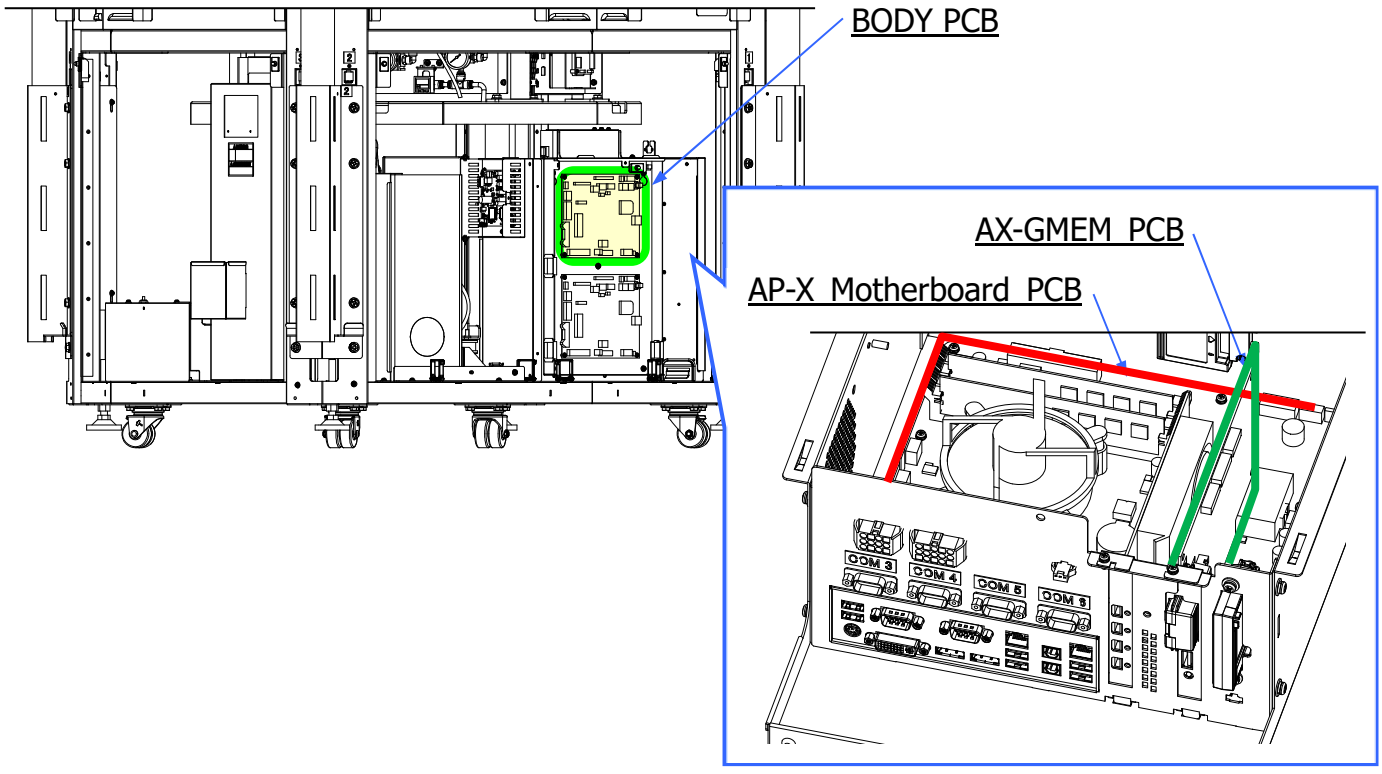
Ensure that the machine is turned off before replacing any expendable items.

6. 6. 1: Lithium Battery

A lithium battery is mounted on the AP-X motherboard PCB, the AX-GMEM PCB and the BODY PCB, in order to back up the important data. The procedures to replace the lithium batteries are outlined below:

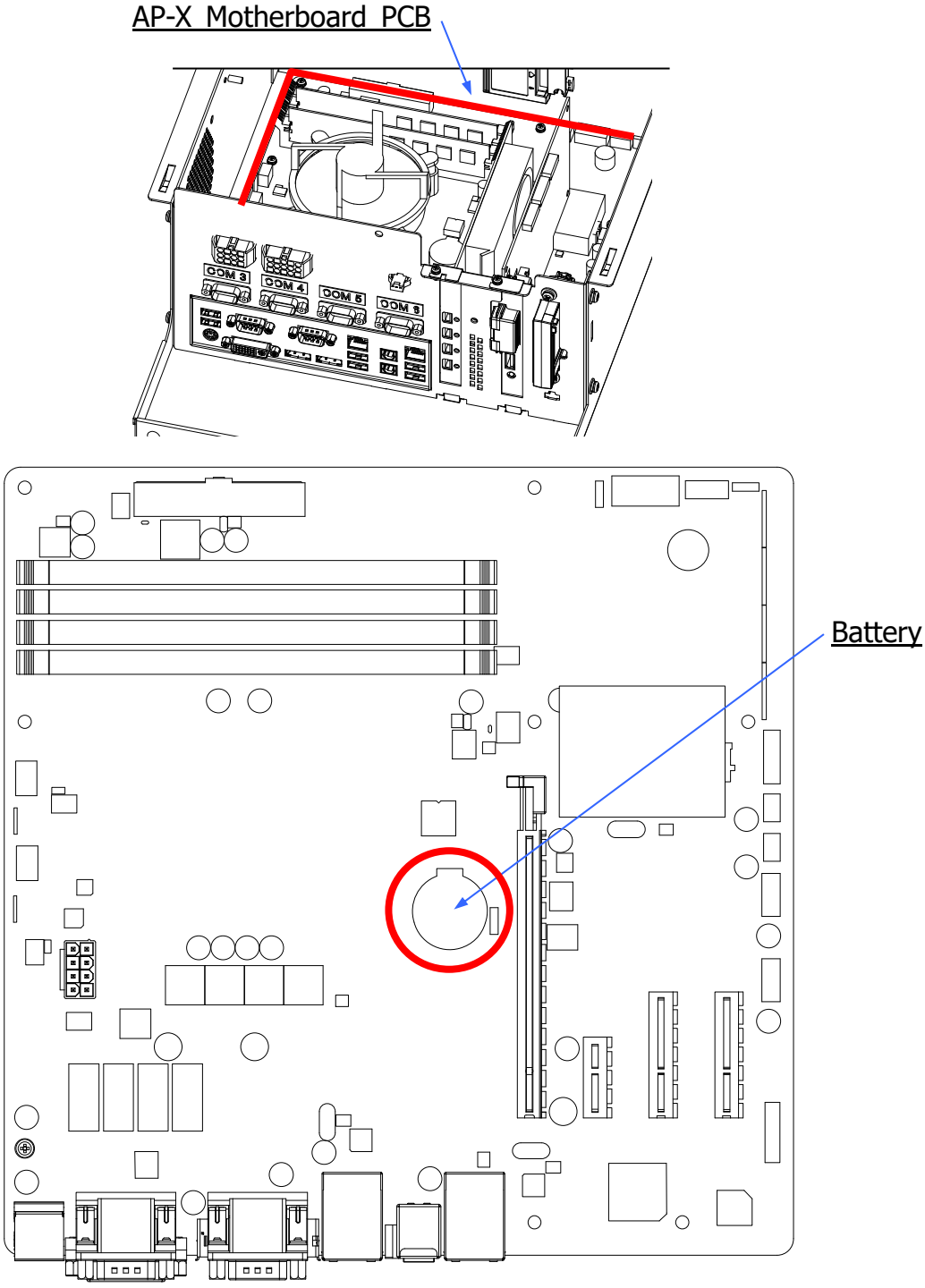
CAUTION!

- Before replacing the lithium batteries, take note of all necessary data.
  Battery replacement after turning the power off may cause data to be deleted.
- When exchanging the lithium batteries, use an officially provided lithium battery.
  Risk of Explosion if lithium battery is replaced by an incorrect type.
- Before mounting a lithium battery, verify its polarity.
  Mounting a battery in a wrong direction may damage the PCBs.
- Used lithium batteries must be disposed as instructed.
  Refer to SAFETY INSTRUCTIONS, **"Disposal of Lithium Batteries"**.



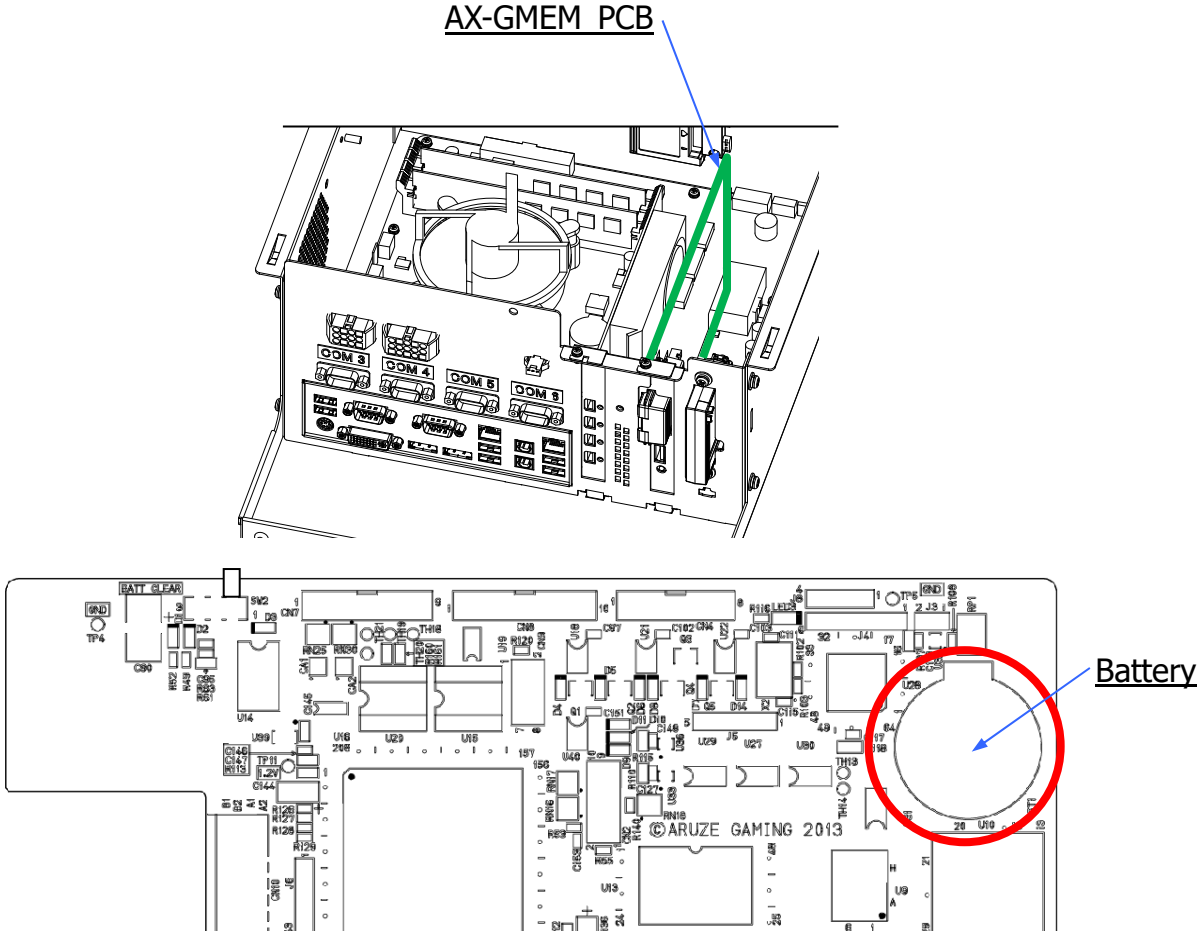
- AP-X Mother board PCB -

Pull out the Security Cage and replace the lithium battery on the AP-X Mother Board PCB.
(Refer to 6.5.1.4)



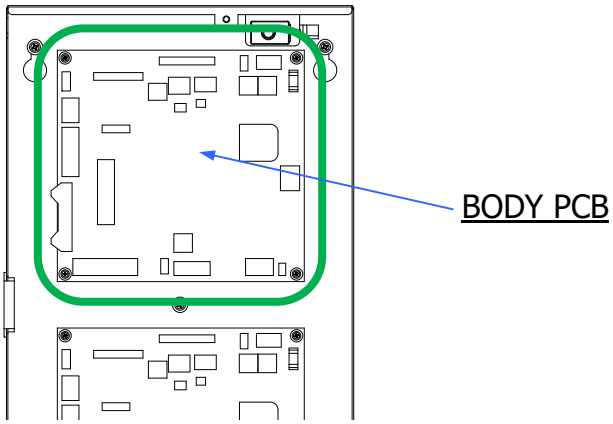
- AX-GMEM PCB -

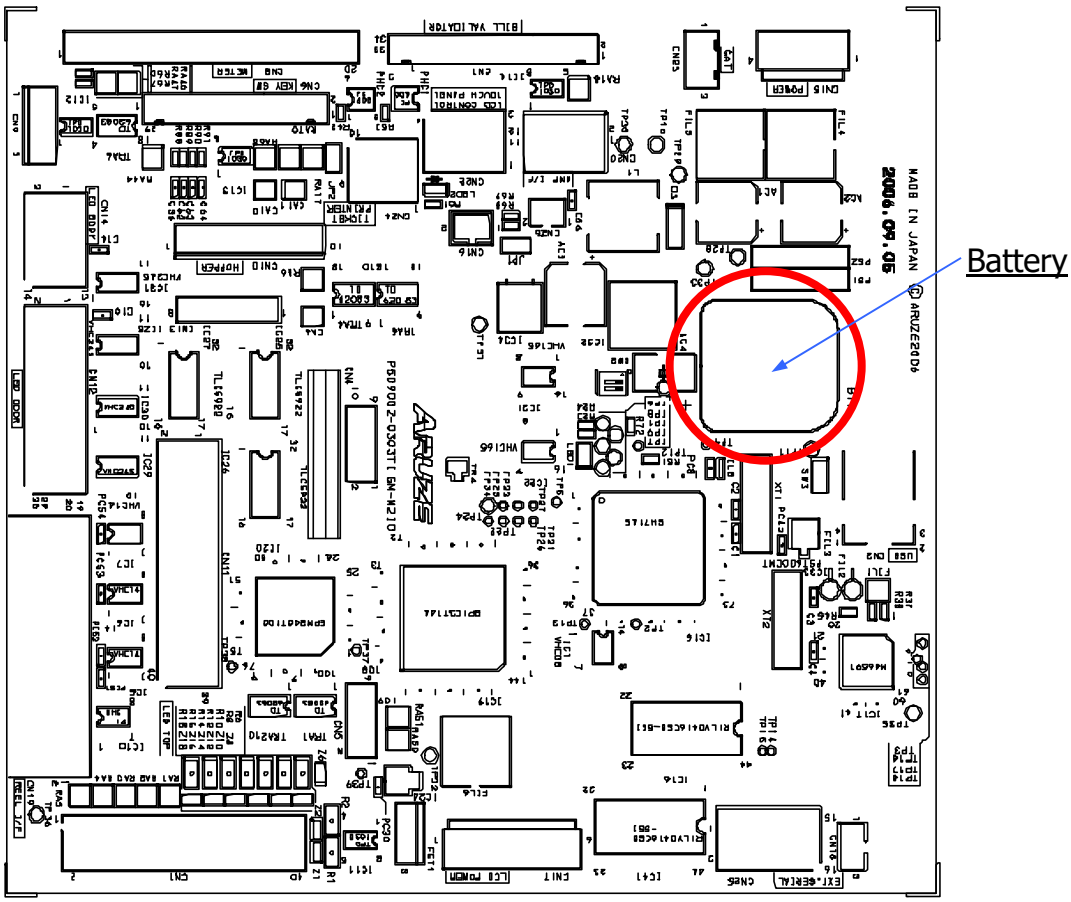
Take out the Security Cage and change the lithium battery on the AX-GMEM PCB. **(Refer to 6.5.1.4)**



- BODY PCB -

Open the IO Case and change the Lithium Battery on the BODY PCB. **(Refer to 6.5.1.1)**

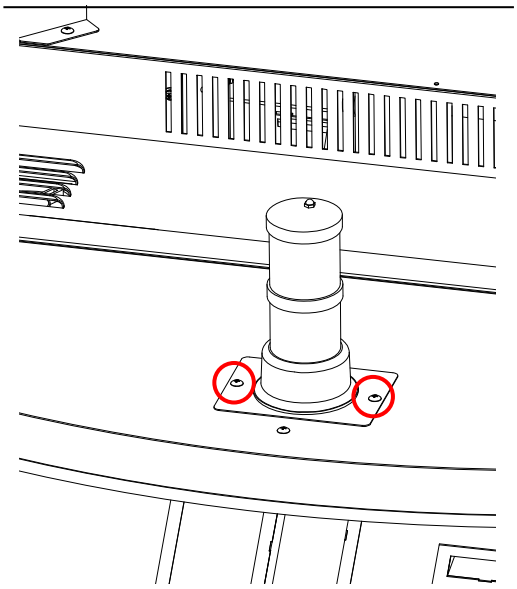


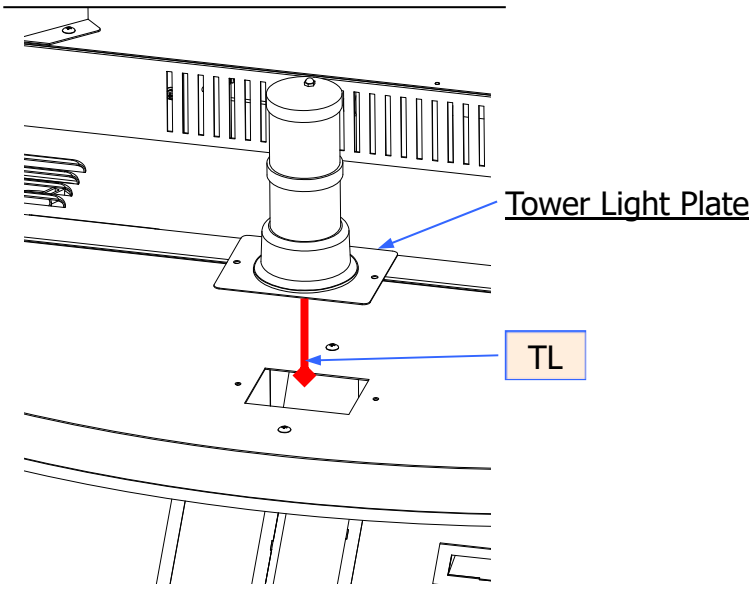


6. 6. 2: Lamps of Tower Light

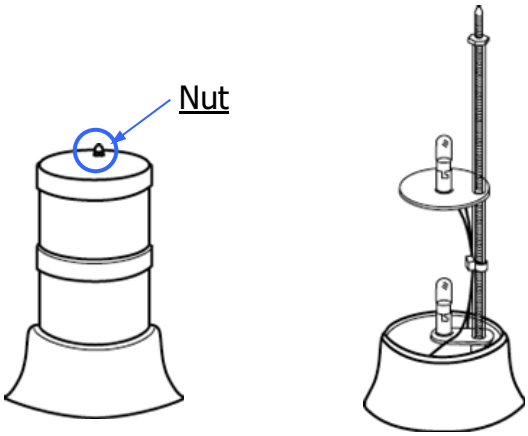
NOTE:
The tower light is optional, and may not always be provided.

1. Remove 2 Screws to detach the Tower Light Plate, then unplug the Connecter of Tower Light.





3. Loosen the nut on the top of the Tower Light to separate the tiers.
4. Replace the lamps and reassemble the Tower Light.



6. 6. 3: Projector Unit

1. Change the Projector Unit. **(Refer to 6.5.11)**
2. After replacing and reassembling the projector, perform the projector settings before installing the stations. **(Refer to 6.7.1)**

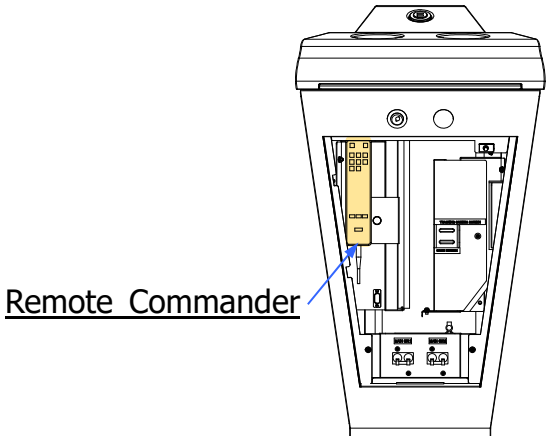
6. 7: Adjusting

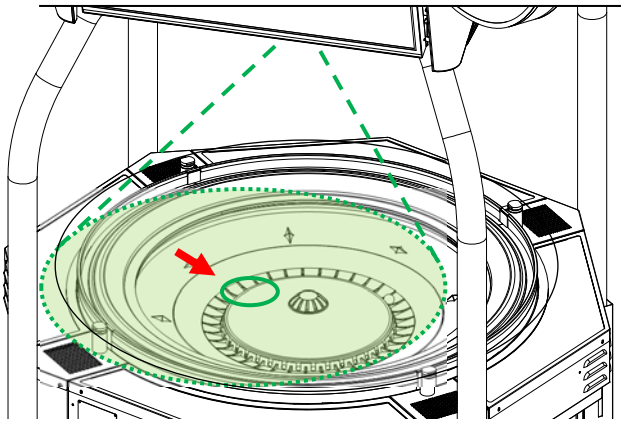
6. 7. 1: Focus of Projector

NOTE:
Before the operations, detach the Stations from the Center Unit so that they will not be an obstacle to the procedures.

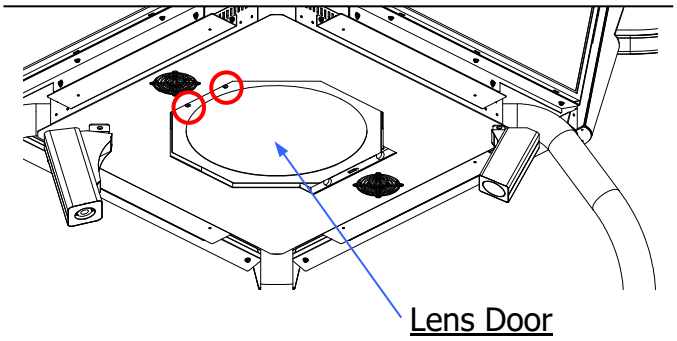
1. Press the Power button on the Remote Commander of the Projector contained inside the Control Spacer Unit, to boot up the Projector.
2. Refer to the Appendix **"Projector Operating Manual"** to adjust the image position.

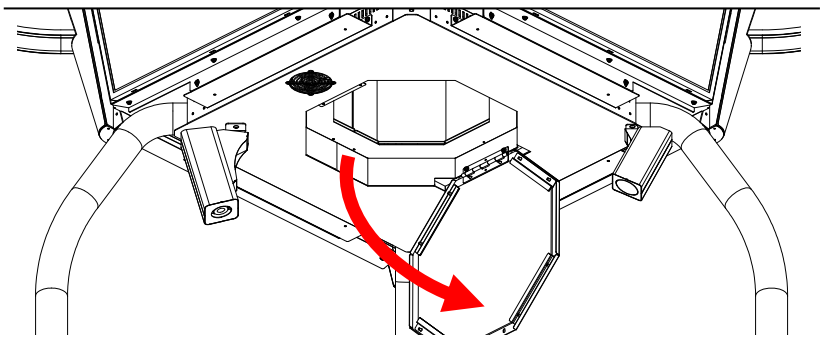
Setting of Projector	DESCRIPTION
LENS SHIFT	Move the lens (the image) in each direction.



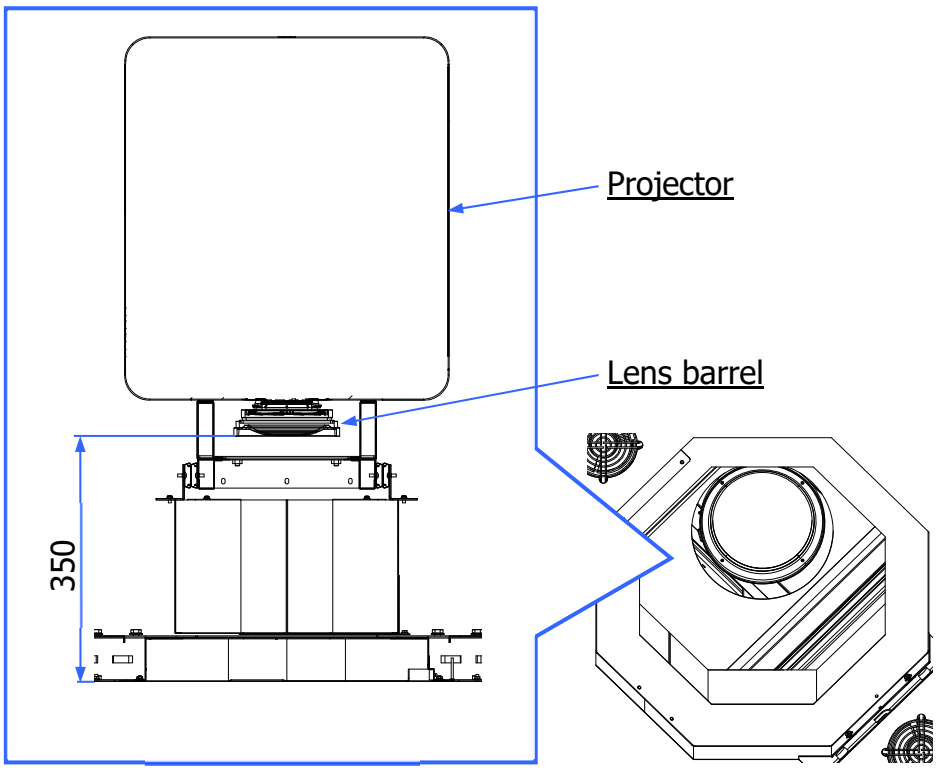


3. Open the Lens Door by removing the 2 screws.





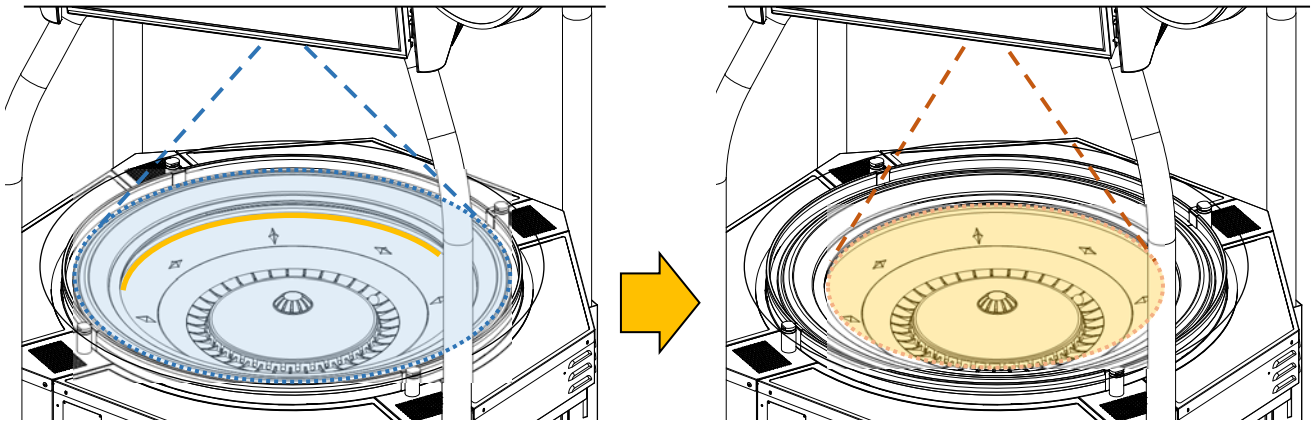
4. Locate the Lens barrel of the Projector, placed 350 mm inside the cavity behind the Lens Door.



5. Refer to the Appendix **"Projector Operating Manual"** and adjust the focus and the size while watching the images projected on the Center Unit. Then close the Lens Door.

NOTE:

※To correctly project the images, use the Zoom to fit the area as indicated in the illustration on the right.

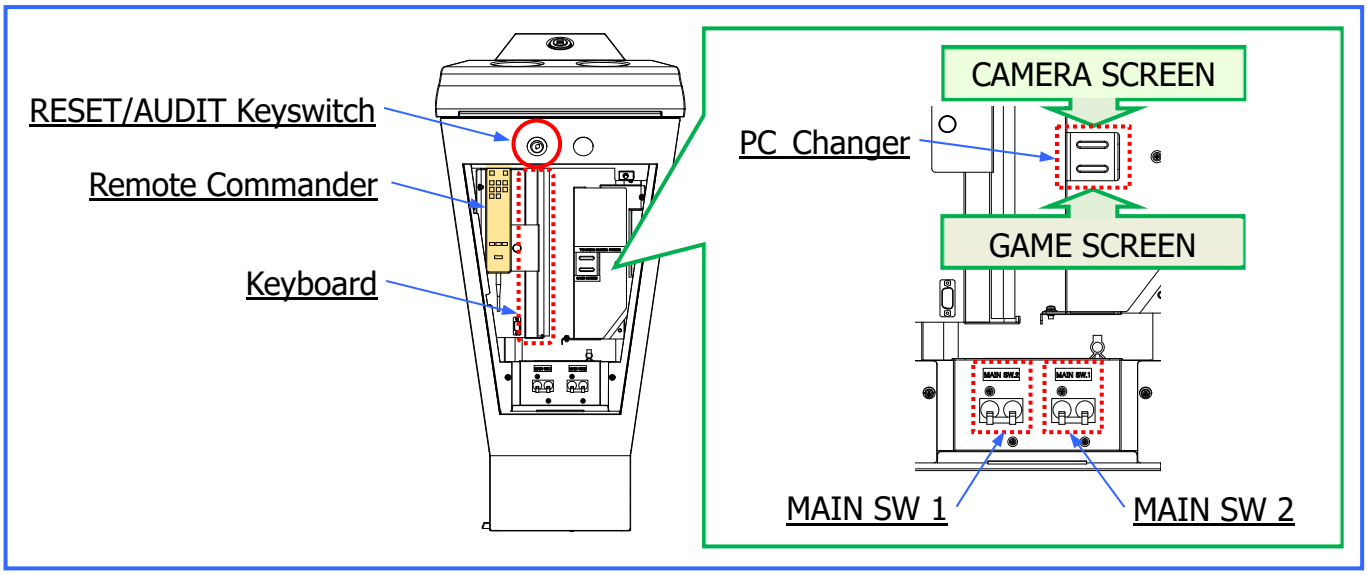


The light is reflected The image is shrunk enough that the light is not reflected

6. Next, set up the Projector. **(Refer to 6.7.2)**

6. 7. 2: Setup of Projector

1. Boot up the Projector Unit, and adjust its Focus. (**Refer to 6.7.1**).
2. Turn ON the Power Switches (MAIN SW 1 and MAIN SW 2) of the Control Spacer. Push the [GAME SCREEN] Button of the PC Changer. The Game Screen will be displayed on the Monitor of the Top Sign Unit.



2. Refer to the Appendix **"Projector User's Manual"** and set up the Projector by using the Remote Commander contained inside the Control Spacer Unit.

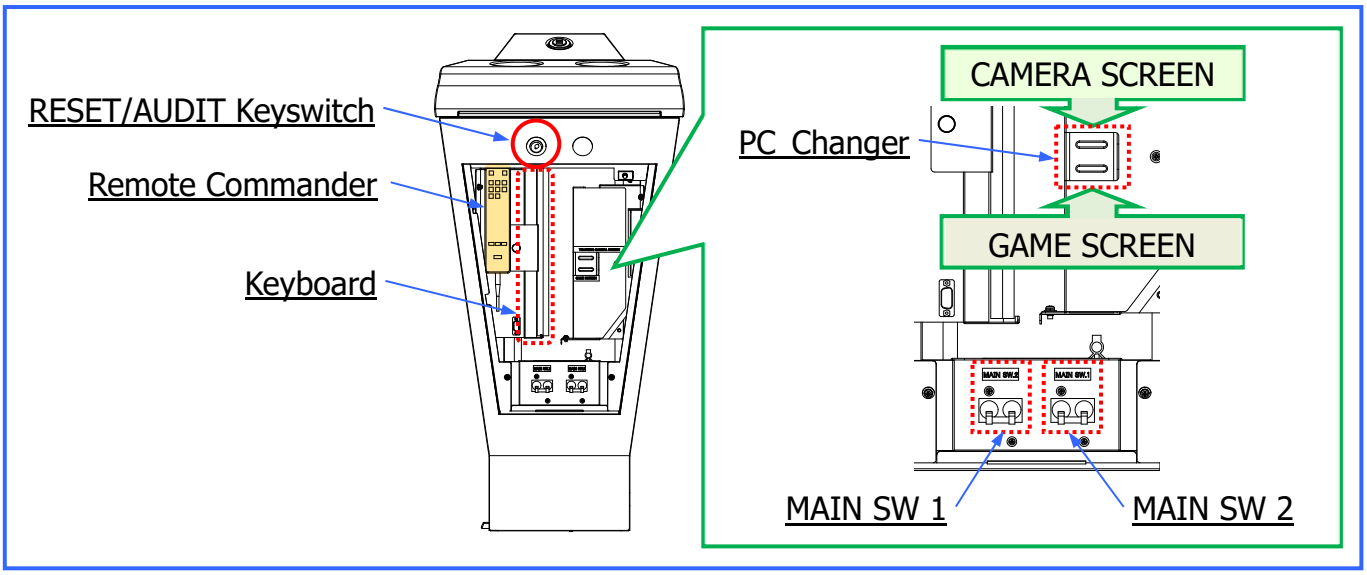
NOTE:

- Provide the optimal image and lighting settings, and system cooling capability to ensure the stability of the projector during prolonged use.
- Input a contrast level suitable for entertainment and amusement facilities.
- Do not display useless graphics or setup menus etc.
- Make so that the Projector can be turned OFF/ON by disconnecting or connecting the AC Cable to a power source.

3. When the procedure is completed, return the Control Spacer Door to its original position.

6. 7. 3: Setting of Tracking Camera (HS Camera)

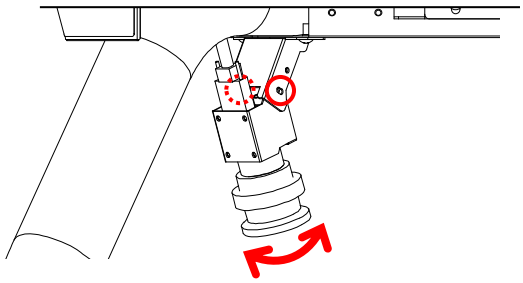
1. Turn ON the Power Switches (MAIN SW 1 and MAIN SW 2) of the Control Spacer. Push the [CAMERA SCREEN] Button of the PC Changer. The Screen of the Tracking Camera PC will be displayed on the Monitor of the Top Sign Unit.



2. Refer to the Appendix **"HS CAMERA setting Instruction"** and set the Tracking Camera(High speed Camera) by using the Keyboard contained inside the Control Spacer Unit.

NOTE:

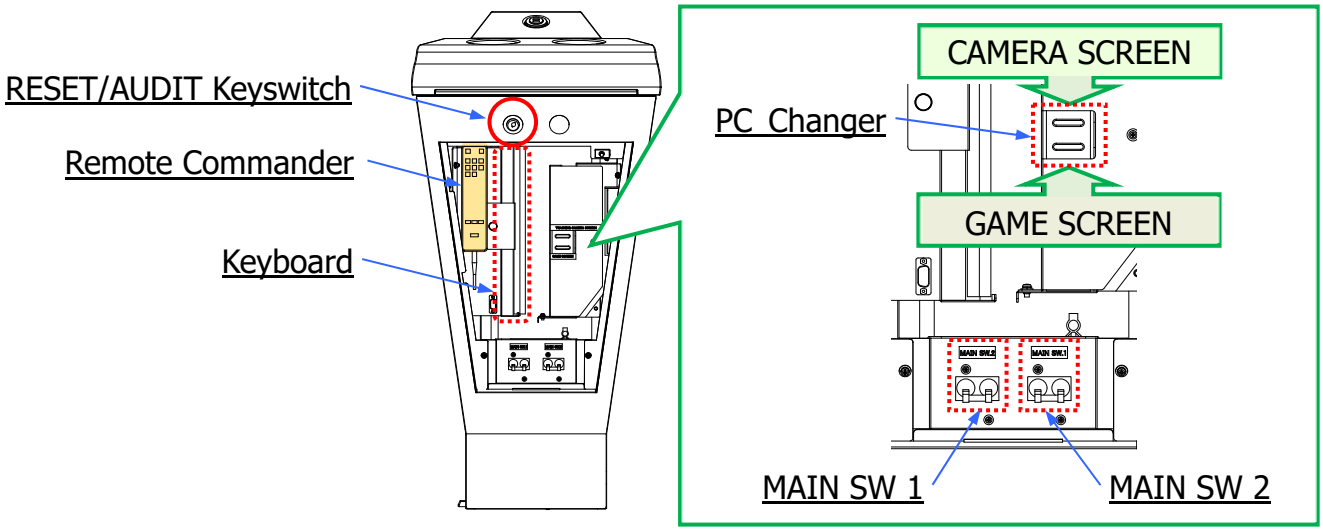
- If it is necessary to reboot, unplug the AC Plug from the power source (for power OFF) and then insert it again (for power ON).
- According to the condition of the Tracking Camera, adjust its mounting angle by removing the Tracking Camera Cover, and then loosening the screw on its support.



3. After the setting of the Tracking Camera, push the [GAME SCREEN] Button of the PC Changer. The Game Screen will be displayed on the Monitor of the Top Sign Unit.
4. When the procedure is completed, return the Control Spacer Door to its original position.

6. 7. 4: Setting of Live Camera Unit (HD-NDI-200)

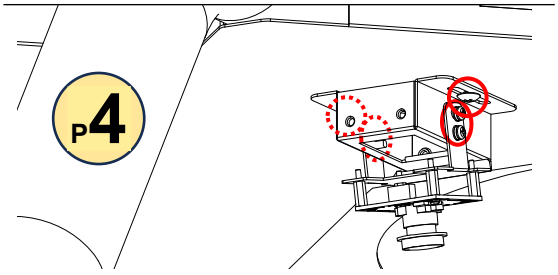
1. Turn ON the Power Switches (MAIN SW 1 and MAIN SW 2) of the Control Spacer. Push the [GAME SCREEN] Button of the PC Changer. The Game Screen will be displayed on the Monitor of the Top Sign Unit.

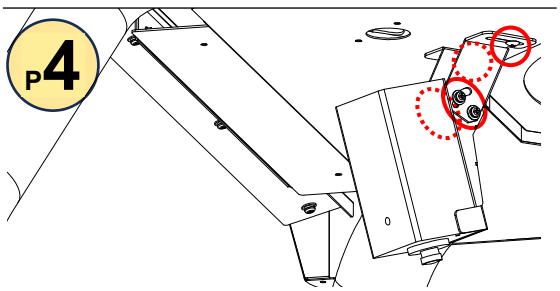


2. Refer to "LIVE CAMERA TYPE", "LIVE CAMERA ADDRESS", "LIVE CAMERA SETTINGS" and "LIVE CAMERA ERROR" inside "**Main Unit Settings**" at Chapter 4 of the SERVICE Manual to set the Live Camera.

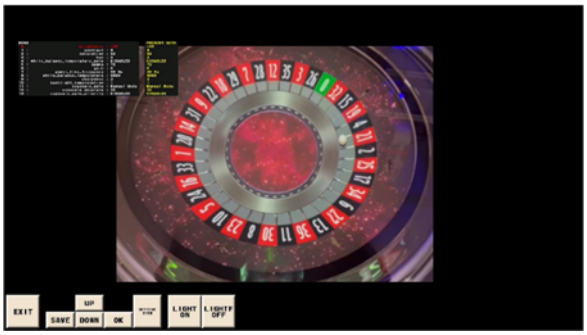
NOTE:

According to the condition of the Live Camera, adjust its mounting position and angle by removing the Live Camera Cover, and then loosening the screw on its support.





Reference image "LIVE CAMERA SETTINGS"



interblock
LUXURY GAMING PRODUCTS

Chapter 7

General Servicing and Disassembly for Stations

7. 1: Memory Clear Procedure

7. 1. 1: Memory Clear Types

There are 2 types of Memory Clear Processes for deleting stored data.

◇ **RAM Clear** - Deleting the Permanent Meters while keeping the setting information intact.

◇ **All RAM Clear (ALL Memory Clear)** - Deleting all memory including setting information and backup data.

CAUTION!

- For both types of Memory Clear, all meter information stored will be deleted and reset.
- When updating software on the machine, always perform an **All RAM Clear**.
- After **All Ram Clear(All Memory Clear)**, all meter information stored and all of the settings will be deleted and reset. Taking note of all settings before executing **All Ram Clear(All Memory Clear)** is recommended.

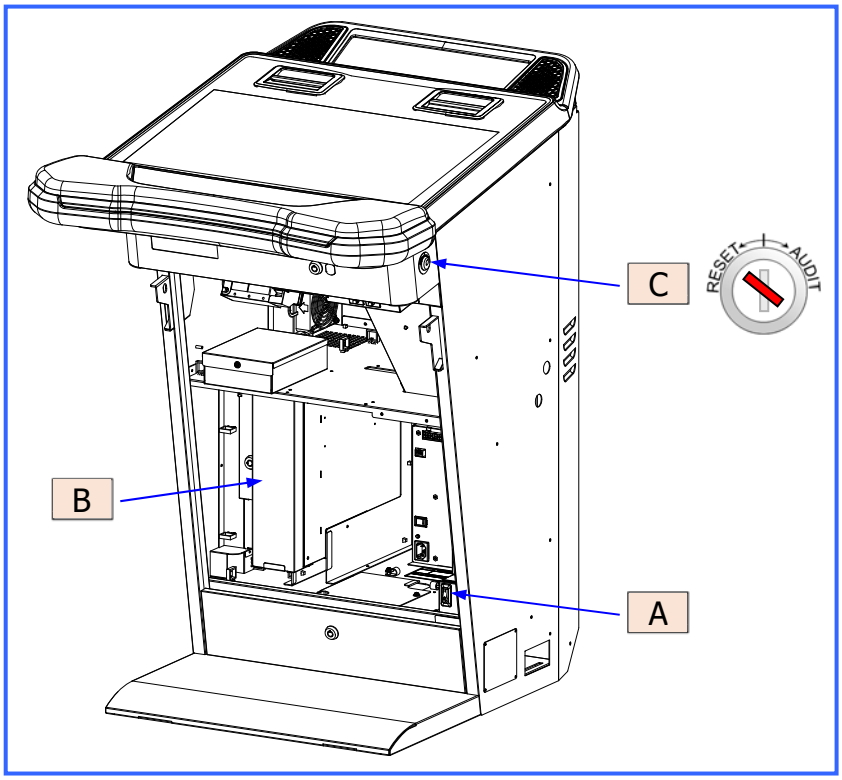
NOTE:

When performing the **RAM Clear** on the Center Unit, please refer to **"Memory Clear Procedure"** on Chapter 6.

7. 1. 2: Common Memory Clear Procedure

The process to execute Memory Clear is different for **Ram Clear** and **All Ram Clear**.
The procedure is as described below.

1. Remove the Front Door, and refer to the Opening insert **"Safe Power OFF"** to turn OFF the Power Switch of the Station. **(Fig A)**
2. Open the Security Cage Front Cover. **(Fig B)**
3. Turn the RESET/AUDIT Key Switch to RESET. **(Fig C)**



4. Turn the Machine power back ON.

CAUTION!

・When doing "Power OFF-ON" wait at least 15 seconds before power On.
・Do not touch the Touch Screen when [NOW CHECKING] is displayed. This may lead to Touch Screen malfunction.

5. The message [Turn the key to the neutral position. The memory Clear method is selected by the next key operation] is displayed.

The procedure above is the same for both **RAM Clear** and **All RAM Clear**.
Which Memory Clear is done depends on the next procedure.

< In the case of RAM Clear >

6. Turn the RESET/AUDIT Key Switch to neutral.



7. Next, turn the key switch to AUDIT.



8. Finally, turn the key switch to neutral.



9. **RAM Clear** is completed when [RAM CLEAR completed.] is displayed on the screen.

NOTE:
To cancel RAM Clear in the middle of the process, turn the key switch towards RESET at step 8.



< In the case of All RAM Clear (ALL Memory Clear) >

6. Keep pressing the blue square displayed on the bottom-right corner of the screen (when pressed, the square becomes red).



7. Turn the RESET/AUDIT Key Switch to neutral.



8. Next, turn the key switch to AUDIT.



9. Finally, turn the key switch to neutral.



10. Stop pressing the square.
11. **All RAM Clear** is completed when [ALL RAM CLEAR completed.] is displayed on the screen.

NOTE:
If the button is released during the process explained in steps 7 and 8, only the **Ram Clear** operation will be done.

NOTE:
To cancel All RAM Clear in the middle of the process, turn the key switch towards RESET at step 8.



When the game is booted up, on the screen the [SETTINGS] and [RETURN TO GAME] buttons are displayed. If it is necessary to change the settings, first please read carefully the **NOTE** at the beginning of **5.9**, then press the [SETTINGS] button and refer to Chapter 5 **"Settings"** to make the changes. If no setting is needed, press the [RETURN TO GAME] button, and then close all the doors.

7. 2: Changing the GAME

7. 2. 1: Changing the GAME Soft

To change the Game, follow the procedure below to change the SSD of the Program Storage Media and the AX-GAL Cassette necessary to boot up the game.

WARNING!

Electrostatic discharge may damage internal components. When accessing the inside of the Cabinet, take anti-static measures (as wearing antistatic wrist band, etc.) before proceeding.

CAUTION!

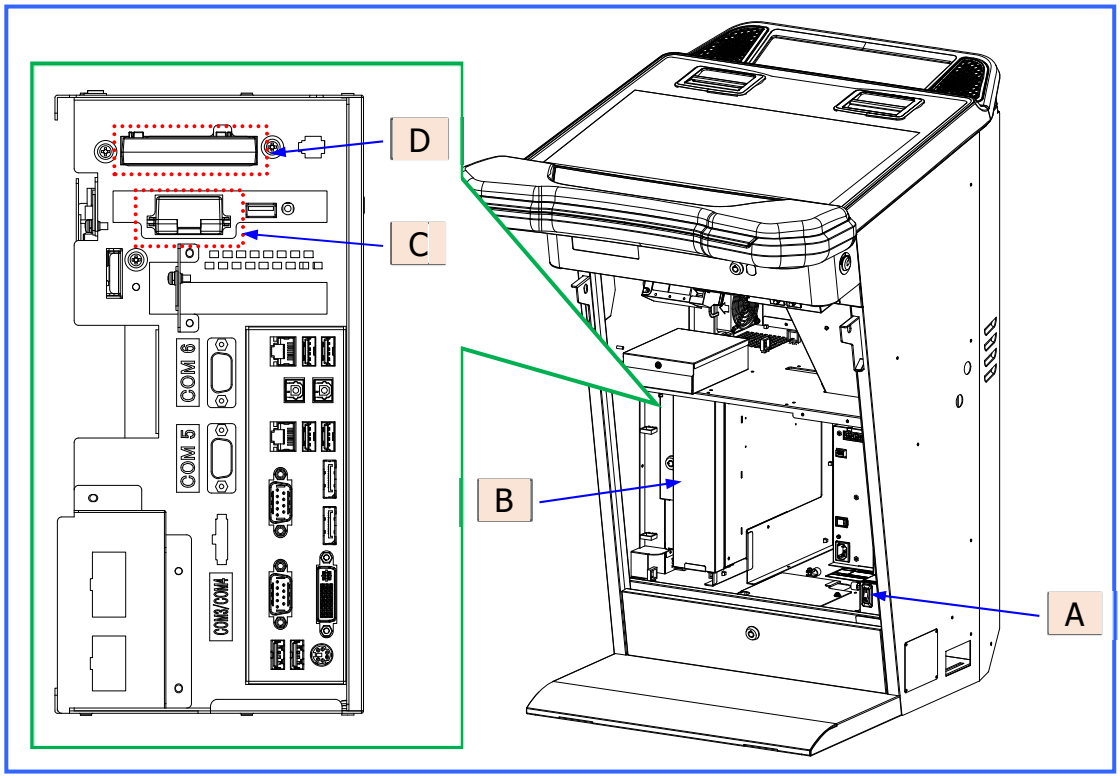
After **All Ram Clear(All Memory Clear)**, all meter information stored and all of the settings will be deleted and reset. Taking note of all settings before executing **All Ram Clear(All Memory Clear)** is recommended.

NOTE:

To change the game on the Center Unit, please refer to "**Changing the GAME**" at Chapter 6.

1. Prepare the replacement AX-GAL(Game GAL) Cassette and SSD Cassette.
2. Remove the Front Door, and refer to the Opening insert **"Safe Power OFF"** to turn OFF the Power Switch of the Station. **(Fig A)**
3. Open the Security Cage Front Cover. **(Fig. B)**
4. Remove the AX-GAL(Game GAL) Cassette currently inserted into the machine **(Fig. C)**, and replace it with the AX-GAL (GAME GAL) Cassette previously prepared.

5. Remove the SSD Cassette currently inserted into the machine **(Fig. D)**, and replace it with the SSD Cassette previously prepared.



6. Perform the **All RAM Clear(All Memory Clear). (Refer to 7.1.2)**

7. 2. 2: Changing the LCD Button Control Panel

Not used in this game.

7. 3: Configuring Settings by using a Setting GAL :for NEVADA/ARIZONA

No settings require the use of a SETTING GAL Cassette.

7. 4: Maintenance Schedule

7. 4. 1: Daily Servicing

◇ Clean the machine surface.

CAUTION!

Never use chemical dust cloth, thinner, benzine or alcohol.

Damage may be caused to the surface of the machine.

◇ Clean the monitor screen with clean, soft cloth.

CAUTION!

Do not use a wet cloth or rub the screen.

Damage may be caused to the screen surface.

7. 4. 2: Quarterly Servicing

Check the Condition of the AC Cord

◇ Has the cord been damaged in any way?
◇ Is the plug securely plugged in?
◇ Is there any dust, garbage, or metal pieces accumulated in or around the plug?
◇ Are there any peeling parts or burn marks on the cord?

DANGER!
Damage to the cord may lead to fire or electric shock. If any damage is found or detected, immediately turn off the machine and contact your local office or distributor.

Check the Harnesses, Connectors, and Clamps of each Cabinet Part

◇ Are there any harnesses stuck between doors?
◇ Are all connectors properly and securely connected?
◇ Are all harnesses securely fastened by clamps?

Check the Conditions of the Doors

◇ Are all the Door Switches operating properly?
◇ When lightly shaking the cabinet while the door is closed, does any Door Open Event occur?
◇ Are any of the doors distorted or damaged in any way?

Check the Condition of the BILL Acceptor

◇ Refer to the manual provided for the BILL Acceptor, and clean the acceptor area and rollers.
◇ Check that the BILL Stacker Door Switch is operating properly.

Check the Condition of the Ticket Printer

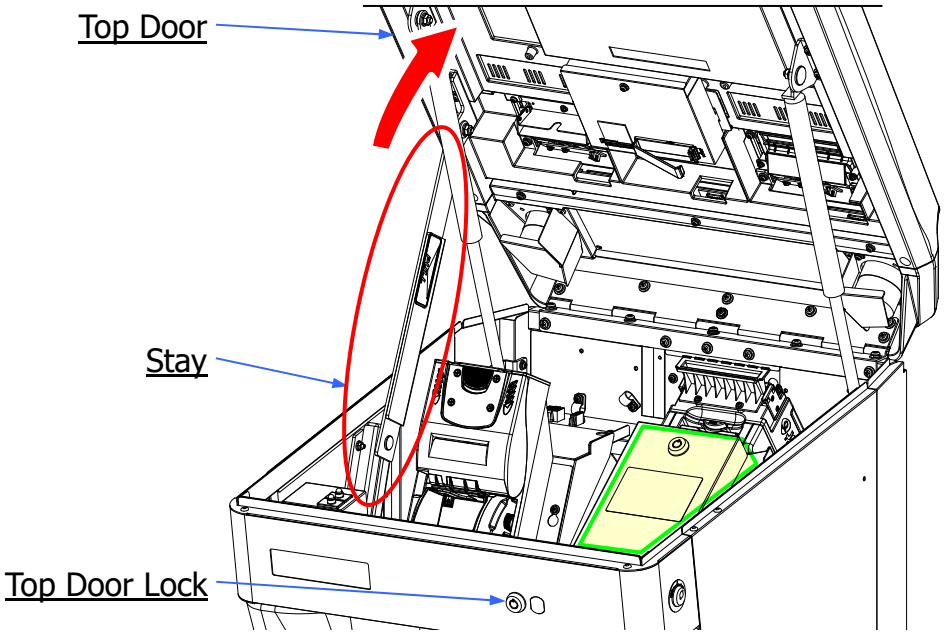
◇ Refer to the manual provided for the Ticket Printer, and clean the driver area and rollers.

7. 5: BILL Stacker Clearance

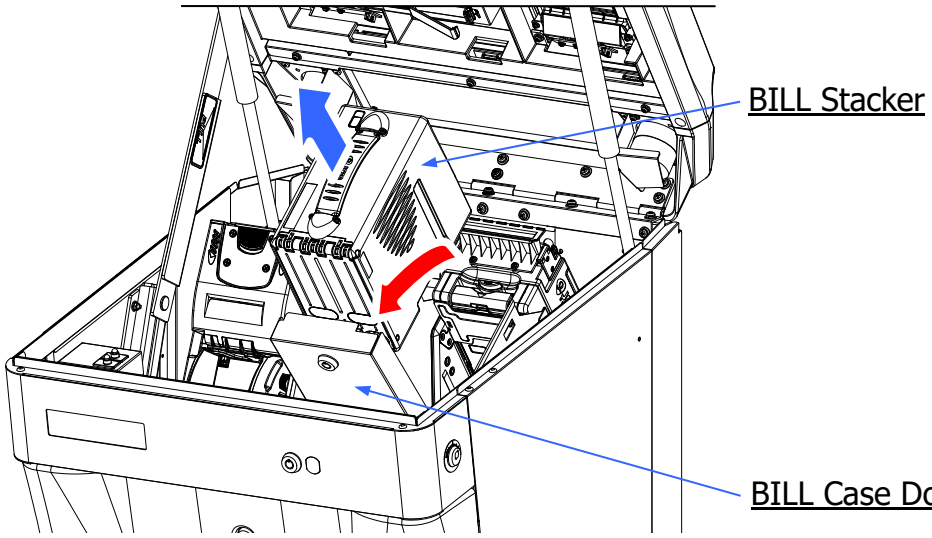
When the BILL stacker is full, the message [BILL STACKER FULL] is displayed on the screen. Please follow the procedure below to collect BILLs from the BILL stacker.

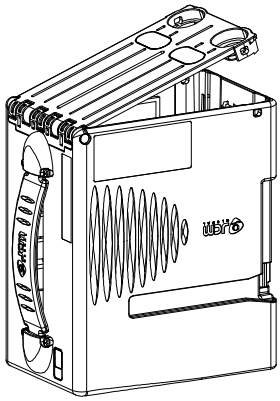
1. Open the Top Door.

> ⚠ **CAUTION!**
> Make sure that the Top Door does not close during the procedure, by keeping a hand on the door until the Stay is locked.



2. Unlock the BILL Case Door Lock, and then open the BILL Case Door. Pull out the BILL Stacker, and then use the key to open the bottom lid of the BILL Stacker.





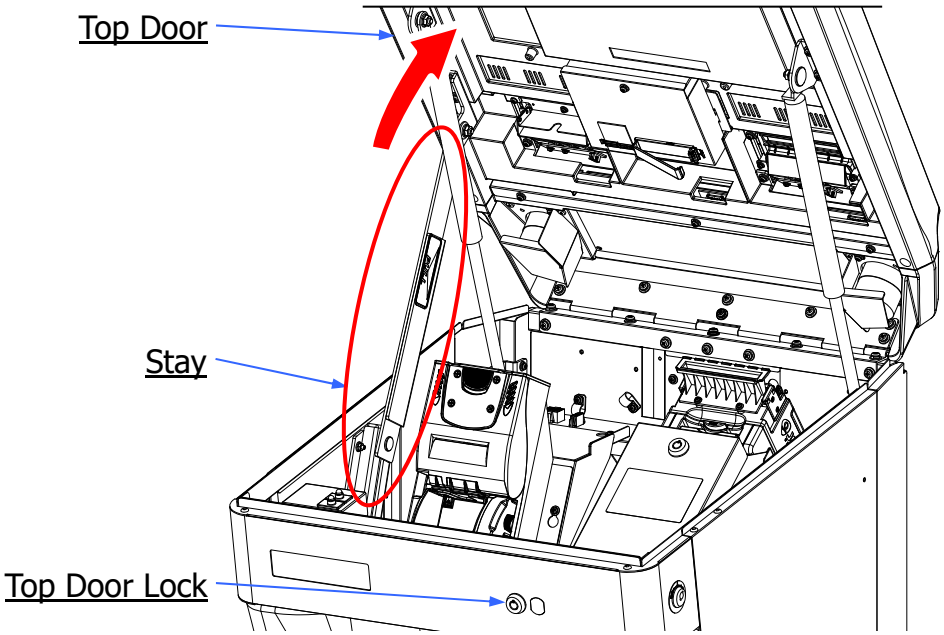
3. After taking out the BILLs, lock the bottom lid and put the BILL Stacker back in place.
4. When the BILL Case Door and Top Door are locked, the Monitor message will disappear.

7. 6: Clearing BILL Stacker Jam

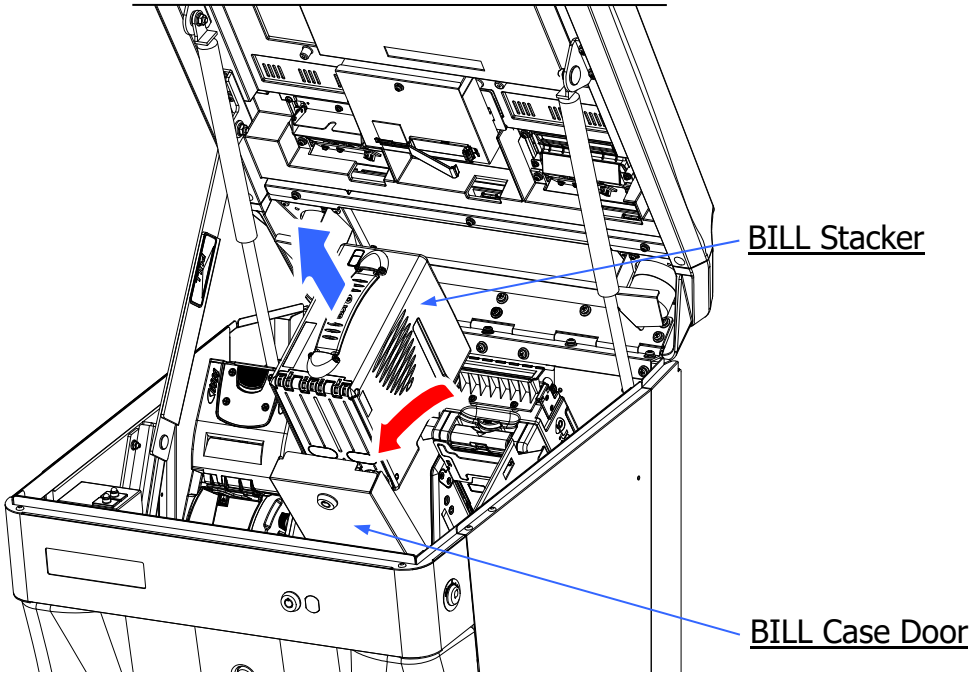
If a jam occurs near the entry slot of the BILL stacker, a [BILL STACKER JAM] message is displayed on the Monitor.
Use the following procedures to clear the jam.

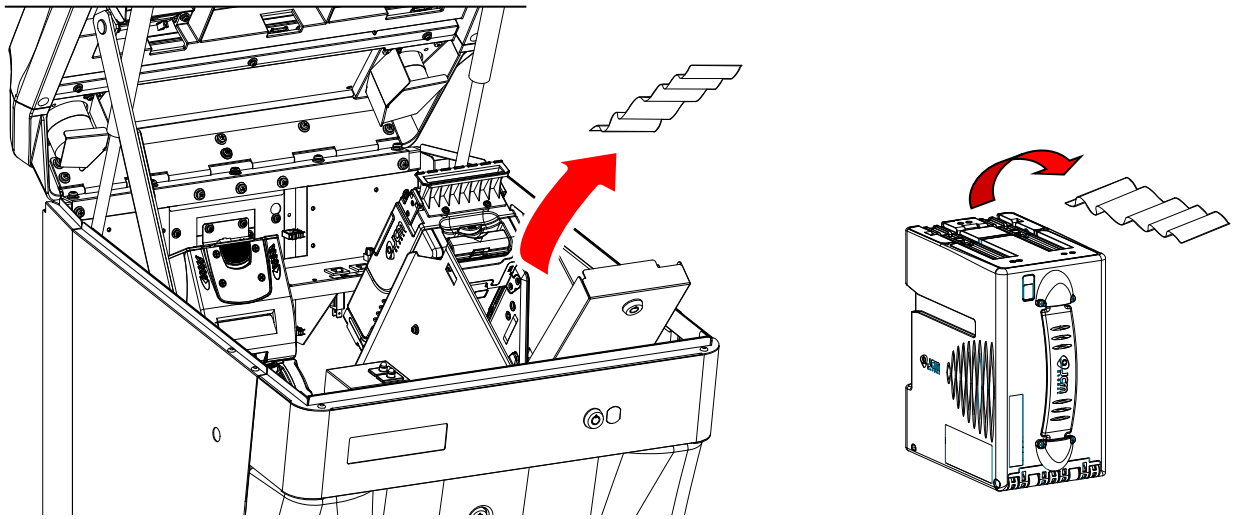
1. Open the Top Door.

CAUTION!
Make sure that the Top Door does not close during the procedure, by keeping a hand on the door until the Stay is locked.



2. Unlock the BILL Case Door Lock, and then open the BILL Case Door. Take Out the BILL Stacker, and then remove any BILLs that are jammed or stuck.





3. After removing the jammed ticket, put the BILL Stacker back in place.
4. When the BILL Case Door and Top Door are locked, the Monitor message will disappear.

NOTE:
If the message does not disappear or it is difficult to extract the BILL, please refer to **"Clearing BILL Acceptor Jam"** at Chapter 5 of the OPERATION Manual.

7. 7: Disassembly

DANGER!

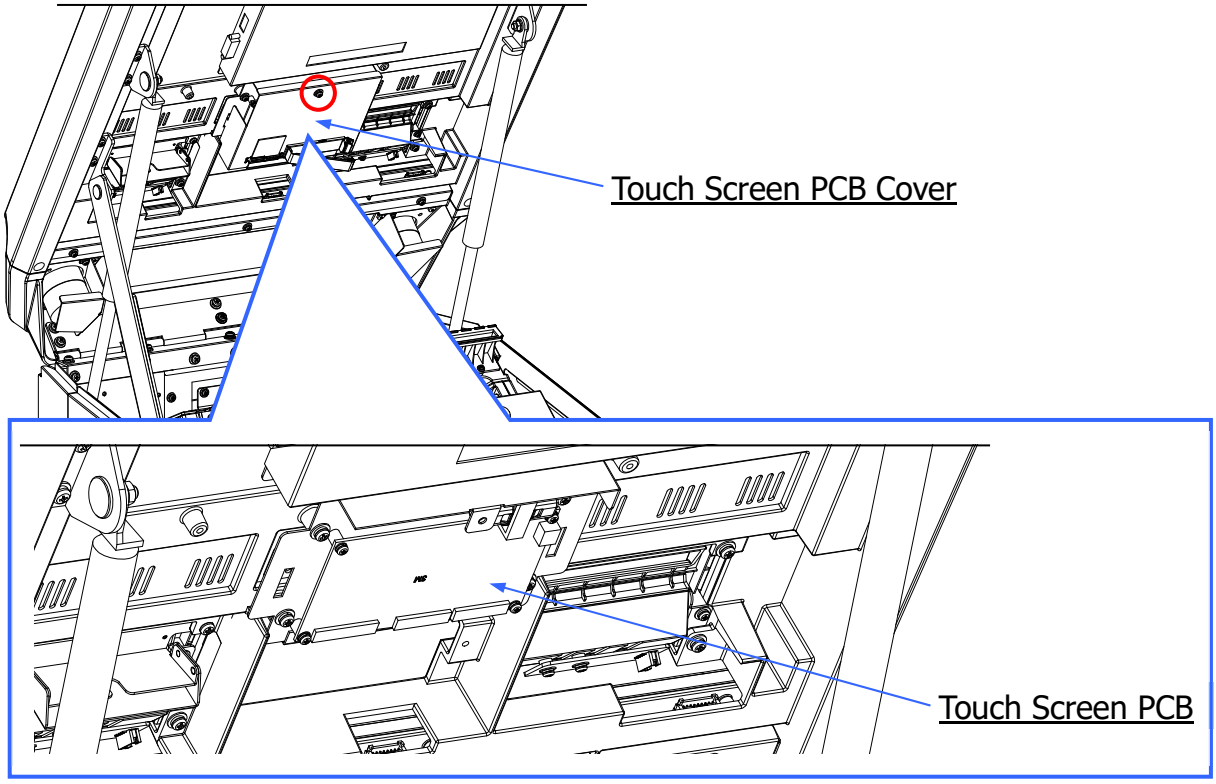
Make sure that the machine is turned off before disassembling any components. **(Refer to the Opening insert Safe Power OFF)**

7. 7. 1: Top Door

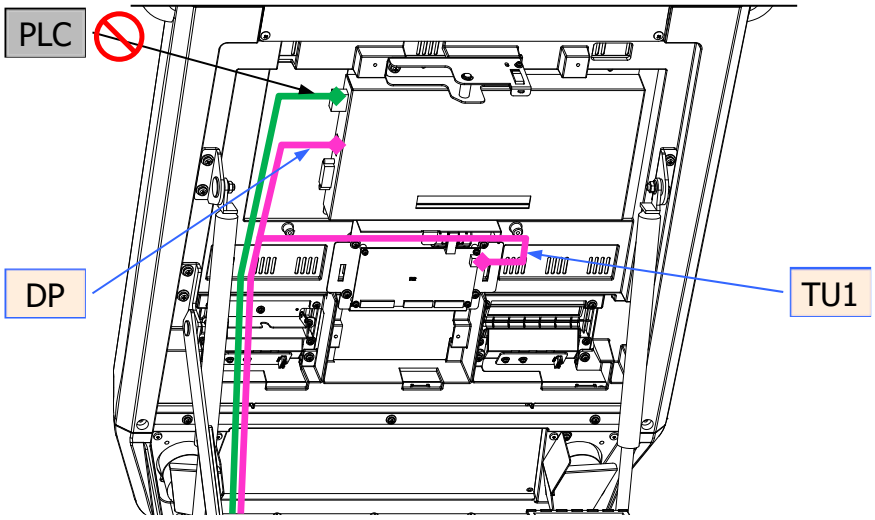
CAUTION!

It is recommended to have this procedure performed by at least 3 people.

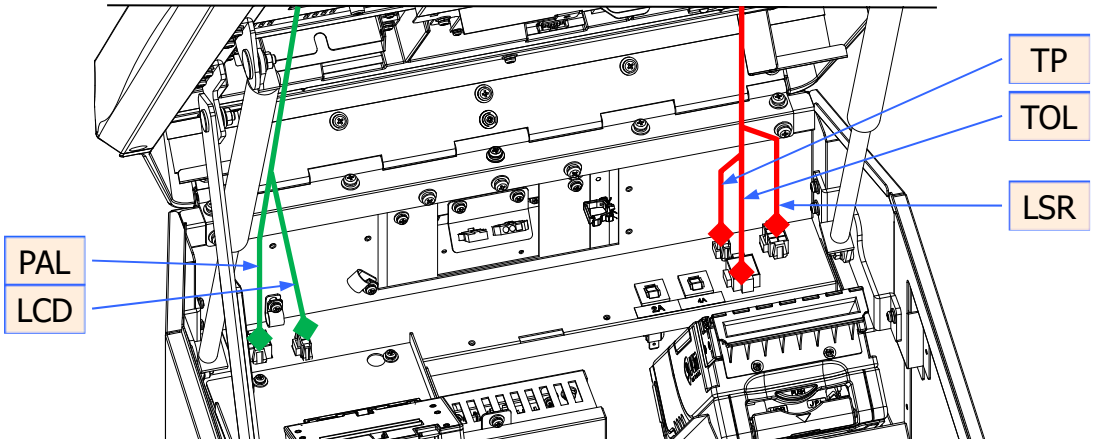
1. Unclamp the flexible cable fixed on the Touch Screen PCB Cover, and then remove 1 screw to detach the Touch Screen PCB Cover.



2. Disconnect the DP and TU1 connectors illustrated below. Loose the clamps where necessary. Do not disconnect the PLC connector. Arrange the disconnected connectors so that they will not get in the way of the next procedures.

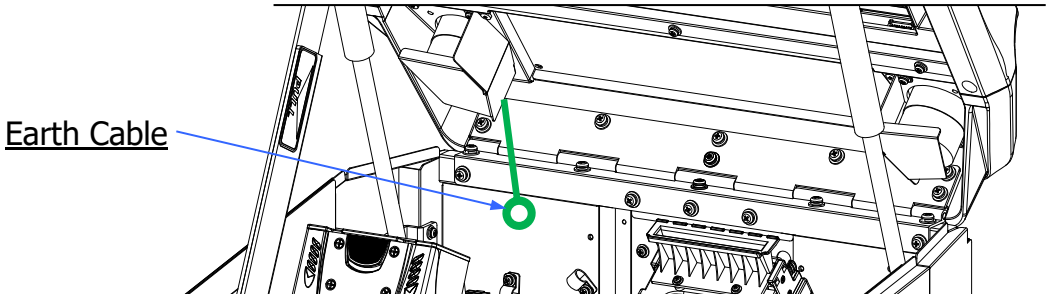


3. Disconnect the PAL, LCD, TP, TOL, LSR connectors linked to the Cabinet. Loose the clamps where necessary. Arrange the disconnected connectors so that they will not get in the way of the next procedures.

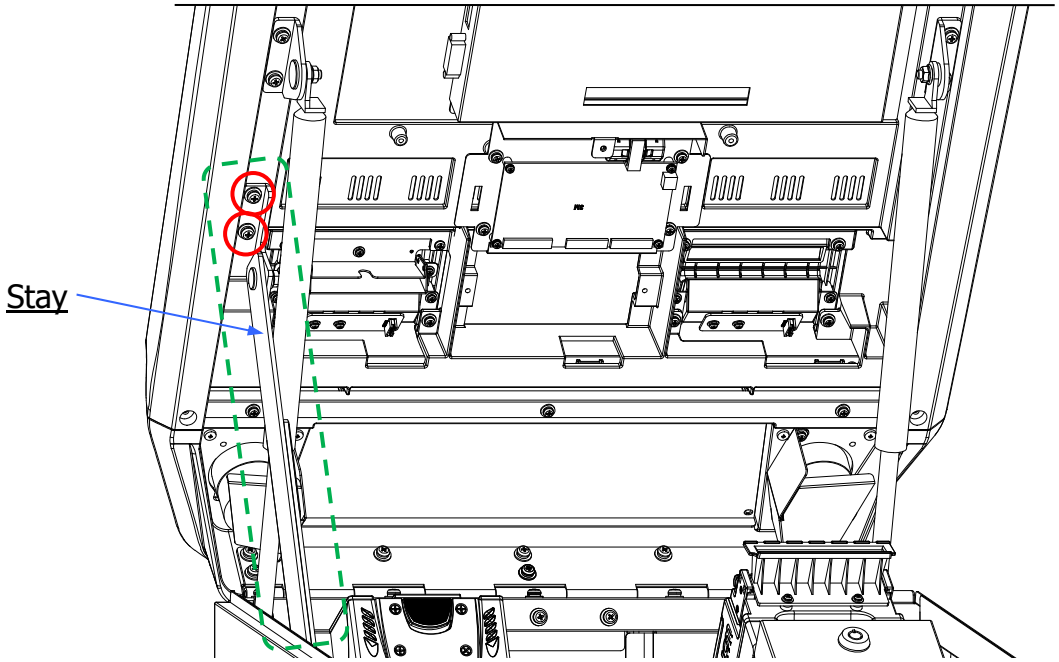


4. Remove 1 screw and disconnect the Earth Cable.

CAUTION!
When attaching the Top Door, do not forget to attach the Earth Cable.

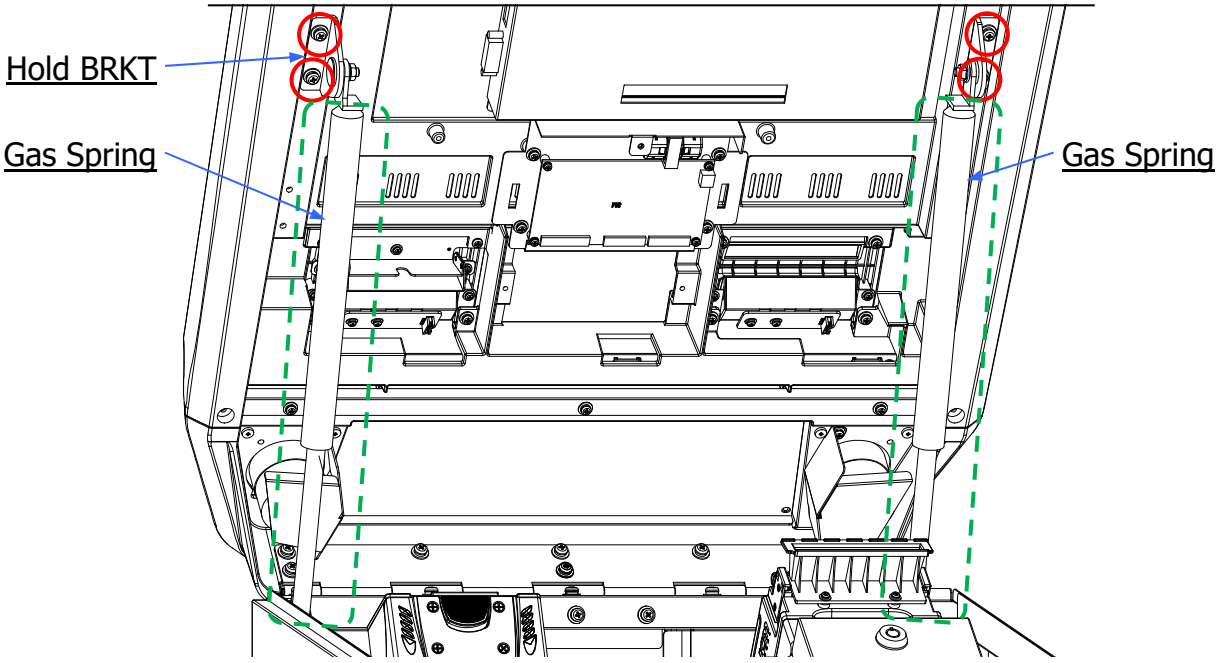


5. Remove the 2 screws to remove the Stay bar from the Top Door. Dispose of the removed Stay bar so that it does not get in the way of the next procedures.

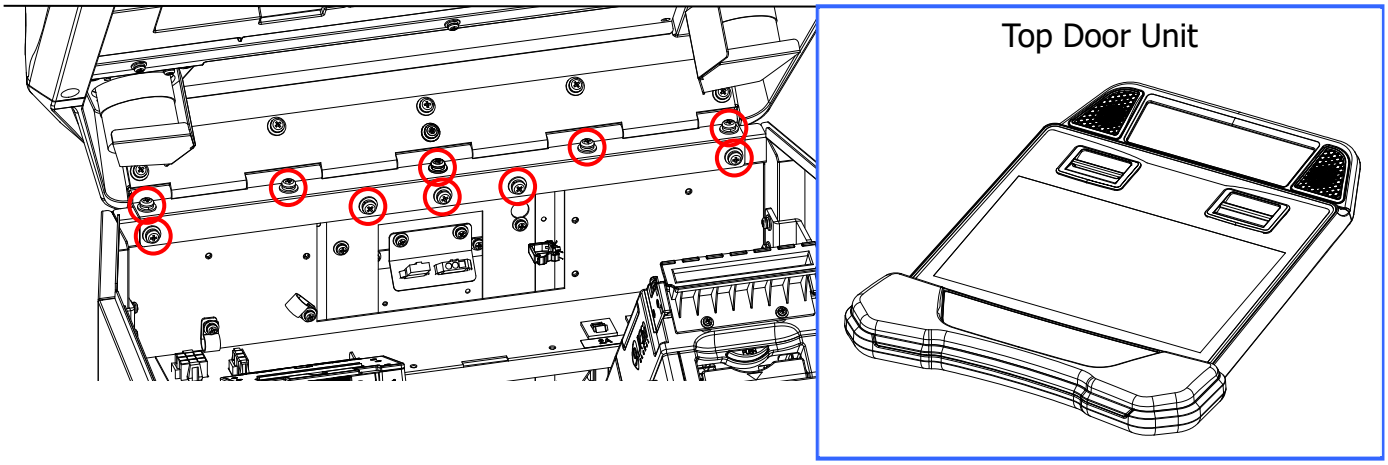


6. As one installer holds the Top Door, another installer can remove the 2 screws of each Hold BRKT, and detach the Gas Spring from the Top Door. Dispose of the removed Gas Spring so that it does not get in the way of the next procedures.

WARNING!
Do not loose hold of the Top Door after the Gas Spring has been removed.



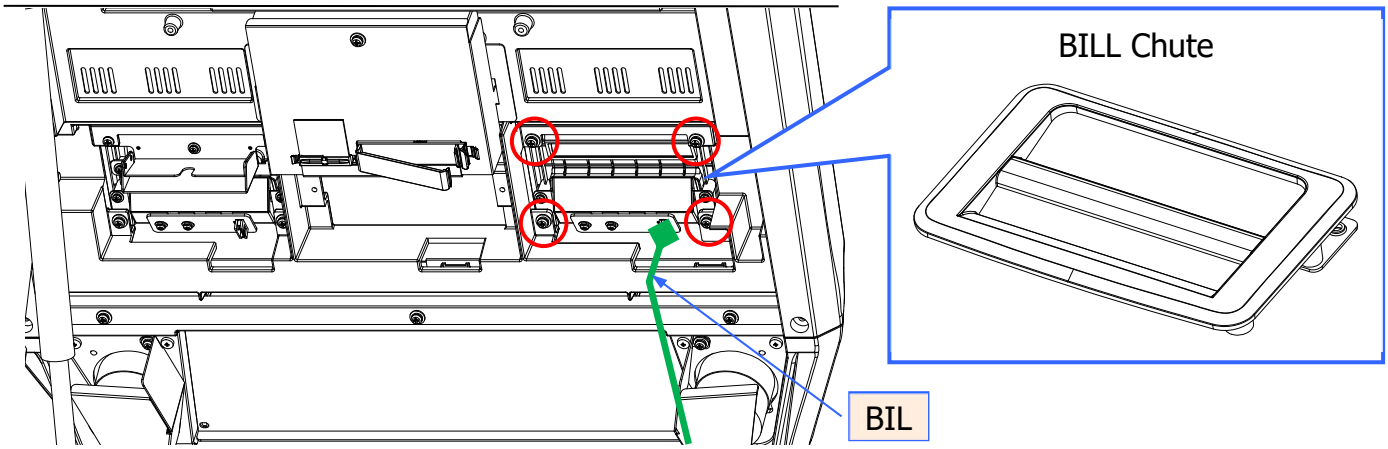
7. The Top Door Unit can be detached by removing the 10 screws marked in the illustration below.



7. 7. 2: BILL Chute and Printer Chute

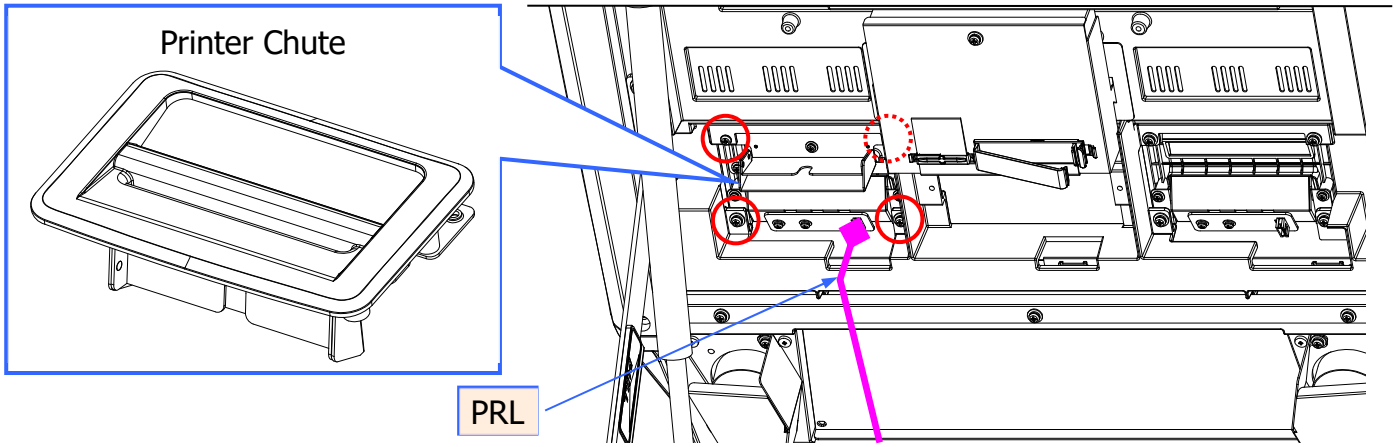
- BILL Chute -

1. Disconnect the BIL connector of the Top Door marked in the illustration below.
2. The BILL Chute can be detached by removing the 4 screws.



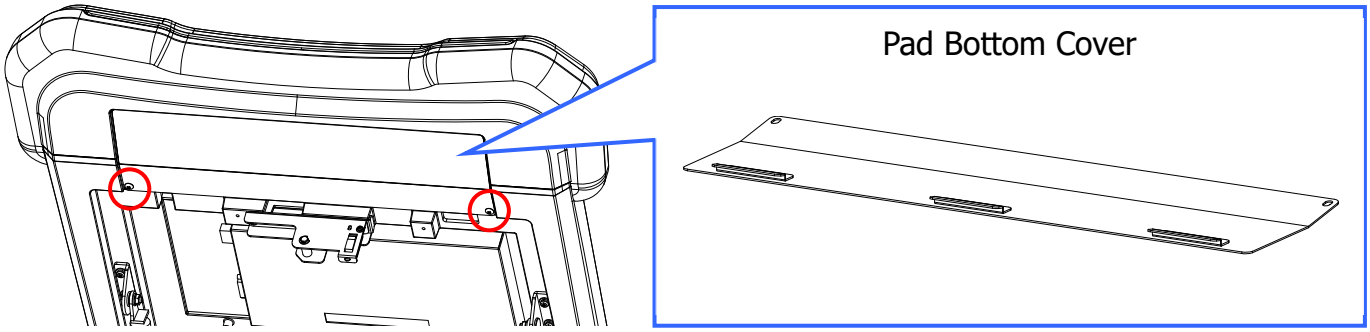
- Printer Chute -

1. Disconnect the PRL connector of the Top Door marked in the illustration below.
2. The Printer Chute can be detached by removing the 4 screws.



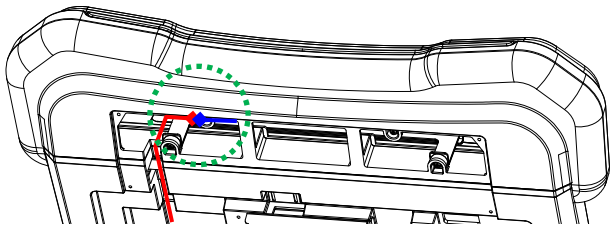
7. 7. 3: Control Panel, Armrest(Pad) and Armrest(Pad) LED

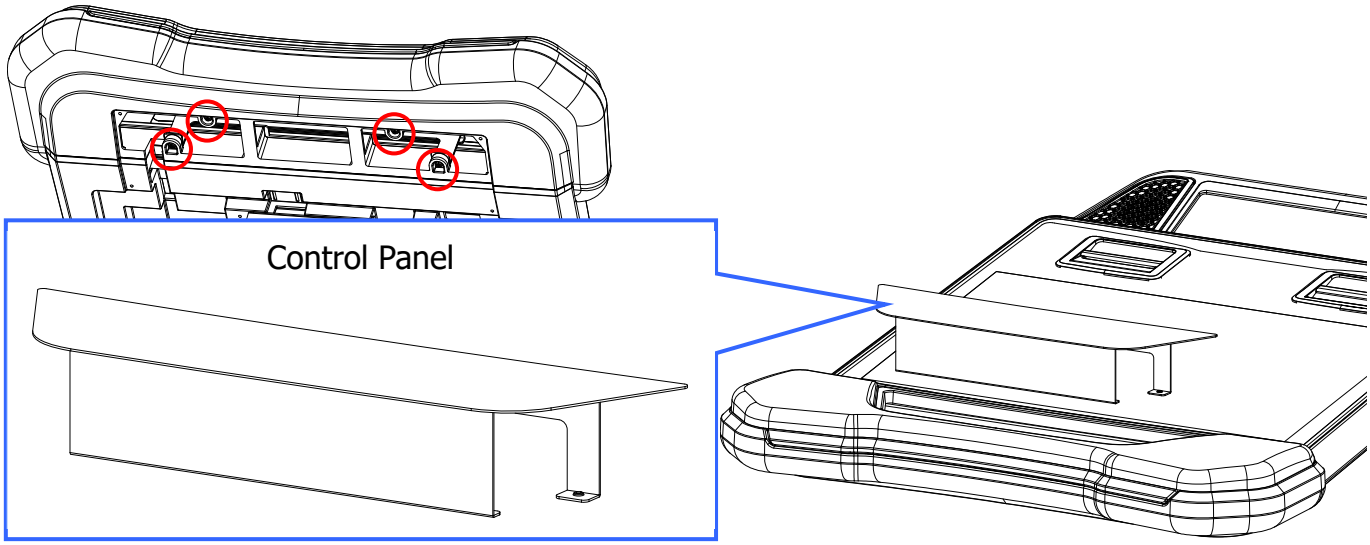
1. Remove the 2 screws to detach the Pad Bottom Cover.



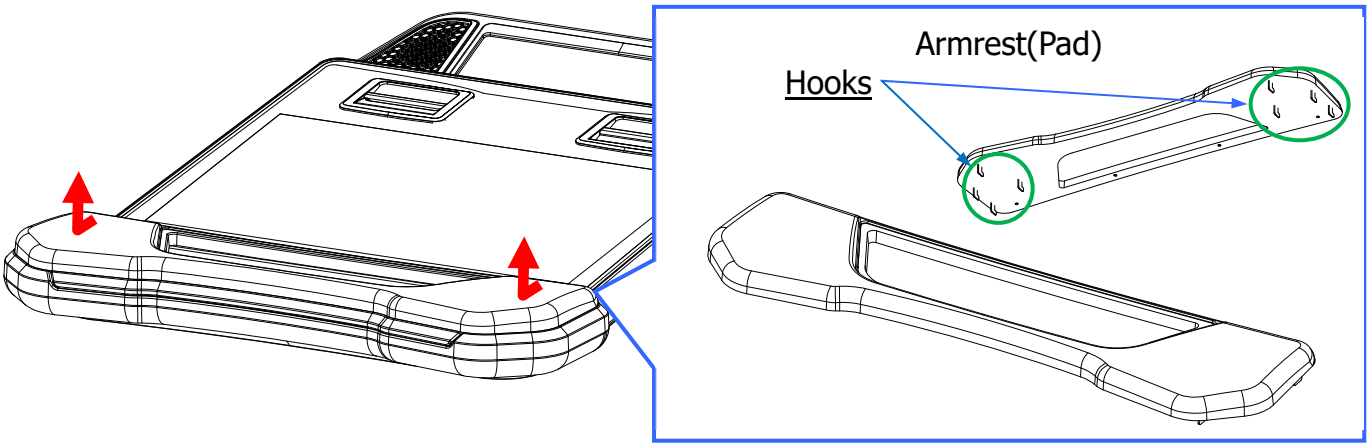
2. Remove the 4 screws to detach the Control Panel.

NOTE:
If a Connector is plugged to the Control Panel, first disconnect it.

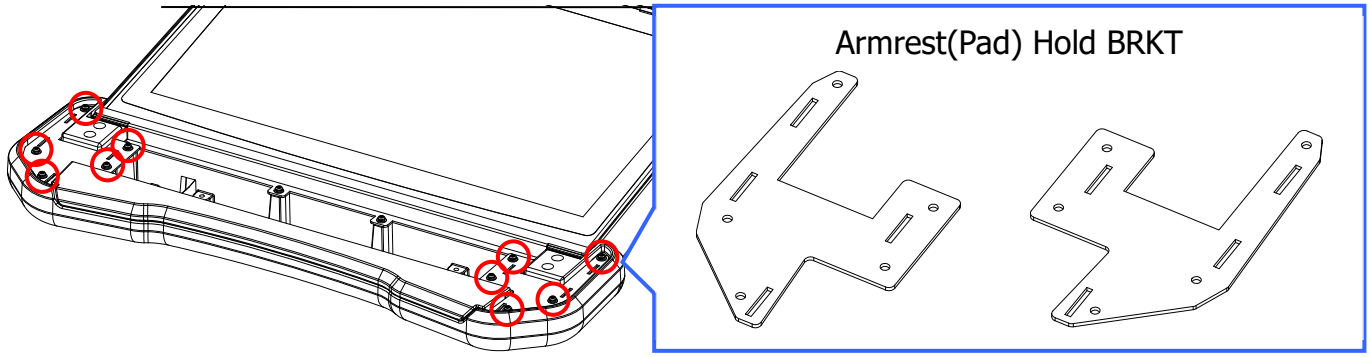




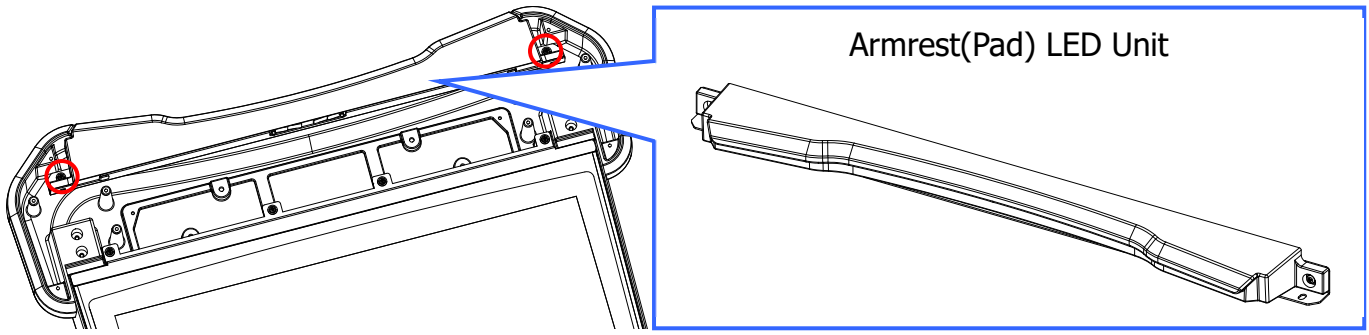
3. Slightly move forward the Armrest(Pad) and free the 8 Hooks placed in the inner side of the Armrest(Pad), and then it will be possible to detach it.



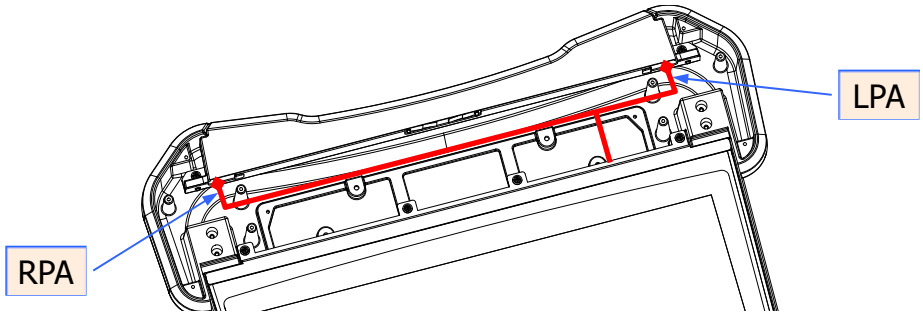
4. The left and right Armrest(Pad) Hold BRKT can be detached by removing the 5 screws on each.



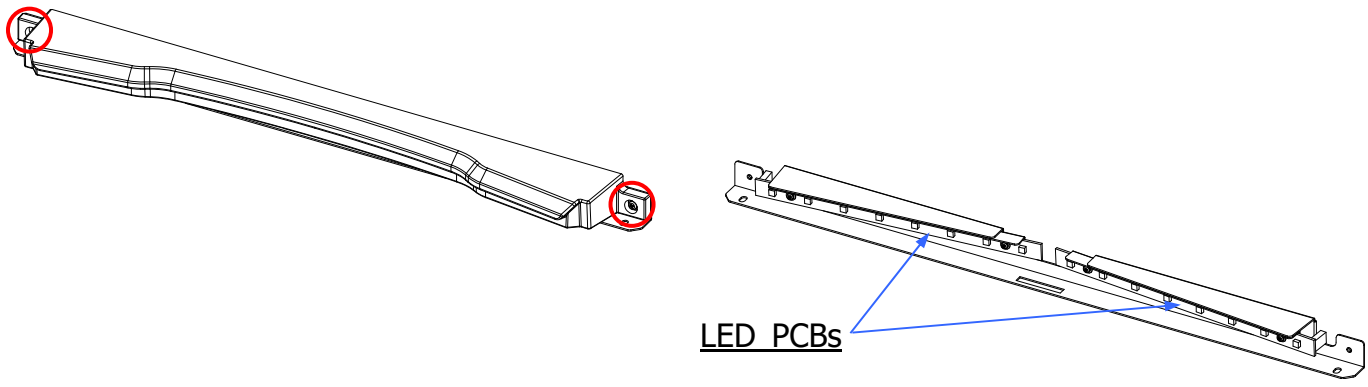
5. The Armrest(Pad) LED Unit can be detached by removing the 2 screws.



NOTE:
The LPA and RPA Connectors are connected to the Armrest(Pad) LED Unit. Handle with care.

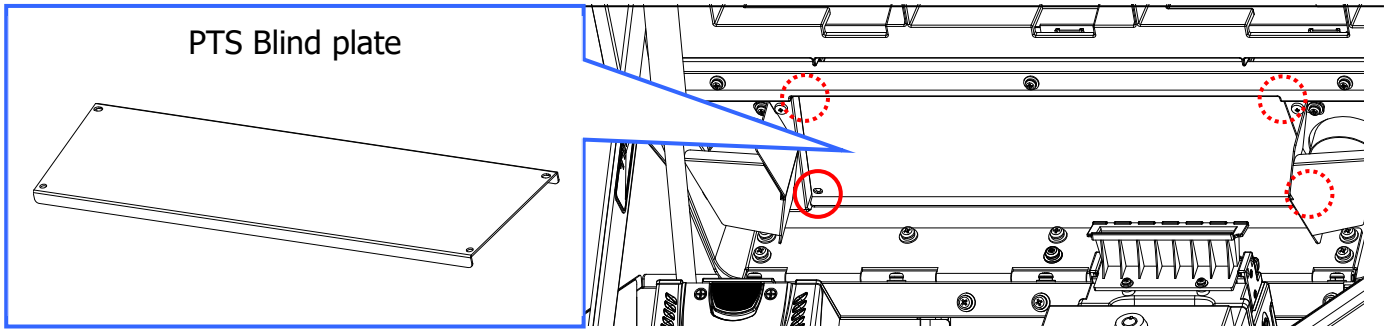


6. The LED Cover can be detached by removing the 2 screws.



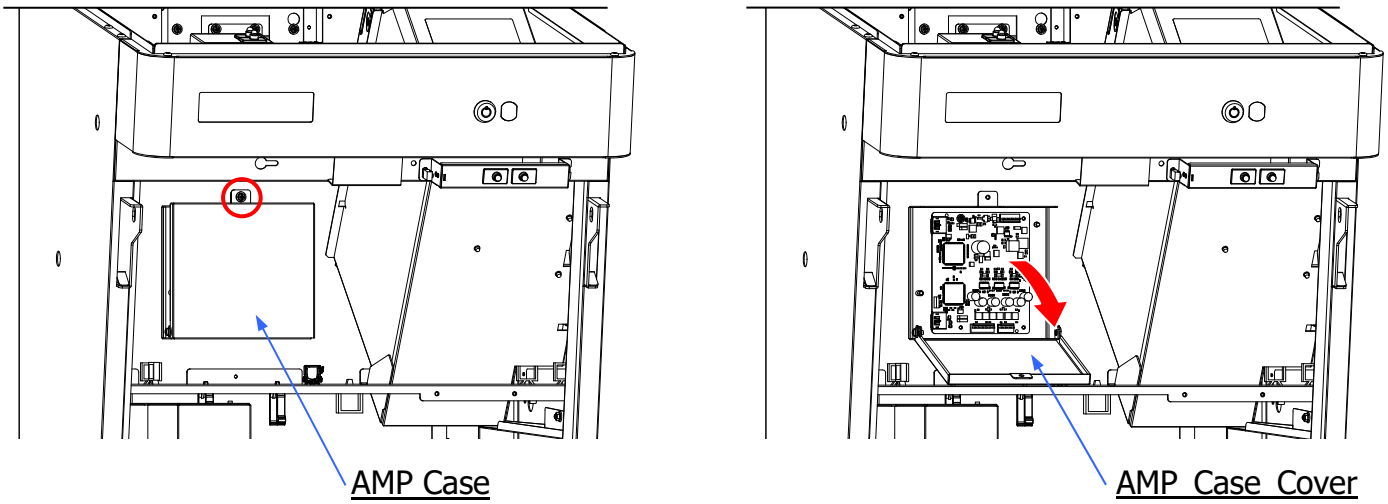
7. 7. 4: PTS Blind plate

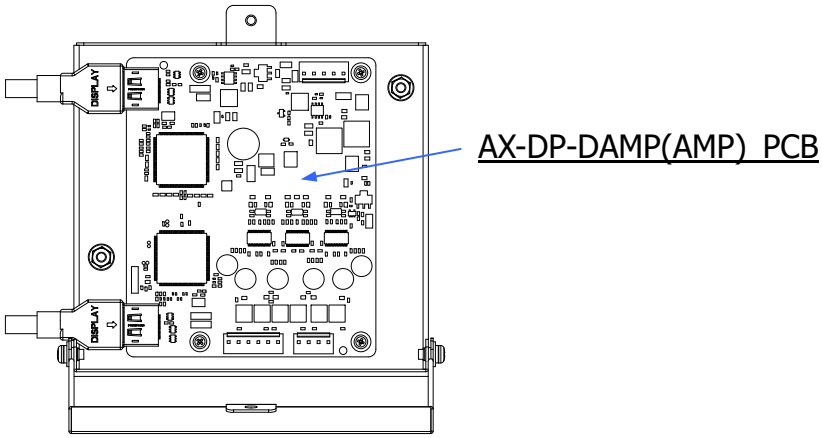
1. The PTS Blind plate can be detached by removing the 4 screws.



7. 7. 5: AMP Case

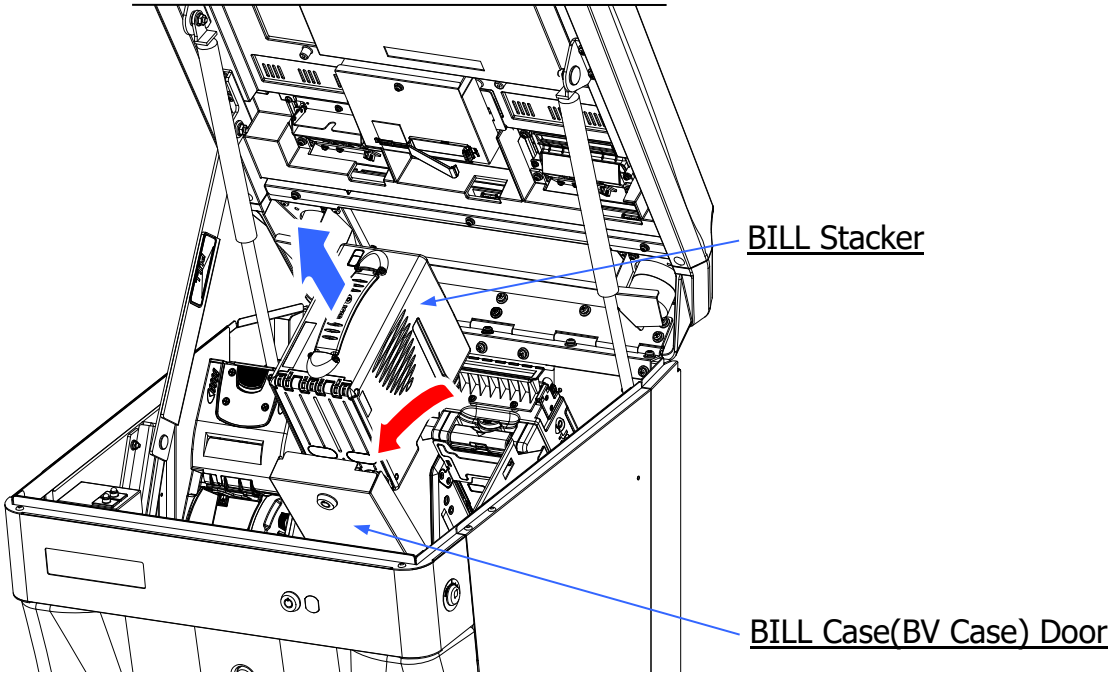
1. Locate the AMP Case on the inner side of the Cabinet. The AMP Case Cover can be opened by removing the screw on the top of the AMP Case.





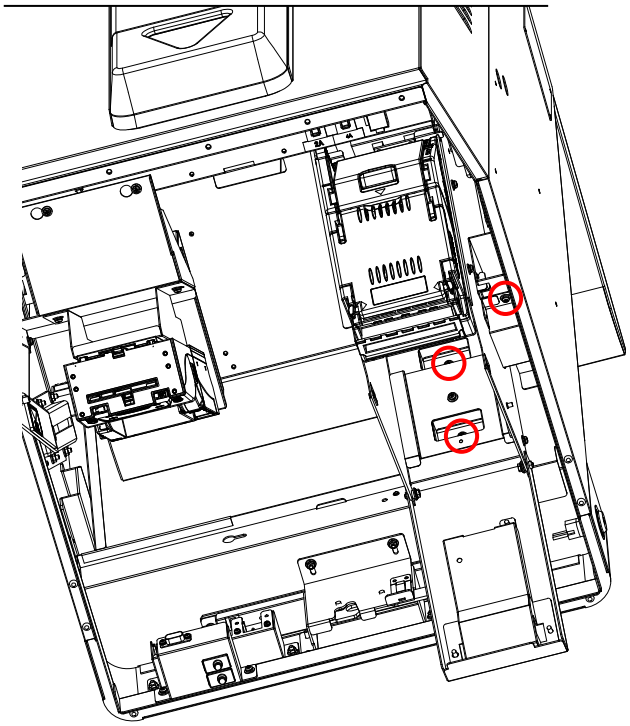
7. 7. 6: BILL Validator

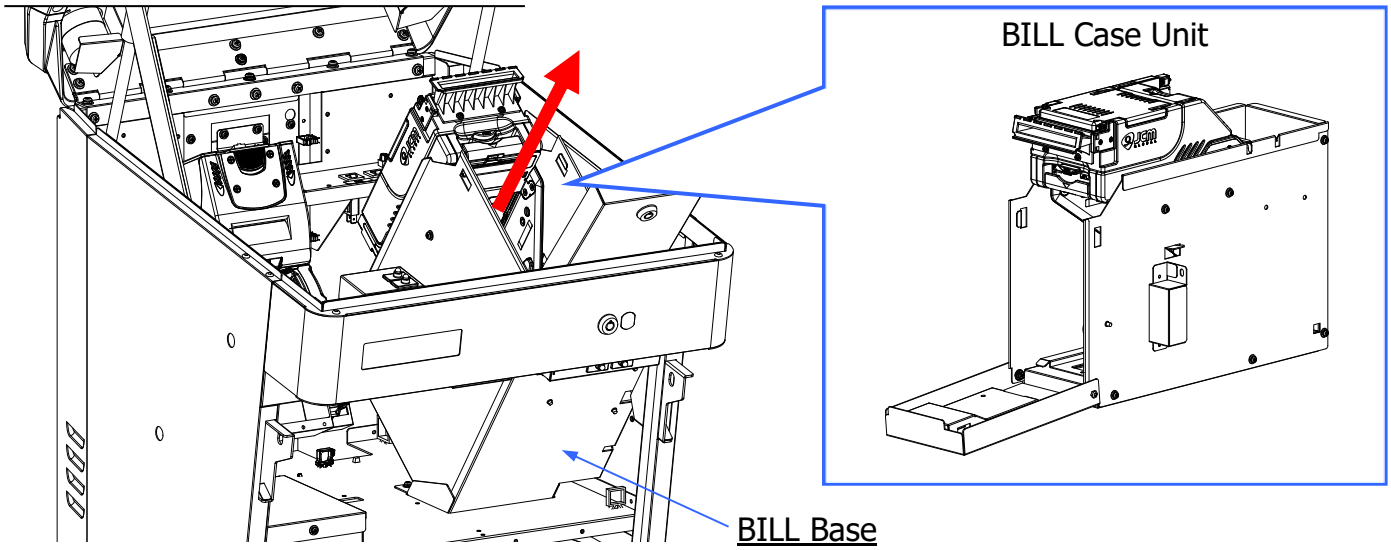
1. Locate the BILL Validator Unit on the right side of the cabinet. Open the BILL Case(BV Case) Door and take out the BILL Stacker.



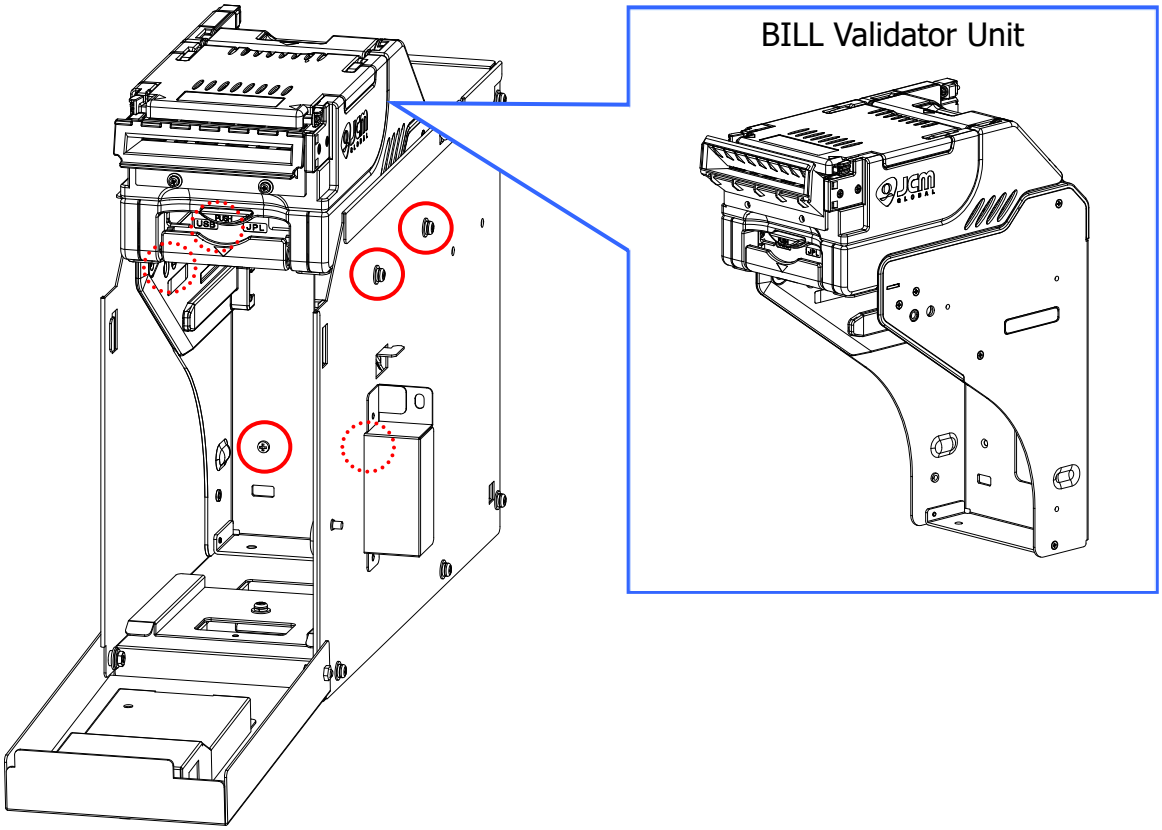
2. The BILL Case(BV Case) can be slid upwards along the BILL Base (BV Base) Unit and pulled out by removing the 1 screw on its right side and the 2 screws inside the hole on the bottom of the BILL Case(BV Case) Unit.

NOTE:
A harness is connected to the backside of the BILL Case Unit. Handle with care.





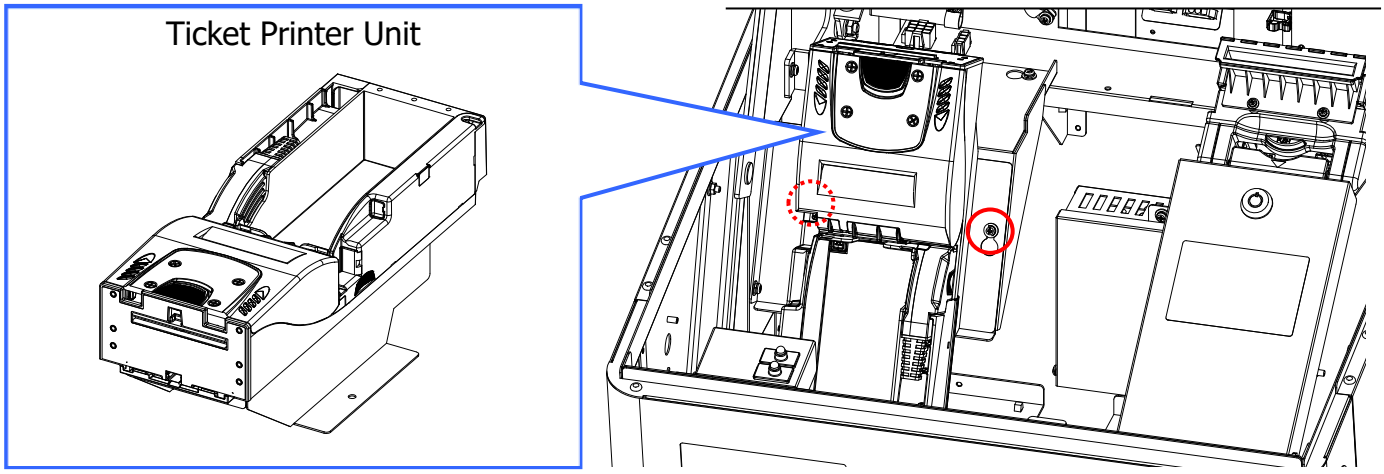
3. The BILL Validator Unit can be detached by removing the 4 screws on the outside and 2 screws on the inside.



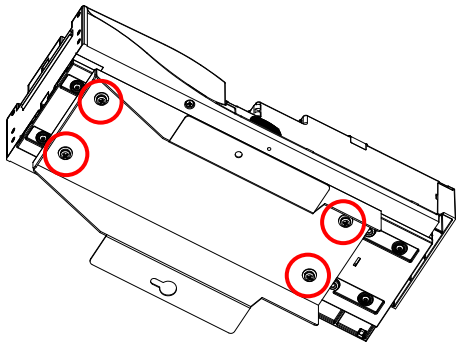
7. 7. 7: Ticket Printer

1. Locate the Ticket Printer Unit on the left side of the Cabinet. Remove the two screws on both the sides of the Ticket Printer, and then detach the Ticket Printer unit.

NOTE:
A harness is connected to the backside of the Ticket Printer, handle with care.

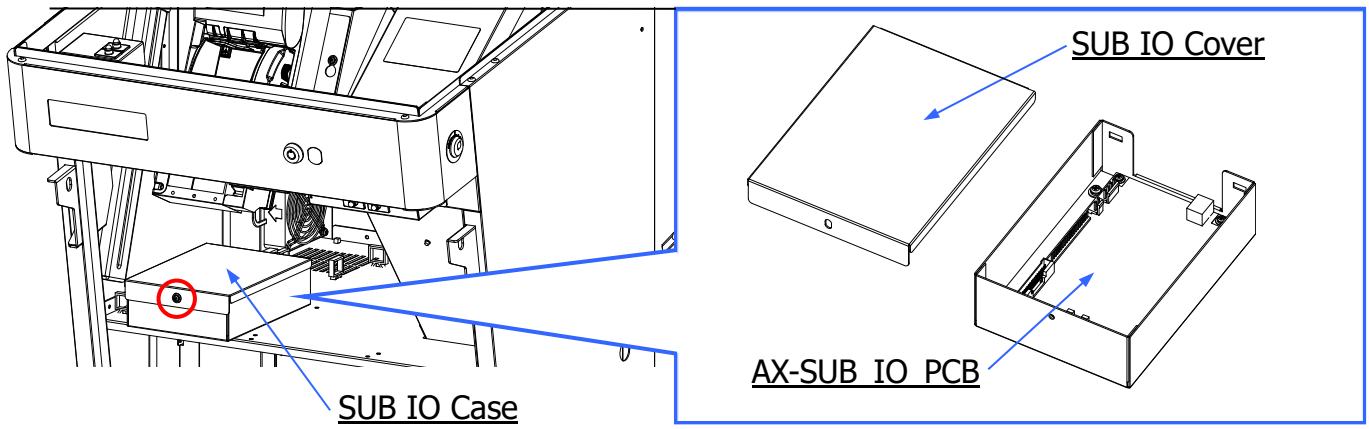


2. The Ticket Printer body can be detached from the bracket by removing the 4 screws on the backside.



7. 7. 8: SUB IO Case:Option

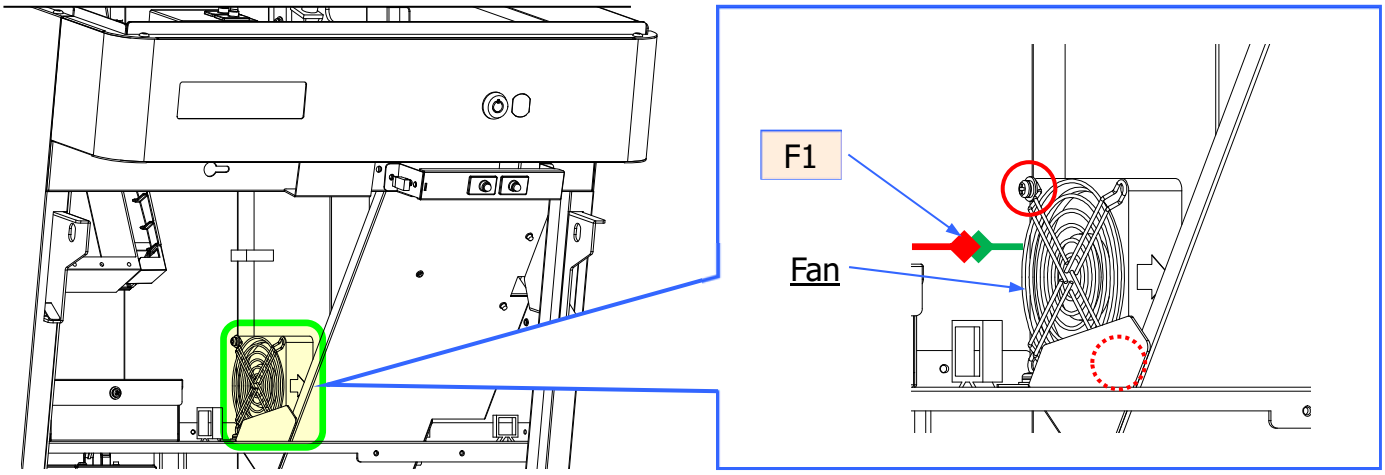
1. Locate the SUB IO Case on the inner front of the Cabinet. The SUB IO Cover can be detached by removing the screw.



7. 7. 9: Fan

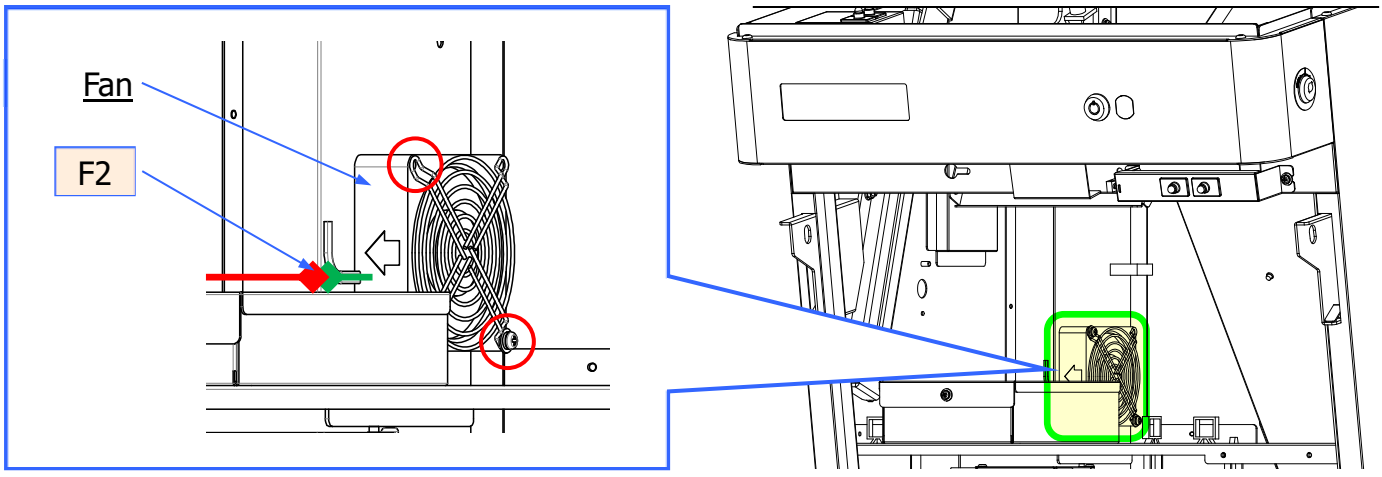
- Left side Fan -

1. Remove the BILL Case (BV Case). **(Refer to 7.7.6)**
2. Disconnect the Connector F1 from the Fan.
3. Fan can be detached by removing the 2 screws.



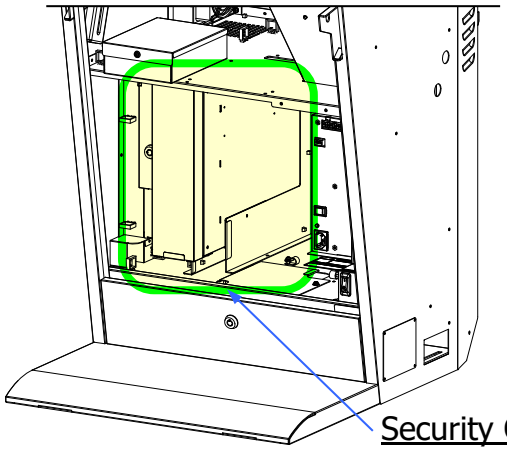
- Right side Fan-

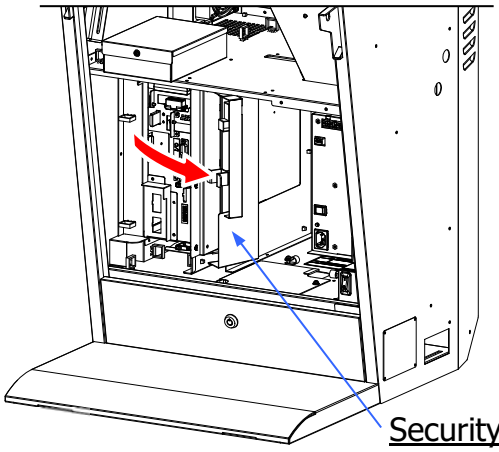
1. Remove the Ticket printer Unit. **(Refer to 7.7.7)**
2. Disconnect the Connector F2 from the Fan.
3. Fan can be detached by removing the 2 screws.



7. 7. 10: Security Cage

1. Unlock the Security Cage Front Cover to open it.



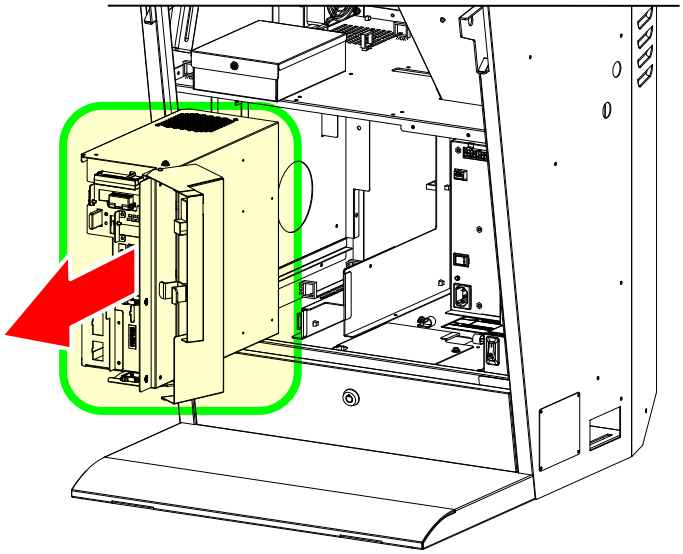


2. Disconnect all the Connectors and put them out of the way.

> **NOTE:**
> Please refer to **"Cable Connections"** on Chapter 3 when reconnecting the Connectors.

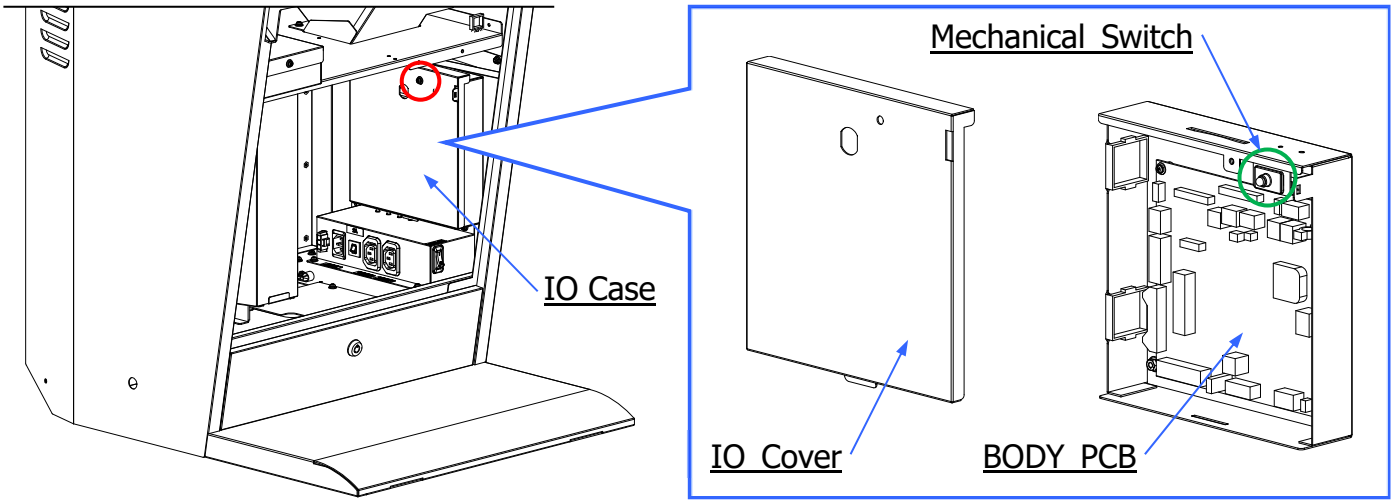
3. Pull out the Security Cage.

> **CAUTION!**
> Handle the Security Cage Unit with care, as the parts inside the Security Cage are vulnerable to static electricity.



7. 7. 11: IO Case

1. Locate the IO Case on the right side of the cabinet. The IO Cover can be detached by removing the screw.

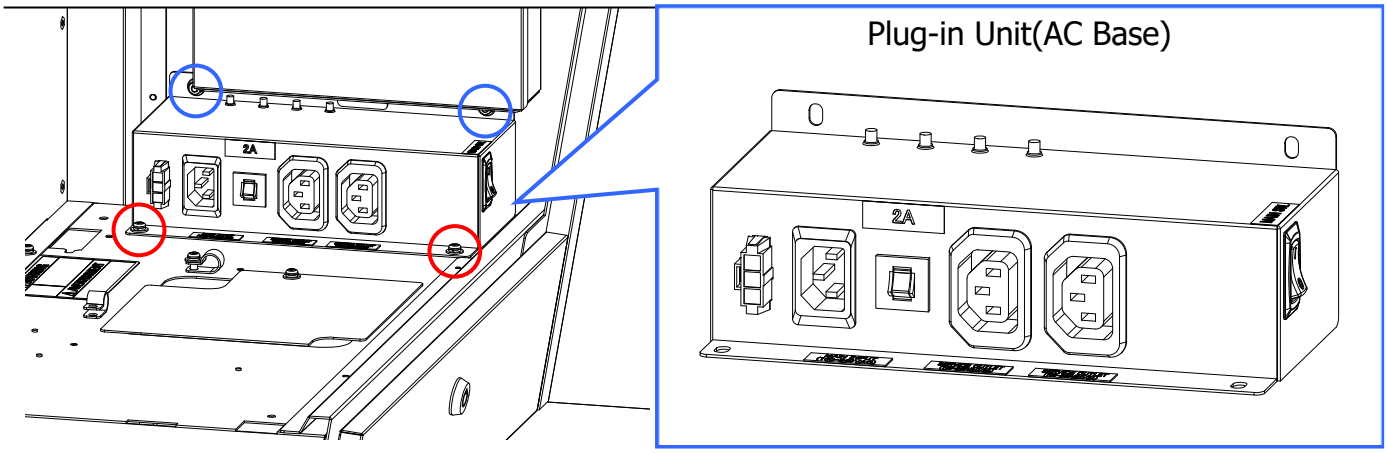


7. 7. 12: Plug-in Unit(AC Base)

1. Locate the Plug-in Unit(AC Base) on the right side of the cabinet.

DANGER!
Disconnect the all cables and harnesses from the Plug-in Unit(AC Base) Inlet before operation.

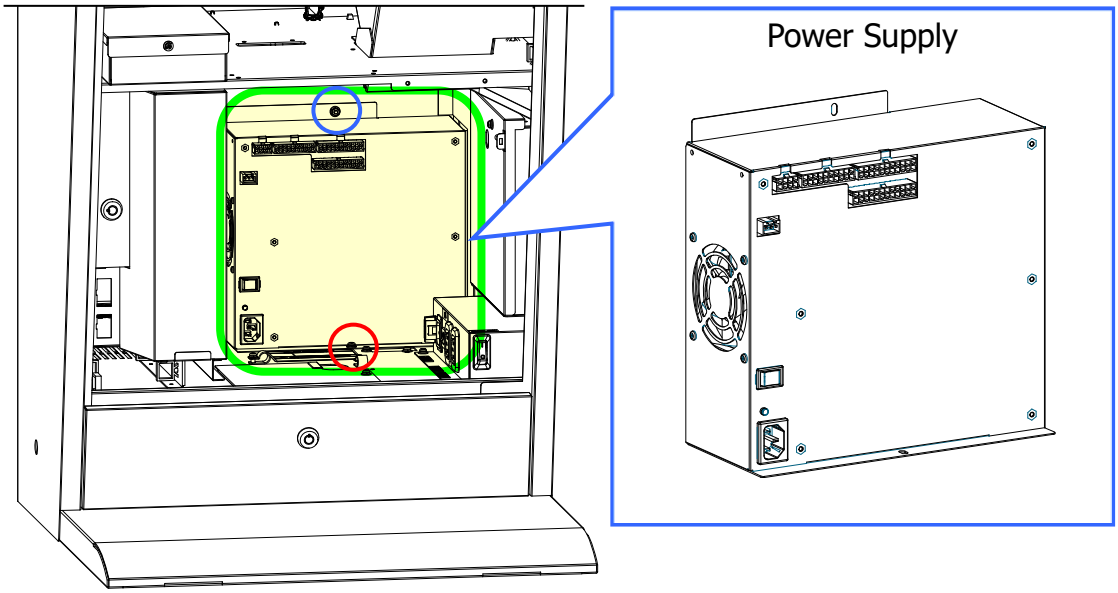
2. The Plug-in Unit(AC Base) can be detached by removing 2 screws and 2 nuts.



DANGER!
Be careful not to pinch or damage the harnesses when installing/detaching the Plug-in Unit (AC Base).

7. 7. 13: Power Supply

1. Locate the Power Supply on the inner back wall of the Cabinet, and then disconnect all the harnesses and cables from the Power Supply.
2. Remove the nut and screw to detach the Power Supply.

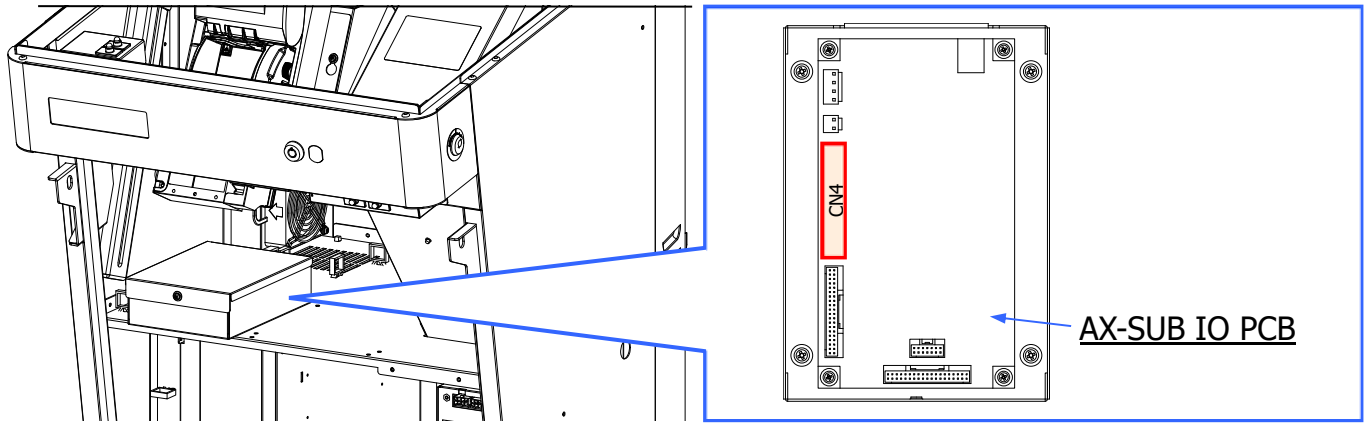


DANGER!

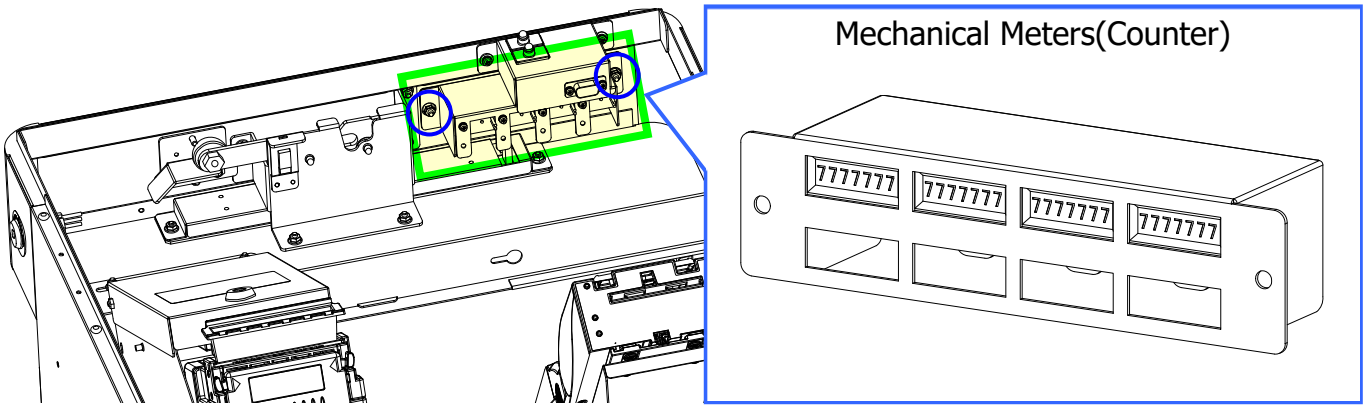
Be careful not to pinch or damage the harnesses when installing the Power Supply.

7. 7. 14: Mechanical Meters(Counter):Option

1. Open the SUB IO Case and Disconnect the Connector CN4 from the AX-SUB IO PCB. **(Refer to 7.7.8)**

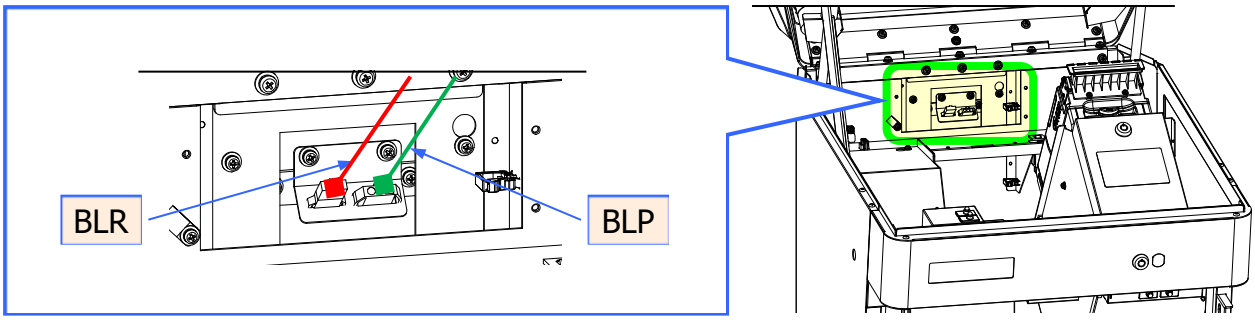


2. The Mechanical Meters (Counter) can be detached by removing the 2 nuts.



7. 7. 15: Back LED

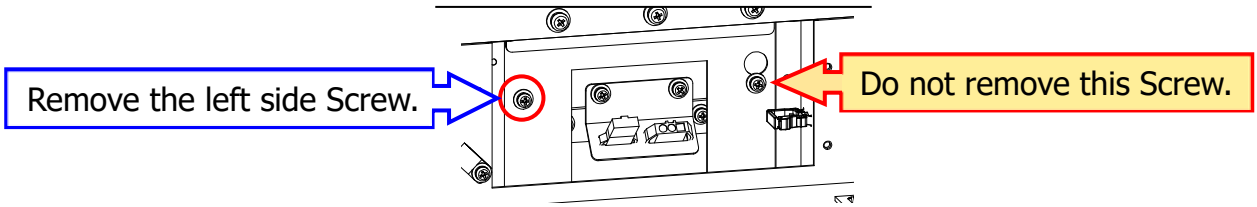
1. Disconnect the Connector BLR and BLP.



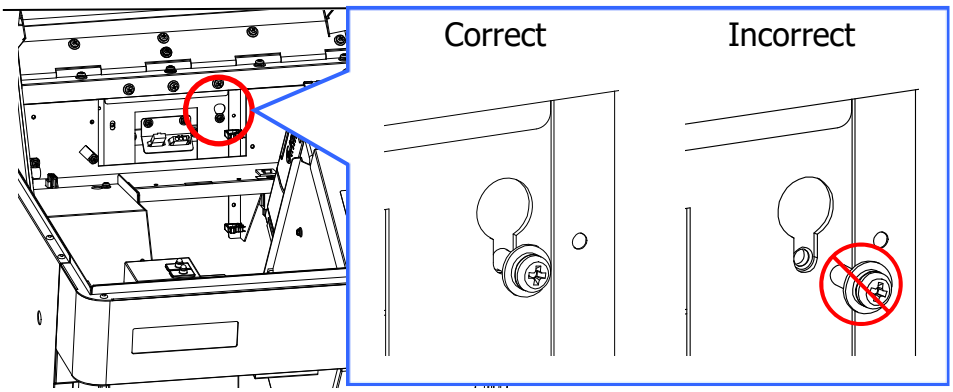
2. Out of the 2 screws on the left and right side, remove only the one on the left side.

CAUTION!

Do not remove the right side screw.



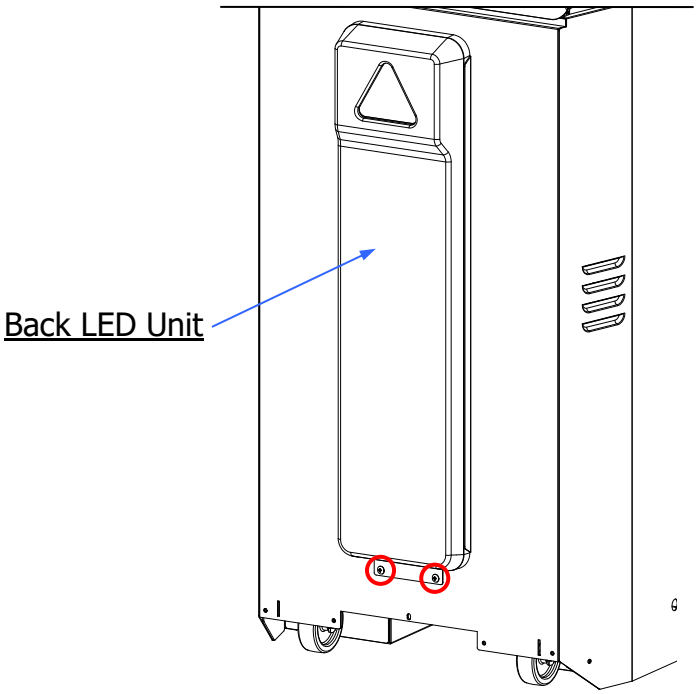
3. Then, loose the right side screw. Do not remove it.



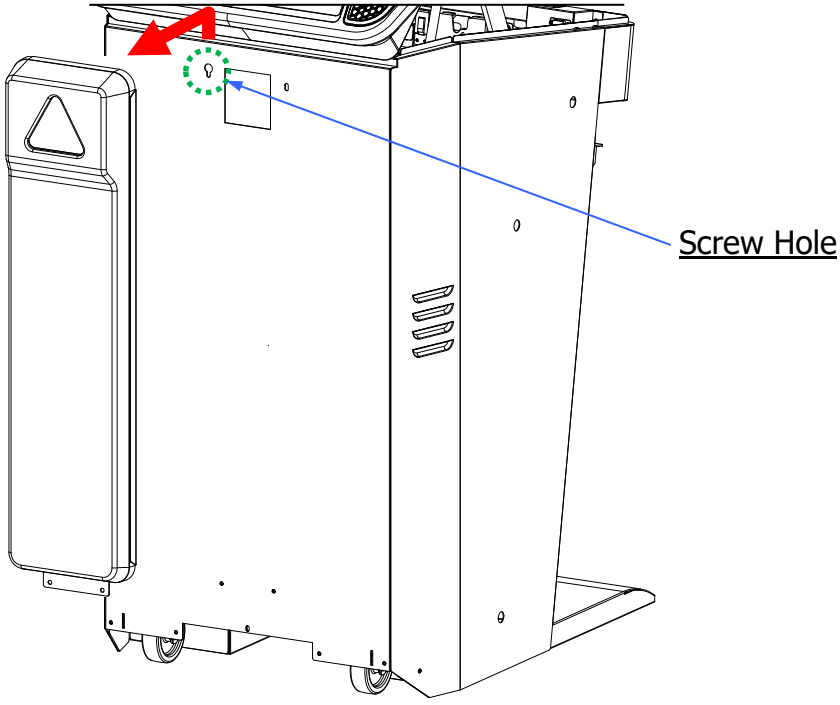
4. Remove the 2 screws at the bottom of the Back LED Unit.

CAUTION!

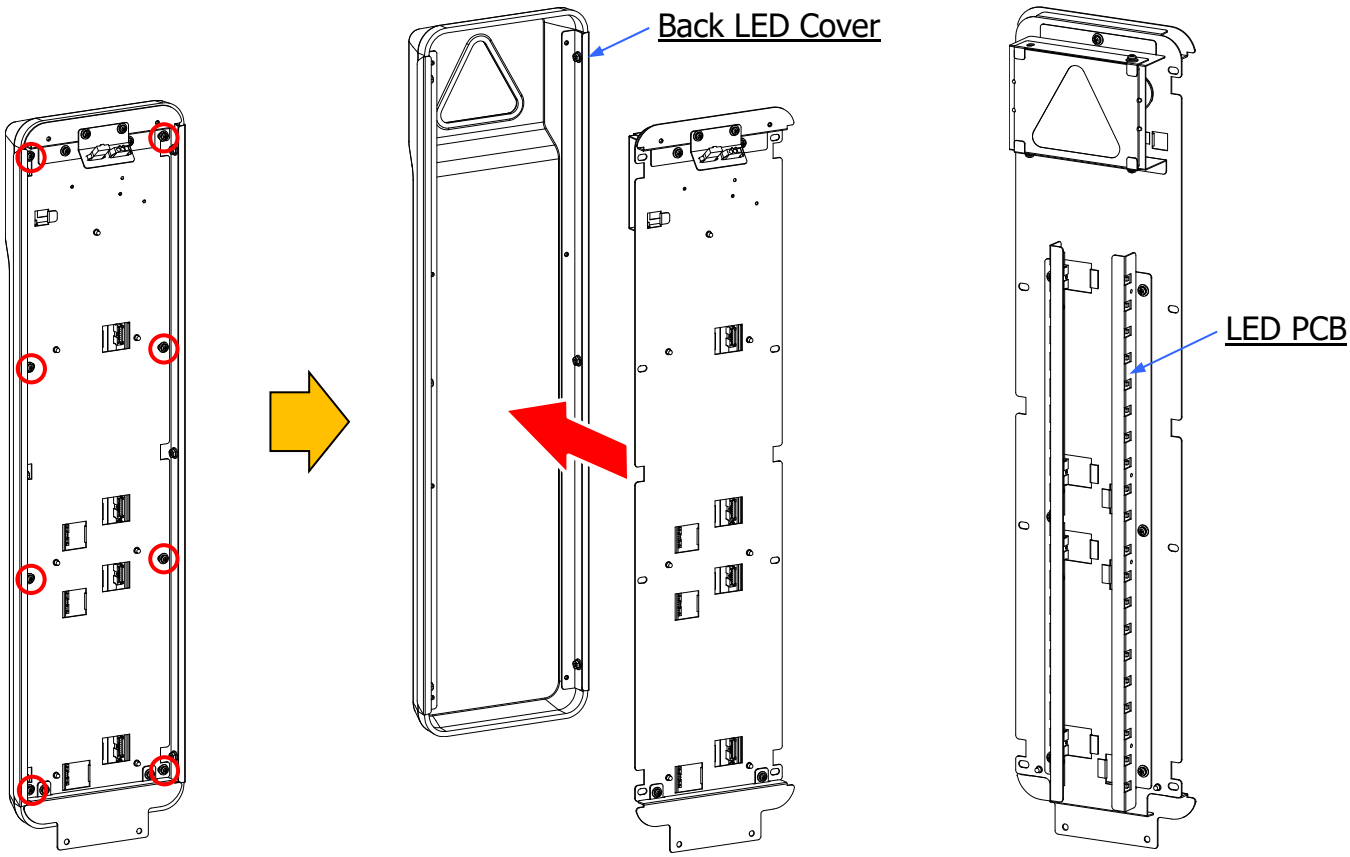
By removing the screws described above, the Back LED Unit will hang only on the screw loosen at step 3. Pay attention not to let the Back LED Unit fall.



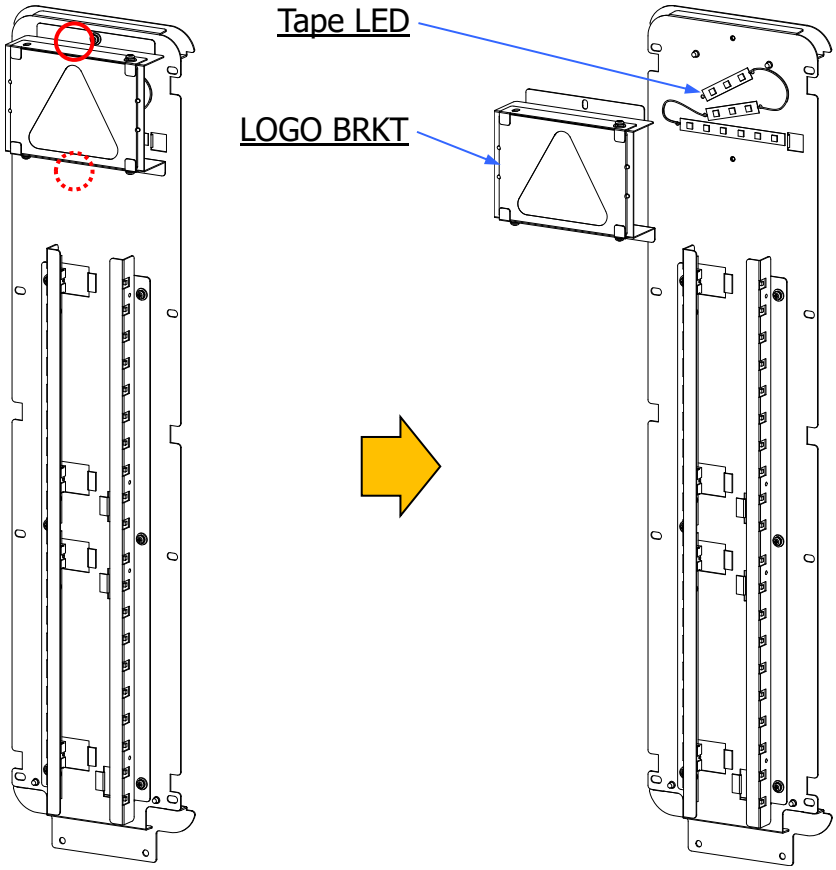
5. Lift slightly the Back LED Unit, and remove the screw loosen at step 3 from its hole. Then detach the Back LED unit.



6. The Back LED Cover can be detached by removing the 8 screws.



7. The LOGO BRKT can be detached by removing the 2 screws.



7. 8: Replacement of Expendable Supplies

DANGER!

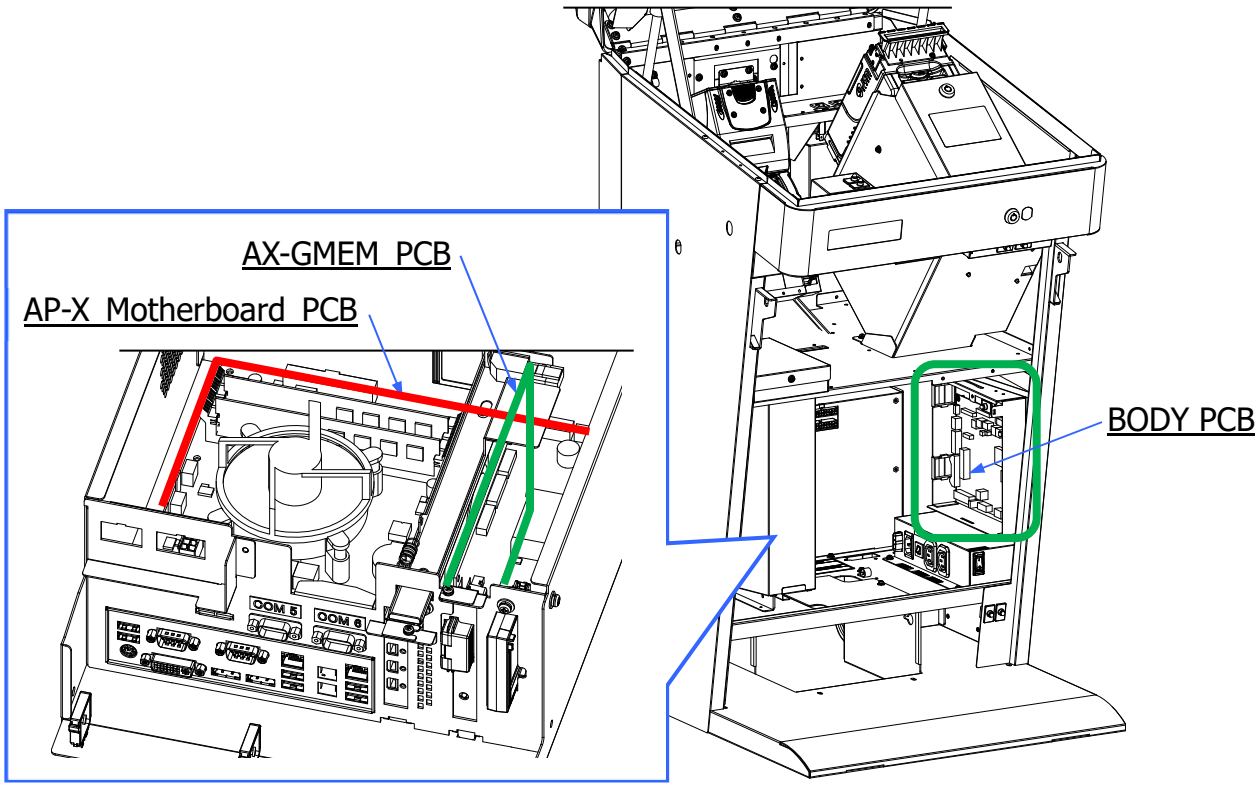
Ensure that the machine is turned off before replacing any expendable items.

7. 8. 1: Lithium Battery

A lithium battery is mounted on the AP-X motherboard PCB, the AX-GMEM PCB and the BODY PCB, in order to back up the important data. The procedures to replace the lithium batteries are outlined below:

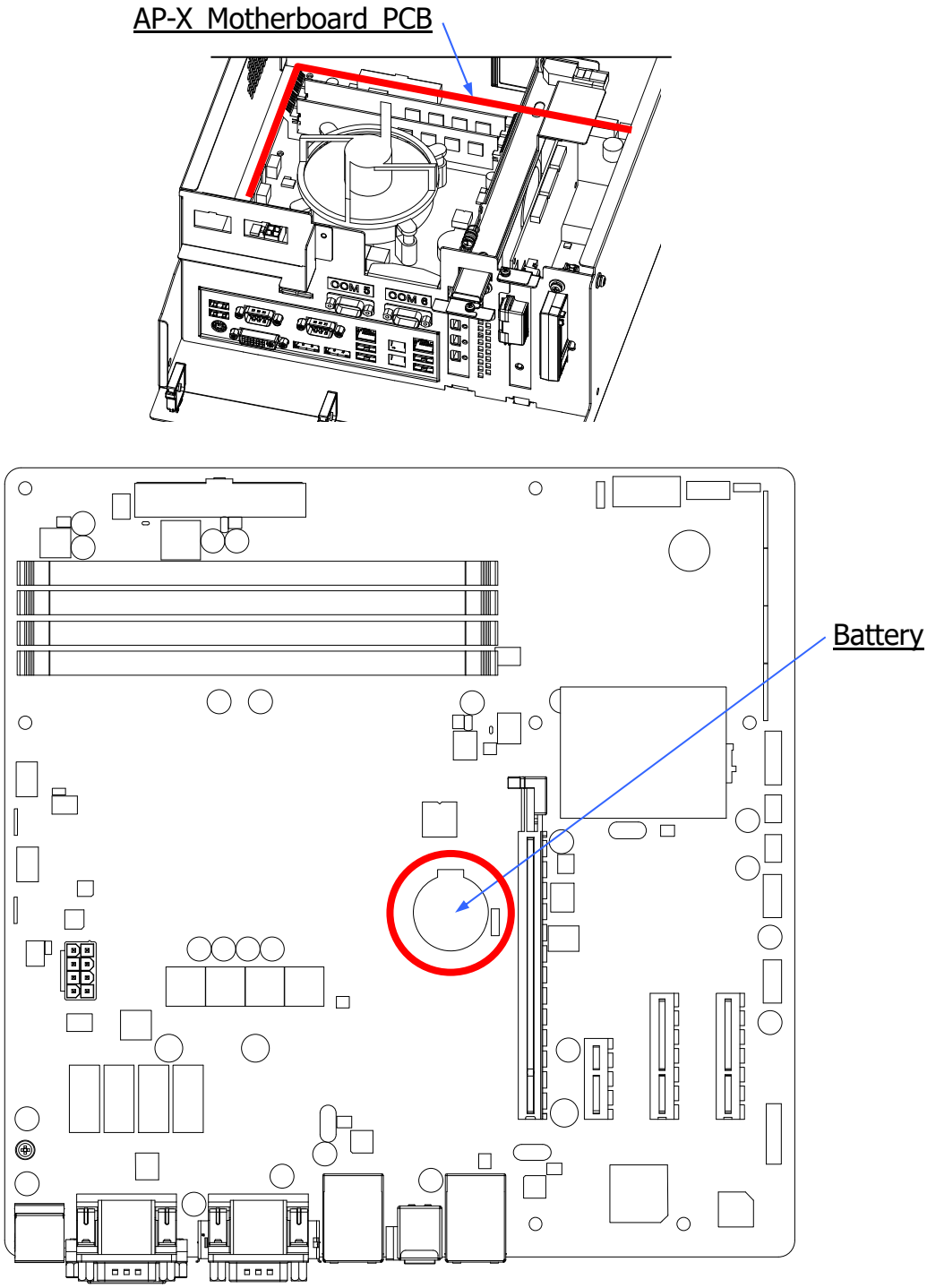
CAUTION!

- Before replacing the lithium batteries, take note of all necessary data.
  Battery replacement after turning the power off may cause data to be deleted.
- When exchanging the lithium batteries, use an officially provided lithium battery.
  Risk of Explosion if lithium battery is replaced by an incorrect type.
- Before mounting a lithium battery, verify its polarity.
  Mounting a battery in a wrong direction may damage the PCBs.
- Used lithium batteries must be disposed as instructed.
  Refer to SAFETY INSTRUCTIONS, **"Disposal of Lithium Batteries"**.



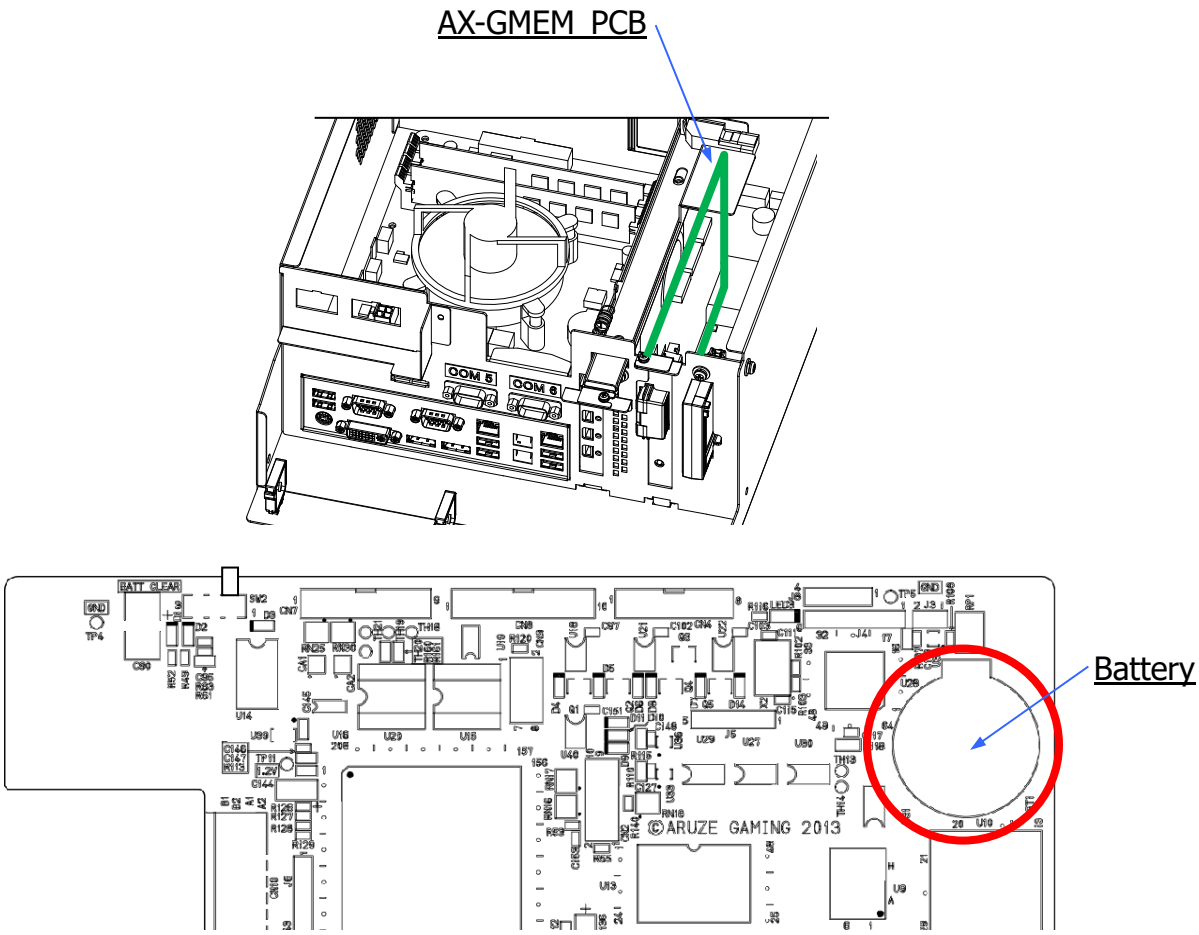
- AP-X Mother board PCB -

Pull out the Security Cage and replace the lithium battery on the AP-X Mother Board PCB. **(Refer to 7.7.10)**



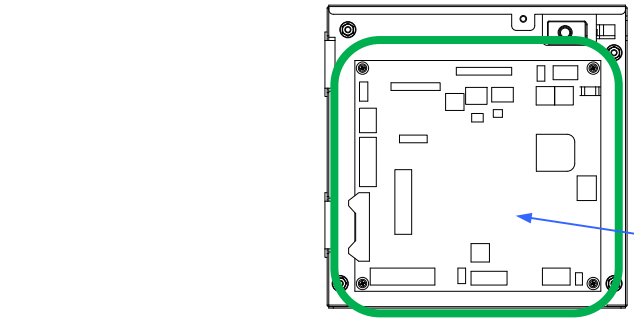
- AX-GMEM PCB -

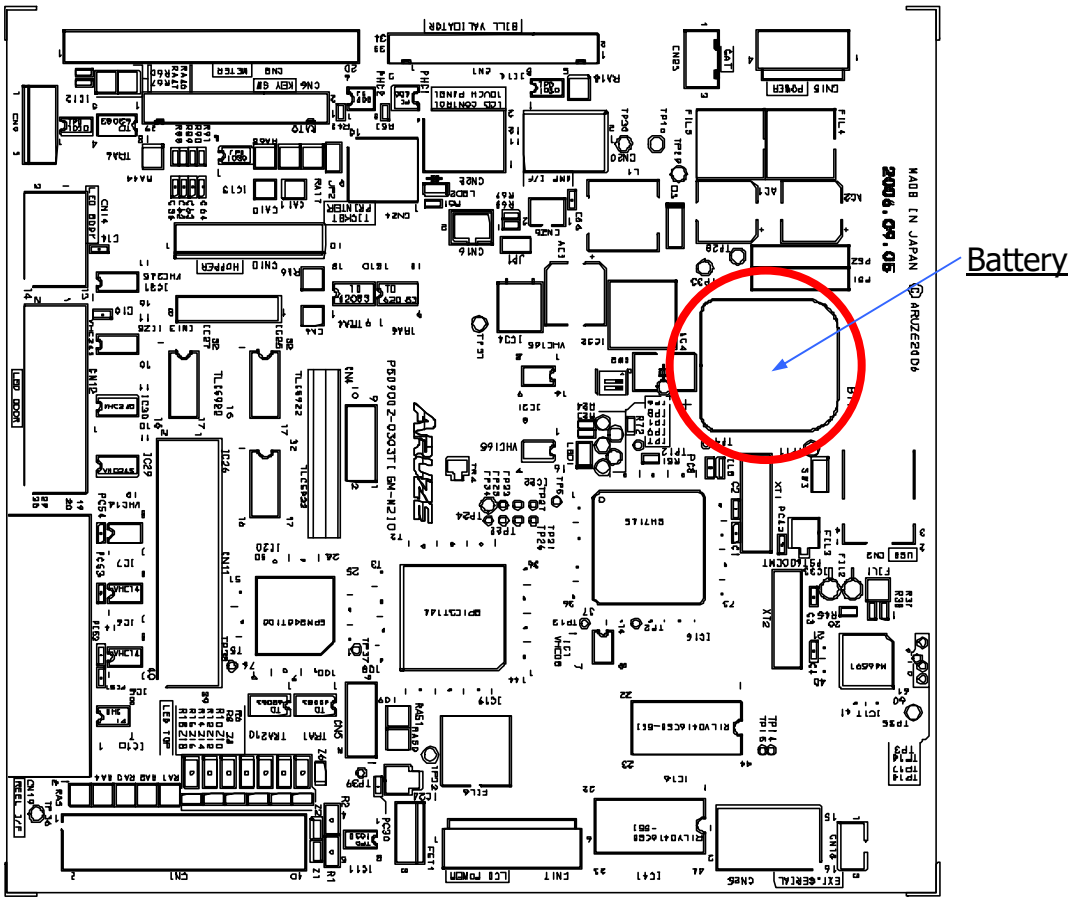
Take out the Security Cage and change the lithium battery on the AX-GMEM PCB. **(Refer to 7.7.10)**



- BODY PCB -

Open the IO Case and change the Lithium Battery on the BODY PCB. **(Refer to 7.7.11)**





Chapter 8

Troubleshooting

This chapter explains troubleshooting measures for the cabinet. If an error occurs, check the corresponding error cause and remedy, starting with number 1 in the troubleshooting charts.

CALL SERVICE IMMEDIATELY!

If an error persists after checking all the items, contact your local office or distributor.

8. 1: Errors during Power Up Self Test

8. 1. 1: 1st Monitor connection test
2nd Monitor connection test

NORMAL	OK	**ABNORMAL**	DISCONNECTED
WHAT	LCD Connection Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	Display port cable error.	Check for connection faults and disconnections.	Make sure the display port cable is properly connected or replace the display port cable.
2	The LCD power is not turned ON.	Check the power switch of the LCD.	Turn on the power for the LCD unit.
3	LCD or AX-DP-DAMP PCB input voltage error.	Check the voltage.	The DC power box requires replacement.

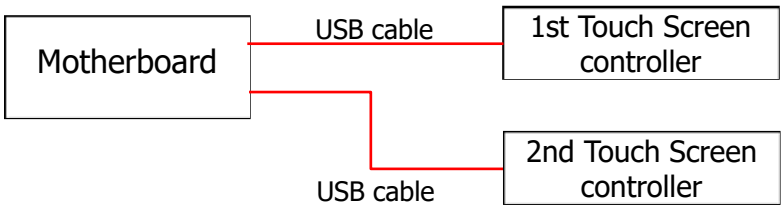
CHECK ROUTE
※ Refer to Block Diagram.

8. 1. 2: 1st Touch Screen connection test
2nd Touch Screen connection test (Option)
Touch screen connection test

NORMAL	OK	**ABNORMAL**	DISCONNECTED
WHAT	Touch Screen Connection Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	USB cable error.	Check for connection faults and disconnections.	Make sure the USB cable is properly connected or replace the USB cable.
2	USB DC power supply error	Check for connection faults and disconnections.	The Motherboard requires replacement.

CHECK ROUTE



The Touch panel connector is an exclusive connector, not a USB connector.

8. 1. 3: Backup memory test

NORMAL	OK	**ABNORMAL**	POWER OFF DURING WRITING/CRACKED
WHAT	Backup Memory Corruption Check.		
WHEN	During power up.		
ERROR RESET	RAM clear.		

CAUSE		**CHECK**	**REMEDY**
1	Backup Memory Corruption.	---	RAM clear.
2	GMEM PCB error.	---	The GMEM PCB requires replacement.
3	Motherboard or PCI express slot error.	---	The Motherboard requires replacement.

8. 1. 4: Backup version test

NORMAL	OK	**ABNORMAL**	FAULT
WHAT	Comparison Test between the version previously activated and the current version.		
WHEN	During power up.		
ERROR RESET	RAM clear.		

	CAUSE	**CHECK**	**REMEDY**
1	The version differs from the backup version.	---	RAM clear.

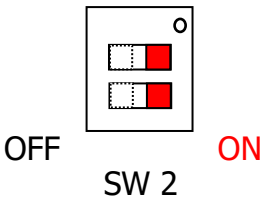
8. 1. 5: BODY PCB battery test
NOKI PCB battery test
SIGA PCB battery test
SIGB PCB battery test

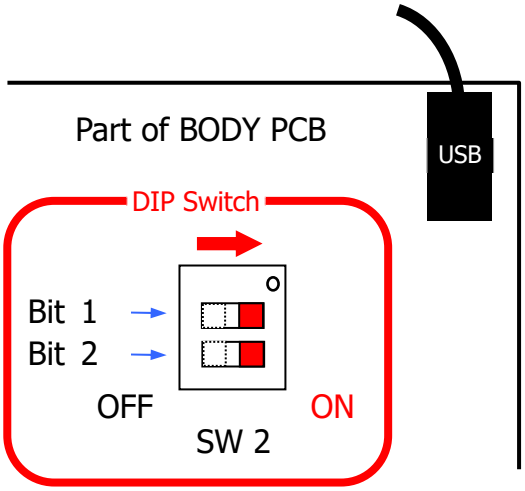
NORMAL	OK	**ABNORMAL**	LOW
WHAT	Voltage Test of the IO PCB Battery.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

	CAUSE	**CHECK**	**REMEDY**
1	The DIP switch is set up incorrectly.	Check the DIP switch diagram below.	Correct the DIP switch setup.
2	The voltage of the IO PCB battery is below a certain level.	Check the battery voltage.	The CR2032 battery requires replacement.

CHECK ROUTE

DIP SW. setting
Bit 1 **ON**: Battery ON(On state)
Bit 2 **ON**: Battery ON(On state)



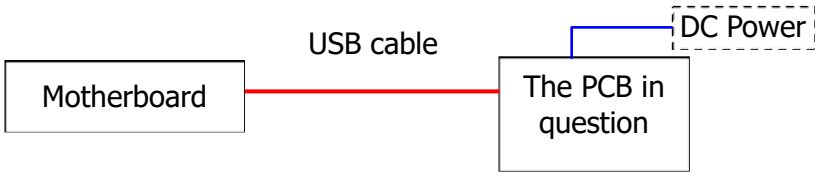


8. 1. 6: BODY PCB communication test
NOKI PCB communication test (Option)
SUB IO(DOOR) PCB communication test
SIGA PCB communication test
SIGB PCB communication test

NORMAL	CONNECTED	**ABNORMAL**	DISCONNECTED
WHAT	Communication Test with each IO.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	USB Cable Connection Error	Check the USB cable/connector connecting the Motherboard to the relevant PCB.	Confirm the physical connection of the cables/connectors.
2	USB Cable Error.	Check for breaks in the cables that may cause disconnection.	The USB cable requires replacement.
3	DC power box error.	Check if the input DC power supply for the PCB in question is running properly.	The DC power box requires replacement.
4	Relevant PCB Error.	Check if there is a malfunction with the relevant PCB.	The PCB requires replacement.
5	Mother Board Error.	Check if there is a Motherboard malfunction.	The Motherboard requires replacement.

CHECK ROUTE



8. 1. 7: BODY PCB test
NOKI PCB test
SIG xx PCB test

NORMAL	OK	**ABNORMAL**	CHANGED / CRACKED
WHAT	Each IO PCB ID Test and RAM Error Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	The PCB ID from the previous power up and the current PCB ID differ.	---	Power OFF/ON.
2	Backup RAM of the IO PCB cannot be read.	---	The IO PCB requires replacement.

8. 1. 8: CPU fan test

NORMAL	OK	**ABNORMAL**	FAULT
WHAT	CPU Fan Function Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	Power Supply connection error with the CPU fan.	Check if the CPU fan power supply harness is properly connected.	Make sure that the power supply harness is properly connected.
2	CPU fan body error.	Check if the fan is moving.	The CPU fan requires replacement.
3	CPU fan power supply voltage error.	Check the DC12V.	The Motherboard requires replacement.

8. 1. 9: EEPROM test (GMEM PCB)

NORMAL	OK	**ABNORMAL**	FAULT
WHAT	EEPROM Access Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	The EEPROM data on the GMEM can not be read.	---	The GMEM PCB requires replacement.

8. 1. 10: GAL test

NORMAL	OK	**ABNORMAL**	CHANGED / GAME ID UNMATCHED / FAULT
WHAT	GAL Access Test and Version Comparison with the Game Media.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	The GAL cannot be read, or the GAL does not match the game media.	---	The GAL Cassette requires replacement.
2	GMEM PCB malfunction.	---	The GMEM PCB requires replacement.

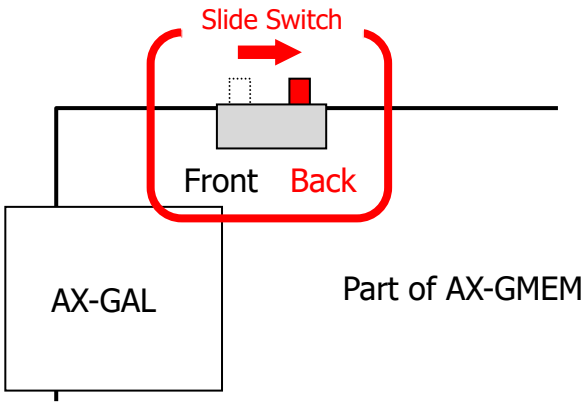
8. 1. 11: GMEM PCB battery test

NORMAL	OK	**ABNORMAL**	LOW
WHAT	Voltage Test of the GMEM PCB Battery.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	The switch is set up incorrectly.	Check the GMEM PCB Switch 2 (Slide Switch) in the diagram below.	Correct the positions of the Slide Switch.
2	The voltage of the GMEM PCB battery is below a certain level.	Check the battery voltage.	The CR2032 battery requires replacement.

CHECK ROUTE

Slide Switch Setting
Back: Battery ON(On state)



8. 1. 12: GMEM PCB test

NORMAL	OK	**ABNORMAL**	FAULT
WHAT	GMEM PCB Access Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	GMEM PCB cannot be accessed.	---	The GMEM PCB requires replacement.

8. 1. 13: MOTHER BOARD battery test

NORMAL	OK	**ABNORMAL**	LOW
WHAT	Motherboard Battery Voltage Test.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

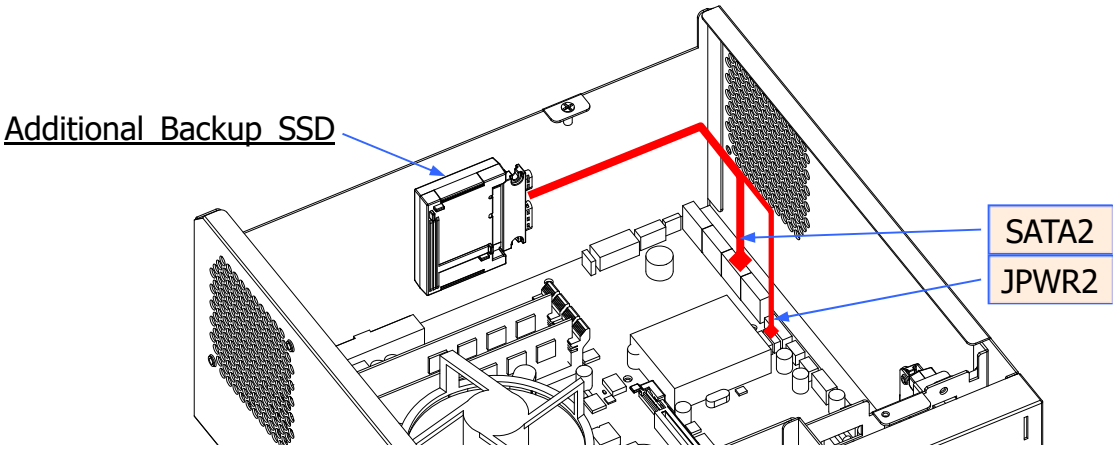
CAUSE		**CHECK**	**REMEDY**
1	The voltage of the Motherboard battery is below a certain level.	Check the voltage of the battery.	The CR2032 battery requires replacement.

8. 1. 14: 2nd Backup memory test

NORMAL	OK	**ABNORMAL**	FAULT / CRACKED
WHAT	Access test for the Additional Backup SSD memory.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

	CAUSE	**CHECK**	**REMEDY**
1	**FAULT** An appropriate SSD has not been installed as Additional Backup SSD	①The SATA2 of the Mother Board is connected to the GAME SSD ②The SSD has not been properly initialized. ③The SSD has not been provided by an official distributor.	Replace it with a proper SSD provided by an official distributor.
2	**CRACKED** The Additional Backup SSD has not been connected.	---	Connect the Additional Backup SSD.

CHECK ROUTE

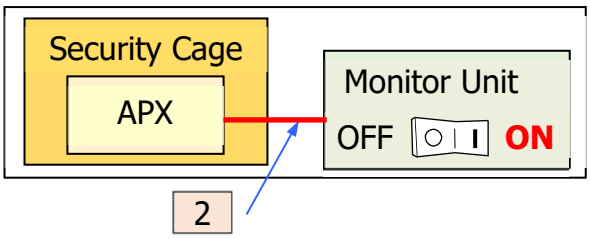


8. 1. 15: Monitor connection test

NORMAL	CONNECTED	**ABNORMAL**	DISCONNECTED
WHAT	Test for connection to the Monitor.		
WHEN	During power up.		
ERROR RESET	Power OFF/ON.		

CAUSE		**CHECK**	**REMEDY**
1	The power switch of the Monitor Unit is turned OFF.		Turn ON the Power Switch of the Monitor Unit.
2	The DVI Cable of the Monitor Unit is not connected.	The DVI Cable connecting the Monitor Unit and the DP1 port of the APX Unit is disconnected or torn.	Reconnect the DVI Cable or change it.
3	Monitor Unit malfunction.		Replace the Monitor Unit.

CHECK ROUTE

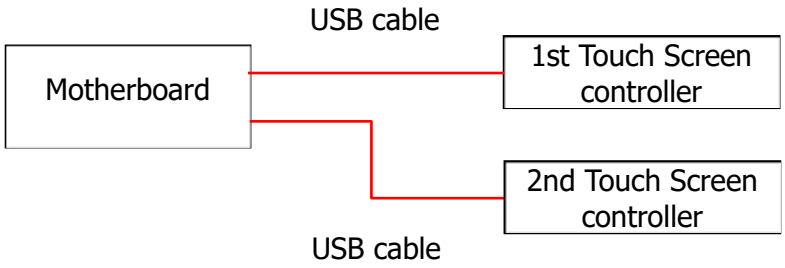


8. 2: Errors during the Game

8. 2. 1: 1st/2nd Touch Screen disconnected Touch Screen disconnected

WHAT	Connection error with the 1st (Door)/2nd (Top) touch panel controller. After boot up, the connection is checked every 10 seconds. If no connection is detected, another check is executed 2 seconds later. If this check does not detect a connection, the error will occur.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	USB cable error.	Check for connection faults and disconnections.	Make sure that the USB cable is properly connected or replace the USB cable.
2	USB DC power supply error.	Check for connection faults and disconnections.	The Motherboard requires replacement.

CHECK ROUTE



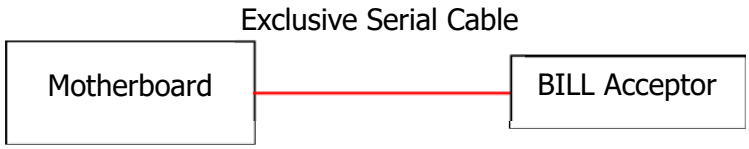
The Touch panel connector is an exclusive connector, not a USB connector.

8. 2. 2: BILL Acceptor cheat

WHAT	(MEI Only) A CHEAT signal is received from the BILL Acceptor. This error comes from the acceptor.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	RESET key.		
CAUSE		**CHECK**	**REMEDY**
1	BILL acceptor error.	---	The BILL acceptor requires replacement.

8. 2. 3: BILL Acceptor communication error

WHAT	No connection with the BILL Acceptor.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Exclusive Serial cable error.	Check for connection faults and disconnections.	Make sure that the cable is properly connected or replace the cable.
2	BILL acceptor error.	---	The BILL acceptor requires replacement.
CHECK ROUTE			



8. 2. 4: BILL Acceptor failure

WHAT	A FAILURE signal is received from the BILL Acceptor. This error comes from the acceptor.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	RESET key.		
CAUSE		**CHECK**	**REMEDY**
1	BILL acceptor error.	---	The BILL acceptor requires replacement.

8. 2. 5: BILL Acceptor jam

WHAT	A BILL or ticket got jammed in the BILL acceptor. This error comes from the acceptor.		
WHEN	When inserting a BILL.		
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.		
ERROR RESET	RESET key.		
CAUSE		**CHECK**	**REMEDY**
1	A BILL got jammed in the BILL acceptor.	---	Remove the jammed BILL from the BILL acceptor.

8. 2. 6: BILL Acceptor pause

WHAT	(JCM Only) A PAUSE signal is received from the BILL Acceptor. This error comes from the acceptor.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	BILL acceptor error.	---	The BILL acceptor requires replacement.

8. 2. 7: MEGA Top Cover during power down
xx Door access during power down
xx Case access during power down
xx Cage access during power down
xx Cover during power down
xx Door access during power down #0

WHAT	One of the doors was opened while the power was turned OFF.
WHEN	Immediately after the game is booted after the power was turned ON.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

8. 2. 8: MEGA Top Cover
xx Door Open
xx Case Open
xx Cage Open
xx Cover Open
xx PCB Open
xx Door Open (Mechanical Switch)
xx Door Open (Optical Sensor)
xx Door Open error (Optical Sensor)

WHAT	One of the doors was opened while the power was turned OFF.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

8. 2. 9: BILL Stacker full

WHAT	The BILL acceptor stacker is full. This error comes from the acceptor.
WHEN	When inserting a BILL.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

	CAUSE	**CHECK**	**REMEDY**
1	BILL stacker full.	---	Clear out the BILLs in the BILL stacker.

8. 2. 10: BILL Stacker jam

WHAT	There is a jam in the BILL acceptor stacker. This error comes from the acceptor.
WHEN	When inserting a BILL.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

	CAUSE	**CHECK**	**REMEDY**
1	A BILL got jammed in the stacker.	---	Remove the jammed BILL from the BILL stacker.

8. 2. 11: BILL Stacker removed

WHAT	The BILL acceptor stacker has been removed. This error comes from the acceptor.
WHEN	When an attendant removes the BILL stacker acceptor at his or her own discretion.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 2. 12: xx PCB changed

WHAT	The corresponding PCB was replaced during Power Off.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

8. 2. 13: Can not open EEPROM

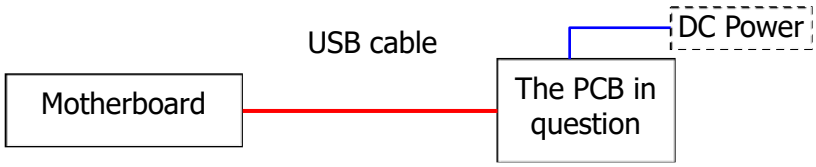
WHAT	The GMEM EEPROM driver can not be opened.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear. The right CREDIT amount must be measured by an attendant.		
ERROR RESET	Power OFF->ON.		
CAUSE		**CHECK**	**REMEDY**
1	GMEM PCB disconnecting error.	Check the connections.	Make sure that the PCB is properly replaced.
2	GMEM PCB error.	PCB malfunction.	The PCB requires replacement.

8. 2. 14: Communication #1 error (BODY PCB)
Communication #10 error (SUB IO 00)
Communication #xx error (xx PCB)

WHAT	No communication with One of the PCBs.
WHEN	At any time. Checked at every frame. (Approx 1 second blanking time)
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	USB cable failure.	Check for connection faults and disconnections.	Make sure that the USB cable is properly connected or replace the cable.
2	Corresponding PCB failure.	Check the power supply for the corresponding PCB.	The corresponding PCB requires replacement.

CHECK ROUTE

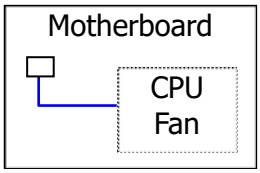


8. 2. 15: CPU Fan abnormal

WHAT	The CPU FAN rotation count is detected to be lower than the Threshold rotation count. Checked at every frame.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	CPU fan power supply connection error.	Check if the power supply harness is connected.	Properly connect the power supply harness.
2	CPU fan body error.	Check if the fan is spinning.	The CPU FAN requires replacement.
3	CPU fan power supply voltage error.	DC12V	The Motherboard requires replacement.

CHECK ROUTE

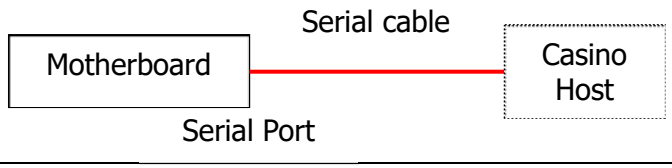


8. 2. 16: Event BUFFER corrupt

WHAT	The Event Buffer cue is corrupt.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. Performing the RAM Clear, the BET selected during the game and credits will be cleared.
ERROR RESET	Ram Clear.

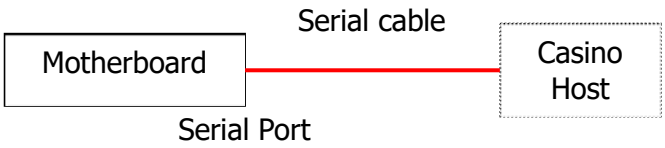
CAUSE		**CHECK**	**REMEDY**
1	Casino Host error.	---	Check if the casino host is operating correctly.
2	Communication cable error.	Check for connection faults and disconnections.	Make sure that the cable is properly connected or replace the cable.
3	GMEM PCB error.	PCB malfunction.	The PCB requires replacement.
4	Mother PCB error.	PCB malfunction.	The PCB requires replacement.

CHECK ROUTE



8. 2. 17: Exception BUFFER overflow

WHAT	A SAS events can not be reported to the host, or the report does not make it in time.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Casino Host error.	---	Check if the casino host is operating correctly.
2	Communication cable error.	Check for connection faults and disconnections.	Make sure that the cable is properly connected or replace the cable.
CHECK ROUTE			



8. 2. 18: Excessive BILL rejects

WHAT	The BILL acceptor rejected an inserted item 10 consecutive times.
WHEN	Idle.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

8. 2. 19: Firm corrupted

WHAT	Firmware has been changed.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Power OFF->ON.

8. 2. 20: GAL fault

WHAT	GAL data can not be read during boot up.
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Power OFF->ON.

8. 2. 21: Low backup Battery (BODY PCB)
Low backup Battery (SIGA PCB)

WHAT	The voltage of one of the PCBs battery is lower than a specified level.
WHEN	Checked at boot up and once an hour.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

	CAUSE	**CHECK**	**REMEDY**
1	The relevant battery is low on voltage.	---	The battery requires replacement.

8. 2. 22: Low backup Battery (GMEM PCB)
Low backup Battery (MOTHER BOARD)

WHAT	The voltage of one of the PCBs battery is lower than a specified level.
WHEN	Checked at boot up and once every 24hours.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

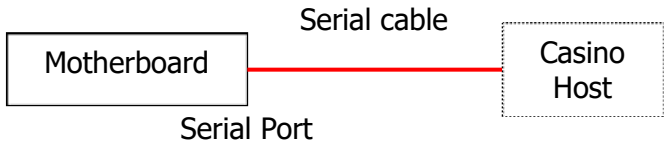
	CAUSE	**CHECK**	**REMEDY**
1	The relevant battery is low on voltage.	---	The battery requires replacement.

8. 2. 23: Machine disable from Host

WHAT	A Machine Disable signal is received from the Casino host.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	Casino Host error.	---	Check if the casino host is operating correctly.
2	Communication cable error.	Check for connection faults and disconnections.	The cable requires replacement.

CHECK ROUTE

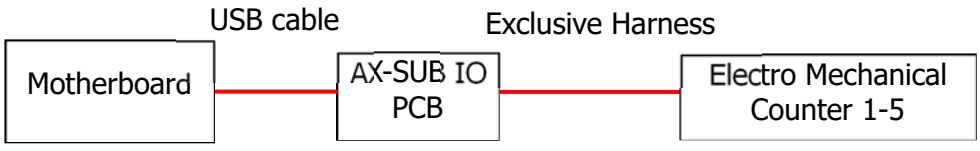


8. 2. 24: Mechanical Meter #1-4 fault/disconnected (Option)

WHAT	The mechanical meter has been removed or there is a related malfunction.
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	Mechanical meter malfunction.	Check if the Mechanical meter is working properly.	The mechanical meter requires replacement.
2	Cable error	Check for connection faults and disconnections.	Make sure that the cable is properly connected, or there may be a need to replace the cable
3	AX-SUB IO PCB malfunction.	Check if the AX-SUB IO PCB is working properly.	The AX-SUB IO PCB requires replacement.

CHECK ROUTE



8. 2. 25: Media removed. Turn off and on the Machine

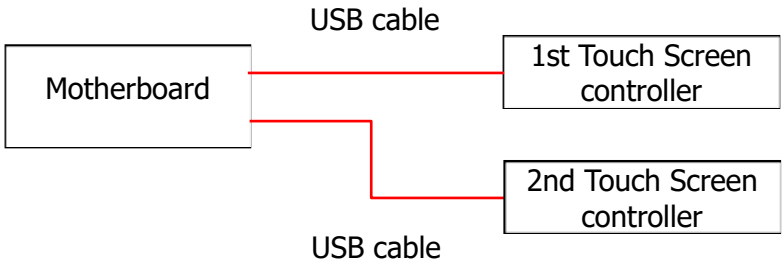
WHAT	Occurs when the SSD is removed.
WHEN	While the door is opened or while the Audit Screen is displayed on the screen.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Power OFF->ON.

8. 2. 26: Not Touch Screen ID

WHAT	Occurs when the touch screen ID is not correctly configured.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Power OFF->ON.

CAUSE		**CHECK**	**REMEDY**
1	USB cable error.	Check for connection faults and disconnections.	Make sure that the USB cable is properly connected or replace the USB cable.
2	USB DC power supply error.	Check for connection faults and disconnections.	The Motherboard requires replacement.
3	Error on the Touch screen controller.	Controller malfunction	The controller requires replacement.

CHECK ROUTE



The Touch panel connector is an exclusive connector, not a USB connector.

8. 2. 27: Power off during setting

WHAT	The power was turned OFF while saving the machine settings data.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

8. 2. 28: Power Supply Box error

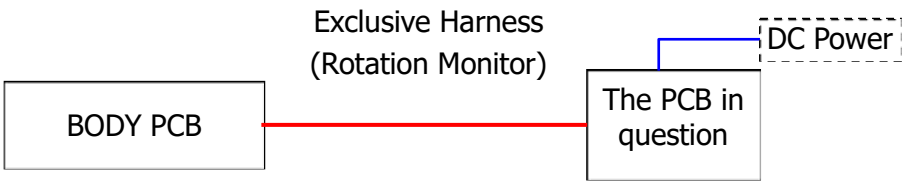
CAUTION!
When this error occurs, immediately turn OFF the machine.

WHAT	The Power Supply Box temperature is abnormally high. (Monitored by the temperature sensor)		
WHEN	At any time. Checked at every frame.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Power OFF.		
CAUSE		**CHECK**	**REMEDY**
1	Power supply error.	**CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

8. 2. 29: Power Supply Fan abnormal

WHAT	An abnormality with the rotation count for the fan in the power supply box.		
WHEN	At any time. Checked at every frame.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.
2	Rotation monitoring harness error.	Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.
3	DC power harness error.	Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.
4	DC power supply error.	Check the input DC voltage of the fan.	The power supply requires replacement.

CHECK ROUTE



8. 2. 30: Program corrupted

WHAT	The program data loaded to the SDRAM was altered.		
WHEN	At any time.		
EFFECT ON CREDITS	When this error occurs, the game will stop. Performing the RAM Clear, the BET selected during the game and credits will be cleared.		
ERROR RESET	Ram Clear.		
CAUSE		**CHECK**	**REMEDY**
1	Mother PCB error.	PCB malfunction.	The PCB requires replacement.

8. 2. 31: RAM error (No meter item in error meters)

WHAT	It is not possible to read the data from the RAM.
WHEN	At any time.
EFFECT ON CREDITS	After turning the power off and then on, the game is replayed from the beginning of the spin in which the error occurred, and the same result will appear. If RAM Clear is performed, the BET during the game and credits will be cleared.
ERROR RESET	Turn Power off and then on, or RAM Clear.

	CAUSE	**CHECK**	**REMEDY**
1	The data in the RAM can not be read.	---	Power OFF>ON.
2			RAM Clear.
3	The RAM is corrupted.	---	The GMEM PCB requires replacement.

8. 2. 32: Self AUDIT error

WHAT	The Cash In/Out meters do not match.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. Performing the RAM Clear, the BET selected during the game and credits will be cleared.
ERROR RESET	Ram Clear.

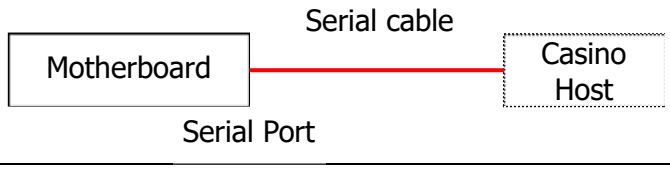
	CAUSE	**CHECK**	**REMEDY**
1	GMEM PCB disconnecting error.	Check the connections.	Make sure that the PCB is properly replaced.
2	GMEM PCB error.	PCB malfunction.	The PCB requires replacement.
3	Mother PCB error.	PCB malfunction.	The PCB requires replacement.

8. 2. 33: Threshold Amount exceeded

WHAT	Occurs when an amount over the configured Threshold Amount is inserted, and then the Cash out button is pressed without playing the game.
WHEN	At any time.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

8. 2. 34: Ticket history BUFFER full

WHAT	The information on the printed ticket can not be reported to the Host.		
WHEN	Occurs after a ticket is printed.		
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Casino Host error.	---	Check if the casino host is operating correctly.
2	Communication cable error.	Check for connection faults and disconnections.	Make sure that the cable is properly connected or replace the cable.
CHECK ROUTE			



8. 2. 35: Ticket Print timed out

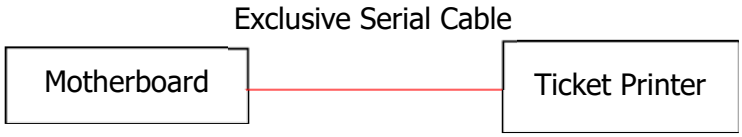
WHAT	The ticket was not printed for over a specific amount of time.
WHEN	Occurs while waiting for the ticket to print.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key.

8. 2. 36: Ticket Printer disconnected

WHAT	The ticket printer is not connected.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	Exclusive Serial cable error.	Check for connection faults and disconnections.	Make sure that the cable is properly connected or replace the cable.
2	Ticket Printer error.	---	The ticket printer requires replacement.

CHECK ROUTE



8. 2. 37: Ticket Printer open

WHAT	A ticket printer cover is opened. This error comes from the printer.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

8. 2. 38: Ticket Printer Paper empty

WHAT	The ticket printer is out of paper. This error comes from the printer.
WHEN	Occurs after a ticket is printed.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 2. 39: Ticket Printer Paper jam

WHAT	There is a paper jam inside the ticket printer. This error comes from the printer.
WHEN	Occurs after a ticket is printed.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 2. 40: Ticket Printer Paper low

WHAT	The amount of paper left in the ticket printer is low. This error comes from the printer.
WHEN	Occurs after a ticket is printed.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 2. 41: Ticket Printer Paper not set correctly

WHAT	The ticket is not correctly insert into the Printer.
WHEN	When the EGM is booted.
EFFECT ON CREDITS	----
ERROR RESET	RESET key.

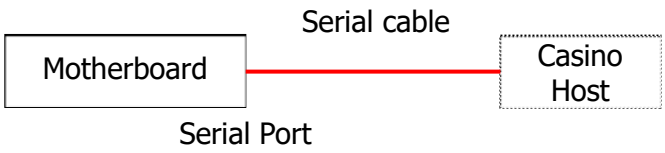
8. 2. 42: Time Clock mismatched

WHAT	The EGM clock has stopped.
WHEN	At any time.
EFFECT ON CREDITS	No effect on the credits.
ERROR RESET	Power OFF->ON.

CAUSE		**CHECK**	**REMEDY**
1	Synchronization discrepancy.	[TIME CLOCK MISMATCHED] is displayed on the top or on the bottom corner of the screen.	Turn OFF->ON the machine. **(Refer to the Opening insert Safe Power OFF)**
2	Mother PCB error.	The Error recurs repeatedly.	The PCB requires replacement.

8. 2. 43: Validation ID not configured

WHAT	LP4C is not sent from the host.		
WHEN	After RAM Clear.		
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Casino Host error.	---	Check to see if the current Host supports SECURE ENHANCED VALIDATION.
2	Communication cable error.	Check for connection faults and disconnections.	Make sure that the cable is properly connected or replace the cable.
CHECK ROUTE			



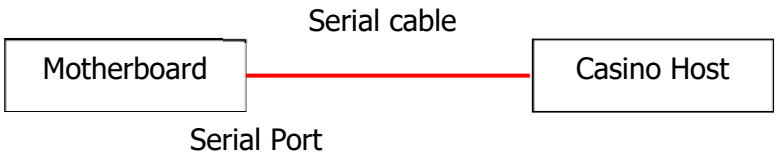
8. 2. 44: Media corrupted

WHAT	Occurs if the data on the MEDIA SSD are damaged.		
WHEN	At any time.		
EFFECT ON CREDITS	When this error occurs, the game will stop. Performing the RAM Clear, the BET selected during the game and credits will be cleared.		
ERROR RESET	Ram Clear.		
CAUSE		**CHECK**	**REMEDY**
1	SSD Media error.	SSD Media malfunction.	The SSD Cassette requires replacement.
2	Mother PCB error.	PCB malfunction.	The PCB requires replacement.

8. 2. 45: Primary Port offline error

WHAT	Error in the communication to the Casino host.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Casino Host error	---	Check if the Casino host is operating correctly.
2	Communication cable error	Check for connection faults and disconnections.	The cable requires replacement.
3	Mother PCB error.	PCB malfunction.	The PCB requires replacement.

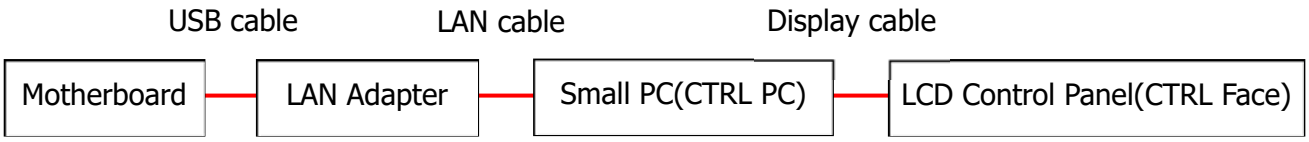
CHECK ROUTE



8. 2. 46: LCD Monitor disconnect

WHAT	The display of the LCD Control Panel (CTRL Face) does not display correctly.		
WHEN	At any time.		
EFFECT ON CREDITS	There is no effect on the credits.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	The Display Cable is not connected correctly.	Check the connection of the Display Cable on the Small PC (CTRL PC) and the LCD Control Panel (CTRL Face).	Connect again the Display Cable.
2	Display Cable malfunction.	There is not connection or the connection is not good.	Change the Display Cable.

CHECK ROUTE

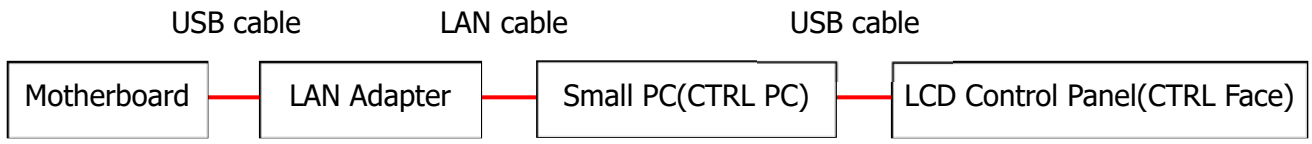


8. 2. 47: LCD Touch Panel disconnect

WHAT	The Touch Panel of the LCD Control Panel (CTRL Face) does not work.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

	CAUSE	**CHECK**	**REMEDY**
1	The USB Cable is not connected correctly.	Check the connection of the USB Cable on the Small PC (CTRL PC) and the LCD Control Panel (CTRL Face).	Connect again the USB Cable.
2	USB Cable malfunction.	There is not connection or the connection is not good.	Change the USB cable.

CHECK ROUTE

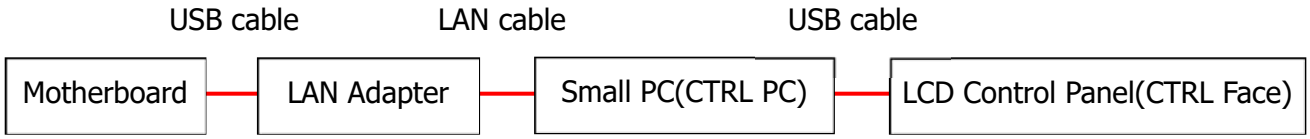


8. 2. 48: LCD PAD communication failure

WHAT	The display of the LCD Control Panel (CTRL Face) does not display correctly.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	RESET key.

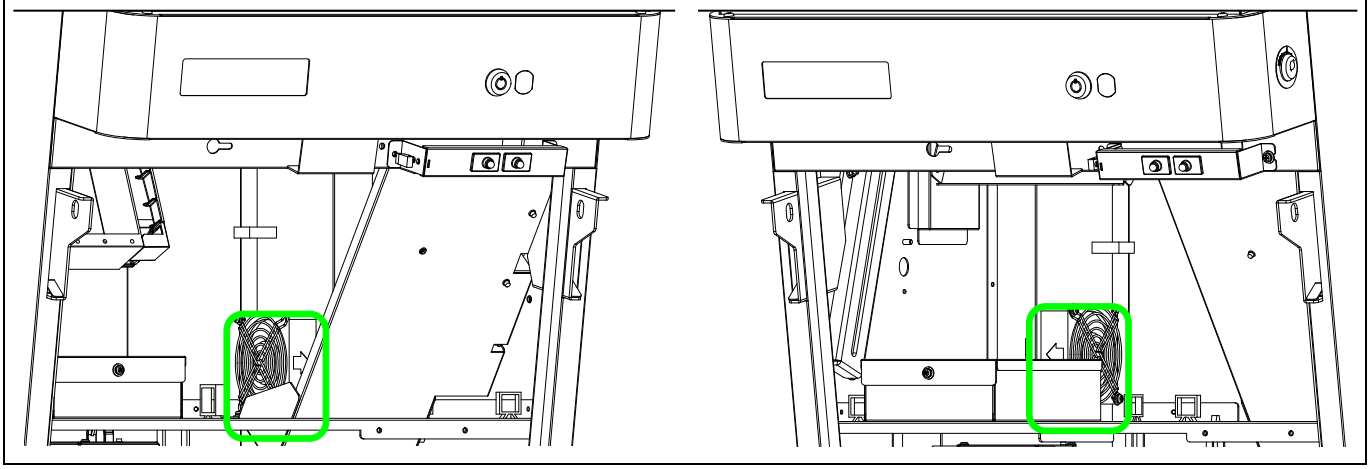
	CAUSE	**CHECK**	**REMEDY**
1	The LAN Cable has not been properly connected before turning the power ON.	The LAN Port Indicator Lamp of the Small PC (CTRL PC) is lit.	Check if the Small PC (CTRL PC) is ON, and if the Indicator Lamp is lit when re-connecting the LAN Cable.
2	The LAN Cable has been connected in the wrong way before turning the power ON.	The connection of the LAN Cable of the Small PC (CTRL PC) is wrong.	Connect to the correct LAN Port (LAN(0))
3	LAN Cable malfunction	There is not connection or the connection is not good.	Change the LAN Cable

CHECK ROUTE



8. 2. 49: Cabinet Fan (LEFT) abnormal
Cabinet Fan (RIGHT) abnormal

WHAT	The fan does not move.		
WHEN	At any time.		
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.
CHECK ROUTE			



8. 2. 50: Reprint Ticket

WHAT	An error of unidentified origin occurred to the printer.
WHEN	Occurs after a ticket is printed.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Power OFF>ON.

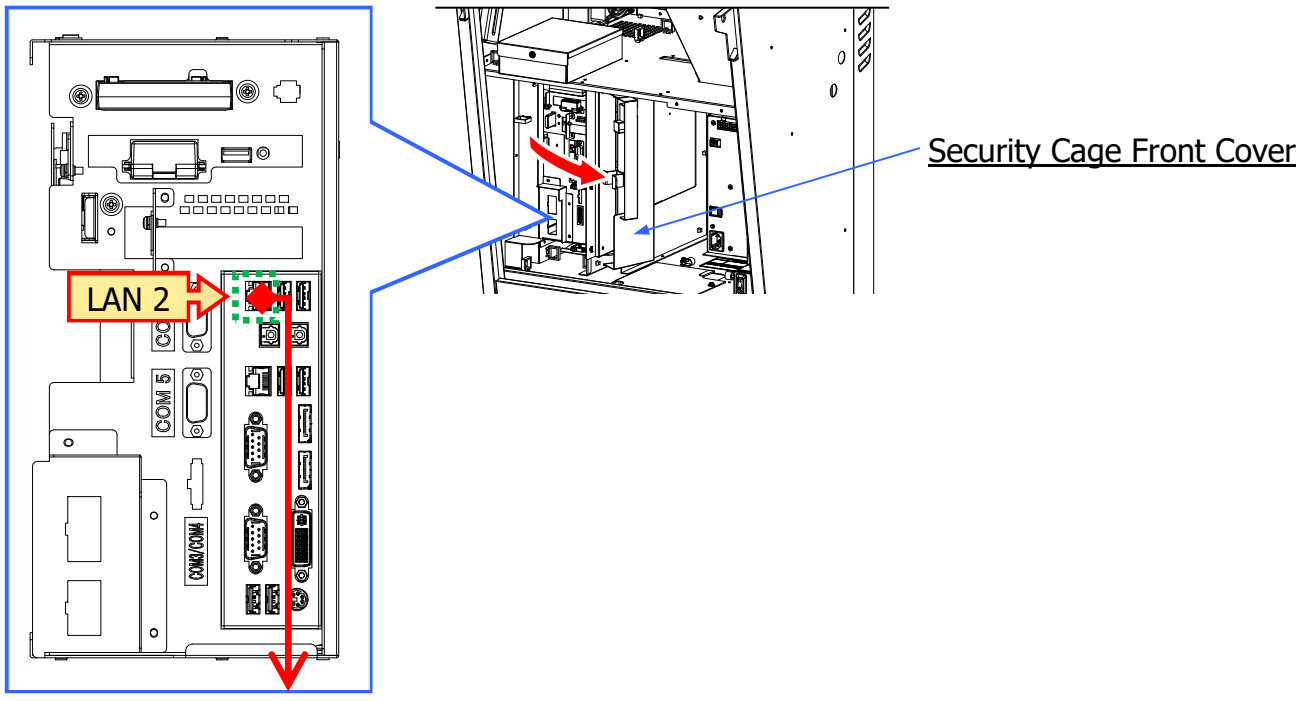
8. 2. 51: Ticket printing error
Void Printed Ticket and reprint

WHAT	The Machine was reboot during the print of a ticket.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Reset Key.

8. 2. 52: Live Camera Disconnected

WHAT	The Live Camera is not connected.		
WHEN	At any time.		
EFFECT ON CREDITS	There is no effect on the credits.		
ERROR RESET	Automatic recovery.		
CAUSE		**CHECK**	**REMEDY**
1	The LAN Cable is disconnected, not plugged properly or malfunctioning.	Check if the wire is broken or disconnected.	Reconnect or change the LAN Cable.
2	Live CAMERA malfunction.		Replace the Live CAMERA.

CHECK ROUTE



8. 2. 53: Cashout to HOST Failure

WHAT	When the player started a Cash out transfer, the communication to the host failed.
WHEN	When the player started a Cash out transfer.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits. The right CREDIT amount must be measured by an attendant.
ERROR RESET	Reset Key.

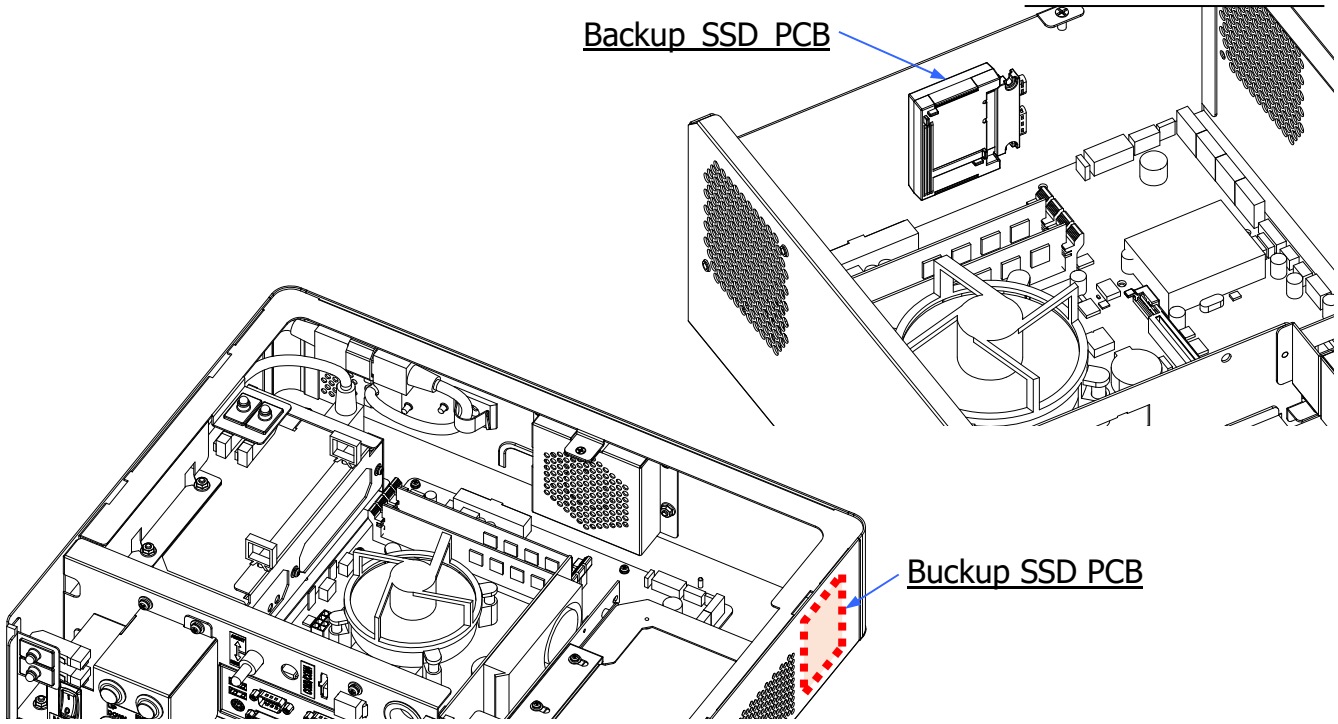
8. 2. 54: 2nd Backup Memory Error

WHAT	The Backup Memory SSD is corrupted.
WHEN	Can occur when accessing to the Backup SSD (at Log In, setting change, when creating new Accounts, when receiving Dealers Tip etc.).
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	All Ram Clear

	CAUSE	**CHECK**	**REMEDY**
1	The Backup SSD got corrupted during the operations.	It is not possible to read the Data saved after the All Ram Clear.	Replace the SSD with a proper SSD provided by an official distributor, then refer to **"Memory Clear Procedure"** on Chapter 6 to perform the All Ram Clear.

CHECK ROUTE

The position of the Backup SSD varies according to the models.



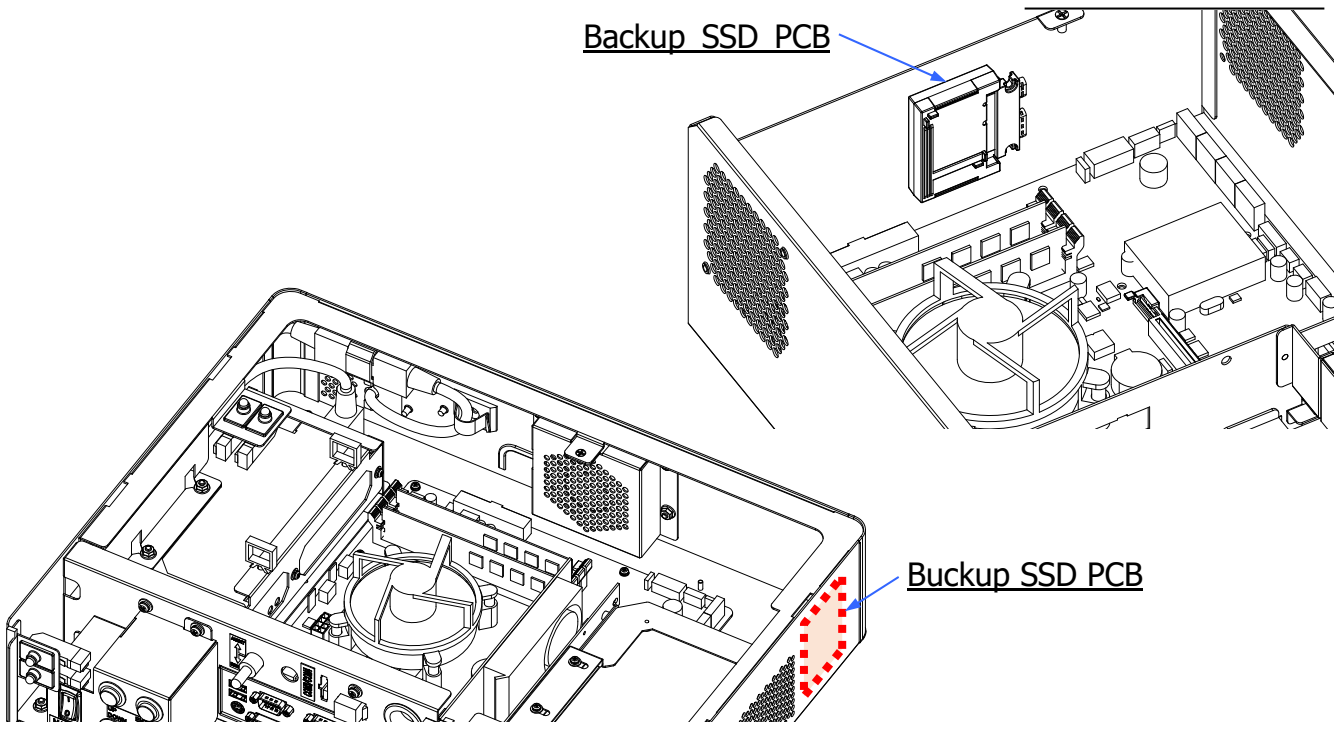
8. 2. 55: 2nd Backup Memory Error (No Data)

WHAT	It is not possible to read the Data in the Backup SSD.
WHEN	Can occur when accessing to the Backup SSD (at Log In, setting change, when creating new Accounts, when receiving Dealers Tip etc.).
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	All Ram Clear

	CAUSE	**CHECK**	**REMEDY**
1	The Data were not saved to the Backup SSD, or the saved Data were deleted.	It is not possible to read the Data saved after the All Ram Clear.	Refer to **"Memory Clear Procedure"** on Chapter 6 to perform the All Ram Clear.
2			Replace the SSD with a proper SSD provided by an official distributor, then refer to **"Memory Clear Procedure"** on Chapter 6 to perform the All Ram Clear.

CHECK ROUTE

The position of the Backup SSD varies according to the models.



8. 2. 56: Handpay not been reported

WHAT	The communication of a [Handpay SAS Event] failed. This error occurs only if on "**Additional Settings**" the setting "SEND HANDPAY RETRY CONTROL" is set to **MANUAL**.
WHEN	When the win amount exceeds the amount set at JACKPOT HAND PAY LIMIT.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits. The right CREDIT amount must be measured by an attendant.
ERROR RESET	Access to "SEND HANDPAY RETRY" on **"Online System Settings"** described at Chapter 5.

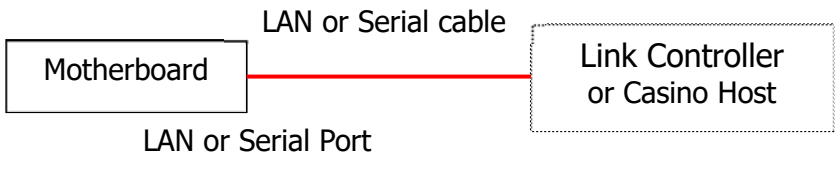
8. 3: Errors during EGM Link connection

8. 3. 1: Communication data error

WHAT	When the Progressive Type is set on SAS Link Progressive, and from the start no communication was established.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

	CAUSE	**CHECK**	**REMEDY**
1	Link controller or Casino Host error.	---	Check if the Link controller or the Casino host are operating correctly.
2	Communication cable error	Check for connection faults and disconnections.	The cable requires replacement.
3	In case of SAS Link Progressive, the SAS cable is not connected to the right port.	Check the connection port, or an incorrect configuration of the Progressive Port.	Reconnect to the right port, or fix the settings for Progressive Port.

CHECK ROUTE

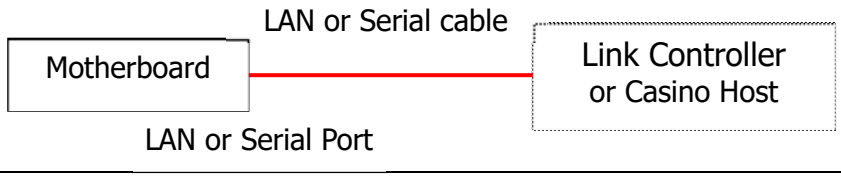


8. 3. 2: Communication offline error
Host communication link down

WHAT	When the Progressive Type is set on SAS Link Progressive, and the communication gets disconnected from a status of normal communication.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	Link controller or Casino Host error	---	Check if the Link controller or the Casino host are operating correctly.
2	Communication cable error	Check for connection faults and disconnections.	The cable requires replacement.

CHECK ROUTE



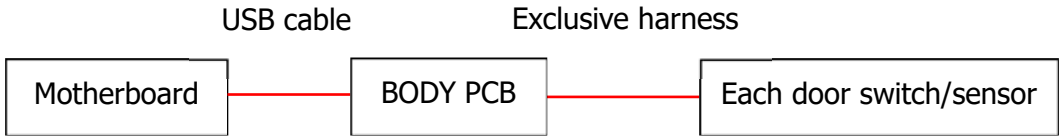
8. 4: Problems Which May Occur Without a Displayed Error

8. 4. 1: The Door Switch does not work

WHAT	The door is opened, but the machine does not display Door Open, or the door is closed but Door Close is not displayed.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.

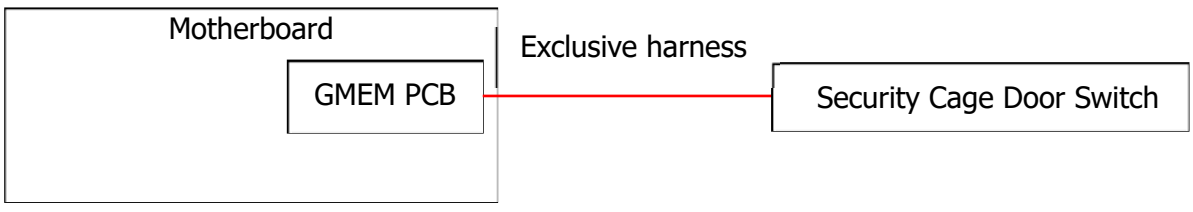
	CAUSE	**CHECK**	**REMEDY**
1	Door switch/sensor malfunction.	Test the switch and sensor functions.	The door switch/sensor requires replacement.
2	Switch is not properly pressed due to misalignment of the door, or the sensor is not properly aligned.	At the IO test, test the switch/sensor functions while opening and closing the door.	Straighten out the misalignment of the door.
3	Door switch/sensor harness error.	Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.
4	BODY PCB harness error.	Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.

CHECK ROUTE



NOTE

(There is one exception) Only the Security Cage Switch is connected to the GMEM PCB.

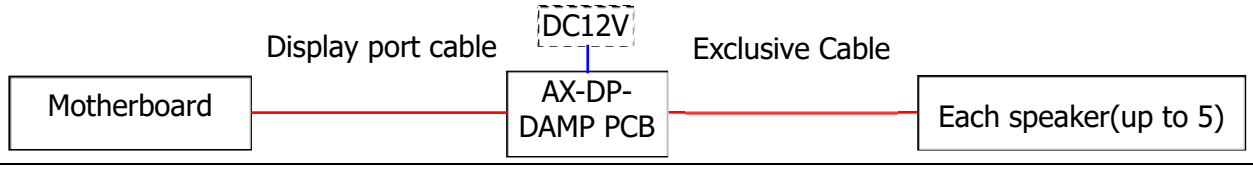


8. 4. 2: There is no sound

WHAT	There is no sound during game play, or there is only sound from certain parts of the speakers.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	**CHECK**	**REMEDY**
1	The volume has been lowered.	Check the Volume Settings in the Audit Menu.	Turn up the volume.
2	Speaker harness error.	Check if the speakers work in the Speaker Test in the Audit menu. Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.
3	Speaker malfunction.	Check for connection faults and disconnections.	The speaker requires replacement.
4	Display Port cable error	Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.
5	AX-DP-DAMP PCB power supply (DC12V) error.	Check the input voltage.	The power supply harness or the power supply unit requires replacement.
6	AX-DP-DAMP PCB error.	---	The AX-DP-DAMP PCB requires replacement.

CHECK ROUTE

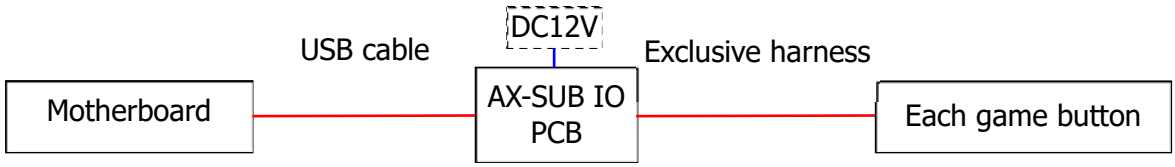


8. 4. 3: The Game Button cannot be pressed or has no response

WHAT	The buttons used in the game cannot be pressed or do not respond.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on CREDIT.

	CAUSE	**CHECK**	**REMEDY**
1	Liquids such as a drink have been spilled and stuck on to the button.	Check to see if the inside of the buttons is clear of adhesive material.	Remove anything attached to the button. The button may require replacement.
2	Button harness error.	Check for connection faults and disconnections.	Make sure that the harness is properly connected or replace the harness.
3	Button error.	Test the button functions in the IO test.	The buttons require replacement.
4	AX-SUB IO PCB Input Voltage (DC12V) error.	Check the input voltage.	Power supply harness or the power supply unit requires replacement.
5	AX-SUB IO PCB error.	---	The AX-SUB IO PCB requires replacement.

CHECK ROUTE

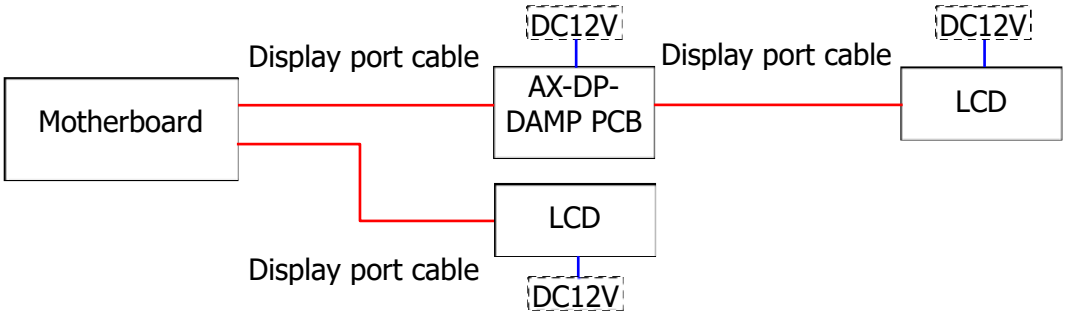


8. 4. 4: LCD Monitor stops working

WHAT	The LCD Monitor does not display anything.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	CHECK	REMEDY
1	The LCD power supply is not plugged in.	The LCD power switch is not turned ON.	Make sure that the power supply harness is properly connected, and then turn ON the LCD unit.
2	Display port cable error.	Check for connection faults and disconnections.	Make sure that the cables are properly connected, or replace the display port cable.
3	LCD malfunction.	---	The LCD requires replacement.
4	LCD, AX-DP-DAMP PCB input voltage error.	Check the voltage.	Replace the DC power box.
5	AX-DP-DAMP PCB malfunction.	---	The AX-DP-DAMP PCB requires replacement.

CHECK ROUTE



8. 4. 5: The Luminaries do not light up

WHAT	The luminaries do not light up or have stopped working.		
WHEN	At any time.		
EFFECT ON CREDITS	There is no effect on the credits.		
CAUSE		**CHECK**	**REMEDY**
1	Harness or harness connector error.	Check for connection faults and disconnections.	Make sure that the cables are properly connected, or replace the display port cable.
2	LED PCB error.	Check the light up status in the Output Test.	The LED PCB requires replacement.
3	LED PCB DC power supply error	Check the input DC voltage.	The source equipment requires replacement.
CHECK ROUTE			
Refer to the Block Diagram at the end of the manual.			

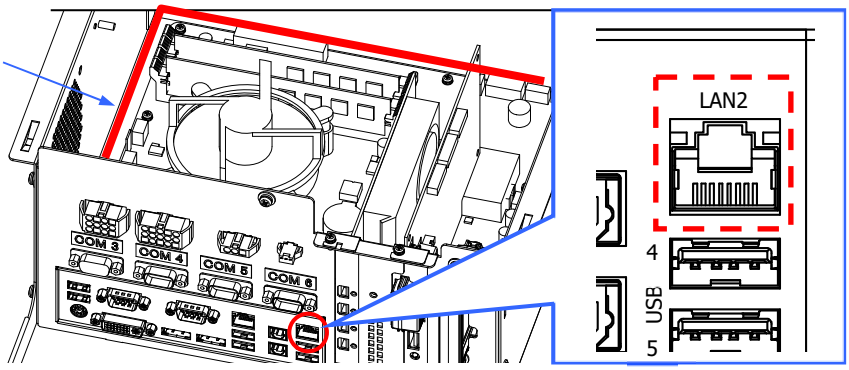
8. 4. 6: Network Error(for the ETG)

WHAT	There is not connection with the station.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

CAUSE		**CHECK**	**REMEDY**
1	Connection error.	Check that the LED of the LAN Port located on the APX Unit is flashing.	Refer to **"Turn on the Center Unit"** on Chapter 2 to turn OFF the power. Wait 15 seconds or more and then turn ON the power.
2	Error in the connection of the LAN port.	Check that the APX Unit of the LAN Cable of the MTM Controller or of the Station are properly connected.	Connect again from the LAN 1 Port and the LAN 2 Port.
3	Error on the LAN Port of the HUB Unit.		Change the LAN Port connected to the Hub Unit of the MTM controller or of the Station.
4	Mal function or damage on the LAN Cable.		Change the LAN Cable.
5	Malfunction or damage on the APX Unit of the HUB.	Check that the LED of the LAN Port located on the APX Unit is flashing.	Replace the APX Unit or the HUB.

CHECK ROUTE

AP-X Motherboard PCB

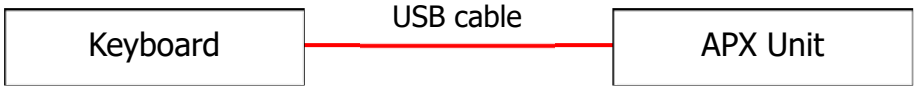


8. 4. 7: Keyboard Error(for the ETG)

WHAT	It is not possible to use the keyboard.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	**CHECK**	**REMEDY**
1	The machine does not recognize the keyboard.		Refer to **"Turn on the Center Unit"** on Chapter 2 to turn OFF the power. Wait 15 seconds or more and then turn ON the power.
2	The USB Cable of the Key Board is not connected.	The USB Cable of the Key Board is disconnected or torn	Reconnect the USB Cable connecting the Keyboard to the APX Unit, or change it.
3	Keyboard malfunction.		Replace the Keyboard.
4	Malfunction of the USB Port of the APX Unit.		Replace the APX Unit.

CHECK ROUTE

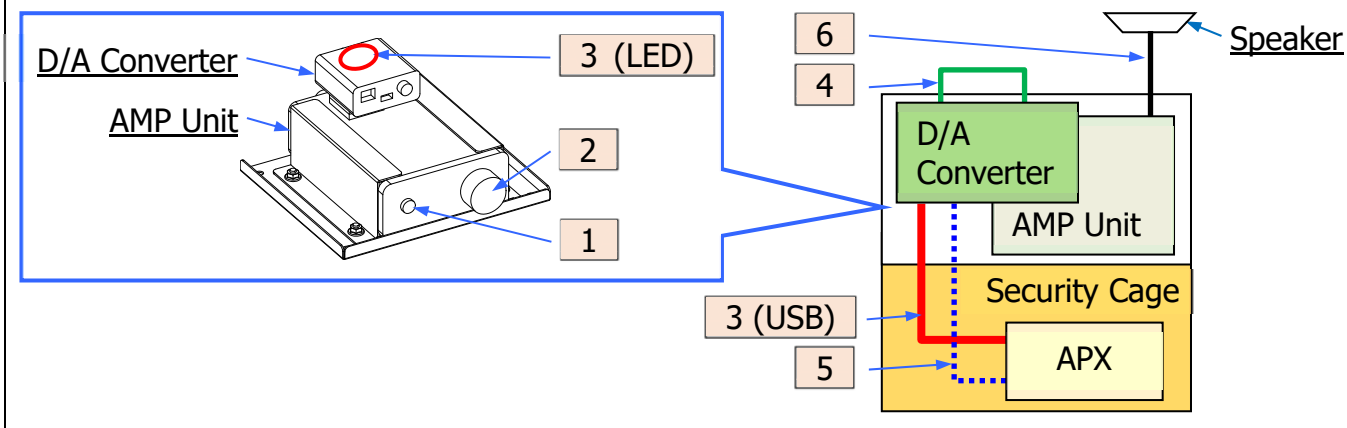


8. 4. 8: Speaker Errors(for use MTM Controller)

WHAT	There is no sound during game play, or there is only sound from certain parts of the speakers.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	**CHECK**	**REMEDY**
1	The switch of the AMP Unit is turned OFF.	Check the Power Switch of the AMP Unit of the MTM Controller Unit.	Turn ON the power on the AMP Unit.
2	The volume of the AMP Unit is low.	Check the Volume of the AMP Unit of the MTM Controller Unit.	Increase to the maximum the volume of the AMP Unit.
3	The D/A Converter is not supplying power.	If the power LED on the D/A Converter is not lightening, check if the USB Cable is disconnected or torn.	Reconnect the USB Cable connecting the D/A Converter and the APX Unit, or change it.
4	The AMP Unit and the D/A Converter are disconnected.	The Cable of the AMP Unit and the D/A Converter is disconnected or torn.	Reconnect the Cable of the AMP Unit and the D/A Converter, or change it.
5	The D/A Converter and the APX Unit are disconnected.	The SPDIF cable of the D/A Converter and the APX Unit is disconnected or torn.	Reconnect the SPDIF Cable of the D/A Converter and the APX Unit, or change it.
6	The AMP Unit and the Speaker are disconnected.	The Cable of the AMP Unit and the Speaker is disconnected or torn.	Reconnect the Cable of the AMP Unit and the Speaker, or change it.

CHECK ROUTE

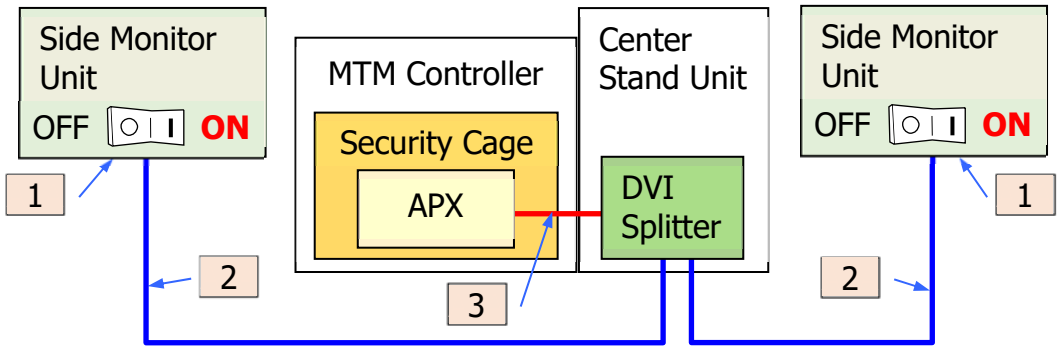


8. 4. 9: The LCD produces no picture(for Big Wheel)

WHAT	The Side Monitor Unit does not display anything.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	CHECK	REMEDY
1	The Side Monitor Unit power switch is turned OFF.		Turn ON the Power Switch of the Side Monitor Unit.
2	Not Connect the DVI Cable of the Side Monitor Unit.	The DVI Cable connecting the Side Monitor Unit and the DVI Splitter is disconnected or torn.	Reconnect the DVI Cable connecting the Side Monitor Unit and the DVI Splitter, or change it.
3	The DVI Cable of the DVI Splitter in not connected.	The DVI Cable connecting the DVI Splitter and the DP2 Port of the APX Unit is disconnected or torn.	Reconnect the DVI Cable connecting the DVI Splitter and the DP2 Port of the APX Unit, or change it.
4	Side Monitor Unit malfunction.		Replace the Side Monitor Unit.
5	There is not display input from the APX Unit.		Replace the APX Unit.

CHECK ROUTE



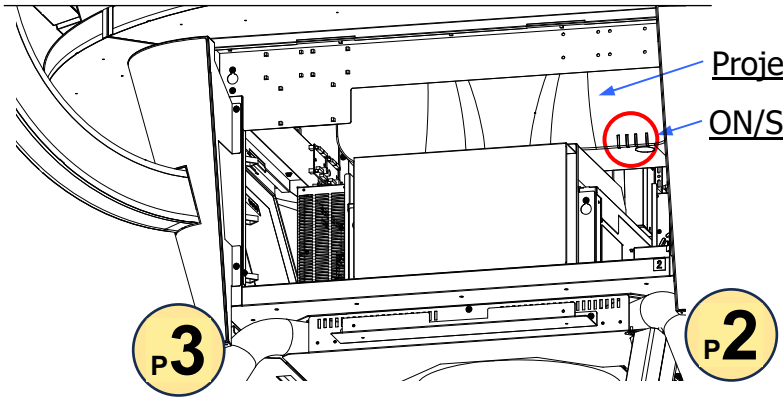
8. 4. 10: No display from the projector

WHAT	The Projector does not display anything.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	**CHECK**	**REMEDY**
1	No power is supplied to the Projector or to the Projector PC (Slim APX PC).	Refer to **"Projector Unit"** on Chapter 6, to check the indicator of the Projector.	·If the Indicator light is OFF, reconnect or substitute the AC Cable of the Projector. ·If the Indicator is normal, reconnect or substitute the AC Cable of the Projector PC (Slim APX PC).
2	Projector, or Projector PC (Slim APX PC) DP Cable malfunction.	Check the condition of connection of the DP cable connecting the Projector and the Projector PCB (Slim APX PC), or if it may be torn.	Reconnect the DP Cable, or change it.
3	Incorrect connection of the cable between the Projector and the Projector PC (Slim APX PC).	The input of the Projector is not connected to the DVI.	Connect the Cable properly.
4	Projector malfunction. Check if the ON/STANDBY LED of the Projector is flashing in red.	Refer to **"Projector Unit"** on Chapter 6, to check the indicator of the Projector.	Check about the display of the Indicator on the "**Projector User Manual**" appendix, to restore the normal functioning.
5	Projector PC (Slim APX PC) malfunction.		Replace the Projector PC (Slim APX PC).
CHECK ROUTE			

CHECK ROUTE

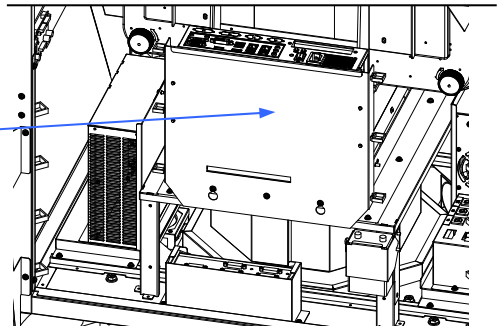
- for Roulette -



Projector Unit

ON/STANDBY and WARNING Indicator LED

Projector PC(Slim APX PC)



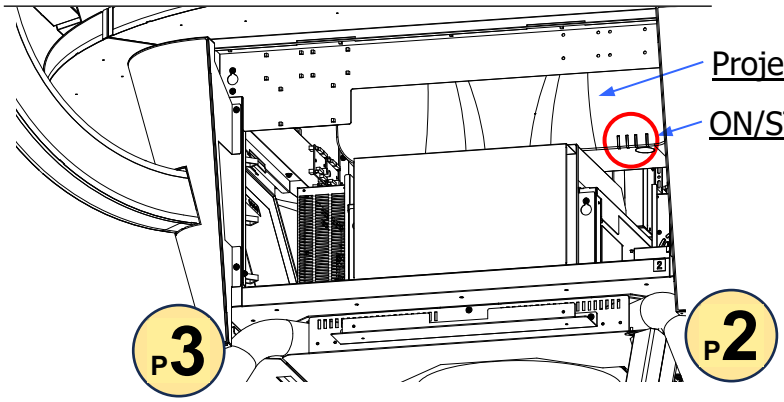
8. 4. 11: How to restore the Projector after a light off status : The Projector does not automatically recover

WHAT	During the operations the projector went on a light off status. (All the other parts work correctly)
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	**CHECK**	**REMEDY**
1	Projector malfunction.	Refer to **"Projector Unit"** on Chapter 6, to check the indicator of the .	Check about the display of the Indicator on the "**Projector User Manual**" appendix, to restore the normal functioning.

CHECK ROUTE

- for Roulette -

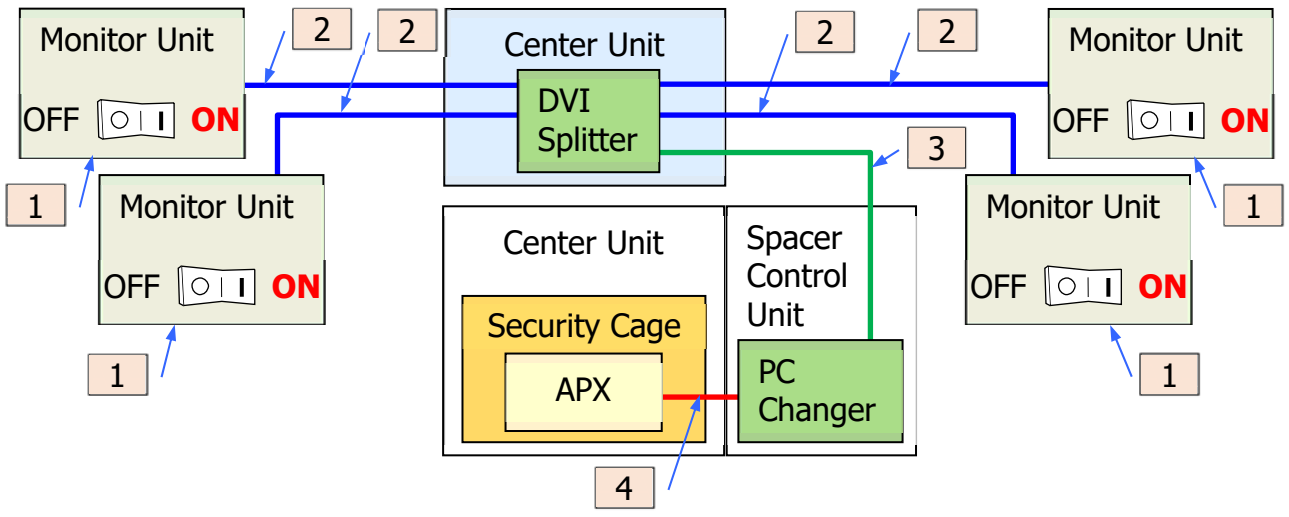


8. 4. 12: The LCD produces no picture(for Roulette)

WHAT	The Top Sign Unit does not display anything.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.

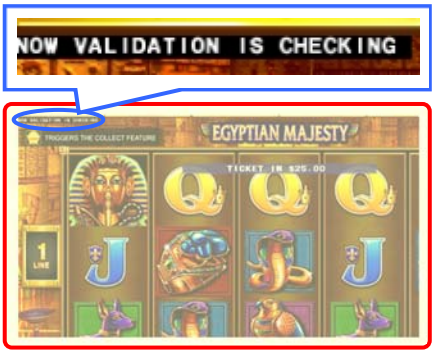
	CAUSE	CHECK	REMEDY
1	The Side Monitor Unit power switch is turned OFF.		Turn ON the Power Switch of the Monitor Unit.
2	The DVI Cable of the Monitor Unit on the Top Sign Unit is not connected.	The DVI Cable connecting the Monitor Unit and the DVI Splitter is disconnected or torn.	Reconnect the DVI Cable connecting the Monitor Unit and the DVI Splitter, or change it.
3	The DVI Cable of the PC Changer in not connected.	The DVI Cable connecting the PC Changer and the DVI Splitter is disconnected or torn.	Reconnect the DVI Cable connecting the PC Changer and the DVI Splitter, or change it.
4	The DVI Cable of the DVI Splitter in not connected.	The DVI Cable connecting the DVI Splitter and the DP4 Port of the APX Unit is disconnected or torn.	Reconnect the DVI Cable connecting the DVI Splitter and the DP2 Port of the APX Unit, or change it.
5	Motor Unit of the Top Sign Unit malfunction.		Replace the Monitor Unit.
6	There is not display input from the APX Unit of the Center unit.		Replace the APX Unit.

CHECK ROUTE



8. 4. 13: Ticket validation stops

WHAT	When a ticket was inserted, the credit changed according to its value and Game play become possible, but the Ticket Validation process did not complete.
WHEN	When a ticket is inserted
EFFECT ON CREDITS	There is no effect on the credits.

	CAUSE	CHECK	REMEDY
1	It is not possible to accept a ticket because a previous ticket Validation communication did not complete.	[NOW VALIDATION IS CHECKING] system message is displayed at the top left of the screen. 	Refer to "RESET TICKET VALIDATION" at **"Online System Settings"** on Chapter 5 and follow the indications on the screen to finalize the communication process. Return to the game screen and check that the message [NOW VALIDATION IS CHECKING] disappeared, and it is possible to validate Tickets.

8. 5: Errors during ETG Game

8. 5. 1: SERVER Network error

WHAT	For various reasons the communication between the Center Unit and the Station is interrupted.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Reset key.

8. 5. 2: Configuration mismatch. Set the Configuration again (Game denomination)

WHAT	The denomination setting on the Center Unit and on the Station are different.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Power OFF>ON.

	CAUSE	**CHECK**	**REMEDY**
1	The setting for denomination on the Center Unit and on the Station do not match.	----	Set the Denomination so that the one on the Station matches with the one on the Center Unit.

8. 5. 3: Configuration setting is cleared. Set the Configuration again

WHAT	It is impossible to read the Configuration settings, or they have been deleted.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits. Performing the RAM Clear, the BET selected during the game and credits will be cleared.
ERROR RESET	Power OFF>ON.

	CAUSE	**CHECK**	**REMEDY**
1	It is impossible to read the Configuration settings, or they have been deleted.	----	Power OFF>ON
2			Set again the Configuration. Power OFF>ON
3			Ram Clear

8. 5. 4: GAL Mismatch(Jurisdiction)

WHAT	The GAL in the Center Unit and the GAL in the Station are different.		
WHEN	After the power is turned ON and the game is activated.		
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.		
ERROR RESET	Ram Clear.		
CAUSE		**CHECK**	**REMEDY**
1	The GAL in the Center Unit and the GAL in the Station are different.	Check the Jurisdiction of the GALs.	Use for the Station the same GAL type as the GAL in the Center Unit.

8. 5. 5: Main Unit error

WHAT	For various reasons an error occurred on the Center Unit.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 5. 6: Main Unit Maintenance

WHAT	The Center Unit is in AUDIT Mode.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 5. 7: Main Unit Disable from HOST

WHAT	A Machine Disable signal is received from the Casino host.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 5. 8: Main Unit Settings Changed (Cash out the Credits.)

WHAT	Major settings were changed on the Center Unit, while the Station is OFF LINE and still has Credit charged.
WHEN	When the communication with the Center Unit has been restored.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Reset Key.

	CAUSE	**CHECK**	**REMEDY**
1	Major settings were changed on the Center Unit, while the Station is OFF LINE.	Check if credit is still charged on the Station.	Cashout the Credit on the Station.

8. 5. 9: Main Unit Settings Changed RAM Clear is necessary. After RAM Clear, Credit becomes "0"(ZERO)

WHAT	The command to perform a RAM Clear was received from the Center Unit, while the Station is OFF LINE and Credit still has credit charged.
WHEN	When the communication with the Center Unit has been restored.
EFFECT ON CREDITS	Performing the RAM Clear, the BET selected during the game and credits will be cleared. The right CREDIT amount must be measured by an attendant.
ERROR RESET	Ram Clear.

	CAUSE	**CHECK**	**REMEDY**
1	It is impossible to perform the RAM Clear because there is still credit charged.	----	Cashout the Credit.

8. 5. 10: Main Unit Settings Changed (Turn the Key switch to "RESET" to clear Meters)

WHAT	Major settings were changed on the Center Unit
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Reset Key.

8. 5. 11: Protocol Violation

WHAT	The GAME Soft Version of the Center Unit and the GAME Soft version on the Station do not match.		
WHEN	After the power is turned ON and the game is activated.		
EFFECT ON CREDITS	There is no effect on the credits.		
ERROR RESET	Ram Clear.		
CAUSE		**CHECK**	**REMEDY**
1	The GAME Soft Version on the Station is old.	Check the GAME Soft Version on the Center Unit.	Change the GAME Soft Version on the Station with one on the same type as on the Center Unit.

8. 5. 12: Station ID Invalid

WHAT	The Station ID is already used.		
WHEN	After the power is turned ON and the game is activated.		
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.		
ERROR RESET	Power OFF>ON.		
CAUSE		**CHECK**	**REMEDY**
1	The Station ID is already used.	----	Use a Station ID that was not already used.

8. 5. 13: Unreasonable Meter increment

WHAT	An incorrect side bet amount has been sent by the station to the Center unit, as jackpot increment.
WHEN	After the BET close call.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Reset Key.

8. 5. 14: BW Power Box thermal error(for BIG WEEL)
Power Supply Box error(for BIG WEEL)
Power Supply Box thermal error(for BIG WEEL)

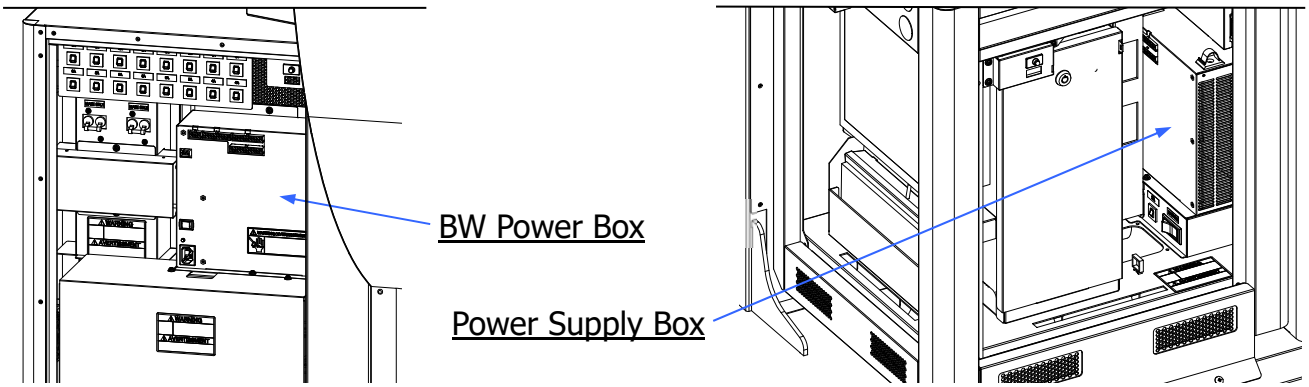
⚠ CAUTION!
When this error occurs, immediately turn OFF the machine.

WHAT	The Power Supply Box temperature is abnormally high. (Monitored by the temperature sensor)
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Power OFF.

CAUSE		**CHECK**	**REMEDY**
1	Power supply error.	**⚠ CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **⚠ CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

CHECK ROUTE

- for SUPER BIG WHEEL -



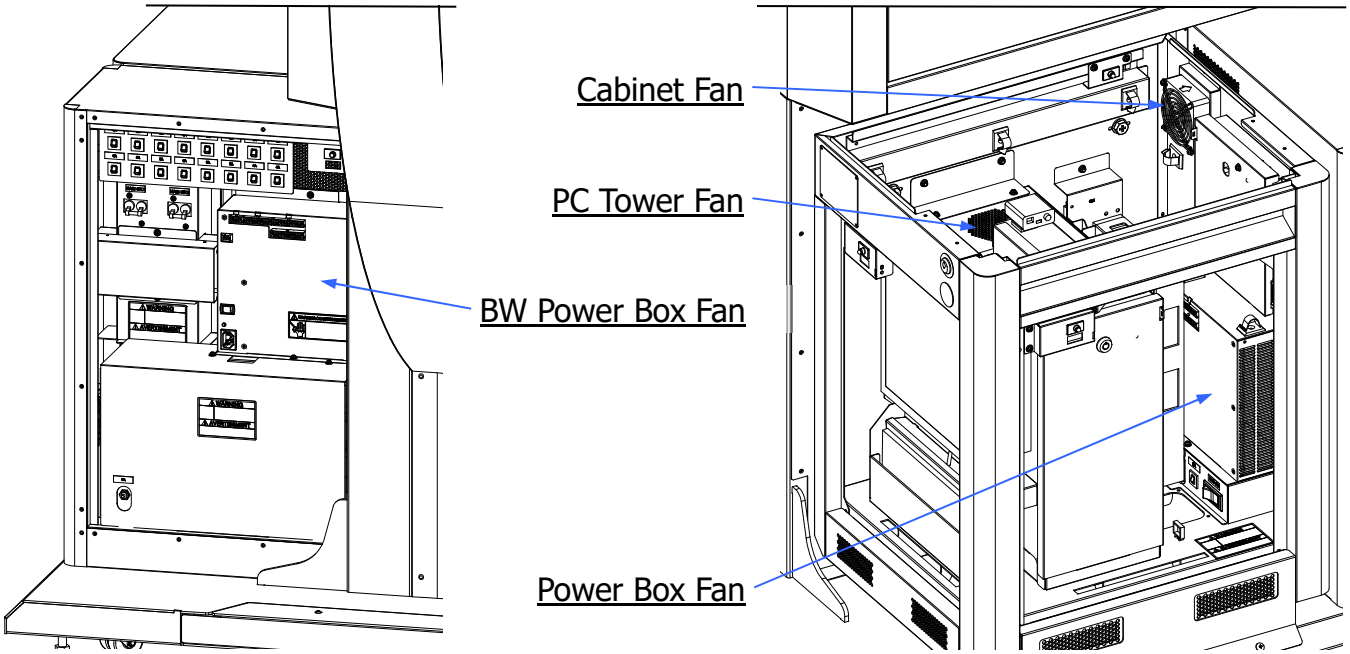
8. 5. 15: BW Power Box Fan abnormal(for BIG WEEL)
Cabinet Fan abnormal(for BIG WEEL)
PC Tower Fan abnormal(for BIG WEEL)
Power Box Fan abnormal(for BIG WEEL)

WHAT	The FAN do not move properly.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

- for SUPER BIG WHEEL -

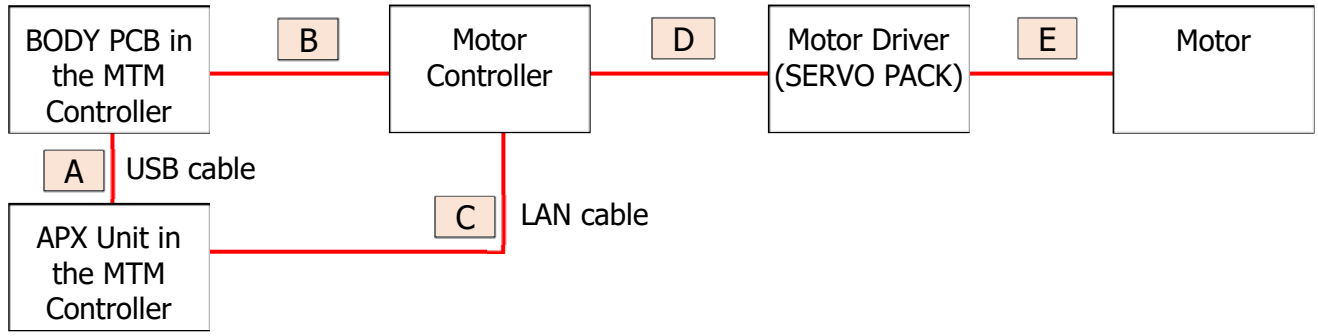


8. 5. 16: Communication Error (Motor Driver)(for BIG WEEL)

WHAT	There is no communication to the Motor Driver (SERVO PACK).
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	RESET key.

	CAUSE	**CHECK**	**REMEDY**
1	The Cable is not connected correctly.	Check that the cables are properly connected.	Reconnect the cables A, B, C and D, illustrated in the diagram below, or change them.
2	No power is supplied to the Motor Driver (SERVO PACK)	The power cable of the Motor Driver (SERVO PACK) is disconnected or torn.	Reconnect the power cable of the Motor Driver (SERVO PACK) or change it.

CHECK ROUTE

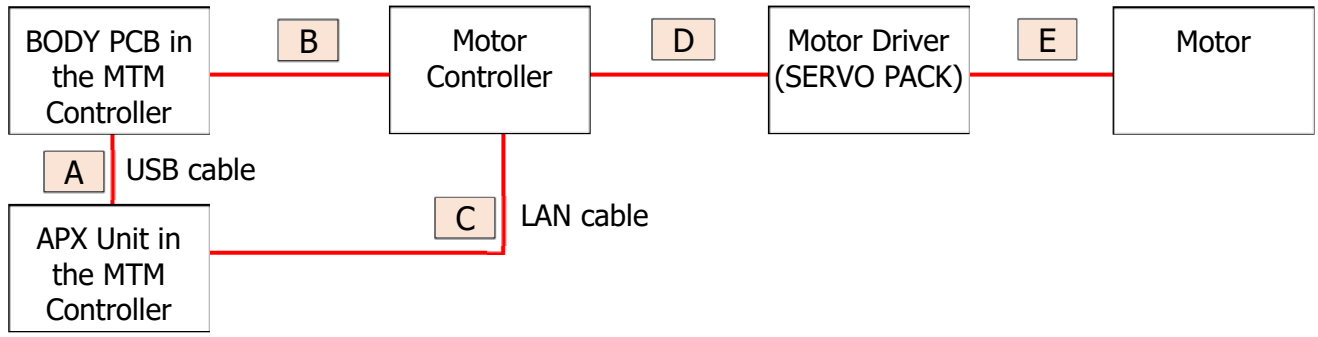


8. 5. 17: Communication Error (Motor Controller)(for BIG WEEL)
5 Consecutive Communication Error(for BIG WEEL)

WHAT	There is no communication to the Motor Controller.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	RESET key.

	CAUSE	**CHECK**	**REMEDY**
1	The Cable is not connected correctly.	Check that the cables are properly connected.	Reconnect the cables A, B, C and D, illustrated in the diagram below, or change them.
2	No power is supplied to the Motor Driver (SERVO PACK)	The power Cable of the Motor Controller is disconnected or torn.	Reconnect the power Cable of the Motor Controller, or change it.

CHECK ROUTE

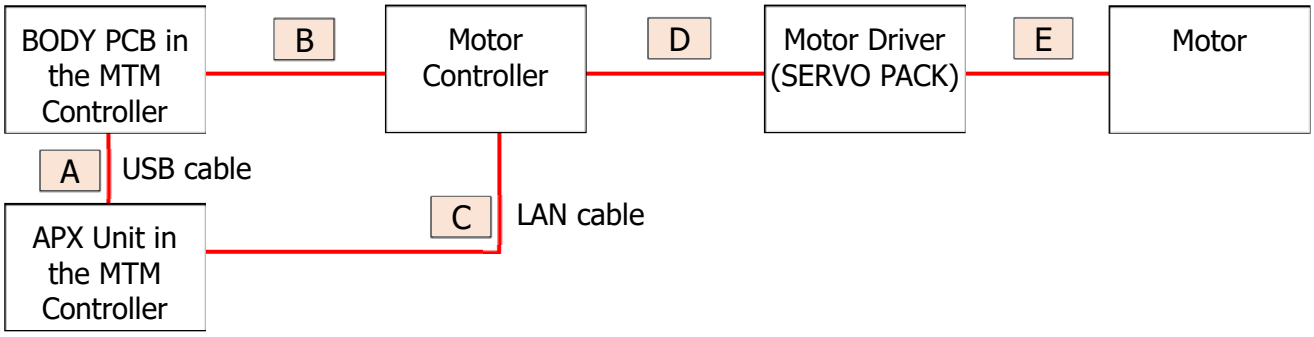


8. 5. 18: Wheel Motor Error(for BIG WEEL)

WHAT	Error on the Wheel Motor. The Wheel Motor cannot move.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	RESET key.

	CAUSE	**CHECK**	**REMEDY**
1	The Cable is not connected correctly.	Check that the cable is properly connected.	Reconnect the Cable E illustrated in the diagram below, or change it.
2	An error occurred on the Motor Driver (SERVO PACK) or on the Motor Controller.	Check that no error is displayed on the LED indicator of the Motor Driver(SERVO PACK). Check that ERR LED is not lighted on the status display of the Motor Controller.	Refer to the APPENDIX : Servo Drives (Alarm & Warning) to resolve the problem.

CHECK ROUTE

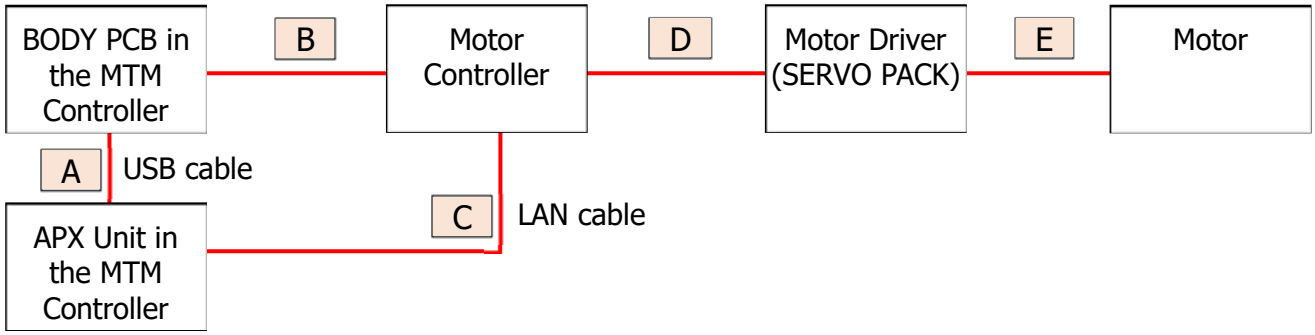


8. 5. 19: Wheel Motor FAULT(for BIG WEEL)

WHAT	Failure on the Wheel Motor. A Limit Over Error has been registered by the Motor Controller.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	RESET key.

	CAUSE	**CHECK**	**REMEDY**
1	An error occurred on the Motor Driver (SERVO PACK).	Check the error No. and Warning No. displayed by the LED Indicator on the Motor Driver(SERVO PACK).	Refer to the APPENDIX : Servo Drives (Alarm & Warning) to resolve the problem.

CHECK ROUTE

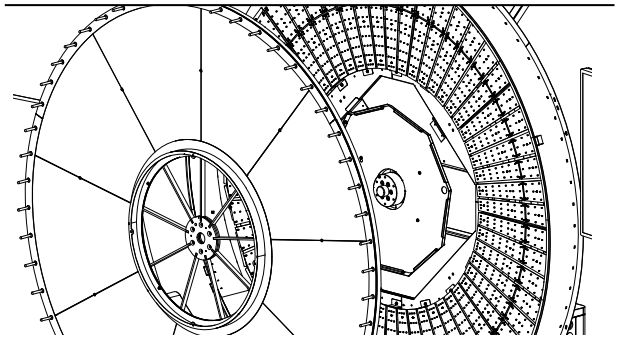


8. 5. 20: Wheel Error(for BIG WEEL)

WHAT	Error on the wheel. The Wheel motor rotates, but the Wheel does not rotate.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF->ON.

CAUSE		**CHECK**	**REMEDY**
1	Malfunction of the joint between the Motor Shaft and the Wheel.	Check the joint between the Motor Shaft and the Wheel.	If there is a malfunction of the joint between the Motor Shaft and the Wheel, install it again.

CHECK ROUTE

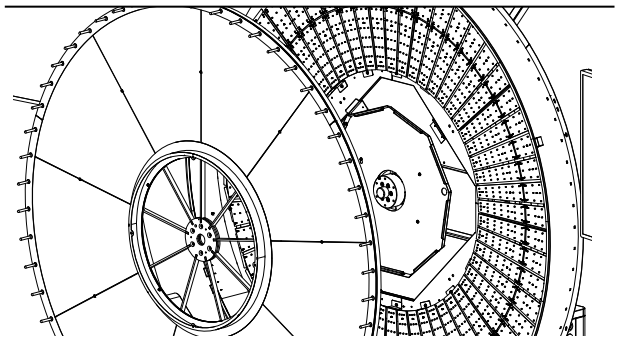


8. 5. 21: Wheel Runaway(for BIG WEEL)
Wheel Stop Error(for BIG WEEL)

WHAT	Error in the movement of the Wheel. The Wheel Motor is still, but the wheel is moving.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF->ON.

	CAUSE	**CHECK**	**REMEDY**
1	Malfunction of the joint between the Motor Shaft and the Wheel.	Check the joint between the Motor Shaft and the Wheel.	If there is a malfunction of the joint between the Motor Shaft and the Wheel, install it again.
2	Malfunction on the main body of the Wheel.	Check that the main body of wheel is not deformed. Check that no symbol artwork plates on the wheel surface is detached.	Install again, or change, the main body of the wheel and the Symbol artwork Plate.

CHECK ROUTE



8. 5. 22: Wheel INIT Error 1(for BIG WEEL)
Wheel INIT Error 2(for BIG WEEL)

WHAT	INIT Error on the Wheel. The origin of the wheel could not be detected over half round. ※For Wheel INIT Error 1 it was detected by the GAME, for Wheel INIT Error 2, it was detected by the Library.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF->ON.

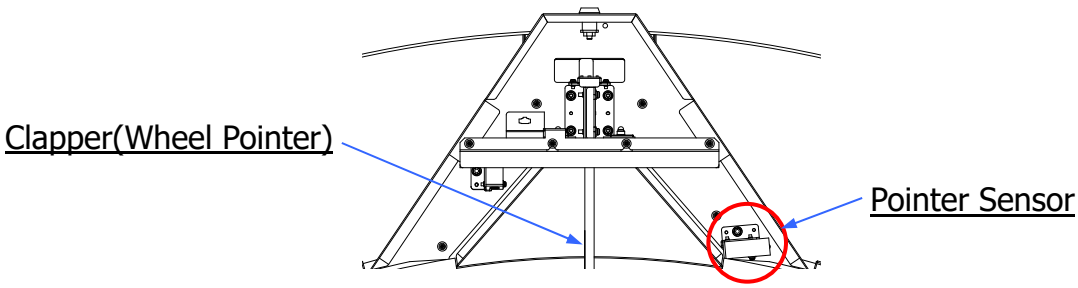
CAUSE		**CHECK**	**REMEDY**
1	The Sensor for the Wheel Origin does not work properly.	Check that the connector of the origin sensor is properly connected.	Reconnect the connector of the origin sensor.
2	The Sensor for the Wheel Origin does not work properly.	Check if the Origin Sensor is damaged.	Perform the IO test to check that the origin sensor is properly operating.

8. 5. 23: Pointer Position Error(for BIG WEEL)

WHAT	Irregularity in the position of the Clapper (Wheel Pointer). The Clapper (Wheel pointer) stopped diagonally.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF->ON.

	CAUSE	**CHECK**	**REMEDY**
1	Malfunction on the Clapper (Wheel Pointer).	Is the fixed part of the Clapper (Wheel Pointer) is firmly secured? Is the Clapper (Wheel Pointer) largely bent or broken?	Install again the Clapper (Wheel Pointer) or change it.
2	The Pointer Sensor of the Wheel is not working properly.	Check if the Pointer Sensor is damaged.	Perform the IO test to check that the Pointer Sensor is properly operating.

CHECK ROUTE

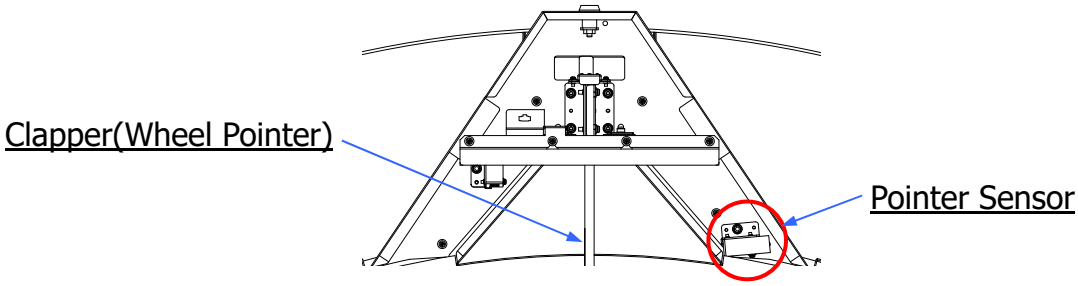


8. 5. 24: Pointer Runaway(for BIG WEEL)

WHAT	Irregularity in the movement of the Clapper (Wheel Pointer). Even if the Wheel is not rotating, the Clapper (Wheel Pointer) moved.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF->ON.

	CAUSE	**CHECK**	**REMEDY**
1	The Pointer Sensor of the Wheel is not working properly.	Check if the Pointer Sensor is damaged.	Perform the IO test to check that the Pointer Sensor is properly operating.

CHECK ROUTE

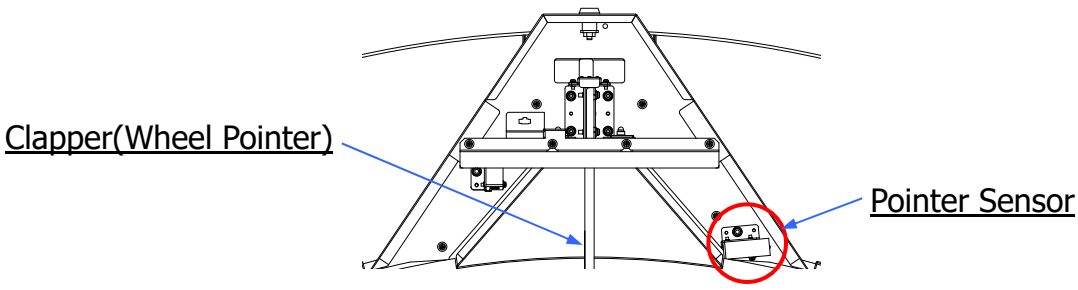


8. 5. 25: Pointer Error(for BIG WEEL)

WHAT	Irregularity in the position of the Clapper (Wheel Pointer). The Wheel is rotating, but the Clapper (Wheel Pointer) is not moving.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF->ON.

CAUSE		**CHECK**	**REMEDY**
1	Malfunction on the Clapper (Wheel Pointer).	Is the fixed part of the Clapper(Wheel Pointer) is firmly secured? Is the fixed part of the Clapper(Wheel Pointer) is bent or broken?	Install again the Clapper (Wheel Pointer) or change it.
2	The Wheel Pin is not in the correct position.	Check that no Wheel Pin is not loose or bent.	Install again the Wheel pin or change it.
3	The Pointer Sensor of the Wheel is not working properly.	Check if the Pointer Sensor is damaged.	Perform the IO test to check that the Pointer Sensor is properly operating.

CHECK ROUTE



8. 5. 26: CLIENT ID error

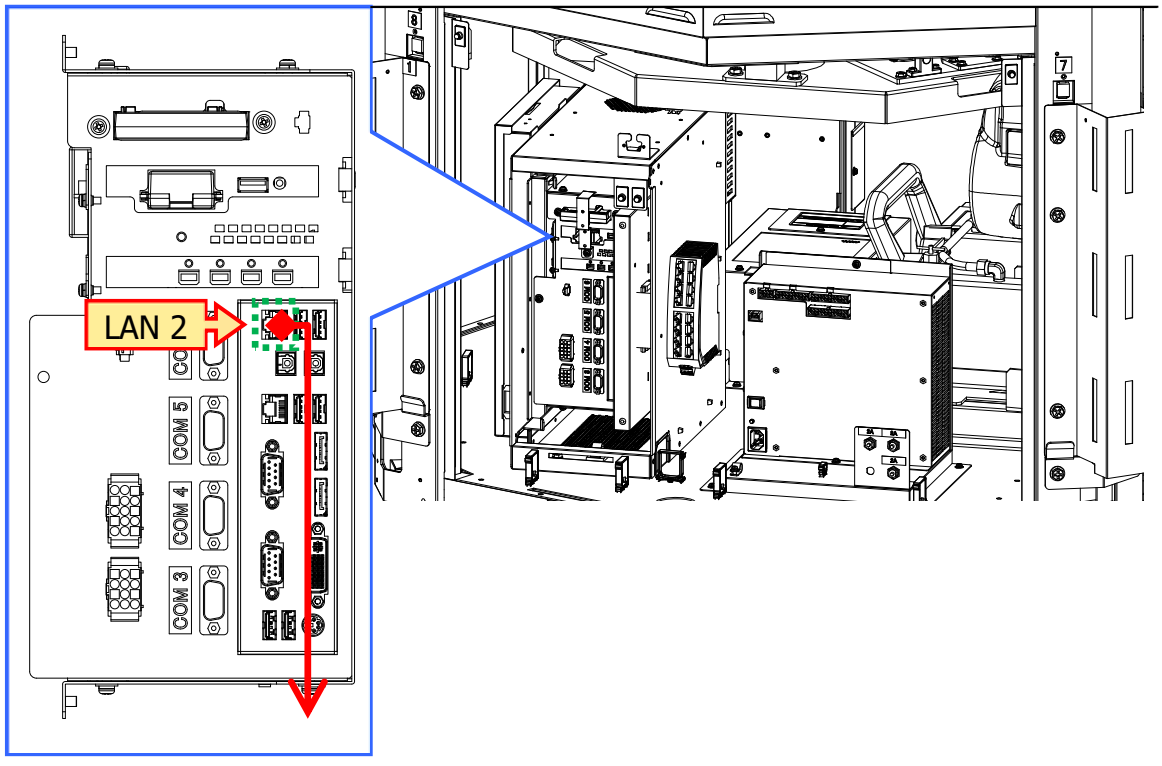
WHAT	It took too much time to restore the connection to the Host.
WHEN	After the connection to the Host is restored.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Power OFF>ON.

8. 5. 27: Live Camera Disconnected

WHAT	Displayed if there is not connection with the Live CAMERA.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	The LAN Cable is disconnected, not plugged properly or malfunctioning.	Check if the wire is broken or disconnected.	Reconnect or change the LAN Cable.
2	Wrong settings of the Live CAMERA	The settings of the Live CAMERA are correct.	Refer to "LIVE CAMERA TYPE" and "LIVE CAMERA ADDRESS" on "Main Unit Settings" at Chapter 4 to set the Live Camera.
3	Live CAMERA malfunction.		Replace the Live CAMERA.

CHECK ROUTE



8. 5. 28: Cabinet Fan xx abnormal(for Roulette)
PC Tower Fan abnormal(for Roulette)
Power Box Fan abnormal(for Roulette)
Power Box A Fan abnormal(for Roulette)
Power Box B Fan abnormal(for Roulette)
Top Cabinet Fan xx abnormal(for Roulette)

WHAT	The FAN does not move or the number of fan rotations is not normal.
WHEN	At any time.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Automatic recovery.

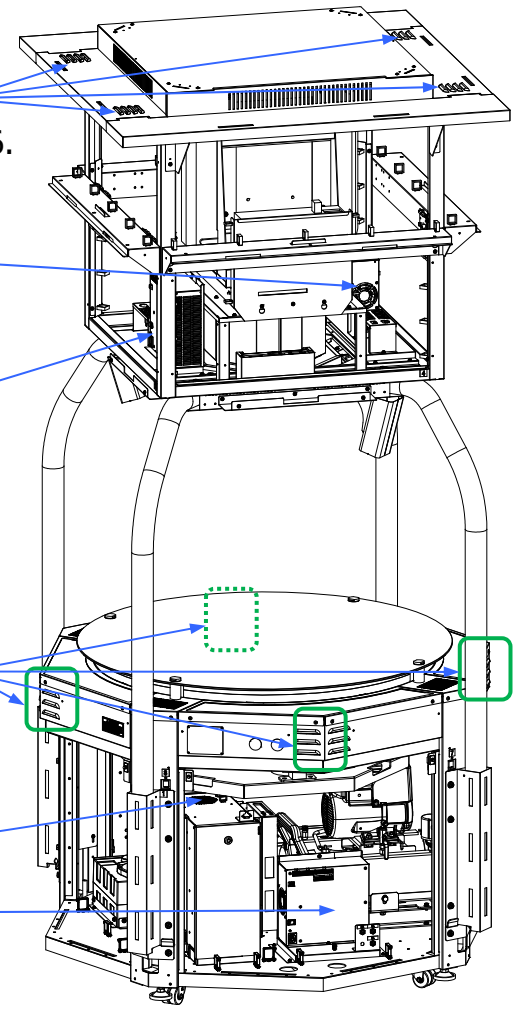
CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

- for LUCKY ROULETTE -

※ Refer to **"Fans in the Top Sign Unit"** on Chapter 6.

※ Refer to **"Speaker and Fan"** on Chapter 6.



8. 5. 29: Power Supply Box thermal error(for Roulette)
Signage Power Supply A thermal error(for Roulette)
Signage Power Supply B thermal error(for Roulette)

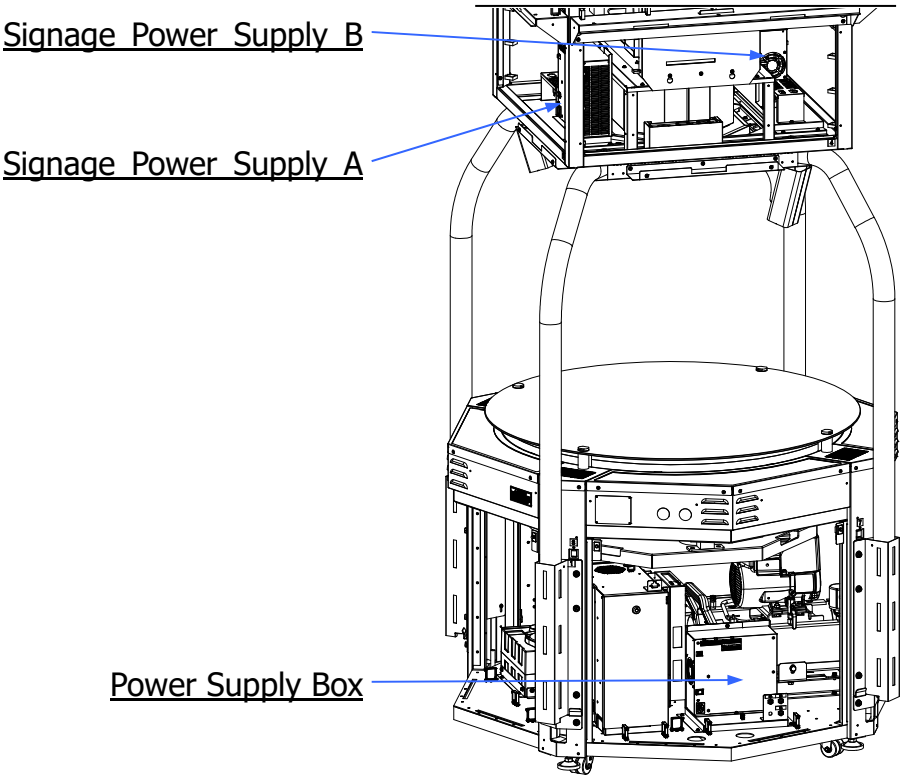
⚠ CAUTION!
When this error occurs, immediately turn OFF the machine.

WHAT	The Power Supply Box temperature is abnormally high. (Monitored by the temperature sensor)
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	The game is replayed from the beginning of the spin in which the error occurred, and the same result will appear.
ERROR RESET	Power OFF.

CAUSE		CHECK	REMEDY
1	Power supply error.	**⚠ CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **⚠ CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

CHECK ROUTE

- for LUCKY ROULETTE -

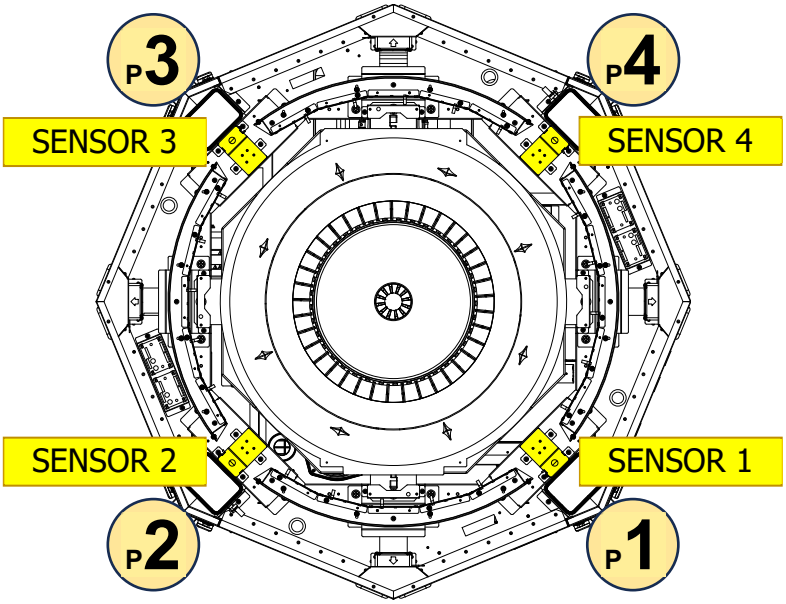


8. 5. 30: Wheel Glass Sensor xx Open(for Roulette)

WHAT	The sensor indicated was activated.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	The sensor indicated was activated.	The relative Post B Bolt is loose.	Fasten the Post B Bolt.
2	Sensor error.	Refer to **"Input Test"** on Chapter 4, to test the sensor.	In case of malfunction, refer to **"Glass Sensor Unit"** on Chapter 6 to replace the Sensor.

CHECK ROUTE



8. 5. 31: Game INIT error(for Roulette)

WHAT	The wheel could not stop at the starting position.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 32: Ball Start error(for Roulette)

WHAT	A ball start error happened for 3 consecutive balls.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 33: Ball Fall error(for Roulette)

WHAT	A ball did not fall in a pocket within the preset time period.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 34: Compressor error(for Roulette)

WHAT	The air compressor did not work normally.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 35: Ball Count error(for Roulette)

WHAT	2 or more balls fell in one pocket.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 36: Motor error(for Roulette)

WHAT	The motor of the wheel did not work at the preset speed
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 37: Position Sensor error (REF0130) (for Roulette)
Position Sensor error (REF0430) (for Roulette)
Position Sensor error (REF0730) (for Roulette)
Position Sensor error (REF1030) (for Roulette)

WHAT	When one of the sensors could not detect any difference from a bet starting moment to the following bet start.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 38: Zero Sensor Detect error(for Roulette)

WHAT	The Zero sensor could not detect the Zero position at the initialization time, even after two or more spins of the wheel.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 39: Zero Sensor error(for Roulette)

WHAT	When the Zero sensor could not detect any difference from a bet starting moment to the following bet start.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 40: Around Sensor error(for Roulette)

WHAT	One of the following conditions occurred: ·Both the Around sensors gets activated at the same time. ·Only one of the Around sensors is activated for 15 consecutive times. ·None of the sensors is activated.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 41: Encoder Count error(for Roulette)

WHAT	The motor moved but there was no change on the Encoder.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 42: Pocket Shuffle error(for Roulette)

WHAT	The value of the pocket shuffle and was different at the initialization time and during the normal time.
WHEN	Occurs between the time the wheel starts spinning and stops.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 43: Wheel Direction error(for Roulette)

WHAT	The actual spinning direction of the wheel was opposite to the settings.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 44: Wheel Origin Detect error(for Roulette)

WHAT	The sensor could not detect the Origin position at the initialization time, even after one or more spins of the wheel.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF. ⚠ **CALL SERVICE IMMEDIATELY!**

8. 5. 45: GAL Mismatch(for Roulette)

WHAT	In case of a mismatch of between the number of pockets on the wheel and the GAL used.		
WHEN	After the power is turned ON and the game is activated.		
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.		
ERROR RESET	Ram Clear.		
CAUSE		**CHECK**	**REMEDY**
1	The number of pockets on the wheel and the information on the GAL are different.	Check the GAL.	Change to a GAL that matches with the number of pockets on the Wheel Unit.

8. 5. 46: Warning!! Configure Main Unit ID(for Roulette)

WHAT	Occurs when the Center Unit ID is not changed from the default "0000".		
WHEN	After the power is turned ON and the game is activated.		
EFFECT ON CREDITS	There is no effect on the credits.		
ERROR RESET	Ram Clear.		
CAUSE		**CHECK**	**REMEDY**
1	The Center Unit ID is not changed from the default "0000"		Refer to the item "MAIN UNIT ID" on **"Important Settings / Basic Settings"** on chapter 4, and change the ID code.

8. 5. 47: Base Protocol Version is Unmatched

WHAT	Occurs if the Base Protocol version of the Center Unit and of the Station do not match.
WHEN	When the communication with the Center Unit has been restored.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF>ON.

	CAUSE	**CHECK**	**REMEDY**
1	The Base Protocol version of the Center unit and the Station do not match.	Check if the Version of the Center Unit and of the Station are correct.	Replace the SSD of the wrong Version.

8. 5. 48: Game Protocol Version is Unmatched

WHAT	Occurs if the Game Protocol version of the Center Unit and of the Station do not match.
WHEN	When the communication with the Center Unit has been restored.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF>ON.

	CAUSE	**CHECK**	**REMEDY**
1	The Game Protocol version of the Center unit and the Station do not match.	Check if the Version of the Center Unit and of the Station are correct.	Replace the SSD of the wrong Version.

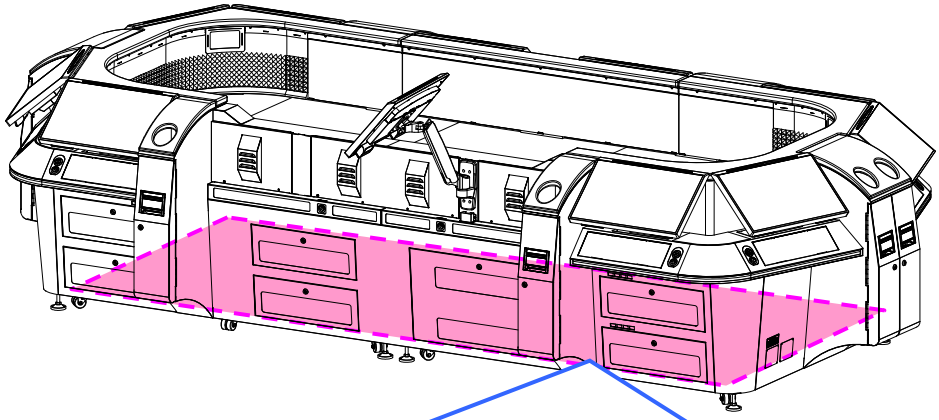
8. 5. 49: Bottom xx Fan abnormal(for Roll to win Craps)

WHAT	The FAN do not move properly.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Automatic recovery.

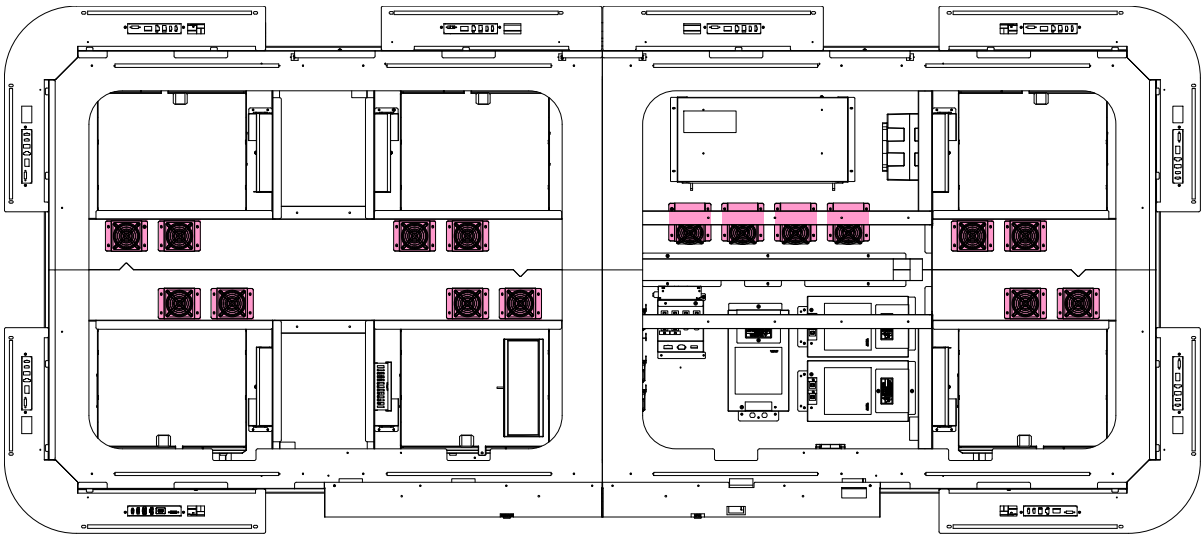
CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

※ Refer to **"Input Test"** on Chapter 4.
Refer to **"Bottom Fan (Base Frame Fan)"** on Chapter 6.



Location of the Bottom Fan (Bottom Area UPPER View)



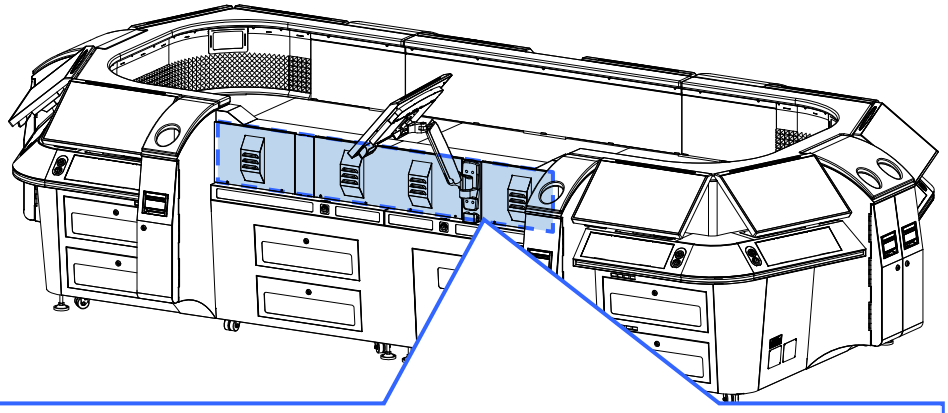
8. 5. 50: Front xx Fan abnormal(for Roll to win Craps)

WHAT	The FAN do not move properly.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Automatic recovery.

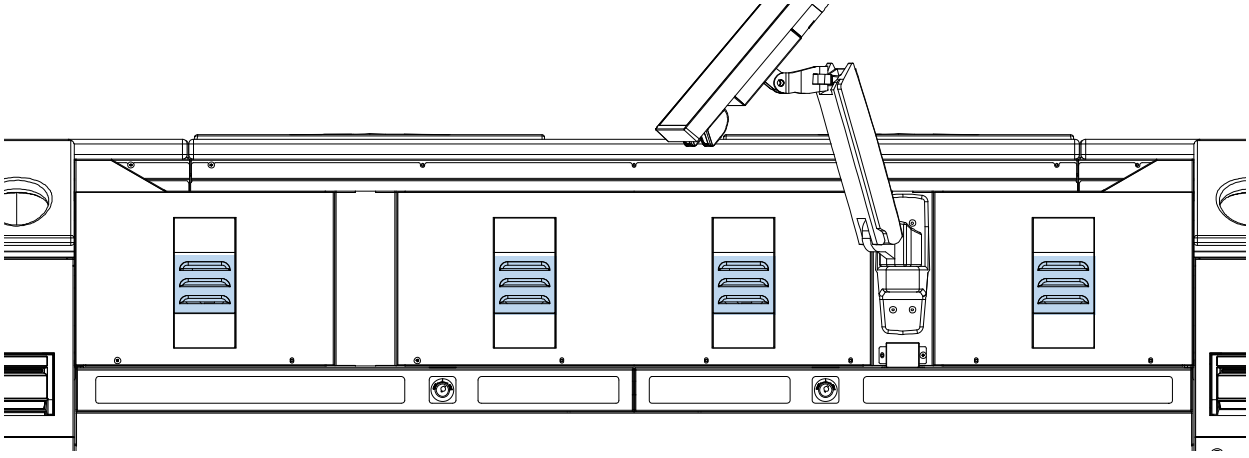
CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

※ Refer to **"Input Test"** on Chapter 4.
Refer to **"Wall LED Unit, Front Fan"** on Chapter 6.



Location of the Front Fan



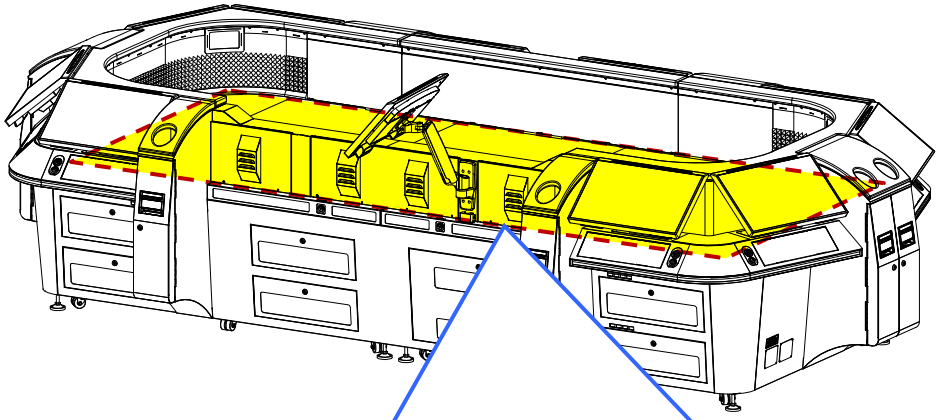
8. 5. 51: Middle xx Fan abnormal(for Roll to win Craps)

WHAT	The FAN do not move properly.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Automatic recovery.

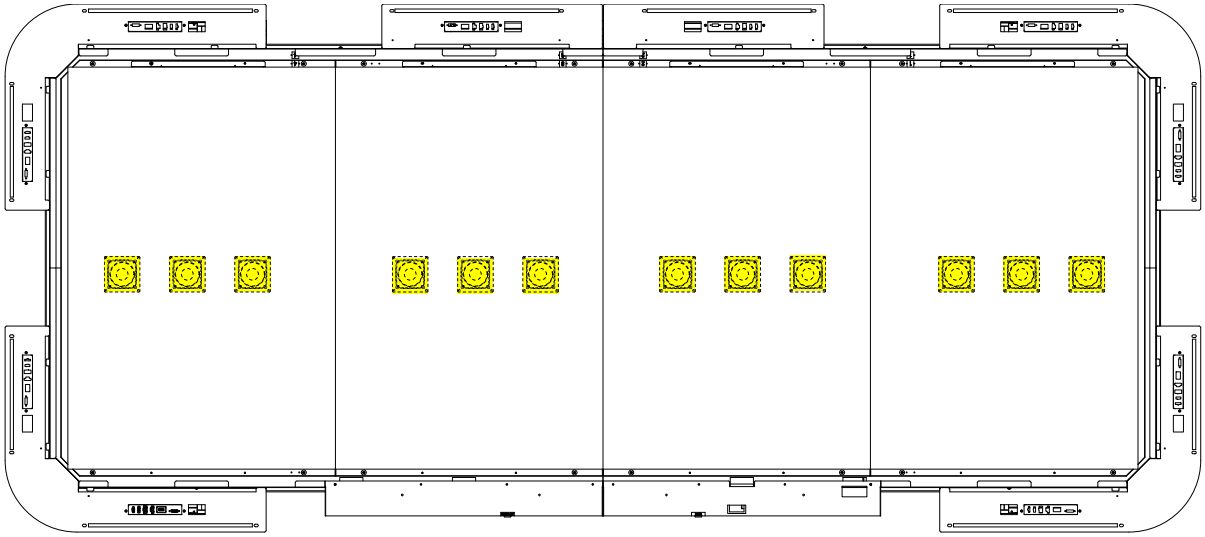
CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

※ Refer to **"Input Test"** on Chapter 4.
Refer to **"Field LED Unit, Middle Fan"** on Chapter 6.



Location of the Middle Fan (Middle Area UPPER View)



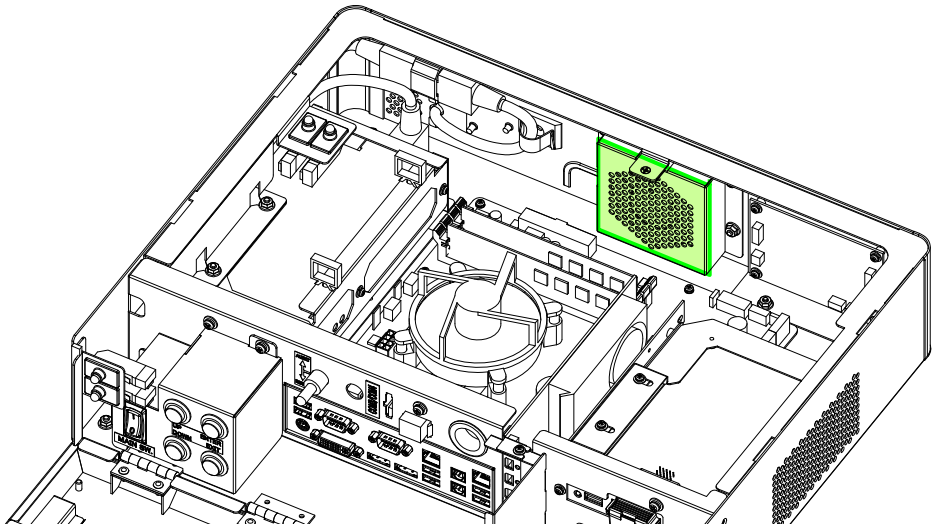
8. 5. 52: Security Box Fan abnormal(for Roll to win Craps)

WHAT	The FAN do not move properly.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Automatic recovery.

	CAUSE	**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

※ Refer to **"Security Box Fan of Controller Unit"** on Chapter 6 for Center Unit, or on Chapter 7 for Player Terminal Unit.



8. 5. 53: Inappropriate Game Result Input(for Roll to win Craps)

WHAT	When the "LOCKUP" is pressed.
WHEN	At any time.
EFFECT ON CREDITS	The right CREDIT amount must be measured by an attendant.
ERROR RESET	RESET key.

8. 5. 54: Login Failure(for Roll to win Craps)

WHAT	When the Log in to the Dealer Console is failed for 3 times.
WHEN	When Log in to the machine.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	RESET key, or wait 30 minutes.

8. 5. 55: Table ID Setting Required(for Roll to win Craps)

WHAT	Occurs if TABLE ID on IMPORTANT SETTINGS of the Center Unit is not set.
WHEN	After the power is turned ON and the game is activated.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 5. 56: Power Supply Box error(for Roll to win Craps)

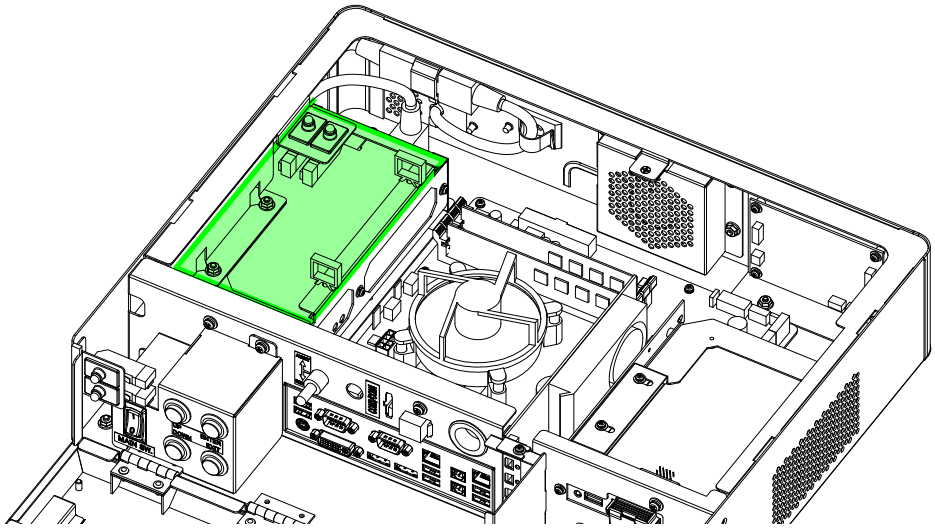
⚠ CAUTION!
When this error occurs, immediately turn OFF the machine.

WHAT	The Power Supply Box temperature is abnormally high. (Monitored by the temperature sensor)
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Power OFF.

CAUSE		CHECK	REMEDY
1	Power supply error.	⚠ **CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

CHECK ROUTE

※ Refer to **"Power Supply Unit of Controller Unit"** on Chapter 6 for Center Unit, or on Chapter 7 for Player Terminal Unit.



8. 5. 57: Power Supply Fan abnormal(for Roll to win Craps)

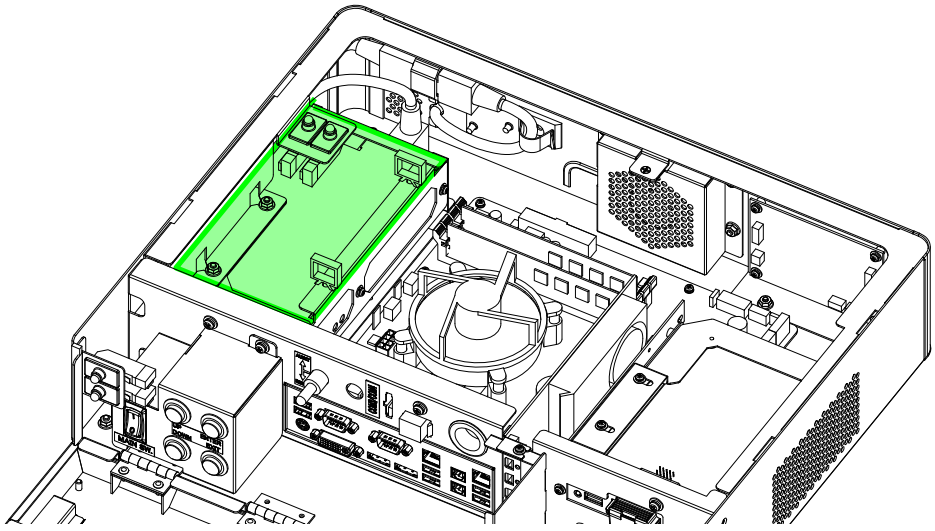
⚠ CAUTION!
When this error occurs, immediately turn OFF the machine.

WHAT	An abnormality with the rotation count for the fan in the power supply box.
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Power OFF.

CAUSE		CHECK	REMEDY
1	Power supply error.	**⚠ CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **⚠ CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

CHECK ROUTE

※ Refer to **"Power Supply Unit of Controller Unit"** on Chapter 6 for Center Unit, or on Chapter 7 for Player Terminal Unit.



8. 5. 58: This Station can not return to the Game, All BETs will be return to Credit Meter then cashout.

(for Roll to win Craps)

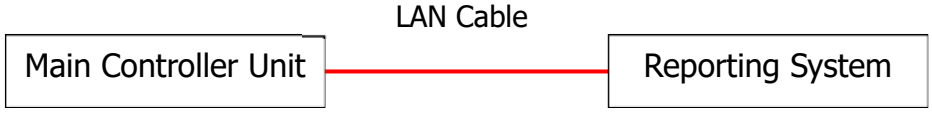
WHAT	The connection to the Center unit was interrupted leaving credit charged on the station. Then settings that do not require the Ram Clear are changed on the Center Unit. When the connection to the Center Unit is restored, this error occurs.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	RESET key.

8. 5. 59: Reporting System communication offline(for Roll to win Craps)

WHAT	It is not possible to connect to the Reporting System.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

CAUSE		**CHECK**	**REMEDY**
1	Incorrect settings on the Main Controller Unit.	Check the settings for "REPORTING SYSTEM", "REPORTING SERVER ADDRESS", "REPORTING SERVER PORT" and "TABLE ID" on **"Important Settings / Basic Settings"** described at Chapter 4.	Input the correct setting on the Main Controller Unit.
2	Main Controller Unit or Reporting System error		Check if the Main Controller Unit or the Reporting System are operating correctly.
3	Communication cable error	Check for connection faults and disconnections.	The cable requires replacement.

CHECK ROUTE

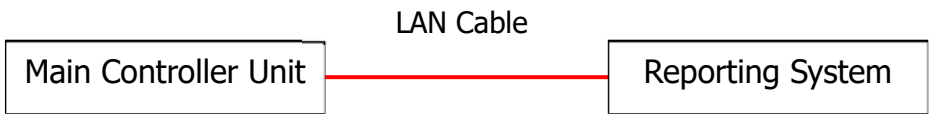


8. 5. 60: Reporting System Event BUFFER full(for Roll to win Craps)

WHAT	The information to send to the Reporting system accumulate more than established.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Automatic recovery.

	CAUSE	**CHECK**	**REMEDY**
1	Main Controller Unit or Reporting System error		Check if the Main Controller Unit or the Reporting System are operating correctly.
2	Communication cable error	Check for connection faults and disconnections.	The cable requires replacement.

CHECK ROUTE



8. 5. 61: Mini PC / Pit Boss PC Disconnected(for Roll to win Craps)

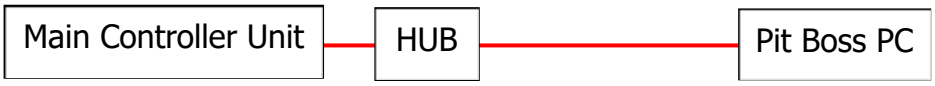
WHAT	The Mini PC or the Pit Boss PC are not connected.		
WHEN	At any time.		
EFFECT ON CREDITS	There is no effect on the credits.		
ERROR RESET	Power OFF>ON.		
CAUSE		**CHECK**	**REMEDY**
1	The LAN Cable is disconnected, not plugged properly or malfunctioning.	Check if the wire is broken or disconnected.	Reconnect or change the LAN Cable.
2	Mini PC/ Pit Boss PC error.	---	Check if the casino host is operating correctly.

CHECK ROUTE

[If using Mini PC]



[If using Pit Boss PC]



8. 5. 62: Printer Jam (Please retrieve printed report)(for Roll to win Craps)

WHAT	There is a paper jam inside the ticket printer. This error comes from the printer.
WHEN	Occurs after a ticket is printed.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits.
ERROR RESET	Automatic recovery.

8. 5. 63: Please wait(for Roll to win Craps)

WHAT	If an individual's Total Win violates the "OVERPAY LOCKUP" trigger condition, the Machine locks up and this message is displayed in all Player Terminals. (Refer to "OVERPAY LOCKUP SECURITY LEVEL" and "OVERPAY LOCKUP LIMIT($)" on **"Game Settings"** at Chapter 4).
WHEN	An individual's Total Win violates the "OVERPAY LOCKUP" trigger condition.
EFFECT ON CREDITS	Does not occur during the game, so there is no effect on the credits. The right CREDIT amount must be measured by an attendant.
ERROR RESET	Open the [OPERATION] Tab on the Dealer Terminal > Press [OVERPAY LOCKUP] > Select the target [Player Terminal] > Press [RESET] to clear the condition. (Refer to **"Dealer Terminal Screen, Buttons And Settings"** on Chapter 3 of the OPERATION Manual.)  

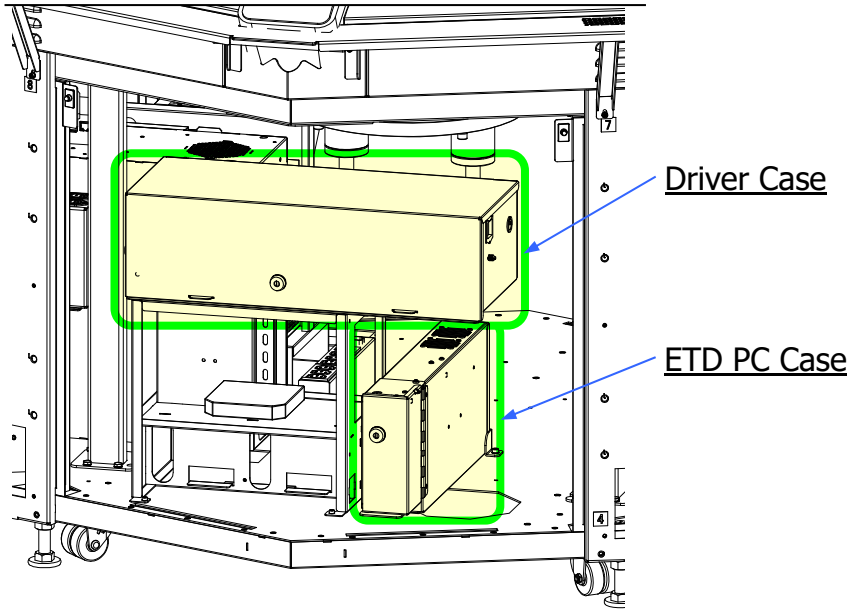
8. 5. 64: Consecutive No Dice(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	A [NO DICE condition](only 1 or less dice could be read) occurred again even after 3 times the dice was reshoot because [No DICE condition] occurred. ※This error is displayed only if on **"Dice Unit Settings"** described at Chapter 4, the setting " NO DICE RESHOOT" is set to **ENABLED**.
WHEN	After the Dice Field is stopped, when the Dice Spot Reading Sensor reads the Dice.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key

CAUSE		**CHECK**	**REMEDY**
1	Dice Field Malfunction.	Contact your local office or distributor.	Improve the condition of the Dice or of the Dice Field.
2	Cable Malfunction.		Reconnect the cables of the Driver Case and ETD PC Case, or replace the cables.
3	Dice Malfunction.		Change Dice.

CHECK ROUTE

※ Refer to **"Dice"** or **"Accessing the Driver Case, the ETD PC Case, the Audio module and the DICE Generator Fan "**on Chapter 6.



8. 5. 65: Consecutive No Results Of Any Spot On Dice(Dice A) Consecutive No Results Of Any Spot On Dice(Dice B) Consecutive No Results Of Any Spot On Dice(Dice C)

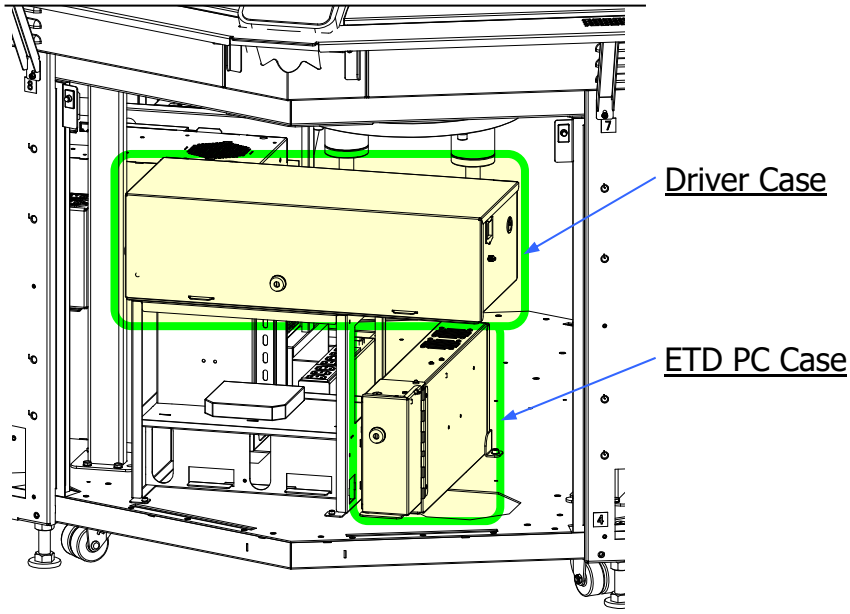
(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	One of the Dice did not show a certain face for 100 times in a row.
WHEN	After the Dice Field is stopped, when the Dice Spot Reading Sensor reads the Dice.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key

CAUSE		**CHECK**	**REMEDY**
1	Dice Trouble like cracks etc.	Contact your local office or distributor.	Change the Dice.
2	Cable malfunction.		Reconnect the cables of the Driver Case and ETD PC Case, or replace the cables.

CHECK ROUTE

※ Refer to **"Dice"** or **"Accessing the Driver Case, the ETD PC Case, the Audio module and the DICE Generator Fan "**on Chapter 6.



8. 5. 66: Consecutive Same Results For One Dice
Consecutive Same Results For All Dice

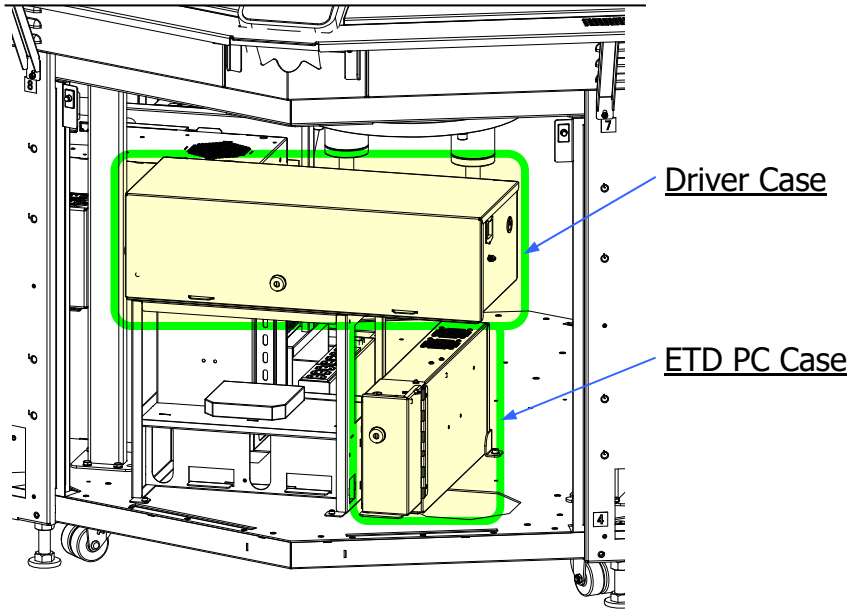
(for Shoot to win Craps) (for Dragon-Sic Bo)

WHAT	for Dragon-Sic Bo **Consecutive Same Results For One Dice** **Consecutive Same Results For All Dice** One (or all) Dice showed the same face 4 times in a row. --- for Shoot to win Craps **Consecutive Same Results For One Dice** One Dice showed the same face for 10 times in a row. **Consecutive Same Results For All Dice** All Dice showed the same faces for 6 times in a row.
WHEN	After the Dice Field is stopped, when the Dice Spot Reading Sensor reads the Dice.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key

	CAUSE	**CHECK**	**REMEDY**
1	Dice Trouble like cracks etc.	Contact your local office or distributor.	Change the Dice.
2	Cable malfunction.		Reconnect the cables of the Driver Case and ETD PC Case, or replace the cables.

CHECK ROUTE

※ Refer to **"Dice"** or **"Accessing the Driver Case, the ETD PC Case, the Audio module and the DICE Generator Fan "**on Chapter 6.



8. 5. 67: Dice And Field Maintenance Required Self Chi Square Test Failure(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	A result of chi-square is not proper. ※Refer to "CHI SQUARE FAILURE LOCK UP" on **"Main Unit Settings"** at Chapter 4.
WHEN	When the next game starts.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Reset key

CAUSE		**CHECK**	**REMEDY**
1	・Dice Trouble like cracks etc. ・Foreign object on the Dice Field. ・Deterioration due to use over time.	Refer to **"Chi Square Test"** of "**Recall Meters**" described at Chapter 6 of the OPERATION Manual to check the frequency of occurrence of this error. ※If this error occurs twice or more within 2 months, contact your local office or distributor.	Change the Dice, or improve the condition of the Dice Field.

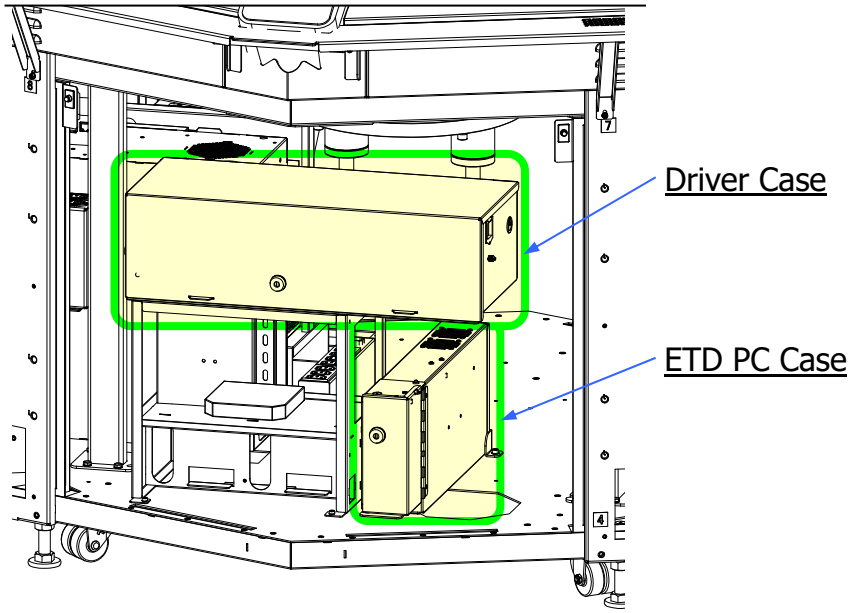
8. 5. 68: Dice Failure(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	[NO DICE condition](only 1 or less dice could be read) occurred again within 30 games after the previous [No DICE condition].
WHEN	After the Dice Field is stopped, when the Dice Spot Reading Sensor reads the Dice.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key.

	CAUSE	**CHECK**	**REMEDY**
1	Dice Trouble like cracks etc.	Contact your local office or distributor.	Change the Dice.
2	Cable malfunction.		Reconnect the cables of the Driver Case and ETD PC Case, or replace the cables.

CHECK ROUTE

※ Refer to **"Dice"** or **"Accessing the Driver Case, the ETD PC Case, the Audio module and the DICE Generator Fan "**on Chapter 6.

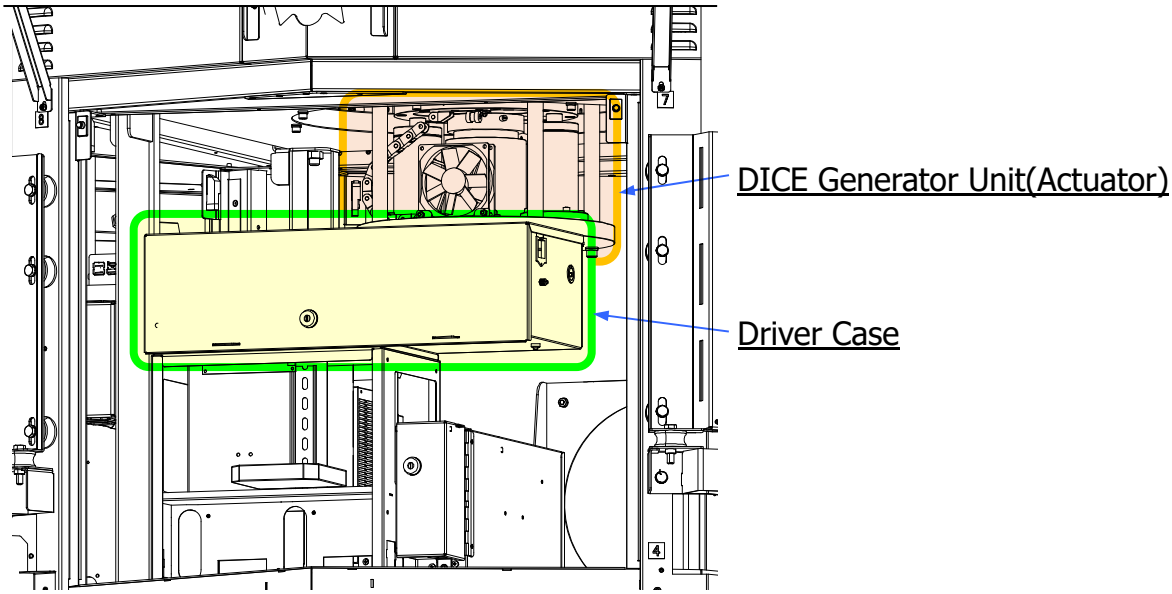


8. 5. 69: Dice Unit Disconnected(for Shoot to win Craps) (for Dragon Sic Bo)

1WHAT	Displayed if there is no connection to the Dice Unit.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset Key

CAUSE		**CHECK**	**REMEDY**
1	Malfunction of the cable between the Driver Case and the DICE Generator Unit(Actuator).	Contact your local office or distributor.	Reconnect the cables or replace the cables.
2	Driver Case or DICE Generator Unit(Actuator) malfunction.		Change the Driver Case or DICE Generator Unit(Actuator).

CHECK ROUTE



8. 5. 70: Dice Unit Settings Have Been Changed, Please Reboot
(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	It is necessary to reboot the ETD PC after changing the setting of **"Dice Unit Settings"** in **"Settings"**. **(Refer to 4.8)**
WHEN	Displayed when exiting AUDIT.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF>ON.

8. 5. 71: Game Failure Error(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	A game play could not be executed because an error occurred.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key.

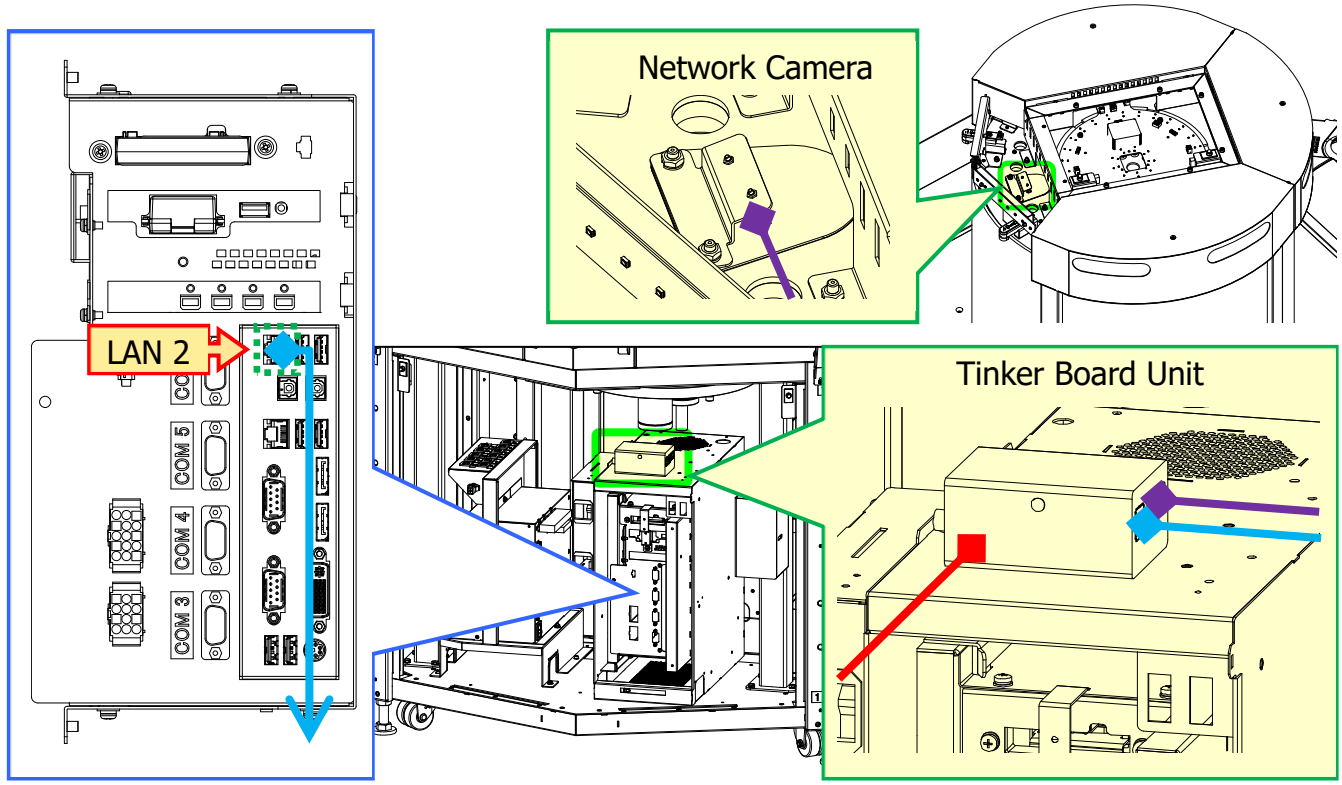
	CAUSE	**CHECK**	**REMEDY**
1	It is not possible to play games because an error occurred.	---	Clear all errors.

8. 5. 72: Live Camera Disconnected(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	Displayed if there is not connection with the Live CAMERA.
WHEN	At any time.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF>ON

	CAUSE	**CHECK**	**REMEDY**
1	The LAN Cable, USB Cable and DC Cable are plugged incorrectly, disconnected, or malfunctioning.	Check if the wire is broken or disconnected.	Reconnect or change the LAN Cable.
2	Tinker Board Unit malfunction.	Contact your local office or distributor.	Refer to **"Accessing the Security Cage, the Tinker Board Unit, the IO Case, the Main Power Unit and the Power Relay Unit"** at Chapter 6 to change the Tinker Board Unit.
3	Network Camera malfunction.		Refer to **"Network Camera, Field LED PCB and Dice Field"** at Chapter 6 to change the Network Camera.
CHECK ROUTE			

CHECK ROUTE



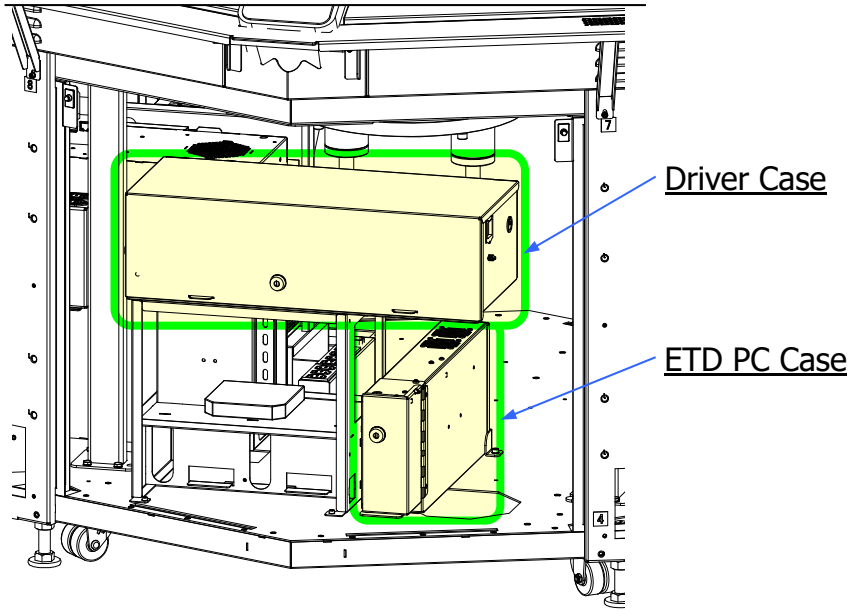
8. 5. 73: No Dice Lockup Interval(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	It was reached the number of times a "NO DICE condition" (only 1 or less dice could be read) can occur within 100 consecutive games. ※Refer to "NO DICE LOCKUP INTERVAL" on **"Dice Unit Settings"** at Chapter 4.
WHEN	After the Dice Field is stopped, when the Dice Spot Reading Sensor reads the Dice.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key

CAUSE		**CHECK**	**REMEDY**
1	Dice Field Malfunction.	Contact your local office or distributor.	Improve the condition of the Dice or of the Dice Field.
2	Cable Malfunction.		Reconnect the cables of the Driver Case and ETD PC Case, or replace the cables.
3	Dice Malfunction.		Change Dice.

CHECK ROUTE

※ Refer to **"Dice"** or **"Accessing the Driver Case, the ETD PC Case, the Audio module and the DICE Generator Fan "**on Chapter 6.



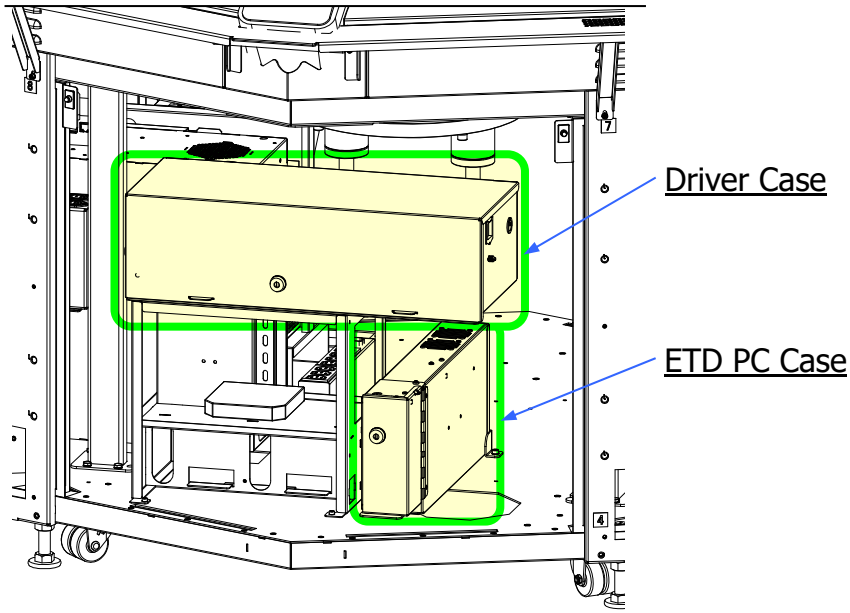
8. 5. 74: No Dice(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	A [NO DICE condition] (only 1 or less dice could be read) occurred. ※This error is displayed only if on **"Dice Unit Settings"** described at Chapter 4, the setting "NO DICE RESHOOT" is set to **DISABLED**.
WHEN	After the Dice Field is stopped, when the Dice Spot Reading Sensor reads the Dice.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key

	CAUSE	**CHECK**	**REMEDY**
1	Dice Field Malfunction.	Contact your local office or distributor.	Improve the condition of the Dice or of the Dice Field.
2	Cable Malfunction.		Reconnect the cables of the Driver Case and ETD PC Case, or replace the cables.
3	Dice Malfunction.		Change Dice.

CHECK ROUTE

※ Refer to **"Dice"** or **"Accessing the Driver Case, the ETD PC Case, the Audio module and the DICE Generator Fan "**on Chapter 6.



8. 5. 75: Cabinet Fan 1-4 Sensor
Power Box Fan1-2 Sensor(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	The FAN does not move properly.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Automatic recovery

CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

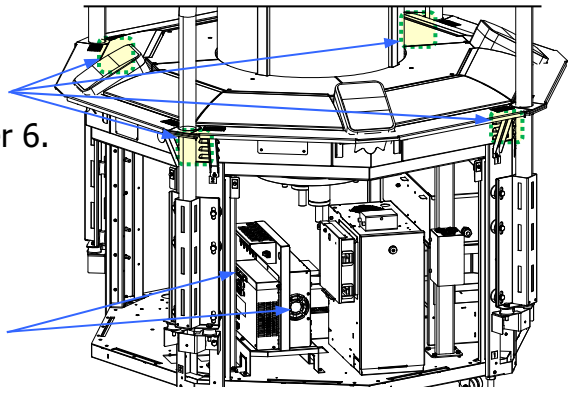
CHECK ROUTE

- for SHOOT TO WIN CRAPS LUCKY ROLL -

Location of the Fans are refer to Chapter 6.5.

Cabinet Fan 1(or else 2, 3, 4)

※ Refer to **"Speaker and Cabinet Fan"** on Chapter 6.



Power Box Fan 1(or else 2)

※ Refer to **"Accessing the Security Cage, the Tinker Board Unit, the IO Case, the Main Power Unit and the Power Relay Unit"** on Chapter 6.

8. 5. 76: Power Supply Box 1 Sensor
Power Supply Box 2 Sensor(for Shoot to win Craps) (for Dragon Sic Bo)

⚠ CAUTION!
When this error occurs, immediately turn OFF the machine.

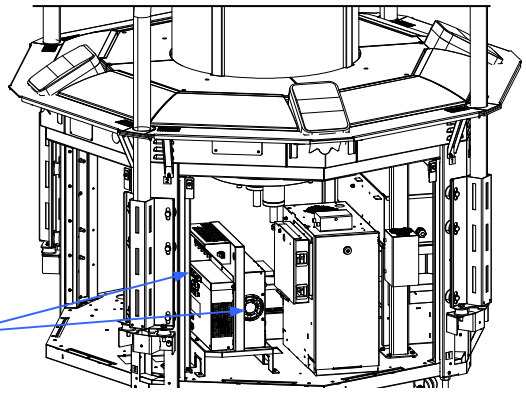
WHAT	The Power Supply Box temperature is abnormally high. (Monitored by the temperature sensor)
WHEN	At any time. Checked at every frame.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Power OFF.

CAUSE		CHECK	REMEDY
1	Power supply error.	⚠ **CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

CHECK ROUTE

- for SHOOT TO WIN CRAPS LUCKY ROLL -

Power Supply Box 1(or else 2) Sensor



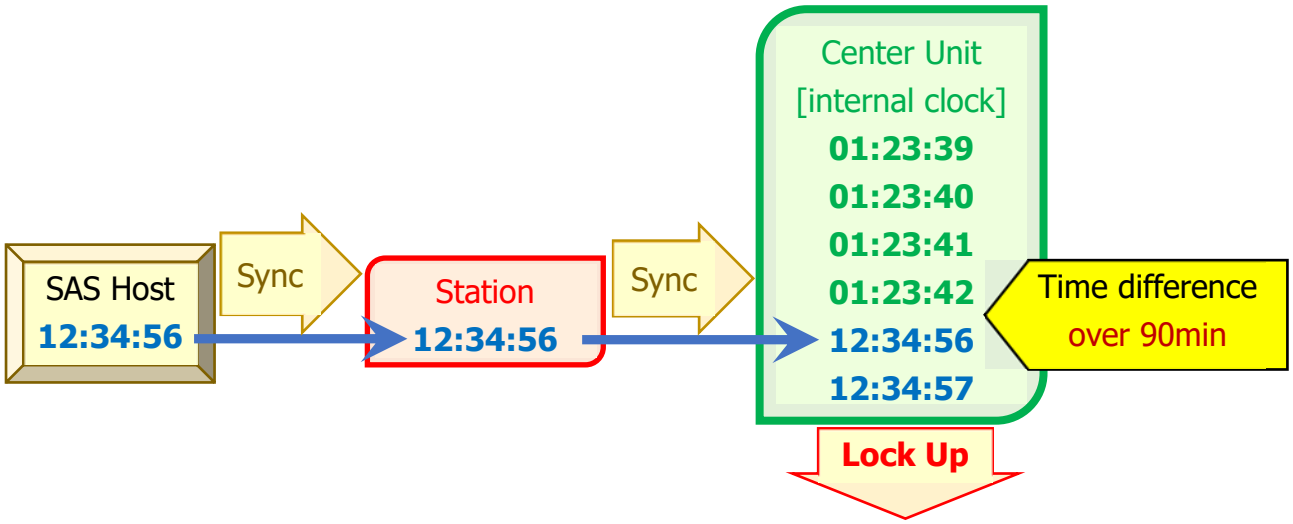
※ Refer to **"Accessing the Security Cage, the Tinker Board Unit, the IO Case, the Main Power Unit and the Power Relay Unit"** on Chapter 6.

8. 5. 77: Time Different Error(for Shoot to win Craps) (for Dragon Sic Bo)

WHAT	A time difference of 90 minutes or more is detected between the clock of the Main Unit and the clock of one of the Stations. ※The machine locks up if on **" Main Unit Settings"** described at Chapter 4, the setting " the setting TIME DIFFERENT ERROR" is set to **LOCK UP**.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop according to the setting of "TIME DIFFERENT ERROR" on **"Main Unit Settings"** at Chapter 4. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset Key

	CAUSE	**CHECK**	**REMEDY**
1	Host error.	・Check the time settings on the Center Unit and the Station. ・Check the connection with the Host.	Check if the casino host is operating correctly.
2	Communication cable error.		Reconnect or replace the cable.

CHECK ROUTE



8. 5. 78: No. xx Fan abnormal
Power Box Fan xx abnormal
Top Fan No. xx abnormal(for Dragon-Sic Bo)

WHAT	The FAN malfunction.
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Reset key.

CAUSE		**CHECK**	**REMEDY**
1	Fan error.	Check the movement of the fan.	The fan requires replacement.

CHECK ROUTE

- for DRAGON SICBO -

Location of the Fans are refer to Chapter 6.5.

Top Fan No.01(or else 02, 03, 04)

※ Refer to **"Top PID Unit"** on Chapter 6.

Power Box Fan 01(or else 02)

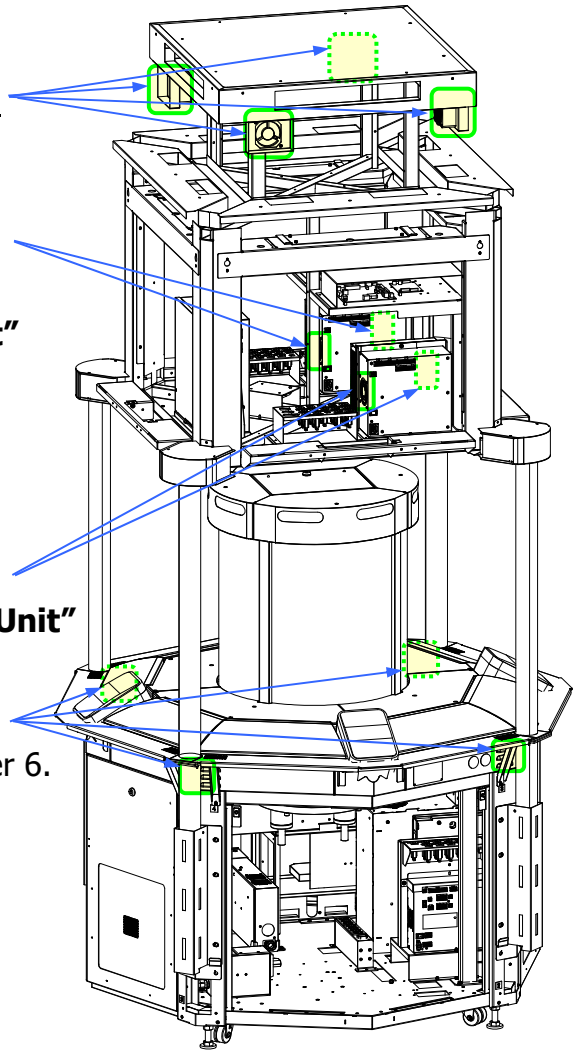
※ Refer to **"Accessing the Power Unit A and SERIAL POWER(SERI PWR) PCB of PID Unit"** on Chapter 6.

Power Box Fan 03(or else 04)

※ Refer to **"Accessing the Power Unit B of PID Unit"** on Chapter 6.

No.1(or else 2, 3, 4) Fan

※ Refer to **"Speaker and Cabinet Fan"** on Chapter 6.



8. 5. 79: Power Box xx thermal abnormal(for Dragon-Sic Bo)

⚠ CAUTION!
When this error occurs, immediately turn OFF the machine.

WHAT	The Power Supply Box temperature is abnormally high. (Monitored by the temperature sensor)
WHEN	At any time.
EFFECT ON CREDITS	When this error occurs, the game will stop. It may be needed to have the right CREDIT amount to be measured by an attendant.
ERROR RESET	Power OFF.

CAUSE		CHECK	REMEDY
1	Power supply error.	**⚠ CAUTION!** When this error occurs, immediately turn OFF the machine power supply.	The power supply requires replacement. **CALL SERVICE IMMEDIATELY!** Contact your local office or distributor.

CHECK ROUTE

- for DRAGON SICBO -

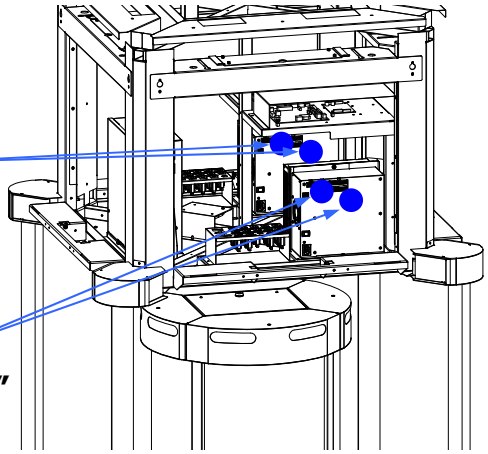
Location of the Power Boxes are refer to Chapter 6.5.

Power Box 01(or else 02) thermal

※ Refer to **"Accessing the Power Unit A and SERIAL POWER(SERI PWR) PCB of PID Unit"** on Chapter 6.

Power Box 03(or else 04) thermal

※ Refer to **"Accessing the Power Unit B of PID Unit"** on Chapter 6.



8. 5. 80: Signage Type Settings Have Been Changed, Please Reboot (for Dragon-Sic Bo)

WHAT	It is necessary to reboot the machine after changing the setting of "SIGNAGE TYPE" in **"Signage Direction"**. **(Refer to 4.8.8)**
WHEN	Displayed when exiting AUDIT.
EFFECT ON CREDITS	There is no effect on the credits.
ERROR RESET	Power OFF>ON.

Chapter 9

Machine Specifications

9. 1: Cabinet Code(MODEL#)

Center Unit: ROUX-MS

Station: AXPS01

9. 2: Overall Dimension

	Width	Height	Depth
Whole Machine Including 8pcs Stations layout	3050 mm (120.08″)	2735 mm (107.68″)	3050 mm (120.08″)
Center Unit : Excluding Tower Light	2170 mm (85.43″)	2735 mm (107.68″)	2170 mm (85.43″)
Station : Excluding Back LED Unit : Including Back LED Unit	670 mm (26.38″)	972 mm (38.27″)	810 mm (31.89″) 868 mm (31.17″)

9. 3: Weight

Center Unit	600 kg(1322.8 lbs)
Station	90 kg(198.4 lbs)

9. 4: Electrical Specifications

Center Unit: ROUX-MS

Power Requirements

Input Voltage	100 - 120VAC	220 - 240VAC
Input Frequency	50 / 60Hz	50 / 60Hz
Mains Input Current		
EGM Maximum (* Including Service Outlet)	12.9 A	5.3 A
EGM Typical	5.8 A	3.2 A
Power Consumption at Nominal Voltage		
EGM Typical	684 W	647 W
Typical Heat Load	2334 BTU/hr	2208 BTU/hr
Maximum Load Current		
Service Outlet	**N/A**	**N/A**
Power Consumption at Nominal Voltage		
EGM Maximum (excluding Service Outlet)	Maximum allowed by PSU	Maximum allowed by PSU

Station: APX-MS

Power Requirements

Input Voltage	100 - 120VAC	220 - 240VAC
Input Frequency	50 / 60Hz	50 / 60Hz
Mains Input Current		
EGM Maximum (* Including Service Outlet)	4.7 A	3.7 A
EGM Typical	1.0 A	0.6 A
Power Consumption at Nominal Voltage		
EGM Typical	119 W	118 W
Typical Heat Load	404 BTU/hr	401 BTU/hr
Maximum Load Current		
Service Outlet	1A x 2	1A x 2
Power Consumption at Nominal Voltage		
EGM Maximum (excluding Service Outlet)	Maximum allowed by PSU	Maximum allowed by PSU

9. 5: Environment

Ambient temperature	0 through 30 degrees C
Ambient humidity	5 through 95% Free from dew condensation

NOTE:
Please use this machine in an ambient with a temperature below 30℃.
If the ambient temperature exceeds 30℃, the security function of the Projector may put it into a light off status.
To restore the Projector from a light off status, please refer to Trouble Shooting.

9. 6: BILLs Capacity

Maker : Model	Capacity
JCM : UBA / i VIZION / i PRO	500 – 900 BILLs
Cash Code : CASH CODE ONE	600 – 900 BILLs
MEI : CASHFLOW	600 – 1200 BILLs


interblock
LUXURY GAMING PRODUCTS

Glossary

A

AFT
Advanced Fund Transfer.
The transfer of funds between a gaming machine and a casino accounting system.

Aging Test
An automated test where a game program and associated hardware are run through continuous game cycles.

Asset Number
A unique identifier or serial number attached to machines, equipment or parts.

Attendant
An employee of a casino who is responsible for customer service and machine maintenance.

Audit (mode)
The mode where it is possible to view gaming machine meters, statistics, etc. and perform non-player related functions.

Award
A payout associated with a unique combination of symbols or a game event as a result of wagering and game play that is displayed on the gaming machine. If one or more symbols can be substituted by a wild symbol, resulting in a winning combination with the same pay as that using the original symbols, then both combinations are considered to be the same award.

AX-GMEM PCB
PCB located in the security cage.

B

Backup Memory Battery
A small battery that enables the retention of RAM or similar memory in the event of power loss.

Base Game
The regular games of any given slot game. These games do not take place during a special condition, such as a bonus feature.

Baud Rate
A number related to the speed of data transmission in a system. The rate indicates the number of electrical oscillations per second that occurs within a data transmission. The higher the baud rate, the more bits per second that are transferred.

BILL Acceptor
The device using photo-optic, electromagnetic or magnetic sensors (internal or external to the gaming machine) and any additional devices used to validate a BILL and/or printed ticket.

BODY PCB
The PCB that controls all parts of the cabinet body, excluding the door.

C

Cage
Also referred to as a logic cage, or logic area It is a secure metal box that contains the game software, OS, memory and motherboard. The cage is located within the cabinet

Cabinet
The secure, metal enclosure that contains all software, hardware, displays, artwork and control panel

Calibration
The check or rectification of an adjustable instrument, in this case the LCD screens.

Cancelled Credits
Credits that are paid by manual cancellation at the gaming machine or by ticket payment to the player.

Capacitor Unit
Unit installed in order to reduce the substitution frequency of the backup battery that powers the data storage memory during the power down, and of the one that powers doors opening/closing monitoring circuit.

Cash Out
An option to remove current credit balance on a gaming machine. The balance is presented to the player in a medium that is readily exchanged for cash.

Cashable Electronic Promotion
The total value of cashable credits electronically transferred to a machine from a promotional account.

Cashable Tickets
Tickets that contain value that can be redeemed for cash.

Cashless
Cashless Wagering System = The collective hardware, software and other equipment used to facilitate wagering without chips, tokens, or other legal tender.

Celebration
A message or graphic displayed to signify a substantial win to the player.

Celebration Win
A substantial win that is accompanied by a notifying message.

CF
An abbreviation for Compact Flash memory.

Communication Error
A data or signal error that occurs between the gaming machine and the venue host

Competition
A game element where 2 or more players compete for a credit prize.

Control Panel
Also referred to as the button panel. Players are able to initiate game play, make selections, place bets, access game information, and make service requests through the pressing of buttons on the control panel.

Configuration
The Audit Menu for setting variation, denomination (also multi denomination), and other software setting.

Coupon Promotion
Coupon = A printed wagering instrument that has a fixed dollar wagering value that can only be used to acquire non-cashable credits.

CPU Fan
A fan incorporated in a cooling mechanism to safeguard the operation and performance of the Central Processing Unit.

CRC
Abbreviation for Cyclic Redundancy Check.

Credit
An indivisible unit that prescribes a monetary value within a gaming machine.

Credit Meter
Displays the amount of credits left in a slot machine.

D

Data Bit
The number of bits used to represent one character of data. When transmitting ASCII text via modem, either seven or eight bits may be used. Most other forms of data require eight bits.

Denomination (Denom)
A monetary value assigned to a single credit.

Drop
The total amount of money, tokens and wagering vouchers contained in the drop box, and any electronic money transfers made to the slot machine through the use of a cashless wagering system.

E

ECT
Electronic Credit Transfer.
Transfer of credit between the machine and the Casino Host, for the purpose of cashless gaming.

EFT
Electronic Funds Transfer.
The transfer of cashable credits electronically from a financial institution to the machine via a cashless wagering system.

Error Event
An error that occurs in the game/base software, hardware or operation of the gaming machine. These errors are recorded in a log.

Error Meters
Meters that record the occurrence, type and time of an error on the game machine.

External Bonus System
Gaming device configured to participate in electronically communicated bonus award payments from a host system.

F

Feature
Any additional free game, free spin of certain reels, metamorphosis of the basic game rules, or secondary choice necessary to complete a game (except gamble), is considered a feature.

Feature Game
An additional function not part of the base game that allows extra credits to be won. They may take the form of free games and/or second screen features.

Firmware
The embedded program memory of a computer.

French Meters
Audit meters found in the Main Meters that are for France. They do not appear when the jurisdictional setting is set to Nevada/Arizona.

G

G-ENEX
Aruze Cabinet series that preceded the current G-ENEX II series.

GAL
Generic Array Logic device.

Gamble Play
A game option, such as Double-Up, that may be selected following a win.

Game ID
A series of letters and/or numerals assigned to identify the game software.

GLI
The abbreviation for Gaming Laboratories International.

GMEM PCB
A Printed Circuit Board harness in which the game software and base software contained on Compact Flash memory are inserted. This harness is then inserted into the motherboard located in the Logic Area.

H

Hand Pay
When the pay out amount is too excessive, the cashier of the casino makes the payment instead of the machine.

Host
The communication and monitoring system maintained by the venue that is connected to all gaming machines.

Host Bonus
An electronically communicated prize sent from the host system to the gaming machine.

I

Idle State
The game machine is in an Idle State, including while the game is disabled, when there is no activity on the device, no credits, and no Error Conditions. The game is ready to be played.

Important Settings
The Audit Menu setting for currency used, game denomination, and SAS accounting denomination.

Increment Rate
The portion of the jackpot contributions that is incrementing the jackpot (as compared to funding the startup value).

J

Jackpot
The grand prize in slot machines, when the best-paying reel symbol combination hits, or a special credit award is won.

Jam
An obstruction occurrence related to peripheral gaming machine hardware, such as a ticket printer, BILL or coin acceptors.

K

L

Line
A pay line or win line.

Link Feature Game
A type of game where multiple stations are linked together.

M

Macau Meters
Audit Meters that display information for the Macau jurisdiction. (Do not appear in Nevada/Arizona jurisdiction configurations.)

Machine Identification
Found in the Audit Menu. Machine Identification consists of various game, system, and OS information, as well as verification details and game information.

Main Meters
The Audit Meters that contain fundamental game meter information: Master Meters, Nevada / Macau Meters, French Meters, BILL Meters, Systems Related In/Out Meters, Online Communication Meters, Game Meters, Gamble Meters, Wager Category Meters, and Progressive Meters. (Some meters may not appear depending on jurisdiction.)

Master Meter
A meter with values that are reset only when a memory reset is performed. This meter represents the total of all updates since the last memory reset.

MD5
A 32-digit hexadecimal number utilized to verify data integrity.

Media
Game and/or Base software

Meter
A non-volatile variable, storing gaming machine audit and other information.

Meter Information
The Audit Menu which contains software Meters.

Minimum RTP
Calculated to be the lowest Return to Player expressed in percentages.

Multi Denom Meters
Meters for multiple denomination data.

N

Nevada Meters
The Audit Meters specifically designed for the state of Nevada. The Nevada Meters take the place of the Main Meters when the jurisdictional setting is set to Nevada/Arizona.

NGCB
The abbreviation for Nevada Gaming Control Board.

Note Acceptor
See BILL Acceptor.

O

P

Payout
The amount of money a slot machine pays out to a player, usually measured as a percentage of the money a player pays to play the game.

PCB
Printed Circuit Board - the board used to connect together electronic components in a certain manner using tracks and holes to route the signals.

Parity Bit
A parity bit is a bit, with a value of 0 or 1, which is added to a block of data for error detection purposes. It gives the data either an odd or even parity, which is used to validate the integrity of the data.

Period Meter
A meter with values that are reset after a memory reset or after a planned external event (i.e. cash clearance). This meter represents the total of all updates since the last instance of the external event.

Period Reset
The action of resetting the Period Meter. This can be done by RAM Clear, or by changing specific settings in the Settings menu.

Permanent Meter
Meter information that is only cleared when an All RAM Clear is executed.

Printer
See Ticket Printer.

Progressive (Jackpot)
A progressive jackpot is an incremental prize that increases by the accumulation of contributions from the turnover of the specified game, from a preset base value. It is reset to a different value (generally a base value plus possible secondary or overflow amounts) when the progressive prize is won.

Progressive Meter
The screen which shows the player the current jackpot size on a progressive slot machine.

Progressive Settings
The settings in the Audit Menu for various Progressive Settings such as the increment and limit values.

Progressive Reserve Pool
An accumulated reservoir of jackpot monitory contributions.

PSD Verification (HMAC-SHA1)
PSD = Program Storage Device, and integrate circuit including Flash-ROM, RAM, Hard Disk and logic functions on a single chip.
HMAC-SHA1 = 'Keyed-Hash Message Authentication Code' utilizing an input key, the contents of a Program Storage Device, and the SHA-1 Hash Algorithm.

Q

R

RAM
Random Access Memory (RAM) is the electronic component used for computer workspace and storage of volatile information in a gaming device. The term does not include memory which is used exclusively for bit-mapped video displays.

RAM Clear
The process performed by a technician to reset the memory of a gaming machine, which restores the machine to its original state.

Recall Meters
Meters that keep record of specific actions. (i.e. the last 35 tickets in, etc.)

Reel
Originally a mechanical wheel with painted symbols arranged periodically along their outer rim, used for randomizing symbols on a slot machine.

Reel Sensor
Sensors that are used in mechanical reel setup, which detect the positions of the reels, as well as any abnormal movements or activities.

Restricted Credits
Credits that are non-cashable. Used primarily for promotional reasons.

RTP (Return to Player)
The ratio of total wins (including progressives and other features) to the total turnover in a game cycle (note gamble bets do not affect turnover and total wins is only affected by the final gamble outcome).

S

SABS
The abbreviation for South African Bureau of Standards.

Stacker
A secure container in which tickets and bank notes are collected and stored from the bank note acceptor head.

Stepper Reel Game
A game that utilizes physical reels to display a game outcome. Games come in 3– reel and 5-reel configurations.

Sub Touch Panel
A smaller touch sensitive LCD monitor located just above the reels that displays game information, as well as inputs from the player.

SSD
Abbreviation for Solid State Drive.

T

Ticket Printer
A peripheral gaming device, the thermal printer prints cashable tickets containing monetary and venue identification, as well as redeemable vouchers.

TITO
Ticket In – Ticket Out System, which validates vouchers printed out by EGMs; the vouchers can either be redeemed for cash, or inserted for play into other EGMs that support this mechanism.

Theoretical Payback
The expected total value of the awards paid by a game divided by the total wager made over an infinite number of games played.

Tokenization
Acceptance by a gaming machine of coins or banknotes which cannot be directly counted as credits; e.g. they must be converted into credits to match the value of the game denomination(s).

Tower Light
A three-color light atop the cabinet used to notify attendants of a game condition.

Trigger
To initiate a feature, or the pattern of symbols or event required to initiate a feature.

U

V

Video Reel Game
Video Slots = A slot machine with a video screen that generates a picture of spinning reels, as opposed to a slot machine with actual physical reels.

Voucher
A printed wagering instrument that has a fixed dollar wagering value that can only be used to acquire an equivalent value of cashable credits or cash.

W

Wager
The total value of coins, currency, coupons, tokens or other approved credits that are required to activate a particular play.

Wagering Account
An electronic ledger wherein the following types of transactions relative to a mobile gaming system are recorded: deposits, withdrawals, amounts wagered, amounts paid on winning wagers, service or other transaction-related charges authorized by the patron, and adjustments to the account.

WAT

Wagering Account Transfer

"WAT In"= a meter that accumulates the total value of cashable credits electronically transferred to the machine from a wagering account by means of an external connection between the machine and a cashless wagering system.

X

Y

Z


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LUXURY GAMING PRODUCTS

LED's Function Test for Center Unit

This Chapter explains the LED's Function Test information specific.

Enter the Test Mode to check the illumination of the LEDs on the Machine. Each test mode has two options: **STEP** or **ALL**. When selected, the LEDs automatically light up in the preset order.

Structure of LED Test

TOP MENU
- **>TEST**
  - **>OUTPUT TEST**
    - **>FIELD IN LIGHT (STEP/ALL)**
    - **>FIELD OUT LIGHT (STEP/ALL)**
    - **>SIGNAGE TITLE LIGHT (STEP/ALL)**
    - **>SIGNAGE UPPER LIGHT (STEP/ALL)**
    - **>SIGNAGE LOWER LIGHT (STEP/ALL)**
    - **>SIGNAGE RING LIGHT (STEP/ALL)**

NOTE:
The AUDIT screen may slightly vary according to the jurisdictions.

TOP MENU>TEST>OUTPUT TEST>FIELD IN LIGHT (STEP/ALL)

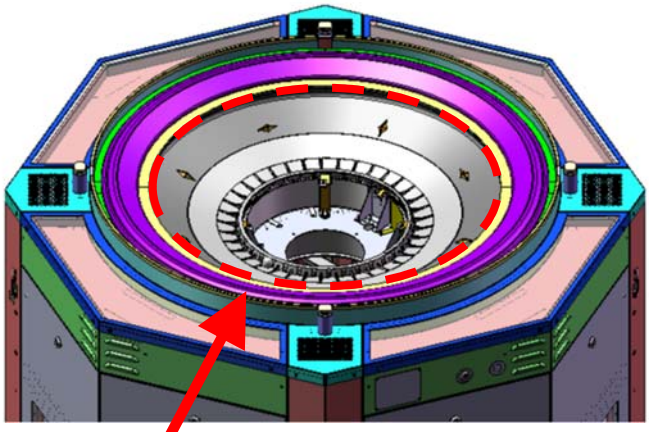
The LEDs position is as indicated in the map.

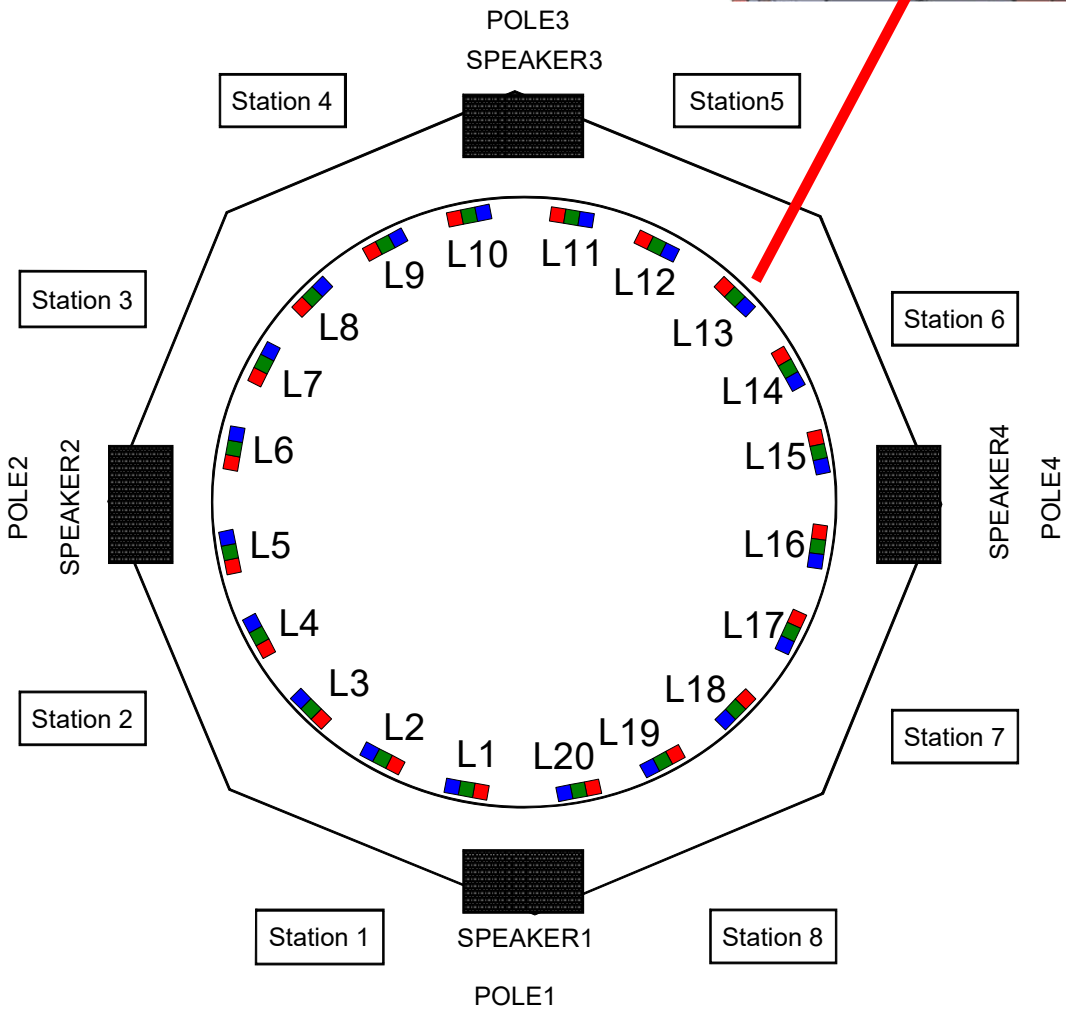
The LEDs illuminate following the order indicated by the numbers on the table.

SIGNAGE TITLE LIGHT (STEP)		
Rotation	No.	NAME
↓	1	L1
	2	L2
	|	|
	19	L19
	20	L20

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

SIGNAGE TITLE LIGHT (ALL)		
Rotation	No.	NAME
	1	L1-20 : W





TOP MENU>TEST>OUTPUT TEST>FIELD OUT LIGHT (STEP/ALL)

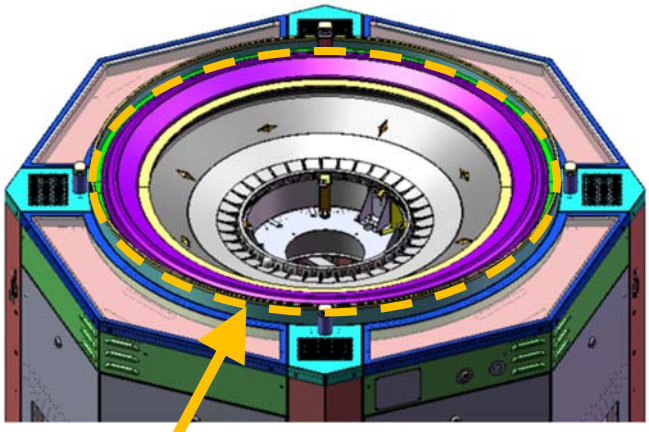
The LEDs position is as indicated in the map.

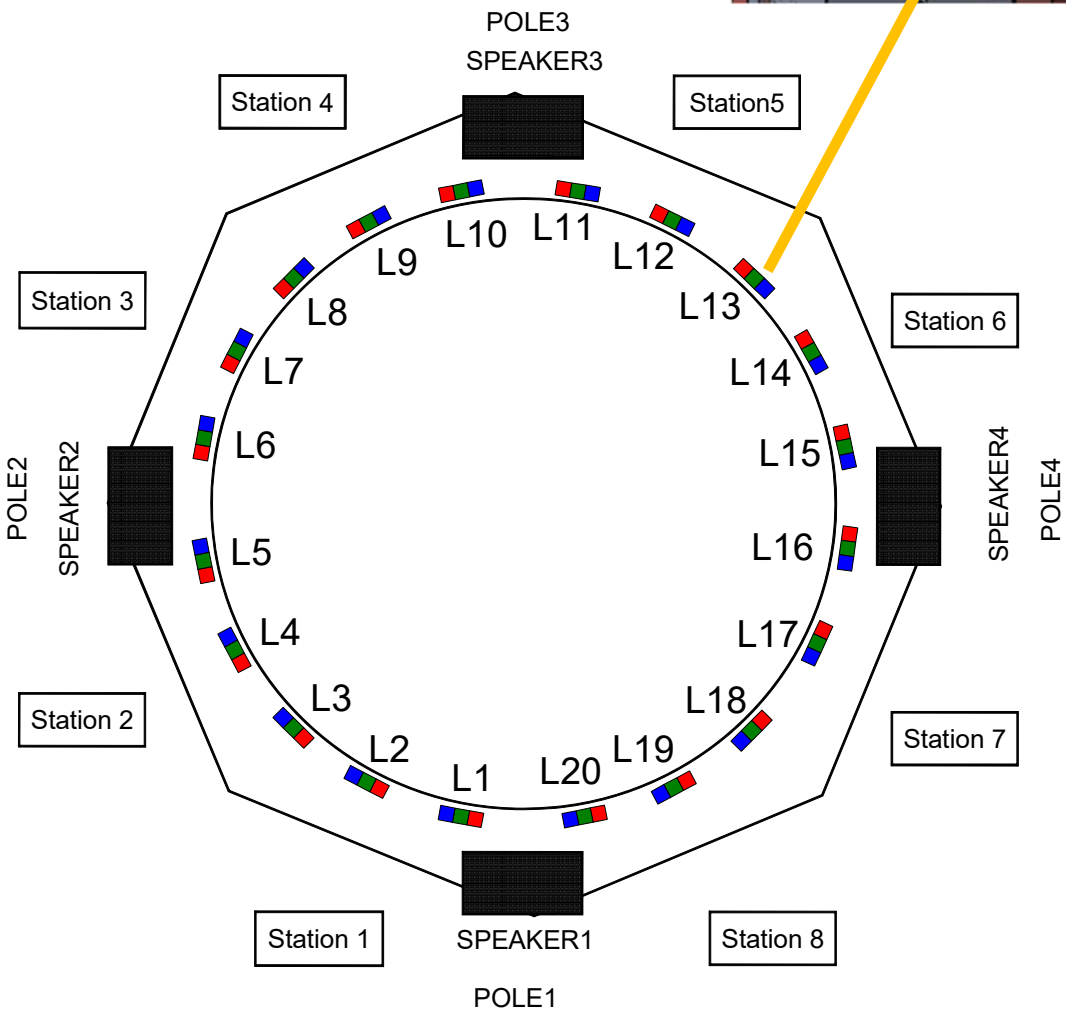
The LEDs illuminate following the order indicated by the numbers on the table.

FIELD OUT LIGHT (STEP)		
Rotation	No.	NAME
↓	1	L1
	2	L2
	|	|
	19	L19
	20	L20

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)

FIELD OUT LIGHT (ALL)		
Rotation	No.	NAME
	1	L1-20 : W





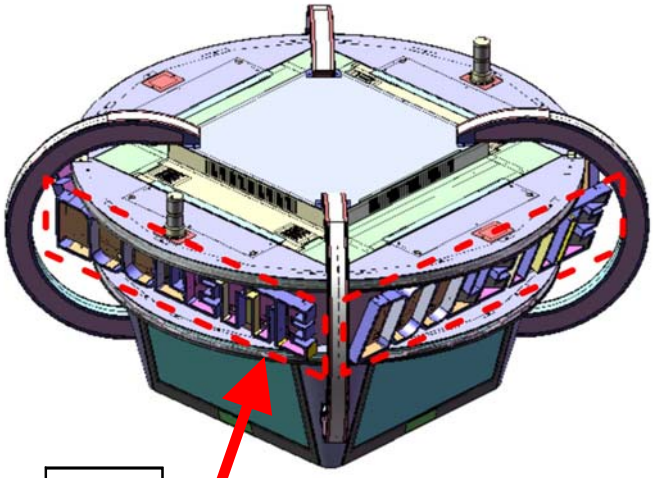
TOP MENU>TEST>OUTPUT TEST>SIGNAGE TITLE LIGHT (STEP/ALL)

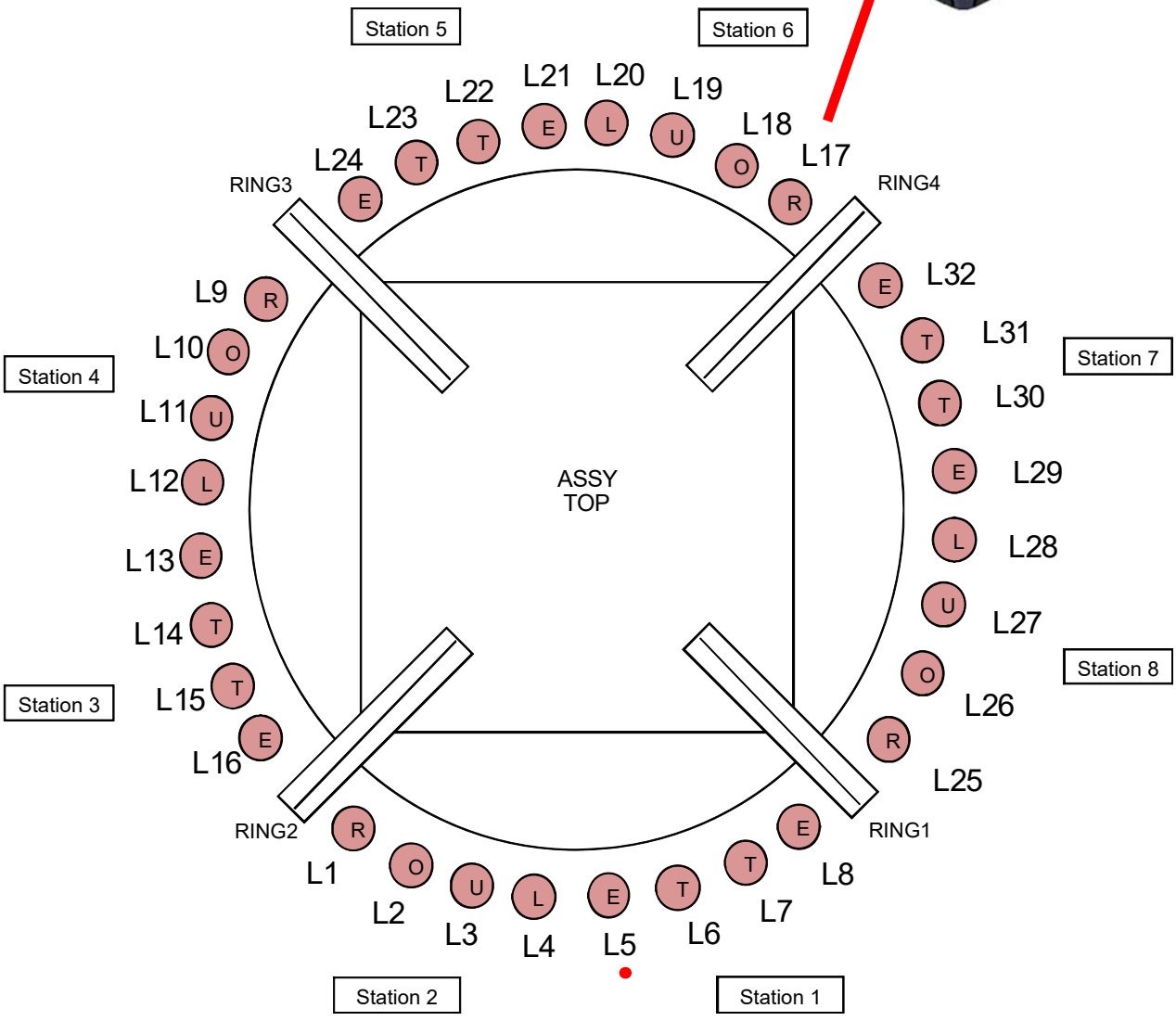
The LEDs position is as indicated in the map.

The LEDs illuminate following the order indicated by the numbers on the table.

SIGNAGE TITLE LIGHT (STEP)		
Rotation	No.	NAME
↓	1	L1 : W
↓	2	L2 : W
↓	|	|
↓	31	L31 : W
↓	32	L32 : W

SIGNAGE TITLE LIGHT (ALL)		
Rotation	No.	NAME
	1	L1-32 : W





TOP MENU>TEST>OUTPUT TEST>SIGNAGE UPPER LIGHT (STEP/ALL)

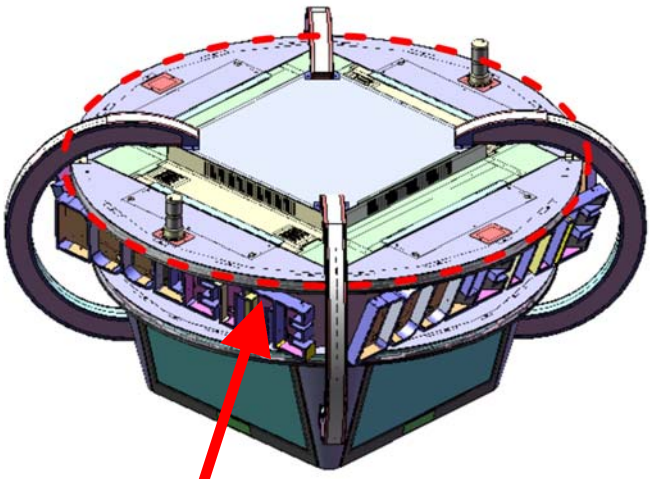
The LEDs position is as indicated in the map.

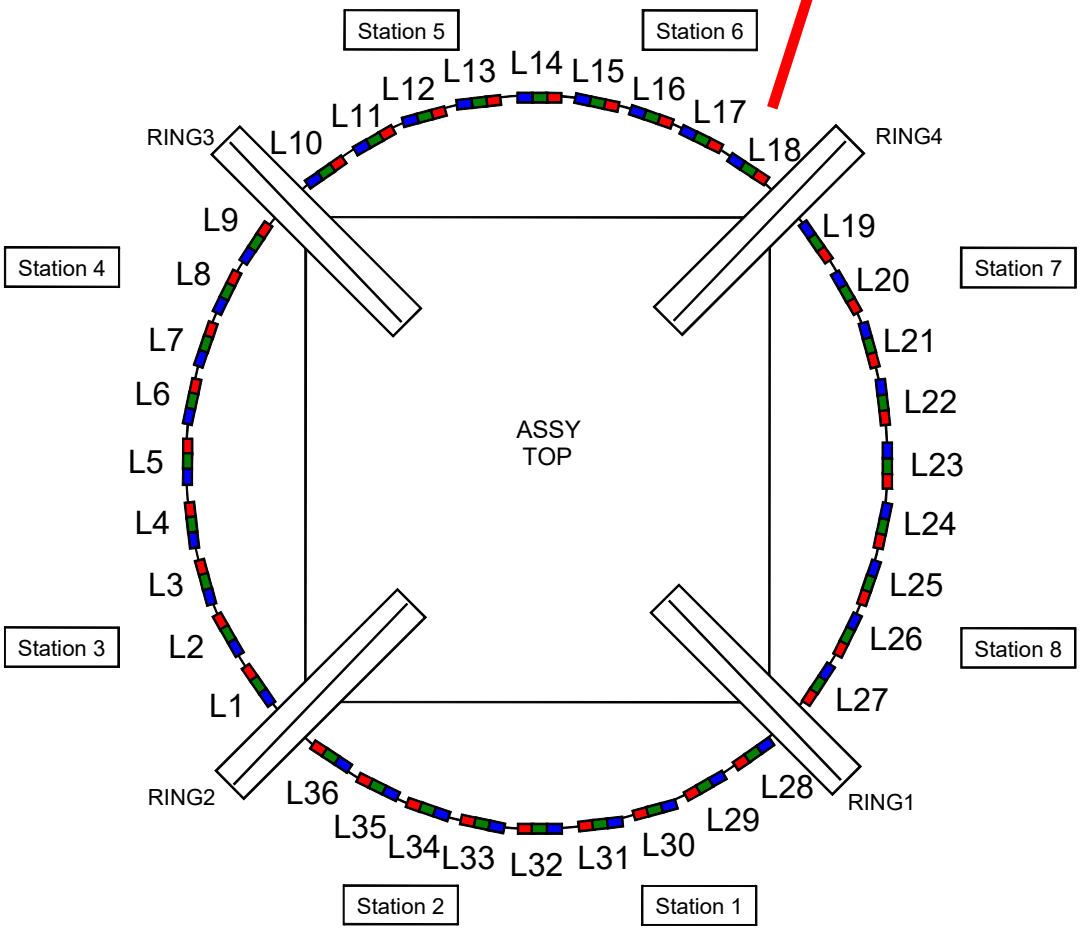
The LEDs illuminate following the order indicated by the numbers on the table.

SIGNAGE UPPER LIGHT (STEP)		
Rotation	No.	NAME
↓	1	L1
	2	L2
	|	|
	35	L35
	36	L36

SIGNAGE UPPER LIGHT (ALL)		
Rotation	No.	NAME
	1	L1-36 : W

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)





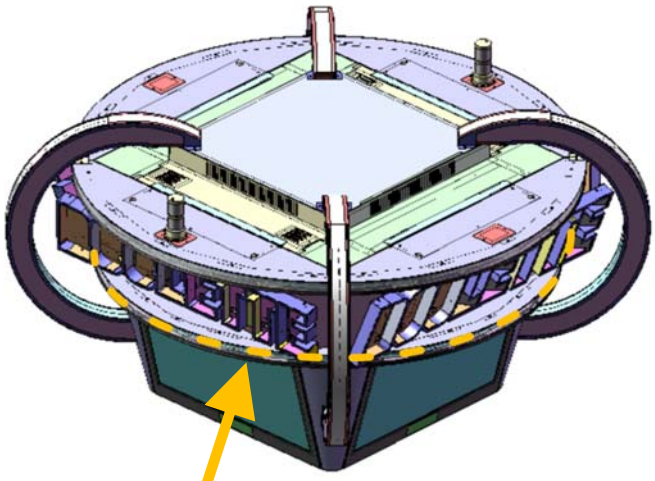
TOP MENU>TEST>OUTPUT TEST>SIGNAGE LOWER LIGHT (STEP/ALL)

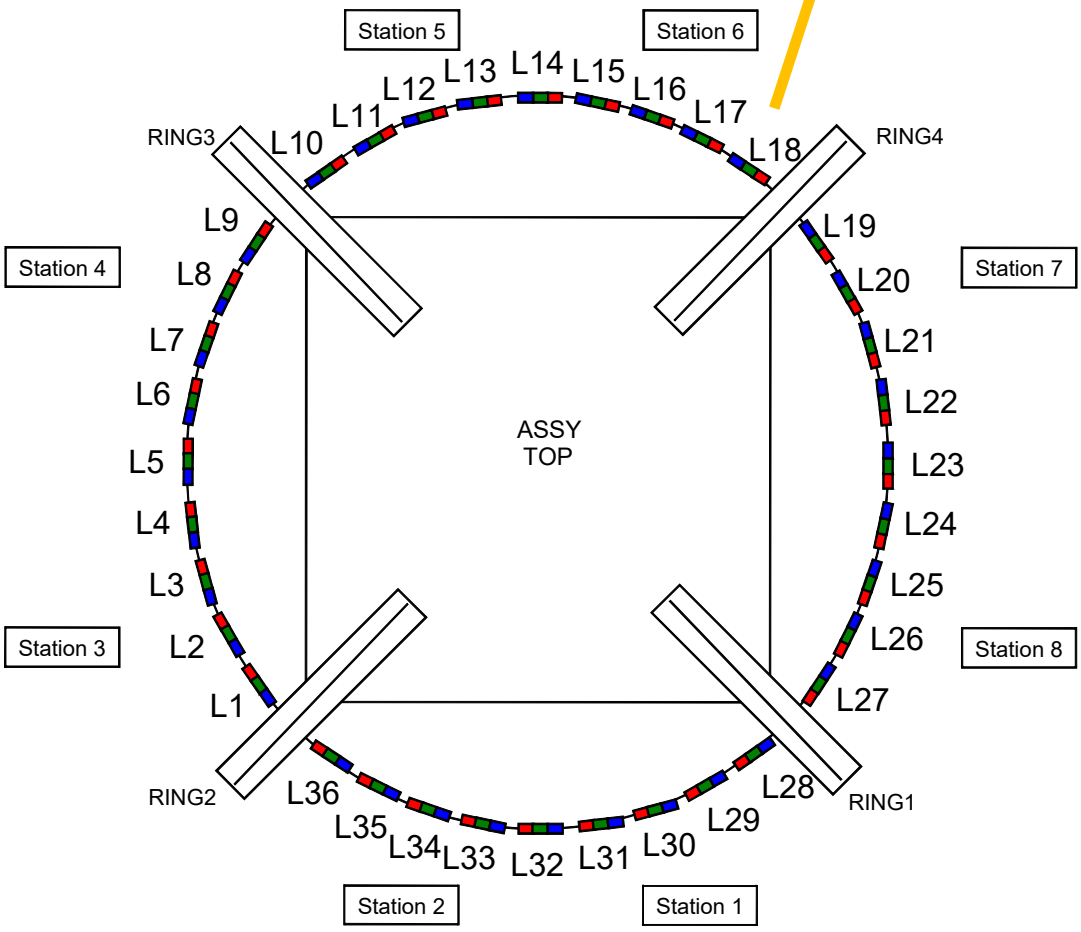
The LEDs position is as indicated in the map.
The LEDs illuminate following the order indicated by the numbers on the table.

SIGNAGE LOWER LIGHT (STEP)		
Rotation	No.	NAME
↓	1	L1
↓	2	L2
↓	|	|
↓	35	L35
↓	36	L36

SIGNAGE LOWER LIGHT (ALL)		
Rotation	No.	NAME
	1	L1-36 : W

Illumi LED lights in the Following order :
R(Red) >G(Green) >B(Blue) >W(White)



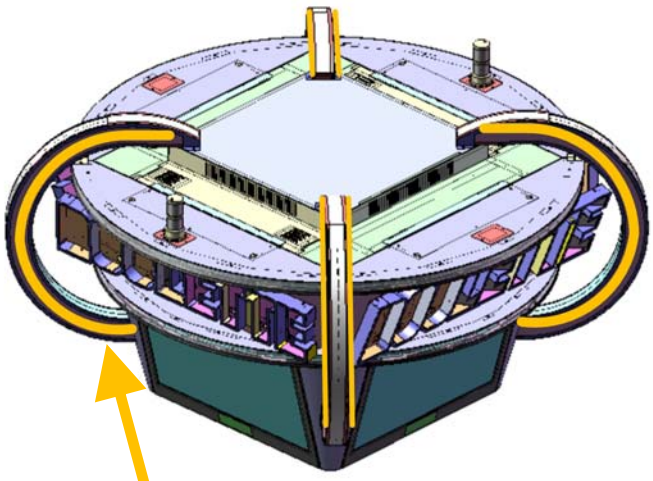


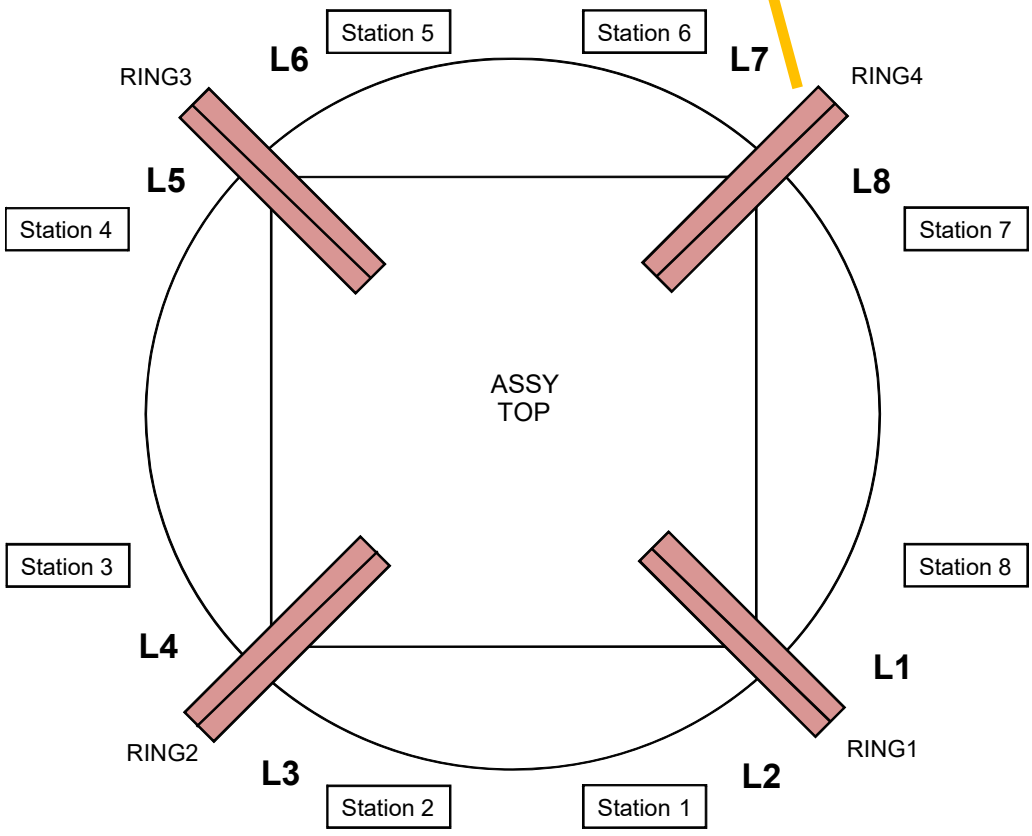
TOP MENU>TEST>OUTPUT TEST>SIGNAGE RING LIGHT (STEP/ALL)

The LEDs position is as indicated in the map.
The LEDs illuminate following the order indicated by the numbers on the table.

SIGNAGE RING LIGHT (STEP)		
Rotation	No.	NAME
↓	1	L1 : W
	2	L2 : W
	|	|
	7	L7 : W
	8	L8 : W

SIGNAGE RING LIGHT (ALL)		
Rotation	No.	NAME
	1	L1-8 : W






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HS CAMERA setting INSTRUCTION

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4. Adjustment of Brightness
5. Angular diff. to camera
6. Angular diff. to projection pattern
7. Finish set up

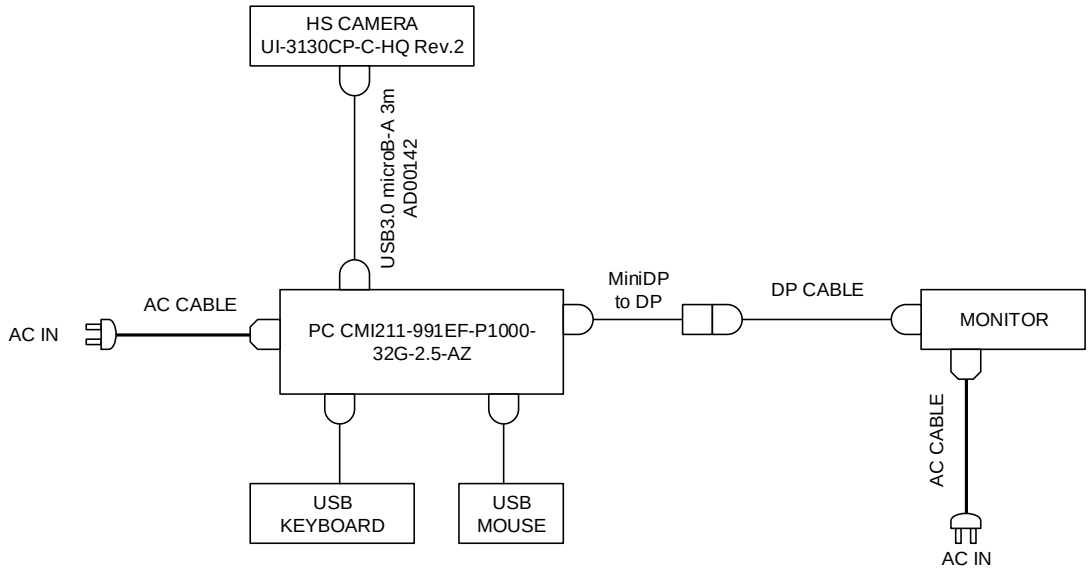
I. PROCEDURE FOR PC AND HS CAMERA SETTING BEFORE ASSEMBLY

1. Preparation

	PART No.
HS CAMERA UI-3130CP-C-HQ Rev.2	333-0015
USB3.0 microB-A 3m AD00142	473-0209
PC CMI211-991EF-P1000-32G-2.5-AZ	575-0002

AC code accompanying i BasePC
MiniDP-DP accompanying i BasePC
Monitor capable of DP connection
USB mouse
USB keyboard
USB memory containing the following folders and files:
"ART" folder
"uEye-Full-48202-64-WHQL" folder
20170807_Gamma2.0_FPS100_NoFlip.ini
20170807_Gamma2.0_FPS120_NoFlip.ini

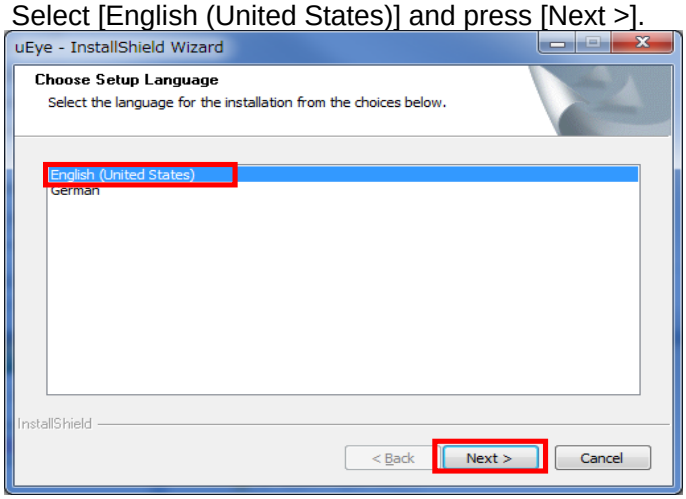
<CONNECTION GUIDE>



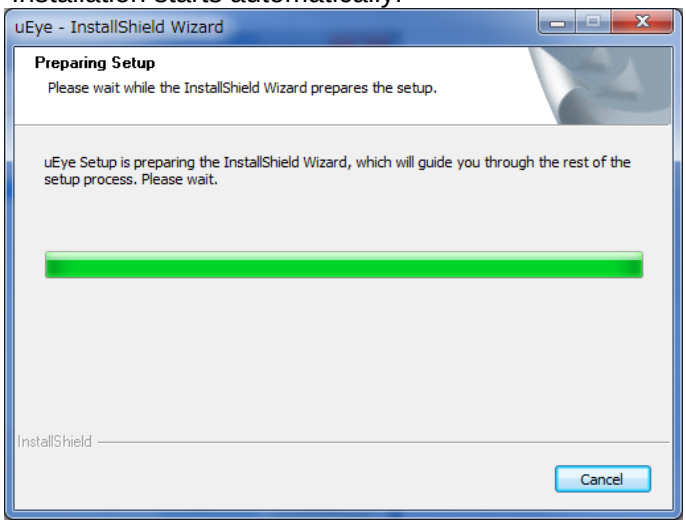
2. Install applications

Connect the AC code with i BasePC and plug into an outlet.
i Base PC will boot automatically when plugged in.
Connect the USB memory to i BasePC.
Copy below folders and files of the USB memory to C:drive
"ART" folder
"uEye-Full-48202-64-WHQL" folder
20170807_Gamma2.0_FPS100_NoFlip.ini
20170807_Gamma2.0_FPS120_NoFlip.ini
Remove the USB memory after copying.
Open "uEye64_48202_WHQL.exe" located inside "uEye-Full-48202-64-WHQL".
Proceed as follows:

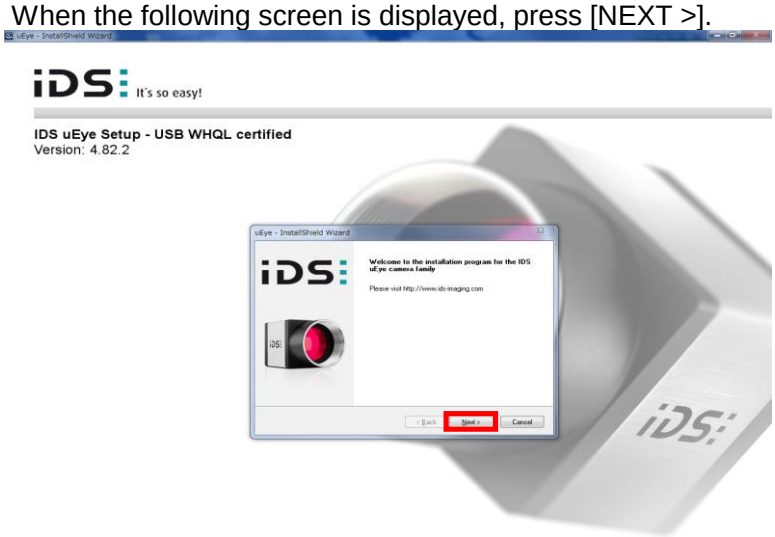
Select [English (United States)] and press [Next >].



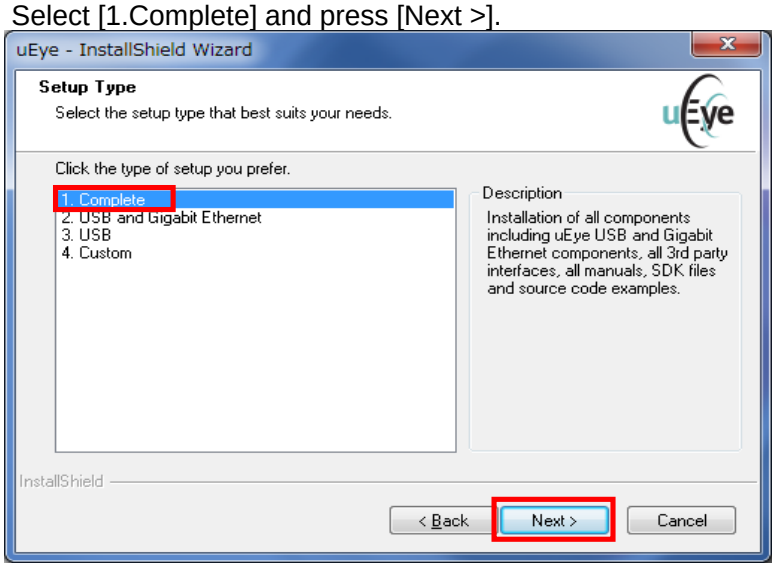
Installation starts automatically.



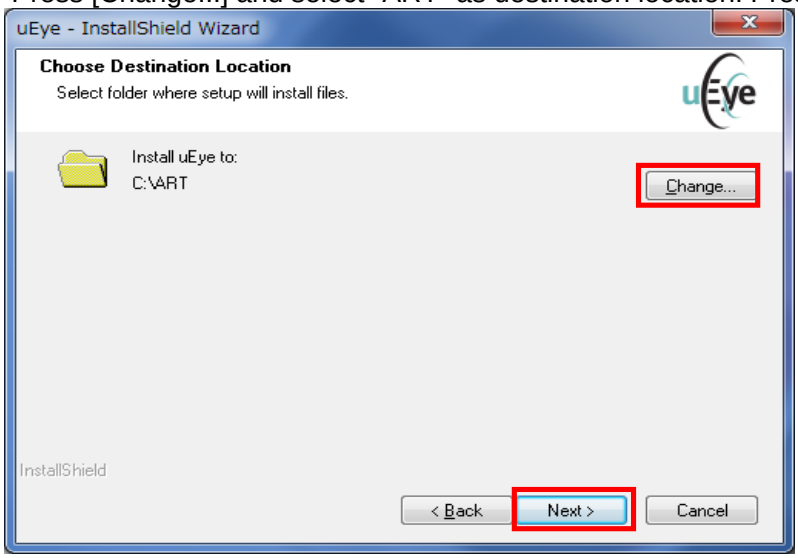
When the following screen is displayed, press [NEXT >].



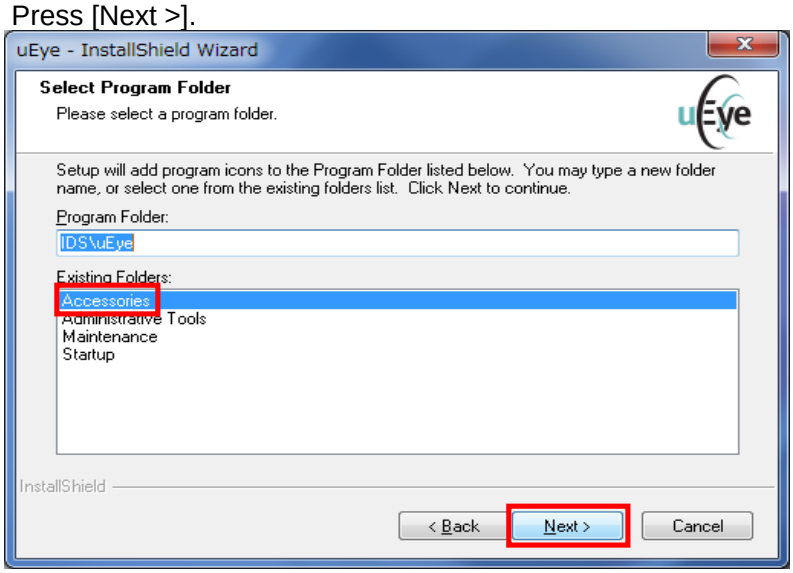
Select [1.Complete] and press [Next >].



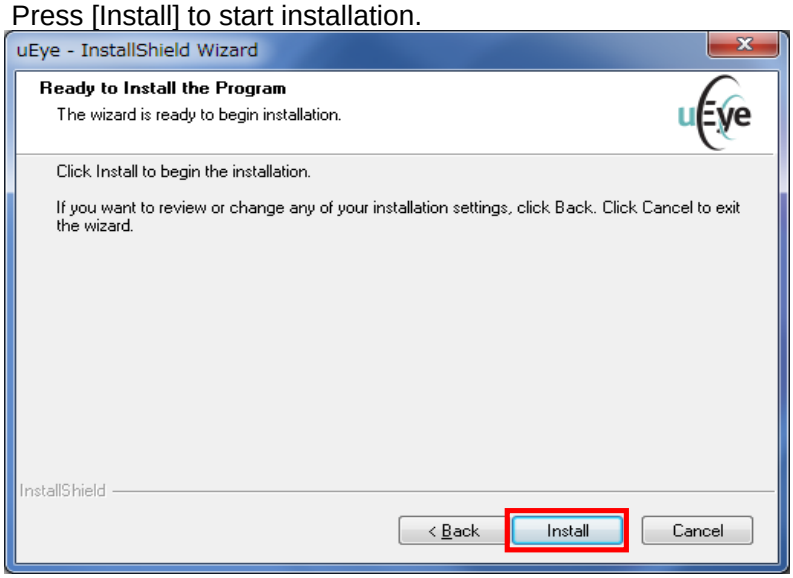
Press [Change...] and select "ART" as destination location. Press [Next >].



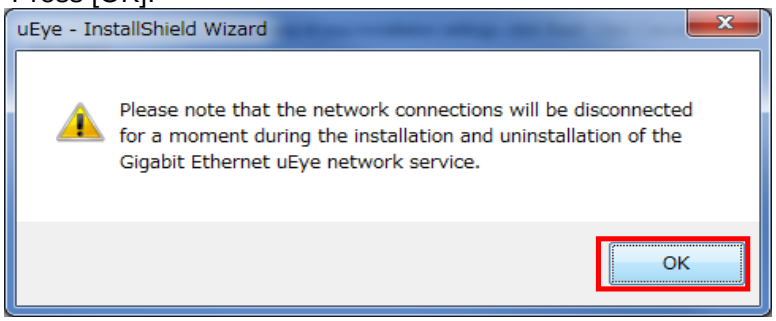
Press [Next >].



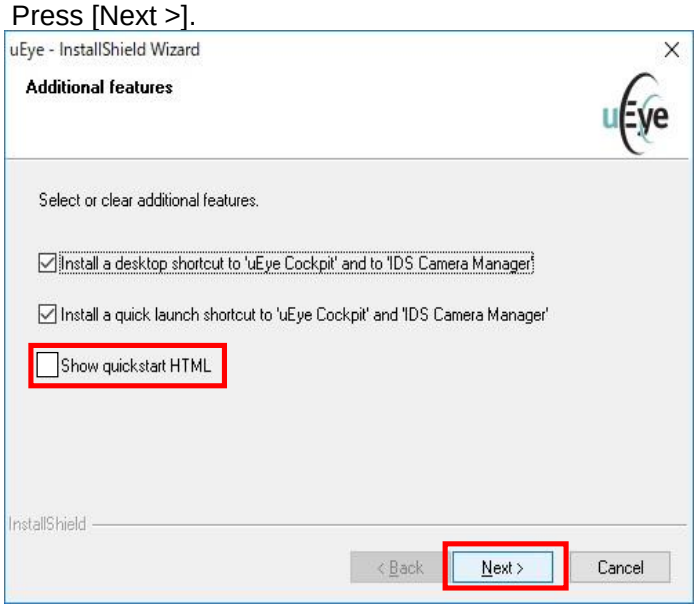
Press [Install] to start installation.



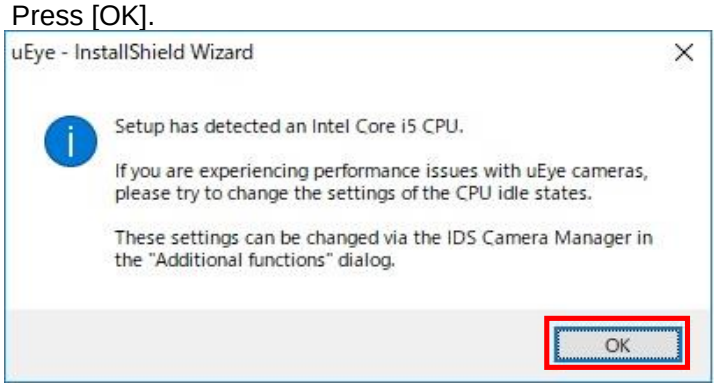
Press [OK].



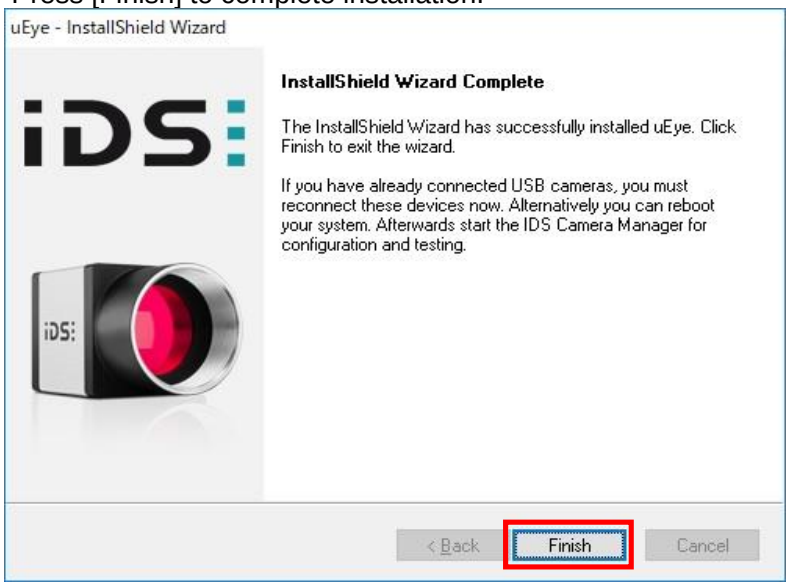
Untick [Show quickstart HTML].
Press [Next >].



Press [OK].



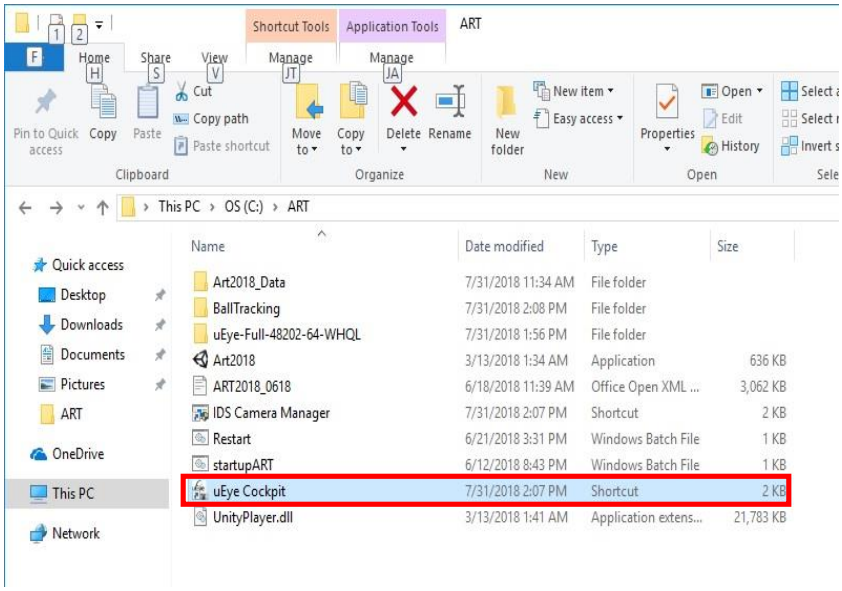
Press [Finish] to complete installation.



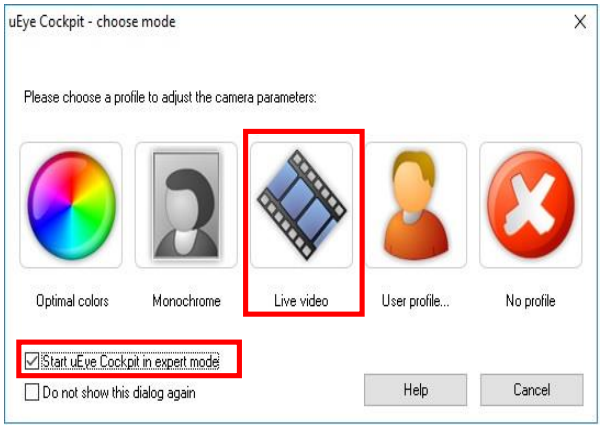
3. Write setting file into the high speed camera

Connect the high speed camera with i BasePC.

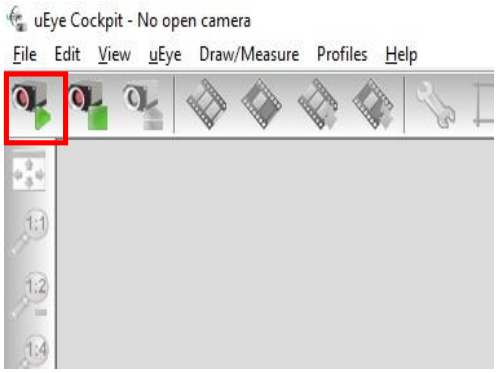
Open explorer.
Start "uEyeCockpit.exe" stored inside "C:ART".



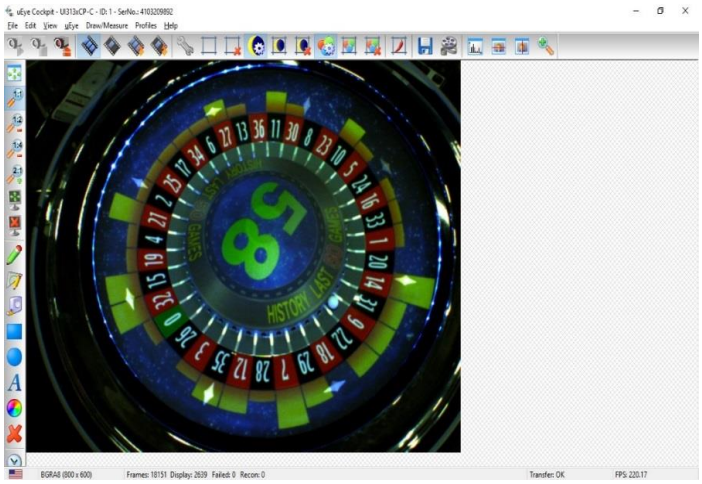
Tick [Start uEye Cockpit in expert mode] and select [Live video] mode.



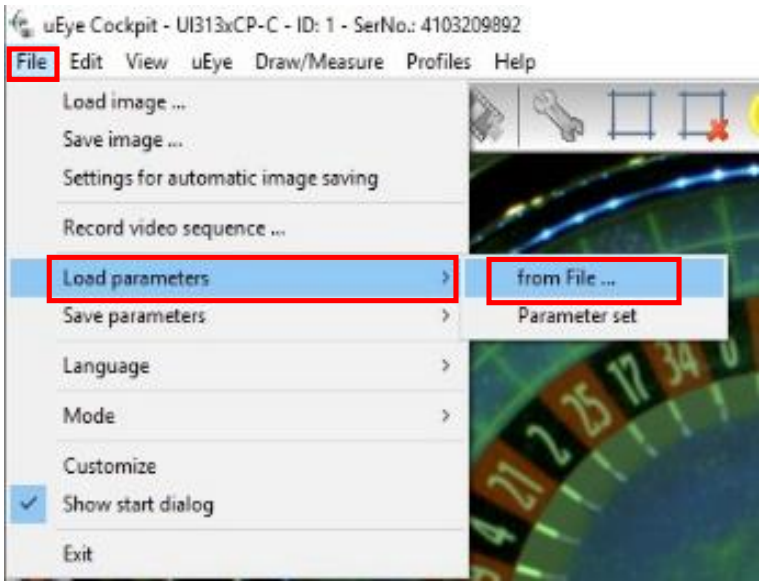
Press [Open Camera] on the upper left.



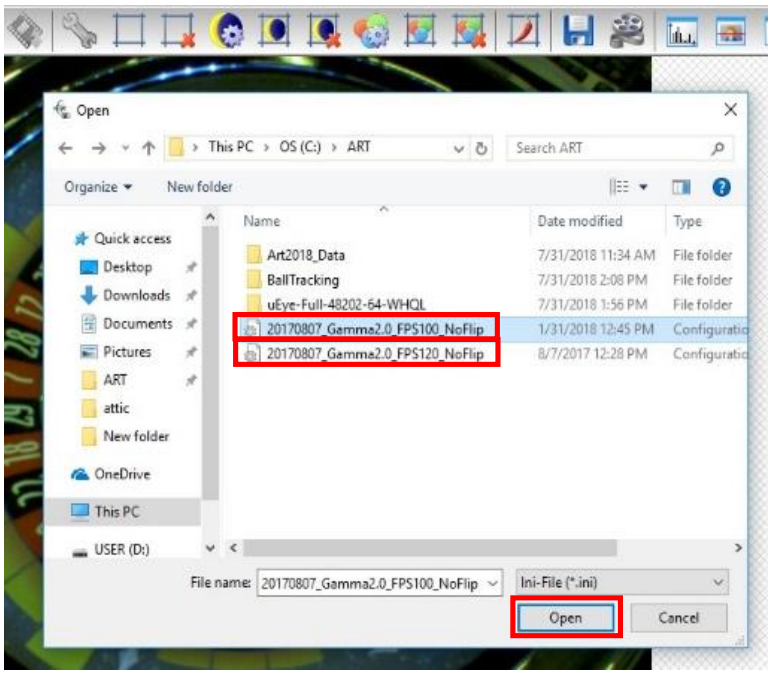
Camera will be loaded and Live camera image will be displayed.
*If no Camera image is displayed, check the connection of Camera and reboot Projector Control PC.



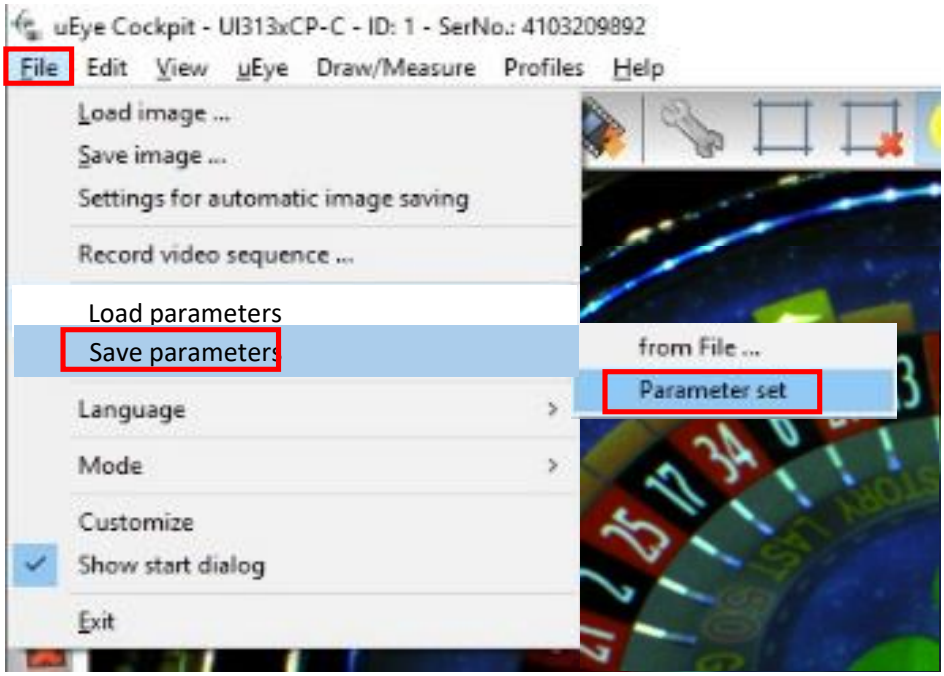
Select [File] > [Load parameters] > [from File ...].



Select ".ini" file under "C:ART".
[power frequency]：select as appropriate according to the commercial frequency at the destination.
For 50Hz areas: "20170807_Gamma2.0_FPS100_NoFlip.ini"
For 60Hz areas: "20170807_Gamma2.0_FPS120_NoFlip.ini"
Press [Open] after the selection.



Select [File] > [Save parameters] > [Parameter set].



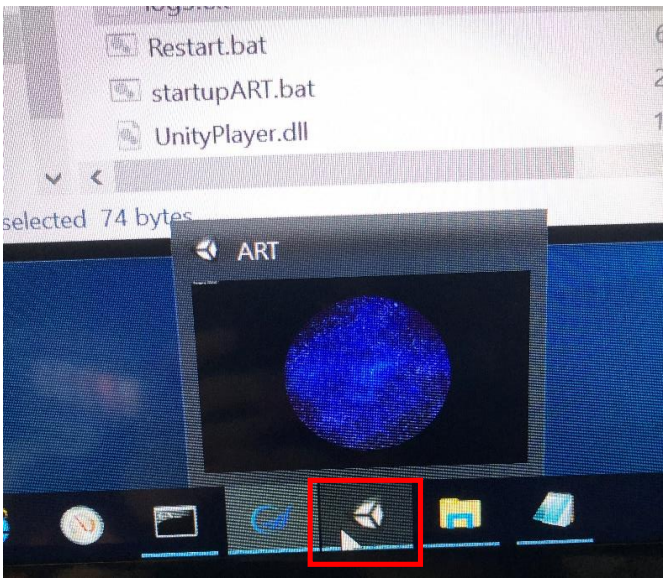
Setting file is written in Camera.

4. Register batch file to auto-launch the application at startup.

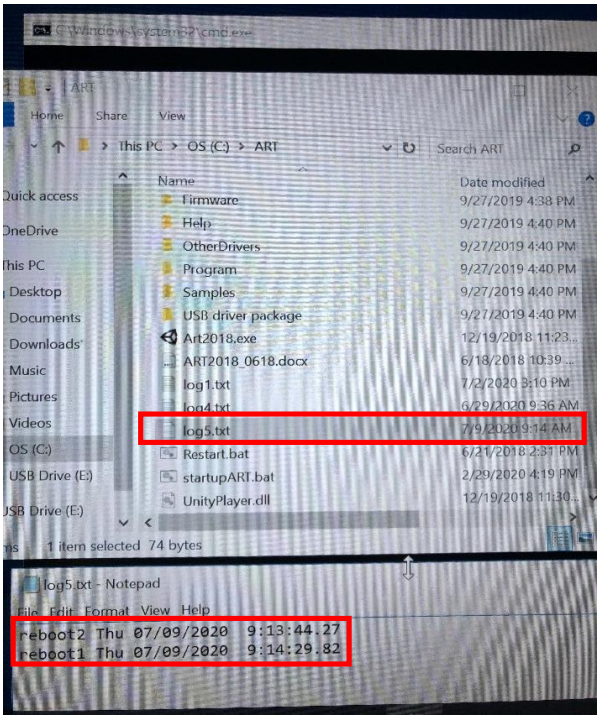
Press [Windows]+[R] to open the command prompt.
Input "shell:common startup" to open "STARTUP" folder.
Copy batch file "startupART.bat" and "crash reboot_Ver1.bat" to STARTUP folder.
"startupART.bat" and "crash reboot_Ver1.bat" can be found inside "ART" folder.

5. Confirm that the batch file is automatically started.

Restart the Projector Control PC.
After starting, close the application where the cursor is placed shown in the image below.
If the PC automatically restarts when closing the app, the batch file will start up normally.



Finally, make sure the "log5.txt" has been created in the ART folder.
In "log5.txt" you'll find the time you closed the app and restarted it.



Setup is complete.
Shut down Projector Control PC.

II. PROCEDURE FOR BALL TRACKING SETTING AFTER ASSEMBLY

1. Summary

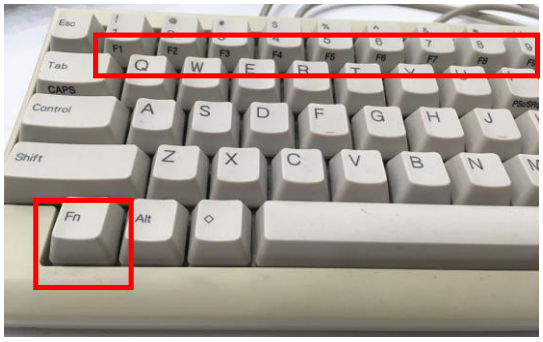
This manual explains how to set up the projector PC for the Roulette to start operating.
Following is the procedure that is after the assembly of the main unit and signage have been completed.

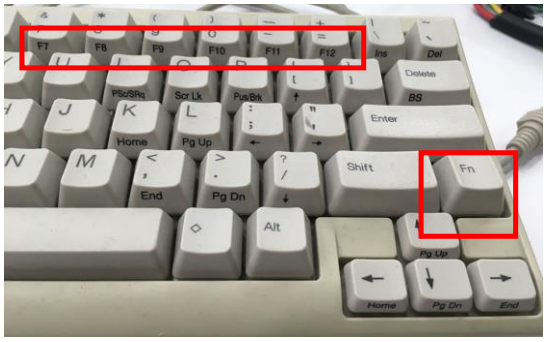
The camera used for tracking the ball is affected by lighting environments.
Please set up the PC in the same lighting environment as the actual operation of the Roulette.

If the installation position of the ETG or the lighting environment is changed, or there is a problem with tracking the ball, make adjustments according to this chapter.

In this manual, the content in "[ ]" indicates a key on the keyboard.
For example, [Shift] represents the Shift key.
[←] is the left cursor key.
"+" is used for describing that 2 or more keys are simultaneously pressed.
For instance, [Windows]+[Shift]+[↑] means pressing the up cursor key while holding down the Windows and Shift keys.

Also, a mini keyboard is used for the Lucky Roulette main unit.
To produce [F8] in the mini keyboard, press [Fn]+[8] as shown below.





2. Preparation

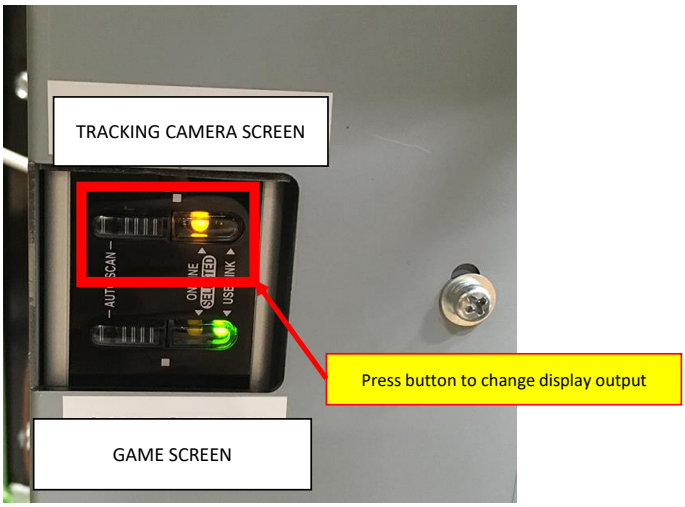
1) Boot up the main unit and projector PC

Power up the game in the following order.
1. Projector display
2. Projector controller PC
3. Lucky Roulette Main unit

Before adjusting the projector unit, set the main unit to AUDIT MODE.

Make the signage screen display the projector PC screen by operating the display switcher contained in the Corner Unit.





When the projector PC boots up, the following 2 applications automatically start up.

BallTracking

This application tracks the ball based on images entered from the camera
and adjusts the recognition range and brightness of the camera.
Immediately after booting up, BallTracking is minimized on the projector display.

ART64

This application serves to display the graphics.

2) How to display BallTracking on the signage screen and to make it operational.

Immediately after booting up, BallTracking is minimized on the projector display.

A list of applications on the projector will display by pressing [ALT] + [TAB] on the keyboard for the main unit.
Select (focus) the BallTracking app by pressing [ALT] and [TAB] while holding [ALT].
When BallTracking is focused, press[TAB] to release.

Press [Windows] + [SHIFT] + [→] while the BallTracking tool is in focus to move BallTracking to the Signage Monitor.
And then, press [Windows]+[↑] to maximize the BallTracking's window.

Check if the BallTracking app is displayed on the Signage Monitor and focused.
When the BallTracking application appears on the screen and is in focus, please note the numbers.

3. Set-Up of Ball Detection Area

1) How to adjust the camera position

Confirm that the whole of the wheel is displayed on the camera screen for BallTracking.

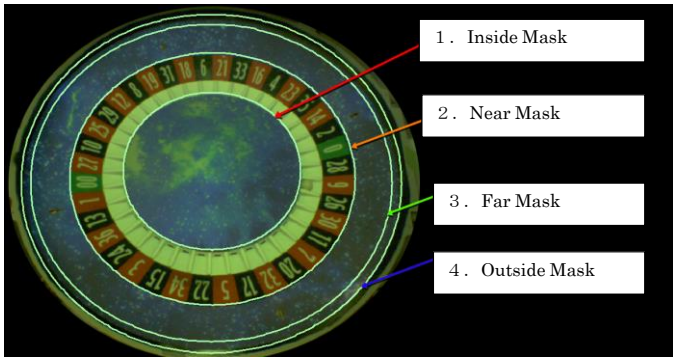
・If no image taken by the camera is shown on the BallTracking window, check connection to the camera and reboot the projector PC.

・If a image taken by the camera is displayed on the BallTracking window but it is not the whole wheel, adjust the installation position of the camera.

2) How to adjust the ball detection area

Adjust the positions of the four circles displayed on the BallTracking window.

Names of the four circles and where the circles are positioned are as follows.



Inside Mask

This should be positioned inside the pocket section and at the circumference of the center cap.
There are no problems if this circle slightly deviates.

Near Mask

This should be positioned outside of the number area.
There are no problems if this circle slightly moves out to the outside of the number area.

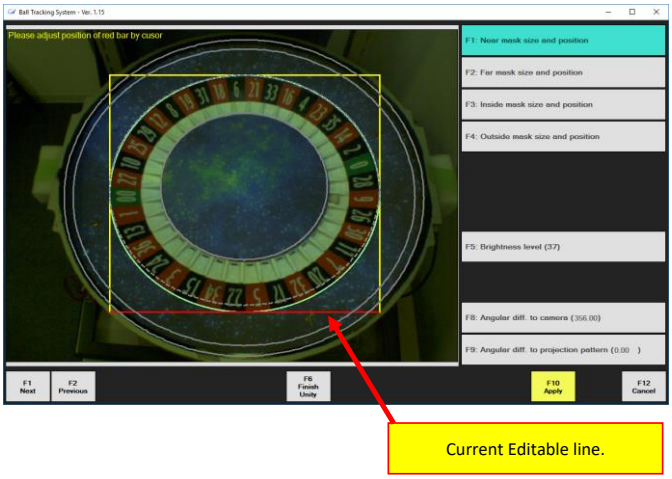
Far Mask

This is the farthest one from the center among the circle that the ball moves on.
Position this circle at the inner side of the ball passing the most outer circumference.
Place this at a position a ball more inner than Outside mask.
Before adjusting Far Mask, make an adjustment of Outside Mask.

Outside Mask

This sets up the outside of the area that the ball moves.
Position this circle at the inside of the bank and the edge of the black roof.
Note that this setting should be performed accurately.

How to make adjustments



Select one of the four circles to be adjusted by pressing the F1 to F4 keys.

Key	Function
[F1]	Selects "Inside Mask"
[F2]	Selects "Near Mask"
[F3]	Selects "Far Mask"
[F4]	Selects "Outside Mask"

For example, pressing the F2 key makes a yellow square appear on the near mask circle.
One side of the yellow square is in red and it is the only side that can be currently operated.

Using the keyboard, adjust the left, right, top and bottom lines of each circle to fit the circle to the corresponding position of the wheel.

Functions of Keys

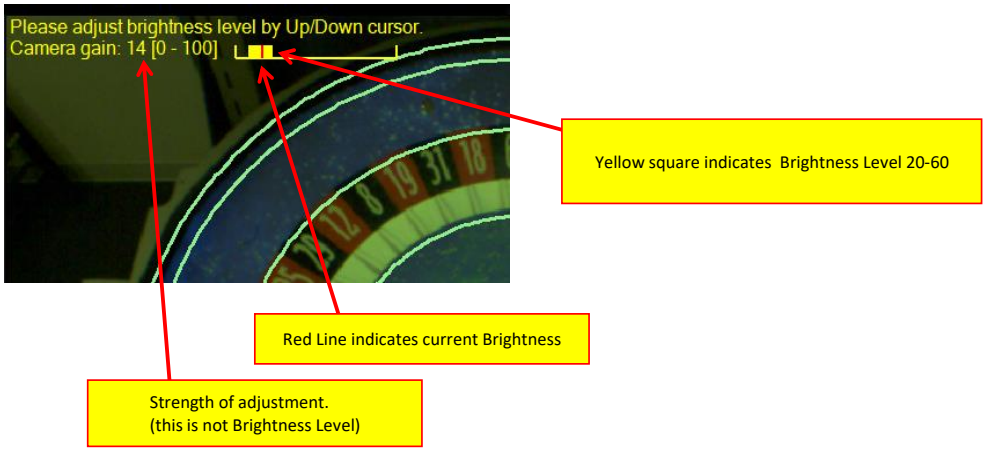
Key	Function
TAB	Changes lines that can be operated (Moves clockwise)
F10 or Enter	Apply. Makes determination and closes the change mode.
F12 or ESC	Cancel(or Esc). Makes cancellation and close the change mode.
← →	Moves the circle to the left or right when the vertical line is selected.
↑ ↓	Moves the circle up or down when the horizontal line is selected.

Make an adjustment of the four side of the square for each circle.
After the adjustment, make a determination by pressing [F10] or [Enter].

4. Adjustment of Brightness

Brightness of image should be modulated so that it can be recognized by the camera.
Basically, the aperture of the camera lens is set to 4.
Brightness may not be adjusted through Adjust Brightness of BallTracking depending on the brightness of the environment that the ETG is installed in.
In this case, modulate appropriately the aperture lens.

Change the current mode to Brightness Setting mode by pressing [F5].



How to Make Adjustment

Modulate Brightness Level using [↑] or [↓].
Change "41" in "F5: Brightness level (41)" below to one of 20 to 60.
Brightness Level 40 is recommended.



Camera gain can be adjusted within a range of 0 to 100, however, Brightness Level occasionally cannot be approx. 40.
In this case, adjust the camera lens aperture so that Brightness Level is about 40.

・Brightness Level is below 20 and cannot exceed 20:
The environment is too dark. Make an adjustment so that the lens aperture is a smaller number.

・Brightness Level is above 60 and cannot be 60 or less:
The environment is too bright. Make an adjustment so that the lens aperture is a larger number.

When it is too dark or too bright, "BRIGHTNESS ERROR" may be displayed as shown in the picture below.

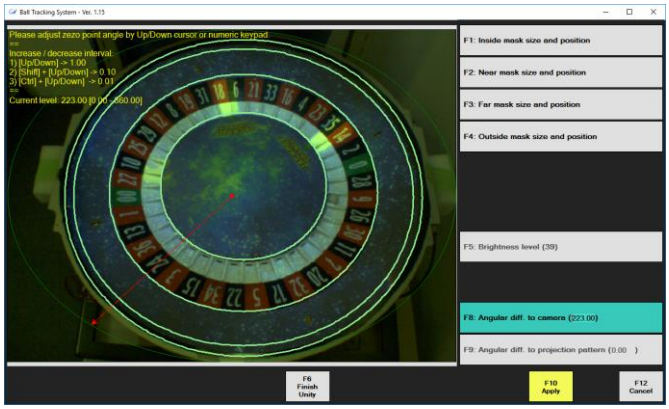
Functions of Keys

Key	Function
F10 or Enter	Apply changing and exit Adjust Brightness Mode
F12 or ESC	Cancel(or Esc). Makes cancellation and ends the change mode.
↑ ↓	Adjusts Brightness Level.

5. Angular diff. to camera

This changes the angle of camera-captured image.
It has the default angle that normally does not need to be modified.

If you alter this angle, set the current mode to the "Angular diff. to camera" mode by pressing [F8].



Functions of Keys

Key	Function
[↑]	Increases the angle by 1.
[↓]	Decreases the angle by -1.
[Shift] + [↑]	Increases the angle by 0.1.
[Shift] + [↓]	Decreases the angle by -0.1.
[Ctrl] + [↑]	Increases the angle by 0.01.
[Ctrl] + [↓]	Decreases the angle by -00.1.
[F10] or [Enter]	Apply changing and exit Angular diff. to camera mode
[F12] or [ESC]	Cancel and exit Angular diff. to camera mode

6. Angular diff. to projection pattern

This adjusts the angle of an image displayed from the projector.
The default angle is 0 degrees but may need to be slightly adjusted depending on states of projector installation.
Make an adjustment if it seems that the angle of the light for Jackpot Number or Wining Number slightly deviates as this light brightens the numbers on the wheel.
This adjustment may increase or decrease the angle by 0.5 to 1 degree(s).

If you alter this angle, set the current mode to the "Angular diff. to projection pattern" mode by pressing [F9].

Functions of Keys

Key	Function
[↑]	Increases the angle by 1.
[↓]	Decreases the angle by -1.
[Shift] + [↑]	Increases the angle by 0.1.
[Shift] + [↓]	Decreases the angle by -0.1.
[Ctrl] + [↑]	Increases the angle by 0.01.
[Ctrl] + [↓]	Decreases the angle by -00.1.
[F10] or [Enter]	Apply changing and exit Angular diff. to projection pattern mode
[F12] or [ESC]	Cancel and exit Angular diff. to projection pattern mode

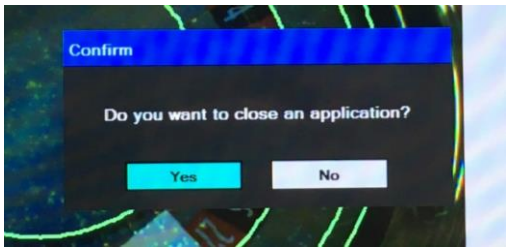
7. Finish set up

After completing the set-up, make the setting items on the right of the screen unchosen and
display the main unit image on the signage screen by operating the display switcher.

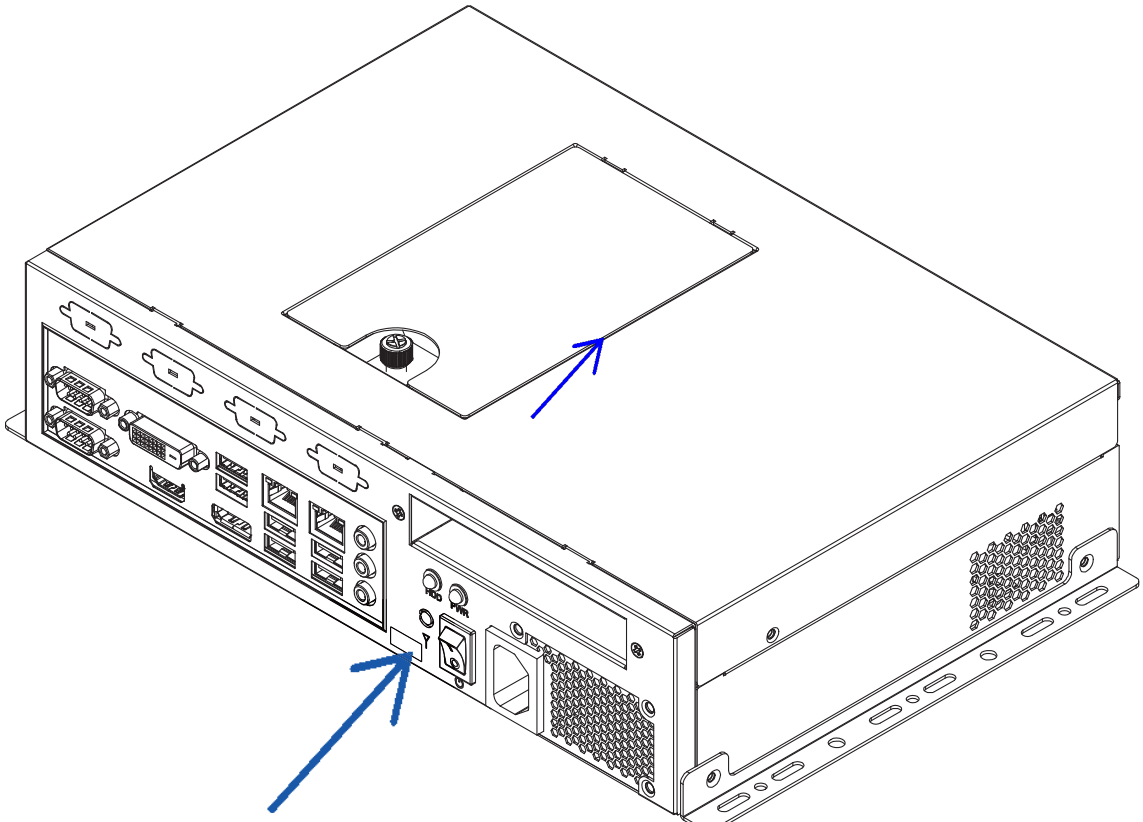
Confirm that the main unit exits AUDIT MODE and an image is correctly shown from the projector on the wheel.

Attention!!!

If the ESC key is pressed with a setting item on the right of the screen selected, the window to end the applications opens.
DO NOT end the apps!



In case you close the applications, reboot the projector PC after power it off.



Version Label "Ver.3.0"


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LUXURY GAMING PRODUCTS

ROULETTE XPLOSION PROJECTOR DATA UPDATE

Instructions for Casinos and Testing Laboratories

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1 OVERVIEW

This document describes how to update the data in the projector controller PC on the field and at test laboratories.

After the update, make sure that the animation is displayed correctly before proceeding to set it up.

In this document, characters in square brackets [ ] represent keyboard keys.

For example, [Shift] represents the shift key.

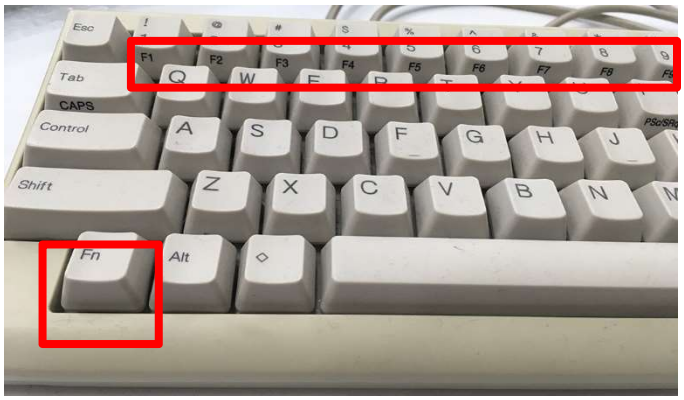
[←] is the left cursor key

+ Indicates that two or more keys are pressed at the same time.

For example, [Windows]+[Shift]+[↑] means to hold down the Windows key and the Shift key while pressing the ↑ cursor key.

The mini keyboard included in the Lucky Roulette body will also be used.

To obtain the [F8] key on the mini keyboard, press [Fn]+[8] as shown below.





2 NECESSARY TOOLS

Prepare the following items.

Plus driver

Keyboard

USB memory containing:

- "Art2018_data" folder
- "BallTracking" folder
- Art2018.exe
- copydata.bat
- shutdown.lnk
- UnityPlayer.dll

****ATTENTION: Do not enter any other data into the USB.**

3 UPDATE PROCEDURE

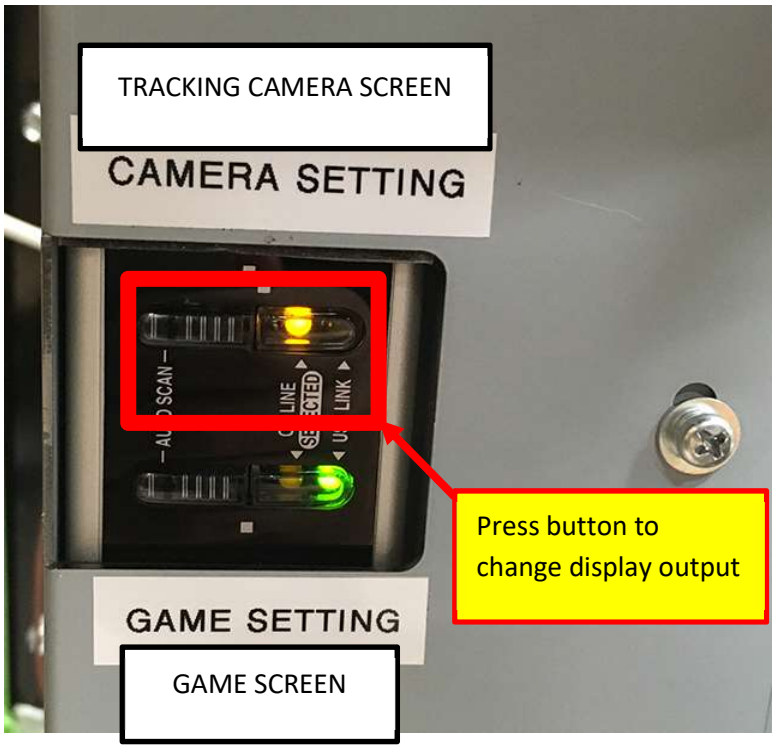
3.1 Boot up the main unit and projector PC

Turn on the power in the following order.

1. Projector display
2. Projector controller PC
3. Lucky roulette machine

Operate the display switcher inside the corner unit to display the projector's PC screen on the signage display (see below).





When the projector PC boots up, the following 2 applications automatically start up.

BallTracking

This application tracks the ball based on the image input from the camera, and also serves to adjust the camera's recognition range and brightness. Immediately after startup, BallTracking will be minimized on the projector display.

*Note: Roulette Xplosion does not perform ball tracking, but uses this application to adjust the angle for the rendering.

ART64

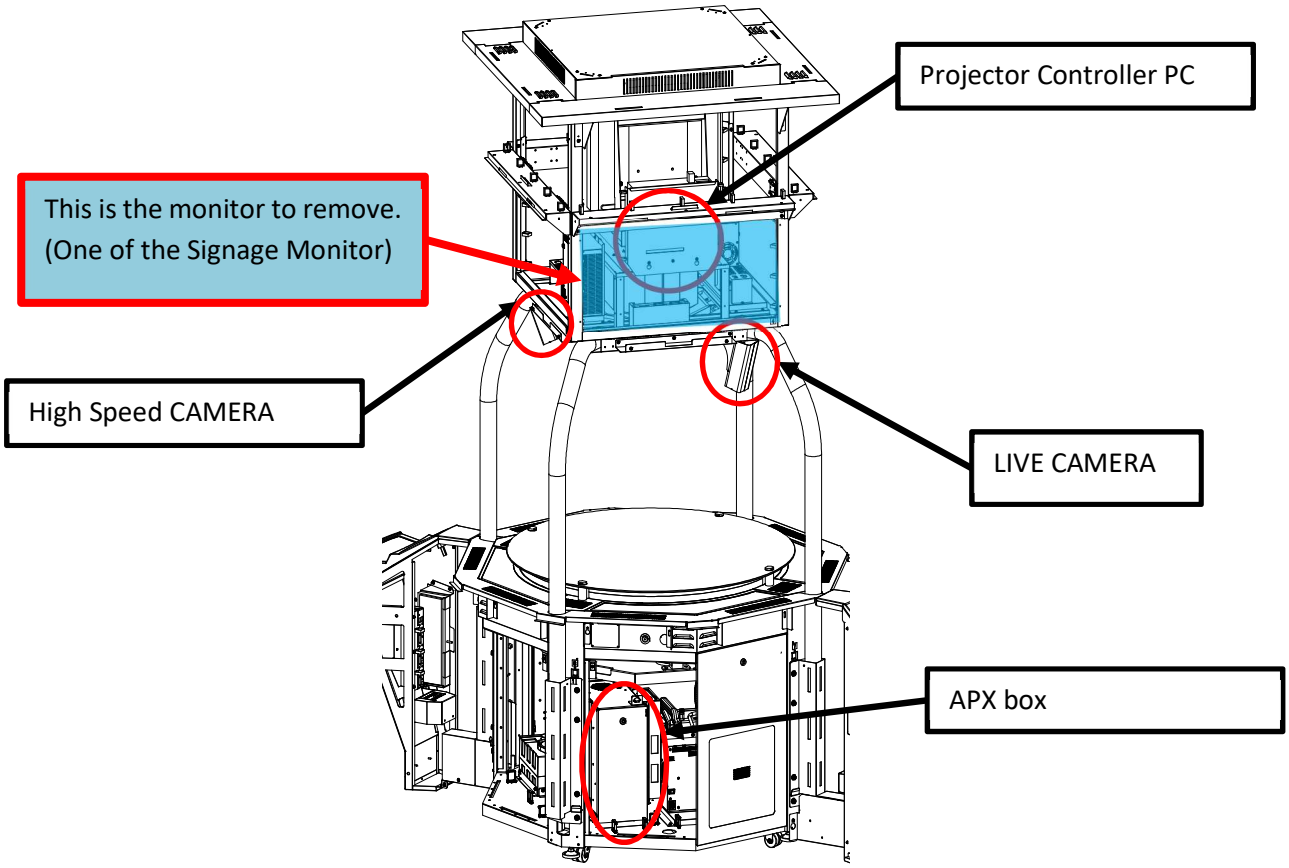
This application serves to display the graphics.

3.2 Remove the Projector PC monitor and plug the USB

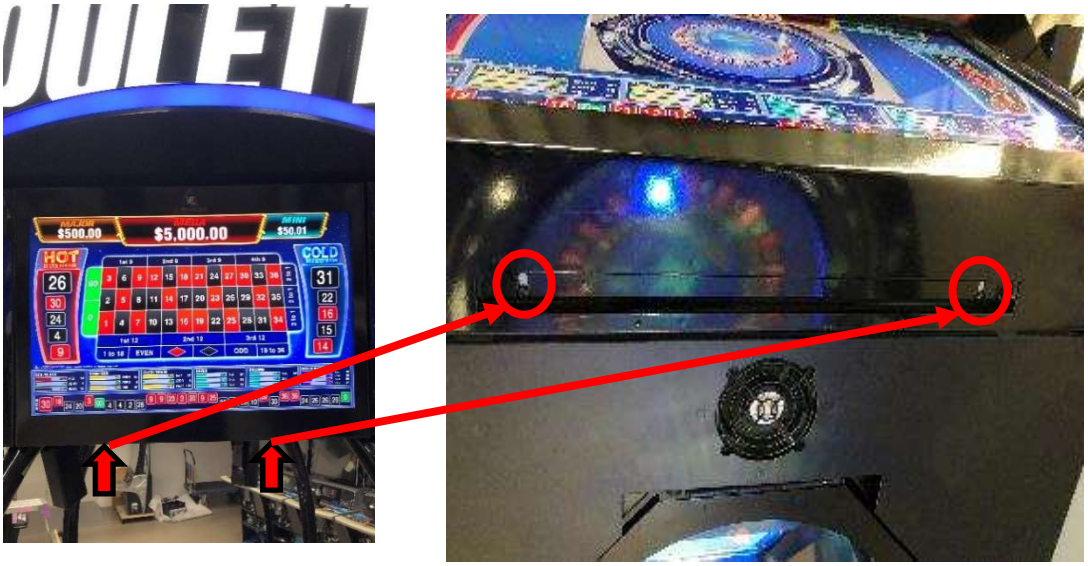
To connect the USB to the projector controller PC, remove monitor 1.

Remove the monitor installed on top of the APX box, between No. 1 and 4 in the figure below.

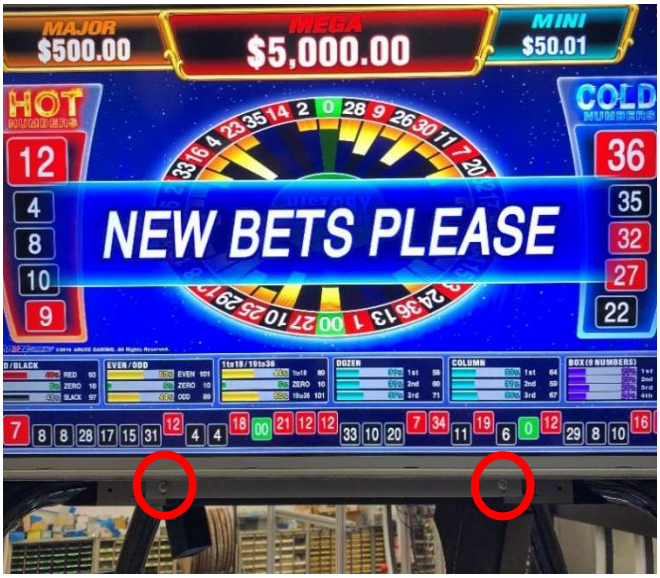
Please refer to the following picture for the part to remove.



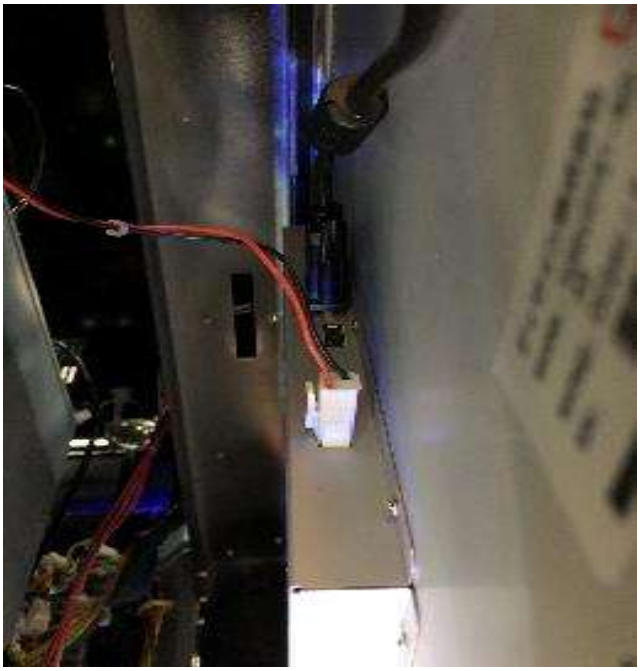
1. To remove the monitor cover, remove the following screws.



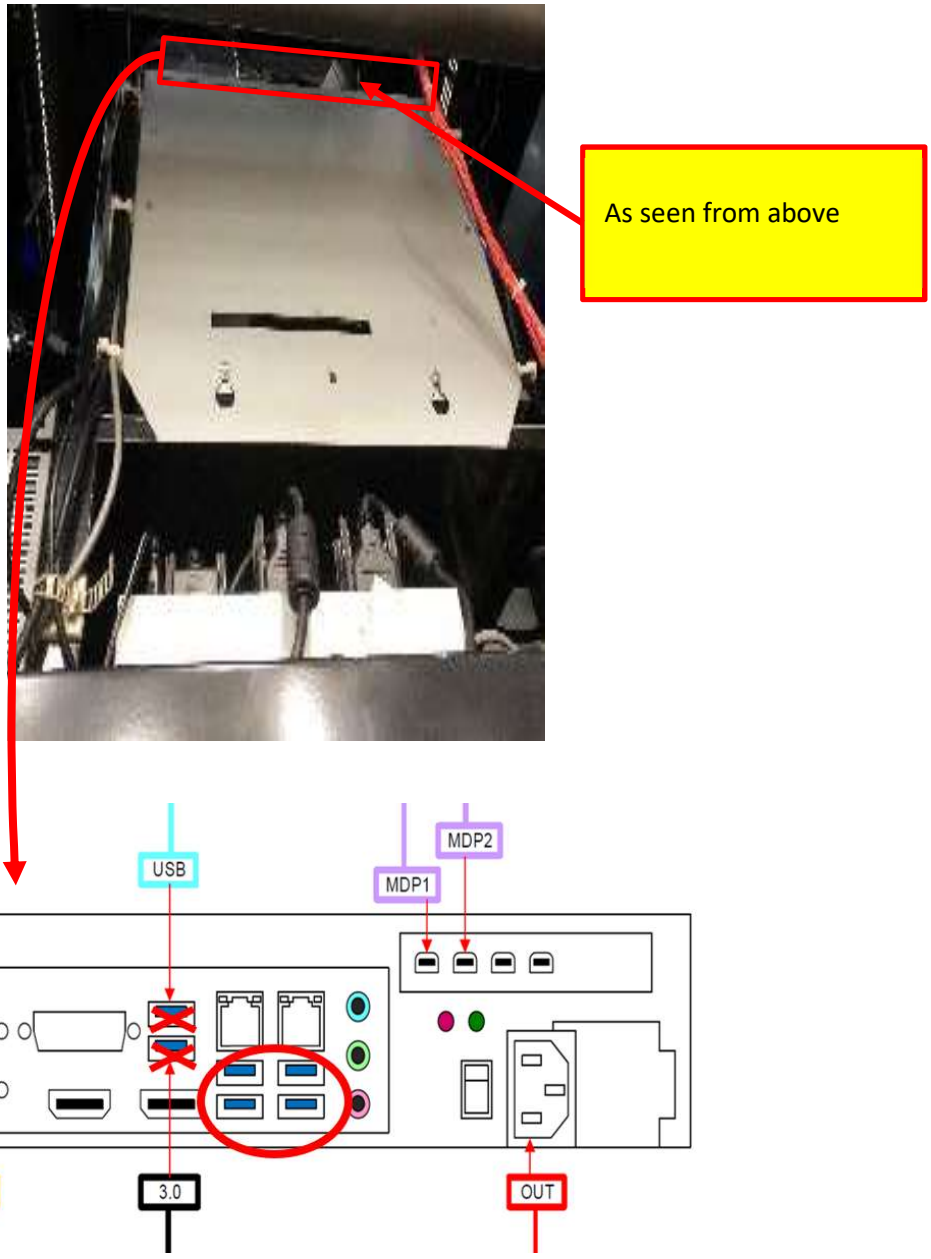
2. Next, remove the following screws.



3. Unplug the AC cable and DVI cable and remove the monitor.



4. This is what it looks like after removing the monitor.



The red circle shows the USB port to be used.

You can use any of the four ports.

5. Insert the USB into the projector controller PC.
   The figure below shows the position of the USB port.



3.3 Execute the BatchFile in the USB

If the above procedure in 3.2 is completed, the monitor should show the projector controller PC screen.
Execute the BatchFile in the USB memory by following this procedure.

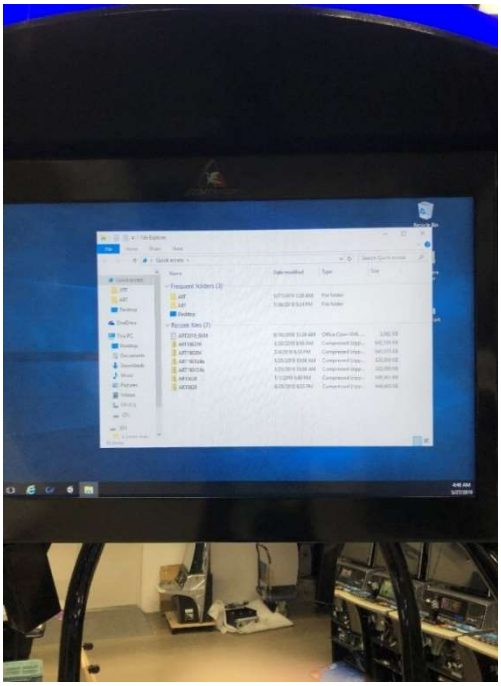
1. Press [Alt] + [Tab] on the machine's keyboard to display the application list on the projector.
2. Press [Tab] while long pressing [ALT] to select (focus on) a projector application.
   Once the projector application is focused, release the [ALT] key.
   You can close the selected window by pressing [Alt]+[F4].
3. Close the projector application.
4. Next, press [Alt] + [Tab] on the keyboard, select the command prompt, press [Alt] + [F4] to close the command prompt.



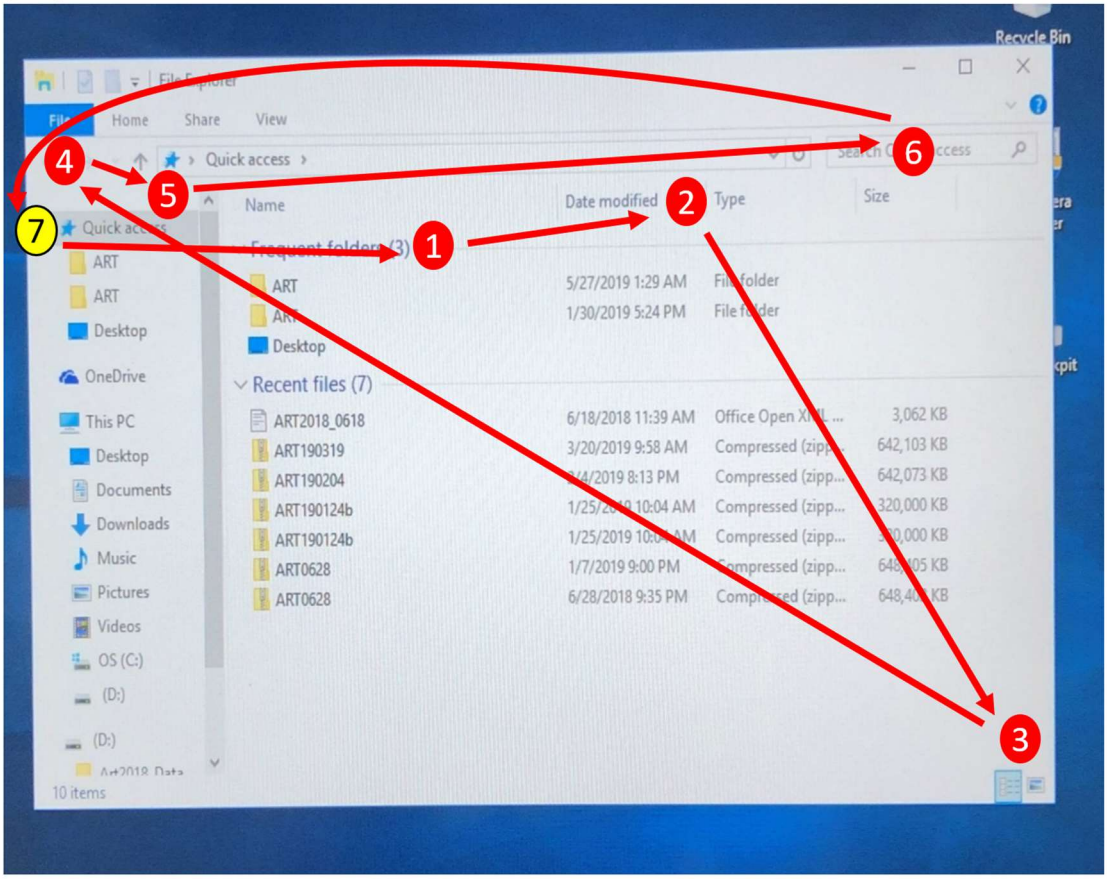
5. Press [Windows] + [E] on the keyboard of the main unit to display Windows Explorer on the projector side (where the wheel image is being displayed).
6. While the focus is on the Windows Explorer, press [Windows] + [Shift] + [→] to move the Windows Explorer will to the Signage Monitor.
7. Move Windows Explorer to the signage monitor.
   If the focus has changed, press [ALT]+[TAB] to display the focus selection screen. Then press [←] or [→] and select the Windows Explorer for the focus.



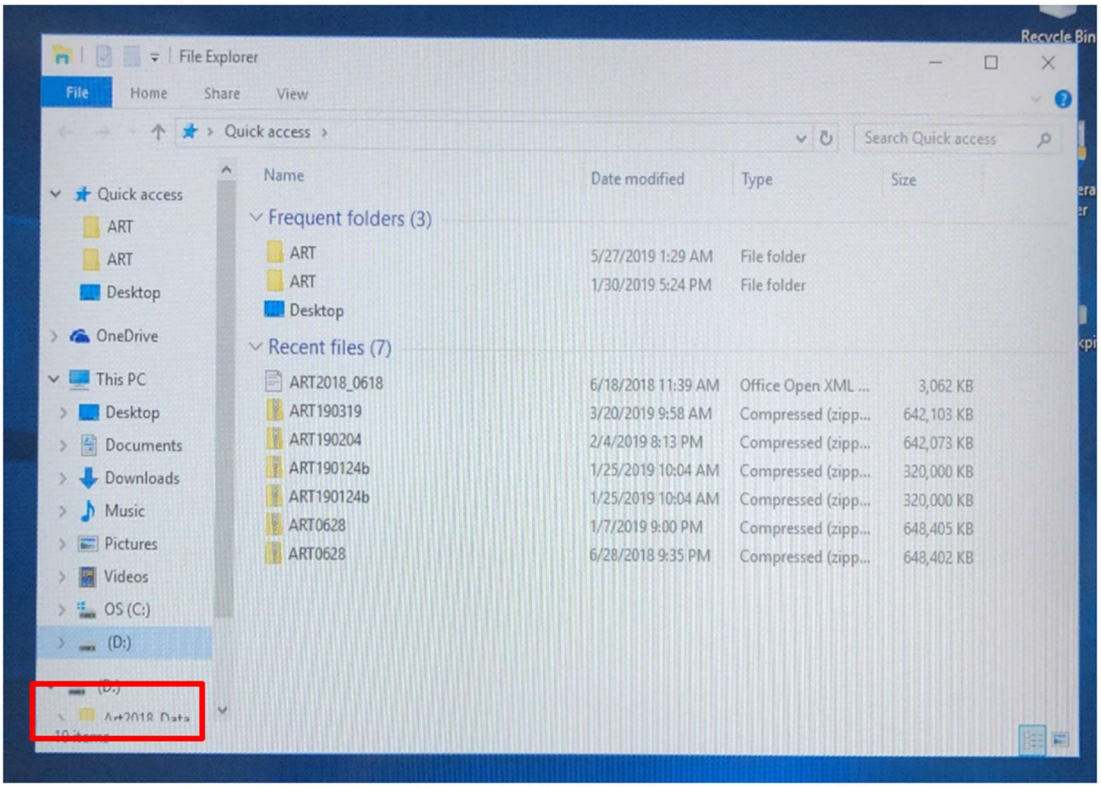
[Windows]+[SHIFT]



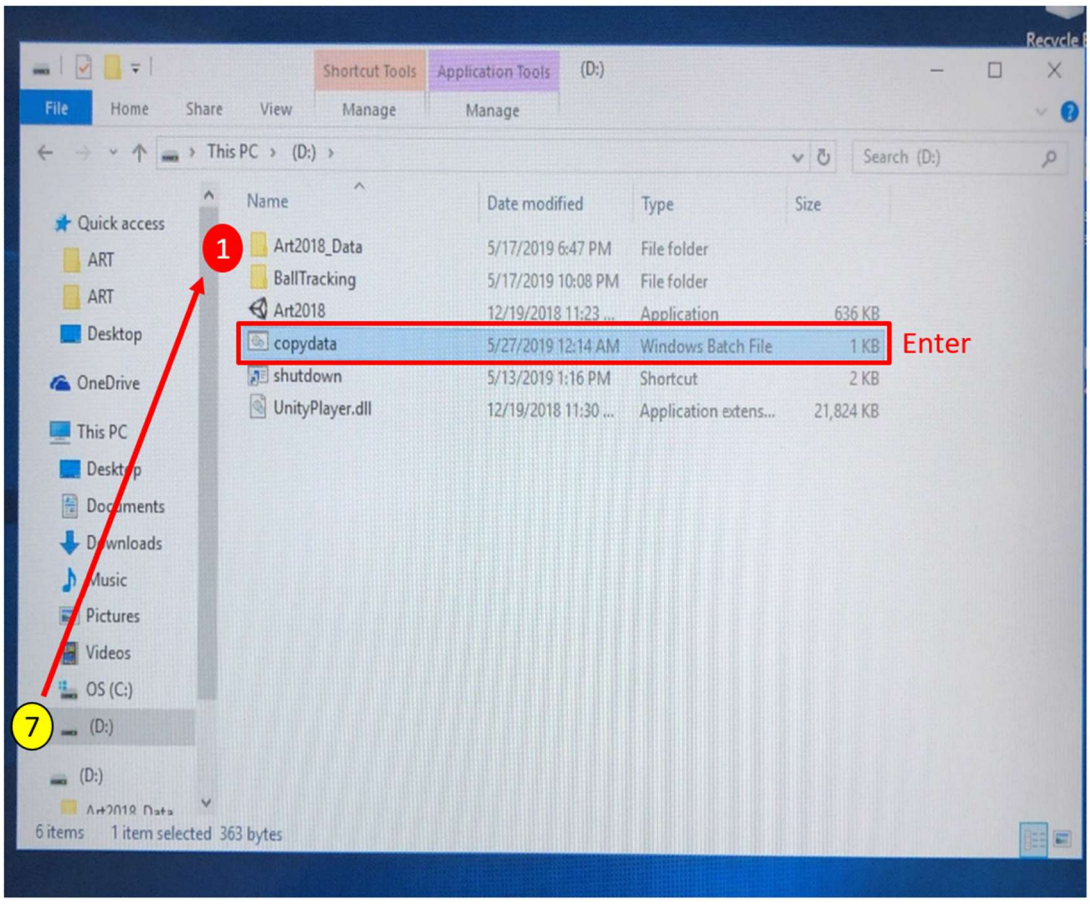
8. Press [TAB] six times to leave the cursor at number 7 in the image below.
   Press [TAB] to move to the next item.
   (The numbers indicate the items the focus will land on each time TAB is pressed.)



9. When you get to 7 in the image above, press [↓] on the keyboard to move the cursor to the USB drive, and press [Enter].



10. After pressing the Enter key, press the [Tab] key to move the cursor to 1 in the image below.

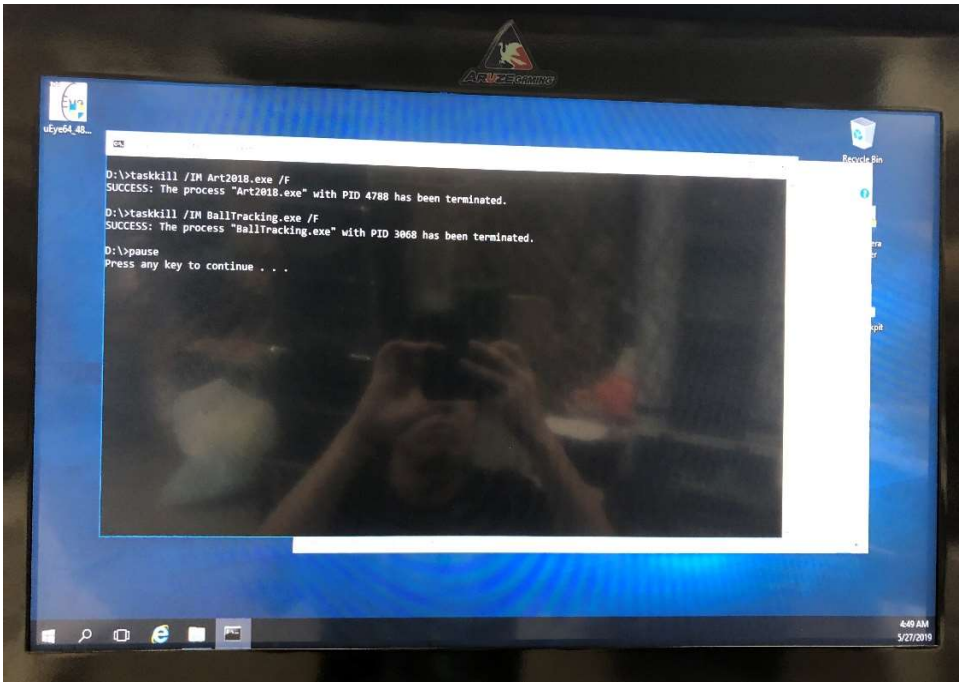


11. When the cursor is on 1 in the image above, press the [↓] key to select "COPYDATA" (also shown in above image), and press the [Enter] key.

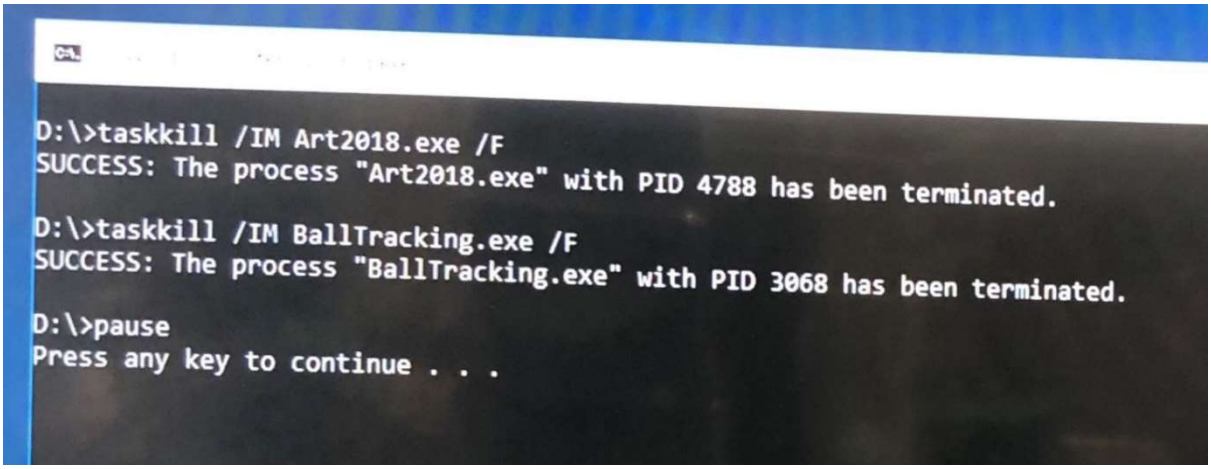
12. Press [Enter] to start updating.
    The batch file is displayed on the projector side (wheel display).



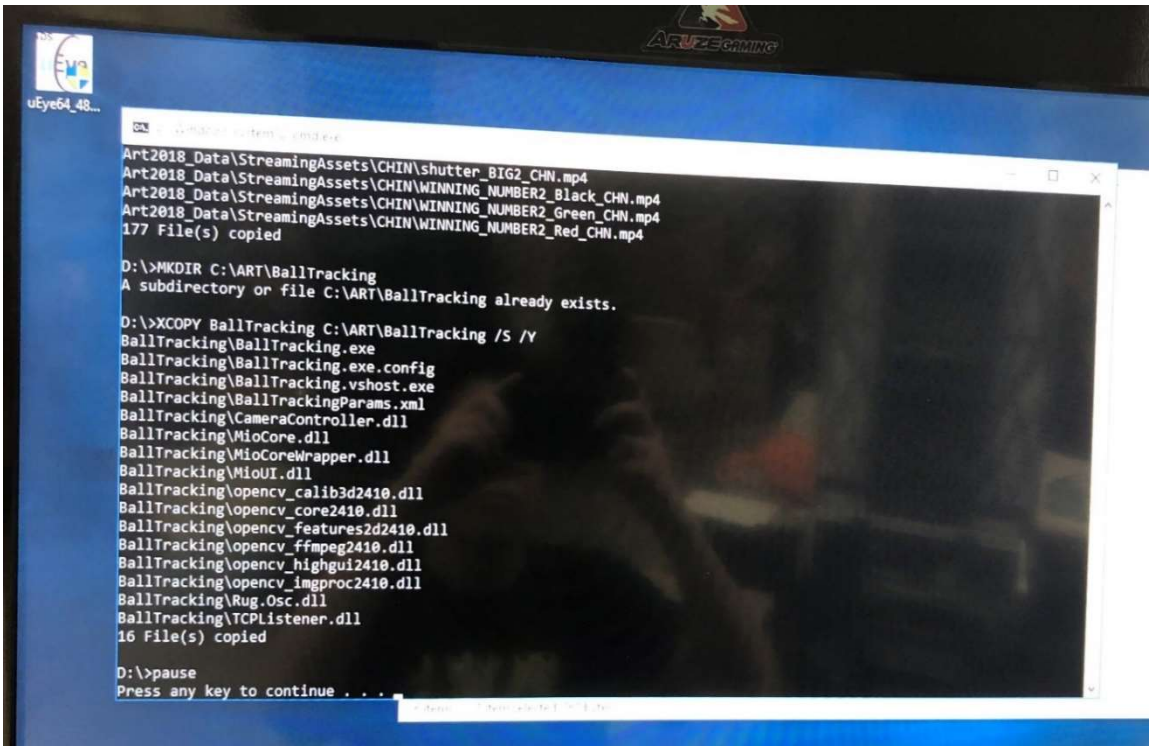
13. While the focus is on the batch file, press [Windows] + [SHIFT] + [→] to move it to the monitor side.



14. When "Press any key to continue" is displayed in BatchFile, press [Enter].
    The update completes in about 1 minute.



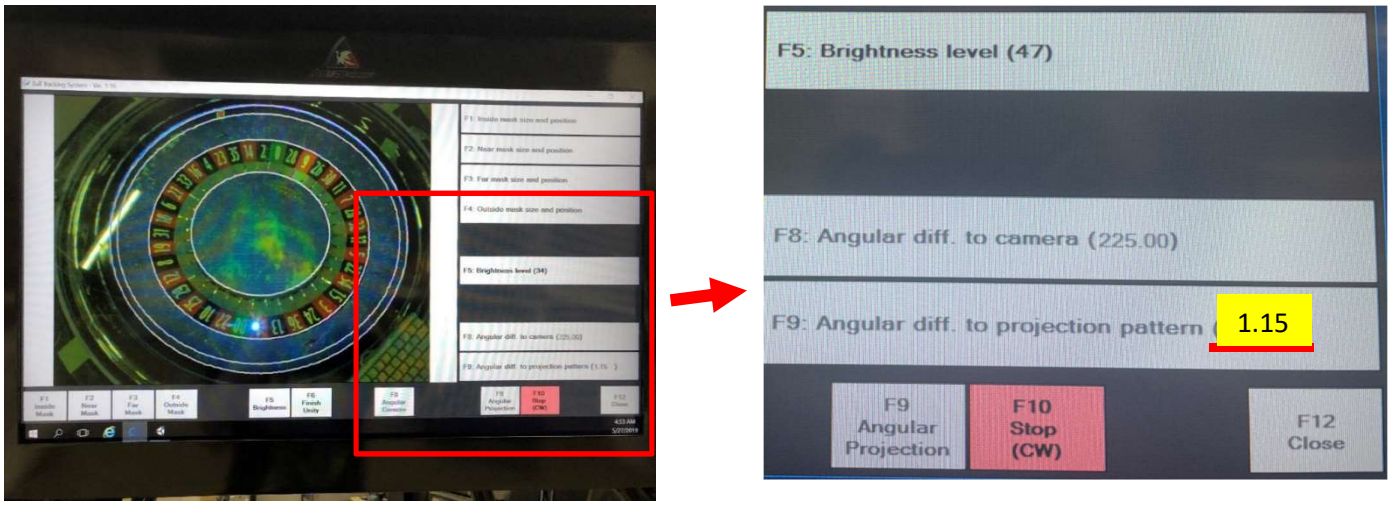
15. When BatchFile displays "Press any key to continue", press the [Enter] key again.
    The projector controller PC will be powered on.



3.4 Adjust camera angle

Adjust the angle on the projector by following this procedure.

1. Press [Windows]+[Shift]+[→] while the balltracking tool is in focus, so that BALLTRACKING moves to the signage monitor.
2. Then, press [Windows]+[↑] to maximize the balltracking window.
   Check that the BallTracking app appears on the signage monitor and is in focus.
3. When the BallTracking app appears on the screen and is in focus, check the following numbers.



4. Set the values as shown on the image.
   These settings are for the Roulette Xplosion and may vary slightly from cabinet to cabinet.

Note: This value is a sample and should be changed as needed.

3.5 Adjust projector angle

Please refer to the image above and change the projector angle settings.

1) Press [◊] + [9] to display the projector angle setting screen.

2) Adjust the angle using the keys in the table below.

3) Finally, press [◊] + [10]

<Keyboard assignment>

Key	Function
[↑]	Increase angle by 1 degree.
[↓]	Decrease angle by 1 degree.
[Shift] + [↑]	Increase angle by 0.1 degree.
[Shift] + [↓]	Decrease angle by 0.1 degree.
[Ctrl] + [↑]	Increase angle by 0.01 degree.
[Ctrl] + [↓]	Decrease angle by 0.01 degree.
[◊] + [10]	Apply changing and exit Angular diff. to camera mode
[◊] + [12]	Cancel and exit Angular diff. to camera mode

3.6 Final check

Operate the display switch and display the animation of the main unit on the signage screen.

Make sure the animation of the projector is accurately displayed on the wheel.



The projector display clears all errors, and after some time a ball is ejected for a demonstration play.

This display must match the animation in the game.

If the display does not match, you need to adjust the settings in "3.4 Adjust projector angle" again.



Also, check the STRATEGY screen that appears during BET TIME to see if the graph extends to the numerical position.

If there is no problem, remove the USB memory and return the monitor to the original position.

The projector update is completed.

Document version:	1.1
Document date:	2025/4/16

Document Revisions	
1.0	Initial document
1.1	Add items to be checked and change the value of 3.4 Adjust camera angle.

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interblock
LUXURY GAMING PRODUCTS

For USA

NEC

Projector

PA1004UL-W/PA1004UL-B
PA804UL-W/PA804UL-B

User's Manual

Model No.
NP-PA1004UL-W/NP-PA1004UL-B/NP-PA804UL-W/NP-PA804UL-B

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Introduction

Thank you for purchasing the NEC projector.
This projector can be connected to computers, video devices, etc. to project images sharply onto a screen.
Please read this manual carefully before using your projector and keep the manual handy for future reference.
Read this user's manual if you have any doubts about operation or if you believe the projector may be faulty.

NOTES

(1) The contents of this user's manual may not be reprinted in part or whole without permission.

(2) The contents of this user's manual are subject to change without notice.

(3) Great care has been taken in the preparation of this user's manual; however, should you notice any questionable points, errors or omissions, please contact us.

(4) Notwithstanding article (3), NEC will not be responsible for any claims on loss of profit or other matters deemed to result from using the Projector.

Ver. 1 5/20

Important Information

About the symbols

To ensure safe and proper use of the product, this manual uses a number of symbols to prevent injury to you and others as well as damage to property.
The symbols and their meanings are described below. Be sure to understand them thoroughly before reading this manual.

WARNING	Failing to heed this symbol and handling the product erroneously could result in accidents leading to death or major injury.
CAUTION	Failing to heed this symbol and handling the product erroneously could result in personal injury or damage to surrounding property.

Examples of symbols

	This symbol indicates you should be careful of electric shocks.
	This symbol indicates you should be careful of high temperatures.
	This symbol indicates something that must be prohibited.
	This symbol indicates something that must not be got wet.
	This symbol indicates you should not touch with wet hands.
	This symbol indicates something that must not be disassembled.
	This symbol indicates things you must do.
	This symbol indicates that the power cord should be unplugged from the power outlet.

Safety Cautions

⚠ WARNING

BE SURE TO DO

Handling the power cord

- Please use the power cord supplied with this projector.



PROHIBITION

- The power cord included with this projector is exclusively for use with this projector. For safety, do not use it with other devices.

HAZARDOUS VOLTAGE

- Handle the power cord with care. Damaging the cord could lead to fire or electric shock.
  - Do not place heavy objects on the cord.
  - Do not place the cord under the projector.
  - Do not cover the cord with a rug, etc.
  - Do not scratch or modify the cord.
  - Do not bend, twist or pull the cord with excessive force.
  - Do not apply heat to the cord.

  Should the cord be damaged (exposed core wires, broken wires, etc.), ask your dealer to replace it.
- Do not touch the power plug should you hear thunder. Doing so could result in electric shock.

⚠ WARNING

Installing the Projector



BE SURE TO DO

- This projector is designed to be used with a 100–240 V AC, 50/60 Hz power supply. Before using the projector, check that the power supply to which the projector is to be connected meets these requirements.
- Use a power outlet as the projector's power supply. Do not connect the projector directly to electrical light wiring. Doing so is dangerous.
- When installing the projector at an angle, the separately sold option cover may be required for safety depending on the installation angle of the projector. (→ page xix)



PROHIBITION

- Do not use in places such as those described below. Doing so could lead to fire or electric shock.
  - Shaky tables, inclined surfaces or other unstable places
  - Near heating appliances or places with heavy vibrations
  - Outdoors or humid or dusty places
  - Places exposed to oil smoke or steam
  - Near cooking appliances, humidifiers, etc.



DO NOT WET

- Do not use in places such as those described below where the projector could get wet. Doing so could lead to fire or electric shock.
  - Do not use in the rain or snow, on a seashore or waterfront, etc.
  - Do not use in a bathroom or shower room.
  - Do not place vases or potted plants on the projector.
  - Do not place cups, cosmetics or medicines on the projector.

  Should water, etc. get inside the projector, first turn off the projector's power, then unplug the power cord from the power outlet and contact your dealer.



UNPLUG THE POWER CORD

- Do not insert or drop metal or combustible objects or other foreign materials into the projector from the vents. Doing so could lead to fire or electric shock. Be particularly careful if there are children in the home. Should a foreign object get inside the projector, first turn off the projector's power, then unplug the power cord from the power outlet and contact your dealer.

Unplug the power cord if the projector malfunctions.



UNPLUG THE POWER CORD

- Should the projector emit smoke or strange odors or sounds, or if the projector has been dropped or the cabinet broken, turn off the projector's power, then unplug the power cord from the power outlet. It may cause not only fire or electric shock but also serious damage to your eyesight or burns. Contact your dealer for repairs.

  Never try to repair the projector on your own. Doing so is dangerous.

⚠ WARNING

DO NOT DISASSEMBLE

Do not disassemble the projector.

- Do not remove or open the projector's cabinet.
  Also, do not modify the projector. There are high voltage areas in the projector. It may cause fire, electric shock, or laser light leakage, resulting in serious damage to your eyesight or burns.
  Have qualified service personnel perform inspection, adjustments and repairs of the interior.

CAUTION

Installing suspended from the ceiling

- Should special works be required, for example to suspend the projector from the ceiling, consult your dealer.
  Never try to install the projector yourself in such cases. The projector could drop and cause injury.
  Suspending the projector from the ceiling requires sufficient ceiling strength to support the projector, and the building standards laws in your particular country must be followed.
  It is also necessary to take measures to prevent the projector from dropping in anticipation of a malfunction occurring in the projector, ceiling mounting device and installation location.
- When installed suspended from the ceiling, etc. do not hang from the projector. The projector could drop and cause injury.
- When installing suspended from the ceiling, use a power outlet that is within reach so the power cord can be easily plugged and unplugged.

PROHIBITION

CAUTION FOR HIGH TEMPERATURE

Do not place objects in front of the lens while the projector is operating.

- Do not leave the lens cap on the lens while the projector is operating. The lens cap could get hot and be warped.
- Do not place objects in front of the lens that obstruct the light while the projector is operating. The object could get hot and be broken or catch fire.
- The below pictogram indicated on the cabinet means the precaution for avoiding to place objects in front of the projector lens.

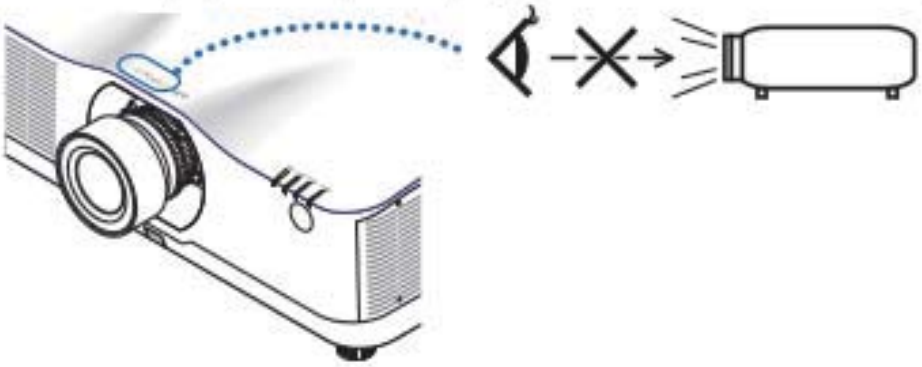


⚠ WARNING

PROHIBITION

About the projector's light source

- Do not look into the projector's lens.
  Strong light that could damage your eyes is projected when the projector is operating. Be especially careful when children are around.
- Do not look at the projected light using optical devices (magnifying glasses, reflectors, etc.). Doing so could result in vision impairment.
- Check that there is no one looking at the lens within the projection range before turning on the projector.
- Do not allow children to operate the projector alone. When a child is operating the projector an adult should always be present and watch the child carefully.
- The following graphic symbol indicating that looking into the projector is prohibited is displayed on top of the projector above the lens mounting unit.



PROHIBITION

When cleaning the projector

- Do not use flammable gas sprays to remove dust from the lens, cabinet, etc. Doing so could lead to fire.

BE SURE TO DO

PROHIBITION

About option cover (separately sold)

- Be sure to tighten the screws after attaching the option cover. Failure to do so may cause the cable cover to come off and fall, resulting in injury or damage to the cable cover.
- Do not put bundled cables in the option cover. Doing so may damage the power cord, resulting in a fire.
- Do not hold the option cover while moving the projector or do not apply excessive force to the option cover. Doing so may damage the option cover, resulting in injury.

⚠ CAUTION

 BE SURE TO DO	**Connecting the power cord to earth** • This equipment is designed to be used in the condition of the power cord connected to earth. If the power cord is not connected to the earth, it may cause electric shock. Please make sure the power cord is earthed properly. Do not use a 2-core plug converter adapter.
 BE SURE TO DO  DO NOT TOUCH WITH WET HANDS  UNPLUG THE POWER CORD	**Handling the power cord** • When connecting the power cord to the projector's AC IN terminal, make sure the connector is fully and firmly inserted. Be sure to fix the power cord using the power cord stopper. Loose connection of the power cord could lead to fire or electric shock. • Do not connect or disconnect the power cord with wet hands. Doing so could result in electric shock. • When cleaning the projector, for safety purposes unplug the power cord from the power outlet beforehand. • When moving the projector, first be sure to turn off the power, unplug the power cord from the power outlet and check that all connection cables connecting the projector to other devices have been disconnected. • When planning not to use the projector for long periods of time, always unplug the power cord from the power outlet.
 PROHIBITION	**Do not use on networks subject to overvoltage.** • Connect the projector's Ethernet/HDBaseT port and LAN port to a network for which there is no risk of overvoltage being applied. Overvoltage applied to the Ethernet/HDBaseT or LAN port could result in electric shock.
 BE SURE TO DO	**Lens shift, focus and zoom operations** • When shifting the lens or adjusting the focus or zoom, do so from either behind or to the side of the projector. If adjustments are performed from the front, your eyes could be exposed to strong light and get injured. • Keep your hands away from the lens area when performing the lens shift operation. If not, your fingers could get caught in the gap between the cabinet and the lens.

⚠ CAUTION

Handling batteries

PROHIBITION

- Handle batteries with caution. Failure to do so could lead to fire, injury or contamination of the surroundings.
  - Do not short-circuit or take apart batteries or dispose of them in flames.
  - Do not use batteries other than those specified.
  - Do not use new batteries together with old ones.
  - When inserting batteries, pay attention to the polarities (+ and – directions), and be sure to insert them as indicated.
- Contact your dealer or local authorities when disposing of batteries.

About the vents

PROHIBITION

CAUTION FOR HIGH TEMPERATURE

- Do not obstruct the projector's vents. Also, do not place such soft objects as paper or cloths underneath the projector. Doing so could lead to fire. Leave sufficient space between the place where the projector is installed and its surroundings. (→ page xxii)
- Do not touch the exhaust vent area while projecting or immediately after projecting images. The exhaust vent area may be hot at this time and touching it could cause burns.

Moving the projector

PROHIBITION

- For moving the projector, make sure you have at least two people. Attempting to move the projector alone could result in back pain or other injuries.
- When moving the projector, do not hold the lens section. The focus ring could turn, causing the projector to drop and resulting in injury. Also, if you put your hand on the gap between the cabinet and the lens, the projector may be damaged, falling and causing injury.
- When carrying the projector with the lens unit removed, do not touch the mounting area of the lens with your hands. Also, do not put your hand into the recess of the connection terminal. The projector could be damaged or fall down, resulting in injuries.
- When moving the projector with the option cover attached, do not hold it by the option cover. The option cover could come lose and the main unit could fall down, causing injuries.

Inspecting the projector and cleaning the inside

BE SURE TO DO

- Consult with your dealer about once per year for cleaning of the inside of the projector. Dust could accumulate inside of the projector if it is not cleaned for extended periods of time, leading to fires or malfunction.

⚠ CAUTION	
 BE SURE TO DO	**Attaching/detaching the lens** • Turn off the projector before attaching or detaching the lens unit. Failure to do so could result in visual impairment.
 BE SURE TO DO	**Securing the lens unit with the fall prevention wire** • If the projector is going to be suspended from a ceiling or another high place, secure the lens unit using the fall prevention wire (sold separately). If the lens unit is not secured, it may fall down if it comes lose.
 BE SURE TO DO	**About viewing 3D pictures** • Before viewing, be sure to read health care precautions that may be found in the user's manual included with your 3D eyeglasses or your 3D compatible content such as Blu-ray Discs, video games, computer's video files and the like. • To avoid any adverse symptoms, heed the following: - Do not use 3D eyeglasses for viewing any material other than 3D images. - Allow a distance of 2 m/7 feet or greater between the screen and a user. Viewing 3D images from too close a distance can strain your eyes. - Avoid viewing 3D images for a prolonged period of time. Take a break of 15 minutes or longer after every hour of viewing. - If you or any member of your family has a history of light-sensitive seizures, consult a doctor before viewing 3D images. - While viewing 3D images, if you get sick such as nausea, dizziness, queasiness, headache, eyestrain, blurry vision, convulsions, and numbness, stop viewing them. If symptoms still persist, consult a doctor. • View 3D images from the front of the screen. Viewing from an angle may cause fatigue or eyestrain.

Laser Safety Caution

For USA

⚠ WARNING – CLASS 3R OF IEC 60825-1 SECOND EDITION LASER PRODUCT

LASER RADIATION – AVOID DIRECT EYE EXPOSURE
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

- This product is classified as Class 3R of IEC 60825-1 Second edition 2007-03
  Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

For other regions

⚠ WARNING

CLASS 1 LASER PRODUCT OF IEC 60825-1 THIRD EDITION
- The laser module is equipped in this product. Use of controls or adjustments of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ WARNING

RG3 PRODUCT OF IEC/EN 62471-5 FIRST EDITION
- No direct exposure to the beam shall be permitted, RG3 IEC/EN 62471-5:2015.
- Operators shall control access to the beam within the hazard distance and install the product at the height that will prevent exposures of spectators' eyes within the hazard distance.

- This product is classified as Class 1 of IEC 60825-1 Third edition 2014-05 and RG3 of IEC/EN 62471-5 First edition.
  Obey the laws and regulations of your country in relation to the installation and management of the device.

Light Module

- A light module containing multiple laser diodes is equipped in the product as the light source.
- These laser diodes are sealed in the light module. No maintenance or service is required for the performance of the light module.
- End user is not allowed to replace the light module.
- Contact qualified distributor for light module replacement and further information.
- Outline of laser emitted from the built-in light module:
  - Wave length: 455 nm
  - Maximum power: 257 W (PA1004UL-W/PA1004UL-B), 229 W (PA804UL-W/PA804UL-B)
- Radiation pattern from the protective housing:
  - Wave length: 455 nm
  - Maximum laser radiation output: 333 mW

Label Information

- The caution and the explanatory labels are stuck on the below indicated positions.

For USA

Label 1



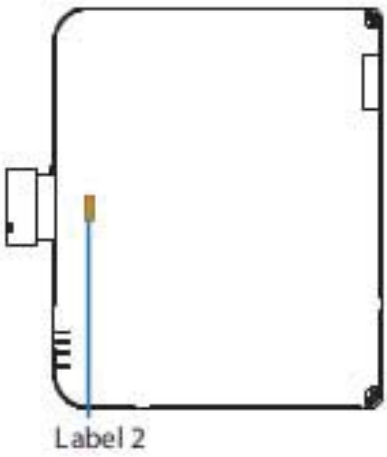
Label 2

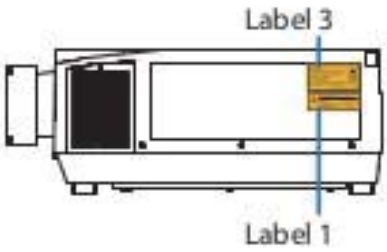


For other regions

Label 3





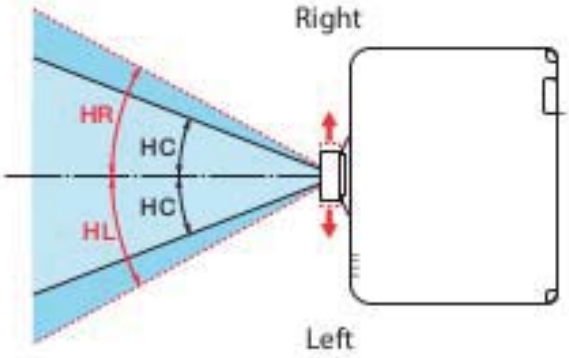


Laser light radiation range

The figure below shows the maximum radiation range of the laser light.

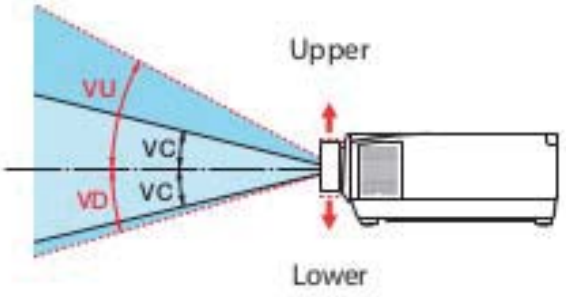
Horizontal angle (unit: degree)

Lens unit	Zoom	Lens position		
		Right most	Center (Reference value)	Left most
		HR	HC	HL
NP11FL		31.8	31.8	31.8
NP12ZL	Tele	27.4	18.0	27.4
	Wide	34.0	22.9	34.0
NP13ZL	Tele	15.1	9.6	15.1
	Wide	28.3	18.6	28.3
NP14ZL	Tele	9.6	6.0	9.6
	Wide	15.1	9.6	15.1
NP15ZL	Tele	6.4	4.0	6.4
	Wide	9.7	6.1	9.7
NP40ZL	Tele	31.7	23.8	31.7
	Wide	41.0	31.8	41.0
NP41ZL	Tele	13.0	9.4	13.0
	Wide	27.9	20.7	27.9
NP43ZL	Tele	6.8	4.9	6.8
	Wide	13.4	9.7	13.4



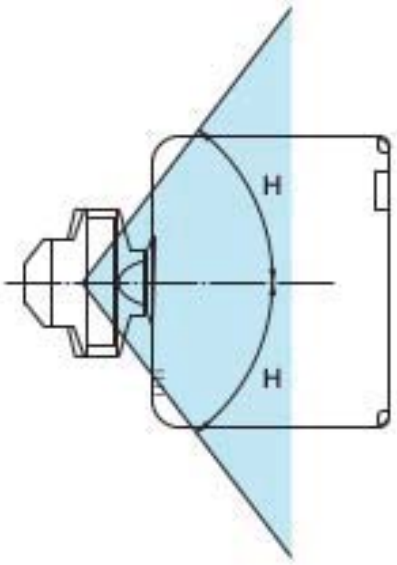
Vertical angle (unit: degree)

Lens unit	Zoom	Lens position		
		Upper most	Center (Reference value)	Lower most
		VU	VC	VD
NP11FL		21.2	21.2	21.2
NP12ZL	Tele	24.0	11.5	13.7
	Wide	30.1	14.8	17.6
NP13ZL	Tele	13.0	6.0	7.2
	Wide	24.8	11.9	14.1
NP14ZL	Tele	8.3	3.8	4.5
	Wide	13.1	6.0	7.2
NP15ZL	Tele	5.5	2.5	3.0
	Wide	8.4	3.8	4.6
NP40ZL	Tele	28.9	15.4	18.3
	Wide	37.8	21.2	24.9
NP41ZL	Tele	11.6	5.9	7.0
	Wide	25.3	13.3	15.8
NP43ZL	Tele	6.1	3.0	3.7
	Wide	12.0	6.1	7.3



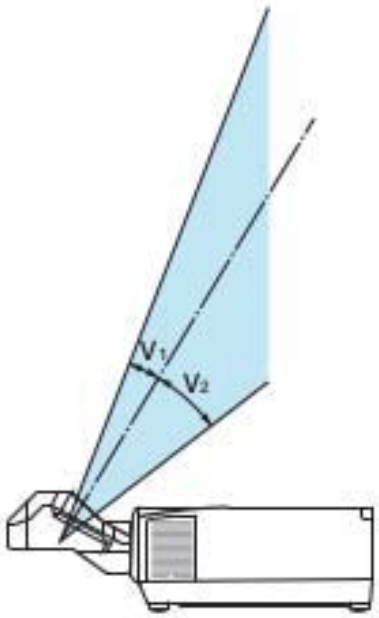
Horizontal angle (unit: degree)

Lens unit	Zoom	
	Tele	Wide
NP44ML	—	55.8



Vertical angle (unit: degree)

Lens unit	Zoom		
	Tele	V1	V2
NP44ML	—	10.7	24.6



Cable information

Use shielded cables or cables attached ferrite cores so as not to interfere with radio and television reception.
For details, please refer to "5. Making Connections" in this user's manual.

FCC Information

⚠ WARNING

- The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by NEC Display Solutions of America, Inc. in this manual. Failure to comply with this government regulation could void your right to operate this equipment.
- This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Supplier's declaration of conformity (for USA only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions.
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party:	NEC Display Solutions of America, Inc.
Address:	3250 Lacey Rd, Ste 500 Downers Grove, IL 60515
Telephone Number:	630-467-3000
Type of Product:	Projector
Equipment Classification:	Class A Peripheral
Model Number:	NP-PA1004UL-W/NP-PA1004UL-B/ NP-PA804UL-W/NP-PA804UL-B

Cautions for ensuring the projector's performance

- Do not install in places subject to vibrations or shocks.
  If installed in places where the vibrations from power sources and the like are conveyed, or in vehicles or on vessels, etc. the projector could be affected by vibrations or shocks that may damage internal parts and lead to malfunction.
  Install in a place not subject to vibrations or shocks.
- Do not install near high voltage power lines or power sources.
  The projector may be affected by interference if it is installed near a high voltage power line or a power source.
- Do not install or store in such places as those described below. Doing so could lead to malfunction.
  - Places where strong magnetic fields are generated
  - Places where corrosive gases are generated
- If intense light like laser beams enters from the lens, it could lead to malfunction.
- Consult your dealer before using in places where much cigarette smoke or dust is present.
- Select [HIGH] in [FAN MODE] if you continue to use the projector for consecutive days.
- When the same still image is projected for a long period of time with a computer, etc. the pattern of the image may remain on the screen after the projection is stopped, but it will disappear after a while. This happens due to the properties of liquid crystal panels, and is not a malfunction. We recommend using a screensaver on the computer side.
- When using the projector at altitudes of about 5500 feet/1700 meters or higher, be sure to set the [FAN MODE] to [HIGH ALTITUDE]. If not, the inside of the projector may get hot, leading to malfunction.
- When the projector is used at high altitudes (places where the atmospheric pressure is low), it may be necessary to replace the optical parts sooner than usual.
- About moving the projector
  - Remove the lens unit once, and be sure to attach the lens cap so as not to scratch the lens. Also, attach a dust protective cap to the projector.
  - Do not subject the projector to vibrations or strong shocks.

  The projector could be damaged otherwise.
- Do not use the tilt feet for purposes other than adjusting the projector's tilt.
  Improper handling, such as carrying the projector by the tilt feet or using it leaned against a wall, could lead to malfunction.
- Do not touch the surface of the projection lens with bare hands.
  Fingerprints or dirt on the surface of the projection lens will be enlarged and projected on the screen. Do not touch the surface of the projection lens.
- Do not unplug the power cord from the projector or the power outlet while projecting. Doing so could cause deterioration of the projector's AC IN terminal or power plug contact. To interrupt the AC power supply while images are being projected, use a power strip switch, a breaker, etc.
- About handling of the remote control
  - The remote control will not work if the projector's remote signal sensor or the remote control's signal transmitter is exposed to strong light or if there are obstacles between them that obstruct the signals.
  - Operate the remote control from within 20 meters from the projector, pointing it at the projector's remote signal sensor.
  - Do not drop the remote control or handle it improperly.

- Do not let water or other liquids get on the remote control. Should the remote control get wet, wipe it off immediately.
- Avoid using in hot and humid places as far as possible.
- When planning not to use the remote control for long periods of time, remove both batteries.

• Take measures to prevent external light from shining on the screen.
Make sure only the light from the projector shines on the screen. The less external light on the screen, the higher the contrast and the more beautiful the images.

• About screens
Images will not be clear if there is dirt, scratches, discoloration, etc. on your screen. Handle the screen with care, protecting it from volatile substances, scratches and dirt.

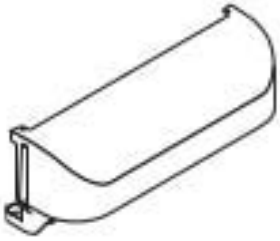
Precautions when installing the projector at an angle

This projector can be installed universally in every angle. When installing the projector at the angles shown below, the separately sold option cover is required to be attached to the projector.

⚠ WARNING
• For safety reasons, be sure to attach the option cover. • Be sure to attach the option cover to the projector when the projector's power is turned on. This may result in fire.

Model name of option cover
NP13CV-W for PA1004UL-W/PA804UL-W NP13CV-B for PA1004UL-B/PA804UL-B

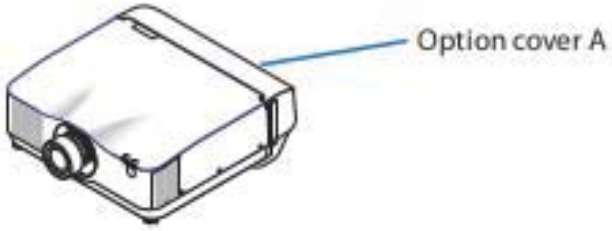
Two covers are packaged with the option cover NP13CV-W and NP13CV-B.

Option cover A: for attaching to the connection terminal area	
Option cover B: for attaching to the exhaust vent	

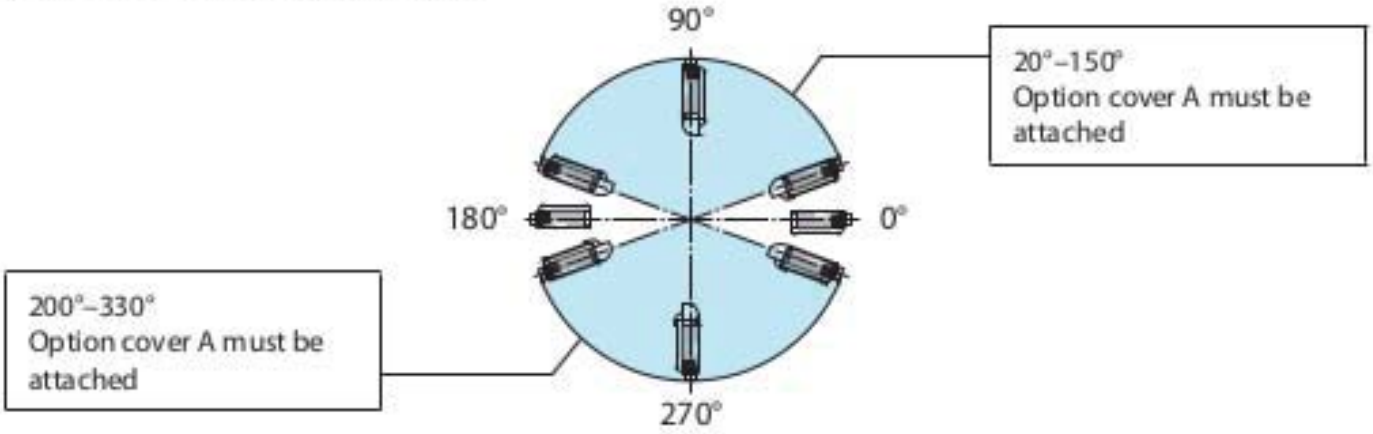
The drawings below show the installation angle required to attach the option cover A and B respectively.

- Both option cover A and B may need to be attached depending on the installation position of the projector.
- Whether the option cover needs to be attached in the current installation position can be checked on the [INFO.] screen of the on-screen menu (→ pages 157, 158).

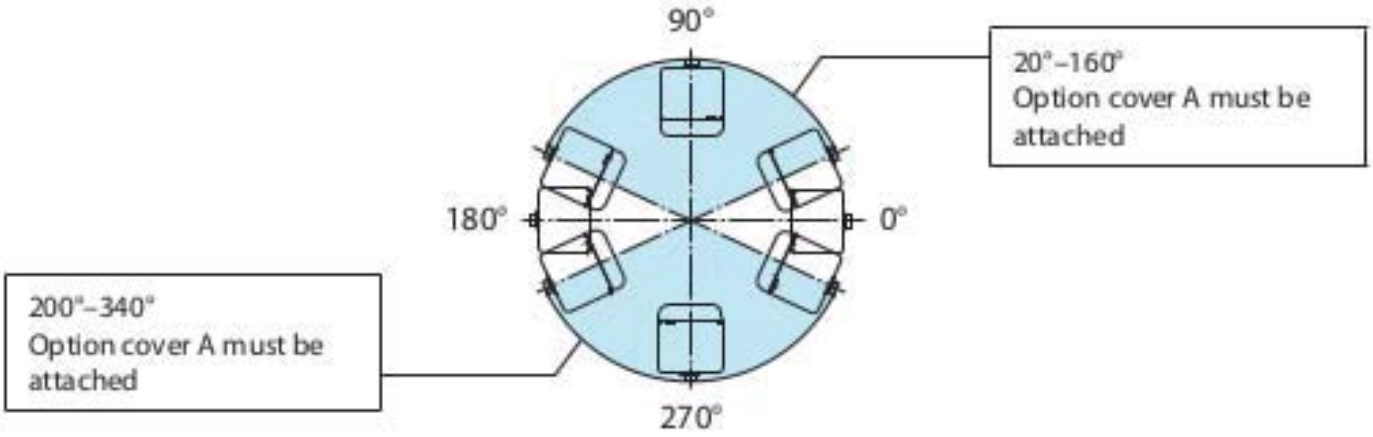
Installation angles required to attach the option cover A



In the direction of back and forth



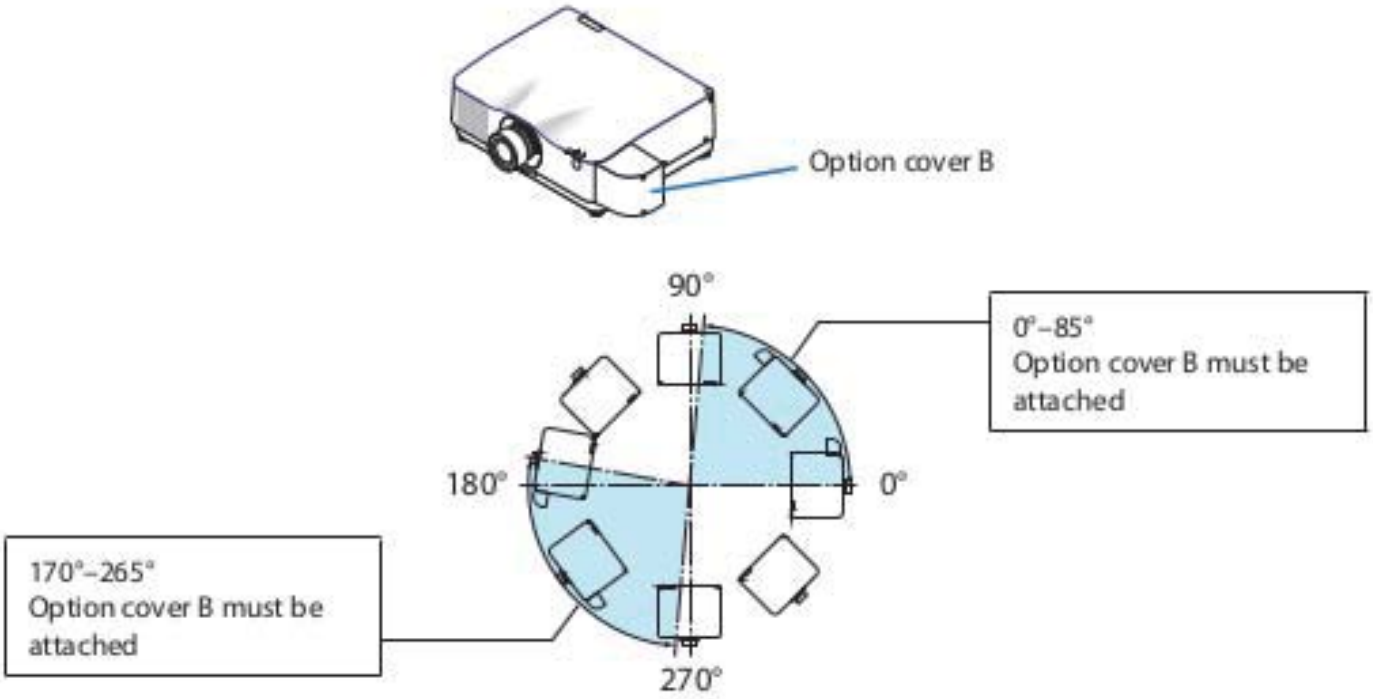
In the direction of left and right



NOTE:

- The drawings show the image of installation angle as a reference. They are slightly different from the actual one.

Installation angles required to attach the option cover B

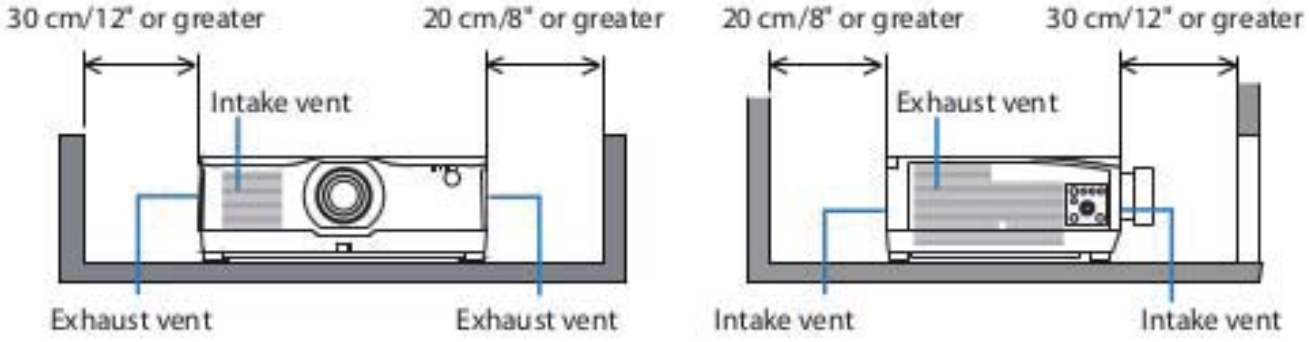


NOTE:

- The drawings show the image of installation angle as a reference. They are slightly different from the actual one.

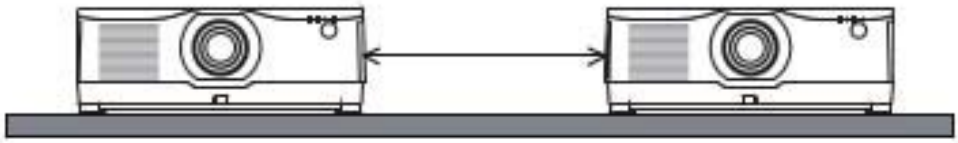
Clearance for Installing the Projector

- When installing the projector, keep sufficient space around it, as described below. If not, the hot exhaust emitted from the projector may be taken back in.
  Also, make sure no wind from an air-conditioner hits the projector.
  The projector's heat control system may detect an abnormality (temperature error) and automatically shut off the power.



NOTE:
- In the above figure, it is assumed that there is sufficient space above the projector.
- For the portrait projection, each required clearance between the floor and the intake or the exhaust vent is same with the clearance on the upper illustration. See page 210 for an installation example on portrait projection.

- When using multiple projectors together for multi-screen projection, provide sufficient space around the projectors for air intake and exhaust. When the intake and exhaust vents are obstructed, the temperature inside the projector will rise and this may result in a malfunction.



Precautions for Ceiling Installation

Do not install the projector in the following places. Attached substances such as oil, chemicals and moisture may cause deformation or cracks of the cabinet, corrosion of the metal parts, or malfunction.

- Outdoors and places with humid or dust
- Places exposed to oil smoke or steam
- Places where corrosive gases are generated

About Copyright of original projected pictures:

Please note that using this projector for the purpose of commercial gain or the attraction of public attention in a venue such as a coffee shop or hotel and employing compression or expansion of the screen image with the following functions may raise concern about the infringement of copyrights which are protected by copyright law.
[ASPECT RATIO], [KEYSTONE], Magnifying feature and other similar features.

[AUTO POWER OFF] Function

The factory default setting for [AUTO POWER OFF] is 15 minutes. If no input signal is received and no operation is performed on the projector during 15 minutes, the projector is automatically powered off for saving the power consumption. In order to control the projector by an external device, set the [AUTO POWER OFF] to [OFF]. Please refer page 154 for details.

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- Apple, Mac, iMac, and MacBook are trademarks of Apple Inc. registered in the U.S. and other countries.
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HDBT™

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- Virtual Remote Tool uses WinI2C/DDC library, © Nicomsoft Ltd.

1. Check the product overview, supplied items and part names

1-1. Introduction to the Projector

This section introduces you to your new projector and describes the features and controls.

General

- **Liquid crystal type high brightness/high resolution projector**

  This projector has a display resolution of 1920 dots × 1200 lines (WUXGA) and an aspect ratio of 16:10. Select [BOOST] under [REF. LIGHT MODE] for a brighter screen.

Model	Brightness
PA1004UL-W/PA1004UL-B	NORMAL: 9000 lm BOOST: 10000 lm
PA804UL-W/PA804UL-B	NORMAL: 7500 lm BOOST: 8200 lm

  When [BOOST] is selected, the cooling fan noise increases. The life of the optical components may also be shortened depending on the operating environment.

- **A proprietary sealed structure that achieves highly dust-proof performance**

  Due to its excellent dust-proof performance, the projector is not equipped with a filter. Filter replacement is therefore unnecessary.

- **Silent design utilizing a sealed structure**

  A silent design with no irritating fan noise even in a quiet conference room or classroom.

Light source · Brightness

- **A long-life laser diode is equipped in the light module**

  The product can be operated at low cost because the laser light source can be used for a long time without requiring replacement or maintenance.

- **Brightness can be adjusted within a wide range**

  Unlike with ordinary light sources, the brightness can be adjusted from 50 to 100% in 1% increments.

- **[CONSTANT BRIGHTNESS] mode**

  Brightness normally decreases with use, but by selecting [CONSTANT BRIGHTNESS] mode, sensors inside the projector detect and automatically adjust the output, thereby maintaining constant brightness throughout the life of the light module.

  However, if brightness output is set at the maximum, brightness will decrease with use.

Installation

- **Wide range of optional lenses selectable according to the place of installation**

  This projector supports 9 types of optional lenses, providing a selection of lenses adapted to a variety of places of installation and projection methods.

  Note that no lens is mounted upon shipment from the factory. Please purchase optional lenses separately.

- **360 dgeree free projection**

  This projector can be installed universally in every angle.

  Note, however, that the separately sold option cover is required to be attached to the projector depending on the installation angle of the projector.

  For controlling fine inclination, use the tilt foot. Install an appropriate metal and a stand that has enough strength to support the projector for controlling the installation angle.

Videos

- **Wide range of input/output terminals (HDMI, DisplayPort, HDBaseT, etc.)**

  The projector is equipped with a variety of input/output terminals: HDMI (input × 2), DisplayPort, HDBaseT (input × 1, output × 1), computer (analog), etc.

  The projector's HDMI input, DisplayPort input terminals and HDBaseT Ports support HDCP.

  HDMI and HDBaseT support HDCP 2.2/1.4

  DisplayPort supports HDCP 1.3

- **Simultaneous display of 2 images (PIP/PICTURE BY PICTURE)**

  Two images can be projected simultaneously with a single projector.

  There are two types of layouts for the two images: [PIP] in which a sub-picture is displayed on the main picture, and [PICTURE BY PICTURE] in which the main and sub pictures are displayed next to each other.

- **Multi-screen projection using multiple projectors**

  This projetor equips the HDBaseT IN/Ethernet and HDBaseT OUT/Ethernet ports. Multiple projectors in same brightness up to four units can be conneted in a daisy chain by a LAN* cable via these terminals. A high quality picture is achieved by dividing and projecting high resolution videos among the various projectors.

  Furthermore, the boundaries of the screens are smoothed using an edge blending function.

  * Use a commercially available CAT 5e STP cable or one in a higher specification.

- **Seamless switch function for smoother screen changes when switching the signal**

  When the input connector is switched, the image displayed before switching is held so that that the new image can be switched to without a break due to absence of a signal.

- **Supports HDMI 3D format**

  This projector can be used to watch videos in 3D using commercially-available active shutter-type 3D eyewear and 3D emitters that support XPANDVISION 3D.

Network

- **Supports wired LAN**

  Equips the LAN and HDBaseT/Ethernet (RJ-45) ports. Utilizing a wired LAN connected with these ports, it enables to control the projector by a computer.

- **CRESTRON ROOMVIEW and Extron XTP compatibility**

  The projector supports CRESTRON ROOMVIEW and Extron XTP, allowing multiple devices connected in the network to be managed and controlled from a computer. Moreover, it enables to output and control image via an Extron XTP transmitter connected with the projector.

- Compatible with our software applications (NaViSet Administrator 2, ProAssist, Virtual Remote Tool, etc.). The projector can be controlled from a computer connected via a wired LAN.
  - NaViSet Administrator 2

    You can monitor the status of the projector and control a variety of functions.
  - ProAssist

    Necessary adjustments can be made smoothly for multi-screen projection.
  - Virtual Remote Tool

    A virtual remote control is displayed on the computer screen to perform simple controls such as turning the projector on/off, switching signals, etc. It is also possible to change the background logo of the projector. (→ page 190)

  Please visit our web site for downloading each software.

  URL: https://www.nec-display.com/dl/en/index.html

Energy-saving

- **Energy-saving design with a standby power consumption of 0.22 W (100-130 V AC) / 0.28 W (200-240 V AC)**

  Selecting [ON] for [POWER-SAVING] from the menu can put the projector in power-saving mode.

  When network is enabled: 0.8 W

  When the network is disabled: 0.22 W (100-130 V AC)/0.28 W (200-240 V AC)

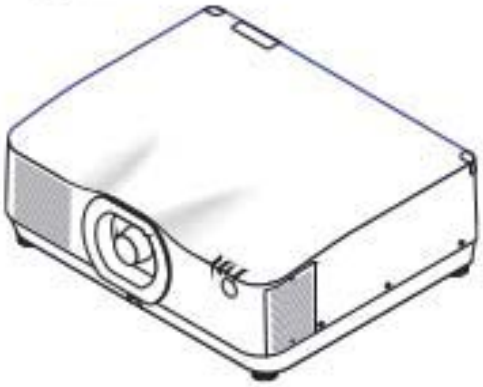
- **[LIGHT MODE] for low power consumption and "Carbon Meter" display**

  The projector is equipped with an [REF. LIGHT MODE] for reducing power consumption during use. Furthermore, the power-saving effect when one option among [ECO1] and [ECO2] is set is converted into the amount of reductions of CO_2 emissions and this is indicated on the confirmation message displayed when the power is turned off and at [INFORMATION] on the on-screen menu (CARBON METER).

1-2. What's in the Box?

Make sure your box contains everything listed. If any pieces are missing, contact your dealer. Please save the original box and packing materials if you ever need to ship your projector.

Projector



Dust cap for lens
(24F56481)
* The projector is shipped without a lens. For the types of lens and throw distances, see page 171.



Remote control
(7N901321)



AAA alkaline batteries (x2)



Power cord
(7N080533)



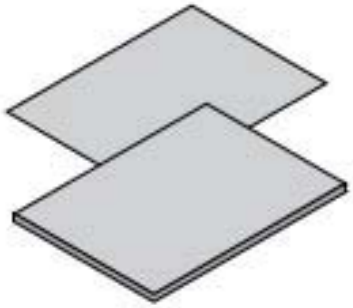
Power cord stopper
(24C10881)



Lens mask
(24FU2831)



Lens theft prevention screw
(24V00941)

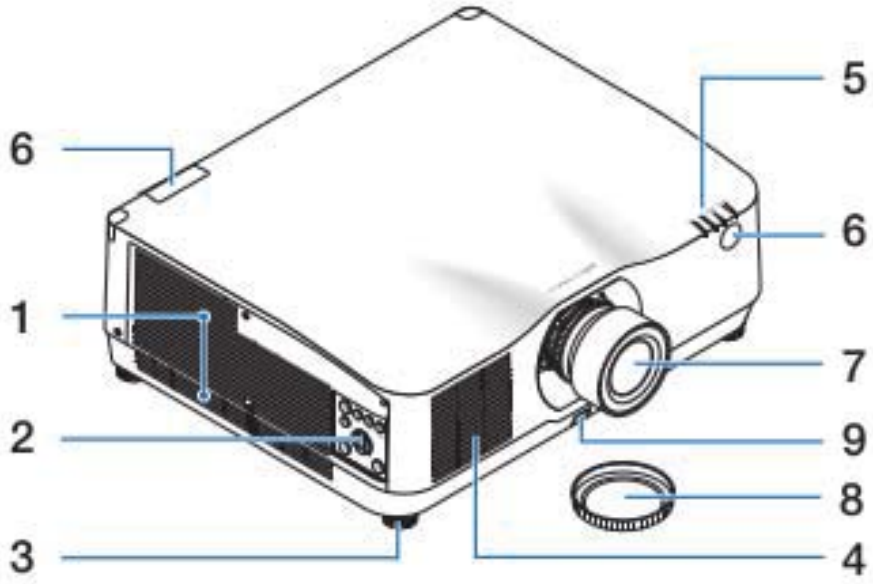


- **Important Infomation**
  (For USA: 7N8R0161, For Canada/South America: 7N8R0511)
- **Quick Setup Guide**
  (7N8R0171)
- **Security Sticker**
  (Use this sticker when security password is set on.)
- **Limited warranty**

1-3. Part Names of the Projector

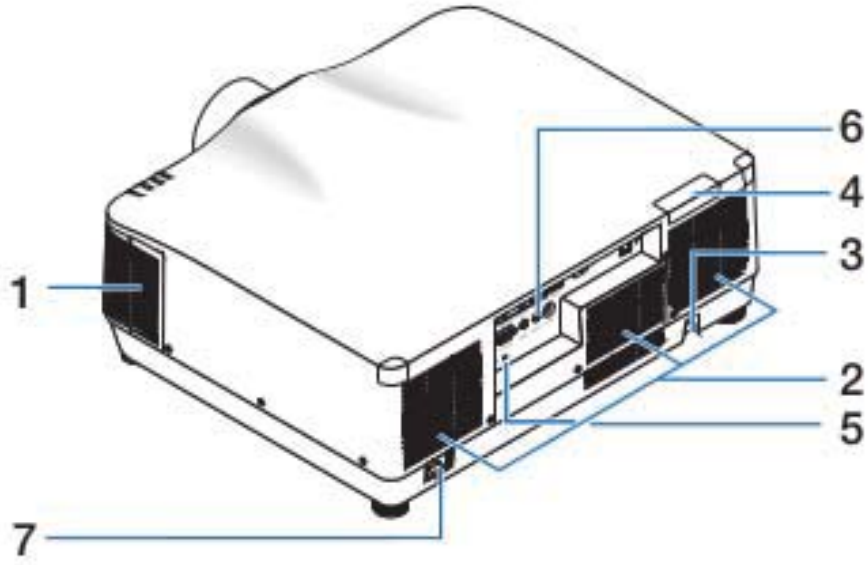
Front

The lens is sold separately. The description below is for when the NP41ZL lens is mounted.



1. **Exhaust vent**
   Heated air is exhausted from here
   (→ page xxii, 170)
2. **Controls**
   (→ page 8)
3. **Adjustable Tilt Foot**
4. **Intake vent**
   (→ page xxii, 170)
5. **Indicator Section**
   (→ page 8, 191)
6. **Remote Sensor**
   (→ page 14)
7. **Lens**
8. **Lens Cap**
   (The optional lens is shipped with the lens cap.)
9. **Lens Release Button**
   (→ page 206)

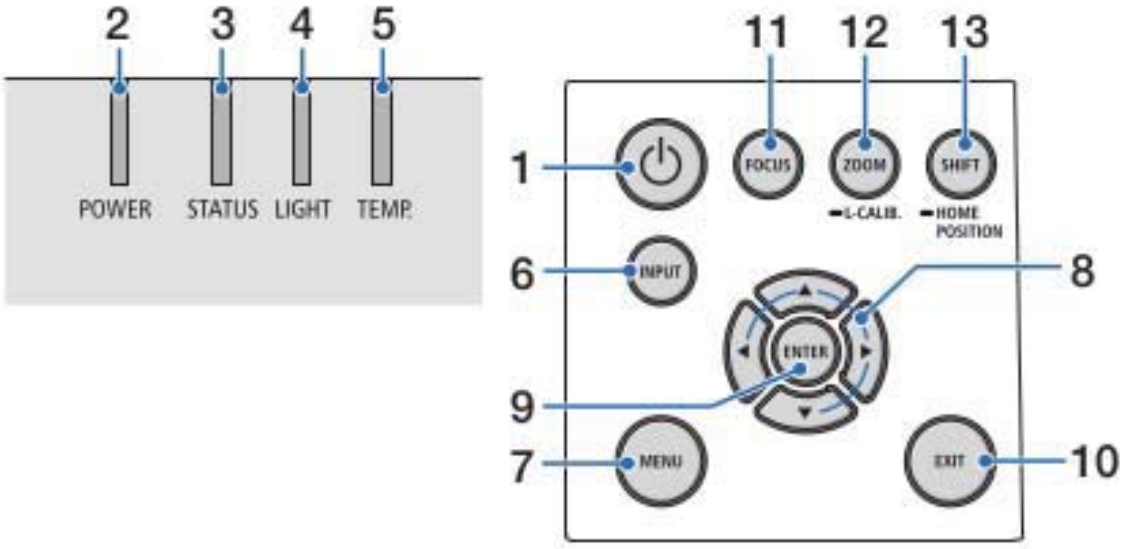
Rear



1. **Exhaust vent**
   (→ page xxii, 170)
2. **Intake vent**
   (→ page xxii, 170)
3. **Security Bar**
   Attach an anti-theft device. The security bar accepts security wires or chains up to 0.18 inch/4.6 mm in diameter.
4. **Remote Sensor**
   (located on the front and the rear)
   (→ page 14)
5. **Security Slot ( )***
6. **Terminals**
   (→ page 9)
7. **AC IN Terminal**
   Connect the supplied power cord's three-pin plug here, and plug the other end into an active wall outlet.
   (→ page 17)

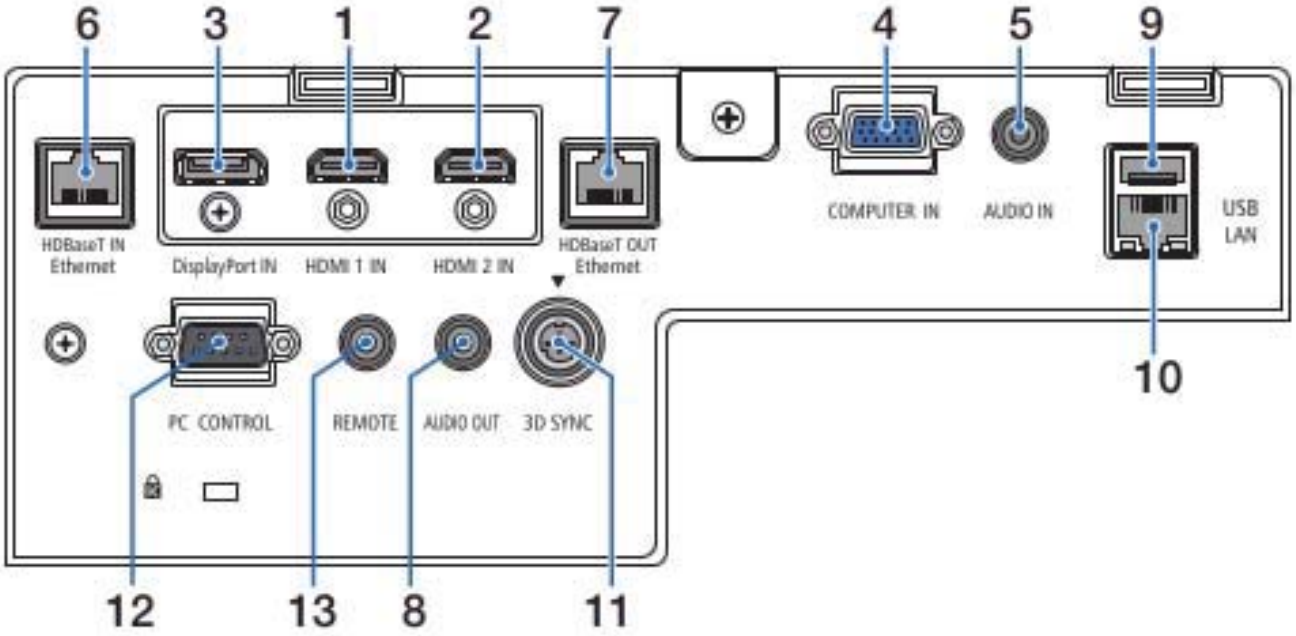
* Security and theft protection lock compatible with Kensington security cables/equipment. For products, visit Kensington's website.

Controls/Indicators



1. **(POWER) Button**
   Switches between projector's power on and standby.
   (→ page 20, 37)
2. **POWER Indicator**
   (→ page 17, 20, 37, 191)
3. **STATUS Indicator**
   (→ page 191)
4. **LIGHT Indicator**
   (→ page 191)
5. **TEMP. Indicator**
   (→ page 191)
6. **INPUT Button**
   (→ page 23)
7. **MENU Button**
   (→ page 82)
8. **▲▼◀▶ / Volume Buttons ◀▶**
   (→ page 27, 36, 82)
9. **ENTER Button**
   (→ page 82)
10. **EXIT Button**
    (→ page 82)
11. **FOCUS Button**
    (→ page 31)
12. **ZOOM/L-CALIB. Button**
    (→ page 21, 34)
13. **SHIFT/HOME POSITION Button**
    (→ page 27)

Terminal Panel Features

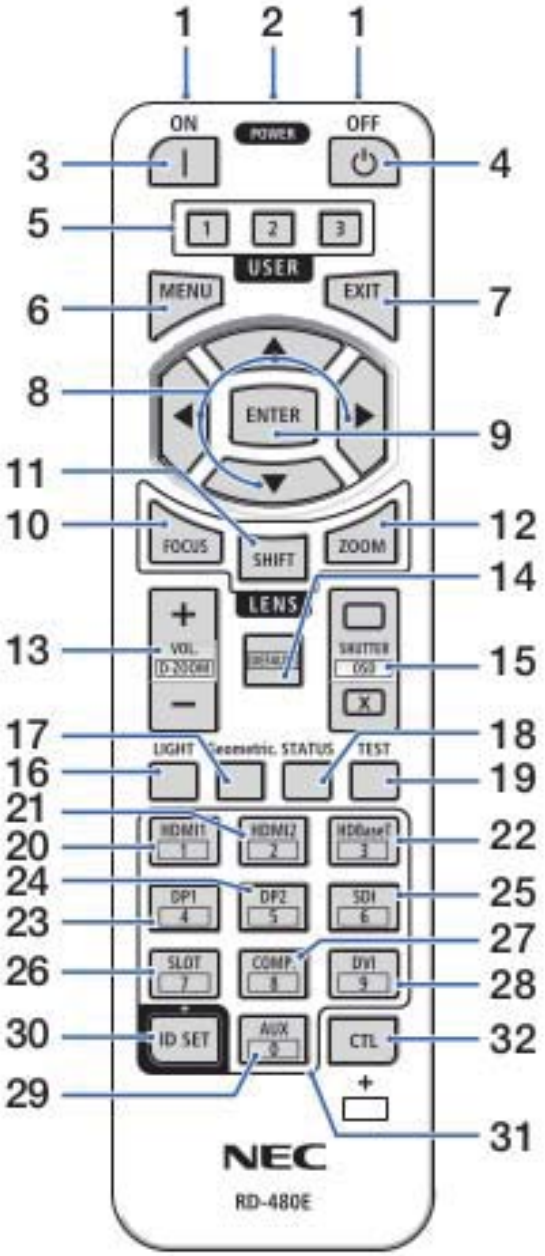


1. **HDMI 1 IN Terminal (Type A)**
   (→ page 161, 163, 165)
2. **HDMI 2 IN Terminal (Type A)**
   (→ page 161, 163, 165)
3. **DisplayPort IN Terminal**
   (→ page 161)
4. **COMPUTER IN/ Component Input Terminal (Mini D-Sub 15 Pin)**
   (→ page 160, 164)
5. **COMPUTER AUDIO IN Mini Jack (Stereo Mini)**
   (→ page 160, 163)
6. **HDBaseT IN/Ethernet Port (RJ-45)**
   (→ page 166, 167)
7. **HDBaseT OUT/Ethernet Port (RJ-45)**
   (→ page 167)
8. **AUDIO OUT Mini Jack (Stereo Mini)**
   (→ page 163, 165)
9. **USB-A Port (Type A)**
   (→ page 48)
10. **LAN Port (RJ-45)**
    (→ page 168)
11. **3D SYNC Terminal (Mini DIN 3 Pin)**
    (→ page 53)
12. **PC CONTROL Port (D-Sub 9 Pin)**
    (→ page 189)
    Use this port to connect a PC or control system. This enables you to control the projector using serial communication protocol. If you are writing your own program, typical PC control codes are on page 197.
13. **REMOTE Terminal (Stereo Mini)**
    Use this terminal for wired remote control of the projector.
    (→ page 15)

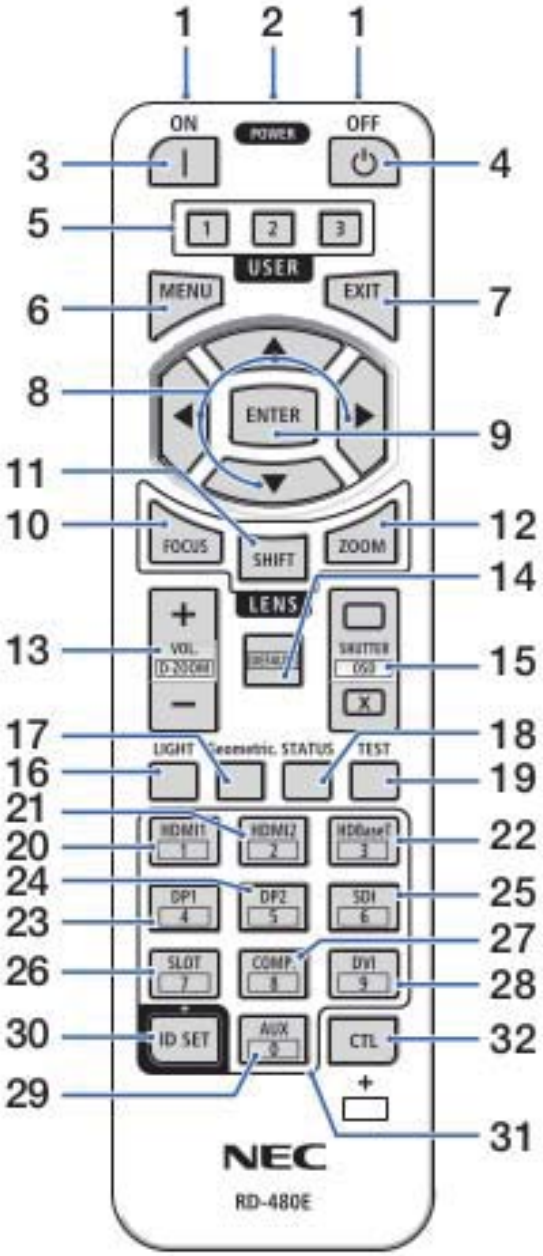
NOTE:

- When a remote control cable is connected to the REMOTE terminal, infrared remote control operations cannot be performed.
- When [HDBaseT] is selected in the [REMOTE SENSOR] and the projector is connected to a commercially-available transmission device that supports HDBaseT, remote control operations in infra-red cannot be carried out if transmission of remote control signals has been set up in the transmission device. However, remote control using infrared rays can be carried out when the power supply of the transmission device is switched off.

1-4. Part Names of the Remote Control



1. **Infrared Transmitter**
   (→ page 14)
2. **Remote Jack**
   Connect a commercially available remote cable here for wired operation.
   (→ page 15)
3. **POWER ON Button (|)**
   (→ page 20)
4. **POWER OFF Button (⏻)**
   (→ page 37)
5. **USER 1/2/3 Button**
   (Not available on this series of projectors. For future expansion)
6. **MENU Button**
   (→ page 82)
7. **EXIT Button**
   (→ page 82)
8. **▲▼◀▶ Button**
   (→ page 82)
9. **ENTER Button**
   (→ page 82)
10. **FOCUS Button**
    Applicable lens unit: NP40ZL/NP41ZL/NP43ZL/NP44ML
    (→ page 31)
11. **SHIFT Button**
    (→ page 27)
12. **ZOOM Button**
    Applicable lens unit: NP40ZL/NP41ZL/NP43ZL/NP44ML
    (→ page 34)



13. VOL./D-ZOOM (+)(–) Button

(→ page 36, 40)

14. DEFAULT Button

(Not available on this series of projectors. For future expansion)

15. SHUTTER/OSD OPEN (▭)/CLOSE (ⓧ) Button

(→ page 39)

16. LIGHT Button

(→ page 42)

17. Geometric. Button

(→ page 45, 113)

18. STATUS Button

(→ page 156)

19. TEST Button

(→ page 92)

20. HDMI1 Button

(→ page 23)

21. HDMI2 Button

(→ page 23)

22. HDBaseT Button

(→ page 23)

23. DP1 Button

(→ page 23)

24. DP2 Button

(Not available on this series of projectors.)

25. SDI Button

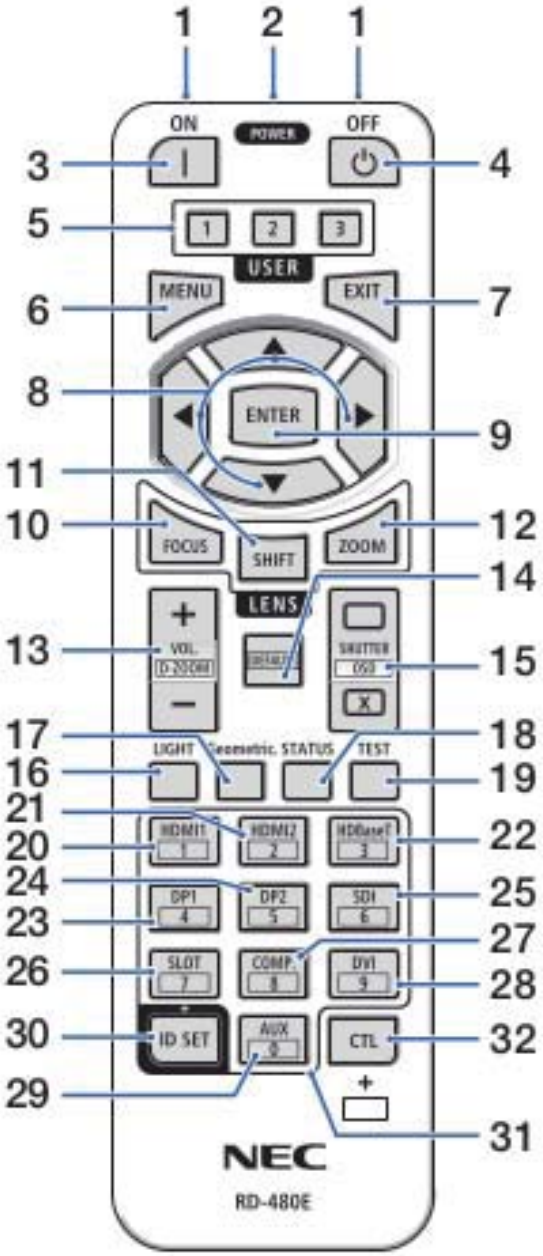
(Not available on this series of projectors.)

26. SLOT Button

(Not available on this series of projectors.)

27. COMP. Button

(→ page 23)



28. DVI Button

(Not available on this series of projectors.)

29. AUX Button

(Not available on this series of projectors. For future expansion)

30. ID SET Button

(→ page 139)

31. Numeric Keypad Button

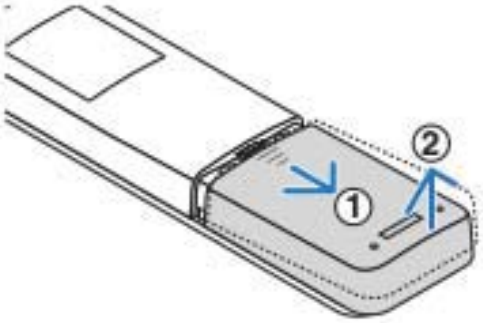
(→ page 139)

32. CTL Button

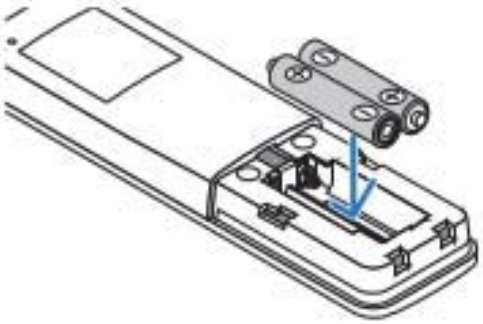
(→ page 39, 40)

Battery Installation

1. **Press the catch and remove the battery cover.**



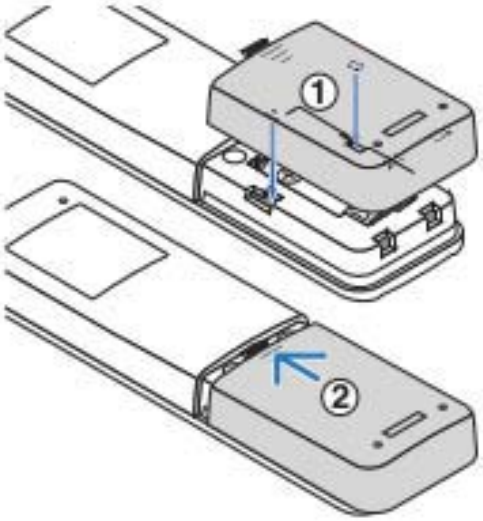
2. **Install new ones (AAA). Ensure that you have the batteries' polarity (+/–) aligned correctly.**



3. **Slip the cover back over the batteries until it snaps into place.**

NOTE:

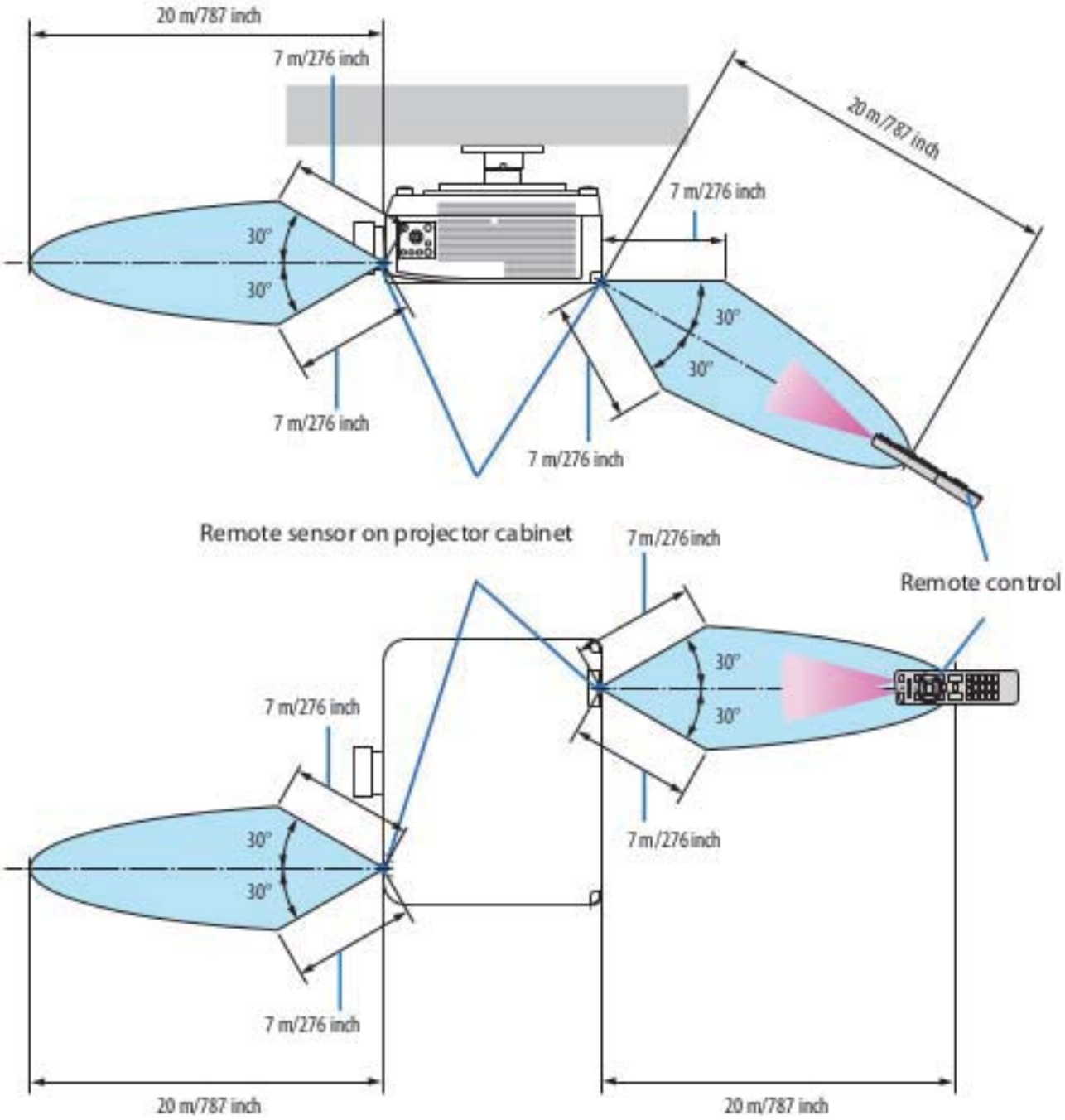
- Do not mix different types of batteries or new and old batteries.



Remote Control Precautions

- Handle the remote control carefully.
- If the remote control gets wet, wipe it dry immediately.
- Avoid excessive heat and humidity.
- Do not short, heat, or take apart batteries.
- Do not throw batteries into fire.
- If you will not be using the remote control for a long time, remove the batteries.
- Ensure that you have the batteries' polarity (+/–) aligned correctly.
- Do not use new and old batteries together, or use different types of batteries together.
- Dispose of used batteries according to your local regulations.
- Please note that if multiple projectors are installed nearby, other projectors may unintentionally light up when you turn on the power using the remote control.

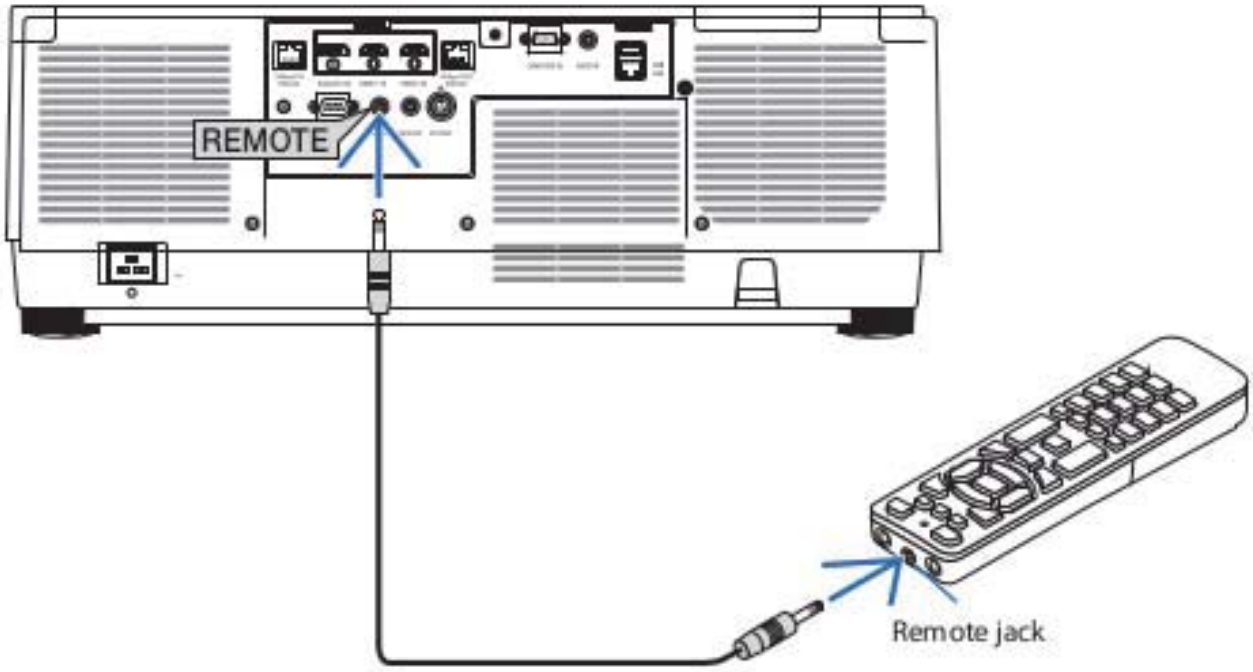
Operating Range for Wireless Remote Control



- The projector will not respond if there are objects between the remote control and the sensor, or if strong light falls on the sensor. Weak batteries will also prevent the remote control from properly operating the projector.

Using the Remote Control in Wired Operation

Connect one end of the remote cable to the REMOTE terminal and the other end to the remote jack on the remote control.



NOTE:

- When a remote cable is inserted into the REMOTE terminal, the remote control does not work for infrared wireless communication.
- Power will not be supplied to the remote control by the projector via the REMOTE jack. Battery is needed when the remote control is used in wired operation.

2. Projecting an Image (Basic Operation)

This section describes how to turn on the projector and to project a picture onto the screen.

2-1. Flow of Projecting an Image

Step 1

- **Connecting your computer / Connecting the power cord (→ page 17)**



Step 2

- **Turning on the projector (→ page 20)**



Step 3

- **Selecting a source (→ page 23)**



Step 4

- **Adjusting the picture size and position (→ page 26)**
- **Correcting keystone distortion [CORNERSTONE] (→ page 45)**



Step 5

- **Adjusting a picture and sound (→ page 36)**



Step 6

- **Making a presentation**



Step 7

- **Turning off the projector (→ page 37)**



Step 8

- **After use (→ page 38)**

2-2. Connecting Your Computer/Connecting the Power Cord

1. **Connect your computer to the projector.**

   This section will show you a basic connection to a computer. For information about other connections, see "6. Connecting to Other Equipment" on page 159.

   Connect the display output terminal (mini D-sub 15 pin) on the computer to the computer video input terminal on the projector with a commercially-available computer cable (with ferrite core) and then turn the knobs of the connectors to secure them.

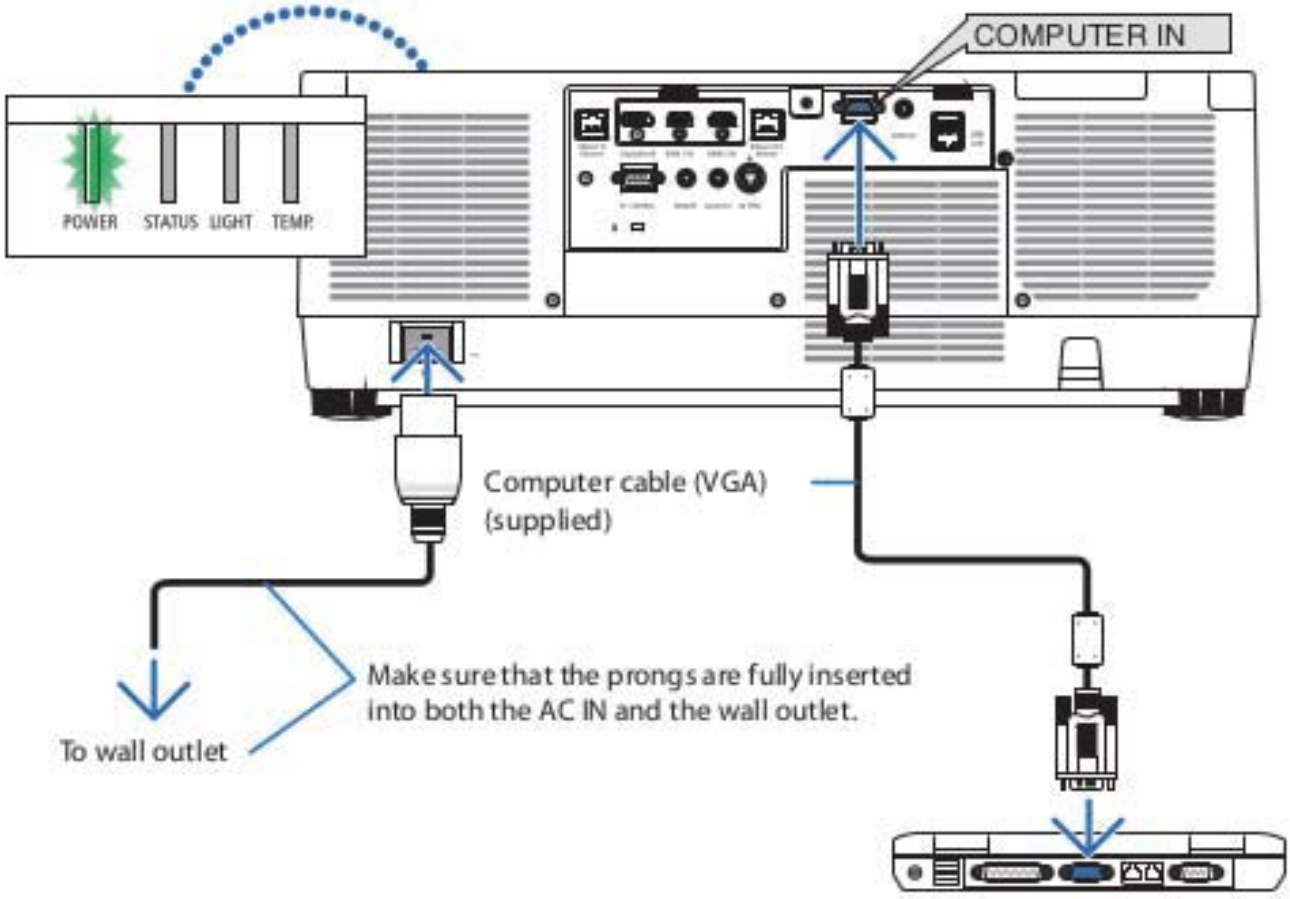
2. **Connect the supplied power cord to the projector.**

   First connect the supplied power cord's three-pin plug to the AC IN terminal of the projector, and then connect another plug of the supplied power cord directly in the wall outlet. Do not use any plug converter.

   ⚠ CAUTION:

   - This equipment is designed to be used in the condition of the power cord connected to earth. If the power cord is not connected to the earth, it may cause electric shock. Please make sure the power cord is earthed properly.
     Do not use a 2-core plug converter adapter.
   - To prevent the power cord from coming loose, make sure that all the prongs of the power cord plug are fully inserted into the AC IN terminal of the projector before using the power cord stopper. A loose contact of the power cord may cause a fire or electric shock.

   Upon connecting the power cable, the POWER indicator of the projector will light. (→ page 191)



CAUTION:

Parts of the projector may become temporarily heated if the projector is turned off with the POWER button or if the AC power supply is disconnected during normal projector operation. Use caution when picking up the projector.

Using the power cord stopper

To prevent the power cord from accidently removing from the AC IN of the projector, use the power cord stopper.

⚠ CAUTION:

To prevent the power cord from coming loose, make sure that all the prongs of the power cord are fully inserted into the AC IN terminal of the projector before using the power cord stopper to fix the power cord. A loose contact of the power cord may cause a fire or electric shock.

NOTE:

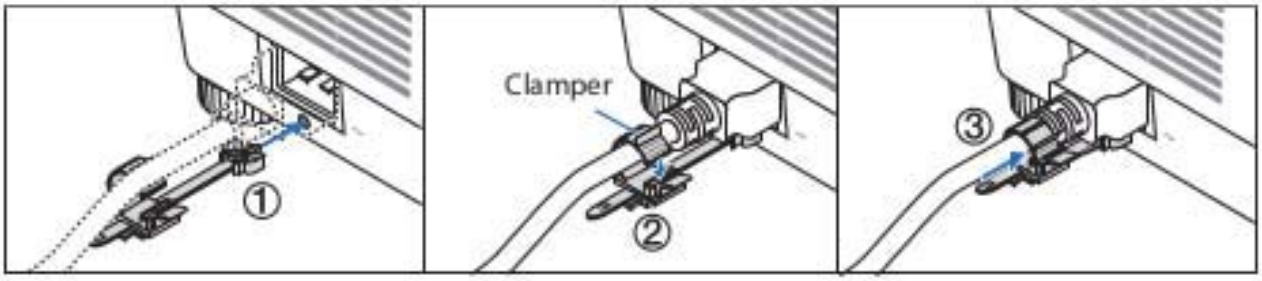
- If you pull on the power supply cord while the connector is fixed, the main unit may fall down and be damaged

Installing the power cord stopper

① With the clamper facing the power supply cord, align the tip of the power supply cord stopper with the hole below the AC IN terminal and push it in.

② Pass the power supply cord through the clamper and press the clamper to fix it.

③ Slide the clamper until the base of the power plug.

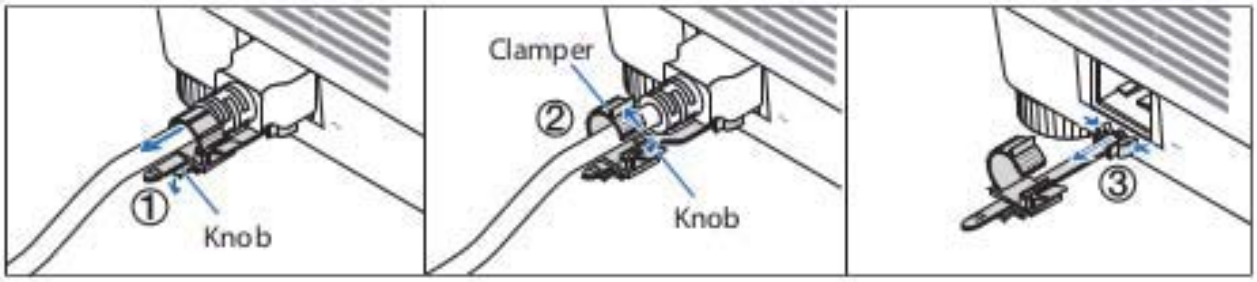


Disconnecting the power cord

① Pull to an appropriate position while pushing down the knob of the power cord stopper.

② Press down the knob on the clamper to open the clamper and take out the power cord.

③ Push and pull the fitted part of the power cord stopper from the left and right to remove it from the main unit.

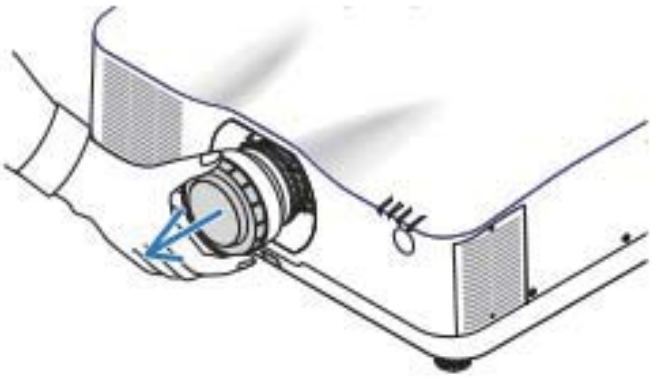


2-3. Turning on the Projector

⚠ WARNING

The projector produces a strong light. When turning on the power, make sure no one within the projection range is looking at the lens.

1. **Remove the lens cap.**

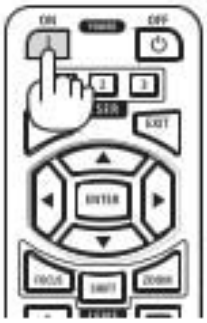


2. **Press the ⏻ (POWER) button on the projector cabinet or the POWER ON button on the remote control.**

   The POWER indicator lit in green will start to blink in blue. After that, the image will be projected onto the screen.

   TIP:
   - When the message "PROJECTOR IS LOCKED! ENTER YOUR PASSWORD." is displayed, it means that the [SECURITY] feature is turned on. (→ page 50)

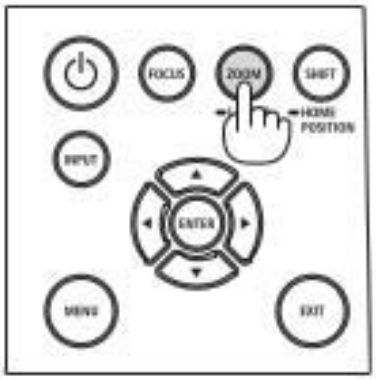
   After you turn on your projector, ensure that the computer or video source is turned on.



NOTE:
- A blue screen (blue background) is displayed when no signal is being input (by factory default menu settings).

Performing Lens Calibration

After mounting the separately available lens unit or replacing a lens unit, perform [LENS CALIBRATION] by holding to press ZOOM/L-CALIB. button on the cabinet over two seconds.
Calibration corrects the adjustable zoom, shift, and focus range. If calibration is not performed, you may not be able to get the best focus and zoom even if you adjust the focus and zoom for the lens.



NOTE:

- [LENS CALIBRATION] is not available for the lens unit NP44ML.

Note on Startup screen (Menu Language Select screen)

When you first turn on the projector, you will get the Startup menu. This menu gives you the opportunity to select one of the 30 menu languages.

To select a menu language, follow these steps:

1. **Use the ▲, ▼, ◄ or ► button to select one of the 30 languages from the menu.**





2. **Press the ENTER button to execute the selection.**

   After this has been done, you can proceed to the menu operation.

   If you want, you can select the menu language later.

   (→ [LANGUAGE] on page 86 and 123)



NOTE:

- If the message, [PLEASE SET "DATE AND TIME".] is shown, please set the current date and time. (→ page 137)
- In the case this message is not shown, the [DATE AND TIME SETTINGS] is recommended to complete.
- Keep the lens cap off the lens while the projector's power is on.
  If the lens cap is on, it could be warped due to high temperature.
- If the STATUS indicator lights orange with the power button pressed, the projector will not be turned on since the [CONTROL PANEL LOCK] has been [ON]. Cancel the lock by turning it off. (→ page 137)
- While the POWER indicator is blinking blue in short cycles, the power cannot be turned off by using the power button.

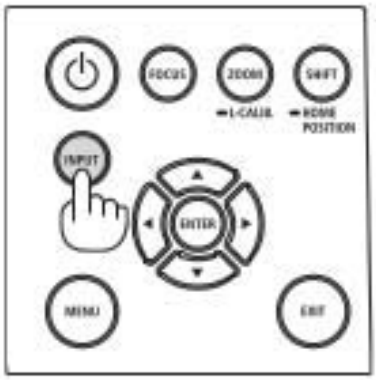
2-4. Selecting a Source

Selecting the computer or video source

NOTE:

- Turn on the computer or video source equipment connected to the projector.

Detecting the Signal Automatically



Press the INPUT button for 1 second or longer. The projector will search for the available input source and display it. The input source will change as follows:
HDMI1 → HDMI2 → DisplayPort → COMPUTER → HDBaseT → HDMI1 → ...

- Press it briefly to display the [INPUT] screen.



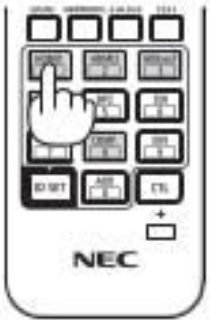
- Press the ▼/▲ buttons to match the target input terminal and then press the ENTER button to switch the input. To delete the menu display in the [INPUT] screen, press the MENU or EXIT button.

TIP:

- If no input signal is present, the input will be skipped.

Using the Remote Control

Press any one of the HDMI1, HDMI2, HDBaseT, DP1 or COMP. button.



Selecting Default Source

You can set a source as the default source so that it will be displayed each time the projector is turned on.

1. **Press the MENU button.**

   The menu will be displayed.

2. **Press the ▶ button to select [SETUP] and press the ▼ button or the ENTER button to select [MENU(1)].**
3. **Press the ▶ button to select [SOURCE OPTIONS] and press the ▼ button or the ENTER button.**
4. **Press the ▼ button three times to select [DEFAULT INPUT SELECT] and press the ENTER button.**



The [DEFAULT INPUT SELECT] screen will be displayed.

(→ page 150)



5. **Select a source as the default source, and press the ENTER button.**
6. **Press the EXIT button a few times to close the menu.**
7. **Restart the projector.**

   The source you selected in step 5 will be projected.

NOTE:

- Even when [AUTO] is turned on, the [HDBaseT] will not be automatically selected. To set your network as the default source, select [HDBaseT].

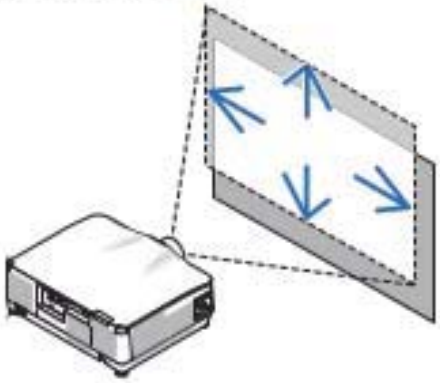
TIP:

- When the projector is in Standby mode, applying a computer signal from a computer connected to the COMPUTER IN input will power on the projector and simultaneously project the computer's image. ([AUTO POWER ON SELECT] → page 154)
- On the Windows 10 keyboard, a combination of the Windows and P keys allows you to set up external display easily and quickly.

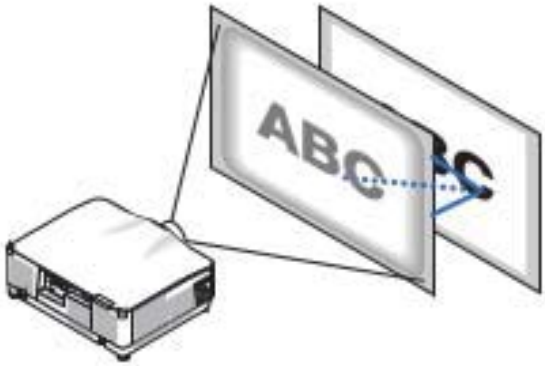
2-5. Adjusting the Picture Size and Position

Use the lens shift, the adjustable tilt foot, the zoom and the focus to adjust the picture size and position.
In this chapter drawings and cables are omitted for clarity.

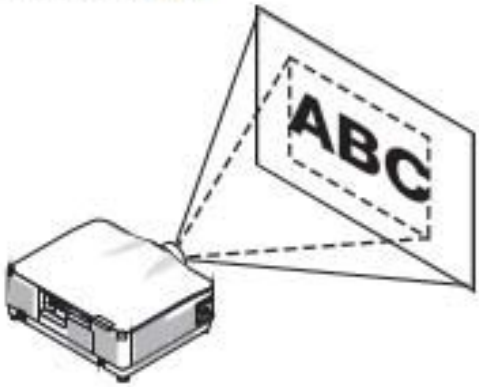
Adjusting the projected image's vertical and horizontal position
"Lens shift" (→ page 27)



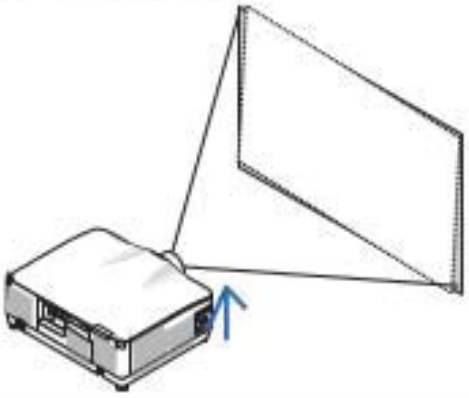
Adjusting the focus
"Focus" (→ page 29)



Finely adjusting the size of an image
"Zoom" (→ page 34)



Adjusting the projected image's inclination
"Tilt foot" (→ page 35)



Adjusting the vertical position of a projected image (Lens shift)

CAUTION

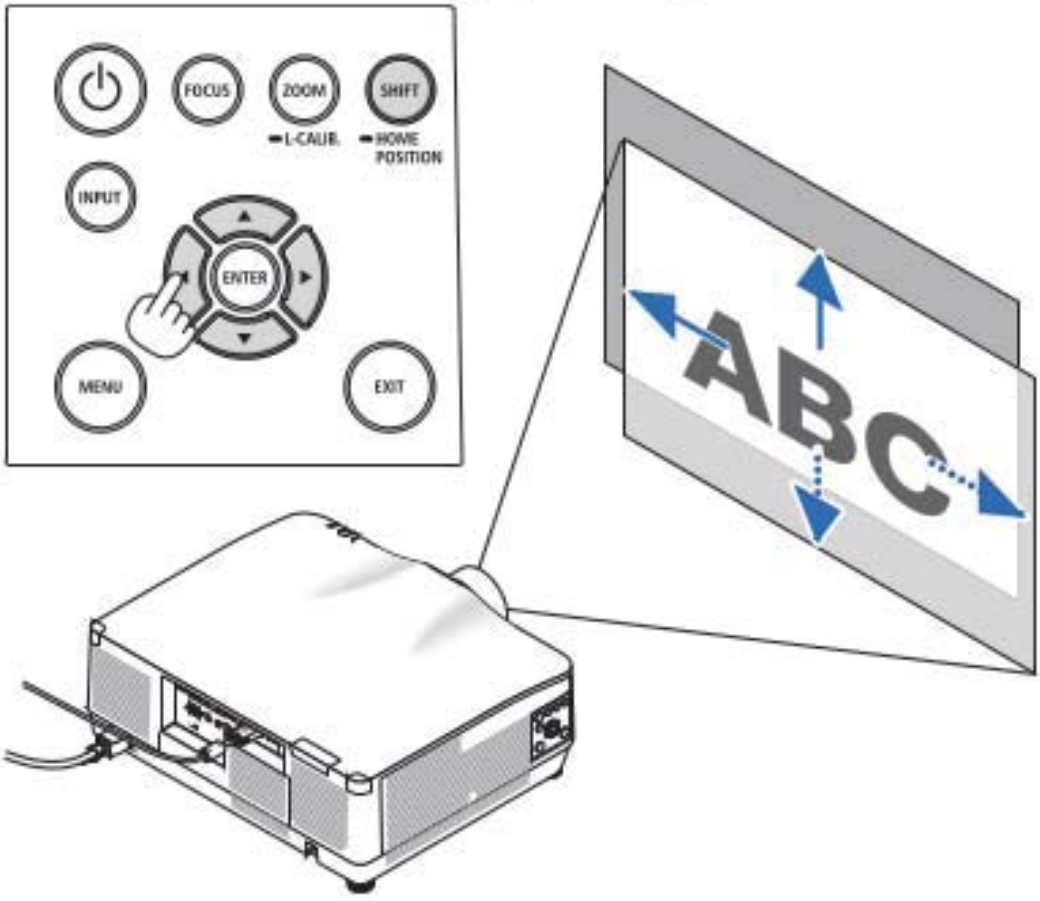
- Perform the adjustment from behind or from the side of the projector. If adjustments are performed from the front, your eyes could be exposed to strong light and get injured.
- Keep hands away from the lens mounting portion while performing a lens shift. Failure to do so could result in fingers being pinched by the moving lens.

1. **Press either SHIFT/HOME POSITION button on the cabinet or SHIFT button on the remote control.**

   The [LENS SHIFT] screen will be displayed.



2. **Press the ▼▲◀▶ buttons to move the projected image.**



To set back the lens to the home position

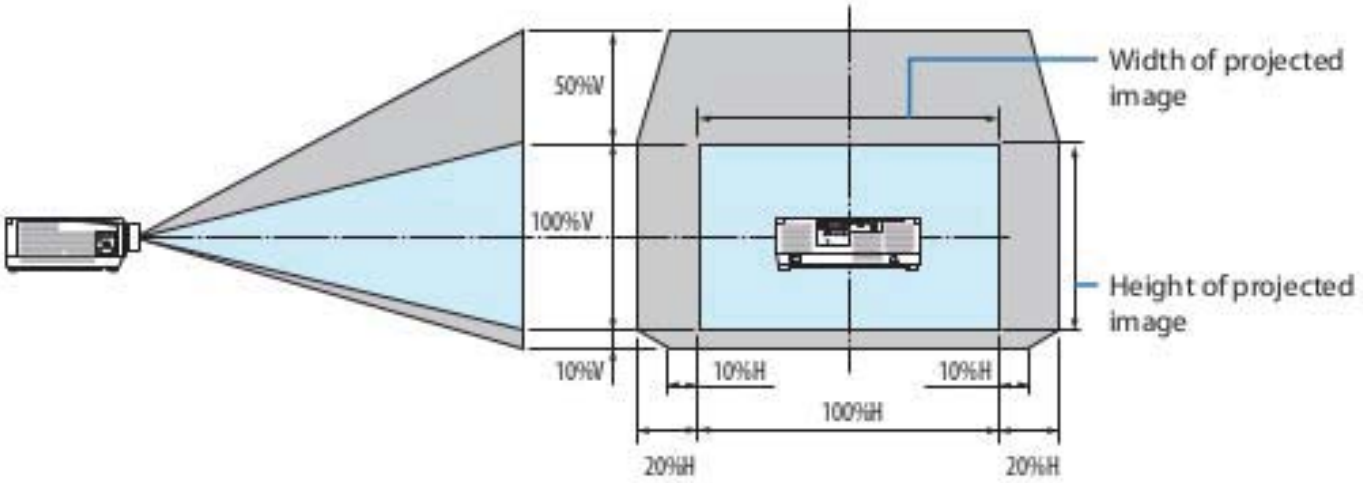
Press and hold the SHIFT/HOME POSITION button over 2 seconds. The lens mounted on the projector goes back to the home position. (roughly to the center position)

NOTE:

- If the lens is shifted to the maximum in the diagonal direction, the screen peripheral area will be dark or shaded.
- Use NP11FL at the home position. If necessary, fine-adjust the position of the projected image using the lens shift function.
- The NP44ML must be fixed to the projector using the separately sold support kit (NP02LK). Loosen the screws of the support bracket, you can fine-adjustment of the lens shift.

TIP:

- The figure below shows the lens shift adjustment range (projection method: Desktop/Front) of the NP41ZL lens unit. See page 175 for other lens units.



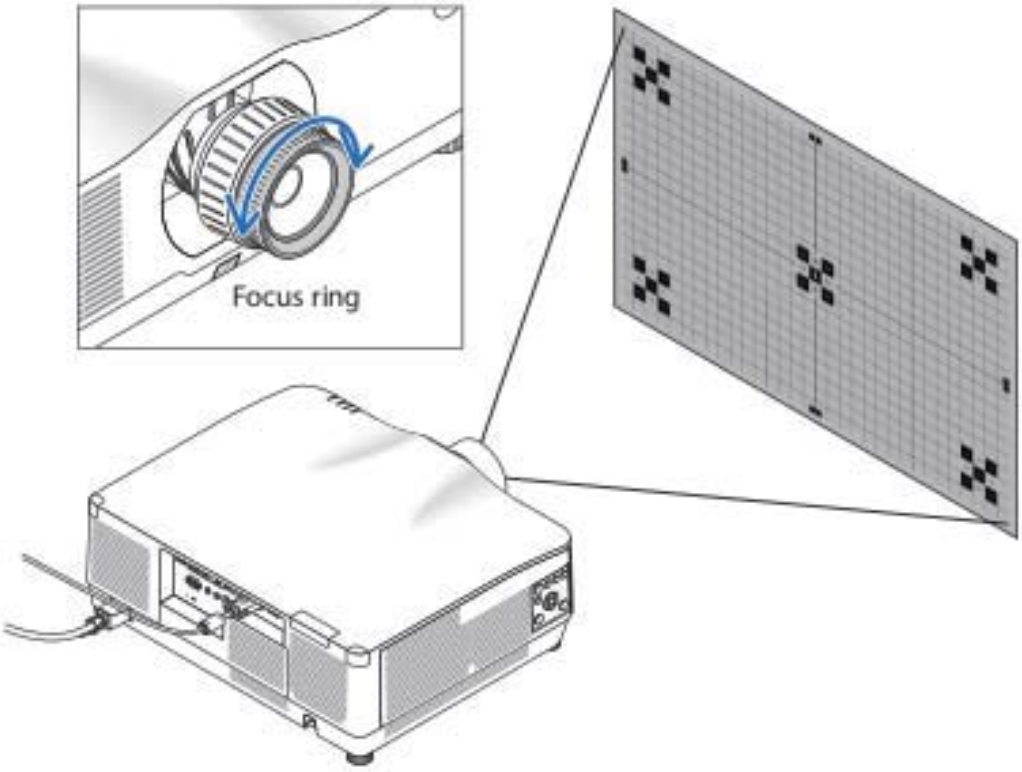
Description of symbols: V indicates vertical (height of the projected image), H indicates horizontal (width of the projected image).

Focus

Recommend to perform the focus adjustment after leaving the projector under the state the TEST PATTERN has been projected for over 30 minutes.
Please refer to page 92 in the User's Manual about the TEST PATTERN.

Applicable lens: NP12ZL/NP13ZL/NP14ZL/NP15ZL (Manual focus)

Use the focus ring to obtain the best focus.



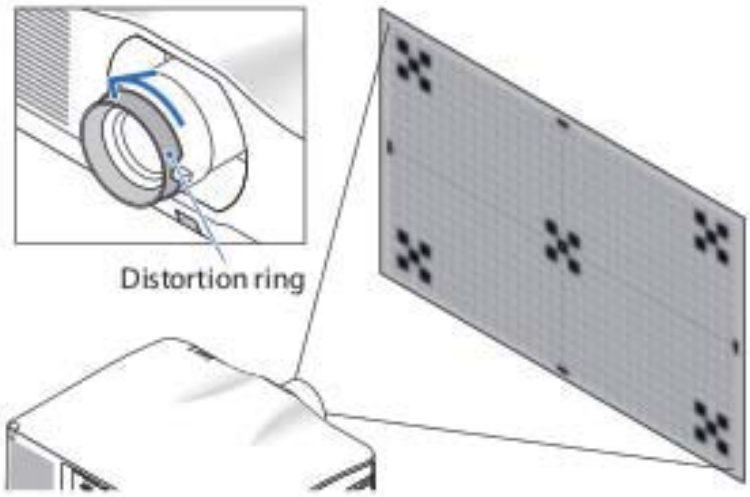
Applicable lens: NP11FL (Manual focus)

With the NP11FL lens, adjust the focus and picture distortion.

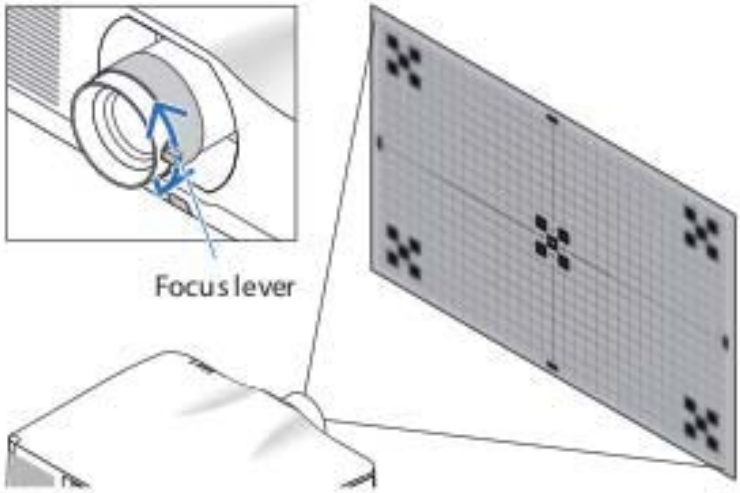
Preparations:

Press and hold the SHIFT/HOME POSITION button on the cabinet longer than 2 seconds for shifting back the lens to the home position.

1. **Turn the distortion ring to the left edge.**



2. **Turn the focus lever clockwise and counterclockwise to adjust the focus at the center of the screen.**

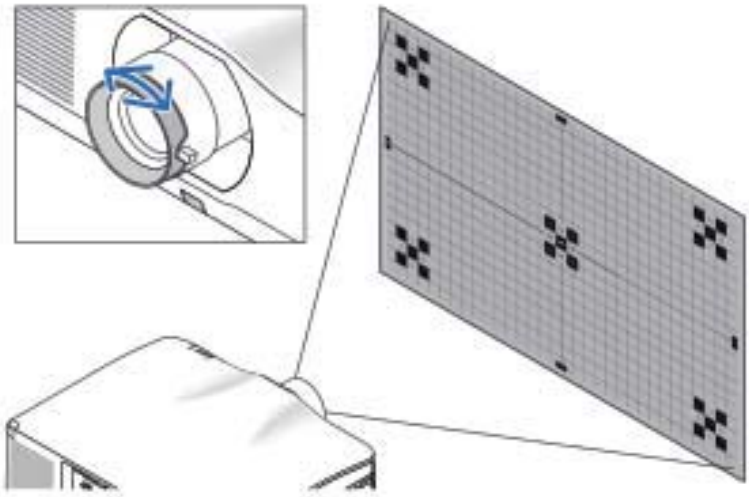


3. **Use the distortion ring to correct the screen's distortion.**

   (This also brings the screen peripheral area into focus.)

4. **Use the focus lever to adjust the screen's overall focus.**

   * If the focus at the center of the screen is off, turn the distortion ring a little counterclockwise. The focus at the center of the screen can now be adjusted with the focus lever.



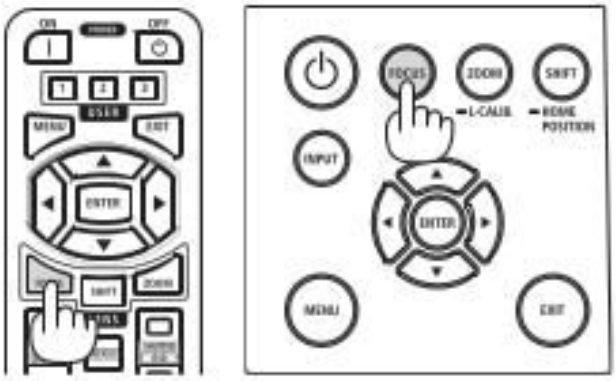
Applicable lens: NP40ZL/NP41ZL (Motorized focus)

1. **Press the FOCUS button.**

   The [LENS FOCUS] control screen will be displayed on.



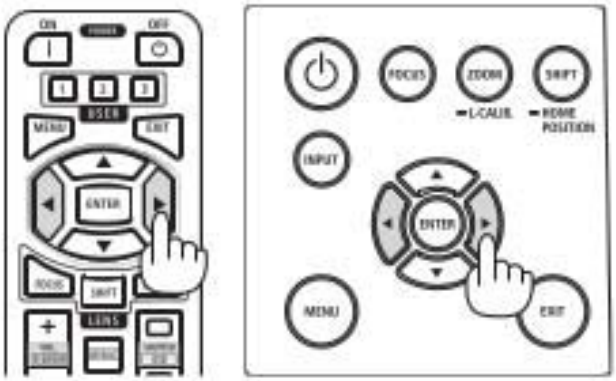
   Press ◀▶ buttons to adjust focus.

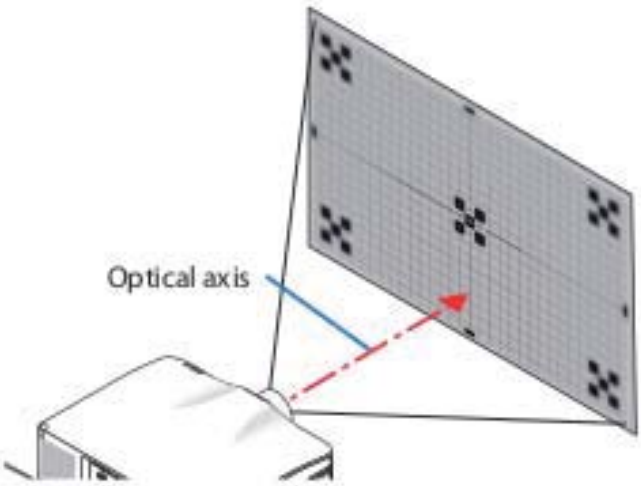


2. **When the cursor is on the [CENTER] on on-screen menu, press either ◀ or ▶ button to align focus around the optical axis.**

   * The picture shows and example when the lens shift is moved upward. The focus for the lower part of the screen is aligned.

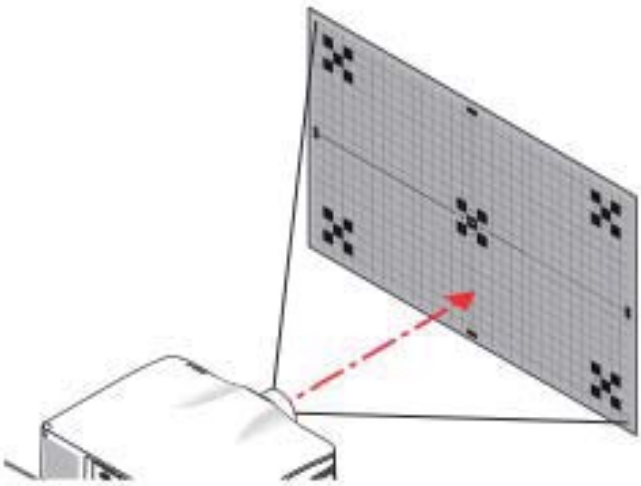
     When the lens is at the center, the focus for the center of the screen is aligned.





3. **Press ▼ button to select the [PERIPHERY] on the on-screen menu, and then press either ◀ or ▶ button to align the focus of screen peripheral area. During this operation, the focus for around the optical axis will be maintained.**





Applicable lens: NP43ZL (Motorized focus)

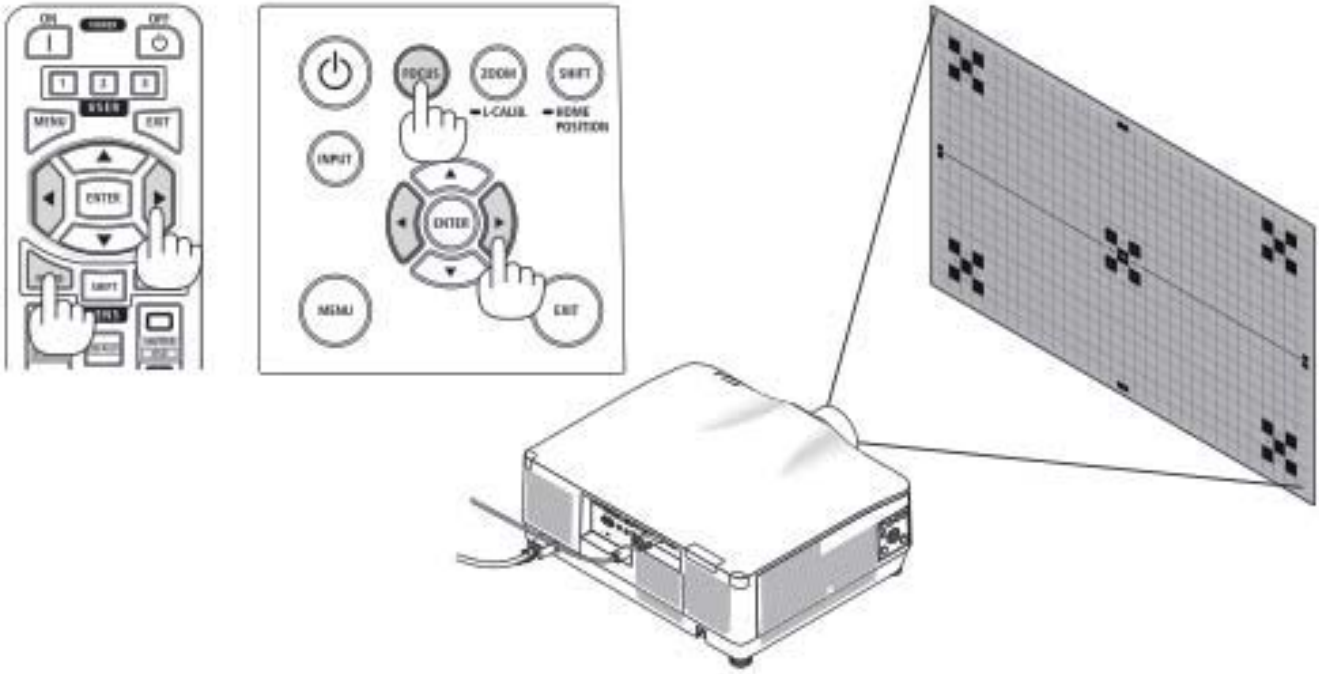
1. Press the FOCUS button.

The [LENS FOCUS] control screen will be displayed on.



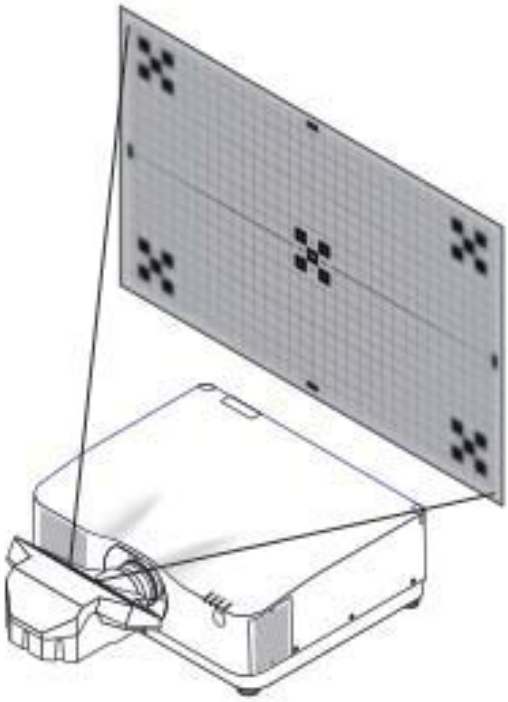
Press ◀▶ buttons to adjust focus.

* [PERIPHERY] LENS FOCUS is not available for this lens unit.



Applicable lens: NP44ML (Motorized focus)

- The NP44ML must be fixed to the projector using the separately sold support kit (NP02LK). The support kit is not shown on this illustration.



1. Press the FOCUS button.

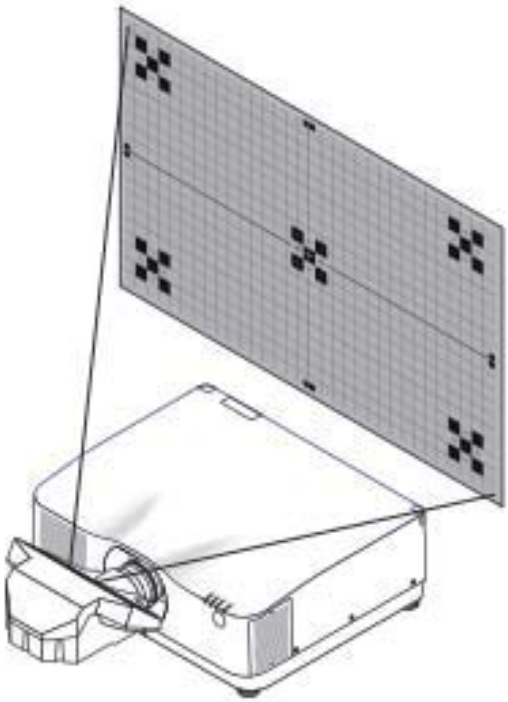
The [LENS FOCUS] control screen will be displayed on.



Press ◀▶ buttons to adjust focus of screen center.

* [PERIPHERY] LENS FOCUS is not available for this lens unit.

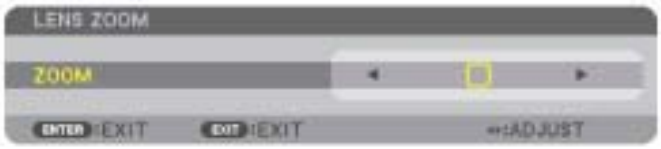




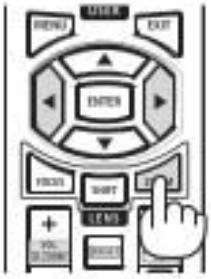
2. Press the ZOOM/L-CALIB. button on the cabinet.

The [LENS ZOOM] control screen will be displayed on.

* In another way, press the ZOOM button on the remote control.



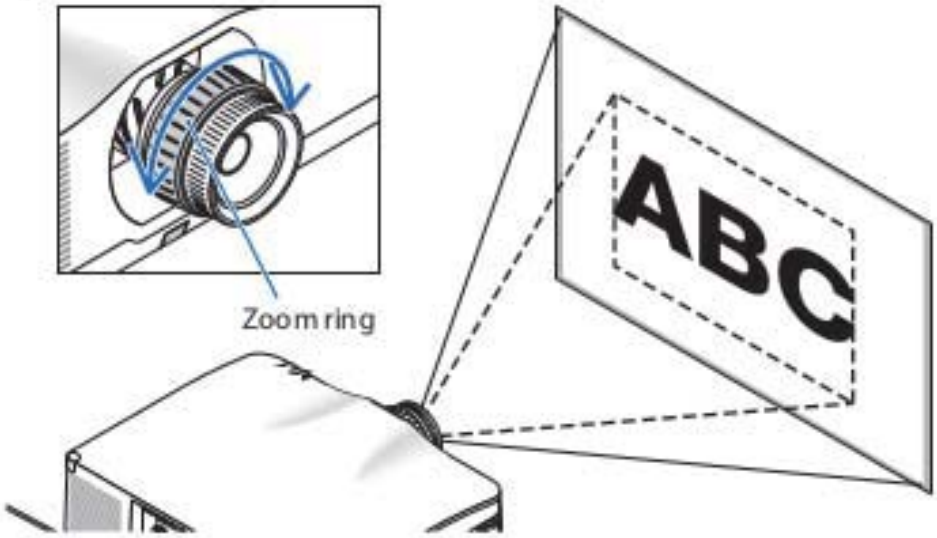
Press ◀▶ buttons to align the focus of screen peripheral area.



Zoom

Applicable lens: NP12ZL/NP13ZL/NP14ZL/NP15ZL (Manual zoom)

Turn the zoom ring clockwise and counterclockwise.



Applicable lens: NP40ZL/NP41ZL/NP43ZL (Motorized zoom)

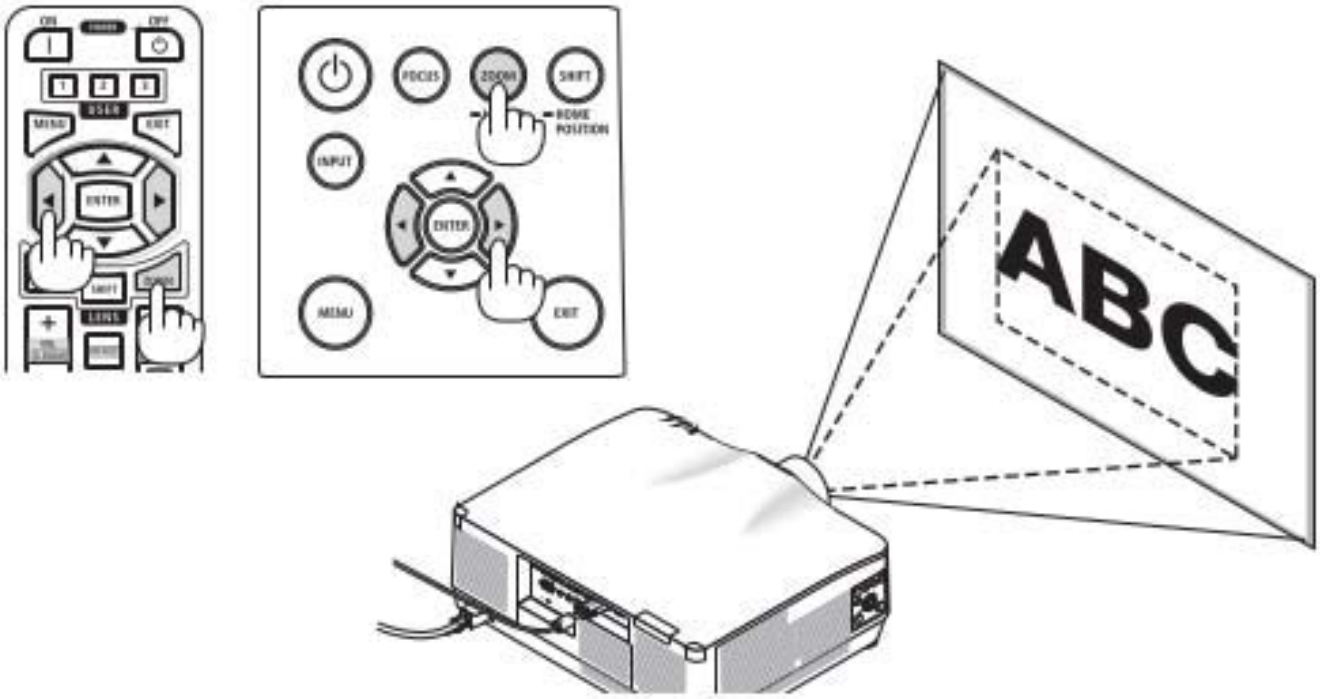
1. **Press ZOOM/L-CALIB. button.**

   The [ZOOM] adjustment screen will be displayed on.



* In another way, press the ZOOM button on the remote control.

Press ◀▶ buttons to adjust zoom.



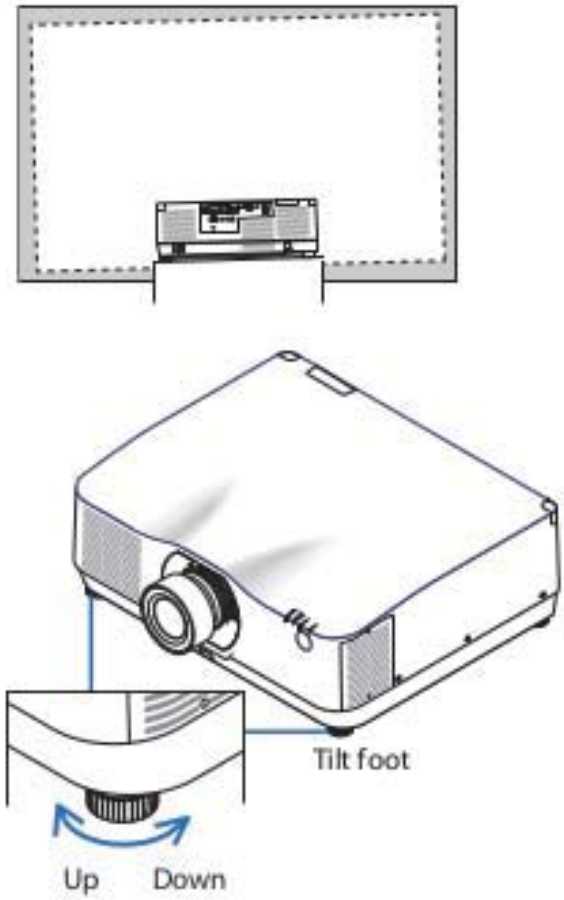
Adjusting the Tilt Foot

1. Turn the left and right tilt foot to adjust.

The tilt foot lengthen and shorten when turned.

Turn one of the tilt foot to adjust the image so that it is level.

- If the projected image is distorted, see "3-5 Correcting Horizontal and Vertical Keystone Distortion [CORNERSTONE]" (→ page 45) and "[GEOMETRIC CORRECTION]" (→ page 113).
- The tilt foot can be lengthened by a maximum of 10 mm/0.4".
- The tilt foot can be used to tilt the projector by a maximum of 1.4°.



NOTE:

- Do not lengthen the tilt foot any more than 10 mm/0.4". Doing so will make the projector unstable.
- Do not use the tilt foot for any purpose other than adjusting inclination of the projector installation angle.
  Handling the tilt foot improperly, such as carrying the projector by grasping the tilt foot or hooking it onto a wall using the tilt foot, could damage the projector.

2-6. Adjusting a picture and sound

Adjusting the picture

Display the on-screen menu and adjust the picture. (→ page 96)

Turning Up or Down Volume

Sound level from the AUDIO OUT terminal can be adjusted.

Important:

- Do not turn up the volume to the maximum level on the external speaker system connected to the AUDIO OUT of the projector. Doing so may produce an unexpected, loud sound at the time of turning on or off the projector, causing damage to your hearing. When adjusting the volume on the external speaker system, set volume level of the speaker system to less than half its rating and adjust the volume on the projector to get appropriate sound level.

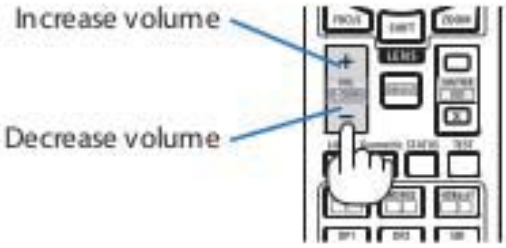


When no menus appear, the ◀ and ▶ buttons on the projector cabinet work as a volume control.

- On the remote control, press the VOL./D-ZOOM (+) or (–)button.

NOTE:

- The volume cannot be adjusted using the ◀ or ▶ button in the following cases.
  - When the on-screen menu is displayed
  - When the screen is enlarged by pressing the VOL./D-ZOOM (+) (–) buttons while holding down the CTL button on the remote control



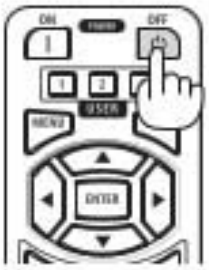


2-7. Turning off the Projector

To turn off the projector:

1. **First, press the ⏻ (POWER) button on the projector cabinet or the POWER OFF button on the remote control.**

   The [POWER OFF / ARE YOU SURE ? / CARBON SAVINGS-SESSION 0.000[g-CO2]] message will appear.





2. **Secondly, press the ENTER button or press the ⏻ (POWER) or the POWER OFF button again.**

   The light source will be turned off and the power supply will be cut.



⚠ CAUTION

- Parts of the projector may become temporarily heated if the projector is turned off with the POWER button or if the AC power supply is disconnected during normal projector operation. Use caution when picking up the projector.

NOTE:

- While the POWER indicator is blinking blue in short cycles, the power cannot be turned off.
- You cannot turn off the power for 60 seconds immediately after turning it on and displaying an image.
- Do not unplug the power cord from the projector or from the power outlet while an image is being projected. Doing so could deteriorate the projector's AC IN terminal or the power plug's contact. To turn off the AC power while an image is being projected, use the power strip's switch, the breaker, etc.
- Do not disconnect the AC power supply to the projector within 10 seconds of making adjustment or setting changes and closing the menu. Doing so can cause loss of adjustments and settings.

2-8. After Use

1. Unplug the power cord.
2. Disconnect any other cables.
3. Mount the lens cap on the lens.
4. Before moving the projector, screw in the tilt foot if they have been lengthened.

3. Convenient Features

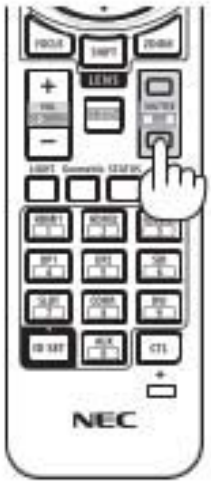
3-1. Turn off the light of the projector (LENS SHUTTER)

1. **Press the SHUTTER CLOSE (X) button on the remote control.**

   The light source will turn off temporarily.

   Press the SHUTTER OPEN (□) button to allow the screen to become illuminated again.

   - You can set the projection light to gradually fade in or out.

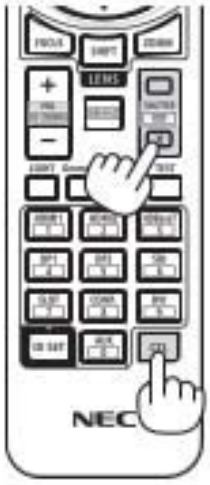


3-2. Turning Off the On-Screen Menu (On-Screen Mute)

1. **Hold down the CTL button on the remote control and press the OSD CLOSE (X) button.**

   The on-screen menu, input terminal, etc. will disappear.

   - To display the on-screen display, press the OSD OPEN (□) button while holding down the CTL button on the remote control.



TIP:

- To confirm that the on-screen mute is turned on, press the MENU button. If the on-screen menu is not displayed even though you press the MENU button, it means the on-screen mute is turned on.
- The on-screen mute is maintained even when the projector is turned off,
- Holding down the MENU button on the projector cabinet for at least 10 seconds will turn off the on-screen mute.

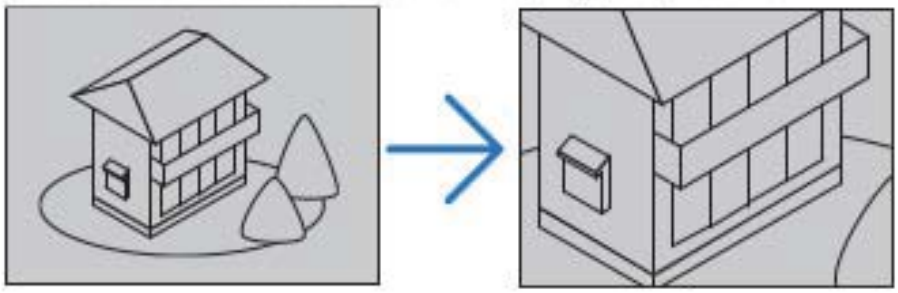
3-3. Enlarging a Picture

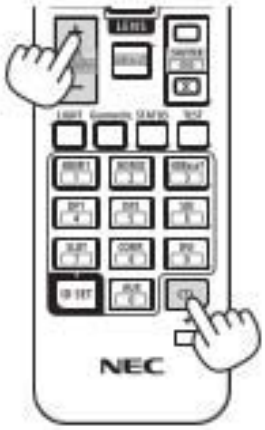
You can enlarge the picture up to four times.

NOTE:

- Depending on an input signal, the maximum magnification may be less than four times, or the function may be restricted.

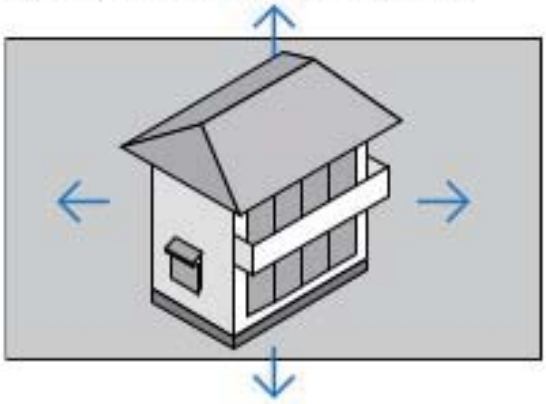
1. **Press and hold the CTL button and then press VOL./D-ZOOM (+) button on the remote control to magnify the picture.**





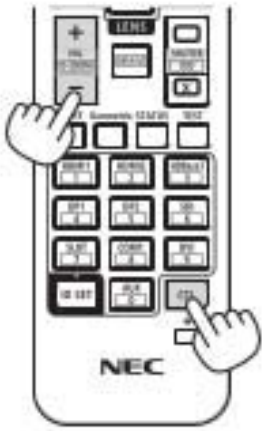
2. **Press the ▲▼◀▶ button.**

   The area of the magnified image will be moved



3. **Press and hold the CTL button and then press VOL./D-ZOOM (–) button on the remote control.**

   Each time the button is pressed, the image is reduced.



NOTE:

- The image will be enlarged or reduced at the center of the screen.
- Displaying the menu will cancel the current magnification.

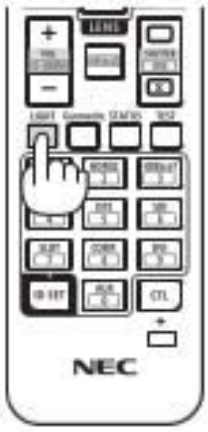
3-4. Adjustment of luminance (brightness) and energy-saving effect

You can adjust the output of the unit to a range of 50–100% (in increments of 1%) and control the brightness after adjustment to keep it constant. Also, set the [REF. LIGHT MODE] to [ECO1] or [ECO2] to reduce the brightness and operating sound. By saving energy consumption, the CO_2 emission from this projector can be reduced. There are two ways to set the light mode.

<table>
<tr><th>Function name</th><th>Description</th><th>Page</th></tr>
<tr><td>REF. LIGHT MODE</td><td>The adjustment values of the [REF. LIGHT MODE] and brightness are saved as a setting common to all input signals.
Valid when the [MODE] (→ page 96) is set to [STANDARD].
<table>
<tr><th>REF. LIGHT MODE</th><th>Icon at the bottom of the menu</th><th>Description</th></tr>
<tr><td>BOOST</td><td></td><td>The picture becomes brighter than the [NORMAL] mode. However, the operating noise and power consumption will also increase due to control of the cooling fan according to the brightness. The life of the optical components may also be shortened depending on the operating environment.</td></tr>
<tr><td>NORMAL</td><td></td><td>100% brightness
Alternatively, you can adjust the output from 50 to 100% using [REF. LIGHT ADJUST].</td></tr>
<tr><td>ECO1</td><td>  </td><td>Brightness will be at about 80%.
The cooling fan will also slow down accordingly.
Lower power consumption</td></tr>
<tr><td>ECO2</td><td>  </td><td>Brightness will be at about 50%.
The cooling fan will also slow down accordingly.
Lower power consumption considerably</td></tr>
</table></td><td>128</td></tr>
<tr><td>LIGHT MODE</td><td>Adjust the brightness and save it for each input signal.
Valid when the [MODE] (→ page 96) is set to [PROFESSIONAL].</td><td>99</td></tr>
</table>

Display the [LIGHT MODE] screen

1. **Press LIGHT button on the remote control.**



When [STANDARD] is selected for [MODE]



The [REF. LIGHT MODE] screen will be displayed.

When [PROFESSIONAL] is selected for [MODE]



The [LIGHT MODE] screen will be displayed.

Perform [LIGHT ADJUST]

An explanation is given here using the [REF. LIGHT MODE] screen.

1. **Press the ▼ button to adjust the cursor to [REF. LIGHT ADJUST].**



2. **Press the ◀▶ button to adjust.**

To keep the brightness after adjustment constant, set [CONSTANT BRIGHTNESS] to [ON].

Press the MENU button to cancel the menu screen.

TIP:

- Brightness normally decreases with use, but by selecting [CONSTANT BRIGHTNESS] mode, sensors inside the projector detect brightness and automatically adjust the output, thereby maintaining a constant brightness throughout the life of the light module. However, if output is already at its maximum, brightness will decrease with use.

Change [REF. LIGHT MODE]

1. **With the cursor adjusted to [REF. LIGHT MODE], press the ENTER button.**



The [REF. LIGHT MODE] selection screen will be displayed.

2. **Use the ▼▲ buttons to make a selection, and press the ENTER button.**



The display will return to the [REF. LIGHT MODE] screen and the selected option will be applied.
Press the MENU button to return to the original screen.

NOTE:

- The light module hours used can be checked in [USAGE TIME] on the menu. Select [INFO.] → [USAGE TIME].
- After a lapse of 1 minute from when the projector displays a blue, black or logo screen, [REF. LIGHT MODE] will automatically switch to [ECO].
- The luminance (brightness) may decrease temporarily depending on the temperature of the operating environment and the [REF. LIGHT MODE] setting.
  This is one of the protection functions called "Forced ECO MODE". When "Forced ECO MODE" is in operation, the TEMP. Indicator lights up in orange. At the same time, the Thermometer symbol [ ] is displayed at the lower right of the menu screen. The temperature inside the projector decreases due to the room temperature being lowered, cancelling the "Forced ECO MODE" and returning to the original brightness.

Checking Energy-Saving Effect [CARBON METER]

This feature will show energy-saving effect in terms of CO_2 emission reduction (kg) when the projector's [LIGHT MODE] is set to either [ECO1] or [ECO2]. This feature is called as [CARBON METER].

There are two messages: [TOTAL CARBON SAVINGS] and [CARBON SAVINGS-SESSION]. The [TOTAL CARBON SAVINGS] message shows the total amount of CO_2 emission reduction from the time of shipment up to now. You can check the information on [USAGE TIME] from [INFO.] of the menu. (→ page 156)



The [CARBON SAVINGS-SESSION] message shows the amount of CO_2 emission reduction between the time of changing to [LIGHT MODE] immediately after the time of power-on and the time of power-off. The [CARBON SAVINGS-SESSION] message will be displayed in the [POWER OFF / ARE YOU SURE ?] message at the time of power-off.



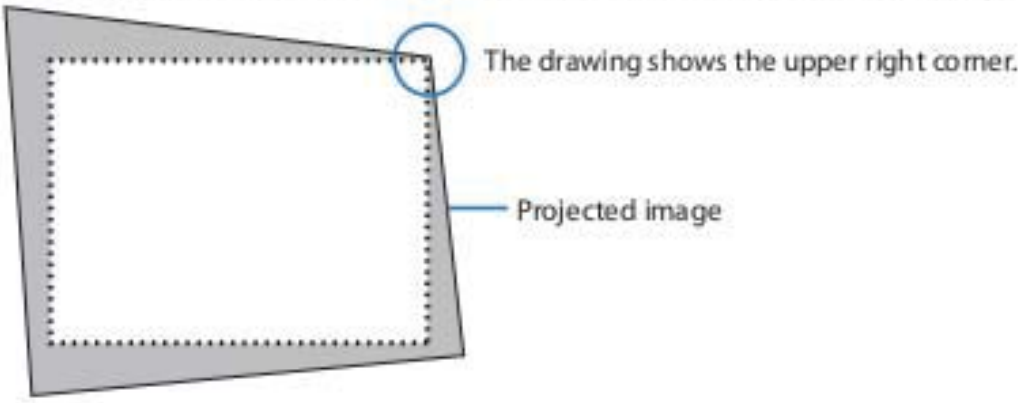
TIP:

- The formula shown below is used to calculate the amount of CO_2 emission reduction. Amount of CO_2 emission reduction = (Power consumption in [NORMAL] [REF. LIGHT MODE] – Power consumption in current setting) × CO_2 conversion factor. *When an energy-saving [LIGHT MODE] is selected, or the Lens Shutter is used, there will be a further reduction in CO_2 emission.
  - * Calculation for amount of CO_2 emission reduction is based on an OECD publication "CO_2 Emissions from Fuel Combustion, 2008 Edition".
- The [TOTAL CARBON SAVINGS] is calculated based on savings recorded in 15 minutes intervals.
- The power consumption when the projector is in standby mode is excluded from the calculation of the amount of CO_2 emission reduction.

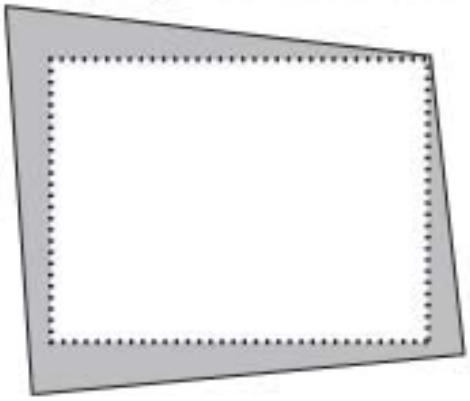
3-5. Correcting Horizontal and Vertical Keystone Distortion [CORNERSTONE]

Use the [CORNERSTONE] feature to correct keystone (trapezoidal) distortion to make the top or bottom and the left or right side of the screen longer or shorter so that the projected image is rectangular.

1. **Project an image so that the screen is smaller than the area of the raster.**



2. **Pick up any one of the corners and align the corner of the image with a corner of the screen.**



3. **Press the Geometric. button either on the cabinet or the remote control.**

   Display the [GEOMETRIC CORRECTION] screen of the on-screen menu.

4. **Move the cursor onto [MODE] by ▼ button and press the ENTER.**

   The mode selection screen will displayed on.



5. **Select [CORNERSTONE] and press the ENTER.**

   Go back to display the [GEOMETRIC CORRECTION] screen of the on-screen menu.



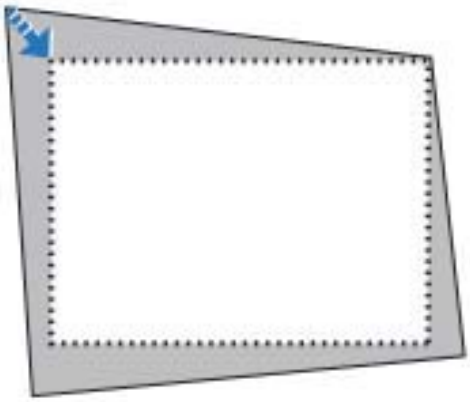
6. **Press the ▼ button to align with the [CORNERSTONE] and then press the ENTER button.**



The drawing shows the upper left icon (▶) is selected.

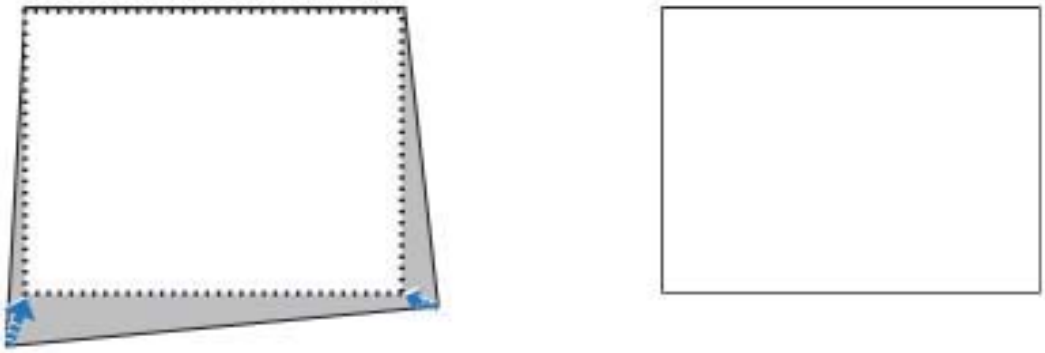
   The screen will switch to the [CORNERSTONE] screen.

7. **Use the ▲▼◀▶ button to select one icon (▲) which points in the direction you wish to move the projected image frame.**
8. **Press the ENTER button.**
9. **Use the ▲▼◀▶ button to move the projected image frame as shown on the example.**



10. **Press the ENTER button.**

11. Use the ▲▼◀▶ button to select another icon which points in the direction.



On the [CORNERSTONE] screen, select [EXIT] or press the EXIT button on the remote control.



The confirmation screen is displayed.

12. Press the ◀ or ▶ button to highlight the [OK] and press the ENTER button.

This completes the [CORNERSTONE] correction.

- Select [CANCEL] and press the ENTER button to return to the [CORNERSTONE] screen.

Selecting [CANCEL] will return to the adjustment screen without saving changes (Step 3).
Selecting [RESET] will return to the factory default.
Selecting [UNDO] will exit without saving changes.

NOTE:

- Even when the projector is turned on, the last used correction values are applied.
- Carry out either one of the following actions to clear the adjustment value of [CORNERSTONE].
  - In Step 11, select [RESET] and then press the ENTER button.
  - In the state [CORNERSTONE] has been selected for [MODE] in the [GEOMETRIC CORRECTION]:
    * Press the Geometric. button for 2 or more seconds.
    * Run [DISPLAY] → [GEOMETRIC CORRECTION] → [RESET] in the on-screen menu.
- Using [CORNERSTONE] correction can cause the image to be slightly blurred because the correction is made electronically.
- A commercially available USB mouse is available for [CORNERSTONE] correction.

3-6. Operation for the On-Screen Menu by a commercially available USB mouse

Once a commercially available USB mouse is connected to this projector, it enables to perform the operation for the on-screen menu and the geometric correction easily.

NOTE:

- Not guarantee the performance of all USB mouse available on the market.

Menu operation

1. **Display the on-screen menu by right click.**
2. **Select a desired menu and perform adjustment by left click.**

   The adjustment bar can be control by drag and drop.



3. **Select [EXIT] displayed at the bottom of the menu by left click for going back to the previous level. If the cursor is on the main menu option, it works for closing the menu. (It works as the same performance with the EXIT button on the remote control.)**



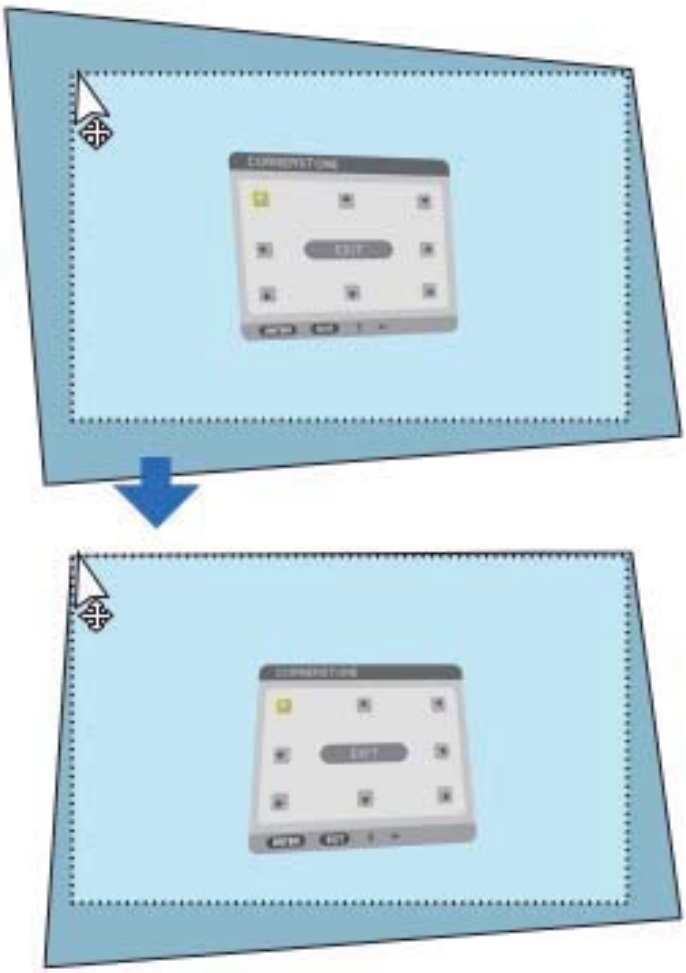
Geometric correction

The USB mouse can be used for [CORNERSTONE] CORRECTION, [HORIZONTAL CORNER], [VERTICAL CORNER], and [WARP]. In this clause, the [CORNERSTONE] CORRECTION by an USB mouse is explained as an example.

1. **While the adjustment screen of the [CORNERSTONE] CORRECTION is displayed, right click on the projection screen. The shape of mouse pointer will be changed and the correction will become available.**



2. **Left click at the screen corner. The projection screen corner will move to the mouse clicked position.**



3. **Repeat the step 2 for correcting all distortion. After completion of distortion correction, right click on the projection screen. The shape of mouse pointer will be changed to normal.**
4. **Left click [EXIT] on the correction screen to finish.**

3-7. Preventing the Unauthorized Use of the Projector [SECURITY]

A keyword can be set for your projector using the Menu to avoid operation by an unauthorized user. When a keyword is set, turning on the projector will display the Keyword input screen. Unless the correct keyword is entered, the projector cannot project an image.

- The [SECURITY] setting cannot be cancelled by using the [RESET] of the menu.

To enable the Security function:

1. **Press the MENU button.**

   The menu will be displayed.

2. **Press the ▶ button twice to select [SETUP] and press the ▼ button or the ENTER button to select [MENU(1)].**

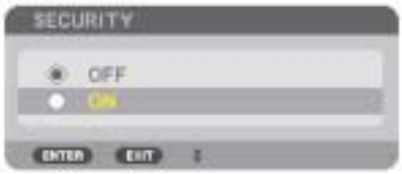
3. **Press the ▶ button to select [CONTROL].**

4. **Press the ▼ button three times to select [SECURITY] and press the ENTER button.**



The [OFF]/[ON] menu will be displayed.

5. **Press the ▼ button to select [ON] and press the ENTER button.**



The [SECURITY KEYWORD] screen will be displayed.

6. **Type in a combination of the four ▲▼◀▶ buttons and press the ENTER button.**

NOTE:

- A keyword must be 4 to 10 digits in length.



The [CONFIRM KEYWORD] screen will be displayed.

NOTE:

- Make a note of your password and store it in a safe place.

7. **Type in the same combination of ▲▼◀▶ buttons and press the ENTER button.**



The confirmation screen will be displayed.

8. **Select [YES] and press the ENTER button.**



The [SECURITY] function has been enabled.

To turn on the projector when [SECURITY] is enabled:

1. **Press the POWER ON button.**

   The projector will be turned on and display a message to the effect that the projector is locked.

2. **Press the MENU button.**



3. **Type in the correct keyword and press the ENTER button. The projector will display an image.**



NOTE:

- The security disable mode is maintained until the main power is turned off or unplugging the power cord.

To disable the [SECURITY] function:

1. **Press the MENU button.**

   The menu will be displayed.

2. **Select [SETUP] → [CONTROL] → [SECURITY] and press the ENTER button.**



   The [OFF]/[ON] menu will be displayed.

3. **Select [OFF] and press the ENTER button.**



   The [SECURITY KEYWORD] screen will be displayed.



4. **Type in your keyword and press the ENTER button.**

   When the correct keyword is entered, the [SECURITY] function will be disabled.

NOTE:

- If you forget your keyword, contact your dealer. Your dealer will provide you with your keyword in exchange for your request code. Your request code is displayed in the Keyword Confirmation screen. In this example [NB52-YGK8-2VD6-K585-JNE6-EYA8] is a request code.

3-8. Projecting 3D videos

This projector can be used to watch videos in 3D using commercially-available active shutter-type 3D eyewear. In order to synchronize the 3D video and eyewear, a commercially-available 3D emitter needs to be connected to the projector (on the projector side).
The 3D eyewear receives information from the 3D emitter and performs opening and closing on the left and right.

⚠ CAUTION

Health precautions
Before use, please make sure to read any health precautions that may be stated in the operating manuals enclosed with the 3D eyewear and 3D video software (Blu-ray player, games, computer animation files, etc.).
Please take note of the following in order to avoid adverse health effects.

- Please do not use the 3D eyewear for purposes other than to watch 3D videos.
- Please keep a distance of at least 2 m away from the screen when watching videos. Watching a video too close to the screen will increase eye fatigue.
- Please do not watch videos continuously for a long period of time. Please take a 15 minutes' break after every hour of watching.
- Please consult a doctor before watching if you or any of your family members have a history of suffering from seizures caused by light sensitivity.
- Please stop watching immediately and take a rest when you feel physically unwell while watching (vomiting, giddiness, nausea, headaches, sore eyes, blurred vision, cramps and dumbness in the limbs, etc.). Please consult a doctor if the symptoms persist.
- Please watch a 3D video directly in front of the screen. If you watch a 3D video obliquely from the sides, this may result in physical and eye fatigue.

3D eyewear and 3D emitter preparations

Please use an active shutter-type 3D eyewear that conforms with the VESA standard.
A commercially-available RF type made by XPANDVISION is recommended.

3D eyewear	XPAND X105-RF
3D emitter	XPAND AD025-RF-X1

Procedure to watch 3D videos using this projector

1. **Connect the video device to the projector.**
2. **Switch on the power supply to the projector.**
3. **Run the 3D video software and project the video using the projector.**

   This has been automatically set up when shipped from the factory. When a 3D video cannot be projected, it may be because the 3D detection signals are not included or because they are not detectable by the projector.

   Please manually select the format.

4. Select the 3D video format.

(1) Press the MENU button to display the on-screen menu and select [ADJUST] → [3D SETTINGS].



(2) Press the ▼ button to align the cursor with the [FORMAT] and press the ENTER button.
The format screen will be displayed.

(3) Select the input signal format using the ▼ button and then press the ENTER button.



The 3D settings screen will disappear and the 3D video will be projected.

Press the MENU button and the on-screen menu will disappear.

The 3D caution message screen will be displayed when switching to a 3D video (default factory setting when shipped). Please read the "Health Precautions" on the previous page to watch videos in the correct manner. The screen will disappear after 60 seconds or when the ENTER button is pressed. (→ page 124)

5. Turn on the power supply of the 3D eyewear and wear the eyewear to watch the video.

A normal video will be shown when a 2D video is input.

To watch a 3D video in 2D, select [OFF(2D)] in the [FORMAT] screen mentioned above in (3).

NOTE:

- Upon switching to 3D image, the following functions will be cancelled and disabled. [BLANKING], [PIP/PICTURE BY PICTURE], [GEOMETRIC CORRECTION], [EDGE BLENDING] (As the adjusted values of [GEOMETRIC CORRECTION] and [EDGE BLENDING] are maintained, when you switch to 2D picture, the adjusted screen will be displayed again.)
- The output may not automatically switch to a 3D video depending on the 3D input signal.
- Check the operating conditions described in the user manual of the Blu-ray player.
- Please connect the DIN terminal of the 3D emitter to the 3D SYNC of the main projector.
- The 3D eyewear allows videos to be viewed in 3D by receiving synchronized optical signals output from the 3D emitter. As a result, the 3D image quality may be affected by conditions such as the brightness of the surroundings, screen size, viewing distance, etc.
- When playing a 3D video software on a computer, the 3D image quality may be affected if the computer CPU and graphics chip performance are low. Please check the required operating environment of the computer that is stated in the operating manual attached to the 3D video software.
- Depending on the signal, [FORMAT] and [L/R INVERT] may not be able to be selected. Please change the signal in that case.

When videos cannot be viewed in 3D

Please check the following points when videos cannot be viewed in 3D.
Please also read the operating manual attached to the 3D eyewear.

Possible reasons	Solutions
The selected signal does not support 3D output.	Please change the video signal input to one that supports 3D.
The format for the selected signal is turned to [OFF(2D)].	Please change the format in the on-screen menu to [AUTO] or a format that supports 3D.
A eyewear that is not supported by the projector is being used.	Please purchase a commercially-available 3D eyewear or 3D emitter (recommended). (→ page 53)
Please check the following points when a video cannot be viewed in 3D using a 3D eyewear that is supported by the projector.	
The power supply of the 3D eyewear is turned off.	Please turn on the power supply of the 3D eyewear.
The internal battery of the 3D eyewear is flat.	Please charge or replace the battery.
The viewer is located too far away from the screen.	Please get closer to the screen until the video can be seen in 3D.
	Please turn the [L/R INVERT] in the on-screen menu to [OFF].
Due to multiple 3D projectors working at the same time in the vicinity, the projectors may interfere with one another. Alternatively, there may be a bright light source near the screen.	Please maintain sufficient distance between the projectors.
	Please keep the light source away from the screen.
	Please turn the [L/R INVERT] in the on-screen menu to [OFF].
There is an obstacle between the optical receiver of the 3D eyewear and the 3D emitter.	Please remove the obstacle.
The 3D format of the 3D video contents is not supported.	Please check with the company selling the 3D video contents.

3-9. Controlling the Projector by Using an HTTP Browser

Overview

You can display the HTTP server screen of the projector by using a web browser and operating the projector with a computer or smartphone.

Possible operations on the HTTP server screen

- Operate the projector.
  Operations such power on/off of the projector, input terminal switchover, and lens control etc. can be carried out.
- Adjusting the picture and projection screen, such as picture adjustment, geometric correction, edge blending, etc. is possible.
- Network settings (smartphones are not supported)
  Configure the various settings when using the projector connected to a network (wired LAN). Also, it is possible to configure the connection settings with various control systems.

For details about settings and adjustments, see the explanation on the screen menu.

Important:

- The default [WIRED LAN] setting of this projector is set to [DISABLE] when it is shipped from the factory. To connect to a network, display the on-screen menu and change the [WIRED LAN] profile setting in the [NETWORK SETTINGS] from [DISABLE] to [PROFILE 1] or [PROFILE 2] to enable the [WIRED LAN].
- When setting up a [WIRED LAN] for the first time after purchasing the unit, be sure to set the [NETWORK PASSWORD].

To view the HTTP server screen

For computers

1. **Connect the projector to the computer with a LAN cable sold commercially. (→ page 168)**
2. **Select [SETUP] → [NETWORK SETTINGS] → [WIRED LAN] in the on-screen menu to configure the network settings. (→ page 143)**
3. **Start up the web browser on your computer and enter the address or URL in the input field.**

   Specify the address or URL as "http://<IP Address of Projector>/index.html".

   The HTTP server screen will be displayed.

For smartphones

1. **Connect a wireless LAN compatible router to the projector with a commercially available LAN cable.**
2. **Select [SETUP] → [NETWORK SETTINGS] → [WIRED LAN] in the on-screen menu to configure the network settings. (→ page 143)**
3. **Configure the network settings of the smartphone so that it can be connected to the projector.**

4. Start up the web browser and enter the address or URL in the input field.

Specify the address or URL as "http://<IP Address of Projector>/index.html".

The HTTP server screen will be displayed.

NOTE:

- To use the projector in a network, consult with your network administrator about network settings.
- The display's or button's response can be slowed down or operation may not be accepted depending the settings of your network. Should this happen, consult your network administrator. The projector may not respond if its buttons are repeatedly pressed in rapid intervals. Should this happen, wait a moment and repeat. If you still can't get any response, turn off and back on the projector.
- If the PROJECTOR NETWORK SETTINGS screen does not appear in the web browser, press the Ctrl+F5 keys to refresh your web browser (or clear the cache).
- This projector uses "JavaScript" and "Cookies" and the browser should be set to accept these functions. The setting method will vary depending on the version of browser. Please refer to the help files and the other information provided in your software.

Preparation before Use

Connect the projector to a commercially available LAN cable before engaging in browser operations. (→ page 168)

Operation with a browser that uses a proxy server may not be possible depending on the type of proxy server and the setting method. Although the type of proxy server will be a factor, it is possible that items that have actually been set will not be displayed depending on the effectiveness of the cache, and the contents set from the browser may not be reflected in operation. It is recommended that a proxy server not be used unless it is unavoidable.

Handling of the Address for Operation via a Browser

Regarding the actual address that is entered for the address or entered to the URL column when operation of the projector is via a browser, the host name can be used as it is when the host name corresponding to the IP address of the projector has been registered to the domain name server by a network administrator, or the host name corresponding to the IP address of the projector has been set in the "HOSTS" file of the computer being used.

Example 1: When the host name of the projector has been set to "pj.nec.co.jp", access is gained to the network setting by specifying
http://pj.nec.co.jp/index.html
for the address or the entry column of the URL.

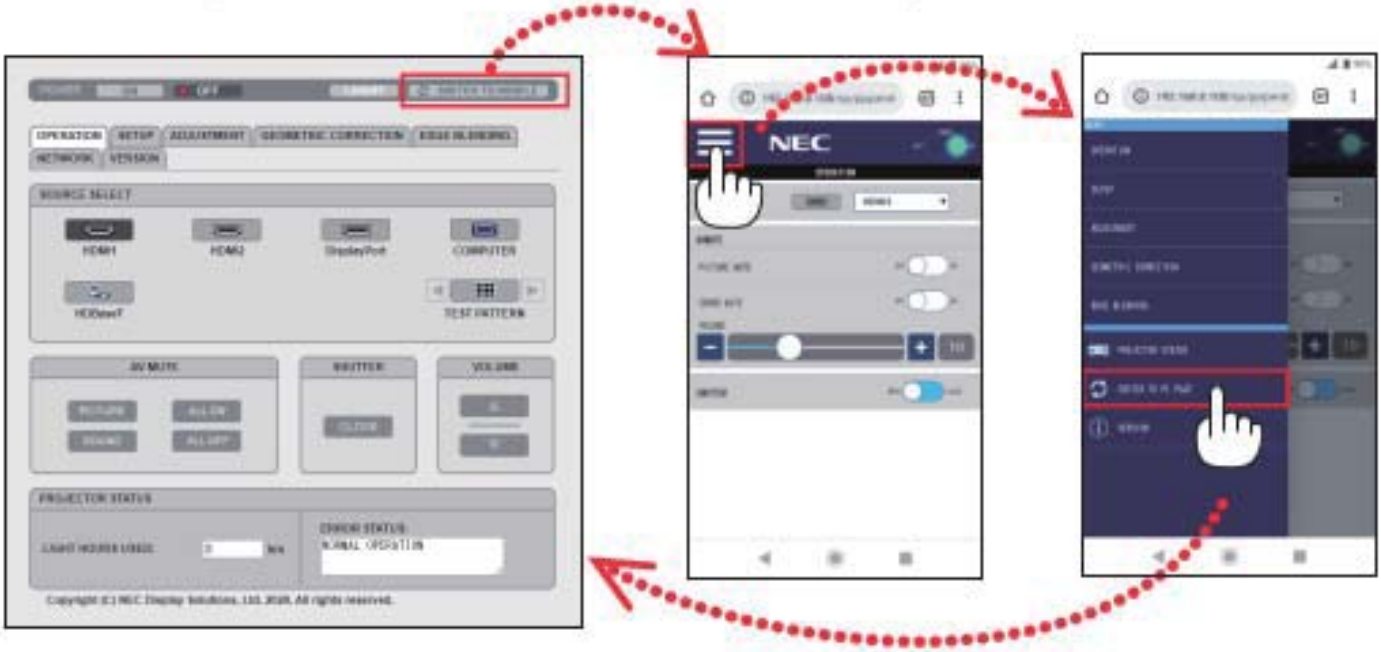
Example 2: When the IP address of the projector is "192.168.73.1", access is gained to the network setting by specifying
http://192.168.73.1/index.html
for the address or the entry column of the URL.

HTTP server screen

The screen size of the terminal being used is automatically determined to display the computer screen or smartphone screen.
You can also switch between the computer screen and the smartphone screen manually.

- When switching the display from a computer to a smartphone
  Press the [SWITCH TO MOBILE] button at the top right of the screen.
- When switching the display from a smartphone to a computer
  Press the menu button at the top left of the screen, and select [SWITCH TO PC PAGE].

Screen for computer **Screen for smartphone**



3-10. Storing Changes for Lens Shift, Zoom, and Focus [LENS MEMORY]

This function serves to store the adjusted values when using the [LENS SHIFT], motorized [ZOOM], and motorized [FOCUS] functions of the projector. Adjusted values can be applied to the signal you selected. This will eliminate the need to adjust lens shift, focus, and zoom at the time of source selection. There are two ways to save adjusted values for lens shift, zoom, and focus.

Function name	Description	Page
REF. LENS MEMORY	Adjusted values common to all input signals. At the time of installation, two kinds of adjusted values can be stored. If no adjusted values have been saved to [LENS MEMORY], the lens will apply [REF. LENS MEMORY] adjusted values.	130
LENS MEMORY	Adjusted values for each input signal. Use the adjusted values for the signal with a different aspect ratio or resolution. The adjusted values can be applied at the time of source selection.	108

NOTE:

- Be sure to carry out [LENS CALIBRATION] after replacing the lens.
- [LENS MEMORY] and [LENS CALIBRATION] are not available for the lens unit NP44ML.

To store your adjusted values in [REF. LENS MEMORY]:

1. **Press the MENU button.**



The menu will be displayed.

2. **Press the ▶ button to select [SETUP] and press the ENTER button.**



3. **Press the ▶ button to select [INSTALLATION(2)].**



4. **Press the ▼ button to select [REF. LENS MEMORY] and press the ENTER button.**



The [REF. LENS MEMORY] screen will be displayed.

5. **Make sure [PROFILE] is highlighted, then press the ENTER button.**



The [PROFILE] selection screen appears.

6. **Press the ▼/▲ buttons to select the [PROFILE] number, then press the ENTER button.**



Return to the [REF. LENS MEMORY] settings screen.

7. **Select [STORE] and press the ENTER button.**



The confirmation screen will be displayed.

8. **Press the ◄ button to select and [YES] and press the ENTER button.**



Select a [PROFILE] number and save the adjusted [LENS SHIFT], [ZOOM], and [FOCUS] values to it.

9. **Press the MENU button.**

The menu will be closed.

TIP:

- To store adjusted values for each input source, use the [LENS MEMORY] function. (→ page 108)

To call up your adjusted values from [REF. LENS MEMORY]:

1. **Press the MENU button.**



The menu will be displayed.

2. **Press the ▶ button to select [SETUP] and press the ENTER button.**



3. **Press the ▶ button to select [INSTALLATION(2)].**
4. **Press the ▼ button to select [REF. LENS MEMORY] and press the ENTER button.**



The [REF. LENS MEMORY] screen will be displayed.

5. **Make sure [PROFILE] is highlighted, then press the ENTER button.**



The [PROFILE] selection screen appears.

6. **Press the ▼/▲ buttons to select the [PROFILE] number, then press the ENTER button.**



Return to the [REF. LENS MEMORY] settings screen.

7. **Select [MOVE] and press the ENTER button.**



The lens will shift based on the adjusted values stored in the selected [PROFILE].

8. **Press the ◀ button to select and [YES] and press the ENTER button.**



The adjusted values will be applied to the current signal. .

9. **Press the MENU button.**

The menu will be closed.

TIP:

To call up the stored values from [LENS MEMORY]:

1. From the menu, select [ADJUST] → [LENS MEMORY] → [MOVE] and press the ENTER button.



   The confirmation screen will be displayed.

2. Press the ◀ button to select and [YES] and press the ENTER button.
   During projection, if the adjusted values for an input signal have been saved, the lens will shift. If not, the lens will shift according to the adjusted values stored in the selected [REF. LENS MEMORY] → [PROFILE] number.

To automatically apply the stored values at the time of source selection:

1. From the menu, select [SETUP] → [REF. LENS MEMORY] → [LOAD BY SIGNAL] and press the ENTER button.



2. Press the ▼ button to select and [ON] and press the ENTER button.
   This will move the lens automatically to the position at the time of source selection according to the adjusted values.



NOTE:

- The [LENS MEMORY] function may not produce a completely aligned image (due to tolerances in the lenses) using the adjusted values stored in the projector. After calling up and applying the stored values from the [LENS MEMORY] function, finely adjust the lens shift, motorized zoom and motorized focus to produce the best possible image.

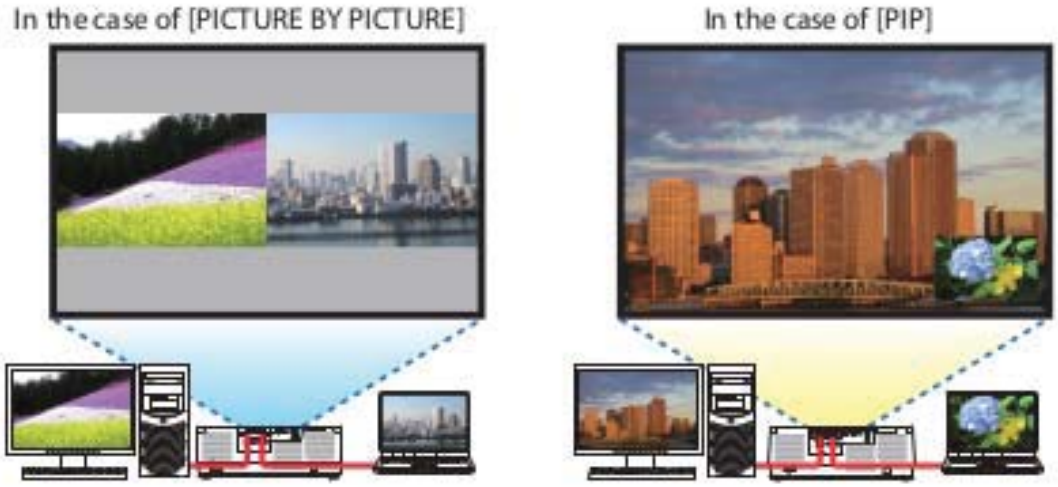
4. Multi-Screen Projection

This projector can be used singly or arranged in multiple units for multi-screen projection.

4-1. Things that can be done using multi-screen projection

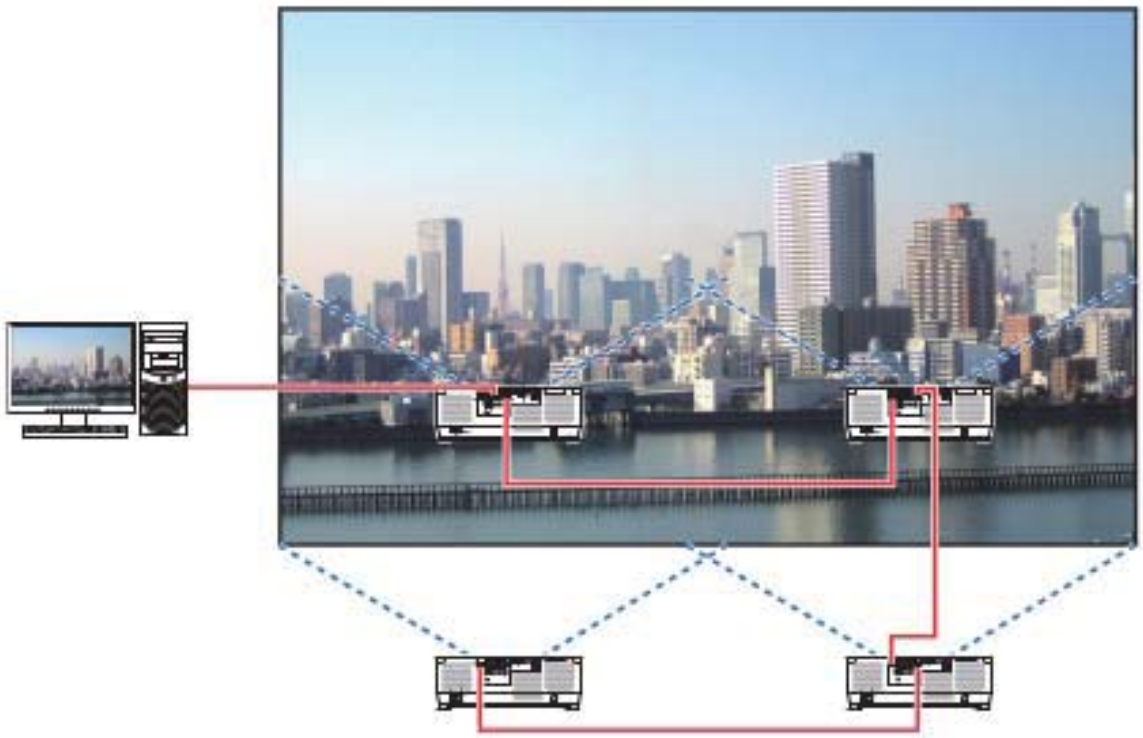
Case 1. Using a single projector to project two types of videos [PIP/PICTURE BY PICTURE]

Connection example and projection image



Case 2. Lien up multiple projectors to project a high-resolution image in a larger screen. [TILING]

Connection example and projection image



4-2. Using a single projector to project two types of videos at the same time [PIP/PICTURE BY PICTURE]

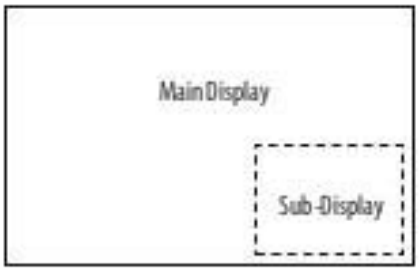
The projector has a feature that allows you to view two different signals simultaneously. You have two modes: [PIP] mode and [PICTURE BY PICTURE] mode.
The projection video in the first screen display is known as the main display while the projection video that is called out subsequently is known as the sub-display.
Select the projection function under [DISPLAY] → [PIP/PICTURE BY PICTURE] → [MODE] in the on-screen menu (the default factory setting when shipped is [PIP]). (→ page 111)

- A single screen is projected when power is turned on.

Picture in Picture function

A small sub-display is displayed inside the main display.
The sub-display can be set up and adjusted as follows. (→ page 111, 112)

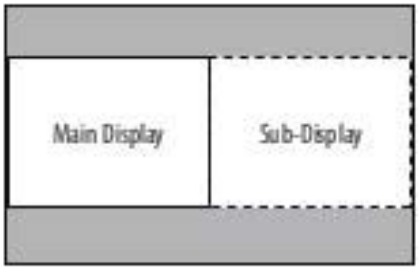
- Select whether to display the sub-display at the top right, top left, bottom right or bottom left of the screen (the size of the sub-display can be selected and the position can be fine-tuned)
- Switch the main display with the sub-display



Picture by picture function

Display the main display and sub-display side by side.
The main display and sub-display can be set up and adjusted as follows. (→ page 111, 112)

- Selecting the display boundary (ratio) of the main display and sub-display
- Switch the main display and sub-display



Input terminals that can be used for the main screen and sub-screen.

The main screen and sub-screen can provide the following input terminals.

- The main display and sub-display support computer signals up to WUXGA@60HzRB.

		Sub-Display or additional display				
		HDMI1	HDMI2	DisplayPort	COMPUTER	HDBaseT
Main Display	HDMI1	No	Yes	Yes	Yes	Yes
	HDMI2	Yes	No	Yes	Yes	Yes
	DisplayPort	Yes	Yes	No	Yes	Yes
	COMPUTER	Yes	Yes	Yes	No	Yes
	HDBaseT	Yes	Yes	Yes	Yes	No

NOTE:

- Some signals may not appear depending on the resolution.

Projecting two screens

1. **Press the MENU button to display the on-screen menu and select [DISPLAY] → [PIP/PICTURE BY PICTURE].**



This displays the [PIP/PICTURE BY PICTURE] screen in the on-screen menu.

2. **Select [SUB INPUT] using the ▼/▲ buttons, and press the ENTER button.**

This displays the [SUB INPUT] screen.

3. **Select the input signal using the ▼/▲ buttons, and press the ENTER button.**



* This screen belongs to a HDBaseT model.

The [PIP] (PICTURE IN PICTURE) or [PICTURE BY PICTURE] screen set up under [MODE] is projected. (→ page 111)

- When the signal name is displayed in grey, this means that it cannot be selected.

4. **Press the MENU button.**

The on-screen menu will disappear.

5. **When returning to single screen, display the [PIP/PICTURE BY PICTURE] screen one more time and select [OFF] in the [SUB INPUT] screen of the Step 3.**

TIP:

- During dual-screen projection, if the selected input is not supported by the sub-screen, the sub-screen will appear as a black screen.

Switching the main display with the sub-display and vice versa

1. **Press the MENU button to display the on-screen menu and select [DISPLAY] → [PIP/PICTURE BY PICTURE].**



This displays the [PIP/PICTURE BY PICTURE] screen in the on-screen menu.

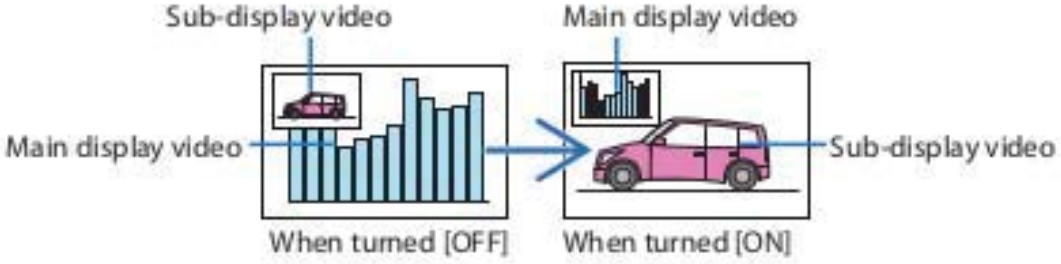
2. **Select [PICTURE SWAP] using the ▼/▲ buttons and then press the ENTER button.**

Display the screen for switching the display positions.

3. **Select [ON] using the ▼ button and then press the ENTER button.**



The video of the main display will switch with that of the sub-display.



The signal output from the HDBaseT OUT/Ethernet terminal does not change even if the display positions are switched.

4. **Press the MENU button.**

The on-screen menu will disappear.

Restrictions

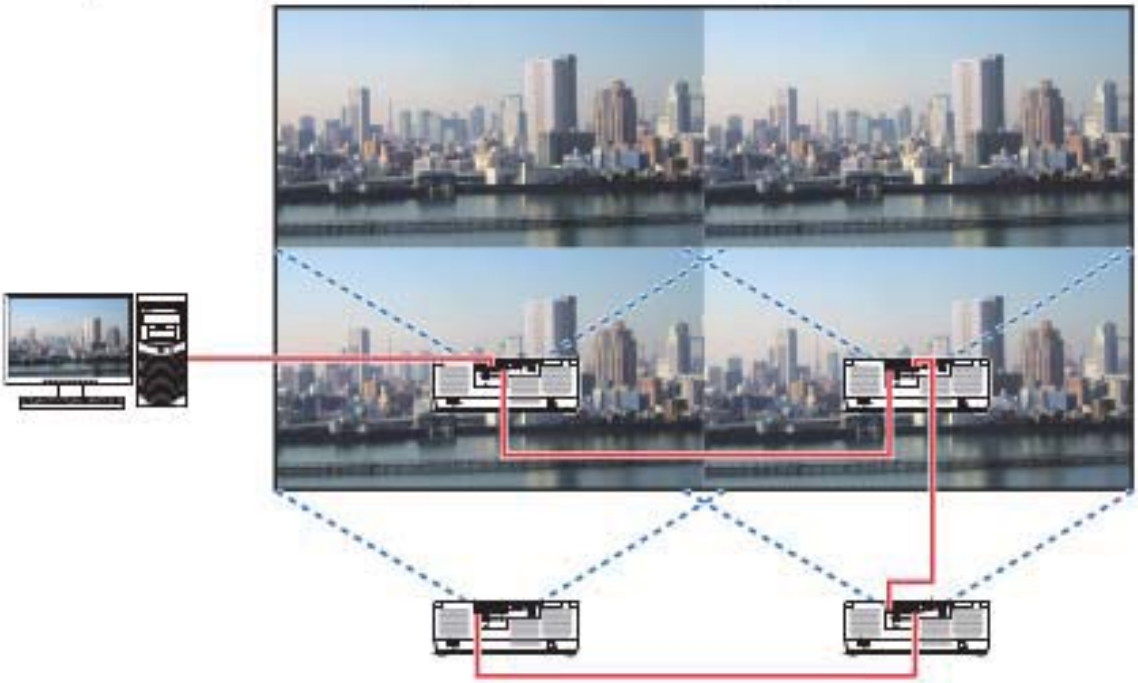
- The following operations are enabled only for the main display.
  - Audio-visual adjustments
  - Video magnification / compression using the partial VOL./D-ZOOM (+)(–) buttons. However, magnification / compression is up to the positions set in [PICTURE BY PICTURE] → [BORDER] only.
  - TEST PATTERN
- [PIP/PICTURE BY PICTURE] cannot be used when a 3D video is being displayed.
- When using the [PIP/PICTURE BY PICTURE] function, [DYNAMIC CONTRAST] can not be used.
- [PIP/PICTURE BY PICTURE] cannot be used when the signal input has a resolution of 1920 × 1200 or more.
- The HDBaseT OUT/Ethernet port has a repeater function. The output resolution is limited by the maximum resolution of the connected monitor and projector.

4-3. Line up multiple projectors to display a high resolution image in a larger screen [TILING]

This section provides procedures for projecting an image with a resolution of 3840 × 2160 (4K UHD) by using four projectors.

Preparation:

- Arrange four projectors in a 2 × 2 layout.
  Connect your video output equipment to the four projectors (→ page 167).
- Turn on the power of all devices to project the same four images



When performing settings or adjustments using one remote control, enable the [CONTROL ID] for assigning ID to each projector so as not to activate the other projectors. (→ page 138)

NOTE:

- When setting up the projector, assign a unique control ID to each projector.
- Set the "Color setting" and "DeepColor setting" on your Blu-ray player or computer to "Auto". Refer to the owner's manual accompanied with your Blu-ray player or computer for more information.
- Connect an HDMI output of your Blu-ray player or computer to the first projector and then connect to HDBaseT IN/Ethernet port of the second and subsequent projectors.
- Selecting another input source on the second and subsequent projectors will disable the HDBaseT repeater function.

Setting [TILING]

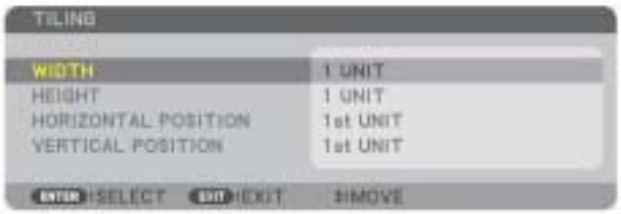
1. **Press the MENU button to display the on-screen menu and select [DISPLAY] → [PICTURE SETTING] → [MODE].**
   This displays the [MODE] screen.



2. **Select [TILING] using the ▼/▲ buttons, and press the ENTER button.**
   The display returns to the [PICTURE SETTING] screen.



3. **Select [TILING] using the ▼/▲ buttons, and press the ENTER button.**
   This displays the [TILING] screen.



4. **Set [WIDTH], [HEIGHT], [HORIZONTAL POSITION], and [VERTICAL POSITION]**
   (1) In the screen for setting the number of horizontal units, select [2 UNITS]. (number of units in the horizontal direction)
   (2) In the screen for setting the number of vertical units, select [2 UNITS]. (number of units in the vertical direction)
   (3) In the screen for setting the horizontal order, select [1st UNIT] or [2nd UNIT]. (look at the screens, the one on the left is the [1st UNIT] while the one on the right is the [2nd UNIT])
   (4) In the screen for setting the vertical order, select the [1st UNIT] or the [2nd UNIT]. (look at the screens, the one at the top is the [1st UNIT] while the one at the bottom is the [2nd UNIT])

After completing setting for the steps 1 to 4, a single image will be displayed to fill the screen.



5. **Press the MENU button.**

   The on-screen menu will disappear.

   To make boundaries less noticeable of a projected image, use [EDGE BLENDING] to adjust them.
   (→ next page)

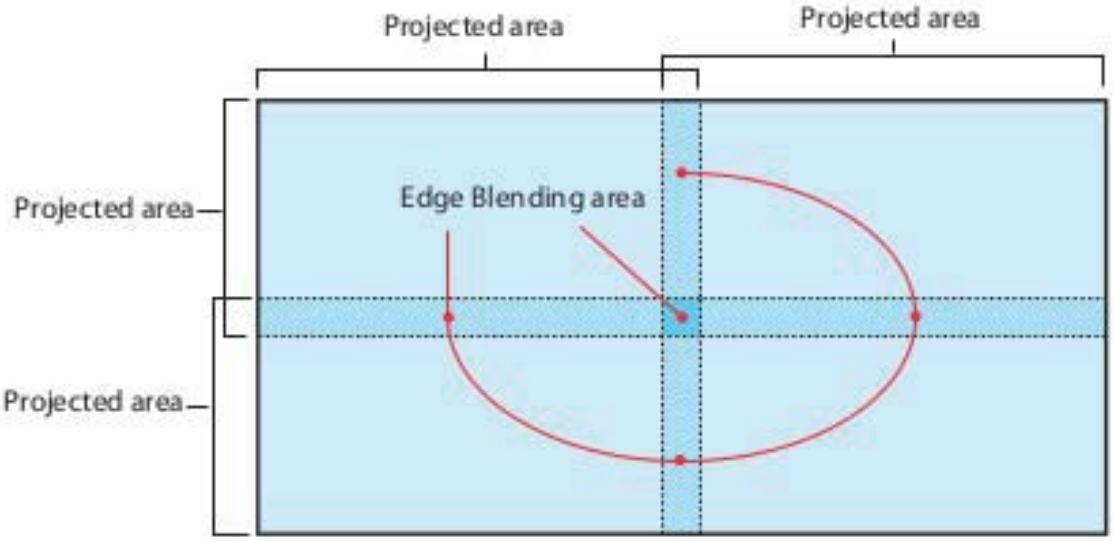
4-4. Adjust boundaries of a projected image [EDGE BLENDING]

This projector is equipped with an "[EDGE BLENDING] Function" that makes the edges (boundaries) of the projection screen indistinguishable.

NOTE:

- Before performing the Edge Blending function, place the projector in the correct position so that the image becomes square in the appropriate size, and then make optical adjustments (lens shift, focus, and zoom).
- Adjust the brightness of each projector using [REF. LIGHT ADJUST] under [REF. LIGHT MODE]. In addition, use [REF. WHITE BALANCE] to adjust the [CONTRAST], [BRIGHTNESS] and [UNIFORMITY].

The following procedure shows an example of four projectors in a 2 × 2 layout.



Setting the overlap of projection screens

① Enable [EDGE BLENDING].

1. **Press the MENU button.**

   The menu will be displayed.

2. **Select [DISPLAY] → [EDGE BLENDING].**

   The [EDGE BLENDING] screen will be displayed. Align the cursor with [MODE] and then press the ENTER button. The mode screen will be displayed.



3. **Select [MODE] → [ON] and press the ENTER button.**



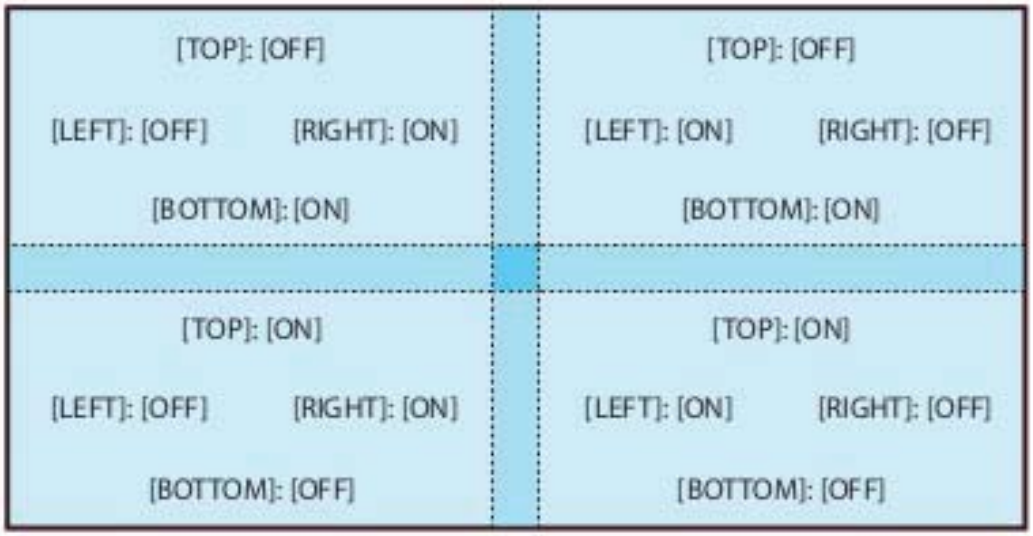
This enables the Edge Blending function. The following menu items are available:

[MARKER], [TOP], [BOTTOM], [LEFT], [RIGHT], [BLEND CURVE], and [BLACK LEVEL]



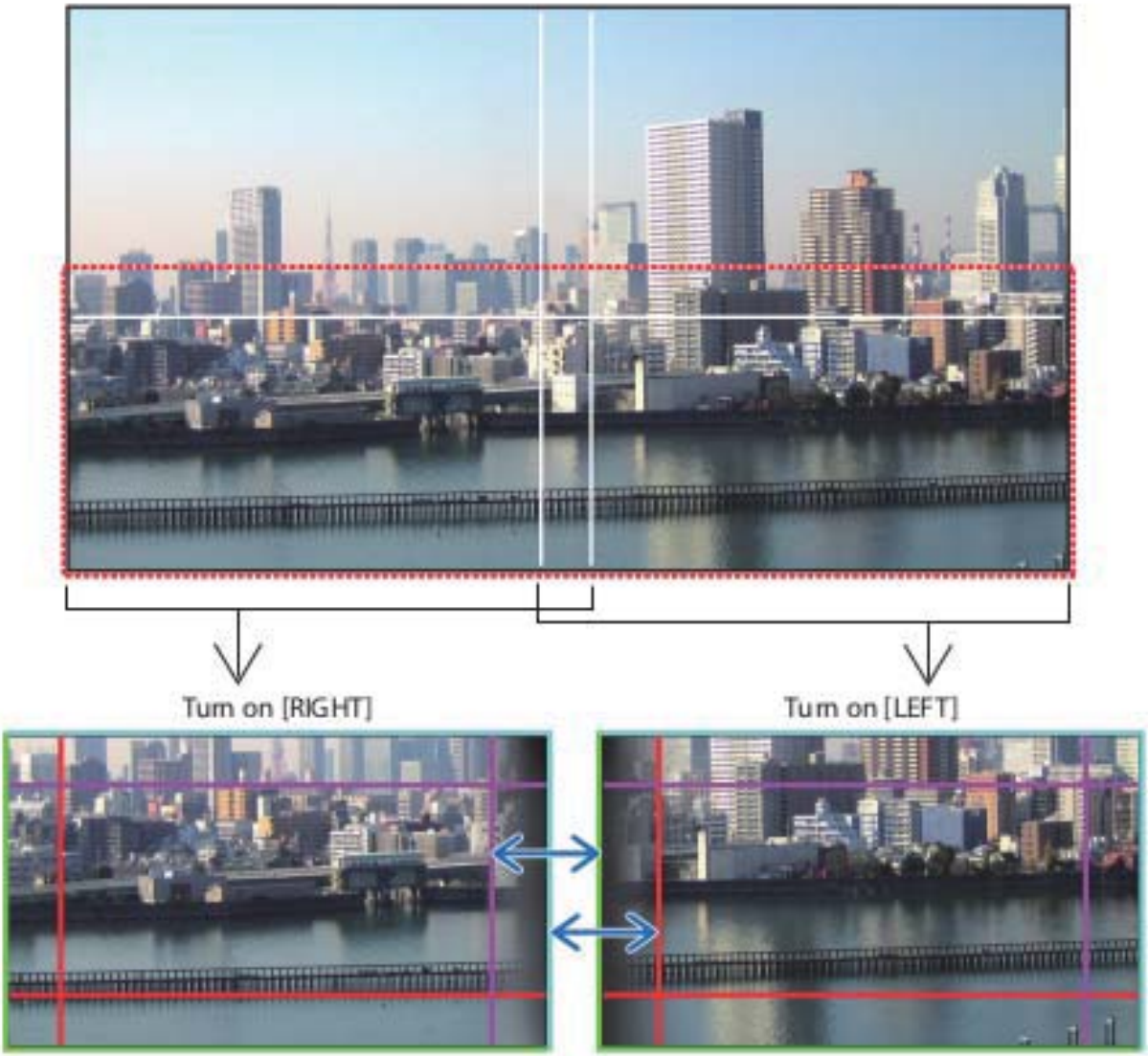
4. Select an appropriate item from [TOP], [BOTTOM], [LEFT], and [RIGHT] for an area of overlapped edges, and turn on [CONTROL].





② Adjust [POSITION] and [RANGE] to determine an area of overlapped edges of images projected from each projector.

When [MARKER] is set to [ON], markers of four colors are displayed on the screen.
The cyan and green markers represent the edges of the region where images overlap, the magenta and red markers represent the range of overlapping (region/width).



* The 2 screens are separated in the diagram for explanatory purposes.

Fit the edge of the overlapping area to the edge of the image with [POSITION], then adjust the overlapping area (width) with [RANGE]. In the case of the figure on the previous page, first set the cyan marker to the edge of the image on the left screen and the green marker to the edge of the image on the right screen. Next, adjust the magenta marker on the left screen onto the green marker on the right screen, and the red marker on the right screen onto the cyan marker on the left screen. Adjustment is completed when the markers are stacked and become white. Turn off [MARKER] to turn off the marker.





TIP:

- When displaying a signal with a different resolution, perform the Edge Blending function from the start.
- Setting of [MARKER] will not be saved and return to [OFF] when the projector is turned off.
- To display or hide the marker while the projector is running, turn on or off [MARKER] from the menu.

[BLEND CURVE]

Adjust the brightness of the overlapped section on the screens. According to the necessity, adjust the brightness of the overlapped section on the screens by the [BLEND CURVE] and [BLACK LEVEL].

- Set the [MODE] to [ON] for selecting [BLEND CURVE] and [BLACK LEVEL].

Selecting an option for the [BLEND CURVE]

By controlling the graduation of the overlapped section on the screens, it makes the border on the projected screens inconspicuous. Select the optimal option among nine.

1. **On the On-Screen Menu, move the cursor onto the [DISPLAY] → [EDGE BLENDING] → [BLEND CURVE] and then press the ENTER. The option setting screen for the [BLEND CURVE] is displayed on.**



2. **Select one option among nine by ▲ or ▼.**



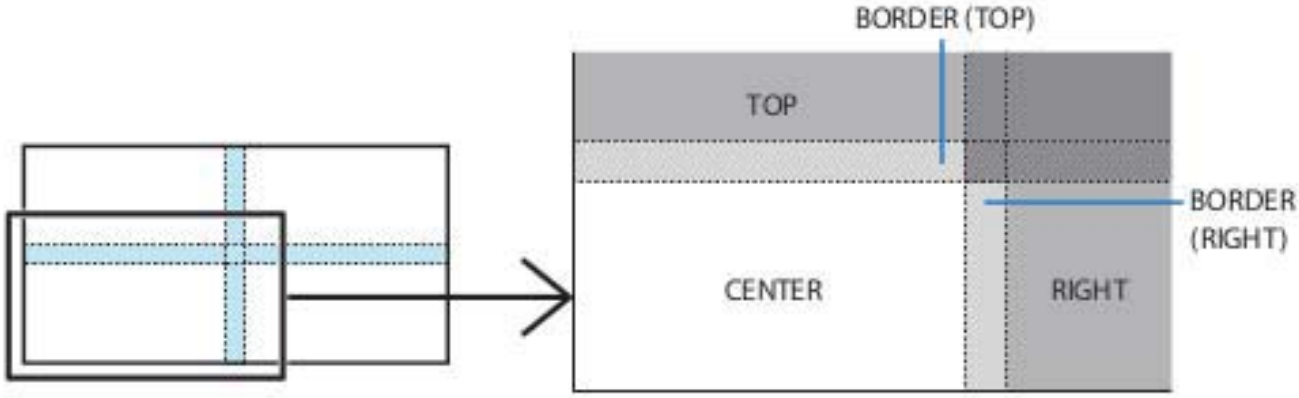
Black Level Adjustment

This adjusts the black level of the overlapping area and the non-overlapping area of the multi-screen (EDGE BLENDING).
Adjust the brightness level if you feel the difference is too large.

NOTE:

- Adjustable area varies depending on what combination of [TOP], [BOTTOM], [LEFT] and [RIGHT] are turned on.

The black level of the lower left projector is adjusted as shown in the figure.



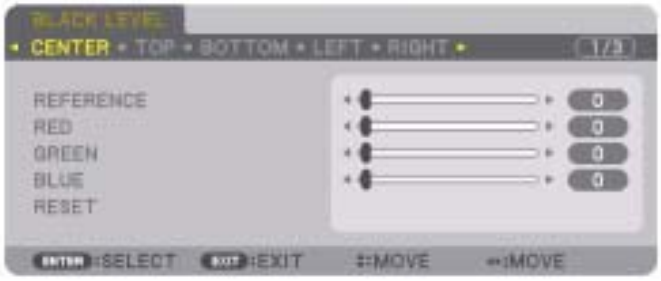
1. **Select [DISPLAY] → [EDGE BLENDING] → [BLACK LEVEL] and press the ENTER button.**

   The screen will switch to the black level adjustment screen.



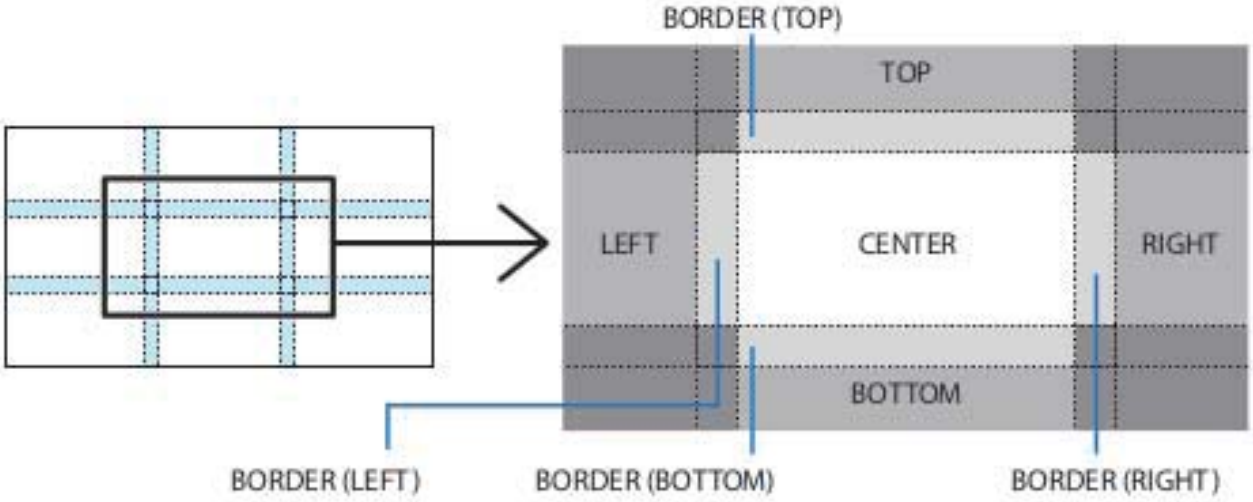
2. Use the ◄, ►, ▼ or ▲ button to select an item and use the ◄ or ► to adjust the black level.

Do this for the other projector if necessary.



TIP:

- 9-segmented portions for Black Level adjustment
  The black level of the center projector is adjusted as shown in the figure.



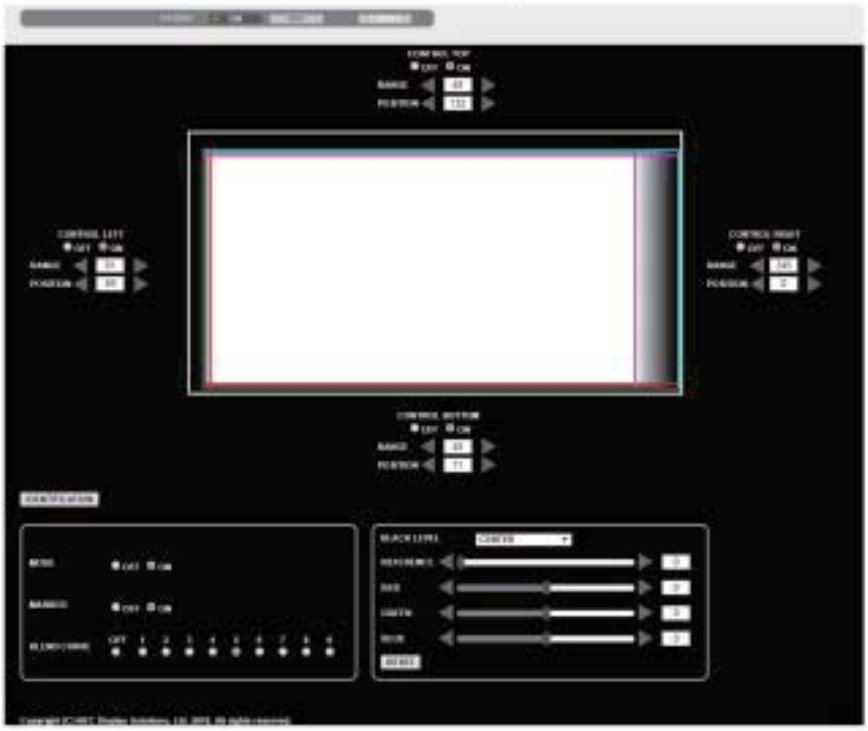
TIP:

- The number of black level division screens changes depending on the number of edge blending positions selected (top, bottom, right, left). In addition, when the top / bottom and left / right ends are selected, the corner division screen appears.
- The edge blending width is the width set in the range and the corner is formed by the intersecting area of the top / bottom ends or left / right ends.
- The [BLACK LEVEL] can be adjusted to make it brighter only.

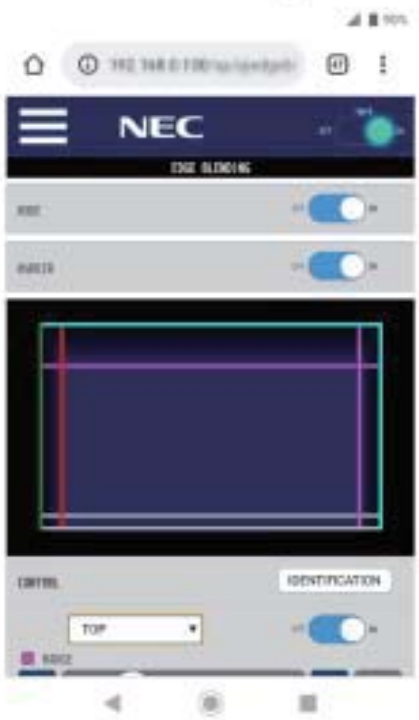
Adjust using a computer or smartphone

[EDGE BLENDING] can be easily done using a computer or smartphone connected to the projectors via a network.
Connect to the HTTP server (→ page 56) and display the [EDGE BLENDING] tab.

Screen for computer



Screen for smartphone



The [EDGE BLENDING] setting/adjustment items are displayed on one screen and can be operated using the mouse of the computer or the touch screen of the smartphone. For details of each setting/adjustment, refer to the On-Screen Menu explanation.

- [POSITION] and [RANGE] can be adjusted by moving the markers (cyan, green, magenta, red line) by clicking and dragging with the mouse (or swiping the smartphone).
- The following adjustment values can be finely adjusted with the ←/→ button on the keyboard:
  - POSITION
  - RANGE
  - [REFERENCE] for [BLACK LEVEL], [RED], [GREEN], BLUE]
- To check which screen of the projector you are adjusting, press the [IDENTIFICATION] button. The identification message (IP address) will be displayed on the screen for 3 seconds.

5. Using On-Screen Menu

5-1. Using the Menus

NOTE:

- The on-screen menu may not be displayed correctly while interlaced motion video image is projected.

1. **Press the MENU button on the remote control or the projector cabinet to display the menu.**



NOTE:

- The commands such as ENTER, EXIT, ▲▼, ◀▶ in the bottom show available buttons for your operation.

2. **Press the ◀▶ buttons on the remote control or the projector cabinet to display the sub-menu.**
3. **Press the ENTER button on the remote control or the projector cabinet to highlight the top item or the first tab.**
4. **Use the ▲▼ buttons on the remote control or the projector cabinet to select the item you want to adjust or set.**

   You can use the ◀▶ buttons on the remote control or the projector cabinet to select the tab you want.
5. **Press the ENTER button on the remote control or the projector cabinet to display the submenu window.**
6. **Adjust the level or turn the selected item on or off by using the ▲▼◀▶ buttons on the remote control or the projector cabinet.**

   Changes are stored until adjusted again.
7. **Repeat steps 2-6 to adjust an additional item, or press the EXIT button on the remote control or the projector cabinet to quit the menu display.**

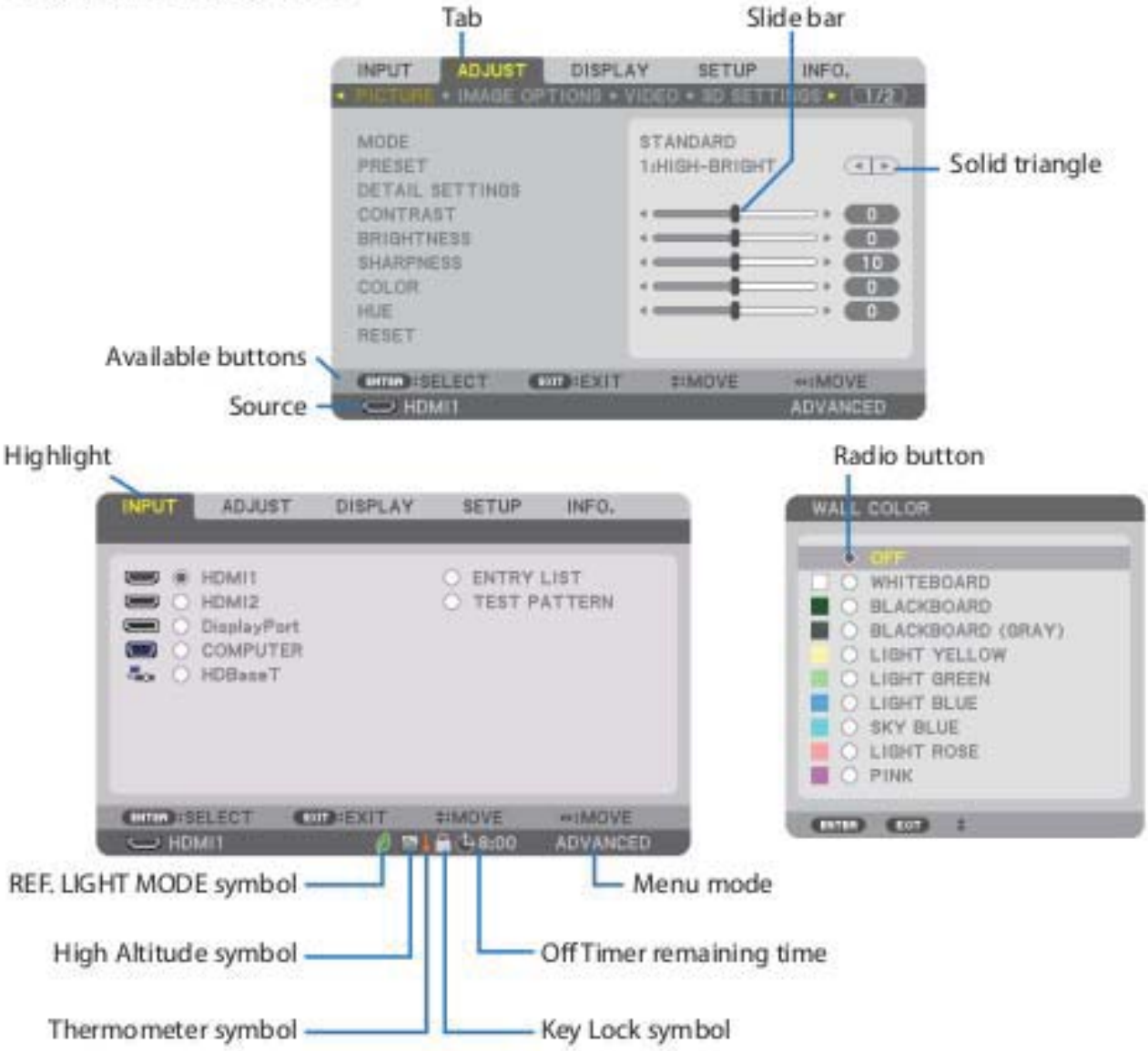
NOTE:

- When a menu or message is displayed, several lines of information may be lost, depending on the signal or settings.

8. **Press the MENU button to close the menu.**

   To return to the previous menu, press the EXIT button.

5-2. Menu Elements



Menu windows or dialog boxes typically have the following elements:

Highlight	Indicates the selected menu or item.
Solid triangle	Indicates further choices are available. A highlighted triangle indicates the item is active.
Tab	Indicates a group of features in a dialog box. Selecting on any tab brings its page to the front.
Radio button	Use this round button to select an option in a dialog box.
Source	Indicates the currently selected source.
Menu mode	Indicates the current menu mode: [BASIC] or [ADVANCED].
Off Timer remaining time	Indicates the remaining countdown time when the [OFF TIMER] is preset.
Slide bar	Indicates settings or the direction of adjustment.
REF. LIGHT MODE symbol	Indicates [REF. LIGHT MODE] is set.
Key Lock symbol	Indicates the [CONTROL PANEL LOCK] is enabled.
Thermometer symbol	Indicates the [LIGHT MODE] is forcibly set to [ON] mode because the internal temperature is too high.
High Altitude symbol	Indicates the [FAN MODE] is set to [HIGH ALTITUDE] mode.

5-3. List of Menu Items

Some menu items are not available depending on the input source.

Menu Item					Default	Options
INPUT	HDMI1				*	
	HDMI2				*	
	DisplayPort				*	
	COMPUTER				*	
	HDBaseT					
	ENTRY LIST					
	TEST PATTERN					
ADJUST	PICTURE	MODE			STANDARD	STANDARD, PROFESSIONAL
		PRESET			*	AUTO, 1:HIGH-BRIGHT, 2:PRESENTATION, 3:VIDEO, 4:MOVIE, 5:GRAPHIC, 6:sRGB, 7:DICOM SIM.
		DETAIL SETTINGS	GENERAL			
			REFERENCE		*	HIGH-BRIGHT, PRESENTATION, VIDEO, MOVIE, GRAPHIC, sRGB, DICOM SIM.
			GAMMA SETTING*1			
			SCREEN SIZE*2		*	LARGE, MEDIUM, SMALL
			COLOR TEMPERATURE*3		*	
			DYNAMIC CONTRAST		*	OFF, MOTION IMAGE, STILL IMAGE
			LIGHT MODE	LIGHT ADJUST	*	
				CONSTANT BRIGHTNESS	OFF	OFF, ON
			WHITE BALANCE			
			CONTRAST R		0	
			CONTRAST G		0	
			CONTRAST B		0	
			BRIGHTNESS R		0	
			BRIGHTNESS G		0	
			BRIGHTNESS B		0	
			COLOR CORRECTION			
			RED		0	HUE, SATURATION
			GREEN		0	HUE, SATURATION
			BLUE		0	HUE, SATURATION
			YELLOW		0	HUE, SATURATION
			MAGENTA		0	HUE, SATURATION
			CYAN		0	HUE, SATURATION
		CONTRAST			50	
		BRIGHTNESS			50	
		SHARPNESS			10	
		COLOR			50	
		HUE			0	
		RESET				

* The asterisk (*) indicates that the default setting varies depending on the signal.

*1 The [GAMMA SETTING] item is available when an item other than [DICOM SIM.] is selected for [REFERENCE].

*2 The [SCREEN SIZE] item is available when [DICOM SIM.] is selected for [REFERENCE].

*3 When [HIGH-BRIGHT] is selected in [REFERENCE], the [COLOR TEMPERATURE] is not available.

Menu Item				Default	Options
ADJUST	IMAGE OPTIONS	CLOCK		*	
		PHASE		*	
		HORIZONTAL		*	
		VERTICAL		*	
		BLANKING		*	TOP, BOTTOM, LEFT, RIGHT
		OVERSCAN			AUTO, 0[%], 5[%], 10[%]
		ASPECT RATIO		AUTO	(HDTV/SDTV) AUTO, NORMAL, 4:3, LETTERBOX, WIDE SCREEN, ZOOM, FULL
				AUTO	(COMPUTER) AUTO, NORMAL, 4:3, 5:4, 16:9, 15:9, 16:10, FULL, NATIVE
		INPUT RESOLUTION*4		*	–
	VIDEO	NOISE REDUCTION	RANDOM NR	*	OFF, LOW, MEDIUM, HIGH
			MOSQUITO NR	OFF	OFF, LOW, MEDIUM, HIGH
			BLOCK NR	OFF	OFF, LOW, MEDIUM, HIGH
		DEINTERLACE		NORMAL	NORMAL, MOVIE, STILL
		CONTRAST ENHANCEMENT	MODE	AUTO	OFF, AUTO, NORMAL
			GAIN		
		SIGNAL TYPE		AUTO	AUTO, RGB, REC601, REC709, REC2020
		VIDEO LEVEL		AUTO	AUTO, NORMAL, ENHANCED, SUPER WHITE
		HDR MODE*5		AUTO	AUTO, OFF, ON
	3D SETTINGS	FORMAT		AUTO	AUTO, OFF(2D), FRAME PACKING, SIDE BY SIDE(HALF), SIDE BY SIDE(FULL), TOP AND BOTTOM, FRAME ALTERNATIVE, LINE ALTERNATIVE
		L/R INVERT		OFF	OFF, ON
	LENS MEMORY	STORE			
		MOVE			
		RESET			
		LOAD BY SIGNAL		OFF	OFF, ON
		FORCED MUTE		OFF	OFF, ON
DISPLAY	PIP/PICTURE BY PICTURE	SUB INPUT		OFF	OFF, HDMI1, HDMI2, DisplayPort, COMPUTER, HDBaseT
		MODE		PIP	PIP, PICTURE BY PICTURE
		PICTURE SWAP		OFF	OFF, ON
		PIP SETTING	START POSITION	TOP-LEFT	TOP-LEFT, TOP-RIGHT, BOTTOM-LEFT, BOTTOM-RIGHT
			HORIZONTAL POSITION		
			VERTICAL POSITION		
			SIZE	MEDIUM	LARGE, MEDIUM, SMALL
		BORDER			
	GEOMETRIC CORRECTION	MODE		OFF	OFF, KEYSTONE, CORNERSTONE, HORIZONTAL CORNER, VERTICAL CORNER, WARP, PC TOOL
		KEYSTONE	HORIZONTAL		
			VERTICAL		
			TILT		
			THROW RATIO		
		CORNERSTONE			TOP-LEFT, TOP, TOP-RIGHT, LEFT, RIGHT, BOTTOM-LEFT, BOTTOM, BOTTOM-RIGHT
		HORIZONTAL CORNER			TOP-LEFT, TOP, TOP-RIGHT, LEFT, RIGHT, BOTTOM-LEFT, BOTTOM, BOTTOM-RIGHT
		VERTICAL CORNER			TOP-LEFT, TOP, TOP-RIGHT, LEFT, RIGHT, BOTTOM-LEFT, BOTTOM, BOTTOM-RIGHT
		WARP			TOP-LEFT, TOP, TOP-RIGHT, LEFT, RIGHT, BOTTOM-LEFT, BOTTOM, BOTTOM-RIGHT
		PC TOOL		OFF	OFF, 1, 2, 3
		RESET			

*4 The [INPUT RESOLUTION] item can be selected for [COMPUTER] input.

*5 The [HDR MODE] item is available exclusively for 4K signal.

Menu Item				Default	Options
DISPLAY	EDGE BLENDING	MODE		OFF	OFF, ON
		MARKER		OFF	OFF, ON
		TOP	CONTROL	ON	OFF, ON
			RANGE		
			POSITION		
		BOTTOM	CONTROL	ON	OFF, ON
			RANGE		
			POSITION		
		LEFT	CONTROL	ON	OFF, ON
			RANGE		
			POSITION		
		RIGHT	CONTROL	ON	OFF, ON
			RANGE		
			POSITION		
		BLEND CURVE		5	OFF, 1, 2, 3, 4, 5, 6, 7, 8, 9
		BLACK LEVEL	CENTER, TOP, BOTTOM, LEFT, RIGHT, BORDER(TOP), BORDER(BOTTOM), BORDER(LEFT), BORDER(RIGHT)		REFERENCE, RED, GREEN, BLUE, RESET
	PICTURE SETTING	MODE		OFF	OFF, ZOOM, TILING
		ZOOM	HORIZONTAL ZOOM		
			VERTICAL ZOOM		
			HORIZONTAL POSITION		
			VERTICAL POSITION		
		TILING	WIDTH		1 UNIT, 2 UNITS, 3 UNITS, 4 UNITS
			HEIGHT		1 UNIT, 2 UNITS, 3 UNITS, 4 UNITS
			HORIZONTAL POSITION		1st UNIT, 2nd UNIT, 3rd UNIT, 4th UNIT
			VERTICAL POSITION		1st UNIT, 2nd UNIT, 3rd UNIT, 4th UNIT
	MULTI SCREEN	WHITE BALANCE	MODE	OFF	OFF, ON
			CONTRAST W		
			CONTRAST R		
			CONTRAST G		
			CONTRAST B		
			BRIGHTNESS W		
			BRIGHTNESS R		
			BRIGHTNESS G		
			BRIGHTNESS B		
SETUP	MENU(1)	LANGUAGE		ENGLISH	ENGLISH, DEUTSCH, FRANÇAIS, ITALIANO, ESPAÑOL, SVENSKA, 日本語
					DANSK, PORTUGUÊS, ČEŠTINA, MAGYAR, POLSKI, NEDERLANDS, SUOMI
					NORSK, TÜRKÇE, РУССКИЙ, عربى, Ελληνικά, 简体中文, 한국어
					ROMÂNĂ, HRVATSKA, БЪЛГАРСКИ, INDONESIA, हिन्दी, ไทย, فارسی, 繁體中文, Tiếng Việt
		COLOR SELECT		COLOR	COLOR, MONOCHROME
		OSD BRIGHTNESS		10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
		INPUT DISPLAY		ON	OFF, ON
		MESSAGE DISPLAY		ON	OFF, ON
		ID DISPLAY		ON	OFF, ON
		3D CAUTION MESSAGE		ON	OFF, ON
		DISPLAY TIME		AUTO 45 SEC	MANUAL, AUTO 5 SEC, AUTO 15 SEC, AUTO 45 SEC
SETUP	MENU(2)	MENU ANGLE		0°	0°, 90°, 270°
		MENU POSITION		CENTER	TOP-LEFT, TOP-CENTER, TOP-RIGHT, CENTER-LEFT, CENTER, CENTER-RIGHT, BOTTOM-LEFT, BOTTOM-CENTER, BOTTOM-RIGHT

Menu Item				Default	Options
	INSTALLATION (1)	ORIENTATION		AUTO	AUTO, DESKTOP FRONT, CEILING REAR, DESKTOP REAR, CEILING FRONT
		SCREEN	SCREEN TYPE	FREE	FREE, 4:3 SCREEN, 16:9 SCREEN, 16:10 SCREEN
			POSITION		
		WALL COLOR		OFF	OFF, WHITEBOARD, BLACKBOARD, BLACKBOARD (GRAY), LIGHT YELLOW, LIGHT GREEN, LIGHT BLUE, SKY BLUE, LIGHT ROSE, PINK
		FAN MODE		AUTO	AUTO, NORMAL, HIGH, HIGH ALTITUDE
		REF. LIGHT MODE	REF. LIGHT MODE	NORMAL	BOOST, NORMAL, ECO1, ECO2
			REF. LIGHT ADJUST		
			CONSTANT BRIGHTNESS	OFF	OFF, ON
		REF. WHITE BALANCE	CONTRAST R		
			CONTRAST G		
			CONTRAST B		
			BRIGHTNESS R		
			BRIGHTNESS G		
			BRIGHTNESS B		
			UNIFORMITY R		
			UNIFORMITY B		
		STATIC CONVERGENCE	HORIZONTAL R		
			HORIZONTAL G		
			HORIZONTAL B		
			VERTICAL R		
			VERTICAL G		
			VERTICAL B		
	INSTALLATION (2)	SHUTTER SETTINGS	POWER ON SHUTTER	OPEN	OPEN, CLOSE
			PICTURE MUTE SHUTTER	OPEN	OPEN, CLOSE
			FADE IN TIME	0	0–10 SEC
			FADE OUT TIME	0	0–10 SEC
		REF. LENS MEMORY	PROFILE	1	1, 2
			STORE		
			MOVE		
			RESET		
			LOAD BY SIGNAL	OFF	OFF, ON
			FORCED MUTE	OFF	OFF, ON
		LENS POSITION	HOME		
		LENS CALIBRATION			
		COLOR UNIFORMITY (TOOL)		OFF	OFF, 1, 2, 3
		GAMMA (TOOL)		OFF	OFF, 1, 2, 3

Menu Item							Default	Options
SETUP	CONTROL	TOOLS	ADMINISTRATOR MODE	MENU MODE			ADVANCED	ADVANCED, BASIC
				NOT SAVE SETTING VALUES			OFF	OFF, ON
				NEW PASSWORD				
				CONFIRM PASSWORD				
			PROGRAM TIMER	ENABLE			OFF	OFF, ON
				SETTINGS	EDIT	ACTIVE		
						DAY		
						TIME		
						FUNCTION		
						ADVANCED SETTINGS		
						REPEAT		
			DATE AND TIME SETTINGS	TIME ZONE SETTINGS				
				DATE AND TIME SETTINGS				
				SUMMER TIME SETTINGS				
			MOUSE	BUTTON			RIGHT HAND	RIGHT HAND, LEFT HAND
				SENSITIVITY			MEDIUM	FAST, MEDIUM, SLOW
		CONTROL PANEL LOCK					OFF	OFF, ON
		SECURITY					OFF	OFF, ON
		COMMUNICATION SPEED					38400bps	4800bps, 9600bps, 19200bps, 38400bps, 115200bps
		PC CONTROL(HDBaseT)					OFF	OFF, ON
		CONTROL ID	CONTROL ID NUMBER				1	1–254
			CONTROL ID				OFF	OFF, ON
		REMOTE SENSOR					FRONT/BACK	FRONT/BACK, FRONT, BACK, HDBaseT
	NETWORK SETTINGS	NETWORK PASSWORD						
		WIRED LAN	INTERFACE					LAN, HDBaseT
			PROFILES					DISABLE, PROFILE 1, PROFILE 2
			DHCP					OFF, ON
			IP ADDRESS					
			SUBNET MASK					
			GATEWAY					
			AUTO DNS					OFF, ON
			DNS CONFIGURATION					
			RECONNECT					
		PROJECTOR NAME	PROJECTOR NAME					PJ-*******
		DOMAIN	HOST NAME					pj-*******
			DOMAIN NAME					
		ALERT MAIL	ALERT MAIL					OFF, ON
			HOST NAME					pj-*******
			DOMAIN NAME					
			SENDER'S ADDRESS					
			SMTP SERVER NAME					
			RECIPIENT'S ADDRESS 1					
			RECIPIENT'S ADDRESS 2					
			RECIPIENT'S ADDRESS 3					
			TEST MAIL					

Menu Item						Default	Options
SETUP	NETWORK SETTINGS	NETWORK SERVICE	SERVICES	HTTP SERVER		ON	OFF, ON, AUTH.
				PJLink	NEW PASSWORD		
					CONFIRM PASSWORD		
					CLASS		CLASS1, CLASS2
					DESTINATION		
				AMX BEACON		OFF	OFF, ON
				CRESTRON	ROOMVIEW	OFF	OFF, ON
					CRESTRON CONTROL (ENABLE, CONTROLLER IP ADDRESS, IP ID)		
				Extron XTP		OFF	OFF, ON
				PC CONTROL		ON	OFF, ON
				AUTH. PC CONTROL		ON	OFF, ON
				Art-Net	Art-Net	OFF	OFF, ON
					[2.x.x.x]		
					[10.x.x.x]		
					SETTINGS		
					CHANNEL		
			ACCOUNT	USER1, USER2, USER3	REGISTER		
					CHANGE USER NAME		
					CHANGE PASSWORD		
					ENABLE	ON	OFF, ON
					DELETE		
			PASSCODE				
	SOURCE OPTIONS	AUTO ADJUST				NORMAL	OFF, NORMAL, FINE
		AUDIO SELECT		HDMI1		HDMI1	HDMI1, COMPUTER
				HDMI2		HDMI2	HDMI2, COMPUTER
				DisplayPort		DisplayPort	DisplayPort, COMPUTER
				HDBaseT		HDBaseT	HDBaseT, COMPUTER
		DEFAULT INPUT SELECT				LAST	LAST, AUTO, HDMI1, HDMI2, DisplayPort, COMPUTER, HDBaseT
		SEAMLESS SWITCHING				OFF	OFF, ON
		BACKGROUND				BLUE	BLUE, BLACK, LOGO
		HDBaseT OUT SELECT				OFF	OFF, AUTO, HDMI1, HDMI2, DisplayPort, HDBaseT
		EDID VERSION		HDMI1		MODE1	MODE1, MODE2
				HDMI2		MODE1	MODE1, MODE2
		HDCP VERSION		HDMI1		HDCP 2.2	HDCP 2.2, HDCP 1.4
				HDMI2		HDCP 2.2	HDCP 2.2, HDCP 1.4
				HDBaseT		HDCP 1.4	HDCP 2.2, HDCP 1.4
	POWER OPTIONS	POWER-SAVING				ON	OFF, ON
		DIRECT POWER ON				OFF	OFF, ON
		AUTO POWER ON SELECT				OFF	OFF, HDMI1, HDMI2, DisplayPort, COMPUTER, HDBaseT
		AUTO POWER OFF				0:15	OFF, 0:05, 0:10, 0:15, 0:20, 0:30, 1:00
		OFF TIMER				OFF	OFF, 0:30, 1:00, 2:00, 4:00, 8:00, 12:00, 16:00
	RESET	CURRENT SIGNAL					
		ALL DATA					
		ALL DATA (INCLUDING ENTRY LIST)					

Menu Item			Default	Options
INFO.	USAGE TIME	LIGHT HOURS USED		
		PROJECTOR HOURS USED		
		TOTAL CARBON SAVINGS		
	SOURCE (1)	INPUT TERMINAL		
		RESOLUTION		
		HORIZONTAL FREQUENCY		
		VERTICAL FREQUENCY		
		SYNC TYPE		
		SYNC POLARITY		
		SCAN TYPE		
		SOURCE NAME		
		ENTRY NO.		
	SOURCE (2)	SIGNAL TYPE		
		BIT DEPTH		
		VIDEO LEVEL		
		SAMPLING FREQUENCY		
		3D FORMAT		
	SOURCE (3)	INPUT TERMINAL		
		RESOLUTION		
		HORIZONTAL FREQUENCY		
		VERTICAL FREQUENCY		
		SYNC TYPE		
		SYNC POLARITY		
		SCAN TYPE		
		SOURCE NAME		
		ENTRY NO.		
	SOURCE (4)	SIGNAL TYPE		
		BIT DEPTH		
		VIDEO LEVEL		
		SAMPLING FREQUENCY		
		3D FORMAT		
	WIRED LAN	IP ADDRESS		
		SUBNET MASK		
		GATEWAY		
		MAC ADDRESS		
		DNS		
	VERSION	SOFTWARE		
	OTHERS	DATE TIME		
		PROJECTOR NAME		
		MODEL NO.		
		SERIAL NUMBER		
		CONTROL ID*6		
		LENS ID		
	CONDITIONS	INTAKE TEMPERATURE		
		EXHAUST TEMPERATURE		
		ATMOSPHERIC PRESSURE		
		INSTALLATION POSITION		
		X-AXIS		
		Y-AXIS		
		Z-AXIS		
		OPTION COVER		

*6 [CONTROL ID] will be displayed when [CONTROL ID] has been set up.

Menu Item			Default	Options
INFO	HDBaseT	SIGNAL QUALITY		
		OPERATION MODE		
		LINK STATUS		
		HDMI STATUS		
	Art-Net(1)	Ch1		
		Ch2		
		Ch3		
		Ch4		
		Ch5		
		Ch6		
		Ch7		
		Ch8		
		Ch9		
	Art-Net(2)	Ch10		
		Ch11		
		Ch12		

5-4. Menu Descriptions & Functions [INPUT]



HDMI1

This projects the video of the device connected to the HDMI 1 IN terminal.

HDMI2

This projects the video of the device connected to the HDMI 2 IN terminal.

DisplayPort

This projects the video of the device connected to the DisplayPort IN terminal.

COMPUTER

This projects the video of the device connected to the computer video input terminal.
(This projects the analog RGB signal or component signal.)

HDBaseT

Projecting the HDBaseT signal.

ENTRY LIST

Displays a list of signals. See the following pages.

TEST PATTERN

Closes the menu and switches to the test pattern screen.

Using the Entry List

When any source adjustments are made, the adjustments are automatically registered in the Entry List. The (adjustment values of) registered signals can be loaded from the Entry List whenever necessary.

However, only up to 100 patterns can be registered in the Entry List. When 100 patterns have been registered in the Entry List, an error message is then displayed and no additional patterns can be registered. You should thus delete (adjustment values of) signals that are no longer needed.

Displaying the Entry list

1. **Press the MENU button.**

   The menu will be displayed.

2. **Press the ◄ or ► button to select [INPUT].**

   The [INPUT] list will be displayed.



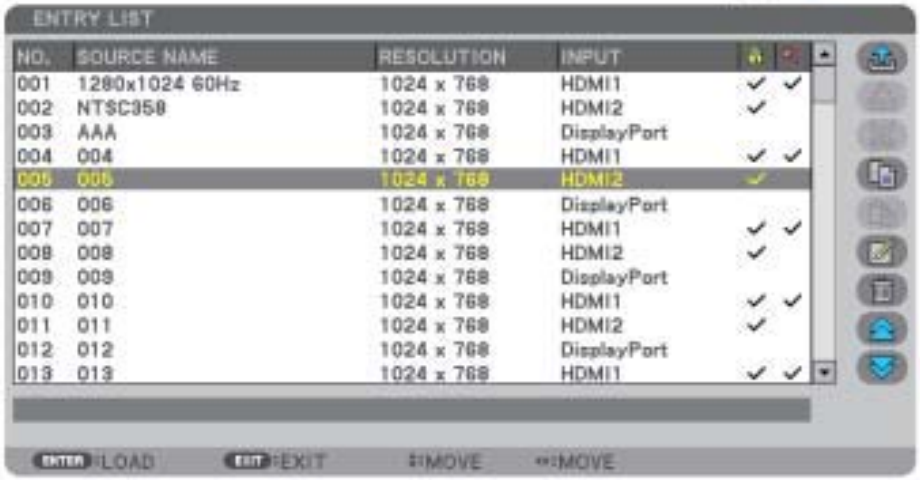
* This screen belongs to a HDBaseT model.

3. **Use the ◄, ►, ▲, or ▼ to select [ENTRY LIST] and press the ENTER button.**

   The [ENTRY LIST] windows will be displayed.

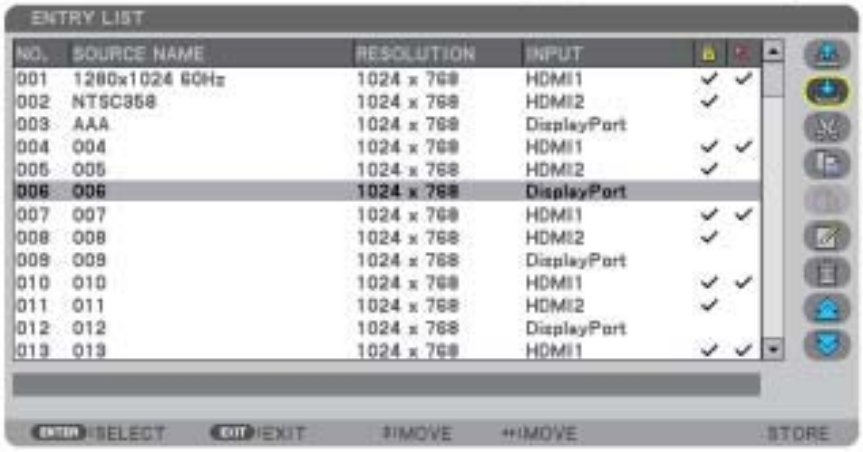
   If the [ENTRY LIST] window is not displayed, switch the menu to [ADVANCED].

   To switch the menu between [ADVANCED] and [BASIC], select [SETUP] → [CONTROL] → [TOOLS] → [ADMINISTRATOR MODE] → [MENU MODE]. (→ page 132)



Entering the currently projected signal into the Entry List [(STORE)]

1. Press the ▲ or ▼ button to select any number.
2. Press the ◄ or ► button to select [(STORE)] and press the ENTER button.



Calling up a signal from the Entry List [(LOAD)]

1. Press the ▲ or ▼ button to select a signal and press the ENTER button.

Editing a signal from the Entry List [(EDIT)]

1. Press the ▲ or ▼ button to select a signal you wish to edit.
2. Press the ◄, ►, ▲, or ▼ button to select [(EDIT)] and press the ENTER button.
   The [EDIT] window will be displayed.



SOURCE NAME	Enter a signal name. Up to 18 alphanumeric characters can be used.
INPUT	The input terminal can be changed. Switching between HDMI1/HDMI2/DisplayPort/COMPUTER/HDBaseT is possible.
LOCK	Set so that the selected signal cannot be deleted when [(ALL DELETE)] is executed. The changes made after LOCK execution cannot be saved.
SKIP	Set so that the selected signal will be skipped during auto search.

3. Set the above items and select [OK] and press the ENTER button.

NOTE:
- The input terminal cannot be changed to the currently projected signal.

Cutting a signal from the Entry List [(CUT)]

1. **Press the ▲ or ▼ button to select a signal you wish to delete.**
2. **Press the ◄, ►, ▲, or ▼ button to select [(CUT)] and press the ENTER button.**
   The signal will be deleted from the Entry List and the deleted signal will be displayed on the clipboard at the bottom of the Entry List.

NOTE:
- The currently projected signal cannot be deleted.
- When the locked signal is selected, it will be displayed in gray which indicates it is not available.

TIP:
- Data on the clipboard can be passed onto the Entry List.
- Data on the clipboard will not be lost after the Entry List is closed.

Copying and pasting a signal from the Entry List [(COPY)] / [(PASTE)]

1. **Press the ▲ or ▼ button to select a signal you wish to copy.**
2. **Press the ◄, ►, ▲, or ▼ button to select [(COPY)] and press the ENTER button.**
   The copied signal will be displayed on the clipboard at the bottom of the Entry List.
3. **Press the ◄ or ► button to move to the list.**
4. **Press the ▲ or ▼ button to select a signal.**
5. **Press the ◄, ►, ▲, or ▼ button to select [(PASTE)] and press the ENTER button.**
   Data on the clipboard will be pasted to the signal.

Deleting all the signals from the Entry List [(ALL DELETE)]

1. **Press the ◄, ►, ▲, or ▼ button to select [(ALL DELETE)] and press the ENTER button.**
   The confirmation message will be displayed.
2. **Press the ◄ or ► button to select [YES] and press the ENTER button.**

NOTE:
- The locked signal cannot be deleted.

Using Test Pattern [TEST PATTERN]

Displays the test pattern for adjusting distortion on the screen and the focus at the time of the projector setup. Once the [TEST PATTERN] on the onscreen menu is selected, the pattern for adjustment will be displayed on. If you find distortion on the pattern, adjust the projector installation angle or correct distortion by pressing the Geometric. button on the remote. If the focus adjustment is required, press the FOCUS button on the remote control for displaying the [FOCUS] adjustment screen and then adjust [FOCUS] by ◄ or ► button. Recommend to perform the focus adjustment after leaving the projector under the state the TEST PATTERN has been projected for over 30 minutes. Press EXIT button to close the test pattern and return to the menu.

5-5. Menu Descriptions & Functions [ADJUST]

[PICTURE]



[MODE]

This function allows you to determine how to save settings for [DETAIL SETTINGS] of [PRESET] for each input.

STANDARD	Saves settings for each item of [PRESET] (Preset 1 through 7)
PROFESSIONAL	Saves all the settings of [PICTURE] for each input.

NOTE:

- When [TEST PATTERN] is displayed, [MODE] cannot be selected.

[PRESET]

This function allows you to select optimized settings for your projected image.
You can adjust neutral tint for yellow, cyan or magenta.
There are seven factory presets optimized for various types of images. You can also use [DETAIL SETTINGS] to set user adjustable settings to customize each gamma or color.
Your settings can be stored in [PRESET] 1 to [PRESET] 7.

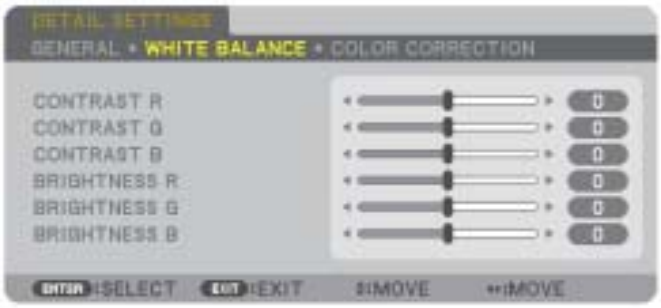
AUTO	Automatically distinguish the optimal setting for the input signal.
HIGH-BRIGHT	Recommended for use in a brightly lit room.
PRESENTATION	Recommended for making a presentation using a PowerPoint file.
VIDEO	Recommended for typical TV program viewing.
MOVIE	Recommended for movies.
GRAPHIC	Recommended for graphics.
sRGB	Standard color values
DICOM SIM.	Recommended for DICOM simulation format.

NOTE:

- The [DICOM SIM.] option is for training/reference only and should not be used for actual diagnosis.
- DICOM stands for Digital Imaging and Communications in Medicine. It is a standard developed by the American College of Radiology (ACR) and the National Electrical Manufacturers Association (NEMA).
  The standard specifies how digital image data can be moved from system to system.

[DETAIL SETTINGS]







[GENERAL]

Storing Your Customized Settings [REFERENCE]

This function allows you to store your customized settings in [PRESET 1] to [PRESET 7].
First, select a base preset mode from [REFERENCE], then set [GAMMA SETTING] and [COLOR TEMPERATURE].

HIGH-BRIGHT	Recommended for use in a brightly lit room.
PRESENTATION	Recommended for making a presentation using a PowerPoint file.
VIDEO	Recommended for typical TV program viewing.
MOVIE	Recommended for movies.
GRAPHIC	Recommended for graphics.
sRGB	Standard color values.
DICOM SIM.	Recommended for DICOM simulation format.

Adjusting the gradation of the picture [GAMMA SETTING]

Adjusts the gradation of the picture. With this, even dark areas can be reproduced vividly.

NOTE:

- This function is not available when [DICOM SIM.] is selected for [DETAIL SETTINGS].

Selecting Screen Size for DICOM SIM [SCREEN SIZE]

This function will perform gamma correction appropriate for the screen size.

LARGE	For screen size of 300"
MEDIUM	For screen size of 200"
SMALL	For screen size of 100"

NOTE:

- This function is available only when [DICOM SIM.] is selected for [DETAIL SETTINGS].

Adjusting Color Temperature [COLOR TEMPERATURE]

This option allows you to select the color temperature of your choice.
A value between 5000 K and 10500 K can be set in 100 K units.

NOTE:

- When [HIGH-BRIGHT] is selected in [REFERENCE], this function is not available.

Adjusting Brightness and Contrast [DYNAMIC CONTRAST]

When set, the most optimal contrast ratio is adjusted according to the video.

OFF	Dynamic contrast is disabled.
MOTION IMAGE	Most optimal settings for moving images.
STILL IMAGE	Most optimal settings for static images. Rapidly follows any changes in the video.

NOTE:

- [DYNAMIC CONTRAST] cannot be selected in the following cases.[]
  - When the [REF. LIGHT MODE] is set to [ECO2]
  - When the input terminal is selected for [SUB INPUT] under [PIP/PICTURE BY PICTURE]
  - When performing [GEOMETRIC CORRECTION]
  - When [EDGE BLENDING] → [MODE] is set to [ON]
  - When [PICTURE SETTING] → [MODE] is set to [ZOOM] or [TILING]
  - When [MULTI SCREEN] → [WHITE BALANCE] → [MODE] is set to [ON]
  - When [FAN MODE] is set to [HIGH] or [HIGH ALTITUDE]
  - When performing portrait projection

Adjusting Brightness [LIGHT MODE]

Adjust the brightness of the projector and save it for each input signal.
With the [REF. LIGHT MODE] set to [NORMAL], the adjustment will be valid if the [PICTURE] → [MODE] is set to [PROFESSIONAL]. (→ page 96, 128)

LIGHT ADJUST		Brightness can be adjusted in 1% increments from 50 to 100%.
CONSTANT BRIGHTNESS	OFF	[CONSTANT BRIGHTNESS] mode will be canceled.
	ON	Maintains the brightness that is in effect at the time [ON] is selected. Unless [OFF] is selected, the same settings will remain in effect even when the projector is turned off. • To re-adjust the brightness, first turn this setting [OFF] before making further adjustments. NOTE: • The [CONSTANT BRIGHTNESS] setting will not be saved for each input signal.

Adjusting White Balance [WHITE BALANCE]

This allows you to adjust the white balance. Contrast for each color (RGB) to adjust the white level of the screen; Brightness for each color (RGB) is used to adjust the black level of the screen.

[COLOR CORRECTION]

Corrects the color for all signals.
Adjusts the tone for the colors red, green, blue, yellow, magenta and cyan.

RED	HUE	+ Direction	Magenta direction
		− Direction	Yellow direction
	SATURATION	+ Direction	Vivid
		− Direction	Weak
GREEN	HUE	+ Direction	Yellow direction
		− Direction	Cyan direction
	SATURATION	+ Direction	Vivid
		− Direction	Weak
BLUE	HUE	+ Direction	Cyan direction
		− Direction	Magenta direction
	SATURATION	+ Direction	Vivid
		− Direction	Weak
YELLOW	HUE	+ Direction	Red direction
		− Direction	Green direction
	SATURATION	+ Direction	Vivid
		− Direction	Weak
MAGENTA	HUE	+ Direction	Blue direction
		− Direction	Red direction
	SATURATION	+ Direction	Vivid
		− Direction	Weak

CYAN	HUE	+ Direction	Green direction
		− Direction	Blue direction
	SATURATION	+ Direction	Vivid
		− Direction	Weak

[CONTRAST]

Adjusts the intensity of the image according to the incoming signal.

[BRIGHTNESS]

Adjusts the brightness level or the back raster intensity.

[SHARPNESS]

Controls the detail of the image.

[COLOR]

Increases or decreases the color saturation level.

[HUE]

Varies the color level from +/− green to +/− blue. The red level is used as reference.

NOTE:

- When [TEST PATTERN] is displayed, [CONTRAST], [BRIGHTNESS], [SHARPNESS], [COLOR] and [HUE] cannot be adjusted.

[RESET]

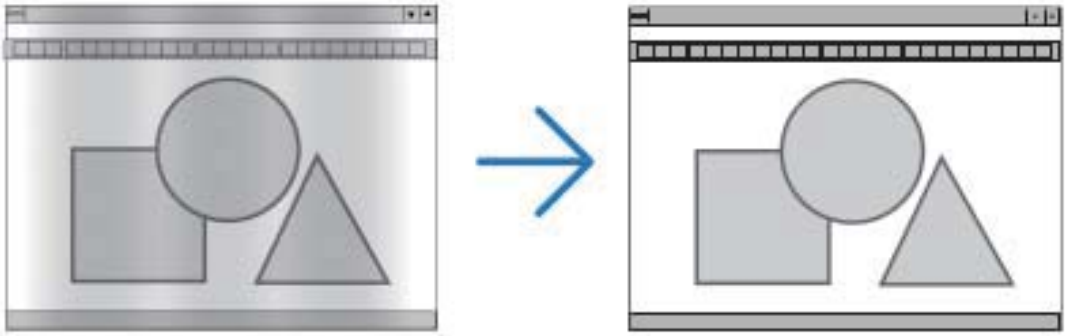
The settings and adjustments for [PICTURE] will be returned to the factory default settings with the exception of the following; Preset numbers and [REFERENCE] within the [PRESET] screen.
The settings and adjustments under [DETAIL SETTINGS] within the [PRESET] screen that are not currently selected will not be reset.

[IMAGE OPTIONS]

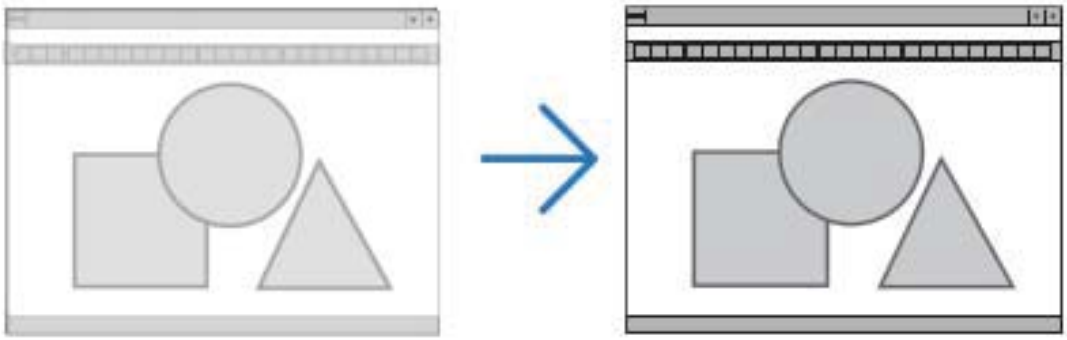


Adjusting Clock and Phase [CLOCK/PHASE]

This allows you to manually adjust [CLOCK] and [PHASE].



CLOCK	Use this item to fine tune the computer image or to remove any vertical banding that might appear. This function adjusts the clock frequencies that eliminate the horizontal banding in the image. This adjustment may be necessary when you connect your computer for the first time.



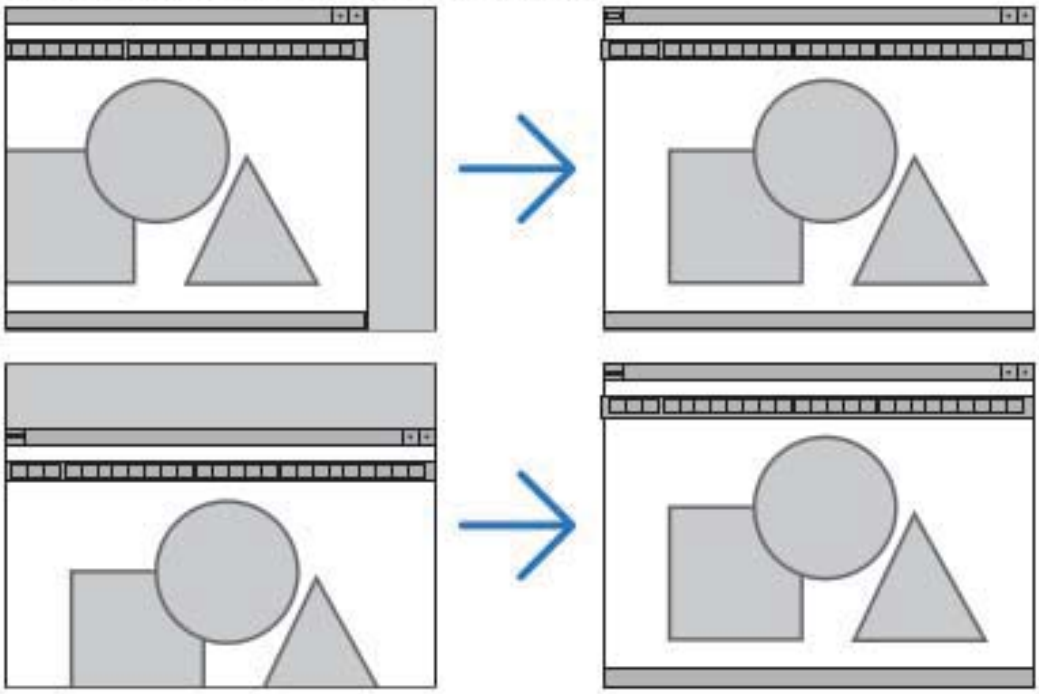
PHASE	Use this item to adjust the clock phase or to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.) Use [PHASE] only after the [CLOCK] is complete.

NOTE:

- The [CLOCK] and [PHASE] items are available for RGB signals only.

Adjusting Horizontal/Vertical Position [HORIZONTAL/VERTICAL]

Adjusts the image location horizontally and vertically.

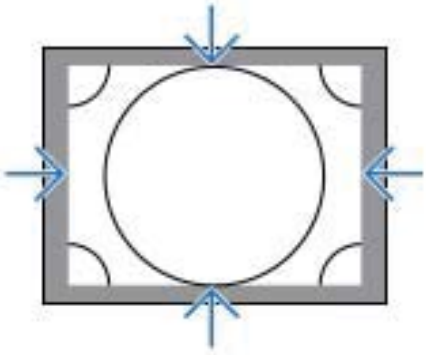


NOTE:

- An image can be distorted during the adjustment of [CLOCK] and [PHASE]. This is not malfunction.
- The adjustments for [CLOCK], [PHASE], [HORIZONTAL], and [VERTICAL] will be stored in memory for the current signal. The next time you project the signal with the same resolution, horizontal and vertical frequency, its adjustments will be called up and applied. To delete adjustments stored in memory, from the menu, you select [SETUP] → [RESET] → [CURRENT SIGNAL] and reset the adjustments.

[BLANKING]

Adjusts the display range (blanking) at the top, bottom, left and right edges of the input signal.

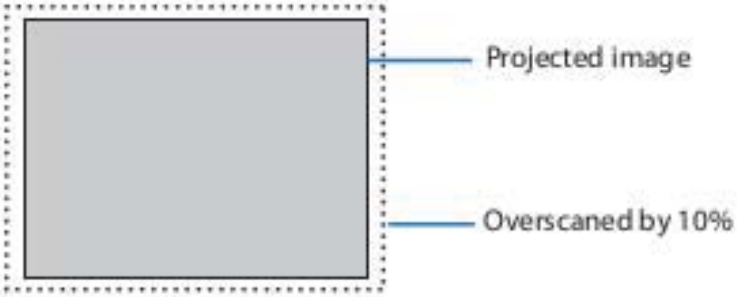


NOTE:

- This can be set when [3D SETTINGS] → [FORMAT] is set to [OFF(2D)].

Selecting Overscan Percentage [OVERSCAN]

Select overscan percentage (Auto, 0%, 5% and 10%) for signal.



NOTE:

- The [OVERSCAN] item is not available:
  - when [NATIVE] is selected for [ASPECT RATIO].

Selecting the Aspect Ratio [ASPECT RATIO]

Use this function to select the screen's lateral:longitudinal aspect ratio.
The projector automatically identifies the signal being input and sets the optimum aspect ratio.

For Computer signal

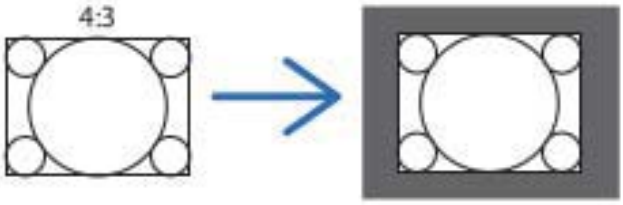
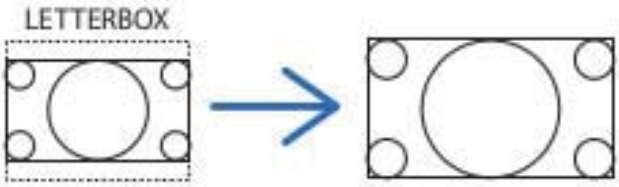
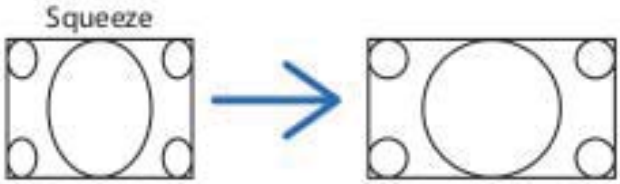


For HDTV/SDTV signals



Resolution		Aspect Ratio
VGA	640 × 480	4:3
SVGA	800 × 600	4:3
XGA	1024 × 768	4:3
WXGA	1280 × 768	15:9
WXGA	1280 × 800	16:10
HD(FWXGA)	1366 × 768	approx. 16:9
WXGA+	1440 × 900	16:10
SXGA	1280 × 1024	5:4
SXGA+	1400 × 1050	4:3
WXGA++	1600 × 900	16:9
UXGA	1600 × 1200	4:3
WSXGA+	1680 × 1050	16:10
FHD(1080P)	1920 × 1080	16:9
WUXGA	1920 × 1200	16:10
WQXGA	2560 × 1600	16:10
Quad HD	3840 × 2160	16:9
Quad HD	4096 × 2160	19:7

Options	Function
AUTO	The projector will automatically determine the incoming signal and display it in its aspect ratio. The projector may erroneously determine the aspect ratio depending on its signal. If this occurs, select the appropriate aspect ratio from the following.
NORMAL	The image is displayed in its original aspect ratio of its input signal.
4:3	The image is displayed in 4:3 aspect ratio.
5:4	The image is displayed in 5:4 aspect ratio
16:9	The image is displayed in 16:9 aspect ratio
15:9	The image is displayed in 15:9 aspect ratio
16:10	The image is displayed in 16:10 aspect ratio

Options	Function
NATIVE	The projector displays the current image in its true resolution when the incoming computer signal has a lower or higher resolution than the projector's native resolution. (→ page 182) When the incoming computer signal has a higher resolution than the projector's native resolution, the center of an image will be displayed. 
LETTERBOX	The image of a letterbox signal (16:9) is stretched equally in the horizontal and vertical directions to fit the screen. 
WIDE SCREEN	The image of a squeeze signal (16:9) is stretched left and right in 16:9. 
ZOOM	The image of a squeeze signal (16:9) is stretched left and right in 4:3. Parts of the displayed image are cropped at the left and right edges and therefore not visible. 
FULL	Project to full screen size.

TIP:

- Image position can be adjusted vertically using [POSITION] when the [16:9], [15:9], or [16:10] aspect ratios are selected.
- The term "letterbox" refers to a more landscape-oriented image when compared to a 4:3 image, which is the standard aspect ratio for a vide source.
  The letterbox signal has aspect ratios with the vista size "1.85:1" or cinema scope size "2.35:1" for movie film.
- The term "squeeze" refers to the compressed image of which aspect ratio is converted from 16:9 to 4:3.

[INPUT RESOLUTION]

The resolution is assigned automatically when the resolution of the input signal from the computer video input terminal (analog RGB) cannot be distinguished.

[VIDEO]



Using Noise Reduction [NOISE REDUCTION]

When projecting a video image, you can use the [NOISE REDUCTION] function to reduce the screen noise (roughness and distortion). This device is equipped with three types of noise reduction functions. Select the function according to the type of noise. Depending on the noise level, the noise reduction effect can be set to [OFF], [LOW], [MEDIUM] or [HIGH]. [NOISE REDUCTION] can be selected for SDTV, HDTV signal and component signal input.

RANDOM NR	Reduces flickering random noise in an image.
MOSQUITO NR	Reduces mosquito noise that appears around the edges of an image during Blu-ray playback.
BLOCK NR	Reduces block noise or mosaic-like patterns.

Selecting Interlaced Progressive Conversion Process Mode [DEINTERLACE]

This function allows you to select an interlaced-to-progressive conversion process for video signals.

NORMAL	Automatically distinguishes a moving image from a static image to create a distinct image. Please select [MOVIE] if there are any obvious jitter and noises.
MOVIE	Select when projecting moving images. This is suitable for signals with a lot of jitter and noise.
STILL	Select when projecting static images. The video will flicker when a moving image is projected.

[CONTRAST ENHANCEMENT]

Using the characteristics of the human eye, a picture quality with a sense of contrast and resolution is achieved.

OFF	[CONTRAST ENHANCEMENT] function is disabled.
AUTO	Contrast and picture quality are automatically improved using this function.
NORMAL	Adjust the gain manually.

[SIGNAL TYPE]

Selection of RGB and component signals. Normally, this is set to [AUTO]. Please change the setting if the color of the image remains unnatural.

AUTO	Automatically distinguishes RGB and component signals.
RGB	Switches to the RGB input.
REC601	Switches to the component signal conforming to the ITU-R Rec601 standard. Setting appropriate to SDTV images.
REC709	Switches to the component signal conforming to the ITU-R Rec709 standard. Setting appropriate to Hi-Vision images.
REC2020	Switches to the component signal conforming to the ITU-R Rec2020 standard. Setting appropriate to 4K images.

[VIDEO LEVEL]

Selection of the video signal level when connecting an external device to the HDMI 1 IN terminal, HDMI 2 IN terminal, DisplayPort input terminal, and HDBaseT IN terminal of the projector.

AUTO	The video level is switched automatically based on the information from the device outputting the signal. Depending on the connected device, this setting may not be made properly. In this case, switch to [NORMAL] or [ENHANCED] from the menu and view with the optimum setting.
NORMAL	This disables the enhanced mode.
ENHANCED	This improves the image's contrast, expressing the dark and light sections more dynamically.
SUPER WHITE	The video contrast is improved and the dark areas appear more dynamic.

[HDR MODE]

AUTO	Automatically distinguishes HDR signal.
OFF	Projects the image based on the input signal
ON	Projects the image conforming to the HDR signal

NOTE:

- These options are available exclusively for 4K signal.

[3D SETTINGS]



[FORMAT]

Select the 3D video format (recording / transmission format). Select to match the 3D broadcast and 3D media. Normally, [AUTO] is selected. Please select the 3D input signal format when the 3D detection signal of the format cannot be distinguished.

[L/R INVERT]

Invert the display order of the left and right videos.
Select [ON] if you feel uncomfortable with the 3D display when [OFF] is selected.

Using the Lens Memory Function [LENS MEMORY]



This function serves to store the adjusted values for each input signal when using the [LENS SHIFT], motorized [ZOOM], and motorized [FOCUS] functions of the projector. Adjusted values can be applied to the signal you selected. This will eliminate the need to adjust lens shift, focus, and zoom at the time of source selection.

STORE	Stores the current adjusted values in memory for each input signal.
MOVE	Applies the adjusted values to the current signal.
RESET	Returns the adjusted values to the last condition.
LOAD BY SIGNAL	Moves the lens to the registered lens adjustment position when the signal is switched.
FORCED MUTE	Select whether to mute the picture or not when moving the lens.

- This function is not available for the lens unit NP44ML.

TIP:

- Lens memory adjustments will be automatically registered the [ENTRY LIST]. These lens memory adjustments can be loaded from the [ENTRY LIST]. (→ page 93)
  Note that performing [CUT] or [ALL DELETE] in the [ENTRY LIST] will delete lens memory adjustments as well as source adjustments. This deletion will not take effect until other adjustments is loaded.
- For storing each adjustment of [LENS SHIFT], motorized [ZOOM], and motorized [FOCUS] as common value for all input signal, store them as [REF. LENS MEMORY].

To store your adjusted values in [LENS MEMORY]:

1. **Project the connected device signal you want to adjust.**
2. **Adjust the projecting image of position, size and focus by the SHIFT/HOME POSITION, ZOOM +/–, and FOCUS +/– buttons.**
   - Adjustment can be performed by the remote control. Please refer to "2-5 Adjusting the Picture Size and Position" on page 26.
   - Slight adjustment by moving the projector position and by the tilt foot is not subject of [LENS MEMORY].
3. **Move the cursor on [STORE] and press ENTER.**



4. **Move the cursor on [YES] and press ENTER.**

To call up the adjusted values from [LENS MEMORY]:

1. **From the menu, select [ADJUST] → [LENS MEMORY] → [MOVE] and press the ENTER button.**



The confirmation screen will be displayed.

2. **Press the ◄ button to select and [YES] and press the ENTER button.**

   During projection, if the adjusted values for an input signal have been saved, the lens will shift. If not, the lens will shift according to the adjusted values stored in the selected [REF. LENS MEMORY] → [PROFILE] number.

To automatically apply the adjusted values at the time of source selection:

1. **From the menu, select [LOAD BY SIGNAL] and press the ENTER button.**



2. **Press the ▼ button to select and [ON] and press the ENTER button.**

   This will move the lens automatically to the position at the time of source selection according to the adjusted values.



NOTE:

- The [LENS MEMORY] function may not produce a completely aligned image (due to tolerances in the lenses) using the adjusted values stored in the projector. After calling up and applying the adjusted values from the [LENS MEMORY] function, finely adjust the [LENS SHIFT], [ZOOM] and [FOCUS] to produce the best possible image.

5-6. Menu Descriptions & Functions [DISPLAY]

[PIP/PICTURE BY PICTURE]



SUB INPUT

Select the input signal to be displayed in the sub-display.
Please refer to "4-2. Using a single projector to project two types of videos at the same time [PIP/PICTURE BY PICTURE]" (→ page 67) for details on the operation.

MODE

Select either [PIP] (PICTURE IN PICTURE) or [PICTURE BY PICTURE] when switching to 2-screen display.

PICTURE SWAP

The videos in the main display and sub-display will be switched.
Please refer to "4-2. Using a single projector to project two types of videos at the same time [PIP/PICTURE BY PICTURE]" (→ page 67) for details.

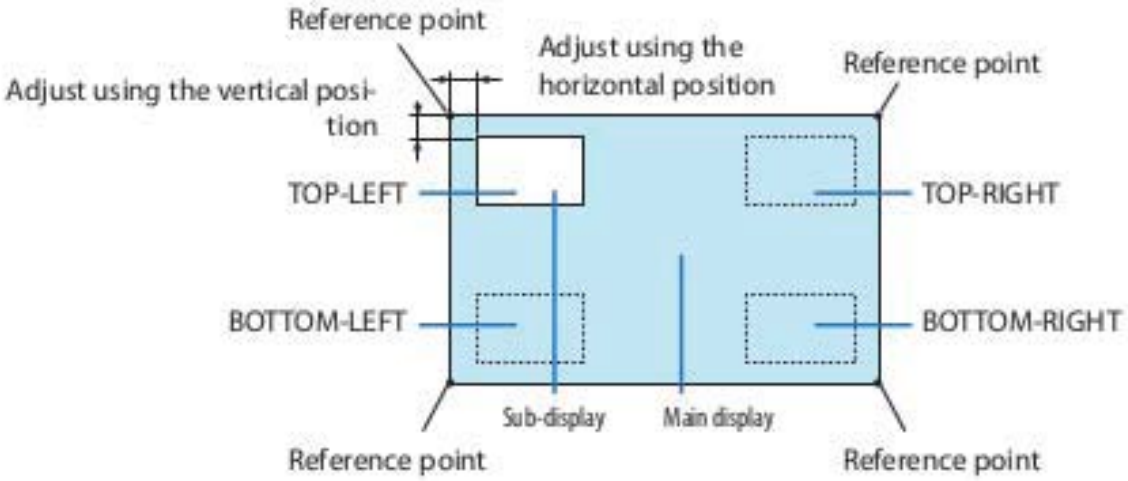
PIP SETTING

Select the display position, position adjustment and size of the sub-display in the [PIP] screen.

START POSITION	Selection of the display position of the sub-display when switching to the [PIP] screen.
HORIZONTAL POSITION	Adjust the display position of the sub-display in the horizontal direction. The respective corners will serve as reference points.
VERTICAL POSITION	Adjust the display position of the sub-display in the vertical direction. The respective corners will serve as reference points.
SIZE	Select the display size of the sub-display.

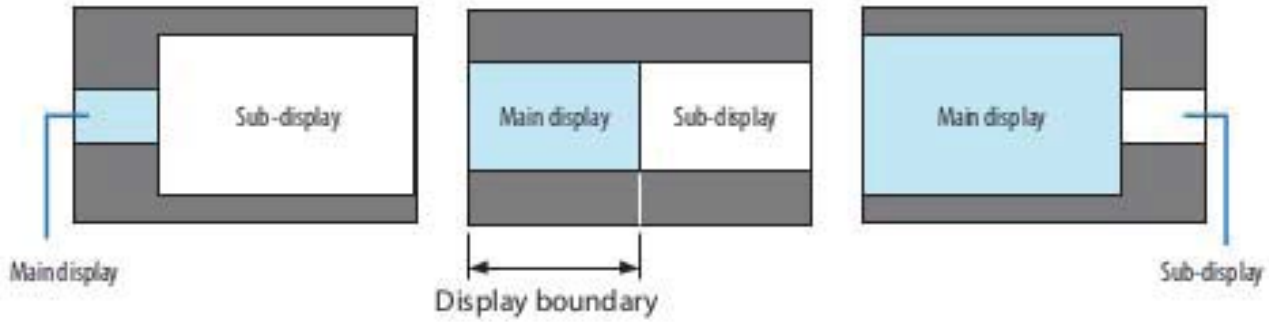
TIP:

- The [HORIZONTAL POSITION] and [VERTICAL POSITION] are the amount of movement from the reference points. For example, when [TOP-LEFT] is adjusted, the position is displayed with the same amount of movement even if displayed with other [START POSITION] settings.
  The maximum amount of movement is half the resolution of the projector.



BORDER

Select the display boundary of the main display and sub-display of the [PICTURE BY PICTURE] screen.



TIP:

- Seven options from zero to six are available.

[GEOMETRIC CORRECTION]



MODE

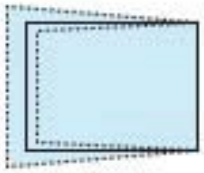
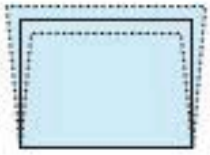
Set pattern for correcting distortion. If [OFF] is selected, the [GEOMETRIC CORRECTION] becomes ineffective.

NOTE:

- If you need to change the [MENU ANGLE], make sure to change it before performing the [GEOMETRIC CORRECTION]. If [MENU ANGLE] is changed after performing the [GEOMETRIC CORRECTION], corrected values will be reset to the default values.
- This can be set when [3D SETTINGS] → [FORMAT] is set to [OFF(2D)].

KEYSTONE

Correct distortion in horizontal and vertical directions.

<table>
<tr><td>HORIZONTAL</td><td>Adjustments when projecting from a diagonal direction to the screen.  </td></tr>
<tr><td>VERTICAL</td><td>Adjustments when projecting from the top or bottom direction to the screen.  </td></tr>
<tr><td>TILT</td><td>Adjusts the distortion when performing trapezoidal correction with the screen moved in the vertical direction using the lens shift.</td></tr>
<tr><td>THROW RATIO</td><td>Adjusts according to the projection ratio of the optional lens used.
<table>
<tr><th>Model name of lens unit</th><th>Adjustment range</th></tr>
<tr><td>NP11FL</td><td>8</td></tr>
<tr><td>NP12ZL</td><td>12–15</td></tr>
<tr><td>NP13ZL</td><td>15–30</td></tr>
<tr><td>NP14ZL</td><td>29–47</td></tr>
<tr><td>NP15ZL</td><td>46–71</td></tr>
</table>
<table>
<tr><th>Model name of lens unit</th><th>Adjustment range</th></tr>
<tr><td>NP40ZL</td><td>8–11</td></tr>
<tr><td>NP41ZL</td><td>13–30</td></tr>
<tr><td>NP43ZL</td><td>30–60</td></tr>
<tr><td>NP44ML</td><td>3</td></tr>
</table></td></tr>
</table>

NOTE:

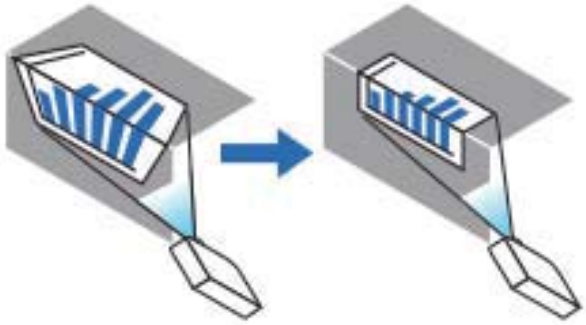
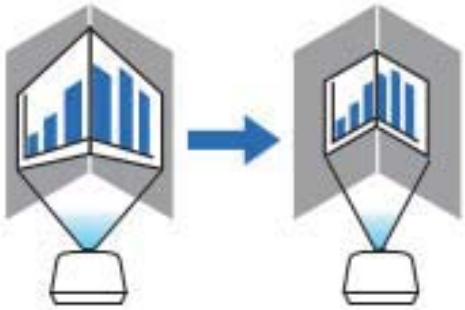
- When power is supplied to the device, the adjustment value of the [KEYSTONE] used previously is retained even if the gradient of the device is changed.
- As electrical correction is carried out by [KEYSTONE], the brightness may be reduced or the screen quality may deteriorate sometimes.

CORNERSTONE

Display the 4-point correction screen and adjust the trapezoidal distortion of the projection screen. Please refer to "Correcting Horizontal and Vertical Keystone Distortion [CORNERSTONE]" (→ page 45) for details on the operation.

HORIZONTAL CORNER/VERTICAL CORNER

Distortion correction for corner projection such as wall surfaces.

HORIZONTAL CORNER	Performs correction for projection onto a wall lying at an angle to the horizontal direction.  * Reverse angle correction is also possible.
VERTICAL CORNER	Performs correction for projection onto a wall lying at an angle to the vertical direction.  * Reverse angle correction is also possible.

NOTE:

- When the maximum adjustment range is exceeded, distortion adjustment is disabled. Set up the projector at an optimal angle as the deterioration in the image quality increases as the distortion adjustment volume gets larger.
- Please note that the image will go out of focus due to the difference in the distance between the upper and lower or left and right sides and the center of the screen for projections cutting across corners. Lenses with short focal points are also not recommended for projections cutting across corners as the image will go out of focus.

Adjustment method

1. **Align the cursor with the [HORIZONTAL CORNER] or [VERTICAL CORNER] of the [GEOMETRIC CORRECTION] menu and then press the ENTER button.**
   - The adjustment screen will be displayed.
2. **Press the ▼▲◀▶ buttons to align the cursor (yellow box) with the target adjustment point and then press the ENTER button.**
   - The cursor will change into an adjustment point (yellow in color).
3. **Press the ▼▲◀▶ buttons to adjust the corners or sides of the screen and then press the ENTER button.**
   - The adjustment point will go back to being a cursor (yellow box).

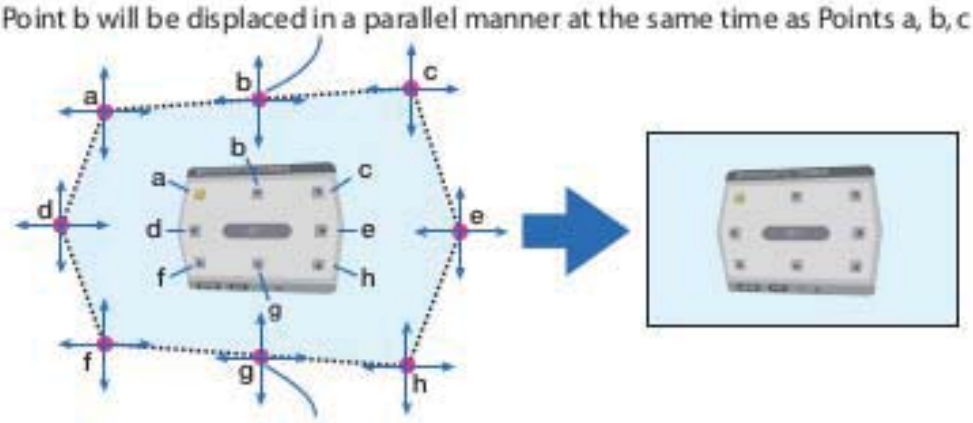
Explanation of screen transition

- The adjustment points of the four corners (a, c, f and h in the drawing) will move independently.
- The following adjustment points differ at the [HORIZONTAL CORNER] and [VERTICAL CORNER].

  HORIZONTAL CORNER: When Point b in the drawing is moved, and the upper side and Point g are moved, the lower side will move in a parallel manner.

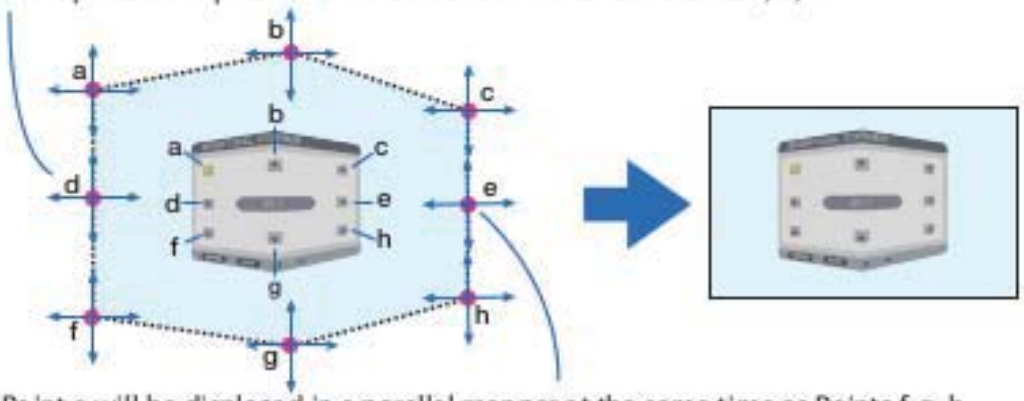
  VERTICAL CORNER: When Point d in the drawing is moved, and the left side and Point e are moved, the right side will move in a parallel manner.

  [Adjustment points of the [HORIZONTAL CORNER] screen and movement points of the projection screen]



[Adjustment points of the [VERTICAL CORNER] screen and movement points of the projection screen]

Point d will be displaced in a parallel manner at the same time as Points a, d, f



Point e will be displaced in a parallel manner at the same time as Points f, g, h

4. **Start from Step 2 onwards to adjust the other points.**
5. **When the adjustment is completed, press the ▼▲◀▶ buttons to align the cursor with the [EXIT] in the adjustment screen and then press the ENTER button.**
   - Switch to the [GEOMETRIC CORRECTION] menu screen.
6. **Press ◀ or ▶ button to move the cursor onto [OK] then press [ENTER].**
   - The adjusted values for [HORIZONTAL CORNER] or [VERTICAL CORNER] are stored and the screen display goes back to the [GEOMETRIC CORRECTION].

TIP:

- A commercially available USB mouse is available to perform correction. (→ page 49)

WARP

Correct projected image distortion on a specific surface as a column or a sphere.

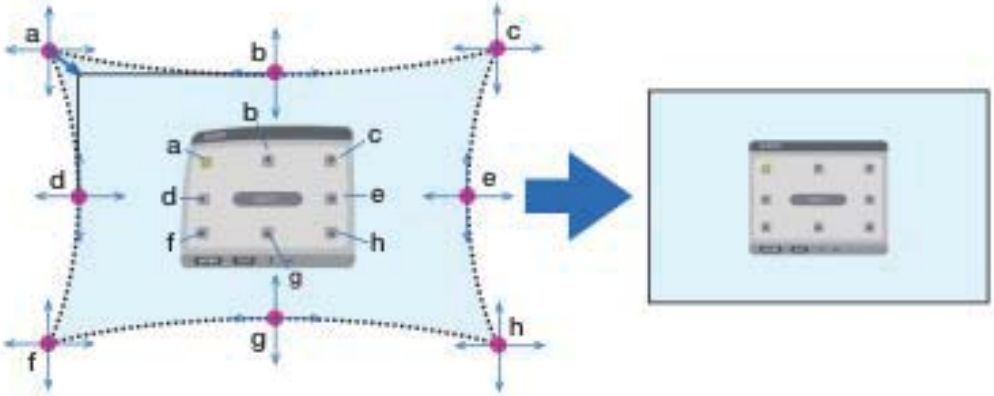
NOTE:

- When the maximum adjustment range is exceeded, distortion adjustment is disabled. Set up the projector at an optimal angle since the more the adjustment volume gets large, the more image quality gets deterioration.
- Please note that the image will go out of focus due to the difference in the distance between peripheries and the center of the screen for projections cutting across corners as on a column or a sphere. Lenses with short focal points are also not recommended for projections cutting across corners as the image will go out of focus.

Adjustment method

1. **Align the cursor with the [WARP] of the [GEOMETRIC CORRECTION] menu and the press the ENTER.**
   - Adjustment screen will be displayed on.
2. **Press the ▼▲◀▶ buttons to align the cursor (blue box) with the target adjustment point and then press the ENTER.**
   - The cursor will change into an adjustment point (yellow in color).
3. **Press the ▼▲◀▶ buttons to adjust the corners or sides of the screen and then press the ENTER.**
   - The cursor will back to yellow box.

   Explanation for correcting distortion
   - Eight adjustment points can be moved independently.
   - For left and right sides, use ◀/▶ buttons for adjusting the range of distortion, and ▼/▲ buttons for adjusting the distortion peak.
   - For top and bottom sides, use ▼/▲ buttons for adjusting the range of distortion, and ◀/▶ buttons for adjusting the distortion peak.
   - For corners, use ▼▲◀▶ buttons for moving positions.



4. **For adjusting other points, repeat Step2 onwards.**
5. **When the adjustment is completed, move the cursor onto the [EXIT] on the adjustment screen and press the ENTER.**
   - The screen will be switched to the [GEOMETRIC CORRECTION] menu.

     The adjustment completion screen will be displayed on.
6. **Press ◀ or ▶ button to move the cursor onto [OK] then press [ENTER].**
   - The adjusted values for [WARP] are stored and the screen display goes back to the [GEOMETRIC CORRECTION].

TIP:

- A commercially available USB mouse is available to perform correction. (→ page 49)

PC TOOL

Recall the geometric correction data that is registered in the projector beforehand.
Three types of correction data can be registered.

NOTE:

- As electrical correction is carried out in geometric correction, the brightness may be affected and the picture quality may be degraded.

RESET

Reset the adjustment value that has been set up as [MODE] in [GEOMETRIC CORRECTION] (return to the initial value).

- This is ineffective when [MODE] is set [OFF].
- Reset can be executed by pressing and holding the Geometric. button on the remote control for over 2 seconds.

[EDGE BLENDING]



This adjusts the edges (boundaries) of the projection screen when projecting high resolution videos using a combination of several projectors in the up, down, left and right positions.

MODE

This enables or disables the [EDGE BLENDING] function.
When [MODE] is set to [ON], the [MARKER], [TOP], [BOTTOM], [LEFT], [RIGHT], [BLACK LEVEL], and [BLEND CURVE] settings can be adjusted.

NOTE:
- This can be set when [3D SETTINGS] → [FORMAT] is set to [OFF(2D)].

MARKER

Set whether to display marker or not when adjusting the range and display position. When turned on, magenta and red markers for adjusting the range adjustment and cyan and green markers for adjusting the display position will be displayed.

TOP/BOTTOM/LEFT/RIGHT

This selects the [EDGE BLENDING] locations on the left, right, top and bottom on the screen.
The following settings can be adjusted when an item is selected. (→ page 75)

CONTROL	Enable [TOP], [BOTTOM], [LEFT], and [RIGHT] functions.
RANGE	Adjust the range (width) of the edge blending.
POSITION	Adjust the display position of the edge blending.

BLEND CURVE

Set brightness for the [EDGE BLENDING] sections. (→ page 78)

BLACK LEVEL

Adjust the black level of the [EDGE BLENDING] section. (→ page 79)

[PICTURE SETTING]



This sets the division conditions for reducing or enlarging the image area and displaying it in the desired position or for projecting using a combination of several projectors.
Please refer to "4. Multi-Screen Projection" (→ page 66) for details.

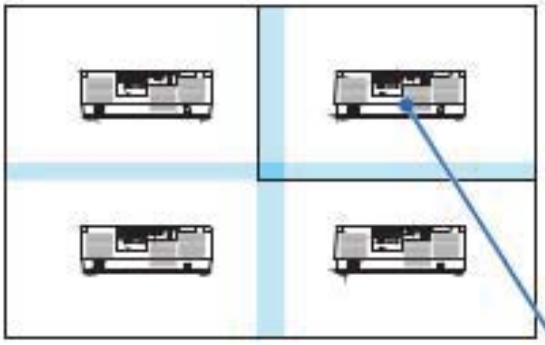
MODE	OFF	Use the projector in a standalone state.
	ZOOM	This adjusts the position and width of the video area that you wish to divide. The edge blending width will also be automatically set to that width.
	TILING	This assigns the divided screens to the projectors. The edge blending function will also be set automatically.
ZOOM	HORIZONTAL ZOOM	This enlarges the video area in the horizontal direction.
	VERTICAL ZOOM	This enlarges the video area in the vertical direction.
	HORIZONTAL POSITION	This shifts the video area in the horizontal direction.
	VERTICAL POSITION	This shifts the video area in the vertical direction.
TILING	WIDTH	This selects the number of projectors to be arranged horizontally.
	HEIGHT	This selects the number of projectors to be arranged vertically.
	HORIZONTAL POSITION	This selects the position of the projector starting from the left among those arranged horizontally.
	VERTICAL POSITION	This selects the position of the projector starting from the top among those arranged vertically.

Conditions for using tiling

- All the projectors need to fulfil the following conditions.
  - The panel size must be the same
  - The projection screen size must be the same
  - The left and right ends or top and bottom ends of the projection screen must be consistent.
  - The settings for the [LEFT] and [RIGHT] of the [EDGE BLENDING] are the same
  - The settings for the [TOP] and [BOTTOM] of the [EDGE BLENDING] are the same

  If the tiling conditions are satisfied, the video screen of the projector at each installation position will be automatically extracted and projected.
  If the tiling conditions are not satisfied, adjust the video screen of the projector at each installation position using the zoom function.
- Assign a unique control ID to each projector.
- Set the "Color setting" and "DeepColor setting" on your Blu-ray player or computer to "Auto". Refer to the owner's manual accompanied with your Blu-ray player or computer for more information. Connect an HDMI output signal of your Blu-ray player or computer to the first projector and then connect to the HDBaseT OUT/Ethernet port on the first projector to the HDBaseT IN/Ethernet port on the second projector, same to the sequel projectors..

Tiling setting example) Number of horizontal units = 2, Number of vertical units = 2



Horizontal order = Second unit
Vertical order = First unit

[MULTI SCREEN]



WHITE BALANCE

This adjusts the white balance for each projector when projecting using a combination of several projectors.
This can be adjusted when [MODE] is set to [ON].

CONTRAST W, CONTRAST R, CONTRAST G, CONTRAST B	Adjusting the white color of the video.
BRIGHTNESS W, BRIGHTNESS R, BRIGHTNESS G, BRIGHTNESS B	Adjusting the black color of the video.

5-7. Menu Descriptions & Functions [SETUP]

[MENU(1)]



Selecting Menu Language [LANGUAGE]

You can choose one of 30 languages for on-screen instructions.

NOTE:

- Your setting will not be affected even when [RESET] is done from the menu.

Selecting Menu Color [COLOR SELECT]

You can choose between two options for menu color: [COLOR] and [MONOCHROME].

Selecting Menu Brightness [OSD BRIGHTNESS]

Select the brightness of the On-Screen display (menu, source display and messages) from 10 levels.

Turning On / Off Source Display [INPUT DISPLAY]

This option turns on or off input name display such as [HDMI1], [HDMI2], [DisplayPort], [COMPUTER], [HDBaseT] to be displayed on the top right of the screen.

Turning messages on and off [MESSAGE DISPLAY]

This option selects whether or not to display projector messages at the bottom of the projected image.
Even when [OFF] is selected, the security lock warning is displayed. The security lock warning turns off when the security lock is canceled.

Turning On / Off Control ID [ID DISPLAY]

This option turns on or off the ID number which is displayed when the ID SET button on the remote control is pressed. (→ page 139)

[3D CAUTION MESSAGE]

This selects whether to display a caution message or not when switching to a 3D video.
The default condition when shipped from the factory is [ON].

OFF	The 3D caution message screen will not be displayed.
ON	The 3D caution message screen will be displayed when switching to a 3D video. Press the ENTER button to cancel the message. • The message will disappear automatically after 60 seconds or when other buttons are pressed. If it disappears automatically, the 3D caution message will be displayed again when switching to a 3D video.

Selecting Menu Display Time [DISPLAY TIME]

This option allows you to select how long the projector waits after the last touch of a button to turn off the menu. The preset choices are [MANUAL], [AUTO 5 SEC], [AUTO 15 SEC], and [AUTO 45 SEC]. The [AUTO 45 SEC] is the factory preset.

[MENU(2)]



[MENU ANGLE]

Select the direction for displaying the menu.

[MENU POSITION]

Shift the menu displaying position. You can choose from 9 locations.

TIP:

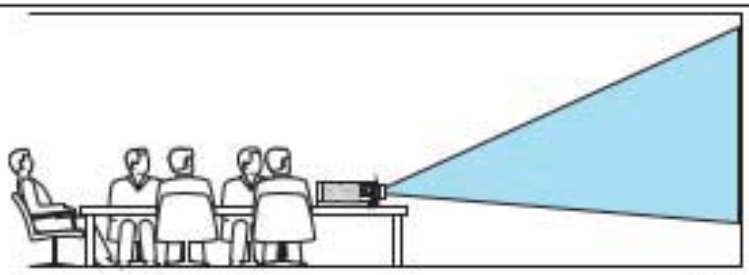
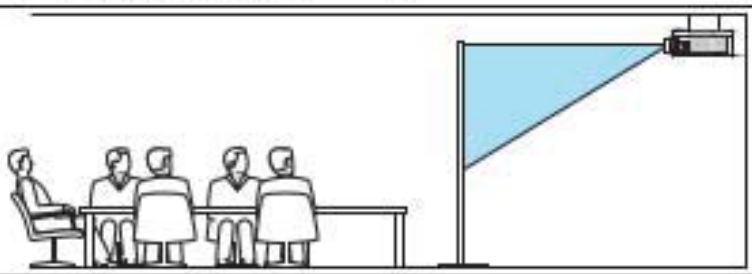
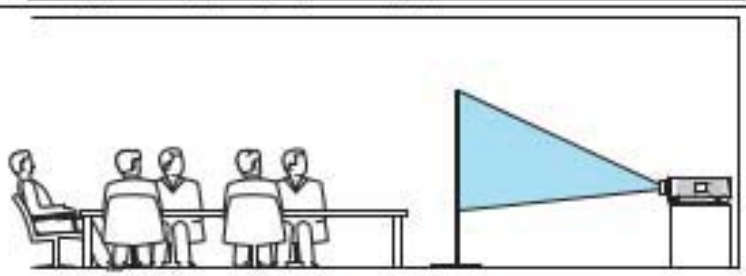
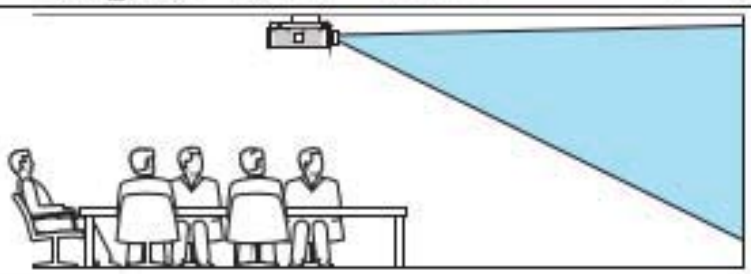
- The display position of the menu is saved even when the power supply of the projector is turned off.
- When you change the [MENU ANGLE], the display position of the menu returns to the original state when it was first shipped from the factory.
- Input terminal and message displaying position are not influenced by the [MENU POSITION].

[INSTALLATION(1)]



Selecting Projector Orientation [ORIENTATION]

This reorients your image for your type of projection. The options are: desktop front projection, ceiling rear projection, desktop rear projection, and ceiling front projection.

AUTO	This automatically detects and projects the [DESKTOP FRONT] and [CEILING FRONT]. NOTE: • The [DESKTOP REAR] and [CEILING REAR] will not be detected. Please select manually.
DESKTOP FRONT	
CEILING REAR	
DESKTOP REAR	
CEILING FRONT	

TIP:

- Check whether the automatic [DESKTOP FRONT] is installed within ± 10 degrees for floor installation and whether the [CEILING FRONT] is within ±10 degrees for ceiling installation. Select manually when the projection screen is inverted.

Selecting Aspect Ratio and Position for Screen [SCREEN]

[SCREEN TYPE]

Sets the aspect ratio of the projection screen.

FREE	The ratio of the liquid crystal panel is selected. Select this when projecting multi-screen and 17:9 screen (2K).
4:3 SCREEN	For a screen with a 4:3 aspect ratio
16:9 SCREEN	For a screen with a 16:9 aspect ratio
16:10 SCREEN	For a screen with a 16:10 aspect ratio

NOTE:

- After changing the screen type, check the setting of [ASPECT RATIO] in the menu. (→ page 104)

[POSITION]

Adjust the screen position. Depending on the model you use and the screen type, the function may become ineffective and the adjustable range may vary.

Using the Wall Color Correction [WALL COLOR]



This function allows for quick adaptive color correction in applications where the screen material is not white.

NOTE:

- Selecting [WHITEBOARD] reduces light source brightness.

Selecting Fan Mode [FAN MODE]

Fan Mode is used to set the speed of the internal cooling fan.

MODE	Select one among four modes: [AUTO], [NORMAL], [HIGH], and [HIGH ALTITUDE].	
	AUTO	The built-in fans automatically run at variable speed according to the detected temperature and atmospheric pressure by the built-in sensor.
	NORMAL	The built-in fans run at the appropriate speed based on the detection by the built-in temperature sensor.
	HIGH	The built-in fans run at high speed
	HIGH ALTITUDE	The built-in fans run at high speed. Select this option when using the projector at altitudes approximately 5500 feet/1700 meters or higher.

NOTE:

- Make sure the speed is set to [HIGH] when you are using this device continuously for several days.
- Set [FAN MODE] to [AUTO] or [HIGH ALTITUDE] when using the projector at altitudes approximately 5500 feet/1700 meters or higher.
- Using the projector at altitudes approximately 5500 feet/1700 meters or higher without setting to [AUTO] or [HIGH ALTITUDE] can cause the projector to overheat and the protector could shut down. If this happens, wait a couple minutes and turn on the projector.
- Using the projector at altitudes less than approximately 5500 feet/1700 meters and setting to [HIGH ALTITUDE] can cause the projector to overcool, causing the image to flicker. Switch [FAN MODE] to [AUTO].
- Using the projector at altitudes approximately 5500 feet/1700 meters or higher can shorten the life of optical components such as the light source.
- Your setting will not be affected even when [RESET] is done from the menu.

TIP:

- When [HIGH ALTITUDE] is selected for [FAN MODE], a symbol icon  will be displayed at the bottom of the menu.

[REF. LIGHT MODE]

Set this when you want to change the brightness of the projector or when you want to use the projector in the energy-saving mode (→ page 41).
This can also be used to adjust the brightness between the different projectors when using a combination of multiple projectors.

REF. LIGHT MODE	BOOST	The picture becomes brighter than the [NORMAL] mode. However, the operating noise and power consumption will also increase due to control of the cooling fan according to the brightness. The life of the optical components may also be shortened depending on the operating environment.
	NORMAL	The light module luminance (brightness) will become 100% and the screen will turn bright.
	ECO1	By controlling the brightness and fan speed according to the selected setting, energy can be saved and motion noise and the power consumption can be lowered.
	ECO2	
REF. LIGHT ADJUST		Brightness can be adjusted in 1% increments from 50 to 100%.
CONSTANT BRIGHTNESS	OFF	[CONSTANT BRIGHTNESS] mode will be canceled.
	ON	Maintains the brightness that is in effect at the time [ON] is selected. Unless [OFF] is selected, the same settings will remain in effect even when the projector is turned off. • To re-adjust the brightness, first turn this setting [OFF] before making further adjustments.

NOTE:
- When [WALL COLOR] is set to [WHITEBOARD], [REF. LIGHT MODE] cannot be selected.
- If [CONSTANT BRIGHTNESS] is set to [ON], then [REF. LIGHT MODE] and [REF. LIGHT ADJUST] cannot be selected.

TIP:
- Brightness normally decreases with use, but by selecting [CONSTANT BRIGHTNESS] mode, sensors inside the projector detect brightness and automatically adjust the output, thereby maintaining a constant brightness throughout the life of the light module. However, if output is already at its maximum, brightness will decrease with use.
  For this reason, when using multi-screen projection, it is recommended to adjust the brightness to a slightly lower level, then setting the [CONSTANT BRIGHTNESS] mode to [ON].

[REF. WHITE BALANCE]

This feature allows you to adjust the white balance for all signals.
The white and black levels of the signal are adjusted for optimum color reproduction.
Uniformity is also adjusted when the redness (R) and blueness (B) of the white color in the screen's horizontal (left/right) direction are uneven.

CONTRAST R, CONTRAST G, CONTRAST B	These adjust the picture's white color.
BRIGHTNESS R, BRIGHTNESS G, BRIGHTNESS B	These adjust the picture's black color.
UNIFORMITY R	The further this is set to the + side, the stronger the redness on the left side of the picture (increasing towards the left edge) and the weaker the redness on the right side of the picture (decreasing towards the right edge). This is reversed when set to the – side.
UNIFORMITY B	The further this is set to the + side, the stronger the blueness on the left side of the picture (increasing towards the left edge) and the weaker the blueness on the right side of the picture (decreasing towards the right edge). This is reversed when set to the – side.

[STATIC CONVERGENCE]

This features allows you to adjust for color deviation in the picture.
This can be adjusted in units of ± 1 pixel in the horizontal direction for [HORIZONTAL R], [HORIZONTAL G], and [HORIZONTAL B], in the vertical direction for [VERTICAL R], [VERTICAL G], and [VERTICAL B].

[INSTALLATION(2)]



[SHUTTER SETTINGS]

Enabling and disabling the lens shutter function. You can also set how long the light will take to fade in and fade out when either the SHUTTER button on the remote control.

POWER ON SHUTTER	OPEN	When the power is turned on, the light source comes on and the picture is projected.
	CLOSE	The light source does not come on when the power is turned on. When the SHUTTER button is pressed, the shutter is released and the light source is turned on.
PICTURE MUTE SHUTTER	OPEN	The light source is still on when the picture is turned off for switching the input terminals.
	CLOSE	The light source turns off when the picture is turned off for switching the input terminals.
FADE IN TIME	Set how long the light will take to fade in after the SHUTTER button is pressed. The time can be set from 0 to 10 seconds in increments of 1 second.	
FADE OUT TIME	Set how long the light will take to fade out after the SHUTTER button is pressed. The time can be set from 0 to 10 seconds in increments of 1 second.	

Using the Reference Lens Memory Function [REF. LENS MEMORY]

This function serves to store the adjusted values common to all input sources when using the [LENS SHIFT], motorized [ZOOM], and motorized [FOCUS] functions of the projector or the remote control. The adjusted values stored in memory can be used as a reference to the current.

PROFILE	Select a stored [PROFILE] number.
STORE	Stores the current adjusted values in memory as a reference.
MOVE	Applies the adjusted reference values stored in [STORE] to the current signal.
RESET	Reset selected [PROFILE] number [REF. LENS MEMORY] to the factory default settings.
LOAD BY SIGNAL	When you switch signals the lens will shift to the lens shift, zoom, and focus values for the selected [PROFILE] number. If no adjusted values have been saved to [LENS MEMORY], the lens will apply [REF. LENS MEMORY] adjusted values. Alternatively, if no adjusted values have been saved to [REF. LENS MEMORY], the unit will return to factory default settings.
FORCED MUTE	To turn off the image during lens shift, select [YES].

- This function is not available for the lens unit NP44ML.

TIP:

- Adjusted values in [REF. LENS MEMORY] will not be returned to default when performing [CURRENT SIGNAL] or [ALL DATA] for [RESET] from the menu.
- To store adjusted values for each input source, use the Lens Memory function. (→ page 59, 108)

[LENS POSITION]

Set back the lens to the home position.

[LENS CALIBRATION]

The adjustment range of the zoom, focus, and shift of the mounted lens is calibrated.
Be sure to carry out [LENS CALIBRATION] after replacing the lens.

- This function is not available for the lens unit NP44ML.

[COLOR UNIFORMITY(TOOL)]

Retrieves the uniformity adjustment value registered in the projector after adjusting with the ProAssist software application.

[GAMMA(TOOL)]

Retrieves the Gamma Tone adjustment value registered in the projector after adjusting with the ProAssist software application.

[CONTROL]



TOOLS



ADMINISTRATOR MODE

This allows you to select [MENU MODE], save settings, and set a password for the administrator mode.



MENU MODE	Select either [BASIC] or [ADVANCED] menu. (→ page 83)	—
NOT SAVE SETTING VALUES	Placing a check mark will not save your projector settings. Clear this check box to save your projector settings.	—
NEW PASSWORD, CONFIRM PASSWORD	Assign a password for the administrator mode.	Up to 10 alphanumeric characters

PROGRAM TIMER



This option turns on/standby the projector and changes video signals, and selects [LIGHT MODE] automatically at a specified time.

Important:

- Before using [PROGRAM TIMER], make sure that the [DATE AND TIME SETTINGS] feature is set. (→ page 137)
  Make sure that the projector is in the standby condition with the POWER cord connected.
  The projector has a built-in clock. The clock will keep working for about a month after the main power is turned off. If the main power is not supplied to the projector for a month or more, it requires to set [DATE AND TIME SETTINGS] feature again.

Setting a new program timer

1. **On the [PROGRAM TIMER] screen, use the ▲ or ▼ button to select [SETTINGS] and press the ENTER button.**



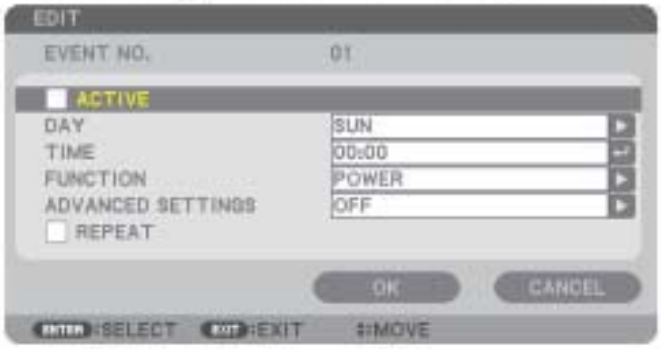
The [PROGRAM LIST] screen will be displayed.

2. **Select a blank program number and press the ENTER button.**



The [(EDIT)] screen will be displayed.

3. Make settings for each item as required.



ACTIVE	Place a check mark to enable the program.
DAY	Select days of the week for the program timer. To execute the program from Monday to Friday, select [MON-FRI]. To execute the program in everyday basis, select [EVERY DAY].
TIME	Set the time to execute the program. Enter time in 24-hour format.
FUNCTION	Select a function to be executed. Selecting [POWER] will allow you to turn on or off the projector by setting [ADVANCED SETTINGS]. Selecting [INPUT] will allow you to select an input terminal by setting [ADVANCED SETTINGS]. Selecting [LIGHT MODE] will allow you to select one option among [BOOST], [NORMAL], [ECO1], and [ECO2] for [LIGHT MODE] by setting [ADVANCED SETTINGS].
ADVANCED SETTINGS	Select one option for the selected item in [FUNCTION].
REPEAT	Place a check mark to repeat the program continuing basis. To use the program this week only, clear the check mark.

4. Select [OK] and press the ENTER button.

This will complete the settings.

You will be returned to the [PROGRAM LIST] screen.

5. Select [(BACK)] and press the ENTER button.



You will be returned to the [PROGRAM TIMER] screen.

6. Select [EXIT] and press the ENTER button.

You will be returned to the [TOOLS] screen.

NOTE:

- Up to 30 different timer settings can be programmed.
- The Program Timer is executed on a set time basis, not in a program basis.
- Once the program not marked with a check in [REPEAT] has been executed, the check mark in the [ACTIVE] check box will be cleared automatically and the program will be disabled.
- When the on-time and the off-time set for the same time, the off-time setting will take preference.
- When two different sources are set for the same time, the larger program number will take preference.
- The on-time setting will not be executed while the cooling fans are running or an error is occurring.
- If the off-time setting is expired under the condition in which the power off is not possible, the off-timer setting will not be executed until the power off becomes possible.
- Programs not marked with a check mark in [ACTIVE] of the [EDIT] screen will not be executed even if the Program Timer is enabled.
- When the projector is turned on by using the program timer and if you want to turn off the projector, set the off-time or do it manually so as not to leave the projector on for a long period of time.

Activating the program timer

1. **Select [ENABLE] on the [PROGRAM TIMER] screen and press the ENTER button.**
   The selection screen will be displayed.
2. **Press the ▼ button to align the cursor with [ON] and then press the ENTER button.**
   Return to the [PROGRAM TIMER] screen.

NOTE:

- When the effective settings of the [PROGRAM TIMER] have not been set to [ON], the program will not be executed even if the [ACTIVE] items in the [PROGRAM LIST] have been ticked.
- Even when the effective settings of the [PROGRAM TIMER] are set to [ON], the [PROGRAM TIMER] will not work until the [PROGRAM TIMER] screen is closed.

Editing the programmed settings

1. **On the [PROGRAM LIST] screen, select a program you want to edit and press the ENTER button.**
2. **Change the settings on the [EDIT] screen.**
3. **Select [OK] and press the ENTER button.**
   The programmed settings will be changed.
   You will be returned to the [PROGRAM LIST] screen.

Changing the order of programs

1. **On the [PROGRAM LIST] screen, select a program whose order you want to change and press the ▶ button.**
2. **Press the ▼ button to select ▲ or ▼.**
3. **Press the ENTER button a few times to select a row to which you wish to move the program.**
   The order of the programs will be changed.

Deleting the programs

1. **On the [PROGRAM LIST] screen, select a program number you want to delete and press the ▶ button.**
2. **Press the ▼ button to select [(DELETE)].**
3. **Press the ENTER button.**
   The confirmation screen will be displayed.
4. **Select [YES] and press the ENTER button.**
   The program will be deleted.

This will complete deleting the program.

DATE AND TIME SETTINGS



You can set the current time, month, date, and year.

NOTE:

- The projector has a built-in clock. The clock will keep working for about a month after the main power is turned off. If the main power is off for a month or more, the built-in clock will cease. If the built-in clock ceases, set the date and time again. The built-in clock will not cease while in the standby mode. In order to activate the built-in clock continuously even when the projector is not used, leave it in the standby state not plugging off the power cord.

TIME ZONE SETTINGS	Select your time zone.
DATE AND TIME SETTINGS	Set your current date (MM/DD/YYYY) and time (HH:MM). INTERNET TIME SERVER: If you place a check mark, the projector's built-in clock will be synchronized with an Internet time server in every 24 hours and at the time of projector's startup. UPDATE: Synchronizes the projector's built-in clock immediately. The [UPDATE] button is not available unless the [INTERNET TIME SERVER] check box is turned on.
SUMMER TIME SETTINGS	If you place a check mark, the clock for daylight saving will be enabled.

[MOUSE]

This function is for using a commercially available USB mouse via the USB-A port on this projector.

BUTTON	Select for using the mouse either by right or left hand.
SENSITIVITY	Select the sensitivity of mouse among [FAST], [MEDIUM] and [SLOW].

NOTE:

- This setting is not guaranteed motion of all commercially available USB mouses.

Disabling the Cabinet Buttons [CONTROL PANEL LOCK]

This option turns on or off the [CONTROL PANEL LOCK] function.

NOTE:

- How to cancel the [CONTROL PANEL LOCK]
  When the [CONTROL PANEL LOCK] is set to [ON], press the EXIT button on the cabinet for 10 seconds or longer to cancel the [CONTROL PANEL LOCK] setting.

TIP:

- When the [CONTROL PANEL LOCK] is turned on, a key lock icon [ ] will be displayed at the bottom right of the menu.
- This [CONTROL PANEL LOCK] does not affect the remote control functions.

Enabling Security [SECURITY]

This feature turns on or off the [SECURITY] function.
Unless the correct keyword is entered, the projector cannot project an image. (→ page 50)

NOTE:
- Your setting will not be affected even when [RESET] is done from the menu.

Selecting Communication Speed [COMMUNICATION SPEED]

This feature sets the communication speed for the PC Control port (D-Sub 9P). Make sure to set the appropriate speed for the device to connect.

NOTE:
- Your selected communication speed will not be affected even when [RESET] is done from the menu.

[PC CONTROL(HDBaseT)]

Set this to [ON] when controlling the projector from a computer using RS-232C via an HDBaseT-compatible transmitter (sold separately).

Setting ID to the Projector [CONTROL ID]

You can operate multiple projectors separately and independently with the single remote control that has the [CONTROL ID] function. If you assign the same ID to all the projectors, you can conveniently operate all the projectors together using the single remote control. To do so, you have to assign an ID number to each projector.

CONTROL ID NUMBER	Select a number from 1 to 254 you wish to assign to your projector.
CONTROL ID	Select [OFF] to turn off the [CONTROL ID] setting and select [ON] to turn on the [CONTROL ID] setting.

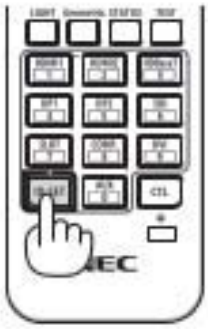
NOTE:
- When [ON] is selected for [CONTROL ID], the projector cannot be operated by using the remote control that does not support the [CONTROL ID] function. (In this case the buttons on the projector cabinet can be used.)
- Your setting will not be affected even when [RESET] is done from the menu.
- Pressing and holding the ENTER button on the projector cabinet for 10 seconds will display the menu for canceling the Control ID.

Assigning or Changing the Control ID

1. **Turn on the projector.**
2. **Press the ID SET button on the remote control.**

   The [CONTROL ID] screen will be displayed.





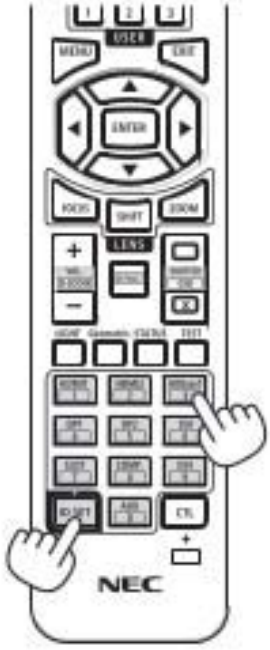
   If the projector can be operated with the current remote control ID, the [ACTIVE] will be displayed. If the projector cannot be operated with the current remote control ID, the [INACTIVE] will be displayed. To operate the inactive projector, assign the control ID used for the projector by using the following procedure (Step 3).

3. **Press one of numeric keypad buttons while pressing and holding the ID SET button on the remote control.**

   Example:

   To assign "3", press the "3" button on the remote control.

   No ID means that all the projectors can be operated together with a single remote control. To set "No ID" and cancel the control ID setting, enter "000" or press the number 0 while holding down the ID SET button.



TIP:

- The range of IDs is from 1 to 254.

4. **Release the ID SET button.**

   The updated [CONTROL ID] screen will be displayed.

NOTE:

- The IDs can be cleared in a few days after the batteries are run down or removed.
- Accidentally pressing any one of the buttons of the remote control will clear currently specified ID with batteries removed.

Turning On or Off Remote Sensor [REMOTE SENSOR]

This option determines which remote sensor on the projector is enabled in wireless mode.
The options are: [FRONT/BACK], [FRONT], [BACK], and [HDBaseT].

NOTE:

- The remote control of the projector will not be able to receive signals if the power supply of the HDBaseT transmission device connected to the projector is switched on when this has been set to [HDBaseT].

TIP:

- If the remote control system does not function when direct sunlight or strong illumination strikes the remote control sensor of the projector, change to other option.

[NETWORK SETTINGS]



Configure the various settings when using the projector connected to a network.

Important:

- Consult with your network administrator about these settings.
- When using a wired LAN, connect the Ethernet cable (LAN cable) to the LAN port on the projector. (→ page 168)
- Please use a shielded twisted pair (STP) cable of Category 5e or higher for the LAN cable (sold commercially).
- The default [WIRED LAN] setting of this projector is set to [DISABLE] when it is shipped from the factory. To connect to a network, change the [WIRED LAN] profile setting from [DISABLE] to [PROFILE 1] or [PROFILE 2] to enable the wired LAN.

TIP:

- The network settings you make will not be affected even when [RESET] is done from the menu.

Hints on How to Set Up LAN Connection

To set up the projector for a LAN connection:
Select [WIRED LAN] → [PROFILES] → [PROFILE 1] or [PROFILE 2].
Two settings can be set for wired LAN.
Next turn on or off for [DHCP], [IP ADDRESS], [SUBNET MASK], and [GATEWAY] and select [OK] and press the ENTER button. (→ page 143)

To recall LAN settings stored in the profile number:
Select [PROFILE 1] or [PROFILE 2] for wired LAN, and then select [OK] and press the ENTER button. (→ page 143)

To connect a DHCP server:
Turn on [DHCP] for wired LAN. Select [ON] and press the ENTER button. To specify IP address without using the DHCP server, turn off [DHCP]. (→ page 143)

To receive error messages via e-mail:
Select [ALERT MAIL], and set [SENDER'S ADDRESS], [SMTP SERVER NAME], and [RECIPIENT'S ADDRESS]. Last, select [OK] and press the ENTER button. (→ page 145)

NETWORK PASSWORD



Setting a password when using a wired LAN. Alternatively, changing the set password.
Set the password using a maximum of up to 10 alphanumeric characters.
If a password is set, you need to enter the password in the following cases.

- When opening the [NETWORK PASSWORD] screen and [WIRED LAN] screen of the on-screen menu
- When updating the network settings on the [SETTINGS] screen of the HTTP server

To delete the set password, leave the password entry field blank when registering.

TIP:

- However, if you forget your password, consult with your dealer.

WIRED LAN



When you select [WIRED LAN] in the on-screen menu for the first time after purchasing the projector, the [NETWORK PASSWORD] setting screen will appear. Carry out the following Step (1) or Step (2).

(1) When setting the network password (recommended)

Refer to [NETWORK PASSWORD] (→ page 142).

(2) When no network password is set

Leave the 2 input fields in the [NETWORK PASSWORD] setting screen blank, then select [OK] and press the ENTER button.

If [NETWORK PASSWORD] has been set, you cannot display the [WIRED LAN] screen without entering password.

INTERFACE	Select [LAN] for using the LAN port for connecting to the wired LAN. Select [HDBaseT] for using the HDBaseT IN/Ethernet port for connecting to the wired LAN.	—
PROFILES	• The settings for the wired LAN can be recorded in the projector memory in two ways. • Select [PROFILE 1] or [PROFILE 2] and then do settings for [DHCP] and the other options. After doing this, select [OK] and press the ENTER button. This will store your settings in memory. • To recall the settings from memory: After selecting [PROFILE 1] or [PROFILE 2] from the [PROFILES] list. Select [OK] and press the ENTER button. • Select [DISABLE] when not connecting to a wired LAN	—
DHCP	Place a check mark to automatically assign an IP address to the projector from your DHCP server. Clear this check box to register the IP address or subnet mask number obtained from your network administrator.	—
IP ADDRESS	Set your IP address of the network connected to the projector when [DHCP] is turned off.	Up to 12 numeric characters
SUBNET MASK	Set your subnet mask number of the network connected to the projector when [DHCP] is turned off.	Up to 12 numeric characters
GATEWAY	Set the default gateway of the network connected to the projector when [DHCP] is turned off.	Up to 12 numeric characters

AUTO DNS	Place a check mark to automatically assign the IP address of your DNS server connected to the projector from your DHCP server. Clear this check box to set the IP address of your DNS server connected to the projector.	Up to 12 numeric characters
DNS CONFIGURATION	Set the IP address of your DNS server on the network connected to the projector when [AUTO DNS] is cleared.	Up to 12 numeric characters
RECONNECT	Retry to connect the projector to a network. Try this if you have changed [PROFILES].	—

PROJECTOR NAME



PROJECTOR NAME	Set a unique projector name.	Up to 16 alphanumeric characters and symbols

DOMAIN

Set a host name and domain name of the projector.



HOST NAME	Set a host name of the projector.	Up to 16 alphanumeric characters
DOMAIN NAME	Set a domain name of the projector.	Up to 60 alphanumeric characters

ALERT MAIL



ALERT MAIL	This option will notify your computer of error messages via e-mail when using wireless or wired LAN. Placing a checkmark will turn on the Alert Mail feature. Clearing a checkmark will turn off the Alert Mail feature. Sample of a message to be sent from the projector: **Subject: [Projector] Projector Information** THE COOLING FAN HAS STOPPED. [INFORMATION] PROJECTOR NAME: xxxxx LIGHT HOURS USED: xxxx[H]	—
HOST NAME	Type in a host name.	Up to 16 alphanumeric characters
DOMAIN NAME	Type in a domain name of the network connected to the projector.	Up to 60 alphanumeric characters
SENDER'S ADDRESS	Specify the sender's address.	Up to 60 alphanumeric characters and symbols
SMTP SERVER NAME	Type in the SMTP server name to be connected to the projector.	Up to 60 alphanumeric characters
RECIPIENT'S ADDRESS 1, RECIPIENT'S ADDRESS 2, RECIPIENT'S ADDRESS 3	Type in your recipient's address.	Up to 60 alphanumeric characters and symbols
TEST MAIL	Send a test mail to check if your settings are correct. NOTE: • If you entered an incorrect address in a test, you may not receive an Alert mail. Should this happen, check if the Recipient's Address is correctly set. • Unless any one of the [SENDER'S ADDRESS], [SMTP SERVER'S NAME] or [RECIPIENT'S ADDRESS 1-3] is selected, [TEST MAIL] is not available. • Be sure to highlight [OK] and press the ENTER button before executing [TEST MAIL].	—

[NETWORK SERVICE]



If [PASSCODE] has been set, you cannot display the [NETWORK SERVICE] screen without entering PASSCODE.

[SERVICES]



HTTP SERVER	Configure the settings for connecting to the HTTP server. ON: Connect directly to the HTTP server without displaying the login screen. OFF: It is not possible to connect to the HTTP server. AUTH.: Display the login screen when connecting to the HTTP server. Enter the USER NAME and PASSWORD that have been set at [ACCOUNT].	—

<table>
<tr><td>PJLink</td><td>Configure the settings for using PJLink.
<table><tr><td>NEW PASSWORD, CONFIRM PASSWORD</td><td>Set the password.</td></tr><tr><td>CLASS</td><td>To use functions with PJLink Class 2 specifications, set [CLASS2].</td></tr><tr><td>DESTINATION</td><td>When the [CLASS] is set to [CLASS2], input the IP address of the destination.</td></tr></table>NOTE:
• Do not forget your password. However, if you forget your password, consult with your dealer.
• What is PJLink?
PJLink is a standardization of protocol used for controlling projectors of different manufacturers. This standard protocol is established by Japan Business Machine and Information System Industries Association (JBMIA) in 2005. The projector supports all the commands of PJLink Class 1.
• Setting of PJLink will not be affected even when [RESET] is done from the menu.</td><td>Up to 32 alphanumeric characters</td></tr>
<tr><td>AMX BEACON</td><td>Turn on or off for detection from AMX Device Discovery when connecting to the network supported by AMX's NetLinx control system.
TIP:
• When using a device that supports AMX Device Discovery, all AMX NetLinx control system will recognize the device and download the appropriate Device Discovery Module from an AMX server.
[ON] will enable detecting the projector from AMX Device Discovery..
[OFF] will disable detecting the projector from AMX Device Discovery.</td><td>—</td></tr>
<tr><td>CRESTRON</td><td>ROOMVIEW: Turn on or off when controlling the projector from your PC.
CRESTRON CONTROL: Turn on or off when controlling the projector from your controller.
• CONTROLLER IP ADDRESS: Enter your IP address of CRESTRON SERVER.
• IP ID: Enter your IP ID of CRESTRON SERVER.
TIP:
• The CRESTRON settings are required only for use with CRESTRON ROOMVIEW. For more information, visit http://www.crestron.com</td><td>Up to 12 numeric characters</td></tr>
<tr><td>Extron XTP</td><td>Set for connecting this projector to the Extron XTP transmitter.
[ON] will enable to connect with the XTP transmitter.
[OFF] will disable to connect with the XTP transmitter.</td><td>—</td></tr>
<tr><td>PC CONTROL</td><td>Set the PC control function to on or off.
[ON] will enable the PC control function.
[OFF] will disable the PC control function.</td><td>—</td></tr>
</table>

<table>
<tr><td>AUTH. PC CONTROL</td><td>Set PC control function using authentication to on or off.
[ON] will enable the PC control function with authentication using the user name and password registered at [ACCOUNT].
[OFF] will disable the PC control function with authentication.

NOTE:
• This function is for future expansion. Security can be improved by using together with an application compatible with the authentication function. For specifications related to the authentication procedure required by the application software, please visit our web site.
https://www.nec-display.com/dl/en/pj_manual/lineup.html</td><td>—</td></tr>
<tr><td>Art-Net</td><td>Art-Net is a communication protocol for transmitting and receiving DMX512 over an Ethernet network.
Configure the settings for controlling the projector using the Art-Net controller.

<table><tr><td>Art-Net</td><td>Turns on or off Art-Net.</td></tr><tr><td>[2.X.X.X],
[10.X.X.X]</td><td>Automatically calculates the IP address according to the Art-Net specifications and overwrites it to the current wired LAN settings (IP address, subnet mask).</td></tr><tr><td>SETTINGS</td><td>Sets DMX Universe and start channel used by the projector.</td></tr><tr><td>CHANNEL</td><td>Selects projector functions to be assigned to channels 1 thru 12. To temporarily disable the assigned function, select [LOCK] to set the parameter to a non-operable value.</td></tr></table>
• The function and DMX value set for each channel can be checked in [INFO.].
• See "Art-Net DMX Parameter List" (→ page 201) for the DMX parameters.</td><td>—</td></tr>
</table>

[ACCOUNT]





You can register three types of accounts: [USER1], [USER2], and [USER3].
When [PASSCODE] is set, [REGISTER] is enabled for each user.
[CHANGE USER NAME], [CHANGE PASSWORD], [ENABLE], and [DELETE] can be selected once the account has been registered at [REGISTER].

REGISTER	Set the user name and password of the account for use with [HTTP SERVER] authentication and [AUTH. PC CONTROL].	Up to 16 alphanumeric characters
CHANGE USER NAME	Change the user name registered at [ACCOUNT].	Up to 16 alphanumeric characters
CHANGE PASSWORD	Change the password registered at [ACCOUNT].	Up to 16 alphanumeric characters
ENABLE	Choose whether to enable or disable the account. [ON] will enable the account. [OFF] will disable the account. With this account, you cannot connect to an HTTP server that requires authentication or operate the projector using the [AUTH. PC CONTROL] function.	—
DELETE	Delete the USER NAME and PASSWORD that have been set at [ACCOUNT]. NOTE: • If the [USER1], [USER2], and [USER3] accounts have all been deleted, you cannot connect to the HTTP server that requires authentication or operate the projector using the [AUTH. PC CONTROL] function.	—

[PASSCODE]



Set the passcode for the network administrator. When the passcode is set, a confirmation screen is displayed when opening the [NETWORK SERVICE] screen of the on-screen menu and the [SERVICES] tab of the HTTP server, and the passcode must be input. Set the passcode using a combination of the ▼▲◀▶ buttons on the main unit or the remote control. To delete the passcode, register with the [PASSCODE] entry field blank. NOTE: • Make a note of your passcode and store it in a safe place. • If you forget your passcode, contact your distributor.	Up to 10 alphanumeric characters

[SOURCE OPTIONS]



Setting Auto Adjust [AUTO ADJUST]

This feature sets the Auto Adjust mode so that the computer signal can be automatically or manually adjusted for noise and stability. You can automatically make adjustment in two ways: [NORMAL] and [FINE].

OFF	The computer signal will not be automatically adjusted. You can manually optimize the computer signal.
NORMAL	Default setting. The computer signal will be automatically adjusted. Normally select this option.
FINE	Select this option if fine adjustment is needed. It takes more time to switch to the source than when [NORMAL]is selected.

TIP:

- The default setting when shipped from the factory is [NORMAL].

[AUDIO SELECT]

This selects the audio input of the HDMI 1 IN terminal, HDMI 2 IN terminal, DisplayPort IN terminal and HDBaseT IN/Ethernet port.

Selecting Default Source [DEFAULT INPUT SELECT]

You can set the projector to default to any one of its inputs each time the projector is turned on.

LAST	Sets the projector to default to the previous or last active input each time the projector is turned on.
AUTO	Searches for an active source in order of HDMI1 → HDMI2 → DisplayPort → COMPUTER → HDBaseT and displays the first found source.
HDMI1	Displays the digital source from the HDMI 1 IN connector every time the projector is turned on.
HDMI2	Displays the digital source from the HDMI 2 IN connector every time the projector is turned on.
DisplayPort	Displays the digital source from the DisplayPort every time the projector is turned on.
COMPUTER	Displays the computer signal from the COMPUTER IN connector every time the projector is turned on.
HDBaseT	Project the HDBaseT signal.

[SEAMLESS SWITCHING]

When the input connector is switched, the image displayed before switching is held to switch to the new image without a break due to absence of a signal.

Selecting a Color or Logo for Background [BACKGROUND]

Use this feature to display a blue/black screen or logo when no signal is available. The default background is [BLUE].

NOTE:

- Even when the background logo is selected, if two pictures are displayed in [PIP/PICTURE BY PICTURE] mode, the blue background is displayed without the logo when there is no signal.

[HDBaseT OUT SELECT]

Select signal to output from the HDBaseT OUT/Ethernet port on the projector.

OFF	No signal is output.
AUTO	Output the input signal. When two images are projected simultaneously (PIP/PICTURE BY PICTURE), the image for the main screen is output.
HDMI1	Output the input signal thru the HDMI 1 IN terminal.
HDMI2	Output the input signal thru the HDMI 2 IN terminal.
DisplayPort	Output the input signal thru the DisplayPort IN terminal.
HDBaseT	Output the input signal thru the HDBaseT IN/Ethernet port.

NOTE:

- Signal thru the COMPUTER IN terminal can not be output. In the state [PIP] or [PICTURE BY PICTURE] has been set and [AUTO] has been set for this function, moreover, the input terminal for the main screen is the COMPUTER and the input terminal for the sub screen is one among the HDMI 1 IN, HDMI 2 IN, DisplayPort IN terminals, or HDBaseT IN/Ethernet port, the signal from the sub screen will be output.
- If the set input terminals for main and sub screen for [PIP] and [PICTURE BY PICTURE] are differed from the selected input terminals, any image will be output.
- 4K60p and 4K50p signals can not be output.

[EDID VERSION]

Switch the EDID version for the HDMI 1 IN and HDMI 2 IN terminals.

MODE1	Supports general signal
MODE2	Supports 4K signal Select this mode for displaying 4K image using the device supporting 4K

NOTE:

- If image and sound can not be output in [MODE2], switch to [MODE1].

[HDCP VERSION]

Switch the HDCP version for the HDMI 1 IN, HDMI 2 IN and HDBaseT IN/Ethernet terminals.

HDCP 2.2	Automatically switch the mode HDCP 2.2 and HDCP 1.4
HDCP 1.4	Forcedly perform transmission with HDCP 1.4

NOTE:

- If image and sound can not be output from the monitor connected with the HDBaseT OUT/Ethernet port, switch the HDCP version to HDCP 1.4.

[POWER OPTIONS]



[POWER-SAVING]

Select the standby mode:

ON	This setting is to keep the standby power consumption to the minimum necessary. The standby state changes automatically depending on the projector settings and the state and duration of connected devices (→ page 191). The consumption power also changes according to the standby state.
OFF	This is a setting with no functional restrictions during standby. To maintain the sleep state, the power consumption is higher than when this mode is set to [ON].

TIP:

- Even if [POWER-SAVING] is set to [ON], the projector goes to sleep in the following cases.
  - [PC CONTROL(HDBaseT)] is set to [ON]
  - [REMOTE SENSOR] is set to [HDBaseT]
  - [HDBaseT OUT SELECT] is set to other than [OFF]
  - When [AUTO POWER ON SELECT] is set to something other than [OFF] and a signal is being input to the HDMI1, HDMI2, DisplayPort or COMPUTER terminal
  - [WIRED LAN] → [INTERFACE] is set to [HDBaseT]
  - [Extron XTP] is set to [ON]
  - While the lens is moving
  - When a temperature error or other error has occurred
- The [POWER-SAVING] setting is not changed by [RESET].
- [POWER-SAVING] ON/OFF does not affect the carbon meter's calculation of the amount of CO_2 emission reduction.

Enabling Direct Power On [DIRECT POWER ON]

Turns the projector on automatically when the power cord is inserted into an active power outlet. This eliminates the need to always use the POWER button on the remote control or projector cabinet.

⚠ WARNING

- The projector produces intense light. When turning on the power, make sure no one within the projection range is looking at the lens.

Turning On the Projector by Detecting Input Signal [AUTO POWER ON SELECT]

Under the state of standby or sleep, the projector automatically detects and projects synchronizing signal input from the selected terminals among [COMPUTER], [HDMI1], [HDMI2], [DisplayPort], and [HDBaseT] by this function.

OFF	[AUTO POWER ON SELECT] function becomes inactive.
HDMI1, HDMI2, DisplayPort, COMPUTER, HDBaseT*	When the projector detects the computer signal input from the selected terminal, automatically it will be turned [ON] and will project the computer screen.

⚠ WARNING

- The projector produces intense light. When the power is turned on, make sure no one within the projection range is looking at the lens.

NOTE:

- If you want to activate this [AUTO POWER ON SELECT] function after powering OFF the projector, interrupt the signal from the input terminals or disconnect the computer cable from the projector and wait for more than 3 seconds (1 minute or longer if the input signal is HDBaseT) and then the input signal from the selected terminal. In addition, if signal from HDMI1, HDMI2, DisplayPort or HDBaseT is continuously input to the projector, the projector may be turned ON again automatically based on the setting of external devices even if the projector is turned OFF and in the condition of SLEEP mode.
- This function is not activated either by component signal input from the computer screen input terminal or computer signal as Sync on Green and Composite Sync.

Enabling Power Management [AUTO POWER OFF]

When this option is selected you can enable the projector to automatically turn off (at the selected time: 0:05, 0:10, 0:15, 0:20, 0:30, 1:00) if there is no signal received by any input or if no operation is performed.

Using Off Timer [OFF TIMER]

1. **Select your desired time between 30 minutes and 16 hours: OFF, 0:30, 1:00, 2:00, 4:00, 8:00, 12:00, 16:00.**
2. **Press the ENTER button on the remote control.**
3. **The remaining time starts counting down and it is displayed at the bottom of the On-Screen Menu.**
4. **The projector will turn off after the countdown is complete.**

NOTE:

- To cancel the preset time, set [OFF] for the preset time or turn off the power.
- When the remaining time reaches 3 minutes before the projector is turned off, the [THE PROJECTOR WILL TURN OFF WITHIN 3 MINUTES.] message will be displayed on the bottom of the screen.

Returning to Factory Default [RESET]

The [RESET] feature allows you to change adjustments and settings to the factory preset for a (all) source (s) except the following:



[CURRENT SIGNAL]

Resets the adjustments for the current signal to the factory preset levels.
The items that can be reset are: [PRESET], [CONTRAST], [BRIGHTNESS], [COLOR], [HUE], [SHARPNESS], [ASPECT RATIO], [HORIZONTAL], [VERTICAL], [CLOCK], [PHASE], and [OVERSCAN].

[ALL DATA]

Reset all the adjustments and settings for all the signals to the factory preset.
All items can be reset EXCEPT [ENTRY LIST], [GEOMETRIC CORRECTION], [EDGE BLENDING], [PICTURE SETTING], [MULTI SCREEN], [LANGUAGE], [SCREEN], [FAN MODE], [REF. WHITE BALANCE], [STATIC CONVERGENCE], [REF. LENS MEMORY], [COLOR UNIFORMITY(TOOL)], [GAMMA(TOOL)], [ADMINISTRATOR MODE], [DATE AND TIME SETTINGS], [CONTROL PANEL LOCK], [SECURITY], [COMMUNICATION SPEED], [PC CONTROL(HDBaseT)], [CONTROL ID], [NETWORK SETTINGS], [BACKGROUND], [EDID VERSION], [HDCP VERSION], [POWER-SAVING], [OFF TIMER], [LIGHT HOURS USED], and [TOTAL CARBON SAVINGS].

[ALL DATA (INCLUDING ENTRY LIST)]

Reset all the adjustments and settings for all the signals including the [ENTRY LIST] to the factory preset except [GEOMETRIC CORRECTION], [EDGE BLENDING], [PICTURE SETTING], [MULTI SCREEN], [LANGUAGE], [SCREEN], [FAN MODE], [REF. WHITE BALANCE], [STATIC CONVERGENCE], [REF. LENS MEMORY], [COLOR UNIFORMITY(TOOL)], [GAMMA(TOOL)], [ADMINISTRATOR MODE], [DATE AND TIME SETTINGS], [CONTROL PANEL LOCK], [SECURITY], [COMMUNICATION SPEED], [PC CONTROL(HDBaseT)], [CONTROL ID], [NETWORK SETTINGS], [BACKGROUND], [EDID VERSION], [HDCP VERSION], [POWER-SAVING], [OFF TIMER], [LIGHT HOURS USED], and [TOTAL CARBON SAVINGS].
Also deletes all the signals in the [ENTRY LIST] and returns to the factory preset.

NOTE:

- Locked signals in Entry List cannot be reset.

5-8. Menu Descriptions & Functions [INFO.]



[USAGE TIME]

LIGHT HOURS USED (H)	PROJECTOR HOURS USED (H)
TOTAL CARBON SAVINGS (kg-CO2)	

- The value of [LIGHT HOURS USED] reflects the temperature of the operating environment and the [LIGHT MODE] setting in the actual operating time.
- [PROJECTOR HOURS USED]
  This displays the actual operating time of the projector.
- [TOTAL CARBON SAVINGS]
  This displays the estimated carbon saving information in kg. The carbon footprint factor in the carbon saving calculation is based on the OECD (2008 Edition). (→ page 44)

[SOURCE(1)]

INPUT TERMINAL	RESOLUTION
HORIZONTAL FREQUENCY	VERTICAL FREQUENCY
SYNC TYPE	SYNC POLARITY
SCAN TYPE	SOURCE NAME
ENTRY NO.	

[SOURCE(2)]

SIGNAL TYPE	BIT DEPTH
VIDEO LEVEL	SAMPLING FREQUENCY
3D FORMAT	

[SOURCE(3)]

INPUT TERMINAL	RESOLUTION
HORIZONTAL FREQUENCY	VERTICAL FREQUENCY
SYNC TYPE	SYNC POLARITY
SCAN TYPE	SOURCE NAME
ENTRY NO.	

[SOURCE(4)]

SIGNAL TYPE	BIT DEPTH
VIDEO LEVEL	SAMPLING FREQUENCY
3D FORMAT	

[WIRED LAN]

IP ADDRESS	SUBNET MASK
GATEWAY	MAC ADDRESS
DNS	

[VERSION]

SOFTWARE	

[OTHERS]

DATE TIME	PROJECTOR NAME
MODEL NO.	SERIAL NUMBER
LENS ID	

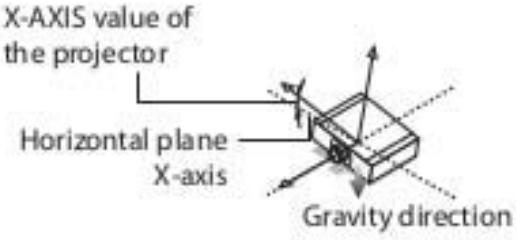
[CONDITIONS]

INTAKE TEMPERATURE	EXHAUST TEMPERATURE
ATMOSPHERIC PRESSURE	INSTALLATION POSITION
X-AXIS	Y-AXIS
Z-AXIS	OPTION COVER

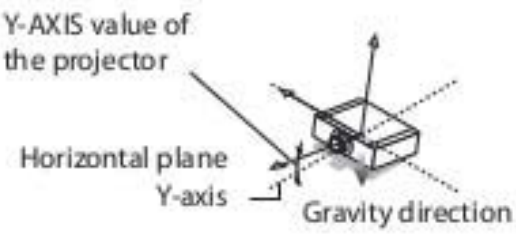
About the [X-AXIS], [Y-AXIS], and [Z-AXIS] under [CONDITIONS]

* Arrow direction of the Z-AXIS in the figure represents the top of the projector.

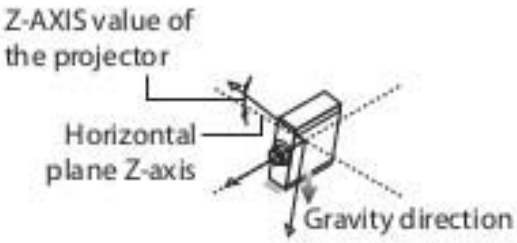
X-AXIS:
Display the projector image at an angle of −100 – +100 degrees to the horizontal in the X-axis direction.



Y-AXIS:
Display the projector image at an angle of −100 – +100 degrees to the horizontal in the Y-axis direction.



Z-AXIS:
Display the projector image at an angle of −100 – +100 degrees to the vertical in the Z-axis direction.



About [OPTION COVER]

This is used to check whether the option cover (separately sold) needs to be attached when the projector is installed at an angle.

- / -	Option cover is not required
A / -	Only option cover A needs to be attached
- / B	Only option cover B needs to be attached
A / B	Both of option covers A and B need to be attached

[HDBaseT]

SIGNAL QUALITY	OPERATION MODE
LINK STATUS	HDMI STATUS

[Art-Net(1)]

Ch1	Ch2	Ch3
Ch4	Ch5	Ch6
Ch7	Ch8	Ch9

[Art-Net(2)]

Ch10	Ch11	Ch12

6. Connecting to Other Equipment

CAUTION

- Be sure to turn off the projector before connecting the projector to an external device. If projected light enters your eyes, it may cause visual impairment.

NOTE:

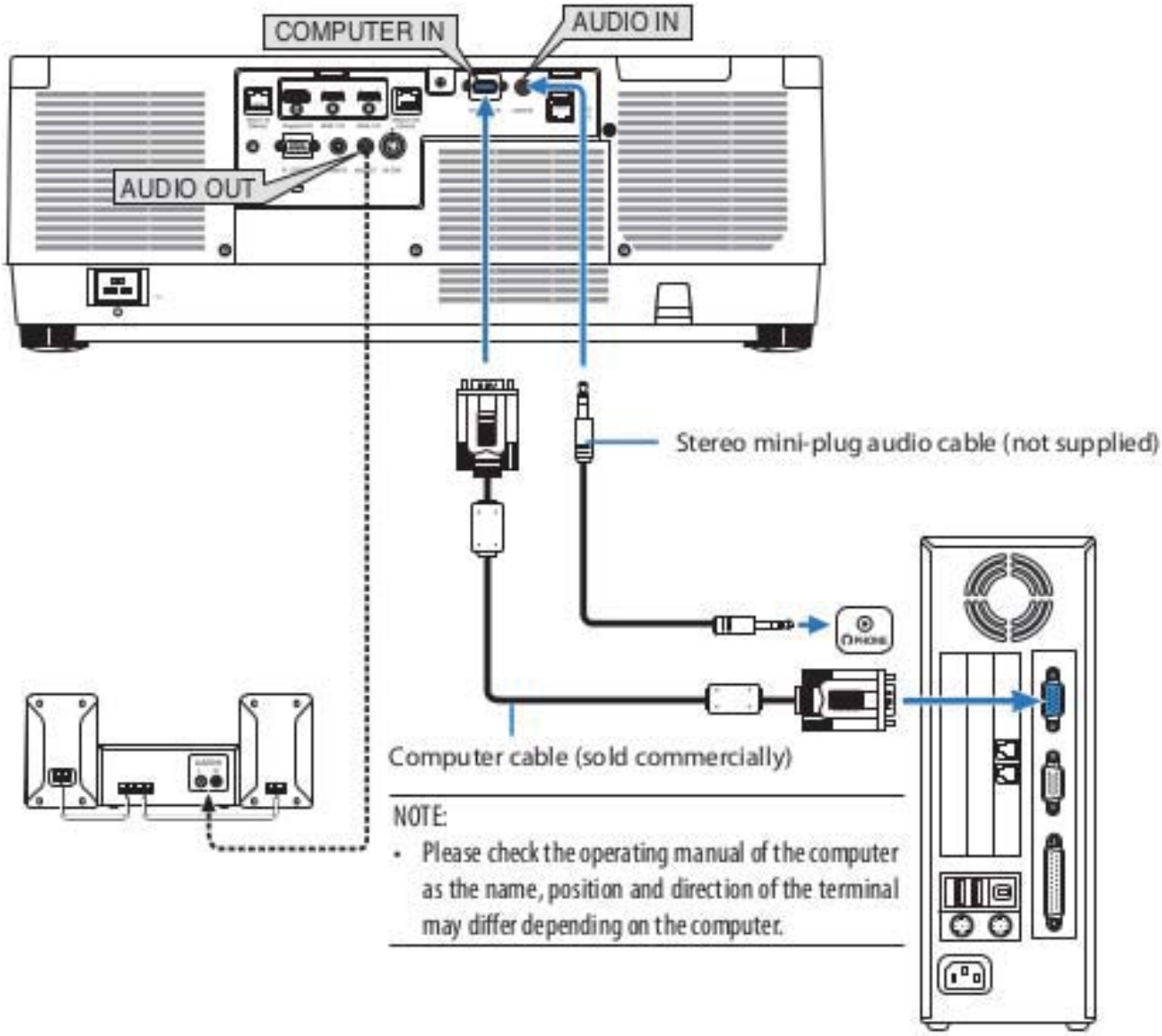
- The connection cable is not enclosed with the projector. Please get ready a suitable cable for the connection.
  For HDMI, DisplayPort, LAN, RS-232C, and AUDIO, please use a shielded signal cable.
  For 15-pin mini D-Sub, please use a shielded signal cable with ferrite core.
  Use of other cables and adapters may cause interference with radio and television reception.

6-1. Connecting Your Computer

A computer cable, HDMI cable, or a DisplayPort cable can be used to connect to a computer.

Analog RGB signal connection

- Connect the computer cable to the monitor out terminal (mini D-sub 15 pin) on the computer and the computer video input terminal on the projector. Please use a computer cable attached with a ferrite core.



NOTE:

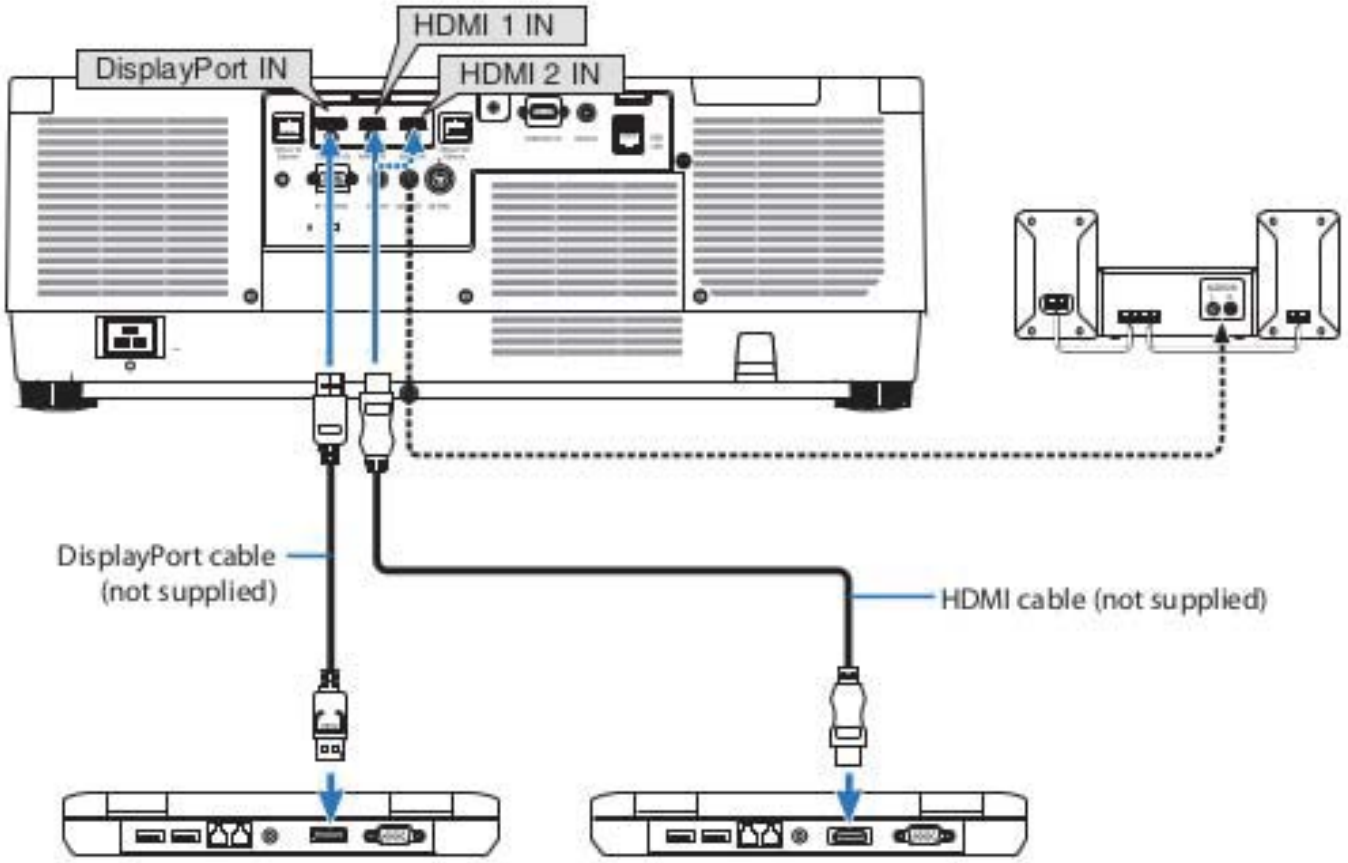
- Please check the operating manual of the computer as the name, position and direction of the terminal may differ depending on the computer.

- Select the source name for its appropriate input connector after turning on the projector.

Input connector	INPUT button on the projector cabinet	Button on the remote control
COMPUTER IN	COMPUTER	COMP.

Digital RGB signal connection

- Connect a commercially available HDMI cable between the computer's HDMI output connector and the projector's HDMI 1 IN or HDMI 2 IN connector.
- Connect a commercially available DisplayPort cable between the computer's DisplayPort output connector and the projector's DisplayPort input connector.



- Select the source name for its appropriate input connector after turning on the projector.

Input connector	INPUT button on the projector cabinet	Button on the remote control
HDMI 1 IN	HDMI1	HDMI1
HDMI 2 IN	HDMI2	HDMI2
DisplayPort IN	DisplayPort	DP1

Cautions when connecting an HDMI cable

- Use a certified High Speed HDMI® Cable or High Speed HDMI® Cable with Ethernet.

Cautions when connecting a DisplayPort cable

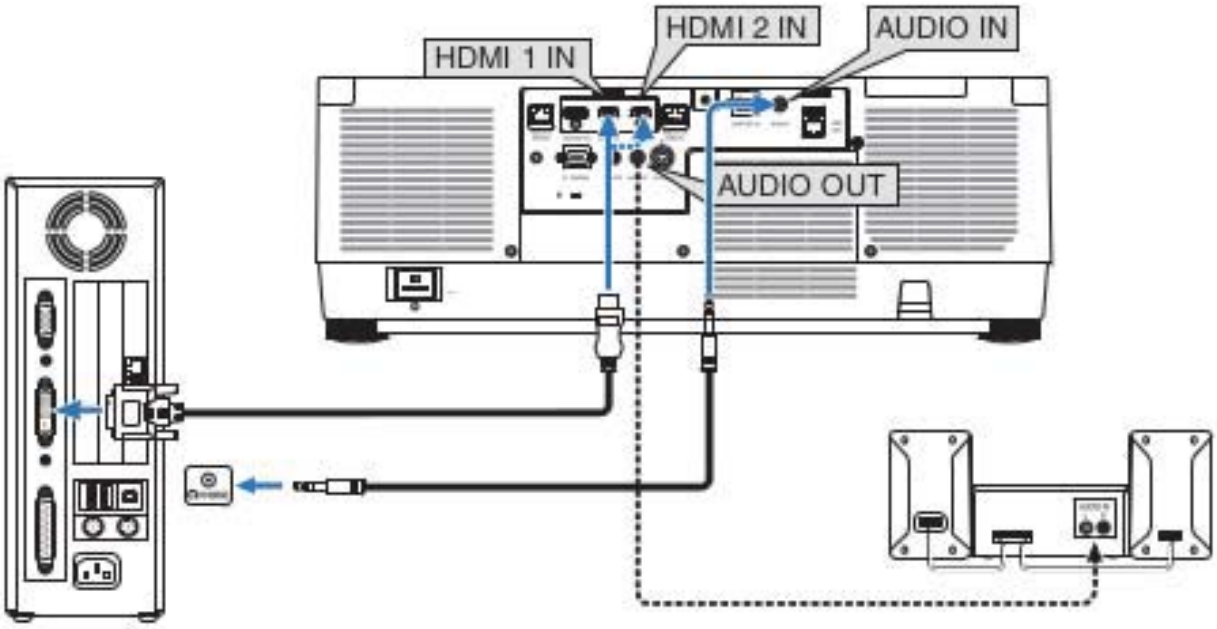
- Use a certified DisplayPort cable.



- Depending on the computer, some time may be required until the image is displayed.
- Some DisplayPort cables (commercially available) have locks.
- To disconnect the cable, press the button on the top of the cable's connector, then pull the cable out.
- In case power supply from the DisplayPort IN terminal is required, please contact your dealer.
- When signals from a device that uses a signal converter adapter are connected to the DisplayPort input connector, the picture may not appear or may not be displayed normally.
- When the HDMI output of a computer is connected to the DisplayPort input connector, use a converter (commercially available).

Cautions when using a DVI signal

- When the computer has a DVI output connector, use a commercially available converter cable to connect the computer to the projector's HDMI 1 IN or HDMI 2 IN connector (only digital video signals can be input). Also, connect the computer's audio output to the projector's audio input connector. In this case, switch the HDMI1 or HDMI2 setting at on-screen menu's audio selection on the projector to [COMPUTER]. (→ page 150)
  To connect the computer's DVI output connector to the projector's DisplayPort input connector, use a commercially available converter.

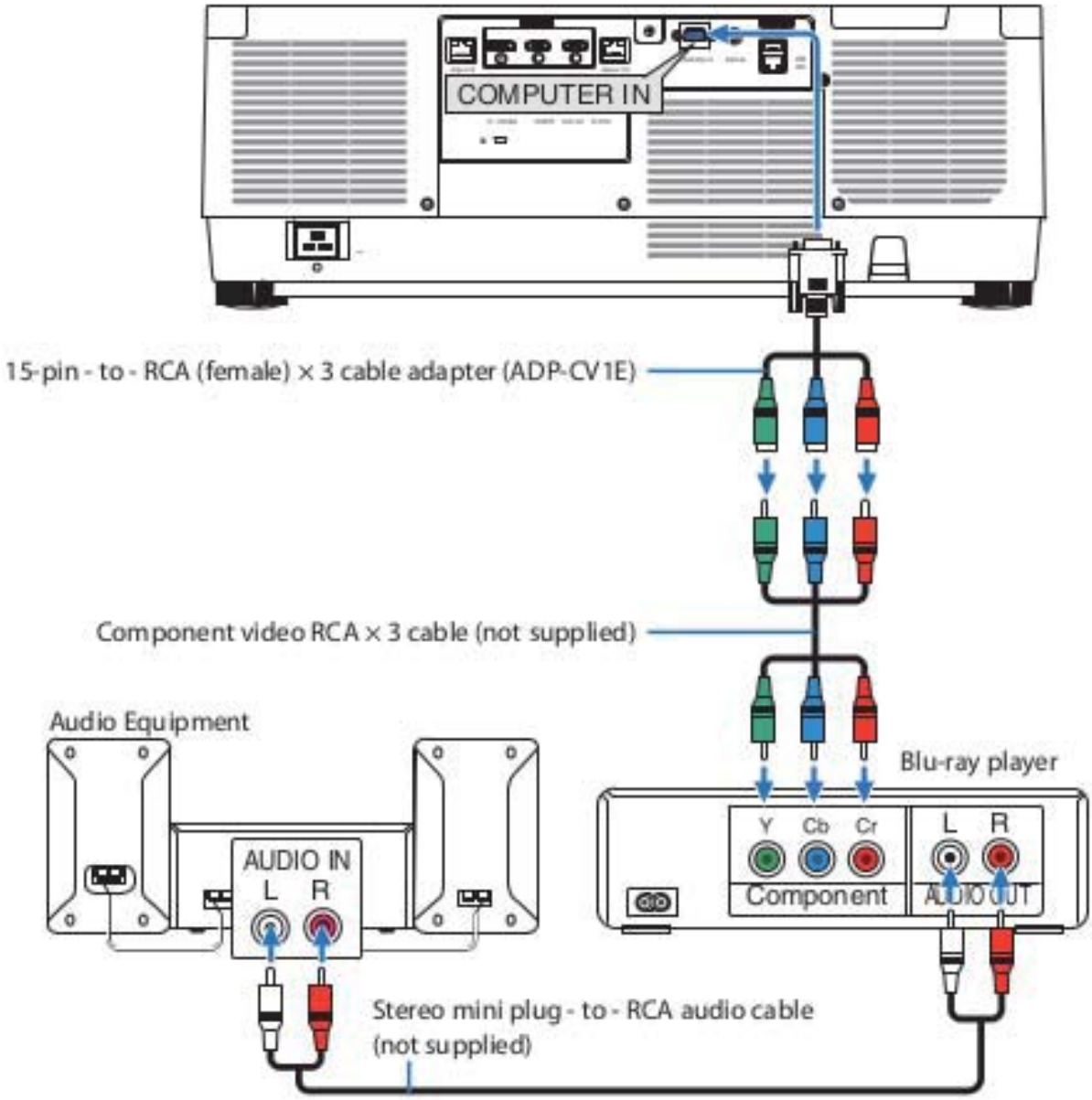


NOTE:

- Turn off the power of the computer and projector before connecting.
- When connecting the headphone terminal of the computer to the audio input terminal of the projector with an audio cable, set the computer volume to a low level before connecting. Then adjust the volume of the projector and the volume of the computer alternately to set the volume to a suitable level.
- If the computer has a mini-jack type audio output connector, we recommend connecting the audio cable to that connector.
- When a video deck is connected via a scan converter, etc., the display may not be correct during fast-forwarding and rewinding.
- Use a DVI-to-HDMI cable compliant with DDWG (Digital Display Working Group) DVI (Digital Visual Interface) revision 1.0 standard. The cable should be within 197"/5 m long.
- Turn off the projector and the PC before connecting the DVI-to-HDMI cable.
- To project a DVI digital signal: Connect the cables, turn the projector on, then select the HDMI input. Finally, turn on your PC. Failure to do so may not activate the digital output of the graphics card resulting in no picture being displayed. Should this happen, restart your PC.
- Some graphics cards have both analog RGB (15-pin D-Sub) and DVI (or DFP) outputs. Use of the 15-pin D-Sub connector may result in no picture being displayed from the digital output of the graphics card.
- Do not disconnect the DVI-to-HDMI cable while the projector is running. If the signal cable has been disconnected and then reconnected, an image may not be correctly displayed. Should this happen, restart your PC.
- The COMPUTER IN video input connectors support Windows Plug and Play.
- A Mac signal adapter (commercially available) may be required to connect a Mac computer.
  To connect a Mac computer equipped with a Mini DisplayPort to the projector, use a commercially available Mini DisplayPort → DisplayPort converter cable.

6-2. Connecting to a DVD player and other AV devices

Connecting Component Input



- Select the source name for its appropriate input connector after turning on the projector.

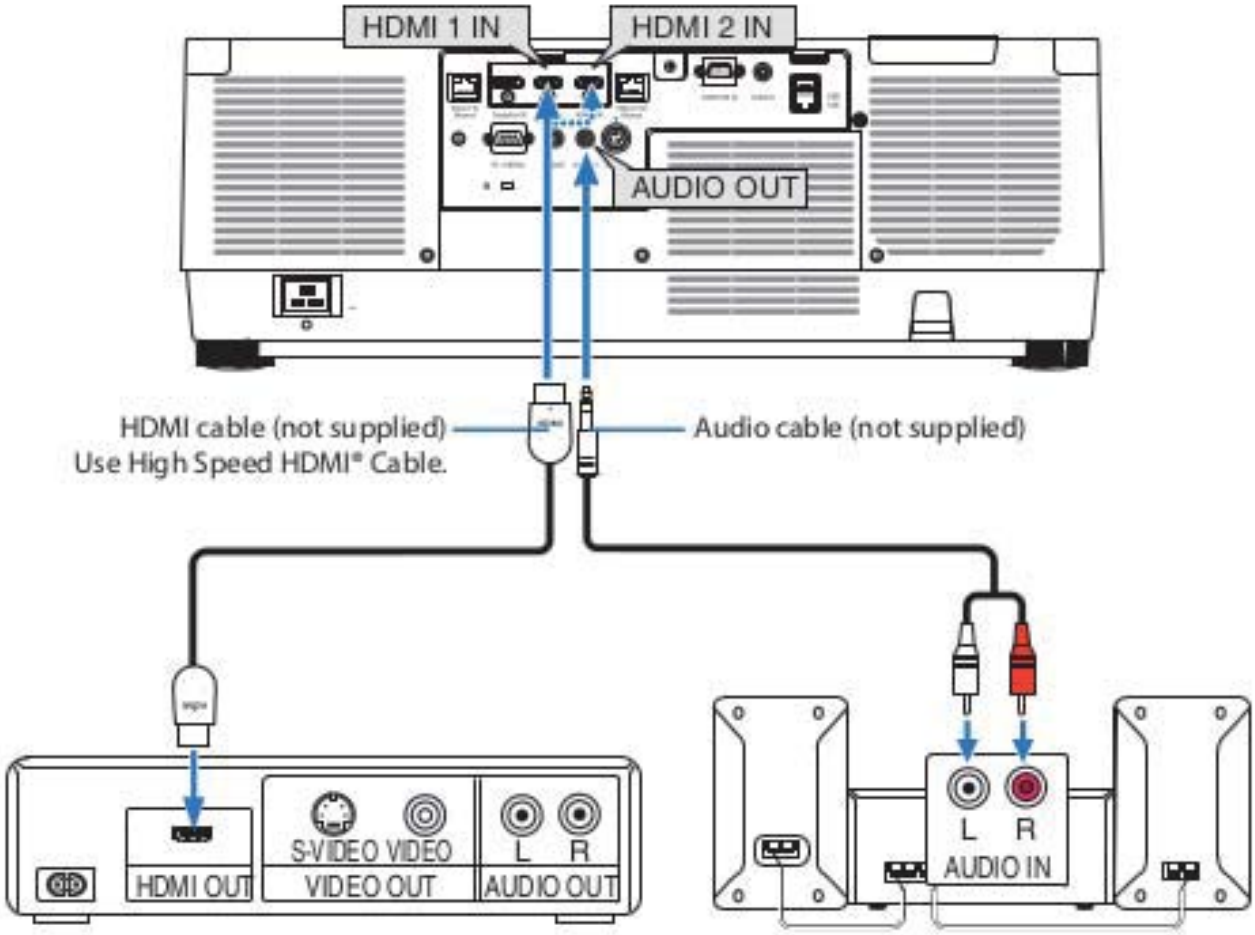
Input connector	INPUT button on the projector cabinet	Button on the remote control
COMPUTER IN	COMPUTER	COMP.

TIP:

- When the signal format is set to [AUTO] (default factory setting when shipped), the computer signal and component signal are automatically distinguished and switched. If the signals cannot be distinguished, select the appropriate setting under [ADJUST] → [VIDEO] → [SIGNAL TYPE] in the on-screen menu of the projector.
- To connect to a video device with a D connector, use the sold separately D connector converter adapter (model ADP-DT1E).

Connecting HDMI Input

You can connect the HDMI output of your Blu-ray player, hard disk player, or notebook type PC to the HDMI 1 IN or HDMI 2 IN connector of your projector.



Input connector	INPUT button on the projector cabinet	Button on the remote control
HDMI 1 IN	HDMI1	HDMI1
HDMI 2 IN	HDMI2	HDMI2

TIP:

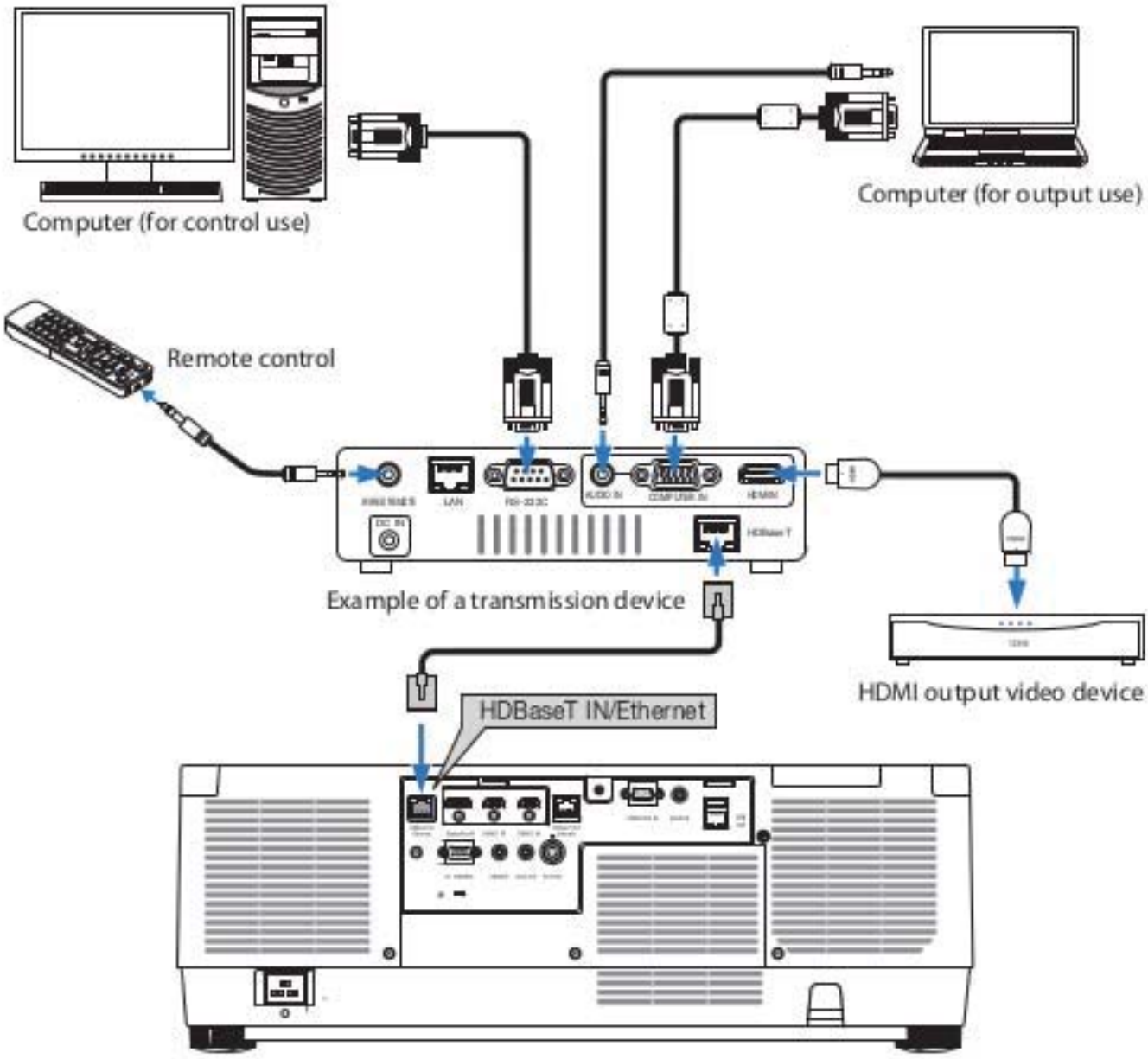
- For users of audio video equipment with an HDMI connector:
  Select "Enhanced" rather than "Normal" if HDMI output is switchable between "Enhanced" and "Normal".
  This will provide improved image contrast and more detailed dark areas.
  For more information on settings, refer to the instruction manual of the audio video equipment to be connected.
- When connecting the HDMI 1 IN or HDMI 2 IN connector of the projector to the Blu-ray player, the projector's video level can be made settings in accordance with the Blu-ray player's video level. In the menu select [ADJUST] → [VIDEO] → [VIDEO LEVEL] and make necessary settings.
- If the HDMI 1 IN or HDMI 2 IN input's sound is not output, check if [HDMI1] and [HDMI2] are set [HDMI1] and [HDMI2] correctly the on-screen menu [SETUP] → [SOURCE OPTIONS] → [AUDIO SELECT]. (→ page 150)

6-3. Connecting to a HDBaseT transmission device (sold commercially)

Use a LAN cable sold commercially to connect the HDBaseT IN/Ethernet port of the projector (RJ-45) to a HDBaseT transmission device sold commercially.
The HDBaseT IN/Ethernet port of the projector supports HDMI signals (HDCP) from transmission devices, control signals from external devices (serial, LAN) and remote control signals (IR commands).

- Refer to the owner's manual accompanied with your HDBaseT transmission for connecting with your external devices.

Connection example

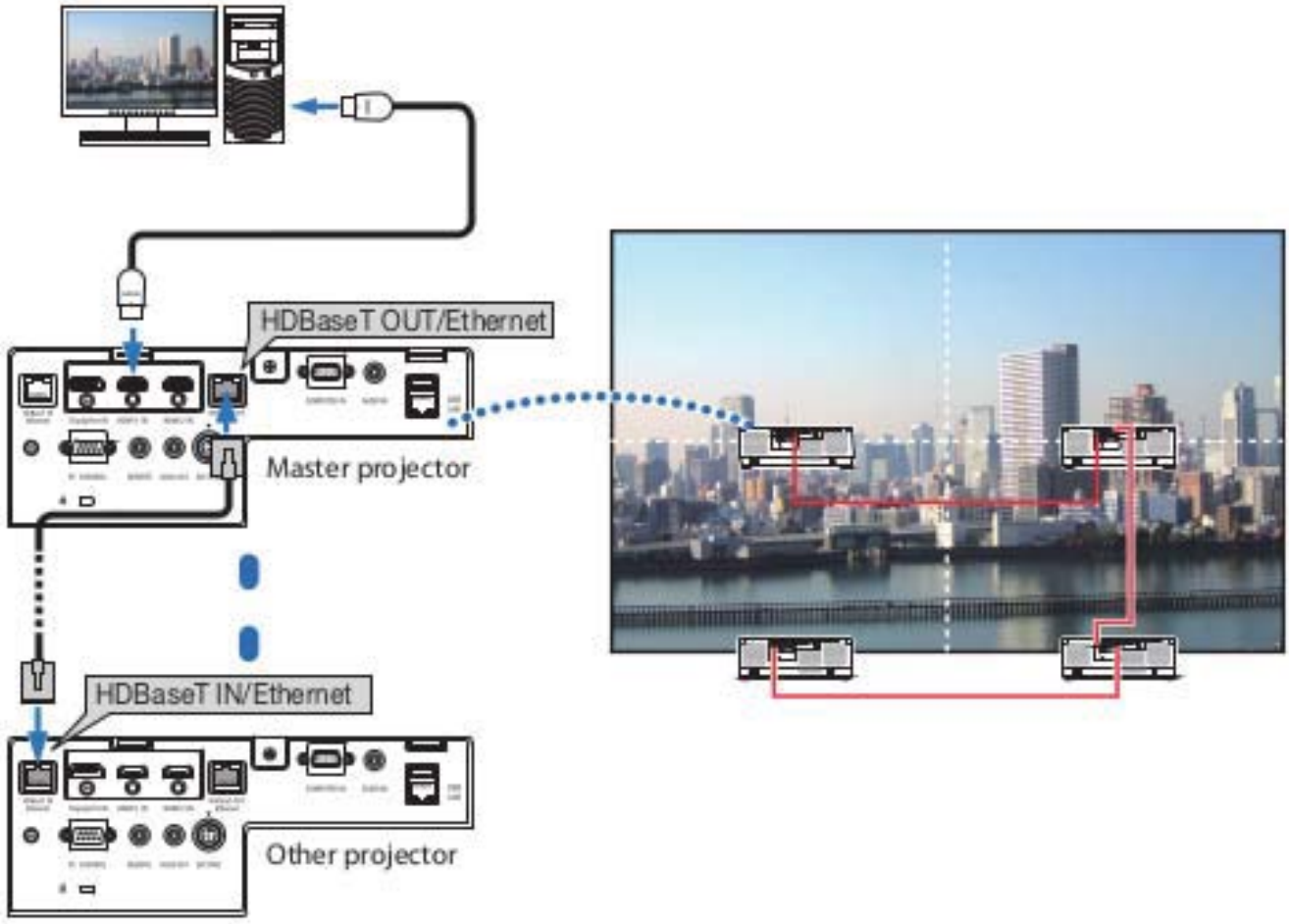


NOTE:

- Please use a shielded twisted pair (STP) cable of Category 5e or higher for the LAN cable (sold commercially).
- The maximum transmission distance over the LAN cable is 100 m.
- Please do not use other transmission equipment between the projector and transmission equipment. The picture quality may be degraded as a result.
- This projector is not guaranteed to work with all HDBaseT transmission devices sold commercially.

6-4. Connecting several projectors

It enables to project HDMI, DisplayPort, HDBaseT image on several projectors connecting the HDBaseT IN/Ethernet port and the HDBaseT OUT/Ethernet port by LAN cable. The projectors support same brightness can be connected up to four units.



NOTE:

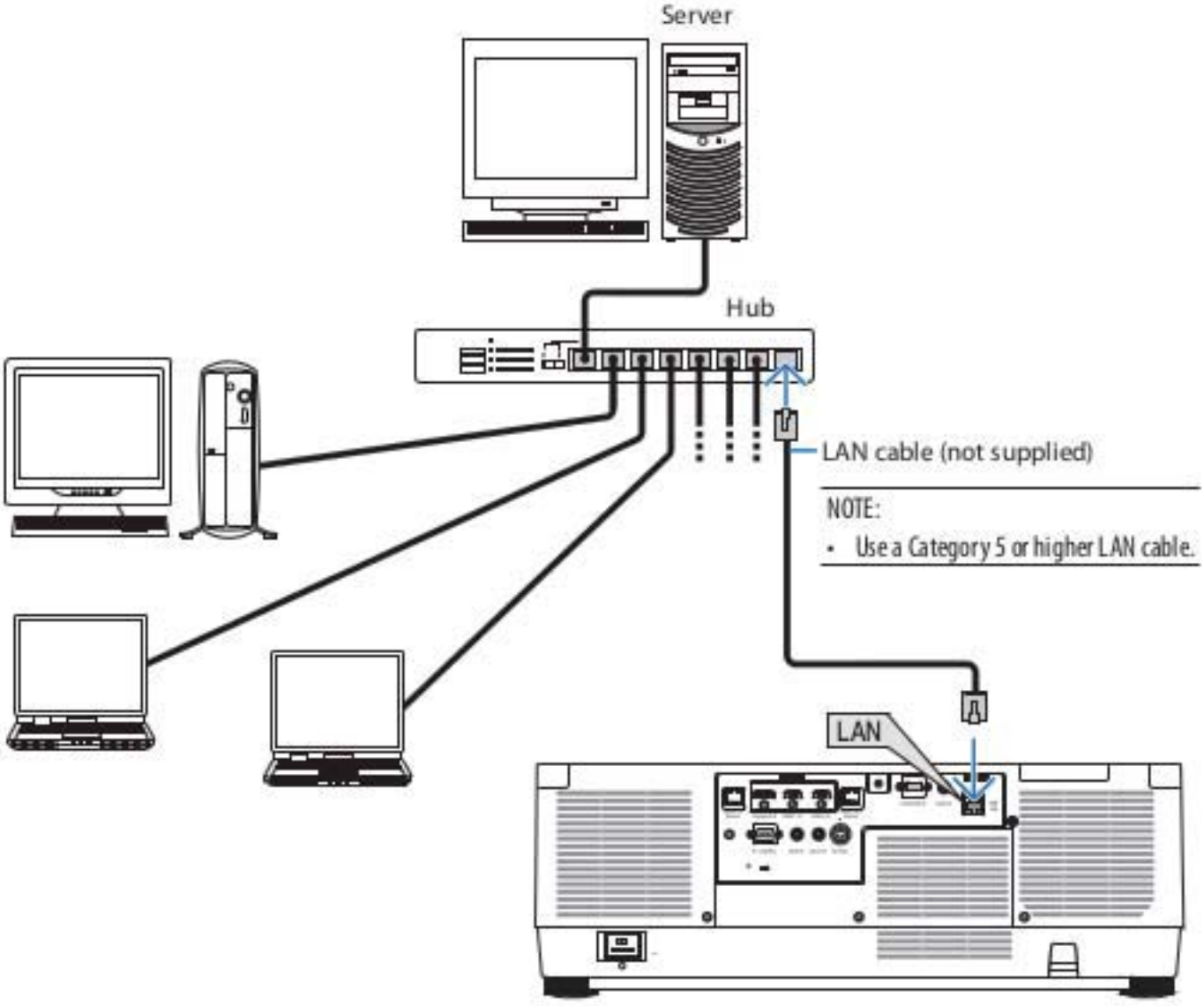
- When outputting HDMI signals, turn on the power of the video device on the output side and keep it connected before inputting video signals into this device. The HDBaseT OUT/Ethernet port of the projector is equipped with repeater function. When a device is connected to the HDBaseT OUT/Ethernet port, the resolution of the output signal is limited by the resolution supported by the connected device.
- The signal from the COMPUTER IN terminal is not output from the HDBaseT OUT/Ethernet port of this projector.
- Connecting and disconnecting an LAN cable or selecting another input source on the second and subsequent projectors will disable the HDBaseT repeater function.
- This projector is not guaranteed to work correctly in the connection with an other device as a monitor.

6-5. Connecting to a Wired LAN

The projector comes standard with a LAN port (RJ-45) which provides a LAN connection using a LAN cable.
To use a LAN connection, you are required to set the LAN on the projector menu. Select [SETUP] → [NETWORK SETTINGS] → [WIRED LAN]. (→ page 143).

Example of LAN connection

Example of wired LAN connection



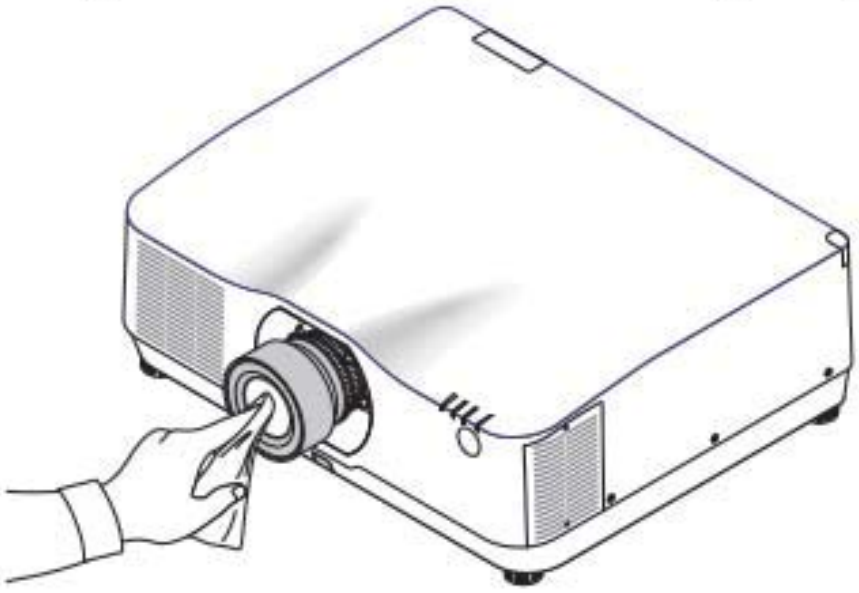
7. Maintenance

WARNING

- Turn off the projector, and unplug the projector before cleaning.
- Please do not use a spray containing flammable gas to remove dust attached to the lens and cabinet. Doing so may result in fires.

7-1. Cleaning the Lens

- Turn off the projector before cleaning.
- The projector has a plastic lens. Use a commercially available plastic lens cleaner.
- Do not scratch or mar the lens surface as a plastic lens is easily scratched.
- Never use alcohol or glass lens cleaner as doing so will cause damage to the plastic lens surface.

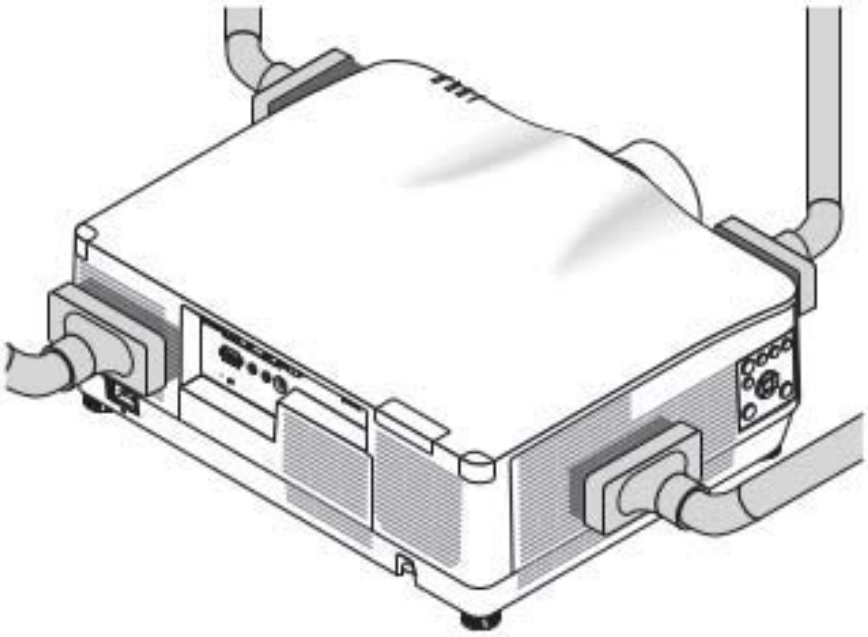


7-2. Cleaning the Cabinet

Turn off the projector, and unplug the projector before cleaning.

- Use a dry soft cloth to wipe dust off the cabinet.

  If heavily soiled, use a mild detergent.
- Never use strong detergents or solvents such as alcohol or thinner.
- When cleaning the ventilation slits or the speaker using a vacuum cleaner, do not force the brush of the vacuum cleaner into the slits of the cabinet.



Vacuum the dust off the ventilation slits.

- Clogged ventilation slits may cause a rise in the internal temperature of the projector, resulting in malfunction.
- Do not scratch or hit the cabinet with your fingers or any hard objects
- Contact your dealer for cleaning the inside of the projector.

NOTE:

- Do not apply volatile agent such as insecticide on the cabinet, the lens, or the screen. Do not leave a rubber or vinyl product in prolonged contact with it. Otherwise the surface finish will be deteriorated or the coating may be stripped off.

8. Appendix

8-1. Throw distance and screen size

Three separate bayonet style lenses can be used on this projector. Refer to the information on this page and use a lens suited for the installation environment (screen size and throw distance).

Lens types and throw distance

NP11FL/NP12ZL/NP13ZL/NP14ZL/NP15ZL/NP40ZL/NP41ZL/NP43ZL

(Unit: inch)

Screen size (inches)	Lens model name							
	NP11FL	NP12ZL	NP13ZL	NP14ZL	NP15ZL	NP40ZL	NP41ZL	NP43ZL
30	—	28 – 37	36 – 74	—	—	—	—	—
40	26	38 – 50	48 – 99	—	—	—	—	—
50	33	48 – 64	61 – 124	—	—	33 – 46	54 – 127	129 – 254
60	40	59 – 77	74 – 149	146 – 236	231 – 354	40 – 56	66 – 153	154 – 303
80	53	79 – 103	99 – 200	196 – 317	310 – 475	53 – 75	88 – 204	204 – 403
100	67	99 – 129	124 – 250	246 – 397	389 – 596	67 – 94	110 – 256	254 – 503
120	81	119 – 155	149 – 300	296 – 477	469 – 716	81 – 113	133 – 307	303 – 602
150	101	149 – 194	187 – 376	372 – 598	588 – 897	101 – 142	166 – 384	378 – 752
200	—	199 – 259	250 – 502	497 – 799	786 – 1199	135 – 190	223 – 513	502 – 1001
240	—	239 – 312	301 – 602	598 – 959	945 – 1440	163 – 229	267 – 616	601 – 1201
300	—	300 – 390	377 – 754	748 – 1200	1183 – 1802	204 – 286	335 – 770	750 – 1500
400	—	400 – 521	503 – 1005	1000 – 1602	1580 – 2406	272 – 382	447 – 1028	999 – 1998
500	—	501 – 651	629 – 1257	1251 – 2004	1977 – 3009	340 – 478	559 – 1285	1247 – 2497

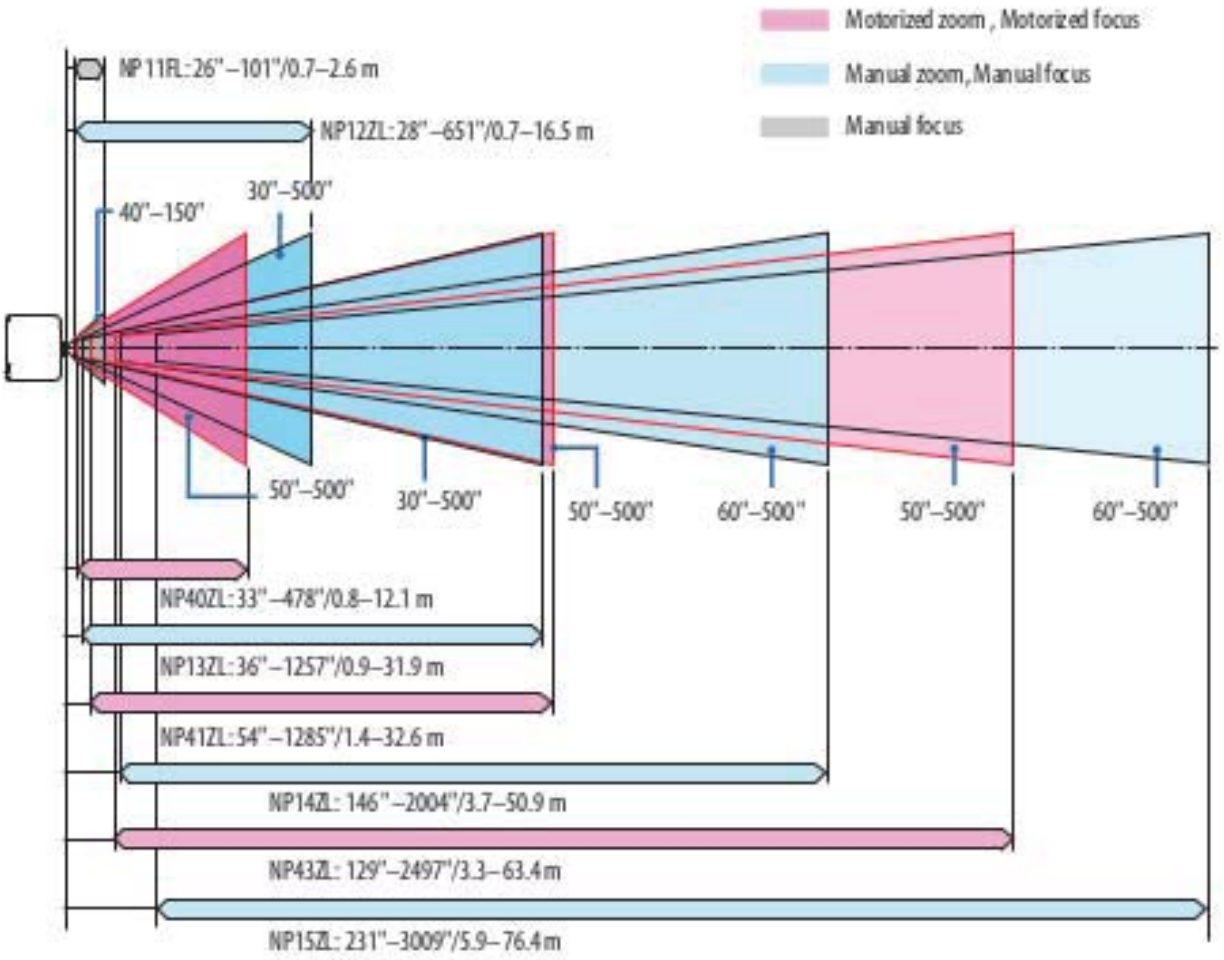
(Unit: m)

Screen size (inches)	Lens model name							
	NP11FL	NP12ZL	NP13ZL	NP14ZL	NP15ZL	NP40ZL	NP41ZL	NP43ZL
30	—	0.7 – 0.9	0.9 – 1.9	—	—	—	—	—
40	0.7	1.0 – 1.3	1.2 – 2.5	—	—	—	—	—
50	0.8	1.2 – 1.6	1.6 – 3.1	—	—	0.8 – 1.2	1.4 – 3.2	3.3 – 6.4
60	1.0	1.5 – 1.9	1.9 – 3.8	3.7 – 6.0	5.9 – 9.0	1.0 – 1.4	1.7 – 3.9	3.9 – 7.7
80	1.4	2.0 – 2.6	2.5 – 5.1	5.0 – 8.0	7.9 – 12.1	1.4 – 1.9	2.2 – 5.2	5.2 – 10.2
100	1.7	2.5 – 3.3	3.2 – 6.3	6.3 – 10.1	9.9 – 15.1	1.7 – 2.4	2.8 – 6.5	6.4 – 12.8
120	2.1	3.0 – 3.9	3.8 – 7.6	7.5 – 12.1	11.9 – 18.2	2.0 – 2.9	3.4 – 7.8	7.7 – 15.3
150	2.6	3.8 – 4.9	4.8 – 9.5	9.4 – 15.2	14.9 – 22.8	2.6 – 3.6	4.2 – 9.8	9.6 – 19.1
200	—	5.1 – 6.6	6.4 – 12.7	12.6 – 20.3	20.0 – 30.5	3.4 – 4.8	5.7 – 13.0	12.7 – 25.4
240	—	6.1 – 7.9	7.6 – 15.3	15.2 – 24.4	24.0 – 36.6	4.1 – 5.8	6.8 – 15.6	15.3 – 30.5
300	—	7.6 – 9.9	9.6 – 19.1	19.0 – 30.5	30.1 – 45.8	5.2 – 7.3	8.5 – 19.6	19.1 – 38.1
400	—	10.2 – 13.2	12.8 – 25.5	25.4 – 40.7	40.1 – 61.1	6.9 – 9.7	11.4 – 26.1	25.4 – 50.8
500	—	12.7 – 16.5	16.0 – 31.9	31.8 – 50.9	50.2 – 76.4	8.6 – 12.1	14.2 – 32.6	31.7 – 63.4

TIP:

- Calculation of the throw distance from the screen size
  NP11FL lens throw distance (inch/m) = H × 0.8 : 27"/0.7 m (min.) to 101"/2.6 m (max.)
  NP12ZL lens throw distance (inch/m) = H × 1.2 to H × 1.5 : 30"/0.7 m (min.) to 636"/16.1 m (max.)
  NP13ZL lens throw distance (inch/m) = H × 1.5 to H × 3.0 : 38"/0.9 m (min.) to 1272"/32.3 m (max.)
  NP14ZL lens throw distance (inch/m) = H × 2.9 to H × 4.7 : 147"/3.7 m (min.) to 1992"/50.6 m (max.)
  NP15ZL lens throw distance (inch/m) = H × 4.6 to H × 7.1 : 234"/5.9 m (min.) to 3010"/76.4 m (max.)
  NP40ZL lens throw distance (inch/m) = H × 0.8 to H × 1.1 : 33"/0.8 m (min.) to 466"/11.8 m (max.)
  NP41ZL lens throw distance (inch/m) = H × 1.3 to H × 3.0 : 55"/1.4 m (min.) to 1272"/32.3 m (max.)
  NP43ZL lens throw distance (inch/m) = H × 3.0 to H × 5.9 : 127"/3.2 m (min.) to 2501"/63.5 m (max.)
  "H" (Horizontal) refers to the screen width.
  * Figures differ by several % with the table above because the calculation is approximate.
    Ex.: Throw distance when projecting on a 150" screen using the NP41ZL lens:
    According to the "Screen Size (for reference)" table (→ page 174), H (screen width) = 127"/323.1 cm.
    The throw distance is 127"/323.1 cm × 1.3 to 127"/323.1 cm × 3.0 = 165"/420.0 cm to 381"/969.3 cm (because of the zoom lens).

Projection range for the different lenses



NP44ML

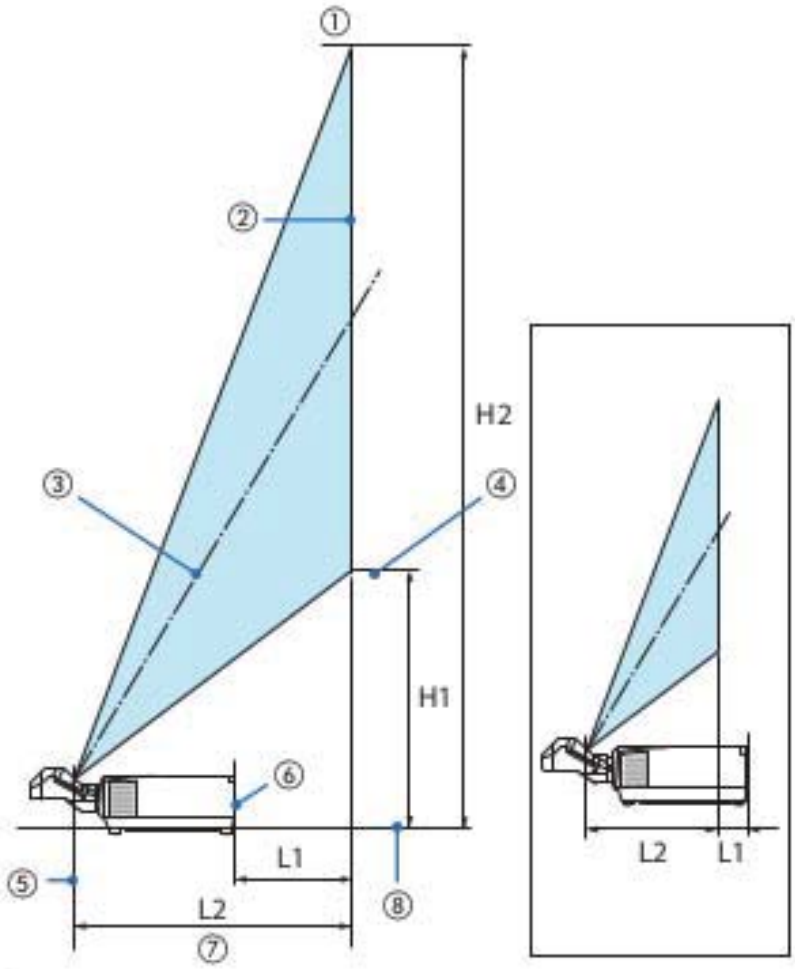
- Throw distance shows a distance between the center of the lens unit projection window and the screen face.
- If there is a wall below the screen bottom, allow 0.2 m/8" or longer of L1 distance to install the projector.

(Unit: inch)

Screen size (inches)	L1	L2	H1	H2
80	-2	22	21	63
100	3	27	25	78
120	9	33	28	92
150	18	42	34	114
180	26	50	40	135
200	32	56	43	149
240	44	68	51	178
270	52	76	56	199
300	61	85	62	221
350	75	99	71	257
400	90	114	80	292

(Unit: m)

Screen size (inches)	L1	L2	H1	H2
80	-0.06	0.55	0.53	1.61
100	0.08	0.70	0.63	1.98
120	0.23	0.84	0.72	2.34
150	0.45	1.06	0.86	2.88
180	0.67	1.28	1.01	3.43
200	0.81	1.43	1.10	3.79
240	1.11	1.72	1.29	4.52
270	1.33	1.94	1.43	5.07
300	1.54	2.16	1.57	5.61
350	1.91	2.52	1.81	6.65
400	2.28	2.89	2.04	7.43



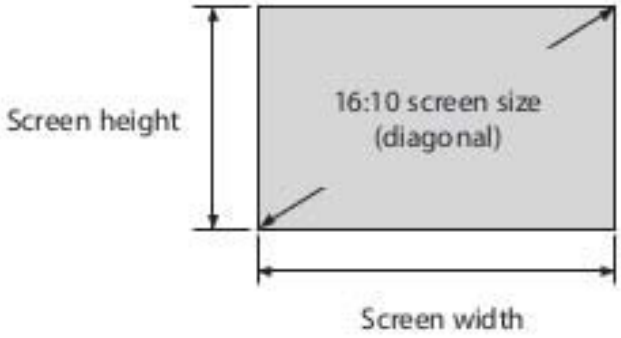
①Screen top end
②Screen face
③Screen center
④Screen bottom
⑤Center of the lens unit projection window
⑥Projector rear face
⑦Throw distance
⑧Projector bottom face

(when L1 is minus)

TIP:

- Calculation of the throw distance from the screen size
  NP44ML lens throw distance (m) = H × 0.32 : 22"/0.6 m (min.) to 109"/2.8 m (max.)
  "H" (Horizontal) refers to the screen width.
  * Figures differ by several % with the table above because the calculation is approximate.

Tables of screen sizes and dimensions



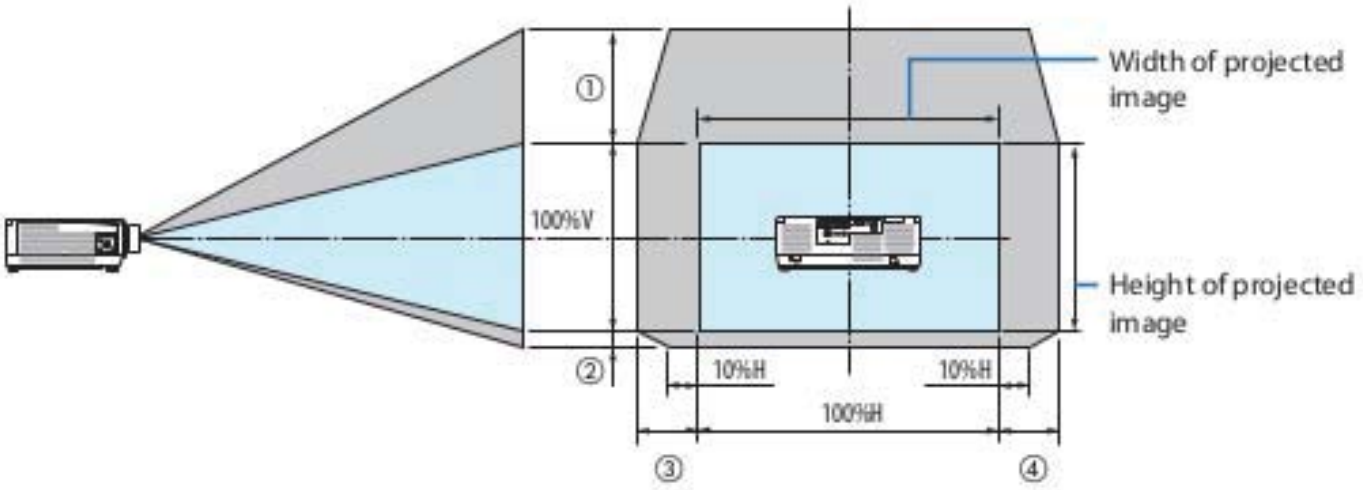
Size (inches)	Screen width		Screen height	
	(inches)	(cm)	(inches)	(cm)
30	25.4	64.6	15.9	40.4
40	33.9	86.2	21.2	53.8
50	42.4	107.7	26.5	67.3
60	50.9	129.2	31.8	80.8
80	67.8	172.3	42.4	107.7
100	84.8	215.4	53.0	134.6
120	101.8	258.5	63.6	161.5
150	127.2	323.1	79.5	201.9
200	169.6	430.8	106.0	269.2
240	203.5	516.9	127.2	323.1
300	254.4	646.2	159.0	403.9
400	339.2	861.6	212.0	538.5
500	424.0	1077.0	265.0	673.1

Lens shifting range

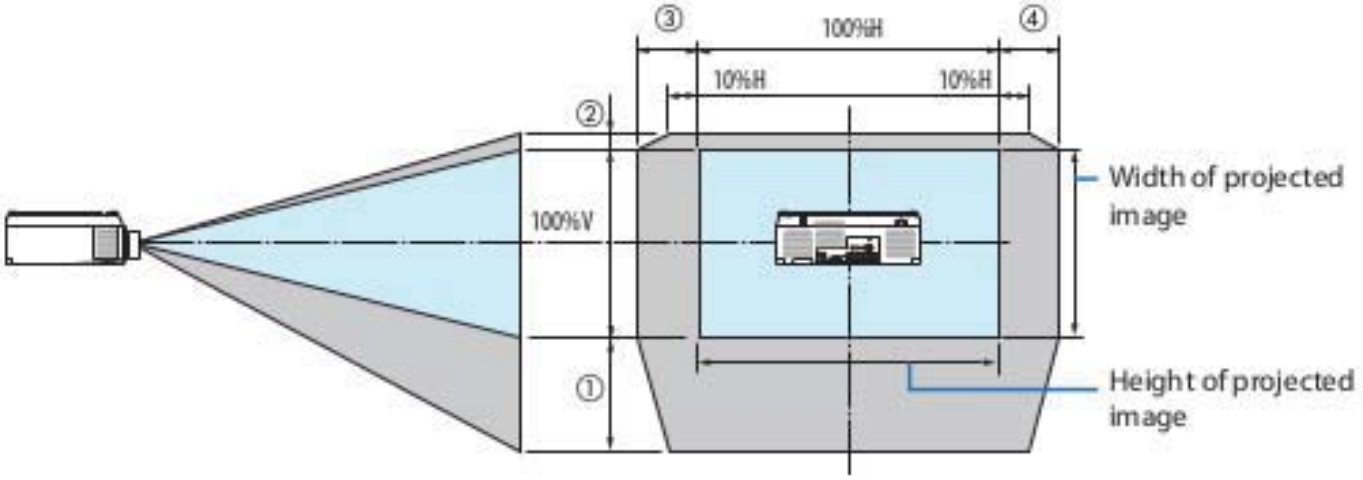
This projector is equipped with a lens shift function for adjusting the position of the projected image by buttons. The lens can be shifted within the range shown below.

Description of symbols: V indicates vertical (height of the projected image), H indicates horizontal (width of the projected image).

Desk/front projection



Ceiling/front projector



Number in the figure	Lens Unit						
	NP12ZL	NP13ZL	NP14ZL	NP15ZL	NP40ZL	NP41ZL	NP43ZL
①	50%V	50%V	50%V	50%V	50%V	50%V	50%V
②	10%V	10%V	10%V	10%V	10%V	10%V	10%V
③	30%H	30%H *	30%H	30%H	20%H	20%H	20%H
④	30%H	30%H *	30%H	30%H	20%H	20%H	20%H

* The maximum adjustable range for lens shift (H) is 15%H when the NP13ZL lens is used on 150" or larger screen.

Example: When projecting on a 150" screen using the NP40ZL lens:

According to the "Tables of screen sizes and dimensions" (→ page 174), H (screen width) = 323.1 cm and V (screen height) = 201.9 cm

Adjustment range in the vertical direction: The projected image can be moved upward 0.50 × 201.9 cm ≈ 111 cm and downward 0.1 × 201.9 cm ≈ 20 cm (when the lens is at the center position).

Adjustment range in the horizontal direction: The projected image can be moved to the left 0.20 × 323.1 cm ≈ 65 cm, and this applies to the right direction which means approx. 65 cm.

* Your calculated figure has a few percent margin of error because the calculation formula is approximate.

NOTE:

- Use NP11FL at the home position. If necessary, fine-adjust the position of the projected image using the lens shift function.
- The NP44ML must be fixed to the projector using the separately sold support kit (NP02LK). Loosen the screws of the support bracket, you can fine-adjustment of the lens shift.

8-2. Compatible Input Signal List

HDMI/HDBaseT

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640 × 480	4 : 3	60/72/75/85/iMac
SVGA	800 × 600	4 : 3	56/60/72/75/85/iMac
XGA	1024 × 768	4 : 3	60/70/75/85/iMac
HD	1280 × 720	16 : 9	60
WXGA	1280 × 768	15 : 9	60
	1280 × 800	16 : 10	60
Quad-VGA	1280 × 960	4 : 3	60
SXGA	1280 × 1024	5 : 4	60
FWXGA	1360 × 768	16 : 9	60
	1366 × 768	16 : 9	60
SXGA+	1400 × 1050	4 : 3	60
WXGA+	1440 × 900	16 : 10	60
WXGA++	1600 × 900	16 : 9	60
WSXGA+	1680 × 1050	16 : 10	60
UXGA	1600 × 1200 *1	4 : 3	60
Full HD	1920 × 1080 *1	16 : 9	60
WUXGA	1920 × 1200 *1	16 : 10	60 (Reduced Blanking)
2K	2048 × 1080	17 : 9	60
WQHD iMac 27"	2560 × 1440	16 : 9	60
WQXGA	2560 × 1600	16 : 10	60 (Reduced Blanking)
4K	3840 × 2160	16 : 9	24/25/30/50*2/60*2
	4096 × 2160	17 : 9	24/25/30/50*2/60*2
HDTV (1080p)	1920 × 1080 *1	16 : 9	24/25/30/50*2/60*2
HDTV (1080i)	1920 × 1080 *1	16 : 9	48/50/60
HDTV (720p)	1280 × 720	16 : 9	50/60
SDTV (480p)	720/1440 × 480	4:3 / 16:9	60
SDTV (576p)	720/1440 × 576	4:3 / 16:9	50
SDTV (480i)	1440 × 480	4:3 / 16:9	60
SDTV (576i)	1440 × 576	4:3 / 16:9	50

DisplayPort

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640 × 480	4 : 3	60
SVGA	800 × 600	4 : 3	60
XGA	1024 × 768	4 : 3	60
HD	1280 × 720	16 : 9	60
WXGA	1280 × 768	15 : 9	60
	1280 × 800	16 : 10	60
Quad-VGA	1280 × 960	4 : 3	60
SXGA	1280 × 1024	5 : 4	60
FWXGA	1360 × 768	16 : 9	60
	1366 × 768	16 : 9	60
SXGA+	1400 × 1050	4 : 3	60
WXGA+	1440 × 900	16 : 10	60
WXGA++	1600 × 900	16 : 9	60
WSXGA+	1680 × 1050	16 : 10	60
UXGA	1600 × 1200 *1	4 : 3	60
Full HD	1920 × 1080 *1	16 : 9	60
WUXGA	1920 × 1200 *1	16 : 10	60 (Reduced Blanking)
2K	2048 × 1080	17 : 9	60
WQHD iMac 27"	2560 × 1440	16 : 9	60
WQXGA	2560 × 1600	16 : 10	60 (Reduced Blanking)
4K	3840 × 2160	16 : 9	24/25/30/50/60
	4096 × 2160	17 : 9	24/25/30/50/60
HDTV (1080p)	1920 × 1080	16 : 9	24/25/30/50/60
HDTV (720p)	1280 × 720	16 : 9	50/60
SDTV (480i/p)	720/1440 × 480	4:3 / 16:9	60
SDTV (576i/p)	720/1440 × 576	4:3 / 16:9	50

Analog RGB

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640 × 480	4 : 3	60/72/75/85/iMac
SVGA	800 × 600	4 : 3	56/60/72/75/85/iMac
XGA	1024 × 768	4 : 3	60/70/75/85/iMac
XGA+	1152 × 864	4 : 3	75
HD	1280 × 720	16 : 9	60
WXGA	1280 × 768	15 : 9	60/75/85
	1280 × 800	16 : 10	60/75/85
Quad-VGA	1280 × 960	4 : 3	60/85
SXGA	1280 × 1024	5 : 4	60/75/85
FWXGA	1360 × 768	16 : 9	60
	1366 × 768	16 : 9	60
SXGA+	1400 × 1050	4 : 3	60/75
WXGA+	1440 × 900	16 : 10	60/75/85
WXGA++	1600 × 900	16 : 9	60
UXGA	1600 × 1200 *1	4 : 3	60
WSXGA+	1680 × 1050	16 : 10	60
Fill HD	1920 × 1080 *1	16 : 9	60
WUXGA	1920 × 1200 *1	16 : 10	60 (Reduced Blanking)
2K	2048 × 1080	17 : 9	60
Full HD	1920 × 1080 *1	16 : 9	60
MAC 13"	640 × 480	4 : 3	67
MAC 16"	832 × 624	4 : 3	75
MAC 19"	1024 × 768	4 : 3	75
MAC 21"	1152 × 870	4 : 3	75
MAC 23"	1280 × 1024	5 : 4	65

Analog Component

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
HDTV (1080p)	1920 × 1080	16 : 9	50/60
HDTV (1080i)	1920 × 1080	16 : 9	48/50/60
HDTV (720p)	1280 × 720	16 : 9	50/60
SDTV (480p)	720 × 480	4:3 / 16:9	60
SDTV (576p)	720 × 576	4:3 / 16:9	50
SDTV (480i)	720 × 480	4:3 / 16:9	60
SDTV (576i)	720 × 576	4:3 / 16:9	50

HDMI/HDBaseT 3D

Signal Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)	3D Format
1920 × 1080p	16 : 9	23.98/24	Frame Packing
			Side By Side (Half)
			Top And Bottom
		25	Side By Side (Half)
			Top And Bottom
		29.97/30	Frame Packing
			Side By Side (Half)
			Top And Bottom
		50	Side By Side (Half)
			Top And Bottom
		59.94/60	Side By Side (Half)
			Top And Bottom
1920 × 1080i		50	Side By Side (Half)
			Top And Bottom
		59.94/60	Side By Side (Half)
			Top And Bottom
1280 × 720p		23.98/24	Frame Packing
			Side By Side (Half)
			Top And Bottom
		25	Side By Side (Half)
			Top And Bottom
		29.97/30	Frame Packing
			Side By Side (Half)
			Top And Bottom
		50	Frame Packing
			Side By Side (Half)
			Top And Bottom
		59.94/60	Frame Packing
			Side By Side (Half)
			Top And Bottom

DisplayPort 3D

Signal Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)	3D Format
1920 × 1080p	16 : 9	23.98/24	Frame Packing
			Side By Side (Half)
			Top And Bottom
		25	Side By Side (Half)
			Top And Bottom
		29.97/30	Frame Packing
			Side By Side (Half)
			Top And Bottom
		50	Side By Side (Half)
			Top And Bottom
		59.94/60	Side By Side (Half)
			Top And Bottom
1280 × 720p		23.98/24	Frame Packing
			Side By Side (Half)
			Top And Bottom
		25	Side By Side (Half)
			Top And Bottom
		29.97/30	Frame Packing
			Side By Side (Half)
			Top And Bottom
		50	Frame Packing
			Side By Side (Half)
			Top And Bottom
		59.94/60	Frame Packing
			Side By Side (Half)
			Top And Bottom

*1 Native resolution

*2 HDBaseT does not support this signal.

- Signals exceeding the projector's resolution are handled with Advanced AccuBlend.
- With Advanced AccuBlend, the size of characters and ruled lines may be uneven and colors may be blurred.
- Upon shipment, the projector is set for signals with standard display resolutions and frequencies, but adjustments may be required depending on the type of computer.

8-3. Specifications

Model name				PA1004UL-W/PA1004UL-B	PA804UL-W/PA804UL-B
Method				Three primary color liquid crystal shutter projection method	
Specifications of main parts					
	Liquid crystal panel	Size		0.76" (with MLA) × 3 (aspect ratio: 16:10)	
		Pixels (*1)		2,304,000 (1920 dots × 1200 lines)	
	Projection lenses			Refer to the specifications of option lens (→ 185 page)	
	Light source			Laser diode	
	Optical device			Integrator, Dichroic Mirror, XDP	
Light output (*2) (*3)		REF. LIGHT MODE			
			NORMAL	9000 lm	7500 lm
			BOOST	10000 lm	8200 lm
Screen size (throw distance)				Please refer to the "Throw distance and screen size" (→ 171 page)	
Color reproducibility				10-bit color processing (approx. 1.07 billion colors)	
Scanning frequency		Horizontal		Analog: 15 kHz, 24 to 100 kHz (24 kHz or greater for RGB inputs), conforming to VESA standards Digital: 15 kHz, 24 to 153 kHz, conforming to VESA standards	
		Vertical		Analog: 48 Hz, 50 to 85 Hz, 100, 120 Hz conforming to VESA standards Digital: 24, 25, 30, 48 Hz, 50 to 85 Hz, 100, 120 Hz conforming to VESA standards	
Main adjustment functions				Zoom, Focus, Lens Shift (Refer to the specifications of option lens → page 185), input signal switching (HDMI1/HDMI2/DisplayPort/COMPUTER/HDBaseT), auto image adjustment, picture enlarging, picture position adjustment, muting (both video and audio), power on/standby, on-screen display/selection, etc.	
Max. display resolution (horizontal × vertical)				Analog WUXGA (1920 × 1200) with Advanced AccuBlend Pixel clock frequency: less than 165 MHz Digital Quad HD (4096 × 2160) with Advanced AccuBlend Pixel clock frequency: less than 600 MHz (HDBaseT: 300 MHz)	
Input signals					
	R,G,B,H,V			RGB: 0.7 Vp-p/75 Ω	
				Y: 1.0 Vp-p/75 Ω (with Negative Polarity Sync)	
				Cb, Cr (Pb, Pr): 0.7 Vp-p/75 Ω	
				H/V Sync: 4.0 Vp-p/TTL	
				Composite Sync: 4.0 Vp-p/TTL	
				Sync on G: 1.0 Vp-p/75 Ω (with Sync)	
	Component			Y: 1.0 Vp-p/75 Ω (with Sync)	
				Cb, Cr (Pb, Pr): 0.7 Vp-p/75 Ω	
				DTV: 480i, 480p, 720p, 1080i, 1080p (60 Hz) 576i, 576p, 720p, 1080i (50 Hz)	
				DVD: Progressive signal (50/60 Hz)	
	Audio			0.5 Vrms/22 kΩ or greater	
Input/output connectors					
	Computer/Component	Video input		Mini D-Sub 15-pin × 1	
		Audio input		Stereo mini jack × 1	
		Audio output		Stereo mini jack × 1 (common for all signals)	

Model name			PA1004UL-W/PA1004UL-B	PA804UL-W/PA804UL-B
	HDMI	Video input	HDMI® Connector type A × 2 RJ-450 × 1, 100BASE-TX compatible Deep Color (color depth): 8-/10-/12-bit compatible Colorimetry: RGB, YCbCr444, YCbCr422 , YCbCr420, REC2020, REC709, REC601 Supports LipSync, HDCP(*4), 4K HDR and 3D	
		Audio input	HDMI: Sampling frequency – 32/44.1/48 kHz, Sampling bits – 16/20/24 bits	
	HDBaseT/Ethernet	Video input	Deep Color (color depth): Support 8/10/12 bits Colorimetry: Support RGB, YCbCr444, YCbCr422 , YCbCr420 , REC2020, REC709, REC601 Support LipSync , HDCP(*4), 3D, HDR	
		Video output	RJ-45 × 1, 100BASE-TX Deep Color (color depth): Support 8/10/12 bits Colorimetry: Support RGB, YCbCr444, YCbCr422, REC709, REC601 Support LipSync, HDCP(*4), 3D	
		Audio input	Sampling frequency: 32/44.1/48 kHz Sampling bit: 16/20/24 bit	
		Audio output	Sampling frequency: 32/44.1/48 kHz Sampling bit: 16/20/24 bits	
	DisplayPort	Video input	DisplayPort × 1 Data rate: 5.4 Gbps/2.7 Gbps/1.62 Gbps No. lanes: 1 lane/2 lanes/4 lanes Color depth: 8 bits, 10 bits, 12 bits Colorimetry: RGB, YCbCr444, YCbCr422, REC709, REC601 HDCP compatible (*4)	
		Audio input	DisplayPort: Sampling frequency – 32/44.1/48 kHz, Sampling bits – 16/20/24 bits	
	PC control terminal		D-Sub 9-pin × 1	
	USB port		USB type A × 1	
	Ethernet/LAN/HDBaseT port		RJ-45 × 1, Supports 10BASE-T/100BASE-TX	
	Remote terminal		Stereo mini jack × 1	
	3D SYNC output terminal		5 V / 10 mA, synchronized signal output for 3D use	
Usage environment (*5)			Operating temperature: 41 to 104°F (5 to 40°C) Operating humidity: 20 to 80% (with no condensation)	
			Storage temperature: 14 to 122°F (–10 to 50°C) Storage humidity: 20 to 80% (with no condensation)	
			Operating altitude: 0 to 3650 m/12000 feet (1700 to 3650 m/5500 to 12000 feet: Set [FAN MODE] to [HIGH ALTITUDE])	
Power supply			100-240 V AC, 50/60 Hz	

Model name			PA1004UL-W/PA1004UL-B	PA804UL-W/PA804UL-B
Power consumption	REF. LIGHT MODE	BOOST	845 W (100-130 V AC) 810 W (200-240 V AC)	675 W (100-130 V AC) 655 W (200-240 V AC)
		NORMAL	750 W (100-130 V AC) 725 W (200-240 V AC)	635 W (100-130 V AC) 615 W (200-240 V AC)
		ECO1	610 W (100-130 V AC) 590 W (200-240 V AC)	515 W (100-130 V AC) 505 W (200-240 V AC)
		ECO2	405 W (100-130 V AC) 395 W (200-240 V AC)	360 W (100-130 V AC) 350 W (200-240 V AC)
	STANDBY	Network	0.8 W (100-130 V AC) / 0.8 W (200-240 V AC)	
		Normal	0.22 W (100-130 V AC) / 0.28 W (200-240 V AC)	
Rated input current			10.5 A (100-130 V AC) 4.6 A (200-240 V AC)	8.6 A (100-130 V AC) 3.8 A (200-240 V AC)
Power cord specification			15 A or higher	
External dimensions (W × H × D)			23.6" (width) × 8.2" (height) × 19.3" (depth)/ 599 (width) × 208 (height) × 490 (depth) mm (not including protruding parts)	
			23.6" (width) × 8.5" (height) × 19.3" (depth)/ 599 (width) × 216 (height) × 490 (depth) mm (including protruding parts)	
Weight			53.8 lbs/24.4 kg (not including lens)	53.1 lbs/24.1 kg (not including lens)

*1 Effective pixels are more than 99.99%.

*2 This is the light output value (lumens) mounting the lens unit, NP41ZL, when the [PRESET] mode is set to [HIGH-BRIGHT]. The light output values will be dropped according to the setting of [REF. LIGHT MODE]. If any other mode is selected as the [PRESET] mode, the light output value may drop slightly.

*3 Compliance with ISO21118-2012

*4 If you are unable to view material via the HDMI input, this does not necessarily mean the projector is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community (Digital Content Protection, LLC).

Video: HDR, Deep Color, 8/10/12-bit, Lip Sync.

Audio: LPCM; up to 2 ch, sample rate 32/44.1/48 KHz, sample bit; 16/20/24-bit

HDMI: Supports HDCP 2.2/1.4

DisplayPort: Supports HDCP 1.3

HDBaseT: Supports HDCP 2.2/1.4

*5 "Forced ECO Mode" is set depending on the temperature of the operating environment and [REF. LIGHT MODE] setting, the projector goes into "Forced ECO Mode". (→ page 43)

- These specifications and the product's design are subject to change without notice.

Option lens (sold separately)

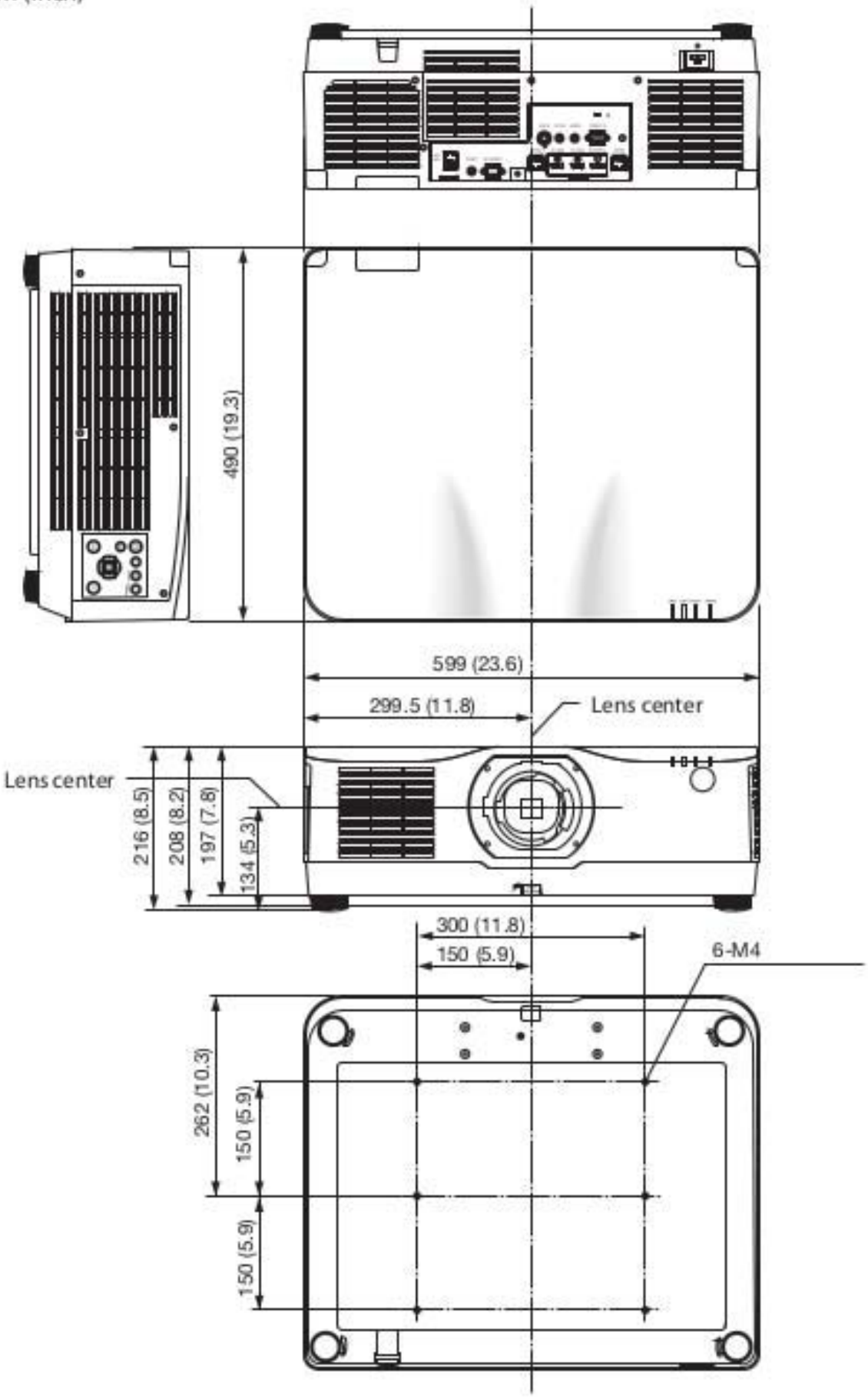
NP11FL	Manual focus
	(Throw ratio 0.81 : 1, F2.3, f=13.2 mm)
NP12ZL	Motorized lens shift, Manual zoom, Manual focus
	(Throw ratio 1.16–1.52 : 1, F2.20–2.69, f=19.4–25.3 mm)
NP13ZL	Motorized lens shift, Manual zoom, Manual focus
	(Throw ratio 1.46–2.95 : 1, F1.70–2.37, f=24.4–48.6 mm)
NP14ZL	Motorized lens shift, Manual zoom, Manual focus
	(Throw ratio 2.90–4.68 : 1, F2.20–2.64, f=48.5–77.6 mm)
NP15ZL	Motorized lens shift, Manual zoom, Manual focus
	(Throw ratio 4.59–7.02 : 1, F2.20–2.70, f=76.6–116.5 mm)
NP40ZL	Motorized lens shift, Motorized zoom , Motorized focus
	(Throw ratio 0.79–1.11 : 1, F2.0–2.5, f=13.3–18.6 mm)
NP41ZL	Motorized lens shift, Motorized zoom , Motorized focus
	(Throw ratio 1.30–3.02 : 1, F1.7–2.0, f=21.8–49.8 mm)
NP43ZL	Motorized lens shift, Motorized zoom, Motorized focus
	(Throw ratio 2.99–5.93 : 1, F2.2–2.6, f=49.7–99.8 mm)
NP44ML	Motorized lens shift, Motorized focus
	(Throw ratio 0.32 : 1, F2.0, f=6.27 mm)

NOTE:

- The above throw ratio is for projecting on 100" screen.
- Use NP11FL at the home position. If necessary, fine-adjust the position of the projected image using the lens shift function.
- Fix the NP44ML to the projector using the separately sold support kit (NP02LK). Loosen the screws of the support bracket, you can fine-adjustment of the lens shift.

8-4. Cabinet Dimensions

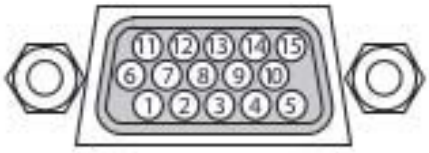
Unit: mm (inch)



8-5. Pin assignments and signal names of main connectors

COMPUTER IN/ Component Input Connector (Mini D-Sub 15 Pin)

Connection and signal level of each pin

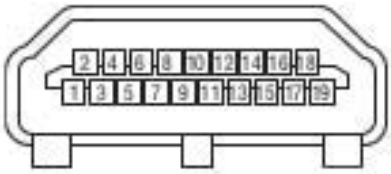


Signal Level

Video signal : 0.7 Vp-p (Analog)
Sync signal : TTL level

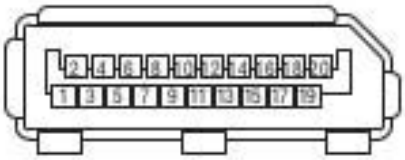
Pin No.	RGB Signal (Analog)	YCbCr Signal
1	Red	Cr
2	Green or Sync on Green	Y
3	Blue	Cb
4	Ground	
5	Ground	
6	Red Ground	Cr Ground
7	Green Ground	Y Ground
8	Blue Ground	Cb Ground
9	No Connection	
10	Sync Signal Ground	
11	No Connection	
12	Bi-directional DATA (SDA)	
13	Horizontal Sync or Composite Sync	
14	Vertical Sync	
15	Data Clock	

HDMI 1 IN/HDMI 2 IN Connector (Type A)



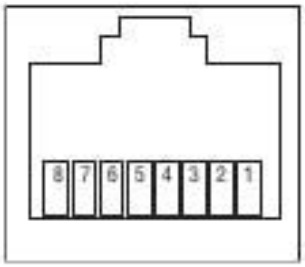
Pin No.	Signal
1	TMDS Data 2+
2	TMDS Data 2 Shield
3	TMDS Data 2–
4	TMDS Data 1+
5	TMDS Data 1 Shield
6	TMDS Data 1–
7	TMDS Data 0+
8	TMDS Data 0 Shield
9	TMDS Data 0–
10	TMDS Clock +
11	TMDS Clock Shield
12	TMDS Clock–
13	CEC
14	Disconnection
15	SCL
16	SDA
17	DDC/CEC grounding
18	+5 V power supply
19	Hot plug detection

DisplayPort IN Connector



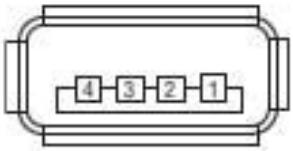
Pin No.	Signal
1	Main link lane 3–
2	Grounding 3
3	Main link lane 3+
4	Main link lane 2–
5	Grounding 2
6	Main link lane 2+
7	Main link lane 1–
8	Grounding 1
9	Main link lane 1+
10	Main link lane 0–
11	Grounding 0
12	Main link lane 0+
13	Configuration 1
14	Configuration 2
15	Supplementary channel +
16	Grounding 4
17	Supplementary channel –
18	Hot plug detection
19	Return
20	+3.3 V power supply

HDBaseT IN/Ethernet Port (RJ-45)



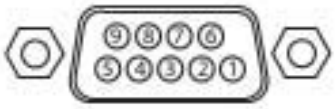
Pin No.	Signal
1	TxD+/HDBT0+
2	TxD–/HDBT0–
3	RxD+/HDBT1+
4	Disconnection/HDBT2+
5	Disconnection/HDBT2–
6	RxD–/HDBT1–
7	Disconnection/HDBT3+
8	Disconnection/HDBT3–

USB Port (Type A)



Pin No.	Signal
1	V_{BUS}
2	D–
3	D+
4	Grounding

PC CONTROL Port (D-Sub 9 Pin)



Pin No.	Signal
1	Unused
2	RxD reception data
3	TxD transmission data
4	Unused
5	Grounding
6	Unused
7	RTS transmission request
8	CTS transmission allowed
9	Unused

8-6. Changing the Background Logo (Virtual Remote Tool)

This will help you perform operations such as projector's power on or off and signal selection via a LAN connection. It is also used to send an image to the projector and register it as the logo data of the projector. After registering it, you can lock the logo to prevent it from changing.

Control Functions
Power On/Off, signal selection, picture freeze, picture mute, audio mute, Logo transfer to the projector, and remote control operation on your PC.

Virtual Remote screen



Remote Control Window

Use this button for changing the background logo.



Toolbar

For getting the Virtual Remote Tool, please visit our web site and download it:
https://www.nec-display.com/dl/en/index.html

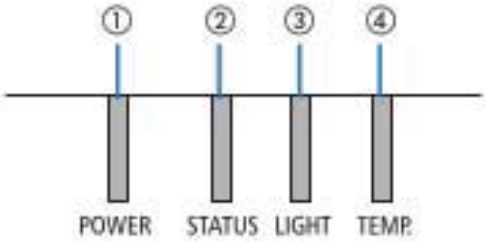
NOTE:

- Remote Control Window is not available for changing the background logo.
  Please see the HELP menu of the Virtual Remote Tool about how to display the Toolbar.
- Logo data (graphics) that can be sent to the projector with Virtual Remote Tool has the following restrictions:
  (Only via serial or LAN connection)
  * File size: Within 256 kilobytes
  * Image size: Within the resolution of the projector
  * File format: PNG (Full color)
- Logo data (image) sent using the Virtual Remote Tool will be displayed in the center with the surrounding area in black.

8-7. Troubleshooting

This section helps you resolve problems you may encounter while setting up or using the projector.

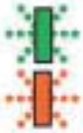
Feature of each indicator



① POWER indicator
② STATUS indicator
③ LIGHT indicator
④ TEMP. indicator

Indicator Message (Status message)

POWER	STATUS	LIGHT	TEMP.	Projector status
Off	Off	Off	Off	Power is off
Orange (Blink*1)	Off	Off	Off	In the state of Standby ([POWER-SAVING] is [ON] and the network is ready.
Orange (Blink*2)	Off	Off	Off	In the state of Standby ([POWER-SAVING] is [ON] and the network is unavailable.
Orange (Light)	Off	Off	Off	In the state of Standby ([POWER-SAVING] is [ON] and the network is available)
Orange (Blink*1)	Off	Off	Off	[ON] time as the [PROGRAM TIMER] is activated. (In the state of Standby)
Green (Light)	Off	Off	Off	In the state of Sleep
Green (Blink*1)	Off	Off	Off	[ON] time as the [PROGRAM TIMER] is activated. (In the state of Sleep)
Blue (Light)	Off	Green (Light)	Off	Powered state ([REF. LIGHT MODE] is [NORMAL])

POWER	STATUS	LIGHT	TEMP.	Projector status
 Blue (Light)	 Off	 Green (Blink*3)	 Off	Powered state ([REF. LIGHT MODE] is [ECO1] or [ECO2])
 Blue (Light)	 Off	 Green and orange (Blink*4)	 Off	Powered state ([REF. LIGHT MODE] is [BOOST])
Status varies	 Orange (Blink*5)	Status varies	 Off	[LENS CALIBRATION] implement request.
 Blue (Light)	 Green (Blink*5)	 Status varies	 Off	Performing the lens calibration
 Blue (Light)	 Status varies	 Off	 Off	Shutter function is activating
 Blue (Blink*1)	 Off	 Status varies	 Off	[OFF TIMER] is activated, [OFF] time as the [PROGRAM TIMER] is activated (Powered state)
 Blue (Blink*6)	 Off	 Off	 Off	Preparing for powering [ON]

*1 Repetition to light on for 1.5 seconds / off for 1.5 seconds

*2 Repetition to light on for 1.5 seconds / off for 7.5 seconds

*3 Repetition to light on for 2.5 seconds / off for 0.5 seconds

*4 Lit in green for 2.5 seconds/lit in orange for 0.5 seconds repeatedly

*5 Repetition to light on for 0.5 seconds / off for 0.5 seconds / on for 0.5 seconds / off for 2.5 seconds

*6 Repetition to light on for 0.5 seconds / off for 0.5 seconds

Indicator Message (Error message)

POWER	STATUS	LIGHT	TEMP.	Projector status	Procedure
 Blue (Light)	 Orange (Light)	Status varies	 Off	A button has been pressed while the [CONTROL PANEL LOCK] is activated.	The [CONTROL PANEL LOCK] is activated. The setting must be canceled to operate the projector. (→ page 137)
				ID numbers for the projector and the remote control do not match.	Check the [CONTROL ID] (→ page 138)
 Blue (Light)	Off	 Orange (Light)	 Orange (Light)	Temperature problem (In the Forced ECO)	Ambient temteprature is high. Lower the room temperature.
 Red (Blink*7)	Off	 Off	 Off	Temperature problem	Ambient temperature is out of the operation temperature. Check if any obstruction stays near the exhaust vent.
 Red (Light)	Status varies	Status varies	 Off	Error requiring service support	Contact your dealer or service personnel. Make sure to check and inform indicator status for asking to repair.

*7 Repetition to light on for 0.5 seconds / off for 0.5 seconds

When the thermal protector is activated:

When inside temperature of the projector becomes too high or low, the POWER indicator start to red blink in a short cycle. After this happened, the thermal protector will activate and the projector may be turned off.

In this case, please take the below measures:

- Pull out the power plug from the wall inlet.
- Place the projector in cool place if it has been placed in high ambient temperature.
- Clean the exhaust vent if dust has accumulated on.
- Leave the projector for about one hour until inside temperature gets lower.

Common Problems & Solutions

(→ "Indicator Message" on page 191.)

Problem	Check These Items
Does not turn on or shut down	• Check that the power cord is plugged in and that the power button on the projector cabinet or the remote control is on. (→ pages 17, 20) • Check to see if the projector has temperature error, If projector inside temperature is too hot or cool, it disabled to turn on the projector as the protection. Wait for a moment and try turn on the projector again. • Set [FAN MODE] to [HIGH ALTITUDE] when using the projector at altitudes approximately 5500 feet/1700 meters or higher. Using the projector at altitudes approximately 5500 feet/1700 meters or higher without setting to [HIGH ALTITUDE] can cause the projector to overheat and the projector could shut down. If this happens, wait a couple minutes and turn on the projector. (→ page 127) If you turn on the projector immediately after the light module is turned off, the fans run without displaying an image for some time and then the projector will display the image. Wait for a moment. • In case it's hard to think the trouble is not caused on the above mentioned conditions, unplug the power cord from the outlet. Then wait 5 minutes before plugging it in again. (→ page 37)
Will turn off	• Ensure that the [OFF TIMER], [AUTO POWER OFF] or [PROGRAM TIMER] is off. (→ page 133, 154)
No picture	• Check if the appropriate input is selected. (→ page 23) If there is still no picture, press the INPUT button or one of the input buttons again. • Ensure your cables are connected properly. • Use menus to adjust the brightness and contrast. (→ page 100) • Is the [POWER ON SHUTTER] in the on-screen menu set to [CLOSE]? • Check that the SHUTTER (lens shutter) or AV-MUTE (image off) buttons are not pressed. • Reset the settings or adjustments to factory preset levels using the [RESET] in the Menu. (→ page 155) • Enter your registered keyword if the Security function is enabled. (→ page 50) • If the HDMI input or the DisplayPort signal cannot be displayed, try the following. - Reinstall your driver for the graphics card built in your computer, or use the updated driver. For reinstalling or updating your driver, refer to the user guide accompanied with your computer or graphics card, or contact the support center for your computer manufacturer. Install the updated driver or OS on your own responsibility. We are not liable for any trouble and failure caused by this installation. • The signal may not be supported depending on the HDBaseT transmission device. In addition, RS232C interface may not be supported. • Be sure to connect the projector and notebook PC while the projector is in standby mode and before turning on the power to the notebook PC. In most cases the output signal from the notebook PC is not turned on unless connected to the projector before being powered up. * If the screen goes blank while using your remote control, it may be the result of the computer's screen-saver or power management software. • See also the page 196.
Picture suddenly becomes dark	• Check if the projector is in the Forced ECO mode because of too high ambient temperature. If this is the case, lower the internal temperature of the projector by selecting [HIGH] for [FAN MODE]. (→ page 127)

Problem	Check These Items
Color tone or hue is unusual	• Check if an appropriate color is selected in [WALL COLOR]. If so, select an appropriate option. (→ page 127) • Adjust [HUE] in [PICTURE]. (→ page 100)
Image isn't square to the screen	• Reposition the projector to improve its angle to the screen. (→ page 26) • Perform [GEOMETRIC CORRECTION] when the trapezoid is distorted. (→ page 45)
Picture is blurred	• Adjust the focus. (→ page 29) • Reposition the projector to improve its angle to the screen. (→ page 26) • Ensure that the distance between the projector and screen is within the adjustment range of the lens. (→ page 171) • Has the lens been shifted by an amount exceeding the guaranteed range? (→ page 175) • Condensation may form on the lens if the projector is cold, brought into a warm place and is then turned on. Should this happen, let the projector stand until there is no condensation on the lens.
Flicker appears on screen	• Set [FAN MODE] to other than [HIGH ALTITUDE] mode when using the projector at altitudes approximately 5500 feet/1700 meters or lower. Using the projector at altitudes less than approximately 5500 feet/1700 meters and setting to [HIGH ALTITUDE] can cause the light module to overcool, causing the image to flicker. Switch [FAN MODE] to [AUTO]. (→ page 127)
Image is scrolling vertically, horizontally or both	• Check the computer's resolution and frequency. Make sure that the resolution you are trying to display is supported by the projector. (→ page 177) • Adjust the computer image manually with the Horizontal/Vertical in the [IMAGE OPTIONS]. (→ page 102)
Remote control does not work	• Install new batteries. (→ page 13) • Make sure there are no obstacles between you and the projector. • Stand within 20 m/787 inch of the projector. (→ page 14)
Indicator is lit or blinking	• See the Indicator Message. (→ page 191)
Cross color in RGB mode	• Adjust the computer image manually with [CLOCK]/[PHASE] in [IMAGE OPTIONS] in the menu. (→ page 101)

For more information contact your dealer.

If there is no picture, or the picture is not displayed correctly.

Power on process for the projector and the PC.

Be sure to connect the projector and notebook PC while the projector is in standby mode and before turning on the power to the notebook PC.
In most cases the output signal from the notebook PC is not turned on unless connected to the projector before being powered up.

NOTE:

- You can check the horizontal frequency of the current signal in the projector's menu under Information. If it reads "0kHz", this means there is no signal being output from the computer. (→ page 156 or go to next step)

Enabling the computer's external display.

Displaying an image on the notebook PC's screen does not necessarily mean it outputs a signal to the projector. When using a PC compatible laptop, a combination of function keys will enable/disable the external display. Usually, the combination of the "Fn" key along with one of the 12 function keys gets the external display to come on or off. For example, NEC laptops use Fn + F3, while Dell laptops use Fn + F8 key combinations to toggle through external display selections.

Non-standard signal output from the computer

If the output signal from a notebook PC is not an industry standard, the projected image may not be displayed correctly. Should this happen, deactivate the notebook PC's LCD screen when the projector display is in use. Each notebook PC has a different way of deactivate/reactivate the local LCD screens as described in the previous step. Refer to your computer's documentation for detailed information.

Image displayed is incorrect when using a Mac

When using a Mac with the projector, set the DIPswitch of the Mac adapter (not supplied with the projector) according to your resolution. After setting, restart your Mac for the changes to take affect. For setting display modes other than those supported by your Mac and the projector, changing the DIP switch on a Mac adapter may bounce an image slightly or may display nothing. Should this happen, set the DIP switch to the 13" fixed mode and then restart your Mac. After that, restore the DIP switches to a displayable mode and then restart the Mac again.

NOTE:

- A Video Adapter cable manufactured by Apple Computer is needed for a MacBook which does not have a mini D-Sub 15-pin connector.

Mirroring on a MacBook

When using the projector with a MacBook, output may not be set to 1920 × 1200 unless "mirroring" is off on your MacBook. Refer to owner's manual supplied with your Mac computer for mirroring.

Folders or icons are hidden on the Mac screen

Folders or icons may not be seen on the screen. Should this happen, select [View] → [Arrange] from the Apple menu and arrange icons.

8-8. PC Control Codes and Cable Connection

PC Control Codes

Function	Code Data							
POWER ON	02H	00H	00H	00H	00H	02H		
POWER OFF	02H	01H	00H	00H	00H	03H		
INPUT SELECT HDMI1	02H	03H	00H	00H	02H	01H	A1H	A9H
INPUT SELECT HDMI2	02H	03H	00H	00H	02H	01H	A2H	AAH
INPUT SELECT DisplayPort	02H	03H	00H	00H	02H	01H	A6H	AEH
INPUT SELECT COMPUTER	02H	03H	00H	00H	02H	01H	01H	09H
INPUT SELECT HDBaseT	02H	03H	00H	00H	02H	01H	BFH	C7H
PICTURE MUTE ON	02H	10H	00H	00H	00H	12H		
PICTURE MUTE OFF	02H	11H	00H	00H	00H	13H		
SOUND MUTE ON	02H	12H	00H	00H	00H	14H		
SOUND MUTE OFF	02H	13H	00H	00H	00H	15H		

NOTE:

- Contact your local dealer for a full list of the PC Control Codes if needed.

Cable Connection

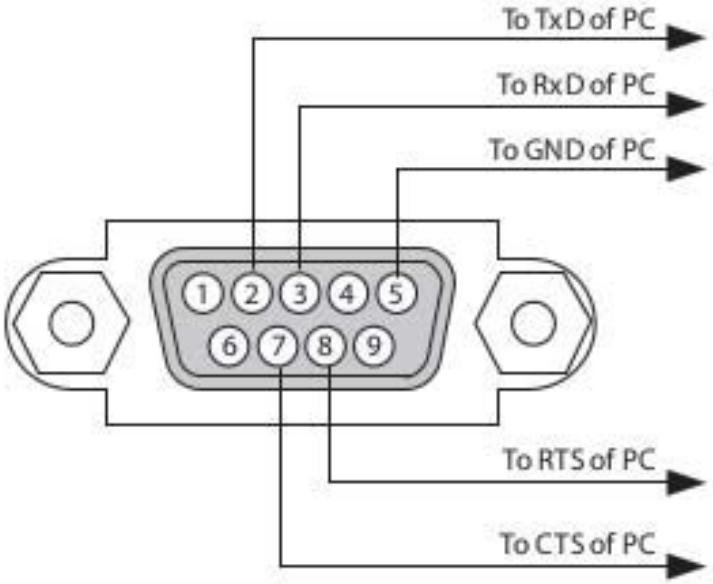
Communication Protocol

Baud rate	115200/38400/19200/9600/4800 bps
Data length	8 bits
Parity	No parity
Stop bit	1 bit
X on/off	None
Communications procedure	Full duplex

NOTE:

- Depending on the equipment, a lower baud rate may be recommended for long cable runs.

PC Control Terminal (D-Sub 9P)



NOTE:

- Pins 1, 4, 6 and 9 are no used.
- Jumper "Request to Send" and "Clear to Send" together on both ends of the cable to simplify cable connection.
- For long cable runs it is recommended to set communication speed within projector menus to 9600 bps.

8-9. About the ASCII Control Command

This device supports the common ASCII Control Command for controlling our projector and monitor. Please visit our web site for detailed information about the command.
https://www.nec-display.com/dl/en/pj_manual/lineup.html

How to connect with an external device

There are two methods to connect the projector with an external device such as a computer.

1. **Connection thru the serial port.**

   Connects the projector to a computer by a serial cable (a cross cable).

2. **Connection via network (LAN/HDBaseT)**

   Connects the projector to a computer by a LAN cable.

   Concerning to the type of LAN cable, please ask to your network administrator.

Connection interface

1. **Connection thru the serial port.**

   Communication Protocol

Item	Information
Baud rate	115200/38400/19200/9600/4800 bps
Data length	8 bits
Parity bit	No parity
Stop bit	1 bit
Flow control	None
Communications procedure	Full duplex

2. **Connection via network**

   Communication Protocol (Connection via LAN)

Item	Information
Communication speed	Set automatically (10/100 Mbps)
Supported standard	IEEE802.3 (10BASE-T)
	IEEE802.3u (100BASE-TX, Auto-Negotiation)

   Use the TCP port number 7142 for transmitting and receiving command.

   Communication Protocol (Connection via HDBaseT)

Item	Information
Communication speed	100 Mbps
Supported standard	IEEE802.3u (100BASE-TX, Auto-Negotiation)

   Use the TCP port number 7142 for transmitting and receiving command.

Parameters for this device

Input command

Input terminal	Response	Parameter
HDMI1	hdmi1	hdmi1 or hdmi
HDMI2	hdmi2	hdmi2
DisplayPort	displayport	displayport or displayport1
COMPUTER	computer	One among computer, computer1, vga, vga1, rgb, and rgb1
HDBaseT	hdbaset	hdbaset or hdbaset1

Status command

Response	Error Status
error:temp	Temperature error
error:fan	Fan trouble
error:light	Light source trouble
error:system	System trouble

8-10. List of Art-Net DMX parameters

Function	Behavior	Parameter	Note
POWER	OFF	0 – 63	
	No operation	64 – 191	
	ON	192 – 255	
INPUT	No operation	0 – 7	
	HDMI1	8 – 15	
	No operation	16 – 23	
	HDMI2	24 – 31	
	No operation	32 – 39	
	DisplayPort	40 – 47	
	No operation	48 – 55	
	COMPUTER	56 – 63	
	No operation	64 – 71	
	HDBaseT	72 – 79	
	No operation	80 – 255	
BLANK	OFF	0 – 63	
	No operation	64 – 191	
	ON	192 – 255	
SHUTTER	OPEN	0 – 63	
	No operation	64 – 191	
	CLOSE	192 – 255	
FREEZE	OFF	0 – 63	
	No operation	64 – 191	
	ON	192 – 255	
LIGHT ADJUST	No operation	0 – 49	
	Adjusted value	50 – 100	
	No operation	101 – 255	
LENS SHIFT(H)	Adjust Left	0 – 63	
	Stop	64 – 191	
	Adjust Right	192 – 255	
LENS SHIFT(V)	Adjust Down	0 – 63	
	Stop	64 – 191	
	Adjust Up	192 – 255	
FOCUS	Adjust (–)	0 – 63	
	Stop	64 – 191	
	Adjust (+)	192 – 255	
ZOOM	Adjust (–)	0 – 63	
	Stop	64 – 191	
	Adjust (+)	192 – 255	
KEYSTONE(H)	No operation		Adjust +/– with 128 as the center (adjustment Adjusted value value 0).
	Adjusted value		
	No operation		
KEYSTONE(V)	No operation		Adjust +/– with 128 as the center (adjustment value 0).
	Adjusted value		
	No operation		

Function	Behavior	Parameter	Note
LOCK	Inoperable	0 – 127	Disables the Art-Net function.
	Operable	128 – 255	Enables the Art-Net function.

8-11. Mounting a lens (separately sold)

Nine separate bayonet style lenses can be used with this projector. The descriptions here are for the NP41ZL lens. Mount other lenses in the same manner.

Important:
- After installing or replacing the lens unit, press the ZOOM/L-CALIB. button on the projector to carry out [LENS CALIBRATION]. By carrying out [LENS CALIBRATION], the adjustment range of the lens shift is calibrated.
- [LENS CALIBRATION] is not available for the lens unit NP44ML.

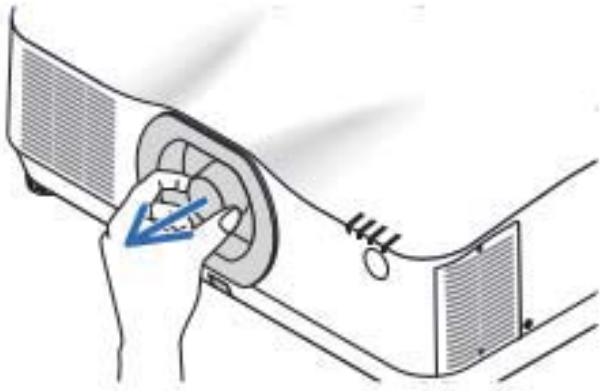
⚠ WARNING:

(1) Turn off the power and wait for the cooling fan to stop, (2) disconnect the power cord and wait for the unit to cool before mounting or removing the lens. Failure to do so can result in eye injury, electric shock, or burn injuries.

Important:
- The projector and lenses are made of precision parts. Do not subject them to shock or excessive forces.
- Remove the separately sold lens when moving the projector. If not, the lens could be subject to shock while the projector is being moved, damaging the lens and the lens shift mechanism.
- When dismounting the lens from the projector, return the lens position to the home position before turning off the power. Failure to do so may prevent the lens from being mounted or dismounted because of narrow space between the projector and the lens.
- Never touch the lens surface while the projector is operating.
- Be very careful not to let dirt, grease, etc., on the lens surface and not to scratch the lens surface.
- Perform these operations on a flat surface over a piece of cloth, etc., to prevent the lens from getting scratched.
- When leaving the lens off the projector for long periods of time, mount the dust cap on the projector to prevent dust or dirt from getting inside.
- After installing the lens unit NP44ML on the projector, be sure to secure it to the projector using the support kit (NP02LK) sold separately. For more details, see the handling instructions of the support kit.

Mounting

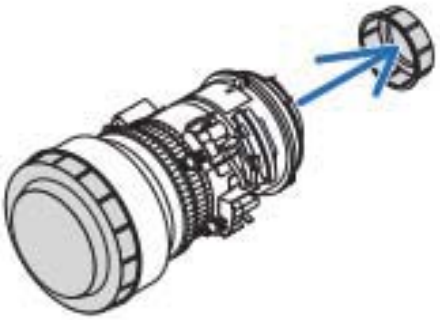
1. Remove the dust cap from the projector.



2. Remove the lens cap on the back of the lens.

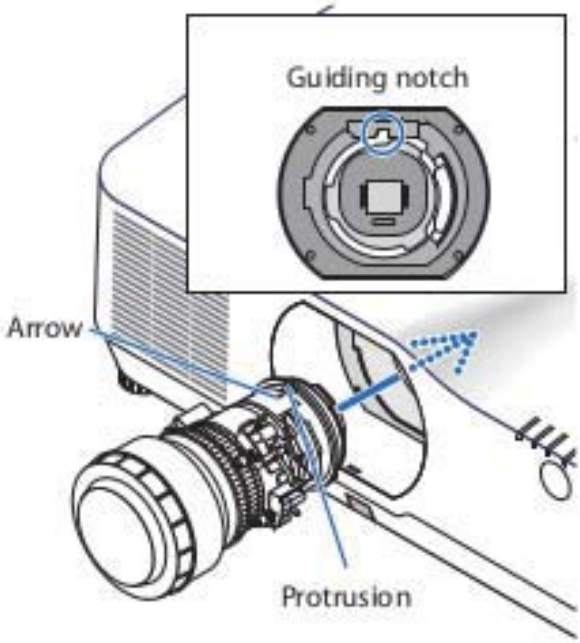
NOTE:

- Make sure to remove the lens cap at the unit back side. If the lens unit with the lens cap remaining on is installed on the projector, it may cause of malfunction.



3. Insert the lens onto the projector facing the arrow on the lens-label upward.

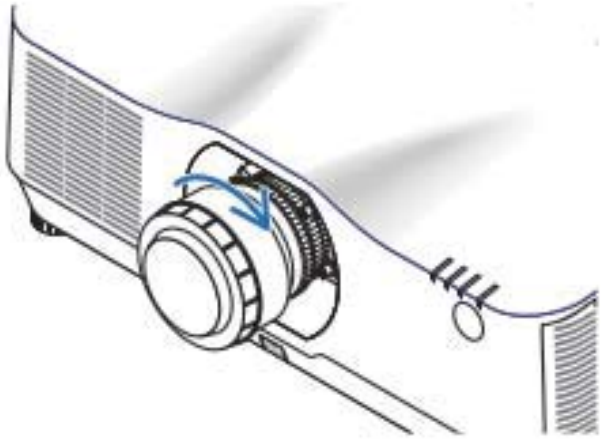
Insert the lens slowly all the way in.



4. Turn the lens clockwise.

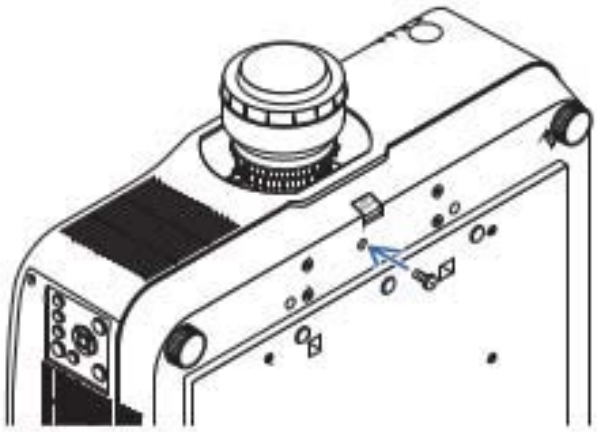
Turn until a click is heard.

The lens is now fastened onto the projector.

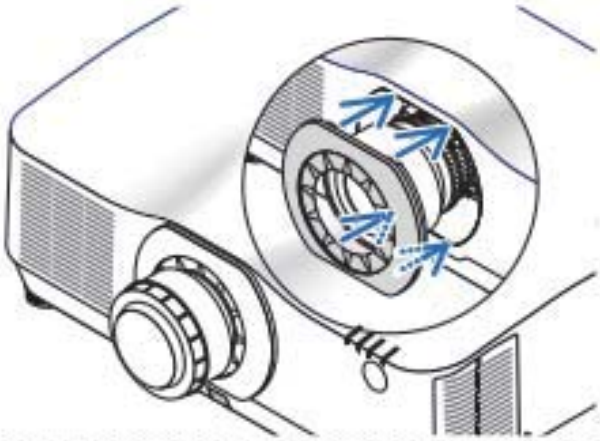


TIP:

- Fasten the lens theft prevention screw included with the projector to the bottom of the projector so that the lens cannot be removed easily.



- Attach the enclosed lens mask if you want to hide the gap between the projector and lens.



Removing

Preparations:

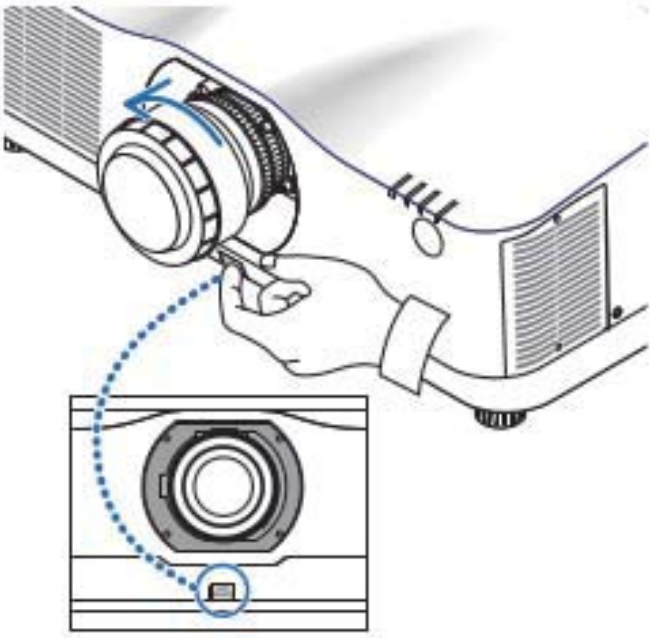
1. Turn on the projector and display an image.
2. Press and hold the SHIFT/HOME POSITION button over 2 seconds. The lens position will be moved to the home position.
3. Turn off the main power switch, and then unplug the power cord.
4. Wait until the projector cabinet is cool enough to handle.
5. If the lens theft prevention screw has been set on, remove it. In addition, remove the lens mask if one is fitted.

1. While pressing the lens release button at the bottom of lens mounting section on the projector's front panel fully in, turn the lens counterclockwise.

The lens comes off.

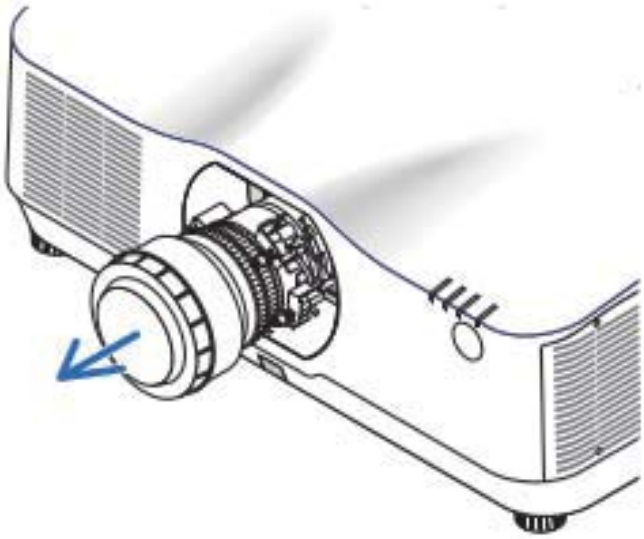
NOTE:

- Check the following areas if the lens unit cannot be removed even when the lens release button is pressed.
  1. The lens release button may be locked sometimes. In that case, turn the lens fully to the right. The lens release button lock will be released.



2. Slowly pull the lens off the projector.

- After removing the lens, mount the lens caps (front and back) included with the lens before storing the lens.
- If no lens is going to be mounted on the projector, mount the dust cap included with the projector.



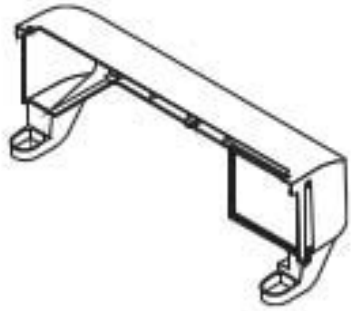
8-12. Attaching the option cover (separately sold)

Model name of option cover

NP13CV-W for PA1004UL-W/PA804UL-W
NP13CV-B for PA1004UL-B/PA804UL-B

The option covers A and B are packaged with the option cover NP13CV-W and NP13CV-B.

For the following cases, attach the separately sold option cover to the projector.

Option cover A • To make the appearance clean by covering the connected cables • To install the projector with its rear upward or downward	
Option cover B • To install the projector with its exhaust vents upward or downward	

For installation angles required to attach the option cover, refer to page xix.

⚠ WARNING

- When installing the projector at an angle, be sure to attach the option cover for safety.
- Be sure to attach the option cover to the projector when the projector's power is turned on.

⚠ CAUTION

About option cover

- After attaching the option cover to the projector, be sure to tighten the screws. If you fail to do so, the option cover may come off and cause injury, or the option cover may fall and cause damage.
- Do not bundle the power cord and place it under the option cover. Doing so could lead to fire.
- Do not move the projector by holding the option cover or do not use excessive force to the option cover. Doing so can cause damage to the option cover, resulting in injury.

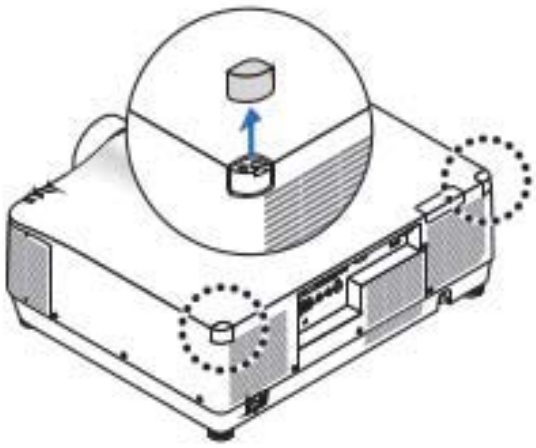
Preparations:

- Connect the cables to the projector (the connection cords are omitted from the diagrams). At this moment, do not connect the power cord.
- Prepare a Phillips screwdriver.
- Place the projector on a soft cloth so as not to scratch the cabinet surface.

• Option cover A

Mounting

1. **Remove the two corner caps from the projector.**
   - Keep the removed corner caps for future use.

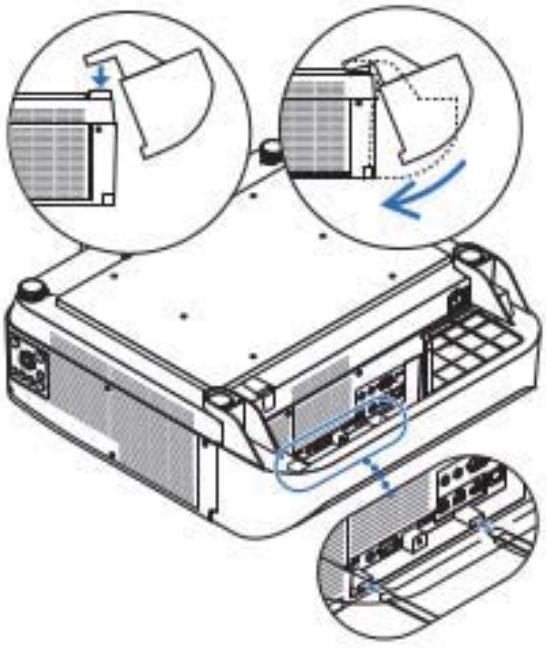


2. **Turn over the projector.**

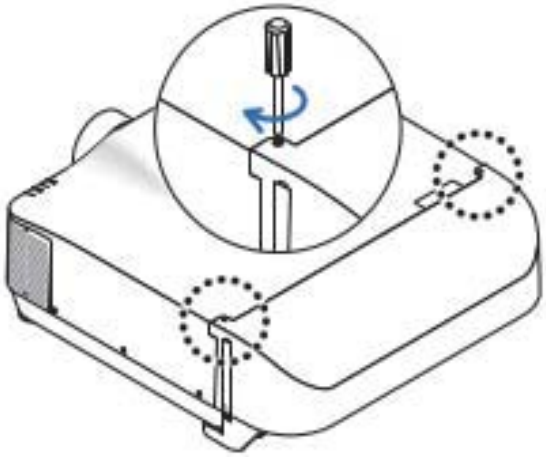
> **CAUTION**
> - For moving the projector, make sure you have at least two people. Attempting to move the projector alone could result in back pain or other injuries.

3. **Attach the option cover A to the projector.**
   ① Shorten the projector tilt foot to the minimum height.
   ② Hang the two hooks of the option cover A on the projector tilt foot.
   ③ Align the two screw fixing parts of the option cover A with the place of the corner caps that were removed at step 1.

   At this time, the two hooks in the option cover will enter the grooves in the projector.
   - If the hooks do not enter easily, check the positions of the grooves. Do not press the hooks in by force.
   - Be careful not to let the cables get pinched by the option cover A.



4. **Turn the two option cover A screws clockwise.**
   - Tighten the screws securely.



Removing

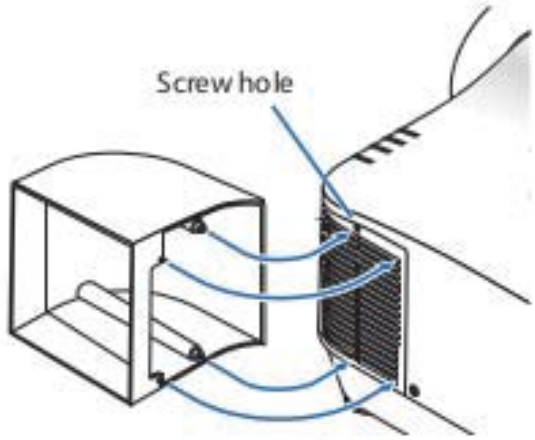
1. **Turn the two option cover A screws counterclockwise until it turns loosely.**
   - The screws are not removable.
2. **Remove the option cover A.**

   Hold up the option cover A to release its two hooks from projector tilt foot.
3. **Attach the two corner caps to the projector.**

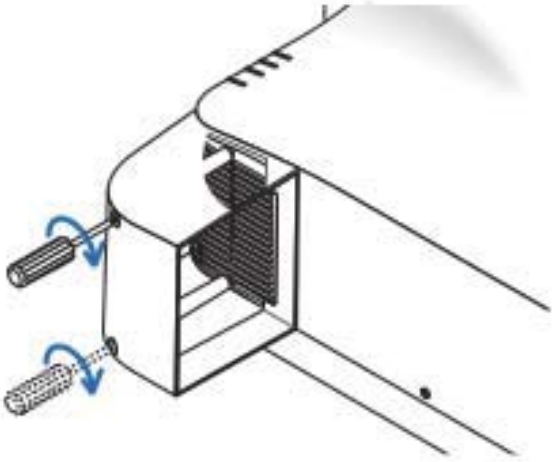
• Option cover B

Mounting

1. **Press the two protrusions on option cover B against the slits in the projector's exhaust vent.**
   - Line up the upper protrusion with the slit at the very top, the lower protrusion with the slit at the very bottom.



2. **Supporting option cover B by hand, turn the two screws clockwise to tighten them.**
   - Tighten the screws securely.

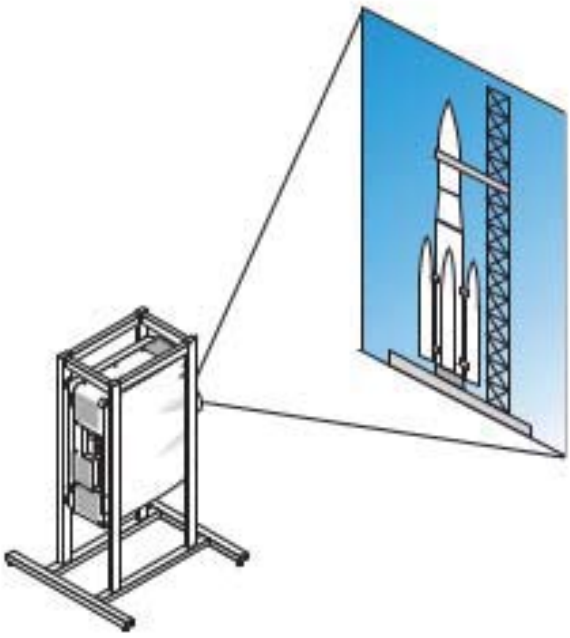


Removing

1. **Supporting option cover B by hand, turn the two screws counterclockwise to loosen them until they turn freely.**
   - The screws are not removable.
2. **Remove the option cover B.**

8-13. Portrait projection (vertical orientation)

Portrait screens from a computer can be projected by installing the projector in a vertical orientation.



Precautions during installation

- Please do not install the projector in a vertical orientation on top of the floor or table on its own. If not, the projector may fall over, resulting in injury, damage or malfunction. Also, the exhaust vent may be obstructed, resulting in the projector getting warm and the possibility of fire and malfunction occurring.
- A stand for supporting the projector needs to be made for portrait projection and for installing the projector in universal angle. In this case, the stand must be designed such that the center of gravity of the projector is located well within the legs of the stand. If not, the projector may fall over and result in injury, damage and malfunction.

Design and manufacturing conditions for the stand

Please engage an installation service provider for the design and manufacture of the customized stand to be used for portrait projection. Please ensure that the following are complied with when designing the stand.

1. Secure sufficient space between the projector and the floor. (→ next page)
2. Use the four screw holes at the back of the projector to secure it to the stand.

   Screw hole center dimension: width 300 mm, lengthwise pitch 150 mm

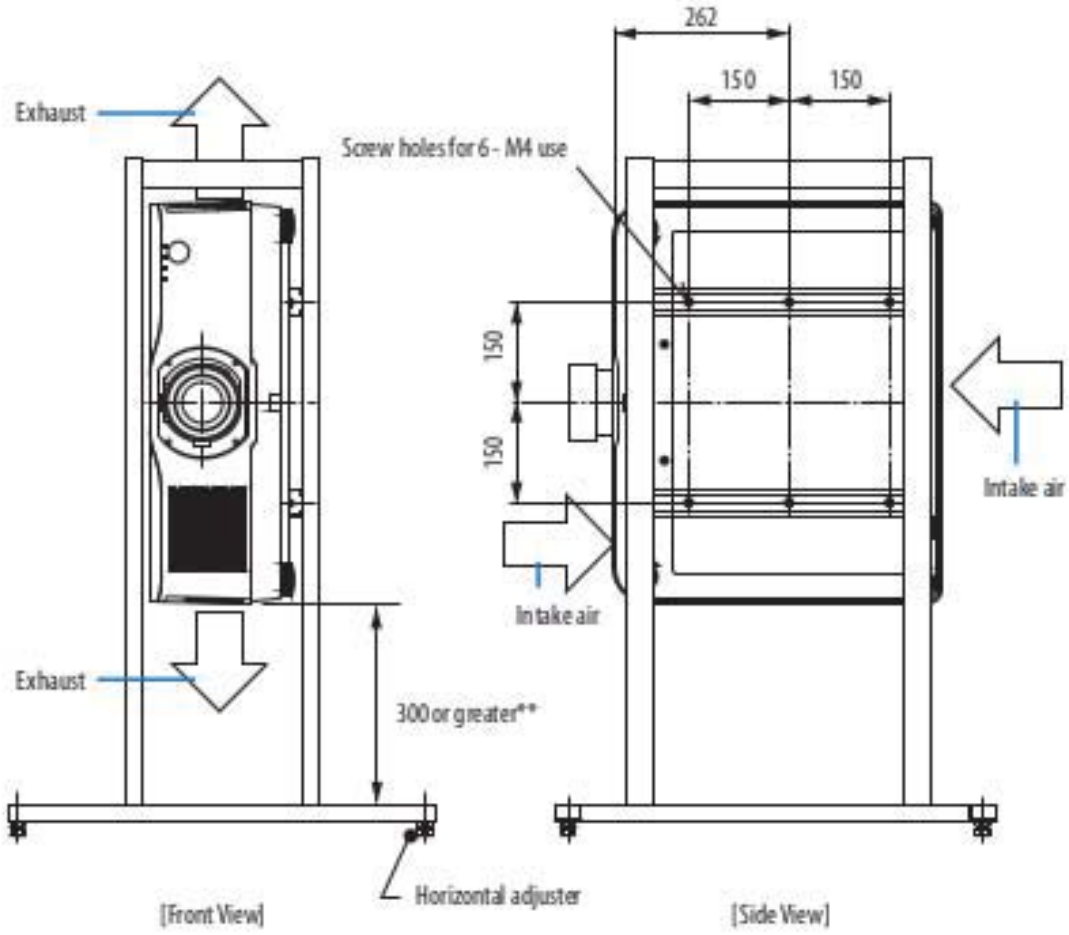
   Screw hole dimension on the projector: M4 with a maximum depth of 8 mm.

   * Please design the stand such that the rear legs at the back of the projector do not contact the stand. The front legs can be turned and removed.
3. Horizontal adjustment mechanism (for example, bolts and nuts in four locations)
4. Please design the stand such that it does not topple over easily.

Reference drawings

* The drawing showing the dimensional requirements is not an actual stand design drawing.

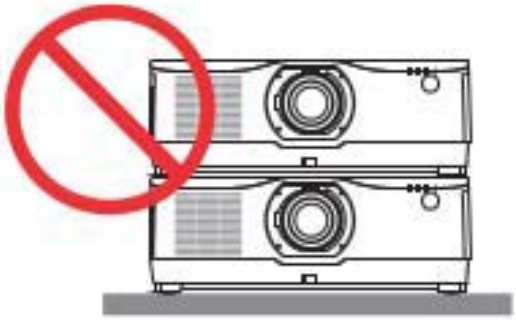
(Unit: mm)



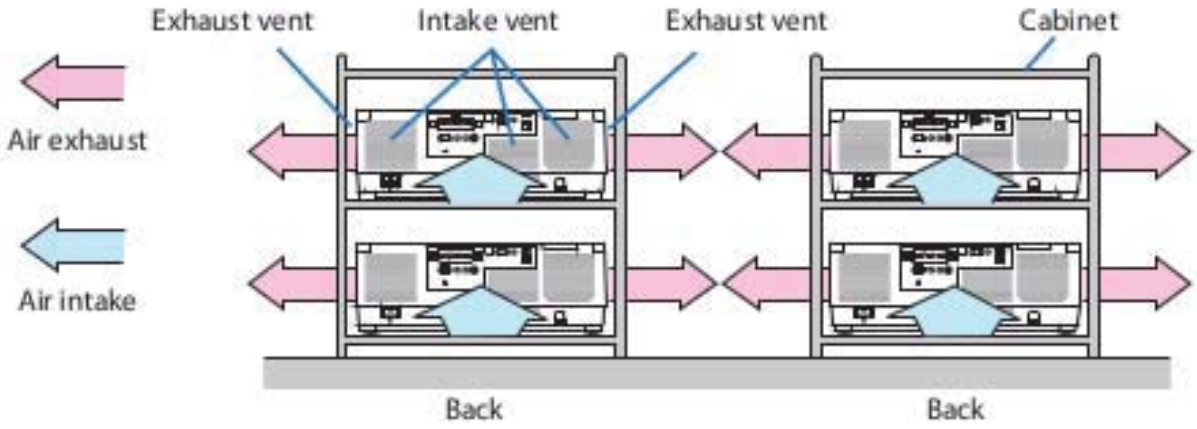
** The example shows the right side of the body (side where the control unit is located) facing downwards. To make the left side of the body (side where the label is pasted) face downwards, leave a space of 200 mm or more.

8-14. For multi-Screen projection

- The projector does not support stack installation. Do not stack projectors directly on top of each other. Failure to do so may cause damage or failure.



- When using multiple projectors together for multi-screen projection, provide sufficient space around the projectors for air intake and exhaust. When the intake and exhaust vents are obstructed, the temperature inside the projector will rise and this may result in a malfunction.



WARNING

Please use a sturdy cabinet that can withstand the weight of the projector for the installation.

8-15. Troubleshooting Check List

Before contacting your dealer or service personnel, check the following list to be sure repairs are needed also by referring to the "Troubleshooting" section in your user's manual. This checklist below will help us solve your problem more efficiently.

* Print this page and the next page for your check.

Frequency of occurrence:

☐ always ☐ sometimes (How often? _____) ☐ other (_____)

Power

- ☐ No power (POWER indicator does not light blue). See also "Status Indicator (STATUS)".
  - ☐ Power cord's plug is fully inserted into the wall outlet.
  - ☐ No power even though you press and hold the POWER button.
- ☐ Shut down during operation.
  - ☐ Power cord's plug is fully inserted into the wall outlet.
  - ☐ [AUTO POWER OFF] is turned off (only models with the [AUTO POWER OFF] function).
  - ☐ [OFF TIMER] is turned off (only models with the [OFF TIMER] function).

Video and Audio

- ☐ No image is displayed from your PC or video equipment to the projector.
  - ☐ Still no image even though you connect the projector to the PC first, then start the PC.
  - ☐ Enabling your notebook PC's signal output to the projector.
    - A combination of function keys will enable/disable the external display. Usually, the combination of the "Fn" key along with one of the 12 function keys turns the external display on or off.
  - ☐ No image (blue or black background, no display).
  - ☐ Still no image even though you press the AUTO ADJ. button.
  - ☐ Still no image even though you carry out [RESET] in the projector's menu.
  - ☐ Signal cable's plug is fully inserted into the input terminal
  - ☐ A message appears on the screen.
    (_____)
  - ☐ The source connected to the projector is active and available.
  - ☐ Still no image even though you adjust the brightness and/or the contrast.
  - ☐ Input source's resolution and frequency are supported by the projector.
- ☐ Image is too dark.
  - ☐ Remains unchanged even though you adjust the brightness and/or the contrast.
- ☐ Image is distorted.
  - ☐ Image appears to be trapezoidal (unchanged even though you carry out the [KEYSTONE] adjustment).
- ☐ Parts of the image are lost.
  - ☐ Still unchanged even though you press the AUTO ADJ. button.
  - ☐ Still unchanged even though you carry out [RESET] in the projector's menu.
- ☐ Image is shifted in the vertical or horizontal direction.
  - ☐ Horizontal and vertical positions are correctly adjusted on a computer signal.
  - ☐ Input source's resolution and frequency are supported by the projector.
  - ☐ Some pixels are lost.
- ☐ Image is flickering.
  - ☐ Still unchanged even though you press the AUTO ADJ. button.
  - ☐ Still unchanged even though you carry out [RESET] in the projector's menu.
  - ☐ Image shows flickering or color drift on a computer signal.
  - ☐ Still unchanged even though you change [FAN MODE] from [HIGH ALTITUDE] to [AUTO].
- ☐ Image appears blurry or out of focus.
  - ☐ Still unchanged even though you checked the signal's resolution on PC and changed it to projector's native resolution.
  - ☐ Still unchanged even though you adjusted the focus.
- ☐ No sound.
  - ☐ Audio cable is correctly connected to the audio input of the projector.
  - ☐ Still unchanged even though you adjusted the volume level.
  - ☐ AUDIO OUT is connected to your audio equipment (only models with the AUDIO OUT terminal).

Other

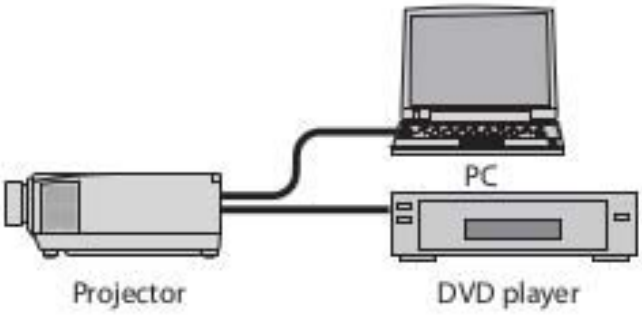
- ☐ Remote control does not work.
  - ☐ No obstacles between the sensor of the projector and the remote control.
  - ☐ Projector is placed near a fluorescent light that can disturb the infrared remote controls.
  - ☐ Batteries are new and are not reversed in installation.
- ☐ Buttons on the projector cabinet do not work (only models with the [CONTROL PANEL LOCK] function)
  - ☐ [CONTROL PANEL LOCK] is not turned on or is disabled in the menu.
  - ☐ Still unchanged even though you press and hold the EXIT button over 10 seconds.

In the space below please describe your problem in detail.

Information on application and environment where your projector is used

Projector

Model number:
Serial No.:
Date of purchase:
Light module operating time (hours):
REF. LIGHT MODE: ☐BOOST ☐NORMAL ☐ECO1 ☐ECO2
Information on input signal:
Horizontal synch frequency [ ] kHz
Vertical synch frequency [ ] Hz
Synch polarity H☐(+) ☐(–) V☐(+) ☐(–)
Synch type ☐Separate ☐Composite ☐Sync on Green
Indicator Message:
☐POWER Blinks in ☐Blue ☐Green ☐Orange ☐Red [ ] cycles
Lights in ☐Blue ☐Green ☐Orange ☐Red
☐STATUS Blinks in ☐Blue ☐Green ☐Orange ☐Red [ ] cycles
Lights in ☐Blue ☐Green ☐Orange ☐Red
☐LIGHT Blinks in ☐Blue ☐Green ☐Orange ☐Red [ ] cycles
Lights in ☐Blue ☐Green ☐Orange ☐Red
☐TEMP. Blinks in ☐Blue ☐Green ☐Orange ☐Red [ ] cycles
Lights in ☐Blue ☐Green ☐Orange ☐Red
Remote control model number:



Signal cable

NEC standard or other manufacturer's cable?
Model number: Length: inch/m
Distribution amplifier
Model number:
Switcher
Model number:
Adapter
Model number:

Installation environment

Screen size: inch
Screen type: ☐White matte ☐Beads ☐Polarization ☐Wide angle ☐High contrast
Throw distance: feet/inch/m
Orientation: ☐Ceiling mount ☐Desktop
Power outlet connection:
☐ Connected directly to wall outlet
☐ Connected to power cord extender or other (the number of connected equipment _____)
☐ Connected to a power cord reel or other (the number of connected equipment _____)

Computer

Manufacturer:
Model number:
Notebook PC ☐ / Desktop ☐
Native resolution:
Refresh rate:
Video adapter:
Other:

Video equipment

VCR, DVD player, Video camera, Video game or other
Manufacturer:
Model number:

8-16. REGISTER YOUR PROJECTOR! (for residents in the United States, Canada, and Mexico)

Please take time to register your new projector. This will activate your limited parts and labor warranty and InstaCare service program.
Visit our web site at www.necdisplay.com, click on support center/register product and submit your completed form online.
Upon receipt, we will send a confirmation letter with all the details you will need to take advantage of fast, reliable warranty and service programs from the industry leader, NEC Display Solutions of America, Inc.

NEC

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠1	D1	ADD : AX-CAP OPTION	'21.11.26	Y.SETO
⚠2	C5	CHANGE : SWITCHING HUB	'25.03.04	M.SAKAMOTO

MAIN UNIT

INPUT
AC220V-240V
or
AC100-120V

TERMINAL BLOCK 6P

NOISE FILTER 30A

BREAKER SW 20A

ISOLATION TRANSFORMER 1.5KVA INPUT 220/230/240V or 100/110/120V OUTPUT 100V selectable

BREAKER 8A

COMPRESSOR OF301-4B

BREAKER SW 20A

ISOLATION TRANSFORMER 1.5KVA INPUT 220/230/240V or 100/110/120V OUTPUT 100V selectable

Primary side

Secondary side

REACTOR HL-0704 Option

POWER BOX (550W)
OUTPUT
DC3.3V
DC5V
DC12V
DC-12V
DC-24V

FAN SENSOR

THERMAL ERROR

⚠1 AX-CAP
DC12V DC3.2V
Option

AP-X
AX-GMEM
MEMORY PCB
VIDEO PCB
AX-GAL
SSD4G

DC3.2V
CPU FAN
DC12V DC5V DC3.3V DC-12V
ETHERNET
USB USB USB USB
DP1 DP4 USB 232C 232C

IN PORT OUT PORT
DC24V DC12V BD-GM-M3IO(STX) NOKI
USB IN PORT

BREAKER 2A

DC24V VALVE SOLENOID×3 IN

WHEEL UNIT

DC24V OUT PULSE MOTOR

DC12V BD-GM-R DRV IN

ZERO POSITION SENSOR

WHEEL SENSOR(INNER) x4

PRESSURE SENSOR x2

WHEEL SENSOR(OUTER) x4

WHEEL ROTATE x3

DC12V DP IN
DP-DAMP
SP OUT DP OUT

miniDP-DVI ACTIVE

EDID EMULATOR

SPEAKER x4

WOOFER

DC3.2V USB
OUT PORT
BD-GM-M3IO(APX) BODY
DC24V DC12V
IN PORT
OUT PORT

DC FAN x3

MAIN DOOR SW

PCB CASE SW

KEY SW POWER SAVE

AUDIT

RESET

GLASS PIN x4

SPACER DRAIN DOOR SW

WHEEL INNER LED_1

IN SERIAL LED DRIVER OUT

TAPE LED(0.1m) x10 DC 12V IN

WHEEL INNER LED_2

KEYBOARD

BREAKER 2A

USB DVI USB
DC5V
DVI
USB DVI
CHANGER

BREAKER 2A

DC FAN x2

TOWER LIGHT
FAN × 2
USB
USB
232C
232C
DVI
USB DVI
AC
AC
LAN

TOP SIGN

⚠1 SWITCHING HUB

AP-X STATION UNIT

Option

:SIGNAL
:DC(UNDER24VDC)
:secondary side AC100V
:primary side
AC220/230/240V or AC100/110/120V

800-0071-C (1/2)

PART No.

TOLERANCE	MATERIAL	FINISH

THIS DRAWING WILL IN NO WAY BE COPIED.
TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

			SCALE	TITLE	BLOCK DIAGRAM LRX
DESIGNED	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
DRAWN	2018/08/09	Y.SETO	1:1	MODEL	ROUX-MS
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	PART No.	800-0071-C (1/2)
APPROVED	2018/08/09	Y.USUKI	mm	ITEM CODE	
RGSTRD	2018/08/09	K.INOUE	MOLD	RELATION	
PROCESS					

interblock LUXURY GAMING PRODUCTS

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TOP SIGN

MARK	POS.	REVISION	DATE	BY
3	C4	WAS : PROJECTOR INPUT	'25.01.23	M.SAKAMOTO
2	D4	ADD : TINKER SYSTEM 2	'25.03.04	M.SAKAMOTO
1	E4	CHANGE : LIVE CAMERA	'25.03.04	M.SAKAMOTO

SUB ASSY LRX-0000

PART No. 800-0071-C (2/2)

MAIN UNIT

TOWER LIGHT → TOWER LIGHT

USB

FAN × 2

USB

AC → POWER BOX A (FAN SENSOR / THERMAL ERROR) → BREAKER2A×3 / BREAKER4A×3

AC → POWER BOX B (FAN SENSOR / THERMAL ERROR) → BREAKER2A×3 / BREAKER4A×3

DC FAN x4

USB → USB / OUT PORT — DC24V DC12V — IN PORT — M3IO(TW)_SigB

USB → USB / OUT PORT — DC24V DC12V — IN PORT — M3IO(TW)_SigA

ASSY CIRCLE LED A

ASSY CIRCLE LED B

IN SERIAL LED DRIVER OUT → DC 12V IN → TAPE LED (0.1m) x9

ASSY TITLE

IN SERI_PWR OUT → DC 24V IN → SLIM CHANNEL (WHITE)×38

ASSY RING

IN SERI_PWR OUT → DC 24V IN → SLIM CHANNEL (WHITE)×38

DVI → +5V DVI / DVI / DVI SPLITTER DVI → 32" LCD×2 / 32" LCD×2

LAN → TINKER SYSTEM2 (DC12V / LAN / USB) ⚠1 ↔ USB CAMERA (USB) ⚠2

DVI ← miniDP-DVI ACTIVE ← DP2 / SLIM PC

232C → 232C DP1 / USB3.0 ↔ HIGH SPEED CAMERA

miniDP-DP ⚠1

232C → 232C DP → PROJECTOR

INPUT AC220V-240V or AC100-120V

INPUT AC220V-240V or AC100-120V

TOLERANCE	MATERIAL	FINISH

THIS DRAWING WILL IN NO WAY BE COPIED.
TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1
DRAWN	2018/08/09	Y.SETO	
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm
APPROVED	2018/08/09	Y.USUKI	
RGSTRD	2018/08/09	K.INOUE	MOLD
PROCESS			

interblock LUXURY GAMING PRODUCTS

TITLE	BLOCK DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	800-0071-C (2/2)
ITEM CODE	
RELATION	

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ASSY CENTER

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		
4	F5	ADD : REFERENCE	'24.12.03	M.SAKAMOTO
3	F3	CHANGE : SWITCHING HUB	'25.03.04	M.SAKAMOTO
2	F3	ADD : LRX SH PW2 HARNESS	'25.03.04	M.SAKAMOTO
1	E3	VOID : VR7 UL 3P-B HARNESS	'25.03.04	M.SAKAMOTO
0	E2,E3	WAS : WRITING ERROR	'25.03.04	M.SAKAMOTO

AC INPUT
AC220V-240V or
AC100V-120V

N PE L

2xMM EARTH HARNESS

2xMM TER-NF HARNESS

NOISE FILTER (30A) RSEN-2030

ASSY SWITCH BOARD

MM NF-A HARNESS

MATE-4P

MM BR-A HARNESS

BREAKER 20A 8340-F420-P1M2 -A2H0 20A

MM BR-B HARNESS

ASSY SPACER CONTROL (1/2)

MATE-6P

1500W TRANSFORMER 100V-100V
The input voltage in the case of 100-120V.

1500W TRANSFORMER 230V-100V
The input voltage in the case of 220-240V.

LRX TR1 HARNESS

LRX TR2 HARNESS

VR7 TR IN HARNESS

CIRCUIT BREAKER 8A

VR7 UL 3P-B HARNESS

VR7 UL 3P-A HARNESS

VL3P

N.C

WIRING 2 (D6)
(O) P4_24OUT03
(BK) P4_GND07
EL2P

LRX SH PW2 HARNESS

ASSY HUB

SWITCHING HUB

Cat5e LAN CABLE 0.5m LA-Y5TS-005

LAN CABLE 3m

LRX LAN HARNESS

FERRITE CORE (NFT-12) 2TURN×8

WIRING2 (A4)
WIRING8 (A1)
WIRING8 (E1)
WIRING2 (D4)
WIRING15 or WIRING18
AP-X STATIONS (LAN2)

COMPRESSOR OF301-4B
(TO WHEEL UNIT)

=LOW VOLTAGE LINE
=HIGH VOLTAGE LINE
#110 TYPE FASTON TERMINAL
#187 TYPE FASTON TERMINAL
#250 TYPE FASTON TERMINAL
SOLDERING

WIRE COLOR

(BK)	BLACK
(BR)	BROWN
(R)	RED
(O)	ORANGE
(Y)	YELLOW
(G)	GREEN
(BL)	BLUE
(PRP)	PURPLE
(GY)	GRAY
(W)	WHITE
(PK)	PINK
(SBL)	SKY BLUE

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1
DRAWN	2018/08/09	Y.SETO	
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm
APPROVED	2018/08/09	Y.USUKI	
RGSTRD	2018/08/09	K.INOUE	MOLD
PROCESS			

TITLE	WIRING DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-I (1/18)
ITEM CODE	
RELATION	

interblock LUXURY GAMING PRODUCTS

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CONTROL BOX

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		
⚠1	F1	ADD : BACK UP SSD	'18.09.12	Y.SETO
⚠2	E4, E5	WAS : RS232C ST CABLE 0.5m COMPATIBLE	'18.09.12	Y.SETO
⚠3	G4	WAS : FERRITE CORE (NFT-6) 1TURN×4	'18.09.12	Y.SETO
⚠4	D5	ADD : PROJECTOR TYPE	'19.06.07	Y.SETO
⚠5	H3	ADD : AX-CAP OPTION	'21.11.26	Y.SETO
⚠6	H2	ADD :SW OPTION	'24.10.17	O.DAIGO
⚠7	D4	ADD : REFERENCE	'24.12.03	M.SAKAMOTO
⚠8	B1	ADD : FERRITE CORE NFT-12	'25.01.23	M.SAKAMOTO
⚠9	C6	ADD : LRX SH PW1 HARNESS	'25.03.04	M.SAKAMOTO

P1 (NEW FIT20P)

+3.3V OUT01	1	(BL)	P1_33OUT01
+3.3V OUT02	2	(BL)	P1_33OUT02
+3.3V OUT03	3	(BL)	P1_33OUT03
+12V OUT01	4	(Y)	P1_12OUT01
+12V OUT02	5	(Y)	P1_12OUT02
+12V OUT03	6	(Y)	P1_12OUT03
+12V OUT04	7	(Y)	P1_12OUT04
+12V OUT05	8	(Y)	P1_12OUT05
+5V OUT01	9	(R)	P1_5OUT01
+5V OUT02	10	(R)	P1_5OUT02
GND OUT01	11	(BK)	P1_GND01
GND OUT02	12	(BK)	P1_GND02
GND OUT03	13	(BK)	P1_GND03
GND OUT04	14	(BK)	P1_GND04
GND OUT05	15	(BK)	P1_GND05
GND OUT06	16	(BK)	P1_GND06
GND OUT07	17	(BK)	P1_GND07
GND OUT08	18	(BK)	P1_GND08
GND OUT09	19	(BK)	P1_GND09
-12V OUT01	20	(BR)	P1_12NOUT

FERRITE CORE (NFT-12) 1TURN x3

LRX P1 HARNESS

P2 (NEW FIT8P)

+5V S+	1	(BR)	5VSP
+3.3V S+	2	(PRP)	33VSP
POWER OK	3	(GY)	POWER OK
5V SB	4	(PRP)	5VSB
+5V S-	5	(BL)	5VSN
+3.3V S-	6	(GY)	33VSN
PS_ON	7	(G)	PSON
	8		

PF

P5 (VH3P)

THERMAL SENSOR OUT	1	(BR)	THERMAL
FAN SENSOR OUT	2	(W)	FAN_SEN
	3		

P3 (NEW FIT24P)

+5V OUT01	1	(R)	P3_5OUT
+12V OUT01	2	(Y)	P3_12OUT01
+12V OUT02	3	(Y)	P3_12OUT02
+12V OUT03	4	(Y)	P3_12OUT03
+12V OUT04	5	(Y)	P3_12OUT04
+12V OUT05	6	(Y)	P3_12OUT05
+12V OUT06	7	(Y)	P3_12OUT06
+24V OUT01	9	(O)	P3_24OUT01
+24V OUT02	10	(O)	P3_24OUT02
GND OUT01	13	(BK)	P3_GND01
GND OUT02	14	(BK)	P3_GND02
GND OUT03	15	(BK)	P3_GND03
GND OUT04	16	(BK)	P3_GND04
GND OUT05	17	(BK)	P3_GND05
GND OUT06	18	(BK)	P3_GND06
GND OUT07	19	(BK)	P3_GND07
GND OUT08	20	(BK)	P3_GND08

LRX P3 HARNESS

P4 (NEW FIT22P)

+5V OUT01	1	(R)	P4_5OUT01
+5V OUT01	2	(R)	P4_5OUT02
+12V OUT01	3	(Y)	P4_12OUT01
+12V OUT02	4	(Y)	P4_12OUT02
+12V OUT03	5	(Y)	P4_12OUT03
+12V OUT04	6	(Y)	P4_12OUT04
+24V OUT01	7	(O)	P4_24OUT01
+24V OUT02	8	(O)	P4_24OUT02
+24V OUT03	9	(O)	P4_24OUT03
GND OUT01	12	(BK)	P4_GND01
GND OUT02	13	(BK)	P4_GND02
GND OUT03	14	(BK)	P4_GND03
GND OUT04	15	(BK)	P4_GND04
GND OUT05	16	(BK)	P4_GND05
GND OUT06	17	(BK)	P4_GND06
GND OUT07	18	(BK)	P4_GND07
GND OUT11	22		

LRX P4 HARNESS

POWER SUPPLY BOARD

PC1 (EL15P)

(BK)	1	(BK)	P1_GND01
(BK)	2	(BK)	P1_GND02
(BK)	3	(BK)	P1_GND03
(BK)	4	(BK)	P1_GND04
(BK)	5	(BK)	P1_GND05
(BK)	6	(BK)	P1_GND06
(BK)	7	(BK)	P1_GND16
(BK)	8	(BK)	P1_GND07
(BK)	9	(BK)	P1_GND17
(BR)	10	(BR)	P1_12NOUT
(G)	11	(G)	PSON
(GY)	12	(GY)	POWER OK
(BL)	13	(BL)	P1_33OUT01
(BL)	14	(BL)	P1_33OUT02
(BL)	15	(BL)	P1_33OUT03

PC2 (EL12P)

(R)	1	(R)	P1_5OUT01
(PRP)	2	(PRP)	5VSB
(R)	3	(R)	P1_5OUT02
(Y)	4	(Y)	P1_12OUT01
(Y)	5	(Y)	P1_12OUT02
(Y)	6	(Y)	P1_12OUT02
(Y)	7	(Y)	P1_12OUT03
(Y)	8	(Y)	P1_12OUT03
(BR)	9	(BR)	5VSP
(BL)	10	(BL)	5VSN
(PRP)	11	(PRP)	33VSP
(GY)	12	(GY)	33VSN

APX PCB P1 HARNESS

P1a WIRING 7 (A2)

P3a WIRING 3 (A1)

P3b WIRING 3 (H3)

P3d WIRING 7 (F2)

P3c WIRING 6 (B6)

P4a WIRING 6 (B6) WIRING 5 (F1)

P4b WIRING 4 (F1)

P4d P4_12OUT03 WIRING 3 (C5)

CIRCUIT BREAKER 2A ×2

(R) P4_5OUT02

(Y)

CH (EL2P)
1 (BK)
2 (R)
WIRING 7 (A5)

HB (EL2P)
1 (O)
2 (BK)
WIRING 1 (E3)

⚠ LRX SH PW1 HARNESS

SSD 4G (BACK UP) ⚠
SSD 4G (SSD 8G)
SATA 3.0 / SATA POWER / SATA 3.0 / SATA POWER

PP1 (NEW FIT24P)

P1_33OUT01	1	(BL)	
P1_33OUT02	2	(BL)	
33VSN	3	(GY)	
5VSP	4	(BR)	
5VSN	5	(BL)	
P1_5OUT02	6	(R)	
P1_GND03	7	(BK)	
POWER OK	8	(GY)	
5VSB	9	(PRP)	
P1_12OUT01	10	(Y)	
	11	(Y)	
P1_33OUT03	12	(BL)	
33VSP	13	(PRP)	
P1_12NOUT	14	(BR)	
P1_GND04	15	(BK)	
PSON	16	(G)	
P1_GND05	17	(BK)	
P1_GND07	18	(BK)	
P1_GND17	19	(BK)	
	20		
P1_5OUT02	21	(R)	
P1_5OUT02	22	(R)	
P1_5OUT02	23	(R)	
P1_GND01	24	(BK)	

PP2 (NEW FIT8P)

P1_GND06	1	(BK)	
	2	(BK)	
P1_GND16	3	(BK)	
	4	(BK)	
P1_12OUT02	5	(Y)	
P1_12OUT02	6	(Y)	
P1_12OUT03	7	(Y)	
P1_12OUT03	8	(Y)	

CPU COOLER (BK) (R) (Y) — NEW FIT8P

AP-X

SPH / AG3
1 (W) 1 RST OUT
4 (BK) 3 GND
GND 3 5 GND
10 RF10P — APX REPSW HARNESS — XH5P

USB6_7 — U67 / J7
1 (BR) 1 VBUS
2 (G) 2 D-
3 (BL) 3 D+
4 (BK) 4 GND
5 RF10P — APX GMEM USB HARNESS — A2 6P

PCIe x1 EDGE CONNECTOR

AX-GMEM (1/2)

AX-GAL

CN4 / AG4
(BR) NO 3
(BK) COM 8
NO 4
COM 7
PH8P

XTM PCDSW HARNESS

PCD 1 2 3 SM3P
(BR) (BK)
XTM DSW HARNESS
D 1 2 3 HL3P
NO NC COM
PCB CASE SW (SDKNA20600)
DOOR SW(ALPS) OPTION Refer To Page17(A1)

CN11
(BL)
3.2V(VBAT) 1
GND 2
PH2P
CPK GMEMBT HARNESS VBAT_GND1 VBAT1
VB1 2 1

CAP OPTION WIRING 16 (B3)

DP OUT
MDP1
MDP2
MDP3
MDP4
MiniDP-DP 1m
DP1 WIRING 7 (A3)
MiniDP-DVI ACTIVE
DP4 WIRING 7 (A3)

VIDEO CARD (1/2)

USB_0 — USB EX CABLE 1.5m — USB0 WIRING 7 (A5)
USB_1
FERRITE CORE (NFT-6) 1TURN×5
USB_4 — USB EX CABLE 1.5m — POLE2 USB4 WIRING9 (A1)
USB_5 — USB EX CABLE 1.5m — USB5 WIRING9 (A1)
USB_2 — G USB 1M HARNESS — USB2 WIRING 3 (A1)
USB_3 — G USB 1M HARNESS — USB3 WIRING 6 (A6)

WIRING1 (F4) — L1 — Cat5e LAN CABLE 0.5m LA-Y5TS-005 — LA — LAN2

POLE4
WIRING15(A3) or WIRING18(A3) — RS3 — RS232C ST CABLE 1.2m COMPATIBLE — COM3 D-SUB9P
WIRING15 (A3) — RS4 — RS232C ST CABLE 1.2m COMPATIBLE — COM4 D-SUB9P
ONLY FOR PROJECTOR TYPE VPL-FHZ700L/W

LRX MAIN HARNESS (PK) — CM2
(SBL) 2 RXD
(BK) 3 TXD
5 GND
COM2 D-SUB9P

WIRING 3 (B4) — RS2

WIRING 1 (F2)
AC1 INLET PULG L E N
#250 #250 #250
(G)
1 2 3 4
(BR) (BL) (BR) (BL)
#187 #187 #187 #187
1 2 3

POWER SUPPLY BOX ADP-555AR

High Voltage lines

PART No. 810-0071-I (2/18)

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1
DRAWN	2018/08/09	Y.SETO	DIM.IN mm
CHECKED	2018/08/09	Y.AIKAWA	MOLD
APPROVED	2018/08/09	Y.USUKI	
RGSTRD	2018/08/09	K.INOUE	
PROCESS			

interblock LUXURY GAMING PRODUCTS

TITLE	WIRING DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-I (2/18)
ITEM CODE	
RELATION	

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ASSY CENTER

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
3	B5	WAS : CN18	'24.10.17	O.DAIGO
2	B5	ADD :SW OPTION	'24.10.17	O.DAIGO
1	E5	ADD :SW OPTION	'24.10.17	O.DAIGO

GM-M3IO (APX)_Body (1/2)

WIRING 2 (H5) → USB2 — G USB1M HARNESS — FERRITE CORE (NFT-6) 1TURN — B — CN2(USB): G GND, P D+, N D-, V VBUS, F FGND — USB(B)

WIRING 2 (C4) → P3a — LRX P3 HARNESS — B15 — CN15: 1 +24V, 2 +12V, 3 GND, 4 GND — VH4P
- P3_24OUT01 (O)
- P3_12OUT01 (Y)
- P3_GND01 (BK)
- P3_GND02 (BK)

SCF — EL3P
- P3_12OUT05 (Y)
- P3_GND07 (BK)

B1 — CN1(1 /2) — PC FAN
- FAN_SEN (W)
- THERMAL (BR)
- PC FAN (PK)
- (W)
- (BK)

3 POWER BOX FAN SENSOR
4 POWER BOX THERMAL SENSOR
6 PC TOWER FAN SENSOR
5 ASSY TOPPER
39 GND
PAD40P

TP — TOP — B1G1 — SM2P
- TP 1 TOP(W)
- TP 2 B1G1(BK)

WIRING 7 (A4) → D1 — EL9P
- 1 (BR) KS2
- 2 (BL) KS1
- 3 (PRP) KS3
- 4 (BK) B6G1
- 5 (PK) DSA
- 6 (W) DSB
- 7 (PK) TXD
- 8 (SBL) RXD
- 9 (BK) GND

LRX MAIN HARNESS

B6 — CN6(1 /2)
- B6G1 (BK) — 1 GND1
- 2 GND2
- KS1 (BL) — 5 KEY SW1 (RESET)
- KS2 (BR) — 6 KEY SW2 (AUDIT)
- KS3 (PRP) — 7 KEY SW3 (POWER SAVE)
- 19 +12V
- TL1 (GY) — 27 TOWER LIGHT TOP
- TL2 (PRP) — 28 TOWER LIGHT CENTER
- TL3 (BR) — 29 TOWER LIGHT BOTTOM
- 30

PHD30P

WIRING 7 (F4) → D2 — SM3P
- 1 (W) SDDS
- 2
- 3 (BK) B7G1

B7 — CN7
- B7G1 (BK) — 24 GND
- SDDS (W) — 25 SPACER DRAIN DOOR SW

PHD34P

WIRING 9 (F4) → TL — POLE1 — EL6P
- 1 (BR) TL3
- 2 (PRP) TL2
- 3 (GY) TL1
- 4 (Y) 12V
- 5 (W) TOP
- 6 (BK) B1G1

RS2 → WIRING 2 (E5)

DOOR SW(ALPS) OPTION Refer To Page17(B3)

B — B18 — CN16
- (PK) — 1 IO BOX COVER SW
- (W) — 2 GND

XH2P

PCB CASE DOOR SW (SDKNA20600) NO NC COM — HL3P — XST B PCB SW HARNESS

TLR — TLR — 12V (Y) — 1 — YL1P — (Y) P4_12OUT03 — LRX P4 HARNESS — P4d → WIRING 2 (D6)

LRX MAIN HARNESS

B3 — CN3 — PHD8P
- ID JP 1 (W)
- GND 2 (W)
- ID JP 7 (W)
- GND 8 (W)

B11 — CN11 — PND40P
- WHEEL INNER_LED LACH 9 — WI1
- WHEEL INNER_LED CLK 10 — WI2
- WHEEL INNER_LED DATA 11 — WI3
- WHEEL INNER_LED MODE 12 — WI4
- +5V 33 — 5V1
- GND 37 (BK) G1
- 40

→ B11 WIRING 4 (A2)

LRX LED IN HARNESS

B12 — CN12 — PND30P
- FIELD OUTER_LED LACH 1 — FO1
- FIELD OUTER_LED CLK 2 — FO2
- FIELD OUTER_LED DATA 3 — FO3
- FIELD OUTER_LED MODE 4 — FO4
- +5V 25 — 5V2
- GND 28 (BK) G2
- 30

→ B12 WIRING 5 (A2)

LRX P3 HARNESS

B1 — CN1(2/2) — PAD40P
- CABINET FAN SENSOR1 1 (PRP) FAN1
- CABINET FAN SENSOR2 2 (GY) FAN2

CF — CF — SM2P
- 1 (PRP) FAN1
- 2 (GY) FAN2

LRX MAIN HARNESS

B6 — CN6(2/2) — PHD30P
- GLASS PIN SW No.1 21 (BR) GS1
- GLASS PIN SW No.2 22 (BL) GS2
- GLASS PIN SW No.3 9 (PRP) GS3
- GLASS PIN SW No.4 10 (GY) GS4
- MAIN DOOR SW 23 (PK) MD
- GND3 3 (BK) B6G3
- GND4 4 (BK) B6G4
- GND5 13 (BK) B6G5
- GND6 14 (BK) B6G6
- GND7 26 (BK) B6G7

CI — CI — EL12P
- 1 (BR) GS1
- 2 (BL) GS2
- 3 (PRP) GS3
- 4 (GY) GS4
- 5 (PK) MD
- 6 (BK) B6G3
- 7 (BK) B6G4
- 8 (BK) B6G5
- 9 (BK) B6G6
- 10 (BK) B6G7
- 11 (PK) DSA
- 12 (PK) DSB

DSA (PK)
DSB (W)

LRX CEN IO HARNESS

F1 F2 F3 F4 — EL3P
- P3_12OUT03 (Y) — FAN1 (PRP) — P3_GND05 (BK)
- P3_12OUT03 (Y) — FAN2 (GY) — P3_GND05 (BK)
- P3_12OUT04 (Y) — FAN5 (BR) — P3_GND06 (BK)
- P3_12OUT04 (Y) — FAN6 (G) — P3_GND06 (BK)

POLE1 — F56 — F56 — WIRING9 (A2) — SM2P
- FAN5 (BR) 1
- FAN6 (G) 2

PS1 PS2 PS3 PS4 — SM3P
- (BK)
- (W)
- (R)

GS — XH3P

PHOTO SENSOR

LRX GS R HARNESS

LRX P3 HARNESS

CP — CP — EL6P
- (R) — (R) P3_5OUT
- (Y) — (Y) P3_12OUT03
- (Y) — (Y) P3_12OUT04
- (BK) — (BK) P3_GND05
- (BK) — (BK) P3_GND06

P3b → WIRING 2 (C4)

LRX CEN IO HARNESS

DOOR SW(ALPS) OPTION Refer To Page17(D5)

DR1 DL4 DR2 DL1 DL3 DR4 DL2 DR3 — HL3P
- (PK)
- (W)
- (BK)

MAIN DOOR SW (SDKNA20600) NO NC COM

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (3/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-I (3/18)

ASSY CENTER (INNER LED)

SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY

LRX P4 HARNESS

LP1 (Y) (Y) (BK) (BK) — 1 2 3 4 — LP1 (Y) (Y) (BK) P4_GND01 (BK) P4_GND02 — YL4P

P4_12OUT01 (Y) → P4b, WIRING 2 (C6)

LRX LED PWR HARNESS

FP1 P4_12OUT01 (Y) P4_12OUT01 (Y) — 1 2 — FP (Y) 12V1 (Y) 12V1 — EL2P

FP2 P4_12OUT01 (Y) P4_12OUT01 (Y) — 1 2 — FP (Y) 12V2 (Y) 12V2 — EL2P

P4_GND01

P4_GND02

LRX LED IN HARNESS — B11 WIRING 3 (E1)

SA1: WI1, WI2, WI3, WI4, 5V1, (BK)

SG1 (BK) (BK) — 1 2 3 — SAG (BK) (BK) — EL3P

SG2 (BK) (BK) — 1 2 3 — SG (BK) (BK) — EL3P

CN1 (PH10P) / CN3 (PHD20P)

CN1		CN3		CN3
WI1	1 LATCH	OUT1_0 1		(BR) R1
WI2	2 CLK	OUT1_1 2		(G) G1
WI3	3 DATA	OUT1_2 3		(BL) B1
WI4	4 MODE	OUT1_3 4		(BR) R2
5V1	5 +5V	OUT1_4 5		(G) G2
(BK)	6 GND	OUT1_5 6		(BL) B2
	7 +12V	OUT1_6 7		(BR) R3
	8 +12V	OUT1_7 8		(G) G3
	9 GND	OUT1_8 9		(BL) B3
	10 GND	OUT1_9 10		(BR) R4
		OUT1_10 11		(G) G4
		OUT1_11 12		(BL) B4
		OUT1_12 13		(BR) R5
		OUT1_13 14		(G) G5
		OUT1_14 15		(BL) B5
		OUT1_15 16		
		+12V 20		

CN2 (PH11P) / CN4 (PHD20P)

CN2		CN4		CN4
WI1	1 LATCH	OUT2_0 1		(BR) R6
WI2	2 CLK	OUT2_1 2		(G) G6
WI3	3 DATA	OUT2_2 3		(BL) B6
WI4	4 MODE	OUT2_3 4		(BR) R7
5V1	5 +5V	OUT2_4 5		(G) G7
(BK)	6 GND	OUT2_5 6		(BL) B7
	7 +12V	OUT2_6 7		(BR) R8
	8 +12V	OUT2_7 8		(G) G8
	9 GND	OUT2_8 9		(BL) B8
	10 GND	OUT2_9 10		(BR) R9
	11	OUT2_10 11		(G) G9
		OUT2_11 12		(BL) B9
		OUT2_12 13		(BR) R10
		OUT2_13 14		(G) G10
		OUT2_14 15		(BL) B10
		OUT2_15 16		
		+12V 20		

BD-SERIAL-LED-DRIVER

LRX INNER-L HARNESS

LRX SL RLY HARNESS

LED TAPE LIGHT 100mm — BLUE, GREEN, RED, +12V — SM4P

L1	T10	B1 (BL)	G1 (G)	R1 (BR)	12V1 (Y)
L2	T10	B2 (BL)	G2 (G)	R2 (BR)	12V1 (Y)
L3	T10	B3 (BL)	G3 (G)	R3 (BR)	12V1 (Y)
L4	T10	B4 (BL)	G4 (G)	R4 (BR)	12V1 (Y)
L5	T10	B5 (BL)	G5 (G)	R5 (BR)	12V1 (Y)
L6	T10	B6 (BL)	G6 (G)	R6 (BR)	12V1 (Y)
L7	T10	B7 (BL)	G7 (G)	R7 (BR)	12V1 (Y)
L8	T10	B8 (BL)	G8 (G)	R8 (BR)	12V1 (Y)
L9	T10	B9 (BL)	G9 (G)	R9 (BR)	12V1 (Y)
L10	T10	B10 (BL)	G10 (G)	R10 (BR)	12V1 (Y)

L1	T10	B1 (BL)	G1 (G)	R1 (BR)	12V2 (Y)
L2	T10	B2 (BL)	G2 (G)	R2 (BR)	12V2 (Y)
L3	T10	B3 (BL)	G3 (G)	R3 (BR)	12V2 (Y)
L4	T10	B4 (BL)	G4 (G)	R4 (BR)	12V2 (Y)
L5	T10	B5 (BL)	G5 (G)	R5 (BR)	12V2 (Y)
L6	T10	B6 (BL)	G6 (G)	R6 (BR)	12V2 (Y)
L7	T10	B7 (BL)	G7 (G)	R7 (BR)	12V2 (Y)
L8	T10	B8 (BL)	G8 (G)	R8 (BR)	12V2 (Y)
L9	T10	B9 (BL)	G9 (G)	R9 (BR)	12V2 (Y)
L10	T10	B10 (BL)	G10 (G)	R10 (BR)	12V2 (Y)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (4/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-I (4/18)

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ASSY CENTER (OUTER LED)

SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY

LP2 (Y) (Y) (BK) (BK) — YL4P — LRX P4 HARNESS — P4_12OUT02 (Y), (BK) P4_GND03, (BK) P4_GND04 → P4a WIRING 2 (C5)

LRX LED PWR HARNESS

FP3 — EL2P: P4_12OUT02 (Y) → (Y) 12V3

FP4 — EL2P: P4_12OUT03 (Y) → (Y) 12V4

LRX LED IN HARNESS — B12 WIRING3 (E2)

P4_GND03

SB1 — EL3P: FO1, FO2, FO3, FO4, 5V2, (BK)

SG3 (BK) (BK) — SBG (BK) (BK) — EL3P

CN1 — PH10P: 1 LATCH, 2 CLK, 3 DATA, 4 MODE, 5 +5V, 6 GND, 7 +12V, 8 +12V, 9 GND, 10 GND

BD-SERIAL-LED-DRIVER

CN3 — PHD20P: OUT1_0 (BR) R1, OUT1_1 (G) G1, OUT1_2 (BL) B1, OUT1_3 (BR) R2, OUT1_4 (G) G2, OUT1_5 (BL) B2, OUT1_6 (BR) R3, OUT1_7 (G) G3, OUT1_8 (BL) B3, OUT1_9 (BR) R4, OUT1_10 (G) G4, OUT1_11 (BL) B4, OUT1_12 (BR) R5, OUT1_13 (G) G5, OUT1_14 (BL) B5, OUT1_15, +12V 20

CN2 — PH11P: 1 LATCH, 2 CLK, 3 DATA, 4 MODE, 5 +5V, 6 GND, 7 +12V, 8 +12V, 9 GND, 10 GND, 11

CN4 — PHD20P: OUT2_0 (BR) R6, OUT2_1 (G) G6, OUT2_2 (BL) B6, OUT2_3 (BR) R7, OUT2_4 (G) G7, OUT2_5 (BL) B7, OUT2_6 (BR) R8, OUT2_7 (G) G8, OUT2_8 (BL) B8, OUT2_9 (BR) R9, OUT2_10 (G) G9, OUT2_11 (BL) B9, OUT2_12 (BR) R10, OUT2_13 (G) G10, OUT2_14 (BL) B10, OUT2_15, +12V 20

LRX OUTER-L HARNESS

LRX SL RLY HARNESS

LED TAPE LIGHT 100mm — SM4P: BLUE, GREEN, RED, +12V

L1	T10	B1 (BL)	G1 (G)	R1 (BR)	12V3 (Y)
L2	T10	B2 (BL)	G2 (G)	R2 (BR)	12V3 (Y)
L3	T10	B3 (BL)	G3 (G)	R3 (BR)	12V3 (Y)
L4	T10	B4 (BL)	G4 (G)	R4 (BR)	12V3 (Y)
L5	T10	B5 (BL)	G5 (G)	R5 (BR)	12V3 (Y)
L6	T10	B6 (BL)	G6 (G)	R6 (BR)	12V3 (Y)
L7	T10	B7 (BL)	G7 (G)	R7 (BR)	12V3 (Y)
L8	T10	B8 (BL)	G8 (G)	R8 (BR)	12V3 (Y)
L9	T10	B9 (BL)	G9 (G)	R9 (BR)	12V3 (Y)
L10	T10	B10 (BL)	G10 (G)	R10 (BR)	12V3 (Y)

P4_GND04

SG4 (BK) (BK) — SG (BK) (BK) — EL3P

L1	T10	B1 (BL)	G1 (G)	R1 (BR)	12V4 (Y)
L2	T10	B2 (BL)	G2 (G)	R2 (BR)	12V4 (Y)
L3	T10	B3 (BL)	G3 (G)	R3 (BR)	12V4 (Y)
L4	T10	B4 (BL)	G4 (G)	R4 (BR)	12V4 (Y)
L5	T10	B5 (BL)	G5 (G)	R5 (BR)	12V4 (Y)
L6	T10	B6 (BL)	G6 (G)	R6 (BR)	12V4 (Y)
L7	T10	B7 (BL)	G7 (G)	R7 (BR)	12V4 (Y)
L8	T10	B8 (BL)	G8 (G)	R8 (BR)	12V4 (Y)
L9	T10	B9 (BL)	G9 (G)	R9 (BR)	12V4 (Y)
L10	T10	B10 (BL)	G10 (G)	R10 (BR)	12V4 (Y)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (5/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-I (5/18)

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠3	G3	ADD : WIRING FOR 38 POCKETS SPEC	'19.01.25	Y.SETO
⚠2	E5	ADD : AX-CAP OPTION	'21.11.26	Y.SETO
⚠1	E1,E3	ADD : FERRITE CORE NFT-8, NFT-12	'25.01.23	M.SAKAMOTO

WHEEL UNIT(THK)

PHOTO INTERRUPTER OJ-456-N23 POCKET SENSOR0 — +5V OUT GND ZH3P
PHOTO INTERRUPTER OJ-456-N23 POCKET SENSOR1 — +5V OUT GND ZH3P
PHOTO INTERRUPTER OJ-456-N23 ORIGIN SENSOR — +5V OUT GND ZH3P
PHOTO INTERRUPTER OJ-456-N23 ZERO POSITION SENSOR — +5V OUT GND ZH3P
PRESSURE SENSOR PPX-R10N-6M — +12V OUT1 OUT2 GND PA4P
FIBER SENSOR UX-R3 WHEEL SENSOR REF1 — SENSOR LEAD CORD
FIBER SENSOR UX-R3 WHEEL SENSOR REF2 — SENSOR LEAD CORD
FIBER SENSOR UX-R3 WHEEL SENSOR REF3 — SENSOR LEAD CORD
FIBER SENSOR UX-R3 WHEEL SENSOR REF4 — SENSOR LEAD CORD
SENSOR EL-15NL WHEEL SENSOR AROUND1 — SENSOR LEAD CORD
SENSOR EL-15NL WHEEL SENSOR AROUND2 — SENSOR LEAD CORD

ENC1 (BR)(BK)(BL) — ENC2 (BR)(W)(BL) — ORG (BR)(R)(BL) — ZERO (BR)(R)(BL) — AIR (BR)(BK)(W)(BL)

WH_ENC ENCODER HARNESS — ENC (R)(GY)(BL)(BR)(BK) — XM5P
WH_ZERO HARNESS — ZERO (R)(PRP)(BK) — XM3P
WH_AIR HARNESS — AIR (Y)(PK)(SBL)(GND2)(BK) — SM4P

SENSOR LEAD CORD (BR)(BK)(BL) — XM3P
I0130 (Y) 12V1 WSR1 GND1 (BR)(BK)
I0430 (Y) 12V1 WSR2 GND1 (GY)(BK)
I0730 (Y) 12V1 WSR3 GND1 (BL)(BK)
I1030 (Y) 12V1 WSR4 GND1 (PRP)(BK)
O1200 (O) 24V WSA1 GND2 (PK)(BK)
O0600 (O) 24V WSA2 GND2 (SBL)(BK)

ORIENTAL MOTOR PKP296U20A — COM COM A A/ B B/ (Y)(W)(BK)(G)(R)(BL)
⚠1 FERRITE CORE (NFT-8) 1TURN
X_MTR ASSY STEPPING MOTOR — (Y)(W)(BK)(G)(R)(BL)
M02 — CN2 +24V A A/ B B/ — NH6P

BD-GM-R_DRV
CN1 +24V P-GND +12V +5V S-GND — PA8P
CN9 WHEEL CW/CCW WHEEL CLK WHEEL SLEEP S-GND — PAD14P
M01 (G) — M09 (BR)
+24V P-GND +12V +5V S-GND2 — WCW WCLK WSP S-GND1

RISE VALVE — VALVE SOLENOID VX210EMXB BALL UP — + - G — V1.25-3 (R)(BK)(G)
TURN VALVE CW — VALVE SOLENOID VX210EMXB BALL AROUND CW — + - G — V1.25-3 (R)(BK)(G)
RESERVE
TURN VALVE CCW — VALVE SOLENOID VX210EMXB BALL AROUND CCW — + - G — V1.25-3 (R)(BK)(G)

WH_DRV HARNESS — (BR) WCW (R) WCLK (O) WSP (Y) S-GND1 (G) +24V (BL) P-GND (PRP) +12V (GY) +5V (W) S-GND2 (PK)
ONLY FOR 38 POCKETS
DRV — 1 2 3 4 5 6 7 8 9 10 11 12 — EL12P
WCW (GY) WCLK (BR) WSP (BL) GND1 (BK) P4_24OUT01 (O) P4_GND05 (BK) P4_12OUT04 (Y) P4_5OUT (R) GND2 (BK) NOP (W) GND (BK)

WH_SOV HARNESS
SOV — 1 2 3 4 5 6 7 8 9 — EL9P
(R)(BK)(G)(R)(BK)(G)(R)(BK)(G)
P4_24OUT02 (O) SV2BU (SBL) (G) P4_24OUT02 (O) SV2BA (PK) (G) P4_24OUT02 (O) SV1BA (PRP) (G)

LRX W-DRV HARNESS
G1 G2 G3

NP — CAP OPTION — WIRING 16 (B1, C1) — YL6P
(R) P4_5OUT01
(Y) P4_12OUT04
(O) P4_24OUT01
(O) P4_24OUT02
(BK) P4_GND05
LRX W-DRV HARNESS

LRX W-DRV HARNESS — 5V WSP0 WSP1 WSO WSZ GND — N19 — CN19 — HIF3B 20P
WHEEL SENSOR POCKET0 (GY)
WHEEL SENSOR POCKET1 (BL)
WHEEL SENSOR ORG (BR)
WHEEL SENSOR ZERO (PRP)
GND (BK)

N01 — CN1 — PAD40P
CABINET FAN SENSOR1 (PK)
CABINET FAN SENSOR2 (SBL)
CENTER FAN SENSOR1 (BR)
CENTER FAN SENSOR2 (GY)
PRESSURE SENSOR1 (BL)
PRESSURE SENSOR2 (PRP)
WHEEL SENSOR REF1 (PK)
WHEEL SENSOR REF2 (SBL)
WHEEL SENSOR REF3 (BR)
WHEEL SENSOR REF4 (GY)
WHEEL SENSOR AROUND1 (BL)
WHEEL SENSOR AROUND2 (PRP)
WHEEL CLK (PK)
WHEEL CW/CCW (SBL)
WHEEL SLEEP (BR)
SOLENOID VALVE1 BALL AROUND CCW (GY)
SOLENOID VALVE2 BALL AROUND CW (BL)
SOLENOID VALVE2 BALL AROUND CW (PRP)
SOLENOID VALVE2 BALL UP (PK)
+12V (SBL)
+12V (Y)
GND (BK)
GND (BK)

N09 — CN9 — PAD40P — NH5P
GND (BK)
NOP (W)
24V (O)
+5V (W)
GND (BK)
NUMBER OF POCKET (PK)
+24V (R)

GM-M3IO (RTX)_NOKI

CN2(USB) — GND D+ D- VBUS FGND — USB(B) — G P N V F
B
G USB 1M HARNESS
WIRING 2 (H5) — USB3
FERRITE CORE (NFT-6) 1TURN

CN15 — +24V +12V GND GND — VH4P
N15
LRX P3 HARNESS
P3_24OUT02 (O) P3_12OUT02 (Y) P3_GND03 (BK) P3_GND04 (BK)
WIRING 2 (C5) — P3c
WIRING 2 (C5) — P4a — LRX P4 HARNESS

P4_24OUT01 (O) — ① #250 CIRCUIT BREAKER 2A #250 ② — (O)

⚠2 FERRITE CORE (NFT-12) 1TURN

ASSY CENTER

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

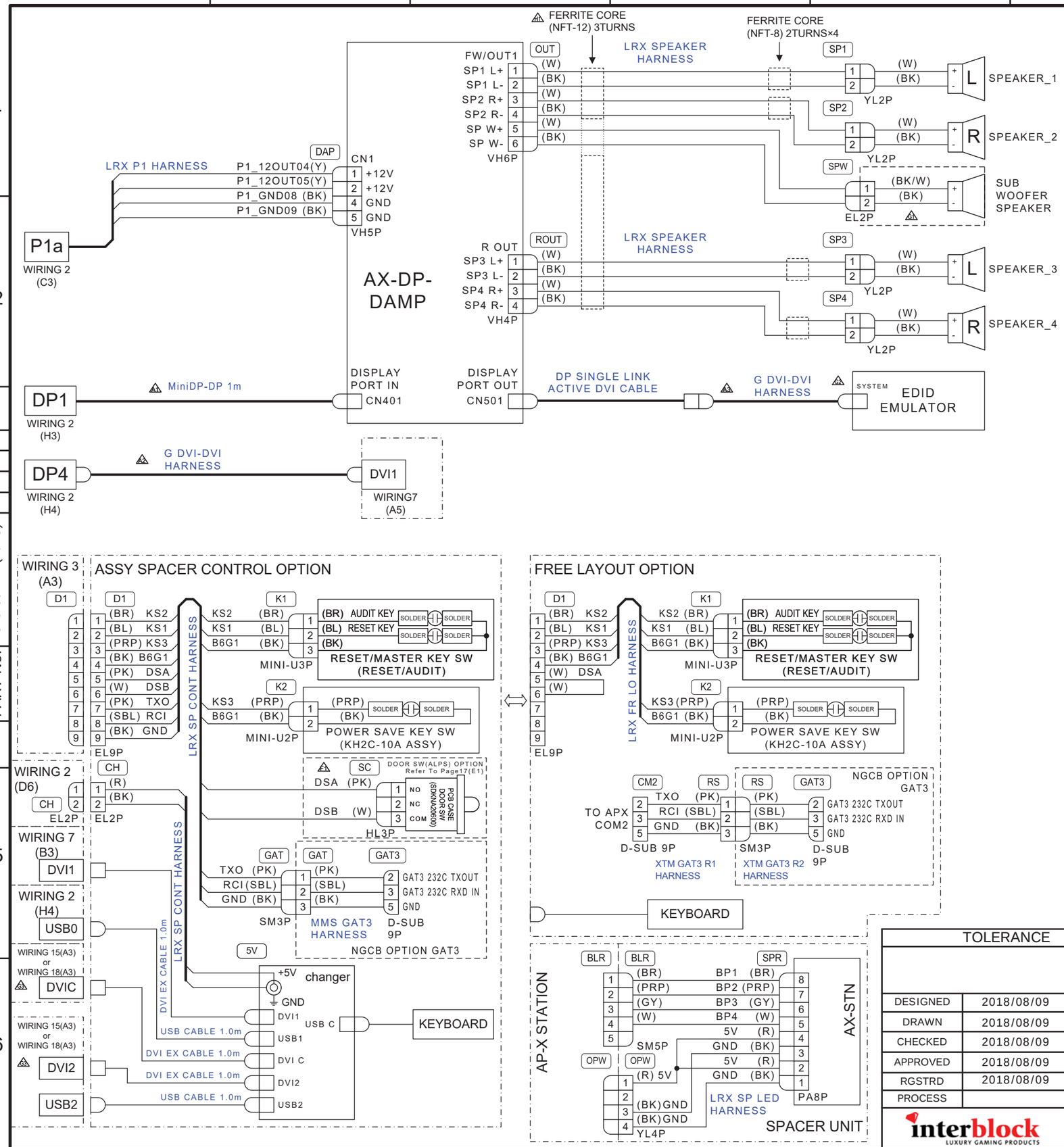
DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (6/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-I (6/18)

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
A1	A3	WAS : DVI CABLE 1.5m	'18.09.12	Y.SETO
A2	A3	WAS : MiniDP-DP 1m	'18.09.12	Y.SETO
A3	D2	WAS : DVI CABLE 1.8m	'18.09.12	Y.SETO
A4	B5	ADD : SW OPTION	'24.10.17	O.DAIGO
A5	F4	VOID: ASSY SPACER DRAIN OPTION AND FREE LAYOUT OPTION	'24.10.17	O.DAIGO
A6	E2	WAS:WIRE COLOR	'24.12.03	M.SAKAMOTO
A7	E3	ADD:DESCRIPTION	'24.12.03	M.SAKAMOTO
A8	A6	ADD : REFERENCE	'24.12.03	M.SAKAMOTO
A9	C1	ADD : FERRITE CORE NFT-12	'25.01.23	M.SAKAMOTO



TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

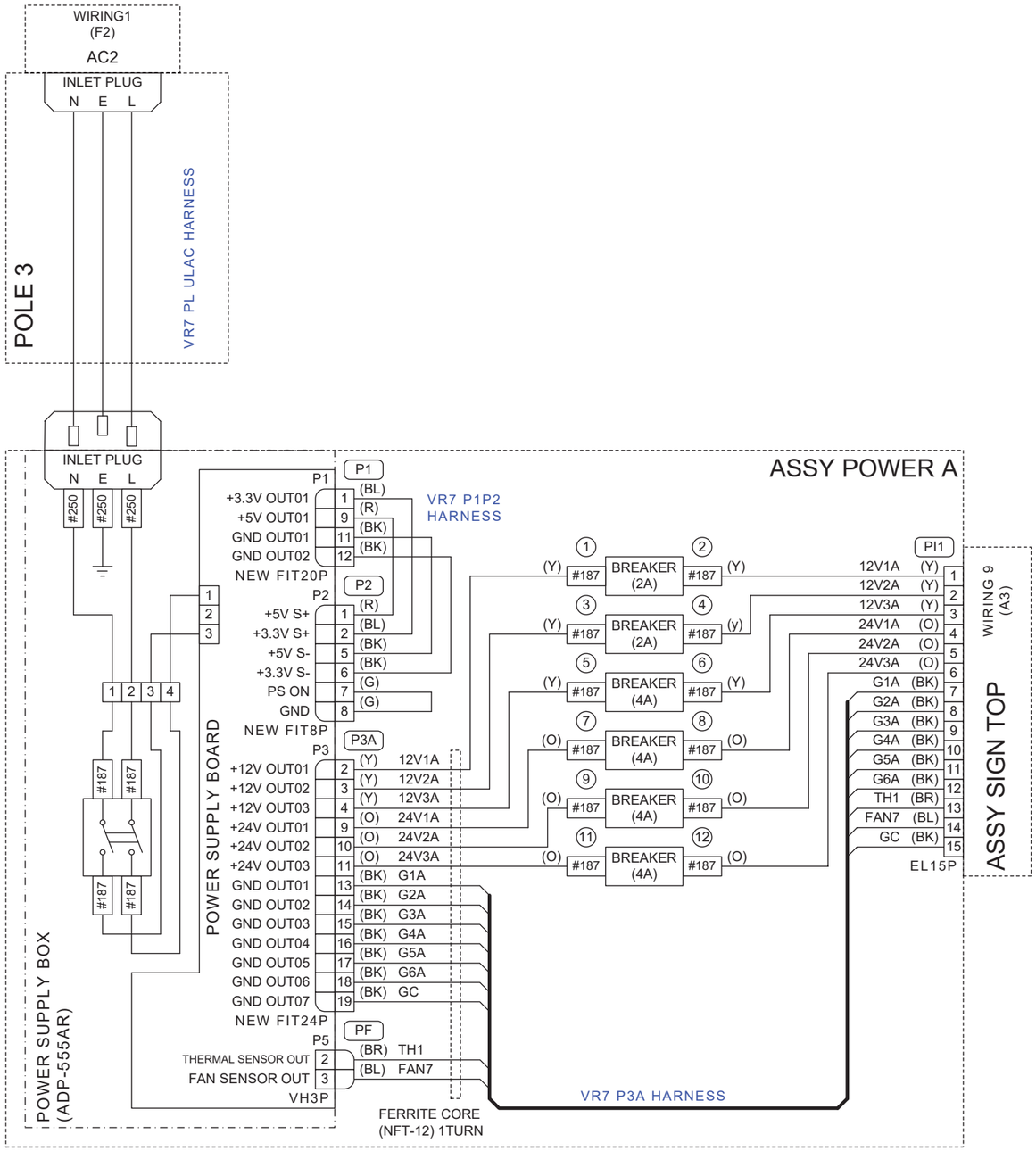
DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (7/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

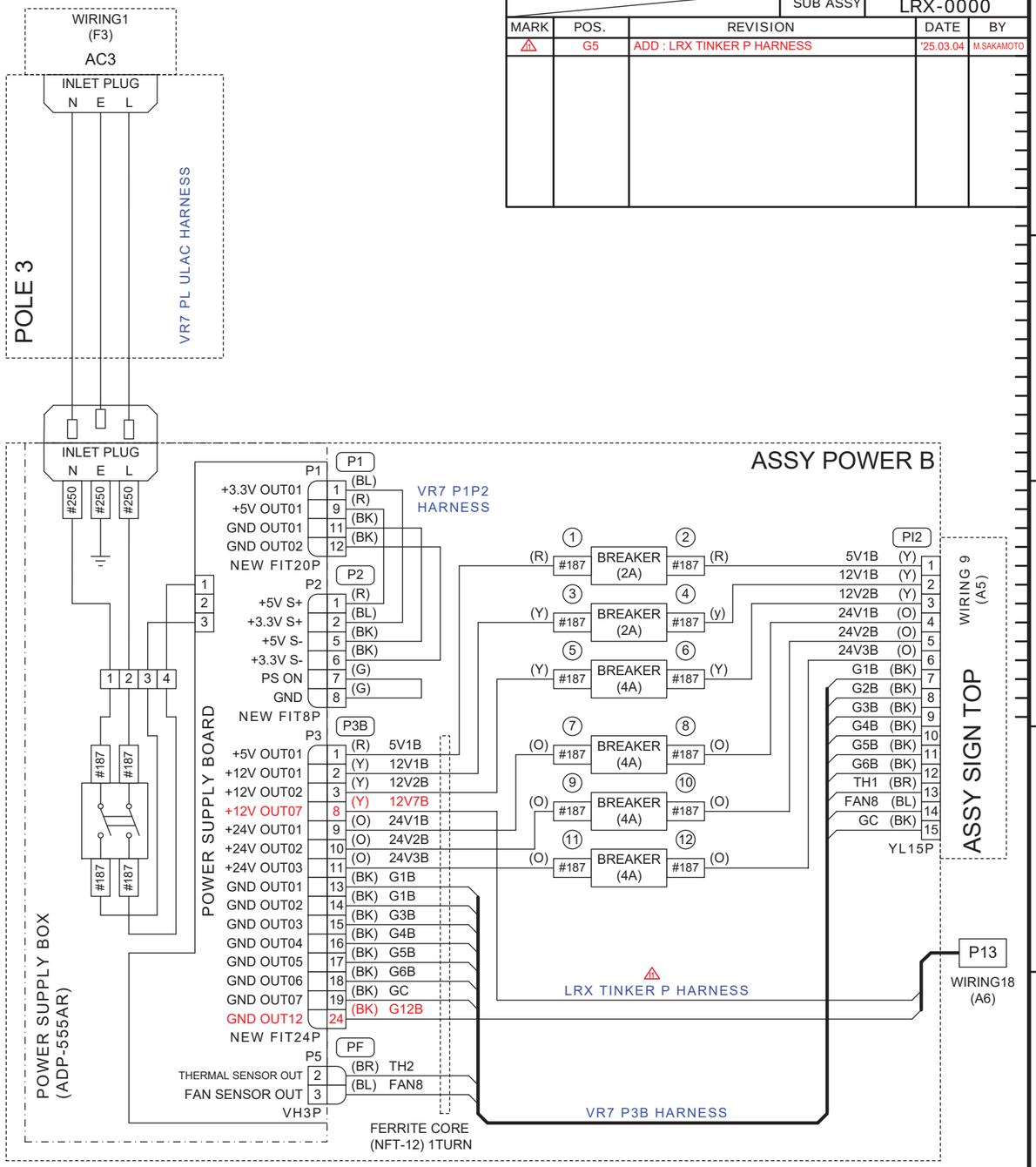
interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-I (7/18)

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠	G5	ADD : LRX TINKER P HARNESS	'25.03.04	M.SAKAMOTO





PART No. 810-0071-I (8/18)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (8/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
4	B6,C3,C5,E6	ADD : REFERENCE	'24.12.03	M.SAKAMOTO

PART No. 810-0071-I (9/18)

POLE 2

WIRING2 (H4) — USB4 — USB 3.0M HARNESS — FERRITE CORE (NFT-6) 1TURN — USB

WIRING2 (H5) — USB5 — USB 3.0M HARNESS — USB

LRX TOP PWR HARNESS

GM-M3IO (TW)_SigB

N15 — CN15: 1 24V (24V1A (O)), 2 12V (12V1A (Y)), 3 GND3 (G1A (BK)), 4 GND4 (BK), VH4P

CN1: 1 CENTER FAN SENSOR3, 2 CENTER FAN SENSOR4, 3 NEW POWER BOX1 SENSOR, 4 POWER BOX1 THERMAL SENSOR, 5 NEW POWER BOX2 SENSOR — PAD40P

N01: (BR) (G) (BR) (BL) (PRP)

CN11: 1 LATCH1, 2 CLK1, 3 DATA1, 4 MODE1, 33 +5V, 37 GND, 5 LATCH2, 6 CLK2, 7 DATA2, 8 MODE2, 34 +5V, 38 GND, 9 LATCH3, 10 CLK3, 11 DATA3, 12 MODE3, 35 +5V, 39 GND — PND40P

N11: L1(A) C1(A) D1(A) M1(A) 5V(A) (BK); L2(A) C2(A) D2(A) M2(A) 5V(A) (BK); L3(A) C3(A) D3(A) M3(A) 5V(A) (BK)

CN12: 1 LATCH, 2 CLK, 3 DATA, 4 MODE, 25 +5V, 29 GND — PND30P

N12: L4(A) C4(A) D4(A) M4(A) 5V(A) (BK)

VR7 TOP SL-C HARNESS — SI4 — WIRING14 (A2)

VR7 TOP SL-A HARNESS — SI3 — WIRING10 (A4)

VR7 TOP SL-A HARNESS — SI2 — WIRING12 (D1)

VR7 TOP SL-A HARNESS — SI1 — WIRING10 (D1)

POLE 1

F56: 1, 2 — SM2P — WIRING3 (H3)

VR7 PL FAN HARNESS

FR — FAN5 (BR), FAN6 (G) — SM2P — FR (BR) (G)

SEN — TH1 (BR), FAN7 (BL), FAN8 (PRP) — SM3P — SEN (BR) (BL) (PRP)

VR7 TOP M2 HARNESS

FERRITE CORE (NFT-6) 1TURN — USB

GM-M3IO (TW)_SigA

S15 — CN15: 1 24V (24V1B (O)), 2 12V (12V1B (Y)), 3 GND3 (G1B (BK)), 4 GND4 (BK), VH4P

CN1: 1 TOP FAN1 SENSOR, 2 TOP FAN2 SENSOR, 3 TOP FAN3 SENSOR, 4 POWER BOX2 THERMAL SENSOR, 5 TOP FAN4 SENSOR — PAD40P

S01: (BR) (G) (BL) (BR) (PRP)

CN11: 1 LATCH1, 2 CLK1, 3 DATA1, 4 MODE1, 33 +5V, 37 GND, 5 LATCH2, 6 CLK2, 7 DATA2, 8 MODE2, 34 +5V, 38 GND — PND40P

S11: L1(B) C1(B) D1(B) M1(B) 5V(B) (BK); L2(B) C2(B) D2(B) M2(B) 5V(B) (BK)

FAN9 FAN10 FAN11 TH2 FAN12

LRX TOP M1 HARNESS

VR7 TOP SL-B HARNESS — SI6 — WIRING10 (H2)

SI5 — WIRING10 (H2)

FAN — FAN — SM6P — (BR) (G) (BL) (BR) (PRP)

F9 F10 F11 F12 — EL3P — 12V1A (Y), FAN9(BR) FAN10 (G) FAN11 (BL) FAN12(PRP), G1A(BK)

FP — FP — HL3P — 12V1A (Y), G1A (BK), TH2 (BR)

VR7 TOP FAN HARNESS

TL1 — TL3 (BR), TL2 (PRP), TL1 (GY), 12V (Y) — EL4P(NV) — TL1 WIRING10 (E5)

POLE 1

TL — TL3 (BR), TL2 (PRP), TL1 (GY), 12V (Y), TOP (W), B1G1 (BK) — EL6P

TLR — (BR) (PRP) (GY) (Y) (W) — EL6P

WIRING3 (A4)

LRX TL EX HARNESS

LRX TL HARNESS

TL2 — TL3 (BR), TL2 (PRP), TL1 (GY), 12V (Y) — EL4P (NV) — TL2 WIRING13 (E5)

(Y) 12V3A, (BK) G2A — CF2 CF1 — EL3P

WIRING9 (C4) — P11

ASSY POWER A

WIRING8 (D3)

PI1 — EL15P

1	(Y)	12V1A
2	(Y)	12V2A
3	(O)	24V1A
4	(O)	24V2A
5	(O)	24V3A
6	(BK)	G1A
7	(BK)	G2A
8	(BK)	G3A
9	(BK)	G4A
10	(BK)	G5A
11	(BK)	G6A
12	(BR)	TH1
13	(BL)	FAN7
14	(BK)	GC
15		

P8 — WIRING15(D1) or WIRING18(D1)

P11 — WIRING9 (G5)

P4 — WIRING 10,11,12,13 (D1)

P5 — WIRING 10,11,12,13 (A4)

TP1 — 12V2A (Y), 12V3A (Y), 24V1A (O), G2A (BK), G3A (BK), G4A (BK) — EL6P — TP1 (Y) (Y) (O) (BK) (BK) (BK)

VR7 TOP LP HARNESS

LRX TOP PWR HARNESS

ASSY POWER B

WIRING8 (H3)

PI2 — EL15P

1	(R)	5V1B
2	(Y)	12V1B
3	(Y)	12V2B
4	(O)	24V1B
5	(O)	24V2B
6	(O)	24V3B
7	(BK)	G1B
8	(BK)	G2B
9	(BK)	G3B
10	(BK)	G4B
11	(BK)	G5B
12	(BK)	G6B
13	(BR)	TH2
14	(BL)	FAN8
15	(BK)	GC

P10 — WIRING15(A1) or WIRING18(A1)

P12 — WIRING15(A6) or WIRING18(A6)

TP2 — 12V1B (Y), 12V2B (Y), 24V1B (O), G2B (BK), G3B (BK), G4B (BK) — YL6P — TP2 (Y) (Y) (O) (BK) (BK) (BK)

P6 — WIRING 10,11,12,13 (H1)

P7 — WIRING14 (A1)

P9 — WIRING15 (D3) or WIRING18(D3)

VR7 TOP LP HARNESS

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

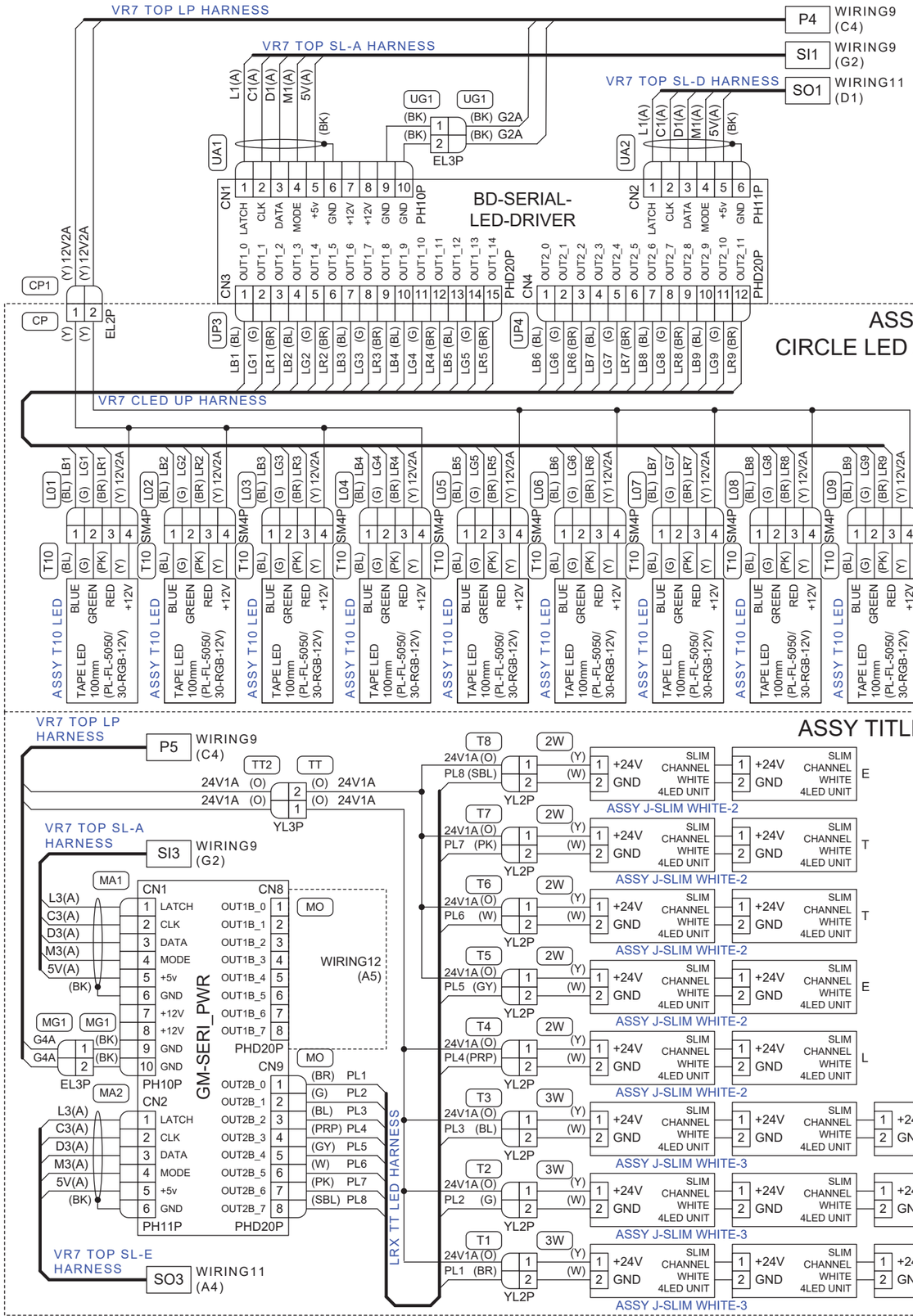
			SCALE	TITLE	WIRING DIAGRAM LRX
DESIGNED	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
DRAWN	2018/08/09	Y.SETO	1:1	MODEL	ROUX-MS
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	PART No.	810-0071-I (9/18)
APPROVED	2018/08/09	Y.USUKI	mm	ITEM CODE	
RGSTRD	2018/08/09	K.INOUE	MOLD	RELATION	
PROCESS					

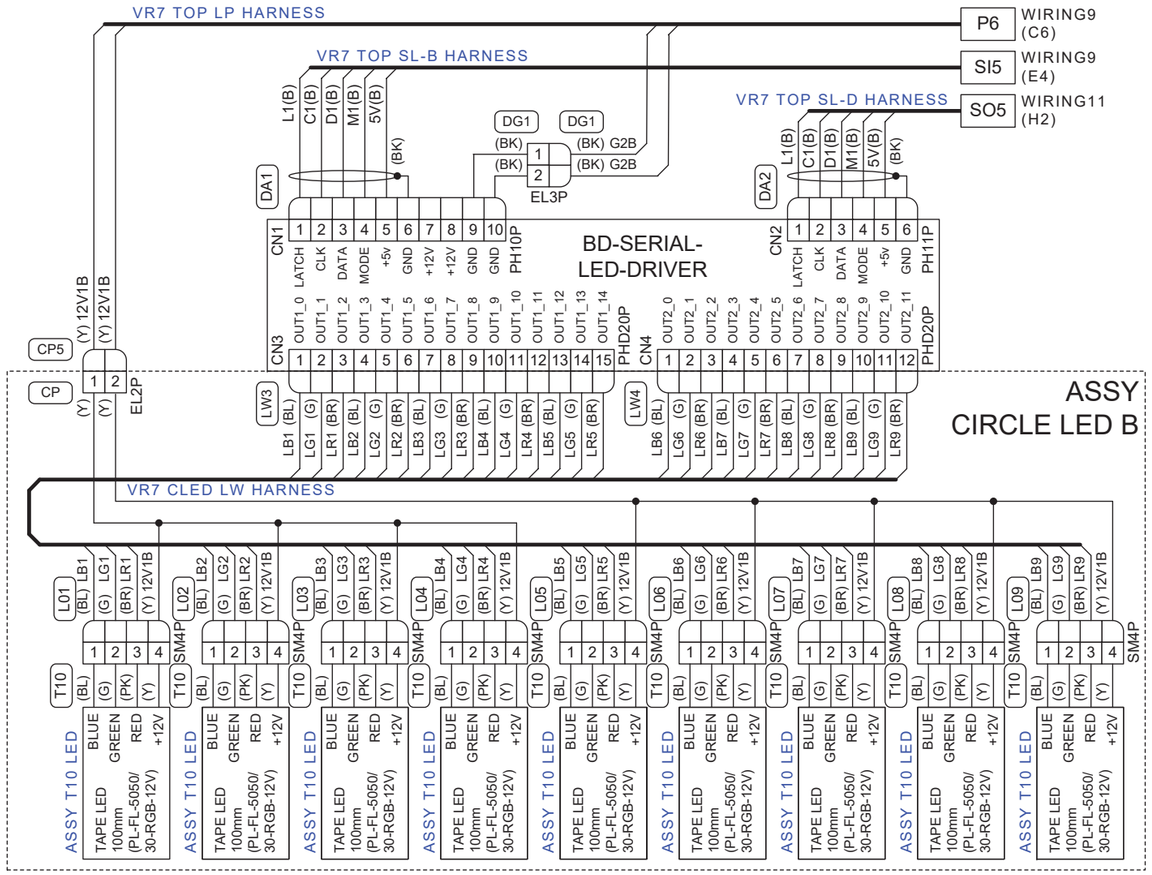
interblock LUXURY GAMING PRODUCTS

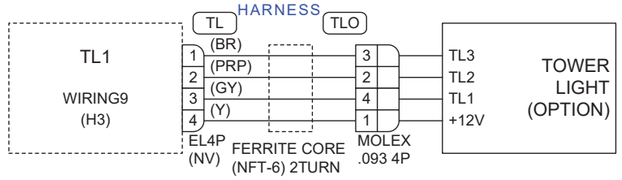
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ASSY SIGN A_1

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		







TOLERANCE	MATERIAL	FINISH	
			THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE: WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC: LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL: ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.: 810-0071-I (10/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE
PROCESS				RELATION

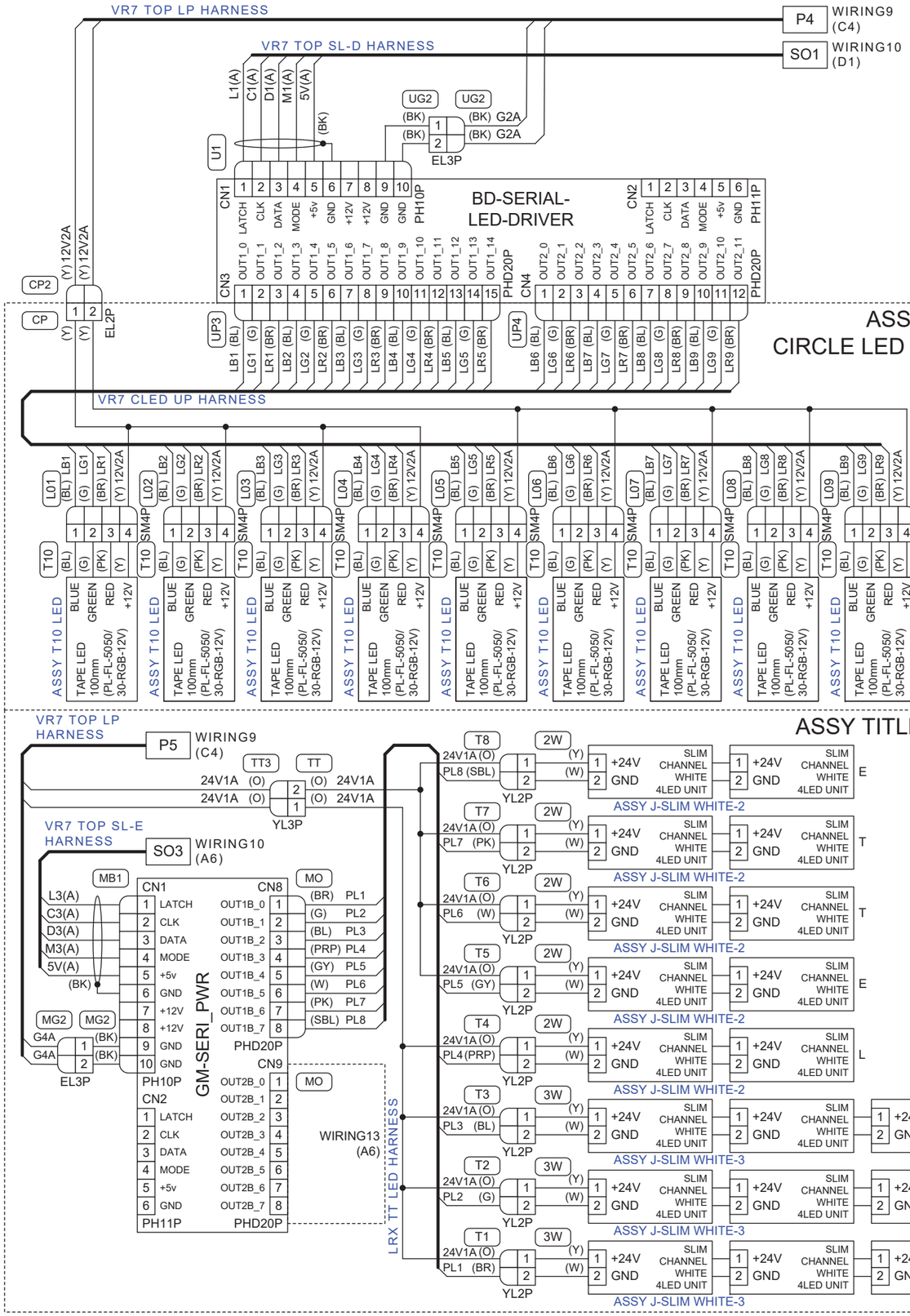
interblock LUXURY GAMING PRODUCTS

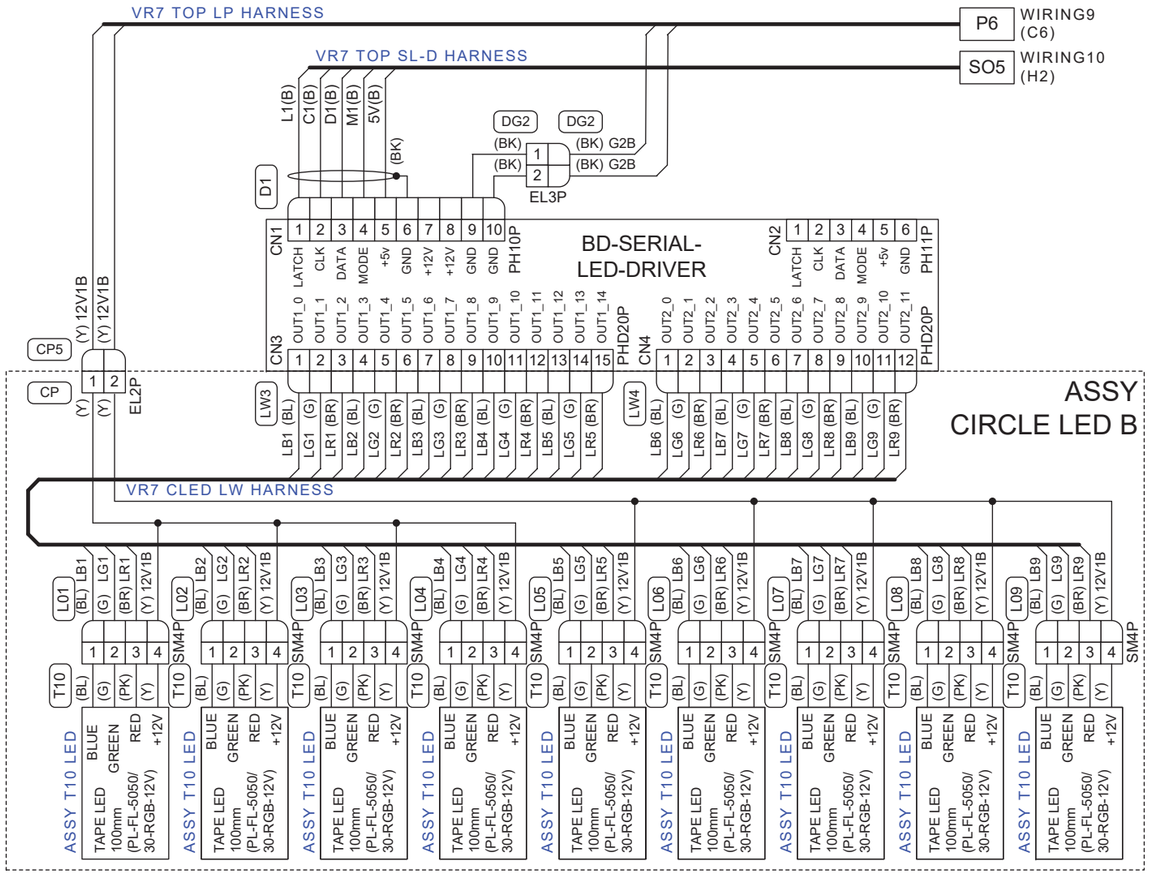
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PART No. 810-0071-I (10/18)

ASSY SIGN B_1

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		





TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (11/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

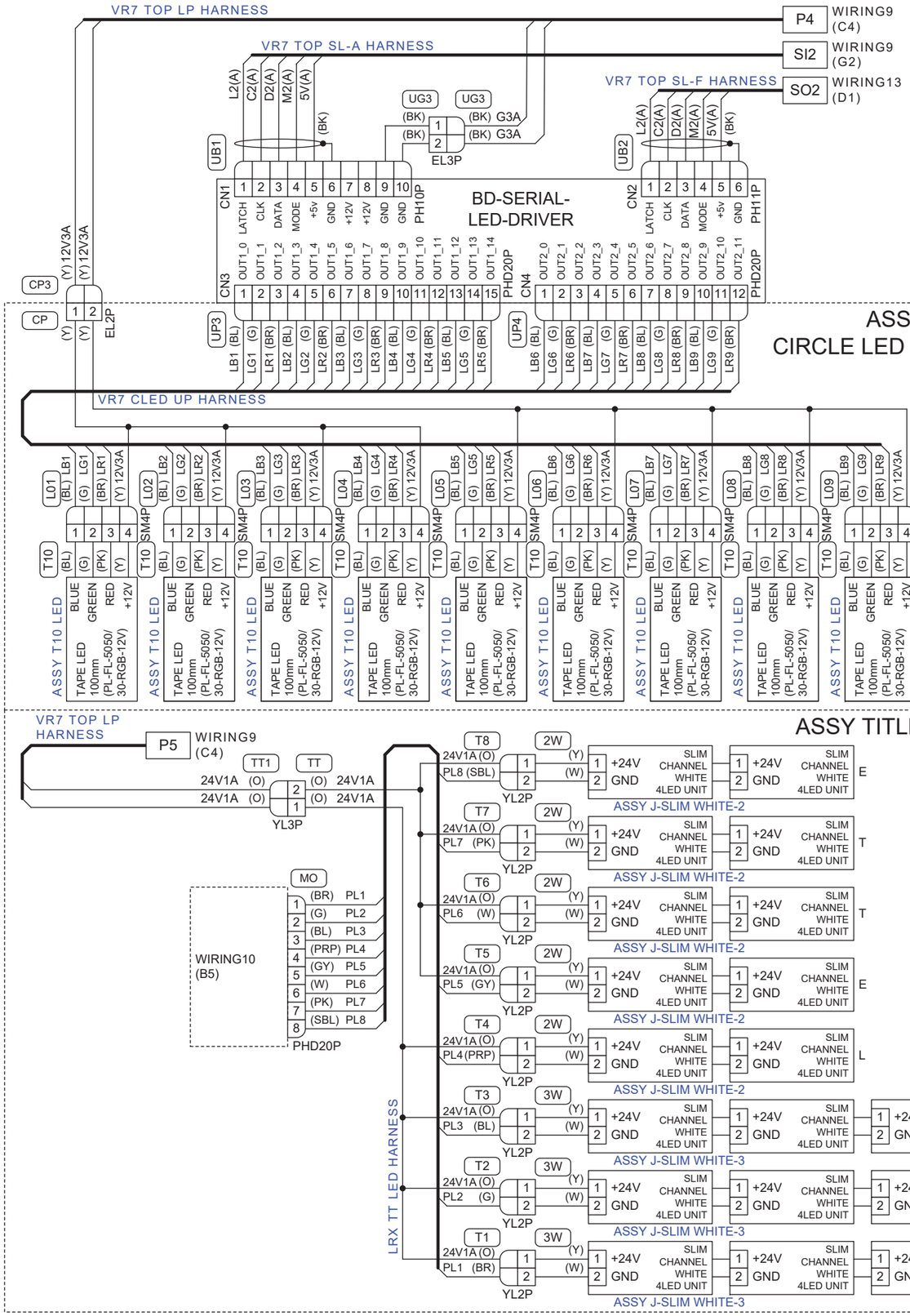
interblock LUXURY GAMING PRODUCTS

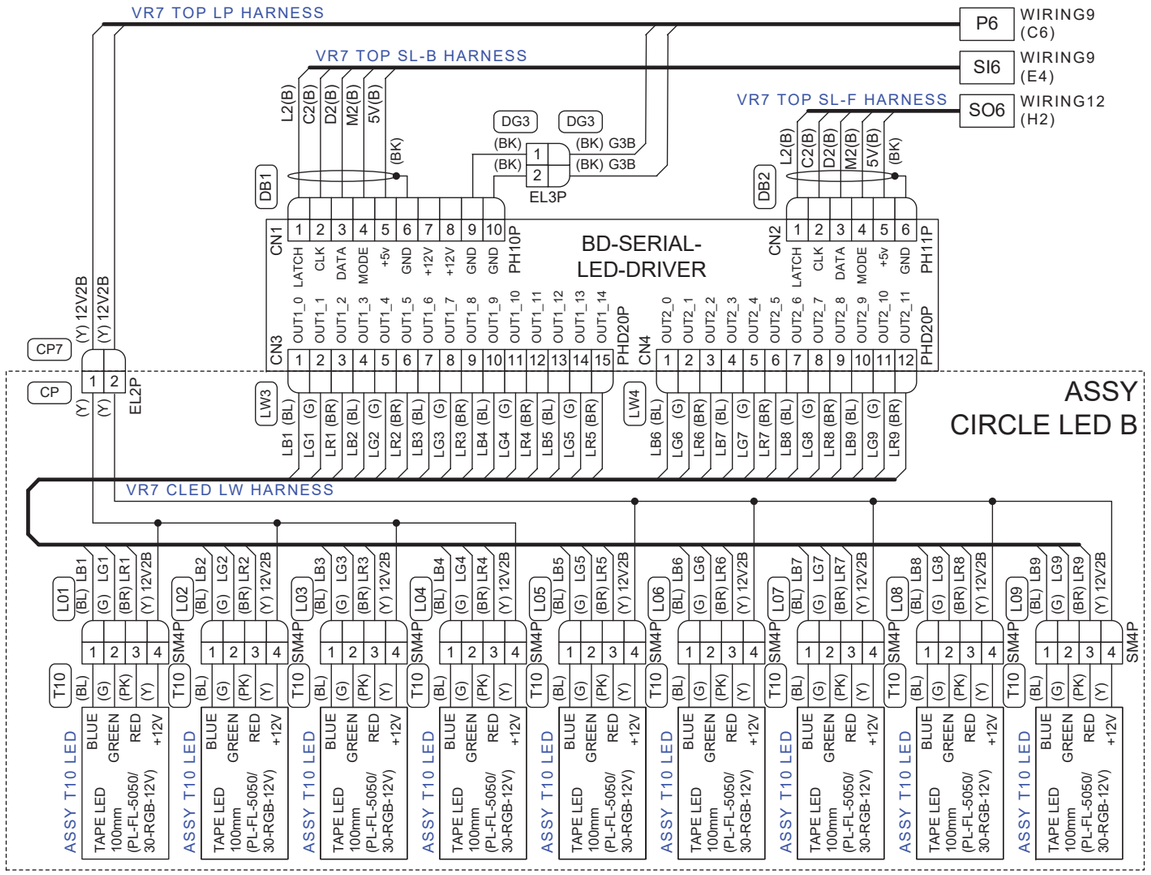
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PART No. 810-0071-I (11/18)

ASSY SIGN B_2

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		





TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

			SCALE	TITLE	WIRING DIAGRAM LRX
DESIGNED	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
DRAWN	2018/08/09	Y.SETO	DIM.IN	MODEL	ROUX-MS
CHECKED	2018/08/09	Y.AIKAWA	mm	PART No.	810-0071-I (12/18)
APPROVED	2018/08/09	Y.USUKI	MOLD	ITEM CODE	
RGSTRD	2018/08/09	K.INOUE		RELATION	
PROCESS					

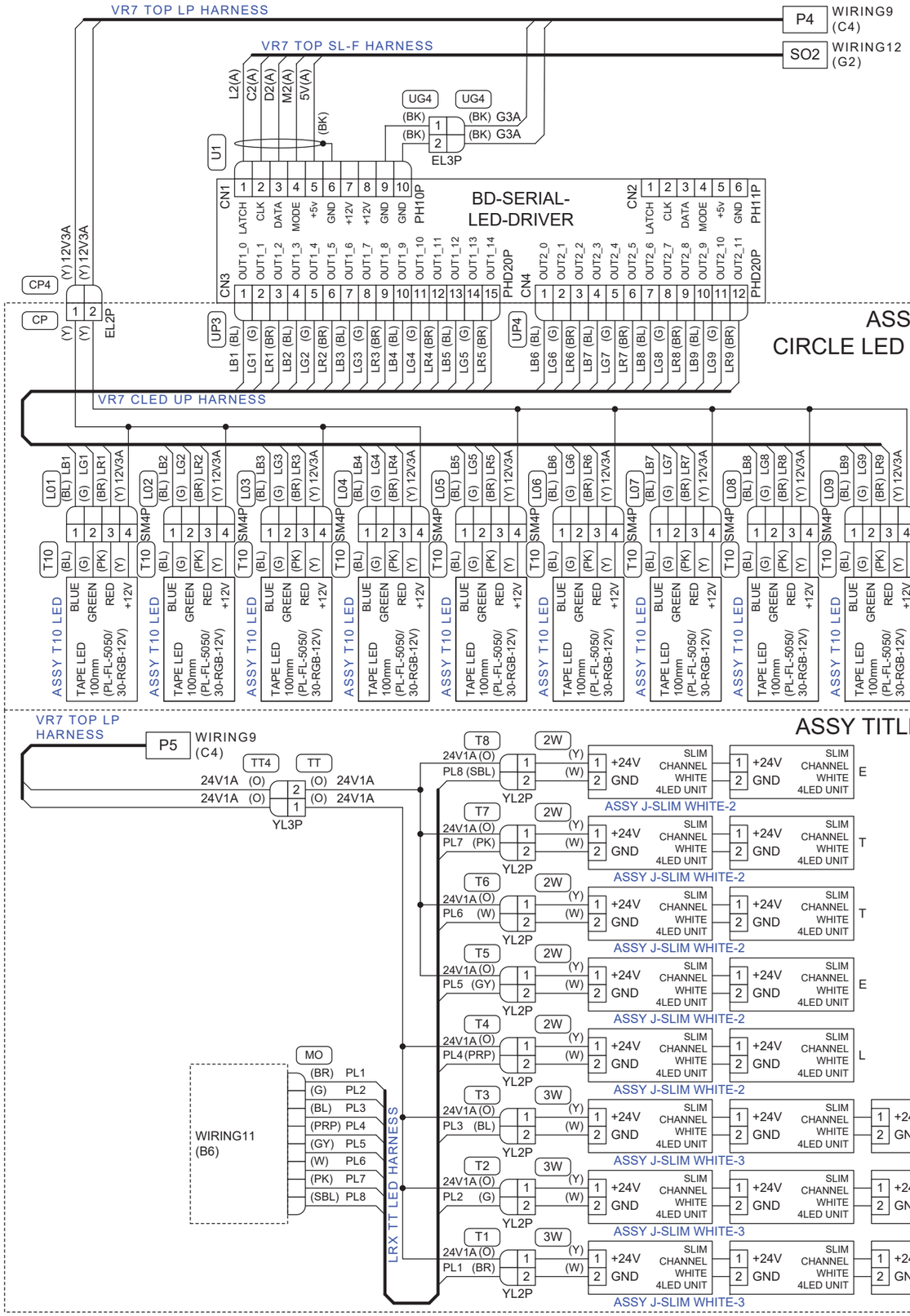
interblock LUXURY GAMING PRODUCTS

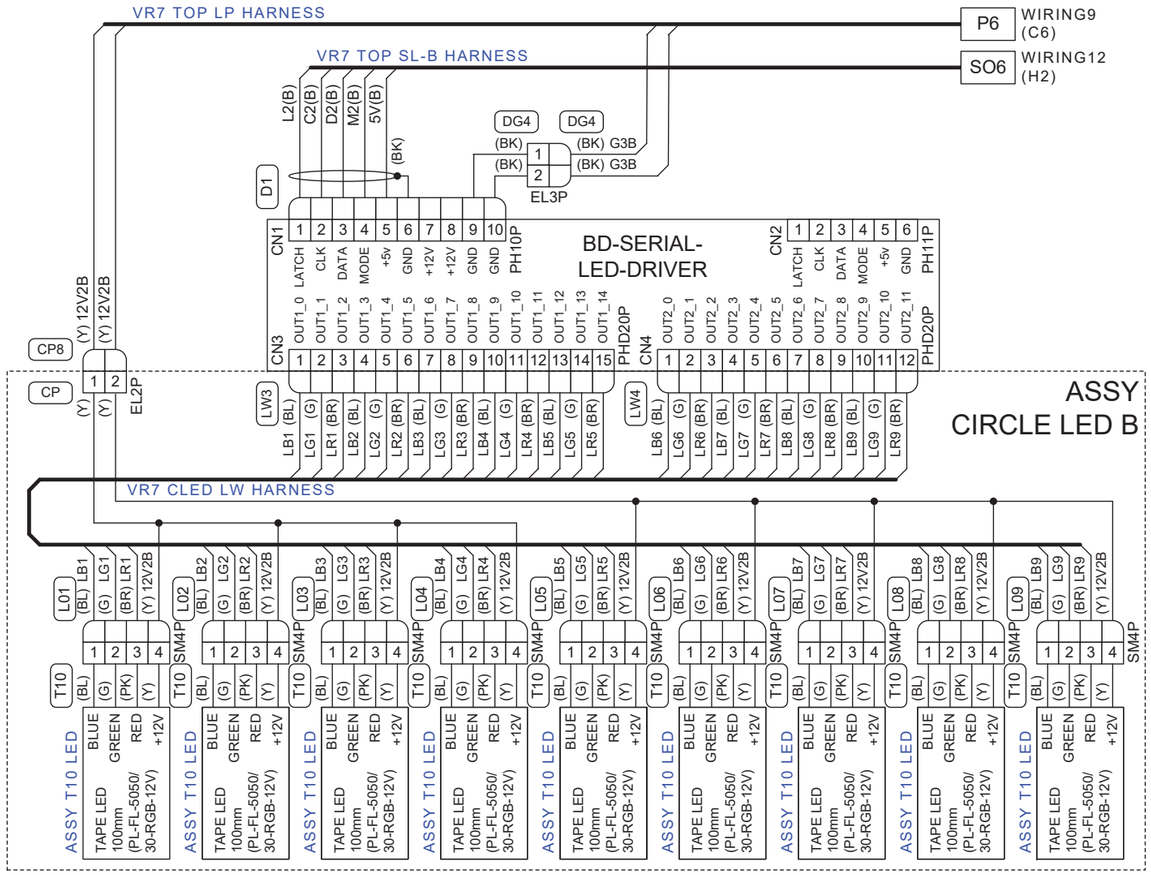
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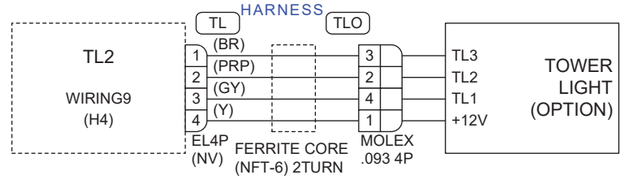
PART No. 810-0071-I (12/18)

ASSY SIGN A_2

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		







TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-I (13/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-I (13/18)

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠	D2,D3,D4,D5	WAS : ASSY SLIM CHANNEL-R 4P40 WHITE-7	'18.11.09	Y.SETO

WIRING9 (C6) — P7 — VR7 TOP LP HARNESS

WIRING9 (G2) — SI4 — VR7 TOP SL-C HARNESS

RL: 24V1B (O) 1 / 24V1B (O) 2 — YL2P — (O) 24V1B / (O) 24V1B

VR7 RING LED HARNESS

PA1 — L4(A), C4(A), D4(A), M4(A), 5V(A), (BK)

CN1 — GM-SERI_PWR

1	LATCH	OUT1B_0	1
2	CLK	OUT1B_1	2
3	DATA	OUT1B_2	3
4	MODE	OUT1B_3	4
5	+5v	OUT1B_4	5
6	GND	OUT1B_5	6
7	+12V	OUT1B_6	7
8	+12V	OUT1B_7	8
9	GND	PHD20P	
10	GND		

PH10P

CN8 — PA8

(BR)	RL1	
(G)	RL2	
(BL)	RL3	
(PRP)	RL4	
(GY)	RL5	
(W)	RL6	
(PK)	RL7	
(SBL)	RL8	

PG1 — G4B (BK), G4B (BK) — EL3P

CN2

1	LATCH	OUT2B_0	1
2	CLK	OUT2B_1	2
3	DATA	OUT2B_2	3
4	MODE	OUT2B_3	4
5	+5v	OUT2B_4	5
6	GND	OUT2B_5	6
	PH11P	OUT2B_6	7
		OUT2B_7	8
		PHD20P	

CN9

ASSY SIGN RING1

R1R — 7W — RIGHT — 24V1B (O) (Y), RL1 (BR) (W) — YL2P

R1L — 7W — LEFT — 24V1B (O) (Y), RL2 (G) (W) — YL2P

ASSY SIGN RING2

R2R — 7W — RIGHT — 24V1B (O) (Y), RL1 (BL) (W) — YL2P

R2L — 7W — LEFT — 24V1B (O) (Y), RL2 (PRP) (W) — YL2P

ASSY SIGN RING3

R3R — 7W — RIGHT — 24V1B (O) (Y), RL1 (GY) (W) — YL2P

R3L — 7W — LEFT — 24V1B (O) (Y), RL2 (W) (W) — YL2P

ASSY SIGN RING4

R4R — 7W — RIGHT — 24V1B (O) (Y), RL1 (PK) (W) — YL2P

R4L — 7W — LEFT — 24V1B (O) (Y), RL2 (SBL) (W) — YL2P

Each SLIM CHANNEL WHITE 4LED UNIT: 1 +24V, 2 GND

⚠ ASSY J-SLIM WHITE-7

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (14/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-I (14/18)

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
1	A2	ADD : DVI EX CABLE1.2m	'18.09.12	Y.SETO
2	A3	ADD : DVI EX CABLE2.0m	'18.09.12	Y.SETO
3	A3	ADD : USB EX CABLE 2.5m	'18.09.12	Y.SETO
4	D4	WAS : DVI CABLE	'18.09.12	Y.SETO
5	D4	ADD : DVI EX CABLE 0.4m	'18.09.12	Y.SETO
6	D4	WAS : RS232C ST CABLE 0.5m	'18.09.12	Y.SETO
1	B4, B5, C5, E4, F4	ADD : PROJECTOR TYPE	'19.06.07	Y.SETO
2	H4	ADD : PROJECTOR TYPE	'24.12.03	M.SAKAMOTO

P10 WIRING9 (C5) — LRX TOP PWR HARNESS

P8 WIRING9 (C3) — LRX TOP PWR HARNESS

P9 WIRING9 (B6) — LRX TOP PWR HARNESS

DVI SPLITTER
- 5V, +5V, GND, MC-5322
- DVI IN
- DVI OUT 1 — DVI-D CABLE (1.5m) — LP1 — 24V2A (O), G5A (BK) — AD BOARD (1 +24V, 4 GND, EL4P(NV), DVI IN) — CONTROL BOARD ASSY — TFT LCD PANEL (1920×1080) — LED BACK LIGHT — LCD1 (32 inch LCD)
- DVI OUT 2 — DVI-D CABLE (1.5m) — LP2 — 24V3A (O), G6A (BK) — AD BOARD — CONTROL BOARD ASSY — TFT LCD PANEL (1920×1080) — LED BACK LIGHT — LCD2 (32 inch LCD)
- DVI OUT 3 — DVI-D CABLE (1.5m) — LP3 — 24V2B (O), G5B (BK) — AD BOARD — CONTROL BOARD ASSY — TFT LCD PANEL (1920×1080) — LED BACK LIGHT — LCD3 (32 inch LCD)
- DVI OUT 4 — DVI-D CABLE (1.5m) — LP4 — 24V3B (O), G6B (BK) — AD BOARD — CONTROL BOARD ASSY — TFT LCD PANEL (1920×1080) — LED BACK LIGHT — LCD4 (32 inch LCD)

WIRING7 (A6) DVIC — DVI EX CABLE1.2m — POLE1 — DVI CABLE BJA42005 L=2.6m

WIRING7 (A6) DVI2 — DVI EX CABLE2.0m — DVI CABLE 2.6m — POLE4

WIRING7 (A6) USB2 — USB EX CABLE 2.5m — USB EX CABLE 2.5m

DVI EX CABLE BJA2C004 L=1.0m — MiniDP to DVI

USB A-A CABLE 1.0m

CAMERA PC
- DP2
- USB
- 232C — RS232C ST CABLE 1.2m

USB 3.0 — 3.0USB CABLE — HIGH SPEED CAMERA

WIRING2 (D5) RS3 — POLE4 — RS232C CROSS CABLE (2.6m)

WIRING2 (D5) RS4 — RS232C CROSS CABLE (2.6m) — *1

MiniDP to DVI — G DVI-DVI HARNESS — DVI EX CABLE 0.4m

PROJECTOR
- DP1
- DVI IN
- 232C — *1 RS232C ST CABLE 0.5m

*3 STEREO CABLE 3.6m — *3 STEREO EX CABLE 1.8m — S — REMOTE COMMANDER

POLE3
- AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — INLET L E N — VR7 PJ ULAC HARNESS Or VR7 PJ AC HARNESS
- AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — INLET L E N — *2 VR7 PJ ULAC HARNESS Or VR7 PJ AC HARNESS

L2 WIRING1 — POLE4 — LAN CABLE — LB — IP CAMERA LAN

12V — +12V — GND — JR-D1

12V2B — G2B — WIRING9 (D6) P12

	PROJECTOR TYPE		
	VPL-FHZ700L/W	VPL-FHZ75/W	NP-PA1004UL
*1	RS232C CROSS CABLE (2.6m) and RS232C ST CABLE 0.5m	NOT USE	REFER TO PAGE 18
*2	VR7 PJ ULAC HARNESS Or VR7 PJ AC HARNESS	VR7 SH ULAC HARNESS Or VR7 SH AC HARNESS	
*3	NOT USE	STEREO CABLE 3.6m and STEREO EX CABLE 1.8m	

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1
DRAWN	2018/08/09	Y.SETO	
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm
APPROVED	2018/08/09	Y.USUKI	
RGSTRD	2018/08/09	K.INOUE	MOLD
PROCESS			

TITLE	WIRING DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-I (15/18)
ITEM CODE	
RELATION	

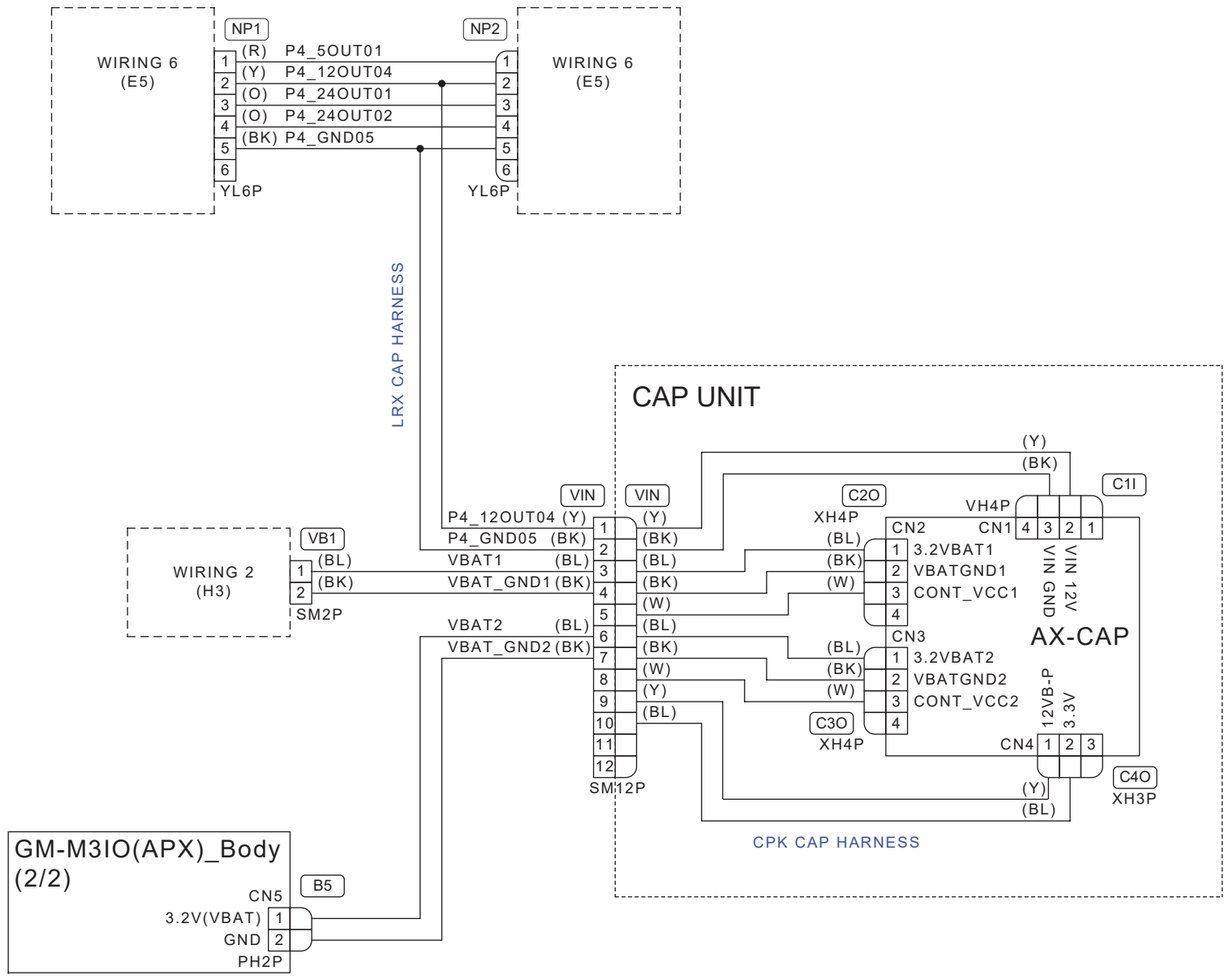
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PART No. 810-0071-I (15/18)

⚠A CAP OPTION

	SUB ASSY	LRX-0000	
MARK	POS.	REVISION	DATE	BY
⚠A	A1	ADD : AX-CAP OPTION	'21.11.26	Y.SETO



TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-I (16/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

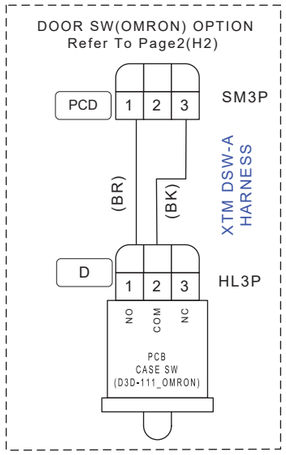
PART No. 810-0071-I (16/18)

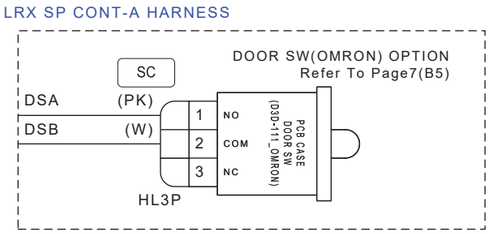
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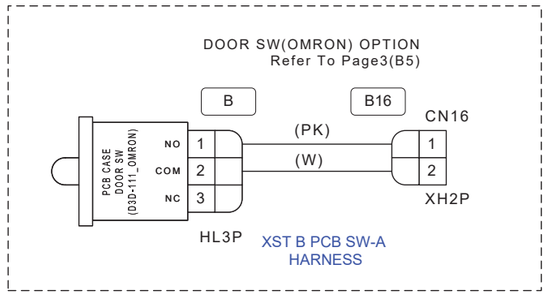
⚠ DOOR SW OPTION

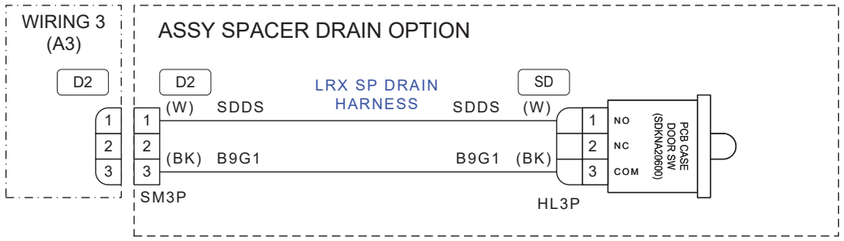
MARK	POS.	REVISION	DATE	BY
⚠	A1	ADD : Page17	'24.10.17	O.DAIGO

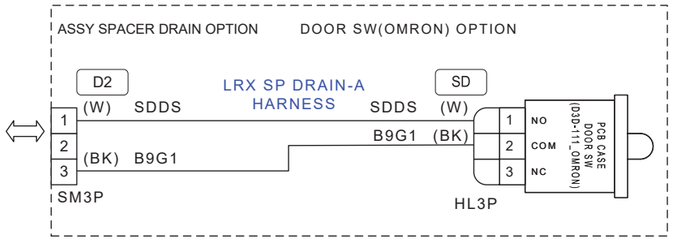
SUB ASSY LRX-0000



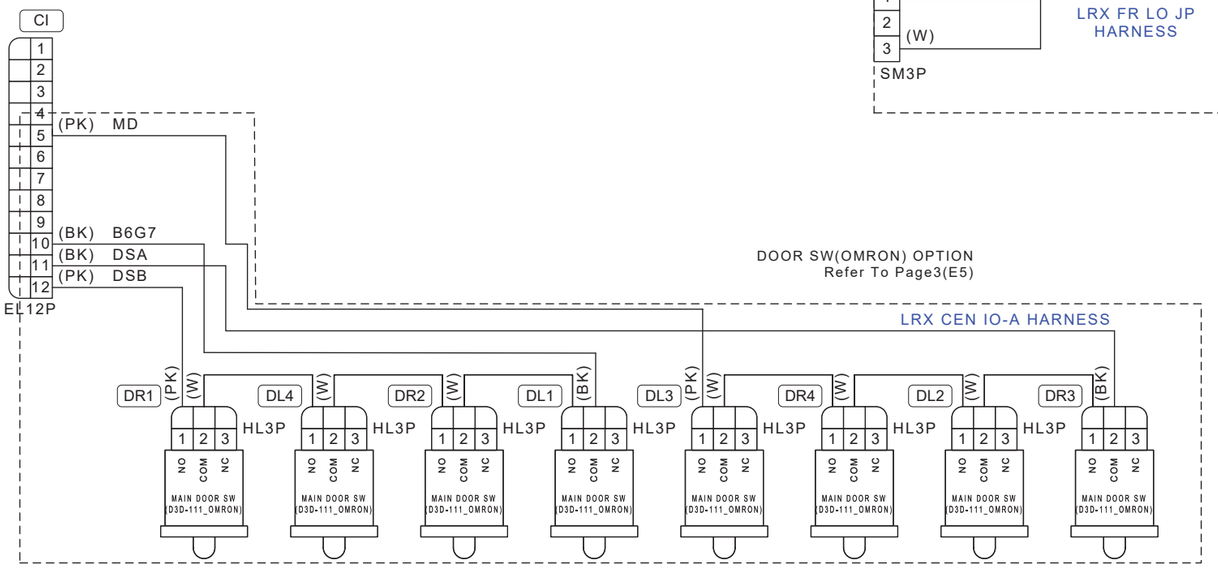












TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-I (17/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-I (17/18)

⚠ NEC PROJECTOR VERSION

SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠A1	A1	ADD : Page18	'24.12.03	M.SAKAMOTO
⚠B1	D6	CHANGE : IP CAMERA	'25.01.23	M.SAKAMOTO
⚠B2	B6	ADD : LRX C12V R HARNESS	'25.01.23	M.SAKAMOTO
⚠B1	D6	CHANGE : IP CAMERA	'25.03.04	M.SAKAMOTO
⚠C1	C6	ADD : TINKER SYSTEM 2	'25.03.04	M.SAKAMOTO
⚠B1	B6	ADD : LRX TINKER P HARNESS	'25.03.04	M.SAKAMOTO

P10 WIRING9 (C5) — LRX TOP PWR HARNESS

P8 WIRING9 (C3) — LRX TOP PWR HARNESS

P9 WIRING9 (B6) — LRX TOP PWR HARNESS

DVI SPLITTER
- DVI IN
- DVI OUT 1 — DVI-D CABLE (1.5m)
- DVI OUT 2 — DVI-D CABLE (1.5m)
- DVI OUT 3 — DVI-D CABLE (1.5m)
- DVI OUT 4 — DVI-D CABLE (1.5m)
- 5V, +5V, GND — MC-5322

LCD1 (32 inch LCD) — LP1
- 24V2A (O), G5A (BK), EL4P(NV)
- AD BOARD: 1 +24V, 4 GND, DVI IN
- CONTROL BOARD ASSY
- TFT LCD PANEL (1920×1080)
- LED BACK LIGHT

LCD2 (32 inch LCD) — LP2
- 24V3A (O), G6A (BK), EL4P(NV)
- AD BOARD: 1 +24V, 4 GND, DVI IN
- CONTROL BOARD ASSY
- TFT LCD PANEL (1920×1080)
- LED BACK LIGHT

LCD3 (32 inch LCD) — LP3
- 24V2B (O), G5B (BK), EL4P(NV)
- AD BOARD: 1 +24V, 4 GND, DVI IN
- CONTROL BOARD ASSY
- TFT LCD PANEL (1920×1080)
- LED BACK LIGHT

LCD4 (32 inch LCD) — LP4
- 24V3B (O), G6B (BK), EL4P(NV)
- AD BOARD: 1 +24V, 4 GND, DVI IN
- CONTROL BOARD ASSY
- TFT LCD PANEL (1920×1080)
- LED BACK LIGHT

WIRING7 (A6) DVIC — DVI EX CABLE1.2m — POLE1 — DVI CABLE BJA42005 L=2.6m

WIRING7 (A6) DVI2 — DVI EX CABLE2.0m — DVI CABLE 2.6m — POLE4

WIRING7 (A6) USB2 — USB EX CABLE 2.5m — USB EX CABLE 2.5m

DVI EX CABLE BJA2C004 L=1.0m

WIRING2 (D5) POLE4 RS3 — RS232C CROSS CABLE (2.6m)

USB A-A CABLE 1.0m — MiniDP to DVI

RS232C ST CABLE 1.2m

CAMERA PC
- DP2
- USB
- 232C
- DP1
- USB 3.0 — 3.0USB CABLE — HIGH SPEED CAMERA

MiniDP to DP CABLE 1.0m

PROJECTOR — DP IN

S — STEREO CABLE 3.6m — STEREO EX CABLE 1.8m — REMOTE COMMANDER

POLE3

AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — LRX PJ ULAC HARNESS

AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — LRX NECPJ ULAC HARNESS

WIRING8 (H4) P13 — LRX TINKER P HARNESS
- (Y) 12V7B
- (BK) G12B
- 12V — MP-122CF — +12V, GND

L2 WIRING1 — POLE4 — LAN CABLE — LAN

TINKER SYSTEM2
- USB3.2
- USB(A)

USB CABLE 0.5m

USB CAMERA — CM
- 1 5V
- 2 D-
- 3 D+
- 4 GND

WIRING9 (D6) P12 — LRX TOP PWR HARNESS
- (Y) 12V2B
- (BK) G2B
- N.C
- JR-D1

PART No. 810-0071-I (18/18)

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1
DRAWN	2018/08/09	Y.SETO	
CHECKED	2018/08/09	Y.AIKAWA	
APPROVED	2018/08/09	Y.USUKI	DIM.IN mm
RGSTRD	2018/08/09	K.INOUE	
PROCESS			MOLD

interblock LUXURY GAMING PRODUCTS

TITLE	WIRING DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-I (18/18)
ITEM CODE	
RELATION	

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠1	D1	ADD : AX-CAP OPTION	'21.11.26	Y.SETO

MAIN UNIT

INPUT
AC220V-240V
or
AC100-120V

TERMINAL BLOCK 6P

NOISE FILTER 30A

BREAKER SW 20A

BREAKER SW 20A

ISOLATION TRANSFORMER 1.5KVA
INPUT
220/230/240V
or
100/110/120V
OUTPUT 100V
selectable

ISOLATION TRANSFORMER 1.5KVA
INPUT
220/230/240V
or
100/110/120V
OUTPUT 100V
selectable

BREAKER 8A

COMPRESSOR
OF301-4B

REACTOR HL-0704
Option

POWER BOX (550W)
OUTPUT
DC3.3V
DC5V
DC12V
DC-12V
DC-24V

FAN SENSOR

THERMAL ERROR

Primary side

Secondary side

⚠1 AX-CAP
DC12V DC3.2V
Option

DC3.2V

CPU FAN

AP-X
AX-GMEM
MEMORY PCB
VIDEO PCB
AX-GAL
SSD4G

DC12V
DC5V
DC3.3V
DC-12V

ETHERNET

USB
USB
USB
USB

DP1 DP4 USB 232C 232C

DC12V DP IN
DP-DAMP
SP OUT DP OUT

miniDP-DVI ACTIVE

EDID EMULATOR

SPEAKER x4

WOOFER

KEYBOARD

BREAKER 2A

USB DVI USB
DC5V
DVI
USB DVI
CHANGER

IN PORT OUT PORT
DC24V DC12V BD-GM-M3IO(STX) NOKI
USB IN PORT

BREAKER 2A

DC24V VALVE SOLENOID×3 IN

WHEEL UNIT

DC24V OUT
DC12V BD-GM-R DRV IN

PULSE MOTOR

ZERO POSITION SENSOR

WHEEL SENSOR(INNER) x4

PRESSURE SENSOR x2

WHEEL SENSOR(OUTER) x4

WHEEL ROTATE x3

DC3.2V USB
OUT PORT
BD-GM-M3IO(APX) BODY
DC24V DC12V
IN PORT
OUT PORT

DC FAN x3

MAIN DOOR SW

PCB CASE SW

KEY SW POWER SAVE

AUDIT

RESET

GLASS PIN x4

SPACER DRAIN DOOR SW

WHEEL INNER LED_1

IN SERIAL LED DRIVER OUT

TAPE LED(0.1m) x10 DC 12V IN

WHEEL INNER LED_2

IN SERIAL LED DRIVER OUT

TAPE LED(0.1m) x10 DC 12V IN

BREAKER 2A

DC FAN x2

TOWER LIGHT
FAN × 2
USB
USB
232C
232C
DVI
USB
DVI
AC
AC
LAN

TOP SIGN

SWITCHING HUB

AP-X STATION UNIT

Option

:SIGNAL
:DC(UNDER24VDC)
:secondary side AC100V
:primary side
AC220/230/240V or AC100/110/120V

PART No. 800-0071-B (1/2)

TOLERANCE	MATERIAL	FINISH

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TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

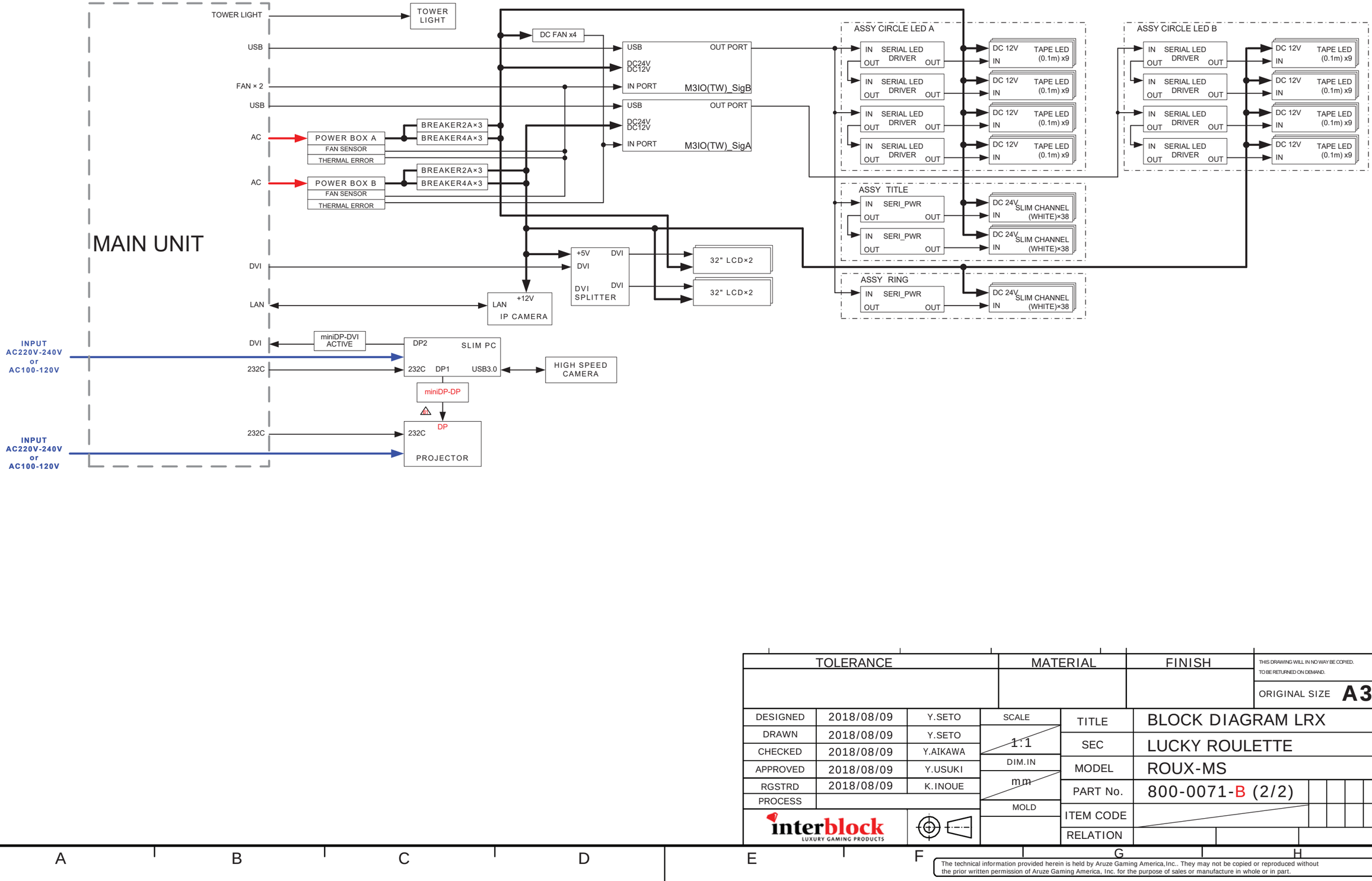
DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	BLOCK DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	800-0071-B (1/2)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock
LUXURY GAMING PRODUCTS

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠	C4	WAS : PROJECTOR INPUT	'25.01.23	M.SAKAMOTO

TOP SIGN



PART No. 800-0071-B (2/2)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

			SCALE	TITLE	BLOCK DIAGRAM LRX
DESIGNED	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
DRAWN	2018/08/09	Y.SETO	DIM.IN	MODEL	ROUX-MS
CHECKED	2018/08/09	Y.AIKAWA	mm	PART No.	800-0071-B (2/2)
APPROVED	2018/08/09	Y.USUKI	MOLD	ITEM CODE	
RGSTRD	2018/08/09	K.INOUE		RELATION	
PROCESS					

interblock LUXURY GAMING PRODUCTS

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ASSY CENTER

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
1	F5	ADD : REFERENCE	'24.12.03	M.SAKAMOTO

AC INPUT
AC220V-240V or
AC100V-120V

N PE L

2xMM EARTH HARNESS

2xMM TER-NF HARNESS

NOISE FILTER (30A) RSEN-2030

ASSY SWITCH BOARD

MM NF-A HARNESS

MATE-4P

MM BR-A HARNESS

BREAKER 20A 8340-F420-P1M2 -A2H0 20A

MM BR-B HARNESS

ASSY SPACER CONTROL (1/2)

MATE-6P

1500W TRANSFORMER 100V-100V

The input voltage in the case of 100-120V.

1500W TRANSFORMER 230V-100V

The input voltage in the case of 220-240V.

LRX TR1 HARNESS

LRX TR2 HARNESS

VR7 TR IN HARNESS

CIRCUIT BREAKER 8A

VR7 UL 3P-B HARNESS

VR7 UL 3P-A HARNESS

VL3P

WIRING2 (A4)

POLE3 WIRING8 (A1)

POLE3 WIRING8 (E1)

COMPRESSOR OF301-4B

(TO WHEEL UNIT)

ASSY HUB

HUB

SWITCHING HUB

INLET

L1 L2 LA LB

Cat5e LAN CABLE 0.5m LA-Y5TS-005

LAN CABLE 3m

LRX LAN HARNESS

FERRITE CORE (NFT-12) 2TURN×8

WIRING2 (D4)

WIRING15 or WIRING18

AP-X STATIONS (LAN2)

WIRE COLOR

(BK)	BLACK
(BR)	BROWN
(R)	RED
(O)	ORANGE
(Y)	YELLOW
(G)	GREEN
(BL)	BLUE
(PRP)	PURPLE
(GY)	GRAY
(W)	WHITE
(PK)	PINK
(SBL)	SKY BLUE

=LOW VOLTAGE LINE

=HIGH VOLTAGE LINE

#110 TYPE FASTON TERMINAL
#187 TYPE FASTON TERMINAL
#250 TYPE FASTON TERMINAL
SOLDERING

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-H (1/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-H (1/18)

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CONTROL BOX

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		
1	F1	ADD : BACK UP SSD	'18.09.12	Y.SETO
2	E4, E5	WAS : RS232C ST CABLE 0.5m COMPATIBLE	'18.09.12	Y.SETO
3	G4	WAS : FERRITE CORE (NFT-6) 1TURN×4	'18.09.12	Y.SETO
4	D5	ADD : PROJECTOR TYPE	'19.06.07	Y.SETO
5	H3	ADD : AX-CAP OPTION	'21.11.26	Y.SETO
6	H2	ADD :SW OPTION	'24.10.17	O.DAIGO
7	D4	ADD : REFERENCE	'24.12.03	M.SAKAMOTO
8	B1	ADD : FERRITE CORE NFT-12	'25.01.23	M.SAKAMOTO

PART No. 810-0071-H (2/18)

High Voltage lines

FERRITE CORE (NFT-12) 1TURN x3

P1 — NEW FIT20P

+3.3V OUT01	1	(BL)	P1_33OUT01
+3.3V OUT02	2	(BL)	P1_33OUT02
+3.3V OUT03	3	(BL)	P1_33OUT03
+12V OUT01	4	(Y)	P1_12OUT01
+12V OUT02	5	(Y)	P1_12OUT02
+12V OUT03	6	(Y)	P1_12OUT03
+12V OUT04	7	(Y)	P1_12OUT04
+12V OUT05	8	(Y)	P1_12OUT05
+5V OUT01	9	(R)	P1_5OUT01
+5V OUT02	10	(R)	P1_5OUT02
GND OUT01	11	(BK)	P1_GND01
GND OUT02	12	(BK)	P1_GND02
GND OUT03	13	(BK)	P1_GND03
GND OUT04	14	(BK)	P1_GND04
GND OUT05	15	(BK)	P1_GND05
GND OUT06	16	(BK)	P1_GND06
GND OUT07	17	(BK)	P1_GND07
GND OUT08	18	(BK)	P1_GND08
GND OUT09	19	(BK)	P1_GND09
-12V OUT01	20	(BR)	P1_12NOUT

P2 — NEW FIT8P

	1	(BR)	5VSP
+5V S+	2	(PRP)	33VSP
+3.3V S+	3	(GY)	POWER OK
POWER OK	4	(PRP)	5VSB
5V SB	5	(BL)	5VSN
+5V S-	6	(GY)	33VSN
+3.3V S-	7	(G)	PSON
PS_ON	8		

PF — VH3P

	1		
THERMAL SENSOR OUT	2	(BR)	THERMAL
FAN SENSOR OUT	3	(W)	FAN_SEN

P3 — NEW FIT24P

+5V OUT01	1	(R)	P3_5OUT
+12V OUT01	2	(Y)	P3_12OUT01
+12V OUT02	3	(Y)	P3_12OUT02
+12V OUT03	4	(Y)	P3_12OUT03
+12V OUT04	5	(Y)	P3_12OUT04
+12V OUT05	6	(Y)	P3_12OUT05
+12V OUT06	7	(Y)	P3_12OUT06
+24V OUT01	9	(O)	P3_24OUT01
+24V OUT02	10	(O)	P3_24OUT02
GND OUT01	13	(BK)	P3_GND01
GND OUT02	14	(BK)	P3_GND02
GND OUT03	15	(BK)	P3_GND03
GND OUT04	16	(BK)	P3_GND04
GND OUT05	17	(BK)	P3_GND05
GND OUT06	18	(BK)	P3_GND06
GND OUT07	19	(BK)	P3_GND07
GND OUT08	20	(BK)	P3_GND08

P4 — NEW FIT22P

+5V OUT01	1	(R)	P4_5OUT01
+5V OUT01	2	(R)	P4_5OUT02
+12V OUT01	3	(Y)	P4_12OUT01
+12V OUT02	4	(Y)	P4_12OUT02
+12V OUT03	5	(Y)	P4_12OUT03
+12V OUT04	6	(Y)	P4_12OUT04
+24V OUT01	7	(O)	P4_24OUT01
+24V OUT02	8	(O)	P4_24OUT02
GND OUT01	12	(BK)	P4_GND01
GND OUT02	13	(BK)	P4_GND02
GND OUT03	14	(BK)	P4_GND03
GND OUT04	15	(BK)	P4_GND04
GND OUT05	16	(BK)	P4_GND05
GND OUT06	17	(BK)	P4_GND06
GND OUT11	22		

LRX P1 HARNESS

PC1 — EL15P

(BK)	1	(BK)	P1_GND01
(BK)	2	(BK)	P1_GND02
(BK)	3	(BK)	P1_GND03
(BK)	4	(BK)	P1_GND04
(BK)	5	(BK)	P1_GND05
(BK)	6	(BK)	P1_GND06
(BK)	7	(BK)	P1_GND16
(BK)	8	(BK)	P1_GND07
(BK)	9	(BK)	P1_GND17
(BR)	10	(BR)	P1_12NOUT
(G)	11	(G)	PSON
(GY)	12	(GY)	POWER OK
(BL)	13	(BL)	P1_33OUT01
(BL)	14	(BL)	P1_33OUT02
(BL)	15	(BL)	P1_33OUT03

PC2 — EL12P

(R)	1	(R)	P1_5OUT01
(PRP)	2	(PRP)	5VSB
(R)	3	(R)	P1_5OUT02
(Y)	4	(Y)	P1_12OUT01
(Y)	5	(Y)	P1_12OUT02
(Y)	6	(Y)	P1_12OUT02
(Y)	7	(Y)	P1_12OUT03
(Y)	8	(Y)	P1_12OUT03
(BR)	9	(BR)	5VSP
(BL)	10	(BL)	5VSN
(PRP)	11	(PRP)	33VSP
(GY)	12	(GY)	33VSN

P1a WIRING 7 (A2)
P3a WIRING 3 (A1)
P3b WIRING 3 (H3)
P3d WIRING 7 (F2)
P3c WIRING 6 (B6)
P4a WIRING 6 (B6) WIRING 5 (F1)
P4b WIRING 4 (F1)
P4d WIRING 3 (C5)

LRX P3 HARNESS
LRX P4 HARNESS

CIRCUIT BREAKER 2A (#250) — (R) P4_5OUT02
CIRCUIT BREAKER 2A (#250) — (Y) P4_12OUT03

CH — EL2P — WIRING 7 (A5)

APX PCB P1 HARNESS

SSD 4G (BACK UP) ⚠1 — SATA 3.0 / SATA POWER
SSD 4G (SSD 8G) — SATA 3.0 / SATA POWER

PP1 — NEW FIT24P

P1_33OUT01	1	(BL)	
P1_33OUT02	2	(BL)	
33VSN	3	(GY)	
5VSP	4	(BR)	
5VSN	5	(BL)	
P1_5OUT02	6	(R)	
P1_GND03	7	(BK)	
POWER OK	8	(GY)	
5VSB	9	(PRP)	
P1_12OUT01	10	(Y)	
	11	(Y)	
P1_33OUT03	12	(BL)	
33VSP	13	(PRP)	
P1_12NOUT	14	(BR)	
P1_GND04	15	(BK)	
PSON	16	(G)	
P1_GND05	17	(BK)	
P1_GND07	18	(BK)	
P1_GND17	19	(BK)	
	20		
P1_5OUT02	21	(R)	
P1_5OUT02	22	(R)	
P1_5OUT02	23	(R)	
P1_GND01	24	(BK)	

PP2 — NEW FIT8P

P1_GND06	1	(BK)	
	2	(BK)	
P1_GND16	3	(BK)	
	4	(BK)	
P1_12OUT02	5	(Y)	
P1_12OUT02	6	(Y)	
P1_12OUT03	7	(Y)	
P1_12OUT03	8	(Y)	

CPU COOLER — (BK) (R) (Y) — 1 2 3

WIRING1 (F4) — L1 — Cat5e LAN CABLE 0.5m LA-Y5TS-005 — LA — LAN2

POLE4 — WIRING15(A3) or WIRING18(A3) — RS3 — RS232C ST CABLE 1.2m COMPATIBLE — COM3 D-SUB9P
WIRING15 (A3) — RS4 — RS232C ST CABLE 1.2m COMPATIBLE — COM4 D-SUB9P

ONLY FOR ⚠ PROJECTOR TYPE VPL-FHZ700L/W

LRX MAIN HARNESS (PK) — CM2 — (SBL) RXD, (BK) TXD, GND — COM2 D-SUB9P

WIRING 3 (B4) — RS2

AP-X

SPH — AG3 — APX REPSW HARNESS — RF10P — XH5P (RST OUT, GND)

U67 — J7 — APX GMEM USB HARNESS — RF10P — A2 6P (VBUS, D-, D+, GND)

PCIe x1 EDGE CONNECTOR

AX-GMEM (1/2)

AX-GAL

CN4 — AG4 — PH8P (NO, COM, NO, COM) — XTM PCDSW HARNESS

PCD — SM3P — XTM DSW HARNESS — D — HL3P — PCB CASE SW (SDKNA20600) — DOOR SW(ALPS) OPTION Refer To Page17(A1)

CN11 — PH2P (3.2V(VBAT), GND) — CPK GMEMBT HARNESS — VB1 — VBAT_GND1 — VBAT1

CAP OPTION WIRING 16 (B3)

PCIe x1 EDGE CONNECTOR

VIDEO CARD (1/2)

DP OUT — MDP1 MDP2 MDP3 MDP4

MiniDP-DP 1m — DP1 — WIRING 7 (A3)
MiniDP-DVI ACTIVE — DP4 — WIRING 7 (A3)

USB_0 — USB EX CABLE 1.5m — USB0 — WIRING 7 (A5)

FERRITE CORE (NFT-6) 1TURN×5

USB_1
USB_4 — USB EX CABLE 1.5m — POLE2 — USB4 — WIRING9 (A1)
USB_5 — USB EX CABLE 1.5m — USB5 — WIRING9 (A1)
USB_2 — G USB 1M HARNESS — USB2 — WIRING 3 (A1)
USB_3 — G USB 1M HARNESS — USB3 — WIRING 6 (A6)

WIRING 1 (F2)

AC1 INLET PULG L E N — #250 — (G)

1 2 3 4 — (BR) (BL) (BR) (BL) — #187

1 2 3

POWER SUPPLY BOX ADP-555AR

POWER SUPPLY BOARD

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1
DRAWN	2018/08/09	Y.SETO	
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm
APPROVED	2018/08/09	Y.USUKI	
RGSTRD	2018/08/09	K.INOUE	MOLD
PROCESS			

TITLE	WIRING DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-H (2/18)
ITEM CODE	
RELATION	

interblock LUXURY GAMING PRODUCTS

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ASSY CENTER

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠1	B5	WAS : CN18	'24.10.17	O.DAIGO
⚠2	B5	ADD :SW OPTION	'24.10.17	O.DAIGO
⚠3	E5	ADD :SW OPTION	'24.10.17	O.DAIGO

GM-M3IO (APX)_Body (1/2)

WIRING 2 (H5) USB2 — G USB1M HARNESS — FERRITE CORE (NFT-6) 1TURN — B — CN2(USB)
- G GND
- P D+
- N D-
- V VBUS
- F FGND

USB(B)

WIRING 2 (C4) P3a — B15 — CN15
- P3_24OUT01 (O) — 1 +24V
- P3_12OUT01 (Y) — 2 +12V
- P3_GND01 (BK) — 3 GND
- P3_GND02 (BK) — 4 GND

VH4P

LRX P3 HARNESS

SCF — EL3P — P3_12OUT05 (Y), P3_GND07 (BK) — B1 — CN1(1 /2)
- FAN_SEN (W) — 3 POWER BOX FAN SENSOR
- THERMAL (BR) — 4 POWER BOX THERMAL SENSOR
- PC FAN (PK) — 6 PC TOWER FAN SENSOR
- (W) — 5 ASSY TOPPER
- (BK) — 39 GND

PAD40P

TP TOP — TP — B1G1 — SM2P — TOP(W), B1G1(BK)

WIRING 7 (A4) — D1 — EL9P
- 1 (BR) KS2
- 2 (BL) KS1
- 3 (PRP) KS3
- 4 (BK) B6G1
- 5 (PK) DSA
- 6 (W) DSB
- 7 (PK) TXD
- 8 (SBL) RXD
- 9 (BK) GND

LRX MAIN HARNESS

WIRING 7 (F4) — D2 — SM3P
- 1 (W) SDDS
- 2
- 3 (BK) B7G1

WIRING 9 (F4) — TL — POLE1 — EL6P
- 1 (BR) TL3
- 2 (PRP) TL2
- 3 (GY) TL1
- 4 (Y) 12V
- 5 (W) TOP
- 6 (BK) B1G1

B6 — B6G1 (BK) — CN6(1 /2)
- KS1 (BL) — 1 GND1
- KS2 (BR) — 2 GND2
- KS3 (PRP) — 5 KEY SW1 (RESET)
- TL1 (GY) — 6 KEY SW2 (AUDIT)
- TL2 (PRP) — 7 KEY SW3 (POWER SAVE)
- TL3 (BR) — 19 +12V
- 27 TOWER LIGHT TOP
- 28 TOWER LIGHT CENTER
- 29 TOWER LIGHT BOTTOM
- 30

PHD30P

B7 — B7G1 (BK) — SDDS (W) — CN7
- 24 GND
- 25 SPACER DRAIN DOOR SW

PHD34P

RS2 — WIRING 2 (E5)

⚠2 DOOR SW(ALPS) OPTION Refer To Page17(B3)

PCB CASE DOOR SW (SDKNA20600) NO NC COM — B — B18 — (PK) — (W) — HL3P — XST B PCB SW HARNESS

⚠3 CN16
- 1 IO BOX COVER SW
- 2 GND

XH2P

TLR — 12V (Y) — 1 — YL1P — TLR — (Y) P4_12OUT03 — LRX P4 HARNESS — P4d — WIRING 2 (D6)

CN3 — B3 — LRX MAIN HARNESS
- ID JP 1 (W)
- GND 2 (W)
- ID JP 7 (W)
- GND 8 (W)

PHD8P

CN11 — B11
- WHEEL INNER_LED LACH 9 — WI1
- WHEEL INNER_LED CLK 10 — WI2
- WHEEL INNER_LED DATA 11 — WI3
- WHEEL INNER_LED MODE 12 — WI4
- +5V 33 — 5V1
- GND 37 — (BK) G1
- 40

PND40P — B11 WIRING 4 (A2)

LRX LED IN HARNESS

CN12 — B12
- FIELD OUTER_LED LACH 1 — FO1
- FIELD OUTER_LED CLK 2 — FO2
- FIELD OUTER_LED DATA 3 — FO3
- FIELD OUTER_LED MODE 4 — FO4
- +5V 25 — 5V2
- GND 28 — (BK) G2
- 30

PND30P — B12 WIRING 5 (A2)

CN1(2/2) — B1 — LRX P3 HARNESS — CF — CF
- CABINET FAN SENSOR1 1 (PRP) FAN1 — 1 (PRP) FAN1
- CABINET FAN SENSOR2 2 (GY) FAN2 — 2 (GY) FAN2

PAD40P — SM2P

LRX MAIN HARNESS — B6 — CI — CI

CN6(2/2)
- GLASS PIN SW No.1 21 (BR) GS1 — 1 (BR) GS1
- GLASS PIN SW No.2 22 (BL) GS2 — 2 (BL) GS2
- GLASS PIN SW No.3 9 (PRP) GS3 — 3 (PRP) GS3
- GLASS PIN SW No.4 10 (GY) GS4 — 4 (GY) GS4
- MAIN DOOR SW 23 (PK) MD — 5 (PK) MD
- GND3 3 (BK) B6G3 — 6 (BK) B6G3
- GND4 4 (BK) B6G4 — 7 (BK) B6G4
- GND5 13 (BK) B6G5 — 8 (BK) B6G5
- GND6 14 (BK) B6G6 — 9 (BK) B6G6
- GND7 26 (BK) B6G7 — 10 (BK) B6G7
- DSA (PK) — 11 (BK) DSA
- DSB (W) — 12 (PK) DSB

PHD30P — EL12P — LRX CEN IO HARNESS

DOOR SW(ALPS) OPTION Refer To Page17(D5)

LRX CEN IO HARNESS

DR1 (PK) (W) — DL4 (W) — DR2 (W) — DL1 (BK) — DL3 (PK) (W) — DR4 (W) — DL2 (W) — DR3 (BK) — HL3P

MAIN DOOR SW (SDKNA20600) NO NC COM

F1 F2 F3 F4 — EL3P

P3_12OUT03 (Y), FAN1 (PRP), P3_GND05 (BK)
P3_12OUT03 (Y), FAN2 (GY), P3_GND05 (BK)
P3_12OUT04 (Y), FAN5 (BR), P3_GND06 (BK)
P3_12OUT04 (Y), FAN6 (G), P3_GND06 (BK)

POLE1 — F56 F56 — WIRING9 (A2)
- FAN5 (BR)
- FAN6 (G)

SM2P

PS1 PS2 PS3 PS4 — SM3P — PS — GS — XH3P

(BK) B6G3, (BR) GS1, (R) P3_5OUT
(BK) B6G4, (BL) GS2, (R) P3_5OUT
(BK) B6G5, (PRP) GS3, (R) P3_5OUT
(BK) B6G6, (GY) GS4, (R) P3_5OUT
(BK), (W), (R)

PHOTO SENSOR

LRX GS R HARNESS

CP CP — EL6P
- (R) P3_5OUT
- (Y) P3_12OUT03
- (Y) P3_12OUT04
- (BK) P3_GND05
- (BK) P3_GND06

LRX P3 HARNESS

P3b — WIRING 2 (C4)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (3/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-H (3/18)

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ASSY CENTER (INNER LED)

SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY

LRX P4 HARNESS

LP1 (Y) (Y) (BK) (BK) — 1 2 3 4 — LP1 (Y) (Y) (BK) P4_GND01 (BK) P4_GND02 — YL4P

P4_12OUT01 (Y) → P4b WIRING 2 (C6)

LRX LED PWR HARNESS

FP1 P4_12OUT01 (Y) / P4_12OUT01 (Y) — 1 2 — FP (Y) 12V1 / (Y) 12V1 — EL2P

LRX LED IN HARNESS → B11 WIRING 3 (E1)

SA1: WI1 WI2 WI3 WI4 5V1 (BK)

SG1 (BK) (BK) — 1 2 3 — SAG (BK) (BK) — EL3P

CN1 — BD-SERIAL-LED-DRIVER — CN3

CN1		CN3	
1	LATCH	OUT1_0 1	(BR) R1
2	CLK	OUT1_1 2	(G) G1
3	DATA	OUT1_2 3	(BL) B1
4	MODE	OUT1_3 4	(BR) R2
5	+5V	OUT1_4 5	(G) G2
6	GND	OUT1_5 6	(BL) B2
7	+12V	OUT1_6 7	(BR) R3
8	+12V	OUT1_7 8	(G) G3
9	GND	OUT1_8 9	(BL) B3
10	GND	OUT1_9 10	(BR) R4
PH10P		OUT1_10 11	(G) G4
		OUT1_11 12	(BL) B4
		OUT1_12 13	(BR) R5
		OUT1_13 14	(G) G5
		OUT1_14 15	(BL) B5
		OUT1_15 16	
		+12V 20	
		PHD20P	

CN2 — CN4

CN2		CN4	
WI1		OUT2_0 1	(BR) R6
WI2		OUT2_1 2	(G) G6
WI3		OUT2_2 3	(BL) B6
WI4		OUT2_3 4	(BR) R7
5V1		OUT2_4 5	(G) G7
(BK)		OUT2_5 6	(BL) B7
1	LATCH	OUT2_6 7	(BR) R8
2	CLK	OUT2_7 8	(G) G8
3	DATA	OUT2_8 9	(BL) B8
4	MODE	OUT2_9 10	(BR) R9
5	+5V	OUT2_10 11	(G) G9
6	GND	OUT2_11 12	(BL) B9
7	+12V	OUT2_12 13	(BR) R10
8	+12V	OUT2_13 14	(G) G10
9	GND	OUT2_14 15	(BL) B10
10	GND	OUT2_15 16	
11		+12V 20	
PH11P		PHD20P	

LRX INNER-L HARNESS

LRX SL RLY HARNESS

P4_GND01

P4_GND02

LED TAPE LIGHT 100mm — BLUE / GREEN / RED / +12V — SM4P

L1	T10	B1 (BL) G1 (G) R1 (BR) 12V1 (Y)	1 2 3 4
L2	T10	B2 (BL) G2 (G) R2 (BR) 12V1 (Y)	1 2 3 4
L3	T10	B3 (BL) G3 (G) R3 (BR) 12V1 (Y)	1 2 3 4
L4	T10	B4 (BL) G4 (G) R4 (BR) 12V1 (Y)	1 2 3 4
L5	T10	B5 (BL) G5 (G) R5 (BR) 12V1 (Y)	1 2 3 4
L6	T10	B6 (BL) G6 (G) R6 (BR) 12V1 (Y)	1 2 3 4
L7	T10	B7 (BL) G7 (G) R7 (BR) 12V1 (Y)	1 2 3 4
L8	T10	B8 (BL) G8 (G) R8 (BR) 12V1 (Y)	1 2 3 4
L9	T10	B9 (BL) G9 (G) R9 (BR) 12V1 (Y)	1 2 3 4
L10	T10	B10 (BL) G10 (G) R10 (BR) 12V1 (Y)	1 2 3 4

FP2 P4_12OUT01 (Y) / P4_12OUT01 (Y) — 1 2 — FP (Y) 12V2 / (Y) 12V2 — EL2P

L1	T10	B1 (BL) G1 (G) R1 (BR) 12V2 (Y)	1 2 3 4
L2	T10	B2 (BL) G2 (G) R2 (BR) 12V2 (Y)	1 2 3 4
L3	T10	B3 (BL) G3 (G) R3 (BR) 12V2 (Y)	1 2 3 4
L4	T10	B4 (BL) G4 (G) R4 (BR) 12V2 (Y)	1 2 3 4
L5	T10	B5 (BL) G5 (G) R5 (BR) 12V2 (Y)	1 2 3 4
L6	T10	B6 (BL) G6 (G) R6 (BR) 12V2 (Y)	1 2 3 4
L7	T10	B7 (BL) G7 (G) R7 (BR) 12V2 (Y)	1 2 3 4
L8	T10	B8 (BL) G8 (G) R8 (BR) 12V2 (Y)	1 2 3 4
L9	T10	B9 (BL) G9 (G) R9 (BR) 12V2 (Y)	1 2 3 4
L10	T10	B10 (BL) G10 (G) R10 (BR) 12V2 (Y)	1 2 3 4

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (4/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-H (4/18)

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ASSY CENTER (OUTER LED)

SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY

LRX P4 HARNESS

LP2 (Y) (Y) (BK) (BK) — YL4P — P4_12OUT02 (Y), (BK) P4_GND03, (BK) P4_GND04 → P4a WIRING 2 (C5)

LRX LED PWR HARNESS

FP3 / FP: P4_12OUT02 (Y) → (Y) 12V3 — EL2P

FP4 / FP: P4_12OUT03 (Y) → (Y) 12V4 — EL2P

LRX LED IN HARNESS → B12 WIRING3 (E2)

P4_GND03

SB1 / CN1 / CN3

	CN1		CN3
FO1	1 LATCH	OUT1_0 1	(BR) R1
FO2	2 CLK	OUT1_1 2	(G) G1
FO3	3 DATA	OUT1_2 3	(BL) B1
FO4	4 MODE	OUT1_3 4	(BR) R2
5V2	5 +5V	OUT1_4 5	(G) G2
(BK)	6 GND	OUT1_5 6	(BL) B2
	7 +12V	OUT1_6 7	(BR) R3
	8 +12V	OUT1_7 8	(G) G3
	9 GND	OUT1_8 9	(BL) B3
	10 GND	OUT1_9 10	(BR) R4
	PH10P	OUT1_10 11	(G) G4
		OUT1_11 12	(BL) B4
		OUT1_12 13	(BR) R5
		OUT1_13 14	(G) G5
		OUT1_14 15	(BL) B5
		OUT1_15 16	
		+12V 20	
		PHD20P	

SG3 / SBG: (BK) (BK) — EL3P

BD-SERIAL-LED-DRIVER

LRX OUTER-L HARNESS

CN2 / CN4

	CN2		CN4
FO1	1 LATCH	OUT2_0 1	(BR) R6
FO2	2 CLK	OUT2_1 2	(G) G6
FO3	3 DATA	OUT2_2 3	(BL) B6
FO4	4 MODE	OUT2_3 4	(BR) R7
5V2	5 +5V	OUT2_4 5	(G) G7
(BK)	6 GND	OUT2_5 6	(BL) B7
	7 +12V	OUT2_6 7	(BR) R8
	8 +12V	OUT2_7 8	(G) G8
	9 GND	OUT2_8 9	(BL) B8
	10 GND	OUT2_9 10	(BR) R9
	11	OUT2_10 11	(G) G9
	PH11P	OUT2_11 12	(BL) B9
		OUT2_12 13	(BR) R10
		OUT2_13 14	(G) G10
		OUT2_14 15	(BL) B10
		OUT2_15 16	
		+12V 20	
		PHD20P	

LRX SL RLY HARNESS

Each LED TAPE LIGHT 100mm: B1 (BL) G1 (G) R1 (BR) 12V3 (Y) → SM4P; BLUE GREEN RED +12V

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
T10	T10	T10	T10	T10	T10	T10	T10	T10	T10	T10
B	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
G	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
R	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
12V3	12V3	12V3	12V3	12V3	12V3	12V3	12V3	12V3	12V3	12V3

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
T10	T10	T10	T10	T10	T10	T10	T10	T10	T10	T10
B	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
G	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
R	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
12V4	12V4	12V4	12V4	12V4	12V4	12V4	12V4	12V4	12V4	12V4

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (5/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-H (5/18)

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
G3	G3	ADD : WIRING FOR 38 POCKETS SPEC	'19.01.25	Y.SETO
E5	E5	ADD : AX-CAP OPTION	'21.11.26	Y.SETO
E1,E3	E1,E3	ADD : FERRITE CORE NFT-8, NFT-12	'25.01.23	M.SAKAMOTO

WHEEL UNIT(THK)

PHOTO INTERRUPTER OJ-456-N23 POCKET SENSOR0 — +5V OUT GND ZH3P
PHOTO INTERRUPTER OJ-456-N23 POCKET SENSOR1 — +5V OUT GND ZH3P
PHOTO INTERRUPTER OJ-456-N23 ORIGIN SENSOR — +5V OUT GND ZH3P
PHOTO INTERRUPTER OJ-456-N23 ZERO POSITION SENSOR — +5V OUT GND ZH3P
PRESSURE SENSOR PPX-R10N-6M — +12V OUT1 OUT2 GND PA4P
FIBER SENSOR UX-R3 WHEEL SENSOR REF1 — SENSOR LEAD CORD
FIBER SENSOR UX-R3 WHEEL SENSOR REF2 — SENSOR LEAD CORD
FIBER SENSOR UX-R3 WHEEL SENSOR REF3 — SENSOR LEAD CORD
FIBER SENSOR UX-R3 WHEEL SENSOR REF4 — SENSOR LEAD CORD
SENSOR EL-15NL WHEEL SENSOR AROUND1 — SENSOR LEAD CORD
SENSOR EL-15NL WHEEL SENSOR AROUND2 — SENSOR LEAD CORD

ENC1 (BR)(BK)(BL) — ENC2 (BR)(W)(BL) — ORG (BR)(R)(BL) — ZERO (BR)(R)(BL) — AIR (BR)(BK)(W)(BL)

WH_ENC ENCODER HARNESS — WH_ZERO HARNESS — WH_AIR HARNESS

ENC (R)(GY)(BL)(BR)(BK) XM5P
ZERO (R)(PRP)(BK) XM3P
AIR (Y)(PK)(SBL)(GND2)(BK) SM4P
I0130 (Y)(BR)(BK) XM3P — 12V1 WSR1 GND1
I0430 (Y)(GY)(BK) XM3P — 12V1 WSR2 GND1
I0730 (Y)(BL)(BK) XM3P — 12V1 WSR3 GND1
I1030 (Y)(PRP)(BK) XM3P — 12V1 WSR4 GND1
O1200 (O)(PK)(BK) XM3P — 24V WSA1 GND2
O0600 (O)(BK) XM3P — 24V WSA2 (SBL) GND2

LRX W-DRV HARNESS

ORIENTAL MOTOR PKP296U20A — COM COM A A/ B B/ — (Y)(W)(BK)(G)(R)(BL)
X_MTR ASSY STEPPING MOTOR — (Y)(W)(BK)(G)(R)(BL)
FERRITE CORE (NFT-8) 1TURN
M02 CN2 +24V A A/ B B/ NH6P

BD-GM-R_DRV
CN1 +24V P-GND +12V +5V S-GND PA8P
CN9 WHEEL CW/CCW WHEEL CLK WHEEL SLEEP S-GND PAD14P
M01 (G)(BL)(PRP)(GY)(W)
M09 (BR)(R)(O)(Y)
FERRITE CORE (NFT-12) 1TURN

WH_DRV HARNESS
+24V P-GND +12V +5V S-GND2 WCW WCLK WSP S-GND1 +24V P-GND +12V +5V S-GND2
(G)(BL)(PRP)(GY)(W)(BR)(R)(O)(Y)(G)(BL)(PRP)(GY)(W)(PK)
ONLY FOR 38 POCKETS
DRV 1 2 3 4 5 6 7 8 9 10 11 12 EL12P
WCW (GY) WCLK (BR) WSP (BL) GND1 (BK) P4_24OUT01 (O) P4_GND05 (BK) P4_12OUT04 (Y) P4_5OUT (R) GND2 (BK) NOP (W) GND (BK)

RISE VALVE — VALVE SOLENOID VX210EMXB BALL UP — + - G — (R)(BK)(G) V1.25-3
TURN VALVE CW — VALVE SOLENOID VX210EMXB BALL AROUND CW — + - G — (R)(BK)(G) V1.25-3
RESERVE
TURN VALVE CCW — VALVE SOLENOID VX210EMXB BALL AROUND CCW — + - G — (R)(BK)(G) V1.25-3

WH_SOV HARNESS
SOV 1 2 3 4 5 6 7 8 9 EL9P
P4_24OUT02 (O) SV2BU (SBL) (G) P4_24OUT02 (O) SV2BA (PK) (G) P4_24OUT02 (O) SV1BA (PRP) (G)
(R)(BK)(G)(R)(BK)(G)(R)(BK)(G)

G1 G2 G3

LRX W-DRV HARNESS

NP (R)(Y)(O)(O)(BK) 1 2 3 4 5 6 YL6P
CAP OPTION
WIRING 16 (B1, C1)
NP (R) P4_5OUT01 / (Y) P4_12OUT04 / (O) P4_24OUT01 / (O) P4_24OUT02 / (BK) P4_GND05 YL6P
LRX W-DRV HARNESS

N19 (R)(GY)(BL)(BR)(PRP)(BK) 5V WSP0 WSP1 WSO WSZ GND
CN19 +5V WHEEL SENSOR POCKET0 WHEEL SENSOR POCKET1 WHEEL SENSOR ORG WHEEL SENSOR ZERO GND HIF3B 20P

N01 (PK)(SBL)(BR)(GY)(BL)(PRP)(PK)(SBL)(BR)(GY)(BL)(PRP)(SBL)(BR)(GY)(BK)(BK) PS1 PS2 WSR1 WSR2 WSR3 WSR4 WSA1 WSA2 WCLK WCW WSP SV1BA SV2BA SV2BU 12V1 12V2 GND1 GND2
CN1 CABINET FAN SENSOR1 / CABINET FAN SENSOR2 / CENTER FAN SENSOR1 / CENTER FAN SENSOR2 / PRESSURE SENSOR1 / PRESSURE SENSOR2 / WHEEL SENSOR REF1 / WHEEL SENSOR REF2 / WHEEL SENSOR REF3 / WHEEL SENSOR REF4 / WHEEL SENSOR AROUND1 / WHEEL SENSOR AROUND2 / WHEEL CLK / WHEEL CW/CCW / WHEEL SLEEP / SOLENOID VALVE1 BALL AROUND CCW / SOLENOID VALVE2 BALL AROUND CW / SOLENOID VALVE2 BALL UP / +12V / +12V / GND / GND / PAD40P

N09 (BK)(W)(O) GND NOP 24V
CN9 +5V GND NUMBER OF POCKET +24V NH5P

GM-M3IO (RTX)_NOKI

CN2(USB) GND D+ D- VBUS FGND USB(B) — G P N V F
B
G USB 1M HARNESS
FERRITE CORE (NFT-6) 1TURN
WIRING 2 (H5) USB3

CN15 +24V +12V GND GND VH4P — 1 2 3 4
N15 (O)(Y)(BK)(BK)
LRX P3 HARNESS
P3_24OUT02 P3_12OUT02 P3_GND03 P3_GND04
WIRING 2 (C5) P3c

WIRING 2 (C5) P4a
LRX P4 HARNESS

P4_24OUT01 (O) — 1 #250 CIRCUIT BREAKER 2A #250 2 — (O)

ASSY CENTER

TOLERANCE	MATERIAL	FINISH

THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
ORIGINAL SIZE **A3**

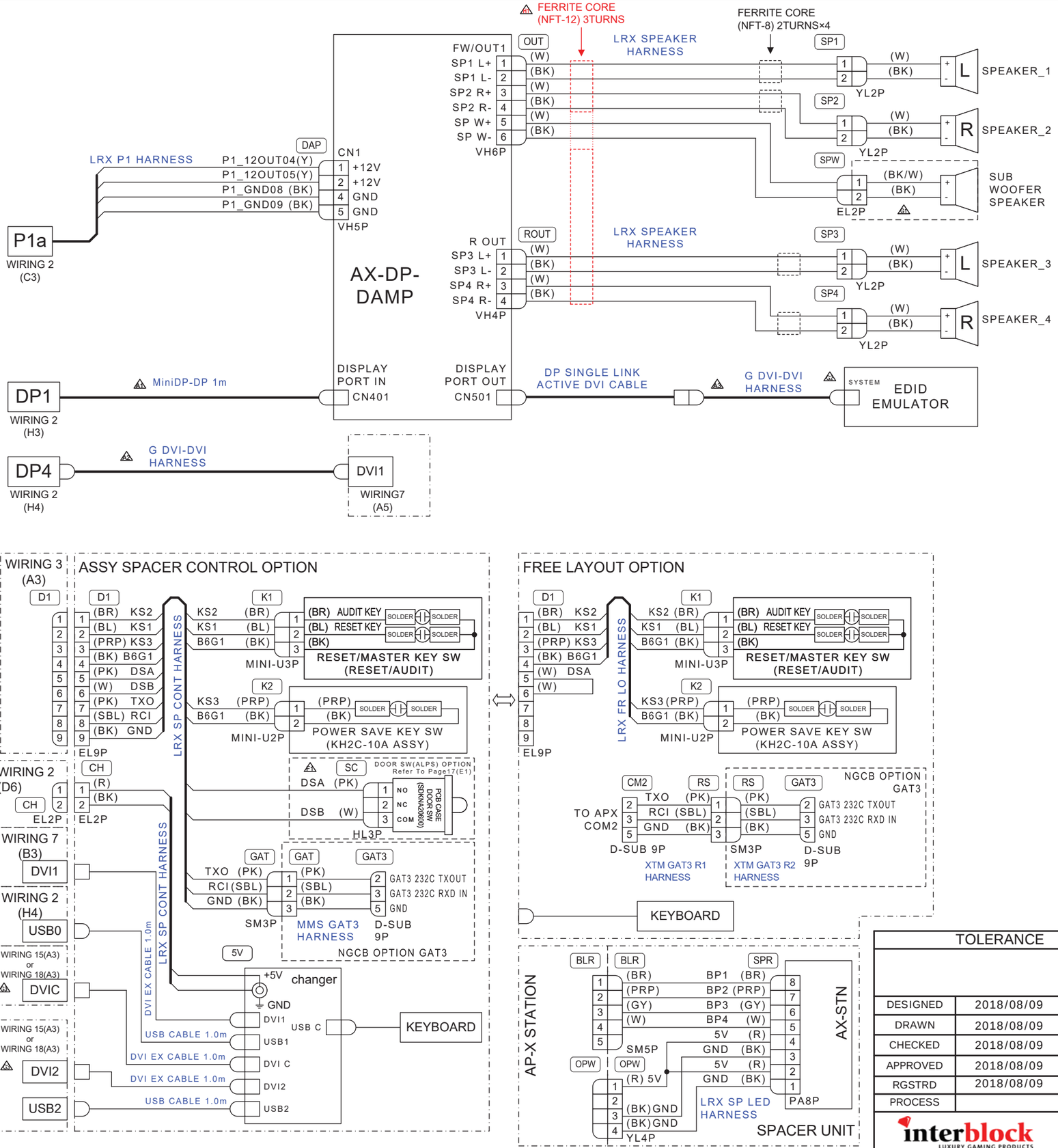
DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-H (6/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-H (6/18)

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
A1	A3	WAS : DVI CABLE 1.5m	'18.09.12	Y.SETO
A2	A3	WAS : MiniDP-DP 1m	'18.09.12	Y.SETO
A3	D2	WAS : DVI CABLE 1.8m	'18.09.12	Y.SETO
A4	B5	ADD : SW OPTION	'24.10.17	O.DAIGO
A5	F4	VOID: ASSY SPACER DRAIN OPTION AND FREE LAYOUT OPTION	'24.10.17	O.DAIGO
A6	E2	WAS:WIRE COLOR	'24.12.03	M.SAKAMOTO
A7	E3	ADD:DESCRIPTION	'24.12.03	M.SAKAMOTO
A8	A6	ADD : REFERENCE	'24.12.03	M.SAKAMOTO
A9	C1	ADD : FERRITE CORE NFT-12	'25.01.23	M.SAKAMOTO



TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (7/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-H (7/18)

	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY

WIRING1 (F2)
AC2
INLET PLUG N E L
POLE 3
VR7 PL ULAC HARNESS
INLET PLUG N E L
#250 #250 #250

ASSY POWER A

POWER SUPPLY BOX (ADP-555AR)
#187 #187 #187 #187

POWER SUPPLY BOARD
P1
+3.3V OUT01 1 (BL)
+5V OUT01 9 (R)
GND OUT01 11 (BK)
GND OUT02 12 (BK)
NEW FIT20P
P2
+5V S+ 1 (R)
+3.3V S+ 2 (BL)
+5V S- 5 (BK)
+3.3V S- 6 (G)
PS ON 7 (G)
GND 8
NEW FIT8P
P3
+12V OUT01 2 (Y) 12V1A
+12V OUT02 3 (Y) 12V2A
+12V OUT03 4 (Y) 12V3A
+24V OUT01 9 (O) 24V1A
+24V OUT02 10 (O) 24V2A
+24V OUT03 11 (O) 24V3A
GND OUT01 13 (BK) G1A
GND OUT02 14 (BK) G2A
GND OUT03 15 (BK) G3A
GND OUT04 16 (BK) G4A
GND OUT05 17 (BK) G5A
GND OUT06 18 (BK) G6A
GND OUT07 19 (BK) GC
NEW FIT24P
P5
THERMAL SENSOR OUT 2 (BR) TH1
FAN SENSOR OUT 3 (BL) FAN7
VH3P

VR7 P1P2 HARNESS
VR7 P3A HARNESS
FERRITE CORE (NFT-12) 1TURN

BREAKER (2A): #187 ① ② #187 (Y); #187 ③ ④ #187 (y); #187 ⑤ ⑥ #187 (Y)
BREAKER (4A): #187 ⑦ ⑧ #187 (O); #187 ⑨ ⑩ #187 (O); #187 ⑪ ⑫ #187 (O)

PI1
12V1A (Y) 1
12V2A (Y) 2
12V3A (Y) 3
24V1A (O) 4
24V2A (O) 5
24V3A (O) 6
G1A (BK) 7
G2A (BK) 8
G3A (BK) 9
G4A (BK) 10
G5A (BK) 11
G6A (BK) 12
TH1 (BR) 13
FAN7 (BL) 14
GC (BK) 15
EL15P

WIRING 9 (A3)
ASSY SIGN TOP

WIRING1 (F3)
AC3
INLET PLUG N E L
POLE 3
VR7 PL ULAC HARNESS
INLET PLUG N E L
#250 #250 #250

ASSY POWER B

POWER SUPPLY BOX (ADP-555AR)
#187 #187 #187 #187

POWER SUPPLY BOARD
P1
+3.3V OUT01 1 (BL)
+5V OUT01 9 (R)
GND OUT01 11 (BK)
GND OUT02 12 (BK)
NEW FIT20P
P2
+5V S+ 1 (R)
+3.3V S+ 2 (BL)
+5V S- 5 (BK)
+3.3V S- 6 (G)
PS ON 7 (G)
GND 8
NEW FIT8P
P3
+5V OUT01 1 (R) 5V1B
+12V OUT01 2 (Y) 12V1B
+12V OUT02 3 (Y) 12V2B
+24V OUT01 9 (O) 24V1B
+24V OUT02 10 (O) 24V2B
+24V OUT03 11 (O) 24V3B
GND OUT01 13 (BK) G1B
GND OUT02 14 (BK) G1B
GND OUT03 15 (BK) G3B
GND OUT04 16 (BK) G4B
GND OUT05 17 (BK) G5B
GND OUT06 18 (BK) G6B
GND OUT07 19 (BK) GC
NEW FIT24P
P5
THERMAL SENSOR OUT 2 (BR) TH2
FAN SENSOR OUT 3 (BL) FAN8
VH3P

VR7 P1P2 HARNESS
VR7 P3B HARNESS
FERRITE CORE (NFT-12) 1TURN

BREAKER (2A): #187 ① ② #187 (R); #187 ③ ④ #187 (y); #187 ⑤ ⑥ #187 (Y)
BREAKER (4A): #187 ⑦ ⑧ #187 (O); #187 ⑨ ⑩ #187 (O); #187 ⑪ ⑫ #187 (O)

PI2
5V1B (Y) 1
12V1B (Y) 2
12V2B (Y) 3
24V1B (O) 4
24V2B (O) 5
24V3B (O) 6
G1B (BK) 7
G2B (BK) 8
G3B (BK) 9
G4B (BK) 10
G5B (BK) 11
G6B (BK) 12
TH1 (BR) 13
FAN8 (BL) 14
GC (BK) 15
YL15P

WIRING 9 (A5)
ASSY SIGN TOP

PART No. 810-0071-H (8/18)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

			SCALE	TITLE	WIRING DIAGRAM LRX
DESIGNED	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
DRAWN	2018/08/09	Y.SETO	DIM.IN mm	MODEL	ROUX-MS
CHECKED	2018/08/09	Y.AIKAWA		PART No.	810-0071-H (8/18)
APPROVED	2018/08/09	Y.USUKI	MOLD	ITEM CODE	
RGSTRD	2018/08/09	K.INOUE		RELATION	
PROCESS					

interblock LUXURY GAMING PRODUCTS

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
3	B6,C3,C5,E6	ADD : REFERENCE	'24.12.03	M.SAKAMOTO

PART No. 810-0071-H (9/18)

POLE 2

WIRING2 (H4) — USB4 — USB 3.0M HARNESS — FERRITE CORE (NFT-6) 1TURN — USB

WIRING2 (H5) — USB5 — USB 3.0M HARNESS — USB

LRX TOP PWR HARNESS

N15 — CN15
24V1A (O) — 1 24V
12V1A (Y) — 2 12V
G1A (BK) — 3 GND3
(BK) — 4 GND4
VH4P

GM-M3IO (TW)_SigB

CN1: CENTER FAN SENSOR3, CENTER FAN SENSOR4, NEW POWER BOX1 SENSOR, POWER BOX1 THERMAL SENSOR, NEW POWER BOX2 SENSOR — PAD40P

N01: (BR) (G) (BR) (BR) (BL) (PRP)

CN11: LATCH1, CLK1, DATA1, MODE1, +5V, GND, LATCH2, CLK2, DATA2, MODE2, +5V, GND, LATCH3, CLK3, DATA3, MODE3, +5V, GND — PND40P

N11: L1(A) C1(A) D1(A) M1(A) 5V(A) — L2(A) C2(A) D2(A) M2(A) 5V(A) — L3(A) C3(A) D3(A) M3(A) 5V(A)

CN12: LATCH, CLK, DATA, MODE, +5V, GND — PND30P

N12: L4(A) C4(A) D4(A) M4(A) 5V(A)

N11 — VR7 TOP SL-C HARNESS — SI4 — WIRING14 (A2)

N11 — VR7 TOP SL-A HARNESS — SI3 — WIRING10 (A4)

N12 — VR7 TOP SL-A HARNESS — SI2 — WIRING12 (D1)

N11 — VR7 TOP SL-A HARNESS — SI1 — WIRING10 (D1)

POLE 1

F56 — WIRING3 (H3) — SM2P

VR7 PL FAN HARNESS

FR — FAN5 (BR), FAN6 (G) — SM2P — FR

SEN — TH1 (BR), FAN7 (BL), FAN8 (PRP) — SM3P — SEN — VR7 TOP M2 HARNESS

FERRITE CORE (NFT-6) 1TURN — USB

S15 — CN15
24V1B (O) — 1 24V
12V1B (Y) — 2 12V
G1B (BK) — 3 GND3
(BK) — 4 GND4
VH4P

GM-M3IO (TW)_SigA

CN1: TOP FAN1 SENSOR, TOP FAN2 SENSOR, TOP FAN3 SENSOR, POWER BOX2 THERMAL SENSOR, TOP FAN4 SENSOR — PAD40P

S01: FAN9 (BR), FAN10 (G), FAN11 (BL), TH2 (BR), FAN12 (PRP)

CN11: LATCH1, CLK1, DATA1, MODE1, +5V, GND, LATCH2, CLK2, DATA2, MODE2, +5V, GND — PND40P

S11: L1(B) C1(B) D1(B) M1(B) 5V(B) — L2(B) C2(B) D2(B) M2(B) 5V(B)

LRX TOP M1 HARNESS

S11 — VR7 TOP SL-B HARNESS — SI6 — WIRING10 (H2)

S11 — SI5 — WIRING10 (H2)

ASSY POWER A

WIRING8 (D3) — PI1

12V1A	1	(Y)	12V1A
12V2A	2	(Y)	12V2A
12V3A	3	(Y)	12V3A
24V1A	4	(O)	24V1A
24V2A	5	(O)	24V2A
24V3A	6	(O)	24V3A
G1A	7	(BK)	G1A
G2A	8	(BK)	G2A
G3A	9	(BK)	G3A
G4A	10	(BK)	G4A
G5A	11	(BK)	G5A
G6A	12	(BK)	G6A
TH1	13	(BR)	TH1
FAN7	14	(BL)	FAN7
GC	15	(BK)	GC

EL15P

LRX TOP PWR HARNESS

P8 — WIRING15(D1) or WIRING18(D1) ⚠5

P11 — WIRING9 (G5)

P4 — WIRING 10,11,12,13 (D1)

P5 — WIRING 10,11,12,13 (A4)

TP1 — TP1

12V2A (Y)	1	(Y)
12V3A (Y)	2	(Y)
24V1A (O)	3	(O)
G2A (BK)	4	(BK)
G3A (BK)	5	(BK)
G4A (BK)	6	(BK)

EL6P

VR7 TOP LP HARNESS

FAN — FAN — SM6P

F9 F10 F11 F12 — EL3P

12V1A (Y), FAN9 (BR), G1A (BK) — 12V1A (Y), FAN10 (G), G1A (BK) — 12V1A (Y), FAN11 (BL), G1A (BK) — 12V1A (Y), FAN12 (PRP), G1A (BK)

FP — FP

12V1A	1	(Y)
G1A	2	(BK)
TH2	3	(BR)

HL3P

VR7 TOP FAN HARNESS

ASSY POWER B

WIRING8 (H3) — PI2

5V1B	1	(R)	5V1B
12V1B	2	(Y)	12V1B
12V2B	3	(Y)	12V2B
24V1B	4	(O)	24V1B
24V2B	5	(O)	24V2B
24V3B	6	(O)	24V3B
G1B	7	(BK)	G1B
G2B	8	(BK)	G2B
G3B	9	(BK)	G3B
G4B	10	(BK)	G4B
G5B	11	(BK)	G5B
G6B	12	(BK)	G6B
TH2	13	(BR)	TH2
FAN8	14	(BL)	FAN8
GC	15	(BK)	GC

YL15P

P10 — WIRING15(A1) or WIRING18(A1) ⚠6

P12 — WIRING15(A6) or WIRING18(A6) ⚠6

P6 — WIRING 10,11,12,13 (H1)

P7 — WIRING14 (A1)

TP2 — TP2

12V1B (Y)	1	(Y)
12V2B (Y)	2	(Y)
24V1B (O)	3	(O)
G2B (BK)	4	(BK)
G3B (BK)	5	(BK)
G4B (BK)	6	(BK)

YL6P

VR7 TOP LP HARNESS

P9 — WIRING15 (D3) or WIRING18(D3) ⚠6

TL1

TL1 — TL3 (BR), TL2 (PRP), TL1 (GY), 12V (Y) — EL4P(NV) — TL1 — WIRING10 (E5)

POLE 1

TL — TLR — TLR

					(BR)
					(PRP)
					(GY)
					(Y)
					(W)

TL3 (BR), TL2 (PRP), TL1 (GY), 12V (Y), TOP (W), B1G1 (BK)

EL6P — EL6P

WIRING3 (A4)

LRX TL HARNESS

LRX TL EX HARNESS

TL2 — TL3 (BR), TL2 (PRP), TL1 (GY), 12V (Y) — EL4P (NV) — TL2 — WIRING13 (E5)

(Y) 12V3A, (BK) G2A

CF2 — CF1 — EL3P

WIRING9 (C4) — P11

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO
DRAWN	2018/08/09	Y.SETO
CHECKED	2018/08/09	Y.AIKAWA
APPROVED	2018/08/09	Y.USUKI
RGSTRD	2018/08/09	K.INOUE
PROCESS		

SCALE 1:1 — DIM.IN mm — MOLD

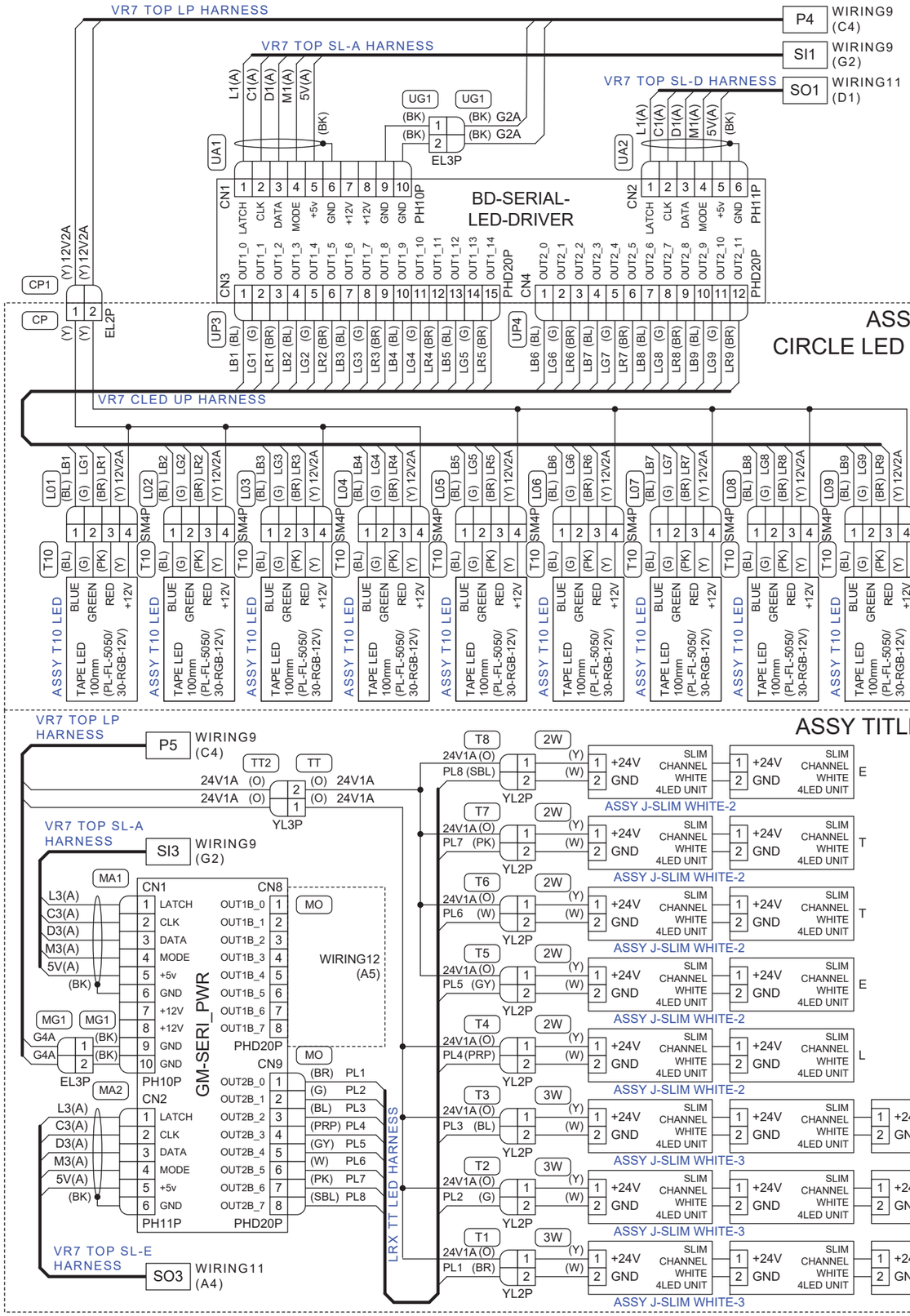
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SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-H (9/18)
ITEM CODE	
RELATION	

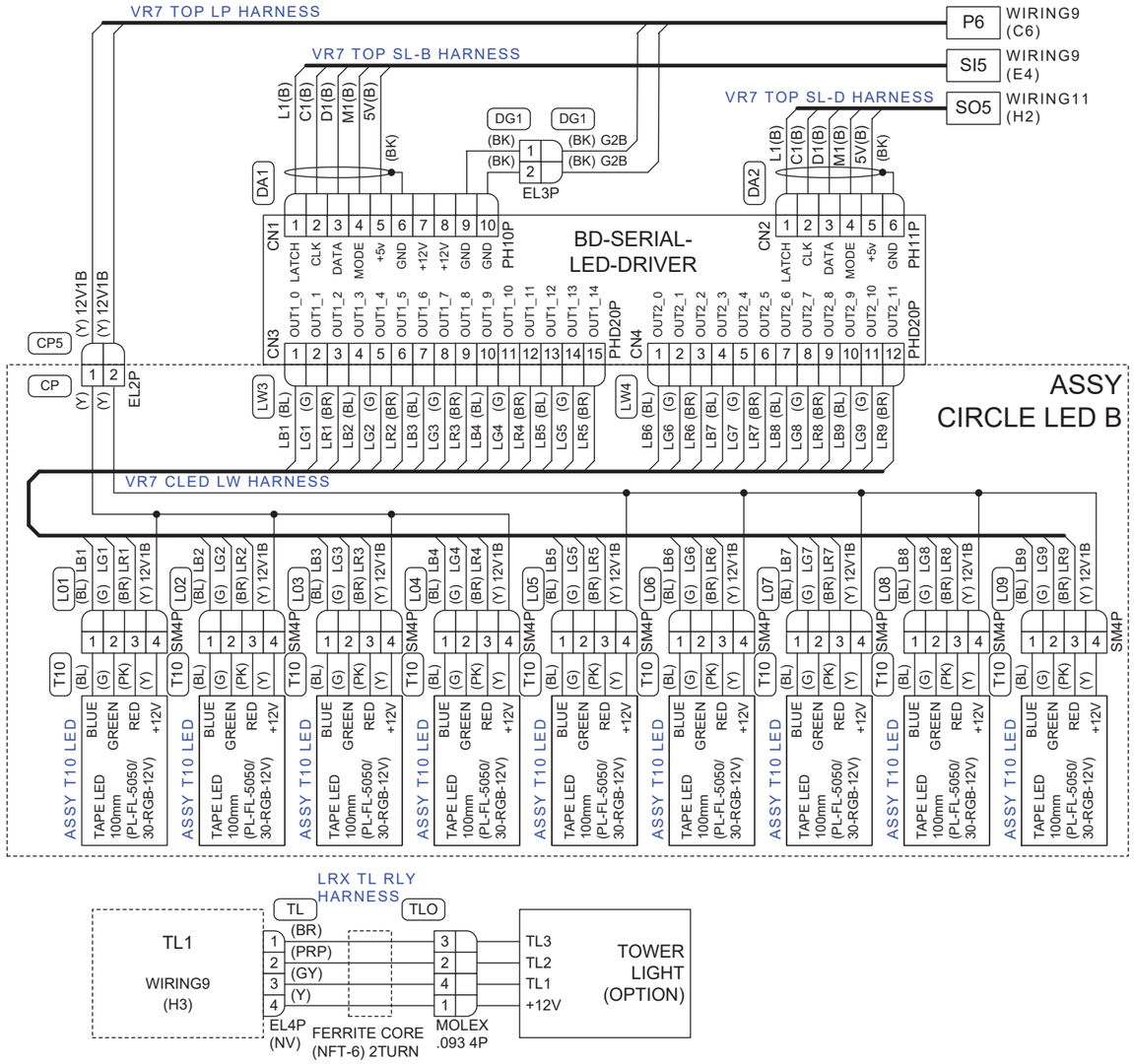
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ASSY SIGN A_1

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		





TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-H (10/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

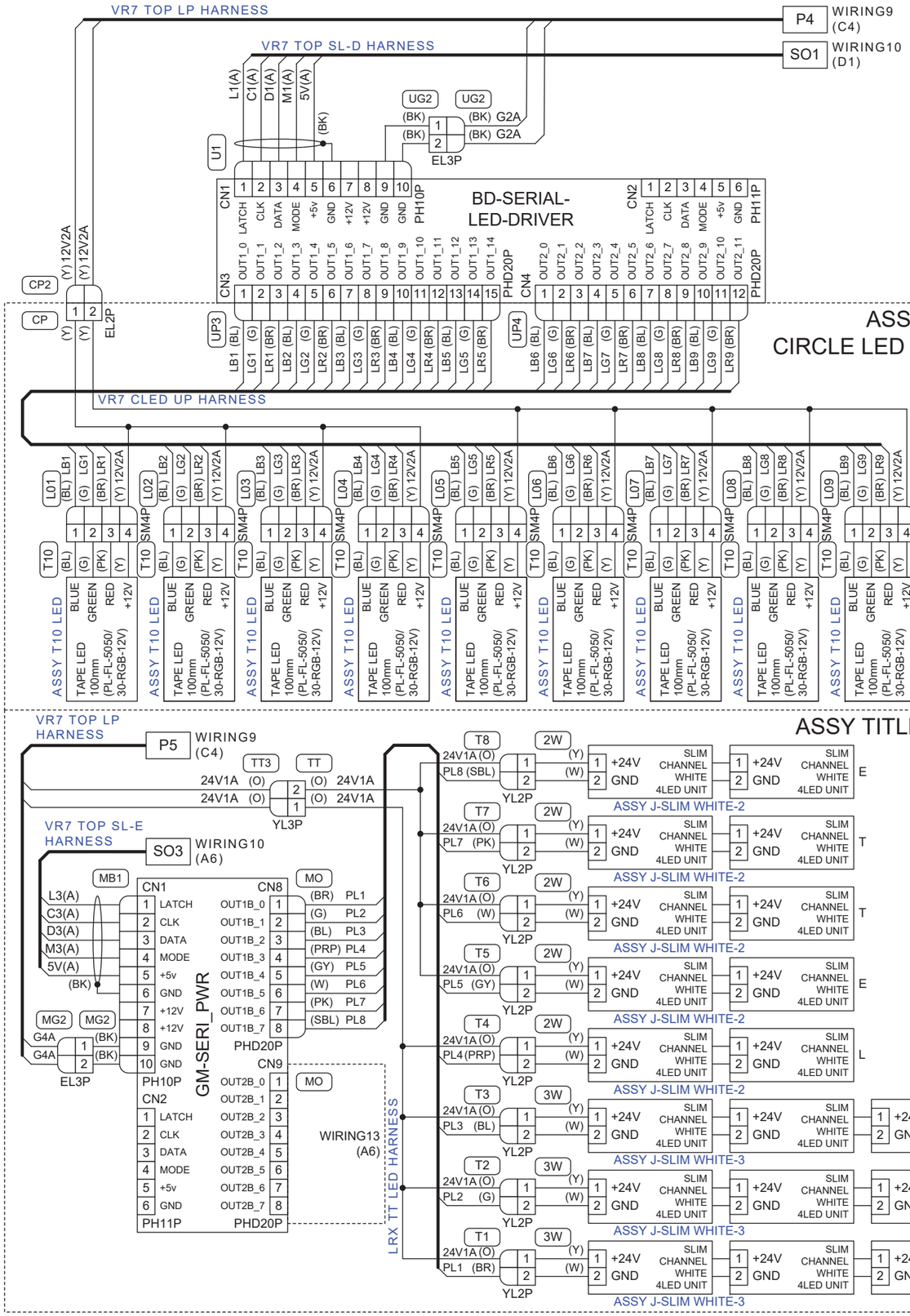
interblock LUXURY GAMING PRODUCTS

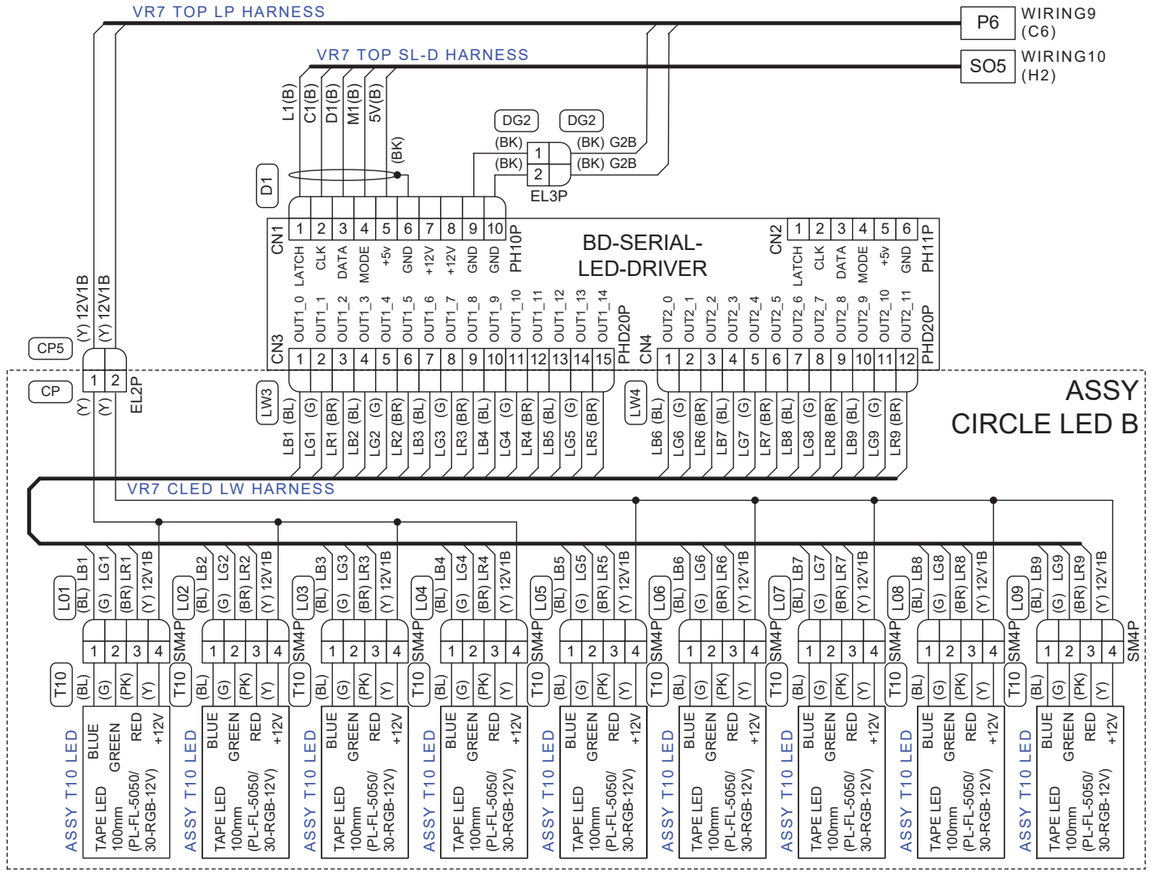
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PART No. 810-0071-H (10/18)

ASSY SIGN B_1

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		





TOLERANCE	MATERIAL	FINISH

THIS DRAWING WILL IN NO WAY BE COPIED.
TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO
DRAWN	2018/08/09	Y.SETO
CHECKED	2018/08/09	Y.AIKAWA
APPROVED	2018/08/09	Y.USUKI
RGSTRD	2018/08/09	K.INOUE
PROCESS		

SCALE 1:1
DIM.IN mm
MOLD

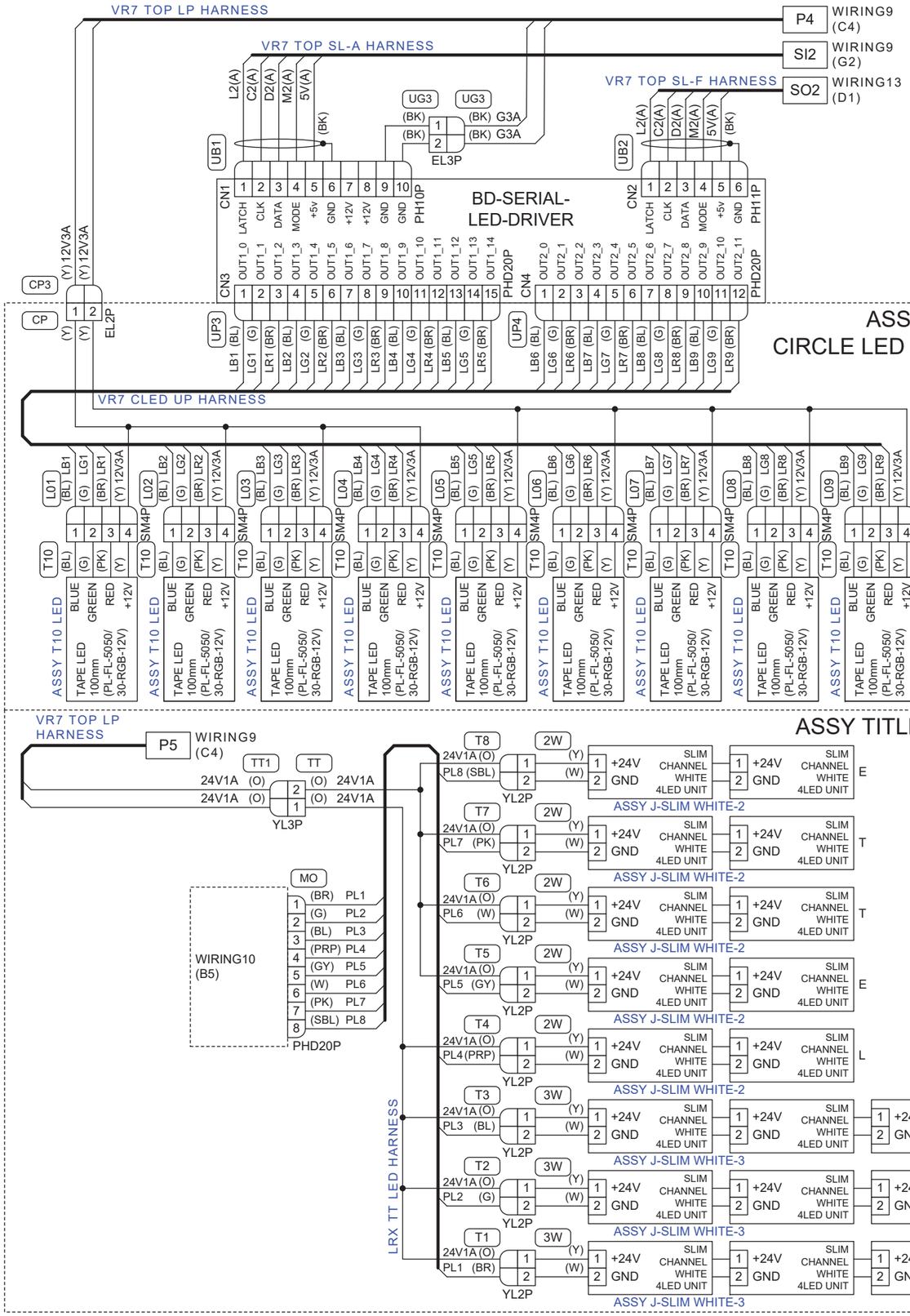
TITLE	WIRING DIAGRAM LRX
SEC	LUCKY ROULETTE
MODEL	ROUX-MS
PART No.	810-0071-H (11/18)
ITEM CODE	
RELATION	

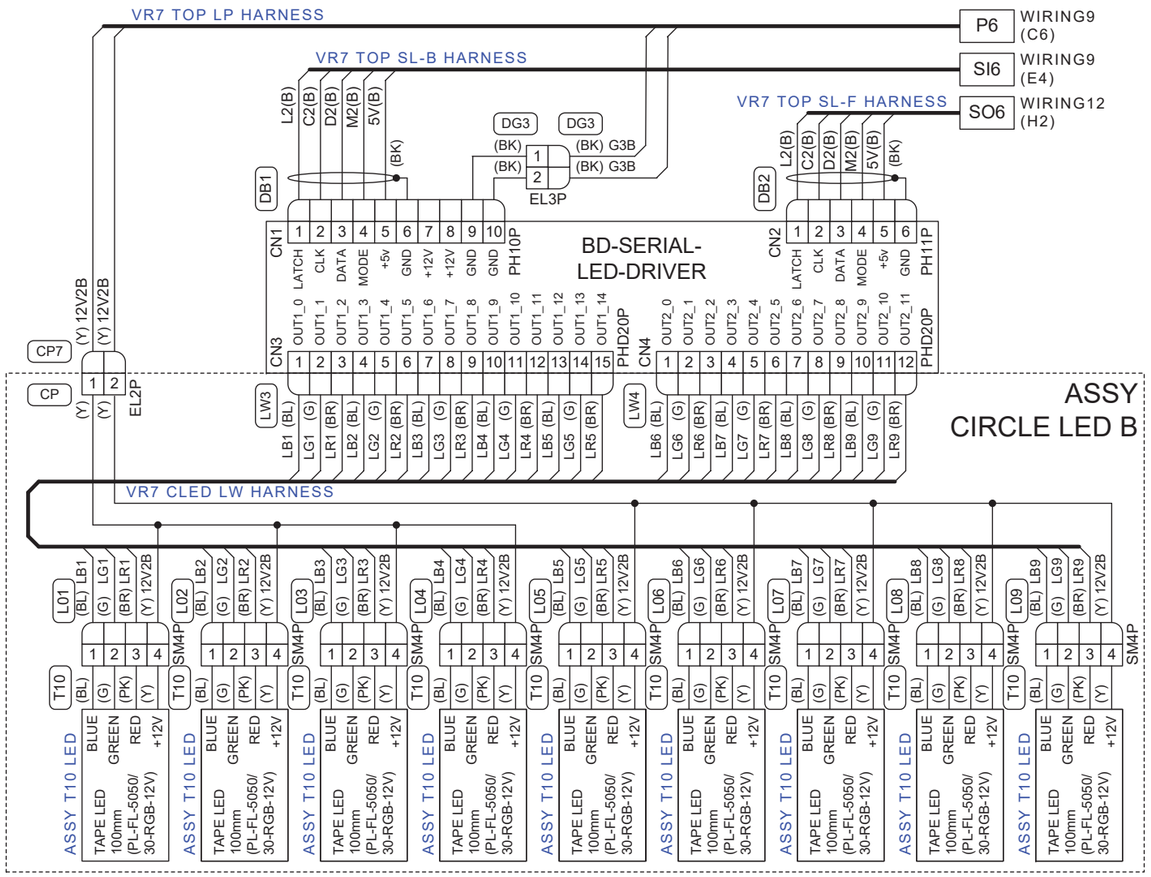
interblock LUXURY GAMING PRODUCTS

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ASSY SIGN B_2

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		





TOLERANCE	MATERIAL	FINISH

THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA		MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	DIM.IN mm	PART No.	810-0071-H (12/18)
RGSTRD	2018/08/09	K.INOUE		ITEM CODE	
PROCESS			MOLD	RELATION	

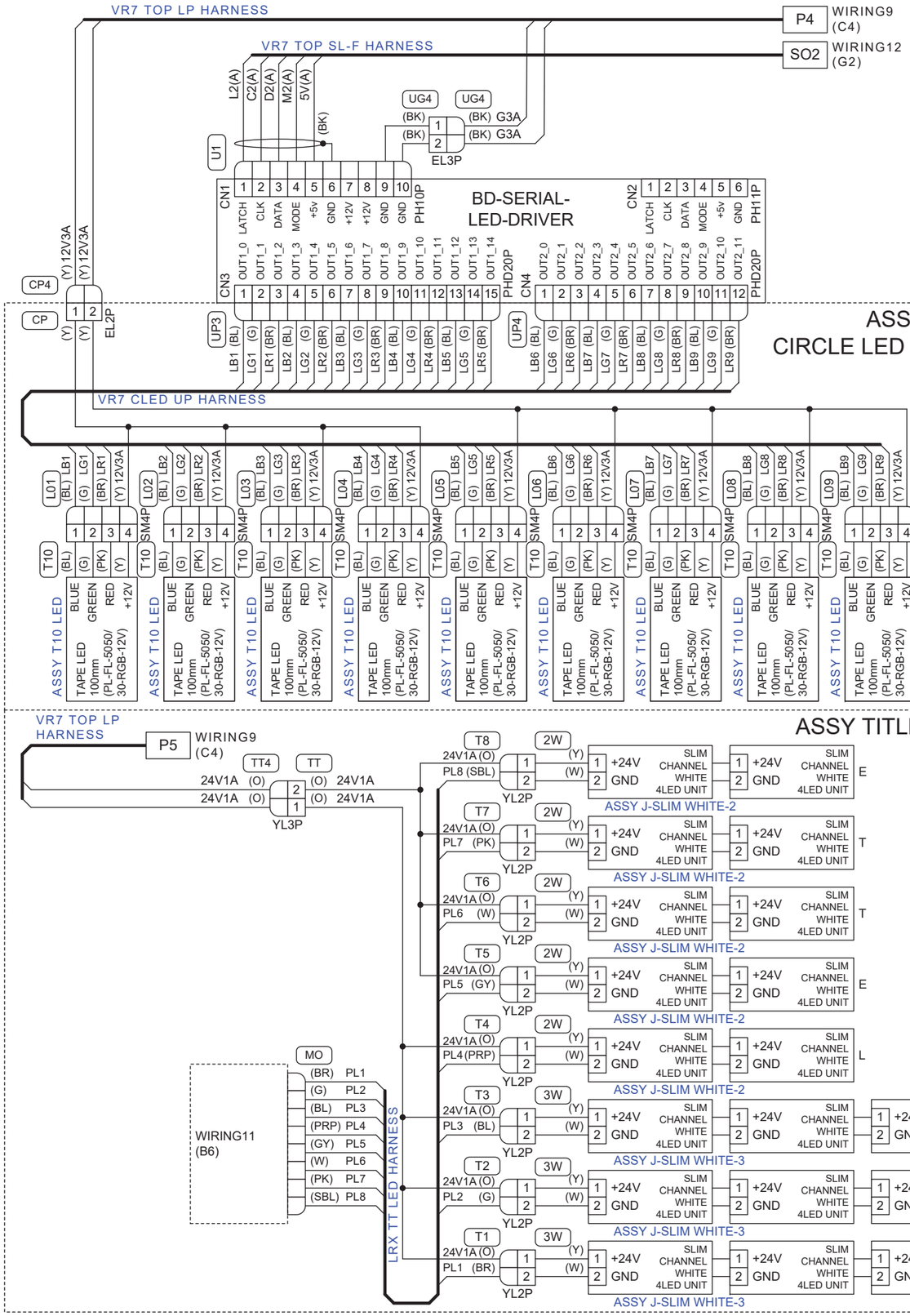
interblock LUXURY GAMING PRODUCTS

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PART No. 810-0071-H (12/18)

ASSY SIGN A_2

MARK	POS.	REVISION	DATE	BY
		SUB ASSY LRX-0000		



TOLERANCE	MATERIAL	FINISH

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TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-H (13/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-H (13/18)

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	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠4	D2,D3,D4,D5	WAS : ASSY SLIM CHANNEL-R 4P40 WHITE-7	'18.11.09	Y.SETO

WIRING9 (C6) — P7 — VR7 TOP LP HARNESS

WIRING9 (G2) — SI4 — VR7 TOP SL-C HARNESS

RL: 24V1B (O) → 1; 24V1B (O) → 2 — YL2P — (O) 24V1B

VR7 RING LED HARNESS

PA1 — EL3P: L4(A), C4(A), D4(A), M4(A), 5V(A), (BK); PG1 G4B (BK), G4B (BK)

CN1 — PH10P — GM-SERI_PWR

1	LATCH
2	CLK
3	DATA
4	MODE
5	+5v
6	GND
7	+12V
8	+12V
9	GND
10	GND

CN2 — PH11P

1	LATCH
2	CLK
3	DATA
4	MODE
5	+5v
6	GND

CN8 — PHD20P — PA8

OUT1B_0	1	(BR) RL1
OUT1B_1	2	(G) RL2
OUT1B_2	3	(BL) RL3
OUT1B_3	4	(PRP) RL4
OUT1B_4	5	(GY) RL5
OUT1B_5	6	(W) RL6
OUT1B_6	7	(PK) RL7
OUT1B_7	8	(SBL) RL8

CN9 — PHD20P

OUT2B_0	1	
OUT2B_1	2	
OUT2B_2	3	
OUT2B_3	4	
OUT2B_4	5	
OUT2B_5	6	
OUT2B_6	7	
OUT2B_7	8	

Each SLIM CHANNEL WHITE 4LED UNIT: 1 +24V, 2 GND

ASSY SIGN RING1

R1R — 24V1B (O) → 1 (Y); RL1 (BR) → 2 (W) — YL2P — 7W — RIGHT — ⚠4 ASSY J-SLIM WHITE-7

R1L — 24V1B (O) → 1 (Y); RL2 (G) → 2 (W) — YL2P — 7W — LEFT — ⚠4 ASSY J-SLIM WHITE-7

ASSY SIGN RING2

R2R — 24V1B (O) → 1 (Y); RL1 (BL) → 2 (W) — YL2P — 7W — RIGHT — ⚠4 ASSY J-SLIM WHITE-7

R2L — 24V1B (O) → 1 (Y); RL2 (PRP) → 2 (W) — YL2P — 7W — LEFT — ⚠4 ASSY J-SLIM WHITE-7

ASSY SIGN RING3

R3R — 24V1B (O) → 1 (Y); RL1 (GY) → 2 (W) — YL2P — 7W — RIGHT — ⚠4 ASSY J-SLIM WHITE-7

R3L — 24V1B (O) → 1 (Y); RL2 (W) → 2 (W) — YL2P — 7W — LEFT — ⚠4 ASSY J-SLIM WHITE-7

ASSY SIGN RING4

R4R — 24V1B (O) → 1 (Y); RL1 (PK) → 2 (W) — YL2P — 7W — RIGHT — ⚠4 ASSY J-SLIM WHITE-7

R4L — 24V1B (O) → 1 (Y); RL2 (SBL) → 2 (W) — YL2P — 7W — LEFT — ⚠4 ASSY J-SLIM WHITE-7

PART No. 810-0071-H (14/18)

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

			SCALE	TITLE	WIRING DIAGRAM LRX
DESIGNED	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
DRAWN	2018/08/09	Y.SETO	DIM.IN mm	MODEL	ROUX-MS
CHECKED	2018/08/09	Y.AIKAWA		PART No.	810-0071-H (14/18)
APPROVED	2018/08/09	Y.USUKI	MOLD	ITEM CODE	
RGSTRD	2018/08/09	K.INOUE		RELATION	
PROCESS					

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SUB ASSY	LRX-0000

MARK	POS.	REVISION	DATE	BY
⚠1	A2	ADD : DVI EX CABLE1.2m	'18.09.12	Y.SETO
⚠2	A3	ADD : DVI EX CABLE2.0m	'18.09.12	Y.SETO
⚠3	A3	ADD : USB EX CABLE 2.5m	'18.09.12	Y.SETO
⚠4	D4	WAS : DVI CABLE	'18.09.12	Y.SETO
⚠5	D4	ADD : DVI EX CABLE 0.4m	'18.09.12	Y.SETO
⚠6	D4	WAS : RS232C ST CABLE 0.5m	'18.09.12	Y.SETO
⚠1	B4, B5, C5, E4, F4	ADD : PROJECTOR TYPE	'19.06.07	Y.SETO
⚠3	H4	ADD : PROJECTOR TYPE	'24.12.03	M.SAKAMOTO

P10 LRX TOP PWR HARNESS — WIRING9 (C5)

P8 LRX TOP PWR HARNESS — WIRING9 (C3)

P9 WIRING9 (B6) — LRX TOP PWR HARNESS

DVI SPLITTER
- 5V → +5V
- MC-5322 → GND
- DVI IN
- DVI OUT 1 — DVI-D CABLE (1.5m) → LP1 24V2A (O) / G5A (BK) → AD BOARD (1 +24V, 4 GND, EL4P(NV), DVI IN) → CONTROL BOARD ASSY → TFT LCD PANEL (1920×1080) / LED BACK LIGHT — LCD1 (32 inch LCD)
- DVI OUT 2 — DVI-D CABLE (1.5m) → LP2 24V3A (O) / G6A (BK) → AD BOARD → CONTROL BOARD ASSY → TFT LCD PANEL (1920×1080) / LED BACK LIGHT — LCD2 (32 inch LCD)
- DVI OUT 3 — DVI-D CABLE (1.5m) → LP3 24V2B (O) / G5B (BK) → AD BOARD → CONTROL BOARD ASSY → TFT LCD PANEL (1920×1080) / LED BACK LIGHT — LCD3 (32 inch LCD)
- DVI OUT 4 — DVI-D CABLE (1.5m) → LP4 24V3B (O) / G6B (BK) → AD BOARD → CONTROL BOARD ASSY → TFT LCD PANEL (1920×1080) / LED BACK LIGHT — LCD4 (32 inch LCD)

WIRING7 (A6) DVIC — ⚠1 DVI EX CABLE1.2m — POLE1 — DVI CABLE BJA42005 L=2.6m

WIRING7 (A6) DVI2 — ⚠2 DVI EX CABLE2.0m — DVI CABLE 2.6m — POLE4

WIRING7 (A6) USB2 — ⚠3 USB EX CABLE 2.5m — USB EX CABLE 2.5m

DVI EX CABLE BJA2C004 L=1.0m — MiniDP to DVI

USB A-A CABLE 1.0m

POLE4
- WIRING2 (D5) RS3 — RS232C CROSS CABLE (2.6m)
- WIRING2 (D5) RS4 — RS232C CROSS CABLE (2.6m) — ⚠1 *1

RS232C ST ⚠6 CABLE 1.2m

CAMERA PC
- DP2
- USB
- 232C
- DP1 — MiniDP to DVI — ⚠4 G DVI-DVI HARNESS — DVI EX CABLE 0.4m ⚠5 — PROJECTOR DVI IN
- USB 3.0 — 3.0USB CABLE — HIGH SPEED CAMERA

⚠1 *1 RS232C ST CABLE 0.5m — PROJECTOR 232C

PROJECTOR S — ⚠1 *3 STEREO CABLE 3.6m — ⚠1 *3 STEREO EX CABLE 1.8m — REMOTE COMMANDER

POLE3
- AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — VR7 PJ ULAC HARNESS Or VR7 PJ AC HARNESS
- AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — ⚠1 *2 VR7 PJ ULAC HARNESS Or VR7 PJ AC HARNESS

L2 WIRING1 — POLE4 — LAN CABLE — LB — IP CAMERA LAN

12V — +12V — JR-D1 — GND

12V2B G2B — WIRING9 (D6) P12

	PROJECTOR TYPE		
	VPL-FHZ700L/W	VPL-FHZ75/W	NP-PA1004UL
*1	RS232C CROSS CABLE (2.6m) and RS232C ST CABLE 0.5m	NOT USE	REFER TO PAGE 18
*2	VR7 PJ ULAC HARNESS Or VR7 PJ AC HARNESS	VR7 SH ULAC HARNESS Or VR7 SH AC HARNESS	
*3	NOT USE	STEREO CABLE 3.6m and STEREO EX CABLE 1.8m	

PART No. 810-0071-H (15/18)

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

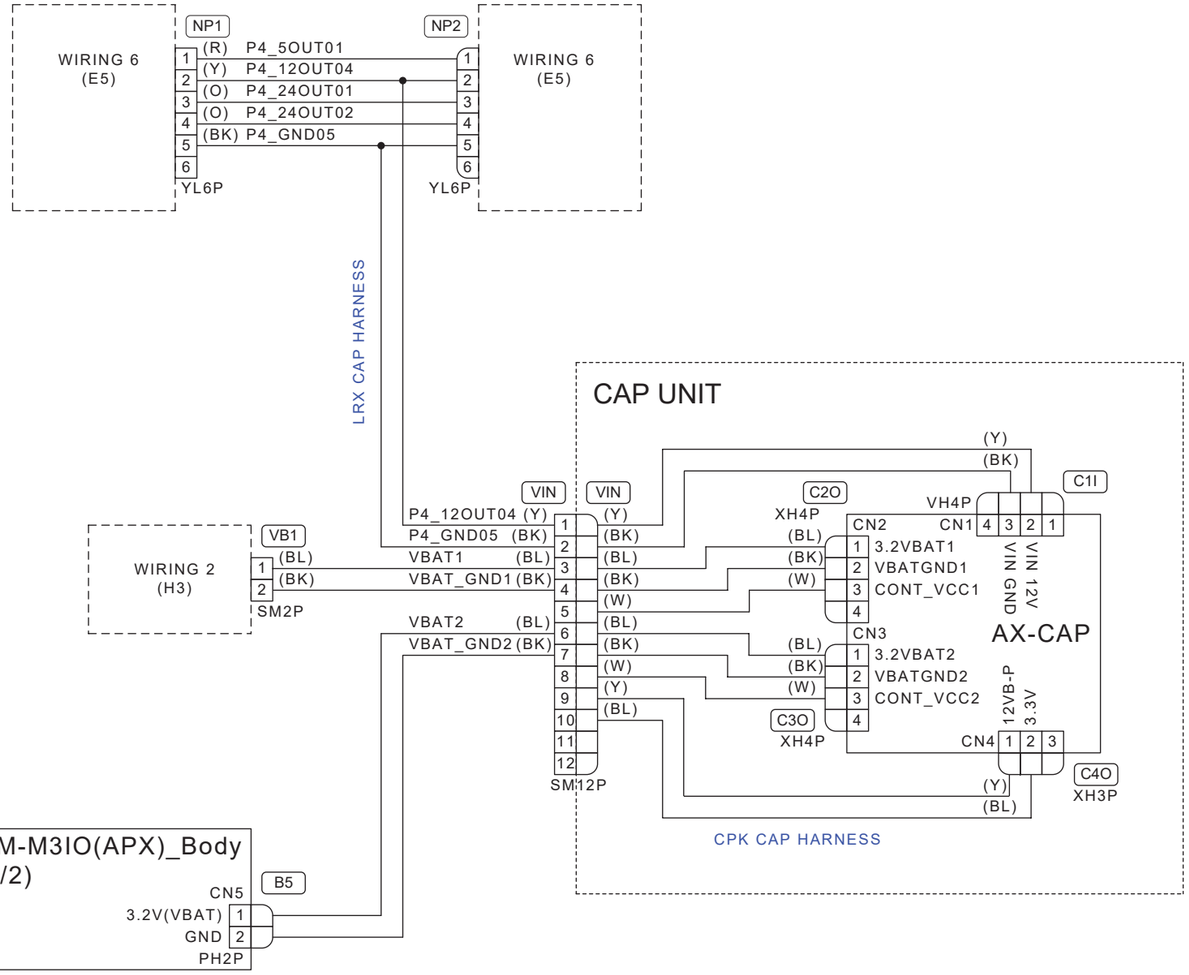
DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (15/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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⚠A1 CAP OPTION

	SUB ASSY	LRX-0000	
MARK	POS.	REVISION	DATE	BY
⚠A1		ADD : AX-CAP OPTION	'21.11.26	Y.SETO



TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (16/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

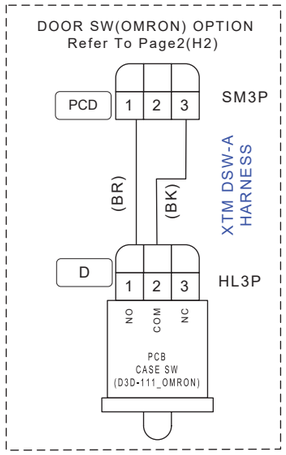
interblock LUXURY GAMING PRODUCTS

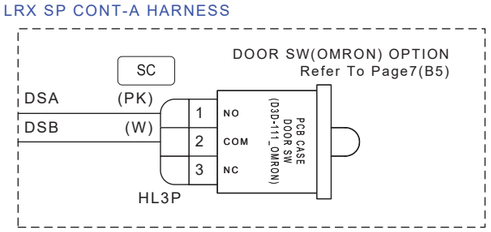
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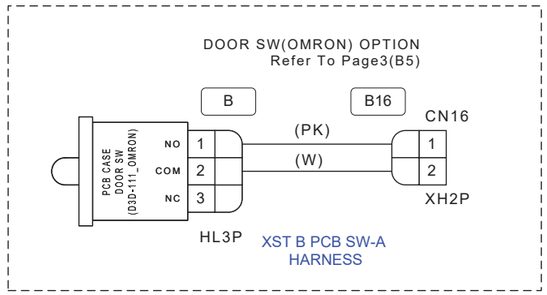
PART No. 810-0071-H (16/18)

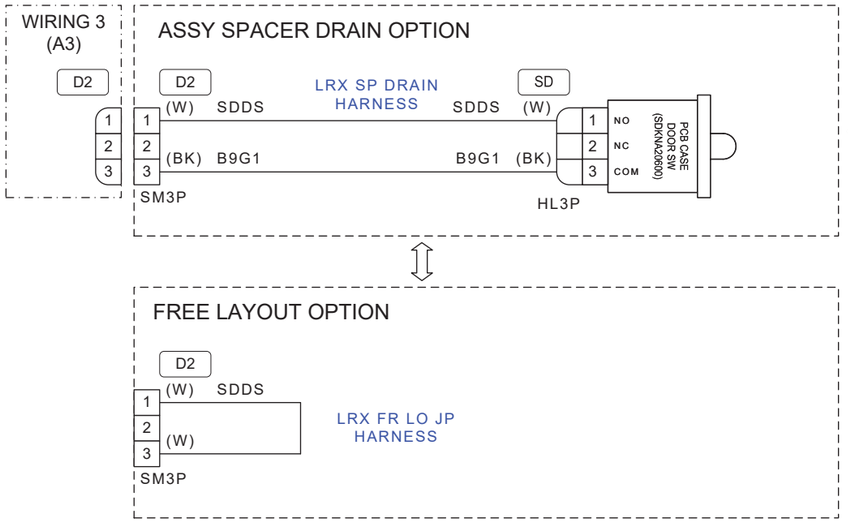
⚠ DOOR SW OPTION

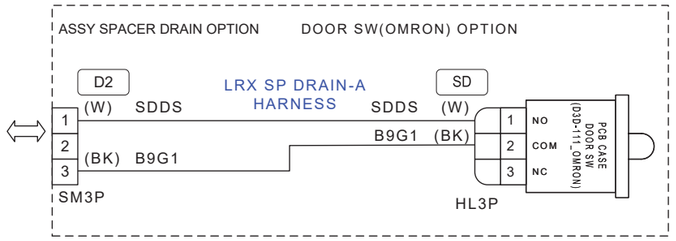
	SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠	A1	ADD : Page17	'24.10.17	O.DAIGO

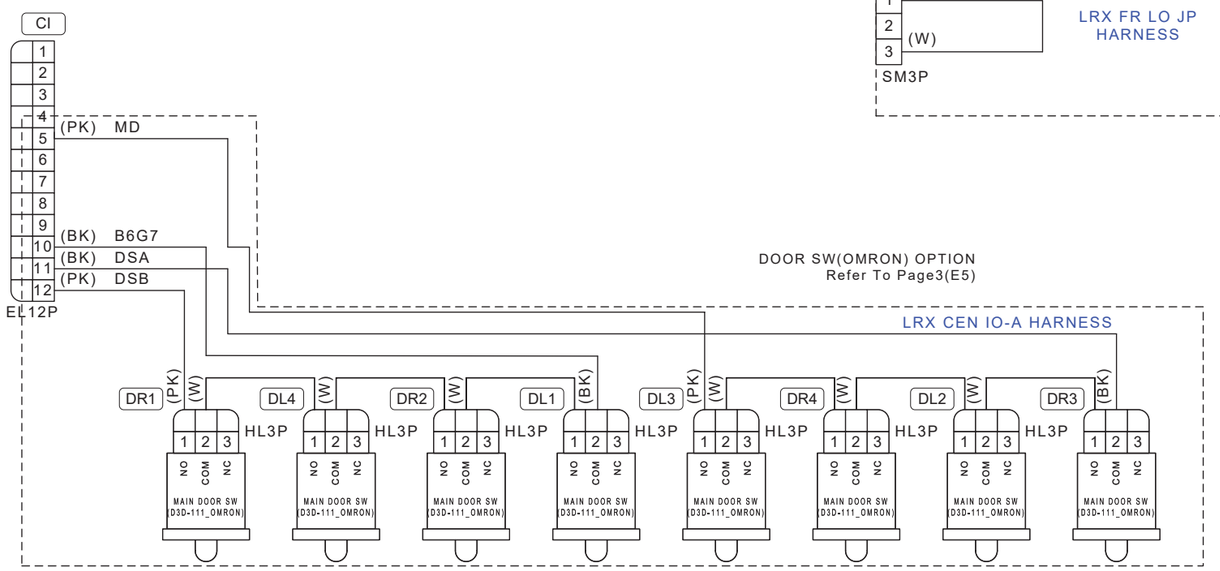












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			ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE 1:1	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO		SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN mm	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI		PART No.	810-0071-H (17/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

PART No. 810-0071-H (17/18)

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⚠ NEC PROJECTOR VERSION

SUB ASSY	LRX-0000		
MARK	POS.	REVISION	DATE	BY
⚠4	A1	ADD : Page18	'24.12.03	M.SAKAMOTO
⚠3	D6	CHANGE : IP CAMERA	'25.01.23	M.SAKAMOTO
⚠2	B6	ADD : LRX C12V R HARNESS	'25.01.23	M.SAKAMOTO

P10 WIRING9 (C5) — LRX TOP PWR HARNESS

P8 WIRING9 (C3) — LRX TOP PWR HARNESS

P9 WIRING9 (B6) — LRX TOP PWR HARNESS

DVI SPLITTER
- DVI IN
- DVI OUT 1 — DVI-D CABLE (1.5m) → LP1 → LCD1 (32 inch LCD)
- DVI OUT 2 — DVI-D CABLE (1.5m) → LP2 → LCD2 (32 inch LCD)
- DVI OUT 3 — DVI-D CABLE (1.5m) → LP3 → LCD3 (32 inch LCD)
- DVI OUT 4 — DVI-D CABLE (1.5m) → LP4 → LCD4 (32 inch LCD)
- 5V → +5V, MC-5322, GND

LP1 / LP2 / LP3 / LP4
- 24V2A / 24V3A / 24V2B / 24V3B (O)
- G5A / G6A / G5B / G6B (BK)
- EL4P(NV)
- AD BOARD: 1 +24V, 4 GND, DVI IN
- CONTROL BOARD ASSY
- TFT LCD PANEL (1920×1080)
- LED BACK LIGHT

WIRING7 (A6) DVIC — DVI EX CABLE1.2m — POLE1 — DVI CABLE BJA42005 L=2.6m

WIRING7 (A6) DVI2 — DVI EX CABLE2.0m — DVI CABLE 2.6m — POLE4

WIRING7 (A6) USB2 — USB EX CABLE 2.5m — USB EX CABLE 2.5m

DVI EX CABLE BJA2C004 L=1.0m

MiniDP to DVI

USB A-A CABLE 1.0m

WIRING2 (D5) RS3 — POLE4 — RS232C CROSS CABLE (2.6m)

RS232C ST CABLE 1.2m

CAMERA PC
- DP2
- USB
- 232C
- DP1
- USB 3.0 — 3.0USB CABLE → HIGH SPEED CAMERA

MiniDP to DP CABLE 1.0m → PROJECTOR DP IN

PROJECTOR
- DP IN
- S — STEREO CABLE 3.6m — STEREO EX CABLE 1.8m → REMOTE COMMANDER

INLET L E N

POLE3

AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — LRX PJ ULAC HARNESS

AC INPUT AC100-120V or AC220-240V — AC CABLE (3m) — LRX NECPJ ULAC HARNESS

L2 WIRING1 — POLE4 — LAN CABLE — LB — IP CAMERA
- LAN
- 12V2B G2B — DC PLUG — DC JACK — BK/W BK — DC PLUG — DC JACK — I/O BREAKOUT CABLE
  - 1 +12V
  - 6 GND
  - 2 D+
  - 5 D-
- WIRING9 (D6) P12 — 12V 12V DC

⚠2 LRX C12V R HARNESS — NC 1 2 — EURO BLOCK 2P — HR10A 6P

PART No. 810-0071-H (18/18)

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2018/08/09	Y.SETO	SCALE	TITLE	WIRING DIAGRAM LRX
DRAWN	2018/08/09	Y.SETO	1:1	SEC	LUCKY ROULETTE
CHECKED	2018/08/09	Y.AIKAWA	DIM.IN	MODEL	ROUX-MS
APPROVED	2018/08/09	Y.USUKI	mm	PART No.	810-0071-H (18/18)
RGSTRD	2018/08/09	K.INOUE	MOLD	ITEM CODE	
PROCESS				RELATION	

interblock LUXURY GAMING PRODUCTS

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SUB ASSY	XST-0000		
MARK	POS.	REVISION	DATE	BY

CABINET

TO MAIN UNIT

PERIPHERAL

STACKER DOOR SW

BILLVALIDATOR(OPTION)
(NOTE ACCEPTOR CABINET)

CASH CORD	FLS
MEI	SCN 66/83
JCM	iVIZION
	UBA

RS232C
DC12V or 24V

TICKET PRINTER(OPTION)

Nanoptix	PAYCHECK4
	PAYCHECK Next GEN
ITHACA	EPIC 950
FUTURE LOGIC	GEN2 UNI
	GEN5

RS232C
DC24V

<NOTE>
High-Voltage Line:

AC-DC POWER SUPPLY
OUTPUT (DC)
INPUT (AC)
INLET
AC 100V-240V
MAIN SWITCH (BREAKER 5A)
BREAKER (2A)
OUTLET (1Ax2)
POWER SUPPLY SWITCH (MAIN SW)
100V - 240V

CH1	DC3.3V
CH2	DC5V
CH3	DC12V(A)
CH4	DC-12V
CH5	DC5V(SB)
CH6	DC12V(B)
CH7	DC24V

COOLING FAN (OPTION)
FAN1
SATA2
SATA PWR
SATA1
SATA5
SATA6
SATA PWR
BACKUP SSD 4G
SSD 4G (SSD 8G)
USB_1
LAN1
LAN2
AP-X
USB_0
COM5
COM6
COM3
USB_5
DVI
DP1
DP2
USB_2
USB_3
OPT_1
OPT_2
PS/2
VIDEO CARD
MDP1
COM4
USB_4
SECURITY DOOR SW
AX-GMEM
AX-GAL
I/O PORT
DC3.2V
US (OPTION)
COM2
NSW(OPTION)
COM2
COM1
I/O
DC3.3V
DC5V
DC12V
DC-12V
DC5V(SB)

(OPTION)
MECHANICAL COUNTER
OUTPORT
AX-SUBIO
USB2.0
DC+12V

IO CASE
USB2.0
LED SERIAL
DC3.2V
GM-M3IO (APX)
INPORT
OUTPORT
DC12V
DC24V
IO CASE SW

KEY SW | RESET | AUDIT
DC12V FAN
DC12V FAN

L SPK OUT
R SPK OUT
USB2.0
DC12V
G5-UC-audio-amplifier
Pn2019-4038b

NSW(OPTION)
CASE SW
RS232C_2
RS232C_1
SEF_SIGNAL
DC12V
AX-XCOM
DC12V IN
6PORT POWER
DC12V OUT

DC3.2V
DC12V
AX-CAP
(OPTION)

GAT3
US
(OPTION)

BREAKER(4A)
BREAKER(2A)

BACK LED (OPTION)
IN | OUT | DC5V IN | DC5V OUT
AX-STN_LED
LED ILLUMINATION
DC12V | IN
LOGO
TAPE LED

BOTTOM DOOR SW
PLUSE IN
PHOTO SENSOR
PLUSE OUT
PRISM
FRONT DOOR SW (MECH)
FRONT DOOR
BOTTOM DOOR

IN | DC12V
BILL
AX-LED3
PRINTER
AX-LED3
PAD(L)
BD-GM-G2LED
PAD(R)
BD-GM-G2LED
FRONT(L)
BD-GM-G2LED
FRONT(R)
BD-GM-G2LED

TOP DDOR LED ILLUMINATION(L)
TOP DDOR LED ILLUMINATION(R)
AX-STN_LED

DC12V
DISPLAY PORT
USB2.0
TOUCH SCREEN CONTROLLER
TOUCH SCREEN SENSOR
TOUCH SCREEN
LCD 23"

SPEAKER(L)
SPEAKER(R)

SHOOTER BUTTON SW
(OPTION)
CONTROL PANE

PLUSE IN
PHOTO SENSOR
PLUSE OUT
PRISM
TOP DOOR SW (MECH)

TOP DOOR

TOLERANCE	MATERIAL	FINISH

THIS DRAWING WILL IN NO WAY BE COPIED.
TO BE RETURNED ON DEMAND.

ORIGINAL SIZE **A3**

DESIGNED	-	-	SCALE	1:1
DRAWN	Y.NAGASAKI	2023/12/06		
CHECKED	-	-	DIM.IN	mm
APPROVED	-	-		
RGSTRD	-	-	MOLD	
PROCESS				

TITLE	BLOCK DIAGRAM XST
SEC	ASSY STATION
MODEL	APX-MS
PART No.	800-0053-E
ITEM CODE	
RELATION	

interblock
LUXURY GAMING PRODUCTS

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SUB ASSY	XST-0000

MARK	POS.	REVISION	DATE	BY

AC100-120V or AC220-240V
50/60Hz

— High Voltage lines

BV BASE ASSY

MAIN SW

XST AC-A IN HARNESS

OUTLET PULG

INLET PULG

VL3P

AXR PS R UL HARNESS
(AXR PS R EU HARNESS)

POWER SUPPLY BOX
ADP-555AR

POWER SUPPLY BOARD

NEW FIT20P

NEW FIT8P

NEW FIT24P

NEW FIT22P

XST P1 HARNESS

XST P2 HARNESS

XST P3 HARNESS

XST P4 HARNESS

XST P5 HARNESS

APX PCB P1 HARNESS

EL15P

EL12P

YL6P

MSTB2P

MCVR2P

SM7P

RF10P

pn2019-4038b
G5-UC-audio
_amplifier

XST MAIN HARNESS

WIRING 5 (F3)

WIRING 2 (B6)

USB1.0M HARNESS

APX BP COM HARNESS

AP-X(1/3)

BUCK UP

SSD 4G

SSD 4G (SSD 8G)

SATA3.0

SATA POWER

SATA_2

JPWR_2

SATA_1

JPWR_1

CPU COOLER

SPH

AG3

RESET#

GND

RST OUT

XH5P

APX REPSW HARNESS

RF10P

U67

J7

USB6_7

VBUS

D-

D+

GND

APX GMEM USB HARNESS

A2 6P

PCIe x1 EDGE CONNECTOR

AX-GMEM (1/2)

AX-GAL

VIDEO CARD

DP OUT

MDP1

MDP2

MDP3

MDP4

MiniDP-DP 2500mm

Y

WIRING 2 (E5)

LAN1

LAN2

TO MAIN UNIT

USB_3

USB_4

USB_1

USB_0

XST TS USB HARNESS

H

WIRING 2 (E5)

MECH COUNTER (OPTION)

G USB1.5M HARNESS

K

WIRING 5 (B6)

USB1.8M HARNESS

G

WIRING 2 (B1)

STANDARD

APX PCBOX SW HARNESS

AG4

D

HL3P

PH8P

SECURITY CASE

NSW OPTION:SEE WIRING5

WIRE COLOR

(BK)	BLACK
(BR)	BROWN
(R)	RED
(O)	ORANGE
(Y)	YELLOW
(G)	GREEN
(BL)	BLUE
(PRP)	PURPLE
(GY)	GRAY
(W)	WHITE
(PK)	PINK
(SBL)	SKY BLUE

#110 #110 TYPE FASTON TERMINAL
#187 #187 TYPE FASTON TERMINAL
#250 #250 TYPE FASTON TERMINAL
SOLD SOLDERING

Note:
HIGH VOLTAGE LINE
LOW VOLTAGE LINE, SIGNAL LINE

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2024/03/12	G.PROSEN	SCALE
DRAWN	2024/03/12	Y.NAGASAKI	
CHECKED			DIM.IN
APPROVED			mm
RGSTRD			MOLD
PROCESS			

TITLE	WIRING DIAGRAM XST
SEC	ASSY STATION
MODEL	APX-MS
PART No.	810-0053-G (1/5)
ITEM CODE	
RELATION	

interblock
LUXURY GAMING PRODUCTS

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PART No. 810-0053-G (1/5)

SUB ASSY	XST-0000		
MARK	POS.	REVISION	DATE	BY

PART No. 810-0053-G (2/5)

WIRING 1 (D5) A

WIRING 1 (G5) G

WIRING3 (A6) N

WIRING 5 (F2) M

WIRING 1 (E4) E

WIRING 1 (H3) Y

WIRING 1 (G4) H

XST B PCB SW HARNESS

XST P3 HARNESS

XST MAIN HARNESS

USB1.8M HARNESS

XST BP RELAY HARNESS

XST TOP LED HARNESS

XST LCD PLED HARNESS

XST TLED R HARNESS

XST SPK RLY HARNESS

XST FR DSW HARNESS

XST TS USB HARNESS

AXR SPEAKER HARNESS

MiniDP-DP 2500mm

B (B16) POS.CASE DOOR SW (SBKNA28300) NO NC COM 1 2 3 HL3P

CN16 1 IO CASE DOOR (PK) 2 GND (W) XH2P

CN2 G GND P D+ N D- V VBUS F FGND USB(B)

B15 CN15 P3_24OUT01 (O) 1 +24V; P3_12OUT07 (Y) 2 +12V; P3_GND03 (BK) 3 GND3; P3_GND04 (BK) 4 GND4 VH4P

GM-M3IO (APX) (1/3)

F1 (Y) P3_12OUT04; (PRP) FAN1; (BK) P3_GND11 EL3P

F2 (Y) P3_12OUT04; (GY) FAN2; (BK) P3_GND11 EL3P

CFS FAN1 (PRP); FAN2 (GY); FAN_SEN (W); THERMAL (BR); P3_12OUT05 (Y); P3_GND07 (BK); P3_5OUT01 (R); P3_GND09 (BK) YL8P

B1 CN1(1/3) 1 CABINET FAN1 SENSOR (PRP); 2 CABINET FAN2 SENSOR (GY); 3 CABINET FAN3 SENSOR (BR); 4 THERMAL SENSOR (BR); 40 PAD40P

K1 AUDIT KEY (BR); RESET KEY (BL); (BK) 1 (BR) KEY SW2; 2 (BL) KEY SW1; 3 (BK) B6GND1 MINI-U3P — RESET/MASTER KEY SW (RESET/AUDIT)

TDO PRISM (R) OPT_5V2; (BR) OPT OUT2; (BK) B7GND5; (W) OPT_IN2 ZH4P

TD TOP DOOR SW (SBKNA28300) (BL) TOP_DSW; (BK) B6GND3 HL3P

ITD TOP DOOR SW (GP) (SBKNA28698) (BR) TFR_DSW NO(GP); (BL) TF_DSW NC(GP); (W) TF_DSW COM(GP) HL3P

FDO PRISM (R) (BR) (BK) (W) ZH4P

FDR (R) OPT_5V1; (BR) OPT OUT1; (BK) B7GND4; (W) OPT_IN1; (PK) FR_DSW; (BK) B6GND4; (BR) TF_DSW NO(GP); (BR) TFR_DSW NO(GP) SM8P

FD FRONT DOOR SW (SBKNA28699) (PK) (BK) HL3P

IFD FRONT DOOR SW (GP) (SBKNA28699) (BR) (BR) HL3P

B6 CN6 (1/2) B6GND1 (BK) 1 GND1; CP PCB CASE SW (PK) 10 LCD CONPANE PCB CASE DOOR; B6GND5 (BK) 13 GND5; 2 GND2; B6GND3 (BK) 3 TOP DOOR SW COM; B6GND4 (BK) 4 FRONT DOOR SW COM; KEY SW1 (BL) 5 KEY SW1(RESET); KEY SW2 (BR) 6 KEY SW2(AUDIT); TOP_DSW (BL) 9 TOP DOOR SW NO; PRI LED (BL) 15 PRINTER LED; BILL LED (SBL) 16 BILL IN LED; 12V3 (Y) 19 PRINTER LED PW; 12V4 (Y) 20 BILL IN LED PW; FR_DSW (PK) 23 FRONT DOOR SW NO; OPT_IN2 (W) 24 OPT TOP DOOR; OPT_IN1 (W) 25 OPT FRONT DOOR; (W) 30 BACK LOGO LED PHD30P

B7 CN7 (1/2) OPT_5V2 (R) 1 GND1; OPT_OUT2 (BR) 18 +5V; OPT_5V1 (R) 19 OPT TOP DOOR OUT; OPT_OUT1 (BR) 20 +5V; B7GND4 (BK) 21 OPT FRONT DOOR OUT; B7GND5 (BK) 23 GND4; 24 GND5; 25; 34 PHD34P

B11 CN11 BACK_PANEL_LED1 LECH (BR) 1; BACK_PANEL_LED1 CLK (PRP) 2; BACK_PANEL_LED1 DATA (GY) 3; BACK_PANEL_LED1 MODE (W) 4; TOP_DOOR_LED1 LECH (BL) T01 5; TOP_DOOR_LED1 CLK (PRP) T02 6; TOP_DOOR_LED1 DATA (GY) T03 7; TOP_DOOR_LED1 MODE (W) T04 8; TOP_DOOR_LED2 LECH (BR) T11 9; TOP_DOOR_LED2 CLK (PRP) T12 10; TOP_DOOR_LED2 DATA (GY) T13 11; TOP_DOOR_LED2 MODE (W) T14 12; ARMREST_L LED BLUE (BL) AR1 13; ARMREST_L LED GREEN (G) AR2 14; ARMREST_L LED RED (PK) AR3 15; ARMREST_R LED BLUE (BL) AR5 16; ARMREST_R LED GREEN (G) AR6 17; ARMREST_R LED RED (PK) AR7 18; +12V (Y) AR4 25; +12V (Y) AR8 26; +5V (R) T05 33; +5V (R) T15 34; +5V 35; GND (BK) T06 37; GND (BK) T16 38; GND 39; GND 40 PND40P

B13 CN13 FOOT_L LED BLUE (BL) F1 1; FOOT_L LED GREEN (G) F2 2; FOOT_L LED RED (PK) F3 3; FOOT_R LED BLUE (BL) F5 4; FOOT_R LED GREEN (G) F6 5; FOOT_R LED RED (PK) F7 6; +12V (Y) F4 7; +12V (Y) F8 8 PH8P

BP1 (BR); BP2 (PRP); BP3 (GY); BP4 (W); (W) SM5P — BL BL BLR — WIRING3 (B1)

TOL T01 (BL); T02 (PRP); T03 (GY); T04 (W); T05 (R); T06 (BK); T11 (BR); T12 (PRP); T13 (GY); T14 (W); T15 (R); T16 (BK) YL12P — XST MAIN HARNESS

TP P3_5OUT01 (R); P3_GND01 (BK) YL2P

A1A / B1A / A2A / A1B — CN1 / CN2 — LATCH, CLK, DATA, MODE, S5V, SGND, P5V, PGND — PA8P / PA9P — AX-STN_LED

PAL AR1 (BL); AR2 (G); AR3 (PK); AR4 (Y); AR5 (BL); AR6 (G); AR7 (PK); AR8 (Y) YL9P

LPA / RPA CN1 1 BLUE 2 GREEN 3 RED 4 +12V PH4P — BD-GM-G2LED (L) / (R)

LCD P3_12OUT02 (Y); P3_GND02 (BK) YL3P

PLC A/D BOARD ASSY 1 +12V; 2 GND EL2P — DISPLAY PORT IN

23 inch LCD — CONTROL BOARD ASSY — TFT LCD PANEL (1920 x 1080) — LED DRIVER — LED BACK LIGHT

TU1 G GND; P D+; N D-; V VBUS; F FGND — 3M TOUCH SCREEN CONTROLLER — SENSOR CONNECTOR — SENSOR HARNESS — 3M TOUCH SCREEN SENSOR

PAD LED — CN1 1 BLUE 2 GREEN 3 RED 4 +12V PH4P — BD-GM-G2LED (L)

LFL F1 (BL); F2 (G); F3 (PK); F4 (Y) — CN1 1 BLUE 2 GREEN 3 RED 4 +12V PH4P — BD-GM-G2LED (L)

RFL F5 (BL); F6 (G); F7 (PK); F8 (Y) — CN1 1 BLUE 2 GREEN 3 RED 4 +12V PH4P — BD-GM-G2LED (R)

FRONT LED

TOP DOOR UNIT

STATION CABI

PRL CN1 (BL); (Y) 1 BLUE 5 +12V PH5P — AX-LED3 (PRINTER)

BIL CN1 (SBL); (Y) 1 BLUE 5 +12V PH5P — AX-LED3 (BILL)

LSR PRI LED (BL); BILL LED (SBL); 12V3 (Y); 12V4 (Y); SLP (BR); SLM (BL); SRP (PRP); SRM (GY) YL8P — XST MAIN HARNESS

SPL / SPR SP SM2P — (BR) (BL) — L / R

TOLERANCE	MATERIAL	FINISH

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ORIGINAL SIZE **A3**

DESIGNED	2024/03/12	G.PROSEN
DRAWN	2024/03/12	Y.NAGASAKI
CHECKED		
APPROVED		
RGSTRD		
PROCESS		

SCALE

DIM.IN mm

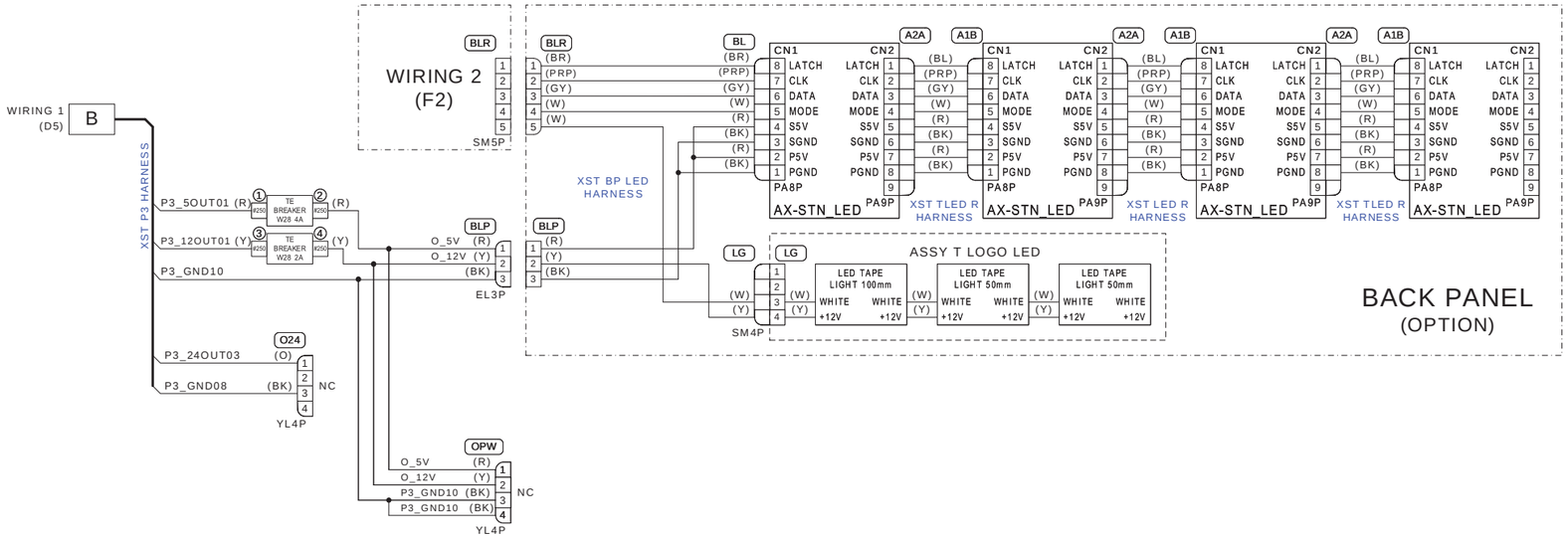
MOLD

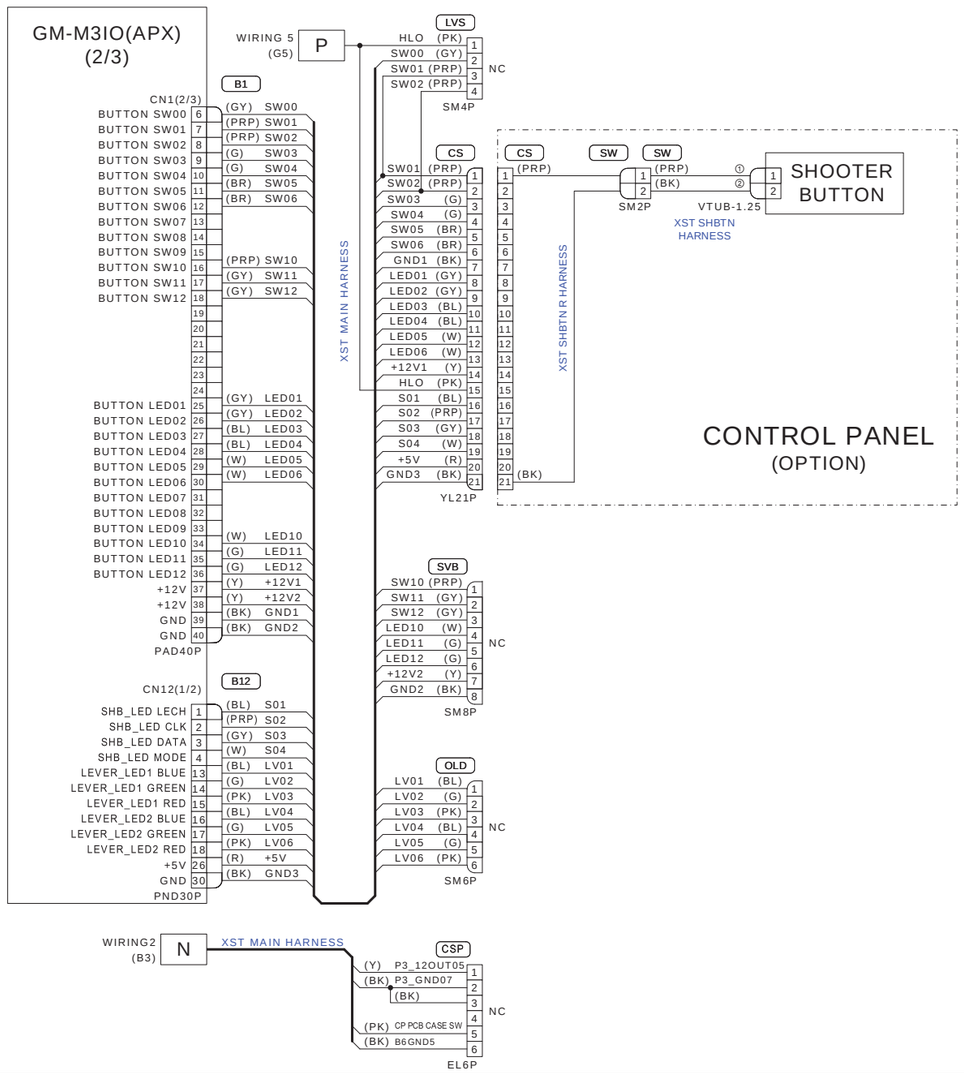
TITLE	WIRING DIAGRAM XST
SEC	ASSY STATION
MODEL	APX-MS
PART No.	810-0053-G (2/5)
ITEM CODE	
RELATION	

interblock LUXURY GAMING PRODUCTS

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	SUB ASSY	XST-0000		
MARK	POS.	REVISION	DATE	BY





TOLERANCE		MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.	
				ORIGINAL SIZE	A3
DESIGNED	2024/03/12	G.PROSEN	SCALE	TITLE	WIRING DIAGRAM XST
DRAWN	2024/03/12	Y.NAGASAKI		SEC	ASSY STATION
CHECKED			DIM.IN	MODEL	APX-MS
APPROVED			mm	PART No.	810-0053-G (3/5)
RGSTRD				ITEM CODE	
PROCESS			MOLD	RELATION	

interblock LUXURY GAMING PRODUCTS

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PERIPHERAL DEVICEs OPTION

	SUB ASSY	XST-0000
MARK	POS.	REVISION	DATE	BY

XST P3 HARNESS

BILL VALIDATOR / NOTE ACCEPTOR

BRC (BL) (BR) (G) (O) (BK) — AXK MEI HARNESS — MEI (BL) (BR) (G) (O) (BK)

EL9P

MEI
SCN66
SCN83

12 TXD OUT
6 RXD IN
5 GND
11 +24V
7 GND
MINI-U12P

BRC (W) (Y)(BR) (BK) (Y)(O) (R) (BK) — AXK IVIZION HARNESS — JCM (W) (Y) (BK) (O) (BK) (R)

EL9P

BJ (BR) (Y) (BK) — 1 2 NC 3 — EL3P

JCM IVIZION

11 TXD OUT
20 RXD IN
10 SGND
12 +12V
18 GND
1 +24V
21 DET-GND
22 DET-GND
15 TTL SU SELECT
24 TTL G SELECT
185884 26P

WIRING1 (D6) C

BRC BRX (BL) BTX (BR) BGND (BK) P3_12OUT03 (Y) P3_GND03 (BK) P3_24OUT01 (O) P3_GND03 (BK)

EL9P

BRC (BR) (G) (BK) (Y) (BK) — AXK UBA-C HARNESS — 02 (BR) (G) (BK)

EL9P

2 TXD
3 RXD
4 SGND
SL4P

RS232C SIGNAL LEVEL CONVERSION BOARD

+12V A3
PGND B2
RESET A4
IF12V B3
SGND B5
TXD OUT A5
RXD IN B4
+12V B1
PGND A2
LY10P

01 (Y) (BK) (PK) (Y) (BK) (BR) (G) (Y) (BK)

UBA (Y) (BK) (PK) (Y) (BK) (BR) (G)

1 +12V
2 PGND
3 RESET
5 IF12V
13 SGND
16 RXD IN
19 TXD OUT
20
DRA20P

JCM UBA14

CN3 (BR) (G) (BR) (G) — 1 5 7 11 — CN3
1 TXD
5 RXD
7 RXD IN
11 TXD OUT
PH12P

M2IO(BODY)PCB — CN5 1 X 7 10 — RF10P — (BL) (BK)

10k

CN2 (BL) (BL) (BK) (BK) — 1 2 3 4 —
CN2
1 3.3V
2 3.3V
3 GND
4 GND
XH4P

BD-GM-GE_CUSTOM (4P232)

BRC (BL) (BR) (G) (O) (BK) — AXK CASH FLS HARNESS — FLS (BL) (BR) (G) (O) (BK)

EL9P

3 TXD OUT
2 RXD IN
7 GND
19 +24V
13 GND
5205067

CASH CODE FLS

TICKET PRINTER

PRC PRX (BL) PTX (BR) PGND (BK) P3_24OUT01 (O) P3_GND04 (BK) — EL6P

PRC (BL) PRX (BR) PTX (BK) PGND (O) P3_24OUT01 (BK) P3_GND04 — AXK PRINTER HARNESS — PRN (BK) (O) (BK) (O) (BK) (BR) (BL)

EL6P

5 GND
6 +24V
7 GND
8 +24V
9 BEZEL LED +24V
10 GND
11 RXD IN
12 TXD OUT
14
NEW FIT14P

Nanoptix	PAYCHECK4
ITHACA	EPIC950
FUTURE LOGIC	GEN5
	GEN2 UNIVERSAL

ALL OF ITEMS HAS ONE HARNESS

AXK PRN RLY HARNESS — AXK PRINTER HARNESS

PRC (BL) (BR) (BK) (O) (BK) — PRR — PRC (BL) PRX (BR) PTX (BK) PGND (O) P3_24OUT01 (BK) P3_GND04 — PRN (BK) (O) (BK) (O) (BK) (BR) (BL)

EL6P EL6P

5 GND
6 +24V
7 GND
8 +24V
9 BEZEL LED +24V
10 GND
11 RXD IN
12 TXD OUT
14
NEW FIT14P

Nanoptix	PAYCHECK NEXTGEN

COP P3_24OUT04 (O) P3_GND04 (BK) 5VSB_CO (PRP) — 1 2 NC 3 — YL3P

WIRING 5 (G2) R — XST MAIN HARNESS — CO

CAS (PK) 1
DCS (BL) 2
12V1 (Y) 3
CAE (GY) 4
12V2 (Y) 5
CDV (SBL) 6
CAT (PRP) 7
B7GND2 (BK) 8
5V (R) 9 NC
CAC (BR) 10
B7GND3 (BK) 11
12
5VSB_IN (R) 13
OUT SW1 (BR) 14
LEVEL SW1 (BL) 15
REMOVE1 (PRP) 16
CTL1 (PK) 17
S_GND (BK) 18
SM18P

WIRE COLOR

(BK)	BLACK
(BR)	BROWN
(R)	RED
(O)	ORANGE
(Y)	YELLOW
(G)	GREEN
(BL)	BLUE
(PRP)	PURPLE
(GY)	GRAY
(W)	WHITE
(PK)	PINK
(SBL)	SKY BLUE

TOLERANCE	MATERIAL	FINISH	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.
			ORIGINAL SIZE **A3**

DESIGNED	2024/03/12	G.PROSEN	SCALE	TITLE	WIRING DIAGRAM XST
DRAWN	2024/03/12	Y.NAGASAKI		SEC	ASSY STATION
CHECKED			DIM.IN	MODEL	APX-MS
APPROVED			mm	PART No.	810-0053-G (4/5)
RGSTRD				ITEM CODE	
PROCESS			MOLD	RELATION	

interblock LUXURY GAMING PRODUCTS

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PART No. 810-0053-G (4/5)

NSW OPTION

MARK	POS.	REVISION	DATE	BY
		SUB ASSY XST-0000		

PART No. 810-0053-G (5/5)

ASSY AP-X

CPK GMEMBT HARNESS

CN11 — VBAT1 — 3.2V(VBAT) 1 — VBAT_GND1 — GND 2 — PH2P — CN11

VB1 — (BL) — (BK) — SM2P

XST CAP PWR HARNESS

VB1 (BL) VBAT1 — VB1 (BK) VBAT_GND1

CONNECT TO EITHER "SUBIO(B5)" OR "X-COM"

D — WIRING 1 (D5)

XSP — P3_12OUT06 (Y) — P3_GND05 (BK) — P3_GND06 (BK) — YL4P

XST P3 HARNESS

XS1 — XS2 — XSP — YL4P

CPK CAP HARNESS

C1I — CN1 — VIN 12V — VIN GND — VH4P

C2O — CN2 — 3.2VBAT1 — VBATGND1 — CONT_VCC1 — XH4P

C3O — CN3 — 3.2VBAT2 — VBATGND2 — CONT_VCC2 — XH4P

C4O — CN4 — 12V_B-P — 3.3V — XH3P

VIN — P3_12OUT06 (Y) — P3_GND05 (BK) — VBAT1 (BL) — VBAT_GND1 (BK)

VBAT2 (BL) — VBAT_GND2 (BK) — SM12P

CN4(2/2) — AG4 — ON (BR) — COM (BK) — ON (BR) — COM (BK) — PH8P

D — PCB CASE SW (SDKNA2606) — HL3P — SECURITY CASE

AX-GMEM (2/2)

CN7 — AG7 — SEF-1 (W) — SEF-2 (W) — SEF-3 (W) — SEF-4 (W) — SEF-5 (W) — SEF-6 (W) — SEF_G (BK) — PH9P

CTL — I/O — (W) SEF_1 — (W) SEF_2 — (W) SEF_3 — (W) SEF_4 — (W) SEF_5 — (W) SEF_6

APX XCOM CTL HARNESS

XST XCOM HARNESS

XCOM DOOR SW — (BR) XCOM DOOR SW

XCOM DOOR COM — (BK) XCOM DOOR COM

(BK) GND — D-SUB15P

XD — XCOM DOOR SW (SDKNA2606) — HL3P

XST XCOM POW HARNESS

P3_12OUT06 (Y) — P3_GND05 (BK)

12V (Y) — 12V (BK) — YL2P

AXK 6P POW HARNESS

BREAKER 0.5A ×6 — (BR) — (Y) (BK) — A B C D E F

MOLEX .093 3P x6

XST CAP PWRHARNESS

B5 — CN5 — VBAT2 (BL) — VBAT_GND2 (BK)

WIRING 4 (E4) — R

B7 — PH2P — CN7 (2/2)

CAS	(PK)	2 COIN ACCEPTOR SENSOR
DCS	(BL)	4 DROP COIN SENSOR
12V1	(Y)	6 +12V
CAE	(GY)	7 COIN ACCEPER ENABLE
12V2	(Y)	9 +12V
CDV	(SBL)	10 COIN DIVIDER
CAT	(PRP)	11 COIN ACCEPER TILT
B7GND2	(BK)	12 GND2
5V	(R)	13 +5V
CAC	(BR)	14 COIN ACCEPER CREDIT
B7GND3	(BK)	15 GND3

PHD34P

XST MAIN HARNESS

WIRING2 (B5) — M — XST MAIN HARNESS

WIRING 1 (E4) — I — XST MAIN HARNESS

GP

TF_DSW COM(GP)	(W)	1
TF_DSW NO(GP)	(BR)	2
BILL ST DSW COM(GP)	(W)	3
BILL ST DSW NO(GP)	(BR)	4
DPBOX DSW COM(GP)	(W)	5
DPBOX DSW NO(GP)	(BR)	6
RX IN	(BL)	7
TF_DSW NC(GP)	(BL)	8
TX OUT	(BR)	9
P3_GND09	(BK)	11
P3_5OUT01	(R)	12
PCB BOX CASE SW NO(GP)	(BR)	13
PCB BOX CASE SW NC(GP)	(BL)	14
PCB BOX CASE SW COM(GP)	(BK)	15

MINI-U15P

B10 — CN10

5VSB_IN	(R)	1 +24V
OUT SW1	(BR)	3 +5V
LEVEL SW1	(BL)	4 HOPPER OUT SW1
REMOVE1	(PRP)	5 HOPPER LEVEL SW1
CTL1	(PK)	6 HOPPER REMOVE
		7 HOPPER CTL1
S_GND	(BK)	8 HOPPER CTL2
		9 GND
		10 GND

NH10P

PD — PCB BOX CASE SW (SDKNA2606) — HL3P — XST MAIN HARNESS — (BR) (BL) (BK)

HLP — HLR — HLR — AXK SWEXTEND HARNESS — STACKER REMOVE SW (SDKNA2606) — HL3P — (PK) (W) (PK) (W) — HL3P

GP2

STACKER REMOVE NO	(PK)	1
STACKER REMOVE COM	(W)	2

MINI-U2P

ISD — BILL STACKER DOOR SW (SDKNA2606) — HL3P — XST BSD SW HARNESS — (BR) (W) (PK) (W) — SDR SDR — (BR) BILL ST DSW NO(GP) / (W) BILL ST DSW COM(GP) / (PK) BILL ST DSW NO / (W) B6GND7 — HL4P

SDS — BILL STACKER DOOR SW (SDKNA2606) — HL3P

IDB — DROP BOX DOOR SW (SDKNA2606) — HL3P — XST BTM DSW HARNESS — (BR) (W) (PK) (W) — DBR DBR — (BR) DPBOX DSW NO(GP) / (W) DPBOX DSW COM (GP) / (PK) DPBOX DSW NO / (W) B6GND6 — EL4P NV

DBD — DROP BOX DOOR SW (SDKNA2606) — HL3P

B3 — CN3 — ID JP — ID JP — PHD8P

XST MAIN HARNESS

B9 — CN9 — +5V — APX M3IO JP — APX M3IO JP — HANDLE LED ON — NH5P

WIRING 3 (B3) — P — XST MAIN HARNESS — HLO (PK)

B6 — CN6 (2/2)

B6GND6	(W)	14 GND6
DPBOX DSW NO	(PK)	21 DROP BOX DOOR SW NO
BILL ST DSW NO	(PK)	22 BILL STACKER DOOR SW NO
B6GND7	(W)	25 GND7

PHD30P

GM-M3IO(APX) (3/3)

AP-X(2/3)

GO TO WIRING1

COM1 — CM1 — RXD1 IN (BR) — TXD1 OUT (BL) — COM1GND (BK) — D-SUB9P

COM2 — CM2 — RXD2 IN (BR) — TXD2 OUT (BL) — COM2GND (BK) — D-SUB9P

XST XCOM HARNESS

AP-X(3/3) DUAL PORT OPTION

CO5 — COX — SOX — CM5 — AXR CABI COM HARNESS — GCOM1 — RRXD6 (BL) — TTXD6 (BR) — GND6 (BK) — RF10P — D-SUB9P

APX COM HARNESS

CO6 — COX — SOX — CM6 — AXR CABI COM HARNESS — GCOM2 — RRXD6 (BL) — TTXD6 (BR) — GND6 (BK) — RF10P — D-SUB12P

APX COM HARNESS

USA OPTION

XST GAT3 R1 HARNESS — XST GAT3 R2 HARNESS

CO2 (2/2) — CM2 — RG — RG — GAT3 — +5V — RXD (PK) (BL) — TXD — DTR — GND (BK) — DSR — RTS — CTS — RI — SM3P — D-SUB9P

GO TO WIRING1

AX-XCOM

X10 — CN10 — 12V — GND — GND — VH4P — P3_12OUT06 (Y) — P3_GND05 (BK)

PORT1 — HIF3B10P

X9 — CN9 — 3.3V — SEF_1 — PE_2 — SEF_2 — PE_3 — SEF_3 — PE_4 — SEF_4 — PE_5 — SEF_5 — PE_6 — SEF_6 — GND — GND — PND14P

SEF_1 (W) — SEF_2 (W) — SEF_3 (W) — SEF_4 (W) — SEF_5 (W) — SEF_6 (W) — GND (BK)

PORT2 — PORT3 — PORT4 — PORT5 — PORT6 — HIF3B 10P

X7 — CN7 — RXD1 — TXD1 — GND — XH3P — RXD1 IN (BR) — TXD1 OUT (BL) — COM1 GND (BK)

X8 — CN8 — RXD2 — TXD2 — GND — XH4P — RXD2 IN (BR) — TXD2 OUT (BL) — COM2 GND (BK)

MECH COUNTER (OPTION)

CONNECT TO EITHER "SUBIO" OR "X-COM(B1)"

WIRING 1 (D4) — D — XST P3 HARNESS — XSP — (Y) P3_12OUT06 — (BK) P3_GND05 — (BK) P3_GND06 — YL4P

XST SUBIO PW HARNESS — XSP — SB1

AX-SUBIO — CN1 — +24V — +12V — GND — GND — VH4P

CN4 — +12V1 — METER1 — +12V2 — METER2 — +12V3 — METER3 — +12V4 — METER4 — +12V5 — METER5 — NH10P

COUNTER 5MZ279B-4L900 ASSY — CN4 — METER 1 — METER 2 — METER 3 — METER 4 — MECH COUNTER

WIRING 1 (G5) — K — G USB1.5M HARNESS — B — CN2 — VBUS — D- — D+ — GND — FGND — USB(B)

TOLERANCE	MATERIAL	FINISH
-		

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CHECKED			DIM.IN
APPROVED			mm
RGSTRD			MOLD
PROCESS			

TITLE	WIRING DIAGRAM XST
SEC	ASSY STATION
MODEL	APX-MS
PART No.	810-0053-G (5/5)
ITEM CODE	
RELATION	

interblock LUXURY GAMING PRODUCTS

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