



DEADSTORM PIRATES OPERATION MANUAL

© NAMCO BANDAI Games Inc.

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The actual product may differ slightly from the illustrations in this manual.

NAMCO BANDAI Games Inc.

WARNING

To ensure safe operation of the game machine, be sure to read this Operation Manual before use.
Keep this Operation Manual in a safe place for quick access whenever needed.

INTRODUCTION

Thank you for purchasing the “DEAD STORM PIRATES” game machine (hereafter referred to as the “machine”).

This operation manual describes:

- How to install, operate, relocate, transport, maintain and discard the machine safely and properly
- How to operate the machine correctly and make full use of its features
- How to ensure safety of players and bystanders

Inquiries regarding this machine and its repair

- For further information about the machine and its repair, contact your distributor.

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PolycomR G.722.1 Annex C audio coding technology

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1. SAFETY PRECAUTIONS – Be sure to read these instructions to ensure safety –

Instructions to the owner

- If you entrust another party to perform installation, operation, relocation, transportation, maintenance or discarding of the machine, instruct the concerned party to read and observe all the instructions and precautions in this operation manual regarding the particular action to be taken.

1-1 Magnitudes of risk

On the labels attached to the machine and in this operation manual, precautions regarding safety and property damage are classified as shown below in accordance with the magnitude of the particular risk.

 **WARNING** : Failure to avoid the indicated risk may result in death or serious injury.

 **CAUTION** : Failure to avoid the indicated risk may result in minor injury or property damage.

Notes related to machine functions but not to safety are marked with the following indication.



NOTICE : Note related to product function or protection.

1-2 Definition of the term “technician”

This operation manual is written for arcade personnel. However, the sections marked “**To be conducted by a technician only**” in the table of contents are written for technicians. These tasks should be conducted by technicians only.

Technician: A person engaged in machine design, manufacture, inspection or maintenance service for a manufacturer of amusement equipment, or a person who has technical knowledge related to electricity, electronics or mechanical engineering at a level equal to or higher than that of a technical high school graduate and is engaged routinely in the maintenance and management (including repair) of amusement machines.

1-3 Top-priority safety precautions

WARNING

- Should any abnormality occur, turn off the power switch immediately to stop operating the machine. Then, unplug the power cord plug from the AC outlet. Operating the machine without correcting abnormalities can result in a fire or accident.
- Some monitor sections remain hot or charged with high voltage even after the power switch is turned off. Do not touch the monitor unnecessarily in order to avoid electric shock and burns.
- Dust accumulated on the power cord plug may cause a fire. Check the power cord plug regularly and remove dust.
- Insert the power cord plug firmly into the AC outlet. Poor contact may cause overheating that can lead to a fire or burns.
- A damaged power cord can cause a fire, electric shock or electrical leakage. Observe the following cautions.
 - Keep the power cord away from heating devices.
 - Do not twist the power cord.
 - Do not bend the power cord forcibly.
 - Do not alter the power cord.
 - Do not bundle the power cord.
 - Do not pull the power cord. (Always unplug by holding the power cord plug, and avoid pulling the power cord.)
 - Do not place anything on the power cord.
 - Do not get the power cord caught by the machine, other equipment or wall.
 - Do not do anything else that might damage the power cord.
- Do not wet the power cord or power cord plug with water. Water can cause an electric shock or electrical leakage.
- Do not touch the power cord plug with a wet hand. Doing so can result in an electric shock.
- The machine's rated power supply voltage and maximum consumption current are 120 VAC and 14 A, respectively. To prevent fire and electric shock, be sure to use interior wiring that conforms to these power supply specifications.
- Operate the machine with a power supply voltage in the range of 110 to 120 VAC. Operating the machine with a supply voltage outside the specified range may cause a fire or electric shock. To ensure that the machine operates in optimum condition, maintain the power supply at 120 VAC.
- To ensure safe operation of the machine, be sure to conduct the pre-service check (see P. 20 "7-4 Pre-service check") and maintenance (see P. 57 "8B. Maintenance") described in this manual. Failure to conduct the pre-service check or maintenance can result in an unexpected accident.
- Use consumables and service parts (including fasteners) specified by our company. To order parts, contact your distributor.
- Do not convert the machine without permission. Do not perform any work that is not described in this operation manual. Unauthorized conversion of the machine may create unforeseen hazards.
- When transferring the ownership of the machine, be sure to provide this operation manual together with the game machine.

1-4 Description of warning labels attached to the machine

WARNING

- The warning labels describe important safety precautions. Be sure to observe the following:
 - To ensure that the warning labels attached to the machine are easily legible, install the machine at an appropriate location with ample illumination and keep the labels clean at all times. Also, make sure that the labels are not hidden behind another game machine or other objects.
 - Do not remove or alter the warning labels.
 - If the warning labels become excessively dirty or damaged, replace them with new labels. To order warning labels, contact your distributor.

■ Back side



1. SAFETY PRECAUTIONS

■ Front side



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2. SPECIFICATIONS

- | | |
|---------------------------------|---------------------------------------|
| (1) Rated power supply | 115 ± 5 VAC (60 Hz) |
| (2) Maximum power consumption | 1,250W |
| (3) Maximum current consumption | 14.0 A |
| (4) Coin box capacity | Approx. 3,000 coins |
| (5) Display device | LCD monitor (55-inch screen) |
| (6) Dimensions | |
| ① As installed | 1,760(W) x 2,480 (D) x 2,260 (H) [mm] |



- | | |
|----------------|--|
| ② When divided | |
| Monitor Assy | 1,410 (W) x 680 (D) x 1,820 (H) [mm] |
| Control Assy | 1,410 (W) x 800 (D) x 1,820 (H) [mm] |
| Seat Assy | 1,760 (W) x 1,000 (D) x 1,820 (H) [mm] |
| Marquee Assy | 1,360 (W) x 300 (D) x 570 (H) [mm] |
| Roof Assy | 1,410 (W) x 550 (D) x 110 (H) [mm] |

- | | |
|----------------|----------------|
| (7) Weight | |
| ① As installed | Approx. 710 kg |
| ② When divided | |
| Monitor Assy | Approx. 245 kg |
| Control Assy | Approx. 220 kg |
| Seat Assy | Approx. 105 kg |
| Marquee Assy | Approx. 16 kg |
| Roof Assy | Approx. 14 kg |

3. CHECKING THE PACKAGE CONTENTS

The product packages shipped from the factory contain the following components and parts.



- Make sure that all the items shown below are contained in the product packages.
- If any item is missing, contact your distributor.

- Dimensions and contained items for the product packages

Packaging 1: 60" (W) x 31" (D) x 75" (H)

- Monitor Assy

Packaging 2: 60" (W) x 39" (D) x 75" (H)

- Control Assy
- Box 1 (Marquee Assy)

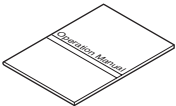
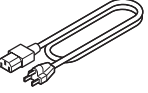
Packaging 3: 74" (W) x 51" (D) x 77" (H)

- Seat Assy
- Box 2 (Roof Assy(1), CS bottom joint bracket(2), MC bottom joint bracket(2), MC side joint bracket(2), Top joint bracket(2), Screws)



3. CHECKING THE PACKAGE CONTENTS

• Accessory list

No.	Name	Specification		Qty.
1	Operation Manual (this manual)			1
2	Maintenance key			2
3	Coin box key			2
4	Torx wrench	M?, T25		1
6	Torx wrench	M?		1
7	Power Cord			1
8	USB dongle			1

4. OVERALL CONSTRUCTION (Names of Parts)

■ General view (front side)

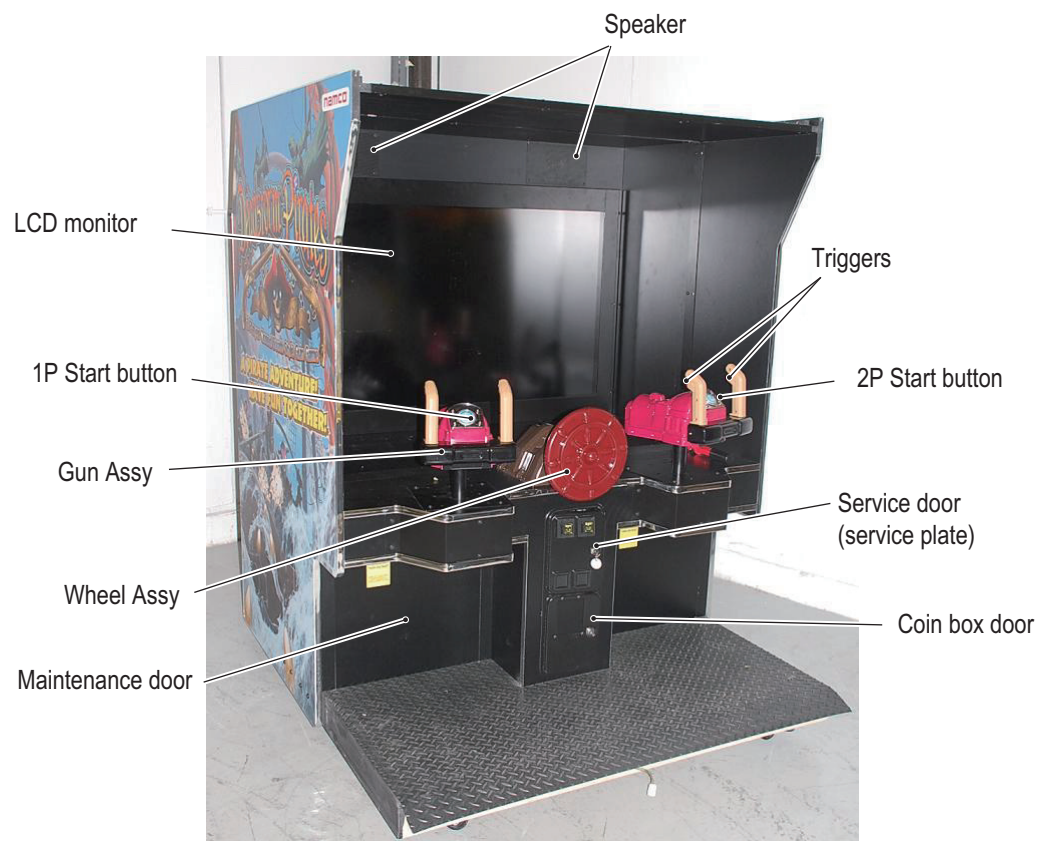


■ General view (rear side)



4. OVERALL CONSTRUCTION (Names of Parts)

■ Monitor and Control Assys



5. INSTALLATION AND CARRY-IN PASSAGE CONDITIONS

WARNING

- Install the machine according to the instructions and procedures specified in this operation manual. Failure to follow the specified procedures may result in a fire, electric shock, injury or machine malfunctions.
- Insert the power cord plug firmly into the AC outlet. Poor contact may cause overheating that can lead to a fire or burns.
- Be sure to connect the ground lead. If the ground lead is not connected, electric shock can result in case of electrical leakage. (See P. 56 “8A-1-7 Connecting the power cord and ground lead.”)
- Install the machine securely by using the level adjusters. Unstable machine installation can result in an accident or injury. (See P. 55 “8A-1-6 Adjusting level adjusters.”)

5-1 Installation conditions

WARNING

- Do not place items near the vent holes on the rear panel of the Monitor Assy of the game machine, or block them with a wall. If those openings are blocked, the inside of the machine becomes extremely hot and fire or malfunction may result.

5-1-1 Locations to avoid

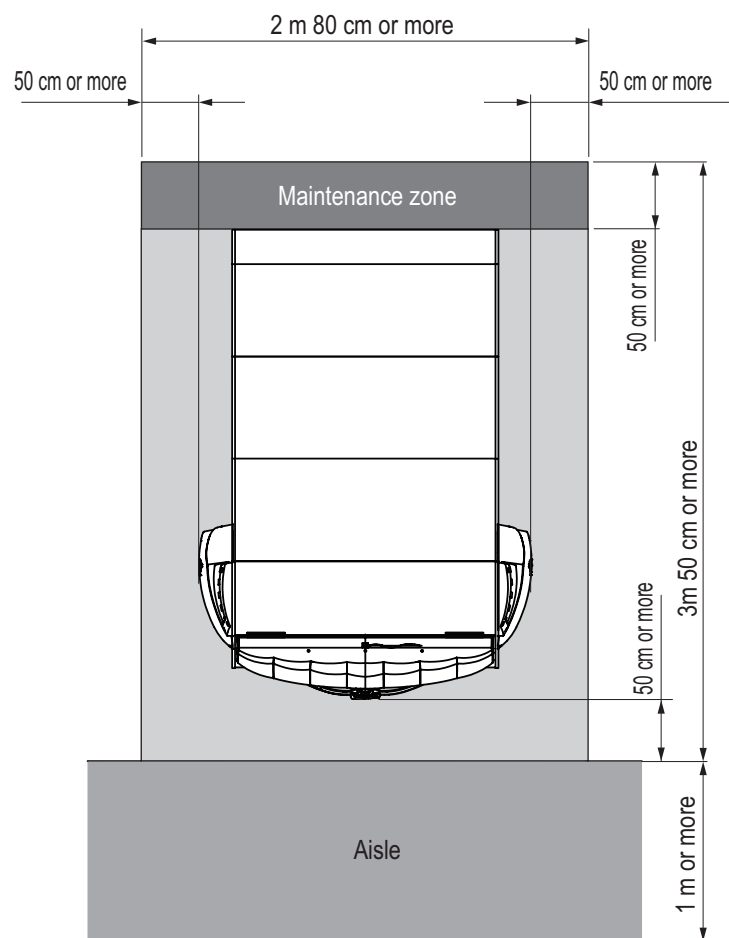
WARNING

- The machine is designed for indoor use. Never install the machine outdoors or at any of the following places:
 - Place in direct sunlight
 - Place exposed to rain or water leakage
 - Damp place
 - Dusty place
 - Close to heating devices
 - Hot place
 - Extremely cold place
 - Place where dew condensation may occur due to temperature differences
 - Place where the machine may become an obstruction in emergencies (such as near emergency exit) or place where fire extinguisher or similar equipment is installed
 - Unstable place or location where vibrations are produced

5-1-2 Play zone for installed machine



- Provide a space of at least 50 cm between the rear side of the machine and the wall or other machine in order to turn the power switch ON/OFF and open the Maintenance panel.
- The vent holes on the rear side of the machine must not be blocked.
- The distance from the floor to the ceiling must be at least 2 m 30 cm.



5-2 Required dimensions of carry-in passage (such as doors and corridors)

The machine is divided into separate components at the factory before shipping. The dimensions of main components are as follows:

- Monitor Assy
1,410 (W) x 680 (D) x 1,820 (H) [mm]
Weight: kg
- Control Assy
1,410 (W) x 800 (D) x 1,820 (H) [mm]
Weight: kg
- Seat Assy
1,760 (W) x 1,000 (D) x 1,820(H) [mm]
Weight: kg

6. MOVING AND TRANSPORTING



WARNING

- Do not leave the machine on a slope. If the machine is left on a slope, it may tip over and cause an unexpected accident.

6-1 Moving (on the floor)



NOTICE

- Carefully transport the machine in order to prevent damage to the machine.
- Do not apply excessive force to plastic parts since they can break easily.
- Even when moving the machine for a short distance, be sure to raise the level adjusters all the way. (See P. 55 “8A-1-6 Adjusting level adjusters.”)
- Be sure to turn off the power switch before moving the machine.
- Carefully handle power cord. (See P 56 “8A-1-7 Connecting the power cord and ground lead.”)

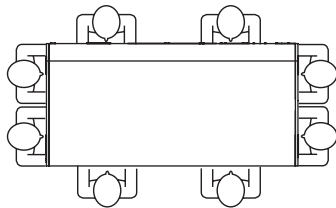
6-2 Transportation

6-2-1 Manual transportation (carrying on stairs, etc.)

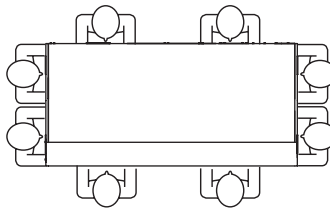
WARNING

- When carrying the machine manually, be sure to divide the machine into the Monitor Assy, Control Assys, Seat Assy, Marquee Assy and Roof Assy and raise all the level adjusters all the way. (See P. 48 “8A-1 Assembly.”)
An attempt to carry the machine manually (over stairs, etc.) without dividing the machine as described above can result in an unexpected accident.
- When carrying the machine manually, make sure that the following number of persons are available. An attempt to carry the machine with fewer persons can result in an accident or injury.

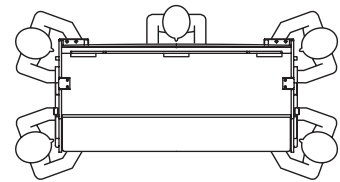
• Monitor Assy	(approx. 160 kg): 6 persons or more
• Control Assy	(approx. 150 kg): 6 persons or more
• Seat Assy	(approx. 110 kg): 5 persons or more
• Marquee Assy	(approx. 16 kg): 2 persons or more
• Roof Assy	(approx. 20 kg): 2 persons or more



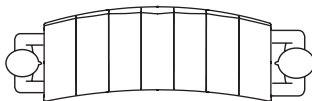
Monitor Assy



Control Assy



Seat Assy



Marquee Assy



Roof Assy



NOTICE

- Do not apply impact to the machine when lowering the machine from a step.

7. OPERATION

WARNING

- Some monitor sections remain hot or charged with high voltage even after the power switch is turned off. Do not touch the monitor unnecessarily in order to avoid electric shock and burns.
- Dust accumulated on the power cord plug may cause a fire. Check the power cord plug regularly and remove dust.
- Insert the power cord plug firmly into the AC outlet. Poor contact may cause overheating that can lead to a fire or burns.
- Be sure to check that the machine has been installed according to the instructions and procedures specified in this operation manual (see P. 13 “5. INSTALLATION AND CARRY-IN PASSAGE CONDITIONS”) before operating the machine. If the machine is not installed properly, fire, electric shock, injury or equipment malfunction can occur.
- The warning labels describe important safety precautions. Be sure to observe the following:
 - To ensure that the warning labels attached to the machine are easily legible, install the machine at an appropriate location with ample illumination and keep the labels clean at all times. Also, make sure that the labels are not hidden behind another game machine or other objects.
 - Do not remove or alter the warning labels.
 - If the warning labels become excessively dirty or damaged, replace them with new labels. To order warning labels, contact your distributor.
- To ensure safe operation of the machine, be sure to conduct the pre-service check (see P. 20 “7-3 Pre-service check”) and maintenance (see P. 57 “8B. Maintenance”) described in this manual. Failure to conduct the pre-service check or maintenance can result in an unexpected accident.

7-1 People who shouldn't play

CAUTION

- To ensure safety of players and prevent accidents, do not allow the following people to play the game machine.
 - Person who is sick or recovering from injury
 - Person with unhealthy heart
 - Person in poor physical condition
 - Person under the influence of alcohol
 - Pregnant woman
 - Person who does not observe the warnings indicated on the machine

7-2 Safety precautions to be observed by players



CAUTION

- If a player becomes sick due to light stimulation or game images, have the person stop playing the game immediately and let him/her rest.
- In rare cases, stimulation by lights or video images can cause convulsion or a loss of consciousness. If this happens, advise the player to consult a doctor as soon as possible. When pre-school children play, request their parents or guardians to keep on eye on the children.

7-3 Pre-service check

Check the following items before commencing operation.

If any problem is found, take corrective measures by referring to “8B-2 Troubleshooting” on page 58.

7-3-1 Safety check (before power ON)

WARNING

- To prevent accidents and injury, be sure to conduct the pre-service check described in “7-3-1 Safety check (before power ON)” on page 20 before commencing operation.
- To prevent accidents and injury, be sure to check that the machine is not installed in a place described in “5-1-1 Locations to avoid” on page 13 before commencing operation.
- Operating the machine with damaged, broken or deteriorated parts, or with incorrectly installed parts can cause injury to players or people near the machine. If an abnormality is found, replace defective parts immediately. To order parts, contact your distributor.

- (1) Are all warning indications in place? (See P. 3 “1-4 Description of warning labels attached to the machine.”)
- (2) Are the warning indications legible? (See P. 3 “1-4 Description of warning labels attached to the machine.”)
- (3) Are all level adjusters adjusted properly? (See P. 55 “8A-1-6 Adjusting level adjusters.”)
- (4) Is the specified play zone provided? (See P. 14 “5-1-2 Play zone of installed machine.”)
- (5) Are the power cord and communication cable routed so that they will not cause players or other customers to trip over?
- (6) Are the power cord securely connected to the AC outlet and the power input socket on the machine? (See P. 56 “8A-1-7 Connecting the power cord and ground lead.”)
- (7) Is the power cord plug free of dust? (See P. 56 “8A-1-7 Connecting the power cord and ground lead.”)

Check the following items after turning on the power switch. If an abnormality is found, turn off the power switch immediately to stop operating the machine. Then, unplug the power cord from the AC outlet and contact your distributor.

- (8) Is any part of the power cord or plug abnormally hot?
- (9) Does touching the machine give an electric shock?
- (10) Is there a burning smell, abnormal noise or vibration?
- (11) Is there any other sign of abnormality or malfunction?

7-3-2 Operation check (after power ON)

Check the following items in the Test mode. (See P. 25 “7-5-2 Adjustment switches.”)

- (1) Check the lamps for proper operation. (Do the fluorescent lamps and Start buttons light?)
(See P. 29 “7-6-4 Switch/sensor test (I/O TEST).”)
- (2) Check the Start buttons for proper operation.
(See P. 29 “7-6-4 Switch/sensor test (I/O TEST).”)
- (3) Check the wheel for proper operation.
(See P. 29 “7-6-4 Switch/sensor test (I/O TEST).”)
- (4) Check the guns for proper operation.
(See P. 29 “7-6-4 Switch/sensor test (I/O TEST).”)
- (5) Check the displayed image. (Does the monitor show images properly?)
(See P. 36 “7-6-5 Monitor adjustment (MONITOR TEST).”)
- (6) Check the sound. (Is sound produced by each speaker?)
(See P. 38 “7-6-6 Sound adjustment (SOUND TEST).”)

7-4 How to play

(1) Basic rules

1. Players shoot approaching enemy pirates and monsters.
2. The player's life level decreases when the player is struck by a sword or bitten. If the player fails to turn the wheel as instructed when it is necessary to do so, the life level also decreases. When the life level decreases to 0, the game ends.
3. When a circular target mark appears on an enemy's body or on the weapon thrown by an enemy, shoot and destroy it.
4. There are two types of target marks: normal target marks and gold target marks. A gold target mark appears on a strong and powerful enemy who is difficult to destroy. Use "united shots" to destroy a strong and powerful enemy. (See P. 22 "7-4 (3) Explanation of the game system.")
5. When two persons are playing the game, the rating of the combination play of the two players is displayed on the result screen. The combination play rating becomes higher when the players use united shots effectively to destroy enemies and operate the wheel skillfully to evade danger.

(2) Operating method

1. Shooting the golden gun — Pull the trigger on the gun-shaped controller (Gun Assy) to shoot. When the trigger is held pulled, the gun shoots consecutively.
2. Shooting the cannon — When the weapon changes to a cannon, pull the trigger to shoot the cannon. To shoot the cannon continuously, it is necessary to pull the trigger after each shot, unlike the golden gun. Also, there will be a time delay between shots.
3. Turning the wheel — It is necessary to turn the wheel to navigate the ship or dodge the enemy's attack in some situations during the game. Turn the wheel according to the instructions displayed on the screen to evade danger.

(3) Explanation of the game system

1. United shot

By aligning the gunsights of the two guns on a target, players can launch a united shot that is more powerful than an ordinary shot. When shooting united shots, the gunsight on the screen becomes larger and the color of the shots and the shooting sound also change.

Use united shots to destroy enemies with a gold target mark. Other enemies can also be destroyed easier when united shots are used.

2. Power-up shot

When a player shoots a green gem placed on a ship or in pirates' hide-out, the gun of the player who shot the gem increases in power and is able to destroy many enemies with each shot.

3. Red cask

The red casks placed on a ship or in pirates' hide-out explode when shot. By shooting a red cask near enemies, the cask explodes and destroys the enemies nearby.

4. Treasure box

When a player shoots a treasure box on a ship or in pirates' hide-out, the player gains additional scores.

5. Selection of treasure box

In the event indicated "TREASURE HUNT," a player selects one from two or three treasure boxes shown on the screen and shoots it. If the shot treasure box contains an item, the player's life level increases.

6. Continuity roulette

When two persons are playing the game, if one person plays Continuity game, the other player's life level also increases.

The amount of life level increase is determined by the roulette that appears in the Continuity game.

The roulette stops after a certain time, but it can be stopped by pressing the Start button.

(4) Start button

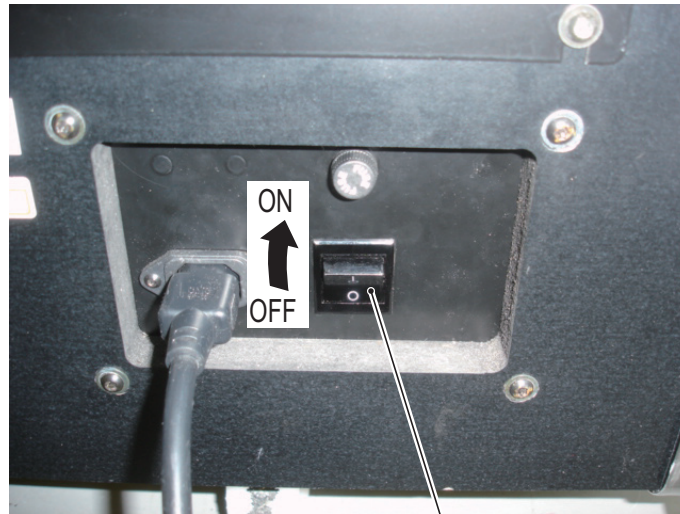
1. The game starts on the side on which the Start button is pressed.
When the left-side Start button is pressed, the player plays the game as Eric (red).
When the right-side Start button is pressed, the player plays the game as Leah (blue).
2. A player can join the game anytime during the game.
3. When a message, "Press the Start button to skip," appears during a demo scene between game scenes, pressing the Start button skips the demo scene.

7-5 Explanation of the power switch and adjustment switches

7-5-1 Power switch location and turning on the switch

Turn on the power switch on the machine.

Back side of Monitor Assy



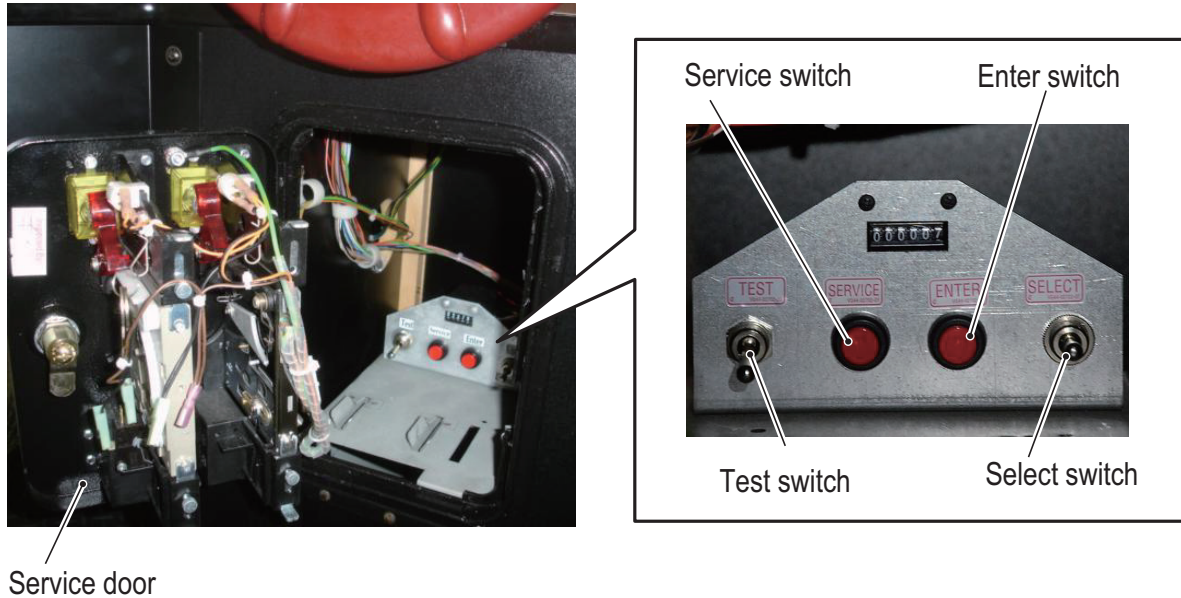
Power switch



- Be sure to complete the installation and setup of the machine before turning on the power switch.
- When turning the power switch on or off, wait at least 30 seconds between switch operations. Do not repeat turning the power switch on and off unnecessarily. Repeated on/off operations can cause damage to the data in the backup memory.

7-5-2 Adjustment switches

Open the service door to gain access to the adjustment switches.



(a) Service switch

Press this switch to increase the credit count without activating the coin counter.

(b) Select switch

In the Test mode, flip this switch up or down to select an item or setting (numeric value).

(c) Test switch

Set this switch to ON to activate the Test mode. The Test mode is used to test the monitor and others. (See P. 26 "7-6 Test mode.")

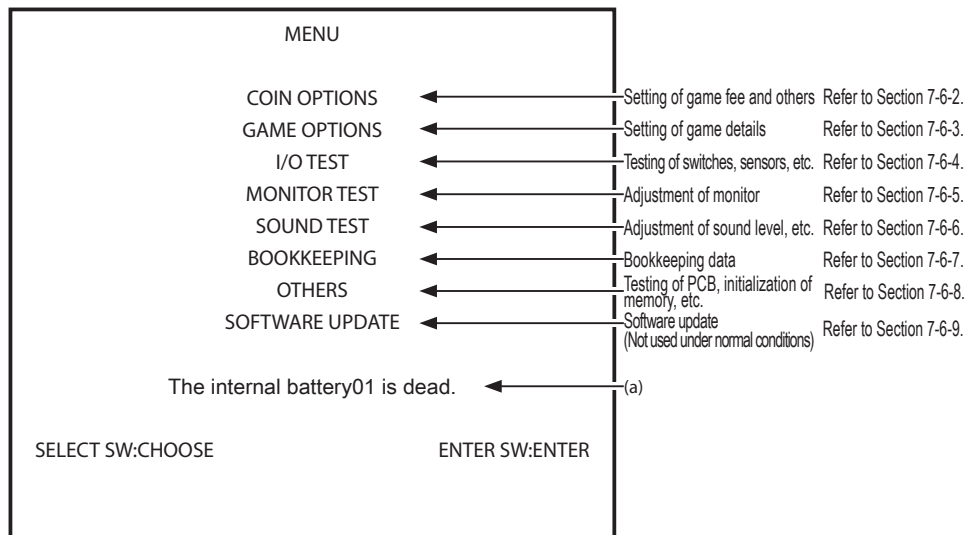
(d) Enter switch

After selecting an item or setting (numeric value) with the Select switch, press this switch to enter or execute the selection.

7-6 Test mode

7-6-1 Description of the menu screen (MENU)

- 1** Unlock the service door and set the Test switch to ON. (See P. 25 “7-5-2 Adjustment switches.”)
The Menu screen appears on the monitor.



Menu screen

Item	Description
(a) This error message appears when the internal battery of the Rack Assy runs out. (The number shown immediately after "battery" may be "02" in some cases.)	When this message appears, turn off the power switch and wait for about 10 minutes. Then, turn on the power switch again. If an error message, "BACKUP MEMORY ERROR," appears during the startup, set the Test switch to ON to activate the Test mode and initialize the backup memory (see P 40 "7-6-8 (4) BACKUP MEMORY INITIALIZE.>"). If the same error is generated after the power switch is turned off and on again, the internal battery may be low in capacity or defective.

- 2** Flip the Select switch up or down to select an item. The selected item is indicated by blinking.

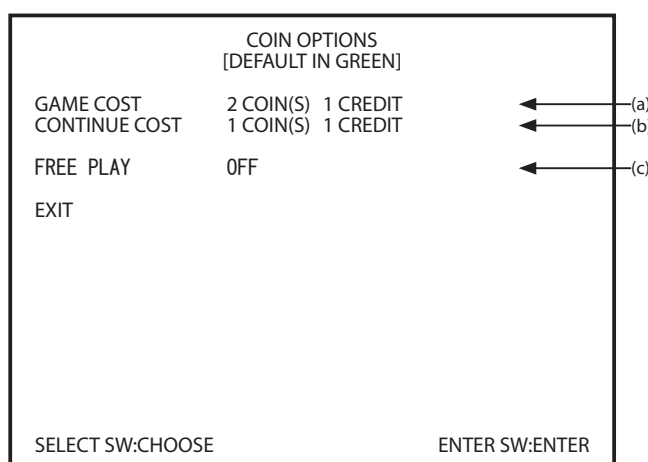
* When "EXIT" is displayed on the screen, selecting "EXIT" and entering the selection returns the display to the previous screen.

- 3** Press the Enter switch to enter the selection.
- 4** When the selection is entered, the screen shows the applicable setting items.
- 5** After all adjustments are completed, set the Test switch to OFF.
The display returns to the game screen.

7-6-2 Game fee setting (COIN OPTIONS)

This screen is used to set the game fee and others.

- 1** Select “COIN OPTIONS” in the Menu screen and press the Enter switch. (See P. 26 “7-6-1 Description of the menu screen (MENU).”) The Coin Options screen appears on the monitor.



Coin Options screen

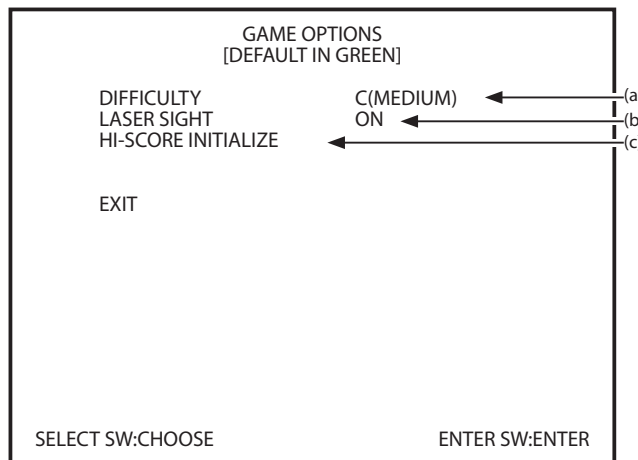
Item	Description	Default setting
(a) GAME COST	Set the number of coins required to play the game. 1 to 19 coins	2
(b) CONTINUE COST	Set the number of coins required to play Continuity game. 1 coin to the value entered in GAME COST The value set in CONTINUE COST cannot be larger than the value set in GAME COST. If the value in GAME COST is reduced to a value lower than the value in CONTINUE COST, the value in CONTINUE COST is automatically changed to the same value set in GAME COST.	1
(c) FREE PLAY	ON (Free play available) OFF (Free play unavailable)	OFF

- 2** Flip the Select switch up or down to select an item. The selected item is indicated by blinking.
- 3** Press the Enter switch to enter the selection.
- 4** After the selection is entered, change the setting using the Select switch.
- 5** After the setting has been changed, press the Enter switch to return to the item selection screen.
- 6** To return the Menu screen, select “EXIT” and press the Enter switch.

7-6-3 Game detail setting (GAME OPTIONS)

This screen is used to set game details.

- 1** Select “GAME OPTIONS” in the Menu screen and press the Enter switch. (See P. 26 “7-6-1 Description of the menu screen (MENU).”) The Game Options screen appears on the monitor. Parameters in default setting are indicated in green.



Game Options screen

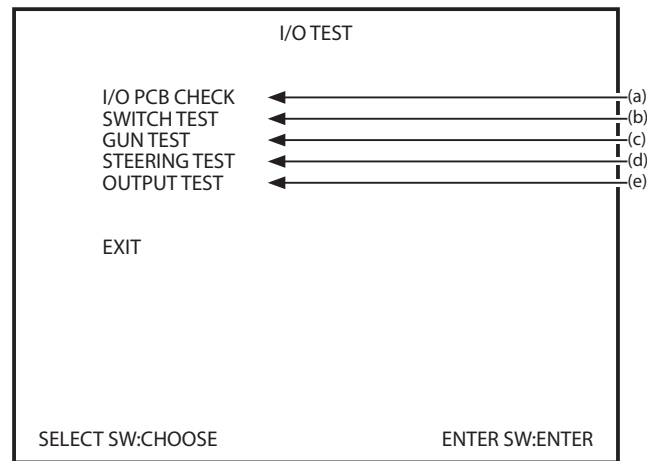
Item	Description	Default setting
(a) DIFFICULTY	Set the game difficulty level. A (VERY EASY) B (EASY) C (MEDIUM) D (HARD) E (VERY HARD)	C (MEDIUM)
(b) LASER SIGHT	Shows a line from the gun to the crosshair aim to assist player.	ON
(c) HI-SCORE INITIALIZE	Initializes the stored high score data. When this item is selected and entered, the screen displays a message, “HI-SCORE INITIALIZE?,” and prompts for the input of “YES” or “NO.” NO: Returns to the item selection screen without initializing the high score data. YES: Initialize the high score data.	—

- 2** Flip the Select switch up or down to select an item. The selected item is indicated by blinking.
- 3** Press the Enter switch to enter the selection.
- 4** After the selection is entered, change the setting using the Select switch.
- 5** After the setting has been changed, press the Enter switch to return to the item selection screen.
- 6** To return the Menu screen, select “EXIT” and press the Enter switch.

7-6-4 Switch/sensor test (I/O TEST)

This screen is used to test the switches and others.

- 1** Select "I/O TEST" in the Menu screen and press the Enter switch. (See P. 26 "7-6-1 Description of the menu screen (MENU).")
The I/O Test screen appears on the monitor.



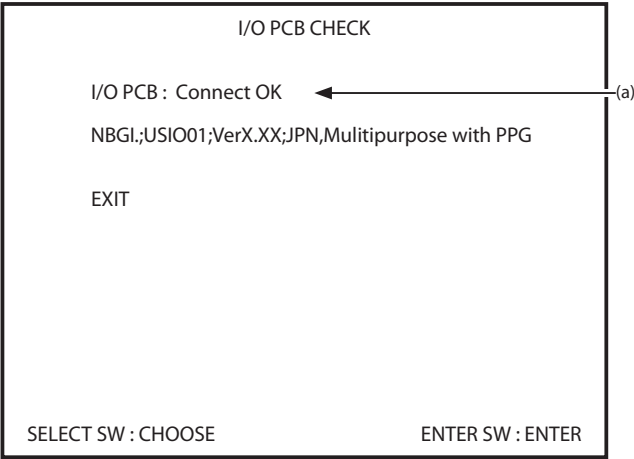
I/O Test screen

Item	Description
(a) I/O PCB CHECK	Checks the I/O PC Board.
(b) SWITCH TEST	Executes the switch input test.
(c) GUN TEST	Executes the Gun Assy test, initializes the Gun Assys.
(d) STEERING TEST	Executes the wheel test.
(e) OUTPUT TEST	Executes the illuminated button test and Gun Assy vibration test.

- 2** Flip the Select switch up or down to select an item.
The selected item is indicated by blinking.
- 3** Press the Enter switch to enter the selection.
When the selection is entered, the screen shows the details of the selected item.
- 4** To return the Menu screen, select "EXIT" and press the Enter switch.

(1) I/O PCB CHECK

This screen is used to confirm the condition of the USIO PC Board.



I/O PCB Check screen

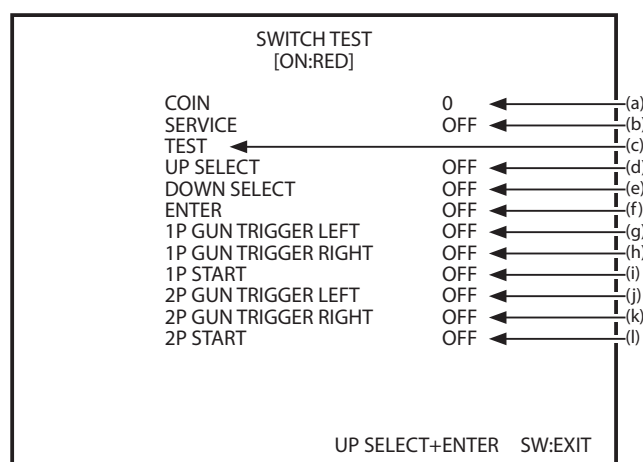
Item	Description
(a) I/P PCB	Displays “CONNECT OK” when the PC Board is normal.

To return to the I/O Test screen, select “EXIT” and press the Enter button.

(2) SWITCH TEST

This screen is used to test the switches.

- 1** Select "SWITCH TEST" in the I/O Test screen and press the Enter switch. (See P. 29 "7-6-4 Switch/sensor test (I/O TEST).")
The Switch Test screen appears on the monitor.



Switch Test screen

Item	Description
(a) COIN	The counter increments by 1 each time the coin switch receives input. When the counter value exceeds 255, it returns to 0. The coin counter also operates.
(b) SERVICE	Shows "ON" while the Service switch is pressed. (In the Test mode, pressing the switch does not add any credit.)
(c) TEST	Shows "ON" when the Test switch is set to ON. (Since the Test mode screen is being displayed, this indication always shows "ON.")
(d) UP SELECT	Shows "ON" while the Select switch is in the raised position
(e) DOWN SELECT	Shows "ON" when the Select switch is the lowered position.
(f) ENTER	Shows "ON" while the Enter switch is pressed.
(g) 1P GUN TRIGGER LEFT	Shows "ON" while the Trigger button (left) on the 1P-side Gun Assy is pressed.
(h) 1P GUN TRIGGER RIGHT	Shows "ON" while the Trigger button (right) on the 1P-side Gun Assy is pressed.
(i) 1P START	Shows "ON" while the 1P-side Start button is pressed.
(j) 2P GUN TRIGGER LEFT	Shows "ON" while the Trigger button (left) on the 2P-side Gun Assy is pressed.
(k) 2P GUN TRIGGER RIGHT	Shows "ON" while the Trigger button (right) on the 2P-side Gun Assy is pressed.
(l) 2P START	Shows "ON" while the 2P-side Start button is pressed.

- 2** Press each switch and check for proper operation.
- 3** To return to the I/O Test screen, hold the Select switch in the raised position and press the Enter switch.

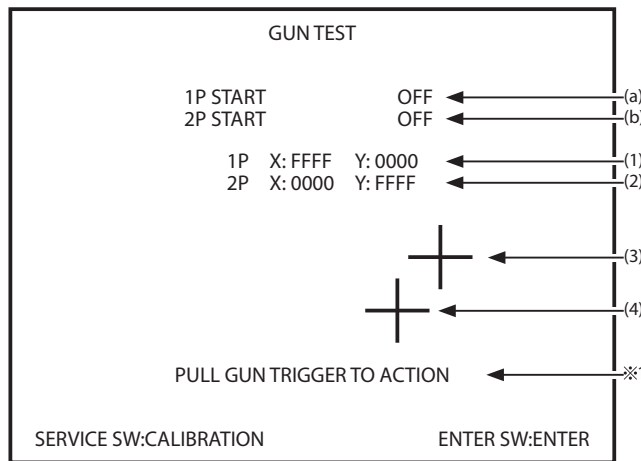
(3) GUN TEST

This screen is used to test and initialize the gunsights of the Gun Assys and test the operation of the gun vibration units.



- After maintaining or replacing a Gun Assy or USIO PC Board, be sure to conduct the calibration described in “GUN CALIBRATION” on page 33.

- 1** Select “GUN TEST” in the I/O Test screen and press the Enter switch. (See P. 29 “7-6-4 Switch/sensor test (I/O TEST).”) The Gun Test screen appears on the monitor.



Gun Test screen

Item	Description
(a) 1P START	Shows the status of the Start button on the 1P-side Gun Assy. *2
(b) 2P START	Shows the status of the Start button on the 2P-side Gun Assy. *2
(1) 1P X-coordinate, Y-coordinate	Shows the X and Y coordinates of the crosshair aim of the 1P-side gun.
(2) 2P X-coordinate, Y-coordinate	Shows the X and Y coordinates of the crosshair aim of the 2P-side gun.
(3) Gun crosshairs (red)	Shows the crosshair aim of the 1P-side Gun Assy on the screen.
(4) Gun crosshairs (blue)	Shows the crosshair aim of the 2P-side Gun Assy on the screen.

*1 The vibration unit operates when the trigger on a Gun Assy is pulled.

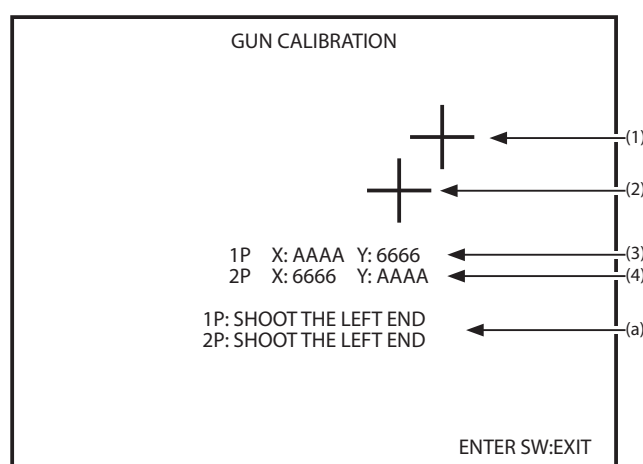
*2 The Start button lights when it is pressed.

- 2** Loosen the wing bolt, move the service switch cover to a side, and press the Service switch to display the calibration setting screen. (See P. 33 “7-6-4 (4) GUN CALIBRATION.”)
- 3** To return to the I/O Test screen, press the Enter switch.

(4) GUN CALIBRATION

This screen is used to calibrate the Gun Assys.

- 1** Press the Service switch while the Gun Test screen is displayed. (See P. 32 "7-6-4 (3) GUN TEST.")
The Gun Calibration screen appears on the monitor.



Gun Calibration screen

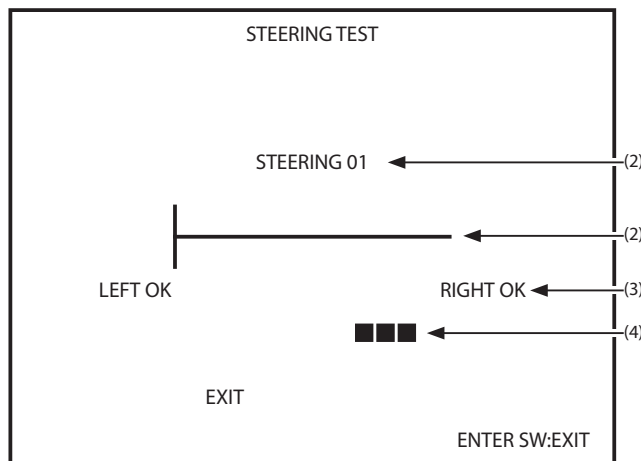
Item	Description
(1) Gun cross hairs (red)	Shows the location of the cross hairs of the 1P-side Gun Assy (after completion of adjustment).
(2) Gun cross hairs (blue)	Shows the location of the cross hairs of the 2P-side Gun Assy (after completion of adjustment).
(3) 1P X-coordinate, Y-coordinate	Shows the X and Y coordinates of the cross hairs of the 1P-side gun.
(4) 2P X-coordinate, Y-coordinate	Shows the X and Y coordinates of the cross hairs of the 2P-side gun.
(a) Displays the procedure for calibrating the gun	Gun calibration can be performed by moving and operating each Gun Assy on the 1P and 2P sides as shown below. (1) [SHOOT THE LEFT END] Move the gun all the way to the left and press the Trigger button once. (2) [SHOOT THE RIGHT EDGE] Move the gun all the way to the right and press the Trigger button once. (3) [SHOOT THE TOP] Move the gun all the way to the top and press the Trigger button once. (4) [SHOOT THE BOTTOM] Move the gun all the way to the bottom and press the Trigger button once. (5) [FINISHED] The calibration has been completed. The adjustment data are saved and the crosshairs appear on the screen.

- 2** Move the gun being calibrated all the way to the left and press the Trigger button once. The left limit position of the cross hairs is set.
- 3** In the same manner, press the Trigger button each after moving the gun all the way to the right, to the top and then to the bottom.
- 4** To return to the Gun Test screen, press the Enter switch.

(5) STEERING TEST

This screen is used to test the sensor for detecting the wheel rotation.

- 1** Select "STEERING TEST" in the I/O Test screen and press the Enter switch. (See P. 29 "7-6-4 Switch/sensor test (I/O TEST).")
The Steering Test screen appears on the monitor.



Steering Test screen

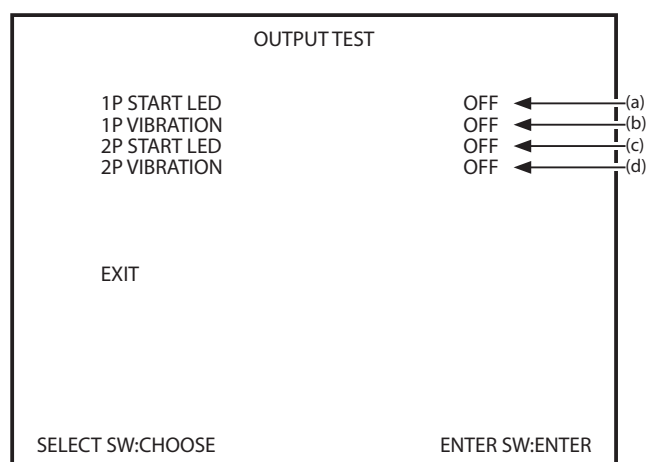
Item	Description
(1) Wheel counter	Displays the wheel count.
(2) Wheel bar	The bar graph shows the wheel movement detected by the sensor.
(3) Wheel sensitivity stability measurement	Displays "OK" when the wheel sensor is normal.
(4) Wheel rotation speed measurement	The wheel turning speed is indicated by the number of "■" marks.

- 2** Turn the wheel to the left and then to the right to make sure that "OK" is displayed each time.
- 3** To return to the I/O Test screen, press the Enter switch.

(6) OUTPUT TEST

This screen is used to conduct output tests.

- 1** Select "OUTPUT TEST" in the I/O Test screen and press the Enter switch. (See P. 29 "7-6-4 Switch/sensor test (I/O TEST).")
The Output Test screen appears on the monitor.



Output Test screen

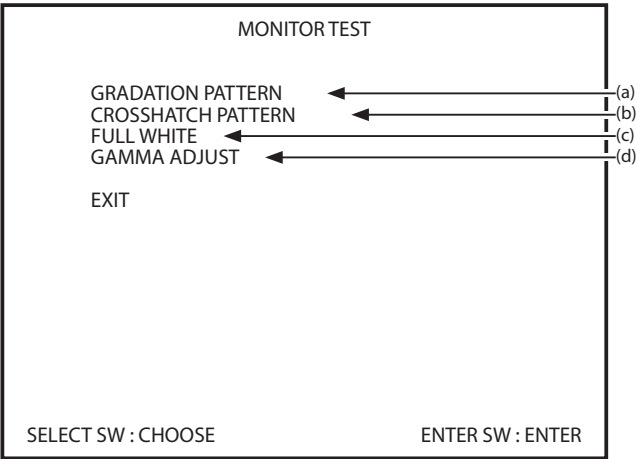
Item	Description
(a) 1P START LED	When this item is set to "ON," the 1P-side Start button lights.
(b) 1P VIBRATION	When this item is set to "ON," the vibration unit of the 1P-side Gun Assy vibrates.
(c) 2P START LED	When this item is set to "ON," the 2P-side Start button lights.
(d) 2P VIBRATION	When this item is set to "ON," the vibration unit of the 2P-side Gun Assy vibrates.

- 2** Using the Select switch, select an item, and then press the Enter switch to enter the selection.
The selected item is indicated by blinking.
- 3** Using the Select switch, select ON or OFF, and then press the Enter switch to enter the selection.
The selected item operates.
- 4** To return to the I/O Test screen, select "EXIT" using the Select switch, and press the Enter switch.

7-6-5 Monitor adjustment (MONITOR TEST)

This screen is used to adjust the monitor.

- 1
- Select "MONITOR TEST" in the Menu screen and press the Enter switch. (See P. 26 "7-6-1 Description of the menu screen (MENU).")
The Monitor Test screen appears on the monitor.



Monitor Test screen

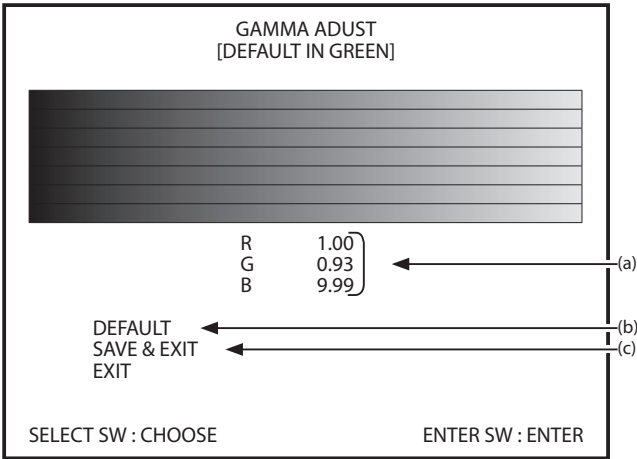
Item	Description
(a) GRADATION PATTERN	Displays a 16-step gradation pattern.
(b) CROSSHATCH PATTERN	Displays a crosshatch pattern.
(c) FULL WHITE	Displays all-white screen.
(d) GAMMA ADJUST	Displays the gamma adjustment screen. (See P. 37 "7-6-5 (1) GAMMA ADJUST.")

- 2
- Flip the Select switch up or down and select an item to be changed.
- 3
- Press the Enter switch to display the test screen for the selected item.
- 4
- To return to the Monitor Test screen, press the Enter switch again.
- 5
- To return to the I/O Test screen, select "EXIT" and press the Enter switch.

(1) GAMMA ADJUST

This screen is used to adjust the gamma values (color).

- 1** Select “GAMMA ADJUST” in the Monitor Test screen and press the Enter switch.
(See P. 35 “7-6-5 Monitor adjustment (MONITOR TEST).”)
The Gamma Adjust screen appears on the monitor.



Gamma Adjust screen

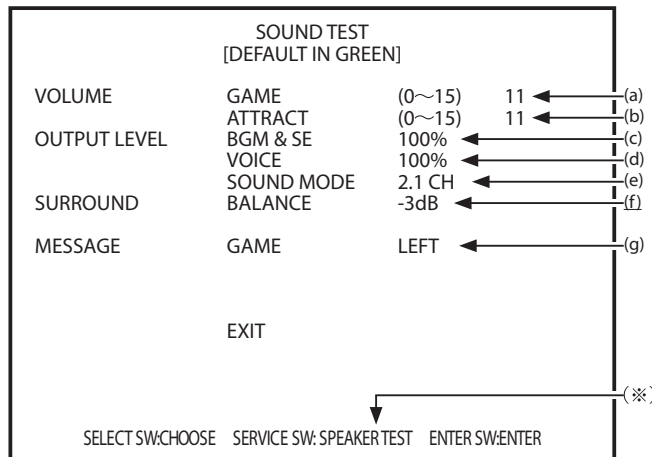
Item	Description
(a) Gamma values	Change the gamma value for each of R, G and B. Each value can be adjusted in a range of 0.00 to 1.00 in intervals of 0.01. (The value increments or decrements by 0.1 when the Select switch is kept in the raised or lowered position.)
(b) DEFAULT	Returns all gamma values to 1.00 (default setting).
(c) SAVE & EXIT	Saves the settings and returns to the Monitor Test screen.

- 2** Flip the Select switch up or down to select an item.
The selected item is indicated by blinking.
- 3** Press the Enter switch to enter the selected item. Selecting and entering the item (b) or (c) reflects the settings displayed on the screen. (Proceed to **4** when (a) is selected. Proceed to **6** when (b) is selected. When (c) is selected, the display returns to the Monitor Test screen.)
- 4** Using the Select switch, adjust the gamma value.
- 5** After changing the gamma values, press the Enter switch for selection of another item.
- 6** To return to the Monitor Test screen, select “EXIT” and press the Enter switch.

7-6-6 Sound adjustment (SOUND TEST)

This screen is used to set the sound level and left/right output levels, and to check the sound level (stereo check).

- 1** Select "SOUND TEST" in the Menu screen and press the Enter switch. (See P. 26 "7-6-1 Description of the menu screen (MENU).")
The Sound Test screen appears on the monitor.



Sound Test screen

Item	Description	Default setting
(a) VOLUME GAME	Set the general sound level in the game mode. 0 (no sound) to 15 (max.)	11
(b) VOLUME ATTRACT	Set the general sound level in the Attract mode. 0 (no sound) to 15 (max.)	11
(c) BGM & SE	Set the sound output level of the background music and sound effects. 0 (no sound) to 100% (max.), 10% steps	100%
(d) VOICE	Set the sound output level of the characters' voices. 0 (no sound) to 100% (max.), 10% steps	100%
(e) SOUND MODE	5.1 CH/2.1 CH (This setting is not changed under normal conditions)	2.1 CH
(f) SURROUND BALANCE	- If (e) indicates "5.1 CH," this item cannot be changed. - If (e) indicates "2.1 CH," this item can be changed in 7 steps (-6 dB, -5 dB, -4 dB, -3 dB, -2 dB, -1 dB, 0 dB, 1 dB).	FIX (5.1 ch) -3dB (2.1 ch)
(g) MESSAGE	Indicates the location of the speaker that is currently producing sound and its sound level setting.	

* When the Service switch is pressed, the speakers start producing sound in the following order.
Center → Front left → Front right → Rear left → Rear right → Woofer
When the Service switch is pressed with "VOLUME ATTRACT" selected, the speakers produce sound at the level set in "VOLUME ATTRACT."
If the Service switch is pressed when "VOLUME ATTRACT" is not selected, the speakers produce sound at the level set in "VOLUME GAME."

- 2** Flip the Select switch up or down and select an item to be changed.
- 3** Press the Enter switch to enter the selection.
- 4** After entering the selection, change the setting using the Select switch.
- 5** To return to the Menu screen, select "EXIT" and press the Enter switch.

7-7-7 Game data display/initialization (BOOKKEEPING)

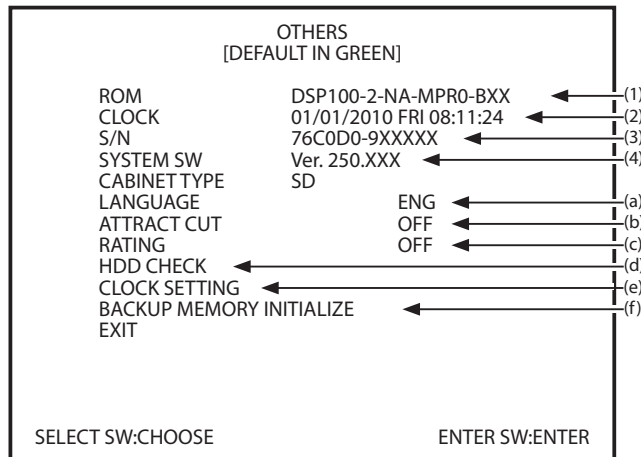
This screen is used to display various game data.

- 1** Select "BOOKKEEPING" in the Menu screen and press the Enter switch. (See P. 26 "7-6-1 Description of the menu screen (MENU).")
The Bookkeeping screen appears on the monitor.
- 2** To change the page, select "NEXT" or "PREVIOUS" using the Select switch, and then press the Enter switch.
- 3** Select "BOOKKEEPING INITIALIZE" and press the Enter switch. The screen shows "YES" and "NO." Select "YES" and press the Enter switch to clear data to default.
* Data can also be initialized by using "BACKUP MEMORY INITIALIZE" (see P. 40 "7-6-8. Initialization and others (OTHERS)") in the Others screen.
- 4** To return to the Menu screen, select "EXIT" and press the Enter switch.

7-6-8 Initialization and others (OTHERS)

This screen is used to initialize bookkeeping data (BOOKKEEPING) and others.

- 1** Select "OTHERS" in the Menu screen and press the Enter switch. (See P. 26 "7-6-1 Description of the menu screen (MENU).")
The Others screen appears on the monitor.



Others screen

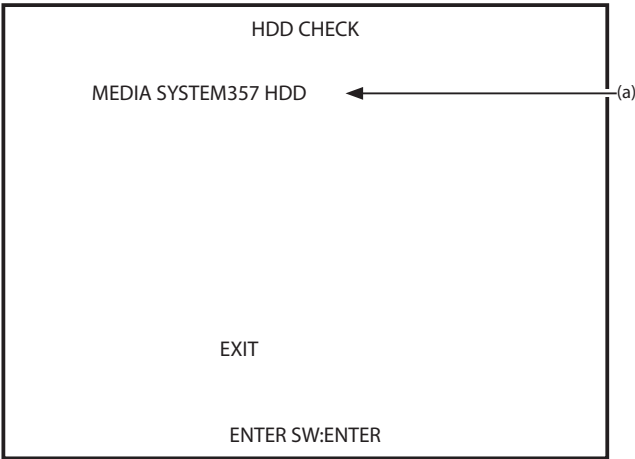
Item	Description
(1) ROM	Shows the version of the program on the hard disk.
(2) CLOCK	Shows the internal clock time.
(3) S/N	Shows the software serial No. (Indicates "NO USB KEY" if the USB dongle is not installed.)
(4) SYSTEM SW	Shows the system software version.
(a) LANGUAGE	Shows the language setting. ("JPN" (Japanese))
(b) ATTRACT CUT	This is used to set whether to display the Attract demo scenes.
(c) RATING	This is used to set the color of damage display (OFF: Red, ON: Green).
(d) HDD CHECK	This is used for checking the hard disk. (See P. 41 "7-6-8 (3) HDD CHECK.")
(e) CLOCK SETTING	This is used to set the internal clock. (See. P. 42 "7-6-8 (3) CLOCK SETTING.")
(f) BACKUP MEMORY INITIALIZE	This is used to initialize the backup memory. (YES: Initialize, NO: Abort) (See P. 42 "7-6-8 (2) BACK UP MEMORY INITIALIZE.")

- 2** Flip the Select switch up or down and select an item to be changed.
- 3** Press the Enter switch to enter the selection.
- 4** When (a), (b), (c) and (f) is selected, change the setting using the Select switch. When (d) is selected, the screen displays the information of the selected item.
- 5** To return to the Menu screen, select "EXIT" and press the Enter switch.

(1) HDD CHECK

This screen displays the HDD check result.

- 1
- Select “HDD CHECK” in the Others screen and press the Enter switch. (See P. 40 “7-6-8 Initialization and others (OTHERS).”)
The HDD Check screen appears on the monitor.



HDD Check screen

Item	Description
(a) SYSTEM 357 HDD	The installed hard disk is normal. If the above screen is not displayed, the hard disk or Rack Assy (SYS357) may be defective. Contact your distributor.

- 2
- To return to the Others screen, select “Exit” and press the Enter switch.

(2) BACK UP MEMORY INITIALIZE

This screen is used to initialize the backup memory.

- 1** Select "BACK UP MEMORY INITIALIZE" in the Others screen and press the Enter switch. (See P. 40 "7-6-8 Initialization and others (OTHERS).")
- 2** Using the Select switch, select an item.
The selected item is indicated by blinking.
- 3** Press the Enter switch to enter the selection.
When "BACK UP MEMORY INITIALIZE" is selected and entered, the screen displays "BACK UP MEMORY INITIALIZE" and prompts for the input of "YES" or "NO."
Selecting "YES" starts the initialization process. When the initialization is finished, data in the memory return to default.
Select "BACK UP MEMORY INITIALIZE."

BACK UP MEMORY INITIALIZE?	NO
	YES

↓ Select "YES."

BACK UP MEMORY INITIALIZE	OK
---------------------------	----

- 4** To return to the Menu screen, select "EXIT" and press the Enter switch.

(3) CLOCK SETTING

This screen is used to set the internal clock.

- 1** Select "CLOCK SETTING" in the Others screen and press the Enter switch. (See P. 40 "7-6-8 Initialization and others (OTHERS).")
The Clock Setting screen appears on the monitor.

CLOCK SETTING	
CLOCK '04/01/2010 THU 19:28:56	
YEAR	10 +2000 ← (a)
MONTH	04 ← (b)
DAY	01 ← (c)
HOUR	19 ← (d)
MINUTE	03 ← (e)
SET	← (f)
EXIT	
SELECT SW:CHOOSE	
ENTER SW:ENTER	

Clock Setting screen

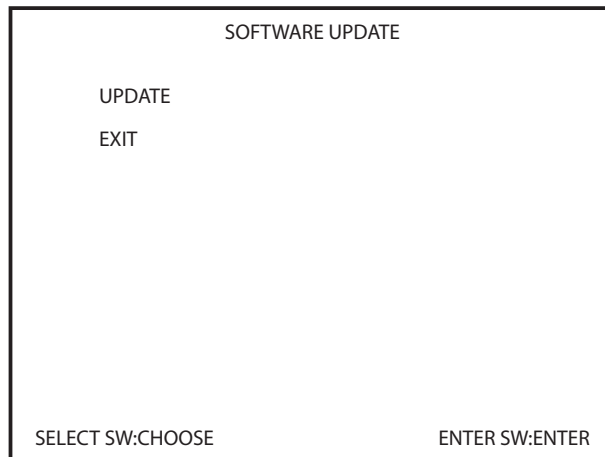
Item	Description
(a) YEAR	Setting of the year (00 to 99)
(b) MONTH	Setting of the month (01 to 12)
(c) DAY	Setting of the day (01 to 31)
(d) HOUR	Setting of the hour (00 to 23)
(e) MINUTE	Setting of the minute (00 to 59)
(f) SET	Enter the clock settings. The values (1) through (e) are set in the internal clock.

- 2** Using the Select switch, select an item.
The selected item is indicated by blinking.
- 3** Press the Enter switch to enter the selection.
- 4** After selecting an item, change the setting using the Select switch.
- 5** After changing the setting, press the Enter switch for selection of another item.
- 6** After changing the items (a) through (e), select "SET" and press the Enter switch to enter the settings in the internal clock. The clock starts from the set date/time at 00 second.
- 7** Select "EXIT" and press the Enter switch to return to the Menu screen.
Set the Test switch to OFF to return to the game screen, and then check to make sure that the clock displays the correct date/time.

7-6-9 Software update

This screen is used to update the software (not used under normal conditions).

- 1** Select “SOFTWARE UPDATE” in the Menu screen and press the Enter switch.
(See P. 26 “7-6-1 Description of the menu screen (MENU).”)
The Software Update screen appears on the monitor



Software Update screen

- 2** To return to the Menu screen, select “EXIT” and press the Enter switch.

7-7 Error display (for the arcade operator)



- The following shows items to be checked by the arcade operator.
- If the same error indication remains after the appropriate countermeasure has been taken, set the Test switch to ON and then to OFF to cancel the error indication.

Error indication	Cause	Remedy
BATTERY02 ERROR	The Rack Assy PCB is defective.	Request a technician to correct the problem.
NOT CONNECT I/O-PCB	The USIO PC Board or its harness is defective.	Request a technician to correct the problem.
BACKUP MEMORY ERROR	The USIO PC Board is defective.	Request a technician to correct the problem.
	The data in the backup memory is damaged.	Initialize the backup memory. (See P. 64 "7-7-10 Initialization and others (OTHERS).")
FIRMWARE ERROR	The USIO PC Board is defective.	Request a technician to correct the problem.
MEMORY ERROR	The USIO PC Board is defective.	Request a technician to correct the problem.
SYSTEM ERROR 01	The Rack Assy PCB is defective.	Request a technician to correct the problem.
SYSTEM ERROR 02	The Rack Assy PCB or hard disk is defective.	Request a technician to correct the problem.
SYSTEM ERROR 03	The Rack Assy PCB or hard disk is defective.	Request a technician to correct the problem.
SYSTEM ERROR 04	The Rack Assy PCB or hard disk is defective.	Request a technician to correct the problem.
USB-KEY ERROR(INVALID KEY)	The USB dongle is defective.	Request a technician to correct the problem.
	A wrong USB dongle is installed.	Request a technician to correct the problem.
USB-KEY ERROR(NO KEY)	The USB dongle is not installed.	Request a technician to correct the problem.
USB-KEY ERROR(IO ERROR)	The USB dongle is defective.	Request a technician to correct the problem.
	The Rack Assy PCB is defective.	Request a technician to correct the problem.
COIN ERROR1	The coin selector or its harness is defective.	Request a technician to correct the problem.
COIN ERROR2	The Service switch or its harness is defective.	Request a technician to correct the problem.
SERVICE PLAY (indicated at the Credit display location)	This error is indicated during a game play activated with the Service switch.	It is normal if the error is displayed during a game play activated with the Service switch.
	The Service switch or its harness is defective.	Request a technician to correct the problem.

7. OPERATION

Error indication	Cause	Remedy
ERROR 55	The data in the machine is damaged.	Contact your distributor.
	USB dongle of a different machine unit is installed.	Request a technician to correct the problem.

7-8 Gun Assy adjustment (initialization) after parts replacement



- Be sure to initialize the Gun Assys after replacing the Rack Assy (SYS357), USIO PC Board or Gun Assy or after initializing the backup data. If the Gun Assys are not initialized, the game machine will not operate properly.
- After initializing the Gun Assys, make sure that the guns operate properly by conducting the switch test (see P. 32 “7-6-4 (3) GUN TEST”).

7-8-1 Initializing the volumes in the Gun Assys

Initialize (calibration) the Gun Assys by referring to “7-6-4 (4) GUN CALIBRATION” on page 33.

8. MANUAL FOR THE TECHNICIAN – To be conducted by a technician only –

8A. Assembly and Setup – To be conducted by a technician only –

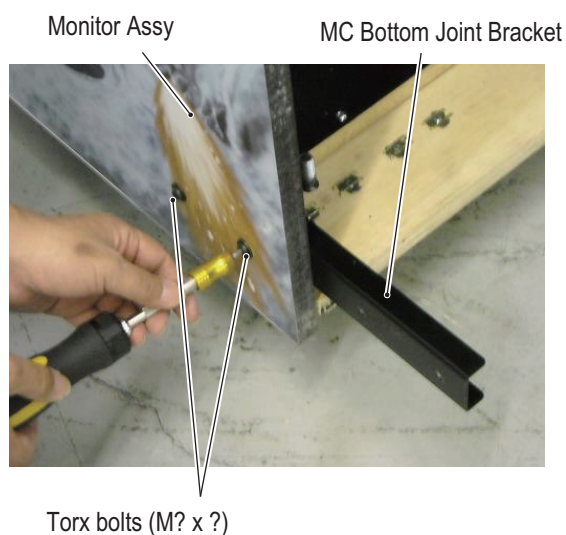
8A-1 Assembly – To be conducted by a technician only –

8A-1-1 Assembling Monitor Assy and Control Assy

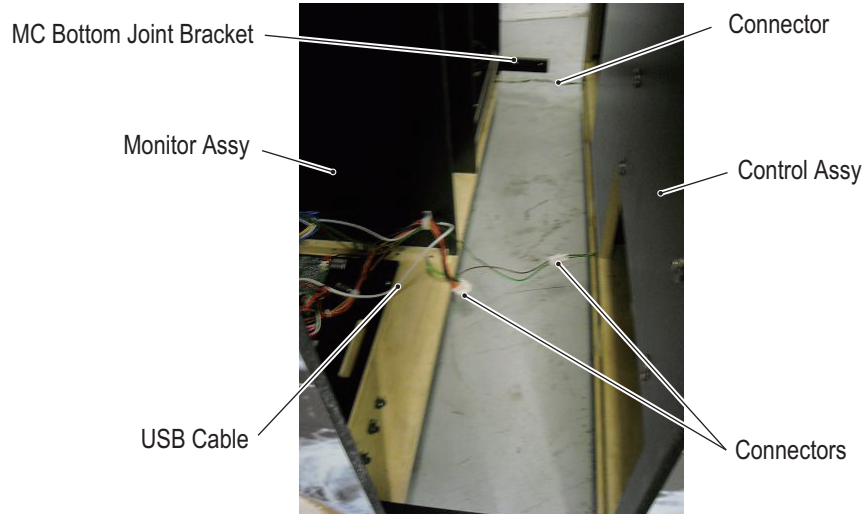
- 1 Remove the two Torx bolts (?) and dismount a wood panel for shipping from Control Assy. This panle is using at just shipping.



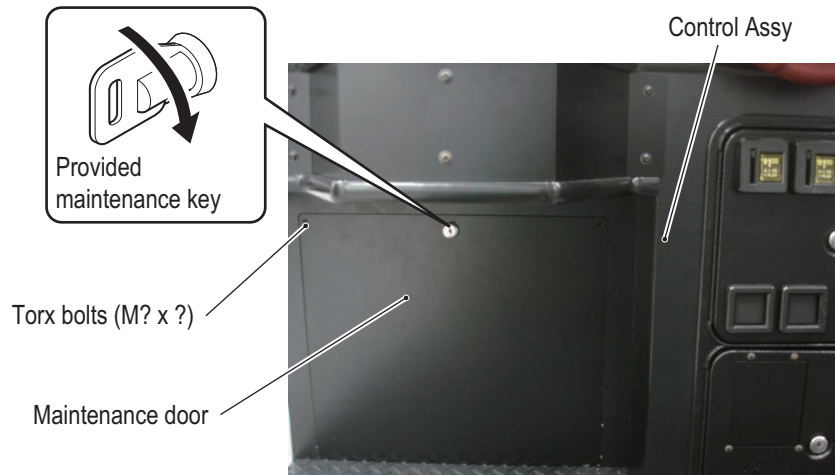
- 2 Connect Monitor Assy with Control Assy. Install MC Bottom Joint Brackets using two Torx bolts (M? x ?) into the Monitor Assy bottom of the left and right sides.



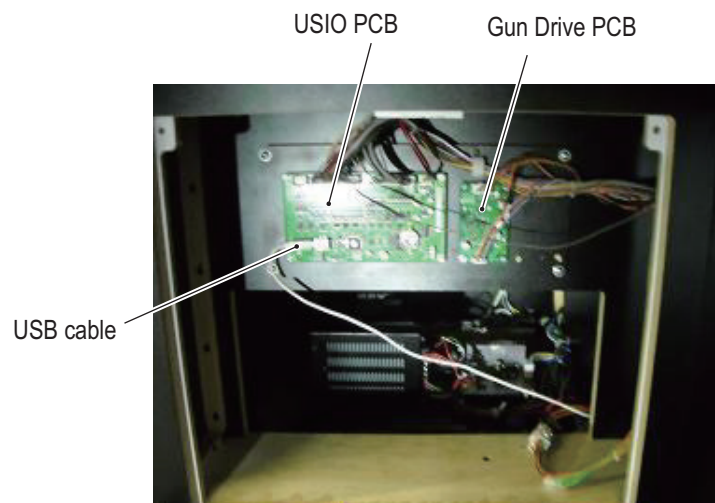
- 3** Connect each 3 connectors and install USB cable into USIO PC Board. Then install MC Bottom Joint Bracket using two Torx bolts (M? x ?) into Control Assy. Be careful not to pinch the connectors or cables here.



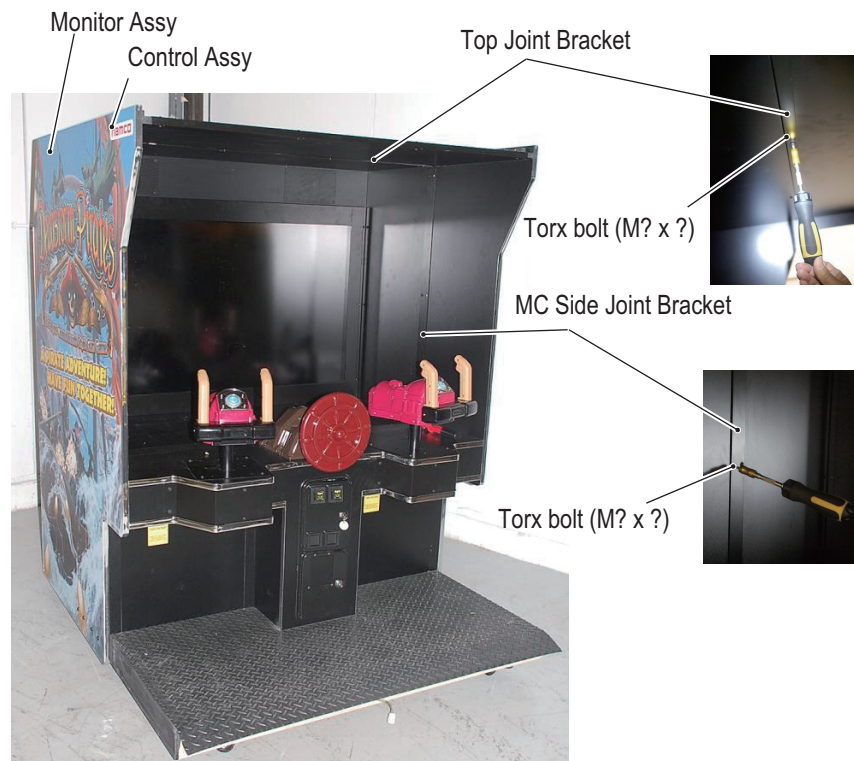
- 4** To install USB cable, using the provided maintenance key, unlock the rack door, remove the two Torx bolts (M? x ?), and then dismount the Maintenance door.



- 5** Install USB cable into USIO PCB.

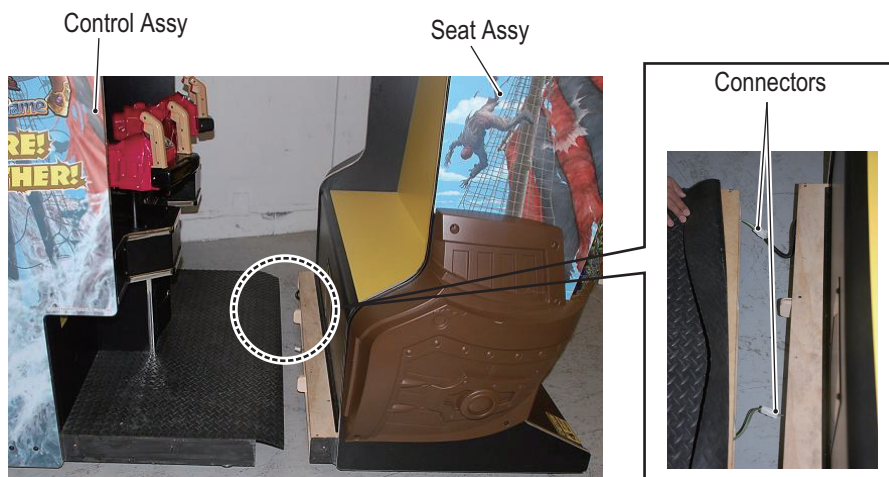


- 6** Using four Torx bolts (M? x ?), connect Top Joint Bracket with Control Assy. Then, install MC Side Joint bracket using 8 Trox bolts (M? x ?) on each side.

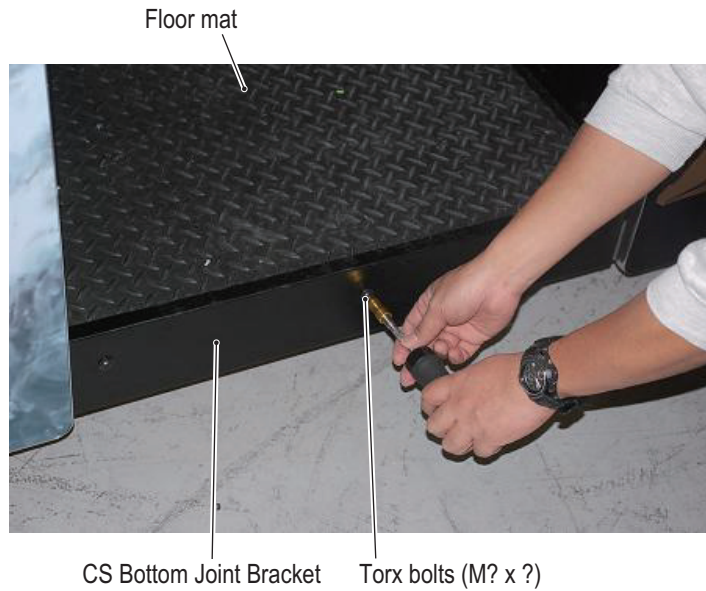


8A-1-2 Assembling Seat Assy

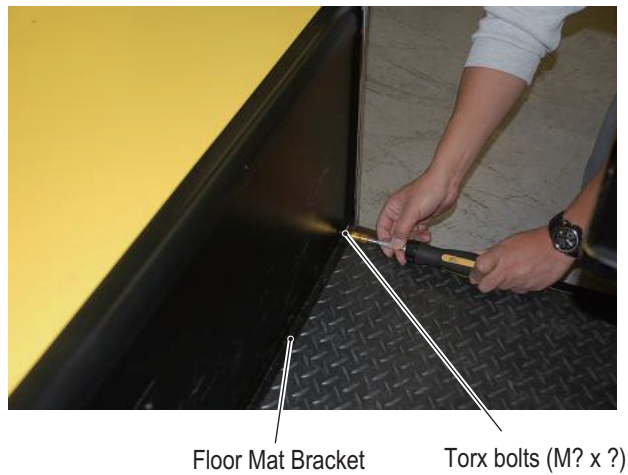
- 1** Connect each two connectors.



- 2** Connect Seat Assy with Control Assy. Be careful not to pinch the connectors and Floor mat here. Install CS Bottom Joint Bracket using 3 Torx bolts(M? x ?) on each side.

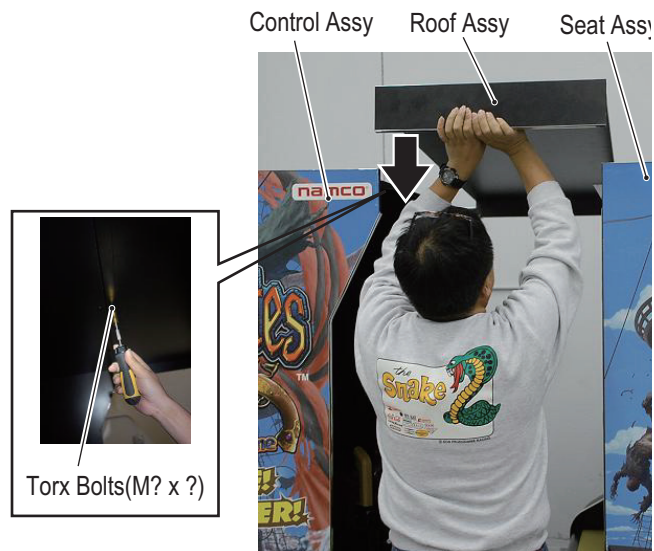


- 3** Install Floor Mat Bracket using Four Torx bolts (M? x ?).



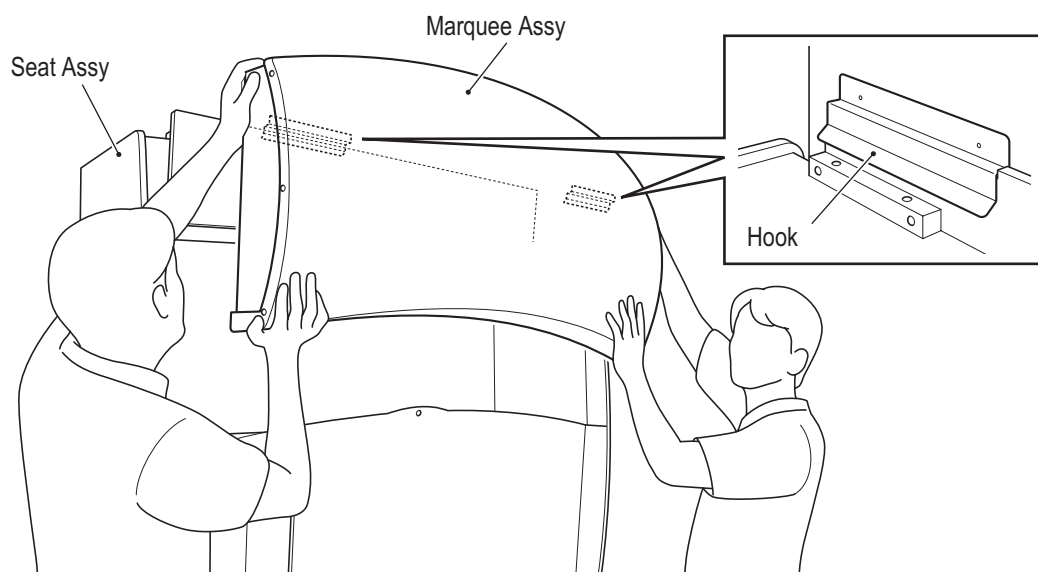
8A-1-3 Assembling Roof Assy

- 1 Install Roof Assy using 8 Torx bolts (M? x ?).

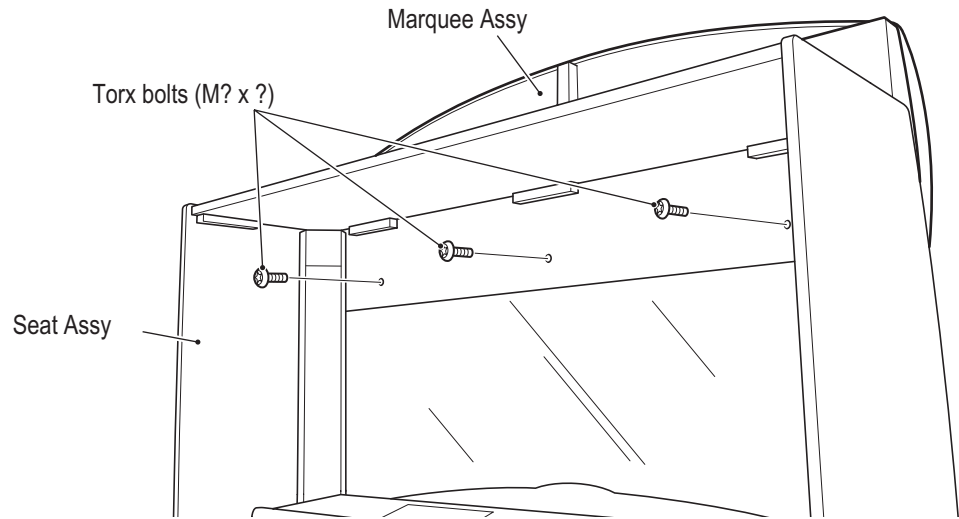


8A-1-4 Assembling Marquee Assy

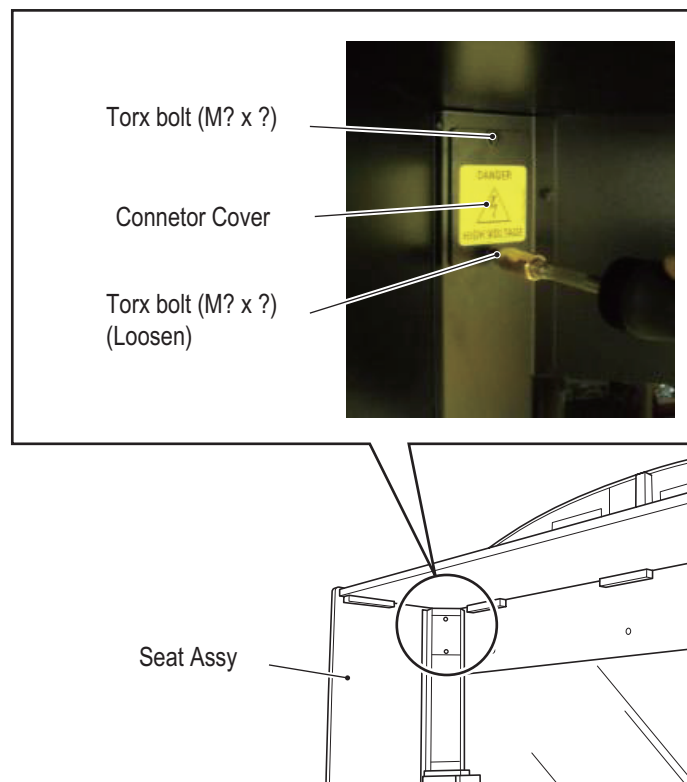
- 1 For the installation of the Marquee Assy, two persons should hold the both ends of the Marquee Assy and engage it with the hooks on the Seat Assy.



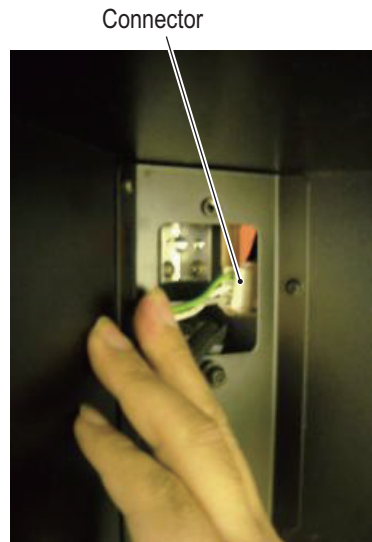
- 2** Install the Marquee Assy securely using three Torx bolts (M? x ?).



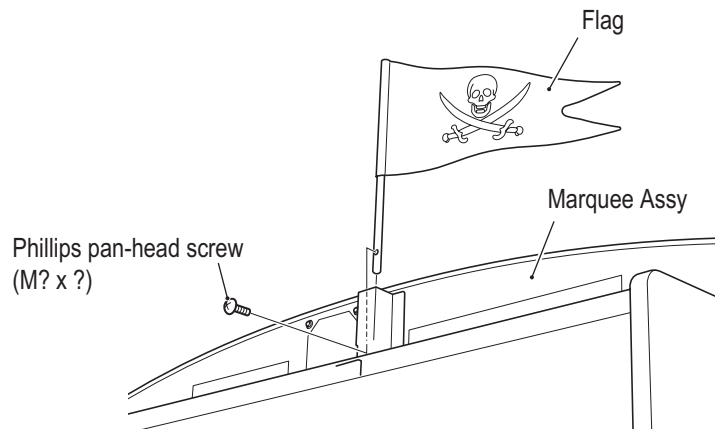
- 3** Loosen the bottom Torx bolt (M? x ?) and remove the top Torx bolt, and dismount the cover plate.



- 4** Connect the one connector.

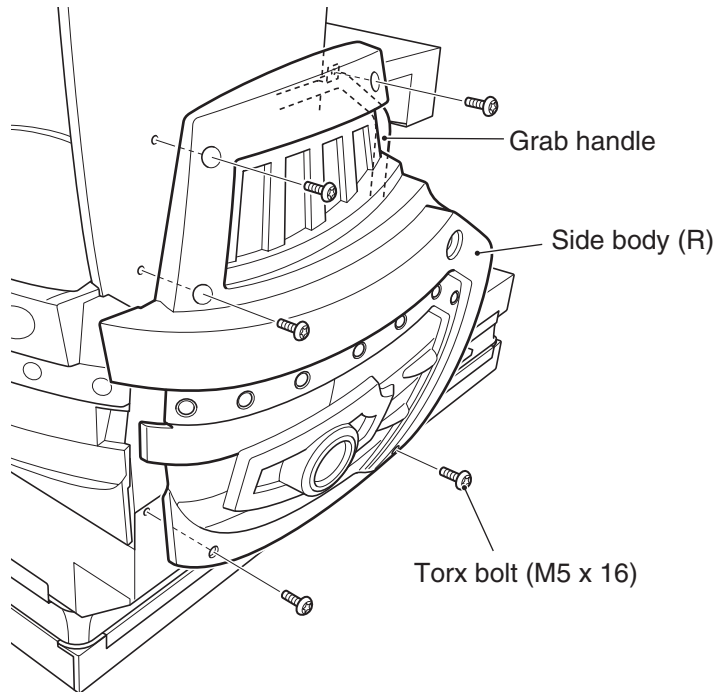


- 5** Install the Connector cover that was removed in step **3** by following the removal sequence in reverse.
- 6** Insert the flag into the hole at the top of the Marquee Assy and install one Phillips pan-head screw (M? x ?).



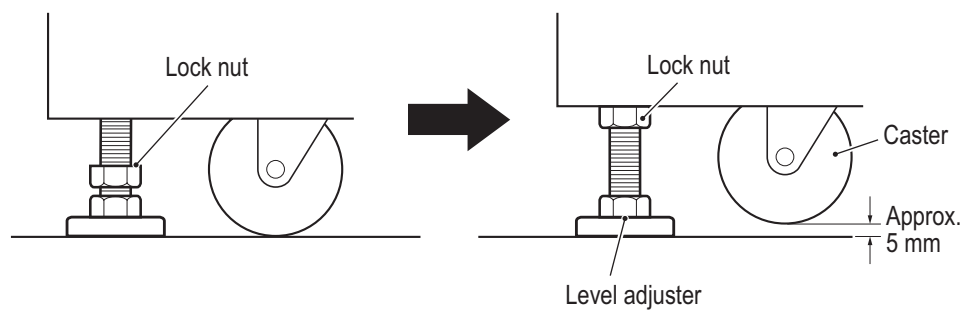
8A-1-5 Assembling Side body(L) and Side body(R)

- 1 Install the Side body (L) and Side body (R) using five Torx bolts (M 5 x 16) on each side.



8A-1-6 Adjusting level adjusters

- 1 Lower the four level adjusters until the casters are lifted about 5 mm from the floor, then turn the lock nuts all the way to lock the level adjusters.



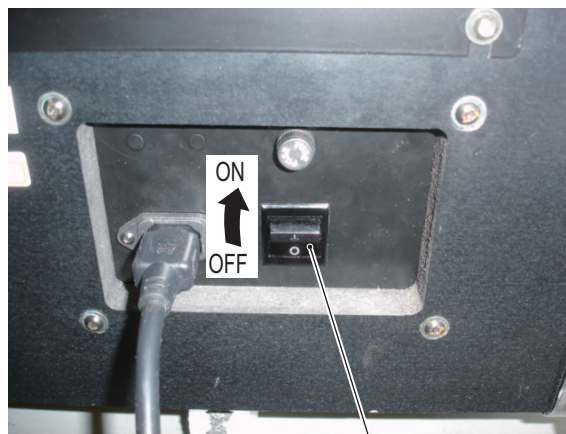
8A-1-7 Connecting the power cord and ground lead

WARNING

- Connect the ground lead using one of the following methods. If the machine is not grounded properly, electric shock can occur in case of electrical leakage.

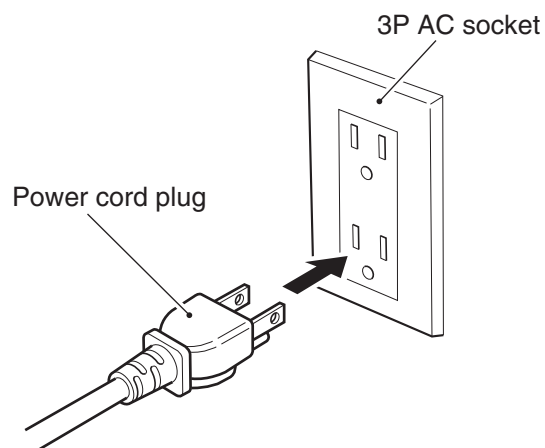
- 1** Insert the connector of the power cord to the power input section located on the lower rear side of the Monitor Assy.

Back side of Monitor Assy



Power switch

- 2** Insert the power cord plug into an AC outlet.



8B. Maintenance – To be conducted by a technician only –

WARNING

- To protect the service staff and other people from an electric shock, accident and injury, always turn off the power switch before conducting maintenance (troubleshooting, repair, etc.).
- Some monitor sections remain hot or charged with high voltage even after the power switch is turned off. Do not touch the monitor unnecessarily in order to prevent electric shock and burns.

8B-1 Inspection and maintenance

WARNING

- Conduct maintenance periodically. Failure to conduct periodic maintenance may result in unexpected accidents.

8B-1-1 Inspection items

Check the following inspection items regularly.

- (1) Inspection of level adjusters
 - Make sure that the machine is installed stably. (See P. 55 “8A-1-6 Adjusting level adjusters.”)
- (2) Inspection of power cord plug
 - Make sure that the power cord is connected firmly to the cord box section of the machine and the AC outlet.
 - If the connector sections are dusty, clean them.
 - Check the power cord for cracks and dirty sheath. If there is any abnormality in the power cord, replace it with a new cord.
- (3) Inspection of fasteners for tightness

Check the following screws and bolts for tightness. If any of them is loose, tighten firmly.

 - Gun Assy retaining bolts (See P. 72 “8B-4-3 (1) Replacing and installing the Gun Assy.”)
 - Wheel retaining bolts (See P. 89 “8B-4-4 (1) Removing and installing the Wheel Assy.”)
 - Marquee Assy retaining bolts (See P. 82 “8A-1-4 Assembling the Marquee Assy.”)
 - Others

8B-2 Troubleshooting

WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.
- If the generated problem symptom does not apply to any of the descriptions in Sections 8B-2-1 through 8B-2-6 or if the corrective action taken does not result in an improvement, turn off the power switch immediately to stop the machine operation, then contact your distributor. Operating the machine without correcting problems can result in an unexpected accident.

NOTICE

- In the event a machine malfunctions, check to make sure that all connectors are connected securely.
- If there is a problem in the Rack Assy (SYS357), Bass Amp PC Board, USIO PC Board or Gun Drive PC Board, the faulty parts must be repaired by our company. Never use a tester to conduct a continuity test. Internal voltage of a tester can damage ICs.
- When sending parts for repair, pack them carefully. When sending the Rack Assy (SYS357), Bass Amp PC Board, USIO PC Board or Gun Drive PC Board, cover it completely with sponge or bubble wrap and place it in a corrugated cardboard box to protect it against external impact.

8B-2-1 General



- Before conducting troubleshooting, make sure that all connectors are connected firmly.

Symptom	Main cause	Remedy	Page
The machine does not start up.	The Rack Assy (SYS357) connector is disconnected.	Connect the connector securely.	Page 63
	The Rack Assy (SYS357) is defective.	Contact your distributor.	—
The machine does not operate stably, or it malfunctions.	The power supply voltage is outside the range of 90 to 110 VAC.	Disconnect large power consuming equipment (air conditioners, large rides, etc.) from the same power line, and ensure that the game machine receives the specified power supply voltage.	—
The machine turns off in the middle of operation.	The circuit protector was activated and turned off the power switch. * The circuit protector is designed to cut off the power supply when an abnormal current flows.	Turn on the power switch again. If the circuit protector is activated frequently, there is a problem in the machine. Contact your distributor.	—

8B-2-2 Monitor Assy

Symptom	Main cause	Remedy	Page
There is no sound from the speakers.	The sound level is set very low.	Readjust the sound level.	Page 38
	The Rack Assy (SYS357) connector is disconnected.	Connect the connector securely.	Page 63
	The Bass Amp PC Board is defective.	Replace the Bass Amp PC Board.	Page 66
	The Rack Assy (SYS357) is defective.	Contact your distributor.	—
The monitor does not display images.	The connector is disconnected.	Readjust the sound level.	Page 63 Page 67
	The monitor is defective.	Replace the monitor.	Page 67
	The Rack Assy (SYS357) is defective.	Contact your distributor.	—
The monitor displays a blue screen.	The Rack Assy (SYS357) generated a startup error.	Turn off the power switch, wait for 30 seconds or more, and then turn on the power switch again.	Page 24
Operation is unstable, or malfunction occurs.	The power supply voltage is outside the range of 110 to 120 VAC.	Disconnect large power consuming equipment (air conditioners, large rides, etc.) from the same power line, and ensure that the game machine receives the specified power supply voltage.	—

8B-2-3 Gun Assy

Symptom	Main cause	Remedy	Page
The gun does not function.	The volume has not been initialized.	Initialize the volume.	Page 47
	The connector is disconnected.	Connect the connector securely.	Page 72 Page 74 Page 77
	The volume is installed incorrectly.	Install the volume correctly.	Page 74 Page 77
	The volume is defective.	Replace the volume.	Page 74 Page 77
The trigger does not function.	The connector is disconnected.	Connect the connector securely.	Page 79 Page 80
	The microswitch in the gun is defective.	Replace the microswitch.	Page 79
The Start button does not function.	The connector is disconnected.	Connect the connector securely.	Page 81
	The switch button is defective.	Replace the Start button.	Page 81
The gun does not vibrate.	The Gun Drive PC Board is defective.	Replace the Gun Drive PC Board.	Page 71
	The vibration unit is defective.	Replace the vibration unit.	Page 83

8B-2-4 Wheel Assy

Symptom	Main cause	Remedy	Page
The wheel does not function.	The connector is disconnected.	Connect the connector securely.	Page 89
	The photosensor (for wheel) is defective.	Replace the photosensor.	Page 90

8B-2-5 Seat Assy

Symptom	Main cause	Remedy	Page
There is no sound from the speakers.	The sound level is set very low.	Readjust the sound level.	Page 38
	The Rack Assy (SYS357) connector is disconnected.	Connect the connector securely.	Page 63
	The Bass Amp PC Board is defective.	Replace the Bass Amp PC Board.	Page 66
	The Rack Assy (SYS357) is defective.	Contact your distributor.	—

8B-2-6 Marquee Assy

Symptom	Main cause	Remedy	Page
The fluorescent lamps do not light.	The connector is disconnected.	Connect the connector securely.	Page 52
	The fluorescent lamps are burnt out.	Replace the fluorescent lamps.	Page 93

8B-3 Error display (for the technician)



- If the error indication remains after the appropriate countermeasure has been taken, set the Test switch to ON and then to OFF to cancel the error indication.

Displayed error indication	Cause	Remedy	Page
BATTERY02 ERROR	The Rack Assy PCB is defective.	Replace the Rack Assy.	Page 63
NOT CONNECT I/O-PCB	The USIO PC Board is defective.	Replace the USIO PC Board.	Page 70
	The USB cable is disconnected.	Connect the USB cable securely.	Page 48 Page 70
BACKUP MEMORY ERROR	The USIO PC Board is defective.	Replace the USIO PC Board.	Page 70
	The data in the backup memory is damaged.	Initialize the backup memory.	Page 42
FIRMWARE ERROR	The USIO PC Board is defective.	Replace the USIO PC Board.	Page 70
MEMORY ERROR	The USIO PC Board is defective.	Replace the USIO PC Board.	Page 70
SYSTEM ERROR 01	The Rack Assy PCB is defective.	Replace the Rack Assy.	Page 63
SYSTEM ERROR 02	The Rack Assy PCB or hard disk is defective.	Replace the Rack Assy.	Page 63
SYSTEM ERROR 03	The Rack Assy PCB or hard disk is defective.	Replace the Rack Assy.	Page 63
SYSTEM ERROR 04	The Rack Assy PCB or hard disk is defective.	Replace the Rack Assy.	Page 63
USB-KEY ERROR(INVALID KEY)	A wrong USB dongle is installed.	Install the USB dongle for Dead Storm Pirates.	Page 63
USB-KEY ERROR(NO KEY)	The USB dongle is not installed.	Install the USB dongle for Dead Storm Pirates.	Page 63
USB-KEY ERROR(IO ERROR)	The USB dongle is defective.	Replace the USB dongle.	Page 63
	The Rack Assy is defective.	Replace the Rack Assy.	Page 63
COIN ERROR1	The coin mech is defective.	Replace the coin mech.	—
	The coin selector harness is defective.	Contact your distributor.	—
COIN ERROR2	The Service switch or its harness is defective.	Contact your distributor.	—
SERVICE PLAY (indicated at the Credit display location)	This error is indicated during a game play activated with the Service switch.	It is normal if the error is displayed during a game play activated with the Service switch.	—
	The Service switch or its harness is defective.	Contact your distributor.	—
ERROR 55	USB dongle of a different game machine unit is installed	Turn off the power switch. Replace the currently installed USB dongle with the one that was mounted on the machine when the machine was initially started for game play, then turn on the power switch.	Page 64

8B-4 Removing and installing Assys and parts

8B-4-1 Front Assy

(1) Replacing the Rack Assy

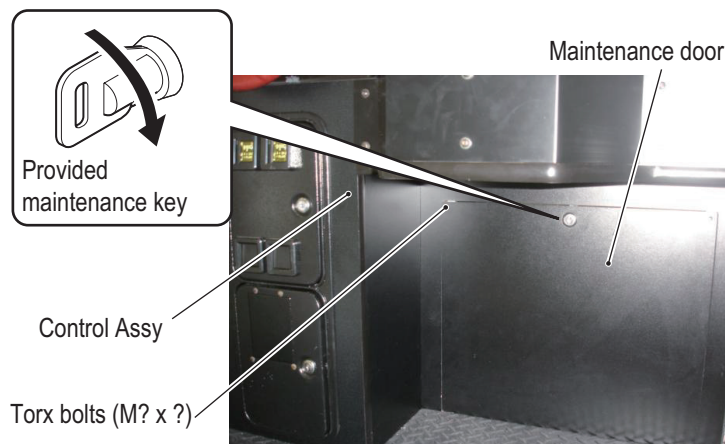
! WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

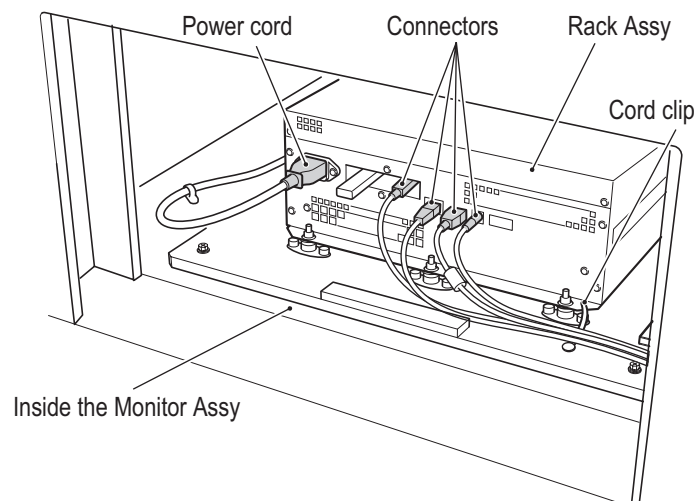
NOTICE

- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to remove static electricity from your body by touching a grounded metal.

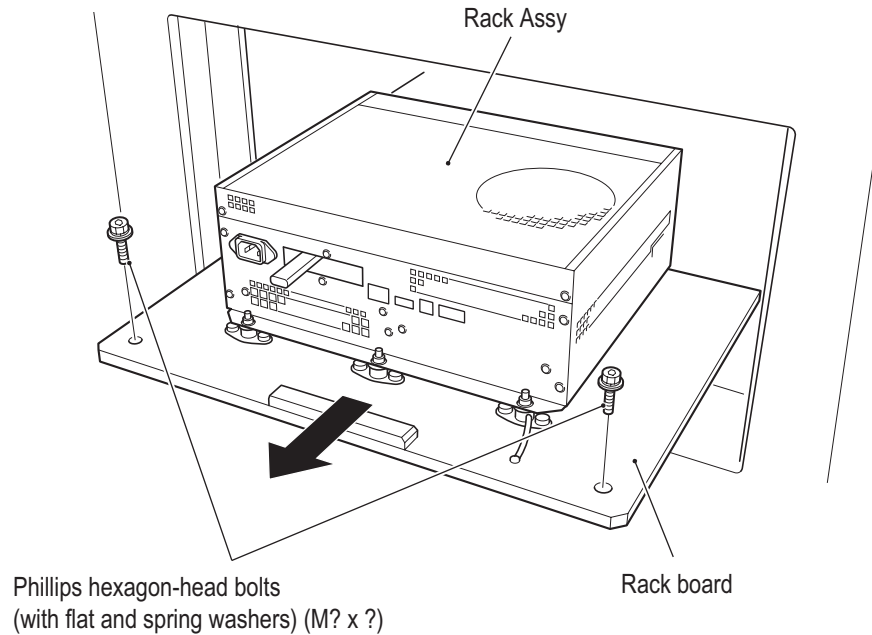
- 1 Turn off the power switch. (See P. 24 “7-5-1 Power switch location and turning on the switch.”)
- 2 Using the provided maintenance key, unlock the rack door, remove the two Torx bolts (M? x ?), and then dismount the Maintenance door.



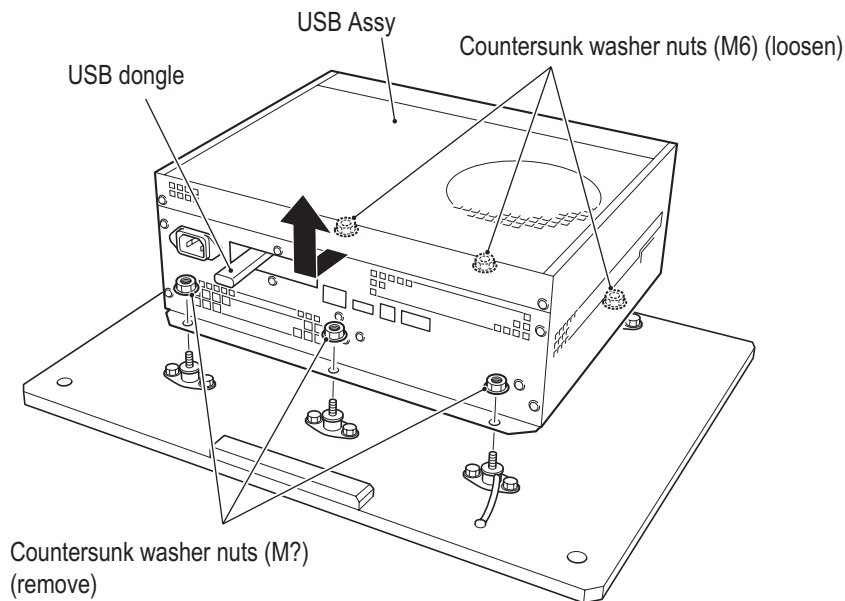
- 3 Remove the one cord clip and disconnect the four connectors and one power cord.



- 4** Remove the two Phillips hexagon-head bolts (with flat and spring washers) (M? x ?) and dismount the rack base.



- 5** Loosen the three countersunk washer nuts (M?) in the back, remove the three countersunk washer nuts (M?) in the front, and then dismount the Rack Assy.



- 6** Remove the USB dongle and replace the Rack Assy.

- 7** To install, follow the removal sequence in reverse.



- During the installation, check the direction of each connector and insert the connectors firmly until they lock securely into place.
- During the installation, be careful not to pinch the connectors or harnesses.
- After the replacement, be sure to perform initialization. (See P. 47 “7-8 Gun Assy adjustment (initialization) after parts replacement.”)

(2) Replacing the power supplies

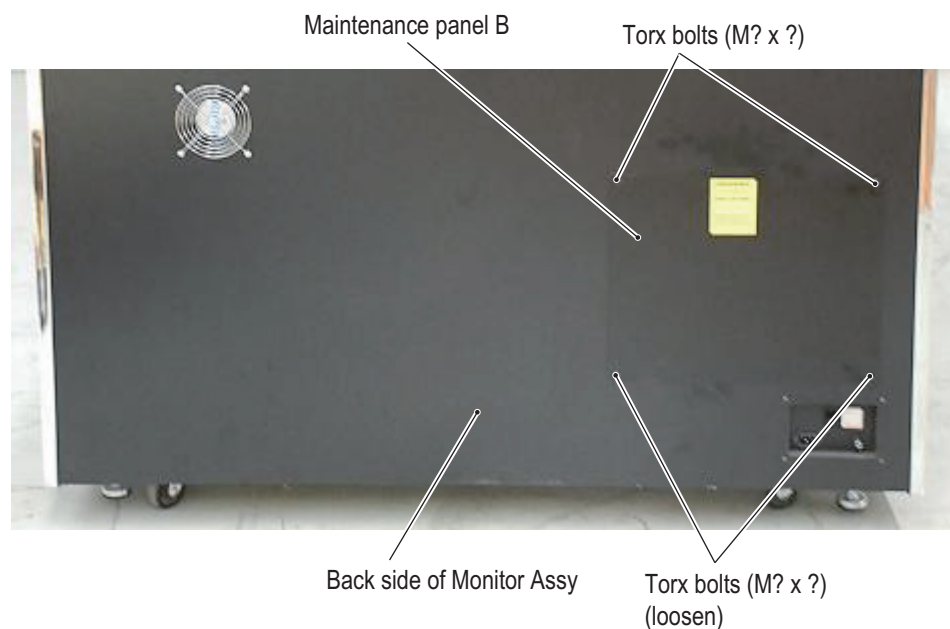
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

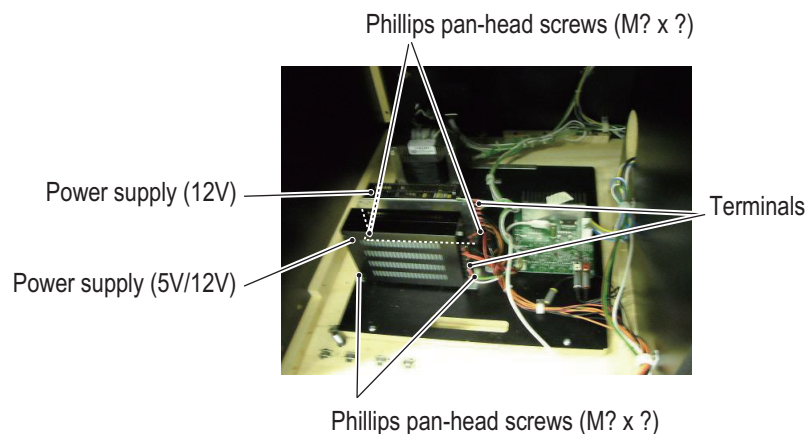
NOTICE

- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to remove static electricity from your body by touching a grounded metal.

- 1 Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2 Remove the Maintenance panel B.



- 3 Disconnect the connectors from terminals. Then, Remove the phillips pan-head screws (M? x ?), and replace the power supply.



- 4 To install, follow the removal sequence in reverse.

(3) Replacing the Bass Amp PC Board

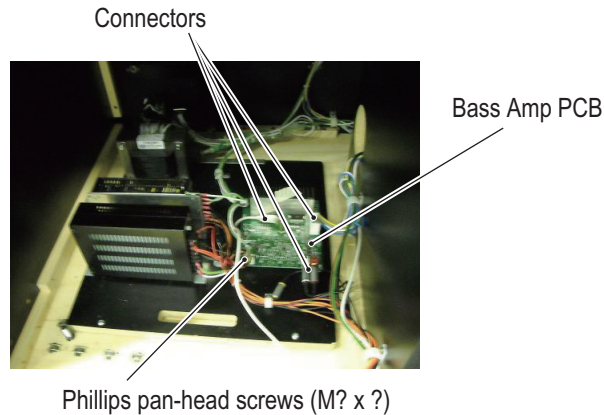
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

NOTICE

- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to remove static electricity from your body by touching a grounded metal.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the Maintenance panel B. (See P. 65 "8B-4-1 (2) Replacing the power supply.")
- 3** Disconnect the four connectors.
- 4** Remove the four phillips pan-head screws (M? x ?), and replace the Bass Amp PC Board.



- 5** To install, follow the removal sequence in reverse.

(4) Replacing the LCD monitor

WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.
- Some sections on the LCD monitor remain hot or charged with high voltage even after the power switch is turned off. In order to prevent burns, conduct the described task after the LCD monitor cools sufficiently.

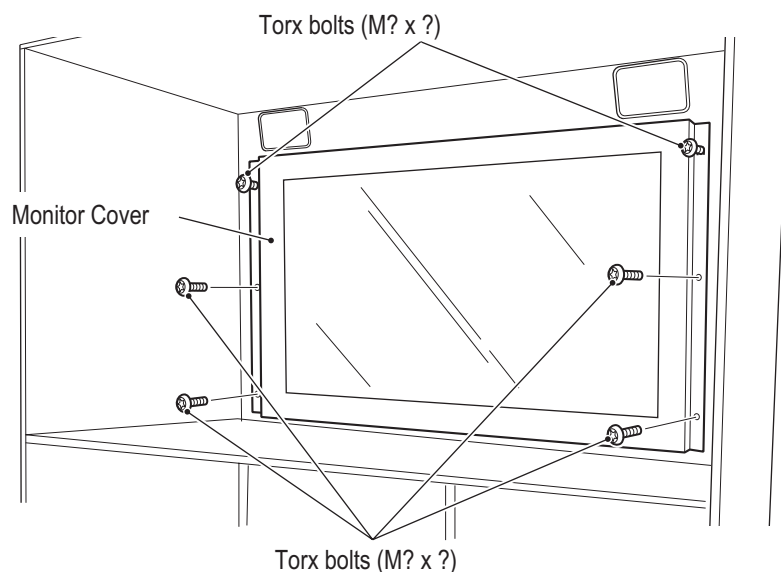
CAUTION

- The LCD monitor weighs approximately 40 kg. It should be removed by two or more persons in a large work area to prevent accidents.

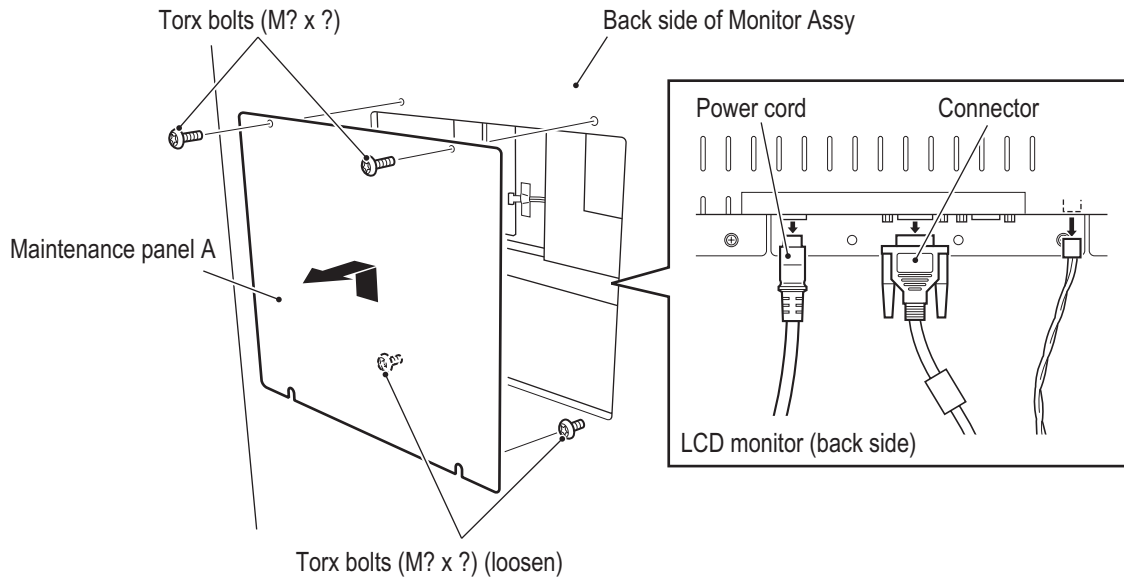
NOTICE

- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to remove static electricity from your body by touching a grounded metal.

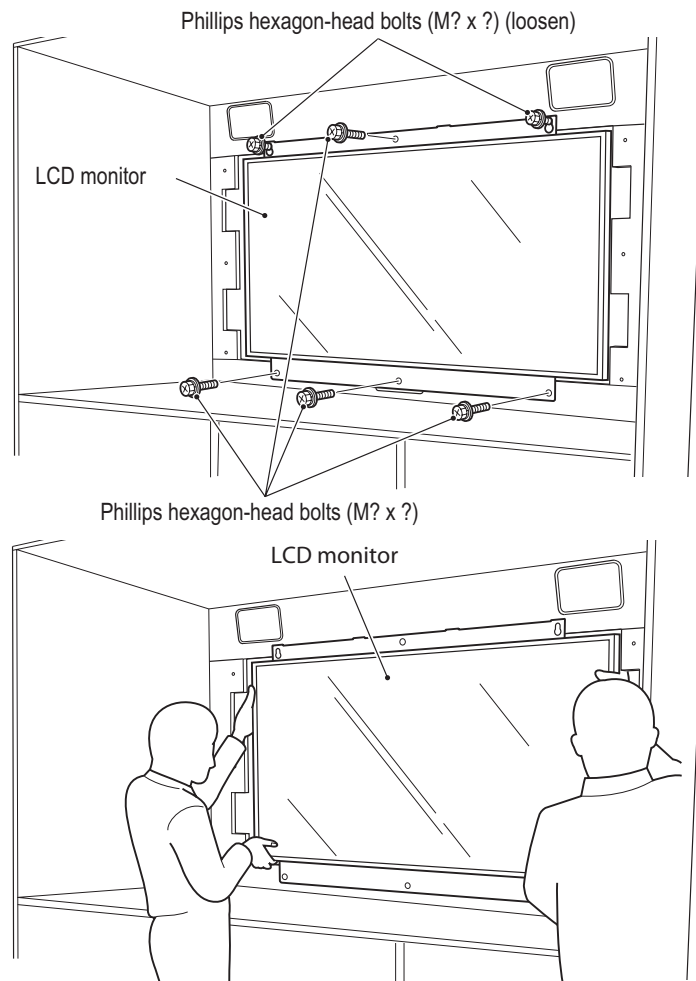
- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Disassemble the Monitor Assy from the Control Assy. (See P. 48 "8A-1-1 Assembling Monitor Assy and Control Assy.")
- 3** Move the Monitor Assy to provide a sufficient work area in front of the Monitor Assy.
- 4** Remove the six Torx bolts(M? x ?), and dismount the Monitor cover.



- 5** Loosen the two bottom Torx bolts (M? x ?), remove the two top Torx bolts, and dismount the rear cover from the Monitor Assy.
Then, disconnect the one connector and one power cord from the rear side of the LCD monitor.

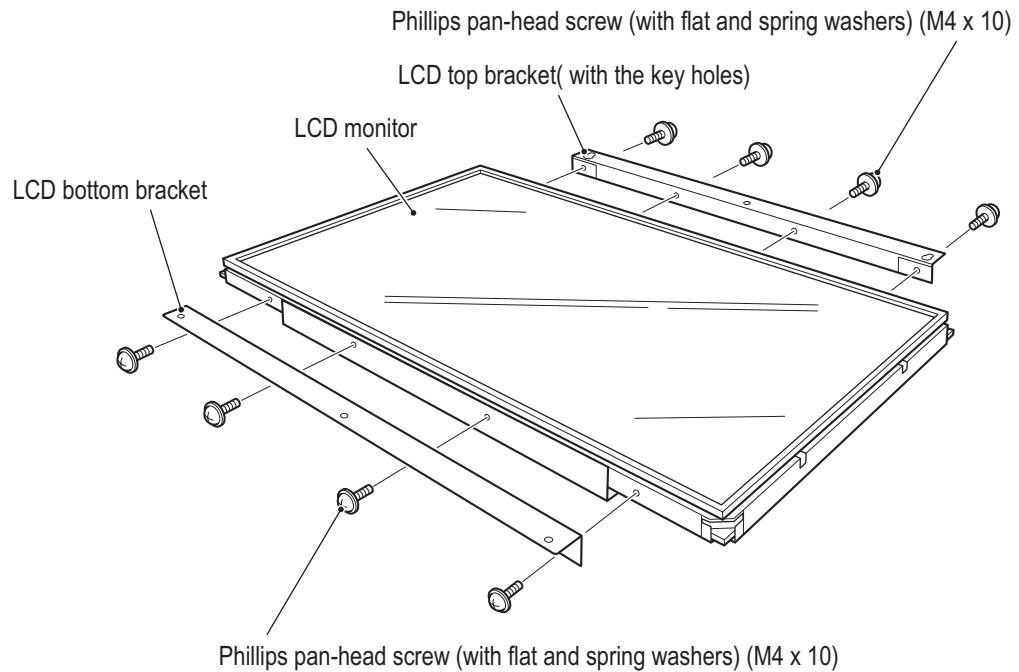


- 6** Loosen the two Phillips hexagon-head bolts (M? x ?) on both ends, remove the top center bolt and the three bottom bolts, and then dismount the LCD monitor.



- Place the dismounted LCD monitor on bubble wrap or similar material to prevent scratching on the monitor surface.

- 7** Remove the four Phillips pan-head screws (with flat and spring washers) (M4 x 10) from each of the top and bottom sides, and dismount the LCD top bracket and LCD bottom bracket.



- 8** To install, follow the removal sequence in reverse.
- * Be sure to install the LCD top bracket and LCD bottom bracket in the correct positions. The LCD bottom bracket must be installed in the side where is the connector terminal. And LCD monitor should be mounted so that connetor terminal of the back side is in downward direction.

8B-4-2 Control Assy

(1) Replacing the USIO PC Board

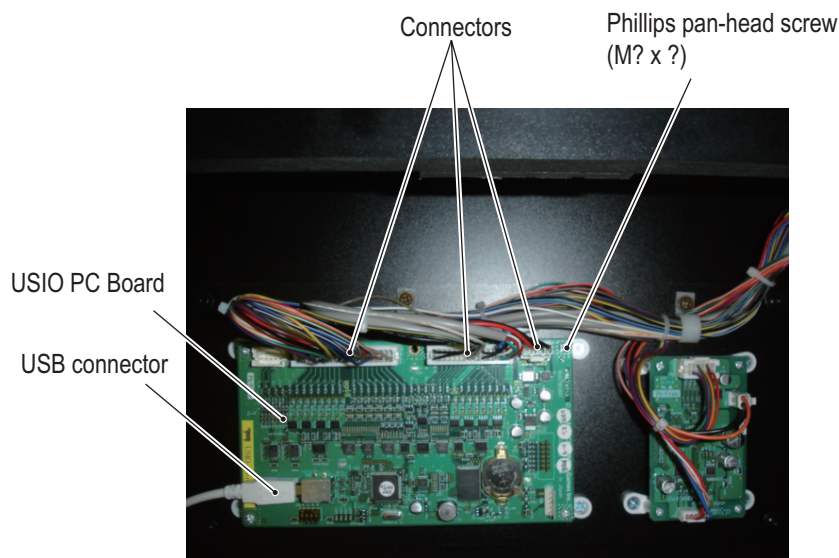
! WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

NOTICE

- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to remove static electricity from your body by touching a grounded metal.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Dismount the Maintenance door. (See P. 48 "8A-1-1 Assembling Monitor Assy and Control Assy.")
- 3** Disconnect the three connectors and one USB connector.



Control Assy (Front side)

- 4** Remove the five Phillips pan-head screws (M? x ?) and replace the USIO PC Board.
- 5** To install, follow the removal sequence in reverse.

NOTICE

- After the replacement, be sure to perform initialization. (See P. 47 "7-8 Gun Assy adjustment (initialization) after parts replacement.")

(2) Replacing the Gun Drive PC Board

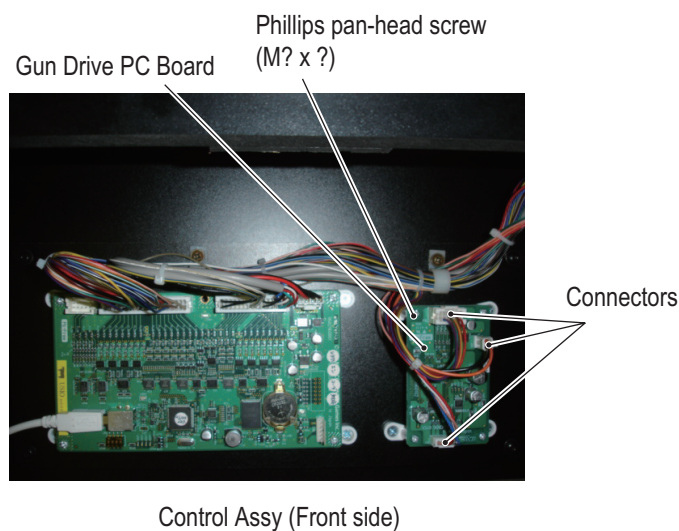
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

NOTICE

- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to remove static electricity from your body by touching a grounded metal.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Dismount the Maintenance door. (See P. 48 "8A-1-1 Assembling Monitor Assy and Control Assy.")
- 3** Disconnect the three connectors.



- 4** Remove the four Phillips pan-head screws (M? x ?) and replace the Gun Drive PC Board.
- 5** To install, follow the removal sequence in reverse.

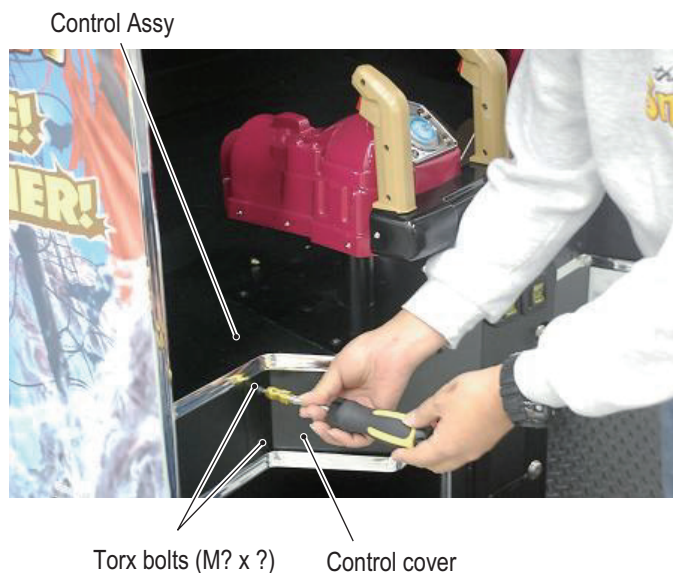
8B-4-3 Gun Assy

(1) Replacing and installing the Gun Assy

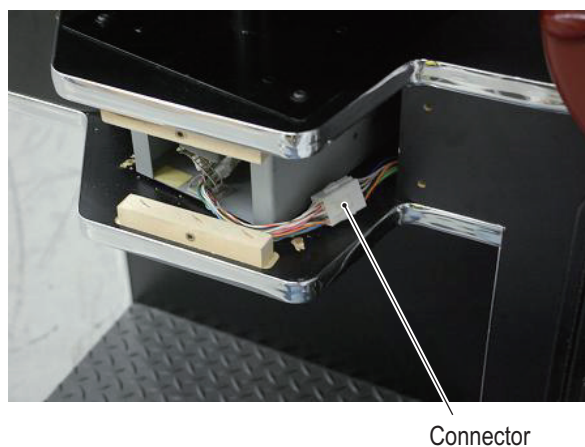
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

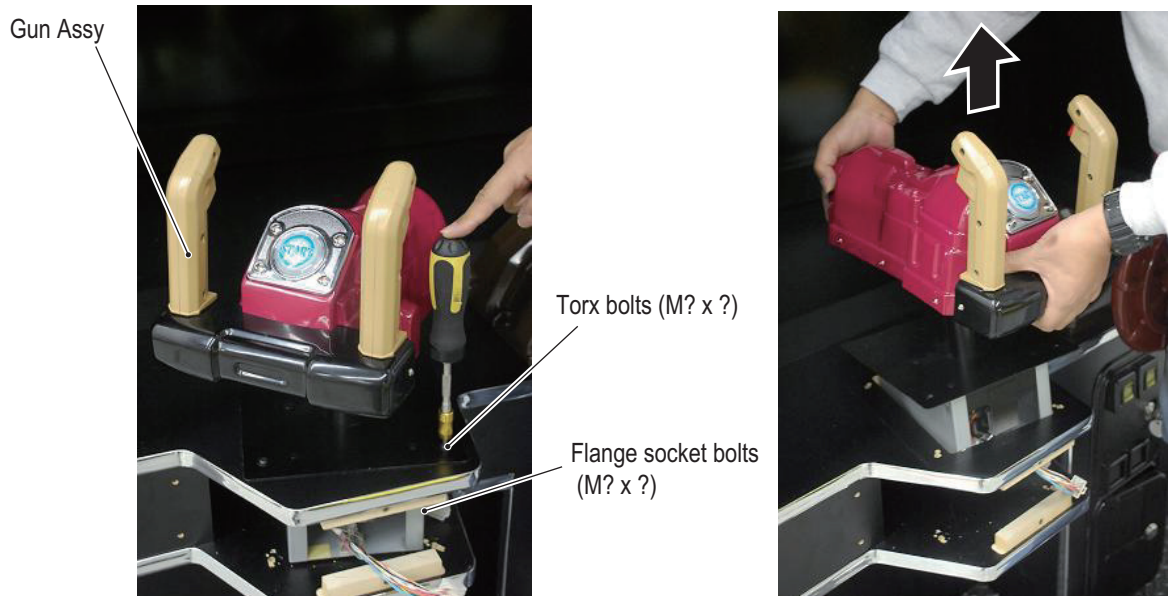
- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove four Torx bolts (M? x ?), and dismount the Control cover.



- 3** Disconnect the connector and the ground terminal.



- 4** Remove the 4 Torx bolts (M? x ?) of the upper surface and 4 Flange socket bolts (M? x ?) of the side. Then replace the Gun Assy.



- 5** To install, follow the removal sequence in reverse.



- During the installation, check the direction of each connector and insert the connectors firmly until they lock securely into place.
- During the installation, be careful not to pinch the connectors or harnesses.
- After the replacement, be sure to perform initialization. (See P. 47 “7-8 Gun Assy adjustment (initialization) after parts replacement.”)

(2) Replacing the volume (for left-right)

WARNING

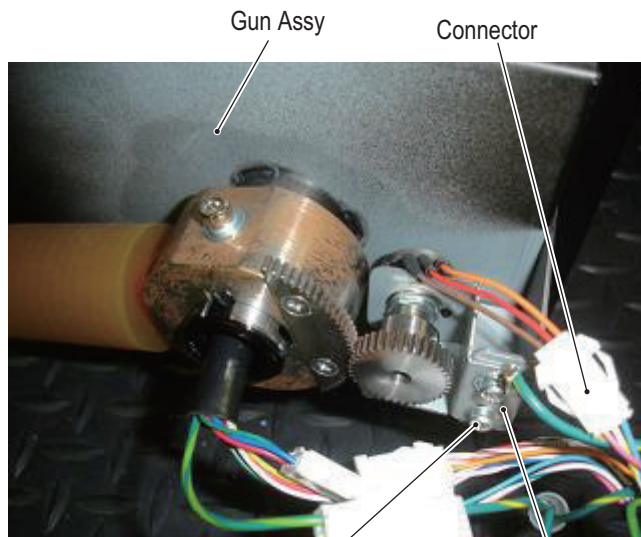
- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the Gun Assy. (See P. 72 "8B-4-3 (1) Replacing and installing the Gun Assy".)
- 3** Remove four Flange socket bolts (M? X ?) and dismount the Gun base box.



Flange socket bolts(M? x?) Gun base box

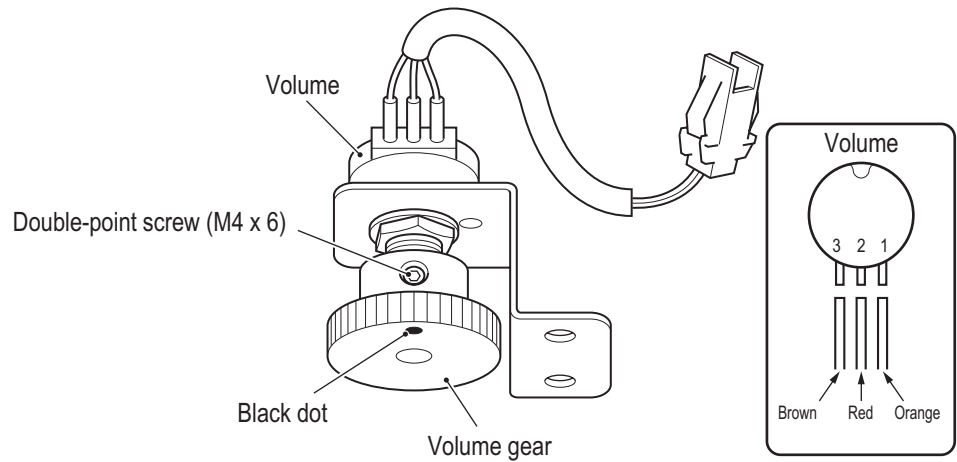
- 4** Loosen the one cord clip and disconnect the one connector. Then, Remove the two Phillips pan-head screws (with flat and spring washers) (M? x ?) and dismount the volume bracket.



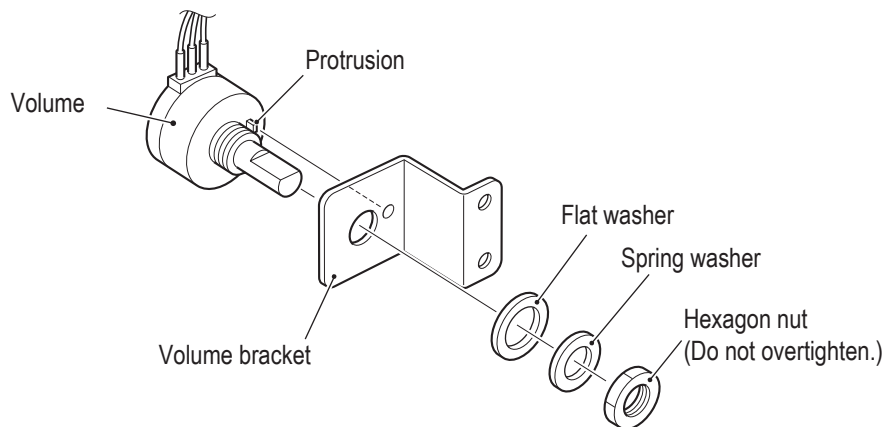
Phillips pan-head screw
(with flat and spring washers)
(M? x ?)

Volume bracket

- 5** Loosen the one double-point screw (M4 x 6) and remove the volume gear.
 * When installing the volume gear, align the black dot on the volume gear with the terminal connected with the red harness of the volume.



- 6** Remove the one hexagon nut, one spring washer and one flat washer, and then dismount the volume from the volume bracket.



- 7** Replace the volume.



- The volume (for up-down) is the same in external appearance. Before replacing, check the harness colors.

- 8** To install, follow the removal sequence in reverse.

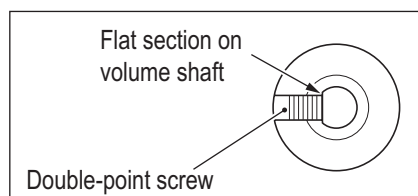


- Do not let the harness get caught between the gears.



* Do not let the harness get caught between the gears.

- When installing the volume, align the flat section on the volume shaft with the position of the double-point screw.



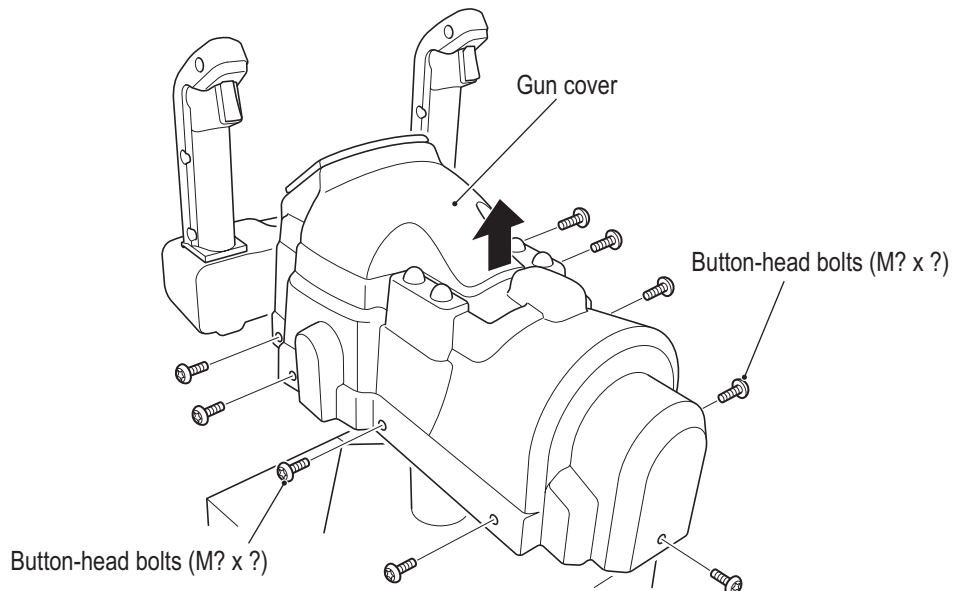
- After the replacement, be sure to perform initialization. (See P. 47 “7-8 Gun Assy adjustment (initialization) after parts replacement.”)

(3) Replacing the volume (for up-down)

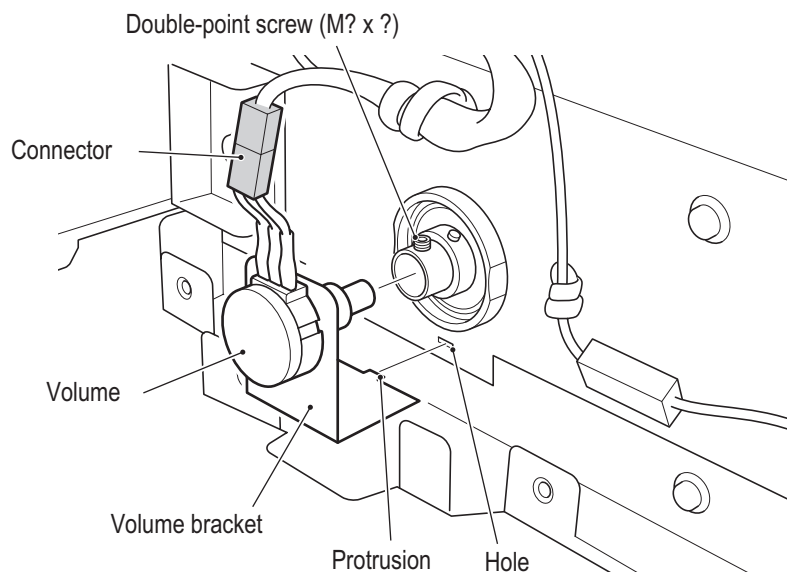
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

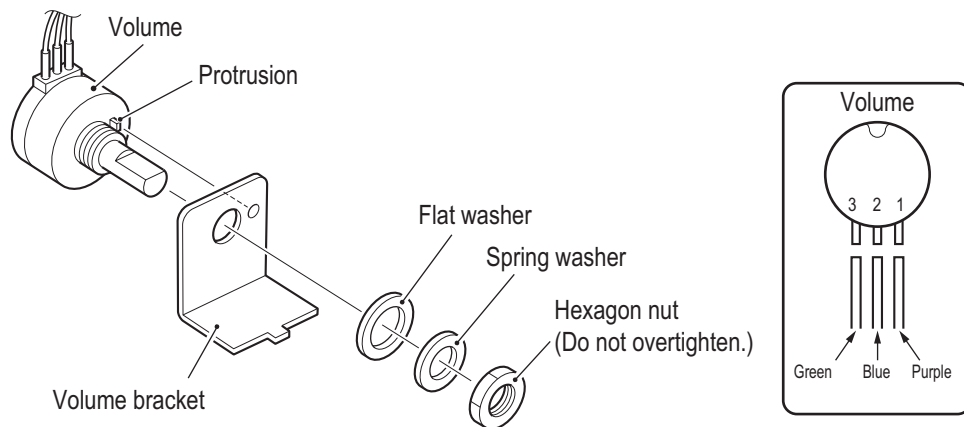
- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the switch bezel. (See P. 72 "8B-4-3 (6) Replacing the illuminated switch/ LED lamp in the Start button" **2** and **3**.)
- 3** Remove the nine button-head bolts (M? x ?) and dismount the gun cover.



- 4** Disconnect the one connector and remove the one double-point screw (M4 x 8), and then dismount the volume together with the volume bracket.



- 5** Dismount the volume from the volume bracket.



- 6** Replace the volume.

* When install the volume, position the volume terminals at the top.

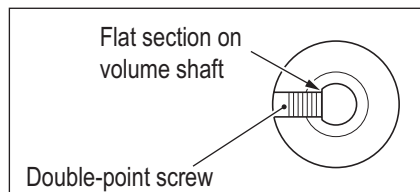


- The volume (for left-right) is the same in external appearance. Before replacing, check the harness colors.

- 7** To install, follow the removal sequence in reverse.



- When installing the volume, align the flat section on the volume shaft with the position of the double-point screw.



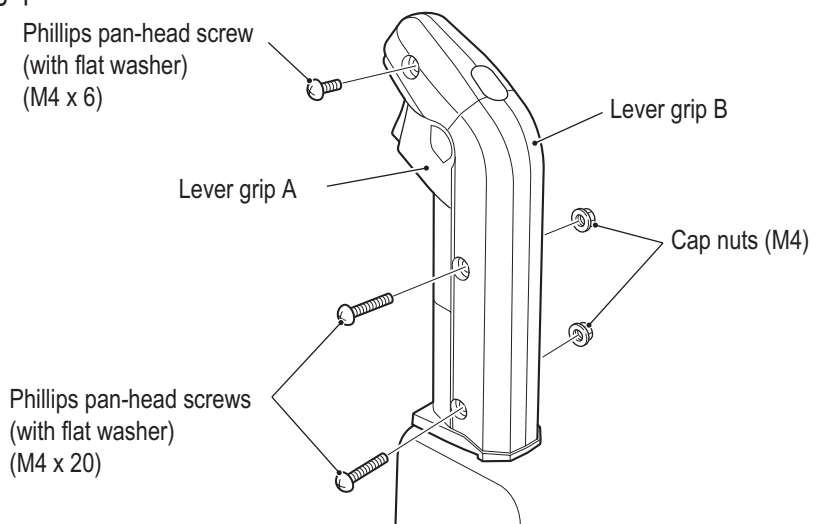
- After the replacement, be sure to perform initialization. (See P. 47 “7-8 Gun Assy adjustment (initialization) after parts replacement.”)

(4) Replacing the microswitch

⚠ WARNING

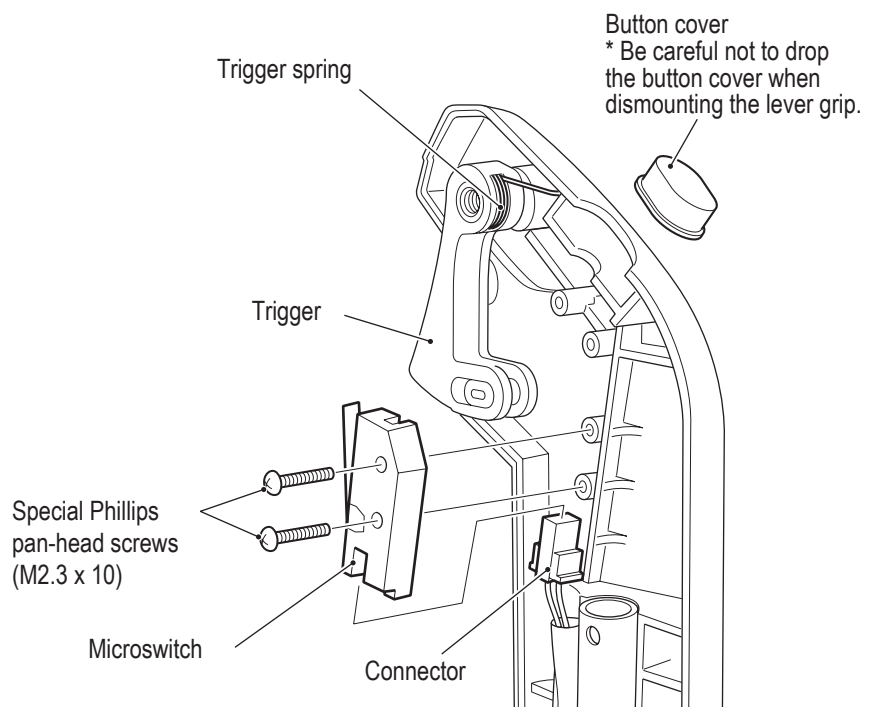
- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the two Phillips pan-head screws (with flat washer) (M4 x 20), two cap nuts (M4) and one Phillips pan-head screw (with flat washer) (M4 x 6), and dismount the lever grip A.



- Be careful not to lose the button cover that is attached to the upper section of the lever grip.

- 3** Remove the two special Phillips pan-head screws (M2.3 x 10).



- 4 Disconnect the one connector, and then dismount and replace the microswitch.



- During the installation, check the direction of each connector and insert the connectors firmly until they lock securely into place.
- During the installation, be careful not to pinch the connectors or harnesses.

- 5 To install, follow the removal sequence in reverse.



- After the replacement, be sure to check switch operation in the Test mode. (See P. 31 "7-6-4 (2) SWITCH TEST.")

(5) Replacing the trigger and spring

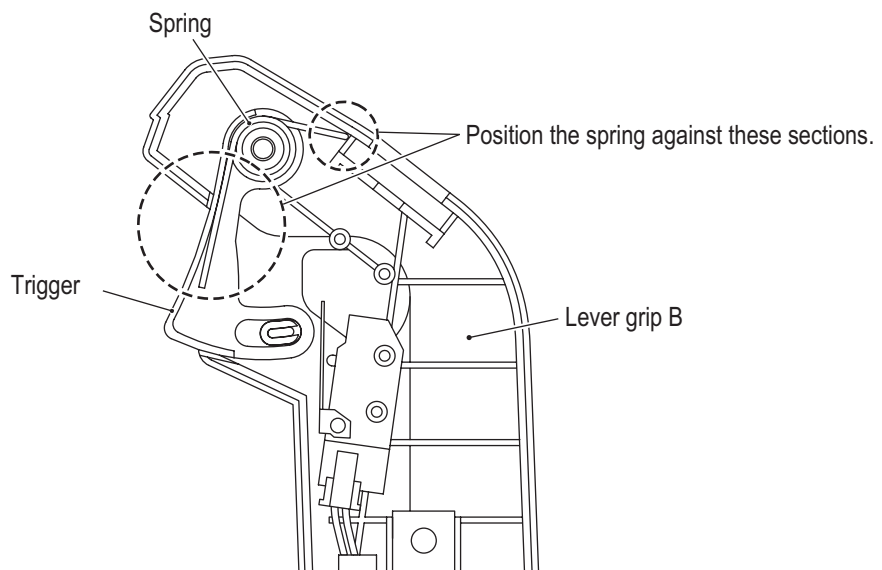
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1 Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2 Disassemble the lever grip. (See P. 79 "8A-4-3 (4) Replacing the microswitch" 2 and 3.)
- 3 If the trigger or spring is defective, replace it.



- Install the spring as shown in the diagram, and make sure that the spring rests securely on the trigger and lever grip B.



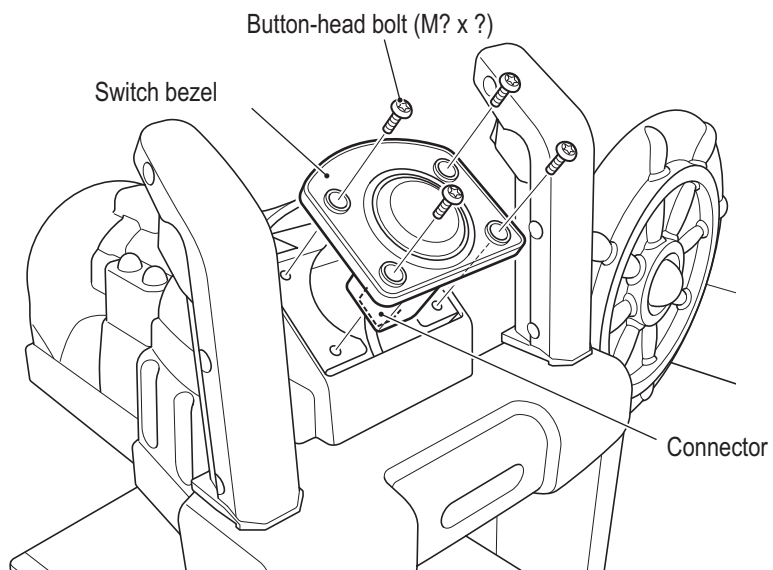
- 4 To install, follow the removal sequence in reverse. (See P. 79 "8A-4-3 (4) Replacing the microswitch" 2 and 3.)

(6) Replacing the illuminated switch/LED lamp in the Start button

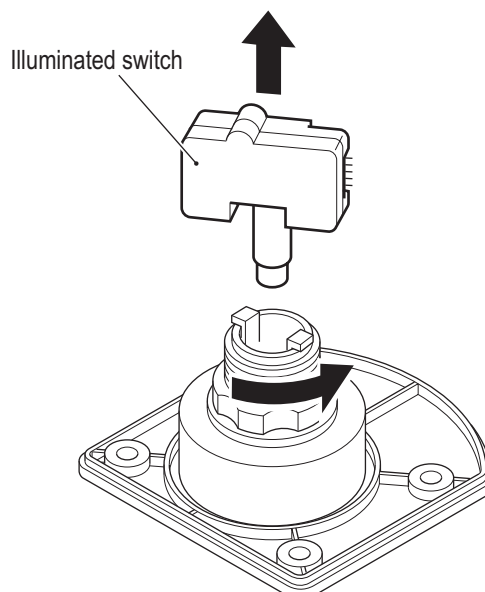
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

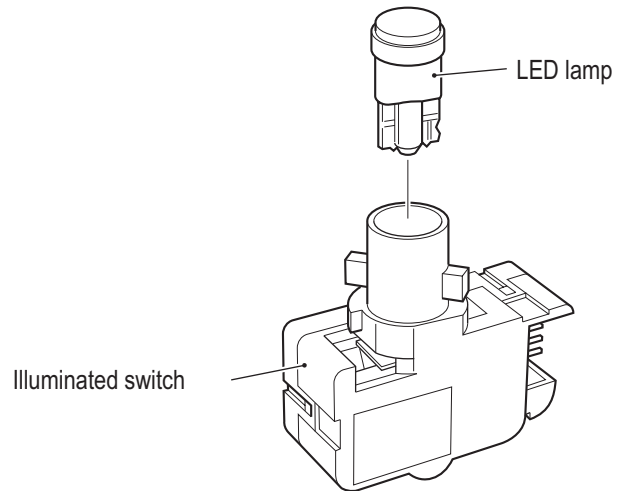
- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the four button-head bolts (M? x ?) and dismount the switch bezel.



- 3** Disconnect the one connector.
- 4** Turn the illuminated switch 45° and remove it from the switch bezel.



- 5** Remove the LED lamp from the illuminated switch and replace the defective part.
* Note that the LED lamp has polarities. Be sure to check the polarities when replacing the LED lamp.



- 6** To install, follow the removal sequence in reverse.



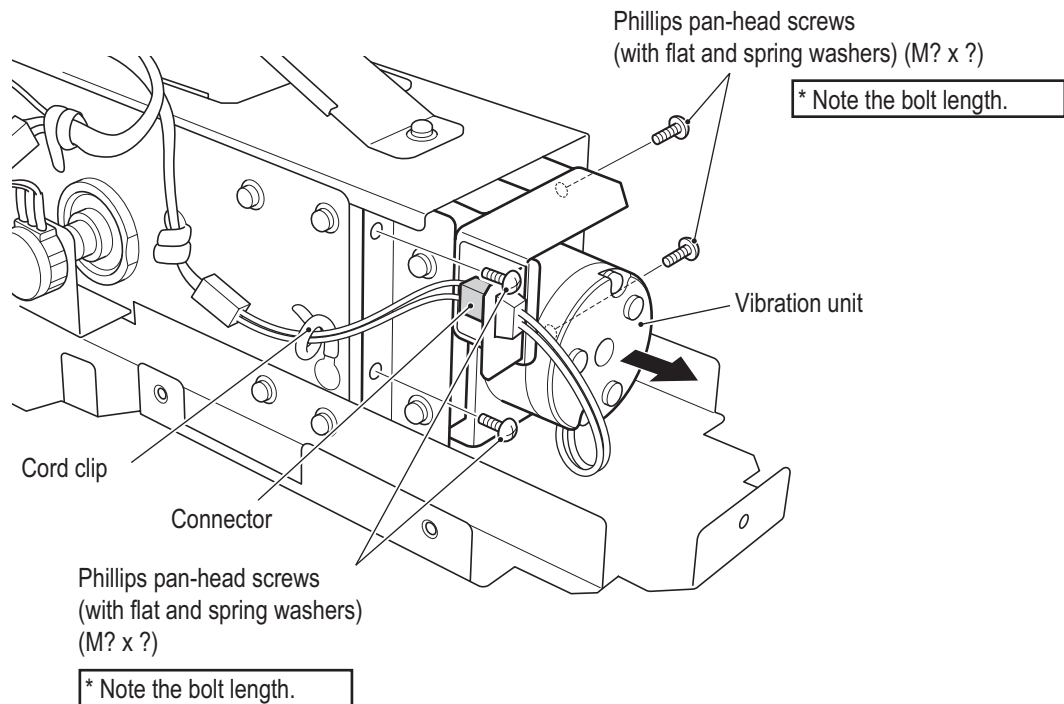
- After the replacement, be sure to check switch operation in the Test mode. (See P. 31 “7-6-4 (2) SWITCH TEST” and P. 35 “7-6-4 (6) OUTPUT TEST.”)

(7) Replacing the vibration unit

WARNING

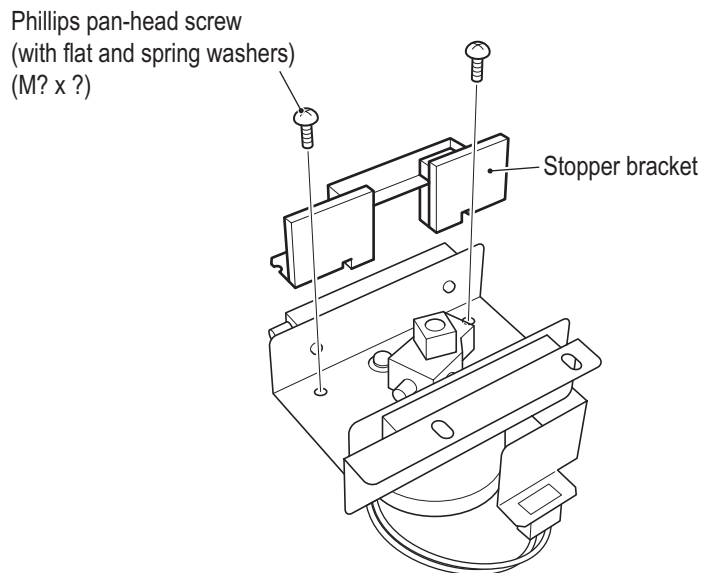
- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the Start button and switch bezel. (See P. 81 "8B-4-3 (6) Replacing the illuminated switch/LED lamp in the Start button" **2** and **3**.)
- 3** Remove the gun cover. (See P. 77 "8B-4-3 (3) Replacing the volume (for up-down)" **3**.)
- 4** Remove the one cord clip and disconnect the one connector.

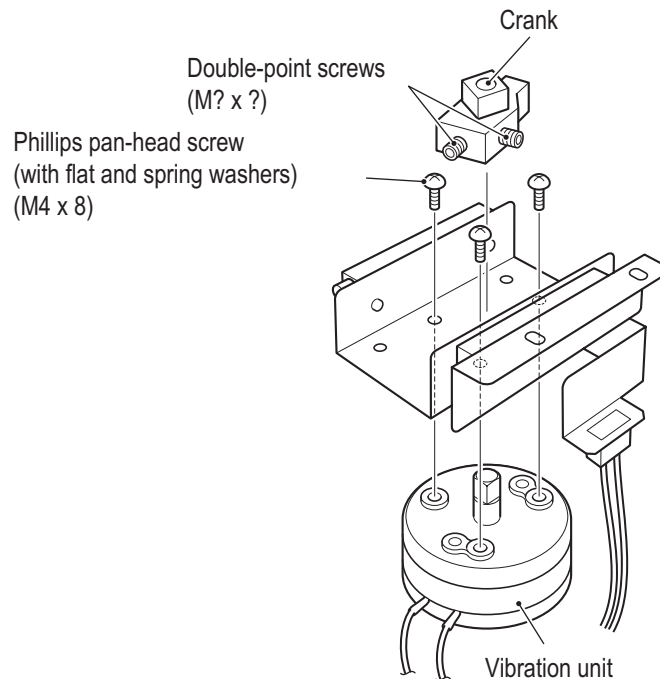


- 5** Remove the two Phillips pan-head screws (with flat and spring washers) (M? x ?) and two Phillips pan-head screws (with flat and spring washers) (M? x ?), and then dismount the vibration unit.

- 6** Remove the two Phillips pan-head screws (with flat and spring washers) (M? x ?) and dismount the stopper bracket.



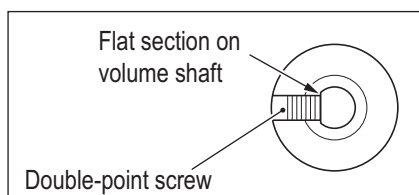
- 7** Loosen the two double-point screws (M? x ?) using an Allen wrench, and dismount the crank.



- 8** Disconnect the one connector.
- 9** Remove the three Phillips pan-head screws (with flat and spring washers) (M4 x 8) and dismount the vibration unit.
- 10** Replace the vibration unit.
- 11** To install, follow the removal sequence in reverse.



- When installing the vibration unit, align the flat sections (2 locations) on the vibration unit shaft with the positions of the double-point screws.



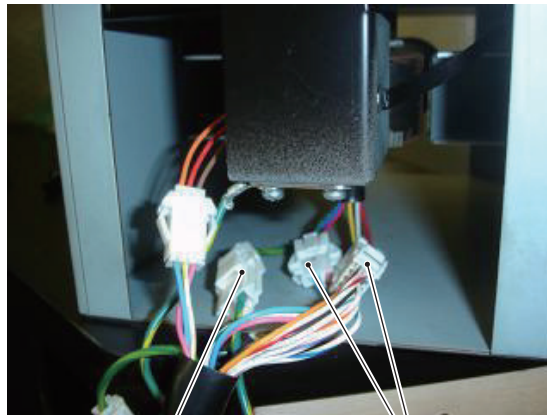
- During the installation, be careful not to pinch the connectors or harnesses.
- After the replacement, be sure to check the vibration unit for proper operation in the Test mode. (See P. 35 "7-6-4 (6) OUTPUT TEST.")

(8) Replacing the gun harness 3d

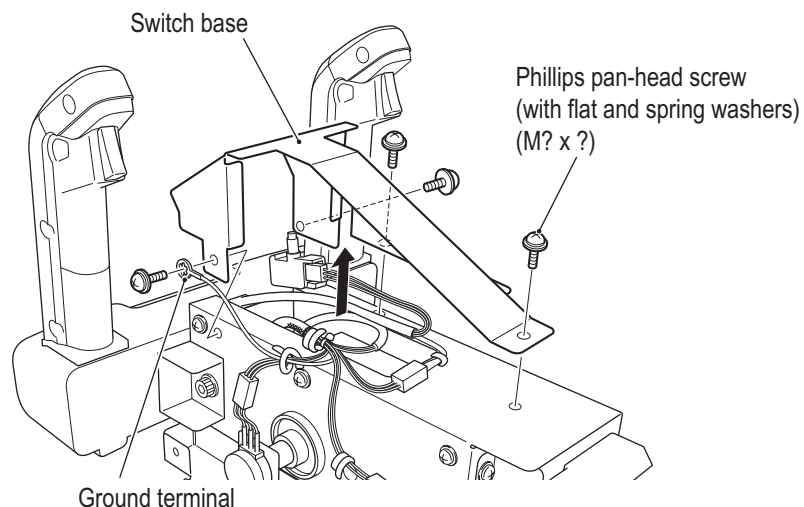
WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

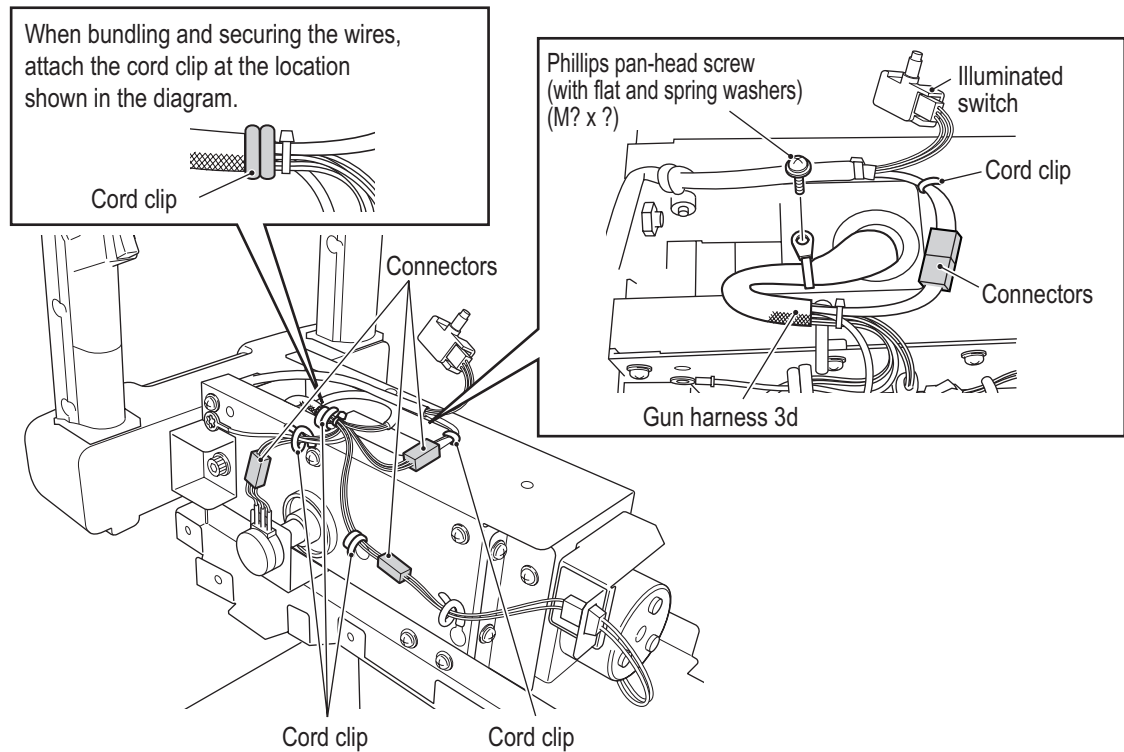
- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Dismount the Gun Assy. (See P. 72 "8B-4-3 (1) Replacing and installing the Gun Assy".)
- 3** Disconnect the two connectors and one Ground terminal.



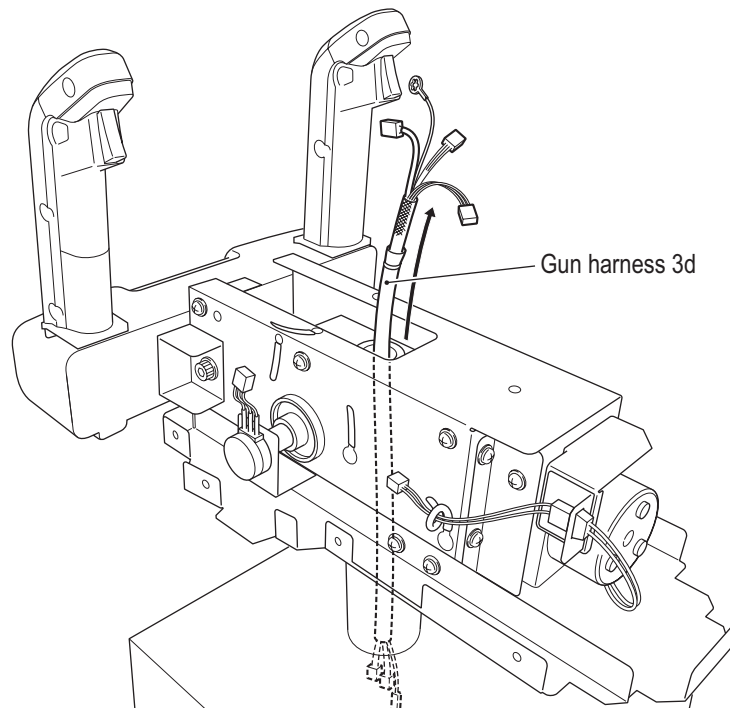
- 4** Remove the Gun cover. (See P. 83 "8B-4-3 (7) Replacing the vibration unit" **2** and **3**.)
- 5** Remove the four Phillips pan-head screws (with flat and spring washers) (M? x ?) and dismount the switch base.



- 6** Disconnect the three connectors of the gun harness 3d and remove the four cord clips. Remove the one Phillips pan-head screw (M? x ?) and one cord clip.



- 7** Pull out the gun harness 3d.



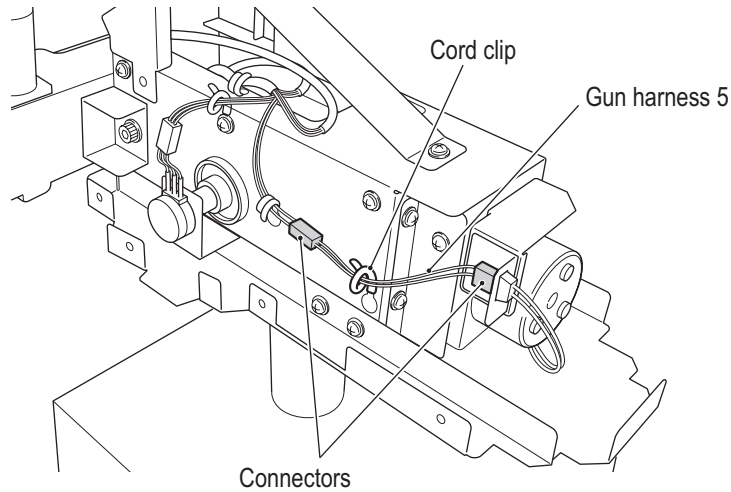
- 8** To install, follow the removal sequence in reverse.

(9) Replacing the gun harness 5

! WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the gun cover. (See P. 77 "8B-4-3 (3) Replacing the volume (for up-down)" **3**.)
- 3** Disconnect the two connectors and detach the one cord clip, and then remove the gun harness 5.



- 4** To install, follow the removal sequence in reverse.

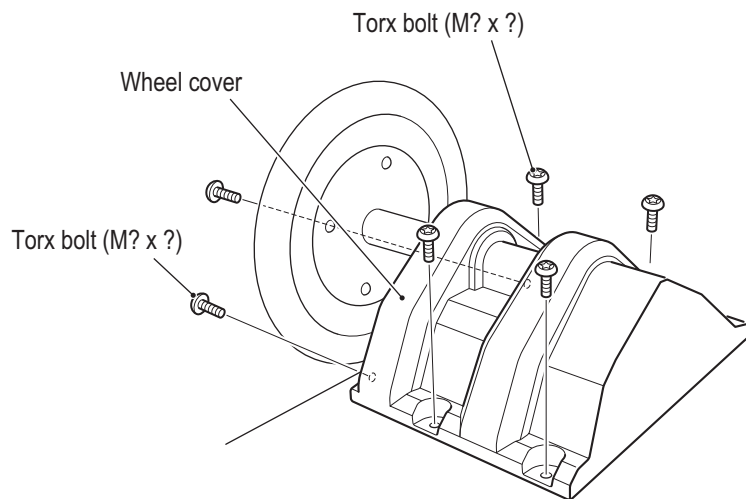
8B-4-4 Wheel Assy

(1) Removing and installing the Wheel Assy

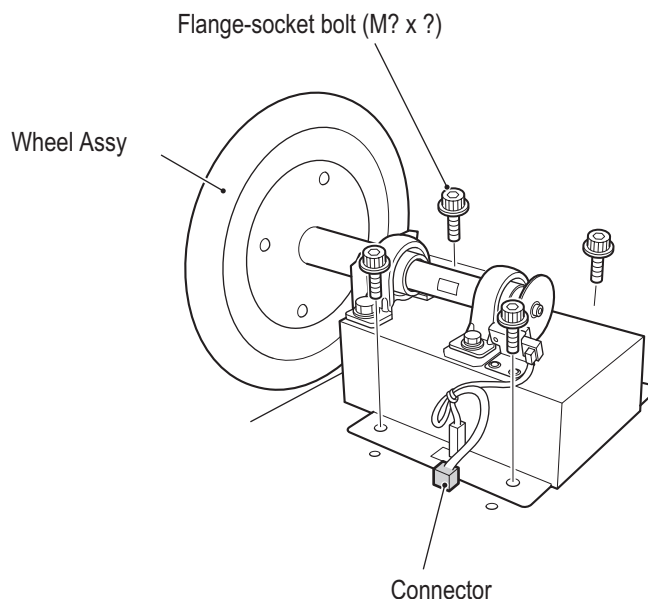
! WARNING

- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the six Torx bolts (M? x ?) and dismount the wheel cover.



- 3** Disconnect the one connector and remove the four flange-socket bolts (M? x ?), and dismount the Wheel Assy.
* When removing the flange-socket bolts (M? x ?), support the wheel section since the Wheel Assy can lose balance due to the weight of the wheel.



- 4 To install, follow the removal sequence in reverse.



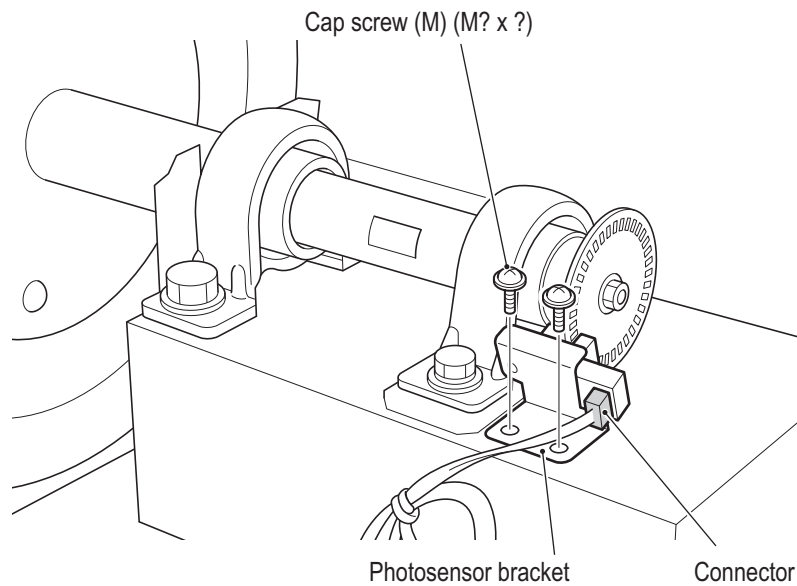
- During the installation, check the direction of each connector and insert the connectors firmly until they lock securely into place.
- During the installation, be careful not to pinch the connectors or harnesses.

(2) Replacing the photosensor (for wheel)

WARNING

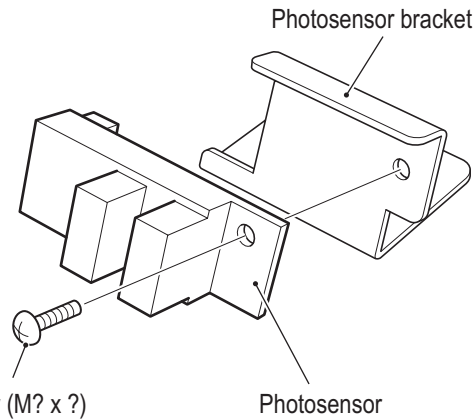
- To protect the service staff and other people from an electric shock, accident and injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

- 1 Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2 Remove the wheel cover. (See P. 89 "8B-4-4 (1) Removing and installing the Wheel Assy" 2.)
- 3 Remove the two cap screws (M) (M? x ?) and dismount the photosensor bracket.

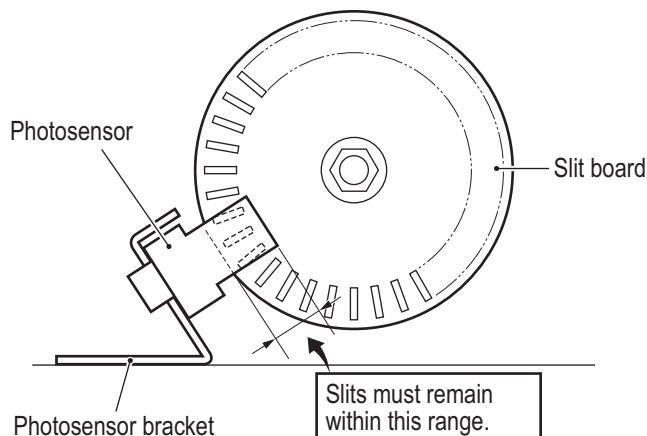
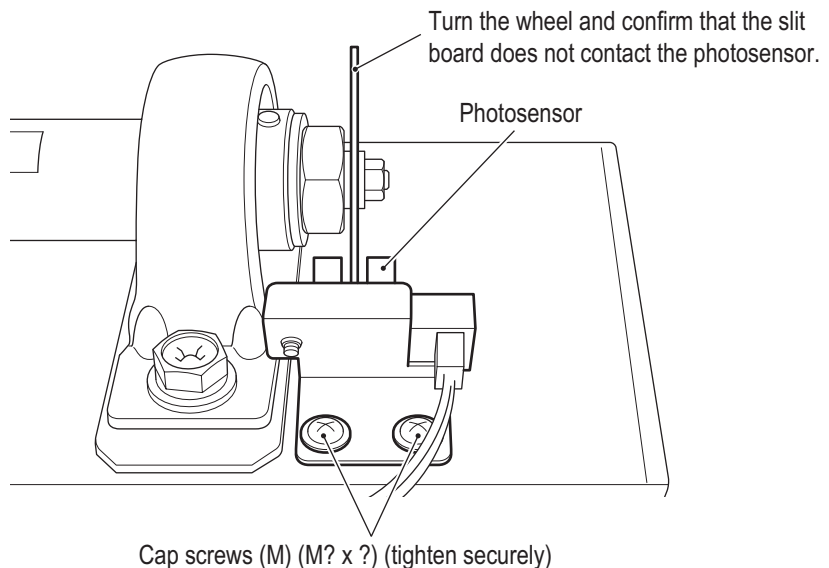


- 4 Disconnect the one connector.

- 5** Remove the one Phillips pan-head screw (M? x ?), and dismount and replace the photosensor.



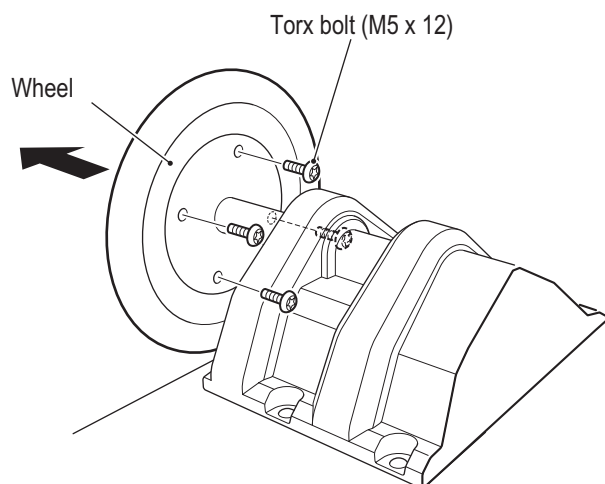
- 6** Temporarily install the photosensor bracket using two cap screws (M) (M? x ?), position the slits in relation to the photosensor as shown in the diagram below, and then tighten the cap screws securely. After tightening the cap screws, turn the wheel and make sure that the slit board does not contact the photosensor.



- During the installation, check the direction of each connector and insert the connectors firmly until they lock securely into place.
- During the installation, be careful not to pinch the connectors or harnesses.
- After the replacement, be sure to check the wheel for proper operation in the Test mode. (See P. 34 “7-6-4 (5) STEERING TEST.”)

(3) Replacing the wheel

- 1** Remove the four Torx bolts (M5 x 12) and dismount the wheel.



- 2** Replace the wheel.
- 3** To install, follow the removal sequence in reverse.

8B-4-5 Marquee Assy

(1) Replacing the fluorescent lamps

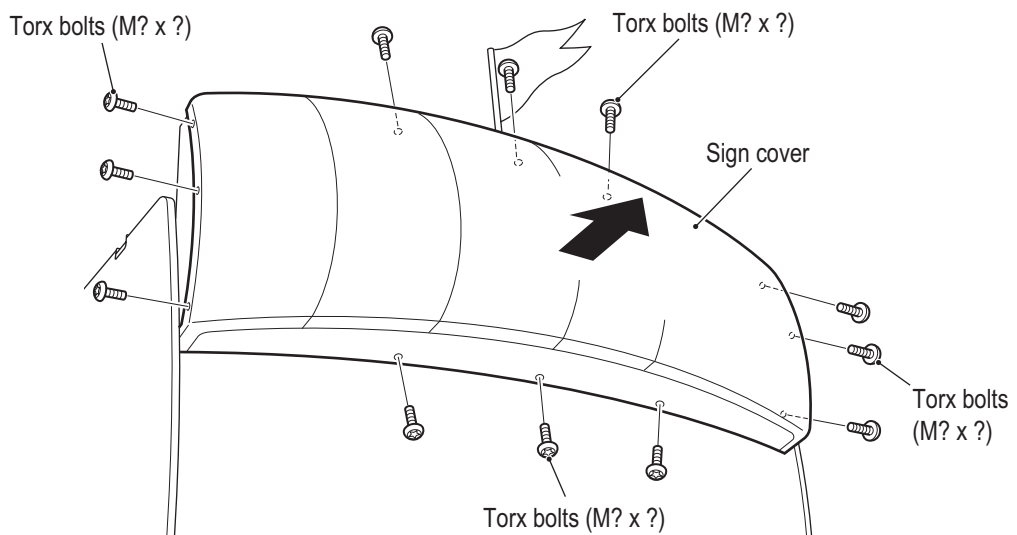
WARNING

- To protect the service staff from injury and to prevent damage to the electrical circuitry of the machine, always turn off the power switch before conducting the described task.

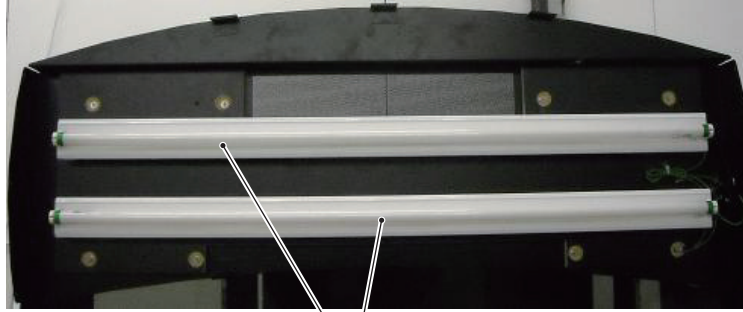
CAUTION

- The fluorescent lamps become very hot. Exercise caution when removing them.
- Since removal of the fluorescent lamps must be performed at a height, prepare a step ladder or platform to stand on. Performing the task in an awkward position can result in injury or machine damage.

- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the 12 Torx bolts (M? x ?) and dismount the Sign cover from the Marquee Assy.



- 3** Disconnect the connector from each fluorescent lamp and replace the fluorescent lamps (40W).



Fluorescent lamps

- 4** To install, follow the removal sequence in reverse.

8B-5 LCD monitor adjustment

WARNING

- To adjust the LCD monitor, the power switch must be turned on. To avoid electric shock, do not touch the connector of the monitor adjustment switches.

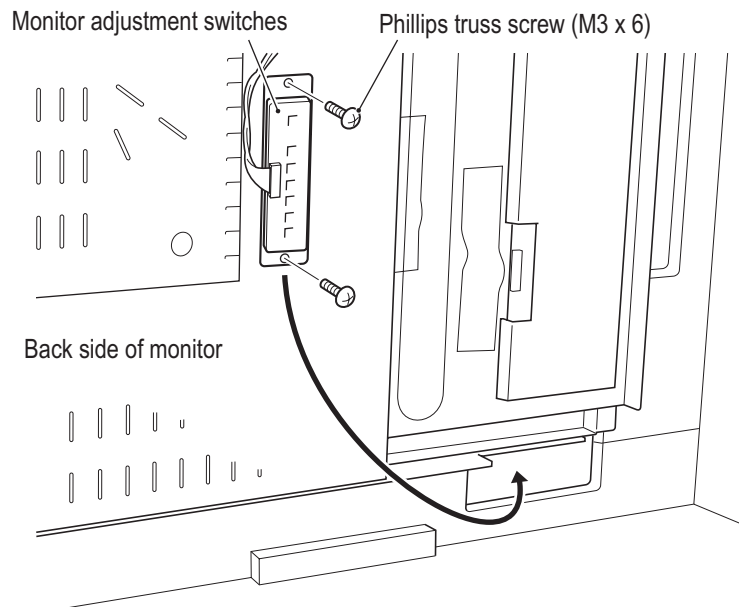


- The LCD monitor is adjusted to optimum condition at the factory. Therefore, it does not normally require adjustment.

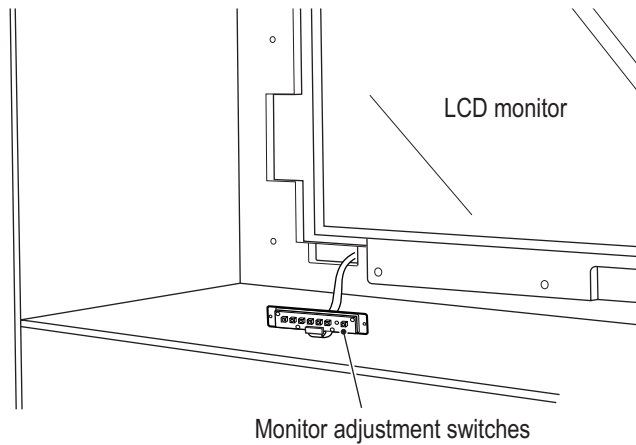
8B-5-1 Removing and installing the monitor adjustment switches

The monitor adjustment switches are located on the rear side of the monitor. To make adjustments, it is necessary to pull out the monitor adjustment switches to a position where you can operate the switches while viewing the displayed image.

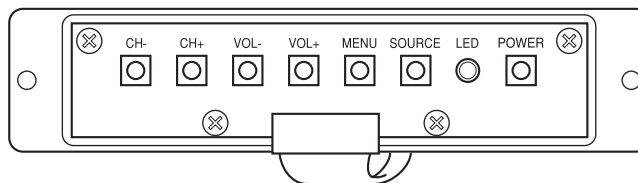
- 1** Turn off the power switch. (See P. 24 "7-5-1 Power switch location and turning on the switch.")
- 2** Remove the Monitor cover and Maintenance cover A. (See P. 67 "8B-4-1 (4) Replacing the LCD monitor.")
- 3** Remove the two Phillips truss screws (M3 x 6) and dismount the monitor adjustment switches.



- 4** Run the monitor adjustment switches through the cut-out section at the bottom of the monitor toward the front of the machine.



- 5** Turn on the power switch and adjust the LCD monitor. (See P. 97 “8B-5-2 Adjusting the LCD monitor image quality” and P. 98 “8B-5-3 Adjusting the LCD monitor settings.”)



OSD Key	Function (normal screen)	Function (OSD screen) ^{*2}	Function (adjustment screen) ^{*3}
(a) CH- button	Disabled	Select an item.	Disabled
(b) CH+ button	Disabled	Disabled	Disabled
(c) VOL- button	Disabled	Enter an item.	Change the numeric setting.
(d) VOL+ button	Disabled	Disabled	Change the numeric setting.
(e) Menu button	Displays the OSD screen ^{*2} .	Ends the OSD screen ^{*2} .	Returns to the previous item.
(f) Source button	Switches signals between VGA and DVI. (Not used)	Switches signals between VGA and DVI. (Not used)	Switches signals between VGA and DVI. (Not used)
(g) LED	Blue: Power ON Orange Power OFF	Blue: Power ON Orange Power OFF	Blue: Power ON Orange Power OFF
(h) Power switch	Turns the monitor ON/OFF (Not used)	Turns the monitor ON/OFF (Not used)	Turns the monitor ON/OFF (Not used)

*1 The machine is set for DVI signals. If the button is pressed accidentally and no image is displayed on the monitor, press the button again to return to the previous condition.

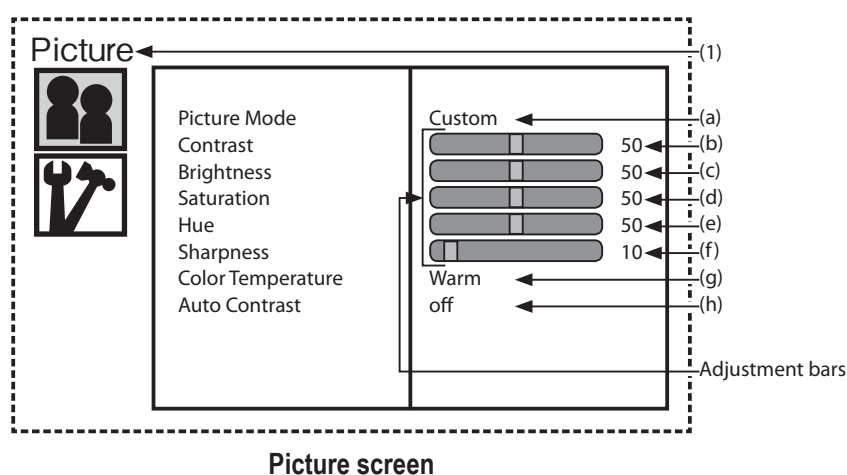
*2 The OSD screen refers to the screen that is used to enter image quality settings and others. (See P. 97 “8B-5-2 Adjusting the LCD monitor image quality” and P. 98 8B-5-3 “Adjusting the LCD monitor settings.”)

*3 Screen that displays enlarged adjustment bars or other items.

- 6** After the adjustment, turn off the power switch and reinstall the monitor adjustment switches by following steps **2** to **4** in reverse.

8B-5-2 Adjusting the LCD monitor image quality

- 1** Move the monitor adjustment switches to a position where you can operate the switches while viewing the displayed image. (See P. 95 “8B-5-1 Removing and installing the monitor adjustment switches.”)
- 2** Turn on the power switch of the machine (cabinet). If the power switch of the LCD monitor is in the OFF position, turn it on. (See P. 96 “8B-5-1 Removing and installing the monitor adjustment switches” **5**.)
- 3** Press the Menu button to display the OSD screen.

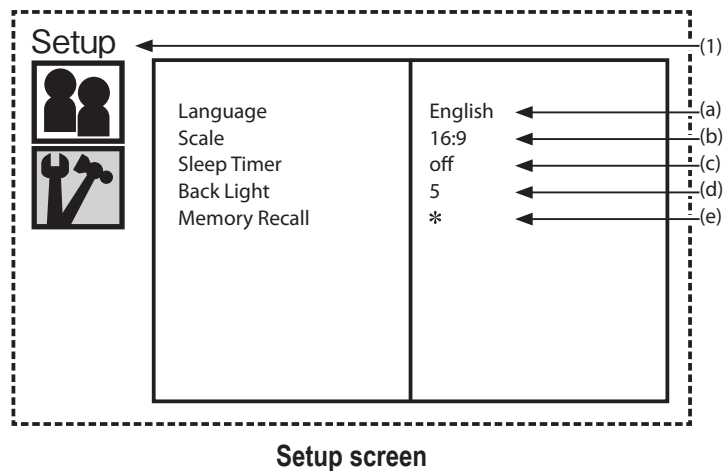


Item	Function	Default setting
(1) Picture	Adjustment of image quality	
(a) Picture Mode	Image quality mode [Custom]	Custom
(b) Contrast	Adjustment of contrast [0 to 100]	50
(c) Brightness	Adjustment of brightness [0 to 100]	50
(d) Saturation	Color saturation adjustment [0 to 100]	50
(e) Hue	Adjustment of hue [0 to 100]	50
(f) Sharpness	Adjustment of color sharpness [0 to 100]	10
(g) Color Temperature	Setting of color temperature [Custom, Cool, Standard, Warm]	Warm
(h) Auto Contrast	Automatic adjustment of contrast [Off, On]	off

- 4** Press the VOL+ button and select “Picture.”
- 5** Press the CH– or CH+ button to select an item to be adjusted, and press the VOL+ button.
- 6** Press the VOL– or VOL+ button to change the setting.
* The displayed settings are active.
- 7** After the adjustment, press the Menu button to close OSD screen.
- 8** Turn off the power switch of the machine (cabinet).
- 9** Reinstall the monitor adjustment switches to the original position. (See P. 95 “8B-5-1 Removing and installing the monitor adjustment switches.”)

8B-5-3 Adjusting the LCD monitor settings

- 1** Move the monitor adjustment switches to a position where you can operate the switches while viewing the displayed image. (See P. 95 “8B-5-1 Removing and installing the monitor adjustment switches.”)
- 2** Turn on the power switch of the machine (cabinet). If the power switch of the LCD monitor is in the OFF position, turn it on. (See P. 96 “8B-5-1 Removing and installing the monitor adjustment switches” **5**.)
- 3** Press the Menu button to display the OSD screen.



Item	Function	Default setting
(1) Setup	Setting screen	
(a) Language	Setting of language [Chinese, Japanese, English, French, Dutch/German, Italian]	English
(b) Scale	Setting of aspect ratio [1:1, 4:3, 16:9]	16:9
(c) Sleep Timer	Setting of sleep timer (min) [Off, 30, 60, 90, 120]	Off
(d) Back Light	Adjustment of backlight brightness [0 to 10]	5
(e) Memory Recall	Returns to default.	—

- 4** Press the CH– or CH+ button and select “Setup,” and then press the VOL+ button.
- 5** Press the CH– or CH+ button to select an item to be adjusted, and press the VOL+ button.
- 6** Press the VOL– or VOL+ button to change the setting.
* The displayed settings are active.
- 7** After the adjustment, press the Menu button to close OSD screen.
- 8** Turn off the power switch of the machine (cabinet).
- 9** Reinstall the monitor adjustment switches to the original position. (See P. 95 “8B-5-1 Removing and installing the monitor adjustment switches.”)

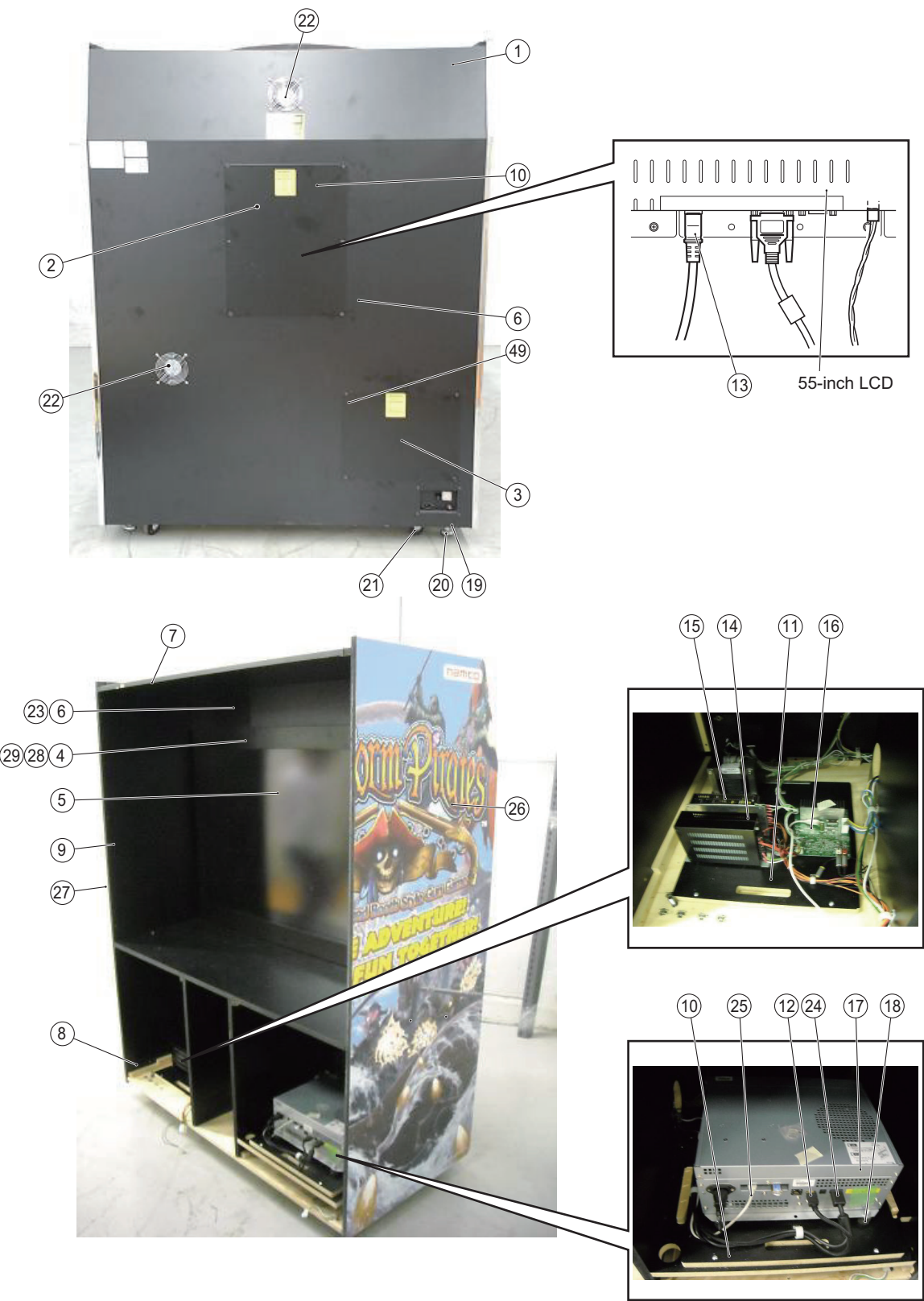
9. DISCARDING THE MACHINE

WARNING

- The machine must be collected, transported and discarded in accordance with applicable laws and regulations.
- When entrusting a third party to collect, transport and discard the machine, be sure to select specialist companies.
- The following component contains specially controlled industrial waste which must be collected, transported and discarded in special manners in accordance with the law. When discarding this component, please contact your distributor.
 - 55-inch LCD monitor (See P. 67 “8B-4-1 (4) Replacing the LCD monitor.”)
 - * In some cases, local ordinances also stipulate special methods of collecting, transporting and discarding specially controlled industrial waste.

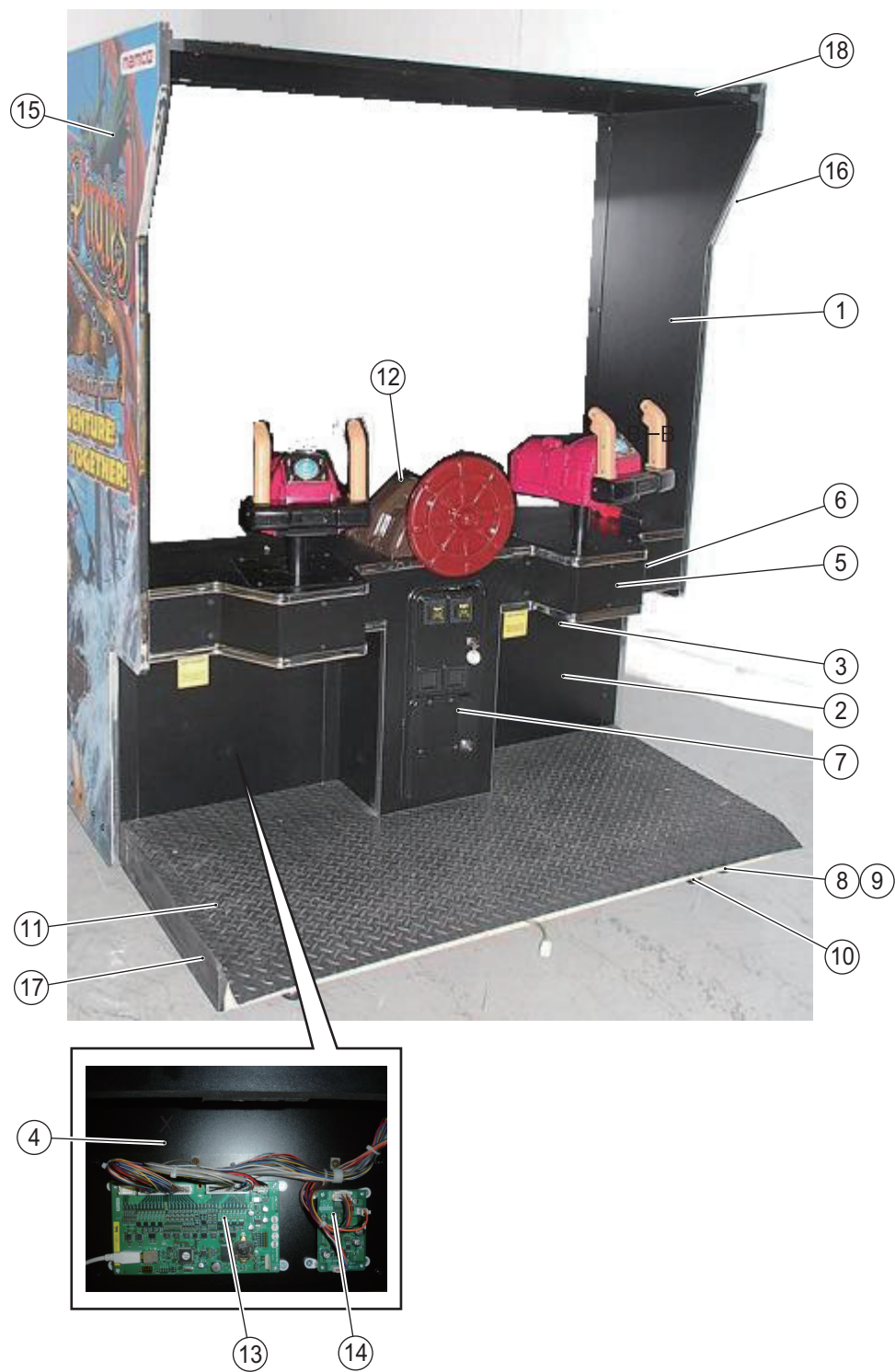
10. PARTS LISTS

10-1 Monitor Assy



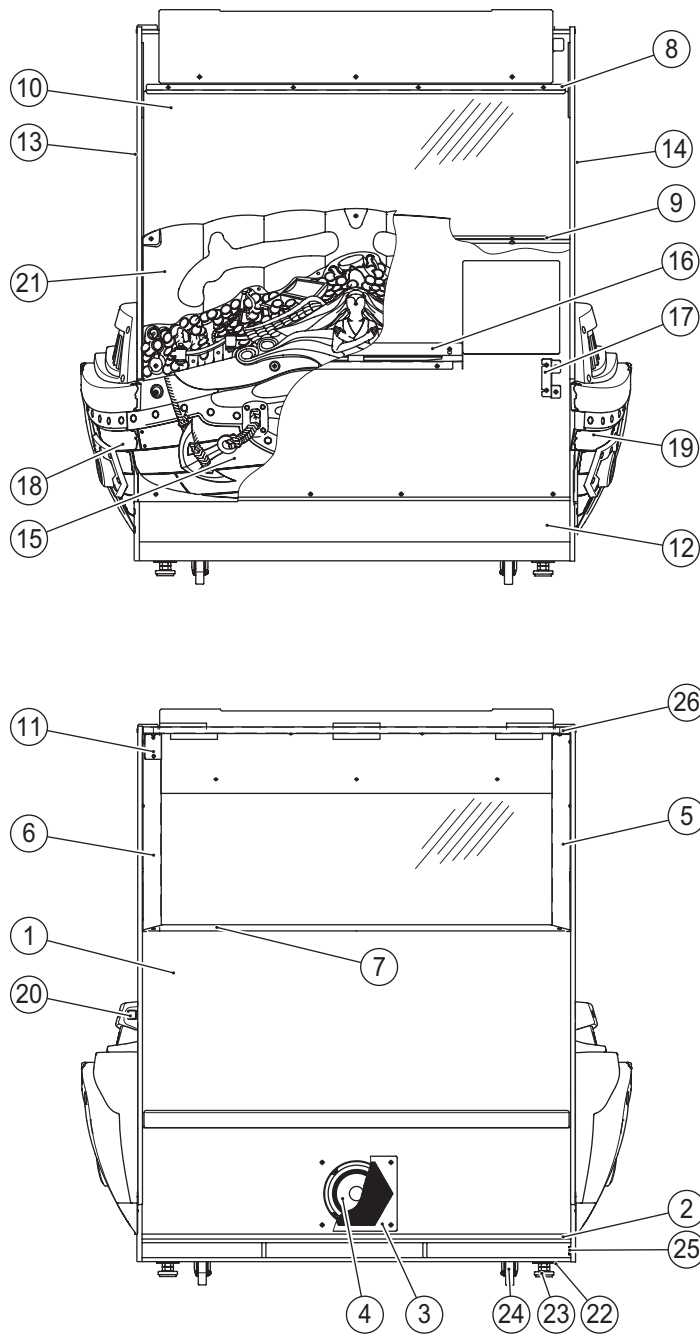
No.	Name	Qty.	Type and rating	Part No.
1	Monitor cabinet	1		
2	Maintenance panel A	1		
3	Maintenance panel B	1		
4	Monitor cover	1		
5	Monitor panel	1		
6	Speaker cover	2		
7	Top joint bracket	1		
8	MC bottom joint bracket	2		
9	MC side joint bracket	2		
10	Rack board	1		
11	PS board	1		
12	HDMI-DVI conversion cable	1		
13	AC connector VLR connector cable	1		
14	SW power supply unit, 5V/12 V	1		
15	SW power supply unit, 12V	1		
16	Bass AMP PC board	1		
17	System 357	1		
18	Round vibration-insulating rubber	6		
19	Adjuster bracket	4		
20	Adjuster	4		
21	Caster	4		
22	Fan motor	2		
23	Speaker	1		
24	AV cable	1		
25	USB cable	1		
26	Decal M sde R	1		
27	Decal M side L	1		
28	Monitor panel TB bracket	2		
29	Monitor panel LR bracket	2		

10-2 Control Assy



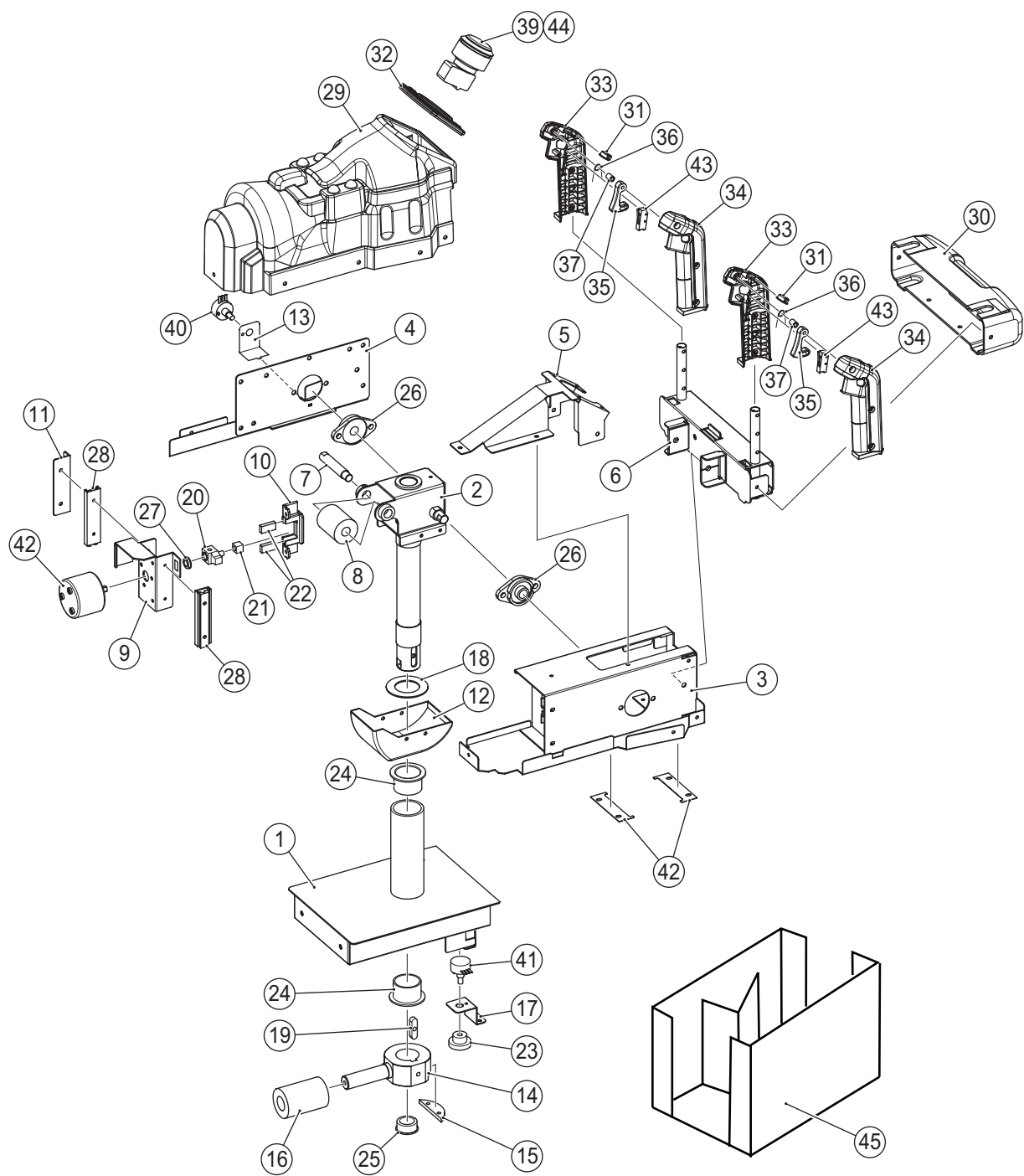
No.	Name	Qty.	Type and rating	Part No.
1	Control cabinet	1		
2	Maintenance door	2		
3	Coin lock	2		
4	USIO mount board	1		
5	Control cover	2		
6	Gun mount bracket	4		
7	Coin door	1		
8	Adjuster Bracket	4		
9	Adjuster Bolt	4		
10	Caster	4		
11	Floor mat	1		
12	Wheel cover	1		
13	USIO PC board	1		
14	Gun Drive PC board	1		
15	Decal C side L	1		
16	Decal C side R	1		
17	C joint support bracket	2		
18	Top joint bracket	1		

10-3 Seat Assy



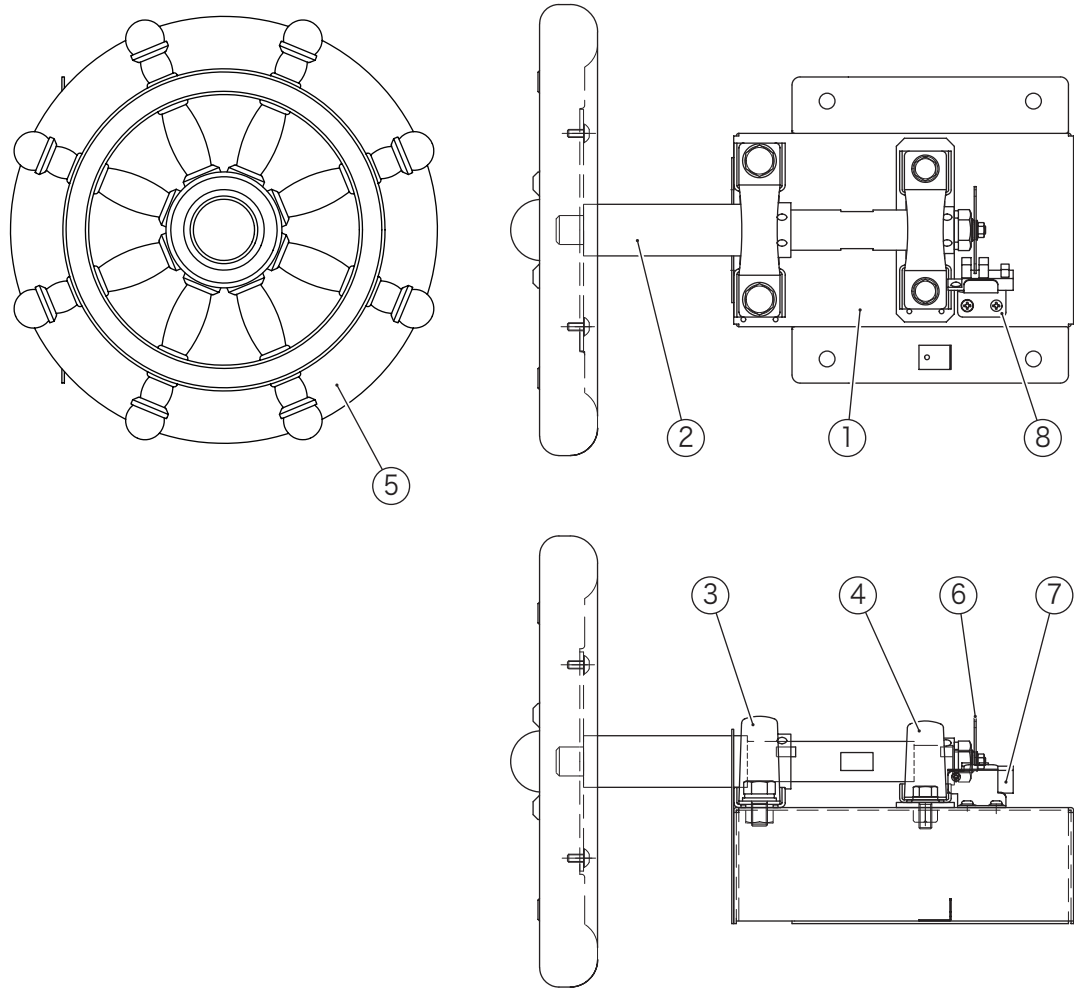
No.	Name	Qty.	Type and rating	Part No.
1	Seat cabinet	1		
2	Floor mat bracket	1		
3	Woofer cover	1		
4	Woofer speaker	1		
5	Window pillar L	1		
6	Window pillar R	1		
7	Window mount base	1		
8	Window top bracket	1		
9	Window bottom bracket	1		
10	Window panel	1		
11	Connector cover	1		
12	Seat bottom cover	1		
13	Decal S side L	1		
14	Decal S side R	1		
15	Rear body	1		
16	Rear body center mount bracket	1		
17	Rear body side mount bracket	2		
18	Side body L	1		
19	Side body R	1		
20	Side body mount bracket	2		
21	Treasure cover	1		
22	Adjuster bracket	1		
23	Adjuster bolt	1		
24	Caster	1		
25	S joint support bracket	2		
26	Top joint bracket	1		

10-4 Gun Assy



No.	Name	Qty.	Type and rating	Part No.
1	Neck SD	1		
2	Core shaft	1		
3	Frame cover (2)	1		
4	Frame cover (1)	1		
5	Switch base	1		
6	Grip	1		
7	Stopper shaft	1		
8	Stopper rubber (1)	1		
9	Motor frame	1		
10	Stopper frame	1		
11	Slide bracket	1		
12	Undercover	1		
13	Volume bracket (for up-down)	1		
14	Pipe end	1		
15	Gear	1		
16	Stopper rubber (2)	1		
17	Volume bracket (for left-right)	1		
18	Spacer	1		
19	Key	1		
20	Crank	1		
21	Slider	1		
22	Stopper rubber	2		
23	Gear	1		
24	Flange bushing	2	LFF-3220	
25	One-touch bushing	1	NB-19	
26	Rhomboidal pillow	2	KFL001	
27	Miniature bearing	1	MF148ZZ	
28	Slide rail	2	AR2-60 (ball: 2 x 10 pieces)	
29	Gun cover	1		
30	Grip cover	1		
31	Button cover Hole blind	2		
32	Switch bezel	1		
33	Lever grip A	2		
34	Lever grip B	2		
35	Trigger button	2	SN-07170	
36	Trigger spring	2	SN-07171	
37	Trigger spacer	2	SN-07177	
38	Gap filling plate	2		
39	Start button Button sticker	1		
40	Volume (for up-down)	1	EWSV7CF20E13	
41	Volume (for left-right)	1	EWSUGBF20E13	
42	Vibration unit	1	RSR20/10-CAB0-BNG	
43	Microswitch	2	D3M-01L1-3	
44	Button switch	1	OBSAX-C45UMW1FLW3	
45	Gun base box	1		

10-5 Wheel Assy



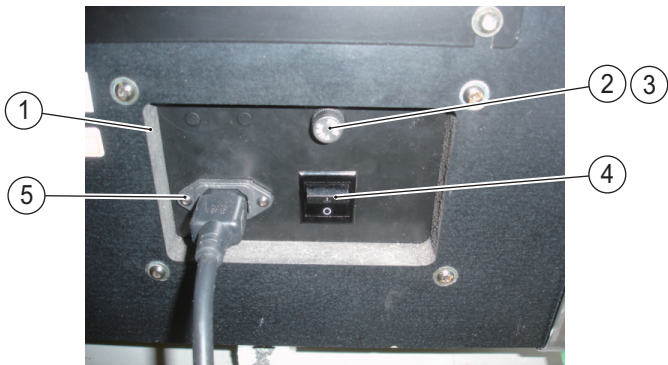
No.	Name	Qty.	Type and rating	Part No.
1	Wheel base	1		
2	Wheel shaft	1		
3	Pillow unit (diameter: 25 mm)	1	BPP5	
4	Pillow unit (diameter: 20 mm)	1	BPP4	
5	Darin	1		
6	Slit board	1		
7	Photosensor	1	KI1138-AALF	
8	Sensor bracket	1		

10-6 Service Plate Assy



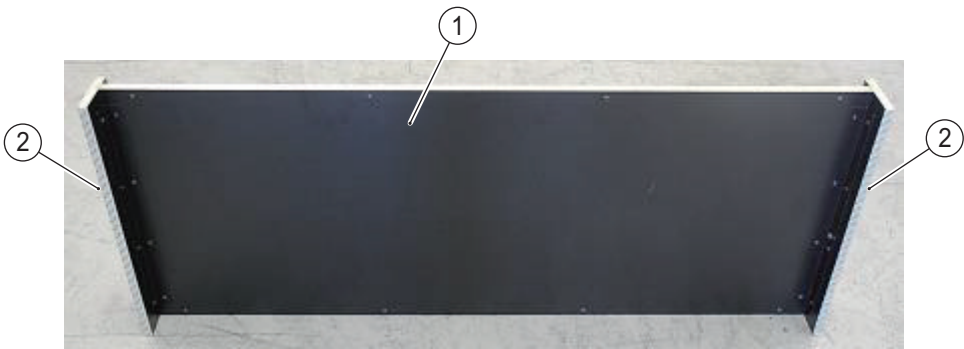
No.	Name	Qty.	Type and rating	Part No.
1	Service plate	1		
2	Switch (toggle switch ON-OFF)	1		
3	Switch (toggle switch ON-OFF-ON)	1		
4	Switch (pushbutton)	2		
5	Test sticker	1		
6	Service sticker	1		
7	Enter sticker	1		
8	Select sticker	1		
7	Coin meter	1		

10-7 Cord Box Assy



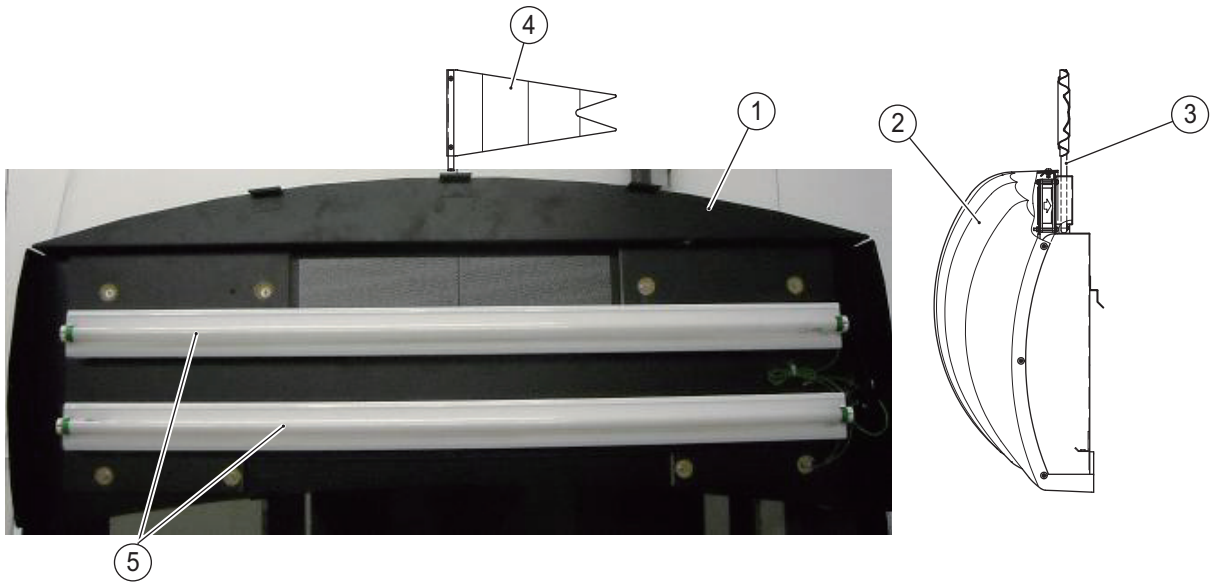
No.	Name	Qty.	Type and rating	Part No.
1	Cord box	1		
2	Fuse holder	1		
3	Fuse	1		
4	Power switch	1		
5	Noise filter	1		

10-8 Roof Assy



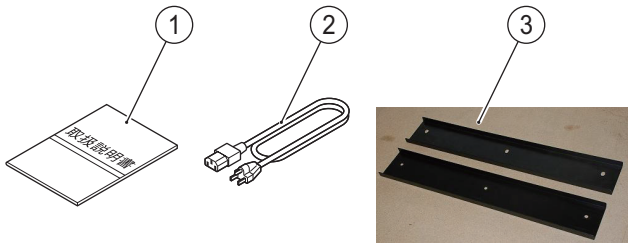
No.	Name	Qty.	Type and rating	Part No.
1	Roof	1		
2	Decal Roof	2		

10-9 Marquee Assy

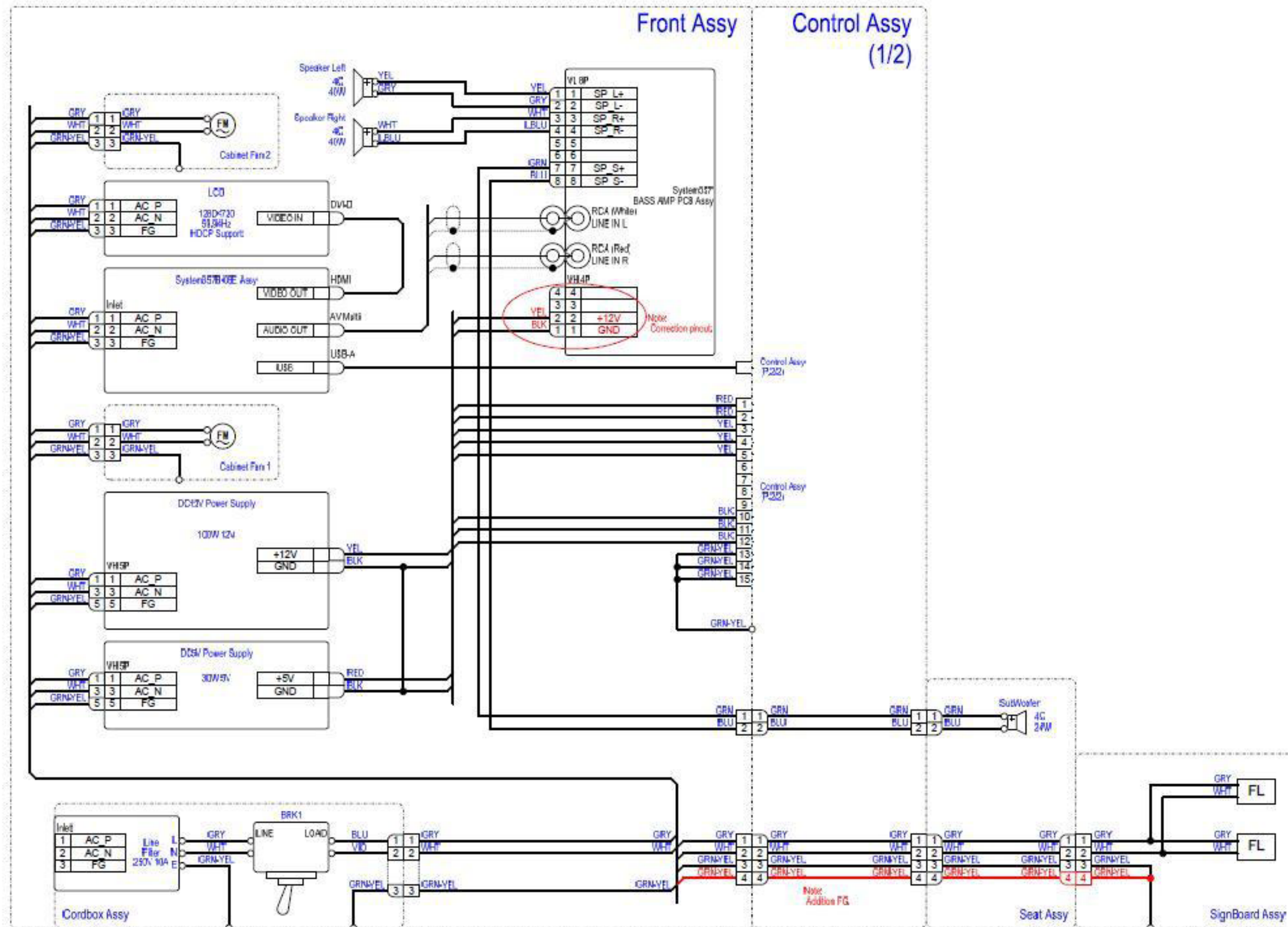


No.	Name	Qty.	Type and rating	Part No.
1	Marquee box	1		
2	Sign cover	1		
3	Flag pole	1		
4	Flag	1		
5	Fluorescent lamp	2		

10-10 Other parts



No.	Name	Qty.	Type and rating	Part No.
1	Operation Manual	1		
2	Power cord	1		
3	CS bottom joint bracket	1		



Control Assy

1349 GUN DRIVE PCB

VH2P

US8-B

V371 USID PCB

VH4P

Shield Cable

Notes:
Holes: red.
Connect and distribute all remote GNDs.
Addition for coin counter control.

Coin Assy

Service Panel Assy

Wheel Assy

Dual Channel Photo Sensor

GUN 1P Assy

GUN 2P Assy