namco®

DEADSTORM PIRATES
SPECIAL EDITION

OPERATION MANUAL

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

⚠ **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.

NAMCO BANDAI Games Inc.

Important

Read PRECAUTIONS and INSTALLATION
Sections before operating game

FCC Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operating in a commercial environment. This equipment uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INTRODUCTION

Thank you for purchasing the "DEAD STORM PIRATES SPECIAL EDITION" game machine (hereafter referred to as the "machine").

This operation manual describes:
- How to install, operate, relocate, transport, maintain and discard of 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

This machine uses MXML.
MXML is used under the MIT License.

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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

CONTENTS

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2. SPECIFICATIONS

(1) Rated power supply   120 ± 5 VAC (60 Hz) / 230V ± 5 VAC (50 Hz)
(2) Maximum power consumption   600 W
(3) Maximum current consumption 5 A (120 VAC) / 2.5 A (230 VAC)
(4) Coin box capacity   Approx. 3,000 coins
(5) Display device   LCD monitor (55″ screen)
(6) Dimensions
   ① As installed   70″(W) x 98″ (D) x 89″ (H)

   ② When divided

    Monitor Assy   56″ (W) x 27″ (D) x 72″ (H)
    Control Assy   56″ (W) x 32″ (D) x 72″ (H)
    Seat Assy   70″ (W) x 40″ (D) x 72″ (H)
    Marquee Assy   54″ (W) x 12″ (D) x 23″ (H)
    Roof Assy   56″ (W) x 22″ (D) x 5″ (H)

(7) Weight
   ① As installed   Approx. 990 lbs.
   ② When divided
    Monitor Assy   Approx. 352 lbs.
    Control Assy   Approx. 331 lbs.
    Seat Assy   Approx. 243 lbs.
    Marquee Assy   Approx. 36 lbs.
    Roof Assy   Approx. 27 lbs.

3. CHECKING THE PACKAGE CONTENTS

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

NOTICE
- **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)**
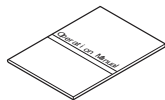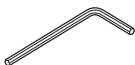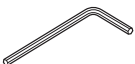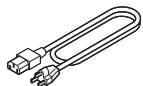
Packaging 3:   74" (W) x 51" (D) x 77" (H)
・ **Seat Assy**
・ **Box 2 (Roof Assy(1), CS bottom joint bracket(2), MC bottom joint bracket(2),**
       MC side joint bracket(2), Top joint bracket(2), Screws)

Control Assy

Seat Assy

Box 1

Box 2

Roof Assy

3. CHECKING THE PACKAGE CONTENTS

• Accessory list

No.	Name	Specification		Qty.
1	Operation Manual (this manual)			1
2	Maintenance key			4
3	Cash box key			2
4	Coin door key			2
6	Torx wrench	M5, T25		1
7	Torx wrench	M6, T27		1
8	Power Cord			1

4. OVERALL CONSTRUCTION (Names of Parts)

■ **General view (front side)**

Roof Assy
Seat Assy
Marquee Assy
Monitor Assy
Control Assy

■ **General view (rear side)**

Air vent holes
Maintenace panel B
Monitor Assy
Rack Assy
Maintenace panel B
Cord box Assy(Power switch)

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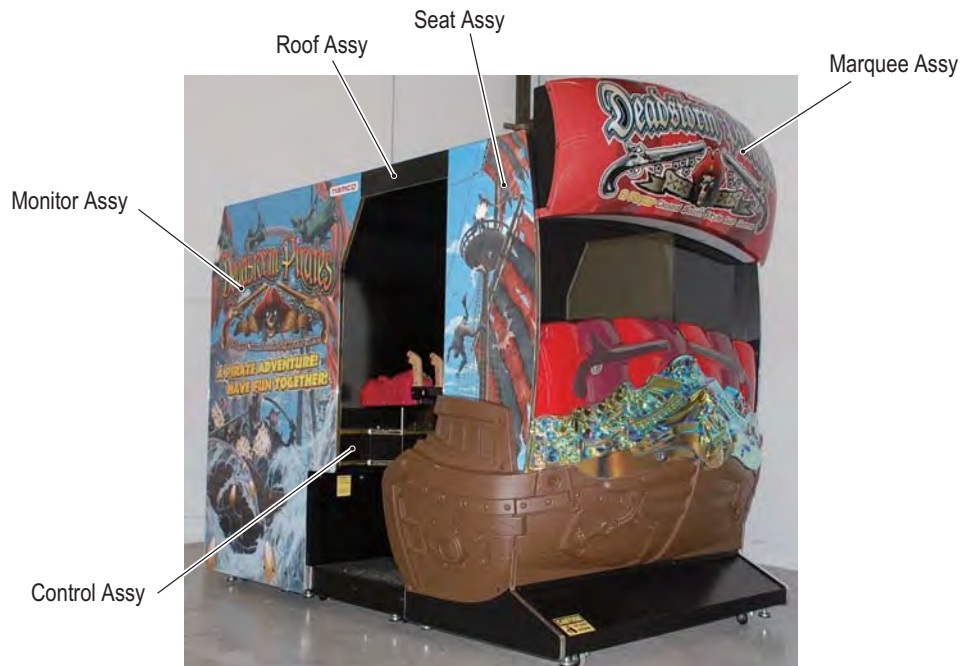
4. OVERALL CONSTRUCTION (Names of Parts)

■ Monitor and Control Assys

Speaker

LCD monitor

Triggers

1P Start button

2P Start button

Gun Assy

Service door
(service plate)

Wheel Assy

Coin box door

Maintenance door
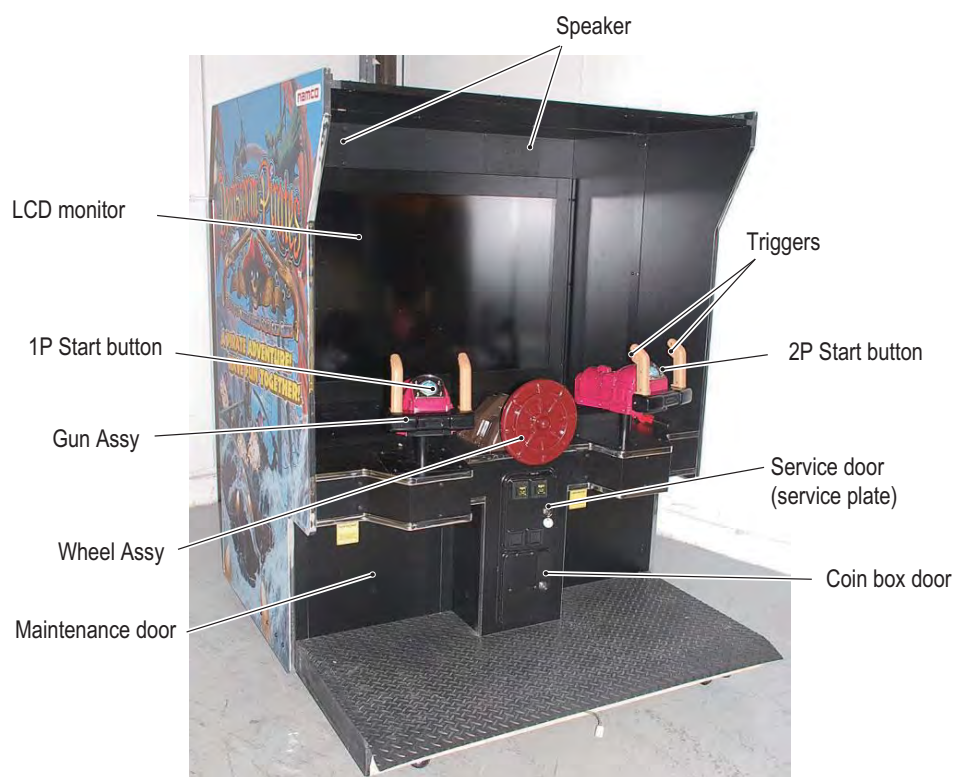
5. INSTALLATION AND CARRY-IN PASSAGE CONDITIONS

⚠️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 over-heating 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. INSTALLATION AND CARRY-IN PASSAGE CONDITIONS

5-1-2 Play zone for installed machine

> **NOTICE**
> - **Provide a space of at least 1' 8" 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 7' 7".**

9' 2" or more

1' 8" or more

1' 8" or more

Maintenance zone

1' 8" or more

11' 6" or more

1' 8" or more

Aisle

3' 3" or more
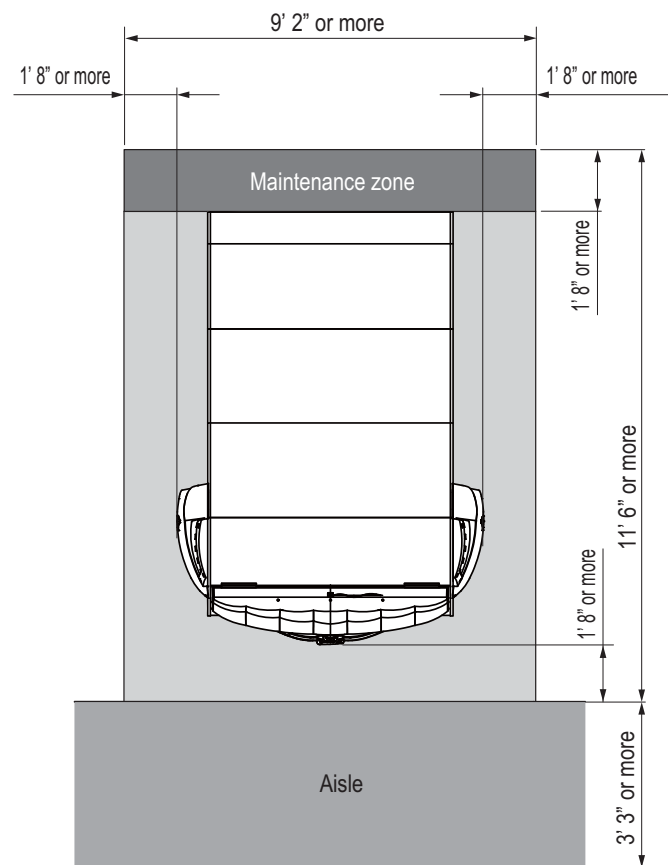
5-2 Required dimensions of carry-in passage (such as doors and corridors)

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

- Monitor Assy
  56" (W) x 27" (D) x 72" (H)
  Weight: 540 lbs.

- Control Assy
  56" (W) x 32" (D) x 72"(H)
  Weight: 485 lbs.

- Seat Assy
  70" (W) x 40" (D) x 72"(H)
  Weight: 232 lbs.

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 beak 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. 353 lbs.):   6 persons or more
  - Control Assy   (approx. 331 lbs.):   6 persons or more
  - Seat Assy   (approx. 243 lbs.):   5 persons or more
  - Marquee Assy   (approx. 36 lbs.):   2 persons or more
  - Roof Assy   (approx. 27 lbs.):   2 persons or more
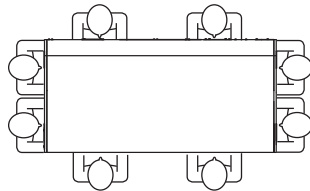
Monitor Assy
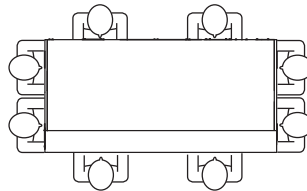
Control Assy
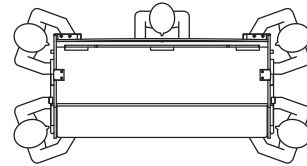
Seat Assy
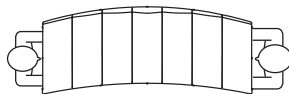
Marquee Assy

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 over-heating 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.

  - People who are sick or recovering from injury
  - People with heart conditions
  - People in poor physical condition
  - People under the influence of alcohol
  - Pregnant women
  - People who do 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 an eye on the children.**

7. OPERATION

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?

(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) Are there any other signs 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, 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 more easily 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 the 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. OPERATION

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
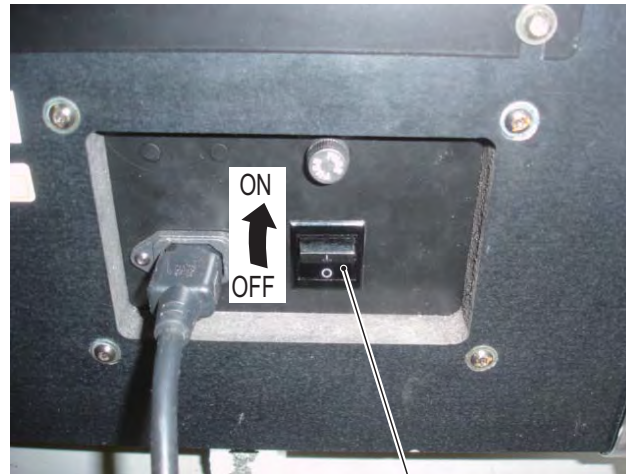
Power switch

> ![NOTICE]
> ● 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.

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7-5-2 Adjustment switches

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

Service door
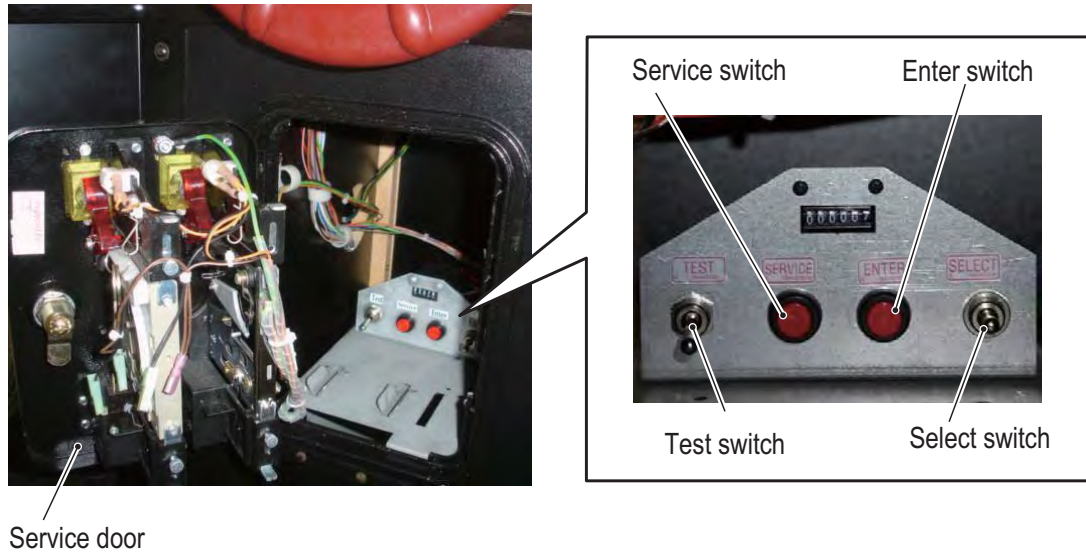
(a) Service switch
Press this switch to increase the credit count without activating the coin counter.

(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


        COIN OPTIONS      ◄──────    Setting of game fee and others   Refer to Section 7-6-2.
        GAME OPTIONS      ◄──────    Setting of game details          Refer to Section 7-6-3.
        I/O TEST          ◄──────    Testing of switches, sensors, etc.  Refer to Section 7-6-4.
        MONITOR TEST      ◄──────    Adjustment of monitor            Refer to Section 7-6-5.
        SOUND TEST        ◄──────    Adjustment of sound level, etc.  Refer to Section 7-6-6.
        BOOKKEEPING       ◄──────    Bookkeeping data                 Refer to Section 7-6-7.
        OTHERS            ◄──────    Testing of PCB, initialization of  Refer to Section 7-6-8.
                                     memory, etc.
        SOFTWARE UPDATE   ◄──────    Software update                  Refer to Section 7-6-9.
                                     (Not used under normal conditions)

    The internal battery01 is dead.  ◄──────  (a)


   SELECT SW:CHOOSE                   ENTER SW:ENTER
```

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
            [DEFAULT IN GREEN]

GAME COST         2 COIN(S)  1 CREDIT        ◄────(a)
CONTINUE COST     1 COIN(S)  1 CREDIT        ◄────(b)

FREE  PLAY        0FF                        ◄────(c)

EXIT




SELECT SW:CHOOSE              ENTER SW:ENTER
```

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 to 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
                   [DEFAULT IN GREEN]

      DIFFICULTY              C(MEDIUM)  ◄────── (a)
      LASER SIGHT             ON  ◄──────────── (b)
      HI-SCORE INITIALIZE  ◄──────────────────  (c)


      EXIT




      SELECT SW:CHOOSE              ENTER SW:ENTER
```

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: Initializes 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 to the Menu screen, select "EXIT" and press the Enter switch.

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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


        I/O PCB CHECK    ◄──────────────────(a)
        SWITCH TEST      ◄──────────────────(b)
        GUN TEST         ◄──────────────────(c)
        STEERING TEST    ◄──────────────────(d)
        OUTPUT TEST      ◄──────────────────(e)


        EXIT




   SELECT SW:CHOOSE                 ENTER SW:ENTER
```
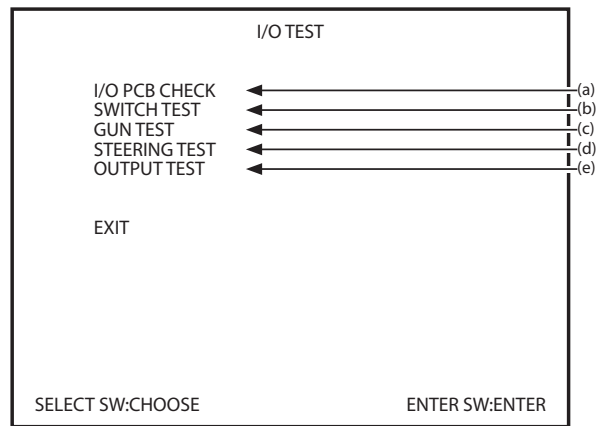
I/O Test screen

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 to the Menu screen, select "EXIT" and press the Enter switch.

7. OPERATION

(1) I/O PCB CHECK

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

```
                    I/O PCB CHECK


     I/O PCB :  Connect OK        ◄─────────────── (a)

     NBGI.;USIO01;VerX.XX;JPN,Mulitipurpose with PPG


     EXIT






     SELECT SW : CHOOSE              ENTER SW : ENTER
```

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.

30

(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
                     [ON:RED]

         COIN                 0    ◄──────────(a)
         SERVICE              OFF  ◄──────────(b)
         TEST                 ON   ◄──────────(c)
         UP SELECT            OFF  ◄──────────(d)
         DOWN SELECT          OFF  ◄──────────(e)
         ENTER                OFF  ◄──────────(f)
         1P GUN TRIGGER LEFT  OFF  ◄──────────(g)
         1P GUN TRIGGER RIGHT OFF  ◄──────────(h)
         1P START             OFF  ◄──────────(i)
         2P GUN TRIGGER LEFT  OFF  ◄──────────(j)
         2P GUN TRIGGER RIGHT OFF  ◄──────────(k)
         2P START             OFF  ◄──────────(l)



                    UP SELECT+ENTER   SW:EXIT
```
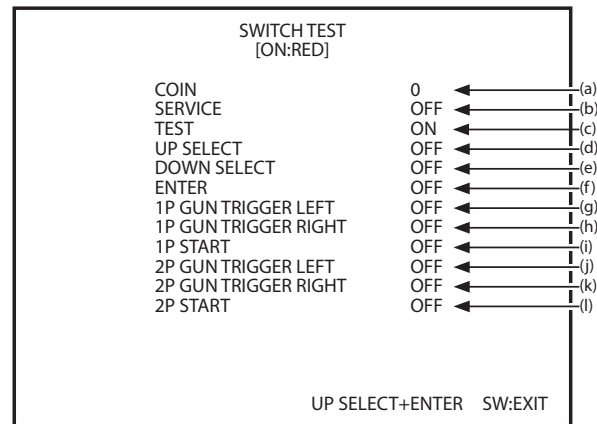
Switch Test screen

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.

7. OPERATION

(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.

⬤ **NOTICE** ● **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

     1P START          OFF  ◄─────── (a)
     2P START          OFF  ◄─────── (b)

     1P   X: FFFF   Y: 0000  ◄─────── (1)
     2P   X: 0000   Y: FFFF  ◄─────── (2)

              ┼         ◄─────── (3)

           ┼            ◄─────── (4)

     PULL GUN TRIGGER TO ACTION  ◄─────── ※1

 SERVICE SW:CALIBRATION        ENTER SW:ENTER
```
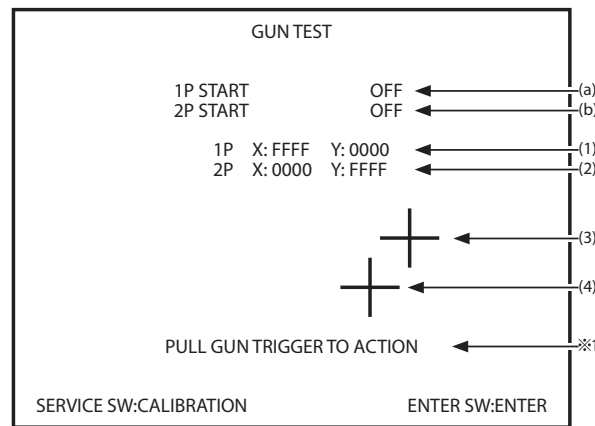
Gun Test screen

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


                      ┼
                       ┼─────────────(1)
                    ┼─────────────────(2)

              1P   X: AAAA   Y: 6666 ◄────(3)
              2P   X: 6666   Y: AAAA ◄────(4)

            1P: SHOOT THE LEFT END
            2P: SHOOT THE LEFT END ◄──────(a)




                            ENTER SW:EXIT
```
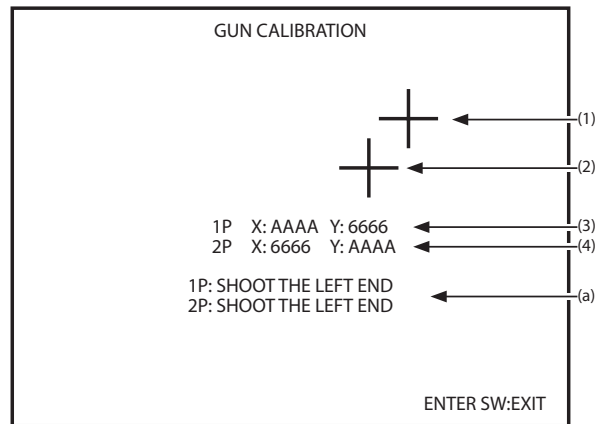
Gun Calibration screen

Item	Description
(1) Gun crosshairs (red)	Shows the location of the crosshairs of the 1P-side Gun Assy (after completion of adjustment).
(2) Gun crosshairs (blue)	Shows the location of the crosshairs of the 2P-side Gun Assy (after completion of adjustment).
(3) 1P X-coordinate, Y-coordinate	Shows the X and Y coordinates of the crosshairs of the 1P-side gun.
(4) 2P X-coordinate, Y-coordinate	Shows the X and Y coordinates of the crosshairs 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 is 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 crosshairs is set.

3 In the same manner, press the Trigger button each time 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.

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7. OPERATION

(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                 │
│                                      │
│                                      │
│      STEERING 01  ◄──────────── (2)  │
│                                      │
│    │────────────◄──────────── (2)    │
│                                      │
│  LEFT OK          RIGHT OK ◄─── (3)  │
│              ■■■ ◄───────────── (4)  │
│                                      │
│  EXIT                                │
│                    ENTER SW:EXIT     │
└─────────────────────────────────────┘
```
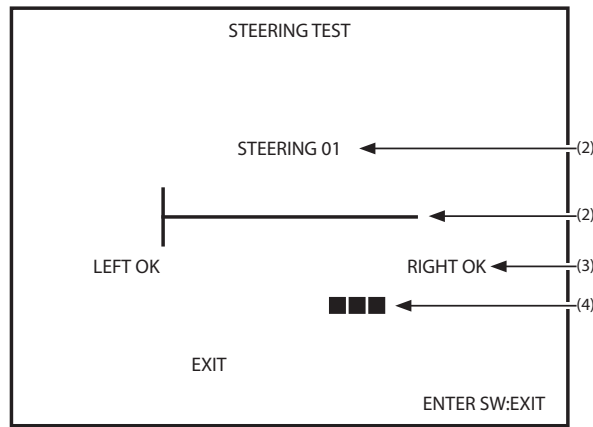
Steering Test screen

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.

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(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


        1P START LED                  OFF  ◄────────(a)
        1P VIBRATION                  OFF  ◄────────(b)
        2P START LED                  OFF  ◄────────(c)
        2P VIBRATION                  OFF  ◄────────(d)



        EXIT




     SELECT SW:CHOOSE                ENTER SW:ENTER
```
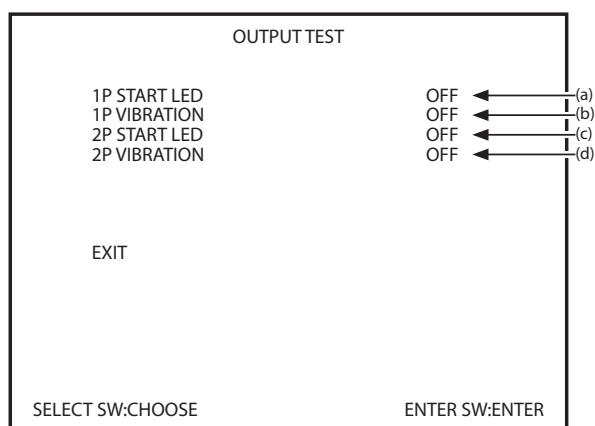
Output Test screen

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.

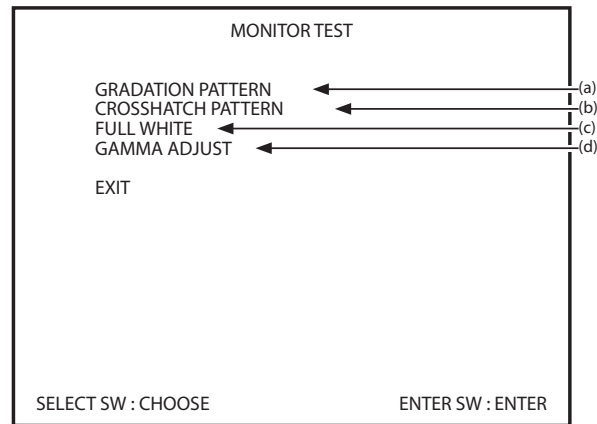**2** Using the Select switch, select an item, and then press the Enter switch to enter the selection.
The selected item is indicated by blinking.

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


       GRADATION PATTERN     ◄──────────────── (a)
       CROSSHATCH PATTERN    ◄──────────────── (b)
       FULL WHITE    ◄──────────────────────── (c)
       GAMMA ADJUST      ◄──────────────────── (d)

       EXIT




       SELECT SW : CHOOSE              ENTER SW : ENTER
```

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 ADUST
                 [DEFAULT IN GREEN]



              R      1.00
              G      0.93          ◄─────────(a)
              B      9.99

       DEFAULT   ◄─────────────────(b)
       SAVE & EXIT ◄───────────────(c)
       EXIT

  SELECT SW : CHOOSE              ENTER SW : ENTER
```

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. OPERATION

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.
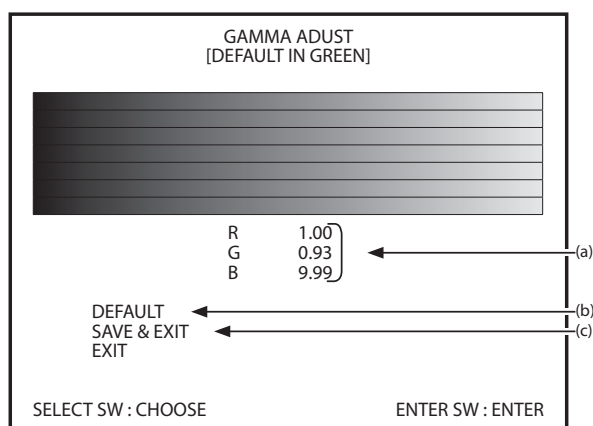
```
                    SOUND TEST
                 [DEFAULT IN GREEN]

VOLUME        GAME        (0~15)    11  ◄────(a)
              ATTRACT     (0~15)    11  ◄────(b)
OUTPUT LEVEL  BGM & SE    100%  ◄─────────(c)
              VOICE       100%  ◄─────────(d)
              SOUND MODE  2.1 CH  ◄────────(e)
SURROUND      BALANCE     -3dB  ◄──────────(f)

MESSAGE       GAME        LEFT  ◄──────────(g)



              EXIT


                                        (※)

  SELECT SW:CHOOSE   SERVICE SW: SPEAKER TEST   ENTER SW:ENTER
```
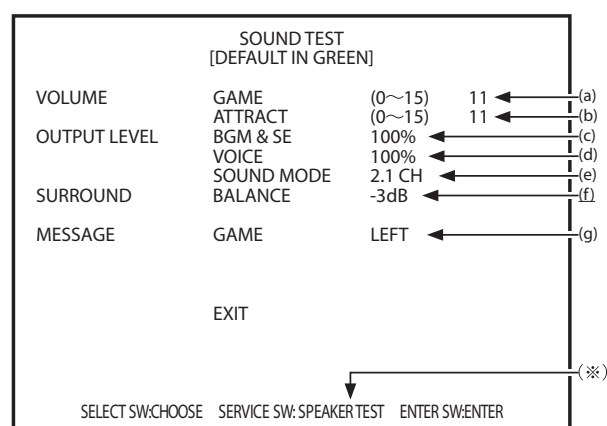
Sound Test screen

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/2 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.

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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.
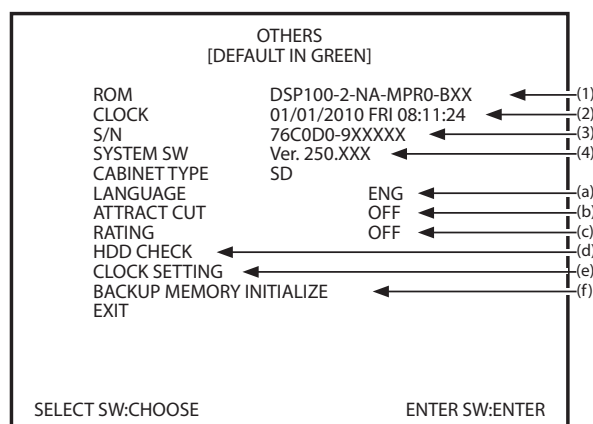
7. OPERATION

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
                   [DEFAULT IN GREEN]

       ROM              DSP100-2-NA-MPR0-BXX  ◄─────(1)
       CLOCK            01/01/2010 FRI 08:11:24  ◄───(2)
       S/N              76C0D0-9XXXXX  ◄───────────(3)
       SYSTEM SW        Ver. 250.XXX  ◄────────────(4)
       CABINET TYPE     SD
       LANGUAGE                    ENG  ◄──────────(a)
       ATTRACT CUT                 OFF  ◄──────────(b)
       RATING                      OFF  ◄──────────(c)
       HDD CHECK  ◄───────────────────────────────(d)
       CLOCK SETTING  ◄───────────────────────────(e)
       BACKUP MEMORY INITIALIZE  ◄────────────────(f)
       EXIT


    SELECT SW:CHOOSE              ENTER SW:ENTER
```

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


     MEDIA  OK!  ◄──────────────────────────── (a)













          ENTER SW:EXIT
```
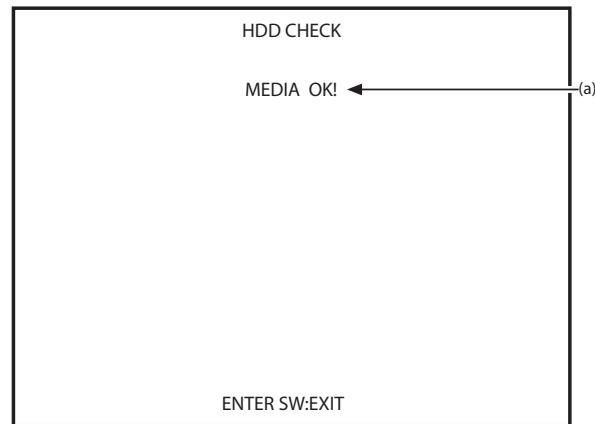
HDD Check screen

Item	Description
(a) MEDIA OK!	The installed hard disk is normal. If the above screen is not displayed, the hard disk or Rack Assy (SYS369) may be defective. Contact your distributor.

2 To return to the Others screen, press the Enter switch.

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7. OPERATION

(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

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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

      UPDATE

      EXIT







   SELECT SW:CHOOSE              ENTER SW:ENTER
```
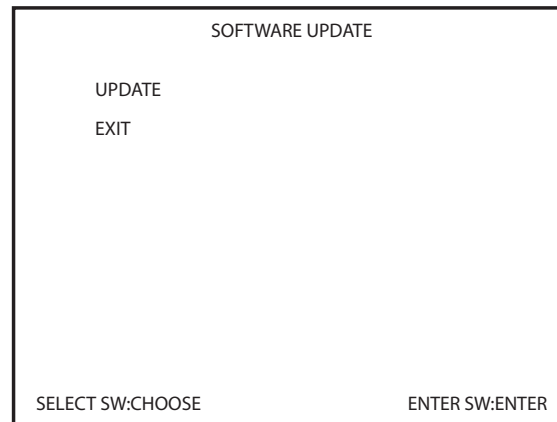
Software Update screen

2 To return to the Menu screen, select "EXIT" and press the Enter switch.

7-7 Error display (for the arcade operator)

NOTICE
- ● **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.

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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

> **NOTICE** ● 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 –

NOTE!: GAME MUST BE ASSEMBLED IN IT'S FINAL PLAYZONE.

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 four Torx bolts (M5 x 30) and remove a wood panel from Control Assy. This panel is used for shipping only.

A wood panel for shipping   Torx bolts (M5 x 30)
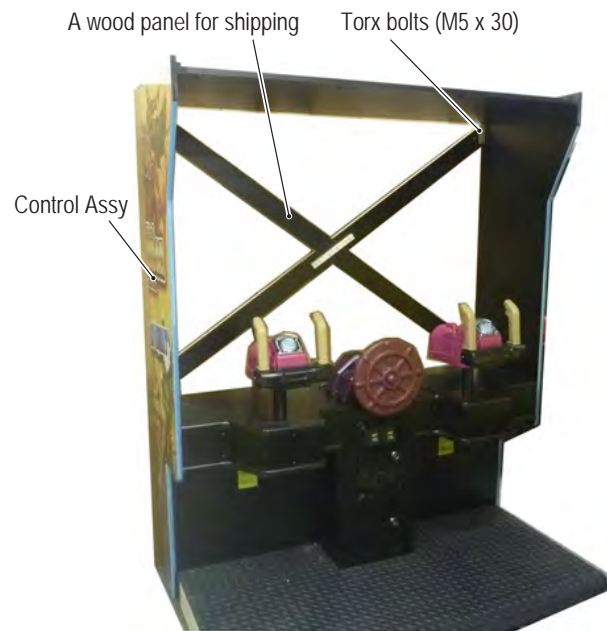
Control Assy

2 Connect Monitor Assy with Control Assy. Install MC Bottom Joint Brackets using two Torx bolts (M6 x 30) into the Monitor Assy bottom on the left and right sides.
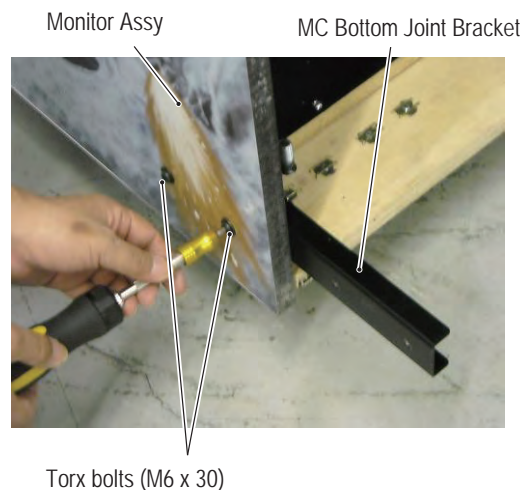
Monitor Assy   MC Bottom Joint Bracket

Torx bolts (M6 x 30)

3 Connect each of the 3 connectors and install USB cable into USIO PC Board. Then install MC Bottom Joint Bracket using two Torx bolts (M6 x 30) into Control Assy. Be careful not to pinch the connectors or cables.

MC Bottom Joint Bracket

Connector

Monitor Assy

Control Assy

USB Cable

Connectors
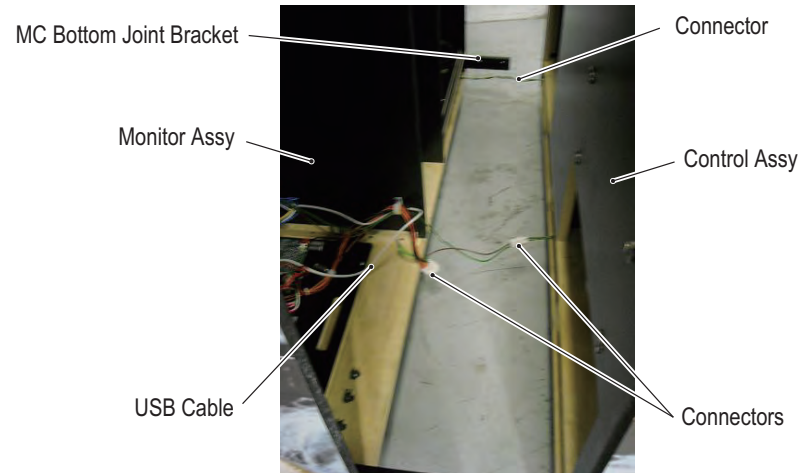
4 To install USB cable, using the provided maintenance key, unlock the rack door, remove the two Torx bolts (M5 x 25), and then remove the Maintenance door.
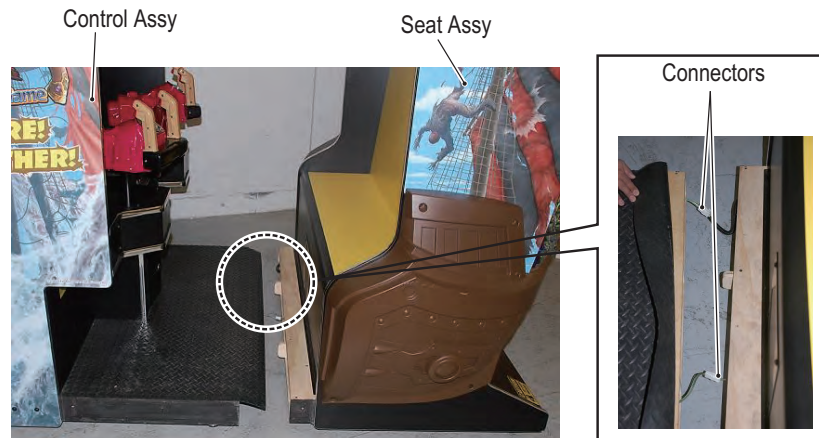
Control Assy

Provided maintenance key

Torx bolts (M5 x 25)

Maintenance door

5 Install USB cable into USIO PCB.

USIO PCB

Gun Drive PCB
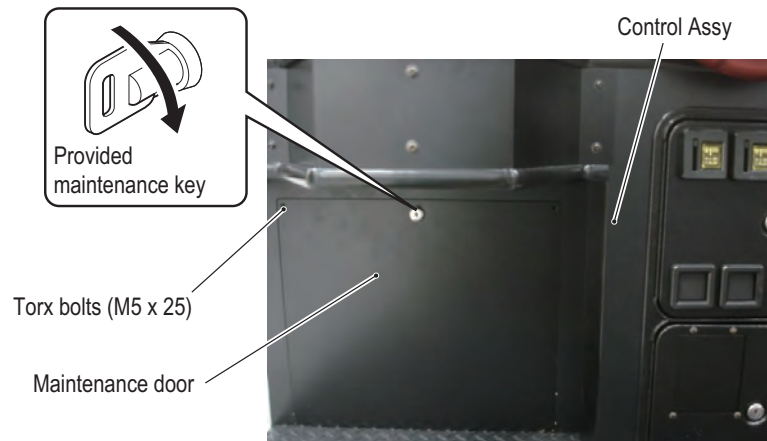
USB cable
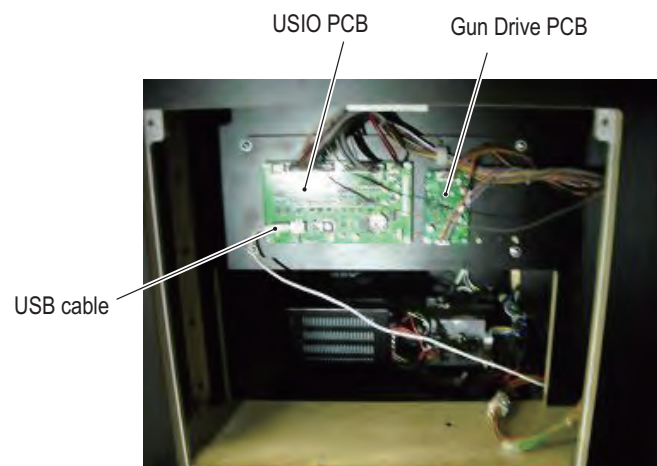
6 Using four Torx bolts (M5 x 30), connect Top Joint Bracket with Control Assy. Then, install MC Side Joint bracket using 8 Trox bolts (M5 x 10) on each side.


Monitor Assy
Control Assy
Top Joint Bracket
Torx bolt (M5 x 30)
MC Side Joint Bracket
Torx bolt (M5 x 10)

8A-1-2 Assembling Seat Assy

1 Connect both of the two connectors.

Control Assy
Seat Assy
Connectors

2   Connect Seat Assy with Control Assy. Be careful not to pinch the connectors and Floor mat. Install CS Botom Joint Bracket using Torx bolts(M6 x 30) on each side.

Floor mat

CS Bottom Joint Bracket   Torx bolts (M6 x 30)
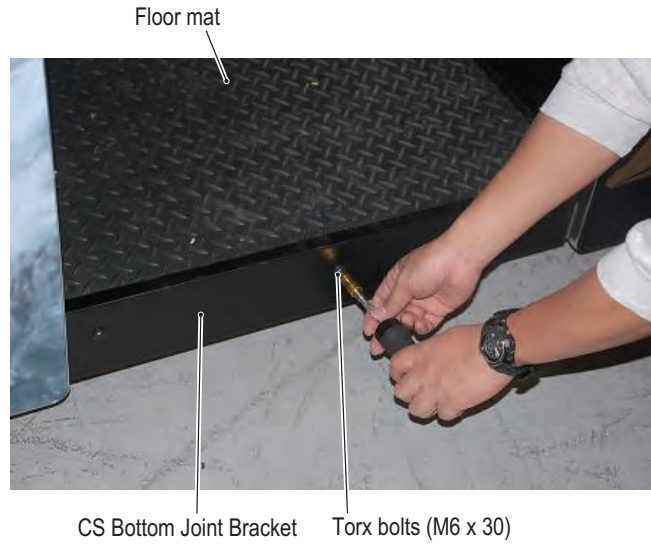
3   Install Floor Mat Bracket using Four Torx bolts (M5 x 25).

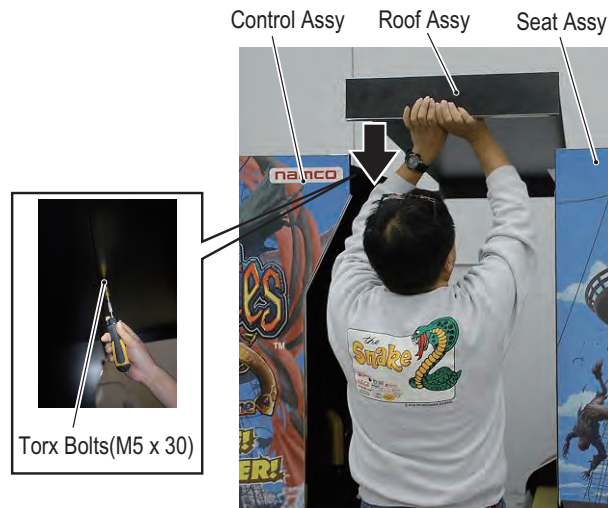Floor Mat Bracket   Torx bolts (M5 x 25)

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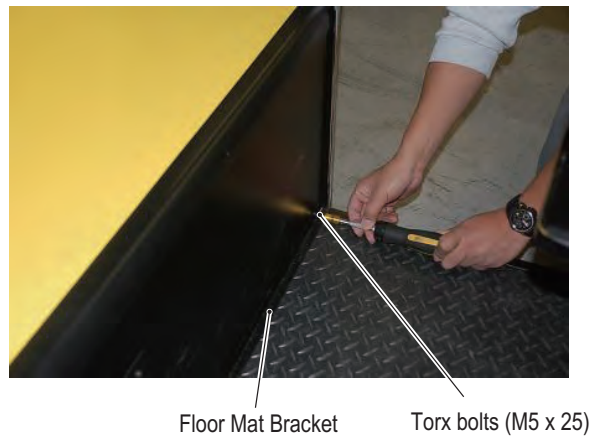
8A. MANUAL FOR THE TECHNICIAN – To be conducted by a technician only –

8A-1-3 Assembling Roof Assy

1 Install Roof Assy using 8 Torx bolts (M5 x 30).

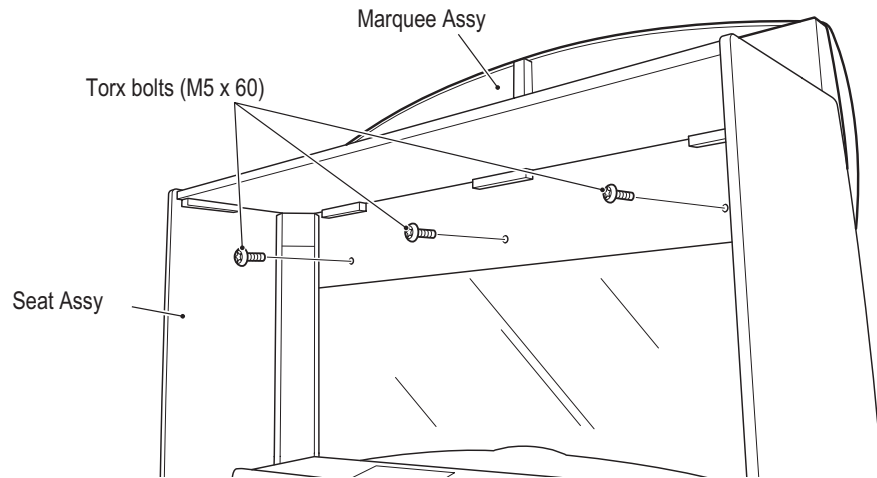Control Assy   Roof Assy   Seat Assy

Torx Bolts(M5 x 30)

8A-1-4 Assembling Marquee Assy

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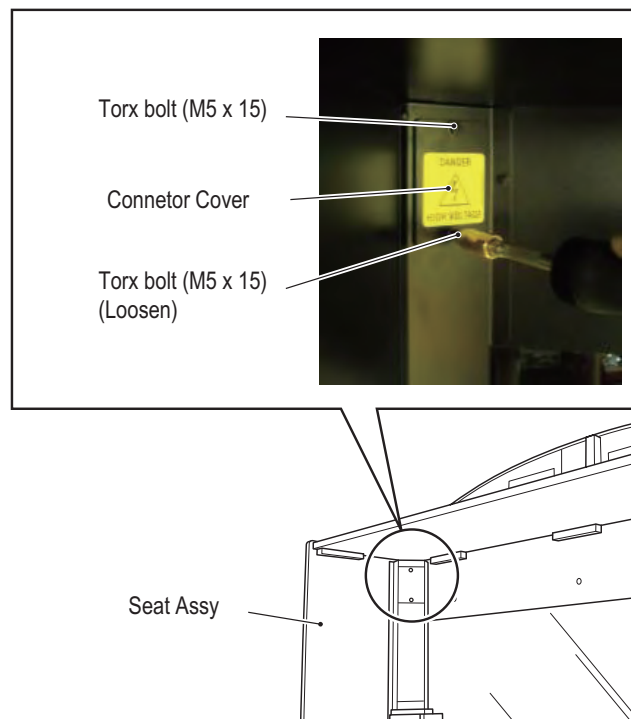
Marquee Assy

Seat Assy

Hook
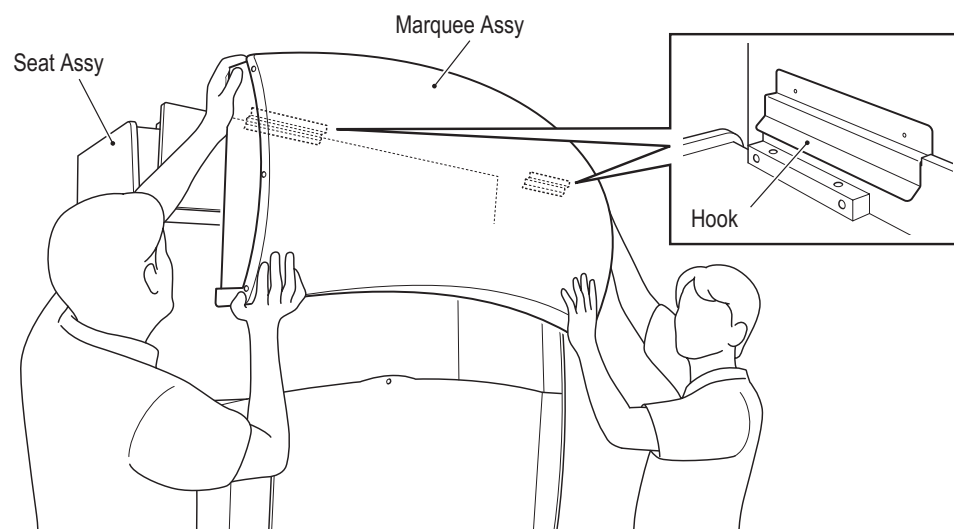
2 Install the Marquee Assy securely using three Torx bolts (M5 x 60).

Marquee Assy

Torx bolts (M5 x 60)

Seat Assy

3 Loosen the bottom Torx bolt (M5 x 15) and remove the top Torx bolt, and dismount the cover plate.

Torx bolt (M5 x 15)

Connetor Cover
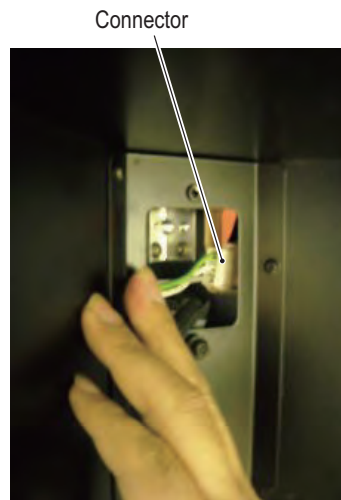
Torx bolt (M5 x 15) (Loosen)

Seat Assy

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

---

4   Connect the one connector.

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 (M4 x 10).

Flag

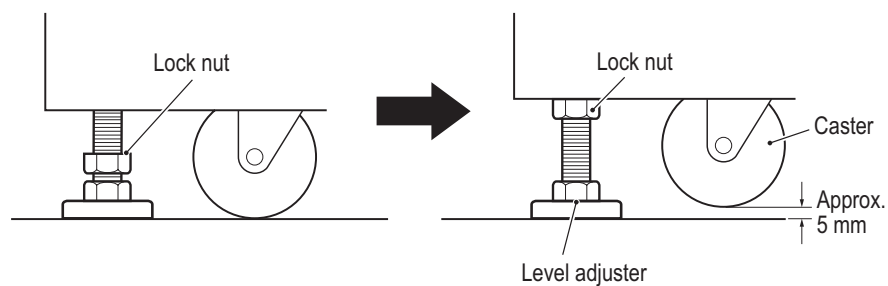Marquee Assy

Phillips pan-head screw
(M4 x 10)
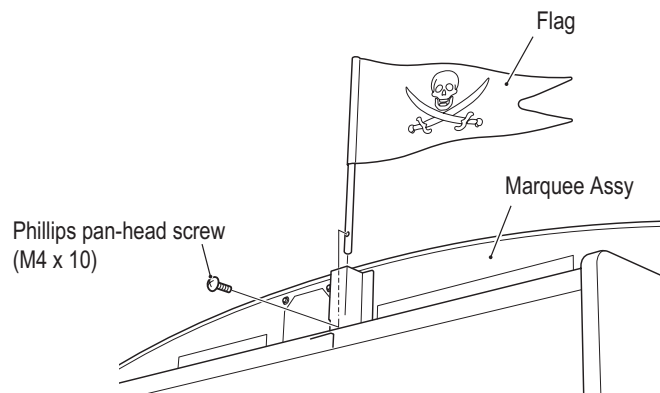
8A-1-5 Assembling Side body(L) and Side body(R)

1 Install the Side body (L) and Side body (R) using five Torx bolts (M 5 x 25) on each side.
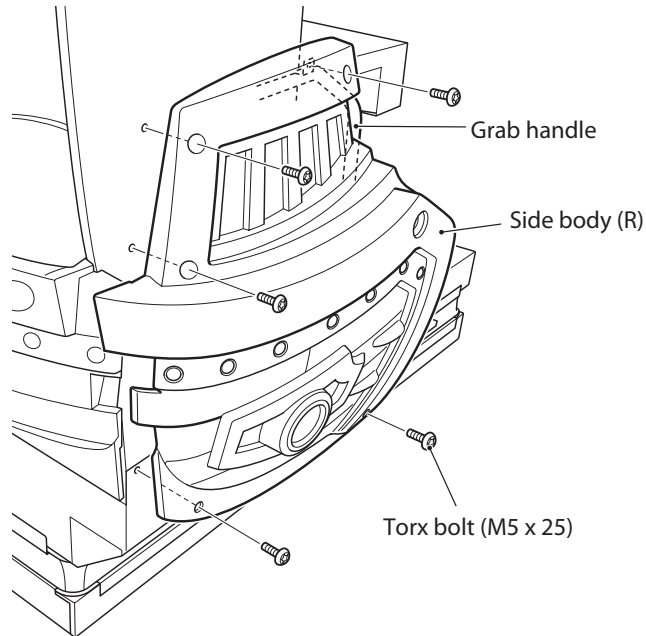
8A-1-6 Adjusting level adjusters

1 Lower the level adjusters until the casters are lifted about 0.2" from the floor, then turn the lock nuts all the way to lock the level adjusters.

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

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

ON
OFF
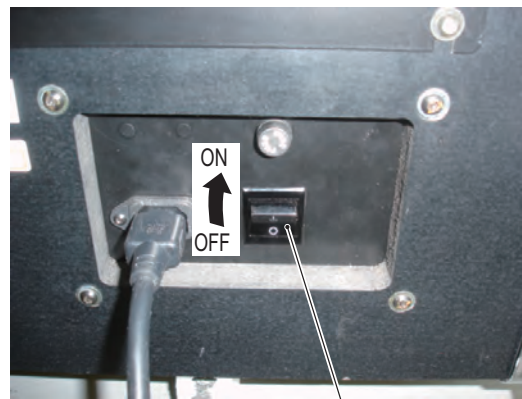
Power switch

2 Insert the power cord plug into an AC outlet.

3P AC socket

Power cord plug

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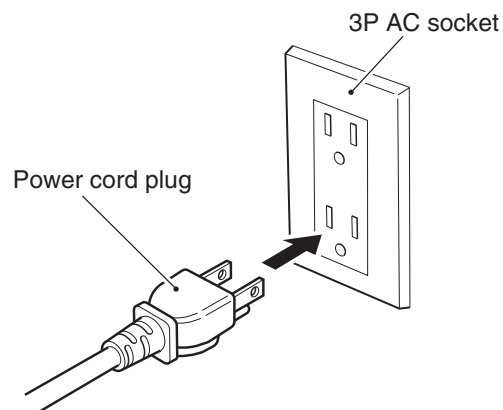
⚠ WARNING

- ● **To protect the service staff and other people from electric shock, accident and injury, always turn off the power switch before conducting maintenance (trouble-shooting, 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 are 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 MarqueeAssy.")
- • Others

8B-2 Troubleshooting

⚠WARNING

- To protect the service staff and other people from electric shock, accident and in-jury 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 opera-tion, then contact your distributor. Operating the machine without correcting prob-lems can result in an unexpected accident.

NOTICE

- In the event a machine malfunctions, check to make sure that all con-nectors are connected securely.
- If there is a problem in the Rack Assy (SYS369), 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 (SYS369), 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

NOTICE ● 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 (SYS369) connector is disconnected.	Connect the connector securely.	Page 63
	The Rack Assy (SYS369) is defective.	Contact your distributor.	—
The machine operation is unstable, or malfunctions.	The power supply voltage is outside the range of 115 to 125 (225 to 235) 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. Maintenance – To be conducted by a technician only –

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 (SYS369) 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 (SYS369) 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 (SYS369) is defective.	Contact your distributor.	—
The monitor displays a blue screen.	The Rack Assy (SYS369) 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 115 to 125 (225 to 235) 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 potentiometer has not been initialized.	Initialize the potentiometer.	Page 47
	The connector is disconnected.	Connect the connector securely.	Page 72 Page 74 Page 77
	The potentiometer is installed incorrectly.	Install the potentiometer correctly.	Page 74 Page 77
	The potentiometer is defective.	Replace the potentiometer.	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.	Re‑adjust the sound level.	Page 38
	The Rack Assy (SYS369) 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 (SYS369) 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. Maintenance – To be conducted by a technician only –

8B-3 Error display (for the technician)

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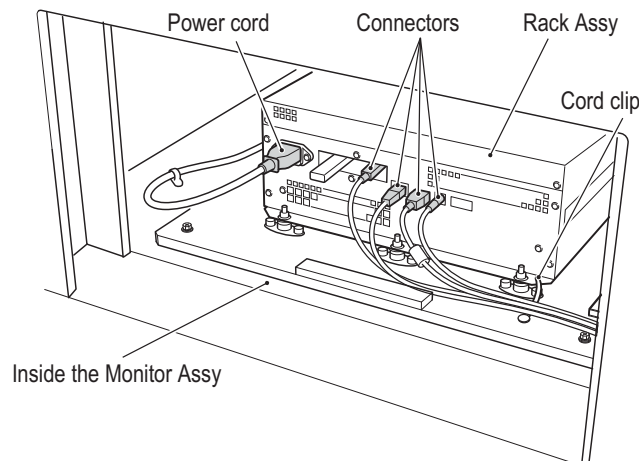
◀NOTICE
- **The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to discharge static electricity from your body by touching grounded metal.**

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 (M5 x 25), and then remove the Maintenance door.


Provided maintenance key

Maintenance door

Control Assy

Torx bolts (M5 x 25)
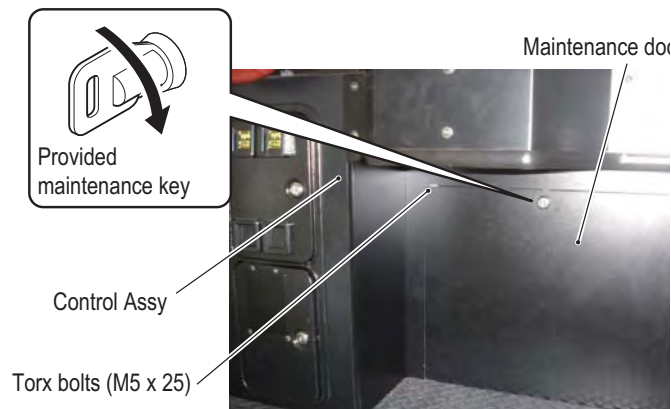
3 Remove the cord clip and disconnect the four connectors and one power cord.

Power cord   Connectors   Rack Assy

Cord clip

Inside the Monitor Assy

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

4   Remove the two Phillips hexagon-head bolts (with flat and spring washers) (M5 x 45) and remove the rack base.

Rack Assy

Phillips hexagon-head bolts
(with flat and spring washers) (M5 x 45)

Rack board
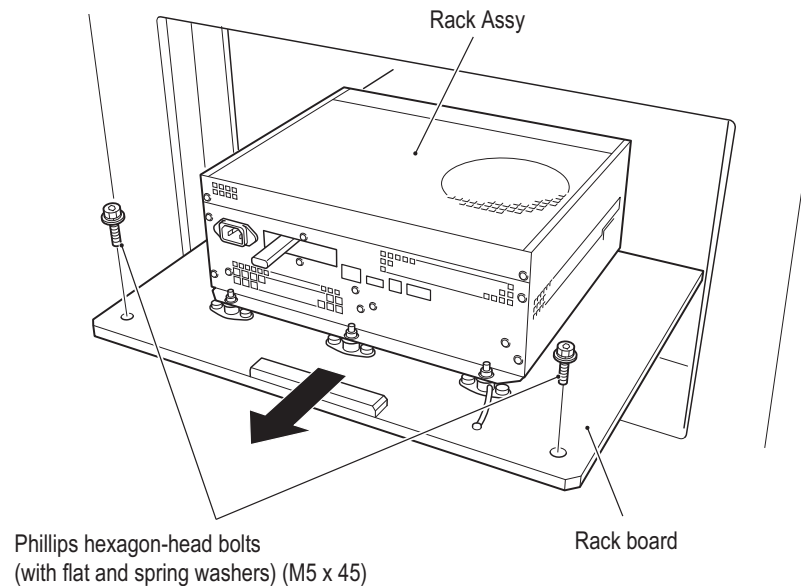
5   Loosen the three countersunk washer nuts (M6) in the back, remove the three countersunk washer nuts (M6) in the front, and then remove the Rack Assy.

USB Assy

USB dongle

Countersunk washer nuts (M6) (loosen)

Countersunk washer nuts (M6) (remove)
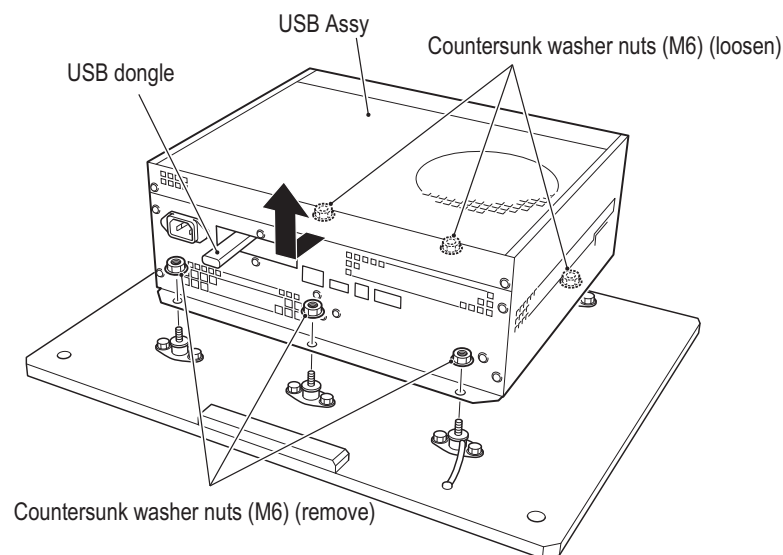
6   Remove the USB dongle and replace the Rack Assy.

7   To install, follow the removal sequence in reverse.

NOTICE
- **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.")**
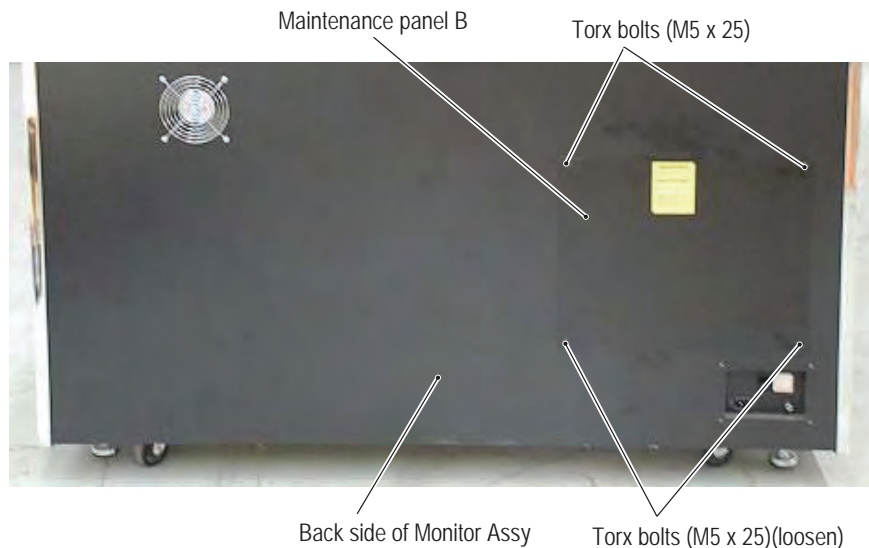
(2) Replacing the power supplies

⚠WARNING

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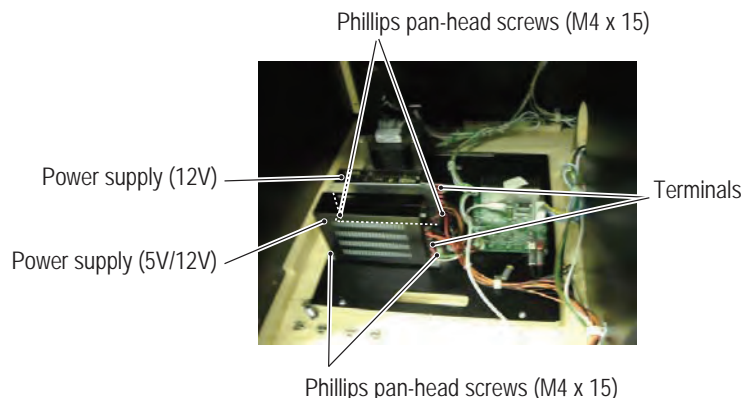off the power switch before conducting the described task.

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 discharge static electricity from your body by touching
grounded metal.

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

2 Loosen the two bottom Torx bolts (M5 x 25), remove the two top Torx bolts, and
remove the Maintenance panel B.

Maintenance panel B   Torx bolts (M5 x 25)

Back side of Monitor Assy   Torx bolts (M5 x 25)(loosen)

3 Disconnect the connectors from terminals. Then, remove the phillips pan-head
screws (M4 x 15), and replace the power supply.

Phillips pan-head screws (M4 x 15)

Power supply (12V)   Terminals

Power supply (5V/12V)

Phillips pan-head screws (M4 x 15)

4 To install, follow the removal sequence in reverse.

65

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

(3) Replacing the Bass Amp PC Board

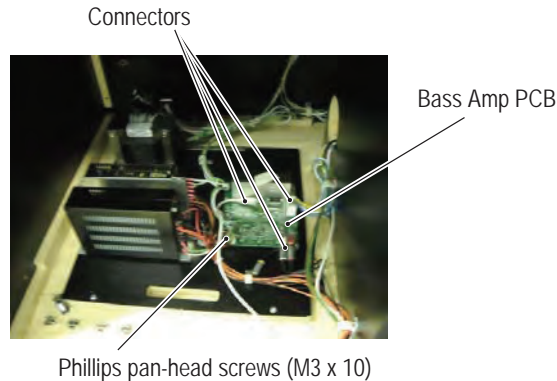## ⚠️WARNING

● To protect the service staff and other people from electric shock, accident and in-jury 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 discharge static electricity from your body by touching 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 (M3 x 10), and replace the Bass Amp PC Board.

Connectors

Bass Amp PCB

Phillips pan-head screws (M3 x 10)

5 To install, follow the removal sequence in reverse.

66

(4) Replacing the LCD monitor

⚠WARNING

- To protect the service staff and other people from electric shock, accident and in-jury 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 de-scribed task after the LCD monitor cools sufficiently.

⚠ CAUTION

- The LCD monitor weighs approximately 88 lbs.. It should be removed by two or more persons in a large work area to prevent accidents.
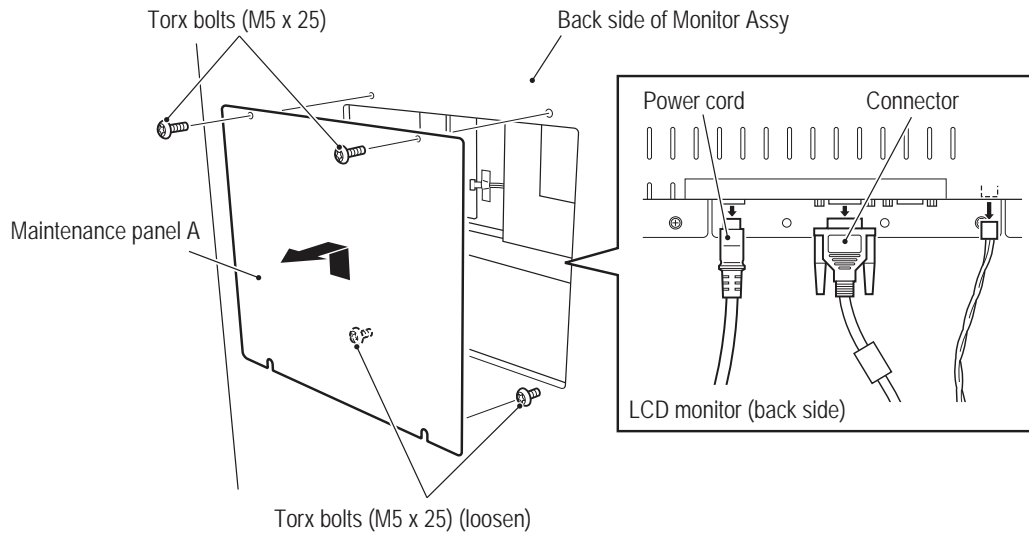
NOTICE
- The PC board can be easily damaged by static electricity. If the PC board is handled by a person charged with static electricity, parts mounted on the PC board can become damaged. Before touching the PC board, be sure to discharge static electricity from your body by touching grounded metal.

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(M5 x 25), and remove the Monitor cover.

Torx bolts (M5 x 25)

Monitor Cover
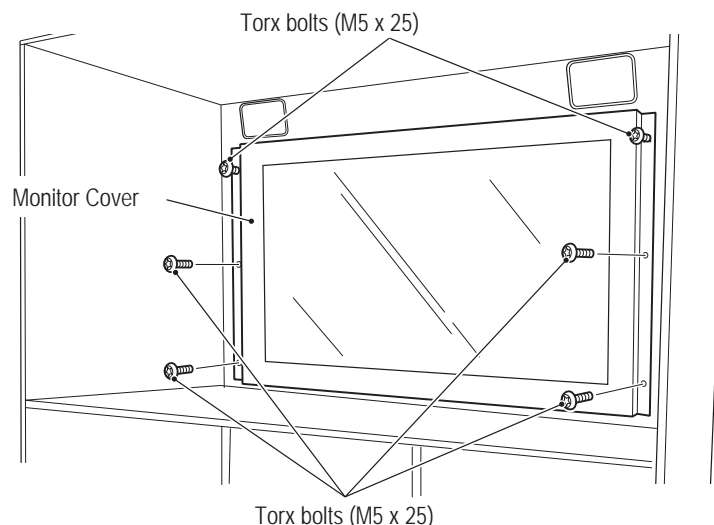
Torx bolts (M5 x 25)

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

---

5 Loosen the two bottom Torx bolts (M5 x 25), remove the two top Torx bolts, and remove the Maintenace panel A from the Monitor Assy.
Then, disconnect the connector and one power cord from the rear side of the LCD monitor.

Torx bolts (M5 x 25)

Back side of Monitor Assy

Power cord   Connector

Maintenance panel A

LCD monitor (back side)

Torx bolts (M5 x 25) (loosen)

6 Loosen the two Phillips hexagon-head bolts (M6 x 25) on both ends, remove the top center bolt and the three bottom bolts, and then remove the LCD monitor.

Phillips hexagon-head bolts (M6 x 25) (loosen)

LCD monitor

Phillips hexagon-head bolts (M6 x 25)
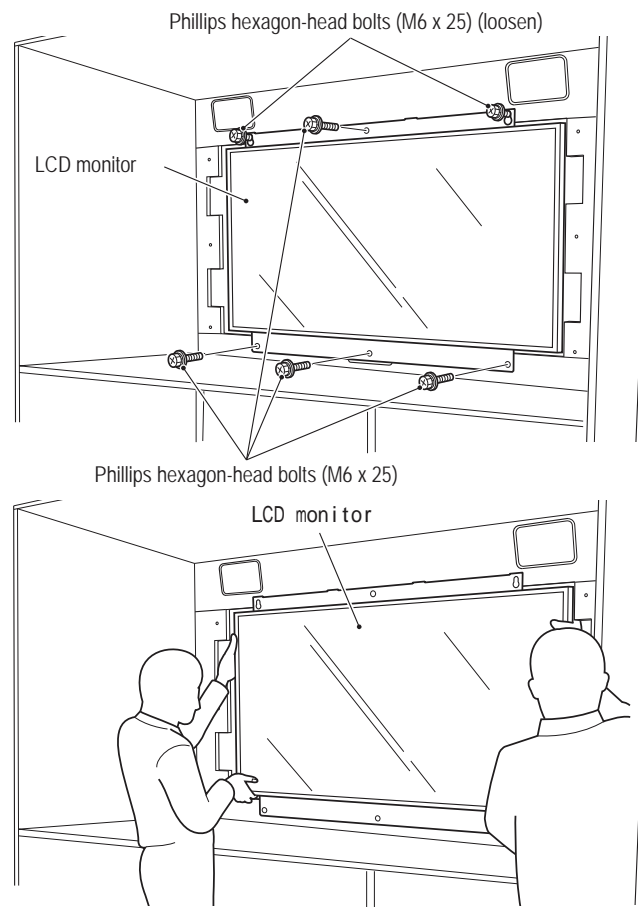
LCD monitor

NOTICE ● Place the removed LCD monitor on bubble wrap or similar material to prevent scratching 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 remove the LCD top bracket and LCD bottom bracket.

Phillips pan-head screw (with flat and spring washers) (M4 x 10)

LCD top bracket(with the key holes)

LCD monitor

LCD bottom bracket

Phillips pan-head screw (with flat and spring washers) (M4 x 10)
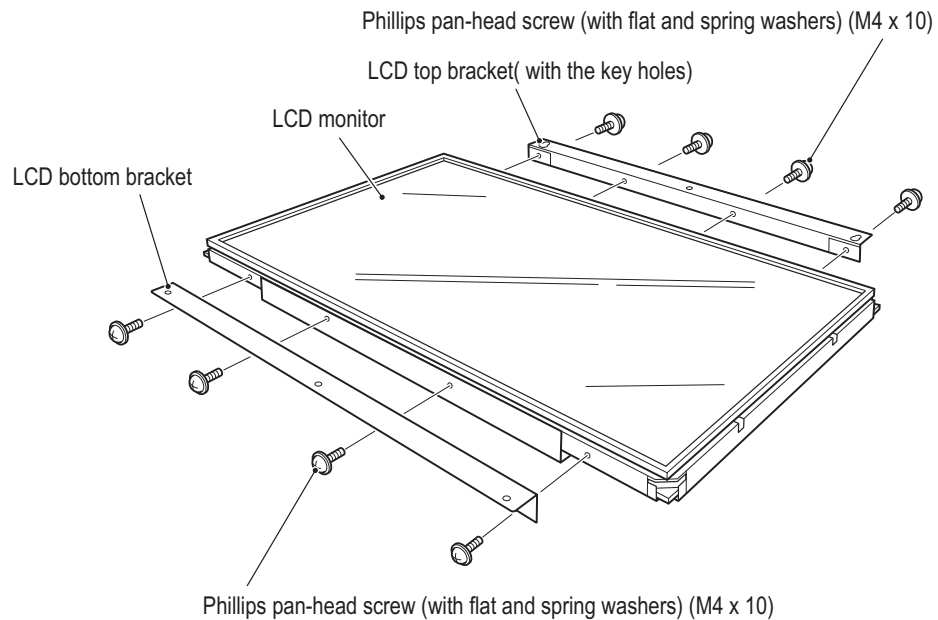
8 To install, follow the removal sequence in reverse.
* Be sure to install the LCD top bracket and LCD bottom bracket in the correct positions. The LCD bottom bracket must be installed in the side where the connector terminal is. And the LCD monitor should be mounted so that the connector terminal of the back side is in downward direction.

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

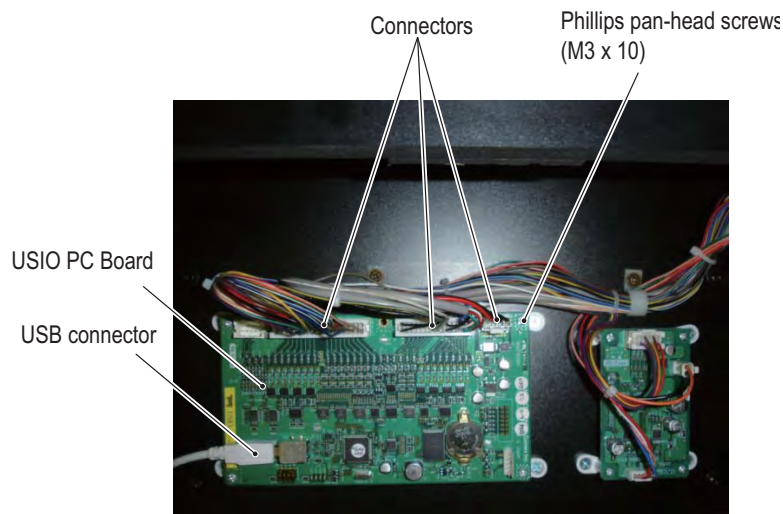### 8B-4-2 Control Assy

(1) Replacing the USIO PC Board

⚠WARNING

● To protect the service staff and other people from 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 discharge 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 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 (M3 x 10) 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.")
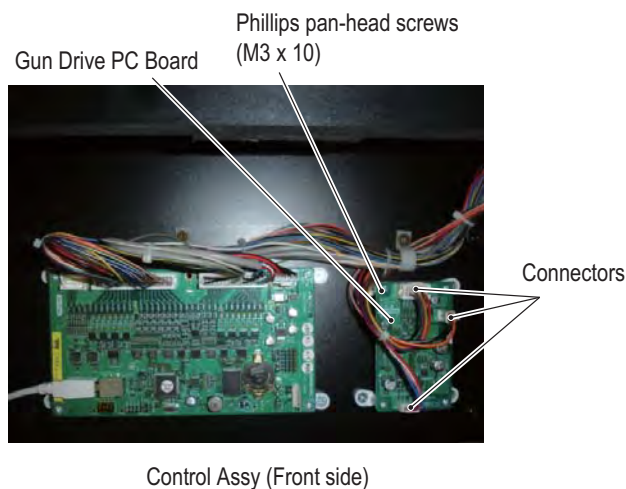
(2) Replacing the Gun Drive PC Board

⚠WARNING

● **To protect the service staff and other people from 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 discharge 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 door. (See P. 48 "8A-1-1 Assembling Monitor Assy and Control Assy.")

3 Disconnect the three connectors.

Phillips pan-head screws (M3 x 10)

Gun Drive PC Board

Connectors

Control Assy (Front side)

4 Remove the four Phillips pan-head screws (M3 x 10) and replace the Gun Drive PC Board.

5 To install, follow the removal sequence in reverse.

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

8B-4-3   Gun Assy

(1) Replacing and installing the Gun Assy

⚠WARNING

● **To protect the service staff and other people from electric shock, accident and in-jury 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.")

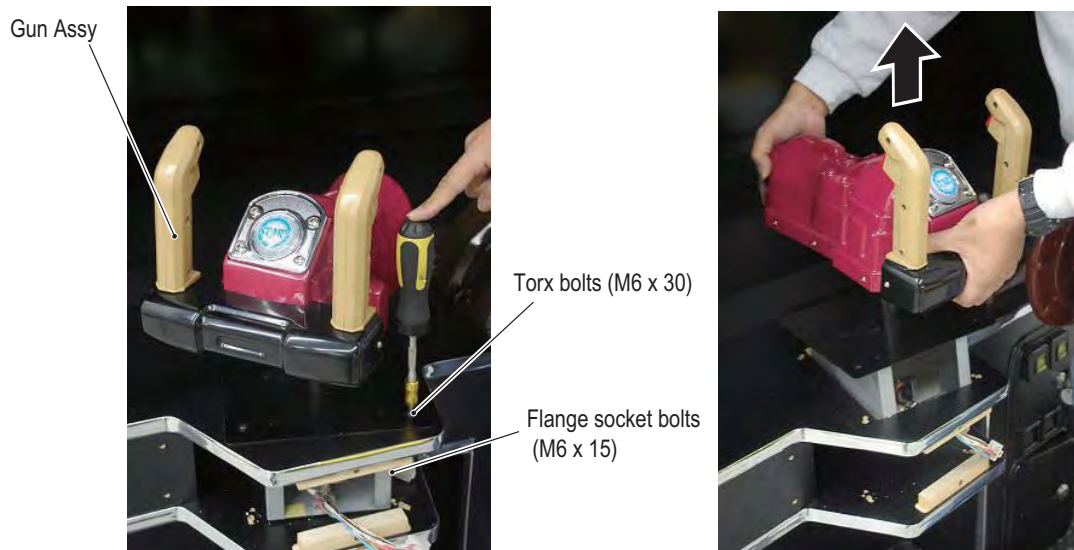**2** Remove four Torx bolts (M5 x 25), and remove the Control cover.

Control Assy

Torx bolts (M5 x 25)   Control cover

3 Disconnect the connector and the ground terminal.

Connector

4 Remove the four Torx bolts (M6 x 30) of the upper surface and the four Flange socket bolts(M6 x15) of the side. Then replace the Gun Assy.

Gun Assy

Torx bolts (M6 x 30)

Flange socket bolts (M6 x 15)

5 To install, follow the removal sequence in reverse.

NOTICE
- **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.")**

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

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

⚠ WARNING

● To protect the service staff and other people from 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 the four Flange socket bolts (M6 X 15) and remove the Gun base box.


Flange socket bolts(M6 x15)   Gun base box

4 Loosen the cord clip and disconnect the connector. Then, remove the two Phillips pan-head screws (with flat and spring washers) (M4 x 12) and remove the potentiometer bracket.


Gun Assy   Connector

Phillips pan-head screw
(with flat and spring washers)
(M4 x 15)   Volume bracket

74
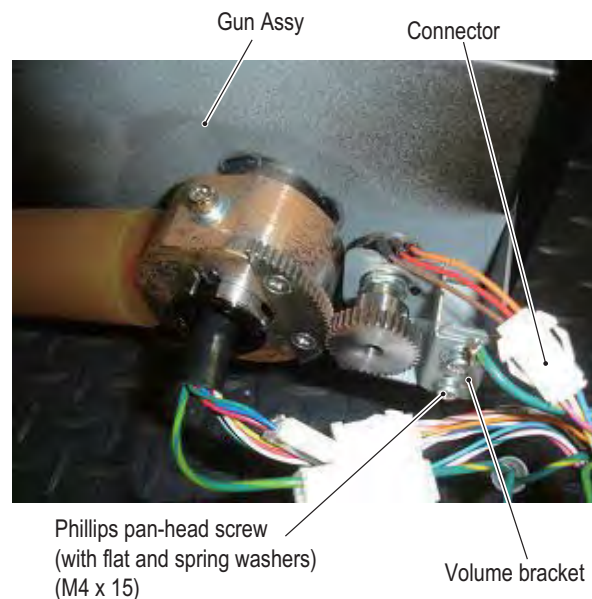
5 Loosen the double-point screw (M4 x 6) and remove the potentiometer gear.
* When installing the potentiometer gear, align the black dot on the potentiometer gear with the terminal connected with the red harness of the potentiometer.

Potentiometer

Double-point screw (M4 x 6)

Black dot

Potentiometer gear

Potentiometer

3 2 1

Brown   Red   Orange
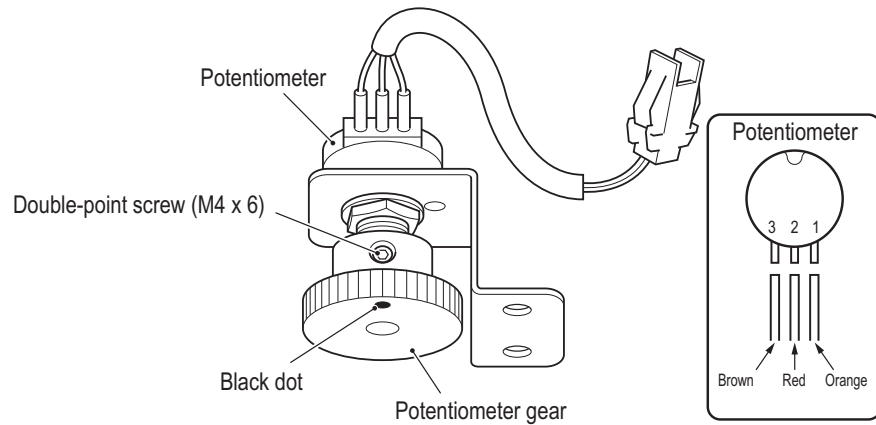
6 Remove the hexagon nut, spring washer and flat washer, and then remove the potentiometer from the potentiometer bracket.

Potentiometer

Protrusion

Flat washer

Spring washer

Hexagon nut
(Do not overtighte

Potentiometer bracket
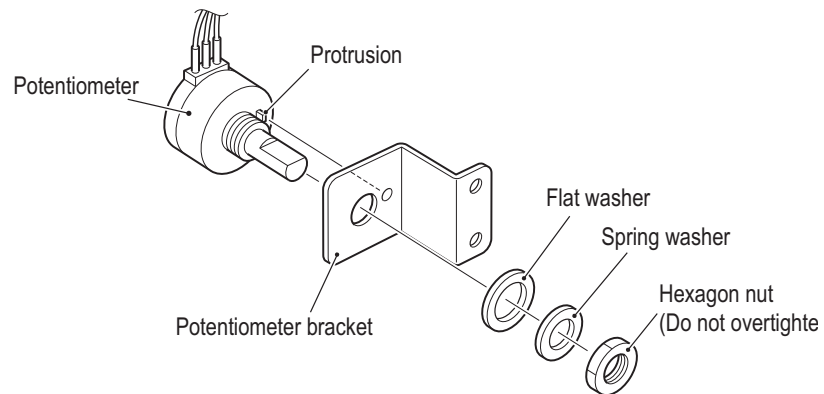
7 Replace the potentiometer.

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

8 To install, follow the removal sequence in reverse.

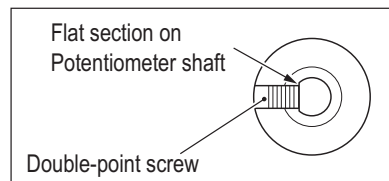**8B. Maintenance – To be conducted by a technician only –**

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

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

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


Flat section on
Potentiometer shaft

Double-point screw

● **After the replacement, be sure to perform initialization. (See P. 47 "7-8 Gun Assy adjustment (initialization) after parts replacement.")**
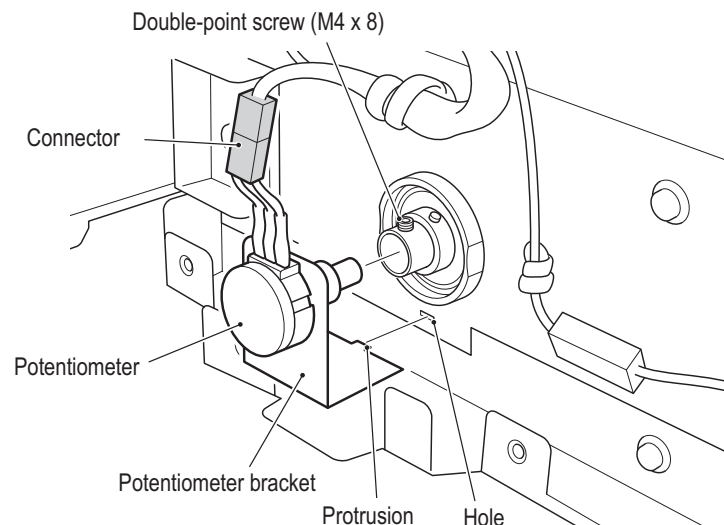
(3) Replacing the potentiometer (for up-down)

⚠️WARNING

● **To protect the service staff and other people from 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 (M4 x 10) and remove the gun cover.

Gun cover
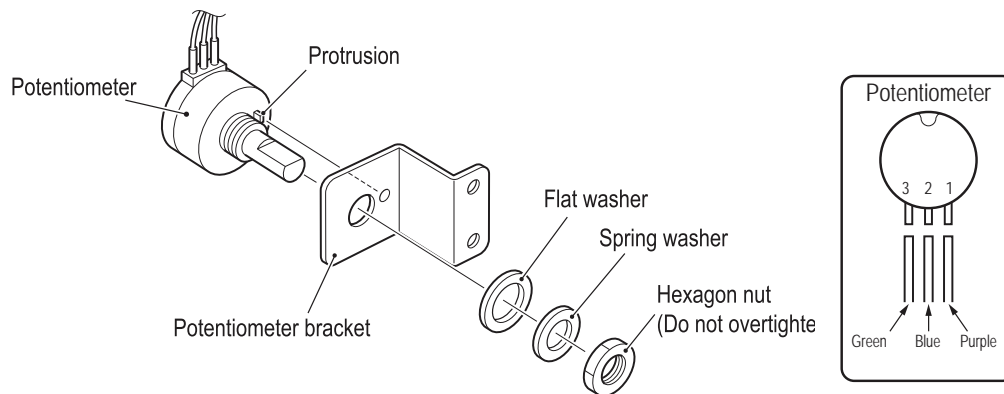
Button-head bolts (M4 x 10)

Button-head bolts (M4 x 10)
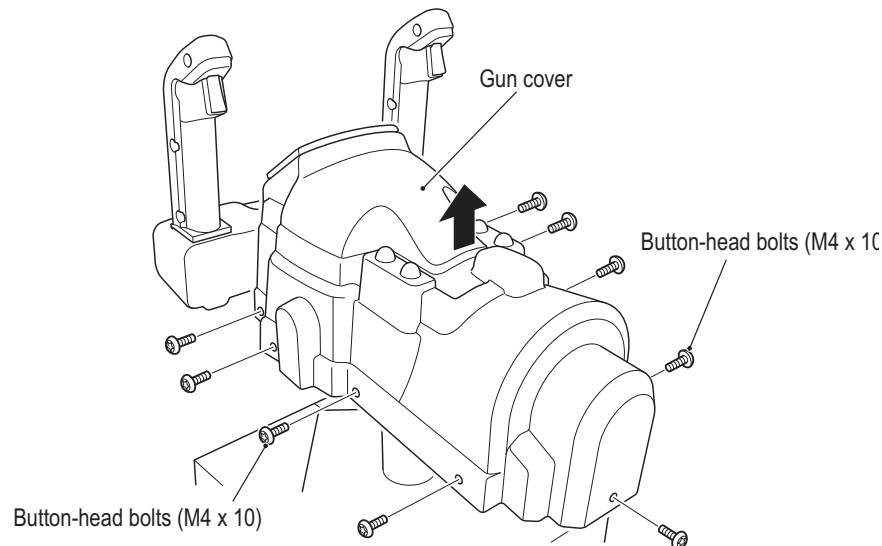
4 Disconnect the connector and remove the one double-point screw (M4 x 8), and then remove the potentiometer together with the potentiometer bracket.

Double-point screw (M4 x 8)

Connector

Potentiometer

Potentiometer bracket

Protrusion   Hole

77

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

5 Remove the potentiometer from the potentiometer bracket.

Protrusion

Potentiometer

Potentiometer

3 2 1

Flat washer

Spring washer

Hexagon nut
(Do not overtighte
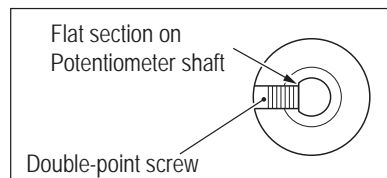
Potentiometer bracket

Green   Blue   Purple

6 Replace the potentiometer.
* When installing the potentiometer, position the potentiometer terminals at the top.

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

7 To install, follow the removal sequence in reverse.

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

Flat section on
Potentiometer shaft

Double-point screw

● After the replacement, be sure to perform initialization. (See P. 47 "7-8 Gun Assy adjustment (initialization) after parts replacement.")
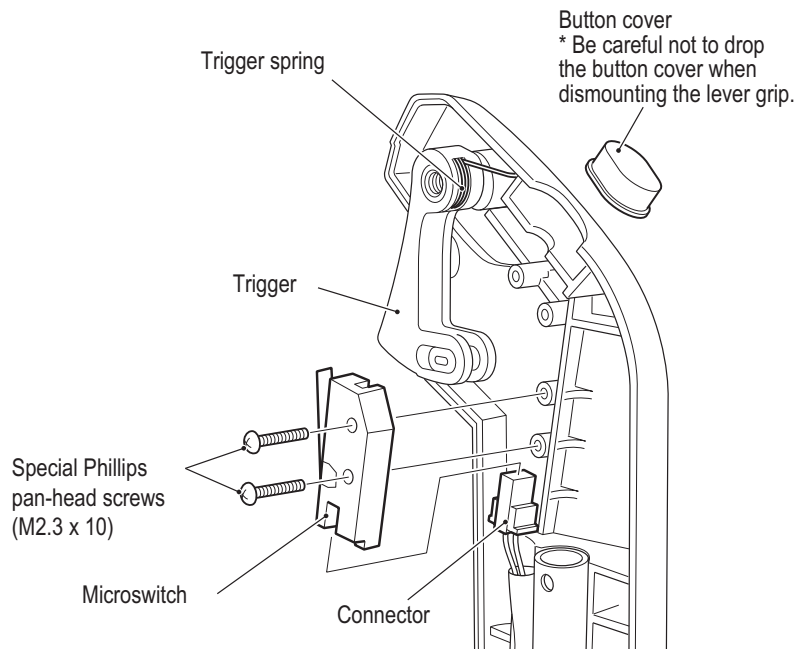
78

(4) Replacing the microswitch

⚠ WARNING

- **To protect the service staff and other people from 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 remove the lever grip A.

Phillips pan-head screw
(with flat washer)
(M4 x 6)

Lever grip B

Lever grip A

Cap nuts (M4)

Phillips pan-head screws
(with flat washer)
(M4 x 20)
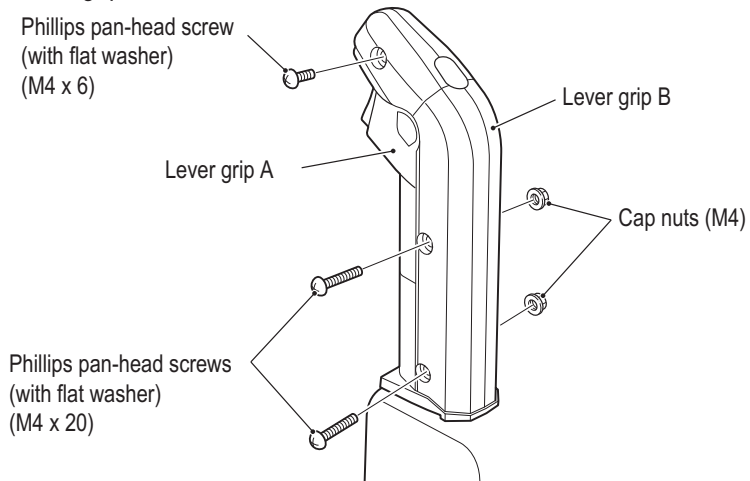
◀ **NOTICE**   ● **Be careful not to lose the button cover that is attached to the upper section of the lever grip.**

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

Button cover
* Be careful not to drop
the button cover when
dismounting the lever grip.

Trigger spring

Trigger

Special Phillips
pan-head screws
(M2.3 x 10)

Microswitch

Connector

79

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

---

4   Disconnect the connector, and then remove and replace the microswitch.

⟨NOTICE   ● **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.

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

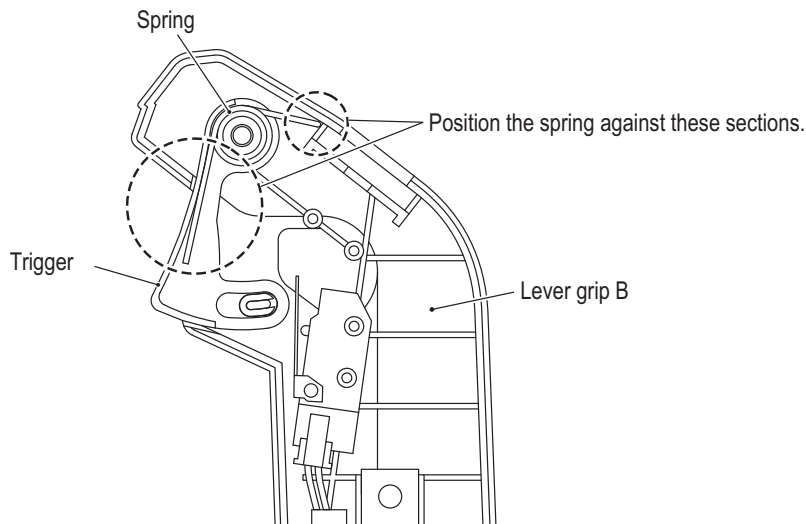**(5) Replacing the trigger and spring**

⚠WARNING

● **To protect the service staff and other people from 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.

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

Spring

Position the spring against these sections.

Trigger

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** .)

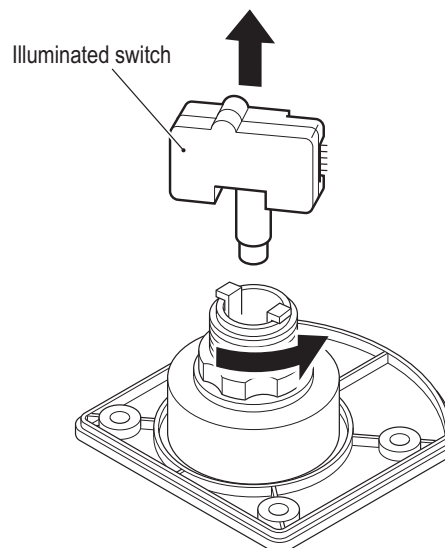**(6) Replacing the illuminated switch/LED lamp in the Start button**

⚠WARNING

● **To protect the service staff and other people from 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 (M4 x 10) and remove the switch bezel.

Button-head bolt (M4 x 10)

Switch bezel
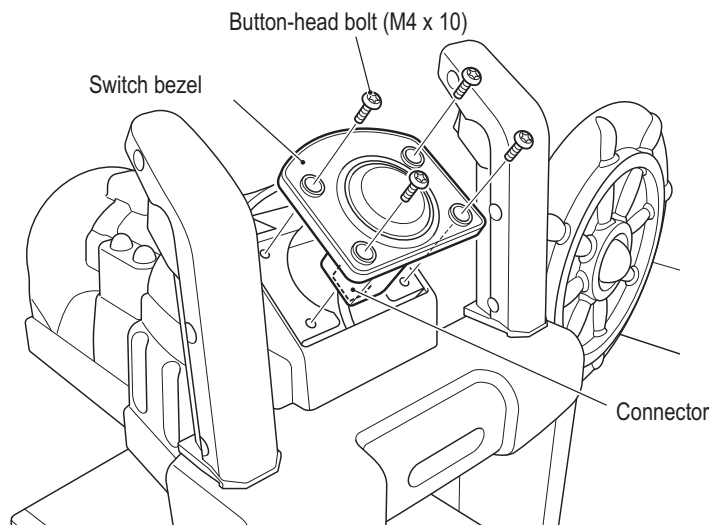
Connector

3 Disconnect the connector.

4 Turn the illuminated switch 45° and remove it from the switch bezel.

Illuminated switch

81

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

<div>

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.

</div>

LED lamp

Illuminated switch
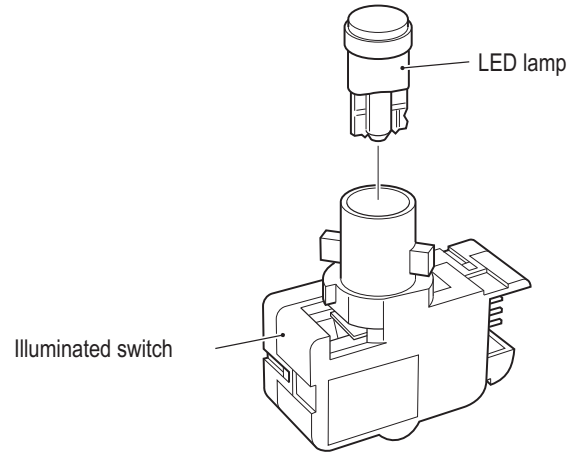
6   To install, follow the removal sequence in reverse.
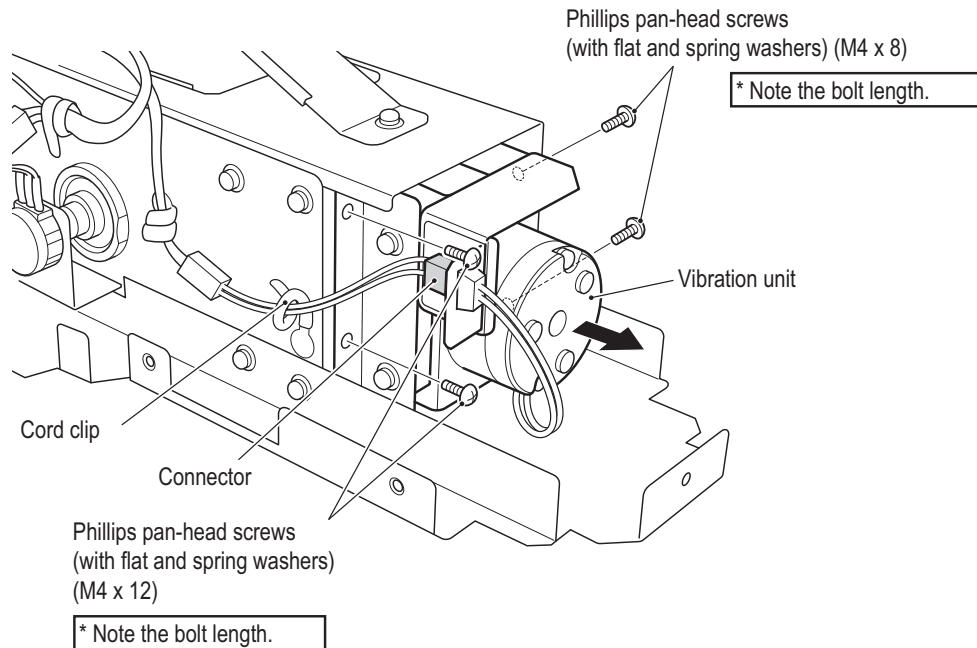
NOTICE ● **After the replacement, be sure to check switch operation in the Test mode. (See P. 31 "7-6-4 (2) SWITCH TEST" and P. 35 "7-6-4 (6) OUTPUT TEST.")**

(7) Replacing the vibration unit

⚠ WARNING

- **To protect the service staff and other people from 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 cord clip and disconnect the connector.

Phillips pan-head screws (with flat and spring washers) (M4 x 8)

* Note the bolt length.

Vibration unit

Cord clip

Connector

Phillips pan-head screws (with flat and spring washers) (M4 x 12)
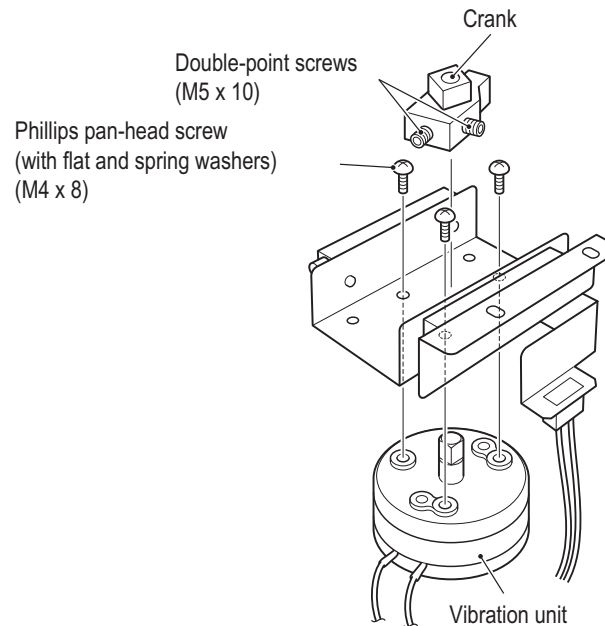
* Note the bolt length.

5   Remove the two Phillips pan-head screws (with flat and spring washers) (M4 x 12) and two Phillips pan-head screws (with flat and spring washers) (M4 x 8), and then remove the vibration unit.

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

| 6 | Remove the two Phillips pan-head screws (with flat and spring washers) (M4 x 12) and remove the stopper bracket. |

Phillips pan-head screw
(with flat and spring washers)
(M4 x 12)

Stopper bracket
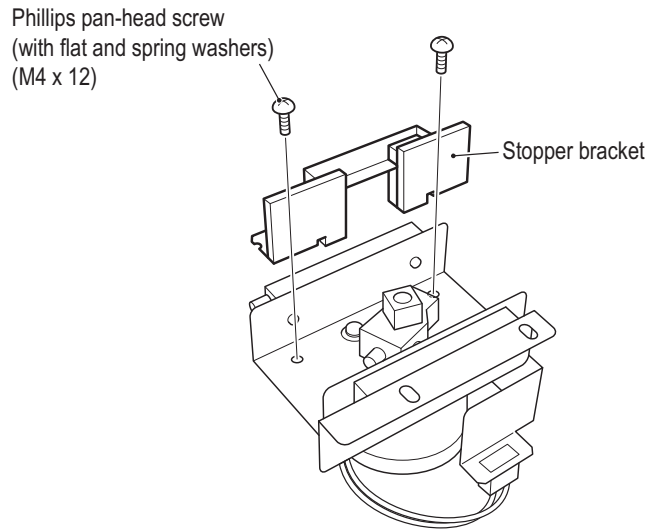
| 7 | Loosen the two double-point screws (M5 x 10) using an Allen wrench, and remove the crank. |

Crank

Double-point screws
(M5 x 10)

Phillips pan-head screw
(with flat and spring washers)
(M4 x 8)

Vibration unit

| 8 | Disconnect the connector. |

| 9 | Remove the three Phillips pan-head screws (with flat and spring washers) (M4 x 8) and remove the vibration unit. |

| 10 | Replace the vibration unit. |

| 11 | To install, follow the removal sequence in reverse. |

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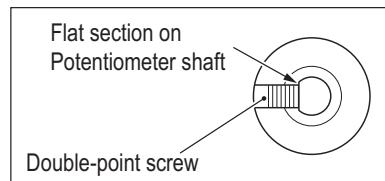
Flat section on
Potentiometer shaft

Double-point screw

- ● 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.")
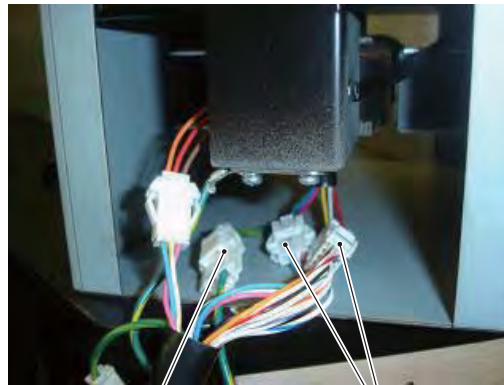
8B. Maintenance – To be conducted by a technician only –

(8) Replacing the gun harness 3d

⚠WARNING

● **To protect the service staff and other people from 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 Disconnect the two connectors and one Ground terminal.
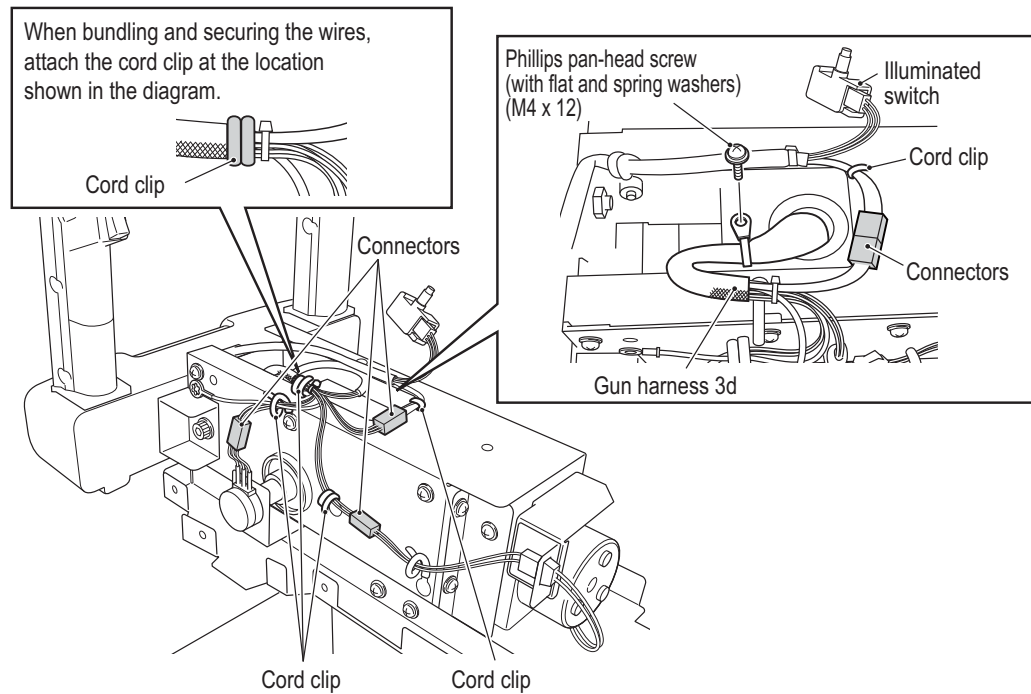

Ground terminal   Connectors

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) (M4 x 12) and remove the switch base.


Switch base

Phillips pan-head screw
(with flat and spring washers)
(M4 x 12)

Ground terminal

86
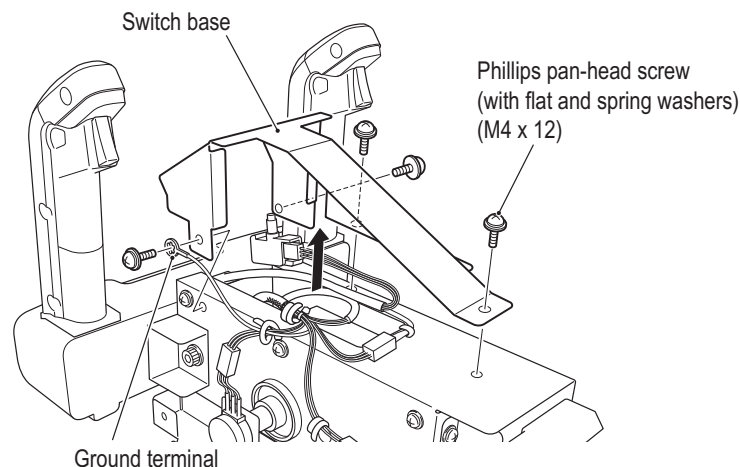
6 Disconnect the three connectors of the gun harness 3d and remove the four cord clips. Remove the Phillips pan-head screw (M4 x 12) and one cord clip.

When bundling and securing the wires, attach the cord clip at the location shown in the diagram.

Cord clip

Connectors

Phillips pan-head screw (with flat and spring washers) (M4 x 12)

Illuminated switch

Cord clip

Connectors

Gun harness 3d

Cord clip   Cord clip

7 Pull out the gun harness 3d.
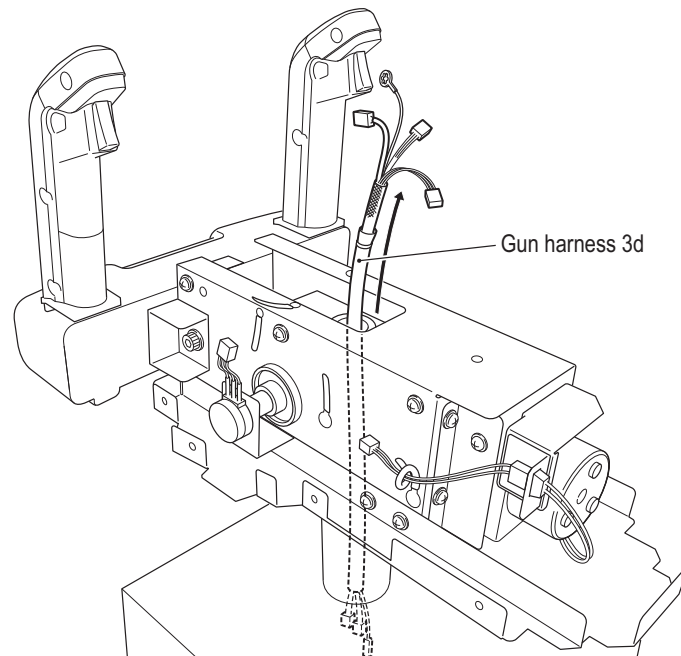
Gun harness 3d

8 To install, follow the removal sequence in reverse.

87

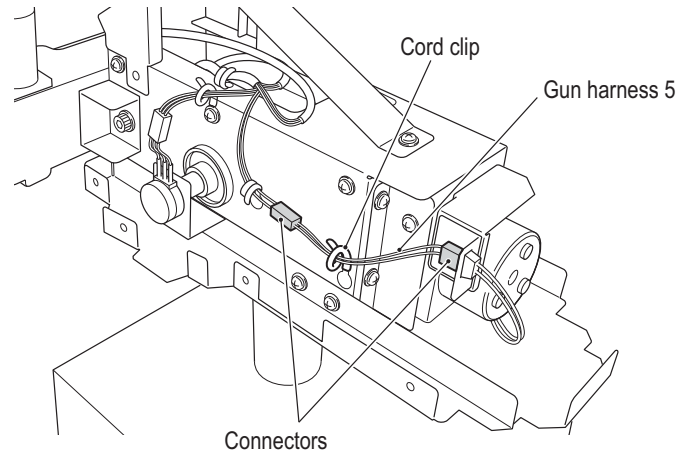**8B. Maintenance – To be conducted by a technician only –**

(9) Replacing the gun harness 5

⚠WARNING

- **To protect the service staff and other people from electric shock, accident and in-jury 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 cord clip, and then remove the gun harness 5.

Cord clip

Gun harness 5

Connectors

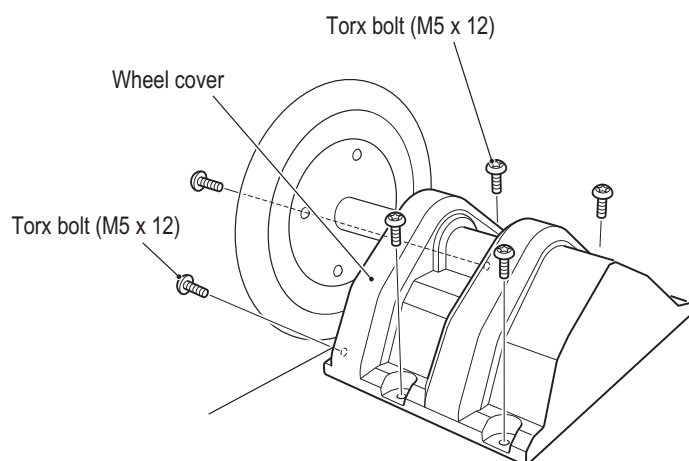**4** To install, follow the removal sequence in reverse.

8B-4-4 Wheel Assy

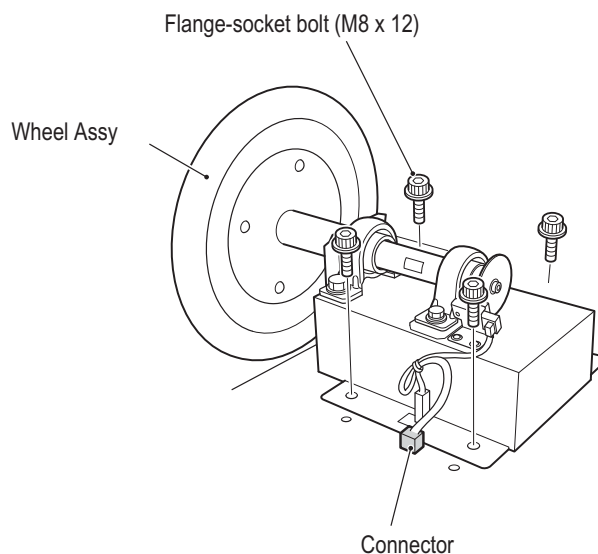**(1) Removing and installing the Wheel Assy**

⚠️WARNING

- **To protect the service staff and other people from 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 (M5 x 12) and remove the wheel cover.

Torx bolt (M5 x 12)

Wheel cover

Torx bolt (M5 x 12)

3 Disconnect the connector and remove the four flange-socket bolts (M8 x 12), and remove the Wheel Assy.
* When removing the flange-socket bolts (M8 x 12), support the wheel section since the Wheel Assy can lose balance due to the weight of the wheel.

Flange-socket bolt (M8 x 12)

Wheel Assy

Connector

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

---

4 To install, follow the removal sequence in reverse.
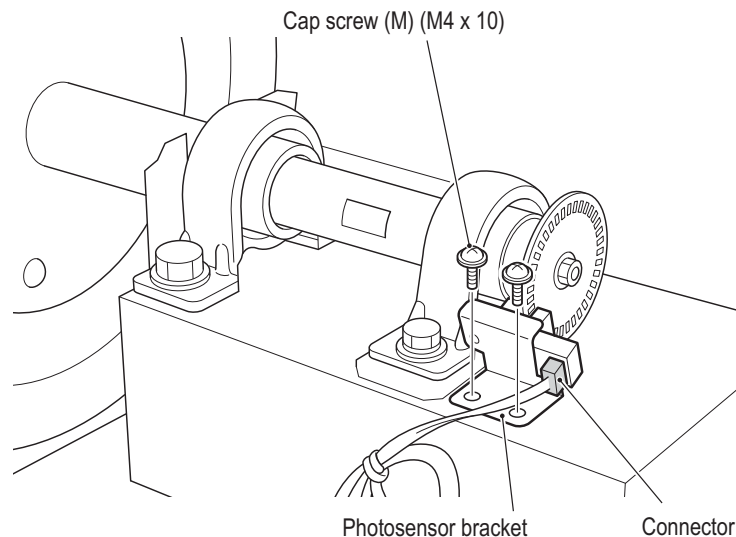
NOTICE
- **During the installation, check the direction of each connector and insert the connectors firmly until they lock securely into place.**
- **During the installation, be careful not to pinch the connectors or harnesses.**

(2) Replacing the photosensor (for wheel)

⚠WARNING

- **To protect the service staff and other people from 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** .)

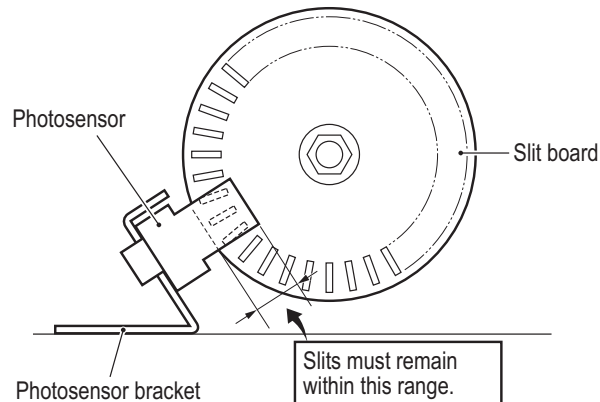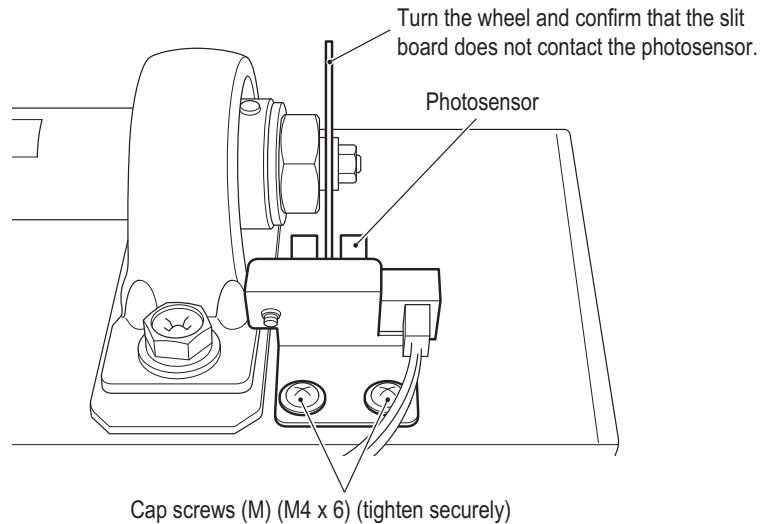**3** Remove the two cap screws (M) (M4 x 10) and remove the photosensor bracket.

Cap screw (M) (M4 x 10)

Photosensor bracket   Connector

4 Disconnect the connector.

5 Remove the one Phillips pan-head screw (M3 x 6), and remove and replace the photosensor.

Photosensor bracket

Phillips pan-head screw (M3 x 6)   Photosensor
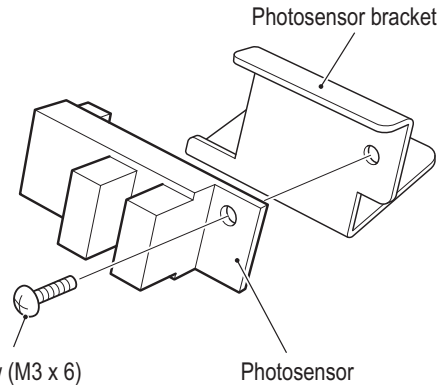
6 Temporarily install the photosensor bracket using two cap screws (M) (M4 x 6), position the slits in relation to the photosensor as shown in the diagram below, and then tighten the cap screws securely. After tightening the cap screws, turn the wheel and make sure that the slit board does not contact the photosensor.

Turn the wheel and confirm that the slit board does not contact the photosensor.

Photosensor

Cap screws (M) (M4 x 6) (tighten securely)

Photosensor

Slit board

Photosensor bracket

Slits must remain within this range.

NOTICE
- **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.")**

91

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

(3) Replacing the wheel

1   Remove the four Torx bolts (M5 x 12) and remove the wheel.

Torx bolt (M5 x 12)
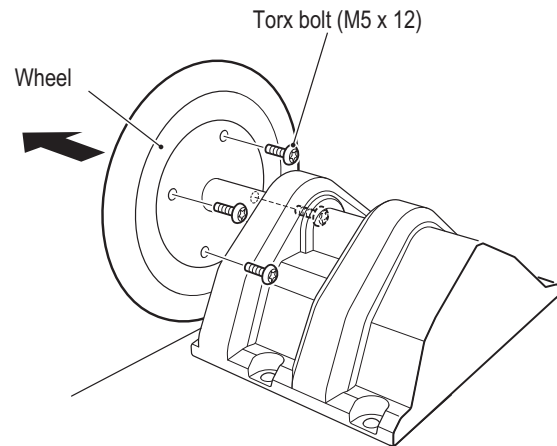
Wheel

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 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 (M5 x 12) and remove the Sign cover from the Marquee Assy.

Torx bolts (M5 x 12)

Torx bolts (M5 x 12)

Sign cover

Torx bolts (M5 x 12)

Torx bolts (M5 x 12)
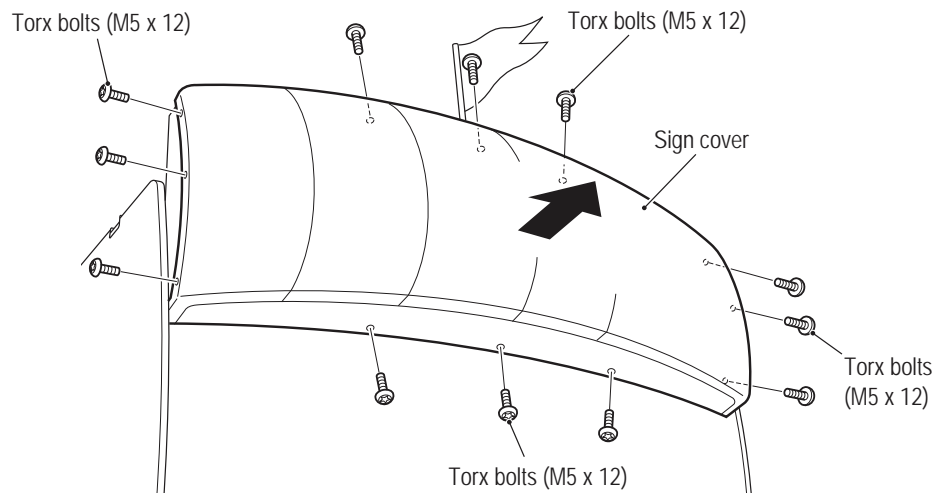
8B. Maintenance – To be conducted by a technician only –

---

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.**

◢ NOTICE ● **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 remove the monitor adjustment switches.

Monitor adjustment switches   Phillips truss screw (M3 x 6)

Back side of monitor

95
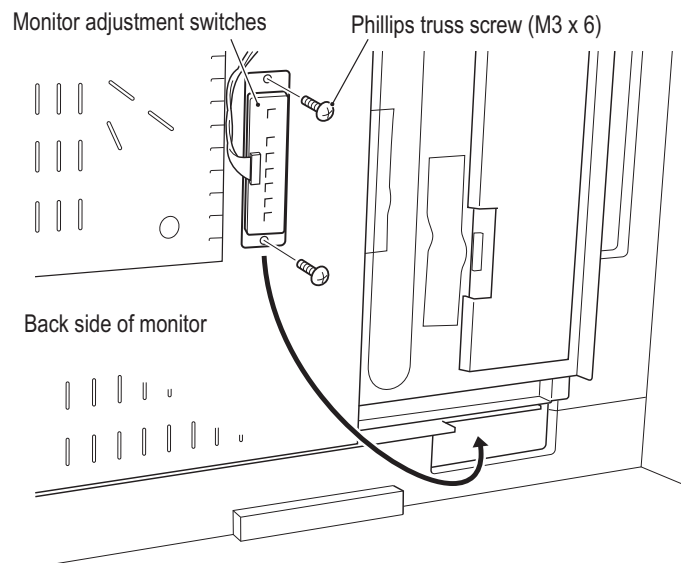
8B. Maintenance – To be conducted by a technician only –

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

LCD monitor

Monitor adjustment switches
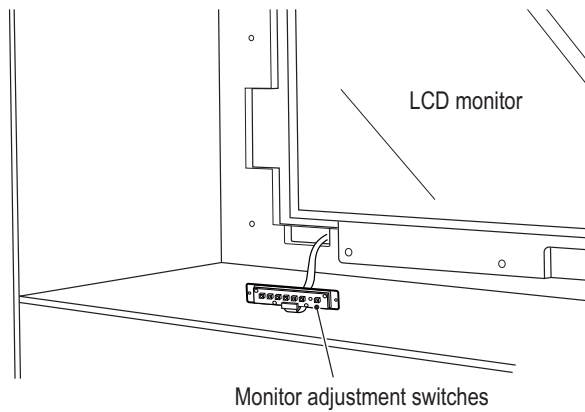
5   Turn on the power switch and adjust the LCD monitor. (See P. 97 "8B-5-2 Adjusting the LCD monitor image quality" and P. 98 "8B-5-3 Adjusting the LCD monitor settings.")
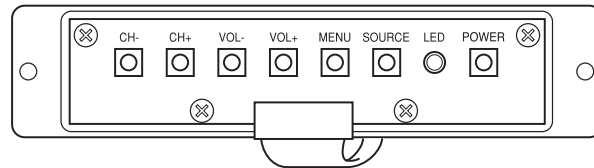
OSD Key	Function (normal screen)	Function (OSD screen)[*2]	Function (adjustment screen[*3])
(a) CH– button	Disabled	Select an item.	Disabled
(b) CH+ button	Disabled	Disabled	Disabled
(c) VOL– button	Disabled	Enter an item.	Change the numeric setting.
(d) VOL+ button	Disabled	Disabled	Change the numeric 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** .)
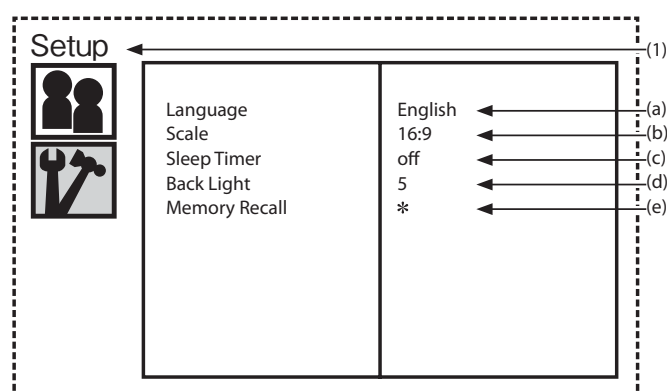
3 Press the Menu button to display the OSD screen.

Picture screen
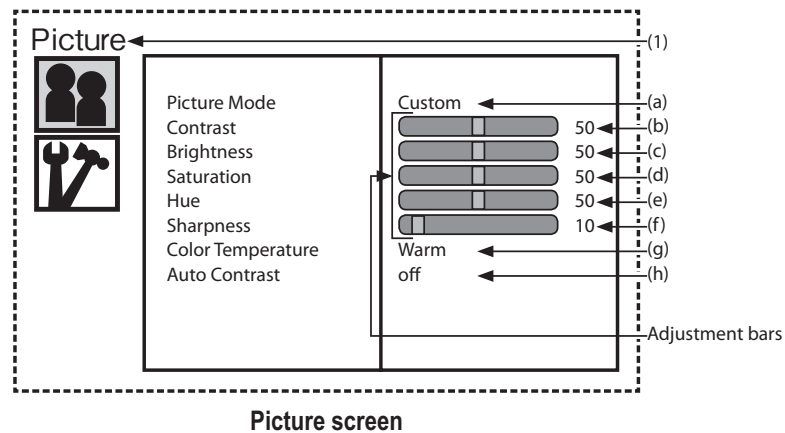
Item	Function	Default setting
(1) Picture	Adjustment of image quality	
(a) Picture Mode	Image quality mode [Custom]	Custom
(b) Contrast	Adjustment of contrast [0 to 100]	50
(c) Brightness	Adjustment of brightness [0 to 100]	50
(d) Saturation	Color saturation adjustment [0 to 100]	50
(e) Hue	Adjustment 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.

```
Setup ◄──────────────────────────────(1)

 ██  Language      English ◄──────────(a)
 ██  Scale         16:9    ◄──────────(b)
     Sleep Timer   off     ◄──────────(c)
 ⚒   Back Light    5       ◄──────────(d)
     Memory Recall *       ◄──────────(e)
```

Setup 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 back light 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 of the machine, be sure to select specialist companies.**
- **The following component contains specially controlled industrial waste which must be collected, transported and discarded in a special manner 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.**
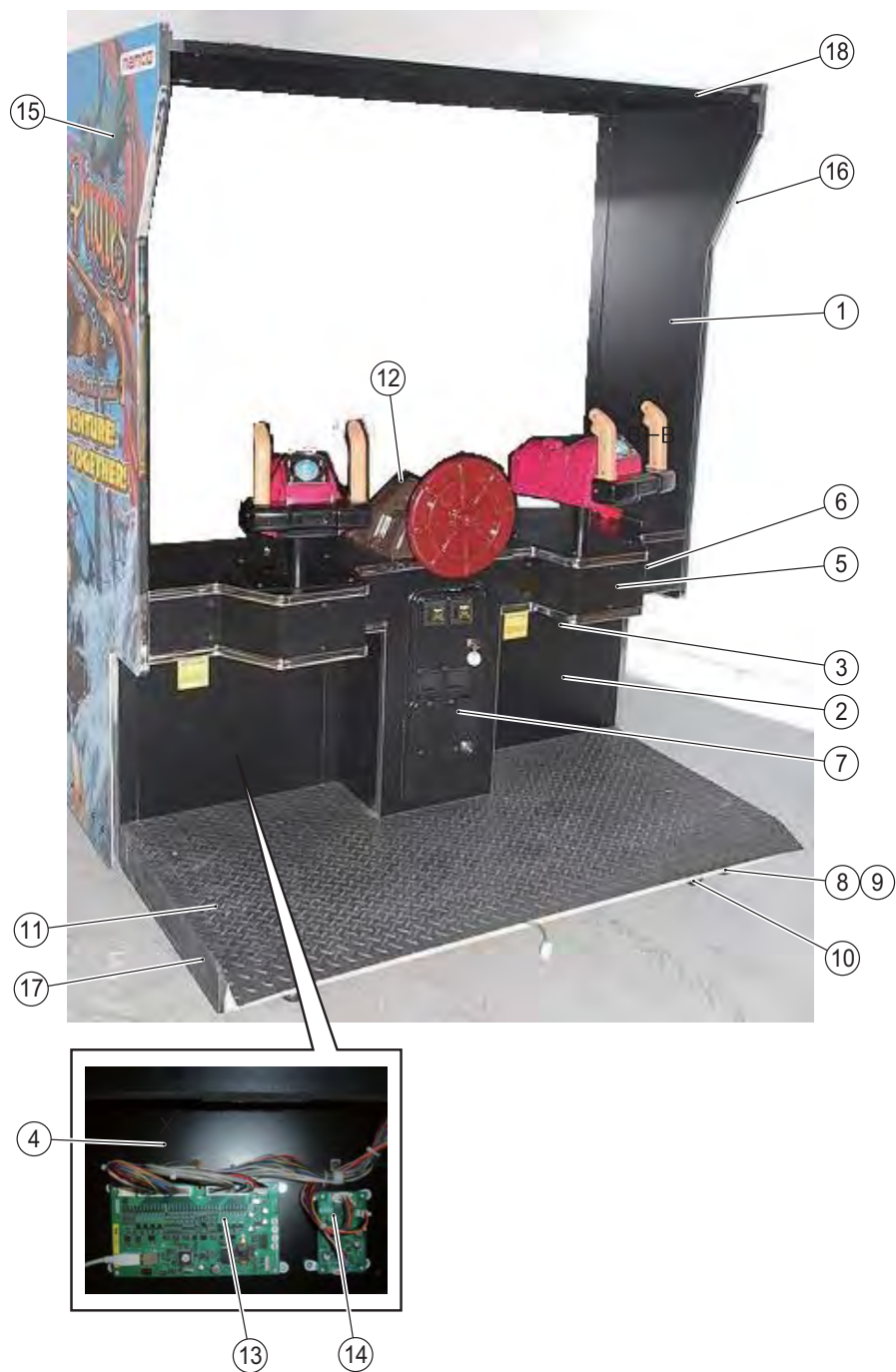
10. PARTS LISTS

10-1 Monitor Assy

55-inch LCD
30 31
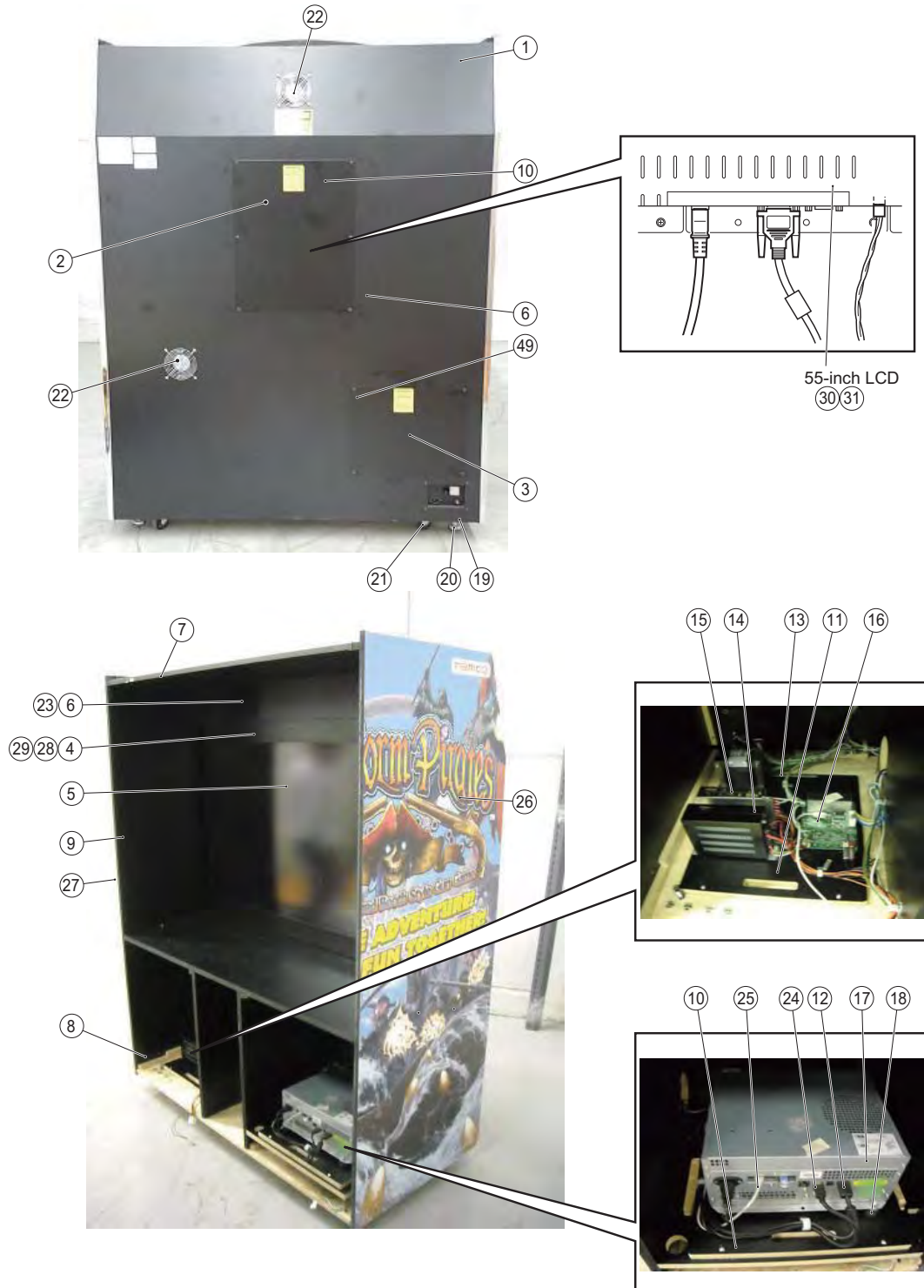
No.	Name	Qty.	Type and rating	Part No.
1	Monitor cabinet	1		DP63-13165-00
2	Maintenance panel A	1		DP63-13166-00
3	Maintenance panel B	1		DP10-13054-00
4	Monitor cover	1		DP10-13055-00
5	Monitor panel	1		DP95-13169-00
6	Speaker cover	2		DP10-13061-00
7	Top joint bracket	1		DP10-13062-00
8	MC bottom joint bracket	2		DP10-13064-00
9	MC side joint bracket	2		DP10-13063-00
10	Rack board	1		DP63-13167-00
11	PS board	1		DP63-13167-01
12	HDMI-DVI conversion cable	1		VG50-13146-00
13	Rack & PS board bracket	2		DP10-13065-00
14	SW power supply unit, 5V/12 V	1		VG88-13197-00
15	SW power supply unit, 12V	1		VG88-10064-00
16	Bass AMP PC board	1		- - - - -
17	System 369	1		- - - - -
18	Round vibration-insulating rubber	6		RM96-12602-00
19	Adjuster bracket	4		VG10-13164-00
20	Adjuster	4		VG20-04938-01
21	Caster	4		VG24-00783-00
22	Fan motor	2		VG55-07827-00
23	Speaker	1		VG54-03210-00
24	AV cable	1		VG50-13147-00
25	USB cable	1		VG50-06800-01
26	Decal Cabinet Right Pirates SE	1		DP240-13638-01
27	Decal Cabinet Left Pirates SE	1		DP240-13638-00
28	Monitor panel TB bracket	2		DP10-13057-00
29	Monitor panel LR bracket	2		DP10-13058-00
30	LCD Top bracket	1		DP10-13059-00
31	LCD Bottom bracket	1		DP10-13060-00

10. PARTS LISTS

10-2 Control Assy

No.	Name	Qty.	Type and rating	Part No.
1	Control cabinet	1		DP63-13165-01
2	Maintenance door	2		DP63-13166-01
3	Coin lock	2		VG26-13198-00
4	USIO mount board	1		DP63-13167-02
5	Control cover	2		DP10-13066-00
6	Gun mount bracket	4		DP10-13067-00
7	Coin door	1		VG83-10635-00
8	Adjuster Bracket	4		VG10-13164-00
9	Adjuster Bolt	4		VG20-04938-01
10	Caster	4		VG24-00783-00
11	Floor mat	1		DP96-13168-00
12	Wheel cover	1		DP90-13026-00
13	USIO PC board	1		- - - - -
14	Gun Drive PC board	1		- - - - -
15	Decal Cabinet Left Pirates SE	1		DP240-13638-00
16	Decal Cabinet Right Pirates SE	1		DP240-13638-01
17	C joint support bracket	2		DP10-13068-00
18	Top joint bracket	1		DP10-13062-00

10. PARTS LISTS

10-3 Seat Assy
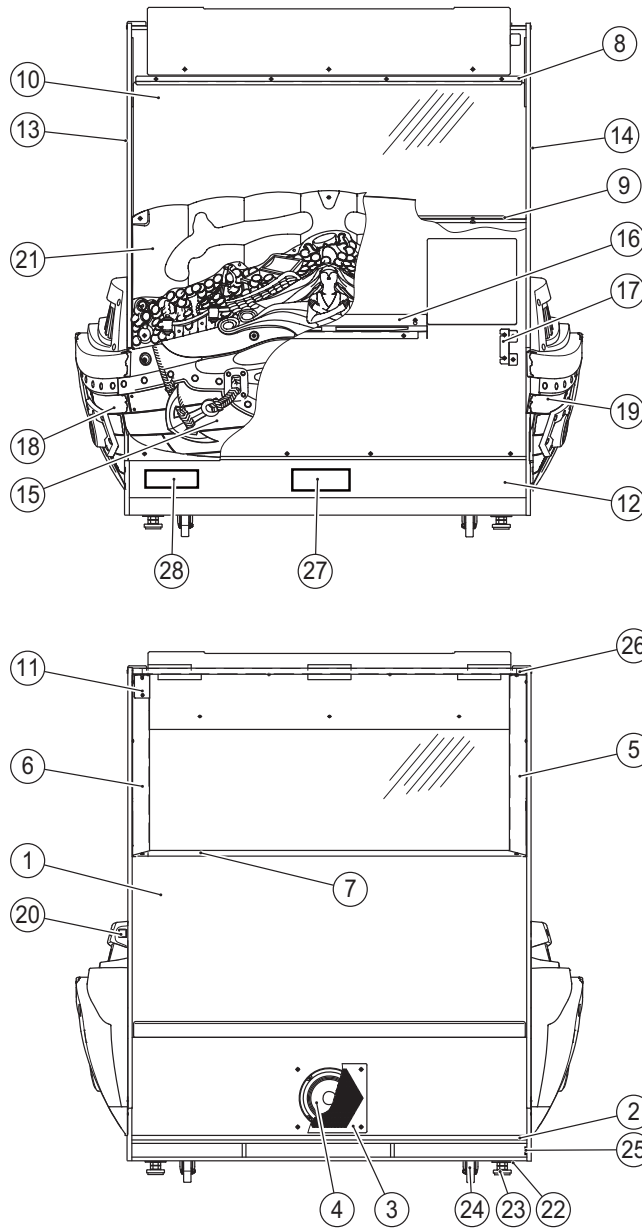
No.	Name	Qty.	Type and rating	Part No.
1	Seat cabinet	1		DP63-13165-02
2	Floor mat bracket	1		DP10-13070-00
3	Woofer cover	1		DP10-13073-00
4	Woofer speaker	1		VG54-11590-00
5	Window pillar L	1		DP10-13077-00
6	Window pillar R	1		DP10-13078-00
7	Window mount base	1		DP10-13074-00
8	Window top bracket	1		DP10-13075-00
9	Window bottom bracket	1		DP10-13076-00
10	Window panel	1		DP95-13169-01
11	Connector cover	1		DP10-13079-00
12	Seat bottom cover	1		DP10-13072-00
13	Decal Seat Left Pirates SE	1		DP240-13637-00
14	Decal Seat Right Pirates SE	1		DP240-13637-01
15	Rear body	1		DP90-13036-00
16	Rear body center mount bracket	1		DP10-13080-00
17	Rear body side mount bracket	2		DP10-13081-00
18	Side body L	1		DP90-13027-00
19	Side body R	1		DP90-13027-01
20	Side body mount bracket	2		DP10-13082-00
21	Cover Treasure Pirates SE	1		DP90-13029-01
22	Adjuster bracket	1		VG10-13164-00
23	Adjuster bolt	1		VG20-04938-01
24	Caster	1		VG24-00783-00
25	S joint support bracket	2		DP10-13071-00
26	Top joint bracket	1		DP10-13062-00
27	Caution Decal, DO NOT STEP	1		VG40-06765-00
28	Caution Decal, TIP OVER HAZARD	1		VG40-13003-00

10. PARTS LISTS

10-4 Gun Assy
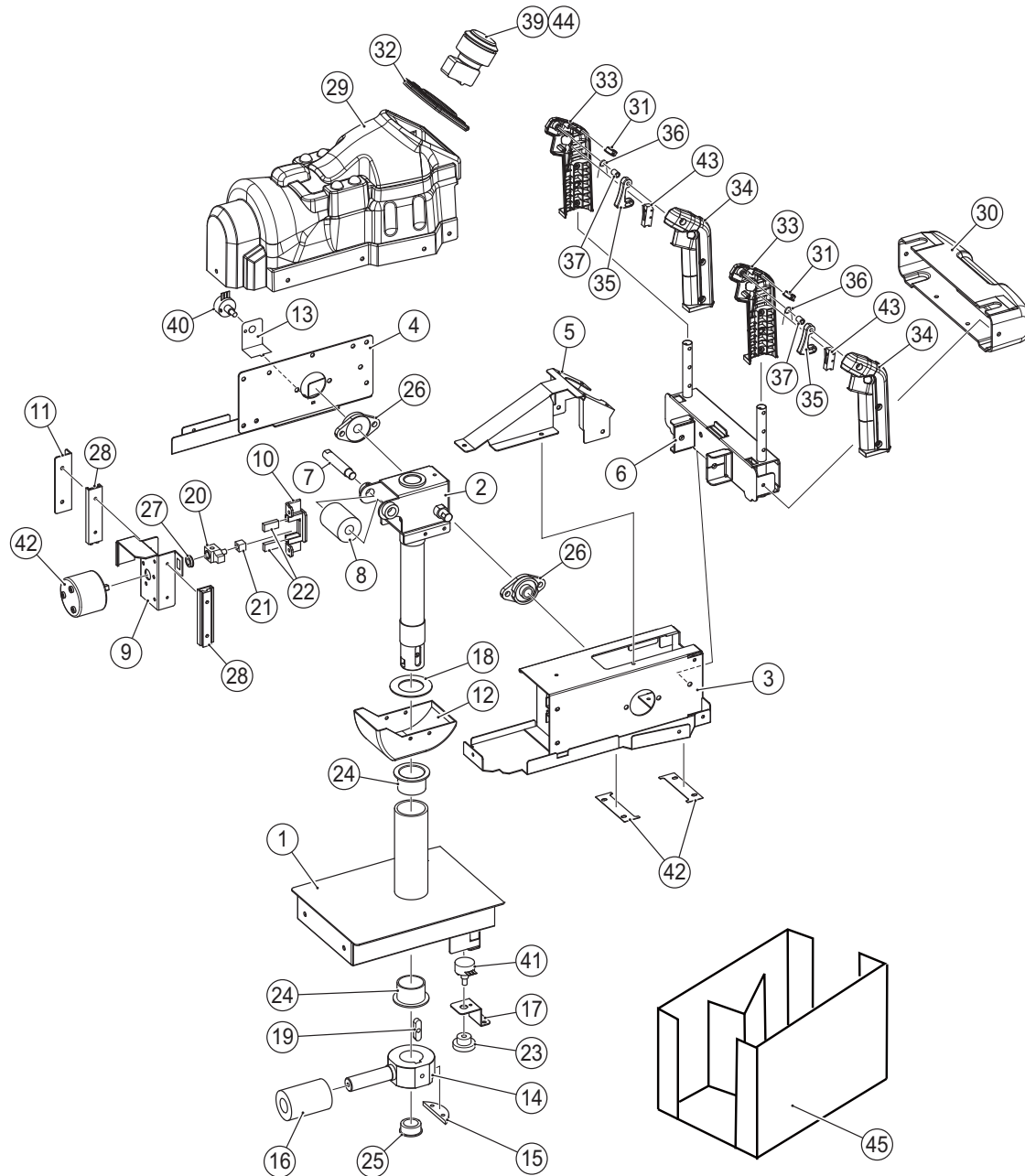
No.	Name	Qty.	Type and rating	Part No.
1	Neck SD	1		DP10-13086-00
2	Core shaft	1		DP10-13094-00
3	Frame cover (2)	1		DP10-13105-00
4	Frame cover (1)	1		DP10-13104-00
5	Switch base	1		DP10-13103-00
6	Grip	1		DP10-13110-00
7	Stopper shaft	1		DP11-13109-00
8	Stopper rubber (1)	1		DP96-13095-00
9	Motor frame	1		DP10-13108-00
10	Stopper frame	1		DP10-13106-00
11	Slide bracket	1		DP10-13107-00
12	Undercover	1		DP90-13025-00
13	Potentiometer bracket (for up-down)	1		DP10-13102-00
14	Pipe end	1		DP11-13099-00
15	Gear	1		DP59-13047-00
16	Stopper rubber (2)	1		DP96-13101-00
17	Potentiometer bracket (for left-right)	1		DP10-13111-00
18	Spacer	1		DP96-13096-00
19	Key	1		DP11-13098-00
20	Crank	1		DP11-13174-00
21	Slider	1		DP59-13175-00
22	Stopper rubber	2		DP96-13176-00
23	Gear	1		DP59-13097-00
24	Flange bushing	2	LFF-3220	DP59-13048-00
25	Gun base box	1		DP10-13069-00
26	Rhomboidal pillow	2	KFL001	DP59-13177-00
27	Miniature bearing	1	MF148ZZ	DP59-13178-00
28	Slide rail	2	AR2-60 (ball: 2 x 10 pieces)	DP05-13179-00
29	Gun cover	1		DP90-13031-00
30	Grip cover	1		DP90-13024-00
31	Button cover Hole blind	2		DP90-13180-00
32	Switch bezel	1		DP90-13181-00
33	Lever grip A	2		DP90-13182-00
34	Lever grip B	2		DP90-13183-00
35	Trigger button	2	SN-07170	DP90-13184-00
36	Trigger spring	2	SN-07171	DP22-13049-00
37	Trigger spacer	2	SN-07177	DP90-13185-00
38	Gap filling plate	2		DP95-13186-00
39	Start button Button sticker	1		DP40-13192-00
40	Potentiometer (for up-down)	1	EWSV7CF20E13	VG75-03824-00
41	Potentiometer (for left-right)	1	EWSUGBF20E13	VG75-07050-00
42	Vibration unit	1	RSR20/10-CAB0-BNG	DP36-13043-00
43	Microswitch	2	D3M-01L1-3	VG53-13092-00
44	Illuminated button switch	1	OBSAX-C45UMW1FLW3	VG80-13093-00

10-5 Wheel Assy
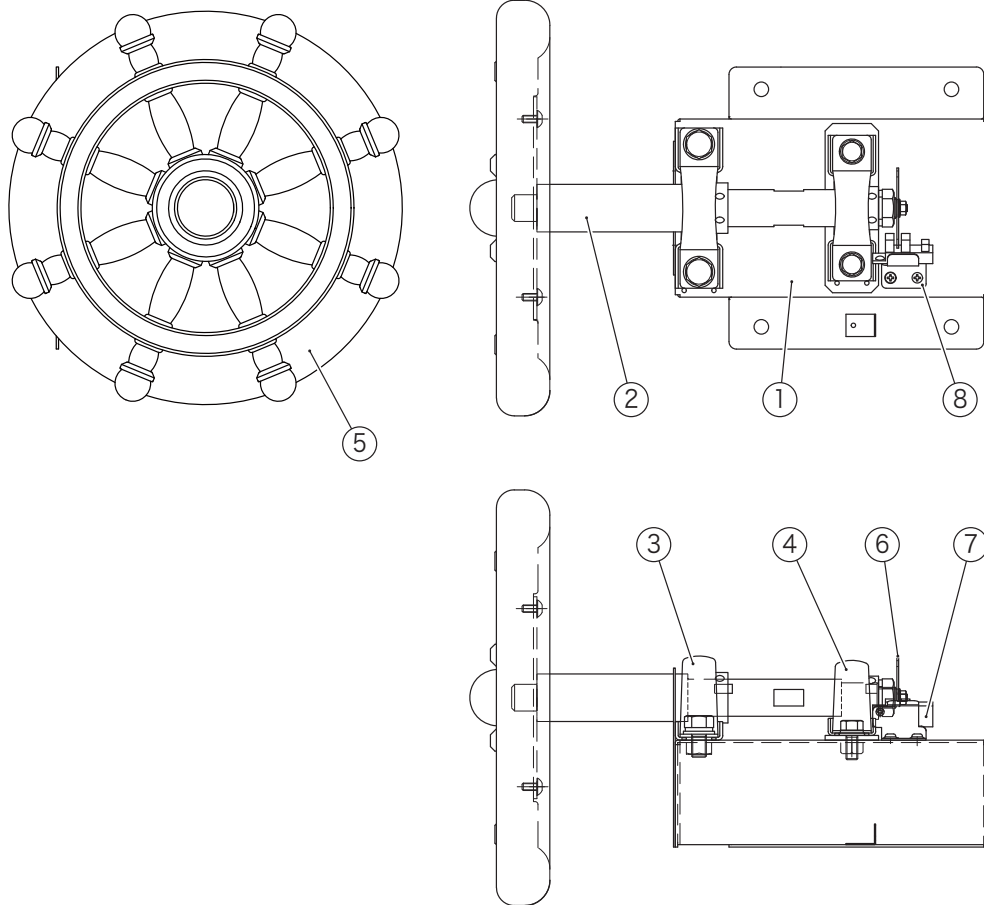
No.	Name	Qty.	Type and rating	Part No.
1	Wheel base	1		DP10-13112-00
2	Wheel shaft	1		DP11-13113-00
3	Pillow unit (diameter: 25 mm)	1	BPP5	VG59-13115-00
4	Pillow unit (diameter: 20 mm)	1	BPP4	VG59-13116-00
5	Darin	1		DP90-13170-00
6	Slit board	1		DP10-13171-00
7	Photosensor	1	KI1138-AALF	DP79-13170-00
8	Sensor bracket	1		DP10-13114-00

10-6 Service Plate Assy

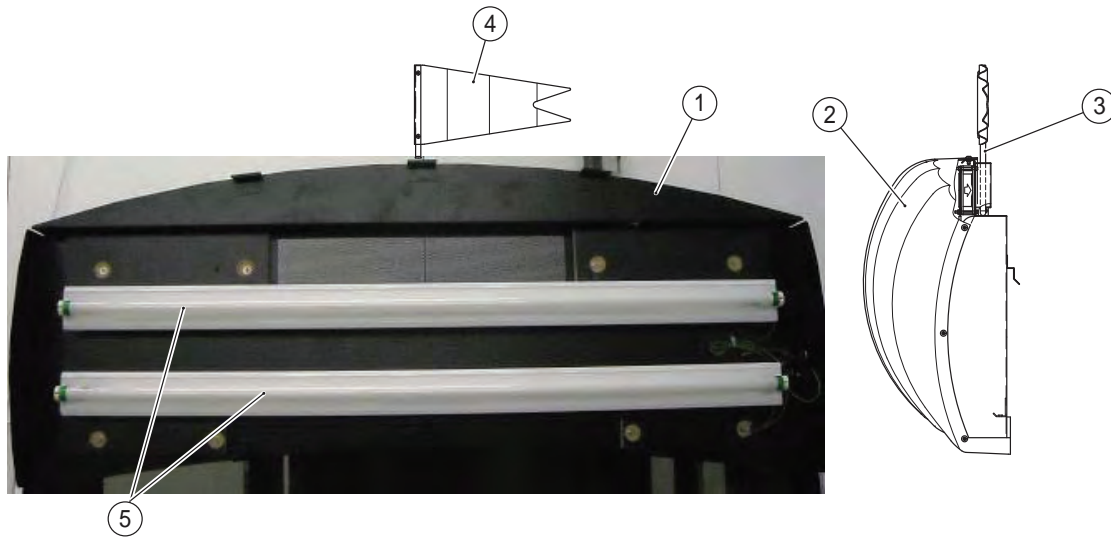| No.	Name	Qty.	Type and rating	Part No.
1	Service plate	1		VG10-04881-00
2	Slide switch	1		VG53-12702-00
3	Toggle switch	1		VG53-12703-00
4	Mini btn, Start, Red ctr galag	2		VG53-09641-00
5	Label, Service panel "Test"	1		VG44-02702-00
6	Label, Service panel "Service"	1		VG44-02702-01
7	Label, Service panel "Enter"	1		VG44-02702-11
8	Label, Service panel "Select"	1		VG44-02702-07
9	Coin meter, 5V W/Harness	1		VG83-09347-00
10	Mini btn, Start, Grn ctr galag	1		VG53-09641-01

10. PARTS LISTS

10-7 Cord Box Assy
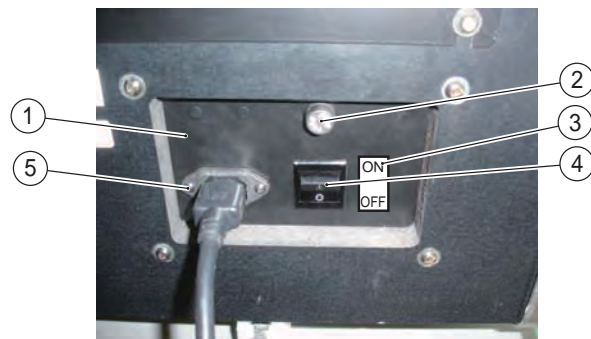
No.	Name	Qty.	Type and rating	Part No.
1	A.C. Plate, detach cord	1		VG10-09494-00
2	Panel mount fuse holder	1		VG78-12950-00
3	Label, ON-OFF	1		VG44-03224-00
4	Switch, Rocker, Dpst	1		VG53-04683-00
5	Filter, EMI, 10A, Panel mount	1		VG78-12947-00

10-8 Roof Assy
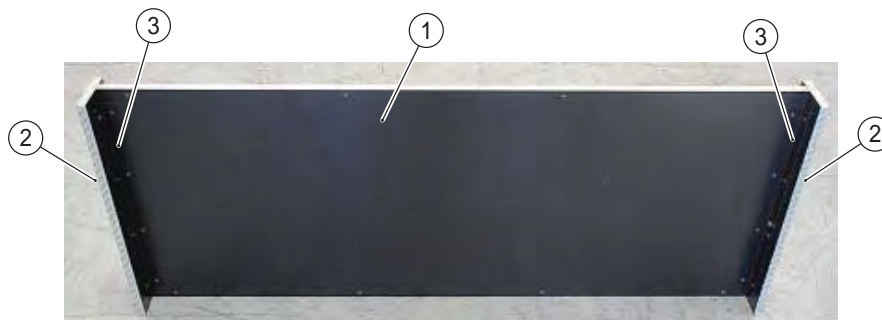
No.	Name	Qty.	Type and rating	Part No.
1	Roof	1		DP63-13165-03
2	Decal Roof Pirates SE	2		DP240-13636-00
3	Top Bracket	2		DP10-13087-00

10-9 Marquee Assy

No.	Name	Qty.	Type and rating	Part No.
1	Marquee box	1		DP10-13052-00
2	Marquee Pirates SE	1		DP290-13640-00
3	Flag pole	1		DP10-13053-00
4	Flag	1		DP90-13021-00
5	Fluorescent lamp	2		VG57-02029-00

10-10 Other parts
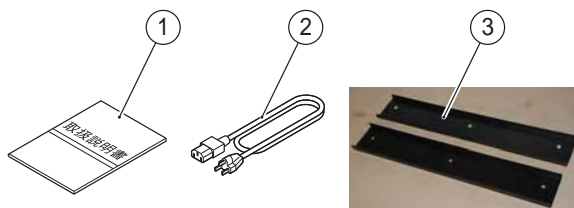
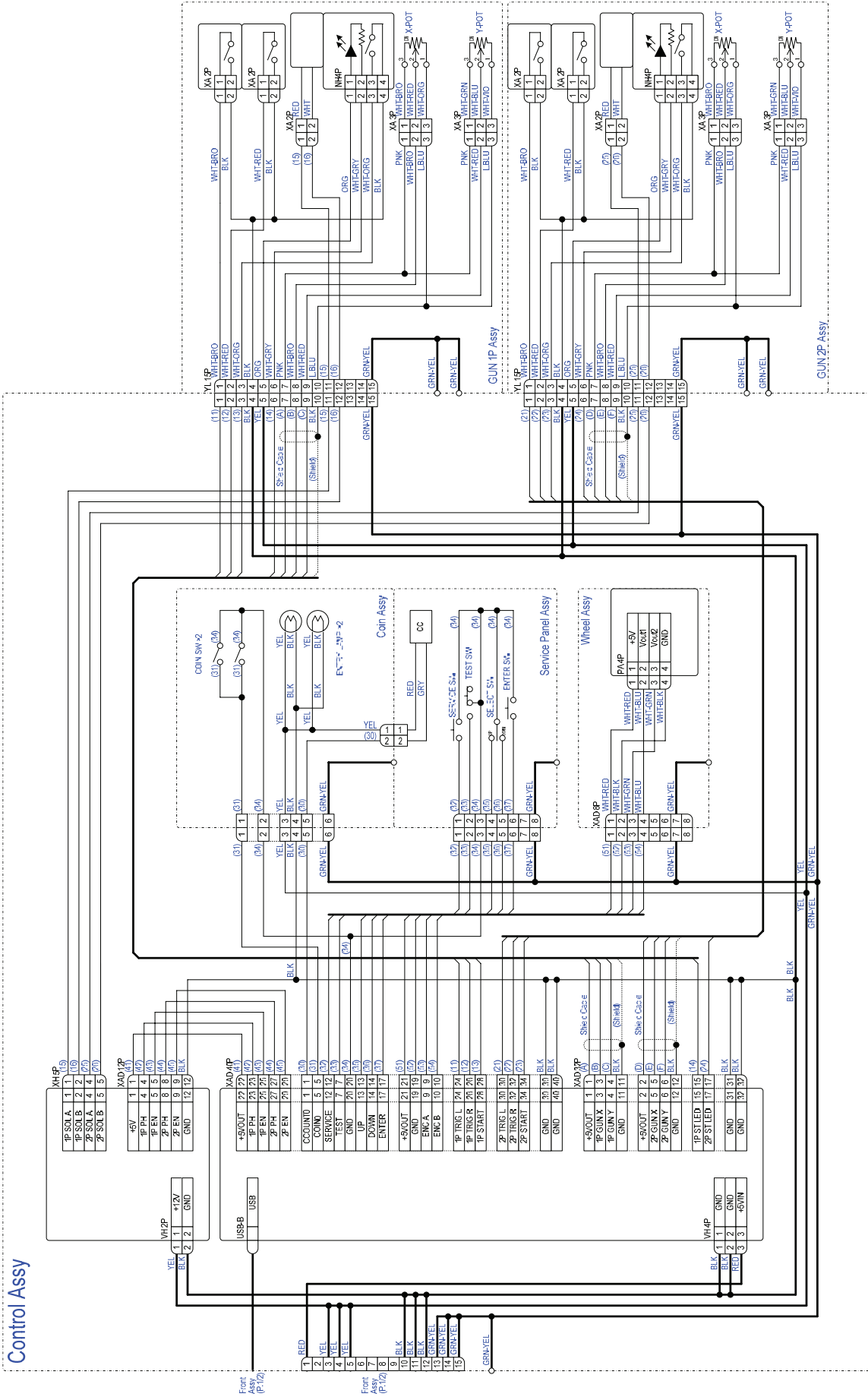| No.	Name	Qty.	Type and rating	Part No.
1	Manual - Pirates SE	1		DP245-13639-00
2	Power cord	1		- - - - -
3	CS bottom joint bracket	2		DP10-13083-00

11. WIRING DIAGRAMS

WIRING DIAGRAM of Control Assy for US
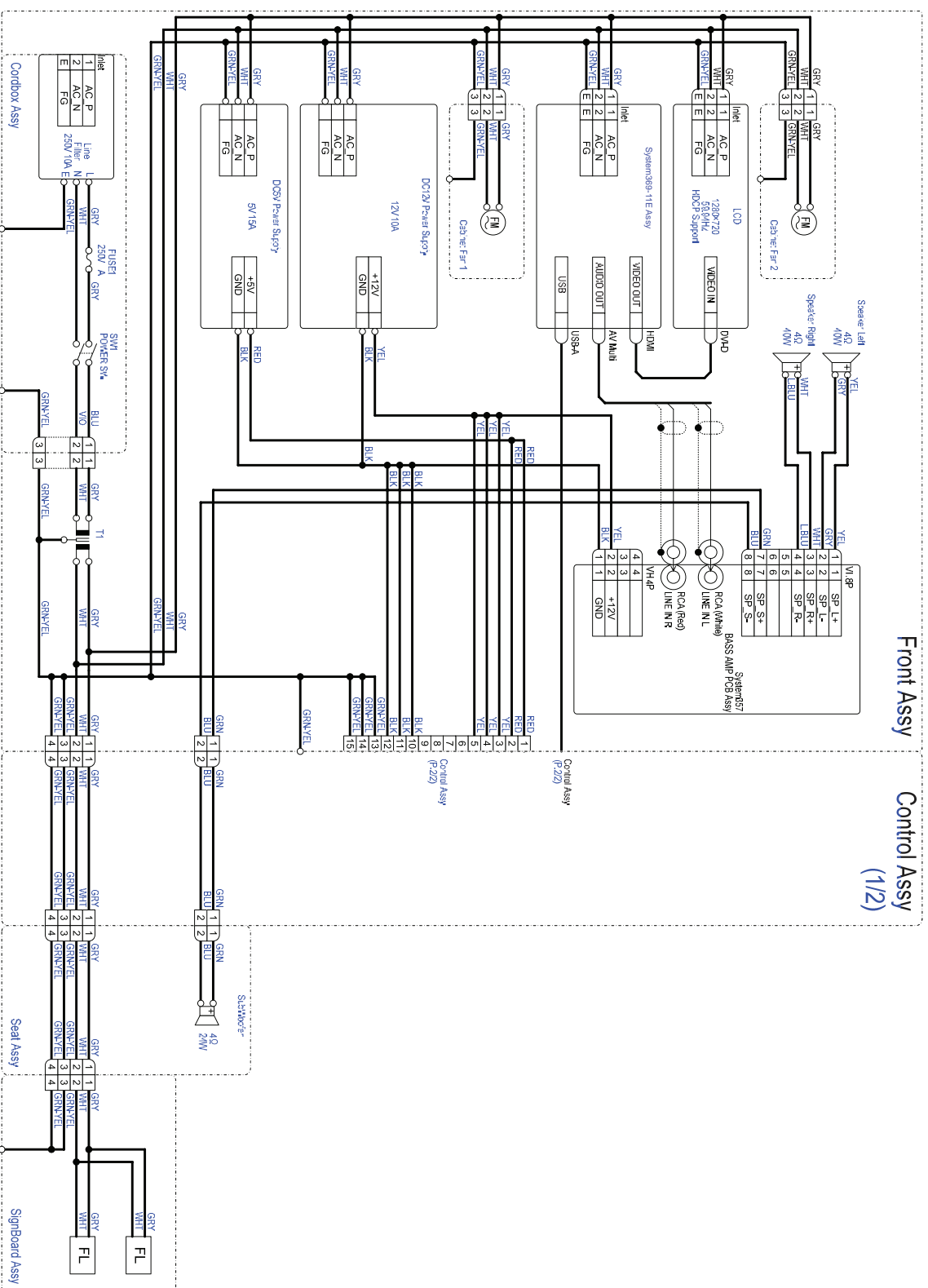
WIRING DIAGRAM of Control Assy for Europe

Control Assy

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Specifications of the machine and contents of this operation manual are subject to change without prior notice due to product improvements.