

OWNER'S MANUAL



MANIC PANIC GHOSTS

OWNERS MANUAL

420-6992UK



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IMPORTANT

- Before using this product, read this manual carefully to understand the contents herein stated.
- After reading this manual, be sure to keep it near the product or in a convenient place for easy reference when necessary.

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BEFORE USING THIS PRODUCT, BE SURE TO READ THE FOLLOWING:

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INTRODUCTION

This manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electro-mechanicals, servicing control, spare parts, etc. for the product, "MANIC PANIC GHOSTS."

This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions. In the unlikely event that the product does not function correctly, DO NOT allow anyone other than a technician to touch the internal system. Turn off the power to the machine, making sure to unplug the electrical cord from the outlet, and contact the office listed below or the point of purchase for this product.

Use of this product is unlikely to cause physical injuries or damage to property. However, points that require special attention are indicated by bold text, the word "IMPORTANT" and the symbol below.

STOP IMPORTANT

Indicates important information that, if ignored, may result in the mishandling of the product and cause faulty operation or damage to the product.

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SPECIFICATIONS

Installation Space :	1,693 mm (H) × 983 mm (W)
Height :	2,205 mm
Weight :	220 kg
Power, Current :	420 W、2 A (AC 230 V 50/60 Hz)
Monitor Type :	50 Type Projector

NOTE: The contents herein described are subject to change without notice.

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Definition of 'Site Maintenance Personnel or Other Qualified Individuals'

WARNING

Procedures not described in this manual or marked as 'to be carried out by site maintenance personnel or other qualified professionals' should not be carried out by personnel without the necessary skill or technology. Work carried out by unqualified persons may cause serious accidents, including electrocution.

Parts replacement, maintenance inspections and troubleshooting should be carried out by site maintenance personnel or other qualified professionals. This manual includes directions for potentially dangerous procedures which should only be carried out by professionals with the appropriate specialized knowledge.

The site maintenance personnel or other qualified professionals mentioned in this manual are defined as follows:

Site maintenance personnel:

Individuals with experience in maintaining amusement equipment, vending machines, etc., working under the supervision of the owner/operator of this product to maintain machines within amusement facilities or similar premises by carrying out everyday procedures such as assembly, maintenance inspections, and replacement of units/expendable parts.

Activities to be carried out by site maintenance personnel:

Amusement equipment/vending machine assembly, maintenance inspection and replacement of units/expendable parts.

Other qualified professionals:

Persons employed by amusement equipment manufacturers, or involved in design, production, testing or maintenance of amusement equipment. The individual should have either graduated from technical school or hold similar qualifications in electrical/electronics/mechanical engineering.

Activities to be carried out by other qualified professionals:

Amusement equipment/vending machine assembly, repair/adjustment of electrical/electronic/mechanical parts.

1 HANDLING PRECAUTIONS

When installing or inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.

Non-compliance with the following points or inappropriate handling running counter to the cautionary matters herein stated can cause personal injury or damage to the machine.

WARNING

- Before performing work, be sure to turn the power off. Performing the work without turning the power off can cause an electric shock or short circuit. In the case work should be performed in the status of power on, this manual always states to that effect.
- To avoid an electric shock or short circuit, do not plug in or unplug quickly.
- To avoid an electric shock, do not plug in or unplug with a wet hand.
- Do not expose power cords or earth wires on the surface, (floor, passage, etc.). If exposed, the power cords and earth wires are susceptible to damage. Damaged cords and wires can cause an electric shock or short circuit.
- To avoid causing a fire or an electric shock, do not put things on or damage the power cords.
- When or after installing the product, do not unnecessarily pull the power cord. If damaged, the power cord can cause a fire or an electric shock.
- In case the power cord is damaged, ask for a replacement through where the product was purchased from or the office herein stated. Using the cord as is damaged can cause fire, an electric shock or leakage.
- Be sure to perform grounding appropriately. Inappropriate grounding can cause an electric shock.
- Be sure to use fuses meeting the specified rating. Using fuses exceeding the specified rating can cause a fire or an electric shock.
- Be sure that connections such as IC BD are made properly. Insufficient insertion can cause an electric shock.
- Specification changes, removal of equipment, conversion and/or addition, not designated by SEGA are not permitted.
- Failure to observe this may cause a fire or an electric shock. Non-compliance with this instruction can have a bad influence upon physical conditions of the players or the onlookers, or result in injury during play.
- SEGA shall not be held responsible for damage, compensation for damage to a third party, caused by specification changes not designated by SEGA.
- If work or parts replacement not indicated in this manual is carried out, an accident may occur. If it is necessary to carry out work not indicated in this manual, be sure to have it done by the office indicated in this manual or by the point of purchase. Also, please inquire regarding details of the work involved.
- Be sure to perform periodic maintenance inspections herein stated.

STOP IMPORTANT

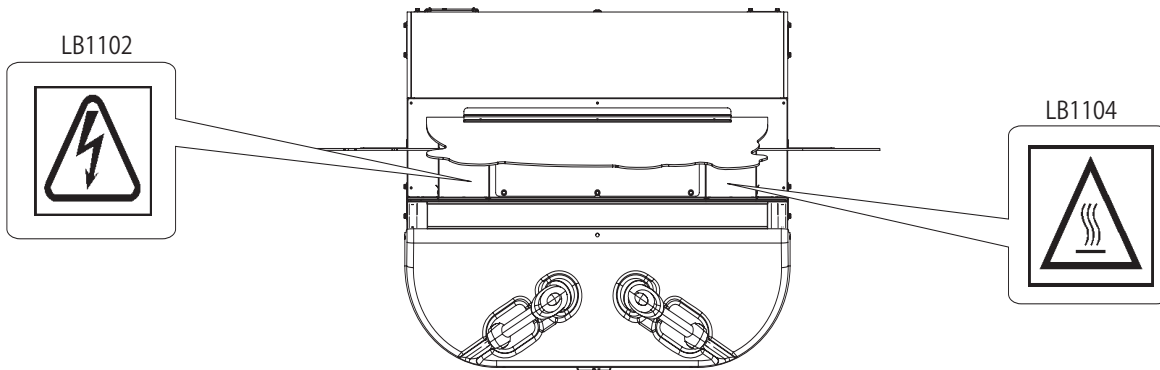
- For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.
- Do not turn the power on and off continuously. Repeatedly turning the power on and off may cause product malfunction or parts damage.
- Some parts are not designed and manufactured specifically for this game machine. The manufacturers may discontinue, or change the specifications of such general-purpose parts. If this is the case, SEGA cannot repair or replace a failed game machine whether or not a warranty period has expired.

CONCERNING THE STICKER DISPLAY

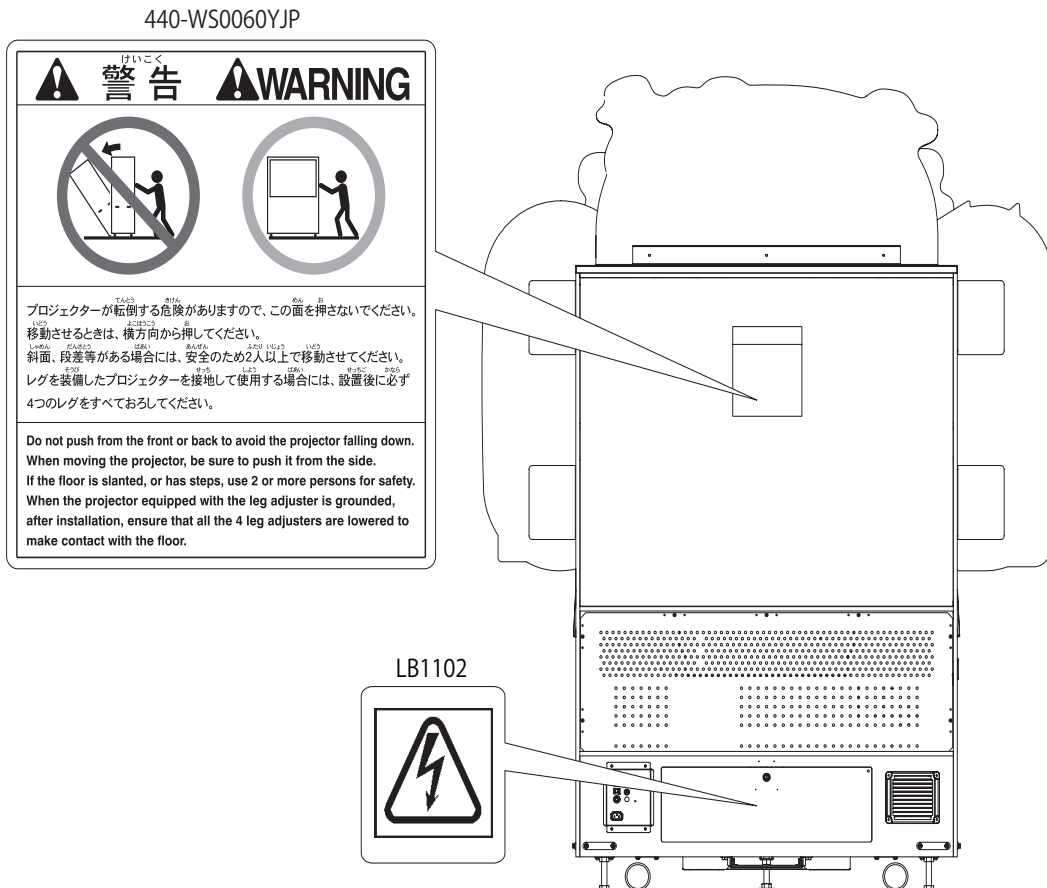
This SEGA product has stickers attached describing the product manufacture No. (Serial No.) and Electrical Specifications. It also has a Sticker describing where to contact for repair and for purchasing parts. When inquiring about or asking for repairs, mention the Serial No. and Name of Machine indicated on the Sticker. The Serial Number indicates the product register. Identical machines could have different parts depending on the date of production. Also, improvements and modifications might have been made after the publication of this manual. In order to ensure you order the correct parts, mention the Serial No. when contacting the applicable places.

CONCERNING WARNING DISPLAYS

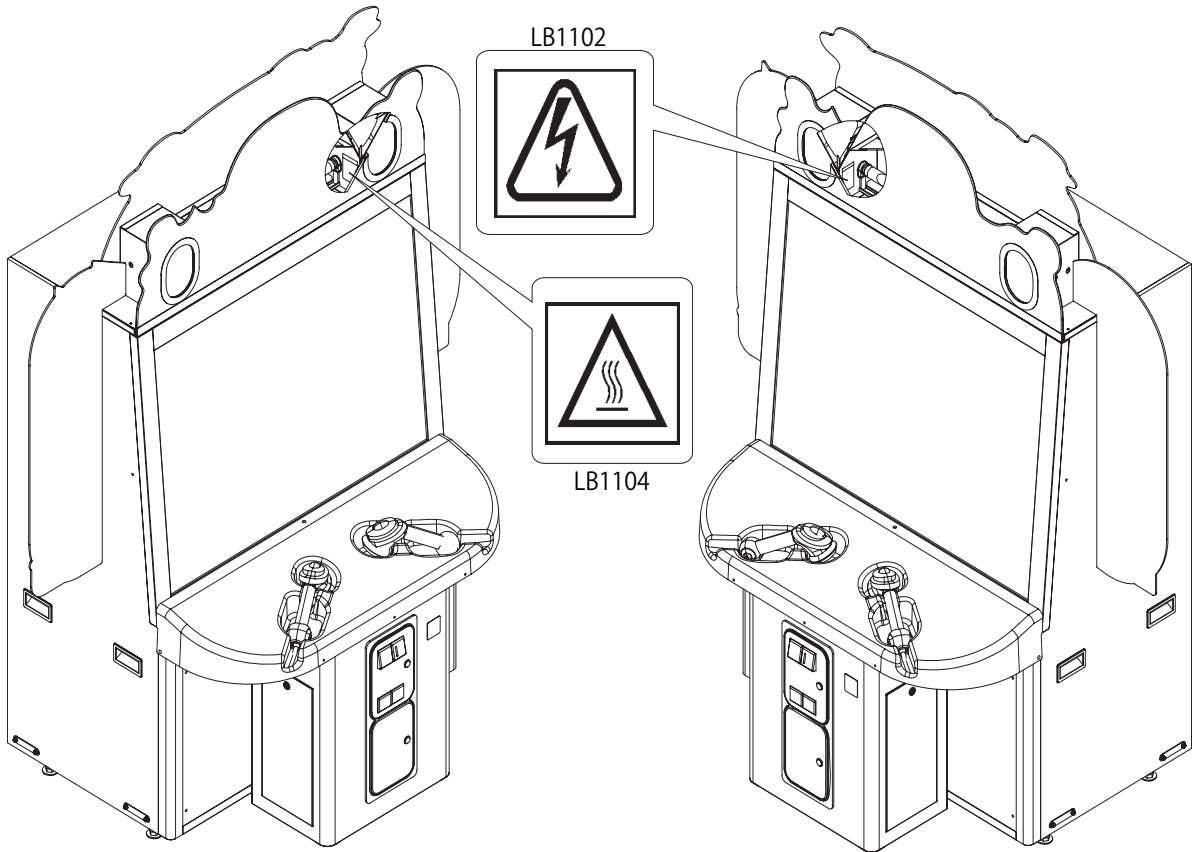
This SEGA product has warning displays on stickers, labels and/or printed instructions adhered/attached to or incorporated in the places where a potentially hazardous situation could arise. The warning displays are intended for accident prevention for customers and for avoiding hazardous situations relating to maintenance and servicing work. Some portions of the cabinet contain high voltage and may cause accidents if touched. When performing maintenance, be very careful of the warning displays. It is especially important that any complex repair and replacement work not mentioned herein should be performed by those technical personnel who have knowledge of electricity and technical expertise. In order to prevent accidents, caution any customer ignoring the warnings to cease and desist immediately.



1 fig01

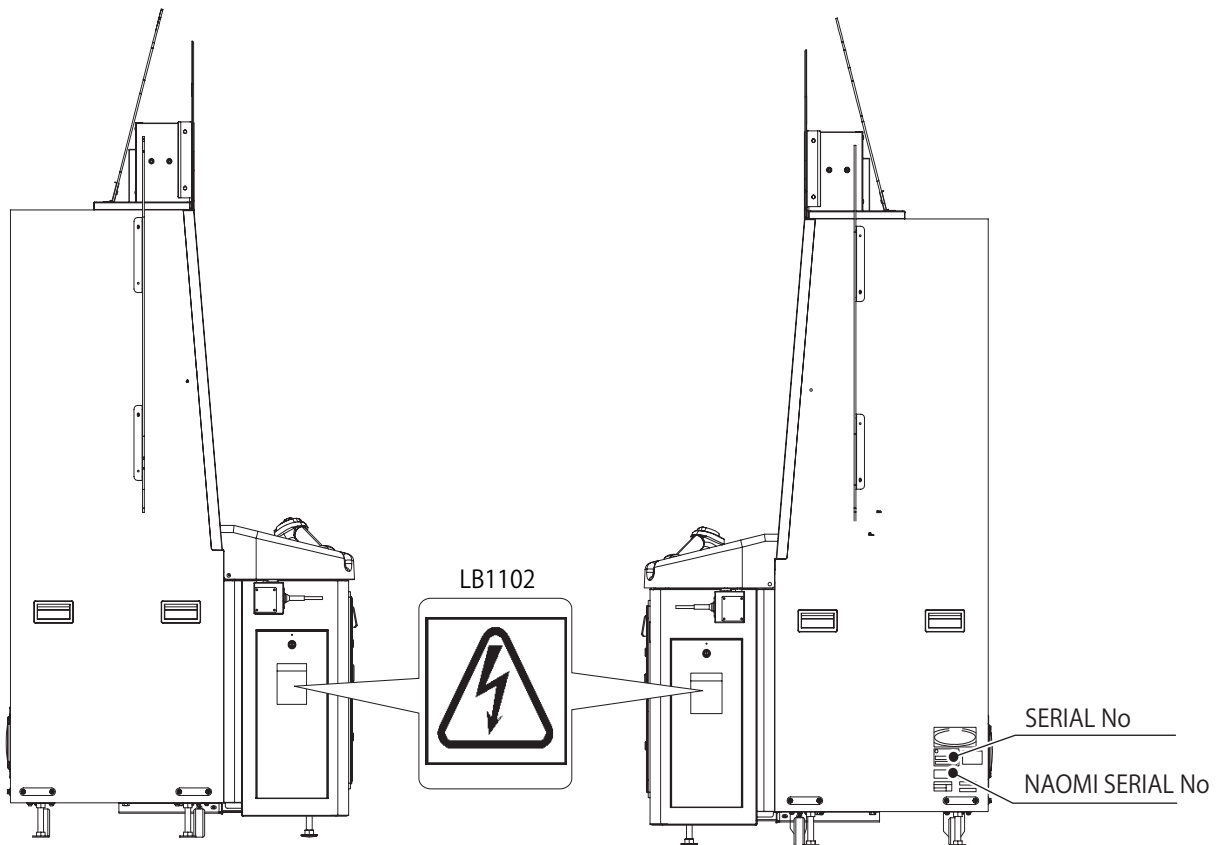


1 fig02



1 fig03

1 fig04



1 fig05

1 fig06

2 PRECAUTIONS REGARDING INSTALLATION LOCATION

WARNING

This product is an indoor game machine. Do not install it outside. Even indoors, avoid installing in places mentioned below so as not to cause a fire, electric shock, injury and/or malfunction.

- Places subject to rain or water leakage, or places subject to high humidity in the proximity of an indoor swimming pool and/or shower, etc.
- Places subject to direct sunlight, or places subject to high temperatures in the proximity of heating units, etc.
- Places filled with inflammable gas or vicinity of highly inflammable/volatile chemicals or hazardous matter.
- Dusty places.
- Sloped surfaces.
- Places subject to any type of violent impact.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- Areas where the temperature exceeds the applicable temperature (ambient temperature) range of 5 to 30 degrees centigrade.

LIMITATIONS OF USE

WARNING

Be sure to check the Electrical Specifications. Ensure that this product is compatible with the location' s power supply, voltage, and frequency requirements. A plate describing Electrical Specifications is attached to the product. Non-compliance with the Electrical Specifications can cause a fire and electric shock.

This product requires a breaker and earth mechanism as part of the location facilities. Using the product without these can cause a fire and electric shock.

Ensure that the indoor wiring for the power supply is rated at 15 A or higher (AC single phase 100 V ~ 120 V area), and 7 A or higher (AC 220 V ~ 240 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.

Be sure to use an independent power supply equipped with an earth leakage breaker. Using a power supply without an earth leakage breaker can cause an outbreak of fire if a power surge occurs.

Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.

When using an extension cord, ensure that the cord is rated at 15 A or higher (AC 100 V ~ 120 V area) and 7 A or higher (AC 220 V ~ 240 V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

ELECTRICITY CONSUMPTION

MAX : 2 A (AC 230 V)

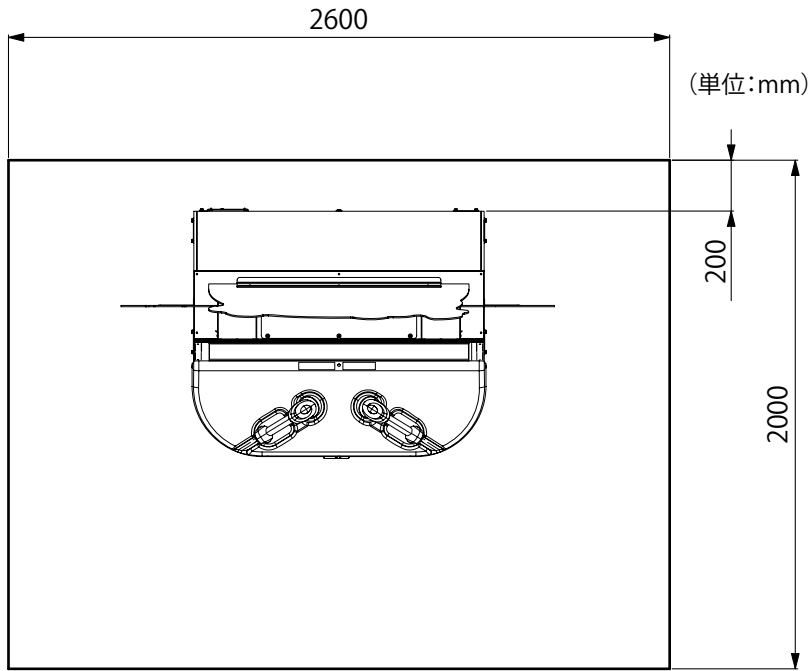
OPERATION AREA

⚠ WARNING

- For the operation of this machine, secure a minimum area of 2.6 m [W] x 2.0 m [D]. The dimensions of the base periphery are established in consideration of ventilation, maintenance and customer passage. And if they fall and hit their head, there could be a very serious injury. Be sure to always secure enough space as prescribed in this manual.
- Be sure to provide sufficient space specified in this manual. Do not allow objects to block the ventilation ports. It can cause generation of heat and a fire.
- SEGA shall not be held responsible for damage or compensation for damage to a third party, resulting from the failure to observe this instruction.

STOP IMPORTANT

In order to transport the machine into a building, the minimum necessary dimensions of the opening (of doors, etc,) are 1.2m, (W) and 1.8m, (H).



2 fig01

3 PRECAUTIONS REGARDING PRODUCT OPERATION

To avoid injury and trouble, be sure to pay attention to the behavior of visitors and players

WARNING

In order to avoid accidents, check the following before starting the operation:

To ensure maximum safety for the players and the customers, ensure that where the product is operated has sufficient lighting to allow any warnings to be read.

Operation under insufficient lighting can cause bodily contact with each other, hitting accident, and/or trouble between customers.

Be sure to perform appropriate adjustment of the monitor (projector). For operation of this machine, do not leave monitor's flickering or deviation as is. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.

It is suggested to ensure a space allowing the players who feel sick while playing the game to take a rest.

Check if all of the adjusters are in contact with the surface. If they are not, the cabinet can move and cause an accident.

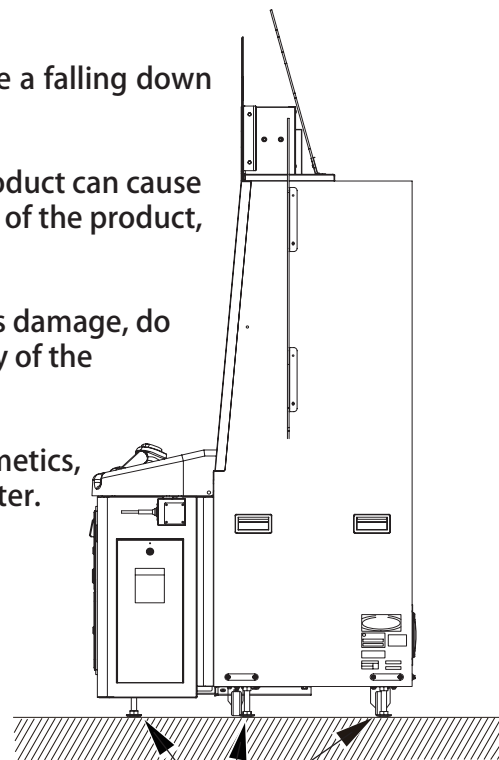
Do not put any heavy items on this product.

Placing any heavy item on the product can cause a falling down accident or parts damage

Do not climb on the product. Climbing on the product can cause a falling down accident. To check the top portion of the product, use a step ladder.

To avoid electric shock, short circuit and / or parts damage, do not put the following items on or in the periphery of the product.

Flower vases, flower pots, cups, water tanks, cosmetics, receptacles or vessels containing chemicals or water.



Ensure that all the adjusters are in contact with the floor

CAUTION

- Immediately stop such violent acts as hitting and kicking the product. Such violent acts can cause parts damage or cause the cabinet to fall over, resulting in injury.
- Instruct players to hold the controller securely while playing. If the controller is dropped, it could cause injury to the player.
- Items such as large finger rings can cause injury to the fingers while playing. Instruct the player(s) to remove all accessories that could cause and injury prior playing.

CAUTION

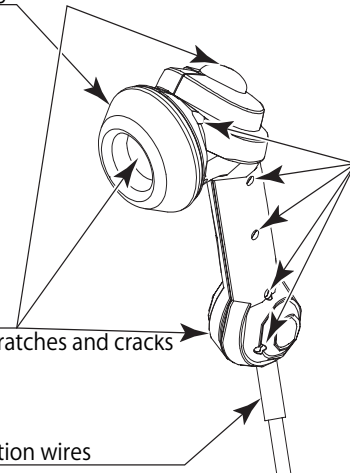
- To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause contact, collisions and or trouble between customers.
- Every day when cleaning the controllers, inspect them and make sure that there are no scratches or cracks in the surface, and that the fasteners are not loose, this can cause injury to the player or to people nearby.

Ensure that the protective sponge is not damaged

Ensure that the case is free from scratches and cracks

Ensure that the connection wires are not damaged

Ensure that the screws are not loose and are all present



STOP IMPORTANT

Players hold the controller with their bare hands so it is recommended that wet towels (paper towels) be provided.

Placing the PTV near strong halogen lamps or other similar types of lighting may cause malfunction. Make sure to install the PTV at a reasonable distance from such lighting.

PAYING ATTENTION TO CUSTOMERS DURING OPERATION

To avoid injury and trouble, be sure to pay attention to the behavior of visitors and players.

WARNING

- For safety reasons, do not allow any of the following people to play the game.
 - Those who need assistance when walking.
 - Those who have high blood pressure or heart problems.
 - Those who have a neck or spinal cord problem.
 - Those who have experienced muscle convulsion or loss of consciousness while playing video games, etc.
 - Those who are intoxicated or under the influence of drugs.
 - Pregnant women.
 - Those who are not in good health.
 - Those who do not follow the attendants instructions.
 - Those who cannot grasp the controller unit securely because of immobility in fingers, hands or arms.
 - Persons who disregard the products warning labels.
- Even players who have never been adversely affected by light stimulus might experience dizziness or headaches depending on their physical condition when playing the game. Small children are especially likely to experience these symptoms. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during play to seek medical advice or examination.
- To avoid injury from falling objects or electric shock hazard from spilt drinks, instruct the player not to place drinks or heavy items on the product.
- To avoid electric shock hazard and short circuit hazard, do not allow customers to put hand or fingers or any other extraneous matter in to the openings of the product or small openings on or around the doors.
- To avoid falls resulting in injury, immediately stop the customer from leaning against or climbing on the product.
- To avoid electric shock and/or short circuit hazard, do not allow customers to unplug the power plug without a justifiable reason.

4 PART DESCRIPTIONS

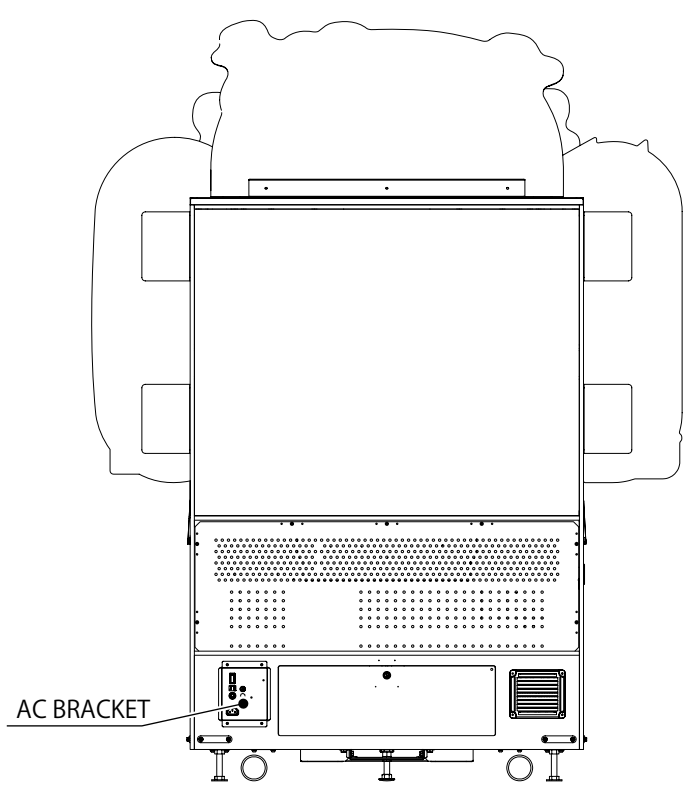
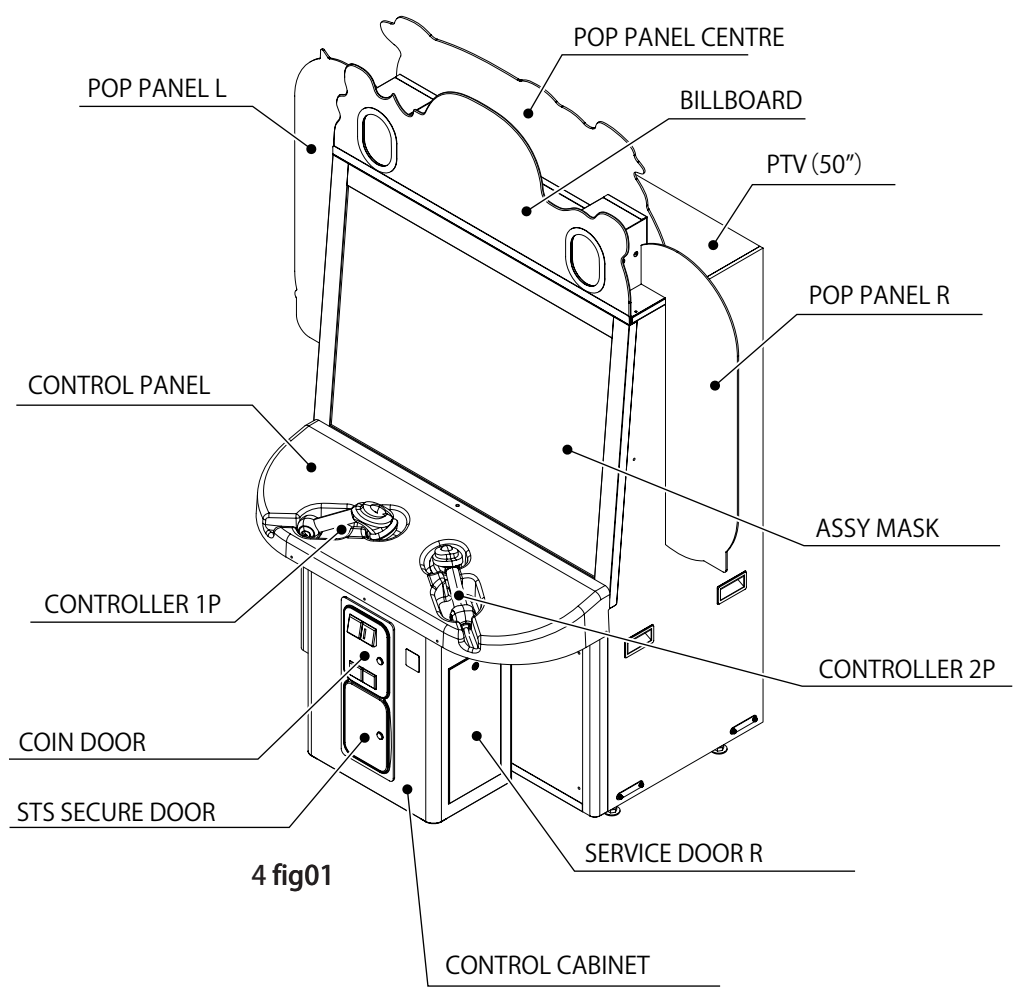


TABLE 4 DIMENSIONS and WEIGHTS for MAJOR PARS

ITEMS	Width X Depth X Height	Weight
PTV	1,157mm (W) × 615mm (D) × 1,677mm (H)	141kg
CONTROLLER CABINET	1,144mm (W) × 374mm (D) × 763mm (H)	44kg
BILLBOARD	1,140mm (W) × 280mm (D) × 314mm (H)	19kg
OVERALL	1,693mm (W) × 983mm (D) × 2,205mm (H)	220kg

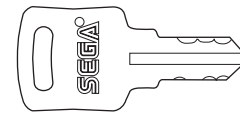
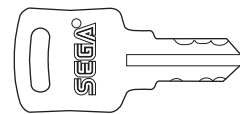
5 ACCESSORIES

Confirm that the accessories list in the table below are present when setting up the product. Accessories marked "Spare" in the note column are consumable items but included as spares.

TABLE 5a ACCESSORIES

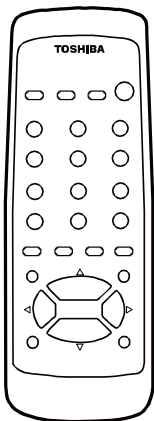
DESCRIPTION	OWNERS MANUAL
PT NUMBER (QTY)	420-6992UK (1)
NOTE:	This manual
Figures:	
Parts not labeled with part numbers are as yet unregistered or cannot be registered. Be sure to handle all parts with care, as some parts are not available for purchase as seperate items.	

Keys are supplied.
All service keys are marked as J9117.
Key to Cash Box are to differ and are not the same tommachine to machine.

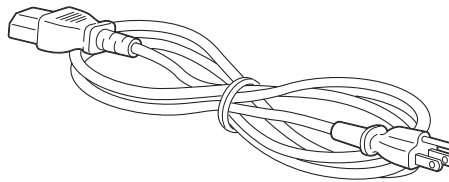


NAOMI サービスマニュアル
420-6455 (1)

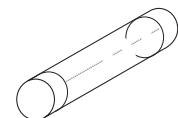
PTV REMOTE
200-6023 (1)



MAINS LEADS
LM1227 (1xUK)
LM1246 (1xEURO)



FUSE 1A T 5x20mm
514-5138-1000 (1)



6 ASSEMBLY & INSTALLTION

WARNING

- This work should be carried out by site maintenance personnel or other qualified professionals. Work performed by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation.
- Perform assembly work by following the procedure herein stated. Failure to comply with the instructions can cause electric shock.
- Perform assembling as per this manual. Since this is a complex machine, incorrect assembling can cause an electric shock, machine damage and/or improper functioning as per specified performance.
- When assembling, more than one person is required. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
- Ensure that connectors are properly connected. Improper connections can cause electric shock.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.
- Do not carelessly push on the monitor. This could cause it to fall over.
- Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
- To perform work safely and avoid serious accident such as the cabinet falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.
- Do not use connectors other than those connected to and used by the game board at the time of shipment. Do not connect wires to unused connectors. This could cause the generation of heat or smoke, or a burnout.

IMPORTANT

- Wear appropriate work clothing so that work can be performed safely. Use gloves and safety shoes to prevent accidents or injuries.
- When installing a wire protection cover over a floor, use a material shaped so that no one passing by will stumble over it. Using a material that could be stumbled over might lead to an accidental fall.
- Be careful in handling plastic parts. Be sure not to tighten screws or nuts too tightly. If such parts are exposed to excessive loads or impact, they might become damaged, resulting in fragments or cracks that could cause accidental injury.

IMPORTANT

Be very careful when handling the mask plate on the projector screen. The screen can be damaged easily and cannot be repaired once damaged.

Installation and assembly of this product should take place in the following sequence.

6-1 Installation of Billboard

6-2 Fitting the CENTRE POP PANEL

6-3 Fixation to installation check

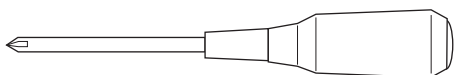
6-4 Fiting the SIDE POP PANELS

6-5 Connection of Power and Ground

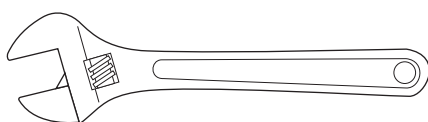
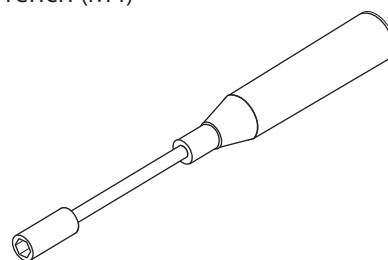
6-6 Assembly Check

Use the following tools for assembly work:

- Phillips N01 Screwdriver for M4 fixings

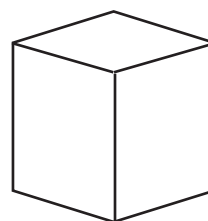


- Nut Wrench (M4)

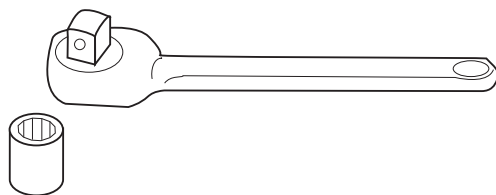


- An adjustable wrench

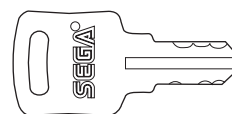
- A solid box to stand on or ladders



- Ratchet for M6, M8 fixings



- Sega MASTER KEY (J9117)

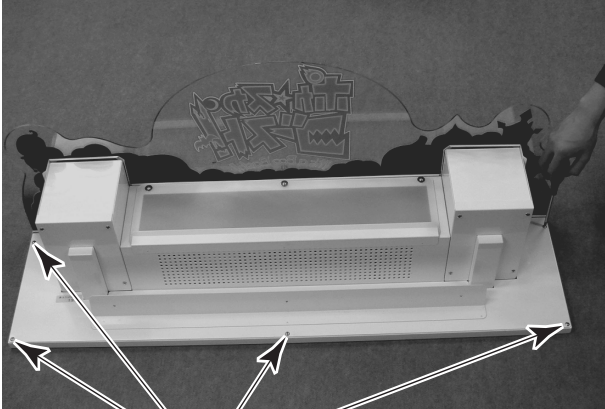


6 fig01

6-1 INSTALLATION OF BILLBOARD

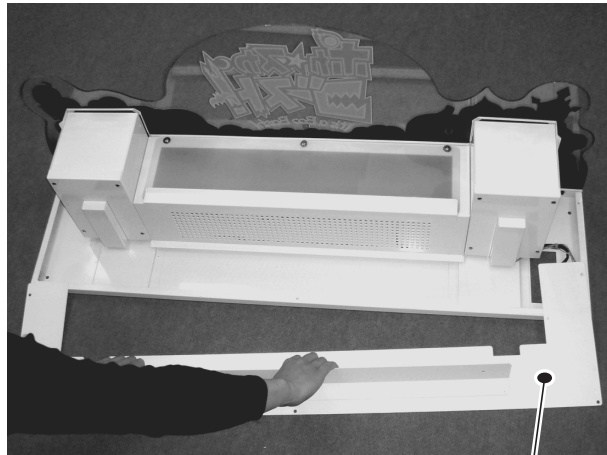
This item may be heavy. Please use additional help to lift the item.

- 1 Remove CENTRE POP HOLD BKT (TFW-0007UK) by unscrewing the 5x M4X12 MSCR TH CRM



6-1 fig01

5x M4X12 trusshead chrome



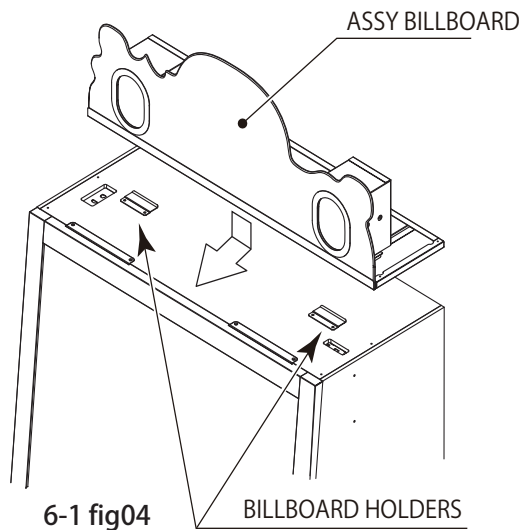
6-1 fig02

TFW-0007UK - Centre Pop Bkt

- 2 Lift and slide the ASSY BILLBOARD up onto the PTV, making sure that the ASSY BILLBOARD locks onto the 2x BILLBOARD HOLDERS as shown.



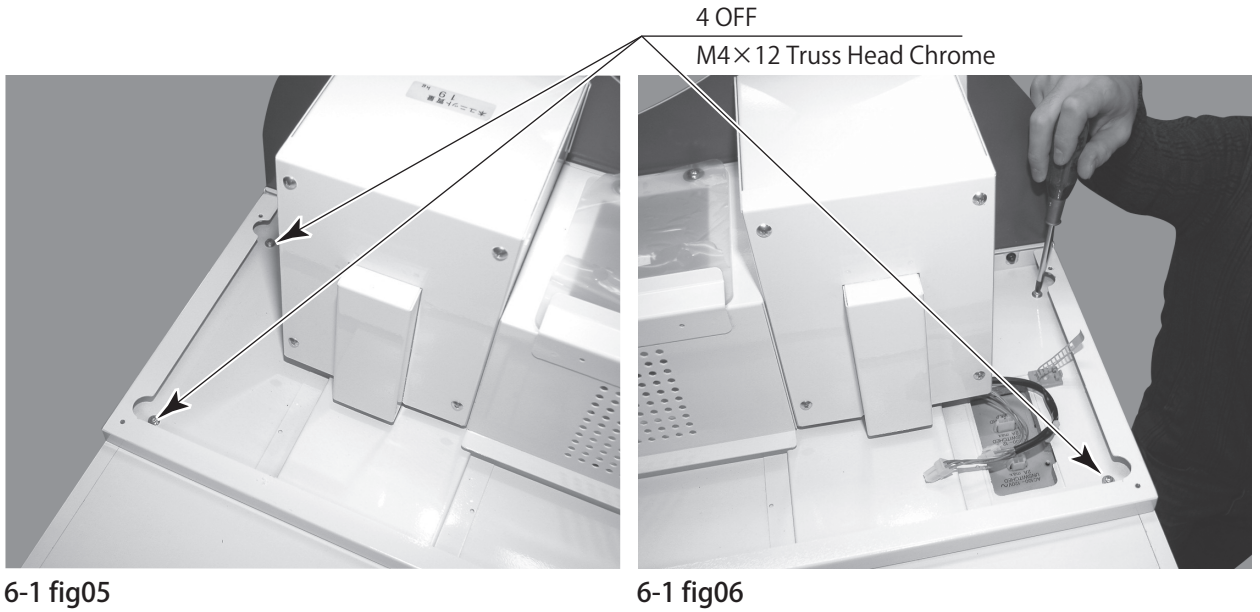
6-1 fig03



6-1 fig04

BILLBOARD HOLDERS

3 Secure the ASSY BILLBOARD to the top of the PTV using 4x M4X12 TH CHROME in place shown.



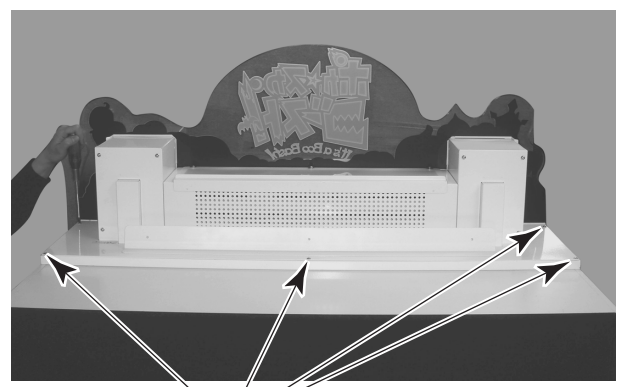
4 Connect the ASSY BILLBOARD (Power, Audio & EARTH) into the top of the ASSY PTV where shown. (3x Connectors)

Connectors



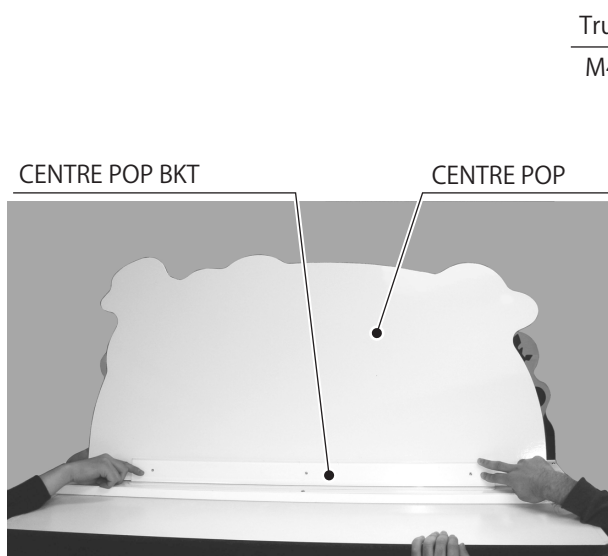
5 Refit the CENTRE POP BKT to the ASSY BILLBOARD using 5x M4X12 TH CHROME fixings

CENTRE POP BKT

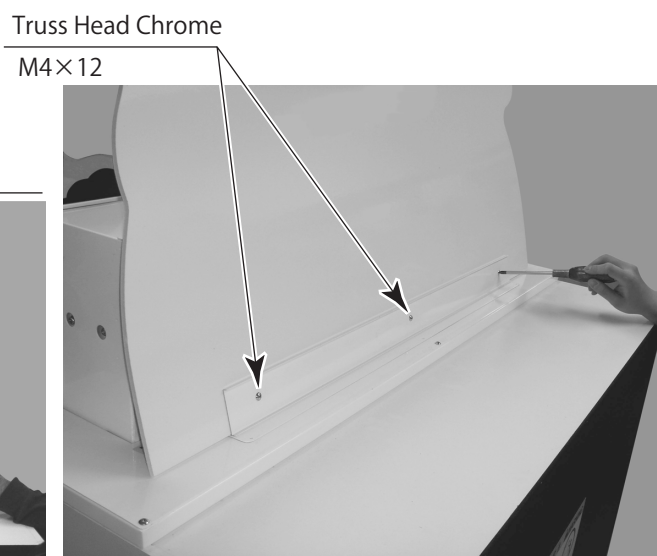


6-2 FITING THE CENTRE POP PANEL

Fit the CENTRE POP (PSG-0002UK) to the CENTRE POP BKT using M4X12 Th CHROME fixings



6-2 fig01



6-2 fig02

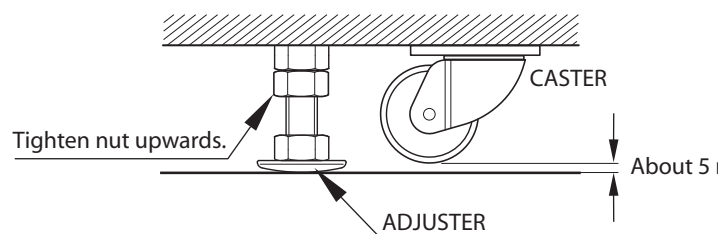
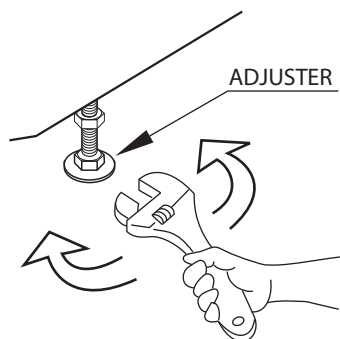
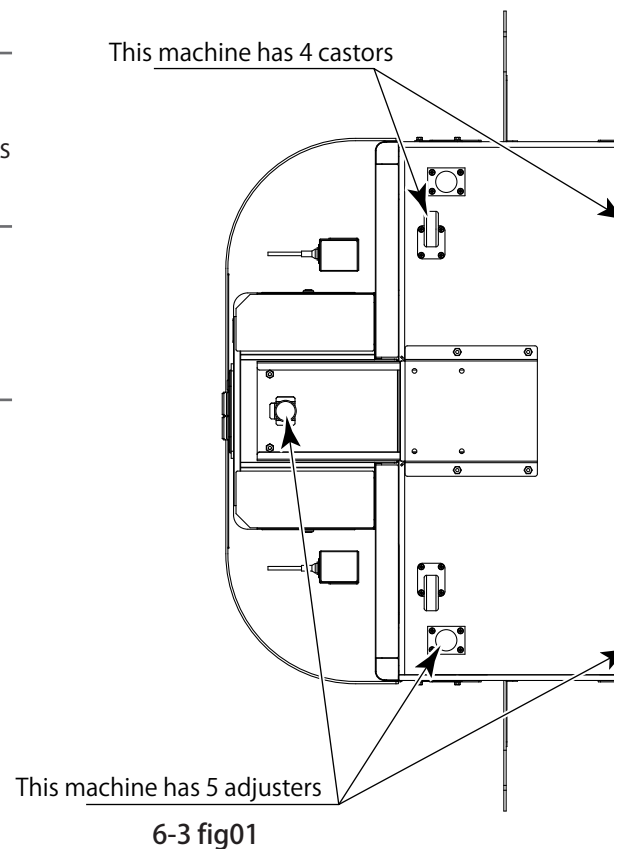
6-3 FIXATION TO INSTALLATION SITE

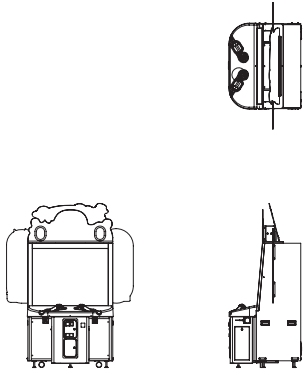
⚠ WARNING

Make sure that all the adjusters contact the floor. Otherwise the cabinet could move, causing an accident.

This product has eight casters (four on front cabinet, four on rear cabinet) and six adjusters (four on front cabinet and two on rear cabinet). After determining the installation location, have the adjusters contact the floor directly, and adjust them so the machine will remain in a level position keeping a space of about 5 mm between the floor and the casters.

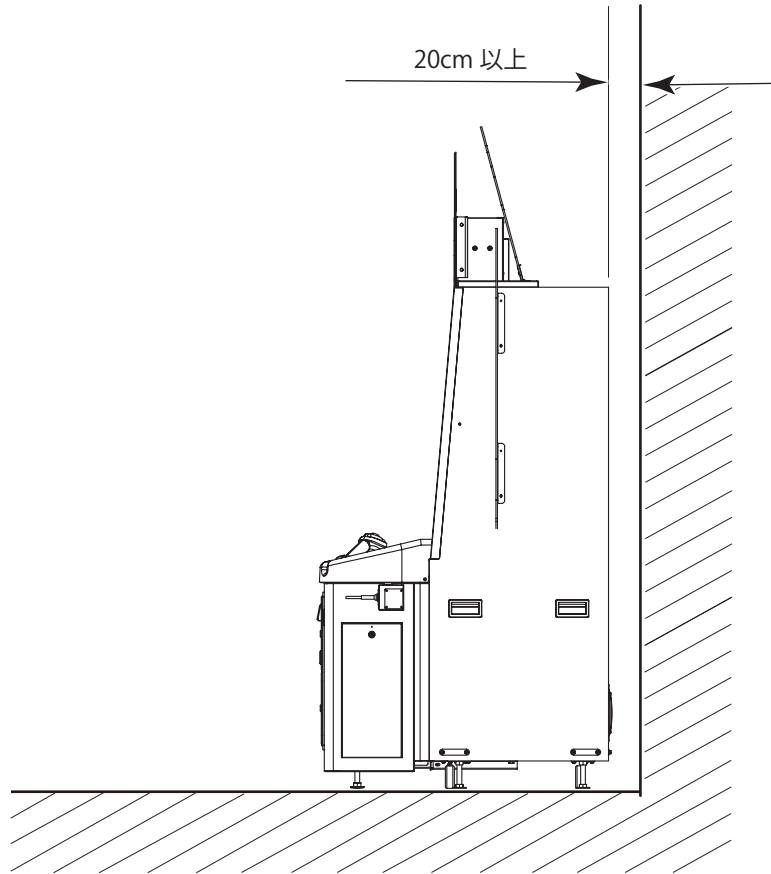
- 1** Move the product to the installation site. Move the cabinet with two or more people, as injury may occur.
- 2** Place all cabinet adjusters in contact with the floor. Use a wrench to set adjuster heights so that the unit will remain level.
- 3** After setting, turn adjuster nuts upwards to tighten them and secure adjuster heights.





6-3 fig03

Views are at 1/100 scale.
Please use them as a
reference in installation and
site layout

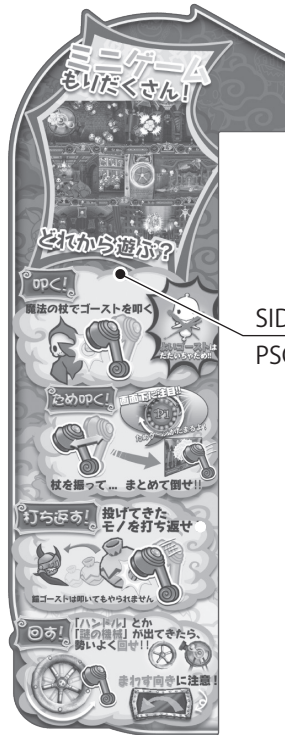


6-3 fig04

Provide ventilation space for the vent opening.

6-4 Fitting the SIDE POP PANELS

Contents



SIDE POP L
PSG-0002UK

6-4 fig01

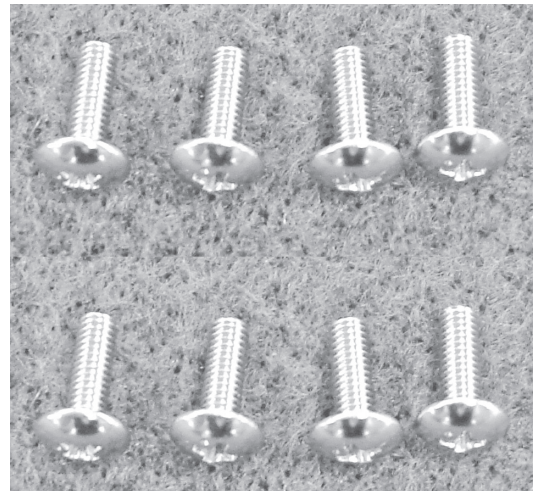


SIDE POP R
PSG-0003UK

6-4 fig02

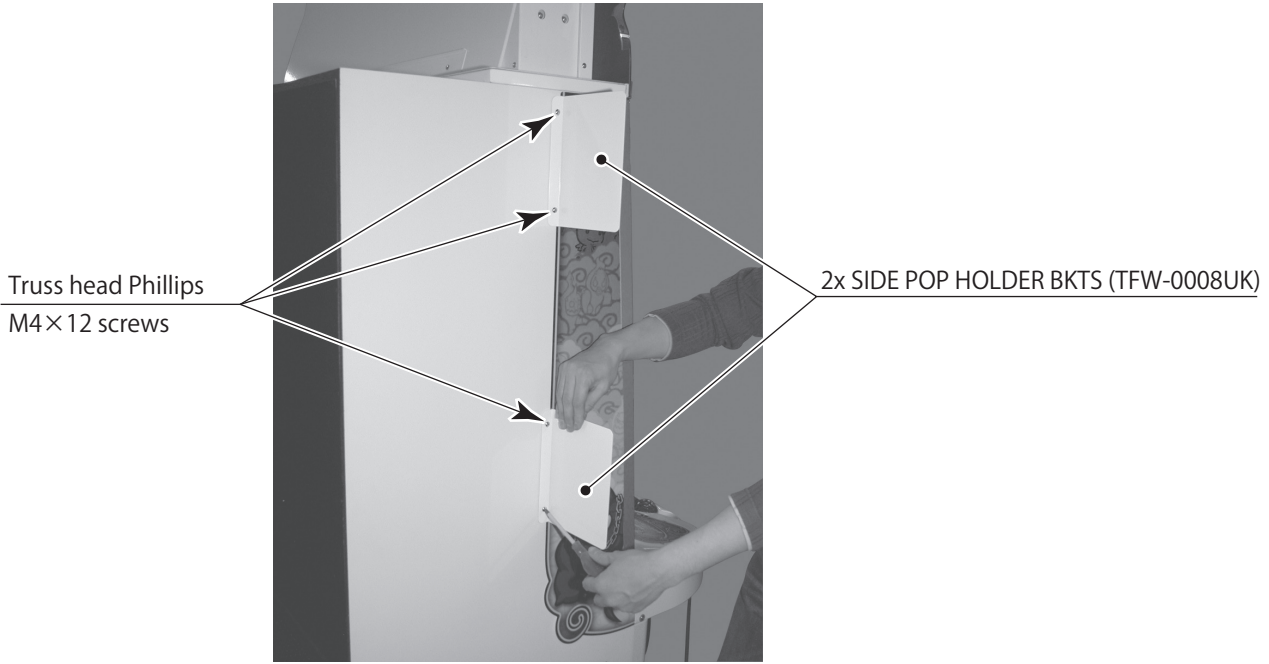


6-4 fig03
SIDE POP BKT HOLDER (4)



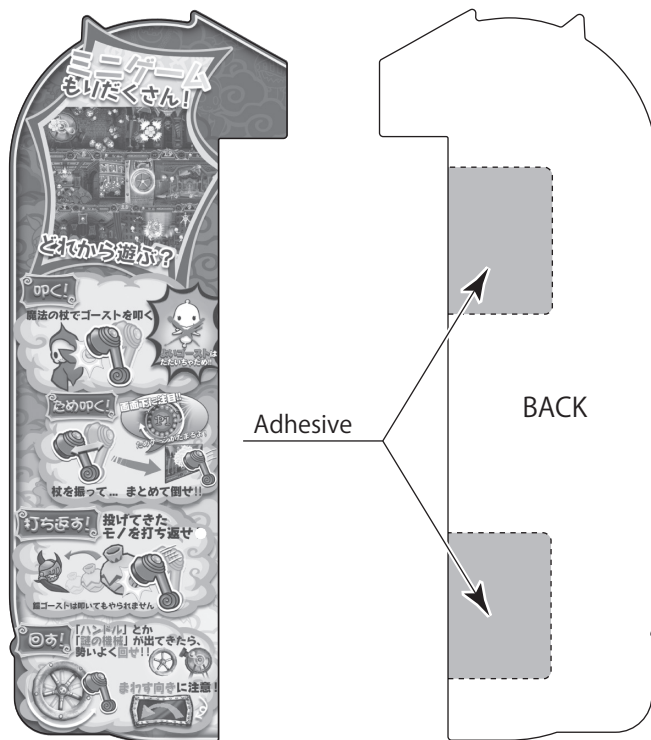
6-4 fig04
SCREWS TH CHROME M4 × 12 (8)

1 Fix 2 of the SIDE POP HOLDER BKTS to each side of the PTV as shown, securing using 2x M4x12 Truss Head Phillips Screws per bracket. Do not tighten fixings at this stage.

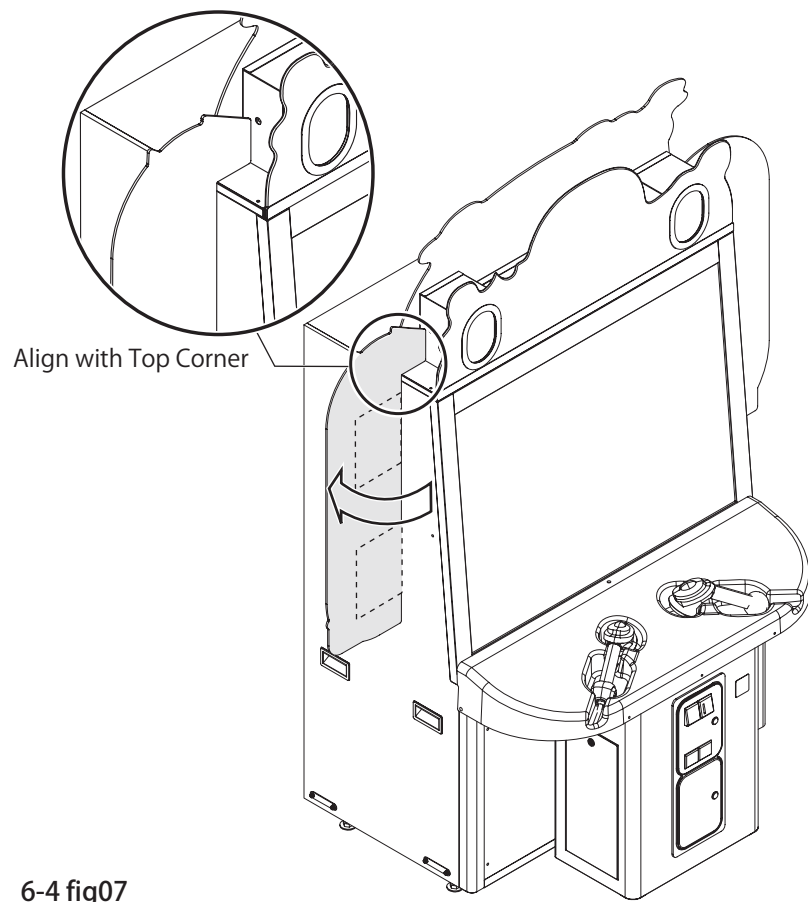


6-4 fig05

2 Remove the protective covering from the adhesive pads on the SIDE POP PANEL.

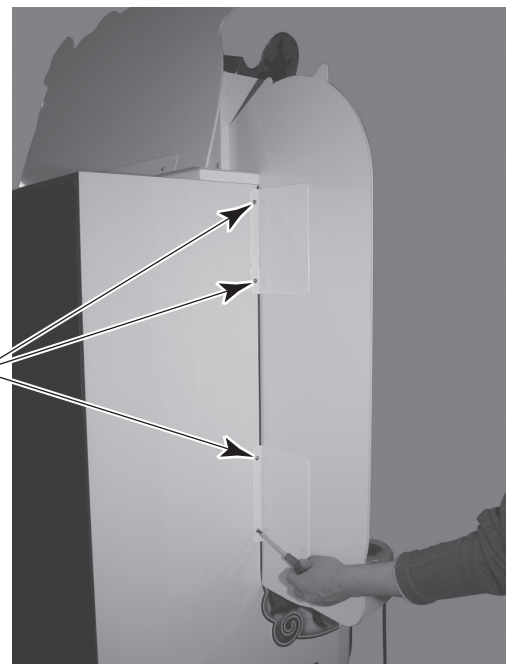


6-4 fig06



3 Once aligned, secure the 4x M4x12 Truss Head Screws.

4x Truss head screws
M4x12



4 Repeat stages 1-4 to secure the RHS POP PANEL.

6-5 CONNECTION OF POWER AND GROUND

⚠ WARNING

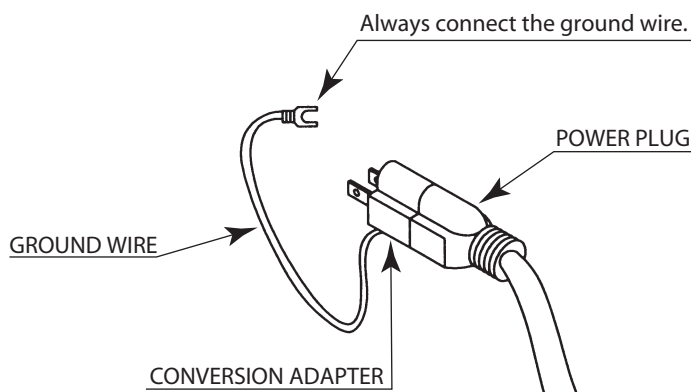
- Use the power supply equipped with an earth leakage breaker. Use of power supply without such a breaker could result in fire if there is a current leakage.
- This product **MUST** be EARTHED. Using this product without a suitable earth will cause electric shock and possibly cause a fire hazard.
- Do not expose the power cords. If these are exposed, customers could stumble over them, for instance, and easily damage them. Additionally, if these lines are damaged, there could be a risk of electrical shock or short circuit. Set these lines at locations where they will not interfere with customer traffic, or attach covers to them.
- After laying out the power cord on the floor, be sure to always protect it. If the power cord is left exposed, it can easily be damaged, resulting in electrical shock.
- This product comes complete with POWER CORDS for the UK and EUROPEAN destinations. Be sure to use the power cords supplied. If a power cord is to be replaced, be sure to replace it with the same specification as the one provided.

STOP IMPORTANT

If grounding has been established with the ground wire inside the power cord, do not perform grounding with the AC unit ground terminal. Conversely, if the AC unit ground terminal has been used for grounding, do not establish ground with the ground wire in the power cord. Otherwise there could be faulty or erroneous operations.

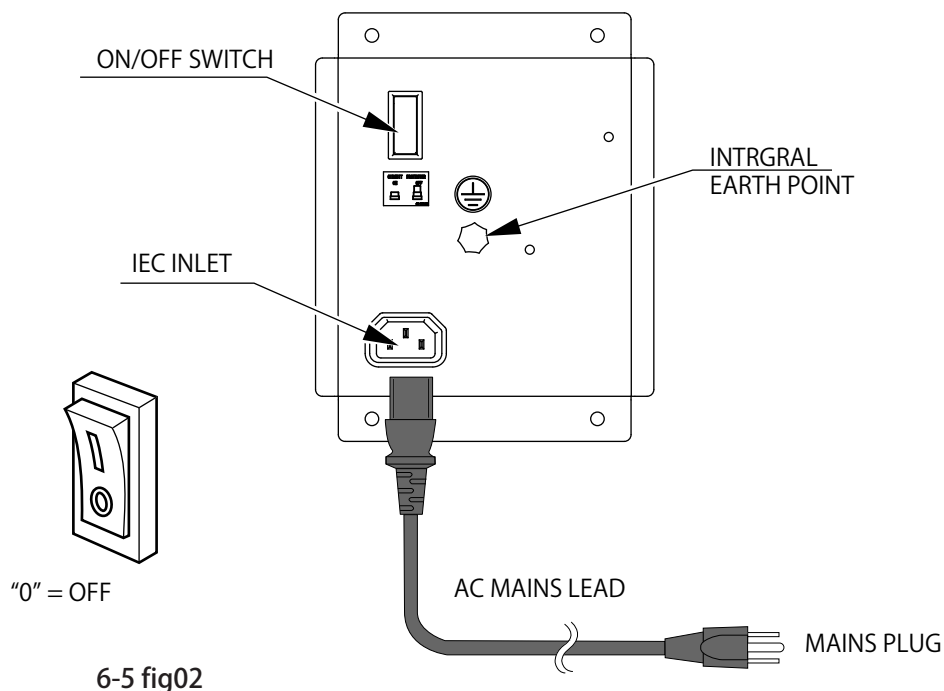
The accessory power cord has a ground wire inside it. Connect the power cord to the AC unit then insert the power cord plug into a "power outlet with ground terminal." If there is no "power outlet with ground terminal," be sure to establish ground by some other means; for example, by connecting the AC unit ground terminal to a ground wire with a ground mechanism prepared separately.

If you use a conversion adapter sold on the market to supply power, connect the ground wire terminal of the adapter to a "securely grounded ground terminal." <For Taiwan>



6-5 fig01

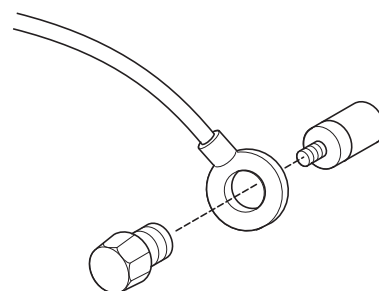
1 Confirm that the MAINS SWITCH is set to OFF.



6-5 fig02

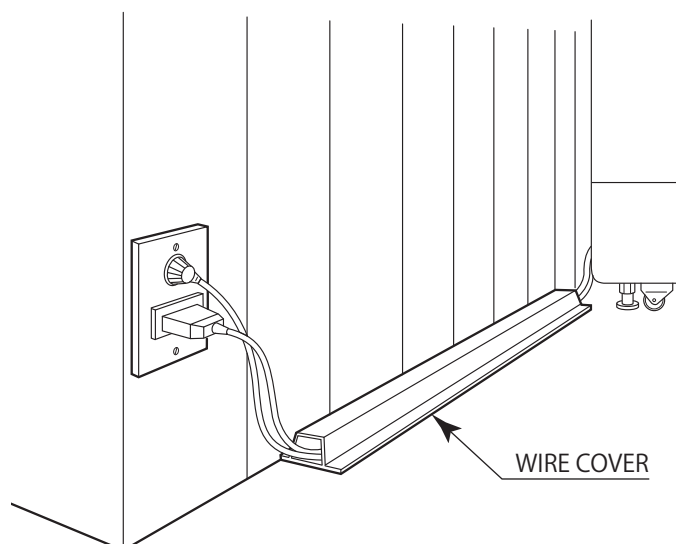
2 Fully insert the AC MAINS LEAD connector on the side opposite the power plug into the AC unit inlet. Then fully insert the AC MAINS LEAD PLUG into the power outlet.

3 When using a ground wire made available separately, connect one end of the wire to the AC unit ground terminal and the opposite end to an indoor ground terminal. The AC unit ground terminal is a bolt-and-nut combination. Remove the nut and pass the bolt through the ground terminal, then secure the nut to the bolt. <For Taiwan>



6-5 fig03

4 The power cord is laid out indoors. protect the power cord by attaching wire cover to it. If ground will be established with a ground wire made available separately, lay out the ground wire indoors and have it protected. <For Taiwan>



6-5 fig04

6-6 ASSEMBLY CHECK

Using Test Mode, verify points such as the proper assembly of the machine. Also verify normal operation of the NAOMI, boards which have been connected, and the product' s various input and output devices. In Test Mode, conduct the tests described below.

6-6-1 RAM TEST & ROM TEST

Enter the TEST MODE and choose RAM TEST and perform. ALL IC' should PASS as GOOD.

```
RAM TEST

IC29 GOOD
IC35 GOOD
IC09 GOOD IC10 GOOD
IC11 GOOD IC12 GOOD
IC16 GOOD IC18 GOOD
IC20 GOOD IC22 GOOD
IC17 GOOD IC19 GOOD
IC21 GOOD IC23 GOOD

PRESS TEST BUTTON TO EXIT
```

6-6-1 fig01

```
ROM TEST

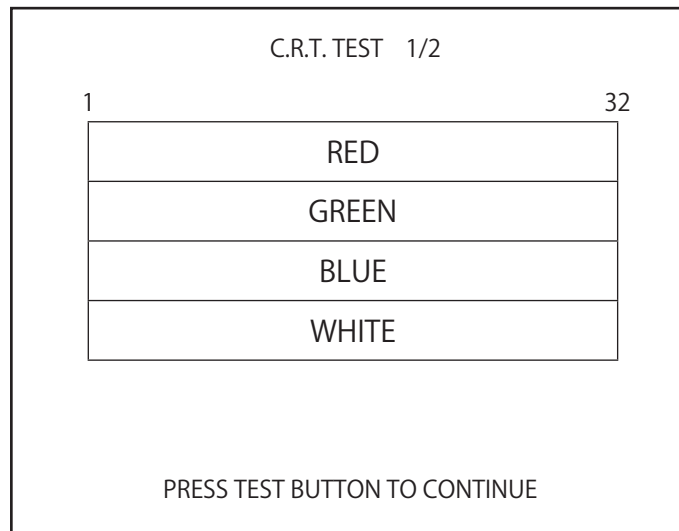
[*****]
TYPE 512M BIT * 5 CHIPS
AREA IC RESULT BYTE WORD
~ 64M IC8 GOOD **** **
~ 128M IC9 GOOD **** **
~ 192M IC10 GOOD **** **
~ 256M IC11 GOOD **** **
~ 320M IC12 GOOD **** **

PRESS TEST BUTTON TO EXIT
```

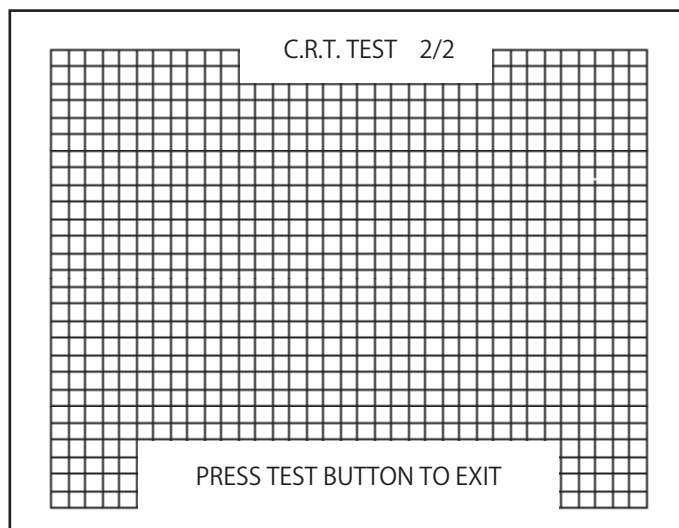
6-6-1 fig02

6-6-2 C.R.T. TEST

When MONITOR TEST is chosen from System Test Menu Screen, a screen to test the PTV will be displayed. Though the PTV is pre-adjusted at the time of shipment from the factory, view the test screen to determine whether or not adjustment is necessary. If so, refer to Chapter 11 and adjust the PTV.



6-6-2 fig01



6-6-2 fig02

6-6-3 MAGIC WAND (CONTROLLER) POSITION DETECTION ADJUSTMENT

STOP IMPORTANT

When setting up or moving the machine, be sure to adjust position detection of the magic wands. The game cannot be played properly if the position cannot be correctly detected.

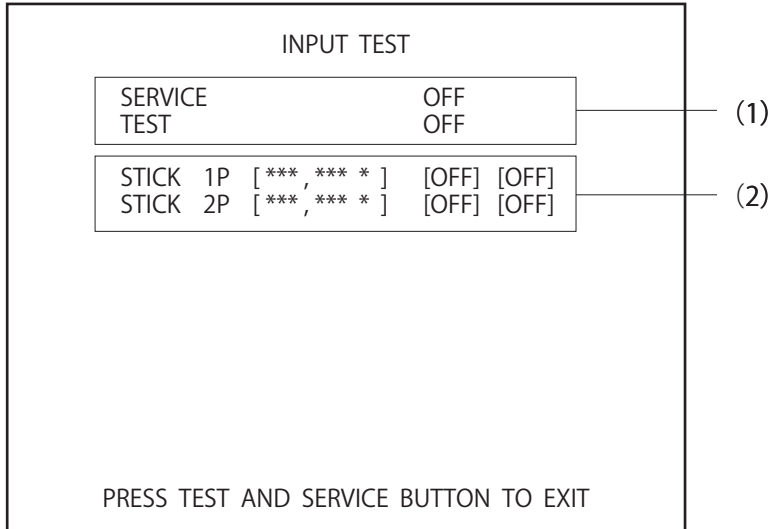
Conduct DEVICE ADJUSTMENT in SENSOR UNIT SETTING in GAME TEST MODE to adjust the magic wands. (See Chapter 9 "GAME TEST MODE.")

An optical sensor is used for detecting the position of the magic wands. Position detection may therefore be affected by changes in the surroundings such as lighting and peripheral equipment. (See Chapter 9 "INPUT TEST.")

6-6-4 INPUT TEST

When INPUT TEST is chosen from Game Test Menu Screen, a screen to test the game' s switches will be displayed.

Flip each switch. If the display that appears to the right of the switch changes to "ON" , the switch and its wiring are normal.

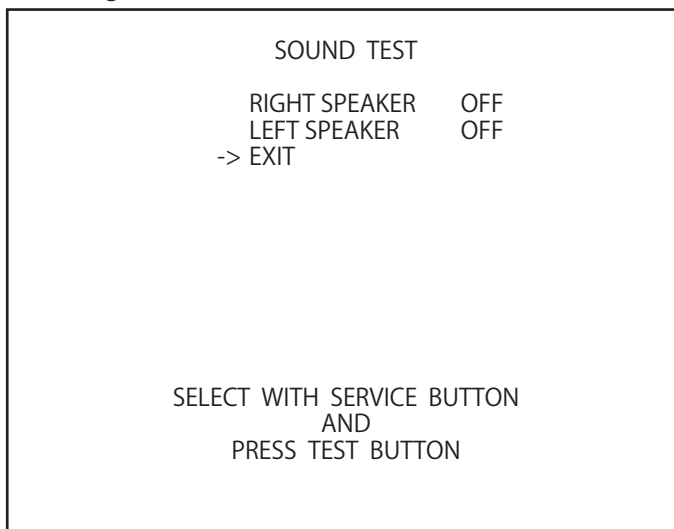


6-6-4 fig01

- (1) TEST & SERVICE SW OPERATION
- (2) CONTROLLER OPERATION

6-6-5 SOUND TEST

When SPEAKER TEST is chosen from System Test Menu Screen, a screen to test each of the speakers will be displayed. The RIGHT SPEAKER and the LEFT SPEAKER are the only speakers which can be checked by just changing their respective settings to ON and OFF. The WOOFER SPEAKER will only output sound when sound from the RIGHT/LEFT SPEAKER is outputted at the same time. No sound will be outputted by only changing its own setting to ON.



6-6-5 fig01

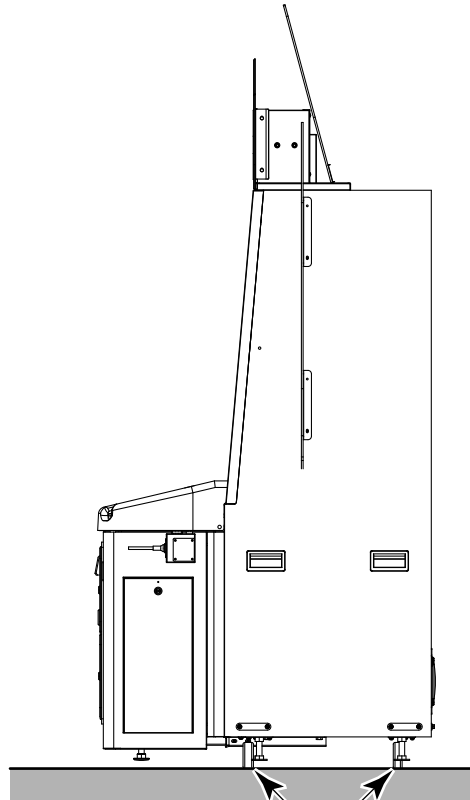
7 PRECAUTIONS WHEN MOVING THE MACHINE

WARNING

- Always disconnect the power cable before moving the product. If it is moved with the power cable connected, the cable could be damaged, causing fire or electric shock.
- To move the unit over the floor, pull in the adjustors and have the casters contact the floor. While moving the unit, be careful that the casters do not roll over the power cord or the ground wire. If cord or wire is damaged, there could be electrical shocks and/or short circuits.
- When crossing a sloped or stepped area, disconnect the PTV from the Main Cabinet. If you tilt them while connected together, the connection points may be damaged and personnel could be injured.
- When lifting the cabinet up steps, you must hold it by the designated handles or by the bottom surface. Lifting it by any other area may lead to damage or disfiguration to that part or surrounding parts due to the weight of the cabinet and could also lead to injury of personnel.
- When tilting the cabinet to move it across a sloped or stepped area, always use at least two people. Attempting such an operation alone can lead to accident or injury.
- When moving the components separately, take care concerning the direction you push the DLP and Controller Cabinet in. These elements may fall over, causing damage or an accident.

STOP IMPORTANT

- When moving the cabinet, do not hold, push or pull the Control Units. This may disfigure or damage them.
- If you need to move components through a narrow or low door and the only way to get the separated components through is to turn them on their side, or if a separation method other than those described in this manual is required, either make a request to the office listed in this document or the place of purchase to perform the operation or contact them regarding how to perform it. Carelessly turning the components onto their side or separating them in ways other than those depicted in this manual may lead to unreparable damage.
- Do not use the Controller Holders to move the cabinet, in doing so may damage or disfigure them.



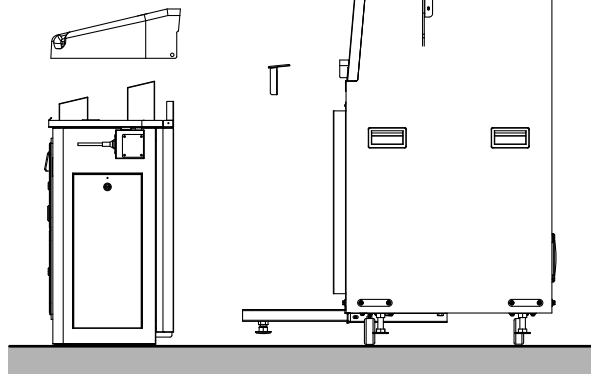
7 fig01

Screw the adjusters fully up into the cabinet before moving.



Do not push the PTV unit from either the front (screen) side or the rear. This may cause the unit to fall over. Always push/pull from the side.

Slit the cabinets before moving



7 fig02

8 GAME DESCRIPTION

The following explanations apply when the product is functioning satisfactory. Should there be any actions different from the following contents, some sort of fault may have occurred. Immediately look into the cause of the fault and eliminate the cause thereof to ensure satisfactory operation.

- STANDBY SCREEN (Attract Mode)

In order to make the product more attractive, a standby screen is displayed on the monitor while the power is on.

The standby screen shows advertisement video, a Game Description, Rankings and Precautionary notes together with Voice and BGM (Background Music).

The sequence is repeated until a credit is initiated. You can also turn the adjust the audio of the standby screen to either ON/OFF or SOFT/NORMAL.



fig 8.1

8-1 GAME OUTLINE

< OUTLINE >

"MANIC PANIC GHOSTS!" is an action game for up to 2 players. Each player uses a special device called a "Magic Wand."

The Player plays a hero who is trapped in a haunted house. The object of the game is to escape from the house while raising various ghosts from the profusion of rooms in the house.

< Game Specifications >

"Manic Panic Ghosts!" offers the following 2 courses.

- A " Single Player Panic!"
- B " Two Player Co-operative!"

8-2 GAME INSTRUCTIONS

8-2-1 Inserting a coin and selecting a course.

1 Insert a Coin

When a coin is inserted, the standby screen stops temporarily and the title logo appears.

If the minimum number of credits required for the game has been inserted, the opening movie screen is displayed.

2 Opening Movie

Touch the SKIP button at the lower right corner of the opening movie screen with the wand to jump directly to the course selection screen.



8-2-1 fig 01

3 Course Selection

On the course selection screen, select either the "Single Player Panic!" course or the "Two player Co-operative!" course.



8-2-1 fig 02

When enough coins for a second player have been inserted, the cloud covering the two player course disappears and the course name can be seen in large letters. The two player course can then be selected.



8-2-1 fig 03

Touch the desired course with the magic wand and then touch "Yes" to start the game



8-2-1 fig 4

CAUTION!

If you start the game with ERROR104 : DEVICE 1P IR-LED ERROR or ERROR105 : DEVICE 2P IR-LED ERROR displayed in the upper left corner of the screen, you will not be able to select the "Two player Co-operative!" course.

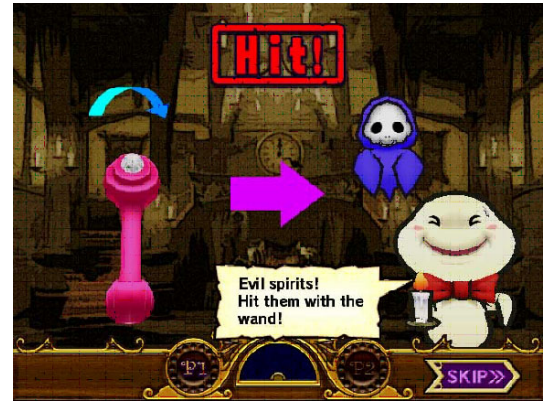
8-2-2 How to Play

A Single Player panic!

The "Single Player Panic!" course is for one player only. Up to 7 game types can be played. The story progresses and the player escapes from the haunted house by defeating the boss and the final boss at the end. Your results and ghost profile are displayed when the game is over.

1 Tutorial

If you select the "Single Player Panic!" course from the course selection screen, a screen appears where you select whether or not you want to see the tutorial for the "Single Player Panic!" course. Select "Yes" to start the tutorial.



8-2-2 fig 01

2 Game Selection

Select the door for the course you want to play by touching it with the magic wand. The game will then advance.



8-2-2 fig 02

3 Game (Game description, game in progress, results and ranking.)

When a game finishes, the game results (number of ghosts defeated) are displayed. Following this, one ranking type will also be displayed.

(Ex: Number of ghosts hit, accuracy, etc.)



8-2-2 fig 03

4 Total Score and Ghost Profile

The ghost profile (the player's personality type) is displayed after the closing credits or when the game is over.



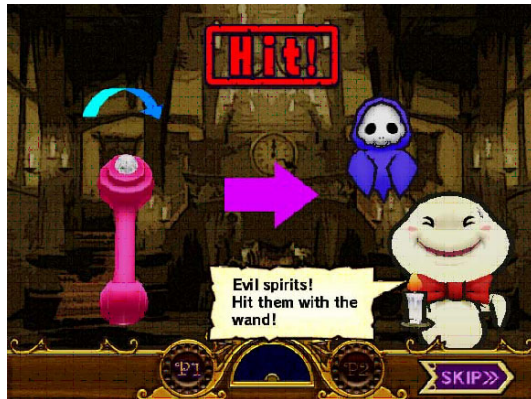
8-2-2 fig 04

B Two Player Co-operative!

The “Two player Co-operative!” course is for two players. In this course, two players play together in a single game and work together to clear it. Up to 6 game types can be played. The story progresses and the players escape from the haunted house by defeating the boss and the final boss at the end. Your results and ghost profiles are displayed when the game is over.

1 Tutorial

If you select the “Two player Co-operative!” course from the course selection screen, a screen appears where you select whether or not you want to see the tutorial for the “Two player Co-operative!” course. Select “Yes” to start the tutorial.



8-2-2 fig 05

2 Game Selection

Select the door for the course you want to play by touching it with either of the magic wands. The game will then advance.



8-2-2 fig 06

3 Game (Game description, game in progress, results and ranking)

When a game finishes, the game results (number of ghosts defeated) are displayed. Following this, one ranking type will also be displayed. (Ex: Number of ghosts hit, accuracy, etc.)



8-2-2 fig 07

4 Total Score and Ghost Profiles

Ghost profiles (both players' personality types and compatibility) are displayed after the closing credits or when the game is over.



8-2-2 fig 08

8-3 GAME SCREEN

- The player can successfully pass each stage by defeating a certain number of ghosts (goal number) within the time limit. When the target number is reached, the player progresses to the next stage.

The player loses if they fail to defeat the goal number of ghosts, and the game is over. (Even if the player fails and continues or succeeds, the game proceeds to the next stage regardless. A stage is not repeated.)

- Your time is reduced if you are attacked by a ghost or if you hit a good ghost
- In a two player game, the two players share life and time.

1) Good Ghost

Hitting or touching the good ghost results in a penalty.

2) Ghosts

Clear the requirement by defeating the goal number of ghosts or more. How to defeat the ghost differs according to the ghost.

3) Score

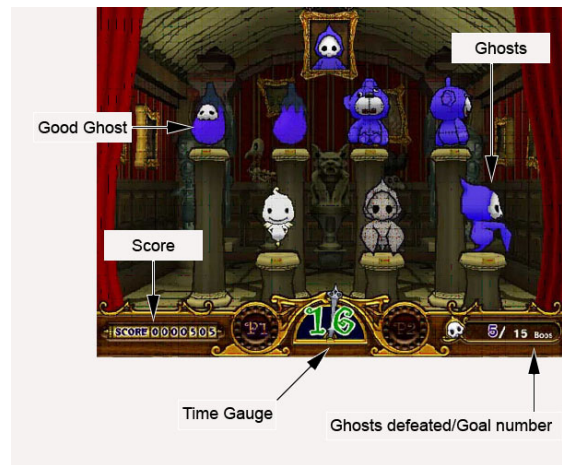
Points are added for defeating ghosts or hitting objects.

4) Time Gauge

Decreases as time elapses.

5) Ghosts defeated/Goal number

Successfully pass a stage by defeating the goal number of ghosts or more within the time limit.



8-3 fig 01



8-3 fig 02

You can adjust the difficulty in the GAME TEST MODE. (See Chapter 9. GAME ASSIGNMENTS.)

NOTE: Games on the game selection screen for which "Difficult" is displayed on the door (appear in the latter half of the game) are more difficult than normal.

<Example>

Games where "Difficult" is displayed on the door when set to "HARD" in GAME TEST MODE are the most difficult.

8-4 EXPLANATION OF GAMES

8-4-1 " Single Player Panic!" Mini Games

Evil Everywhere



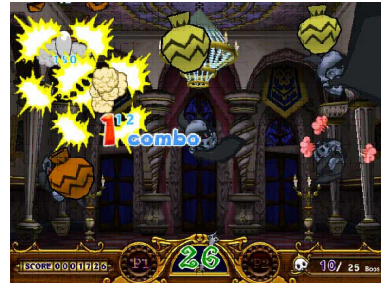
Ghosts will show up from everywhere! Hit them.

Spirit Shindig



Hit the floating ghosts!

Restless Knights



Knock back the things that the ghost throw.

Sonic Boom Racer



Hit the speedy ghosts!

The Curious Clock



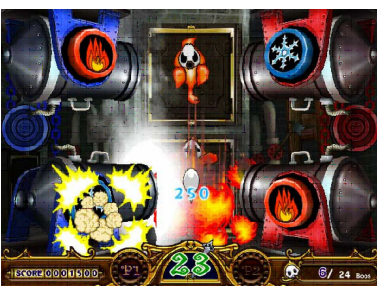
Hit only the bad ghosts in the clocks!.

Frozen Souls



Avoid the white ghosts, and pull the ice-ghosts into the fire!

Shoot for the Stars



Hit the ice-ghosts with the fire cannon and the fire-ghosts with the ice cannon.

Ghost Gathering



Hit the ghosts as they wander about.

The Weird Wall



Hit the wall ghosts that come towards you, and keep hitting!.

A Fantastic Feast



Hit only the food into the ghosts mouth.

Nefarious Numbers



Hit the ghosts in order, starting with 1!

Which one is real?



Find the hiding ghosts and hit them!

Doppelganger



Hit two doors to find the hidden pair.

Boss - Twisted Laboratory



Hit back FRANK N' s attacks to weaken him, then hit him when he hides!

Boss - Out of Blood



Hit back COUNT CLEVER' s attacks then hit him while he hides.

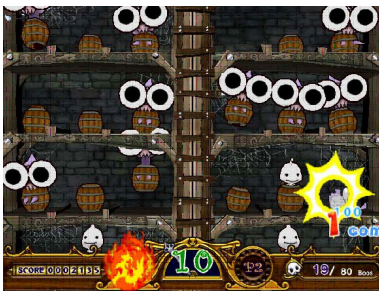
Final Boss - The Last Stand



Hit back Boss-Boo' s attacks, then hit him to defeat him.
NOTE: Appears as a hidden boss only when all ordinary bosses are defeated.

8-4-2 "Two player Co-operative!" Mini Games

The barrels are back



[1P • 2P Simutaneous]
Hit the ghosts as they peek out of the barrels!

Haunted huddle



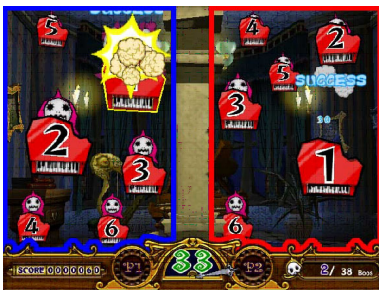
[1P • 2P Simutaneous]
Hit the ghosts as they wander about!

Sinister Spirits



[1P • 2P Simutaneous]
Find the hiding ghosts then hit them!

Dastardly Digits



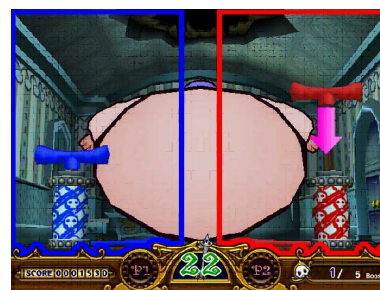
[1P • 2P Simutaneous]
Hit the ghosts in order starting with 1!

Cannon Conflict



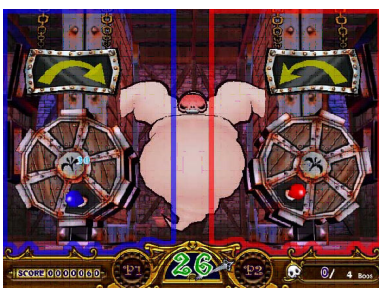
[1P • 2P Simutaneous]
Hit the ice-ghosts with the fire cannon and the fire-ghosts with the ice cannon.

Balloonacy



[1P • 2P Simutaneous] Take turns to lower the lever to inflate the ghosts!

The Looming Wall



[1P • 2P Simutaneous]
Turn the handle to squash the Chunky-Boos!

Fire and Ice



[1P • 2P Simutaneous]
Pull the fire and ice ghosts into the cage.

Do you remember?



[1P • 2P Simutaneous]
Hit the door hiding the right ghost!

Prison Panic



【1P・2P Simultaneous】
Turn the handle to raise the cage and hit the ghosts inside!

Machine of Menace



【1P・2P Simultaneous】
Turn the handle and hit the ghost that fly out!

The Monster Mash



【1P・2P Simultaneous】
Take turns to hit the floating ghosts.

Proving Ground



【1P・2P Simultaneous】
Take turns in knocking back objects!

Speed-Up Syndrome



【1P・2P Simultaneous】
Take turns in hitting the speedy ghosts!

Extra Evil Everywhere



【1P・2P Simultaneous】
Take turns hitting the ghosts as they appear!

Fatal Fantastic Feast



【1P・2P Simultaneous】
Hit only the food into the ghosts mouths!

Boss - Unravelling Mystery



【1P・2P Simultaneous】
One player can hit back attacks, while the other pulls of the wrappings.

Boss - Machine Powered



【1P・2P Simultaneous】
One player can hit back attacks, while the other hit doors with matching numbers.

9 EXPLANATION OF TEST AND DATA DISPLAY

Perform tests and data checks periodically by manipulating the TEST Button and SERVICE Button in the cabinet. Follow the instructions in this chapter to conduct checks when the game machine is first installed, when money is being collected, or when the game machine does not operate properly.

Shown below are the tests and screens to be used for different problems.

This product uses a NAOMI game board. In the system, a different game can be played by changing a ROM board.

For this reason, the product's Test Mode consists of two modes: a system test mode for systems in which coin settings, for instance, are made for products that use of the same system, and a GAME TEST MODE for setting of difficulty level, etc., and for input/output test of operational units used exclusively with this product

The NAOMI Service Manual (hereinafter referred to as "NAOMI Manual") should be used in conjunction with this chapter.

9 TABLE 01 Explanation of Test Mode

ITEMS	DESCRIPTION	REFERENCE
Installation	Game machine installtion 1 . Adjust the Magic Wand. 2 . Investigate input devices with Input Test Screen. 3 . Test IC board with the automatic self test.	Chapter 9 Chapter 9 NAOMI manual
Self Test	Automatic self-test is conducted by selecting MEMORY TEST from the menu screen. The test tests the program RAM, ROM and IC board.	NAOMI manual
Maintenance	Periodic maintenence 1 . Automatic Self Test 2 . Check Settings 3 . Check each control device on Input Test Screen	NAOMI manual Chapter 9 Chapter 9
Controller	1 . Investigate input device on Input Test Screen 2 . Adjust or replace input device 3 . If the problem persists, examine the machanical components of each input device.	NAOMI manual Chapter 9 Chapter 9
Monitor Problems	On the monitor adjustment screen, check to be sure the projector has been adjusted properly.	Chapter 12
IC board problems	1 . Automatic Self Test 2 . Check the sound-related ROM on the sound check screen.	NAOMI manual NAOMI manual
Data Check	Check data and game play times, histograms, etc., and adjust the level of difficulty.	Chapter 9

9-1 SWITCH UNIT AND COIN COUNTER

⚠ WARN

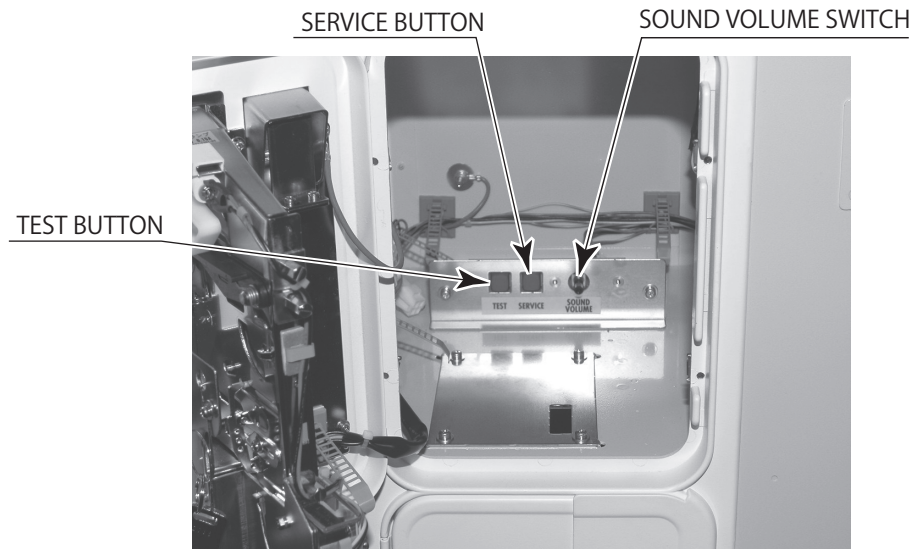
Never touch places other than those specified. Touching places not specified can cause electric shock and short circuit accidents.

STOP

- Adjust the sound to the optimum volume, taking into consideration the environmental requirements of the installation location.
- Removing the Coin Meter circuitry renders the game inoperable.

9-1-1 Switch Unit

Open the coin chute door, and the switch unit shown will appear.
The functioning of each SW is as follows:

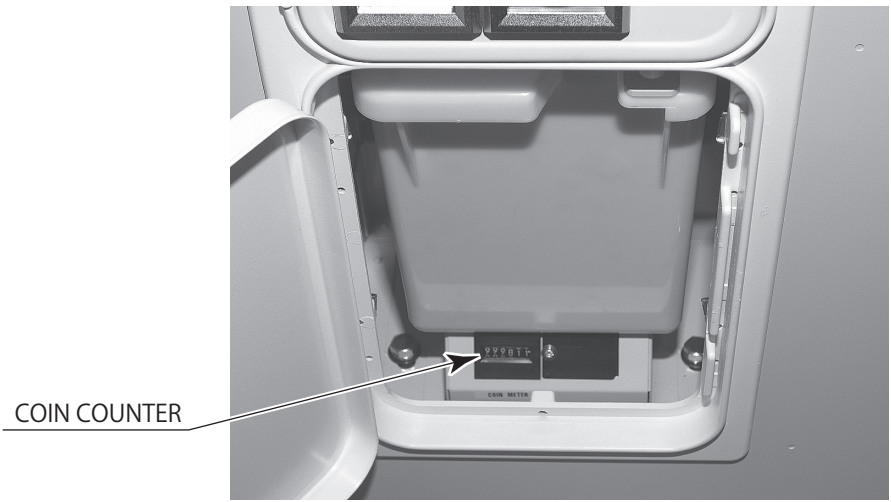


9-1-1fig 01

- TEST BUTTON** : For the handling of the Test Button, refer to the following pages.
- SERVICE BUTTON** : Gives credits without registering on the coin meter.
- SOUND VOLUME SWITCH** : Adjust sound volume for all of the machines' speakers.

9-1-2 COIN COUNTER

After using a special-purpose key to unlock the cashbox door, the coin meter can be found at the bottom of the cashbox



9-1-2 fig 01

9-2 SYSTEM TEST MODE

STOP

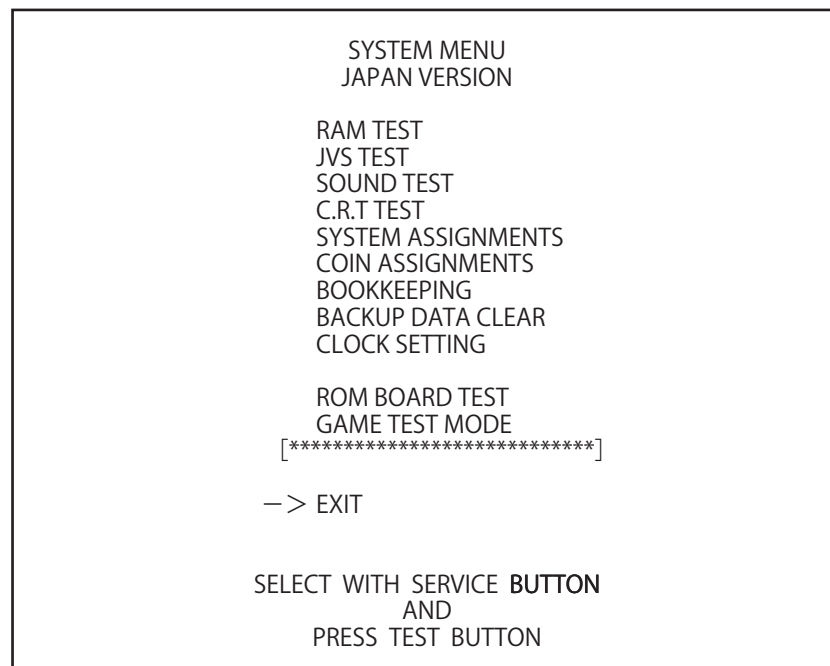
- The details of changes to Test Mode settings are saved when you exit from Test Mode by selecting EXIT from the system test mode menu. Be careful because if the power is turned off before that point, changes to the settings will be lost.
- Executing BACKUP DATA CLEAR in the system test mode does not clear the BOOKKEEPING data in the GAME TEST MODE.
- Entering the Test Mode clears fractional number of coins less than one credit and bonus adder data.
- Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur.

In the system test mode, IC board functioning can be checked, the monitor adjusted, and the coin setting performed.

Refer to NAOMI service manual for the details.

TEST ITEM SELECTION

- 1 When the TEST Button is pressed, the system test mode menu screen (SYSTEM MENU) appears.



9-2 fig 01

- 2 Use the SERVICE Button to move the cursor to the desired test item. Press the TEST Button to confirm selection of the item
- 3 Move the cursor to GAME TEST MODE and press the TEST Button. The GAME TEST MENU appears.
- 4 When all tests are completed, select EXIT and press the TEST Button. The game screen reappears.

Use the following settings with this product.

- **CABINET TYPE** : 2PLAYER(S)
- **MONITOR TYPE** : HORIZONTAL
- **SERVICE TYPE** : COMMON
- **COIN CHUTE TYPE** : COMMON

The SEQUENCE SETTING items of COIN ASSIGNMENTS are as follows.

- SEQUENCE SETTING

- SEQUENCE 1: Number of credits required to start "Single Player Panic!"
- SEQUENCE 2: Number of credits required to start "Two player Co-operative!"
- SEQUENCE 3: Number of credits required to continue in "Single Player Panic!"
- SEQUENCE 4: Number of credits required to continue in "Two player Co-operative!"

CAUTION!

In SEQUENCE SETTING, be sure to set the amount of credits required to start "Two player Co-operative!" to the same number or more than the amount of credits required to start "Single Player Panic!" Failure to do so will result in a COIN ASSIGNMENTS ERROR.

9-3 GAME TEST MODE

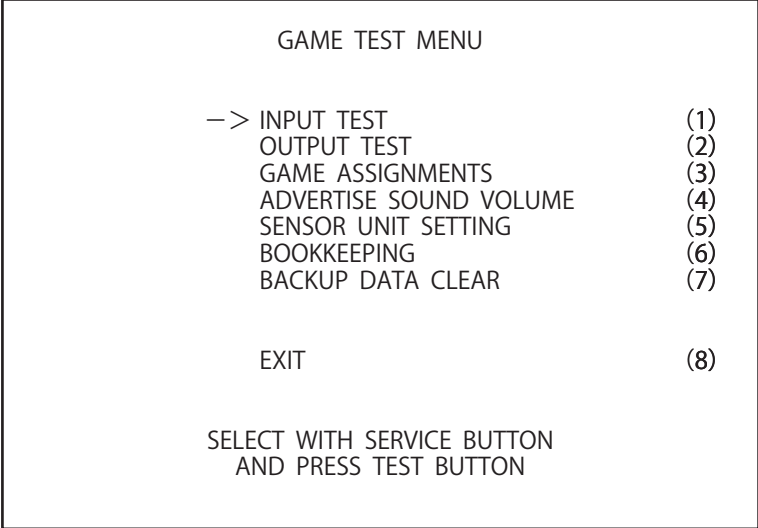


- To change settings in the GAME TEST MODE, simply making changes on the setting screen will not be effective. Complete the Test Mode in normal fashion.
- Do not configure the game in ways not described in this text. It is possible that the game will not function properly.

GAME TEST MENU

Select GAME TEST MODE from the System Test Menu Screen to display the Game Test Menu Screen as follows.

Use the SERVICE Button to move the cursor to the desired test item. Press the TEST Button to enter the selected item.



9-3 fig 01

After the test is complete, move the cursor to EXIT and press the TEST Button to return to the System Test Menu Screen.

- | | |
|-----------------------------|---|
| (1) INPUT TEST: | Input test |
| (2) OUTPUT TEST: | Output test |
| (3) GAME ASSIGNMENTS: | Game settings |
| (4) ADVERTISE SOUND VOLUME: | Standby screen sound volume settings |
| (5) SENSOR UNIT SETTING: | Software version confirmation and magic wand settings |
| (6) BOOKKEEPING: | Operating status record |
| (7) BACKUP DATA CLEAR: | Data reset |
| (8) EXIT: | Back to system test mode |

9-3-1 INPUT TEST

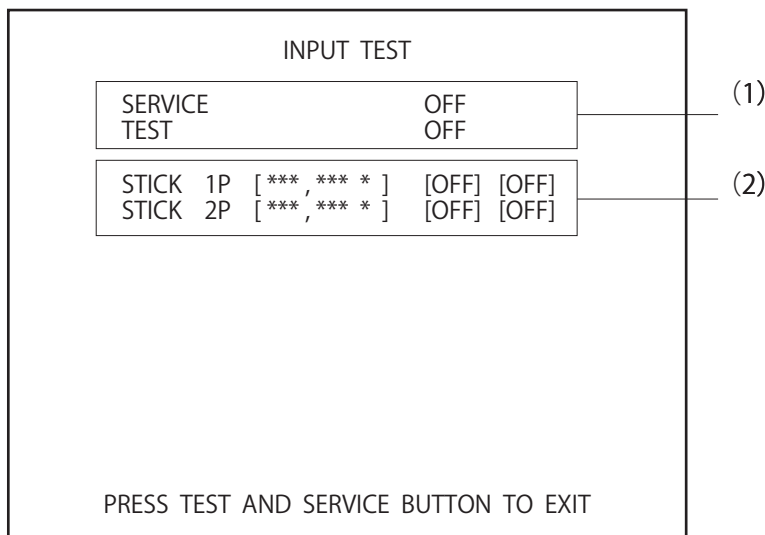


- If the monitor or tip of the magic wand are dirty, the sensitivity of the magic wand may drop considerably. Be sure to remove any dirt from the monitor or tip of the magic wand. (See Chapters 10 and 12)
- If an error is displayed during the input test, look up the error code in Chapter 15, determine the cause of the error, and take the appropriate corrective measures.

When INPUT TEST is selected, the monitor displays the following screen. Switches/buttons can be tested and operation of the magic wand can be checked here.

If coordinates are displayed on the screen immediately when it appears such as shown in the following figure, it indicates that the position detection LED board, sensor board and camera are functioning normally. If "NG" is displayed, it indicates that connection or parts may be faulty.

Using this screen, you should periodically check the condition of the switches/buttons and magic wand.



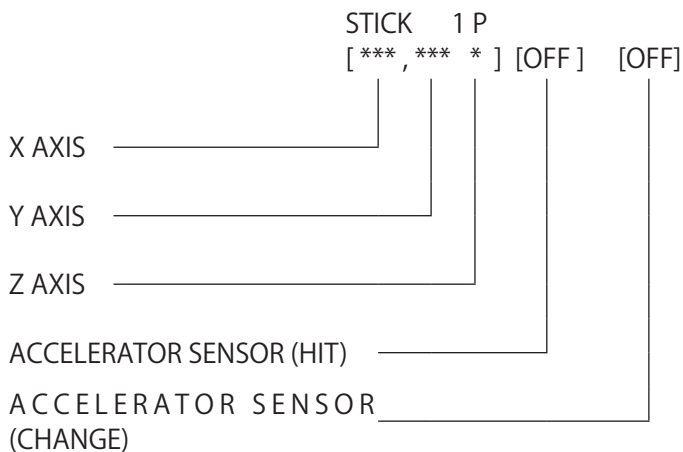
9-3-1 fig 01

(1) Button input test

If the display changes to "ON" when the SERVICE Button or TEST Button is pressed, it indicates the buttons are operating normally.

(2) Magic wand operation test

Touch any spot on the screen with the magic wand and check the coordinates and acceleration sensor.



9-3-1 fig 02

- X axis value

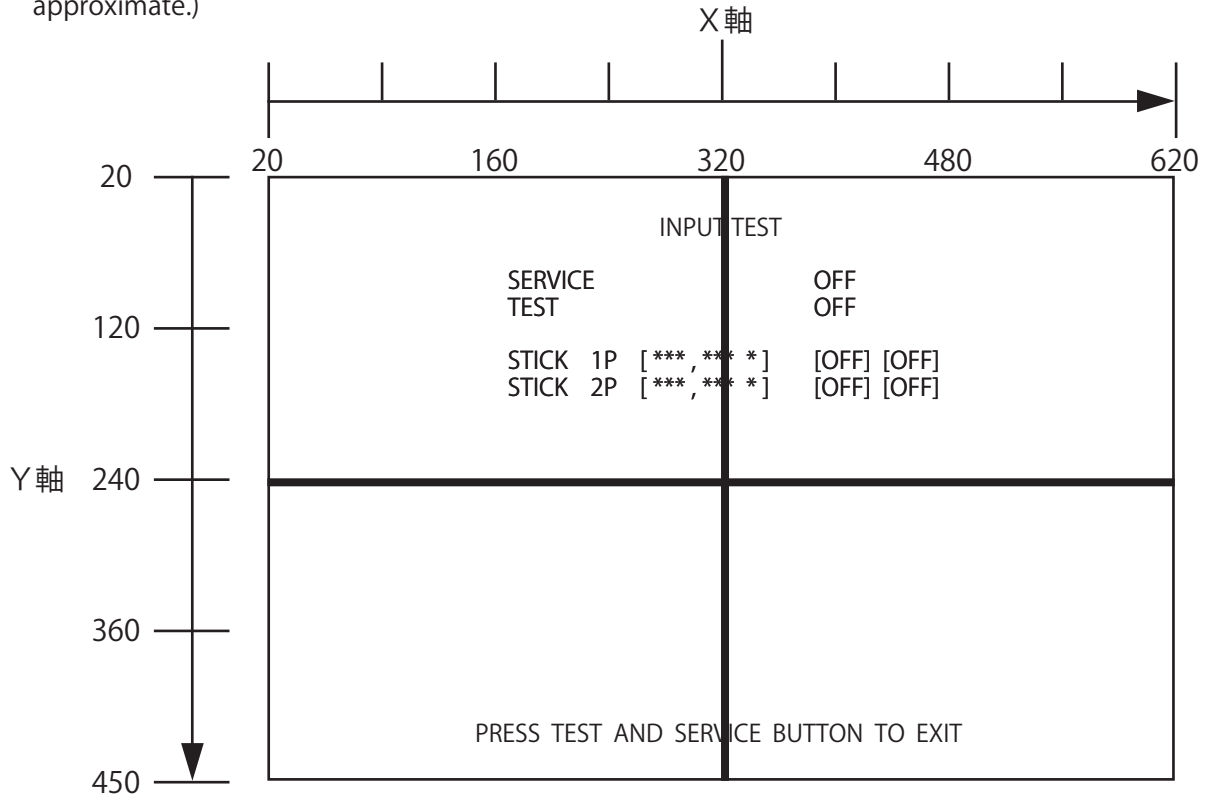
Displays the horizontal axis position on the screen.

20 ± 10 should be displayed as soon as you touch the left edge of the screen and 620 ± 10 when the right edge is touched. (The monitor frame is outside the sensor area, so values for the edges will be approximate.)

- Y axis value

Displays the vertical axis position on the screen.

20 ± 10 should be displayed as soon as you touch the top edge of the screen and 450 ± 10 when the bottom edge is touched. (The monitor frame is outside the sensor area, so values for the edges will be approximate.)



9-3-1 fig 03

- Z axis value

Displays the distance between the screen and magic wand.

The display should change from "0" to "3" as the magic wand approaches the screen.

- Acceleration sensor (hit input) - ON/OFF

Displays whether or not the magic wand has made contact with the screen.

The display should change to "ON" the instant the magic wand touches the screen.

- Acceleration sensor (charge input) - ON/OFF

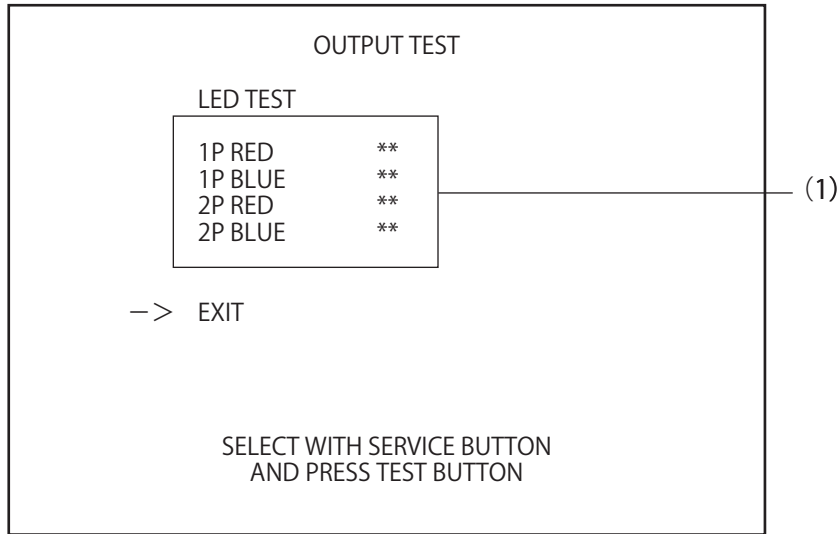
Displays whether or not a charge input is detected when the magic wand is waved.

The display should change to "ON" when the magic wand is waved.

When the SERVICE Button and TEST Button are pressed simultaneously, the Game Test Menu Screen re-appears.

9-3-2 OUTPUT TEST

When OUTPUT TEST is selected, the monitor displays the following screen. Operation of the decorative LEDs on the magic wand can be checked here



9-3-2 fig 01

(1) Red/blue LED output test

Pressing the TEST Button on an item changes its numerical value.

The value changes from 0 to 15. The higher the number, the brighter the LED light is.

Pressing the TEST Button at 15 reverts the value back to 0.

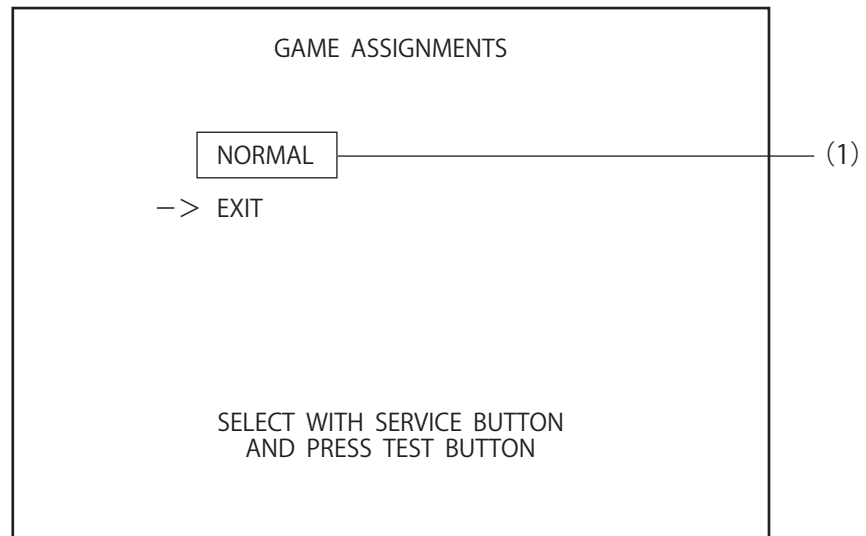
The decorative LED of the magic wand should light up or go off in accordance with the test item and number value.

Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu Screen.

NOTE: An error is displayed if it is not functioning normally. For details concerning errors, see Chapter 15.

9-3-3 GAME ASSIGNMENTS

When GAME ASSIGNMENTS is selected, the monitor changes to the following screen. Game software settings can be changed here.



9-3-3 fig 01

Move the cursor with the SERVICE Button and press the TEST Button to switch the game mode. Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu Screen.

DIFFICULTY - EASY/NORMAL/HARD

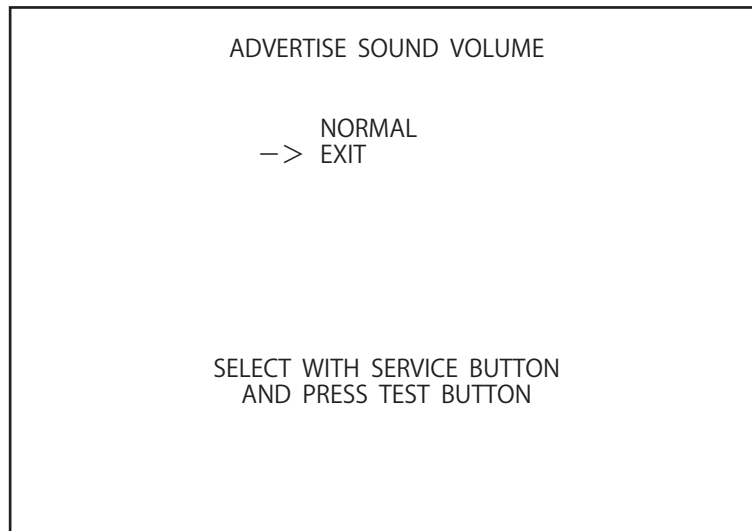
Sets the difficulty for both the "Single Player Panic!" and "Two player Co-operative!" courses.

- EASY: Sets the difficulty to "easy."
- NORMAL: Sets the difficulty to "normal." (Default setting)
- HARD: Sets the difficulty to "hard."

9-3-4 ADVERTISE SOUND VOLUME

When ADVERTISE SOUND VOLUME is selected, the monitor changes to the following screen. Standby screen sound volume settings can be changed here.

NOTE: The settings are applied only if ADVERTISE SOUND is set to "ON" in the System Test Mode settings.



9-3-4 fig 01

Move the cursor to NORMAL with the SERVICE Button and press the TEST Button to toggle the standby screen sound mode between NORMAL/SOFT.

- NORMAL: Normal volume setting (default setting)
- SOFT: Low volume setting

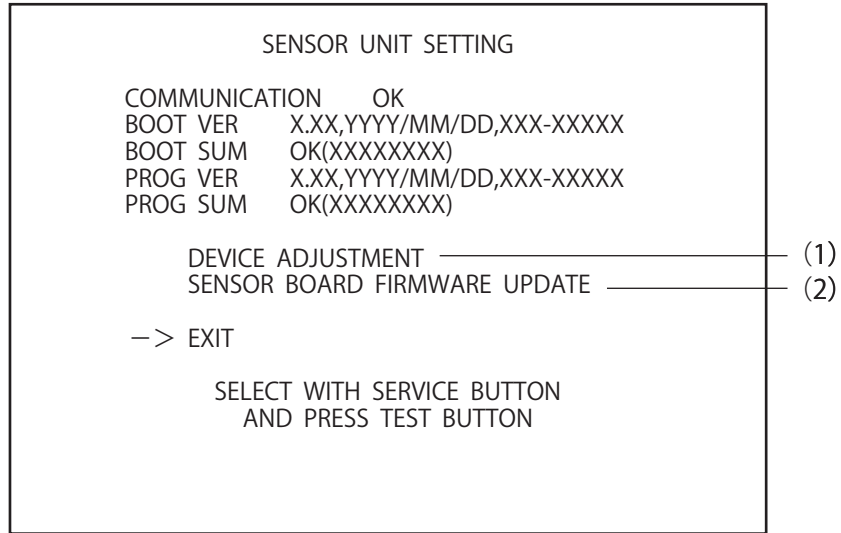
Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu Screen.

9-3-5 SENSOR UNIT SETTING



If an error is displayed while changing settings in SENSOR UNIT SETTING, look up the error code in 15-2, determine the cause of the error, and take the appropriate corrective measures.

Selecting SENSOR UNIT SETTING enables you to check the state of peripheral equipment. If "NG" is displayed, it indicates that connection or parts may be faulty.



9-3-5 fig 01

(1) DEVICE ADJUSTMENT : Magic wand adjustment

(2) SENSOR BOARD FIRMWARE UPDATE : Firmware update

- COMMUNICATION: Communication status between the NAOMI and the magic wand sensor board
- BOOT VER: Boot ROM version
- BOOT SUM: Boot ROM checksum status
- PROG VER: Program ROM version
- PROG SUM: Program ROM checksum status

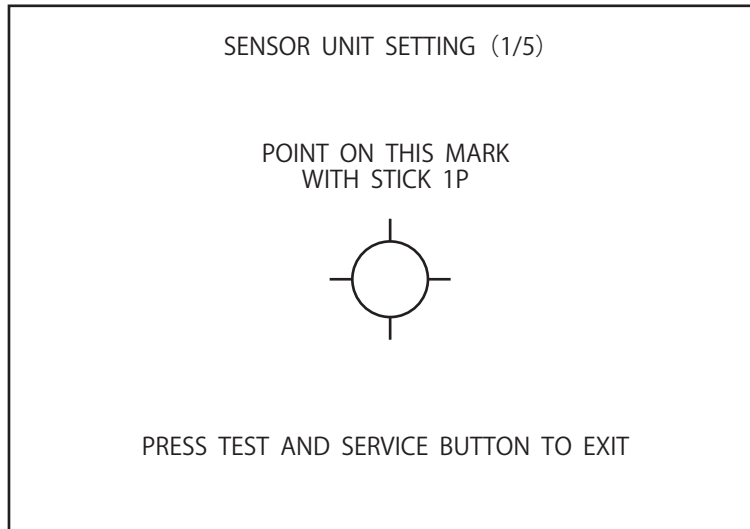
Use the SERVICE Button to move the cursor to the desired test item. Press the TEST Button to enter the selected item.

Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu Screen.

(1) DEVICE ADJUSTMENT (Magic wand adjustment)

When DEVICE ADJUSTMENT is selected, the monitor changes to the following screen. Adjustments to the magic wand can be made here. Adjust by following the procedures on the following pages.

After replacing a magic wand or ROM, or upon changing the position or orientation of the cabinet, be sure to conduct magic wand adjustments from this screen.

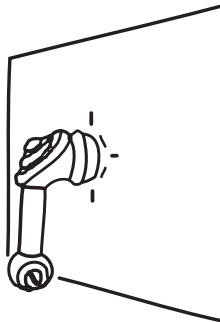


9-3-5 fig 02

STOP

[Handling the magic wand during adjustment]

- Touch the screen with the magic wand to make adjustments.
- When touching the screen with the magic wand, press the tip of the magic wand flush against the target mark on the screen as shown in the following figure.

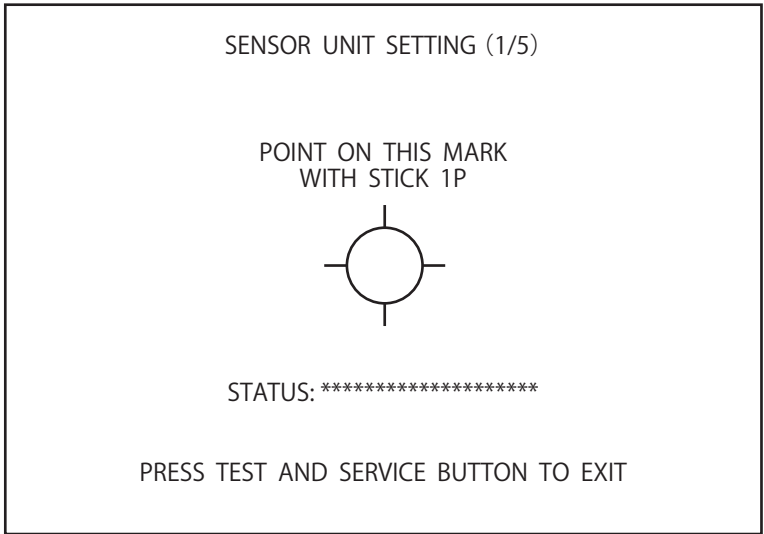


Adjusting the 1P side (left side) magic wand

1. DEVICE ADJUSTMENT (1/5)

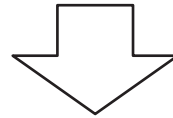
The 1P side (left side) magic wand will now be adjusted.
 When the tip of the magic wand approaches the target mark displayed in the center of the screen, "STATUS: READY?" is displayed and a 5-second countdown begins.
 During this time, adjust the position of the magic wand so that the tip fits in the center of the mark. Press the tip firmly against the screen.

※ NOTE: Do not move the magic wand from the target mark while "STATUS: NOW CHECKING" is displayed (approximately 5 seconds).



9-3-5 fig 03

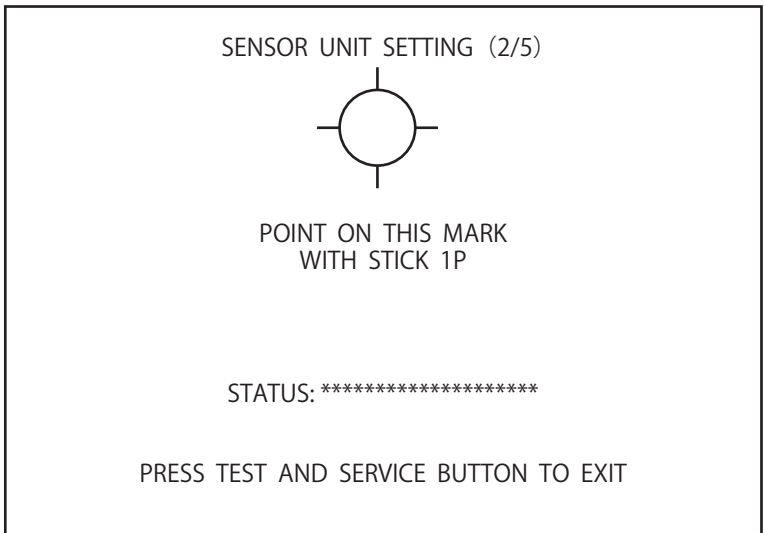
The setting is correct if "STATUS: OK" is displayed after which the next screen appears. Pressing the TEST Button quits the operation without saving the setting, and the display reverts to the SENSOR UNIT SETTING screen.



2. DEVICE ADJUSTMENT (2/5)

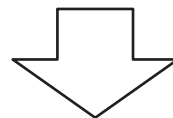
The setting is correct if "STATUS: OK" is displayed after which the next screen appears.
 Pressing the TEST Button and SERVICE Button simultaneously aborts the setting adjustments and the display reverts to the SENSOR UNIT SETTING screen.

※ NOTE: Do not move the magic wand from the target mark while "STATUS: NOW CHECKING" is displayed (approximately 5 seconds).



9-3-5 fig 04

The setting is correct if "STATUS: OK" is displayed after which the next screen appears. Pressing the TEST Button and SERVICE Button simultaneously aborts the setting adjustments and the display reverts to the SENSOR UNIT SETTING screen.



Adjusting the 2P side (right side) magic wand

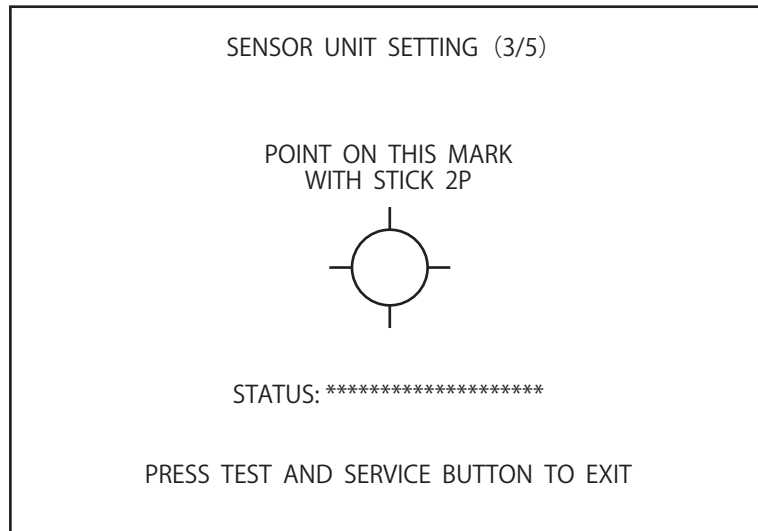
3. DEVICE ADJUSTMENT (3/5)

The 2P side (right side) magic wand will now be adjusted.

When the tip of the magic wand approaches the target mark displayed in the center of the screen, "STATUS: READY?" is displayed and a 5-second countdown begins.

During this time, adjust the position of the magic wand so that the tip fits in the center of the mark. Press the tip firmly against the screen.

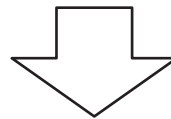
※ NOTE: Do not move the magic wand from the target mark while "STATUS: NOW CHECKING" is displayed (approximately 5 seconds).



9-3-5 fig 05

The setting is correct if "STATUS: OK" is displayed after which the next screen appears.

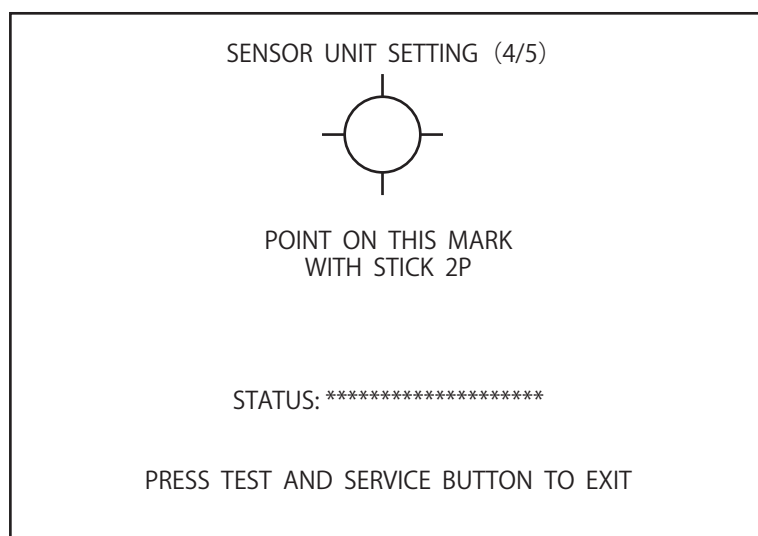
Pressing the TEST Button and SERVICE Button simultaneously aborts the setting adjustments and the display reverts to the SENSOR UNIT SETTING screen.



4. DEVICE ADJUSTMENT (4/5)

- Finally, place the tip of the 2P side (right side) magic wand in the center of the target mark displayed at the top of the screen just as before.

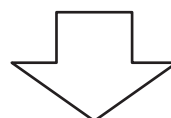
※ NOTE: Do not move the magic wand from the target mark while "STATUS: NOW CHECKING" is displayed (approximately 5 seconds).



9-3-5 fig 06

The setting is correct if "STATUS: OK" is displayed.

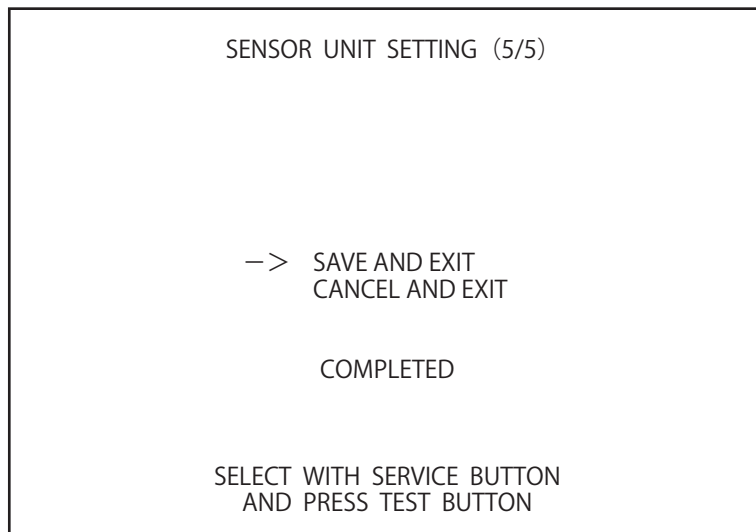
Pressing the TEST Button and SERVICE Button simultaneously aborts the setting adjustments and the display reverts to the SENSOR UNIT SETTING screen.



Saving magic wand settings

5. DEVICE ADJUSTMENT (5/5)

- When all DEVICE ADJUSTMENT items have been set, "COMPLETED" is displayed
- ※ NOTE: After "COMPLETED" is displayed, touch any area of the screen with the magic wand and see if the target mark appears at the place where the magic wand touched.



9-3-5 07

Selecting SAVE AND EXIT and pressing the TEST Button saves the adjustment settings. The display then reverts to the SENSOR UNIT SETTING screen.

Selecting CANCEL AND EXIT and pressing the TEST Button cancels the adjustment settings. The display then reverts to the SENSOR UNIT SETTING screen.
Data is not saved.

(2) SENSOR BOARD FIRMWARE UPDATE

When SENSOR BOARD FIRMWARE UPDATE is selected, the monitor changes to the following screen. The sensor board firmware will be automatically updated. As shown in the following figure, this operation is required only when it is necessary to change the version of the sensor board firmware due to ROM version updates, etc.

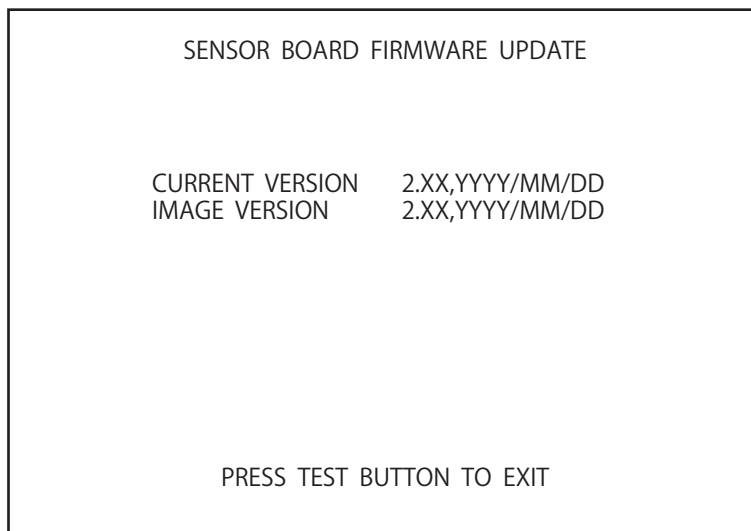
An update is not required if "OK" , "FIRMWARE SAME VERSION" is displayed. Press the TEST Button and return to the SENSOR UNIT SETTING screen.

An update starts automatically if the firmware version needs to be changed. Progress of the update is displayed as "%." You cannot use the TEST Button or SERVICE Button until the update is complete.

About 2 minutes is required to complete the update, including initialization.
"UPDATE COMPLETED" is displayed when the update is completed.

Pressing the TEST Button after update results are displayed reverts to the SENSOR UNIT SETTING screen.

NOTE: Once an update has begun, DO NOT turn off the power until the update is completed.



9-3-5 fig 08

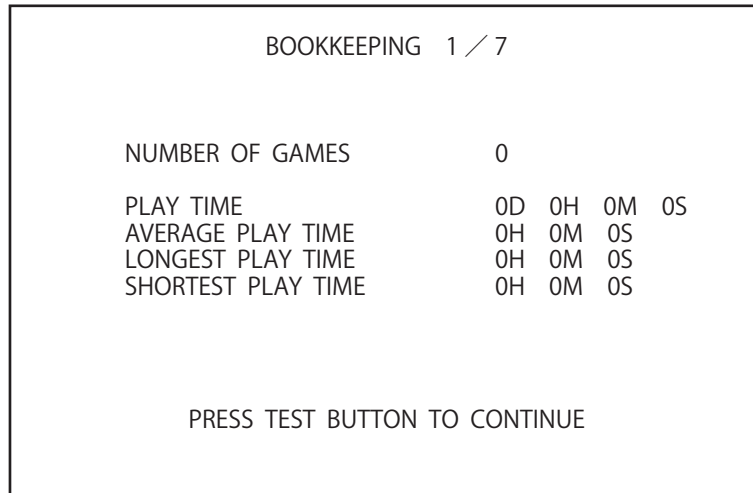
- CURRENT VERSION: Current firmware version
- IMAGE VERSION: Version of firmware image on ROM

NOTE: If the power is turned off during an update, be sure to redo the update.

9-3-6 BOOKKEEPING

Select BOOKKEEPING to display the following screens of operating status data. Each time TEST Button is pressed, the ensuing page appears. Pressing the TEST Button while the 7/7 page is displayed causes the Game Test Menu to return on the screen.

- BOOKKEEPING 1/7
Displays all play data for all courses.

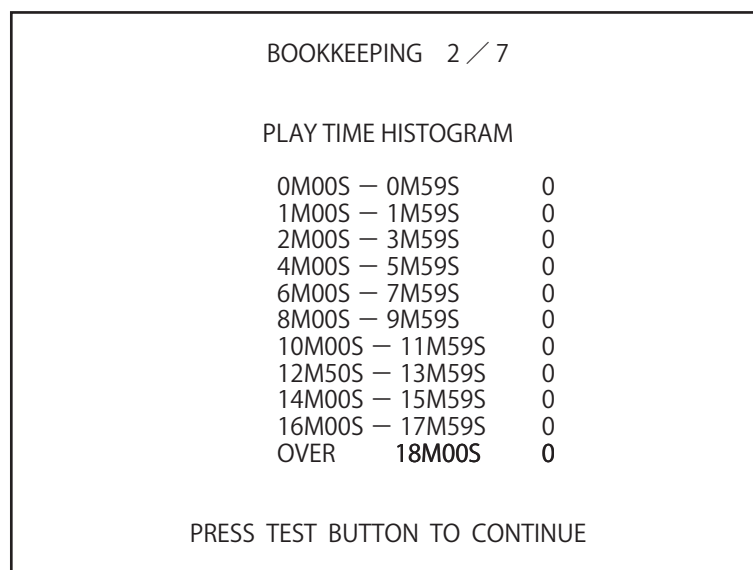


9-3-6 fig 01

- NUMBER OF GAMES: Total number of games played
- PLAY TIME: Total play time
- AVERAGE PLAY TIME: Average play time
- LONGEST PLAY TIME: Longest play time
- SHORTEST PLAY TIME: Shortest play time

Press the TEST Button to move to screen 2/7 of BOOKKEEPING.

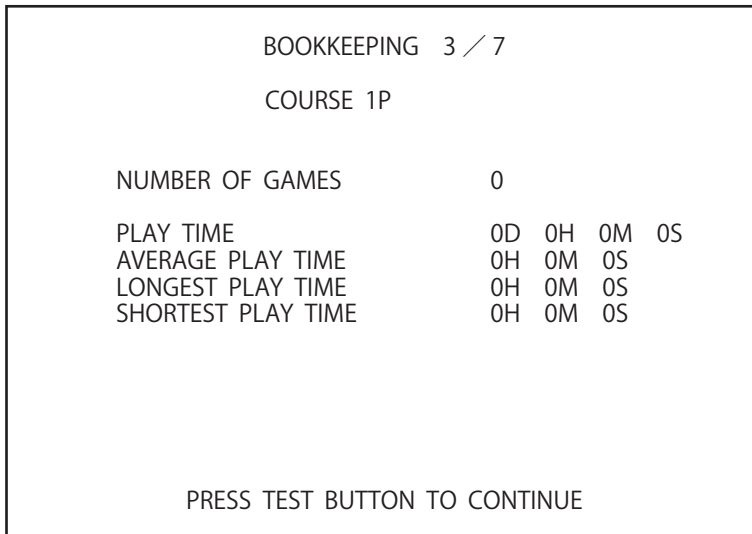
- BOOKKEEPING 2/7 PLAY TIME HISTOGRAM



9-3-6 fig 02

Displays play time frequency for all courses.
18 minutes and over is included in OVER 18M00S.
Press the TEST Button to move to the next screen.

- BOOKKEEPING 3/7
Displays play data for "Single Player Panic!"

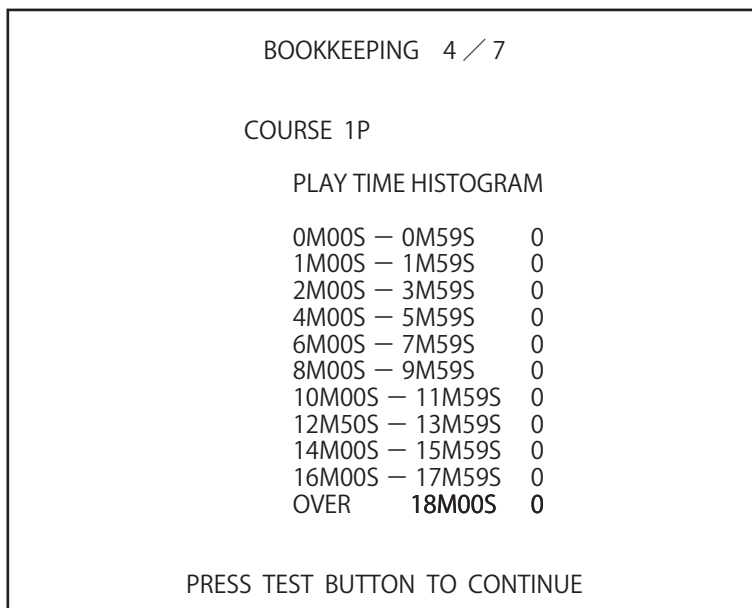


9-3-6 fig 03

- NUMBER OF GAMES: Number of games played in "Single Player Panic!"
- PLAY TIME : Total play time in "Single Player Panic!"
- AVERAGE PLAY TIME: Average play time in "Single Player Panic!"
- LONGEST PLAY TIME: Longest play time in "Single Player Panic!"
- SHORTEST PLAY TIME: Shortest play time in "Single Player Panic!"

Press the TEST Button to move to the next screen.

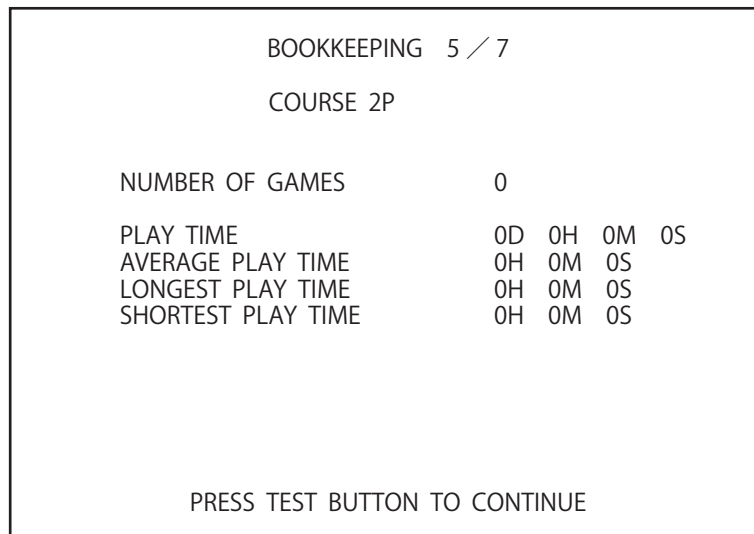
- BOOKKEEPING 4/7
Displays the PLAY TIME HISTOGRAM for "Single Player Panic!"



9-3-6 fig 04

Displays play time frequency for "Single Player Panic!"
18 minutes and over is included in OVER 18M00S.
Press the TEST Button to move to the next screen.

- BOOKKEEPING 5/7
Displays play data for "Two player Co-operative!"

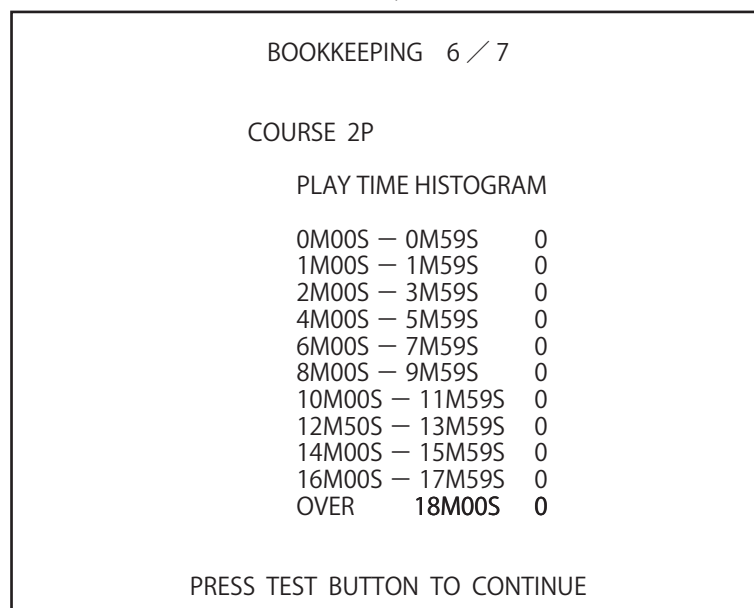


9-3-6 fig 05

- NUMBER OF GAMES: Number of games played in "Two player Co-operative!"
- PLAY TIME: Total play time in "Two player Co-operative!"
- AVERAGE PLAY TIME: Average play time in "Two player Co-operative!"
- LONGEST PLAY TIME: Longest play time in "Two player Co-operative!"
- SHORTEST PLAY TIME: Shortest play time in "Two player Co-operative!"

Press the TEST Button to move to the next screen.

- BOOKKEEPING 6/7
Displays the PLAY TIME HISTOGRAM for "Two player Co-operative!"

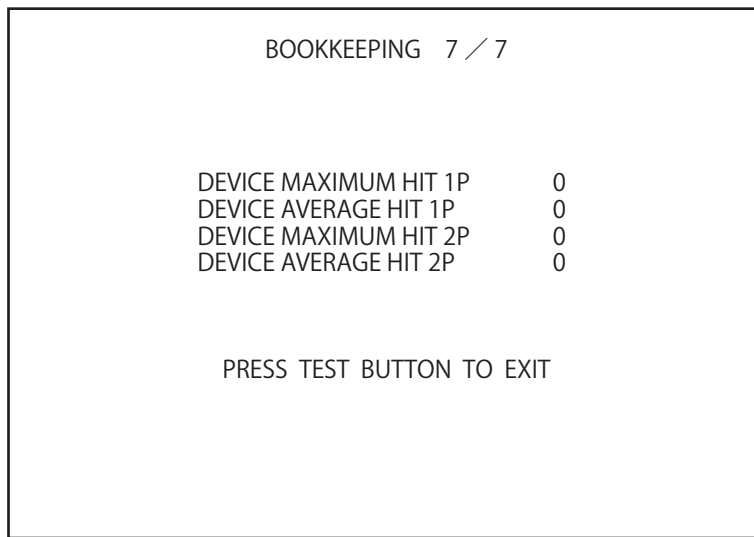


9-3-6 fig 06

Displays play time frequency for "Two player Co-operative!"
18 minutes and over is included in OVER 18M00S.
Press the TEST Button to move to the next screen.

● BOOKKEEPING 7/7

Displays the number of times the screen is hit with the magic wand.



9-3-6 fig 07

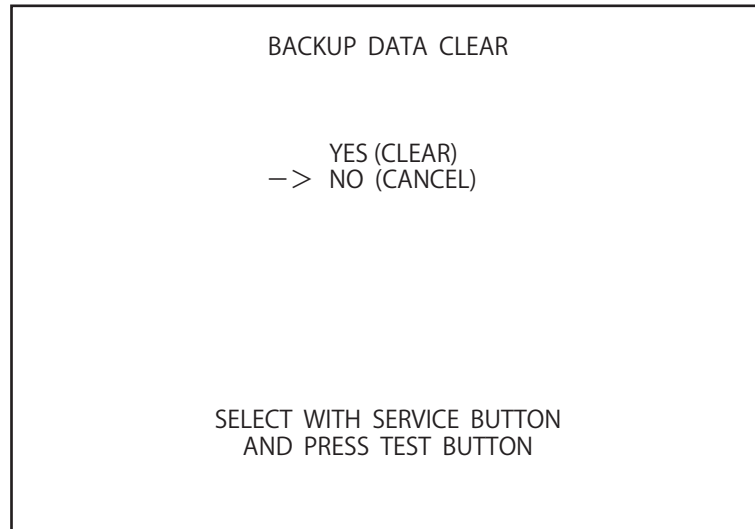
- DEVICE MAXIMUM HIT 1P: Maximum number of hits in one game on the 1P side.
- DEVICE AVERAGE HIT 1P: Average number of hits in one game on the 1P side.
- DEVICE MAXIMUM HIT 2P: Maximum number of hits in one game on the 2P side.
- DEVICE AVERAGE HIT 2P: Average number of hits in one game on the 2P side.

Press the TEST Button to revert to the Game Test Menu Screen.

9-3-7 BACKUP DATA CLEAR

When BACKUP DATA CLEAR is selected, the monitor changes to the following screen. BOOKKEEPING data and ranking data from the GAME TEST MODE can be reset here.

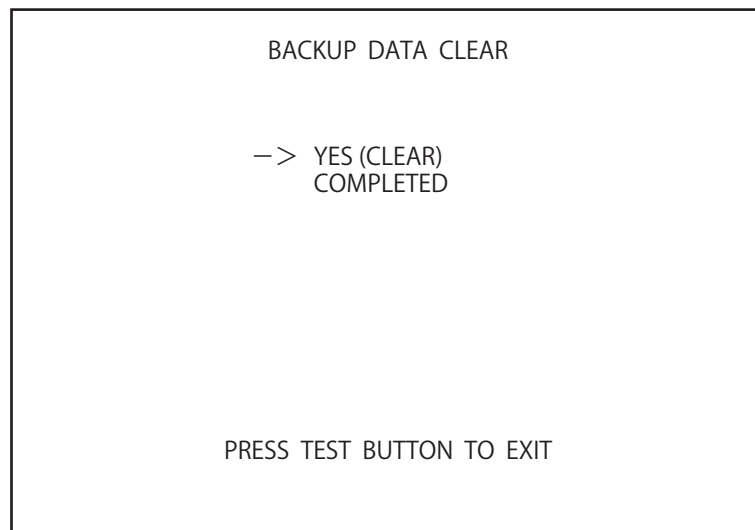
- ※ Resetting data does not modify the other settings of the GAME TEST MENU.
- ※ BOOKKEEPING data from the System Test Mode is not reset.



9-3-7 fig 01

To reset data, move the cursor to YES with the SERVICE Button and press the TEST Button. "COMPLETED" is displayed when data has been reset.

Selecting NO and pressing the TEST Button reverts to the Game Test Menu Screen without resetting data.



9-3-7 fig 02

Press the TEST Button after resetting data to revert to the Game Test Menu Screen.

10 MAGIC WAND (CONTROLLER)

⚠ WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause an electric shock or short circuit.

⚠ CAUTION

When fastening plastic parts, be careful not to tighten screws or nuts excessively. If these are tightened to excess, parts could be damaged, resulting in injuries from fragments, etc.

STOP IMPORTANT

- Be careful not to lose or damage small parts or screws.
- After replacing parts, be sure to adjust and check in the Test Mode.

Use Phillips screwdrivers (for M2, M3, M4) and socket drivers (for M2.5, M5 bolts and nuts) to perform the following work.

This manual describes how to disassemble the magic wand. If any part or parts need to be replaced, disassemble the magic wand according to the procedure described herein.

To disassemble the magic wand, first remove the wand from the cabinet. You can replace the magic wand by following the removal procedure in reverse.

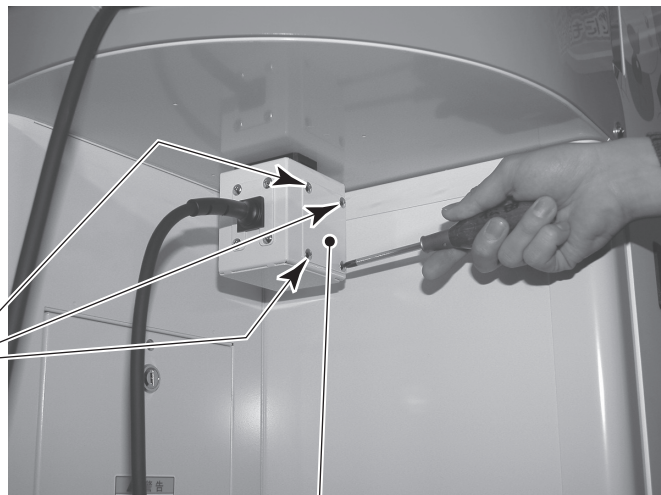
For convenience, the manual describes how to replace the player two magic wand (right side, red).

10-1 REMOVAL OF THE MAGIC WAND

1 Turn off the power.

2 Remove the 4 truss screws on the side of the box-shaped part from which the wire of the player two magic wand (red) extends from and remove the side lid.

TRUSS SCREW (4)
M4x12



10-1 FIG. 01

SIDE LID

3 Disconnect the 3 connectors.



Disconnect the connectors. (3)

10-1 FIG. 02

4 Remove the flange nut. The ring of the fastening reinforcement wire passes through the screw shaft on which the flange nut is attached. Remove the ring of the fastening reinforcement wire from the screw shaft.

FASTENING REINFORCEMENT WIRE



FLANGE NUT (1)
M5

10-1 FIG. 03

5 Remove the 4 truss screws fastening the cord plate. Remove the cord plate from the box-shaped part while being careful not to damage the wire.

NOTE: To replace the wire, remove the wire from the cord plate.



TRUSS SCREW (4)
M4x12

10-1 FIG. 04



10-1 FIG. 05

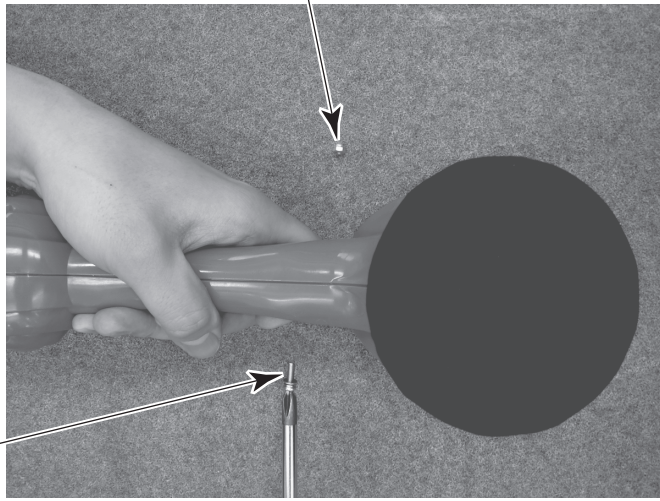
CORD PLATE

10-2 MAGIC WAND DISASSEMBLY

- 1 Remove the 8 screws from the holes on the right side of the magic wand when facing the front of the wand.

SCREW (8)
M3x10, small flat & spring washers used

CAP NUT (8)
M3

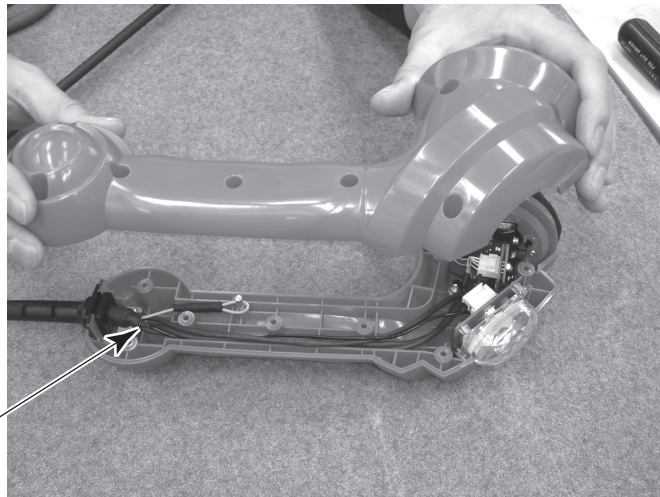


10-2 FIG. 01

- 2 Remove the right cover of the magic wand.

NOTE: When reassembling, place the wire carefully so it doesn't get pinched by the cover.

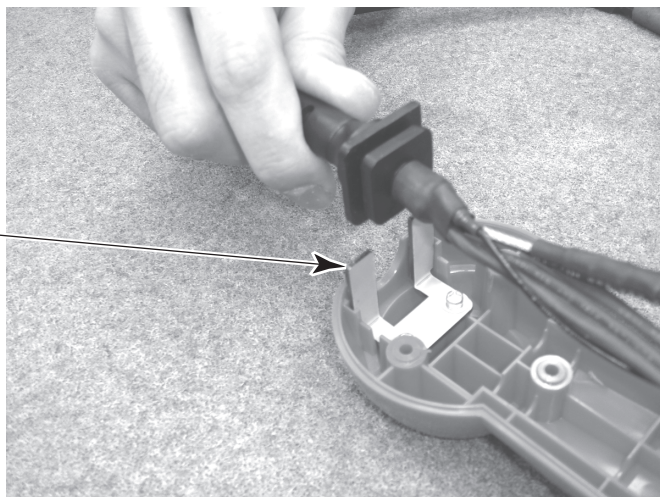
WIRE



10-2 FIG. 02

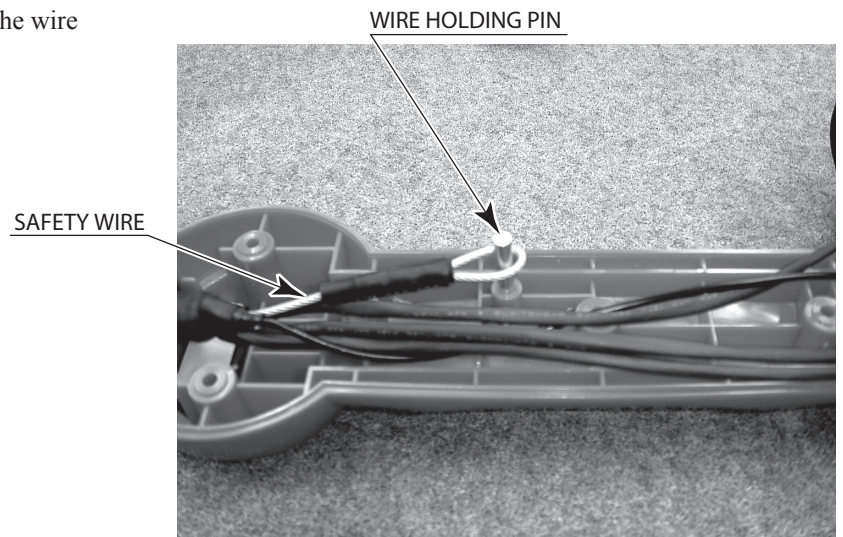
- 3 Remove the wire from the wire holder.

WIRE HOLDER



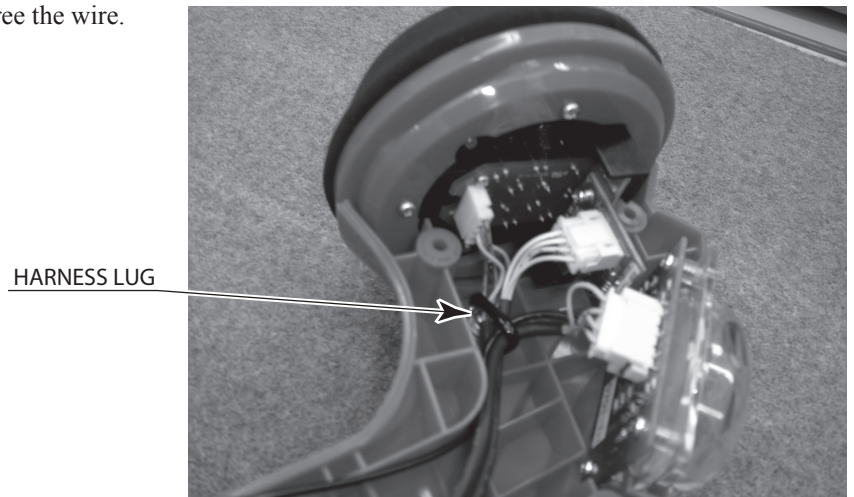
10-2 FIG. 03

- 4 Remove the safety wire from the wire holding pin.



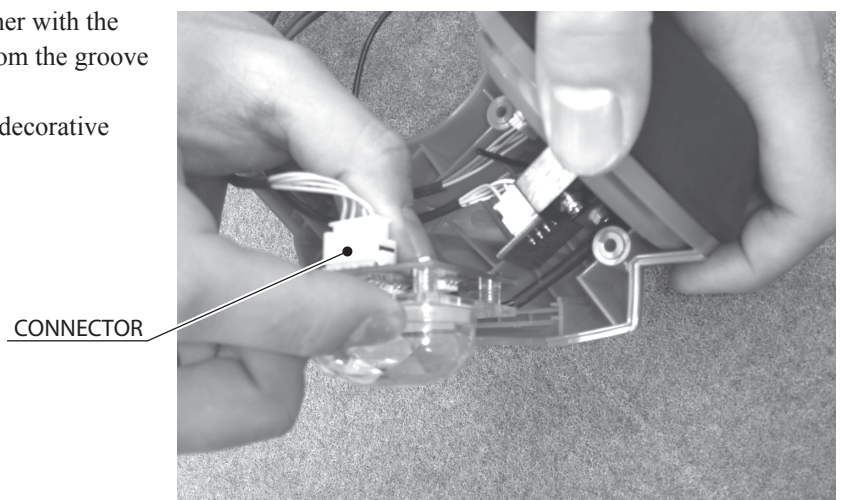
10-2 FIG. 04

- 5 Loosen the harness lug and free the wire.



10-2 FIG. 05

- 6 Lift the decorative LED together with the diamond dome and remove from the groove on the left cover. Remove the connector on the decorative LED board.



10-2 FIG. 06

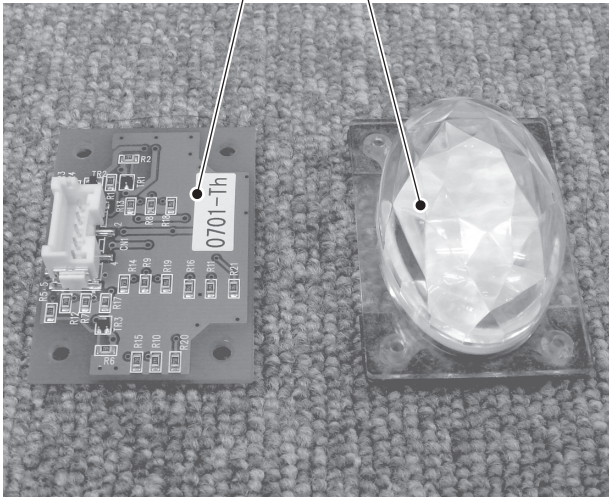
NOTE: For disassembly of the acceleration sensor, position detection LED board and wand cushion, proceed to step 8.

7 Remove the 4 tapping screws and separate the decorative LED board from the diamond dome.

NOTE: Be careful not to over-tighten when reassembling.

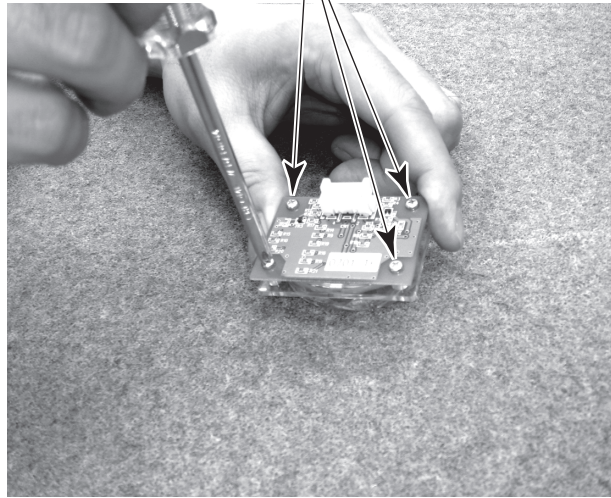
DECORATIVE LED BOARD
838-14647

DIAMOND DOME



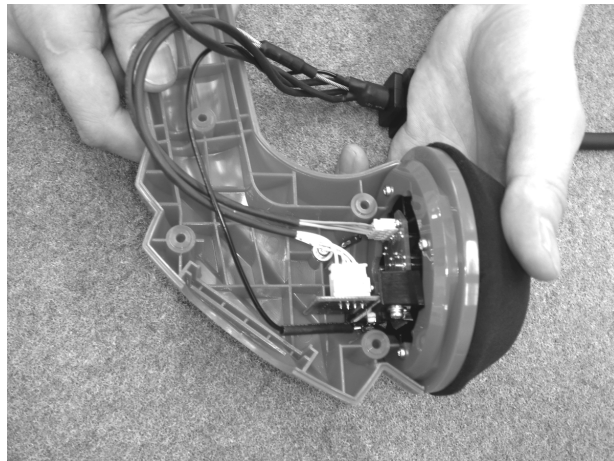
10-2 FIG. 07

TAPPING SCREW (4)
2.5x6



10-2 FIG. 08

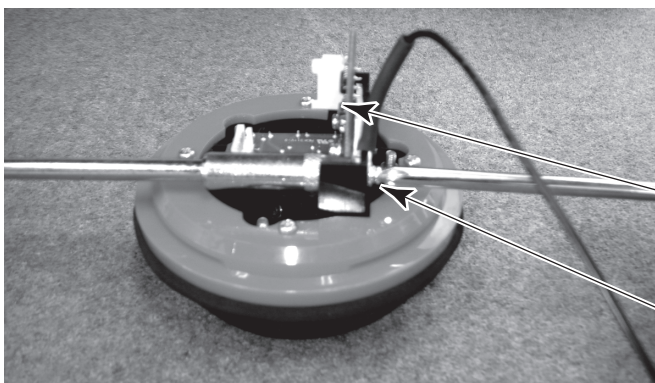
8 Remove the tip of the magic wand.
Remove the 2 connectors, one from the acceleration sensor board and one from the position detection LED board.



10-2 FIG. 09

9 Remove the 2 hexagon nuts.
Remove the 2 screws and remove the acceleration sensor board and ground wire.

NOTE: When reassembling, mount the ground wire standing up as shown in the figure.



ACCELERATION SENSOR BOARD
839-1324

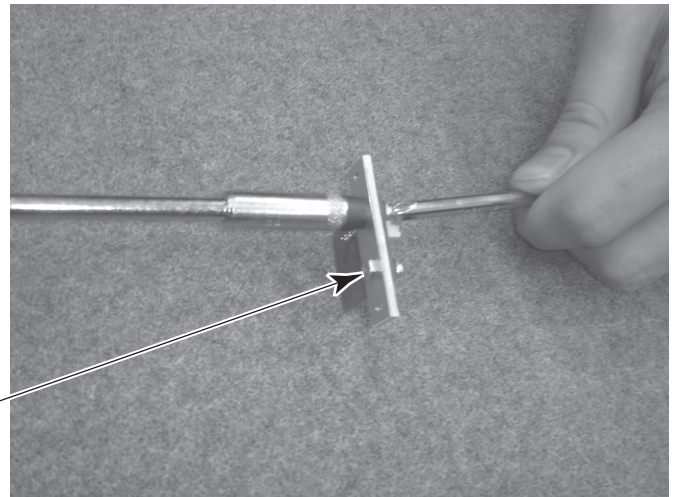
SCREW (2), HEXAGON NUT M2.5 (2)
M2.5x8, flat & spring washers used

10-2 FIG. 10

NOTE: For disassembly of the position detection LED board and wand cushion, proceed to step 13.

10 Remove the 2 hexagon nuts.

HEXAGON NUT (2)
M2.5

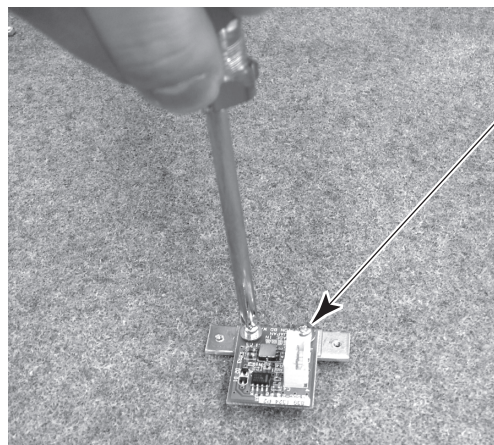


10-2 FIG. 11

11 Remove the 2 screws and separate the acceleration sensor board.

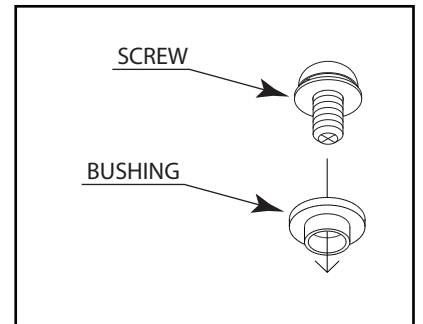
NOTES:

- Bushings are attached to the screws. Be sure not to lose them.
- Be careful of the orientation of the bushings when reassembling.



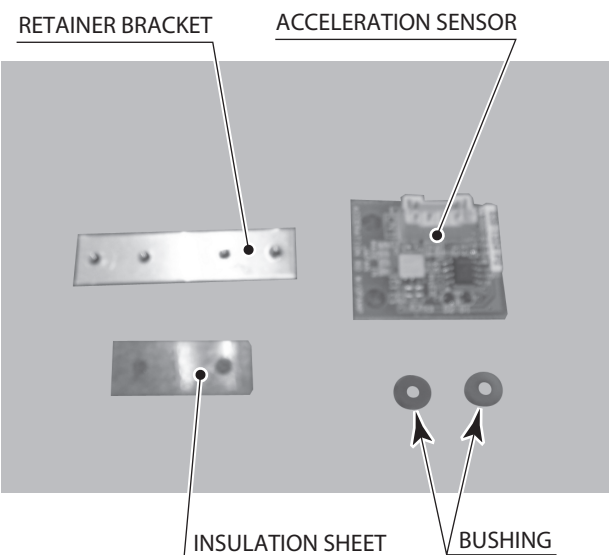
10-2 FIG. 12

SCREW (2)
M2.5x8, w/flat & spring washers

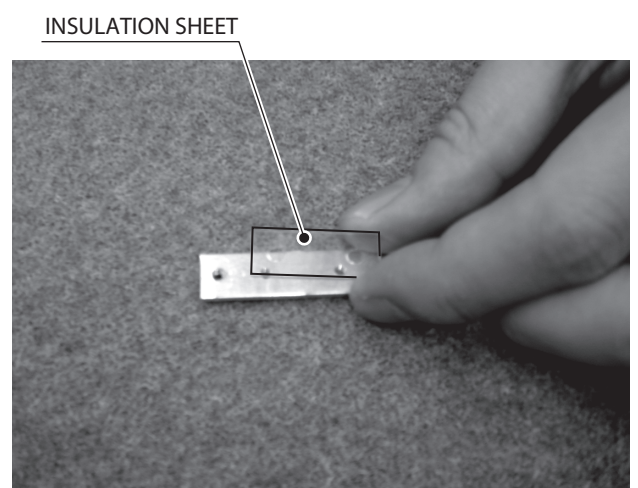


10-2 FIG. 13

12 There is a clear insulation sheet between the acceleration sensor board and retainer bracket. Be careful not to lose it when disassembling.



10-2 FIG. 14 Disassembled parts

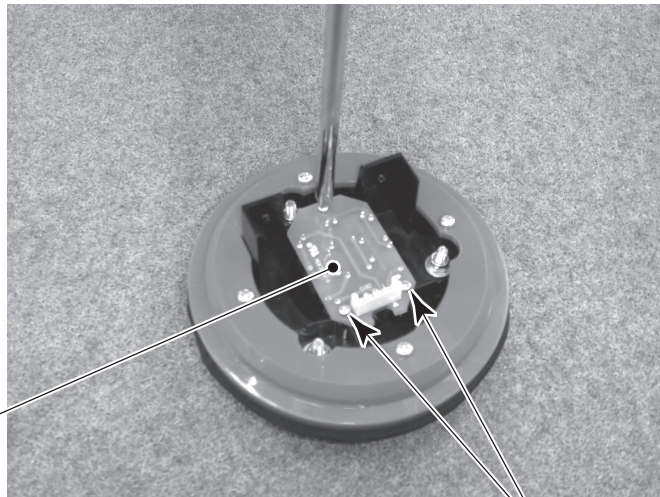


10-2 FIG. 15

13 Remove the 3 tapping screws and separate the position detection LED board.

NOTE: Be careful not to over-tighten when reassembling.

POSITION DETECTION LED BOARD
837-14584

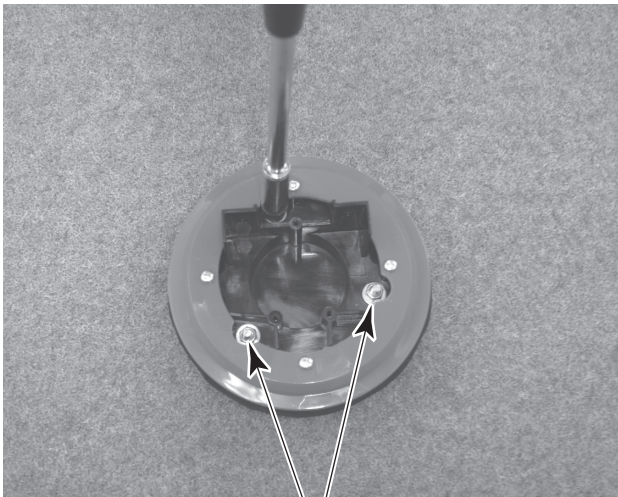


10-2 FIG. 16

TAPPING SCREW (3)
2x8

14 Remove the 3 U-nuts and separate the wand cushion.

WAND CUSHION



10-2 FIG. 17

U-NUT (3)
M3, flat washer used



10-2 FIG. 18

10-3 MAGIC WAND CLEANING

STOP IMPORTANT

The players come in direct contact with the magic wand (controller). The magic wand should therefore be kept clean at all times. When cleaning, also check to see that there are no scratches or damage to the magic wand. If the black portion inside the sponge on the tip of the magic wand is dirty, the sensitivity of the magic wand may drop. Clean this portion if it is dirty.

Do not use acidic or alkaline detergents to clean the magic wand. Doing so will destroy the wand.

To prevent static electricity, do not use a dry cloth or chemical cloth.

These may also damage the surface finish.

Wand cushion (sponge)

Wipe away dust with a dry cloth.

Wand (plastic, wire)

Wipe away dirt with a cloth first dampened with water or neutral detergent diluted with water, then wrung out. Some general-purpose household, kitchen, and furniture cleaning products may contain strong solvents that degrade plastic parts, coatings, and print. Before using any cleaning product, read the product's cautionary notes carefully and test the product first on a small area that is not highly visible.

11 COIN HANDLING

Handling the Coin Jam

If the coin is not rejected when the REJECT button is pressed, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector correctly functions.

Cleaning the Coin Selector

STOP IMPORTANT

- Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- Never apply machine oil, etc. to the Coin Selector.
- After cleaning the Coin Selector, insert a regular coin in the normal working status and ensure that the selector correctly functions.

The Coin Selector should be cleaned once every 3 months.
When cleaning, follow the procedure below:

- 1 Turn the power for the machine OFF. Open the coin chute door.
- 2 Remove the Coin Selector from the coin chute door.
- 3 Open the gate and dust off by using a soft brush (made of wool, etc.).

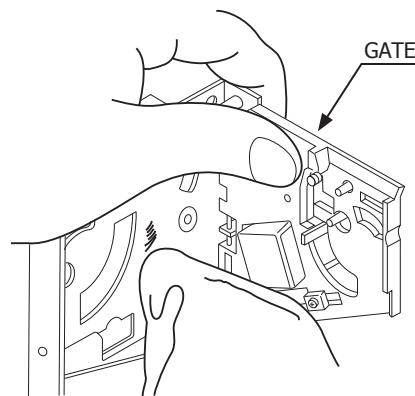


FIG. 12a

- 4 Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- 5 Remove the CRADLE.
When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.

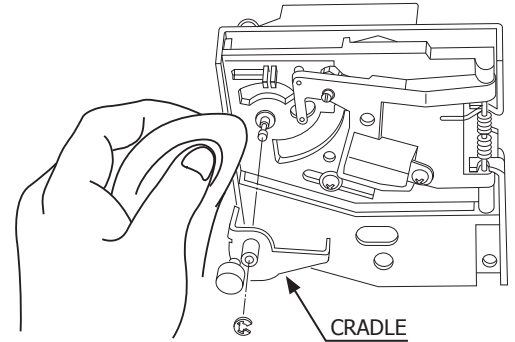


FIG. 12b

- 6 Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.
- 7 After wiping off as per previous step, further apply a dry cloth, etc. to cause the Coin Selector to dry completely.

Coin Insertion Test

Once every month, when performing the Coin SW Test, simultaneously check the following:

- Does the Coin Meter count satisfactorily?
- Does the coin drop into the cashbox correctly?
- Is the coin rejected when inserted while keeping the REJECT Button pressed down?

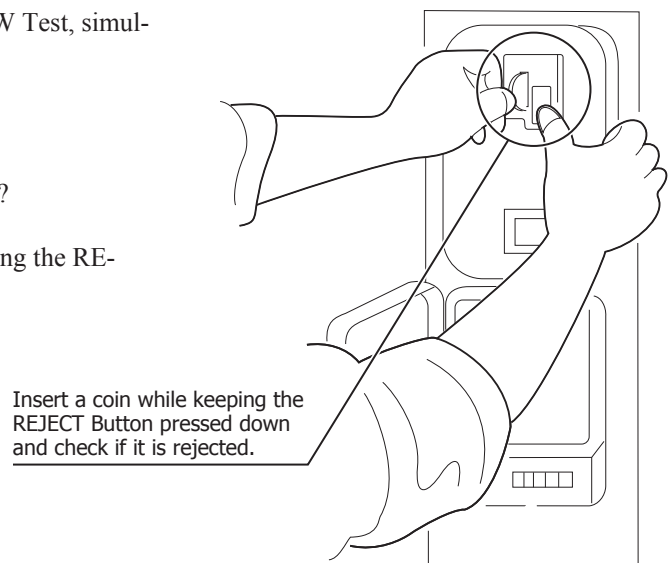


FIG. 12c

CREDIT SETTINGS

Credit Board Mode Settings Switch 3																			
Country	Setting	Switch 3 Setting					Coin Validator Programming												
		SW1	SW2	SW3	SW4	SW5	SW6	COIN1	COIN2	COIN3	COIN4	COIN5	COIN6	COIN7	COIN8	COIN9	COIN10	COIN11	COIN12
UK	Coin Controls C220 Parallel	OFF	OFF	OFF	OFF		£1	50p new	20p	10p	-	50p old	-	-					
UK	Coin Controls C220 Binary	ON	OFF	OFF	OFF		£1	50p new	20p	10p	-	50p old	-	£2					
UK	Coin Controls C220 Binary	OFF	ON	OFF	OFF		£1	50p new	20p	10p	-	£2	-	50p old	-	-	-	-	-
UK	Coin Controls SR3 Parallel	ON	ON	OFF	OFF		£1	50p new	20p	10p	-	£2	-	50p old	-	-	-	-	-
UK	Coin Controls SR3 Parallel	OFF	OFF	ON	OFF		£2 €2	£1 €1	50p new 50¢	20p 20¢	10p 10¢	-	-	-	50p old	-	-	-	-
UK	Mars ME/MS 111 Parallel	ON	OFF	ON	OFF		£1	£2	20p	10p	50p new	50p old	-	-	-	-	-	-	-
UK	NRI Parallel	OFF	ON	ON	OFF		10p	20p	50p	£1	£2	-	-	-	-	-	-	-	-
Belgium	Parallel	ON	ON	ON	OFF		-	50Bfr	20Bfr	5Bfr	-	-	-	-	-	-	-	-	-
Holland	Parallel	OFF	OFF	OFF	ON		-	5NLG	2.5NLG	1NLG	-	-	-	-	-	-	-	-	-
Austria	SR3 Parallel	ON	OFF	OFF	ON		20Sch	10Sch	5Sch	1Sch	-	-	-	-	-	-	-	-	-
Spain	Coin Controls C220 Binary	OFF	ON	OFF	ON		500Pta	200Pta	100Pta	50Pta	25Pta	200Pt old	50Pta old	25Pta old	200Pta	-	50Pta old	25Pta old	-
Spain	SR3/NRI Parallel	ON	ON	OFF	ON		500Pta	200Pta	100Pta	50Pta	25Pta	-	-	-	-	-	-	-	-
Spain	Coin Controls C220 Parallel	OFF	OFF	ON	ON		100Pta	50Pta new	-	25Pta new	-	50Pta old	-	25Pta old	-	-	-	-	-
Portugal Euro	Parallel	ON	OFF	ON	ON		200Es €1	100Es 50¢	50Es	-	-	-	-	-	-	-	-	-	-
	TBA				OFF		TBA												
	Channels						TBA												
							Direct Mode												
							2 channel Mode												

Please Note
The credit board automatically sets the validator for parallel and binary operation through an output on pin 8 of the 17 way pinstrip. For the feature to work it is necessary for the validator interconnecting cable to include at wire at this position

- Note: These switch settings are under constant review and may change due to world currency updates.**
- Set SW 1 according to the option settings found in the relevant Price of Play Settings Table on the following pages.
 - For Germany (DM), France (Fr) & Switzerland (SFr), use the appropriate existing setting shown above (from another country) that matches the coin ratios programmed into your coin mech.
 - Set SW 3 on the VTS /Excel board as shown in the table above corresponding to the country required.

PRICE OF PLAY SETTINGS FOR UK

	Price	Bonus					DIL Switch 1				
							1	2	3	4	5
1	10p	50p = 5 plays	£1 = 10 plays	£2 = 20 plays		OFF	OFF	OFF	OFF	OFF	
2	10p	50p = 6 plays @ 8.33p per play	£1 = 12 plays @ 8.33p per play	£2 = 24 plays @ 8.33p per play		ON	OFF	OFF	OFF	OFF	
3	20p	50p = 2.5 plays	£1 = 5 plays	£2 = 10 plays		OFF	ON	OFF	OFF	OFF	
4	20p	50p = 3 plays @ 16.66p per play	£1 = 6 plays @ 16.66p per play	£2 = 12 plays @ 16.66p per play		ON	ON	OFF	OFF	OFF	
5	30p	50p = 1.66 plays	£1 = 3.33 plays	£2 = 6.66 plays		OFF	OFF	ON	OFF	OFF	
6	30p	50p = 1.66 plays	£1 = 4 plays @ 25p per play	£2 = 8 plays @ 25p per play		ON	OFF	ON	OFF	OFF	
7	30p	50p = 2 plays @ 25p per play	£1 = 4 plays @ 25p per play	£2 = 8 plays @ 25p per play		OFF	ON	ON	OFF	OFF	
8	30p	50p = 2 plays @ 25p per play	£1 = 3 plays @ 33.33p per play	£2 = 6 plays @ 33.33p per play		ON	ON	ON	OFF	OFF	
9	40p	50p = 1.25 plays	£1 = 2.5 plays	£2 = 5 plays		OFF	OFF	OFF	ON	OFF	
10	40p	50p = 1.25 plays	£1 = 3 plays @ 33.3p per play	£2 = 6 plays @ 33.3p per play		ON	OFF	OFF	ON	OFF	
11	50p	50p = 1 play	£1 = 2 plays	£2 = 4 plays		OFF	ON	OFF	ON	OFF	
12	50p	50p = 1 play	£1 = 3 plays @ 33.3p per play	£2 = 6 plays @ 33.3p per play		ON	ON	OFF	ON	OFF	
13	50p	50p = 1 play	£1 = 2 plays	£2 = 5 plays @ 40p per play		OFF	OFF	ON	ON	OFF	
14	60p	50p = 0.83 play	£1 = 1.66 plays	£2 = 3.33 plays		ON	OFF	ON	ON	OFF	
15	60p	50p = 0.83 play	£1 = 2 plays @ 50p per play	£2 = 4 plays @ 50p per play		OFF	ON	ON	ON	OFF	
16	80p	50p = 0.62 play	£1 = 1.25 plays	£2 = 2.5 plays		ON	ON	ON	ON	OFF	
17	80p	£1 = 1.25 plays	£1.50 = 2 plays @ 75p per play	£2 = 2.5 plays		OFF	OFF	OFF	OFF	ON	
18	£1	2x50p = 1 play	£1 = 1 play	£2 = 2 plays		ON	OFF	OFF	OFF	ON	
19	£1	2x50p = 1 play	£1 = 1 play	£2 = 3 plays @ 66.6p per play		OFF	ON	OFF	OFF	ON	
20	£1	2x50p = 1 play	£2 = 2 plays	£4 = 5 plays @ 80p per play		ON	ON	OFF	OFF	ON	
21	£1.50	3x50p = 1 play	£1 = 0.66 plays	£3 = 2 plays		OFF	OFF	ON	OFF	ON	
22	£1.50	3x 50p = 1 play	£1 = 0.66 plays	£2 = 2 plays @ £1 per play		ON	OFF	ON	OFF	ON	
23	£2	4x 50p = 1 play	£1 = 0.5 play	£2 = 1 play		OFF	ON	ON	OFF	ON	
24	£2	4x 50p = 1 play	£1 = 0.5 play	£5 = 3 plays @ £1.66 per play		ON	ON	ON	OFF	ON	
25	£3	6x50p = 1 play	£1.50 = 0.5 play	£3 = 1 play		OFF	OFF	OFF	ON	ON	
26	£3	6x50p = 1 play	£1.50 = 0.5 play	£5 = 2 plays @ £2.50 per play		ON	OFF	OFF	ON	ON	
27	£5	£1 = 0.2 play	£5 = 1 play	£10 = 2 plays		OFF	ON	OFF	ON	ON	
28	£5	£1 = 0.2 play	£5 = 1 play	£10 = 3 plays @ £3.33p per play		ON	ON	OFF	ON	ON	
29	£7.50	£5 = 0.66 play	£10 = 1.33 plays	£15 = 2 plays		OFF	OFF	ON	ON	ON	
30	£7.50	£5 = 0.66 play	£10 = 1.33 plays	£10 = 2 plays @ £5 per play		ON	OFF	ON	ON	ON	
31	£10	£10 = 1 play	£20 = 2 play	£30 = 3 play		OFF	ON	ON	ON	ON	
32			Free Play			ON	ON	ON	ON	ON	

PRICE OF PLAY SETTINGS FOR EURO

	Price	Bonus		DIL Switch 1				
				1	2	3	4	5
1	10¢	50¢ = 5 plays	€1 = 10 plays	€2 = 20 plays	OFF	OFF	OFF	OFF
2	10¢	50¢ = 6 plays @ 8.33p per play	€1 = 12 plays @ 8.33¢ per play	€2 = 24 plays @ 8.33¢ per play	ON	OFF	OFF	OFF
3	20¢	50¢ = 2.5 plays	€1 = 5 plays	€2 = 10 plays	OFF	ON	OFF	OFF
4	20¢	50¢ = 3 plays @ 16.66¢ per play	€1 = 6 plays @ 16.66¢ per play	€2 = 12 plays @ 16.66¢ per play	ON	ON	OFF	OFF
5	30¢	50¢ = 1.66 plays	€1 = 3.33 plays	€2 = 6.66 plays	OFF	OFF	ON	OFF
6	30¢	50¢ = 1.66 plays	€1 = 4 plays @ 25¢ per play	€2 = 8 plays @ 25¢ per play	ON	OFF	ON	OFF
7	30¢	50¢ = 2 plays @ 25¢ per play	€1 = 4 plays @ 25¢ per play	€2 = 8 plays @ 25¢ per play	OFF	ON	ON	OFF
8	30¢	50¢ = 2 plays @ 25¢ per play	€1 = 3 plays @ 33.33¢ per play	€2 = 6 plays @ 33.33¢ per play	ON	ON	ON	OFF
9	40¢	50¢ = 1.25 plays	€1 = 2.5 plays	€2 = 5 plays	OFF	OFF	OFF	ON
10	40¢	50¢ = 1.25 plays	€1 = 3 plays @ 33.33¢ per play	€2 = 6 plays @ 33.33¢ per play	ON	OFF	OFF	ON
11	50¢	50¢ = 1 play	€1 = 2 plays	€2 = 4 plays	OFF	ON	OFF	ON
12	50¢	50¢ = 1 play	€1 = 3 plays @ 33.33¢ per play	€2 = 6 plays @ 33.33¢ per play	ON	ON	OFF	ON
13	50¢	50¢ = 1 play	€1 = 2 plays	€2 = 5 plays @ 40¢ per play	OFF	OFF	ON	ON
14	60¢	50¢ = 0.83 play	€1 = 1.66 plays	€2 = 3.33 plays	ON	OFF	ON	ON
15	60¢	50¢ = 0.83 play	€1 = 2 plays @ 50¢ per play	€2 = 4 plays @ 50¢ per play	OFF	ON	ON	ON
16	80¢	50¢ = 0.62 play	€1 = 1.25 plays	€2 = 2.5 plays	ON	ON	ON	ON
17	80¢	€1 = 1.25 plays	€1.50 = 2 plays @ 75¢ per play	€2 = 2.5 plays	OFF	OFF	OFF	ON
18	€1	2x50¢ = 1 play	€1 = 1 play	€2 = 2 plays	ON	OFF	OFF	ON
19	€1	2x50¢ = 1 play	€1 = 1 play	€2 = 3 plays @ 66.6¢ per play	OFF	ON	OFF	ON
20	€1	2x50¢ = 1 play	€2 = 2 plays	€4 = 5 plays @ 80¢ per play	ON	ON	OFF	ON
21	€1.50	3x50¢ = 1 play	€1 = 0.66 plays	€3 = 2 plays	OFF	OFF	ON	ON
22	€1.50	3x 50¢ = 1 play	€1 = 0.66 plays	€2 = 2 plays @ €1 per play	ON	OFF	ON	ON
23	€2	4x 50¢ = 1 play	€1 = 0.5 play	€2 = 1 play	OFF	ON	OFF	ON
24	€2	4x 50¢ = 1 play	€1 = 0.5 play	€5 = 3 plays @ €1.66 per play	ON	ON	ON	ON
25	€3	6x50¢ = 1 play	€1.50 = 0.5 play	€3 = 1 play	OFF	OFF	OFF	ON
26	€3	6x50¢ = 1 play	€1.50 = 0.5 play	€5 = 2 plays @ €2.50 per play	ON	OFF	OFF	ON
27	€5	€1 = 0.2 play	€5 = 1 play	€10 = 2 plays	OFF	ON	OFF	ON
28	€5	€1 = 0.2 play	€5 = 1 play	€10 = 3 plays @ 3.33¢ per play	ON	ON	OFF	ON
29	€7.50	€5 = 0.66 play	€10 = 1.33 plays	€15 = 2 plays	OFF	OFF	ON	ON
30	€7.50	€5 = 0.66 play	€10 = 1.33 plays	€10 = 2 plays @ €5 per play	ON	OFF	ON	ON
31	€10	€10 = 1 play	€20 = 2 play	€30 = 3 play	OFF	ON	ON	ON
32		Free Play			ON	ON	ON	ON

12 PROJECTOR (PTV)

CAUTION

The projector is adjusted prior to leaving the factory. Avoid any unnecessary adjustment.

IMPORTANT

The Projector is subject to color deviation due to Convergence deviation caused by the geomagnetism at the installation location and peripheral magnetic field. After the installation of machine, and before commencing operation, check for Convergence deviation and if deviated, make adjustments.

The projector remembers adjustments.

If there is any distortion, etc. that requires adjustment on the TEST screen, use the remote control.

12-1 MASK PLATE (PTV PROTECTIVE COVER) CLEANING

IMPORTANT

If the screen (mask plate) is dirty, the sensitivity of the magic wand (controller) may drop. Clean the mask plate if it is dirty.

The mask plate is made of resin. Pay attention to the following points before cleaning:

Wipe away dirt with a cloth first dampened with water or neutral detergent diluted with water, then wrung out. To prevent static electricity, do not use a dry cloth or chemical cloth. These may also damage the surface finish.

Some general-purpose household, kitchen, and furniture cleaning products may contain strong solvents that degrade plastic parts, coatings, and print. Before using any cleaning product, read the product's cautionary notes carefully and test the product first on a small area that is not highly visible.

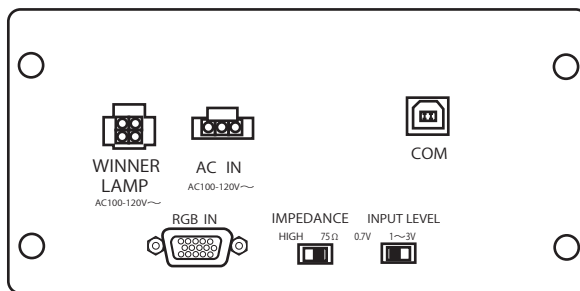
12-2 PROJECTOR ADJUSTMENT

Setting The Interface

STOP IMPORTANT

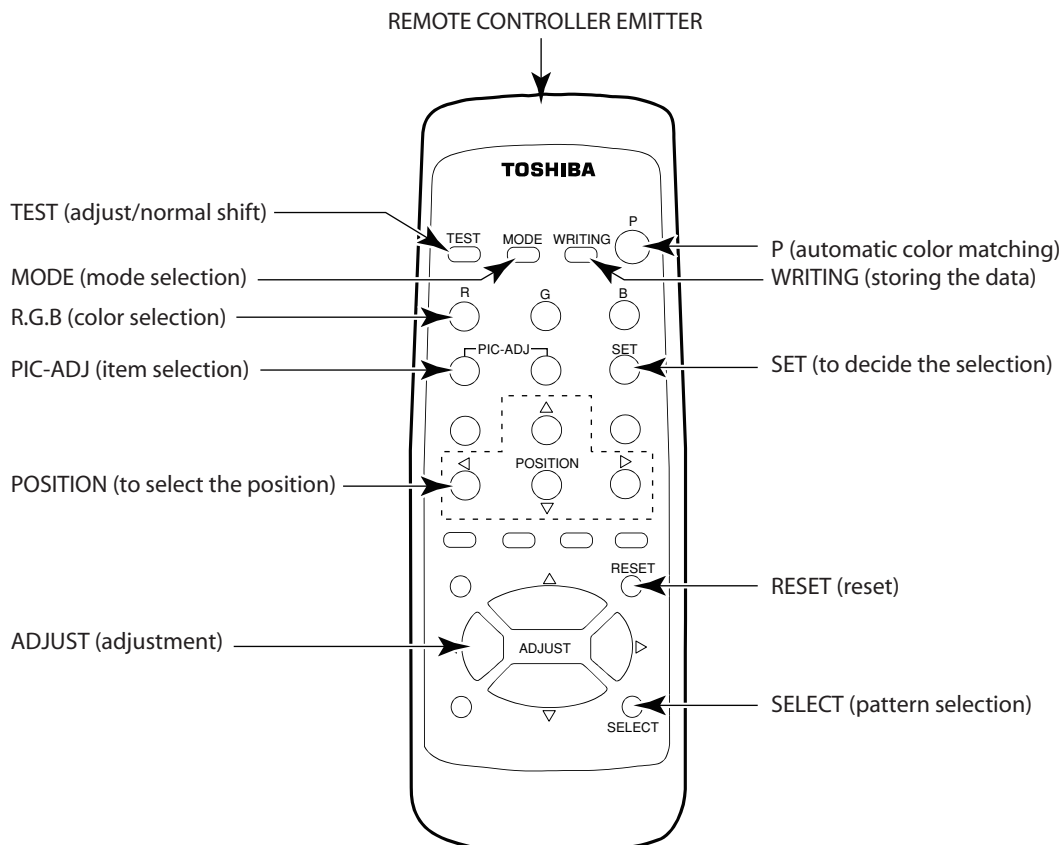
In this product, set to **INPUT LEVEL: 0.7 V** and **IMPEDANCE: 75 Ω**. Failure to observe this can cause CRT membrane to burn or Shutdown device to function resulting in power off.

The Projector's Connector Panel contains the Interface setting SW.



Remote Control Buttons

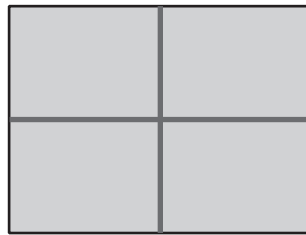
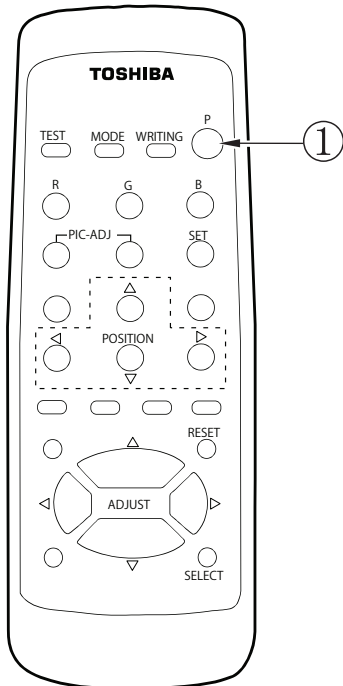
When making adjustments, make sure that the remote control's emitter is pointed toward the projector screen.



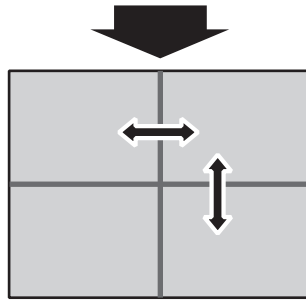
Automatic Color Matching

The projector may be subject to color deviations affected by earth magnetism, the building steel frames, etc. When the projector is initially installed or the projector's installation position is changed, have the color matching performed automatically.

- 1 Keep pressing the P button (red) for approximately 3 seconds to have the ensuing movements performed automatically.



The Projector will shift to the color deviation correction mode from the game mode, with the green cross pattern appearing on the screen.



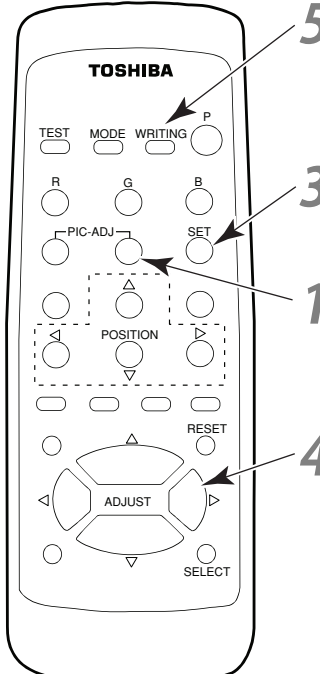
The cross pattern moves up/down and right/left to start the movement of searching the correct screen position and inclination.

When the green cross pattern movements are finished, similar detection is performed sequentially in order of red and then blue cross movements. After detecting by green, red and blue cross movements, the game mode returns with the color deviation status being corrected.

- Although very rarely, the TRY AGAIN error display in red may appear. At this time, press the P button (red) for approximately 3 seconds. Even after the above operation is repeated, if the error condition still exists, then the display shifts to “PLEASE ADJ”. In this case, the auto color matching function can not be used. Contact the place of contact herein stated or where the product was purchased from.
- If the automatic color matching indicates an error, color matching can manually be performed. Refer to CONVERGENCE ADJUSTMENT (manual color matching).

Adjusting The On-Screen Contrast

Although the on-screen picture quality has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary. Changing the CONTRAST causes the light and shade of the on-screen images to be changed.



1 Press either side of PIC - ADJ button.

The on-screen menu will have one item in purple and 6 items in white.

```

CONTRAST
BRIGHTNESS
H.POSI
V.POSI
H.SIZE
V.SIZE
EXIT
    
```

2 Choose CONTRAST by using either side of PIC - ADJ button.

Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.

```

CONTRAST
BRIGHTNESS
H.POSI
V.POSI
H.SIZE
V.SIZE
EXIT
    
```

3 Press the SET button (to decide selection).

When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.

```

CONTRAST      230
■.....■
    
```

4 Make adjustment by using either ◀ or ▶ ADJUST button.

As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen contrast status.

```

CONTRAST      156
■.....■
    
```

5 Press the WRITING button (for storing and finish).

The WRITING display appears and the adjustment data is stored.

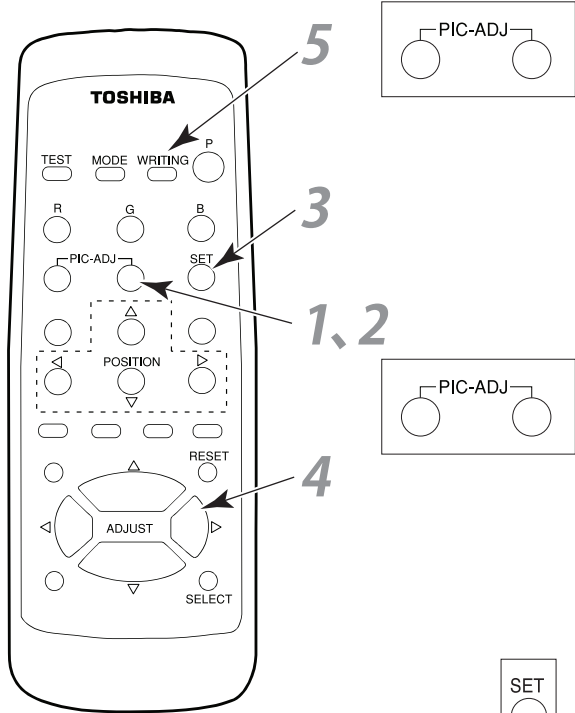
```

WRITING
    
```

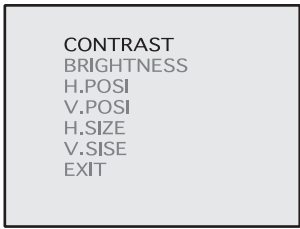
- When discontinuing the adjustment, choose EXIT from the menu at the step 2 and press the SET button.
- To continue adjusting other menu items, repeat steps 2 - 4.
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

Adjusting The Screen Brightness

Although the on-screen picture quality has been adjusted at the time of shipment from the factory, readjustment can be made if desired. When the Game Board is replaced, readjustment may be necessary. Changing the BRIGHTNESS causes the brightness of the on-screen images of black portions to be changed.



1 Press either side of PIC - ADJ button.



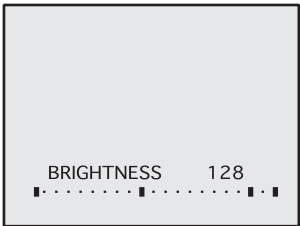
The on-screen menu will have one item in purple and 6 items in white.

2 Choose BRIGHTNESS by using either side of PIC - ADJ button.



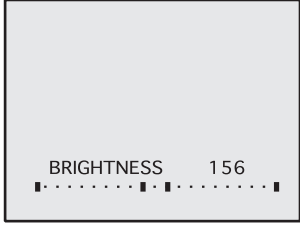
Have BRIGHTNESS displayed in purple.

3 Press the SET button (to decide selection).



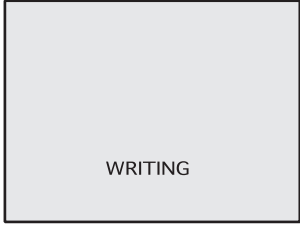
When the selection of the BRIGHTNESS adjustment mode is decided, the adjustment data scale bar appears on the screen.

4 Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen brightness status.

5 Press the WRITING button (for storing and finish).

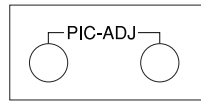
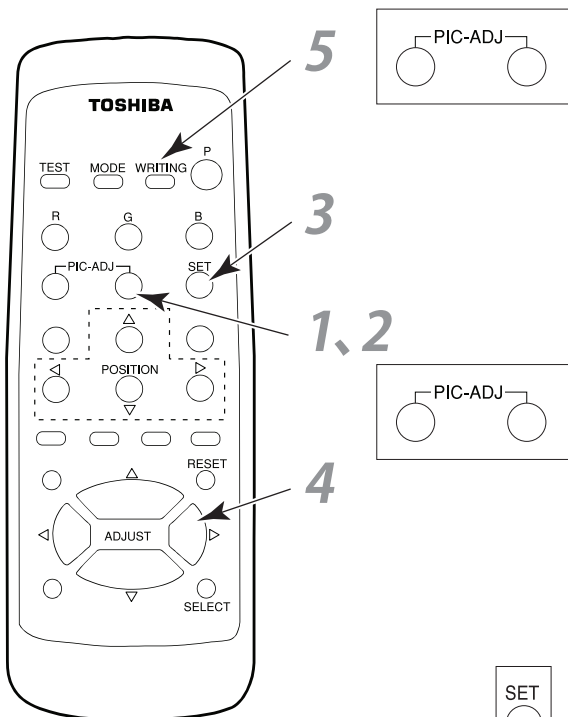


The WRITING display appears and the adjustment data is stored.

- When discontinuing the adjustment, choose EXIT from the menu at the step 2 and press the SET button.
- To continue adjusting other menu items, repeat step 2 - 4.
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

Adjusting The On-Screen Display Position

Although the on-screen display position (H. POSI, V. POSI) has been adjusted at the time of shipment from the factory, readjustment can be made if desired. When the Game Board is replaced, readjustments may be necessary.



1 Press either side of PIC - ADJ button.

CONTRAST
BRIGHTNESS
H.POSI
V.POSI
H.SIZE
V.SISE
EXIT

The on-screen menu will have one item in purple and 6 items in white.

2 Choose H. POSI or V. POSI by using either side of PIC - ADJ button.

CONTRAST
BRIGHTNESS
H.POSI
V.POSI
H.SIZE
V.SISE
EXIT

Have the H. POSI or V. POSI displayed in purple. The Figure shows the status in which H. POSI is selected.

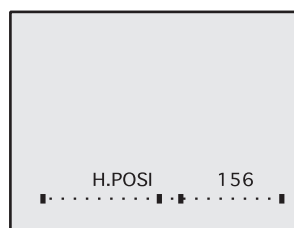
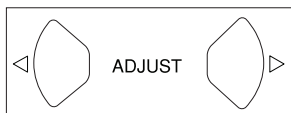
3 Press the SET button (to decide selection).



When the selection of the H. POSI or V. POSI is decided, the adjustment data scale bar appears on the screen.

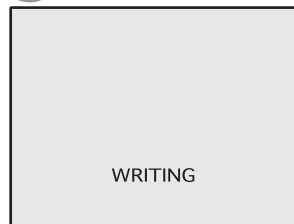
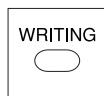
H.POSI 128

4 Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen position status.

5 Press the WRITING button (for storing and finish).

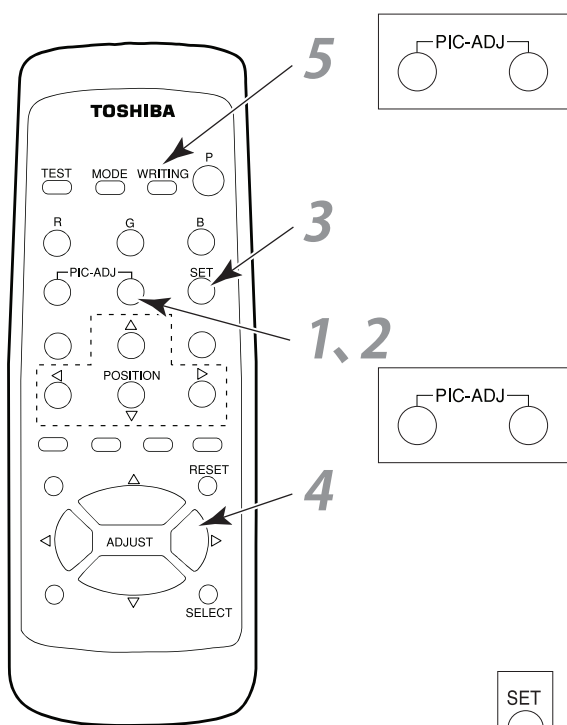


The WRITING display appears and the adjustment data is stored.

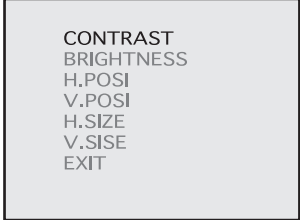
- When discontinuing the adjustment, choose EXIT from the menu at the step 2 and press the SET button.
- To continue adjusting other menu items, repeat steps 2 - 4.
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

Adjusting The Screen Size

Although the on-screen size (H. SIZE, V. SIZE) has been adjusted at the time of shipment from the factory, readjustment can be made if desired. When the Game Board is replaced, readjustments may be necessary.



1 Press either side of PIC - ADJ button.



The on-screen menu will have one item in purple and 6 items in white.

2 Choose H. SIZE or V. SIZE by using either side of PIC - ADJ button.



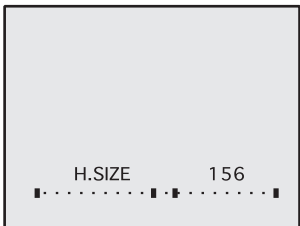
Have the H. SIZE or V. SIZE displayed in purple. The Figure shows the status in which H. SIZE is selected.

3 Press the SET button (to decide selection).



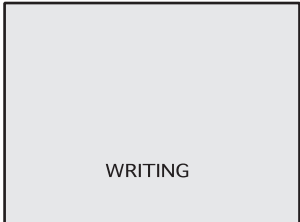
When the selection of the H. SIZE or V. SIZE adjustment mode is decided, the adjustment data scale bar appears on the screen.

4 Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen position status.

5 Press the WRITING button (for storing and finish).



The WRITING display appears and the adjustment data is stored.

- When discontinuing the adjustment, choose EXIT from the menu at the step 2 and press the SET button.
- To continue adjusting other menu items, repeat steps 2 - 4.
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

⚠ CAUTION

To avoid circuitry malfunctioning due to electrical load increase, never utilize **CONVERGENCE ADJUSTMENT** (Line Convergence Adjustment in particular) for adjusting screen size changes.

There is no means to restore the Convergence Adjustment data once stored, to its original state. To avoid changing the screen size by erroneously using convergence adjustment, do not perform the green Line Convergence Adjustment.

As such, be sure to perform the adjustment work from this page onward by the Technical staff and the Location's Maintenance Man who are well versed in such adjustment work. In the Static Convergence Adjustments, if satisfactory adjustments can not be performed, do not make other convergence adjustments inadvertently. Contact the office herein stated or where the product was purchased from.

STOP IMPORTANT

- To avoid making the adjustment work ineffective, do not press the RESET button during adjustment.
- To discontinue adjustment work, keep pressing the TEST button for approximately 3 seconds at the stage before storing the adjustment data by pressing the WRITING button.
- Should the screen be abnormally disturbed by noise due to static electricity, etc., turn the power off without storing the adjustment data.
- Pressing either or PIC – ADJ button in the Convergence Adjustment mode status will display the Adjustment Menu shown right. Do not utilize this Adjustment Menu as this is the one applied at the factory.

Adjusting this menu causes the Customer's adjustment range to be deviated.

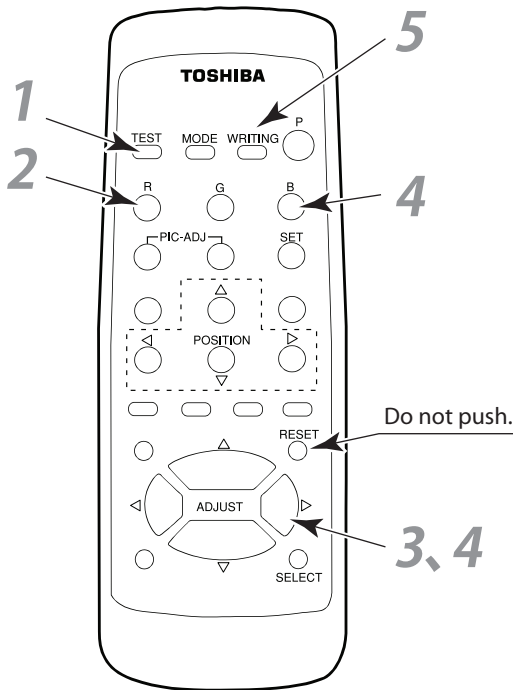
Should the menu shown right be displayed by mistake, first choose EXIT by using either or PIC - ADJ button and then press the SET button.

----- ADJUST MODE -----	
SUB VSIZE	
SUB HSIZE	
SUB BRIGHT	
EXIT	

ADJUSTMENT MENU USED IN THE FACTORY

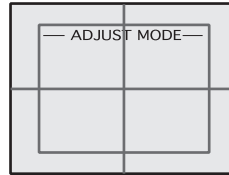
Static Convergence Adjustment

In the STATIC CONVERGENCE adjustment, each of red and blue images is comprehensively moved to and superimposed on the green color. If automatic color matching function is not sufficiently satisfactory, perform this adjustment. Be sure to perform automatic color matching before starting the above adjustment.



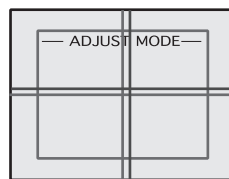
When either of 2, 4 COLOR SELECT buttons (R, B) is pressed, if the color desired to be adjusted disappears, press that particular button again. For example, if the red color needs to be adjusted again at the step 4, the R button need to be pressed twice.

- 1 Keep pressing the TEST button for approximately 3 seconds.



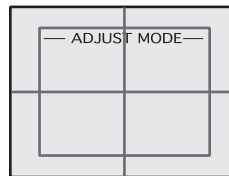
The screen will change to ADJUST MODE from the Game mode to cause the green test pattern to be displayed on the screen.

- 2 Press the R button to have the red adjustment mode.



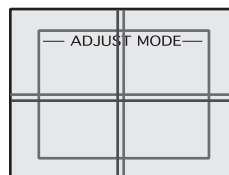
The red test pattern is added to the display. The frame color turns red and this signifies the red adjustment mode.

- 3 Make adjustment by using the ▲▼◀▶ ADJUST buttons.



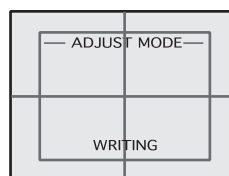
Make adjustment so as to have red superimposed on green. When red is superimposed on green, the color becomes yellow.

- 4 Press the B button to have the blue adjustment mode.



Similarly as in the case of red, adjust the blue color. When green, red, and blue are superimposed, the color becomes white.

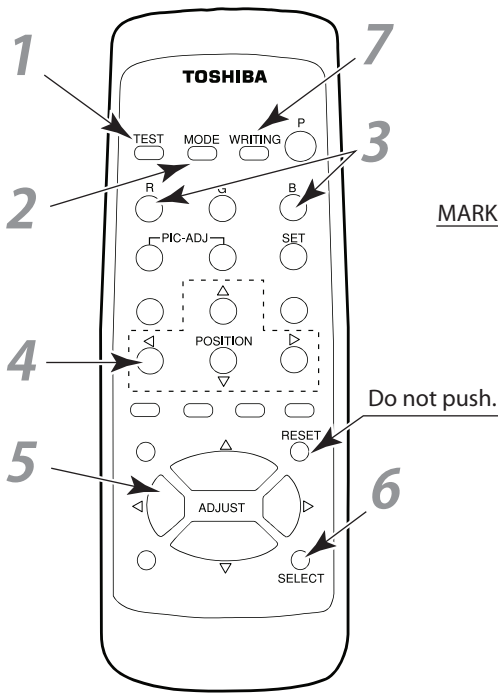
- 5 Press the WRITING button (for storing and finish).



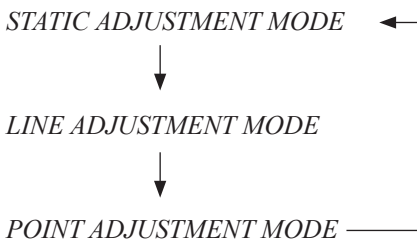
The WRITING display appears and the adjustment data is stored. After the data is stored, the Game mode returns.

Point Convergence Adjustment

In the POINT CONVERGENCE adjustment, each of red, green and blue images is partially moved for color matching. The adjustment may be necessary when the Game Board is replaced or changed, or screen size is changed. Be sure to perform automatic color matching before starting the adjustment.



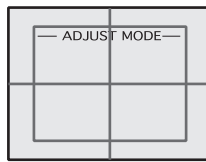
NOTE 1: When the MODE button is repeatedly pressed, the adjustment modes will circulate as follows:



NOTE 2: When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted disappears, press that particular button again.

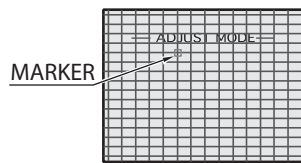
NOTE 3: By repeatedly pressing the SELECT button, only the Projector's TEST pattern screen and the screen superimposing the Game Board Test pattern can be alternately displayed.

1 Keep pressing the TEST button for approximately 3 seconds.



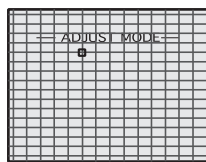
The screen changes to ADJUST MODE from the Game mode and displays the green test pattern.

2 Press the MODE button twice to have the POINT ADJUSTMENT mode. ***NOTE 1**



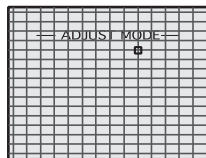
MARKER indicating the adjustment point is displayed.

3 Using either R or B button, select the desired color to be adjusted. ***NOTE 2**



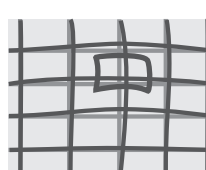
By using the G button, the green color can also be selected. The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

4 By using the ▲▼◀▶ POSITION buttons, move the MARKER to the position to be adjusted.



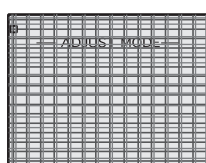
The MARKER moves in the direction of the button's arrow. However, the movable point is predetermined.

5 Make adjustment by using the ▲▼◀▶ ADJUST buttons.



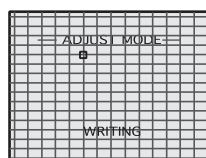
Although the direct vicinity of the MARKER's center moves most conspicuously, make adjustment by paying attention to the periphery area also. Shown left is the magnified MARKER periphery.

6 Press the SELECT button as necessary to superimpose Game Board images. ***NOTE 3**



If the test pattern is not displayed in the periphery of the screen, adjustments can be made by pressing the SELECT button to superimpose the test pattern and the Game Board's CRT test screen.

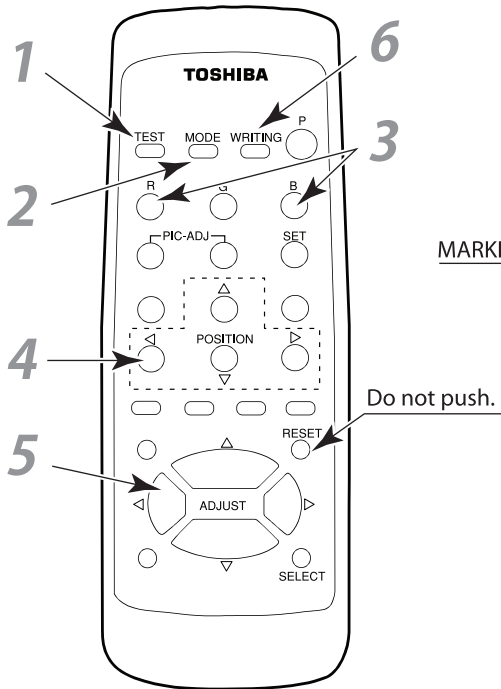
7 Press the WRITING button (for storing and finish).



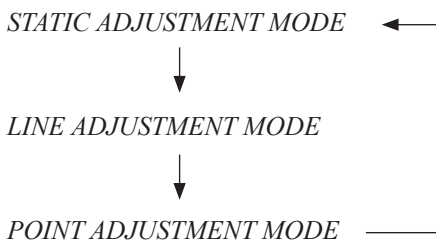
WRITING is displayed and the adjustment data is stored. After the data is stored, the Game Board screen returns.

Line Convergence Adjustment

In the LINE CONVERGENCE adjustment, the adjustment point of the column line (vertical) or row line (horizontal) is comprehensively moved for color matching. It is convenient to utilize this adjustment when the color of the column line or row line is uniformly deviated.

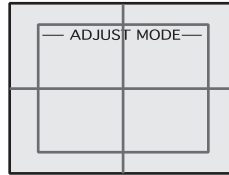


NOTE 1: When the MODE button is repeatedly pressed, the adjustment modes will circulate as follows:



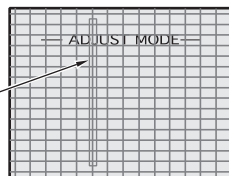
NOTE 2: When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted disappears, press that particular button again.

1 Keep pressing the TEST button for approximately 3 seconds.



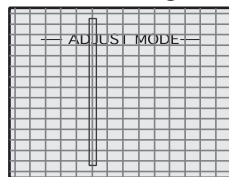
The screen changes to ADJUST MODE from the Game Board mode and displays the green test pattern.

2 Press the MODE button once to have the POINT ADJUSTMENT mode. **NOTE 1*



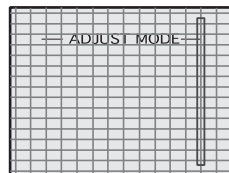
The crosshatch test pattern appears and the vertically long MARKER is shown.

3 Using either R or B button, select the desired color to be adjusted. **NOTE 2*
Although the green color can also be selected by using the G button, to avoid the screen size change adjustment, do not choose green.

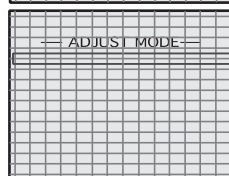


The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

4 By using the ▲▼◀▶ POSITION buttons, move the MARKER to the position to be adjusted.

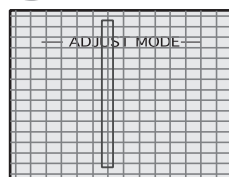


Use the ◀▶ buttons to select the column line, and the MARKER moves in the right/left direction. However, the movable range is predetermined.



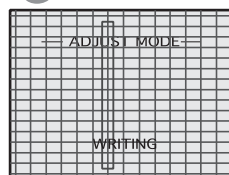
Use the ▲▼ buttons to select the row line and the MARKER moves in the up/down direction. However, the movable range is predetermined.

5 Make adjustment by using the ▲▼◀▶ ADJUST buttons.



The selected column line or row line (shown left is the column line) can be moved in the desired up/down or right/left directions as applicable.

6 Press the WRITING button (for storing and finish).



WRITING is displayed and the adjustment data is stored. After the data is stored, the Game Board screen returns.

13 REPLACING THE FLUORESCENT LAMPS

⚠ WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- You may get burned by a hot fluorescent lamp or other lamps. Pay full attention to the lamps when performing the work.
- Use lamps of the specified ratings. Using lamps with different ratings may cause fires or damage.
- There is the danger of short circuits or smoke generation due to deterioration of insulation in lighting fixtures resulting from age deterioration. Check for anomalies such as the following: Does it smell like something is burning? Is there socket discoloration? Are any lamps being replaced frequently? Do lamps not go on properly?

⚠ CAUTION

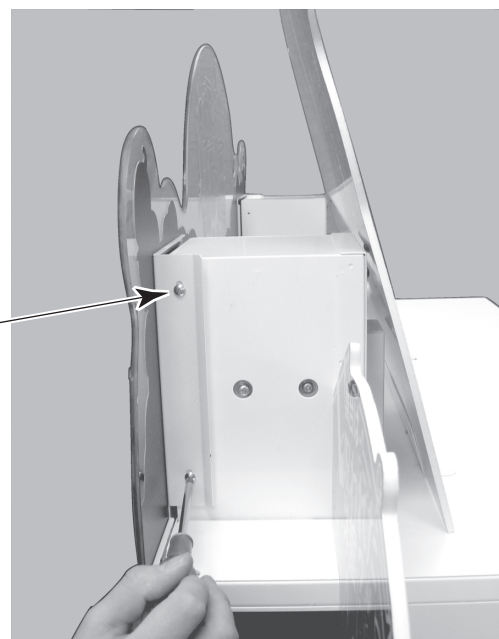
- To perform the operation safely and accurately you must use a safe, steady footstool or step. Working without this may lead to a fall and possible injury.
- Be careful when handling the plastic parts. Failure to observe this may cause injury or damage due to fragments, etc.

Billboard Fluorescent Lamp

1 Turn off the power.

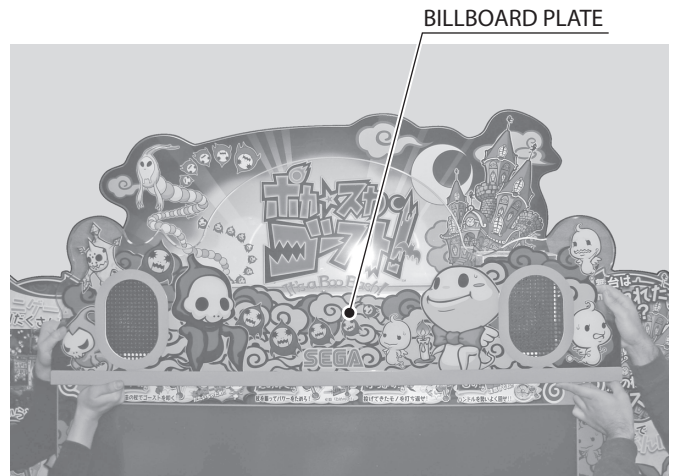
2 Remove the truss screws (total of 4) on the left and right sides of the billboard.

TRUSS SCREW (total 4)
M4x8



13 FIG. 01

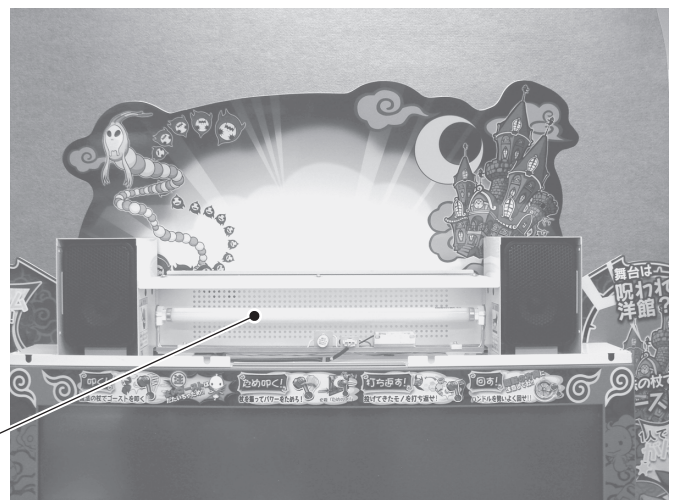
- 3** To ensure safety, have at least 2 people during this operation. Remove the billboard plate.
The bottom of the billboard is inserted.
Slide forward and remove.



13 FIG. 02

- 4** Replace the fluorescent lamp.

FLUORESCENT LAMP 20 W: 390-5251-20-01
GLOW BULB: 390-5638-1P



13 FIG. 03

14 PERIODIC INSPECTION

In order to maintain the performance of this product and operate it safely, inspect the following items routinely and perform maintenance.

The players come in direct contact with the magic wand (controller). You should therefore make an effort to clean the wand often and provide hand wipes, etc. for the amenity of the players.

WARNING

- Once a year, check to see if power cords are damaged, the plug is securely inserted, dust is accumulated between the socket outlet and the power plug, etc. Using the product with accumulated dust in the interior may cause fire or electric shock.
- Never use a water jet, etc. to clean the inside and outside of the cabinet. If wetness occurs for any reason, do not use the product until it has completely dried.
- Once a year, request the office shown on this manual or the dealer from whom the product was originally purchased to perform the internal cleaning. Using the product with accumulated dust in the interior may cause fire or other accidents.
Note that you are liable for the cost of cleaning the interior parts.
- There is the danger of accidents involving electrical shorts circuits or fire caused by factors such as the deterioration of insulation in electrical and electronic equipment over time. Check that there are no abnormalities such as odors from burning.

14 TABLE 01 PERIODIC INSPECTION TABLE

ITEM	DESCRIPTION	PERIOD	REFERENCE
CABINET	Confirm that adjusters contact floor.	Daily	Chapter 3
FLUORASENT LAMP	Inspection of lighting fixtures	As appropriate	Chapter 13
MAGIC WAND	Cleaning	Daily	Chapter 10
	Operation check	Weekly or when moving.	Chapter 9
COIN SELECTOR	Inspection of coin switch	1 month	Chapter 11
	Coin insertion test	1 month	Chapter 11
	Coin Selector cleaning	3 months	Chapter 11
PROJECTOR	Mask plate cleaning	Daily	Chapter 12
	Check screen adjustment	1 month or when moving.	Chapters 6, 12
GAME BOARD	Memory Test	1 month	NAOMI Service Manual
	Check of settings	1 month	NAOMI Service Manual
ELECTRICAL/ELECTRONIC PARTS	Inspection	As appropriate	As above
POWER CABLE	Inspection, cleaning	1 year	As above
CABINET INTERIOR	Cleaning	1 year	As above
CABINET SURFACES	Cleaning	As appropriate	Next page

Cleaning The Cabinet Surfaces

When the cabinet surfaces become dirty, remove stains with a soft cloth soaked in water or diluted (with water) chemical detergent and then wrung dry. To avoid damaging the finish, do not use such solvents as thinner, benzene, etc. (other than ethyl alcohol) or abrasives (bleaching agent and chemical dust-cloth).

Some general-purpose household, kitchen, and furniture cleaning products may contain strong solvents that degrade plastic parts, coatings, and print. Before using any cleaning product, read the product's cautionary notes carefully and test the product first on a small area that is not highly visible.

15 TROUBLESHOOTING

15-1 TROUBLE NOT RELATED TO THE GAME BOARD

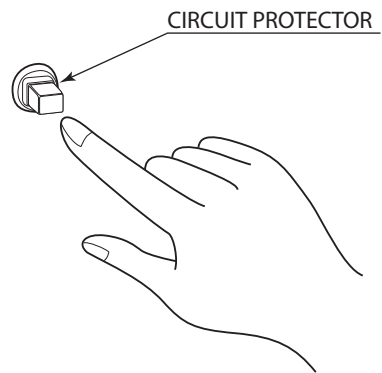
If a problem has occurred, first inspect the connection of the wiring connection.

15-1 TABLE 01 TROUBLESHOOTING TABLE

PROBLEMS	CAUSE	COUNTERMEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	The Circuit Protector of the AC Unit functioned due to momentary over current.	After eliminating the cause of overload, have the Circuit Protector of the AC Unit restored. (See Chapter 6 and this chapter.)
Color on projector screen is strange.	Screen adjustments are inappropriate.	Adjust screen appropriately. (See Chapter 12.)
No sound output.	Volume is not adjusted properly.	Adjust the volume. (See Chapter 9.)
	Board or amp malfunction.	Check by performing a speaker test. (See Chapter 9.)
Pointing position of magic wand doesn't match.	Due to external or environmental factors the targeting is off.	Adjust magic wand in the test mode (See Chapter 9.)
	The control board circuit protection fuse has blown due to instantaneous overload.	Remove the source of overload and replace the fuse. (See this chapter.)
The magic wand doesn't operate as expected.	The acceleration sensor is faulty.	Check to see that the acceleration sensor turns on and off normally in the Test Mode. If operation is abnormal despite wiring being properly connected, the acceleration sensor may be faulty. (See Chapters 9 and 10.)
	An error is displayed during the advertise (stand-by) screen.	Check the error code in Chapter 9 "GAME TEST MODE" and take the corrective measures provided in the error code table. (See Chapters 9 and this chapter.)
	The position of the magic wand is not displayed.	Wipe away dirt from the surface. (See Chapters 10 and 12.)
The lights in the cabinet don't come on.	The fluorescent light is dead.	Exchange the fluorescent light. (See Chapter 13.)

CIRCUIT PROTECTOR

Functions due to the activation of bimetal. To restore the function, wait for approximately one minute or longer until the bimetal cools off. (Press the button.)



15-1 FIG. 01

WARNING

- If an error is displayed, have the site maintenance personnel or other qualified individuals resolve it. If someone without specialized or technical knowledge attempts to rectify the problem, electric shock, short circuits or fire may result. If there is no site maintenance personnel or other qualified individuals available, turn off the power and contact your retailer or the office listed in this manual.
- If a problem not described in this manual and the LINDBERGH service manual occurs, or the resolution to a problem described in this manual is not effective, do not make further attempts to resolve the problem yourself. Immediately turn off the power and contact your retailer or the office listed in this manual. Any unguided attempts to solve such problems may lead to a serious accident.

If a malfunction is discovered with parts related to the magic wand (position detection LED = IR-LED), sensor board, and camera, the following error code is displayed in the test mode. See the following “cause” and “countermeasures” and take the appropriate corrective measures.

• ERROR 101: Sensor board self-test error

ERROR DISPLAY: ERROR101: SENSOR SELFTEST ERROR
CAUSE: The firmware data of the sensor board could be corrupted.
COUNTERMEASURES: You must reload the firmware data from the NAOMI ROM board. Update the firmware.

• ERROR 102: Camera check error

ERROR DISPLAY: ERROR102: CAMERA CHECK ERROR
CAUSE: There is something wrong with transmission from the camera board.
COUNTERMEASURE: Check if the connectors of the camera board on the sensor board are connected correctly. (Also check connection of the connectors connecting NAOMI and the sensor board.)

• ERROR 103: Sensor boot error

ERROR DISPLAY: ERROR103: SENSOR KICK ERROR
CAUSE: Sensor board failed to boot.
COUNTERMEASURES: Turn the power off and reboot.
NOTE: If the error persists after rebooting, there may be a fatal defect in the sensor board.

• ERROR 104: Player one magic wand position detection LED (IR-LED) error

ERROR DISPLAY: ERROR104: DEVICE 1P IR-LED ERROR
CAUSE: Part of the position detection LED (IR-LED) of the player one side (left side) magic wand is damaged or the wiring is broken/disconnected.
COUNTERMEASURES: Check if the connectors of the magic wand on the sensor board are connected correctly. (Also check connection of the connectors connecting NAOMI and the sensor board.)
NOTE: If there is nothing wrong with the connection, the magic wand may be damaged. Replace the magic wand.

- **ERROR 105: Player two magic wand position detection LED (IR-LED) error**

ERROR DISPLAY: ERROR105: DEVICE 2P IR-LED ERROR

CAUSE: Part of the position detection LED (IR-LED) of the player two side (right side) magic wand is damaged or the wiring is broken/disconnected.

COUNTERMEASURES: Check if the connectors of the magic wand on the sensor board are connected correctly. (Also check connection of the connectors connecting NAOMI and the sensor board.)

NOTE: If there is nothing wrong with the connection, the magic wand may be damaged. Replace the magic wand.

Caution!

If “ERROR104: DEVICE 1P IR-LED ERROR” or “ERROR105: DEVICE 2P IR-LED ERROR” is displayed on the SENSOR UNIT SETTING screen, only the magic wand that is functioning normally is adjusted. If the game is started while the error is still displayed, the “Two player Co-operative!” course cannot be selected.

- **ERROR 106: Sensor board time out**

ERROR DISPLAY: ERROR106: SENSOR BOARD TIME OUT

CAUSE: Time out has occurred because communication with the sensor board was interrupted.

COUNTERMEASURES: Check if the connectors on the sensor board are connected correctly.

- **ERROR 107: Position detection LED (IR-LED) error**

ERROR DISPLAY: ERROR107: DEVICE IR-LED ERROR

CAUSE: The magic wand position detection LED (IR-LED) light has become weak.

COUNTERMEASURES: Wipe away any dirt from the screen or tip of the magic wand.

Also, check if part of the magic wand position detection LED (IR-LED) is damaged using the INPUT TEST.

NOTE: Normal if “ERROR104: DEVICE 1P IR-LED ERROR” or “ERROR105: DEVICE 2P IR-LED ERROR” is not displayed on the INPUT TEST screen or DEVICE ADJUSTMENT screen.

- **ERROR 108: Outside light error**

ERROR DISPLAY: ERROR108: SATURATED OUTSIDE LIGHT

CAUSE: The sensor cannot correctly pickup signals due to the effect of outside light.

COUNTERMEASURES: Move the cabinet to a place not directly exposed to outside light or check if there is a light source (lighting, etc.) that may affect the sensor nearby.

- **ERROR 109: Magic wand/camera position error**

ERROR DISPLAY: ERROR109: DEVICE MISALIGNMENT

CAUSE: The magic wand position alignment is slightly off (not accurately pointing to target mark) or camera position error is exceeding the tolerance range.

COUNTERMEASURES: Return to the DEVICE ADJUSTMENT screen and adjust to the target mark in accordance with the prescribed procedure. (Do not move the magic wand from the target mark until “COMPLETED” is displayed.)

If this error is displayed even after properly adjusting to the target mark, camera position error may be exceeding the tolerance range. Turn off the power, turn the DIP switches on the sensor board to the ON position and reboot.

- **ERROR 121: Data transmission error**

ERROR DISPLAY: ERROR121: ILLEGAL DATA IMAGE

CAUSE: Data to be transmitted is corrupted or communication is not being properly carried out.

COUNTERMEASURES: Check if the connectors connecting NAOMI and the sensor board are properly connected.

- **ERROR 122: Update error**

ERROR DISPLAY: ERROR122: FIRMWARE UPDATE ERROR

CAUSE: An abnormality has been discovered in the data to be transmitted or communication is not being properly carried out.

COUNTERMEASURES: Check if the connectors connecting NAOMI and the sensor board are properly connected.

NOTE: If there is nothing wrong with the connection, the NAOMI ROM board containing the firmware data may be corrupted.

- **ERROR 123: Other error**

ERROR DISPLAY: ERROR123: SENSOR ERROR

CAUSE: The sensor board may be failing to communicate with NAOMI.

COUNTERMEASURES: Check if the connectors connecting NAOMI and the sensor board are properly connected. If this fails to solve the problem, contact the dealer from whom the product was originally purchased.

15-3 REPLACING FUSES

WARNING

- Fuse replacements other than those specified can cause accidents and are strictly forbidden. In case fuse replacements other than those stated in this manual are necessary, contact the office shown in this manual or the dealer from whom the product was originally purchased.
- In order to prevent an electric shock, be sure to turn power off and unplug from the socket outlet.
- Be careful not to damage the wires. Damaged wires may cause electric shock and short circuit accidents.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause fire and electric shock accidents.
- After eliminating the cause of the blowing of fuse, replace the fuse. Depending on the cause of fuse blowing, continued use with the fuse as is blown can cause generation of heat and fire hazard.

The circuit protection fuse of the magic wand is located inside service door R on the right side of the control cabinet when facing the screen.

1 Turn off the power.

2 Loosen the security screw on service door R.

TRUSS SCREW (1)
M4x30



15-3 FIG. 01

3 Unlock and remove service door R.

SERVICE DOOR R



15-3 FIG. 02

4 Replace the fuse.

FUSE 0.2 A/514-5143-200

Left side: For position detection LED of player one (blue) magic wand

Right side: For position detection LED of player two (red) magic wand

FUSE 1 A/514-5138-1000

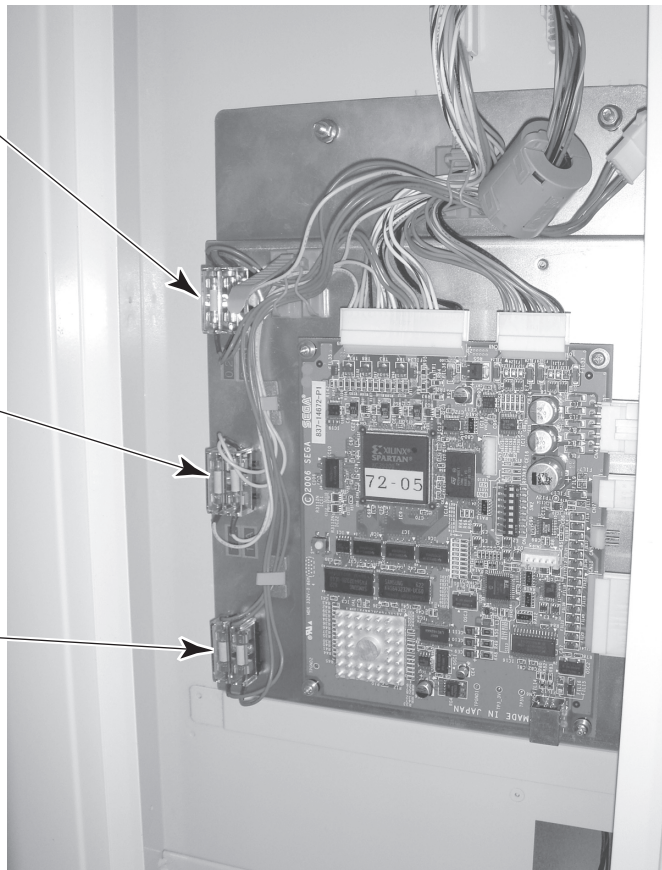
Left side: For acceleration sensor of player one (blue) magic wand

Right side: For acceleration sensor of player two (red) magic wand

FUSE 0.5 A/514-5143-500

Left side: For decorative LED of player one (blue) magic wand

Right side: For decorative LED of player two (red) magic wand



15-3 FIG. 03

16 GAME BOARD

WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not expose the game board, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
- Do not use this product with connectors other than those that were connected and used with the game board at the time of shipping. Do not carelessly connect wires to connectors that were not used at the time of shipping, as this may cause overheating, smoke or fire damage.
- When returning the game board after making repairs or replacements, make sure that there are no errors in the connection of connectors. Erroneous connections can lead to electrical shock, short circuits or fires.
- When connecting a connector, check the direction carefully. Connectors must be connected in only one direction. If indiscriminate loads are applied in making connections, the connector or its terminal fixtures could be damaged, resulting in electrical shock, short circuits or fires.

CAUTION

Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.

STOP IMPORTANT

When sending the game board for replacement or repairs, place in the original box without disassembling. The part may not be accepted if received in other than the specified condition.

16-1 HOW TO REMOVE GAME BOARD

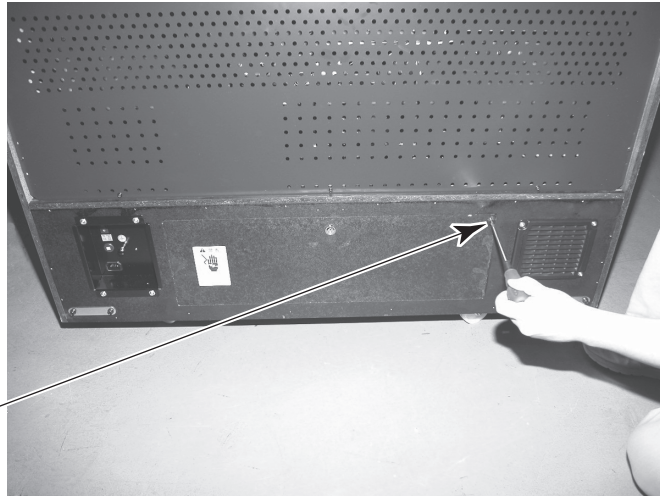
The game board is inside the service door on the back of the cabinet.

1 Turn the AC unit main switch to “OFF”.

2 Move the cabinet to secure work space.

3 Remove the screw fastening the rear service door.

SCREW (1), black
M4x30, w/flat & spring washers

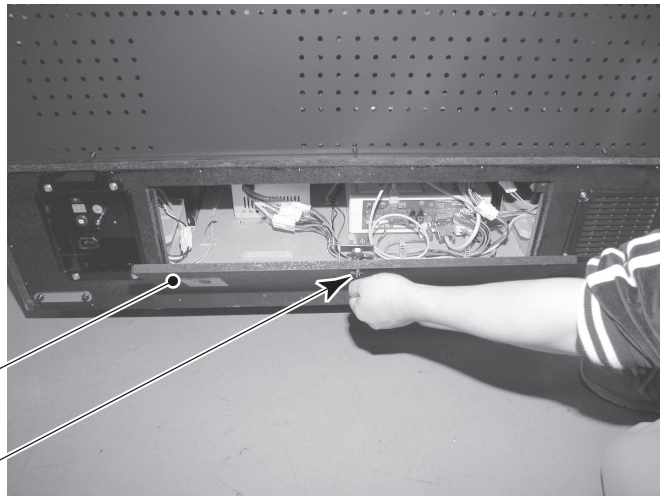


16-1 FIG. 01

4 Unlock and remove the rear service door.

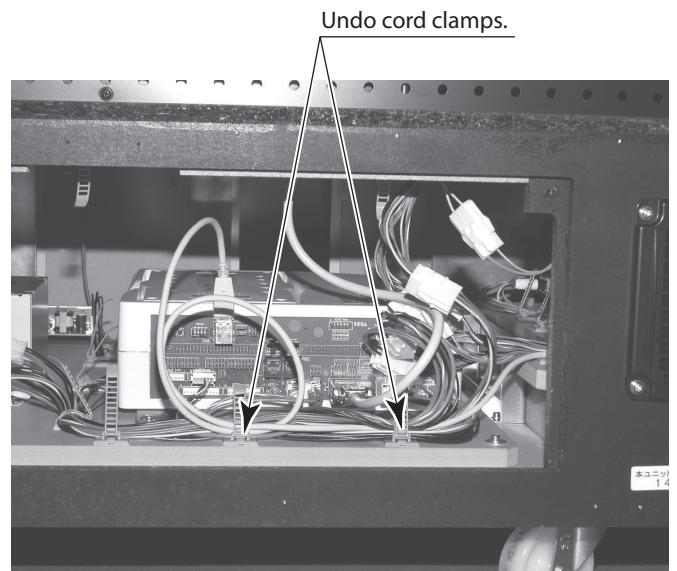
REAR SERVICE DOOR

Unlock.



16-1 FIG. 02

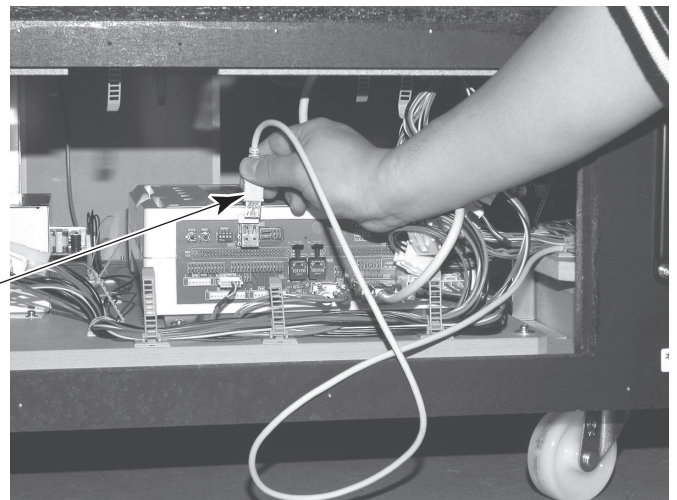
5 Undo the 2 cord clamps.



16-1 FIG. 03

6 Disconnect the JVS connector from the NAOMI game board.

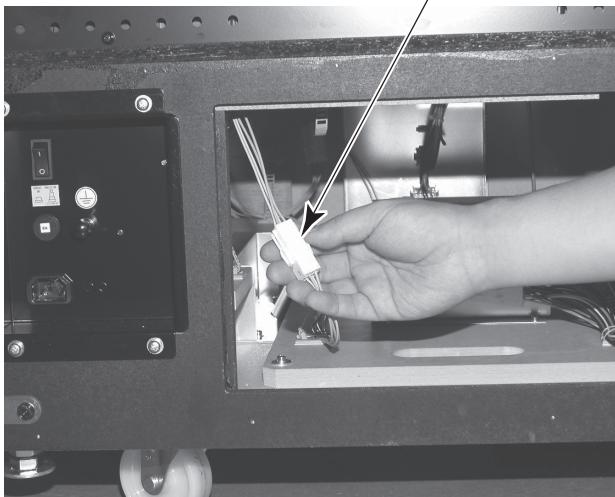
Disconnect the JVS connector.



16-1 FIG. 04

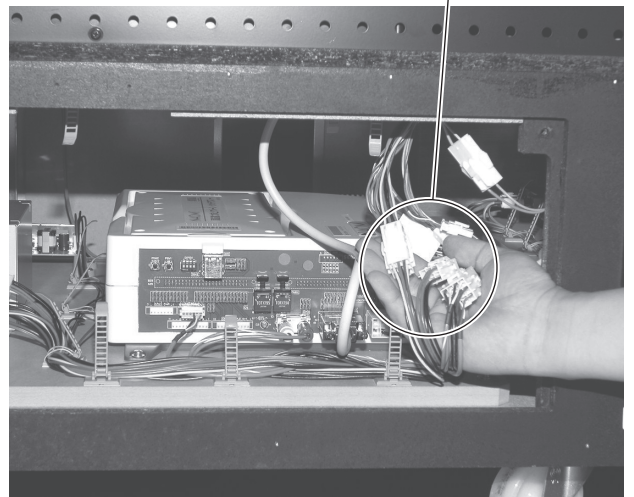
7 Disconnect the connectors (total of 4).

Disconnect the connector.
VL 4P WHITE



16-1 FIG. 05

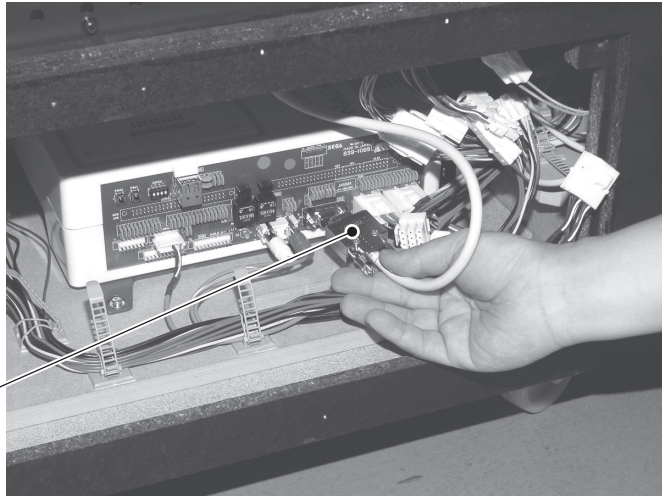
Disconnect the connectors.
YL 6P WHITE, YL 9P WHITE, YL 12P WHITE



16-1 FIG. 06

- 8** Disconnect the RGB cable connector from the NAOMI game board.

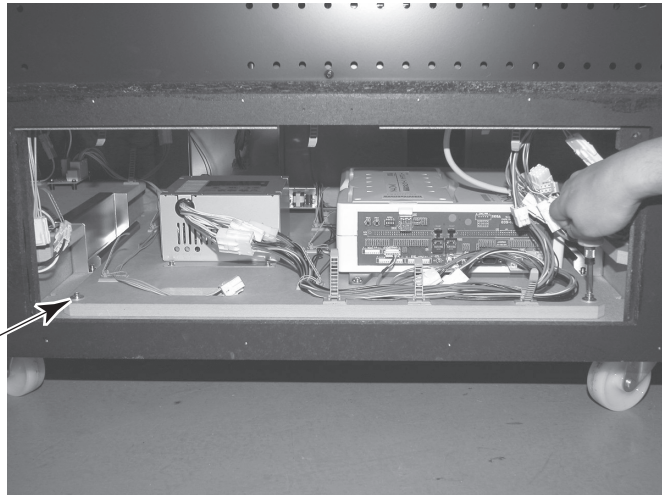
Disconnect the RGB cable connector.



16-1 FIG. 07

- 9** Remove the 2 screws with a short screwdriver.

SCREW (2)
M4x30, flat washer used



16-1 FIG. 08

- 10** Pull out the board (wooden board). Be sure not to damage the wiring when doing so.



16-1 FIG. 09

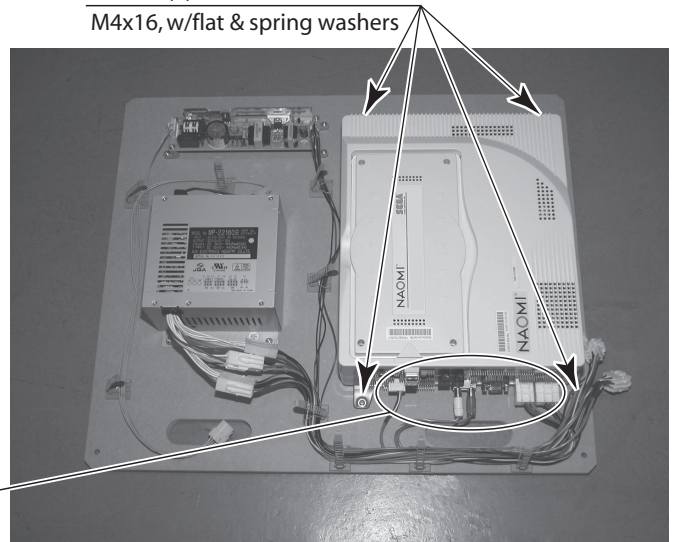
11 Place the board on a level surface.

12 Disconnect all connectors connected to the NAOMI board.

13 Remove the 4 screws and remove the NAOMI board.

SCREW (4)
M4x16, w/flat & spring washers

Disconnect the connectors.



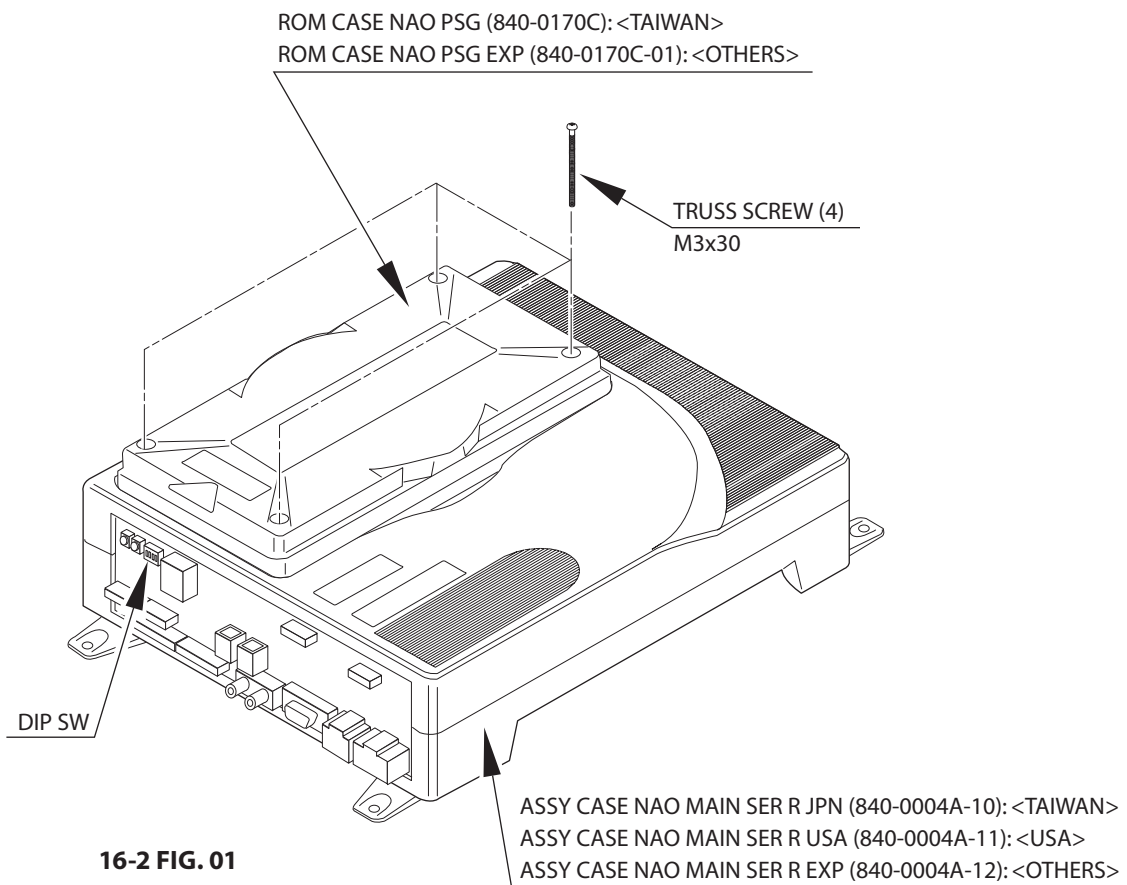
16-1 FIG. 10

16-2 COMPOSITION OF THE GAME BOARD

STOP IMPORTANT

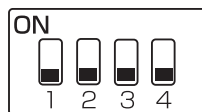
Use with the DIP SW (dip switches) of the filter board set as prescribed. Using with the switches set other than as prescribed will result in trouble such as the images not being displayed properly on the screen.

ASSY CASE NAO PSG (840-0170D): <TAIWAN>
ASSY CASE NAO PSG USA (840-0170D-01): <USA>
ASSY CASE NAO PSG EXP (840-0170D-02): <OTHERS>



DIP SW SETTING

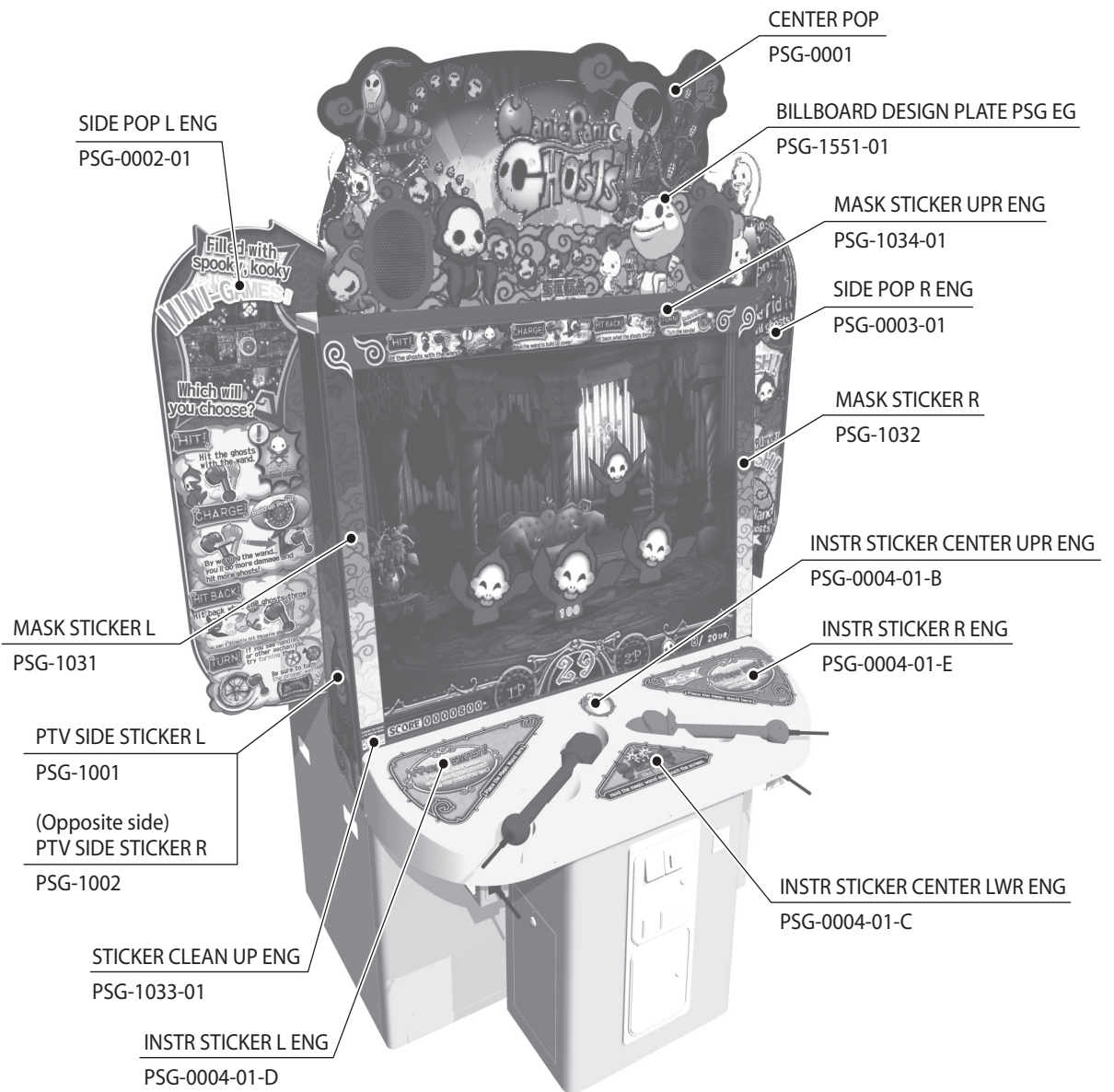
In this product, set all the DIP SW to OFF.



16-2 FIG. 02

17 DESIGN-RELATED PARTS

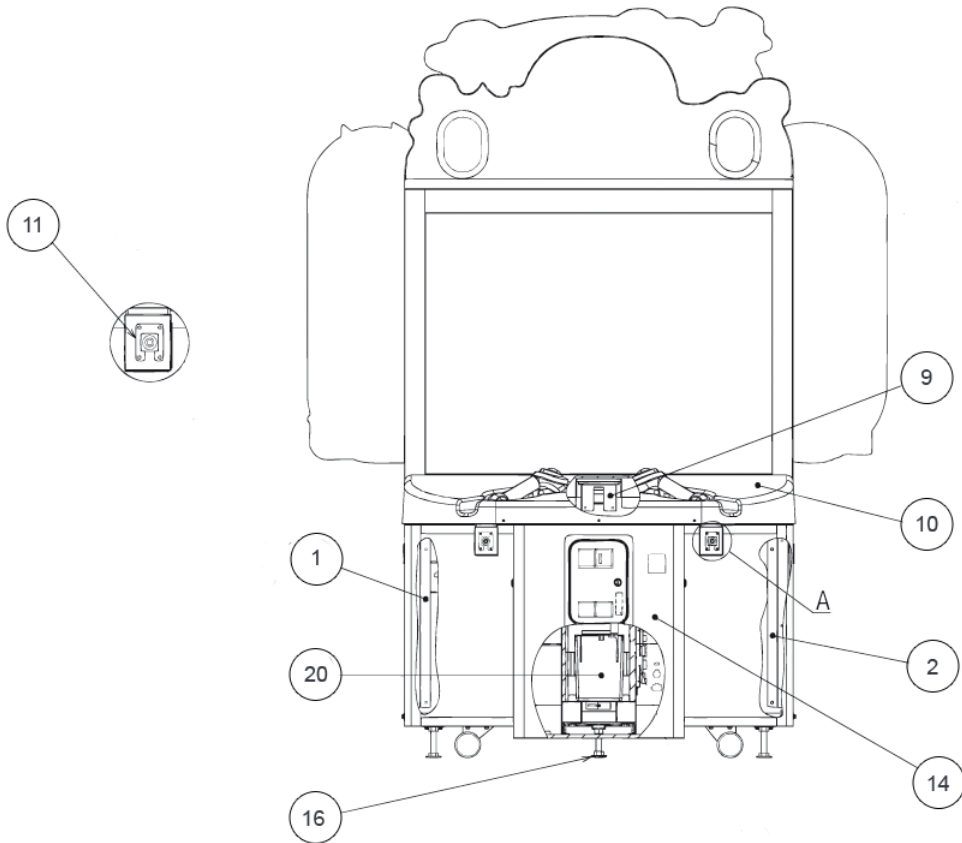
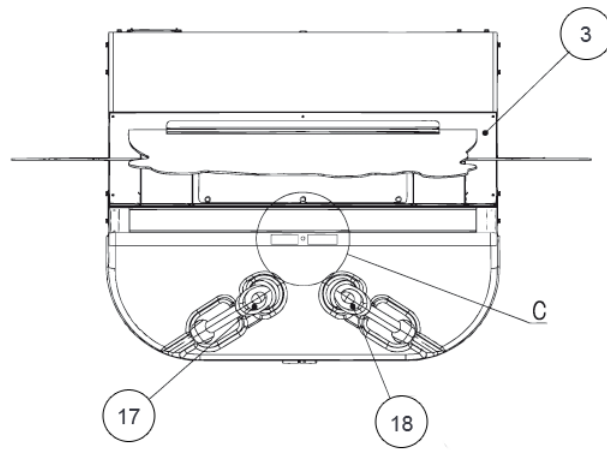
For the warning display stickers, refer to Section 1.



18 PARTS LIST

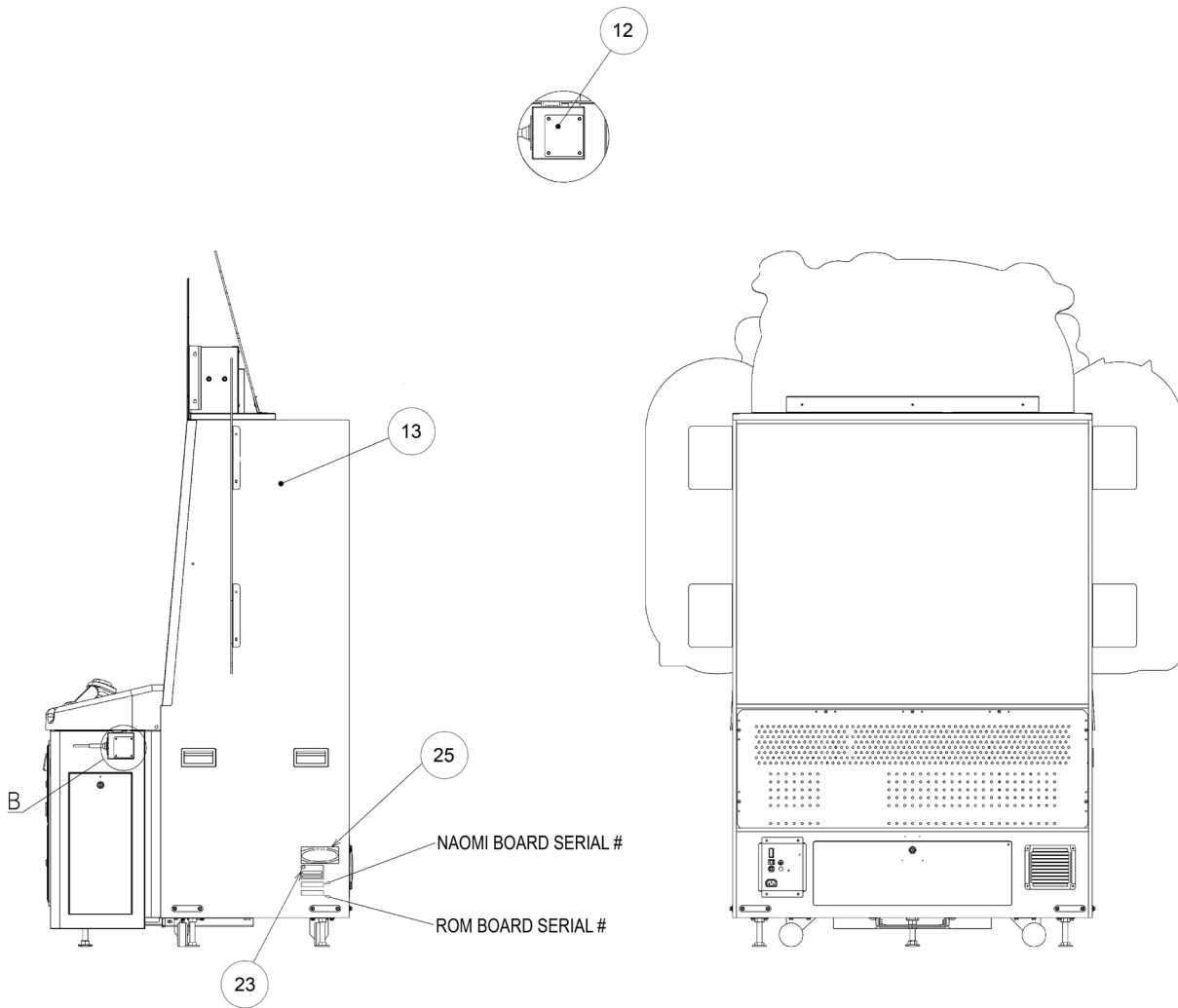
① TOP ASSY PSG (PSG-0000UK)

(D-1/3)



① TOP ASSY PSG (PSG-0000UK)

(D-2/3)

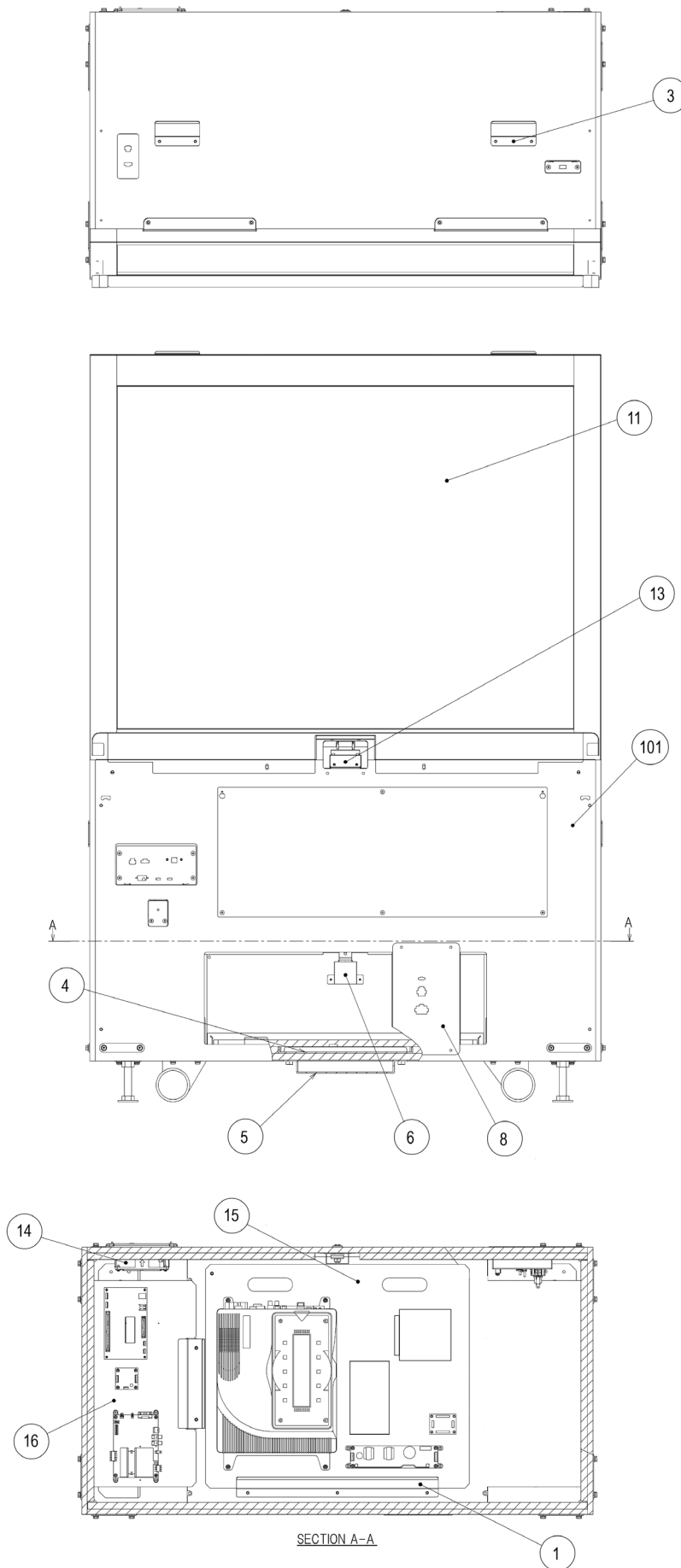


① TOP ASSY PSG (PSG-0000UK)**(D-3/3)**

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-0001UK	CTRL CABI HOLD BRKT L	
2	TFW-0002UK	CTRL CABI HOLD BRKT R	
3	TFW-0003UK	BILLBOARD LID	
9	TFW-0009UK	CAMERA COVER SASH	
10	PSG-0004-A	CONTROL PANEL COVER BLANK	
11	TFW-0011UK	CORD PLATE	
12	TFW-0012UK	CORD BOX SIDE LID	
13	PSG-1000UK	ASSY PTV	
14	PSG-1200UK	ASSY CTRL CABI	
16	TFW-1600UK	ASSY CABI GUIDE	
17	PSG-2000UK	ASSY COTROLLER BLUE	
18	PSG-2100UK	ASSY COTROLLER RED	
19	253-5366	CASH BOX	
23	421-7988-91UK	STICKER SERIAL NUMBER	
25	LB1046	LABEL TESTED FOR ELEC SAFETY	
26	SAECE-XXX	DECLARATION OF CONFORMITY	
27	440-CS0186UK	STICKER C EPILEPSY MULTI	
32	PK0422	PALLET PSG	
33	PK0424	COVER SHRINK PSG	
36	INST-KIT-PSG	ASSY INSTALLATION KIT	
405	OS1019	SELF SEAL BAG 9X21/34"	
406	514-5138-1000	FUSE 1A T 5X20 1000MA 250V	
410	LM1227	UK MAIN LEAD 10A WITH PLUG	
411	LM1246	EURO MAIN LEAD 10A	

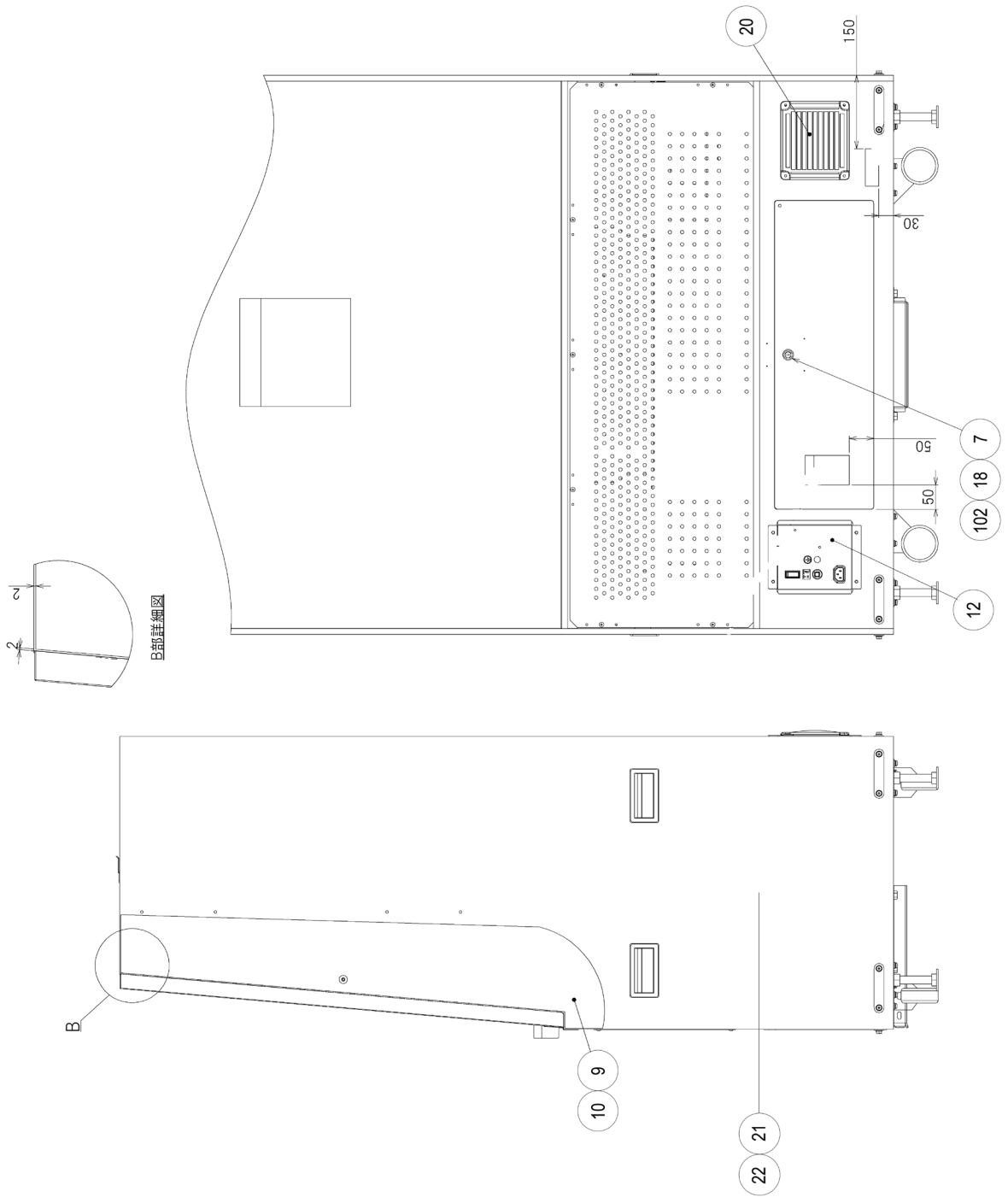
② ASSY PTV (PSG-1000UK)

(D-1/3)



② ASSY PTV (PSG-1000)

(D-2/3)

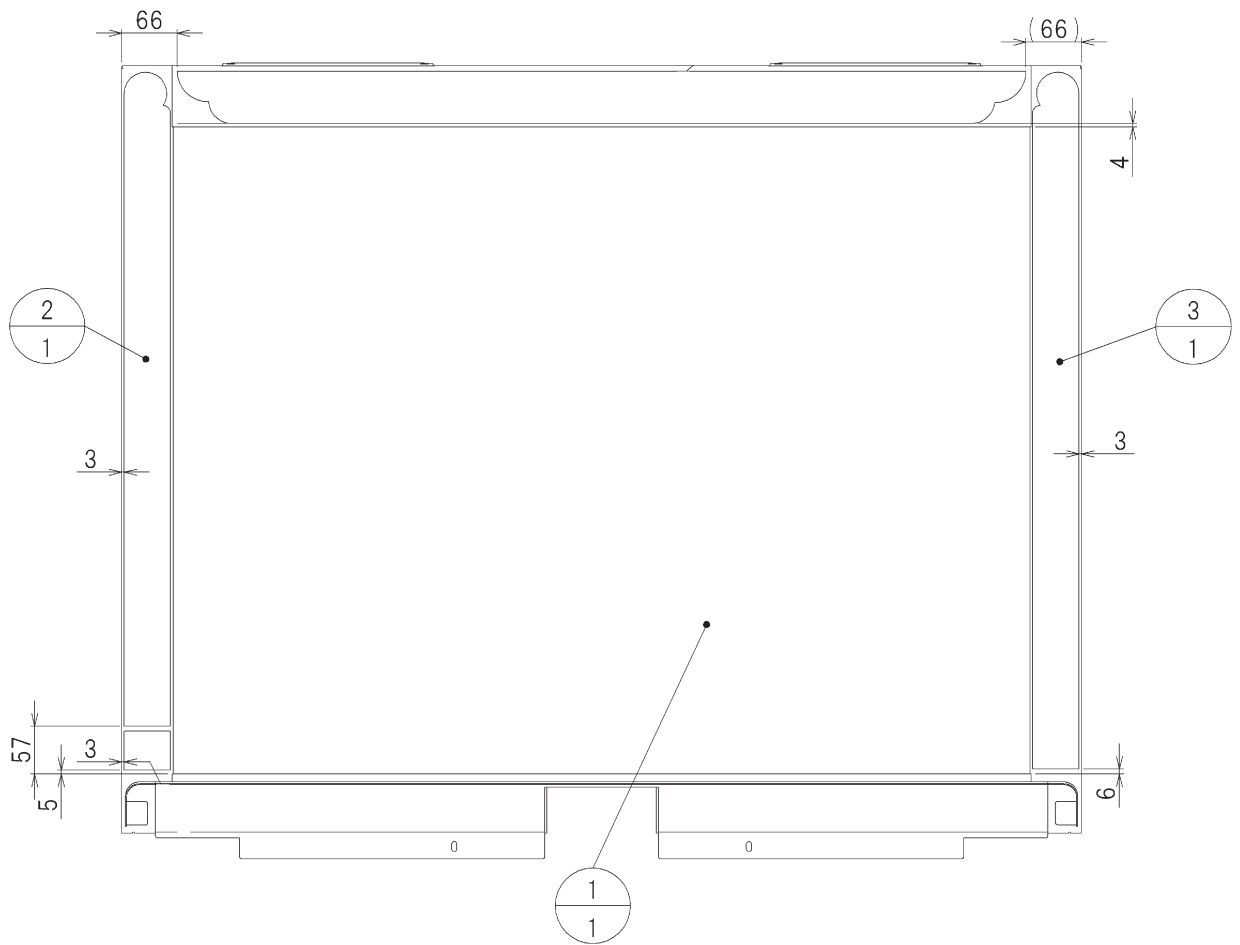


② ASSY PTV (PSG-1000UK)

(D-3/3)

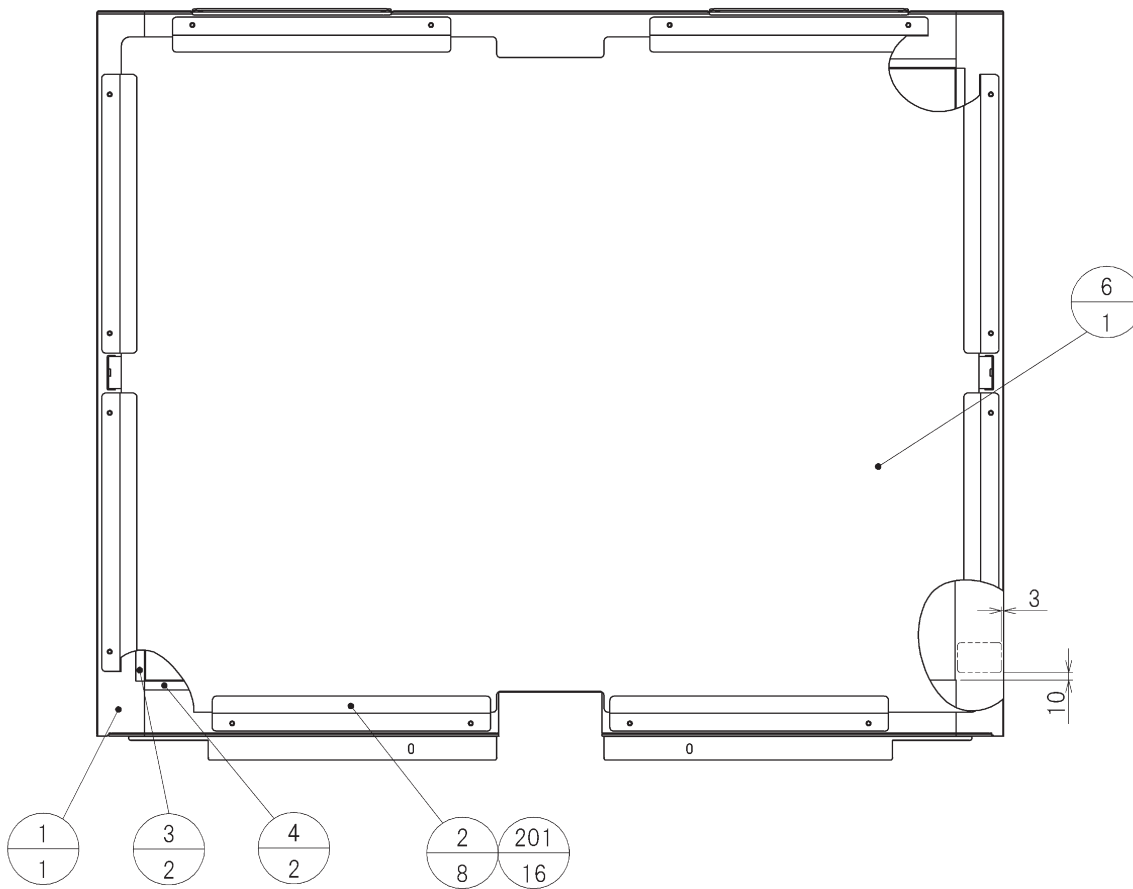
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1001UK	MAIN BD HOLD BRKT	
2	TFW-1002UK	ELEC BD HOLD BRKT	
3	TFW-1003UK	BILLBOARD HOLD BRKT	
4	TFW-1004UK	CABI GUIDE HOLDER IN	
5	TFW-1005UK	CABI GUIDE HOLDER OUT	
6	TFW-1006UK	KEY COVER BRKT	
7	TFW-1007UK	TNG BRKT	
8	TFW-1008UK	CONN PLATE	
9	PSG-1001UK	PTV SIDE STICKER L	
10	PSG-1002UK	PTV SIDE STICKER R	
11	PSG-1030UK	ASSY MASK	
12	TFW-1050UK	AC UNIT	
13	TFW-1070UK	CAMERA UNIT	
14	TFW-1080UK	FAN UNIT	
15	PSG-4000UK	ASSY MAIN BD NAOMI	
16	TFW-4100UK	ASSY ELEC BD	
18	117-0062	PLATE LOCK RETAINER	
20	253-5460-01	AIR VENT BLACK	
21	PSG-1003UK	PTV SIDE STICKER LOWER L	
22	PSG-1004UK	PTV SIDE STICKER LOWER R	
101	200-6025	PJTN DSPL 50TYPE INCL OF 5DEG	
102	220-5574UK	LOCK KEYED DIFFERENT 7087-10	
201	012-P03512-F	N6X1/2" S/TAP FLG PAS	
202	000-P00412-W	M4X12 MSCR PAN W/FS PAS	
203	000-P00416-WB	M4X16 MSCR PAN W/FS BLK	
204	000-F00412	M4X12 MSCR CSK PAS	
205	000-P00430-W	M4X30 MSCR PAN W/FS PAS	
206	068-441616	M4 WSHR 16OD FLT PAS	
207	000-P00516	M5X16 MSCR PAN W/FS PAS	
208	000-P00525-W	M5X25 MSCR PAN W/FS PAS	
209	030-000803-S	HEX BLT W/S M8X30	
210	050-F00400	M4 NUT FLG SER PAS	
213	000-P00512-WB	MSCR PH W/FS BLK M5X12	
302	TFW-6002UK	ASSY WIRE PTV DC	
303	TFW-60009UK	WH AC PTV EXT	
305	600-7009-1800	ASSY RGB CA D-SUB 15P 1800MM	
306	600-6135-44K	WIRE HARN EARTH ID4 1350MM	

③ ASSY MASK (PSG-1030UK)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1030UK	ASSY MASK	
2	PSG-1031UK	MASK STICKER L	
3	PSG-1032UK	MASK STICKER R	

4 ASSY MASK (TFW-1030UK)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1036UK	PTV MASK BRKT	
2	TFW-1032UK	PTV MASK PLATE HOLDER	
3	TFW-1033	MASK SPACER RUBBER V	
4	TFW-1034	MASK SPACER RUBBER H	
6	TFW-0601	PTV MASK PLATE	
201	050-H00500	HEX NUT M5	

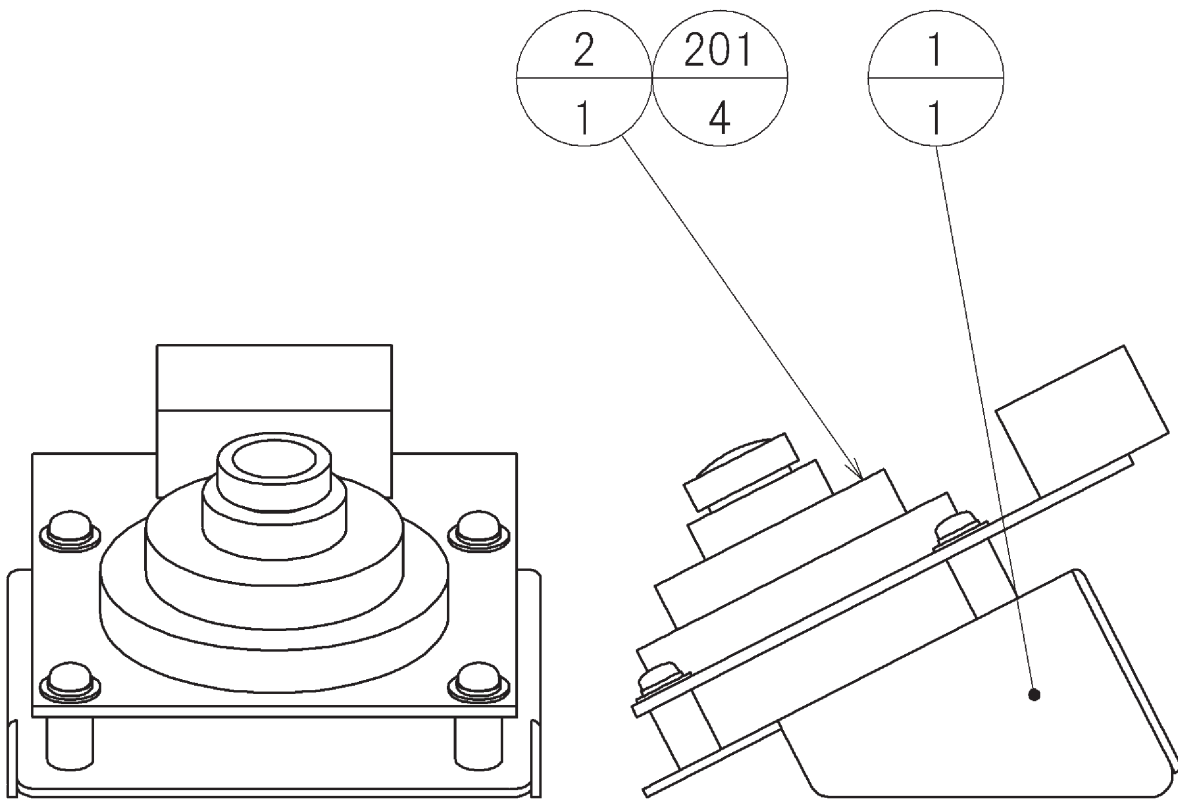
⑤ AC UNIT (TFW-1050UK)

18

PARTS LIST

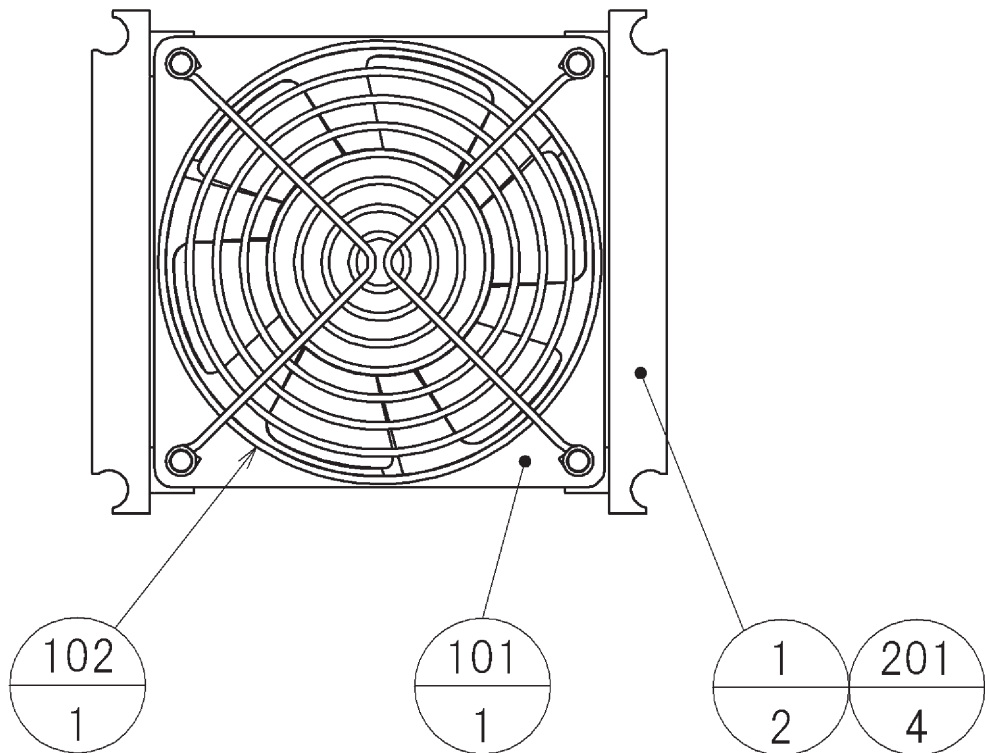
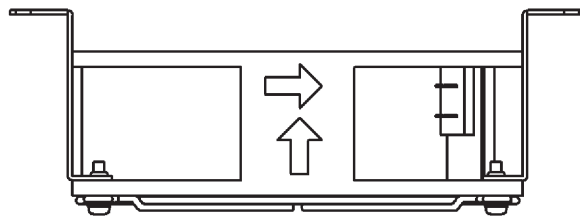
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1051UK	AC BRKT	
2	LB1126-5-250	STICKER FUSE 5A 250V	
3	LB1131	STICKER ON/OFF	
4	LB1096	STICKER PROTECTIVE EARTH	
101	EP1382	FILTER SHAFTNER	
102	EP1387	IEC INLET & SWITCH	
103	514-5078-5000	FUSE 5X20 CERAMIC SB 5000MA	
104	310-5029-D508	HEAT SHRINK SLEEVE	
202	050-H00400	HEX NUT M4	
203	060-F00400	FLT WSHR M4	
301	TFW-60001UK	WH AC IN	
302	600-9040-44K	WH EARTH STRAP 400MM M4/M4	

⑥ CAMERA UNIT (TFW-1070UK)



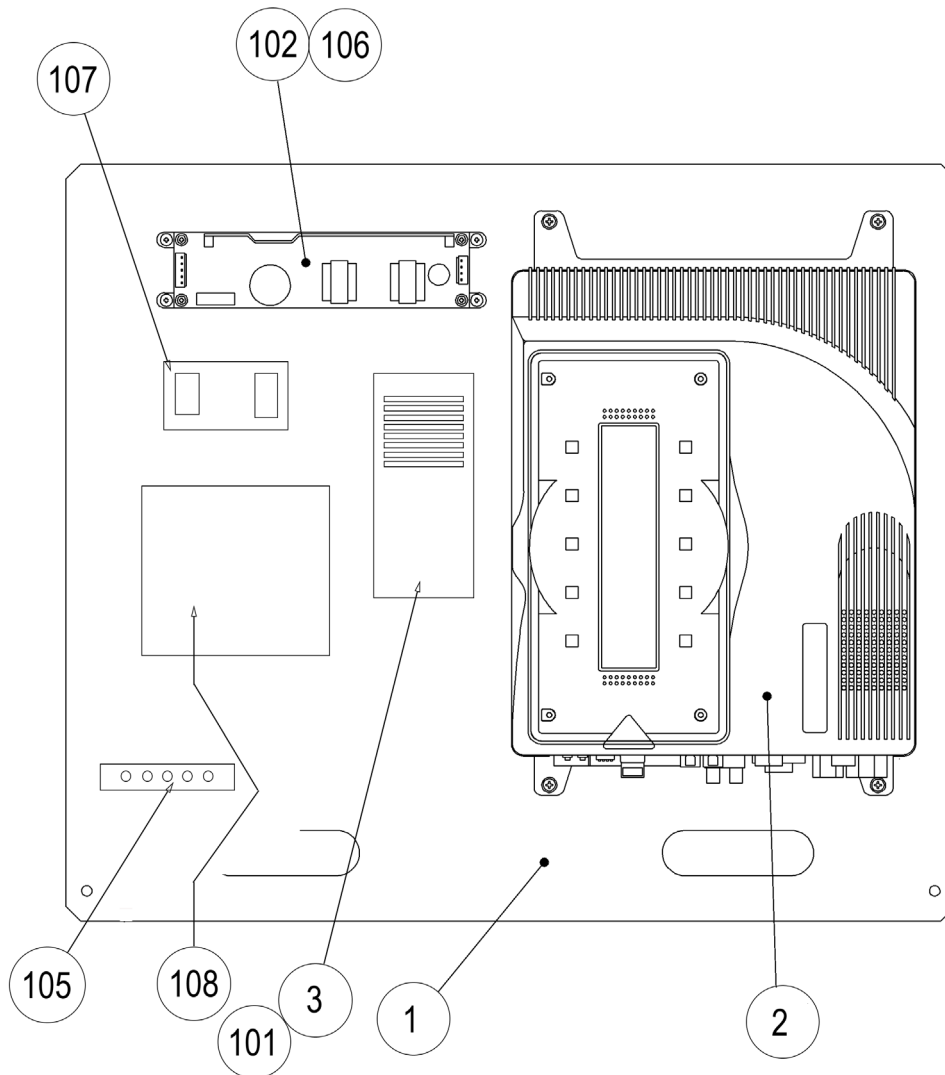
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1072UK	CAMERA BD HOLDER	
2	837-14564-91	IC BD P SENSOR CAMERA BD	
201	000-P00312-W	M SCR PH W/FS M3 × 12	

⑦ FAN UNIT (TFW-1080UK)



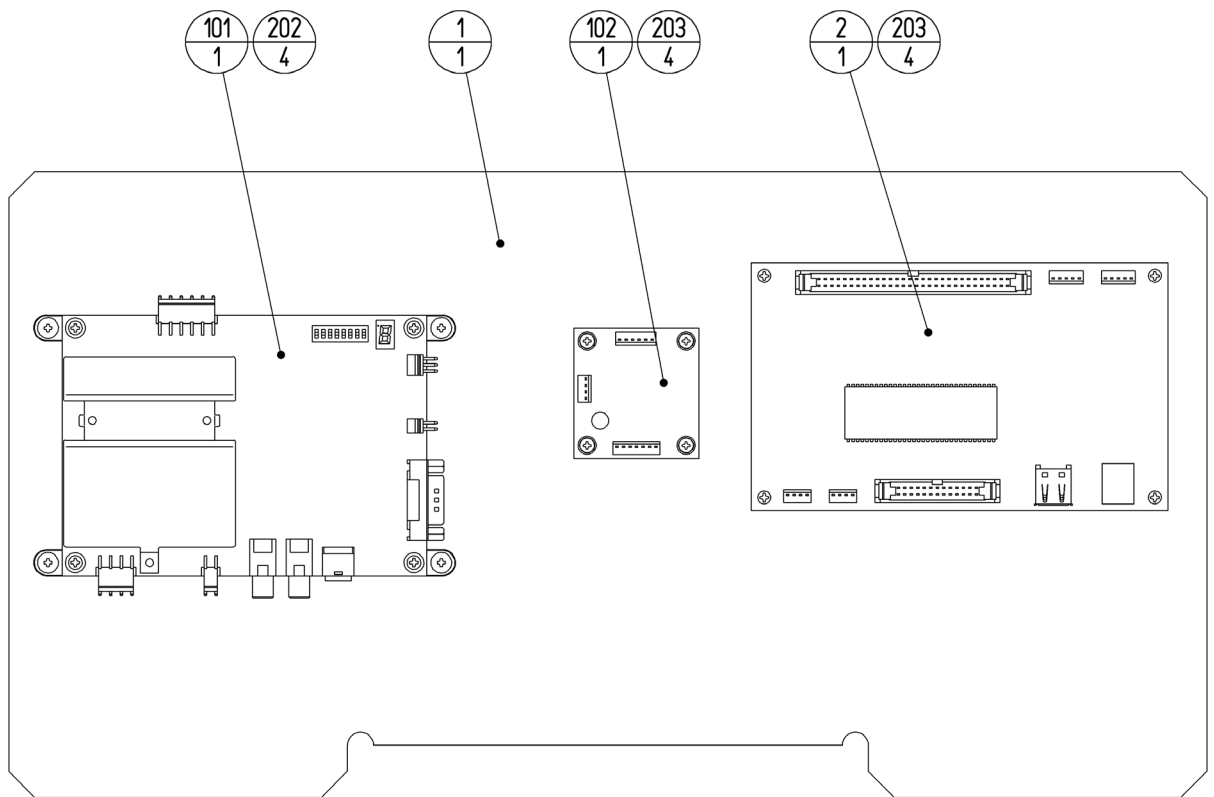
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	105-5340-01	FAN BRKT LONG	
101	260-0011-02	AXIAL FLOW FAN AC100V 50-60HZ	
102	601-8543	FAN GUARD METAL 120MM (FG-12)	
201	000-P00312-W	M SCR PH W/FS M3 × 12	
301	LGJ-60036UK	WH BILLBOARD FAN AC	

8 ASSY MAIN BD NAOMI (PSG-4000UK)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-4001UK	WOODEN BASE MAIN	
2	840-0170D-02	ASSY CASE NAO PSG EX	
3	APC-4002	SW REGU BRKT	
101	400-5443-01	SW REGU FOR CHIHIRO VA	
102	400-050-024-01	PSU 24VDC 50W MW LPS 50-24	
105	CFB-4003-01UK	EARTH TERMINAL PLATE	
106	OS1011	L-LOCK LT-320PCG	
107	838-14551-02UK	DISTRIBUTION BOARD	
108	560-LBGH-01UK	XFMR LINDBERGH 230-100VAC 8A	
201	000-P00416-W	M SCR PH W/FS M4 × 16	
202	011-F00312	TAP SCR #1 FH 3 × 12	
203	000-P00308-W	M SCR PH W/FS M3 × 8	
204	011-T03516	TAP SCR TH 3.5 × 16	
205	012-P00325	N4X1" S/TAP PAN PAS	
206	012-P03512-F	N6X1/2" S/TAP FLG PAS	
207	068-441616	M4 WSHR 16OD FLT PAS	
301	TFW-60012UK	WH AC MAIN BD	
302	TFW-60013UK	WH JVS PWR	
303	TFW-60014UK	WH DC JVS PWR OUT	
304	TFW-60015UK	WH SIGNAL MAIN BD	
305	TFW-60008UK	WH AC DIST OUT	
306	PSG-60102UK	WH AC DIST IN EXT	

9 ASSY ELEC BD (TFW-4100UK)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-4101UK	WOODEN BASE ELEC	
2	837-14505	I/O CONTROL BD FOR JVS	
101	838-14515-A0191	SOUND AMP ANALOG IN	
102	838-14361	SERIAL I/F BD MKG	
201	011-F00312	TAP SCR #1 FH 3 × 12	
202	011-T03516	TAP SCR TH 3.5 × 16	
203	011-P00325	TAP SCR PH 3 × 25	
301	TFW-6004UK	ASSY WIRE ELEC BD	
302	600-7141-100UK	CABLE JVS A-B 100CM	

10 ASSY AC BD (TFW-6004UK)

USED ON ASSY ELEC BD (TFW-4101UK)

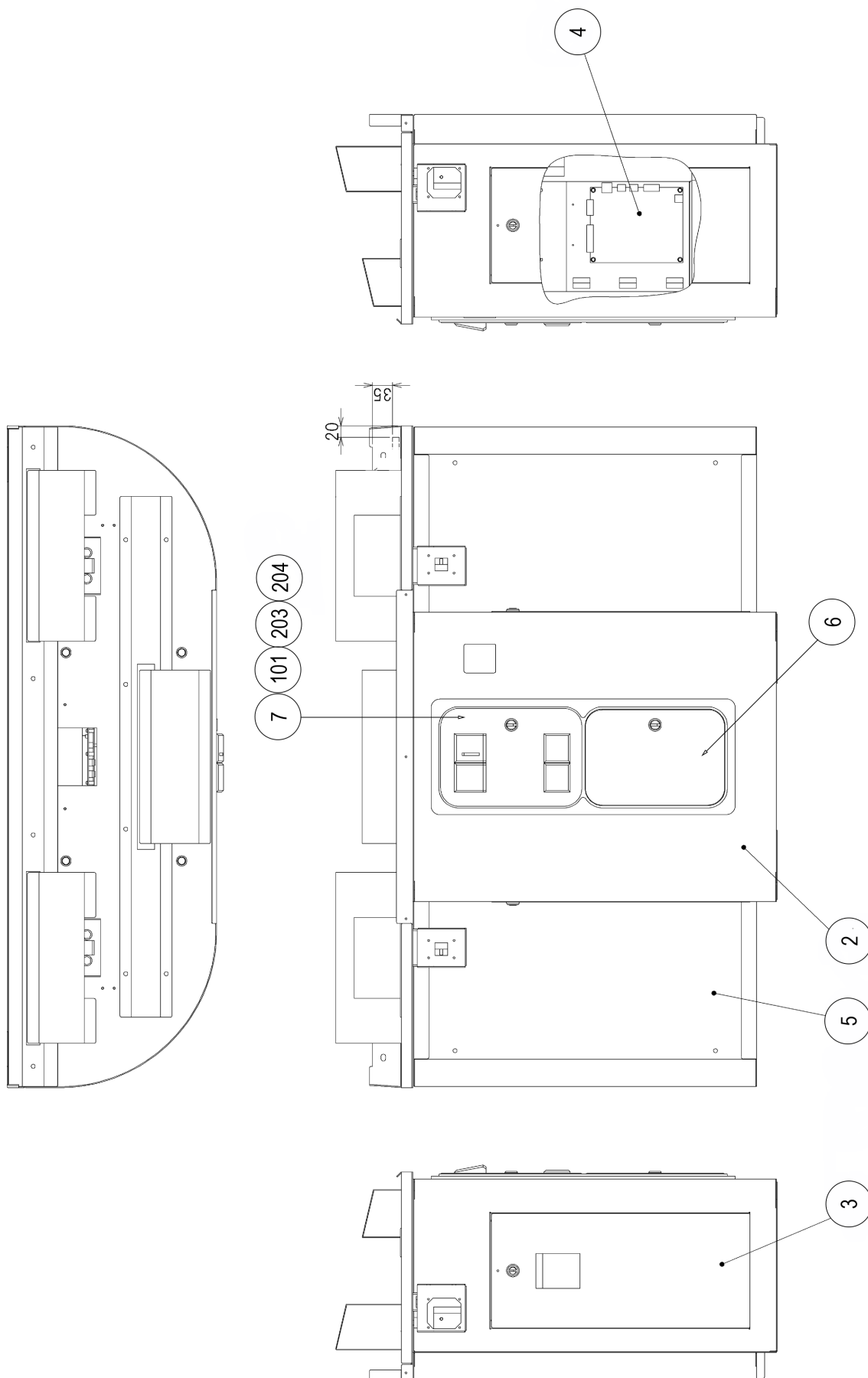
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	601-0460	CABLE TIE	
302	TFW-60016UK	WH ELEC BD SIGNAL IN	
303	TFW-60018UK	WH ELEC BD 5V IN	
304	TFW-60019UK	WH ELEC BD AUDIO	
305	TFW-60020UK	WH ELEC BD SIGNAL OUT	

⑪ ASSY WIRE PTV DC (TFW-6002UK)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	601-0460	CABLE TIE 100MM	
302	TFW-60021UK	WH AUDIO EXT	
303	TFW-60024UK	WH 232C EXT	
304	TFW-60025UK	WH DC EXT	
305	TFW-60026UK	WH SIGNAL EXT	

12 ASSY CTRL CABI (PSG-1200UK)

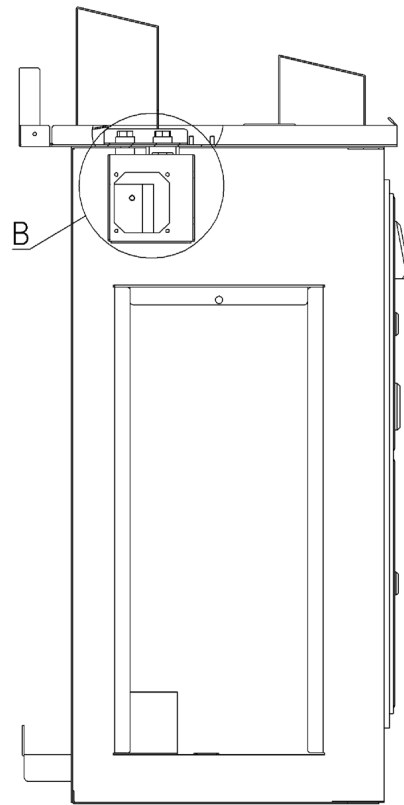
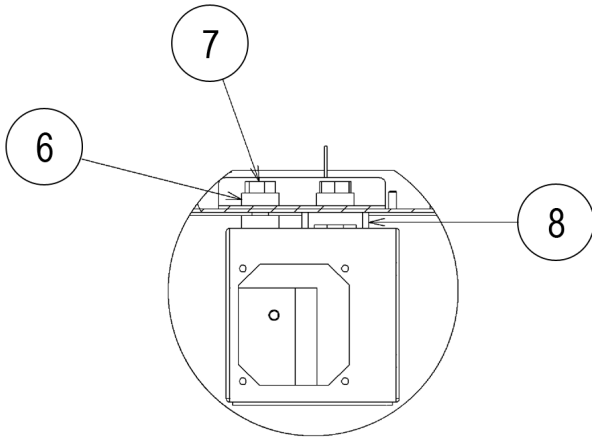
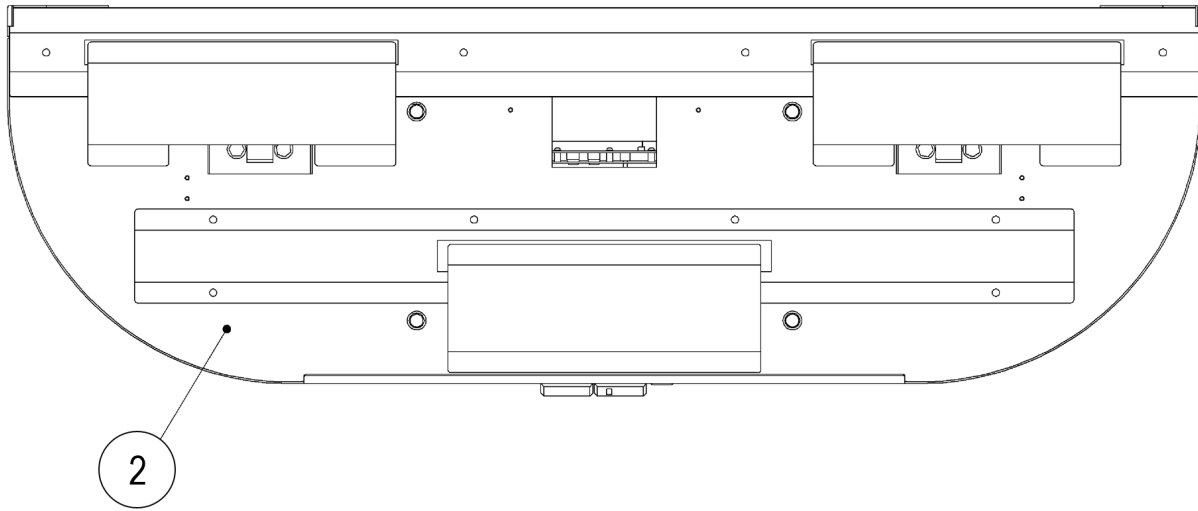
(D-1/2)

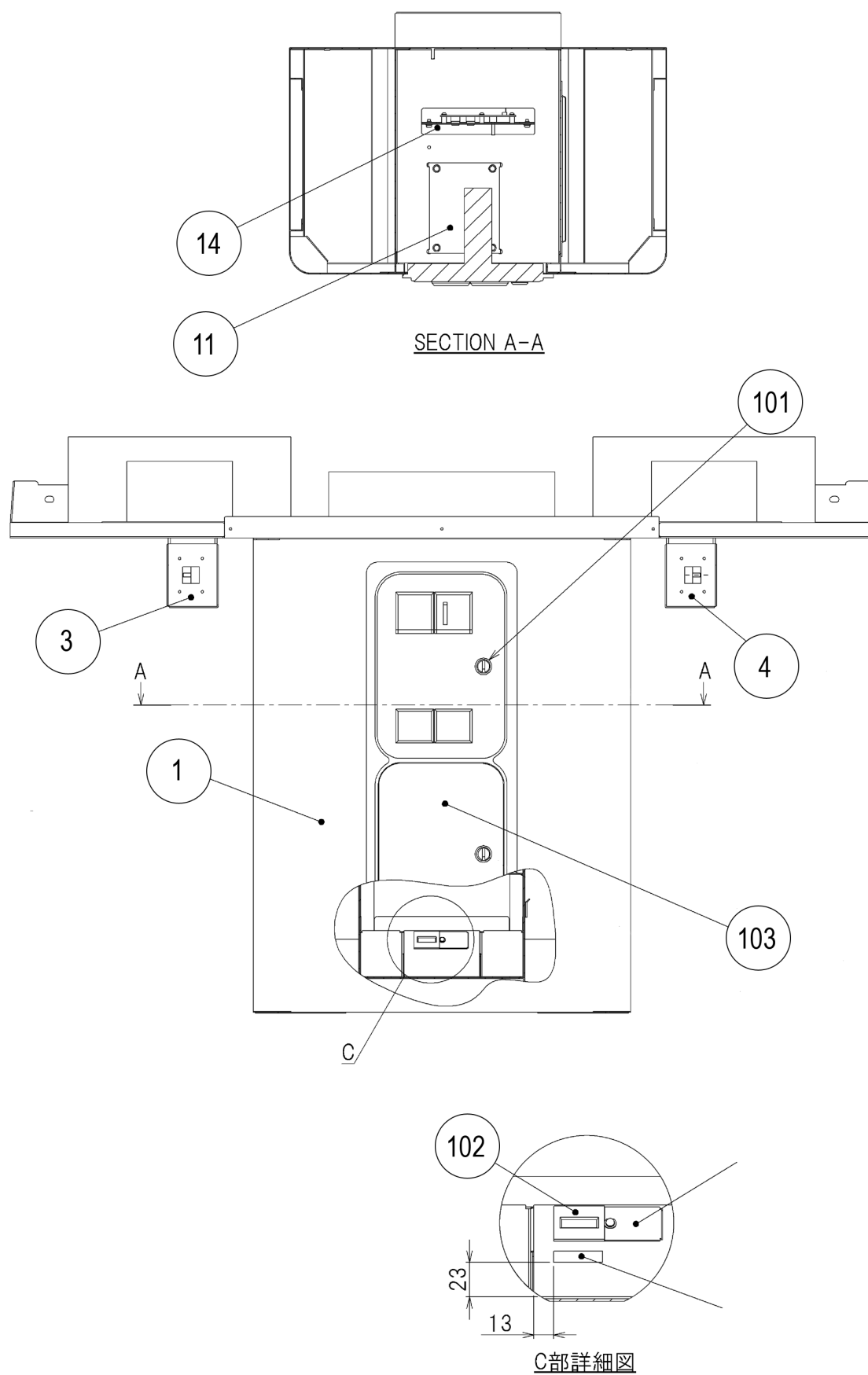


12 ASSY CTRL CABI (PSG-1200UK)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
2	PSG-1300UK	ASSY SUB CTRL CABI	
3	TFW-1350UK	ASSY SIDE LID	
4	PSG-1360UK	CTRL BD UNIT	
5	TFW-1370UK	ASSY PTV LOWER PANEL	
6	PSG-1380UK	ASSY SECURITY LOCKING	
7	TFW-1309UK	BRKT EXCEL BD	
101	EP1380	CREDIT BD EXCEL	
202	000-P00416-W	M4X16 MSCR PAN W/FS PAS	
203	280-L00706-PM	STANDOFF 6.4L 4MM	
204	050-F00400	M4 NUT FLG SER PAS	
205	030-000620-S	M6X20 BLT W/S PAS	
206	068-652016	M6 WSHR 20OD FLT PAS	





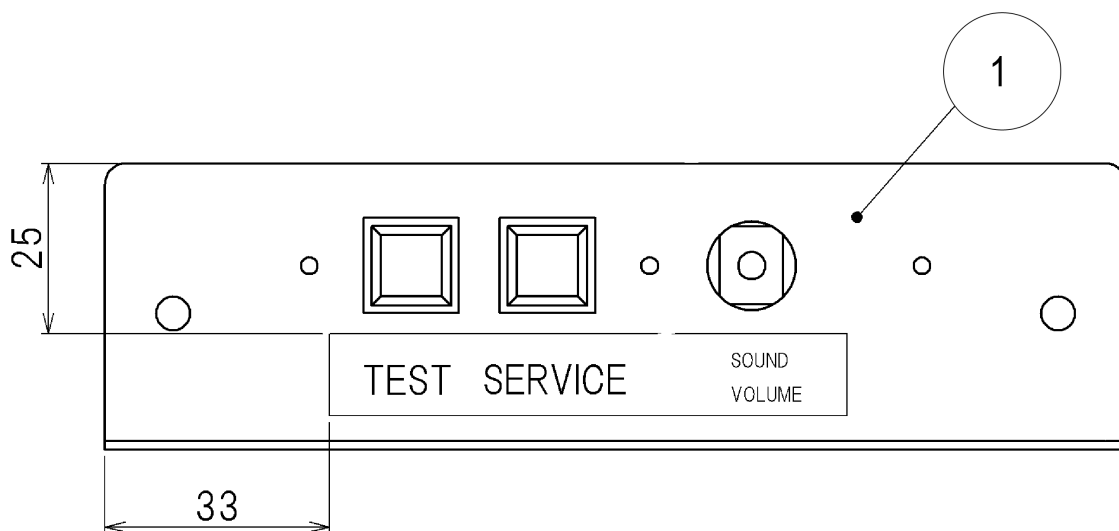
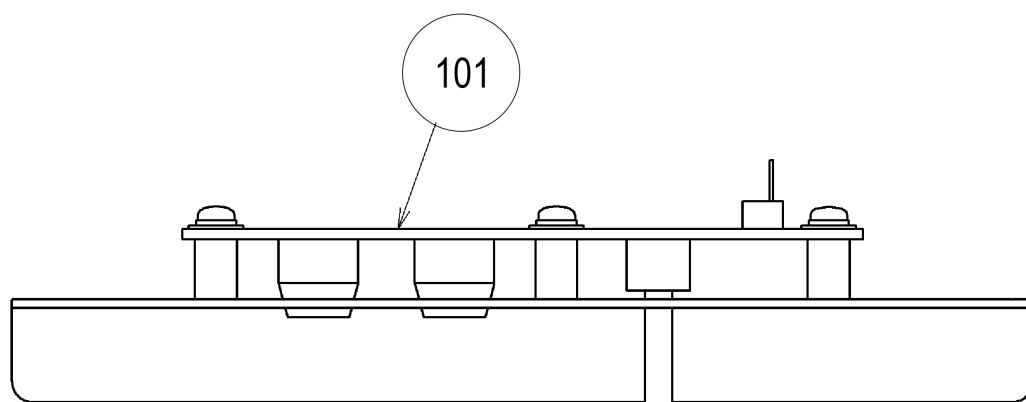
13 ASSY SUB CTRL CABI (PSG-1300UK)**(D-3/3)**

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1301UK	CTRL CABI BRKT	
2	TFW-1302UK	CTRL PANEL BASE BRKT	
3	TFW-1303UK	CORD BOX L	
4	TFW-1304UK	CORD BOX R	
6	SMB-1403	HOLDER PIN	
7	SMB-1404	HOLDER RUBBER	
8	TMB-1406	HOLDER RUBBER FRONT	
11	DUT-0302UK	COIN PATH PLATE	
14	TFW-1320UK	SW UNIT	
15	TFW-6003UK	ASSY WIRE CABINET DC	
101	220-5347-01	DOOR DFMD W/FR&LOCK C120 UNIV	
102	220-5643UK	COIN METER SMALL 12VDC	
103	220-5727-01B	STS SECURITY DOOR	
104	220-5574UK	LOCK KEYED DIFFERENT 7087-10	
201	000-P00308-W	M SCR PH W/FS M3 × 8	
202	000-P00408-W	M SCR PH W/FS M4 × 8	
203	050-F00400	FLG NUT M4	
204	030-000820-W	HEX BLT W/FS M8 × 20	
303	TFW-60032UK	WH TO CTRL UNIT EXT	
304	TFW-60034UK	WH CAMERA BD	
305	600-9100-45K	WH EARTH 1000MM M4/M5	
306	600-9100-44K	WH EARTH 1000MM M4/M4	
307	PSG-60004UK	WH TO LED BD	
308	TFW-60029UK	WH COIN MECH	

18

PARTS LIST

14 SW UNIT (TFW-1320UK)

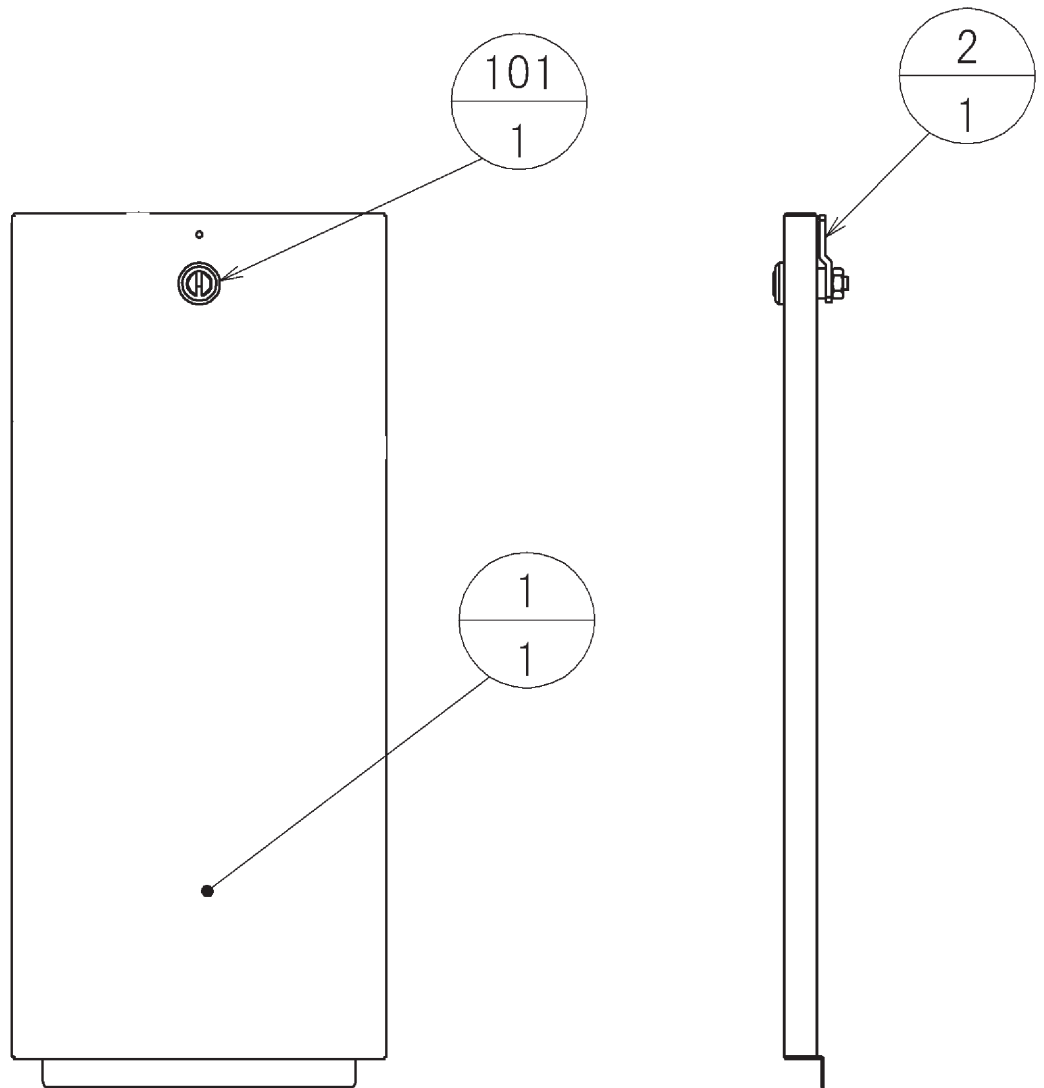


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1321UK	SW HOLD BRKT	
101	838-14548-01UK	SW & C VOL BD	
201	000-P00308-W	M SCR PH W/FS M3 × 8	

15 ASSY WIRE CABINET DC (TFW-6003UK)

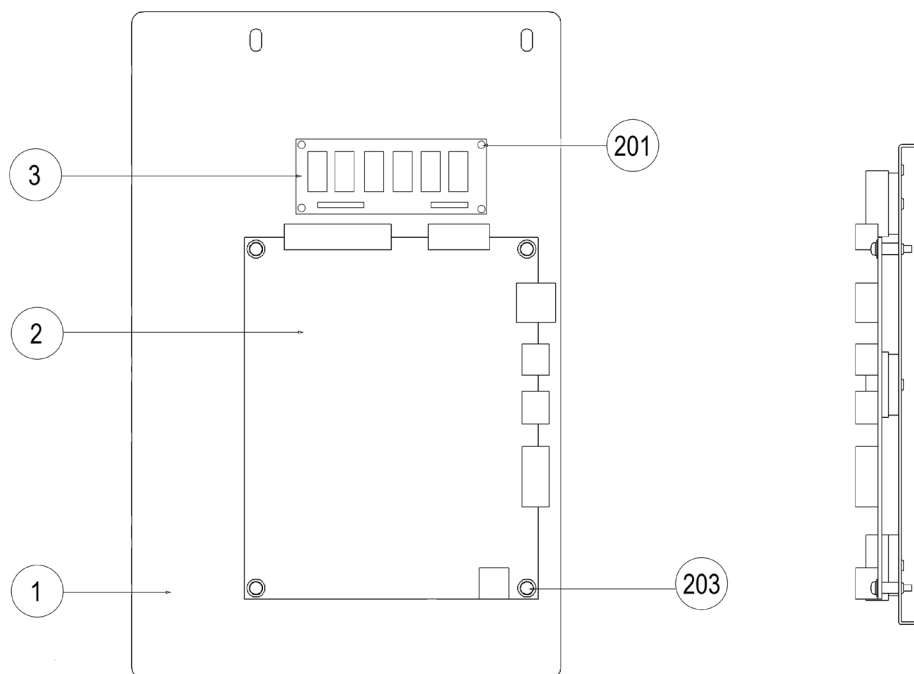
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	601-0460	PLASTIC TIE BELT 100 MM	
301	TFW-60027UK	WH CTRL BD 232C	
302	TFW-60028UK	WH CTRL BD PWR	

①⑥ ASSY SIDE LID (TFW-1350UK)



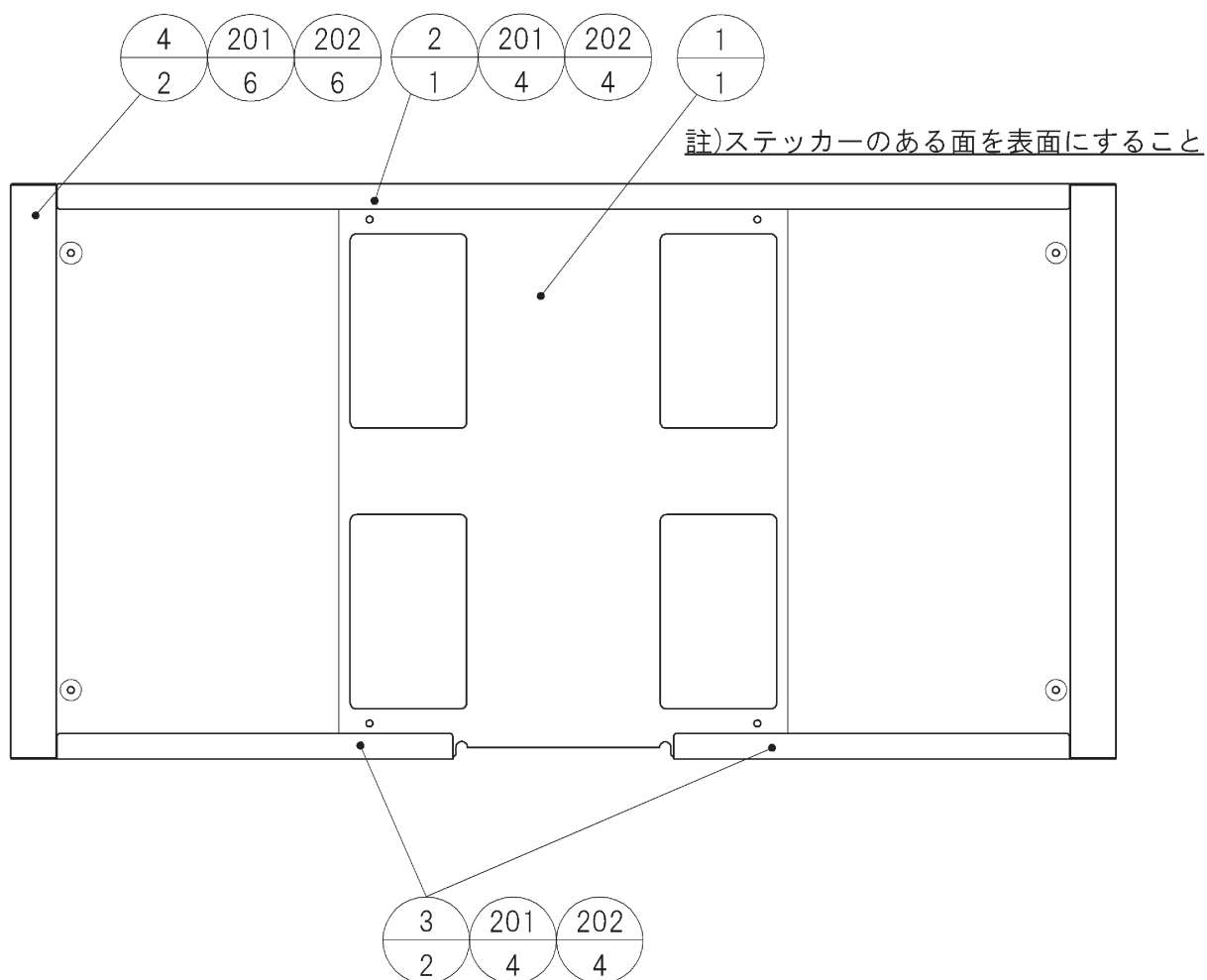
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1352UK	CTRL CABI SIDE LID	
101	220-5574UK	LOCK KEY DIFFER	

17 CTRL BD UNIT (PSG-1360UK)

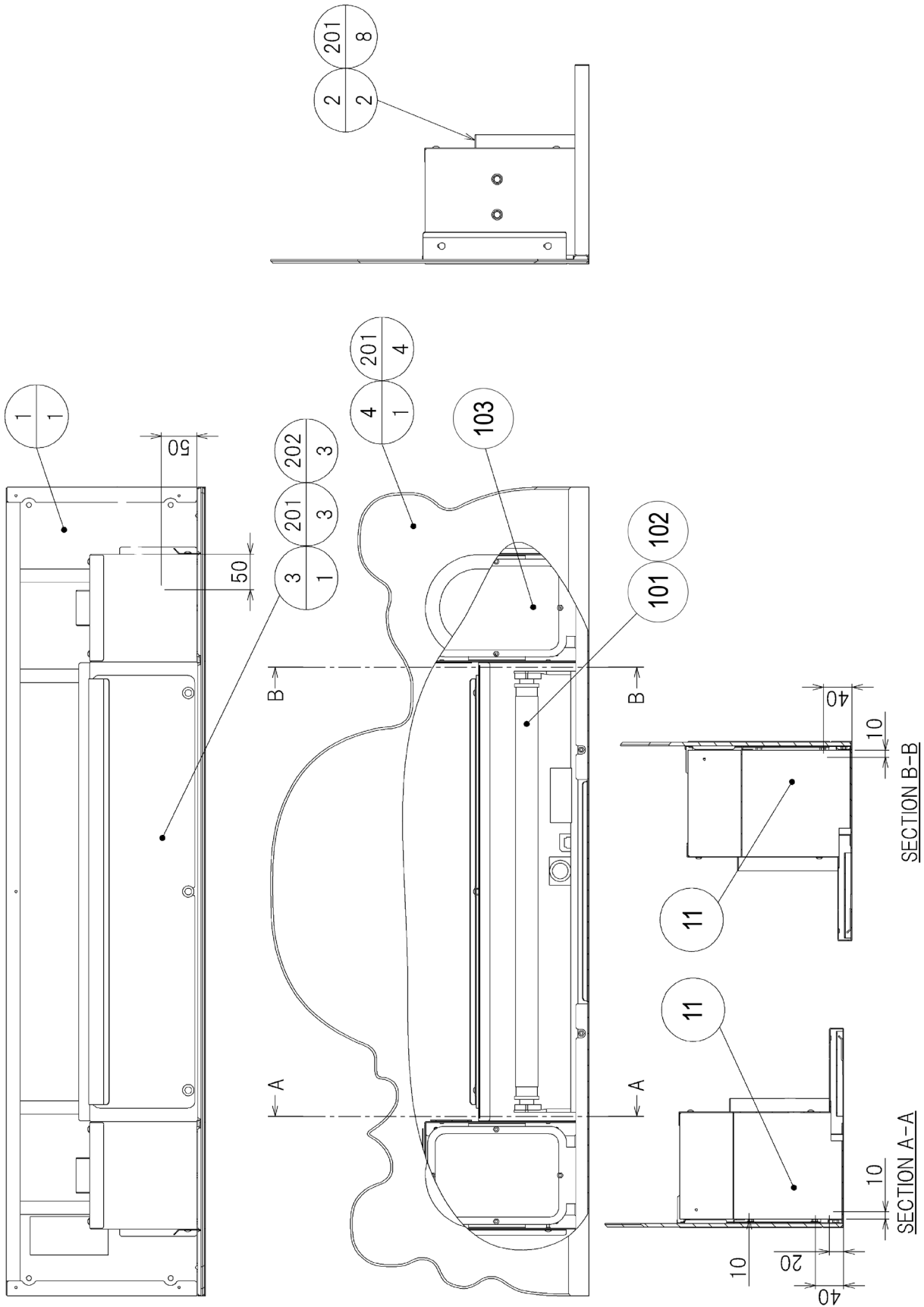


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1361UK	CTRL BD HOLDER	
2	837-14672	IC BD P SENSOR 2 MAIN BD	
3	838-0004UK	DC FUSE BD	
201	000-P00320-W	M3X20 MSCR PAN W/S W/FS PAS	
202	000-F00310	M SCR FH M3 × 10	
301	TFW-60030UK	WH TO CTRL UNIT	
302	TFW-60031UK	WH TO CAMERA BD	
303	PSG-60005UK	WH TO 500MA FUSE	

18 ASSY PTV LOWER PANEL (TFW-1370UK)



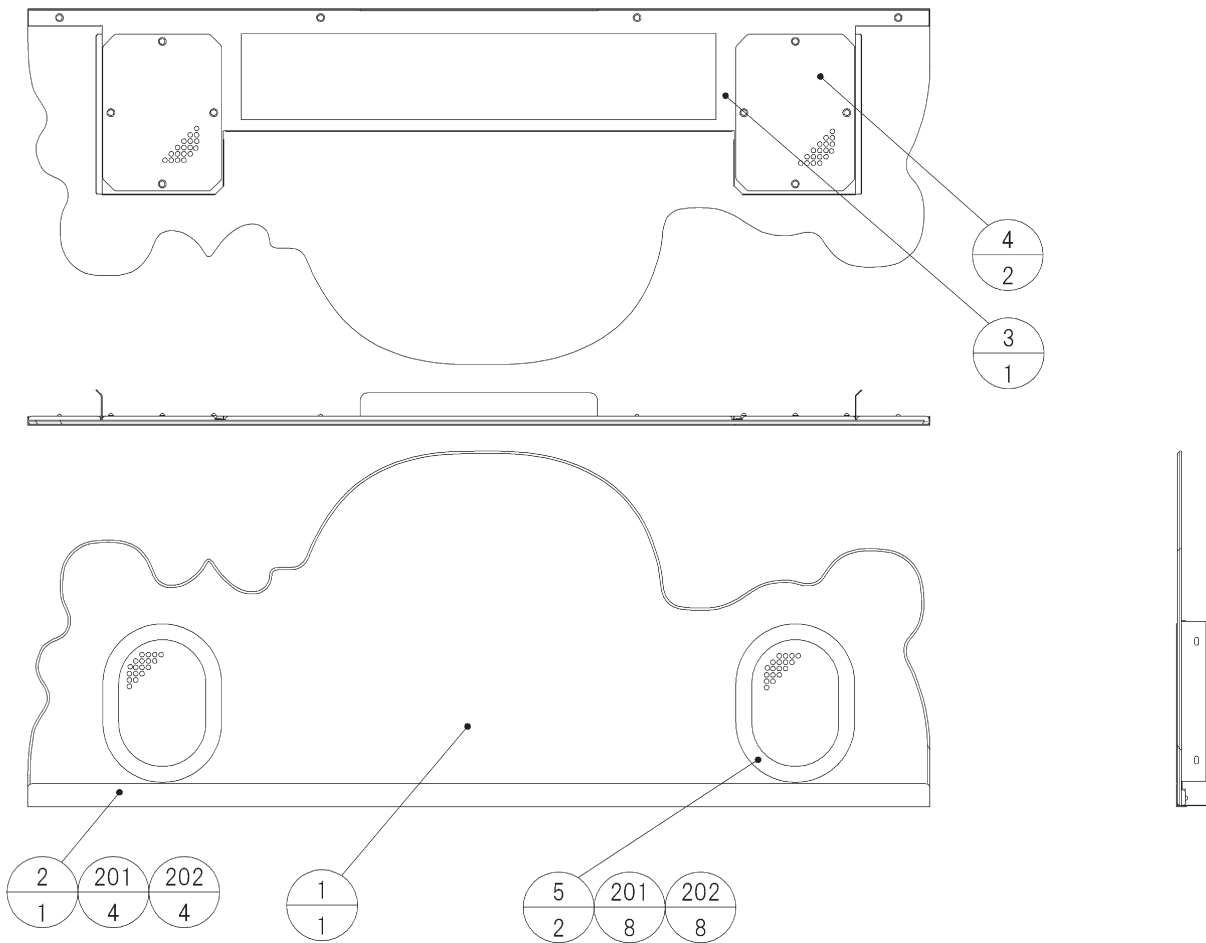
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1371UK	PANEL BOARD	
2	TFW-1372UK	PANEL BRKT UPPER	
3	TFW-1373UK	PANEL BRKT LOWER	
4	TFW-1374UK	PANEL BRKT SIDE	
5	PSG-1375UK	STICKER LOWER L	NOT SHOWN
6	PSG-1376UK	STICKER LOWER R	NOT SHOWN
201	050-F00500	FLG NUT M5	
202	068-552016	FLT WSHR 5.5-20 × 1.6	



19 ASSY BILLBOARD (PSG-1500UK)**(D-2/2)**

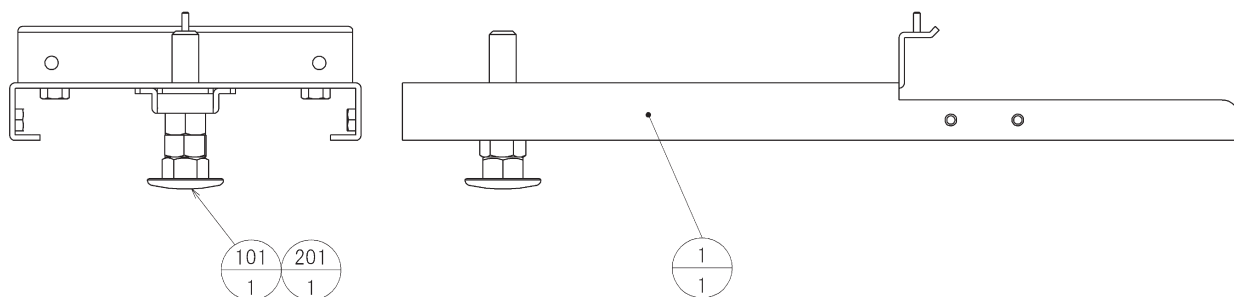
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1501UK	BILLBOARD BOX	
2	TFW-1502UK	SPEAKER LID	
3	TFW-1503UK	FL PLATE	
4	PSG-1550UK	ASSY BILLBOARD FRONT PLATE	
5	LB1104	STICKER CAUTION HOT SURFACE	
10	LB1102	STICKER DANGEROUS VOLTAGE	
11	PSG-1556UK	SPEAKER BOX	
12	PSG-1557UK	BRKT SPKR HOLDER	
101	390-5695-40-DUK	FL TUBE 40W 600L 1.5" DIA	
102	390-5695-40-CUK	FL TRAY 110V 40W (T12)	
103	130-013-04040WP	SPEAKER 4OHM 40W	
201	000-T00408	M SCR TH M4 × 8	
202	068-441616	FLT WSHR 4.4-16 × 1.6	
203	000-P00430-W	M SCR PH W/FS M4 × 30	
204	000-P00512-W	M SCR PH W/FS M5 × 12	
205	000-F00612	M6X12 MSCR CSK PAS	
206	FAS-290050	HEX SKT SCR BH CRM M8X20	
301	TFW-60022UK	WH AUDIO BILLBOARD	
302	NCR-60420UK	WH FL	
303	PSG-60101UK	WH SPKR	

20 ASSY BILLBOARD FRONT PLATE (PSG-1550UK)



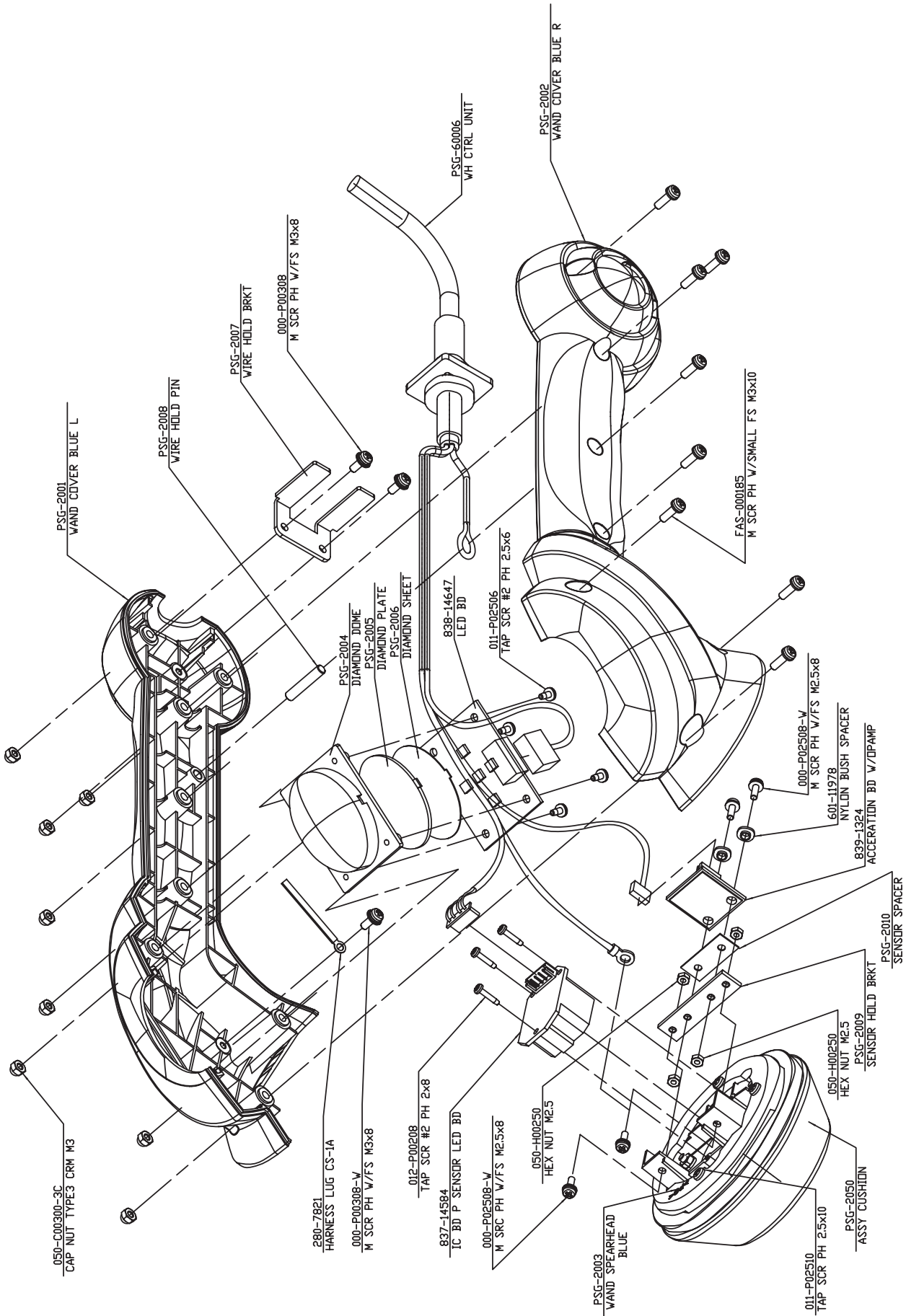
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	PSG-1551	BILLBOARD DESIGN PLATE PSG JP	
2	TFW-1552UK	DESIGN PLATE FRONT HOLDER	
3	TFW-1553UK	DESIGN PLATE REAR HOLDER	
4	TFW-1554UK	SPEAKER NET	
5	TFW-1555	SPEAKER MASK	
201	050-C00400-3B	CAP NUT TYPE3 BLK M4	
202	060-F00400-0B	FLT WSHR BLK M4	
203	050-F0040-0B	M4 NUT FLG PAS	

21 ASSY CABI GUIDE (TFW-1600UK)

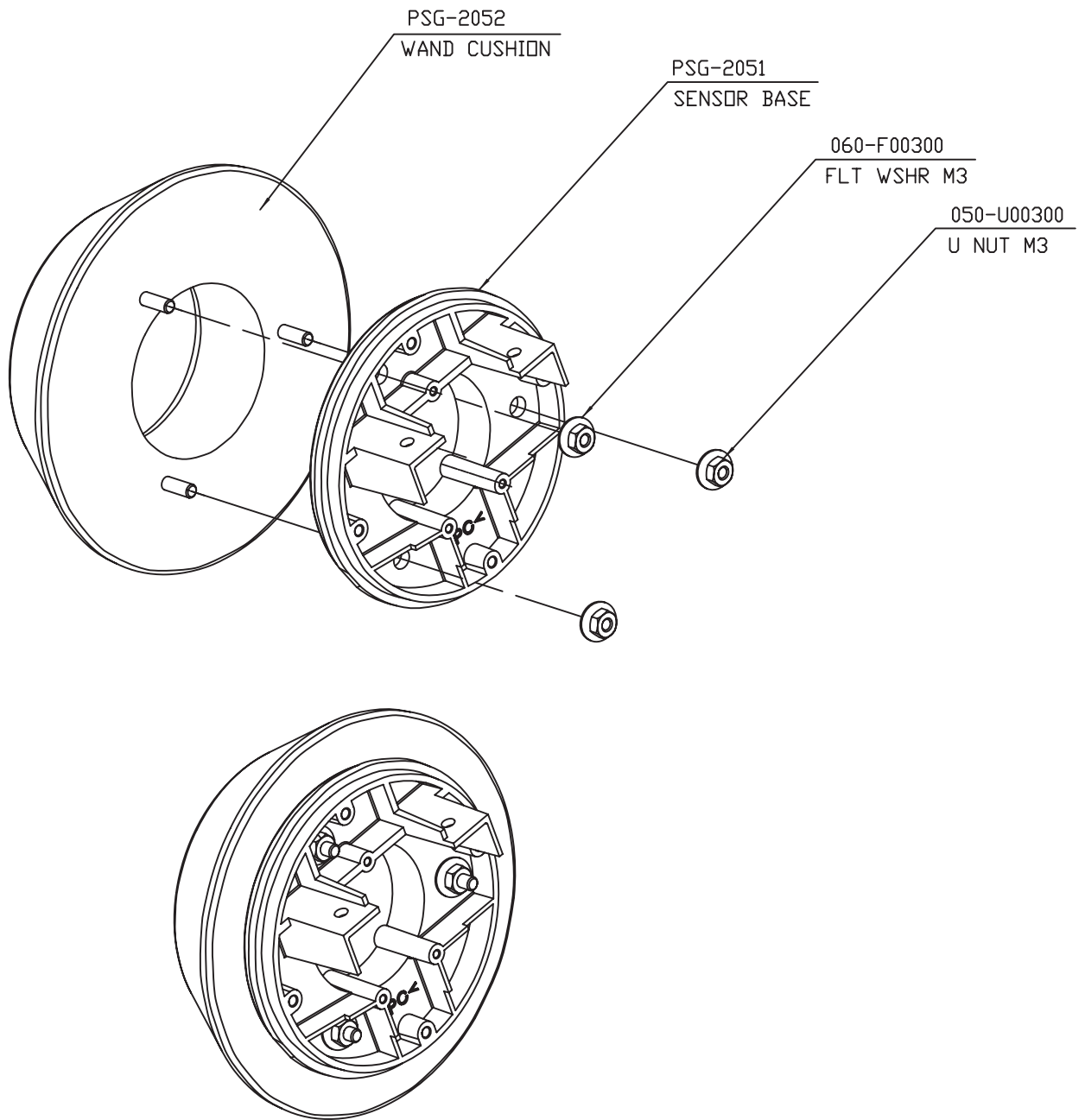


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TFW-1601UK	CABI GUIDE BRKT	
101	601-5699X	LEG ADJUSTER BOLT M16 × 75	
201	050-H01600	HEX NUT M16	

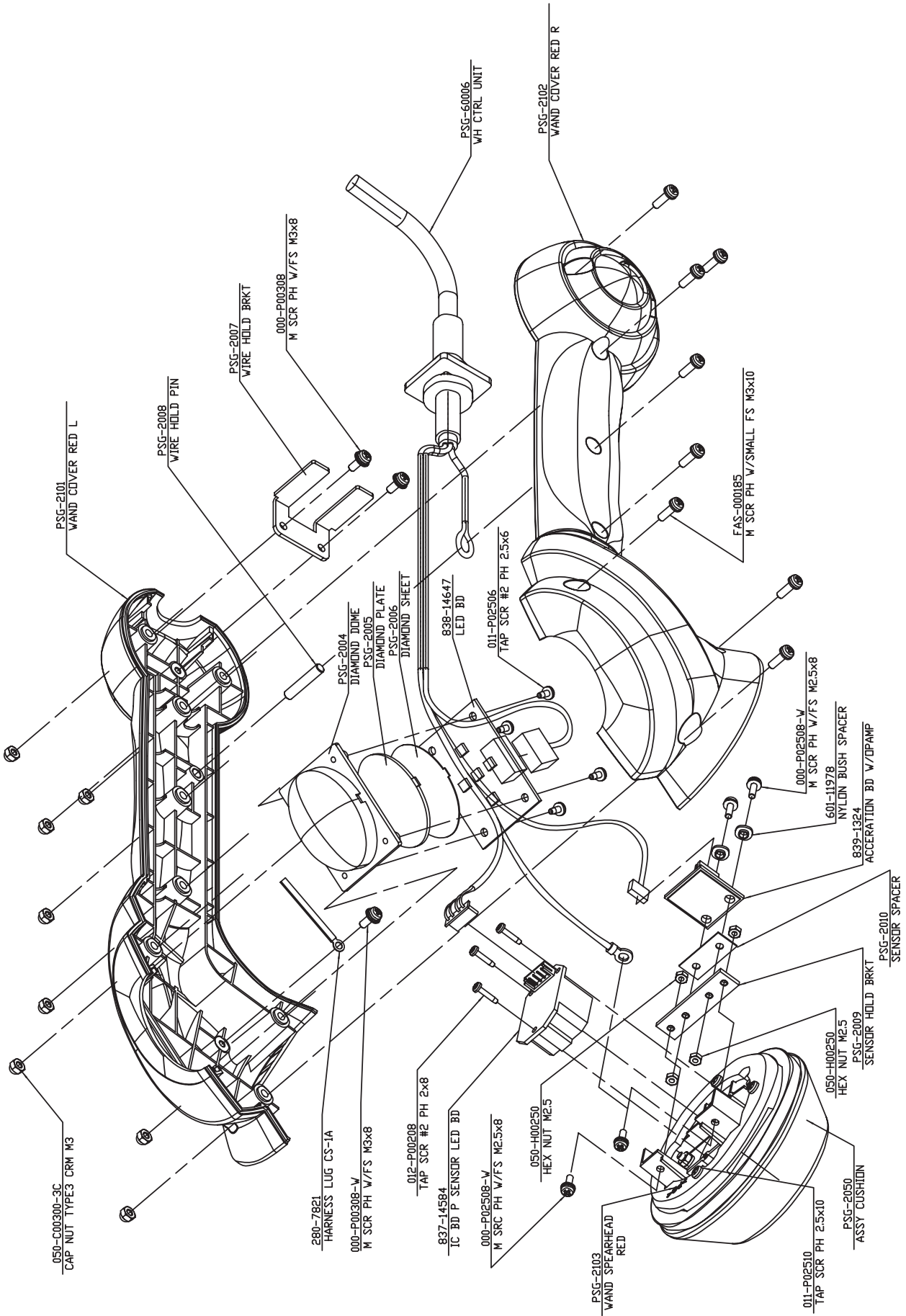
22 ASSY CONTROLLER BLUE (PSG-2000)



23 ASSY CUSHION (PSG-2050)



24 ASSY CONTROLLER RED (PSG-2100)



19 WIRE COLOR CODE TABLE

⚠ WARNING

The DC power wire color for this product is different from previous SEGA titles. Working from the previous wire colors will create a high risk of fire.

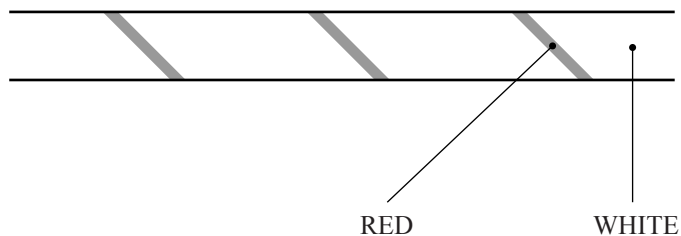
The color codes for the wires used in the diagrams in the following chapter are as follows.
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

CODE	WIRE COLOR
10	RED
20	BLUE
30	YELLOW
40	GREEN
50	WHITE
70	ORANGE
80	BLACK
90	GRAY
A	PINK
B	SKYBLUE
C	BROWN
D	PURPLE
E	LIGHT GREEN

If the right-hand side numeral of the code is 0, then the wire will be of a single color shown by the left-hand side numeral (see the above).

Note 1: If the right-hand side numeral is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

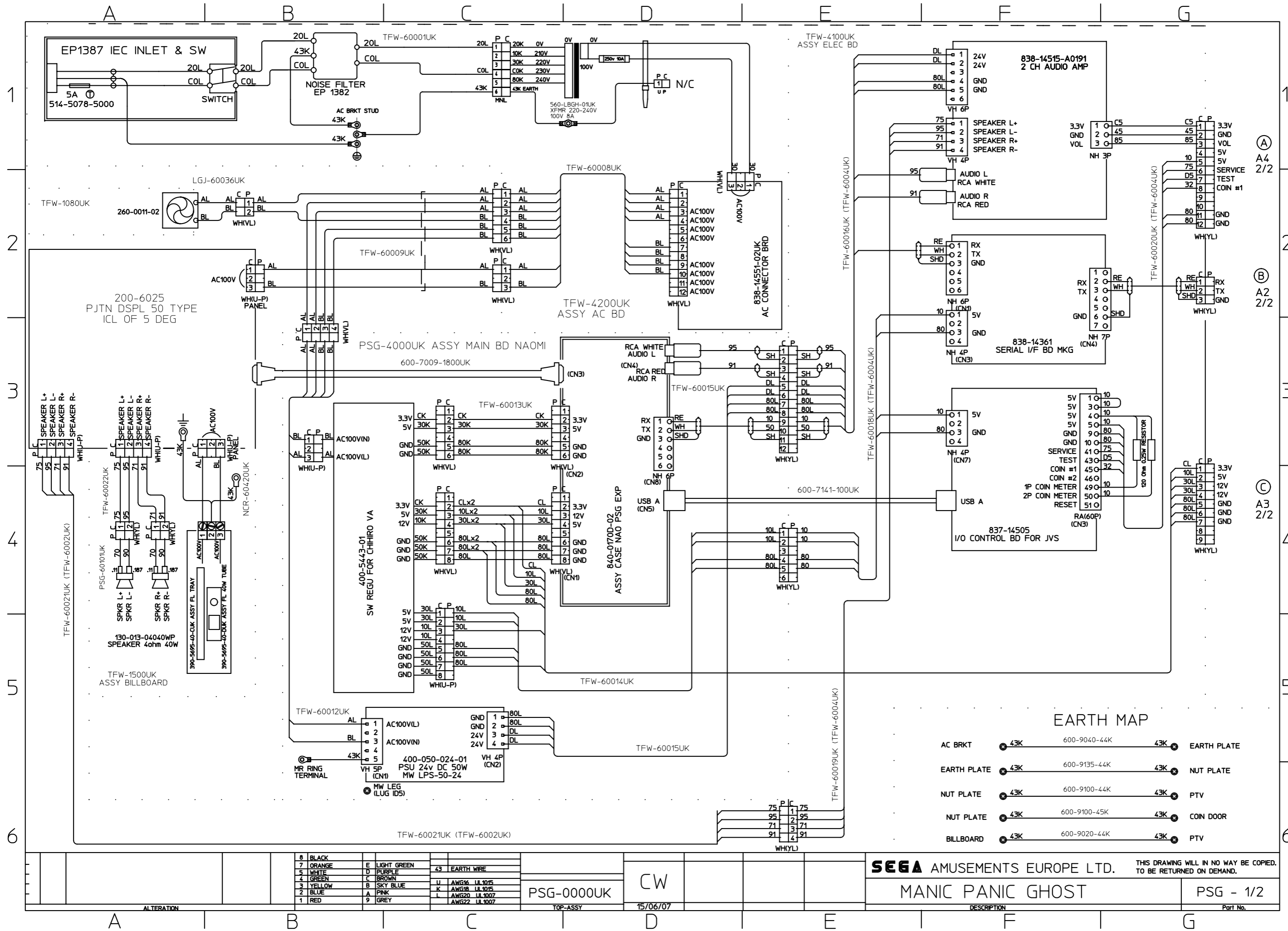
<Example> 51.....WHITE/RED



Note 2: The character following the wire color code indicates the size of the wire.

- U : AWG16
- K : AWG18
- L : AWG20
- None : AWG22

20 総合配線図 (D-1/2)



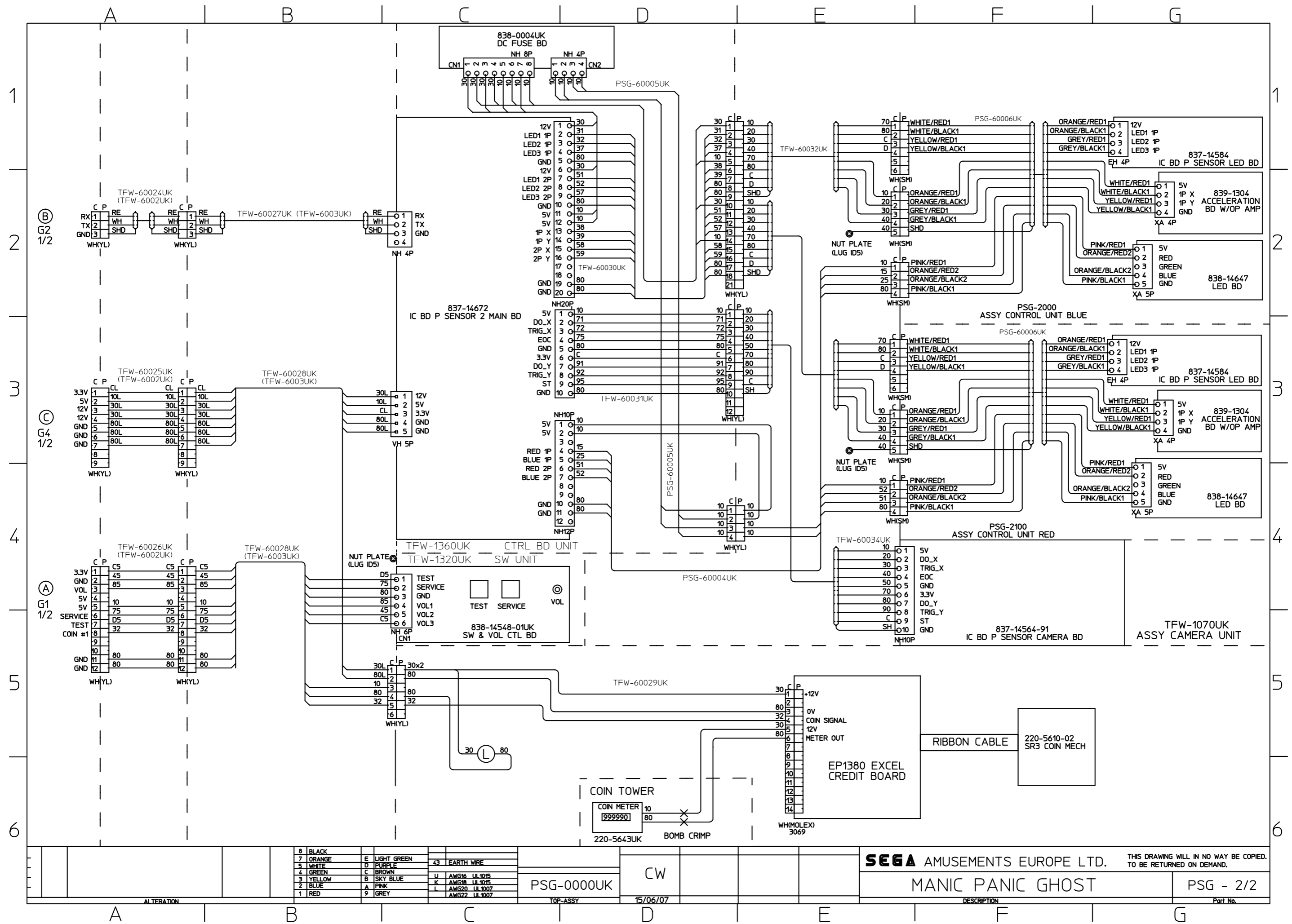
8	BLACK	E	LIGHT GREEN	43	EARTH WIRE
7	ORANGE	D	PURPLE	U	AWG16 UL1015
5	WHITE	C	BROWN	K	AWG18 UL1015
4	GREEN	B	SKY BLUE	J	AWG20 UL1007
3	YELLOW	A	PINK	I	AWG22 UL1007
2	BLUE	9	GREY		
1	RED				

PSG-0000UK	CW	15/06/07
TOP-ASSY		

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MANIC PANIC GHOST	PSG - 1/2
DESCRIPTION	Part No.

AC BRKT	43K	600-9040-44K	43K	EARTH PLATE
EARTH PLATE	43K	600-9135-44K	43K	NUT PLATE
NUT PLATE	43K	600-9100-44K	43K	PTV
NUT PLATE	43K	600-9100-45K	43K	COIN DOOR
BILLBOARD	43K	600-9020-44K	43K	PTV

20 総合配線図



8	BLACK	E	LIGHT GREEN	43	EARTH WIRE
7	ORANGE	D	PURPLE		
5	WHITE	C	BROWN	U	AWG14 UL1015
4	GREEN	B	SKY BLUE	K	AWG18 UL1015
3	YELLOW	A	PINK	L	AWG20 UL1007
2	BLUE				
1	RED	9	GREY		AWG22 UL1007

PSG-0000UK

CW
15/06/07

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MANIC PANIC GHOST

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PSG - 2/2
Part No.