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SEGA

THE MAZE OF THE KINGS ™

DELUXE Version

Owner's Manual

SEGA ENTERPRISES, INC. USA

MANUAL NO. 999-1455

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

To maintain the safety:

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning displays and cautions, handle the product appropriately. Be sure to keep this manual nearby the product or elsewhere convenient for referring to it when necessary.

Herein, explanations which require special attention are enclosed with dual lines. Depending on the potentially hazardous degrees, the terms of WARNING, CAUTION, etc. are used. Be sure to understand the contents of the displays before reading the text.

WARNING! Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.

CAUTION! Indicates that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and or material damage.

For the safe usage of the product, the following pictographs are used:

Indicates "HANDLE WITH CARE." In order to protect the human body an equipment, this display is attached to places where the Owner's Manual and or Service Manual should be referred to.

○ **Perform work in accordance with the instructions herein stated.**
Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the serviceman should perform such work.

○ **Be sure to turn off power before working on the machine.**
To prevent electric shock, be sure to turn off power before starting the work in which the worker touches the interior of the product. If the work is to be performed in the power-on status, the Instruction Manual herein always states to that effect.

○ **Be sure to ground the Earth Terminal** (this, however, is not required in the case where a power cord with earth is used).
This product is equipped with the Earth Terminal. When installing the product, Connect the Earth Terminal to the "accurately grounded indoor earth terminal" by using an earth wire. Unless the product is grounded appropriately, the user can be subject to electric shock. After performing repair, etc. for the Control equipment, ensure that the Earth Wire is firmly connected to the Control equipment.

○ **Ensure that the Power Supply used is equipped with an Earth Leakage Breaker.**
This product does not incorporate the Earth Leakage Breaker. Using a power supply which is not equipped with the Earth Leakage Breaker can cause a fire when earth leakage occurs.

○ **Be sure to use fuses which meet the specified rating.** (only for the machines which use fuses).
Using fuses exceeding the specified rating can cause a fire and electric shock.

○ **Specification changes (removal of equipment, conversion and addition) not designated by SEGA are not allowed.**
The parts of the product include warning labels for safety, covers for personal protection, etc. It is very hazardous to operate the product by removing parts and or modifying the circuits. Should doors, lids and protective parts be damaged or lost, refrain from operating the product, and contact where the product was purchased from or the office herein stated. SEGA shall not be held responsible for any accidents, compensation for damage to a third party, resulting from the specifications not designated by SEGA.

○ **Ensure that the product meets the requirements of appropriate Electrical Specifications.**
Before installing the product, check for Electrical Specifications. SEGA products have a nameplate on which Electrical Specifications are described. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location. Using any Electrical Specifications different from the designated Specifications can cause a fire and electric shock.

○ **Install and operate the product in places where appropriate lighting is available, allowing warning labels to be clearly read.**
To ensure safety for the customers, labels and printed instructions describing potentially hazardous situation are applied to places where accidents can be caused. Ensure that where the product is operated has sufficient lighting allowing the warnings to be read. If any label is peeled off, apply it again immediately. Please place an order with where the product was purchased from or the office herein stated.

○ **When handling the Monitor, be very careful. (Applies only to the product w/monitor.)**
Some of the monitor (TV) parts are subject to high tension voltage. Even after running off power, some portions are still subject to high tension voltage sometimes. Monitor repair and replacement should be performed only be those technical personnel who have knowledge of electricity and technical expertise.

○ **Be sure to adjust the monitor (projector) properly. (Applies only to the product w/monitor.)**
Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or the customers.

○ **When transporting or reselling this product, be sure to attach this manual to the product.**
In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific Instruction Manual of such equipment.

- Descriptions herein contained may be subject to improvement changes without notice.
- The contents described herein are fully prepared with due care. However, should any question arise or errors be found, please contact SEGA.

INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION.

Normally, at the time of shipment, SEGA products are in a status allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on power, check the following points to ensure that the product has been transported in a satisfactory status.

☐ Are there any dented portions or defects (cuts, etc.) on the external surfaces of the cabinet?
☐ Are Casters and Adjusters, damaged?
☐ Do the power supply voltage and frequency requirements meet with those of the location?
☐ Are all wiring connectors correctly and securely connected? Unless connected in the correct direction, connector connections can not be made accurately. Do not insert connectors forcibly.
☐ Do power cords have cuts and dents?
☐ Do the fuses used meet specified rating? Is the Circuit Protector in an energized status?
☐ Are all accessories available?
☐ Can all Doors and Lids be opened with the Accessory keys? Can Doors and Lids be firmly closed?

BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:
TABLE OF CONTENTS
INTRODUCTION OF THE OWNER'S MANUAL

```
┌─────────────────── SPECIFICATIONS ───────────────────┐
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SPECIFICATIONS

Installation space	: 53 in. × 70 in.)
Height	: (102 in.)(with POP mounted)
Weight	: (544 lbs.)
Power, maximum current	: 380 W 4.25 A (AC 120 V 60 Hz AREA)
	395 W 2.40 A (AC 220 V 50 Hz AREA)
	370 W 2.35 A (AC 220 V 60 Hz AREA)
	400 W 2.30 A (AC 230 V 50 Hz AREA)
	395 W 2.20 A (AC 240 V 50 Hz AREA)
For TAIWAN	
Power, current	: 385 W 4.6 A (MAX.)
	257 W 3.1 A (MIN.)
MONITOR	: 50 TYPE PROJECTION DISPLAY

INTRODUCTION OF THE OWNER'S MANUAL

This Owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards the product,
THE MAZE OF THE KINGS DELUXE TYPE.
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. If the product fails to function satisfactorily, non-technical personnel should under no circumstances touch the internal system. Should any malfunctioning occur, turn the power off and unplug the AC Cable (Power Cord), and contact where the product was purchased from.

Use of this product is unlikely to cause physical injuries or damages to property. However, where special attention is required this is indicated by a thick line, the word "IMPORTANT" and its sign in this manual.

STOP

IMPORTANT!   Indicates that mishandling the product by disregarding this display can cause the product's intrinsic performance not to be obtained, resulting in malfunctioning.

SEGA ENTERPRISES, INC. (U.S.A.)/CUSTOMER SERVICE
45133 Industrial Drive, Fremont, California 94538, U.S.A.
   Phone: (415) 701-6580
   Facsimile: (415) 701-6594

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 power off. Performing the work without turning 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 electric shock or short circuit, do not plug in or unplug quickly.
- To avoid electric shock, do not plug in or unplug with a wet hand.
- Do not expose Power Cords and 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 electric shock or short circuit.
- To avoid causing a fire or electric shock, do not put things on or damage 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 electric shock.
- In case the power cord is damaged, ask for replacement through where the product was purchased from or the office herein stated. Using the cord as is damaged can cause fire, electric shock or leakage.
- Be sure to perform grounding appropriately. Inappropriate grounding can cause an electric shock.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause a fire or electric shock.
- Completely make connector connections for IC BD and others. 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 lookers-on, 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.
- Be sure to perform periodic maintenance inspections herein stated.

● 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.

● The Projector is employed for this machine. The Projector's screen is susceptible to damage, therefore, be very careful when cleaning the screen. For details, refer to PROJECTOR.

● Some parts are the ones designed and manufactured not 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.

2. PRECAUTIONS CONCERNING 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 malfunctioning.

● 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.
● The operating (ambient) temperature range is from 5° to 30°.

LIMITATIONS OF USAGE REQUIREMENTS

 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 the Breaker and Earth Mechanisms as part of the location facilities. Using them in a manner not independent 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 ~ 120 V area), and 7 A or higher (AC 220 ~ 240 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.
● Be sure to independently use the power supply equipped with the Earth Leakage Breaker. Using a power supply without the Earth Leakage Breaker can cause an outbreak of fire when earth leakage 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 ~ 120 V area) and 7 A or higher (AC 220 ~ 240 V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

⚠️ **WARNING!**

● For the operation of this machine, secure a minimum area of 79 in. (W) × 94 in (D). In order to prevent injury resulting from the falling down accident during game play, be sure to secure the minimum area for operation.
● Be sure to provide sufficient space so as to allow this product's ventilation fan to function efficiently. To avoid machine malfunctioning and a fire, do not place any obstacles near the ventilation opening.
● SEGA shall not be held responsible for damage, compensation for damage to a third party, resulting from the failure to observe this instruction.

STOP IMPORTANT!

For transporting the machine into the location's building, the minimum necessary dimensions of the opening (of doors, etc.) are 39 in. (W) and 67 in. (H).

Electric current consumption

MAX. 4.25 A (AC 120 V 60 Hz)
MAX. 2.40 A (AC 220 V 50 Hz)
MAX. 2.35 A (AC 220 V 60 Hz)
MAX. 2.30 A (AC 230 V 50 Hz)
MAX. 2.20 A (AC 240 V 50 Hz)
MAX. 4.60 A (For TAIWAN)

4 inches

94.5 inches

79 inches
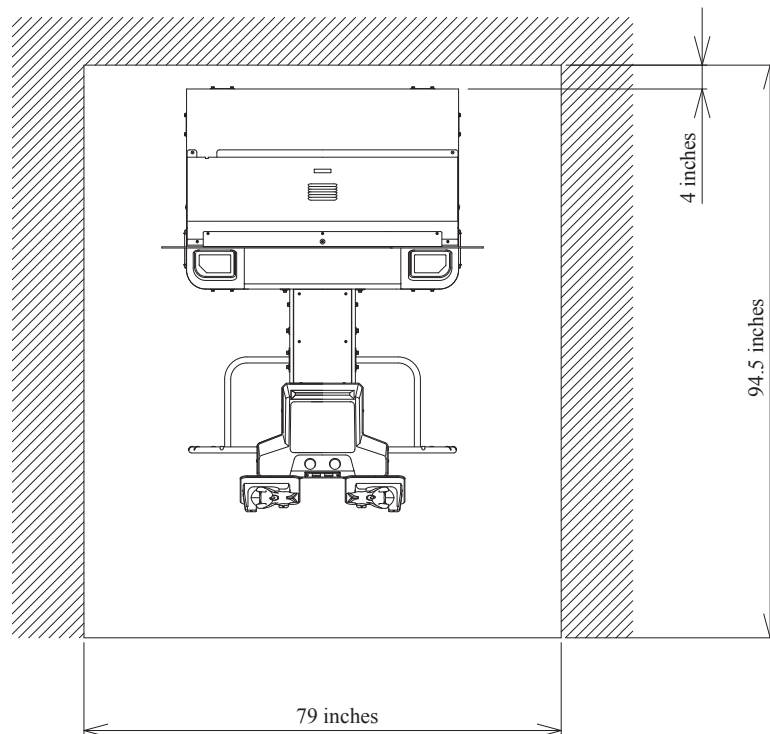
FIG. 2

3. OPERATION

PRECAUTIONS TO BE HEEDED BEFORE STARTING THE OPERATION

To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the 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.
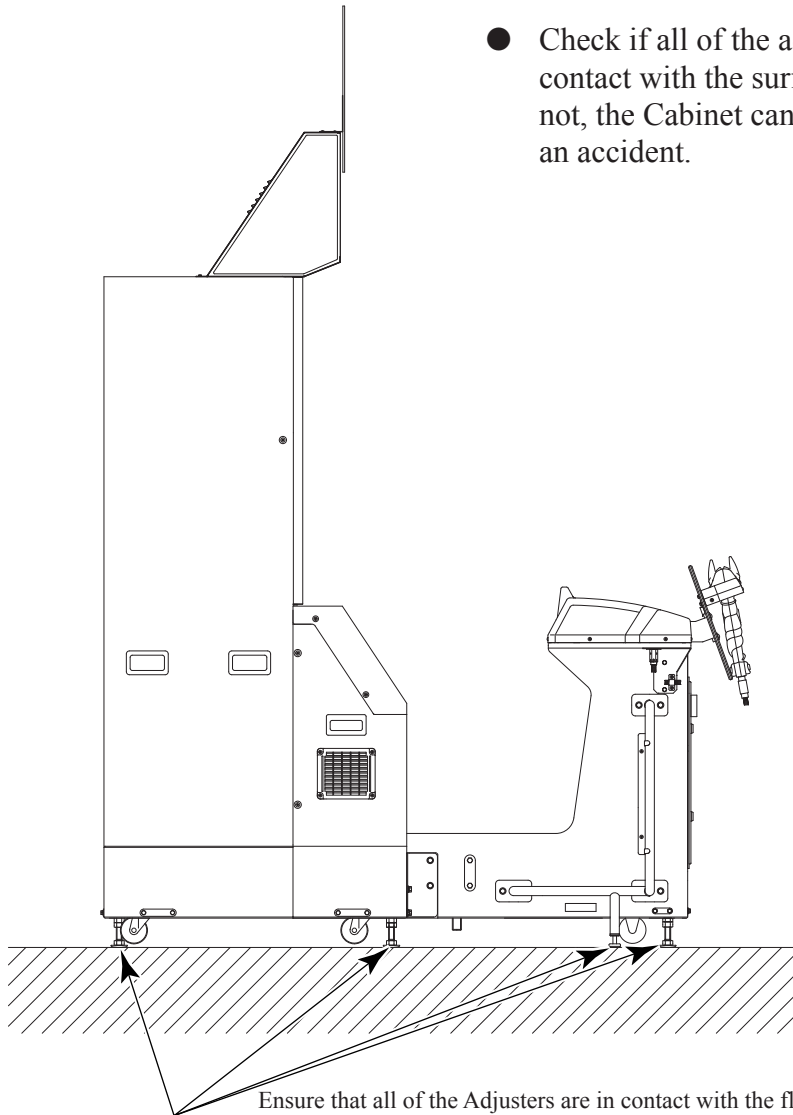
Ensure that all of the Adjusters are in contact with the floor.

FIG. 3 a

5   *www.seuservice.com*

WARNING!

- Do not put any heavy item 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 falling down accidents. To check the top portion of the product, use a step.
- To avoid electric shock, check to see if door & cover parts are damaged or omitted.
- 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, flowerpots, cups, water tanks, cosmetics, and receptacles/containers/vessels containing chemicals and water.

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 making bodily contact with each other, hitting accidents, and or trouble between customers.

STOP IMPORTANT!

- Note that while the Gun (Rod) Controller has front and rear sights, its sights are not aligned to aim like a gun. If the Gun (Rod) Controller's sights are used to aim, they will not appear to fire properly. Also be sure to let your players know this.
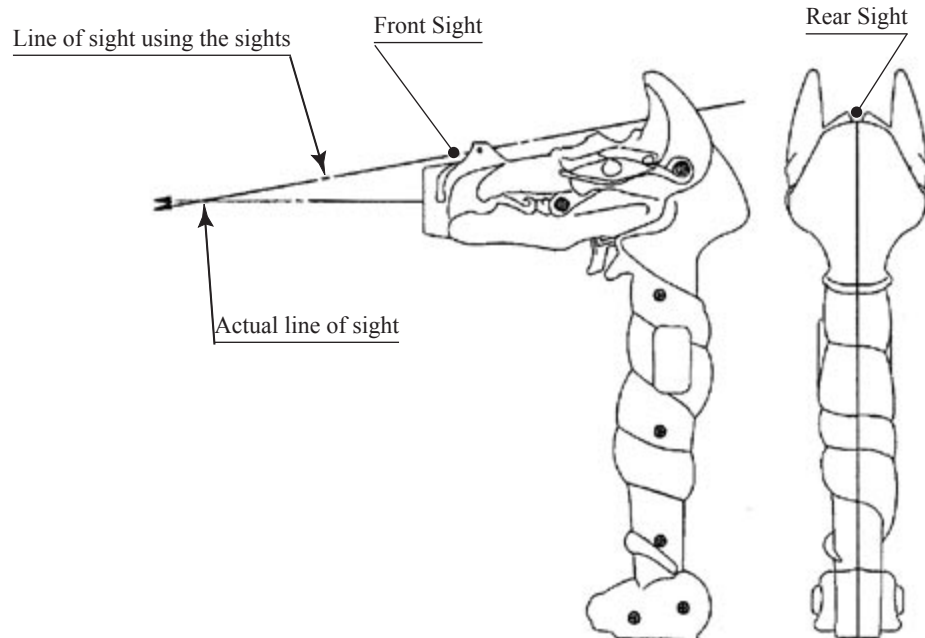

Line of sight using the sights   Front Sight   Rear Sight

Actual line of sight

FIG. 3 b

- Players with bare hands directly hold the controller. For operation, it is recommended that the wet towels (paper towels) be provided.

To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players.

WARNING!

- To avoid injury and accidents, those who fall under the following categories are not allowed to play the game.
  - Those who need assistance such as the use of an apparatus when walking.
  - Those who have high blood pressure or a heart problem.
  - Those who have experienced muscle convulsion or loss of consciousness when playing video game, etc.
  - Those who have a trouble in the neck and or spinal cord.
  - Intoxicated persons.
  - Pregnant women or those who are in the likelihood of pregnancy.
  - Persons susceptible to motion sickness.
  - Persons whose act runs counter to the product's warning displays.
- A player who has never been adversely affected by light stimulus might experience dizziness or headache depending on his physical condition when playing the game. Especially, small children can be subject to those conditions. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during play to have a medical examination.
- To avoid injury resulting from falling down and electric shock due to spilled drinks, instruct the player not to place heavy items or drinks on the product.
- To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in the openings of the product or small openings in or around the doors.
- To avoid falling down and injury resulting from falling down, immediately stop the customer's leaning against or climbing on the product, etc.
- To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without a justifiable reason.

CAUTION!

Immediately stop such violent acts as hitting and kicking the product. Such violent acts can cause parts damage or falling down, resulting in injury due to fragments and falling down.

WARNING!

WARNING: HAZARD TO EPILEPTICS.
- A very small portion of the population has a condition which may cause them to experience epileptic seizures or have momentary loss of consciousness when viewing certain kinds of flashing lights or patterns that are present in our daily environment. These persons may experience seizures while watching some kinds of television pictures or playing certain video games. People who have not had any previous seizures may nonetheless have an undetected epileptic condition.
- If you or anyone in your family has experienced symptoms linked to an epileptic condition (e.g., seizures or loss of awareness), immediately consult your physician before using any video games.
- We recommend that parents observe their children while they play video games. If you or your child experience the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation, or convulsions, DISCONTINUE USE IMMEDIATELY and consult your physician.
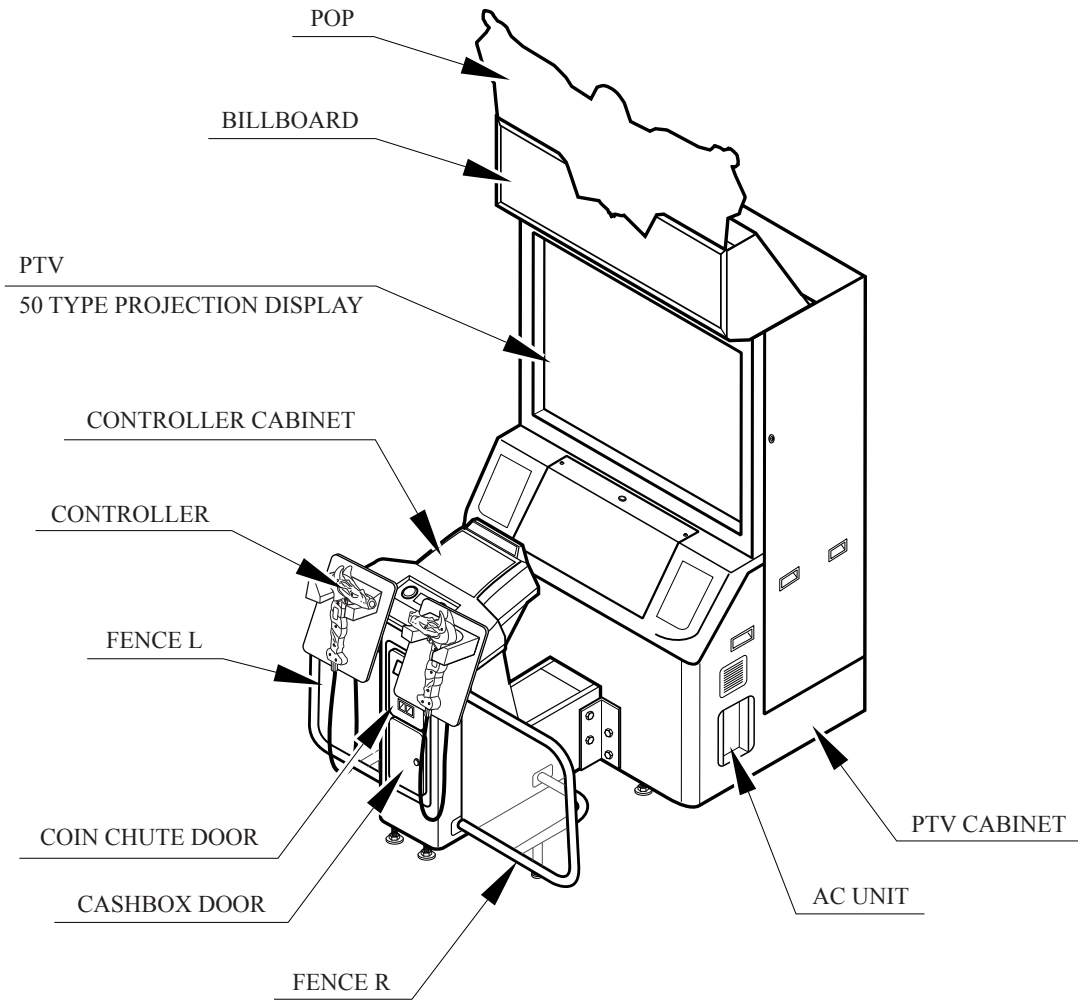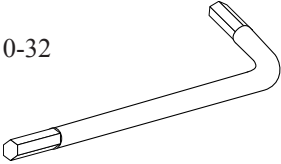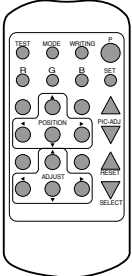
4. NAME OF PARTS

POP

BILLBOARD

PTV
50 TYPE PROJECTION DISPLAY

CONTROLLER CABINET

CONTROLLER

FENCE L

COIN CHUTE DOOR

CASHBOX DOOR

FENCE R

PTV CABINET

AC UNIT

FIG. 4
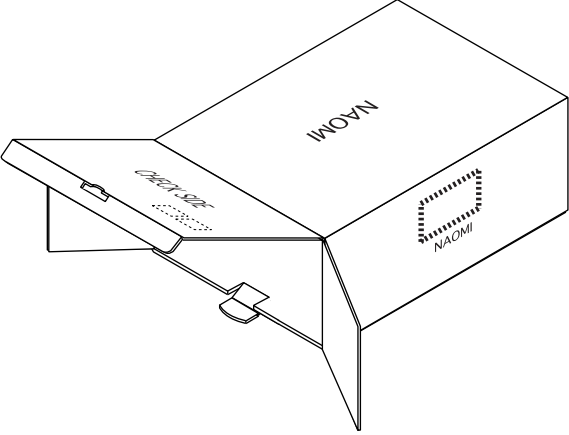
TABLE 4

	Width × Depth × Height	Weight
PTV	45 inches × 22 inches × 66 inches	242 lbs
PTV CABINET	45 inches × 33 inches × 37 inches	163 lbs
BILLBOARD	45 inches × 16 inches × 16 inches	42 lbs
CONTROLLER CABINET	22 inches × 35 inches × 39 inches	75 lbs
FENCE(one side)	17 inches × 19 inches × 27 inches	7.5 lbs
When assembled	53 inches × 70 inches × 89 inches	544 lbs
When assembled(W/POP)	53 inches × 70 inches × 102 inches	

5. ACCESSORIES

When transporting the machine, make sure that the following parts are supplied.

TABLE 5 a ACCESSORIES

DESCRIPTION	OWNERS MANUAL
Part No.(Qty.)	999- 1455(1)
Note	

Figures

NOTE: 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 separately.

KEY MASTER
9301A (2)

For opening/closing the doors

KEY
(2)

For the CASHBOX DOOR

The Keys are inside the Coin Chute Door at the time of shipment from the factory.

TAMPERPROOF†WRENCH

T-15 TORX 8-32

T-25 TORX 10-24/10-32

NAOMI NETWORK SYSTEM SERVICE MANUAL ENG
420-6660-01 (1)

INSTRUCTION MANUAL FOR
THE GAME BOARD AND GD-ROM

CARTON BOX
601-10532 (1)

Used for transporting the
Game Board.
See FIG. 5 a.

TOSHIBA
Remote Controller used for
adjustment of the projector.
See Section 11.

200-5536(1)

The Remote Controller is attached to
the Projector at the time of shipment.

STOP IMPORTANT!

When requesting for the replacement/repair of this product's Game Board (NAOMI BOARD), follow the instructions below. Transporting the Game Board in an un-designated status is unacceptable. An erroneous handling can cause parts damage.
- Put the Game Board in the Carton Box together with the Shield Case. Do not unnecessarily disassemble nor remove parts.
- By paying careful attention to the following Figure and the direction shown by on-Carton-Box printing, put the Shield Case in the Carton Box.
- When putting the Shield Case in the Carton Box, do not remove Leg Brackets.
- The projected portions of the packing material is intended for cushioning. Therefore, do not bend the projected portions.
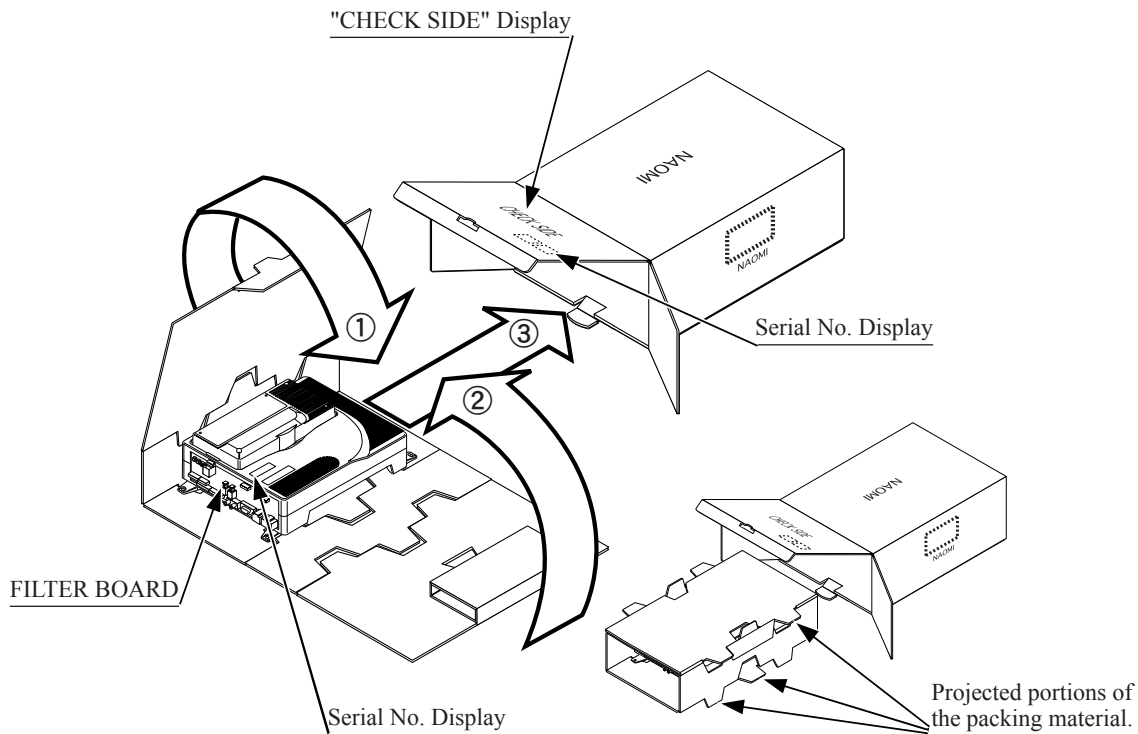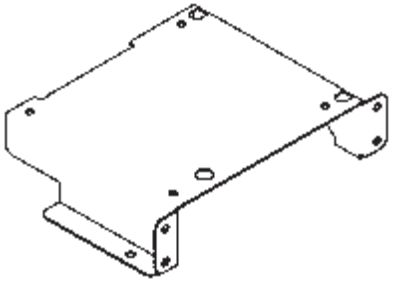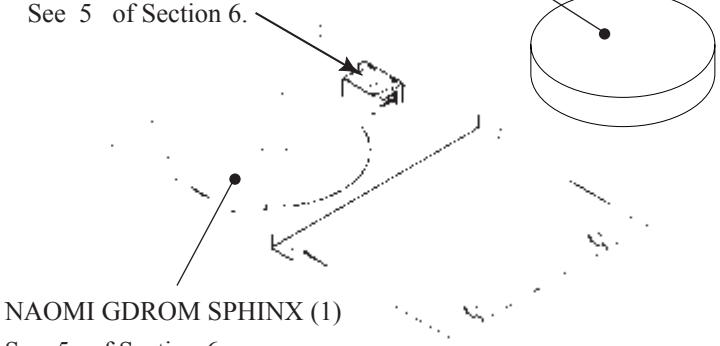- Do not remove the DIMM board without fail.

FIG. 5 a

Fold the packing material in the sequential order of the numbers as shown in the Figure, enfold the Shield Case and put it in the Carton Box. If it is placed upside down, or is not packed up as illustrated, the Game Board and other parts will be damaged.

The following Table 5b lists the parts that had been separately packed when the product was shipped from the factory but are necessary when you use the product. These parts will be mounted on the product when installing and assembling it.

TABLE 5 b

GD DRIVE BRACKET
105-5435 (1)

To be mounted on the GD-ROM drive.
See 5 of Section 6.

GD SOFT KIT MAZ

KEY CHIP (1)
See 5 of Section 6.

CUSHION SPONGE
601-11137 (1)

GD-ROM Disc Protector

STICKER
442-00097B-01 (1)

Shield Case Sticker

NAOMI GDROM SPHINX (1)

See 5 of Section 6.

NOTE: When you order the GD-ROM disc only, specify the part number 610-0625-0022 (GD SOFT MAZ).

The following Table 5c lists the parts that are separately marketed but are necessary when booting this product's software. When having unpacked the shipping crate, make sure that all the parts in this Table 5c are in the crate. If not so, contact where you have obtained the product.

TABLE 5 c (XKT-0833 : GD-ROM DRIVE KIT)

GD-ROM DRIVE
610-0617
610-0617-01 (1)

Device that loads the software in a GD-ROM disc.
see 5 of Section 6.
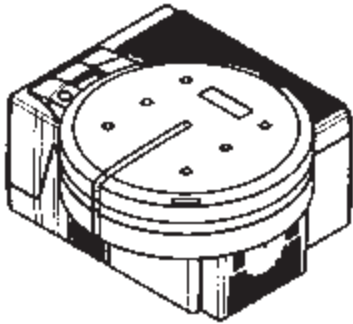
GD-ROM DRIVE CARTON BOX
(1)

Used for transporting the GD-ROM DRIVE.
See FIG. 5 b.

This carton box is a standard accessory of the GD-ROM drive. If you want to obtain the carton box itself separately, specify the part number 601-11031.

STOP

IMPORTANT!

When you want to order for replacing or repairing service of the GD-ROM drive that is used by the product, pack it in a carton box as instructed below, and then deliver the carton box to a service agent. If you do not observe the instruction, your order may not be accepted or may be charged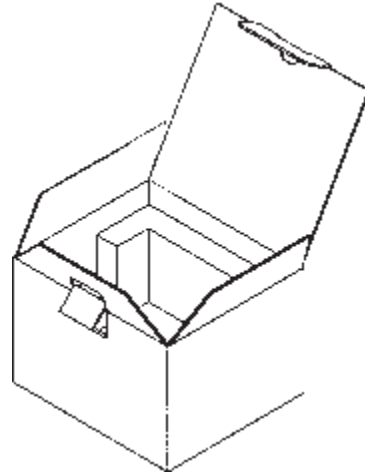 additionally. If you handle the GD-ROM drive differently from the following instructions, its components may be damaged.

● Contain the GD-ROM drive in a dedicated carton box. Do not disassemble it or remove any part from it unless otherwise instructed.

● Before containing the GD-ROM drive in a dedicated carton box, attach the GD-ROM drive lid (DISC LID) onto the drive and fix the lid with a screw.

● Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM disk from the drive. Do not attempt to move the GD-ROM drive with a GD-ROM disk inside.

● Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM drive bracket. Carefully keep the GD-ROM drive bracket and the 4 set screws, because they will be reused.

● When inserting the GD-ROM drive into a dedicated carton box, be careful about an inserting direction as illustrated below.

● The packing materials in a carton box are used as a cushion. Use them always when inserting the GD-ROM drive into a dedicated carton box. Do not bend them.
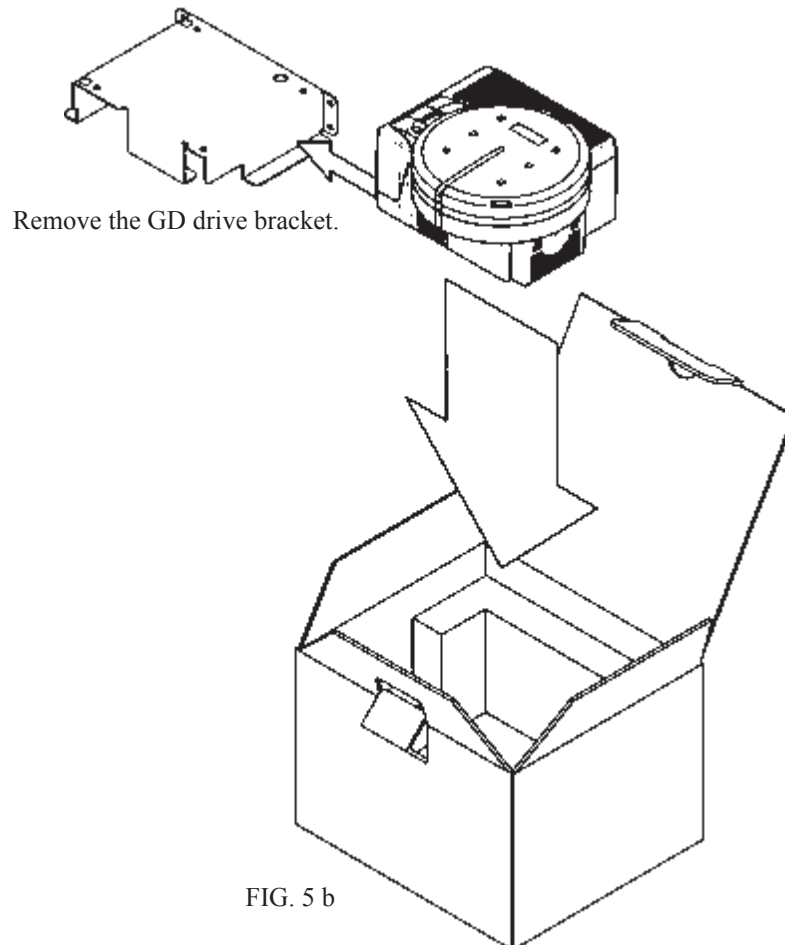
Remove the GD drive bracket.

FIG. 5 b

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6. ASSEMBLING AND INSTALLATION

WARNING!

- Perform assembly work by following the procedure herein stated. Failing to comply with the instructions can cause electric shock hazard.
- Perform assembling as per this manual. Since this is a complex machine, erroneous assembling can cause an electric shock, machine damage and or not functioning as per specified performance.
- When assembling, be sure to use plural persons. 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 accurately connected. Incomplete connections can cause electric shock hazard.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not carelessly push the PTV. Pushing the PTV carelessly can cause the PTV to fall down.
- This work should be performed by the Location's Maintenance Man or Serviceman. Performing work 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.
- 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's falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.

CAUTION!

- When handling plastic parts, use care. Do not give a shock or apply excessive load to the fluorescent lamps and plastic parts. Failure to observe this can cause parts damage, resulting in injury due to fragments, cracks and broken pieces.
- To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause violent falling down accidents.
- Make sure that the GD cable connector is inserted parallel to the plug. Improper insertion may cause damage to the connector and present a fire risk.

When carrying out the assembling and installation, follow the following 8-item sequence.

1	ASSEMBLING THE PTV
2	ASSEMBLING THE CABINET
3	INSTALLING THE POP
4	SECURING IN PLACE (ADJUSTER ADJUSTMENT)
5	INSTALLING THE GD-ROM DRIVE (SETTING GD-ROM DISC)
6	POWER SUPPLY, AND EARTH CONNECTION
7	TURNING POWER ON
8	ASSEMBLING CHECK

The master key (accessories) in addition to the tools such as a Phillips type screwdriver, wrench, socket wrench and Ratchet Handle are required for the assembly work.
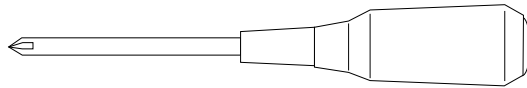
Phillips type screwdriver
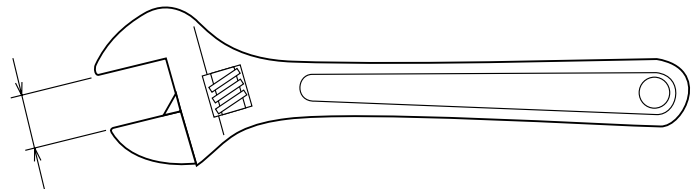
WRENCH (for hexagon bolt)
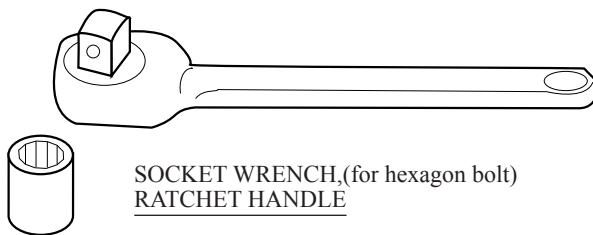
SOCKET WRENCH (for hexagon bolt)
RATCHET HANDLE

ASSEMBLING THE PTV

1 By using 2 Flat Head screws, secure the 2 Mask Bracket Uppers to the PTV ceiling.

2 Secure the Mask Bracket Lower to the front of PTV with 4 screws.

FLAT HEAD SCREW (2 each)
M4×12

MASK BRACKET UPPER

MASK BRACKET LOWER

TRUSS SCREW (4), black
M5×20
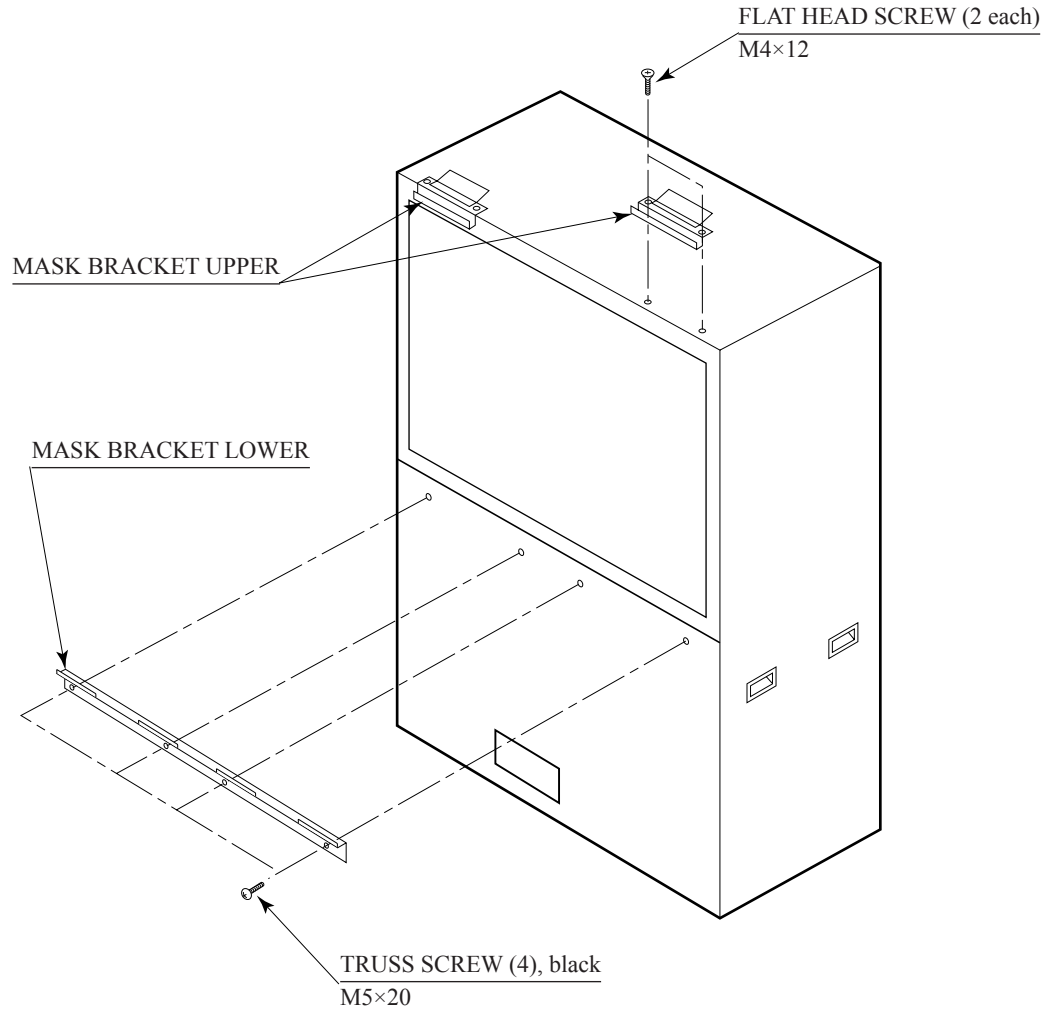
FIG. 6. 1 a

③ Install the Mask to the PTV front. Install the Mask in a manner hooking up to both 2 Mask Bracket Uppers and the Mask Bracket Lower. Simultaneously insert the projections of the Mask into the square holes in the PTV Screen left and right.

④ Secure the Mask by fastening a screw for each from both sides of PTV.

TRUSS SCREW (2), black
M5×25, flat washer used.

MASK
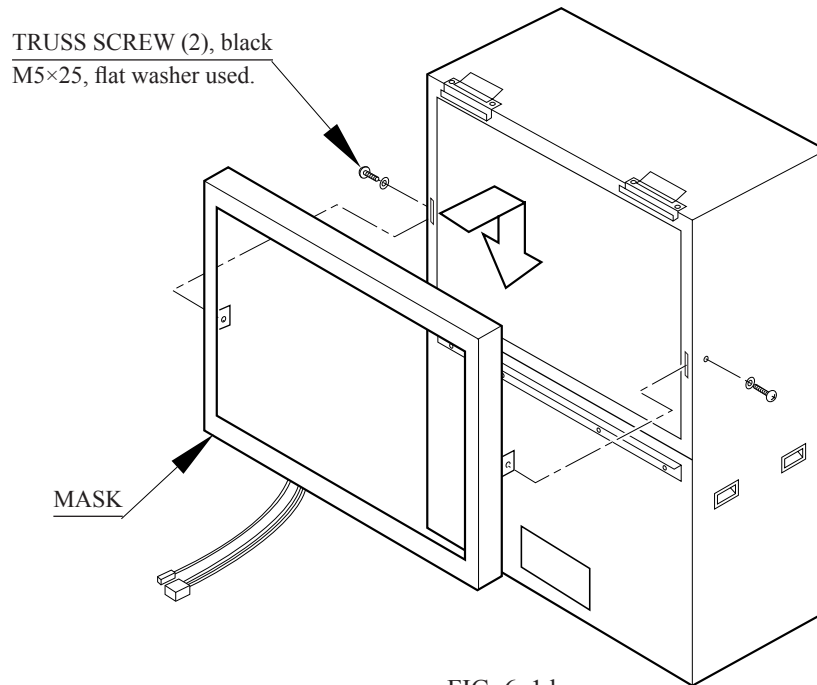
FIG. 6. 1 b

⑤ Secure the 2 PTV Holders to the PTV front with the 2 screws for each.

SCREW (2 each)
M5×16, w/flat & spring washers

PTV HOLDER
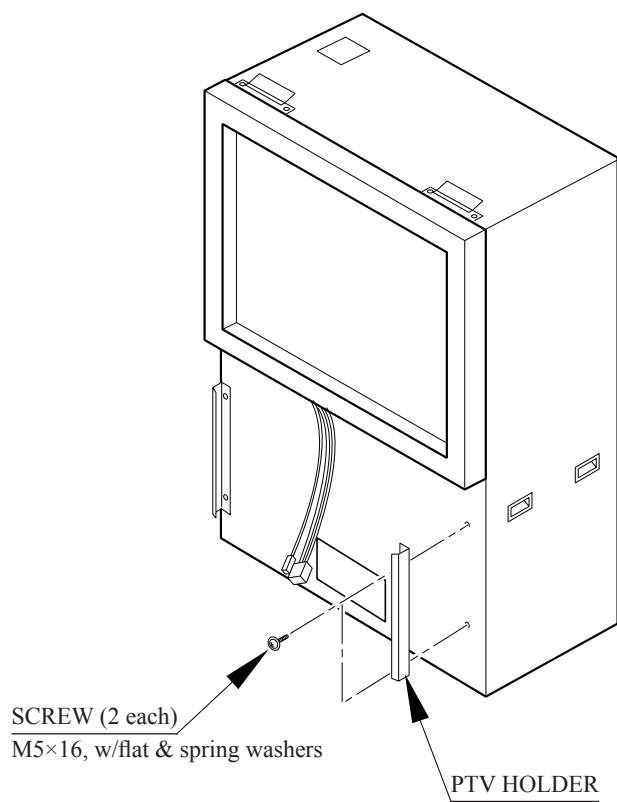
FIG. 6. 1 c

2   ASSEMBLING THE CABINET

①   Move the PTV to the rear of the PTV Cabinet.

②   Connect wiring between the PTV and the PTV Cabinet.

Connect the Connector.

Connect the Connector.
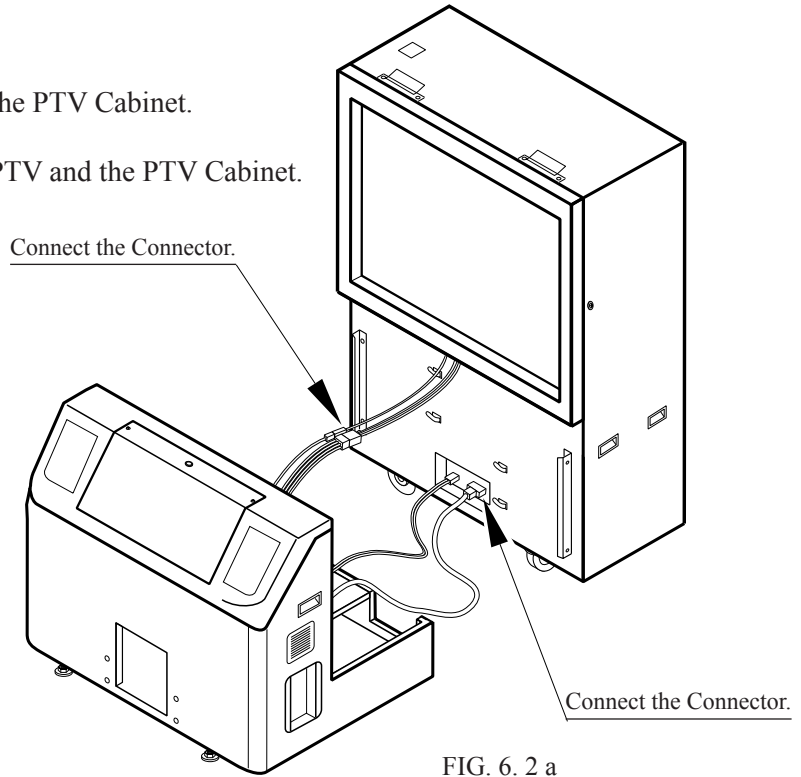
FIG. 6. 2 a

③   There are 4 cord clamps in the PTV front.
By using the 4 cord clamps, secure the
wiring as per the Figure. (FIG. 6. 2 b)

④   Mount the PTV onto the PTV Cabinet.
Lift the PTV by 3 or more workers while
another worker supporting the PTV
Cabinet. Be careful so as not to damage
wiring at this time.

FIG. 6. 2 b

For performing work,
use 4 or more workers.
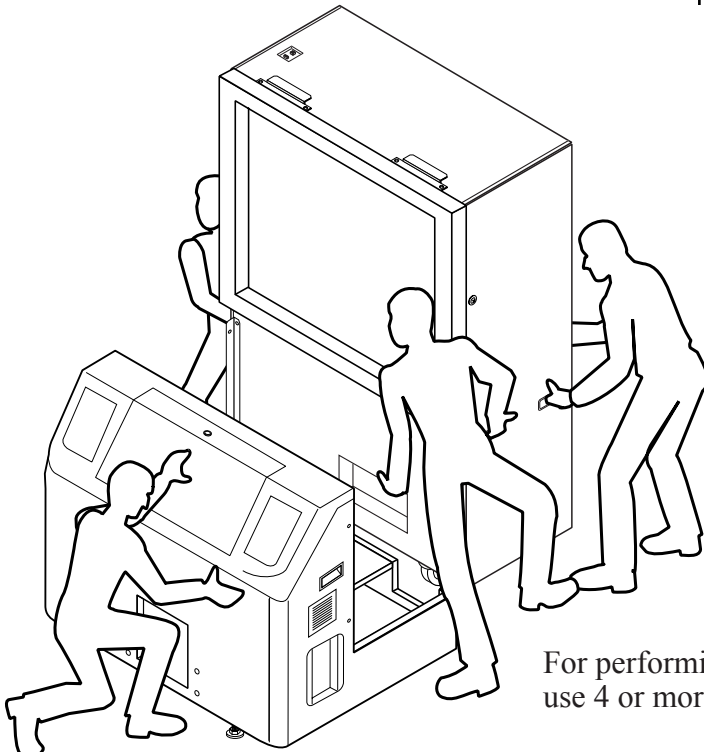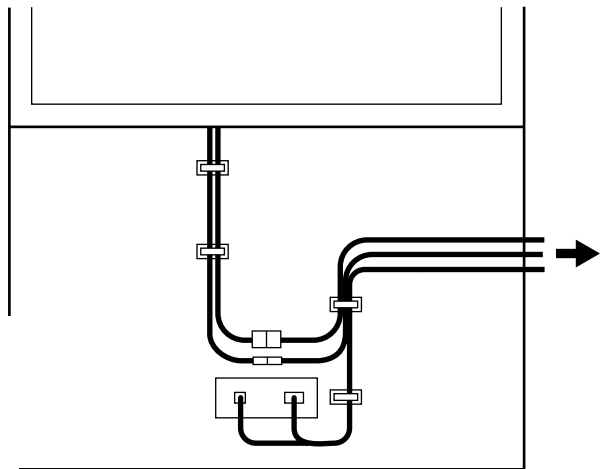
FIG. 6. 2 c

⑤ Secure the joining portion of the PTV and the PTV Cabinet with the 4 screws.

PTV
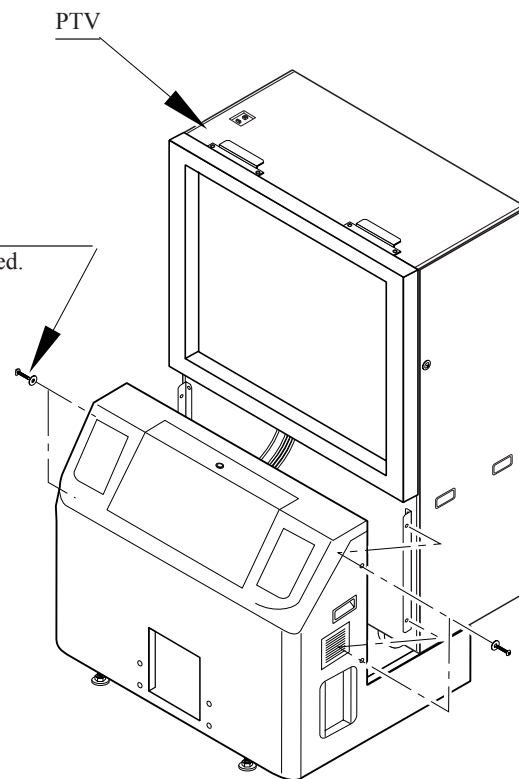
TRUSS SCREW (4)
M5×30, flat washer used.

⑥ Connect a Billboard's connector to the terminal board on the PTV ceiling. While supporting the Billboard as is inclined, connect the connector. Be sure to use a step to connect the connector while 2 persons supporting the Billboard.

⑦ Insert the Billboard from the rear as shown and secure with the 2 screws. At this time, be sure to use a step.

FIG. 6. 2 d

SCREW (2)
M5×16, w/flat & spring washers

BILLBOARD

Connect the Connector.
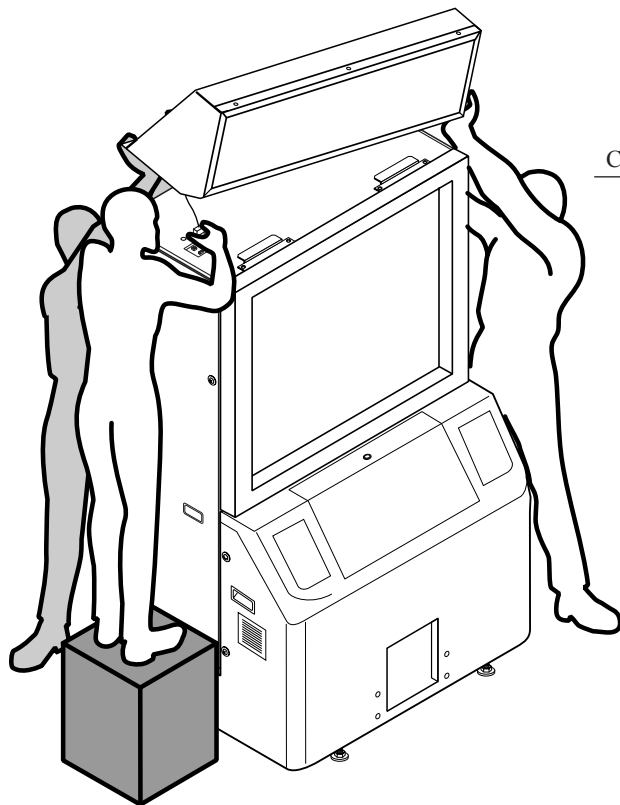
For performing work, prepare a step and use 3 or more workers.

FIG. 6. 2 e

19
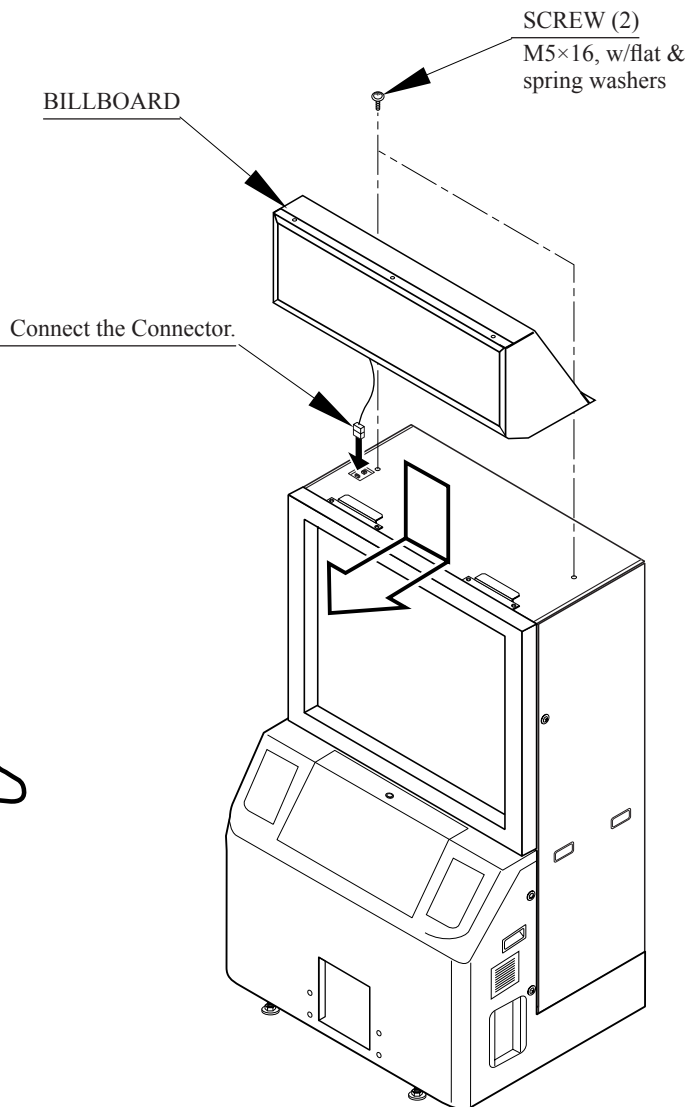
⑧ Install Fence L & R to CONTROLLER CABINET by using 6 Hexagon Bolts for each and 2 screws for each.

CONTROLLER CABINET

TRUSS SCREW (2 each), black
M4×16, flat washer used.

FENCE R (L)

HEXAGON BOLT (4 each)
M8×35, w/spring washer,
flat washer used.

HEXAGON BOLT (2 each)
M8×50, w/spring washer,
flat washer used.
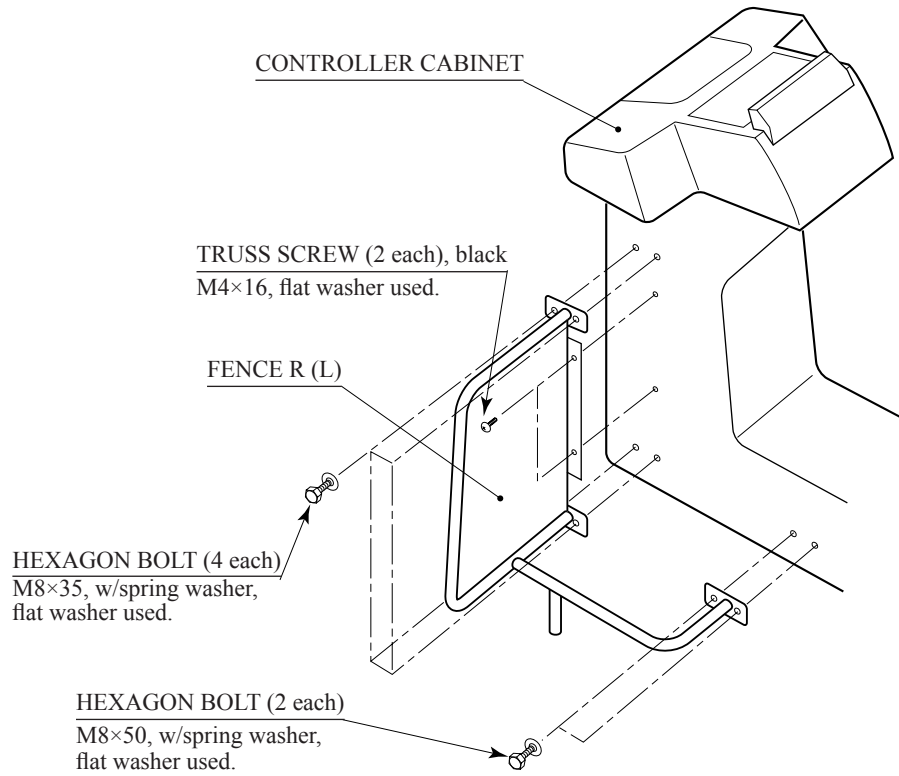
FIG. 6. 2 f

⑨ Insert the Gun Holder L into the Holder on the left side of the Controller Cabinet.

GUN HOLDER L   HOLDER

TRUSS SCREW (2), black
M6×20, flat washer used.
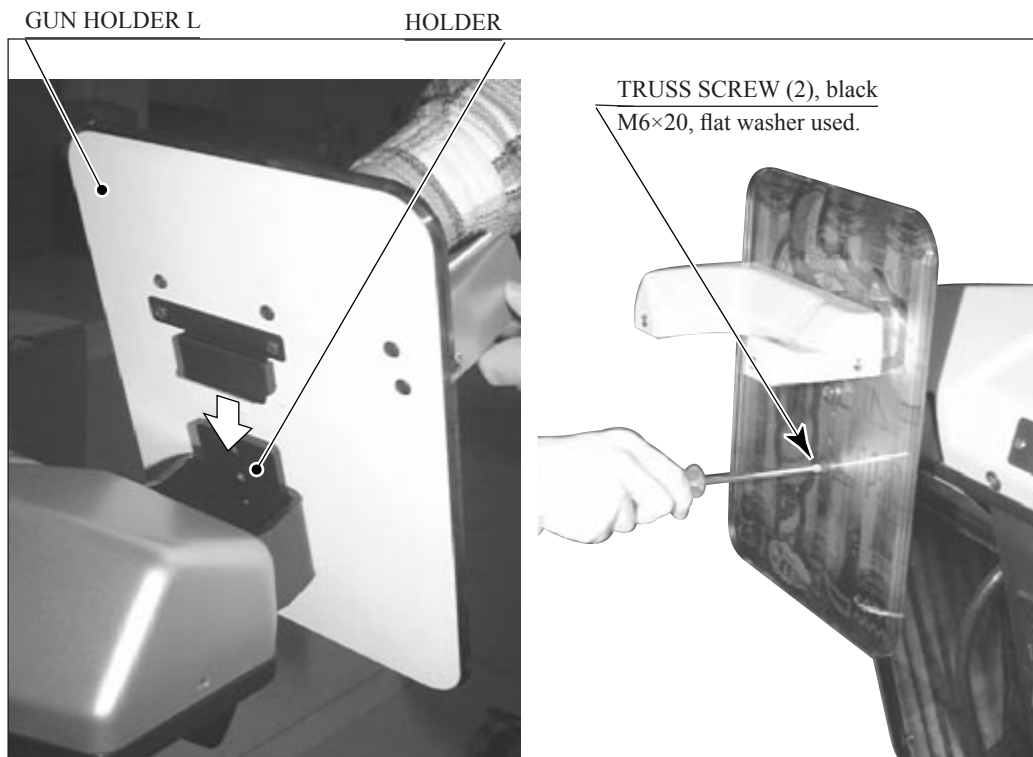
PHOTO 6. 2 a

⑩ Secure the Gun Holder R (opposite side) with the 2 truss screws like the above.

⑪ Move the controller cabinet nearer to the PTV cabinet.

⑫ Connect the wires between the controller cabinet and the PTV cabinet. Connect the 4 connectors.

Connect the Connector.

PHOTO 6. 2 b

⑬ Insert the controller cabinet into a square opening of the PTV cabinet. In this instance, be careful not to catch the wires in the cabinets.

⑭ Attach the joint bracket L and R onto the contacting surfaces of the controller cabinet and PTV cabinet. Carefully use the hexagon head screws because the ones for the former cabinet and the others for the latter cabinet are different in size from each other.

Do not catch the wires in the cabinets.

CONTROLLER CABINET

HEXAGON BOLT (2), black
M8×50, w/spring washer,
flat washer used.

HEXAGON BOLT (2), black
M8×35, w/spring washer,
flat washer used.

JOINT BRACKET R
OPPOSITE SIDE: JOINT BRACKET L
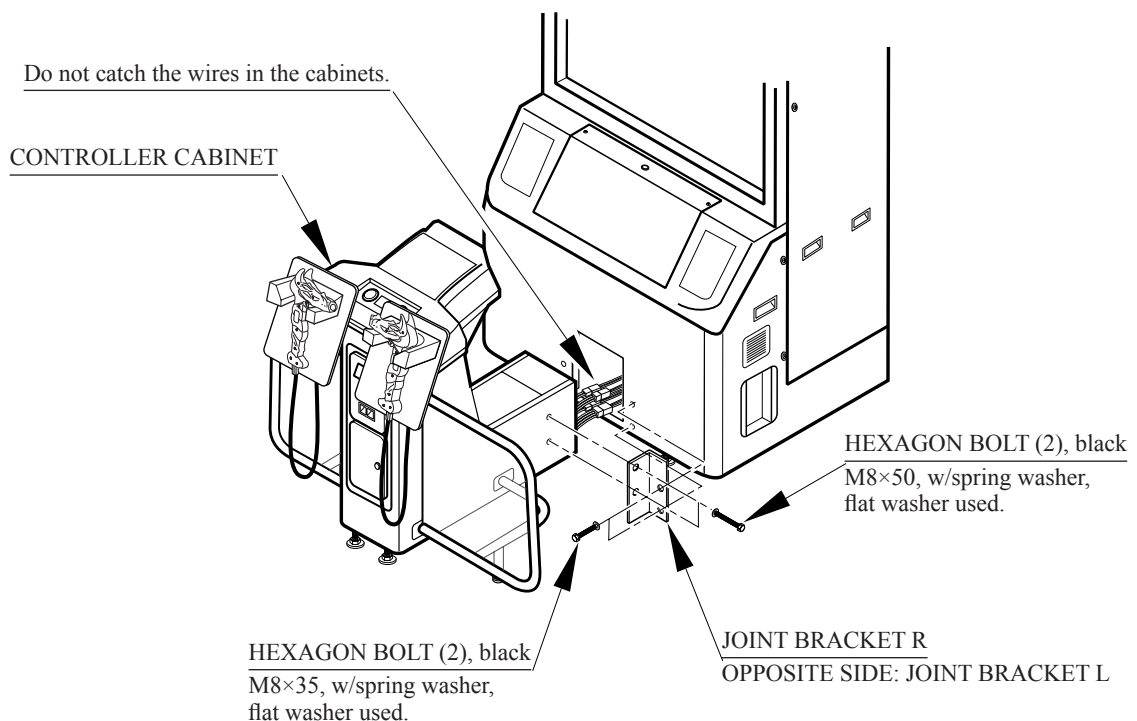
FIG. 6. 2 g

3 INSTALLING THE POP

① Install the POP Holder on the top of the Billboard by using the 3 truss screws. For performing this work, be sure to prepare a step.

② The double-sided tape is attached to the POP back side. Remove the separation sheet and stick on the POP Holder.
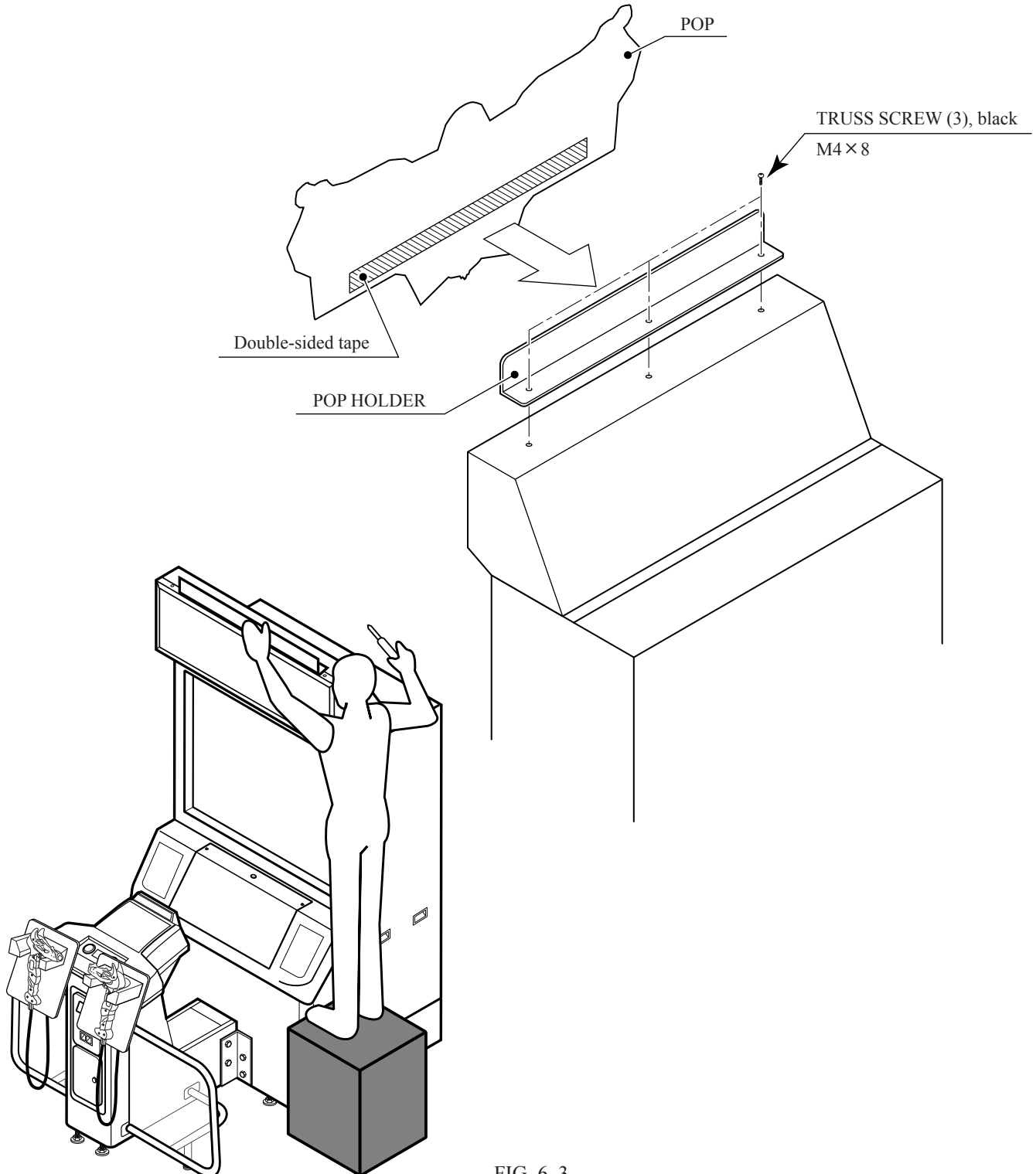
POP

TRUSS SCREW (3), black
M4 × 8

Double-sided tape

POP HOLDER

FIG. 6. 3

For performing work,
prepare a step.

⚠ **WARNING!**

Make sure that all of the adjusters are in contact with the floor. If they are not, the cabinet can move and cause an accident.

This product has 6 casters (4 for PTV Cabinet, 2 for CONTROLLER CABINET) and 8 Adjusters (4 for PTV Cabinet, 4 for CONTROLLER CABINET). (FIG. 6. 4 a) When the installation position is determined, cause the adjusters to come into contact with the floor directly, make adjustments in a manner so that the casters will be raised approximately 5 mm. from the floor and make sure that the machine position is level.

① Transport the product to the installation position.

② Have all of the Adjusters make contact with the floor. Adjust the Adjuster's height by using a wrench so that the machine position is kept level.
When contacting the adjusters of the right and left fences onto the floor, manually turn them.

③ After making adjustment, fasten the Adjuster Nut upward and secure the height of Adjuster (FIG. 6. 4 b).

ADJUSTER

CASTER

FIG. 6. 4 a BOTTOM VIEW

ADJUSTER

FASTEN UPWARD.

CASTER

Approx. 5mm
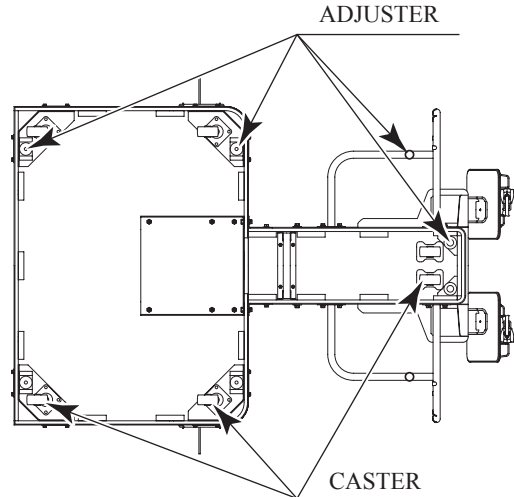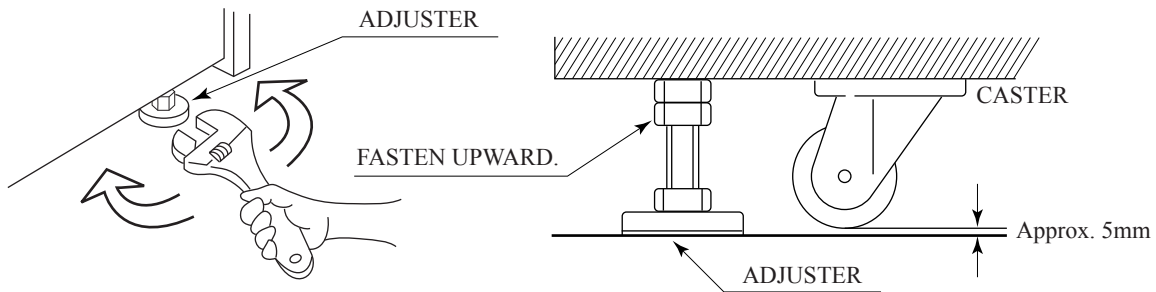
ADJUSTER

FIG. 6. 4 b ADJUSTER

FIG. 6. 4 c
Refer to this Fig. (Scale:1/100) for the layout of the place of installation.

8 inches   8 inches

4 inches
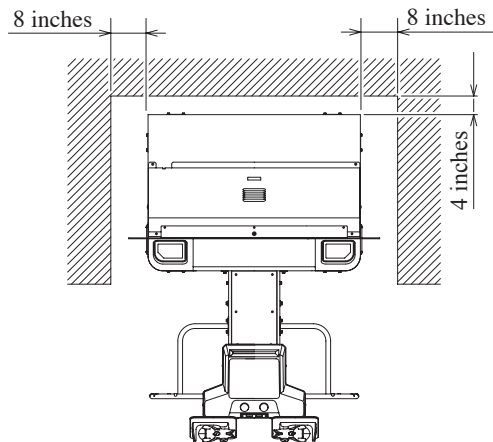
FIG. 6. 4 d
Provide ventilation space for the ventilation opening.

STOP IMPORTANT!

- Carefully handle the GD-ROM drive so as not to contaminate the disc and the readout lens with stains and dust particles.
- Do not continue to use the scratched GD-ROM disc. The scratched GD-ROM disc may cause the system to malfunction.
- Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.
- The key chip is a precision device. Handle it carefully and avoid exposure to heat, shock and static electricity, as these may cause damage to the device.
- The key chip is contained in the GD-ROM disc case. Always use them as a set.

This section explains how to remove the ASSY MAIN BD from the PTV cabinet, set the GD-ROM disk onto the GD-ROM drive, and install the GD-ROM drive onto the ASSY MAIN BD.

① Unpack the shipping crate, and take out the GD-ROM drive, GD-ROM drive bracket, and GD-ROM disc.

GD DRIVE BRACKET   GD-ROM DRIVE

PHOTO 6. 5 a

② Use the 4 tapping screws to fix the GD-ROM drive bracket onto the GD-ROM drive. Be careful about a fixing direction.

TAPPING SCREW (4)
4×8

GD DRIVE BRACKET

GD-ROM DRIVE

FIG. 6. 5 a

Application diagram

Ⓐ
INVISIBLE LASER RADIATION.
DO NOT STARE INTO BEAM OR
VIEW DIRECTLY WITH OPTICAL
INSTRUMENTS.
CLASS 3A LASER PRODUCT.

Ⓑ
DO NOT STARE INTO BEAM
OR VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS.
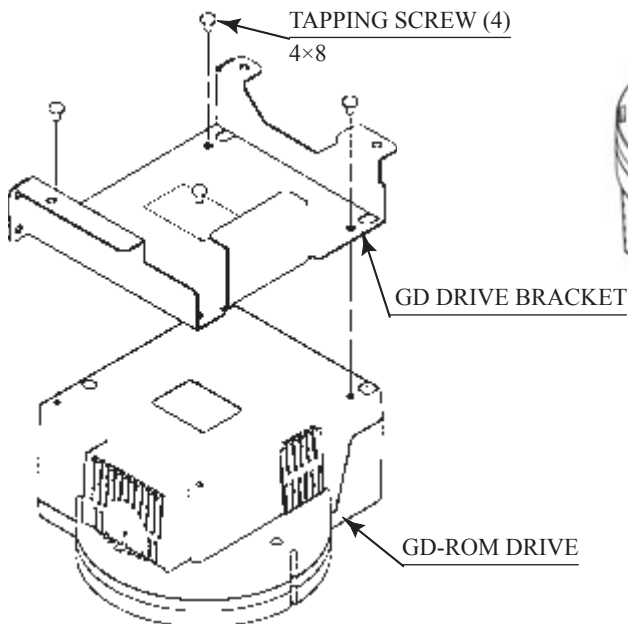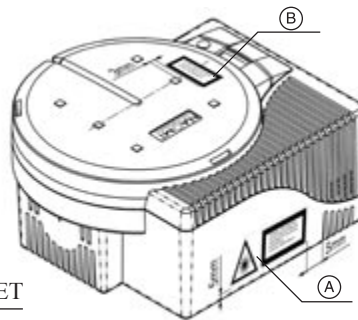
Please follow the drawing and place the sticker with the right language.
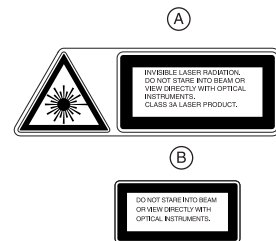
FIG. 6. 5 b

CAUTION for U. S. A., Europe, and Australia: Attach the 2 caution stickers for a laser ray onto the GD-ROM drive.

③ Remove the 1 truss head screw that fixes the GD-ROM drive lid (DISC LID). And turn clockwise the lid to remove.

TRUSS SCREW (1)
M3×8
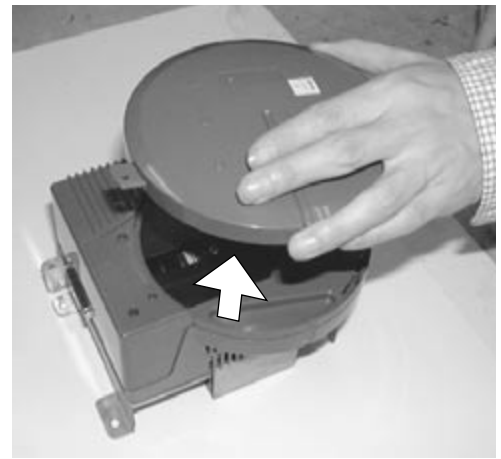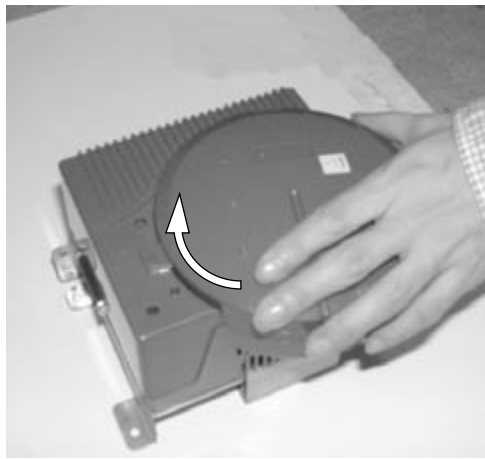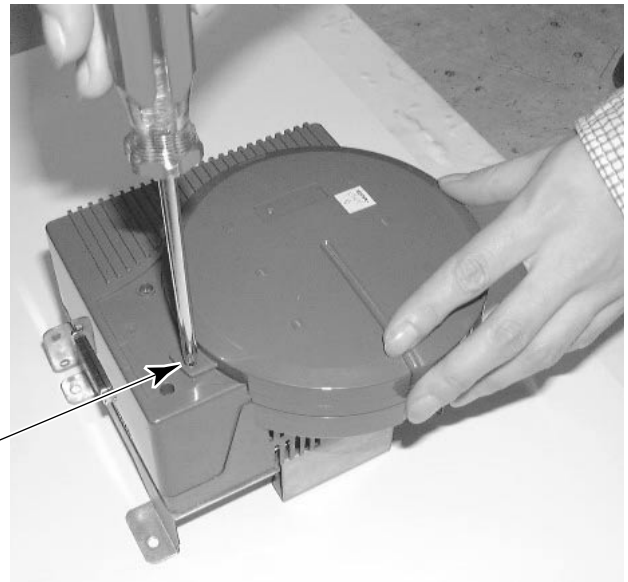
PHOTO 6. 5 b

④ Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.

⑤ Return the lid to its original place, and fix it with 1 truss head screw. Be careful not to fasten the screw too tightly.
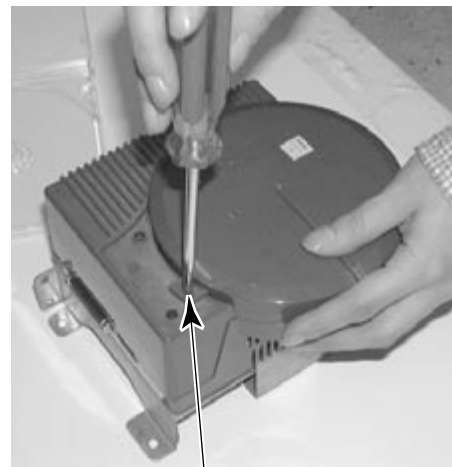
PHOTO 6. 5 c

TRUSS SCREW (1)
M3×8

⑥ Remove the 2 truss head screws that fix the PTV cabinet lid upper, and unlock. Thus remove the lid upper.

TRUSS SCREW (2), black
M4×16

UNLOCK

PHOTO 6. 5 d

⑦ Disconnect all the connectors of the wires extending to the ASSY MAIN BD in the PTV cabinet.

Disconnect the connector.

PHOTO 6. 5 e
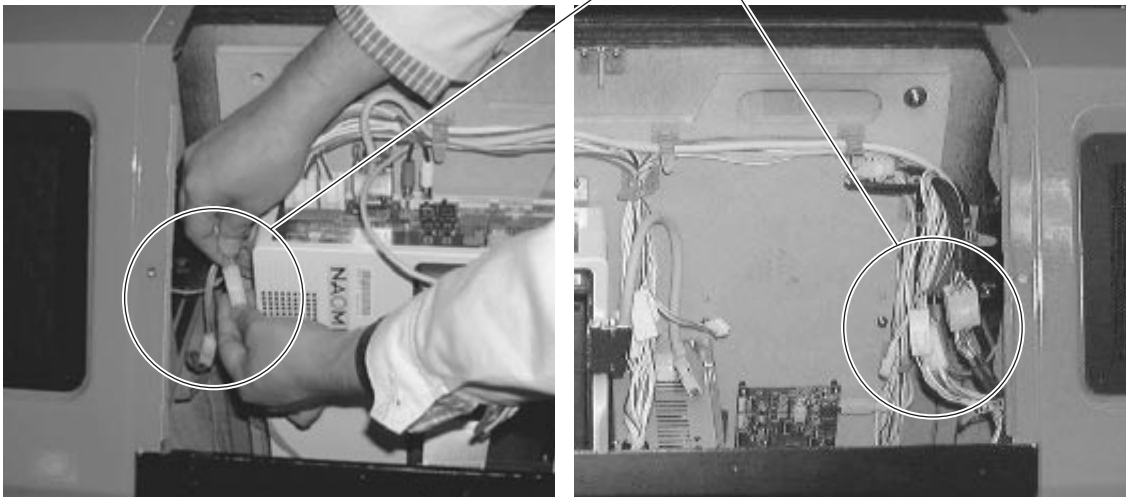
D-SUB connector cable

⑧ Disconnect the D-SUB connectors of the cable extending to the filter board (a part of the NAOMI board on the ASSY MAIN BD). Unclamp the cable with the D-SUB connector.

⑨ Remove the 2 screws that fix the ASSY MAIN BD's base (a wooden base).

SCREW (2)
M5×35,w/spring washer, flat washer used.
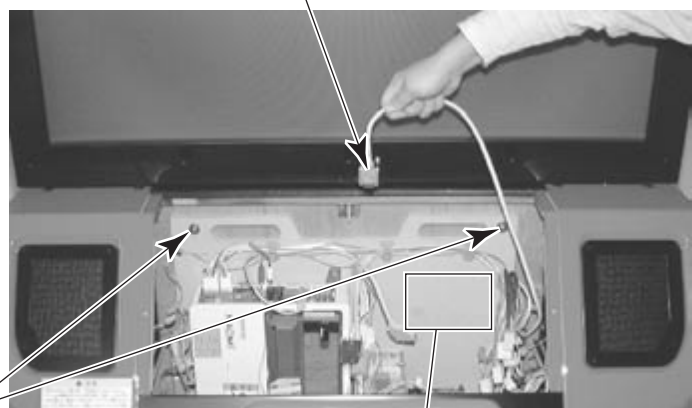
GD-ROM drive is installed here.

PHOTO 6. 5 f

⑩ Take out the ASSY MAIN BD from the PTV cabinet. Be careful not to damage the wires in this instance.
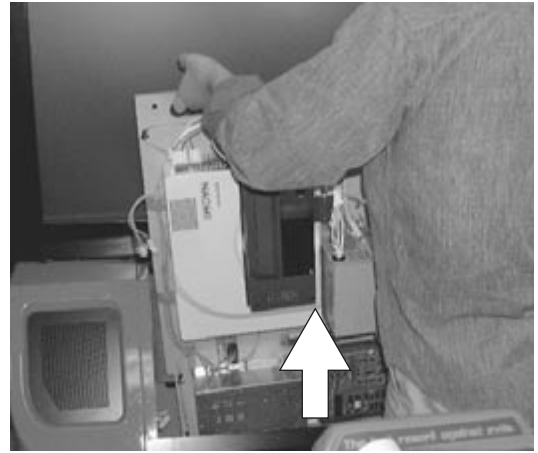
PHOTO 6. 5 g

⑪ Place the ASSY MAIN BD on a flat vertical surface.

⑫ Using the 4 screws, fix the GD-ROM drive onto the ASSY MAIN BD.

SCREW (4)
M4×16, w/flat & spring washers

PHOTO 6. 5 h

⑬ Insert both the GD cable connector (for data communication) and the power cord connector (JST NH6P) into the GD-ROM drive. Be careful about an inserting direction in this instance. Make sure that the connectors are inserted firmly and completely.

Power Cord connector

GD Cable connector

PHOTO 6. 5 i

27
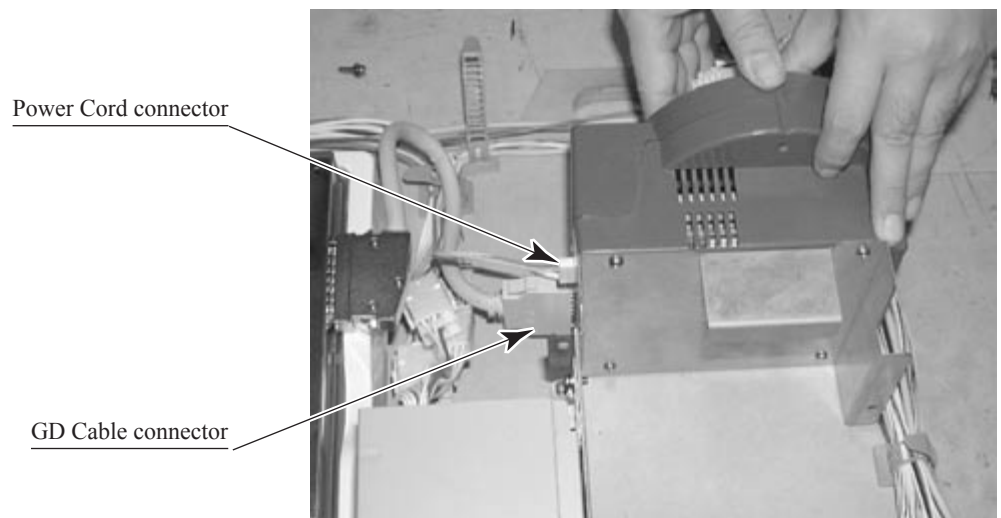
(14) Paying attention to the direction of the Key Chip, insert it securely into the NAOMI DIMM Board Case.

(15) Place the Sticker (442-00097B-01) on the side of the DIMM Board Case as shown in the figure.

KEY CHIP

KEY CHIP

DIMM BOARD CASE

PROJECTION

STICKER (442-00097B-01)

Sticker Position
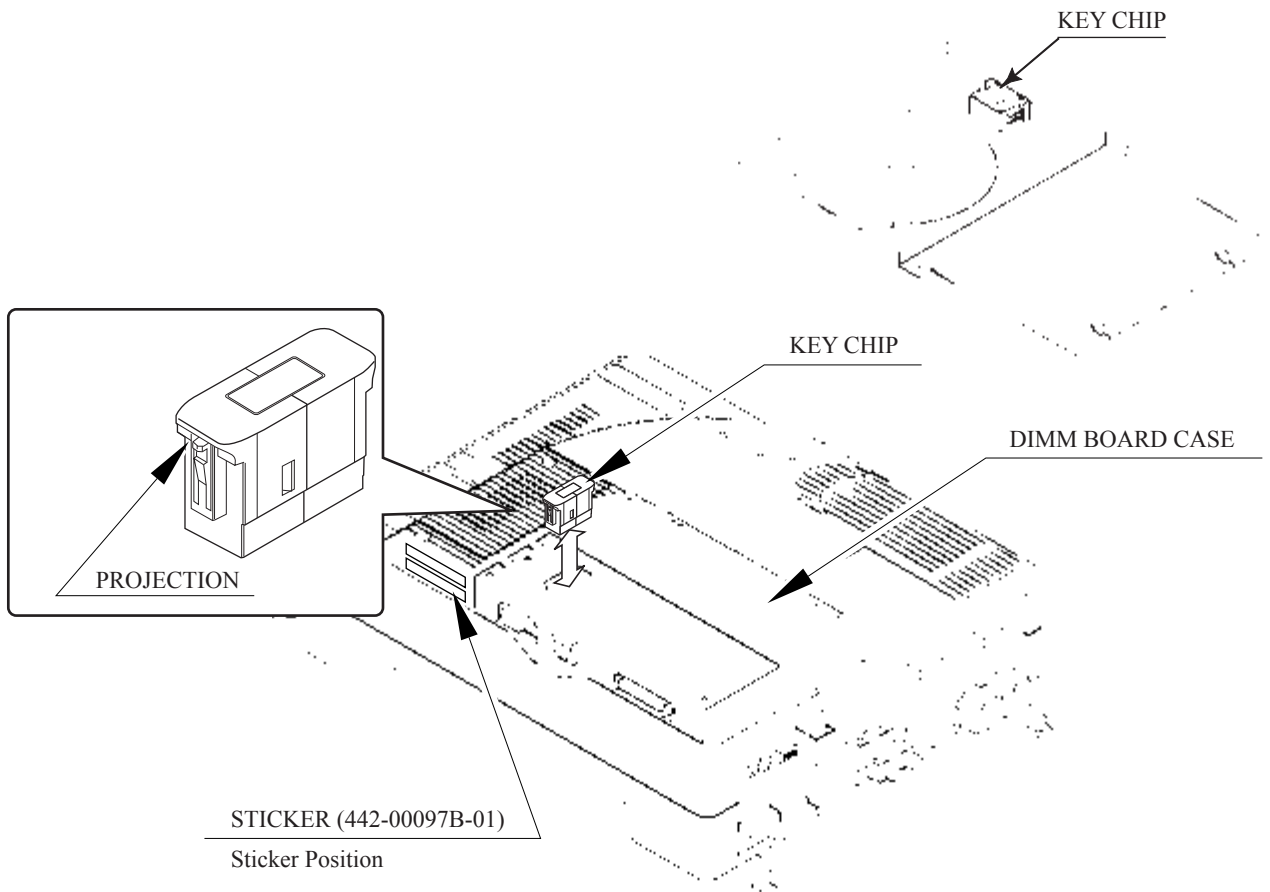
FIG. 6. 5 c

(16) Return the ASSY MAIN BD (now installed with the GD-ROM drive) into the PTV cabinet. Following the above-described actions in a reverse order, fix the base, connect the connectors, and clamp the wires/cables.

(17) Return the PTV cabinet lid upper to the PTV cabinet.

WARNING!

- Be sure to independently use the power supply socket outlet equipped with an Earth Leakage Breaker. Using a power supply without an Earth Leakage Breaker can cause a fire when electric leakage occurs.
- Ensure that the "accurately grounded indoor earth terminal" and the earth wire cable are available (except in the case where a power cord plug with earth is used). This product is equipped with the earth terminal. Connect the earth terminal and the indoor earth terminal with the prepared cable. If the grounding work is not performed appropriately, customers can be subjected to an electric shock, and the product's functioning may not be stable.
- Ensure that the power cord and earth wire are not exposed on the surface (passage, etc.). If exposed, they can be caught and are susceptible to damage. If damaged, the cord and wire can cause electric shock and short circuit accidents. Ensure that the wiring position is not in the customer's passage way or the wiring has protective covering.
- After wiring power cord on the floor, be sure to protect the power cord. Exposed power cord is susceptible to damage and causes an electric shoc accident.

The AC Unit is located on one side of Cabinet. The AC Unit has Main SW, Earth Terminal and the Inlet which connects the Power Cord.

① Ensure that the Main SW is OFF.

FIG. 6. 6 a   AC unit
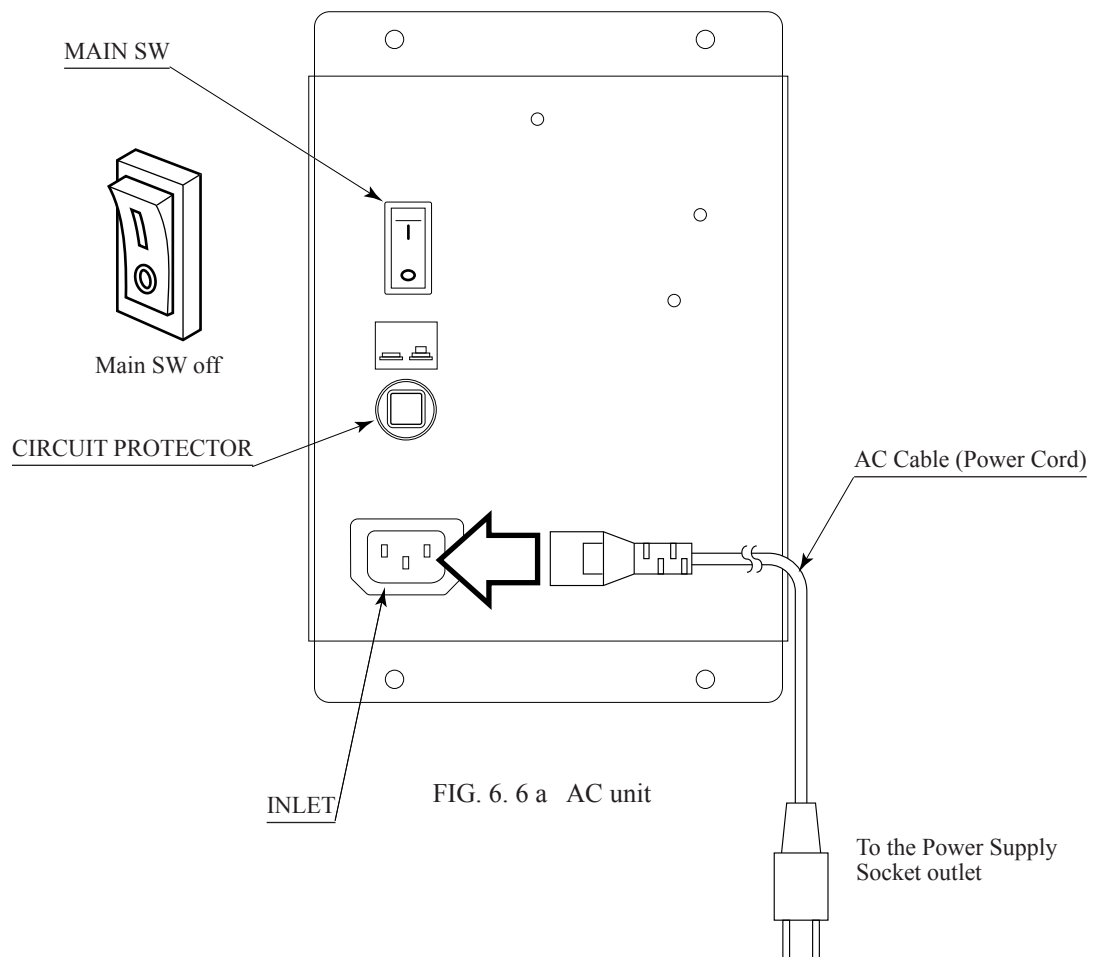
Turn on the AC unit's main switch to connect the power. When the power is connected, the fluorescent light in the billboard becomes on. A few seconds later a system startup screen appears and then an advertising screen (plying for a player screen) appears.

Time until displaying an advertising screen is not constant; it varies from some tens of second up to several minutes. This is due to the functional characteristics of the GD-ROM system's rechargeable battery and therefore normal.
For more information, see the NAOMI NETWORK SYSTEM Service Manual.

When an advertising screen appears, sound is output from the speakers on the right and left of the PTV cabinet. Sound is not output if you have set the function to off.
After the power is disconnected, the system can maintain the data of credit number and ranking. The system cannot maintain, however, the fractional number of coins (not enough for one credit) and the bonus adder count data.

Fluorescent lamp (in the Billboard) is lit.

On-screen images are outputted.

Sound is emitted.
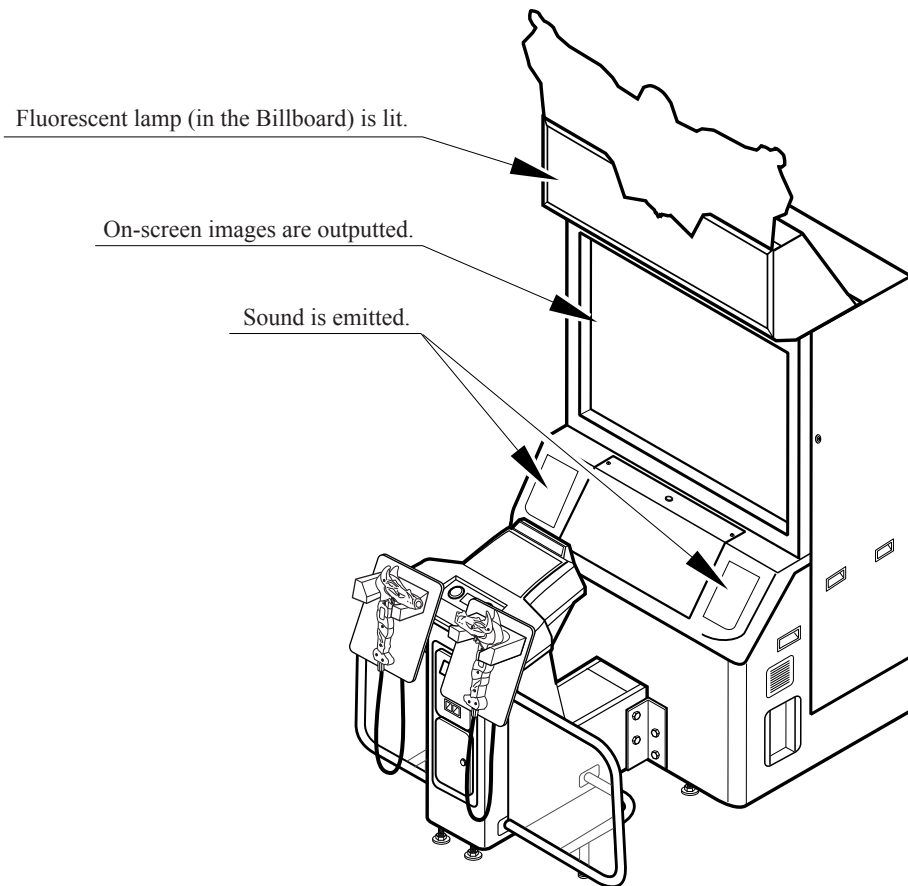
FIG. 6. 7

8 ASSEMBLING CHECK

In the TEST MODE, ensure that the assembly has been made correctly and IC BD. is satisfactory (refer to Section 9).
In the test mode, perform the following test:

(1) MEMORY TEST

Selecting the RAM TEST and DIMM BOARD TEST on the test mode menu screen causes the on-board memory to be tested automatically. The game board is satisfactory if the display beside each IC No. shows 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
```

```
                 DIMM BOARD TEST

            PROGRAM VER :1.02
            DIMM SLOT 0 : GOOD
            DIMM SLOT 1 : GOOD
            DIMM STATUS : GOOD

            CHECKING DIMM BD
            DIMM0 - GOOD
            DIMM1 - GOOD
            IC34,35S - GOOD
            IC10,11S - GOOD
            GD DRIVE - GOOD
            --- COMPLETED ---



            PRESS TEST BUTTON TO EXIT
```

(2) C.R.T. TEST

```
          C.R.T. TEST  1/2

  1                                    32
     ┌────────────────────────────┐
     │            RED             │
     ├────────────────────────────┤
     │           GREEN            │
     ├────────────────────────────┤
     │            BLUE            │
     ├────────────────────────────┤
     │           WHITE            │
     └────────────────────────────┘



       PRESS TEST BUTTON TO CONTINUE
```
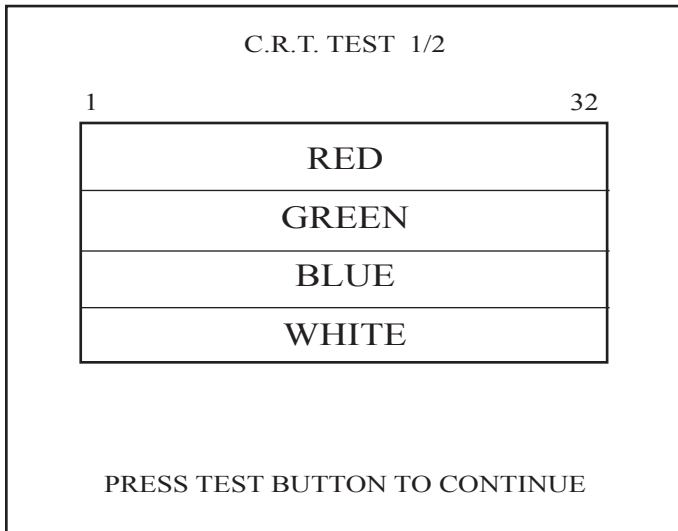
In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the projector is tested) to be displayed. Although the projector adjustments have been made at the time of shipment from the factory, make judgment as to whether an adjustment is needed by watching the test mode screen. If it is necessary, adjust the projector by referring to Section 11.

```
          C.R.T. TEST  2/2




       PRESS TEST BUTTON TO EXIT
```

(3) INPUT TEST
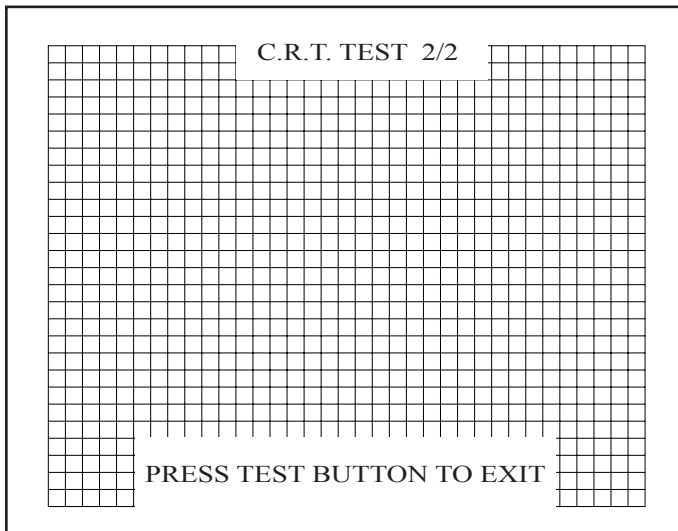
```
              INPUT TEST

               PLAYER 1  PLAYER 2
   TRIGGER     OFF       OFF
   SCREEN-IN   OUT       OUT
   GUN-X       0         0
   GUN-Y       0         0
   START       OFF       OFF



      PRESS TEST AND SERVICE BUTTON
                 TO EXIT
```
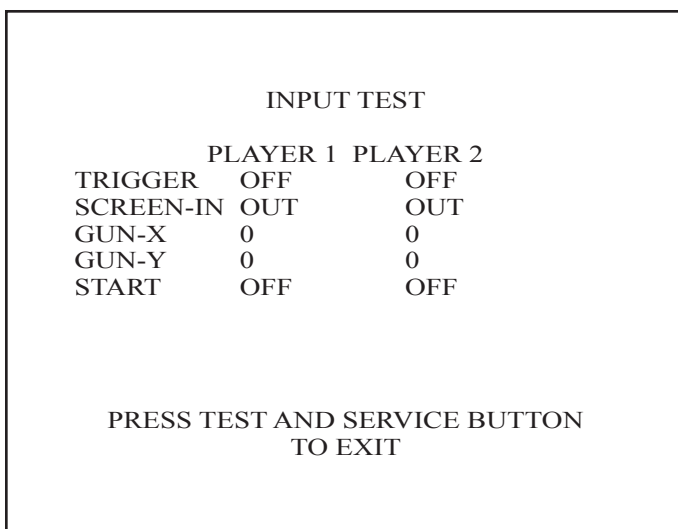
Selecting the INPUT TEST on the game test mode menu screen causes the screen (on which each switch is tested) to be displayed. Press each switch. If the display beside each switch indicates "ON," the switch and wiring connections are satisfactory.

(4) OUTPUT TEST

Select OUTPUT TEST from the menu in the test mode to cause the screen (on which each lamp and wiring connections are tested) to appear. Ensure that lamp light up satisfactorily.

```
        OUTPUT TEST


        PLAYER 1
        PLAYER 2
      > EXIT




   SELECT WITH SERVICE BUTTON
     AND PRESS TEST BUTTON
```
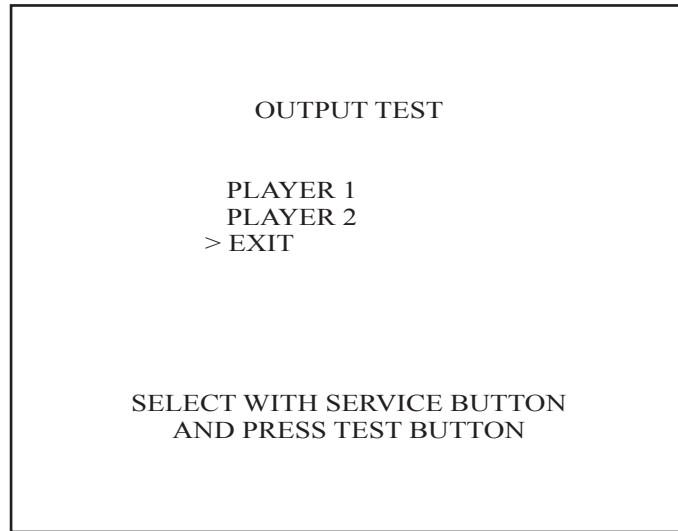
(5) GUN ADJUSTMENT

Before starting the operation, play the game by yourself and make sure that the gun readjustment is not needed and that you can play the game without a problem. Although completed at the factory, the gun adjustment may be necessary because after the adjustment the product has been disassembled for packing and shipping.

```
            GUN ADJUSTMENT

     PLAYER1                PLAYER2
    OLD : NOW              OLD : NOW
  > RIGHT     aa   bb     > RIGHT     aa   bb
    LEFT      aa   bb       LEFT      aa   bb
    TOP       aa   bb       TOP       aa   bb
    BOTTOM    aa   bb       BOTTOM    aa   bb
    CENTER X  aa   bb       CENTER X  aa   bb
    Y         aa   bb          Y      aa   bb
    DEFAULT                   DEFAULT
    CHECK                     CHECK

                 SIGHT OUT

       SELECT WITH START BUTTON
         AND PULL TRIGGER

       PRESS TEST BUTTON TO EXIT
```
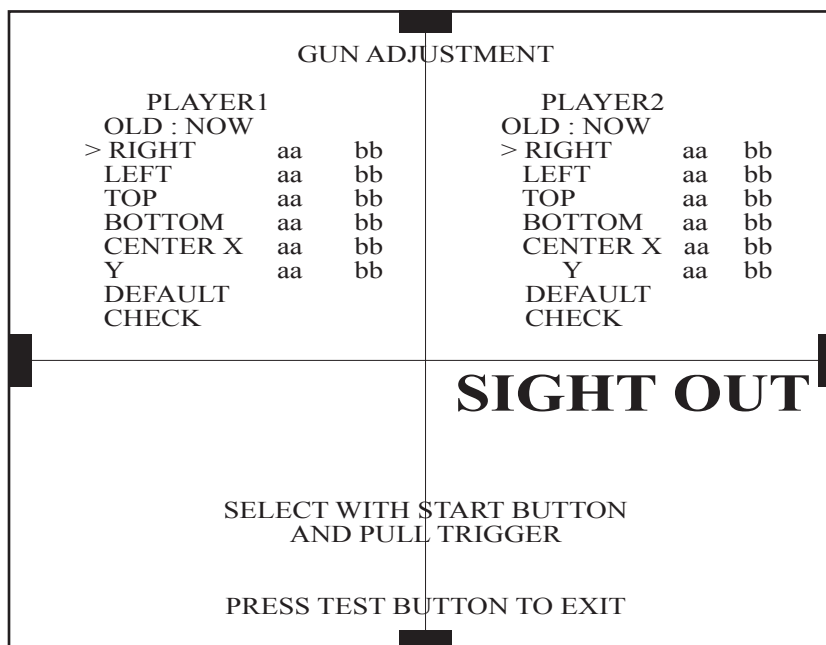
Perform the above inspections also at the time of monthly inspection.
As for the gun adjustment described in part (5) above, weekly confirm that the gun is properly adjusted.

⚠️ **WARNING!**

- In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
- 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 IC BD, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
- Work should be performed by the Location's Maintenance Man or technical personnel. Performing work by those who do not have technical knowledge and expertise can cause electric shock accident or malfunctioning.

When the game machines of a same or similar type are installed side by side, their sensors may interfere with each other. To reject the interference, follow the procedure below.
The following game machines employ a same or similar type of sensor. If interference happens to the sensors, operation of the games may be mutually disturbed.

- THE HOUSE OF THE DEAD 2, U/R type, DX type and Super DX type

- THE LOST WORLD, U/R type, DX type and Super DX type

- BRAVE FIRE FIGHTERS

- SAMBA DE AMIGO

- CONFIDENTIAL MISSION, U/R type and DX type

- SHAKATTO TAMBOURINE

- THE MAZE OF THE KINGS, U/R type and DX type

① Disconnect the power.

② Remove the 2 truss head screws that fix the PTV cabinet lid upper, and unlock. Thus remove the lid upper.

③ Locate an interference rejection wire inside the cabinet.
If the game machines of a same or similar type are installed side by side, place them alternately (place the machine with an interference rejection wire next to the machine without).

INTERFERENCE PREVENTION WIRING
SPY-60019

PHOTO 6. 8

7. PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE

⚠️ **WARNING!**

- When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug as is inserted can cause the power cord to be damaged and could result in a fire and or electric shock.
- When moving the machine on the floor, retract the Adjusters and ensure that Casters make contact with the floor. During transportation, pay careful attention so that Casters do not tread power cords and earth wires. Damaging the power cords can cause an electric shock and or short circuit.
- In places where step-like grade differences exist, be sure to separate the PTV, PTV Cabinet, and the Controller Cabinet. Inclining the PTV as is mounted on the PTV Cabinet can cause the PTV to fall off from the Base and result in injury.
- When lifting the cabinet, be sure to hold the catch portions or bottom part. Lifting the cabinet by holding other portions can damage parts and installation portions due to the empty weight of the cabinet, and cause personal injury.
- When moving the PTV, do not push it from the rear side. Push it from sideways. Pushing the PTV from the rear side can have the PTV fall down, causing personal injury etc. In case the floor has slanted surfaces or step-like differences, be sure to move the machine by 2 or more persons.

⚠️ **CAUTION!**

- Do not move the product with a GD-ROM disk inside. Remove the GD-ROM disk before moving the product.
- Failure to observe this instruction may cause the GD-ROM disk and/or GD-ROM drive to be damaged.
- Do not hold or press the plastic parts as indicated by the Figure 7C. Failure to observe this instruction may break the parts, and eventually the broken pieces may cause a personal injury.

Do not push PTV from the back. Pushing the PTV from the back can cause the PTV to fall down. Push it from the side.
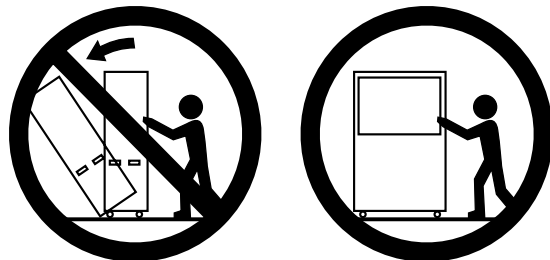
8. GAME CONTENTS

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

While the power is connected, the fluorescent light in the billboard is on and demonstration images and ranking data are displayed. During this advertising period, sound is also output from the speakers on the right and left of the PTV cabinet. Sound is not output if you have set the function to off. Each of the right and left start buttons is integrated with a light. The light flashes when coins are inserted sufficiently for a play. The light goes out when the start button is pressed to start the game.

Fluorescent lamp is lit.

On-screen images are outputted.

Sound is emitted.

START BUTTON

CONTROLLER

COIN INLET
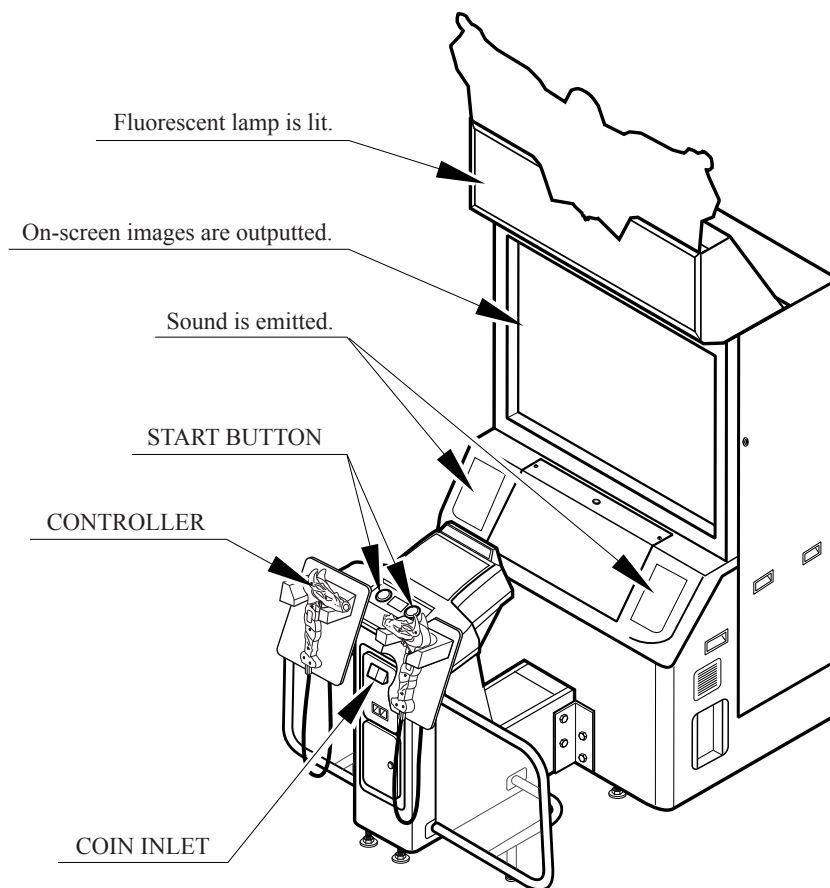
FIG. 8

● This is an action adventure game with the theme of a giant treasure hunt.

● The players take on the role of treasure hunters, fighting their way through various traps and using their magic rods to defeat the guardians of the treasure.

● The game is made up of three stages.

● Two players can play simultaneously.

Story

Somewhere among the pyramids, the world's last remaining secret treasure is sleeping. However, each time you set foot in the dungeon where it lies hidden, the route to the treasure changes...
Two treasure hunters with magic rods in hand.
Can they miraculously defeat the guardians and avoid countless traps to retrieve the hidden treasure?

Player Characters

LINDA ROBERTS
Twenty-four years old. A veteran adventurer whose quests have taken her around the world, she seeks the treasure of ancient ruins.
She possesses a courage and decisiveness unmatched by any man.

JAMES COOPER
Twenty-eight years old. A bright young man from the West Coast. This will be his first adventure.
He has talked the veteran character (female) into bringing him along against her will.
His lack of experience and simplicity of character often confound his partner.

(1) Random Map System
This game adopts a random map system where the route changes each time the game is played. Under this system, the room layout and order of rooms to be passed through for each stage change every time the game is started.

(2) Customizable Players
This game allows players to select rod effects and defense items. Using these functions, players are able to adequately prepare themselves for battle with difficult enemies and also to compensate for their partners' weak points.

(3) Free Exchange of Items/Lives
During two-player mode, players can give lives to their partners or exchange rod effects.

How to Play

(1) Insert Coins

Insert coins and the credit display at the bottom of the screen will go up.
When enough coins have been inserted for a single-player game, the "INSERT COIN(S)" message at the bottom of the screen will change to "PRESS START BUTTON" and both Start buttons will flash.

● Up to nine credits can be counted at a time. If additional coins are inserted they will not be counted as credits nor will they be returned. However, they will register on the data display and coin meter as having been inserted.

A player who wants to join a game in progress should insert coins during the game and press the Start button. If the number of credits remaining is enough, the Start button on the side not being played will flash. A player can join in during the game by pressing this button.

(2) Rod Controller Settings

A player decides which side (left or right) to play by pressing the Start button on the desired side. Press the Start button and the Rod Controller Settings screen will appear.

Players adjust the aim of the Gun Controllers by aiming and firing at the target in the center of the screen.

③ Rod Effects - Selecting Player Items

This selection screen appears after the Gun Controllers have been adjusted.

1. Rod Effect Selection

Select the effect of the rod. Only one of the three effects can be selected.

❍ LIGHT   This allows the most shots to be fired at once, but shot strength is correspondingly less powerful.

❍ SPARK   This effect provides a balance between shot strength and frequency.

❍ FIRE   This effect is the most powerful but allows the least number of shots.

2. Equipment Selection

Select equipment. Only one of the three items can be selected.

❍ HELMET   Protects against flying enemies attacking from above.

❍ JACKET   Protects against piercing attacks.

❍ BRACELET Protects against the fang and claw attacks of the mummies.

Each is only effective once.
They regain their effectiveness when Continue is selected.

3. Exchanging Lives
   [Two-Player Mode Only]

Players can give lives to and receive lives from a partner.
However, players cannot reduce their lives to zero.

    www.seuservice.com

④ Current Game Edition

Player One: Score

Player Two: Score

Player One:
Equipment Selected

Player Two:
Equipment Selected

Enemies

Player One:
Number of Rod Effects

Player Two:
Number of Rod Effects

Player One:
Number of Stones

Player Two:
Number of Stones

Player One:
Number of Lives Remaining

Player Two:
Number of Lives Remaining
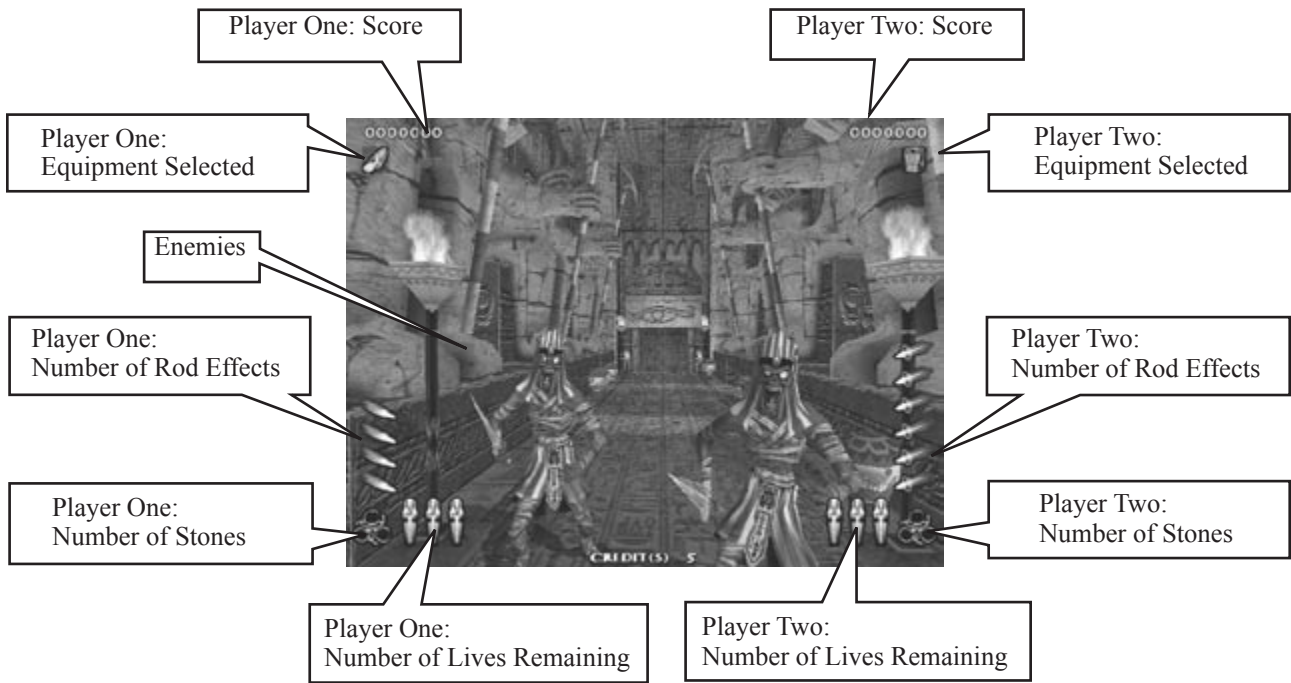
Rod effects and lives for the Player One (on the left side) are displayed at the lower left of the screen. Rod effects and lives for (Player Two) (on the right side) are displayed at the lower right of the screen.

<Recharging the Rod >
The rod loses its effectiveness after a certain period of time, depending on the effect that the player has chosen.
When the rod loses its effectiveness, the message RELOAD will be displayed on the screen. To restore the effectiveness of the rod, the player should point the tip of the rod away from the screen.

Reload Display (Displayed When Bullets are Used Up)

<Losing Lives>
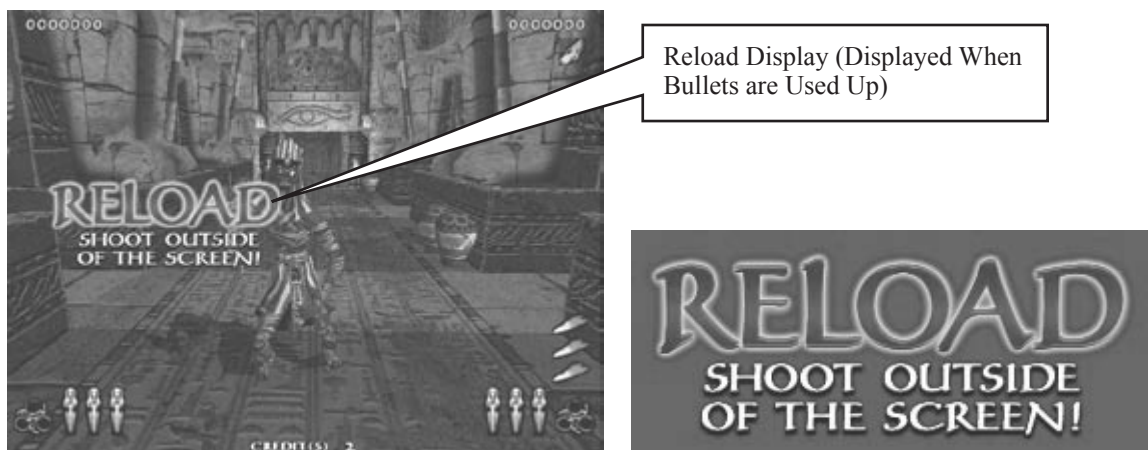
- Each player possesses a certain number of lives.

- The player loses a life each time they suffer an enemy attack (biting, clawing, slashing or hitting).

- A sight appears each time players battle a boss character. Players lose one life if they fail to shoot the enemy down by the time the sight turns completely red.
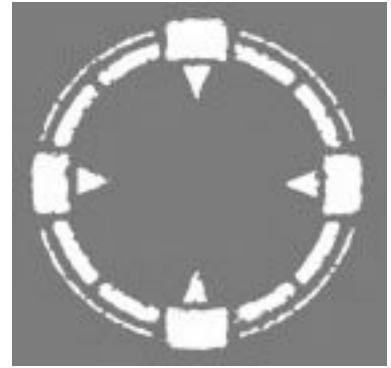
Sight

<Increasing Score>

- Score is increased when a player discovers treasure in pots or acquires treasure from enemy characters.

- Complete the minigame in the last area of each stage to acquire even more treasure!

<Decreased Score>

Score decreases each time the game is continued.

<Items>

Items sometimes appear when players defeat enemies or smash pots.
Players can collect items by shooting them to increase their scores or gain lives.

Life
Collect one Life to increase the number of lives by one.

Stone
Collect three Stones to increase the number of lives by one.

Treasure Item
This is enemy treasure.
Reveal the Treasure by defeating the enemy for bonus points.

<Boss Battles>

Life Meter

- Clear each stage by defeating the Boss character waiting at the end of the stage.

- To defeat the Boss character, the player must reduce its Life Meter to zero.

<Treasure Hunt Minigame>

- When the Boss character of each stage has been defeated, a minigame begins where players can acquire the Boss's treasure.

- During a minigame, follow the instructions that appear on the screen.

- Players can increase their scores by completing the minigame and acquiring the treasure.

<Rankings>

- The Stage Clear screen appears when the minigame ends.

- This screen displays players' rankings along with their scores for each stage.

⑤ Player Item Exchange (Two-player mode only)

- Clear a stage during two-player mode and the Item Exchange screen is displayed. (If a partner joined while a game was in progress, the partner's Item Selection screen will be displayed.)

- Players can exchange rod effects, equipment and lives.

⑥ Game Over

The following conditions result in GAME OVER:

1) Reduction of players' lives to zero.

2) Clearing of Stage Three.

⑦ CONTINUE

To continue when a player's lives are reduced to zero, they must insert enough coins to continue and then press the Start button. If there are enough credits remaining to continue, the game can be continued by simply pressing the Start button.

⑧ Hi-Score

Players whose scores are in the top twenty can record their names.

Play Tips

● Shoot the Treasure For Increased Points!
Points increase with the number of successful shots on enemy treasure.

● Stop Multiple Enemies in their Tracks!
Simultaneous attacks by multiple enemies are extremely dangerous.
Be sure to create situations where they can be dealt with one-on-one.

● Aim at the Shoulders and Legs of Enemies With Shields!
Enemies with shields may be encountered.
Shields deflect rod effects, so aim and fire at unshielded areas.

9. EXPLANATION OF TEST AND DATA DISPLAY

By operating the switch unit, periodically perform the tests and data check. When installing the machine initially or collecting cash, or when the machine does not function correctly, perform checking in accordance with the explanations given in this section.

The following shows tests and modes that should be utilized as applicable.

This product's basic system consists of the NAOMI game board and the GD-ROM drive. The system enables you to play several games one after the other just by changing a GD-ROM disc that is to be set on the GD-ROM drive.

The product supports, therefore, the following 2 test modes:

    (1) System test mode for an automatic self-diagnostic test (generally used by every product that contains the basic system) and a coin assignment (specifically used by this product) and

    (2) Game test mode for testing the input/output control devices and setting the difficulty level (specifically used by this product).

      This manual does not cover the automatic self-diagnostic test. For more information about the system test mode, see the attached NAOMI NETWORK SYSTEM Service Manual.

TABLE 9   EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to ensure each is the standard setting at shipment. 2. Check each Input equipment in the INPUT TEST mode. 3. Check each Output equipment in the OUTPUT TEST mode. 4. Test on-IC-Board IC's in the SELF-TEST mode.	NETWORK SYSTEM SERVICE MANUAL 9-3D,E 9-3B 9-3C NETWORK SYSTEM SERVICE MANUAL
MEMORY	This test is automatically executed by selecting RAM TEST, or ROM BOARD TEST in the Menu mode.	NETWORK SYSTEM SERVICE MANUAL
PERIODIC SERVICING	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. To test each Input equipment in the INPUT TEST mode. 4. To test each Output equipment in the OUTPUT TEST mode.	NETWORK SYSTEM SERVICE MANUAL
CONTROL SYSTEM	1. To check each Input equipment in the INPUT TEST mode. 2. Adjust or replace each Input equipment. 3. If the problem still remains unsolved, check each equipment's mechanism movements.	9-3D,E 9-3B 9-3C NETWORK SYSTEM SERVICE MANUAL
MONITOR	In the Monitor Adjustment mode, check to see if Monitor (Projector) adjustments are appropriate.	9-3B,E 10
IC BOARD	1. MEMORY TEST 2. In the SOUND TEST mode, check the sound related ROMs.	NETWORK SYSTEM SERVICE MANUAL
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc.	11

WARNING!

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

STOP

IMPORTANT!

● 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.

SWITCH UNIT

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

SOUND VOLUME   SERVICE BUTTON   TEST BUTTON
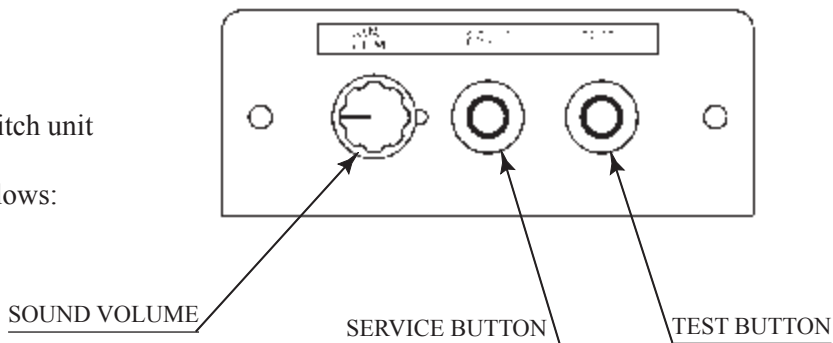
FIG. 9. 1 a SWITCH UNIT

● SOUND VOLUME SWITCH: Adjusts sound volume for all of the machines' Speakers.
  (SOUND VOLUME)

● SERVICE BUTTON: Gives credits without registering on the coin meter.
  (SERVICE)

● TEST BUTTON: For the handling of the test button, refer to the following pages.
  (TEST)

COIN METER

Open the Cashbox Door by using the key to have the Coin Meter appear underneath the Cashbox.

COIN METER

FIG. 9. 1 b

● The contents of settings changed in the TEST mode are stored when the test mode is finished from EXIT in the menu mode. If the power is turned off before the TEST mode is finished, the contents of setting change become ineffective.
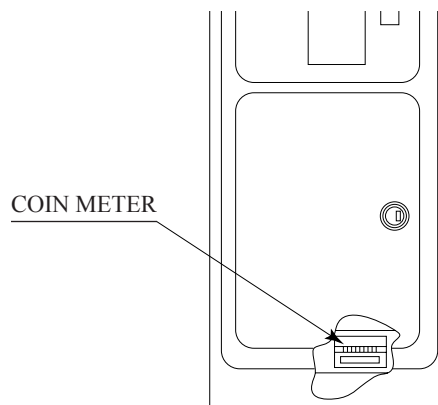● Executing "BACKUP DATA CLEAR" in the SYSTEM TEST MODE does not clear the BOOKKEEPING data in the GAME TEST mode.
● Entering the TEST mode clears fractional number of coins less than one credit and BONUS ADDER data.
● Perform setting as per specified in this manual for operation. If setting not specified is performed for operation, proper function of this product may not be obtained.

In the SYSTEM TEST MODE, IC BD functioning can be checked, the monitor adjusted, and the coin setting performed.
Refer to NAOMI NETWORK SYSTEM SERIVCE MANUAL for the details. Note that the setting of the following items need to be performed in accordance with the instruction given.

●CABINET TYPE   : 2 PLAYER(S)
●MONITOR TYPE   : HORIZONTAL
●SERVICE TYPE   : COMMON
●COIN CHUTE TYPE   : COMMON
●NETWORK TYPE   : NONE

9 - 3 GAME TEST MODE
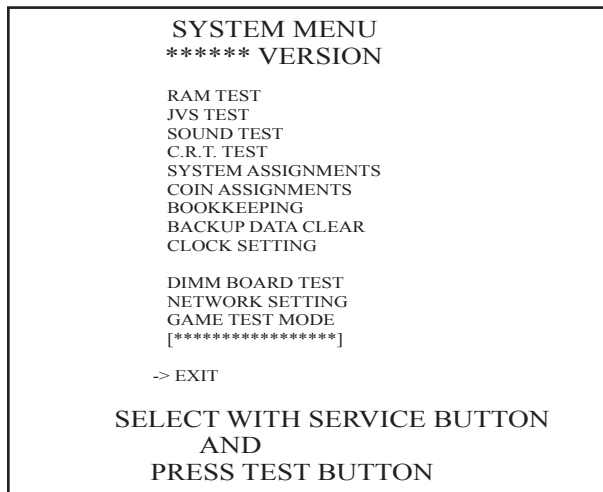
```
 ___
(STOP)      ●  When changing the game configuration, changes will not take effect until the
 ‾‾‾            Game Test Mode has been completed.  Be sure to exit the Game Test Mode
IMPORTANT!      properly after configuration changes.
             ●  Do not configure the game in ways not described in this text.  It is possible
                that the game will not function properly.
```
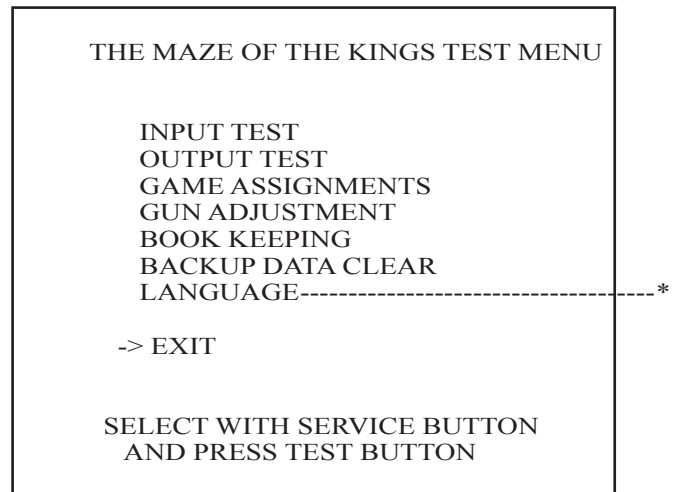
9 - 3a GAME TEST MENU MODE

Select GAME TEST MODE from the System Menu screen to display the Game Test Menu screen.

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

```
        SYSTEM MENU
        ****** VERSION

        RAM TEST
        JVS TEST
        SOUND TEST
        C.R.T. TEST
        SYSTEM ASSIGNMENTS
        COIN ASSIGNMENTS
        BOOKKEEPING
        BACKUP DATA CLEAR
        CLOCK SETTING

        DIMM BOARD TEST
        NETWORK SETTING
        GAME TEST MODE
        [****************]

        -> EXIT

        SELECT WITH SERVICE BUTTON
                  AND
            PRESS TEST BUTTON
```

SYSTEM TEST MODE MENU Screen

```
      THE MAZE OF THE KINGS TEST MENU


          INPUT TEST
          OUTPUT TEST
          GAME ASSIGNMENTS
          GUN ADJUSTMENT
          BOOK KEEPING
          BACKUP DATA CLEAR
          LANGUAGE----------------------------------*

        -> EXIT


        SELECT WITH SERVICE BUTTON
          AND PRESS TEST BUTTON
```
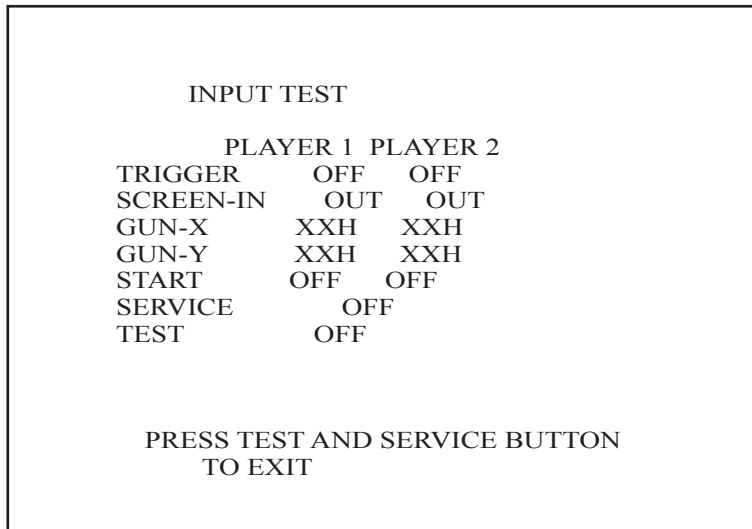
GAME TEST MENU Screen

After making changes, be sure to select EXIT and press the TEST Button in order to enable the new settings.

Move the cursor to EXIT and press the TEST Button to return to the System Menu screen.

* For overseas version other than US, Australia, and Korea.

Select INPUT TEST to display the following screen and check the status of input devices.
This test should be used periodically to check that each input device is functioning correctly.

```
INPUT TEST

             PLAYER 1  PLAYER 2
TRIGGER         OFF     OFF
SCREEN-IN       OUT     OUT
GUN-X           XXH     XXH
GUN-Y           XXH     XXH
START           OFF     OFF
SERVICE            OFF
TEST               OFF



   PRESS TEST AND SERVICE BUTTON
          TO EXIT
```

INPUT TEST Screen

Pull the gun's trigger. If it is functioning correctly, the TRIGGER indicator will switch from OFF to ON.

Point the barrel of the gun at the screen. If the gun is functioning correctly, the SCREEN-IN indicator will switch from OUT to IN and the indicators to the right of GUN-X and GUN-Y will display values within the "0ff" range.

Press the START switch/button. If functioning correctly, the START indicator will switch from OFF to ON.

Press the SERVICE and TEST Buttons simultaneously to return to the Game Test Menu screen.

9 - 5 OUTPUT TEST

Select OUTPUT TEST to display the following screen and check the status of each lamp.
This test should be used periodically to check that the lamps are functioning correctly.

```
OUTPUT TEST




    PLAYER 1
    PLAYER 2
 -> EXIT




    SELECT WITH SERVICE BUTTON
      AND PRESS TEST BUTTON
```
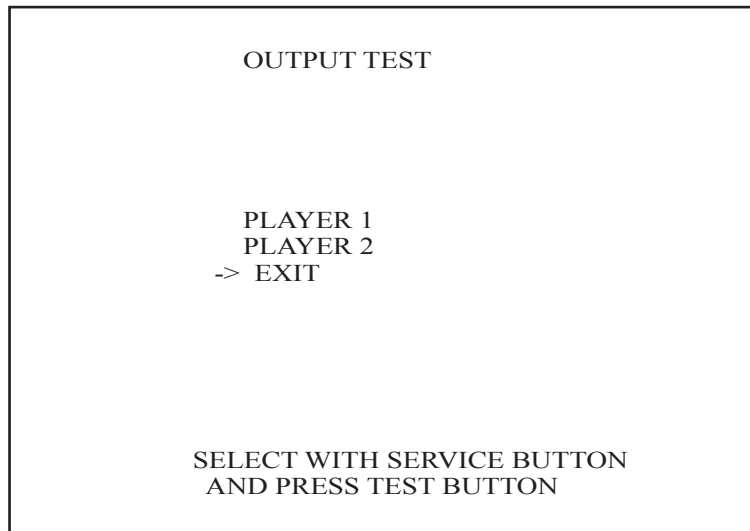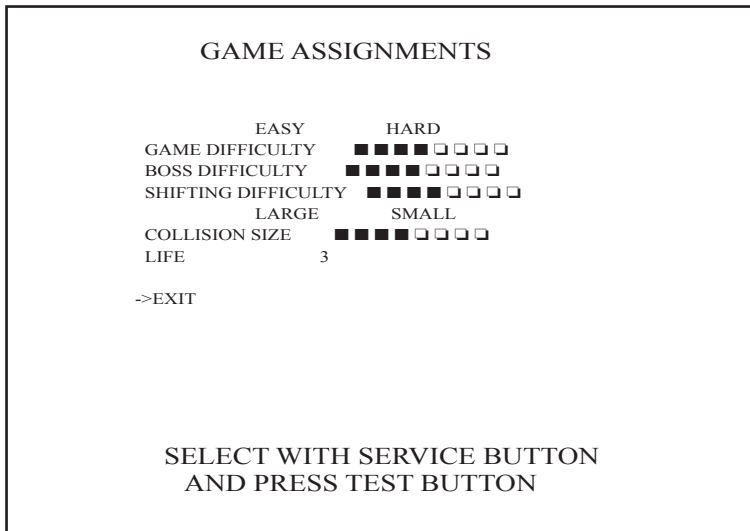
OUTPUT TEST Screen

Select the item to be tested. If the connections are functioning correctly, the "1P" and "2P" buttons
will flash when PLAYER 1 and PLAYER 2 are selected.

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

Select GAME ASSIGNMENTS to display the current game settings and make changes.

```
                    GAME ASSIGNMENTS


              EASY          HARD
       GAME DIFFICULTY     ■■■■□□□□
       BOSS DIFFICULTY      ■■■■□□□□
       SHIFTING DIFFICULTY ■■■■□□□□
              LARGE        SMALL
       COLLISION SIZE      ■■■■□□□□
       LIFE           3

       ->EXIT




               SELECT WITH SERVICE BUTTON
                 AND PRESS TEST BUTTON
```

GAME ASSIGNMENTS Screen

● GAME DIFFICULTY (Default setting: 4)
  Alters difficulty level of the game. Choose from eight levels.

● BOSS DIFFICULTY (Default setting: 4)
  Alters difficulty level of BOSS battles for each stage. Choose from eight levels.

● SHIFTING DIFFICULTY (Default setting: 4)
  Alters rate at which level of difficulty increases as the game progresses. Choose from eight
  levels.

● COLLISION SIZE (Default setting: 4)
  Alters collision impact of enemy characters that appear throughout the game. Choose from
  eight levels.

● LIFE (Default setting: 3)
  INITIAL LIFE (Number of lives given to players at the start of the game). Players can be
 given from three to eight initial lives.

Changes to settings are not enabled until Test Mode is exited. After changing settings, be sure to
exit Test Mode.

After changing the settings, select the EXIT and press the TEST Button to return to the Game
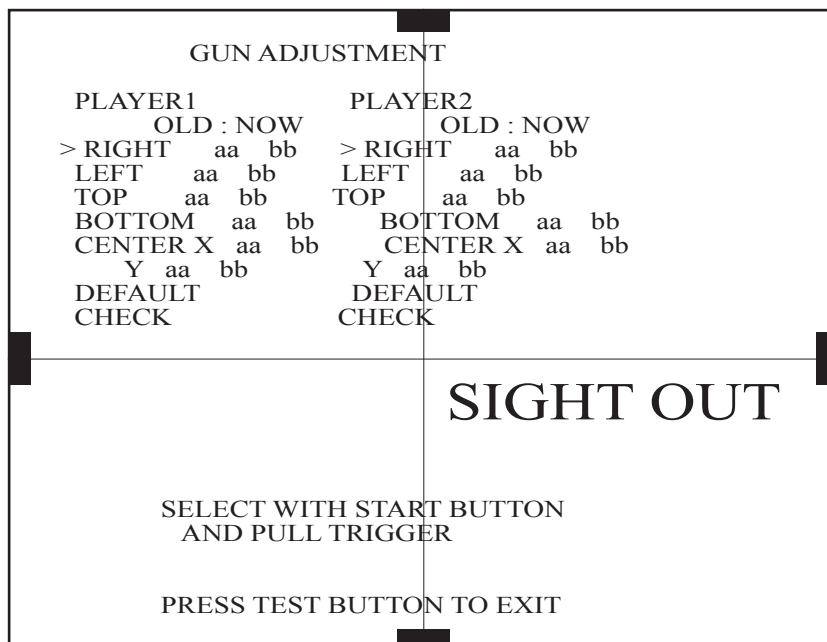Test Menu screen.

> **STOP IMPORTANT!**
>
> Note that while the Gun (Rod) Controller has front and rear sights, its sights are not aligned to aim like a gun. If the Gun (Rod) Controller's sights are used to aim, they will not appear to fire properly.
>
> Line of sight using the sights   Front Sight   Rear Sight
>
> Actual line of sight
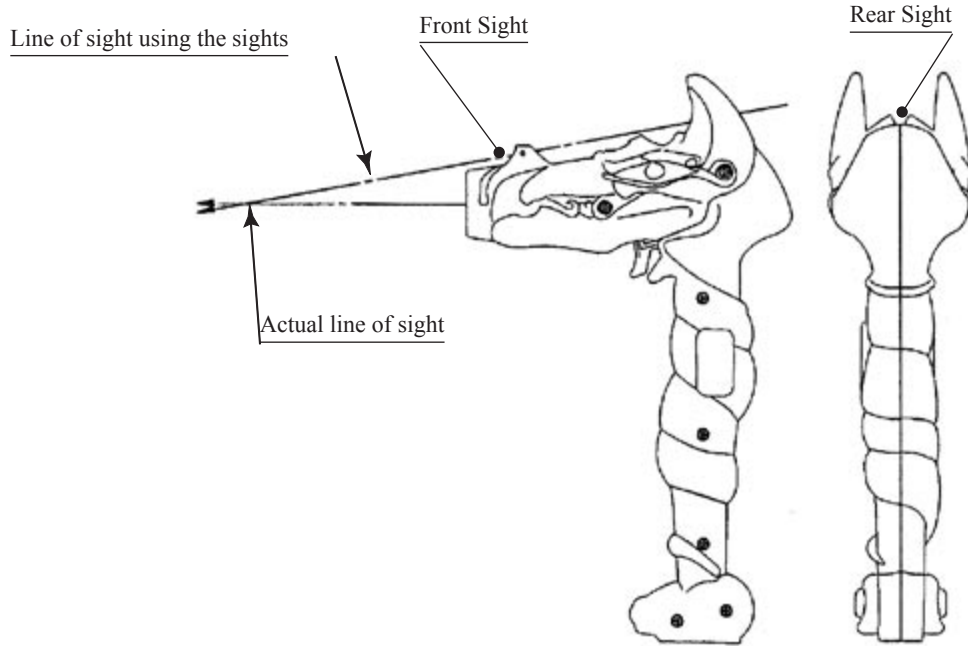
Select GUN ADJUSTMENT to display the following screen. Five aiming correction values (screen center, right limit, left limit, top and bottom) can be set from this screen. Set the five correction values in the following way: Aiming the Gun Controller in the specified direction, select 1P using the 1P Start Button and 2P using the 2P Start Button. When the Gun Controller is in the desired position, pull the trigger to set the new values.

```
              GUN ADJUSTMENT

     PLAYER1              PLAYER2
         OLD : NOW            OLD : NOW
   > RIGHT    aa   bb   > RIGHT     aa   bb
     LEFT     aa   bb     LEFT      aa   bb
     TOP      aa   bb     TOP       aa   bb
     BOTTOM   aa   bb     BOTTOM    aa   bb
     CENTER X aa   bb     CENTER X  aa   bb
        Y  aa  bb            Y  aa   bb
     DEFAULT              DEFAULT
     CHECK                CHECK


                   SIGHT OUT



        SELECT WITH START BUTTON
           AND PULL TRIGGER


        PRESS TEST BUTTON TO EXIT
```

GUN ADJUSTMENT Screen

● RIGHT aa bb ●

Sets the right horizontal limit correction value.
The left indicator (aa) shows the previous value and the right indicator (bb) shows the newly-input value.
Point the Gun Controller at the right edge of the screen, aiming at the square mark, and pull the trigger to set the correction value. Vertical movement has no effect on the values in this case.

● LEFT aa bb ●

Sets the left horizontal limit correction value.
The left display (aa) shows the previous value and the right display (bb) shows the newly-input value.
Point the Gun Controller at the left edge of the screen, aiming at the square mark, and pull the trigger to set the correction value. Vertical movement has no effect on the values in this case.

● TOP aa bb ●

Sets the upper vertical limit correction value.
The left indicator (aa) shows the previous value and the right indicator (bb) shows the newly-input value.
Point the Gun Controller at the upper edge of the screen, aiming at the square mark, and pull the trigger to set the correction value. Horizontal movement has no effect on the values in this case.

● BOTTOM aa bb ●

Sets the lower vertical limit correction value.
The left display (aa) shows the previous value and the right display (bb) shows the newly-input value.
Point the Gun Controller at the lower limit of the screen, aiming at the square mark, and pull the trigger to set the correction value. Horizontal movement has no effect on the values in this case.

● CENTER X Y   aa bb ●

Sets the center correction value.
X indicates the horizontal and Y indicates the vertical. The left display (aa) shows the previous value and the right display (bb) shows the newly-input value.
Point the Gun Controller at the center of the screen, aiming at the square mark, and pull the trigger to set the correction value.

● DEFAULT ●

Returns correction values to their default settings.

● CHECK ●

Select CHECK and point the Gun Controller at the screen. Use the two round cursors that appear at the top of the screen (red for Player 1 and blue for Player 2) to check the aim.

● SIGHT OUT ●

SIGHT OUT message appears when you point the Gun Controller to outside the screen.

Changes to settings are not enabled until the Test Mode is exited. After changing settings, be sure to exit Test Mode.

After changing the settings, select EXIT and press the TEST Button to return to the Game Test Menu screen.

Selecting BOOKKEEPING displays the two following screens of operating status data.

Pressing the TEST Button toggles between the first (BOOKKEEPING 1/2) and second (BOOKKEEPING 2/2) screens.

```
BOOK KEEPING 1/2




NUMBER OF GAMES              0
PLAY TIME          OD 00H 00M 00S
AVERAGE PLAY TIME      00H 00M 01S
LONGEST PLAY TIME      00H 00M 02S
SHORTEST PLAY TIME      00H 00M 03S






PRESS TEST BUTTON TO CONTINUE
```

BOOKKEEPING Screen (1/2)

●NUMBER OF GAMES○   Indicates the total number of plays.

●PLAY TIME○   Indicates the sum of the play times of Players 1 and 2.

●AVERAGE PLAY TIME○   Total play time divided by number of games played.

●LONGEST PLAY TIME○   Indicates the longest game play time.

●SHORTEST PLAY TIME○   Indicates the shortest game play time.

Press the TEST Button to display the BOOKKEEPING 2/2 screen.

```
BOOK KEEPING 2/2
TIME HISTOGRAM

0M00S - 0M29S    0
0M30S - 0M59S    0
1M00S - 1M29S    0
1M30S - 1M59S    0
2M00S - 2M29S    0
2M30S - 2M59S    0
3M00S - 3M29S    0
3M30S - 3M59S    0
4M00S - 4M29S    0
4M30S - 4M59S    0
5M00S - 5M29S    0
5M30S - 5M59S    0
6M00S - 6M29S    0
6M30S - 6M59S    0
7M00S - 7M29S    0
7M30S - 7M59S    0
8M00S - 8M29S    0
8M30S - 8M59S    0
9M00S - 9M29S    0
9M30S - 9M59S    0
OVER  10M00S    0

PRESS TEST BUTTON TO EXIT
```
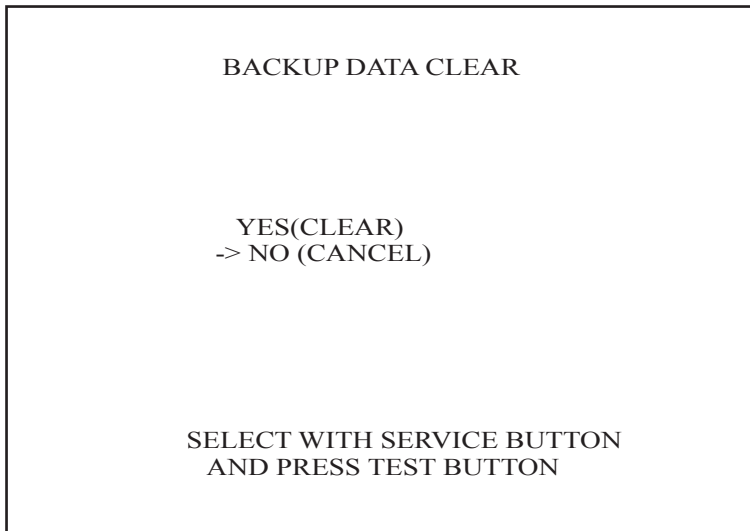
BOOKKEEPING Screen (2/2)

PLAY TIME HISTOGRAM shows the number of plays and their respective play times. This histogram should be referred to when setting the Game Difficulty.

Press the TEST Button to return to the Game Test Menu screen.

9 - 9 BACKUP DATA CLEAR

Select BACKUP DATA CLEAR to clear the contents of BOOKKEEPING and Ranking Data.

```
┌─────────────────────────────────────────────┐
│                                               │
│            BACKUP DATA CLEAR                  │
│                                               │
│                                               │
│                                               │
│               YES(CLEAR)                      │
│             -> NO (CANCEL)                    │
│                                               │
│                                               │
│                                               │
│                                               │
│        SELECT WITH SERVICE BUTTON             │
│          AND PRESS TEST BUTTON                │
│                                               │
└─────────────────────────────────────────────┘
```

BACKUP DATA CLEAR Screen

To clear data, use the SERVICE Button to move the cursor to YES (CLEAR) and then press the TEST Button.
When the data has been cleared, the message "COMPLETED" will be displayed.

Press the TEST Button again to return to the Game Test Menu screen.

Move the cursor to NO (CANCEL) and press the TEST Button to return to the Game Test Menu screen without clearing the data.

Note that this operation does not affect the settings of the GAME ASSIGNMENTS and the GUN ADJUSTMENT.

Using the BACKUP DATA CLEAR function from this screen will not affect coin/credit data. To clear coin/credit data, use the BACKUP DATA CLEAR function in SYSTEM TEST MODE.

9 - 10 LANGUAGE (For overseas version other than US, Australia, and Korea)

Select LANGUAGE to display the following screen and choose the language displayed on the screen message. Five languages (English/French/German/Italian/Spanish) are selectable. (Default setting: English)

```
┌─────────────────────────────────────────────┐
│                                               │
│              LANGUAGE SETTING                 │
│                                               │
│                                               │
│                                               │
│          -> LANGUAGE : ENGLISH                │
│             EXIT                              │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
│          SELECT WITH SERVICE BUTTON           │
│            AND PRESS TEST BUTTON              │
│                                               │
└─────────────────────────────────────────────┘
```
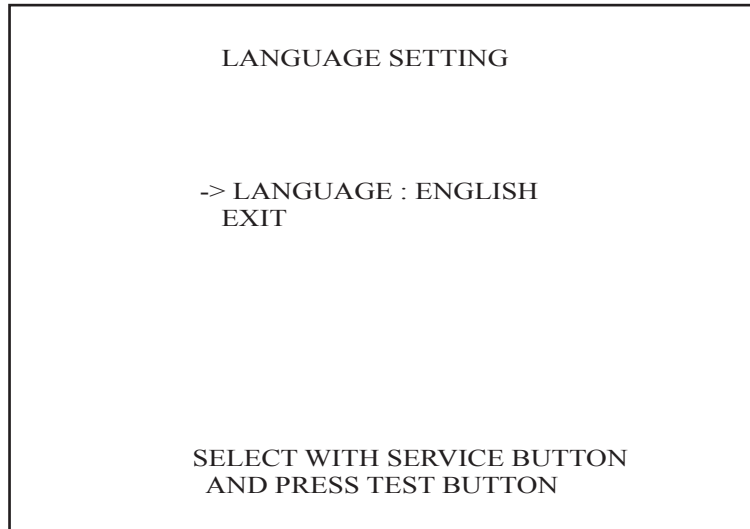
LANGUAGE Screen

Use the SERVICE Button to move the cursor to LANGUAGE and press the TEST Button to choose your favorite language.

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

10. CONTROLLER

In the cases where the controller's operation is not satisfactory or the controller sight deviates from the direction in which the controller is pointed, the controller's interior parts may have been damaged. Replace the parts by disassembling the controller in the following procedure: Also, be sure to perform sighting check in the test mode when the controller parts are replaced.

REPLACING THE MICROSWITCH

① Remove the 4 tapping screws and the 4 (resin) color heads. The color heads are small, take care not to lose them.

② Slide the head cover and remove it.

TAPPING SCREW (4), black
3 × 14

TAPPING SCREW (4), black
3×14

COVER HEAD

COLOR HEAD
(RESIN)

FIG. 10 a

COVER HEAD
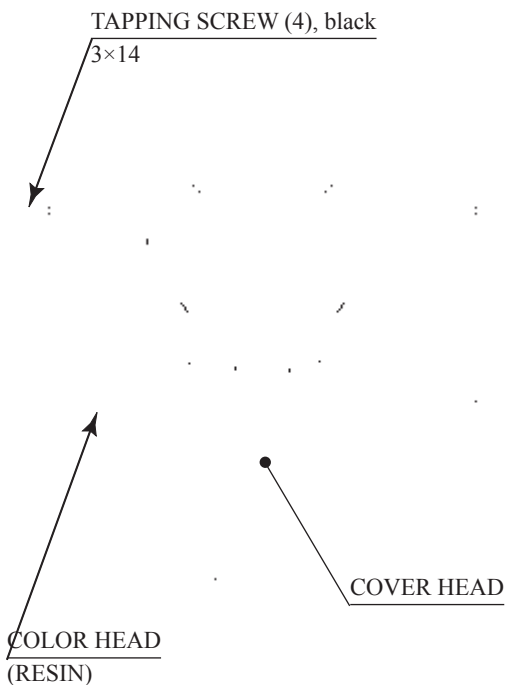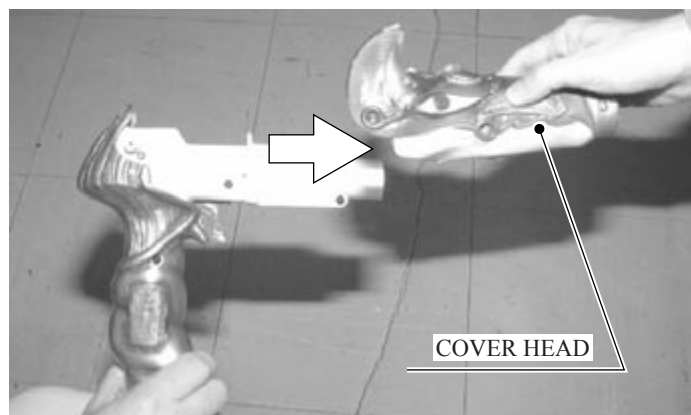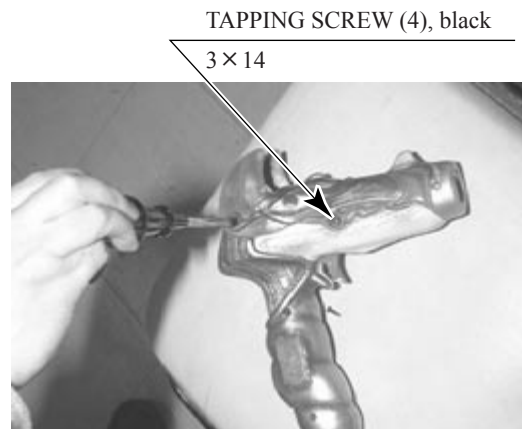
PHOTO 10 a

③ Remove the 9 cap nuts and 9 screws. The cap nuts are small, take care not to lose them.

SCREW (2), black
M3×20, w/flat & spring washers (small)

CAP NUT (9), black
(same as other side)
M3

SCREW (7), black \ M3×28,
w/flat & spring washers (small)
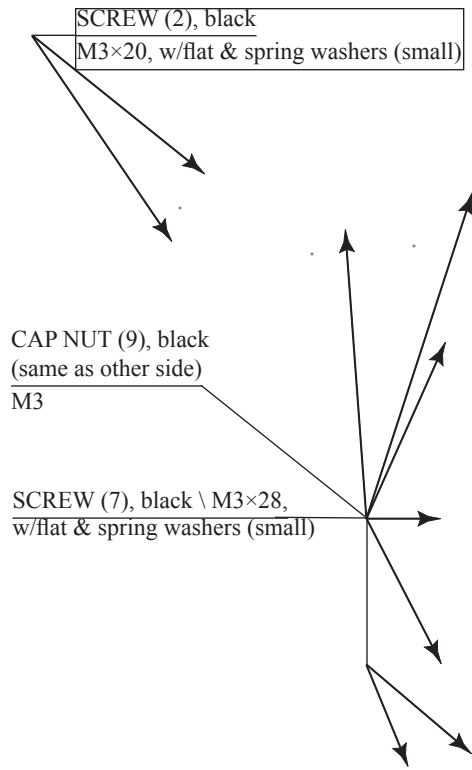
FIG. 10 b

PHOTO 10 b

④ Remove Cover Body L.

COVER BODY R

COVER BODY L

PHOTO 10 c

57
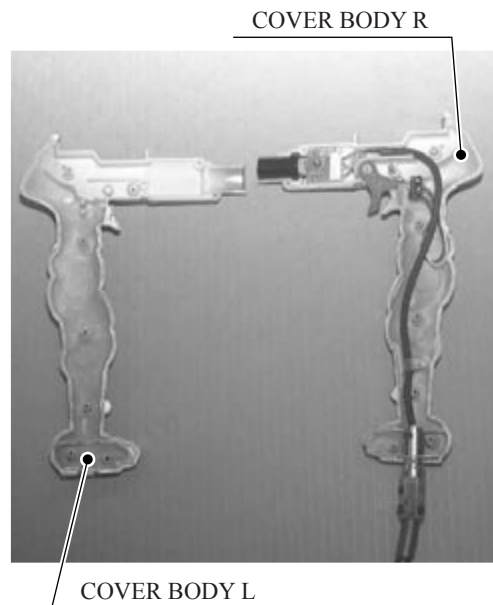
(5) Pull out the microswitch from the Cover Body R.

(6) Take out the microswitch by removing the soldering from it.

MICROSWITCH
509-5080
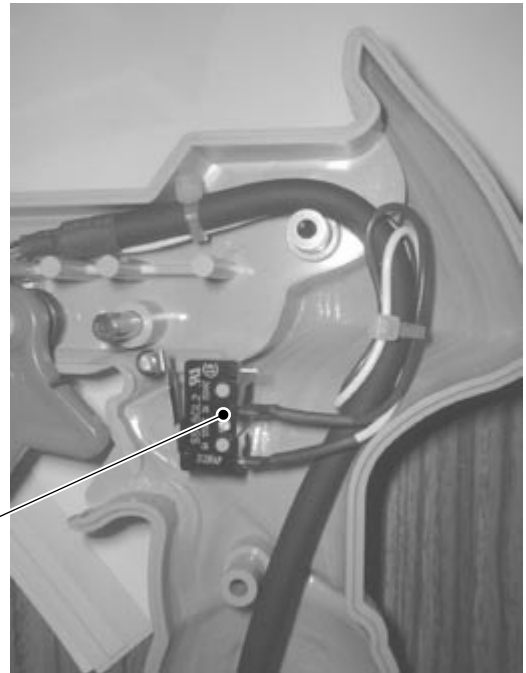
PHOTO 10 d

(7) Solder the new microswitch and reassemble the controller.
When assembling the controller, take care not to fasten the screws too tightly. Be especially careful in case of the tapping screws.

(8) Test the trigger to ensure that the microswitch is working properly.

REPLACING THE SENSOR UNIT

(1) Follow instructions (1) through (4) of "Replacing the Microswitch." Remove the Cover Body L.

(2) Disconnect the connector and remove the Sensor Unit.

SENSOR UNIT
JPT-2030

Disconnect the connector.
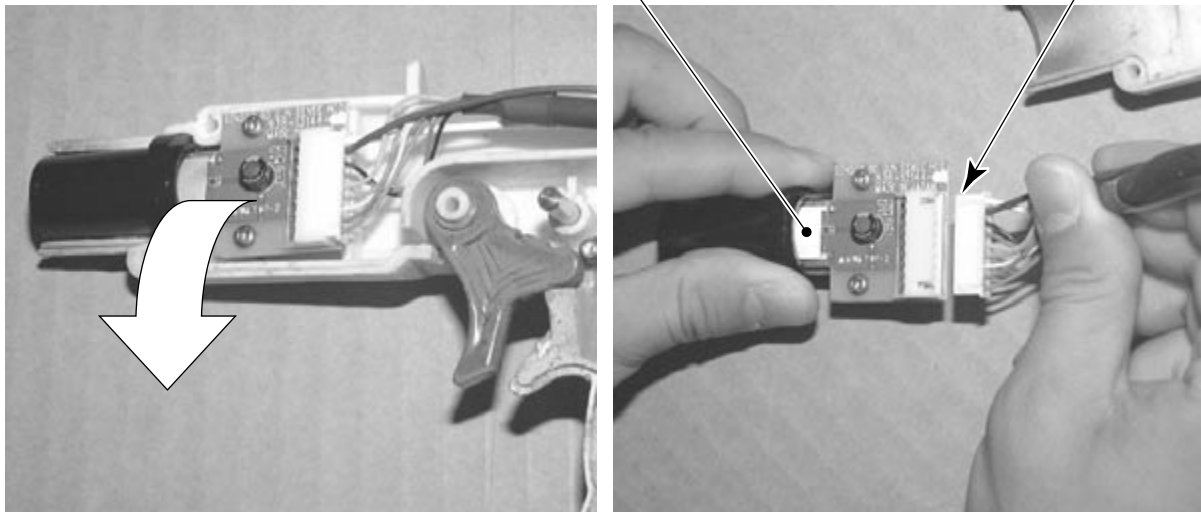
PHOTO 10 e

11. PROJECTOR

Since the Projector has been adjusted at the time of shipment, avoid making further adjustments without good reason.

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.

Projector adjustments are stored. Due to distortion or color deviation in the TEST mode, if an adjustment is necessary, use the Remote Control to make adjustments.

11 - 1 CLEANING THE SCREEN

Since the Projector screen is susceptible to damage, pay careful attention to its handling. When cleaning, refrain from using water or volatile chemicals.

When the screen surface becomes dirty with dust, etc., clean it by using a soft cloth such as gauze. When water, and volatile chemicals such as benzine, thinner, etc., spill on the screen surface, it may be subject to damage, therefore, do not use them. Also, since the surfaces are susceptible to damage, refrain from rubbing them with a hard material or using a duster.
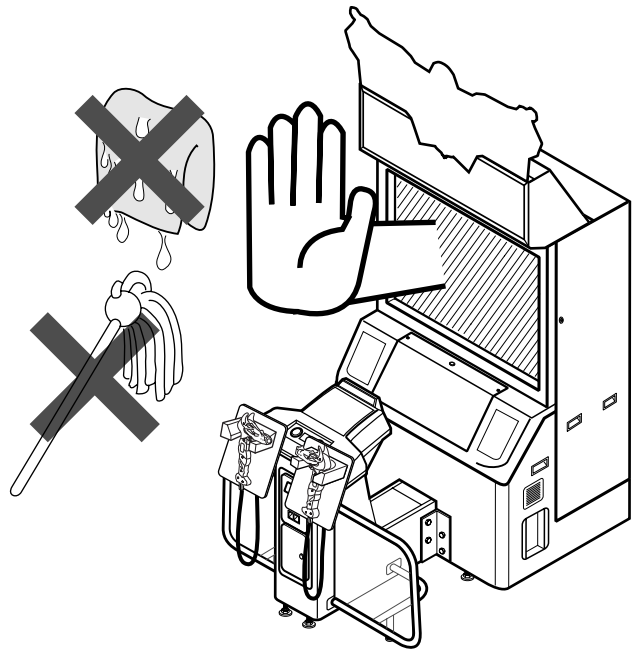
FIG. 11. 1

SETTING THE INTERFACE

STOP
IMPORTANT!

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

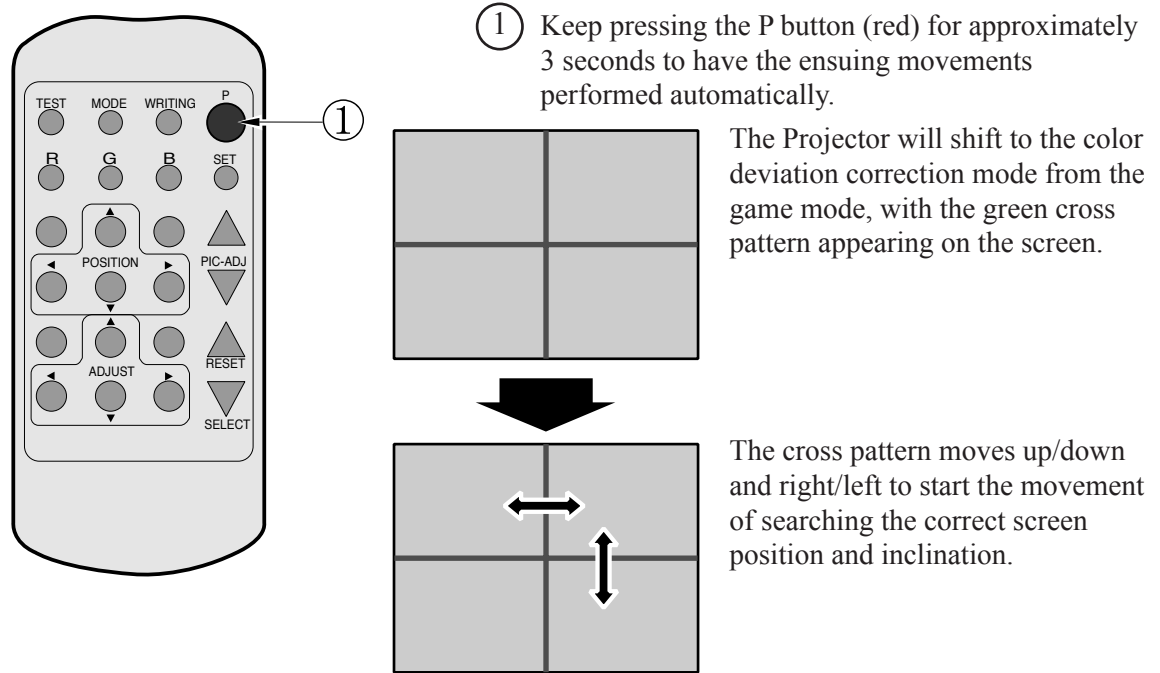The Projector's Connector Panel contains the Interface setting SW.

WINNER
LAMP
AC100-120V~

AC IN
AC100-120V~

COM

RGB IN

IMPEDANCE
HIGH   75Ω

INPUT LEVEL
0.7V   1~3V
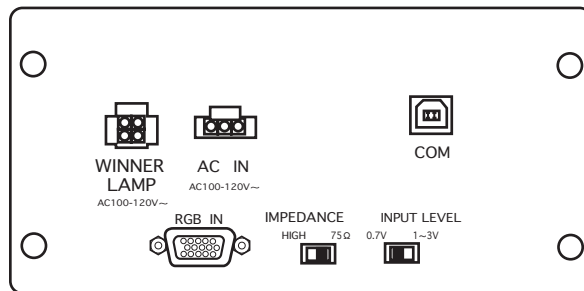
REMOTE CONTROL BUTTONS

When adjusting the Projector, direct the Remote Control's light emitting portion towards the Projector Screen.

REMOTE CONTROL LIGHT EMITTING PORTION

MODE (mode selection)
TEST (adjust/normal shift)

R. G. B. (color selection)

POSITION (to select the position)

ADJUST (adjustment)

TEST   MODE   WRITING   P

R   G   B   SET

POSITION

ADJUST

PIC-ADJ

RESET

SELECT

WRITING (storing the data)
P (automatic color matching)

SET (to decide the selection)
PIC - ADJ (item selection)

RESET

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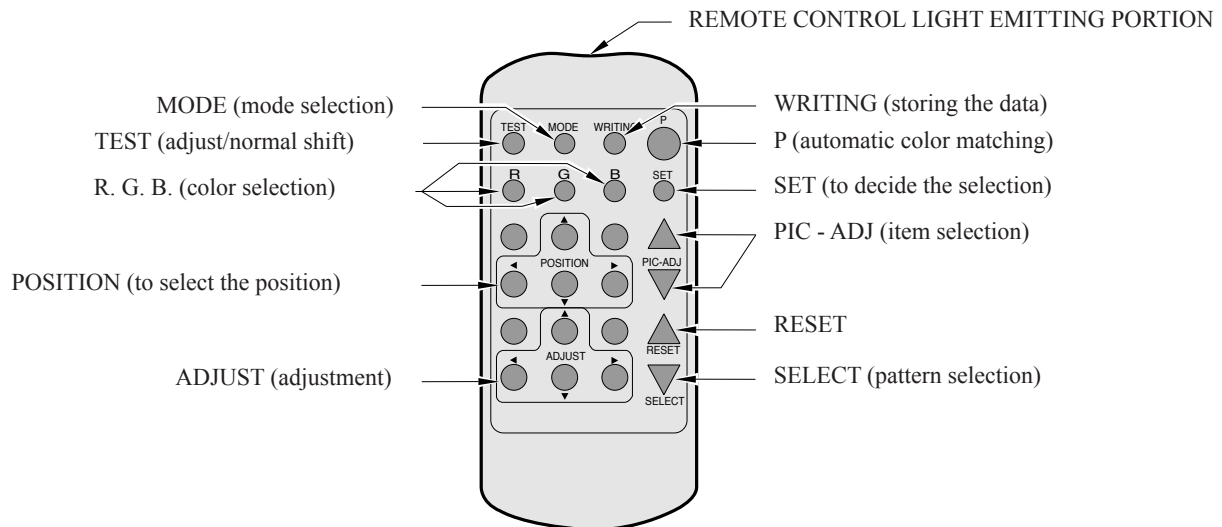
The Projector may be subject to color deviations affected by earth magnetism, the building steel frames, etc. When the Projector is initially installed or the Projector's installation position is changed, have the color matching performed automatically.

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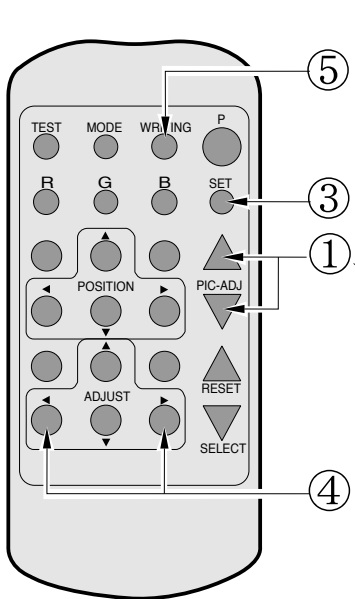
Although the on-screen picture quality has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary. Changing the CONTRAST causes the light and shade of the on-screen images to be changed.

(1) Press either ▲ or ▼ PIC - ADJ button.

PIC-ADJ

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

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

Herein, (2) procedure is skipped.

(2) Choose CONTRAST by using either ▲ or ▼ PIC - ADJ button.

PIC-ADJ

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

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

(3) Press the SET button (to decide selection).

SET

CONTRAST   230

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

(4) Make adjustment by using either ◄ or ►ADJUST button.

ADJUST

CONTRAST   156

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

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

WRITING

WRITING

The WRITING display appears and the adjustment data is stored.
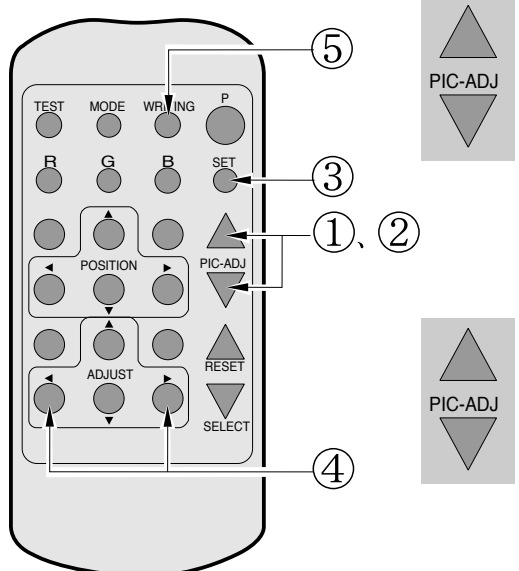
● When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure (2) and press the SET button.

● To continue adjusting other menu items, repeat procedure (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 ▲ or ▼ 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 BRIGHTNESS by using either ▲ or ▼ PIC - ADJ button.

Have the BRIGHTNESS displayed in purple.

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

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.

BRIGHTNESS   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 brightness status.

BRIGHTNESS   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 stage of procedure ② and press the SET button.

● To continue adjusting other menu items, repeat procedure 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 ▲ or ▼ 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 H. POSI or V. POSI by using either ▲ or ▼ PIC ADJ button.

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

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

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.

When making adjustments in vertical directions, also use 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.

H.POSI   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 stage of procedure ② and press the SET button.

● To continue adjusting other menu items, repeat procedure 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 ▲ or ▼ 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 H. SIZE or V. SIZE by using either ▲ or ▼ PIC - ADJ button.

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

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

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.

```
H.SIZE      128
```

④ Make adjustment by using either ◄ or ► ADJUST button.

When making adjustments in vertical directions, also use either ◄ or ► button.

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

```
H.SIZE      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 stage of procedure ② and press the SET button.

● To continue adjusting other menu items, repeat procedure 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.

CONVERGENCE ADJUSTMENT (manual color matching)

⚠️ 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 Personnel who are well versed in such adjustment work. In the Static Convergence Adjustments, if satisfactory adjustments can not be performed, do not make another 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 the ▲ 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
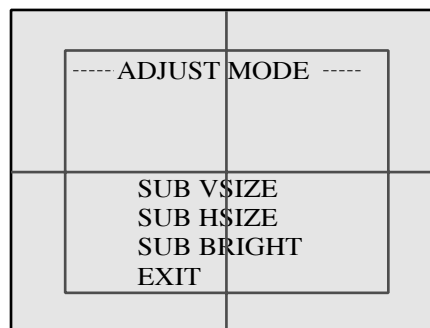
Adjustment menu used in the factory.

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.

TEST   MODE   WRITING   P

⑤

①

R   G   B   SET

②

④

POSITION   PIC-ADJ

DO NOT PUSH THIS.

RESET

ADJUST

SELECT

③、④
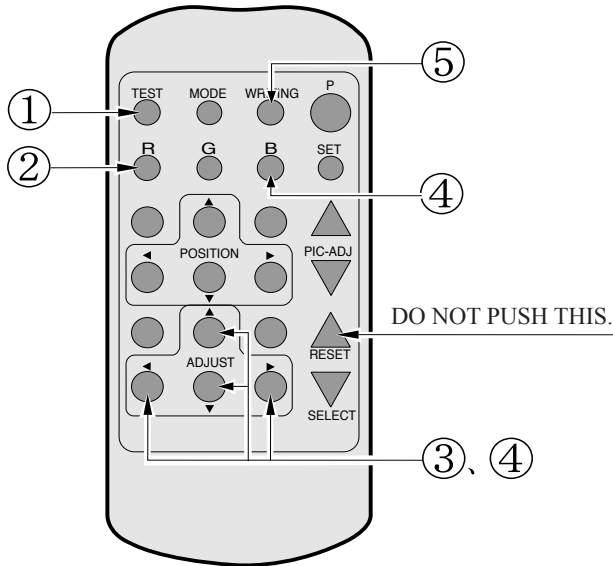
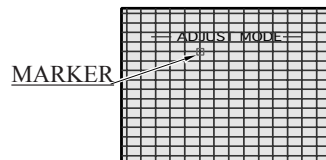When either of ② ④ COLOR SELECT buttons (R, B) is pressed, if the color desired to be adjusted disappears, press that particular button again. For example, if the red color needs to be adjusted again at the stage of ④ , the R button need to be pressed twice.

① Keep pressing the TEST button for approximately 3 seconds.
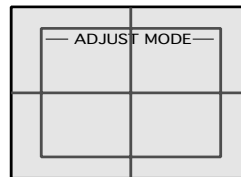
— ADJUST MODE —

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.
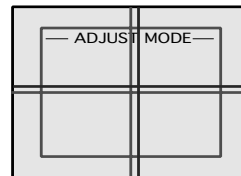
— ADJUST MODE —

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.
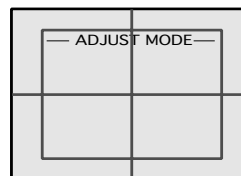
— ADJUST MODE —

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.

— ADJUST MODE —
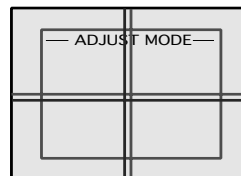
Similarly as in the case of red, adjust the blue color. When green, red, and blue are superimposed, the color becomes white.
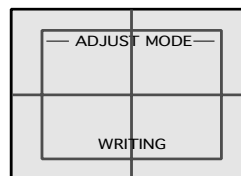
⑤ Press the WRITING button (for storing and finish).

— ADJUST MODE —

WRITING

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.

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

The crosshatch test pattern appears and the 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 ▲ ▼ ◄ ► ADJUST buttons, move the MARKER to the position to be adjusted.
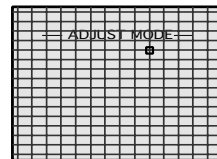
The MARKER moves in the direction of the button's arrow. However, the movable point is predetermined.

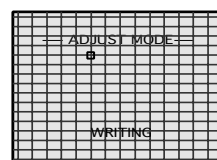⑤ Make adjustment by using the ▲ ▼ ◄ ► ADJUST buttons.
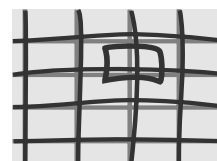
Although the direct vicinity of the MARKER's center moves most conspicuously, make adjustment by paying attention to the periphery area also. Shown left is the magnified MARKER periphery.

⑥ Press the SELECT button as necessary to superimpose Game Board images. Note 3
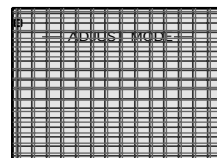
If the test pattern is not displayed in the periphery of the screen, adjustments can be made by pressing the SELECT button to superimpose the test pattern and the Game Board's CRT test screen.

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.

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

STATIC ADJUSTMENT MODE

LINE ADJUSTMENT MODE

POINT ADJUSTMENT MODE

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.

MARKER

DO NOT PRESS.

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.
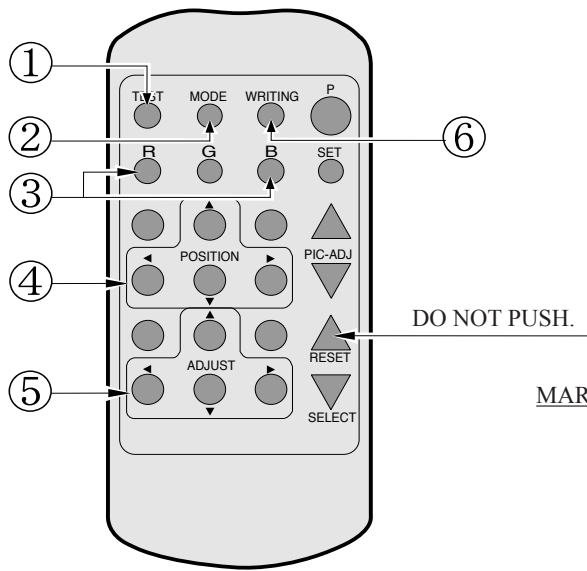

DO NOT PUSH.

MARKER

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

STATIC ADJUSTMENT MODE

LINE ADJUSTMENT MODE

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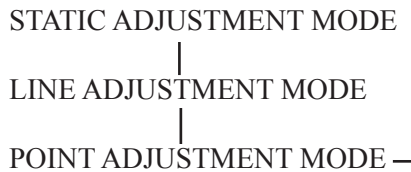
Note 2　When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted disappears, press that particular button again.

1 Keep pressing the TEST button for approximately 3 seconds.
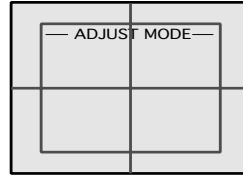
The screen changes to ADJUST mode from the Game Board mode and displays the green test pattern.

2 Press the MODE button once to have the POINT ADJUSTMENT mode. Note 1
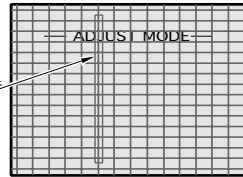
The crosshatch test pattern appears and the vertically long MARKER is shown.

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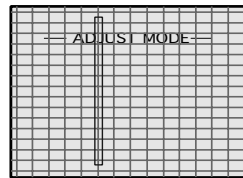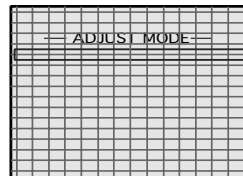
The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

4 By using the ▲ ▼ ◄ ► POSITION buttons, move the MARKER to the position to be adjusted.
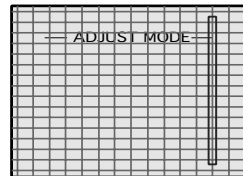
Use the ◄ ► buttons to select the column line, and the MARKER moves in the right/left direction. However, the movable range is predetermined.
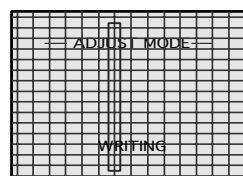
Use the ▲▼ buttons to select the row line and the MARKER moves in the up/down direction. However, the movable range is predetermined.

5 Make adjustment by using the ▲ ▼ ◄ ► ADJUST buttons.
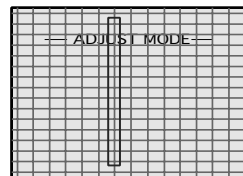
The selected column line or row line (shown left is the column line) can be moved in the desired up/down or right/left directions as applicable.

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.
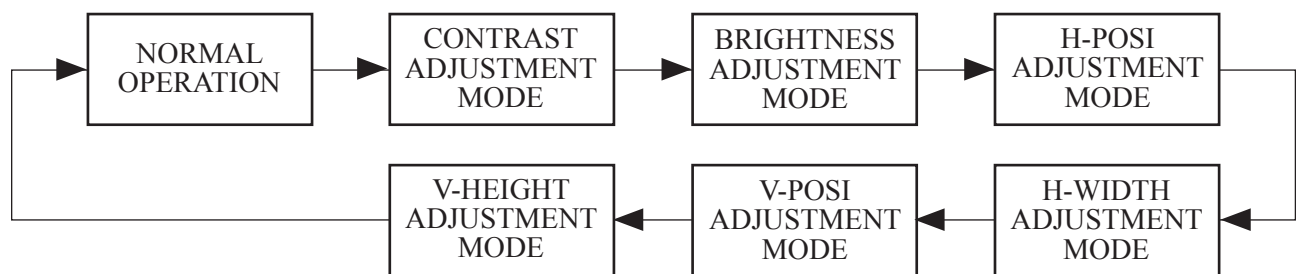
www.seuservice.com

STOP
IMPORTANT!

- ● For the operation of Remote Control, use only the Keys of R/B,
  ▲ (UP shift), ◀ (LEFT shift), ▼ (DOWN shift), ▶ (RIGHT shift), TEST, -, +,
  and PICTURE. Do not press keys other than those explained in this manual.
- ● When operating the Remote Control, have it point the screen.

The Projector has DYNAMIC CONVERGENCE adjustment functions. This manual does not refer to the functions as the adjustment of DYNAMIC CONVERGENCE is very troublesome and in addition, visual effects are negligible.
Very rarely, you cannot solve a color-shift problem even with the adjustment procedure described below. If this is the case, contact where you have procured the projector and ask for further information on the adjustment method.
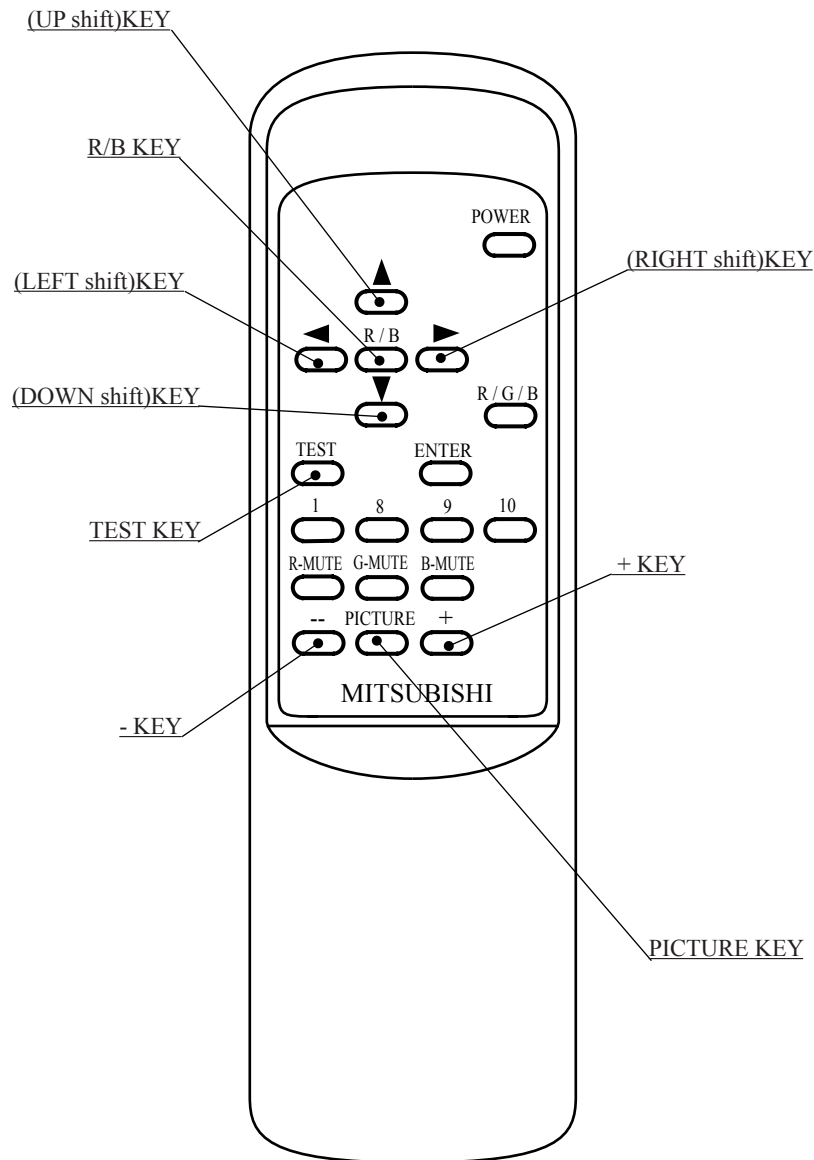
•POWER KEY .... This does not have power ON/OFF function.
Does not function even if it is pressed.

•R/B KEY............................... Used to select "R" for red adjustment or "B" for blue adjustment in the
STATIC CONVERGENCE ADJUSTMENT mode.

• ▲ (UP shift) KEY .... Used to move the test cross upward in the STATIC CONVERGENCE AD-
JUSTMENT mode.

• ◀ (LEFT shift) KEY .... Used to move the test cross to the left in the STATIC CONVERGENCE AD-
JUSTMENT mode.

• ▲ (DOWN shift) .... Used to move the test cross downward in the STATIC CONVERGENCE
ADJUSTMENT mode.

• ▶ (RIGHT shift) KEY .... Used to move the test cross to the right in the STATIC CONVERGENCE
ADJUSTMENT mode.

•TEST KEY............................. This is the ON/OFF key in the STATIC CONVERGENCE ADJUSTMENT
mode. In the ON status of this key, the test cross pattern appears in the ap-
proximately on-screen center.

•ENTER KEY .... Used for DYNAMIC CONVERGENCE.

•- KEY .... Used to decrease the adjustment data in the adjustment mode of CONTRAST,
BRIGHTNESS, HORIZONTAL/VERTICAL POSITIONS and WIDTH.

•+ KEY .... Used to increase the adjustment data in the adjustment mode of CONTRAST,
BRIGHTNESS, HORIZONTAL/VERTICAL POSITIONS and WIDTH.

•PICTURE KEY .... Used for the ADJUSTMENT mode of CONTRAST, BRIGHTNESS,
HORIZONTAL/VERTICAL POSITIONS and WIDTH.
Every time this key is pressed, the ADJUSTMENT mode proceeds as follows:

```
┌──────────┐    ┌──────────┐    ┌──────────┐    ┌──────────┐
│  NORMAL  │───▶│ CONTRAST │───▶│BRIGHTNESS│───▶│  H-POSI  │
│OPERATION │    │ADJUSTMENT│    │ADJUSTMENT│    │ADJUSTMENT│
│          │    │   MODE   │    │   MODE   │    │   MODE   │
└──────────┘    └──────────┘    └──────────┘    └──────────┘

┌──────────┐    ┌──────────┐    ┌──────────┐
│ V-HEIGHT │◀───│  V-POSI  │◀───│ H-WIDTH  │◀───
│ADJUSTMENT│    │ADJUSTMENT│    │ADJUSTMENT│
│   MODE   │    │   MODE   │    │   MODE   │
└──────────┘    └──────────┘    └──────────┘
```

EXPLANATIONS OF ADJUSTMENT MODES

•CONTRAST .... Used to vary image contrast. Use + and - keys to adjust.

•BRIGHTNESS............... Used to change image brightness. Use + and - keys to adjust.

•H-POSI .... Used to move the image position in the horizontal direction. Use + and - keys to
adjust.

•H-WIDTH...................... Used to change the horizontal width of image. Use + and - keys to adjust.

•V-POSI.......................... Used to move the image position in the vertical direction. Use + and - keys to ad-
just.

•V-HEIGHT.................... Used to change the vertical width of image. Use + and - keys to adjust.

STATIC CONVERGENCE ADJUSTMENT

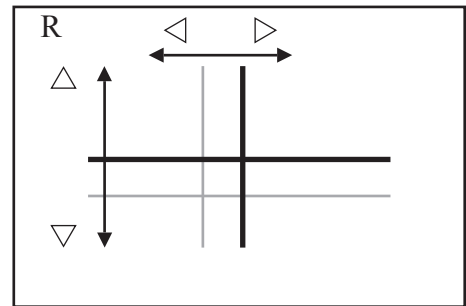Press the TEST KEY to change the screen to Red Line
Adjustment mode.

```
RED 31K
H:+75  V:-11
```
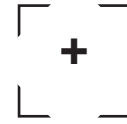
Superimpose the red line on the green line.
When the red line is superimposed on the green line, the
green line turns to yellow or white.

To MOVE RED LINE:
  Use ◁   key to move it left.
  Use ▷   key to move it right.
 Use ▲ key to move it upward.
  Use ▼ key to move it downward.

Press the R/B KEY.
Changes to the Blue Line Adjustment screen.
Every time the key is pressed, "from red to blue" and
"from blue to red" are alternated.

SUPERIMPOSING BLUE LINE ON GREEN LINE:
Superimposing blue line on green line causes the green
line to turn to white.

TO MOVE BLUE LINE:
  Use ◁ key to move it left.
  Use ▷ key to move it right.
  Use ▲ key to move it upward.
  Use ▼ key to move it downward.
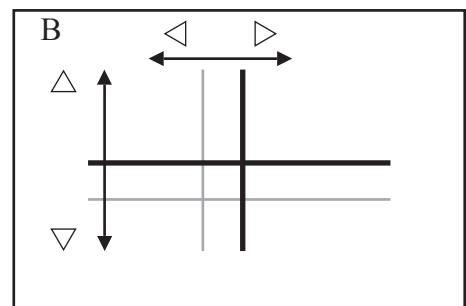
Press the TEST KEY.
Adjustment is finished.

AUTOMATIC CANCELLATION OF ADJUSTMENT MODE

In each adjustment mode, only in the case where an effective key input (variation of values
and images) is not performed within the time limit indicated below, the adjustment mode is
automatically cancelled and finished, shifting to on-screen normal images.

Approximately 6 seconds	CONTRAST
	BRIGHTNESS
	H-POSI
	H-WIDTH
	V-POSI
	V-HEIGHT
Approximately 5 min.	STATIC CONVERGENCE

12. COIN SELECTOR

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

GATE

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.

FIG. 12 a

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) Open the gate and dust off by using a soft brush (made of wool, etc..).

(3) Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.

(4) Remove the CRADLE.
When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.

(5) Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.

(6) After wiping off as per (5) above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

CRADLE

FIG. 12 b

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?
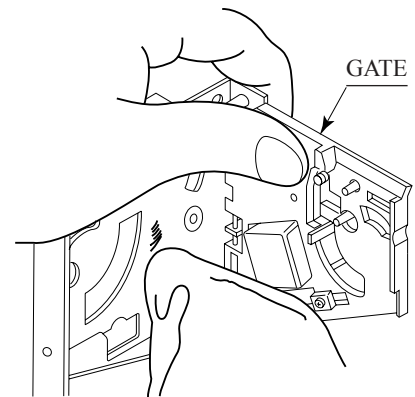☐ Is the coin rejected when inserted while keeping the Reject Button pressed down?

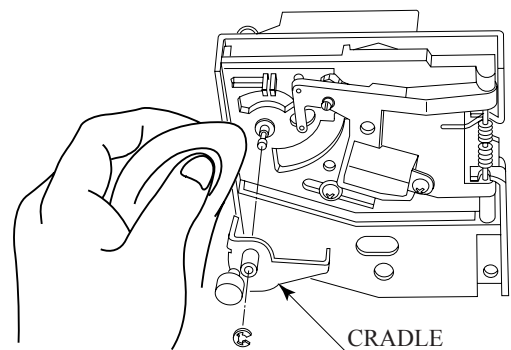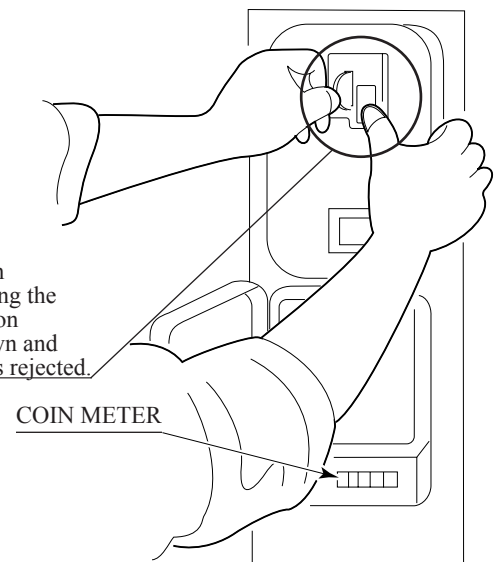Insert a coin while keeping the Reject Button pressed down and check if it is rejected.

COIN METER

FIG. 12 c

WELLS-GARDNER
ELECTRONICS CORPORATION
2701 N. KILDARE   CHICAGO, IL 60639

1-800-336-6630

WWW.WGEC.COM

WGD15-2110-01
OVER/UNDER MINI DOOR
2 ENTRIES WITH BILL
VALIDATOR   BOTTOM DOOR
& SPECIAL ENCLOSURE

#	W.G. PART #	DESCRIPTION
1	812-4150-011	S-7 US 25c COIN MECH LEFT
2	812-4050-011	S-10 US $1 COINMECH RIGHT
3	890-1002-00	HINGE SCREW
4	890-1003-00	CLAMP SCREW
5	890-1017-00	SCREW TRILOBULAR
6	890-1019-00	WASHER INTERNAL TOOTH 3/4"
7	890-1300-00	KEYHOOK
8	891-0514-00	CLAMP UK 5/8" CABINET
9	025X3711-001	ENCLOSURE W/CHUTE
10	025X3712-001	METAL CASHBOX
11	891-0509-162	DOUBLE FRAME
12	891-0547-00	LOCK SINGLE BIT
13	891-0100-4016	COVER PLATE
14	891-1008-107	BASE PLATE ASSEMBLY
15	891-1113-03	E/R BUTTON US 4x25c/$1 LEFT
16	891-1113-011	E/R BUTTON US $1 COIN RIGHT
17	891-1117-00	LAMPHOLDER
18	891-1118-00	LAMP WEDGE BASE 6 VOLT
19	891-1121-00	SPRING, E/R BUTTON
20	891-1311-16	BUTTON BEZEL, NYLON
21	891-1312-16	REJECT BEZEL, NYLON
22	891-1109-16	REJECT FLAP
23	020X1877-005	NUT KEPS #8-32 X 5/16 HEX
24	891-2216-16	MICROSWITCH ASSEMBLY
24A	890-1007-00	SCREW,FLAT HEAD W/S
24B	890-1206-02	KEP NUT
24C	891-1105-01	REJECT CUP SIDE PLATE
24D	891-1106-00	REJECT CUP BASE PLATE
24E	891-1107-00	BRACKET, MICROSWITCH
24F	891-1110-00	ADJUSTER, COIN
24G	891-1116-16	MICROSWITCH,BLACK - MED.
24H	891-1125-00	COVER, PLASTIC
24J	892-1002-07	CLIP, SNAP-ON
24K	892-1002-08	ELASTIC SNAP NUT
24L	892-1002-09	SLEEVE, SNAP-ON
24M	892-1002-11	SCREW, PAN HEAD
25	891-0604-16	MINI DOOR 2 ENTRIES
26	891-0614-16	MINI DOOR W/DBV C/O
27	892-1002-01	BRACKET, LAMPSIDE
28	892-1002-021	BRACKET, COVERSIDE
29	892-1002-10	BRACKET, HOLD DOWN
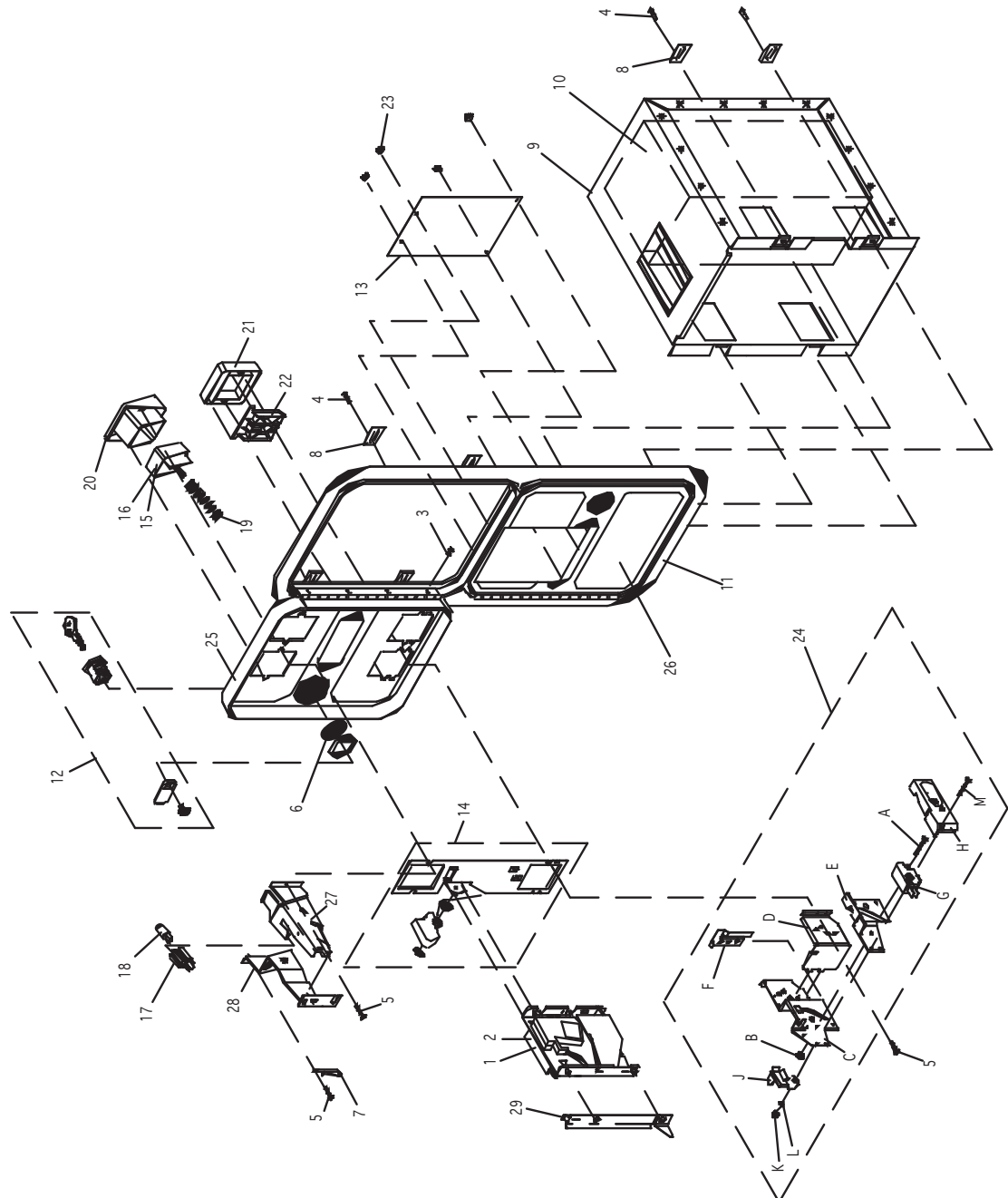
Tom Happ
tom.happ@happcontrols.com
Happ Controls
106 Garlisch Drive
Elk Grove, IL. 60007
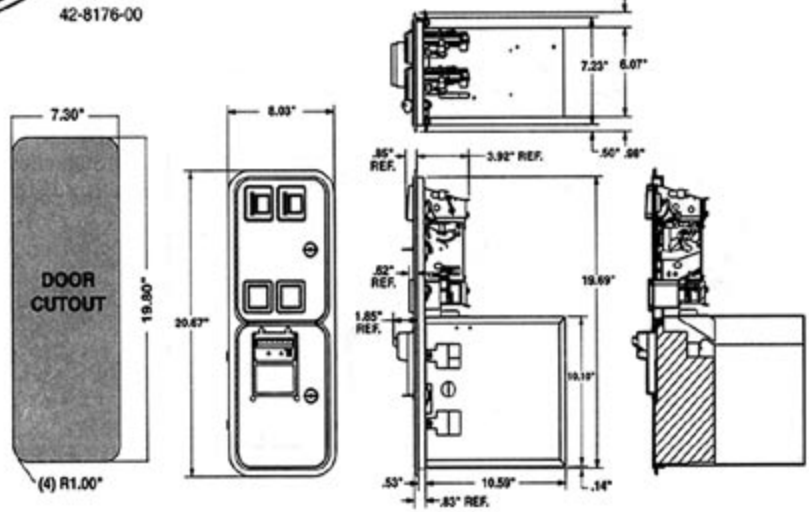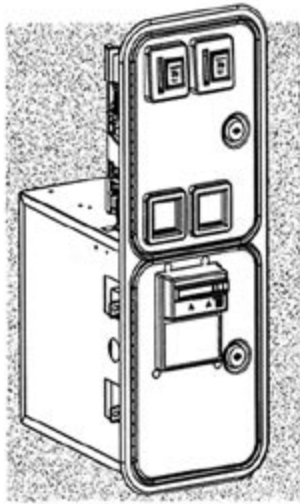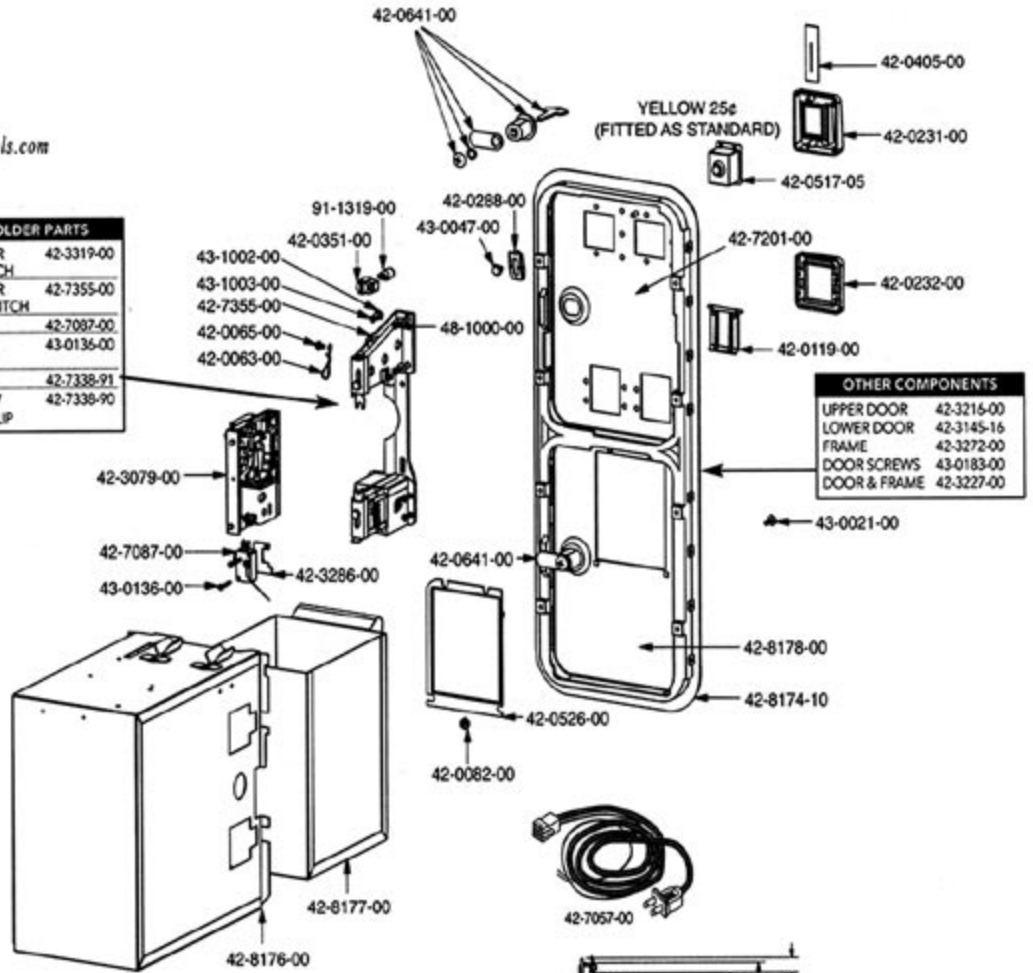Ph. 847-593-6161 ext. 107
Fx. 847-956-2091

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Custom "Guardian" Security Hasp available to protect your dollars.

GUARDIAN

MECH HOLDER PARTS	
MECH HOLDER W/COIN SWITCH	42-3319-00
MECH HOLDER W/O COIN SWITCH	42-7355-00
COIN SWITCH	42-7087-00
SCREW FOR COIN SWITCH	43-0136-00
METAL CLIP	42-7338-91
THUMBSCREW FOR METAL CLIP	42-7338-90

42-0641-00

42-0405-00

YELLOW 25¢ (FITTED AS STANDARD)

42-0231-00

42-0517-05

91-1319-00

42-0288-00

43-0047-00

42-7201-00

42-0351-00

43-1002-00

43-1003-00

42-7355-00

42-0065-00

42-0063-00

48-1000-00

42-0232-00

42-0119-00

OTHER COMPONENTS	
UPPER DOOR	42-3216-00
LOWER DOOR	42-3145-16
FRAME	42-3272-00
DOOR SCREWS	43-0183-00
DOOR & FRAME	42-3227-00

42-3079-00

43-0021-00

42-7087-00

43-0136-00

42-3286-00

42-0641-00

42-8178-00

42-8174-10

42-0526-00

42-0082-00

42-8177-00

42-7057-00

42-8176-00

7.23" 6.07"

7.30"

8.03"

.86" REF.

3.92" REF.

.50" .98"

DOOR CUTOUT

19.90"

20.67"

.52" REF.

19.69"

1.85" REF.

19.18"

(4) R1.00"

.53"

10.59"

.14"

.83" REF.

● THE COIN DOOR ASSEMBLY USED ON **THE MAZE OF KINGS DELUXE** COMES EQUIPPED TO ACCEPT A DOLLAR BILL ACCEPTOR. ALL NEEDED WIRING CONNECTIONS ARE CONVENIENTLY LOCATED INSIDE THE GAME FOR THIS APPLICATION.

● THE COIN DOOR CAN ACCOMMODATE THE FOLLOWING VALIDATOR(S):

FORWARD-MOST   Mars 2000 series
HOLE POSITION

**42-1155-00   MARS VALIDATOR $1, 2, 5 300 CAP

The frame and cashbox enclosure on this coindoor has been modified to accommo-date a Mars 2000 series upstacker. A 2000 series stacker can be added by simply re-moving the cut-out plate. This one entry door can be ordered through Happ Controls or one of Happ Controls authorized distributors. The part number is 40-6000-10EX. The Mars stacker can be obtained through an authorized Mars distributor.

Note: Your game may have either Happ Controls Coin Door Assembly or the Wells Gardner Coin Door Assembly (not shown).

**Happ part number

Security Locking Bar/Bracket Set Part No.# 999-0966

Modified Cash Box (For use when DBA installed) Part No. # 999-1106

Plastic Cash Box - Full Size Part No. # 999-1177

13. REPLACING THE FLUORESCENT LAMP, AND LAMPS

INSIDE THE BILLBOARD

① Take out the 3 truss screws and remove the POP holder with attaching the POP.

POP

TRUSS SCREW (3), black
M4 × 8

POP HOLDER

When performing work, prepare a step.

FIG. 13 a

(2) Remove the billboard holder, slide up the billboard, and replace the fluorescent tube.

To slide.

TRUSS SCREW (3), black
M4×8

BILLBOARD HOLDER

BILLBOARD

FLUORESCENT LAMP 36" F30T12
LOCAL PURCHASE

When performing work, prepare a step.

FIG. 13 b

LAMP REPLACEMENT

(3) Take out the 8 screws and remove Control Panel DX.

(4) Hold both sides of the switch portion with fingers and pull out from the button's base portion. At this time, be careful so as not to damage the wiring connected to the switch.

(5) The lamp is positioned at the end of the switch portion. Pull out the lamp straight without turning it.

WEDGE BULB, 6V 3W
390-5160

FIG. 13 d

CONTROL PANEL DX
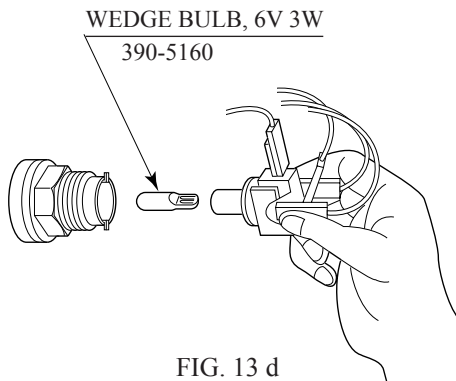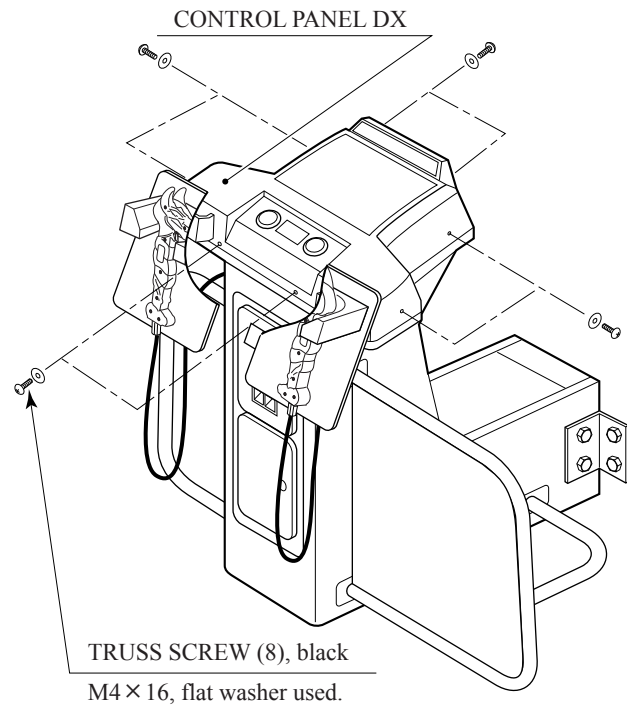
TRUSS SCREW (8), black
M4 × 16, flat washer used.

FIG. 13 c

14. PERIODIC INSPECTION TABLE

The items listed below require periodic check and maintenance to retain the performance of this machine and to ensure safe business operation.

When handling the controller, the player will be in direct contact with it . In order to always allow the player to enjoy the game, be sure to clean it regularly. Also, it is advisable to provide wet tissue, etc. available for player use.

⚠️ WARNING!

- Be sure to check once a year 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 dust as is accumulated can cause fire and electric shock hazards.
- Never use a water jet, etc. to clean inside and outside the cabinet. If wetness occurs for any reason, do not use the product until it has completely dried.
- Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the internal cleaning. Using the product with dust as is accumulated in the interior without cleaning can cause a fire or accident. Note that cleaning the interior parts can be performed on a pay-basis.

TABLE 14

	Item	Interval	Reference
CABINET	Check Adjusters'contact with surface.	Daily	3
CONTROLLER	Cleaning	As necessary	-
	Sight check	Weekly	9, 10
	Check SWes.	Monthly	9, 10
COIN CHUTE DOOR	Check COIN SW.	Monthly	*SERVICE MANUAL
	Coin insertion test	Monthly	12
	Cleaning of COIN SELECTOR	Trimonthly	12
PROJECTOR	SCREEN cleaning	Weekly	11-1
	Check adjustments.	Monthly or when moving	6,11,*SERVICE MANUAL
GAME BD	MEMORY TEST	Monthly	*SERVICE MANUAL
	Check settings.	Monthly	9,*SERVICE MANUAL
INTERIOR	Cleaning	Annually	See above.
POWER SUPPLY PLUG	Inspection and cleaning		
CABINET SURFACES	Cleaning	As necessary	See below.

*NAOMI NETWORK SYSTEM SERVICE MANUAL

CLEANING THE CABINET SURFACES

When the cabinet surfaces are badly soiled, remove stains with a soft cloth dipped in water or diluted (with water) chemical detergent and squeezed dry. To avoid damaging surface finish, do not use such solvents as thinner, benzine, etc. or abrasives, bleaching agent and chemical dustcloth.

15. TROUBLESHOOTING

- In order to prevent electric shock and short circuit, be sure to turn power off before performing work.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- After removing the cause of the functioning of the Circuit Protector, reinstate the Circuit Protector. Depending on the cause of the functioning, using the Circuit Protector as is without removing the cause can cause generation of heat and fire hazard.

In case a problem occurs, first check wiring connector connections.

TABLE 15 a

PROBLEMS	CAUSE	COUNTERMEASURES
With Main SW ON, no activation.	Power is not supplied.	Securely insert the power plug into the plug socket.
	Power supply/voltage is not correct.	Make sure that power supply/voltage is correct.
	The Circuit Protector functioned due to the momentary overload.	After eliminating the cause of overload, reinstate the AC Unit's Circuit Protector (see 6 , Section 6, Refer to the following).
The color on PTV screen is incorrect.	Image adjustment is inappropriate.	Adjust appropriately (see Sec. 11).
Color deviation on PTV screen.	Affected by peripheral machines or the building's steel frames.	Perform convergence adjustment (see Sec. 11).
		Change installation direction or position.
		Move the machine which causes the problem.

CIRCUIT PROTECTOR

CIRCUIT PROTECTOR(POWER PANEL)
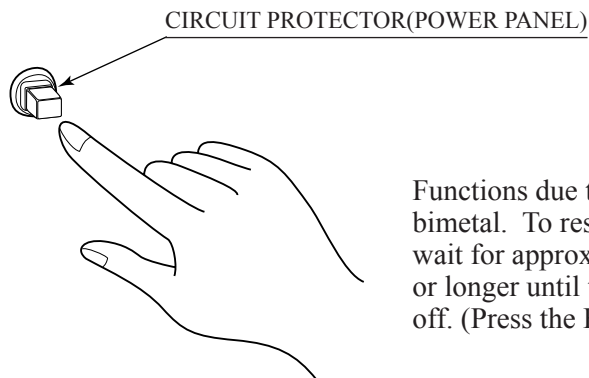
Functions due to the activation of bimetal. To restore the function, wait for approximately one minute or longer until the bimetal cools off. (Press the Button.)
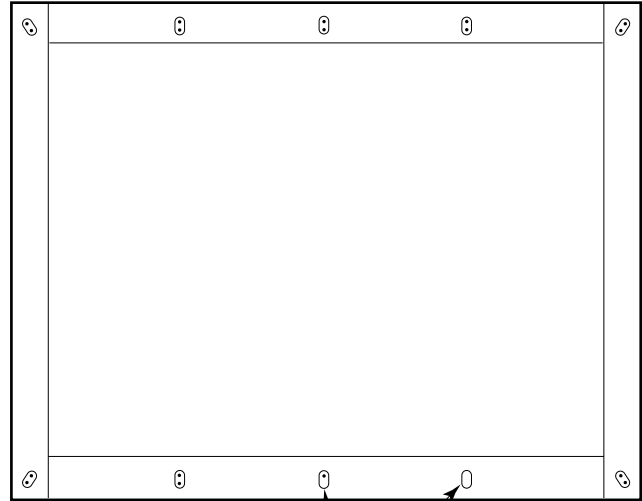
FIG. 15 a

TABLE 15 b

PROBLEMS	CAUSE	COUNTERMEASURES
No sound is emitted.	Sound volume adjustment is not appropriate.	Adjust sound volume (see Sec. 9).
	Board and Amplifier malfunctioning.	Perform the sound test and confirm (see NAOMI NETWORK SYSTEM Service Manual).
Controller sighting is not satisfactory.	Due to environmental changes, etc., sighting became inappropriate.	Perform sighting adjustment in the test mode (see Sec. 9).
	LED BD malfunctioning.	Check to ensure that the LED lights up. If it does not light up, replace (see next page).
	Sensor Unit malfunctioning.	Replace the Sensor Unit (see Sec.10).
	LED board and LED board cover are contaminated.	Wipe off soiled surfaces (see Sec. 14 and next page).
During game play, the Controller is not operable for shooting.	Malfunctioning of microswitch.	Check for ON and OFF in the INPUT test and if it is not functioning, replace the microswitch (see Sec.10).
	Malfunctioning of LED BD.	Check if the LED is lit, and if it is not lit, replace (see next page).
	Malfunctioning of Sensor Unit.	Replace the Sensor Unit.
The Fluorescent lamp does not light up.	The Fluorescent tube is burnt out.	Replace the Fluorescent tube (see Sct. 13).
The Lamp does not light up.	Lamp malfunctioning.	Replace the Lamp (see Sec. 13).

In case two of LED's do not emit light, failure and malfunctioning may be considered. Replace in the following procedure. When removing surface soils, also use the following procedure.

If light emission from the 2 LED's can not be seen,replace.

FIG. 15 b

1 Turn off power.

2 By referring to 2 , Section 6, demount the PTV from Cabinet DX.

3 By referring to 1 , Section 6, remove the Mask from the PTV.

4 The Mask has the LED Board. Disconnect the Connectors from both ends of LED Board, remove 2 U Nuts, take out and replace the LED Board.

LED BD
838-13145-02

U NUT (2)
M3, plastic washer used.
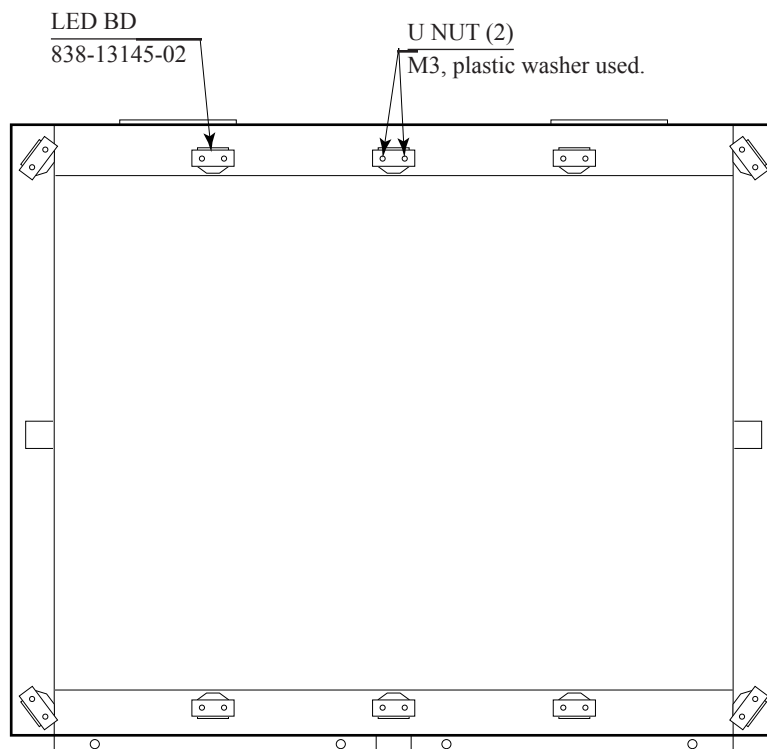
FIG. 15 c

16. GAME BOARD

<table>
<tr>
<td>⚠ WARNING!</td>
<td>

● In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
● 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 BD, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
</td>
</tr>
<tr>
<td>⚠ CAUTION!</td>
<td>

● In this product, setting changes are made during the test mode. The Game BD need not be operated. Use the Game BD, etc. as is with the same setting made at the time of shipment so as not to cause electric shock and malfunctioning.
● 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.
</td>
</tr>
</table>

16 - 1 REMOVING THE GAME BOARD

① Turn off power.

② Take off the 2 screws from the cabinet, unlock, and remove the LID UPPER.

TRUSS SCREW (2), black
M4 × 16

UNLOCK
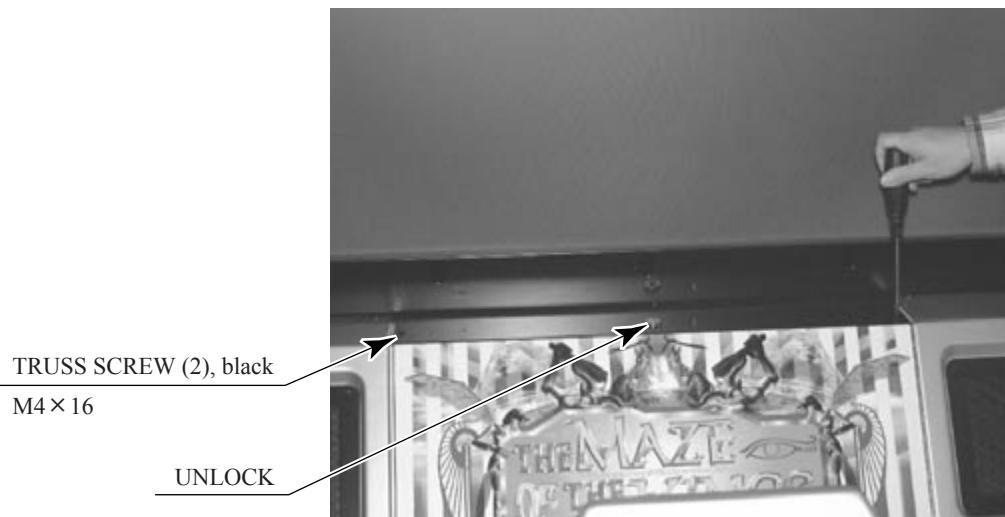
PHOTO 16. 1 a

③ Disconnect all the connectors connected to the unit on the wooden board (the base) which carries the NAOMI BD.

Disconnect the connector.

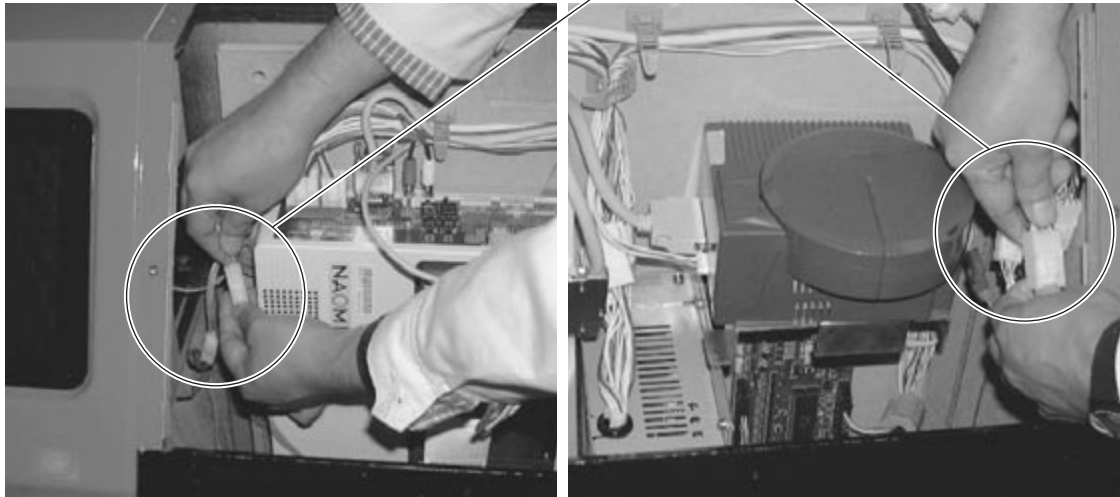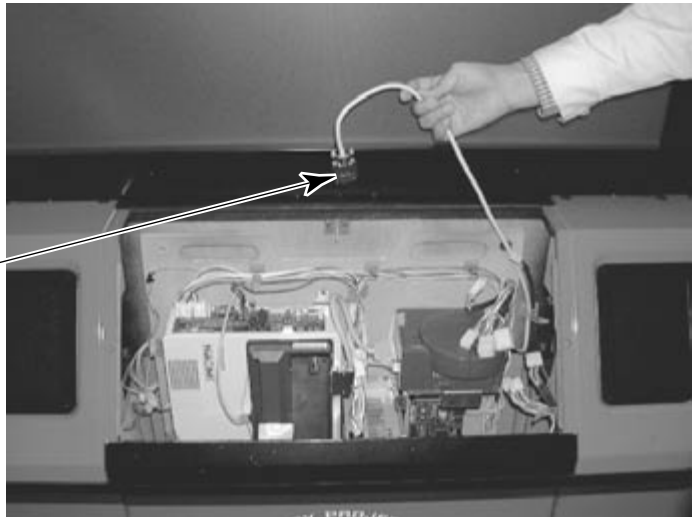PHOTO 16. 1 b

④ Remove the D-SUB connector from the filter board.

D-SUB connector cable

⑤ Take off the 2 screws which secure the base and take out the base with the NAOMI BD on it from the cabinet.

PHOTO 16. 1 c

SCREW (2)
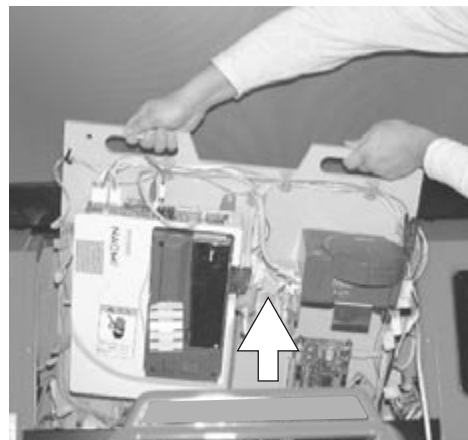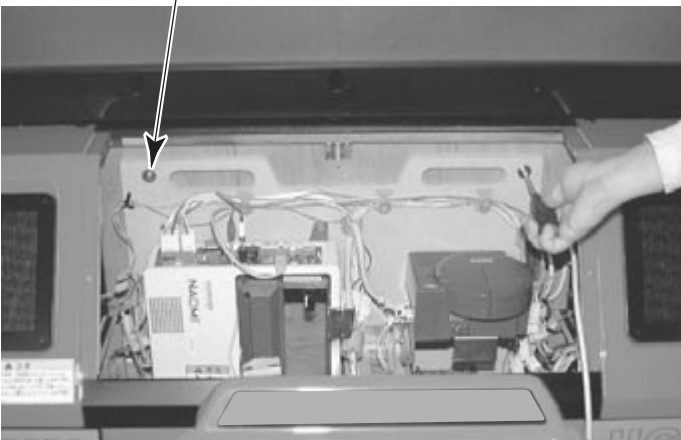M5×35, w/spring washer, flat washer used.

PHOTO 16. 1 d

6 Remove all the connectors from the filter board of the NAOMI board. Also remove the GD cable connector from the DIMM board.

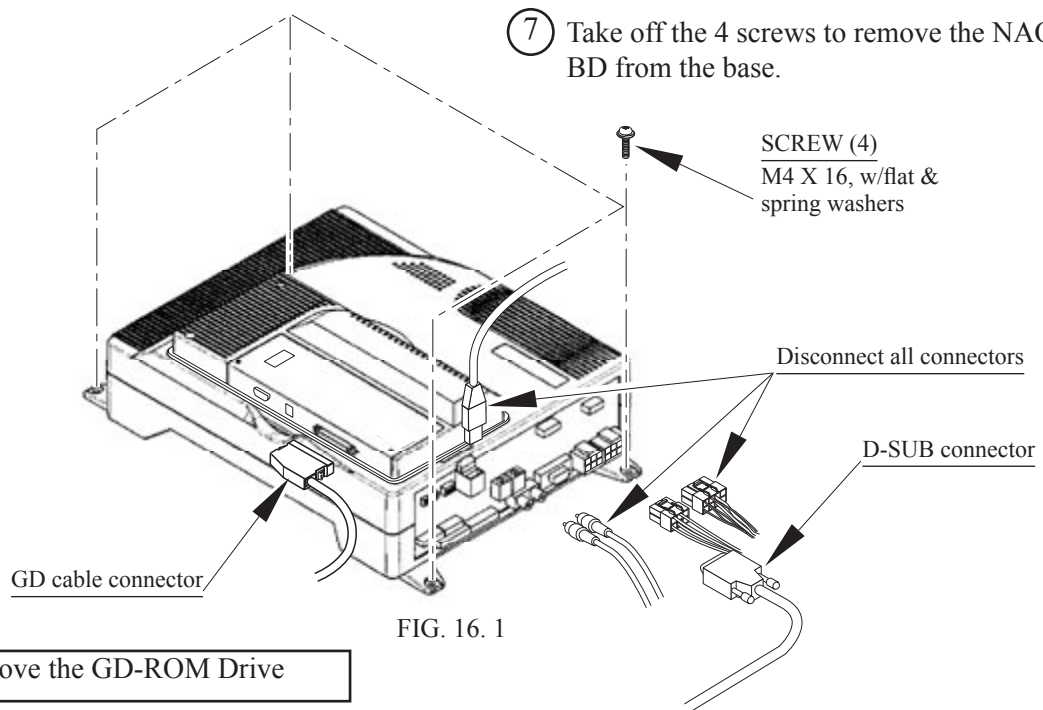7 Take off the 4 screws to remove the NAOMI BD from the base.

SCREW (4)
M4 X 16, w/flat & spring washers

Disconnect all connectors

D-SUB connector

GD cable connector

FIG. 16. 1

How to Remove the GD-ROM Drive

Take out the ASSY MAIN BD from the PTV cabinet; and then remove the GD-ROM drive from the ASSY MAIN BD as follows:

1 Following the above described actions 1 to 5 (to remove the NAOMI board), take out the ASSY MAIN BD from the PTV cabinet.

AC Cable connector

2 Remove the GD cable connector and the power cord connector from the GD-ROM drive.
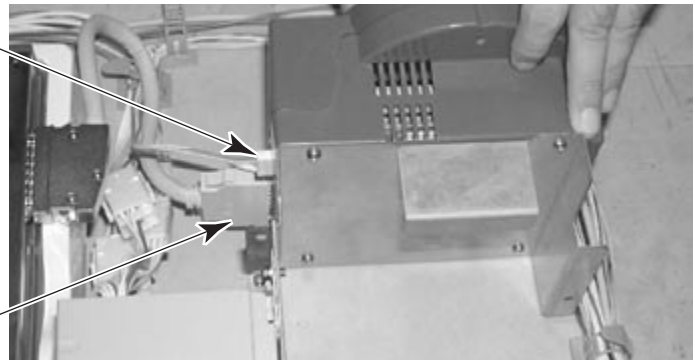
GD Cable connector

PHOTO 16. 1 e

3 Remove the 4 screws and thereby remove the GD-ROM drive.
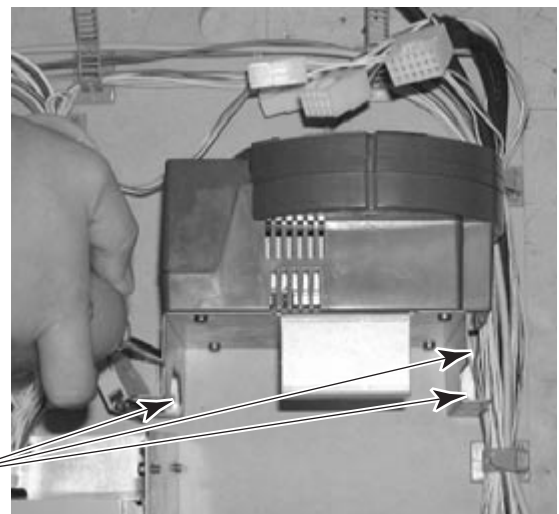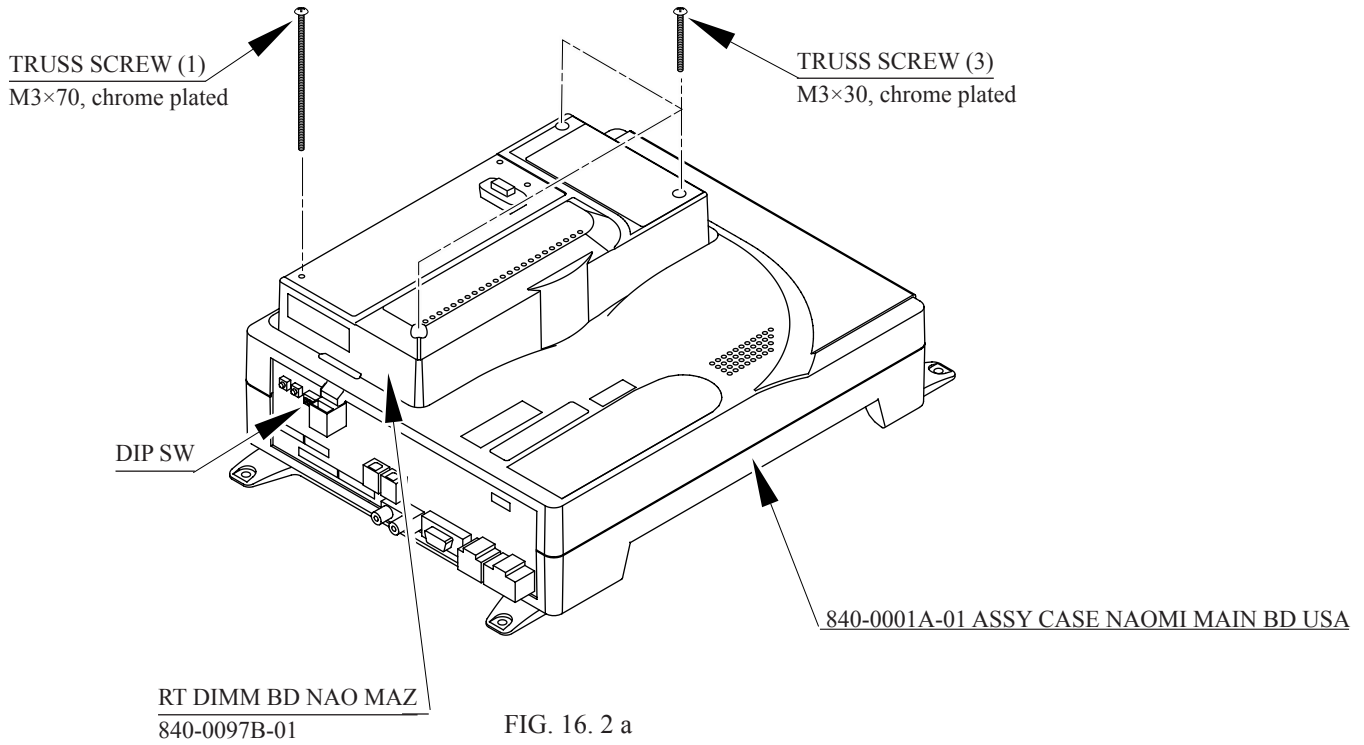
SCREW (4)
M4 X 16, w/flat & spring washers

PHOTO 16. 1 f

16 - 2 COMPOSITION OF GAME BOARD

ASSY CASE NAO GD RTOS MAZ USA 840-0097D-11 :USA

TRUSS SCREW (1)
M3×70, chrome plated

TRUSS SCREW (3)
M3×30, chrome plated

DIP SW

840-0001A-01 ASSY CASE NAOMI MAIN BD USA

RT DIMM BD NAO MAZ
840-0097B-01

FIG. 16. 2 a

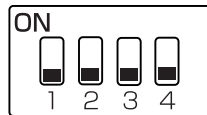DIP SW SETTING

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

FIG. 16. 2 b

17. DESIGN RELATED PARTS

For the Warning Display stickers, refer to Section 1.

①, Opposite side:②

③ (same as opposite side)

④, Opposite side:⑤
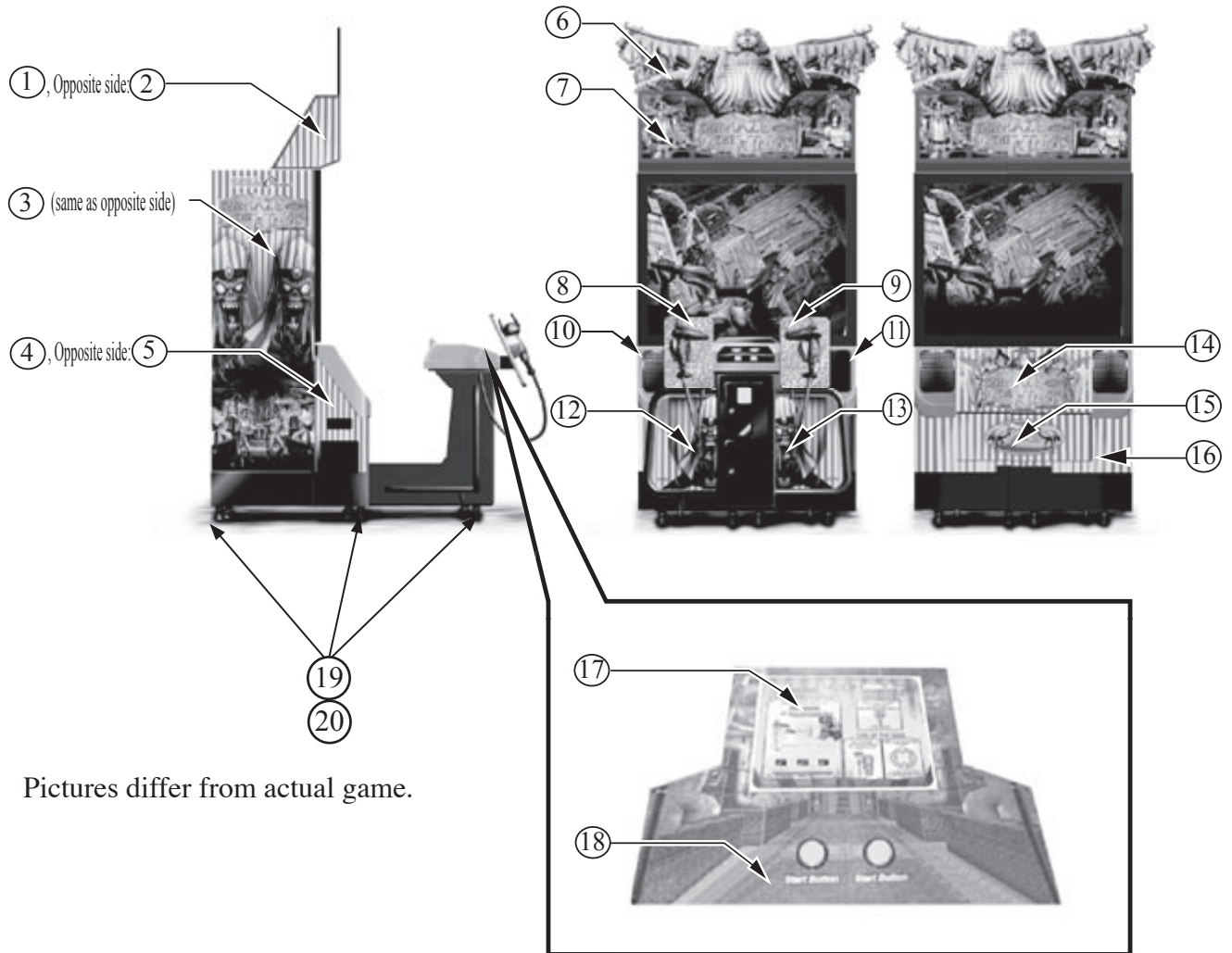
Pictures differ from actual game.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	999-1461	MARQUEE LEFT SIDE DECAL	
2	999-1462	MARQUEE RIGHT SIDE DECAL	
3	999-1458	DECAL SIDE - (MONITOR) X 2	
4	999-1467	CONSOLE WRAP LEFT	
5	999-1468	CONSOLE WRAP RIGHT	
6	999-1460	PANEL DISPLAY-POP	
7	999-1456	MARQUEE - STYRENE	
8	999-1454	GUN BOARD LEFT	
9	999-1453	GUN BOARD RIGHT	
10	999-1466	DECAL SPEAKER (YELLOW)	
11	999-1466	DECAL SPEAKER (YELLOW)	
12	999-1469	GUARD PLATE LEFT SCREENED	
13	999-1470	GUARD PLATE RIGHT SCREENED	
14	999-1463	FRONT UPPER (SERVICE DOOR DECAL)	
15	999-1464	CONSOLE LOWER LID	
16	999-1465	CONSOLE FRONT	
17	999-1459	INSTRUCTION PLATE	
18	999-1457	CONTROL PANEL OVERLAY	
19	999-0167	LEG LEVELERS	
20	999-0169	CASTERS	

www.seuservice.com
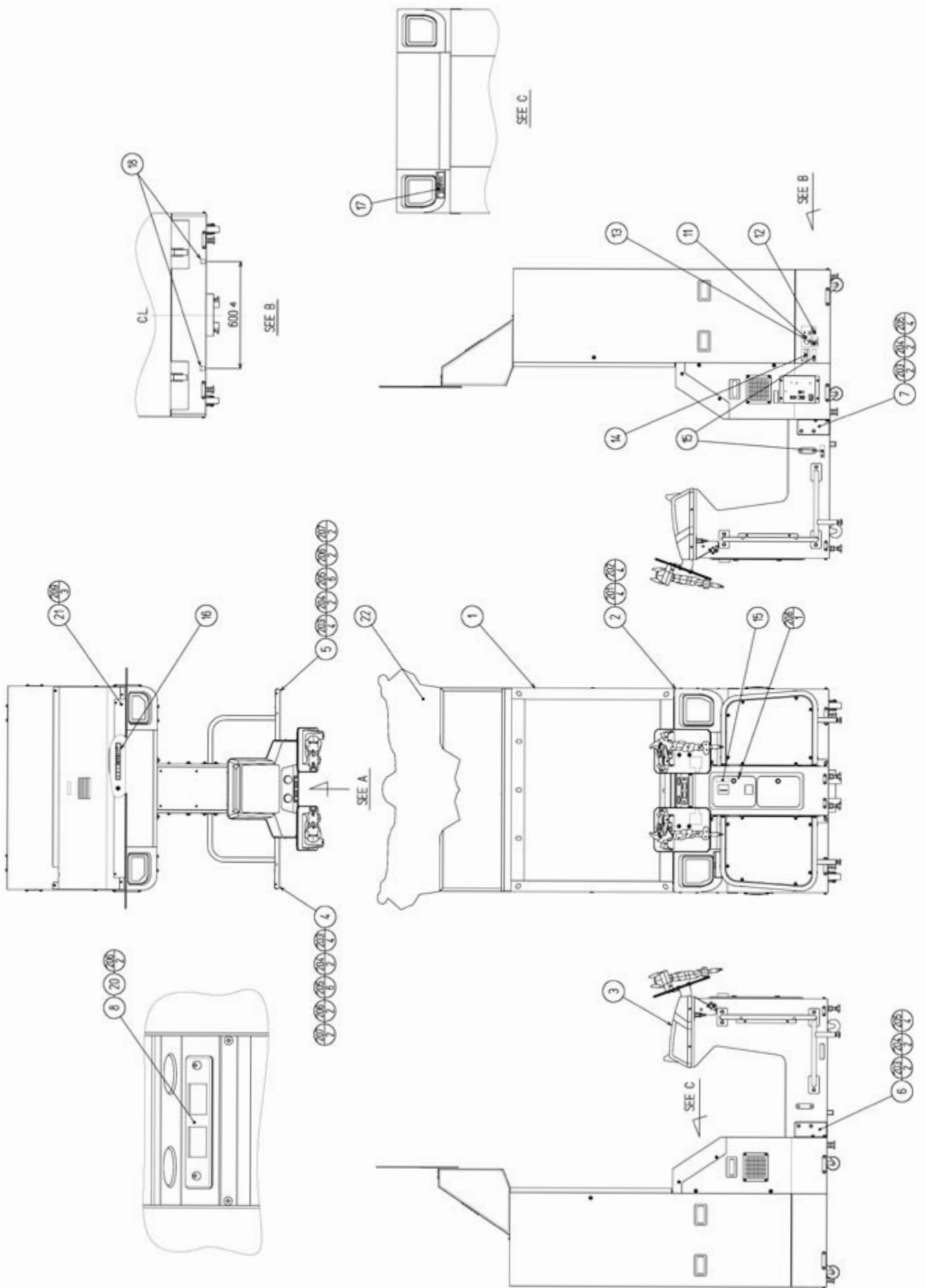
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-0500	ASSY PTV	
2	MAZ-1000	ASSY PTV CABINET DX	
3	MAZ-1100	ASSY CONTROLLER CABINET	
4	MAZ-1150	ASSY FENCE L	
5	MAZ-1160	ASSY FENCE R	
6	SPY-0001	JOINT BRKT L	
7	SPY-0002	JOINT BRKT R	
8			
17	999-1430	STICKER C EPILEPSY ENG	
21	MAZ-0521	POP HOLDER	
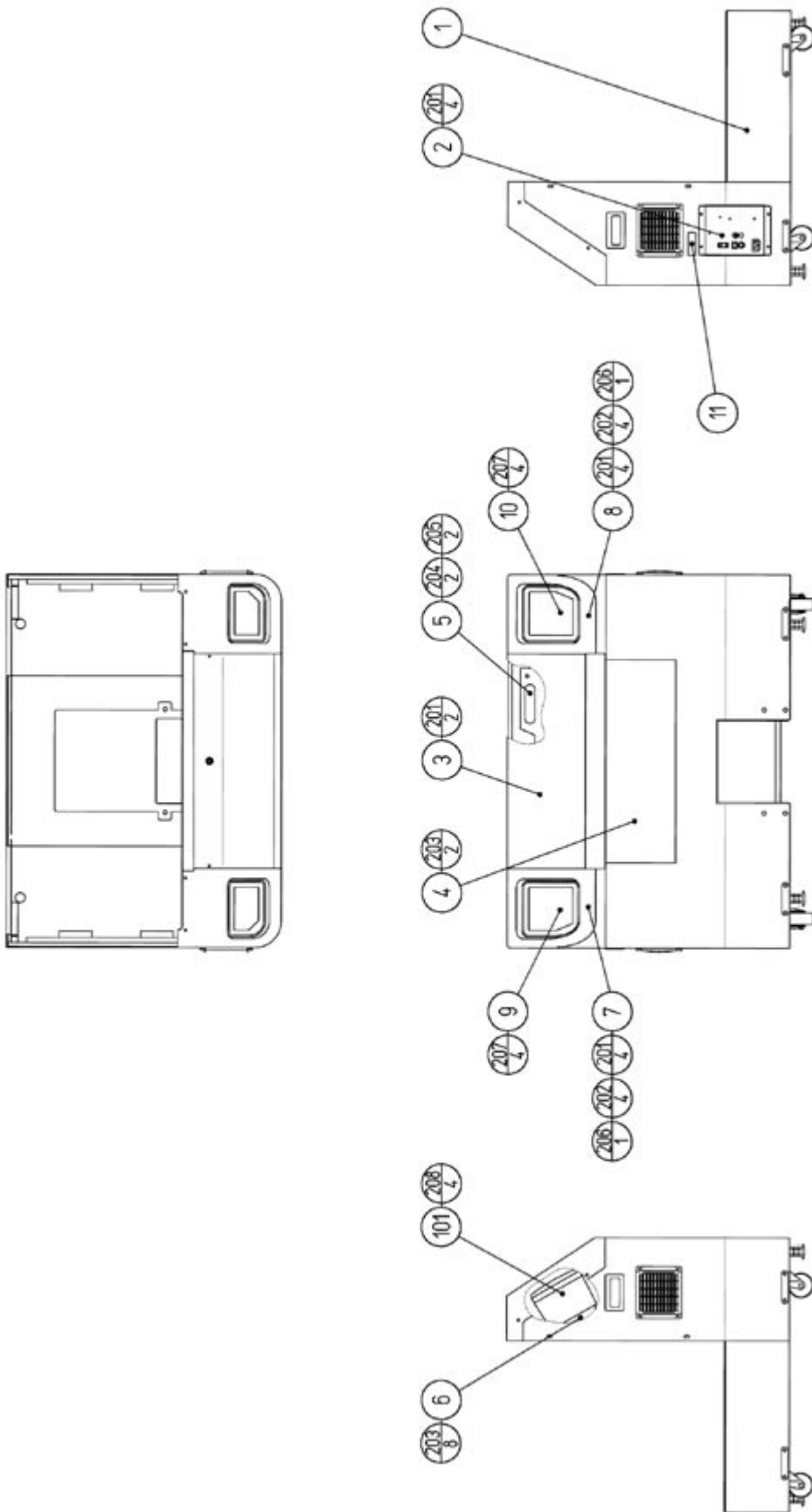
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-1001	ASSY SUB-CABI PTV DX	
2		AC UNIT	
3	MAZ-1060	ASSY LID UPPER	
4	MAZ-1070	ASSY LID LOWER	
5	MAZ-4000	ASSY MAIN BD	
7	999-1466	DECAL SPEAKER	
8	999-1466	DECAL SPEAKER	
101	999-1442	SPEAKER 4 OHM 15 WATT D05-0040 9612	

Direction of the connector : Downward
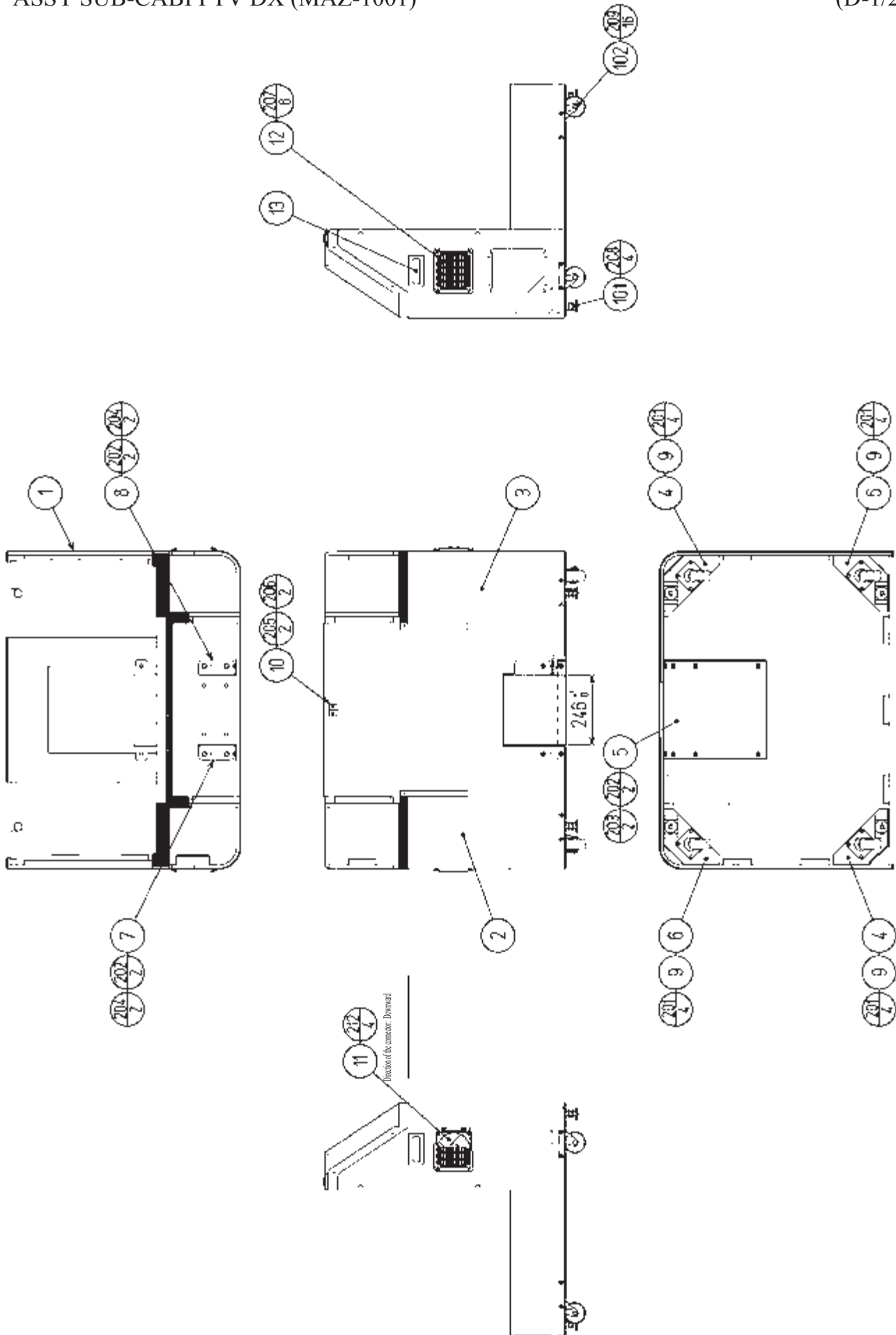
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	FRQ-1002X	PTV CABINET	
4	FRQ-1009	LEG CASTER BRKT A	
5	SPY-1005	HOLDER PLATE	
6	FRQ-1012	LEG CASTER BRKT B	
7	SPY-1006	HOLDER BRKT L	
8	SPY-1007	HOLDER BRKT R	
9	117-5284	PLATE 6-80 BLACK	
10	HOD-1003	LOCKING BRKT HOD	
11	NOT USED		
12	253-5460-01	AIR VENT BLACK	
13	253-5396-91	CABINET HANDLE	

AC UNIT
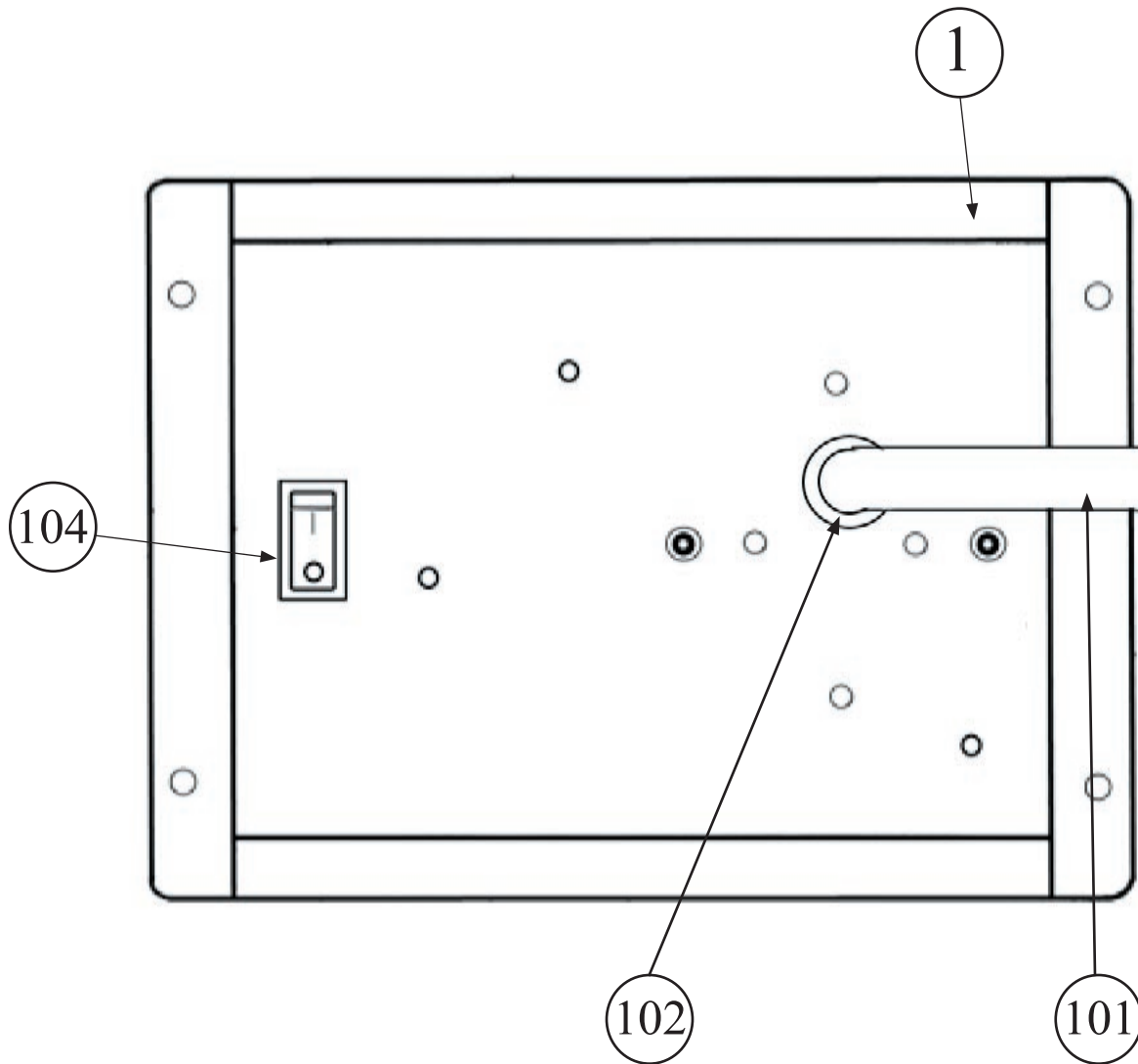
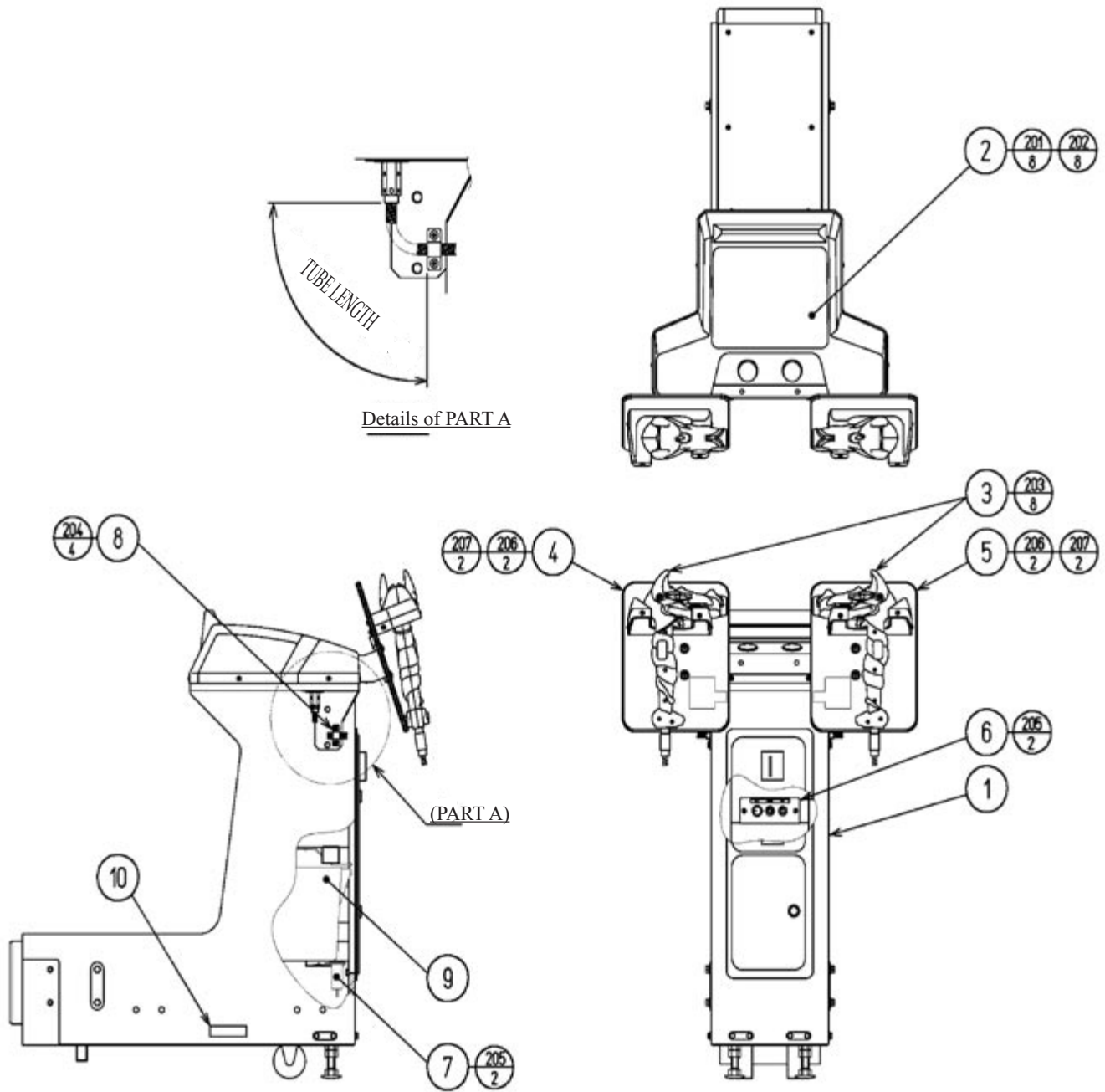| ITEM NO.	PART NO.	DESCRIPTION
1	999-1204	PLATE LINE CORD
101	0065-082-100	LINE CORD (GRAND PRODUCTS)
102	0042-029-000	BUSHING STRAIN RELIEF (GRAND PRODUCTS)
104	999-0676	SW ROCKER J8 V-B

ASSY LID UPPER (MAZ-1060)
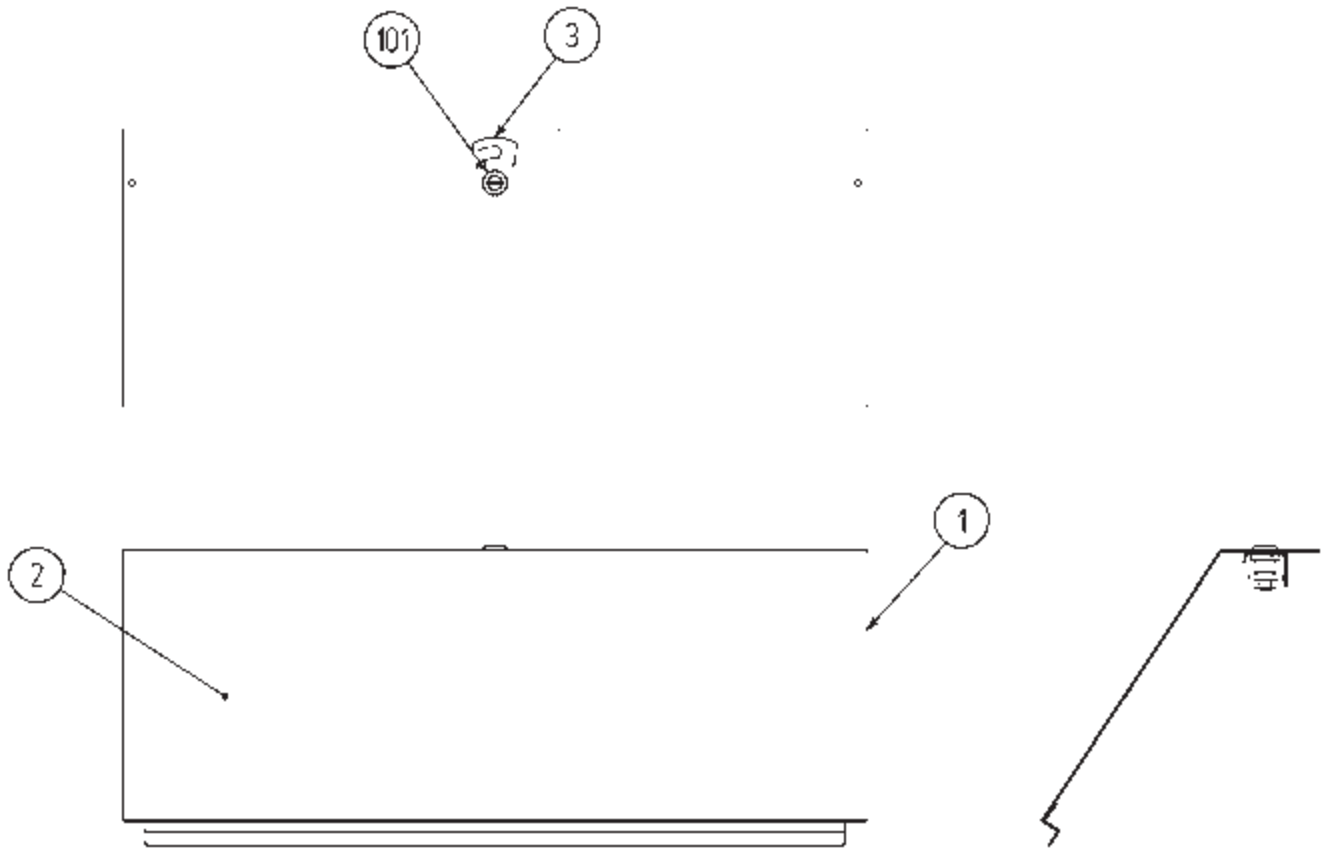
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPY-1061	LID UPPER	
2	999-1463	FRONT UPPER (SERVICE DOOR DECAL)	
3	TH-1015	LOCKING TONGUE	
101	220-5575	CAM LOCK MASTER W/O KEY	

ASSY LID LOWER (MAZ-1070)
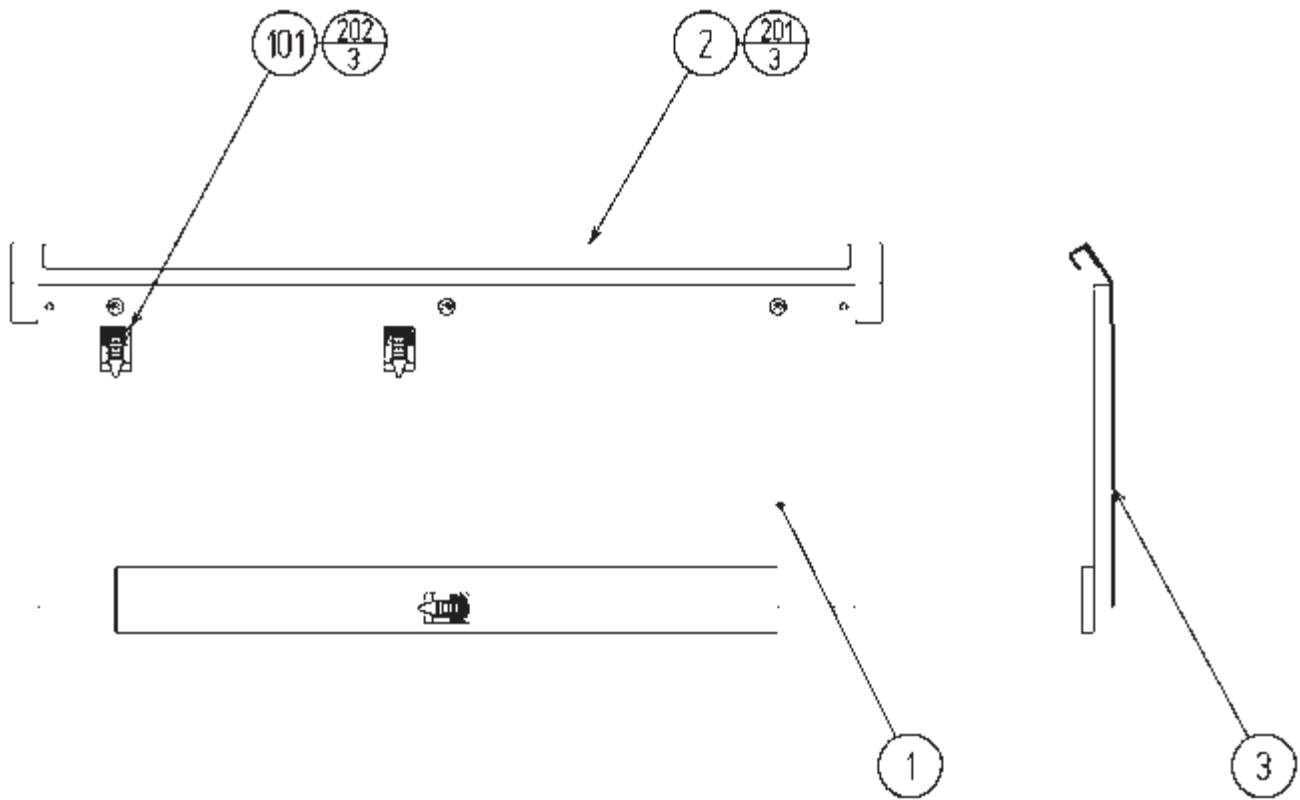
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	FRQ-1061	LID LOWER	
2	SPY-1071	LID BRKT	
3	999-1464	CONSOLE LOWER LID (DECAL)	
101	280-5009-01	CORD CLAMP 21	

ASSY CONTROLLER CABINET (MAZ-1100)   (D-1/2)

Details of PART A

TUBE LENGTH

(PART A)

* : Pay attention to the torsion of the tube.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-1101	ASSY SUB-CABI CONTROLLER	
2	MAZ-2000	ASSY CTRL PANEL DX	
3	MAZ-2100	CONTROL UNIT	
4	MAZ-2150	ASSY GUN HOLDER L	
5	MAZ-2160	ASSY GUN HOLDER R	
6		SW UNIT	
7		METER UNIT	
8	CPT-1017	CABLE CLAMP	
9	999-1106	CASH BOX	

SECTION X-X

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPY-1102	CONTROLLER CABINET	
2	SPY-1103	JOINT NUT PLATE	
3	SPY-1104	PLATE 8-70	
4	SPY-1105	JOINT PART LID	
5	HOD-1306	NUT PLATE FOR PIPE	
6	105-5106	CASH BOX COVER	
7	105-5107	CHUTE	
8	105-5188	HOLE COVER	
9	DP-1167	TNG LKG	
10	105-5170	LOCK BRACKET S	
11	ARC-1006	LEG BRACKET	
12	117-5233	PLATE LEG BRACKET BLACK	
13	421-7501-02	STICKER 6.3V 0.15A	
14	MAZ-1102	HOLDER	
15	SPY-1106	HOLDER BRKT	
16	999-1474	SIDE BRKT L	
17	999-1475	SIDE BRKT R	
18	HOD-1309	UNDER BRKT	
19	HOD-1310	UNDER PLATE	
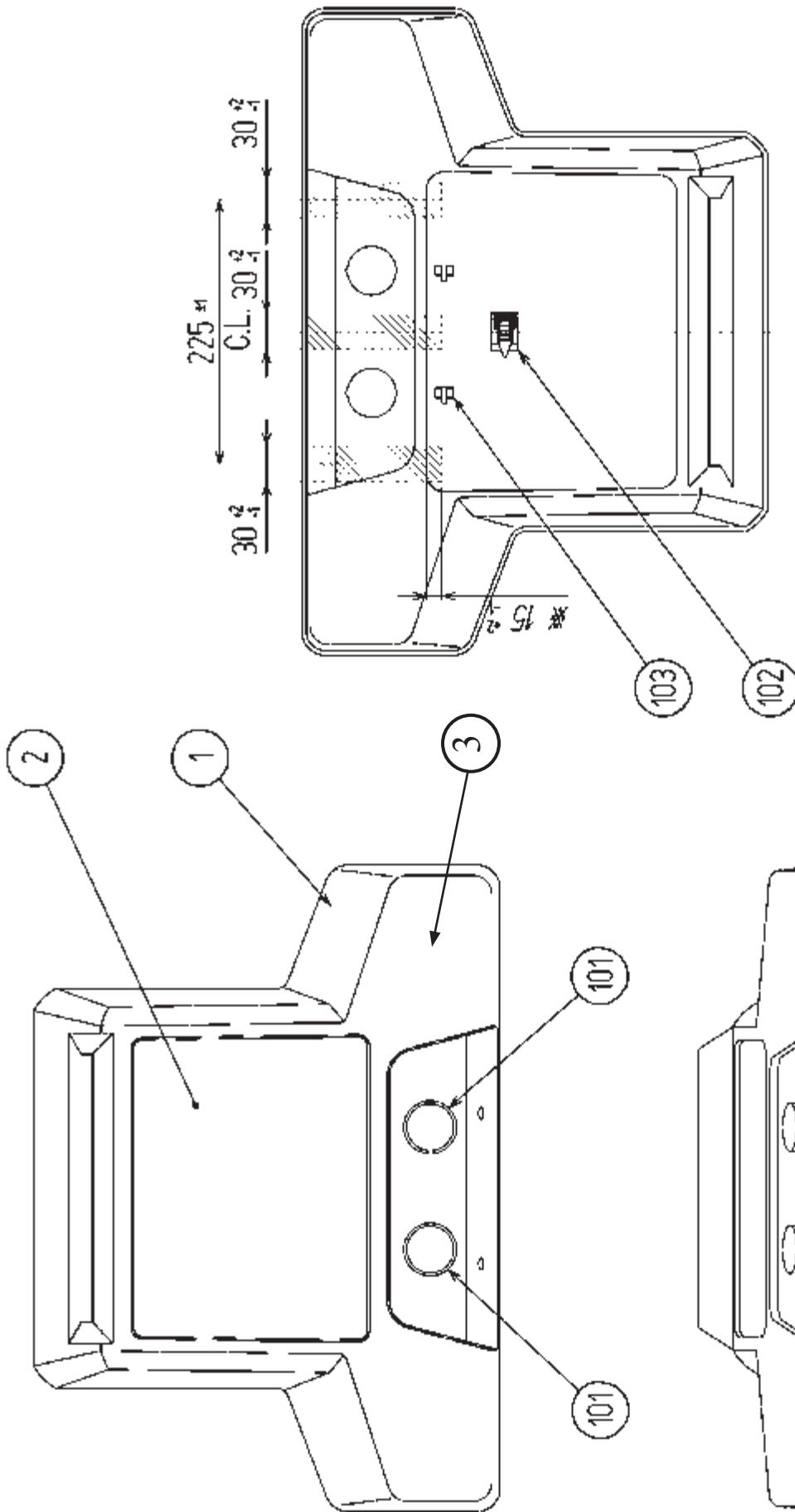
NOTE: Make sure that there is no wiring, etc. in the slash mark portions.

SEE A

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1		NO MOLDING USED ON US VERSION	
2	999-1459	INST PLATE MAZ DX ENG	
3	999-1457	CONTROL PANEL OVERLAY	
101	509-5712-01S	SW PB W/L 6V YELLOW	

SECTION A-A

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2030	SENSOR UNIT	
2	COP-2005	STOPPER PIN	
3	125-5124	TORSION SPRING	
4	MAZ-2101	COVER BODY L	
5	MAZ-2102	COVER BODY R	
6	MAZ-2103	COVER HEAD	
7	MAZ-2104	TRIGGER	
8	MAZ-2105	HEAD COLLAR	
101	280-5124-03	NYLON CLAMP NK03	
103	509-5080	SW MICRO TYPE (SS-5GL2)	
104	601-0460	PLASTIC TIE BELT 100 MM	
201	FAS-000080	M SCR PH W/SMALL FS BLK M3×20	
202	FAS-000081	M SCR PH W/SMALL FS BLK M3×28	
203	FAS-500006	CAP NUT TYPE 3 BLK M3	
204	012-P00308	TAP SCR #2 PH 3×8	
205	060-F00300	FLT WSHR M3	
206	FAS-110013	TAP SCR PH #1 BLK 3×14	
301	999-1451	HOSE ASSY PLAYER 1	
	999-1452	HOSE ASSY PLAYER 2	

SENSOR UNIT (JPT-2030)
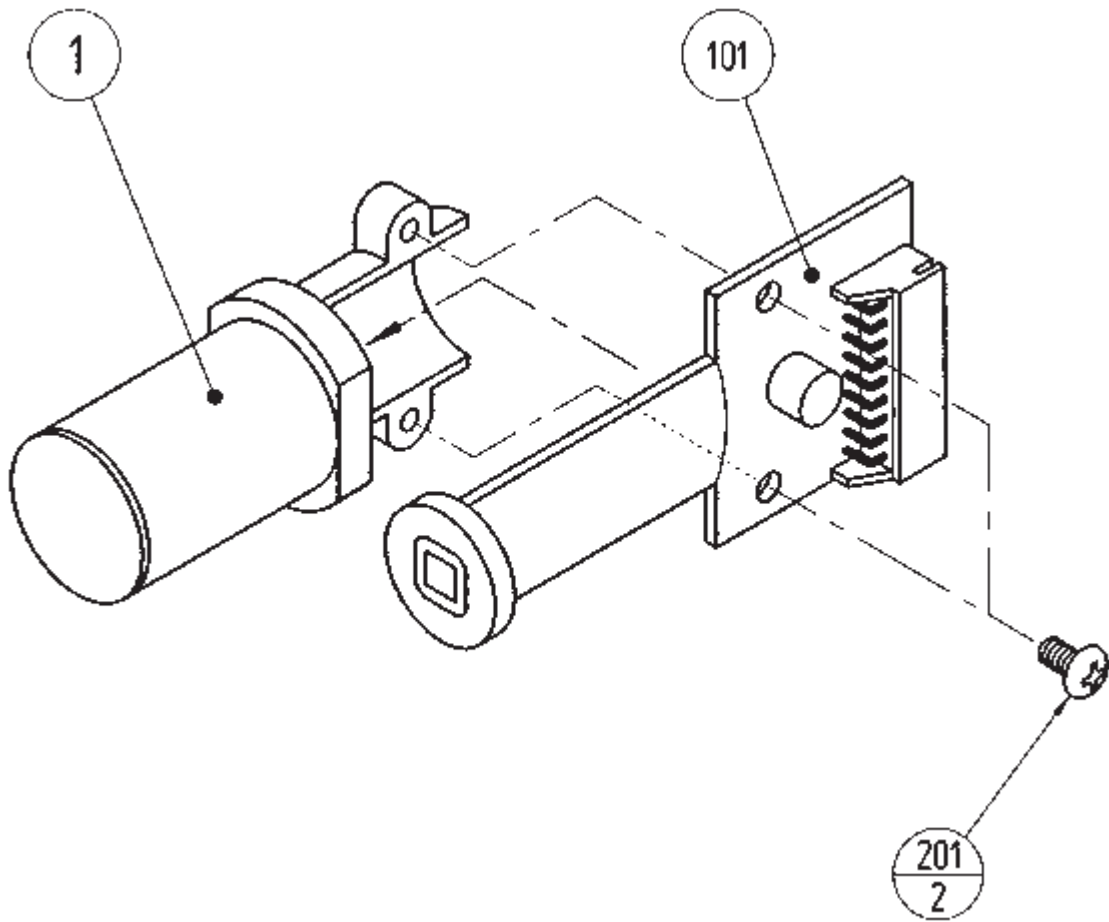
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2031	SENSOR HOLDER	
101	838-13144-91	SENSOR BD GUN SENSE (NOT SOLD SEPERATELY)	
201	012-P00306	TAP SCR #2 PH 3×6	

ASSY GUN HOLDER L (MAZ-2150)
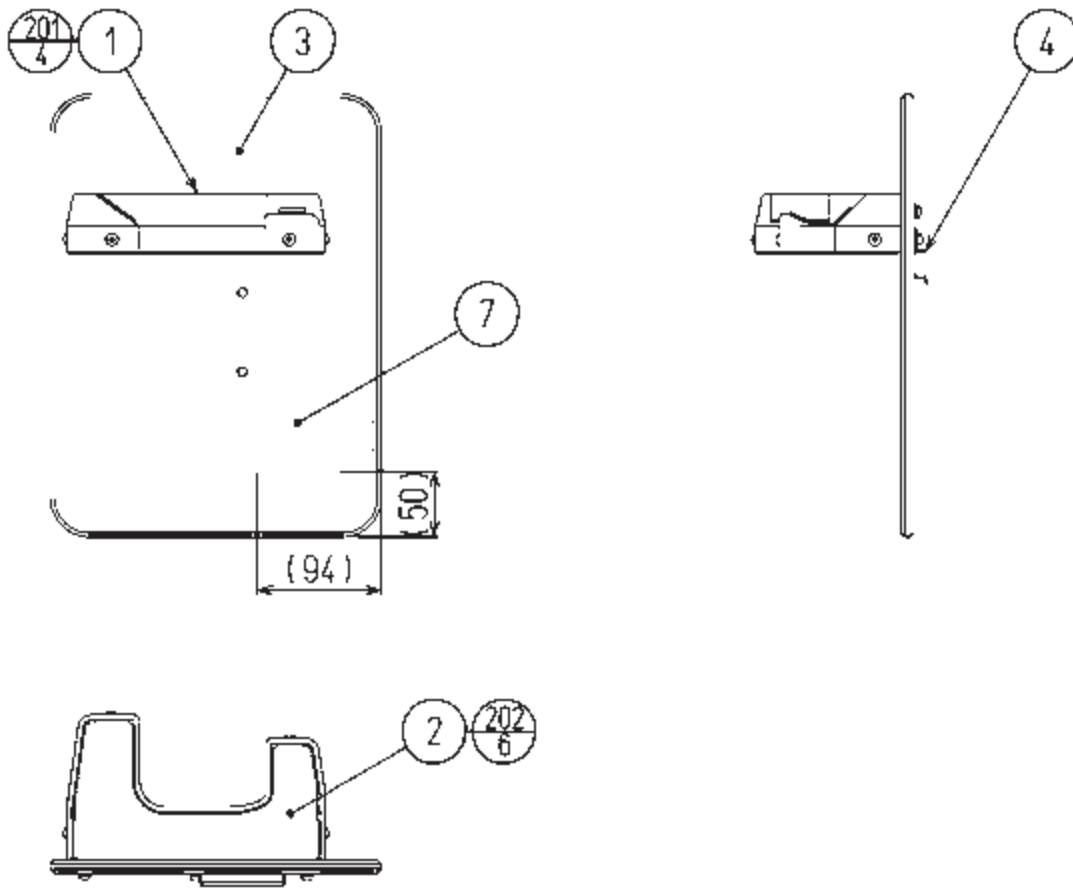
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-2151	GUN HOLDER COVER L	
2	MAZ-2153	GUN HOLDER BRKT L	
3	999-1454	GUN BOARD L	
4	MAZ-2155	BOARD HOLDER L	
5			
6			
7	999-1449	STICKER GUN BOARD L ENG	
201	000-T00412-0C	M SCR TH CRM M4×12	
202	000-P00420-WB	M SCR PH W/FS BLK M4×20	

ASSY GUN HOLDER R (MAZ-2160)
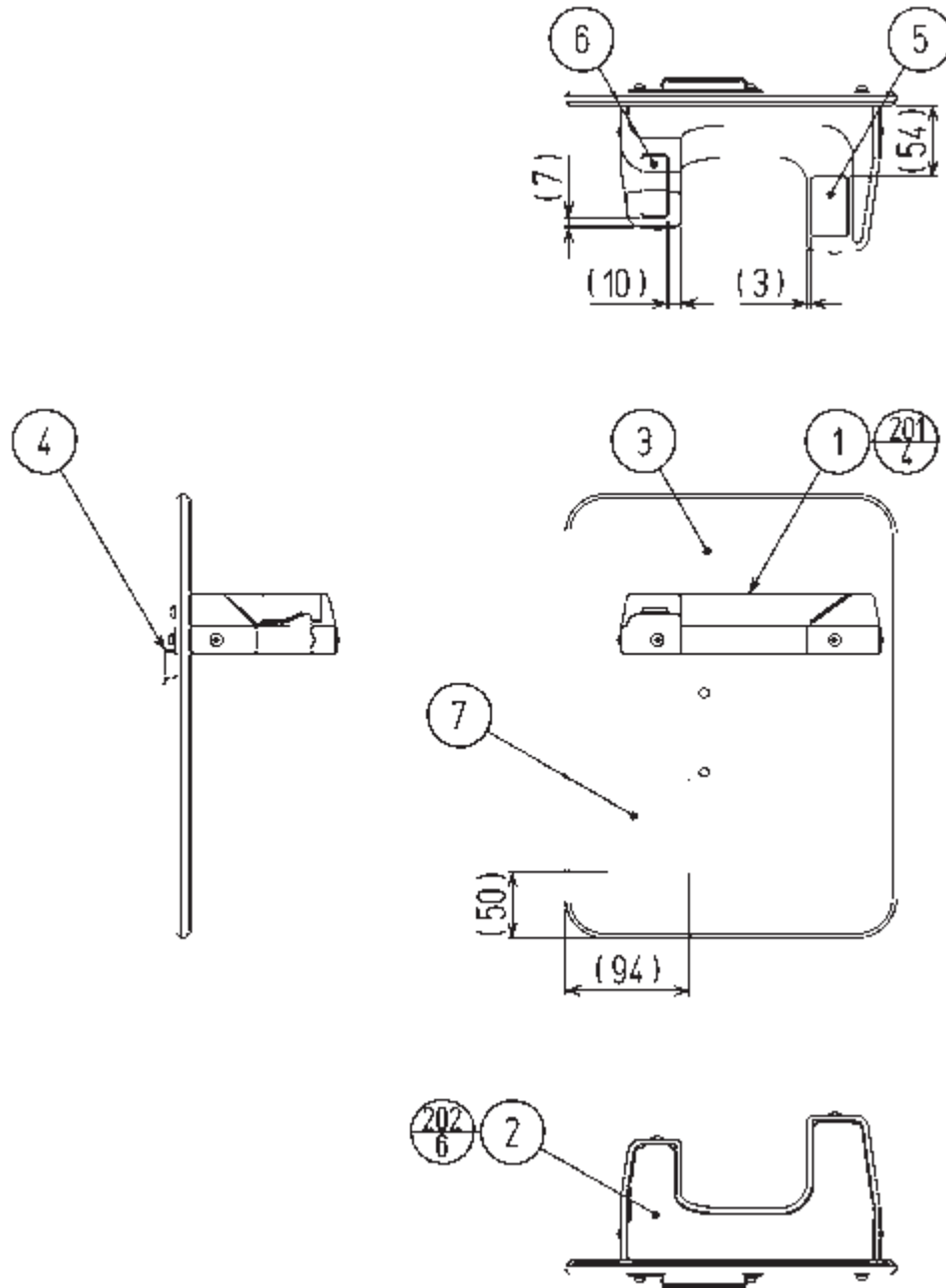
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-2152	GUN HOLDER COVER R	
2	MAZ-2163	GUN HOLDER BRKT R	
3	999-1453	GUN BOARD R	
4	MAZ-2165	BOARD HOLDER R	
5	MAZ-2156	GUN CUSHION L	
6	MAZ-2157	GUN CUSHION R	
7	999-1450	STICKER GUN BOARD R ENG	
201	000-T00412-0C	M SCR TH CRM M4×12	
202	000-P00420-WB	M SCR PH W/FS BLK M4×20	

SW UNIT
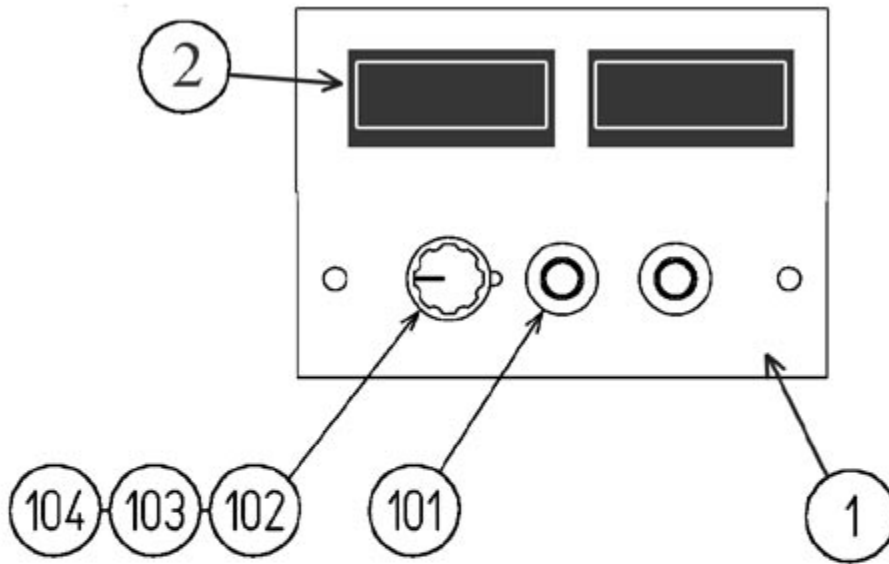
NOTE: Bend the legs of the 220-5179 as shown in the figure.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPY-1171	SW BRKT	
2	999-1050	COIN METER	
101	LOCAL PURCHASE	SWITCH TEST/SVC .5 AMP - MOUSER#104-0015	
102	999-1222	VOL CONT 05K OHM (31VA305)	
103	LOCAL PURCHASE	KNOB 1/4" SHAFT - MOUSER #450-2023	
104	310-5029-F20	SUMITUBE F F 20MM	
301	SPY-60017	WH SW UNIT	

ASSY PTV (MAZ-0500)
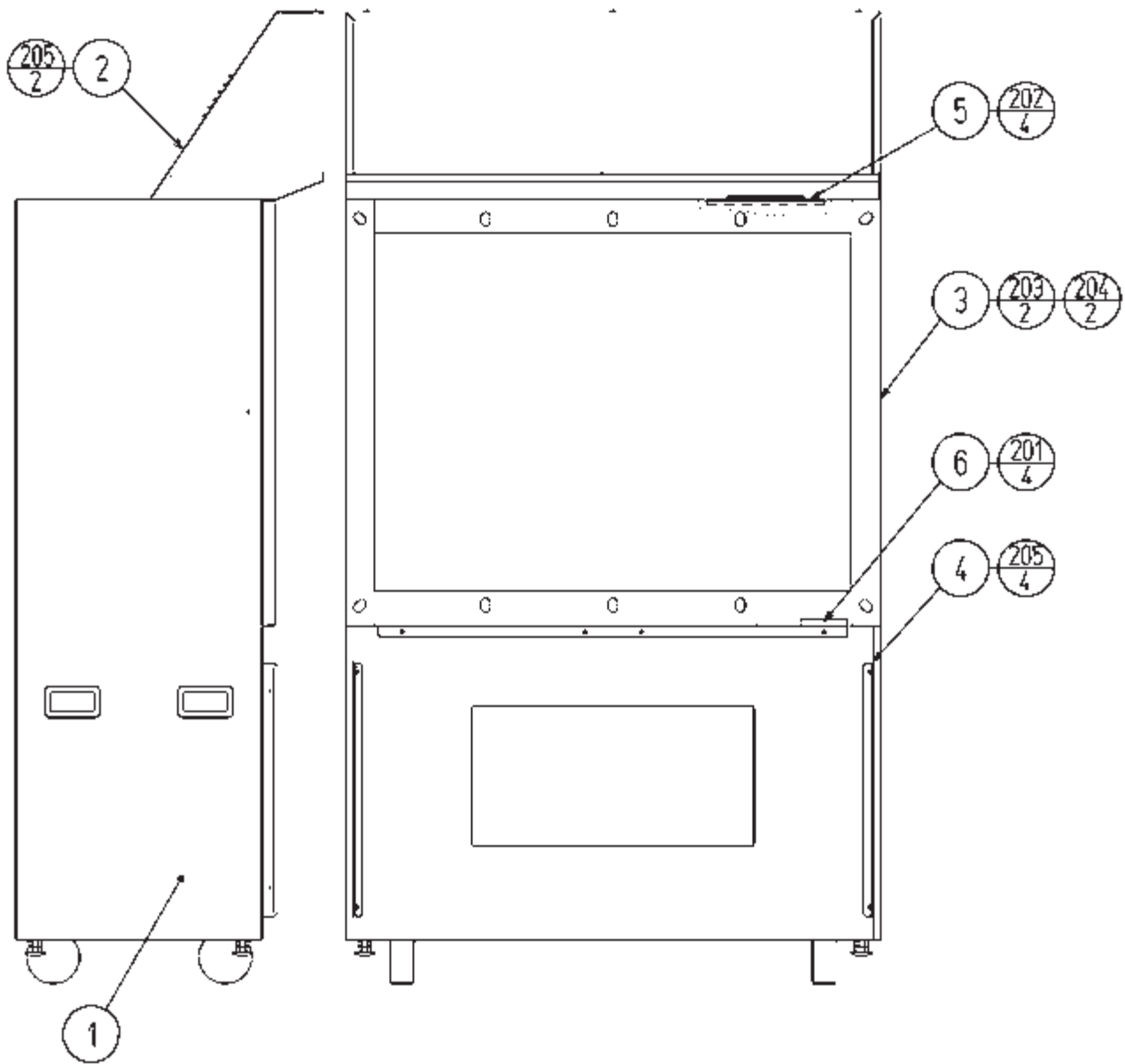
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-0510	PTV W/STICKER MAZ DX	
2	MAZ-0520	ASSY BILLBOARD DX	
3	SPY-0530	ASSY MASK	
4	HOD-1101	PTV HOLDER	
5	FRQ-1114	MASK BRKT UPPER	
6	SMB-1501	MASK BRKT LOWER	
201	000-T00520-0B	M SCR TH BLK M5×20	
202	000-F00412	M SCR FH M4×12	
203	000-T00525-0B	M SCR TH BLK M5×25	
204	068-552016-0B	FLT WSHR BLK 5.5-20×1.6	
205	000-P00516-W	M SCR PH W/FS M5×16	

PTV W/STICKER MAZ DX (MAZ-0510)
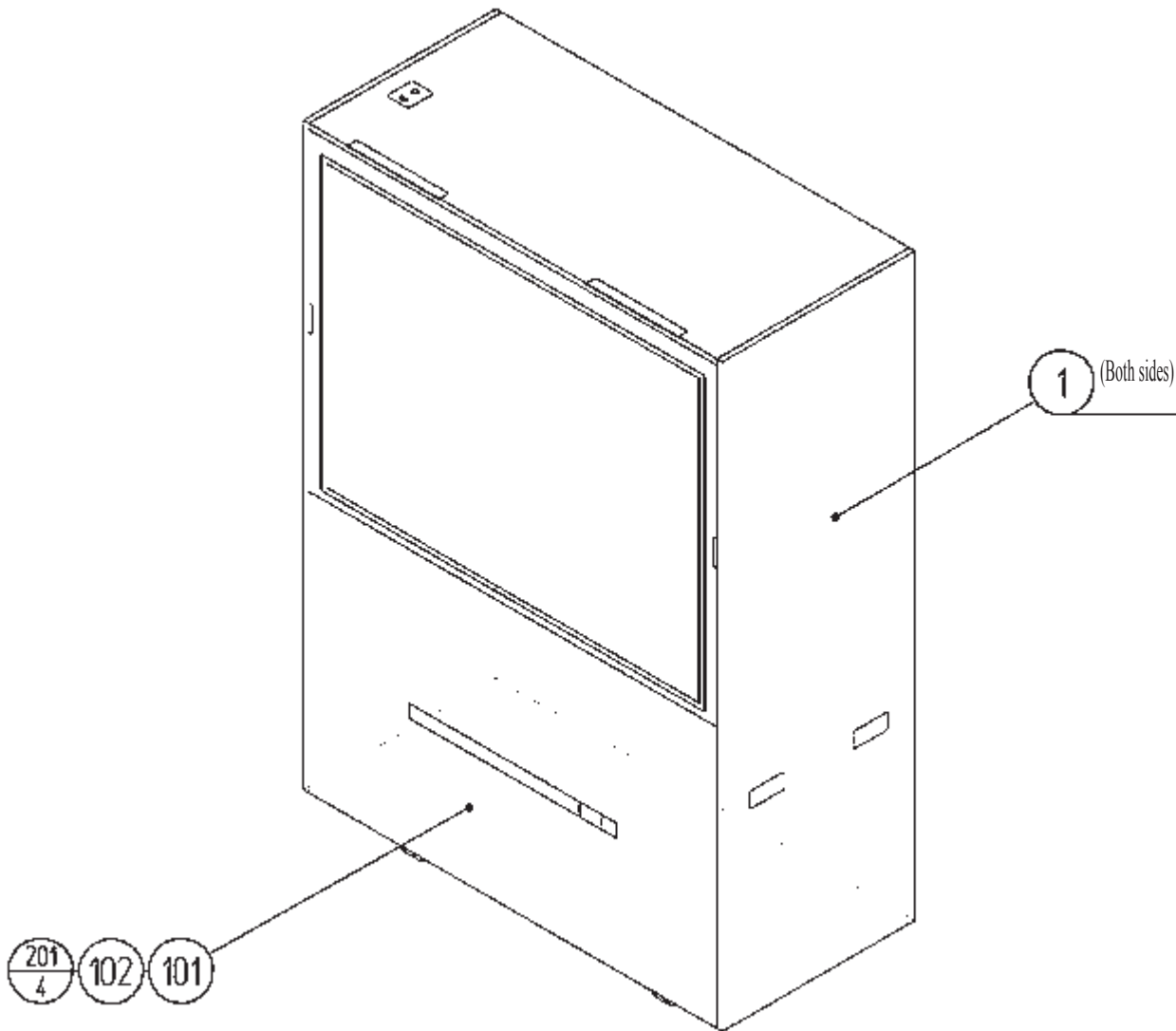
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	MAZ-0511	STICKER PTV SIDE	
101	200-5788-31	PROJECTION DSPL T 50TYPE 31K	
102	280-5009-01	CORD CLAMP 21	
201	011-F00310	TAP SCR FH 3×10	
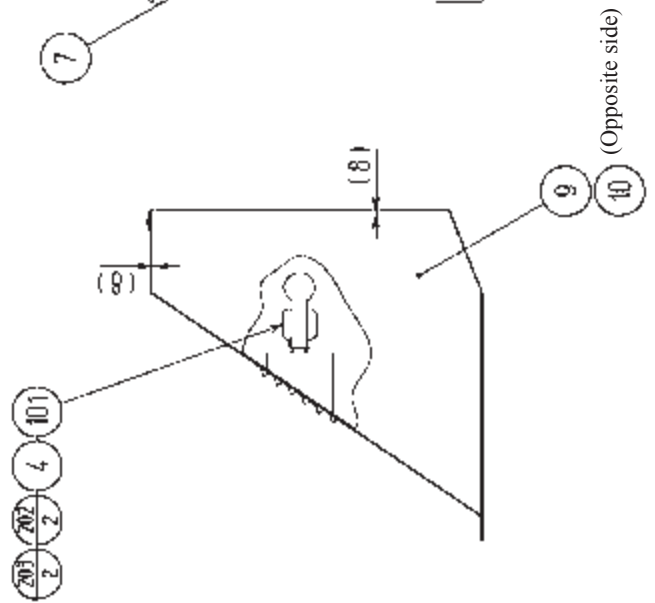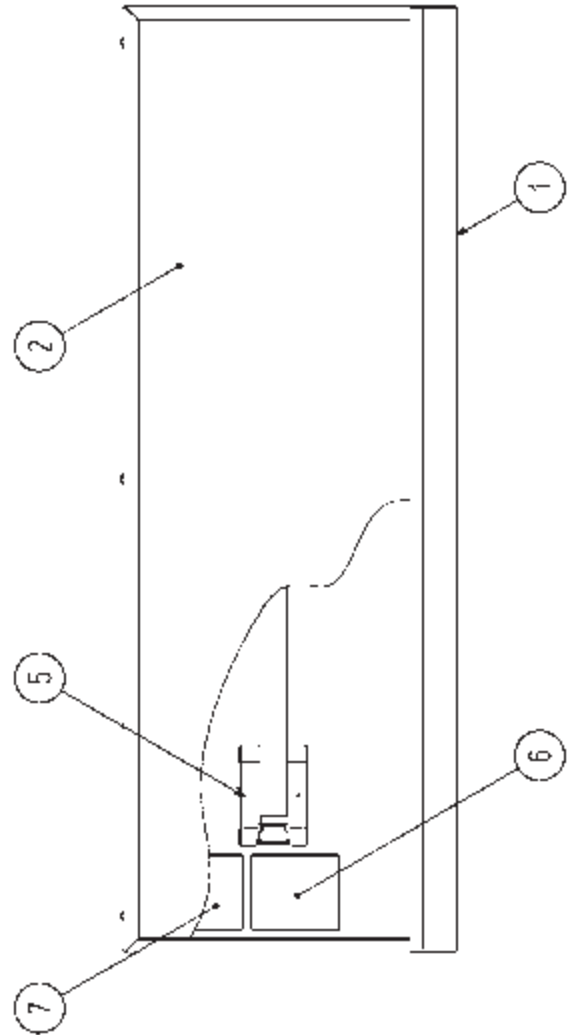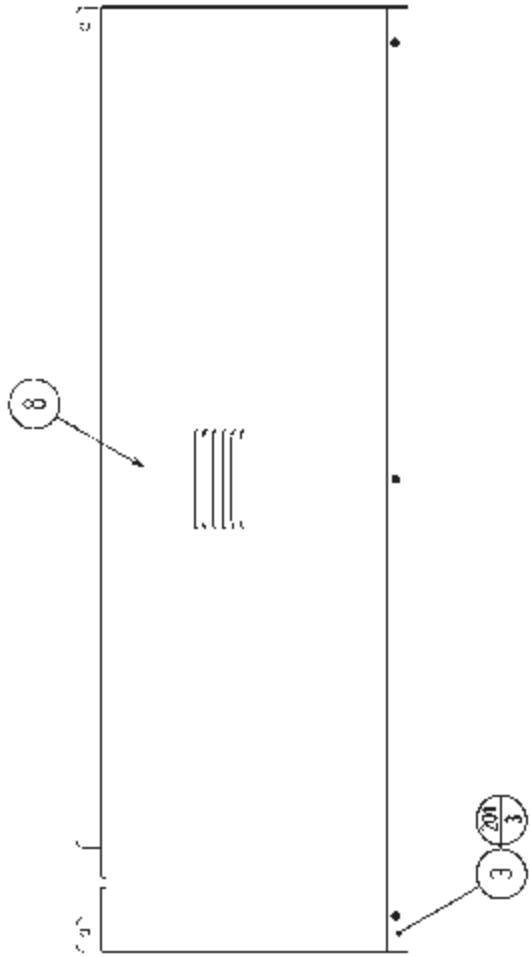
(Opposite side)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPY-0521	BILLBOARD BOX	
2	MAZ-0522	BILLBOARD PLATE	
3	SPY-0523	BILLBOARD SASH	
9	999-1461	STICKER BILLBOARD SIDE L	
10	999-1462	STICKER BILLBOARD SIDE R	
101	LOCAL PURCHASE	FLUOR.LAMP ASSY 36" ST13ORS X 40 AMER.FLUOR.	
201	000-T00408-0B	M SCR TH BLK M4×8	
202	000-P00430-S	M SCR PH W/S M4×30	
203	068-441616	FLT WSHR 4.4-16×1.6	

ASSY MASK (SPY-0530)
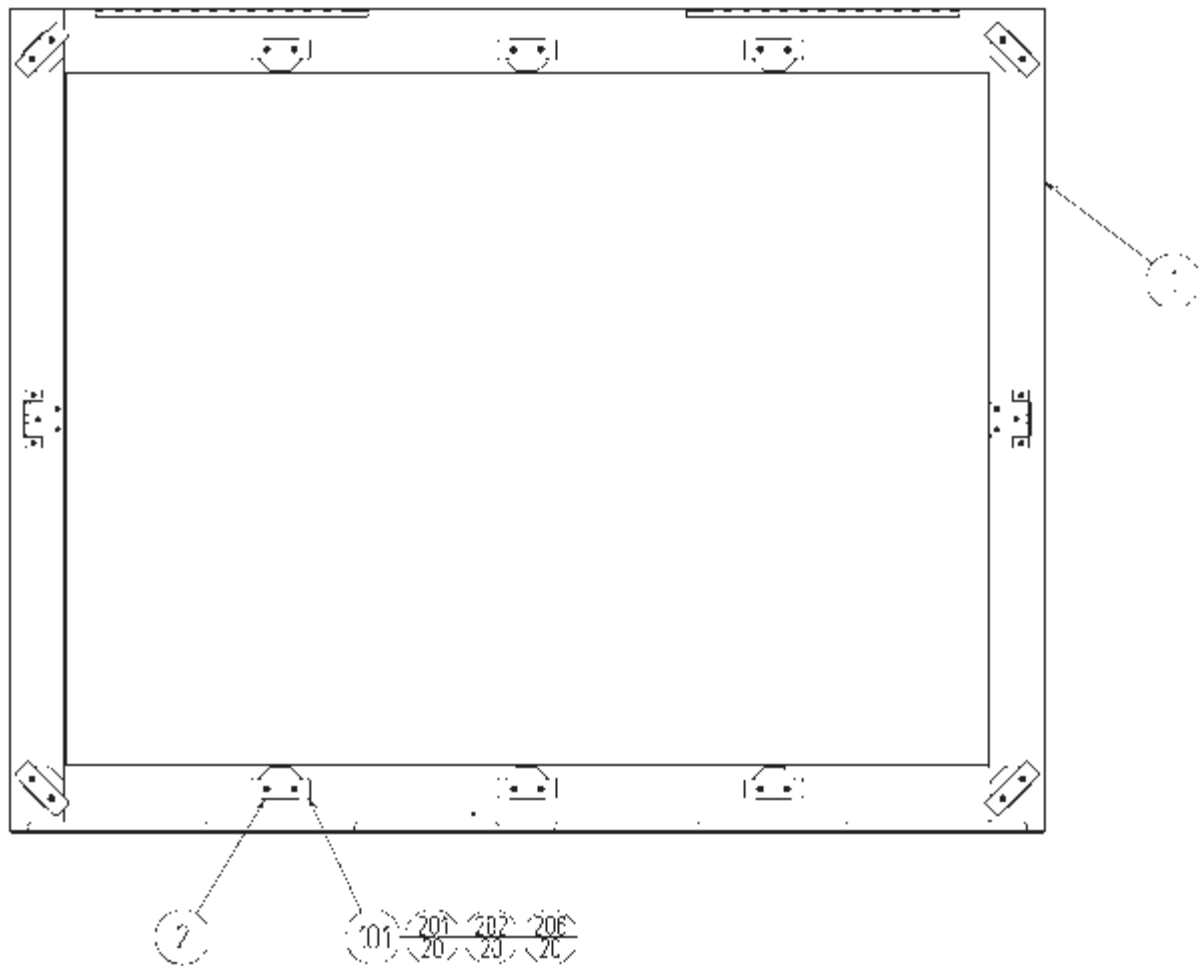
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPY-0531	MASK BASE	
2	JPT-1082	IR COVER	
101	838-13145-02	LED BD GUN SENSE HOD	
103	280-5008	CORD CLAMP 15	
201	050-U00300	U NUT M3	
202	068-330808-PN	FLT WSHR PLASTIC 3.3-8×0.8	
203	050-H00400	HEX NUT M4	
204	060-F00400	FLT WSHR M4	
205	060-S00400	SPR WSHR M4	
206	069-000026	FLT WSHR 3.2-11 ×0.5	
301	SPY-60026	WH MASK INTO	
302	SPY-60024	WH MASK SHORT	
303	SPY-60025	WH MASK LONG	
304	HOD-60035	WIRE HARN E MASK01	

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ASSY FENCE L (MAZ-1150)
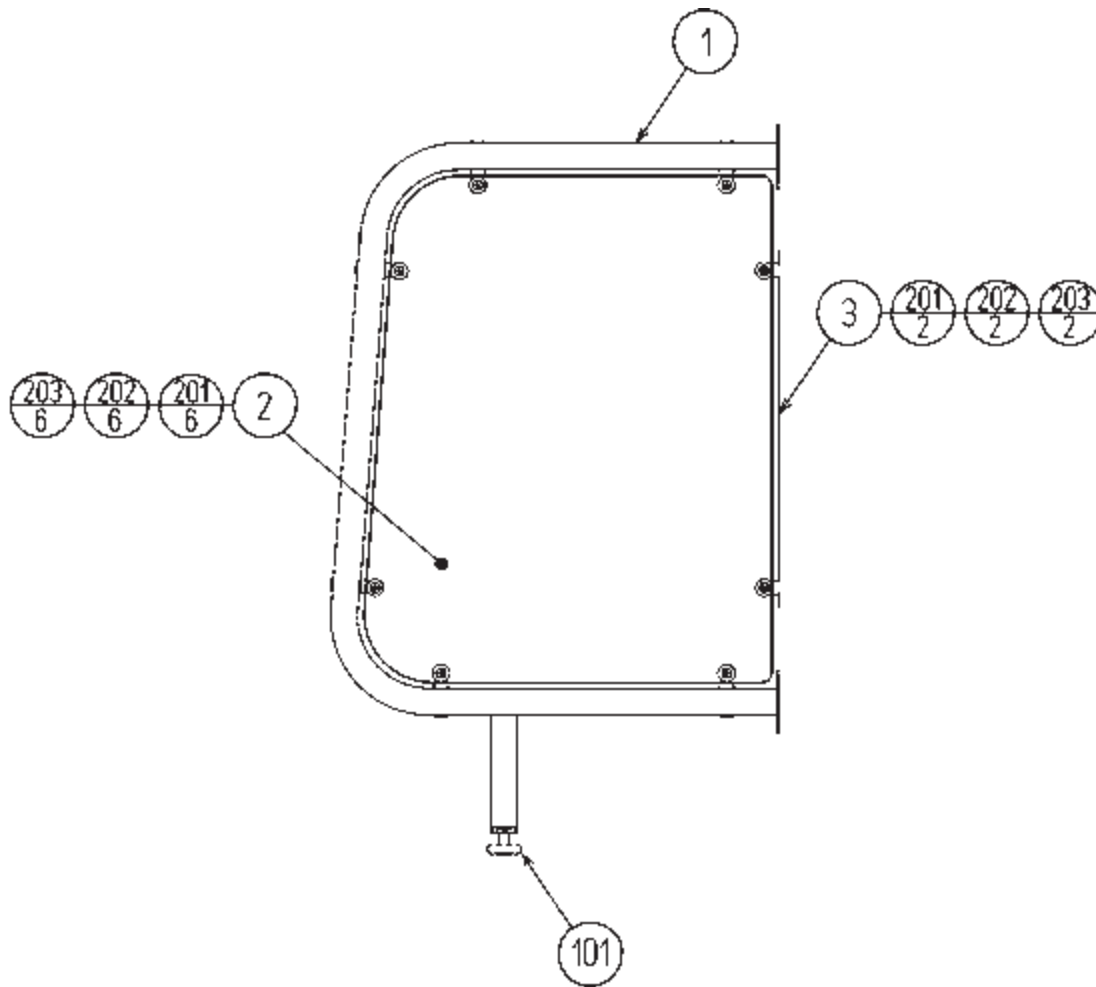
NOTE: Screw Fastening Torque (201): 0.7 N·m

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	HOD-1351	PIPE L	
2	999-1469	GUARD PLATE L	
3	HOD-0004	PLATE HOLDER	
101	601-6076	LEG ADJUSTER 32(MKP-32)	
201	000-T00412-0B	M SCR TH BLK M4×12	
202	068-441616-0B	FLT WSHR BLK 4.4-16×1.6	
203	050-C00400-3B	CAP NUT TYPE3 BLK M4	

ASSY FENCE R (MAZ-1160)
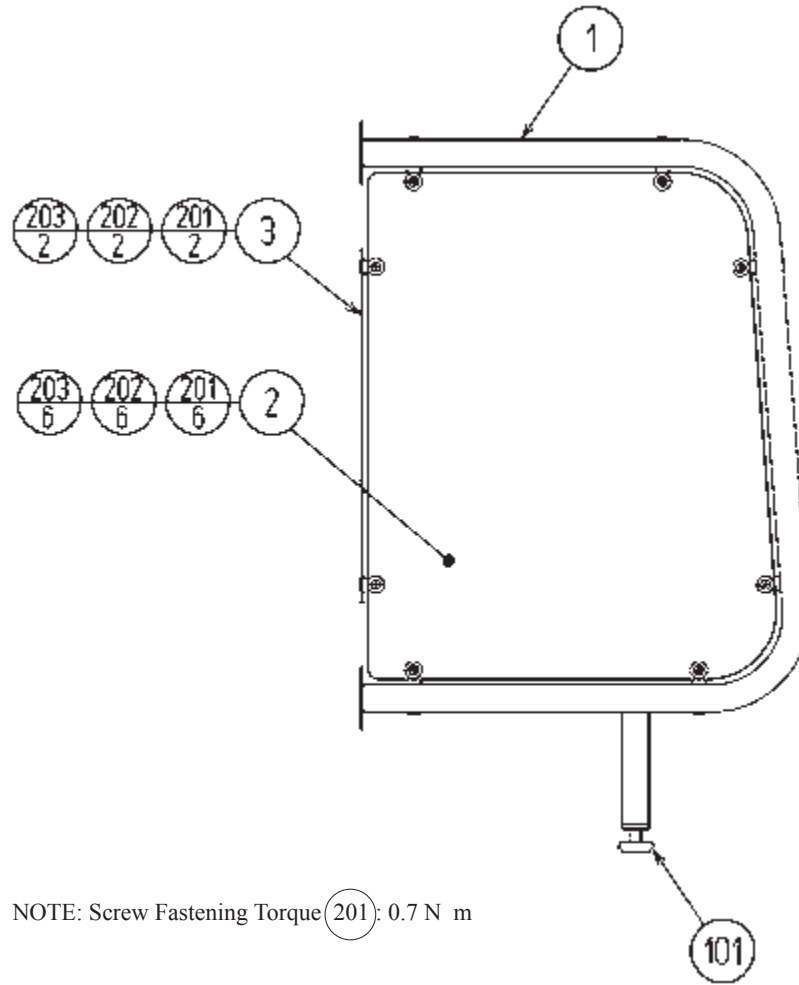
NOTE: Screw Fastening Torque (201): 0.7 N m

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	HOD-1361	PIPE R	
2	999-1470	GUARD PLATE R	
3	HOD-0004	PLATE HOLDER	
101	601-6076	LEG ADJUSTER 32(MKP-32)	
201	000-T00412-0B	M SCR TH BLK M4×12	
202	068-441616-0B	FLT WSHR BLK 4.4-16×1.6	
203	050-C00400-3B	CAP NUT TYPE3 BLK M4	

ELECTRONIC BD ASSY
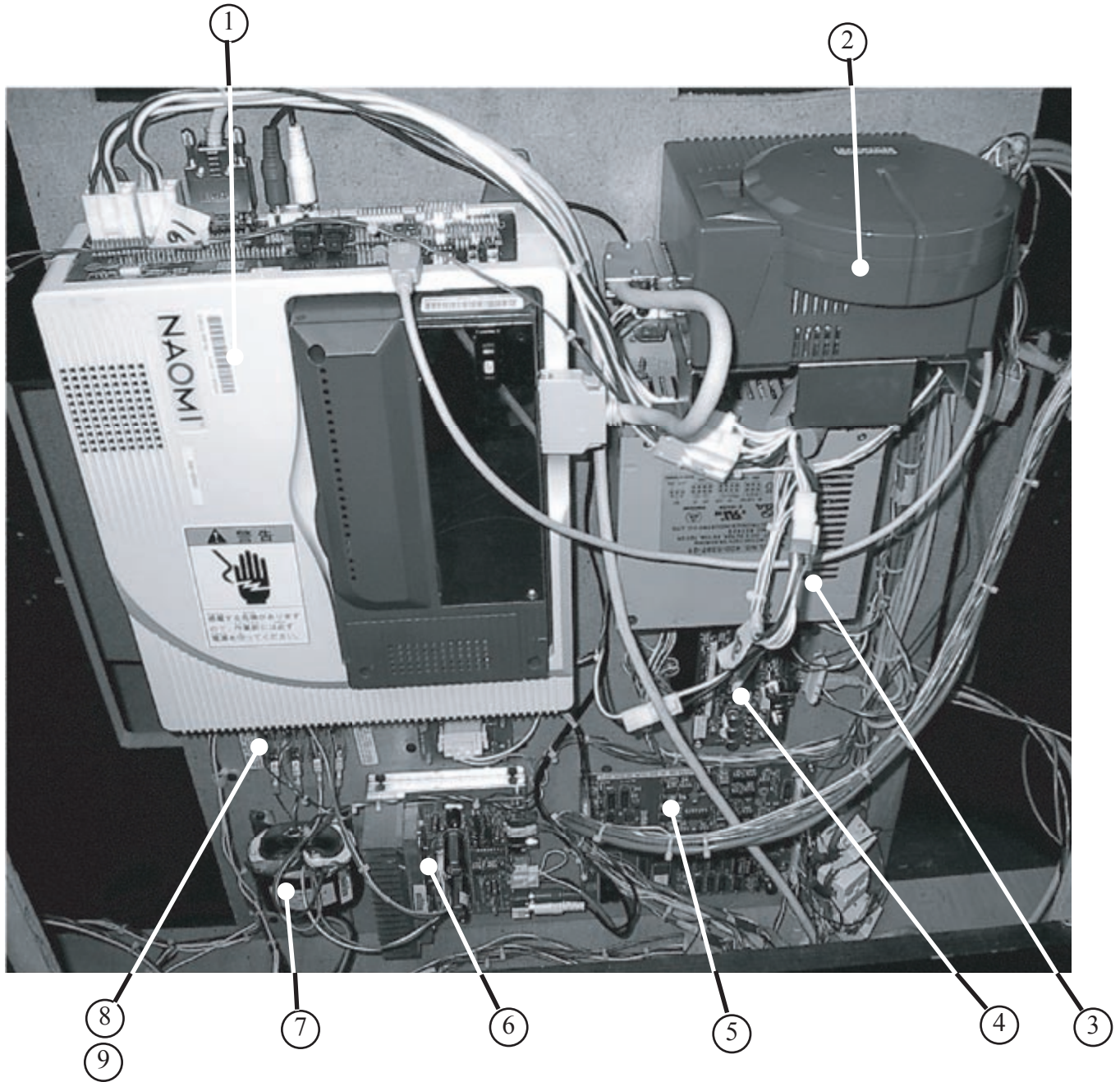
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	840-0050D-01	GAME BOARD WITH DIMM BD	
2	610-0617	GD ROM DRIVE UNIT	
3	400-5397-01	POWER SUPPLY	
4	838-13683-02	I/O BOARD JVS TO JAMMA	
5	838-13143-08	IC BD GUN SENSE SPY DX	
6	838-13616	AUDIO POWER AMP WS KIT	
7	560-5407-UL	TRANSFORMER	
8	LOCAL PURCHASE	FUSES 3 AMP & FUSE HOLDERS	
9	839-0979	CONDENSER BOARD	

AC INPUT ASSY
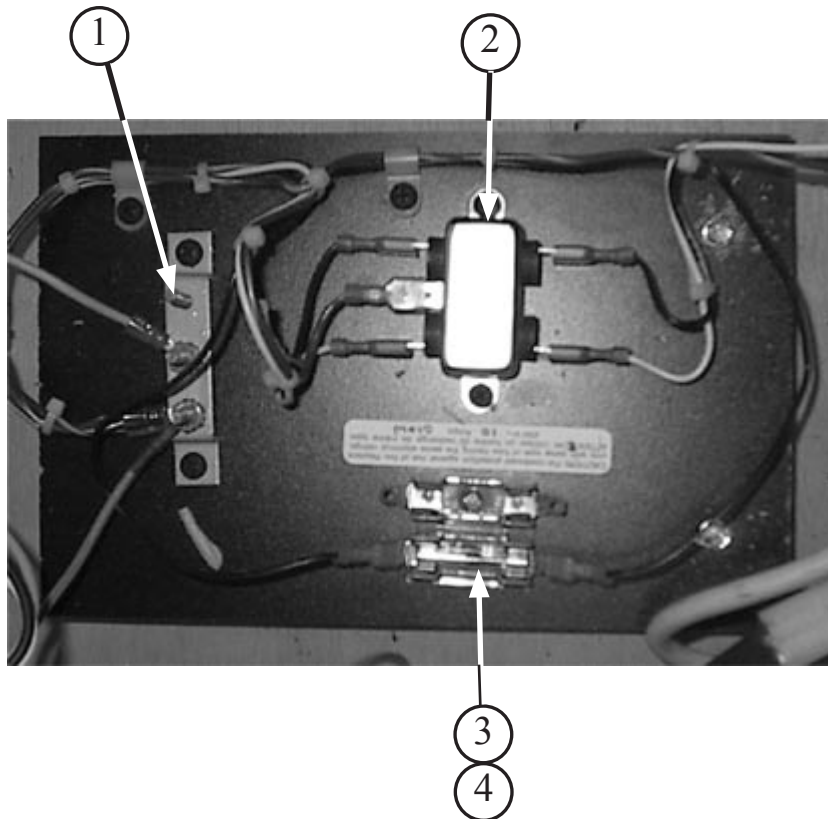
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	S109-049-100	GROUND PLATE (GRAND PRODUCTS)	
2	0053-010-400	LINE FILTER (GRAND PRODUCTS)	
3	0057-011-000	FUSE HOLDER (GRAND PRODUCTS)	
4	LOCAL PURCHASE	FUSE 10 AMP SB	

19. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

A PINK
B SKY BLUE
C BROWN
D PURPLE
E LIGHT GREEN

Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

1 RED
2 BLUE
3 YELLOW
4 GREEN
5 WHITE
7 ORANGE
8 BLACK
9 GRAY

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 alphanumeric 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

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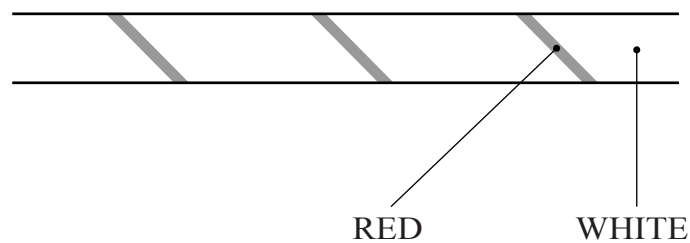
Note 2: The character following the wire color code indicates the size of the wire.

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

Warranty

Your new Sega Product is covered for a period of 90 days from the date of shipment. This certifies that the Printed Circuit Boards, Power Supplies and Monitor are to be free of defects in workmanship or materials under normal operating conditions.   This also certifies that all Interactive Control Assemblies are to be free from defects in workmanship and materials under normal operating conditions. No other product in this machine is hereby covered.

Sellers sole liability in the event a warranted part described above fails shall be, at its option, to replace or repair the defective part during the warranty period. For Warranty claims, contact your Sega Distributor.

Should the Seller determine, by inspection that the product was caused by Accident, Misuse, Neglect, Alteration, Improper Repair, Installation or Testing, the warranty offered will be null and void.

Under no circumstances is the Seller responsible for any loss of profits, loss of use, or other damages.

This shall be the exclusive written Warranty of the original purchaser expressed in lieu of all other warranties expressed or implied. Under no circumstance shall it extend beyond the period of time listed above.

SEGA

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