

SEGA™



U/R TYPE

OWNER'S MANUAL



IMPORTANT!

- Before using this product, read this OWNER'S MANUAL carefully to understand the contents herein stated.
- After reading this manual, be sure to keep it available nearby the product or elsewhere convenient for referring to it anytime when necessary.

SEGA ENTERPRISES, LTD.

MANUAL NO. 420 - 6325 - 03

THE LOST WORLD: JURASSIC PARK TM & © 1997
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Merchandising, Inc.

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 DANGER!, WARNING!, CAUTION!, etc. are used. Be sure to understand the contents of the displays before reading the text.



Indicates that mishandling the product by disregarding this pictograph will cause severe injury or death.



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.



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



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

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



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



Indicates a "Protective Earth Terminal." Before operating the equipment, be sure to connect it to the Ground.

- **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.
- **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 turning off power, some portions are still subject to high tension voltage sometimes. Monitor repair and replacement should be performed only by those technical personnel who have knowledge of electricity and technical expertise.
- **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?

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

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SPECIFICATIONS

Installation space	: 800 mm (W) × 1,230 mm (D) (31.5 in. × 48.4 in.)
Height	: 2,160 mm (85.0 in.)
Weight	: Approx. 207 kg. (456.4 lbs.)
Power, maximum current	: 300W 3.30A (AC 110V 50 Hz AREA) 289W 3.30A (AC 110V 60 Hz AREA) 294W 3.00A (AC 120V 60 Hz AREA) 307W 1.70A (AC 220V 50 Hz AREA) 299W 1.70A (AC 220V 60 Hz AREA) 306W 1.60A (AC 230V 50 Hz AREA) 293W 1.60A (AC 230V 60 Hz AREA) 300W 1.50A (AC 240V 50 Hz AREA) 294W 1.50A (AC 240V 60 Hz AREA)
For TAIWAN	
Power, current	: 285W 3.30A (MAX.) 210W 2.40A (MIN.)
MONITOR	: 29 INCH COLOR MONITOR

INTRODUCTION OF THE OWNER'S MANUAL

SEGA ENTERPRISES, LTD., supported by its high electronic technology of LSIs, microprocessors, etc. and a wealth of experience, has for more than 30 years been supplying various innovative and popular game machines to the world market. 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 LOST WORLD U/R TYPE, a new SEGA product.

This manual is intended for those who have knowledge of electricity and technical expertise especially in ICs, CRTs, microprocessors, etc. Carefully read this manual to acquire sufficient knowledge before working on the machine. Should there be a malfunction, non-technical personnel should under no circumstances touch the interior system. Should such a case arise, contact our Main Office or the closest branch office listed as follows:

SEGA ENTERPRISES, INC. (U.S.A.)/CUSTOMER SERVICE
45133 Industrial Drive, Fremont, California 94538, U.S.A.
Phone : (415) 802-3100
Fax : (415) 802-1754

DEFINITION OF LOCATION MAINTENANCE MAN AND SERVICEMAN



Non-technical personnel who do not have technical knowledge and expertise should refrain from performing such work that this manual requires the location's maintenance man or a serviceman to carry out, or work which is not explained in this manual. Failing to comply with this instruction can cause a severe accident such as electric shock.

Ensure that parts replacement, servicing & inspections, and troubleshooting are performed by the location's maintenance man or the serviceman. It is instructed herein that particularly hazardous work should be performed by the serviceman who has technical expertise and knowledge.

The location's maintenance man and serviceman are herein defined as follows:

"Location's Maintenance Man" :

Those who have experience in the maintenance of amusement equipment and vending machines, etc., and also participate in the servicing and control of the equipment through such routine work as equipment assembly and installation, servicing and inspections, replacement of units and consumables, etc. within the Amusement Facilities and or locations under the management of the Owner and Owner's Operators of the product.

Activities of Location's Maintenance Man :

Assembly & installation, servicing & inspections, and replacement of units & consumables as regards amusement equipment, vending machines, etc.

Serviceman :

Those who participate in the designing, manufacturing, inspections and maintenance service of the equipment at an amusement equipment manufacturer.

Those who have technical expertise equivalent to that of technical high school graduates as regards electricity, electronics and or mechanical engineering, and daily take part in the servicing & control and repair of amusement equipment.

Serviceman's Activities :

Assembly & installation and repair & adjustments of electrical, electronic and mechanical parts of amusement equipment and vending machines.

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.



- Before performing the work, be sure to turn power off. Performing the work without turning power off can cause an electric shock or short circuit.
- To avoid electric shock or short circuit, do not insert or pull out the plug quickly.
- To avoid electric shock, do not 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 and short circuit accidents.
- 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.
- The electronic parts on the IC Board could be damaged due to human body's static electricity. Before performing IC Board related work, be sure to discharge physically accumulated statics by touching grounded metallic surfaces.
- To avoid causing a fire or electric shock, do not make Specification changes by removing, converting and making additions unless otherwise 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.
- When cleaning the CRT surfaces, use a soft, dry cloth. Do not apply chemicals such as thinner, benzene, etc.
- The electronic parts on the IC Board could be damaged due to human body's static electricity. Before performing IC Board related work, be sure to discharge physically accumulated statics by touching grounded metallic surfaces.

CONCERNING THE STICKER DISPLAY

SEGA product has Stickers describing the product manufacture No. (Serial No.) and Electrical Specifications. Also it has a Sticker describing where to contact for repair and for purchasing parts.

When inquiring about or asking for repair, mention the Serial No. and Name of Machine indicated on the Sticker. The Serial No. indicates the product register. Identical machines could have different parts depending on the date of production. Also, improvements and modifications might have been made after the publication of this Manual. In order to meet the above situations, mention the Serial No. when contacting the applicable places.

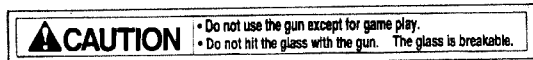
CONCERNING WARNING DISPLAYS

SEGA product has warning displays on Stickers, Labels and or printed instructions adhered / attached to or incorporated in the places where a potentially hazardous situation can arise. The warning displays are intended for avoiding hazardous situation relating to maintenance and servicing work, and for the prevention of accidents for the customers.

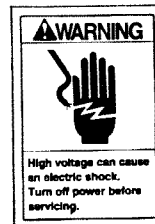
There are some portions in the Cabinet, which are subject to high tension voltage, etc. where accidents can be caused only by touching. When performing the servicing work, be very careful of the warning displays. Especially, repair and replacement work not mentioned herein, should be performed by those technical personnel who have knowledge of electricity and technical expertise.

For the prevention of accidents, caution any customer whose act runs counter to the warnings, as to the effect that he must stop the act.

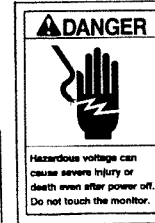
440-WS0012XEG



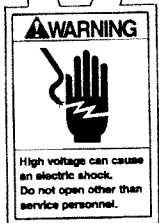
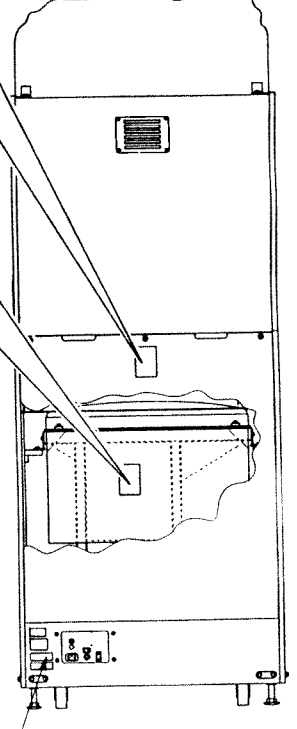
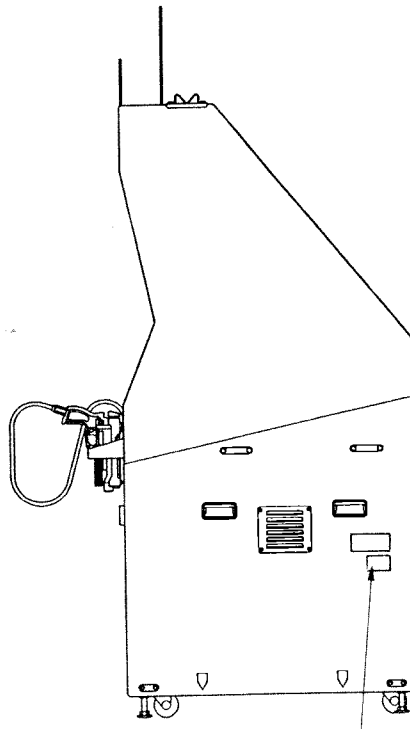
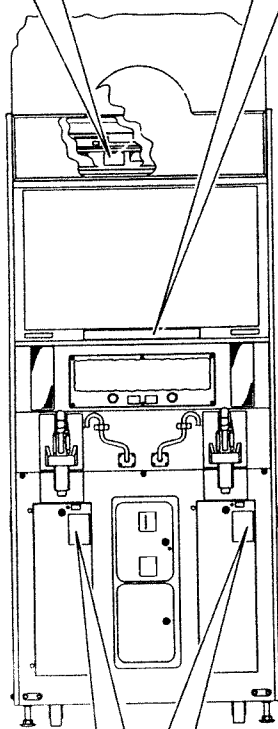
440-CS0109XEG



440-WS0002XEG



440-DS0013XEG



440-WS0002XEG

Electrical Specifications Display

Serial No. Display

2. PRECAUTIONS CONCERNING INSTALLATION LOCATION



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°C to 40°C. Only in the case a projector is employed, the temperature range is from 5°C to 30°C.

LIMITATIONS OF USAGE REQUIREMENTS



- 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 Electric 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 7A or higher (AC 100V~120V area) and 3A or higher (AC 220~240V 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 7A or higher (AC 100~120V area) and 3A or higher (AC 220V~240V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.



IMPORTANT!

- Note that for transporting the machine into the location's building, the minimum necessary dimensions of the opening (of doors, etc.) are 0.9m (W) and 2.0m(H).
- For the operation of this machine, secure a minimum area of 1.3m (W)× 1.6m (D). For ventilation, provide an approximately 10cm. space between the rear part of the cabinet and the wall.

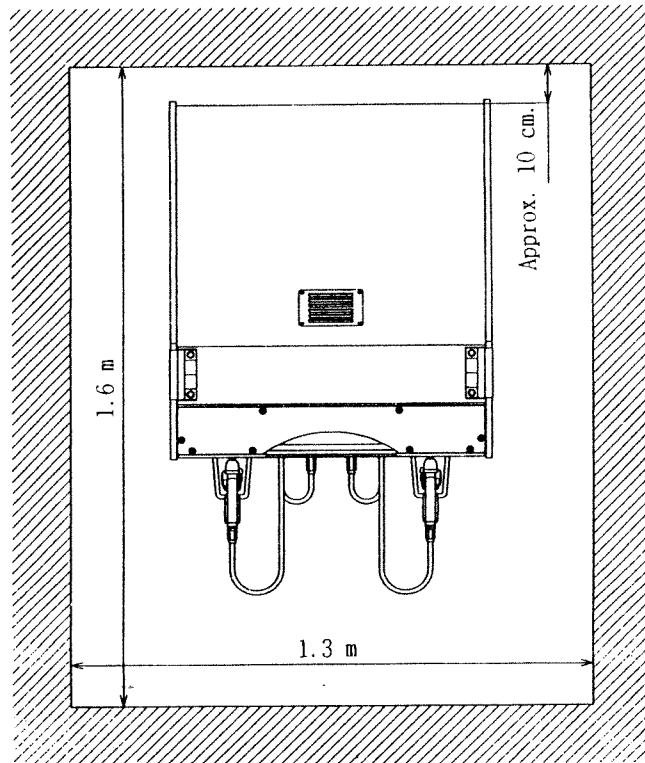


FIG. 2

3. PRECAUTIONS TO BE HEDED FOR OPERATION

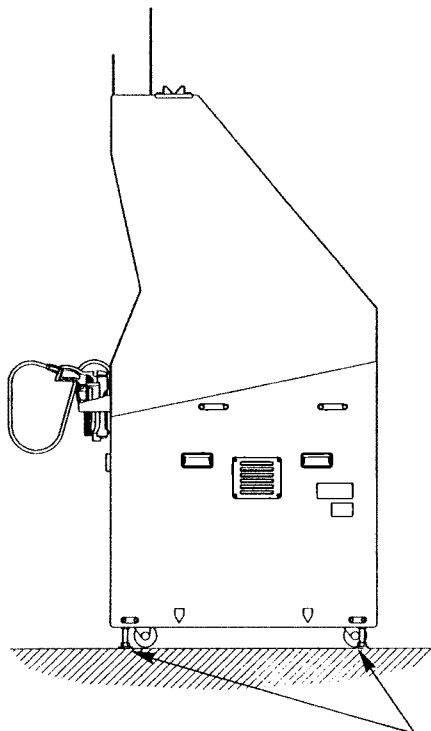
For the safe operation of the product, be sure to comply with the following precautions.

BEFORE STARTING OPERATION



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

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



- Do not put any heavy 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 accidents, 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, flower pots, cups, water tanks, cosmetics, and receptacles/containers/vessels containing chemicals and water.



To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause the player to come into contact with or hit the others and result in injury or trouble.

PAYING ATTENTION TO CUSTOMERS

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 electric shock and short circuit accidents, 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 accidents, do not allow the customers to unplug the power plug without a justifiable reason.
- To avoid injury resulting from falling down, and electric shock accidents due to spilled drinks, instruct the player not to place heavy items or drinks on the product.



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.

4. NAME OF PARTS

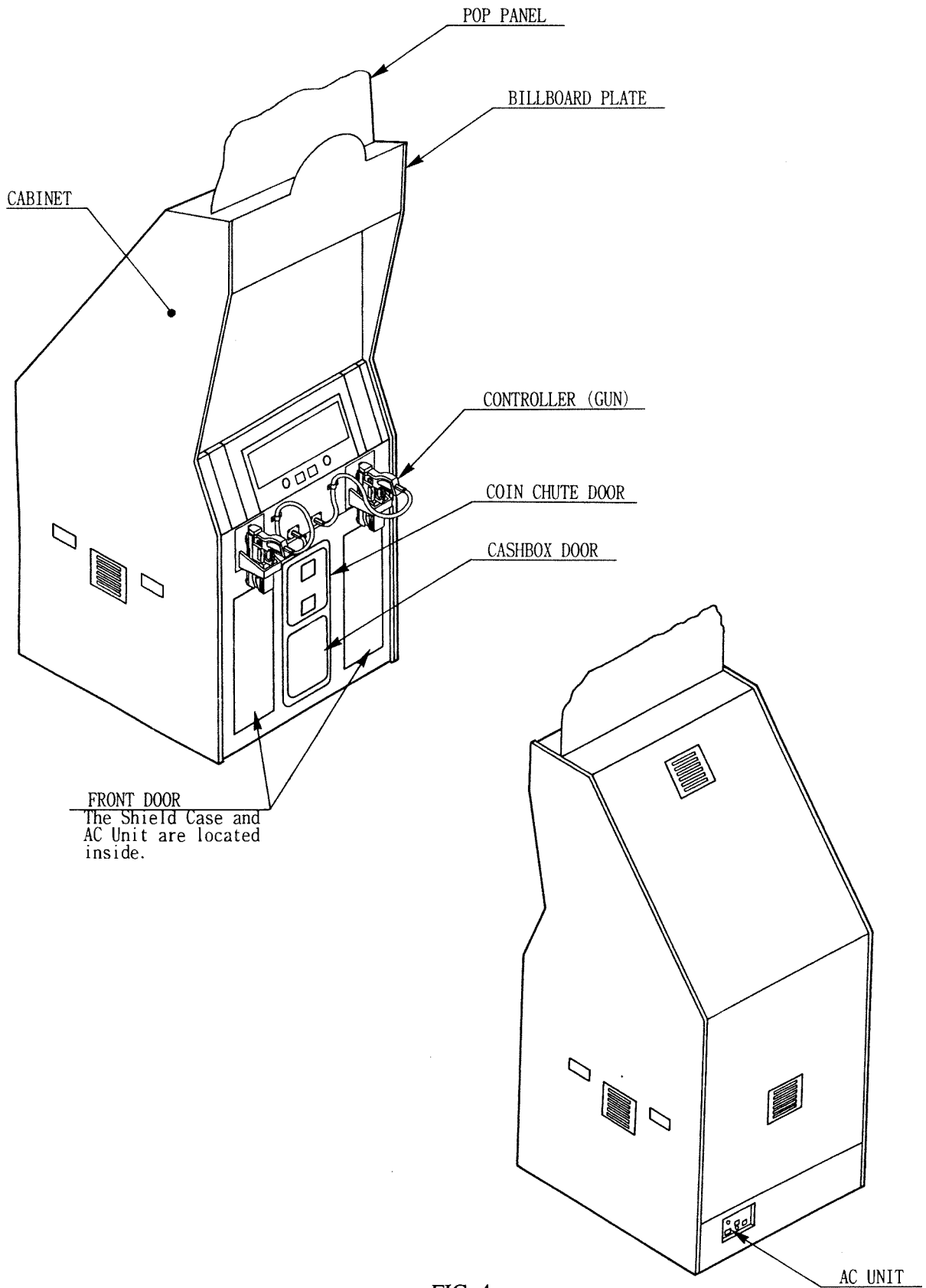


FIG. 4

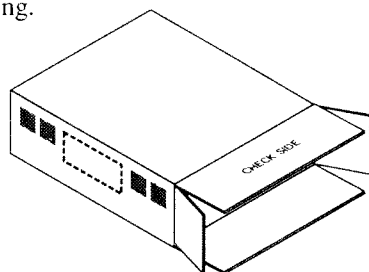
5. ACCESSORIES

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

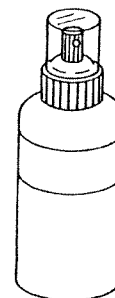
TABLE 5 ACCESSORIES

<p>DESCRIPTION OWNERS MANUAL Part No. (Qty.) 420-6325-03 (1) Note Figures If Part No. has no description, the Number has not been registered or can not be registered. Such a part may not be obtainable even if the customer desires to purchase it. Therefore, ensure that the part is in safekeeping with you.</p>	<p>KEY MASTER 220-5576 (2) For opening/closing the doors</p>	<p>KEY (2) For the CASHBOX DOOR</p>
<p>TAMPERPROOF WRENCH M4 540-0006-01 (1) M5 540-0007-01 (1) TOOL</p>	<p>SW MICRO TYPE 509-5080 (1) For spare, refer to Section 10.</p>	
<p>LAMP WEDGE BASE 390-5160(1) For spare, refer to Section 13.</p>	<p>FUSE 5000mA 125V 514-5036-5000 (1) For spare, refer to Section 15.</p>	
<p>POWER CORD 600-6724 (1) For AC 110V AREA 600-6729 (1) For AC 220V~240V AREA Used for installation, see [3], Sec. 6).</p>		

CARTON BOX
601-8928 (1)
Used for transporting
the Game Board.
Refer to the following.



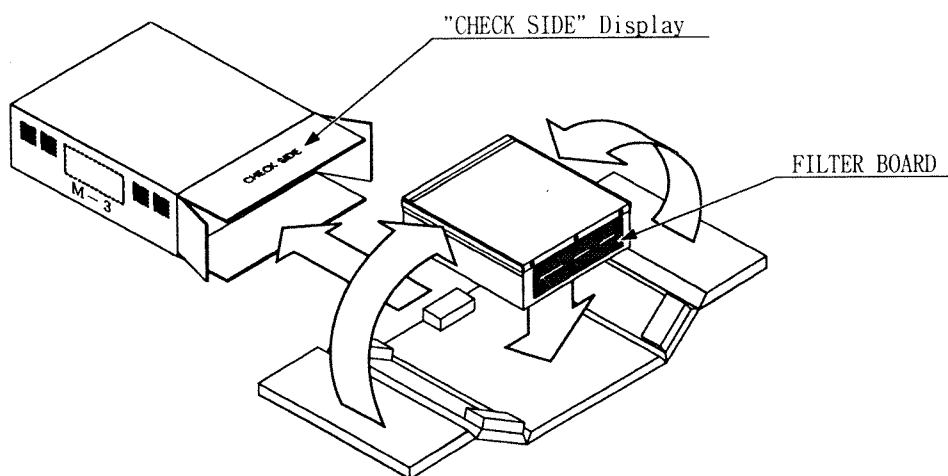
GLASS CLEANER
090-0174 (1)
Used for cleaning
the Front Glass and
Mirror.



HOW TO USE THE CARTON BOX



- When asking for the replacement or repair of the product's Game Board (MODEL 3 BOARD), be sure to put the Game Board together with the Shield Case in the Carton Box. Otherwise, the request is not acceptable.
- Put the Shield Case in the Carton Box by paying attention to the correct direction as per the following instructions and as shown by the instructions printed on the Carton Box. Handling in an erroneous manner can damage the Game Board.



Wrap the Shield Case with the packing material and put it in the Carton Box as shown. Putting it upside down or packing otherwise in the manner not shown can damage the Game Board and parts.

6. ASSEMBLING AND PRECAUTIONS

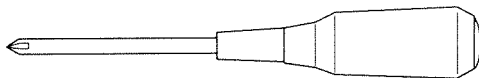


- Perform the assembly work by following the procedure herein stated. Failing to comply with the instructions can cause an electric shock accident.
- Assembling should be performed as per this manual. Since this is a complex machine, erroneous assembling can damage the machine or cause the machine not to function as per specified performance.
- When assembling, be sure to perform the work by plural persons. Depending on the assembly work, there are some cases in which performing the work by a single person can cause personal injury or parts damage.
- Ensure that connectors are accurately connected. Incomplete connections can cause electric shock and short circuit accidents.

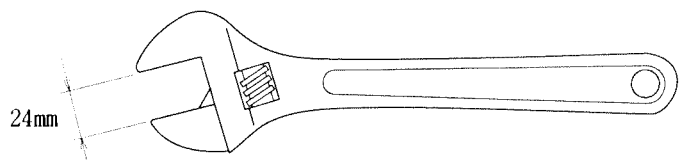
The installation and assembling work of this product is performed sequentially in order of the following 4 items:

- 1** INSTALLING THE BILLBOARD PLATE AND POP PANEL.
- 2** SECURING TO THE INSTALLATION LOCATION (ADJUSTER ADJUSTMENT)
- 3** POWER SUPPLY, AND EARTH CONNECTION
- 4** ASSEMBLING CHECK

Note that the tools such as a Phillips type screwdriver and wrench for hexagon bolt with 24 mm width across flats are necessary for the assembly work.



Phillips type screwdriver



ADJUSTABLE WRENCH (for M16 hexagon bolt)

1

INSTALLING THE BILLBOARD PLATE AND POP PANEL



To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Using an unstable step can cause a violent falling down accidents.

- ① Take out the 3 Truss screws from the lower part of the Billboard and pull out the Billboard Case towards you.
- ② Adhere the Pop Panel to the Billboard Case with 2-sided adhesive tape.
- ③ Return the Billboard Case to the original position and secure with the 3 truss screws.
- ④ Take out the 4 truss screws to remove Lamp Cover B.
- ⑤ Insert the Billboard Plate to the Billboard Case and secure Lamp Cover B with the 4 truss screws.

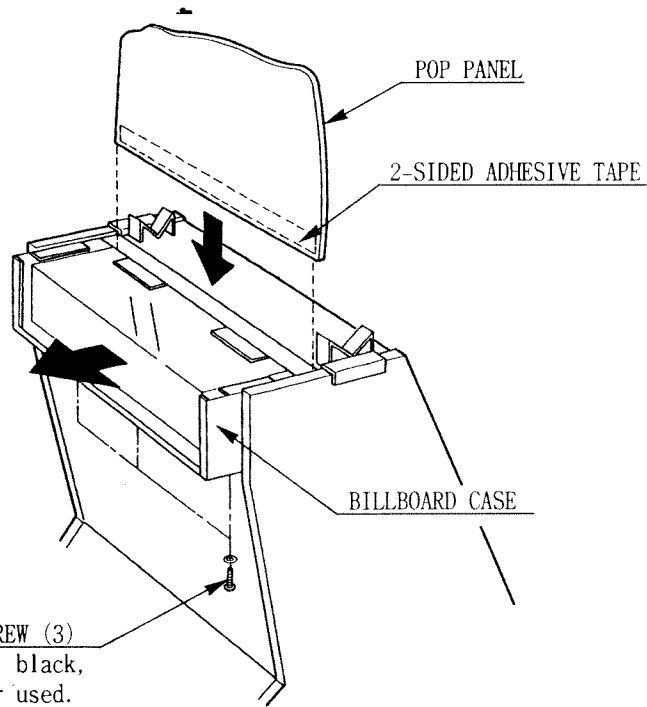
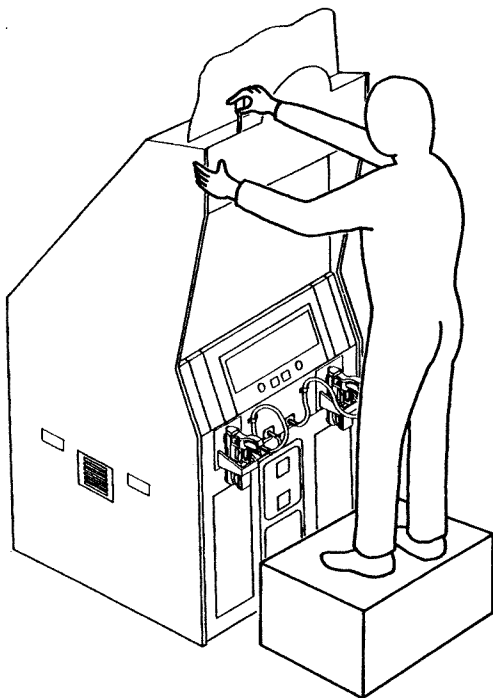


FIG. 6.1 a



PREPARE A STEP
TO PERFORM WORK.

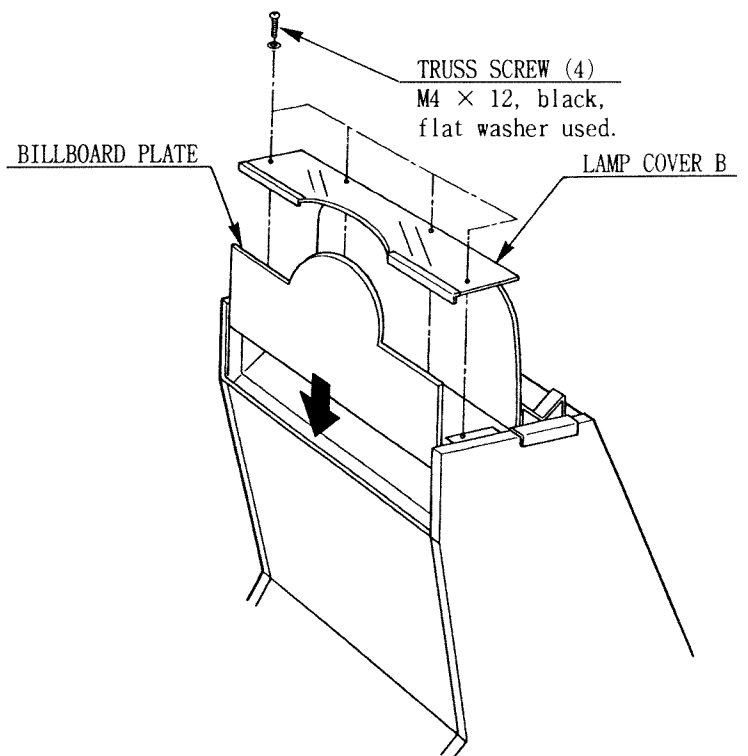


FIG. 6.1 b

2

SECURING TO THE INSTALLATION LOCATION (ADJUSTER ADJUSTMENT)



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

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

- ① Move the machine to the installation position.
- ② Have all of the Adjusters make contact with the floor surfaces. Adjust the height of the Adjusters by using a wrench in the manner so that the machine position is kept level.
- ③ After making adjustments, fasten the adjuster nut upward and secure the height of the adjuster.

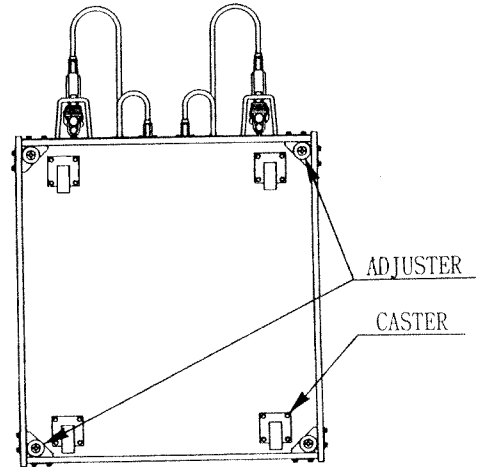


FIG. 6. 2 a BOTTOM VIEW

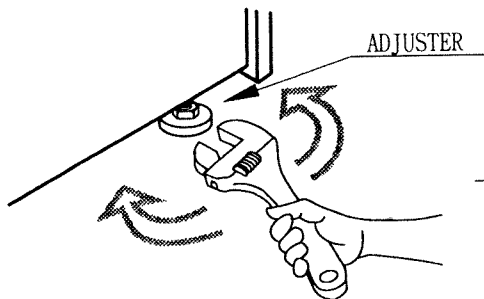


FIG. 6. 2 b
Having the Adjusters make contact with the floor surfaces

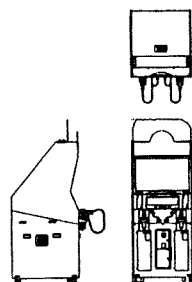
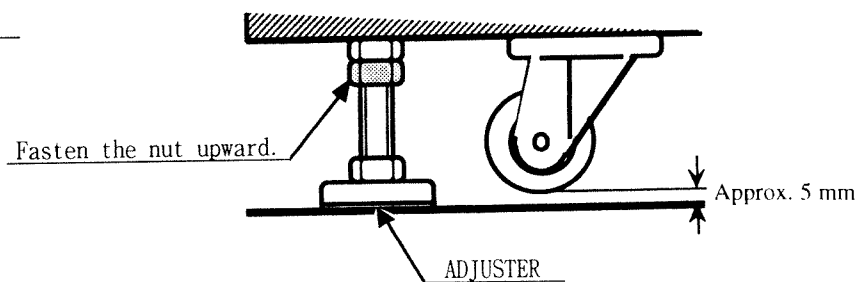


FIG. 6. 2 c
Refer to this Fig. (Scale: 1/100) for the layout of the place of installation.

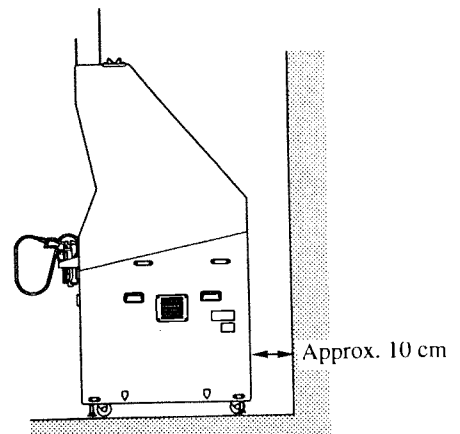


FIG. 6. 2 d
Provide sufficient space so as to allow for ventilation by the ventilation fan.

3

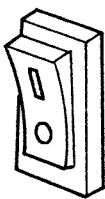
POWER SUPPLY, AND EARTH CONNECTION



- 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 the 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 an 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.

The AC unit is mounted on the rear of Cabinet. The AC Unit incorporates the Main SW, Circuit Protector, Earth Terminal and Inlet which connects the Power Cord. Firmly insert the Power Plug into the Plug Socket and the other side of the plug to the Inlet. Turn the Main SW ON to turn power ON.

- ① Ensure that the Main SW is OFF.



Turn the Main SW OFF.

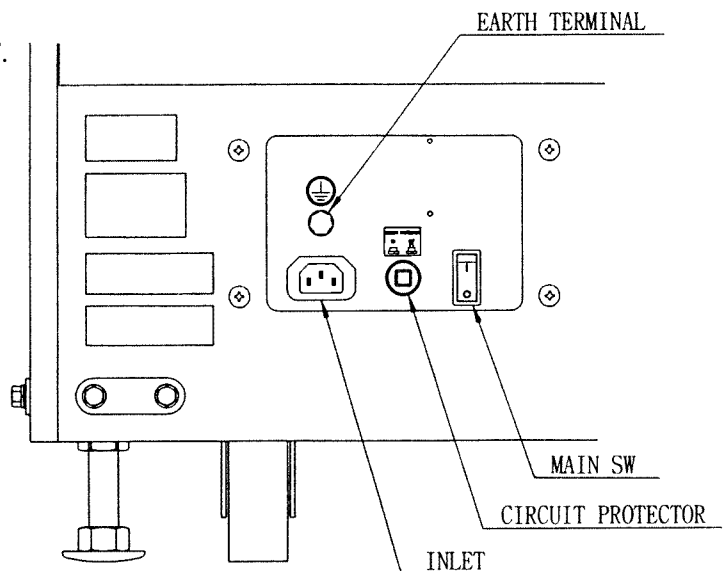


FIG. 6. 3 a

- ② Connect one end of the earth wire to the AC Unit earth terminal, and the other end to the indoor earth terminal. The AC Unit earth terminal has a Bolt and Nut combination. Take off the Nut, pass the earth wire through the Bolt, and fasten the Nut.

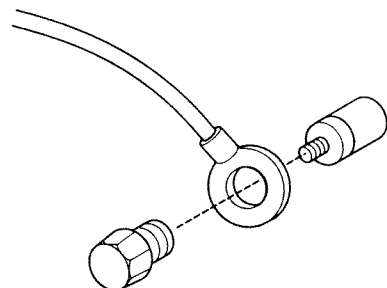


FIG. 6. 3 b

- ③ Firmly insert the power plug into the plug socket and inlet.

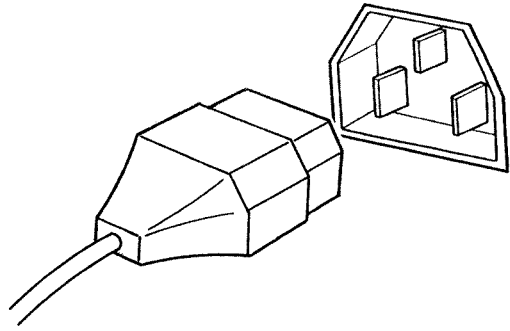


FIG. 6. 3 c

- ④ Perform wiring for the Power Cord and Earth Wire. Install protective covering for the Power Cord and Earth Wire.
- ⑤ Turn the Main SW ON to turn power ON.

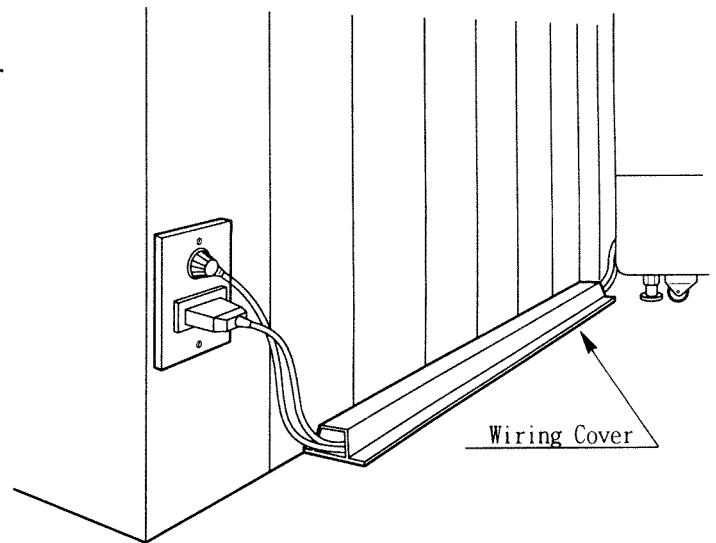


FIG. 6. 3 d Wiring for Power Cord and Earth Wire

4

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:

MEMORY TEST

<ROM>			
IC 1 GOOD	IC 2 GOOD	IC 3 GOOD	IC 4 GOOD
IC 5 GOOD	IC 6 GOOD	IC 7 GOOD	IC 8 GOOD
IC 9 GOOD	IC10 GOOD	IC11 GOOD	IC12 GOOD
IC13 GOOD	IC14 GOOD	IC15 GOOD	IC16 GOOD
IC17 GOOD	IC18 GOOD	IC19 GOOD	IC20 GOOD
<RAM>			
IC 17 GOOD	IC18 GOOD	IC 94 GOOD	

PRESS TEST BUTTON TO EXIT

Selecting the MEMORY 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.

INPUT TEST

	PLAYER 1	PLAYER 2
TRIGGER	off	off
START	off	off
COIN CHUTE #1	off	
COIN CHUTE #2	off	
SERVICE TEST	off	

PRESS TEST BUTTON TO EXIT

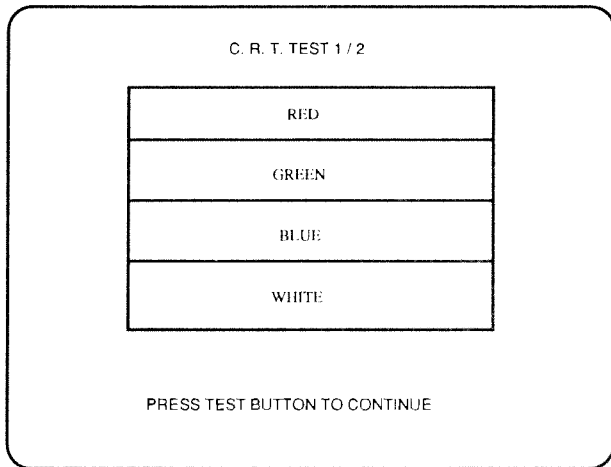
Selecting the INPUT TEST on the test mode menu screen causes the screen (on which each switch is tested) to be displayed. Press each switch. For the coin switch test, insert a coin from the coin inlet with the coin chute door being open. If the display beside each switch indicates "ON," the switch and wiring connections are satisfactory.

SOUND TEST

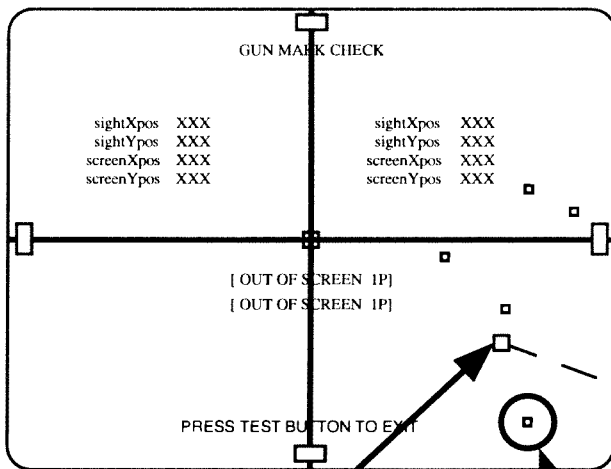
- VOICE
- EFFECT
- B.G.M.
- > EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

In the TEST mode, selecting SOUND TEST causes the screen, on which sound related BD and wiring connections are tested, to be displayed. Be sure to check if the sound is satisfactorily emitted from each speaker and the sound volume is appropriate.



In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed. Although the monitor adjustments have been made at the time of shipment from the factory, color deviation, etc., may occur due to the effect caused by geomagnetism, the location building's steel frames and other game machines in the periphery. By watching the test mode screen, make judgment as to whether an adjustment is needed. If it is necessary, adjust the monitor by referring to Section 12. In case of color deviation due to the monitor's magnetization, use DEMAG SW (see Section 9).



On the menu screen in the test mode, selecting GUN SETTING displays the screen on which gun sighting is set. Check to see if there is any problem for playing game.

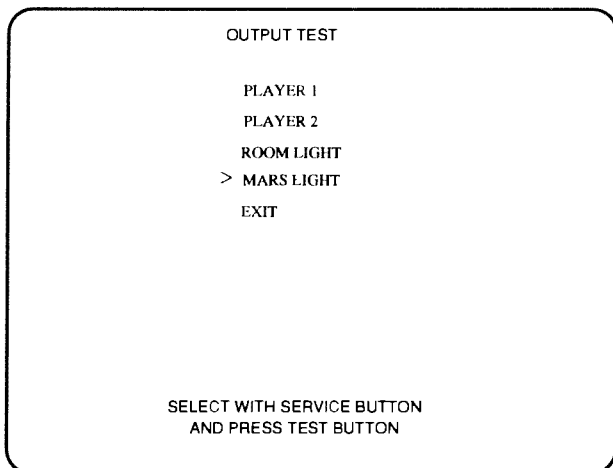
CURSOR
(Impact Position)

IMPACT MARK



CURSOR for 1P is blue and for 2P, red.

SIGHTING CHECK



Select "OUTPUT TEST" from the Test Menu in the Test Mode to have the Lamp Test Screen displayed. Check if each lamp lights up satisfactorily.

Perform the above inspections also at the time of monthly inspection.

7. PRECAUTIONS TO BE HEDED WHEN MOVING THE MACHINE



- 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 damage the power cord and cause a fire 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 electric shock and short circuit accidents.



- When moving the product, do not push the Front Glass. The Glass part could be damaged and glass fractions can cause injury.
- When lifting the cabinet, be sure to hold the grip 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.

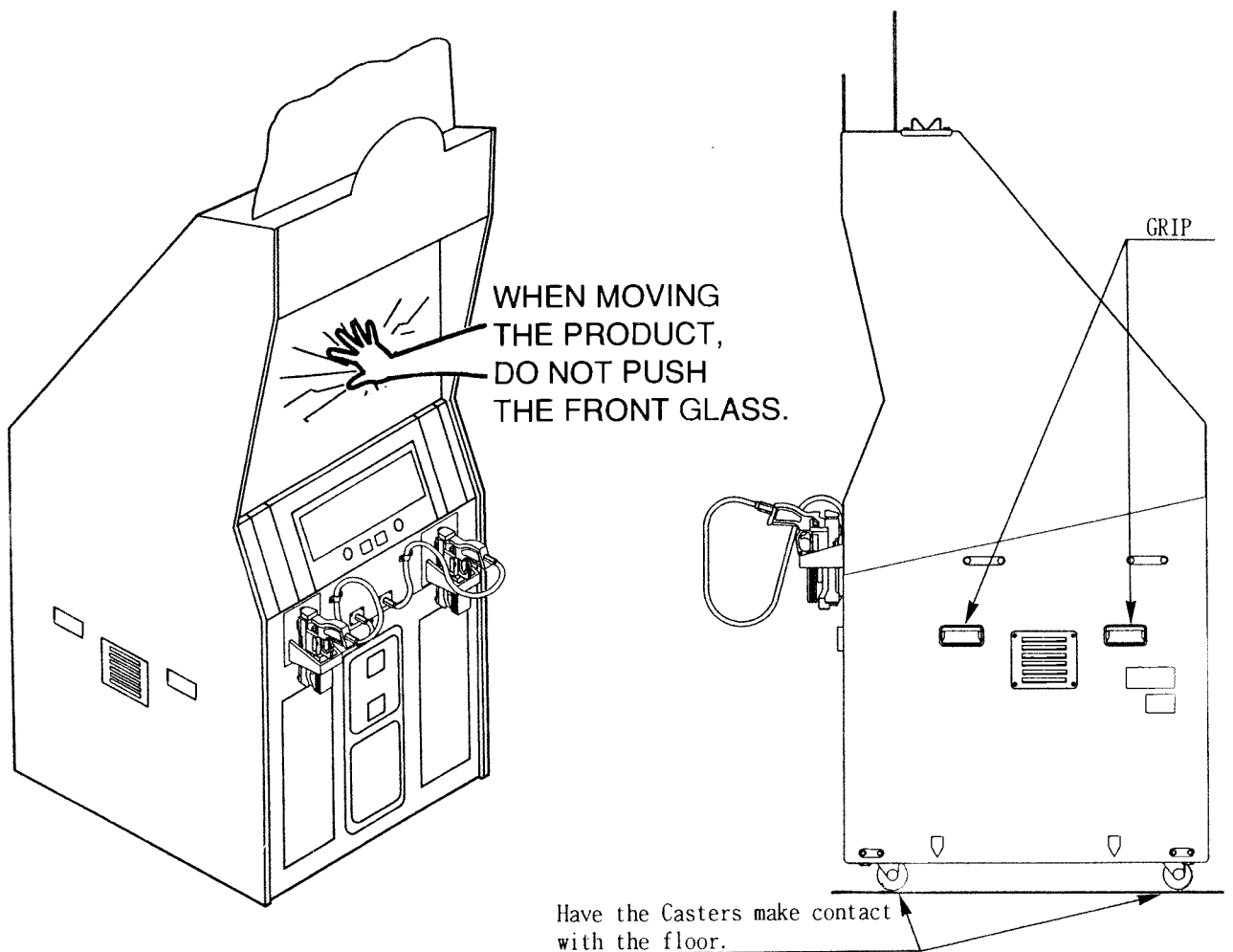
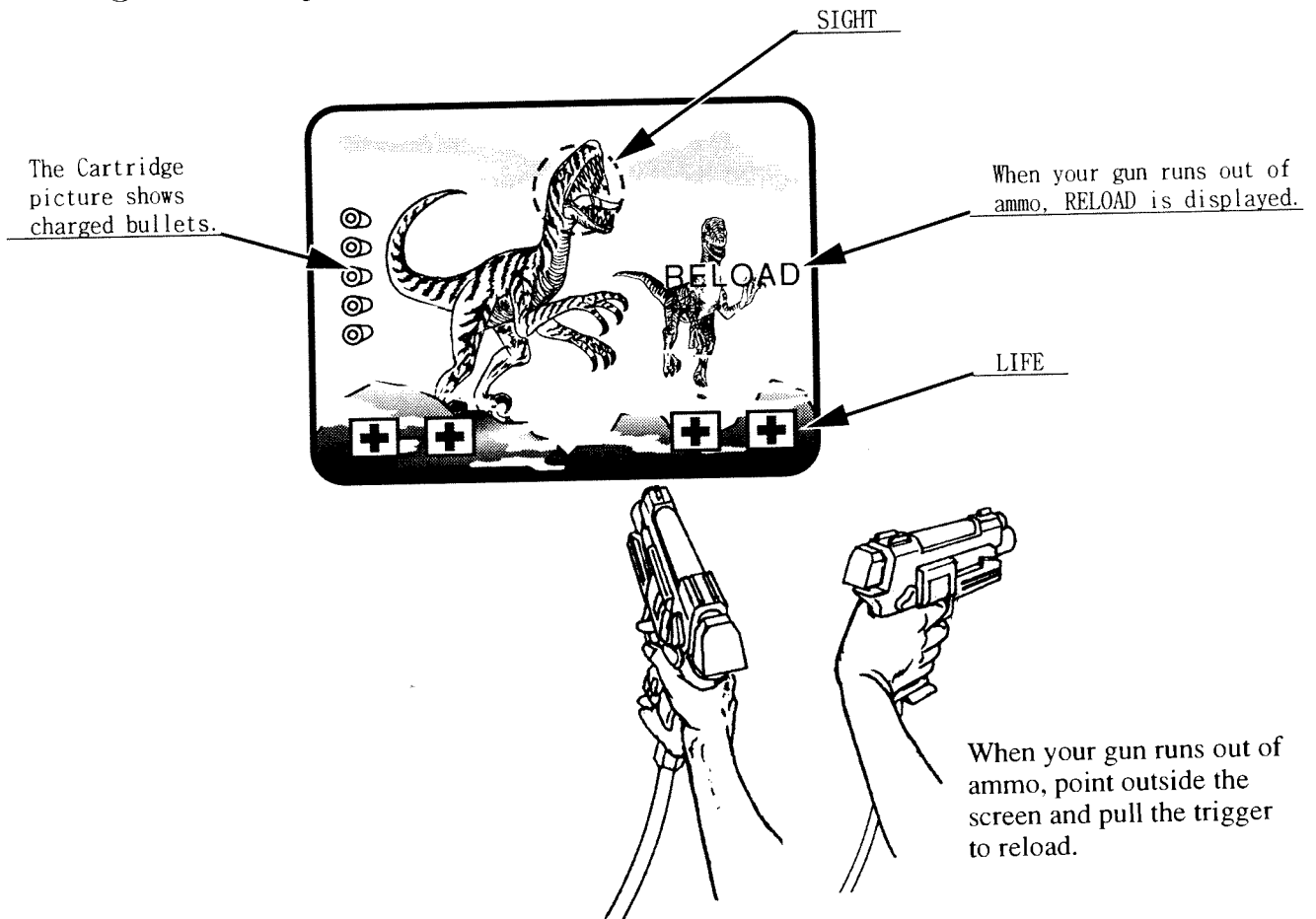


FIG. 7

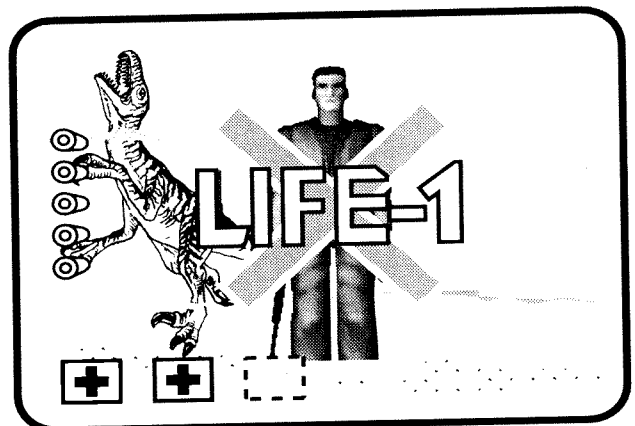
8. CONTENTS OF GAME

The following are operations and responses obtained when the machine functions satisfactorily. Any functioning different from the following may have been caused by a certain fault. Immediately investigate and eliminate the cause of malfunctioning to ensure satisfactory operation.

- ① Inserting a coin(s) causes the credit display on the bottom of the screen to count. Inserting one credit worth coin(s) changes the message on the bottom of the screen from "INSERT COIN(S)" to "PRESS START BUTTON" and both of the start buttons will flash. The maximum number of credits counted at a time is 9. Any coin inserted after counting 9 credits will not be counted as any credits, nor be returnable. These coins, however, will count as coins inserted in book-keeping and the coin meter.
- ② Pressing either of the start buttons determines which side (left or right) you are playing on. Press the START button to start the game.
- ③ After starting the game, the Title of the Stage being started is displayed.

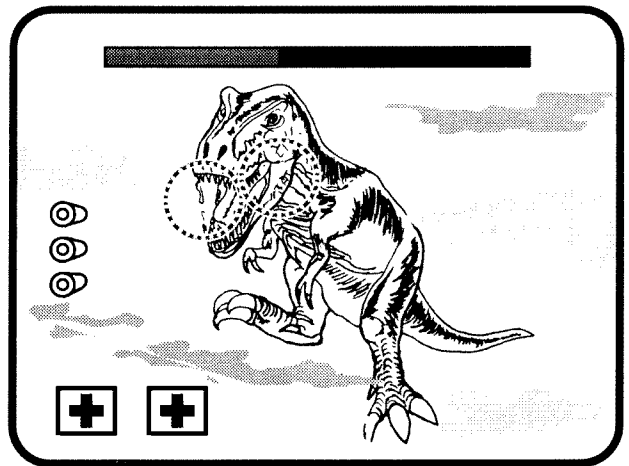


- The life points and the number of bullets of the left-hand side player (1P) are displayed on the lower left-hand side of the screen, and those of the right-hand side player (2P), on the lower right-hand side of the screen.
- You lose one life when the dinosaur attacks you.
- Shooting a human by mistake loses one life.



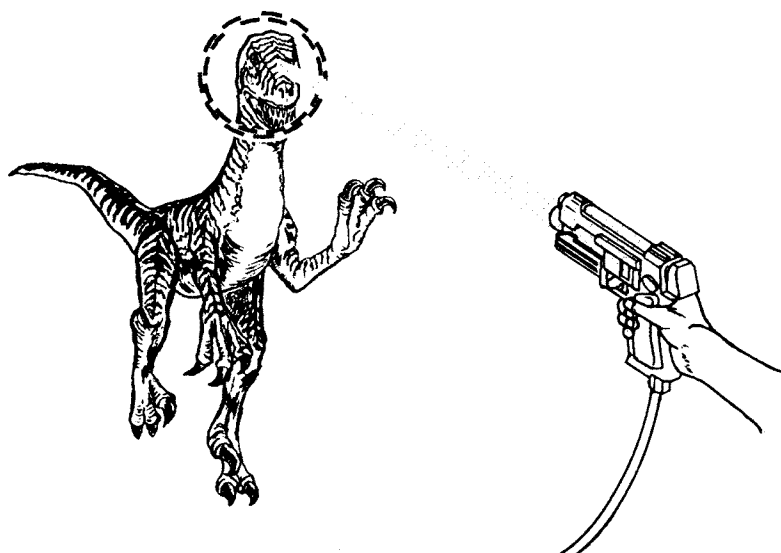
Shooting a human by mistake loses one life.

- The gun holds 5 bullets. When it runs out of ammo, "RELOAD" is displayed on the screen. At this time, point outside the screen and pull the trigger to reload.
- When the life point becomes zero, the game is over.
- Downing the boss character awaiting you at the end of each stage results in clearing that particular stage. The player can not defeat the boss until the life meter of the boss becomes zero.
- Shooting an item on the screen or clearing a specific event allows you to capture an item. Capturing an item strengthens weapons or recovers the life (the explanations regarding the items are stated later on).

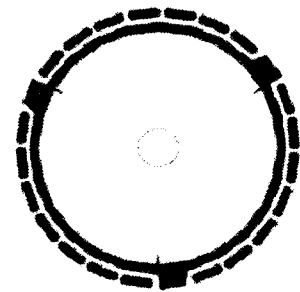


Downing the boss character awaiting you at the end of each stage results in clearing that particular stage. The player can not defeat the boss until the life meter of the boss becomes zero.

- The Sight Mark sometimes appears on the enemy. At this time, unless the enemy is downed before the sight turns red, the player's life may be lost or the player's status could be extremely unfavorable.

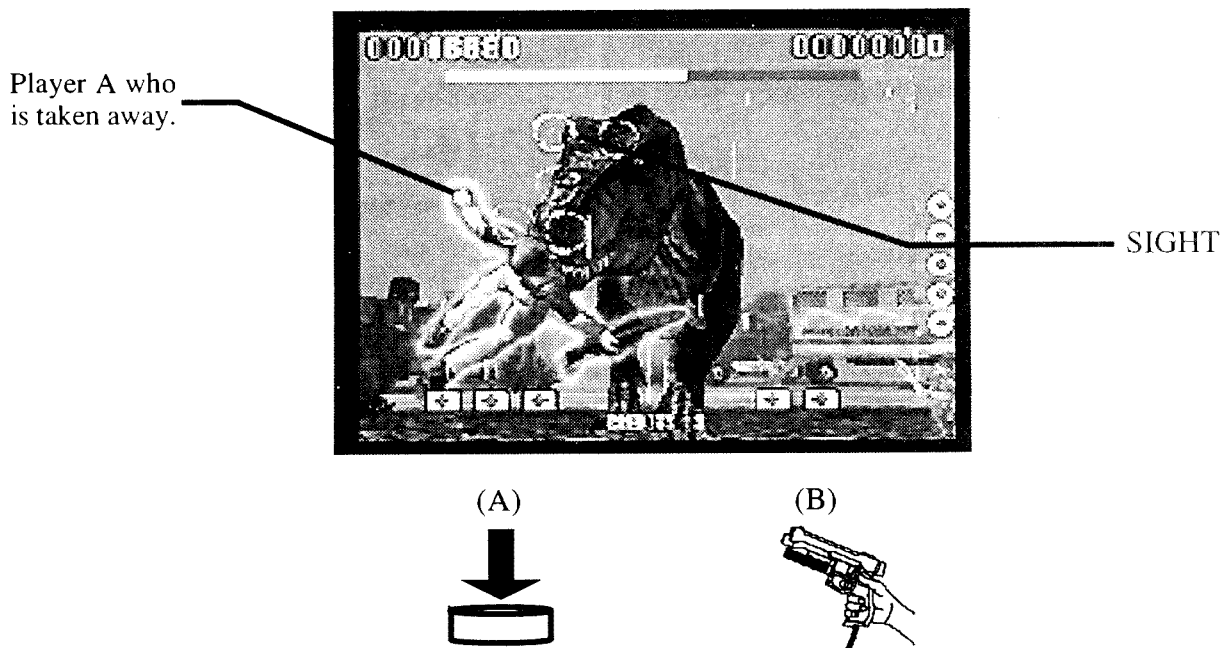


SIGHT



Unless the enemy is downed before the sight turns red, the player's status could be extremely unfavorable.

- When fighting against the boss character at the end of each stage in the 2 player simultaneous play, if all of the sights can not be shot, the screen will be in the objective mode and in this case either of the players may be taken away by the enemy.
 - The player who is taken away will remain on the screen as is between the dinosaur's teeth. Herein, he is referred to as Player A.
 - The other player who is not taken away stays on the screen in the subjective mode. Herein, this player is referred to as Player B.



- At this time, Player B who is not taken away can rescue Player A by shooting all of the sights before the sight attached to the boss turns red.
- Although Player A can not shoot with the gun, he can extend the completion time of the sight attached to the boss by repeatedly pressing the Start Button.
- If Player B fails to shoot all of the sights before the boss sight becoming red, then Player A will be subject to damage and Player A loses one life.

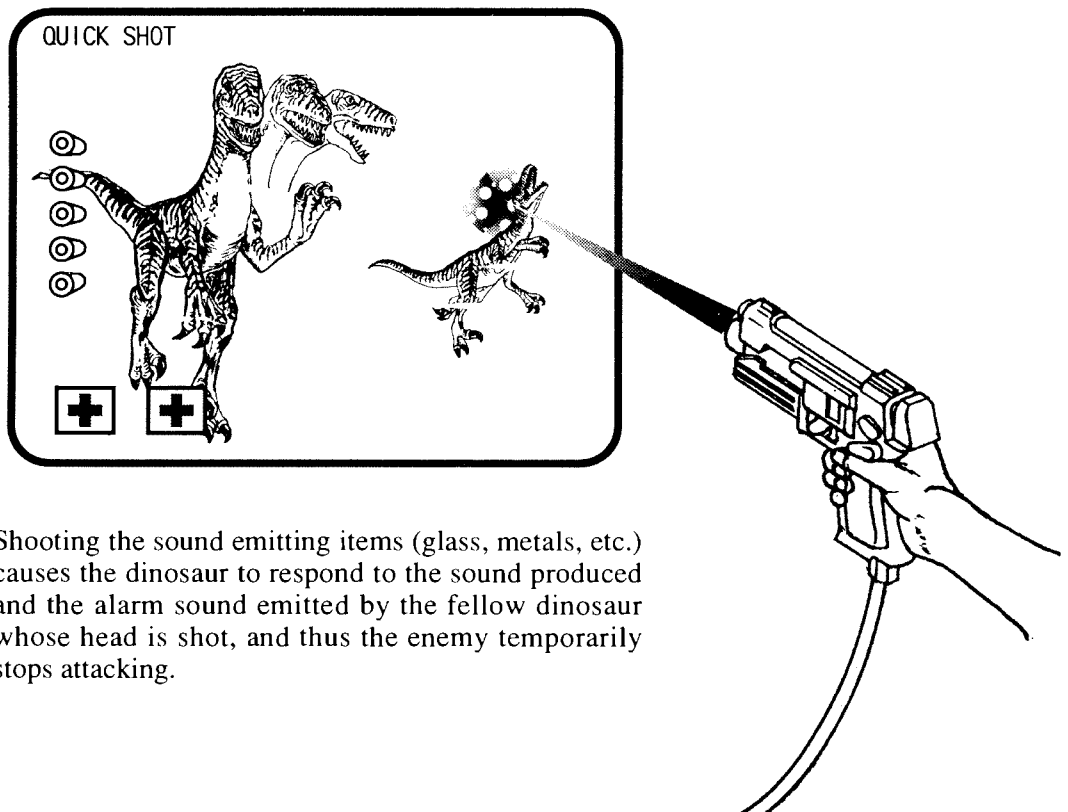


- ④ If you would like to join in the game at anytime while the other person is playing, insert a coin(s) and press the start button. Also, when credits allowing the game to be played still remain, the start button on the other side will keep flashing. The player can participate in the game by pressing the flashing button.
- ⑤ When the life point becomes zero, if you want to continue, insert a coin(s) required to continue and press the start button. If credits allowing the player to continue still remain, you can continue by merely pressing the start button.
- ⑥ At the time of game over, if the player's score ranks 10th or higher, his name can be entered.

KNACK OF PLAY

TO SHOOT AND DESTROY WHAT EMITS SOUND.

In any stage, the enemy characters other than the boss character will face in the direction where sound is emitted in response to sound and during this time, they stop attacking temporarily. When you are surrounded by plural enemies, shoot anything that emits sound to divert the enemy's attention. Things that emit sound are glass, metal, wooden items, etc.



Shooting the sound emitting items (glass, metals, etc.) causes the dinosaur to respond to the sound produced and the alarm sound emitted by the fellow dinosaur whose head is shot, and thus the enemy temporarily stops attacking.

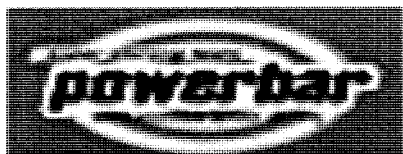
- Accurately shoot the head:
In each stage, the head part is the weak point of the enemy characters other than the boss. Shooting the head produces a very loud alarm sound which results in the same effect as when shooting what emits sound.
- Successfully perform an event:
Successfully achieving an event which takes place during a stage allows you to favorably proceed with what's coming thereafter. On the other hand, failing to achieve the event causes the enemy attack to become more furious and the situation for the player to be less favorable.
- Continuously hitting the target enemy without missing earns you high points.

REGARDING THE ITEMS



S-POWERBAR (SPECIAL POWER BAR)

This increases your "LIFE" by one.



POWERBAR

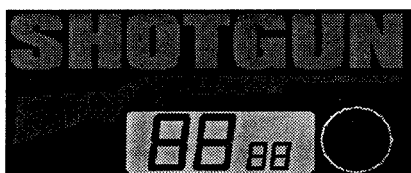
Collecting 3 POWERBARs increases your "LIFE" by one.



GRENADE

Hitting this against the earth surface damages the target(s) over a wide area.

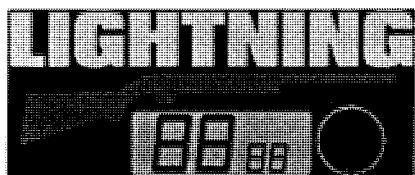
During the limited time, there is no limit regarding the number of grenades that can be used. When the limited time elapses, this returns to an ordinary gun.



SHOT GUN

Having a wide scope for hit determination, this damages the target(s) in an extensive area.

During the limited time, there is no limit regarding the number of bullets that can be used. When the limited time elapses, this returns to an ordinary gun.



LIGHTNING

Hitting a target damages targets within a certain scope from that particular point.

During the limited time, there is no limit regarding the number of bullets that can be used. When the limited time elapses, this returns to an ordinary gun.



LASER-SITE

The present place at the gunpoint appears on the screen in real time as the pointer.

During the limited time, there is no limit regarding the number of bullets that can be used. When the limited time elapses, this returns to an ordinary gun.

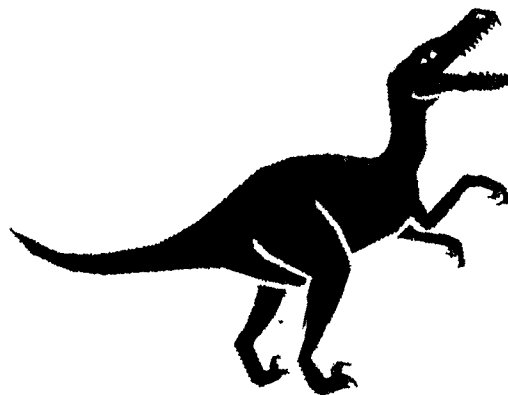
VELOCIRAPTOR

Alias: RAPTOR

Weight: 45 kg. Length: 2m Flesh-eater

One of the most ferocious dinosaur in The Lost World. Captures preys by taking an advantage of sharp, long & hook-shaped claws and agile movements as powerful weapons. This dinosaur seems to have brains and skills to pursue spoils in groups.

Appearance in all stages.

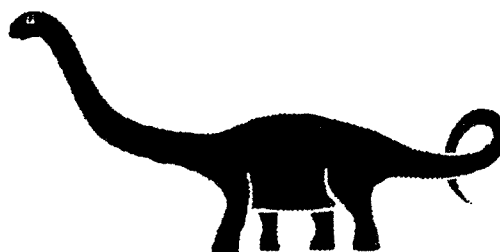


MAMENCHISAURUS

Weight: 12t Length: 22m Plant-eater

MAMENCHISAURUS was a living creature with an approximately 11m long head & neck portion, about the half of the total length, the longest ever (in relation to the physical length) in the terrestrial history. Since the head movements were not so versatile, it might have been able to stand on its rear feet alone sometimes to make up for the handicap.

Appearance in Stage 2.

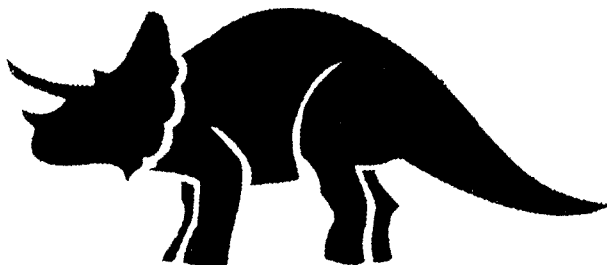


TRICERATOPS

Weight: 6t Length: 9m Plant-eater

This plant-eater has features of 3 large horns which derive its name and an accessory-like pattern around the neck portion. It's a gentle dinosaur which eats young buds, etc. with the edge-sharp beak.

Appearance in Stage 1.



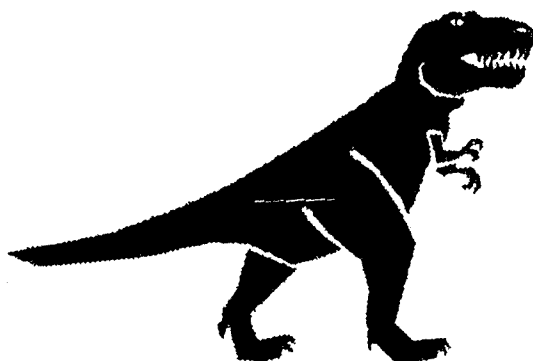
TYRANNOSAURUS-REX

Alias: TYREX

Weight: 6.5t Length: 12m Flesh-eater

This flesh-eating dinosaur is well-known and the strongest one ever existed in the history. Although physically gigantic, it seems that this dinosaur was able to run fairly quick to pursue preys. The sharp biting attack ability with teeth of a 17 cm. length could be the maximum threat.

Appearance in Stage 1 & ?

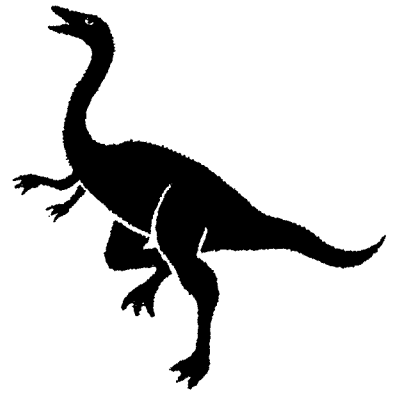


GALLIMIMUS

Weight: 130 kg Length: 4m Omnivorous-eater

This dinosaur running in groups in the “Jurassic Park” is very impressive. It has the skeletal structure quite similar to an ostrich and its movements are the fastest of all dinosaurs. Having omnivorous-eating habits, it takes insects, small lizards, and fruit.

Appearance in Stage 2.

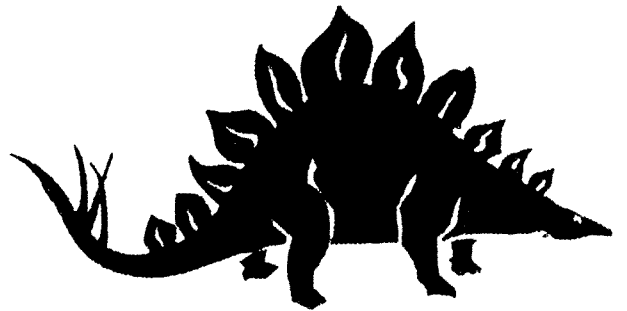


STEGOSAURUS

Weight: 1.5t Length: 6m Plant-eater

A large body and small head as well as the spine are very characteristic. It seems that the 2 pairs of tail spines are utilized for defense, and also, they always act in groups.

Appearance in Stage 1.



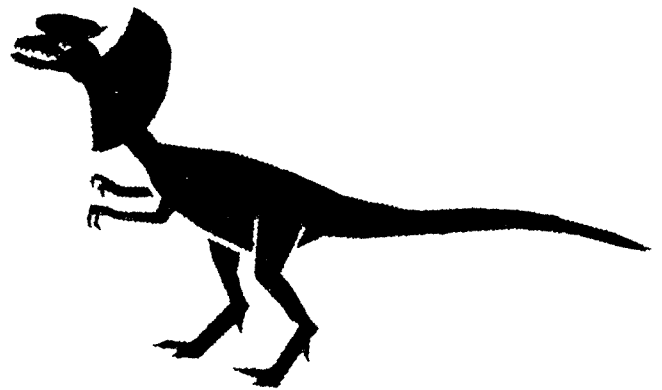
DILOPHOSAURUS

Alias: Spitter

Weight: 1t Length: 6m Flesh-eater

This dinosaur suddenly became famous as poison spitter in the Jurassic Park. It is distinguished by the large muffer that spreads out to threaten others.

Appearance in Stage 1.



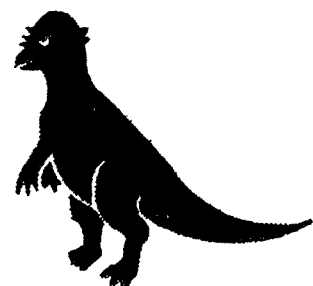
PACHYCEPHALOSAURUS

Alias: PACHY

Weight: ? Length: 4.5m Plant-eater

Having the head of a dome-shaped skeletal structure, this dinosaur looks strange as if it had a helmet on. The “helmet” portion is as thick as 25 cm. and surrounded by spike-shaped spines. Did it ferociously fight against the enemies and its rivals sometimes with head butts attack by taking advantage of the rock head?

Appearance in Stage 2.

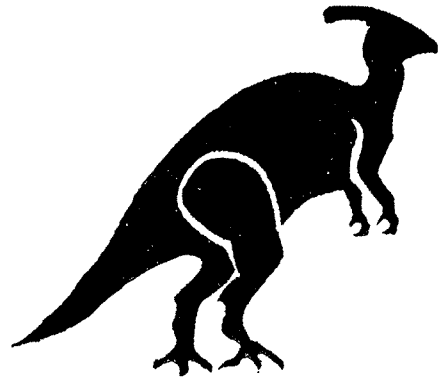


PARASAUROLOPHUS

Weight: ? Length: 10m Plant-eater

The length of the cristated, cylindrical portion of the head is approximately one meter. The cristate is considered to produce cry resonance and to be useful for communicating with fellow dinosaurs belonging to their groups and also instrumental in making amorous approaches.

Appearance in Stage 2.

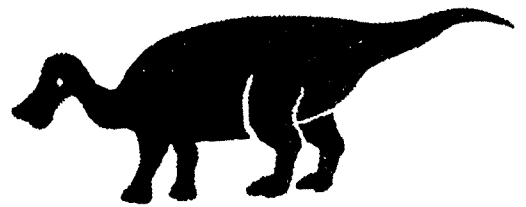


ANATOSAURUS

Weight: 3t Length: 10m Plant-eater

This belongs to one of the duck-billed dinosaur species, the same as PARASAUROLOPHUS. Its characteristic is the duck-billed wide beak. A number of back teeth allows it to eat hard things such as pine needles and nuts.

Appearance in Stage 2.



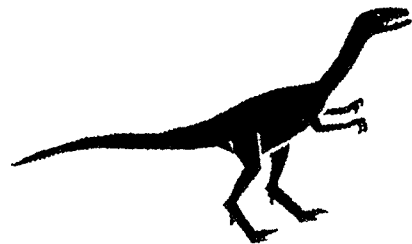
PROCOMPSONGNATHUS

Alias: COMPY

Weight: 3 kg Length: 60 cm Flesh-eater

This is one of the smallest dinosaurs, only as large as a chicken. It can move quickly and catches small animals such as lizards, etc., and sometimes attacks human adults by groups!!

Appearance in Stages 1, 3, and 5.



DEINOSUCHUS

Weight: ? Length: 15m Flesh-eater

The name is derived from "fearful Alligator." Although belonging to the specie different from the dinosaur, this is a ferocious flesh-eater which attacks living creatures and fish at the waterside. The length is said to be 15m though the appearance is almost the same as currently existing alligators. Its weapons are the jaws lined up with sharp teeth and the strong tail.

Appearance in Stage 2.



PTERANODON

Weight: 17 kg. Length: 7m (when wings are opened) Flesh-eater

PTERANODON signifies that it has wings and is toothless. It used to glide through the air like a glider with large wings spread out. Freely flying through the sky, it pursues spoils from above with its sharp beak.

Appearance in Stage 4.

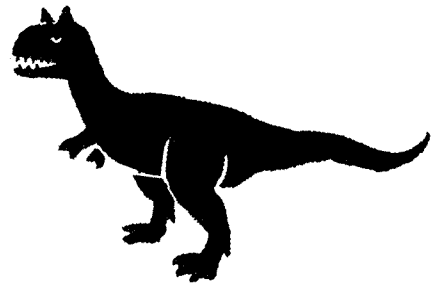


CARNOTAURUS

Weight: ? Length: 12m Flesh-eater

The characteristics are a short, strange looks with two large spines. In the "Lost World," the original novel, this is given a setting as Chameleon Dinosaur and captures preys which come near by without knowing that this dinosaur uses the technique in which it camouflages itself by changing its physical color adapted to the surrounding scenery.

Appearance in Stage 4.



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.

TABLE 9 EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to see that each setting is as per standard setting made at the time of shipment. 2. In the INPUT TEST mode, check each SW and VR. 3. In the OUTPUT TEST mode, check each of lamps. 4. In the MEMORY TEST mode, check ICs on the IC Board.	9-7, 9-8, 9-9 9-4 9-10 9-3
MEMORY	Choose MEMORY TEST in the MENU mode to allow the MEMORY test to be performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.	9-3
PERIODIC SERVICING	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. In the INPUT TEST mode, test the CONTROL device 4. In the OUTPUT TEST mode, check each of lamps.	9-3 9-7, 9-8, 9-9 9-4 9-10
CONTROL SYSTEM	1. In the INPUT TEST mode, check each SW and VR. 2. Adjust or replace each SW and VR. 3. If the problem can not be solved yet, check the CONTROL's moves.	9-4 10 10
MONITOR	In the MONITOR ADJUSTMENT mode, check to see if the PROJECTOR adjustment is appropriately made.	9-6
IC BOARD	1. MEMORY TEST 2. In the SOUND TEST mode, check the sound related ROMs.	9-3 9-5
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc..	9-7, 9-11

9-1 SWITCH UNIT AND COIN METER



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



- Adjust to the optimum sound volume by considering the environmental requirements of the installation location.
- If the COIN METER and the game board are electrically disconnected, game play is not possible.

Open FRONT DOOR (RIGHT), and the Switch Unit shown appears. The function of each switch is as follows:

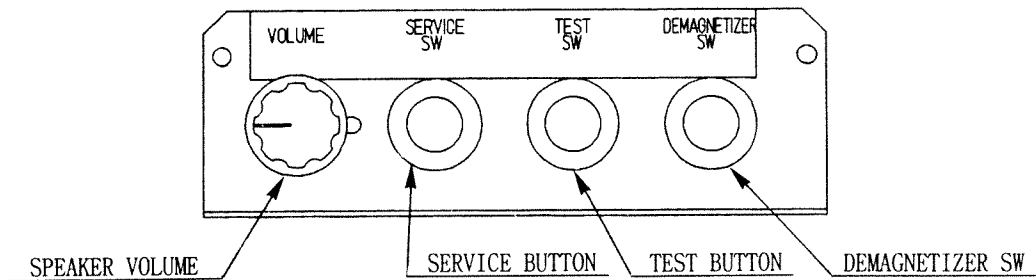
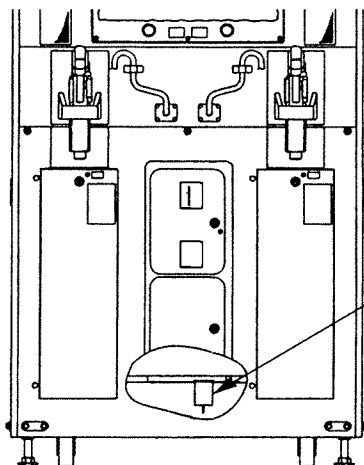


FIG. 9. 1 a SWITCH UNIT

- TEST BUTTON (TEST SW) : For the handling of the TEST BUTTON, refer to the following pages.
- SERVICE BUTTON (SERVICE SW): Gives credits without registering on the coin meter.
- SPEAKER VOLUME (VOLUME) : Adjusts the volume of all of the Speakers.
- DEMAGNETIZER SWITCH : Eliminates the unevenness of MONITOR's on-screen color.



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

COIN METER
Counts the number of coins

FIG. 9. 1 b COIN METER

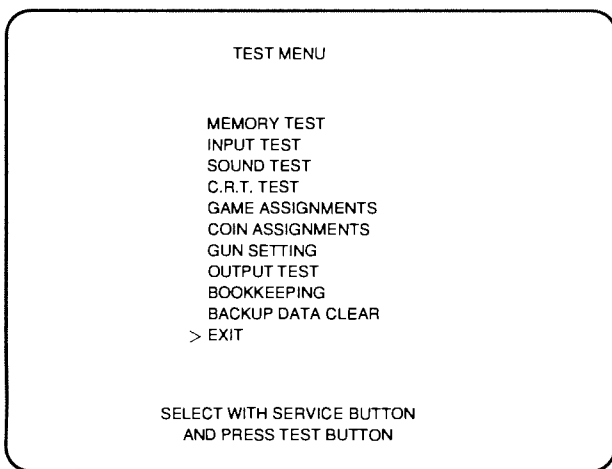
9-2 TEST MODE



In case settings are changed in GAME ASSIGNMENTS, COIN ASSIGNMENTS, and GUN SETTING, the setting changes are not effective unless the test mode is exited and the game mode returns on the screen. The setting changes are ineffective if power is turned off in the test mode.

This mainly checks if the operation of the game BD is accurate, and allows for COIN ASSIGNMENTS/GAME ASSIGNMENTS setting and Monitor adjustments.

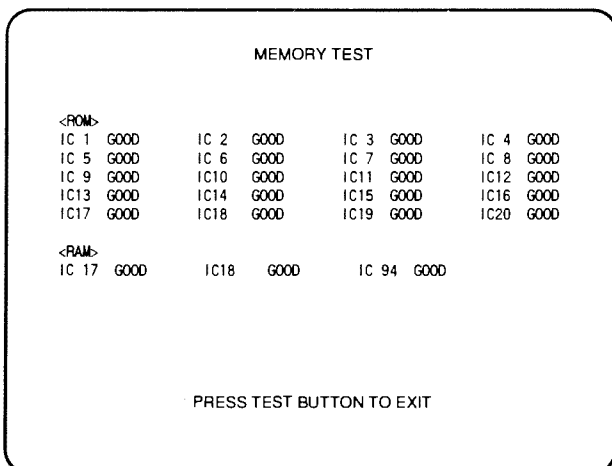
SELECTION OF TEST ITEMS



- ① Push the TEST BUTTON to cause the following TEST MENU to appear:
- ② By pushing the SERVICE BUTTON, bring the arrow mark ">" to the desired item and press the TEST BUTTON.
- ③ After the test is complete, move ">" to "EXIT" and press the TEST BUTTON to return to the Game Mode.

FIG. 9.2 TEST MENU

9-3 MEMORY TEST



The MEMORY TEST mode is for checking the on-BD memory IC functioning. "GOOD" is displayed for normal ICs and "BAD" is displayed for abnormal ICs.

- When the test is completed, if the display is as shown left, it is satisfactory.
- After finishing the test, pressing the TEST BUTTON allows the MENU mode to return on to the screen.

FIG. 9.3 MEMORY TEST

9-4 INPUT TEST

When INPUT TEST is selected, the monitor will show the following, allowing you to watch the status of each switch.

On this screen, periodically check the status of each switch.

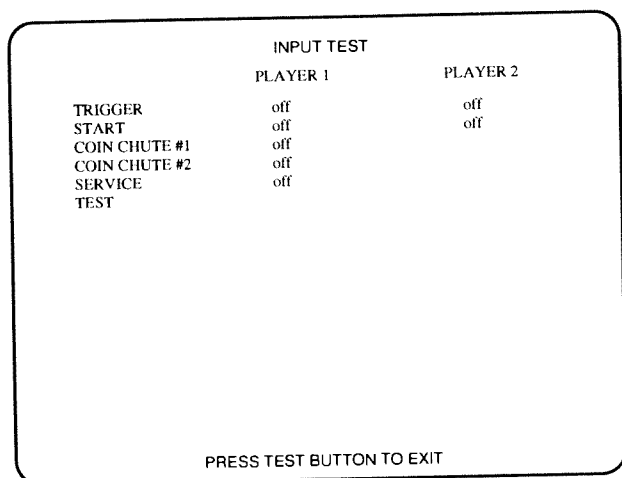


FIG. 9.4 INPUT TEST

- By pressing each switch, if the display on the right-hand side of the name of each switch changes to on from off, the SW and the wiring connections are satisfactory.
- Open the Coin Chute Door and insert a coin into the Coin Entry to check Coin Chute Coin SW. Note that depending on the destination, this product may not be equipped with COIN CHUTE #2.

Press the Test button to return to the Test Menu mode (FIG. 9.2).

9-5 SOUND TEST

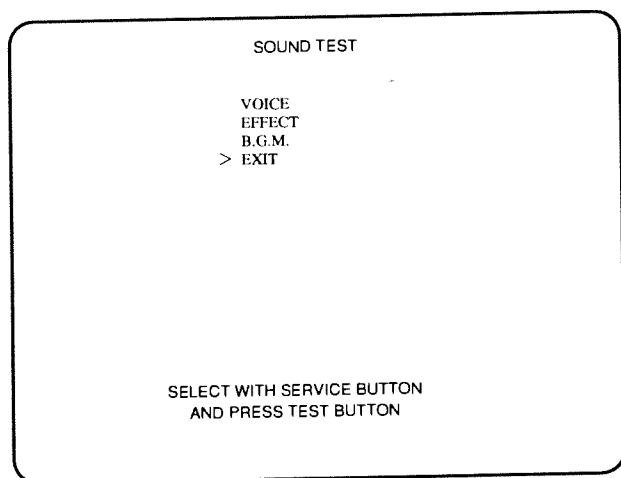


FIG. 9.5 SOUND TEST

This enables sounds used in the game to be checked. Sound related memory and each speaker are checked.

By using the Service button, bring the arrow to select the desired sound item to be checked. Each time the Test button is pressed, the numeral beside the selected item increases by one and the sound is emitted sequentially in order.

Choose EXIT and press the Test button to return to the menu mode (FIG. 9.2).

9-6 C.R.T. TEST

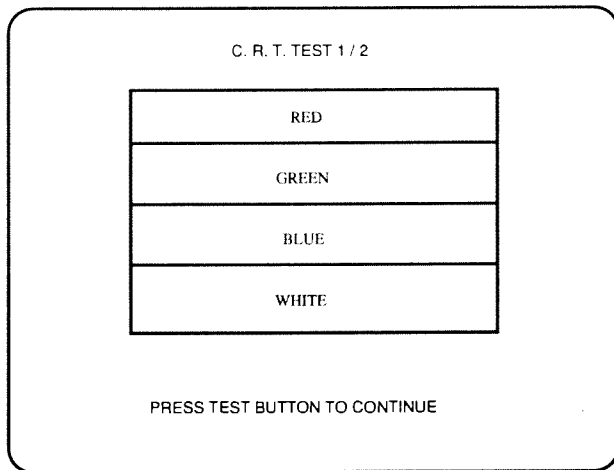


FIG. 9. 6 a C.R.T TEST (1/2)

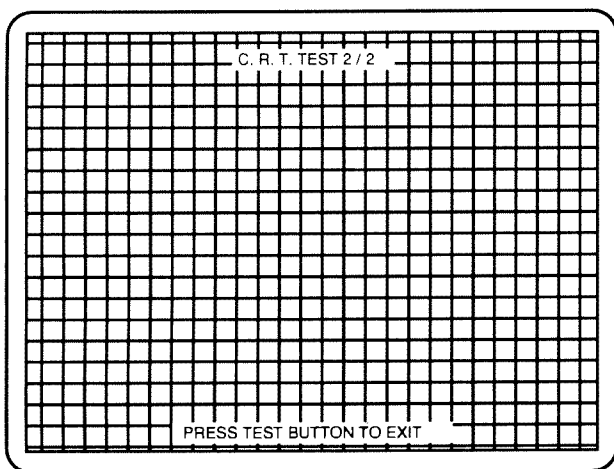


FIG. 9. 6 b C.R.T TEST (2/2)

Select C. R. T. Test to cause the Monitor to display the screen shown left, allowing Monitor adjustment status to be checked.

Periodically check the Monitor adjustment status on this screen.

The screen (1/2) enables color adjustment check to be performed. The color bar of each of the 4 colors, i. e., red, green, blue and white, is darkest at the extreme left and becomes brighter towards the extreme right.

Press the TEST BUTTON to shift to the next page (2/2).

The screen (2/2) allows screen size and distortion to be tested.

Check if the Crosshatch Frame Line goes out of the screen and if the crosshatch lines are distorted.

Press the TEST BUTTON to return to the Menu mode. (FIG. 9. 2)

9-7 GAME ASSIGNMENTS

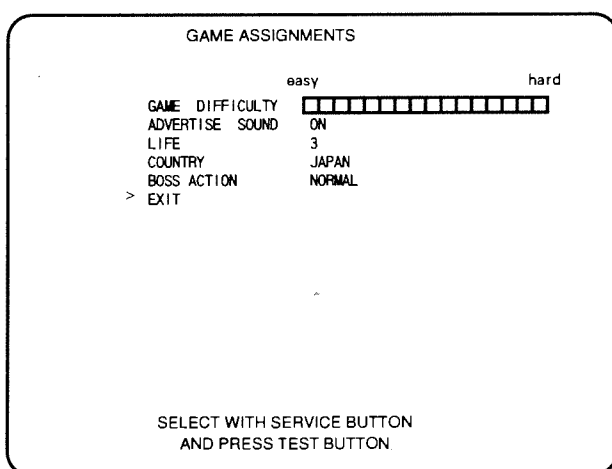
Selecting the GAME ASSIGNMENTS in the menu mode causes the present game setting to be displayed and also the game setting changes (game difficulty, etc.) can be made. Each item displays the following content.

SETTING CHANGE PROCEDURE



The setting changes are ineffective unless "EXIT" is selected in the menu mode (FIG. 9. 2). Be sure to exit from the test mode after the setting change.

- ① Press the SERVICE BUTTON to move the arrow ">" to the desired item.
- ② Choose the desired setting change item by using the TEST BUTTON.
- ③ To return to the MENU mode, move the arrow to EXIT and press the TEST BUTTON.



- **GAME DIFFICULTY**
Game Difficulty can be set in 16 different levels.
- **ADVERTISE SOUND**
Determines whether ADVERTISE SOUND is to be emitted or not by setting to ON when emitting it and to OFF when not emitting it.
- **LIFE**
The INITIAL LIFE (the number of life points allotted to the player at the time of game start) can be selected from the 9 categories.
- **BOSS ACTION**
The setting of the last Boss Character is performed.
NORMAL enables LIFE recovery.
MILD disables LIFE recovery.

FIG. 9. 7 GAME ASSIGNMENTS

9-8 COIN ASSIGNMENTS

The "COIN ASSIGNMENTS" mode permits you to set the start number of credits, as well as the basic numbers of coins and credits. This mode expresses "how many coins correspond to how many credits."

SETTING CHANGE PROCEDURE



The setting changes are ineffective unless "EXIT" is selected in the menu mode (FIG. 9. 2). Be sure to exit from the test mode after the setting change.

```

COIN ASSIGNMENTS

CREDIT TO START      2 CREDITS
CONTINUE             1 CREDIT

COIN/CREDIT SETTING #1
  CHUTE #1          1COIN 1CREDIT
  CHUTE #2          1COIN 1CREDIT

MANUAL SETTING
> EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
    
```

Note that depending on the destination, this product may not be equipped with COIN CHUTE #2.

FIG. 9. 8 a COIN ASSIGNMENTS

● CREDIT TO START / CREDIT TO CONTINUE

Number of credits required for starting game and for continuing game are set. The eleven sets of these combinations are available as follows:

START :	1	2	3	3	4	4	4	5	5	5	5
CONTINUE :	1	1	1	2	1	2	3	1	2	3	4

● COIN/CREDIT SETTING

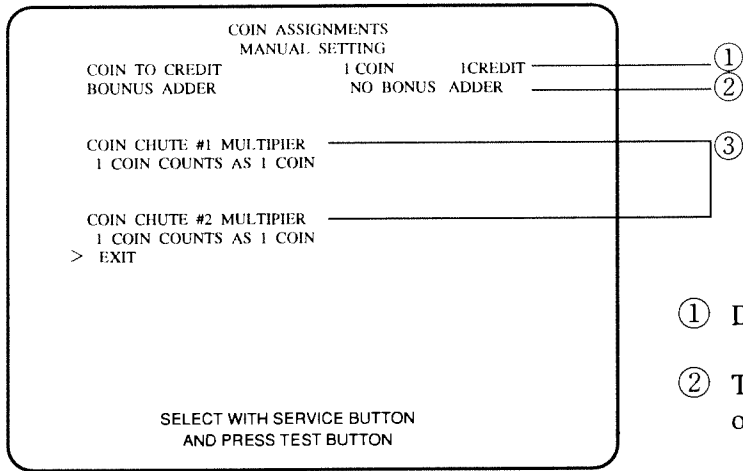
Sets the CREDIT increase increment per coin insertion. There are 27 settings from #1 to #27, expressed in ○○ CREDIT as against ○○ COINS inserted. #27 refers to FREE PLAY (refer to TABLE 9. 8 a).

● MANUAL SETTING

This allows credit increase setting as against coin insertion to be further set in the manner finer than COIN/CREDIT SETTING (refer to TABLE 9. 8 b).

HOW TO USE THE TEST MODE

Selecting **MANUAL SETTING** in the Coin Assignment mode displays the following screen.



- ① Determines Coin /Credit setting.
- ② This sets how many coins should be inserted to obtain one Service Coin.
- ③ This sets how many tokens one coin represents.

FIG. 9.8 b MANUAL SETTING

Table 9.8 b MANUAL SETTING

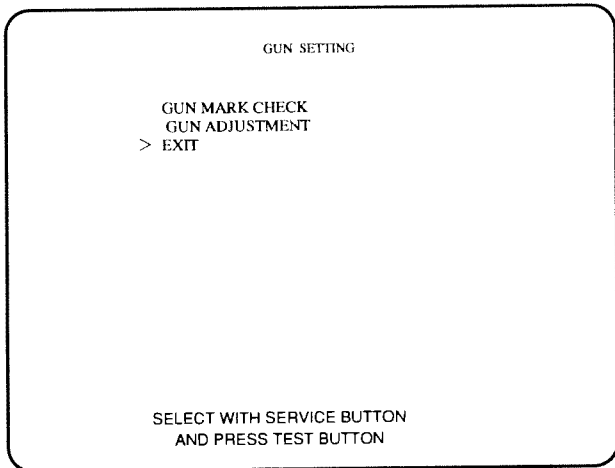
COIN TO CREDIT	1 COIN	1 CREDIT
	2 COINS	1 CREDIT
	3 COINS	1 CREDIT
	4 COINS	1 CREDIT
	5 COINS	1 CREDIT
	6 COINS	1 CREDIT
	7 COINS	1 CREDIT
	8 COINS	1 CREDIT
	9 COINS	1 CREDIT
BONUS ADDER	NO BONUS ADDER	
	2 COINS GIVE 1 EXTRA COIN	
	3 COINS GIVE 1 EXTRA COIN	
	4 COINS GIVE 1 EXTRA COIN	
	5 COINS GIVE 1 EXTRA COIN	
	6 COINS GIVE 1 EXTRA COIN	
	7 COINS GIVE 1 EXTRA COIN	
	8 COINS GIVE 1 EXTRA COIN	
	9 COINS GIVE 1 EXTRA COIN	
COIN CHUTE MULTIPLIER	1 COIN COUNTS AS 1 COIN	
	1 COIN COUNTS AS 2 COINS	
	1 COIN COUNTS AS 3 COINS	
	1 COIN COUNTS AS 4 COINS	
	1 COIN COUNTS AS 5 COINS	
	1 COIN COUNTS AS 6 COINS	
	1 COIN COUNTS AS 7 COINS	
	1 COIN COUNTS AS 8 COINS	
	1 COIN COUNTS AS 9 COINS	

9-9 GUN SETTING



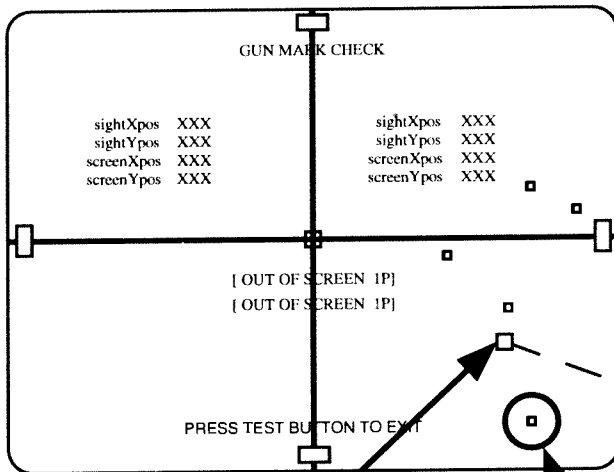
The setting changes are ineffective unless "EXIT" is selected in the menu mode (FIG. 9. 2). Be sure to exit from the test mode after the setting change.

Selecting GUN SETTING causes the following screen shown at the top to appear. This allows the controller sighting to be adjusted. Periodically check the sighting adjustment status on this screen.



The screen shown left is the sighting adjustment menu mode. Press the SERVICE button to bring the arrow to the desired adjustment item to check. Press the Test button to have the following adjustment menu mode appear on the screen. Bring the arrow to EXIT and press the TEST button to return to the menu mode (FIG. 9. 2).

FIG. 9. 9 a SIGHTING ADJUSTMENT MENU



Selecting GUN MARK CHECK causes the screen at the left to appear (the intersecting point of the 2 straight lines indicates the center of the screen). Point the Controller to this screen to have a square cursor appear (1P side is blue and 2P side is red). This cursor indicates an impact mark. Point the Controller at the screen and trigger to have a small square remain on the screen as impact mark. Perform sighting check on this screen. Press the Test button to return to the above sighting adjustment menu screen.

CURSOR
(Impact Position)

IMPACT MARK



CURSOR for 1P is blue and for 2P, red.

FIG. 9. 9 b SIGHTING CHECK

Select GUN ADJUSTMENT to display the following screen. In this mode, the 4 Adjustment values (for on-screen right end, left end, upper end and lower end) are set. Each adjustment value is set as follows. Be sure to determine the adjustment value by actually pointing the Controller at the end of the designated direction (the cursor value is preset). Select each adjustment position by using the 1P or 2P Start button. Press the Test button to return to the SIGHTING ADJUSTMENT mode.

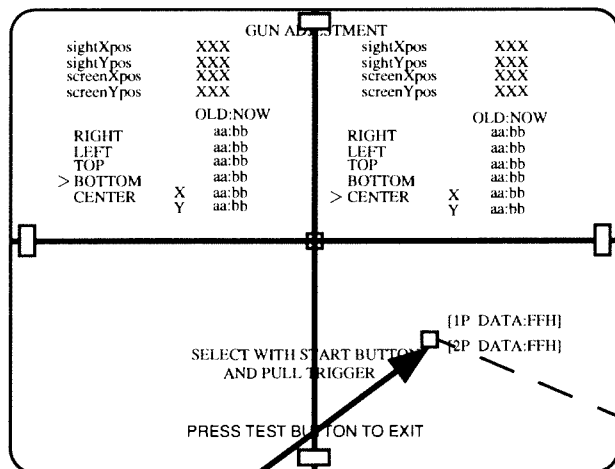


FIG. 9.9 c
SIGHTING ADJUSTMENT

The Cursor is in the pre-setting status.

For the actual sighting adjustment, trigger while each end of the on-screen 4 sides being aimed at by the Controller regardless of the Cursor.

RIGHT aa:bb

Determine the adjustment value of the screen's right-hand end in the horizontal directions.

The left side value (aa) indicates the pre-setting value, and the right side value (bb) refers to the value to be newly inputted.

By pointing the Controller to the right end of the screen, determine the adjustment value while actually aiming the Controller at the right end of the screen with the Controller and triggering regardless of the cursor.

At this time, disregard the vertical directions.

TOP aa:bb

Determines the adjustment value of the screen's upper end in the vertical direction.

The left side value (aa) indicates the pre-setting value, and the right side value (bb) refers to the value to be newly inputted.

By pointing the Controller to the upper end of the screen, determine the adjustment value while actually aiming the Controller at the upper end of the screen and triggering regardless of the cursor.

At this time, disregard the horizontal directions.

CENTER X aa:bb Y aa:bb

Determines the adjustment value of the screen's center.

X and Y respectively indicates left/right and up/down directions. The left-hand side value (aa) indicates the pre-setting value, and the right-hand side value (bb) refers to the value to be newly inputted.

By pointing the Controller to the center of the screen, determine the adjustment value while actually aiming the Controller at the center of the screen and triggering regardless of the cursor.

LEFT aa:bb

Determine the adjustment value of the screen's left-hand end in the horizontal direction. The left side value (aa) indicates the pre-setting value, and the right side value (bb) refers to the value to be newly inputted.

By pointing the Controller to the left end of the screen, determine the adjustment value while actually aiming the Controller at the left end of the screen and triggering regardless of the cursor.

At this time, disregard the vertical directions.

BOTTOM aa:bb

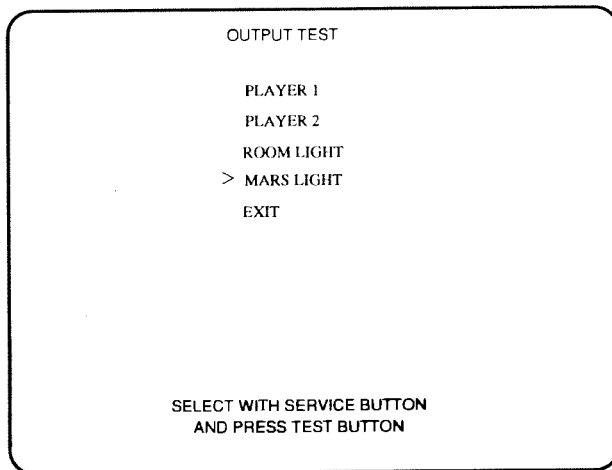
Determines the adjustment value of the screen's lower end in the vertical direction.

The left side value (aa) indicates the pre-setting value, and the right side value (bb) refers to the value to be newly inputted.

By pointing the Controller to the lower end of the screen, determine the adjustment value while actually aiming the Controller at the lower end of the screen and triggering regardless of the cursor.

At this time, disregard the horizontal directions.

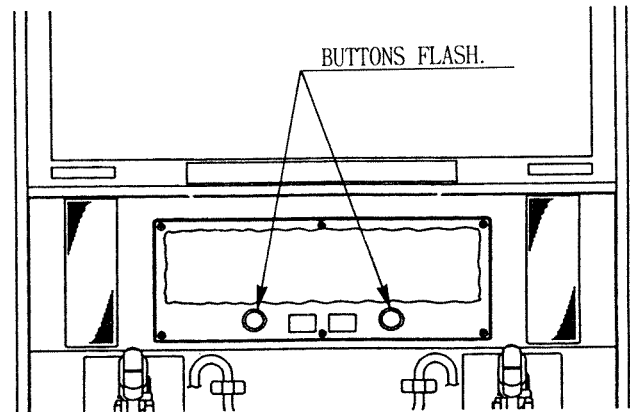
9-10 OUTPUT TEST



Choose OUTPUT TEST to have the MONITOR screen shown left appear. This screen allows lamp status to be checked. Periodically check the lamp status in this mode.

Select the desired item to be checked. If each of 1P and 2P buttons flashes, it is satisfactory. Note that though ROOM LIGHT and MARS LIGHT are displayed on the screen, the U/R Cabinet is not equipped with these.

FIG. 9. 10 OUTPUT TEST



Choose EXIT and press the Test button to return to the Menu mode (FIG. 9. 2).

9-11 BOOKKEEPING

Choosing BOOKKEEPING in the menu mode displays the data of operating status up to the present are shown on 2 pages. PAGE 1/2 shows COIN/CREDIT related data. Press the Test button to proceed to PAGE 2/2.

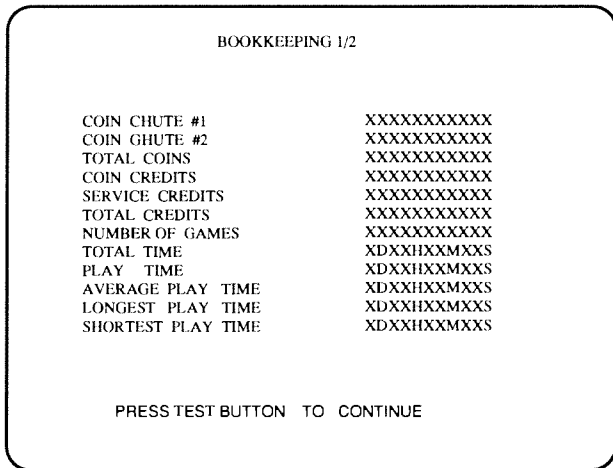


FIG. 9.11 a BOOKKEEPING(1/2)

- **COIN CHUTE #1, 2:**
Number of coins put in each Coin Chute.
- **TOTAL COINS:**
Total number of activations of coin chutes
- **COIN CREDITS:**
Number of credits registered by inserting coins
- **SERVICE CREDITS:**
Credits registered by the SERVICE BUTTON
- **TOTAL CREDITS:**
Total number of credits (COIN CREDITS + SERVICE CREDITS)
- **NUMBER OF GAMES:**
Total number of plays
- **TOTAL TIME:**
Total energized time
- **AVERAGE PLAY TIME:**
- **LONGEST PLAY TIME:**
- **SHORTEST PLAY TIME:**

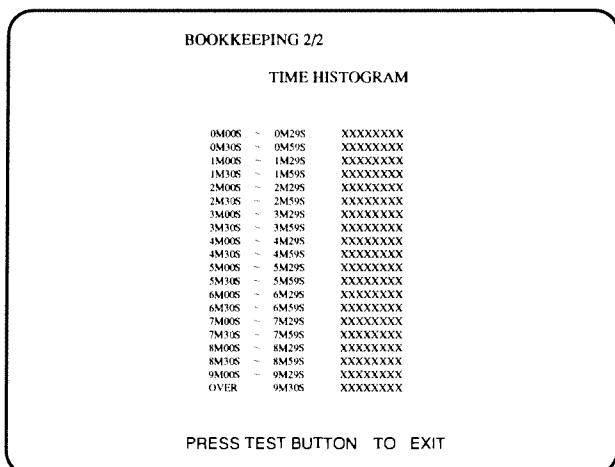


FIG. 9.11 b BOOKKEEPING(2/2)

On page (2/2), each play frequency is displayed. When setting difficulty levels, the frequency can be referred to as a standard.

When in the PAGE 2/2 mode, press the Test button to return to the Menu mode (FIG. 9.2).

9-12 BACKUP DATA CLEAR

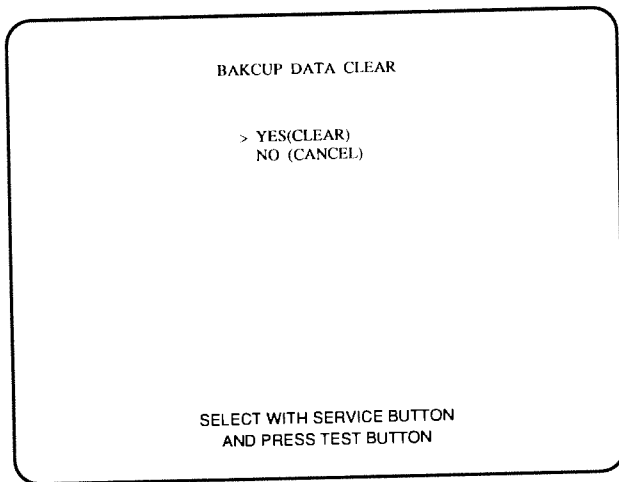


FIG. 9. 12 BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING and high score player ranking entry. When clearing the contents, bring the arrow to "YES" and press the test button. When the data has been cleared, "COMPLETED" is displayed. Press the Test button to return to the menu mode (FIG. 9.2). Bringing the arrow to "NO" and pressing the Test button causes the menu mode to return to the screen. Note that the contents of game assignments and sighting adjustment are not affected by BACKUP DATA CLEAR operation.

10. CONTROLLER (GUN)



- In order to prevent an electric shock and short circuit, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

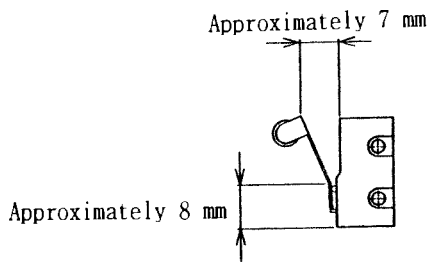
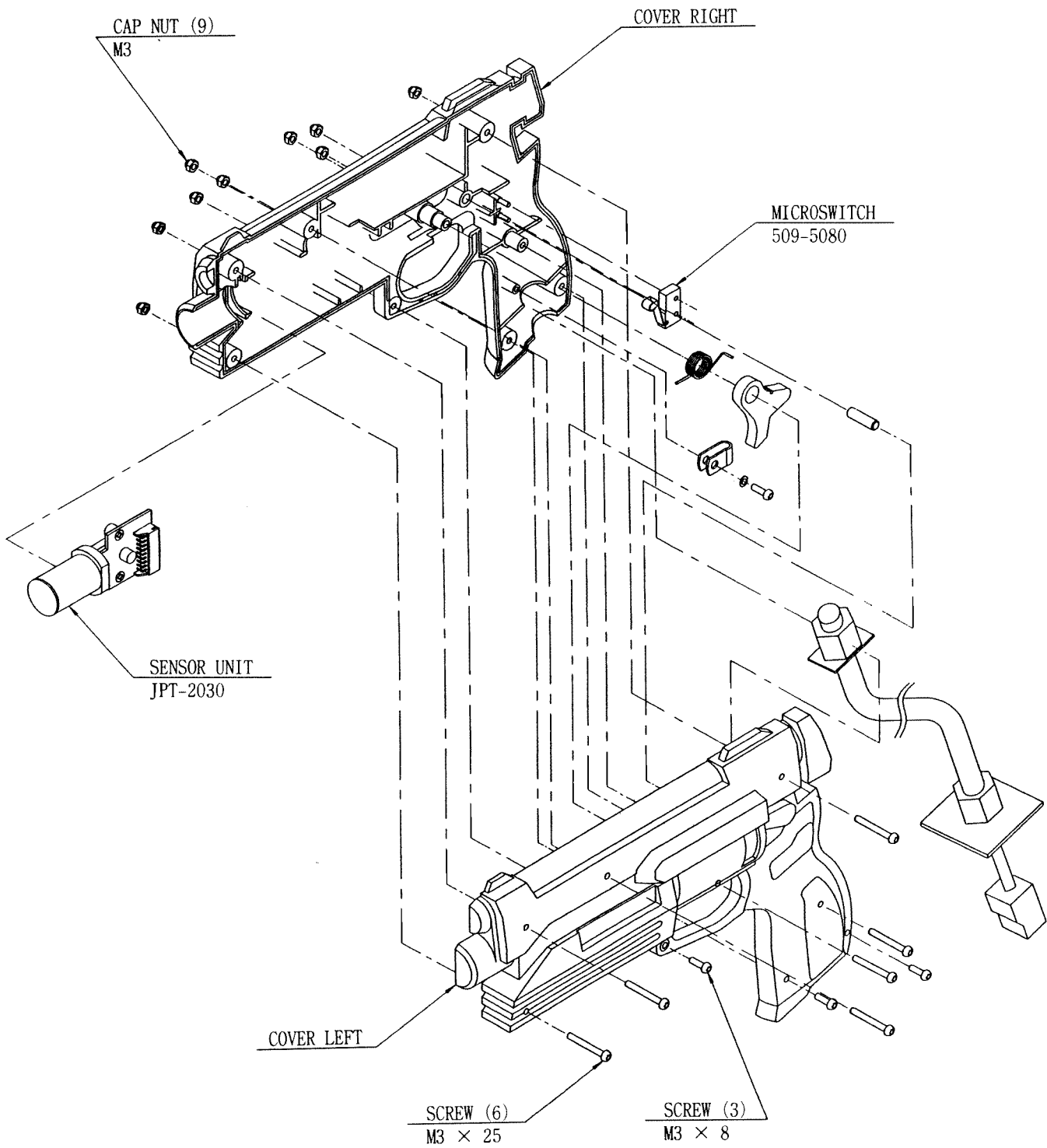
In the cases where the controller's operation is not satisfactory or the controller sight deviates from the direction in which the controller is pointed, the controller's interior parts may have been damaged. Replace the parts by disassembling the controller in the following procedure: Also, be sure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

REPLACING THE MICROSWITCH

- ① Disassemble the controller.
- ② Pull out the microswitch from COVER RIGHT.
- ③ Take out the microswitch by removing the soldering from it.
- ④ Bend the new Microswitch Actuator as shown.
- ⑤ Solder the new microswitch and assemble the controller.
- ⑥ By operating the Trigger, check if the Microswitch can be turned ON/OFF correctly.

REPLACING THE SENSOR UNIT

- ① Disassemble the controller.
- ② Remove the sensor unit from COVER.



MICROSWITCH ACTUATOR BENDING WORK

FIG. 10

11. 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

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 shaft.
- ⑤ Remove stain from the shaft and pillow 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.

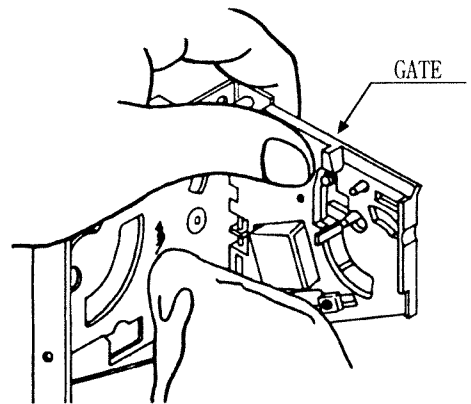


FIG. 11 a

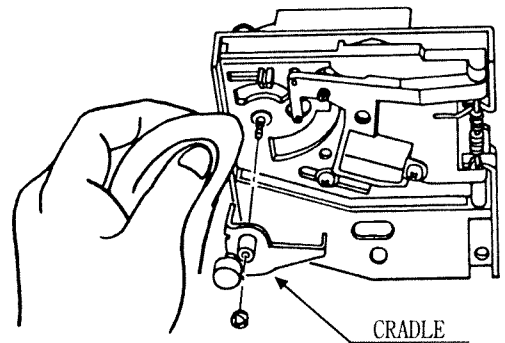


FIG. 11 b



- 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.

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.

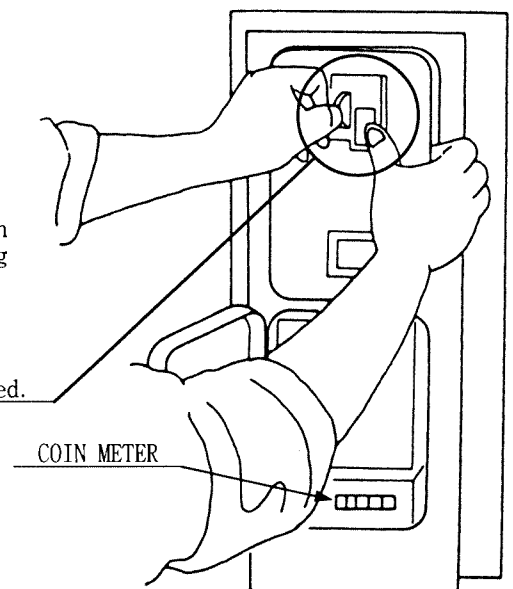


FIG. 11 c

12. MONITOR

12-1 CAUTIONS AND WARNINGS CONCERNING THE SAFETY FOR HANDLING THE MONITORS

Before handling the monitors, be sure to read the following explanations and comply with the caution/warning instructions given below. Note that the caution/warning symbol marks and letters are used in the instructions.



Indicates that handling the monitors erroneously by disregarding this warning may cause a potentially hazardous situation, which could result in death or serious injury.



Indicates that handling the monitors by disregarding this caution may cause a potentially hazardous situation, which could result in personal injury and or material damage.



Indicates that access to a specific part of the equipment is forbidden.



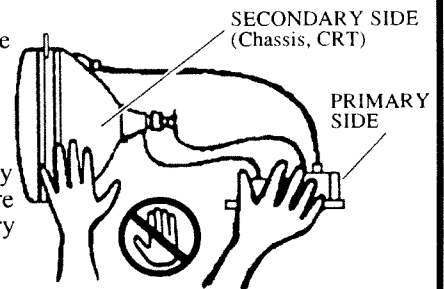
Indicates the instruction to disconnect a power connector or to unplug.



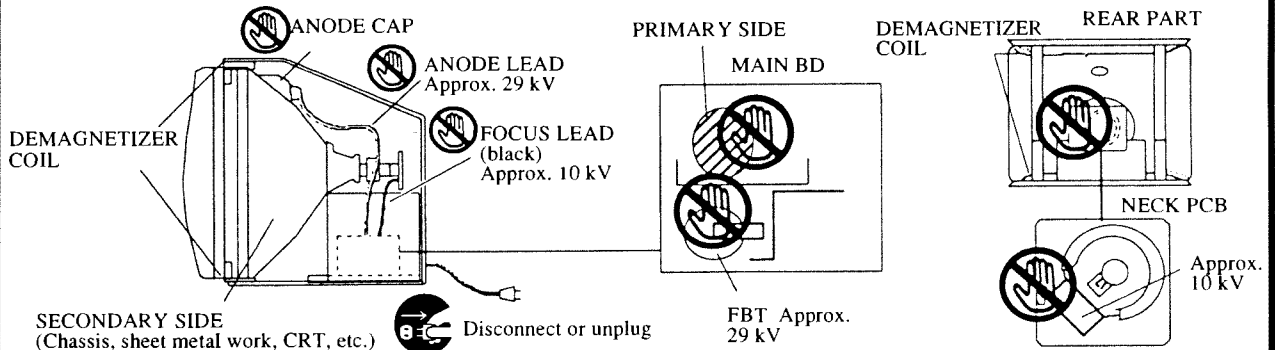
- When performing such work as installing and removing the monitor, inserting and disconnecting the external connectors to and from monitor interior and the monitor, be sure to disconnect the power connector (plug) before starting the work. Proceeding the work without following this instruction can cause electric shock or malfunctioning.
- Using the monitor by converting it without obtaining a prior permission is not allowed. SEGA shall not be liable for any malfunctioning and accident caused by said conversion.



- **Primary side and Secondary side**
The monitor's circuit which is divided into the Primary side and Secondary side, is electrically isolated. Do not touch the primary side, or do not touch both the primary side and the secondary side simultaneously. Failing to observe the instruction can cause electric shock and this is very dangerous. When making monitor adjustments, use a non-conductive driver and make adjustment without touching any part other than the Adjustment V. R. and knob. Also, be sure not to cause a short-circuit to the Primary side and Secondary side. If short-circuited, it can cause electric shock or malfunctioning, which is very dangerous.



- **High-tension Voltage**
Some of the parts inside monitor are subject to high-tension voltage in excess of 20,000 volts and very dangerous. Therefore, do not touch the monitor interior. Should soldering & paper wastes, etc. be mixed in the monitor interior, turn the power off so as not to cause malfunctioning or fire hazard.



- **Connecting the CRT and PCB**
For combining the CRT and PCB, use the specified part No. to maintain the status of adjustments made at the factory. The anode of the CRT itself will be accumulatively charged as time elapses, generating high-tension voltage which is very dangerous. The monitor should be used with the Chassis, CRT and PCB assembled. When repair, etc. is required at the time of malfunctioning, be sure to send it in an "as is assembled" condition. If these are disassembled, what's charged to said high tension voltage can be discharged, causing a very hazardous situation. Therefore, under no circumstances should it be disassembled.

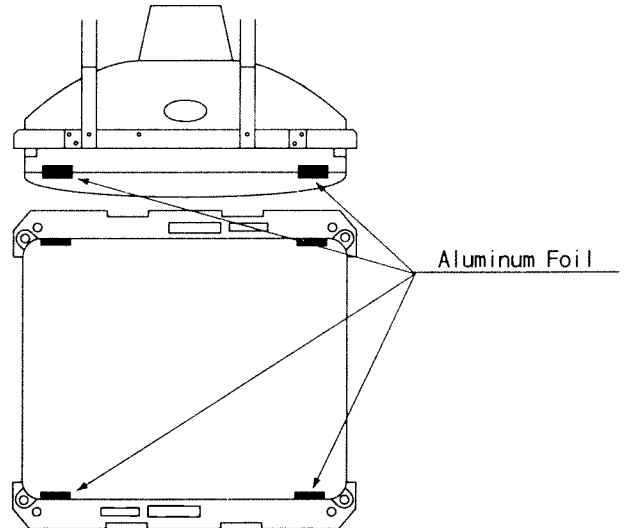


- **Static Electricity**
Touching the CRT surface sometimes causes you to slightly feel electricity. This is because the CRT surfaces are subject to static and will not adversely affect the human body.
- **Installation and removal**
Ensure that the Magnetizer Coil, FBT (Fly-Back Transformer), Anode Lead and Focus Lead are not positioned close to the sheet metal work's sharp edges, etc. and avoid damaging the insulated portions so as not to cause electric shock and malfunctioning. (For the name of parts, refer to the above Figures).



For the purpose of static prevention, special coating is applied to the CRT face of this product. To protect the coating, pay attention to the following points. Damaging the coating film can cause electric shock to the customers. For the caution to be heeded when cleaning, refer to the Section of Periodic Inspection Table.

- Do not apply or rub with a hard item (a rod with pointed edge, pen, etc.) to or on the CRT surfaces.
- Avoid applying stickers, seals, etc. on the CRT face.
- Do not remove aluminum foils from the CRT corners. Removing the aluminum foils can cause static prevention effects to be lowered.



12-2 CLEANING THE CRT



Use care when handling the glass made parts. If glass made parts are damaged, the glass fractions can cause injury.



- When cleaning the CRT, be sure to use a soft, dry cloth. Do not use chemicals such as thinner, benzene, etc.
- Apply anti-static agent, which prevents dust attachment, only to the CRT face.

Be sure to turn power off before cleaning the CRT.

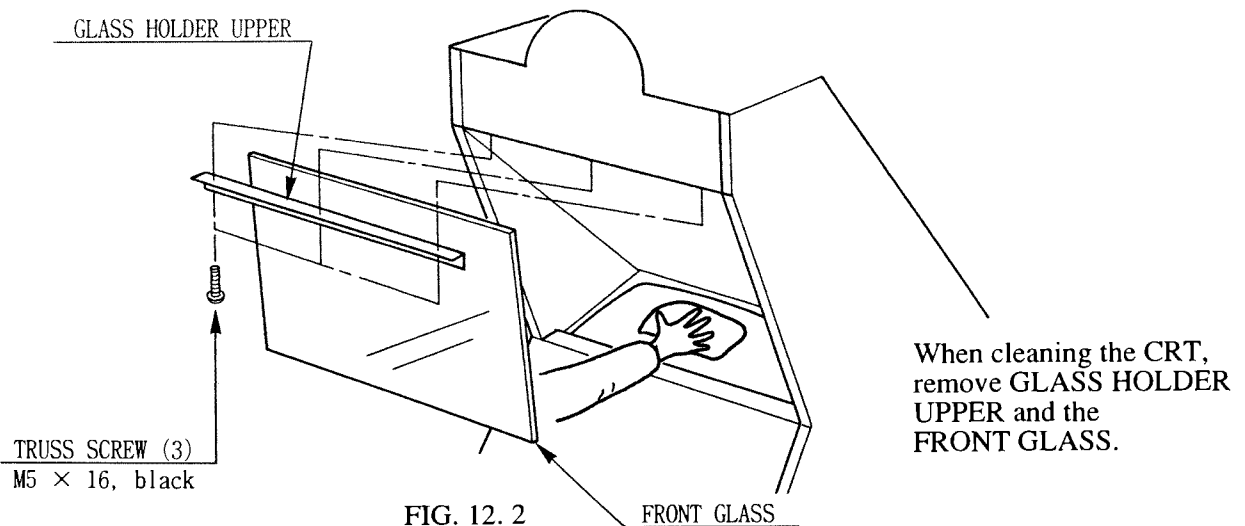


FIG. 12. 2

12-3 ADJUSTMENT METHOD



- Monitor adjustments have been made at the time of shipment. Therefore, do not make further adjustment without a justifiable reason. Adjusting the monitor which contains high tension parts is a dangerous work. Also, an erroneous adjustment can cause deviated synchronization and image fault, resulting in malfunctioning.
- When making adjustment, utilize a resinous Alignment Screwdriver. Servicing with bare hand or using conductive tools can cause electric shock accidents.

Remove the back door at the rear of the cabinet, and the monitor adjustment knob appears.

- ① Take off the 3 tamperproof screws to remove the back door.

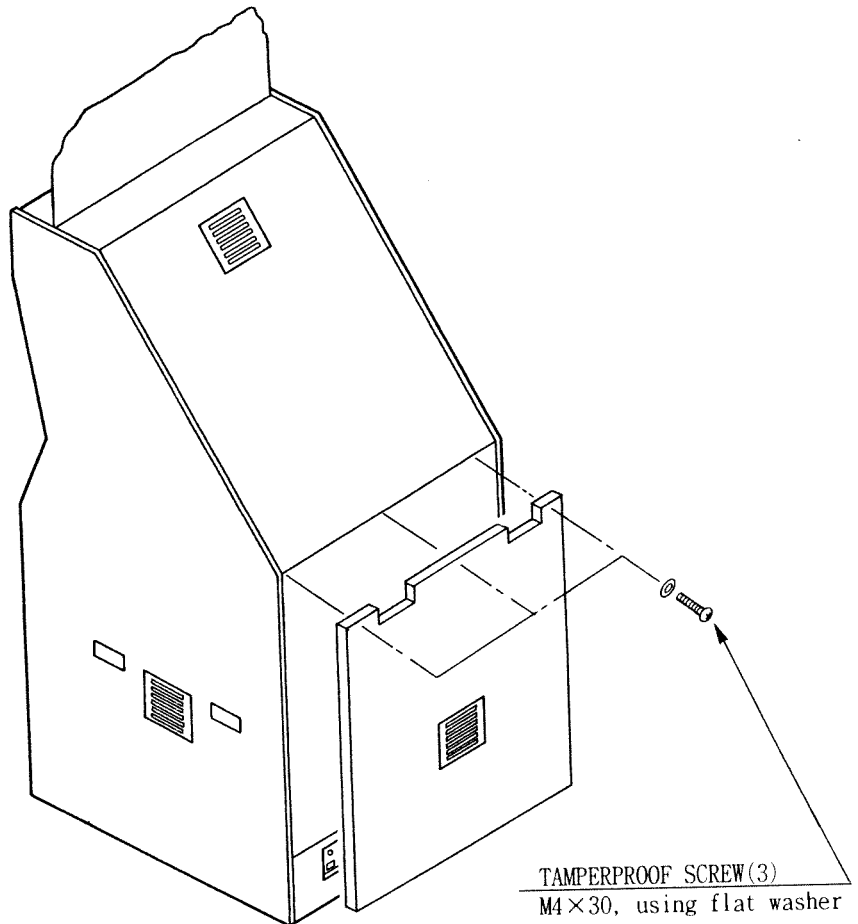
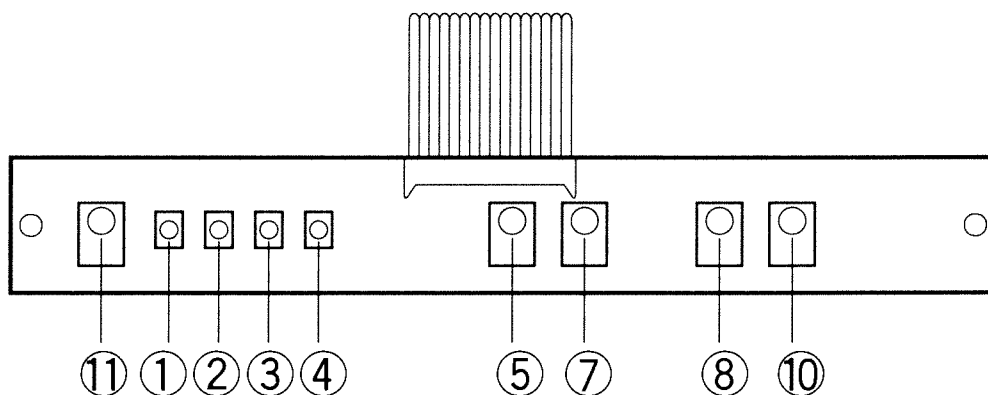


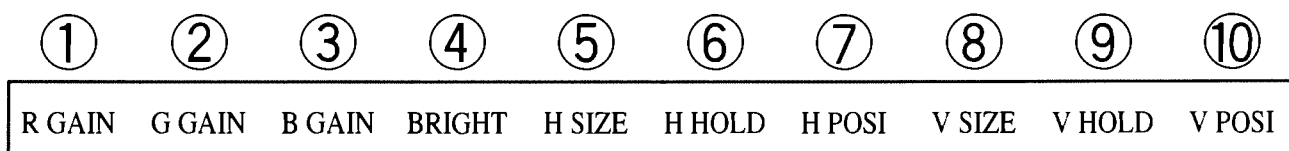
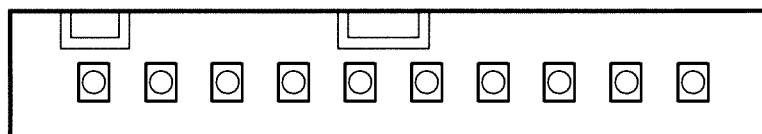
FIG. 12.3

- ② There are 3 types of Monitor that can be used for this product. Depending on the specific monitor, the knob layout varies.

- NANA O monitor: 2 0 0 - 5 2 4 2 - 2 4 - 0 5 (24K mode)
- NANA O monitor: 2 0 0 - 5 3 8 7 - 2 4 - 0 1 (24K mode)



- SANWA monitor: 2 0 0 - 5 2 4 3 - 2 4 - 0 1 (24K mode)



- ① R-GAIN Controls colors.
- ② G-GAIN Controls colors.
- ③ B-GAIN
- ④ BRIGHT Controls screen brightness.
- ⑤ H. SIZE Controls horizontal screen size.
- ⑥ H. HOLD Provides horizontal synchronization, i.e., controls right/left hold.
- ⑦ H. POSI..... Controls horizontal display position on screen.
- ⑧ V. SIZE Controls vertical screen size.
- ⑨ V. HOLD Provides vertical synchronization, i.e., controls up-down hold.
- ⑩ V. POSI..... Controls vertical display position on screen.
- ⑪ CONTRAST ... Adjusts image contrast.

13. REPLACEMENT OF FLUORESCENT LAMP AND LAMPS



- When performing the work, be sure to turn power off. Working with power on can cause electric shock and short circuit accidents.
- The Fluorescent Lamp, when it gets hot, can cause burns. Be very careful when replacing the Fluorescent Lamp.
- Be sure to use the lamp of the specified rating. Using lamps of non-specified rating can cause a fire or malfunctioning.



To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Not using a step or using an unstable step can cause a violent falling down accidents.

13-1 REPLACEMENT OF FLUORESCENT LAMP

After removing Lamp Cover B and Billboard Plate as per FIG. 6. 1 a, Section 6, take out the 2 screws, remove Lamp Cover A, and replace the Fluorescent Lamp.

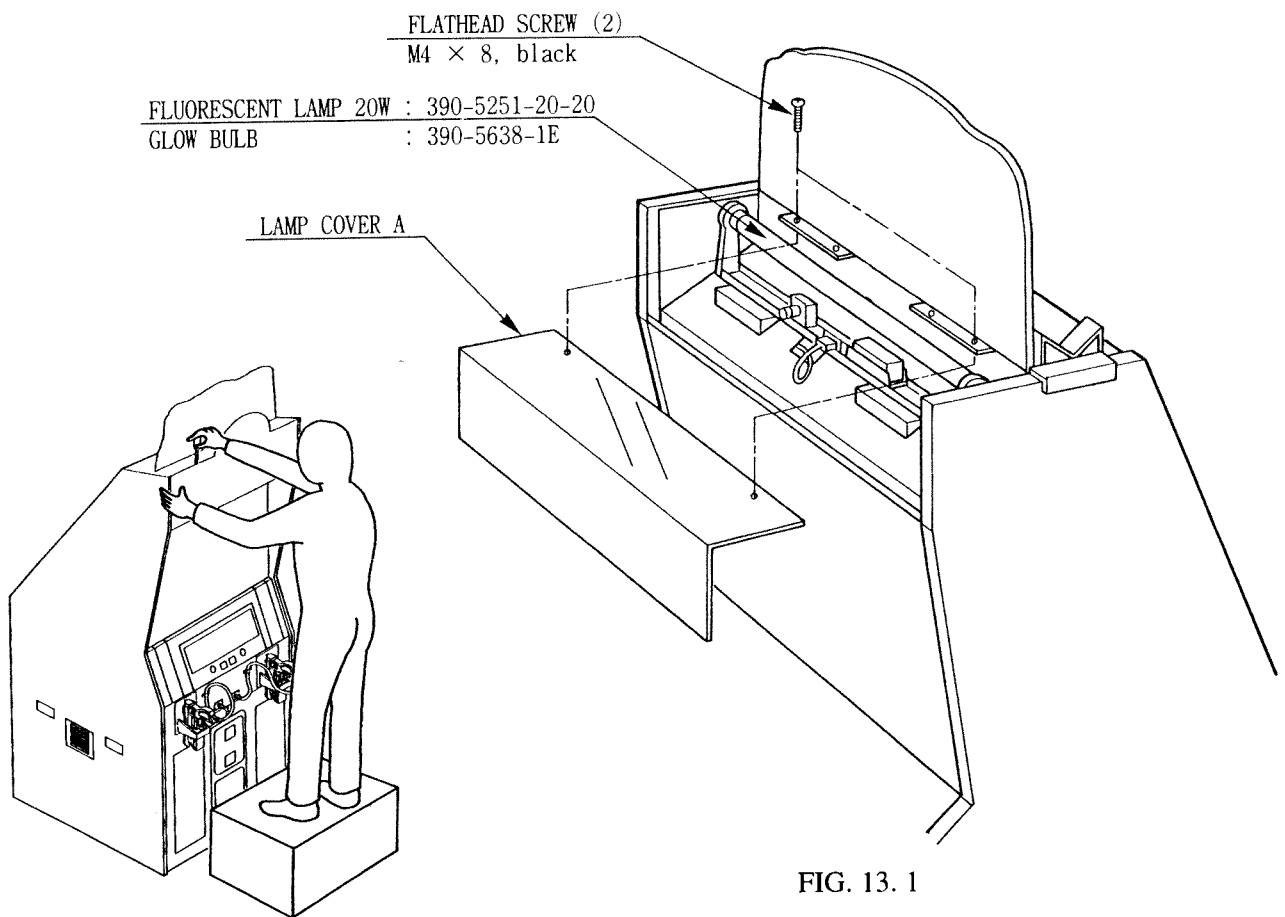


FIG. 13. 1

PREPARE A STEP TO
PERFORM WORK.

13-2 LAMP REPLACEMENT

- ① Take off the 6 Tamperproof Screws and remove the Switch Panel. (FIG. 13. 2 a)
- ② Pull the lower part of the Switch from the rear of the Switch Panel and remove the Switch part to replace the lamp. (FIG. 13. 2 b)

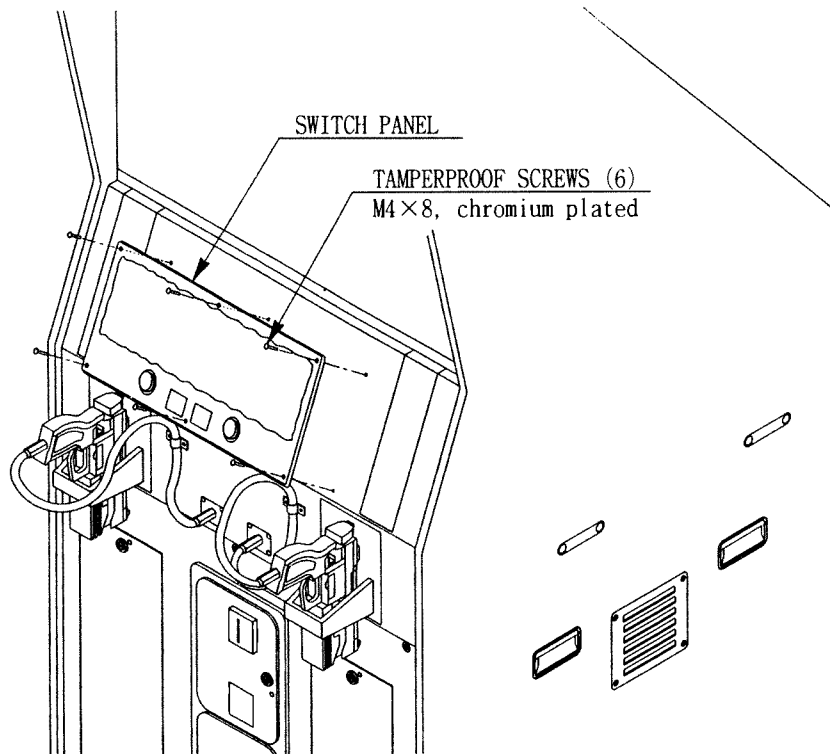


FIG. 13. 2 a

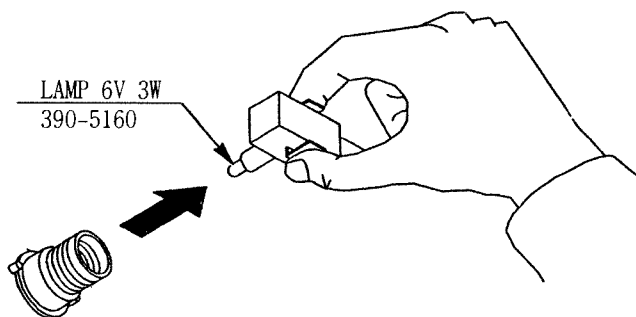


FIG. 13. 2 b

14. PERIODIC INSPECTION TABLE

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



- 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 a fire or electric shock.
- Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the interior 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.

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CONTROLLER	Cleaning	As necessary	
	Sight check	Weekly	9
	Check SWes.	Monthly	9
COIN SELECTOR	Check COIN SWes.	Monthly	9
	COIN SELECTOR cleaning.	Trimonthly	1 1
MONITOR	C.R.T. cleaning.	Weekly	1 2
	Check adjustments.	Monthly	6、9、1 2
FRONT GLASS, MIRROR	Cleaning	Weekly	See FIG. 14
GAME BD	Setting check	Monthly	9
INTERIOR	Cleaning	Annually	See above.
POWER PLUG	Inspection and cleaning		

CLEANING THE FRONT GLASS AND MIRROR

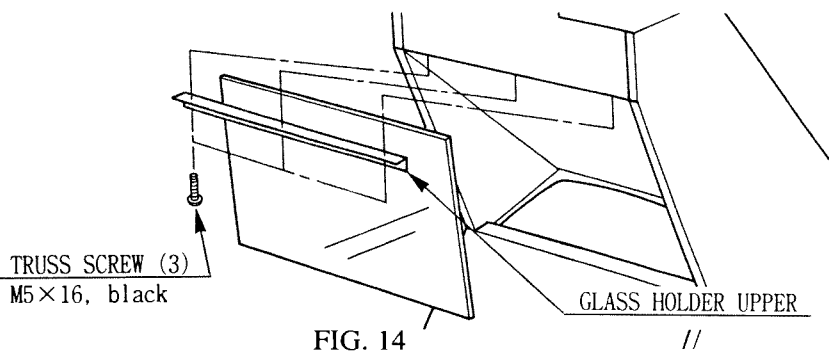
When cleaning, be sure to comply with the following CAUTION and instructions so as to ensure that the front glass and mirror are not damaged.



Use care when handling glass made parts. When the glass is damaged, fragments of glass can cause injury.



- Be sure to use the accessory glass cleaner or high-efficiency alkaline cleansing water. To avoid damaging the glass surfaces, do not use solutions such as thinner and alcohol, or abrasives, nor bleaching agents.
- Use a soft cloth.
- When removing an attached large particle of dust (or foreign matter), do not rub with a cloth.



Remove the front glass when cleaning the front glass and mirror. First, remove GLASS HOLDER UPPER only. Then, put your hand through the square hole in the back side of GLASS HOLDER UPPER, and pull the front glass toward you.

FIG. 14

15. TROUBLESHOOTING

Should trouble occur, first check wiring connector connections.

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, re-instate the AC Unit's Circuit Protector.
	The CONNECT BOARD fuse is blown due to the momentary overload.	After eliminating the cause of overload, replace the CONNECT BOARD fuse (see next page). 514-5036-5000 FUSE 6.4 ϕ \times 30 5000mA 125V
The monitor screen sways or shrinks.	The power supply voltage is not correct.	Ensure that the power supply voltage is correct.
No sound is emitted.	Sound volume adjustment is not appropriate.	Adjust sound volume (see Section 9).
	Board and Amplifier malfunctioning.	Perform the sound test and confirm (see Section 9).
Controller sighting is not satisfactory.	Due to environmental changes, etc., sighting became inappropriate.	Perform sighting adjustment in the test mode (see Section 9).
	LED BD malfunctioning.	Check to ensure that the LED lights up. If it does not light up, replace.
	Sensor Unit malfunctioning.	Replace the Sensor Unit.
	LED BD, Front Glass, and Mirror are soiled.	Wipe off soiled surfaces (see Sec. 14 and next page).
The Fluorescent lamp does not light up.	The Fluorescent tube is burnt out.	Replace the Fluorescent tube (refer to Section 13).
The Lamp does not light up.	Lamp malfunctioning.	Replace the Lamp (see Section 13).

REPLACEMENT OF LED BD

If the light emission of 2 LED's can not be seen, the fault or malfunctioning may be considered. Replace by using the following procedure. Also, when wiping off the soils, remove the ASSY SENSOR as per the same procedure.

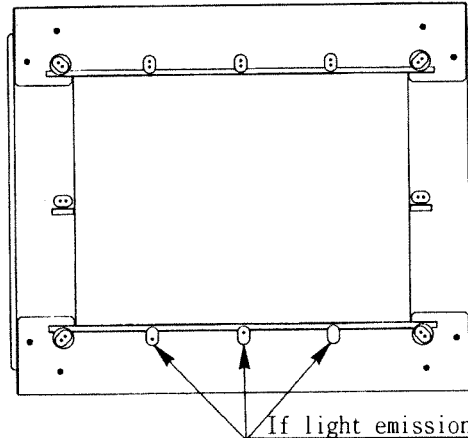


FIG. 15 a

- ① Turn power off.
- ② Remove the Back Door.
- ③ Disconnect the ASSY SENSOR CONNECTOR.
- ④ Pull out the ASSY SENSOR.

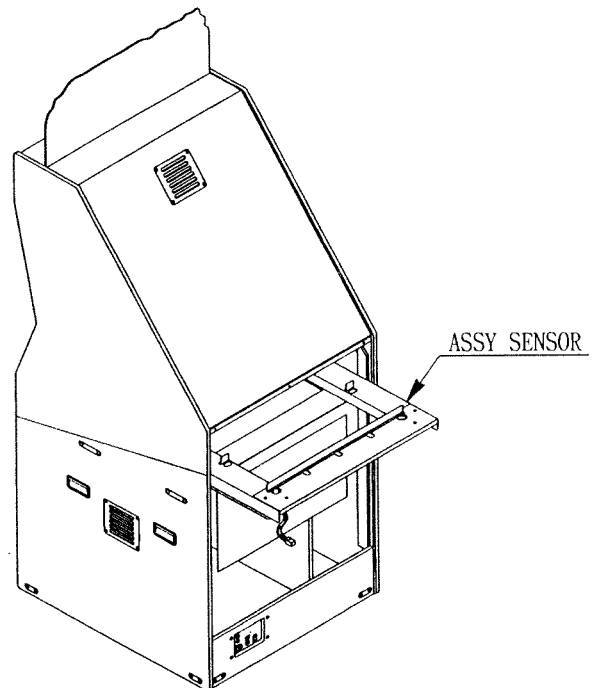


FIG. 15 b

- ⑤ Disconnect the connector from the both ends of the LED BD which shows defects.
- ⑥ Take out the 2 U Nuts to remove and replace the LED BD.

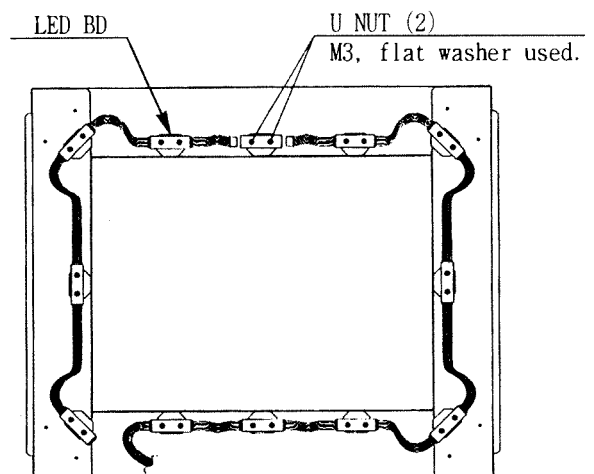


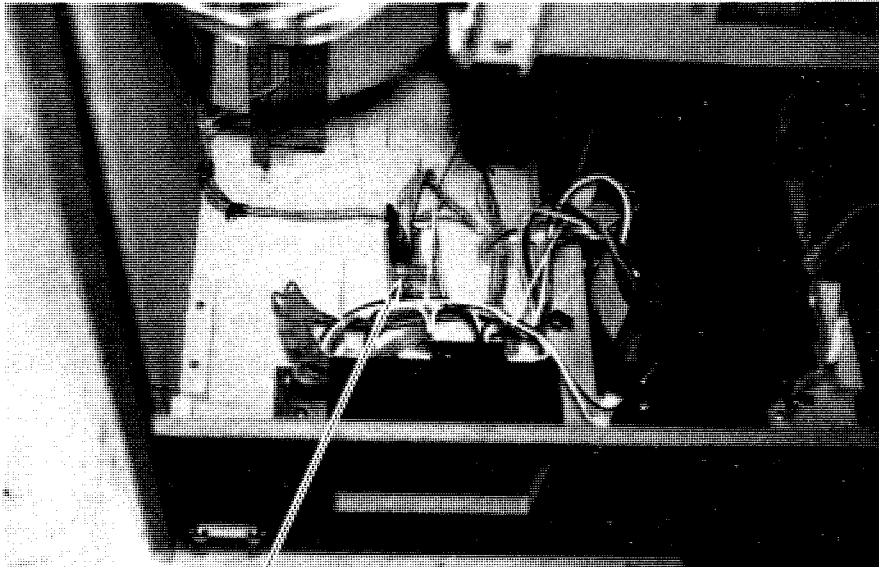
FIG. 15 c

REPLACEMENT OF FUSE



- In order to prevent an electric shock accident, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause a fire or electric shock.
- After eliminating the cause of the fuse blowing, replace the fuse. Depending on the cause of fuse blowing, continued use with the fuse as is blown can cause generation of heat resulting in a fire.

By referring to 12 - 3, remove the Back Door and replace the AC Unit Fuse.



FUSE 5A

514-5036-5000

PHOTO 15

16. GAME BOARD



- In order to prevent electric shock and short circuit accidents, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause a fire or electric shock and short circuit accidents.
- Do not expose the Game BC, etc. without a justifiable reason. Exposed Game BD, etc. can cause electric shock accidents and malfunctioning.



- The electronic parts on the IC Board could be damaged due to human body's static electricity. Before performing IC Board related work, be sure to discharge physically accumulated statics by touching grounded metallic surfaces.
- When asking for the replacement or repair of the product's Game Board (MODEL 3 BOARD), be sure to put the Game Board together with the Shield Case in a Carton Box. Otherwise, the request is not acceptable.

16-1 REMOVING THE BOARD

To replace the IC BD (such as GAME BD, I/O BD, etc.) , take out the IC BD by using the following procedure:

- ① Turn the MAIN SW off.
- ② Take off the screw to unlock and open FRONT DOOR LEFT. Depending on cabinets, the front door may not have this screw.
- ③ The shield case is contained inside FRONT DOOR LEFT.
- ④ Disconnect all the Connectors which connect the Base and the Cabinet.
- ⑤ The shield case is secured to the base (wooden). Take off the wing bolt which secures the base to the cabinet and take out the shield case together with the base.
- ⑥ Take off the 3 screws to remove the case lid. The game BD is contained in the shield case.

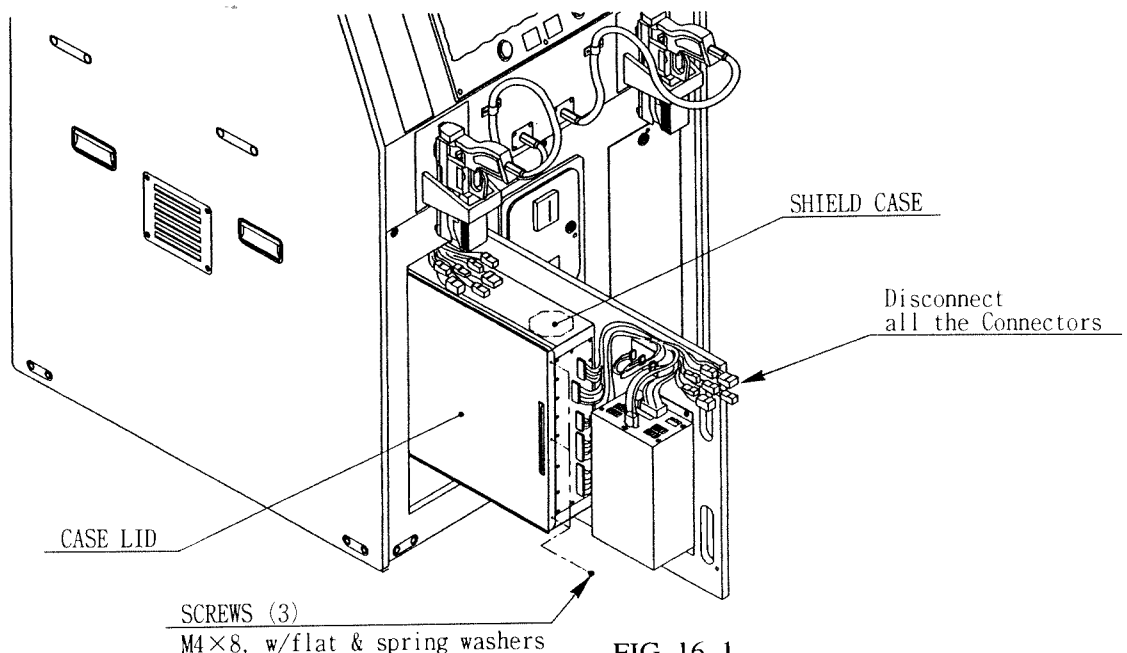


FIG. 16.1

16-2 COMPOSITION OF GAME BOARD

GAME BD JPT (833-13171)

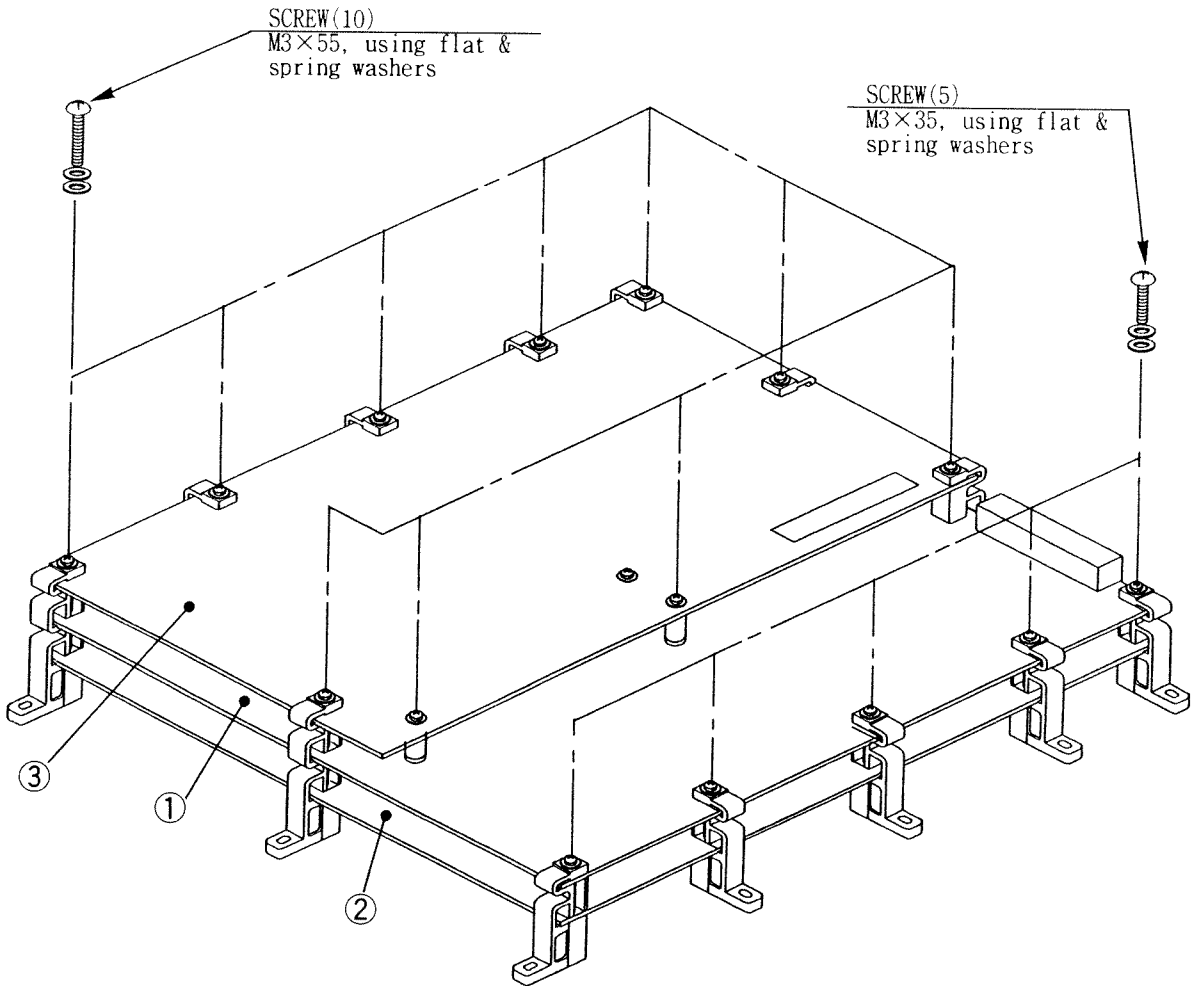
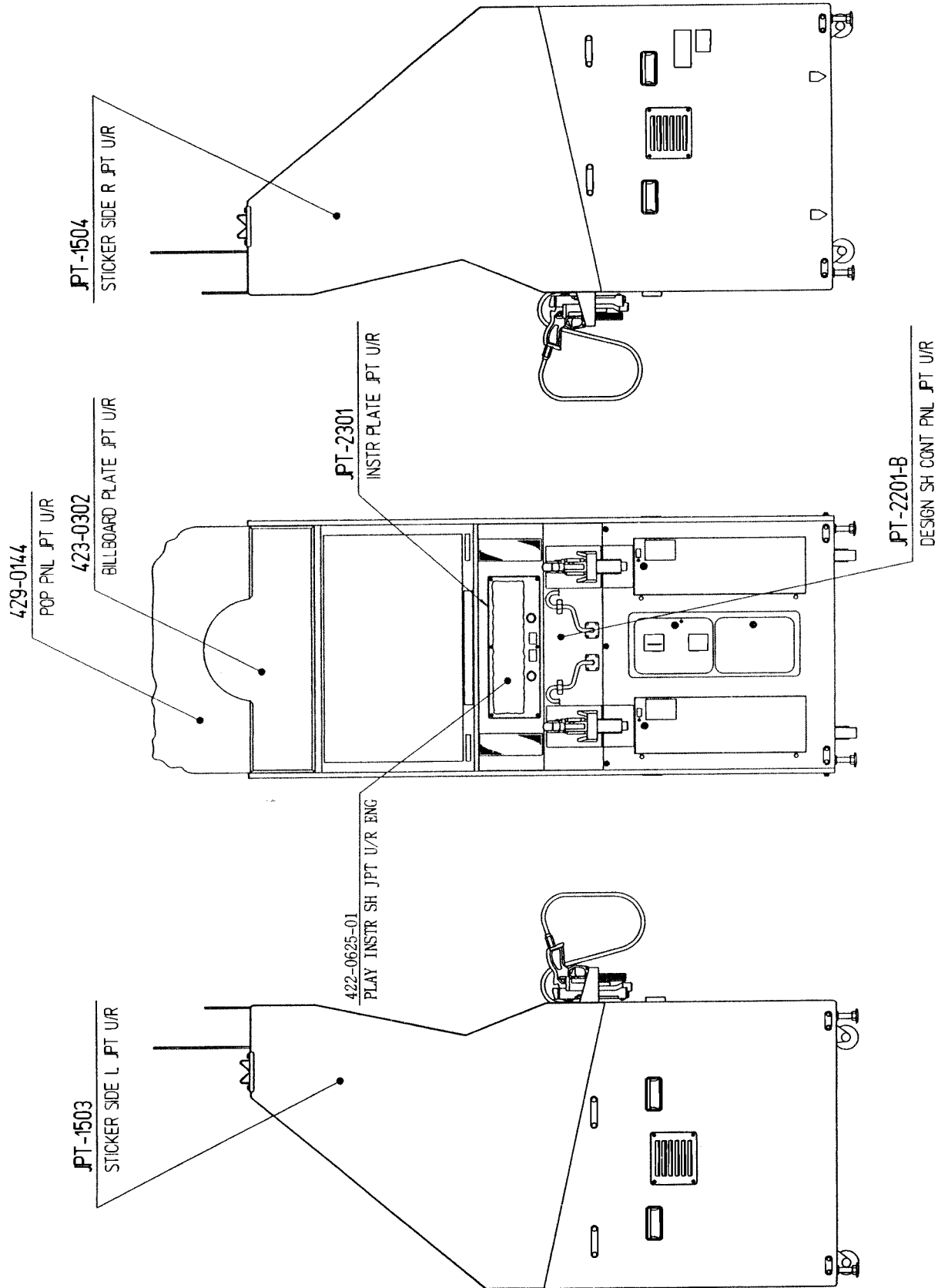


FIG. 16.2

No.	PART No.	DESCRIPTION
①	837-12874	MODEL3 STEP 1.5 CPU BOARD
	837-12874-01	MODEL3 STEP 1.5 CPU BD W/GND BD
②	837-12875	MODEL3 STEP 1.5 VIDEO BOARD
③	834-13172	ROM BD THE LOST WORLD

17. DESIGN RELATED PARTS

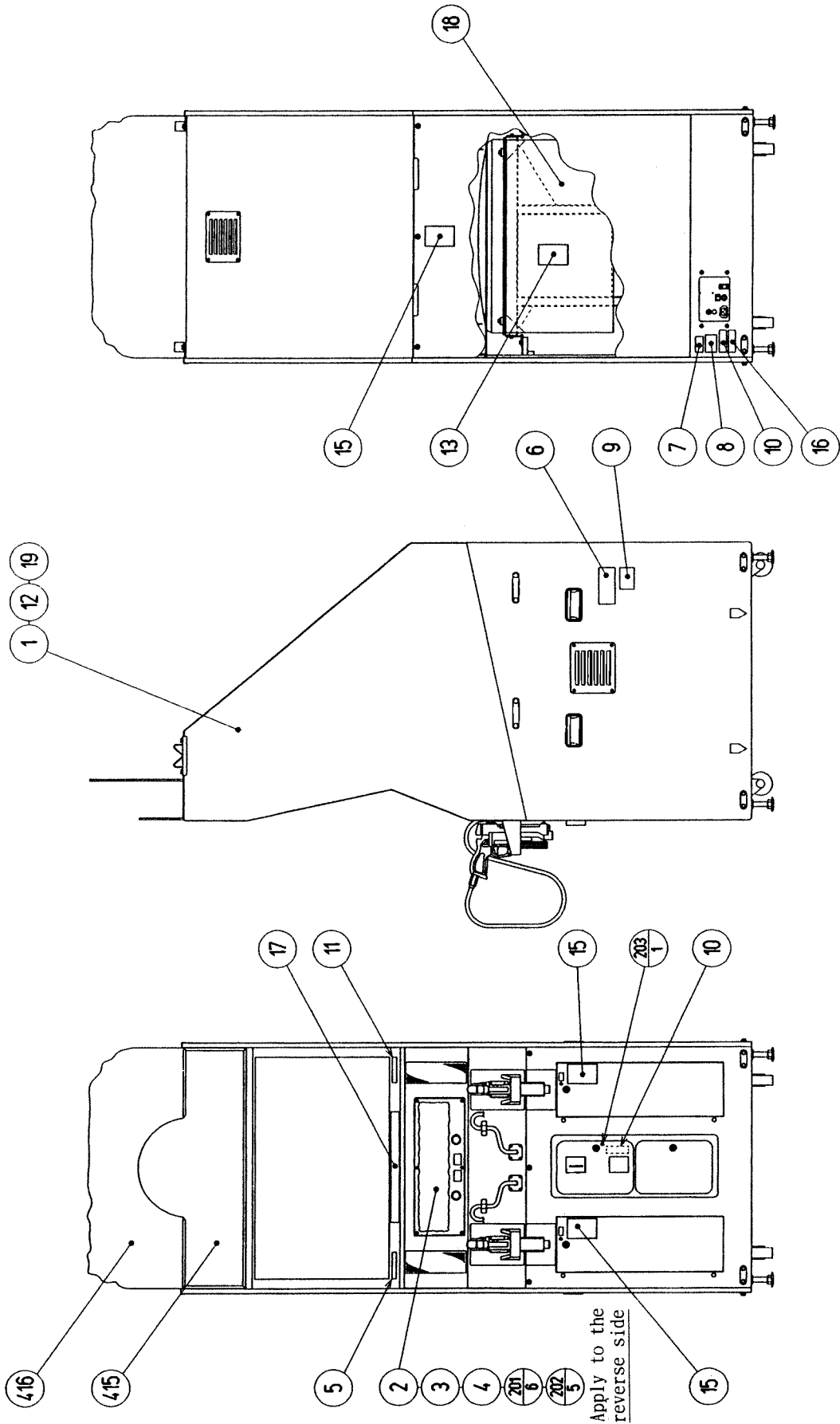
For the Warning Display stickers, refer to Section 1.



18. PARTS LIST

① TOP ASSY THE LOST WORLD U/R

(D-1/2)



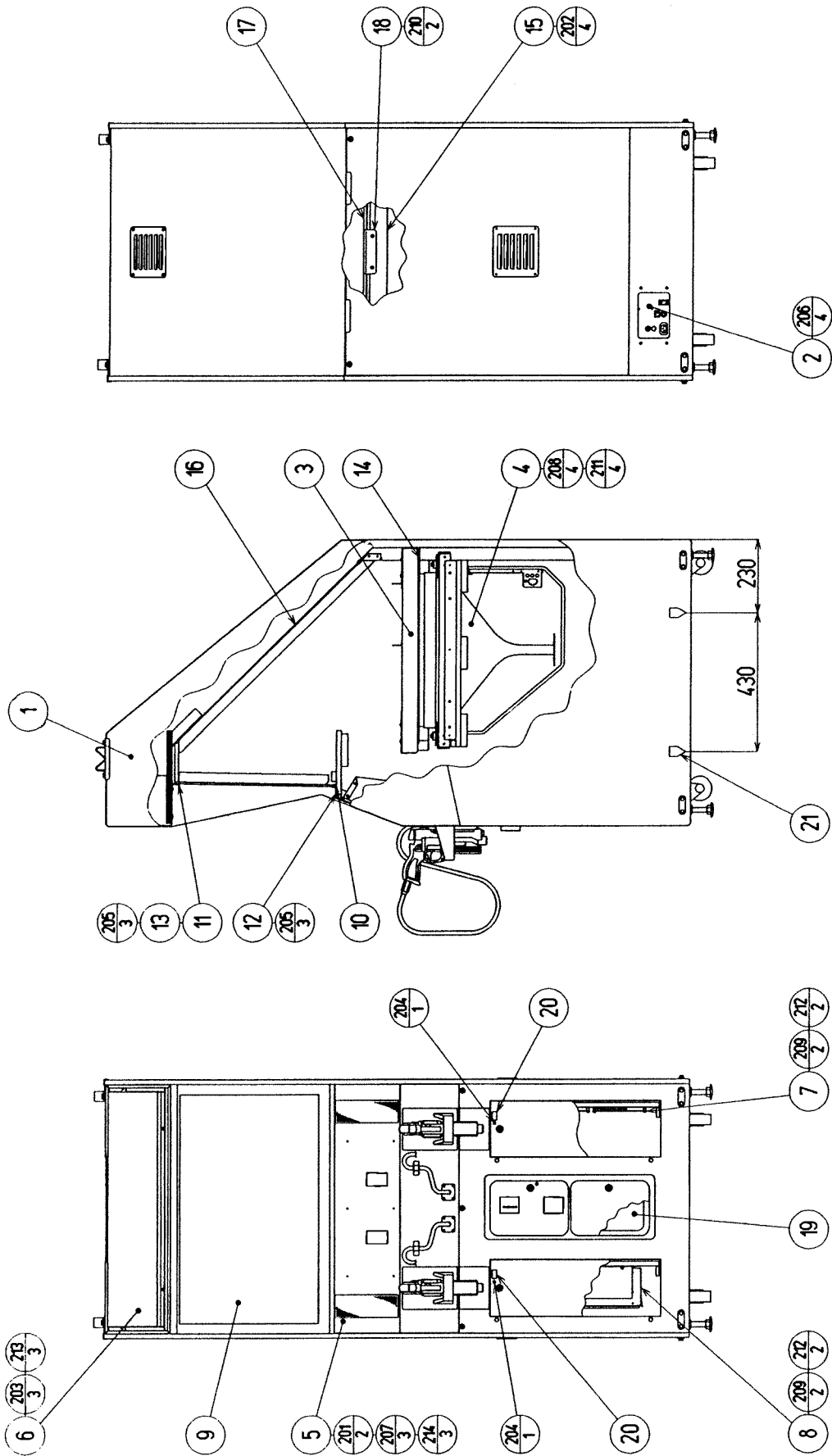
① TOP ASSY THE LOST WORLD U/R

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-10001	ASSY CABINET U/R	
2	JPT-2300	ASSY SW PANEL	
3	422-0625-01	PLAY INSTR SH JPT U/R ENG	
4	421-7907- ~	DENOMI SH ~	
7	421-6594-91	STICKER CERTIFICATE	
9	421-7987	STICKER ELEC SPEC	OTHERS
	421-8408	STICKER ELEC SPEC FOR TAIWAN	TAIWAN
10	421-7988-91	STICKER SERIAL NUMBER	
12	421-8479-01	STICKER INSTR SUNLIGHT ENG	
13	440-DS0013XEG	STICKER D MONITOR ENG	
14	SGM-4323	POLY COVER 900×1300×1800	
15	440-WS0002XEG	STICKER W POWER OFF ENG	
17	440-CS0109-EG	STICKER C ZMB U/R ENG	
18	PRC-1045	COVER	
201	008-T00408-0C	TMP PRF SCR TH CRM M4×8	
202	090-0024	S E TAPE 19MM×50M ROLL L=70	
203	008-T00408-0B	TMP PRF SCR TH BLK M4×8	
401	601-6604-30	CARTON BOX 30	
402	SGM-2675	POLYETHYLENE BAG 240×370	
403	420-6325-03	OWNERS MANUAL JPT U/R ENG	
405	220-5576	KEY MASTER FOR 220-5575	
406	SGM-4111	KEY BAG (SGB-1035X)	
407	540-0006-01	WRENCH M4 TMP SCR	
408	540-0007-01	WRENCH M5 TMP SCR	
409	514-5036-5000	FUSE 6.4×30 5000MA 125V	
410	509-5080	SW MICRO TYPE	
411	390-5160	LAMP WG B TYPE 6V 3W	
413	600-6724	AC CABLE CONNECT TYPE 15A	} AC 110V AREA
	600-6729	AC CABLE CONNECT TYPE 15A	
	600-6618	AC CABLE CONNECT TYPE FOR EXP	
414	SGM-4441	POLY BAG 780×1000×0.05	
415	423-0302	BILLBOARD PLATE JPT U/R	
416	429-0144	POP PNL JPT U/R	
417	090-0174	GLASS CLEANER NAC S-100	
/	105-5216	CHAIN BRKT	
/	601-7975	CHAIN 1080	
/	008-T00412-0C	TMP PRF SCR TH CRM M4×12	
/	050-F00400	FLG NUT M4	
/	008-T00408-0C	TMP PRF SCR TH CRM M4×8	
/	GPD-0002X	SHIPPING BRACKET	
/	421-8740	CAUTION INSTR COP U/R	
/	421-6690-03	STICKER 220V	AC 220V AREA
/	421-6690-05	STICKER 240V	AC 240V AREA
/	421-6690-06	STICKER 110V	AC 110V AREA

② ASSY CABINET U/R (JPT-10001)

(D-1/2)



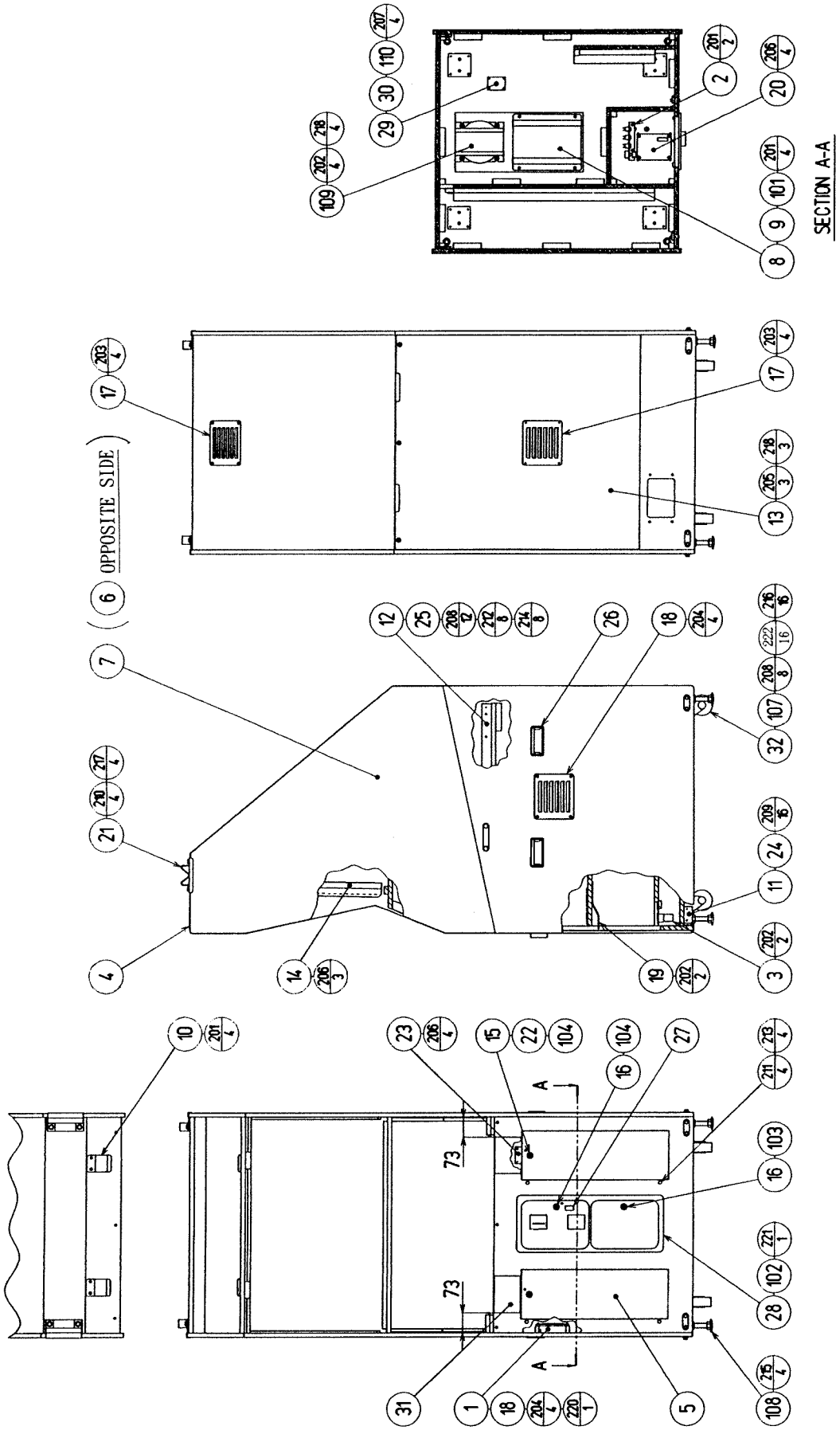
② ASSY CABINET U/R (JPT-10001)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-1500	ASSY SUB-CABI U/R	
2	JPT-1540	AC UNIT	
3	JPT-1550	ASSY SENSOR	
4	COP-1570	ASSY MONITOR 29	
5	JPT-2200	ASSY CONT PNL U/R	
6	JPT-3500	ASSY BILLBOARD	
7	JPT-4500	ASSY PWR SPLY U/R	
8	JPT-4600	ASSY MAIN BD U/R	
9	COP-1510	FRONT GLASS	
10	AIN-1032	RUBBER PACKING	
11	AIN-1033	GLASS HOLDER UPPER	
12	JPT-1509	GLASS HOLDER LOWER	
13	AIN-1035	CUSHION	
14	AIN-1036	WOODEN MASK	
15	AIN-1044	MIRROR BRKT	
16	AIN-1038	MIRROR	
17	AIN-1039	MIRROR SASH	
18	AIN-1040	MIRROR HOLDER	
19	253-5366	CASH BOX	
21	421-8885	STICKER CAUTION FORK	
201	000-F00416	M SCR FH M4×16	
202	000-P00412-W	M SCR PH W/FS M4×12	
203	000-T00420-0B	M SCR TH BLK M4×20	
204	008-T00412-0C	TMP PRF SCR TH CRM M4×12	
205	000-T00516-0B	M SCR TH BLK M5×16	
206	000-T00520-0B	M SCR TH BLK M5×20	
207	008-T00525-0B	TMP PRF SCR TH BLK M5×25	
208	030-000612-S	HEX BLT W/S M6×12	
209	032-000430	WING BLT M4×30	
210	050-F00400	FLG NUT M4	
211	060-F00600	FLT WSHR M6	
212	068-441616	FLT WSHR 4. 4-16×1.6	
213	068-441616-0B	FLT WSHR BLK 4. 4-16×1.6	
214	068-552016-0B	FLT WSHR BLK 5. 5-20×1.6	

③ ASSY SUB-CABI U/R (JPT-1500)

(D-1/3)



③ ASSY SUB-CABI U/R (JPT-1500)

(D-2/3)

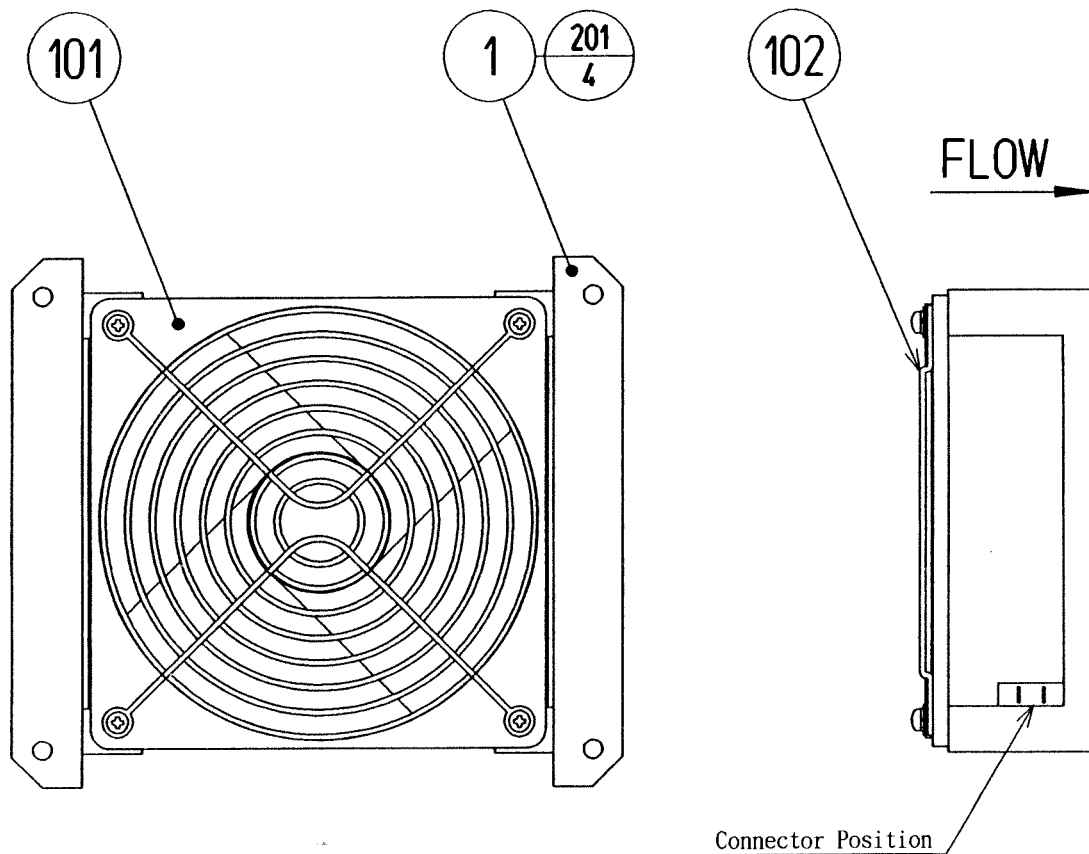
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-1530	FAN UNIT	
2	SDW-0360	SW UNIT	
3	610-0395-01	METER UNIT S	
4	JPT-1501	WOODEN CABINET	
5	JPT-1502	FRONT DOOR	
6	JPT-1503	STICKER SIDE L JPT U/R	
7	JPT-1504	STICKER SIDE R JPT U/R	
8	JPT-1505	WOOFER BRKT	
9	JPT-1506	WOOFER HOLD RUBBER	
10	JPT-1507	HOOK BRKT	
11	ARC-1006	LEG BRACKET	
12	AIN-1008	MONITOR SUPPORT BRKT	
13	COP-1503	BACK DOOR	
14	COP-1506	WIRE COVER	
15	DP-1148X	LKG TNG	
16	DP-1167	TNG LKG	
17	UP-1018	AIR VENT	
18	105-5239-03	AIR VENT	
19	105-5169	LOCK BRACKET W	
20	105-5171	CHUTE PLATE SINGLE	
21	105-5258-01	SHIPPING HOOK BRKT RED	
22	117-0062	PLATE LOCK RETAINER	
23	117-5098	TNG RETAINER PLATE	
24	117-5191	PLATE	
25	117-5247	PLATE 6-80	
26	253-5396-02	CABINET HANDLE WHITE	
28	421-7501-02	STICKER 6.3V 0.15A	
29	838-11856-01	CONNECT BD W/FUSE & COVER	
30	421-6595-05	STICKER 5A	
31	JPT-1508	PROTECT SHEET B	
32	SCR-1008	NUT PLATE FOR CASTER	
101	130-5155	SPEAKER BOX SUB WOOFER	
102	220-5237- ~	ASSY C. C 2DR ~	
103	220-5574	CAM LOCK W/KEYS	
104	220-5575	CAM LOCK MASTER W/O KEY	
105	280-5275-SR10	CORD CLAMP SR10	
106	310-5029-F20	SUMI TUBE F F 20MM	
107	601-9377	CASTER FAI=75	
108	601-5699X	LEG ADJUSTER BOLT M16×75	
109	560-5316	XFMR 100V5A 12.5V6A	
110	514-5036-5000	FUSE 6.4×30 5000MA 125V	
111	280-5009-01	CORD CLAMP 21	
112	280-0419	HARNESS LUG	
113	601-0460	PLASTIC TIE BELT 100MM	
201	000-P00416-W	M SCR PH W/FS M4×16	
202	000-P00420-W	M SCR PH W/FS M4×20	
203	000-T00420-0B	M SCR TH BLK M4×20	
204	000-T00420-0C	M SCR TH CRM M4×20	
205	008-T00430-0B	TMP PRF SCR TH BLK M4×30	
206	011-T00312	TAP SCR TH 3×12	

③ ASSY SUB-CABI U/R (JPT-1500)

(D-3/3)

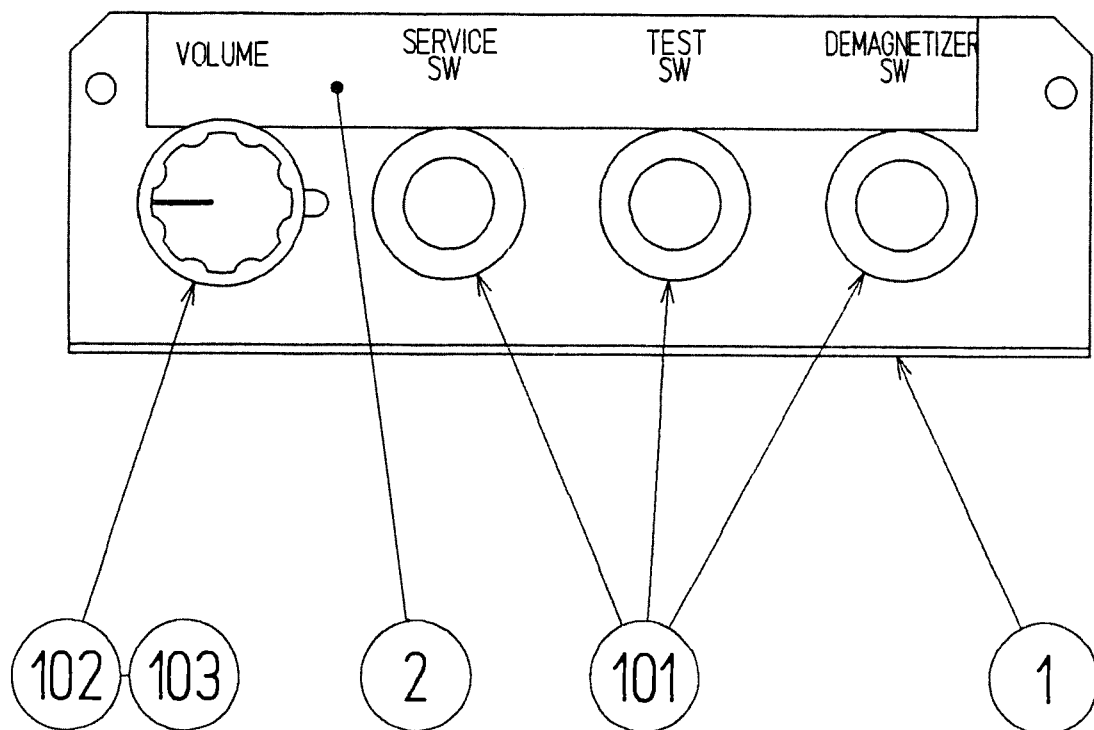
ITEM NO.	PART NO.	DESCRIPTION	NOTE
207	011-T00325	TAP SCR TH 3×25	
208	011-T03512	TAP SCR TH 3.5×12	
209	030-000630-SC	HEX BLT W/S CRM M6×30	
210	030-000830-SB	HEX BLT W/S BLK M8×30	
211	031-000530-0C	CRG BLT CRM M5×30	
212	031-000630-0C	CRG BLT CRM M6×30	
213	050-F00500	FLG NUT M5	
214	050-F00600	FLG NUT M6	
215	050-H01600	HEX NUT M16	
216	060-F00600	FLT WSHR M6	
217	060-F00800-0B	FLT WSHR BLK M8	
218	068-441616-0B	FLT WSHR BLK 4.4-16×1.6	
219	011-F00310	TAP SCR FH 3×10	
220	010-P00406-F	S-TITE SCR PH W/F M4×6	
221	000-P00408-W	M SCR PH W/FS M4×8	
222	030-000625-S	HEX BLT W/S M6×25	
301	600-6455-02	WIRE HARN C.C DOOR SINGLE	
302	600-6709-52	WIRE HARN EARTH 400MM	
303	600-6709-54	WIRE HARN EARTH 150MM	
304	600-6925-004	WIRE HARN XFMR AC100V OUT	
305	600-6925-005	WIRE HARN XFMR AC12.5V OUT	
306	600-6925-006	WIRE HARN CONN BD 15P	
307	600-6925-026	WIRE HARN EXT SPEAKER A	
308	600-6925-027	WIRE HARN DC12V	
309	600-6925-028	WIRE HARN EXT SOUND	
310	600-6925-029	WIRE HARN EXT RGB & I/O	
311	600-6925-030	WIRE HARN EXT I/O & A/D	
312	600-6925-031	WIRE HARN EXT SOUND VR	
313	600-6925-032	WIRE HARN EXT WOOFER	
314	600-6925-033	WIRE HARN EXT LED BD	
315	600-6925-045	WIRE HARN EARTH MAIN	
316	600-6925-047	WIRE HARN EARTH COIN METER	

④ FAN UNIT (JPT-1530)



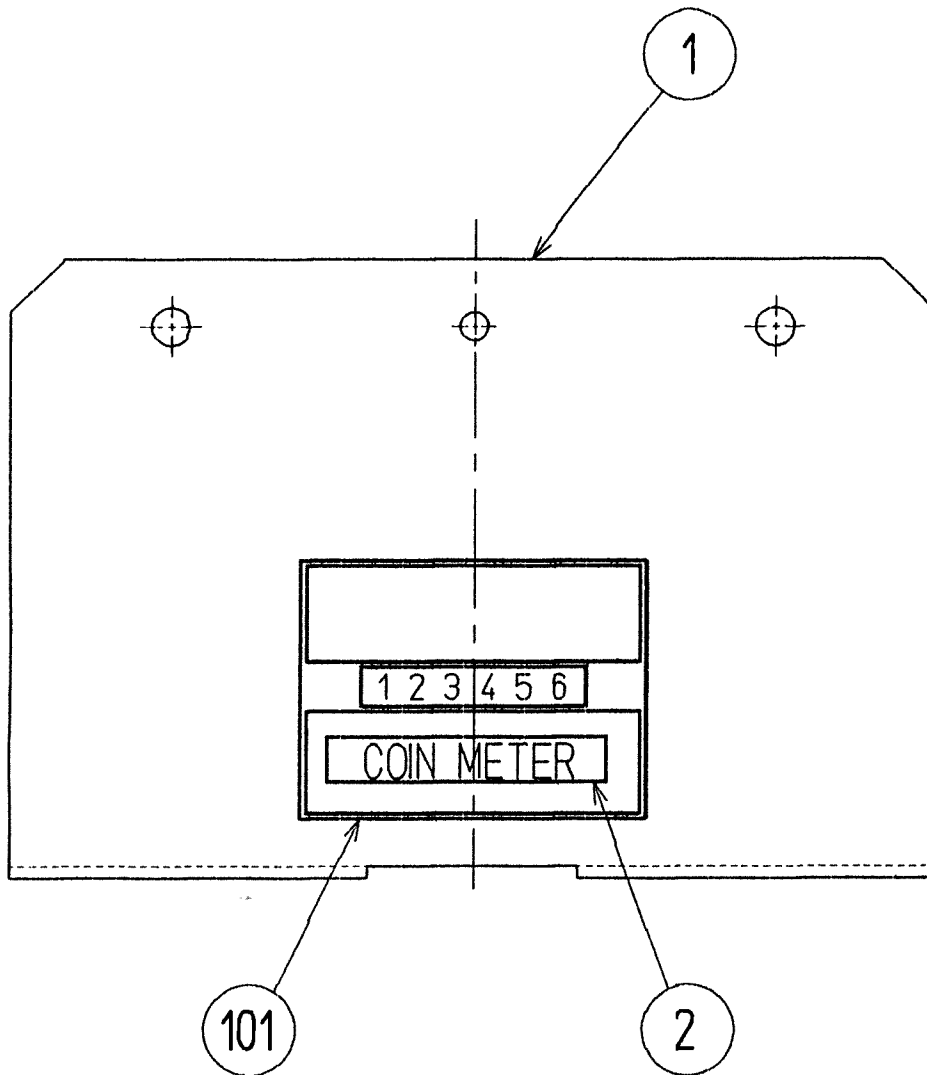
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	150-5238	FAN BRKT	
101	260-0011-02	AXIAL FLOW FAN AC100V 50-60HZ	
102	601-8543	FAN GUARD	
103	280-5275-SR10	CORD CLAMP SR10	
201	000-P00312-W	M SCR PH W/FS M3×12	

⑤ SW UNIT (SDW-0360)



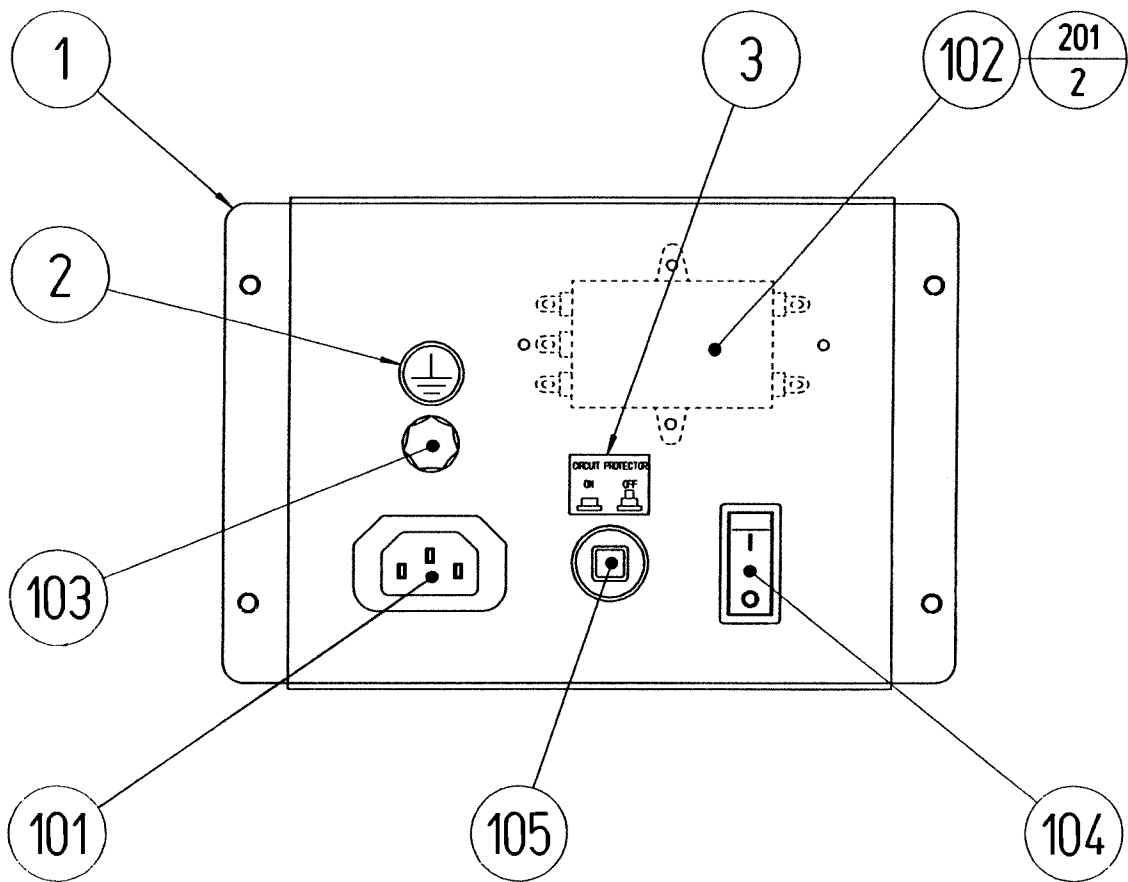
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	KR-1060	SW BRACKET	
2	421-6481	STICKER SW	
101	509-5028	SW PB 1M	
102	220-5179	VOL CONT B-5K OHM	
103	601-0042	KNOB 22MM	
104	310-5029-D20	SUMITUBE F D20MM	
105	601-0460	PLASTIC TIE BELT 100MM	
301	600-6373-53	WIRE HARN TEST&SERVICE LEFT	
302	600-6373-55	WIRE HARN VOL. LEFT	

⑥ METER UNIT S (610-0395-01)



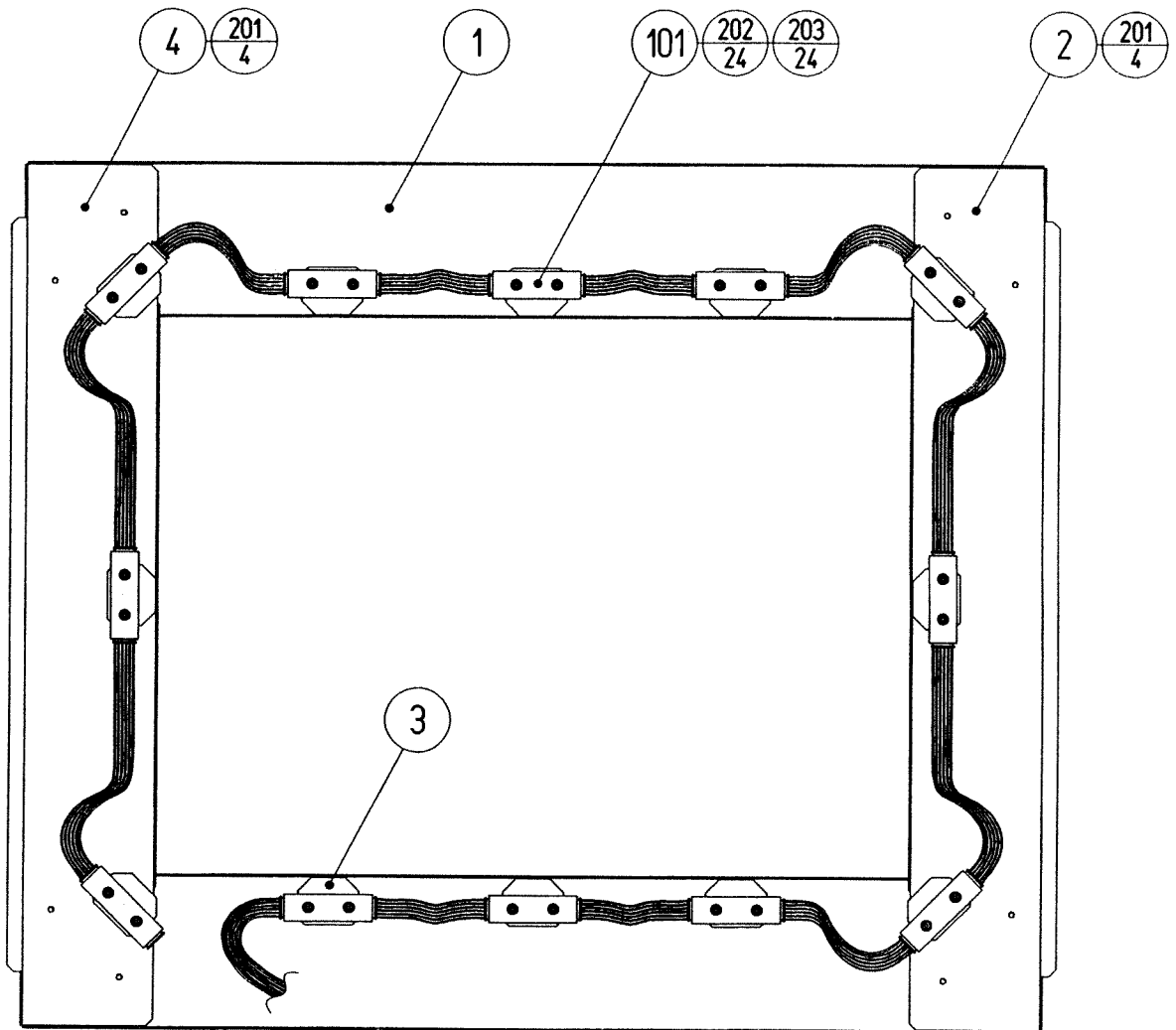
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	105-5233-01	METER BRKT S	
2	421-6591-01	STICKER COIN METER	
101	220-5412	MAG CNTR W/CONN	

⑦ AC UNIT (JPT-1540)



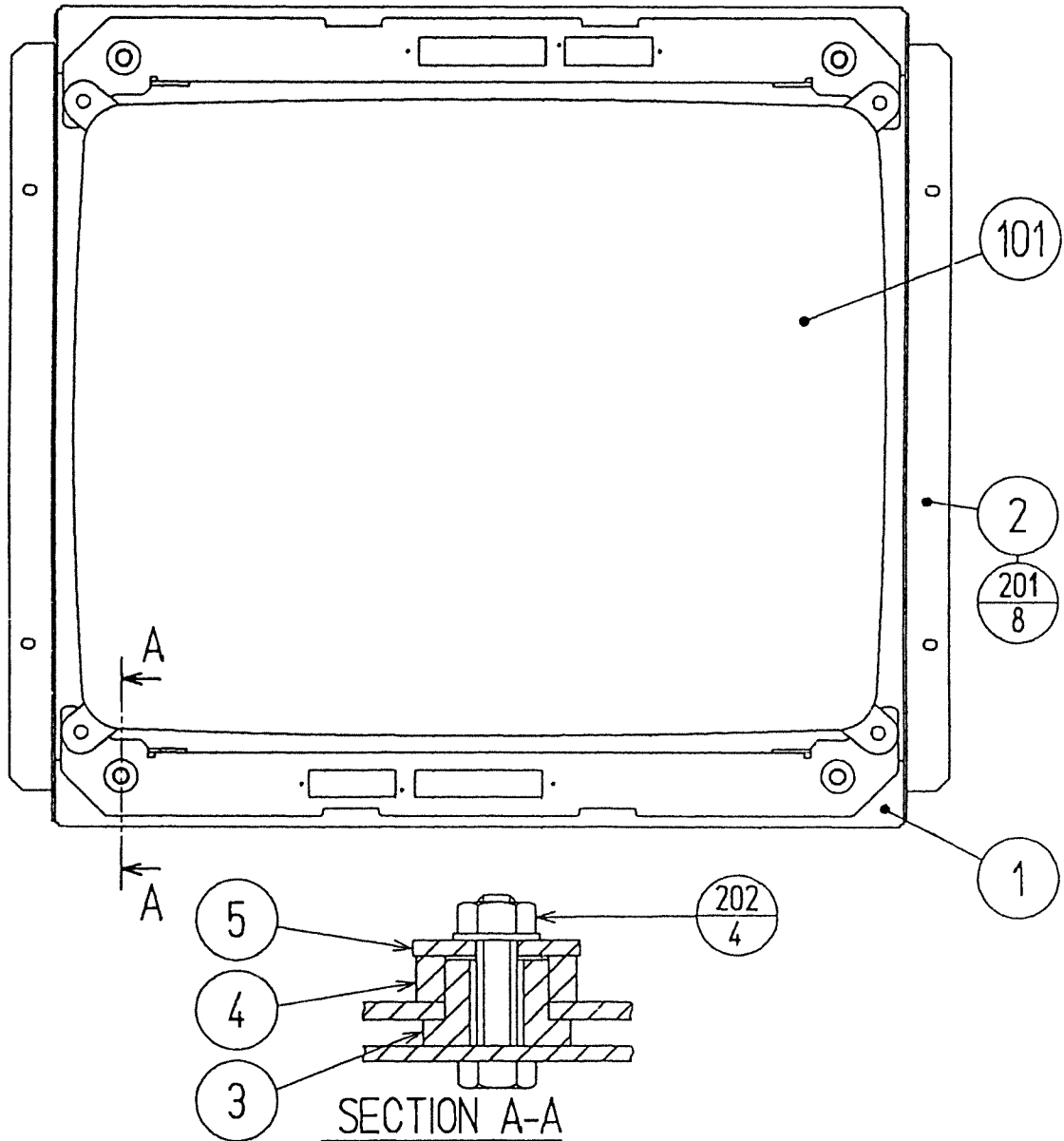
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-1541	AC BRACKET	
2	421-8202	STICKER EARTH MARK	
3	421-7468-02	STICKER C. P W/PIC	
101	214-0202	AC INLET PANEL TYPE	
102	270-5020	NOISE FILTER AC250V 6A	
103	280-0417	TERMINAL BINDING POST BLACK	
104	509-5453-V-B	SW ROCKER J8 V-B	
105	512-5046-5000	C. P 5000MA CE UL	AC 110V AREA
	512-5046-3000	C. P 3000MA CE UL	AC 220~240V AREA
106	280-5009-01	CORD CLAMP 21	
107	601-0460	PLASTIC TIE BELT 100MM	
108	310-5029-F20	SUMI TUBE F F 20MM	
201	010-P00306-F	S-TITE SCR PH W/F M3×6	
301	600-6925-001	WIRE HARN C. P.	
302	600-6925-002	WIRE HARN N. FILTER IN	
303	600-6925-003	WIRE HARN N. FILTER OUT	
304	600-6925-043	WIRE HARN EARTH AC INLET	
305	600-6925-044	WIRE HARN EARTH AC UNIT	

⑧ ASSY SENSOR (JPT-1550)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-1551	SENSOR BRKT A	
2	JPT-1552	SENSOR BRKT B	
3	JPT-1082	IR COVER	
4	JPT-1553	SENSOR BRKT C	
101	838-13145	LED BD GUN SENSE	
102	280-5009-01	CORD CLAMP 21	
103	280-5275-SR10	CORD CLAMP SR10	
201	000-P00408-WB	M SCR PH W/FS BLK M4×8	
202	050-U00300	U NUT M3	
203	060-F00300	FLT WSHR M3	
301	600-6925-039	WIRE HARN LED BD A	
302	600-6925-040	WIRE HARN LED BD B	
303	600-6925-041	WIRE HARN LED BD C	
304	600-6925-042	WIRE HARN LED BD D	

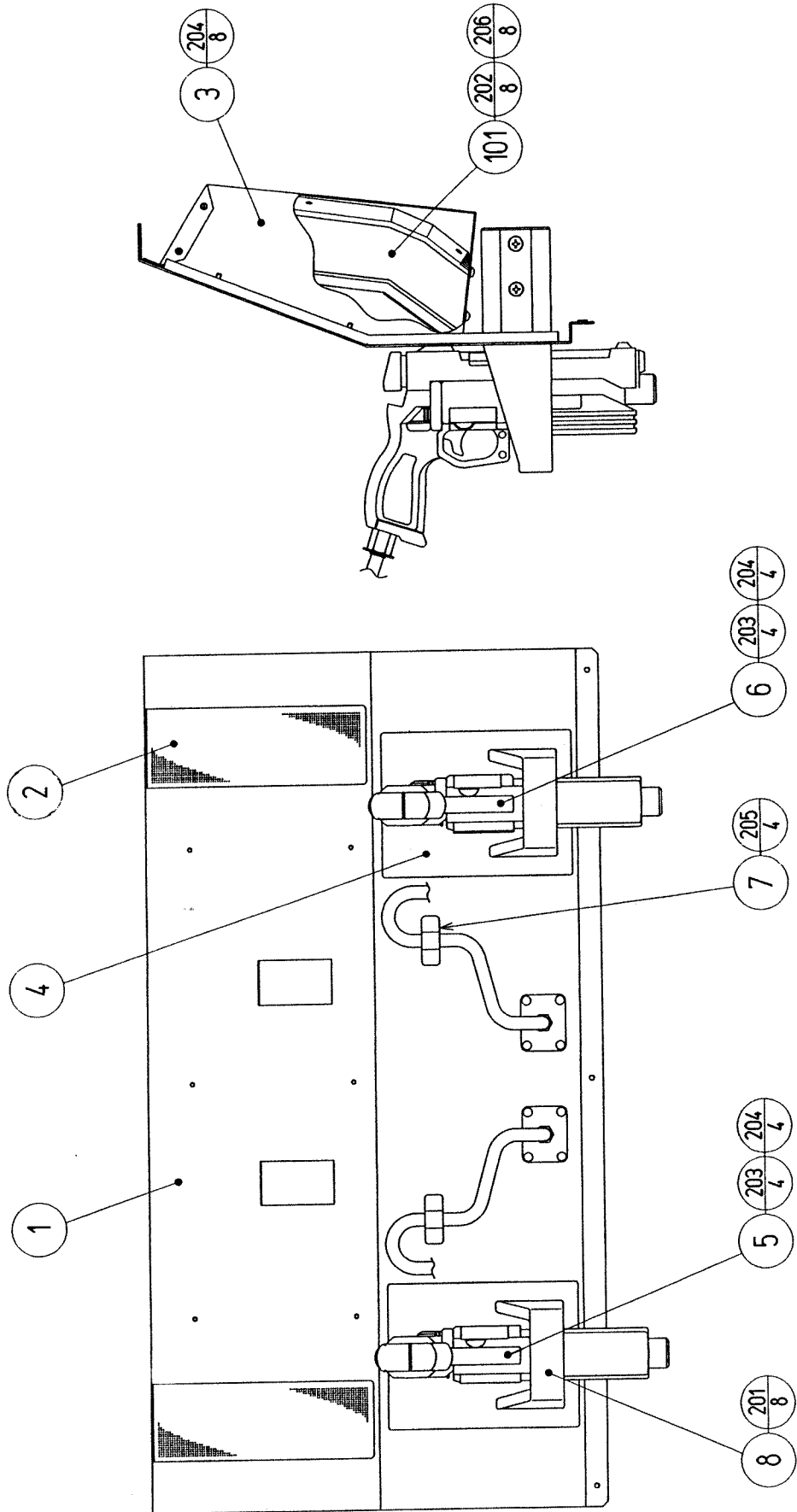
⑨ ASSY MONITOR 29 (COP-1570)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	AIN-1026	MONITOR BRKT A	
2	AIN-1027	MONITOR BRKT B	
3	280-5112	BUSH FOR TV	
4	280-5113	COLLAR FOR TV	
5	280-5114	SPACER 6.4-25×2	
101	200-5242-24-05	ASSY CLR DSPL 29 TYPE 24K 100V	
	200-5243-24-01	ASSY CLR DSPL 29 TYPE 24K 100V	
	200-5387-24-01	ASSY CLR DSPL 29 TYPE 24K AUTO 100V	
201	000-P00512-W	M SCR PH W/FS M5×12	
202	050-F00600	FLG NUT M6	

⑩ ASSY CONT PNL U/R (JPT-2200)

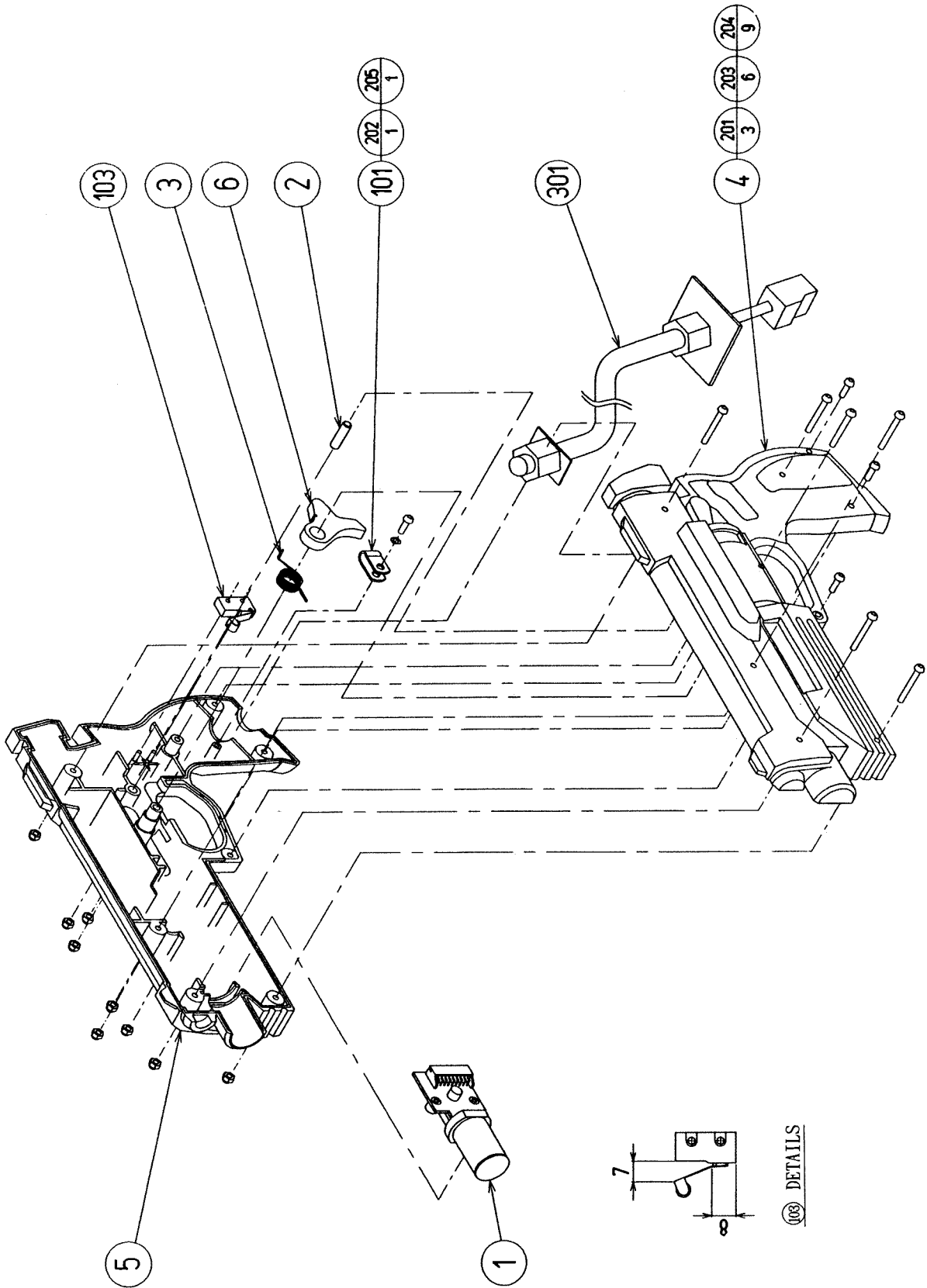
(D-1/2)



⑩ ASSY CONT PNL U/R (JPT-2200)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2201	CONT PANEL BASE	
2	JPT-2202	SPEAKER NET	
3	JPT-2203	SPEAKER BRKT	
4	JPT-2204	PROTECT SHEET	
5	JPT-2010	CONTROL UNIT 1P U/R	
6	JPT-2060	CONTROL UNIT 2P U/R	
8	CPT-1019	HOLDER	
101	130-5162	GULL BOX SPEAKER 80HM 8W	
102	280-5009-01	CORD CLMAP 21	
103	280-5275-SR10	CORD CLAMP SR10	
104	601-0460	PLASTIC TIE BELT 100MM	
201	000-P00612-W	M SCR PH W/FS M6×12	
202	012-P00412	TAP SCR #2 PH 4×12	
203	031-000410-0C	CRG BLT CRM M4×10	
204	050-F00400	FLG NUT M4	
205	050-U00400	U NUT M4	
206	060-F00400	FLT WSHR M4	
301	600-6925-034	WIRE HARN EXT SW PANEL	
302	600-6925-036	WIRE HARN EXT SPEAKER B	
303	600-6925-046	WIRE HARN EARTH CONT PNL	



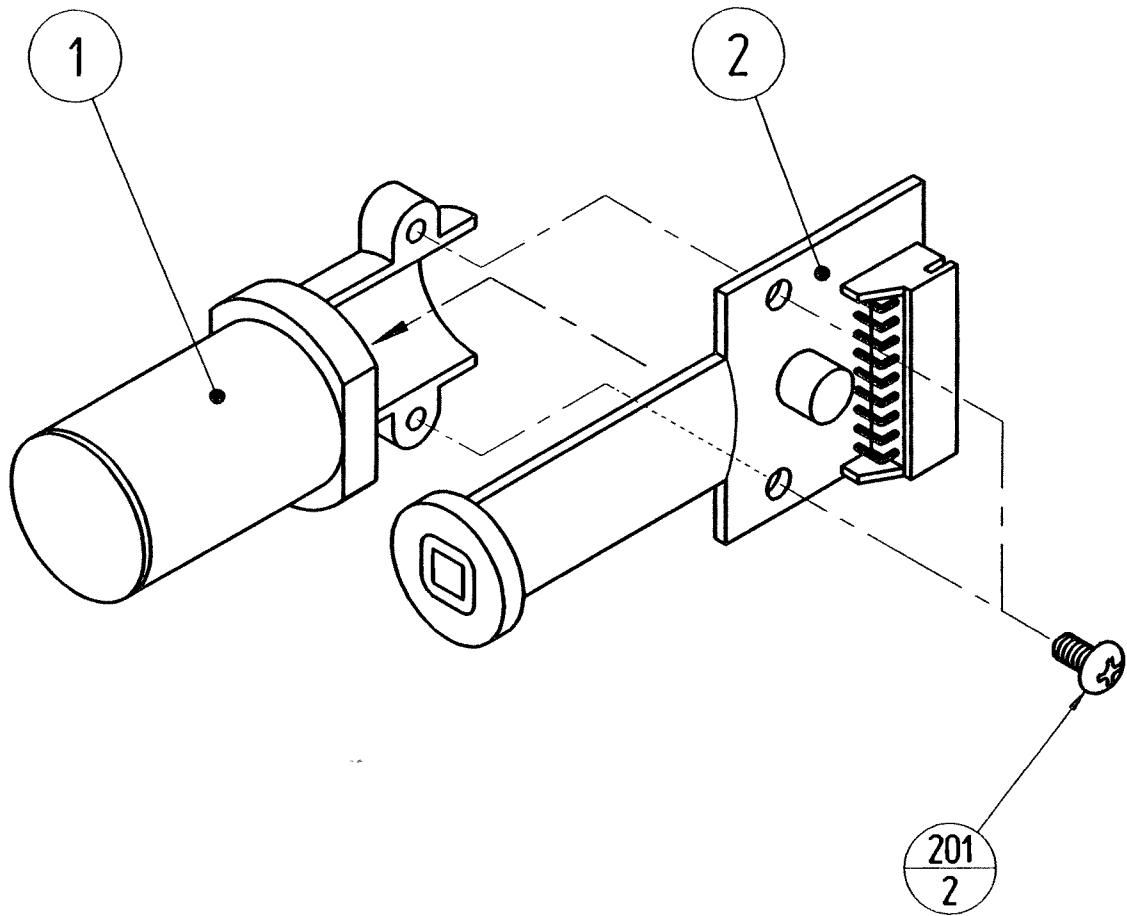
NOTE: When assembling ⑩③, bend the Actuator as shown in the Detail FIG. and adjust the Actuator so as to allow the Trigger of ⑥ to turn the Microswitch ON-OFF correctly.

⑪ CONTROL UNIT 1P U/R (JPT-2010)

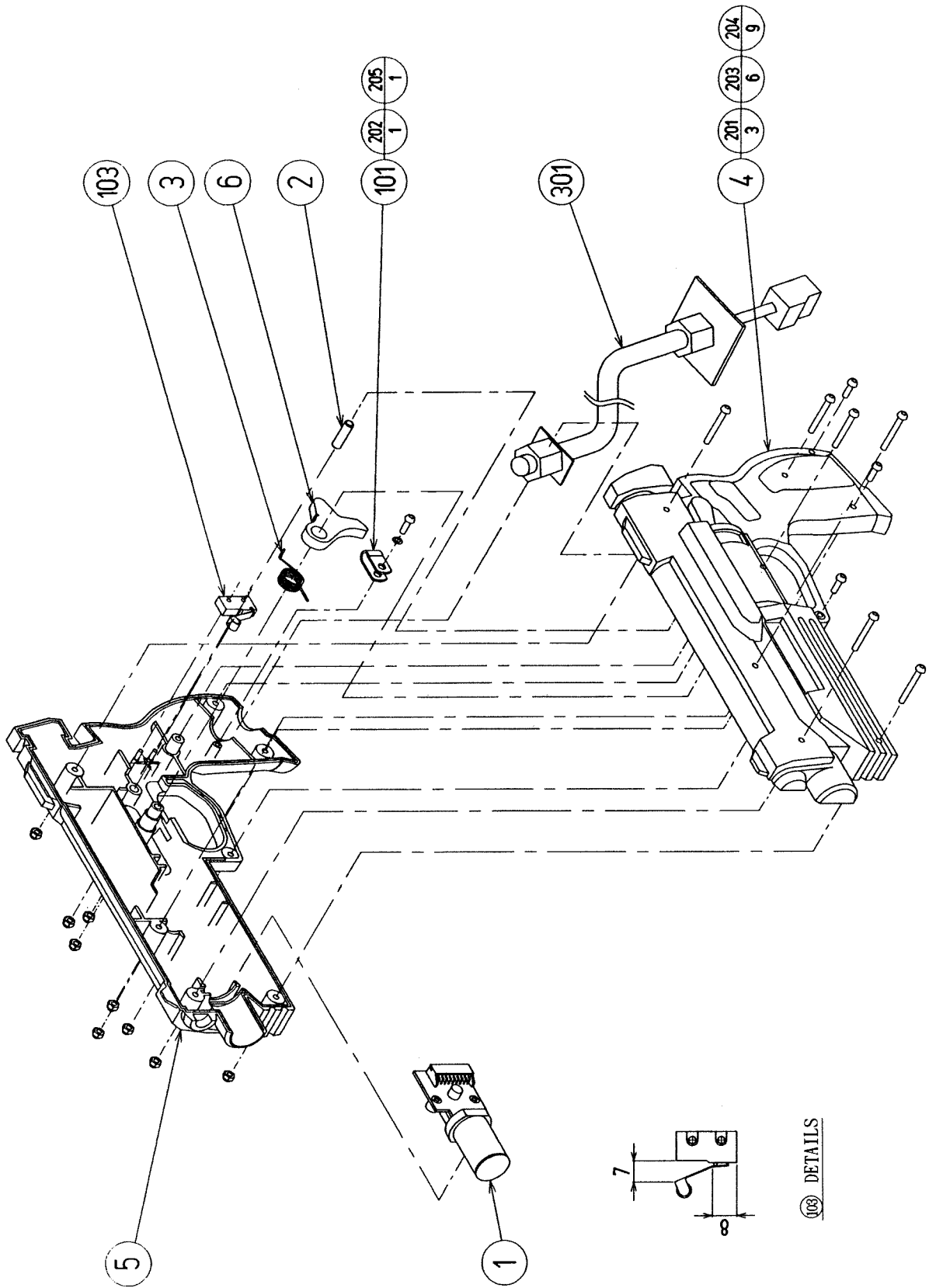
(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2030	SENSOR UNIT	
2	COP-2005	STOPPER PIN	
3	125-5124	TORSION SPRING	
4	253-5404-01	COVER LEFT BLUE	
5	253-5405-01	COVER RIGHT BLUE	
6	253-5406-01	TRIGGER BLUE	
101	280-5124-03	NYLON CLAMP NK03	
102	310-5029-D20	SUMITUBE F D 20 MM	
103	509-5080	SW MICRO TYPE	
104	601-0460	PLASTIC TIE BELT 100MM	
201	000-P00308-0B	M SCR PH BLK M3×8	
202	012-P00308	TAP SCR #2 PH 3×8	
203	FAS-000015	M SCR PH BLK M3×25	
204	FAS-500006	CAP NUT TYPE 3 BLK M3	
205	060-F00300	FLT WSHR M3	
301	600-6925-037	WIRE HARN GUN 1P	

⑫ SENSOR UNIT (JPT-2030)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2031	SENSOR HOLDER	
101	838-13144	SENSOR BD GUN SENSE	
201	012-P00306	TAP SCR #2 PH 3×6	



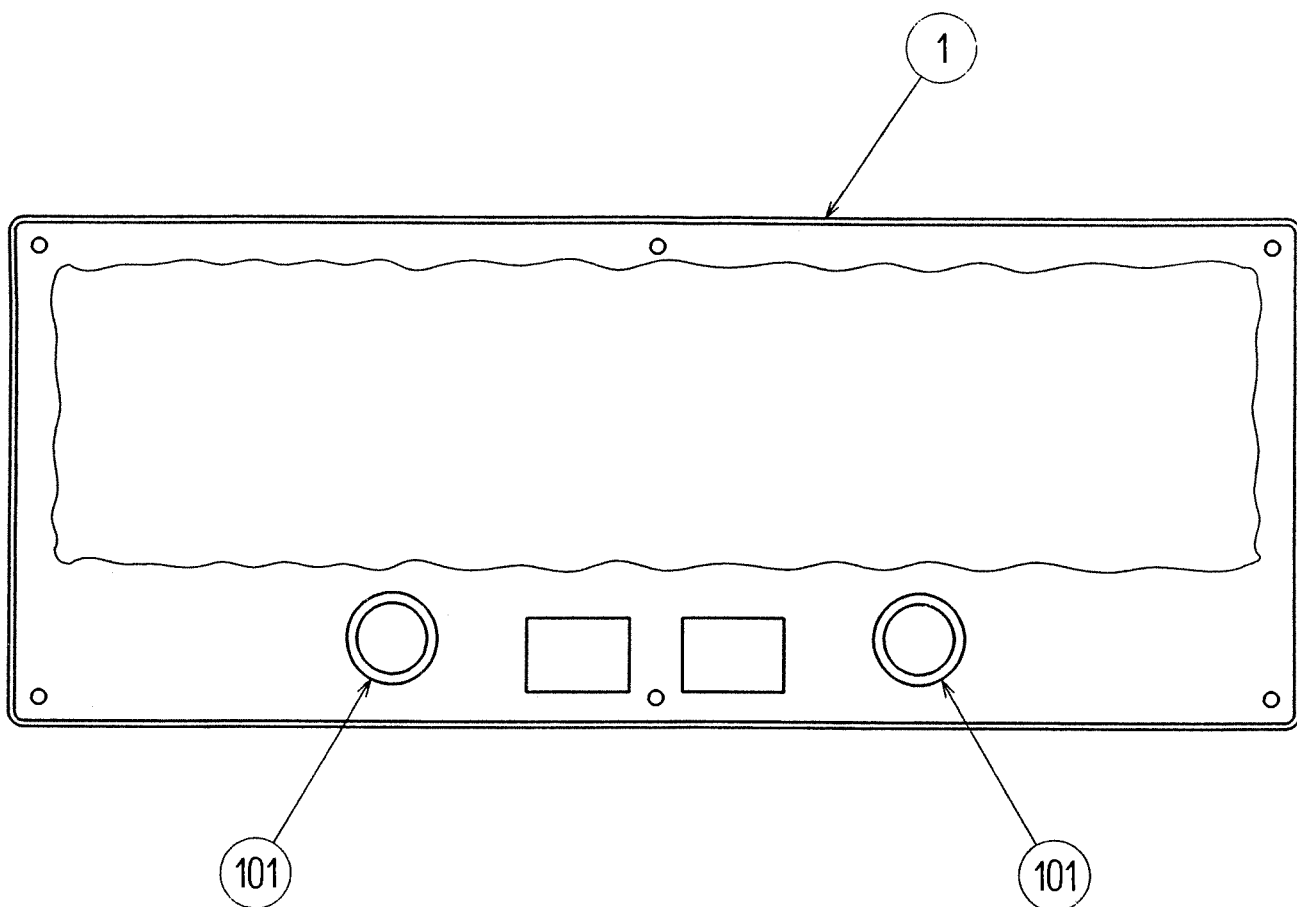
NOTE: When assembling ⑩③, bend the Actuator as shown in the Detail FIG. and adjust the Actuator so as to allow the Trigger of ⑥ to turn the Microswitch ON-OFF correctly.

⑬ CONTROL UNIT 2P U/R (JPT-2060)

(D-2/2)

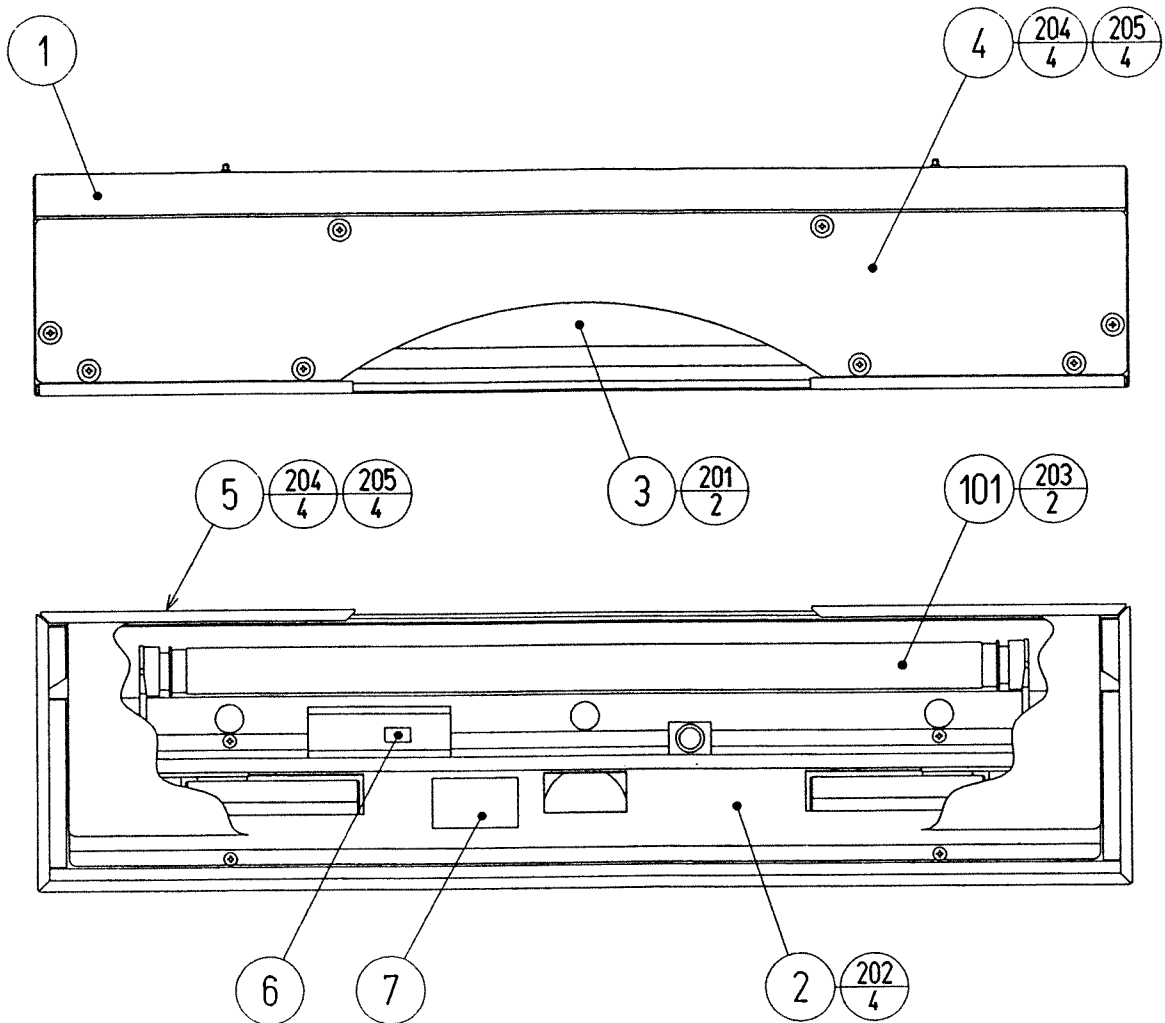
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2030	SENSOR UNIT	
2	COP-2005	STOPPER PIN	
3	125-5124	TORSION SPRING	
4	253-5404-02	COVER LEFT RED	
5	253-5405-02	COVER RIGHT RED	
6	253-5406-02	TRIGGER RED	
101	280-5124-03	NYLON CLAMP NK03	
102	310-5029-D20	SUMITUBE F D 20 MM	
103	509-5080	SW MICRO TYPE	
104	601-0460	PLASTIC TIE BELT 100MM	
201	000-P00308-0B	M SCR PH BLK M3×8	
202	012-P00308	TAP SCR #2 PH 3×8	
203	FAS-000015	M SCR PH BLK M3×25	
204	FAS-500006	CAP NUT TYPE 3 BLK M3	
205	060-F00300	FLT WSHR M3	
301	600-6925-038	WIRE HARN GUN 2P	

⑭ ASSY SW PANEL (JPT-2300)

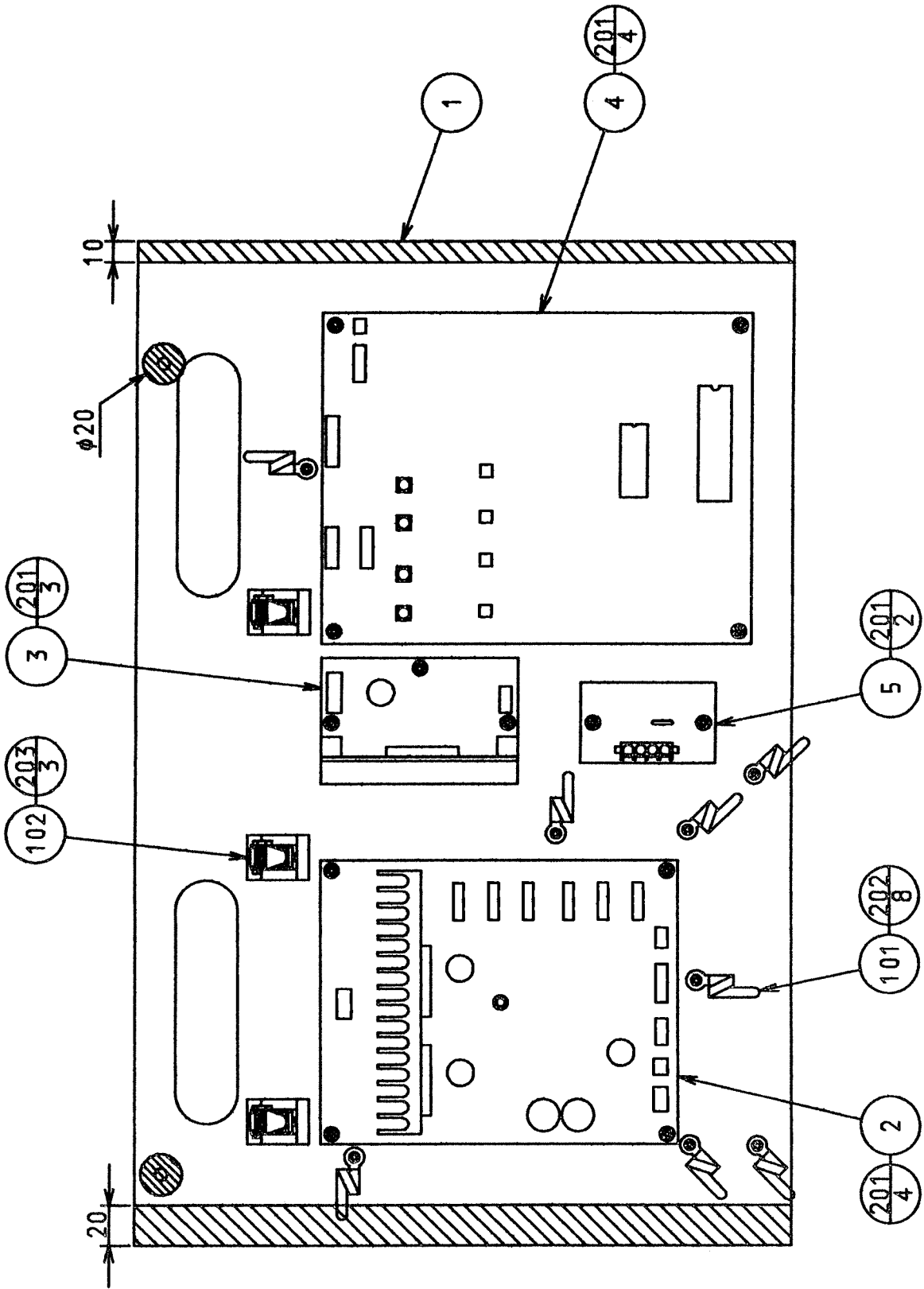


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2301	INSTR PLATE JPT U/R	
101	509-5610-03YE	SW PB 30M YELLOW W/L WH 5V 3W	
301	600-6457-10	WIRE HARN START	
302	600-6457-36	WIRE HARN START EX	

⑮ ASSY BILLBOARD (JPT-3500)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-3501	BILLBOARD CASE	
2	JPT-3502	REFLECTOR	
3	JPT-3503	LAMP COVER A	
4	JPT-3504	LAMP COVER B	
5	JPT-3505	BILLBOARD UPPER SUSH	
6	421-7501-17	STICKER FL 20W	
7	440-WS0012XEG	STICKER W HIGH TEMP ENG	
101	390-5538-20SD	ASSY FL20W SD W/CONN HIGH L	
	390-5636-20SD	ASSY FL20W SD W/CONN HIGH S	
	390-5637-20SD	ASSY FL20W SD W/CONN HIGH T	
102	280-5275-SR10	CORD CLAMP SR10	
201	000-F00408-0B	M SCR FH BLK M4×8	
202	000-T00408-0B	M SCR TH BLK M4×8	
203	000-P00430-W	M SCR PH W/FS M4×30	
204	000-T00412-0B	M SCR TH BLK M4×12	
205	068-441616-0B	FLT WSHR BLK 4.4-16×1.6	
301	600-6925-035	WIRE HARN FL	

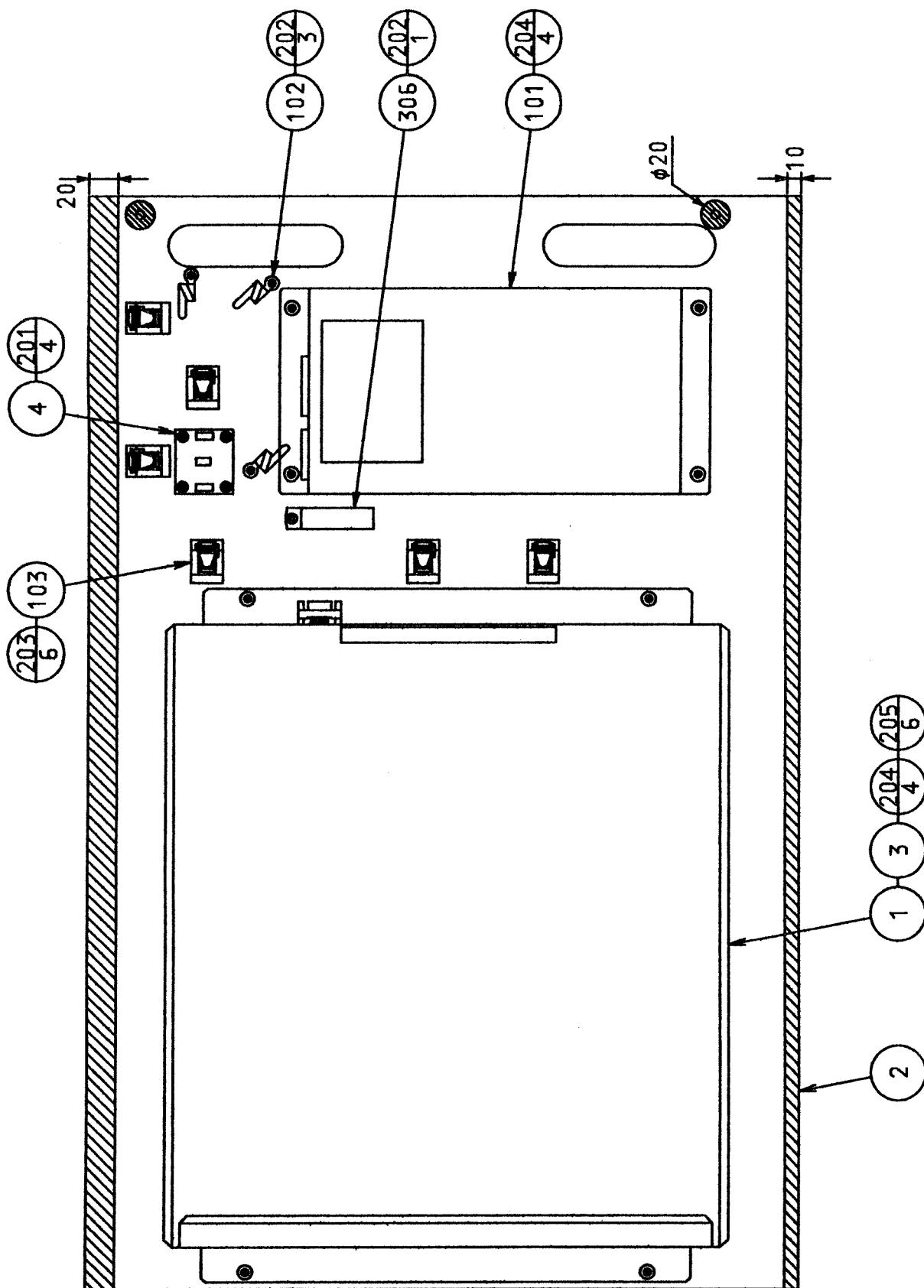


Make sure that there is no wiring, etc. in the slash mark portions.

①6 ASSY PWR SPLY U/R (JPT-4500)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-4501	PWR SPLY BASE U/R	
2	838-11650-29	EQ. PWR AMP JPT C	
3	838-11651-91	LOWPASS AMP	
4	838-13143-01	IC BD GUN SENSE UR	
5	839-0979	CONDENSER BD	
101	280-0419	HARNESS LUG	
102	280-5009-01	CORD CLAMP 21	
103	601-0460	PLASTIC TIE BELT 100MM	
201	011-P00325	TAP SCR PH 3×25	
202	011-T03512	TAP SCR TH 3.5×12	
203	011-F00310	TAP SCR FH 3×10	
301	600-6925-007	WIRE HARN EQ. AMP AC IN	
302	600-6925-008	WIRE HARN EQ. AMP VR	
303	600-6925-009	WIRE HARN EQ. AMP SOUND IN	
304	600-6925-010	WIRE HARN EQ. AMP SPEAKER	
305	600-6925-011	WIRE HARN AMP TO AMP	
306	600-6925-012	WIRE HARN LAMP WOOFER	
308	600-6925-014	WIRE HARN IC BD TO MAIN BD	
309	600-6925-015	WIRE HARN IC BD TO LED BD	
312	600-6925-048	WIRE HARN IC BD TO SENSOR	



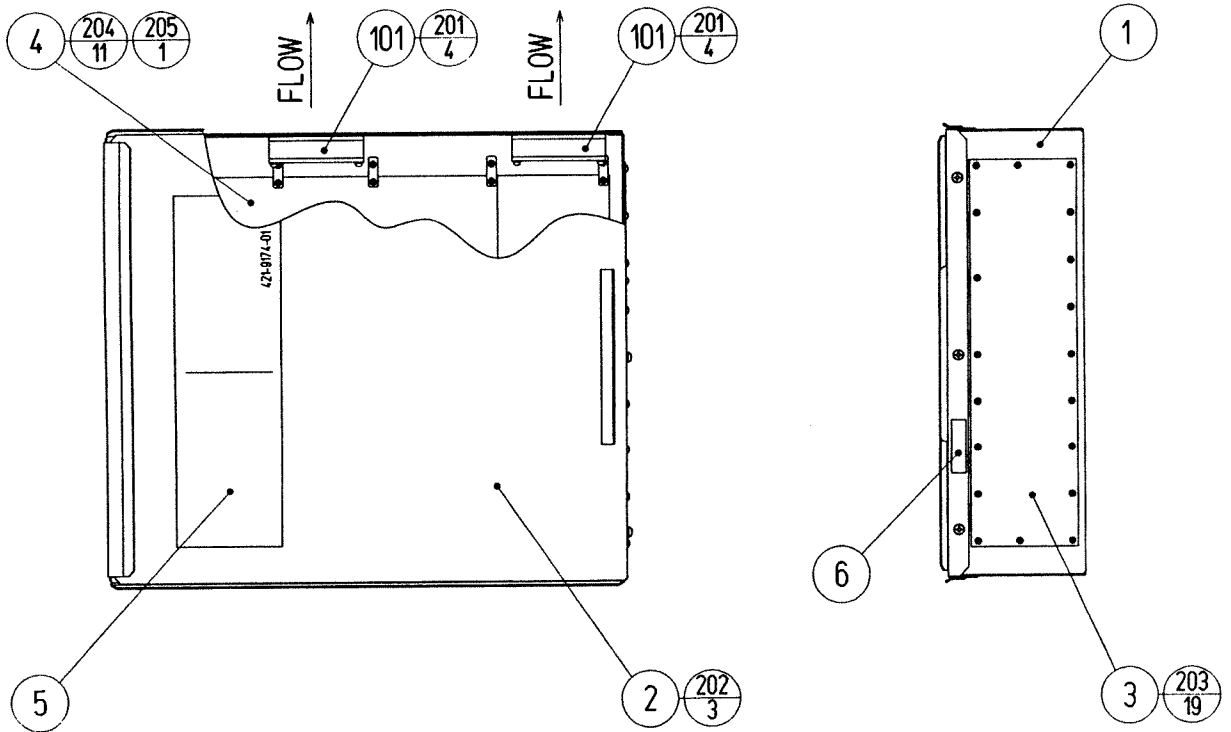
Make sure that there is no wiring, etc. in the slash mark portions.

①7 ASSY MAIN BD U/R (JPT-4600)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-0100	ASSY SHIELD CASE	
2	JPT-4601	MAIN BD BASE U/R	
3	105-5241	SHIELD CASE BRKT	
4	839-0542	AUDIO MIX BD	
101	400-5330-02	SW REGU FOR MODEL3	
102	280-0419	HARNESS LUG	
103	280-5009-01	CORD CLAMP 21	
201	011-P00325	TAP SCR PH 3×25	
202	011-T03512	TAP SCR TH 3.5×12	
203	011-F00310	TAP SCR FH 3×10	
204	000-P00412-W	M SCR PH W/FS M4×12	
205	000-P00408-W	M SCR PH W/FS M4×8	
301	600-6925-018	WIRE HARN SW REGU AC IN	
302	600-6925-019	WIRE HARN MAIN BD DC IN	
303	600-6925-020	WIRE HARN SW REGU 18P	
304	600-6925-021	WIRE HARN MAIN BD SOUND	
305	600-6925-022	WIRE HARN AUDIO MIX BD OUT	
306	600-6925-023	WIRE HARN MAIN BD RGB	
307	600-6925-024	WIRE HARN MAIN BD I/O	
308	600-6925-025	WIRE HARN MAIN BD A/D	

⑱ ASSY SHIELD CASE (JPT-0100)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	105-5245	SHIELD CASE MODEL3 NVS	
2	105-5242X	SHIELD CASE LID MODEL3	
3	839-0951	FILTER BD MODEL3 JPT	
4	833-13171	GAME BD JPT	
5	421-9174-01	STICKER CAUTION ANTISTATIC	
6	421-6510-13171	STICKER 833-13171	
7	601-8928	CARTON BOX MODEL3	
101	260-0064	FAN MOTOR DC12V	
102	280-5275-SR10	CORD CLMAP SR10	
103	601-0460	PLASTIC TIE BELT 100MM	
201	000-P00320-W	M SCR PH W/FS M3×20	
202	000-P00408-W	M SCR PH W/FS M4×8	
203	010-P00308-F	S-TITE SCR PH W/F M3×8	
204	010-P00310-F	S-TITE SCR PH W/F M3×10	
205	010-P00365-F	S-TITE SCR PH W/F M3×65	
301	600-6770-018-91	WIRE HARN FAN MOTOR	

19. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

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

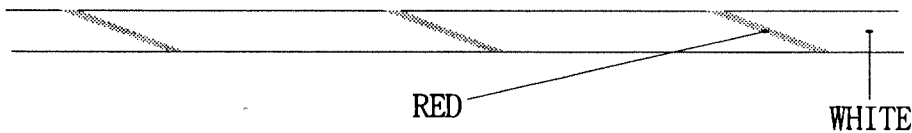
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

- 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).

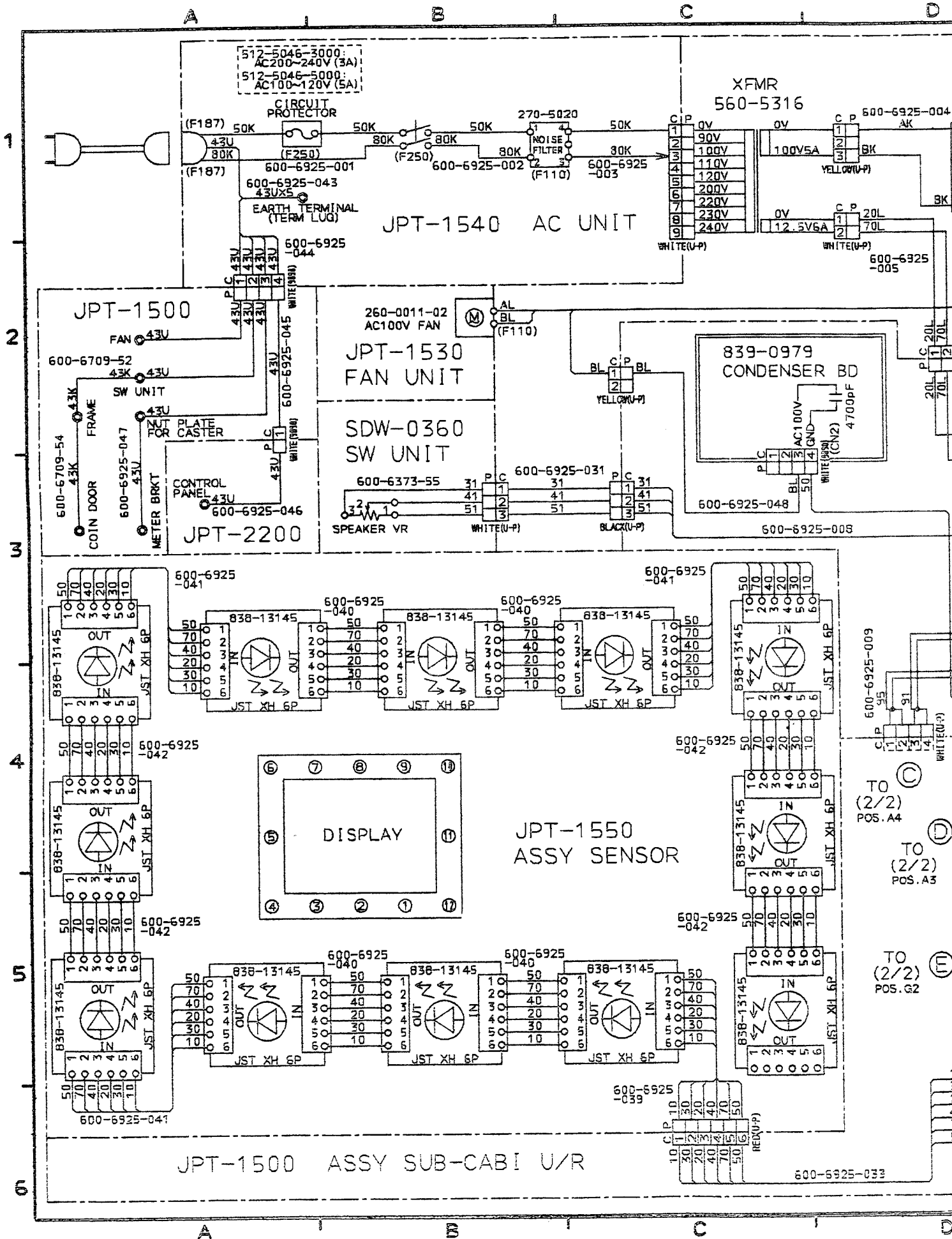
Note 1: If the right-hand side alphanumeric is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

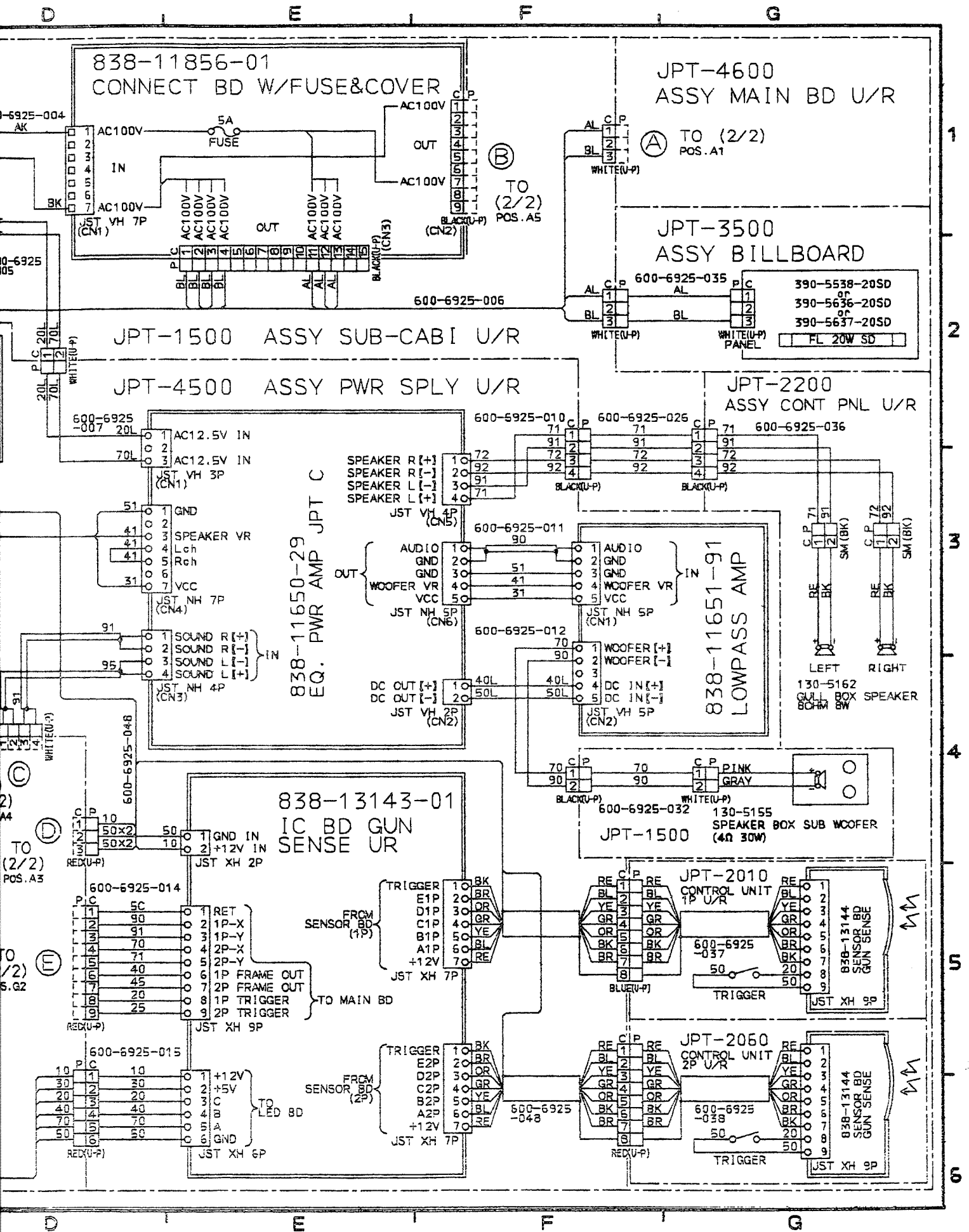
<Example> 51 WHITE / RED



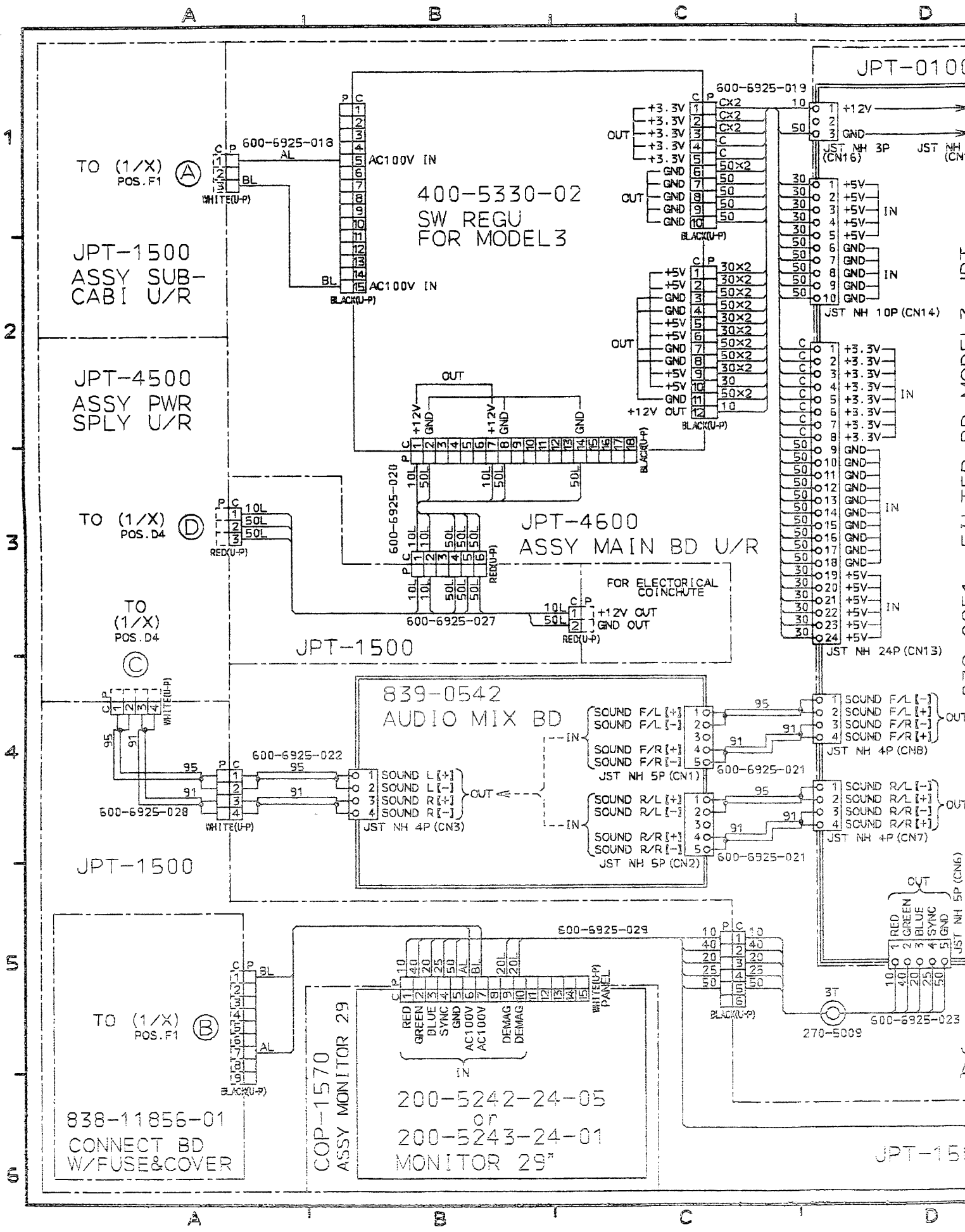
Note 2: The character following the wire color code indicates the size of the wire.

- K: AWG18, UL1015
- L: AWG20, UL1007
- None: AWG22, UL1007





20. WIRING DIAGRAM (D-1/2)



TO (1/X) POS. F1 (A)

JPT-1500
ASSY SUB-
CAB U/R

JPT-4500
ASSY PWR
SPLY U/R

TO (1/X) POS. D4 (D)

TO (1/X) POS. D4 (C)

JPT-1500

TO (1/X) POS. F1 (B)

838-11855-01
CONNECT BD
W/FUSE&COVER

COP-1570
ASSY MONITOR 29

200-5242-24-05
or
200-5243-24-01
MONITOR 29"

400-5330-02
SW REGU
FOR MODEL 3

JPT-4600
ASSY MAIN BD U/R

839-0542
AUDIO MIX BD

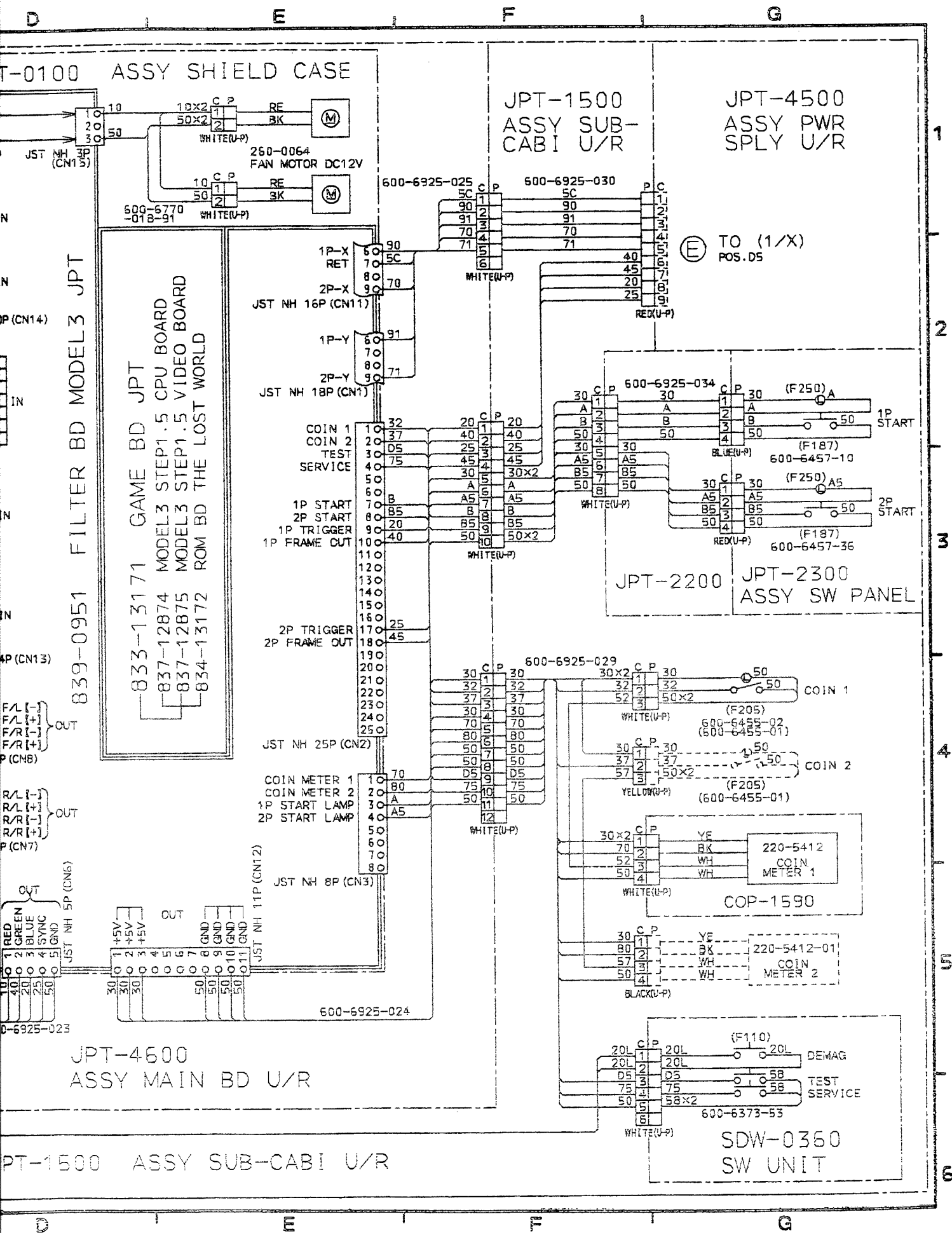
JPT-0100

JPT-1500

1
2
3
4
5
6

A B C D

A B C D



20. WIRING DIAGRAM (D-2/2)

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