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SEGA®

INITIAL 頭文字 D

TWIN TYPE

Owner's Manual



SEGA ENTERPRISES, INC. USA

MANUAL NO. 999-1488

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

To maintain the safety:

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

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



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 caution will cause a slight hazardous situation which can result in personal injury and or material damage.

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



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

- **Perform work in accordance with the instructions herein stated.**
Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the serviceman should perform such work.
- **Be sure to turn off power before working on the machine.**
To prevent electric shock, be sure to turn off power before starting the work in which the worker touches the interior of the product. If the work is to be performed in the power-on status, the Instruction Manual herein always states to that effect.
- **Be sure to ground the Earth Terminal** (this, however, is not required in the case where a power cord with earth is used).
This product is equipped with the Earth Terminal. When installing the product, Connect the Earth Terminal to the “accurately grounded indoor earth terminal” by using an earth wire. Unless the product is grounded appropriately, the user can be subject to electric shock. After performing repair, etc. for the Control equipment, ensure that the Earth Wire is firmly connected to the Control equipment.
- **Ensure that the Power Supply used is equipped with an Earth Leakage Breaker.**
This product does not incorporate the Earth Leakage Breaker. Using a power supply which is not equipped with the Earth Leakage Breaker can cause a fire when earth leakage occurs.
- **Be sure to use fuses which meet the specified rating.** (only for the machines which use fuses).
Using fuses exceeding the specified rating can cause a fire and electric shock.

- **Specification changes (removal of equipment, conversion and addition) not designated by SEGA are not allowed.**

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

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

- **Install and operate the product in places where appropriate lighting is available, allowing warning labels to be clearly read.**

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

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

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

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

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

INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION.

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

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

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

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SPECIFICATIONS

Installation Space	: 74.3 inches width X 73 inches
Height	: 71.75 inches
Width	: 80 inches
Length	: 68 inches
Weight	: 1565 lbs
Power, maximum current	: 1200 W 10 A (AC 120V 60 Hz AREA)
MONITOR	: 29 inch supplied by Sanwa
	Monitor Part# 998-0162
	Chassis Part# 998-0161

INTRODUCTION OF THE OWNERS MANUAL

This Owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards the product,
SEGA INITIAL "D" TYPE TWIN.

This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions. If the product fails to function satisfactorily, non-technical personnel should under no circumstances touch the internal system. Please contact where the product was purchased from.

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



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

IMPORTANT!

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

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.

LISTED



5K92

AMUSEMENT MACHINE

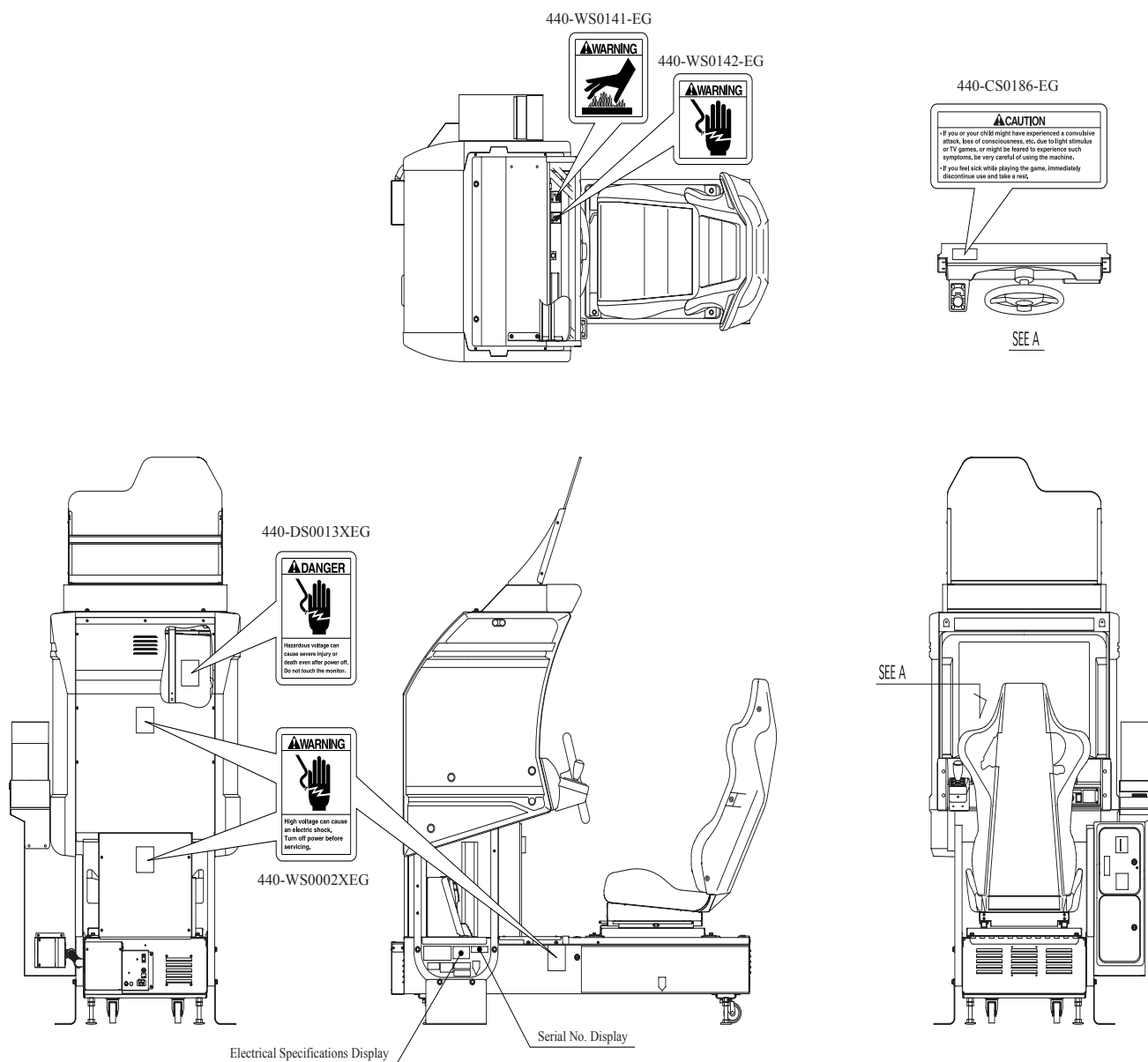
CONCERNING THE STICKER DISPLAY

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 accident prevention for the customers and for avoiding hazardous situation relating to maintenance and servicing work. There are some portions in the Cabinet, which are subject to high tension voltage, etc. where accidents can be caused merely by touching. When performing the servicing work, be very careful of the warning displays. Especially, any complex 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.



* NOTE: ILLUSTRATIONS MAY DIFFER FROM ACTUAL PRODUCT

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



- For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- The Projector is employed for this machine. The Projector's screen is susceptible to damage, therefore, be very careful when cleaning the screen. For details, refer to PROJECTOR.
- Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.
- Some parts are the ones designed and manufactured not specifically for this game machine. The manufacturers may discontinue, or change the specifications of, such general-purpose parts. If this is the case, Sega cannot repair or replace a failed game machine whether or not a warranty period has expired.

◆ PRODUCTION DATE ◆

This SEGA product was produced in the year of:

2002

This signifies that this work was disclosed in 2002.

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 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 Electrical Specifications can cause a fire and electric shock.
- This product requires the Breaker and Earth Mechanisms as part of the location facilities. Using them in a manner not independent can cause a fire and electric shock.
- Ensure that the indoor wiring for the power supply is rated at 10 A or higher (AC single phase 100 ~ 120 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- Be sure to independently use the power supply equipped with the Earth Leakage Breaker. Using a power supply without the Earth Leakage Breaker can cause an outbreak of fire when earth leakage occurs.
- Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.
- When using an extension cord, ensure that the cord is rated at 10 A or higher (AC 100 ~ 120 V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

Operation Area



- For the operation of this machine, secure a minimum area of 74.3 in. (W)×73 in. (D). In order to prevent injury resulting from the falling down accident during game play, be sure to secure the minimum area for operation.
- Be sure to provide sufficient space so as to allow this product's ventilation fan to function efficiently. To avoid machine malfunctioning and a fire, do not place any obstacles near the ventilation opening.
- SEGA shall not be held responsible for damage, compensation for damage to a third party, resulting from the failure to observe this instruction.



For transporting the machine into the location's building, the minimum necessary dimensions of the opening (of doors, etc.) are 40 in. (W) and 67 in. (H).

Electric current consumption

MAX. 10 A (AC 120 V 60 Hz)

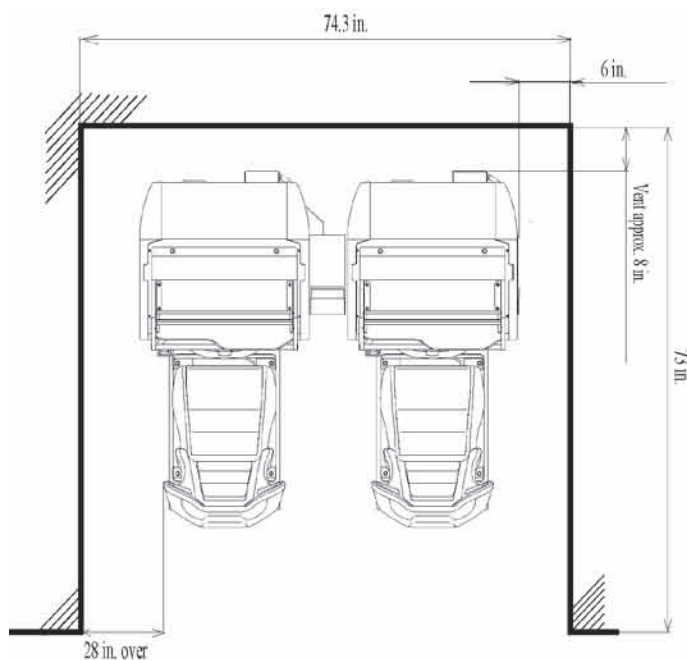


FIG. 2

3. OPERATION

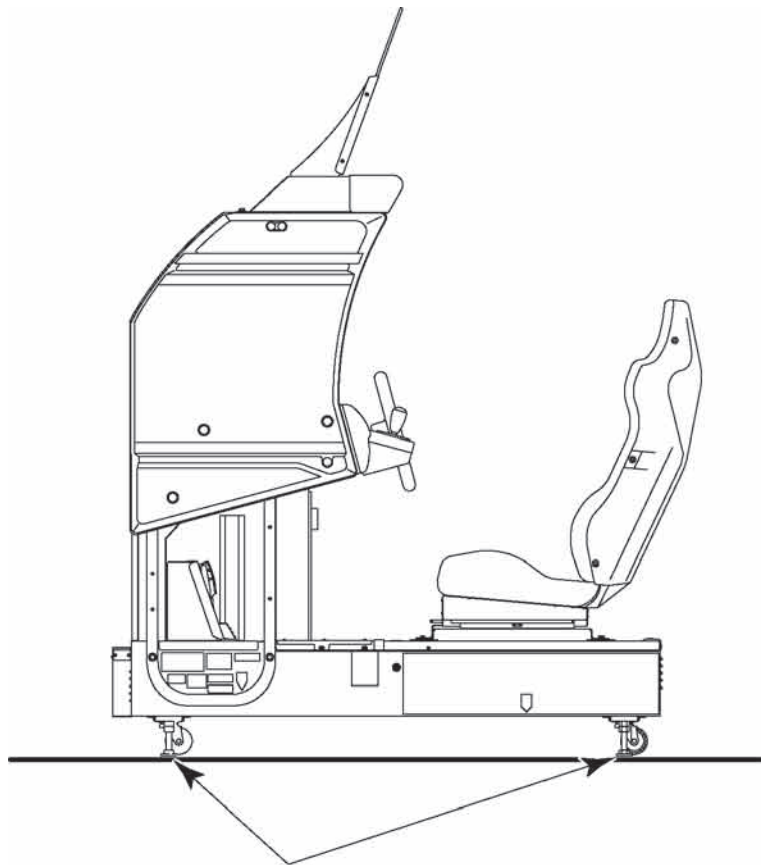
PRECAUTIONS TO BE HEEDED BEFORE STARTING THE OPERATION

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



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

- To ensure maximum safety for the players and the customers, ensure that where the product is operated has sufficient lighting to allow any warnings to be read. Operation under insufficient lighting can cause bodily contact with each other, hitting accident, and or trouble between customers.
- Be sure to perform appropriate adjustment of the monitor (projector). For operation of this machine, do not leave monitor's flickering or deviation as is. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.
- It is suggested to ensure a space allowing the players who feel sick while playing the game to take a rest.
- Check if all of the adjusters are in contact with the surface. If they are not, the Cabinet can move and cause an accident.



Ensure that all of the Adjusters are in contact with the floor.



- Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.
- Do not climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a step.
- To avoid electric shock, check to see if door & cover parts are damaged or omitted.
- To avoid electric shock, short circuit and or parts damage, do not put the following items on or in the periphery of the product.
Flower vases, flowerpots, cups, water tanks, cosmetics, and receptacles/
containers/vessels containing chemicals and water.



To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause making bodily contact with each other, hitting accidents, and or trouble between customers.

PRECAUTIONS TO BE HEHEED DURING OPERATION (PAYING ATTENTION TO CUSTOMERS)

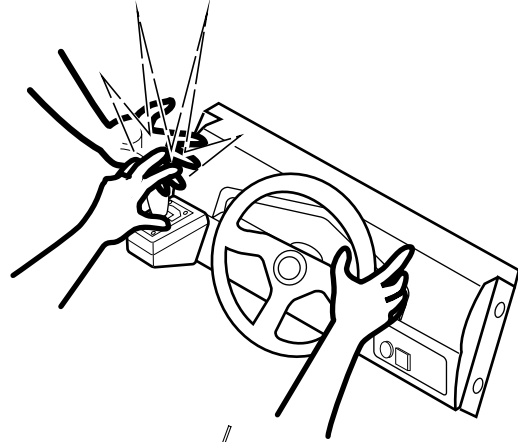
To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players.



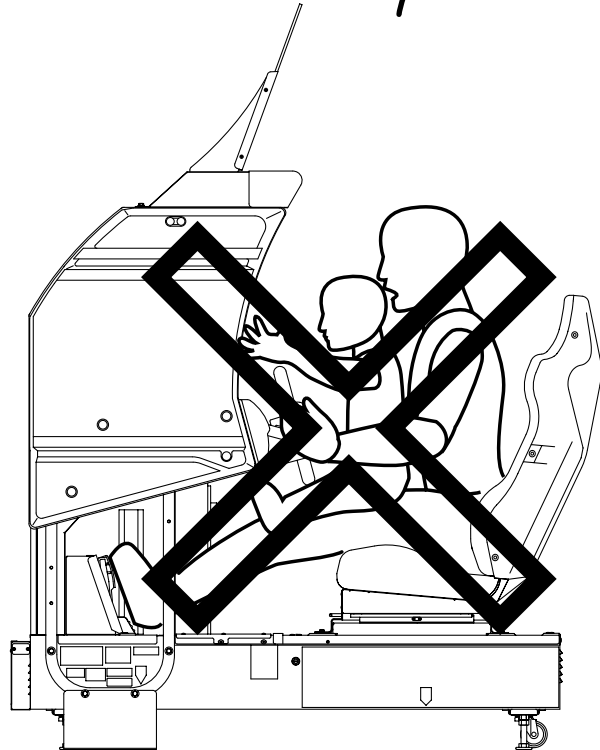
- To avoid injury and accidents, those who fall under the following categories are not allowed to play the game.
 - Those who need assistance such as the use of an apparatus when walking.
 - Those who have high blood pressure or a heart problem.
 - Those who have experienced muscle convulsion or loss of consciousness when playing video game, etc.
 - Those who have a trouble in the neck and or spinal cord.
 - Intoxicated persons.
 - Pregnant women or those who are in the likelihood of pregnancy.
 - Persons susceptible to motion sickness.
 - Persons whose act runs counter to the product's warning displays.
- A player who has never been adversely affected by light stimulus might experience dizziness or headache depending on his physical condition when playing the game. Especially, small children can be subject to those conditions. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during play to have a medical examination.
- To avoid injury resulting from falling down and electric shock due to spilled drinks, instruct the player not to place heavy items or drinks on the product.
- To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in the openings of the product or small openings in or around the doors.
- To avoid falling down and injury resulting from falling down, immediately stop the customer's leaning against or climbing on the product, etc.



- To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without a justifiable reason.
- This product is intended for 1 Player only per seat. Playing the game by 2 or more Players riding on the seat together can cause falling down and collision accidents by striking head, hand, or elbow.
- Caution lookers-on so as not to touch the operating unit while in play. Failure to observe this may cause bodily contact with the player and trouble between the customers.



- Caution the player so as not to hold a child in her/his lap to play. Failure to observe this may cause the child to be caught between the Control Panel and the player and fall down.



- 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.
- Instruct the Player to adjust the seat before playing the game. Playing the game in a forcible posture can cause a contingent accident.

PRECAUTIONS TO BE HEHEDED BEFORE STARTING THE OPERATION (CARD SYSTEM)



When an unjust act is performed, no written data is backed up mechanically. The following acts may be judged to be unjust acts. Since it also becomes a defect of operation and the cause of parts damage, caution the player not to perform the following acts.

- Use of cards bent or deformed
- Use of cards adhered seals or extraneous matter on
- Use of a card mixed two sheets
- Use of cards other than dedicated cards
- When a card is extracted quickly

If the card reader/writer has not been set as being unused, you will be unable to select any game mode with use of cards while the game will be in progress.

Thus, for the card reader/writer, deal with the player, paying attention to the following points:

Even if the player requests the system for use of cards when you have set the machine so that the card reader/writer is not used, the request is rejected.



WARNING: HAZARD TO EPILEPTICS.

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

4. NAME OF PARTS

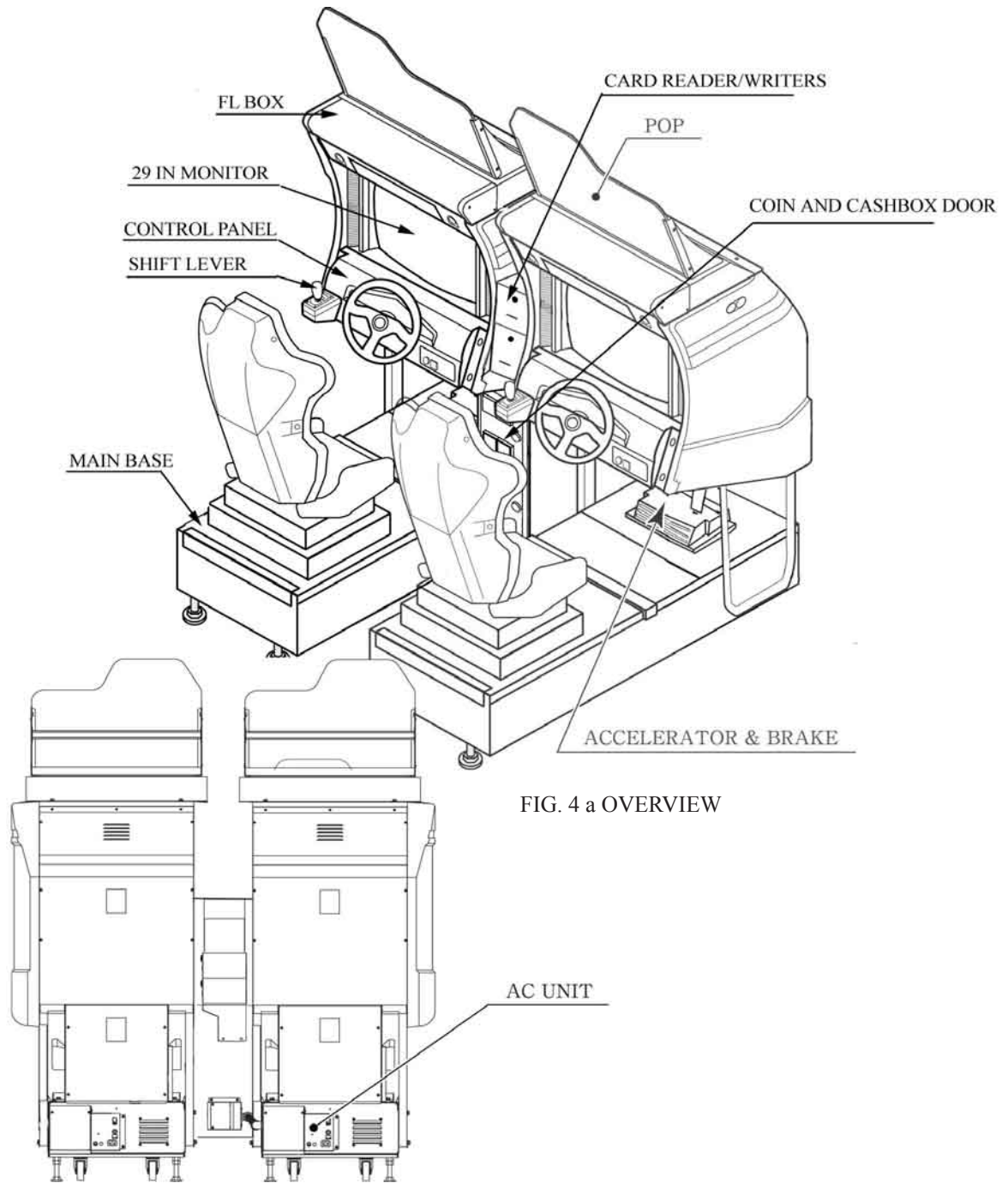


FIG. 4 a OVERVIEW

FIG. 4 b REAR VIEW

TABLE 4 Dimensions and Weights

	Width	x	Length	x	Height	Weight
CABINET 1	44 in	x	68 in	x	71.75 in	865 LB
CABINET 2	36.75 in	x	68 in	x	71.75 in	700 LB
ASSY POP	30 in	x	22 in	x	14 in	1 LB
When assembled	80.75 in	x	68 in	x	71.75 in	1565 LB

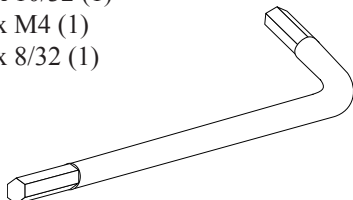
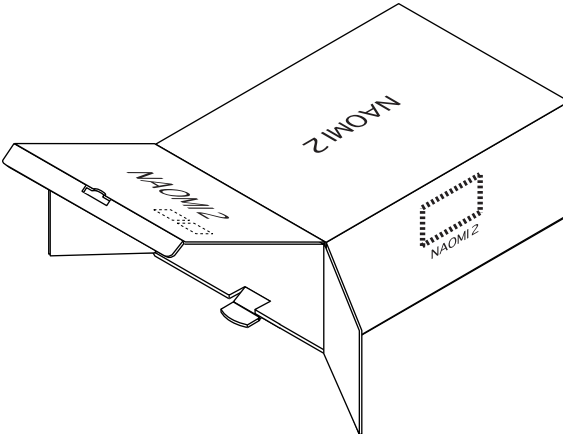
5. ACCESSORIES

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

Magnetic cards for the recording of play results, and cleaning kits for cleaning the head of the card reader/writer are sold separately. Subsequent purchases of these items can be made by contacting the office listed on this Owner's Manual or the dealer from whom the product was originally purchased. Be sure to provide the part number(s), name(s), and required number of items.

- Cleaning Kit
601-11050 CLEANING CARD: Package of 30 sheets
- Magnetic Cards
601-11136-01 CARD PACKAGE TOF ENG: Package of 200 Magnetic Cards

TABLE 5 a ACCESSORIES

DESCRIPTION OWNER'S MANUAL Part No. (Qty.) 999-1488 Notes Figures Parts not labeled with part numbers are as yet unregistered or cannot be registered. Be sure to handle all parts with care, as some parts are not available for purchase separately.	KEY MASTER 9301A (2) For opening/closing the doors	KEY (2) For the CASHBOX DOOR
NAOMI NETWORK SYSTEM SERVICE MANUAL 420-6660-01 (1) Instruction Manual for the Game Board	The Keys are inside the Coin Chute Door at the time of shipment from the factory.	
CLEANING CARD 601-11050 (1) For the periodic maintenance. See Sections 7 and 10. (30 sheets of Cleaning Card)	TAMPERPROOF WRENCH T-27 Torx 1/4-20 (1) T-25 Torx 10/32 (1) T-20 Torx M4 (1) T-15 Torx 8/32 (1) Tool	
	CARTON BOX 601-11044 (1) Used for transporting the Game Board. See Fig. 5a.	
CARD PACKAGE TOF ENG 601-11136-01 (6) Cards for card reader/writer *Picture not available at this time.		

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

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

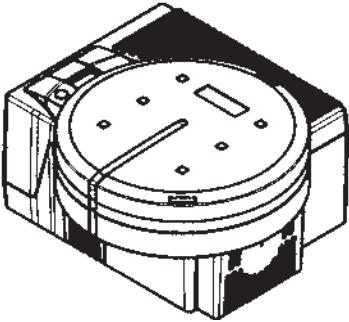
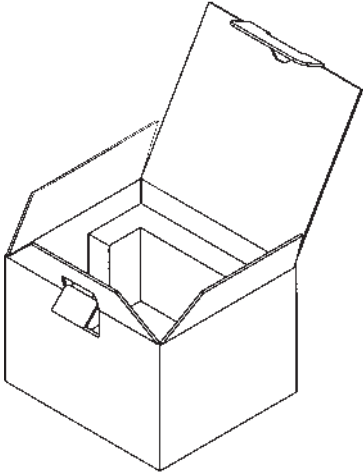
GD-ROM DRIVE XKT-0833 Device that loads the software in a GD-ROM disc. see 5 of Section 6.	GD-ROM DRIVE CARTON BOX (1) Used for transporting the GD-ROM DRIVE. See FIG. 5 b.
	 This carton box is a standard accessory of the GD-ROM drive.

TABLE 5 c (XKT-1208-G-EX1 : GD-ROM KIT TOF ENG EXP)

GD ROM KIT TOF	CUSHION SPONGE 601-11137 (1) GD-ROM Disc Protector
KEY CHIP (1) See 3 of Section 6.	STICKER 442-00108B (1) Shield Case Sticker
NAOMI2 GDROM TOF ENG (1) See 3 of Section 6.	840-0108B
NOTE: When you order the GD-ROM disc only, specify the part number 610-0625-0025 (GD SOFT TOF ENG).	

HOW TO USE THE CARTON BOX (GD-ROM DRIVE)



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

- Contain the GD-ROM drive in a dedicated carton box. Do not disassemble it or remove any part from it unless otherwise instructed.
- Before containing the GD-ROM drive in a dedicated carton box, attach the GD-ROM drive lid (DISC LID) onto the drive and fix the lid with a screw.
- Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM disk from the drive. Do not attempt to move the GD-ROM drive with a GD-ROM disk inside.
- Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM drive bracket. Carefully keep the GD-ROM drive bracket and the 4 set screws, because they will be reused.
- When inserting the GD-ROM drive into a dedicated carton box, be careful about an inserting direction as illustrated below.
- The packing materials in a carton box are used as a cushion. Use them always when inserting the GD-ROM drive into a dedicated carton box. Do not bend them.

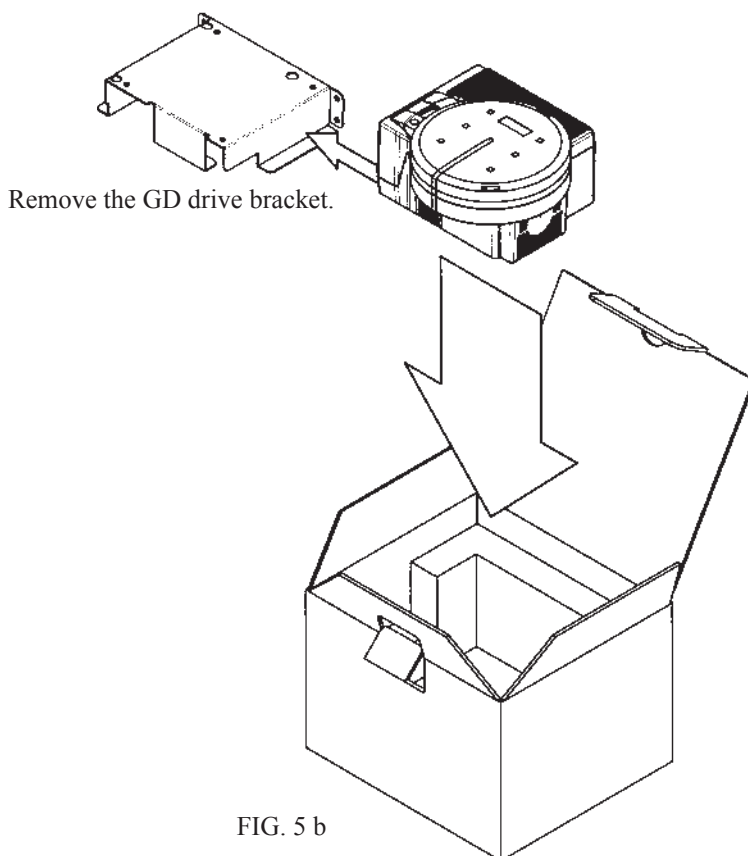


FIG. 5 b

6. ASSEMBLING AND INSTALLATION



- Perform assembly work by following the procedure herein stated. Failing to comply with the instructions can cause electric shock hazard.
- Perform assembling as per this manual. Since this is a complex machine, erroneous assembling can cause an electric shock, machine damage and or not functioning as per specified performance.
- When assembling, be sure to use plural persons. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
- Ensure that connectors are accurately connected. Incomplete connections can cause electric shock hazard.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- This work should be performed by the Location's Maintenance Man or Serviceman. Performing work by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation.
- Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
- To perform work safely and avoid serious accident such as the cabinet's falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.

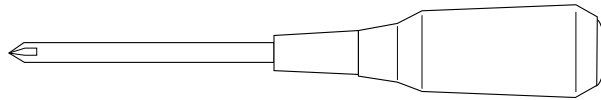
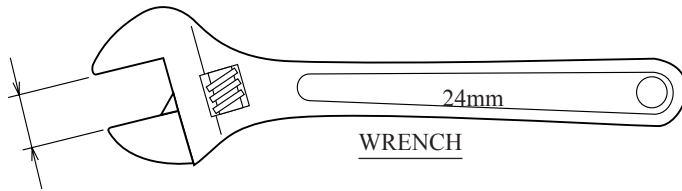


- Handle molded parts with care. Undue weight or pressure may cause them to break and the broken pieces may cause injury.
- To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause violent falling down accidents.
- Make sure that the GD cable connector is inserted parallel to the plug. Improper insertion may cause damage to the connector and present a fire

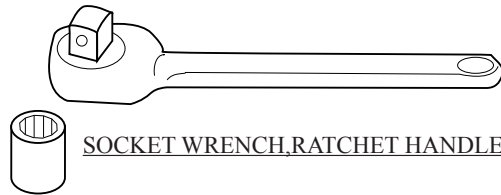
When carrying out the assembling and installation, follow the following 6-item sequence.

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

Tools such as a Phillips type screwdriver, wrench, socket wrench and Ratchet Handle are required for the assembly work.



Phillips type screwdriver



1

INSTALLING THE POP AND POP CARD

- Install the POP Holder on the top of the Billboard by using the 4 screws. For performing this work, be sure to prepare a step.

POP HOLDER
SCREW (4)
M6×16, w/flat and spring washers

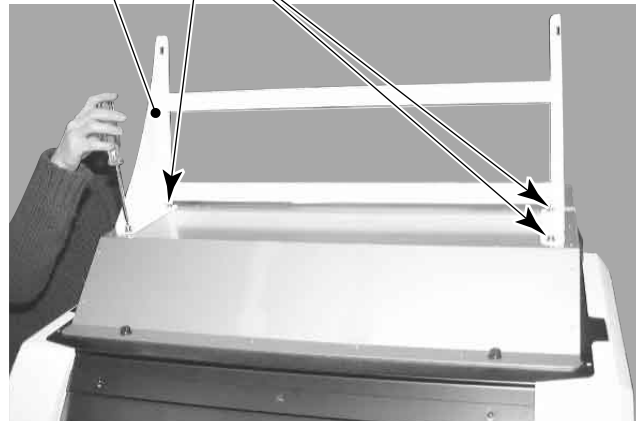
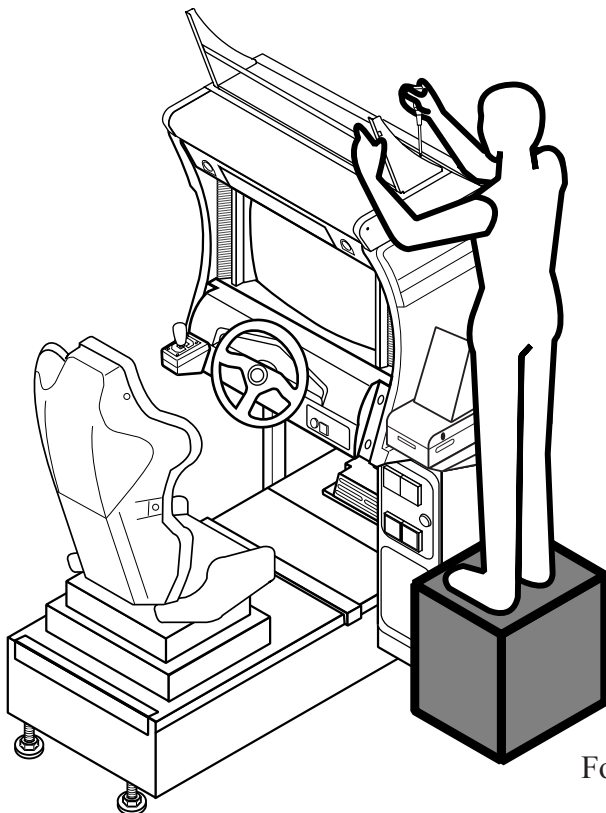


PHOTO 6. 1 a



For performing work, prepare a step.

* Note: Picture may differ from actual unit.

- Attach the POP to the POP Holder.
Slide the POP cut-out so that the edges fit into the protruding portions of the POP Holder.

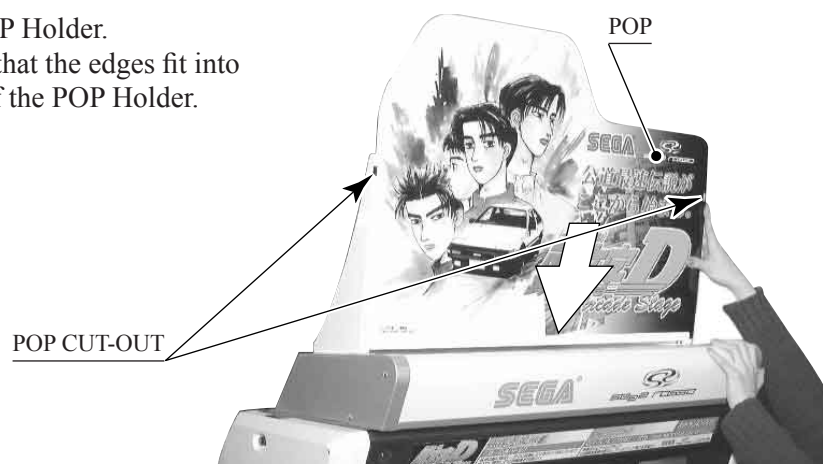


PHOTO 6. 1 b

- Attach Billboard Sash R with 2 Truss screws.
- Use 2 Truss screws to attach Billboard Sash L to the opposite side in the same manner.

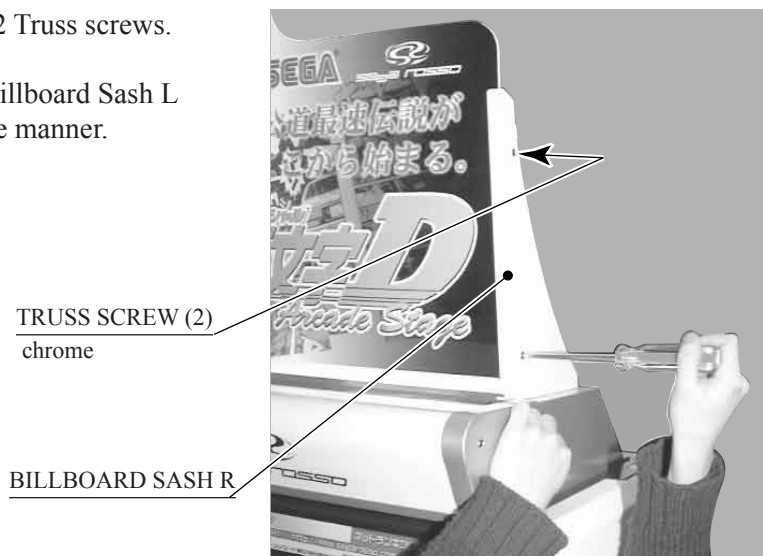


PHOTO 6. 1 c

2 SECURING IN PLACE (ADJUSTER ADJUSTMENT)



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

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

- Transport the product to the installation position.
- Have all of the Adjusters make contact with the floor. Adjust the Adjuster's height by using a wrench so that the machine position is kept level.
- After making adjustment, fasten the Adjuster Nut upward and secure the height of Adjuster.

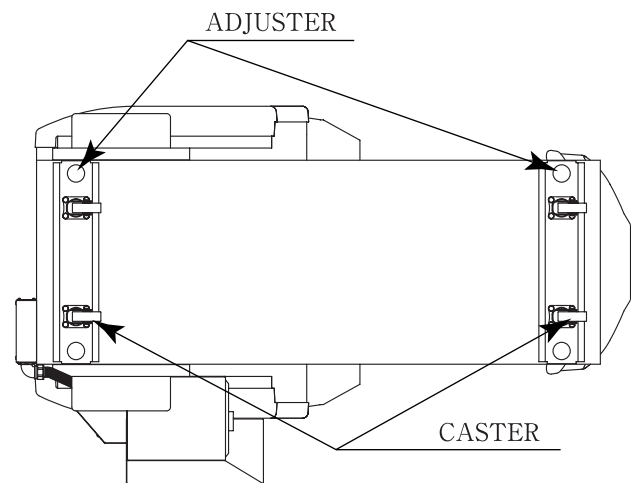


FIG. 6. 2 a BOTTOM VIEW

* Note: Picture may differ from actual unit.

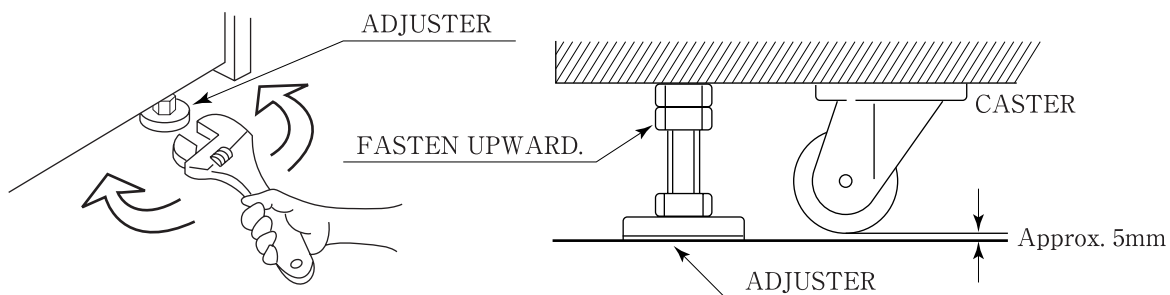


FIG. 6. 2 b ADJUSTER

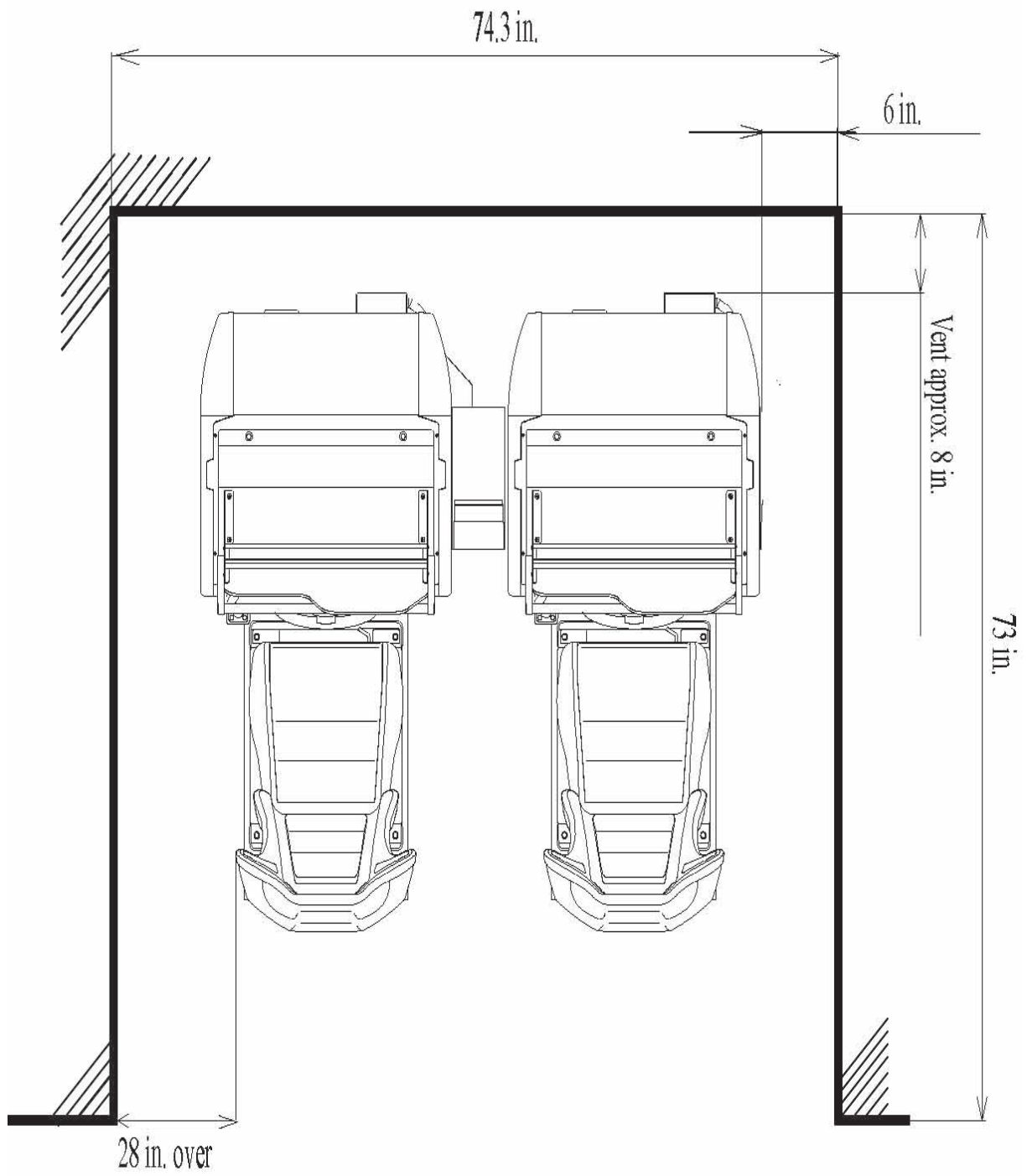


FIG. 6. 2 e
 Provide ventilation space for the ventilation
 opening.
 Allow more than 28 in. of space for customer
 traffic.

3

INSTALLING THE GD-ROM DRIVE (SETTING GD-ROM DISC)



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

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



GD DRIVE BRACKET



GD-ROM DRIVE

PHOTO 6. 3 a

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

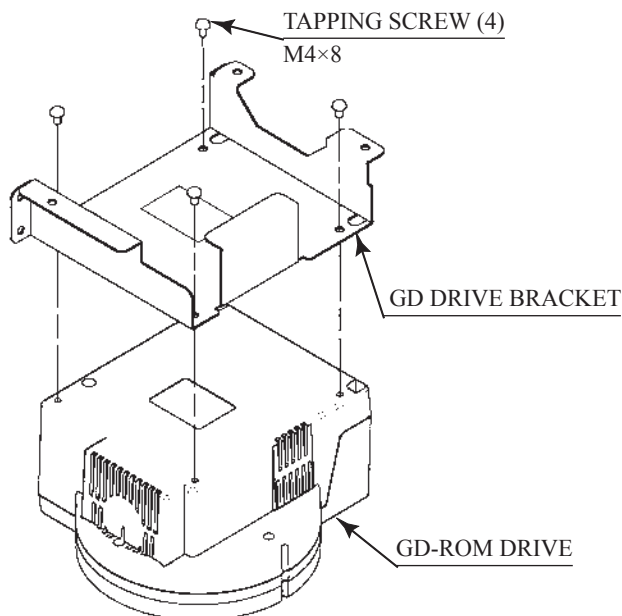


FIG. 6. 3 a

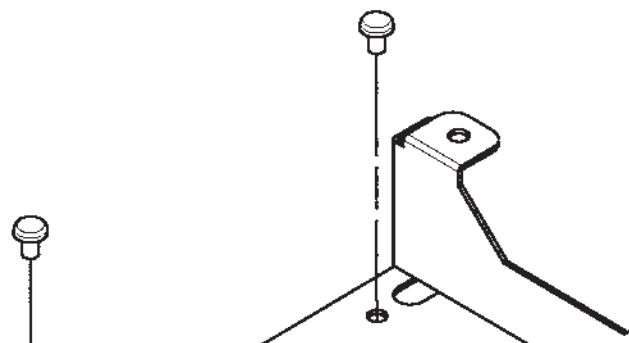


FIG. 6. 3 b

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

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

TRUSS SCREW (1)
M3×8

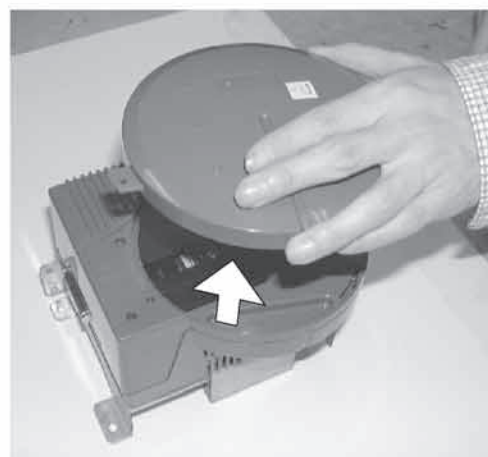
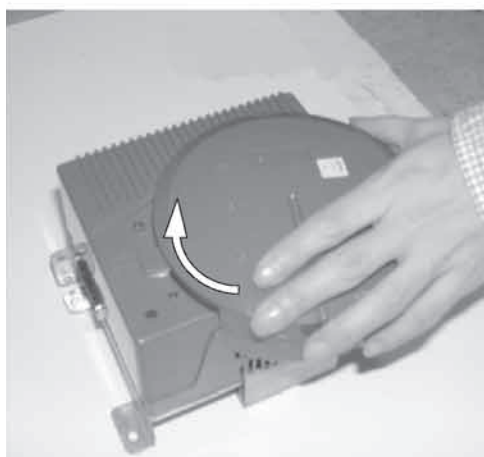
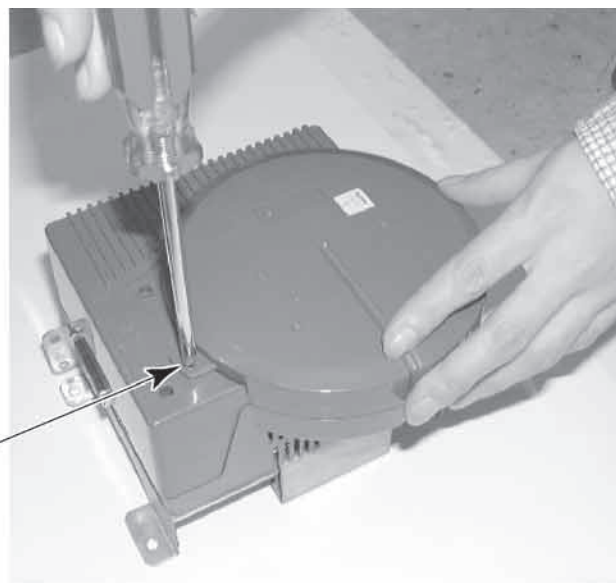


PHOTO 6. 3 b

- Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.
- Return the lid to its original place, and fix it with 1 truss head screw. Be careful not to fasten the screw too tightly.

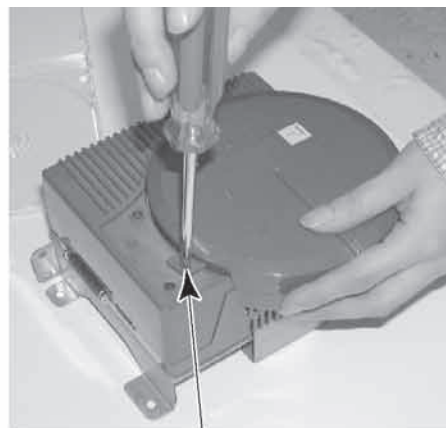


PHOTO 6. 3 c

TRUSS SCREW (1)
M3×8

- Undo the lock on the side of the unit base and remove the Truss screws.
- Turn the knob to open the lock, and lower the seat towards the backrest. Slowly lower the backrest until it touches the floor to prevent damage to the seat components. Put a drop cloth on the floor to prevent damaging the surface of the seat components.

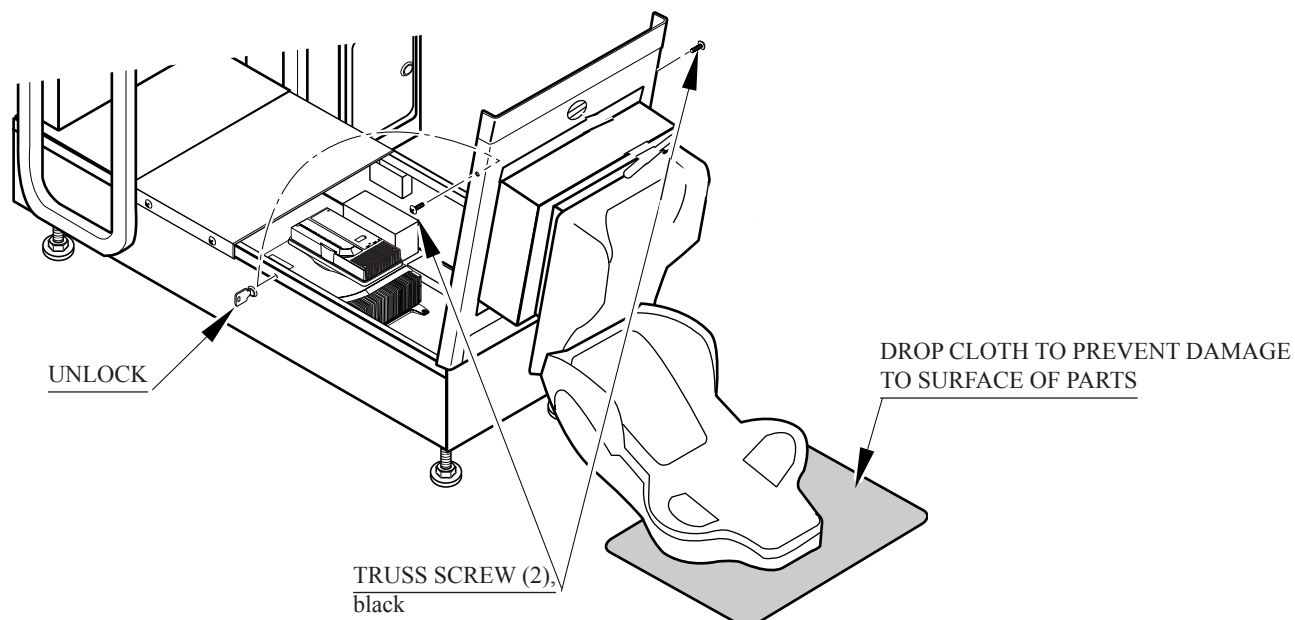


FIG. 6. 3 b

* Note Figure may appear different then actual product.

- Attach the GD-ROM drive with 3 screws.

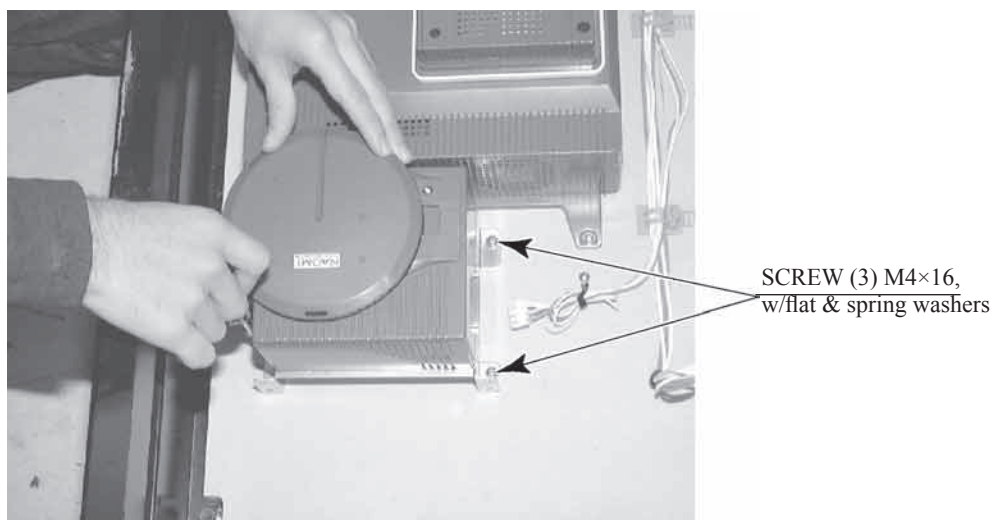


PHOTO 6. 3 d

- Connect the GD cable connector (for data communication) to the DIMM board.

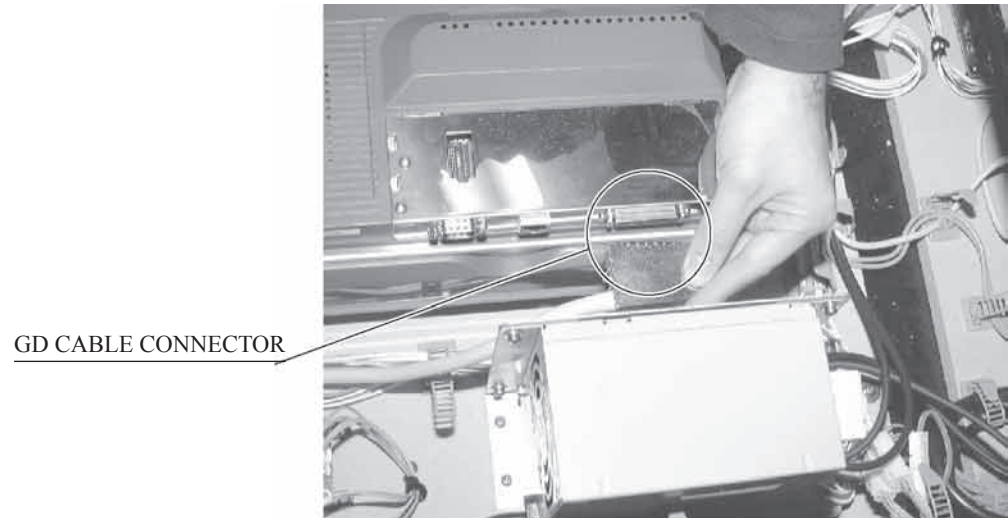


PHOTO 6. 3 e

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

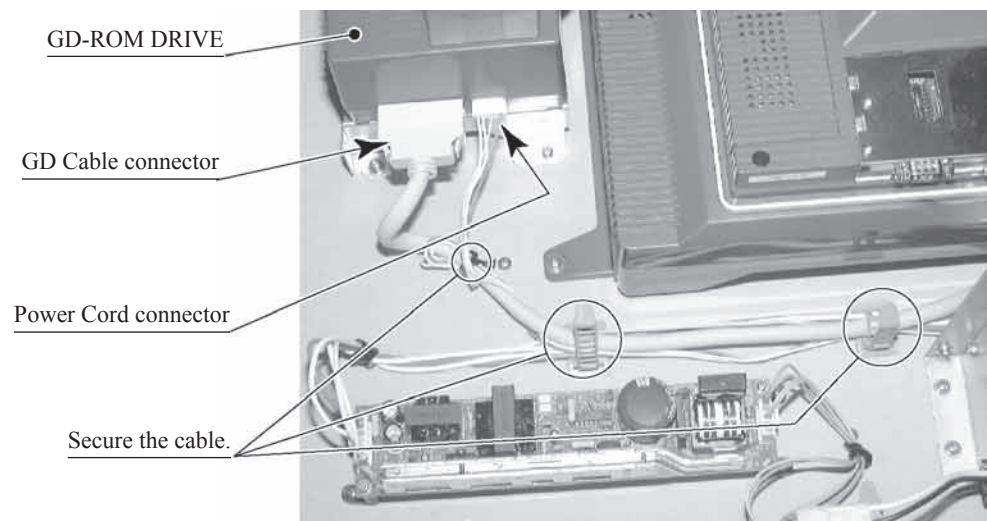


PHOTO 6. 3 f

- Paying attention to the direction of the Key Chip, insert it securely into the NAOMI DIMM Board Case.
- Place the Sticker (442-00108B) on the side of the DIMM Board Case as shown in the figure.

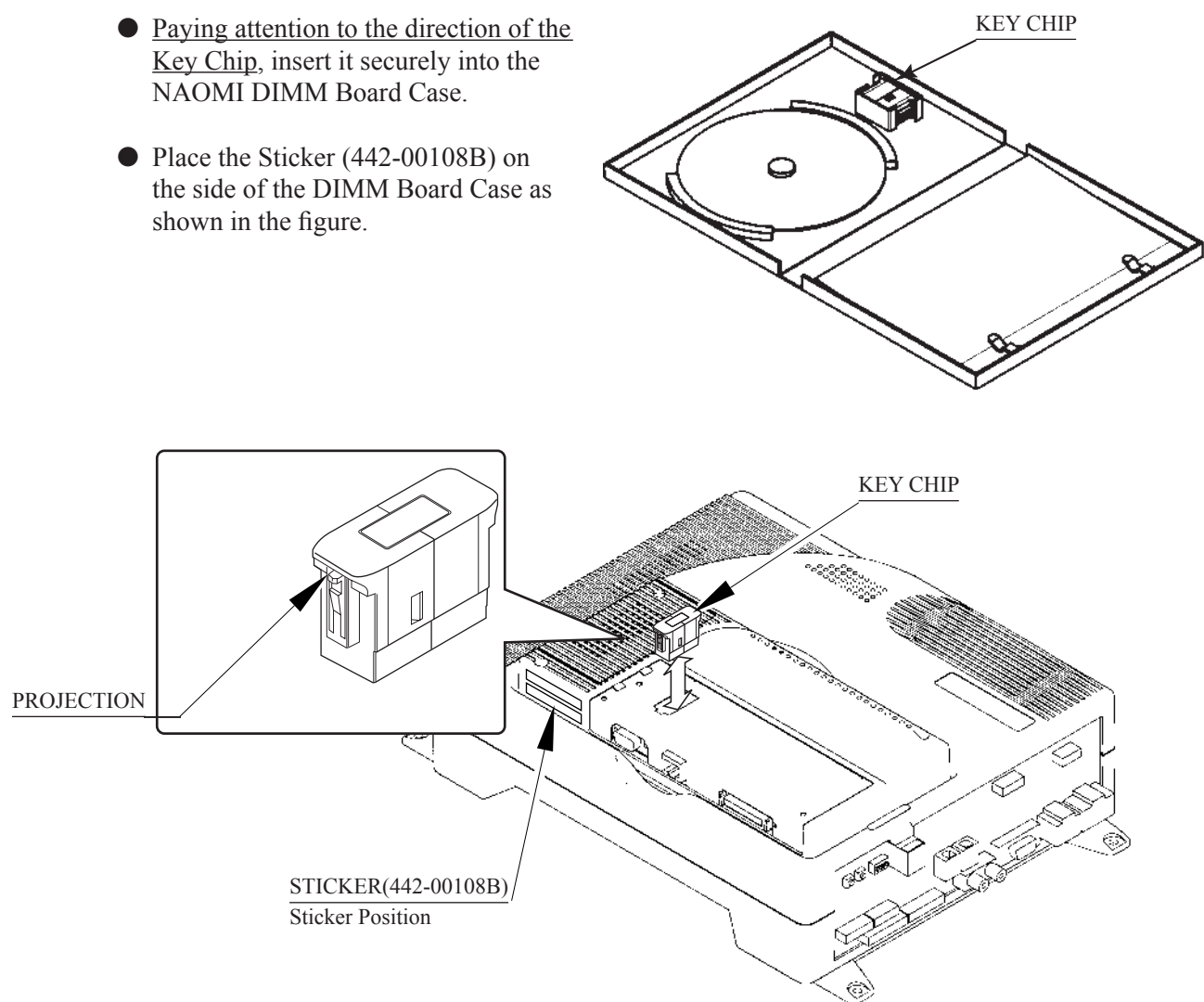


FIG. 6.3 c



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

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

- Ensure that the Main SW is OFF.

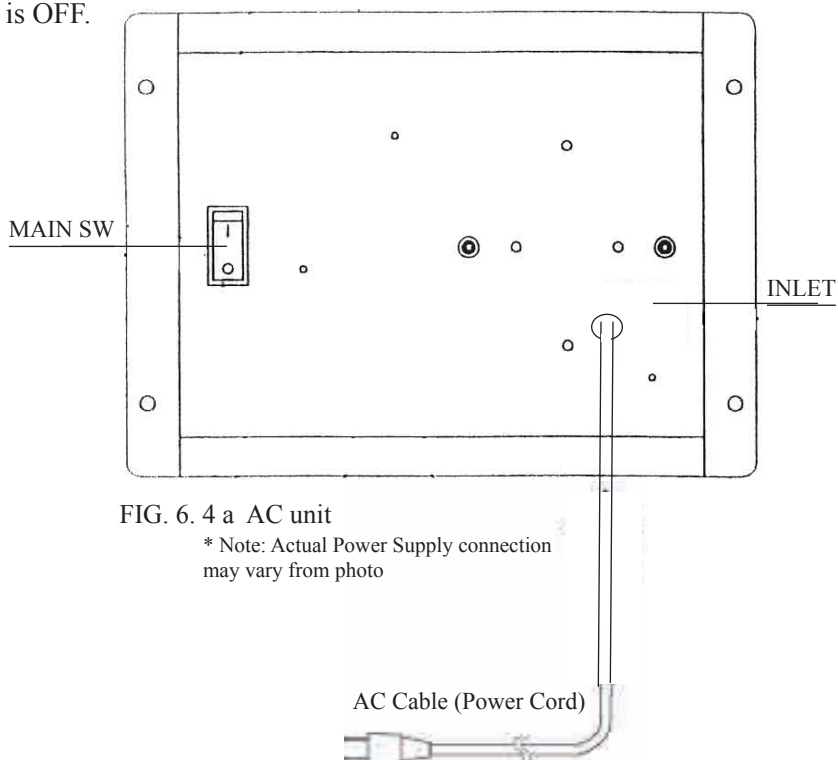
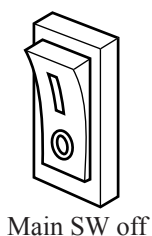


FIG. 6. 4 a AC unit

* Note: Actual Power Supply connection may vary from photo

5

TURNING POWER ON

Turn on the AC unit's main switch to supply power to the unit. Once power is turned on, the fluorescent lamp lights up. The Start System Screen displays after a lapse of several seconds. It is followed by the screen that indicates that the network is currently being checked if the communication mode has been set. If there is a bad or improper communication connection, each screen will not proceed to the next, remaining on the currently Network Check Screen. If this occurs, resolve the error according to the instructions in this document.

If the communication mode has not been set or the communication check ends normally, the Motor Check Screen returns. While the Motor Check Screen is on-screen, the steering wheel can move either clockwise or counterclockwise. If you touch the wheel, the motor check is hindered and the game will not operate normally. So, you must not touch it at this time. Failures are displayed, if found. Resolve the errors according to the instructions in this document.

Once all the above steps have been completed, the Advertise Screen displays and voices are output through the left and right loudspeakers, unless you have set the machine so that no voices are output during the Advertise mode.

This product retains the number of credits and the ranking data even after the power is turned off. It does not retain data about the fractional number of coins (i.e., the number of coins not reaching one credit) or the bonus adder count.

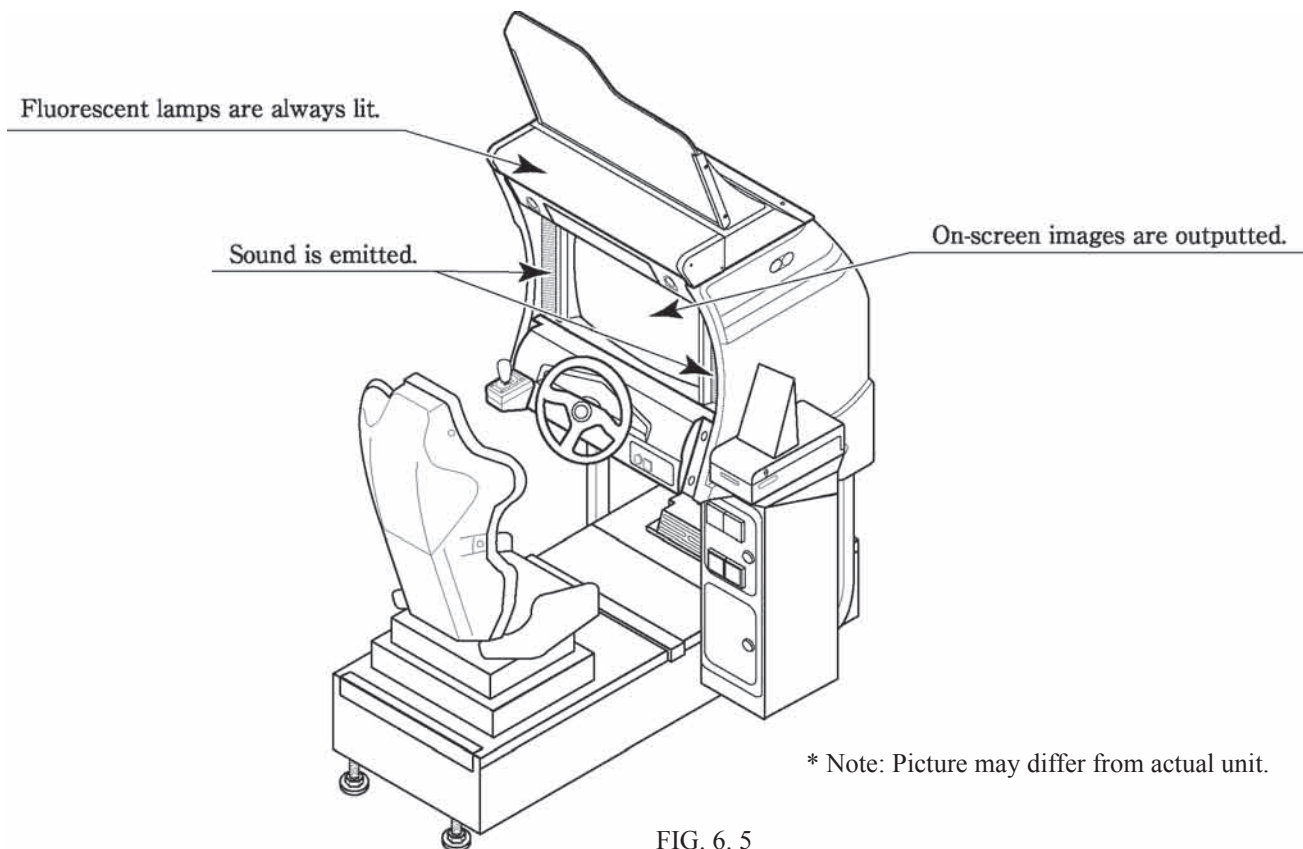
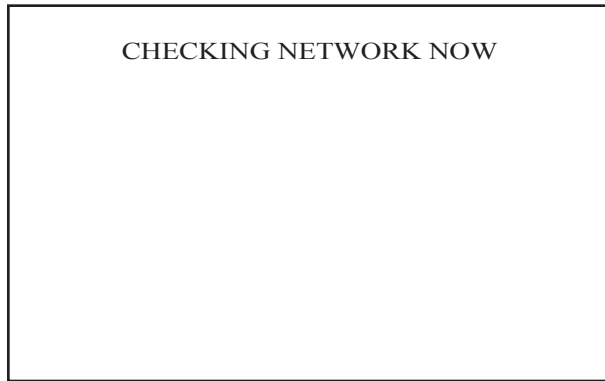


FIG. 6. 5

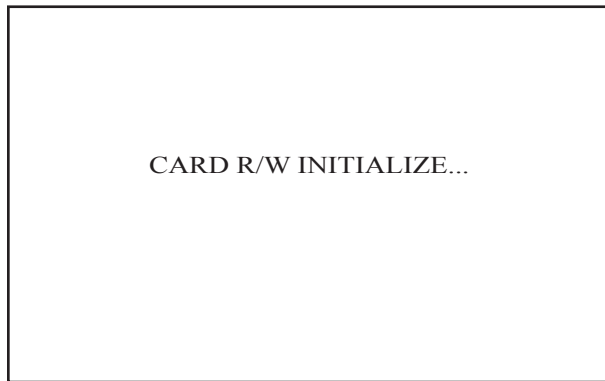
Note: The first time the power is turned on, the unit will automatically enter Cleaning Mode. Follow the on-screen instructions to carry out cleaning of the unit.

Each Check Screen is followed as below.

Network Check Screen



Card Reader/Writer Check Screen



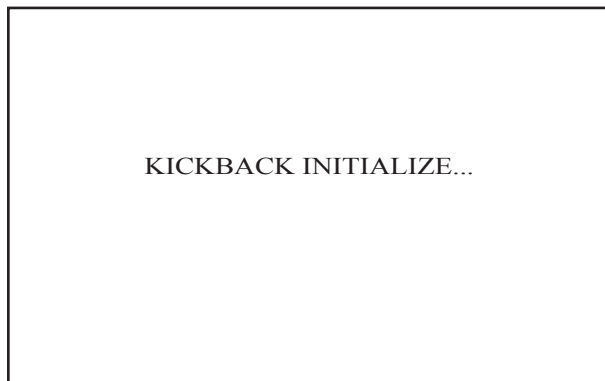
● When Card is left in the Card Reader/Writer;



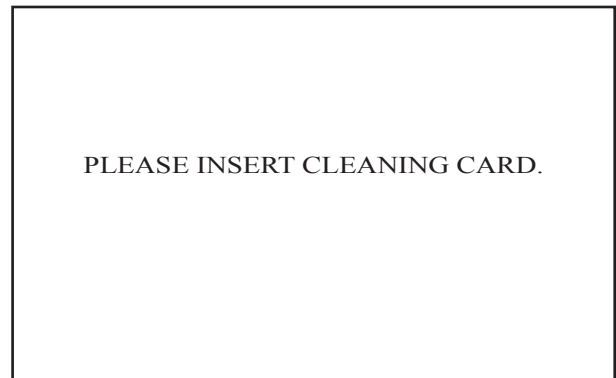
● Remove the card. Screen does not change until the card is removed.



Motor Check Screen



● When cleaning is required;



Insert the cleaning card. (See 7-2 HEAD CLEANING.)

● Steering wheel will turn. Do not touch it.

6

ASSEMBLING CHECK

In the TEST MODE, ascertain that the assembly has been made correctly and IC BD. is satisfactory (refer to Section 10).

In the test mode, perform the following test:

(1)MEMORY TEST

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

```

          RAM TEST

IC29 GOOD
IC35 GOOD
IC09 GOOD IC10 GOOD
IC11 GOOD IC12 GOOD
IC16 GOOD IC18 GOOD
IC20 GOOD IC22 GOOD
IC17 GOOD IC19 GOOD
IC21 GOOD IC23 GOOD
IC106 GOOD IC107 GOOD
IC108 GOOD IC109 GOOD
IC111 GOOD IC113 GOOD
IC115 GOOD IC117 GOOD
IC112 GOOD IC114 GOOD
IC116 GOOD IC118 GOOD

PRESS TEST BUTTON TO EXIT
  
```

```

          DIMM BOARD TEST

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

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

PRESS TEST BUTTON TO EXIT
  
```

SOUND TEST

RIGHT SPEAKER OFF

LEFT SPEAKER OFF

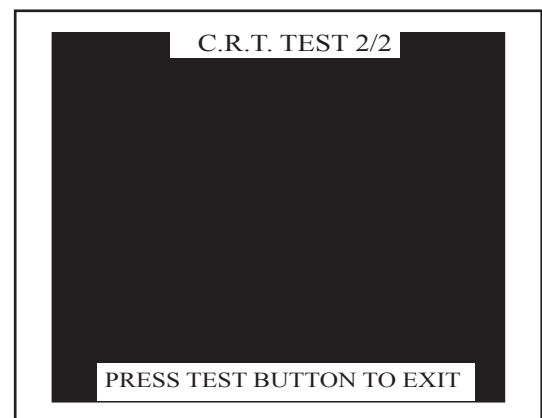
-> EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

Check if the sound is satisfactorily emitted from each speaker and the sound volume is appropriate.

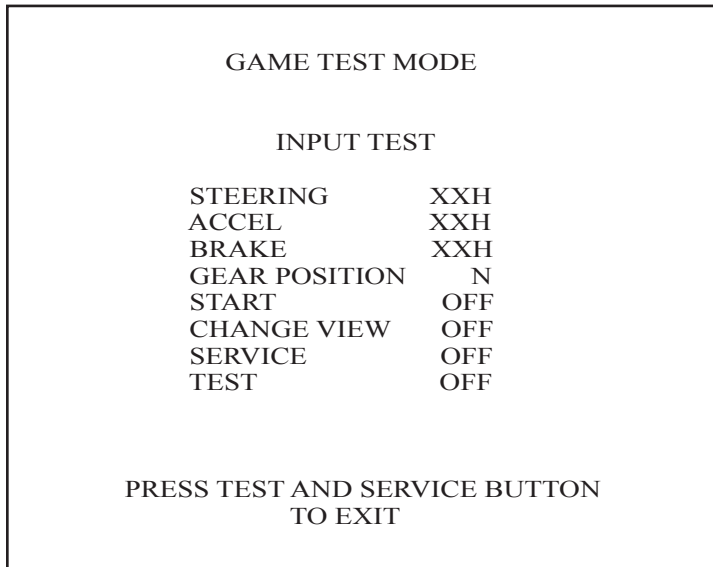
In the system test mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed. Although the monitor adjustments have been made at the time of shipment from the factory, color deviation, etc., may occur due to the effect caused by geomagnetism, the location building's steel frames and other game machines in the periphery. By watching the system test mode screen, make judgment as to whether an adjustment is needed. If it is necessary, adjust the monitor by referring to Chapter 15.

C.R.T. TEST 1/2					
1	32				
<table><tr><td>RED</td></tr><tr><td>GREEN</td></tr><tr><td>BLUE</td></tr><tr><td>WHITE</td></tr></table>		RED	GREEN	BLUE	WHITE
RED					
GREEN					
BLUE					
WHITE					
PRESS TEST BUTTON TO CONTINUE					



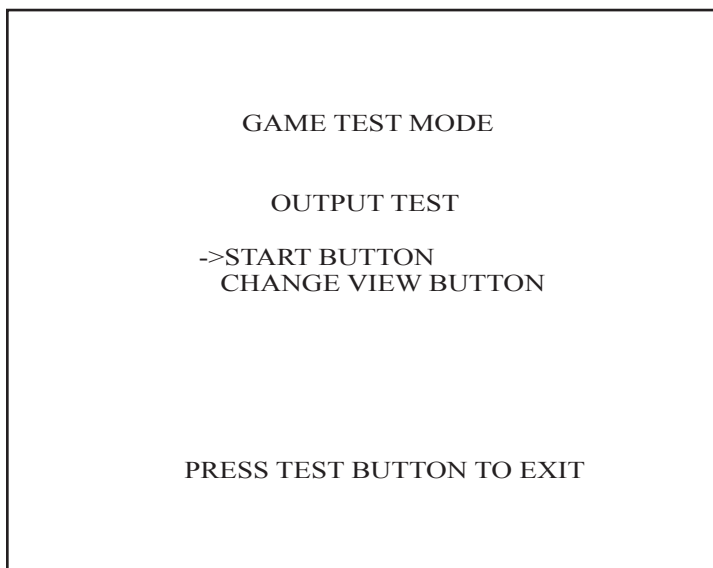
www.seuservice.com

(4)INPUT TEST



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

(5)OUTPUT TEST



Select OUTPUT TEST from the Menu screen in the Game Test Mode to cause the screen (on which output unit such as lamps and wiring connections are tested) to appear. Ensure that the output unit functions satisfactorily.

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

7. CARD READER/WRITER

7-1 SETTING DEDICATED CARDS



- Be sure to use dedicated cards available for this product.
Use of ones other than such dedicated cards may cause a malfunction or failure of the machine.
- Be sure to set the specified number of card in the specified orientation by using the specified procedure. Wrong setting of the cards may cause the machine to fail.
- This machine allows you to set up to 100 cards at a time. You must not set over 101 cards at a time. If you do so, a trouble such as card jamming may occur.
- Set virgin cards taken out from a container that was unpacked immediately before use.
Use of any deformed or deteriorated card may cause a trouble.
- Do not include a corrugated, bent, or used card in the card deck.

When the unit is out of cards, a message will be displayed at the upper right of the screen during advertisements. Follow the instructions below to restock the system with cards. Cards may be stocked when the unit is on or off.

After restocking the system with cards, the message displayed after the "SEGA" logo will be updated. Gameplay can be resumed without waiting for the updated message.

- Unlock and open the cover to find the card reader/writer.
The dispenser on which you should place the cards is located at the rear of the reader/writer.
- From the card reader/writer, take out the dispenser upward in a straight line.

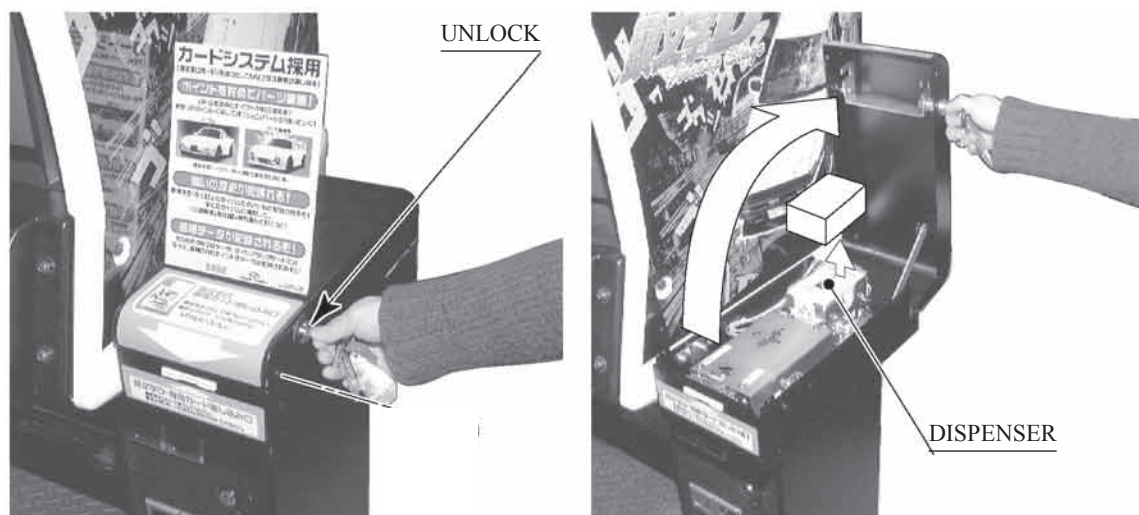


PHOTO 7. 1 * Note: Pictures may differ from actual Unit.

- Remove the cover from the back of the dispenser.

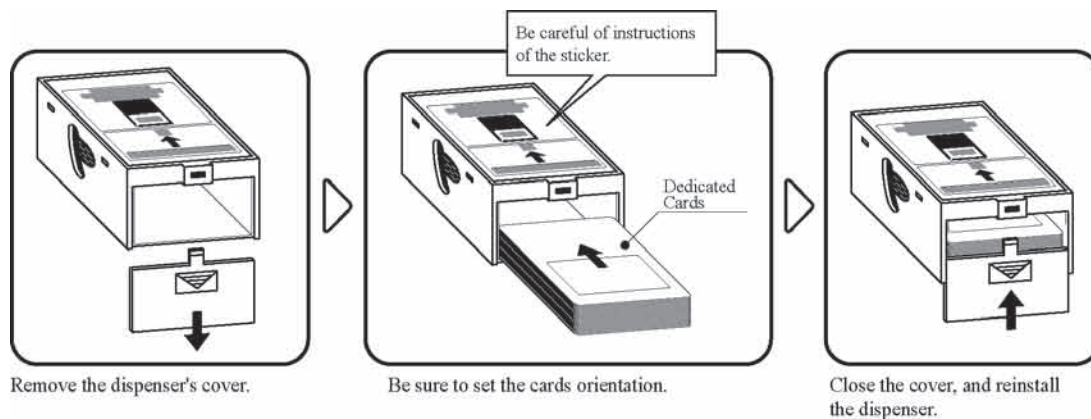


FIG. 7. 1 a

- Place the cards into the dispenser according to the instructions on the sticker annexed to the dispenser. Refer to the diagram shown on the sticker attached to the Dispenser and insert the cards into the Dispenser. Be careful not to insert the cards in the wrong direction or with the wrong side facing up.
 The Dispenser can only hold 100 cards. Do not attempt to insert more than 100 cards. Too many cards may cause the Dispenser to jam or result in other problems.
 Insert magnetic cards into the Dispenser in complete packs of 100 or after carefully counting the number of cards (not to exceed 100).

Load cards in the correct orientation.

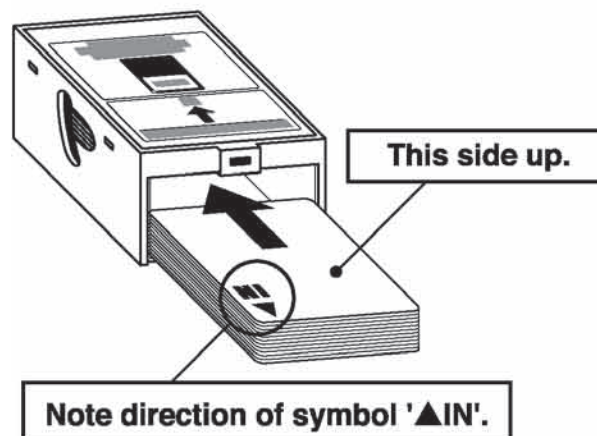


FIG. 7. 1 b

- Reinstall the cover to the dispenser.
- Insert the dispenser into the card reader/writer. The dispenser can be inserted only in the predetermined orientation.
- Close and lock the cover.
- Secure with the truss screw

7-2 HEAD CLEANING



- The unit enters Head Cleaning Mode when any of the following conditions are met:
 - At power-up if the Card Reader/Writer has operated 100 times or more
 - At power-up if the date has been updated
 - At boot time after performing Backup Data Clear
- Once the unit enters Head Cleaning Mode, follow the on-screen instructions and perform Head Cleaning. The unit will not exit Cleaning Mode (i.e. games may not be played) until head cleaning is complete.
- Always use the designated Cleaning Card. Using anything other than the designated card or carrying out any other procedure other than the one outlined in the manual may cause faulty printing, faulty operation and/or unit failure.
- Cleaning Cards may only be used once. Dispose of them after use.
- Cleaning Cards should be used immediately after removal from the package. Cleaning Cards will not clean effectively if dried out.
- Perform head cleaning only when there are cards in the Card Reader/Writer Dispenser. If the Dispenser is empty, the part that secures the cards inside the Dispenser may touch the rotating part of the Card Reader/Writer and cause noise.
- Always remember to remove the Cleaning Card after completing head cleaning.
- After head cleaning, wait for the "SEGA LOGO" to be displayed at least twice before resuming gameplay.

This machine records the number of times the Card Reader/Writer is used.

The Card Reader/Writer writes data to and reads data from cards. Each write and read is counted, so the Card Reader/Writer usage count will not be the same as the number of times the game is played.

Once head cleaning of the Card Reader/Writer is complete, the unit will exit this mode.

Follow the on-screen instructions to carry out cleaning.



*Note: Photo may differ from actual product.

PHOTO 7. 2

PLEASE INSERT CLEANING CARD.

Insert the Cleaning Card into the card slot.



NOW CLEANING...

Indicates that the unit is undergoing cleaning. Wait for cleaning to be completed.



The unit exits to normal mode after cleaning is complete. Do not forget to remove the Cleaning Card.

Wait for the "SEGA LOGO" to be displayed at least twice before resuming gameplay after cleaning.

The Card Reader/Writer usage count described above is reset when cleaning is performed.

Manual head cleaning may also be performed from Test Mode. Refer to Test Mode <10-3G> for more details.

7-3 CLEARING CARD JAMS



When attempting to perform this operation without powering down so that gameplay can be restored, exercise extreme caution. Machine parts may move unexpectedly when the power is ON. This may result in fingers being caught or severed and other injuries.

Verify the Stay Lock on the top cover before attempting this procedure. If the top cover closes during the procedure, it may result in serious injury.

If a trouble such as card jamming occurs on the card reader/writer, you are notified of the trouble on the screen. You cannot proceed to a play unless you resolve the trouble at this time. First identify the trouble before you begin to take action.

An error message is displayed at the top of the screen when cards become jammed. Use the RESTORE command (hold down the Start button + Change View button for a long time) to retry the function that caused the error.

If repeated attempts continue to generate errors, follow the instructions below to remove the card. Removing the card may force the game to shut down. If the game shuts down, existing customer game data will not be saved.

- Unlock and open the cover.
- Unlock the hatch by drawing the green shaft attached to the top cover on the card reader/writer. While drawing the shaft, open the cover up.
- Remove the card jammed in the card reader/writer.

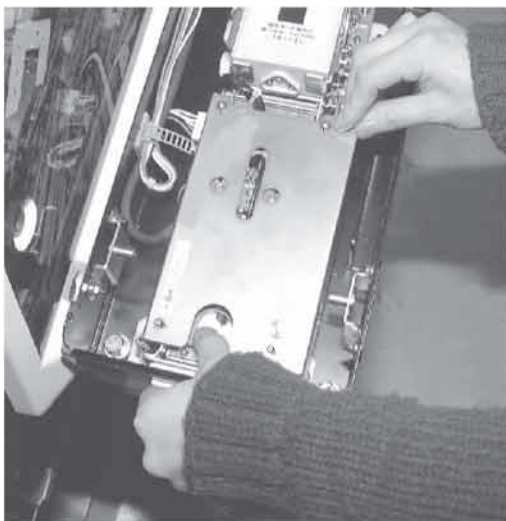
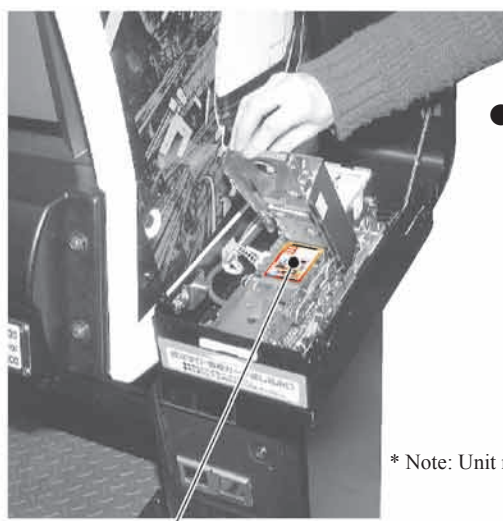


PHOTO 7.3 b



- While drawing the shaft, close the cover. With the top cover closed, release the green shaft. Check that the top cover has been locked securely.

* Note: Unit may differ from Photo.

Remove the card jammed.

- Close and lock the cover.

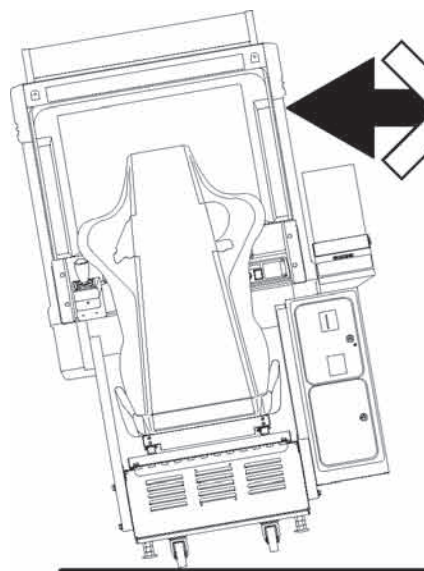
8. PRECAUTIONS WHEN MOVING THE MACHINE



- When moving the machine, be sure to unplug the power plug. Moving the machine with the plug as is inserted can damage the power cord and cause fire and electric shock hazards.
- 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 hazards.
- Do not push the cabinet from the left/right when attempting to move the unit. Pushing from the sides may cause the unit to tip and result in injury and damage to parts.



Do not push on any parts made of glass (e.g. CRT screen) or plastic, as these parts may break and result in bodily injury.

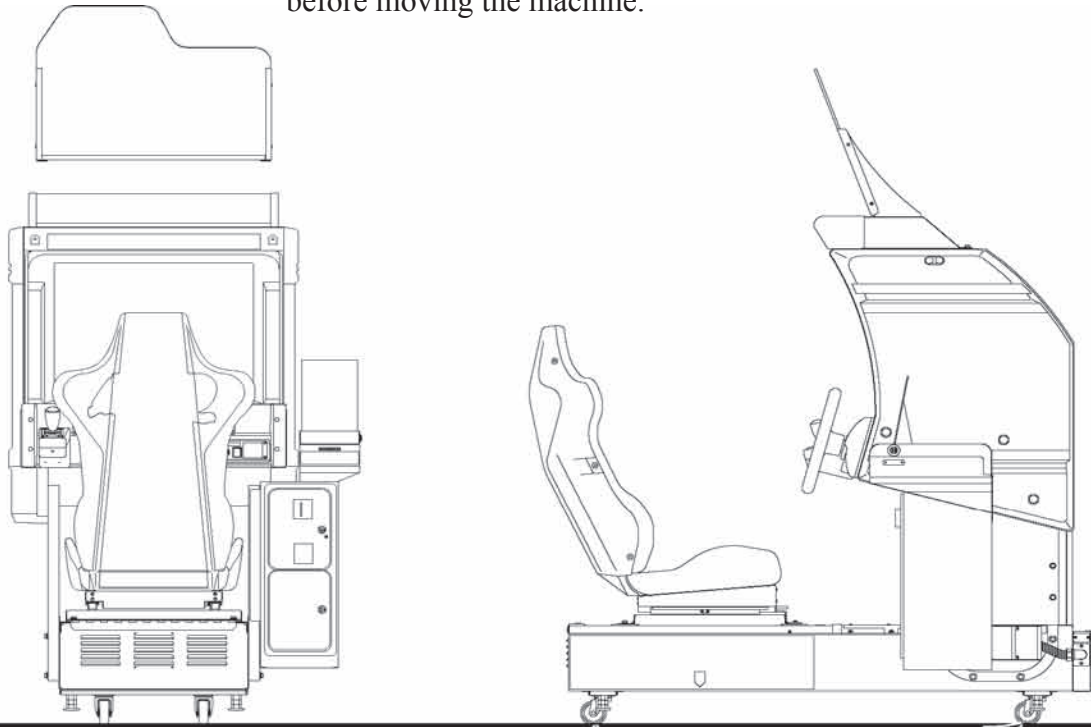


Do not push the cabinet from the left/right direction.

* Note: Pertains when unit is separated.

FIG. 8 a

In locations with low ceilings,
remove the POP and POP Holder
before moving the machine.



* Note: Machine may be different then illustrated.

FIG. 8 b

Place the machine on casters.

9. GAME DESCRIPTION

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

When the power is connected, the fluorescent lamp in the FL box is always on. When in an advertising state, the screen displays the demonstration pictures and ranking data. Sounds are heard from the speakers on the right and left of the monitor. The advertising sounds are not heard if you have set this function to off (disabled).

The start button and the change view button on the control panel are integrated with a lamp. The start button (lamp) flashes when the coins are inserted enough to play the game.

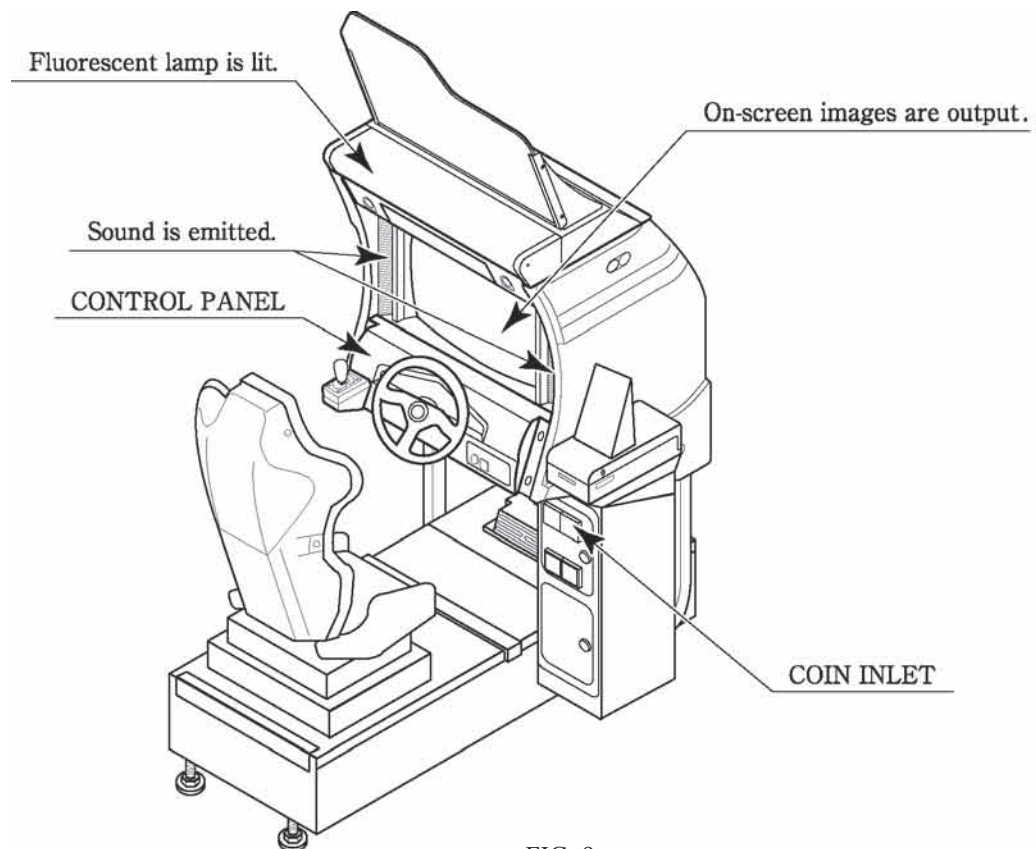


FIG. 9

* Note: Unit in Photo may differ from actual Unit.

Game Overview

The game is a car racing game with two different game modes: "Legend of the Streets" and "Time Attack". By connecting two units, you can also enjoy "Network Game" play. The card system allows players to store information such as the car, wins/loss records and car tune-up status on a special card.

Legend of the Streets

● Game Content & Rules

Battle rival characters man to man on 4 different courses. Each checkpoint you pass adds time to the overall time limit. The first one across the finish line with the allotted time wins. If you run out of time or cross the finish line second, you lose. Once you've defeated all 16 rival characters, you'll get a chance to race against a hidden rival character (final battle/race). Defeat him and you'll race for the title of street legend against the last hidden rival character (special battle/race). Only when the title is yours will you get to see the ending.

● INITIAL D CARD

Purchasing a card when you start the game creates your car.

The card can store all the data for one car. Information on the card includes the player name, car, tune-up status, names of defeated rival characters, times from Time Attack mode, Network Game records, passwords from Time Attack mode and more.

The front of the card shows the driver (name), the car registered to that driver, the driver's home area (areas you've mastered) and a special 3 digit number, or KEY.



● Car Tune-Ups

Depending on how well you do, points are added to your card when you use it to play in "Legend of the Streets" mode and "Time Attack" mode. When you've accumulated enough points, you are given the option of using those points to do tune-ups on your car to increase performance.

Game Flow

- Insert Card Screen: Insert your card if you've got one after completing the Card Purchase Screens. If you don't already have a card, you can purchase one.



- Vehicle Selection Screen: This screen isn't displayed if you've already purchased a card.



- Transmission Selection Screen: This screen isn't displayed if you've already purchased a card.



- If you're purchasing a card, select one of the Parts courses. These parts are then attached to your car when you accumulate enough points.



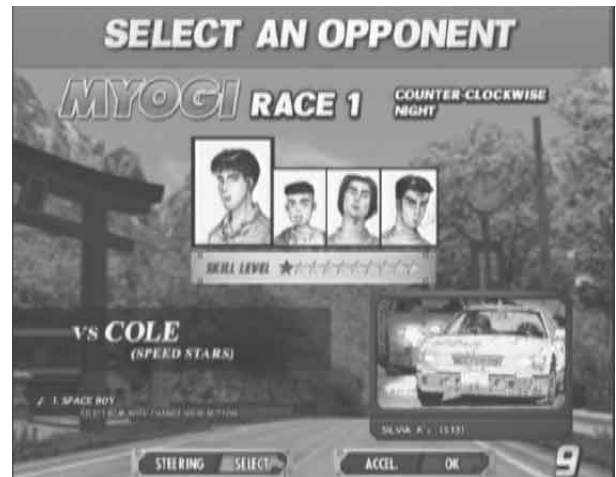
- If you're purchasing a card, enter your name (driver's name) at the player name input screen.



- Select "Legend of the Streets" at the Mode Selection Screen



- Course and rival character selection screens



- Rival Character Scenes



- Battle (Race)



- Results Screen

Result	
BATTLE RESULT	
TOTAL TIME	1' 22" 11
LAP TIME	1' 22" 11
	
ADVANTAGE	+
Point	
BATTLE POINTS	150pts
VICTORY BONUS	0pts
ADVANTAGE BONUS	0pts
PTS. ACQUIRED	150pts
TOTAL POINTS	150pts

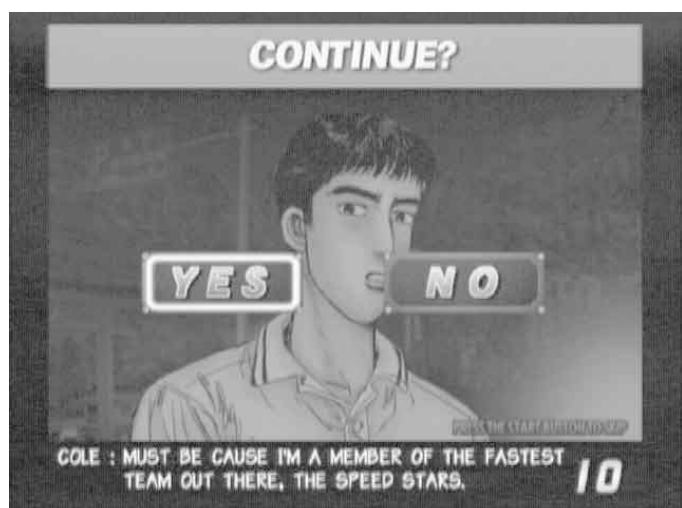
- Tune Up Screen

Use your card to play and accumulate points you can put towards performance enhancing tune-ups.



- Continue Screen

Choose to continue or quit after rival character scenes. If you select "YES", nothing is recorded to the card and you can continue playing. If you select "NO", your game data is stored on your card and your game ends.



Time Attack

● Game Content & Rules

This is a race against time. The goal is to cross the finish line as quickly as you can. Each checkpoint you pass adds time to the overall time limit. When you cross the finish line, a password is displayed. You may use this password to participate in the online Internet rankings. In order to register the password, you must have played the game with a card and you'll need to enter the 3 digit number or KEY printed on the front of the card.

After using the 60,000 points accumulated on the card, you can play Time Attack "Go Round All Courses". Courses are completed in the following order: Myogi (1 lap in a circular course that turns to the right), Usui (1 lap in a circular course that turns to the left), Akina (a downhill straight race) and Happogahara (straight race down and back).

Your times, when recorded with the card (or tuned car), are displayed in the "TUNED" ranking. Your time, when not using a card, are displayed in the "NORMAL" ranking. The only way to accumulate points is to play with a card.

Network Game

● Game Content & Rules

This is a competitive race between two players. One of players' passage of the checkpoints adds the remaining times to both. The player that crosses the finish line first or the player in the lead when time runs out is declared the winner.

You can use a card (tuned car) in Network Game. When playing with a card, your Network Game win/loss record is stored on the card. You cannot accumulate points in a Network Game.

Game Over

The Continue Screen is displayed at the end of each battle (race) in all game modes. If you choose not to continue, the game ends.

Limit on Card Use

After every 50 games with the same car, the game calls for a mandatory "Safety Check". Continued game play after each race is not counted as part of the 50 game limit. At each "Safety Check", you are given the option of renewing your card. Any data stored on your old card is copied over to a new card when you renew. You will not lose any points you accumulated on your old card. However, if you do not renew your card at the "Safety Check", you will not longer be able to play using the data stored on your old card.

Car Selections

TOYOTA

TRUENO GT-APEX [AE86]
 LEVIN GT-APEX [AE86]
 MR2 G-Limited [SW20]
 MR-S S EDITION [ZZW30]

HONDA

CIVIC SiR II [EG6]
 CIVIC TYPE R [EK9]
 INTEGRA TYPE R [DC2]
 S2000 [AP1]

MAZDA

RX-7 ∞ III [FC3S]
 RX-7 Type R [FD3S]
 ROADSTER RS [NB8C]

NISSAN

SKYLINE GT-R [BNR32]
 SKYLINE GT-R [BNR34]
 SILVIA K's [S13]
 SILVIA K's AERO [S14]
 SILVA spec-R [S15]
 180SX TYPE X [RPS13]
 SILEIGHTY [RPS13]

MITSUBISHI

LANCER EVOLUTION IV [CE9A]
 LANCER EVOLUTION III [CN9A]
 LANCER EVOLUTION Z [CT9A]

SUBARU

IMPREZA STi Ver Y [GC8]
 IMPREZA WRX STi [GDB]

Race Courses

Easy: Myogi	Circular Course - 3 laps	Clockwise & Counter-clockwise	Day & Night
Normal: Usui	Circular Course - 2 laps	Clockwise & Counter-clockwise	Day & Night
Hard: Akina	One Street	Uphill & Downhill	Day & Night
Expert: Happogahara	One Street	Outbound & Inbound	Night

"Legend of the Streets" Rival Characters

<EASY - MYOGI>

COLE SILVIA K's [S13]
 IGGY LEVIN SR [AE85]
 SHINGO CIVIC SiR II [EG6]
 ZACK SKYLINE GT-R Vspec II [BNR32]

<NORMAL - USUI>

MAYA & SIMONE SILEIGHTY [RPS13]
 K.T. RX-7 Type R [FD3S]
 AKI LEVIN GTV [AE86 TURBO]
 CAINE MR2 G-Limited [SW20]

<HARD- AKINA>

HAWK LANCER EVOLUTION IV RS [CN9A]
 KYLE LANCER EVOLUTION III GSR [CE9A]
 RY RX-7 ∞III [FC3S]
 TAK TRUENO GT-APEX [AE86]

<EXPERT - HAPPOGAHARA>

DICE CIVIC TYPE R [EK9]
 SMILY INTEGRA TYPE R [DC2 TURBO]
 TOUCH CIVIC TYPE R [EK9]
 K.T. RX-7 Type R [FD3S]

10. EXPLANATION OF TEST AND DATA DISPLAY

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

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

This product's basic system consists of the NAOMI 2 GD-ROM game board. The system enables you to play several games one after the other just by changing a GD-ROM disc and key chip.

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

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

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

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

TABLE 10 EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to ensure each is the standard setting at shipment. 2. Check each Input equipment in the INPUT TEST mode. 3. Check each Output equipment in the OUTPUT TEST mode. 4. Test on-IC-Board IC's in the SELF-TEST mode.	NETWORK SYSTEM SERVICE MANUAL 10-3F,H 10-3B 10-3C NETWORK SYSTEM SERVICE MANUAL
MEMORY	This test is automatically executed by selecting RAM TEST, or ROM BOARD TEST in the Menu mode.	NETWORK SYSTEM SERVICE MANUAL
PERIODIC SERVICING	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. To test each Input equipment in the INPUT TEST mode. 4. To test each Output equipment in the OUTPUT TEST mode. 5. CARD R/W TEST	NETWORK SYSTEM SERVICE MANUAL 10-3F,H 10-3B 10-3C 10-3G
CONTROL SYSTEM	1. To check each Input equipment in the INPUT TEST mode. 2. Adjust or replace each Input equipment. 3. If the problem still remains unsolved, check each equipment's mechanism movements.	NETWORK SYSTEM SERVICE MANUAL 10-3B,D,E 11,12,13
MONITOR	In the Monitor Adjustment mode, check to see if Monitor (Projector) adjustments are appropriate.	NETWORK SYSTEM SERVICE MANUAL 15
IC BOARD	MEMORY TEST	NETWORK SYSTEM SERVICE MANUAL
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc.	NETWORK SYSTEM SERVICE MANUAL 10-3F,I

10-1 SWITCH UNIT AND COIN METER



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



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

SWITCH UNIT

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

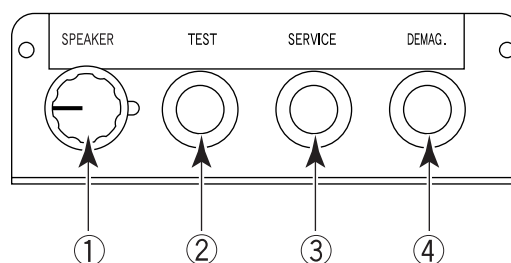


FIG. 10. 1 a SWITCH UNIT

* Note: Actual Switch Unit will appear different.

- **SOUND VOLUME SWITCH:** Adjusts sound volume for all of the machines' Speakers. (SPEAKER)
- **TEST BUTTON:** (TEST) For the handling of the test button, refer to the following pages.
- **SERVICE BUTTON:** (SERVICE) Gives credits without registering on the coin meter.
- **DEMAGNETIZER SWITCH:** (DEMAG.) Eliminates the on-screen color unevenness due to magnetization of CRT. First use this SW before performing the monitor's color adjustment.

COIN METER

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

COIN METER

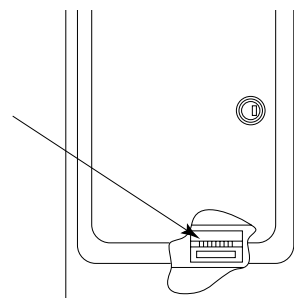


FIG. 10. 1 b



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

In the SYSTEM TEST MODE, IC BD functioning can be checked, the monitor adjusted, and the coin setting performed.

Refer to NAOMI NETWORK SYSTEM SERVICE MANUAL for the details. Note that the setting of the following items need to be performed in accordance with the instruction given.

- CABINET TYPE : 1 PLAYER(S)
- MONITOR TYPE : HORIZONTAL
- SERVICE TYPE : COMMON
- COIN CHUTE TYPE : COMMON
- NETWORK TYPE : NONE

The SEQUENCE SETTING items of COIN/CREDIT SETTING are as follows.

- SEQUENCE SETTING
 - SEQUENCE 1: Number of credits required for starting the game.
 - SEQUENCE 2: Number of credits required for continuing the play.
 - SEQUENCE 3: Number of credits required for dedicated CARD purchase.
 - SEQUENCE 4~8: NOT USED

10-3 GAME TEST MODE

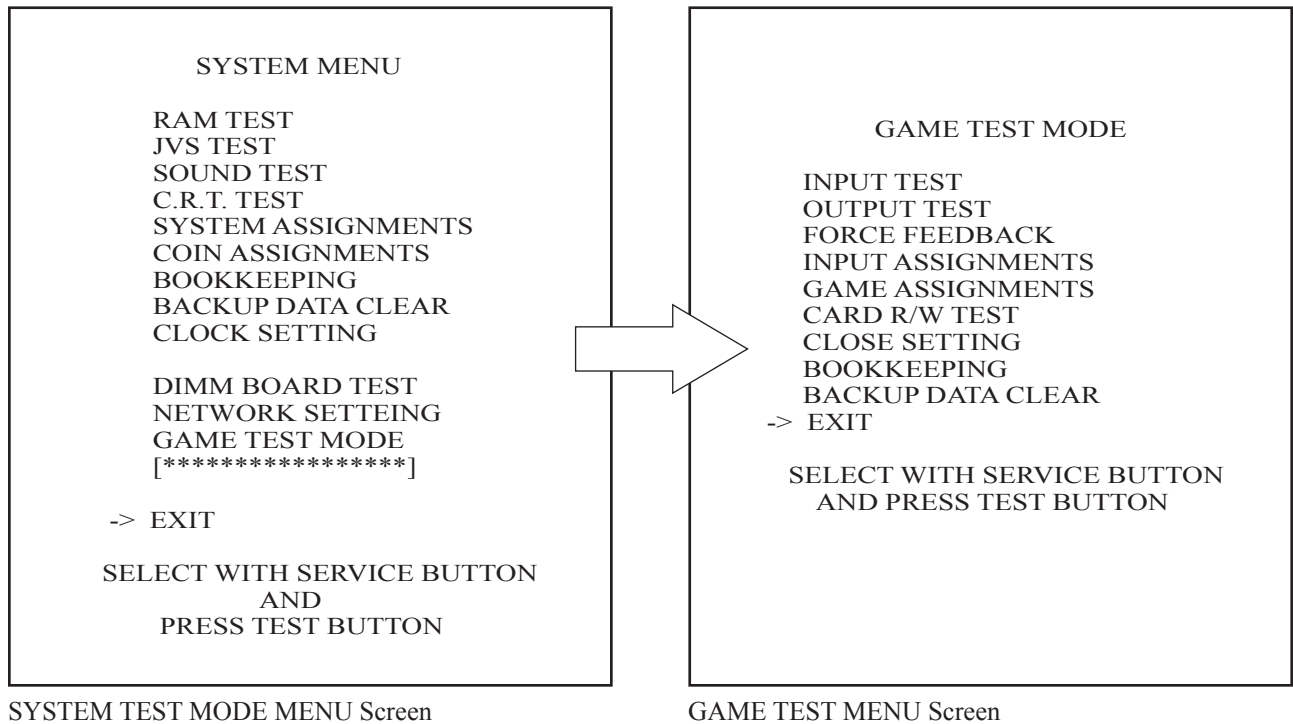


- When changing the game configuration, changes will not take effect until the Game Test Mode has been completed. Be sure to exit the Game Test Mode properly after configuration changes.
- Do not configure the game in ways not described in this text. It is possible that the game will not function properly.

A. GAME TEST MENU MODE

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

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



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

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

B. INPUT TEST

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

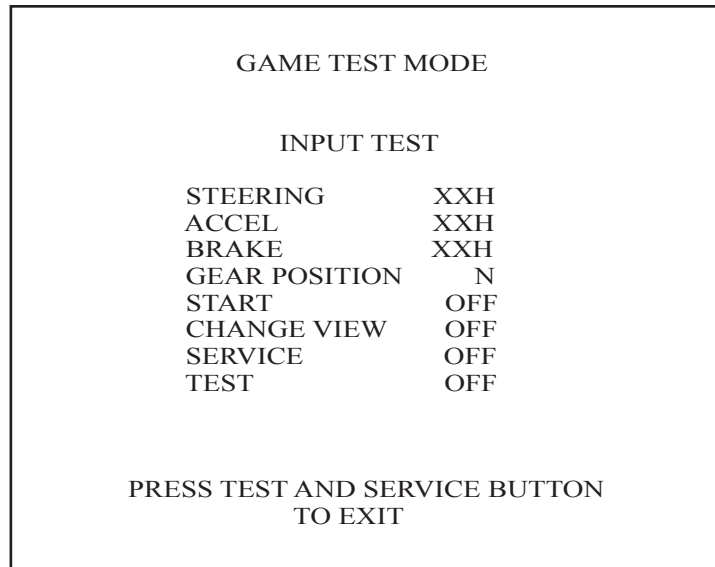
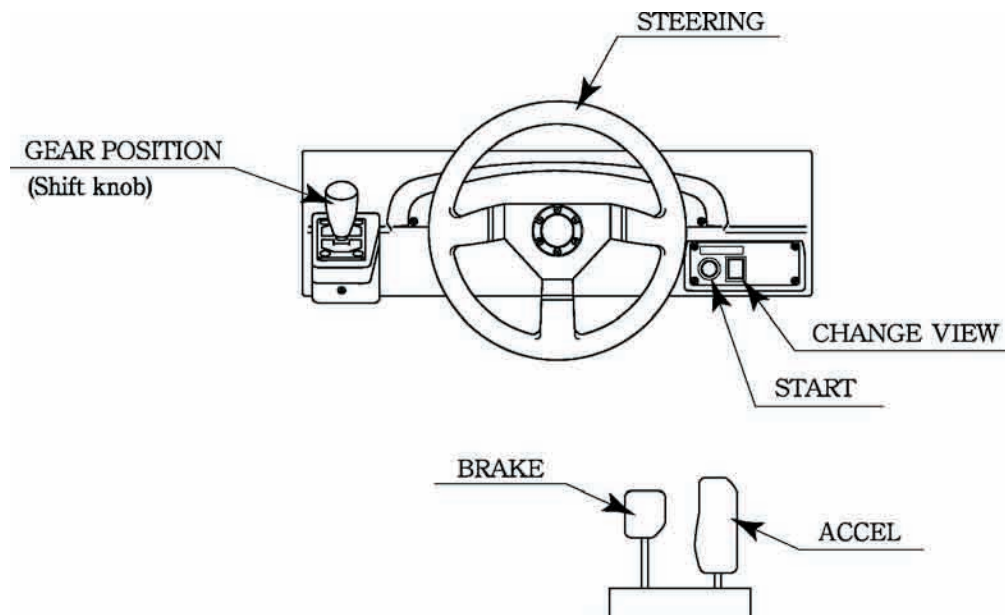


FIG. 10. 3 b INPUT TEST Screen

Test the STEERING, ACCEL and BRAKE controls to ensure that they are functioning properly and that the parameters change smoothly as each input device is operated.

Display N, UP and DOWN using the GEAR POSITION. N should display there is no control input. Verify that both UP and DOWN display in sync with the position of the shift knob.

Press the START, CHANGE VIEW, SERVICE and TEST Buttons. If functioning correctly, each indicator will switch from OFF to ON.



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

C. OUTPUT TEST

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

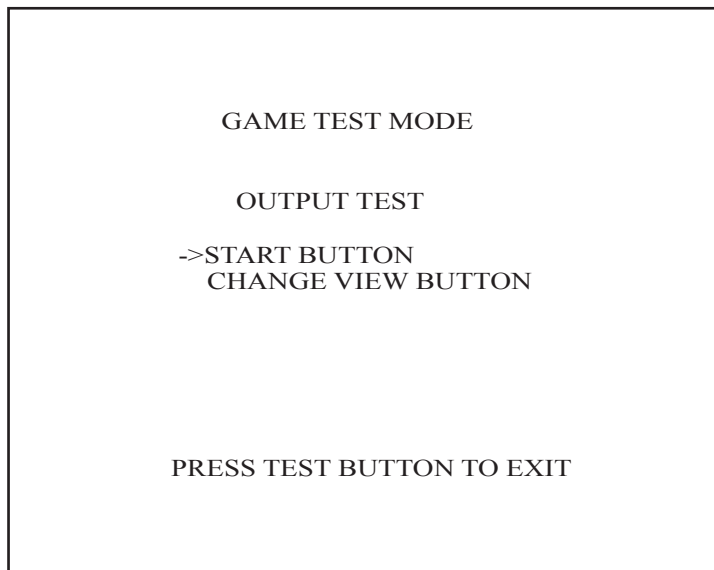


FIG. 10. 3 c OUTPUT TEST Screen

The cursor toggles automatically between START Button and CHANGE VIEW Button, and each lamp lights up.

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

D. FORCE FEEDBACK



If you select FORCE FEEDBACK, the STEERING will rotate automatically when you press the TEST Button. The STEERING will also rotate automatically during FORCE TEST. Make sure that no one is touching the STEERING before running these tests as contact may cause injury.

When you select "FORCE FEEDBACK", a connection test runs and the STEERING rotates. When the connection check completes, a screen similar to the one below is displayed, and you may adjust the STEERING resistance.

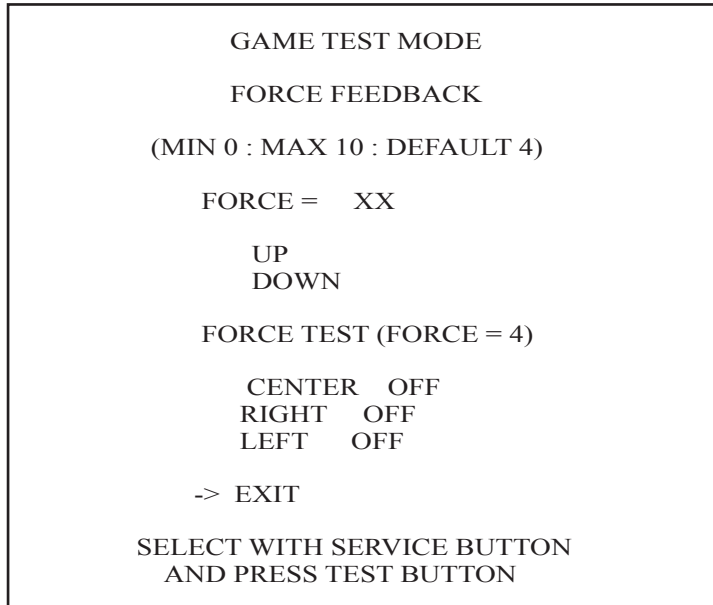


FIG. 10. 3 d FORCE FEEDBACK Screen

- **FORCE:** Set the STEERING resistance
The smaller the value, the weaker the resistance; the larger the value, the stronger the resistance.
(Minimum value is 0; the maximum value is 10. The default setting is 4.)
Move the cursor to UP or DOWN and press the TEST Button to change the value.
- **FORCE TEST:** Verifies the STEERING motor is working properly
Conducted when the STEERING resistance is set at 4.
Toggle between OFF and ON by aligning to CENTER and pressing the TEST Button.
The STEERING will rotate and stop in the center position. Pressing the SERVICE Button moves the cursor to the next menu item and CENTER changes to OFF. Control of the STEERING is then released.

When the RIGHT menu item is ON, the STEERING rotates to the right as far as possible and then stops. Press the SERVICE Button again to turn it OFF and release control of the STEERING.

When the LEFT menu item is ON, the STEERING rotates to the left as far as possible and then stops. Press the SERVICE Button again to turn it OFF and release control of the STEERING.

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

E. INPUT ASSIGNMENTS

Select INPUT ASSIGNMENTS to display the following screen.

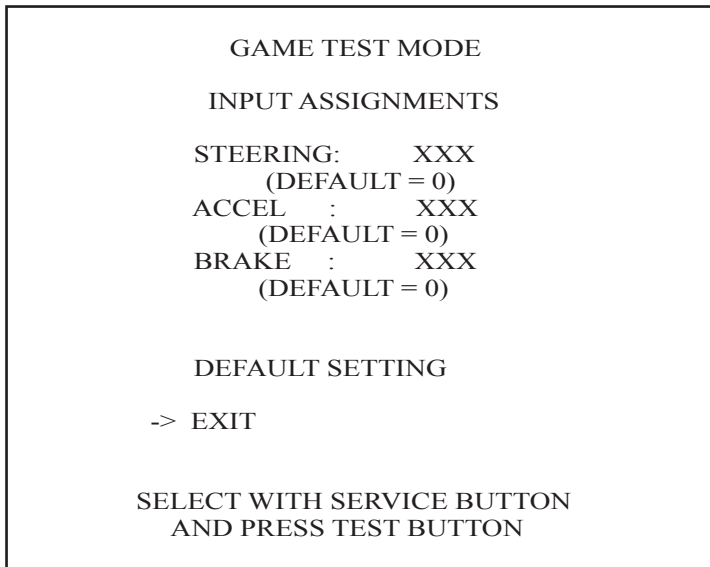


FIG. 10. 3 ea INPUT ASSIGNMENTS Screen

You can adjust each of the menu items by moving the cursor to the menu item and pressing the TEST Button.

Return all settings to the default settings with DEFAULT SETTING.

- STEERING: Make adjustments to STEERING
Press the TEST Button to display the following screen.

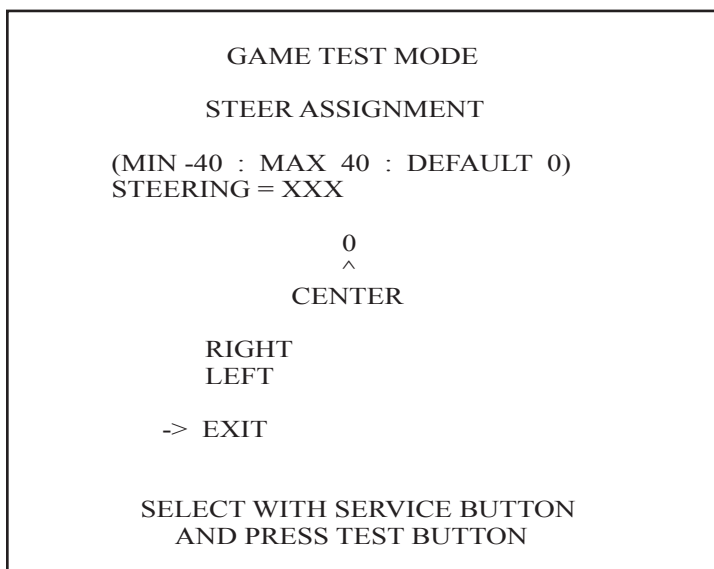


FIG. 10. 3 eb STEER ASSIGNMENTS Screen

Center the STEERING. When the "0" displayed is not exactly aligned with the "^" mark above CENTER, use the cursor to select RIGHT or LEFT and move the "0" until it is displayed directly above the "^" mark.

Move the cursor to RIGHT and press the TEST Button to move the "0" to the right. Each time you press the TEST Button, "0" moves slightly to the right. Move the cursor to LEFT and press the TEST Button to move the "0" to the left. Each time you press the TEST Button, "0" moves slightly to the left.

Move the cursor to EXIT and press the TEST Button to return to the INPUT ASSIGNMENTS screen.

- ACCEL: Make adjustments to ACCEL
Press the TEST Button to display the following screen.

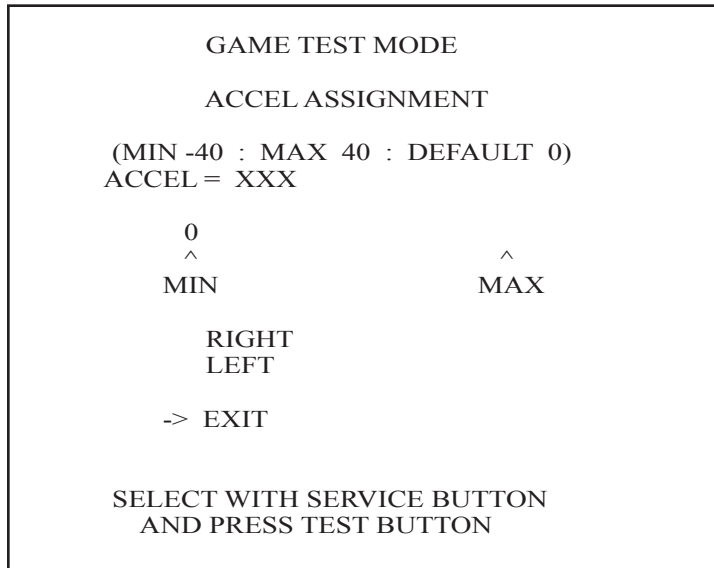


FIG. 10. 3 ec ACCEL ASSIGNMENTS Screen

Adjust the distance between "0" displayed and the "^" mark equally so that when your foot is off the ACCEL pedal, the "0" on the left is aligns with the "^" above MIN and when you press the ACCEL pedal down all the way, the "0" on the right is aligns with the "^" mark above MAX.

Move the cursor to RIGHT and press the TEST Button to move "0" to the right. Each press of the TEST Button moves "0" slightly to the right.

Move the cursor to LEFT and press the TEST Button to move "0" to the left. Each press of the TEST Button moves "0" slightly to the left.

Move the cursor to EXIT and press the TEST Button to return to the INPUT ASSIGNMENTS screen.

- BRAKE: Make adjustments to BRAKE
Press the TEST Button to display the following screen.

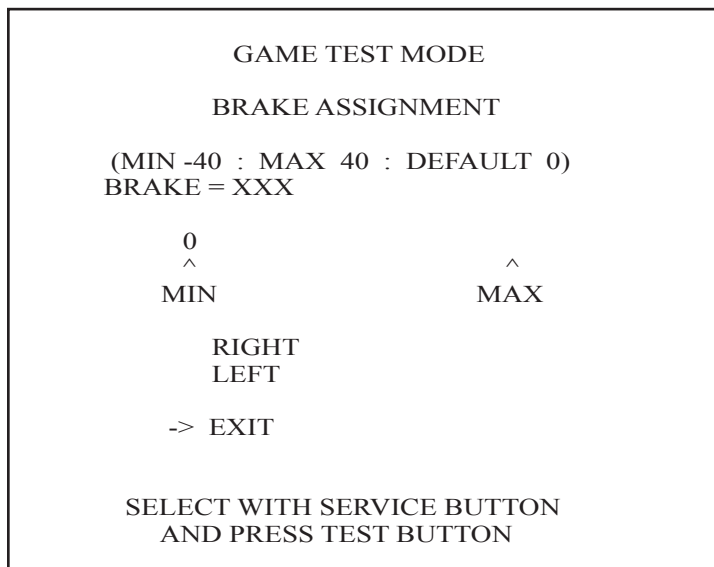


FIG. 10. 3 ed BRAKE ASSIGNMENTS Screen

Adjust the distance between "0" displayed and the "^" mark equally so that when your foot is off the BRAKE pedal, the "0" on the left is aligns with the "^" above MIN and when you press the BRAKE pedal down all the way, the "0" on the right is aligns with the "^" mark above MAX.

Move the cursor to RIGHT and press the TEST Button to move "0" to the right. Each press of the TEST Button moves "0" slightly to the right.

Move the cursor to LEFT and press the TEST Button to move "0" to the left. Each press of the TEST Button moves "0" slightly to the left.

Move the cursor to EXIT and press the TEST Button to return to the INPUT ASSIGNMENTS screen.

F. GAME ASSIGNMENTS

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

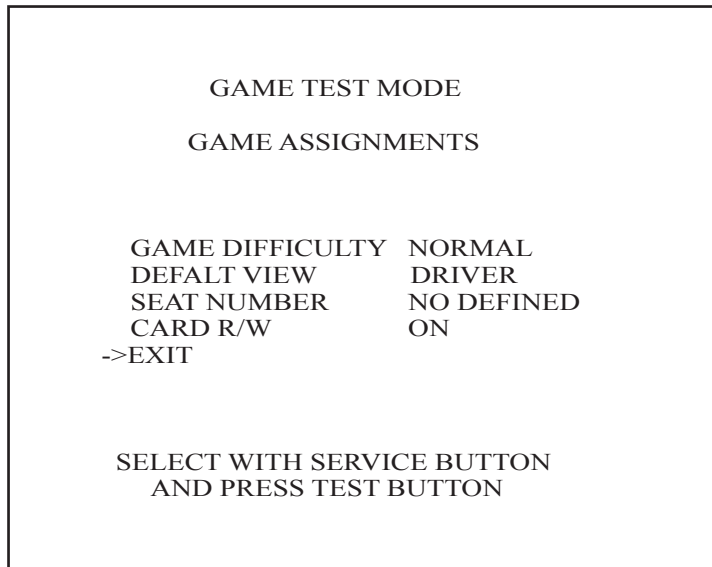


FIG. 10. 3 f GAME ASSIGNMENTS Screen

The GAME DIFFICULTY menu item is only displayed when the SEAT NUMBER is set to either 1 or NO DEFINED.

- **GAME DIFFICULTY:** Set the level of difficulty for the game
You may select one of 5 different levels of difficulty: VERY EASY, EASY, NORMAL, HARD or VERY HARD.
This setting does not affect the speed of rivals in "Legend of the Streets" mode.
- **DEFAULT VIEW:** Set the view perspective at the start of races
You may select one of the following 2 settings: DRIVER view or REAR view.
- **SEAT NUMBER:** Assign seat numbers to seats in each arcade unit for network play
If you have two arcade units side by side, make sure you assign different seat numbers; the seat on the left would be 1 and the one on the right would be 2. If the unit will not be used for network play, set the SEAT NUMBER to NO DEFINED.
You may select one of the following 3 settings: 1, 2 or NO DEFINED.
- **CARD R/W:** Set the existence of the card reader/writer; normally, this should be ON

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

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

G. CARD R/W TEST



Clean the card reader/writer periodically.

Test the functionality of or clean the CARD R/W (read/writer).
The CARD R/W should be tested and cleaned periodically.

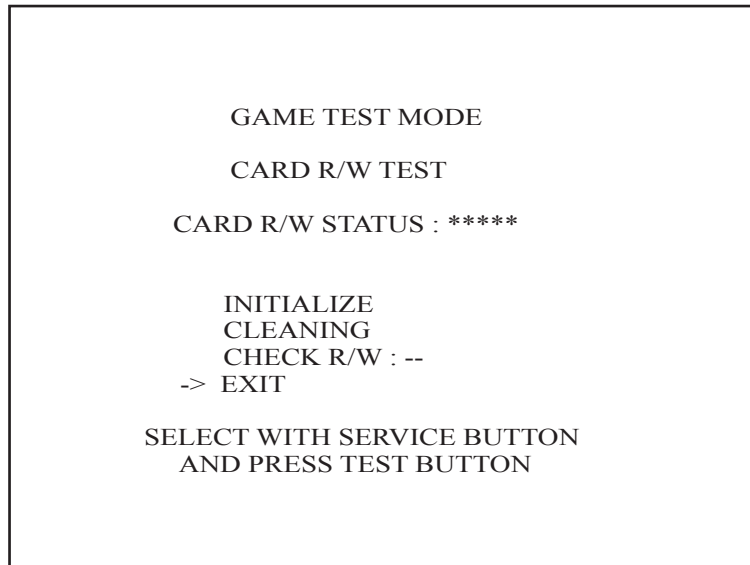


FIG. 10. 3 g CARD R/W TEST Screen

The cursor can move to the following items:

- INITIALIZE: Initialization
- CLEANING: Cleaning
- CHECK R/W: R/W Operation Check

Depending on the R/W running mode, one of the following is displayed in "*****" in "CARD R/W STATUS : *****":

READY Now waiting (Clear to Send Command)
INITIALNow initializing (Not Clear to Send Command)
CLEANNow cleaning (Not Clear to Send Command)
GET Cards are being taken out from the dispenser (Not Clear to Send Command)
SAVESample data is saved onto the card (Not Clear to Send Command)
LOAD.....Load card data and compares it with sample data (Not Clear to Send Command)
OUT.....Eject cards (Not Clear to Send Command)
SHUTTER....Now closing/opening the shutter (Not Clear to Send Command)
ERROR Error (Clear to Initialize Command Only)

While a status with a note of "Not Clear to Send Command " in parentheses is on-screen, no operations are accepted. If such a status has occurred, wait until the operation in that status stops automatically and the display comes to READY.

Occasionally, the "INFORMATION" field on the screen outputs one of the instructions below, although it usually displays NO ERROR.

While cleaning is in progress, waiting in the ready mode for inserting a cleaning card:

-- PLEASE INSERT CLEANING CARD --

After the operation check, waiting for the ready mode for ejecting the card:

-- PLEASE REMOVE --

When an error occurs, its type are displayed in the "INFORMATION" field:

NO ERROR.....Nomal Completion
CAN'T LOADLoading Error
CAN'T SAVEWritting Error
DRAW CARD ERRORError in Taking Card from dispenser
CARD STUFFEDCard Jamming
SHUTTER ERRORShutter Error
WRONG DATAData Error, Dispenser Card Empty
CONNECTION ERRORConnection Error
SCIF ERROR.....RC-232C Communication Error
UNKNOWN EROR.....Unknown Error

The "---" field in "CHECK R/W : ---" shows the result of the operation check.

---..... Not Checked
OK..... No Failure
NG..... Failure

CLEANING PROCESS

Cleaning refers to the optional cleaning of the heads on the CARD R/W.
Refer to section <7-2> Head Cleaning for details on the use of the cleaning card.

- Select "CLEANING" and press the TEST Button.
- If the CARD R/W is not initialized, it will be initialized first. :INITIALIZE is displayed.
- The following message appears to show that the R/W is ready for insertion of the cleaning card:
-- PLEASE INSERT CLEANING CARD --
- Insert the cleaning card into the R/W.
On the screen, the status display is replaced with "CLEAN", and cleaning begins.
- Once cleaning ends after a lapse of a certain time, the R/W automatically ejects the card.
The status display changes from "CLEAN" to "READY."
NO ERROR is displayed on the screen.

TESTING FUNCTIONALITY

The operation check takes out each card from the dispenser, and writes the sample data onto it. The check then loads and reads it, and checks whether the read data matches the sample data. Then, the check ejects the card. When you draw out the card at this time, the entire process of the check is completed. The functionality test uses 1 card from the dispenser.

- Select "CHECK R/W" and press the TEST button.
R/W operates automatically as follows:
- If the CARD R/W is not initialized, it will be initialized first. :INITIALIZE is displayed.
- Close the shutter: SHUTTER is displayed.
- Takes out the card from the dispenser: GET is displayed.
- Saves the sample data onto the card: SAVE is displayed.
- Print the sample data onto the card: PRINT is displayed.
- Loads the data on the card for comparison with the sample data: LOAD is displayed.
- Open the shutter: SHUTTER is displayed.
- Ejects the card: OUT is displayed.
- Draws out the card. Now the entire process of the check is completed.

If execution of the operation check results in display of NG, check the error condition. If you can take action against the error, execute the operation check again after you take the proper action. If you cannot take action against the error, repeat the check several times. If the result of the check is still NG, clean the R/W.
If the subsequent execution of the operation check still results in NG, the R/W may be faulty.

If an error occurs, it is cleared by executing the INITIALIZE command.
Note that, when an error has occurred, the R/W only accepts this command (except EXIT).

H. CLOSE SETTING

Select CLOSE SETTING to display the following screen.

Change the setting for the time when the store closes.

The game will be unusable for card play starting 15 minutes before the time you set until 6:00 AM the next morning.

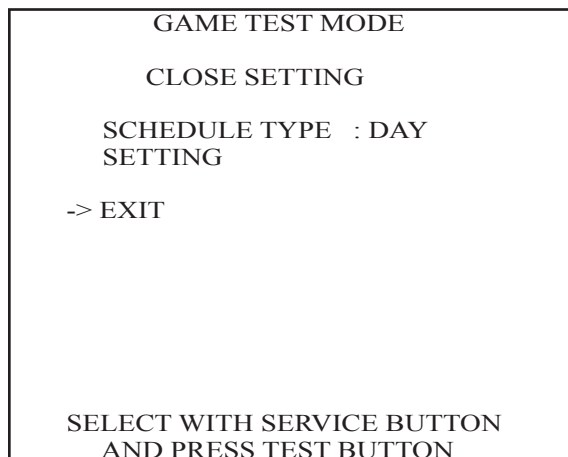


FIG. 10. 3 ha CLOSE SETTING Screen

You can set SCHEDULE TYPE to DAY, WEEK or OFF. Press the TEST Button to select the item. (The unit is shipped with SCHEDULE TYPE set to OFF.)

Move the cursor to SETTING and press the TEST Button to display the appropriate time setting screen.

- DAY: Set the daily store closing time. This time setting will be used every day

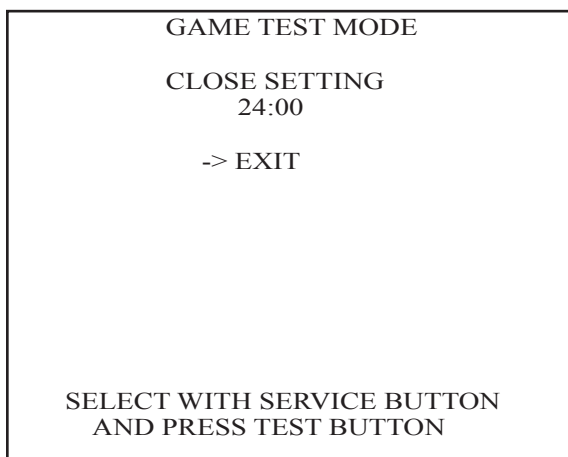


FIG. 10. 3 hb CLOSE SETTING (DAY) Screen

Set the daily store closing time. When you press the SERVICE Button, the "hour" display will begin to flash. Press the TEST Button to select any hour from "19" to "26".

Press the SERVICE Button again to accept the "hour" selection. Once accepted, the "minute" display will then begin to flash. Press the TEST Button to select one of the following "minute" options: "00, 15, 30, 45". Press the SERVICE Button again to accept the "minute" selection.

When complete, move the cursor to EXIT. If you press the SERVICE Button when the cursor is next to EXIT, the "hour" display will begin to flash again indicating that you can change the settings.

Move the cursor to EXIT and press the TEST Button to return to the CLOSE SETTING screen.

- WEEK: Set a different store close time for each day of the week

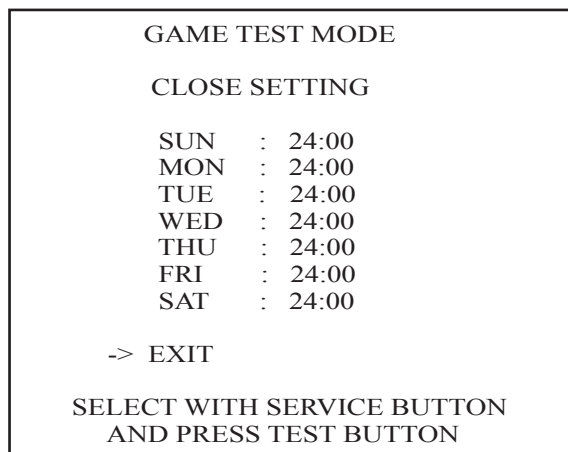


FIG. 10. 3 hc CLOSE SETTING (WEEK) Screen

Set the store closing time for each day of the week. When you press the SERVICE Button, the "hour" display will begin to flash. Press the TEST Button to select any hour from "19" to "26". Press the SERVICE Button again to accept the "hour" selection. Once accepted, the "minute" display will then begin to flash. Press the TEST Button to select one of the following "minute" options: "00, 15, 30, 45". Press the SERVICE Button again to accept the "minute" selection. Once accepted, the "hour" display for the next day of the week will begin to flash. Set the "hour" and "minute" settings in the same fashion as described above.

When you have completed setting the time for SAT, move the cursor to EXIT. If you press the SERVICE Button when the cursor is next to EXIT, the "hour" display for SUN will begin to flash again indicating that you can change the settings.

Move the cursor to EXIT and press the TEST Button to return to the CLOSE SETTING screen.

- OFF: Do not set any store closing times. Other SETTING items are not displayed

I. BOOKKEEPING

Select BOOKKEEPING to display the following screens of operating status data. Each time the TEST Button is pressed, the ensuing page appears. Pressing the TEST Button while the 5/5 page is displayed causes the Game Test Menu to return on the screen.

GAME TEST MODE	
BOOKKEEPING 1/5	
NUMBER OF GAMES	0
NUMBER OF NETWORK PLAY	0
NUMBER OF CARD	0
NUMBER OF CARD PLAY	0
PLAY TIME	0D 0H 0M 0S
AVERAGE PLAY TIME	0M 0S
LONGEST PLAY TIME	0M 0S
SHORTEST PLAY TIME	0M 0S
PLAY TIME HISTOGRAM	
0M 0S ~ 0M59S	0
1M 0S ~ 1M59S	0
2M 0S ~ 2M29S	0
2M30S ~ 2M59S	0
3M 0S ~ 3M29S	0
3M30S ~ 3M59S	0
4M 0S ~ 4M29S	0
4M30S ~ 4M59S	0
5M 0S ~ 5M29S	0
5M30S ~ 5M59S	0
6M 0S ~ 6M29S	0
OVER 6M30S	0
PRESS TEST BUTTON TO CONTINUE	

FIG. 10. 3 i BOOKKEEPING (1/5) Screen

- NUMBER OF GAMES: total number of games played
- NUMBER OF NETWORK PLAY: total number of network games played
- NUMBER OF CARD: total number of cards purchased
- NUMBER OF CARD PLAY: number of games played with cards
(selecting continue during card play gets added to this count)
- PLAY TIME: total amount of game play time
- AVERAGE PLAY TIME: average game play time
- LONGEST PLAY TIME: longest game play time
- SHORTEST PLAY TIME: shortest game play time
- PLAY TIME HISTOGRAM: table of play times

Press the TEST Button to move to screen 2/5 of BOOKKEEPING.

GAME TEST MODE	
BOOKKEEPING 2/5	
GAME / LEGEND OF THE STREETS	
MYOGI-1	0
MYOGI-2	0
MYOGI-3	0
MYOGI-4	0
USUI-1	0
USUI-2	0
USUI-3	0
USUI-4	0
AKINA-1	0
AKINA-2	0
AKINA-3	0
AKINA-4	0
HAPPOGAHARA-1	0
HAPPOGAHARA-2	0
HAPPOGAHARA-3	0
HAPPOGAHARA-4	0
HAPPOGAHARA-5	0
SPECIAL	0
PRESS TEST BUTTON TO CONTINUE	

FIG. 10. 3 i BOOKKEEPING (2/5) Screen

- **GAME/LEGEND OF THE STREETS:** Displays the number of times each rival character was selected in "Legend of the Street" mode. "MYOGI-1" refers to the first rival in MYOGI which is "COLE"

Press the TEST Button to move to screen 3/5 of BOOKKEEPING.

GAME TEST MODE	
BOOKKEEPING 3/5	
GAME / TIME ATTACK	
MYOGI	0
USUI	0
AKINA	0
HAPPOGAHARA	0
GAME / NETWORK GAME	
MYOGI	0
USUI	0
AKINA	0
HAPPOGAHARA	0
TRANSMISSION SELECT	
AUTOMATIC	0
MANUAL	0
PRESS TEST BUTTON TO CONTINUE	

FIG. 10. 3 i BOOKKEEPING (3/5) Screen

- **GAME/TIME ATTACK:** Displays the number of times each course was selected in TIME ATTACK mode
- **GAME/NETWORK GAME:** Displays the number of times each course was selected in NETWORK GAME mode
- **TRANSMISSION SELECT:** Displays the number of times each TRANSMISSION was selected in all game modes

Press the TEST Button to move to screen 4/5 of BOOKKEEPING.

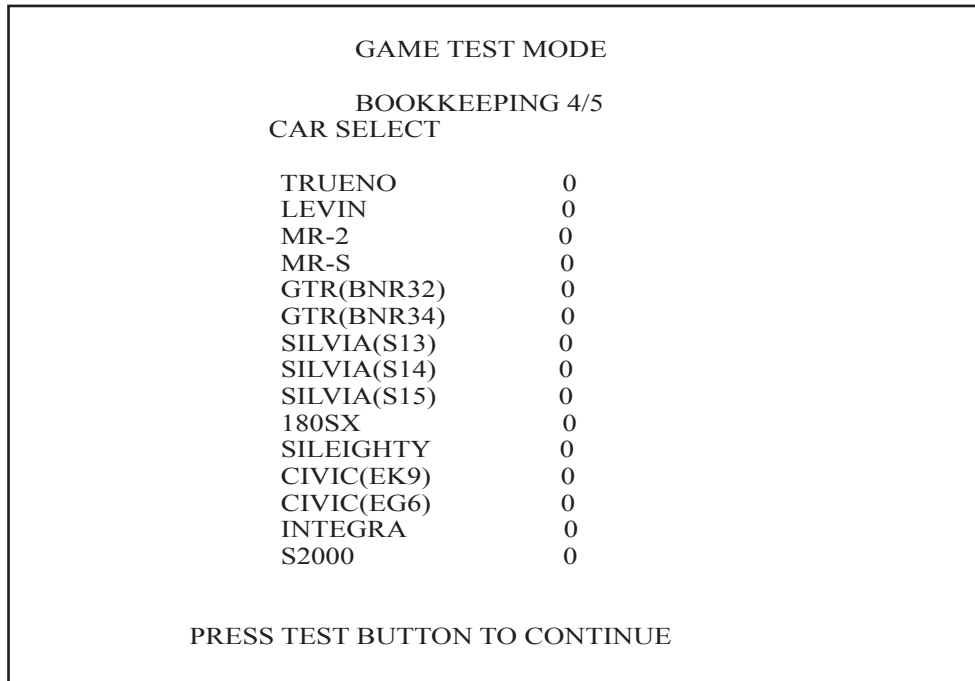


FIG. 10. 3 i BOOKKEEPING (4/5) Screen

- CAR SELECT: Displays the number of times each car was selected

Press the TEST Button to move to screen 5/5 of BOOKKEEPING.

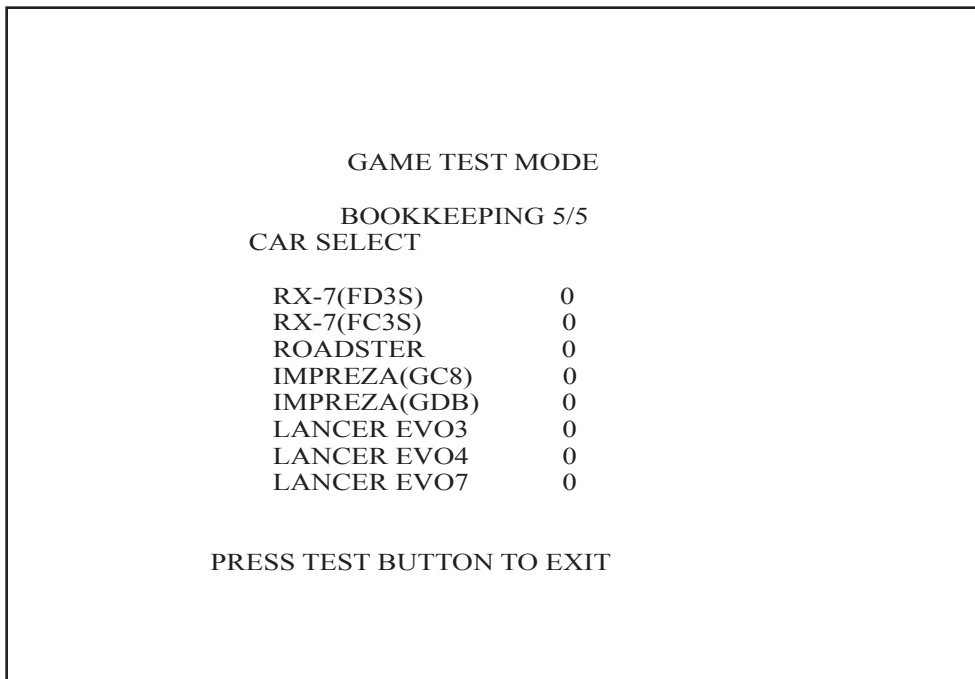


FIG. 10. 3 i BOOKKEEPING (5/5) Screen

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

J. BACKUP DATA CLEAR

Delete all BOOKKEEPING screen data. Use BACKUP DATA CLEAR in the SYSTEM TEST MODE to delete data about coin/credit collection.

Deleting this data does not affect the game settings or other data stored by the game.

Deleting this data will delete the data showing how many times the CARD R/W was used.

After deleting the data, the CARD R/W automatically enters Head Cleaning mode.

Refer to section <7-2> Head Cleaning for more information about head cleaning.

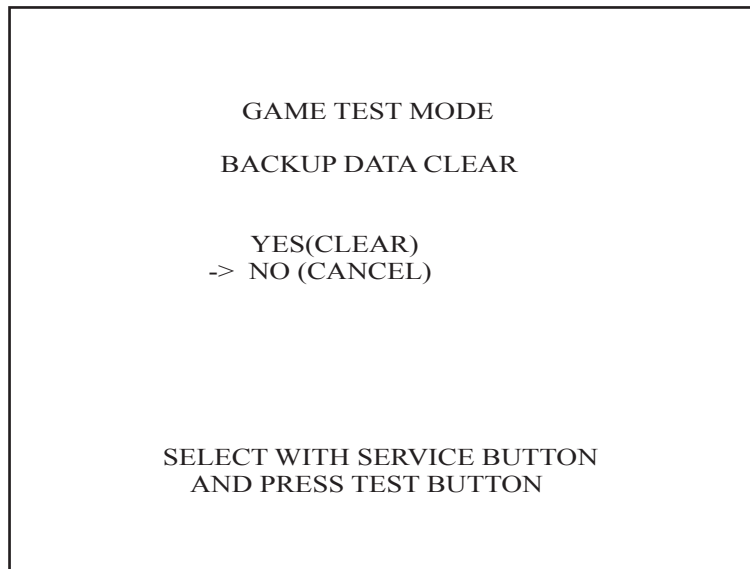


FIG. 10. 3 j BACKUP DATA CLEAR Screen

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

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

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

11. CONTROL PANEL



- 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 not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
- This work should be performed by the Location's Maintenance Man or Serviceman. Performing work by non-technical personnel can cause electric shock hazard.
- Do not perform work other than those specified in this Manual in order to prevent accidents during performing work and operation after performing work. Performing work not specified in this Manual may require special training for this product. If performing work other than those stated in this manual is required for repair, contact the offices herein stated in this manual or where you purchased the product from and ask for repair or inquire how to repair.
- Be very careful when soldering. Handling a soldering iron carelessly may result in a fire or a burn.
- Be extremely careful when heating the heat-shrinkable tube. Failure to do so may result in a fire or burns.



- Exercise extreme caution when handling the internal parts of the Control Panel. Watch out for damage, warping and loss. The loss of just one piece may result in damage to or lead to faulty operation of the entire unit.
- When securing the plastic-made parts, do not excessively fasten screws and nuts. Failure to observe this may damage the parts and cause injury due to fragments resulting from damage.



Be sure to perform volume's move value setting in the Volume Setting in the Test Mode after replacing or adjusting the Volume. (See 10-3E.)

11-1 REMOVING THE CONTROL PANEL

Poor handle response/lack of response when adjusting the Volume in Test Mode may be caused by faulty Volume alignment and/or a damaged Volume.

Follow the instructions below to adjust the gear alignment and/or replace the Volume.

If the Volume Shaft is rotating within its normal area of mobility, there is little chance the Volume can be damaged by rotating the handle as far as possible to the left/right. With the handle in the center position, i.e. straight, and the Volume Shaft in the same direction shown in the diagram, attach the Volume so that it aligns properly with the gears. In order to adjust or replace the Volume, follow the instructions below to remove the Control Panel.

A 5 mm hexagonal wrench is required for the following procedure.

- Turn off the power.
- Remove the 6 hexagon socket screws from the Control Panel.

HEXAGON SOCKET SCREW (total 6), black

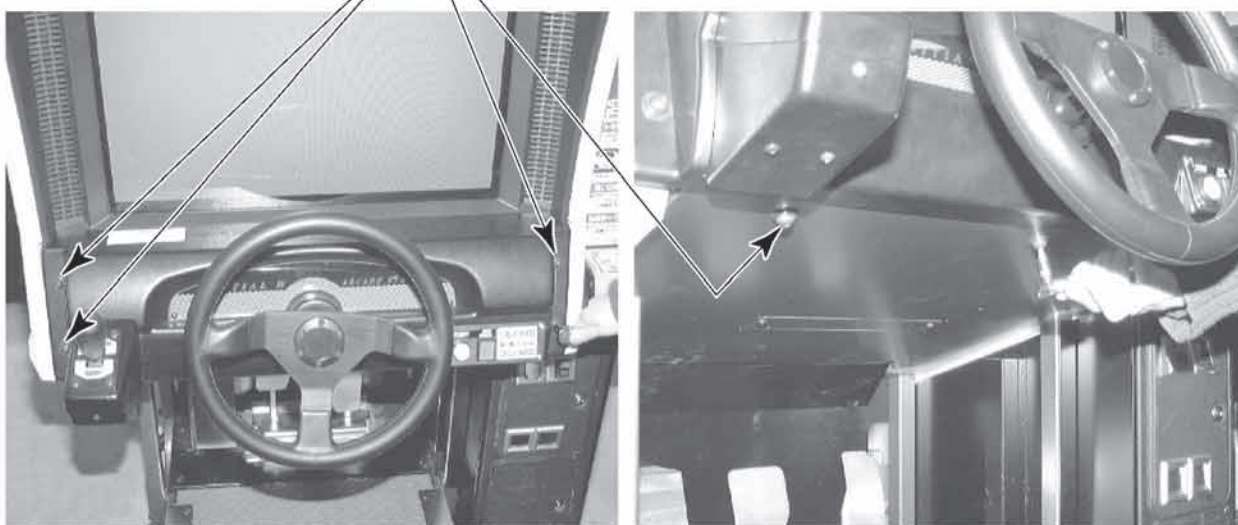


PHOTO 11. 1 a

- Unplug the 5 connectors and remove the Control Panel. Be careful not to damage any of the wiring.

CONNECTOR (5)
BROWN: 4P
YELLOW: 10P,12P
RED: 3P,6P

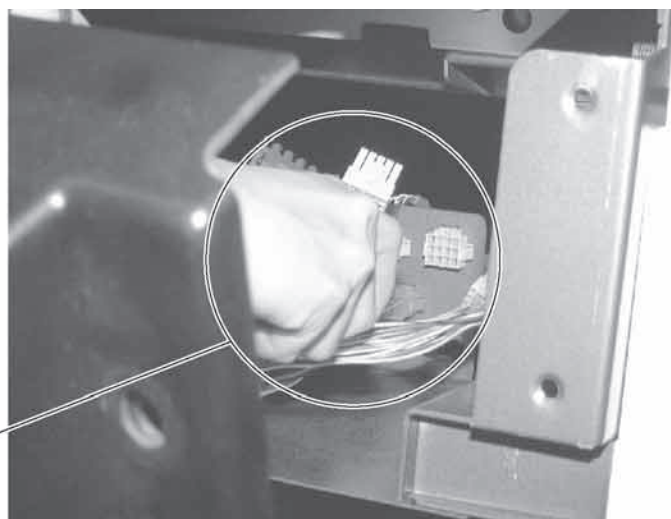


PHOTO 11. 1 b

11-2 ADJUSTING/REPLACING THE VOLUME

ADJUSTMENT PROCEDURE

- Loosen the 2 screws that secure the VR Bracket and move the VR Bracket to adjust the angle and condition of the gear alignment.
- Keeping the handle straight, align the gears so that the direction of the D Cut side of the Volume Shaft matches that shown in the diagram.
- Tighten the 2 screws and secure the VR Base.

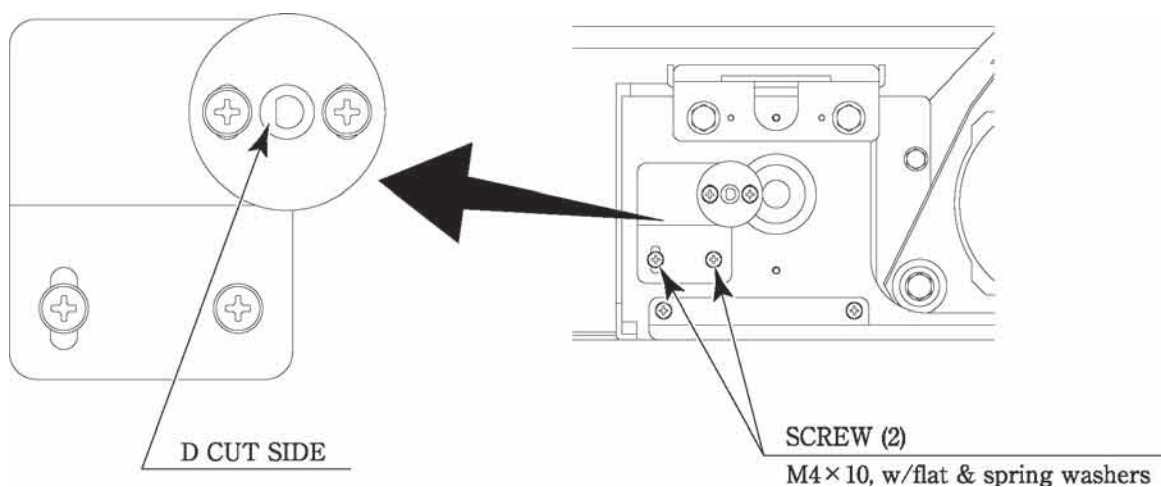


FIG. 11. 2 a

- After making adjustments, use the Volume Setting Screen to set the Volume (refer to 10-3E). The recommended value for the handle Volume is "80H" when the handle is set straight. Verify that the value decreases when the handle is rotated to the left and increases when rotated to the right. Use the Test Mode to view the Volume value (refer to 10-3B).

REPLACEMENT PROCEDURE

This procedure requires the following tools: Philips screwdriver for the M4 screws, 2 mm hexagonal wrench, 11—12mm monkey wrench, nipper, cutter, wire stripper, soldering iron and industrial dryer.

- Remove the connectors.
- Remove the 2 screws securing the VR Bracket and remove the entire Bracket and Volume.

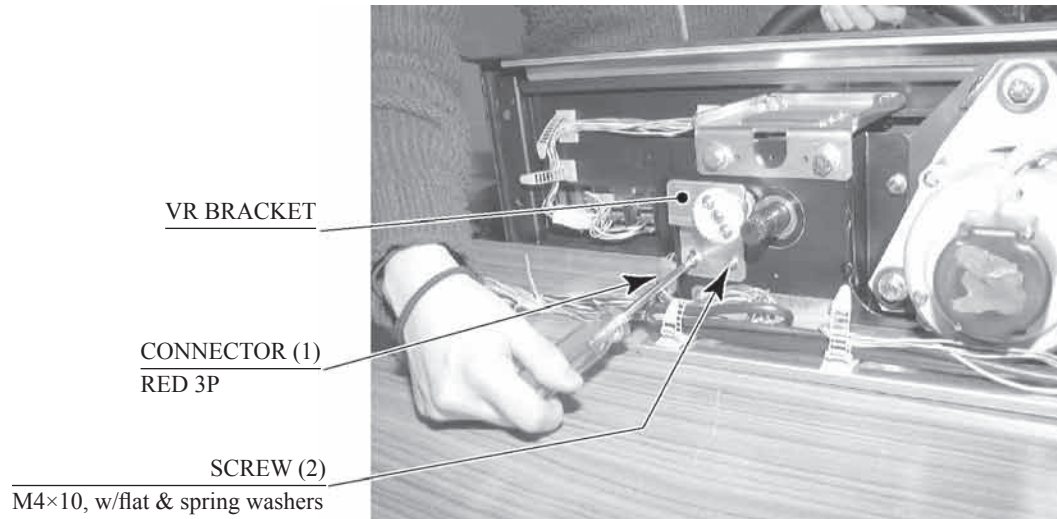


PHOTO 11. 2

- Loosen the 2 hexagon socket screws on the Gear Holder and remove the Gear Holder.
- Remove the nut securing the VR Bracket, then separate the Volume from the VR Bracket and replace it.

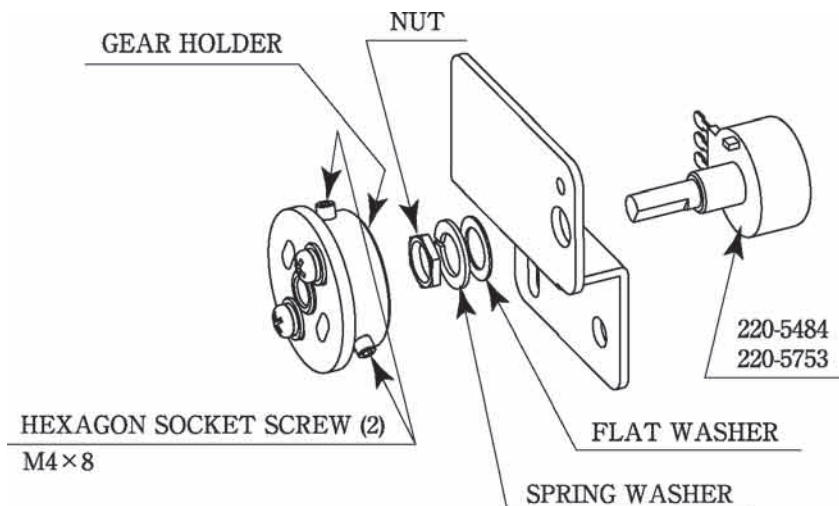


FIG. 11. 2 b

11-3 GREASING



- Grease is inflammable and must never be close to fire.
- Grease may be apt to be erroneously used or drunk, and must not be placed in a location where children can access.



- Grease does harm to your body if you aspirate it. Do not perform any work related to grease in a location where ventilation is insufficient.
- If grease enters an eye, eye irritation may be caused. Take care to prevent it from entering your eyes (for example, by wearing protective goggles). Should grease enter an eye, rinse it in clean water and have your illness diagnosed by a doctor.
- If grease touches a human skin, skin irritation may be caused. Take care to prevent grease from touching your skin (for example, by wearing protective gloves). Should grease touch your skin, fully wash it using water and soap.



- Be sure to use the designated type of grease. If a non-designated type grease is used, components may break.
- The period for greasing specified herein is a standard. Apply greasing to the specified portions as occasion arises.

Use spray grease once every three months to grease up the gear mesh portion of the constituent parts.

Use "Grease Mate" (part number 090-0066) for the spray grease.

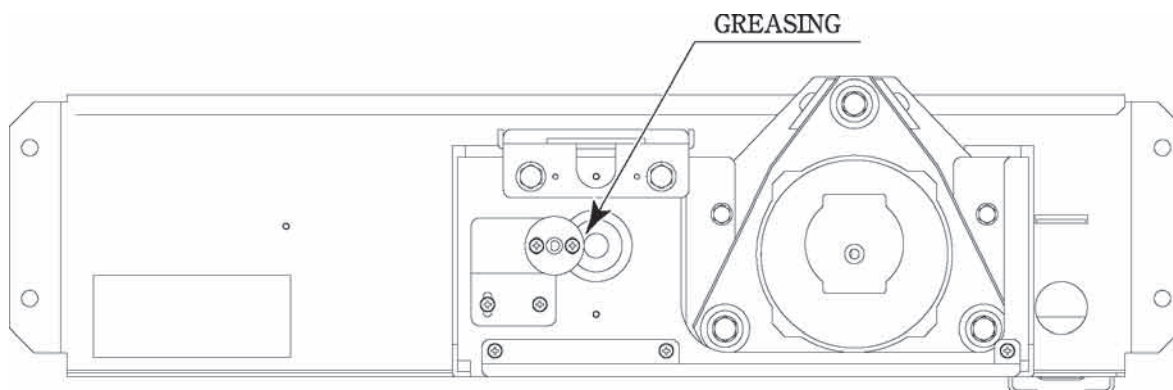


FIG. 11. 3

12. SHIFT LEVER

In the Test Mode, if the SHIFT LEVER's SW can not be inputted satisfactorily, replace the Switch. Apply greasing to the Mechanism's sliding portion once every 3 months. When performing the above work, remove the Shift Lever Unit.



- Before starting to work, ensure that the Power SW is OFF. Failure to observe this can cause electric shock and short circuit hazards.
- Use care so as not to damage wirings. Damaged wiring can cause electric shock and short circuit hazards.

12-1 REMOVING THE SHIFT LEVER

- Turn the Power SW off.
- Remove the 4 Tamperproof Screws to lift the Shift Lever Unit.
- Disconnect the Connector to remove the Shift Lever Unit.
- When reinstalling, follow the procedure opposite as when removing. At this time, ensure that "DOWN" display appears on the upper part as shown.
- After reinstalling, be sure to check INPUT TEST in the test mode. (See 10-3B.)

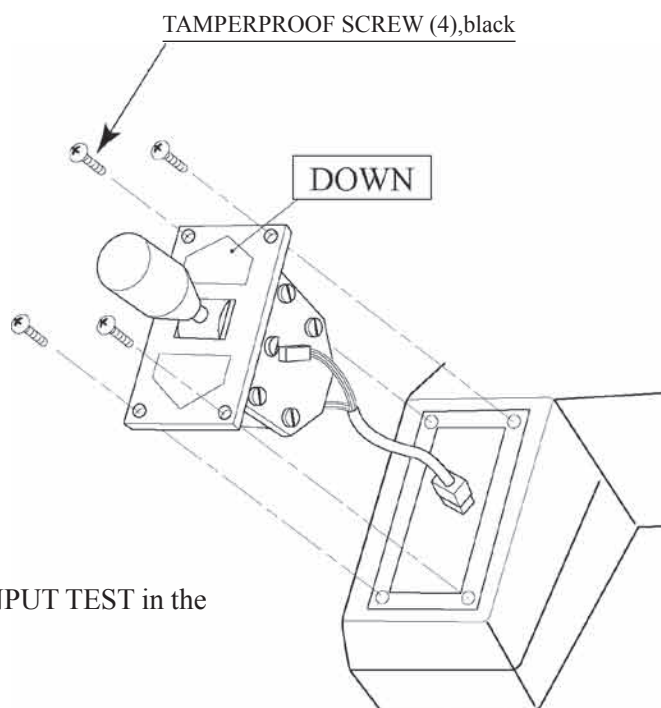


FIG. 12. 1

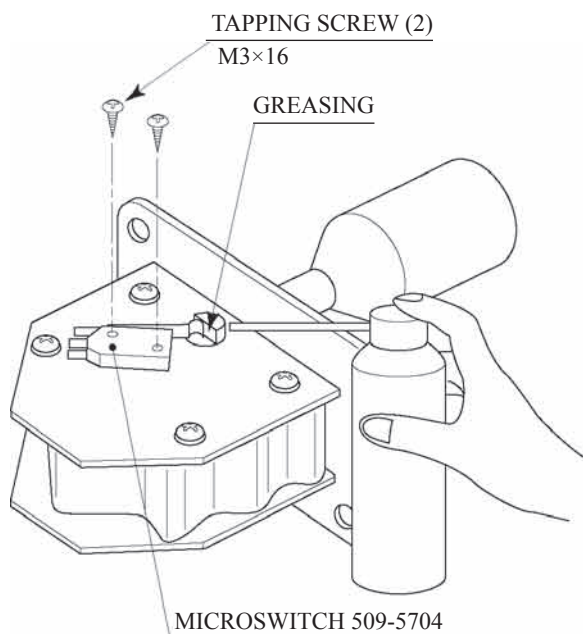


FIG. 12. 2

12-2 SWITCH REPLACEMENT

- Disconnect the wiring Connector of the Switch to be replaced.
- Remove the 2 Tapping Screws to replace the Microswitch.

12-3 GREASING

Apply greasing once in 3 months to the specified portions.
For spray grease, use NOK KLUBER L 60 or Grease Mate (Part No. 090-0066).

13. ACCELERATOR & BRAKE



- Before starting to work, ensure that the Power SW is OFF. Failure to observe this can cause electric shock or short circuit.
- Use care so as not to damage wirings. Damaged wiring can cause electric shock or short circuit.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
- This work should be performed by the Location's Maintenance Man or Serviceman. Performing work by non-technical personnel can cause electric shock hazard.
- When performing work such as parts replacement other than those specified in this manual, be sure to contact where you purchased the product from. Confirm the work procedures and obtain precautions from where you purchased the product prior to performing work. Inappropriate parts replacement and/or installation with erroneous adjustment can cause an overload or the parts to come into contact, resulting in an electric shock, a short circuit, and a fire.



Be sure to perform volume's move value setting in the Volume Setting in the Test Mode after replacing or adjusting the Volume. (See 10-3E.)

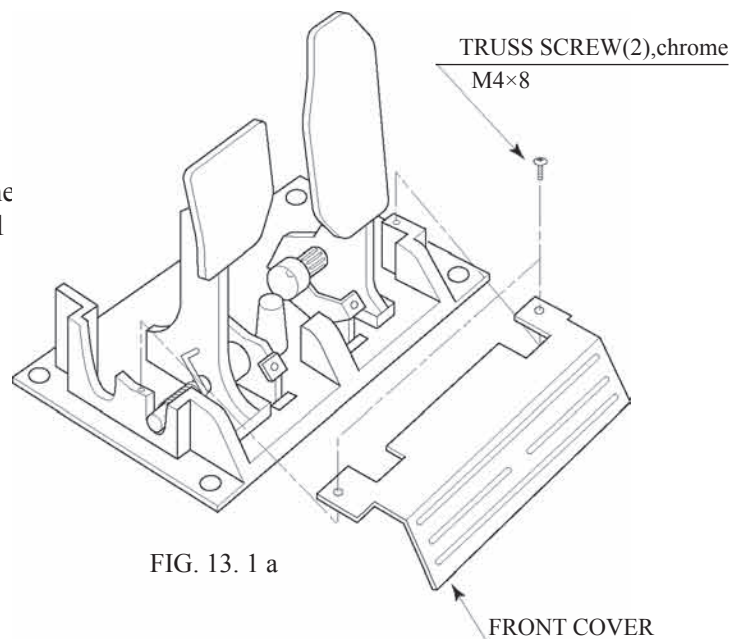
If Accel. and Brake operation is not satisfactory, adjustment of volume installation position or volume replacement is needed. Also, be sure to apply greasing to the gear mesh portion once every 3 months.

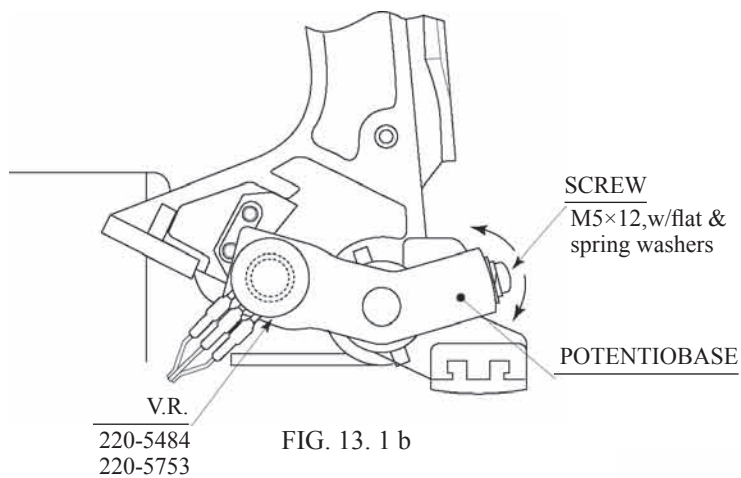
13-1 ADJUSTING OR REPLACING THE VOLUME

The following tools are required for the operations below: Phillips screwdrivers for M4 and M5. The appropriate value for both ACCEL. Volume and Brake Volume is under 30H when released and over C0H when stepped on. Check Volume values in the TEST mode. Since work is performed inside the energized cabinet, be very careful so as not to touch undesignated places. Touching places not specified can cause electric shock or short circuit.

ADJUSTING PROCEDURE

- Take out the 2 truss screws and remove the Front Cover from the Accel. & Brake Unit (FIG. 13. 1





- Loosen the screw which secure the Potentiobase, and adjust the Volume value by moving the Base. (FIG. 13. 1 b)
- Secure the Potentiobase.
- Perform volume setting in the volume setting mode. (See 10-3E.)

REPLACING THE VOLUME

- Turn the power off.
- Take out the 2 screws and remove the Potentiocover (FIG. 13. 1 c).
- Disconnect the connector of the volume to be replaced.
- Remove the screw which secures the Potentiobase (FIG. 13. 1 b).
- Remove the Potentiobase together with the volume as is attached. (FIG. 13. 1 c)
- Remove the base and the gear to replace the volume.
- Adjust the volume as per the previous page after replacing.

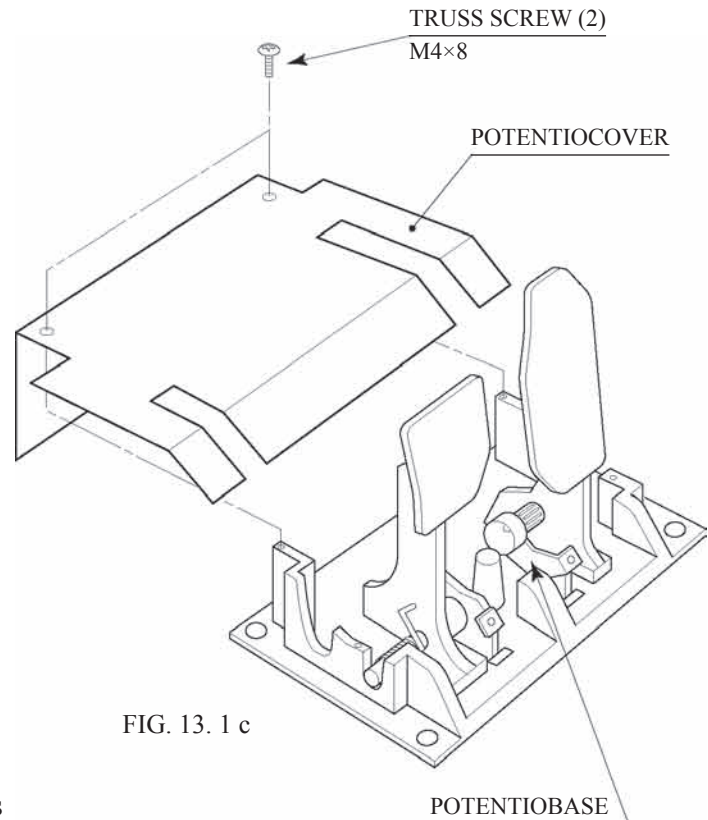


FIG. 13. 1 c

13-2 GREASING



Be sure to use the designated grease. Using undesignated grease can cause parts damage.

Use spray grease once every three months to grease up the Spring and gear mesh portion. For spray greasing, use GREASE MATE (PART No. 090-0066).

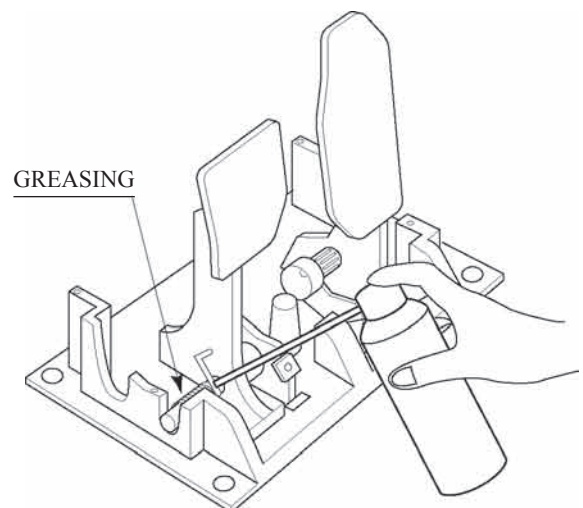


FIG. 13. 2

14. 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



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

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

- (1) Turn the power for the machine OFF. Open the coin chute door.
- (2) Remove the coin selector from the coin chute door.
- (3) Open the gate and dust off by using a soft brush (made of wool, etc.).
- (4) Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- (5) Remove the CRADLE.
When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.
- (6) Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.
- (7) After wiping off as per (6) above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

COIN INSERTION TEST

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

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

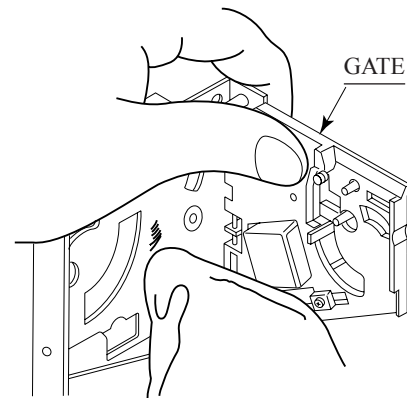


FIG. 14 a

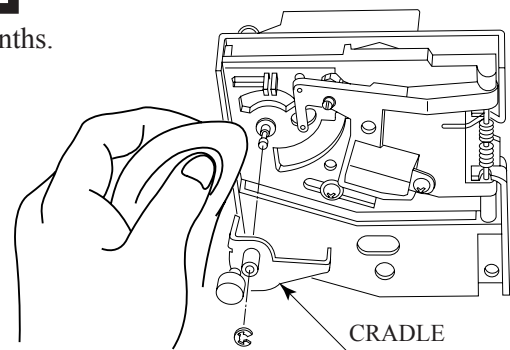


FIG. 14 b

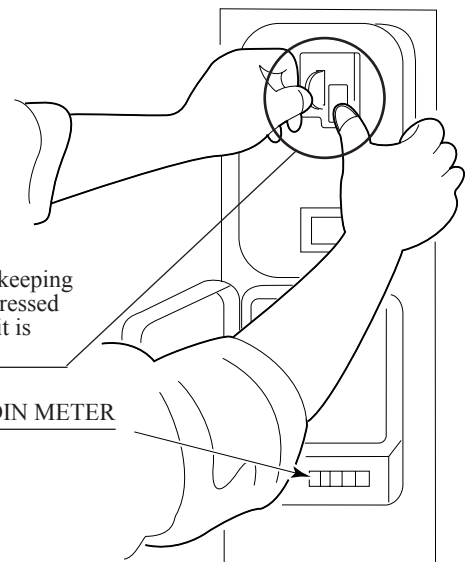


FIG. 14 c

COIN DOOR

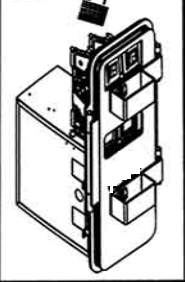
Tom Happ
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Happ Controls
106 Garlich Drive
Elk Grove, IL 60007
Ph. 847-593-6161 ext. 107
Fx. 847-956-2091

Visit our website <http://www.happcontrols.com>

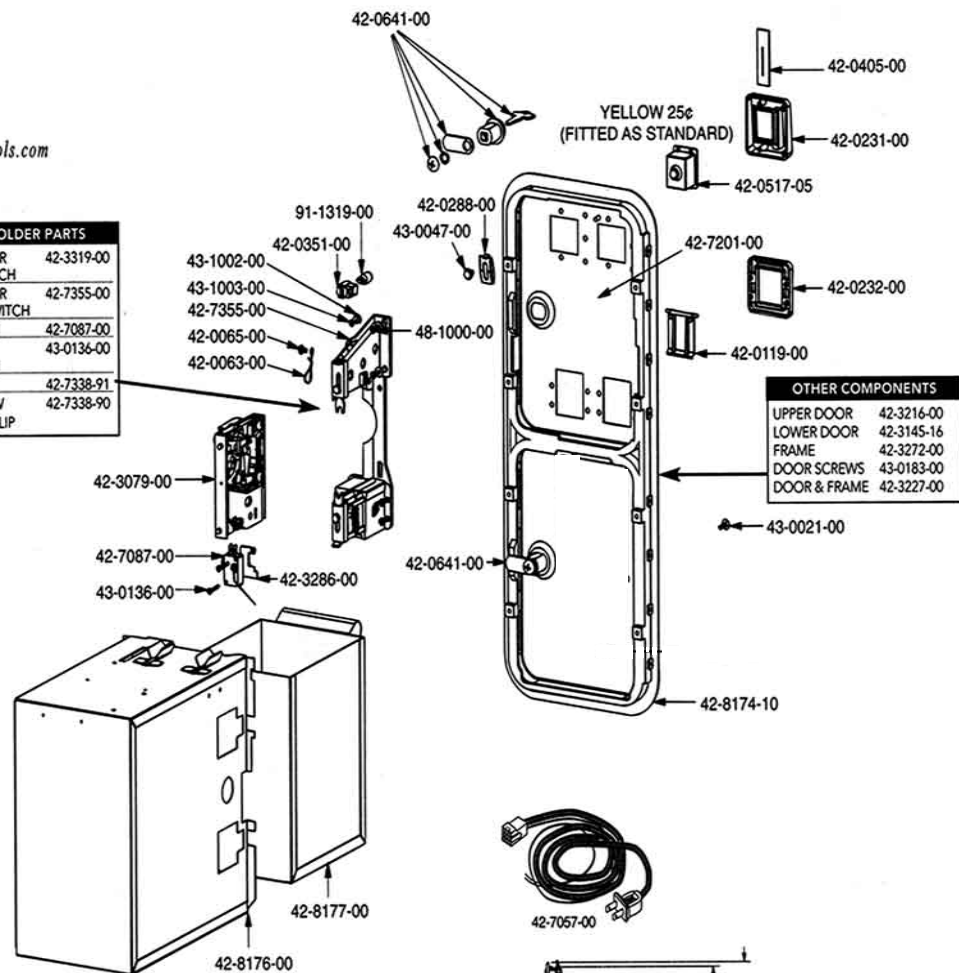
EXCLUSIVE!

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

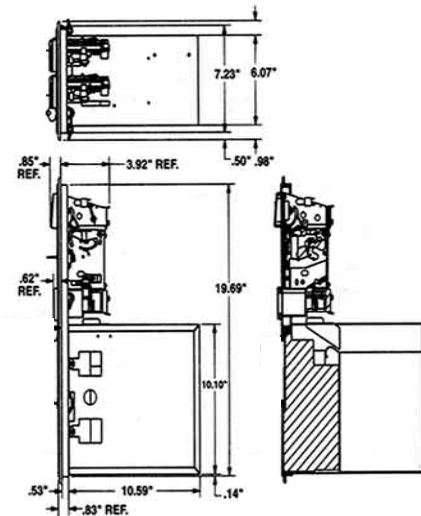
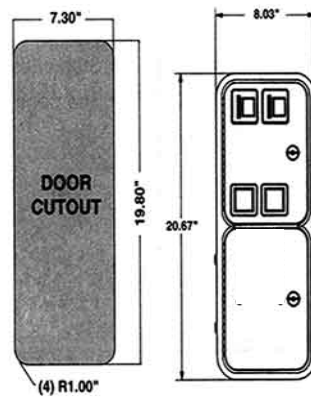
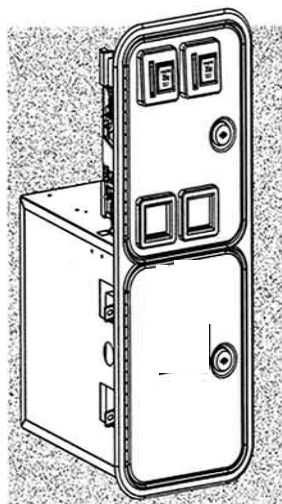
GUARDIAN



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



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



15. MONITOR

15-1 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.



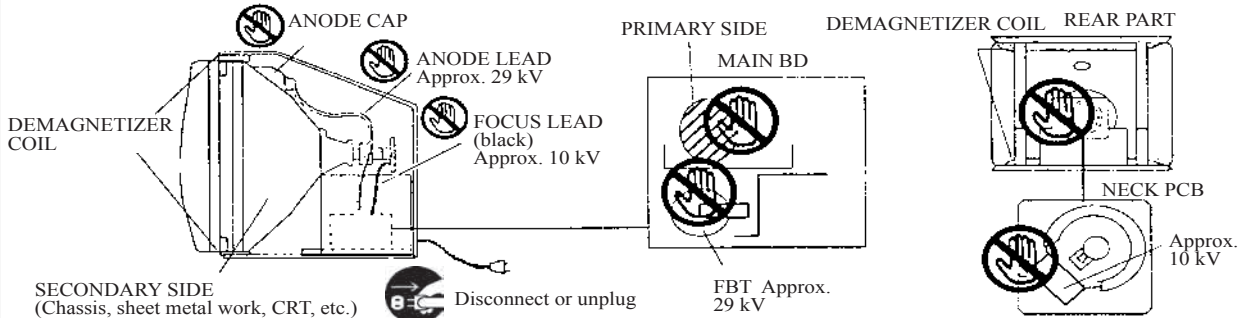
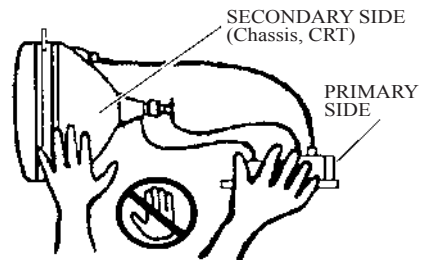
Indicates the instruction to disconnect a power connector or to unplug.



- 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.

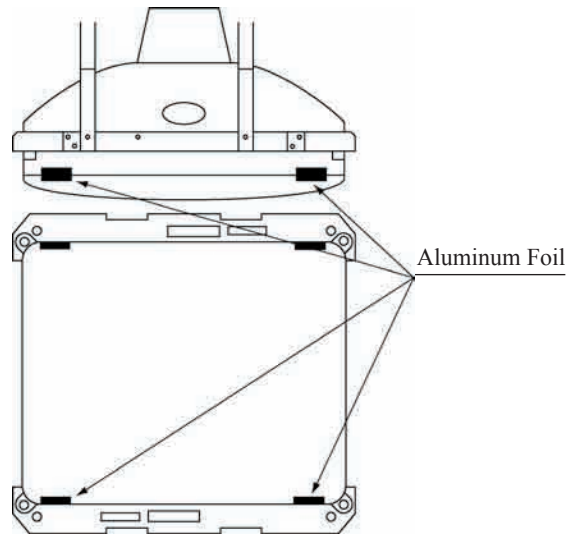


- Static Electricity**
Touching the CRT surface sometimes causes you to slightly feel electricity. This is because the CRT surfaces are subject to static and will not adversely affect the human body.
- Installation and removal**
Ensure that the Magnetizer Coil, FBT (Fly-Back Transformer), Anode Lead 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.

- 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.



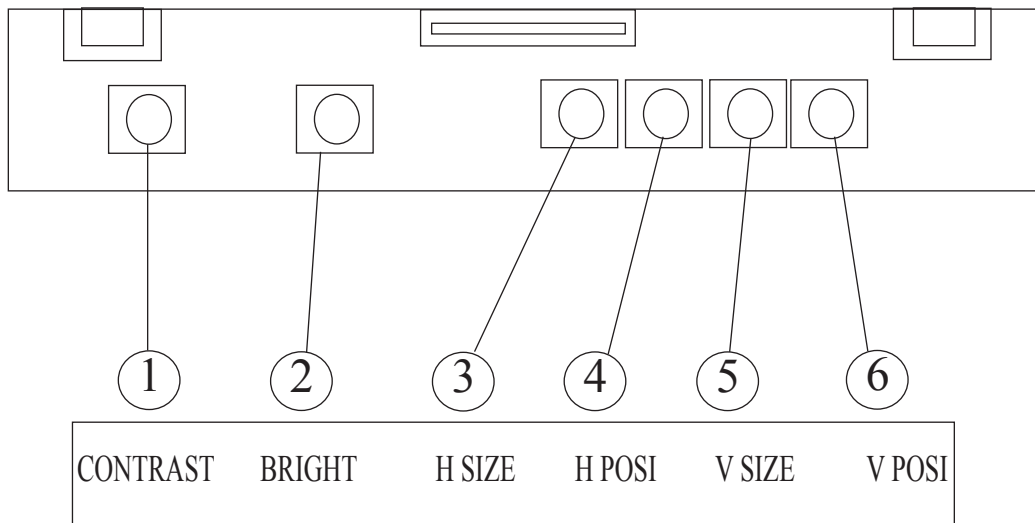
15-2 CLEANING THE CRT SURFACES



Static preventive coating is applied to the CRT surfaces. When cleaning, pay attention to the following points. Peeling off of static preventive coat can cause electric shock.

- Remove smears by using a dry, soft cloth (flannels, etc.). Do not use a coarse gauze, etc.
- For smear removing solvent, alcohol (ethanol) is recommended. When using chemical detergent, be sure to follow instructions below:
 - Dilute chemical detergent with water and dip a soft cloth in and then thoroughly wring it to wipe smears off.
 - Do not use a chemical detergent containing an abradant, powder or bleaching agent.
 - Do not use alkaline chemical detergents such as "glass cleaner" available on the market or solvents such as thinner, etc.
- Do not rub or scratch the CRT face with hard items such as brushes, scrub brush, etc.

Clean the CRT surfaces once a week. When cleaning, pay attention to the above caution so that the antistatic coating will not come off.



- ① CONTRAST..... Adjust image contrast.
- ② BRIGHT..... Controls screen brightness.
- ③ H. SIZE.....Controls horizontal screen size.
- ④ H. POSI.....Controls horizontal display position on screen.
- ⑤ V. SIZE.....Controls vertical screen size.
- ⑥ V. POSI.....Controls vertical display position on screen.

16. REPLACING THE FLUORESCENT LAMP/OTHER LAMPS



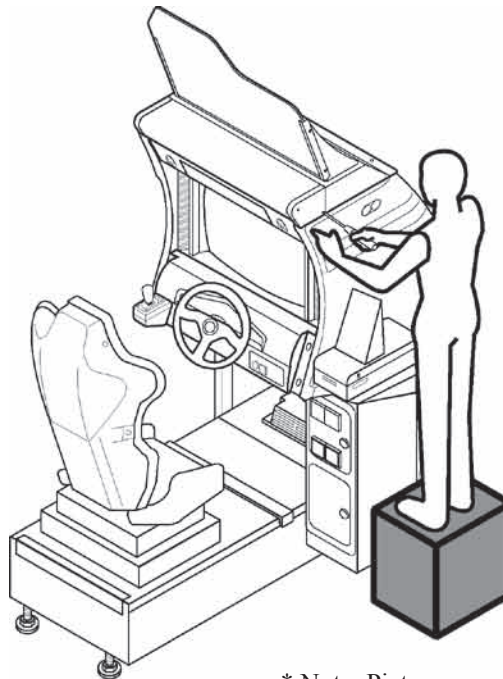
- When performing work, be sure to turn power off. Working with power on can cause electric shock and short circuit hazards.
- The Fluorescent Lamp, when it gets hot, can cause burn. Be very careful when replacing the Fluorescent Lamp.
- Be sure to use lamps of the designated rating. Using lamps of undesignated 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. Performing work without using the step can cause violent falling down accidents.
- Be careful when handling the plastic parts. Failure to observe this may cause injury due to damage or fragments resulting from damage.



When replacing the fluorescent lamps, it is recommended to replace the glow bulb as well.

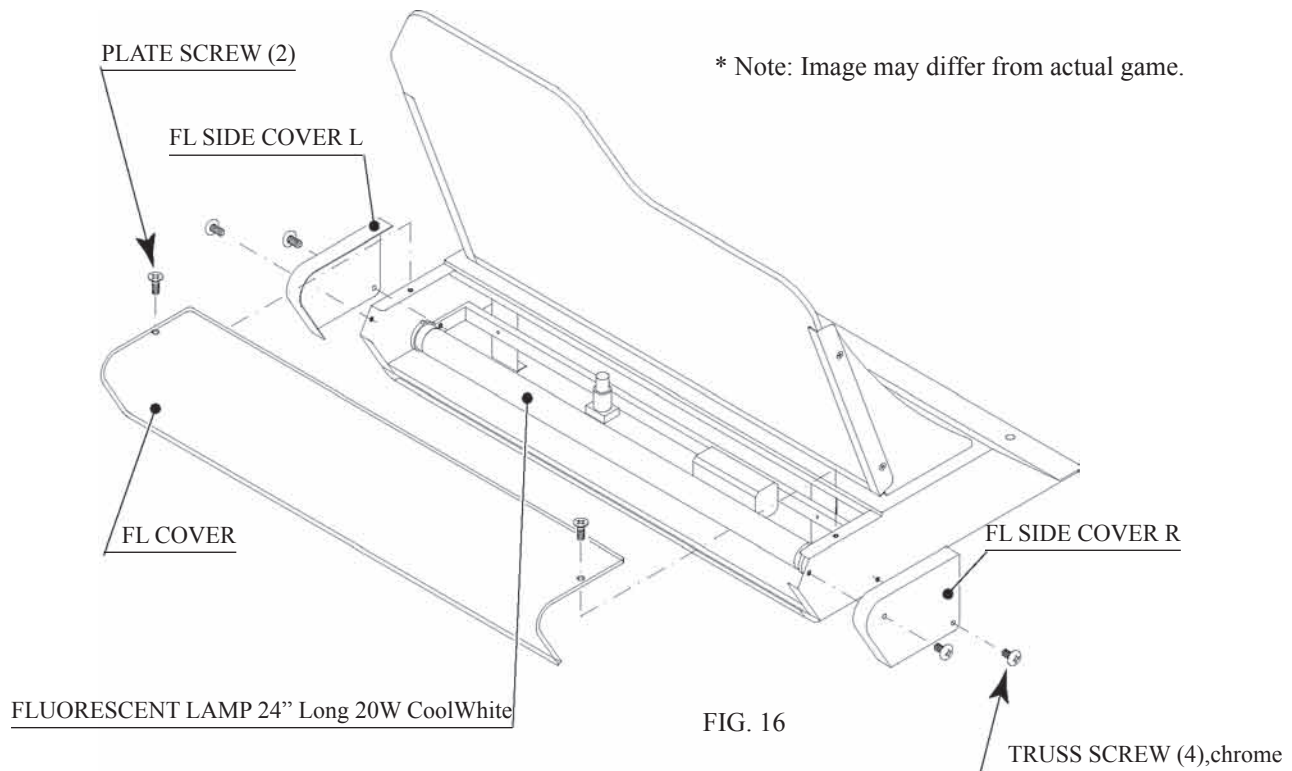


* Note: Picture may appear different then acutal Unit.

When performing work, prepare a step.

FLUORESCENT LAMPS IN THE FL BOX

- Turn off the power.
- Remove the 2 Truss screws and remove FL Side Cover R.
- Remove the 2 Truss screws and remove FL Side Cover L from the opposite side in the same manner.
- Remove the 2 Plate screws and remove the FL Cover.
- Fluorescent lamps may be replaced once the FL Cover is removed.



START BUTTON LAMP, CHANGE VIEW BUTTON LAMP

- Turn off the power.
- Remove the 4 truss screws securing the Button Plate.

TRUSS SCREW (4),chrome
M4×10

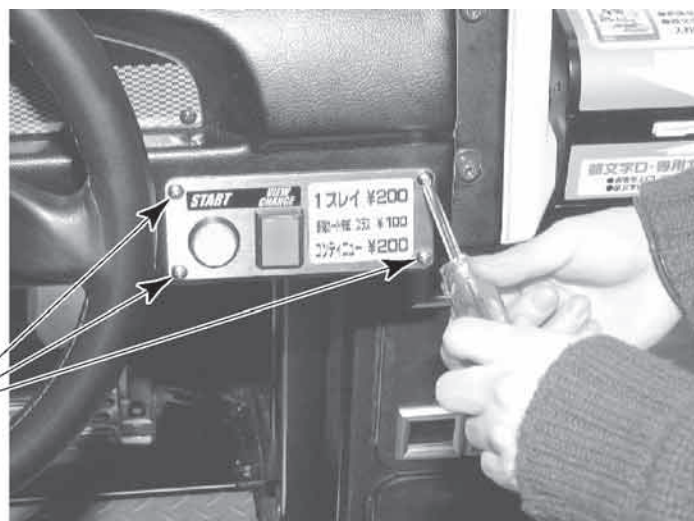


PHOTO 16 a

* Note: Button Plate will appear different on US Games.

- Remove the Button Plate.
The Button Plate contains wiring connections. Remove this panel, taking care not to damage the wiring.
- Disconnect the connector.

CONNECTOR (1)
YELLOW 12P

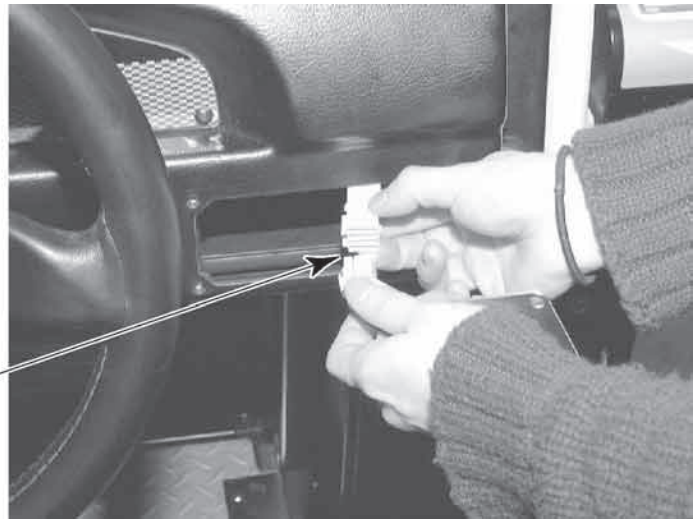


PHOTO 16 b

- There is a metal fitting at the base of the buttons on the Button Plate. Rotate this metal fitting to unlock it, then remove the wiring connection from the button.

UNLOCK

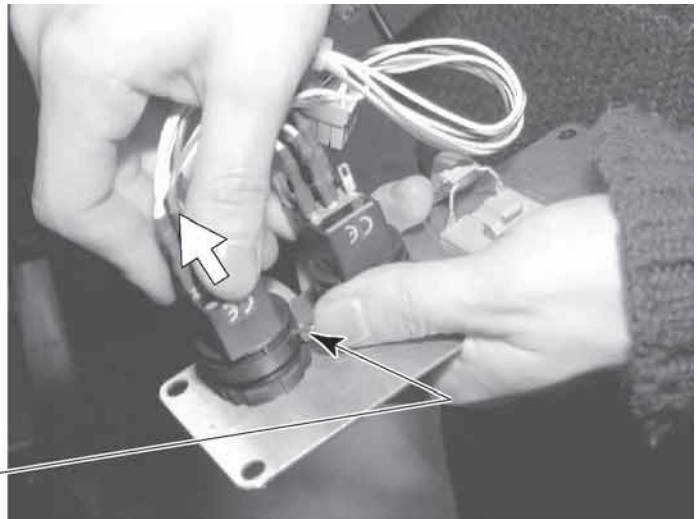
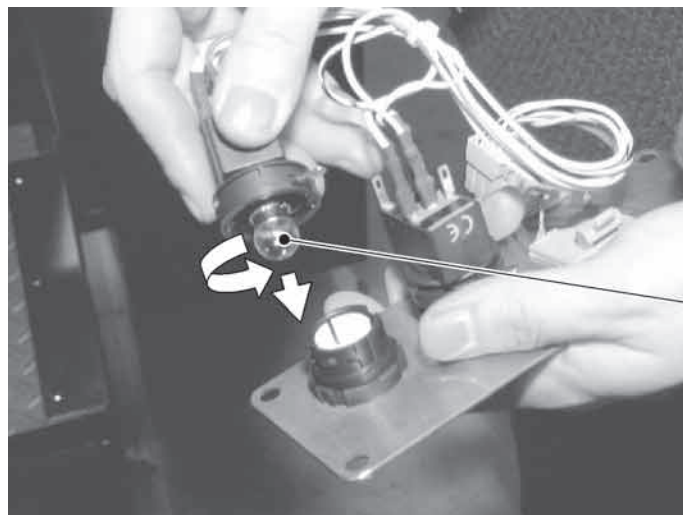


PHOTO 16 c

- Press and turn the lamp counter-clockwise to remove it.



LAMP 6.3V 1W

PHOTO 16 d

17. PERIODIC INSPECTION TABLE

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

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



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

TABLE 17

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CABINET	Check Adjusters'contact with surface.	Daily	3
CARD READER/WRITER	Head cleaning	Every 101 counts of the card reader/writer or Daily	7
CONTOROL PANEL	Cleaning	As necessary	--
	Inspection of VR	Monthly	10, 11
	Inspection of adjusting gear mesh	Trimonthly	11-2
	Greasing	Trimonthly	11-3
SHIFT LEVER	Inspection of SW	Monthly	10, 12
	Greasing	Trimonthly	12-3
ACCEL. & BRAKE	Inspection of VR	Monthly	10, 13
	Gear and Spring portion greasing	Trimonthly	13-2
MONITOR	SCREEN cleaning.	Weekly	15-2
	Check adjustments.	Monthly or when moving.	6, 10, 15
COIN CHUTE DOOR	Inspection of COIN SW	Monthly	10
	Coin insertion test	Monthly	14
	Cleaning of COIN SELECTOR.	Trimonthly	14
SEAT	Greasing to the seat rail	Trimonthly	FIG.17
GAME BD	MEMORY TEST	Monthly	10
	Check settings.	Monthly	10
POWER SUPPLY PLUG	Inspection and cleaning	Annually	See above.
INTERIOR	Cleaning		
CABINET SURFACES	Cleaning	As necessary	Next Page

CLEANING THE CABINET SURFACES

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

SEAT (Greasing to Seat Rail Portion)

Move the Seat to the rearmost position and apply spray greasing to the portion shown at the right once every 3 months by using NOK KLUBER L60 or GREASE MATE SEGA PART No. 090-0066. After greasing, move the Seat a few times forward and backward so as to allow the grease to be applied all over uniformly. Be sure to wipe grease which attaches to the surfaces of the PROTECT RUBBER on the Seat Rail, or any excess grease.

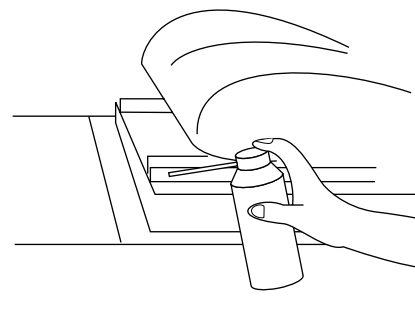


FIG. 17

18. TROUBLESHOOTING

18-1 CARD READER/WRITER

If this machine detects an error during the operation of the Card Reader/Writer, it will display the error messages listed below. Perform the appropriate maintenance based on the content of the error message displayed.

Should an error occur, do not attempt to open the top cover of the Card Reader/Writer. The unit will attempt to save the data to the customer's card and restore the game if the top cover is closed and the RESTORE command (hold down the Start button + Change View button for a short time) is used. However, attempting to use the RESTORE command after the top cover has been opened may force the game to shut down and not save data to the card.

When the game shuts down or the unit is reset, the data on the customer's card is not saved. In order to save customer data, perform the proper maintenance carefully.

TABLE 18. 1 a

ERROR DISPLAY	CAUSE	COUNTERMEASURES
Error occurred while reading card. Card will be ejected without saving data. Please press the Start and Change View buttons.	This message is displayed after several failed attempts to read the card at the end of the game.	Press the Start button and Change View button at the same time to eject the card and end the game.
Error occurred while saving data. Please notify a store attendant. Please press the Start and Change View buttons.	This message is displayed after several failed attempts to save data to the card at the end of the game.	Leave the card in place and press the Start button and Change View button at the same time to retry the save operation. Remove the card and press the Start button and Change View button at the same time to restore or end the game. If this error occurs several times, use Test Mode to perform manual cleaning. (See 10-3G.)
Printing error. Card will be ejected without printing or saving data. Please press the Start and Change View buttons.	This message is displayed after several failed attempts to print at the end of the game.	Press the Start button and Change View button at the same time to eject the card and end the game.
A shutter error has occurred. Please remove any cards present in card insertion slot. Please press the Start and Change View buttons.	This message is displayed when the shutter is forced open or if the unit detects a problem with the shutter. This message is displayed when the unit is unable to open/close the shutter.	Correct the problem, then press the Start button and Change View button at the same time to restore the game. Circumstance may force the game to shut down. Correct the problem, then press the Start button and Change View button at the same time to restore the game.

TABLE 18.1 a

ERROR DISPLAY	CAUSE	COUNTERMEASURES
This card cannot be used. Card will be ejected without saving data. Please press the Start and Change View buttons.	This message is displayed when the card in the Card Reader/Writer is not a proper player card at the end of the game.	Press the Start button and Change View button at the same time to eject the card and end the game.
Card jam. Ejecting card. Please press the Start and Change View buttons.	This message is displayed when various operations fail because of dirty rollers or heads.	Press the Start button and Change View button at the same time to eject the card and restore the game. If this error occurs several times, use Test Mode to perform manual cleaning. (See 10-3G.)
There is a problem with the card reader/writer. Please notify a store attendant. Please turn off the power and start again.	This message is displayed when there is a problem with the Card Reader/Writer and it sends improper signals.	Verify there are no problems with the shutter and that the top cover is closed and then restart the unit. (See 7-3.)
The card reader/writer is not responding. Please notify a store attendant. Check the card reader/writer is connected properly, turn off the power and start again.	This message is displayed at power-up during advertisements when the Card Reader/Writer is not connected properly or when it is broken and unresponsive.	Verify that the Card Reader/Writer is connected properly and then restart the unit. (See Section 24.)
SCIF Error. Please notify a store attendant. Check that the card reader/writer is connected properly, turn off the power and start again.	This message is displayed when a communication error occurs between the Card Reader/Writer and the game board.	Verify that the Card Reader/Writer is connected properly and then restart the unit. (See Section 24.) If this error occurs several times, check the immediate area for sources of possible interference.
Card jam. Remove the card and press the Start and Change View buttons. If the card cannot be removed, please notify a store attendant.	This message is displayed when various operations fail because of dirty rollers or heads. This message is displayed when a card jam is suspected when there should be no card in the Card Reader/Writer.	Leave the card in place and press the Start button and Change View button to retry the operation. Remove the card and press the Start button and Change View button at the same time to restore or end the game (refer to 7-3). If this error occurs several times, use Test Mode to perform manual cleaning. (See 10-3G.) Press the Start button and Change View button at the same time after removing the card or correcting the problem to restore the game. (See 7-3.)

The following error messages are displayed when problems are detected during unit power-up (during initialization of the Card Reader/Writer). Perform the appropriate maintenance based on the content of the error message displayed.

TABLE 18. 1 b

ERROR DISPLAY	CAUSE	COUNTERMEASURES
CARD R/W ERROR!	This message is displayed at power-up when the Card Reader/Writer is not connected properly or when it is broken and unresponsive.	Verify that the Card Reader/Writer is connected properly and then restart the unit. (See Section 24). If broken, contact the company from whom the unit was purchased.
PLEASE INSERT CLEANING CARD.	This message is displayed when the conditions prompting an automatic Card Reader/Writer cleaning are met.	Perform the Card Reader/Writer cleaning. (See 7-2.)
PLEASE WAIT	This message is displayed during network setup while the other unit is being initialized.	This message disappears once initialization of the other network game unit is complete.
CAN'T EJECT	This message is displayed at power-up when, after attempting to do so, the Card Reader/Writer is unable to eject a card for some reason. This message is displayed at power-up when the shutter cannot be opened/closed properly.	Remove all cards from the Card Reader/Writer. (See 7-3.) Verify that there are no problems with the shutter and then restart the unit. If this error occurs several times, contact the company from whom the unit was purchased.

The following messages are displayed when there are limits to the Card Reader/Writer Operation Mode. The messages are displayed in the upper right of the screen during advertisements. The message content is updated after the "SEGA LOGO" is displayed. If the message is not one displayed intentionally by the Operation Mode, perform the appropriate maintenance based on the content of the error message displayed.

TABLE 18. 1 c

ERROR DISPLAY	CAUSE	COUNTERMEASURES
The machine is currently unable to issue new cards. Please see a store attendant to have the machine restocked with cards.	The Card Reader/Writer Dispenser is empty (no cards).	Restock the Dispenser with cards. (See 7-1.) If no cards are available, contact the company from whom the unit was purchased.
Cards may not be used at this time.	Cards may not be used due to the Store Closing setting being activated.	If there is a mistake in the settings, use Test Mode to change the Store Closing setting. (See 10-3.) If the setting is correct, but not operating properly, check the internal clock settings on the game board (Refer to the Service Manual.)

18-2 TROUBLESHOOTING (WHEN NO ERROR MESSAGE IS SHOWN)



- In order to prevent electric shock and short circuit, be sure to turn power off before performing work.
- Be careful so as not to damage wirings. Damaged wiring can cause electric shock or short circuit.
- After removing the cause of the functioning of the Circuit Protector, reinstate the Circuit Protector. Depending on the cause of the functioning, using the Circuit Protector as is without removing the cause can cause generation of heat and fire hazard.
- In the event that a problem cannot be resolved by employing the procedures listed in this Manual, be sure to request service from the office shown on this Manual or the dealer from whom the product was originally purchased. Attempts to employ procedures other than those specified in this Manual can cause electrical shock, shorting, or fire.
- In the event of a problem that is not described here, be sure to contact the office shown on this Manual or the dealer from whom the product was originally purchased. Careless attempts at repair can result in electrical shock, shorting, or fire.

If a problem occurs, first check to make sure that the wiring connectors are properly connected.

TABLE 18. 2

PROBLEM	CAUSE	COUNTERMEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	The CIRCUIT PROTECTOR functioned due to momentary overcurrent.	After eliminating the cause of overload, have the Circuit Protector of the AC Unit restored. (See Section 6 4 , Refer to the following.)
	The fuse of the connect board was blown out due to momentary overcurrent.	After eliminating the cause of overload, replace the specified rating fuse. (Fig. 18. 2 b)
Fluorescent lamp inside FL box doesn't light up.	Connector connection fault.	Check connector connections between the Cabinet and the FL box.
	Fluorescent lamp and Glow lamp need replacement.	Replace the fluorescent lamp and the glow lamp. (See Section 16.)

CIRCUIT PROTECTOR

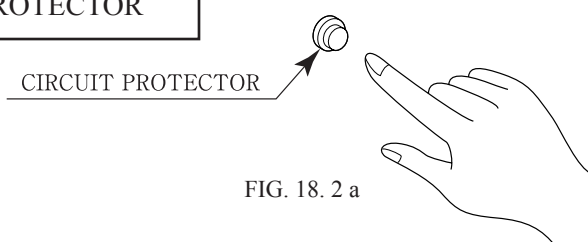


FIG. 18. 2 a

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

TABLE 18.2

PROBLEM	CAUSE	COUNTERMEASURES
Sound is not emitted.	Sound volume adjustment is not correct.	Adjust the Switch Unit's sound adjustment volume . (See Section 10.)
	Faulty connections for various connectors.	Check the connections for the game board, amp, speakers and Volume connectors.
	Malfunctioning BD, Amp. and Speaker.	Perform SOUND TEST. (See Service Manual.)
Sounds are emitted and the lamps are lit, but the screen is black.	Faulty connections for the visual signal connector or the monitor power connector.	Check the connections for the monitor and game board connectors.
	Broken monitor.	Contact the company from whom the unit was purchased.
Irregular/uneven colors on the monitor screen.	Magnetization of the CRT.	Press the Demag. switch on the switch unit. (See Section 10.)
Colors on the monitor screen are strange.	Faulty connection for the visual signal connector.	Check the visual signal connector connection and make sure it is secured properly.
	Screen adjustment is not appropriate.	Make adjustment appropriately. (See Section 15.)
The on-screen image sways and/or shrinks.	The power source and voltage are no correct.	Make sure that the power supply and voltage are correct.
Does not accept input from any switch or volume.	Faulty connector connections.	Check the connection for the I/O Board and Cabinet connector.
		Check the power for the I/O Board.
Does not accept input from the Shift Lever.	Faulty connector connections.	Check the connections for the connectors in the Control Panel and between the Control Panel and the Cabinet.
	Broken Microswitch.	Replace the Microswitch (MICROSWITCH 509-5704).
STEERING (Servomotor) response is incorrect.	Incomplete power on check.	Power on and verify that the power on check completes properly. (See Section 6 5 .)
	Deviation of the volume value.	Adjust the volume value in the Test Mode. (See Section 10.)
	Volume gear engagement fault.	Adjust the engagement of the gear. (See Sections 10 & 11.)
	Volume malfunctioning.	Replace the volume. (See Section 11.)
	Detached wires.	Check for faulty wire connections around moving parts. When replacing wires, secure them so that they do not touch any moving parts.

TABLE 18. 2

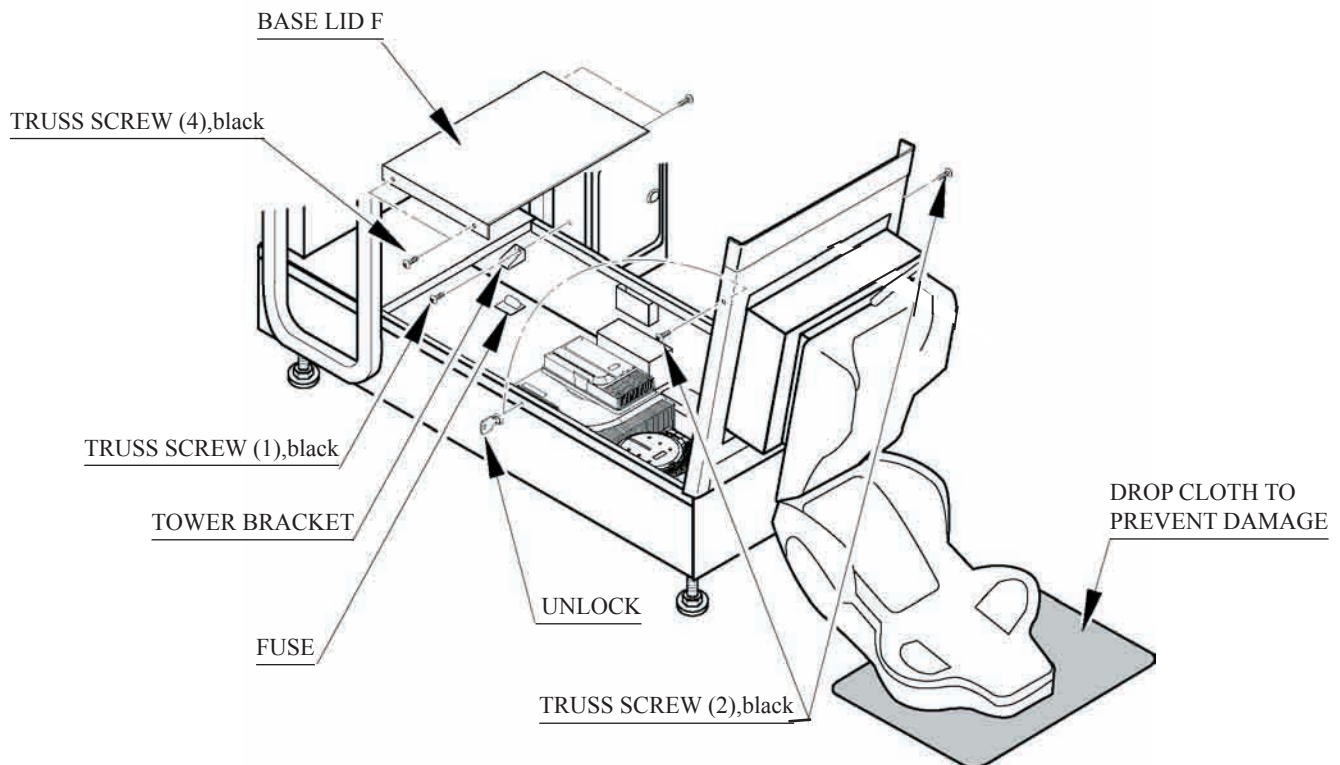
PROBLEM	CAUSE	COUNTERMEASURES
No response from Steering (Servomotor).	Failure of power-on checking procedure.	Reconnect the power and complete a power-on checking procedure. (See Section 6 5.)
	Faulty connector connections.	Check the connections for the connectors between the Game Board and Servodriver and between the Servodriver and the Servomotor.
	Thermal element in the Servodriver is operating.	Occurs when the internal temperature reaches 70°C (158°F) and corrects automatically when the unit cools.
	Momentary overload caused a fuse on the Servodriver to blow.	Contact the company from whom the unit was purchased.
Steering (Servomotor) is weak in its force feedback.	Aging of the force feedback mechanism.	Reset in the Test Mode. (See Section 10.)
Unsatisfactory Accel and Brake operation.	Incorrect volume setting.	Adjust the volume value in the Test Mode. (See Section 10.)
	Faulty Volume attachment or adjust gear alignment.	Adjust the volume attachment and verify in Test Mode. (See Sections 10 & 13.)
	Faulty connector connection.	Check the connections for the Accel and Brake connectors and the connectors between the Accel, Brake and Cabinet.
	Failure of the volume.	Replace the volume. (See Section 13.)
Start button and Change View button input does not work and they do not flash.	Faulty connector connections.	Check the connections for the connectors between the I/O Board, the Cabinet and the Control Panel and those inside the Control Panel.
Start button and Change View button input works, but they do not flash.	Unverified settings or operation.	The Start button only flashes when Free Play is set. Check the operation in Test Mode. (See Section 10.)
	The lamp is burnt out.	Replace the lamp. (See Section 16.)
Failure of the network play.	Network play is wrongly set.	Reset correctly. (See Section 20.)
	Communication cables are disconnected. Communication cables are wrongly connected.	Reconnect the cables. (See Section 20.)
	Damage of communication cables.	Reconnect the cables correctly. (See Section 20.) Replace the cables. Contact the company from whom the unit was purchased.

REPLACING FUSES



- In case fuse replacements other than those stated in this manual are necessary, contact where you purchased the product from for inquiries regarding this matter.
- Fuse replacements other than those specified can cause accidents and are strictly forbidden.
- In order to prevent an electric shock, be sure to turn power off and unplug from the socket outlet before performing work by touching the internal parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause electric shock and short circuit accidents.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause fire and electric shock accidents.
- After eliminating the cause of the blowing of fuse, replace the fuse. Depending on the cause of fuse blowing, continued use with the fuse as is blown can cause generation of heat and fire hazard.

Fuses are located on the top of the Connector Board inside the Cockpit Base. Lower the Seat and remove the Tower Bracket and Base Lid F to replace fuses.



* Note: Fuse location and Unit may differ from illustration.

FIG. 18. 2 b

19. GAME BOARD



- In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not expose the Game BD, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.



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

19-1 REMOVING THE GD-ROM DRIVE

- Turn the power off.
- Remove 1 screw from each side of Base Lid R.
- Unlock the base with the Master Key.
- Turn the Lock Handle on Base Lid R to unlock the lid.
- Lower the seat towards the backrest. Slowly lower the backrest until it touches the floor to prevent damage to the seat part. Put a drop cloth on the floor to prevent damaging the surface of the seat part.

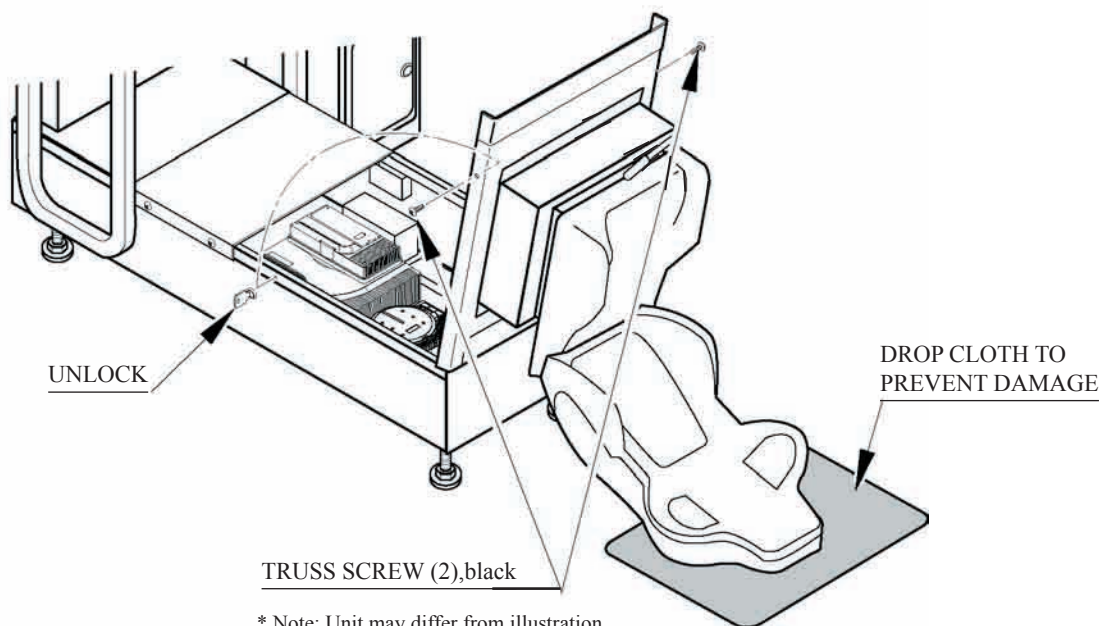


FIG. 19. 1

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

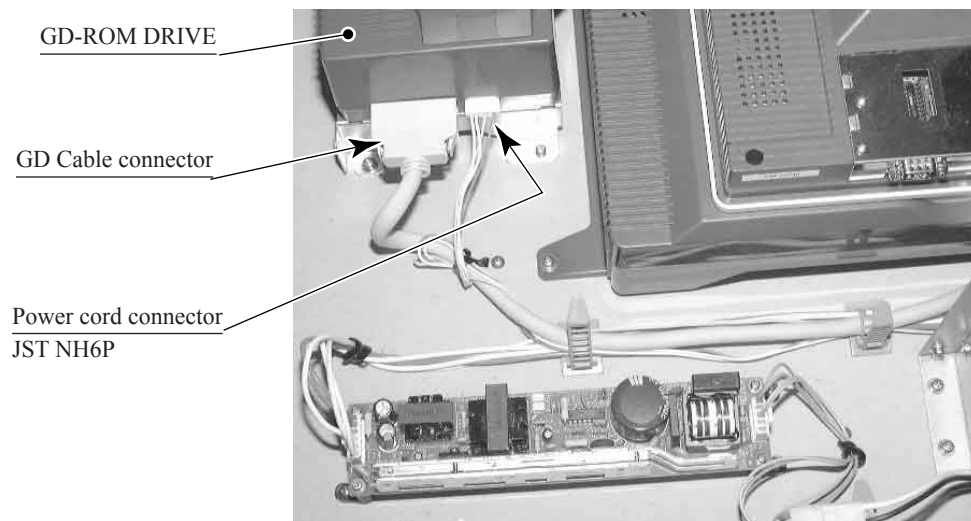


PHOTO 19. 2 a

- Remove the 4 screws to remove the GD-ROM drive.

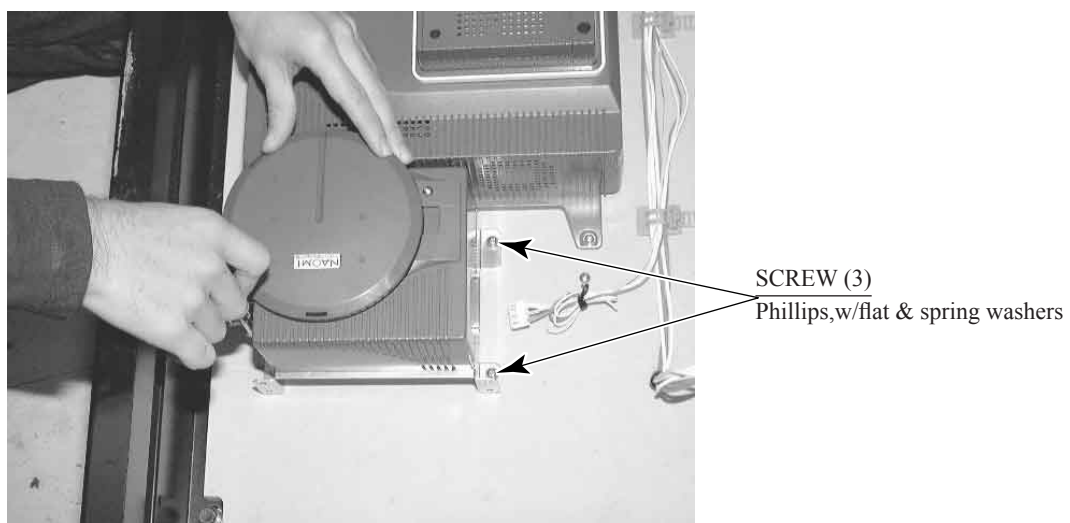
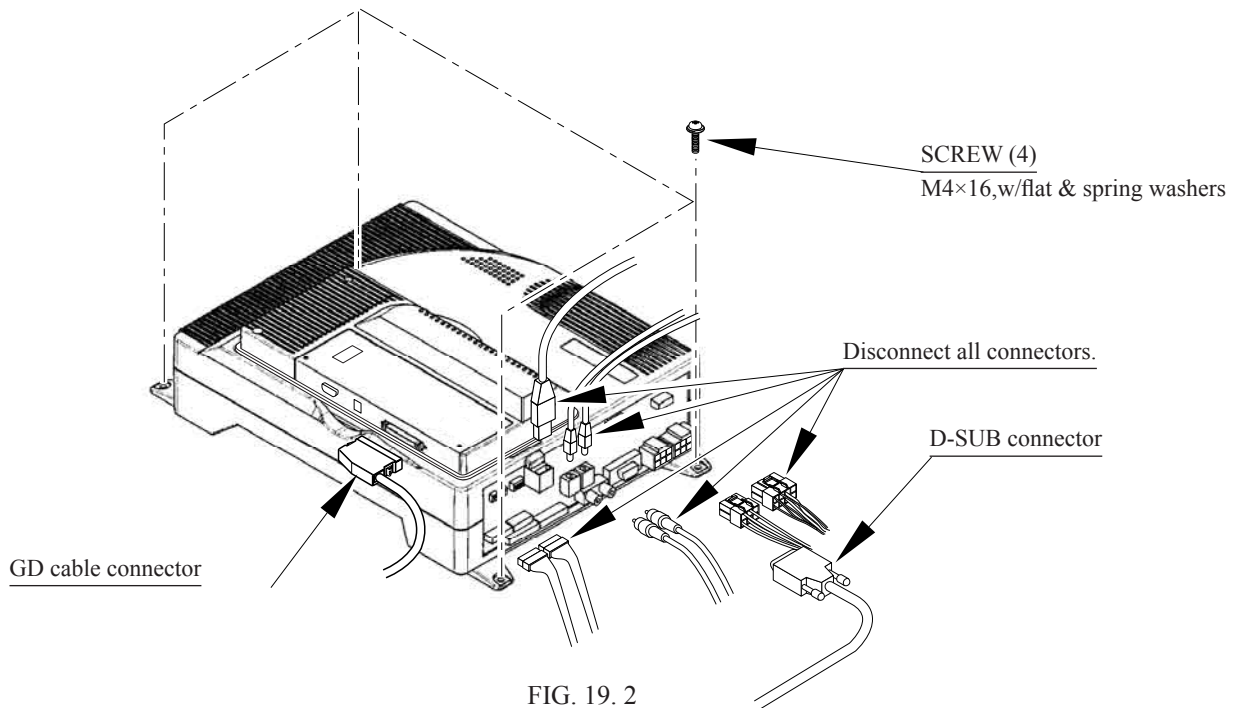


PHOTO 19. 2 b

19-2 REMOVING THE GAME BOARD

- Follow the above described action to open cabinet
- Remove all the connectors from the filter board on the Game Board. Also remove the GD cable connector from the DIMM board.
- Remove the 4 screws that fix the Game Board.



19-3 COMPOSITION OF GAME BOARD

ASSY CASE NAT TOF USA (840-0108D-01) :USA

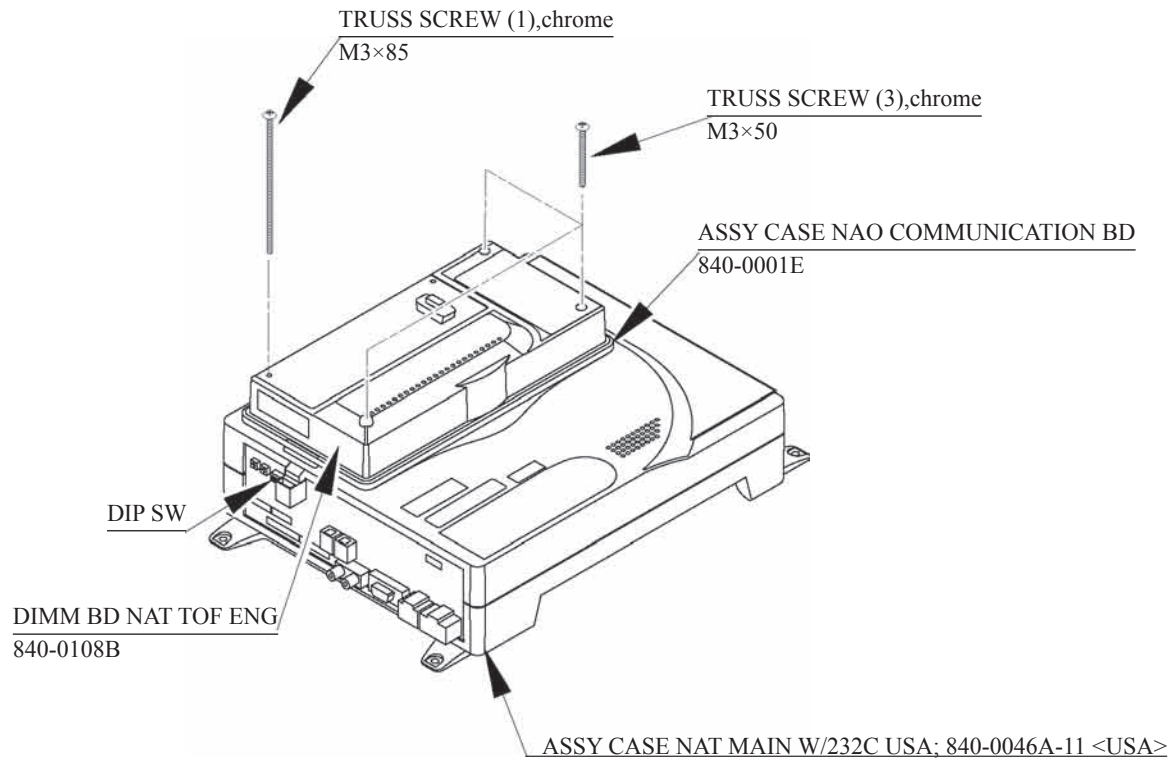


FIG. 19. 3 a

DIP SW SETTING

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

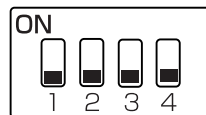


FIG. 19. 3 b

20. COMMUNICATION PLAY

20-1 SETTING FOR COMMUNICATION PLAY

Change the game setting for each seat in a manner so as to meet communication play. If the setting is not correct, communication play cannot be played.

SETTING FOR COMMUNICATION PLAY

- Turn the linked machines' power on.
- Cause all of the machines to enter the test mode. (10-3.)
- Select the GAME ASSIGNMENTS.
- Perform the SEAT NUMBER setting in the GAME ASSIGNMENTS screen. Set one of the machines to "1" and the other to "2".

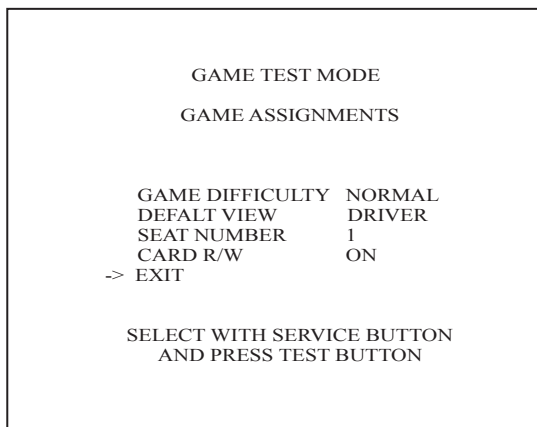


FIG. 20.3

- Cause all of the machines to exit from the test mode. After the test mode, the screens proceed to and display the Network Check.
- When network checking is finished, the system displays Advertise Screen. This indicates successful completion of setting. If SEAT NUMBER setting is wrong, Network Check Screen appears, but it does not change to Advertise Screen. Normally the Network Check takes several 10 seconds. If the screen does not proceed from the Network Check screen, some sorts of errors such as incorrect setting, incorrect connection or malfunctioning of the communication cable can be considered.

20-2 NETWORK PLAY PRECAUTIONS

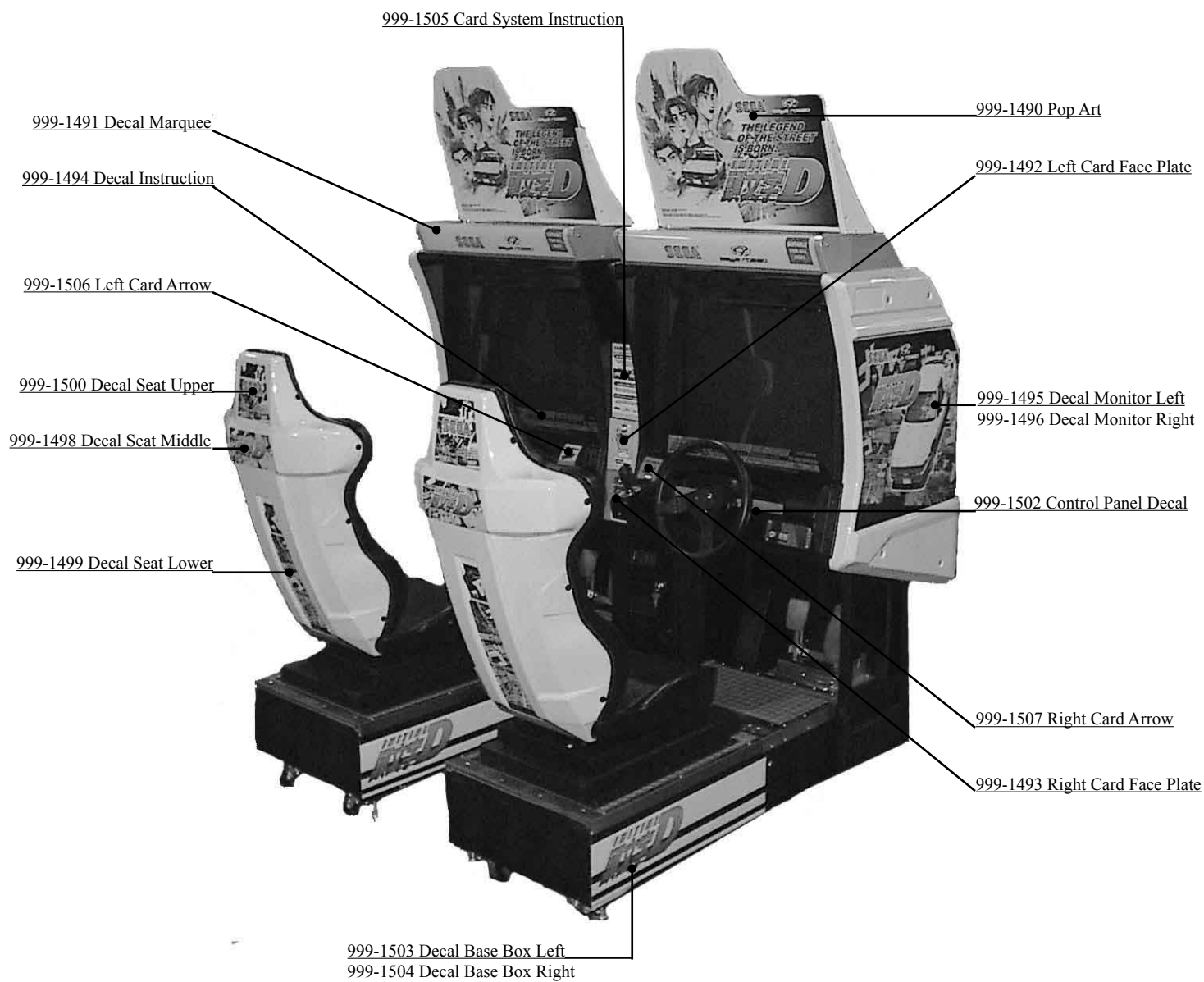


- In network play, difficulty level and other settings are made from Seat Number 1. Changing the settings at Seat Number 1 also changes the settings for Seat Number 2. Settings for Seat Number 2 cannot be changed from Seat Number 2 and so will not appear in the list of settings.
- Should a network connection fail during network play, gameplay will be suspended and the Network Check Screen will be displayed.
- If one of the units attached for network play enters Test Mode, the other unit will display the Network Check Screen.
- Even when units are connected for network play, each seat, each game may be given different cost settings. Incorrect cost settings may cause budget balancing problems.

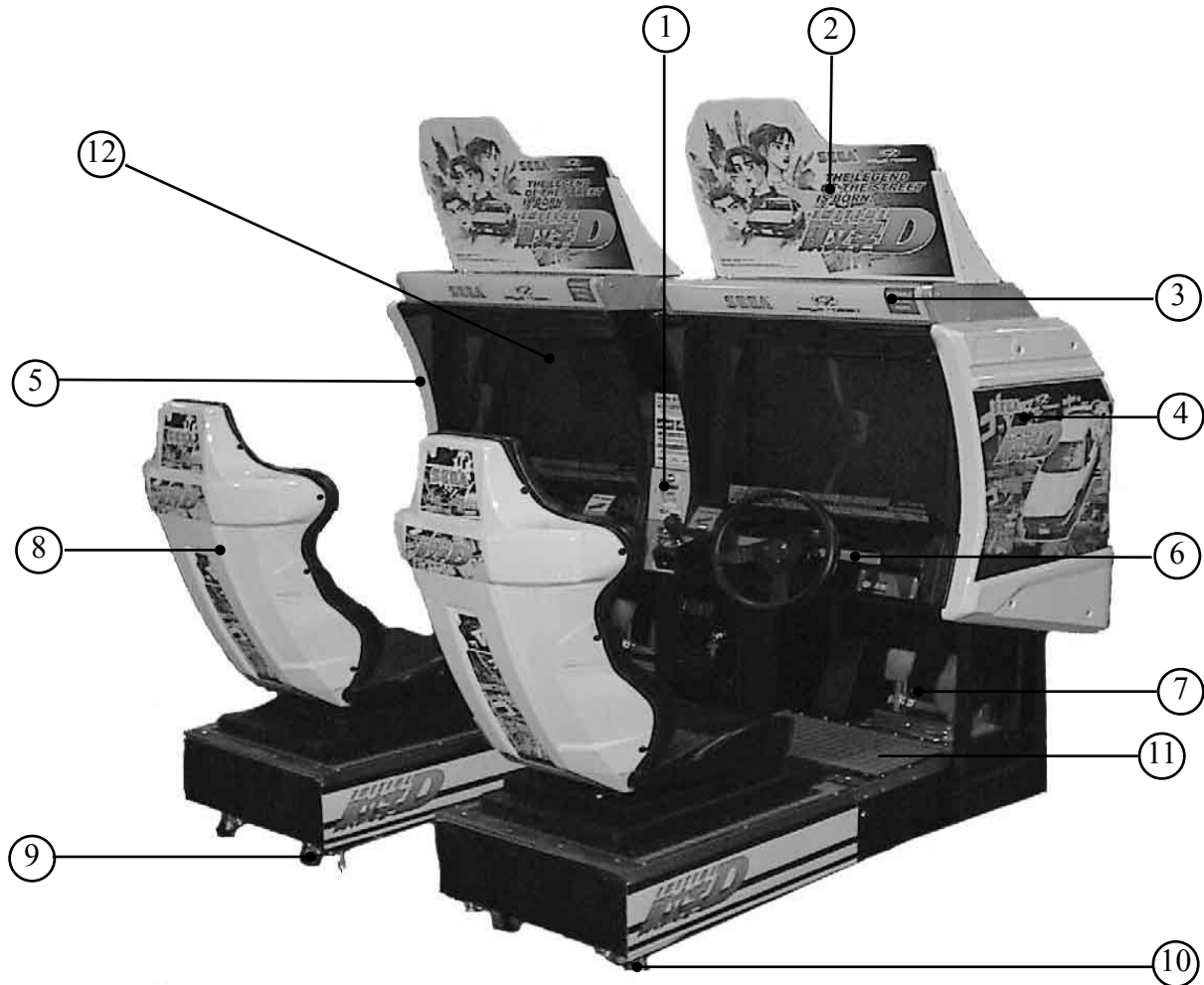
The operation of a unit when connected to another for network play is different than that of a stand-alone unit. Administration of network units should be handled carefully. Entering Test Mode will cause any other machines set up for network play to display the Network Check Screen. When customers are playing the game, do not enter Test Mode on any network play-enabled machine.

21. DESIGN RELATED PARTS

For the warning display stickers, refer to Section 1.

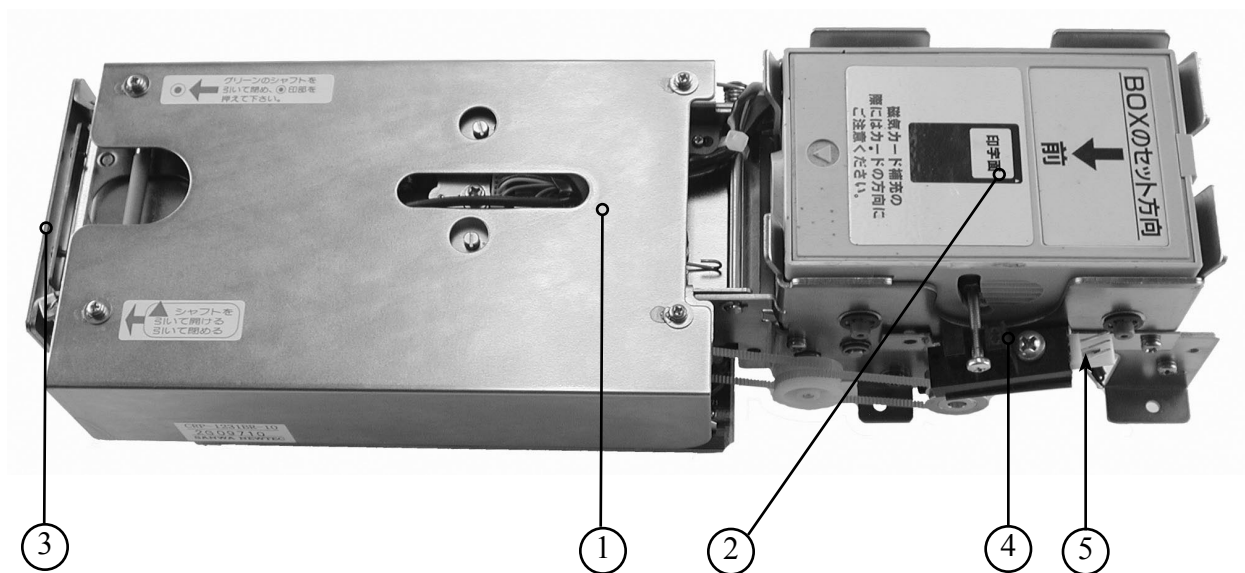


22. PARTS LIST



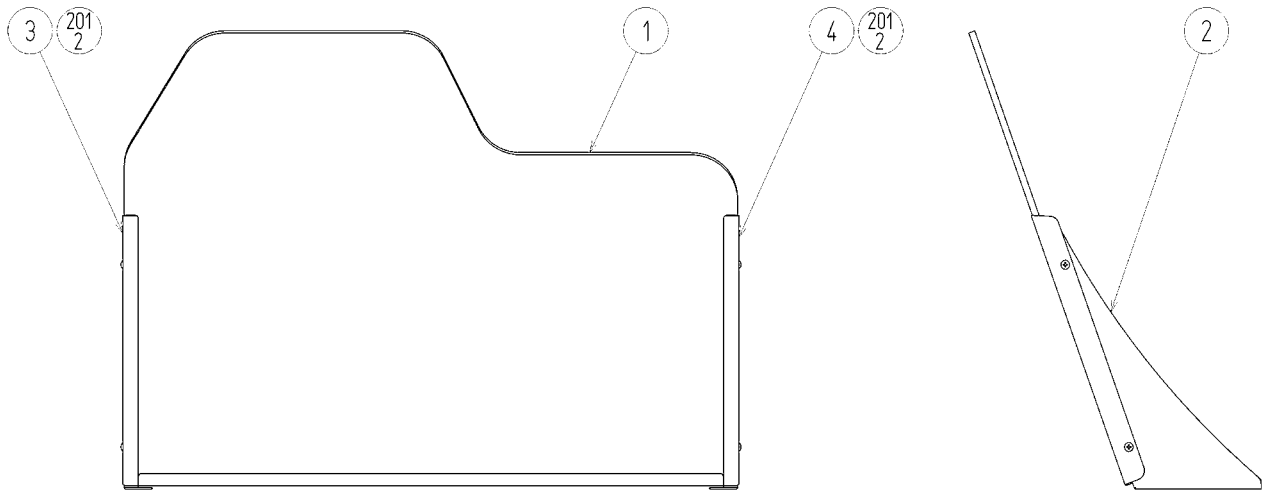
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	601-11082	Card Unit	
2		Assy Pop Panel	
3		Assy Marquee	
4	999-1547	Cover Side Cap R White Blank	
5	999-1546	Cover Side Cap L White Blank	
6	TOF-2000	Assy Control Panel	
7	SPG-2200	Assy Accel and Brake	
8	TOF-1600	Assy Seat	
9	999-0167	Leg Leveler	
10	999-0169	Caster	
11	999-1548	Grey Floor Mat Initial "D"	
12	999-0313	Monitor Glass 24 5/16 X 21 3/16 X 3/16 Gray tint, (Tempered)	

Card Unit Initial “D”



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	601-11082	Card Unit	
2	601-10952	Magazine	
3	253-5512	Card Guide	
4	999-1259	Optical Switch	
5	999-1592	Optical Switch Bracket	for low card detection

Assy Pop

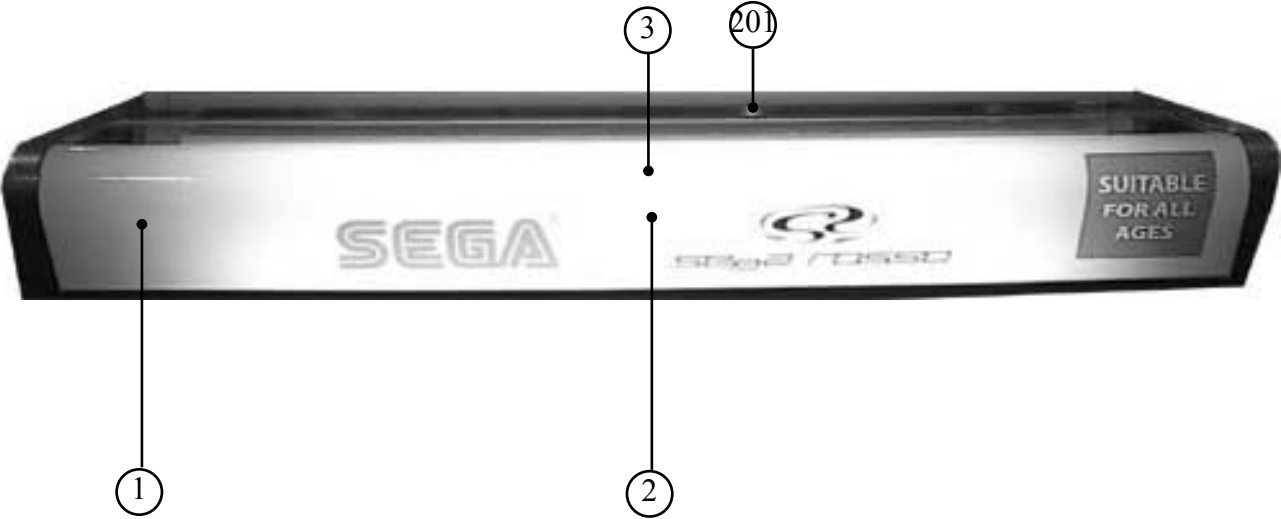


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	999-1490	POP ENG	
2	999-1549	POP HOLDER	
3	999-1550	POP SASH L	
4	999-1551	POP SASH R	
201	LOCAL PURCHASE	M SCR TH CRM 8-32xx1/2"	

Alternate Parts

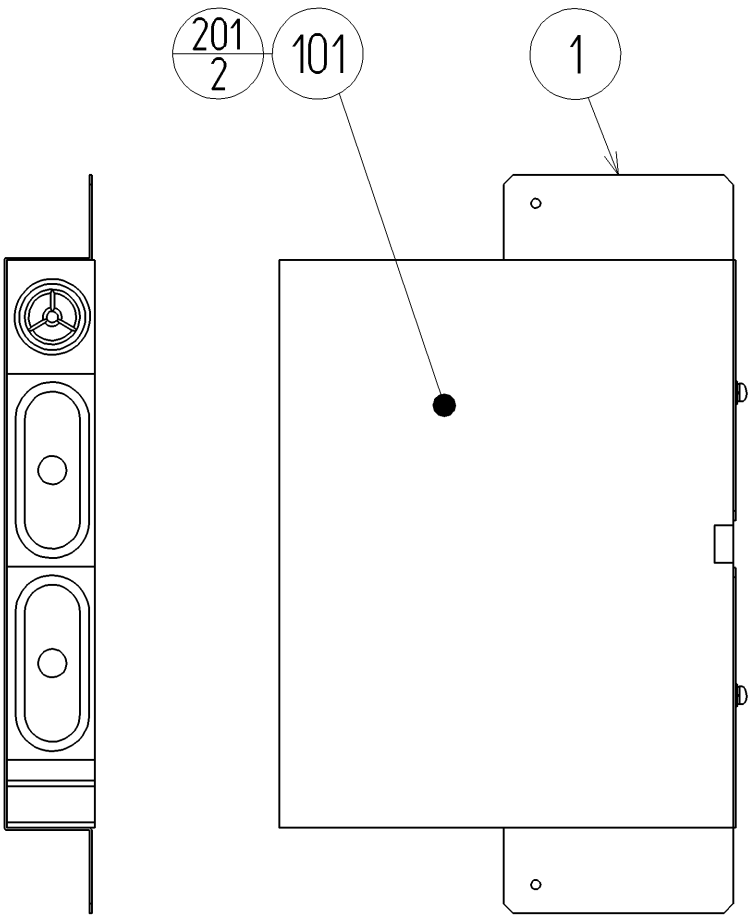
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	999-1490	POP ENG	
2	TOF4-0202	POP HOLDER	
3	TOF-0203	POP SASH L	
4	TOF-0204	POP SASH R	
201	000-T00408-0C	M SCR TH CRM M4×8	

Assy Marquee



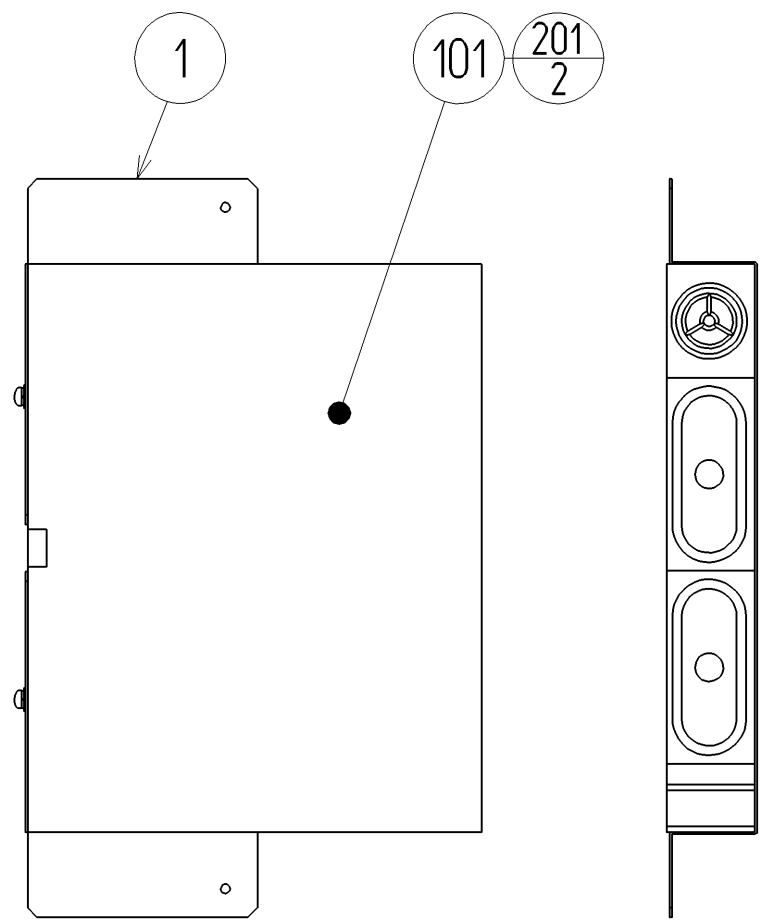
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	999-1508	Plastic Marquee	
2	LOCAL PURCHASE	Flourescent Bulb 24" long 20 W CoolWhite	
3	999-1491	Decal Marquee	
201	000-T00408-0C	M SCR TH CRM M4×8	

ASSY SPEAKER R (APC-1565)



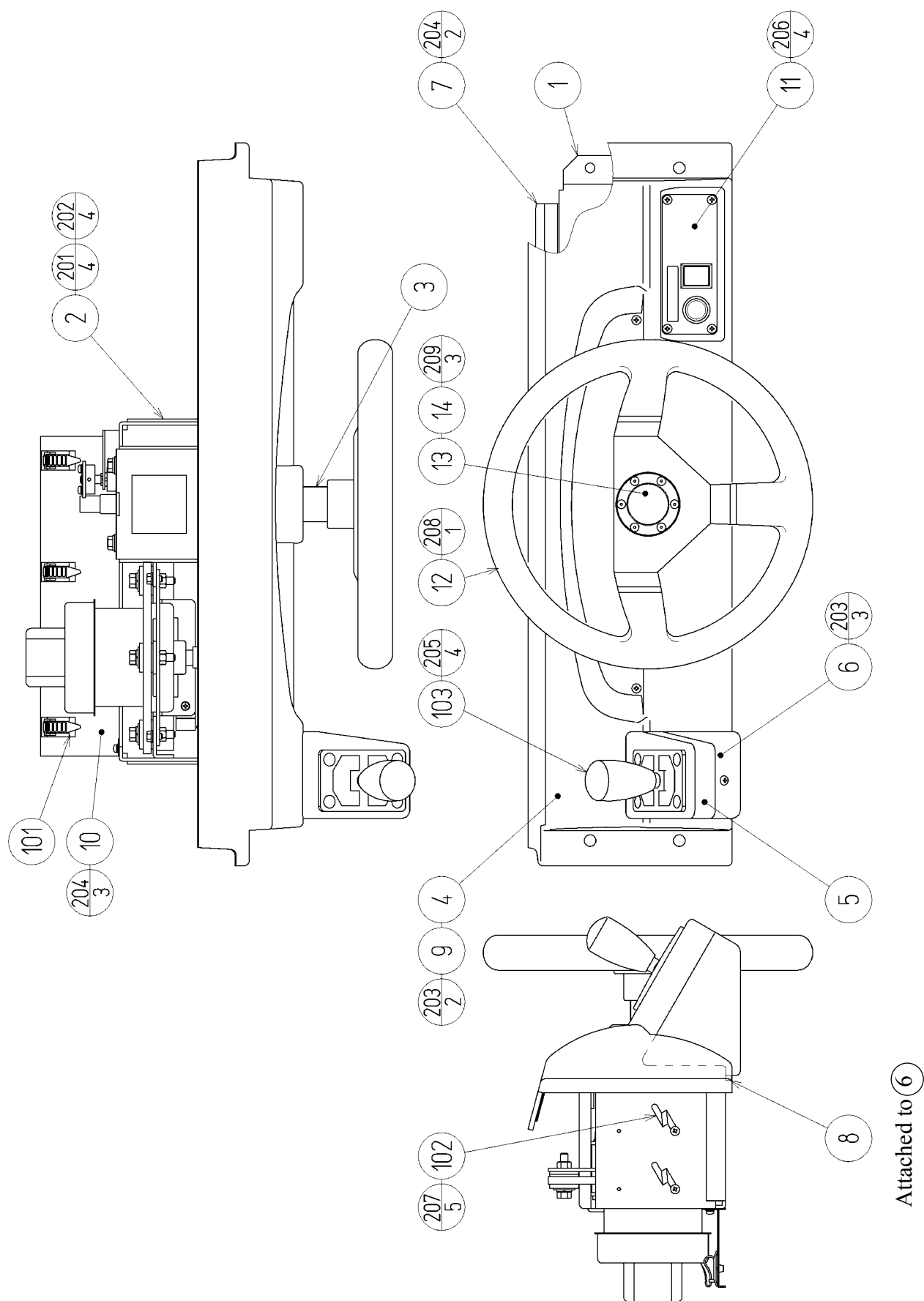
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	APC-1561	SPEAKER BRKT	
101	130-5156-01	SPEAKER BOX 8OHM 20W VA1	
201	000-P00512-W	M SCR PH W/FS M5×12	

ASSY SPEAKER L (APC-1560)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	APC-1561	SPEAKER BRKT	
101	130-5156-01	SPEAKER BOX 8OHM 20W VA1	
201	000-P00512-W	M SCR PH W/FS M5×12	

ASSY CONTROL PANEL (TOF-2000)

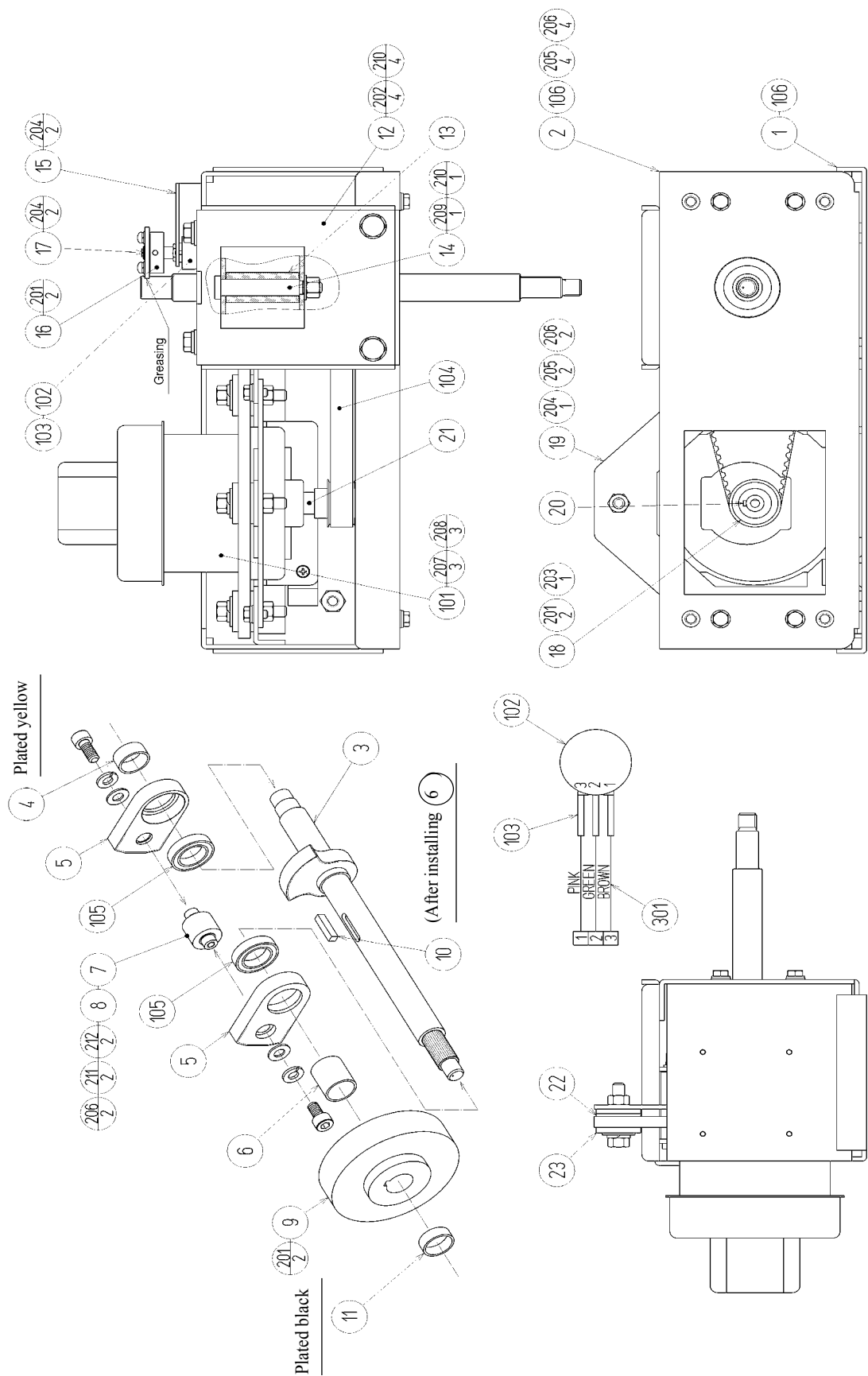


Attached to 6

ASSY CONTROL PANEL (TOF-2000)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TOF-2001	CONTROL PANEL BRKT	
2	TOF-2500	ASSY HANDLE MECHA	
3	TOF-2002	HANDLE COLLAR	
4	TOF-2003	CONTROL PANEL COVER	
5	TOF-2004	SHIFT COVER UPPER	
6	TOF-2005	SHIFT COVER LOWER	
7	TOF-2006	COVER HOLDER	
8	TOF-2007	CUSHION	
9	TOF-2008	CTRL PNL PLATE	
10	TOF-2009	WIRE HOLDER	
11	TOF-2150	ASSY SW PLATE	
12	601-11097	STEERING WHEEL 340	
13	601-11098	STEERING EMBLEM 340	
14	TOF-2010	STICKER STEERING EMBLEM	
101	280-5169	CORD CLAMP TL-20S	
102	280-0419	HARNESS LUG	
103	610-0408-91	UP/DOWN SHIFTER AL	
104	601-0460	PLASTIC TIE BELT 100 MM	
105	280-5009-01	CORD CLAMP 21	
201	030-000820-S	HEX BLT W/S	
202	060-F00800	FLT WSHR	
203	000-T00408-0B	M SCR TH BLK	
204	000-P00410-W	M SCR PH W/FS	
205	008-T00512-0B	TMP PRF SCR TH BLK	
206	000-T00410-0C	M SCR TH CRM	
207	000-T00408-0B	M SCR TH BLK M4×8	
208	050-F01200	FLG NUT M12	
209	FAS-290015	HEX SKT SCR FH BLK M4×12	

ASSY HANDLE MECHA (TOF-2500)



Fastening Torque:
M3: 0.74N.m.M4: 1.8N.m.M6: 5.6N.m.M8: 17.4N.m

ASSY HANDLE MECHA (TOF-2500)

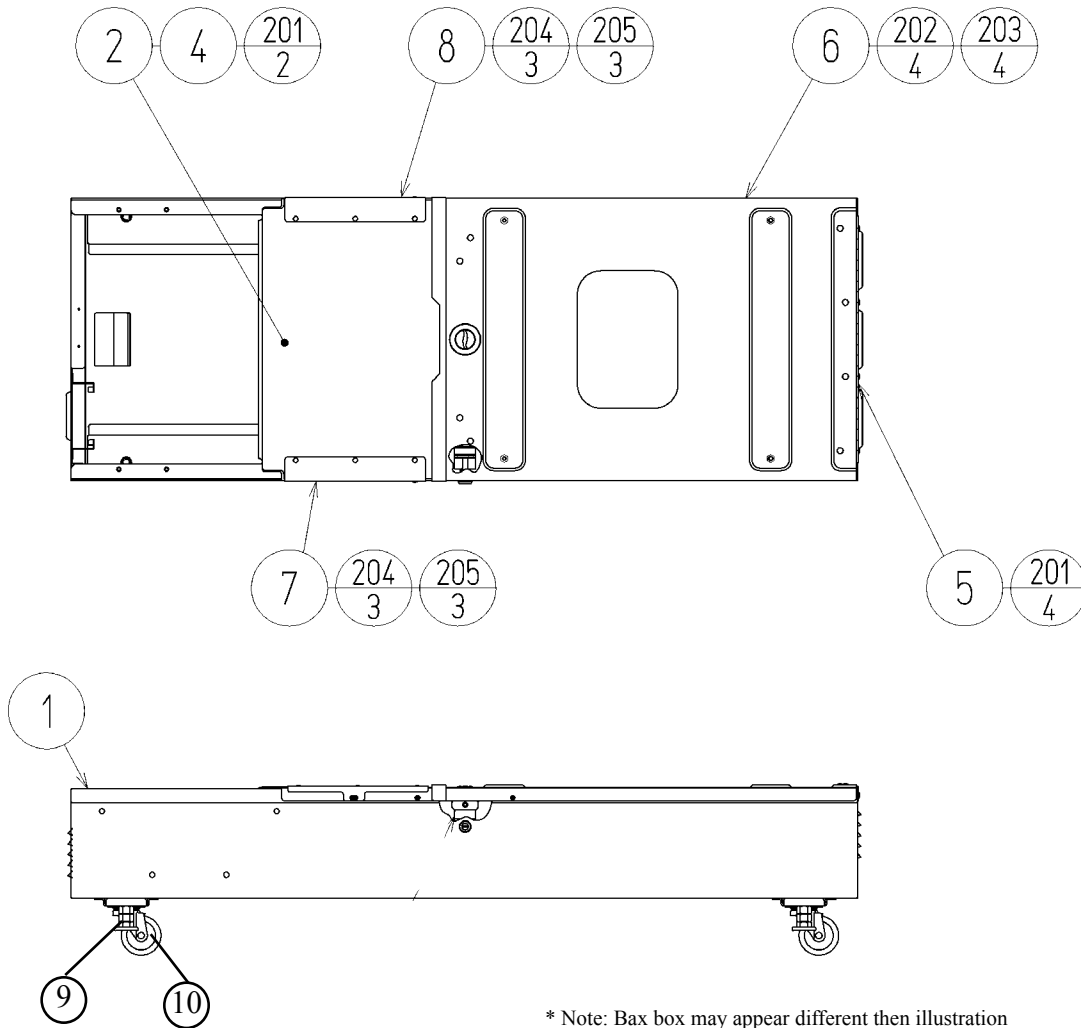
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TOF-2501	MECHA BASE	
2	TOF-2502	MECHA BASE LID	
3	TOF-2503	HANDLE SHAFT	
4	TOF-2504	SPACER COLLAR A	
5	TOF-2505	STOPPER BLOCK A	
6	TOF-2507	SPACER COLLAR B	
7	TOF-2508	STOPPER PIN SS	
8	TOF-2509X	STOPPER RUBBER SS	
9	SPG-2505	PULLEY 60 S5M	
10	DYN-1270	STOPPER KEY	
11	TOF-2510	SPACER COLLAR C	
12	TOF-2511	STOPPER HOLDER	
13	TOF-2512	STOPPER RUBBER	
14	TOF-2513	STOPPER BOLT	
15	TOF-2514	VR BRKT	
16	TOF-2515	GEAR HOLDER	
17	601-6172	GEAR 48	
18	SPG-2504	PULLEY 20 S5M	
19	SPG-2506	MOTOR BRKT	
20	SPG-2453	KEY 4×4×40	
21	SPG-2454	MOTOR SHAFT COLLAR	
22	ASK-3502	MOTOR SPACER	
23	ASK-3503	MOTOR COLLAR	
101	350-5448-01	SERVO MOTOR 500W NEW	
102	220-5484	VOL CONT B-5K OHM	
103	310-5029-F20	SUMITUBE F F 20MM	
104	601-11089	TIMING BELT (150 S5M 520)	
105	100-5168	BEARING 20 (NSK 6904ZZ)	
106	100-5285	BEARING 20(6804ZZ)	
201	028-A00408-P	SET SCR HEX SKT CUP P M4×8	
202	030-000820-S	HEX BLT W/S M8×20	
203	065-S012S0-Z	STP RING BLK OZ S12	
204	000-P00410-W	M SCR PH W/FS M4×10	
205	030-000612-S	HEX BLT W/S M6×12	
206	060-F00600	FLT WSHR M6	
207	030-000840-S	HEX BLT W/S M8×40	
208	068-852216	FLT WSHR 8.5-22 ×1.6	
209	050-U00800	U NUT M8	
210	060-F00800	FLT WSHR M8	
211	020-000612-0Z	HEX SKT H CAP SCR BLK 0Z M6×12	
212	060-S00600	SPR WSHR M6	

This diagram is an exploded view of a mechanical assembly, likely a piece of industrial equipment. It shows the main components and their sub-assemblies, each labeled with a number in a circle. The components are arranged in a way that shows their relative positions and how they fit together. The main assembly is labeled 1. Other components include 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824,

ASSY ACCEL&BRAKE (SPG-2200)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPG-2201	BASE	
2	SPG-2202	ACCEL PEDAL	
3	SPG-2203	BRAKE PEDAL	
4	SPG-2204	ACCEL SPRING	
5	SPG-2205	BRAKE SPRING	
6	SPG-2206	SHAFT	
7	SPG-2207	ACCEL GEAR	
8	SPG-2208	BRAKE GEAR	
9	SPG-2209	NEUTRAL STOPPER	
10	SPG-2210	VR PLATE ACCEL	
11	SPG-2211	VR PLATE BRAKE	
12	SPG-2212	AMPL GEAR	
13	SPG-2213	GEAR SHAFT	
14	SPG-2214	STOPPER	
15	SPG-2215	RUBBER CUSHION	
16	SPG-2216	COVER	
17	SPG-2217	VR COVER	
19	SPG-2219	GEAR STAY	
20	SPG-2220	WSHR	
21	SPG-2221	NEUTRAL STOPPER D	
101	100-5263	BEARING 12(OILES 80F-1212)	
102	220-5484	VOL CONT B-5K OHM	
104	601-7944	GEAR 15	
105	310-5029-F15	SUMITUBE F F15MM	
106	280-0419	HARNESS LUG	
201	028-A00304-P	SET SCR HEX SKT CUP P M3×4	
202	020-000520-0Z	HEX SKT H CAP SCR BLK M5×20	
203	000-P00420	M SCR PH M4×20	
204	000-P00508-W	M SCR PH W/FS M5×8	
205	000-T00408-0C	M SCR TH CRM M4×8	
206	FAS-450005	SPR PIN BLK OZ 6×10	
207	000-P00405	M SCR PH M4×5	
208	FAS-000001	M SCR TH CRM M3×6	
209	050-H00500	HEX NUT M5	
210	060-F00400	FLT WSHR M4	

ASSY BASE BOX (TOF-1520)

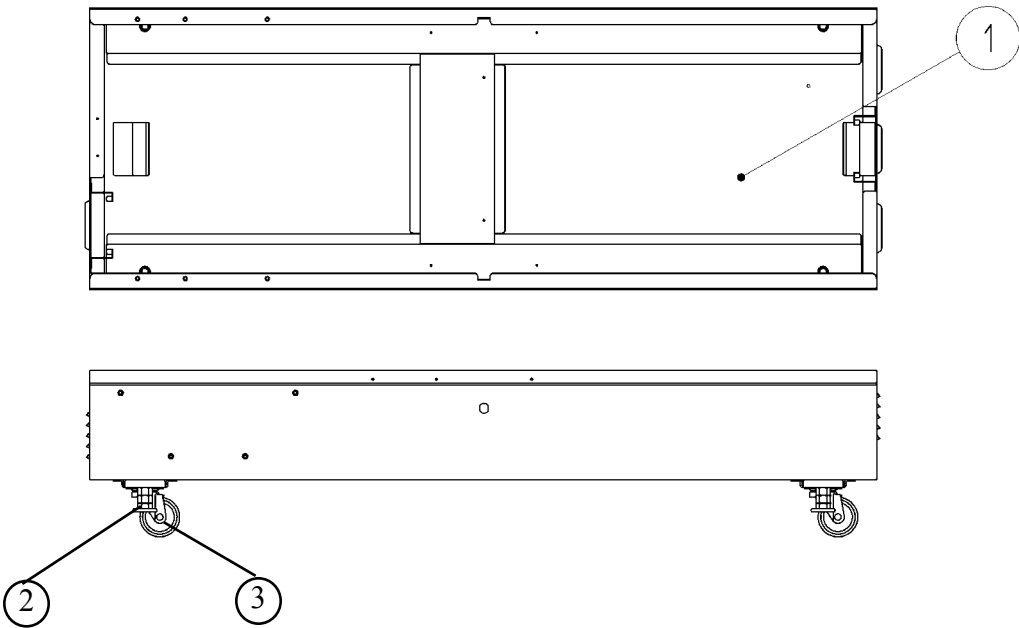


* Note: Bax box may appear different then illustration

Note: After installing (5) and (6), attach to (1).

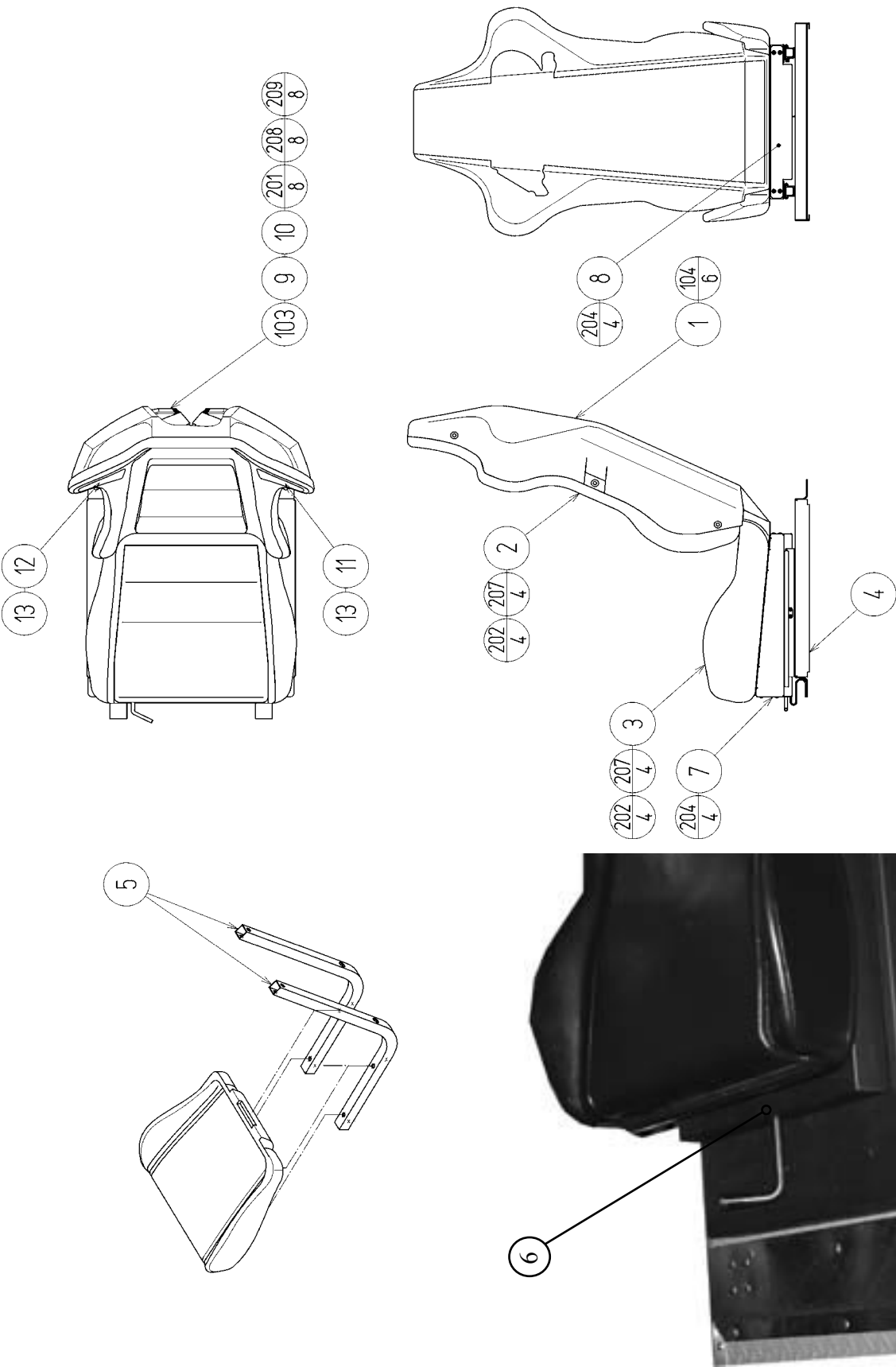
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TOF-1521	MAIN BASE	
2	DYN-2003	BASE LID F	
4	SDW-1102X	FLOOR MAT	
5	DYN-2006	HINGE 480	
6	FRI-1510X	ASSY BASE LID R	
7	DYN-2007X	LID EDGE L	
8	DYN-2009X	LID EDGE R	
9	999-0167	LEG LEVELER	
10	999-0169	CASTER	
201	000-T00512-0B	M SCR TH BLK M5×12	
202	031-000514-0B	CRG BLT BLK M5×14	
203	050-F00500	FLG NUT M5	
204	031-000414-0C	CRG BLT CRM M4×14	
205	050-F00400	FLG NUT M4	

MAIN BASE



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	FRI-1501-A	MAIN BASE BLANK	
2	999-0167	LEG LEVELER	
3	999-0169	CASTER	

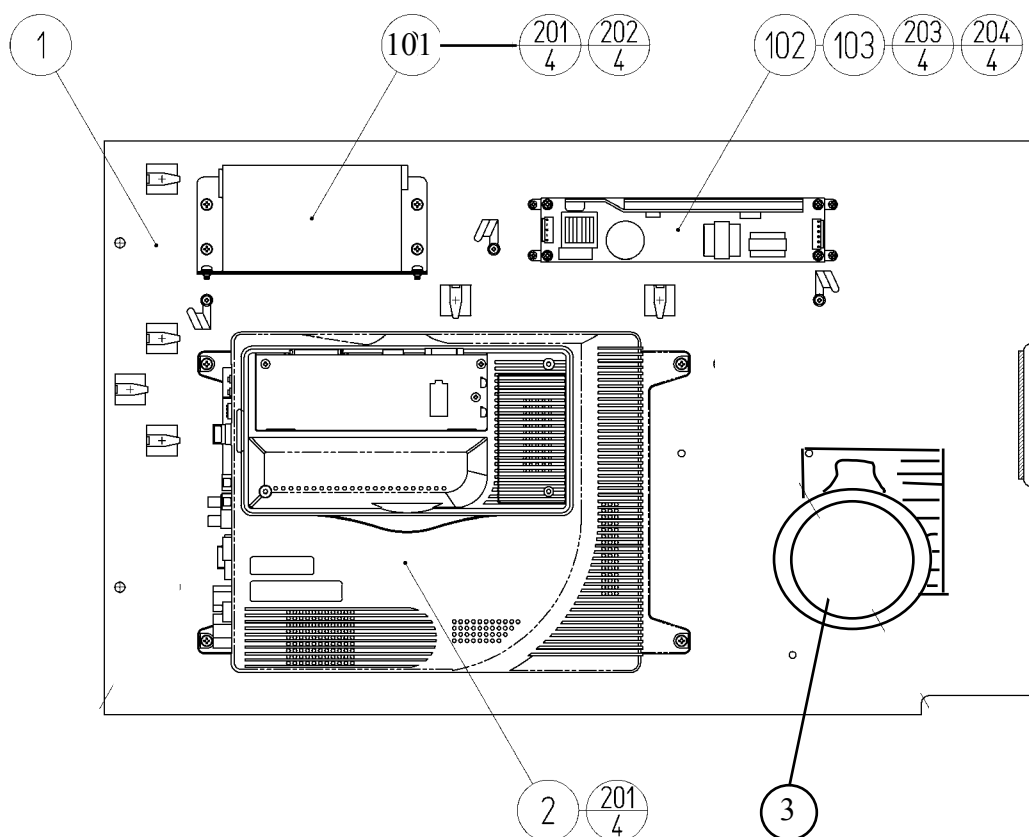
ASSY SEAT



ASSY SEAT

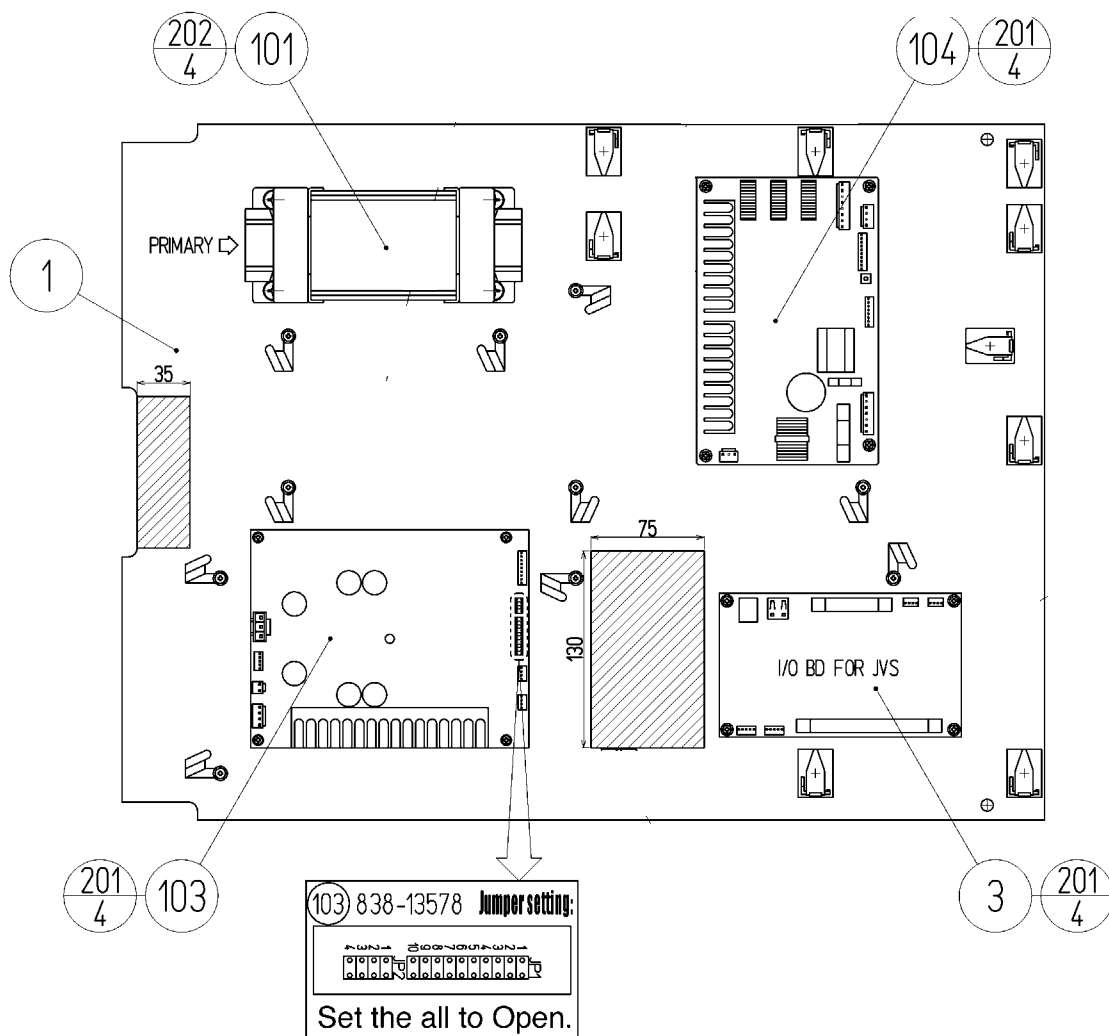
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TOF-1603-01	SEAT BACK COVER ENG	
2	DUT-2202	UPPER SEAT	
3	DUT-2203	LOWER SEAT	
4	TOF-1601	SEAT BASE	
5	STC-1604	SEAT FRAME(2)	
6	STCC-00781	SEAT TURTLE	
7	FRI-3307	FRONT TRAY COVER	
8	NCR-2406	REAR TRAY COVER	
9	INY-1302-B	MASK CUSHION SIDE	
10	STC-1607	SP MOUNT BRKT	
11	STC-1608	SPEAKER NET L	
12	STC-1609	SPEAKER NET R	
13	TOF-1604	NET COVER SH	
103	130-5186-91	DUMMY SPEAKER	
104	280-5297	SCRIVET 8 1K31	
201	000-P00410-W	M SCR PH W/FS M4×10	
202	030-000850-S	HEX BLT W/S M8×50	
203	030-000816-S	HEX BLT W/S M8×16	
204	000-T00408-0B	M SCR TH BLK M4×8	
205	050-H00800	HEX NUT M8	
206	060-S00800	SPR WSHR M8	
207	068-852216	FLT WSHR 8.5-22 ×1.6	
208	012-P00412	TAP SCR #2 PH 4×12	
209	060-F00400	FLT WSHR M4	

ASSY MAIN BD (TOF-4500)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	TOF-4501	MAIN BD BASE	
2	840-0091D-11	ASSY CASE NAT RT/232C & COM USA	<USA>
3	XKT-0833	GD-ROM DRIVE	
101	400-5397-01	SW REGU FOR JVS VA	
102	400-5421-07512	SW REGU	

ASSY ELEC BD

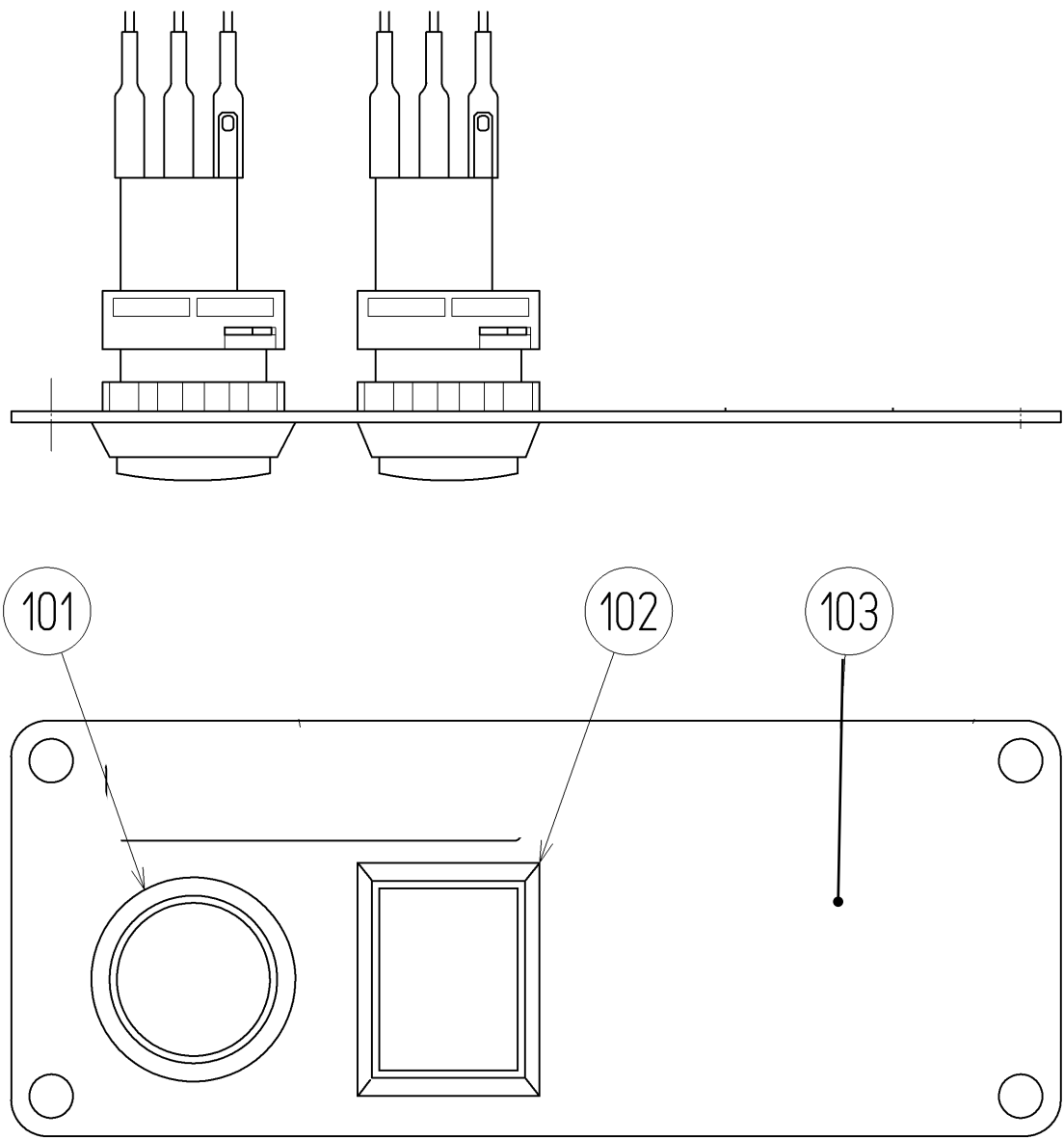


Note: Make sure that there is no wiring, etc. in the slash mark portions.

ASSY ELEC BD

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NCR-4601	WOODEN BASE ELEC	
3	837-13551-92	I/O CONTROL BD FOR JVS	
101		XFMR 100-120V 100V7.5A	GRAND:0054-465-101
103	838-13578	PWR AMP 2CH & MIXER	
104	838-14174	SERVO MOTOR DRIVE BD MIDI	

ASSY SW PLATE



ITEM NO.	PART NO.	DESCRIPTION	NOTE
101	HAPP CONTROLS	START BUTTON #57-2000-355	
102	HAPP CONTROLS	VIEW BUTTON #57-2000-62	
103	999-1509	BUTTON PLATE	

23. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

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

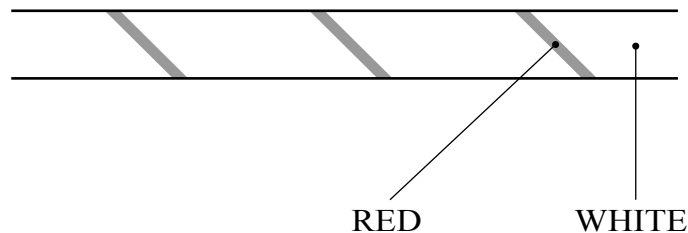
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

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.

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

Notes:

Warranty

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

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

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

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

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



SEGA ENTERPRISES, INC. (USA)

45133 Industrial Drive
Fremont, CA 94538
(415) 701-6580 phone
(415) 701-6594 fax