

## OWNER'S MANUAL

**IMPORTANT**

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

# WARRANTIES

## GAME WARRANTY POLICY

Your new SEGA PRODUCT is covered for a period of ninety (90) days from the date of the shipment. This certifies that all Printed Circuit boards, power supplies and monitors 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 problem 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 circumstances shall it extend beyond the period of time listed above.

## PARTS WARRANTY POLICY

Sega Amusements USA, Inc. warrants all parts to be free from defective materials and workmanship for a period of thirty (30) days from Sega Amusements USA, Inc. invoice date unless otherwise specified in writing by Sega Amusements USA, Inc.

This limited warranty is invalid for any part that upon examination, is deemed to have been subject to misuse, improper repair or installation, neglect or violation of specification or other instructions published by Sega Amusements USA, Inc. There are no additional warranties described above.

The limited warranties described above shall be in lieu of any other warranty, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose.

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

## To maintain safety:

To ensure the safe operation of this product, be sure to read the following before usage. 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 close to the product or in a convenient place for future reference.

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



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



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



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

## 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, Serviceman Manual and/or Service Manual should be referred to.



Indicates a "Protective Earth Terminal." Before operating the equipment, be sure to connect it to the Ground.  
(The step may be omitted for products in which a power cord with earth is used.)

- **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 site maintenance personnel should perform such work.
- **Be sure to turn off the power before working on the machine.**  
To prevent an electric shock, be sure to turn off the power before carrying out any work that requires direct contact with 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 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 an 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 an 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 an 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 situations 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 with a monitor.)**

Some of the monitor (TV) parts are subject to high tension voltage. Even after turning off the 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 with a monitor/projector.)**

Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor/projector 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 the 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 way, 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 ratings? 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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# INTRODUCTION

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

This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions.

In the unlikely event that the product does not function correctly, DO NOT allow anyone other than a technician to touch the internal system. Turn off the power to the machine, making sure to unplug the electrical cord from the outlet, and contact the office listed below or the point of purchase for this product.

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

## **STOP** IMPORTANT

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

### Sega Amusements U.S.A., Inc.

800 Arthur Avenue, Elk Grove Village, IL 60007-5215, U.S.A.

TEL: 1-847-364-9787  
TOLL FREE: 1-888-877-2669  
FAX: 1-847-427-1065

### SPECIFICATIONS

Dimensions:	Unit : 36.5" [Width] x 69.1" [Depth] x 74.5" [Height]
Weight:	Unit : 562.2 lbs.
Power, maximum current:	540 W, 4.5 A (AC 120 V, 60 Hz)
Monitor:	29 Type Color Monitor

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



## Definition of 'Site Maintenance Personnel or Other Qualified Individuals'

### WARNING

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

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

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

#### **Site maintenance personnel:**

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

#### **Activities to be carried out by site maintenance personnel:**

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

#### **Other qualified professionals:**

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

#### **Activities to be carried out by other qualified professionals:**

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

# 1 HANDLING PRECAUTIONS

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

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

## WARNING

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

If you need to perform any work not listed in this manual, request work from the office indicated in this manual or the point of purchase, or inquires for details.
- Be sure to perform periodic maintenance inspections herein stated.

**STOP** **IMPORTANT**

**1** **HANDLING PRECAUTIONS**

- For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- When cleaning the CRT surfaces, use a soft and dry cloth. Do not apply chemicals such as thinner, benzene, etc.
- 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 not designed and manufactured specifically for this game machine. The manufacturers may discontinue, or change the specifications of such general-purpose parts. If this is the case, SEGA cannot repair or replace a failed game machine whether or not a warranty period has expired.

### CONCERNING THE STICKER DISPLAY


This SEGA product has stickers attached describing the product manufacture No. (Serial No.) and Electrical Specifications. It also has a Sticker describing where to contact for repair and for purchasing parts.

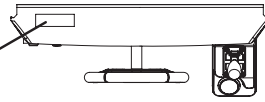
When inquiring about or asking for repairs, mention the Serial No. and Name of Machine indicated on the Sticker. The Serial Number indicates the product register. Identical machines could have different parts depending on the date of production. Also, improvements and modifications might have been made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

### CONCERNING WARNING DISPLAYS

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

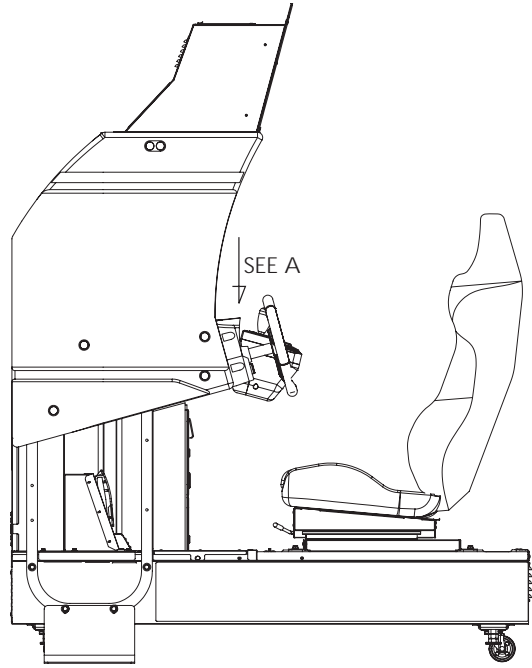
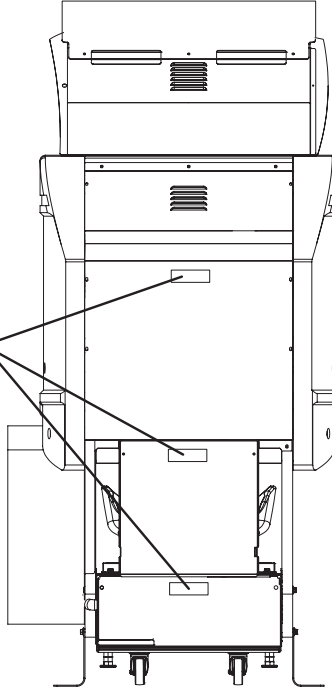
**1** HANDLING PRECAUTIONS

 **WARNING**  
**SHOCK HAZARD**  
Do Not Open.  
Refer Servicing To Service Personnel.



SEE A

 **WARNING**  
**SHOCK HAZARD**  
Do Not Open.  
Refer Servicing To Service Personnel.



SEE A

## 2 PRECAUTIONS REGARDING INSTALLATION LOCATION

### WARNING

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

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

### 2-1 LIMITATIONS OF USAGE

### WARNING

- Be sure to check the Electrical Specifications. Ensure that this product is compatible with the location's power supply, voltage, and frequency requirements. A plate describing Electrical Specifications is attached to the product. Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- This product requires a breaker and earth mechanism as part of the location facilities. Using the product without these can cause a fire and electric shock.
- Ensure that the indoor wiring for the power supply is rated at 15 A or higher (AC single phase 100 V ~ 120 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- Be sure to use an independent power supply equipped with an earth leakage breaker. Using a power supply without an earth leakage breaker can cause an outbreak of fire if a power surge occurs.
- Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.
- When using an extension cord, ensure that the cord is rated at 15 A or higher (AC 100 V ~ 120 V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

## 2-2 OPERATION AREA

### WARNING

- For safe operation, use and operate this product in an area measuring at least 1.67 m (65.7 in) in width and 2.3 m (90.6 in) in depth. The area prescribed in this manual is absolutely necessary, for if one should fall over and hit their head against something, there could be a serious accident.
- Be sure to provide sufficient space specified in this manual. Do not allow objects to block the ventilation ports. It can cause generation of heat and a fire.
- SEGA shall not be held responsible for damage or compensation for damage to a third party, resulting from the failure to observe this instruction.
- If the machine does not fit through the entryway to the installation location, do not disassemble it without first consulting the instructions. The machine should only be disassembled in accordance with the instructions listed in this manual; do not attempt to disassemble it in any other way. This may cause electric shock or short circuits.

### IMPORTANT

To install this product, the entrance must be at least 1 m in width and 1.8 m in height.

### 3 PRECAUTIONS REGARDING PRODUCT OPERATION

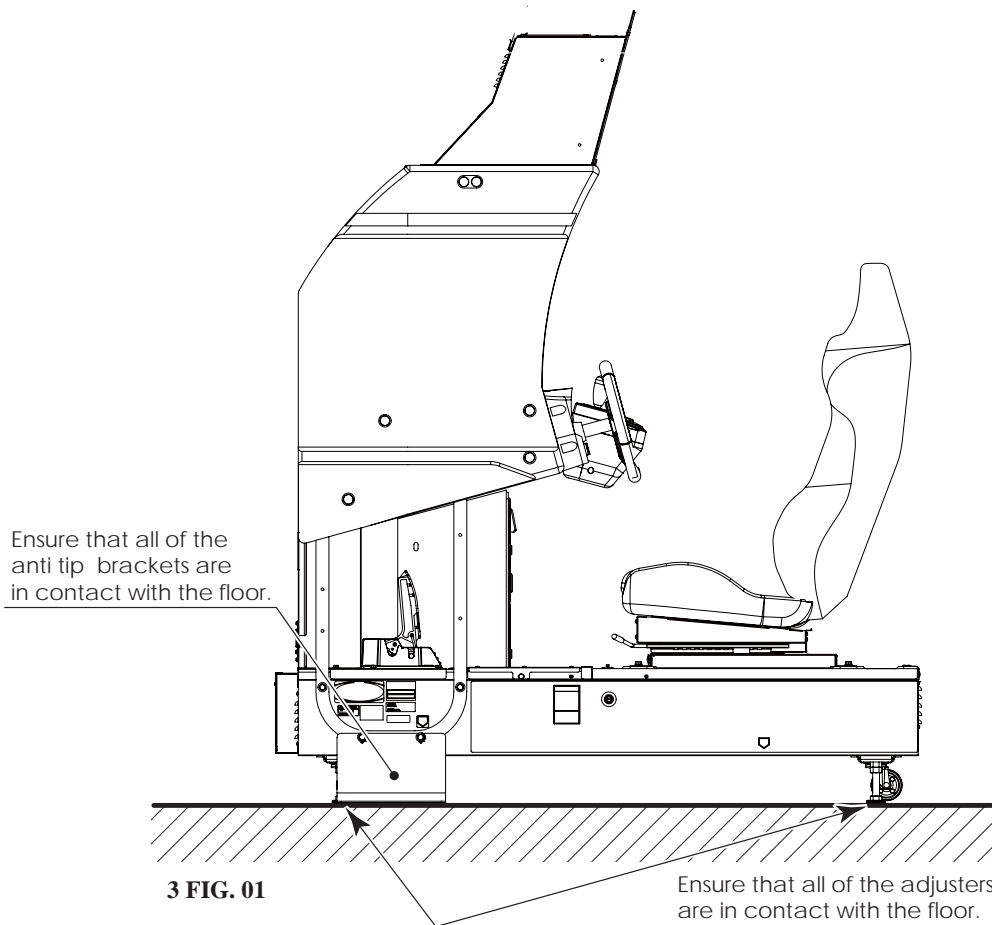
To avoid injury and trouble, be sure to pay attention to the behavior of visitors and players.

#### BEFORE OPERATION

#### **!WARNING**

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

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





**⚠ WARNING**

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

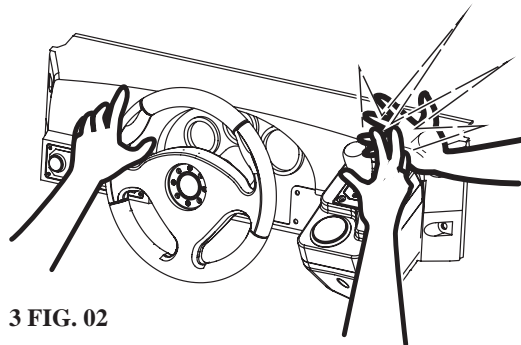
**⚠ CAUTION**

- During daily cleaning, be sure to check the surface of the steering wheel, gear shifter, and other parts that the player touches with his hands for damage, cracks, or loose screws. If a player uses the machine while it is damaged, cracked, or has a loose screw, the player may become injured.
- During daily cleaning, be sure to check the seat for any abnormality, wetness, etc. Failure to do this may result in deliberate tampering or negligence being left undetected.
- 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.

## DURING OPERATION (PAYING ATTENTION TO CUSTOMERS)

### **⚠️ WARNING**

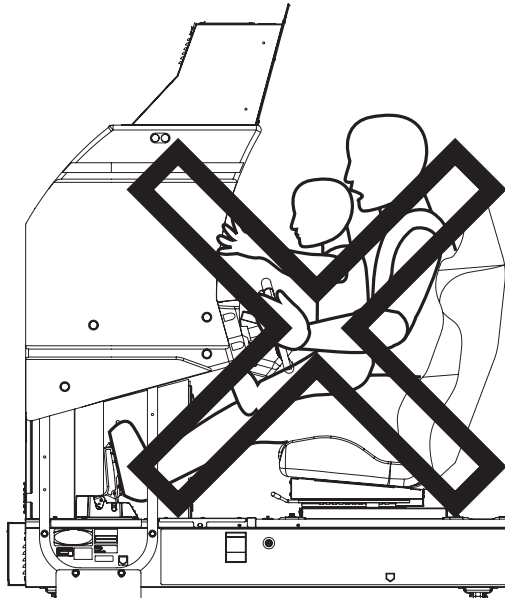
- For safety reasons, do not allow any of the following people to play the game.
  - Those who need assistance such as the use of an apparatus when walking.
  - Those who have high blood pressure or a heart problem.
  - Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.
  - Those who have neck or spinal cord problems.
  - Those who are intoxicated or under the influence of drugs.
  - Pregnant women.
  - Persons susceptible to motion sickness.
  - Persons who disregard the product's warning displays.
- Even players who have never been adversely affected by light stimulus might experience dizziness or headache depending on their physical condition when playing the game. Small children are especially likely to experience these symptoms. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during play to have a medical examination.
- To avoid injury from falls and electric shocks due to spilled drinks, instruct the player not to place heavy items or drinks on the product.
- To avoid electric shocks and short circuits, 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 falls and resulting injury, immediately stop the customer from leaning against or climbing on the product, etc.
- To avoid electric shock and short circuit, do not allow customers to unplug the power plug without a justifiable reason.
- This game is for one player only. If two or more customers attempt to sit in the seat and play at the same time, it may result in players falling over, falling off, or catching body parts in the ride.
- Persons other than the player should not be allowed to touch the controls during play. They may brush against or collide with the controls or the player, possibly resulting in accidents.



3 FIG. 02

**⚠ WARNING**

- Customers should be warned not to place children on their laps while they play the game. Doing so may cause the child to become trapped between the player and the control panel and/or cause the machine to tip over.

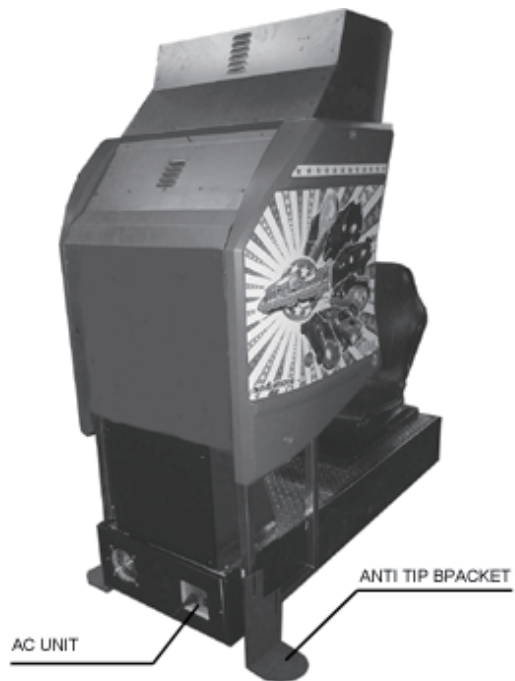
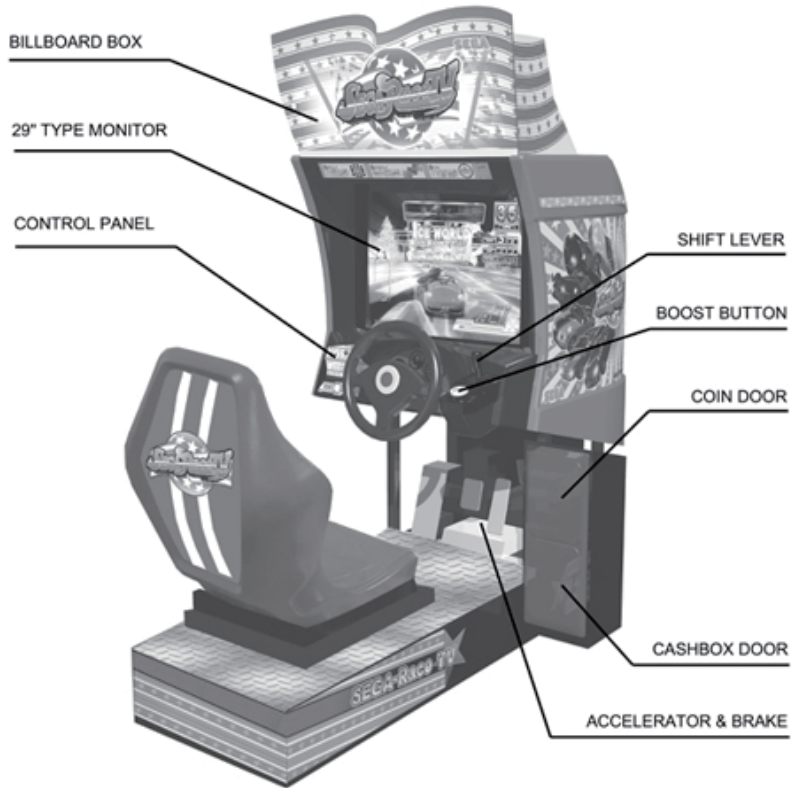


3 FIG. 03

**⚠ CAUTION**

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

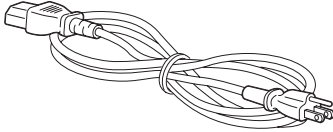
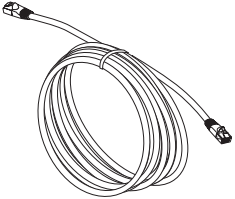
# 4 PART DESCRIPTIONS



## 5 ACCESSORIES

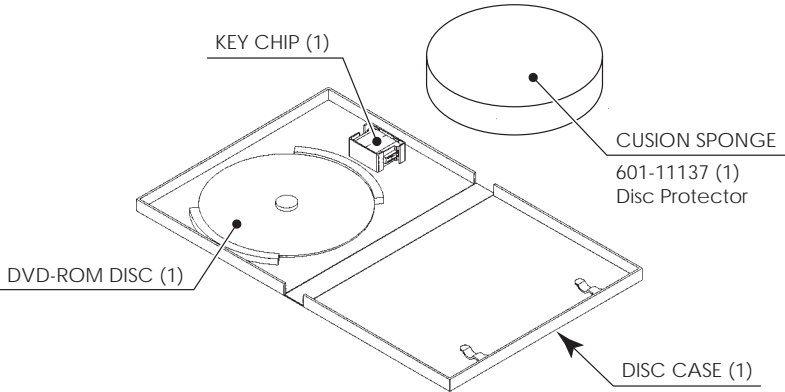
Confirm that the accessories listed in the table below are present when setting up the product. Accessories marked “Spare” in the note column are consumable items but included as spares.

**5 TABLE 01**

<p>OWNER'S MANUAL 542-30-300 (1) This manual</p>	<p>AC CABLE (Power Code) 99-00-017 (1)</p>	<p>COMMUNICATION CABLE 5m</p>
		

**5 TABLE 02 SOFTWARE KIT XKT-1675-D-EX1 <USA>**

DVD SOFTWARE KIT (1)



When you order the DVD-ROM disc only, specify the part number 610-0726-0044 (DVD SOFT RTV).

**NOTE;** The game software has been pre-installed in the main PCB and the key chip has been pre-set to the main PCB.  
Please use the DVD software, only when necessary for some reason such as replacing the main PCB.  
However to install the software, the DVD DRIVE and USB(mini type) cable need to be prepared separately.  
Those are not included in the unit and available separately at SEGA.

## 6 ASSEMBLY AND INSTALLATION

### WARNING

- Perform assembly work by following the procedure herein stated. Failure to comply with the instructions can cause electric shock.
- Perform assembling as per this manual. Since this is a complex machine, incorrect assembling can cause an electric shock, machine damage and/or improper functioning as per specified performance.
- When assembling, more than one person is required. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
- Ensure that connectors are properly connected. Improper connections can cause electric shock.
- This work should be carried out by the site maintenance personnel or other qualified professionals. Work performed by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation. If no one with proper technological expertise is available, request service from the office indicated in this document or the point of purchase so as to ensure safety.
- Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
- To perform work safely and avoid serious accident such as the cabinet falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.
- Do not leave power cords, ground wires, or network cables exposed in areas of heavy foot traffic. Doing so may cause them to become damaged, possibly resulting in electric shock and/or short circuits. When laying wiring across the floor, always use safety covers to protect the wires.
- The power cord for this product has a ground terminal. Make sure to use this ground terminal when plugging it in to an indoor outlet. Failure to properly ground the product could lead to electrocution. It can also lead to malfunction.

**CAUTION**

- When opening/closing, attaching/removing doors or lids, be careful that your hand or finger does not get caught in anything.
- To perform the operation safely and accurately you must use a safe, steady footstool or stepladder. Working without this may lead to a fall and possible injury.
- Wear appropriate work clothing so that work can be performed safely. Use gloves and safety shoes to prevent accidents or injuries.
- When installing a wire protection cover over a floor, use a material shaped so that no one passing by will stumble over it. Using a material that could be stumbled over might lead to an accidental fall.
- Handle plastic parts with care. Excessive weight or pressure may cause them to break and the broken pieces may cause injury.

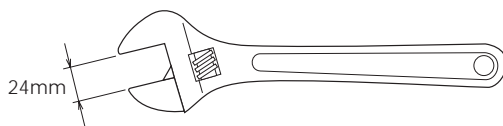
When carrying out the assembling and installation, follow the following 6-item sequence.

**6-1 Fixation to installation site**

**6-2 Turning on the power (Software Installation)**

**6-3 Checking assembly (Setup)**

**Tools necessary for work**



Spanner with measuring distance of 24 mm to opposite side (for M16 hexagon bolts)

## 6-1 FIXATION TO INSTALLATION SITE

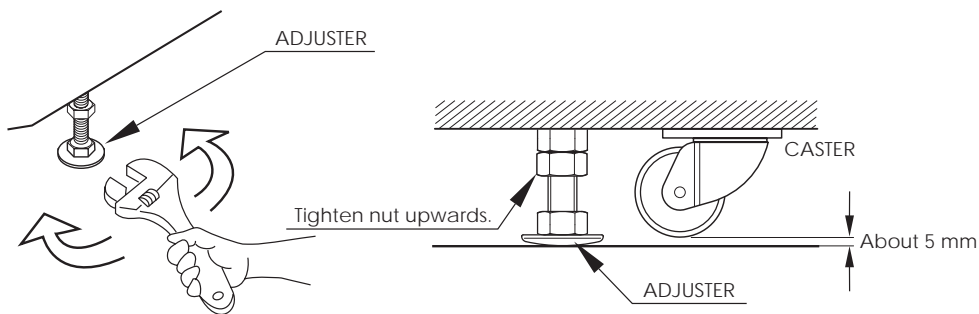
### **!WARNING**

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

This product has 4 casters and 4 adjusters.

Up to 4 machines can be connected for multi-player games. If several machines are to be installed, refer to Chapter 19.

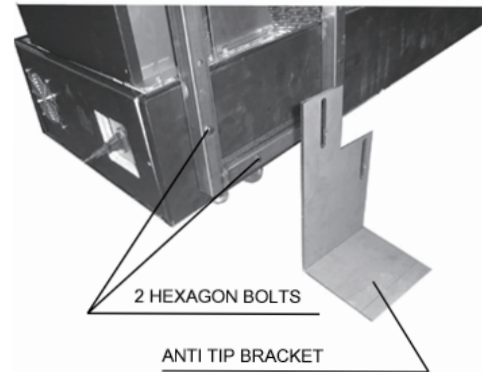
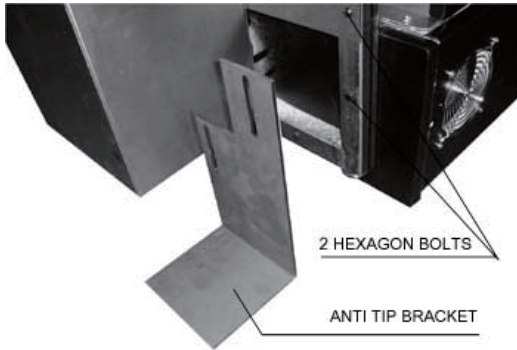
- 1** Move the product to the installation site. See Chapter 19 for an example of installation. Make sure to leave enough passage space for the player to get into the seat. Also leave some space on the back lid side for performing maintenance work later.
- 2** Have all the adjusters make contact with the floor. Adjust the adjuster's height by using a wrench so that the machine position is kept level.
- 3** After making adjustment, fasten the adjuster nut upward and secure the height of adjuster.



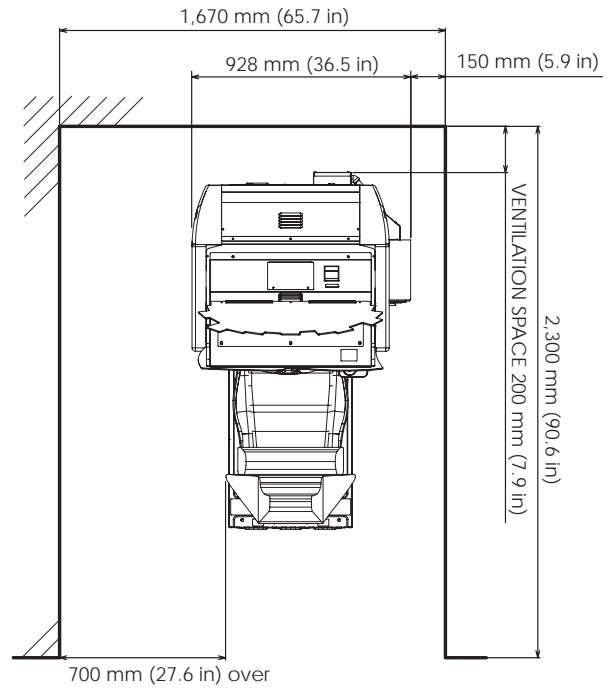
6-2 FIG. 02



- 4 Attach the anti tip brackets to the left and right sides. Remove the 2 hexagon bolts from each side. These will be used to fasten the anti tip brackets.



6-2 FIG. 03



Provide ventilation space for the ventilation opening. Allow more than 70 cm (approx. 28 in) of space for customer traffic.

6-2 FIG. 05

## 6-2 TURNING ON THE POWER (SOFTWARE INSTALLATION)

The software installation is not necessary for this game, as it is pre-installed into the main PCB. Please refer to the following section, only when necessary.

### WARNING

- Be careful not to damage the DVD wire by getting it caught between objects, etc. Doing so may cause a short circuit or fire.
- The following explanation assumes that the product has been assembled properly as explained above. If there is an error or if the product operates in a manner other than as indicated below, cut off the power supply immediately. Failure to do so may result in a fire or electrical shock.
- If you look directly at the laser beam in the DVD DRIVE, you could suffer vision impairment. Do not look inside the DVD DRIVE.

### IMPORTANT

- Do not use or store the DVD DRIVE or DVD wire in any of the following locations, as this may result in serious damage.  
[Do not use or store in these locations]
  - Anywhere which may vibrate or shock the equipment
  - In direct sunlight
  - In damp or dusty places
  - In places with a sharp change in temperature
  - Close to anything that gives off heat (a heater, etc.)
  - Close to anything with a strong magnetic field (magnets, monitor, speakers, radio, etc.)
  - Anywhere that is likely to get wet (kitchen, etc.)
  - Anywhere with a slope or incline
  - Anywhere with corrosive gas in the air (chlorine, hydrogen sulfide, ammonia, sulfur dioxide, etc.)
  - Anywhere with strong static electricity
- [Do not use in these locations]
  - Close to anything that is highly retentive of heat (carpet, sponge, cardboard, etc.)
  - Anywhere that blocks the DVD DRIVE air vent.
- The DVD DRIVE is a delicate piece of equipment. Avoid the following.
  - Dropping or shaking it violently.
  - Getting water or other liquids on it, or placing small items on top of it.
  - Placing large or heavy items on top of it.
  - Drinking or smoking close to the DVD DRIVE.
- Do not turn off the power to the DVD DRIVE when its access lamp is on or flashing, as this could cause damage to the device.

**STOP** IMPORTANT

- Do not allow any foreign materials, such as liquids, metals or smoke inside the DVD DRIVE.
- Use a soft, dry cloth to wipe off any dirt or marks on the DVD DRIVE.
- If you need to use a cleaning agent, always use a "neutral" agent diluted in water.
- Never use products or cleaning agents containing benzene, alcohol, thinners, etc.
- Do not touch the lens inside the DVD DRIVE. Doing so may prevent it from reading accurately.
- The chip components on IC boards can be damaged by electrostatic discharge from the human body. Before handling an IC board, always neutralize any static charge in the body by touching a grounded metal surface.
- Some parts are not designed and manufactured specifically for the kit. 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 kit whether or not a warranty period has expired.

### STOP IMPORTANT

- Do not use a DVD-ROM with a damaged front. This may cause a malfunction.
- Insert the DVD-ROM into the DVD DRIVE with the label facing upwards.
- Do not get fingerprints or dust particles on the disc. Contaminated discs may lower audio and video quality, and may result in read malfunctions.
- When cleaning the disc, do not use volatile chemicals (benzene, thinner, etc.), cleaning sprays, or antistatic agents.
- Do not use a cracked, warped, or damaged disc. Do not attach papers or seals onto the disc to avoid scratching it. Do not use a disc with signs of peeled seals, tape, etc. If such a disc is placed in the DVD-ROM DRIVE, malfunctions, such as the inability to remove the disc from the drive, may result.
- When cleaning a heavily contaminated disc, use a clean cloth that has been soaked in water and squeezed. After wiping, remove any remaining moisture with a clean, dry cloth.
- How to Hold a Disc  
When handling a disc, be careful not to contaminate it with your fingerprints.

#### With both hands:

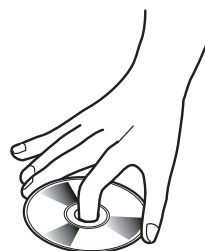
Put your thumbs and forefingers on 4 opposite sides of the disc.



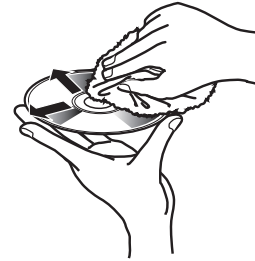
6-5 FIG. 02

#### With one hand:

Insert your forefinger into the center hole, while placing your thumb and middle finger on opposite sides of the disc.



6-5 FIG. 03



Wipe the disc with a soft cloth, working from the center outwards.

6-5 FIG. 01

- The software is not installed on the game board (LINDBERGH) when the power supply is engaged, so the "Error 22" message is not a malfunction. However, if there is another error display, or if there is no video output at all, there might have been an error in product assembly, wiring connections might be faulty, or the LINDBERGH might not be functioning properly.
- After the power supply is engaged, wait for "Error 22" message to be displayed. If the product is indiscriminately operated in any way beforehand, there could be unexpected problems or malfunctions, as well as damage to parts.
- Once "Error 22" is displayed, set the DVD-ROM in the DVD DRIVE and re-engage the power supply. Installation takes place.

## STOP IMPORTANT

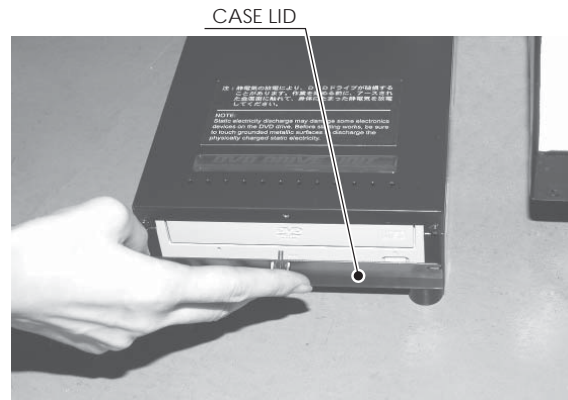
- After the power supply is engaged, the DVD DRIVE tray will not come out for about 30 seconds even if you press the switch. This is due to DVD DRIVE initialization.
- The DVD DRIVE tray can come out or return only while the power supply is engaged. The tray cannot be opened or closed while the power is off.
- Even after the software has been installed, store the DVD software kit, DVD DRIVE and DVD wire in a secure location.
- If for any reason installation cannot be completed, an error is displayed. Refer to the LINDBERGH service manual and take corrective action.

Take out the DVD software kit provided.

**1** Turn on the MAIN POWER switch on the AC unit.

**2** The LINDBERGH startup image appears on the screen. However, it does take several minutes for the projector image to become visible. Wait for at least one minute. An error will occur. Check to see if it is “Error 22.” If it is “Error 22,” proceed to the next operation. If it is not “Error 22,” take corrective measures as indicated in the LINDBERGH service manual.

**3** Remove 1 urea (resin-head) screw, and then remove DVD DRIVE case lid.



6-5 FIG. 04

**4** Press the DVD DRIVE switch. The DVD DRIVE tray comes out. Set the DVD from the DVD software kit into the tray. Always have the DVD label side facing upward.



6-5 FIG. 05

---

**5** Press the DVD DRIVE switch and the tray returns to its original position.

---

**6** Reset power. Turn the MAIN POWER switch to OFF, wait for at least 10 minutes, and then turn the switch to ON. Wait until the projector lamp cools.

---

**7** Software installs automatically from the DVD to the LINDBERGH. In some cases, it may take as long as 30 minutes for the software to install to the LINDBERGH.

---

**8** After the software installation, the game image appears automatically.



**6-5 FIG. 06 ADVERTISE SCREEN**

---

**9** Press the DVD DRIVE switch to have the tray come out, and then remove the DVD.

---

**10** Press the DVD DRIVE switch to have the tray return. When the power is cut off the tray will not move.

---

**11** Set the MAIN POWER switch to OFF.

---

**12** Remove 2 DVD wires from the DVD DRIVE.

---

**13** Refer to steps 1-13 in “6-3 ATTACHING DVD DRIVE AND KEY CHIP” and follow the steps in reverse order to detach the DVD wire (2 m) from the cabinet.

---

**14** Attach DVD DRIVE case lid and fasten it with 1 urea (resin-head) screw.  
Store DVD DRIVE and DVD software kit at a location where there is no dust or cigarette smoke.

---

**15** Turn on the MAIN POWER switch on the AC unit. When the game image appears, installation is complete.

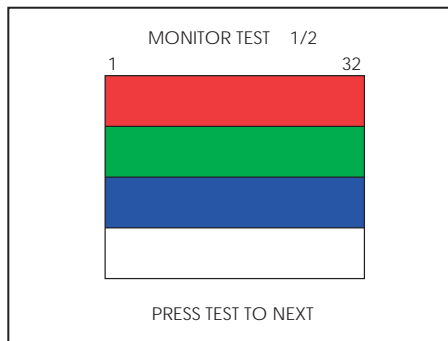
## 6-6 CHECKING ASSEMBLY (SETUP)

### Checking Assembly

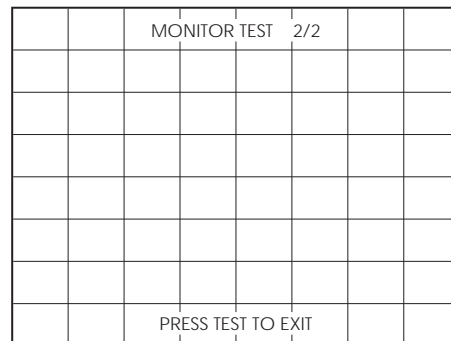
In the TEST MODE, ensure that the assembly has been made correctly and IC BD. is satisfactory (refer to Chapter 9). Refer to the LINDBERGH Service Manual for details on SYSTEM TEST MODE and “9-3 GAME TEST MODE” for details on GAME TEST MODE.

#### (1) C.R.T. TEST

In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed. Although the monitor adjustments have been made at the time of shipment from the factory, make needed by watching the test mode screen. If it is necessary, adjust the monitor by referring to Chapter 14.



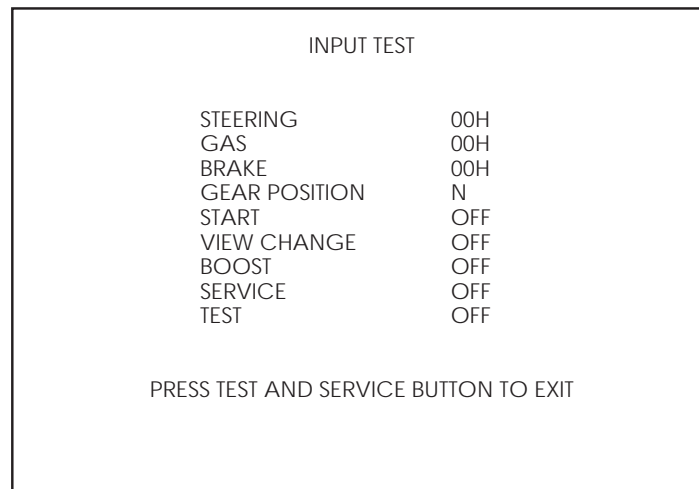
6-6 FIG. 01



6-6 FIG. 02

#### (2) INPUT TEST

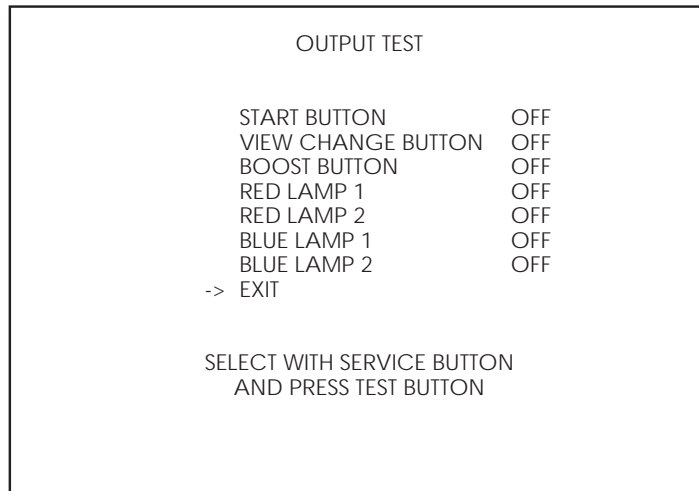
Selecting the INPUT TEST on the game test mode menu screen (on which each switch is tested) to be displayed. Press each switch. If the display beside each switch indicates “ON”, the switch and wiring connections are satisfactory.



6-6 FIG. 03

### (3) OUTPUT TEST

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



**6-6 FIG. 04**

### (4) SPEAKER TEST

Check to make sure the speakers are functioning properly using the SPEAKER TEST in SYSTEM TEST MODE. This product makes use of the speakers as shown below. Set the RIGHT SPEAKER and LEFT SPEAKER to “ON” and check to make sure that there is sound output.

**6-6 TABLE 01**

SPEAKER	SETTING
RIGHT SPEAKER	ON
LEFT SPEAKER	ON
REAR RIGHT SPEAKER	OFF
REAR LEFT SPEAKER	OFF
CENTER SPEAKER	OFF
WOOFER SPEAKER	OFF

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



**SETTINGS AT TIME OF INSTALLATION****STOP IMPORTANT**

When 2 or more game machines are to be installed, use the **GAME TEST MODE** to set the seat number for the cabinet and perform the settings for in-house matchups.

Using **TEST MODE**, set, adjust and confirm the settings shown below. Refer to the LINDBERGH Service Manual for details on **SYSTEM TEST MODE** and “9-3 **GAME TEST MODE**” for details on **GAME TEST MODE**.

- Perform the following settings in **SYSTEM TEST MODE**:

**COIN ASSIGNMENTS**

Set up the coin settings under **COIN ASSIGNMENTS**.

<b>COIN CHUTE TYPE</b>	<b>COMMON</b>
<b>SERVICE TYPE</b>	<b>COMMON</b>

**NETWORK SETTING**

Select the **MAIN NETWORK** and set up in the following manner:

<b>DHCP</b>	<b>DISABLE</b>
-------------	----------------

There is no need to set a specific value for the IP address. Leave the displayed IP address as is and exit the settings.

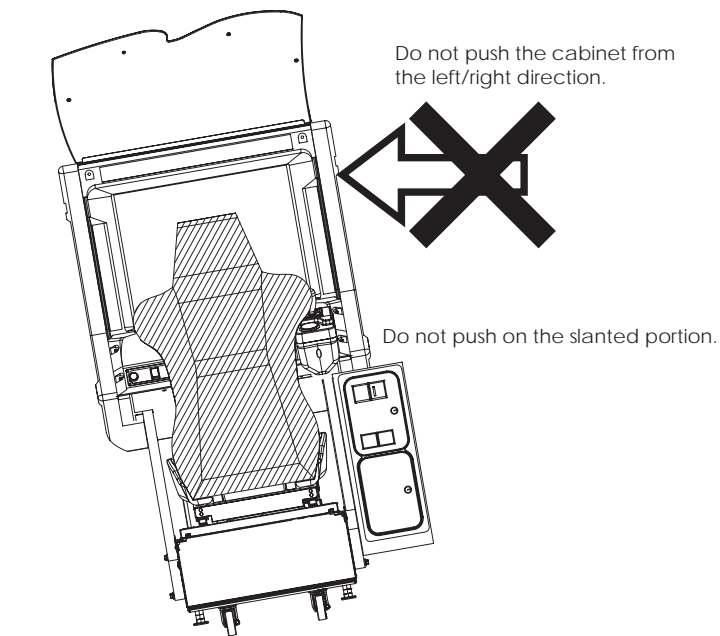
## 7 PRECAUTIONS WHEN MOVING THE MACHINE

### **⚠**WARNING

- Always disconnect the power cable before moving the product. If it is moved with the power cable connected, the cable could be damaged, causing fire or electric shock.
- 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.

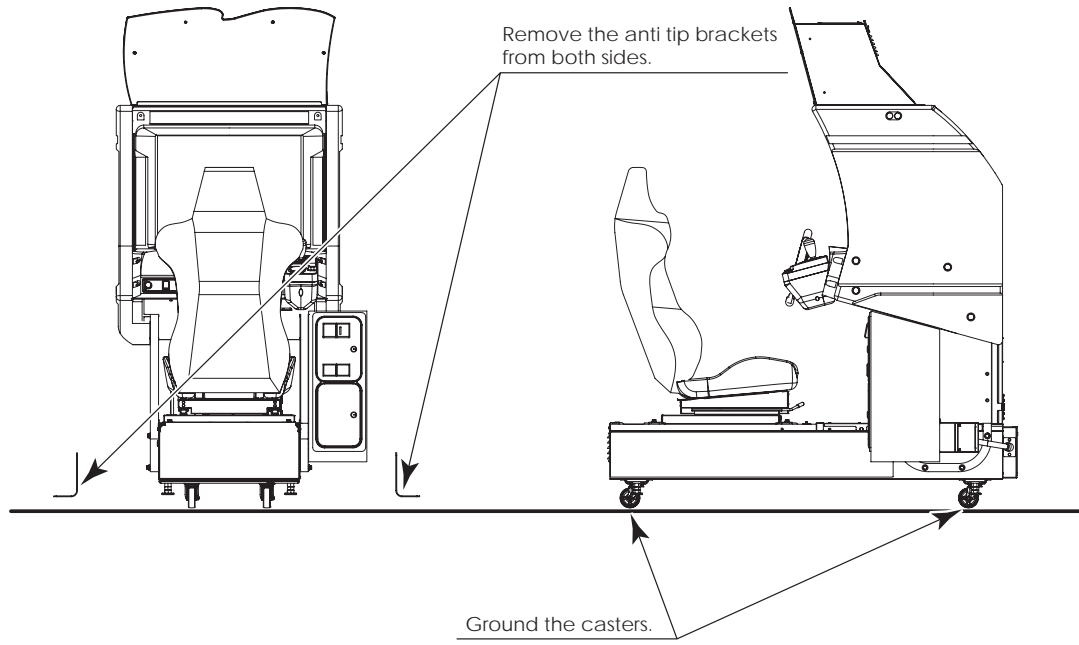
### **⚠**CAUTION

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.



7 FIG. 01

**7** PRECAUTIONS WHEN MOVING THE MACHINE



## 8 GAME DESCRIPTION

### 8-1 GAME OVERVIEW

The game is a car racing game with two different game modes: “Multi Player Game” and “Single Player Game”. A wide variety of real time action based on players’ actions make the race all the more exciting. Players can push the BOOST button to rapidly accelerate. They can also dress up their cars by entering a password.

#### Car Selection (alphabetical order)

<b>Chevrolet(R)</b> Camaro(R) Concept Convertible Corvette(R) Stingray(TM) Convertible
<b>Chrysler(R)</b> Prowler(TM)
<b>Ford</b> Mustang GT Convertible
<b>Mazda</b> Roadster RS
<b>Mercury</b> 1949 Convertible *TIME RELEASE (see 8-5)
<b>Mitsubishi</b> Eclipse Spyder GT
<b>Plymouth(R)</b> Hemi(R) Cuda Convertible
<b>RUF</b> RK Spyder

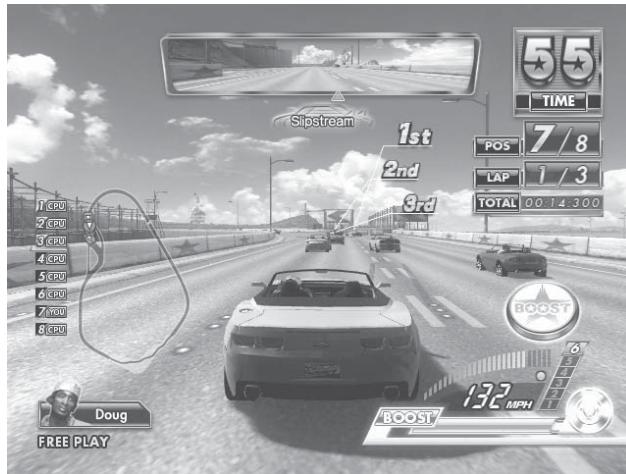
#### Race Course

All courses are based on laps. The number of laps can be set to 3 or 4.

Course	Laps	Time of day
JAKE's WORLD	Counter-clockwise	Day
SLIP CIRCUIT	Counter-clockwise	Night
SUNSHINE COAST	Counter-clockwise	Day
RUMBLING VOLCANO	Clockwise	Evening
RTV ARENA *TIME RELEASE (see 8-5)	Counter-clockwise	Morning

Race Screen

(3rd person view)



8-1 FIG. 01

## 8-2 GAME FLOW

### (1) Advertise (Stand-by), Movie Screens

Insert coins until you have enough credits. The game will then start automatically.

A message will be displayed prompting you to insert additional coins if you do not have enough credits.



8-2 FIG. 01

### (2) MODE SELECT Screen

Select the one of two game modes by turning the steering wheel to the left or right.

If COMMUNICATION PLAY is not enabled, the MULTI PLAYER option will be darkened and cannot be selected.



8-2 FIG. 02

MULTI PLAYER	Play against other players in the amusement facility
SINGLE PLAYER	Play to complete all 3 stages.

### (3) CAR SELECT Screen

Select your car by turning the steering wheel left or right and choose automatic or manual transmission by moving the shift lever up or down.

Push the VIEW CHANGE button to go to the PASSWORD INPUT screen.



8-2 FIG. 03

**(4) DRIVER SELECT Screen**

Select your driver by turning the steering wheel to the left or right. The color of the car will change depending on the driver selected.

Each driver has his or her own ending movie.



8-2 FIG. 04

**(5) COURSE SELECT Screen**

Select the course by turning the steering wheel to the left or right.

In COMMUNICATION PLAY, the course is selected by popular vote. If there is a draw, the earliest selected course will be used.



8-2 FIG. 05

**(6) CONTINUE**

In SINGLE PLAYER mode, you will be given the option to continue if you do not finish the race in or above the regulation finishing place.

If you insert the necessary number of coins and select “YES,” you will be able to try the course again.

When you continue with a course on the 1st or 2nd stage, the regulation finishing place for moving on to the next stage will be lowered by one (5th place being the lowest).

On the final stage, you cannot win unless you place 1st, no matter how many times you continue.

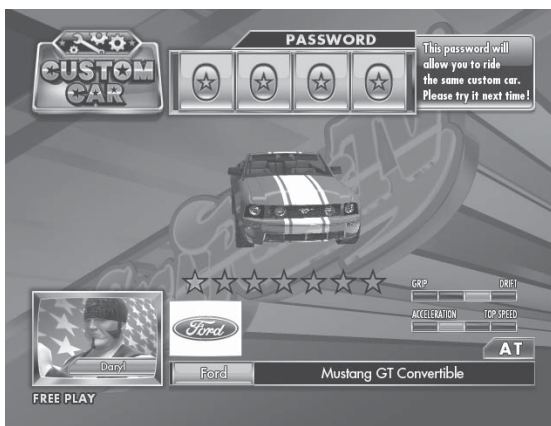


8-2 FIG. 06

**(7) CUSTOM CAR Screen**

You will be issued a password after you play in SINGLE PLAYER mode without a password and after you clear all 3 stages in SINGLE PLAYER mode.

*NOTE: Passwords are not issued in MULTI PLAYER mode.*



8-2 FIG. 07

**(8) NAME ENTRY Screen**

You will be able to enter your name if you make it into the top ranks within the total time of one of the courses that are available in SINGLE PLAYER mode.

Your name (3 alphanumeric characters) will be displayed in the rankings during the advertise display.



8-2 FIG. 08

**(9) GAME OVER**

The GAME OVER screen is displayed after playing in MULTI PLAYER or SINGLE PLAYER mode.



8-2 FIG. 09



## 8-3 MODE OVERVIEW

### 8-3-1 MULTI PLAYER GAME

#### Game Content & Rules

In this mode, players on machines in the same amusement facility can play against each other. Up to 4 machines can be used for COMMUNICATION PLAY, for a total number of 8 players when the CPU players are included. The game lasts for one race, regardless of ranking, and no passwords are issued. Once someone passes a checkpoint, all the players will be given extra time. The first player to cross the finish line or the player in the lead when the time expires is declared the winner.

If there are no competition players available, the game will default to SINGLE PLAYER mode. Races already in progress on other cabinets cannot be joined.

### 8-3-2 SINGLE PLAYER GAME

#### Game Content & Rules

In this mode, the player attempts to complete all 3 stages. There are 8 players, including the CPU players, in the race, and the player can continue on to the next stage when successfully making a regulation finishing place.

(Regulation Finishing Place)

- 1st stage: 3rd place or higher
- 2nd stage: 2nd place or higher

After a 1st place finish in the final stage, the ending movie will be played, and a dress up password will be issued.

*NOTE: If the dress up level is at MAX, no password will be issued.*

If the 1st stage is selected on the COURSE SELECT screen, the 2nd and final stages will be selected automatically. Once a checkpoint is passed, the remaining time will increase. The time remaining at stage completion will be added to the remaining time for the next stage.

## 8-4 PASSWORDS

In SINGLE PLAYER mode, if any of the following conditions are met a password will be issued after the game is finished.

- The player completes the game without any dressing up, regardless of whether a stage was cleared or not.
- The dress up level is not at MAX and all 3 stages have been cleared.

A password consists of 4 letters and includes the following information:

- Car
- Driver (car color)
- AT / MT
- Dress up level (indicated by the number of stars)

The dress up car can be used in MULTI PLAYER or SINGLE PLAYER mode by entering the password during car selection.



8-4 FIG. 01

*NOTE: There are also special passwords that are not issued for regular games. These passwords are planned to be introduced one by one on the official website.*

## 8-5 TIME RELEASE

When the power is turned on after the date designated in the cabinet's built-in calendar, the following will be added to the available options:

- Car: Mercury 1949 Convertible
- Driver: Jake Paterson
- Course: RTV ARENA

Passwords for the newly available car and driver will become active, and the ranking for the newly added course will be displayed in the advertise loop.

For a period of one month after the TIME RELEASE, an announcement will be shown in the advertise demo, and an icon reading "NEW" will be displayed next to the applicable items.



8-5 FIG. 01



8-5 FIG. 02

## 9 TEST MODE

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

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

This product uses a LINDBERGH game board and a DVD DRIVE. In the system, a different game can be played by putting a different DVD ROM in the DVD DRIVE.

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

**9 TABLE 01 EXPLANATION OF TEST MODE**

ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF MACHINE	<ol style="list-style-type: none"> <li>1. Check to ensure each is the standard setting at shipment.</li> <li>2. Check each Input equipment in the INPUT TEST mode.</li> <li>3. Check each Output equipment in the OUTPUT TEST mode.</li> </ol>	<p>S/M Chapter 4</p> <p>S/M Chapter 4, 6-6, 9-3-2, 9-3-5</p> <p>S/M Chapter 4, 6-6, 9-3-3</p>
PERIODIC SERVICING	<p>Periodically perform the following:</p> <ol style="list-style-type: none"> <li>1. Ascertain each setting.</li> <li>2. To test each Input equipment in the INPUT TEST mode.</li> <li>3. To test each Output equipment in the OUTPUT TEST mode.</li> </ol>	<p>S/M Chapter 4, 6-6, 9-3-4, 9-3-5, 9-3-6</p> <p>S/M Chapter 4, 6-6, 9-3-2, 9-3-5</p> <p>S/M Chapter 4, 6-6, 9-3-3</p>
CONTROL SYSTEM	<ol style="list-style-type: none"> <li>1. To check each Input equipment in the INPUT TEST mode.</li> <li>2. Adjust or replace each Input equipment.</li> </ol>	<p>S/M Chapter 4, 6-6, 9-3-2, 9-3-5</p> <p>Chapter 10, 11, 12</p>
MONITOR	In the Monitor Adjustment mode, check to see if Monitor (Projector) adjustments are appropriate.	S/M Chapter 4, 6-6, 14
IC BOARD	<ol style="list-style-type: none"> <li>1. Information Display Screen</li> <li>2. SPEAKER TEST</li> </ol>	<p>S/M Chapter 4</p> <p>S/M Chapter 4</p>
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc.	9-3-7

NOTE: " S/M" in the table denotes LINDBERGH service manual, which is provided separately.

## 9-1 SWITCH UNIT AND COIN METER

### ⚠ WARNING

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

### ⚠ CAUTION

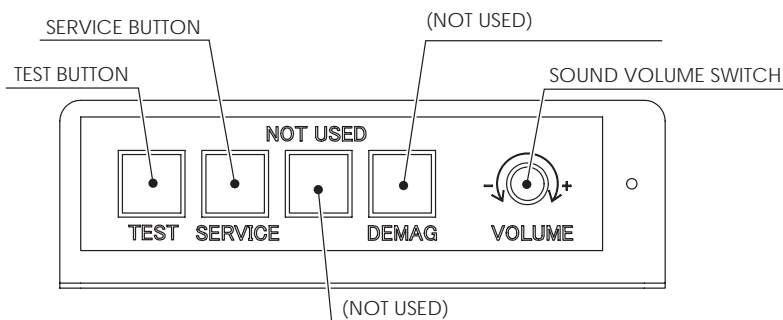
Be careful that a finger or hand does not get caught when opening/closing the coin chute door.

### STOP IMPORTANT

- When you enter the Test Mode, fractional coin and bonus adder data is erased.
- 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:



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.

SOUND VOLUME SWITCH (VOLUME):

Adjusts sound volume for all of the machines' speakers.

DEMAGNETIZER BUTTON (DEMAG):

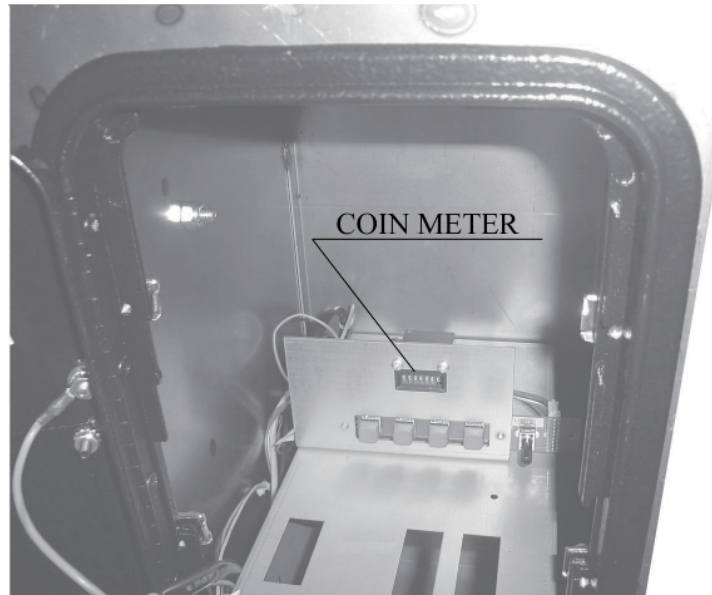
This button is not used for this game.

The demagnetizer button is located on the CRT adjust panel. Please refer to the section 14-3 hereinafter described.

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 Coin Door by using the key to have the Coin Meter appear.



6 TEST MODE

## 9-2 SYSTEM TEST MODE

### **STOP** IMPORTANT

- Refer to BOOKKEEPING in GAME TEST MODE for this product's data.
- Adjust for an appropriate sound volume in consideration of the installation site.
- If the coin meter circuit is removed, play cannot be executed.
- Read the LINDBERGH service manual included with the product for details about System Test Mode. However, the settings for this product should follow the specifications in this manual.

In the SYSTEM TEST MODE, LINDBERGH board functioning can be checked, the monitor adjusted, and the coin setting performed. Refer to LINDBERGH service manual for the details.

Note that the settings of the following items need to be performed in accordance with the instruction given.

#### **COIN ASSIGNMENTS**

COIN CHUTE TYPE:	COMMON
SERVICE TYPE:	COMMON

#### **NETWORK SETTING**

MAIN NETWORK	
DHCP:	DISABLE

*NOTE: An IP address will be shown, but there is no need to change it.*

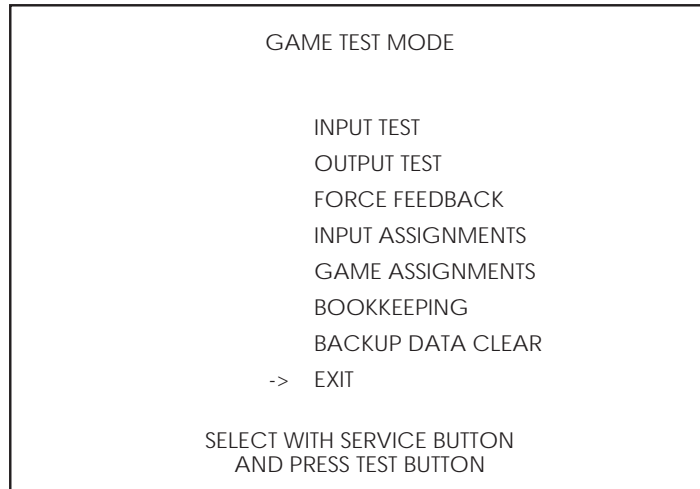
## 9-3 GAME TEST MODE

### STOP IMPORTANT

- When changing the game configuration, changes will not take effect until the Game Test Mode properly after configuration changes. 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.

### 9-3-1 GAME TEST MODE Menu

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



9-3-1 FIG. 01

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

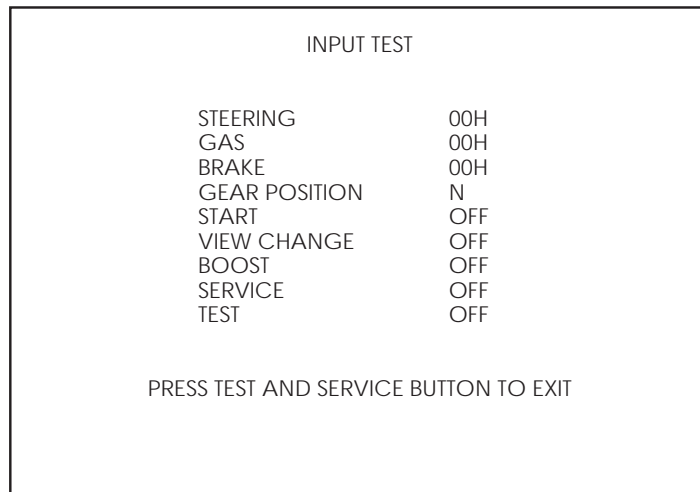
9-3-2	INPUT TEST:	Test each input
9-3-3	OUTPUT TEST:	Test each output
9-3-4	FORCE FEEDBACK:	Set the STEERING resistance
9-3-5	INPUT ASSIGNMENTS:	Adjust input settings
9-3-6	GAME ASSIGNMENTS :	Adjust game settings
9-3-7	BOOKKEEPING:	View game backup data
9-3-8	BACKUP DATA CLEAR:	Clear game backup data
	EXIT:	Go back to the System Test Menu

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



### 9-3-2 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.



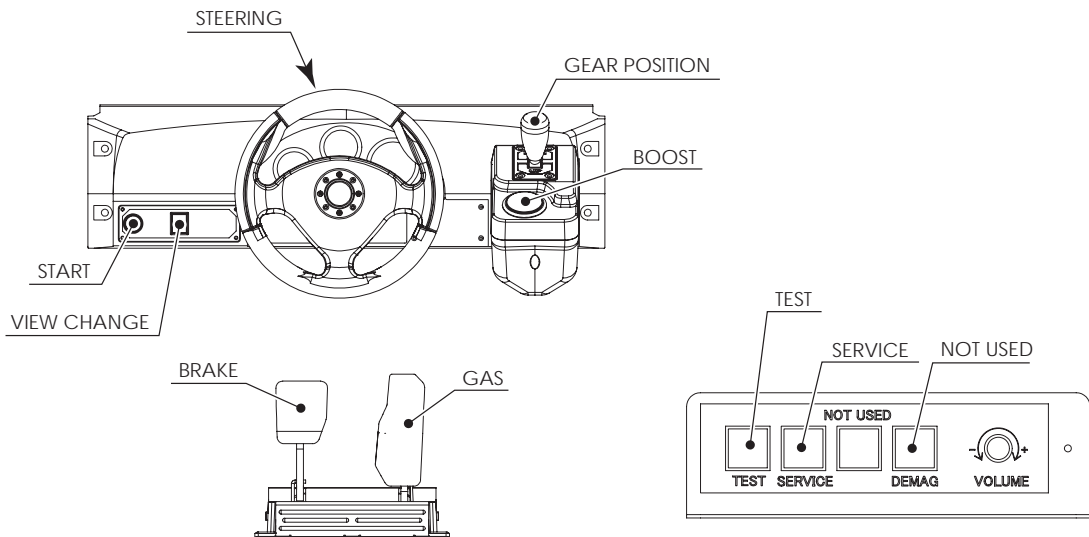
9-3-2 FIG. 01

Test the STEERING, GAS 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 gear shifter.

Other controls are working properly if the OFF display changes to ON when operating the corresponding input device.

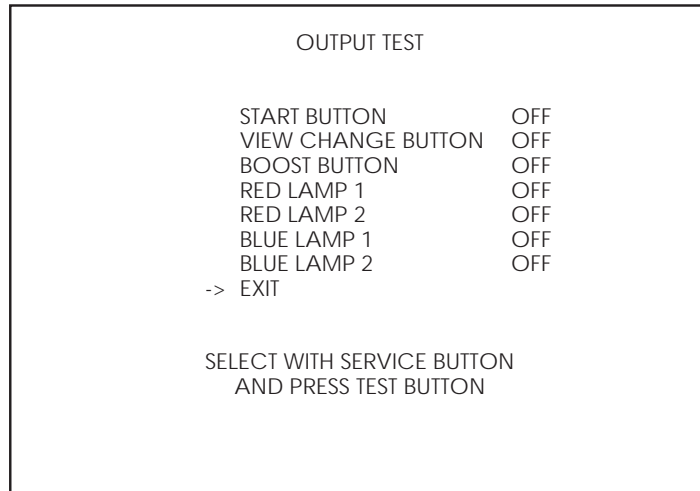
Press the SERVICE and TEST Buttons simultaneously to return to the Game Test Menu Screen.



9-3-2 FIG. 02

### 9-3-3 OUTPUT TEST

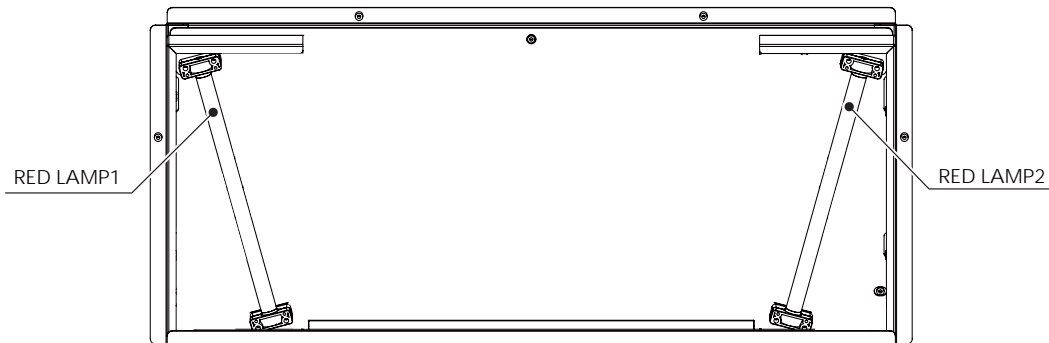
Select OUTPUT TEST to display the following screen and check the status of each lamp. This test should be used periodically to check that the lamps are functioning correctly.



9-3-3 FIG. 01

If you press the TEST button after placing the arrow beside an item, the status will be switched to “ON,” and the corresponding button and lamp will come on. Pressing the TEST button again will switch the status back to “OFF,” and the lamp will go out.

RED LAMPS are inside the billboard box. Refer to 9-3-3 FIG. 02.



9-3-3 FIG. 02

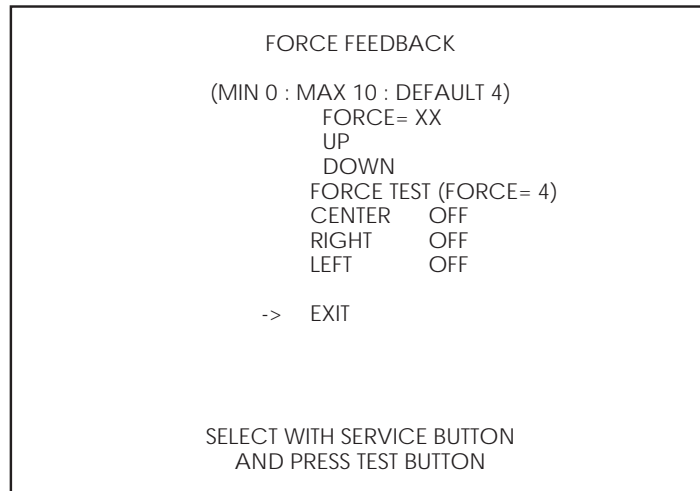
Move the cursor to EXIT and press the TEST button to return to the Game Test Menu Screen.

### 9-3-4 FORCE FEEDBACK

#### CAUTION

When you select "FORCE FEEDBACK", a connection test runs and the STEERING rotates.  
Make sure that no one is touching the STEERING before running these tests as contact may cause injury.

After the check is completed, the following FORCE FEEDBACK screen will appear, and you will be able to set the level of STEERING resistance.



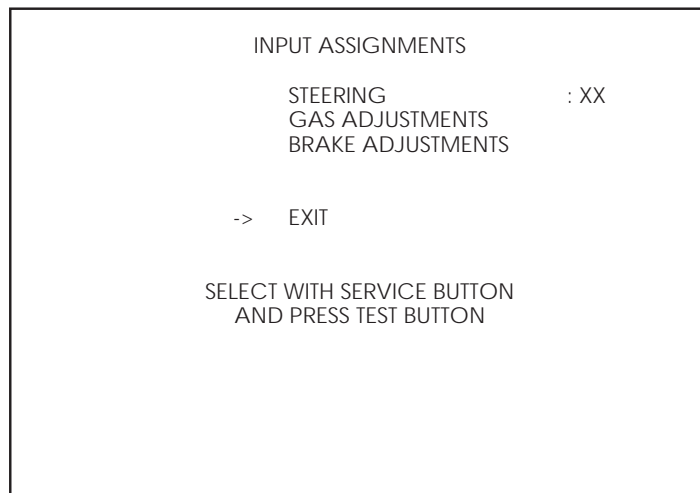
9-3-4 FIG. 01

- **FORCE:** Set the STEERING resistance. The \*\* indicates the current resistance setting. 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.  
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.

### 9-3-5 INPUT ASSIGNMENTS

Select INPUT ASSIGNMENTS to display the following screen.



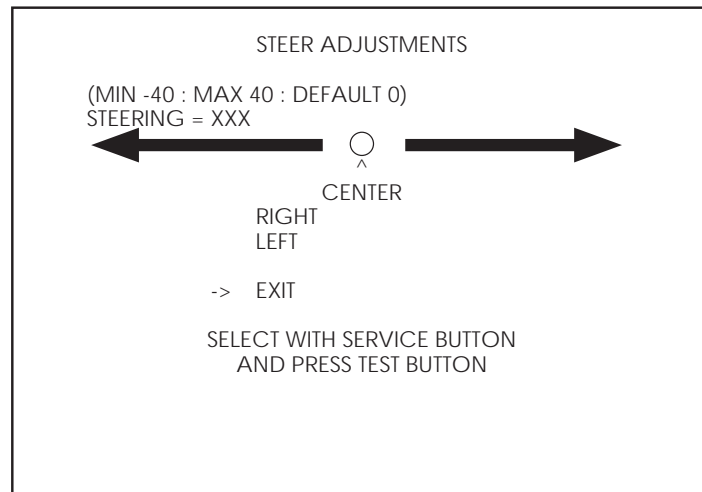
9-3-5 FIG. 01

- STEERING: Adjust the centering of the STEERING control.
- GAS PEDAL, BRAKE PEDAL: Adjust the GAS and BRAKE pedals.

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

## STEERING

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



9-3-5 FIG. 02

Center the STEERING. When the “o” displayed is not exactly aligned with the “^” mark above CENTER, use the cursor to select RIGHT or LEFT and move the “o” 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.

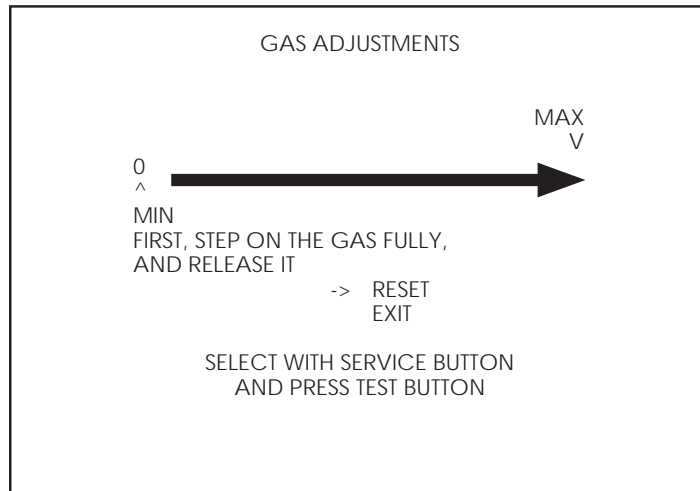
Move the cursor to LEFT and press the TEST Button to move the “0” to the left. Each time you press the TEST Button, “0” moves slightly to the left.

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

## GAS ADJUSTMENTS

Make adjustments to GAS.

Press the TEST Button to display the following screen.



9-3-5 FIG. 03

Set the MAX position by stepping on the GAS pedal. The "MAX" display moves to the right depending on how hard the pedal is pressed.

Entering GAS ADJUSTMENTS without having the GAS pedal pressed down automatically sets the MIN position.

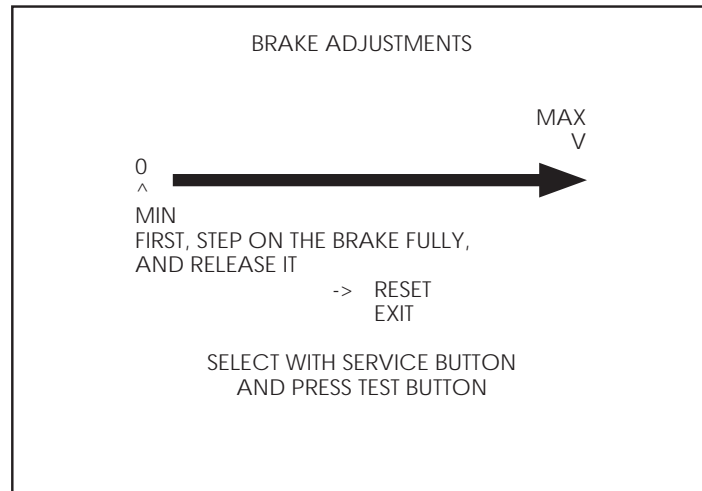
*NOTE: If you enter GAS ADJUSTMENTS with the GAS pedal pressed down, set the MIN position by releasing the GAS pedal. The "MIN" display moves to the left depending on how much the pedal is released.*

Move the cursor to RESET and press the TEST Button to reset MAX and MIN.

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

## BRAKE ADJUSTMENTS

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



9-3-5 FIG. 04

Set the MAX position by stepping on the BRAKE pedal. The "MAX" display moves to the right depending on how hard the pedal is pressed.

Entering BRAKE ADJUSTMENTS without having the BRAKE pedal pressed down automatically sets the MIN position.

*NOTE: If you enter BRAKE ADJUSTMENTS with the BRAKE pedal pressed down, set the MIN position by releasing the BRAKE pedal. The "MIN" display moves to the left depending on how much the pedal is released.*

Move the cursor to RESET and press the TEST Button to reset MAX and MIN.

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

## 9-3-6 GAME ASSIGNMENTS

Select GAME ASSIGNMENTS to display the following screen.

GAME ASSIGNMETNS	
CABINET ID	XXX
GAME DIFFICULTY	NORMAL
CONTINUE	ON
ADVERTISE SOUND	ON
COMMENTARY VOLUME	HIGH
NUM OF LAPS	3
HEAT	1
DRESS CODE	LOW
SPEEDOMETER	KM/H
CASUAL USER MODE	OFF
DEFAULT SETTING	
-> EXIT	

9-3-6 FIG. 01

- **CABINET ID:** This setting assigns a seat number to the cabinet for use in “Multi Player Game”. You may select one of the following settings: NO DEFINED, 1(MAIN), 2, 3 or 4. When setting up cabinets for Multi Player Game, assign each cabinet the number from “1”. (Make sure they are not assigned the same number). Set to NO DEFINED if you do not need to set the cabinet up for Multi Player Game.  
During COMMUNICATION PLAY, the difficulty level and other settings will be taken from the game machine with the CABINET ID of “1.” When changes are made to settings on a machine other than CABINET ID “1”, that machine will follow those settings.
- **GAME DIFFICULTY:** Set the level of difficulty for the game.  
You may select one of 3 different levels of difficulty: EASY, NORMAL, HARD.
- **CONTINUE:** Enable/Disable Continue function.  
ON: Enables Continue.  
OFF: Disable Continue.
- **ADVERTISE SOUND:** Turn sound on the Advertise Screen on and off.  
ON: Sound is played on the Advertise Screen.  
OFF: Sound is not played on the Advertise Screen (except when inserting coins).
- **COMMENTARY VOLUME:** Adjust the volume for the race commentary.  
You may select one of the 3 levels of difficulty: LOW, NORMAL, HIGH.
- **NUM OF LAPS:** Set the number of laps.  
3, 4: Indicates the number of laps.
- **HEAT:** Set the assistance level for COMMUNICATION PLAY.  
0, 1, 2: A setting of “0” gives no assistance, while a setting of “2” provides maximum assistance.



- DRESS CODE: Switches the level of female appearances in the game.
  - LOW: All screens and movies will be displayed.
  - HIGH: The advertise movie will be cut.  
Driver selection will be cut.  
(Player will not be able to select car and driver.)  
The ending movie will be cut.
  
- SPEEDOMETER: Set the SPEEDOMETER display.
  - KM/H: Shows the speed in kilometers per hour.
  - MPH: Shows the speed in miles per hour.
  
- CASUAL USER MODE: Set the difficulty level of vehicle handling.
  - OFF: Normal level.
  - ON: Level of difficulty adjusted for casual users.
    - The turn performance and ease of drifting are increased.
    - The game will provide extra assistance to prevent vehicle control loss.
    - The CPU vehicles' performances are adjusted.
    - The BOOST GAUGE will be full when the race begins.
    - When AT is selected, the gears will not respond to the shift lever.
    - 5 seconds are added to the wait time.
  
- DEFAULT SETTING: Returns all items under GAME ASSIGNMENTS to their default values.

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

## 9-3-7 BOOKKEEPING

Select BOOKKEEPING to display the following screens of operating status data.

BOOKKEEPING 1/2	
COIN 1	0
COIN 2	0
TOTAL COINS	0
COIN CREDITS	0
SERVICE CREDITS	0
TOTAL CREDITS	0
NUMBER OF GAMES	0
SINGLE PLAY	0
MULTI PLAY	0
TOTAL TIME	00D 00H 00M 00S
PLAY TIME	00D 00H 00M 00S
AVERAGE PLAY TIME	00M 00S
LONGEST PLAY TIME	00M 00S
SHORTEST PLAY TIME	00M 00S
BACKUP CLEAR TIME	2008/02/01 XX : XX : XX
PRESS TEST BUTTON TO CONTINUE	

9-3-7 FIG. 01 BOOKKEEPING 1/2

View the number of credits inserted.

- COIN 1: The number of coins inserted in COIN CHUTE 1
- COIN 2: The number of coins inserted in COIN CHUTE 2
- TOTAL COINS: The total number of coins inserted
- COIN CREDITS: The total number of coins inserted
- SERVICE CREDITS: The number of credits added by the SERVICE Button
- TOTAL CREDITS: The total number of credits

View the number of times the game has been played.

- NUMBER OF GAMES: The total number of games played
- SINGLE PLAY: The total number of Single Player Game played
- MULTI PLAY: The total number of Multi Player Game played

View gameplay times.

- TOTAL TIME: The total time
- PLAY TIME: The total play time
- AVERAGE PLAY TIME: The average play time
- LONGEST PLAY TIME: The longest play time
- SHORTEST PLAY TIME: The shortest playtime

You can check the date and time when the BACKUP DATA CLEAR option was executed.

- BACKUP CLEAR TIME: Date and time when backup was cleared last.

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

BOOKKEEPING 2/2 TIME HISTOGRAM		
	TOTAL	RATIO
00M00S - 00M59S	0	0%
01M00S - 01M59S	0	0%
02M00S - 02M29S	0	0%
02M30S - 02M59S	0	0%
03M00S - 03M29S	0	0%
03M30S - 03M59S	0	0%
04M00S - 04M29S	0	0%
04M30S - 04M59S	0	0%
05M00S - 05M29S	0	0%
05M30S - 05M59S	0	0%
06M00S - 06M29S	0	0%
06M30S - 06M59S	0	0%
07M00S - 07M29S	0	0%
07M30S - 07M59S	0	0%
08M00S - 08M29S	0	0%
08M30S - 08M59S	0	0%
09M00S - 09M29S	0	0%
09M30S - 09M59S	0	0%
10M00S - 14M59S	0	0%
15M00S - 19M59S	0	0%
20M00S - 24M59S	0	0%
25M00S - 29M59S	0	0%
OVER 30M	0	0%

PRESS TEST BUTTON TO EXIT

9-3-7 FIG. 02 BOOKKEEPING 2/2

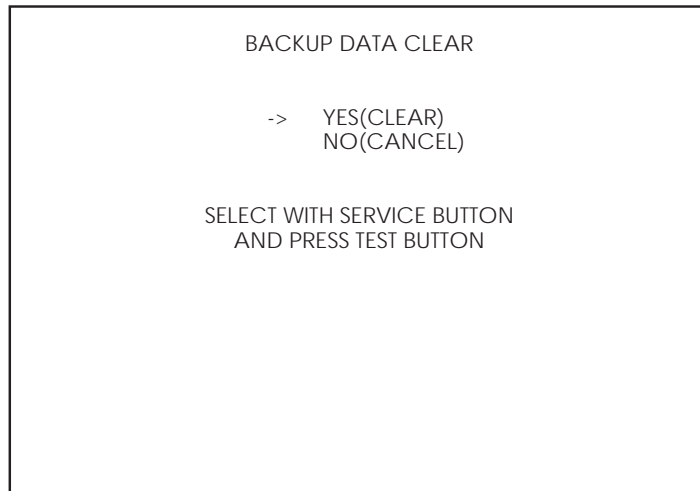
Display the number of plays by time length category.

- TIME HISTOGRAM: List of play times

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

### 9-3-8 BACKUP DATA CLEAR

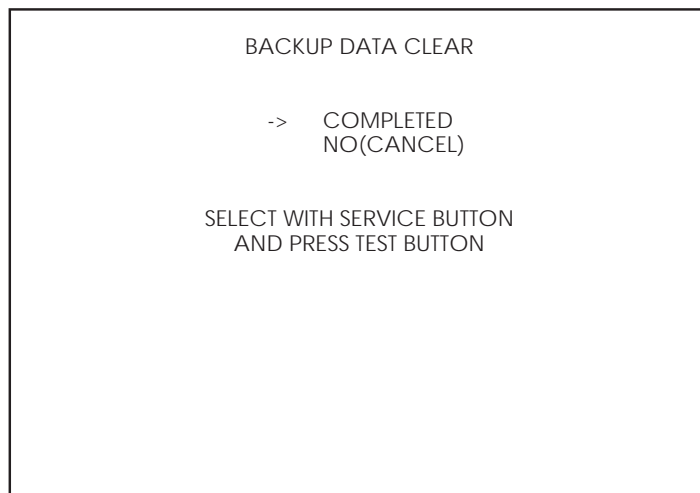
Select BACKUP DATA CLEAR to display the following screen.



9-3-8 FIG. 01

This screen allows you to clear backup data. Use the cursor to select YES or NO.

- YES: Clear all data in BOOKKEEPING, ranking data and credit data.
- NO: Go back to the menu screen without clearing data.



9-3-8 FIG. 02

Select YES and press the TEST Button to clear all data in BOOKKEEPING, ranking data and credit data. Clearing data does not affect other game settings.

When the data has been cleared, the screen displays “COMPLETED”.

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

## 10 CONTROL PANEL (HANDLE MECHA)

### WARNING

- 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 site maintenance individual or other skilled professional. 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.
- Immediately after the game is finished, the motor may still be very hot. When performing the removal work, wait until the motor cools off.
- This unit is a heavy item weighing approximately 20kg (44.1 lb). Therefore, be very careful when performing the work. Use plural workers.

### CAUTION

- 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.
- Be careful that your fingers do not get caught when opening and closing the control panel, adjusting the VR bracket, or performing other maintenance tasks.
- 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.
- Do not touch the steering wheel when switching on the unit. The steering wheel undergoes automatic initialization after the unit is switched on.

## **STOP** IMPORTANT

Be sure to perform volume's move value setting in the INPUT ASSIGNMENTS in the Game Test Mode after replacing or adjusting the Volume.

In cases the Steering operability is poor and the adjustment of VOLUME SETTING in the TEST mode has no effect, the causes may be the volume gear's mesh failure and or volume malfunctioning.

Adjust volume gear mesh or replace the volume as per the following procedure.

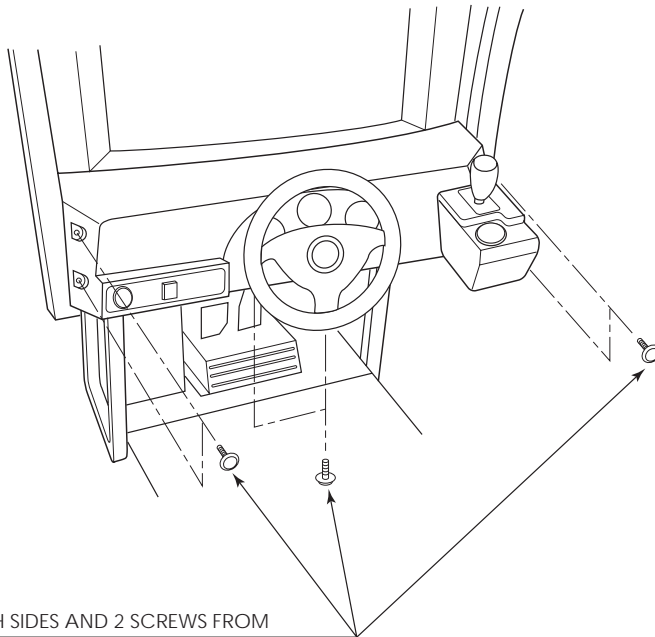
In this product, when the steering wheel is moved fully left/right, if the volume shaft is rotating within the movable range, the volume is not feared to be damaged.

Secure the volume in the manner the volume shaft is oriented as shown and the gears are appropriately engaged when the steering wheel is in the centering position allowing the car to go straight forward.

### 10-1 REMOVING THE CONTROL PANEL

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

- 1** Turn off the power.
- 2** Remove 4 screws from both sides of the Control Panel's front part.
- 3** Remove 2 screws from underside of the Control Panel.
- 4** Wiring connectors are connected inside the Control Panel. Be careful not to damage any of the wiring, and carefully pull out the Control Panel.
- 5** Unplug the wiring connectors.



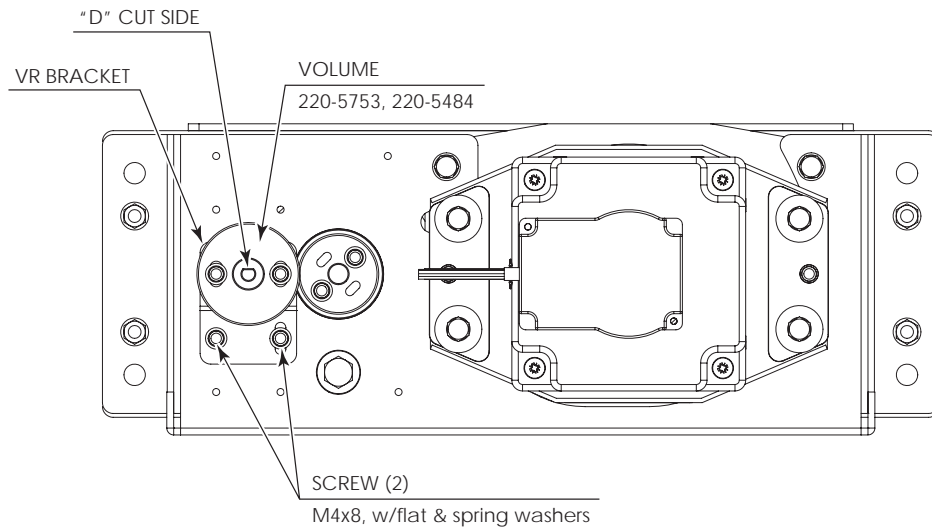
4 SCREWS FROM BOTH SIDES AND 2 SCREWS FROM  
UNDERSIDE (TOTAL 6 SCREWS)

10-1 FIG. 01

## 10-2 ADJUSTING/REPLACING THE VOLUME

### ADJUSTMENT PROCEDURE

- 1 Loosen the 2 screws that secure the VR Bracket and move the VR Bracket to adjust the angle and condition of the gear alignment.
- 2 Keeping the handle straight, align the gears so that the direction of the D Cut side of the V.R. Shaft matches that shown in the diagram.
- 3 Tighten the 2 screws and secure the VR Bracket.
- 4 Check to make sure the value on the Input Test screen is within the range  $80H \pm 8H$  when the steering unit is in the straight position.

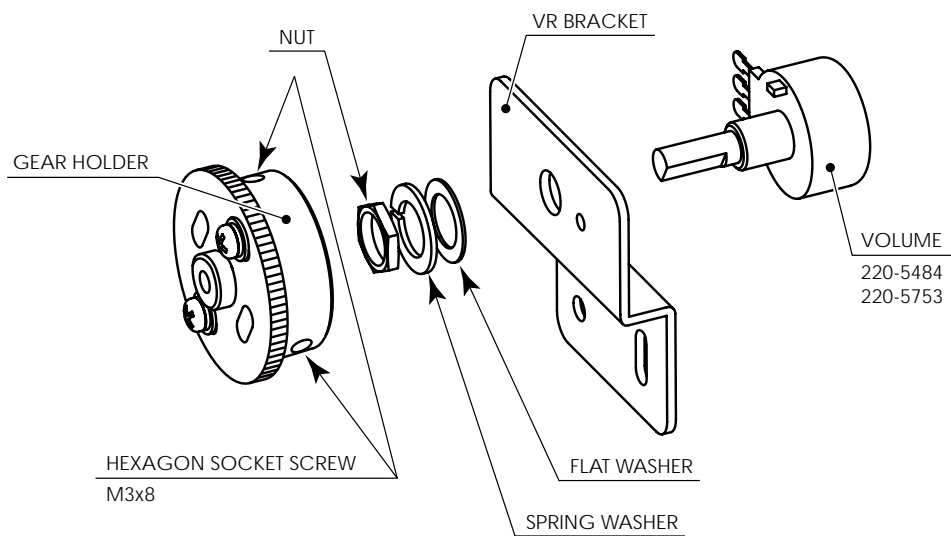


10-2 FIG. 01

## REPLACEMENT PROCEDURE

This procedure requires the following tools: Phillips screwdriver for the M4 screws, 1.5 mm hexagonal wrench, 11-12 mm monkey wrench, nipper, cutter, wire stripper, soldering iron, industrial dryer and heat-shrinkable tube.

- 1 Remove the connectors.
- 2 Remove the 2 screws securing the VR Bracket and remove the entire Bracket and V.R.
- 3 Loosen the 2 hexagon socket screws on the Gear Holder and remove the Gear Holder.
- 4 Remove the nut securing the VR Bracket, then separate the Volume from the VR Bracket and replace it.
- 5 Check to make sure the value on the Input Test screen is within the range  $80H \pm 8H$  when the steering unit is in the straight position.



10-2 FIG. 02

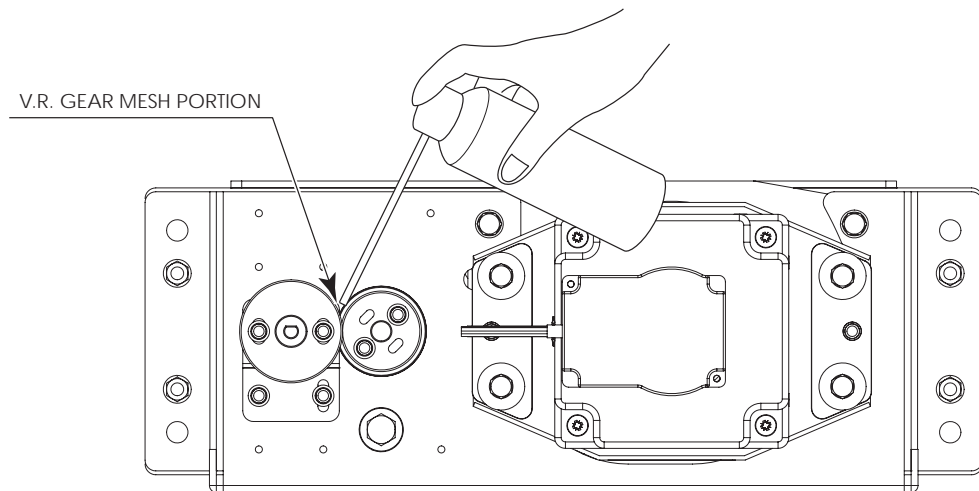


## 10-3 GREASING

### **STOP** IMPORTANT

- Be sure to use the designated grease. Using undesignated grease can cause parts damage.
- Do not apply grease to locations other than as specified. Doing so may create a risk of operational problems and deterioration of parts.
- The designated periods for greasing serve only as a guide. Whenever there are squeaks or other anomalies, apply grease at designated locations.

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.



10-3 FIG. 01

# 11 SHIFT LEVER

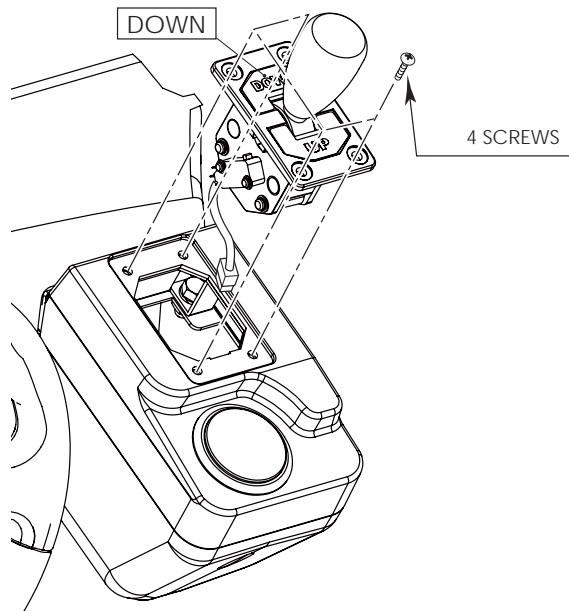
In the Test Mode, if the SHIFT LEVER's SW can not be inputted satisfactorily, replace the Switch.  
When performing the work, remove the Shift Lever Unit.

## ⚠ WARNING

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

### 11-1 REMOVING THE SHIFT LEVER

- 1 Turn the power off.
- 2 Remove 4 screws to lift the Shift Lever Unit.
- 3 Disconnect the connector to remove the Shift Lever Unit.
- 4 When reinstalling, follow the procedure opposite as when removing. At this time, ensure that "DOWN" display appears on the upper part as shown.
- 5 After reinstalling, be sure to check INPUT TEST in the Game Test mode.



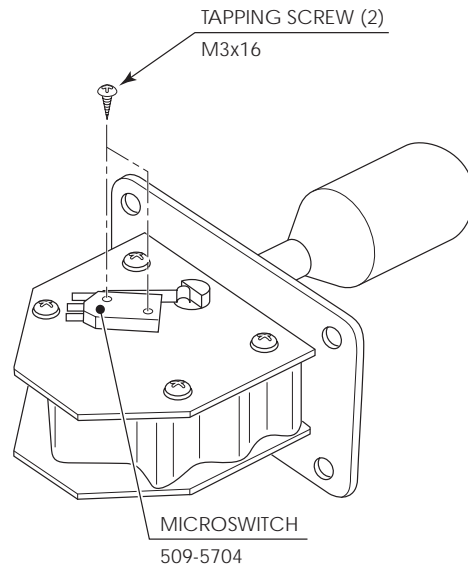
11-1 FIG. 01

## 11-2 SWITCH REPLACEMENT

**1** Disconnect the wiring connector of the switch to be replaced.

**2** Remove the 2 tapping screws to replace the Microswitch.

**11** SHIFT LEVER



**11-2 FIG. 01**

## 12 ACCELERATOR & BRAKE

### WARNING

- Always disengage the power before beginning work. Otherwise there could be an electric shock or short circuit. Note that when using TEST mode there will be electricity running through the machine. Do not touch any parts that are not specified in these directions.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
- This work should be performed by site maintenance personnel or other skilled professionals. Work performed by non-technical personnel can cause a severe accident such as an electric shock.
- To prevent accidents while working or while operating the product after it has been installed, be sure not to conduct any procedures other than those given in this manual. If a procedure not given in this manual is required, request service from the office given in this manual or from the point of purchase.

### CAUTION

Do not touch the steering wheel when switching on the unit. The steering wheel undergoes automatic initialization after the unit is switched on.

### STOP IMPORTANT

Be sure to perform volume's move value setting in the INPUT ASSIGNMENTS in the Game Test Mode after replacing or adjusting the Volume.

When the accelerator and brake pedal do not operate properly, either the volume attachment position must be adjusted, or the volume must be replaced. Also, the gear alignment position and spring should be greased once every three months.

## 12-1 VOLUME ADJUSTMENT AND REPLACEMENT

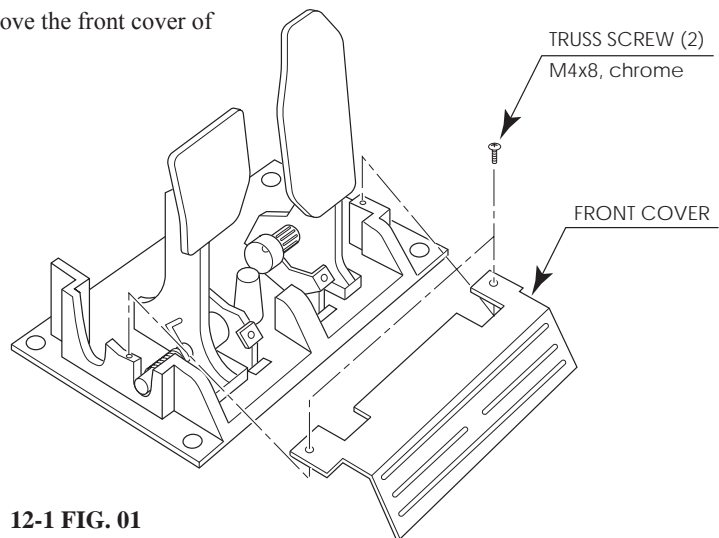
The appropriate value for acceleration volume is under 30H when released and over C0H when stepped on. The appropriate value for brake volume is under 30H when released and over C0H when stepped on. Check Volume values in the TEST mode.

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.

The following tools are required for the operations below: Phillips screwdrivers for M4 and M5, hexagon wrench with measuring distance of 1.5 mm, and thread sealant.

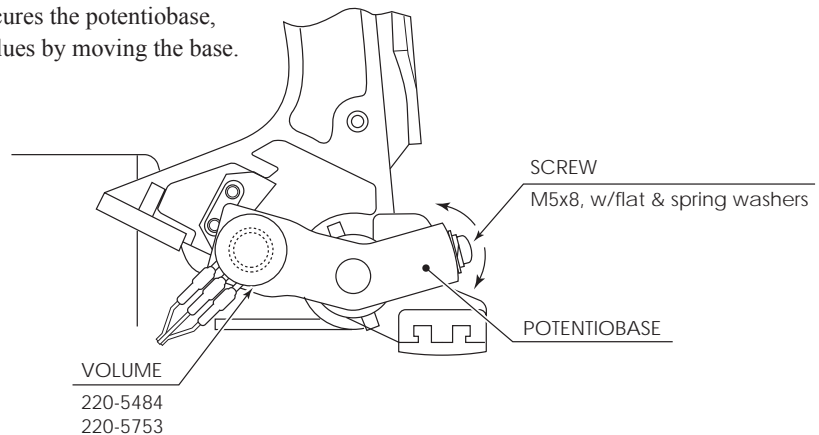
### ADJUSTING PROCEDURE

- 1** Turn off the power.
- 2** Remove two truss screws, and remove the front cover of the accelerator and brake.



12-1 FIG. 01

- 3** Loosen the screw that secures the potentiobase, and adjust the volume values by moving the base.



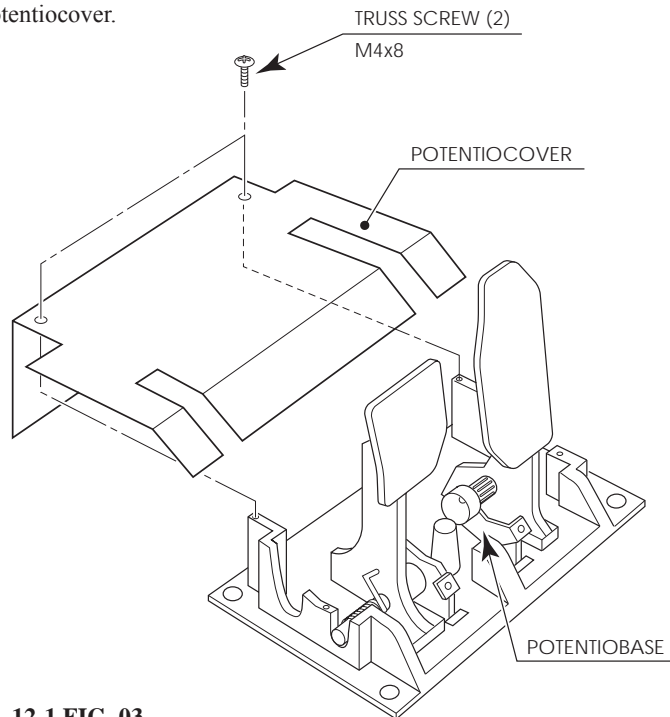
12-1 FIG. 02

- 4** Fasten the potentiobase.
- 5** On the INPUT ASSIGNMENTS Screen in the Game Test Mode, set the volume values.
- 6** Confirm that the values change smoothly by operating the pedal.

## REPLACING THE VOLUME

**1** Turn off the power.

**2** Remove two screws, and remove the potentiocover.



12-1 FIG. 03

**3** Undo the connector of the volume to be replaced.

**4** Remove the screw that fastens the potentiobase.

**5** With the volume still attached, remove the potentiobase.

**6** Remove the base and the gears, and replace the volume. When attaching the volume, use the thread locker.

**7** After replacement, set the volume as described in the “Adjusting Procedure” section above.

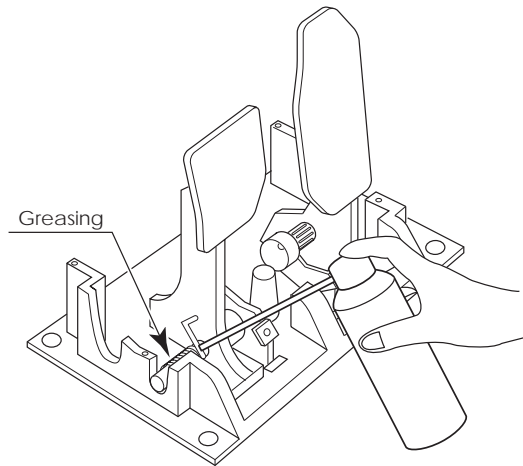
**8** After adjusting the setting, confirm that the values change smoothly by operating the pedal.

## 12-2 GREASING

### **STOP** IMPORTANT

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

Grease the spring and gear alignment area once every three months.  
Use GREASE MATE (PART No. 090-0066) as spray grease.



12-2 FIG. 01

# 13 MONITOR

## 13-1 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.

### WARNING

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

### CAUTION

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.

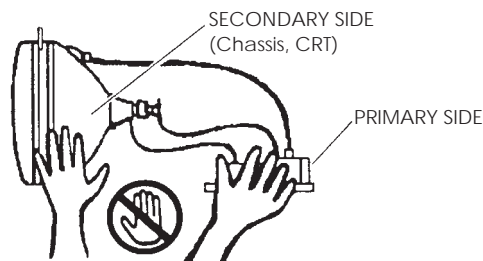
### WARNING

- 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.

### WARNING

- 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 nonconductive 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.

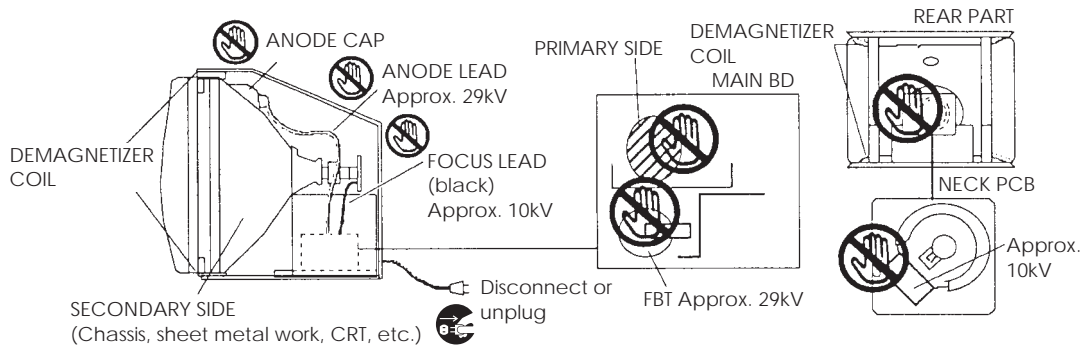


14-1 FIG. 01



**WARNING**

- **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.



14-1 FIG. 02

- **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.

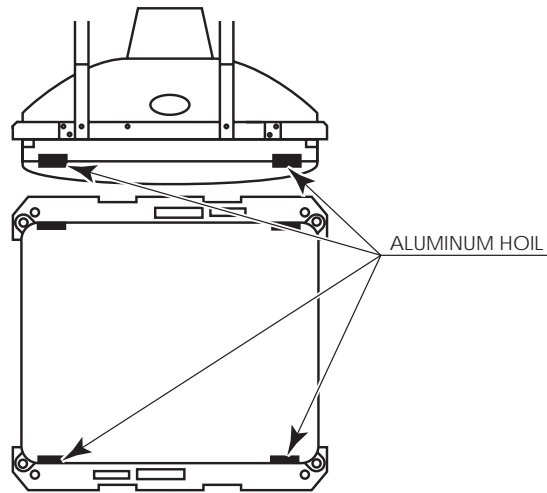
**CAUTION**

- **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 Demagnetizer 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).

## **CAUTION**

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.



14-1 FIG. 03

## 13-2 CLEANING THE CRT SURFACES

### CAUTION

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.

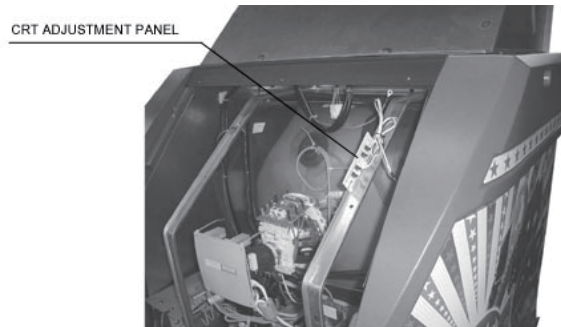
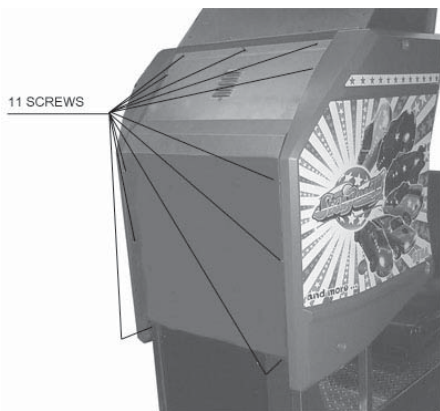
Clean the CRT surfaces once a week. When cleaning, pay attention to the above caution so that the antistatic coating will not come off.

## 13-3 ADJUSTMENT PROCEDURE

### **⚠ WARNING**

- Monitor adjustments have been made at the time of shipment. Therefore, do not make further adjustment without a justifiable reason. Adjusting the monitor which contains high tension parts is dangerous work. Also, an erroneous adjustment can cause deviated synchronization and image fault, resulting in malfunctioning.
- 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 cause to worsen the players' or the customers' physical conditions.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.

To make monitor adjustment, take off back cover removing 11 screws.  
The adjustment board appears when the back cover is open.



This product's monitor is SANWA 29PFX (Sega part#: 99-60-718). For adjustment method, carefully read and carry out the following. With this product, the hue of each color cannot be adjusted.

There are 4 buttons to operate the adjustment.

Pressing FUNCTION button displays the menu screen.

- CONT : adjusts image contrast.  
With the UP button, it becomes deep and becomes light with the DOWN button.
- BRIT : adjusts the on-screen image brightness.  
With the UP button, it becomes bright and becomes dark with the DOWN button.
- HSIZ : adjusts the horizontal image size.  
With the UP button, it becomes large and becomes small with the DOWN button.
- HPOS : adjusts the horizontal image's position.  
With the UP button, it moves to the left and moves to the right with the DOWN button.
- VSIZ : adjusts the vertical image size.  
With the UP button, it becomes large and becomes small with the DOWN button.
- VPOS : adjusts the vertical image's position.  
With the UP button, it moves upwards and moves downwards with the DOWN button.
- When pressing the DEGAUSS button, degaussing is performed.  
Once degaussed, it takes 30 minutes or longer to have degaussing function again.

## 14 FLUORESCENT LIGHT/OTHER LAMPS REPLACEMENT

### **⚠ WARNING**

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

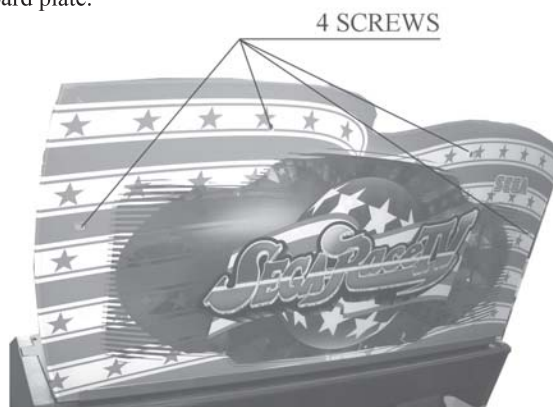
### **⚠ CAUTION**

- Be careful when handling the plastic parts. Failure to observe this may cause injury or damage due to fragments, etc.
- Do not attempt to replace billboard fluorescent lamps while standing on the base. If you should misstep while working, you could stumble or fall down.

#### **Billboard Fluorescent Light**

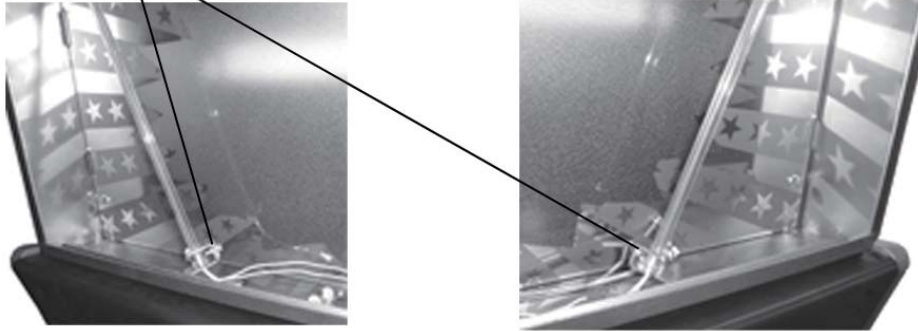
**1** Turn off the power.

**2** Remove the 4 screws then remove the front billboard plate.

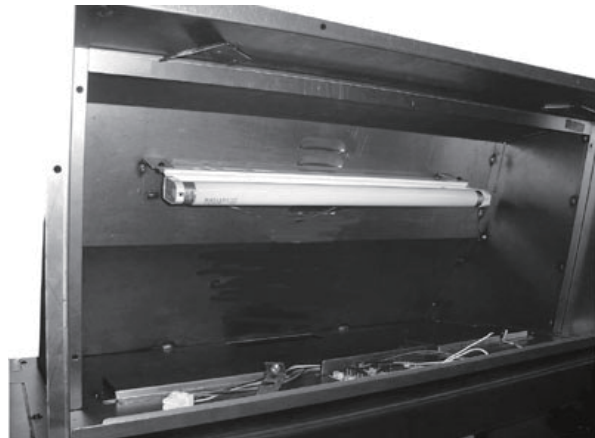
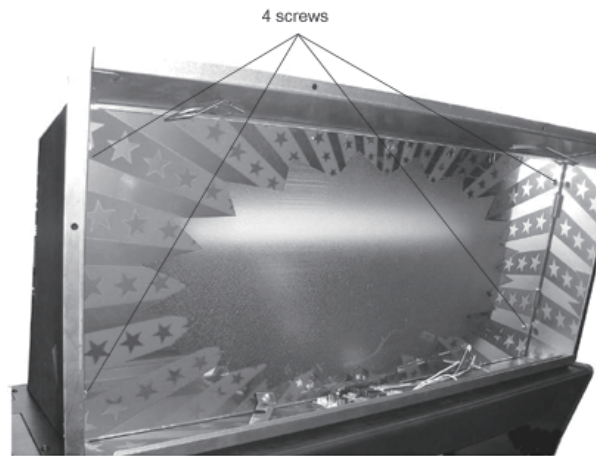


- 3 Remove a clamp taking a screw out and remove a red CCFL from each left and right side.

REMOVE A CLAMP TAKING 1 SCREW OFF FROM EACH LEFT AND RIGHT SIDE



- 4 Remove the back marquee plate and replace the fluorescent light and glow lamp.



## Start Button Lamp, View Change Button Lamp

**1** Turn off the power.

**2** Remove 4 screws.

4 SCREWS



**3** Remove the Switch Plate. The Switch Plate contains wiring connections. Disconnect the connector, taking care not to damage the wiring.

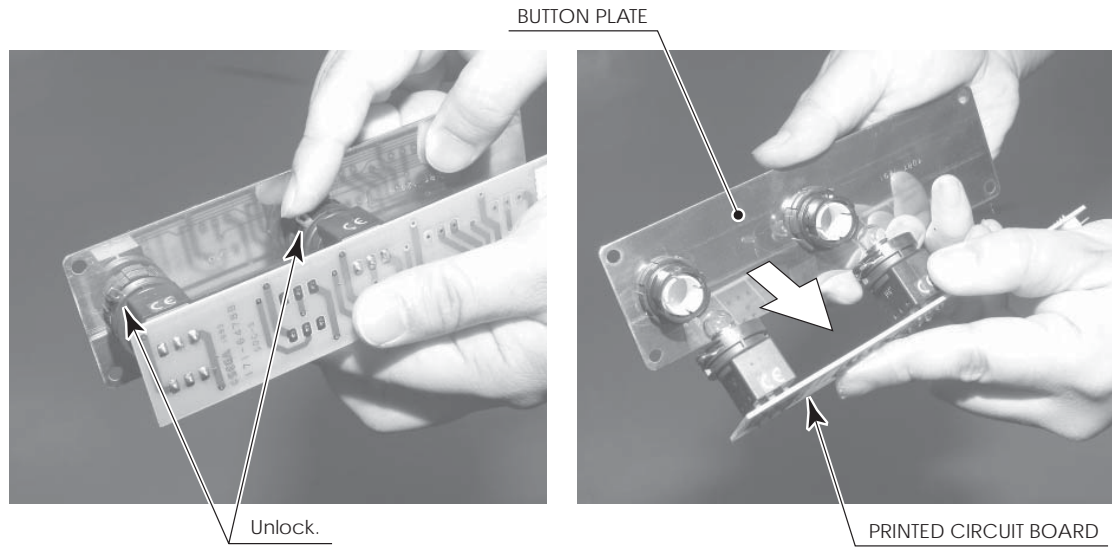
Disconnect the connector.

SWITCH PLATE

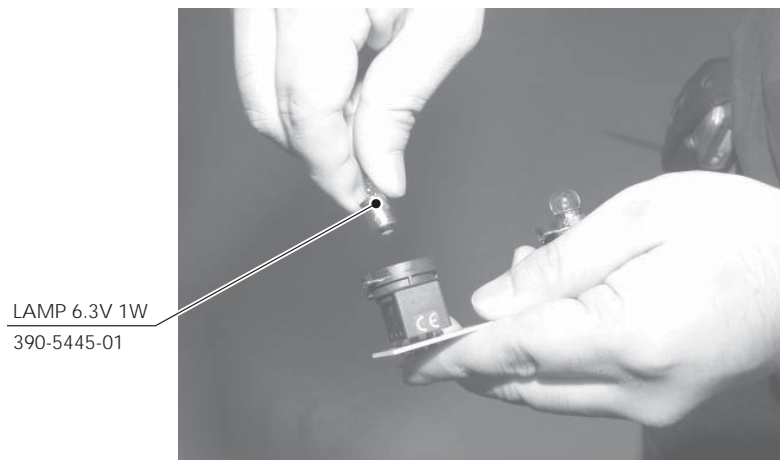




- 4 There is a metal fitting at the base of the buttons on the Button Plate. Rotate this metal fitting to unlock it, then remove the printed circuit board from the Button Plate.



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



## 15 PERIODIC INSPECTION

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

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

### WARNING

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

16 TABLE 01 PERIODIC INSPECTION TABLE

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CABINET	Confirm that adjusters contact floor	Daily	3
CONTROL PANEL	Volume inspection	Monthly	9, 10
	Gear alignment inspection	Every 3 months	10-2
	Greasing	Every 3 months	10-3
SHIFT LEVER	Switch inspection	Monthly	9, 11
	Greasing	Every 3 months	11-3
ACCELERATOR & BRAKE	Volume inspection	Monthly	9, 12
	Gear and spring portion greasing	Every 3 months	12-2
MONITOR	Screen cleaning	Weekly	14-2
	Confirm settings	Monthly or when moving	6, 9, 14
COIN CHUTE DOOR	Coin switch inspection	Monthly	9
	Coin insertion test	Monthly	13
	Selector cleaning	Every 3 months	13
SEAT	Greasing to the seat rail	Every 3 months	16 FIG. 01
GAME BD	Memory Test	Monthly	9
	Confirm settings	Monthly	9
POWER CABLES	Inspection, Cleaning	1 year	As above
INTERIOR	Cleaning	1 year	As above
CABINET SURFACES	Cleaning	As appropriate	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, benzene, etc. other than ethyl alcohol, or abrasives, bleaching agent and chemical dustcloth.

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

### **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.

# 16 TROUBLESHOOTING

## 16-1 TROUBLESHOOTING (WHEN NO ERROR MESSAGE IS SHOWN)

### WARNING

- 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.

17 TABLE 01

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. <6-6, See 17 FIG. 01.>
	The fuse of the connect board was blown out due to momentary overcurrent.	After eliminating the cause of overload, replace the specified rating fuse. <17 FIG. 01>
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 Chapter 15.>
Sound is not emitted.	Sound volume adjustment is not correct.	Adjust the Switch Unit's sound adjustment volume. <See Chapter 9.>
	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 System Test Mode in LINDBERGH 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 to the CRT.	Press the Demagnetization switch on the switch unit. <See Chapter 9.>
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 Chapter 14.>
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 Chapter 9.>
	Volume gear engagement fault.	Adjust the engagement of the gear. <See Chapter 9, 10.>
	Volume malfunctioning.	Replace the volume. <See Chapter 10.>
	Detached wires.	Check for faulty wire connections around moving parts. When replacing wires, secure them so that they do not touch any moving parts.
No response from Steering (Servomotor).	Failure of power-on checking procedure.	Reconnect the power and complete a power-on checking procedure. <See Section 6-6.>
	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 Chapter 9.>

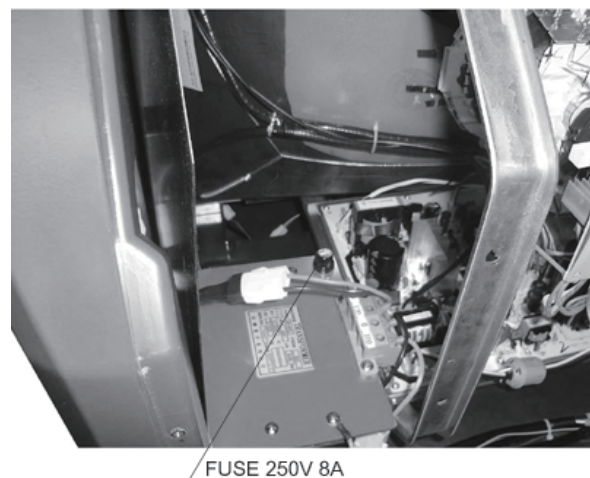
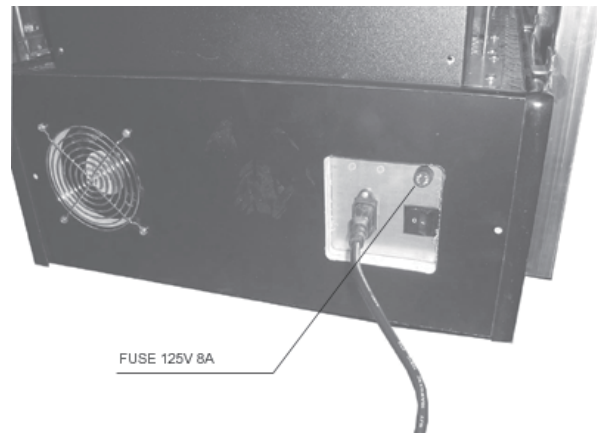
The accelerator or brake does not perform appropriately.	Incorrect volume setting.	Adjust the volume value in the Test Mode. <See Chapter 9.>
	Faulty Volume attachment or adjust gear alignment.	Adjust the volume attachment and verify in Test Mode. <See Chapter 9, 12.>
	Faulty connector connection.	Check the connections for the accelerator and brake connectors and the connectors between the accelerator, brake and cabinet.
	Failure of the volume.	Replace the volume. <See Chapter 12.>
Start button and View Change 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 View Change 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 Chapter 9.>
	The lamp is burnt out.	Replace the lamp. <See Chapter 15.>
Failure of the network play.	Network play is wrongly set.	Reset correctly. <See Chapter 9, 19.>
	Communication cables are disconnected. Communication cables are wrongly connected.	Reconnect the cables. <See Chapter 19.>
	Damage of communication cables.	Reconnect the cables correctly. Replace the cables. Contact the company from whom the unit was purchased.

## Replacing Fuses

### **⚠WARNING**

- 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.
- 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 AC power plate on the back of the cabinet and on the transformer inside upper back lid..



## 16-2 ERROR MESSAGES

This product displays the following messages when it detects an error. Read the error description and follow the steps indicated. Refer to the LINDBERGH Service Manual for details on error messages displayed with the LINDBERGH logo.

### Error 11

JVS I/O board is not connected to main board.

The I/O board and the LINDBERGH have been disconnected.  
Check to make sure the I/O board and the LINDBERGH are properly connected.

### Error 12

JVS I/O board does not fulfill the game spec.

The number of I/O boards are not sufficient to run the application.  
Check to make sure the I/O board and the LINDBERGH are properly connected.

### Error 15

Game Program Not Found.

The key chip intended for the application is not connected or is loose.  
Check to make sure the key chip and the LINDBERGH are properly connected.

### Error 1000

Network is Disconnected.

Communication has been broken.  
This occurs when the packet does not arrive in a specific amount of time.  
Check to make sure the network devices of all the cabinets are properly connected.  
See the NOTE below.

### Error 1001

MAIN-Cabinet Not Found.

The main cabinet (CABINET ID 1) was not found when the application was started or a timeout occurred while waiting for communication. Communication will time out after approximately 2 minutes.

- In GAME TEST mode, check to make sure the main cabinet (CABINET ID 1) is properly set up.
- In the case of a time out, turn the power to all the connected cabinets off and then on again.

### Error 1002

SUB-Cabinet Not Found.

The sub cabinets (CABINET ID 2-4) were not found when the application was started or a timeout occurred while waiting for communication. Communication will time out after approximately 2 minutes.

- In GAME TEST mode, check to make sure the sub cabinets (CABINET ID 2-4) are properly set up.
- In the case of a time out, turn the power to all the connected cabinets off and then on again.



Error 1003  
Same CabinetID Found.

The connected cabinets have the same CABINET ID.  
In GAME TEST mode, set the CABINET IDs making sure that they are all different.

Error 1004  
Network has not been initialized.

The network has not been initialized.  
Check to make sure the network device on the LINDBERGH is functioning properly.

Error 1005  
Network cannot use.

The network cannot be used.  
Check to make sure the network device on the LINDBERGH is functioning properly.

*NOTE: This game is set up so that if one cabinet comes up with the message, "Error 1000 Network is Disconnected," the same message will appear on all the other cabinets as well. To recover the connection, check the network devices connecting the cabinets, and then turn the power off to all the cabinets showing the error and then on again.*

## 17 GAME BOARD

### **⚠ WARNING**

- In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- When replacing or repairing the game board and then returning it to the cabinet, be sure to reconnect all the connectors correctly. Improper connection may cause electric shock, short circuit or fire.
- When connecting the connector, check the orientation carefully and connect securely. The connector must be connected in the proper direction. If it is connected in the wrong direction or indiscriminately at an incline so that a load is applied, the connector or its terminal pins could break, causing a short circuit or fire.
- No connectors other than those connected on the game board when first delivered can be used by this product. Do not connect any other wires to any of the unused connections. This may lead to the generation of heat, smoke or burn outs.

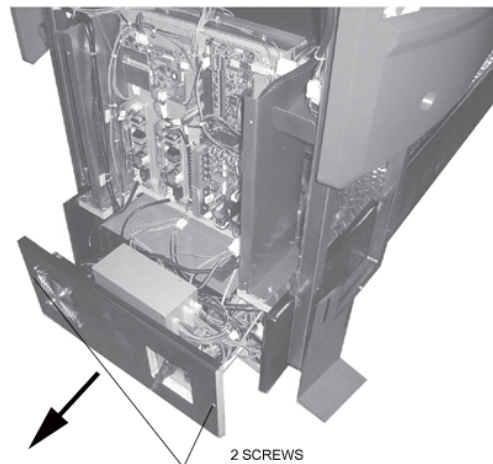
### **⚠ CAUTION**

In this product, setting changes are made during the test mode. The game board need not be operated. Use the game board, etc. as is with the same setting made at the time of shipment so as not to cause electric shock and malfunctioning.

### 17-1 REMOVING THE LINDBERGH

**1** Turn off the power.

**2** Remove 2 truss screws and pull out the PCB base..



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**3** Remove all connectors connecting to the game board.



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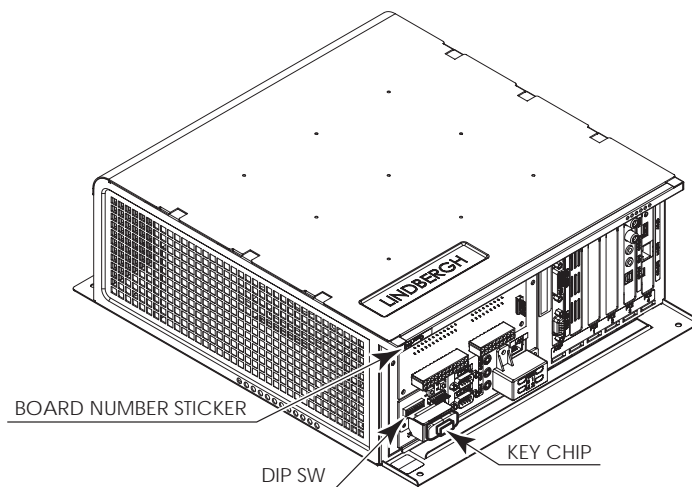
**4** Remove 4 screws and remove the game board.

## 17-2 COMPOSITION OF THE GAME BOARD

### **STOP** IMPORTANT

- The game board becomes the game board for this product once the key chip is inserted.
- The DIP SW (dip switches on the board must be set as specified below. If set incorrectly for this product, an error will be displayed and the game will not run.

ASSY CASE LBG L 1GB RTV (844-0019D-01) <USA>



18-2 FIG. 01

### DIP SW Setting

Use this product with the DIP SW settings shown in the figure below.



18-2 FIG. 02

## 18 COMMUNICATION PLAY

For this game, up to 4 machines can be connected to allow up to 4 players to play simultaneously. In this instance, connecting the communication cable and setting for the communication play are required.

### 18-1 INSTALLATION PRECAUTIONS

#### WARNING

- 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.
- The work described below should be carried out by the site maintenance personnel or other qualified professional. Work carried out by personnel without the necessary skill or technology can cause accident.
- To perform work safely and avoid serious accident such as the cabinet falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.
- To prevent accidents while working or while operating the product after it has been installed, be sure not to conduct any procedures other than those given in this manual. There are cases in which procedures not covered in this manual require special tools and skills. If a procedure not given in this manual is required, request service from the office given in this manual or from the point of purchase.

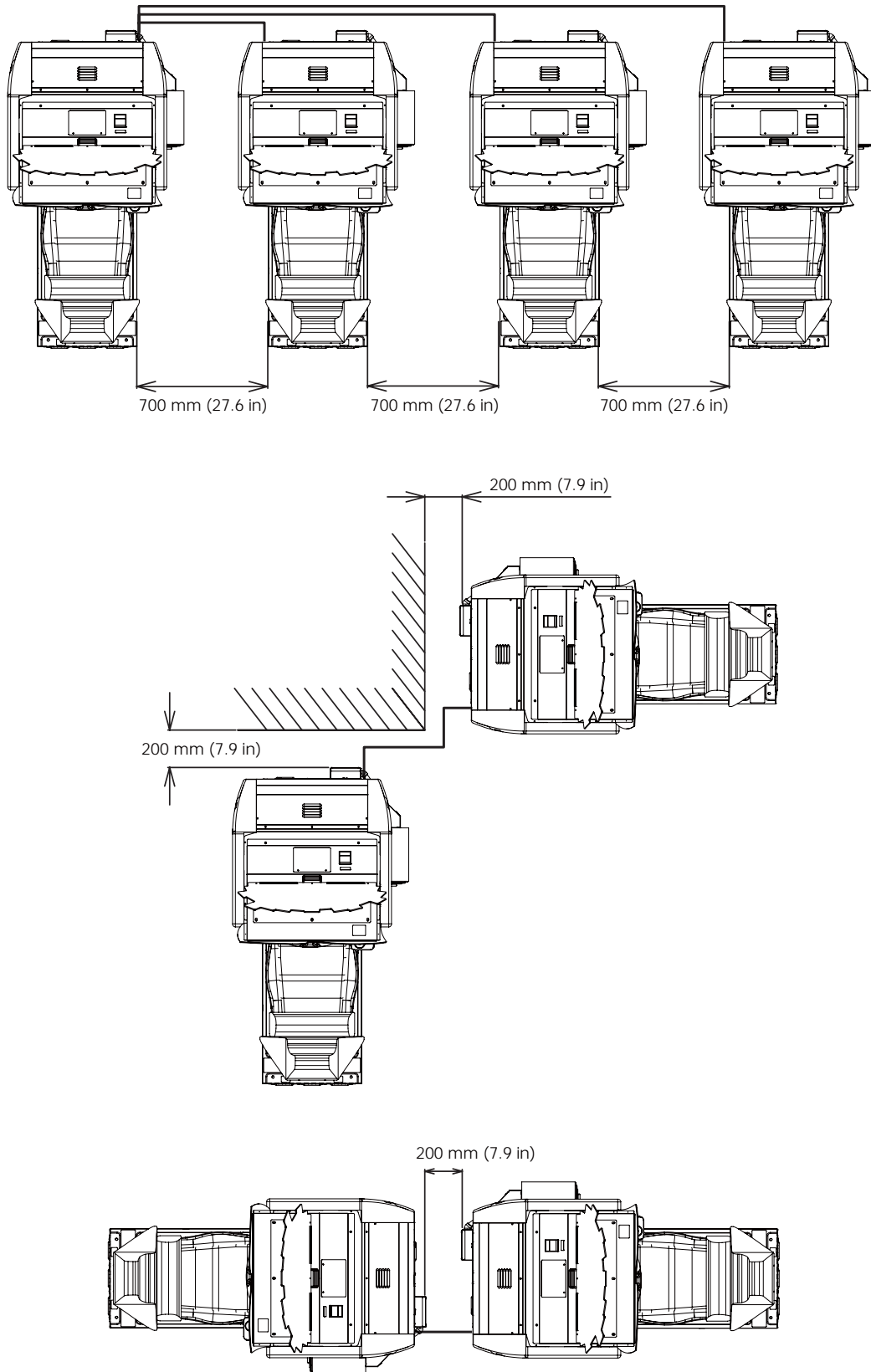
#### CAUTION

- To perform work safely, be sure to secure the space corresponding to number of machines to be linked. Failure to observe this can cause accident.
- To avoid accidents, use a cable cover that will not cause patrons to trip when laying network cables in areas of heavy foot traffic.
- To prevent accidents and acts of vandalism, cover the network cables with the strongest cover possible.

Since 2 or more machines are to be linked, sufficient power corresponding to the number of machines used need to be supplied. Note that as a standard, the per machine capacity should be 7 A for the 100-120 V area.

## Distance between Machines

The maximum distance between the game machines depends on the length of the cables connecting them, but make sure the units are separated from each other by at least 70 cm (27.6 in) so that players can pass between them. Do not install more than the designated number shown in the layout diagram.



19-1 FIG. 01

## 18-2 CONNECTING THE COMMUNICATION CABLE

This game can be linked up to 4 units.

(For 2 units link play)

The LAN ports on the game boards in both unit must be connected with network (LAN) cable.

(For 3 or more units link play)

The hub is necessary to enable 3 or more units link play, but it is not included in the unit.

It must be prepared separately. (It is available at SEGA as an optional part (part#: 601-11351), if necessary)

Then the LAN port on the game board in each unit must be connected to the hub with network (LAN) cable.

## 18-3 NETWORK PLAY SETTINGS

Each of the linked machines must be set up for network play. If the machines are not set up correctly, network play will not be possible.

For this game, up to 4 machines can be connected to allow up to 4 players to play simultaneously.

- 1 Turn on the power on each machine to be used in network play.
- 2 Cause all of the machines to enter the Test Mode.
- 3 Select the GAME TEST MODE and press the Test button to display the GAME TEST MENU screen.
- 4 Select the GAME ASSIGNMENTS in the GAME TEST MENU screen and press the Test button.

GAME ASSIGNMENTS	
CABINET ID	XXX
GAME DIFFICULTY	NORMAL
CONTINUE	ON
ADVERTISE SOUND	ON
COMMENTARY VOLUME	HIGH
NUM OF LAPS	3
HEAT	1
DRESS CODE	LOW
SPEEDOMETER	KM/H
CASUAL USER MODE	OFF
DEFAULT SETTING	
-> EXIT	

19-3 FIG01 GAME ASSIGNMENTS Screen

- 5 Perform the CABINET ID setting. Set the different ID number to each machine. Be sure to assign one of them with the ID number of "1."
- 6 Cause all of the machines to exit from the TEST MODE. Always select EXIT in the SYSTEM TEST MENU screen.



## 18-4 NETWORK PLAY PRECAUTIONS

### **STOP** IMPORTANT

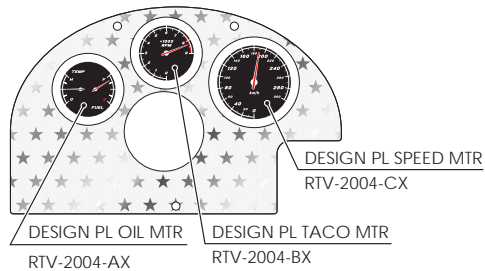
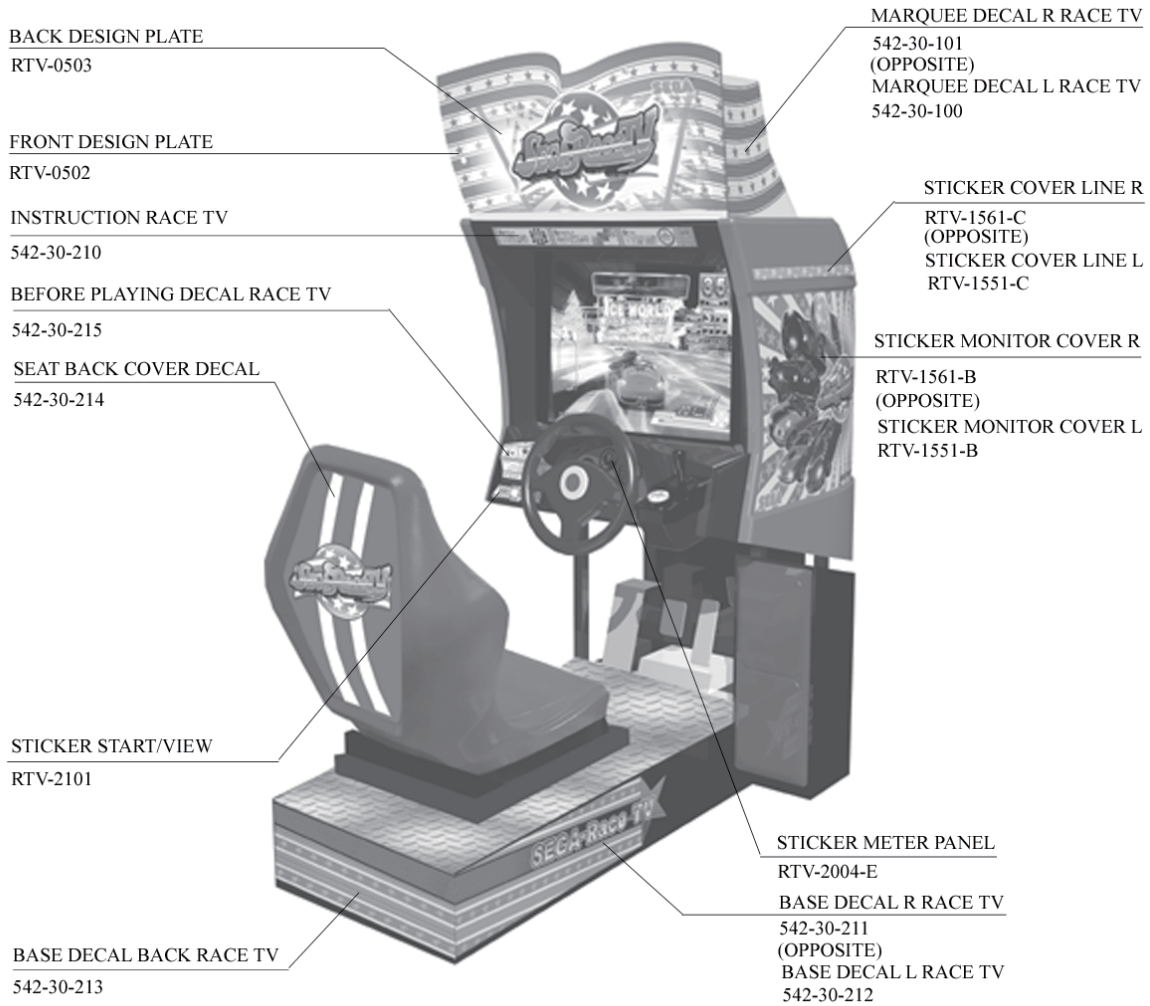
- In network play, difficulty level and other settings are made from CABINET ID Number 1. Changing the settings at CABINET ID Number 1 also changes the settings for other units.
- If one of the units attached for network play enters Test Mode, the other unit will display the Error screen.
- Even when 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 other units 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 Error screen. When customers are playing the game, do not enter Test Mode on any network play-enabled machine.

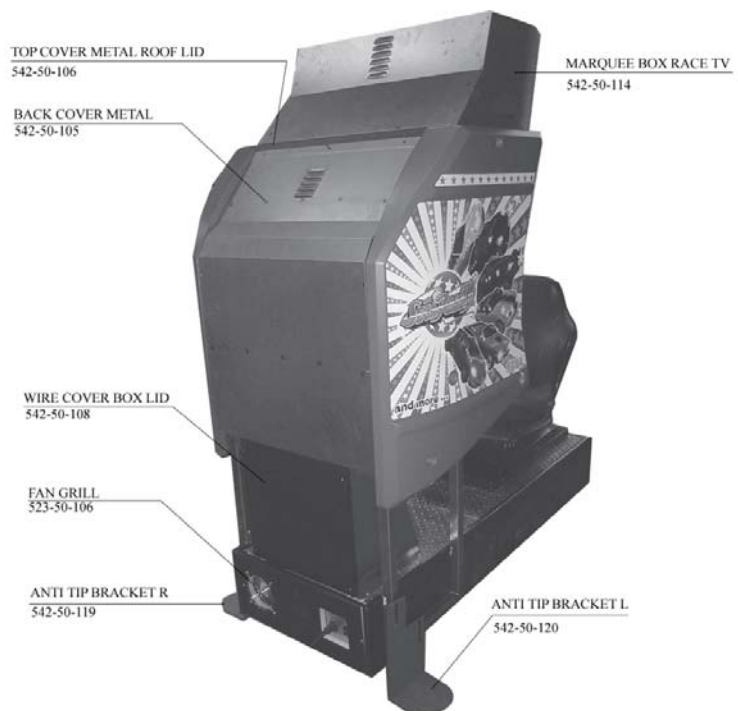
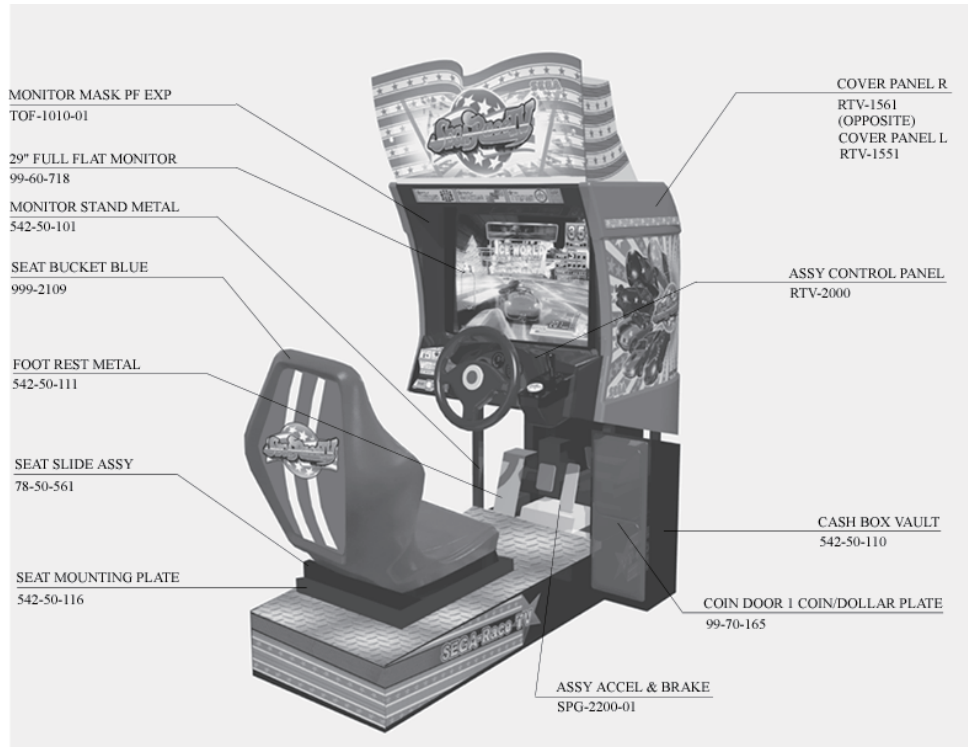
# 19 DESIGN-RELATED PARTS

For the warning display stickers, refer to Chapter 1.



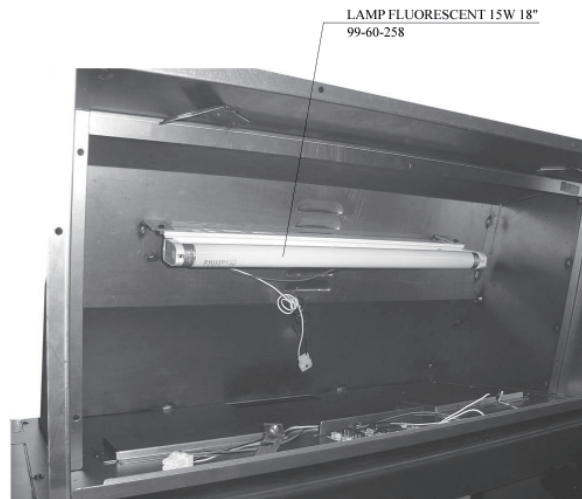
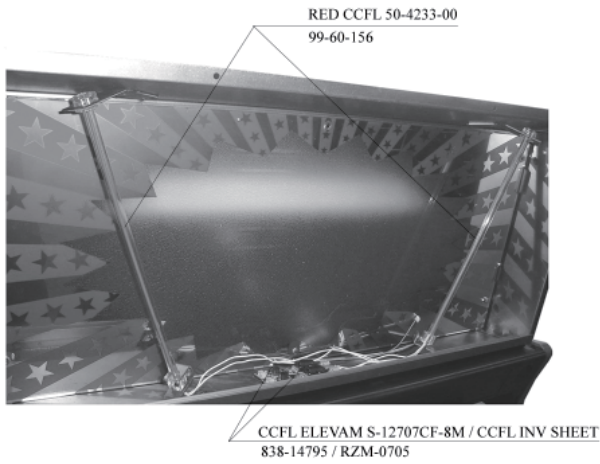
# 20 PARTS LIST

## (CABINET PARTS)

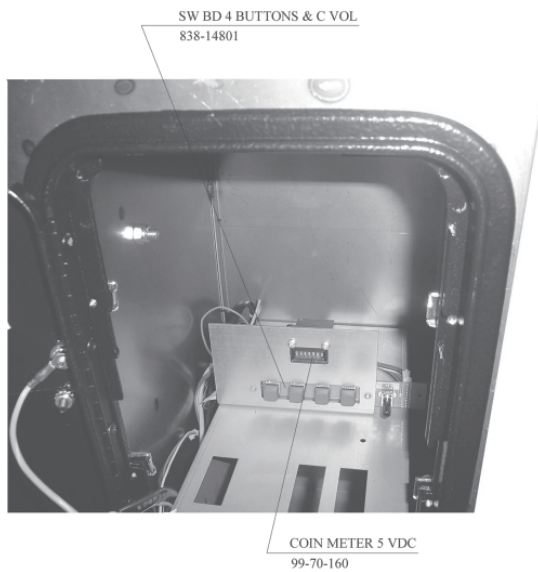


**(INSIDE ELECTRIC COMPONENTS)**

**MARQUEE BOX**



**COIN BOX**



## INSIDE THE CABINET BACK LOWER PORTION

SOUND AMP ANALOG IN  
838-14515-A0191

I/O CONTROL BD 3 FOR JVS COM  
837-14572

24V POWER SUPPLY LCA50S-24  
400-5421-05027

12V POWER SUPPLY LCA50S-12 SSF  
400-5421-05012

ASSY CASE LBG L 1GB 7800 US  
844-0001D-92-11

FAN 110 VAC 50/60HZ COOLING  
99-60-900

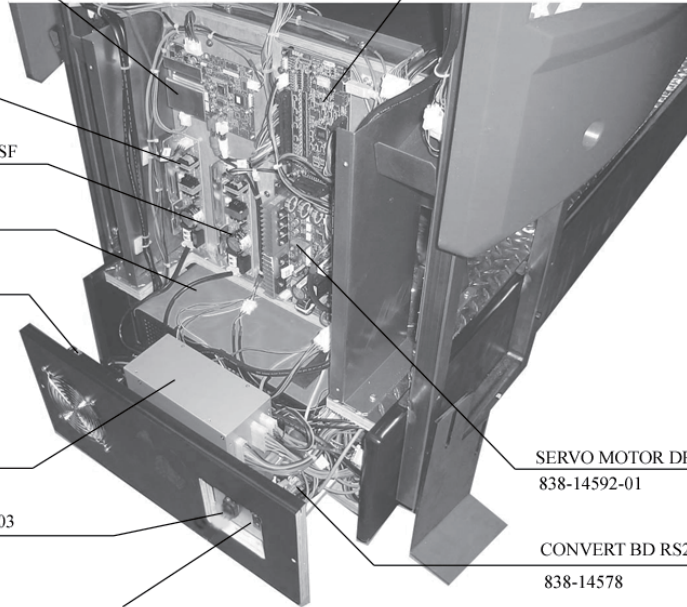
POWER SUPPLY FOR LBG  
99-60-719

LINEFILTER QUAL TEK 874-06/003  
99-00-014

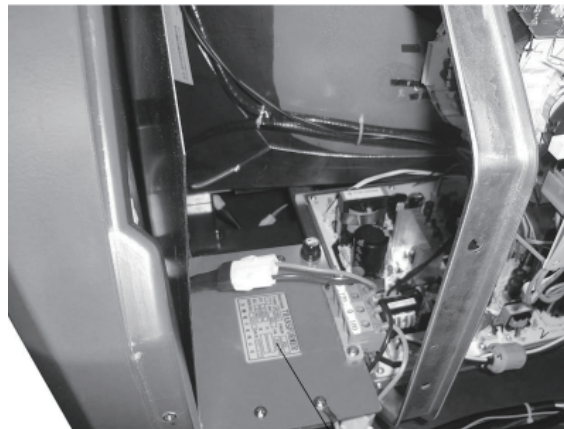
POWER SWITCH #8-252  
99-00-001

SERVO MOTOR DRIVE BD SER EMI  
838-14592-01

CONVERT BD RS232C/RS422  
838-14578



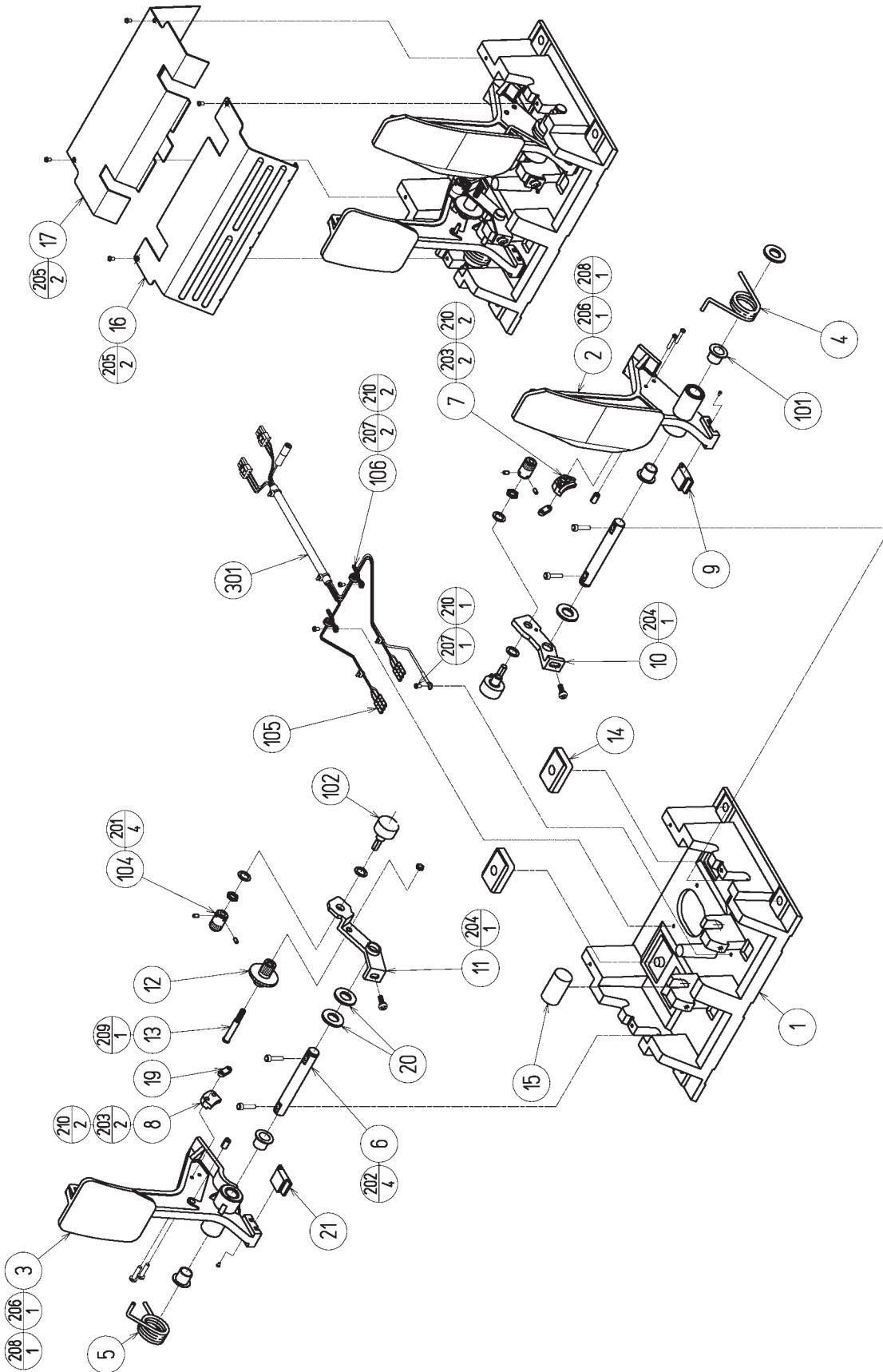
## INSIDE THE CABINET BACK UPPER PORTION



TRANSFORMER 120VTO100V 8A  
99-60-221

ASSY ACCEL&BRAKE (SPG-2200-01)

(D-1/2)



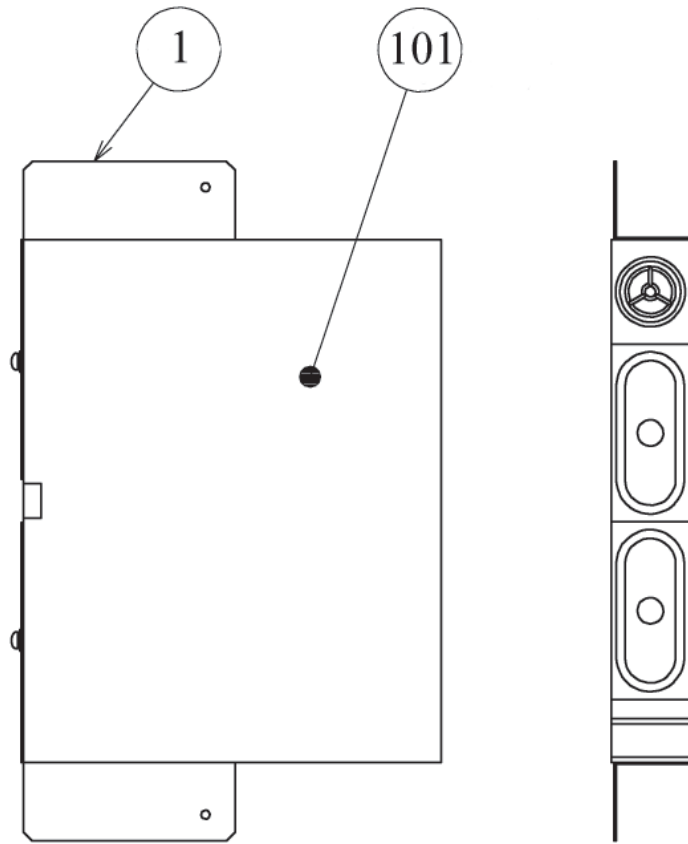
**20** PARTS LIST

ASSY ACCEL&BRAKE (SPG-2200-01)

(D-2/2)

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-2213X	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	
102	220-5753	VOL CONT B-5K OHM (TOCOS)	
104	601-7944	GEAR 15	
105	310-5029-F15	SUMITUBE F F15MM	
106	280-0419	HARNES LUG	
201	028-A00304-P	SET SCR HEX SKT CUP P M3x4	
202	020-000520-OZ	HEX SKT H CAP SCR BLK M5x20	
203	000-P00420	M SCR PH M4x20	
204	000-P00512-W	M SCR PH W/FS M5x12	
205	000-T00408-0C	M SCR TH CRM M4x8	
206	FAS-450005	SPR PIN BLK OZ 6x10	
207	000-P00405	M SCR PH M4x5	
208	FAS-000001	M SCR TH CRM M3x6	
209	050-H00500	HEX NUT M5	
210	060-F00400	FLT WSHR M4	
301	600-6840-01	WIRE HARN ACCEL&BRAKE YL	

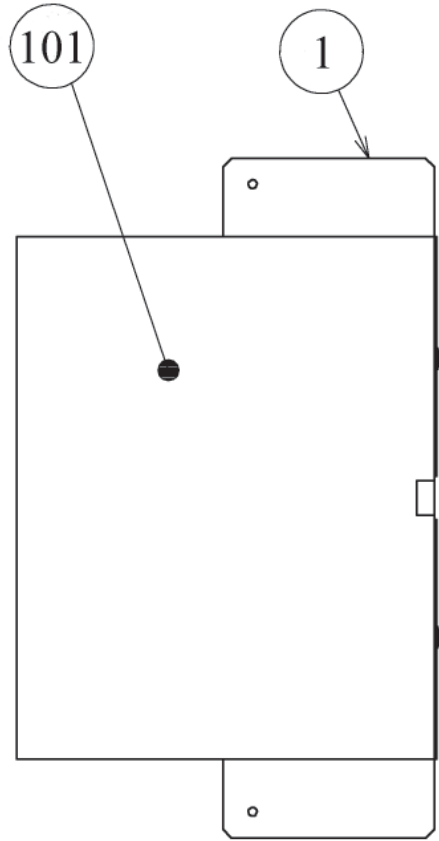
# ASSY SPEAKER L



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	542-50-104	SPEAKER HOLD DOWN METAL	
101	130-5156-02	SPEAKER BOX 8OHM 20W VA1 YL	



# ASSY SPEAKER R

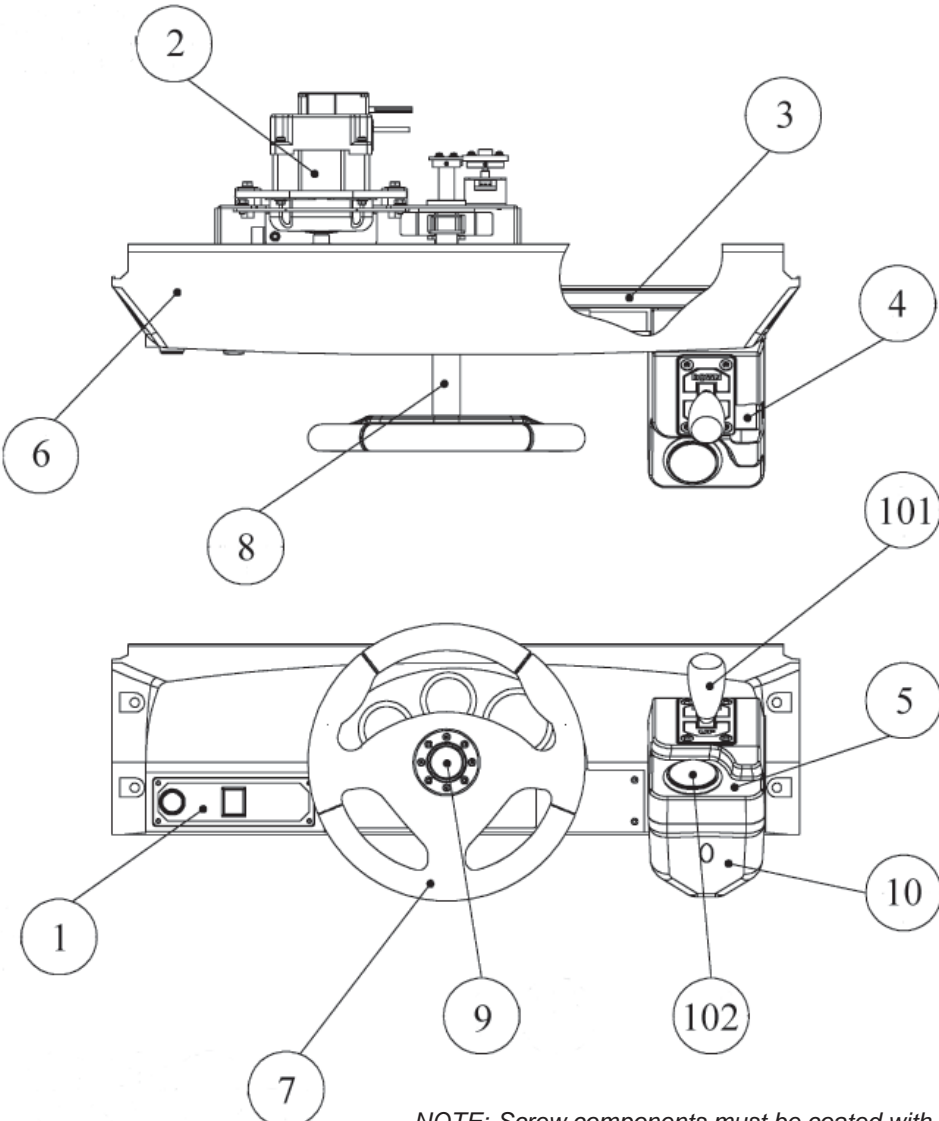


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	542-50-104	SPEAKER HOLD DOWN METAL	
101	130-5156-02	SPEAKER BOX 8OHM 20W VA1 YL	

ASSY CONTROL PANEL

(D-1/2)

20 PARTS LIST



Fastening Torque 20N\*m

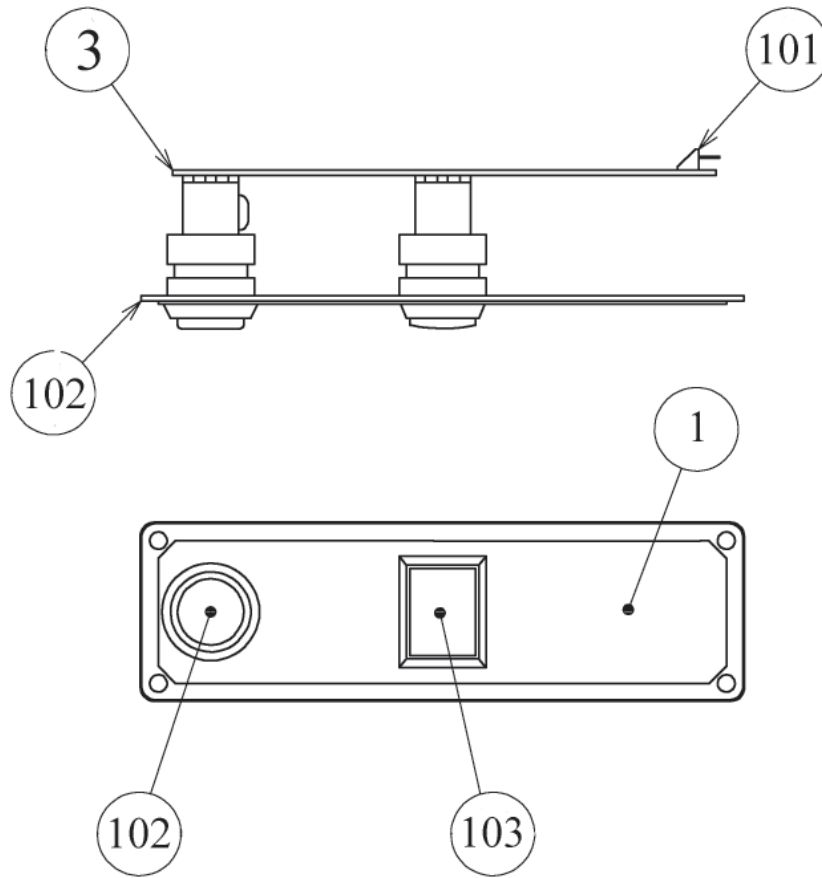
NOTE: Screw components must be coated with thread sealant.

# ASSY CONTROL PANEL

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	RTV-2100	ASSY SW PLATE	
2	RTV-2500	ASSY HANDLE MECHA	
3	542-50-109	CONTROL BRACKET (STEERING)	
4	RTV-2002	SHIFT BASE	
5	RTV-2003	SHIFT COVER UPPER	
6	RTV-2004	CONTROL PANEL COVER	
7	SPG-2001X	STEERING WHEEL	
8	DYN-1209X	HANDLE COLLAR	
9	SPG-2002	STEERING EMBLEM	
10	DYN-1223X	SHIFT COVER B	
101	610-0408-01	UP/DOWN SHIFTER AL YL	
102	509-6175	SW OBSA-60UMQ/BOOST RTV	

# ASSY SW PLATE



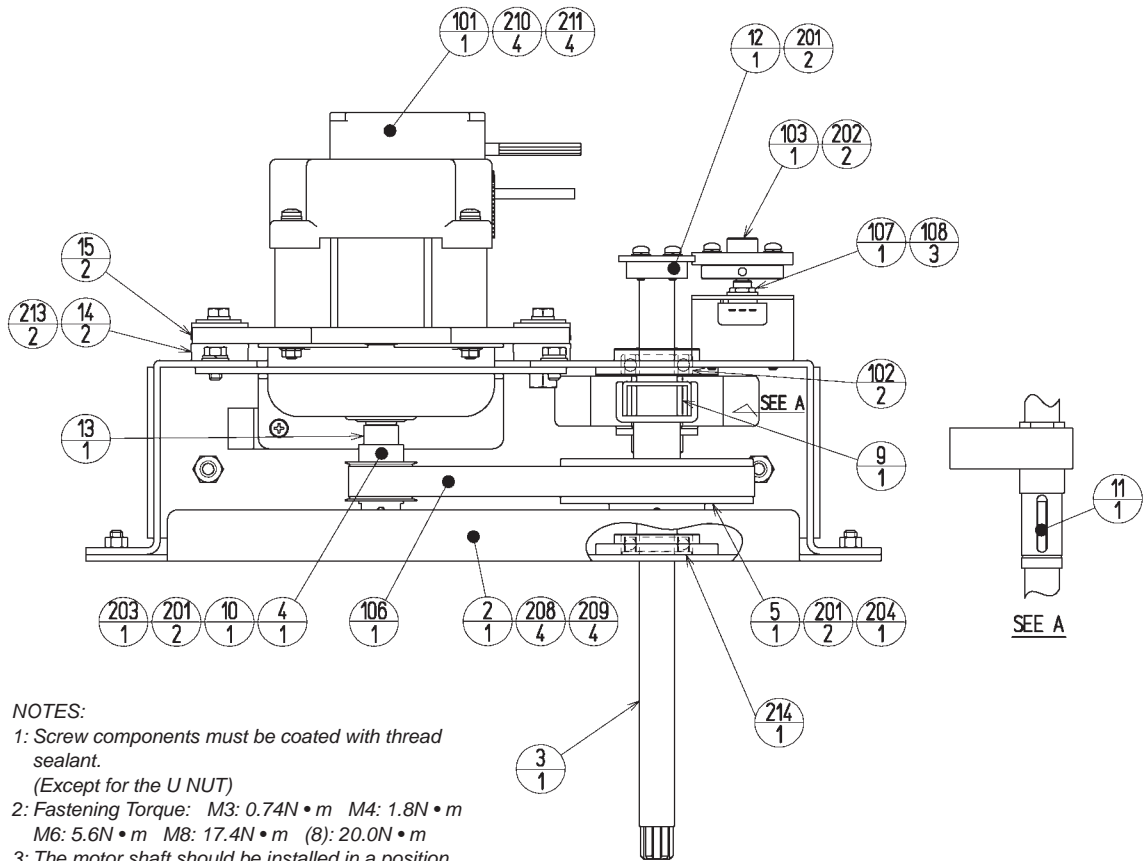
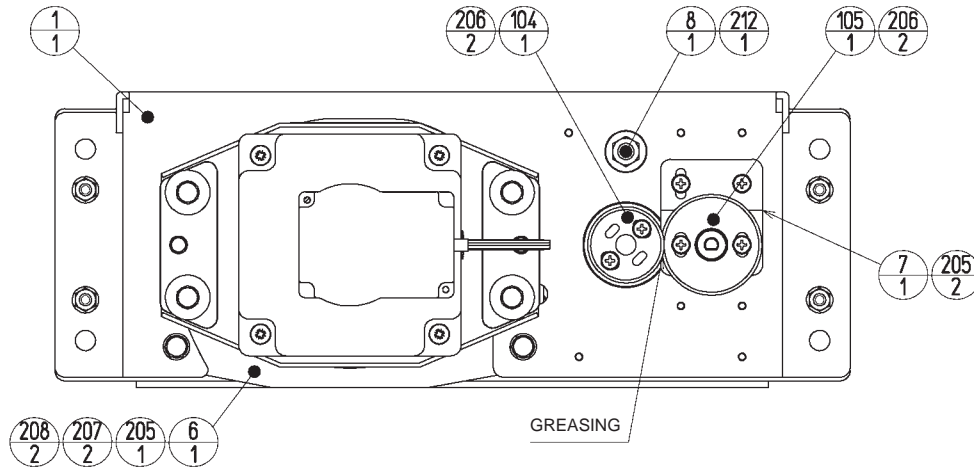
NOTE: When attaching the STICKER, line it up with the hole.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	RTV-2101	STICKER START/VIEW	
2	ORT-2101	BUTTON PLATE	
3	171-6478B	PC BD LIGHTING SWX5	
101	212-5205-12	CONN JST M 12P RTA	
102	509-5560-Y-91	PB SW W/L 6V 1L Y ROHS	
103	509-5561-R-91	PB SW W/L 6V 5L R ROHS	

# ASSY HANDLE MECHA (RTV-2500)

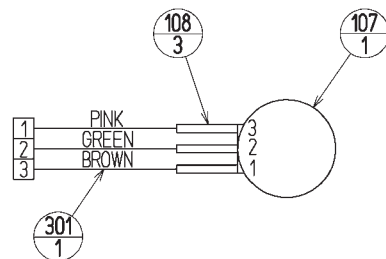
(D-1/2)

**20** PARTS LIST



**NOTES:**

- 1: Screw components must be coated with thread sealant.  
(Except for the U NUT)
- 2: Fastening Torque: M3: 0.74N•m M4: 1.8N•m  
M6: 5.6N•m M8: 17.4N•m (8): 20.0N•m
- 3: The motor shaft should be installed in a position such that, when the steering wheel shaft is centered, the key structure surface comes to ±45 degrees from the top.
- 4: Timing Belt S5M Initial Tension 95~165[N]  
Span=130[mm] Belt width=15[mm]  
Unit weight=0.034[kg/(10mm width x 1m length)]  
(Mitsuboshi Belting Ltd.)  
Unit weight=0.039[kg/(10mm width x 1m length)]  
(Bando Chemical Industries, Ltd.)



# ASSY HANDLE MECHA (RTV-2500)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	ORA-2501	HANDLE BASE	
2	SPG-2502	BASE LID	
3	ORA-2502	HANDLE SHAFT	
4	SPG-2504	PULLEY 20 S5M	
5	SPG-2505	PULLEY 60 S5M	
6	ORA-2503	MOTOR BRKT	
7	ORA-2504	VR BRKT	
8	ORA-2505	STOPPER BOLT	
9	ORA-2506	STOPPER RUBBER	
10	SPG-2453	KEY 4x4x40	
11	DYN-1270	STOPPER KEY	
12	SLC-1130	ADJUST RING	
13	ORA-2507	MOTOR SHAFT COLLAR	
14	253-5592	MOTOR INSULATOR A	
15	253-5593	MOTOR INSULATOR B	
101	350-5805-02	SERVO MOTOR W/FG SIDE TYPE	
102	100-5112	BEARING 17 (NSK 6003ZZ)	
103	601-8966	GEAR HOLDER	
104	601-6172	GEAR 48	
105	601-6959	GEAR 64	
106	601-9173	TIMING BELT (150 S5M 475)	
107	220-5484	VOL CONT B-5K OHM	
107	220-5753	VOL CONT B-5K OHM (TOCOS)	
108	310-5029-F20	SUMITUBE F F 20MM	
201	028-A00408-P	SET SCR HEX SKT CUP P M4x8	
202	028-A00308-P	SET SCR HEX SKT CUP P M3x8	
203	065-S012S0-Z	STP RING BLK OZ S12	
204	065-S020S0-Z	STP RING BLK OZ S20	
205	000-P00408-W	M SCR PH W/FS M4x8	
206	000-P00412-W	M SCR PH W/FS M4x12	
207	030-000612-S	HEX BLT W/S M6x12	
208	060-F00600	FLT WSHR M6	
209	050-U00600	U NUT M6	
210	030-000840-S	HEX BLT W/S M8x40	
211	068-852216	FLT WSHR 8.5-22x1.6	
212	060-S01200	SPR WSHR M12	
213	012-P00412	TAP SCR #2 PH 4x12	
214	FAS-650023	WAVE WSHR 26.4-34.2x0.3	
301	600-6866-01	WIRE HARN ASSY HANDLE MECHA VR	

## 21 WIRE COLOR CODE TABLE

### ⚠ WARNING

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

The color codes for the wires used in the diagrams in the following chapter are as follows.

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

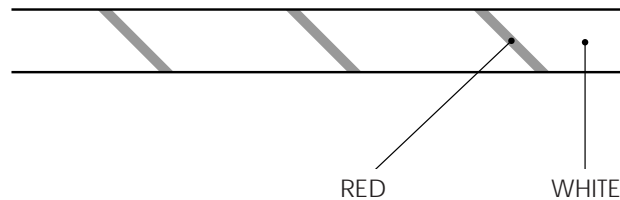
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

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).

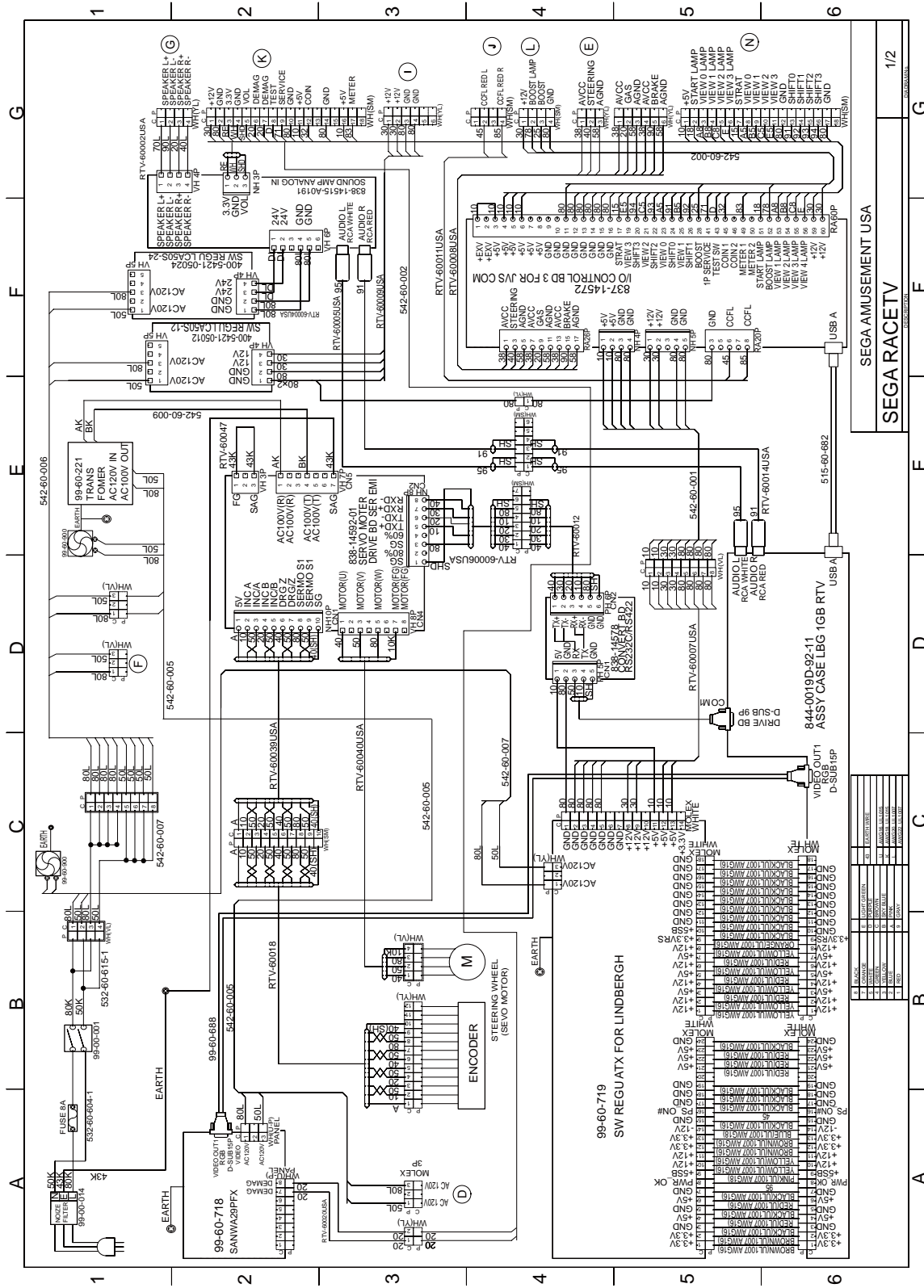
Note 1: If the right-hand side numeral is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

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



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

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

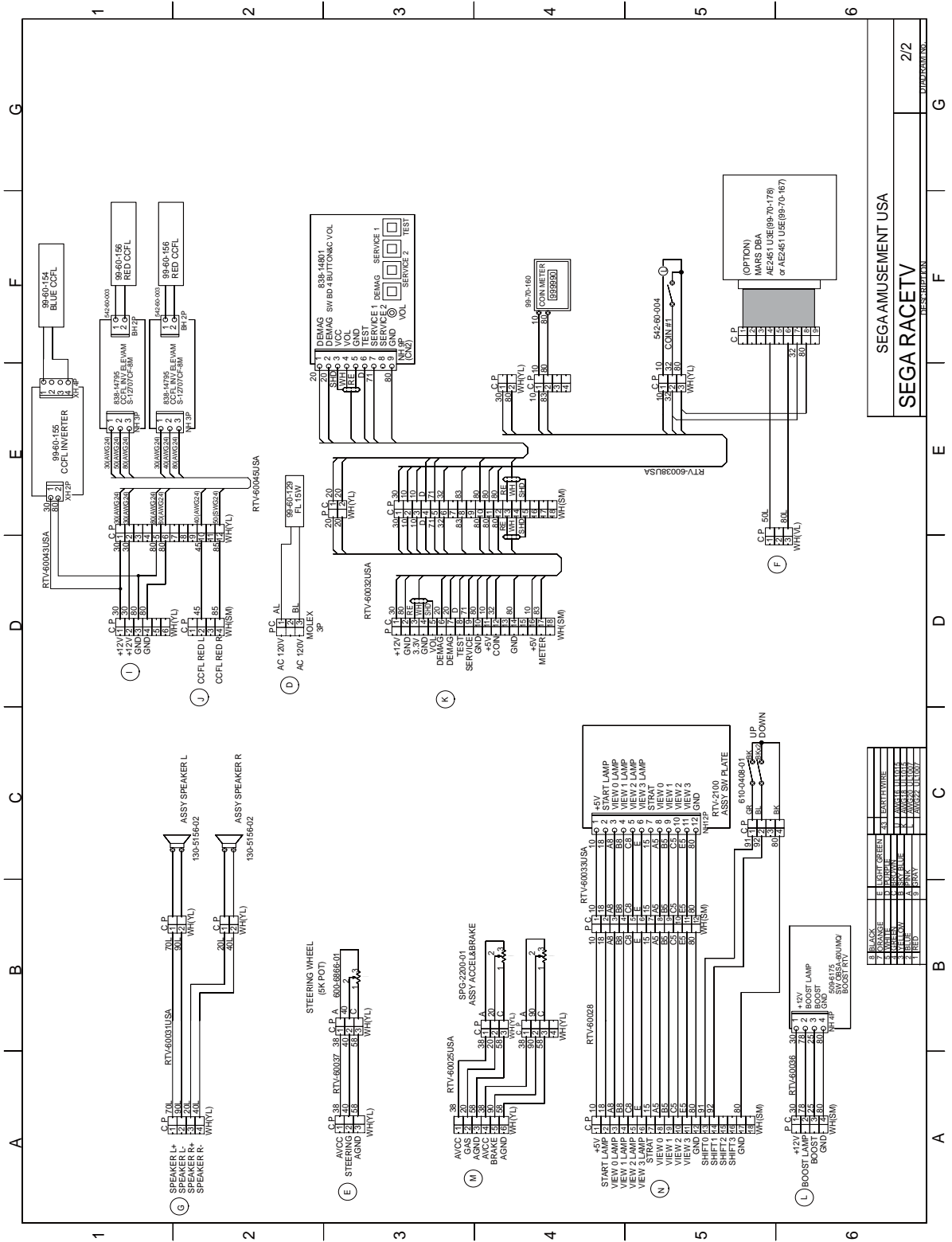


**22 WIRING DIAGRAM**

SEGA AMUSEMENT USA  
SEGA RACE TV



# 22 WIRING DIAGRAM



SEGA AMUSEMENT USA  
**SEGA RACETY**  
 DESCRIPTION  
 2/2

1	BLACK	31	START WIRE
2	ORANGE	32	START WIRE
3	GREEN	33	START WIRE
4	RED	34	START WIRE
5	WHITE	35	START WIRE
6	WHITE	36	START WIRE
7	WHITE	37	START WIRE
8	WHITE	38	START WIRE
9	WHITE	39	START WIRE
10	WHITE	40	START WIRE
11	WHITE	41	START WIRE
12	WHITE	42	START WIRE
13	WHITE	43	START WIRE
14	WHITE	44	START WIRE
15	WHITE	45	START WIRE
16	WHITE	46	START WIRE
17	WHITE	47	START WIRE
18	WHITE	48	START WIRE
19	WHITE	49	START WIRE
20	WHITE	50	START WIRE
21	WHITE	51	START WIRE
22	WHITE	52	START WIRE
23	WHITE	53	START WIRE
24	WHITE	54	START WIRE
25	WHITE	55	START WIRE
26	WHITE	56	START WIRE
27	WHITE	57	START WIRE
28	WHITE	58	START WIRE
29	WHITE	59	START WIRE
30	WHITE	60	START WIRE
31	WHITE	61	START WIRE
32	WHITE	62	START WIRE
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34	WHITE	64	START WIRE
35	WHITE	65	START WIRE
36	WHITE	66	START WIRE
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39	WHITE	69	START WIRE
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42	WHITE	72	START WIRE
43	WHITE	73	START WIRE
44	WHITE	74	START WIRE
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60	WHITE	90	START WIRE
61	WHITE	91	START WIRE
62	WHITE	92	START WIRE
63	WHITE	93	START WIRE
64	WHITE	94	START WIRE
65	WHITE	95	START WIRE
66	WHITE	96	START WIRE
67	WHITE	97	START WIRE
68	WHITE	98	START WIRE
69	WHITE	99	START WIRE
70	WHITE	100	START WIRE

542-30-300  
1<sup>ST</sup> PRINTING FEB. 2008



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