SEGA®

MANUAL

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.

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

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

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

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

⚠   Indicates "HANDLE WITH CARE." In order to protect the human body and equipment, this display is attached to places where the instruction 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 cable 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 and unplug the power cable 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 cable 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.**
  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 products with monitors.)
  Some of the monitor 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 properly.**
  (Applies only to products with monitors.)
  Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or the customers.

- **When transporting or reselling this product, be sure to attach this manual to the product.**

* *In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific instruction manual of such equipment.*
* *Descriptions herein contained may be subject to improvement changes without notice.*
* *The contents described herein are fully prepared with due care. However, should any question arise or errors be found, please contact SEGA.*

INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION

Normally, at the time of shipment, SEGA products are in a status allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on 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 cables have cuts and dents?
☐ Are all accessories available?
☐ Can all doors and lids be opened with the accessory keys? Can doors and lids be firmly closed?

TABLE OF CONTENTS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

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 GOLDEN GUN**."

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.

SPECIFICATIONS

Installtion space	46 inches [Width] × 62 inches [Depth]
Height	90 inches
Weight	430 lbs
Power, maximum current	550 W, 4.6A (AC 120 V 60 Hz Area)

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.

Game Version Notation

Version numbers appearing in TEST MODE are displayed as asterisks. When describing software version upgrades, only major version numbers are displayed. Minor version and release version numbers are for Sega's administrative use only. If you require these numbers, please contact the office listed in this document.

```
        (Ver)
      VER. **. **. **
           |___|  |_|  |__|
             |     |     |
      Major version  Minor version  Release version
      (may be only one digit)
```
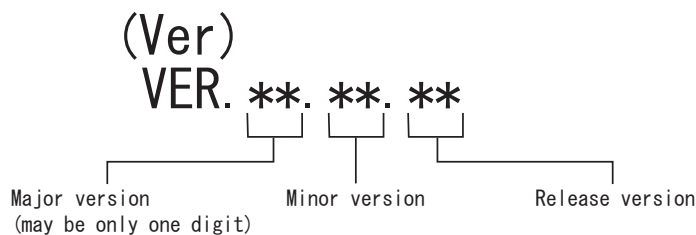
1 HANDLING PRECAUTIONS

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 cable or earth wires on the surface, (floor, passage, etc.). If exposed, the power cable 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 cable.**

- **When or after installing the product, do not unnecessarily pull the power cable. If damaged, the power cable can cause a fire or an electric shock.**

- **In case the power cable 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 that connections such as IC board 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.**

1

(STOP) IMPORTANT

- **For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.**

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

- **This product uses a DLP projector. DLP projector screens scratch easily, so be careful when cleaning the screen. See Chapter 13 "DLP PROJECTORS" for details.**

- **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.**

- **Do not turn the power on and off continuously. Repeatedly turning the power on and off may cause product malfunction or parts damage.**

CONCERNING THE SERIAL NO. AND THE ELECTRICAL SPECIFICATIONS DISPLAYS

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.

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 or unstable 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.**

- **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.**

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

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

2

Electricity Consumption

MAX. 4.6 A	Single phase AC 120 V, 60 Hz Area

2-2 OPERATION AREA

⚠ WARNING

- **For safe operation, use and operate this product in an area measuring at least 2.1 m (82.7 in) in width and 2.8 m (110.2 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.**

- **The ceiling where this product is installed must be at least 2.4 m (94.5 in) high. If the ceiling is too low, the heat emitted from the product may cause it to catch on fire.**

---
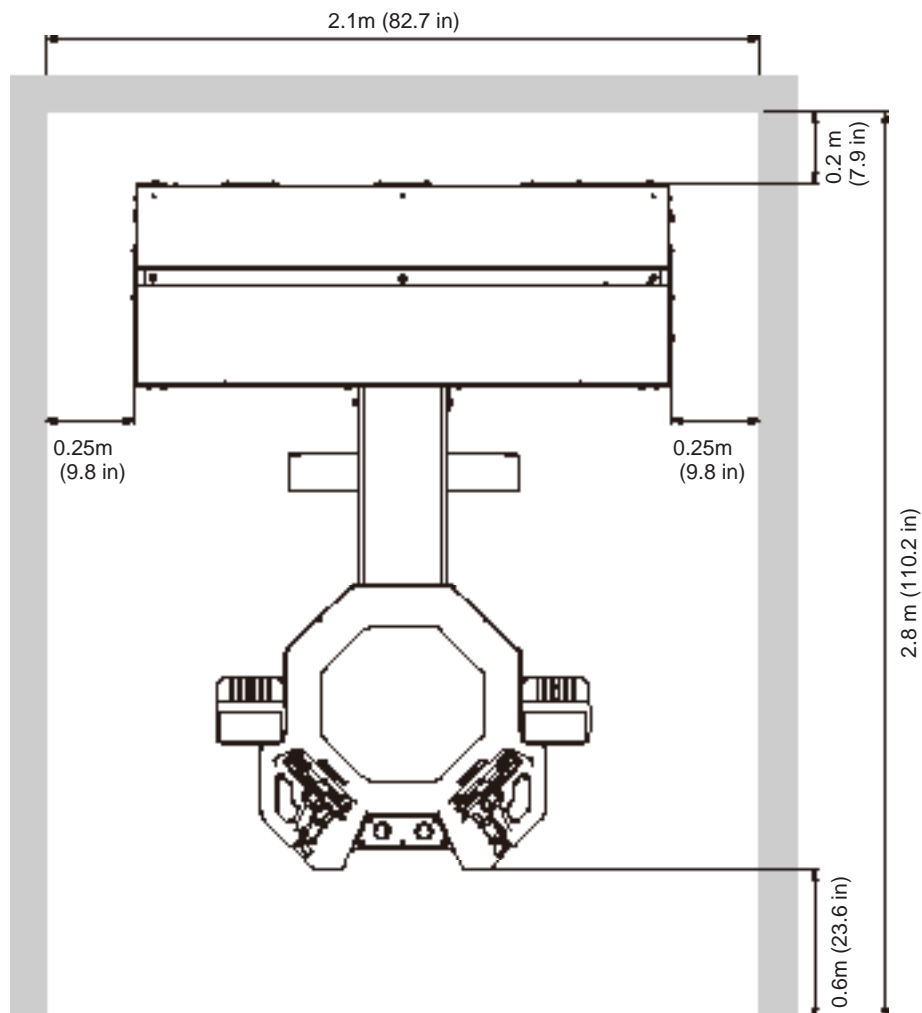
3 PRECAUTIONS REGARDING PRODUCT OPERATION

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

3-1 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. For operation of this product, 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 al players who feel sick while playing to take a rest.**

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

Ensure that all of the adjusters are in contact with the floor.
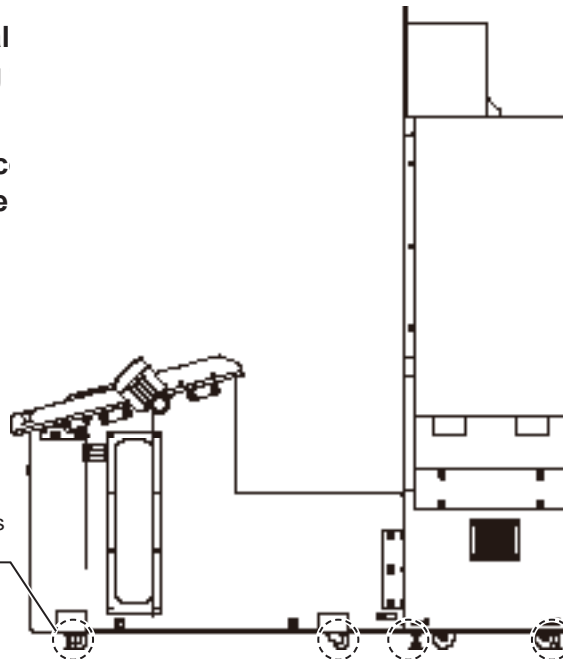
● **Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.**

● **Do not climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a stepstool.**

● **To avoid electric shock, check to see if door and cover parts are damaged or omitted.**

● **Do not place the following items on top of the product, nearby the product or hang them from the ceiling. Doing so could result in electric shock, short circuits and/or damage to the parts.**

Flower vases, flowerpots, cups, water tanks, cosmetics, and receptacles/ containers/vessels containing chemicals and water.

3

⚠ CAUTION

- **To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause contact, collisions, and/or trouble between customers.**

- **During daily cleaning, be sure to check the surface of the parts that the player touches with his/her 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.**

Ensure that the screws are not loose and are all present.

Ensure that the casing is free of scratches and cracks.

Ensure that the trigger is functioning properly.

Ensure that all connecting wires are not damaged.
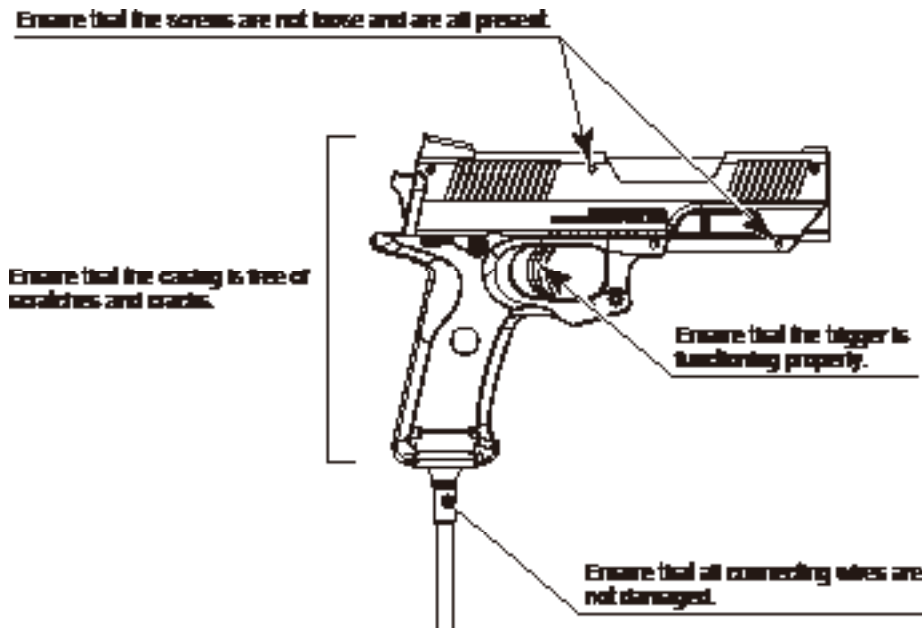
- **Be sure to check carefully that there are no gaps or rattling at the door or/and the junction of the cabinet. If there are gaps or rattling, the players could get fingers or hands caught, resulting in injury.**

- **Make sure all the doors are locked securely and that they do not rattle. If the doors are not locked properly or there are gaps or rattling, the players could get their fingers or hands caught. It could also invite mischief.**

- **Be sure to perform appropriate adjustment of DLP 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.**

- **Prepare a place where players can rest if they feel sick.**

(STOP) IMPORTANT

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

- **Placing the DLP projector near halogen lamps or other types of light fixtures which emit strong light may cause a malfunction. Make sure to install the projector at a reasonable distance from such sources of light.**

3-2 PAYING ATTENTION TO CUSTOMERS

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

⚠ WARNING

- **For safety reasons, do not allow any of the following people to play the game. Failure to observe this warning could result in serious injury.**

    - **Those who need assistance such as the use of apparatus when walking.**

    - **Those who are intoxicated or under the influence of drugs.**

    - **Persons who disregard the product's warning displays.**

- **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.**

⚠ CAUTION

- **For safety reasons, do not allow any of the following people to play the game. Failure to observe this caution could result in an accident or injury.**

    - **Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.**

    - **Those who are not in good health.**

    - **Pregnant women.**

    - **Persons susceptible to motion sickness.**

    - **Those who have high blood pressure or a heart problem.**

    - **Those who have neck or spinal cord problems.**

- **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.**

- **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.**

- **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

3

⚠ CAUTION

- **Be sure to instruct the adult responsible for their children to watch them. Children cannot sense danger. Approaching the player during play may result in accidental contact, collisions or falls. If the control unit is pulled from the controller holder and dropped on the head, it may cause injury.**

- **Caution the player not to wrap the control unit cable around his/her wrist or neck, as this can lead to serious injury.**

- **Immediately stop users from leaning or sitting on the controller panel. Such acts can lead to injury or damage to parts or the shape of the cabinet.**

- **Immediately stop users from swinging or reloading the control unit in a violent manner. Such acts may hurt the user or other people around them.**

- **Playing too close to the cabinet may cause the control unit to hit the cabinet and cause damage. Make sure that players understand to play at a safe distance from the cabinet.**

- **Make sure that players understand not to stand too close together when playing a 2 player game. Swinging the control unit could lead to a player getting hit and may cause injury.**

- **Instruct players to hold the control unit securely while playing. If the Control Unit is dropped, it could cause injury to the player.**

- **Items such as large finger rings can cause injury to the fingers while playing. Instruct players to remove all accessories that could cause an accident before playing.**

- **Instruct players that a single control unit is never to be held by 2 or more people during play. Otherwise there could be dangerous contact or a collision.**
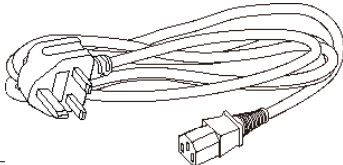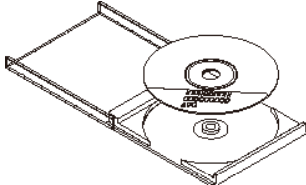
(STOP) IMPORTANT

The control units for use on 1P side (left side) and 2P side (right side) are different. Ensure that players do not confuse the right and left side Control Units when starting play.

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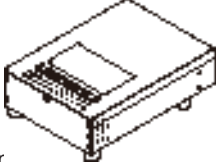
Confirm that the accessories listed in the table below are present when setting up the product.
Accessories marked Spare in the note column are consumable items but included as spares.

Parts not labeled with part numbers are as yet unregistered or cannot be registered. Be sure to handle all parts with care, as some parts are not available for purchase separately.

Part name/Part no.	Diagram/Use etc.	Quantity
OWNER'S MANUAL 574-30-300	This manual	1
KEY		2
POWER CABLE		
DVD SOFTWARE KIT	When you order the DVD only, specify the part number DVR-0026 RGW DVDROM GLG	1

5

The DVD drive is sold separately, but it is required in order to install the software for this product. If you do not have the drive when installing the product, consult the dealer from which you purchased this product. Alternatively, use the kit number below to arrange for a drive.

XKT-1515-01:DVD DRIVE KIT FOR LBG ENG

Part name/Part no.	Diagram/Use etc.	Quantity
DVD DRIVE SERVICE MANUAL 420-6923-01		1
DVD DRIVE 610-0719-03	For software installation.	1
DVD WIRE 605-0094	For software installation	2

6 ASSEMBLY AND INSTALLATION

6

⚠ WARNING

- **Perform assembly work by following the procedure herein stated. If instructions are not followed, or if tasks and/or checks are neglected, an electric shock or other very serious accident, even fatal accident, can occur. Also, customers could be injured while operating the product.**

- **Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.**
- **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.**
- **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.**
- **Do not leave power cable, earth 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. (Wiring diameter: power cable, approx. 8 mm)**
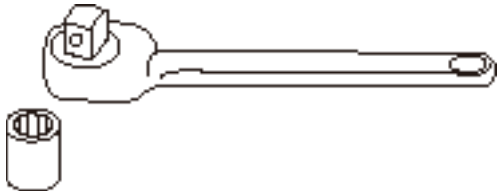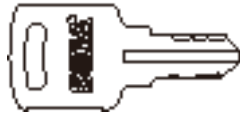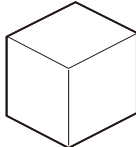
⚠ CAUTION

- **Be careful in handling plastic parts. Be sure not to tighten screws or nuts too tightly. If such parts are exposed to excessive loads or impact, they might become damaged, resulting in fragments or cracks that could cause accidental injury.**

- **When attaching or removing doors or parts, be careful that your hand or finger does not get caught in anything.**

- **Wear appropriate work clothing so that work can be performed safely. Use gloves and safety shoes to prevent accidents or injuries.**

- **To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause accidents such as falling down.**

(STOP) **IMPORTANT**

Be very careful when handling the DLP projector screen. The screen is easily damaged but cannot be repaired. If damaged the entire screen must be replaced.

TOOLS NECESSARY FOR WORK

Phillips screwdriver	
Spanner with variable measuring distance	
Socets for hexagon bolts and nuts	
Master key	
Stepstool	

6-1 ATTACHING THE BILLBOARD

Use several steps to perform the assembly work on the top of the machine.

1 Lift the 574-50-111 marquee front cover with at least 2 people and set it on top of the LCD from the back. Unscrew 4 screws on marquee bracket, and insert between back marquee bracket.
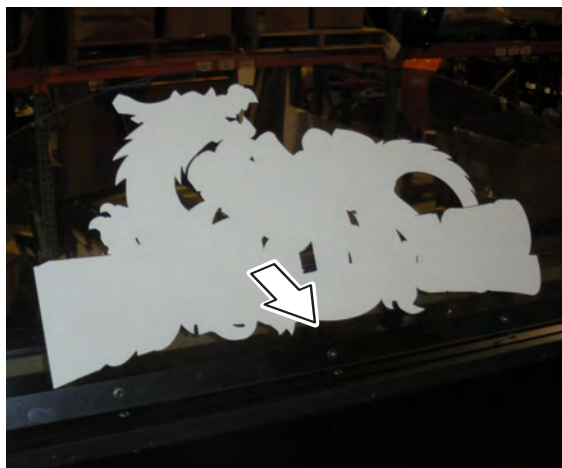
6

2 Lift the 574-30-211 rear marquee with at least 2 people and set it on top of the LCD from the back. Unscrew 4 screws on marquee bracket, and insert between back marquee bracket.

6-2 INSTALLING THE CABINET

⚠ **WARNING**

Be sure to ground the adjusters, and secure the product firmly to the installation location. If the projector moves either during assembly work or during operation after the completion of assembly, a serious accident may occur.

This product has 4 casters and 4 adjusters. After determining the installation location, have the adjusters contact the floor directly, and adjust them so the machine will remain in a level position keeping a space of about 5 mm between the floor and the casters.

1 Move the product to the installation site. Hold the grips on the sides of the cabinet when moving it and changing the direction it faces. Secure a 200 mm space between the back wall and the back of the cabinet for ventilation.
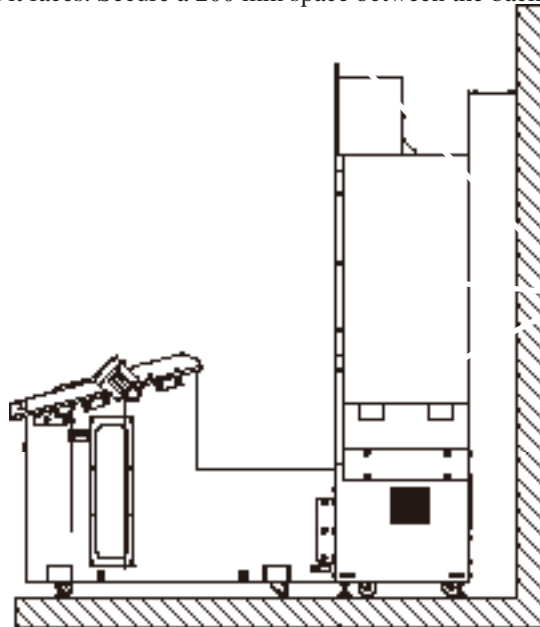
2 Use a wrench to set adjuster heights so that the unit will stay level.

3 After setting, turn adjuster nuts upwards to tighten them and secure adjuster heights.
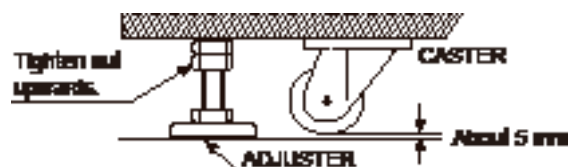
6-3 CONNECTING THE POWER CABLE AND EARTH

⚠ WARNING

- **Use the power supply equipped with an earth leakage breaker. Use of power supply without such a breaker could result in fire if there is a current leakage.**

- **Have available a securely grounded indoor earth terminal. This product is equipped with a earth terminal. Connect it to a earth terminal in the room with the earth wire. Without proper grounding, customers could be electrocuted and product operations might not always be stable.**

- **Do not expose the power cable or earth wire. If these are exposed, customers could stumble over them, for instance, and easily damage them. Additionally, if these lines are damaged, there could be a risk of electrical shock or short circuit. Set these lines at locations where they will not interfere with customer traffic, or attach covers to them.**

- **After laying out the power cable on the floor, be sure to always protect it. If the power cable is left exposed, it can easily be damaged, resulting in electrical shock.**

- **For safety reasons, be sure to first connect the power cable to the product. If the power cable is first connected to the power plug, an accident such as an electric shock or short circuit may occur.**

STOP IMPORTANT

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

The AC unit has main switch, circuit protector and the inlet which connects the power cable.

1   Confirm that the AC unit power switch is at OFF.

Main switch OFF.

2   Connect one end of the earth wire to the AC earth terminal, and the other end to the indoor earth terminal. The accessory power cable contains earth wire. Connect power cable to AC unit inlet, and then insert power plug into "power outlet with earth terminal".
When using a conversion adapter sold on the market to provide power, connect the adaptor's earth wire terminal to an "earth terminal that is securely grounded".
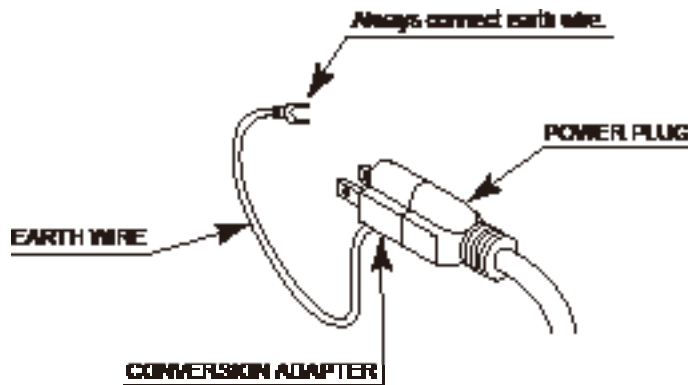
3   The power cable is laid out indoors. Protect the power cable by attaching wire cover to it.
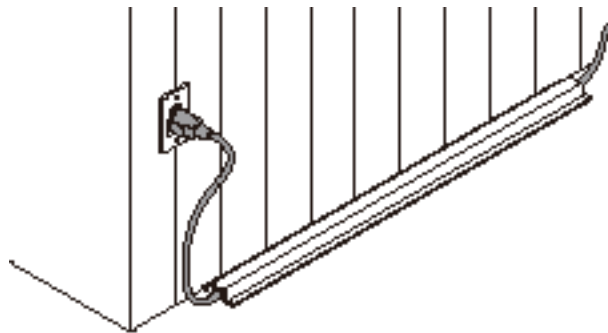
6-4 ASSEMBLING CHECK

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

(1) MONITOR TEST

When MONITOR TEST is chosen from SYSTEM TEST MENU screen, a screen to test the Monitor will be displayed.
Though the Monitor is pre-adjusted at the time of shipment from the factory, view the test screen to determine whether or not adjustment is necessary. If so, refer to Chapter 13-2 "DLP PROJECTOR ADJUSTMENT"and adjust the Monitor.

```
        MONITOR TEST 1/2
    1                      32




    PRESS TEST BUTTON TO NEXT
```

```
        MONITOR TEST 2/2




    PRESS TEST BUTTON TO EXIT
```
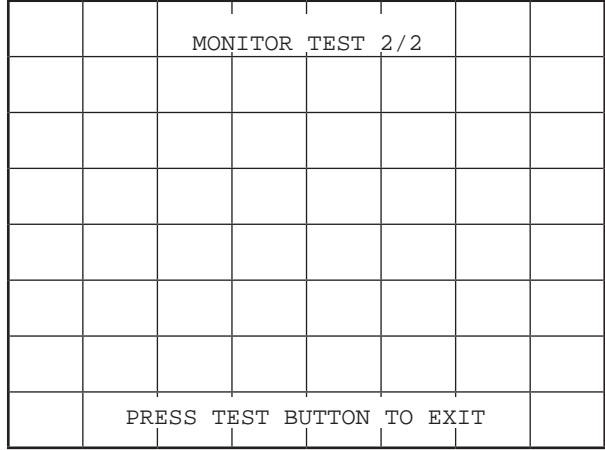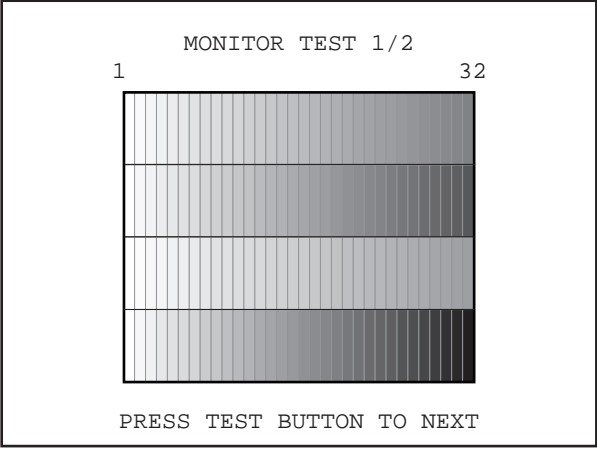
(2) SPEAKER TEST

When SPEAKER TEST is chosen from SYSTEM TEST MENU screen, a screen to test each of the speakers will be displayed.
The RIGHT SPEAKER and the LEFT SPEAKER are the only speakers which can be checked by just changing their respective settings to ON and OFF.

```
                SPEAKER TEST


    LEFT SPEAKER         OFF
    RIGHT SPEAKER        OFF
    REAR LEFT SPEAKER    OFF
    REAR RIGHT SPEAKER   OFF
    CENTER SPEAKER       OFF
    WOOFER SPEAKER       OFF


  -> EXIT


        SELECT WITH SERVICE BUTTON
           AND PRESS TEST BUTTON
```
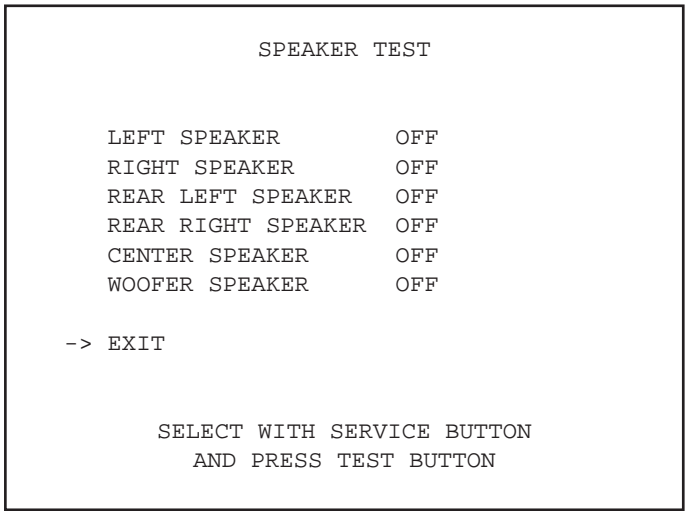
(3) INPUT TEST

When INPUT TEST is chosen from GAME TEST MENU screen, a screen to test the game's switches will be displayed.
Confirm each input device is functioning correctly.
[Normal]
- When the controller is turned towards the screen, the word "OUT" beside "SCREEN IN" will change to "IN."
- If other input devices are operated, the word "OFF" beside the device name will change to "ON."
(See 11-3.)

```
                        INPUT TEST


                             PLAYER1    PLAYER2
        CONTROLLER TRIGGER    OFF        OFF
        CONTROLLER X          **         **
        CONTROLLER Y          **         **
        SCREEN IN             OUT        OUT
        START                 OFF        OFF

        SERVICE               OFF
        TEST                  OFF



                 PRESS TEST BUTTON AND
                 SERVICE BUTTON TO EXIT
```

INPUT TEST screen

(4) OUTPUT TEST

When OUTPUT TEST is chosen from GAME TEST MENU screen, a screen to test lamps and their wiring connections will be displayed.
Confirm each output device is functioning correctly.
[Normal]
- When the TEST Button is pressed, the selected item will change from "OFF" to "ON" and the corresponding output device will operate. If the TEST Button is pressed for an item that is "ON," the device will change to "OFF" and stop operating.
(See 11-4)

```
                    OUTPUT TEST

        START1 LAMP                      OFF
        START2 LAMP                      OFF
        PANEL1 LAMP                      OFF
        PANEL2 LAMP                      OFF
        PLAYER1 CONTROLLER REACTION      OFF
        PLAYER2 CONTROLLER REACTION      OFF
     -> EXIT




             SELECT WITH SERVICE BUTTON
                AND PRESS TEST BUTTON
```

OUTPUT TEST screen

(5) CONTROLLER ADJUSTMENT

When CONTROLLER ADJUSTMENT is chosen from CONTROLLER CALIBRATION SETTING under GAME TEST MENU screen, a screen for adjusting the Control Unit crosshair will be displayed.
Before operating the product, always play the game to verify that there are no irregularities during play and that the crosshair does not require adjustment.
Though the crosshair is adjusted at the factory, adjustment may be required in some situations because the product is disassembled for shipment. (See 11-7.)

```
          PLAYER1 CONTROLLER ADJUSTMENT




                        +



  ↑PLEASE SHOOT GRID WITH PLAYER1 CONTROLLER

          PRESS TEST BUTTON TO EXIT
```

CONTROLLER ADJUSTMENT screen

NOTE: Strong lighting located near the monitor, other machines in the surrounding area, and other objects may have an effect on the controller adjustment.

The above inspections (1) – (4) should be conducted regularly as part of a monthly inspection.
However, (5) CONTROLLER ADJUSTMENT should be conducted once per week.

THE INTERFERENCE PREVENTION WIRING

⚠ WARNING

- **This work should be performed by the site maintenance individual or other skilled professional. Work performed by non-technical personnel can cause malfunctioning.**

- **In order to prevent electric shock and short circuit hazards, be sure to turn the power off before performing work.**

- **Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.**

When the game machines of a same or similar type are installed side by side, their sensors may interfere with each other. To reject the interference, follow the procedure below.

The following game machines employ a same or similar type of sensor. If interference happens to the sensors, operation of the games may be mutually disturbed.

- THE HOUSE OF THE DEAD 2, U/R type, DX type and Super DX type
- DEATH CRIMSON, U/R type and DX type
- THE LOST WORLD, U/R type, DX type and Super DX type
- BRAVE FIRE FIGHTERS
- SAMBA DE AMIGO
- CONFIDENTIAL MISSION, U/R type and DX type
- SHAKATTO TAMBOURINE
- LUPIN THE 3RD THE SHOOTING, U/R type and DX type
- THE MAZE OF THE KINGS, U/R type and DX type
- THE HOUSE OF THE DEAD 3, U/R type and DX type
- VIRTUA COP 3, U/R type and DX type
- GHOST SQUAD, U/R type and DX type
- THE HOUSE OF THE DEAD 4 DX type and SPECIAL type
- 2SPICY
- RAMBO
- Ai Sareru Yori Ai Shitai
- SEGA GOLDEN GUN

1 Turn the power off.

2 Remove the 8 screws, and take back cover off.

3 There is an interference prevention wire on the lower level inside the left side front door.
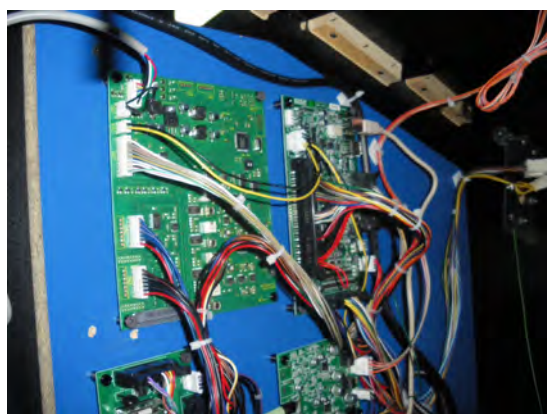
INTERFERENCE PREVENTION WIRE
RMB-60047
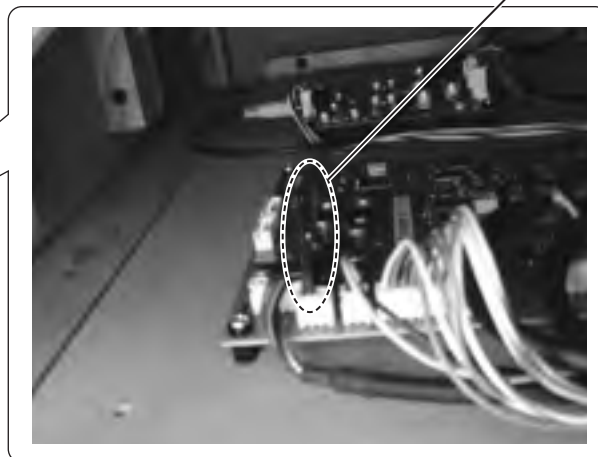
Enlargement

4 Refer to Step 2 and work in reverse order to attach the left front door.

5 If several of the same type of game machines are to be installed beside each other, they should be lined up alternating between ones with the interference prevention wire connected and ones that with the wire removed. Be sure to keep the removed interference prevention wire.

6

7 PRECAUTIONS WHEN MOVING THE MACHINE

⚠ WARNING

- **When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug still inserted can cause the power cable to be damaged, resulting in a fire and/or electric shock.**

- **When moving the machine on the floor, retract the adjusters, and ensure that the casters make contact with the floor. Pay careful attention so that the casters do not run over power cable and earth wires. Damaging the power cable can cause an electric shock and/or short circuit.**

- **When lifting the cabinet, be sure to hold the grips and the bottom part. Lifting the cabinet by holding other portions may damage parts and installation portions due to the empty weight of the cabinet, and may cause personal injury.**

- **When moving the DLP projector, do not push it from the rear side. Push it from sideways. Pushing the DLP projector from the rear side can have the DLP projector fall down, causing personal injury, etc. In case the floor has slanted surfaces or step-like differences, be sure to move the machine by 2 or more persons.**

- **Never disassemble the unit in ways other than those described in this manual. Doing so can cause accidents such as electric shocks, short circuits, and fires.**

⚠ CAUTION

- **Do not hold or press the plastic parts as indicated by the figure. Failure to observe this instruction may break the parts, and eventually the broken pieces may cause a personal injury.**

- **When moving the cabinet, push on the parts made of sheet metal or by holding the handles. Putting fingers into the coin return or other open slots, or opening doors and holding the machine by the door frames could damage the edges or may result with fingers getting shut in the doors.**

(STOP) IMPORTANT

- **If the machine is going to be moved somewhere on a different level, disassemble it into the individual units before doing so. If the machine is tilted or the cabinet is set on an uneven surface the joints may break.**

- **Do not allow ropes to come in contact with the surface of the machine directly or they may scratch it. Put some kind of protective material under the rope where it will touch the machine.**

- **When moving the cabinet, do not hold it by the control unit or pull on the control unit. Doing so could damage the parts or cause them to become deformed.**

8 GAME DESCRIPTION

8-1 HOW TO PLAY

1 When you insert coins, they will be counted in the credit display at the bottom of the screen. When you insert enough coins for a game, the message at the bottom will change from "INSERT COIN (S)" to "PRESS START BUTTON," and the start buttons on either side will flash.
Up to 24 credits can be counted at once. Coins inserted after 24 credits are recorded will not be counted or returned. However, the number of coins inserted will be counted in the data display and the coin meter.
NOTE: The number of credits required for a game can be set in SYSTEM TEST MODE. Refer to 10.
"SYSTEM TEST MODE" for details.

2 Which START button you press determines which side you play on. Once you press the START button, the game begins.

3 Once the game starts, the video demonstration will play, followed by the stage title, and then it will go to the actual game.

8

GAME SCREEN

The score, ammo remaining, player mark, and life of the player playing on the left (PLAYER 1) are shown at the left side of the screen, while those of the player playing on the right (PLAYER 2) are shown at the right side of the screen. Credits are always displayed at the bottom of screen.
If there is no player, the required number of credits is displayed instead.

GAME screen
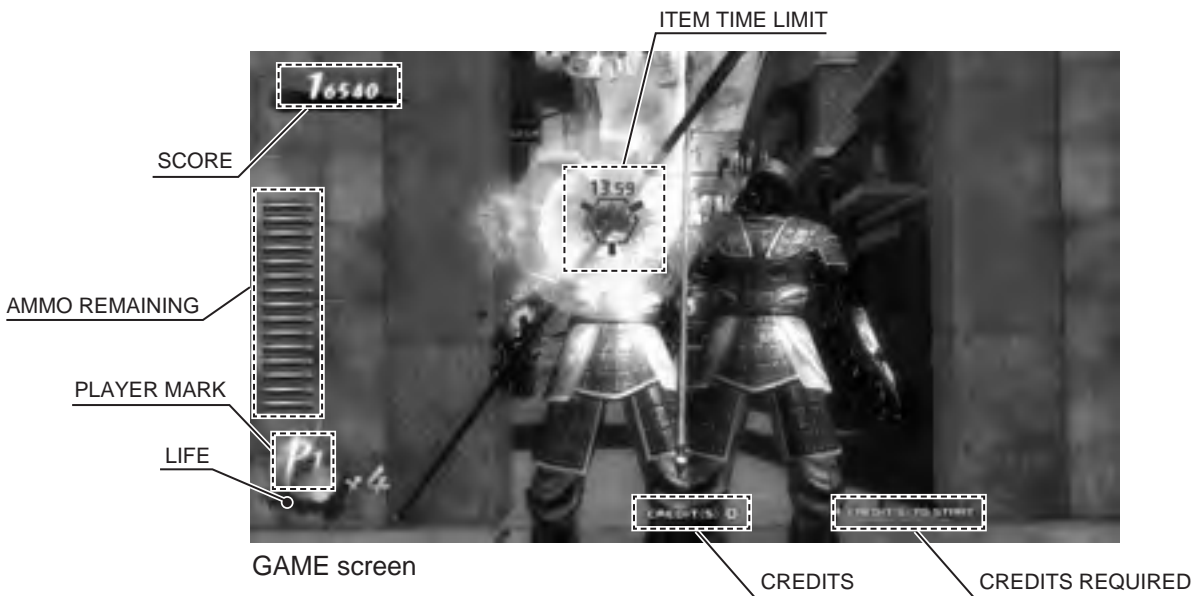
RELOADING

When the player fires all ammo remaining, the gun will be empty. The player can then reload the weapon by aiming it outside the screen. The player can reload this way even if there are still bullets left.
The gun is also reloaded automatically when the trigger is pulled with no ammo remaining. However, this type of reload takes longer than a normal reload.

SCORE ITEMS

Various score items appear when the player shoots treasure boxes or "hidden" boxes in the background. Hidden box appear when the player aims at certain secret areas.
Picking up score items increases the player's score by various amounts based on the type of item.
Shooting fireworks boxes causes explosions that defeat nearby enemies.

8

Coin (+200)

Silver Ingot (+400)
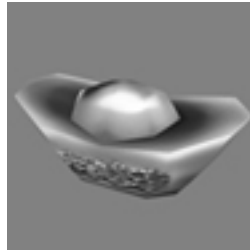
Gold Ingot (+600)

Sword (+800)

Fan (+1,000)
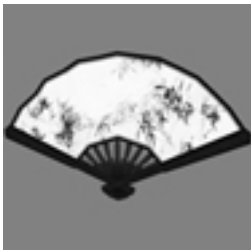
Ginseng (+2,000)

Drum (+100×max.20)

Imperial Seal (+3,000)

Fireworks Box

SHOP ITEMS

In each stage, the player meets an item merchant twice.
The player can purchase various weapons and items from the merchant.
For each stage the player advances, item prices go up by 10%.
In 2-player mode, items cost 70% of the price they are in 1-player mode.

■Weapons (permanent effect)

Attack Power Up (+1)   Magazine (+1)   Fast Reload

■Weapons (limited use)

Machine Gun (+6 sec.)   Shot Gun (+6 sec.)

Piercing Ammo (+1)   Missile (+1)

■Items (one-time use)

Enemy Weakener (+1)   Life (+1)

■Etc.

Mystery Ball

8

8
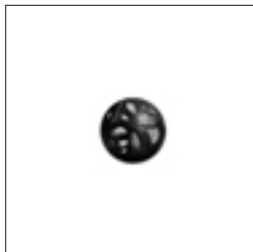
EVENTS

Various events occur in the course of the game, such as "Shoot the arch to block enemies," "Battle your secret rival," "Shoot down the incoming energy balls," and "Shoot the driver of the car."
A "Shoot" prompt appears on screen, telling the player to shoot the target objects marked with red circles.

EVENT screen

If the player succeeds, he/she can get a score bonus (1000 pts.) and sometimes avoid enemy attacks.
If the player fails, he/she will have to battle many enemies or be forced to take damage.

BATTLES WITH BOSSES

A unique boss awaits the player at the end of each stage.
Their weak points are revealed in the form of on-screen prompts.

BOSS BATTLE START screen

WEAK POINT PROMPT

BOSS BATTLE SCREEN

Attacking the boss's weak point drains the boss's LIFE gauge significantly.

When the boss begins an attack, a cancel gauge will sometimes appear.

As the boss approaches the player, the cancel gauge changes from green to yellow, orange, and finally red according to the danger level.

The boss's attack can be avoided by forcing the cancel gauge down to zero.

BOSS'S LIFE GAUGE   BOSS'S CANCEL GAUGE
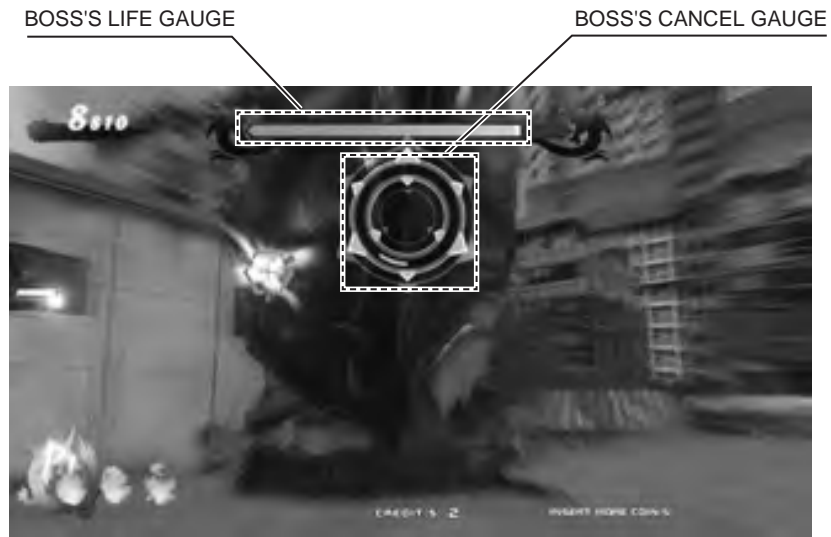
BOSS BATTLE screen

Shooting the boss drains the boss's LIFE gauge. When the boss's LIFE gauge reaches zero, the boss is defeated.

GAME OVER

If both players run out of LIFE, the game ends. LIFE is shown as burning fire.

1   If you want to join the game during play, insert coins and press the START button at any time. If there are enough credits remaining to play, the START button on the side with no one playing flashes continuously. Join the game by pressing the flashing START button.

2   When all LIFE is lost, the CONTINUE message is displayed. If you wish to CONTINUE, insert the required number of coins and press the START button again. If there are enough credits remaining to CONTINUE, you can join again by pressing the START button.
NOTE: The number of credits required to continue can be set in SYSTEM TEST MODE. Refer to 10."
SYSTEM TEST MODE" for details.

3   If your total points rank among the top 10 after completing all the stages in the game, you can enter your name.

8-2 SPECIAL FEATURES

These are special features to encourage users to play the game.
Each feature can be turned ON/OFF and its effects adjusted in TEST MODE.

PREMIUM START CHANCE

Using extra credits to start the game allows players to start in a powered-up state.
Both Players 1 and 2 have only a single chance to do this. The Premium Start Chance feature cannot be used twice in a row.
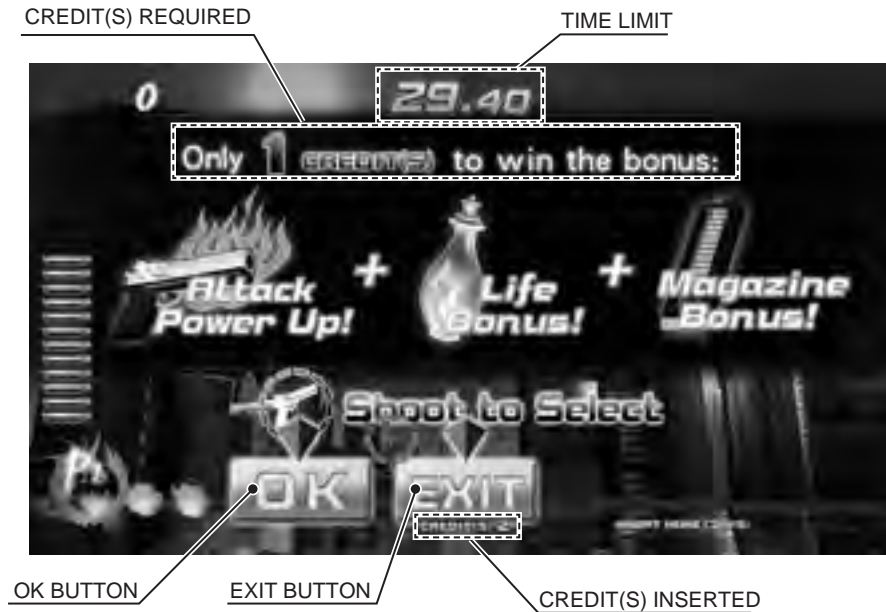
■**Controls**

- The [OK] button lights up when the number of credits inserted meets the requirement for a Premium Start.
- Shooting the [OK] button when it is lit up causes the game to start powered up at the cost of credits.
- Shooting the [EXIT] button causes the game to start normally.

■**Menu Items**

ATTACK POWER UP	Can be set from +1 to +10 in TEST MODE (Default setting: +2)
LIFE BONUS	Can be set from +1 to +9 in TEST MODE (Default setting: +1)
MAGAZINE BONUS	Can be set from +1 to +10 in TEST MODE (Default setting: +2)

EXCHANGE CHANCE

NOTE: Scores achieved with this feature cannot be entered in the score rankings at the end of the game.

Players can spend credits in items shops to gain extra score, which can then be used to purchase items.
Both Players 1 and 2 have only a single chance to do this. The Exchange Chance feature cannot be used twice in a row. (It can, however, be used again in a different shop.)
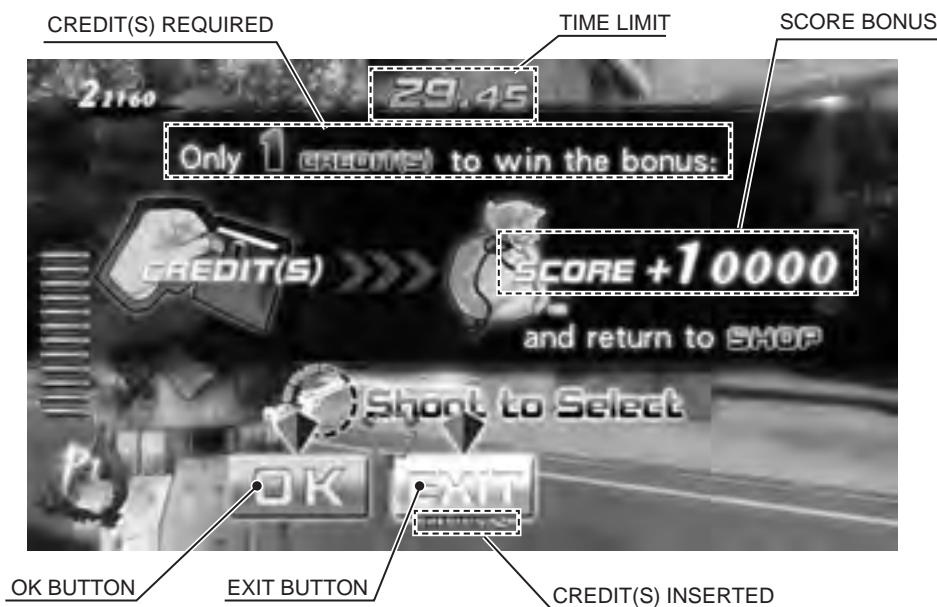
■**Controls**

- The [OK] button lights up when the number of credits inserted meets the requirement for an Exchange Chance.
- Shooting the [OK] button when it is lit up causes the game to award a set number of points at the cost of credits, and then return to the shopping screen.
- Shooting the [EXIT] button causes the player to exit the shop and continue the game.

■**Menu Item**

SCORE BONUS	Can be set from +10000 to +90000 in increments of 10000 in TEST MODE (Default setting: +10000)

CONTINUE BONUS

NOTE: This feature is not included for REGION EXP (EUROPE).

1   When the Continue screen appears, an item roulette begins spinning.

2   The player inserts the required number of credits and presses the START button to continue the game.

3   The player is awarded whichever item was lit up when the START button was pressed.

4   The game continues.

8

ROULETTE

BONUS ITEM (LIT UP)

9 SWITCH UNIT AND COIN METER

⚠ **WARNING**

Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.

⚠ **CAUTION**

When opening/closing or attaching or removing the doors or the other parts, be careful that your hand or finger does not get caught in anything.

(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.

In TEST MODE, the switch unit in the coin chute door is operated.
Unlock and open the coin chute door. Inside is a switch unit.

SWITCH UNIT
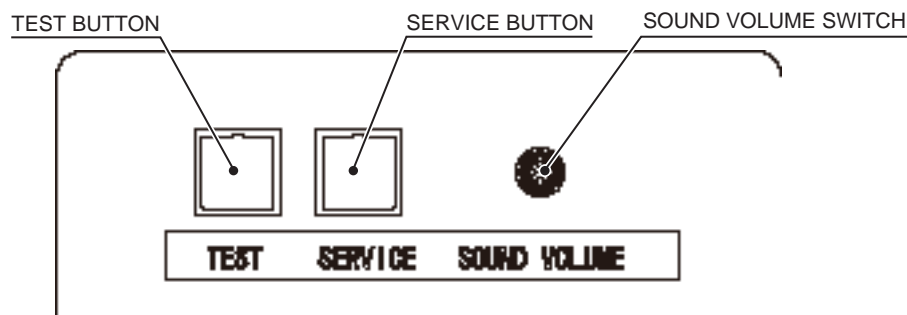
TEST Button (TEST)	Activates TEST MODE. Becomes the button to confirm selections in TEST MODE.
SERVICE Button (SERVICE)	Makes it possible to enter credits for service without increasing the coin meter. Becomes the button to select items in TEST MODE.
SOUND VOLUME Knob (SOUND VOLUME)	Controls the volume for the speakers to the left and right of the control panel. Turn the knob to the right to increase speaker volume.

COIN METER

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

COIN METER

9

10 SYSTEM TEST MODE

STOP IMPORTANT

- **Go to BOOKKEEPING in GAME TEST MODE to access this product's data.**
- **Read the RINGWIDE service manual that comes with the product for details on the SYSTEM TEST MODE. However, you should perform the settings for this product according to the manual you are reading.**
- **The details of changes to TEST MODE settings are saved when you exit from TEST MODE by selecting EXIT from the SYSTEM TEST MODE menu. Be careful because if the power is turned off before that point, changes to the settings will be lost.**
- **Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur.**

In the SYSTEM TEST MODE, the main activities include checking RINGWIDE information and actions and the setting of coin/credit. Also, a screen appears for checking screen adjustments. For details, refer to the RINGWIDE service manual, which is provided with the product. Press the TEST Button to enter TEST MODE and bring up the SYSTEM TEST MENU screen.

Use the following settings with this product. If the settings are not as specified, error messages may appear and the product may not operate as intended.

COIN ASSIGNMENTS

COIN CHUTE TYPE	COMMON
SERVICE TYPE	COMMON

NETWORK SETTING

DHCP	ENABLE

The GAME COST SETTING screen in COIN ASSIGNMENTS appears as follows:

```
            COIN ASSIGNMENTS
            GAME COST SETTING

      *credit (s) to start
      *credit (s) to continue
      *credit (s) to premium start
      *credit (s) to exchange

  ->   EXIT

        SELECT WITH SERVICE BUTTON
          AND PRESS TEST BUTTON
```

■**Menu Items**

* credit (s) to start	Sets the number of credits required to start the game.
* credit (s) to continue	Sets the number of credits required to continue.
* credit (s) to premium start	Sets the number of credits required for Premium Start.
* credit (s) to exchange	Sets the number of credits required for Exchange Chance.

11 GAME TEST MODE

(STOP) IMPORTANT

- **To change settings in the GAME TEST MODE, simply making changes on the setting screen will not be effective. Complete the TEST MODE in normal fashion.**
- **Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur.**

11-1 GAME TEST MENU

Select GAME TEST MENU from the SYSTEM TEST MODE screen to display the GAME TEST MENU screen as follows.

```
                    GAME TEST MENU


           BOOKKEEPING
           INPUT TEST
           OUTPUT TEST
           GAME ASSIGNMENTS
           OPTION ASSIGNMENTS
           CONTROLLER CALIBRATION SETTING
           BACKUP DATA CLEAR
         → EXIT


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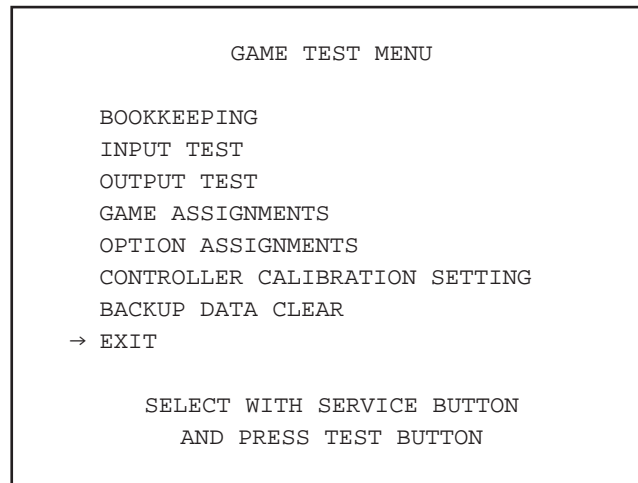
GAME TEST MENU screen

■**Controls**

- Use the SERVICE Button to move the cursor to the desired test item.
- Press the TEST Button to confirm selection of the item.
- Select EXIT and press the TEST Button to return to the SYSTEM TEST MENU screen.

■**Menu Items**

BOOKKEEPING	Displays all recorded game data.
INPUT TEST	Tests each input device used for the game.
OUTPUT TEST	Tests each output device used for the game.
GAME ASSIGNMENTS	Adjusts all game settings.
OPTION ASSIGNMENTS	Adjusts game options.
CONTROLLER CALIBRATION SETTING	Adjusts aim settings for control units.
BACKUP DATA CLEAR	Erases all types of game records.

11-2 BOOKKEEPING

Each game record can be viewed.

```
              BOOKKEEPING 1/3


     COIN 1                 *
     COIN 2                 *
     TOTAL COINS            *

     COIN CREDITS           *
     SERVICE CREDITS        *
     TOTAL CREDITS          *



       PRESS TEST BUTTON TO NEXT
```
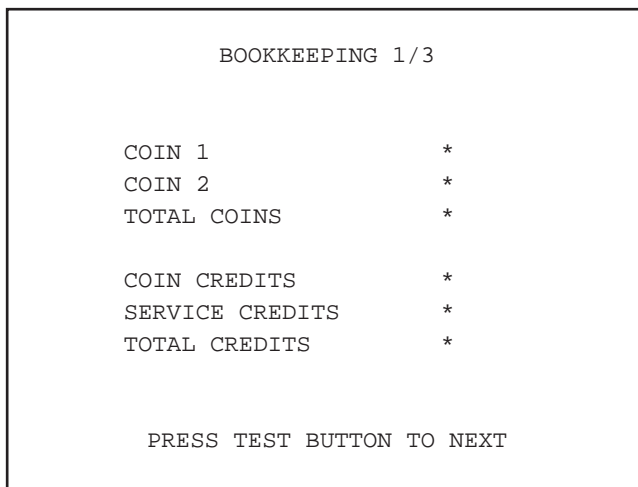
BOOKKEEPING 1/3 screen

■**Controls**

- Press the TEST Button to move to BOOKKEEPING 2/3 screen.

■**Menu Items**

COIN 1	Number of coins inserted in coin chute 1.
COIN 2	Number of coins inserted in coin chute 2.
TOTAL COINS	Total Number of coins inserted in coin chute.
COIN CREDITS	Number of credits for coins inserted.
SERVICE CREDITS	Number of credits entered with the SERVICE Button.
TOTAL CREDITS	Total number of all credits.

11

```
          BOOKKEEPING 2/3


 NUMBER OF GAMES                   *
 FIRST PLAY                        *
 CONTINUE PLAY                     *
 PREMIUM START CHANCE              *
 EXCHANGE CHANCE                   *
 TOTAL TIME         *D **H **M **S
 PLAY TIME          *D **H **M **S
 AVERAGE PLAY TIME        *M **S
 LONGEST PLAY TIME        *M **S
 SHORTEST PLAY TIME       *M **S


       PRESS TEST BUTTON TO NEXT
```
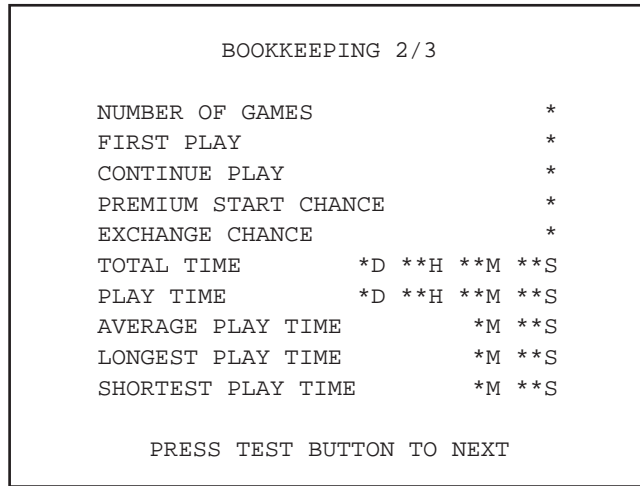
BOOKKEEPING 2/3 screen

■Controls

- Press the TEST Button to move to BOOKKEEPING 3/3 screen.

■Menu Items

NUMBER OF GAMES	Total number of games played by Player 1 and Player 2.
FIRST PLAY	Total number of first time plays by Player 1 and Player 2.
CONTINUE PLAY	Total number of times Player 1 and Player 2 opted to continue.
PREMIUM START CHANCE	Total number of times Player 1 and Player 2 opted for Premium Start.
EXCHANGE CHANCE	Total number of times Player 1 and Player 2 opted for Exchange Chance.
TOTAL TIME	Amount of time the cabinet has been in operation.
PLAY TIME	Amount of time the game has been played.
AVERAGE PLAY TIME	Average play time for one game.
LONGEST PLAY TIME	Longest play time for one game.
SHORTEST PLAY TIME	Shortest play time for one game.

```
          BOOKKEEPING 3/3

          GAME HISTOGRAM

   0M 00S - 0M 29S        *
   0M 30S - 0M 59S        *
   1M 00S - 1M 29S        *
   1M 30S - 1M 59S        *
                 :
                 :
   9M 00S - 9M 29S        *
   9M 30S - 9M 59S        *
   OVER   10M 00S         *


       PRESS TEST BUTTON TO EXIT
```
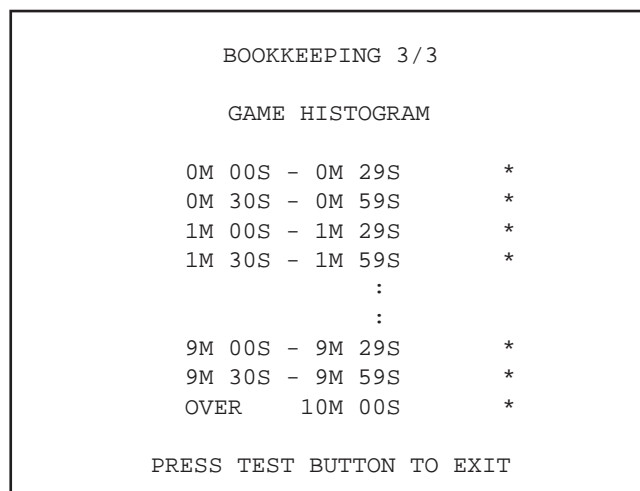
BOOKKEEPING 3/3 screen

■Controls

- Press the TEST Button to return to GAME TEST MENU screen.

■Menu Items

This displays play times on a scale from 0M00S to 9M59S based on 30-second intervals.
All play times 10 minutes or over are included in the item OVER 10M00S.

11-3 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.

```
                    INPUT TEST

                         PLAYER1   PLAYER2
    CONTROLLER TRIGGER   OFF       OFF
    CONTROLLER X         **        **
    CONTROLLER Y         **        **
    SCREEN IN            OUT       OUT
    START                OFF       OFF

    SERVICE              OFF
    TEST                 OFF

            PRESS TEST BUTTON AND
          SERVICE BUTTON TO EXIT
```

INPUT TEST screen

■**Controls**

- The SCREEN IN setting is normal if it changes from "OUT" to "IN" when the control units are pointed at the screen.
- Settings other than SCREEN IN are normal if they change from "OFF" to "ON" when the corresponding input device is operated.
- Press the TEST Button and the SERVICE Button simultaneously to return to GAME TEST MENU screen.

■**Menu Items**

CONTROLLER TRIGGER	This will say "ON" when the triggers on the control units are being pulled and "OFF" when they are released.
CONTROLLER X	This shows the aim location for the X direction on the control units.
CONTROLLER Y	This shows the aim location for the Y direction on the control units.
SCREEN IN	This will say "IN" when the control units are aimed inside the screen and "OUT" when they are aimed outside the screen.
START	This will say "ON" when the START buttons are being pressed and "OFF" when they are released.
SERVICE	This will say "ON" when the SERVICE Button is being pressed and "OFF" when it is released.
TEST	This will say "ON" when the TEST Button is being pressed and "OFF" when it is released.

11

11-4 OUTPUT TEST

This screen is for confirming the proper operation of each output device used by the game.
Periodically use this screen to check the status of each output device.

```
              OUTPUT TEST

  START1 LAMP                      OFF
  START2 LAMP                      OFF
  PANEL1 LAMP                      OFF
  PANEL2 LAMP                      OFF
  PLAYER1 CONTROLLER REACTION   OFF
  PLAYER2 CONTROLLER REACTION   OFF
→ EXIT


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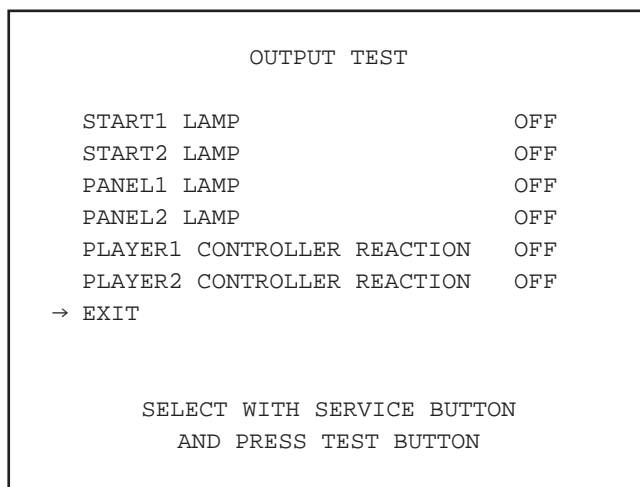
OUTPUT TEST screen

■Controls

- Use the SERVICE Button to move the cursor to the desired test item.
- On the PANEL1/2 LAMP settings, the value changes each time the TEST Button is pressed, switching to a different color.
- When the TEST Button is pressed for other selected items, "OFF" will change to "ON" and the corresponding output device will operate. If the TEST Button is pressed for an item that is "ON," the device will change to "OFF" and stop operating.
- Select EXIT and press the TEST Button. The GAME TEST MENU screen reappears.

■Menu Items

START1 LAMP	Player 1 START Button lamp.
START2 LAMP	Player 2 START Button lamp.
PANEL1 LAMP	LED panel lights up in a "+" shape. (See "1" on the figure in below.) Cycle setting from "1" through "7" to change colors.
PANEL2 LAMP	LED panel lights up in an "X" shape. (See "2"on the figure in below.) Cycle setting from "1" through "7" to change colors.
PLAYER1 CONTROLLER REACTION	Activates the solenoid in Player 1's control unit. Reverts to "OFF" after one activation.
PLAYER2 CONTROLLER REACTION	Activates the solenoid in Player 2's control unit. Reverts to "OFF" after one activation.
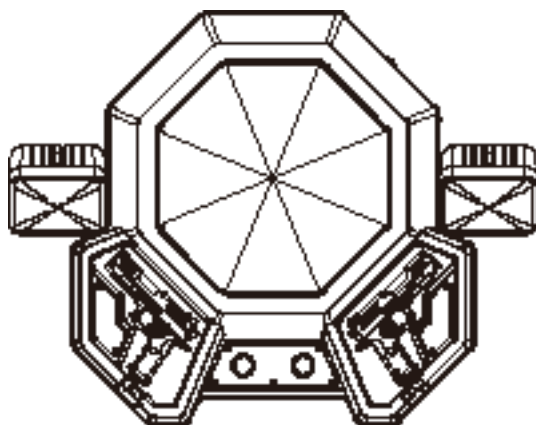
11-5 GAME ASSIGNMENTS

All settings such as level of game difficulty or mode of the game are adjusted.

```
              GAME ASSIGNMENTS

    GAME DIFFICULTY                NORMAL
    ADVERTISE SOUND                NORMAL
    INITIAL LIFE                   *
    MAX LIFE                       *
    RANDOM REVIVAL                 ON
    PLAYER1 CONTROLLER REACTION    ON
    PLAYER2 CONTROLLER REACTION    ON
    VOICE LANGUAGE                 ENGLISH
    CABINET TYPE                   EUROPE

  → EXIT


         SELECT WITH SERVICE BUTTON
          AND PRESS TEST BUTTON
```
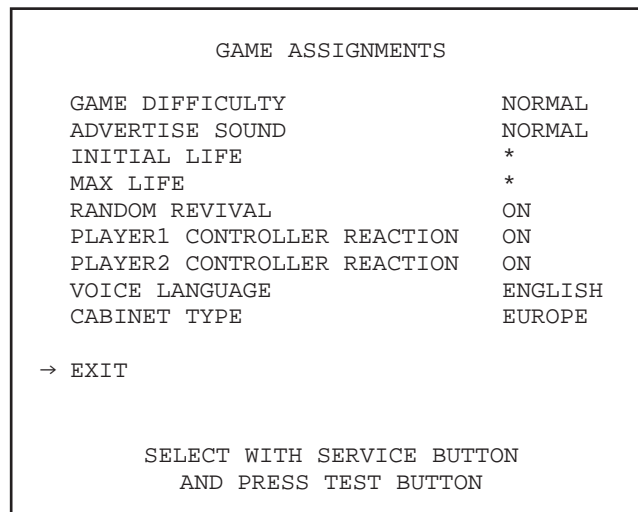
GAME ASSIGNMENT screen

■Controls

- Use the SERVICE Button to move the cursor to the desired test item.
- Press the TEST Button to change the value of the selected setting.
- Select "EXIT" and press the TEST Button to return to the GAME TEST MENU screen.

■Menu Items

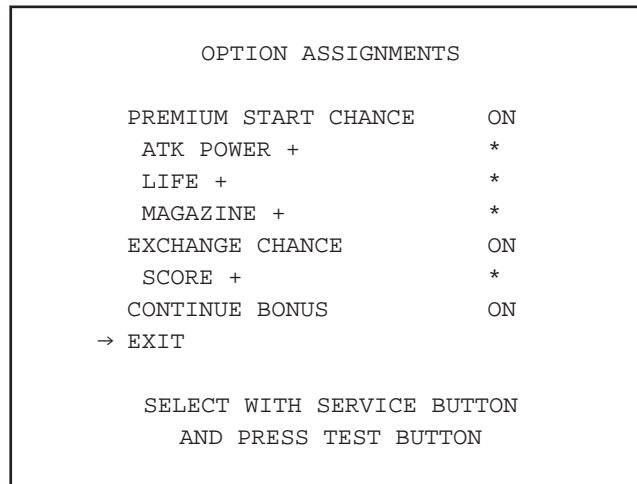|	
GAME DIFFICULTY	Sets the level of difficulty to one of five levels. In order of difficulty: VERY EASY -> MEDIUM EASY ->NORMAL -> MEDIUM HARD -> VERY HARD. (Default setting: NORMAL)
ADVERTISE SOUND	Sets the sound level for the advertisements to one of 5 levels, from loudest to softest: NORMAL -> 3/4 -> 1/2 -> 1/4 -> OFF. (Default setting: NORMAL)
INITIAL LIFE	The number of LIFE(s) the player will start the game with. Can be set between 1 and 9. However, cannot be set higher than the MAX LIFE setting. (Default setting: 3)
MAX LIFE	The maximum amount of LIFE(s) a player may have. Can be set between 1 and 9. (Default setting: 9)
RANDOM REVIVAL	Turns RANDOM REVIVAL ON/OFF; If set to "ON," two players cannot die at the same time. (Setting this to "ON" extends play time, but also increases the rate of continues.) (Default setting: ON)
PLAYER1 /PLAYER2 CONTROLLER REACTION	Turns the reaction of player control units ON/OFF. (Default setting: ON)
VOICE LANGUAGE	Toggles the in-game language. (ENGLISH/CHINESE) (Default setting: ENGLISH)
CABINET TYPE	Automatically displays the cabinet type. (EUROPE/ASIA) (REGION EXP only)

11

11-6 OPTION ASSIGNMENTS

Adjust game options.

```
            OPTION ASSIGNMENTS

   PREMIUM START CHANCE       ON
    ATK POWER +               *
    LIFE +                    *
    MAGAZINE +                *
   EXCHANGE CHANCE            ON
    SCORE +                   *
   CONTINUE BONUS             ON
 →  EXIT


     SELECT WITH SERVICE BUTTON
       AND PRESS TEST BUTTON
```
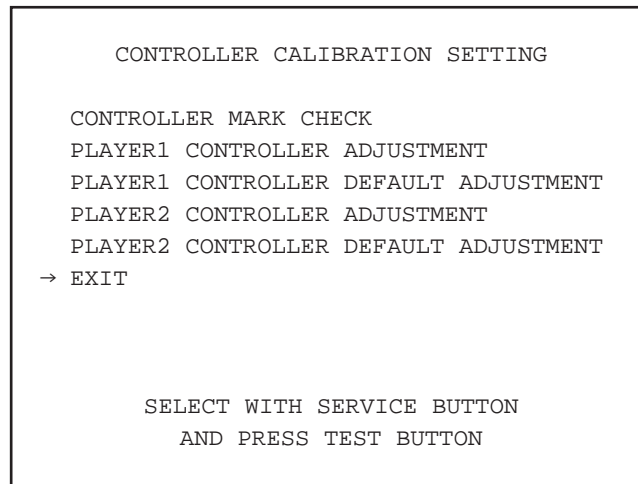
OPTION ASSIGNMENTS screen

■Controls

- Use the SERVICE Button to move the cursor to the desired test item.
- Select EXIT and press the TEST Button. The GAME TEST MENU screen reappears.

■Menu Items

PREMIUM START CHANCE	Set PREMIUM START CHANCE ON/OFF: Setting to "ON" makes the Premium Start menu available at the start of the game (credits required). Inserting additional credits awards the player bonuses as set below. *NOTE: Cannot be set to "ON" when set to FREE PLAY.* *(Default setting: ON)*	
	ATK POWER +	The level of ATTACK POWER the player will gain. Can be set between 1 and 10. (Default setting: 2)
	LIFE +	The amount of LIFE the player will gain. Can be set between 1 and 9. (Default setting: 1)
	MAGAZINE +	The number of MAGAZINEs the player will gain. Can be set between 1 and 10. (Default setting: 2)
EXCHANGE CHANCE	Set EXCHANGE CHANCE ON/OFF: Setting to "ON" allows players to exchange credits for score items at the item store screen. Scores are worth 70% of the set value during 2-player simultaneous play. *NOTE: Cannot be set to "ON" when set to FREE PLAY.* *(Default setting: ON)*	
	SCORE +	The number of points the player will gain. Can be set between 10000 and 90000, in 10000 increments. (Default setting: 10000)
CONTINUE BONUS	Set CONTINUE BONUS ON/OFF. Setting to "ON" allows players to get bonus items when continuing. *NOTE: The CONTINUE BONUS setting is not displayed for CABINET TYPE EUROPE; the setting defaults to "OFF" for CABINET TYPE ASIA. Cannot be set to "ON" when set to FREE PLAY.*	

11

11-7 CONTROLLER CALIBRATION SETTING

This screen allows for the adjustment of the control unit's crosshair settings which are used during game play.

```
        CONTROLLER CALIBRATION SETTING


   CONTROLLER MARK CHECK
   PLAYER1 CONTROLLER ADJUSTMENT
   PLAYER1 CONTROLLER DEFAULT ADJUSTMENT
   PLAYER2 CONTROLLER ADJUSTMENT
   PLAYER2 CONTROLLER DEFAULT ADJUSTMENT
 → EXIT




        SELECT WITH SERVICE BUTTON
           AND PRESS TEST BUTTON
```

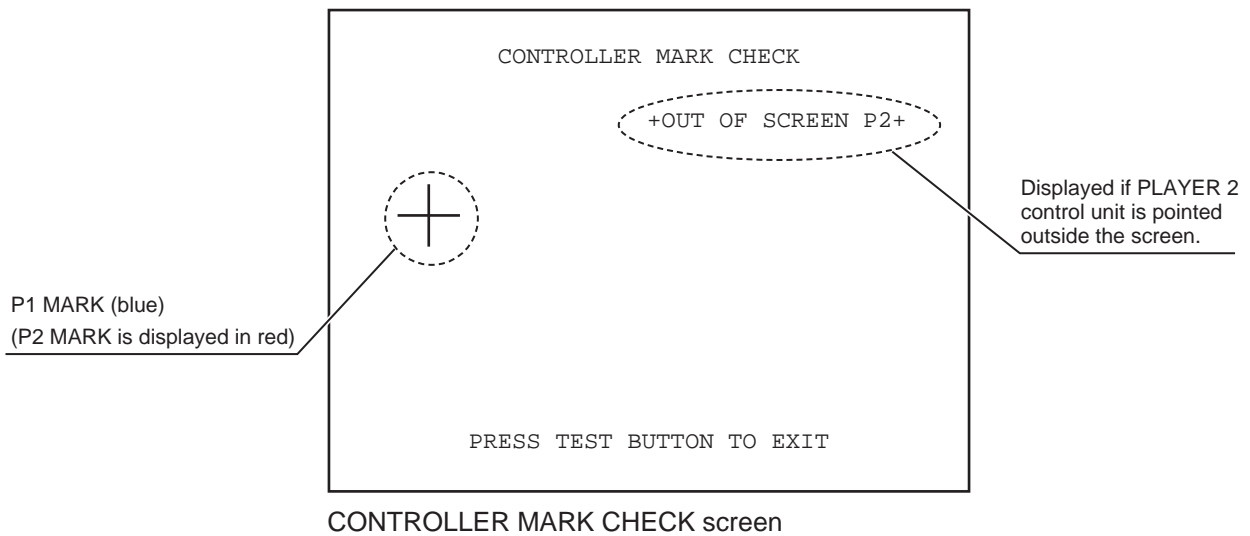CONTROLLER CALIBRATION SETTING screen

■Controls

- Use the SERVICE Button to move the cursor to the desired test item.
- Press the TEST Button to change the value of the selected setting.
- To abort calibration, press the TEST Button to cancel.
- Select EXIT and press the TEST Button. The GAME TEST MENU screen reappears.

■Menu Items

CONTROLLER MARK CHECK	Checks the gun sights. P1 and P2 control units are checked at the same time.
PLAYER1 / PLAYER2 CONTROLLER ADJUSTMENT	Calibrates Player 1 and Player 2 control units.
PLAYER1 / PLAYER 2 CONTROLLER DEFAULT ADJUSTMENT	Resets Player 1 and Player 2 control units to their factory default settings.

11

CONTROLLER MARK CHECK

Check the marks (targeting sights) for Players 1 and 2.

```
                CONTROLLER MARK CHECK

                          +OUT OF SCREEN P2+


                                                    Displayed if PLAYER 2
                                                    control unit is pointed
                 +                                  outside the screen.



P1 MARK (blue)
(P2 MARK is displayed in red)




                PRESS TEST BUTTON TO EXIT
```
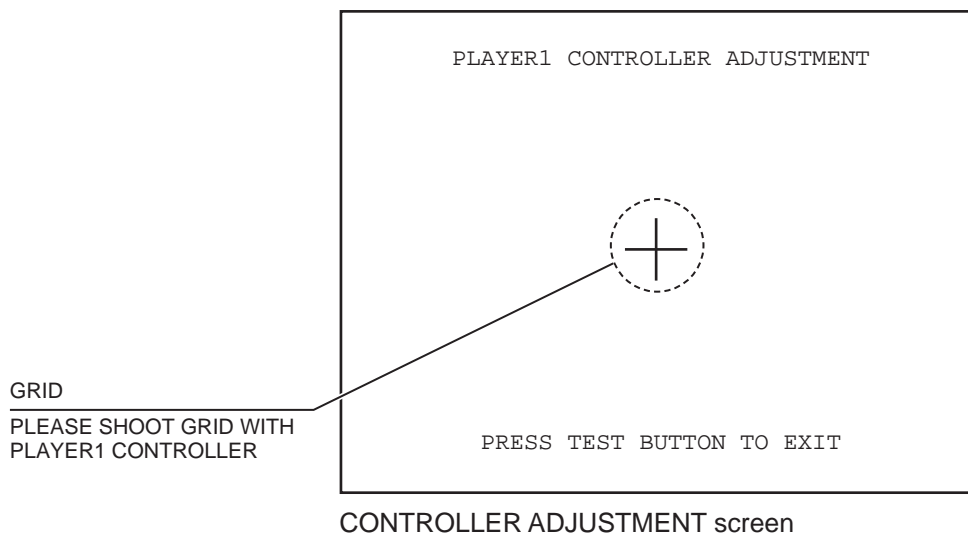
CONTROLLER MARK CHECK screen

■**Controls**

-Point the control units at the screen to display the marks (targeting sights).
-"OUT OF SCREEN" is displayed when the control units are pointed outside the screen.
-Press the TEST Button to return to the CONTROLLER CALIBRATION SETTING screen.

PLAYER1 / PLAYER2 CONTROLLER ADJUSTMENT

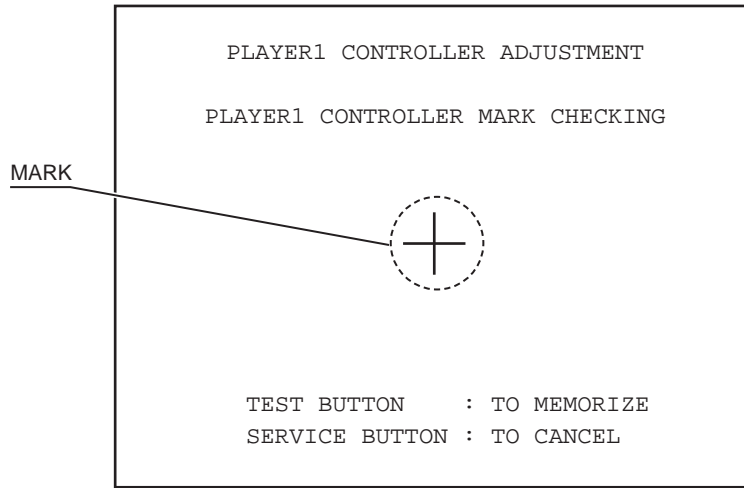Calibrate PLAYER 1/PLAYER 2 control units.
(The below image shows the calibration screen for Player 1. The screen for Player 2 is the same.)

```
             PLAYER1 CONTROLLER ADJUSTMENT




                              +


GRID
PLEASE SHOOT GRID WITH          PRESS TEST BUTTON TO EXIT
PLAYER1 CONTROLLER
```

CONTROLLER ADJUSTMENT screen

■**Controls**

1   Align the top of the groove on the control unit's rear sight with the horizontal line of the plus sign on the screen.

2   Align the top of the control unit's front sight with the horizontal line as well.

3   Pull the trigger when the top of the rear sight and top of the front sight line up with the center of the plus sign on the screen.

4 Shoot the upper left, then the lower right, and finally the center of the screen to complete the process. The screen will display "NOW CALCULATING.".

5 When the calibration screen is complete, check to make sure the mark (targeting sight) is properly displayed.

```
        PLAYER1 CONTROLLER ADJUSTMENT

      PLAYER1 CONTROLLER MARK CHECKING

MARK ─────────────────



                           +




          TEST BUTTON    : TO MEMORIZE
          SERVICE BUTTON : TO CANCEL
```
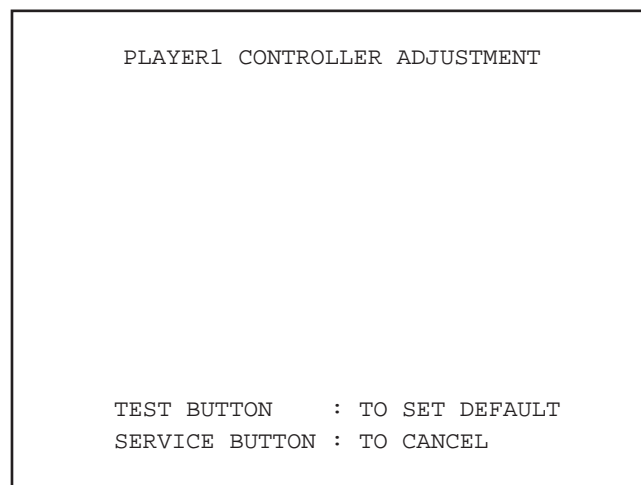
CONROLLER ADJUSTMENT screen (MARK CHECK)

6 Press the TEST Button to save calibration settings and return to the CONTROLLER CALIBRATION SETTING screen. Press the SERVICE Button to exit to the CONTROLLER CALIBRATION SETTING screen without saving calibration settings.

11

DEFAULT ADJUSTMENT

Set the values for the control units to default.

```
         PLAYER1 CONTROLLER ADJUSTMENT








          TEST BUTTON    : TO SET DEFAULT
          SERVICE BUTTON : TO CANCEL
```

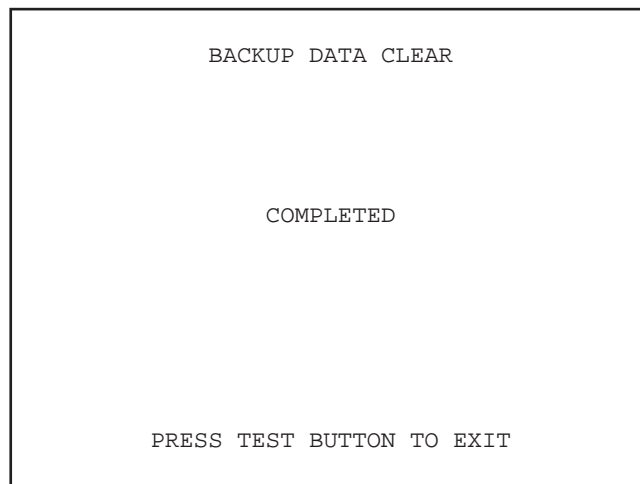DEFAULT ADJUSTMENT screen

■**Controls**

- Press the TEST Button to reset settings to their factory defaults. The screen will display "COMPLETED". Press the TEST Button again to return to the CONTROLLER CALIBRATION SETTING screen.
- Press the SERVICE Button to exit to the CONTROLLER CALIBRATION SETTING screen without resetting calibration settings to default.

11-8 BACKUP DATA CLEAR

Delete various game data.

```
BACKUP DATA CLEAR




      YES (CLEAR)
   -> NO (CANCEL)




   SELECT WITH SERVICE BUTTON
    AND PRESS TEST BUTTON
```
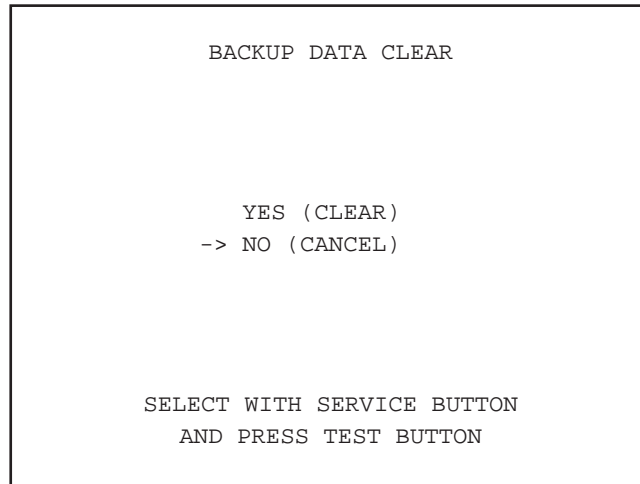
BACKUP DATA CLEAR screen (1/2)

```
BACKUP DATA CLEAR



    COMPLETED




PRESS TEST BUTTON TO EXIT
```

BACKUP DATA CLEAR screen (2/2)

■**Controls**

- Use the SERVICE Button to move the cursor to the desired test item.
- Select "YES (CLEAR)" and press the TEST Button to clear game operational data. Once data is cleared, the screen will display "COMPLETED". Press the TEST Button again to return to the GAME TEST MENU screen.
- Select "NO (CANCEL)" and press the TEST Button to return to the GAME TEST MENU screen without clearing data.

12 CONTROL PANEL

⚠ WARNING

- **Before starting to work,, be sure to turn the power off. Without turning the power off can cause an electric shock or short circuit.**

- **Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.**

12-1 REMOVING THE CONTROL PANEL

---

1   Turn the power off.

---

2   Remove the 4 tamper screws.

Tamper Scres(4)

---

3   Lift the front side of the control panel and then pull the back forward. At this point, the connector on the back of the control panel is still attached, so do not force it.

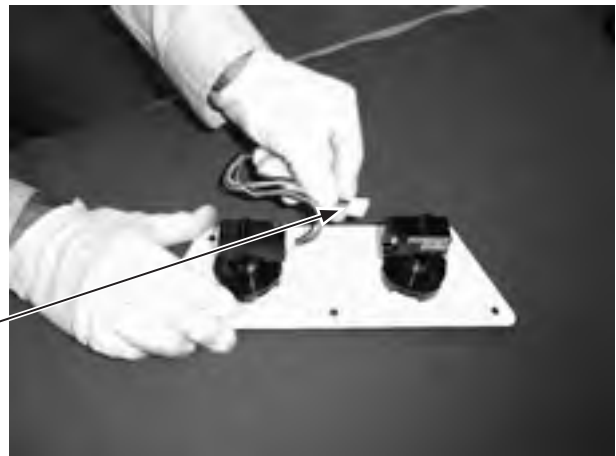*4* Disconnect the connector and take the control panel off.

CONNECTOR
YL8P

12-2 REPLACING THE START BUTTON

1 Refer to 12-1 "REMOVING THE CONTROL PANEL" to take the control panel off.

2 Disconnect the connector from the switch.
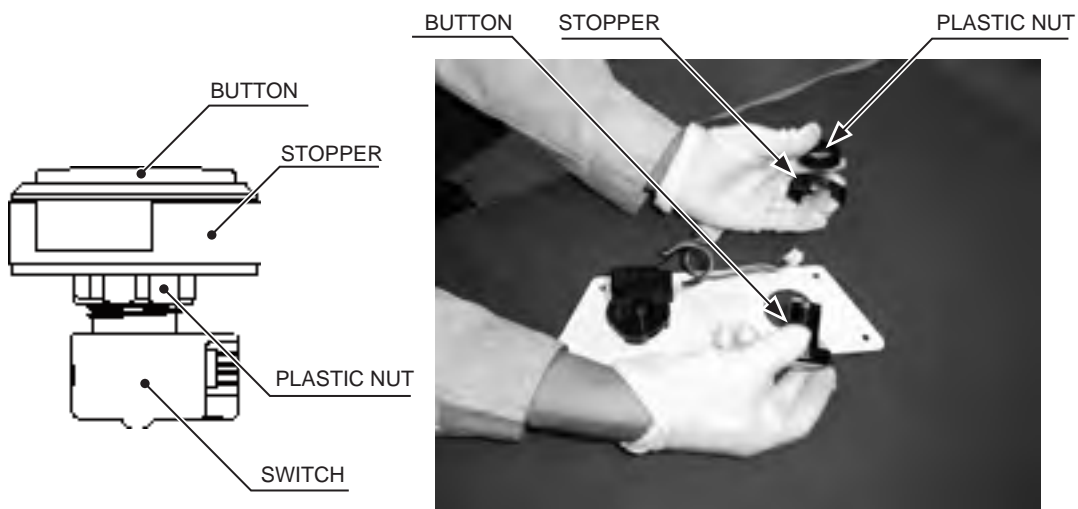*NOTE: The 1P and 2P START buttons are distinguished by a stamp.*

CONNECTOR
SM4P

3 Turn the switch about 45 degrees in a counterclockwise direction and pull it out.

4   Remove the plastic nut and take off the stopper and the button.

NOTE: When ordering a replacement start button, order part number 509-6077.

START BUTTON (509-6077)

12

13 LCD unit

⚠ CAUTION

The LCD is adjusted when shipping from the factory. Avoid any unnecessary adjustment. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.

(STOP) IMPORTANT

- If the adjustment method in this manual does not resolve the problem contact the customer service number in this manual or your supplier.

- There is no way of knowing when the LCD light is going to cease to function. Once it ceases to function, the LCD unit will be unable to display anything and the product cannot be used.

- Do not stick tape, stickers or anything else onto the screen. Any kind of adhesive may damage the surface of the screen.

13

13-1 CLEANING THE SCREEN

(STOP) **IMPORTANT**

Since the LCD screen is susceptible to damage, pay careful attention to its handling. Do not clean the screen with volatile chemicals, solvents or alkaline/acidic cleaners.

Clean the screen surface once a week.
Dip a soft cloth in water 40 degrees or below, wring it out firmly, and use it to gently wipe the screen.
If there are stains that can't be removed with warm water, use a neutral detergent diluted to 2-3%.
Refrain from using other chemicals, solvents, bleaches and cleaners because they may affect the screen.
Also do not use chemically-treated cloths.
The screen is easily damaged, so avoid scratching it with hard objects or striking it with a duster or other objects.
If the stains are serious, contact the office detailed in this manual or the point-of-purchase for this product.

13
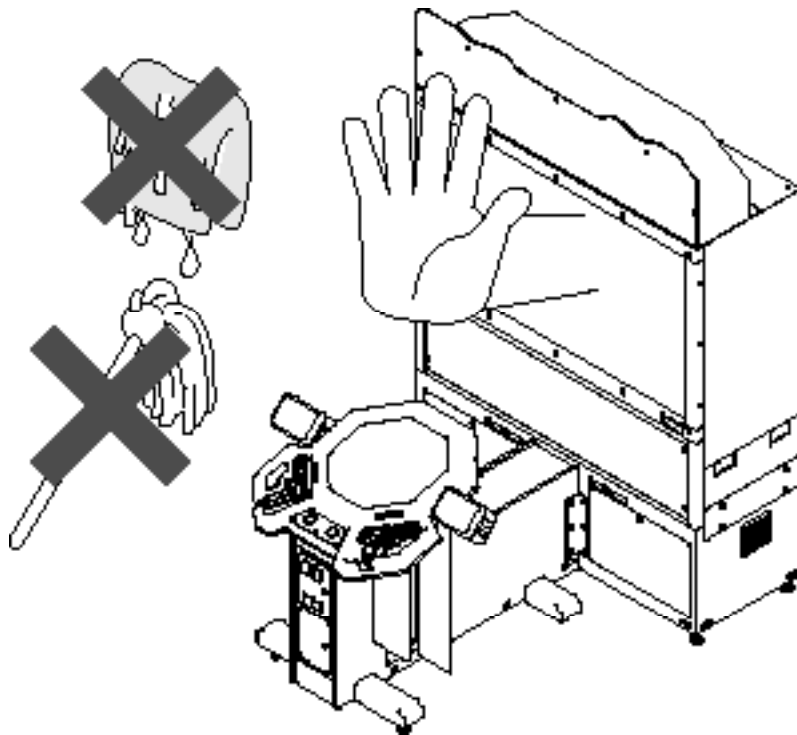
14 CONTROL UNIT

⚠ WARNING

- **Before starting to work, be sure to turn the power off. Without turning the power off can cause an electric shock or short circuit.**

- **Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.**

- **Exercise due caution in performing soldering procedures. If soldering iron is handled carelessly, there could be fires or burns.**

⚠ CAUTION

- **When fastening plastic parts, be careful not to tighten screws and nuts excessively. Failure to observe this may damage the parts and cause injury due to fragments resulting from damage.**

- **After the unit has been disassembled and reassembled again, check carefully to be sure that there are no gaps or rattling at the junctions and that the trigger can be operated smoothly. If there are gaps or rattling, or if operation is not satisfactory, the players could get fingers or hands caught, resulting in injury.**

- **Be sure to inspect control unit surfaces for cracks and damage. Players could be injured if they play when the unit is cracked or damaged.**

- **Assemble so that there is no gap between the L and R covers. If there is a gap or rattling, the players could get fingers or hands caught, resulting in injury.**


STOP IMPORTANT

- **Do not cut the tie that holds the wires together inside the control unit. Doing so can lead to connection failures with the connectors inside the unit. If the tie must be cut to replace wires or perform other such work, make sure that they are returned to the original position and tied together again.**

- **Once the product has been disassembled, use slack preventive agent (product No. : 090-0012-N). Coat screws with suitable amounts of this agent and then tighten them. If this agent is not used, the product might start rattling or come apart.**

- **Use the slack preventive agent prescribed in these instructions. If any other agent is used, there could be chemical changes that inhibit the use of screws and part surfaces could be damaged.**

- **Be careful not to damage or lose small parts or screws.**

- **When a part has been replaced, be sure to always make adjustments and check conditions in TEST MODE.**

If the control unit does not operate satisfactorily and adjustments in TEST MODE are ineffective, it could be that parts inside the control unit have been damaged.

Follow the steps given below to remove the control unit, then take it apart and replace parts.
To replace parts in the control unit, detach the L and R covers of the outer part.
Because internal parts are inserted on the R cover side, work with the R cover facing downward.

14
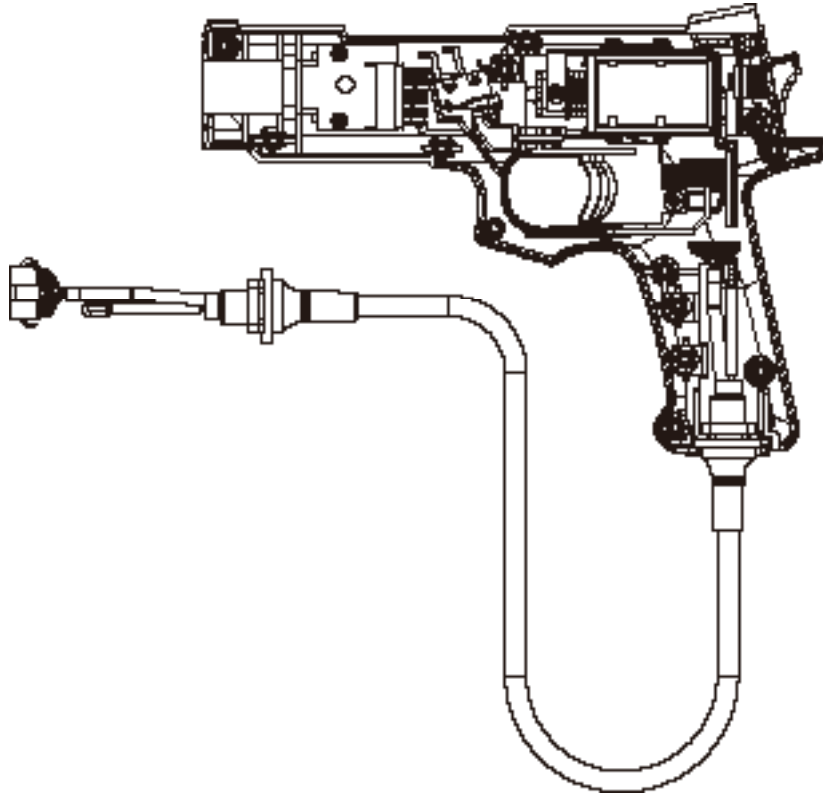
14-1 REMOVING THE CONTROL UNIT

Remove the 1P and 2P control units.

1P CONTROL UNIT

2P CONTROL UNIT

---
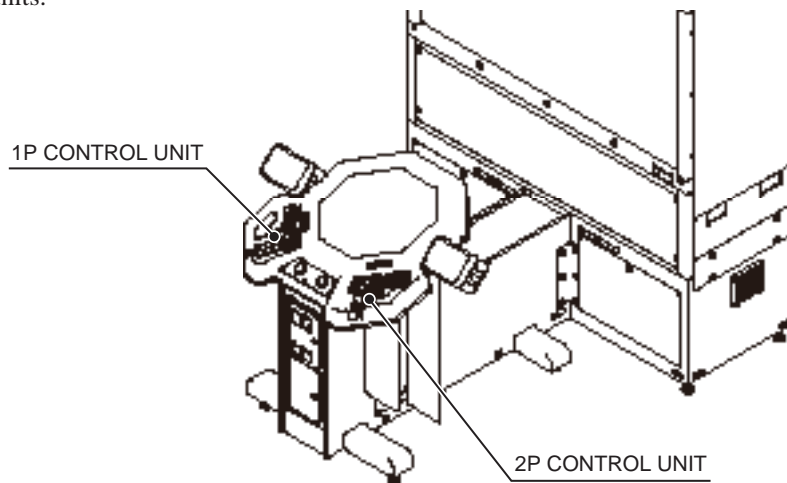
1   Turn the power off.

---

2   Remove the 4 screws and pull out the control unit's connector.

SCREW (4), black

NOTE: When attaching, confirm the direction of the bracket and the cable.

14

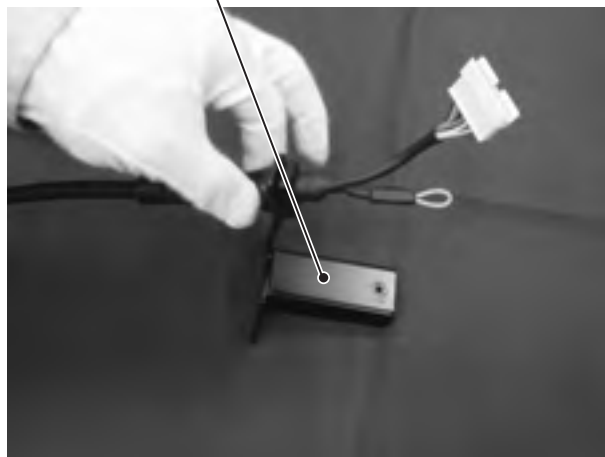*3*   Disconnect the connector and take the control unit off.

4   Remove the screw and take the controller cable bracket off.

SCREW (1)
M4 x 8, w/flat & spring washers

CONTROLLER CABLE BRACKET


14

14-2 REPLACING THE MICROSWICH

There are microswitches for the trigger and button inside the control unit.

1   3 kinds of screws are used to fasten the L and R covers in place. Remove the 10 screws and separate the L and R covers.

SCREW (8), black
M3 x 12, w/small flat & spring washers

SCREW (1), black
M3 x 10, w/small flat & spring washers

COUNTERSUNK-HEAD SCREW (1), black
M3 x 8

2   Place cover R face down on the work surface and slowly lift cover L directly upward.

3   Remove the trigger microswitch from the R cover.

TRIGGER MICROSWITCH
509-5080
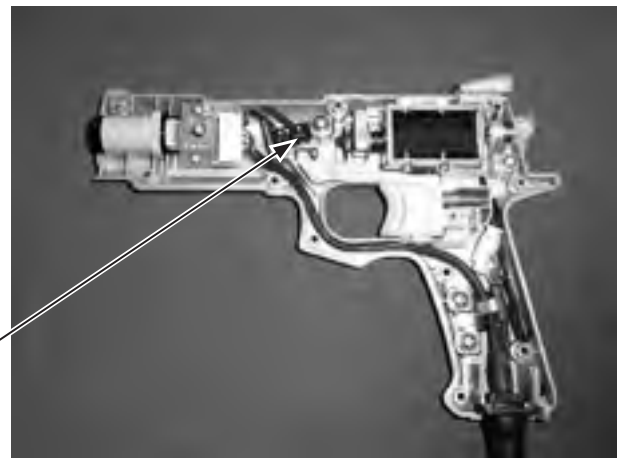
4   Remove the soldered part and then remove the microswitch.

5   Solder and attach the new button microswitch. Protect the soldered part with heat-shrinkable tubing.

6   After replacing the microswitch, re-assemble the control unit. Confirm the microswitches turn on and off properly by pulling the trigger and pushing the button and then attach the L and R covers. Be careful not to tighten screws excessively.

7   Refer to 11-3 "INPUT TEST" and perform the input test.

14

14-3 REPLACING THE SENSOR UNIT

1   Refer to 14-2 "REPLACING THE MICROSWITCH" and remove the cover L.

2   Disconnect the connector and take the sensor unit off.

SENSOR UNIT
GLG-2130

CONNECTOR
XA9P

3   After replacing the sensor unit, re-assemble the control unit. Confirm the microswitches turn on and off properly by pulling the trigger and pushing the button and then attach the L and R covers. Be careful not to tighten screws excessively.

4   Refer to 11-7 "CONTROLLER CALIBRATION SETTING" and perform the aim adjustment.

14

14-4 REPLACING THE SOLENOID

1   Refer to 14-2 "REPLACING THE MICROSWITCH" and remove the cover L.

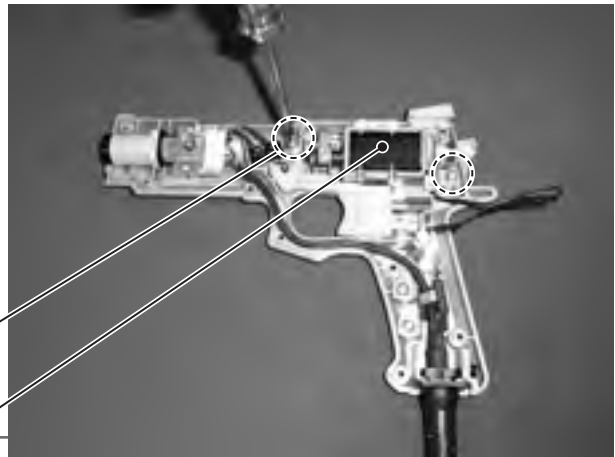*2*   Undo the cord clamp and disconnect the connector.

CONNECTOR
SM2P

3   Remove the 2 screws and take the solenoid unit off.

SCREW (2)
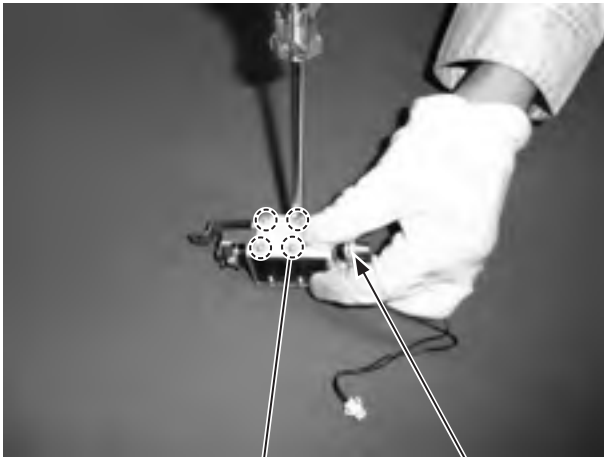M4 x 8, w/flat & spring washers

SOLENOID UNIT

4   Be careful not lose or damage the spring and other small parts when removing the solenoid unit.

14

5   Remove the 8 screws and the E-ring (2 mm), and replace the solenoid. Be careful not to lose small parts.
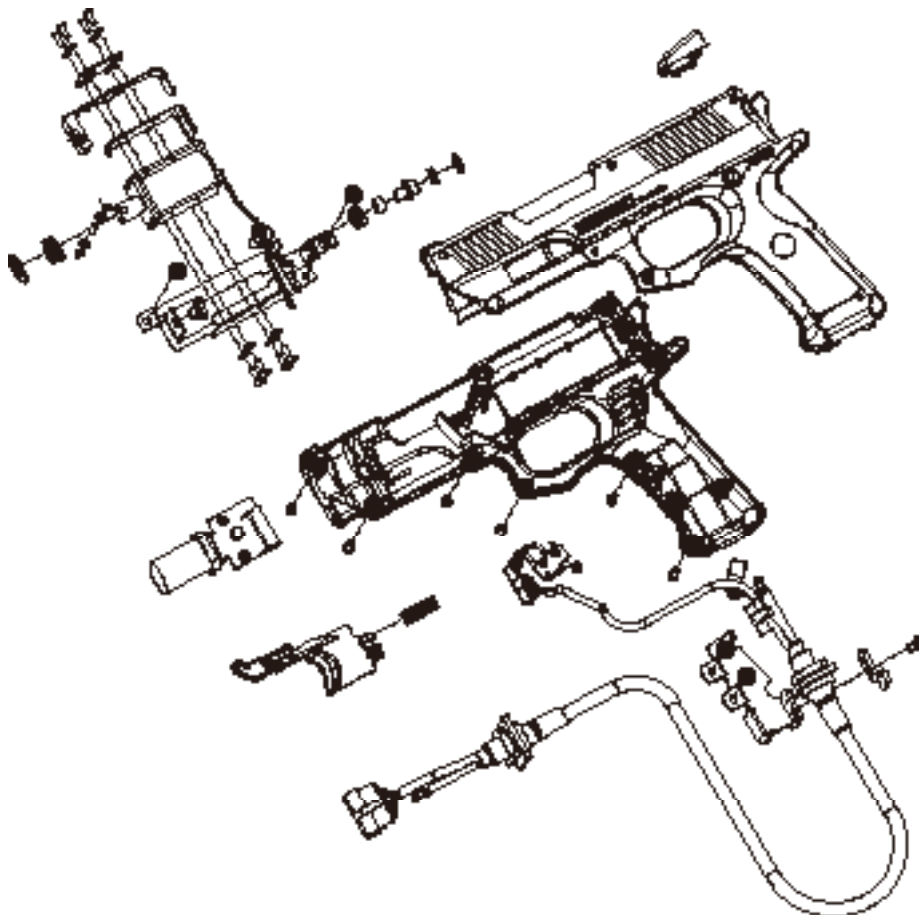

SCREW (8)
M3 x 8, w/spring washer

SOLENOID
124-5101

E-RING
2 mm

6   Refer to Step 2 to Step 5 and work in reverse order to affix the solenoid unit. Refer to the drawing below and be careful with the order in which the small parts are attached and the direction the side with the solenoid wire faces. Attaching the parts the wrong way may result in malfunction of the unit or pinching of the wire.

7   After replacing the solenoid, re-assemble the control unit. Confirm the microswitches turn on and off properly by pulling the trigger and pushing the button and then attach the L and R covers. Be careful not to tighten screws excessively.

8   Refer to 11-4 "OUTPUT TEST" and perform the output test.

14

15 COIN SELECTOR

STOP IMPORTANT

- **Remove and clean smears using a soft cloth dipped in water or diluted chemical detergent which is then wrung dry.**

- **Never apply machine oil, greace, etc. to the coin selector.**

- **After cleaning the coin selector, properly insert a standard coin to ensure that the selector functions correctly.**

15-1 CLEANING THE COIN SELECTOR

The coin selector should be cleaned once per month. When cleaning, follow the procedures below:

1   Turn the power off. Open coin chute door.

2   Open gate and wipe away dirt with animal hairbrush or other soft brush.
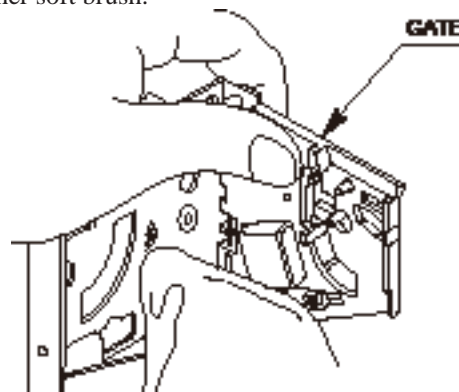
3   Soak a soft cloth in water or in a neutral cleaning agent diluted with water, wring it tightly and wipe away dirt.

4   Remove cradle. When removing the retaining ring (E ring), be careful not to bend the rotary shaft.
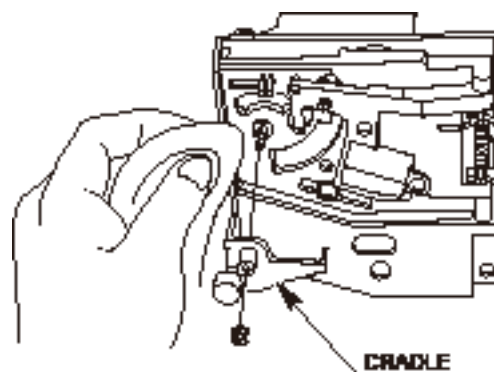
5   Use soft cloth to wipe dirt from rotary shaft and bearing.

6   After wiping off dirt, wipe away moisture with a dry cloth and make sure that the coin selector is completely dry.

15-2 REMOVING THE JAMMED COIN

When the REJECT button fails to refund coins, open the coin chute door and open the selector gate. Once the jammed coin is removed, insert a standard coin to ensure that the selector is working properly.

15-3 COIN INSERTION TEST

Carry out a coin insertion test once per month. At the same time, check the following points:

□ Does the coin meter count properly?
□ Do coins drop into the cashbox correctly?
□ Are coins rejected when inserted while holding down the REJECT button?
□ Are extra coins and incorrect coins properly returned?

COIN INSERTION SLOT

REJECT BUTTON

COIN RETURN SLOT

15
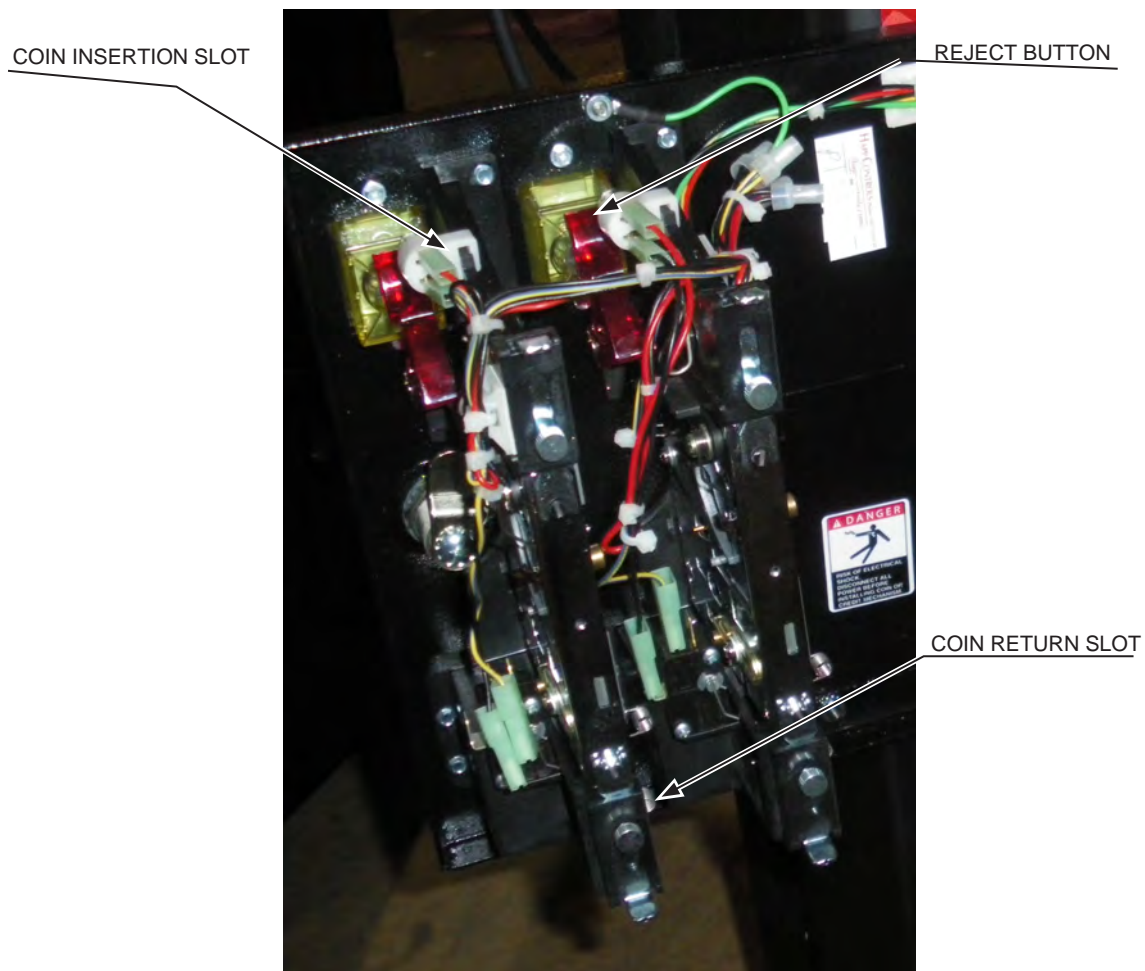
16 FLUORESCENT LAMP REPLACEMENT

⚠ WARNING

- **Before starting to work, be sure to turn the power off. Without turning the power off can 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 meeting specified rating. Using lamps exceeding the specified rating can cause fire and/or accident.**

- **Such things as deteriorated insulation in lighting fixtures can cause a short circuit and/or smoke. Make sure there are no abnormalities. For example, check if you can smell anything burning, if any sockets have been discolored and if the lamp has to be replaced frequently.**

⚠ CAUTION

- **To perform work safely and securely, be sure to prepare a stepstool which is in a secure and stable condition. Performing work without using the stepstool can cause violent falling down accidents.**

- **When fastening plastic parts, be careful not to tighten screws and nuts excessively.**

16-1 BILLBOARD

1 Turn the power off.

2 Unscrew the 3 screws,
   to remove glass holder bracket.
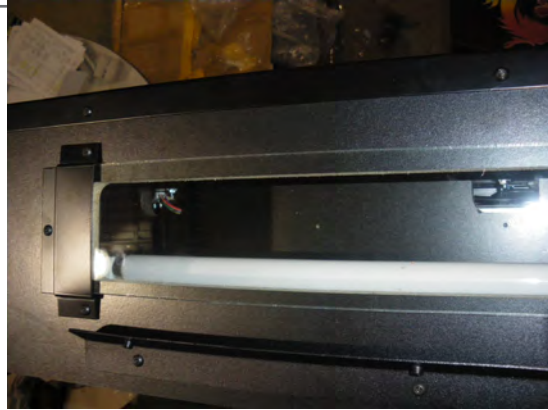
3 Stand on a stepstool when replacing FL unit. For safety reasons, this should be done together with at least 2 people.

4 Replace the fluorescent lamp.

NOTE: Replace the glow lamp if necessary.

16

62

To Purchase This Machine, Please Visit BMI Gaming | www.bmigaming.com | (800) 746-2255 | +1.561.391.7200
REPLACING THE FUSE

17 REPLACING THE FUSE

⚠ 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 not to damage the wire. Damaged wires may cause electric shock or short circuit or present a fire risk.

- 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.

⚠ CAUTION

For continued protection against risk of fire, replace only with the same type of fuse having the same electrical ratings.

---

1 Turn the power off.

---

2 Remove the 8 screws, and remove back cover.

17

3 Replace the fuse.
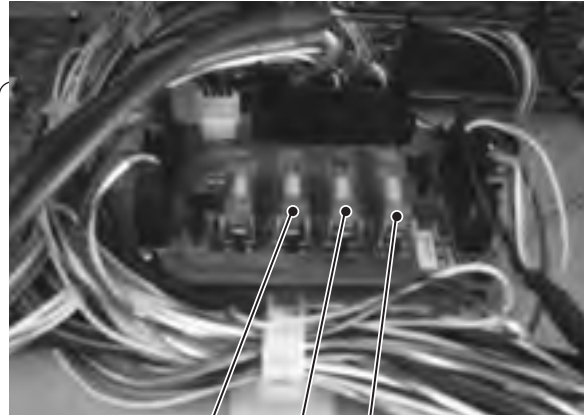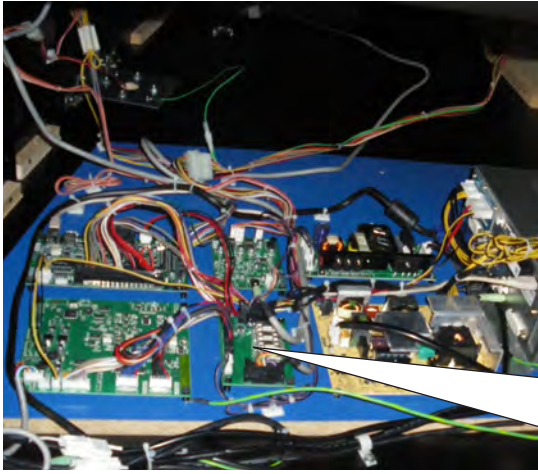
FUSE 250 V 0.2 A (1P SENSOR UNIT)
514-5143-200

FUSE 250 V 2 A (1P SOLENOID)
514-5143-2000

FUSE 250 V 0.2 A (2P SENSOR UNIT)
514-5143-200

FUSE 250 V 2 A (2P SOLENOID)
514-5143-2000

17

18 PERIODIC INSPECTION

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

Players operate the control unit by touching it and holding it with their hands. Clean the control unit on a regular basis and have hand wipes, etc. available to ensure that players will always fully enjoy the game.

⚠ WARNING

- **Have work performed by site maintenance personnel or other qualified individuals. Do not allow people without proper knowledge and technical expertise to work on the product. Otherwise there could be an electric shock or other serious accident. Also, customers could be injured while operating the product.**

- **Be sure to check once a year to see whether power cables are damaged, the plug is securely inserted, dust has accumulated between the socket outlet and the power plug, etc. Using the product with accumulated dust can cause fire and electric shock.**

- **Periodically, around once a year, get in touch with the place of contact herein stated or the Distributor, etc. where the product was purchased from, regarding internal cleaning. Using the product with accumulated dust in the interior can cause a fire or accident. Note that professional cleaning will require a fee.**

- **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 anomalies such as odors from burning.**

- **Before starting to work, be sure to turn the power off. Without turning the power off can cause an electric shock or short circuit.**

- **Do not clean the product with a water jet or water cannon. The product has not been designed for water jet cleaning. Water infiltration can cause electric shock or short circuit. It will also cause damage that is difficult to repair.**

■ **PERIODIC INSPECTION TABLE**

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CABINET	Confirm that adjusters contact floor	Daily	Chapter 3
CONTROL UNIT	Cleaning	As appropriate	-
	Aim test	Weekly	Chapter 11
	Microswitch test	Monthly	Chapter 14
COIN SELECTOR	Coin switch inspection	Monthly	Chapter 15
	Coin insertion test	Monthly	15-3
	Cleaning	Monthly	15-1
LCD UNIT	Screen cleaning	Weekly	13-1
	Check screen adjustment	Monthly or when moving	13-2
RINGWIDE	Memory test	Monthly	"S/M"
	Settings check	Monthly	"S/M"
	Cleaning	Every 3 months	20-2
POWER CABLE	Inspection, Cleaning	1 year	6-8
CABINET INTERIOR	Cleaning	1 year	As above
CABINET SURFACES	Cleaning	As appropriate	See below

NOTE: The "S/M" referenced in the table denotes RINGWIDE Service Manual, which is provided separately.

Cleaning the Cabinet Surfaces

When the cabinet surfaces become dirty, remove stains with a soft cloth soaked in water or diluted (with water) chemical detergent and then wrung dry. To avoid damaging the finish, do not use such solvents as thinner, benzene, etc. (other than ethyl alcohol) or abrasives (bleaching agent and chemical dust-cloth).
Some general-purpose household, kitchen, and furniture cleaning products may contain strong solvents that degrade plastic parts, coatings, and print. Before using any cleaning product, read the product's cautionary notes carefully and test the product first on a small area that is not highly visible.

18

19 TROUBLESHOOTING

⚠ WARNING

- If problems other than those covered in this manual arise, or if no improvements can be noted after measures given in this manual have been taken, do not take measures indiscriminately. Cut off the power immediately and contact the office shown in this manual or the dealer from whom the product was originally purchased. If the power is left on while there is an abnormality, a fire, electric shock or other serious accident can occur.

- Before starting to work, be sure to turn the power off. Without turning the power off can cause an electric shock or short circuit.

- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.

- After the cause of circuit protector activation has been removed, have the circuit protector re-engaged. If the unit is used continuously as is, there could be heat generation or fire, depending on the cause of the activation.

- Have work performed by site maintenance personnel or other qualified individuals. Do not allow people without proper knowledge and technical expertise to work on the product. Otherwise there could be an electric shock or other serious accident. Also, customers could be injured while operating the product.

(STOP) IMPORTANT

If a problem occurs, first inspect the connection of any wiring connectors.

19-1 TROUBLESHOOTING TABLE

PROBLEMS	CAUSE	COUNTERMEASURES
With main switch ON, no activation.	Power is not supplied.	Securely insert the power plug into the plug socket.
	Power supply/voltage is not correct.	Make sure that power supply/voltage is correct.
	The circuit protector functioned due to the momentary overload.	After eliminating the cause of overload, reinstate the AC unit's circuit protector. <See 6-8, see below>
No sound is generated from the speaker.	Faulty adjustment of sound volume.	Adjust the sound volume. <See Chapter 9>
	Failure of the Board and Amplifier.	Contact the customer service center listed in this manual.
The control unit sighting is not satisfactory.	Sights are not aligned due to changes in the surrounding environment.	Perform sighting adjustment in the TEST MODE.<See 6-10>
	Failure of the LED board.	Check to ensure that the LED lights up. If it does not light up, replace. <See 19-2>
	Failure of the sensor unit.	Replace the sensor unit. (GLG-2130 SENSOR UNIT) <See Chapter 14-3>
	LED board and LED board cover are contaminated.	Wipe off soiled surfaces.
The control unit does not appear to be operating correctly.	Failure of the microswitches.	Use an Input Test to make sure they change between ON and OFF. If they do not, exchange the faulty microswitches. (509-5080 SW MICRO TYPE) <See 14-2>
	Failure of the LED board.	Check that the LEDs are on. If not, replace them. <See 19-2>
	Failure of the sensor unit.	Replace the sensor unit. <See 14-3>
Fluorescent lamp does not illuminate.	Fluorescent lamp and glow lamp need replacement.	Replace the fluorescent lamp/grow lamp. <See Chapter 16>
	Fuse need replacement.	Replace the fuse.<See Chapter 17>

19

19-2 REPLACING THE LED BOARD

⚠ CAUTION

Removing or attaching of the mask must be carried out by at least 2 people, one on the left and one on the right. A single person working alone can lead to injury.

If the light from the 2 LEDs cannot be seen then there is a problem or malfunction. Follow the steps below to exchange them. You can also use the following steps to clean the screen.
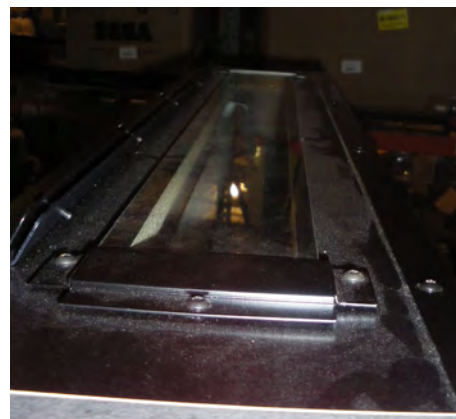
1 Turn the power off.

Replacement is required when the light from 2 LEDs cannot be seen.

2 Unscrew 7 screws on both side of monitor cover.

19

3 Unscrew 4 screws on top of monitor cover..

CONNECTOR
VL1P

4   Disconnect the 2 connectors.
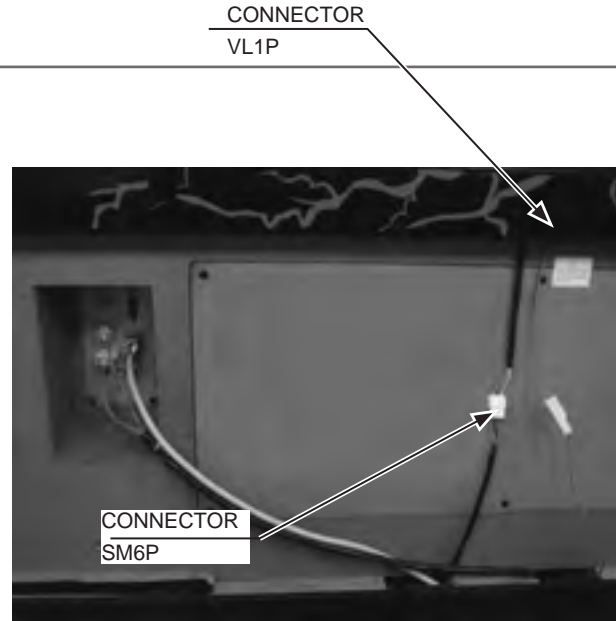
CONNECTOR
SM6P

5   The mask has the LED boards attached. Remove the 2 U nuts holding the malfunctioning board, disconnect both connectors and remove and replace the LED board. Be sure not to lose the plastic washers. Attach the LED board after checking to make sure it is facing the same way as before.
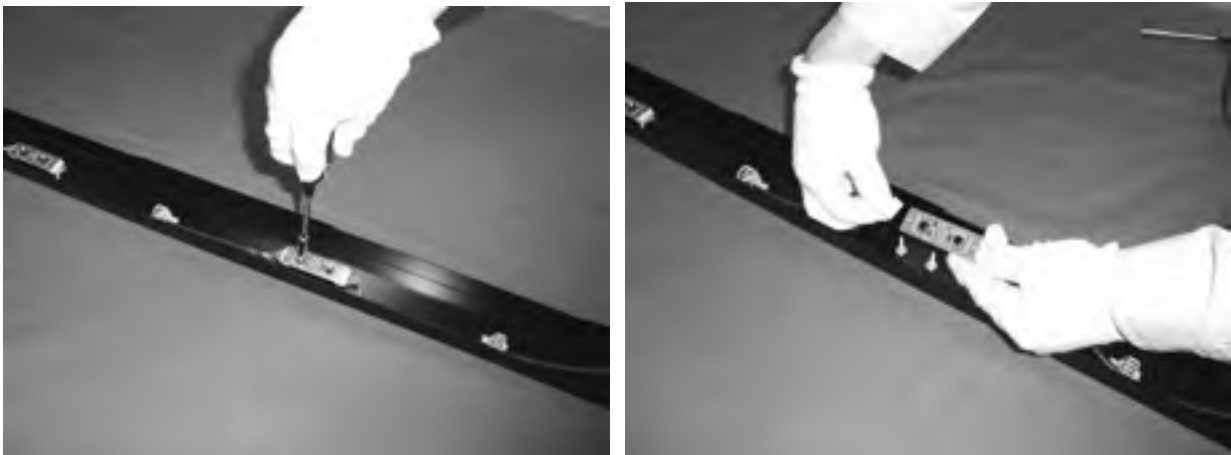
5 The mask has the LED boards attached. Remove the 2 U nuts holding the malfunctioning board, disconnect both connectors and remove and replace the LED board. Be sure not to lose the plastic washers. Attach the LED board after checking to make sure it is facing the same way as before.

6 If the problematic LED board is in the corner of the mask remove the 5 screws and remove the joint bracket. The joint bracket has the same parts are the boards along the straight sections of the mask, and there are 2 types.

19

7 After exchanging the LED board enter TEST MODE and perform a controller adjustment. (See 11-7.)

20 RINGWIDE

⚠ WARNING

- **Before starting to work, be sure to turn the power off. Without turning the power off can cause an electric shock or short circuit.**

- **Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.**

- **Do not expose the game board, etc. Failure to observe this can cause electric shock hazard or malfunctioning.**

- **This product does not use any connectors other than those connected to and used by the game board when it leaves the factory. Do not needlessly connect wires to unused connectors. This could lead to overheating, generation of smoke and burn related injuries.**

- **Have work performed by site maintenance personnel or other qualified individuals. Do not allow people without proper knowledge and technical expertise to work on the product. Otherwise there could be an electric shock or other serious accident. Also, customers could be injured while operating the product.**

- **When returning the game board after making repairs or replacements, make sure that there are no errors in the connection of connectors. Erroneous connections can lead to electrical shock, short circuits or fires.**

- **When connecting a connector, check the direction carefully. Connectors must be connected in only one direction. If indiscriminate loads are applied in making connections, the connector or its terminal fixtures could be damaged, resulting in electrical shock, short circuits or fires.**

⚠ CAUTION

When opening/closing or attaching or removing the doors or the other parts, be careful that your hand or finger does not get caught in anything.

🛑 STOP IMPORTANT

20

- **Static electricity from human body may damage some electronics devices. Before handling starting to work, touch a grounded metallic surface so that the static electricity can be discharged.**

- **The product's settings are changed in TEST MODE. If using only one machine, the RINGWIDE DIP SW setting does not need to be configured. Leave RINGWIDE on the default setting. Changing it could cause malfunctions or damage to the parts.**

20-1 REMOVING THE RINGWIDE

The RINGWIDE is inside the left side front door of the cabinet on the left side when facing the screen. Remove the entire wooden board (ASSY MAIN BD) on which the RINGWIDE is placed.

1 Turn the power off.

2 Unscrew 8 screws, and remove back cover

3 Disconnect all connecters connected to the RINGWIDE.

20

4 Remove the 4 screws and take the RINGWIDE off.

20-2 CLEANING THE RINGWIDE

(STOP) **IMPORTANT**

Clean the RINGWIDE once a year or when "Error 0090" or "Error 0091" is displayed. If dust accumulates inside the RINGWIDE, it could lead to malfunction and other trouble.

Take the RINGWIDE off once a year and use a vacuum cleaner to clean the areas around the intake and exhaust vents and where it is attached to the cabinet.

1   Refer to 20-1 "REMOVING THE RINGWIDE" and take the RINGWIDE off from the cabinet.

2   Clean around the air vent of the RINGWIDE with a vacuum cleaner.

AIR INTAKE

EXHAUST VENT

EXHAUST VENT
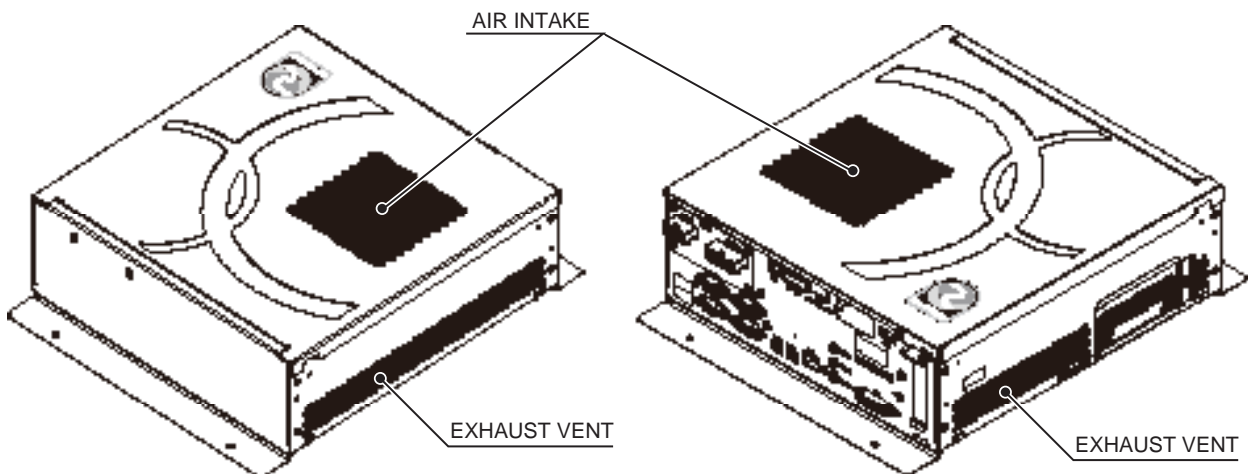
3   Clean around installment parts of the RINGWIDE in the cabinet with a vacuum cleaner. Be sure not to damage wirings and boards. Electronic devices on boards may damage by static electricity, and be sure not to vacuum electronic devices by a vacuum cleaner.

4   Refer to 20-1 "REMOVING THE RINGWIDE" and work in reverse order to attach the RINGWIDE to the cabinet.

20

20-3 COMPOSITION OF THE RINGWIDE

(STOP) IMPORTANT

- **The RINGWIDE becomes the RINGWIDE for this product once the key chip is inserted.**
- **The DIP SW (dip switches) on the RINGWIDE 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 WDE W 1GB USA (847-0001D-01)
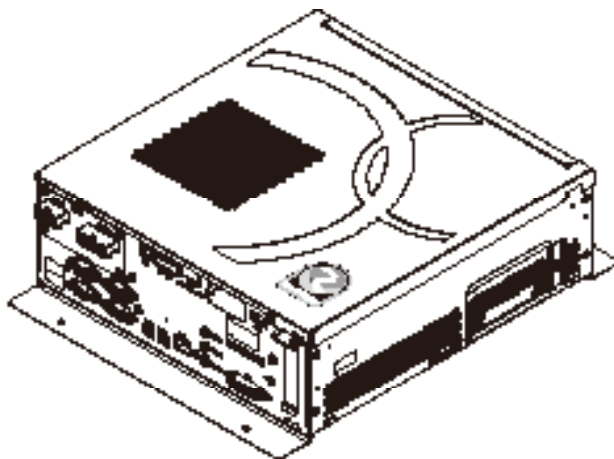
DIP SW Setting

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

Pin	1	2	3	4	5	6	7	8
Setting	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF

20

21 DESIGN RELATED PARTS

574-30-211
Rear Marquee Golden Gun

574-30-201
Marquee Golden Gun

574-30-210
Crown Moulding Decal

574-30-209
Side Pnl Decal Monitor Side

574-30-205
Monitor Frame Decal
Top/Bottom (2per)

574-30-206
Monitor Frame Decal
Left/Right (2per)

GLG-2041
LED Panel Octagon

574-30-202
Gun Decal Right
Golden Gun

574-30-200
Side Decal Golden Gun
(2per)

574-30-208
Instruction Decal
Golden Gun

574-30-203
Gun Decal Left
Golden Gun

574-30-207
Button Decal
Golden Gun

574-30-204
Front Decal
Golden Gun

21

22 PARTS LIST

(1) ELECTRONIC PARTS
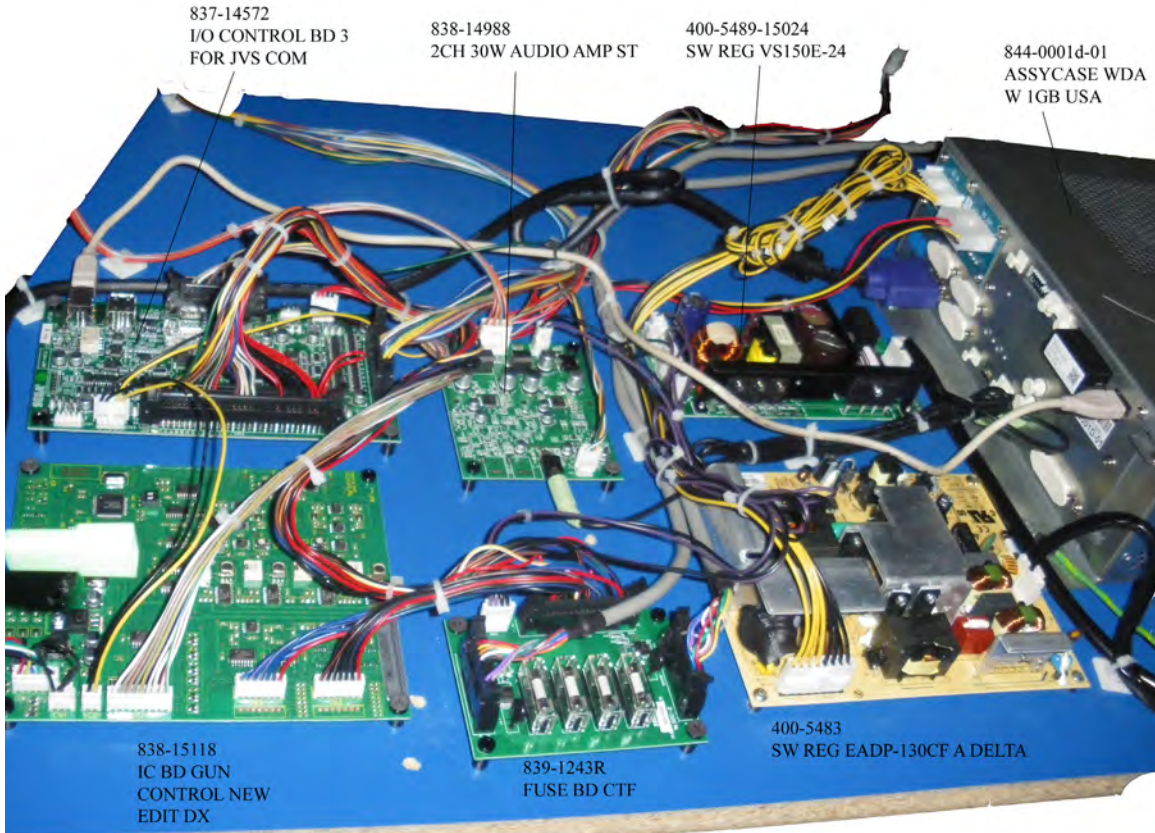
837-14572
I/O CONTROL BD 3
FOR JVS COM

838-14988
2CH 30W AUDIO AMP ST

400-5489-15024
SW REG VS150E-24

844-0001d-01
ASSYCASE WDA
W 1GB USA

838-15118
IC BD GUN
CONTROL NEW
EDIT DX

839-1243R
FUSE BD CTF

400-5483
SW REG EADP-130CF A DELTA

(2) CONTROL PANEL

130-5228-01-91
SPEAKER BOX
4OHM 40W (2per)

838-14973-02
LED BD GUN SENSOR
(10per , inside cover)

GLG-2100-01
CONTROL UNIT
GUN (2per)

509-6207
SW OBSA-45UM-R-
1FLED-R-12V (2per)

22

(3) GLG-0550 (D-1/2)
ASSY MASK

SEE A

EARTH

SEE A
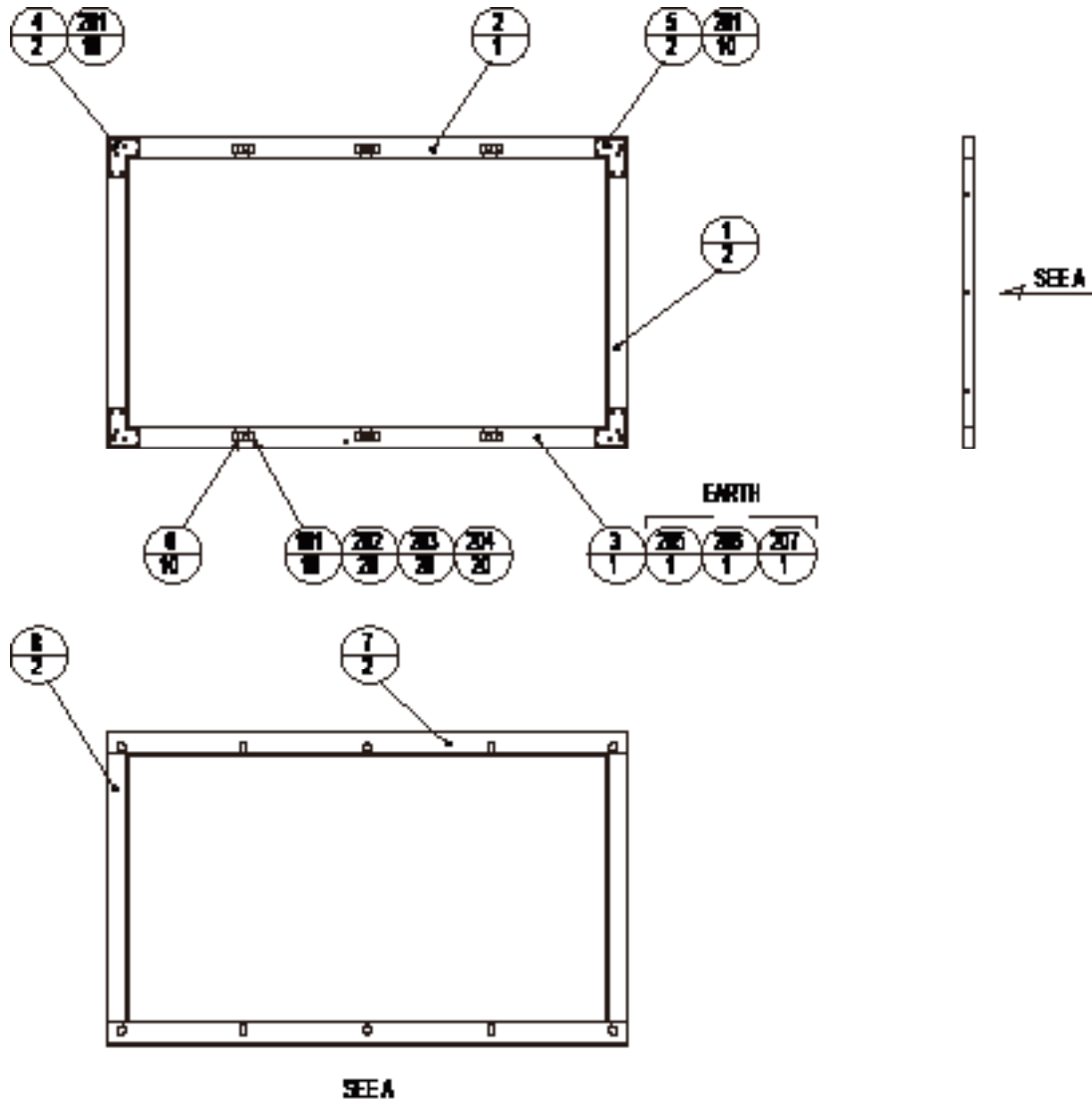
(3) GLG-0550   (D-2/2)
ASSY MASK

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	RMB-0551	SIDE MASK	
2	HDF-0531	UPPER MASK	
3	HDF-0532	LOWER MASK	
4	HDF-0534	MASK JOINT BRKT L	
5	HDF-0535	MASK JOINT BRKT R	
6	JPT-1082X	IR COVER	
7	GLG-0551	STICKER MASK LONG	
8	GLG-0552	STICKER MASK SHORT	
101	838-15119	LED BD HFN G.SENSE GLG	
102	280-5009-02-91	CORD CLAMP 21 CN	
201	000-P00408-W	M SCR PH W/FS M4x8	
202	050-U00300	U NUT M3	
203	069-000034-PN	FLT WSHR PLASTIC BLK 3-8x1	
204	FAS-680016	FLT WSHR NI 3-10x0.5	
205	050-H00400	HEX NUT M4	
206	060-S00400	SPR WSHR M4	
207	060-F00400	FLT WSHR M4	
301	GLG-60029	WH MASK1	
302	GLG-60030	WH MASK2	
303	GLG-60031	WH MASK3	
304	600-7010-0300	WIRE HARN EARTH VL1P P 0300MM	

(5) GLG-2050
ASSY LED
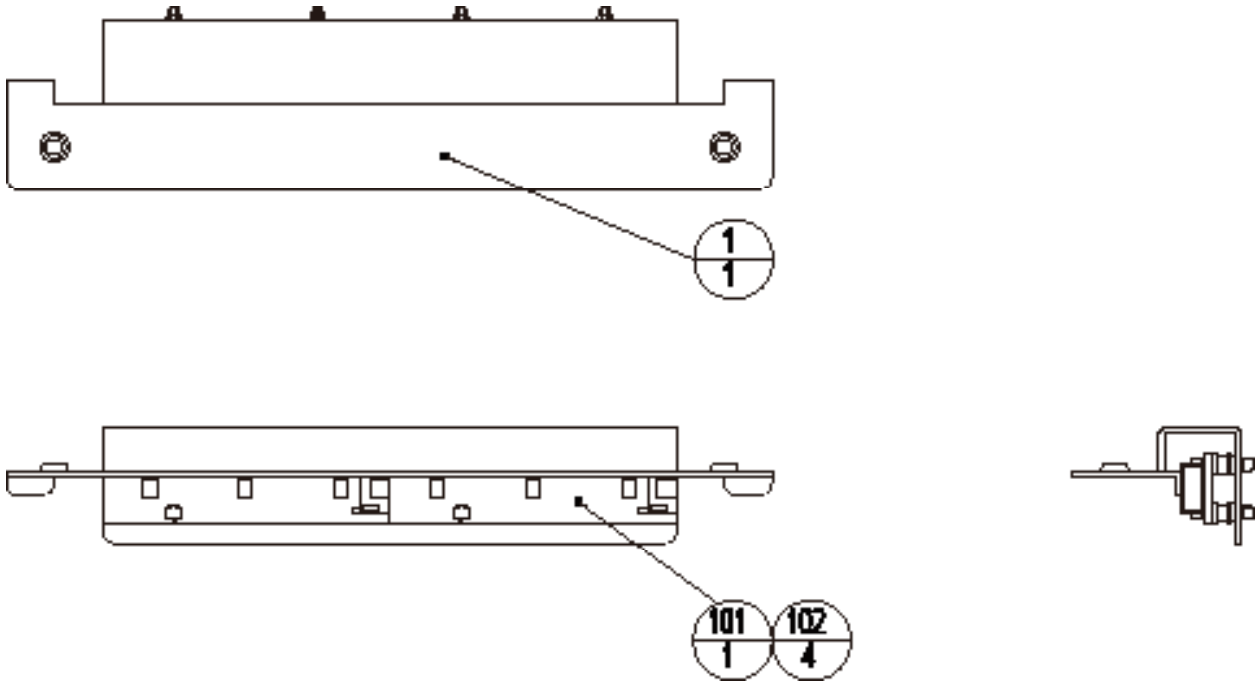
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	GLG-2052	LED BRKT	
101	838-14973-02	LED BD RGB 3x2BLOCK	
102	280-7896-05	SPACER WN-05G (HIROSUGI)	

22

(6) GLG-2060
ASSY BUTTON PLATE
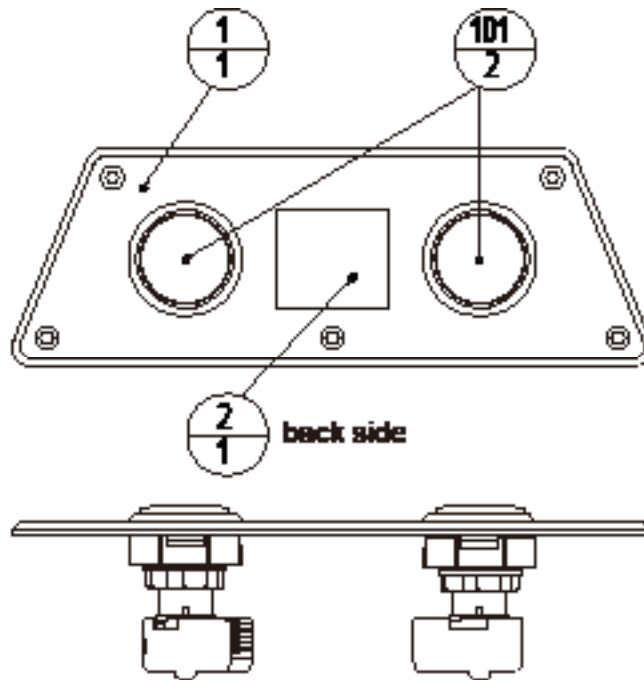
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	GLG-2061	BUTTON PLATE	
2	421-12771	STICKER DENOMI BLANK	
101	509-6077	SW PB OBSA-45UM-W-1FLED-W-12V	
301	GLG-60025	WH START BUTTON PLATE	

(27) GLG-2100 CONTROL UNIT

(D-1/2)

Apply grease to around the hole.
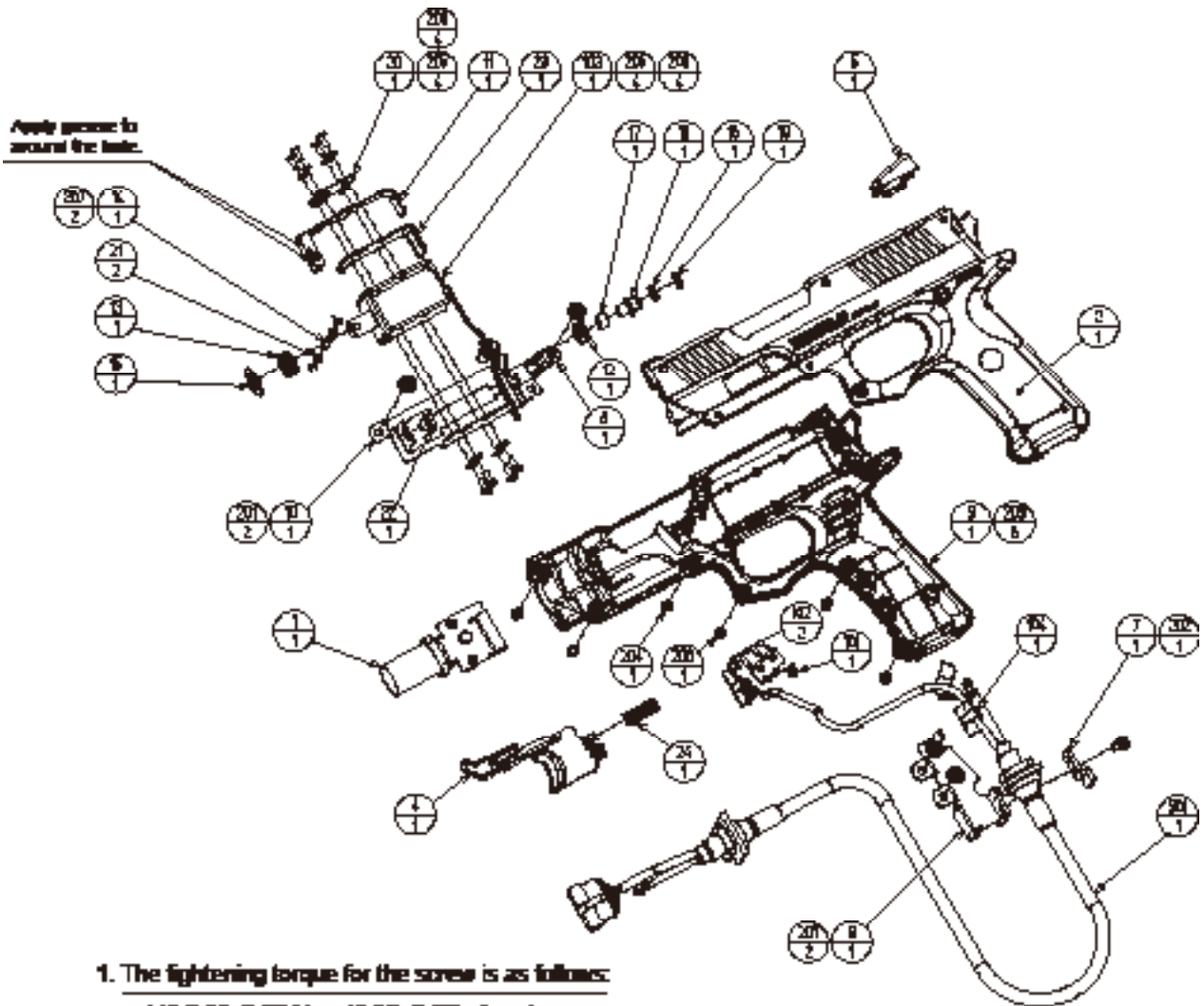
1. The tightening torque for the screw is as follows:

   M3 0.65±0.05 N-m (6.60±0.50kgf-cm)
   M4 1.50±0.10 N-m (15.30±1.00kgf-cm)

2. Apply grease to specified area.(product No.030-0070 GREASE248 <SOLVEST248>}

3. Screw components must be coated with thread sealant (Three Bond 1401 c) on (205) and (206)

(27) GLG-2100-01
CONTROL UNIT

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	GLG-2130	SENSOR UNIT (OMJ-GZH200HFXA)	
2	APA-2101-04	COVER LEFT GOLD	
3	APA-2102-04	COVER RIGHT GOLD	
4	APA-2103-01	TRIGGER GOLD	
5	APA-2104-04	SIGHT GOLD	
7	APA-2106-03	CORD FRAME COVER GOLD	
8	APA-2107	CORD CLAMP	
9	APA-2108	CORD FRAME	
10	APA-2109	SOLENOID FRAME	
11	APA-2110-01	SLIDE FRAME	
12	APA-2111	SOLENOID DAMPER	
13	APA-2112	SOLENOID SPRING	
14	APA-2113	SOLENOID SHAFT	
15	APA-2114	SOLENOID WSHR	
16	APA-2115	WEIGHT	
17	APA-2116	DAMPER COLLAR	
18	APA-2117	WEIGHT SPRING	
19	APA-2118	WEIGHT WSHR	
20	APA-2119	SLIDE BASE UPPER	
21	APA-2123-01	BUSH	
22	APA-2124	PLUG CUSHION	
23	APA-2120	SLIDE BASE LOWER	
24	CTF-2123	TRIGGER SPRING	
101	509-5080	SW MICRO TYPE (SS-5GL2)	
102	310-5029-D20	SUMITUBE F D 20MM	
103	124-5101-91	SOLENOID DC24V	
104	280-7881	CORD CLAMP SR10 CN	
201	000-P00408-W	M SCR PH W/FS M4x8	
202	FAS-000188	M SCR PH W/SMALL FS BLK M4x8	
203	FAS-000100	M SCR PH W/SMALL FS BLK M3x12	
204	FAS-000099	M SCR PH W/SMALL FS BLK M3x10	
205	FAS-290110	HEX SKT ELH CAP STN M3x8	
206	000-F00308-0B	M SCR FH BLK M3x8	
207	065-E00200	E RING 2MM	
208	060-S00300	SPR WSHR M3	
301	APA-60035X	WH CONTROLLER	

22

23 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.
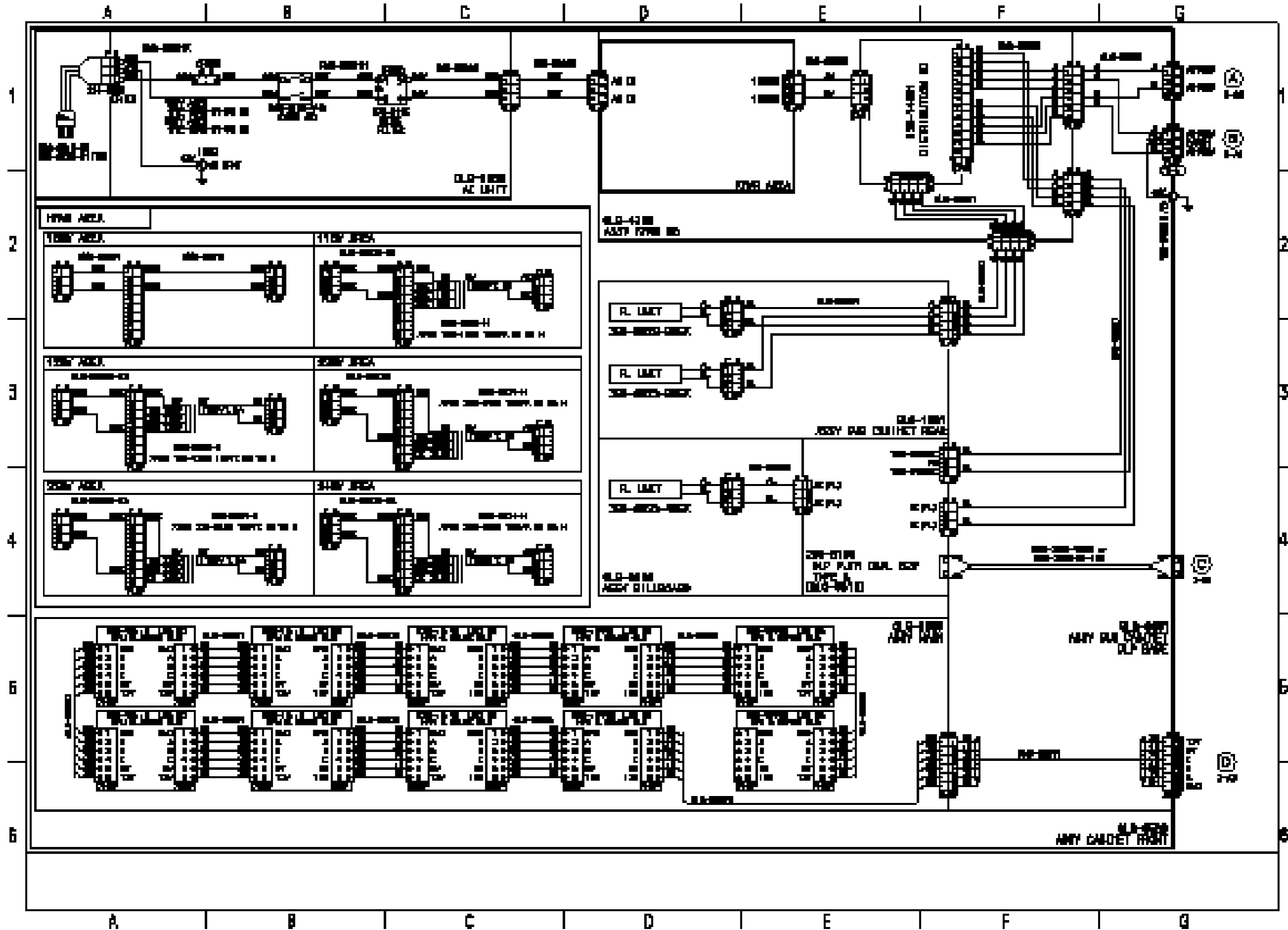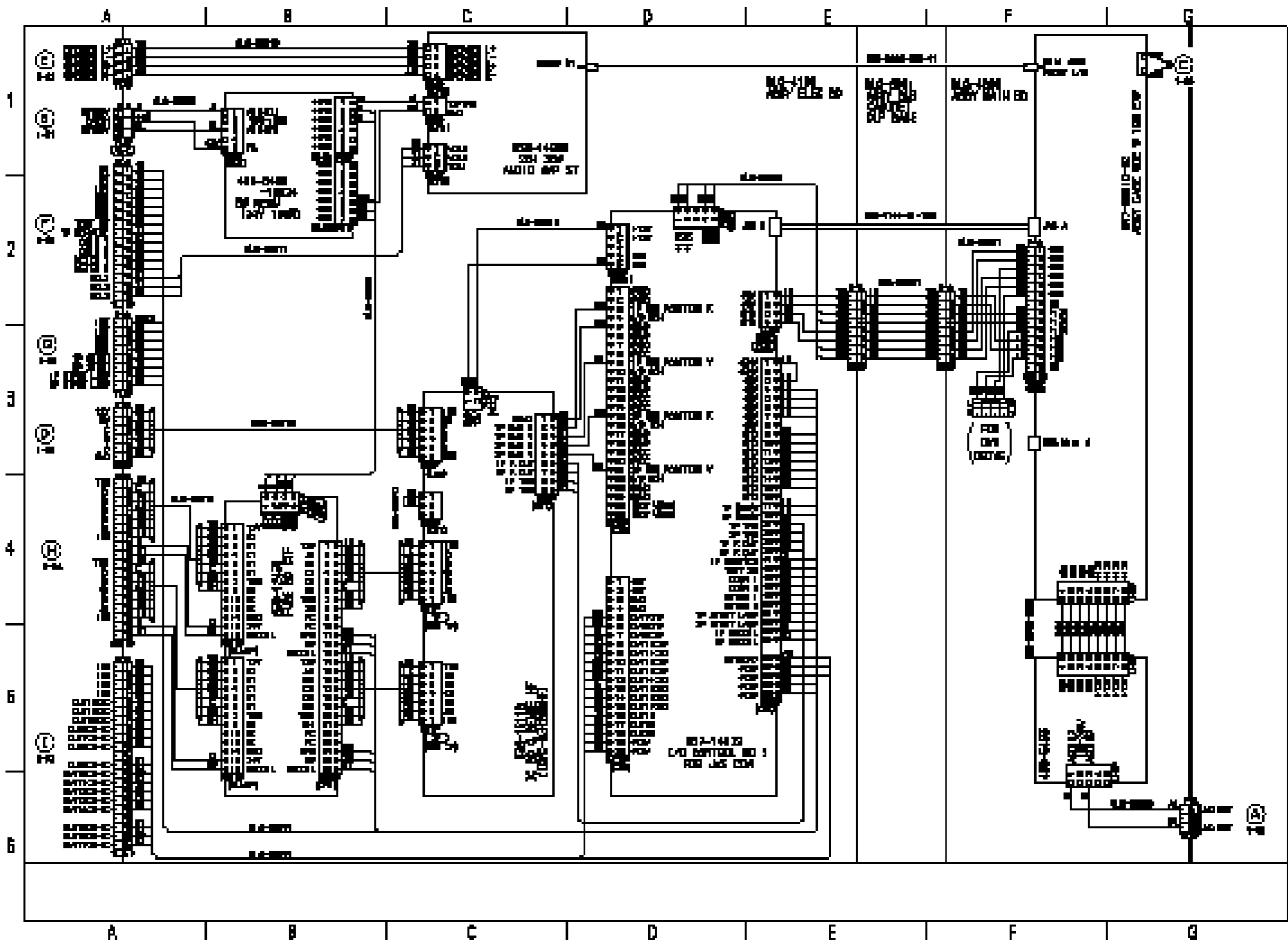
<Example> 51.........WHITE/RED

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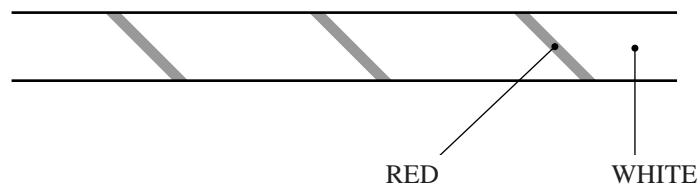
Note 2: The character following the wire color code indicates the size of the wire.

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

23

24 WIRING DIAGRAM (D-1/3)

(D-2/3)

(D-3/3)