

SEGA®

OWNER'S MANUAL



62" DX CABINET

IMPORTANT

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

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

| | |
|--|-----------|
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INTRODUCTION

This manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electro-mechanicals, servicing control, spare parts, etc. for the product, **"LET'S GO JUNGLE! - LOST ON THE ISLAND OF SPICE."**

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.



IMPORTANT

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

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SPECIFICATIONS

| | |
|-------------------------|------------------------------|
| Width and Depth | 60.5" [Width] x 109" [Depth] |
| Height: | 86.4" |
| Weight: | 1,498 lbs. |
| Power, maximum current: | 6.3 A (AC 120 V, 60 Hz Area) |
| Monitor: | 62 inch DLP Projector |

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

Definition of 'Site Maintenance Personnel or Other Qualified Individuals'



WARNING

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

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

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

Site maintenance personnel:

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

Activities to be carried out by site maintenance personnel:

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

Other qualified professionals:

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

Activities to be carried out by other qualified professionals:

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

1 HANDLING PRECAUTIONS

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

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

WARNING

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

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

CONCERNING THE STICKER DISPLAY

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

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

CONCERNING WARNING DISPLAYS

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

In order to prevent accidents, caution any customer ignoring the warnings to cease and desist immediately.

2 PRECAUTIONS REGARDING INSTALLATION LOCATION

WARNING

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

- Places subject to rain or water leakage, or places subject to high humidity in the proximity of an indoor swimming pool and/or shower, etc.
- Places subject to direct sunlight, or places subject to high temperatures in the proximity of heating units, etc.
- Places filled with inflammable gas or vicinity of highly inflammable/volatile chemicals or hazardous matter.
- Dusty places.
- Sloped surfaces.
- Places subject to any type of violent impact.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- The operating (ambient) temperature range is not from 5°C to 30°C.

2-1 LIMITATIONS OF USAGE

WARNING

- Be sure to check the Electrical Specifications. Ensure that this product is compatible with the location's power supply, voltage, and frequency requirements. A plate describing Electrical Specifications is attached to the product. Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- This product requires a breaker and earth mechanism as part of the location facilities. Using the product without these can cause a fire and electric shock.
- Ensure that the indoor wiring for the power supply is rated at 15 A or higher (AC single phase 100 V ~ 120 V area), and 7 A or higher (AC 220 V ~ 240 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- Be sure to use an independent power supply equipped with an earth leakage breaker. Using a power supply without an earth leakage breaker can cause an outbreak of fire if a power surge occurs.
- Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.
- When using an extension cord, ensure that the cord is rated at 15 A or higher (AC 100 V ~ 120 V area) 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.

2-2 OPERATION AREA

WARNING

- For the operation of this machine, secure a minimum area of 116"(W) x 156"(D). If the machine rolls during play it could lead to serious injury, especially if anyone is hit on the head. You must secure the space specified in this document.
- Be sure to provide sufficient space specified in this manual. Do not allow objects to block the ventilation ports. It can cause generation of heat and a fire.
- SEGA shall not be held responsible for damage or compensation for damage to a third party, resulting from the failure to observe this instruction.
- If the machine does not fit through the entryway to the installation location, do not disassemble it without first consulting the instructions. If the machine still does not fit through the entryway after following the procedures in this manual, contact your retailer or the office listed in this manual.

IMPORTANT

To install this product, the entrance must be at least 48.8" in width and 78" in height.

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 (projector). For operation of this machine, do not leave monitor's flickering or deviation as is. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.
- It is suggested to ensure a space allowing the players who feel sick while playing the game to take a rest.
- Check if all of the adjusters are in contact with the surface. If they are not, the Cabinet can move and cause an accident.

⚠ WARNING

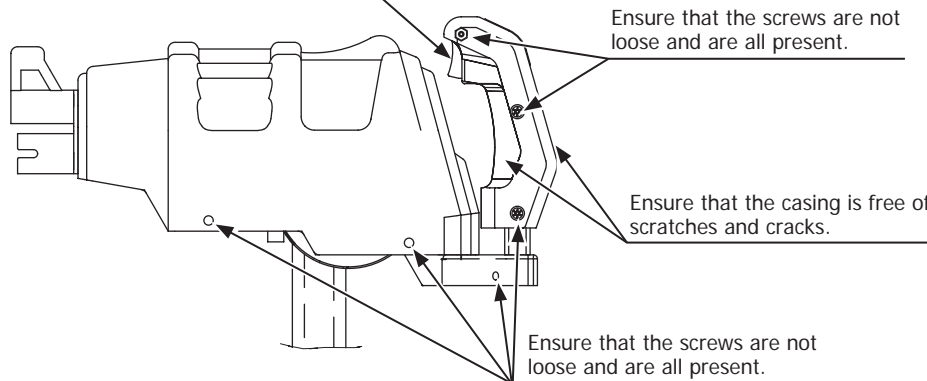
- Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.
- Do not climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a step ladder.
- When using a stepladder or stool while working, do not hold onto the billboard carrier (the round pipe section). Holding or hanging off this may bend it out of shape or damage it, and could lead to a fall or an accident.
- To avoid electric shock, check to see if door & cover parts are damaged or omitted.
- To avoid electric shock, short circuit and/or parts damage, do not put the following items on or in the periphery of the product.

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

⚠ CAUTION

- To avoid injury, be sure to provide sufficient space by considering the crowd situation at the installation location. Insufficient installation space can cause customers to bump into each other, causing trouble.
- Every day when cleaning the Control Unit (Gun), inspect the gun and make sure that there are no scratches or cracks in the surface, and that the fastening screws are not loose. If the game is played with scratches, cracks or loose screws, it can cause injuries to the player or to people nearby.

Ensure that the trigger is functioning properly.



- When you clean the cabinet each day, always make sure that there is nothing placed on the seats and that they are not damp or wet. The construction of this product may allow for willful misconduct by players.

STOP IMPORTANT

To ensure customers enjoy playing the game, clean the Control Unit regularly. If there is any dirt buildup, the trigger may not return properly after being pulled.

3-2 DURING OPERATION (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.
 - Those who require supporting devices, etc., to walk.
 - Those who have high blood pressure or a heart problem.
 - Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.
 - Those who have neck or spinal cord problems.
 - Intoxicated persons.
 - Pregnant women.
 - Persons susceptible to motion sickness.
 - Persons who disregard the product's warning displays.
- Even players who have never been adversely affected by light stimulus might experience dizziness or headache depending on their physical condition when playing the game. Small children are especially likely to experience these symptoms. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during play to have a medical examination.
- To avoid injury from falls and electric shocks due to spilled drinks, instruct the player not to place heavy items or drinks on the product.
- To avoid electric shocks and short circuits, do not allow customers to put hands and fingers or extraneous matter in the openings of the product or small openings in or around the doors.
- To avoid falls and resulting injury, 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.

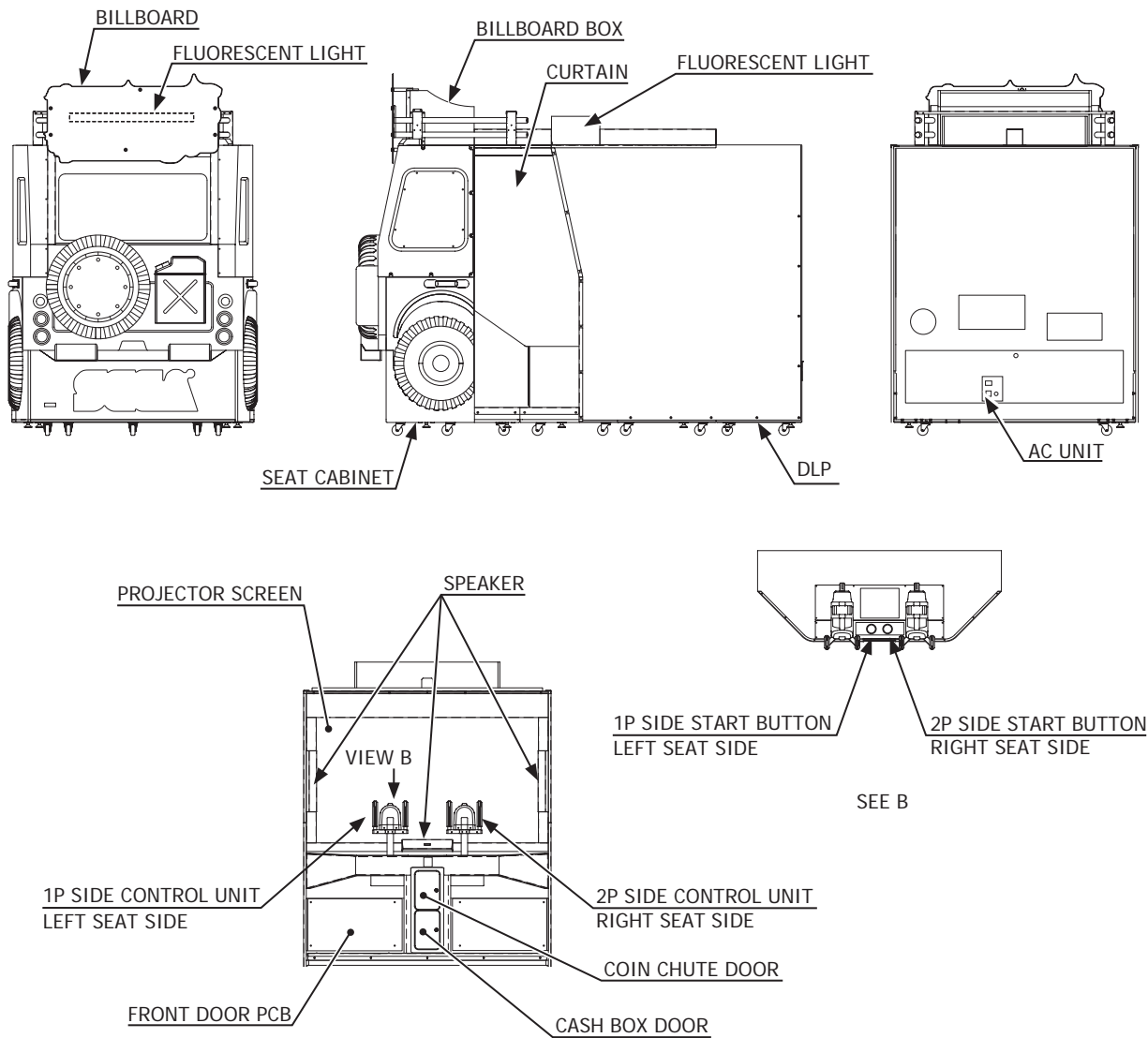
CAUTION

- 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.
- Two or more players must never be allowed to play using a single Control Unit. Playing in such a way could lead to physical injuries.
- When entering or exiting the machine, players may trip over the base. Be sure to warn players who do not appear to be exercising proper caution.

STOP IMPORTANT

The interior of the cabinet is hard to see from the outside which may lead to willful misconduct by players or accidents going unnoticed. When the game is not in use, check the interior at regular intervals and make sure that nothing has been forgotten or placed on the seats.

4 PART DESCRIPTIONS



4 PART DESCRIPTIONS

FIG. 4 Name of Each Part

- In this product, the DLP cabinet housing the 62 inch projector is termed the “DLP.”
- Facing the projector screen, the left side is the 1P seat and the right side is the 2P seat.

TABLE 4 Major Measurements of Each Unit Upon Purchase

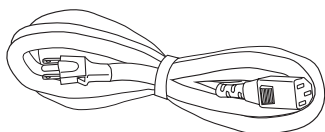
| | Width x Depth x Height |
|-----------------------|------------------------|
| Cabinet A (Monitor) | 61" x 20 3/4" x 71" |
| Cabinet B (Speaker) | 61" x 24 1/4" x 71" |
| Cabinet C (Control) | 61" x 31 1/2" x 71" |
| Cabinet D (Seat Assy) | 61" x 30" x 71" |
| Billboard (Assy) | 49" x 33" x 14" |

5 ACCESSORIES

MANUAL LET'S GO JUNGLE: 532-30-300 (1) > This manual

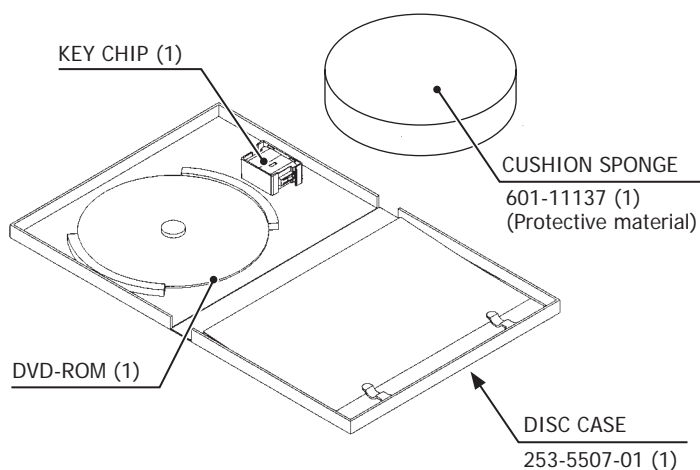
REMOTE CONTROLER & MANUAL FOR TOSHIBA 62" DLP MONITOR

UNIVERSAL POWER CORD 8FT
99-00-017



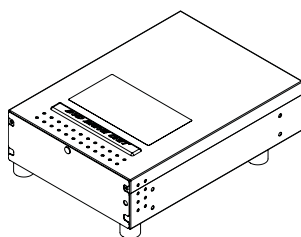
DVD SOFTWARE KIT

(1)
Software media, see chapter 6 [13]

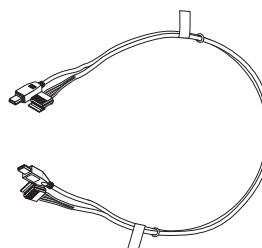


To order the DVD-ROM by itself, use the following part number:
610-0726-0011 (DVD SOFT LGJ).

DVD DRIVE: 610-0719-01-91 (1)
> Do not use for installation of game. Only need when you have software update.



USB CABLE MINI AB 100CM: 600-0719-01-91 (1)
DVD DR. TO MAIN PC HARNESS: 515-60-661 (1)
> Use connection between DVD DRIVE and Main PCB.



6 ASSEMBLY AND INSTALLATION

WARNING

- Perform assembly work by following the procedure herein stated. Failure to comply with the instructions can cause electric shock.
- Perform assembling as per this manual. Since this is a complex machine, incorrect assembling can cause an electric shock, machine damage and/or improper functioning as per specified performance.
- When assembling, more than one person is required. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
- Ensure that connectors are properly connected. Improper connections can cause electric shock.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.
- This work should be carried out by site maintenance personnel or other qualified professionals. Work performed by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation. If no one with proper technological expertise is available, request service from the office indicated in this document or the point of purchase so as to ensure safety.
- Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
- To perform work safely and avoid serious accident such as the cabinet falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.
- Do not leave power cords or ground wires 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. ϕ 8)
- Have a flashlight or another supplementary lighting unit available while working. With indoor lighting alone, the cabinet interior may be too dark. Working without proper lighting can lead to accidents. It also hinders proper work performance.
- The cabinet has ventilation ports. Be sure not to block them. If they are blocked, heat can build up, leading to fire. This can also accelerate wearing of parts and malfunctions.
- Secure ample ventilation space around the cabinet. If heat builds up, there could be accidents associated with heat or smoke generation.
- Do not unnecessarily push the projector. This could cause the unit to tip over.
- 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.

CAUTION

- Handle molded parts with care. Excessive weight or pressure may cause them to break and the broken pieces may cause injury.
- To perform the operation safely and accurately you must use a safe, steady footstool or stepladder. Working without this may lead to a fall and possible injury.
- When connecting the connectors on the DVD wire, you must carefully check the tags on the wire to find the correct connector. Even when you have the correct connector, you must pay careful attention to the direction and angle of insertion. Attempting to forcefully connect the incorrect connector or connecting a connector at the wrong angle or facing may damage the connector and could lead to overheating and burn related injuries.
- When attaching or removing doors or lids, be careful that your hand or finger does not get caught in anything.

IMPORTANT

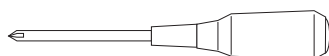
- Be very careful when handling the projector screen. The screen can be damaged easily and cannot be repaired once damaged. Such damage can only be repaired by completely replacing the screen.
- Be careful not to damage parts surfaces. In some cases, if such surfaces are damaged, the part must be replaced; it cannot be reinforced or repaired.

The assembly of this product is performed in the following 6 steps.

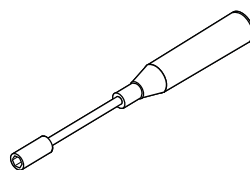
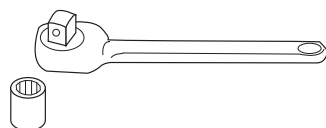
- 1 CONNECTION OF THE CABINET
- 2 ATTACHING THE BILLBOARD BOX
- 3 ATTACHING THE BILLBOARD
- 4 FIXATION TO INSTALLATION SITE\
- 5 CONNECTION OF POWER AND GROUND
- 6 CONFIRMATION OF ASSEMBLY

Tools Required for Assembly Operation

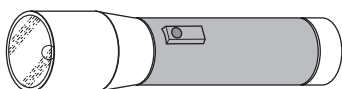
- Philips screwdriver (for Phillips screws)



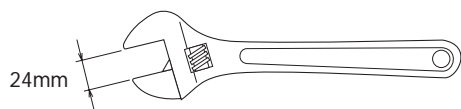
- A 7, Socket wrench or hexagonal screwdriver (for US standard bolts and nuts)



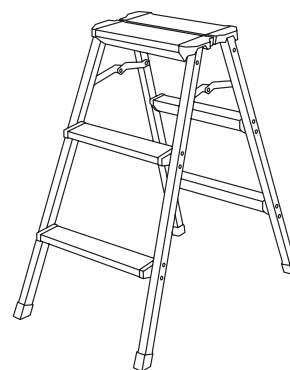
- Flashlight or other supplementary lighting



- A 24 millimeter spanner (Adjustable spanner)



- Stepladder



- Tamper screw wrench (T-25)

1 CONNECTION OF THE CABINET

- 1 Move the Cabinet A-B and C-D Cabinet close together.
Perform the connection of the wires between the two cabinets.
Leave a gap of approx 8". Please Line up top of cabinets by adjusting Leg Leveler before joint.

NOTE:

PLEASE LINE TOP OF CABIETS UP BY ADJUSTING LEG LEVELERS BEFORE JOINT CABINETS. WE RECCOMEND 3 OR MORE PERSONS TO ASSEMBLE.

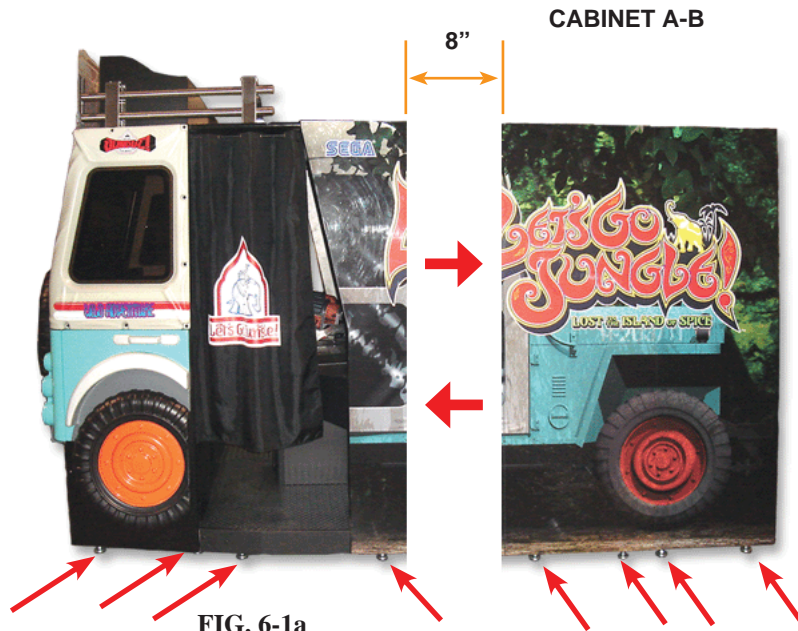
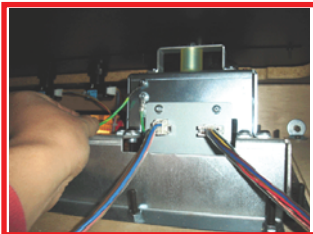


FIG. 6-1a

- 2 Connect the following harness
 - A) Gun Assy 1P & 2P (Gun harness and Earth wire fdoor each assy)
 - B) Con Door harness w/Earth wire.
 - C) F.L.Lamp and Speaker harness (Top of cabinet)
 Then remove 4 sets of Washer and screws

Harness, 1P Gun Assy w/earth wire

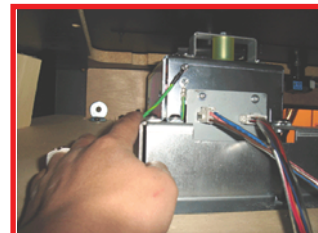


Please tight Earth wire to Base bracket of 1P Gun Assy in cabinet C.

CABINET A-B

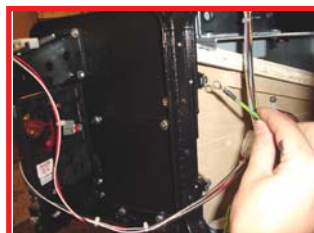
Harness, F.L.Lamp and Speaker

Harness, 2P Gun Assy w/earth wire



Please tight Earth wire to Base bracket of 2P Gun Assy in cabinet C.

Harness, Coin Door w/earth wire



Please tight Earth wire with screw of coin door frame in cabinet C.

NOTE:

PLEASE REMOVE 4 WASHERS & 4 SCREWS (T25) FROM HERE. THAT ARE USED FOR JOINTING OF CABINET A-B & C-D.

FIG. 6-1b

- 3 Joint Cabinet A-B and C-D. (Remove 5 of Phillips screws from ROOF SUPPORT BRACKET before joint.) After joint top part then tight 2 each of Left and Right screws (T-25) & washers up on bottom under control panel. (FIG. 6-1b)

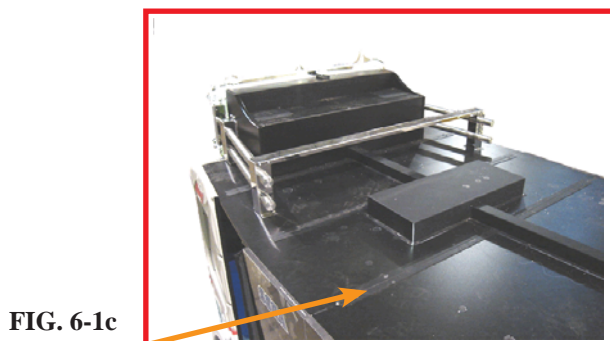


FIG. 6-1c

ROOF SUPPORT BRACKET

(Use same 4 phillips screws that already mounted on this bracket to joint cabinets)

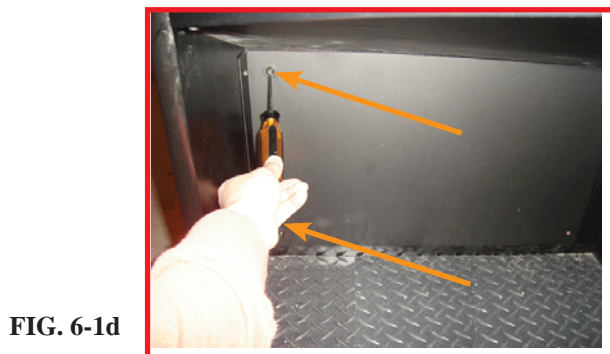


FIG. 6-1d

Use 4 Washers and 4 screws that already removed from Cabinet A-B to joint Cabinet A-B and C-D. Refer picture. (2 sets for Left and Right)

- 4 Use 6 of #16 Wood screws (Black) to mount CABINET JOINT PLATE both Left and Right to support joint of Cabinet A-B and C-D.

523-50-102
CABINET JOINT PLATE
LGJ-1001 (2) >Left & Right



FIG. 6-1e

2 ATTACHING THE BILLBOARD BOX

The billboard box is attached to the top of the Seat Cabinet. This operation must be performed by at least two people. As two or more people will be working together, take extra care not to trap your fingers or hands.

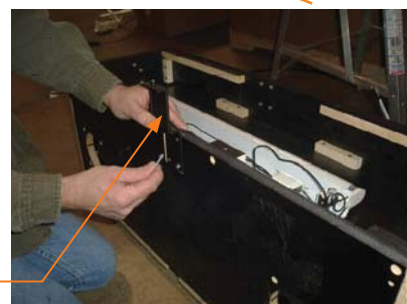
- 1 Remove the DESIGN BILLBOARD BACK with removing 8 screws & washers off.
- 2 Mount the Lower bracket (ANGLED SIGN HOLDER LGJ) on bottom of Marquee box with using 4 screws (8-32, 1 1/2" long, Phillips)

LGJ-1413
DESIGN BILLBOARD
BACK



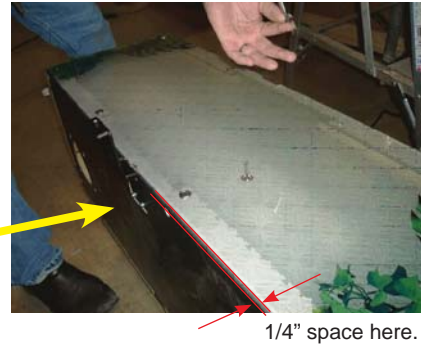
523-50-120
ANGLED SIGN HOLDER LGJ (BOTTOM)

Use 8-32, 1 1/2" long
Phillips screws (4) to
mount it.



- 3** Re-mount the DESIGN BILLBOARD BACK with using 8 screws & washers. There should be approx. 1/4" space created from bottom edge of Marquee Box and bottom edge of the DESIGN BILLBOARD BACK when you re-mounting it.

Bottom side of Marquee box



1/4" space here.

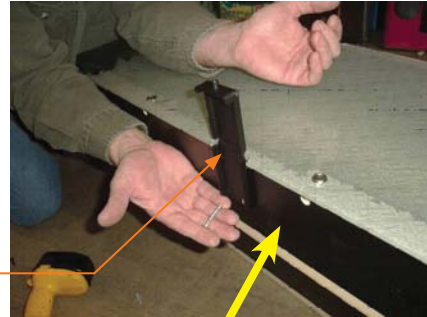
- 4** Mount the Upper bracket (SIGN HOLDER LGJ) on top of the marquee box with 4 screws. (8-32, 1 1/2" long Phillips)



Use 8-32, 1 1/2" long Phillips screws (4) to mount it.

523-50-121

SIGN HOLDER LGJ (TOP)



Top side of Marquee box

- 5** Align Marquee box on top of Seat Cabinet. Use 4 of screws and Wahsers (1/4-20, 1 1/2" long, T-25 screw) to fix above marquee box from inside of Roof.



NOTE: Take 3 screws off to remove Plastic Trim (Black), if cabinet has it.



Align Marquee box.



1/4-20, 1 1/2" long T-25 screws (4)

- 6** Connect 2 connectors coming out of the Marquee box to the connectors from other side (F.L.Lamp = Roof Lamp Metal box)

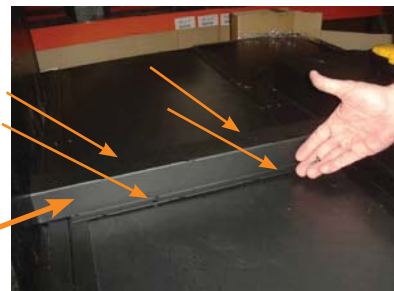
NOTE: Some cabinet may have issue that short harnesss coing out from Roof Lamp ob and Marquee box and could not connect them because sort. if so, please open Roof Lamp or Marquu Box then cut cable tight to loose harness.



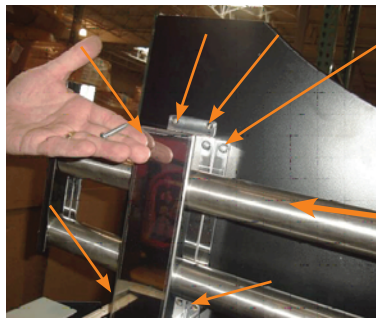
- 7** Use 4 of #16 Wood screws (Black) to mount the Cable cover (WIRE CHANNEL LGJ) to cover the harness as above.

#16 Wood screws, Black (4)

523-50-129 WIRE CHANNEL LGJ



- 8** Mount the TUBE ASSY L and R on both side of marquee box. (Use 12 of 10-24, 1" long, Phillips) Then mount CONNERCTOR BRACE LGJ between back of Tube Assy Left and Right. (Use 8 of 8-32, 3/4" long, Phillips screws.)



10-24, 1" long, Phillips screws (6 pcs of Left & Right = Total 12 pcs)

Tube Assy (Left & Right)

FIG. 6-2a



523-50-119
CONNECTOR
BRACE LGJ

Use total 8 of
8-32, 3/4" long, Phil-
lips crews (4 pcs of
Left & Right)

- 9** Use total 6 of #16 Wood screws (Black) to mount Marquee box with Tube Assy.

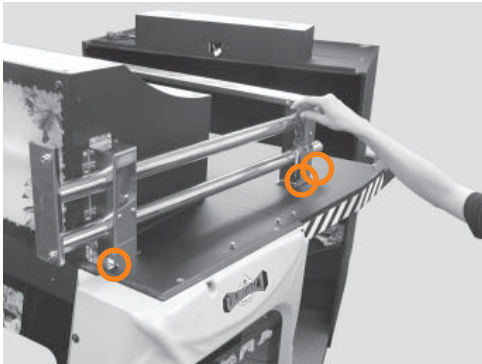
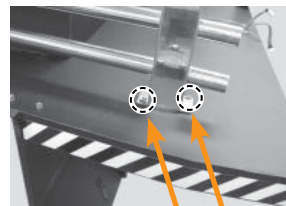


FIG. 6-2be



Use #16 Wood screws, Black (3 pcs
of Left & Right = Total 6 pcs)

FIG. 6-2c

3 ATTACHING THE BILLBOARD

- 1** The billboard box has six shafts for attaching the billboard. Place a Disk washer (6) onto each of these attachment shafts. Fix the billboard in place by capping each attachment shaft with screw. Do not tighten them too tight.

Use 2 each of Flat Washer Black for Tube Assy Left & Right (Do not use Flat Washer Black for top and bottom) Total 8 pcs.

1 1/4" 10-32 Black T-25 screws (6)



FIG. 6-3a

Washer CTF (6) Part#: CTF-1002

No Flat Black Washer



No Flat Black
Washer

FIG. 6-3b

4 FIXATION TO INSTALLATION SITE

WARNING

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

The product comes with casters attached at 17 locations and adjusters at 12 locations. When the installation site has been determined, have the adjusters come in direct contact with the floor. Establish a gap of about 5 mm between the floor and the casters and adjust the unit so that it will remain level.

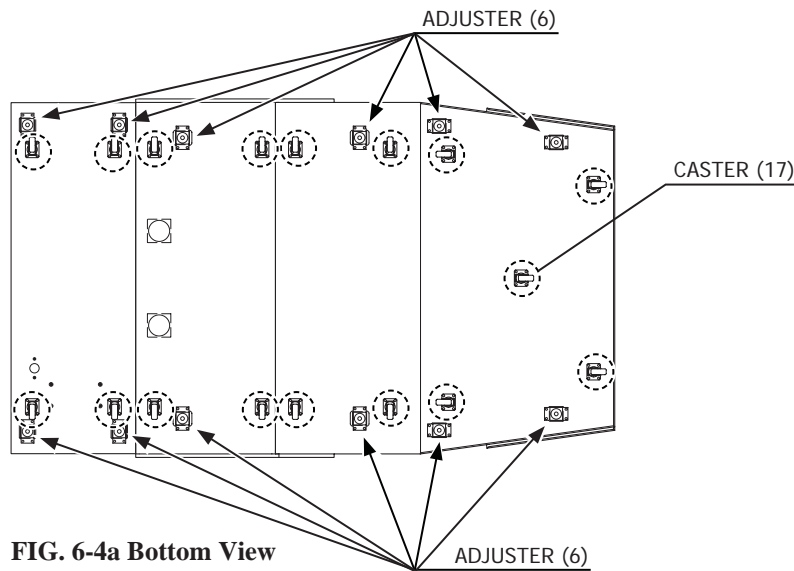


FIG. 6-4a Bottom View

- 1** Move the product to the installation site. If the product is to be installed near a wall, secure enough passage-way space for players to access the seat. You must also secure a 50 cm space between the back wall and the back of the cabinet for ventilation.
- 2** Bring the adjusters into direct contact with the floor. Use a wrench to align the height of the adjusters until the cabinet is perfectly level.
- 3** After setting, turn adjuster nuts upwards to tighten them and secure adjuster heights.

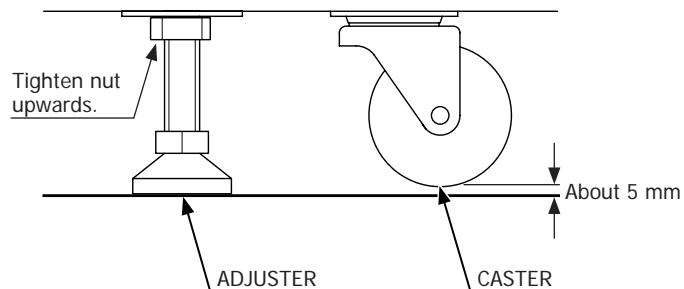
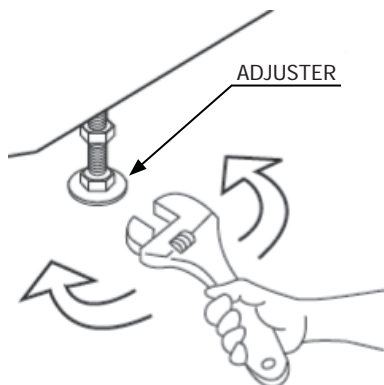
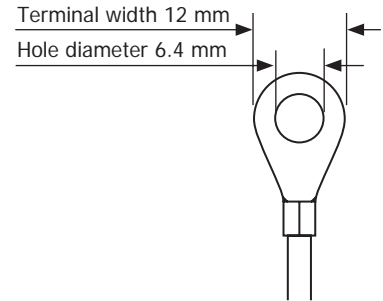


FIG. 6-4b Aligning the Adjusters

5 CONNECTION OF POWER AND GROUND

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 ground terminal. Without proper grounding, customers could be electrocuted and product operations might not always be stable.
- Do not expose the power cord or ground 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 cord on the floor, be sure to always protect it. If the power cord is left exposed, it can easily be damaged, resulting in electrical shock.
- When using the product's AC unit ground terminal, use ground wire with a circular terminal as shown in the illustration, and establish ground securely. Avoid indiscriminant grounding operations such as use of wire with only its sheath peeled off.



- 1 Confirm that the main switch is at OFF. Fully insert the power cord connector on the side opposite the power plug into the AC unit inlet.
- 2 Fully insert the power cord plug into the outlet. The power cord is laid out indoors. Protect the power cord by attaching wire cover to it.
If ground will be established with a ground wire made available separately, lay out the ground wire indoors and have it protected. <For Taiwan>

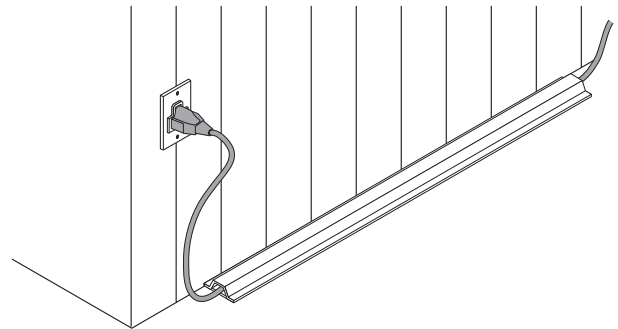


FIG. 6-5a

Process for Turning on the Power

Set the main switch of the AC unit to ON and engage the power.

When you turn on the power, the one billboard fluorescent light and two fluorescent bulbs on the ceiling of the Main Cabinet will come on.

After the LINDBERGH start up screen is displayed on the projector screen, the Advertise (Attract) Mode will start. During Attract Mode, demo footage and how to play the game will be displayed on the screen.

Sound will be emitted from the left and right speakers inside the Main Cabinet and the speaker in the center of the control panel.

If the unit is set for no sound during Attract Mode, there is no sound output.

If there are enough credits to enable play, the start button flashes. It goes out if there are no credits during Attract Mode.

Even when the power source has been cut off, credit count and ranking data are kept stored in the product. However, fractional coin counts (inserted coins that do not amount to one credit) and bonus adder counts are not kept.

Use test mode to confirm that assembly is proper, and that the LINDBERGH, connecting boards, and input/output devices are normal.

Perform the following tests in test mode.

For tests (1) to (4), refer to the LINDBERGH Service Manual. For tests (5) to (7), see [9-3 Game Test Mode].

1 Information Display Screen

When “SYSTEM INFORMATION,” “STORAGE INFORMATION,” or “JVS TEST” has been selected on the system test mode menu, system information, game information and information on JVS I/O board connected to LINDBERGH are displayed.

If each category of information is displayed without anomalies, the LINDBERGH is normal.

2 JVS Input Test Screen

When “INPUT TEST” has been selected on the JVS test screen, data input to the JVS I/O board is displayed. On the product, this is the screen for the testing coin switch.

Insert a coin. If the display to the side of the switch changes, the switch and wiring connections are normal.

3 Monitor Test Screen

When “MONITOR TEST” has been selected on the system test mode menu, the screen for checking projector (monitor) adjustment status appears.

Projector adjustment is completed when the product is shipped from the factory, but you should observe the test screen to determine whether further adjustment is necessary. Refer to Chapter 10 and adjust the projector if necessary.

4 Speaker Test Screen

When “SPEAKER TEST” has been selected on the system test mode menu, the screen for checking speaker sound output appears.

To confirm that audio output is normal, have test sound output from the game unit’s speaker.

5 Input Test

When “INPUT TEST” has been selected on the game test mode menu, the screen for testing input device appears. Test operate the input device by pressing each switch. If the display on the side of each input device changes to “ON” and numerical values change smoothly in accordance with each operation, the input device and its wiring connections are normal. (See 9-3a.)

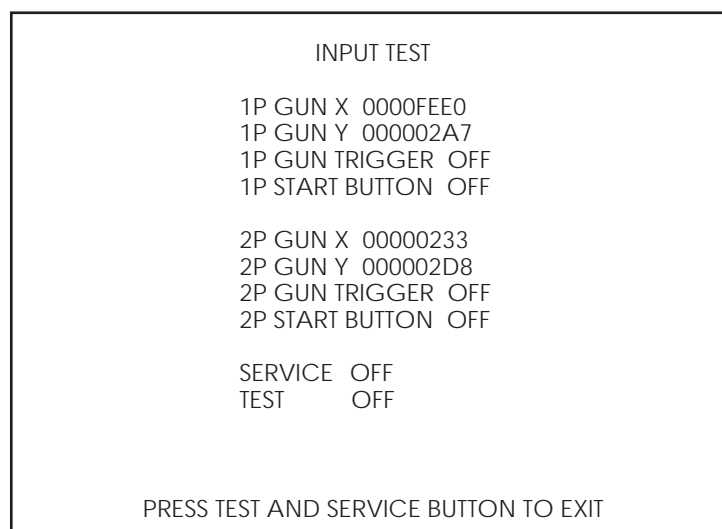


FIG. 6-6a INPUT TEST Screen

6 Output Test

When “OUTPUT TEST” has been selected on the game test mode menu, the screen for testing lamps and other output devices appears.

If each output device operates properly, the output device and its wiring connections are normal. (See 9-3b.)

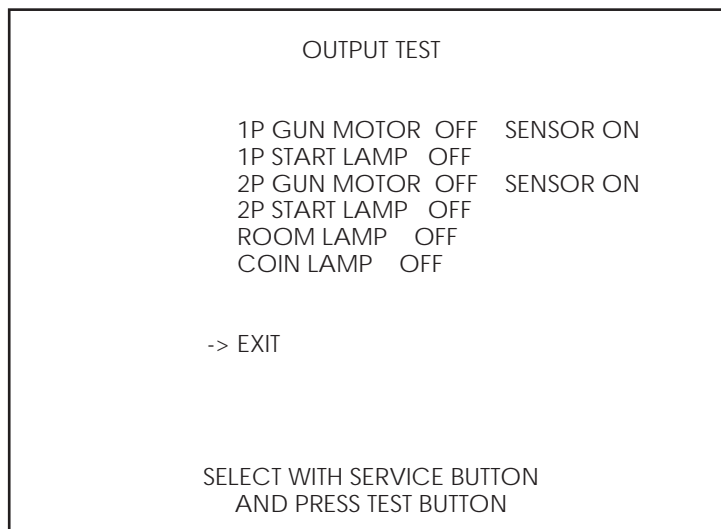


FIG. 6-6b OUTPUT TEST Screen

7 Calibration

Confirm that the operability of control unit do not present any hindrances to play. Calibration is adjusted when the product is shipped from the factory but it might need to be adjusted again because of vibrations during transport, etc.

If such things as operability are not satisfactory, select “GUN CALIBRATION” on the game test mode menu and check and adjust settings. (See 9-3c.)



FIG. 6-6c GUN CALIBRATION Screen

Conduct the aforesaid tests when performing routine tests each month.

7 PRECAUTIONS WHEN MOVING THE MACHINE

7-1 MOVING THE MACHINE

WARNING

- Always disconnect the power cable before moving the product. If it is moved with the power cable connected, the cable could be damaged, causing fire or electric shock.
- To move the unit over the floor, pull in the adjusters and have the casters contact the floor. While moving the unit, be careful that the casters do not roll over the power cord or the ground wire. If cord or wire is damaged, there could be electrical shocks and/or short circuits.
- When crossing a sloped or stepped area, disconnect the DLP, Main Cabinet and Seat Cabinet. If you tilt them while connected together, the connection points may be damaged and personnel could be injured.
- When lifting the cabinet up steps, you must hold it by the designated handles or by the bottom surface. Lifting it by any other area may lead to damage or disfiguration to that part or surrounding parts due to the weight of the cabinet and could also lead to injury of personnel.
- When tilting the cabinet to move it across a sloped or stepped area, always use at least two people. Attempting such an operation alone can lead to accident or injury.
- When moving the components separately, take care concerning the direction you push the DLP and Seat Cabinet in. These elements may fall over, causing damage or an accident.

CAUTION

- When moving the components do not push any of the plastic elements or shaped parts. Do not use them to pull the components along either. This may damage the parts or the surrounding parts and this could lead to accidents or injury.
- After dividing the components to move them, do not use the Control Units in the Main Cabinet to push or pull the cabinet. This may damage or disfigure these parts and lead to malfunctions or injury.
- When moving the separated components, the Top Board on the Seat Cabinet ceiling protrudes out. Be careful not to bang your head on it while working.
- If you move the cabinet with the Side Cloth attached, do not push or pull the Side Cloth. This may damage the Side Cloth, injure your hand or cause the cabinet to tip over.

IMPORTANT

- When moving the cabinet, do not hold, push or pull the Control Units. This may disfigure or damage them.
- If you need to move components through a narrow or low door and the only way to get the separated components through is to turn them on their side, or if a separation method other than those described in this manual is required, either make a request to the office listed in this document or the place of purchase to perform the operation or contact them regarding how to perform it. Carelessly turning the components onto their side or separating them in ways other than those depicted in this manual may lead to unrepairable damage.
- Do not press the projector screen. The screen can be easily damaged and cannot be repaired if it is, meaning complete replacement will be necessary.

7-2 SEPARATING THE MAIN CABINET

WARNING

- Do not carelessly separate the components of the Main Cabinet. This may lead to accidents during maintenance and electric shocks or short circuits during operation.
- After separation of the Main Cabinet, the individual Front Cabinet and Rear Cabinet are not sufficiently strong. Take care which places you push or pull. Do not turn the components onto their sides. This may lead to disfigurement or damage and could cause accidents during maintenance. It could even lead to unrepairable damage.

CAUTION

- To work safely and precisely prepare a steady, safety stool or ladder to stand on. Climbing onto the cabinet or hanging down from it can lead to accidents.
- Perform the separation operation with at least two people. Performing the operation alone could lead to an accident.

STOP IMPORTANT

If the only way to get the separated components into a desired location is to turn them onto their side, or if a separation method other than those described in this manual is required, contact the office listed in this document or the place of purchase. Turning the components onto their side may disfigure or misalign the cabinet and could lead to unrepairable damage.

If the entranceway is narrow, follow the process detailed below to separate the Cabinet A-B and Cabinet C-D.

CABINET A-B



FIG. 7-2a

CABINET C-D

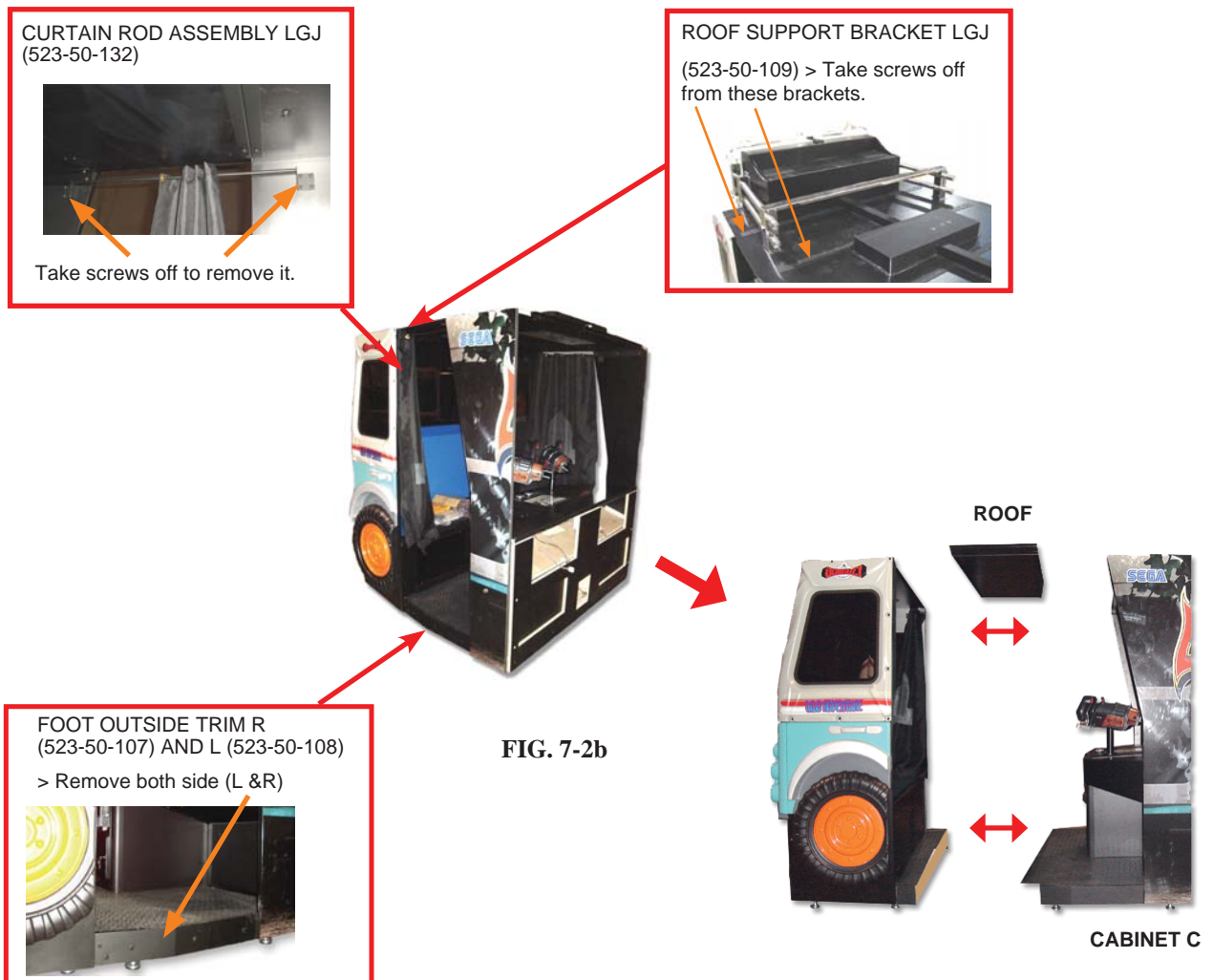


FIG. 7-2b

8 GAME DESCRIPTION

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

The florescent light in the billboard and the lights inside the main cabinet (two florescent bulbs) should be on at all times while power is being supplied. However, you may select for the lights inside the main cabinet to turn off during play from the Test Mode.

During Attract (standby) Mode, demo footage and details on how to play the game will be displayed on the screen.

Sound output comes from the left and right speakers inside the main cabinet and from the central speaker inside the control panel. Sound output during Attract Mode can be turned off from the Test Mode.

The two start buttons, one on the left and one on the right, can light up. They will light up when enough credits have been inserted to allow play. After the start button is pressed to start the game, the light in the button will turn off. After pressing the start button, use the control unit next to it to play the game. The start button then becomes the action button during the game and will light up when it has to be used.

The game requires two players to cooperate to escape from the jungle, using a combination of the control unit and the action button to defeat the attacking animals and obstacles in their path.

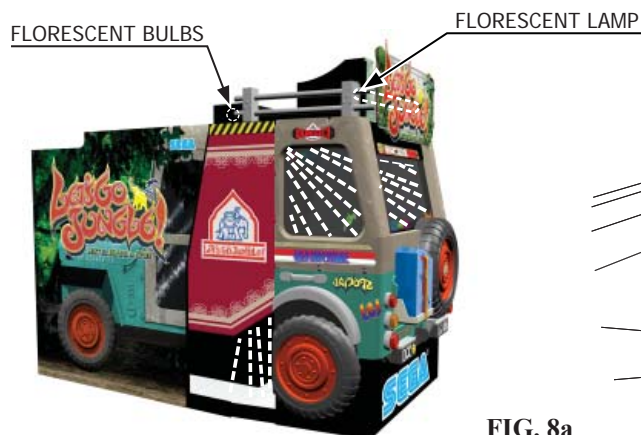


FIG. 8a

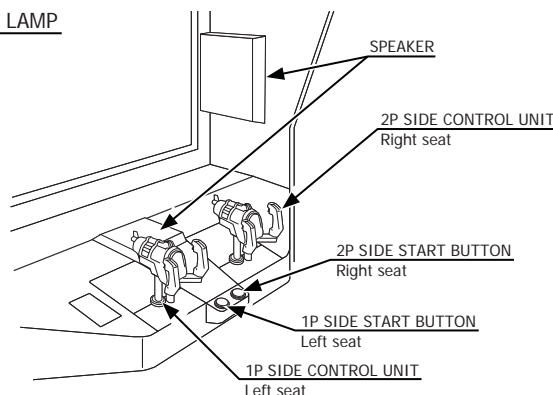


FIG. 8b

Using the Control Unit

Use the control unit to aim at targets and fire. Moving the control unit will move the target sight on the screen. The blue target is the 1P side and red target is the 2P side. Pull the trigger to fire bullets on the screen and also the control unit reacts by internal motor. You have unlimited ammunition.



1P SIDE (LEFT SEAT)

TARGET



2P SIDE 2P (RIGHT SEAT)

FIG. 8c Targets

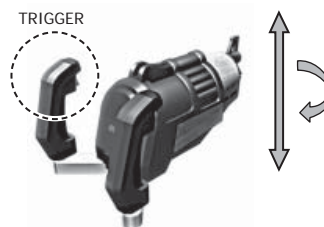


FIG. 8d Control Unit

Game Rules

Once the game starts, the life for the player(s) will be displayed. The 1P side is blue and the 2P side is red.

- Use the control unit to aim and fire at the oncoming enemies.
- Being hit by enemy attacks will reduce your life.
- It is game over when your life reaches zero.



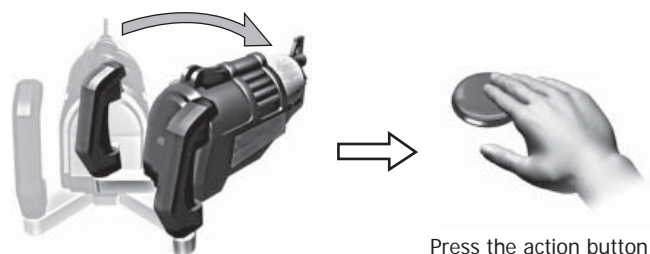
FIG. 8e

During the game, a player will have to perform various actions. When an action needs to be performed, the action icon will appear on the screen. The action icon indicates the start of an action. Then follow the onscreen instructions.



FIG. 8f Action Icon

FIG. 8g



Move the control unit to the right.

Press the action button.



FIG. 8h Mark



FIG. 8i Mark Changes

Sometimes a mark will appear on a large enemy or something that can be destroyed. The mark changes color as time passes. Shoot at the mark and destroy it within the time limit.

9 EXPLANATION OF TEST AND DATA DISPLAY

⚠ WARNING

Do not touch any parts that are not specified in these directions. Touching unspecified locations may lead to electric shock or cause short circuits.

⚠ CAUTION

- Be careful that your finger or hand does not get caught when opening/closing the coin chute door.
- Operating the TEST Button and SERVICE Button during Test Mode may be slightly uncomfortable, due to the position of the buttons in relation to the cabinet seats. Take care not to hurt your shoulder or back, or scratch or catch yourself on any parts of the cabinet.

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.
- Have a flashlight on hand and operate in Test Mode very carefully. The cabinet interior is dark and narrow and you could easily make mistakes in operation.

Perform tests and data checks periodically by manipulating the TEST Button and SERVICE Button in the cabinet. Follow the instructions in this chapter to conduct checks when the game machine is first installed, when money is being collected, or when the game machine does not operate properly. Shown below are the tests and screens to be used for different problems. This product uses a LINDBERGH game board and a DVD DRIVE. In the system, a different game can be played by putting a different DVD ROM in the DVD DRIVE. For this reason, the product's Test Mode consists of two modes: a System Test Mode for systems in which coin settings, for instance, are made for products that use the same system, and a Game Test Mode for setting of difficulty level, etc., and for input/output test of operational units used exclusively with this product.

9-1 PUSH SWITCH AND COIN METER

Push Switch

In Test Mode, the push switch in the coin chute door is operated. Unlock and open the coin chute door. Inside is the push switch.

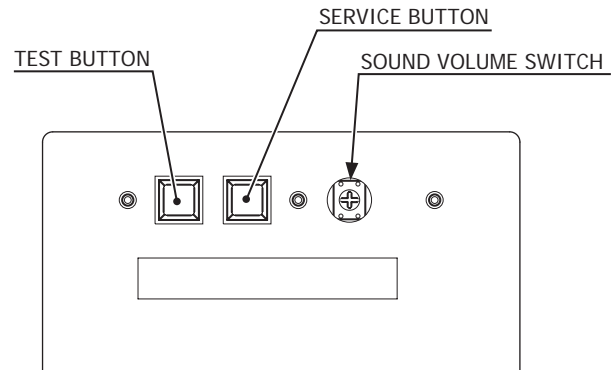


FIG. 9-1a Push Switch

TEST Button (TEST):

Establishes 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 Switch (SP.VOL):

Adjust the volume of the main cabinet left and right speakers, the control panel central speaker, the seat cabinet left and right speakers and all of the woofers at once. You cannot independently adjust the output of each speaker and woofer cannot be adjusted independently.

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.

9-2 SYSTEM TEST MODE

STOP IMPORTANT

- 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 LINDBERGH information and actions and the setting of coin/credit. Also, a screen appears for checking screen adjustments. For details, see the LINDBERGH service manual, which is provided separately.

Use the following settings with this product. If the settings are not as specified, error messages might appear and operations might not be normal.

• COIN ASSIGNMENTS

COIN CHUTE TYPE: COMMON

SERVICE TYPE (SERVICE Button Type): COMMON

• NETWORK SETTING

NETWORK TYPE: MAIN

MAIN NETWORK: Setting Not Required.

1 When the TEST Button is pressed, the system test mode menu screen (SYSTEM TEST MENU) appears. Use the SERVICE Button to move the cursor to the desired test item. Press the TEST Button to confirm selection of the item.

2 When testing and checking are completed, select EXIT and press the TEST Button. The SYSTEM TEST MENU screen reappears. When all tests are completed, select EXIT and press the TEST Button. The game screen reappears.

```

SYSTEM TEST MENU

SYSTEM INFORMATION
STORAGE INFORMATION
JVS TEST
MONITOR TEST
SPEAKER TEST
COIN ASSIGNMENTS
CLOCK SETTING
NETWORK SETTING
GAME TEST MODE
-> EXIT
  
```

SELECT WITH SERVICE AND PRESS TEST

FIG. 9-2 SYSTEM TEST MENU Screen

9-3 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.

Highlight GAME TEST Mode on the system test mode menu, and press the TEST Button to enter the game test mode. Once you enter the game test mode, the game test mode menu will be displayed.

1 Press the SERVICE Button to highlight the desired menu item with the cursor. Press the TEST Button to perform the selected item. To learn how to proceed after executing the selected item, read the item's explanation.

2 When test or setting is completed, take steps to have the game test mode menu screen reappear. The steps involved vary with the item.

3 Select EXIT and press the TEST Button. The system test mode menu screen reappears. On the system test mode menu screen, select EXIT and press the TEST Button. The game screen reappears.

<Item Explanation>

9-3a INPUT TEST: Perform an input test.

9-3b OUTPUT TEST: Perform an output test.

9-3c GUN CALIBRATION: Perform calibration.

9-3d GAME ASSIGNMENTS: Set up game settings.

9-3e BOOKKEEPING: View bookkeeping records.

9-3f BACKUP DATA CLEAR: Clear data.

EXIT: Return to system test mode menu.

```

GAME TEST MODE

INPUT TEST
OUTPUT TEST
GUN CALIBRATION
GAME ASSIGNMENTS
BOOKKEEPING
BACKUP DATA CLEAR

-> EXIT
  
```

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

FIG. 9-3a GAME TEST MODE MENU Screen

9-3a INPUT TEST

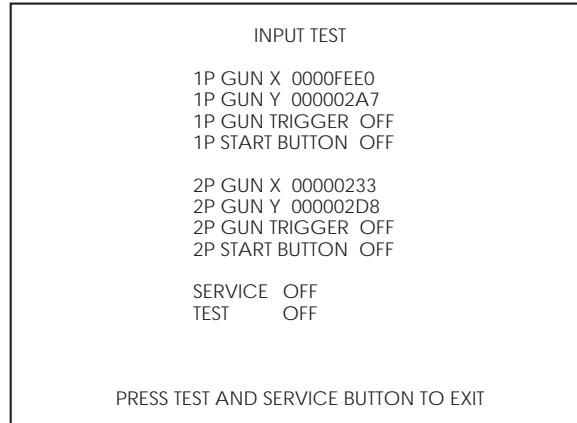


FIG. 9-3a01 INPUT TEST Screen

Periodically check the condition of each input device on this screen.

<Operation>

- 1** Manipulate the control unit (Gun) and confirm that the input value on the right side of the item changes smoothly in response to manipulation.
- 2** Manipulate the trigger and the start button and check the display on the right side of the item. The display is normal if it shows ON when trigger or button is pressed and OFF when trigger or button is released.
- 3** Use the TEST Button and SERVICE Button and check the values shown on the right of each category. Operation is normal if it shows ON when pressed and OFF when released.
- 4** When the SERVICE Button and TEST Button are pressed simultaneously, the game test mode menu screen reappears.

<Menu Explanation>

| | |
|---------------|-------------------------------------|
| GUN X: | Control unit left/right input value |
| GUN Y: | Control unit up/down input value |
| GUN TRIGGER: | Gun trigger |
| START BUTTON: | Start button |
| SERVICE: | SERVICE Button |
| TEST: | TEST Button |

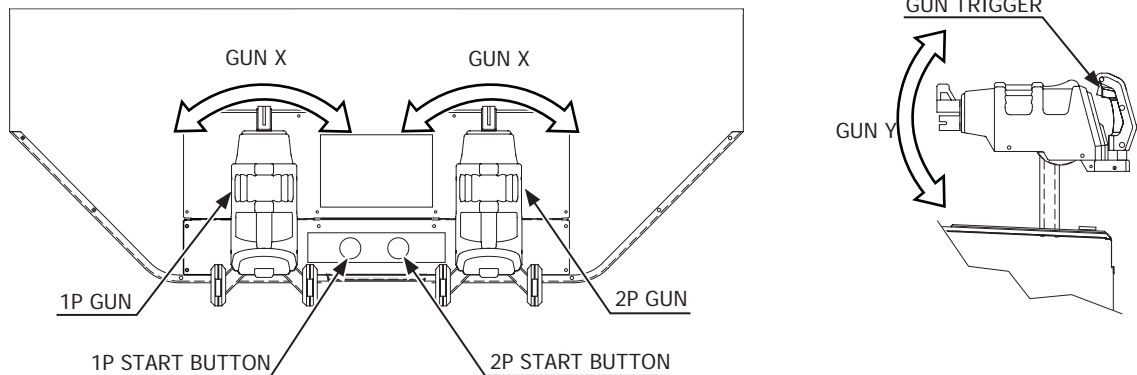


FIG. 9-3a02 Input Device

9-3b OUTPUT TEST

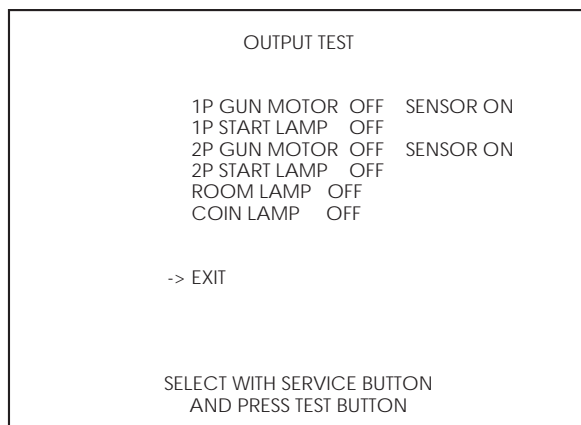


FIG. 9-3b OUTPUT TEST Screen

The condition of each output device can be checked. Periodically check the condition of each output device on this screen. Conditions are normal if each device operates and yields output as indicated below.

<Operation>

- 1** Press the SERVICE Button and move the cursor to the item (output device) you want to test.
- 2** Whenever the TEST Button is pressed, the display on the right side of the item goes from OFF to ON and the selected output device operates. Confirm that the device operates normally.
- 3** Press the SERVICE Button and move the cursor to EXIT. When the TEST Button is pressed, the game test mode menu screen reappears.

<Menu Explanation>

| | |
|-------------|--|
| GUN MOTOR: | When ON the motor will operate and the controller will vibrate, when OFF it will stop. |
| SENSOR: | Will continue to switch between ON and OFF when the motor is in operation. |
| START LAMP: | Start lamp will turn on when ON and off when OFF. |
| ROOM LAMP: | Main cabinet ceiling florescent lamp will turn on when ON and off when OFF. |
| COIN LAMP: | Coin insert slot lamp will turn on when ON and off when OFF. |
| EXIT: | Game Test Menu screen reappears. |

9-3c GUN CALIBRATION

STOP IMPORTANT

Calibration is relevant to operability. Manipulate and adjust the control unit with appropriate force. Do not make adjustments with excessive force.

Change the volume input values of the control unit. After changing the volume, use this screen to adjust and check it.

You must adjust the sight for 1P side and 2P side separately.

<Operation>

- 1** Press the SERVICE Button and move the cursor to the item you want to select. Move the cursor to CALIBRATION START and press the TEST Button to adjust the calibration.
- 2** Move the cursor to EXIT and press the TEST Button, the calibration screen exits and the game test mode menu screen reappears.

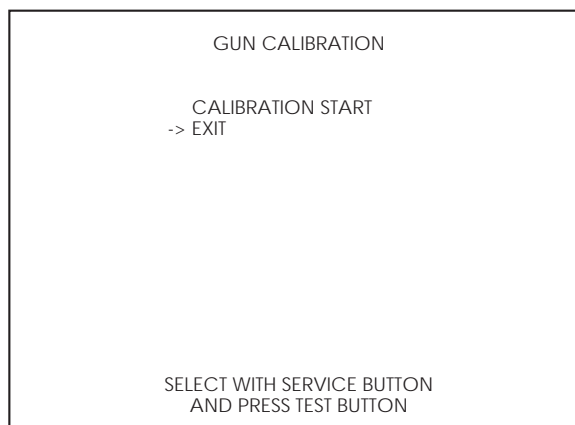


FIG. 9-3c01 GUN CALIBRATION Screen

Perform individual calibration of the control units for the 1P side and 2P side.
The current maximum and minimum individual volume values will be reset when entering the Gun Calibration Screen.

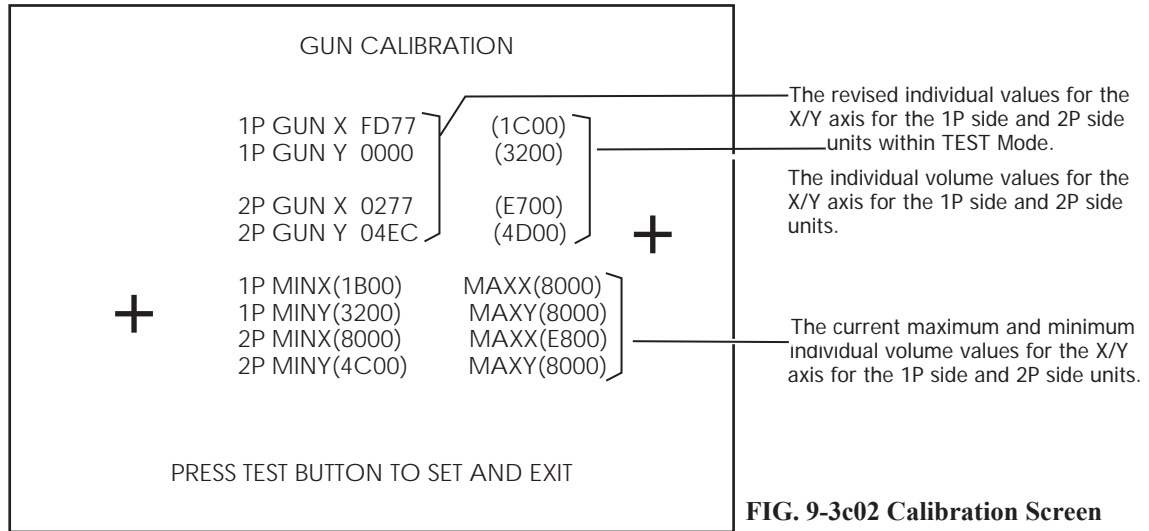


FIG. 9-3c02 Calibration Screen

- 1 Slowly move the control unit you wish to adjust all the way up, down, left and right. Repeat this numerous times and the values will set automatically.
- 2 Press the TEST Button and the calibration settings will be altered to reflect all changes made before returning to the GAME TEST Mode screen.

9-3d GAME ASSIGNMENTS

STOP IMPORTANT

Setting changes do not become effective until EXIT is selected on the setting screen. After a setting has been changed, be sure to always exit the setting screen.

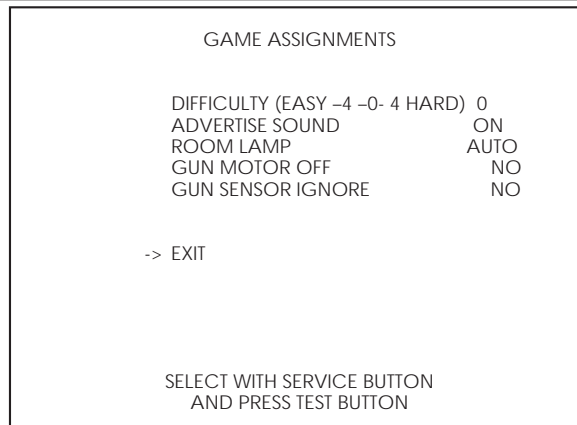


FIG. 9-3d
GAME ASSIGNMENTS Screen

- 1 Press the SERVICE Button, move the cursor to the item whose setting is to be changed and select the item. When the TEST Button is pressed, the preset value of the selected item changes.
- 2 Press the SERVICE Button and move the cursor to EXIT. When the TEST Button is pressed, the game setting screen exits and the game test mode menu screen reappears.

<Menu Explanation>

| | |
|--------------------|--|
| DIFFICULTY: | Set the Game Difficulty. Select from 9 settings: from -4 (low difficulty) to 4 (high difficulty). |
| ADVERTISE SOUND: | Turn sound during the Attract (standby) mode ON or OFF. |
| ROOM LAMP: | Light settings for lights inside main cabinet. |
| GUN MOTOR OFF: | ON: Always on. AUTO: On during Attract Mode and all other times aside from during game play. |
| GUN SENSOR IGNORE: | Motor operation settings for the control unit (gun). |
| | YES: Motor will not operate. NO: Motor operates and control unit will vibrate. |
| | Motor sensor operation settings. |
| | YES: Motor sensor will not operate. NO: Motor sensor operates. If the motor sensor detects an abnormality, the motor will stop. The motor will not operate while the power is left on. |
| EXIT: | Return to the Game Test Menu screen. |

9-3e BOOKKEEPING

Displays bookkeeping information across 4 screens.

When the TEST Button is pressed, proceed to the next screen. When the TEST Button is pressed while the (4/4) screen is displayed, the game test mode menu screen reappears.

| BOOKKEEPING | | 1/4 |
|---------------------------|---|-----|
| COIN1 | 0 | |
| COIN2 | 0 | |
| COIN3 | 0 | |
| COIN4 | 0 | |
| TOTAL COINS | | 0 |
| COIN CREDITS | 0 | |
| SERVICE CREDITS | 0 | |
| TOTAL CREDITS | 0 | |
| PRESS TEST BUTTON TO NEXT | | |

FIG. 9-3e01 BOOKKEEPING Screen (1/4)

<Menu Explanation>

| | |
|------------------------------|--|
| COIN 1/COIN 2/COIN 3/COIN 4: | Number of coins inserted in each coin slot. |
| TOTAL COINS: | Total number of coins. |
| COIN CREDITS: | Number of credits awarded from inserting coins. |
| SERVICE CREDITS: | Number of credits awarded with the SERVICE Button. |
| TOTAL CREDITS: | Total of COIN CREDITS and SERVICE CREDITS. |

| BOOKKEEPING | | 2/4 |
|---------------------------|--------------------|-----|
| TOTAL TIME | 0 D 00 H 00 M 00 S | |
| TOTAL PLAY TIME | 0 D 00 H 00 M 00 S | |
| TOTAL PLAY TIME1P | 0 D 00 H 00 M 00 S | |
| TOTAL PLAY TIME2P | 0 D 00 H 00 M 00 S | |
| NUMBER OF GAMES | 1P 0 2P 0 | |
| CONTINUE OF GAMES | 1P 0 2P 0 | |
| TOTAL GAMES | 0 | |
| BOTH PLAYERS GAMES | 0 | |
| AVERAGE PLAY TIME | 00 H 00 M 00 S | |
| LONGEST PLAY TIME | 00 H 00 M 00 S | |
| SHORTEST PLAY TIME | 00 H 00 M 00 S | |
| PRESS TEST BUTTON TO NEXT | | |

FIG. 9-3e02 BOOKKEEPING Screen (2/4)

<Menu Explanation>

| | |
|---------------------|--|
| TOTAL TIME: | Total number of hours the power has been supplied. (Time power has been supplied, but not including TEST Mode.) |
| TOTAL PLAY TIME: | Total play time. |
| TOTAL PLAY TIME 1P: | Total play time on the 1P side. |
| TOTAL PLAY TIME 2P: | Total play time on the 2P side. |
| NUMBER OF GAMES: | Total number of plays on the 1P side and on the 2P side. |
| CONTINUE OF GAMES: | Total number of continues on the 1P side and on the 2P side. |
| TOTAL GAMES: | Total number of plays. |
| BOTH PLAYERS GAMES: | Total number of two player games. |
| AVERAGE PLAY TIME: | Average play time. |
| LONGEST PLAY TIME: | Longest play time. |
| SHORTEST PLAY TIME: | Shortest play time. |

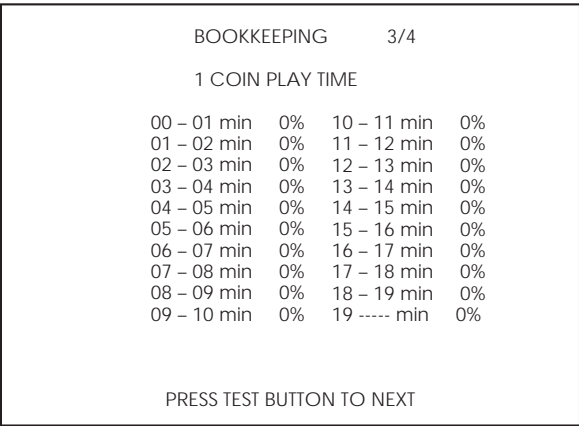


FIG. 9-3e03 BOOKKEEPING Screen (3/4)

<Menu Explanation>
1 COIN PLAY TIME: Distribution of playtime on 1 coin (until continue or game over).

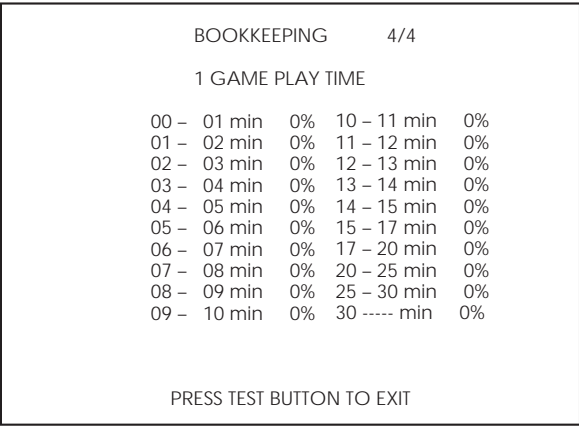


FIG. 9-3e04 BOOKKEEPING Screen (4/4)

<Menu Explanation>
1 GAME PLAY TIME: Distribution of playtime for 1 full game (from start until game over).

9-3f BACKUP DATA CLEAR

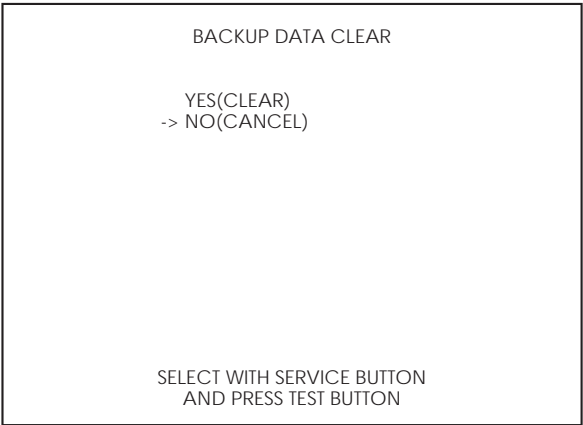


FIG. 9-3f BACKUP DATA CLEAR Screen

- 1 Press the SERVICE Button and move the cursor to the item you want to select.
- 2 To clear data, move the cursor to YES (CLEAR) and then press the TEST Button. When the data has been cleared, the message “COMPLETED” will be displayed and return to the game test mode menu screen automatically.
- 3 Move the cursor to NO (CANCEL) and press the TEST Button to return to the game test mode menu screen without clearing the data.

10 CONTROL UNIT

10 CONTROL UNIT

WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause an electric shock, short circuit or present a risk of fire.
- Do not touch any parts that are not specified in these directions. Touching unspecified locations may lead to electric shock or cause short circuits.
- This work should be performed by site maintenance personnel or other skilled professionals. Work performed by non-technical personnel can cause a severe accident such as an electric shock.
- Exercise due caution in performing soldering procedures. If soldering iron is handled carelessly, there could be fires or burns.
- Proceed very carefully when heating thermal contraction tube. Careless operations can result in fires or burns.

CAUTION

- When fastening plastic parts, be careful not to tighten screws and nuts excessively. Otherwise parts may be damaged, resulting in injuries from fragments, etc.
- Be careful not to get hand or finger caught when removing or attaching the parts.
- Disconnection and connection of connectors will be performed within the narrow cabinet space. Take due care not to scratch or otherwise injure yourself.
- Take care when carrying the removed Control Units. Such heavy lifting carries a risk of injury to back or shoulders.

IMPORTANT

- After the volume has been replaced, be sure to set the volume value on the test mode calibration screen and the input test screen and check variations in the volume value.
- After adjusting or replacing a microswitch, always check ON/OFF of the switch on the input test screen of the test mode.
- Handle parts inside the Control Unit very carefully. Be especially careful to avoid damage, deformation or loss of these parts. If any one of these parts is lost or defective, it can result in damages and/or faulty operations.

If the operability of the Control Unit is unsatisfactory, or if settings on the test mode calibration screen are ineffective, the problem could be a defective mechanism, displacement of the position where volume or microswitch has been fastened, or malfunctioning of volume or microswitch. Carry out the following procedure to replace Control Unit or microswitch. Also be sure to grease the mechanical components of the Control Unit once every 3 months.

10-1 HOW TO REMOVE CONTROL UNIT

When changing the volume or microswitches in the Control Unit you must first remove the Control Unit. Performing these operations with the Control Unit still attached is difficult and may damage parts or wires.

The following tools are needed for the following procedure.

- Phillips head screwdriver (for M6)
- Wrench or screwdriver for tamperproof screws (for M4)
- A 7 millimeter spanner, hexagonal screwdriver, or socket wrench

- 1 Turn off the power.
- 2 Remove Tamper screws to take off the CONTROL PANEL PLATE REAR and FRONT.

523-50-133
CONTROL PANEL PLATE
REAR LGJ

523-50-134
CONTROL PANEL PLATE
FRONT LGJ

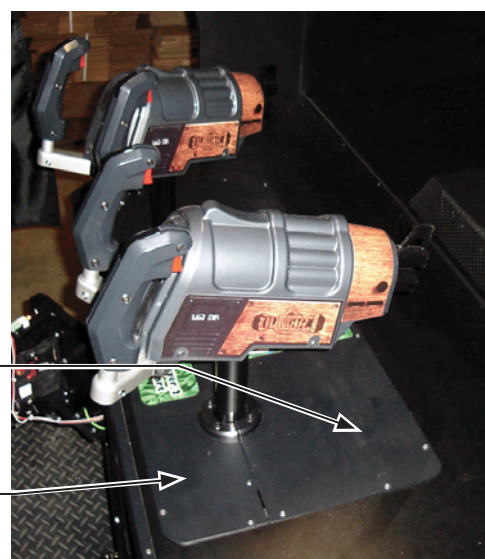


FIG. 10-1a

- 3 Disconnect the two connectors then remove Earth wire from Gun Assy bottom.

Please remove Earth wire when
you take off Gun Assy.

Two connectors

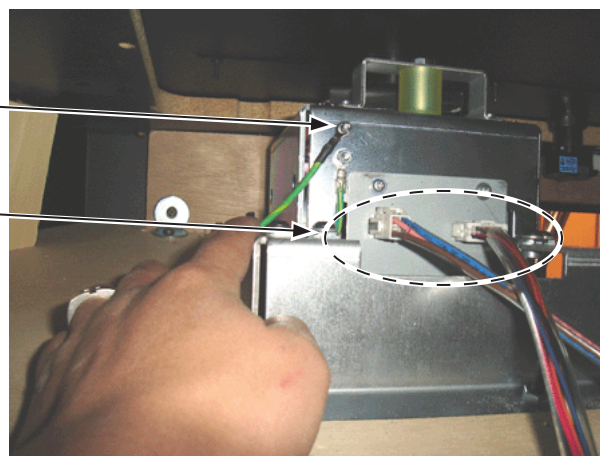
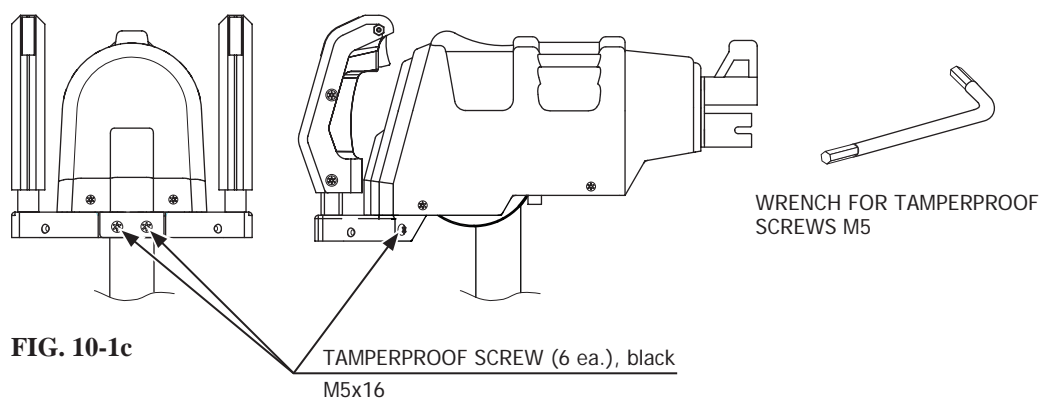


FIG. 10-1b

The Supplied Wrench

The supplied wrench for tamperproof screws M5 is used for the screws on the grip base. Use it to tighten these screws if they are loose or when changing the grip base.



10-2 ADJUSTING OR CHANGING THE X AXIS VOLUME

STOP IMPORTANT

The volume axis directions when the Control Units are pointed directly at the screen are different.

The X (left and right) axis volume is on the bottom of the Control Unit.

If the X axis volume does not seem to be working properly and the TEST Mode calibration screen has no effect, the cause is likely to be a problem with or damage to the gears of the X axis volume.

When replacing the volume, you will need a replacement volume and three heat shrink tubes (product number: 310-5029-D20). You will also need the following tools and some solder.

- Phillips head screwdriver (for M4, M6)
- Wrench or screwdriver for tamperproof screws (for M4)
- A 7 millimeter spanner, hexagonal screwdriver, or socket wrench
- A 2 millimeter hexagonal bar wrench or screwdriver
- An 11-12 millimeter spanner
- Nippers
- Cutters
- Wire stripper
- Soldering iron
- Industrial dryer

Adjustment

- 1 Turn off the power and remove the Control Unit (see 10-1). Invert the Control Unit and place it upside down. Make sure you do not damage the surface of the Control Unit.
- 2 Loosen the two screws fixing the volume bracket lower and separate the gear engagement.

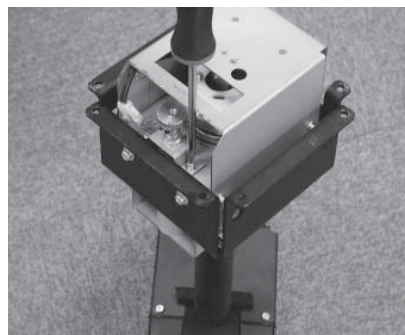
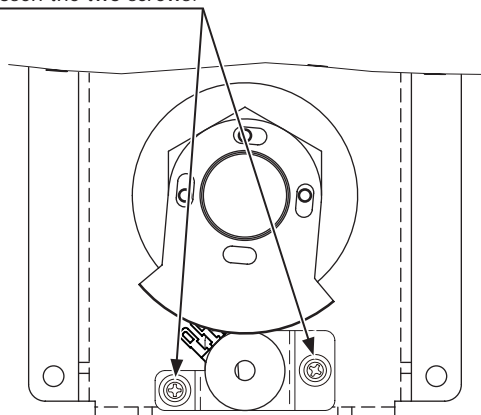


FIG. 10-2a

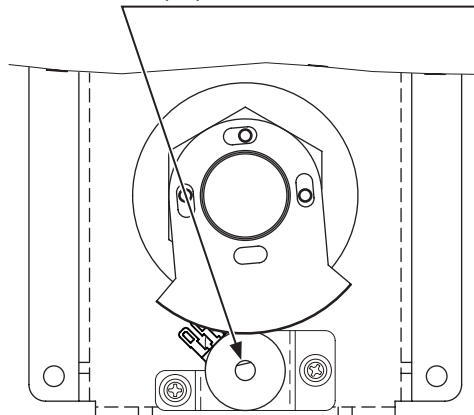
- 3 With the Control Unit's left and right axis perpendicular to the screen, engage the D cut face of the volume axis so that it matches the diagram below.

Loosen the two screws.



GUN 1P

Volume axis D cut face with left and right axis perpendicular to the screen



GUN 2P

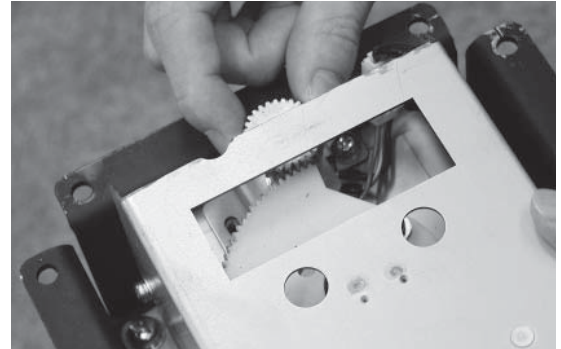
FIG. 10-2b X Axis (Left and Right) Volume

- 4 Tighten the two previously loosened screws. Move the Control Unit left and right and check that the gears move smoothly. Reattach the Control Unit, then turn on the power and adjust the volume value on the calibration screen.

You can also adjust the gear engagement in the following way.

- 1** Loosen the two screws fixing the volume bracket lower and separate the gear engagement. Looking at the bottom of the Control Unit from the top, turn it as far anti-clockwise as possible and hold it there.
- 2** Turn the volume axis as far as it will go clockwise and then reengage the gears.
- 3** From this engagement, engage the gears on the volume axis at a half turn anti-clockwise and tighten the previously loosened screws.

FIG. 10-2c

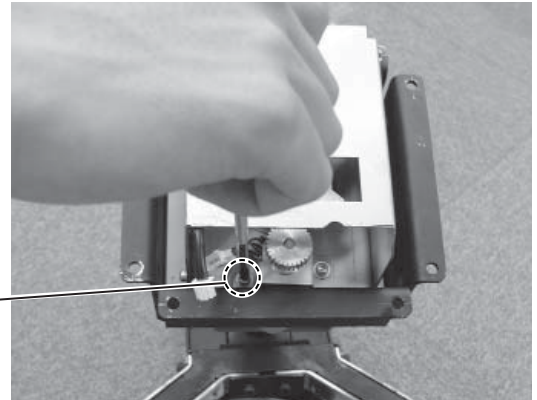


Exchange

- 1** Turn off the power and remove the Control Unit. (See 11-1). Invert the Control Unit and place it upside down. Make sure you do not damage the surface of the Control Unit.
- 2** Disconnect the one connector on the wire coming from the volume. Remove the two screws fixing the volume bracket lower in place. The screws have flat and spring washers attached. These two screws will be used with the replacement part.

M4x8, w/flat & spring washers
SCREW (2)

FIG. 10-2d



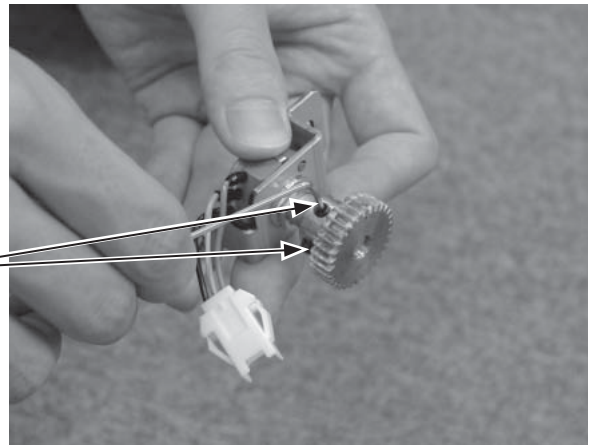
- 3** Remove the volume along with the entire volume bracket lower from the Control Unit. Loosen the two hexagon socket screws and remove the gears. The gears will be used with the replacement part.

WIRE
COLOR OF
POT.
1 = RED
2 = BK/W
3 = BK



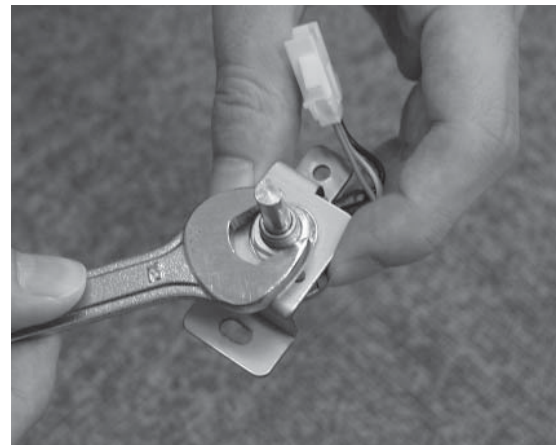
HEXAGON SOCKET SCREW (2)
M4x8

FIG. 10-2e



- 4** Remove the hexagon nuts attaching the volume bracket lower to the volume and remove it from the bracket. The bracket will be used with the replacement part.

FIG. 10-2f



5 The wire attached to the volume will be used with the replacement part. Remove the old heat shrink tubing attached to the wire using the nippers or cutters.

6 Use the soldering iron to melt the solder and remove the wire from the old volume. You must take the utmost care when using the soldering iron.

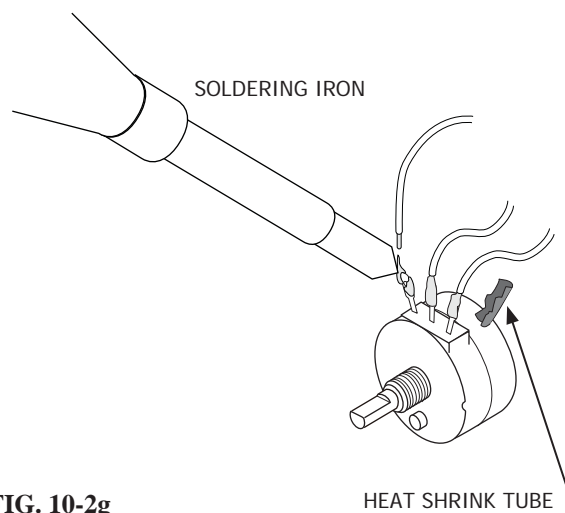


FIG. 10-2g

7 If the lead wire on the end of the wire terminal is less than five millimeters, use wire strippers or cutters to peel back the covering. Pass the wire through each of the heat shrink tubes. Solder the wire terminal to the replacement volume.

8 Use the wiring diagram to make sure you don't solder in the wrong place. Use the industrial dryer to apply heat and attach the heat shrink tubing to the soldered area. Attach the gears and bracket to the volume.

9 As in the above adjustment method, with the Control Unit's left and right axis perpendicular to the screen, engage the gears with the D cut face of the volume axis in the direction shown in the diagram and attach it to the Control Unit. (See FIG. 10-2b). Note that the directions are different for 1P side and 2P side.

10 Fix the bracket in place with the two screws. Connect the connector. Reattach the Control Unit to the cabinet. Turn on the power and use the calibration screen to alter the volume values.

10-3 ADJUSTING OR CHANGING THE Y AXIS VOLUME

The Y (up and down) axis volume is inside the Control Unit on the side.

If the Y axis volume does not seem to be working properly and the TEST Mode calibration screen has no effect, the cause is likely to be a problem with or damage to the gears of the Y axis volume.

When replacing the volume, you will need a replacement volume and three heat shrink tubes (product number: 310-5029-D20). You will also need the following tools and some solder.

- Phillips head screwdriver (for M4, M6), Wrench or screwdriver for tamperproof screws (for M4), 7 millimeter spanner or hexagonal screwdriver or socket wrench, 1.5 millimeter hexagonal bar wrench or screwdriver, 11-12 millimeter spanner, Wire cutter, Knife, Wire Stripper, Soldering iron, Industrial dryer

Adjustment

1 Turn off the power and remove the Control Unit. (See 10-1).

2 Remove the muzzle. Insert the tool into the gun barrel and remove the two tamperproof screws.

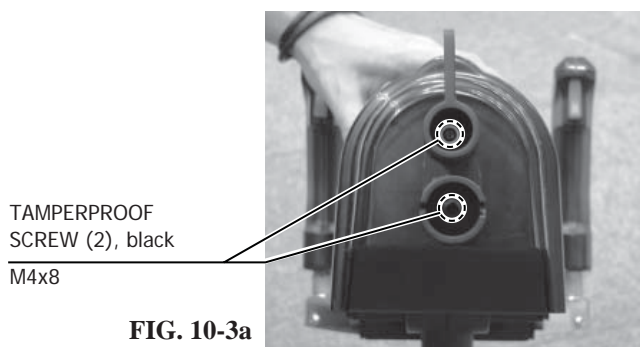


FIG. 10-3a

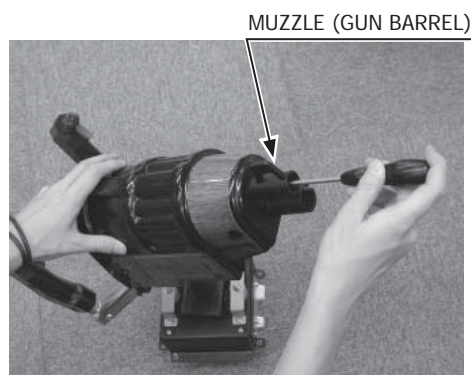
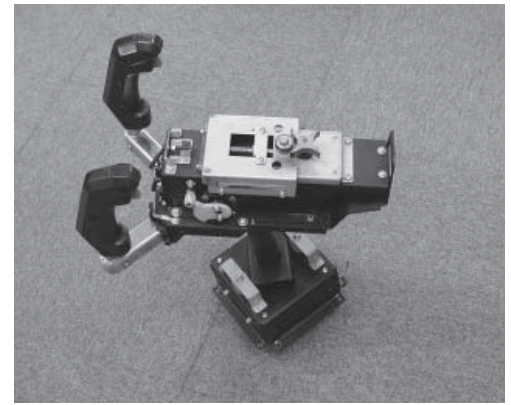
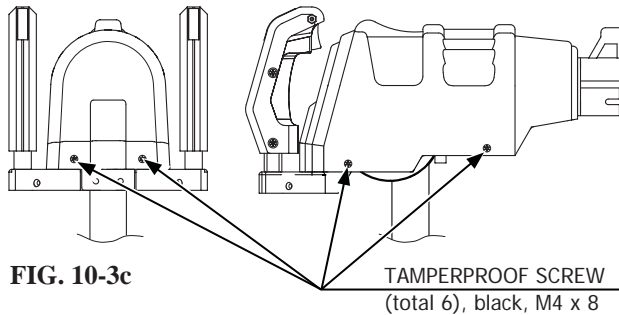


FIG. 10-3b

- 3 Remove the Gun Cover.
Remove the six tamperproof screws.
With the Control Unit pointing at the screen, the Y axis volume is located on the right side.



- 4 Loosen the two screws holding the volume bracket upper and adjust the gear engagement.
With the Control Unit level, engage the D cut face of the volume axis in the direction shown in the diagram.

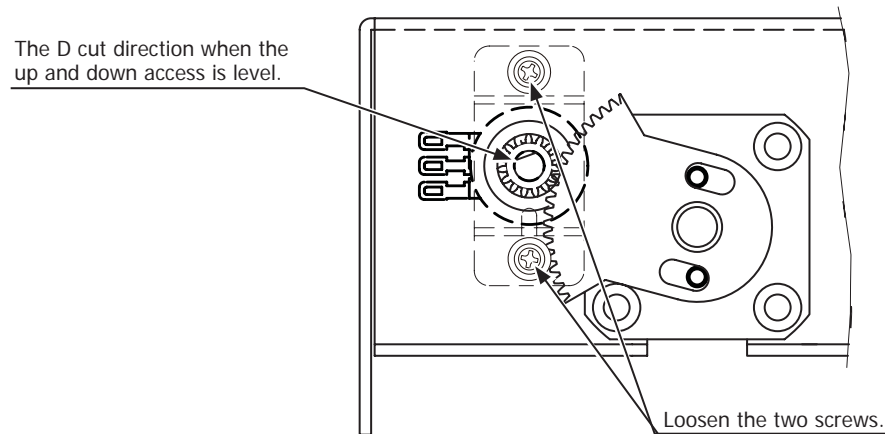
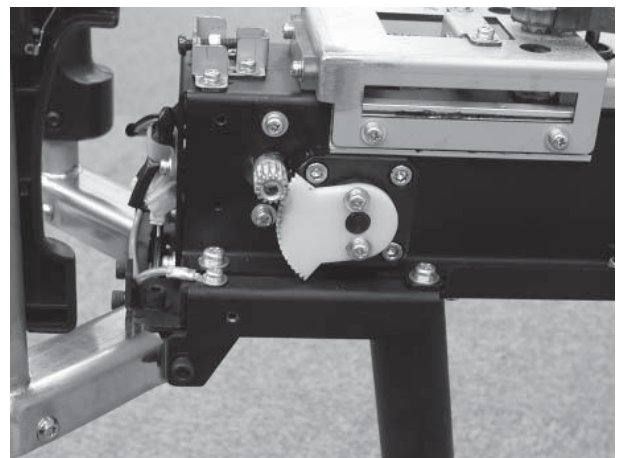


FIG. 10-3e Y Axis (up and down) Volume

- 5 Tighten the two previously loosened screws. Move the Control Unit up and down and make sure that the gears are moving smoothly.
After reattaching the Control Unit turn on the power and use the calibration screen to adjust the volume values.

You can also adjust the gear engagement in the following way.

- 1 Loosen the two screws fixing the volume bracket lower and separate the gear engagement. Point the Control Unit down as far as it will go. Turn the volume axis as far clockwise as it will go and engage the gears.
- 2 From this engagement, engage the gears on the volume axis at a half turn anti-clockwise and tighten the previously loosened screws

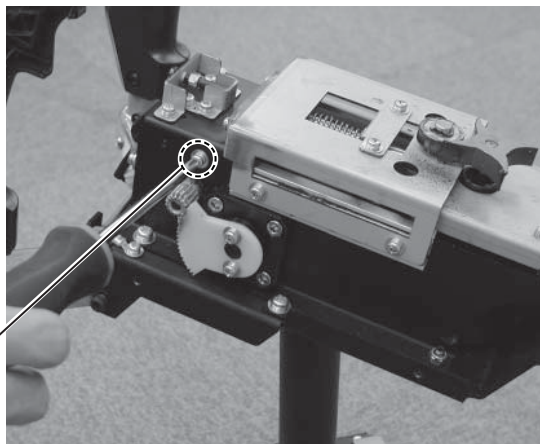


Exchanging

- 1 Turn off the power and remove the Control Unit. (See 11-1). Remove the muzzle and the Gun Cover.
- 2 Remove the two screws fixing the volume bracket upper in place. The screws have flat and spring washers attached. These screws will be used with the replacement volume.

SCREW (2)
M4x8, w/flat & spring washers

FIG. 10-3g



- 3 Remove the volume wire restraint and free the wires. Remove the single screw holding the restraint in place.

SCREW (1)
M4x8, w/flat & spring washers

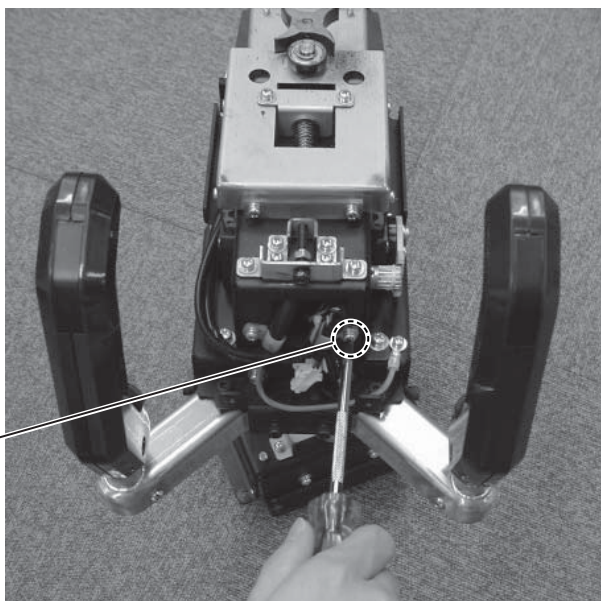


FIG. 10-3h

- 4 Remove the volume from the Control Unit with the volume bracket upper still attached. Be careful as a connector is attached.

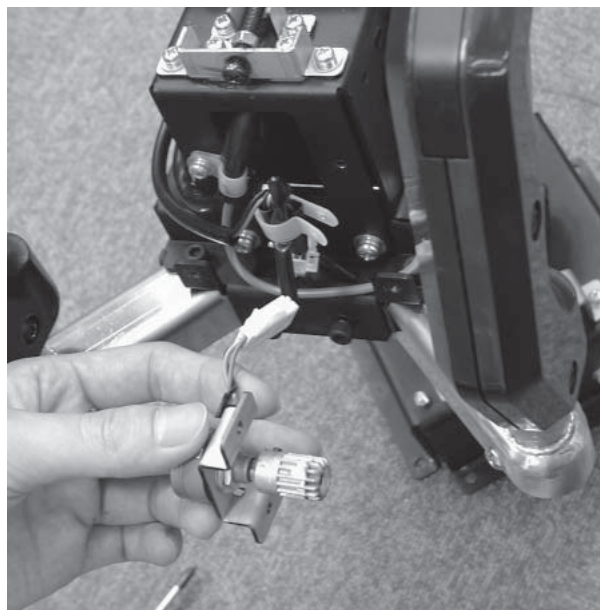


FIG. 10-3i

- 5** Disconnect the one connector.

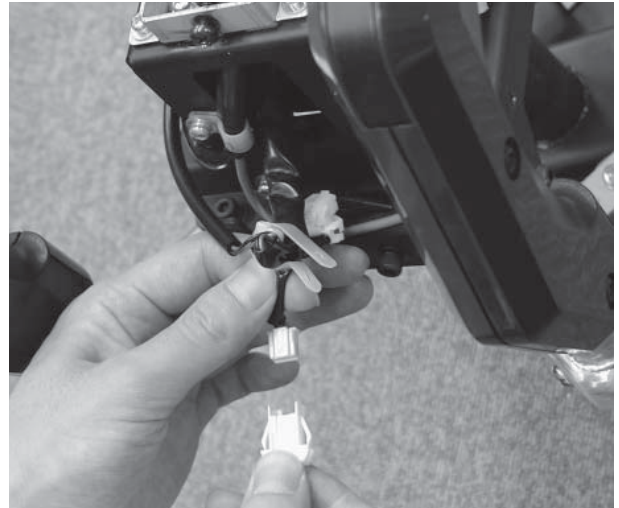


FIG. 10-3j

- 6** Loosen the two hexagon socket screws fixing the gears in place and remove the gears. The gears will be used in the replacement volume.

WIRE
COLOR OF
POT.
1 = RED
2 = BK/W
3 = BK



HEXAGON SOCKET SCREW (2)
M3x4

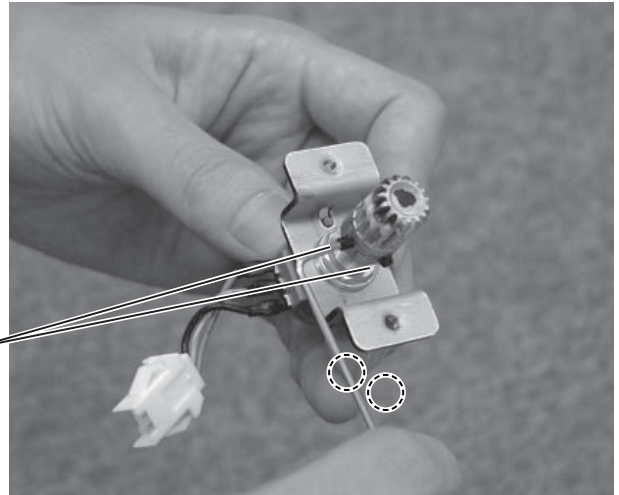


FIG. 10-3k

- 7** Remove the hexagon nuts attaching the volume bracket upper to the volume and remove it from the bracket. The bracket will be used with the replacement part.
- 8** The wire attached to the volume will be used with the replacement part. Remove the old heat shrink tubing attached to the wire using the nippers or cutters.
- 9** Use the soldering iron to melt the solder and remove the wire from the old volume. You must take the utmost care when using the soldering iron.
- 10** If the lead wire on the end of the wire terminal is less than five millimeters use wire strippers or cutters to peel back the covering.
- 11** Pass the wire through each of the heat shrink tubes. Solder the wire terminal to the replacement volume. Use the wiring diagram to make sure you don't solder in the wrong place.
- 12** Use the industrial dryer to apply heat and attach the heat shrink tubing to the soldered area. Attach the gears and bracket to the volume. Connect the connector.
- 13** As in the above adjustment method, with the Control Unit level, engage the gears with the D cut face of the volume axis in the direction shown in the diagram and attach it to the Control Unit. (See FIG. 11-3e).
- 14** Fix the bracket in place with the two screws. Reattach the Gun Cover and the muzzle Reattach the Control Unit to the cabinet. Turn on the power and use the calibration screen to alter the volume values.

10-4 REPLACING THE TRIGGER SWITCH

If the trigger does not seem to be working properly, it is likely a fault with the microswitch inside the Control Unit's grip or there is foreign matter or dirt on the trigger. Remove the Control Unit when exchanging the microswitch or when disassembling and cleaning individual parts.

When replacing the microswitch, you will need a replacement microswitch and two heat shrink tubes (product number: 310-5029-B20). You will also need the following tools and some solder.

- Phillips head screwdriver (for M4, M6)
- Wrench or screwdriver for tamperproof screws (for M4)
- A 7 millimeter spanner or hexagonal screwdriver or socket wrench.
- Nippers
- Cutters
- Soldering iron
- Industrial dryer

The microswitch slots into the left hand part of the grip, the left grip. During this operation you will remove and replace the right hand part of the grip, the right grip.

The screws and nuts fixing the grip in place are treated as part of this product. If you lose them they can be reordered using their respective product numbers.

1 Turn off the power and remove the Control Unit (See 10-1).

2 Disassemble the grip with the microswitch inside it. The top screw on the right grip uses a hexagon nut. Use a Phillips head screwdriver (for M4 screw).

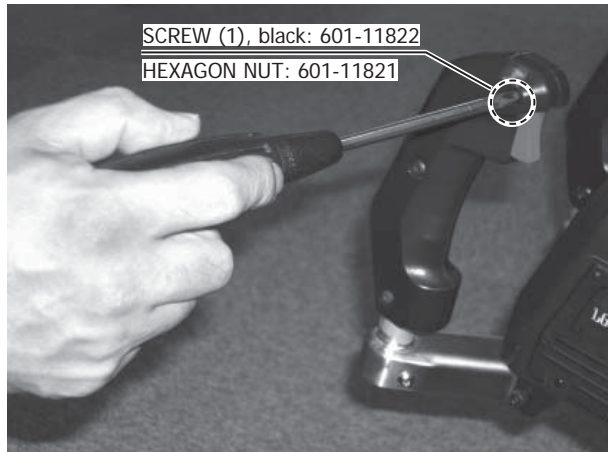


FIG. 10-4a

3 Remove the two tamperproof screws holding the right grip in place. Use a wrench or screwdriver for tamperproof screws (for M4).

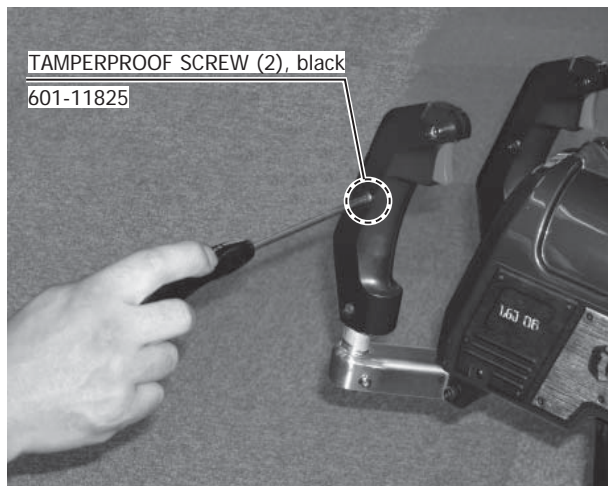
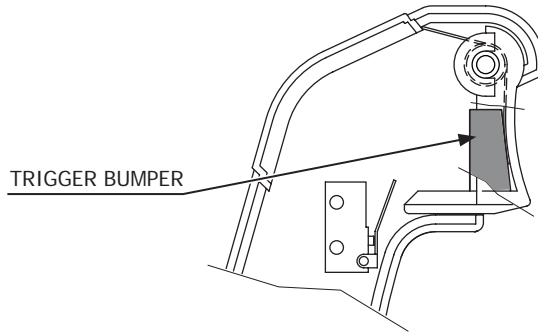


FIG. 10-4b

- 4** Remove the right grip. Be careful when removing the grip as the pieces inside may come free. When disassembling and cleaning individual parts, be careful of the direction you attach the trigger bumper. Attaching it in the wrong direction may lead to a malfunction in the operation of the trigger.

**FIG. 10-4d****FIG. 10-4c**

- 5** The microswitch is slotted into the left grip. Remove it gently, being careful not to damage the wires.

MIRCOSWITCH
601-11823

**FIG. 10-4e**

- 6** The wire attached to the microswitch will be used with the replacement microswitch. Remove the old heat shrink tubing attached to the wire using the nippers or cutters.
- 7** Use the soldering iron to remove the wire soldered to the microswitch terminal. Pass the wire through each of the heat shrink tubes.
- 8** Solder the wire to the terminal on the replacement microswitch. Use the wiring diagram to make sure you don't solder in the wrong place.
- 9** Use the industrial dryer to apply heat and attach the heat shrink tubing to the soldered area. Insert the microswitch into the left grip and attach it.
- 10** Reattach the right grip, taking care not to pinch the wire. Replace the two tamperproof screws, screw and nut to fix it in place. Be careful not to tighten the screws too tightly.
- 11** Reattach the Control Unit to the cabinet. Turn on the power and use the input test screen in GAME TEST Mode to check the operation of the trigger.

10-5 GREASING

STOP IMPORTANT

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

Once every three months, grease the cam slide part, springs, gear engagement and the sliding part of the slide rail.

For all parts aside from the slide part of the slide rail, use Grease Mate (product number: 090-0066).

For the slide part of the slide rail, use Sumico Lubricant (Ltd.) Mori LG Grease NO. 2 (product number: 090-0290).

In order to grease the gear engagement for the X and Y axis volumes, you must cut the power, remove the Control Unit from the cabinet, and remove the muzzle and Gun Cover. (See 10-1 & 10-2.)

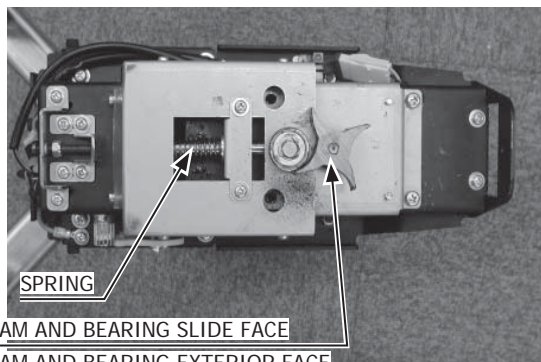


FIG. 10-5a

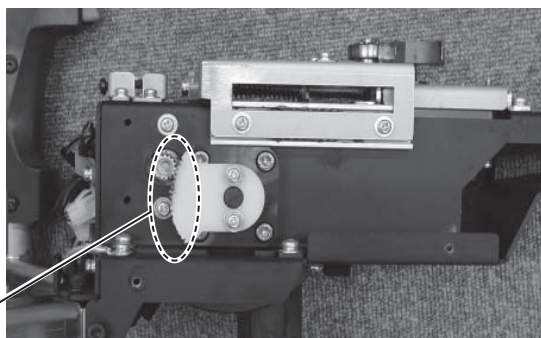


FIG. 10-5b

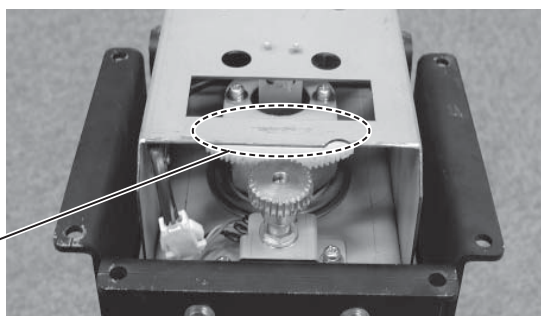


FIG. 10-5c

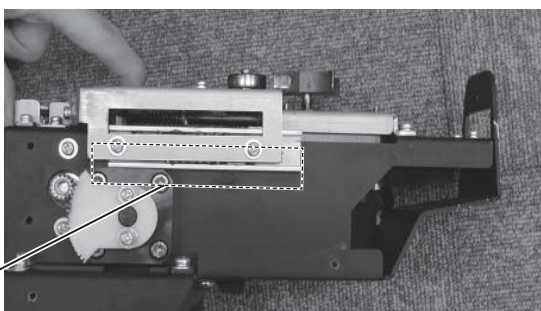


FIG. 10-5d

10-6 ADJUSTMENT OF VIBRATION NOISE

If the vibration is creating a lot of noise, adjust it in the following way.

- 1 Turn off the power and remove the Control Unit. (See 10-1.) Remove the muzzle and Gun Cover. (See 10-2.)
- 2 Loosen the four screws holding the vibration pack stopper (hereafter "stopper") in place.

SCREW (4)
M4x8, w/flat & spring washers

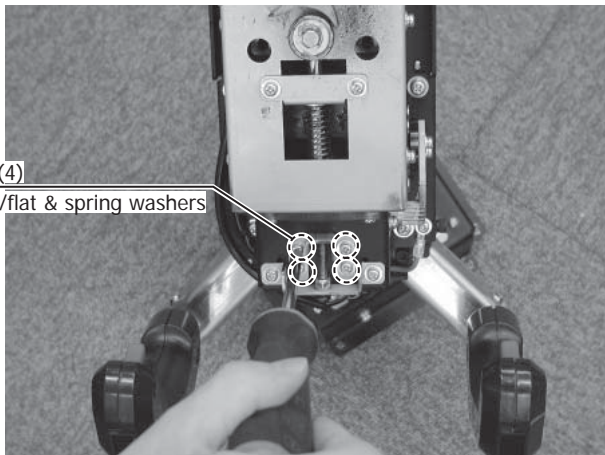


FIG. 10-6a

- 3 Use a Phillips head screwdriver and spanner to loosen the screw and U nut passing through the stopper.

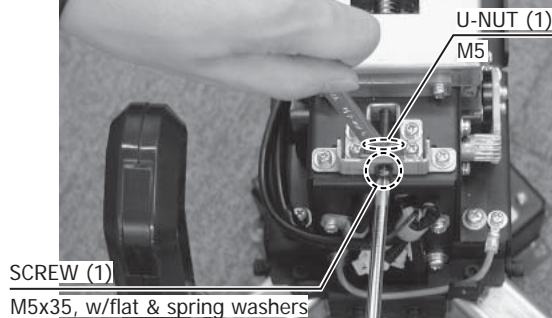


FIG. 10-6b

- 4 Slide the vibration pack toward the stopper, adjusting its fixed position as far as possible so that the tip of the cam and bearings are not touching. Tighten the screws loosened at step 4 of this process.

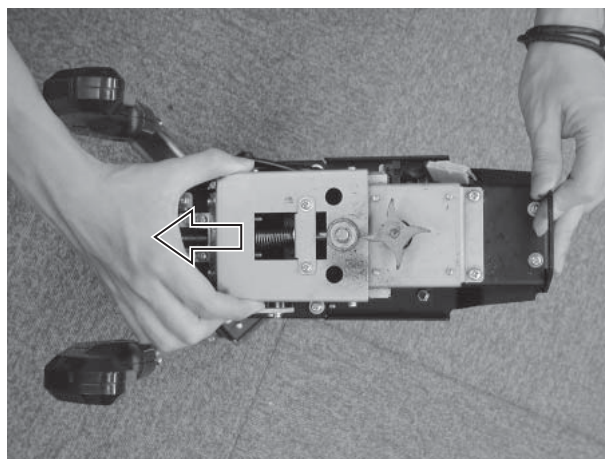


FIG. 10-6c

- 5 Tighten the four screws fixed the stopper in place. Fix the screw and tighten the U nut.

11 PERIODIC INSPECTION

WARNING

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

IMPORTANT

The interior of the cabinet is hard to see from the outside which may lead to willful misconduct by players or accidents going unnoticed. When the game is not in use, check the interior at regular intervals and make sure that nothing has been forgotten or placed on the seats.

In order to maintain the performance of this product and operate it safely, inspect the following items routinely and perform maintenance.

The player directly touches and manipulates the Control Unit with his/her hands. Clean it as necessary and provide hand towels, etc., so that players will be comfortable while playing.

The service manual referred in the table is the LINDBERGH service manual, which is provided separately.

TABLE 11 PERIODIC INSPECTION TABLE

| ITEMS | DESCRIPTION | PERIOD | REFERENCE |
|------------------------------|--|---------------------------|------------|
| CABINET | Confirm that adjusters contact floor | Daily | Chapter 3 |
| | Seat check, removal of forgotten / other items | Daily | Chapter 3 |
| PROJECTOR | Screen cleaning | Weekly | |
| | Check screen adjustment | 1 month | 6 [14] |
| | Exchange of lamp unit | When message is displayed | |
| CONTROL UNIT | Cleaning | As appropriate | Chapter 3 |
| | Inspection of volume | 1 month | 9-3a |
| | Greasing | 3 months | 10-5 |
| COIN SELECTOR | Inspection of coin switch | 1 month | |
| | Coin insertion test | 1 month | |
| | Coin Selector cleaning | 3 months | |
| GAME BOARD | Individual tests | 1 month | |
| | Check of settings | 1 month | 9-3d |
| FLUORESCENT LAMP & LAMPS | Inspection of lighting fixtures | As appropriate | |
| ELECTRICAL/ELECTRON-IC PARTS | Inspection | As appropriate | See above. |
| POWER CABLE | Inspection, Cleaning | 1 year | See above. |
| CABINET INTERIOR | Cleaning | 1 year | See above. |
| CABINET SURFACES | Cleaning | As appropriate | See below. |

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.

12 TROUBLESHOOTING

12 TROUBLE SHOOTING

WARNING

- If an error message is displayed, have the problem looked at by a store maintenance person or a technician. Unless the problem is addressed by someone with specialized knowledge or skills, there could be electrical shock, short circuits or fire. If there are no store maintenance people or technicians, cut off the power immediately and contact the office shown in this manual or the dealer from whom the product was originally purchased.
- 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. Indiscriminate countermeasures could lead to unforeseeable accidents. They could also result in permanent damages.
- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause an electric shock, short circuit or present a risk of fire.
- 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.

CAUTION

- When removing and replacing parts, take due care not to trap or pinch your fingers.
- The Control Units contain gears, cams and other moving machine parts. Take due care not to trap or pinch your fingers.

An error message indicates an error with the game board. Check the separate LINDBERGH Service Manual for more details. If a problem has occurred, first inspect the connection of the wiring connector.

TABLE 12 TROUBLESHOOTING TABLE

| PROBLEMS | CAUSE | COUNTERMEASURES |
|--|---|--|
| When the main SW is turned ON, the machine is not activated. | The power is not ON. | Firmly insert the plug into the outlet. |
| | Incorrect power source/voltage. | Make sure that the power supply/voltage are correct. |
| | The Circuit Protector of the AC Unit functioned due to momentary overcurrent. | After eliminating the cause of overload, have the Circuit Protector of the AC Unit restored. (See Section 6 [12], refer to the following.) |
| | The screen is not adjusted correctly. | Adjust the screen correctly. |
| The projector does not project an image. | The projector lamp is dead. | Replace the lamp. (Refer Manual of TOSHIBA 62"DLP manual) |
| No sound output. | Volume is not adjusted properly. | Adjust the volume. (See chapter 9.) |
| | Board or amp malfunction. | Check by performing a speaker test. (See 9-2.) |
| The Control Unit (Gun) does not target correctly. | Due to external or environmental factors the targeting is off. | Perform calibration in TEST Mode. (See 9-3c.) |
| | Volume damaged. | Exchange the volume. (See 10-2 & 10-3.) Volume: 220-5753 |
| The Control Unit is not operating properly. | Microswitches damaged. | Check ON, OFF on the input test and if it is not working exchange the microswitch. (See 10-4.) Microswitch: 601-6729-01 |
| | The volume gears are not properly engaging. | Adjust the engagement. (See 10-2 & 10-3.) |
| | Something is trapped or caught in the revolving or other parts. | Remove the trapped item or clean the trigger. |
| | Grease has deteriorated. | Apply grease to the designated grease areas. (See 10-5.) |
| Control Unit does not respond. | The Control Unit motor is set not to move. | Alter the TEST Mode settings. (See 9-3d.) |
| | Due to overload or other factors, an error has occurred with the motor, which has been sensed by the motor sensor and the motor has been stopped. | Remove the cause of the motor error. |
| | Motor damaged. | Exchange the motor. |
| The Control Unit makes a lot of noise when it vibrates. | Due to a problem with the vibration parts or wear over time, the internal parts have moved. | Adjust the position of the vibration parts. (See 10-6.) |
| The Marquee fluorescent lights don't come on. | The fluorescent light is dead. | Exchange the fluorescent light. Fluorescent Light: 18W |
| The lights in the cabinet don't come on. | The fluorescent light is dead. | Exchange the fluorescent light. Fluorescent Light: 15W |

13 GAME BOARD

⚠ WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not expose the game board, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
- Do not use this product with connectors other than those that were connected and used with the game board at the time of shipping. Do not carelessly connect wires to connectors that were not used at the time of shipping, as this may cause overheating, smoke or fire damage.
- 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

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

STOP IMPORTANT

- When a game board is to be replaced, put the old game board with anomaly into a special box for replacing the game board and send it. If a special box is not available or if it has been damaged, arrange to obtain a box with the following part number/name. [601-11691/CARTON BOX LBG]
- For replacement or repair, pack the game board and send it without disassembling it. Order for servicing might not be accepted if any part of the game board has been removed. If any part is removed, a service fee will be charged even if the warranty period has not yet expired.
- Do not remove the key chip from the game board before sending the board for servicing.

13-1 HOW TO REMOVE GAME BOARD

The game board (LINDBERGH) is inside the front door PCB to the right side when facing the projector screen. Remove the LINDBERGH together with the wooden base (PCB Board) on which it has been mounted.

- 1 Turn off the power.
- 2 Remove the screws to take off metal cover plate under Left bottom of control panel.



FIG. 13-1a

- 3 Disconnect all of the connectors connected to the LINDBERGH.



FIG. 13-1b

- 4 Remove the 4 wood screws. (2 front, 2 back side)

Wood screws (2 front, 2 back side)

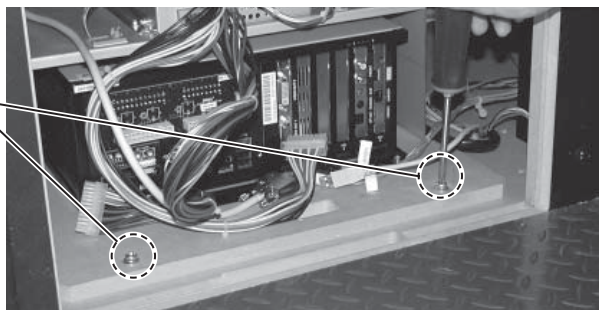


FIG. 13-1c

13-2 COMPOSITION OF THE GAME BOARD

STOP IMPORTANT

- With the key chip inserted into it, this board serves as a special-purpose game board for the product.
- Use with the dip switches (DIP SW) on the board at the prescribed settings. If settings do not match the product, an error message will be displayed. In some cases, the game cannot be started.

ASSY CASE LBG L 1GB LGJ EXP (844-0012D-02)

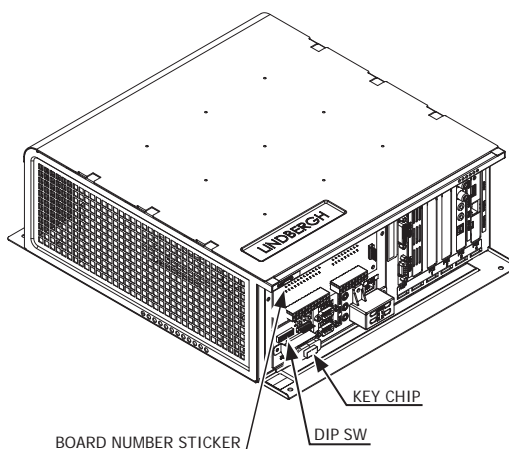


FIG. 13-2a

DIP SW SETTING

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

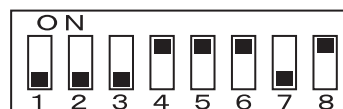


FIG. 13-2b

14 DESIGN RELATED PARTS

For the warning display stickers, refer to Section 1.

<EXTERIOR>

532-30-200
SIDE DECAL LEFT BACK LGJ
532-30-201
SIDE DECAL LEFT CENTER LGJ
532-30-202
SIDE DECAL LEFT FRONT LGJ

(OTHER SIDE)

532-30-203
SIDE DECAL RIGHT BACK LGJ
532-30-204
SIDE DECAL RIGHT CENTER LGJ
532-30-205
SIDE DECAL RIGHT FRONT LGJ

LGJ-1218-A-USA
SIDE WINDOW L&R LGJ (2)
> Both side

XXX-XXXX
CURTAIN LGJ (2)
> Both side

LGJ-1412
DESIGN BILLBOARD FRONT
LGJ-1413
DESIGN BILLBOARD BACK

LGJ-1217-A-USA
REAR WINDOW LGJ

532-30-206
SEGA LOGO LGJ



<INTERIOR>



532-30-207
START BUTTON DECAL LGJ

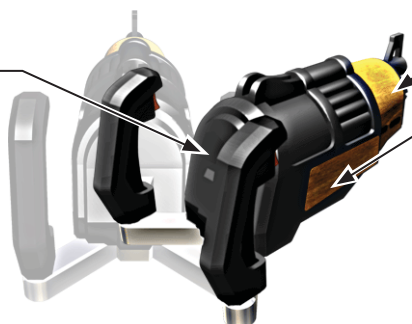


532-30-210
INSTRUCTION LGJ

LGJ-3043
GUN STICKER SEGA

LGJ-3042
GUN STICKER FRONT

LGJ-3040
GUN STICKER L
LGJ-3041
GUN STICKER R (Opposite side)



15 PARTS LIST

15

PARTS LIST

LGJ-1104
COVER SIDE WINDOW L

LGJ-1218-A-USA
SIDE WINDOW L&R (2)
>BOTH LEFT & RIGHT

LGJ-1456-USA
ENTRANCE CURTAIN (2)
>BOTH LEFT & RIGHT

532-30-152
SIDE PANEL LEFT LGJ

LGJ-1413
DESIGN BILLBOARD BACK



LGJ-1412
DESIGN BILLBOARD FRONT
CTF-1002
WASHER CTF (6)

LGJ-1105
COVER SIDE WINDOW R

LGJ-1217-A-USA
REAR WINDOW LGJ

532-30-151
SIDE PANEL RIGHT LGJ

532-30-153
BACK PANEL LGJ



CABINET D
(SEAT)

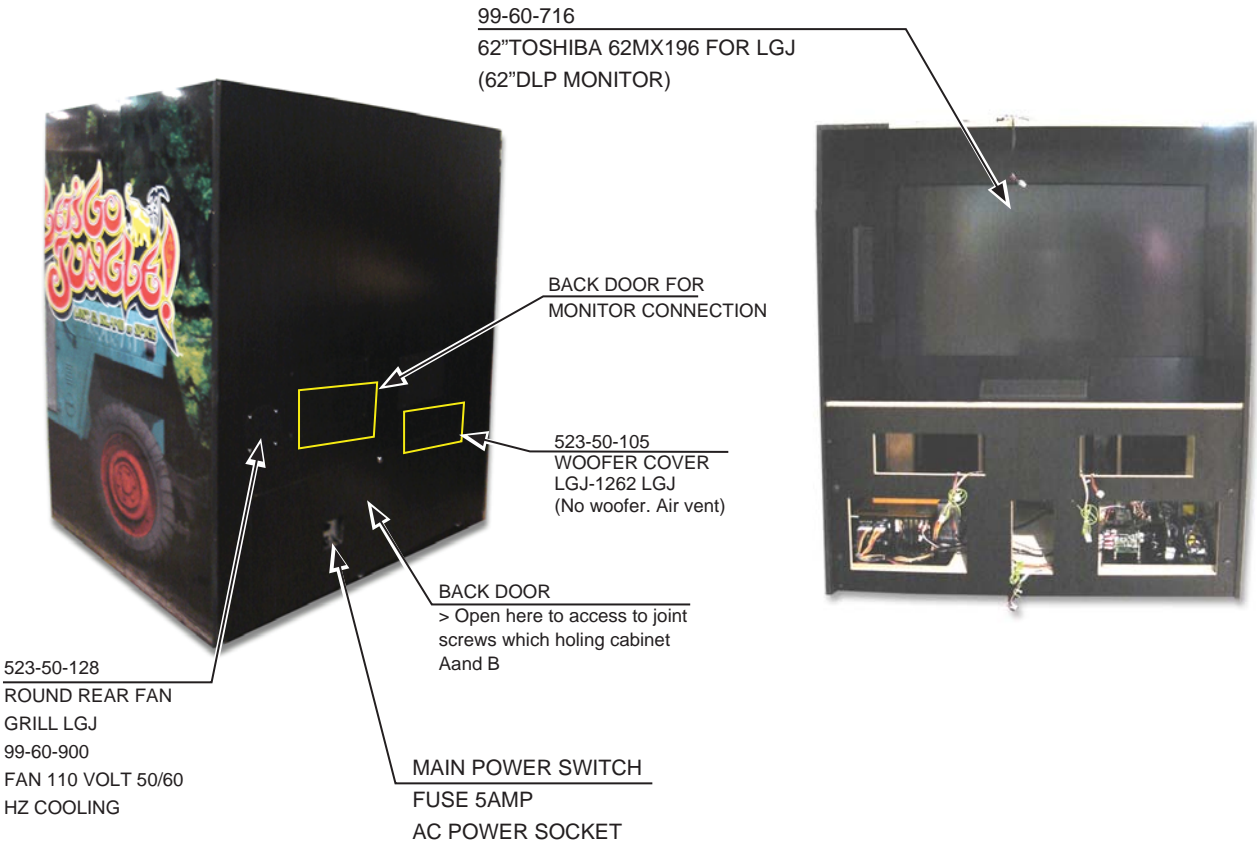
CABINET C
(CONTROLL)

CABINET B
(SPEAKER)

CABINET A
(MONITOR)



CABINET A & B (TV cabinet and Speaker cabinet)



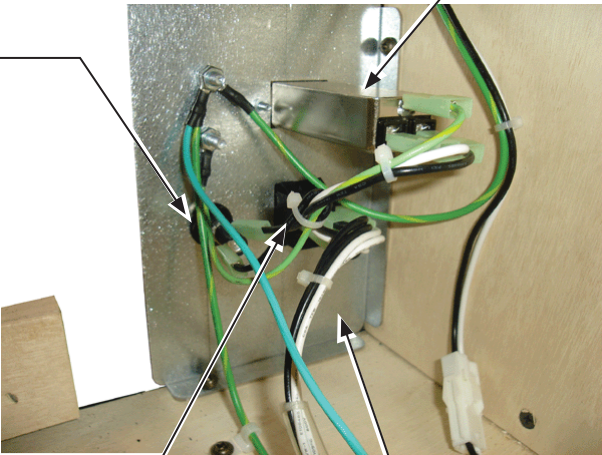
POWER SUPPLY



523-50-136
POWER SUPPLY HOLD DOWN LGJ

MAIN POWER SWITCH PLATE

99-00-015
FUSE HOLDER W/CAP&NUT PANEL
99-00-016
FUSE 5 AMP SLOW-BLOW 250V
MDL5



99-00-001
POWER SWITCH #8-252

99-00-014
LINE FILTER QUAL TEK
874-06/003

523-50-135
AC POWER PLATE LGJ

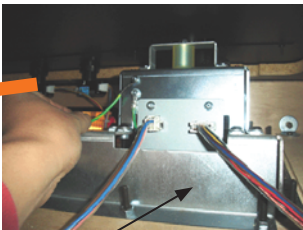
CABINET C & D (Control cabinet and Seat cabinet)

523-50-106
FAN GRILL LGJ (2) >Rectangle



523-50-103
CORNER BRACE LGJ (4)
2 each for Cabinet C and B

BOTTOM OF GUN ASSY



523-50-112
GUN BASE LGJ-1064X LGJ

523-50-131
REAR CHANNEL L LGJ



523-50-130
REAR CHANNEL R LGJ

CURTAIN, BOTTOM SEAT, TOP FL LAMP BOX

523-50-132

CURTAIN ROD ASSEMBLY LGJ (2 sets)

- > Rod (1) & Mount Brackets (2) per set
- > Used both Left and Right side.

532-30-101

INSIDE CABINET LAMP
COVER LGJ

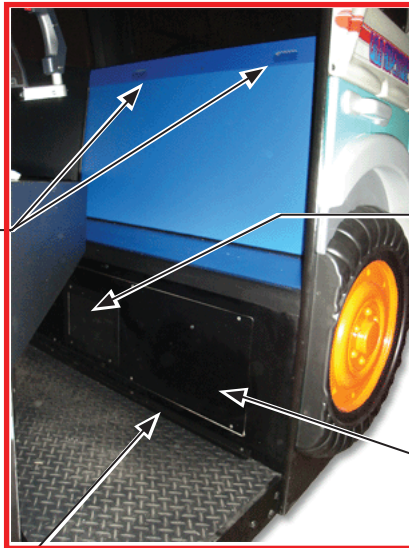


130-5163

SPEAKER 4 OHM 6W
W/SHLD (2) L&R

523-50-104

REAR SPEAKER COVER LGJ-1205X



130-5196-03

WOOFER 4 OHM 80W W/NET ROHS

523-50-138

SUB WOOFER HOLD DOWN PLATE LGJ

523-50-105

WOOFER COVER LGJ-1262 LGJ

MAINTENANCE
SERVICE DOOR

523-50-115

SEAT BRACKET LOWER
LGJ-1203

99-60-129

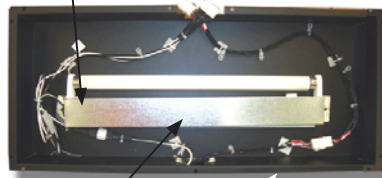
LIGHT FIXTURE 18 INCH
99-60-258
LAMP, FLORESCENT, 18"

523-50-129

WIRE CHANNEL LGJ

523-50-101

LIGHT BOX CHANNEL LGJ

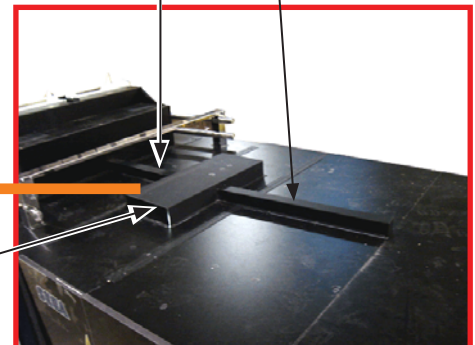


99-60-128

U.L. COVER FOR 99-60-129

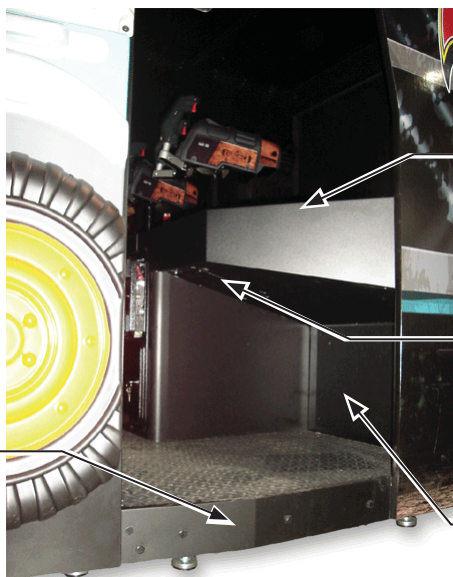
523-50-100

LIGHT BOX LGJ



CONTROL CABINET BOTTOM, COIN DOOR, SWITCH PALTE

523-50-107
FOOT OUTSIDE TRIM R LGJ
523-50-108
FOOT OUTSIDE TRIM L LGJ
> The other side.



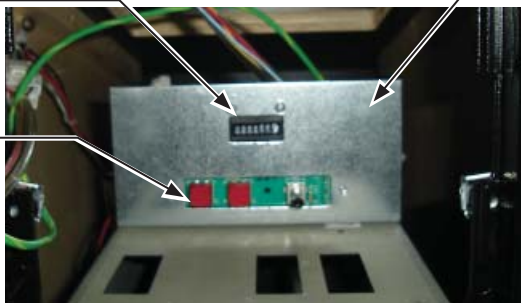
523-50-114
CABINET COVER LGJ-1010 LGJ (RIGHT)
523-50-113
CABINET COVER LGJ-1009 LGJ (LEFT)
> The other side.
523-50-127
GUN MOUNT COVER PLATE, SMALL (2)
> Used on Left and Right side.

523-50-126
GUN CABINET DOOR (2)
> Used on Left and Right side.

99-70-160
COIN METER 5 VOLT 42-0562

523-50-137
COIN COUNTER PLATE LGJ

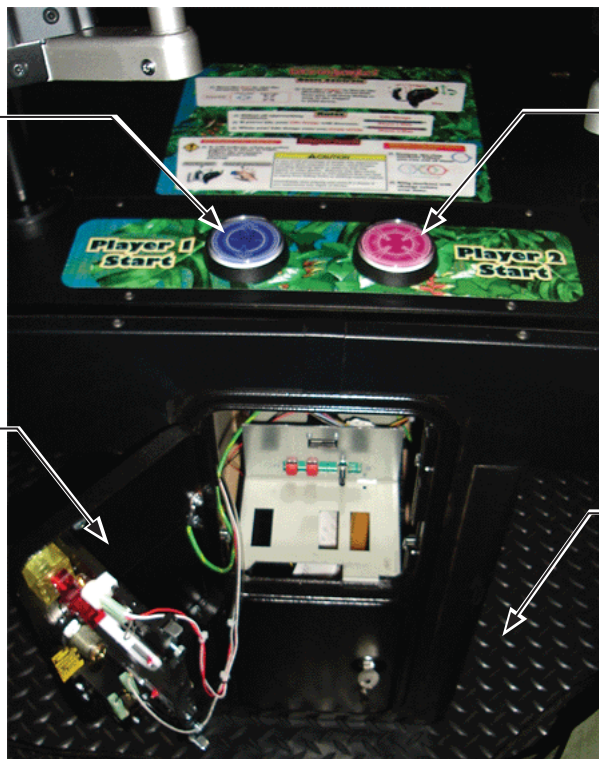
838-14548-02
SW & C 1K OHM VOL BD



509-6131-91-01
OBSA-60M-W-1FLED-W-12V
LGJ 1P (START 1P)

509-6131-91-02
OBSA-60M-W-1FLED-W-12VC
LGJ 2P (START 2P)

99-70-165
COIN DOOR 1 COIN / DOLLAR
PLATE



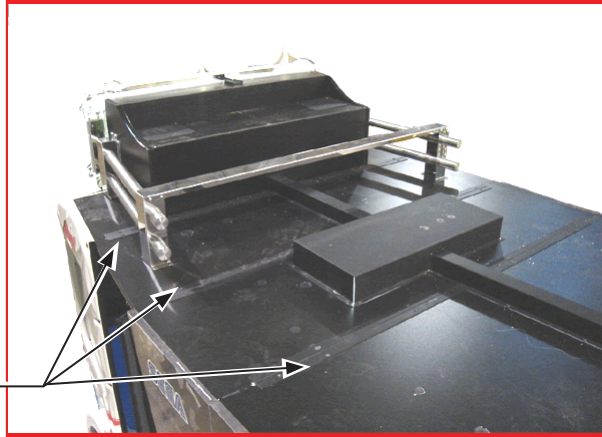
532-70-156
RUBBER FLOOR LGJ
DIAMOND PLATI

JOINT BRACKETS, SPEAKERS, CONTROL PANEL

15

PARTS LIST

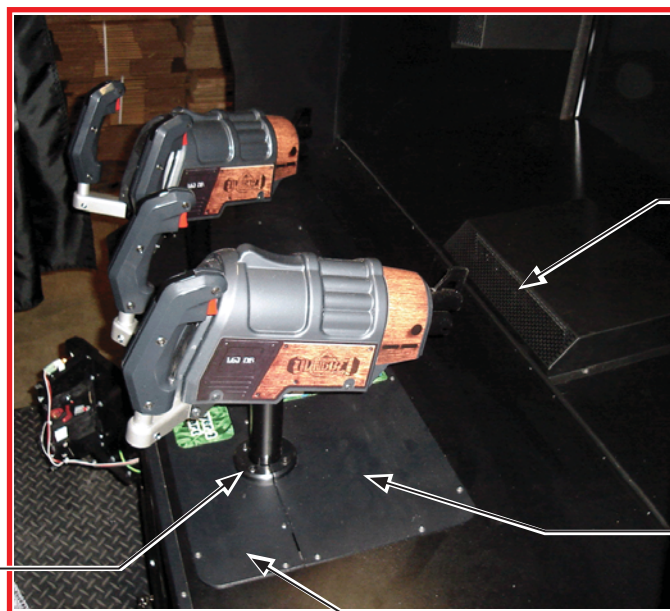
523-50-109
ROOF SUPPORT
BRACKET LGJ (3)



523-50-103
CORNER BRACE LGJ (4)
2 each for Cabinet C and B



523-50-102
CABINET JOINT PLATE LGJ-1001 (2)
> Joint Cabinet A-B and C-D.



LGJ-1074
GUNSHAFT GUIDE (4)

130-5156-02
SPEAKER BOX 8 OHM 20W VA1 YL (3)
523-50-110
SIDE SPEAKER BRACKET LGJ-1027 (3)
523-50-111
SIDE SPEAKER COVER LGJ-1029 (3)
> Front Center, Left & Right.

523-50-133
CONTROL PANEL PLATE
REAR LGJ

523-50-134
CONTROL PANEL PLATE
FRONT LGJ

MAIN BOARD, OTHER BOARDS, ELECTRONICS PARTS

844-0001D-91-11

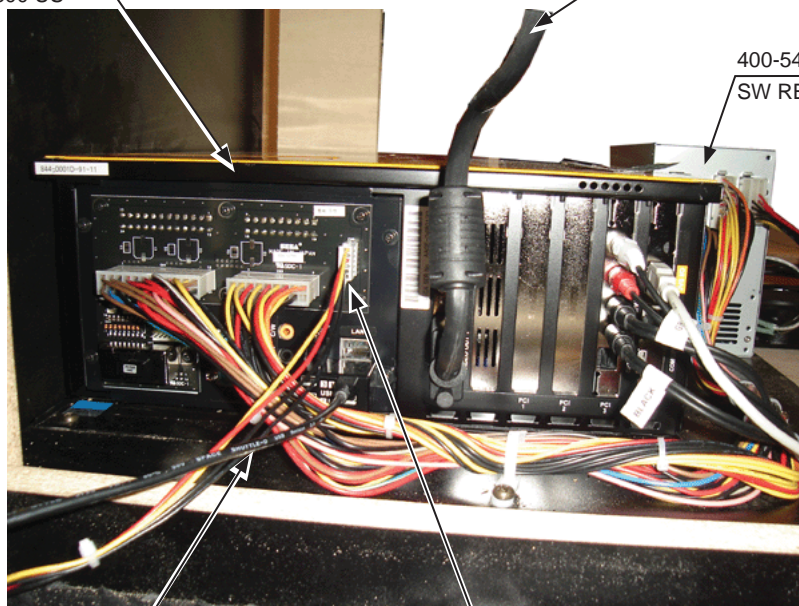
ASSY CASE LBG L 1GB 7800 US

99-60-688

VGA MAIL TO VGA MALE CABLE 15'

400-5457-91

SW REGU ATX / JVS AUTO



600-7920-100

USB CABLE MINI AM 100CM

> Option. Do not need for operation.

515-60-661

DVD DR. TO MAIN PC HARNESS

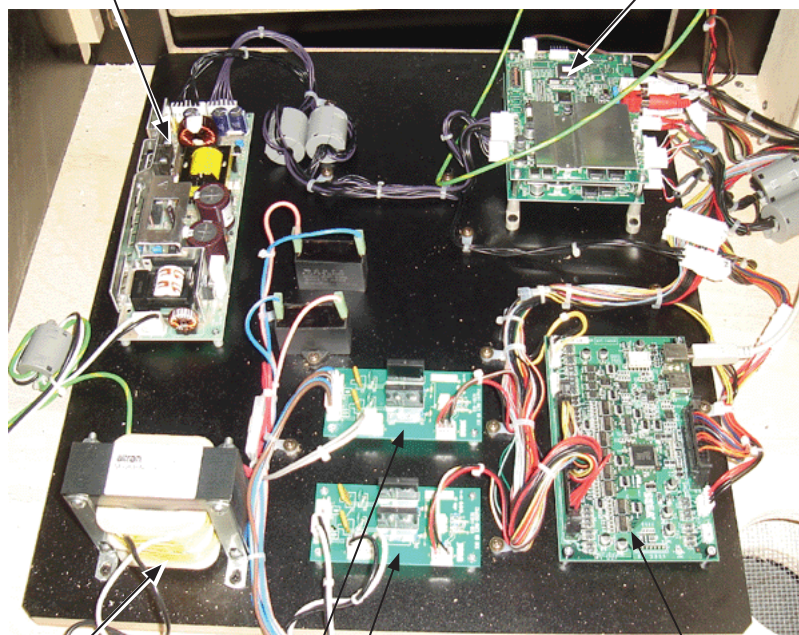
> Option. Do not need for operation.

400-5421-15024W

SW REGU 150S-24-XJCM
(24VDC POWER SUPPLY)

838-14515-A03

SOUND AMP ANALOG IN W/EXP BD



99-60-209

TRANSFORMER
120V60HZ100V2A
120VAC IN / 100VAC OUT

837-14505

I/O CONTROL BD FOR JVS

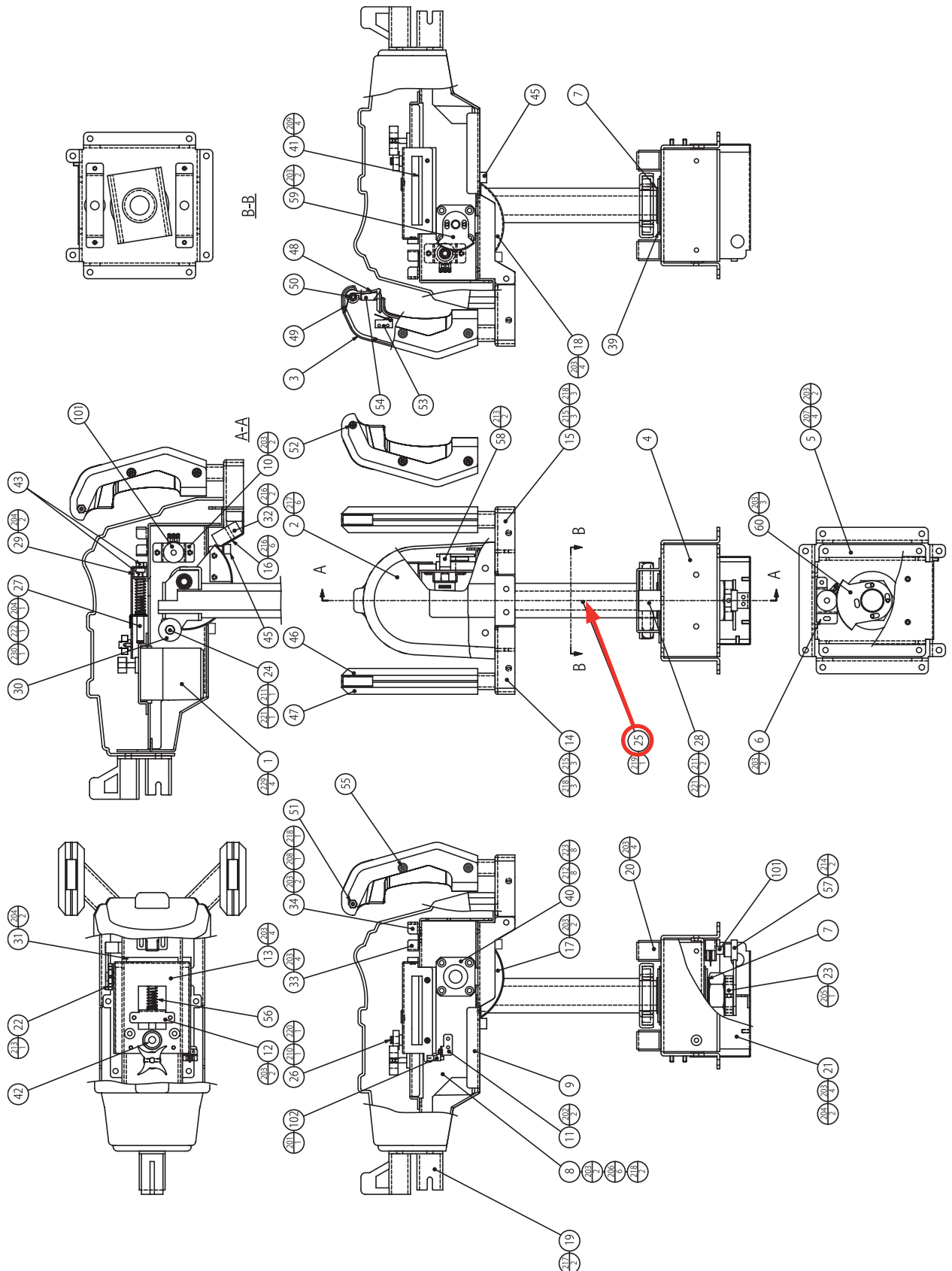
838-14630

SSR BD G3MB-202P X2 (2)

CONTROL UNIT L (LGJ-3000)

NOTE: Please refer this parts list for CONTROL UNIT R (LGJ-3050) except MAIN SHAFT A (LGJ-3024) which is #25

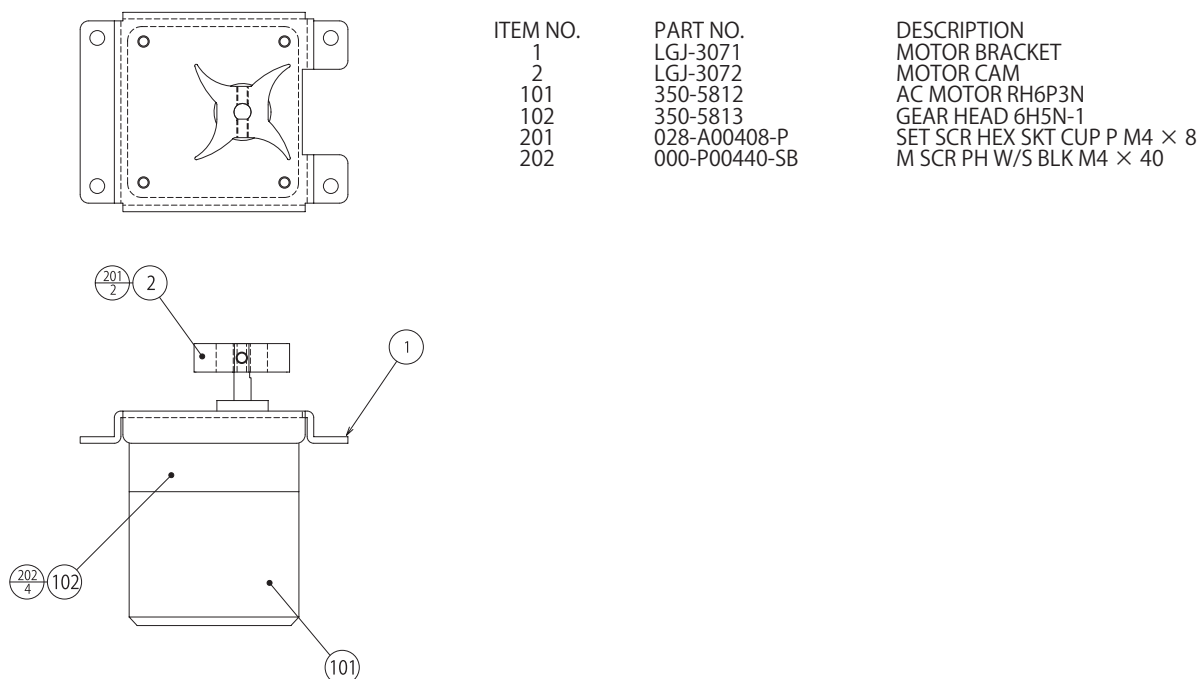
15 PARTS LIST



| ITEM NO. | PART NO. | DESCRIPTION | NOTE |
|----------|--------------|---|------|
| 1 | LGJ-3070 | ASSY MOTOR | |
| 2 | LGJ-3001 | GUN COVER | |
| 3 | LGJ-3002X | GRIP COVER | |
| 4 | LGJ-3003 | GUN BASE | |
| 5 | LGJ-3004 | BEARING BRACKET | |
| 6 | LGJ-3005 | VOLUME BRACKET LOWER | |
| 7 | LGJ-3006 | MAIN SHAFT WASHER | |
| 8 | LGJ-3007 | GUN MAIN FRAME | |
| 9 | LGJ-3008X | GUN UNDER FRAME | |
| 10 | LGJ-3009 | VOLUME BRACKET UPPER | |
| 11 | LGJ-3010 | GUN SENSOR BRACKET | |
| 12 | LGJ-3011 | SPRING STOPPER | |
| 13 | LGJ-3012 | VIBRATION PACK | |
| 14 | LGJ-3013 | GRIP BASE L | |
| 15 | LGJ-3014 | GRIP BASE R | |
| 16 | LGJ-3015X | GUN BACK COVER | |
| 17 | LGJ-3016 | FINGER GUARD L | |
| 18 | LGJ-3017 | FINGER GUARD R | |
| 19 | LGJ-3018 | MUZZLE | |
| 20 | LGJ-3019 | GUN STOPPER BRACKET | |
| 21 | LGJ-3020 | LOWER GEAR COVER | |
| 22 | LGJ-3021 | GEAR BOSS UPPER | |
| 23 | LGJ-3022 | GEAR BOSS LOWER | |
| 24 | LGJ-3023 | CUSHION SHAFT | |
| 25 | LGJ-3051 | MAIN SHAFT B | |
| | | >>>Used MAIN SHAFT A (LGJ-3024) For Control Unit R (lgj-3050) | |
| 26 | LGJ-3025 | BEARING SHAFT | |
| 27 | LGJ-3026X | SPRING GUIDE SHAFT | |
| 28 | LGJ-3027 | GUN CUSHION LOWER | |
| 29 | LGJ-3028 | INNER VIBRATION CUSHION | |
| 30 | LGJ-3029 | GUN CUSHION UPPER | |
| 31 | LGJ-3030 | OUTER VIBRATION CUSHION | |
| 32 | LGJ-3032 | GUN WEIGHT | |
| 33 | LGJ-3033 | VIBRATION PACK STOPPER | |
| 34 | LGJ-3034 | VIBRATION PACK BALANCER | |
| 39 | 100-5489 | BEARING 6007ZZNR | |
| 40 | 100-5490 | BEARING HOLDER BGSRB6902ZZ | |
| 41 | 100-5491 | SLIDE RAIL SAR210 | |
| 42 | 100-5018 | BEARING BALL 8 | |
| 43 | 250-5709 | STEEL SPACER CF-405ZE | |
| 45 | LGJ-3035X | GUN SPONGE | |
| 46 | 601-11816 | RIGHT GRIP (HAPP95-1293-00) | |
| 47 | 601-11817 | LEFT GRIP (HAPP95-1294-00) | |
| 48 | 601-11818 | TRIGGER RED(HAPP95-1295-00) | |
| 49 | 601-11819 | TORSION SPRING(HAPP95-1297-00) | |
| 50 | 601-11820 | SPACER SLEEVE(HAPP95-1315-00) | |
| 51 | 601-11821 | NUT .336(HAPP43-1124-00) | |
| 52 | 601-11822 | SCREW #8-32*1(HAPP43-0378-00) | |
| 53 | 601-11823 | TRIGGERSW ASSY(HAPP95-0028-00) | |
| 54 | 601-11824 | TRIGGER BUMPER(HAPP96-0110-00) | |
| 55 | 601-11825 | SCREW10-32*3/8(HAPP96-2516-00) | |
| 56 | 125-5234 | SPRING WR12-60 | |
| 57 | 601-6555 | GEAR Z=30 M=0.75 | |
| 58 | 601-7944 | GEAR 15 | |
| 59 | 601-6005 | ADJUST GEAR | |
| 60 | 601-6450 | GEAR 110 | |
| 101 | 220-5753 | VOL CONT B-5K OHM (TOCOS) | |
| 102 | 370-5299 | PHOTO INTERRUPTER KI1233-AALF | |
| 103 | 310-5029-D10 | SUMITUBE F D 10MM | |
| 104 | 310-5029-B20 | SUMITUBE F B 20MM | |
| 105 | 280-5124-03 | NYLON CLAMP NK03 | |

| ITEM NO. | PART NO. | DESCRIPTION | NOTE |
|----------|-----------------|----------------------------------|------|
| 106 | 280-5124-05 | NYLON CLAMP NK05 | |
| 107 | 280-5124-07 | NYLON CLAMP NK07 | |
| 108 | 280-6623-1.5M-0 | PLASTIC TIE BELT PLT-1.5M | |
| 201 | FAS-000163 | M SCR PH W/SMALL FS M3 × 14 | |
| 202 | 000-P00308-W | M SCR PH W/FS M3 × 8 | |
| 203 | 000-P00408-W | M SCR PH W/FS M4 × 8 | |
| 204 | 000-P00410-W | M SCR PH W/FS M4 × 10 | |
| 205 | 000-P00416-W | M SCR PH W/FS M4 × 16 | |
| 206 | 000-P00510-W | M SCR PH W/FS M5 × 10 | |
| 207 | 000-P00612-W | M SCR PH W/FS M6 × 12 | |
| 208 | 000-T00530-0B | M SCR TH BLK M5 × 30 | |
| 209 | 000-F00308 | M SCR FH M3 × 8 | |
| 210 | 000-T00408-0C | M SCR TH CRM M4 × 8 | |
| 211 | 030-000610 | HEX BLT M6 × 10 | |
| 212 | 020-000510-0Z | HEX SKT H CAP SCR BLK 0Z M5 × 10 | |
| 213 | 028-A00304-P | SET SCR HEX SKT CUP P M3 × 4 | |
| 214 | 028-A00408-P | SET SCR HEX SKT CUP P M4 × 8 | |
| 215 | 008-T00516-0B | TMP PRF SCR TH BLK M5 × 16 | |
| 216 | 008-T00408-0C | TMP PRF SCR TH CRM M4 × 8 | |
| 217 | 008-T00408-0B | TMP PRF SCR TH BLK M4 × 8 | |
| 218 | 050-U00500 | U NUT M5 | |
| 219 | FAS-500058 | HEX NUT H=18 M30 | |
| 220 | 065-E00600 | E RING 6MM | |
| 221 | 060-F00600 | FLT WSHR M6 | |
| 222 | 069-0077 | FLT WSHR SMALL 8.5-16 × 1.2 | |
| 223 | 060-S00500 | SPR WSHR M5 | |
| 224 | 050-H00400 | HEX NUT M4 | |
| 225 | 060-F00400 | FLT WSHR M4 | |
| 226 | 060-S00400 | SPR WSHR M4 | |
| 227 | 050-F00400 | FLG NUT M4 | |
| 228 | 000-P00408 | M SCR PH M4 × 8 | |
| 229 | 000-P00510-S | M SCR PH W/S M5 × 10 | |
| 230 | 065-E00500 | E RING 5MM | |
| 301 | LGJ-60017 | WH GUN ASSY DC | |
| 302 | LGJ-60028 | WH GUN ASSY AC | |
| 303 | LGJ-60029 | WH VOL | |
| 304 | LGJ-60030 | WH TRIGGER SW | |

ASSY MOTOR (LGJ-3070) > For each Gun Assy



MARQUEE BOX ASSY

523-50-121

SIGN HOLDER LGJ (TOP)



523-50-106

FAN GRILLS LGJ (2) > Rectangle

523-50-119

CONNECTOR BRACE LGJ

Washer CTF (6) Part#: CTF-1002

INSIDE OF MARQUEE BOX ASSY:

99-60-142

FLUORESCENT LAMP F18T824CW 24"

99-60-127

FL ASSY W/BALLAST & STARTER 24"

99-60-900

FAN 110VOLT 50/60 HZ COOLING (2)

523-50-117

TUBE ASSY R LGJ

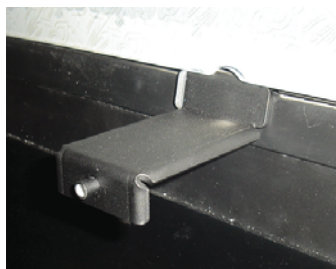
523-50-118

TUBE ASSY L LGJ

(The other side)

523-50-120

ANGLED SIGN HOLDER LGJ (BOTTOM)



16 WIRE COLOR CODE TABLE

! WARNING

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

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

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

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

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

If the right-hand side numeral of the code is 0, then the wire will be of a single color shown by the left-hand side numeral (see the above).

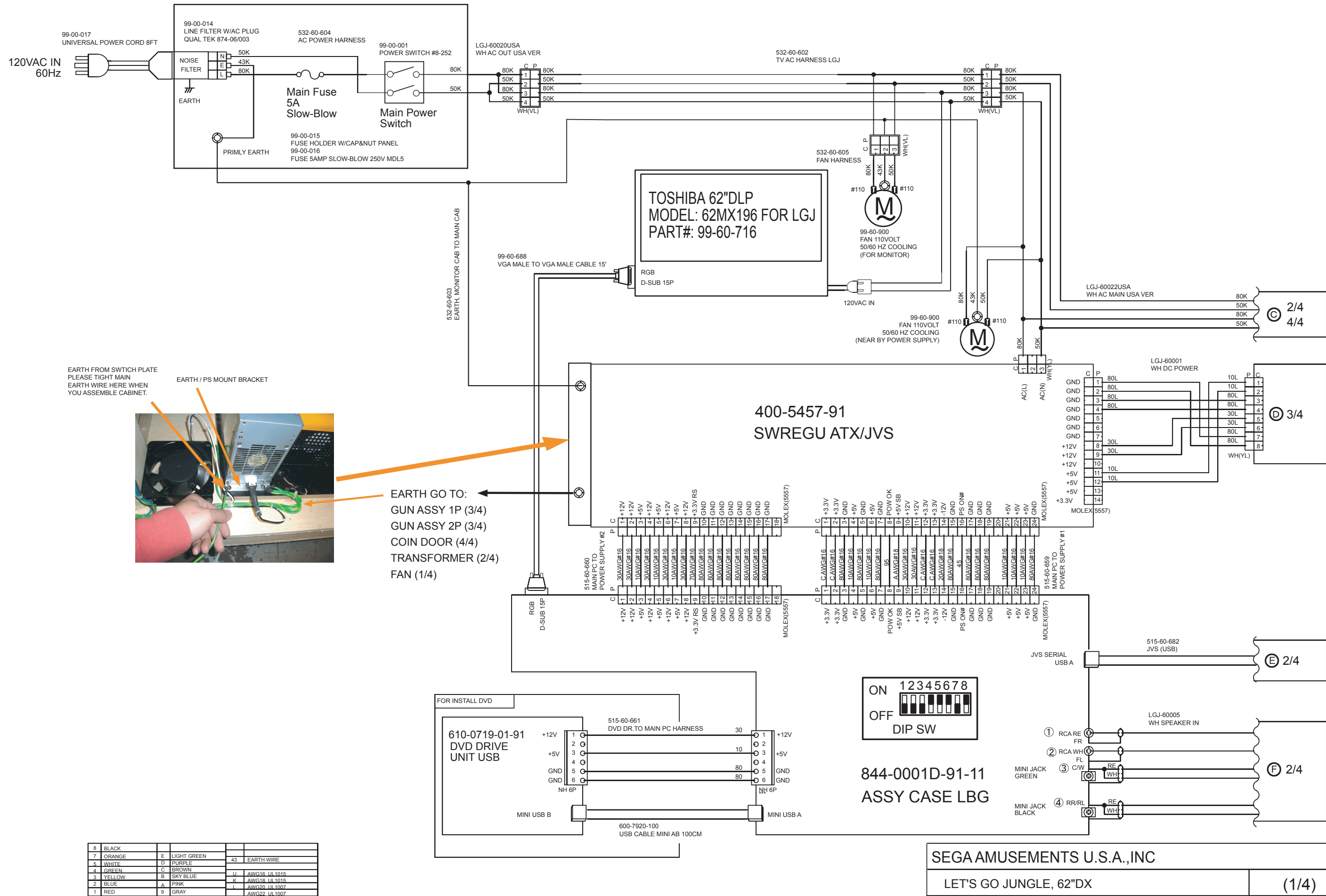
Note 1: If the right-hand side numeral is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

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



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

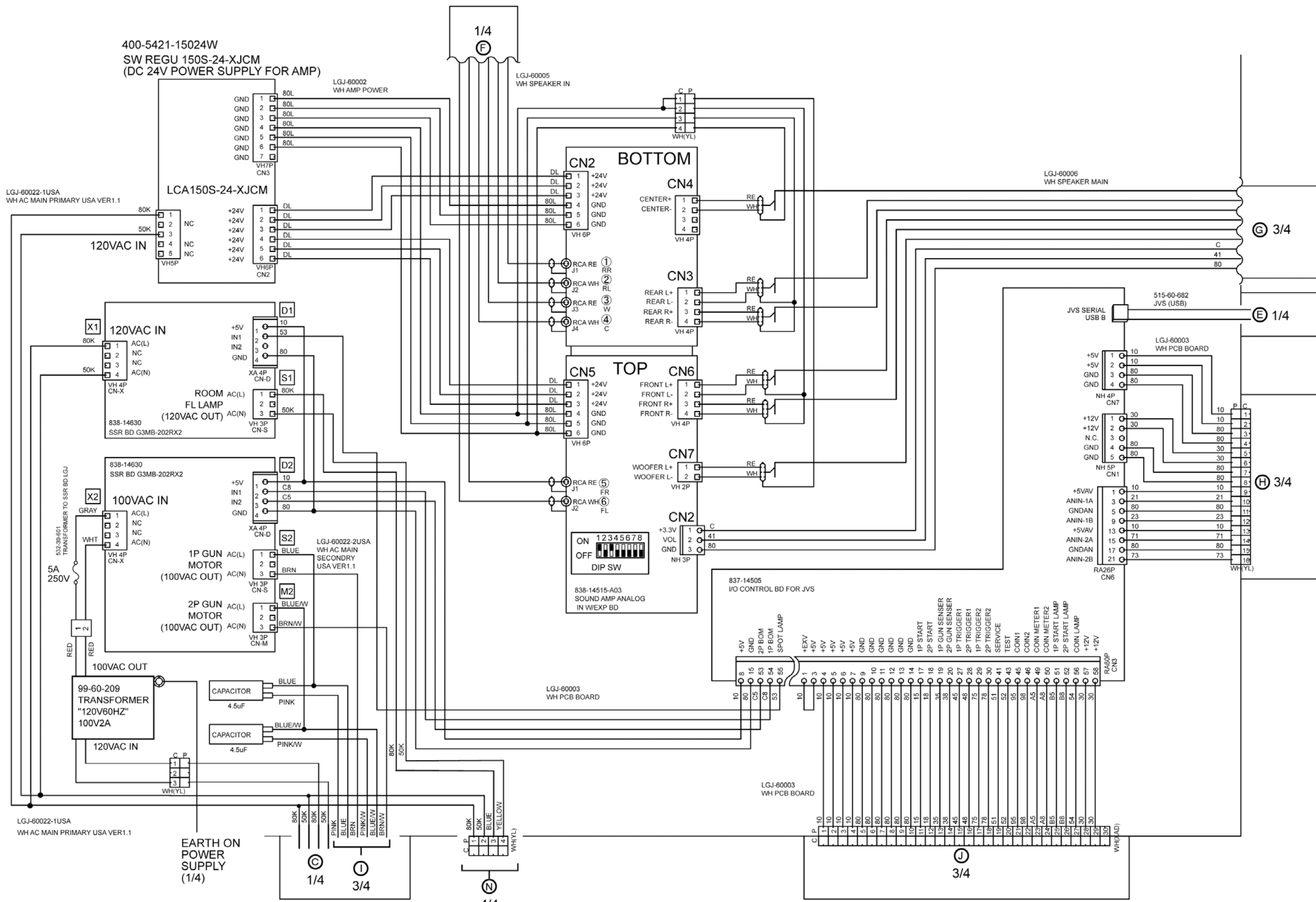
| | |
|-------|-------|
| U: | AWG16 |
| K: | AWG18 |
| L: | AWG20 |
| None: | AWG22 |



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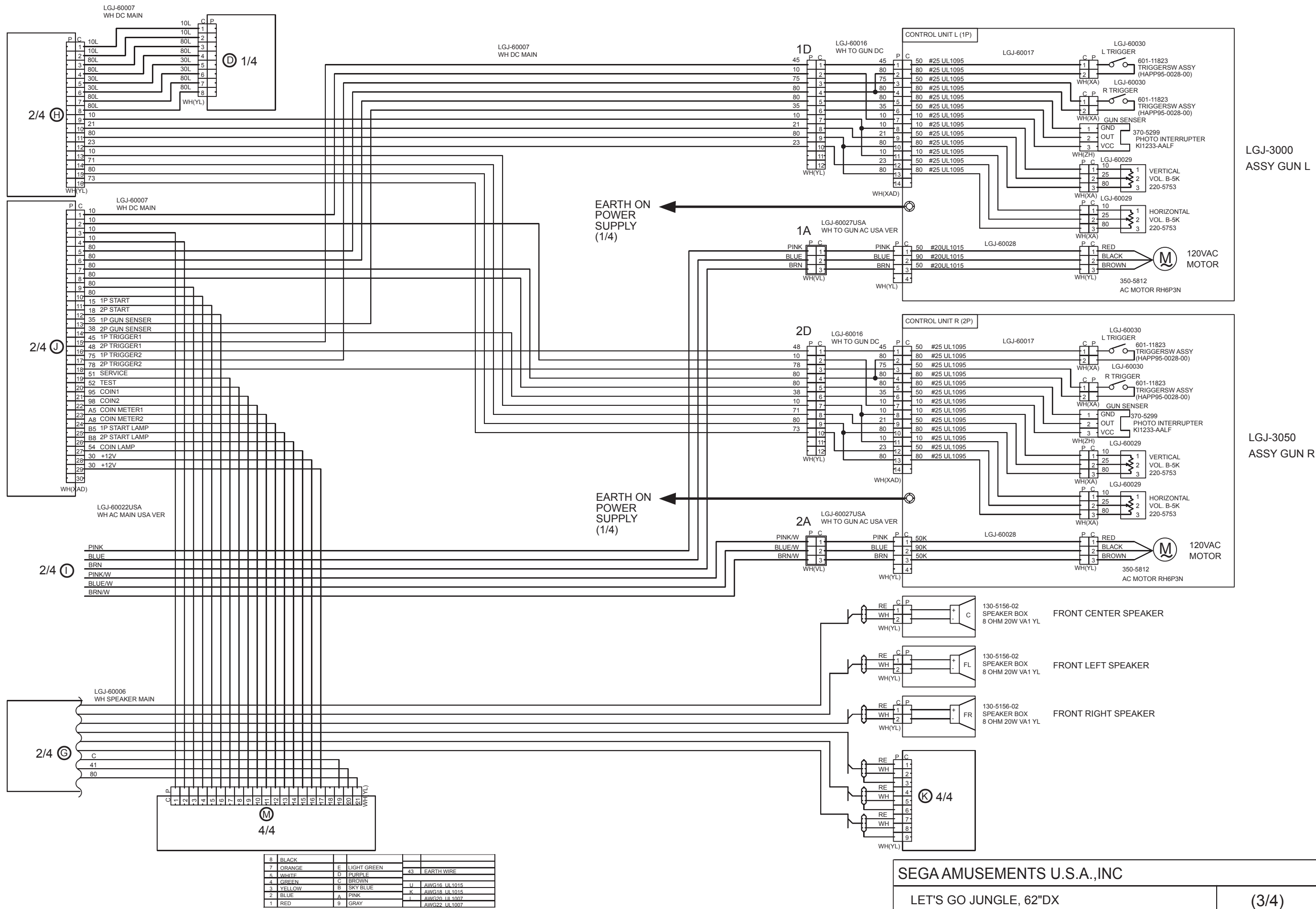


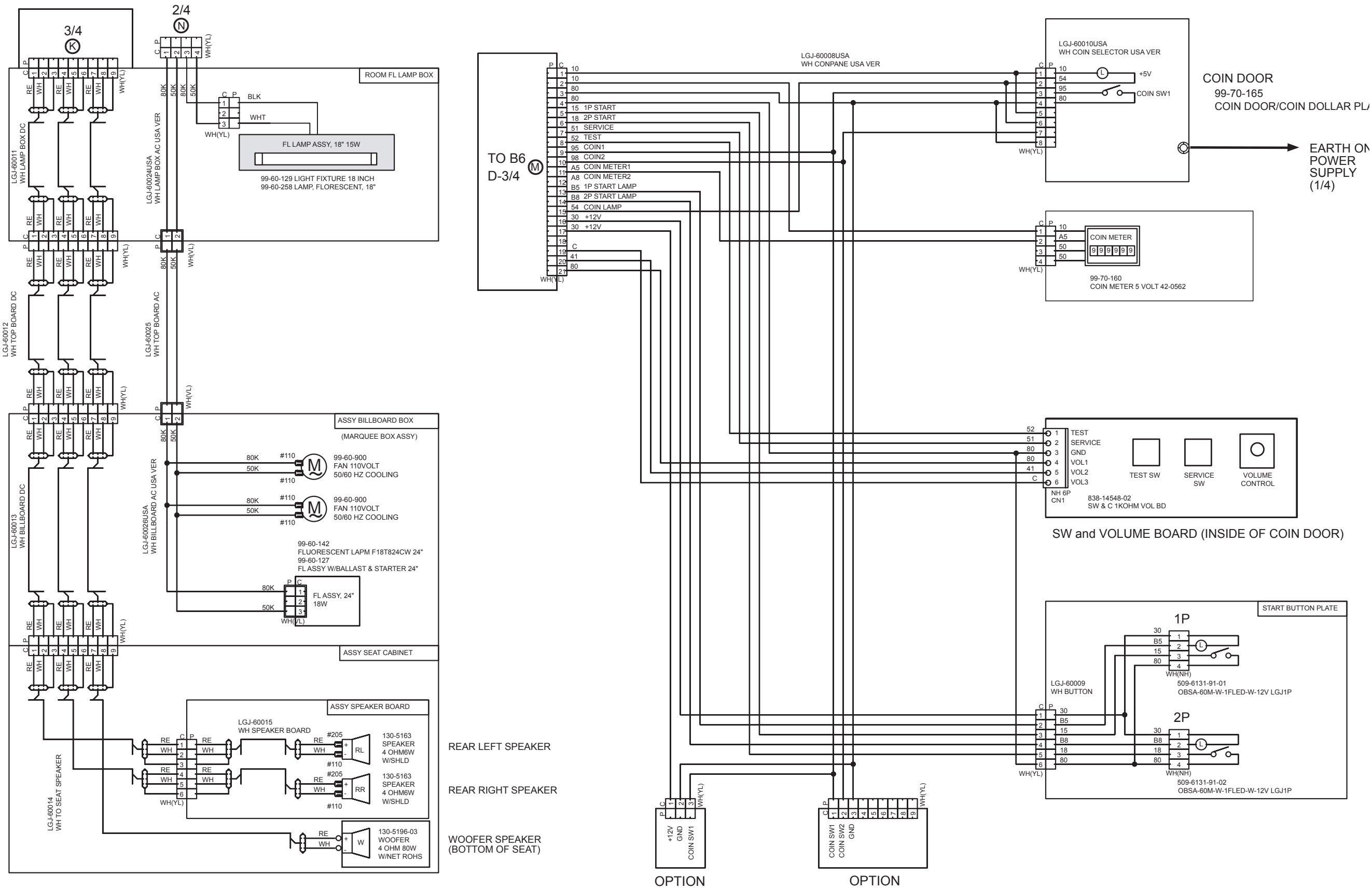
| | | | | | |
|---|--------|---|-------------|----|--------------|
| 8 | BLACK | | | | |
| 7 | ORANGE | E | LIGHT GREEN | 43 | EARTH WIRE |
| 5 | WHITE | D | PURPLE | | |
| 4 | GREEN | C | BROWN | U | AWG18 UL1015 |
| 3 | YELLOW | B | SKY BLUE | K | AWG18 UL1015 |
| 2 | BLUE | A | PINK | J | AWG20 UL1007 |
| 1 | RED | 9 | GRAY | | AWG22 UL1007 |

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PART#: 532-30-300
1st PRINTING, JANUARY 2007



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