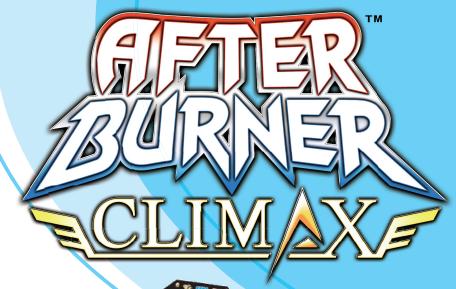


OWNER'S MANUAL





STANDARD 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.

TABLE OF CONTENTS

BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING: TABLE OF CONTENTS
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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, "AFTER BURNER CLIMAX."

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.



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

Sega Amusements U.S.A., Inc.

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

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

SPECIFICATIONS

Installation space: 1,225 mm (48.2 in.) [Width] x 1,810 mm (71.3 in.) [Depth]

Height: 83"

Weight: 564 lbs

Power, maximum current: 5 A (AC 120 V, 60 Hz Area)

Monitor: 29 Type Color Monitor

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

Use of GPL/LGPL software

This product can use GPL/LGPL software, which is open source software. This means that customers who purchase this product can freely obtain, alter and pass-on the source code for this software (hereafter referred to as "the source code"). Downloaded this software is an indication of the customer's agreement to the GPL/LGPL contract of use and thus the download and all subsequent use of the source code is the full responsibility of the customer.

Furthermore this source code and the download service are provided totally as-is, with no guarantees of effectiveness, completeness, usefulness or reliability, and our company offers no support concerning this source code.

Customers using this product who wish to obtain this source code should enter the following password on the website below to download it.

URL: http://amproduct-softlicense.sega.jp/

ID: amsoftwebdl Password: segaamhd1

GPL/LGPL Contract Site

URL: http://www.fsf.org/licenses/gpl.html URL: http://www.fsf.org/licenses/lgpl.html

Definition of 'Site Maintenance Personnel or Other Qualified Individuals'

AWARNING

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.

AWARNING

- 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 ground wires on the surface, (floor, passage, etc.). If exposed, the power cords and ground 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.
- Be sure to perform periodic maintenance inspections herein stated.



- For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- When cleaning the CRT surfaces, use a soft and dry cloth. Do not apply chemicals such as thinner, benzine, etc.
- Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.
- Some parts are not designed and manufactured specifically for this game machine. The manufacturers may discontinue, or change the specifications of such general-purpose parts. If this is the case, SEGA cannot repair or replace a failed game machine whether or not a warranty period has expired.

CONCERNING THE STICKER DISPLAY

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

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

CONCERNING WARNING DISPLAYS

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

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

2 PRECAUTIONS REGARDING INSTALLATION LOCATION

AWARNING

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 to 30 degrees.

2-1 LIMITATIONS OF USAGE

AWARNING

- 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 15A or higher (AC single phase 100V ~ 120V area), and 7A or higher (AC 220V ~ 240V 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 15A or higher (AC 100V ~ 120V area) and 7A or higher (AC 220V ~ 240V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

Electricity Consumption: MAX. 5 A (AC 120 V, 60 Hz)

AWARNING

- Be sure to provide sufficient space specified in this manual. Do not allow objects to block the ventilation ports. It can cause generation of heat and a fire.
- SEGA shall not be held responsible for damage or compensation for damage to a third party, resulting from the failure to observe this instruction.
- If the machine does not fit through the entryway to the installation location, do not disassemble it without first consulting the instructions. The machine should only be disassembled in accordance with the instructions listed in this manual; do not attempt to disassemble it in any other way. Specific tools and adjustment procedures are required to assemble and disassemble the mechanical parts. Attempting to assemble or disassemble the machine without consulting the instructions may result in accidents during assembly/disassembly and electric shock, short circuits, and/or personal injury during operation. 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.
- If the machine is still too large to fit through the entryway after following the
 procedures listed in this manual, do not tip the machine on its side. Attempting to
 transport the machine while it is tipped on its side may cause accidents. It may
 also damage or warp parts of the machine, resulting in accidents during operation.

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

AWARNING

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.
- 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.

ACAUTION

- To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause making bodily contact with each other, hitting accidents, and/or trouble between customers.
- Check the control devices to make sure that there are no scratches or cracks on parts touched by players, as such defects can cause injury to hands and fingers.

AWARNING

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

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.

AWARNING

- For safety reasons, do not allow any of the following people to play the game.
 - Those who have high blood pressure or a heart problem.
 - Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.
 - Those who have neck or spinal cord problems.
 - Those who are intoxicated or under the influence of drugs.
 - Pregnant women.
 - Those who are not in good health.
 - Those who do not follow the attendant's instructions.
 - Those who cannot grasp the Control Unit securely because of immobility in fingers, hands or arms.
 - Persons who disregard the product's warning displays.

The game cannot be played while sitting in a wheelchair.

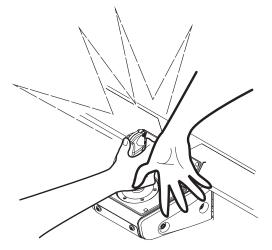
- Even players who have never been adversely affected by light stimulus might experience dizziness or headache depending on their physical condition when playing the game.
- Instruct those who feel sick during play to have a medical examination.
- To avoid injury from falls and electric shocks due to spilled drinks, instruct the player not to place heavy items or drinks on the product.
- To avoid electric shocks and short circuits, do not allow customers to put hands and fingers or extraneous matter in the openings of the product or small openings in or around the doors.
- To avoid falls and resulting injury, immediately stop the customer from leaning against or climbing on the product, etc.
- To avoid electric shock and short circuit, do not allow customers to unplug the power plug without a justifiable reason.

AWARNING

- Prevent customers from sitting two at a time in the seat. This game is for one player
 only. If two or more customers attempt to sit in the seat and play at the same time,
 they may hit their heads, hands, or elbows, possibly resulting in serious injury.
- Customers should be warned not to place children on their laps while they play the game. Doing so may cause the child to become trapped between the player and the control panel and/or cause the machine to tip over.

AWARNING

- 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.
- 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.
- Persons other than the player should not be allowed to touch the controls during play. They may brush against or collide with the controls or the player, possibly resulting in accidents.



 Players should be warned not to place personal effects or other objects on the base of the machine. If the safety sensor fails to detect these items, the motion of the machine may cause them to fly out and strike other customers.

4 PART DESCRIPTIONS



FIG. 4 Overall View

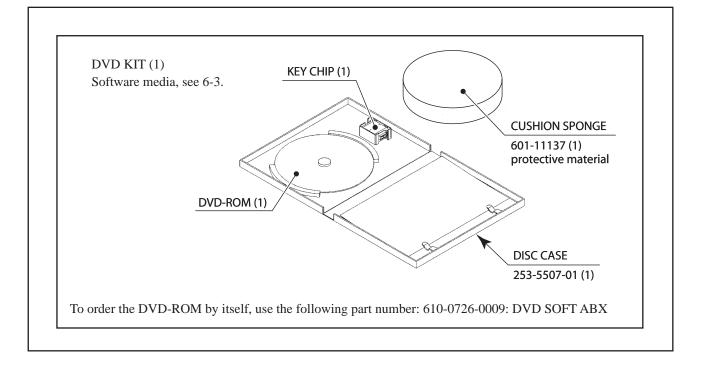
Dimensions

	(Width x L	ength x Heigl	ht)	(Weight)
Standard Cabinet	31" x	67" x	83"	564 lbs

5 ACCESSORIES

MANUAL, ABX STD (1) Part#: 525-30-300

DVD-SOFT KIT ABX (1) Part#: 610-0727-0009



6 ASSEMBLY AND INSTALLATION

AWARNING

- 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.
- If the machine is placed so that people will be passing through the vicinity, leave at least 28" of space around the machine. If this space is too narrow, persons other than the player may brush against or collide with the machine, possibly resulting in accidents.
- Do not leave power cords, ground wires, or network cables exposed in areas
 of heavy foot traffic. Doing so may cause them to become damaged, possibly
 resulting in electric shock and/or short circuits. When laying wiring across the floor,
 always use safety covers to protect the wires. (Wiring diameter: power cable approx. Ø 8; network cable approx. Ø 5)
- 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.

AWARNING

- 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.
- If two cabinets are installed in alignment, make sure that there is ample distance between them so that players or other customers will not come in contact or collide with each other. If the distance is too narrow, there could be contacts or collisions. If someone should fall down, head injury or other serious accident could occur. Trouble between customers could also arise.

ACAUTION

- Handle molded parts with care. Excessive weight or pressure may cause them to break and the broken pieces may cause injury.
- When attaching or removing doors or lids, be careful that your hand or finger does not get caught in anything.



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.

Installation and assembly of this product should take place in the following sequence.

- 1 FIXATION TO INSTALLATION SITE
- 2 CONNECTION OF POWER AND GROUND
- 3 ENGAGEMENT OF POWER SUPPLY AND SOFTWARE INSTALLATION
- 4 ENGAGEMENT OF POWER SUPPLY AFTER INSTALLING SOFTWARE
- 5 CONFIRMATION OF ASSEMBLY

AWARNING

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

The product comes with casters attached at 4 locations and adjusters at 4 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.

Move the product to the installation site. If the product is to be installed near a wall, secure enough passageway space for players to access the seat.

2 Use a wrench to set adjuster heights so that the unit will stay level. After setting, turn adjuster nuts upwards to tighten them and secure adjuster heights.

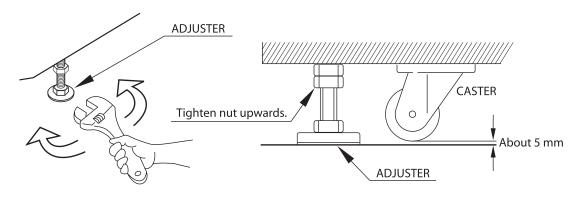


FIG. 6-1a Illustration of Adjuster Setting

Ventilation Space

When installing the product next to a wall or other game unit, where customers will not be able to pass, secure 10" (250 mm) of ventilation space between the product and the wall or game unit, as viewed from the left side facing the monitor.

CONNECTION OF POWER AND GROUND

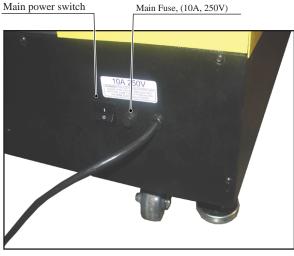
AWARNING

- 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. 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.

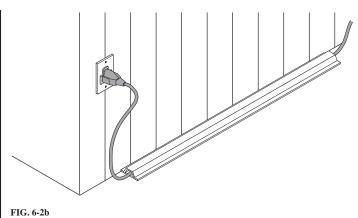
Insert the power cord plug into a "power outlet with ground terminal." If there is no "power outlet with ground terminal," be sure to establish ground by some other means; for example, by connecting the AC unit ground terminal to a ground wire with a ground mechanism prepared separately. If you use a conversion adapter sold on the market to supply power, connect the ground wire terminal of the adapter to a "securely grounded ground terminal."

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. 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.







AWARNING

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

STOP) IMPORTANT

- The software is not installed on the game board (LINDBERGH) when the power supply is engaged, so the "Error 22" message is not a malfunction. However, if there is another error display, or if there is no video output at all, there might have been an error in product assembly, wiring connections might be faulty, or the LINDBERGH might not be functioning properly.
- After the power supply is engaged, wait for "Error 22" message to be displayed. If the product is indiscriminately operated in any way beforehand, there could be unexpected problems or malfunctions, as well as damage to parts.
- Once "Error 22" is displayed, set the DVD-ROM in the DVD DRIVE and re-engage the power supply. Installation takes place.
- After the power supply is engaged, the DVD DRIVE tray will not come out for about 30 seconds even if you press the switch. This is due to DVD DRIVE initialization.
- The DVD DRIVE tray can come out or return only while the power supply is engaged. The tray cannot be opened or closed while the power is off.
- Even after the software has been installed, store the DVD software kit, DVD DRIVE and DVD wire in a secure location.
- If for any reason installation cannot be completed, an error is displayed. Refer to the service manual and take corrective action.

- Before engaging the power supply, be sure that no one is on the base and that there are no tools, etc., on the seat. When the product is shipped from the factory, the software has not yet been installed. But when the software is installed and the power supply is engaged, the seat will move left and right.
- **7** Turn the main switch of the AC unit to ON and engage the power supply.
- The LINDBERGH start-up screen appears. Wait for at least one minute. The error state is established. Check to be sure it is "Error 22." If it is "Error 22," proceed to the next operation. If it is not "Error 22," refer to the LINDBERGH service manual and take corrective action.
- Take out 1 urea (plastic head) screw and remove the DVD DRIVE case lid.

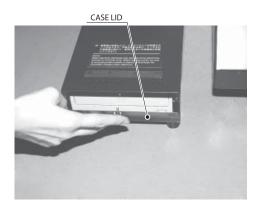


FIG. 6-3a

Press the DVD DRIVE switch and the DVD DRIVE tray will come out. Set the DVD from the DVD kit into the tray. Always have the labeled side facing upward.



FIG. 6-3b

- Press the DVD DRIVE switch. The tray goes back into the drive. Re-engage the power. Turn the main switch to OFF once, wait for at least one minute, then turn the switch back to ON.
- Software is installed automatically from the DVD to the LINDBERGH. In some cases, it may take about 5 minutes to install software to the LINDBERGH.
- Screen will shows Attract Mode screen appears.
- Press the DVD DRIVE switch so that the tray comes out. Remove the DVD. Press the DVD DRIVE switch so that the tray goes back into the unit. If the power is cut off, the tray will not move.

ENGAGEMENT OF POWER SUPPLY AFTER INSTALLING SOFTWARE

AWARNING

Only engage the power supply after checking the surroundings. Initialization takes place automatically when engaging the power supply after software installation. At this time the seat will move, and if anyone is near the product, they may collide with the product, fall down, or get their hand or finger caught somewhere.

STOP IMF

IMPORTANT

It takes about 2 minutes and 30 seconds for initialization to complete after the power has been engaged. Do not touch the product or press any buttons until after initialization is completed. If an anomaly is detected during initialization, there is an error display. Unless the cause of the error is removed and initialization is allowed to complete normally, the product will not operate properly.

Set the main switch of the AC unit to ON and engage the power. When the power is engaged, 1 fluorescent lamp in the billboard and 2 fluorescent lamps on the seat rear surface will light up.

After the LINDBERGH start-up screen has appeared, the "initialization in progress" screen appears and initialization begins.

The Attract Mode demo appears on the monitor and sound is output from the speakers to the left and right of the monitor and to the left and right of the seat backrest. The LEDs at the upper right and left of the monitor also light up.

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 on the control panel flashes. It goes out if there are no credits during Attract Mode.

If the setting is for network play, the screen for "checking network" message appears on the monitor after completion of initialization.

If there are no problems with the connections or settings for network play, the Attract Mode screen appears.

If there are any anomalies or faults in the connections or settings for network play, the confirmation screen or error message is displayed. Inspect the connections and settings of the cable for network play.

Upon completion of initialization, if the seat inclines and stops, for instance, re-engage the power source and execute initialization once again.

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 counts are not kept.

6

5

CONFIRMATION OF ASSEMBLY

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].

The items displayed on the test screen for tests (5) and (6) vary depending on the setting for cabinet type in the game setting screen.

(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 monitor adjustment status appears.

Monitor 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 monitor 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.

	80H 80H 80H 0FF 0FF 0FF 0FF 0FF
PRESS TEST AND SERVICE BUTTO	ON TO EXIT

FIG. 6-5a Input Test Screen

17

(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.

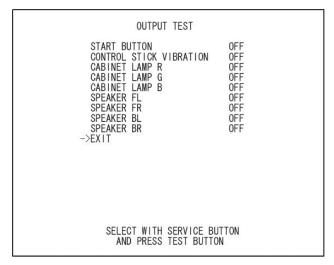


FIG. 6-5b Output Test Screen

(7) Calibration

Confirm that the operability of input devices and seat motions during game play 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 "CALIBRATION" on the game test mode menu and check and adjust settings.

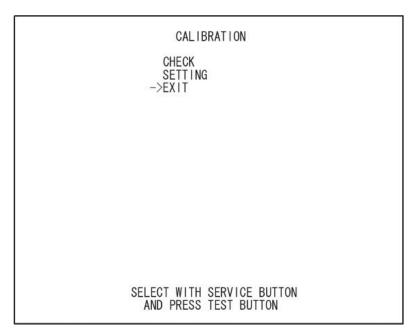


FIG. 6-5c Calibration Menu

Conduct the aforesaid tests when performing routine tests each month.

7 PRECAUTIONS WHEN MOVING THE MACHINE

AWARNING

- · 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 adjustors 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.
- To lift up the cabinet, hold it at the bottom. If you hold it anywhere else, the weight of the cabinet could cause damage to parts or attachments, resulting in injury.

ACAUTION

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

7-1 MOVING THE MACHINE



STOP) IMPORTANT

- Observe the following precautions when moving the machine. Failure to observe these precautions may result in damage to the casters and/or the flooring.
 - The machine should be moved along a level floor.
 - Ramps should be used to climb/descend steps 0.400" or greater in height.
 - The machine should not be moved any faster than walking speed (about 1.243
 - The machine should not be tilted too far to one side or loaded excessively on one side only.

AWARNING

- This product weighs over 550 lbs. It cannot be lifted by human strength alone.
 Trying to do so could cause accidents. Use a crane or other powered hauling unit to move the product.
- When moving a load, insert buffer material between the base and the platform wall and attach the product securely to the platform with rope or other means. If exterior parts are damaged or deformed, there could be electrical shocks and/or short circuits.

ACAUTION

- A minimum of 2 or 3 persons is needed to load this machine onto a forklift truck. The procedure cannot be carried out safely with fewer than this number.
- The forklift should have a platform of at least 60" in length. The procedure cannot be carried out safely with a platform shorter than this.
- When using a crane to move this machine, ensure that the person operating the crane is properly qualified. Do not attempt to carry out this procedure without properly qualified personnel.
- Do not push or support the monitor, control stick, throttle lever or plastic components while moving or loading the product. Otherwise these components could be damaged, resulting in injuries from fragments, cracks, etc.
- When transporting the unit by truck, etc., do not secure it with rope, etc., in any
 position other than as illustrated. Otherwise components could be damaged,
 resulting in injuries from fragments, cracks, etc. Also protect amply with cloth, etc.,
 those areas contacted by rope, etc.

STOP

STOP) IMPORTANT

- When placing the machine onto a platform or onto the ground, lower it slowly in an
 upright, level position. If the machine is lowered at an angle, the weight may be
 distributed unevenly and damage to casters/adjusters may result.
- Do not have adjustors contact the floor on the platform. Otherwise they could be damaged or deformed by tilts or vibrations during transport.
- Make sure that the product will not undergo violent oscillations. Lay out a vibrationproof mat, for instance, and place the product on top of it.

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.

Normally, when the power is on, the fluorescent lamp in the billboard on the monitor and the two fluorescent lamps on the seat rear surface are lit up. In Attract Mode, such things as game content and rankings are shown on the Attract Mode Demonstration screen on the monitor.

The colors emitted by the LEDs on the billboard right and left vary depending on the screen content.

Audio output comes from the speakers at the left and right of the monitor and the left and right of the seat backrest. Presence or absence of audio output in the Attract Mode can be selected by means of the settings in the test mode.

The START button on the control panel is an illuminated button. In Attract Mode, this button is not lit up.

If there are enough credits to enable play, the START button flashes. When it is pressed and the game is started, the START button light goes out.

After the game is over, if there are enough credits to enable play, the START button flashes.

The colors emitted by the LEDs on the billboard right and left vary depending on conditions.

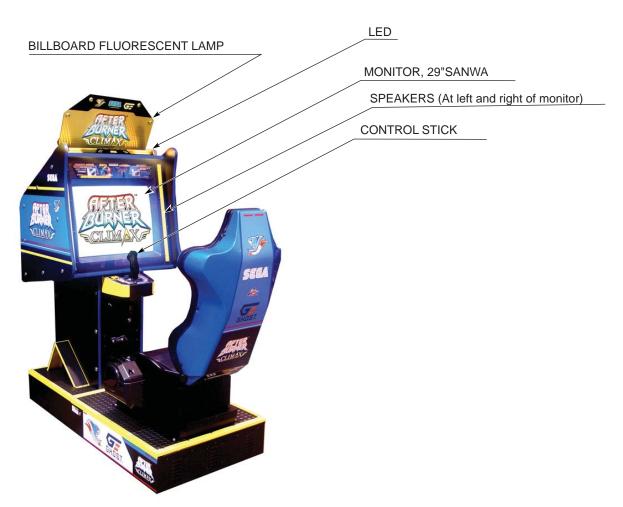


FIG. 8a

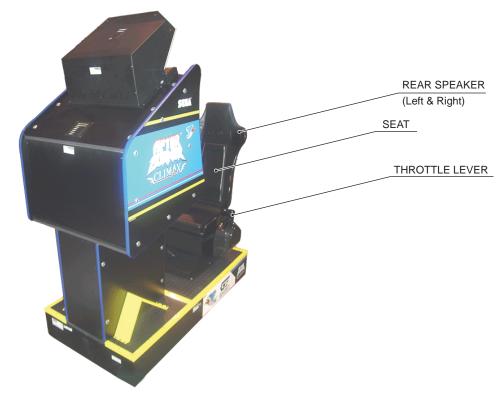


FIG. 8b



FIG. 8c

Game Outline

- AFTER BURNER CLIMAX is a flight shooting game that features exhilarating gameplay.
- The player takes on the role of the leader of the "Brave Fangs", a special air-force unit whose mission is to prevent the outbreak of all-out nuclear war.
- Fighting the enemy, you proceed through the game's stages. Attack targets include jet fighters, bombers, helicopters, missile launch sites and facilities.
- Using CLIMAX Mode, a special form of attack style, it is possible to take down large groups of enemies at once.

Attract Mode

The Attract Mode cycles through the following screens.

- 1. Logo Display
- 2. Title Screen
- 3. Movie
- 4. Title Screen
- 5. Ranking
- 6. Title Screen
- 7. Controls
- 8. Title Screen
- 9. Demonstration
- 10. Return to 1

Insert a coin and press the START button during the Attract Mode and the game will start.

However, during FREE PLAY no coins need to be inserted.

Pull the trigger during the Attract Mode and it will skip to the next screen. (The Logo Display cannot be skipped).

Game Mode Select (Network Play only)

Move the control stick left/right to select a game mode.

Pull the trigger or press the START button to confirm selection.

TEAM PLAY MODE Start game in single play mode. SINGLE PLAY MODE TIME SINGLE PLAY MODE

ONE-PLAYER Mode:

Play for one player.

TWO-PLAYER Mode:

FIG. 8e MODE SELECT Screen

Two players play at the same time. Co-operate or compete to clear all stages. At each stage, scores are compared and the winner/loser is displayed.

Aircraft Select

Move the control stick left/right to select an aircraft.

9 Push the throttle lever forward or back to change the aircraft paint pattern.

3 Pull the trigger or press the START button to confirm selection.

The three following aircraft can be selected.

- F-14D Super Tomcat
- F-15E Strike Eagle
- F/A-18E Super Hornet

The four following paint patterns can also be selected.

- Standard Paint
- Camouflage
- Special Paint
- Low Visibility



FIG. 8f AIRCRAFT SELECT Screen

Stage Composition

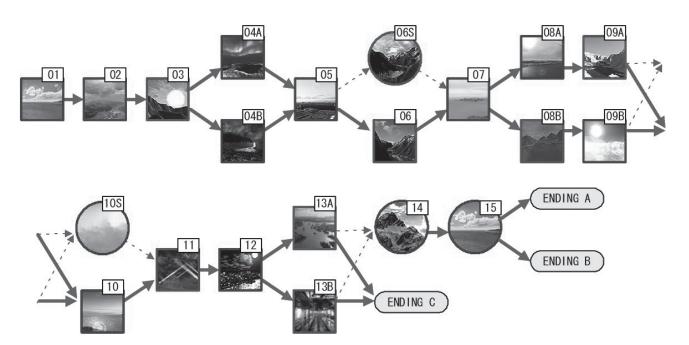


FIG. 8g Stage Composition

There are a total of 21 stages.

- There are 17 basic stages (shown in squares on the above diagram)
- There are 2 secret stages (stages 06S and 10S on the above diagram)
- There are 2 extra stages (stages 14 and 15 on the above diagram)

Some stages simply have a number, like "01", and some also have a letter included, like "04A".

- The numbers on the above diagram denote stage number.
- Where the route splits, an "A" or "B" follows the stage number.
- Secret stages have an "S" following the number.

There are a number of routes that can be taken to the end of the game.

- In some cases the player can choose their route, and in some cases their play will automatically decide which route is taken.
- The dotted lines on the above diagram denote a route that is automatically determined by play.
- The "No. of Stars earned" effects progress to secret stages.
- The "No. of Critical Commands completed" effects progress to the extra stages.

There are 3 endings.

- There is ENDING A, ENDING B and ENDING C, with ENDING A being the best.
- There are 15 stages to reach ENDING A and ENDING B.
- There are 13 stages to reach ENDING C.

Controls



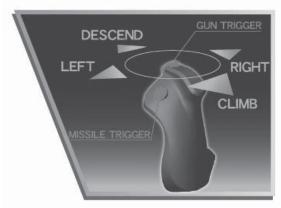


FIG. 8h Throttle Lever

FIG. 8i Control Stick

The player aircraft is controlled by the "Throttle Lever" and "Control Stick".

<Throttle Lever>

Used to change the speed of the player aircraft.

Pull the lever towards you to decrease speed. Push the lever away from you to increase speed.

Push the lever all the way away from you to activate CLIMAX Mode. CLIMAX Mode requires a full Climax Gauge to activate.

<Control Stick>

Alters the movement direction of the player aircraft.

Move right to move to the right. Move left to move to the left.

Pull towards you to ascend. Push away from you to descend.

The gun trigger fires guns, and the missile trigger fires missiles.

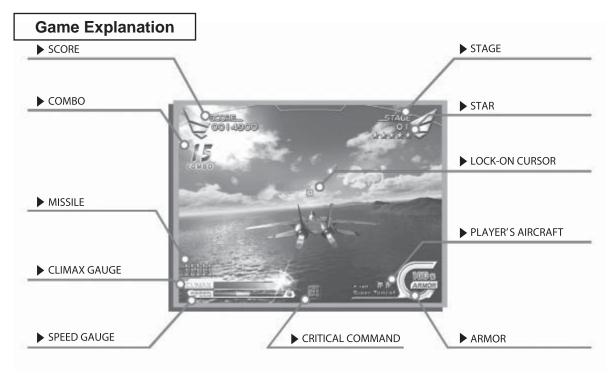


FIG. 8j GAME SCREEN Explanation

<Game Rules>

Either clearing all the stages, or all the player aircraft being lost results in Game Over.

All the player aircraft have been lost when there are no remaining player aircraft and the armor gauge falls to 0%.

When an aircraft's armor gauge falls to 0%, that aircraft is lost, and the remaining player aircraft are reduced by one.

During game play, there are no increases in the number of aircraft and no restoration of the armor gauge.

The number of aircraft at the start of the game is set in test mode.

<Screen Explanation>

- SCORE: Current score.

- COMBO: Current combo. Defeating enemies in quick succession results in a combo.

- MISSILE: Remaining number of missiles. Required to fire missiles. They are gradually

replenished.

- CLIMAX GAUGE: Once this gauge is filled, CLIMAX Mode can be activated.

- SPEED GAUGE: The speed of the player aircraft.

- STAGE: Current stage number.

- STAR: Current number of stars. Defeating many enemies without taking any damage

earns stars.

- LOCK-ON CURSOR: Align this cursor with an enemy to lock-on.

- PLAYER'S AIRCRAFT: When there are no remaining aircraft and the armor gauge falls to 0% it is Game

Over.

- ARMOR: When the gauge falls to 0% a player aircraft is lost.

- CRITICAL COMMAND: Displays a Critical Command in progress.

<Lock-On>

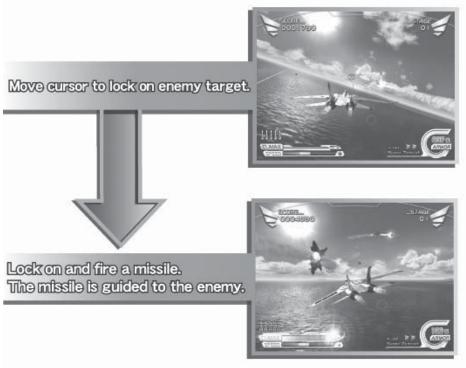


FIG. 8k Locking On

Using missiles is the most basic method of attack. A missile may still miss a locked on enemy if your timing is off.

1

Align the lock-on cursor with an enemy to lock-on to them.

2

Fire a missile while locked on and it will home in on the enemy.

<After Burners>

When the throttle lever is moved to FAST (far away from you), the after burners ignite and maximum acceleration can be realized.

The after burners can only be used for a limited period of time.

You must then return your speed to normal for a while before the after burners can be fired again.

Moving the throttle from SLOW to FAST will allow the after burners to be fired again more quickly than normal.

<Rolling>

Rolling is a technique for avoiding missiles. Normally, missiles can be avoided by other actions. Rolling is performed as follows.

1

Move the control stick left or right for a short time. Move it momentarily all the way to the other side and the aircraft will roll

<CLIMAX Mode>



FIG. 81 Activating CLIMAX Mode



FIG. 8m CLIMAX MODE ACTIVATION Screen

Using CLIMAX Mode allows a larger number of enemies to be locked on to and taken out at once.

During CLIMAX Mode the lock-on cursor expands, providing more opportunities to attack. You can now quickly lock onto multiple enemies. During CLIMAX Mode, the number of remaining missile shots is unlimited.

In CLIMAX Mode, motion can begin by pushing the throttle lever all the way to CLIMAX position, the farthest point away from you.

The Climax Gauge must also be full before CLIMAX Mode will activate. Keeping the throttle lever pushed all the way from you will keep CLIMAX Mode active.

CLIMAX Mode ends under the following circumstances.

- If the throttle lever is moved out of the CLIMAX position.
- If the Climax Gauge becomes totally empty.
- If damage can be taken during CLIMAX Mode.

[CLIMAX Mode Hints]

- * Defeating enemies quickly is vital. The less you use the gauge up, the more often CLIMAX Mode can be used.
- * An infinite number of missiles can be used during CLIMAX Mode, presenting an opportunity to attack even if the number of remaining missiles are low.
- * A Combo increases simply by locking on and firing a missile.

<TWO-PLAYER Mode>



FIG. 8n TWO-PLAYER Mode GAME Screen

<Game Rules>

Two players compete at the same time to get the higher score. It is also possible to co-operate to clear the stages. The conditions for Game Over are the same as for the one-player game.

<Evaluation>

Results (WIN/LOSE/DRAW) are determined by comparing the score earned in each stage.

MID-GAME RESULT and TOTAL RESULT display the total score comparison up until that point.

<Screen Explanation>

- RIVAL: Position and direction of your rival.

- RIVAL'S STATUS: An icon that displays your rival's current status.

Displayed on the right on the Player 01 screen and the left on the Player 02 screen.

(Icons are: CLIMAX Mode, Down, Game Over)

- DOWNED: Displayed when either player is shot down.

(In red: Player 01 downed; In blue: Player 02 downed)

- PLAYER NUMBER: Player number.

Route Select



FIG. 80 ROUTE SELECT Screen

Move the control stick left/right to move the cursor.

9 Pull the gun trigger to select the route.

Select the route you wish to take on the ROUTE SELECT screen. The countdown appears in the middle of the screen. If the time runs out then the route that the cursor is currently highlighting shall be selected.

8

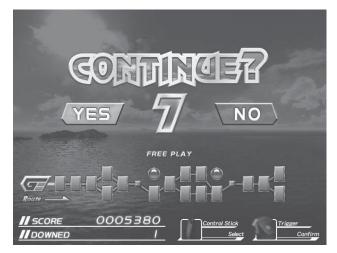


FIG. 8p CONTINUE Screen

On the CONTINUE screen, select whether to continue the game or quit. The countdown appears in the middle of the screen. If the time runs out, NO will be automatically selected.

To continue the game, perform the following before the countdown reaches 0.

<Credit Remains>

If enough credits remain to continue the game, the CONTINUE screen appears and the START button flashes. The START button is used to select YES when there are enough credits to continue. It is also used to select YES when FREE PLAY has been set. At any other time the START button has no effect.

- Move the control stick left/right to move the cursor.
- **9** Pull the gun trigger or press the START button to select.

<No Credit>

- Insert coins. When a coin is inserted the count down resets to 9. When enough coins have been inserted to continue, the START button flashes.
- Tilt the control stick left/right and move the cursor to YES.
- **2** Pull the gun trigger or press the START button to select.

Name Entry

If stage 13A, 13B or stage 15 are cleared, and the score is in the top 20 then you can enter your name.



FIG. 8q NAME ENTRY Screen

A maximum of three characters can be entered. Name entry ends when END is selected or when time runs out.

Move the control stick left/right to move the cursor. Pull the trigger to select the letter the cursor is aligned to.

Pull the throttle lever towards you to move the cursor to the DEL position. Press the START button to confirm the entered name.

If name entry ends without anything being input, the name will appear as "???"

If prohibited characters are included in the name, it will automatically be changed to "- - -"

Other Notes

<Change BGM>

On the "PLEASE WAIT" screen displayed after selecting an aircraft, leave the throttle in SLOW and pull the missile trigger to change the music to the After Burner II BGM.

<Aircraft licenses>

The rights to use all of the aircraft that appear in the game have been obtained from the appropriate licensers.

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9 EXPLANATION OF TEST AND DATA DISPLAY

AWARNING

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

ACAUTION

- Because of the position of the switch unit, you must assume an unnatural posture to operate in test mode, which can cause pain in the shoulder, waist, etc. You could also get caught by parts in the coin chute door, for instance, and suffer abrasions. Have a flashlight on hand and operate in test mode very carefully. The door interior is dark and narrow and you could easily make mistakes in operation.
- Be careful that a finger or hand does not get caught when opening/closing the coin chute door.

STOP IMPORTANT

- When you enter the Test Mode, fractional coin and bonus adder data is erased.
- Adjust the sound to the optimum volume, taking into consideration the environmental requirements of the installation location.
- Removing the Coin Meter circuitry renders the game inoperable.

9-1 SWITCH UNIT AND COIN METER

Switch Unit

In test mode, the switch unit in the coin chute door is operated.

Unlock and open the coin chute door. Inside is a switch unit. There is a monitor adjustment panel at the bottom. (See Chapter 10.)

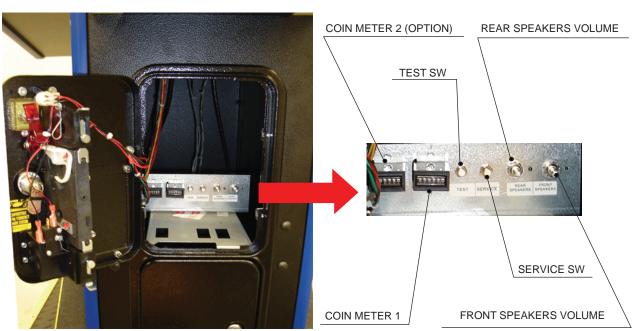


FIG. 9-1a Coin Meter

TEST Switch (TEST)

Establishes test mode. Becomes the button to confirm selections in test mode.

SERVICE Switch (SERVICE)

Makes it possible to enter credits for service without increasing the coin meter. Becomes the button to select items in test mode.

Front Speaker Volume (FRONT SP.VOL)

This is the volume knob for speakers at the left and right of the monitor. Turn the knob to the right to increase speaker volume.

Rear Speaker Volume (REAR SP.VOL)

This is the volume knob for speakers at the left and right of the seat backrest. Turn the knob to the right to increase speaker volume.

Coin Meter

After using a Coin Door key to unlock it, the coin meter can be found inside. (Coin Meter 2 which located in Left is option.)

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: COMMON

NETWORK SETTING

NETWORK TYPE: MAIN

MAIN NETWORK: SETTING NOT REQUIRED

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.

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



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 menu will be displayed.

The items displayed on each test screen vary depending on the setting of CABINET TYPE on the game setting screen in game test mode.

GAME TEST MENU

INPUT TEST
OUTPUT TEST
GAME ASSIGNMENTS
NETWORK SETTING
CALIBRATION
BOOKKEEPING
BACKUP DATA CLEAR
->EXIT

SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON

FIG. 9-3 GAME TEST MENU Screen

- 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. You can also use the control stick and gun trigger to make selections in game test mode.
- When test or setting is completed, take steps to have the game test mode menu screen reappear. The steps involved vary with the item.
- 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>

a. INPUT TEST: Perform an input test.

b. OUTPUT TEST: Perform an output test.

c. GAME ASSIGNMENTS: Set up game settings.

d. NETWORK SETTING: Set up network settings.

e. CALIBRATION: Perform calibration.

f. BOOKKEEPING: View bookkeeping records.

g. BACKUP DATA CLEAR: Clear data.

h. EXIT: Return to system test mode menu.

a. INPUT TEST

INPUT TEST CONTROL STICK X 80H CONTROL STICK Y 80H THROTTLE LEVER 80H GUN TRIGGER 0FF MISSILE TRIGGER 0FF CLIMAX SWITCH START BUTTON SERVICE TEST PRESS TEST AND SERVICE BUTTON TO EXIT

FIG. 9-3a INPUT TEST Screen (CABINET TYPE: STANDARD)

9

The condition of each input device can be checked. Periodically check the condition of each input device on this screen. The number of items displayed varies depending on the setting of CABINET TYPE.

<Operation>

- Manipulate the control stick or throttle lever and confirm that the input value on the right side of the item changes smoothly in response to manipulation.
- Manipulate the triggers and buttons 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.
- When the SERVICE Button and TEST Button are pressed simultaneously, the game test mode menu screen reappears.

<Menu Explanation>

CONTROL STICK X: Control stick left/right input value
CONTROL STICK Y: Control stick up/down input value
THROTTLE LEVER: Throttle lever front/back input value

GUN TRIGGER: Gun trigger
MISSILE TRIGGER: Missile trigger

CLIMAX SWITCH: ON when throttle lever is pressed to monitor side; OFF when lever is released

START BUTTON: START button
SERVICE: SERVICE Button
TEST: TEST Button

b. OUTPUT TEST

OUTPUT TEST

START BUTTON OFF
CONTROL STICK VIBRATION OFF
CABINET LAMP R OFF
CABINET LAMP G OFF
CABINET LAMP B OFF
SPEAKER FL OFF
SPEAKER FR OFF
SPEAKER BL OFF
SPEAKER BL OFF
SPEAKER BR OFF
->EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

FIG. 9-3b OUTPUT TEST Screen (CABINET TYPE: STANDARD)

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.

The number of items displayed varies depending on the setting of CABINET TYPE. For safety, in performing tests in which the seat moves, manipulate the control stick and gun trigger without standing on the base.

<Operation>

1

Press the SERVICE Button and move the cursor to the item (output device) you want to test.

2

While the TEST Button is depressed, 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. If the speakers are operating, you will hear a buzz-like noise.

3

Press the SERVICE Button and move the cursor to EXIT.

4

When the TEST Button is pressed, the game test mode menu screen reappears.

<Menu Explanation>

START BUTTON: START button lights up at ON; extinguishes at OFF.

CONTROL STICK VIBRATION: Control stick vibrates at ON; stops at OFF.

CABINET LAMP R: LED glows red at ON; extinguishes at OFF.

CABINET LAMP G: LED glows green at ON; extinguishes at OFF.

CABINET LAMP B: LED glows blue at ON; extinguishes at OFF.

SPEAKER FL: Monitor left side speaker produces sound at ON; no sound at OFF.

SPEAKER FR: Monitor right side speaker produces sound at ON; no sound at OFF.

SPEAKER BL: Backrest left speaker produces sound at ON; no sound at OFF.

SPEAKER BR: Backrest right speaker produces sound at ON; no sound at OFF.

EXIT: GAME TEST MENU screen reappears.

When AUDIO OUTPUT on the game setting screen is set to "2CH", speaker-related items change as follows. At "2CH", sound is output only from the left and right monitor speakers.

SPEAKER FL: Monitor left speaker produces sound at ON; no sound at OFF.

SPEAKER FR: Monitor right speaker produces sound at ON; no sound at OFF.

AWARNING

When the store is crowded inside and motions might be dangerous to customers passing near the product, set the cabinet so it will not move, then operate the product.

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.
- Use this product with the CABINET TYPE set at STANDARD. Otherwise there could be erroneous operations.

GAME ASSIGNMENTS

DIFFICULTY NORMAL
PLAYERS AIRCRAFT 3
CABINET TYPE STANDARD
CONTROL STICK VIBRATION ON
ADVERTISE SOUND ON
AUDIO OUTPUT 4CH
->EXIT

SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON

FIG. 9-3c GAME ASSIGNMENTS Screen (CABINET TYPE: STANDARD)

The various game settings are established. The number of menu items differs depending on the CABINET TYPE setting in game assignments.

<Operation>

1

Press the SERVICE Button, move the cursor to the item whose setting is to be changed and select the item.

2

When the TEST Button is pressed, the preset value of the selected item changes. When AUDIO OUTPUT is set to "2CH", sound is output only from the monitor right and left speakers.

screen e

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 (VERY EASY/EASY/NORMAL/HARD/VERY

HARD).

PLAYERS AIRCRAFT: Set the number of player aircraft at the start of the game (1 - 9).

CABINET TYPE: Set the cabinet type (DELUXE/STANDARD).

CABINET MOVEMENT: Turn Cabinet Movement ON/OFF.
CONTROL STICK VIBRATION: Turn control stick vibration ON/OFF.

ADVERTISE SOUND: Turn sound during Attract Mode ON/OFF.

AUDIO OUTPUT: Set the speaker output (4CH/2CH).

EXIT: Return to the game test menu screen.

d. NETWORK SETTING

STOP IMPORTANT

- Network play cannot be implemented without proper setting for network play.
 Instead, an error message may be displayed.
- 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.

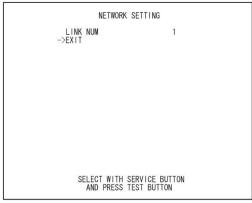


FIG. 9-3d01 NETWORK SETTING Screen (LINK NUM: 1)

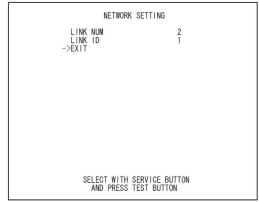


FIG. 9-3d02 NETWORK SETTING Screen (LINK NUM: 2)

9

To setup network play with this product, connect two game machines with a network cable.

Change to the settings for network play by proceeding as follows. The number of menu items differs depending on the LINK NUM setting.

<Operation>

1

Press the SERVICE button, move the cursor to LINK NUM and select it.

2

When the TEST button is pressed, the value set for LINK NUM changes. Set each of the two game machines to "2". LINK ID is displayed.

3

Press the SERVICE button, move the cursor to LINK ID and select it.

4

When the TEST button is pressed, the value set for LINK ID changes. Set this value to "1" for one machine and to "2" for the other machine.

5

Press the SERVICE button and move the cursor to EXIT.

6

When the TEST button is pressed, the network play setting screen exits and the game test mode menu screen reappears.

<Menu Explanation>

LINK NUM: Set the number of cabinets to link (1 or 2).

LINK ID: Numbers for game machine network play (1/2).

NOTES:

- Make sure that the two cabinets being used are both given different numbers. If the same number if used for both, then two-player play will not be possible.
- It is recommended that, facing the screens, the cabinet on the left is given number 1 and the cabinet on the right is given number 2.

EXIT: Return to the game test menu screen.

NOTE:

After Burner Climax games able 2 cabinets LINK PLAY. You need 1 LINK (LAN) cable. You need create hole for LINK cable bottom wood of both base cabinets then thru LINK CABLE there. (Please refer Chapter 20)



NETWORK (LAN) CABLE (OPTION) 600-7269-0300 (1)

9



- Change will not be effective simply by making a change on the calibration screen.
 When a setting has been changed, be sure to always exit the test mode.
- Calibration is relevant to operability. Manipulate and adjust the input device with appropriate force. Do not make adjustments with excessive force.

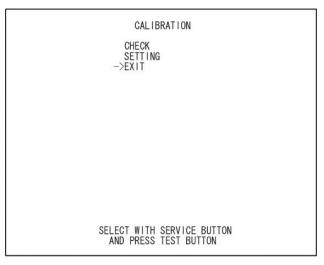


FIG. 9-3e01 CALIBRATION Screen

Adjust the volume input value of the input device. When the volume has been replaced, check and adjust it on this screen.

<Operation>

- Press the SERVICE Button and move the cursor to the item you want to select.
- When the TEST Button is pressed, the selected item is executed.
- **?** Perform checks and adjustments.
- The calibration screen reappears.

 When an adjustment has been made, select CHECK and, on the calibration check screen, make sure that the adjustment is appropriate.
- Press the SERVICE Button and move the cursor to EXIT.
- When the TEST Button is pressed, the calibration screen exits and the game test mode menu screen reappears.

<Menu Explanation>

CHECK: Proceed to the calibration check screen.

SETTING: Proceed to the calibration screen.

EXIT: Return to the game test menu screen.

Calibration Check Screen

```
CALIBRATION

CHECK

MIN CENTER MAX

CONTROL STICK X 80H ( 36H - 77H - B4H ) <% 1 >
CONTROL STICK Y 80H ( 57H - 98H - D8H ) <% 2 >
THROTTLE LEVER 80H ( 52H - 80H - ACH ) <% 3 >
```

FIG. 9-3e02 CALIBRATION Check Screen

<Operation>

1

Operate the input device whose input value is to be checked.

2

When the TEST Button is pressed, the calibration screen reappears.

<Menu Explanation>

CONTROL STICK X: When minimum and maximum values have been input, MIN and MAX are displayed at

the < * 1> position, depending on the input. If both MIN and MAX are not displayed

then the game cannot be played properly.

CONTROL STICK Y: When minimum and maximum values have been input, MIN and MAX are displayed at

the < \pi 2> position, depending on the input. If both MIN and MAX are not displayed

then the game cannot be played properly.

THROTTLE LEVER: When minimum, maximum, and CLIMAX values have been input, MIN, MAX, and

CLIMAX are displayed at the < \mathbb{X} 3> position, depending on the input. If MIN, MAX

and CLIMAX are not displayed then the game cannot be played properly.

STOP IMPORTANT

Shown below is the recommended range in the value for the center position of each volume. Attach volume so that its value is within this range. [Throttle lever: $80H \pm 4H$, Seat: $80H \pm 4H$]

CALIBRATION

CONTROL STICK
THROTTLE LEVER
SEAT CENTER POSITION
->EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

FIG. 9-3e03 CARIBRATION SELECT Screen

<Operation>

Press the SERVICE Button and move the cursor to the item you want to select.

9 When the TEST Button is pressed, the calibration screen for the selected item appears.

Adjust the input values on the calibration screen. The calibration select screen reappears.

The calibration select screen reappears.

Press the SERVICE Button and move the cursor to EXIT.

When the TEST Button is pressed, the calibration screen reappears.

<Menu Explanation>

CONTROL STICK: Proceed to the control stick calibration screen.

THROTTLE LEVER: Proceed to the throttle lever calibration screen.

SEAT CENTER POSITION: Proceed to the calibration screen for seat center position.

EXIT: Return to the calibration screen.

9

Control Stick Calibration Screen

STEP 1 aligns the center position for the control stick.

Press the TEST Bbutton after releasing your hand from the control stick.

After determining the center position, proceed to STEP 2.

CALIBRATION

CONTROL STICK

MIN CENTER MAX X 80H (36H - 77H - B4H) Y 80H (57H - 98H - D8H)

RELEASE THE CONTROL STICK AND PRESS THE TEST BUTTON

FIG. 9-3e04 CONTROL STICK (STEP1) Screen

2 STEP 2 aligns the MIN/MAX positions for the control stick.

Push the control stick as far as possible in all directions (left/right/forward/back).

(After moving it past a certain position, the message "PRESS TEST BUTTON TO EXIT" will be displayed.)

CALIBRATION

CONTROL STICK

MIN CENTER MAX X 80H (36H - 77H - B4H) Y 80H (57H - 98H - D8H)

MOVE THE CONTROL STICK TO ITS EXTREMES <UP/DOWN/LEFT/RIGHT>

FIG. 9-3e05 CONTROL STICK (STEP2-1) Screen

CALIBRATION

CONTROL STICK

MIN CENTER MAX X 80H (36H - 77H - B4H) Y 80H (57H - 98H - D8H)

MOVE THE CONTROL STICK TO ITS EXTREMES <UP/DOWN/LEFT/RIGHT>

PRESS TEST BUTTON TO EXIT

FIG. 9-3e06 CONTROL STICK (STEP2-2) Screen

"PRESS TEST BUTTON TO EXIT" is displayed.

Press the TEST Button to set these MIN/MAX settings (left/right/forward/back) and return to the calibration select screen.

Throttle Lever Calibration Screen

STEP 1 aligns the center position for the throttle lever.

Press the TEST Button after releasing your hand from the throttle lever.

After determining the center position, proceed to STEP 2.

CALIBRATION

THROTTLE LEVER

MIN CENTER MAX 80H (52H - 80H - ACH)

RELEASE THE THROTTLE LEVER AND PRESS THE TEST BUTTON

FIG. 9-3e07 THROTTLE LEVER (STEP1) Screen

9

STEP 2 aligns the MIN/MAX positions for the throttle lever.

Push the throttle lever as far as possible in both directions (forward/back). Make sure that you do not push the lever into CLIMAX Mode when inputting the MAX value. If you do so the game cannot be played properly. If CLIMAX Mode has been entered, once the MIN/MAX position has been determined, repeat the same procedure to amend.

After moving it past a certain position, the message "PRESS TEST BUTTON TO EXIT" will be displayed.

CALIBRATION

THROTTLE LEVER

MIN CENTER MAX 80H (52H - 80H - ACH)

MOVE THE THROTTLE LEVER TO ITS EXTREMES <BACK/FRONT>

- BE CAREFUL!! DO NOT MOVE THE THROTTLE LEVER INTO "CLIMAX"
WHEN YOU ARE IN "MAX" LEVEL

FIG. 9-3e08 THROTTLE LEVER (STEP2-1) Screen

CALIBRATION

THROTTLE LEVER

MIN CENTER MAX 80H (52H - 80H - ACH)

MOVE THE THROTTLE LEVER TO ITS EXTREMES <BACK/FRONT>

- BE CAREFUL!! DO NOT MOVE THE THROTTLE LEVER INTO "CLIMAX"
WHEN YOU ARE IN "MAX" LEVEL

PRESS TEST BUTTON TO EXIT

FIG. 9-3e09 THROTTLE LEVER (STEP2-2) Screen

"PRESS TEST BUTTON TO EXIT" is displayed.

f. 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)		
COIN 1 COIN 2 TOTAL COINS	0 0 0	
COIN CREDITS SERVICE CREDITS TOTAL CREDITS	0 0 0	
PRESS TEST BUTTON TO CO	NTINUE	

FIG. 9-3f01 BOOKKEEPING Screen (1/4)

<Menu Explanation>

COIN 1: Number of coins inserted into coin chute 1.
COIN 2: Number of coins inserted into coin chute 2.

TOTAL COINS: Total of COIN 1 and COIN 2.

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) NUMBER OF GAMES 0 TOTAL TIME 0D 00H 00M 00S PLAY TIME 0D 00H 00M 00S AVERAGE PLAY TIME 0D 00H 00M 00S LONGEST PLAY TIME 0D 00H 00M 00S SHORTEST PLAY TIME 0D 00H 00M 00S PRESS TEST BUTTON TO CONTINUE

FIG. 9-3f02 BOOKKEEPING Screen (2/4)

<Menu Explanation>

NUMBER OF GAMES: Total number of games played.

TOTAL TIME: Total time that power has been supplied to the cabinet.

(Time power is supplied, except during test mode.)

PLAY TIME: Total play time.

AVERAGE PLAY TIME: Average play time.

LONGEST PLAY TIME: Longest play time.

SHORTEST PLAY TIME: Shortest play time.

```
BOOKKEEPING (3/4)
                                TIME HISTOGRAM
 OMOOS~0M29S
                                                                    7M30S~
                                                                7M30S~ 7M59S

8M00S~ 8M29S

8M30S~ 8M59S

9M00S~ 9M29S

9M30S~ 9M59S

10M00S~ 10M29S

11M00S~ 11M29S

11M30S~ 11M59S

12M00S~ 12M29S

12M30S~ 13M29S

13M30S~ 13M59S

14M00S~ 14M29S
0M00S~0M29S

0M30S~0M59S

1M00S~1M29S

1M30S~1M59S

2M00S~2M29S

2M30S~2M59S

3M30S~3M59S

4M00S~4M29S

4M30S~4M59S

5M00S~5M29S

5M00S~5M29S

6M00S~6M29S
                                                                                         7M59S
                                                                                                                  0
                                              Ŏ
                                              000000000
 6M00S~6M29S
6M30S~6M59S
7M00S~7M29S
                                              0
                                                                 14M00S~14M29S
                                              ŏ
                                                                 14M30S~14M59S
                                                                 OVER
                                                                                      15M00S
                 PRESS TEST BUTTON TO CONTINUE
```

FIG. 9-3f03 BOOKKEEPING Screen (3/4)

<Menu Explanation>

TIME HISTOGRAM: Total number of plays in each time bracket.

BOOKKEEPING (4/4)		
NUMBER OF GAMES NUMBER OF GAME START NUMBER OF CONTINUE NUMBER OF GAMECLEAR NUMBER OF GAMEOVER AVERAGE NUMBER OF CONTINUE MIN NUMBER OF CONTINUE TO CLEARED AVERAGE NUMBER OF CONTINUE TO CLEARED	0 0 0 0 0 0.000	
NUMBER OF TEAM PLAY NUMBER OF MID-GAME ENTRY	0	
NUMBER OF MOTION STOP DURING GAME NUMBER OF SENSOR VIOLATIONS	0	
PRESS TEST BUTTON TO EXIT		

FIG. 9-3f04 BOOKKEEPING Screen (4/4)

<Menu Explanation>

NUMBER OF GAMES:	Total number of games.
NUMBER OF GAMES.	Total number of games.

NUMBER OF GAME START: Total number of games started.

NUMBER OF CONTINUE: Total number of continues.

NUMBER OF GAMECLEAR: Total times the game has been cleared.

NUMBER OF GAMEOVER: Total number of Game Overs.

AVERAGE NUMBER OF CONTINUE: Average number of continues.

MIN NUMBER OF CONTINUE TO CLEARED: Minimum number of continues until ENDING is reached.

AVERAGE NUMBER OF CONTINUE TO CLEARD: Average number of continues until ENDING is reached.

NUMBER OF TEAM PLAY: Total number of two-player games.

NUMBER OF MID-GAME ENTRY: Total number of mid-game entries, and total number

of mid-game entries plus number of continues after

GAMEOVER.

NUMBER OF MOTION STOP DURING GAME: Number of times the MOTION STOP button has been

pressed.

NUMBER OF SENSOR VIOLATIONS: Number of times a sensor has reacted. (Only counted

when the seat is unlocked.)

9

g. BACKUP DATA CLEAR

BACKUP DATA CLEAR

CLEAR ALL BACKUP DATA

CLEAR RANKING DATA (RANKO1 ~ 20) ONLY

CLEAR RANKING DATA (RANK11 ~ 20) ONLY

CLEAR BOOKKEEP DATA ONLY

->EXIT

SELECT WITH SERVICE BUTTON

AND PRESS TEST BUTTON

FIG. 9-3g01 BACKUP DATA CLEAR Screen

<Menu Explanation>

CLEAR ALL BACKUP DATA: Clear all data (both ranking and bookkeeping).

CLEAR RANKING DATA(RANK01~20) ONLY: Clear only ranking data.

CLEAR RANKING DATA(RANK11~20) ONLY: Clear only ranking data from (rank 11 to 20 only).

CLEAR BOOKKEEP DATA ONLY: Clear only bookkeeping data.

EXIT: Return to game test menu screen.

After selecting one of the above items the following confirmation screen will be displayed.

The screen below is displayed when CLEAR ALL BACKUP DATA is selected, but the screen is almost identical in other cases too.

BACKUP DATA CLEAR

CLEAR ALL BACKUP DATA

YES (CLEAR)

->NO (CANCEL)

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

FIG. 9-3g02 BACKUP DATA CLEAR Screen

If you wish to clear data, press the SERVICE Button to highlight YES and then press the TEST Button. "COMPLETED" will be displayed once the data has been erased.

When the TEST Button is pressed, the game test mode menu screen reappears.

If you don't wish to clear data, press the SERVICE Button to highlight NO and then press the TEST Button. Return to BACKUP DATA CLEAR screen.

10 MONITOR

10-1 CAUTIONS/WARNINGS REGARDING SAFETY FOR HANDLING THE MONITOR

Before handling the monitor, be sure to read the following points and comply with the caution/warning instructions given below. Note the caution/warning symbols and letters used in the instructions.

AWARNING

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

ACAUTION

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



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



Indicates the instruction to disconnect or unplug a power connector.

AWARNING

- When performing such work as installing and removing the monitor, inserting and
 disconnecting the external connectors to and from the monitor interior and the
 monitor itself, be sure to disconnect the power connector (plug) beforehand.
 Proceeding without doing so can cause electric shock or malfunctioning.
- Use of the monitor by converting it without permission is not allowed. SEGA shall not be liable for any malfunctioning and accidents caused by such a conversion.

AWARNING

Primary side and Secondary side

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

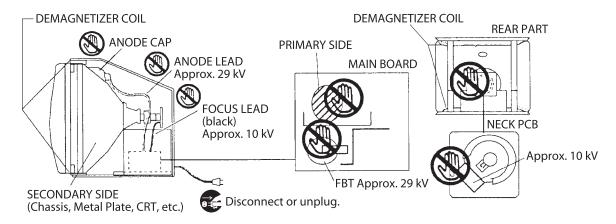
a serious risk of danger.

(Chassis, CRT, etc.)

AWARNING

High Voltage

Some of the parts inside the monitor are subject to high voltage in excess of 20,000 volts and pose a serious threat. Therefore, do not touch the monitor interior. Should soldering & paper wastes, etc. be mixed in the monitor interior, turn the power off so as not to cause malfunctioning or a fire hazard.



Connecting the CRT and PCB

When combining the CRT and PCB, use the specified part No. to maintain the factory settings. The anode of the CRT itself will charge as time elapses, generating high voltage that is very dangerous. The monitor should be used with the Chassis, CRT, and PCB assembled. When repair, etc. is required at the time of malfunctioning, be sure to send it in an assembled state. If it is disassembled, the charged high voltage can be released, causing a very hazardous situation. Therefore, under no circumstances should it be disassembled.

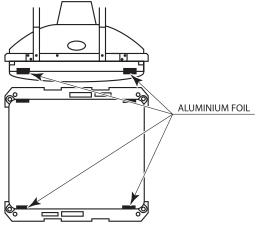
ACAUTION

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

ACAUTION

Antistatic sheet is used in the product's CRT to prevent electrification. To protect this sheet, observe the following precautions. If the sheet is damaged, the customer could be electrocuted. There are cases in which sheet edges peel off and turn white, but this poses no problems in usage.

- Do not contact the antistatic sheet on the CRT surface, or rub it, with a hard implement (pointed bar or pen, etc.).
- Do not affix stickers or anything else that might damage the antistatic sheet on the CRT surface, or cause the sheet to peel off.
- Do not remove aluminum foils from the CRT corners. Removing the aluminum foils can cause static prevention effects to be lowered.



10-2 CLEANING THE CRT SURFACES

ACAUTION

The antistatic sheet is attached onto the CRT surface. Observe the following precautions when cleaning. Damage to the antistatic sheet could result in electrical shock.

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

Clean the CRT once a week. Observe the aforesaid precautions in cleaning so as not to damage antistatic sheet on the CRT surface.

10-3 ADJUSTMENT PROCEDURE

AWARNING

- Monitor adjustments have been made at the time of shipment. Therefore, do not
 make further adjustment without a justifiable reason. Adjusting the monitor which
 contains high tension parts is dangerous work. Also, an erroneous adjustment can
 cause deviated synchronization and image fault, resulting in malfunctioning.
- Be sure to perform appropriate adjustment of the monitor (projector). For operation of this machine, do not leave monitor's flickering or deviation as is.
 Failure to observe this can cause to worsen the players' or the customers' physical conditions.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.

There is a monitor adjustment board at the bottom of the Monitor inside the Front Glass. Remove 4 each out side of screws to take off Speaker bracket frame, Bezel and Front Glass then you able to access Adjustment board.



FIG. 10-3

ADJUSTMENT BOARD



This product's monitor is SANWA MONITOR 29E31S-B (SEGA Part#: 998-0162). For adjustment method, carefully read and carry out the following.

CONT: adjusts image contrast.

Turn potentiometer lockways, it becomes deep and becomes light when turn it counter clockways.

BRIT: adjusts the on-screen image brightness.

Turn potentiometer clockways, it becomes bright and becomes dark with turn it counter clockways.

HSIZ: adjusts the horizontal image size.

Turn potentiometer clockways, it becomes large and becomes small with the DOWN button.

HPOS: adjusts the horizontal image's position.

Turn potentiometer clockways, it moves to the left and moves to the right with turn it counter clockways.

VSIZ: adjusts the vertical image size.

Turn potentiometer clockways, it becomes large and becomes small with turn it counter clockwaysn.

VPOS: adjusts the vertical image's position.

Turn potentiometer clockways, it moves upwards and moves downwards with turn it counter clockways.

11 CONTROL STICK

AWARNING

- 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.
- To prevent accidents while working or while operating the product after it has been installed, be sure not to conduct any procedures other than those given in this manual. There are cases in which procedures not covered in this manual require special tools and skills. If a procedure not given in this manual is required, request service from the office given in this manual or from the point of purchase.
- 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.
- In performing adjustments or replacements, check the surroundings before
 powering up. The product undergoes initialization automatically after the power
 has been engaged. If someone is near the product and the seat moves left or right,
 there could be a collision or fall.

ACAUTION

- 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 opening or closing the controller lid.
- Control stick connectors are removed within a narrow cabinet. Be careful as there
 is the danger of abrasions.
- While holding the control stick firmly, remove the 4 flange nuts that fasten it. If the control stick falls on you, you could be injured.



- 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 stick 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 stick 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 stick or microswitch. Also be sure to grease the mechanical components of the control stick once every 3 months.

11-1 HOW TO REMOVE CONTROL STICK

To replace the control stick volume or microswitch, remove the control stick. It is very difficult to work with the control stick attached and parts or wiring could be damaged.

The following tools are needed for the following procedure.

- 2.5 mm Allen wrench or screwdriver
- 8 mm spanner, Allen screwdriver or socket wrench

1

Power OFF the machine.

2

Remove the 6 tamper screws in bottom of the control stick base to open the Bottom cover plate.



FIG. 11-1a

After open the Bottom cover plate under the control stick base.

- Remove the 2 wire connectors on the control stick.
- At the bottom of the control stick there is a board on the right side as you face the monitor. Off the connectors connected to this board, remove the connector on the monitor side.
- Remove the 4 nuts that fasten the control stick from the bottom. Hold the control stick firmly while proceeding. Pull the control stick downward to remove it. Be careful not to damage wiring.

11-2 GREASING



- 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 3 months, apply grease to the spring and sliding part of the mechanical component that turns the volume shaft. Use Greasemate (PART NO. 090-0066).

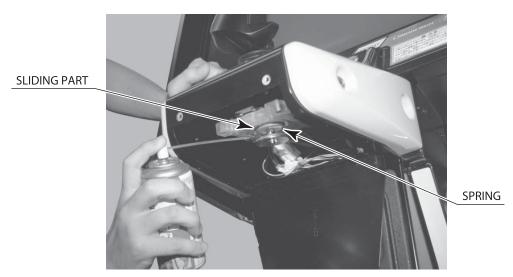


FIG. 11-2

11-3 VOLUME REPLACEMENT

If control stick operability is unsatisfactory and settings on the test mode calibration screen are ineffective, the problem could be a malfunction of the control stick volume.

Remove the control stick and replace the volume.

Please note, however, that the control stick has two volumes. Make sure you are replacing the correct volume.

Have available a volume for replacement and three thermal contraction tubes (PART NO. 310-5029-D12).

Use the following tools and solder.

- 2.5 mm Allen wrench or screwdriver
- 8 mm spanner, Allen screwdriver or socket wrench
- Philips screwdriver (for M3 screw)
- 11 to 12 mm spanner
- Nippers
- Cutter
- Wire stripper
- Soldering iron
- Industrial drier
- 1 Cut off the power and remove the control stick.
- **7** Take out the 2 screws that hold down the volume bracket.

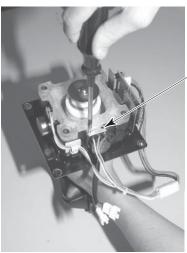
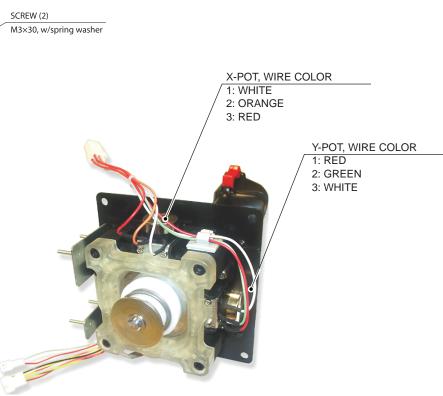


FIG. 11-3a



Remove the volume together with volume bracket from the control stick.

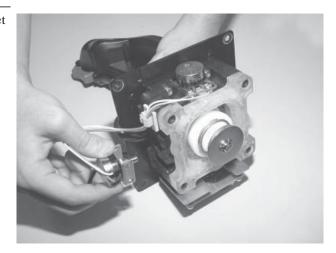
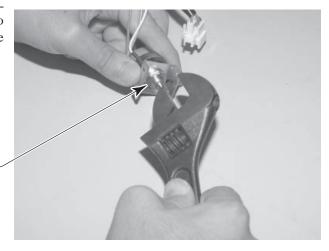


FIG. 11-3b

Take off the hexagon nut that fastens the volume to the volume bracket, then remove the volume from the bracket.



Take off hexagon nut.

FIG. 11-3c

- Wire connected to the volume can be used as is. Use nippers or cutters to remove old thermal contraction tube from wire connection sites.
- Use a soldering iron to melt soldered joints and remove wire from old volume. Exercise extreme caution in using the soldering iron.

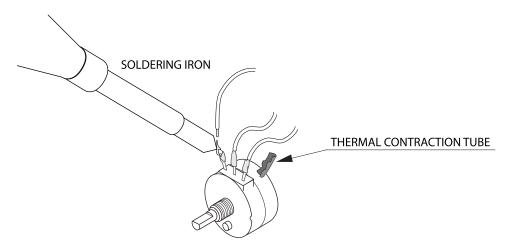


FIG. 11-3d

If the length of wire exposed at the wire tip does not reach 5 mm, use wire stripper or cutter to remove wire cover.

Remove wire cover.

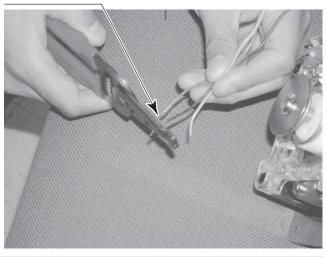


FIG. 11-3e

Pass one wire through each thermal contraction tube.

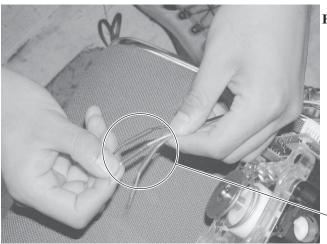


FIG. 11-3f

Pass through thermal contraction tube.

Solder wire to the pin of the new volume.

Refer to wiring diagram and make sure that you are using soldering wire.

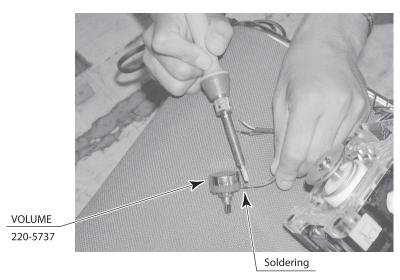


FIG. 11-3g

Heat with industrial dryer and affix thermal contraction tube so that it covers soldered area.

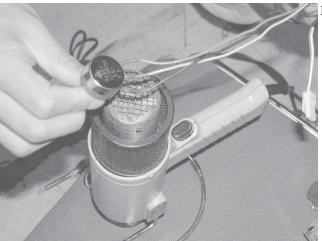
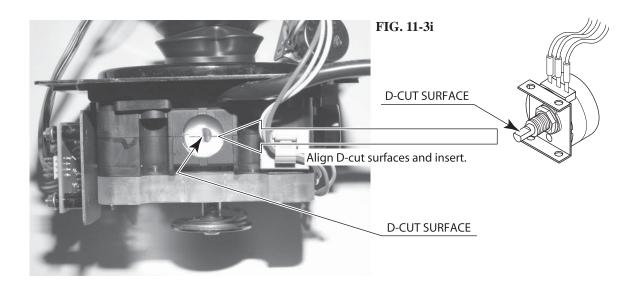


FIG. 11-3h

Attach the volume to the volume bracket, then attach this assembly to the control stick. Align the D-cut surface of the volume shaft with the D-cut surface of the hole on the side of the control stick, then insert the shaft.



- 1 Pasten volume bracket with 2 screws.
- 1 3 Attach control stick.
- Engage the power. Note that initialization takes place.
- 15 Establish volume setting on the game test mode calibration screen. (See 9-3e).
- 16 Simply changing settings on the calibration screen will not be effective. Terminate the test mode. Note that initialization takes place upon termination of the test mode.

11-4 MICROSWITCH REPLACEMENT

If operability of the gun trigger is unsatisfactory, the problem could be a malfunction of the microswitch inside the control stick grip.

Remove the control stick and replace the microswitch.

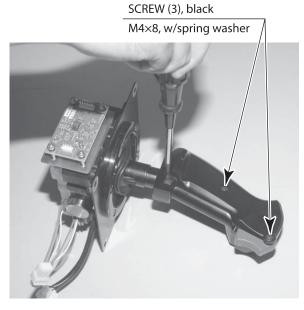
Use the following tools, solder and screw lock agent (PART NO. 090-0012).

- 2.5 mm Allen wrench or screwdriver
- 8 mm spanner, Allen screwdriver or socket wrench
- Philips screwdriver (for M4 screw)
- Soldering iron
 - Cut off the power and remove the control stick. (See 11-1.)
- Press down on the rubber cover at the base of the control stick grip.

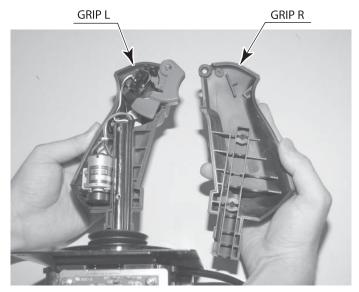


FIG. 11-4a

Take out 3 screws and remove grip R. Be careful when removing the grip that parts inside the grip do not come out and get lost.









The grip L microswitch is inserted. Pull out the microswitch slowly so as not to damage wire.

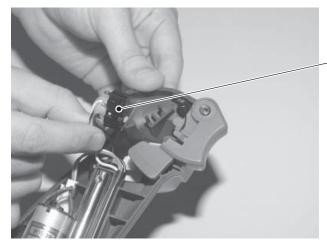


FIG. 11-4d

MICROSWITCH 509-5975

- Use a soldering iron to remove wire to be connected by solder to microswitch pin. Solder wire to the pin of the new microswitch. Insert microswitch into grip L, then attach grip L.
- Attach grip R and fasten it with 3 screws, being careful not to let wire get caught anywhere. Coat the screws with screw lock agent at this time. Also be careful not to tighten the screws excessively
- Attach control stick. Engage the power. Note that initialization takes place. Check gun trigger input on the game test mode input test screen.

11-5 GUIDE PLATE REPLACEMENT

Among the potential causes of abnormal control stick operability, apart from volume malfunctions, are wear and/or damage to guide plates. Use the following tools to replace a guide plate.

- 2.5 mm Allen wrench or screwdriver
- 4 mm Allen wrench or screwdriver
- Cut off the power and open the controller lid at the bottom of the control stick. Take out 4 hexagon socket screws that hold down the guide plate, then replace the guide plate.





HEXAGON SOCKET SCREW (4), black M5×35, w/spring washer

FIG. 11-5

12 THROTTLE LEVER

AWARNING

- 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.
- In performing adjustments or replacements, check the surroundings before
 powering up. The product undergoes initialization automatically after the power
 has been engaged. If someone is near the product and the seat moves left or right,
 there could be a collision or fall.

ACAUTION

When fastening plastic parts, be careful not to tighten screws and nuts excessively. Otherwise parts may be damaged, resulting in injuries from fragments, etc.

STOP 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.

If the operability of the throttle lever is unsatisfactory, or if the lever is ineffective with the settings on the test mode calibration screen, the problem could be faulty gear mesh or volume malfunction.

Grease the mechanical component of the throttle lever once every 3 months.

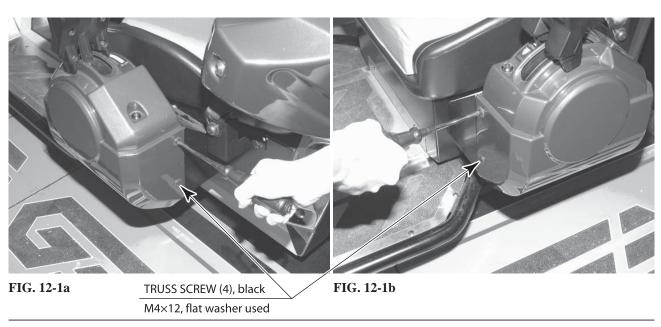
12-1 GREASING

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 3 months apply grease to the spring and gear mesh that turn the volume shaft. Use Greasemate (PART NO. 090-0066).

Cut off the power supply. Remove the 4 truss screws that hold the throttle cover lower. Flat washers are used with the truss screws.



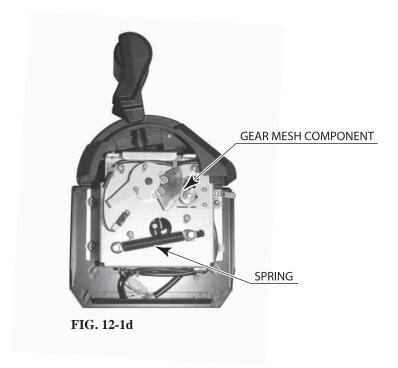
Remove throttle cover lower.



FIG. 12-1c



Apply grease only at designated locations. When attaching throttle cover lower, make sure that wires do not get caught anywhere.



12-2 VOLUME ADJUSTMENT OR REPLACEMENT

When the volume that detects throttle lever operation is unsatisfactory, either adjust the gear mesh or replace the volume by proceeding as follows.

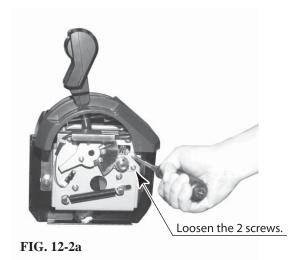
With this product, when the lever has been operated fully to front or rear, if the volume rotary shaft turns within its movable range, there is no danger that the volume will be damaged. With your hand released from the lever, fasten the volume so that the gear fits properly with the volume shaft in the designated direction.

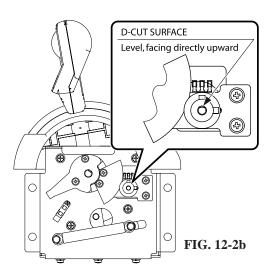
The following tools are required for the following procedure.

Philips screwdriver for M4 screw, 2 mm Allen wrench or screwdriver, 11 to 12 mm spanner, Nippers,
 Cutter, Soldering iron, Industrial drier

Adjustment Method

- Power OFF the machine. Take out the 4 truss screws and remove throttle cover lower. (See 12-1.) Loosen the 2 screws that hold down the VR bracket.
- Adjust the gear mesh so that the volume shaft turns smoothly when the lever is manipulated and so that the incline of the volume shaft (D cut surface direction) when hand is removed from the lever is as shown in the illustration.



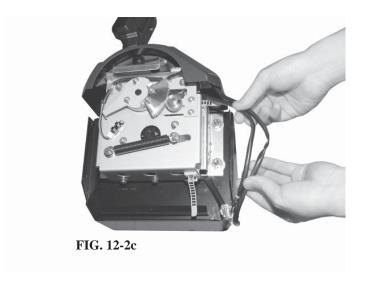


- Tighten the 2 loosened screws. Turn on the power. Note that initialization takes place.
- Check the volume value on the game test mode input test screen. Confirm that changes take place smoothly in accordance with lever operation. Also confirm that the value when hand has been removed from the lever is [80H+/-4H].
- Align the center position of throttle lever on the calibration screen. (See 9-3e.)
- Simply changing the setting on the calibration screen will not be effective. Terminate the test mode. Note that initialization takes place when the test mode is terminated.

Replacement Method

Make available the volume for replacement and 3 thermal contraction tubes (PART NO. 310-5029-D20).

- Cut off the power supply.
- **7** Take out the 4 truss screws and remove the throttle base cover backet.
- **Q** Unfasten the 2 cord clamps that hold down wire connected to the volume.



4

Remove the connector.

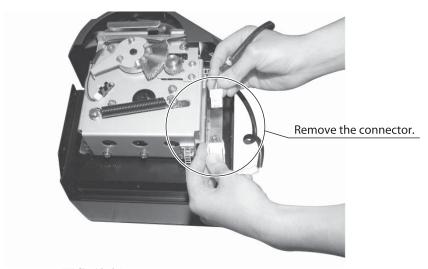


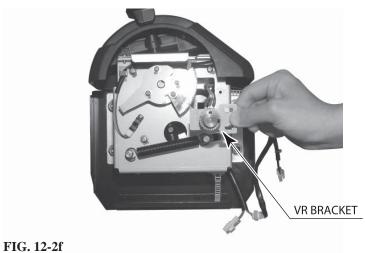
FIG. 12-2d

Remove the 2 screws that fasten the VR bracket. Flat and spring washers are used with these screws.



FIG. 12-2e

Remove the volume together with VR bracket. Be careful not to damage the wire connected to the volume.



Loosen the 2 hexagon socket screws that fasten the gear. Withdraw the gear from the volume shaft.

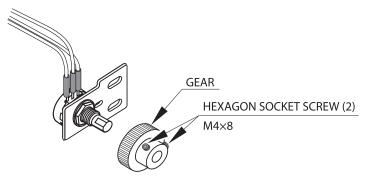


FIG. 12-2g

- Remove the nuts that fasten the VR bracket, then remove volume from VR bracket and replace.
- The wire connected to the volume is used as is. Take away the thermal contraction tube with nippers or cutter, melt the soldered areas with a soldering iron and remove wire from the volume.
- 10 Cover the soldered areas with thermal contraction tube. In place of the thermal contraction tube that was cut away, pass each wire through new thermal contraction tube.
- Solder the wire to the new volume. Check the wiring diagram to be sure there are no errors in wiring.
- 12 Cover the soldered areas with thermal contraction tube. Heat the thermal contraction tube with an industrial drier so that the tube adheres to soldered areas.

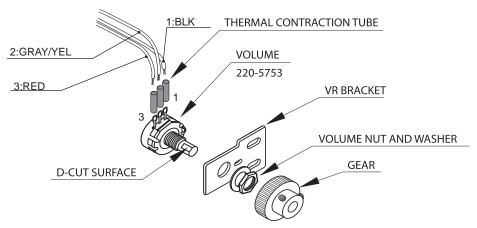


FIG. 12-2h Volume Replacement

- 1 2 Attach the gear and VR bracket to volume.
- After passing the wire, attach the volume. While your hand is removed from the lever, align gear mesh so that the D cut surface of the volume shaft is level, facing directly upward, then fasten with 2 screws. (See FIG. 12-2b.)
- 15 Manipulate the lever to check that the gear rotates smoothly. Connect the connector and fasten wire with 2 cord clamps
- 16 Attach the throttle cover lower. Be careful that the wire does not get caught anywhere. Turn on the power. Note that initialization takes place
- Establish volume settings on the game test mode calibration screen. (See 9-3e.)
- 18 Simply changing the settings on calibration screen will not be effective. Terminate the test mode. Note that initialization takes place when test mode has been terminated.

13 PERIODIC INSPECTION

AWARNING

- 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.
- Once a year, request the office shown in this manual or the dealer from whom
 the product was originally purchased to perform routine maintenance on moving
 mechanisms. Failure to perform maintenance can lead to accidents.
- There is the danger of accidents involving electrical shorts circuits or fire caused by factors such as the deterioration of insulation in electrical and electronic equipment over time. Check that there are no abnormalities such as odors from burning.

ACAUTION

If there is only enough space for ventilation in the area reserved for product installation and operation, do not begin maintenance work until space has also been set aside for maintenance. Such work cannot be performed safely and thoroughly in narrow spaces.

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 stick and throttle lever with his/her hands. Clean these components as necessary and provide hand towels, etc., so that players will be comfortable while playing.

TABLE 13 PERIODIC INSPECTION TABLE

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CABINET	Confirm that adjusters contact floor	Daily	3
MONITOR	Screen cleaning	Weekly	10-2
	Check screen adjustment	Monthly or when moving	6 7 , 10-3
CONTROL STICK	Inspection of volume, switch	1 month	9-3a
	Greasing	3 months	11-2
THROTTLE LEVER	Inspection of volume, switch	1 month	9-3a
	Greasing	3 months	12-1
COIN SELECTOR	Inspection of coin switch	1 month	Service manual, Chapter 4
	Coin insertion test	1 month	Chapter 14
	Coin Selector cleaning	3 months	Chapter 14
GAME BOARD	Check of board information	1 month	Service manual, Chapter 4
	Check of settings	1 month	9-3c, 9-3d
FLUORESCENT LAMP	Inspection of lighting fixtures	As appropriate	Chapter 15
ELECTRICAL/ ELECTRONIC PARTS	Inspection	As appropriate	Previous page
POWER CABLE	Inspection, Cleaning	1 year	See above.
CABINET INTERIOR	Cleaning	1 year	See above.
CABINET SURFACES	Cleaning	As appropriate	See below.
MOVING MECHANISMS	Maintenance	1 year	Previous page

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.

14 TROUBLESHOOTING

AWARNING

- 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, or moving mechanisms are involved, 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.
- After the cause of an error message display has been removed, before reengaging the power or entering or leaving test mode, inspect carefully to be sure that no one is near the product and that no tools or items have been left on the product. When the power has been engaged or the test mode has been terminated, initialization takes place automatically. If anyone is near the product, they could collide with the product or come in contact with it accidentally. Accidents could also occur if tools or other items fly off the product.
- 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.

ACAUTION

If there is only enough space for ventilation in the area reserved for product installation and operation, do not begin maintenance work until space has also been set aside for maintenance. Such work cannot be performed safely and thoroughly in narrow spaces.

14-1 ERROR MESSAGES



- Apart from the error messages given below, there are errors for the LINDBERGH.
 Consult the LINDBERGH service manual.
- If there is an error message other than the ones below or those in the LINDBERGH service manual, stop using the product and have the LINDBERGH sent for servicing.

Because the seat moves, and for other reasons, this product has a unique set of error messages. These error messages appear in the middle of the screen as shown below.

Error ABX01 MOTOR DRIVE COMMUNICATION ERROR

FIG. 14-1 Error Message

If an error has occurred, after the problem has been resolved, power up again or enter and leave the test mode so that the machine can be restored.

[DISPLAY]	Error ABX07 CONNECTION TIMEOUT
[CAUSE]	Timed-out connecting to the network.
[COUNTERMEASURES]	Failed to connect to the network. Check that the network cable is connected properly. Confirm that the LINK NUM setting is not set to "1".
[DISPLAY]	Error ABX08 LINK ID ERROR
[CAUSE]	LINK ID is not set correctly. LINK ID is set to the same number.
[COUNTERMEASURES]	An error occurred when trying to connect to the network. Set the LINK ID of 2 game units to different numbers.

14-2 TROUBLESHOOTING TABLE

If a problem has occurred, first inspect the connection of the wiring connector.

TABLE 14-2

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 6-2)	
	The fuse of the fuse holder was blown out due to momentary overcurrent.	After eliminating the cause of overload, replace the specified rating fuse.	
Billboard fluorescent lamp does not glow.	Faulty connection of connectors	Join connectors securely between cabinet and billboard. (See chapter 6-2.)	
	Fluorescent lamp and glow lamp need replacement.	Replace the fluorescent lamp and the glow lamp.	
Sounds are emitted and the lamps are lit, but the screen is black.	Faulty connections for the visual signal connector or the monitor power connector.	Check the connections for the monitor and game board connectors.	
	Broken monitor.	Contact the company from whom the unit was purchased.	
Sound is not emitted.	Sound volume adjustment is not correct.	Adjust the switch unit's sound adjustment volume. (See 9-1.)	
	Faulty connections for various connectors.	Check the connections for the game board, amp, speakers and volume connectors.	
	Malfunctioning board, amplifier and speaker.	Perform output test and check. (See 9-3b.)	
	Speaker settings are incorrect.	Check the AUDIO OUTPUT setting on the game setting screen. (See 9-3c.)	

PROBLEMS	CAUSE	COUNTERMEASURES
Irregular/uneven colors on the monitor screen.	Magnetization of the CRT.	Press the DEGAUSS button on the adjustment board.
Colors on the monitor screen are strange.	Faulty connection for the visual signal connector.	Check the visual signal connector connection and make sure it is secured properly.
	Screen adjustment is not appropriate.	Make adjustment appropriately.
The on-screen image sways and/or shrinks.	The power source and voltage are no correct.	Make sure that the power supply and voltage are correct.
Does not accept input from any switch or volume.	Faulty connector connections.	Check the connection for the I/O board and cabinet connector. Check the power for the I/O board.
Control stick or throttle lever operation is unsatisfactory.	Faulty setting of volume.	Perform calibration in test mode. (See 9-3e.)
	Faulty volume or faulty gear mesh installation.	Adjust installation and check in test mode. (See chapters 11, 12, and 9-3a.)
	Faulty connection of connectors.	Check connections of control stick and throttle lever connectors.
	Volume malfunction.	Replace the volume. (See chapters 11, 12.)

PROBLEMS	CAUSE	COUNTERMEASURES
Fluorescent lamp doesn't light up.	Fluorescent lamp and glow lamp need replacement.	Replace the fluorescent lamp and the glow lamp.
Failure of the network play.	Network play is wrongly set.	Reset correctly.
	Network cables are disconnected. Network cables are wrongly connected.	Reconnect the cables.
	Damage of network cables.	Replace the cables. Contact the company from whom the unit was purchased.

15

15 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 ABX USA (844-0001D-91-11)

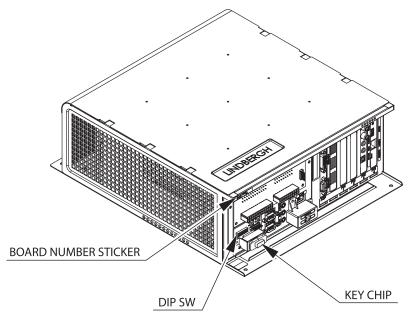


FIG. 18-2a

DIP SW SETTING

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

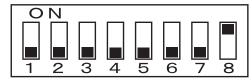


FIG. 18-2b

16 DESIGN RELATED PARTS



17 NETWORK PLAY

Network play can be enjoyed with this product by having two units connected by LAN cable.

Provide appropriate electrical power to each of the two game machines.

Use the following as a guide: current capacity per machine is 15 A in areas of 100 ~ 120 V, and 7 A in areas of 220 ~ 240 V.

17-1 NETWORK CABLE CONNECTIONS

To setup network play, connect the two game machines for network play with a network (LAN) cable. Do not connect a network cable to any game machine not being used for network play.

Have available the accessory network cable, Philips screwdriver for M4 screws, and a 24 mm spanner.

- Cut off the power and pull the power plug from the outlet. Remove the power cord so it will not be damaged while working.
- **9** Use 2 keys and take off 2 of screws to open bottom of seat.
- You need create hole for LAN cable on bottom of wood plate. Refer below.



FIG. 17-1

Create LAN cable hole around here.

4

Connect LAN cable to both LINDBERGH LAN CONNECTOR where located enar by USB connectors on LINDBERGH.

17-2 NETWORK (LINK) PLAY SETTING

AWARNING

When the power has been engaged or the test mode has been terminated, initialization takes place automatically. If anyone is near the product, they could come in contact or collide with it. Check carefully to be sure that no one is near the product and that no tools or items have been left on the product, then engage the power or terminate test mode.

STOP IMF

IMPORTANT

Upon completion of initialization, call up the network check screen and check connections and settings for network play. If the network check screen appears continuously on one machine, an error message is displayed. The power must be reengaged and the test mode must be established and terminated once.

Set the two game machines for network (LINK) play. If the setting is incorrect, network play cannot be implemented.

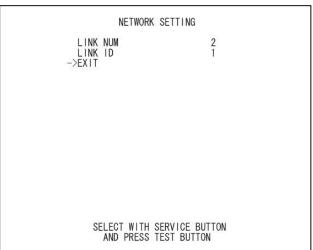
- Power up the two game machines for network play. Wait for proper completion of initialization.
- **9** Put the two game machines in test mode. (See chapter 9.)
- Select GAME TEST MODE and press the TEST Button. Game test mode is established and the game test mode menu appears. (See 9-3.)
- On the game test mode menu select NETWORK SETTING and press the TEST Button. The network play setting screen appears.

NETWORK SETTING

LINK NUM 1
->EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

- On the network play setting screen, set LINK NUM. Press the SERVICE Button, move the cursor onto LINK NUM and select it.
- When the TEST Button is pressed, the LINK NUM preset value changes. Set "2" in each of the two game machines. When "2" has been set, LINK ID appears below LINK NUM.



- FIG. 17-2b
- **7** Press the SERVICE Button, move the cursor to LINK ID and select it.
- When the TEST Button is pressed, the preset value of LINK ID changes. Set [1] in one machine and [2] in the other machine.
- Press the SERVICE Button and move the cursor to EXIT.
- When the TEST Button is pressed, the network play setting screen exits and the game test mode menu reappears.
- Press the SERVICE Button, move the cursor to EXIT and press the TEST Button. The system test mode menu reappears.
- 12 Press the SERVICE Button, move the cursor to EXIT and press the TEST Button. The test mode terminates. Note that initialization now takes place when the power is engaged.
- 13 Upon completion of initialization, network check begins. The monitor screen shows that network check is in progress.
- 14 If there are no problems with the connections and settings for network play, the Attract Mode is established.

 When the Attract Mode screen appears, setting is completed.

 Network check will be completed after about 20 seconds or longer. If the network check screen continues to be displayed, there could be an error in the settings, error in the network cable connections, faulty network cable

17-3 PRECAUTIONS IN NETWORK PLAY



- If communication is interrupted during network play for any reason, network play is disabled and game play continues on each machine individually. If communication is interrupted in the Attract Mode, the network check screen appears.
- If one game machine for network play is put in test mode, the network check screen appears on the other game machine.
- Even when a game machine is connected for network play, game settings and coin/credit settings can be made individually. Individual changes can also be made in settings, for example to those for experienced players or for beginners, but usually the two machines should be set the same. If there are errors in coin/credit settings, earnings and expenses might not be balanced.

When two game machines are connected for network play, they operate differently than when they are set up individually. Remember this when operating the machines.

When the test mode is used, the network check screen appears on the other game machine connected for network play. Do not indiscriminately engage the test mode while a customer is playing, even if the machine is not currently being played on.

If the network check screen appears for a long time, an error message is displayed. The power must be re-engaged or the test mode must be established and terminated once.

18 OPTIONAL ITEMS

AWARNING

- The work must only be carried out by personnel with electrical appliance knowledge. Shocks and other serious accidents may result if the work is carried out by unqualified individuals.
- Before performing work, be sure to turn the power off and unplug the electrical cord from the outlet. Performing the work without turning the power off can 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.

18-1 DOLLAR BILL VALIDATOR KIT

The following optional items are available for AFTER BURNER CLIMAX STD.

- Dollar Bill Validator: MEI, Model#: AE2451 U3E (SEGA Part#: 99-70-178)
- > Please use DBA harness in Cash Box of ABX STD to wire Dollar Bill Validator.
- > 120VAC Plug on DBA Harness will connect to AC Power line inside of Base cabinet.
- > Coin signal wires wire together with original coin switch wires.



NOTE: For details on bill validator handling, inspection, changing settings, etc., refer to the sticker attached or the [Bill Acceptor (Validator) "Installation Guide"] provided with the bill validator.

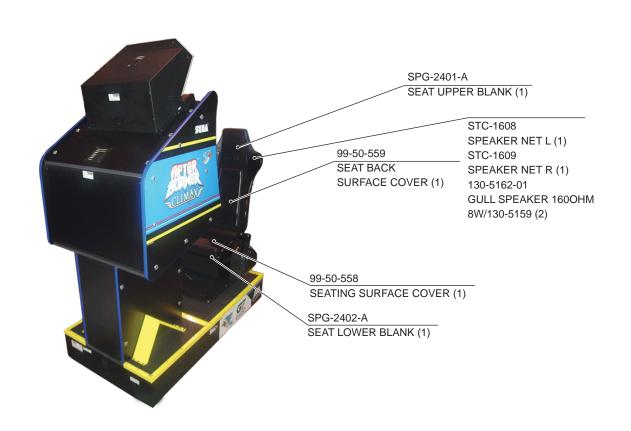
18-2 SECURITY BAR KIT

- Security Bar kit (SEGA Part#: 30-70-270)

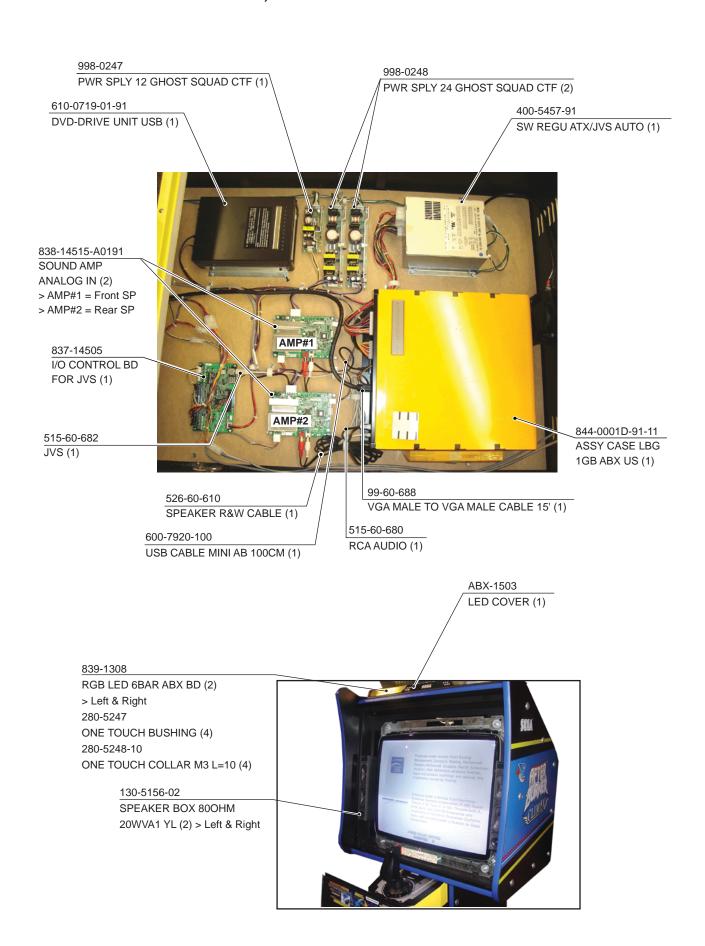
Please call SEGA Amusements U.S.A., Inc or your Distributor about order for above.

19 PARTS LIST

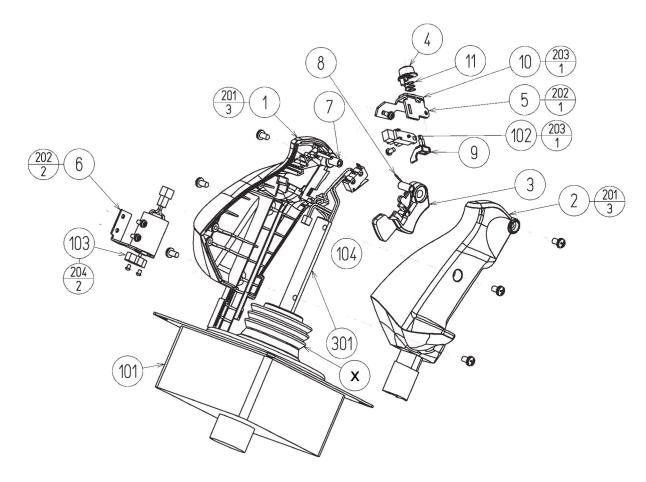




INSIDE OF BASE CABINET, ABX STD



ASSY ANALOG JOY ABX (610-0756)

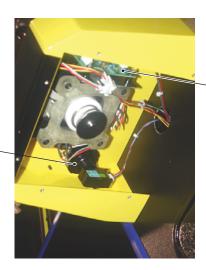


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1 2 3 4 5 6 7 8 9 10	ABX-1404 ABX-1405 ABX-1406 ABX-1407 ABX-1408 ABX-1410 ABX-1411 ABX-1411 ABX-1412 ABX-1413 ABX-1414	CONTROLLER GRIP L CONTROLLER GRIP R TRIGGER THUMB BUTTON SWITCH BRKT MOTOR BRKT TRIGGER SHAFT TRIGGER SPRING SENSOR DOG BUTTON GUIDE BUTTON SPRING	
101 102 103 104	610-0755 370-5297 350-5801 509-5975	ASSY ANALOG JOY W/O GRIP PHOTO INTERRUPTER GP1A75EJ000F MOTOR DC5V TG-01H SW MICRO TYPE SS-5GL	
201 202 203 204	000-P00408-SB 000-P00306-S 000-P00305 FAS-000157	M SCR PH W/S BLK M4x8 M SCR PH W/S M3x6 M SCR PH M3x5 M SCR PH M2.3x3	
301	ABX-60099X	WH ANALOG JOYSTICK ABX	
X	280-6624	RUBBER COVER MRF RUBBER BOOT	

ASSY CONTROL STICK AND BILLBOARD

Bottom view, insde of Control Stick

509-6101 (START BUTTON) SW PB OBSA-45UM-Y-1 FLED-Y-5V (1)



839-1187R AMP BD FOR ANALOG JOYSTICK (1)

BALLAST (1)

120VAC, 60Hz, 0.35A

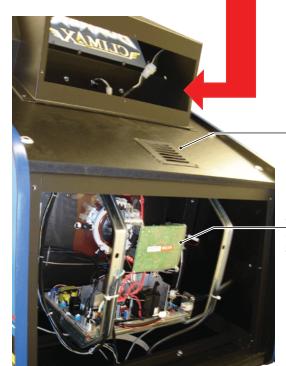


STARTER (1) FS-2

F.L.LAMP BULB (1) 15W, FL15CW

Inside view of BILLBOARD (Marquee)

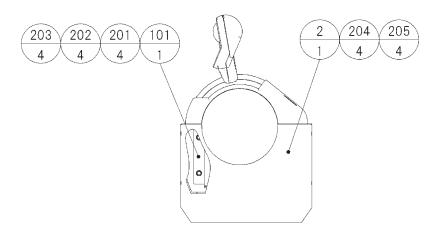
Back inside view of Monitor cabinet

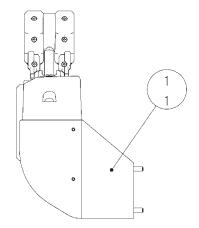


AIR VENT

998-0162 SANWA 29"MONITOR 29E31S-B (1)

THROTTLE UNIT (ABX-1650)

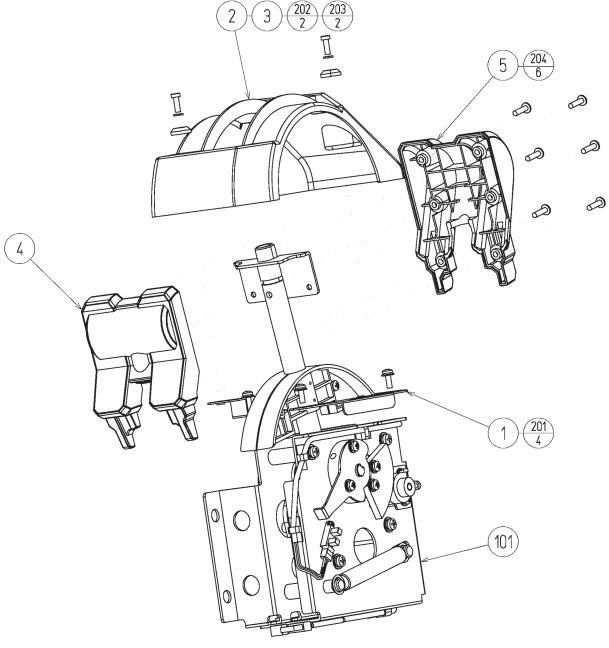




NOTE

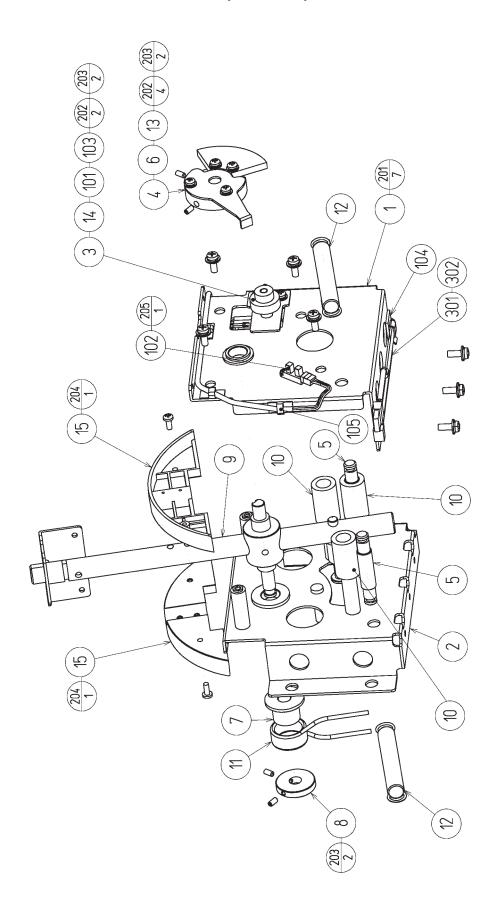
ITEM NO.	PART NO.	DESCRIPTION
1 2	ABX-1651 ABX-1654X	THROTTLE BRKT THROTTLE COVER LOWER
101	610-0754	THROTTLE UNIT ABX
201 202 203 204 205	050-H00800 060-S00800-0C 060-F00800-0B 000-T00412-0B 068-441616-0B	HEX NUT M8 SPR WSHR CRM M8 FLT WSHR BLK M8 M SCR TH BLK M4x12 FLT WSHR BLK 4.4-16x1.6
301	ABX-60073	WH THROTTLE EXT

THROTTLE UNIT ABX (610-0754)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1 2 3 4 5	ABX-1652X ABX-1653X 280-6695 ABX-1655 ABX-1656	THROTTLE COVER BRKT THROTTLE COVER UPPER SPCL WSHR 4.5-16x5 AL BLK THROTTLE GRIP A THROTTLE GRIP B	
101	610-0758	THROTTLE UNIT ABX W/O GRIP	
201 202 203 204	000-P00412-W FAS-290042 FAS-600023 FAS-120035	M SCR PH W/FS M4x12 HEX SKT LH CAP SCR STN M4x12 SPR WSHR NI M4 TAP SCR P-TITE BI H BLK 4x16	

19 PARTS LIST



19	
PAR	
RTSI	
SI	

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1 2 3 4 5 6 7 8 9 10 11 12 13	ABX-1658 ABX-1659 ABX-1660 ABX-1661 ABX-1662 ABX-1663 ABX-1665 ABX-1665 ABX-1666 ABX-1667 ABX-1668 ABX-1669 ABX-1670 ABX-1671	FRAME L FRAME R VR BRKT SENSOR PLATE SPRING SHAFT GEAR BASE SPRING COLLAR SPRING STOPPER MAIN SHAFT STOP DAMPER LEVER SPRING TENSION SPRING LEVER GEAR VR GEAR	
15 101 102 103 104 105	ABX-1657 220-5753 370-5297 310-5029-D20 280-5008 280-5275-SR10	SLIDE GUARD VOL CONT B-5K OHM (TOCOS) PHOTO INTERRUPTER GP1A75EJ000F SUMITUBE F D 20MM CORD CLAMP 15 CORD CLAMP SR10	
201 202 203 204 205	000-P00514-W 000-P00412-W 028-A00408-P 012-P00410 000-P00308	M SCR PH W/FS M5x14 M SCR PH W/FS M4x12 SET SCR HEX SKT CUP P M4x8 TAP SCR #2 PH 4x10 M SCR PH M3x8	
301 302	ABX-60056 ABX-60057	WH THROTTLE VR WH CLIMAX SW	

20 WIRE COLOR CODE TABLE

AWARNING

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

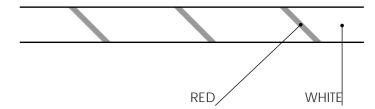
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

- 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.





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

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

WARRANTY

Limited warranty, Repair and Return Policy

SEGA Amusements U.S.A., Inc. warrants this ABX STD products to be free from defective materials and workmanship for a period of thirty (90) days from SEGA Amusements U.S.A., Inc. invoice date unless otherwise specified in writing by SEGA Amusements U.S.A., Inc. The extent of this warranty applies to all electronic assemblies only, and does not include lamps and fuses.

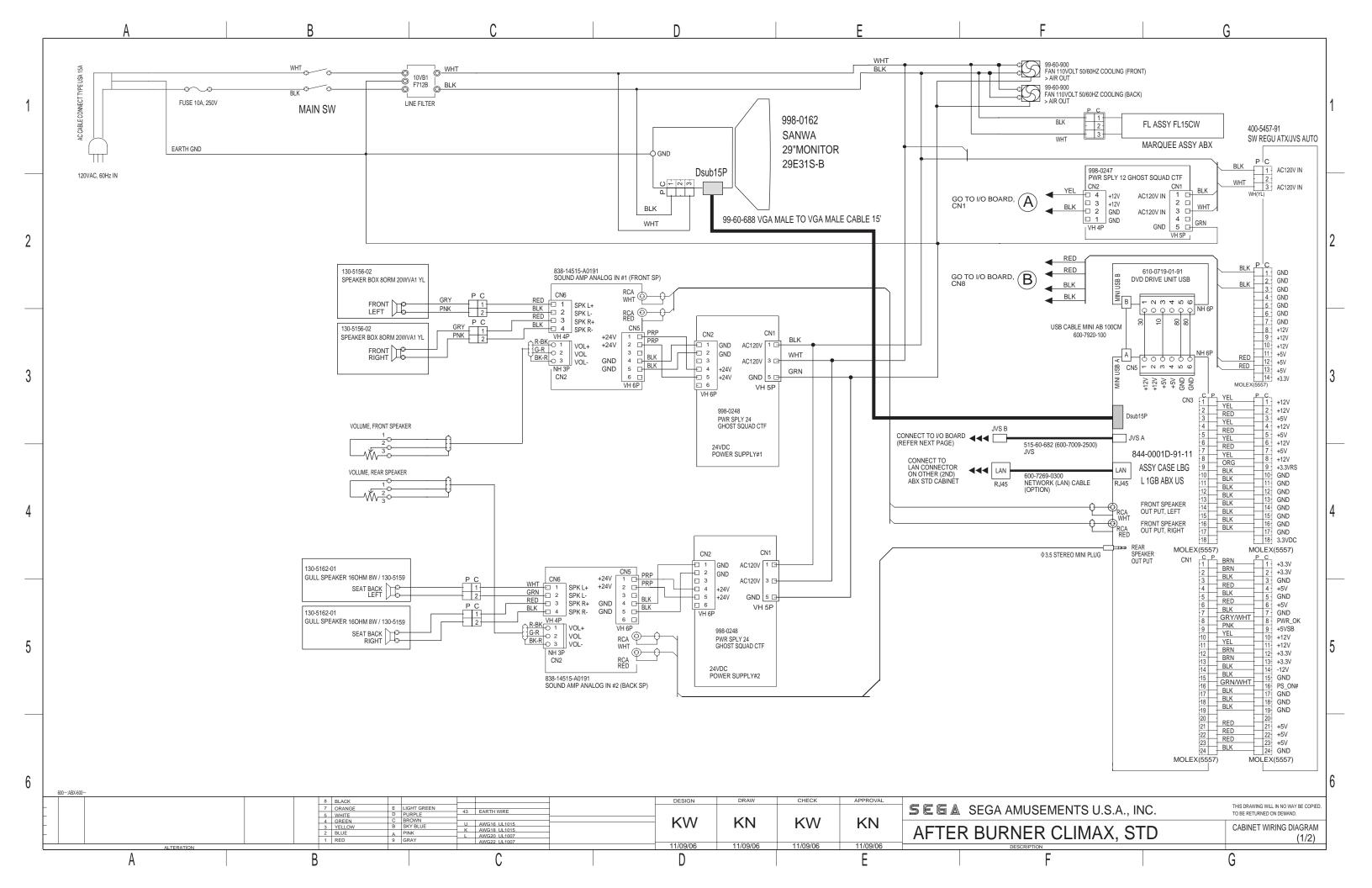
This limited warranty is invalid for any product that upon examination, is deemed to have been subject to misuse, improper repair or installation, neglect or violation of specification or other instructions published by SEGA Amusements U.S.A., Inc.

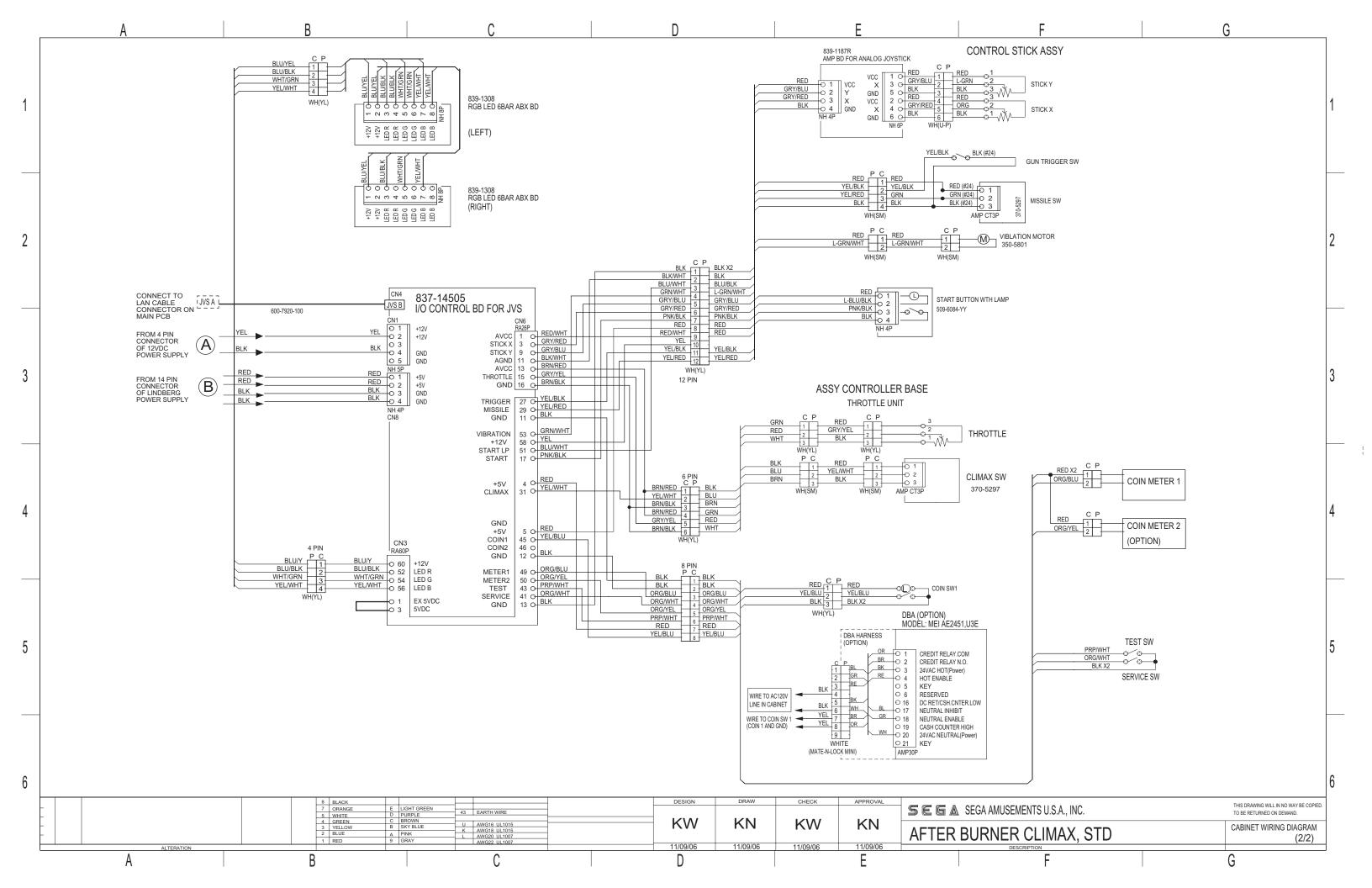
There are no additional warranties described above.

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

Return Merchandise Authorization

- 1. Contact your authorized SEGA Amusements U.S.A., Inc. distributor to receive a Return Merchandise Authorization for return.
- 2. You must obtain RMA numbers from SEGA Amusements U.S.A., Inc. through an authorized SEGA Amusements U.S.A., Inc. distributor. Please have your serial number available when calling for RMA number.
- 3. All items must have an RMA number marked clearly on the outside of the package.
- 4. Products must be shipped prepaid. Products returned without an RMA number will not be accepted.
- 5. Credits to accounts are subject to inspection of products for damage and suitability for resale.





PART#: 525-30-300 1st PRINTING, DECEMBER 2006



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