

1st Printing
July 2000

SEGA™

STAR WARS RACER ARCADE

MINI DX OWNER'S MANUAL



PART NO. 999-0988

Warranty

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

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

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

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

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

TABLE OF CONTENTS	1-2
INTRODUCTION OF THE OWNER MANUAL	3
GENERAL PRECAUTIONS	4-5
1. Precautions to be Heeded for Operation	6-7
2. Name of Parts	8
3. Accessories	9-10
4. Assembly and Installation	11-16
A) Assembly of Cabinet	11
B) Securing in Place (Adjuster Adjustment)	12
C) Power Supply	13
D) Assembling Check	14-16
1) Memory Test	
2) C.R.T. Test	
3) Sound Test	
4) Input Test	
5) Output Test	
5. Precautions to be Heeded When Moving the Machine	17
6. Contents of Game	18
7. How to Play	19-25
A) Select Screen	19-20
B) Courses and Vehicles	21
C) How to Operate	21-22
D) Game Screen	23
E) Game Over	23
F) Damage System	23
G) Name Entry	24
H) Continuous Play vs. Play	24
I) Password	25
J) Flow Chart	25
8. System Test Mode	26-41
8-1 Switch Unit and Coin Meter	27
8-2 System Test Mode	28-41
A) System Test Mode Menu	28
B) Ram Test	28
C) JVS Test	29
D) Sound Test	30
E) C.R.T. Test	30
F) System Assignments	31-32
G) Coin Assignments	33-37
H) Bookkeeping	38
I) Backup Ram Clear	39
J) Rombd Test	40
K) Clock Setting	41
L) Game Test Mode	41

9. Game Test Mode	42-49
A) Game Menu	42
B) Input Test	43
C) Output Test	44
D) Game Assignments	45-46
E) Bookkeeping	47
F) Calibration Test	48
G) Backup Data Clear	49
H) Features	49
10. Control Panel	50-54
10-1 Removing the Control Panel	51
10-2 Volume Adjustment\Replacement	52-53
10-3 Greasing	54
11. Coin Selector	55-58
12. Monitor	59-61
12-1 Cautions and Warnings Concerning the Safety for Handling the Monitors	59
12-2 Cautions to be Heeded When Cleaning the C.R.T. Surfaces	60
12-3 Adjustment Method	61
13. Replacing the Flourescent Lamps and Buttons	62
14. Periodic Inspection Table	63
15. Design Related Parts	64
Design Related Parts	64
16.Parts List	65-72
Switch Unit	65
Assembly AC Unit	66
Assembly Seat	67
Assembly Controller	68-69
Assembly Lever Mecha	70-71
Assembly Brake	72
17. Wire Color Table	73-74
Wiring Diagram	74

SPECIFICATIONS

Installation space:	. 34 in.(L) x 87 in.(W)
Height:	. 76 in.
Weight:	Approx. 500 lbs.
Power maximum current:	6.8 Amp AC 120V 60 Hz
MONITOR:	33" COLOR MONITOR

INTRODUCTION OF THE OWNERS MANUAL

SEGA ENTERPRISES, LTD., has for more than 30 years been supplying various innovative and popular amusement products to the world market. This Owners Manual is intended to provide detailed descriptions together with all the necessary installation, game settings and parts ordering information related to the STAR WARS RACER ARCADE, a new SEGA product.

This manual is intended for those who have knowledge of electricity and technical expertise, especially in ICs, CRTs, microprocessors, and circuit boards. Read this manual carefully to acquire sufficient knowledge before working on the machine. Should there be a malfunction, nontechnical personnel should under no circumstances touch the interior system. Should the need arise, contact our main office, or the closest branch office listed below.

SEGA ENTERPRISES, INC. (USA)

Customer Service

45133 Industrial Drive

Fremont, CA 94538

Phone 415-701-6580

Fax 415-701-6594

7:30 am - 4:00 pm, Pacific Standard Time

Monday thru Friday

General Precautions

Follow Instructions: All operating and use instructions should be followed.

Attachments: Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Accessories: Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use only mounting accessories recommended by the manufacturer.

Moving the Product: This product should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product to overturn.

Ventilation: Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating; these openings must not be blocked or covered. The openings should never be blocked by placing the product in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

Power Sources: This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your location, consult your local power company. For products intended to operate from battery power or other sources, refer to the operating instructions.

Grounding or Polarization: This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

Power Cord Protection: Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

Overloading: Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

Object and Liquid Entry: Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

Servicing: Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a) If the power cord or plug is damaged;
- b) If liquid has been spilled, or objects have fallen into the product;
- c) If the product has been exposed to rain or water;
- d) If the product does not operate normally when following the operating instructions. Adjust only those controls that are explained in the operating instructions. An improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation;
- e) If the product has been dropped or damaged in any way;
- f) When the product exhibits a distinct change in performance; this indicates a need for service.

Replacement Parts: When replacement parts are required, be sure the service technician has used replacements parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check: Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Heat: The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Lithium Battery- Dispose of batteries only in accordance with the battery manufacturer's recommendations. Do not dispose in an open flame condition, since the battery may explode.

Cleaning: When cleaning the monitor glass, use water or glass cleaner and a soft cloth. Do not apply chemicals such as benzine, thinner, etc.

Location: This an indoor game machine, DO NOT install it outside. To ensure proper usage, avoid installing indoors in the places mentioned below:

- Places subject to rain/water leakage, or condensation due to humidity;
- In close proximity to a potential wet area;
- Locations receiving direct sunlight;
- Places close to heating units or hot air;
- In the vicinity of highly inflammable/volatile chemicals or hazardous matter;
- On sloped surfaces;
- In the vicinity of emergency response facilities such as fire exits and fire extinguishers;
- Places subject to any type of violent impact;
- Dusty places.

INSTALLATION PRECAUTIONS

- Verify the amperage of the branch circuit outlet before plugging in the power plug. Do not overload the circuit.
- Avoid using an extension cord. If one is required, use an extension cord of type SJT, 16/3 AWG rated min. 120 VAC, 7A.
- Moving this unit requires a minimum clearance (of doors, etc.) of 32" (W) by 77" (H).
- For the operation of this machine, secure a minimum area of 32" (W) by 42"(D).

REGULATORY APPROVALS

This game has been tested and found to comply with the Federal Communications Commission Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This game has been tested and listed by Underwriters Laboratories, Inc., to ANSI/UL22.



1 . PRECAUTIONS TO BE HEDEED FOR OPERATION

In order to prevent accidents, be sure to comply with the following points before and during operation.

PRECAUTIONS TO BE HEDEED FOR OPERATION BEFORE STARTING THE OPERATION



WARNING!

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

- 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 climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a step.
- To avoid electric shock, check to see if door & cover parts are 508.5
- 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, flower pots, cups, water tanks, cosmetics, and receptacles/containers/vessels containing chemicals and water.



CAUTION!

To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause the player to come into contact with or hit others and result in injury or trouble.

PRECAUTIONS TO BE HEEDED DURING OPERATION



CAUTION!

To avoid injury and accidents, those who fall under the following categories are not allowed to play the game:

- * Intoxicated persons
- * Those who have high blood pressure or heart problems.
- * Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.
- * Persons susceptible to motion sickness.
- * Persons whose acts runs counter to the products warning displays.
- * Instruct those who wear high-heeled shoes to refrain from playing the game by explaining that playing the game with high-heeled shoes is very dangerous and likely to cause a potentially hazardous situation.



- To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in openings of the product or small openings in or around doors.
- To avoid electric shock circuit, do not allow the customers to unplug the power plug without a justifiable reason.
- Although this product has the accident preventive covering attached to potentially hazardous places where hand and fingers could be caught, small children are unable to perceive hazards. Use care so that small children do not come close to the product when in play.
- Immediately stop such violent acts as hitting and kicking the product. Such violent acts can cause parts damage and /or falling down, resulting in injury due to fragments and falling down.






CAUTION!

2. NAME OF PARTS



GAME SPECIFICATIONS	WIDTH	LENGTH	HEIGHT	WEIGHT
DURING SHIPPING	Shipping dimensions currently unavailable			
CABINET				
SEAT CABI				
WHEN ASSEMBLED	34"	X 87"	X 76"	500 LBS

3. ACCESSORIES

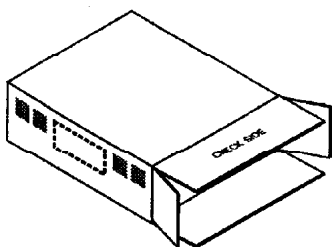
<div>DESCRIPTIONOWNERS MANUAL</div> <div>Part No. (Qty.)999-0921</div> <div>Note</div> <div>Figures</div> <div>If Part No. has no description, the Number has not been registered or can not be registered. Such a part may not be obtainable even if the customer desires to purchase it. Therefore, ensure that the part is in safekeeping with you.</div>		<div>KEY MASTER</div> <div>220-5576 (2)</div> <div>For opening/closing the doors</div> <div></div>	<div>KEY</div> <div>(2)</div> <div>For the CASHBOX DOOR</div> <div></div>
<div>TAMPERPROOF WRENCH</div> <div>M8 540-0009-01 (1)</div> <div>TOOL</div> <div></div>			



**THE SHIPMENT METHOD DESCRIBED BELOW ONLY
APPLIES TO 'HIKARU' BOARDS CONTAINED IN THE
FOLLOWING GAMES:**

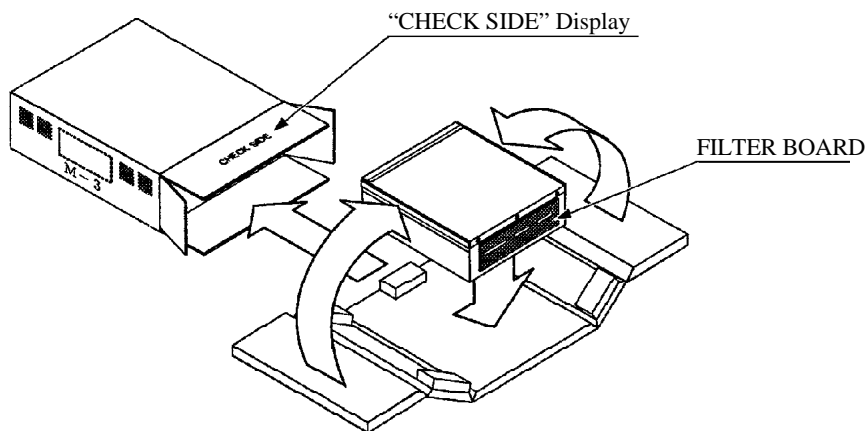
LOST WORLD, VIRTUA FIGHTER 3, SUPER GT, SEGA BASS FISHING, STRIKER 2
HARLEY DAVIDSON, STAR WARS RACER

**!!NEVER SHIP HIKARU GAME BOARDS
OUTSIDE OF CAGE!!**



CARTON BOX
601-8928 (1)
Used for transporting the GAME BOARD.
{SUPPLIED WITH YOUR GAME}

**DO NOT SHIP GAME BOARD WITHOUT
THIS BOX AS IT MAY DAMAGE THE GAME
BOARD AND VOID YOUR WARRANTY.**



**NO OTHER GAMES BOARDS ARE TO BE SHIPPED IN THE CAGE AS
THEY MAY BE DAMAGED BEYOND REPAIR. PLEASE SHIP THEM
WITHOUT CAGE PROPERLY PROTECTED DURING SHIPPING.**

4 . ASSEMBLING AND INSTALLATION



Assembling should be performed as per this manual. Since this is a complex machine, erroneous assembling may cause damage to the machine, or malfunctioning to occur.
When assembling, be sure to perform work by plural persons.
Depending on the type of work, there are some cases in which a single person performing the work can cause personal injury or parts damage.

When carrying out the assembly work, follow the procedure in the following 4-item sequence:

- 1 ASSY OF CABINET
- 2 SECURING IN PLACE (ADJUSTER ADJUSTMENT)
- 3 POWER SUPPLY
- 4 ASSEMBLING CHECK

Note that tools such as a phillips-head screwdriver and wrench for M16 hexagon bolt w/24 mm width across flats are required for the assembly work.



ASSY OF CABINET



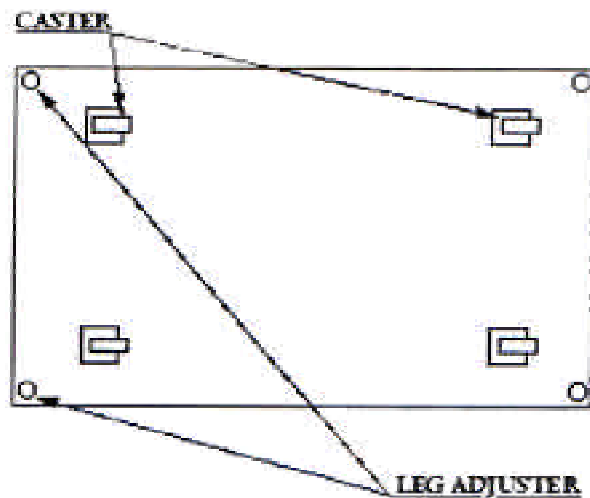
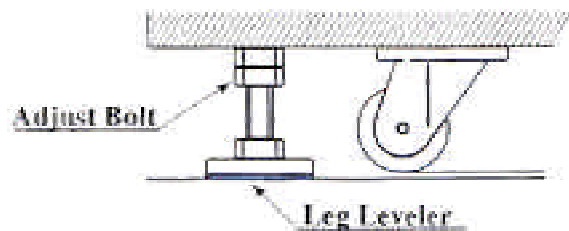
Permanantly tightening the hex bolts should not be completed until the leg levelers are adjusted properly.

B**SECURING IN PLACE (ADJUSTER ADJUSTMENT)**

Be sure to have all the Adjusters make contact with a flat surface. Unless the Adjusters come into contact with a flat surface, the Cabinet can move of itself, causing an accident.

This machine has 4 casters and 4 adjusters (shown below). When the installation position is determined, make sure that the machine position is level, bring the adjusters into direct contact with the floor, and make adjustments so that the casters will be raised approximately 5mm. from the floor.

- ① Move the machine to the installation position. Be sure to provide adequate space allowing the player to get on and off.
- ② Have all of the leg adjusters make contact with the floor. Adjust the height of the leg adjusters by using a wrench so that the machine's position is kept level.
- ③ After making adjustments, fasten the leg adjuster nut upward and secure the height of the leg adjuster.





POWER SUPPLY

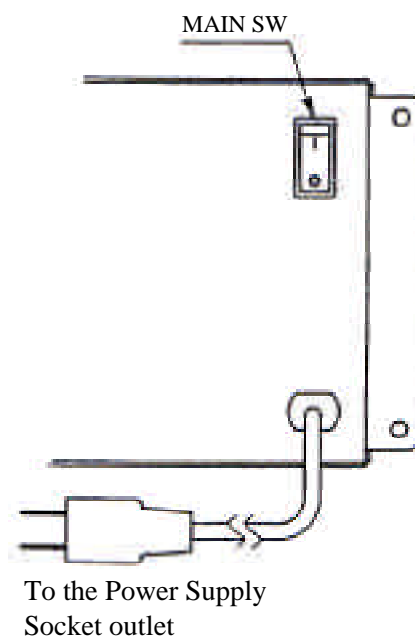


- Ensure that the power cord is not exposed on the surface (passage, etc.). If exposed, they can be caught and are susceptible to damage. If damaged, the cord can cause an electric shock or short circuit.
- Ensure that the wiring position is not in the customer's passage way or the wiring has protective covering.

Connect the game to the power supply and turn on power to the game. Before connecting power supply be sure that power switch is off.

- ① Turning the AC unit's main switch on will cause the machine to start the power check and network check automatically.
- ② In the Power On check, the steering wheel turns left and right, and then returns to the centering position and stops. In this check, the values of the VR inside the control panel are corrected.
- ③ Until this check is finished, and the steering wheel stops do not touch the steering wheel or play the game.

If you do, the steering reaction during the game (reaction at the time of course-out or crash) can not be obtained correctly. In the case of an abnormal reaction during the game, turn power on again from the beginning and complete the power on check.



D

ASSEMBLING CHECK

In the TEST MODE, ascertain that the assembly has been made correctly and IC BD, is satisfactory (refer to Section 9).

In the test mode, perform the following test:

(1) MEMORY TEST

RAM TEST

IC15	IC16	IC17S	IC18S	GOOD
IC22	IC23	IC24S	IC25S	GOOD
IC28	IC29S			GOOD
IC41				GOOD
IC42				GOOD
IC44	IC45S	IC46	IC47S	GOOD
IC91S	IC92S			GOOD
IC98				GOOD

OPTIONAL SOUND BOARD:
IC12
GOOD

OPTIONAL COMMUNICATION BOARD:
IC7 IC8 IC9 IC10 GOOD
.
.
.

PRESS TEST BUTTON TO EXIT

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

(2) C.R.T. TEST

0

C.R.T. TEST PAGE#1

31

RED

GREEN

BLUE

WHITE

PRESS SERVICE BUTTON TO ANOTHER PAGE
PRESS TEST BUTTON TO EXIT

In the system test mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed.

C.R.T. TEST PAGE#2

PRESS SERVICE BUTTON TO ANOTHER PAGE
PRESS TEST BUTTON TO EXIT

(3) SOUND TEST

SOUND TEST

MAIN SPEAKER LEFT
MAIN SPEAKER RIGHT
OPTION SPEAKER LEFT
OPTION SPEAKER RIGHT
>EXIT

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON

In the system test mode, selecting SOUND TEST causes the screen (on which sound related BD and wiring connections are tested) to be displayed. Check if the sound is satisfactorily emitted from each speaker and the sound volume is appropriate.

(4) INPUT TEST

INPUT TEST

BOOST	OFF
BRAKE	OFF
LEFT BUTTON	OFF
RIGHT BUTTON	OFF
LEFT LEVER	3E
RIGHT LEVER	3D
START	OFF
SERVICE	OFF
TEST	OFF

PRESS TEST AND SERVICE BUTTON TO EXIT

Selecting the INPUT TEST on the game test mode menu screen causes the screen (on which each switch is tested) to be displayed. Press each switch. For the coin switch test, insert a coin from the coin inlet with the coin chute door open. If the display beside each switch indicates “ON,” the switch and wiring connections are satisfactory.

JVS TEST
> DISPLAY CONFIG
EXIT

NODE 1/1
SWITCH
SYSTEM -----
PLAYER1 -----
PLAYER2 -----
COIN
SLOT1 0000 SLOT2 8000
ANALOG
CH1 6300 CH2 5A00 CH3 7D00 CH4 8100
CH5 1F00 CH6 1D00 CH7 1F00 CH8 2000

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON

(5) OUTPUT TEST

OUTPUT TEST	
START LAMP	OFF
BOOST LAMP	OFF
BOOST LOCK	OFF
>EXIT	

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON

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

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

5 . PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE



- When moving the machine, be sure to unplug the power plug. Moving the machine with the plug as is inserted can damage the power cord and cause fire and electric shock hazards.
- When moving the machine on the floor, retract the Adjusters and ensure that Casters make contact with the floor. During transportation, pay careful attention so that Casters do not tread power cords. Damaging the power cords can cause an electric shock and/or short circuit.
- When lifting the cabinet, be sure to hold the catch portions or bottom part. Lifting the cabinet by holding other portions can damage parts and installation portions, due to the empty weight of the cabinet, and cause personal injury.
- Do not insert the fork to places other than designated when using a Forklift to transport the machine. Failure to observe this could cause falling down and injury resulting from falling down.



Do not push the plastic made parts. Failure to observe this may damage parts and cause injury due to fragments resulting from damage.



- When transporting the product in places with steps, disassemble into each unit before transporting. Inclining the product in an as is assembled condition or placing the cabinet in places with steps can damage the unit's joining portions.
- To protect surface, do not directly apply a rope to the surfaces of product. Use protective materials to the places the rope is applied to.

6. CONTENTS OF GAME

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

When the product is energized, the Billboard's fluorescent lamp is always lit. During the advertise mode, the advertise screen is shown on the monitor and sound is emitted from the speakers in the front, left and right of the seat. Setting to No Sound Output during the advertise is possible in the TEST mode. During the advertise mode, the button on the Control Panel is unlit.



7. **HOW TO PLAY**

To adjust the seat position, pull the lever under the seat on the right-hand side to release the seat lock, and slide the seat forward or backward to the desired position.

The game starts upon inserting the required number of coins for one play.

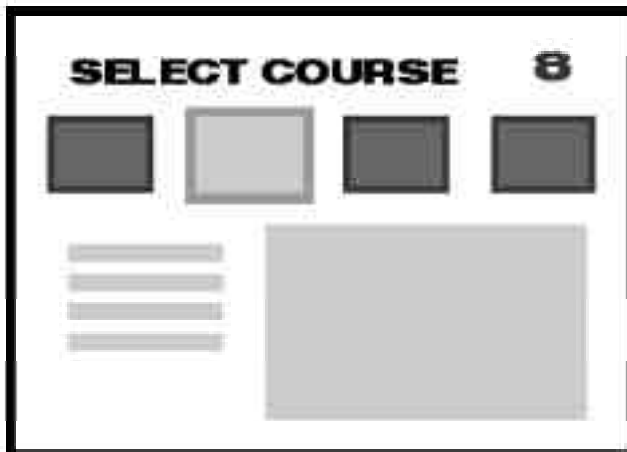
■ (A) **SELECT SCREEN**

For Communication Play:

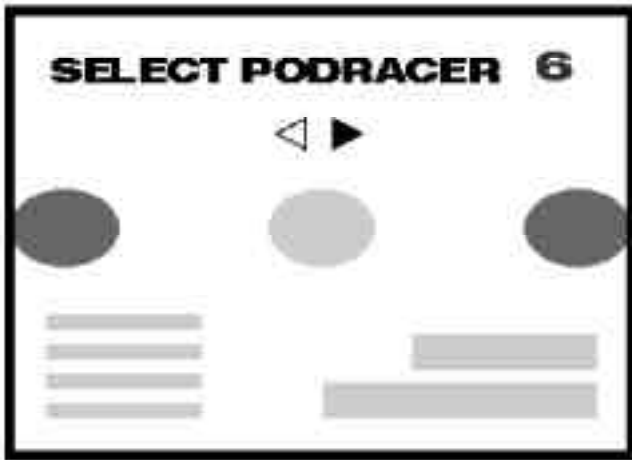
When in communication play, the monitor screen remains stationary for approximately 10 seconds to wait for the participant. The time limit is displayed in the upper right corner of the screen. Press the START button to cancel vs. play and proceed to the 1P mode. To avoid misoperation, pressing the START button will not cancel vs. mode during the first 3 seconds.



Use the SELECT button to choose one of the 4 courses and press the START button to decide. The time limit for selecting the course is displayed in the upper right corner of the screen. The course displayed on the left is easier, and the difficulty increases upon proceeding to the right.

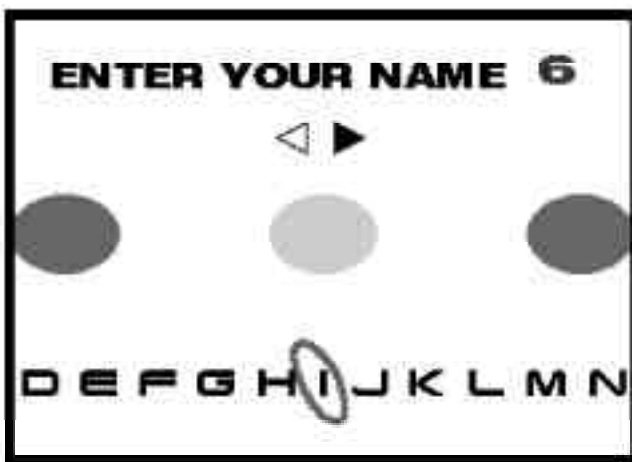


Use the SELECT button to choose one of the 4 vehicles and press the START button to decide. The time limit for selecting the vehicle is displayed in the upper right corner of the screen. At the time of shipment, only 2 of the vehicles are usable. However, by fulfilling the requirements described later in this manual, the remaining 2 vehicles will become available. The performance of each vehicle differs.



For Communication Play:

After selecting your vehicle, input your "name" using 3 letters. This name is displayed at the top of the opponent's vehicle in the game screen. Use the SELECT button to scroll through the letters and press the START button to decide. Finally, select END to confirm. The time limit for inputting your name is displayed in the upper right corner of the screen. Upon completion of this process by all players, the game proceeds to the next screen.



While loading the game data, the screen remains stationary for a while. You cannot skip this screen.

■(B) COURSES AND VEHICLES

There are 4 courses in this product.

[BANTHA TRACKS] EASY

The actual course shown in the motion picture has been simplified and shortened for beginners. Huge rocks rise out of the stretched wilderness.

[SMUGGLER'S COVE] NORMAL

A beautiful shoal and moss-covered land can be seen in this course. Although you will face consecutive curves in the course, the difficulty itself is not too high.

[PIXELITO CHALLENGE] HARD

This course is staged in the mountains at night. The narrower road and the number of hairpin curves make it the most difficult among the 4 courses in terms of the course layout.

[THE BOONTA CLASSIC] EXPERT

This course is a reproduction of the course shown in the motion picture. This course is longer than the other 3 courses, making it difficult to stay the course.

There are 4 vehicles to choose from. The vehicles available at the beginning are the ANAKIN SKYWALKER and the SEBULBA. The other 2 can only be used if certain requirements are fulfilled.

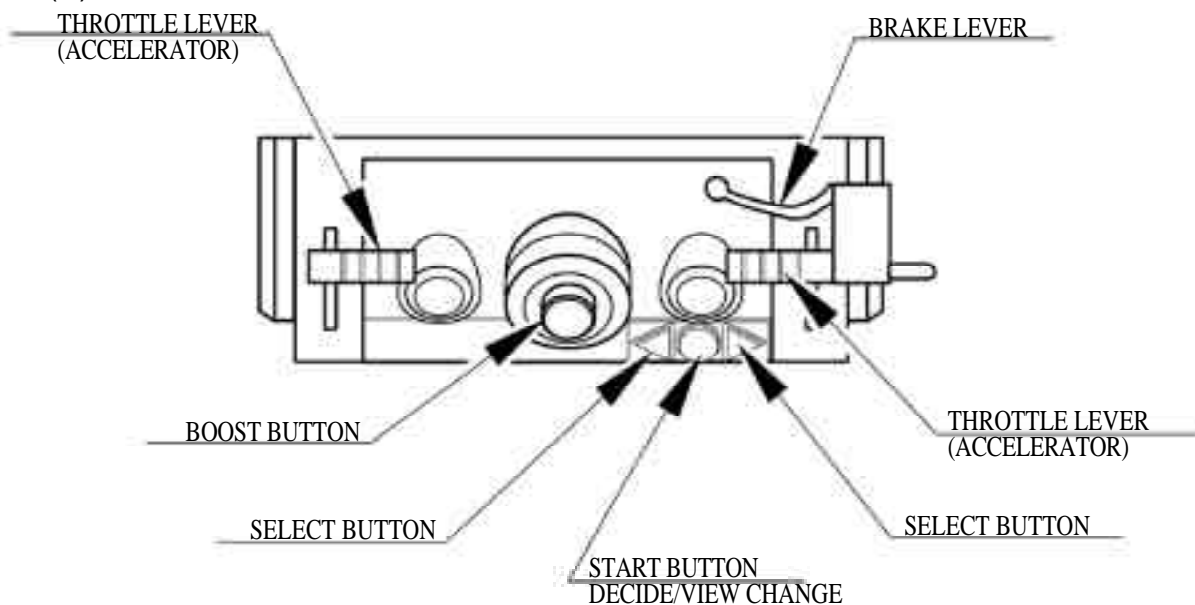
Conditions to have the Hidden vehicles appear:

[GASGANO] Must exceed 700 plays total (with any course/character).

[BEN QUADINAROS] In the EXPERT course, game must be completed 50 times (with any character).

*Note that once the vehicles appear, they will not be cleared when the BACKUP RAM CLEAR is performed.

■(C) HOW TO OPERATE



The THROTTLE LEVER left & right also function as an accelerator and steering. Incline the THROTTLE LEVER forward to gain speed. To reduce the speed, pull the THROTTLE LEVER toward you. Incline the right Lever forward and pull the left Lever toward you to turn left. Grip the Brake Lever on the right-hand Lever to quickly reduce the speed. The Brake Lever itself is in the digital switch system, however, braking power varies in accordance with the strength of gripping the Lever.

Press the BOOST button on the center of the panel to gain a rapid speed for a certain period of time. The gauge displayed at the lower right screen shows the current BOOST effect. The BOOST power gradually diminishes, and when it becomes zero, acceleration is finished. While the BOOST is in effect, the button is kept pressed down. Once the BOOST becomes active, the button returns to its original state.

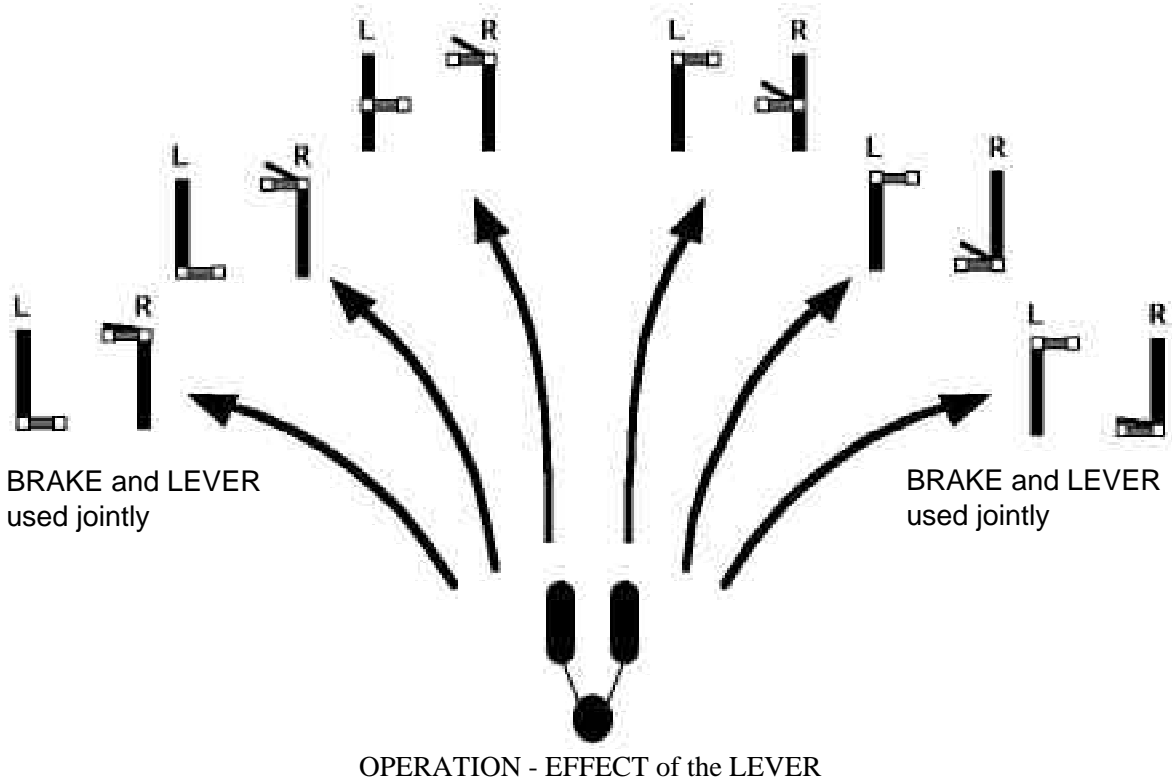
Note that setting of not performing the aforementioned operation can be selected.

In that case however, gaining a rapid speed by the BOOST button remains unchanged.

BOOST can be used up to 3 times per race. The BOOST button goes on when active, flashes during use, and goes off when inactive.

The START button can be used for “DECIDE” in the select screen and “VIEW CHANGE” during game. It goes on during the race only.

Use the SELECT button for selecting the course, the vehicle, and the letters in the NAME entry.



■ (D) GAME SCREEN

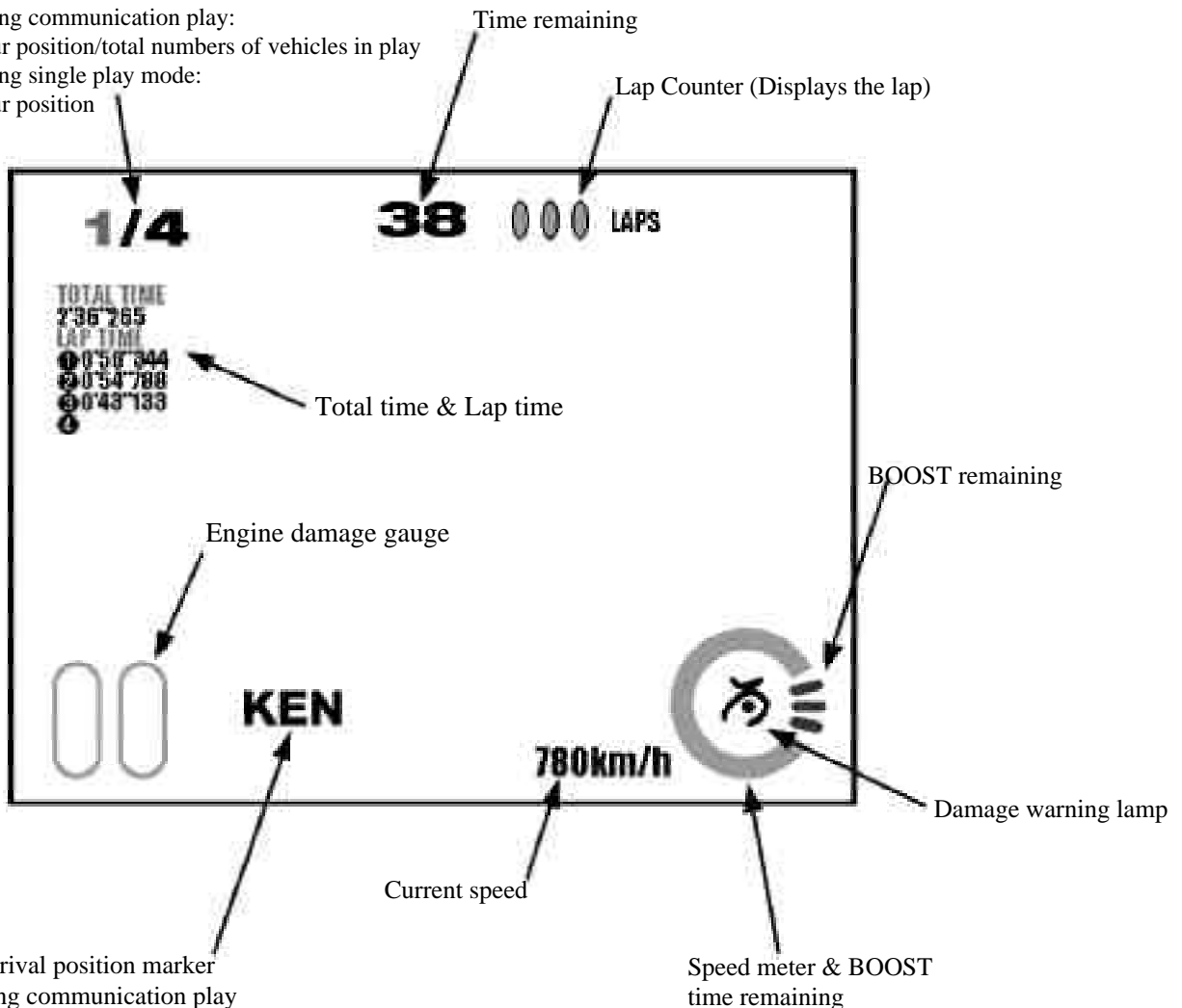
Position-

During communication play:

your position/total numbers of vehicles in play

During single play mode:

your position



■ (E) GAME OVER

The purpose is to finish the predetermined number of laps within the time limit.

There are 3 laps in the EXPERT course and 4 in the other courses. When the remaining time becomes zero, you have to retire unfinished. Pass through the checkpoints on the course, and you can get extra time. When the first position player goes through the checkpoint, extra time is given to other players. The same applies to communication play.

■ (F) DAMAGE SYSTEM

When hitting or making contact with obstacles, damage increases and the gauge displayed at the lower left screen turns yellow. Recovery is possible if you do not hit or make contact with them thereafter. When damage reaches the maximum, the gauge turns red and BOOST cannot be used due to the limitation applied to the maximum speed. The condition can automatically be restored, however, it takes approximately 10 seconds to do so.

■ (G) NAME ENTRY

The NAME ENTRY screen where you can input your name up to 3 letters will be displayed on the following conditions:

- (1) In 1P mode, when the player's record is excellent. (after race)
- (2) In 1P mode, when the player is finished within the first to the third position. (after race)
- (3) Communication (vs.) play is formed. (before race)

Scroll the letter screen with the SELECT button and press the START button to decide. After inputting the 3 letters, bring the cursor to "END" and press the START button to decide.

In case of (1) as above, after the name entry, the rank will be displayed.

In case of (2) as above, the name entry is for making password for the Internet ranking registration. Therefore, the name will not necessarily be displayed for in-game ranking.

■ (H) CONTINUOUS VS. PLAY

In vs. play, while the game over screen is displayed, you are asked if you continue vs. play. The countdown is displayed at the same time. If 2 or more players insert coins before countdown reaches zero, continuous vs. play is effective, and vs. play record in total is displayed. Note that "P1~P4" as above displays the seat numbers set in the TEST MODE.

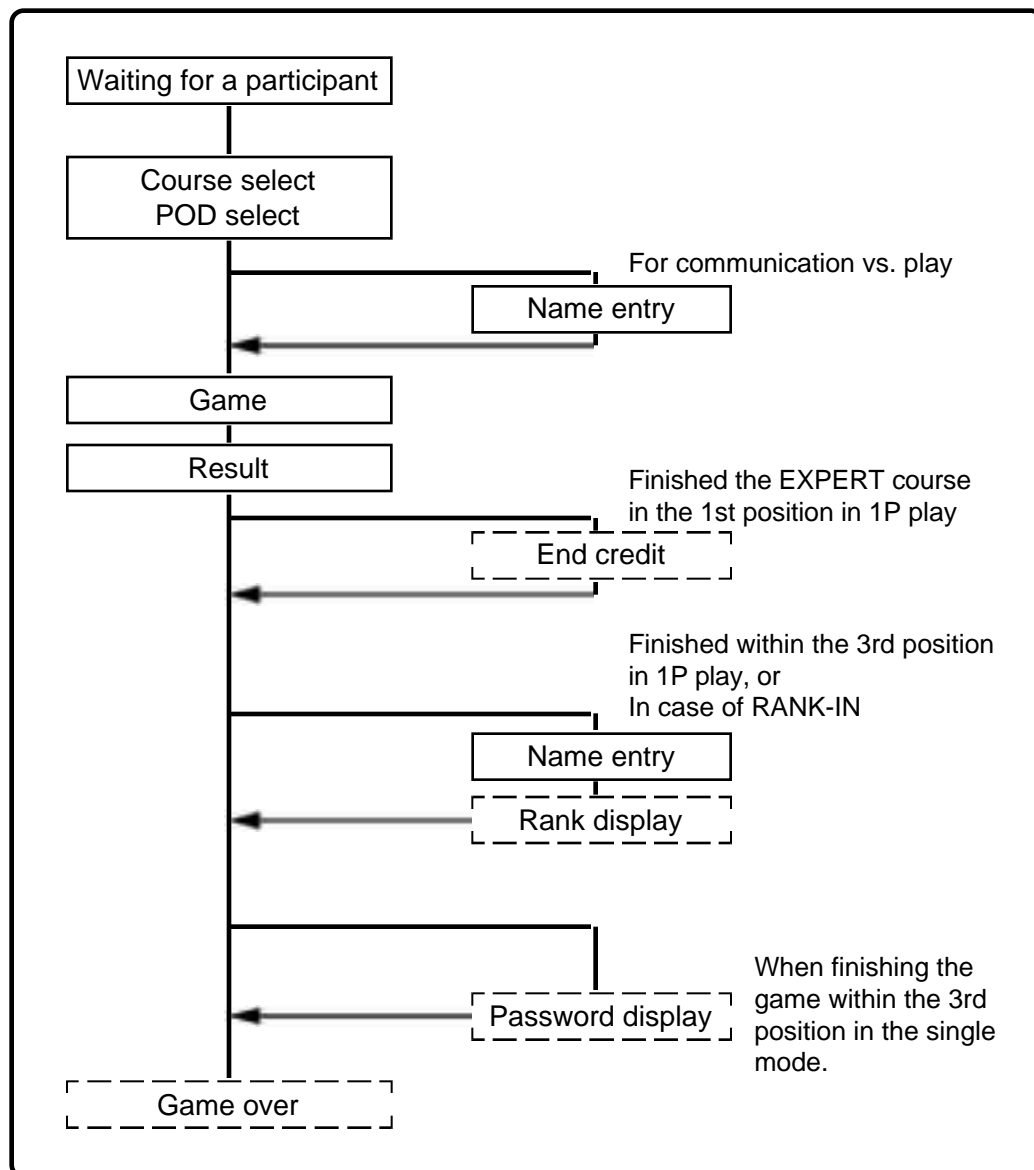


■ (I) PASSWORD

When you succeed to run the whole distance in 1P mode in any course, the password screen will be displayed. Make a note of the password shown in the screen and send it to the Home Page exclusive for this game, and you can enter in the world ranking register. You can skip this screen by pressing the START button. The Home Page will be open in May 2000. Operation and maintenance in the second year and thereafter are undecided, however.

URL: <http://www.sega.co.jp/racer/>

■ (J) FLOW CHART



You can skip the items enclosed with a dotted line in the above chart with the START button.

8. SYSTEM TEST MODE



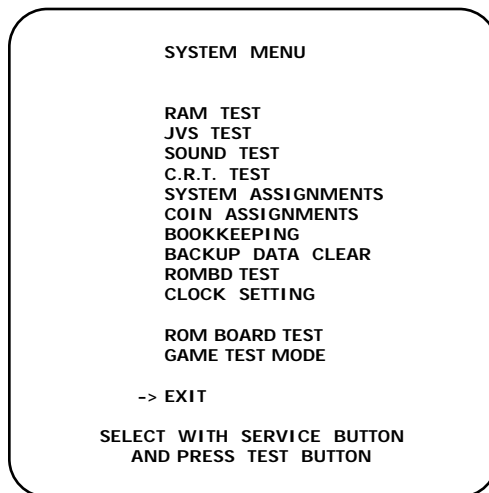
IMPORTANT!

- The contents of settings changed in the TEST mode are stored when the TEST mode is finished from EXIT in the MENU mode. If the power is turned off before the TEST mode is finished, the contents of the setting changes do not take effect.
- Executing "BACKUP DATA CLEAR" in the SYSTEM TEST MODE does not clear the BOOKKEEPING data in the GAME TEST MODE.
- Entering the TEST mode clears fractional numbers of coins less than one credit and BONUS ADDER data.

The SYSTEM TEST mode mainly allows checks of the IC Board for accurate functioning , monitor adjustment, as well as CRT TEST and COIN ASSIGNMENTS, etc. The following assignments, however, should be designated for this product.

CABINET TYPE : 1 PLAYER (S)
MONITOR TYPE : HORIZONTAL
SERVICE TYPE : COMMON
COIN CHUTE TYPE : COMMON

TEST ITEM SELECT



- ① After turning the power on, press the TEST button to display the test item menu shown above.
- ② Press the SERVICE button to move the arrow to the desired item and press the TEST button.
- ③ When finished, bring the arrow to EXIT and press the TEST button to return to the Game mode.

8 - 1 SWITCH UNIT AND COIN METER

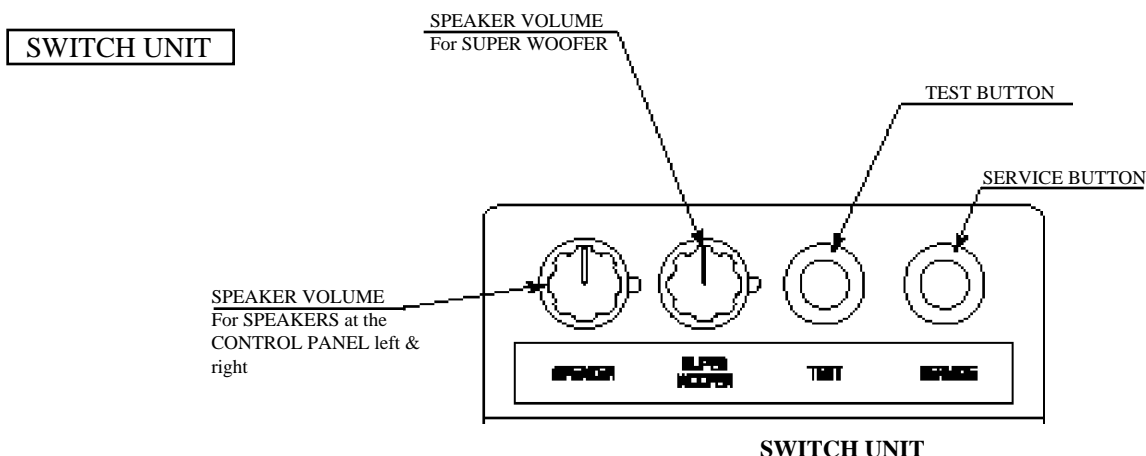


Never touch places other than those specified. Touching places not specified can cause electric shock and short circuit.



- Adjust to the optimum sound volume by considering the environmental requirements of the installation location.
- If the COIN METER and the game board are electrically disconnected, game play is not possible.

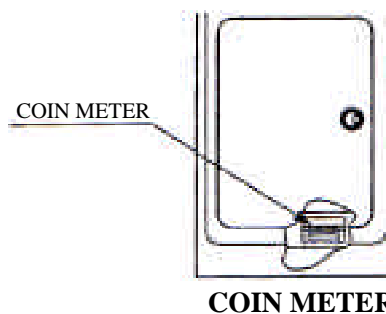
Open the COIN CHUTE DOOR, and the switch unit shown will appear. The function of each switch is as follows:



- ① **SPEAKER VOLUME (SPEAKERS)**
Controls the sound volume for the left/right CONTROL PANEL speakers.
- ② **SPEAKER VOLUME (SUPER WOOFER)**
Controls the sound volume for the SUPER WOOFER and the BASE SHAKER under the seat.
- ③ **TEST BUTTON (TEST SW)**
Enters to the test mode.
- ④ **SERVICE BUTTON (SERVICE SW)**
Gives credits without registering on the coin meter.

COIN METER

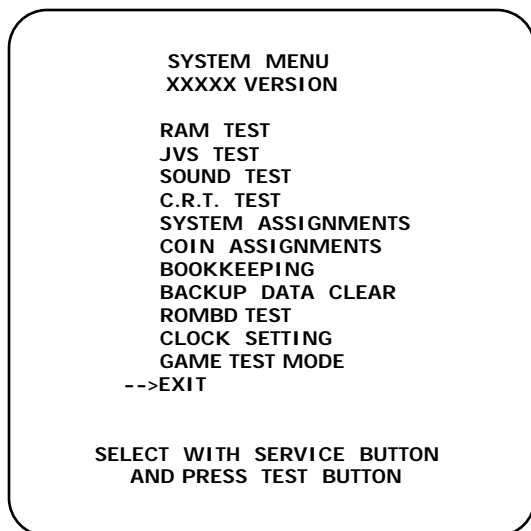
Open the Cashbox Door by using the key to have the Coin Meter appear underneath the Cashbox.



8 - 2 SYSTEM TEST MODE

A. SYSTEM TEST MODE MENU

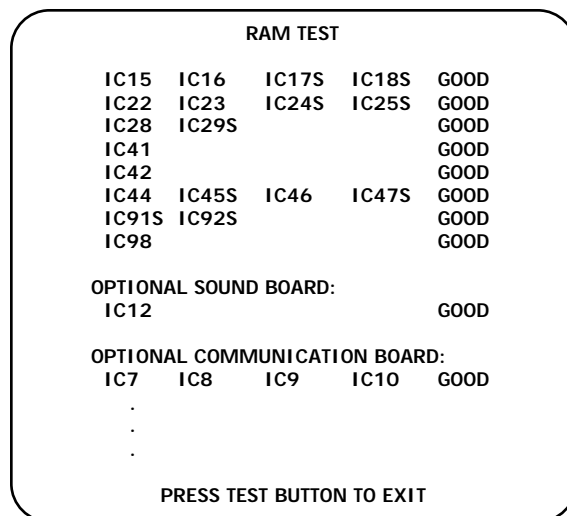
Press TEST Button to enter the TEST MODE, and the following Menu screen will be displayed.



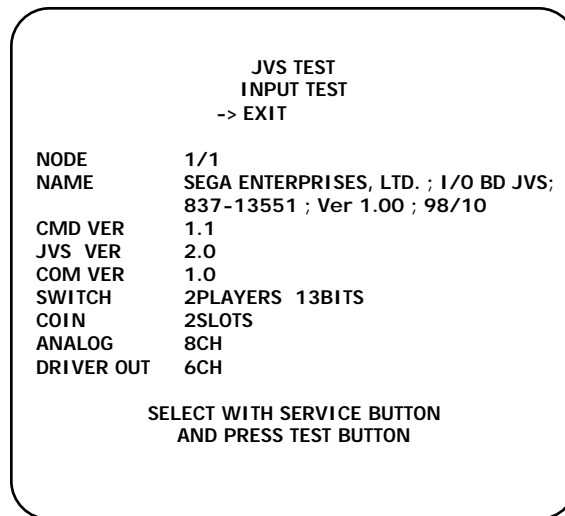
- Press SERVICE Button to move the arrow (>) to the desired item and select with TEST Button.
- Bring the arrow to EXIT and press TEST Button to return to the GAME Mode.

B. RAM TEST

This test allows you to check the functioning of the RAM on the Game BD. In this test, IC's are checked in every row. During the test, "CHECKING" is displayed on the right-hand side of the screen. "BAD" is displayed to indicate irregular RAMs, if any. Upon finishing the test, "PRESS TEST BUTTON TO EXIT" is displayed in the lower center of the monitor. Press the TEST Button to return to the MENU screen.

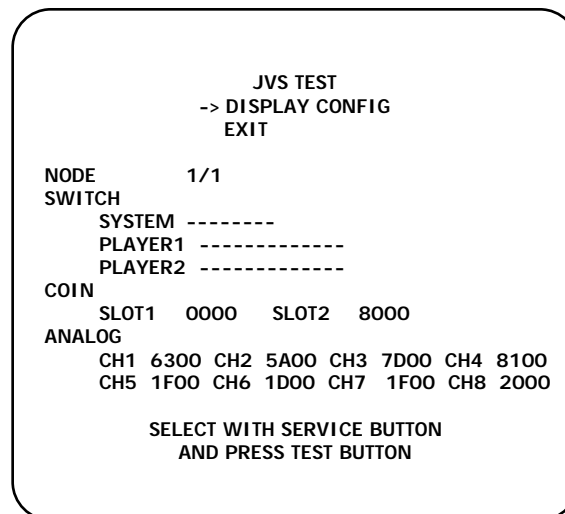


C. JVS TEST



In this test, Functioning of the I/O Board connected to the Game Board is displayed and INPUT TEST can be performed. Execute EXIT to return to the MENU screen.

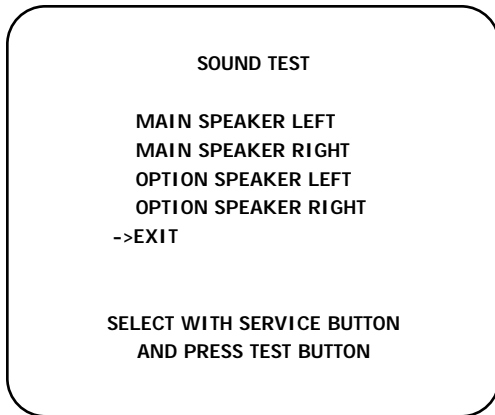
When the INPUT TEST is selected and executed, the following screen appears.



When INPUT is performed, the Switch value changes to 1 from -. Execute EXIT to return to the MENU screen.

D. SOUND TEST

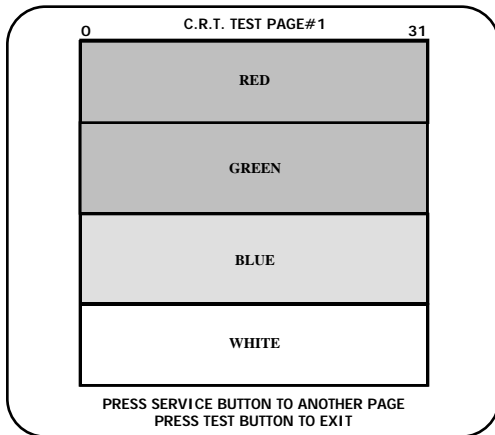
Sound Output can be performed and each Speaker can be checked.



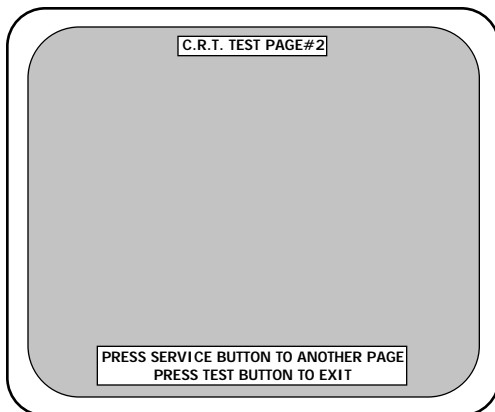
- Select the desired item and press TEST Button, and sound is emitted from the corresponding Speaker.
- The OPTIONAL SPEAKER LEFT and RIGHT function the same. Select either OPTIONAL SPEAKER LEFT or RIGHT to allow the vibration device of the Control Panel to be checked.
- Select EXIT to return to the MENU screen.

E. C.R.T. TEST

In this test, monitor adjustment can be performed. Periodically check to see if the monitor adjustment is appropriate in this test. This test consists of 2 screens. Use SERVICE button to change the screen displayed. Press TEST Button to return to the MENU screen.



- The first screen allows color adjustments to be made. The color bar of each of the 4 colors (red, green, blue, white) is the darkest at the extreme left and becomes brighter toward the extreme right.



- The second screen displays crosshatches . In this page, monitor size and deviation can be checked.

F. SYSTEM ASSIGNMENTS

Performs setting for the whole system. Set each item in accordance with the cabinet. Use the items except ADVERTISE SOUND and COMMUNICATION MODE as they are at the time of shipment. To change setting, bring the arrow (>) to the desired item with the SERVICE BUTTON and press the TEST BUTTON

SYSTEM ASSIGNMENTS

CABINET TYPE	2PLAYERS
ADVERTISE SOUND	ON
MONITOR TYPE	HORIZONTAL
DISPLAY TYPE	AUTOSCAN
SERVICE TYPE	COMMON
COMMUNICATION MODE	MASTER

->EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

- CABINET TYPE specifies Control Panel and number of Coin Chute. The number of Player displayed in BOOKKEEPING varies in accordance with the value here.
- ADVERTISE SOUND is used for settings of emitting sound during ADVERTISE.
- MONITOR TYPE sets the on-screen display to the positional direction of monitor (HORIZONTAL or VERTICAL). If set to VERTICAL, the on-screen display for the test mode is vertically positioned in accordance with the setting.
- DISPLAY MODE sets the monitor's display frequency. In this mode, if other than AUTOSCAN is selected and EXIT is executed, the display frequency is changed to the selected setting.
- SERVICE TYPE sets the functioning of when the Service Button is pressed, in case that several Service Buttons exist.
 - INDIVIDUAL
By pressing Service Button, Service credit can be obtained for the Player corresponding to the Service Button pressed.
 - COMMON
By pressing any Service Button, Service credit can be obtained for all Players.

- **COMMUNICATION MODE** is for communication play setting. Select from among MASTER, SLAVE, NO LINK, and RELAY. When performing setting for communication play, be careful of the following points:
 - MASTER - Set only one of the linked machines to MASTER for communication play.
 - SLAVE - Set the other linked machines to SLAVE for communication play.
 - NO LINK - Set to NO LINK when you operate the machine alone.
 - RELAY - Set to RELAY when you want to use the machine as a monitor showing the communication play.

[SEAT NUMBER]

Give a different seat number to each of the MASTER and SLAVE machines linked for communication play. If the same numbers are used among the linked machines, the game does not start. (Refer to the section titled GAME ASSIGNMENTS)

[The following setting items in the MASTER apply to the SLAVE.]

- ADVERTISE SOUND ON/OFF (SYSTEM MENU)
- DIFFICULTY SETTING (GAME TEST MODE)
- Object / Subject View of Default View (GAME TEST MODE)
- URL display ON/OFF during ADVERTISE (GAME TEST MODE)
- Hidden vehicles that are unusable

This does not apply in case of setting to NO LINK.

G. COIN ASSIGNMENTS

In this mode, the setting of incremental credit increase as against coin insertion can be changed. This test consists of 3 screens, and the following is the first screen. The settings made in the first screen will be stored when exited.

COIN ASSIGNMENTS

COIN CHUTE TYPE	COMMON
COIN/CREDIT SETTING	#1
COIN CHUTE #1	
1COIN 1CREDIT	
COIN CHUTE #2	
1COIN 1CREDIT	
MANUAL SETTING	
SEQUENCE SETTING	
EXIT	

**SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON**

- **COIN CHUTE TYPE** sets whether Coin Chute is used in common by all players or separately allocated to each player in case 2 or more Coin Chutes are incorporated.
COMMON: This setting is for common use by plural players.
INDIVIDUAL: As each player uses an independent coin chute, setting to **INDIVIDUAL** causes **COIN CHUTE #2** to disappear.
- **COIN/CREDIT SETTING** is set when using one of the existing 26 settings or **FREE PLAY**. The selected coin rates in the **COIN/CREDIT SETTING** are displayed below **COIN CHUTE #1** and **COIN CHUTE #2**. If you wish to set a coin rate rather than select from the existing setting, select **MANUAL SETTING**. The display next to **COIN/CREDIT SETTING** indicates “**MANUAL**” not “**#n**” in this case.

● MANUAL SETTING

When MANUAL SETTING is selected in the first screen, the following screen will appear.

**COIN ASSIGNMENTS
MANUAL SETTING**

COIN TO CREDIT	1
BONUS ADDER	0
COIN CHUTE #1 MULTIPLIER	
1 COINCOUNT AS 1COIN	
COIN	1 2 3 4 5 6 7 8 9
CREDIT	1 2 3 4 5 6 7 8 9
COIN CHUTE #2 MULTIPLIER	
1 COINCOUNT AS 1COIN	
COIN	1 2 3 4 5 6 7 8 9
CREDIT	1 2 3 4 5 6 7 8 9

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

- COIN TO CREDIT determines how many coins are needed for one credit. (1~9)
- BONUS ADDER determines how many coins should be inserted to obtain one SERVICE COIN.
- COIN CHUTE #1 MULTIPLIER, and COIN CHUTE #2 MULTIPLIER set how many tokens one Coin represents inserted in each COIN CHUTE.

SETTING EXAMPLE 1

Setting of 2 COINS 1 CREDIT, set to:

COIN TO CREDIT	2
BONUS ADDER	0
COIN CHUTE #1 MULTIPLIER	1

SETTING EXAMPLE 2

Setting of 5 COINS 6 CREDITS (5 COINS 1 BONUS), set to:

COIN TO CREDIT	1
BONUS ADDER	5
COIN CHUTE #1 MULTIPLIER	1

When exiting from MANUAL SETTING, if the identical coin rate is in the existing COIN/ CREDIT SETTING, such existing mode other than what is set in the MANUAL SETTING is confirmed.

Table 1: COIN/CREDIT SETTING

SETTING No.	COIN CHUTE#1		COIN CHUTE#2	
SETTING #1	1 COIN	1 CREDIT	1 COIN	1 CREDIT
SETTING #2	1 COIN	2 CREDITS	1 COIN	1 CREDIT
SETTING #3	1 COIN	3 CREDITS	1 COIN	1 CREDIT
SETTING #4	1 COIN	4 CREDITS	1 COIN	1 CREDIT
SETTING #5	1 COIN	5 CREDITS	1 COIN	1 CREDIT
SETTING #6	1 COIN	2 CREDITS	1 COIN	2 CREDITS
SETTING #7	1 COIN	5 CREDITS	1 COIN	2 CREDITS
SETTING #8	1 COIN	3 CREDITS	1 COIN	3 CREDITS
SETTING #9	1 COIN	4 CREDITS	1 COIN	4 CREDITS
SETTING #10	1 COIN	5 CREDITS	1 COIN	5 CREDITS
SETTING #11	1 COIN	6 CREDITS	1 COIN	6 CREDITS
SETTING #12	2 COINS	1 CREDIT	2 COINS	1 CREDIT
SETTING #13	1 COIN	1 CREDIT	2 COINS	1 CREDIT
SETTING #14	1 COIN	2 CREDITS	2 COINS	1 CREDIT
SETTING #15	1 COIN	1 CREDIT	1 COIN	1 CREDIT
	2 COINS	3 CREDITS	2 COINS	3 CREDITS
SETTING #16	1 COIN	3 CREDITS	1 COIN	1 CREDIT
			2 COINS	3 CREDITS
SETTING #17	3 COINS	1 CREDIT	3 COINS	1 CREDIT
SETTING #18	4 COINS	1 CREDIT	4 COINS	1 CREDIT
SETTING #19	1 COIN	1 CREDIT	1 COIN	1 CREDIT
	2 COINS	2 CREDITS	2 COINS	2 CREDITS
	3 COINS	3 CREDITS	3 COINS	3 CREDITS
	4 COINS	5 CREDITS	4 COINS	5 CREDITS
SETTING #20	1 COIN	5 CREDITS	1 COIN	1 CREDIT
			2 COINS	2 CREDITS
			3 COINS	3 CREDITS
			4 COINS	5 CREDITS
SETTING #21	5 COINS	1 CREDIT	5 COINS	1 CREDIT
SETTING #22	1 COIN	2 CREDITS	3 COINS	1 CREDIT
			5 COINS	2 CREDITS
SETTING #23	2 COINS	1 CREDIT	2 COINS	1 CREDIT
	4 COINS	2 CREDITS	4 COINS	2 CREDITS
	5 COINS	3 CREDITS	5 COINS	3 CREDITS
SETTING #24	1 COIN	3 CREDITS	2 COINS	1 CREDIT
			4 COINS	2 CREDITS
			5 COINS	3 CREDITS
SETTING #25	1 COIN	1 CREDIT	1 COIN	1 CREDIT
	2 COINS	2 CREDITS	2 COINS	2 CREDITS
	3 COINS	3 CREDITS	3 COINS	3 CREDITS
	4 COINS	4 CREDITS	4 COINS	4 CREDITS
	5 COINS	6 CREDITS	5 COINS	6 CREDITS
SETTING #26	1 COIN	6 CREDITS	1 COIN	1 CREDIT
			2 COINS	2 CREDITS
			3 COINS	3 CREDITS
			4 COINS	4 CREDITS
			5 COINS	6 CREDITS
SETTING #27	FREE PLAY		FREE PLAY	

Table 2: COIN/CREDIT SETTING (COIN CHUTE INDIVIDUAL TYPE)

SETTING No.	EACH SEAT'S COIN CHUTE	SETTING No.	EACH SEAT'S COIN CHUTE
SETTING #1	1 COIN 1 CREDIT	SETTING #21	5 COINS 1 CREDIT
SETTING #2	1 COIN 2 CREDITS	SETTING #23	2 COINS 1 CREDIT
SETTING #3	1 COIN 3 CREDITS		4 COINS 2 CREDITS
SETTING #4	1 COIN 4 CREDITS		5 COINS 3 CREDITS
SETTING #5	1 COIN 5 CREDITS	SETTING #25	1 COIN 1 CREDIT
SETTING #11	1 COIN 6 CREDITS		2 COINS 2 CREDITS
SETTING #12	2 COINS 1 CREDIT		3 COINS 3 CREDITS
SETTING #15	1 COIN 1 CREDIT		4 COINS 4 CREDITS
	2 COINS 3 CREDITS		5 COINS 6 CREDITS
SETTING #17	3 COINS 1 CREDIT	SETTING #27	FREE PLAY
SETTING #18	4 COINS 1 CREDIT		
SETTING #19	1 COIN 1 CREDIT		
	2 COINS 2 CREDITS		
	3 COINS 3 CREDITS		
	4 COINS 5 CREDITS		

Table 3: MANUAL SETTING

COIN TO CREDIT	1 COIN 1 CREDIT
	2 COINS 1 CREDIT
	3 COINS 1 CREDIT
	4 COINS 1 CREDIT
	5 COINS 1 CREDIT
	6 COINS 1 CREDIT
	7 COINS 1 CREDIT
	8 COINS 1 CREDIT
	9 COINS 1 CREDIT
BONUS ADDER	NO BONUS ADDER
	2 COINS GIVE 1 EXTRA COIN
	3 COINS GIVE 1 EXTRA COIN
	4 COINS GIVE 1 EXTRA COIN
	5 COINS GIVE 1 EXTRA COIN
	6 COINS GIVE 1 EXTRA COIN
	7 COINS GIVE 1 EXTRA COIN
	8 COINS GIVE 1 EXTRA COIN
	9 COINS GIVE 1 EXTRA COIN
COIN CHUTE (#1 / #2) MULTIPLIER	1 COIN COUNTS AS 1 COIN
	1 COIN COUNTS AS 2 COINS
	1 COIN COUNTS AS 3 COINS
	1 COIN COUNTS AS 4 COINS
	1 COIN COUNTS AS 5 COINS
	1 COIN COUNTS AS 6 COINS
	1 COIN COUNTS AS 7 COINS
	1 COIN COUNTS AS 8 COINS
	1 COIN COUNTS AS 9 COINS

● SEQUENCE SETTING

When SEQUENCE SETTING is selected in either first or second screen, the SEQUENCE SETTING Mode (the third screen) appears. In this mode, number of credits required for starting the game can be set.

COIN ASSIGNMENTS
SEQUENCE SETTING

SEQUENCE1 *CREDIT

SEQUENCE2 *CREDIT

SEQUENCE3 *CREDIT

SEQUENCE4 *CREDIT

SEQUENCE5 *CREDIT

SEQUENCE6 *CREDIT

SEQUENCE7 *CREDIT

SEQUENCE8 *CREDIT

->EXIT

[X X X X X X X X X X]

[SEGA ENTERPRISES, LTD.]

DESCRIPTION OF SEQUENCE

SEQ1 ****

SEQ2 ****

SEQ3 ****

SEQ4 ****

SEQ5 ****

SEQ6 ****

SEQ7 ****

SEQ8 ****

SELECT WITH SERVICE BUTTON

AND PRESS TEST BUTTON

Each sequence can be set between 1 ~ 5.
Select EXIT to return to the first screen.

H. BOOKKEEPING

This allows such data as operating time/No. of coins is inserted/No. of credits to be checked, etc. This is test consists of 2 screens. Pressing SERVICE Button causes screen to be changed. Press TEST Button to return to the MENU screen. On the first screen, such data as total time, coin, and credit are displayed.

BOOKKEEPING			
TOTAL TIME	55H27M13S		
COIN1	16	SERVICE1	5
COIN2	4	SERVICE2	0
CREDIT	10		
TOTAL COIN	20		
COIN CREDIT	10		
SERVICE CREDIT	5		
TOTAL CREDIT	15		
PRESS SERVICE BUTTON TO ANOTHER PAGE			
PRESS TEST BUTTON TO EXIT			

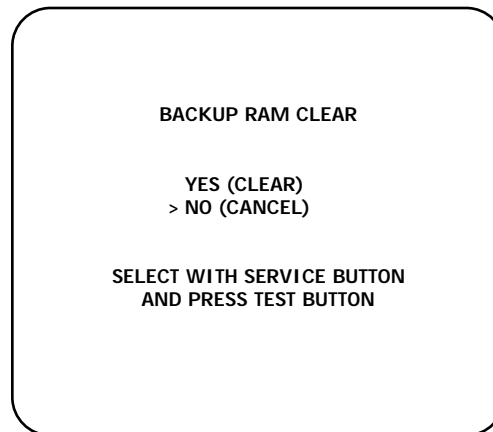
- Total Time is displayed as “ X X H X X M X X S “ and no date will be displayed after exceeding 24 hours.
- The displays for number of coin and number of service vary depending on the CABINET TYPE set in SYSTEM ASSIGNMENTS. Number of credit displays 1 if COIN CHUTE TYPE is set to COMMON in COIN ASSIGNMENTS. If COIN CHUTE TYPE is set to INDIVIDUAL, the applicable number in CABINET TYPE setting will be displayed.

On the second screen, each sequence displays the frequency of functioning.

BOOKKEEPING			
PLAYER1		PLAYER2	
SEQ1	1	SEQ1	0
SEQ2	0	SEQ2	1
SEQ3	1	SEQ3	0
SEQ4	0	SEQ4	1
SEQ5	0	SEQ5	0
SEQ6	0	SEQ6	0
SEQ7	0	SEQ7	0
SEQ8	0	SEQ8	0
PRESS SERVICE BUTTON TO ANOTHER PAGE			
PRESS TEST BUTTON TO EXIT			

I, BACKUP RAM CLEAR

Clears contents of BOOKKEEPING, operating time, coin/credit data, number of games played, etc.



Selecting YES clears all aforementioned data. Select NO and press TEST button to have the MENU mode return without clearing data.

Note that this does not affect the data of BOOKKEEPING in GAME TEST Mode. To clear the contents of BOOKKEEPING in GAME TEST Mode, enter into GAME TEST Mode and execute BACKUP DATA CLEAR.

J. ROMBD TEST

In this test, on -ROM-BD ROM check is executed. If GOOD is displayed, it is satisfactory. The IC No., TYPE, BYTE, and word refers to the check sum of each unit. Press TEST Button to return to MENU mode.

ROMBD TEST
[X X X X X X X X X X]
[SEGA ENTERPRISES, LTD]

NO.	TYPE	RESULT	NO.	TYPE	RESULT
IC29	**M	----	IC**	**M	GOOD
IC30	**M	----	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
IC**	**M	GOOD	IC**	**M	GOOD
....			
....			
IC**	**M	GOOD			

PRESS TEST BUTTON TO EXIT

In the above screen, IC 29 and IC 30 do not display GOOD or BAD.

Press the SERVICE Button to proceed to the screen the check sum is displayed.

ROMBD TEST
[X X X X X X X X X X]
[SEGA ENTERPRISES LTD.]

NO.	TYPE	BYTE	WORD	NO.	TYPE	BYTE	WORD
IC29	**M	****	****	IC**	**M	****	****
IC30	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
IC**	**M	****	****	IC**	**M	****	****
....				
IC**	**M	****	****				

PRESS TEST BUTTON TO EXIT

K. CLOCK SETTING

YEAR ,MONTH, DAY, HOUR, and MINUTE are set for SEGA HIKARU BD. Select the desired item with the SERVICE Button and press the TEST Button to increase the value. Bring the arrow to EXIT and press the TEST Button to return to MENU mode.

CLOCK SETTING

2000 7/ 7 7: 7 7 FRI

YEAR
MONTH
DAY
HOUR
MINUTE
SECOND

-> EXIT
CANCEL

2000 7/ 7 7: 7 **FRI

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

L. GAME TEST MODE

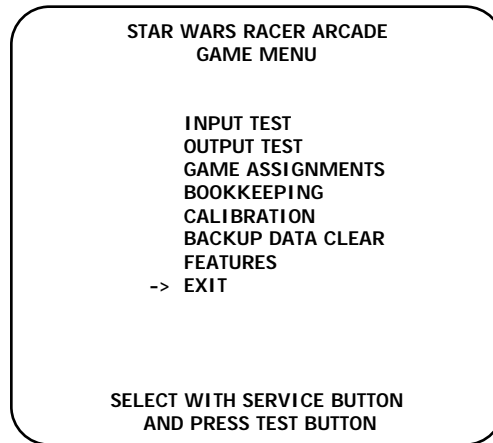
Enter the test Mode of the game connected to SEGA HIKARU BD. The TEST Mode includes INPUT Test and GAME ASSIGNMENTS such as game difficulty, etc. Refer to 9-3 for details.

9. GAME TEST MODE

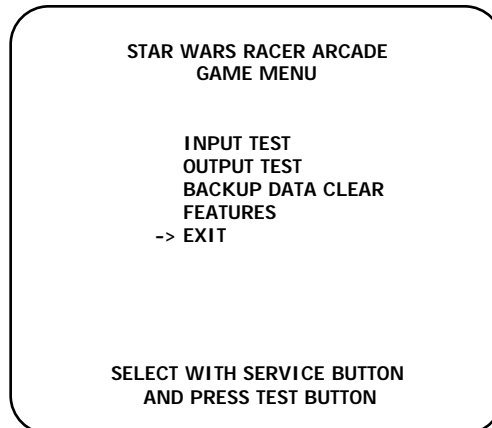
A. GAME MENU

According to the COMMUNICATION MODE setting in the SYSTEM ASSIGNMENTS screen in the SYSTEM TEST MODE, the display items in the GAME TEST MENU vary.

In the case as the COMMUNICATION MODE is set to other than RELAY:



When the COMMUNICATION MODE is set to RELAY:

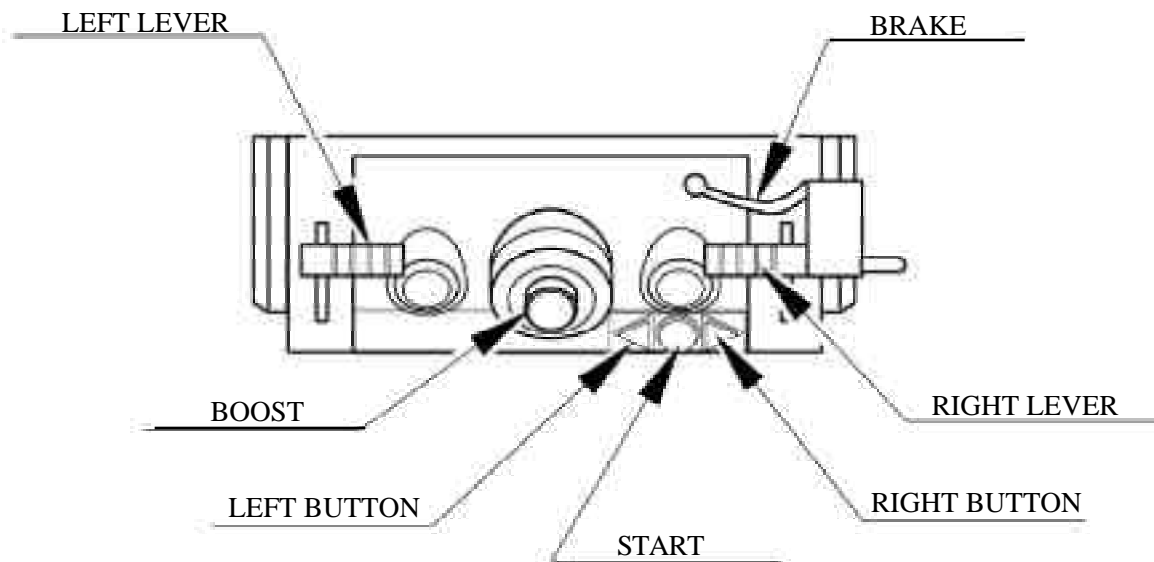


Bring the arrow (>) to the desired item and press the TEST Button. Hereafter the same applies to the items that display an arrow. The SELECT button and the START Button on the CONTROL PANEL function the same. Select the EXIT and press the TEST Button to return to the SYSTEM TEST MENU screen.

B. INPUT TEST

INPUT TEST		
BOOST		OFF
BRAKE		OFF
LEFT	BUTTON	OFF
RIGHT	BUTTON	OFF
START		OFF
SERVICE TEST		OFF
		OFF
LEFT	LEVER	**
RIGHT	LEVER	**
PRESS TEST AND SERVICE BUTTON TO EXIT		

This screen performs tests for the input units. Periodically perform tests in this screen. When each button on the cabinet is pressed down and the display goes ON, operation is satisfactory. The value for the LEVER changes according to the operation of the LEVER. Press the SERVICE button and the TEST button simultaneously to return to the GAME TEST MENU screen.

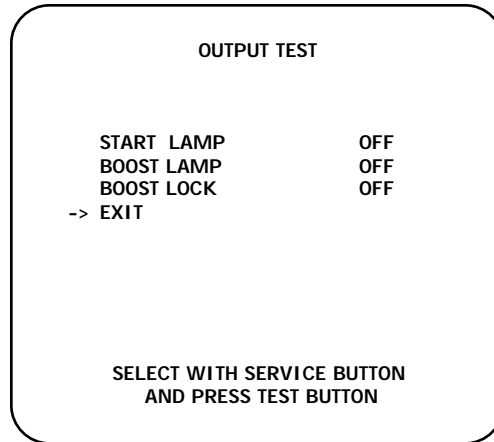


RECOMMENDED VOLUME VALUE

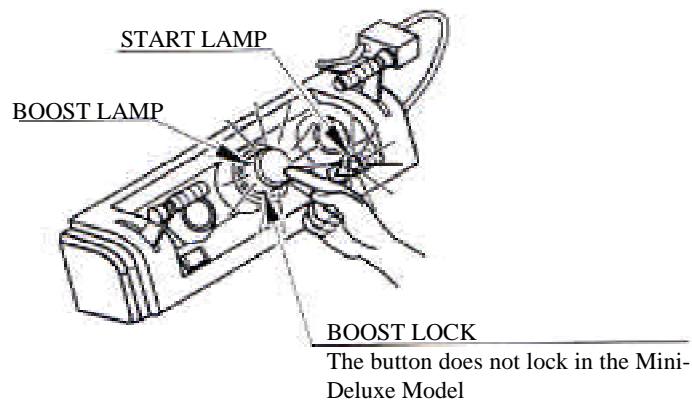
The range of the recommend Volume value for the LEVER is within 2D ~ C1. If the value does not fall into range, or if the LEVER V.R. value movements are irregular., adjust the V.R. in the following procedure (10-2).

The above range shows the maximum allowable values. From the viewpoint of the design, the moving range of the Volume is approximately 70H, therefore when the minimum value is 2D, the maximum value should be $\pm 9D$.

C. OUTPUT TEST



Operation status of each output unit can be checked. Select an item with the SERVICE button and press the TEST button. Each time you press the TEST button, ON/OFF display alters. If the lamps for the START and the BOOST buttons turn on when ON is displayed, operation is satisfactory. Change the BOOST LOCK to ON with the BOOST button pressed down. If the button is locked in the state of being pressed down, operation is satisfactory. If the CONTROL PANEL is set to STANDARD in D. GAME ASSIGNMENTS, the BOOST LOCK is not displayed on the screen. The ERROR DISPLAY will not occur in the Mini Deluxe Game.



D. GAME ASSIGNMENTS

According to COMMUNICATION MODE setting in the SYSTEM ASSIGNMENT screen in the SYSTEM TEST MODE, the display items in the GAME ASSIGNMENTS vary.

In this case the cabinet is set to MASTER.

GAME ASSIGNMENTS

DEFAULT VIEW	POD
DIFFICULTY	NORMAL
URL	ON
SEAT NUMBER	1
CONTROL PANEL	DELUXE
>EXIT	

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

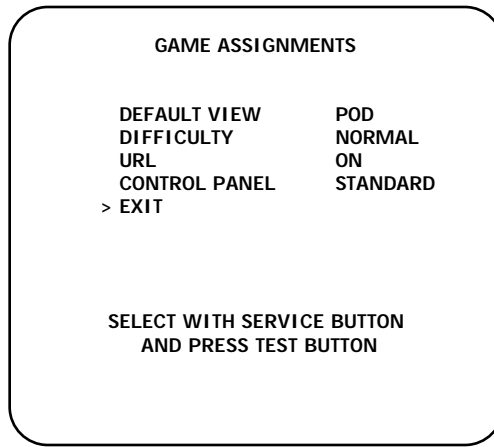
In this case the cabinet is set to SLAVE.

GAME ASSIGNMENTS

SEAT NUMBER	4
CONTROL PANEL	DELUXE
>EXIT	

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

In this case the cabinet is set to NO LINK.



The in -game default view can be set in **DEFAULT VIEW** . Select either **POD** (Subjective view) or **REAR** (Objective view from the rear).

The game difficulty can be set in **DIFFICULTY**. Select from among **VERY EASY/EASY/NORMAL/ HARD/ VERY HARD**. The higher the difficulty, the lesser the points you can get when passing through the checkpoints.

When the **URL** is set to **ON**, the official Home page address for the game is displayed during the **ADVERTISE** mode.

The ID number for each machine for the communication play can be set in the **SEAT NUMBER**. Select the ID. number from 1 to 4 and apply to each machine linked for communication play. If the same numbers are applied to 2 or more machines , the monitor displays “ **CONFLICTING SEAT NUMBER**” and the game cannot start.

In **CONTROL PANEL**, settings for the solenoid control for the lock mechanism inside the control panel and the error display can be performed. Select the either **DELUXE** or **STANDARD**. when selecting **DELUXE** as the **BOOST** button is pressed, the button is locked and is passed down due to activation of the solenoid. An error is displayed on the screen if the **BOOST** button or the lock mechanism malfunctions. (Sec.15).

When selecting **STANDARD**, the solenoid control and an error display are not performed.

E. BOOKKEEPING

The BOOKKEEPING displays the data of gameplay time, the frequencies of the vehicles, and the course selection, etc. in a total of 2 pages.

BOOKKEEPING 1/2

NUMBER OF GAMES		0			
PLAY TIME	OD	OH	OM	OS	
AVERAGE PLAY TIME		OH	OM	OS	
LONGEST PLAY TIME		OH	OM	OS	
SHORTEST PLAY TIME		OH	OM	OS	

TIME HISTOGRAM

0M00S-0M29S	0
0M30S-0M59S	0
1M00S-1M29S	0
1M30S-1M59S	0
2M00S-2M29S	0
2M30S-2M59S	0
3M00S-3M29S	0
3M30S-3M59S	0
4M00S-4M29S	0
4M30S-4M59S	0

PRESS TEST BUTTON TO CONTINUE

● **NUMBER OF GAMES:**
Total number of plays

● **PLAY TIME:**
Total play time

● **TIME HISTOGRAM**
By-playtime play frequency bookkeeping is displayed in increments of 30 seconds from 0M00S to 5M00S.

Press the TEST button to proceed to the next page (2/2).

BOOKKEEPING 1/2

TOTAL NUMBER OF GAMES 637 (391F:246R)

POD SELECTED

ANAKIN	384	(280F:104R)
SEBULBA	195	(85F:110R)
QUADINAROS	40	(18F:22R)
GASGANO	18	(8F:10R)

COURSE SELECTED

EASY	382	(269F:111R)
NORMAL	75	(49F:26R)
HARD	48	(33F:15R)
EXPERT	132	(40F:92R)

PRESS TEXT BUTTON TO EXIT

In the parentheses next to each item, the F refers to “FINISH” and the R refers to “RETIRE” (for your reference when setting the game difficulty). In the POD SELECTED screen, only ANAKIN and SEBULBA are displayed at the time of shipment. Once each of the other 2 vehicles become usable by fulfilling the certain requirements, a vehicle will be added to the screen one by one.

press the TEST button while page 2 is displayed to return to the GAME MENU screen.

F. CALIBRATION TEST

The volume values for the Throttle Levers left and right can be calibrated. When operation of the Lever is not satisfactory, adjust the volume value in this screen.

CALIBRATION TEST			
LEFT VALUE		RIGHT VALUE	
MAX	CA	MAX	CA
MIN	3D	MIN	3D
CURRENT	3E	CURRENT	3E

PRESS SERVICE BUTTON TO START CALIBRATION
PRESS TEST BUTTON TO EXIT

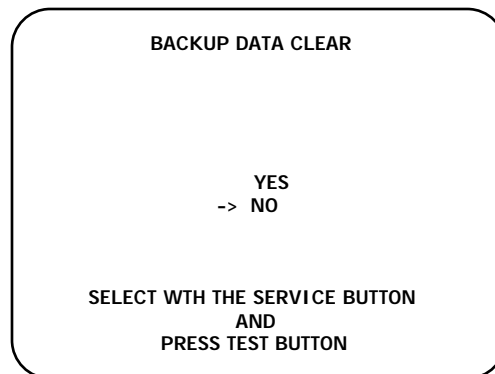
When performing calibration, first press the SERVICE button. The message in the lower screen changes as shown.

CLIBRATION TEST			
LEFT VALUE		RIGHT VALUE	
MAX	CA	MAX	CA
MIN	3D	MIN	3D
CURRENT	3E	CURRENT	3E

PRESS SERVICE BUTTON TO DECIDE VALUE
PRESS TEST BUTTON TO EXIT

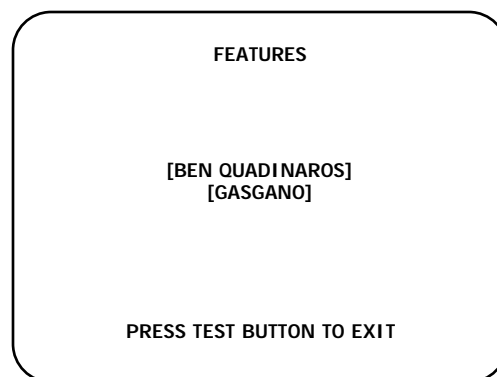
While the above screen is displayed, incline the left and right THROTTLE LEVERS lightly to the front and the rear ends. Each of the MAX/MIN/CURRENT analog input values for both the left and the right levers are displayed. Press the TEST button to return to the GAME MENU screen.

G. BACKUP DATA CLEAR



Clears the contents of the BOOKKEEPING. Bring the arrow to “YES” with the SERVICE button and press the TEST button. “COMPLETED” is displayed after the data has been cleared. bring the arrow to “NO” and press the TEST button when not cleared. Unlike the “BACKUP DATA CLEAR” in the SYSTEM TEST MENU, the play frequency data is cleared mainly in this mode. (the setting values in the GAME ASSIGNMENTS, the BOOKKEEPING data in the GAME MENU, and the high scores). Since the BACKUP DATA CLEAR clears the play-frequency data, executing this mode before meeting the requirements delays appearance of the hidden vehicles.

H. FEATURES



In the FEATURES, the name of hidden vehicles that appeared by fulfilling the certain requirements can be checked. If the hidden vehicles have not appeared, nothing but “DISABLED” is displayed. There are 2 kinds of vehicles hidden, and the requirements to make the vehicle appear differ one by one. Press the TEST button to return to the GAME MENU screen.

10. CONTROL PANEL



- Before starting to work, ensure that the Power SW is off. Failure to observe this can cause an electric shock or short circuit.
- Be careful not to change wirings. Damaged wiring can cause electric shock or short circuit.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
- This work should be performed by the location's Maintenance man or service man. Performing work by non-technical personnel can cause an electric shock hazard.
- Do not perform work other than what is specified in this Manual in order to prevent accidents during performing work and operation after performing work. Performing work not specified in this manual may require special training for this product. If you perform work other than what is stated in this manual that is required for repair, contact the offices stated in the manual or where you purchased the product. Ask for repair or inquire how to repair.



- Use caution when handling the parts inside the control panel. Be careful not to damage, misplace, or deform any parts. Damaging small a portion of a part can cause malfunctioning.
- When securing the plastic-made parts, do not excessively fasten screws and nuts. Failure to observe this may damage the parts and cause injury due to fragments resulting from damage.

In this product the input units are mounted on the control panel. The input units include the left and right levers on the control panel, the Brake Lever (the right-hand side), the BOOST button(the center), the START button (the lower right), and the SELECT buttons beside the START button on the control panel. Be sure to check the reaction of each input unit on a monthly basis. If the operability is poor and performing CALIBRATION in test mode does not improve the situation, the cause may be a malfunction of the input unit in the control panel.

10 - 1 REMOVING THE CONTROL PANEL COVER

In order to check the control panel inside, first remove the control panel cover.

- ① Turn power off.
- ② Remove the GRIP from the left lever. Take out a screw from each to remove the GRIP, the GRIP END, and the GRIP PIN from the lever.

SCREW (1) black
w/flat & spring washers

GRIP END

Lever left

CONTROL PANEL COVER

GRIP PIN

GRIP

- ③ Remove the GRIP and the ASSY BRAKE from the right lever. Take out a screw for each to remove the GRIP, the GRIP END, and the ASSY BRAKE. To avoid wire damage, do not allow the ASSY BRAKE to come down.

SCREW (1) black

GRIP

ASSY BRAKE

Lever

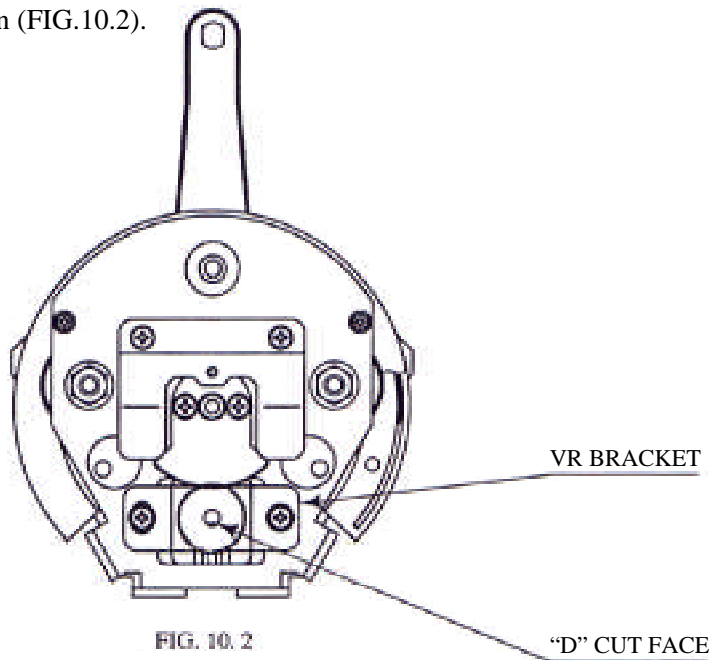
GRIP END

10 - 2 VOLUME ADJUSTMENT/REPLACEMENT

In case the operability of the right and left levers are poor, and the performed CALIBRATION in test mode does not improve the situation, the cause may be failure of the Volume Gear's engagement in the ASSY LEVER MECHA inside the control panel and or Volume malfunctioning. Follow the following procedure to perform Volume adjustment or replacement. Since work is performed inside the energized cabinet, be very careful not to touch undesigned places.

ADJUSTMENT

- ① Turn power off and remove the CONTROL PANEL COVER (10-1)
- ② Loosen the 2 cscrows securing the VR BRACKET in the ASSY LEVER MECHA to push the gear out of mesh.
- ③ With the Lever being at the centering position, bring the gear into mesh so that the status of the volume's shaft is as shown in (FIG.10.2).



- ④ Fasten the screws securing the VR BRACKET.
- ⑤ Turn power on and perform volume setting in the CALIBRATION in the test mode. (9-3)
- ⑥ During the I/O TEST in the test mode, check to see if the volume value varies smoothly in accordance with operation of the Lever. (9-3)
- ⑦ Turn off power.
- ⑧ Install the CONTROL PANEL COVER to change back to former state.

REPLACEMENT

If the volume is in a status as per FIG. 10.2, moving the Lever fully forward and backward does not damage parts, and the value does not exceed the Volume's movable range.

- ① Turn off power and remove the CONTROL PANEL COVER (10-1).
- ② Disconnect the connector from the VOLUME to be replaced.
- ③ Take out the 2 screws securing the VR BRACKET, in the ASSY LEVER MECHA to remove the VR BRACKET with the GEAR and VOLUME mounted on it.

Disconnect the connector.

PHOTO 10.2 b

- ④ Remove the GEAR and VOLUME from the VR BRACKET and replace the VOLUME

PHOTO 10.2 c

SCREW (2)

Flat & spring washers

- ⑤ With the Lever being at the centering position, bring the gear into mesh so that the status of the volume's shaft is as shown in the Fig. (FIG.10.2)
- ⑥ Fasten the 2 screws securing the VR BRACKET. PHOTO 10.2 d
- ⑦ Turn power on and perform the volume setting for CALIBRATION in the test mode.
- ⑧ During I/O TEST in test mode, check to see if the volume value varies smoothly in accordance with operation of the Lever. (9-3)
- ⑨ Turn off power.
- ⑩ Install the CONTROL PANEL COVER to change back to the former state.

10 - 3 GREASING



Do not touch solenoid. The solenoid can be very hot.



- Be sure to use the designated grease. Using undesignated grease can cause parts damage.
- Do not apply greasing to undesignated places. Failure to observe this can cause malfunctioning or quality deterioration of parts.
- The period for greasing specified herein is standard. Apply greasing to specified portions as occasion arises.

Once every 3 months apply greasing to the volume mesh portion in the ASSY MECHA LEVER and the ASSY BRAKE spring. For spray greasing, use GREASE MATE (PART NO.090-0066). Apply greasing to the BOOST button MECHA portion semiannually. Use GREASE 248 (PART NO.090-0070) for the portion. If the specified greasing is not obtainable, use greasing for the cold-proof, heat resisting plastic instead.

APPLY GREASING TO THE ASSY MECHA LEVER

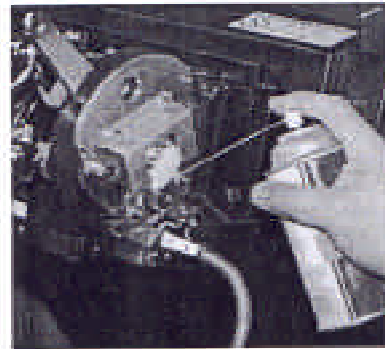
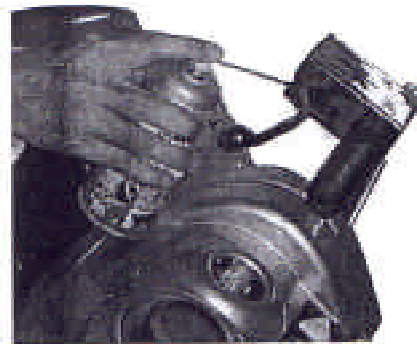


PHOTO 10.3 a VOLUME GEAR MESH PORTION

APPLY GREASING TO THE ASSY BRAKE

Insert the spray-greasing nozzle into the square hole of the ASSY BRAKE LEVER to apply greasing to the spring portion.



11 . COIN SELECTOR

HANDLING THE COIN JAM

If the coin is not rejected when the REJECT BUTTON is pressed, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector functions correctly.

CLEANING THE COIN SELECTOR

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

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

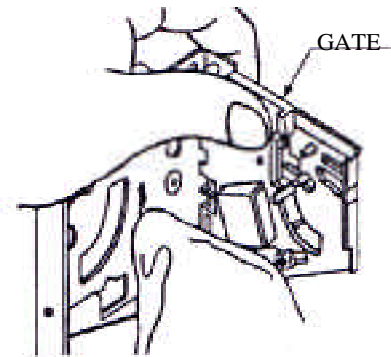


FIG. 11a

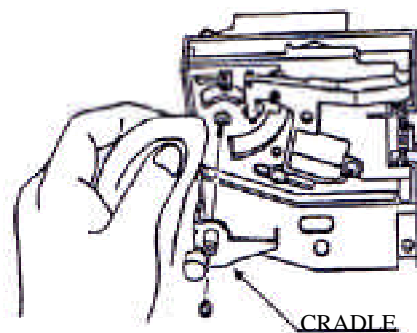


FIG. 11b



IMPORTANT!!

- Never apply machine oil, etc. to the coin selector
- After cleaning the Coin Selector, insert a regular coin during the normal working status to ensure that the Selector functions correctly.

COIN INSERTION TEST

Once a month, when performing the COIN SW TEST, simultaneously check the following:

- ☐ Does the Coin Meter count satisfactorily?
- ☐ Does the coin drop into the Cashbox correctly?
- ☐ Is the coin rejected once inserted when the REJECT BUTTON is kept pressed down?

Insert a coin while keeping the Reject Button pressed down and check if it is rejected.

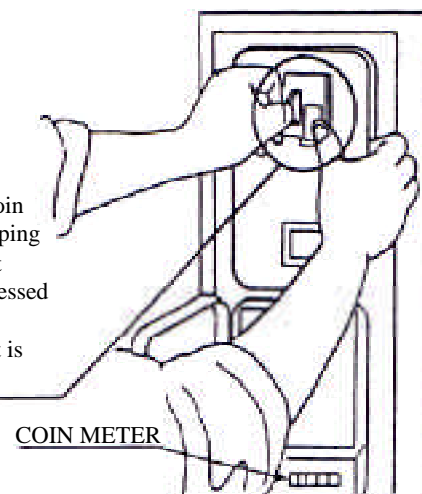


FIG. 11c

OPTIONAL DOLLAR BILL ACCEPTOR

- THE COIN DOOR ASSEMBLY USED ON STAR WARS POD RACER MINI DELUXE COMES EQUIPED TO ACCEPT A DOLLAR BILL ACCEPTOR. ALL NEEDED WIRING CONNECTIONS ARE CONVIENENTLY LOCATED INSIDE THE GAME FOR THIS APPLICATION.
- THE COIN DOOR CAN ACCOMMODATE THE FOLLOWING VALIDATOR(S):

FORWARD-MOST
HOLE POSITION

Mars 2000 series

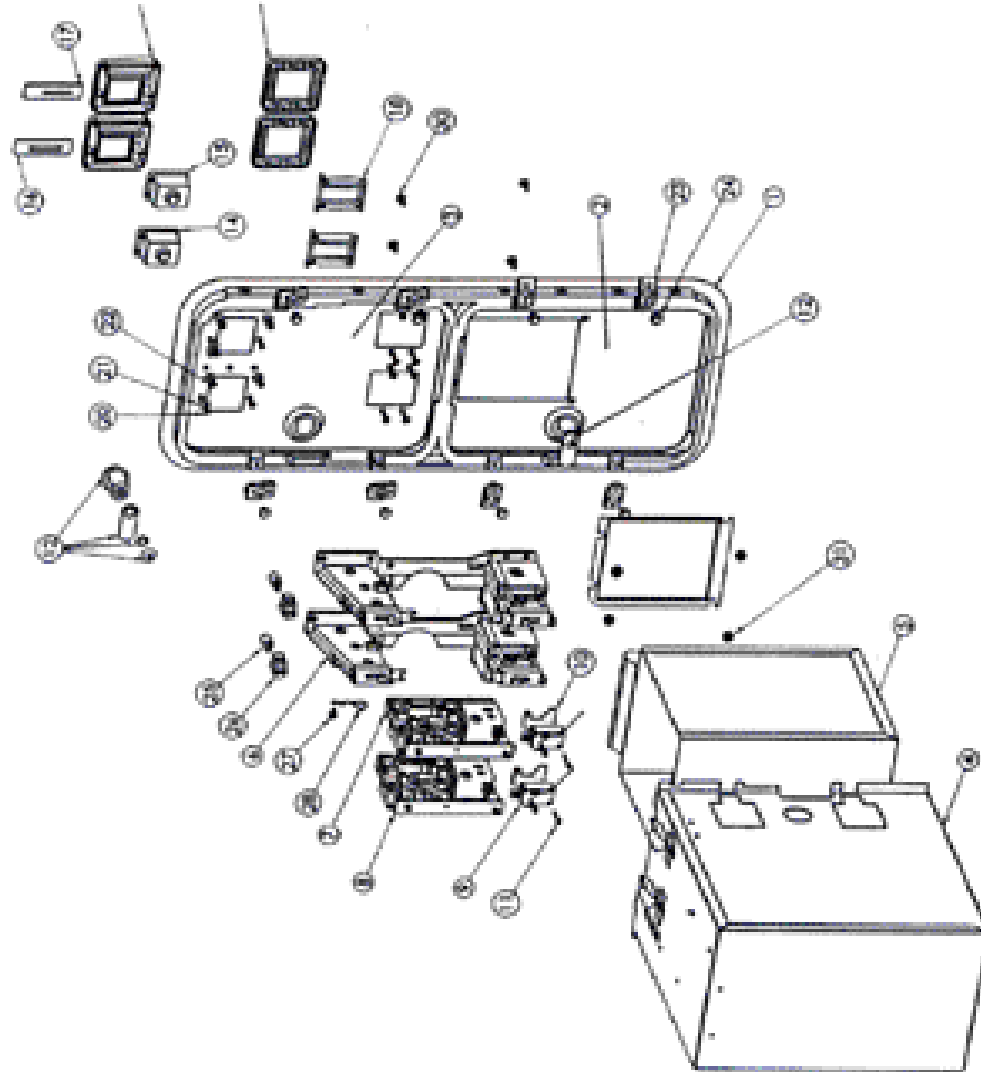
**42-1155-00 MARS VALIDATOR \$1,2,5 300 CAP

The frame and cashbox enclosure on this coindoor has been modified to accommodate a Mars 2000 series stacker. It can be added by simply removing the cut-out plate. This one entry door can be ordered through Happ Controls authorized distributors. The part number is 40-6000-10EX. The Mars stacker can be obtained through an authorized Mars distributor.

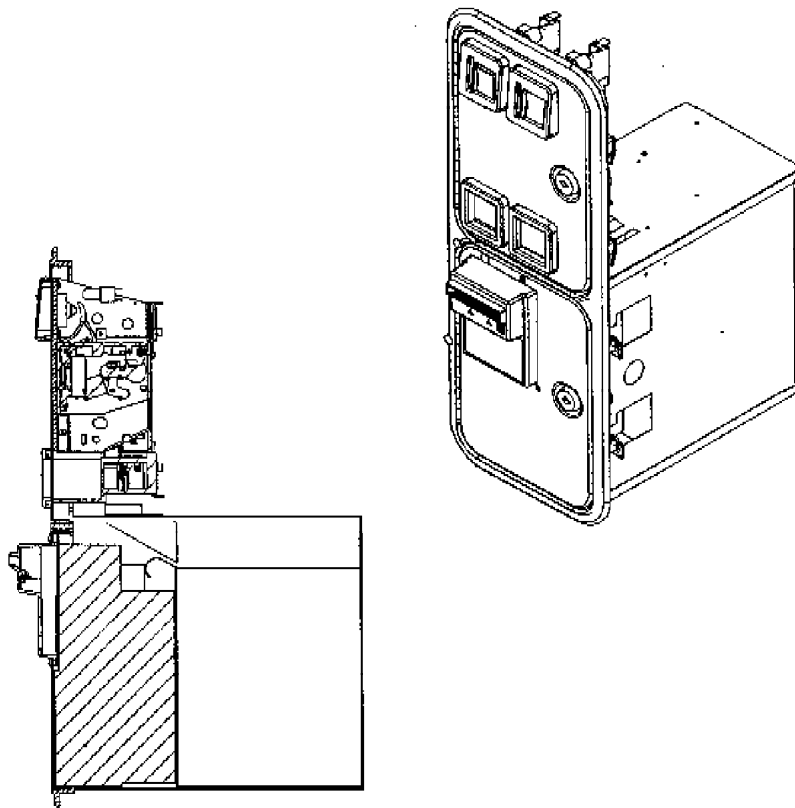
**Happ part number

40-6000-10EX

ITEM NO.	QTY	PART NO.	DESCRIPTION
1	1	40-6000-10	FRAME ONLY WITH LOCK VAL ON THE TOP
2	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
3	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
4	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
5	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
6	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
7	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
8	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
9	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
10	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
11	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
12	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
13	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
14	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
15	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
16	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
17	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
18	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
19	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
20	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
21	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
22	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
23	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
24	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
25	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
26	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
27	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
28	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
29	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
30	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL
31	1	40-6000-10	DOOR HANDLE ONLY WITH LOCK VAL



****Coin door shown with optional dollar bill validator inserted****



12. MONITOR

12 - 1 CAUTIONS AND WARNINGS CONCERNING THE SAFETY FOR HANDLING THE MONITORS



CAUTION!

When performing such work as installing and removing the monitor, inserting and disconnecting the external connectors to and from monitor, be sure to disconnect the power connector (plug) before starting work. Proceeding the work without following this instruction can cause electric shock or malfunctioning.

Using the monitor by converting it without obtaining a prior permission is not allowed. SEGA shall not be liable for any malfunctioning and accident caused by said conversion.

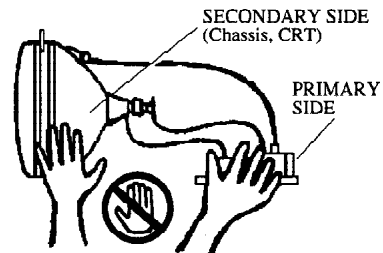


WARNING!

Primary side and secondary side

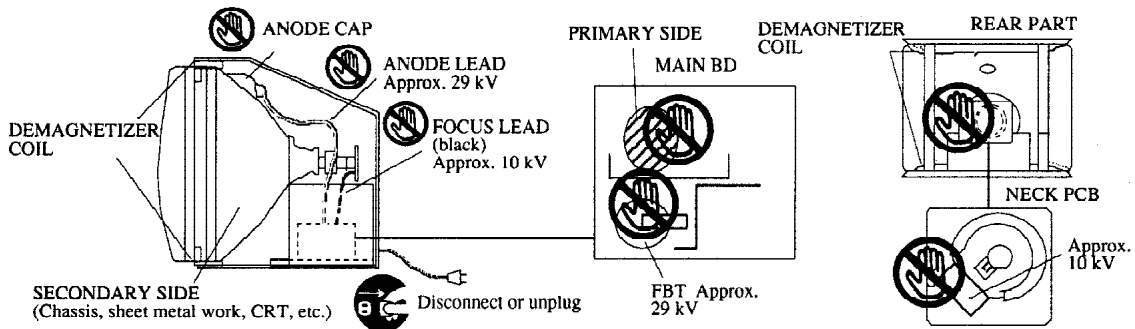
The monitor's circuit which is divided into the Primary side and secondary side, is electrically isolated. Do not touch the primary side and the secondary side simultaneously. Failing to observe the instruction can cause electric shock, and this is very dangerous.

When making monitor adjustments, use a non-conductive driver and make adjustment without touching any other part other than the Adjustment V.R. and Knob. Also, be sure not to cause a short-circuit to the Primary side and the Secondary side. If short-circuited, it can cause electric shock or malfunctioning, which is very dangerous.



High tension Voltage

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



Connecting the CRT and PCB

For combining the CRT and PCB, use the specified part No. to maintain the status of adjustments made at the factory. The anode of the CRT itself will be accumulatively charged as time elapses, generating high tension voltage which is very dangerous. The monitor should be used with the Chassis, CRT and PCB assembled. When repair, etc. is required at the time of malfunctioning, be sure to send it in an "as assembled" condition. If these are disassembled, what's charged to said high tension voltage can be discharged, causing a very hazardous situation. Therefore, under no circumstances should it be disassembled.



CAUTION!

Static Electricity

Touching the CRT surface sometimes causes you to slightly feel electricity. This is because the CRT surfaces are subject to static and will not adversely affect the human body.

Installation and removal

Ensure that the Magnetizer Coil, FBT (Fly-Back Transformer), Anode Lead and Focus Lead are not positioned close to the sheet metal work's sharp edges, etc. and avoid damaging the insulated portions so as not to cause an electric shock and malfunctioning. (For the name of parts, refer to the above figures.)



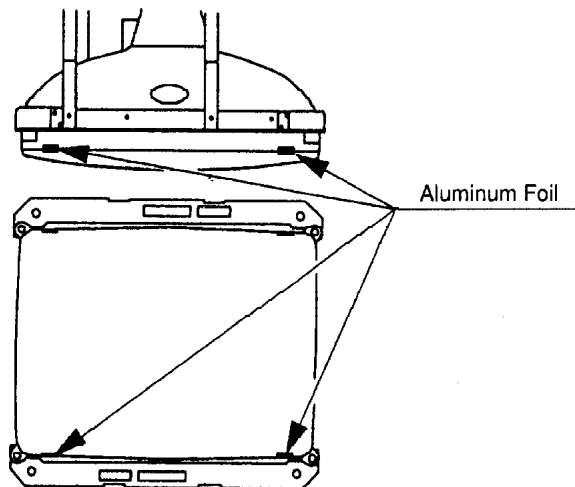
CAUTION!

For the purpose of static prevention, special coating is applied to the CRT face of this product. To protect the coating, pay attention to the following points. Damaging the coating film can cause electric shock to the customers. For the caution to be heeded when clearing, refer to the Section of Periodic inspection Table.

Do not apply or rub with a hard item (a rod with pointed edge, pen, etc.) to or on C.R.T. surfaces.

Avoid applying stickers, seals, etc. on the C.R.T. face.

Do not remove aluminum foils from the C.R.T. corners. Removing the aluminum foils can cause static prevention effects to be lowered.



CAUTION!

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.

When making adjustment, utilize a resinous Alignment Rod. Servicing with bare hands or using conductive tools can cause electric shock.

12 - 2 CAUTIONS TO BE HEEDED WHEN CLEANING THE CRT SURFACES



CAUTION!

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

- 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 abrasive, 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 scrub brushes, etc.

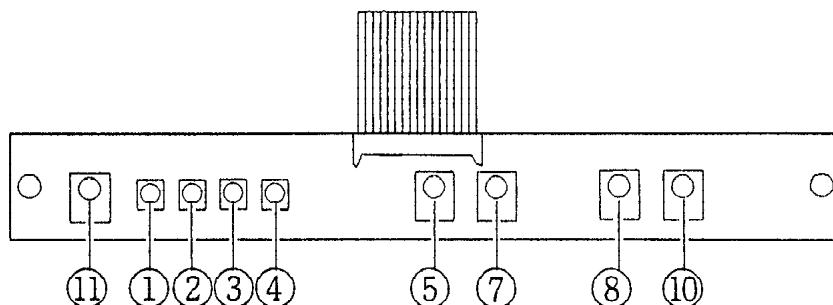
Clean the CRT surfaces once a week. When cleaning, pay attention to the above cautions so that the antistatic coating will not come off.

12 - 3 ADJUSTMENT METHOD

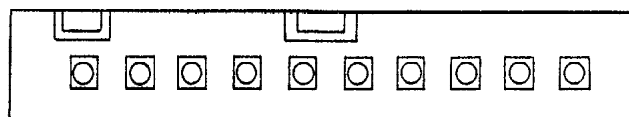


- Monitor adjustments are made at the time of shipment. Therefore, do not make further adjustments without a justifiable reason. Adjusting a monitor which contains high tension parts is dangerous work. Also, an erroneous adjustment can cause deviated synchronization and image fault, resulting in malfunction.
- When making adjustments, utilize a resinous Alignment Rod. Servicing with bare hands or using tools made of conductive material can cause electric shock.

NANAO monitor: 2 0 0 - 5 2 4 2 - 2 4 - 0 4 (24K mode)



SANWA monitor: 2 0 0 - 5 2 4 3 - 2 4 (24K mode)



①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
R GAIN	G GAIN	B GAIN	BRIGHT	H SIZE	H HOLD	H POSI	V SIZE	V HOLD	V POSI

- ① R-GAIN
- ② G-GAIN Controls colors.
- ③ B-GAIN
- ④ BRIGHT Controls screen brightness.
- ⑤ H. SIZE Controls horizontal screen size.
- ⑥ H. HOLD Provides horizontal synchronization, i.e., controls right/left hold.
- ⑦ H. POSI Controls horizontal display position on screen.
- ⑧ V. SIZE Controls vertical screen size.
- ⑨ V. HOLD Provides vertical synchronization, i.e., controls up-down hold.
- ⑩ V. POSI Controls vertical display position on screen.
- ⑪ CONTRAST Adjusts image contrast.

13. REPLACING THE FLUORESCENT LAMP AND BUTTONS



WARNING!

- When performing the work, be sure to turn power off. Working with power on can cause an electric shock or short circuit accident.
- The fluorescent lamp, when it gets hot can cause burns. Be very careful when replacing the Fluorescent Lamp.

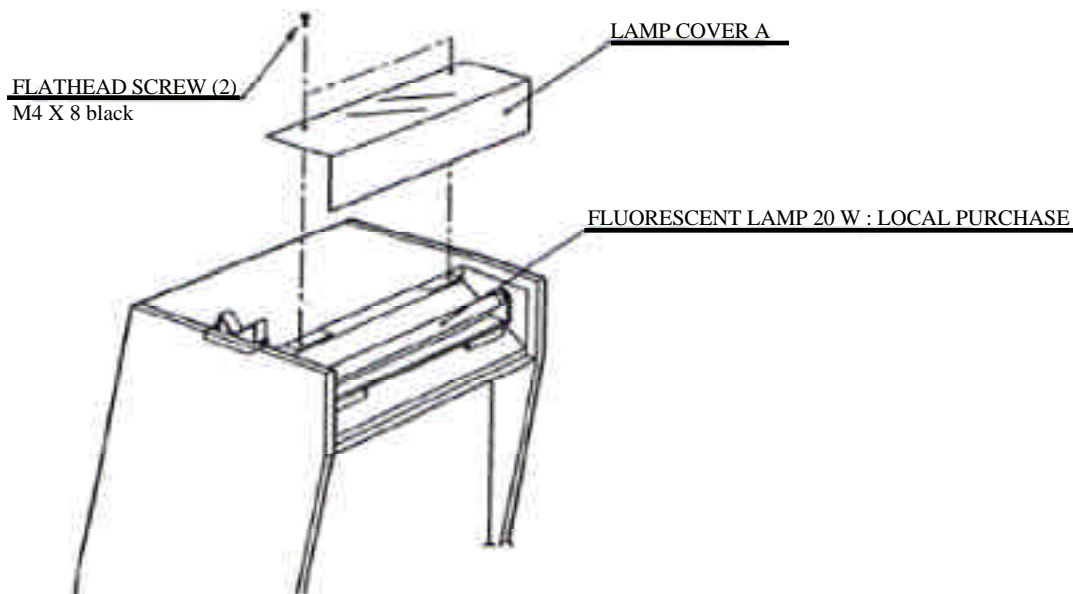


CAUTION!

To perform work safely and securely, be sure to use a step which is in a secure and stable condition. Not using a step or using an unstable step can cause violent falling accidents.

THE FLUORESCENT LAMP

- ① Take out the 2 Truss Screws and remove the Plate Holder.
- ② Lower the Billboard Plate and replace the Fluorescent Lamp.



START BUTTON AND VIEW CHANGE BUTTON

Be careful not to damage the wiring connection inside the start button and view change button.

- ① Turn power off.
- ② Take out the 4 Truss Screws.
- ③ Disconnect the connector attached to the start button, and the VR BUTTON START REVIEW 1 can be removed.

14. PERIODIC INSPECTION TABLE

The items listed below require periodic check and maintenance to retain the performance of this machine and to ensure safe business operation. When handling the controller, the player will be in direct contact with it. In order to always allow the player to enjoy the game, be sure to clean it regularly. Also, it is advisable to provide wet tissue, etc. for player use.



- Be sure to check once a year to see if power cords are damaged, the plug is securely inserted, and dust is accumulated between the Socket Outlet and the Power Plug, etc. Using the product with accumulated dust can cause fire and electric shock hazards.
- Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the internal cleaning. Using the product with accumulated dust in the interior without cleaning can cause a fire or accident. Note that cleaning the interior parts can be performed on a pay-basis.

TABLE 14

	Item	Interval	Reference
CABINET	Check Adjuster's contact with surface.	Daily	3
CONTROL PANEL	Cleaning	As necessary	
	Inspection of SW, VR.	Monthly	9
	Greasing to the gear mesh portion and the spring.	Trimonthly	10-3
	Greasing to the BOOST button.	Semiannually	10-3
COIN CHUTE DOOR	Check COIN SW.	Monthly	9
	Coin insertion test.	Monthly	11
	Cleaning of COIN SELECTOR	Trimonthly	11
PROJECTOR	SCREEN cleaning	Weekly	12-1
	Check adjustments	Monthly or when moving	6, 9, 12
SEAT	An anti-static electricity measure	Bimonthly	5
	Greasing to the seat rail	Trimonthly	FIG.14
GAME BD	MEMORY TEST	Monthly	9
	Check settings	Monthly	9
INTERIOR	Cleaning	Annually	See above
POWER SUPPLY PLUG	Inspection and cleaning		
Cabinet surfaces	Cleaning	As necessary	See below

CLEANING THE CABINET SURFACES

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

15. DESIGN RELATED PARTS



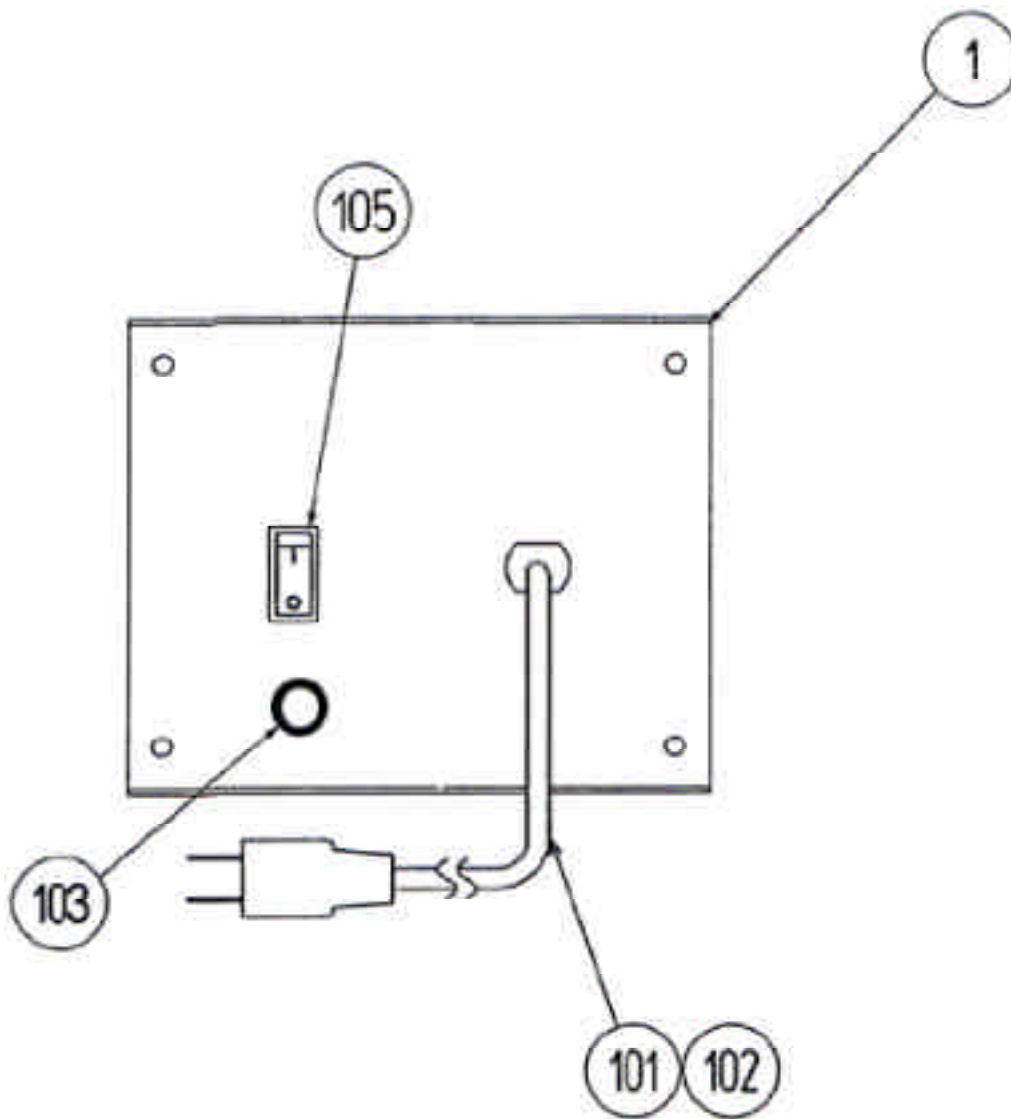
ITEM NO.	PART NO.	DESCRIPTION
1	999-0983	MARQUEE
2	999-0982	POP PANEL
3	999-0984	RIGHT SIDE DECAL
NOT SHOWN	999-0985	LEFT SIDE DECAL
4	999-0986	RIGHT CENTER DECAL
NOT SHOWN	999-0987	LEFT CENTER DECAL
NOT SHOWN	999-1037	SEAT DECAL SET
5	999-1038	REAR POD (PLASTIC)

16. PARTS LIST

SWITCH UNIT

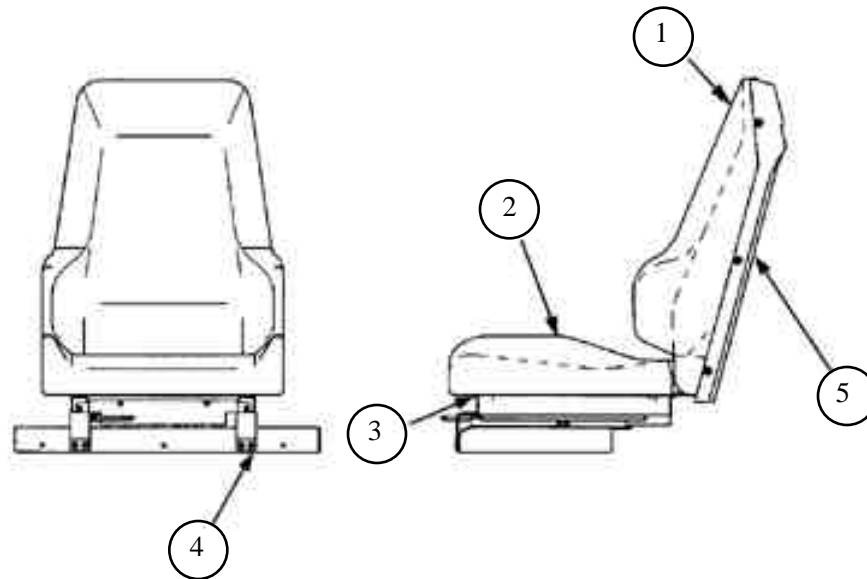
ITEM NO.	PART NO.	DESCRIPTION
1	INY-1181	SW BRKT
2	421-8911	STICKER SW UNIT
101	509-5028	SW PB 1M
102	220-5179	VOL CONT B-5K OHM
103	601-0042	KNOB 22 MM

ASSY AC UNIT (DRT1-0400)

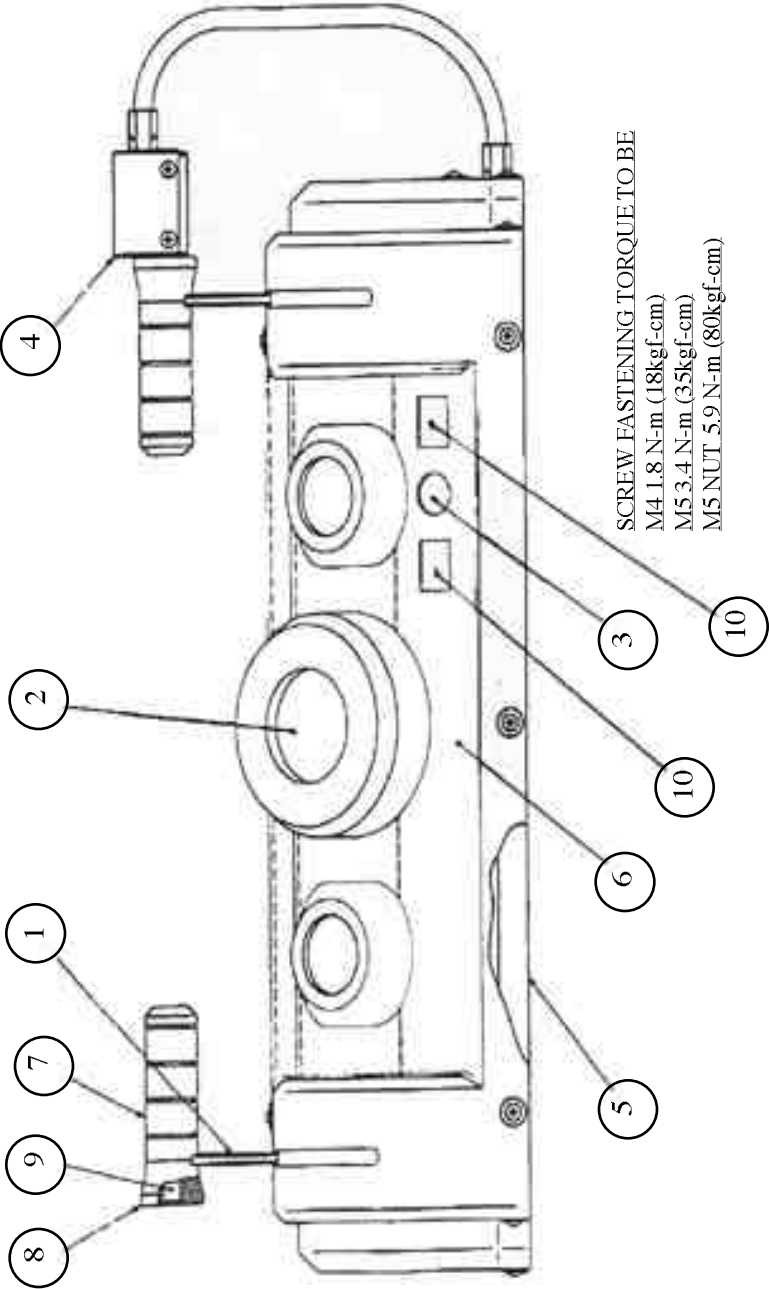


ITEM NO.	PART NO.	DESCRIPTION
1	SPG5-0401	AC BRKT
101	600-5843-25	CA & PLUG ASSY 5A W/F-L=2.5M
102	280-5143-6N34	BUSHING STRAIN RELIEF 6N34
103	Local Purchase	FUSE 5000 MA UL
105	509-5453-91-V-B	SW ROCKER J8 V-B

ASSY SEAT



ITEM NO.	PART NO.	DESCRIPTION
1	DNY0-2131	UPPER SEAT
2	DNY0-2132	LOWER SEAT
3	DYN1-2081	SEAT FRAME
4	DYN1-2084	SEAT BASE
5	999-1009	SEAT BACK (PURPLE)

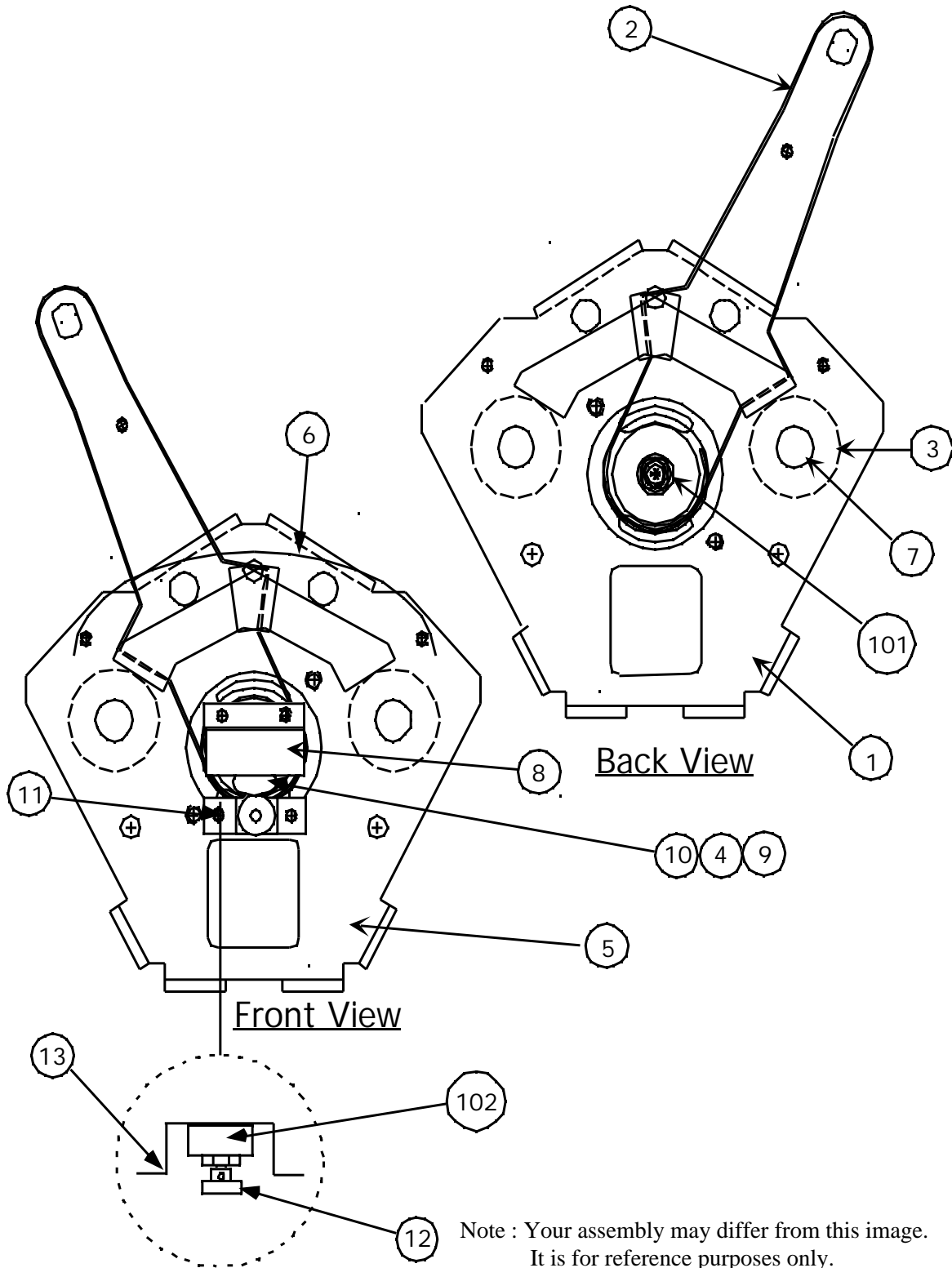


ASSY CONTROLLER

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION
1	999-1010	ASSY LEVER MECHA
2	999-1011	BOOST BUTTON (IMPERIAL#54-0004-12)
3	999-1012	START SWITCH (IMPERIAL#57-2000-30)
4	999-1013	ASSY BRAKE
5	999-1014	CONTROLLER BASE
6	999-1015	CTRL PNL COVER
7	POD-2103	GRIP
8	POD-2104	GRIP END
9	999-1016	GRIP PIN
10	999-1017	SELECT SWITCH (IMPERIAL#57-2000-65)

ASSY LEVER MECHA (999-1010)

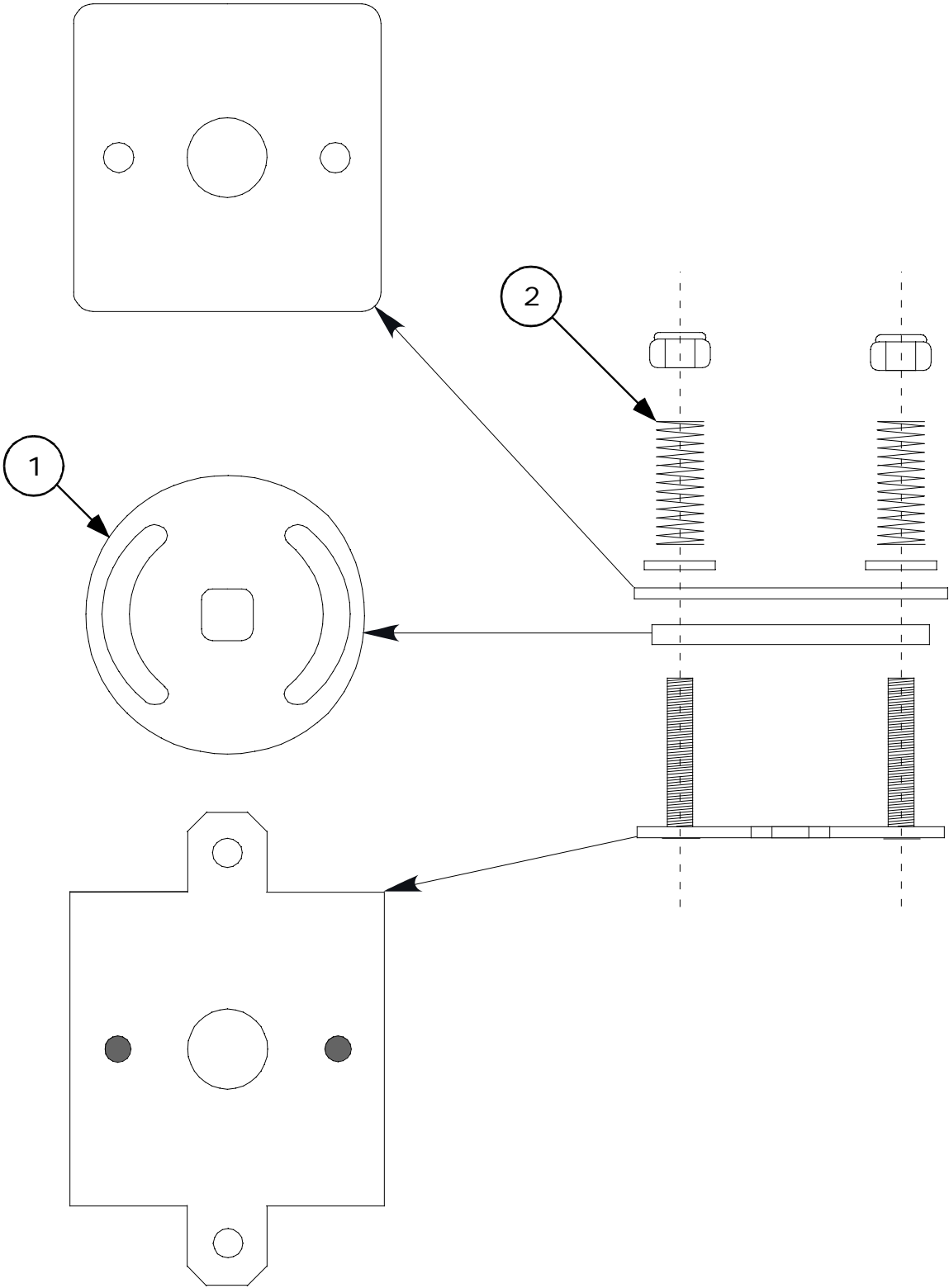


ASSY LEVER MECHA (999-1010)

(D-2/2)

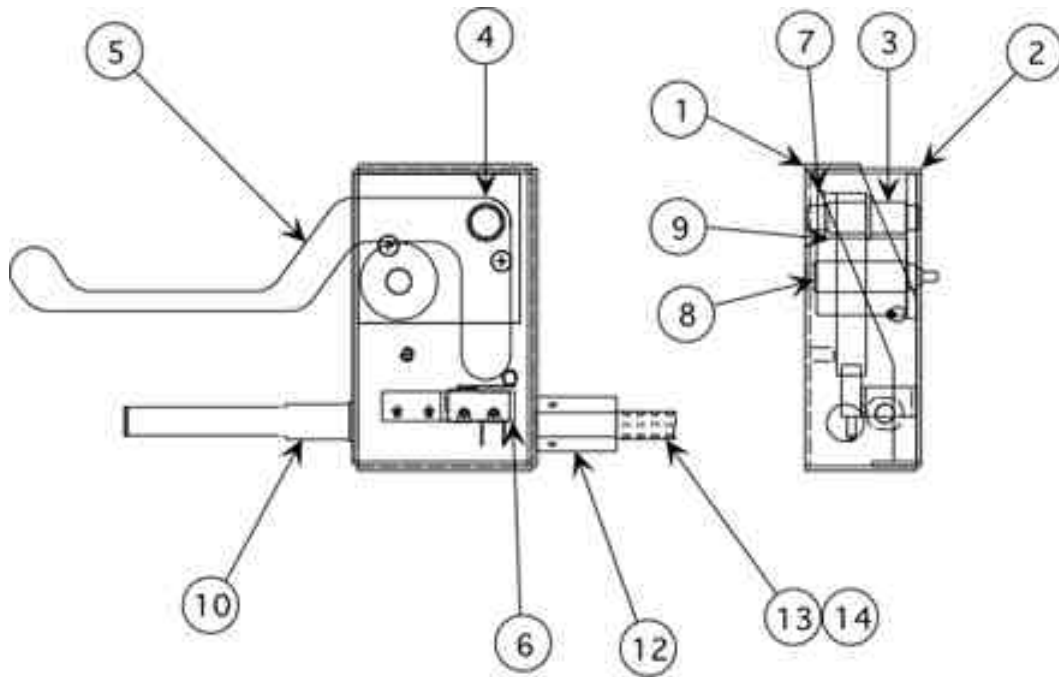
ITEM NO.	PART NO.	DESCRIPTION
1	999-1018	LEVER BRKT INNER
2	999-0996	LEVER SHAFT
3	999-1019	STOPPER RUBBER LEVER
4	999-1000	GEAR HOLDER PLATE
5	999-1020	LEVER BRKT OUTER
6	999-1003	SHUTTER PLATE
7	999-1021	STOPPER SHAFT LEVER
8	999-0999	GEAR COVER
9	999-1005	GEAR HOLDER
10	999-1022	ADJUST GEAR
11	999-0998	VR BRACKET
12	999-1023	GEAR
13	999-1002	INSULATOR PAPER
101	999-1024	ROTARY DAMPER
102	999-1025	VOL CONTROL 5K LONG LIFE

ASSY ROTARY DAMPER (999-1024)



- | | | |
|----|----------|--------------------------------|
| 1. | 999-1084 | DISK INNER RORY DAMPR STW MINI |
| 2. | 999-1085 | SPRING ROTARY DAMPR STW MINI |

ASSY BRAKE (999-1013)



ITEM NO.	PART NO.	DESCRIPTION
1	999-0994	BRAKE COVER UPPER
2	999-0995	BRAKE COVER LOWER
3	999-1026	BRAKE SHAFT
4	999-1027	TORSION SPRING BRAKE
5	999-1001	BRAKE LEVER
6	999-1028	MICRO SWITCH
7	999-1029	BRAKE COLLAR
8	999-1030	STOPPER SHAFT
9	999-1031	STOPPER RUBBER BRAKE
10	999-1032	GRIP PIN R
11	999-0997	MOUNTING BRACKET (not shown)
12	999-1033	HOSE END
13	999-1034	HOSE
14	999-1035	HARNESS (BRAKE)

17. WIRE COLOR TABLE

THE WIRE COLOR CODE is as follow:

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

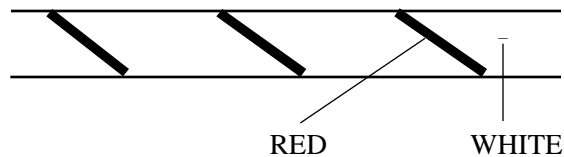
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

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

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

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

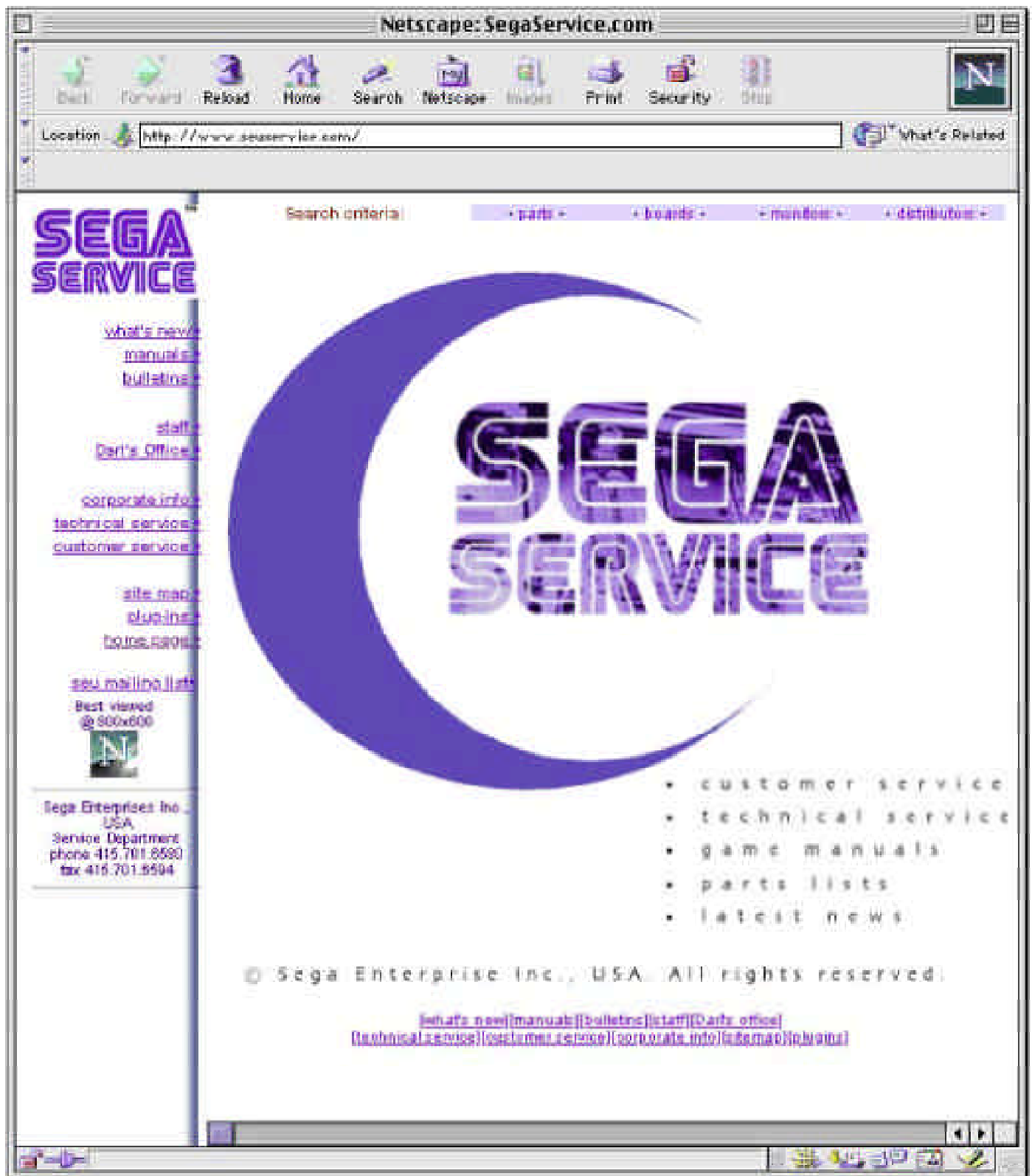
<Example> 51 WHITE / RED



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

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

VISIT OUR WEBSITE!





SEGA ENTERPRISES, INC. (USA)

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