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INTRODUCTION OF THE OWNERS MANUAL

SPECIFICATIONS

Installation space: 112 in.(L) x 52 in.(W)

Height: 90 in.

Weight: Approx. 1180 lbs.

Power maximum current: 8.4 Amp AC 120V 60 Hz

MONITOR: 50 INCH PROJECTION DISPLAY

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 SEGA RALLY 2 DLX, 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, non-technical 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)

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Customer Service

45133 Industrial Drive

Fremont, CA 94538

Phone 650-632-7580

Fax 650-632-7594

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

Monday thru Friday

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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.

General Precautions Page 2 of 3

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 benzene, 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;

General Precautions Page 3 of 3

- · 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.

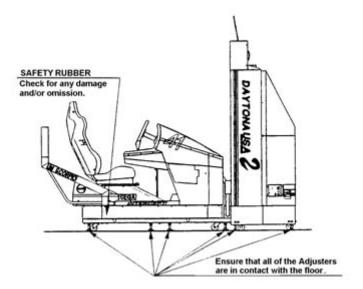


1. PRECAUTIONS TO BE HEEDED FOR OPERATION



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.





Check to see if hazard preventive parts are damaged or omitted.

Operating the product with the hazard preventive parts as is left in an irregular status will cause accidents.

Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.

Do not climb on the product. Climbing on the product can cause falling down accidents.

To check the top portion of the product, use a step. To avoid electric shock, check to see if door & cover parts are closed.

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.

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

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 the others and result in injury or trouble.

PRECAUTIONS TO BE HEEDED DURING OPERATION



To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players. To avoid injury and accidents, those who fall under the following categories are not allowed to play the game.

- > Intoxicated persons.
- > Those who need assistance such as the use use of apparatus when walking.
- > Those who have high blood pressure or a heart condition.
- > Those who have experienced muscle convulsion or loss of consciousness when exposed to intensive light stimulus due to watching television, playing video games or water surface flickering.
- > Persons susceptible to motion sickness.
- > Persons whose actions runs counter to the product's warning displays.

To avoid injury from potential falling down accidents, be sure to that only one person is allowed to play at a time.

Do not allow players to put any heavy items or beverages on the product. Falling items can cause accidents and spilled beverages can cause electric shock.

To avoid electric shock and short circuit, 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 falling down and injury resulting from falling down, immediately stop the customer's leaning against or climbing on the product, etc.

To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without justifiable reason.



Instruct the player to hold firmly to the Safety Bar during game. Caution the customers who are most likely to cause injury by playing without holding the Safety Bar, for example.

To avoid injury, do not allow persons other than the player access to the mechanism base during game play.

Instruct the player not to put baggage, etc. on the mechanism base to avoid damaging such items.

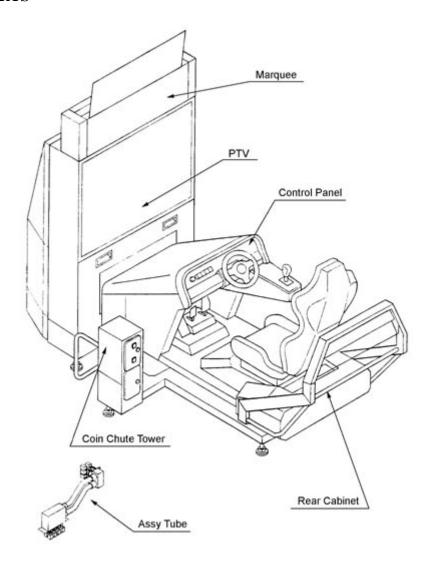
Regarding this product, the weight of the player is limited to 330 lbs. To avoid machine damage and injury due to machine damage, playing by those who are as heavy as 330 lbs. or heavier is strictly prohibited.

Immediately stop violent acts such as hitting and kicking the product. Such violent acts can cause parts to be damaged or falling down.

Name Of Parts Page 1 of 2

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2. NAME OF PARTS



GAME SPECIFICATIONS	WIDTH ~ LENGTH ~ HEIGHT	WEIGHT
	All measurements are in inches	
DURING SHIPPING		1260 LBS.
REAR CABINET	56" x 70" x 58"	750 LBS.
FRONT CABINET	47" x 36" x 78"	460 LBS.
BILLBOARD	44" X 25" X 25"	50 LBS.

Name Of Parts Page 2 of 2

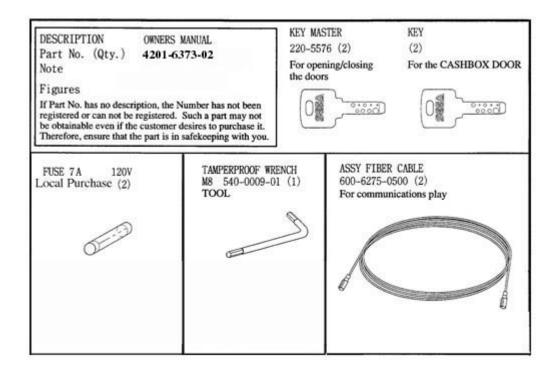
BILLBOARD	42" X 23" X 22"	48 LBS.
REAR CABINET	57" X 82" X 57"	701 LBS.
FRONT CABINET	50" X 31" X 70"	433 LBS.
WHEN ASSEMBLED	52" X 112" X 90"	1180 LBS.

Accessories Page 1 of 2

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Please read entire page as it contains information regarding your warranty.

3. ACCESSORIES



!!!Shipment of model 3 Board!!!



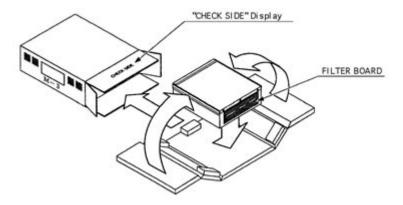
When asking for the replacement or repair of the product's Game Board (MODEL 3 BOARD), be sure to put the Game Board together with the Shield Case in the Carton Box.



Accessories Page 2 of 2

the Game board.

Refer to the following.



Wrap the Shield Case with the packaging material and put it in the Carton Box as shown. Putting it upside down or packing otherwise in the manner not shown can damage the Game Board and parts.

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 assembly work, there are some cases in which performing the work by a single person can cause personal injury or parts damage.



When installing the billboard, it is difficult to carry out work by one person. To perform work properly and safely, be sure work is performed by at least two people.

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

When carrying out the assembly work, follow the procedure in the following 6-item sequence:

- 1. ASSY OF PTV
- 2. WIRING CONNECTIONS BETWEEN CABINETS
- 3. SECURING IN PLACE (ADJUSTER ADJUSTMENT)
- 4. POWER SUPPLY
- 5. TURNING POWER ON

6. ASSEMBLING CHECK

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

5. PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE

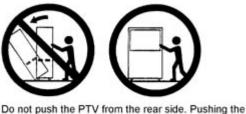
When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug as is inserted can damage the power cord and cause a fire or electric shock.



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.

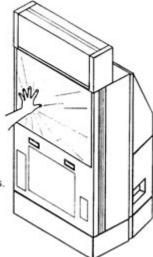
When lifting the cabinet, be sure to hold the catch portions or bottom part. Lifting the cabinet by holding other portions can damage parts and installation portions, due to the empty weight of the cabinet, and cause personal injury.

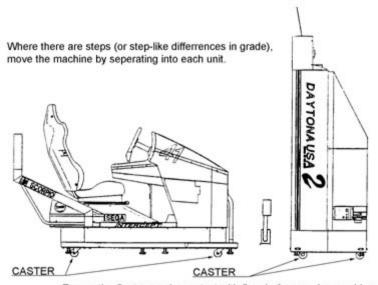
Use care when handling glass made parts. When the glass is damaged, fragments of glass can cause injury.



PTV from the rear side can cause the PTV to fall down. Push it from the side.





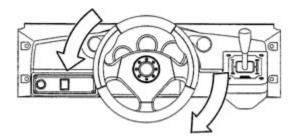


Ensure the Casters make contact with floor before moving machine.

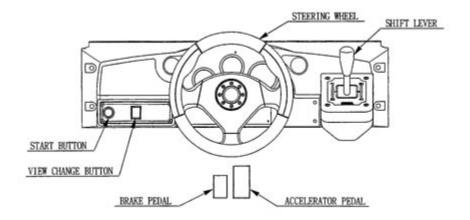
6. CONTENTS OF GAME/HOW TO PLAY

The following explanations apply to the case where the product is satisfactory functioning. Any functioning different from the following may have been caused by a certain trouble. Immediately investigate and eliminate the cause to ensure satisfactory operation. The explanations herein are based on the case the machine is independently used. In case of communication play, the following explanations may not be applicable.

During the Advertise Mode, the View Change Button's Start Lamp lights up periodically. The Cockpit is locked and will not move. When the machine is energized, the Billboard's Fluoresent lamp is always lit. The Steering Wheel repeats centering action periodically. Automatic centering will apply to the Steering Wheel if it is not centered. During the Advertise Mode, sound is emitted from the 2 speakers underneath the Control Panel.



(1) Get in the machine. The seat position is adjustable forward and backward. Facing the monitor, you will find the Lever on the lower-right hand side. Pull the lever to adjust the seat position.



(2) Insert a coin(s). Insert one play worth of coins to have the Select Mode appear.

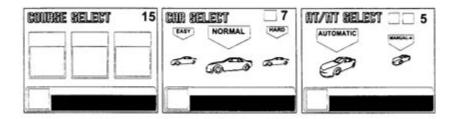
Up to 9 credits can be counted at a time. Coins inserted after counting 9 credits will not be counted or rejected. Credits will not be displayed after the Select Mode.

- (3) When a coin is inserted to one of the machines linked for communication, the other unit's screen will be in the entry accepting mode, and countdown starts. For Entry, the player is to insert a coin(s) during countdown.
- (4) Select sequentially in order of COURSE, CAR, and TRANSMISSION. Turn the Steering Wheel to choose and decide the selection by steping on the Acelerator pedal.

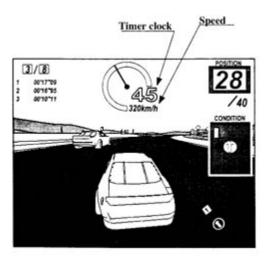
Displaying the SELECT screen mode starts the countdown. When the countdown becomes 0, the COURSE and CAR being chosen are determined automatically.

Stepping on the Accel. Pedal again after stepping on it once will have the present SELECT screen, in the middle of counting down, proceed to the next SELECT screen.

COURSE selection is decided by majority. In case of a tie, the left hand side course on the SELECT screen has priority.



- (5) Choosing and deciding on either AUTOMATIC or MANUAL (4 shifts) will result in a race start. At this time, while pressing the start button, step on the Accel Pedal to decide on the selection to play in the PLAYER ONLY mode. After race start, the View Change button being selected lights up. While participating in the race, if the player becomes the race leader , that particular seat's leader lamp lights flashes. The Steering Wheel is subject to the reaction and load depending on the status of the Course, Course Out, and Crash.
- (6) The number of laps is displayed on the upperleft of the screen, and the lap time is shown below the upper left. Tachometer and Time Limit (remaining time) as well as Speed are shown on the upper center portions. Position, Condition, and Course Map are displayed sequentially in order fromth eupper right portion of the screen downward. If Manual Transmission is selected, Gear position will be shown to the right side of Speed.
- (7) Simultaneously with race start, the Time Limit decreases. Passing a Course's Checkpint allows the game to be continued with the remaining time of the previous section added to the Time Limit up to the next Check Point. Failing to pass the Checkpoint within the Time Limit results in GAME OVER.



7. EXPLANATION OF TEST AND DATA DISPLAY

By operating the switch unit, periodically perform tests and data check. When installing the machine initially or collecting cash, or when the machine does not function correctly, perform checking in accordance with the explanations given in this section. The following shows tests and modes that should be utilized as applicable.

ITEMS	DESCRIPTION	SECTIONS
	When the machine is installed, perform the following:	
	1.> Check to see that each setting is as per standard setting made at time of shipment.	7 - 9, 7- 10
INSTALLATION OF MACHINE	2.> In the INPUT TEST mode, check each SW and VR.	7 - 5 7 - 6
	3.> In the OUTPUT TEST mode, check each of the lamps.	7 - 3, 7 - 4
	4.> In the MEMORY TEST mode, check the IC's on the IC Board.	
MEMORY	Choose MEMORY TEST in the MENU MODE to allow the MEMORY TEST to be performed. In this test, PROGRAM RAM's, ROM's, and IC's on the IC Board are checked.	
	Periodically perform the following:	
	1.> MEMORY TEST.	7 - 3, 7 - 4
PERIODIC	2.> Ascertain each setting.	7 - 9, 7 - 10
SERVICING	3.> In the INPUT TEST mode, test the control device.	7 - 5
	4.> In the OUTPUT TEST mode, check each of the lamps.	7 - 6
	1.> In the INPUT TEST mode, check each SW and VR.	7 - 5
CONTROL SYSTEM	2.> Adjust or replace VR and SW.	8
	3.> If the problem can not be solved yet, check the CONTROL's moves.	8
	In the PROJECTOR ADJUSTMENT mode, check to	

PRINK	see if the PROJECTOR adjustment is appropriately made.	7 - 8
	1.> MEMORY TEST.2.> In the SOUND TEST mode, check the sound related ROM's.	7 - 7
	Check such data as game play time and histogram to adjust the difficulty level, etc.	7 - 12

7 - 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 COIN CHUTE DOOR, and the switch unit shown appears. The function of each switch is as follows:

SWITCH UNIT

(1) SOUND VOLUME

Controls the speaker volume of the right/left speakers on the coin chute tower.

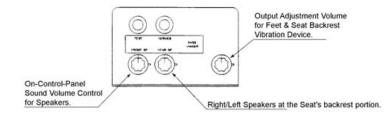
(2) TEST BUTTON (TEST SW)

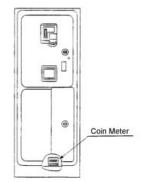
For the handling of the TEST BUTTON,

refer to the section on test mode.

(3) SERVICE BUTTON (SERVICE SW)

Gives credits without registering on the coin





m	$\Delta 1$	Δr	

COIN METER

Open Cash Box Door and the Coin Meter will appear. The Coin Meter counts the number of coins inserted

Test Mode Page 1 of 3

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7 - 2 TEST MODE

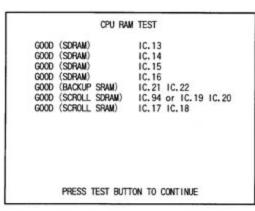
This mainly checks if the operation of the game BD is accurate, and allows for COIN

ASSIGNMENTS/GAME ASSIGNMENTS setting and Projector adjustments.

Push the TEST BUTTON to cause the following TEST MENU to appear:

By pushing the SERVICE BUTTON, bring the ">" mark to the desired item and press the TEST BUTTON. This will select the item to be tested.

After the test is complete, move the ">" mark to "EXIT" and press the TEST BUTTON to return to game mode.



7 - 3 MEMORY TEST

The MEMORY TEST mode is for checking the on-BD memory IC functioning.

"GOOD" is displayed for normal ICs and "BAD" is displayed for abnormal ICs.

When the test is completed, if the

display is as shown left, it is

satisfactory.

After finishing the test, pressing the TEST BUTTON allows the

MENU MODE to return on the screen.

Test Mode Page 2 of 3

IF THE TEST TIME FOR THE MEMORY TEST EXCEEDS 5 MINUTES THE IC BOARD MAY BE DEFECTIVE.

7 - 5 INPUT TEST

Press the TEST BUTTON to have the menu mode return on the screen.

Using the Decision (SET) button instead of TEST BUTTON will not allow for exiting from the Input Test Mode. Press the SET BUTTON and SELECT BUTTON (UP).

By opening the Coin Chute Door, insert a coin from the Coin Inlet to check the Coin Chute Tower.

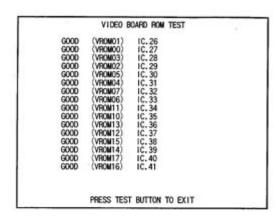
When INPUT TEST is selected, the MONITOR will show the following, allowing you to watch the status of each switch and the value of each V.R. of the cabinet to be viewed

On the screen, periodically check the status of each switch & V.R.

By pressing each switch, if the display on the right-hand side of the name of each switch changes to ON from OFF, the SW and the wiring connections are satisfactory.

PITCH refers to the Switch for the left/right Foot Pedal's UP/DOWN. Normally, this is ON and stepping on the Pedal's front side causes the Switch to become off.

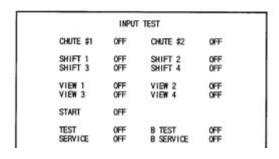
7 - 6 OUTPUT TEST



Choose OUTPUT TEST to cause the following lower screen to appear. In this test,

check the status of each lamp.Pressing the TEST BUTTON causes "ON" to be displayed and the corresponding lamp lights up. Pressing the TEST BUTTON again causes "OFF" to be displayed and the lamp goes off. The Foot Controller is locked with the Slide Lock in the ON status, and Unlocked to become free with the Slide Lock in the OFF status.

Press the test Button to return to the MENU MODE.



7 - 7 SOUND TEST

This enables sound used in the game to be checked. Sound related memory and each speaker are checked.

Test Mode Page 3 of 3

Press the SERVICE BUTTON to bring the arrow to the desired sound item to be tested. SE refers to sound effects and BGM refers to background music.

Each time the SERVICE BUTTON is pressed, the numeral displayed on the screen counts up and sound is admitted.

Bring the ">" to EXIT and press the TEST BUTTON to return to the MENU MODE.

7 - 8 C.R.T. TEST

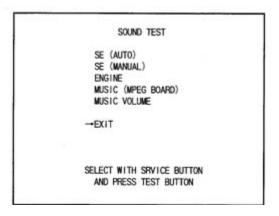
Select C.R.T. TEST to cause the MONITOR to display the screen shown left, allowing MONITOR adjustment status to be checked.

Periodically check the MONITOR adjustment status on this screen.

The screen (1/2) enables color adjustment check to be performed. The color bar of each of the 4 colors, i.e.,red, green, blue, and white, is the darkest at the extreme left and becomes brighter towards the extreme right.

Press the TEST BUTTON to shift to the next screen (2/2).

The screen (2/2) allows screen size and distortion to be tested.



Check if the CROSSHATCH FRAME LINE goes out of the screen and if the crosshatch lines are distorted.

Press the TEST BUTTON to return to the MENU mode. (FIG. 6.2)

Game Assignments Page 1 of 2

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7 - 9 GAME ASSIGNMENTS

Selecting the GAME ASSIGNMENTS in the MENU mode causes the present game settings to be displayed and also the game settings changes (game difficulty, etc.) can be made. Each item displays the following content.



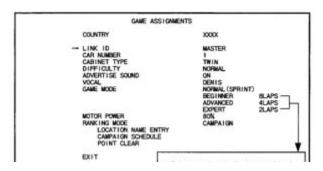
Setting changes cannot be stored unless the TEST BUTTON is pressed while the arrow is

on EXIT.

SETTING CHANGE PROCEDURE

- (1) Press the SERVICE BUTTON to move the ">" to the desired item.
- (2) Choose the desired setting change item by using the TEST BUTTON.
- (3) To return to the MENU mode, move the arrow to EXIT and press the TEST BUTTON.

The Following FIGURES/TABLES show the factory recommended settings.



ADVERTISE SOUND

Determines whether ADVERTISE SOUND is to be emitted or not by the setting to ON when emitting it and to OFF when not emitting it. Game Assignments Page 2 of 2

GAME DIFFICULTY

Sets the Game Difficulty in 8 categories from 1 to 8. The greater the number is, the higher the difficulty level becomes.

Coin Assignments Page 1 of 2

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The "COIN ASSIGNMENTS" mode permits you to set the start number of credits, as well as the basic numbers of coins and credits. This mode expresses "how many coins correspond to how many credits."



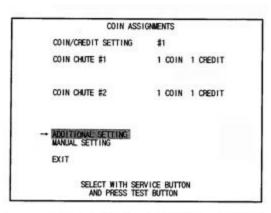
Setting changes cannot be stored unless the TEST BUTTON is pressed while the arrow is

on EXIT.

7 - 10 COIN ASSIGNMENTS

SETTING CHANGE PROCEDURE:

- (1) Press the SERVICE BUTTON to move the arrow to the desired item.
- (2) Choose the desired setting change item by using the TEST BUTTON.
- (3) To return to the MENU mode, move the arrow to EXIT and press the TEST BUTTON.



COIN CHUTE TYPE:

Sets the combination of the number of COIN CHUTEs and the number of players as applicable. In the case that the COIN CHUTE is changed, be sure the setting is made in a manner meeting the replaced coin chute.

COMMON:

Coins are accepted in common for both players.

COIN ASSIGNMENTS
(ADDITIONAL SETTING)

-- CREDIT TO START 4 CREDITS (1~16 CREDITS)
ADDITION 2 CREDITS (1~8 CREDITS)
BEGINNER +2LAPS (+1~+16LAPS)

Coin Assignments Page 2 of 2

INDIVIDUAL:

Each player uses a coin chute which accepts coins independently.

CREDIT TO START:

Number of credits required for starting game (1~5 credits are selected.)

CREDIT TO CONTINUE:

Number of credits required for continuing game (1~5 credits are selected.)

COIN/CREDIT SETTING:

Sets the CREDITS increase increment per coin insertion. There are 27 settings from #1 to #27, expressed in XX CREDIT as against XX COINS inserted. (TABLE 7.10a, 7.10b) #27 refers to FREE PLAY.

When the COIN CHUTE TYPE is set to INDIVIDUAL, there are some setting numbers not displayed as indicated in TABLE 7.10b.

MANUAL SETTING:

This allows credit increase setting as against coin insertion to be further set in the manner finer than COIN/CREDIT SETTING (refer to TABLE 7.10c).

7 - 12 BOOKKEEPING

Choosing BOOKKEEPING in the MENU mode displays the data of operating status up to the present are shown on 2 pages. Press the TEST BUTTON to proceed to PAGE 2/2.

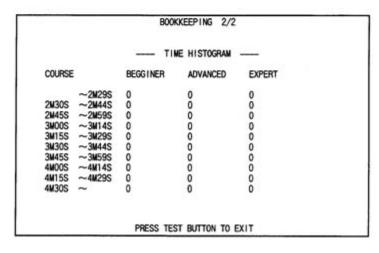
G PAGE 1/2
0 0 0 0 0 0 0
0
OD OH OM OS OD OH OM OS OHOOMOOS OHOOMOOS OHOOMOOS
TO CONTINUE

COIN CHUTE#*:

Number of coins put in each Coin Chute.

TOTAL COINS:

Total number of activations of Coin Chutes.



COIN CREDITS:

Number of credits registered by inserting coins.

SERVICE CREDITS:

Credits registered by the SERVICE BUTTON.

TOTAL CREDITS:

Total number of credits (COIN CREDITS+SERVICE CREDITS).

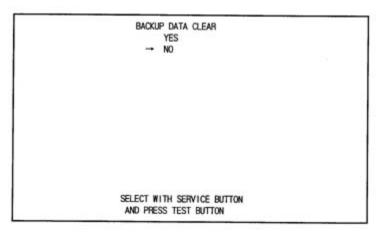
TOTAL TIME:

The total energized time.

On page (2/2), each play frequency is displayed. When setting difficulty levels, the frequency can be referred to as a standard.

When in the PAGE 2/2 mode, press the TEST BUTTON to return to the MENU mode.

7 - 13 BACKUP DATA CLEAR



Clears the contents of BOOKKEEPING and high score player ranking entry.

When clearing, bring the arrow to "YES" and when not clearing bring the arrow to "NO", by using the SERVICE BUTTON, and press the TEST BUTTON.

When data has been cleared, "COMPLETED" will be displayed. Bring the arrow to "NO" and press the TEST BUTTON to cause the

MENU MODE to return to the screen.

Note that that contents of the GAME SETTING, COIN SETTING, and VOLUME SETTING are not affected by BACKUP DATA CLEAR operation.

8. MAINTENANCE OF HANDLE AND SHIFT LEVER



In order to prevent an electric shock and short circuit, be sure to turn power off before performing work by touching the interior parts of the product.

Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

This work should be performed by the Location's Serviceman. Performing work by non-technical personnel can cause shock hazard.

Don not touch places other than those specified. Touching places not specified can cause an electric shock accident.

In the test mode, if the handle V.R. value movements are irregular, adjust or replace the V.R. in the following procedure.

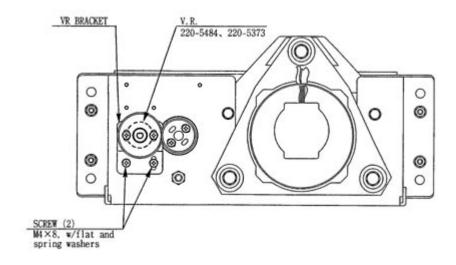
8 - 1 ADJUSTMENT AND REPLACEMENT OF SWING VOLUME

SETTING THE VOLUME

- (1) In the test mode, have the V.R. value displayed on the screen.
- (2) Remove the 11 screws from the right-hand side Panel Cover.
- (3) Loosen the 2 screws which secure the Volume Bracket, and you can move the Volume

Bracket.

- (4) Moving the Volume Bracket disengages the gear mesh.
- (5) Secure the handle to the centering position and adjust the gear mesh so that the position of Volume value is within the range 80+/-2H.
- (6) Fasten the 2 securing brackets.
- (7) Set the volume in the Volume Setting Mode.



REPLACING THE VOLUME

- (1) Turn Power off.
- (2) Disconnect the Connector.
- (3) Remove the Volume bracket by taking out the 2 screws which secure the Volume Bracket.

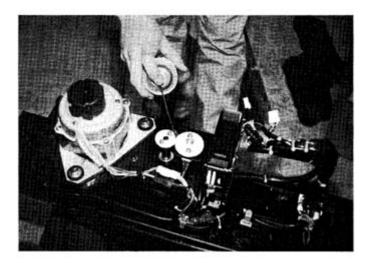
(4) Remove the Volume Gear and Volume Bracket to replace the Volume. Adjust the gear mesh and ensure that Volume value display is within the range of 80+/-2H when the handle is in the centering position.

8 - 2 GREASING

In order to prevent electric shock and short circuit, be sure to turn off power before performing work by touching the interior parts of the product.

not apply greasing to places other than those specified. Greasing to undesignated places can cause malfunctioning and the qualitative deterioration of parts.

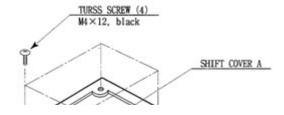
Once in 3 months, apply greasing to Volume Gear Mesh Portion. For spray greasing, use GREASE MATE (P.No. 090-0066).



8 - 3 REMOVING THE SHIFT LEVER



In order to prevent an electric shock and short circuit accident, be sure to



turn power off before performing work by touching the interior parts.

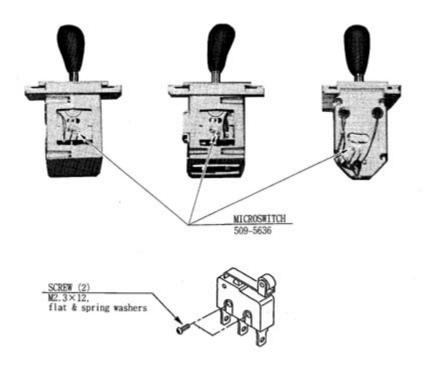
Be careful so as not to damage wirings. Damaged wirings can cause an electric shock or short circuit accident. Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident.

If the Shift Lever operation is not satisfactory, remove the Shift Lever in the following procedure and replace the micro switch.
(1) Take out the 6 truss screws and remove the Shift Cover.
(2) Remove the 4 Hexagon Bolts which secure the Shift Lever.
(3) Carefully lift the Shift Lever so as no to damage the Shift Lever's wiring connections, and disconnect the connectors.

8 - 4 SWITCH REPLACEMENT

Each Micro switch is secured with 2 screws. Remove the 2 screws and replace the Micro switch.

After replacing the Switch, check to see if the switch is inputted as per Shift Lever operation in the Test Mode.



After replacing the Switch, check to see if the switch is inputted as per Shift Lever operation in the Test Mode.

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9. ACCELRATOR & BRAKE



Be careful so as not to damage wirings. Dmaged wiring can cause an electric shock or short circuit accident. Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident.

If Accel. and brake operation is not satisfactory, adjustment of Volume installation position or Volume replacement is needed. Also, be sure to apply greasing to gear mesh portion once every 3 months.

9 - 1 ADJUSTMENT AND REPLACEMENT OF VOLUME



This work should be performed by the Location's Maintenance man or Serviceman. Performing work by non-technical personnel can cause shock hazard.

If appropriate value of each V.R. is as follows.

Check volume values in the Test Mode.

Since work is performed inside the energized cabinet, be very careful so as not to touch undesignated portions. Touching places not specified can cause electric shock or short circuit accident.

- (1) Take out the 2 truss screws and remove the Front Cover from the Accel & Brake Unit.
- (2) Loosen the screw which secures the Potentiobase, and adjust the Volume value by moving the Base.

- (3) Secure the Potentiobase.
- (4) Perform Volume setting in the Volume setting mode.

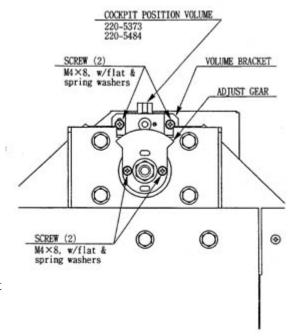
In order to prevent an electric shock and short circuit accident, be sure to turn power off before performing work by touching the interior parts of the product.

Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident.

REPLACING THE VOLUME

- (1) Turn power off.
- (2) Disconnect the Connector.
- (3) Remove the Volume Bracket by taking out the 2 screws which secure the Volume Bracket.
- (4) Remove the Volume Gear and Volume Bracket to replace the Volume.



Adjust gear mesh and ensure that Volume value display is within the range of 80+/-2H when the handle is in the centering position.

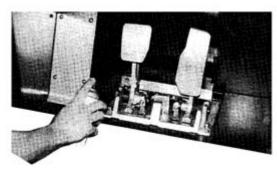
9 - 2 GREASING



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

Do not apply greasing to places other than those specified. Greasing to undesignated places can cause malfunctioning and the qualitative deterioration of parts.

Once every 3 months, apply greasing to the SWING Volume gear mesh portion, Swing Frame supportive bearings, and Motor gear mesh portion. For spray greasing, use GREASE MATE (PART No. 090-0066).8 - 2 GREASING



9 - 3 HAND BRAKE

⚠

In order to prevent electric shock and short circuit, be sure to turn power off before performing work by touching the interior parts of the product.

Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident. Do not touch places other than those specified. Touching places other than those specified can cause an electric shock or short circuit accident.

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

Once every 3 months, apply greating to the Spring inside the hand Brake. For spray greating, use GREASE MATE (PART No. 090-0066)

GREASING

- (1) Turn Power off.
- (2) Take out the 9 screws and remove Side Cover B.
- (3) Apply greasing to the Spring portion.

REPLACING THE HAND BRAKE SWITCH

- (1) Turn power off.
- (2) Replace the Microswitch inside Side Cover B by taking out the 2 screws.

Mecha Unit Page 1 of 4

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10. MAINTENANCE OF MECHANISM UNIT

10 - 1 ADJUSTMENT AND REPLACEMENT OF VOLUME

Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

Do not touch places other than those specified. touching places other than thos specified can cause electric shock or short circuit accident.

When performing work, be sure to use plural workers. Working by a single worker alone can cause accidents and parts damage.

This work should be performed by the Location's Maintenance man or Serviceman. Performing work by non-technical personnel can cause shock hazard.

×

Enter test mode to check the Volume value. Work is performed inside an energized cabinet. Use care so as not to touch undesignated places. Failure to observe this can cause electric shock and short circuit hazards.

- (1) In the Test Mode, have the volume value displayed on the screen.
- (2) Move the seat to the foremost position and remove the 4 bolts which secure the seat.
- (3) Another person is to incline and hold the seat so that the Volume can be checked.

Mecha Unit Page 2 of 4

×	ADJUSTING THE VOLUME	
(1) Lo	oosen the 2 screws which secure the Volume Bracket	t, and move the Bracket.

- (2) Move the Volume Bracket to disengage gear mesh.
- (3) With the front part of Cockpit inclined up to the top position, adjust gear mesh to ensure the volume value display is within the range of 80+/-10H.
- (4) Fasten the 2 screws which secure the Bracket.
- (5) In the Cockpit Reaction Test Mode, check the volume value.
- (8.) Remove the gear from the Volume Shaft and replace the Volume.

REPLACING THE VOLUME

Mecha Unit Page 3 of 4

(1) Turn	power	off.
----------	-------	------

- (2) Disconnect the connector.
- (3) Take out the 2 screws which secure the Volume Bracket, and remove the Volume Bracket.
- (4) Remove the Volume Gear and Volume Bracket to replace the Volume.
- (5) After replacing the Volume, adjust the volume value by using the above procedure.

10 - 2 GREASING



In order to prevent an electrical shock and short circuit, be sure to turn power off before performing work by touching the interior portions of the product. When performing work, be sure to use plural workers. Working by a single worker alone can cause accidents and parts damage.

Be sure to use the designated grease. Using undesignated grease can cause parts damage. Do not apply greasing to places other than those specified. greasing to undesignated portions can cause malfunctioning and the qaulitative deterioration of parts.

Once every 3 months, apply greaisng to the following places. For spray greasing, use GREASE MATE (PART No. 090-0066).



Take out the 8 screws, remove the Mecha Cover, and apply greasing.

Mecha Unit Page 4 of 4

GREASING TO THE SPRING PORTION UNDERNEATH THE SEAT

Once every 3 months, apply greasing to the 2 Spring and Spring installation portions underneath the seat. Remove the 4 bolts which secure the seat, and for safety, one person is to incline the seat and another person is to apply greasing.



10 - 3 REPLACING THE SAFETY RUBBER



The Safety Rubber is an important, hazard-prevention part. Before commencing daily operation, be sure to check for damage and omission. Operating with the Safety Rubber as is damaged or omitted can cause the customer's fingers to be caught.

INSTALLATION OF RUBBER MIDDLE SIDE

To install RUBER MIDDLE SIDE to the side oppisite the Cockpit, turn over the RUBBER and use HOLDER LEFT S.





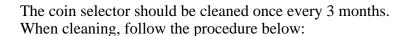
Coin Selector Page 1 of 2

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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 correctly functions.

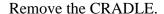


Turn the power for the machine OFF.

Open the coin chute door.

Open the gate and dust off by using a soft brush (made of wool, etc.).

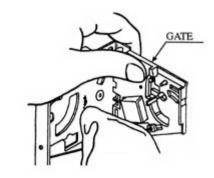
Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.

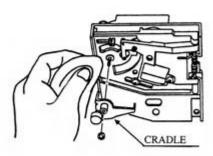


When removing the retaining ring(E-ring), be very careful so as not to bend the shaft.

Remove stain from the shaft and pillow portions by wiping off with a soft cloth, etc.

After wiping as per #5 above, further apply a dry cloth, etc. to cause the coin selector to dry completely.







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 Cash box correctly?

Coin Selector Page 2 of 2

Is the coin rejected when inserted while keeping the REJECT BUTTON is pressed down?

CLEANING THE COIN SELECTOR

Never apply machine oil, etc. to the coin selector

After cleaning the Coin Selecting, Insert a regular coin in the normal working status and ensure that the Selector correctly functions.

Projector Page 1 of 1

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12. PROJECTOR



Since the Projector has been adjusted at the time of shipment, avoid making further adjustments without good reason. The Projector is subject to color deviation due to Convergence deviation caused by the geomagnetism at the time of installation location and peripheral magnetic field. After the installation of machine, and before commencing operation, check for Convergence deviation and if deviated, make adjustments.

Since the Projector screen is susceptible to damage, pay careful attention to it's handling. When cleaning, refrain from using water or volatile chemical. Fine adjustments are stored in the Projector. Pressing the Fine Adjustment SW (Convergence Adjustment) results in entering the Fine Adjustment mode, and this may cause the stored fine adjustment to be changed. During work other than for adjustment, Should you touch the Fine Adjustment SW by mistake, immediately turn power off by using the main SW and then turn it back on again. If any distortion or color deviation is found in the test mode and adjustments are needed, use the specified adjustment knob, or perform adjustment by remote control. To find the adjustment knob, move Cabinet DX and remove the PTV Front Service Door by using the procedure opposite the one for installing and assembling. In some cases a cover is installed to the Adjustment Knobs. Remove the Cover. When the screen surface becomes dirty with dust, etc., clean it by using a soft cloth such as gauze.



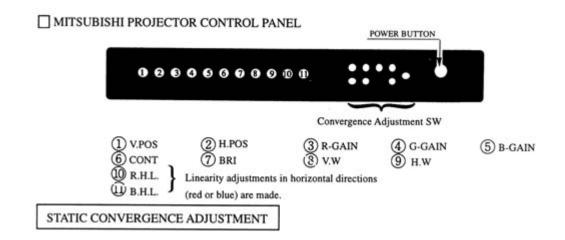
12 - 1 CLEANING THE SCREEN

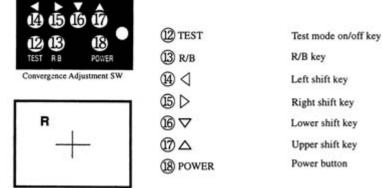


When water, and volatile chemicals such as benzene, thinner, etc., spill on the screen surface, it may be subject to damage, therefore, do not use them. Also, since the surfaces are susceptible to damage, refrain from rubbing them with a hard material or using a duster.

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12 - 2 MITSUBISHI MONITOR





For the Convergence adjustment mode, press the test mode on/off key. 12

Ensure that "R" is displayed on the screen.

Make adjustments so as to cause the red cross pattern to match with the green cross pattern by using Left shift key 14, Right shift key 15, Lower shift key 16, and Upper shift key 17.

By using R/B shift key 13, cause the red adjustment "R" to shift to blue adjustment "B" and make sure that "B" is displayed on the screen.

In the same manner as in 3 above, cause the blue cross pattern to match with the green cross pattern.

After making adjustment, press the test mode on/off key 12 to cancel the convergence adjustment mode.

STATIC CONVERGENCE ADJUSTMENT METHOD WITH REMOTE CONTROL



Although Remote Control Buttons other than those specified below do not function even if pressed during Convergence Adjustment, do not press them during adjustment work so as to avoid causing malfunctioning.

Operate the Remote Control towards the PTV screen. If directed other than to the PTV screen, the Remote Control does not function.

BEFORE USING REMOTE CONTROL:

First make sure that the main SW on the Projector's control panel is ON (the LED adjacent to the main SW is lit).

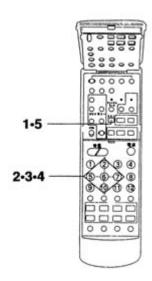
The Remote Control has 2 different types. Depending on the type, the Adjustment procedure is different.

In case of REMOTE CONTROL (Part No. 200-5298):

For the Convergence Adjustment mode, press the test button. Ensure that "R" is displayed on the screen.

Make adjustment so as to cause the red cross pattern to match with the green cross pattern.

When the red cross matches the green cross, the green cross turns yellow or white.



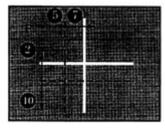
Use remote control buttons shown below to move the red cross as follows:

Button to the left......5

to the right.....7

Upward......2

Downward......10



Use Remote Control button 6 to shift "R" to "B". Make sure that "B" is displayed on the screen. Each time Button 6 is pressed, red and blue adjustments are shifted.

In the same manner as in 2 above, cause the blue cross to match the green cross. When the blue cross matches the green cross, the green cross turns

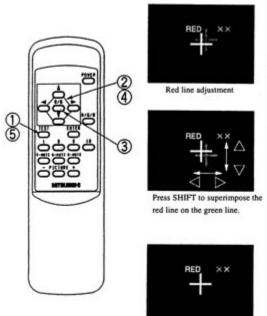
white.

After adjustment is made, press the test button to cancel the Convergence Adjustment mode.

*When 2 minutes or more elapses in the Convergence mode screen without taking any action, the on-screen adjustment mode will disappear.

In case of REMOTE CONTROL (Part No. 200-5532):

Press the TEST KEY to have the red line adjustment screen appear.



Superimpose the red cross on the green cross at the center of the screen.

Move the red cross to the left, right, up, and down respectively with the corresponding buttons of the remote control.

When the red cross is superimposed on the green cross, the green cross turns into yellow or white.

Press the R/B Key to have the blue line adjustment screen appear. Each time R/B Key is pressed, the red line and blue line will be alternated.

Completion of Adjustment In the manner similar to 2 above, press each key to superimpose the blue cross on the green cross. When it is superimposed, the cross in the center will become white.

Press the TEST KEY to exit from the adjustment mode.

During STATIC CONVERGENCE Adjustment Mode, if no action is taken within 5 minutes, the adjustment mode will be exited automatically.

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12 - 3 TOSHIBA MONITOR

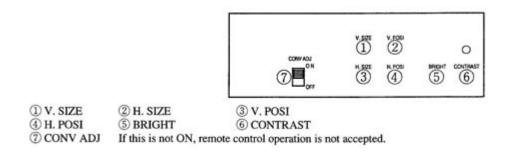
NOTE: THIS PAGE CONTAINS MANY GRAPHICS AND MAY TAKE A MINUTE OR TWO TO LOAD. IF YOU DO NOT HAVE A TOSHIBA MONITOR, YOU MAY PRESS THE STOP BUTTON ON YOUR BROWSER AND THEN FOLLOW ONE OF THE LINKS ABOVE TO CONTINUE.

Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident.

MPORTANT! Do not press undesignated key. Pressing any undesignated key can cause malfunction and adjustment fault. Should the key be pressed by mistake, turn power off and turn it back on again.

TOSHIBA PROJECTOR CONTROL PANEL

TOSHIBA PROJECTOR has two different types, i.e., one equipped with the Control Panel and the other without the Control Panel. When adjusting, be sure to confirm the type used.

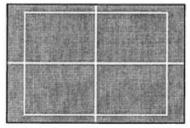


STATIC CONVERGENCE ADJUSTMENT (With the Control Panel)

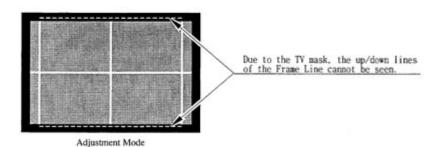


During adjustment, should the screen image be abnormally disfigured due to static electricity and other causes, do not have adjustment status stored, and be sure to turn power off.

Operate the Remote Control towards the PTV screen. If directed other than to the PTV screen, the Remote Control does not function. Unless the CONV ADJ SW is ON, remote control operation is not acceptable. At the time of shipment, the SW is set to ON. If remote control is not accepted, check status of this SW.

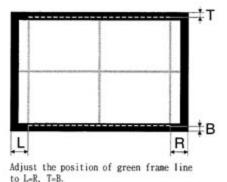


Test Pattern



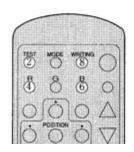
Direct the remote control towards the PTV screen and keep the Test Key pressed down for approximately 3 seconds. The adjustment mode should appear on the screen and the screen turns into the green test pattern.

On the screen, the cross pattern and the square frame line will be projected. However, due to the TV mask, the up/down lines cannot be seen.



When initially installing the machine, or when the installation position is changed, check to see if the Test Pattern is in the central, well balanced position. If deviated, adjust the green position by using the Adjust Key "up/down/left/right" in the manner so as to improve the balance (L&R, and T&B are approximately equal as shown).

In the normal usage, with green as reference color, red and blue are adjusted. Therefore, skip the above procedure.



Press the R Key of the remote control. The red pattern together with the green pattern are displayed on the screen. At this time, the frame color turns into red.

By operating the Adjust Key of the remote control "up/down/left/right", have the center red match with that of green.

When red color is superimposed on green color, it seems to be

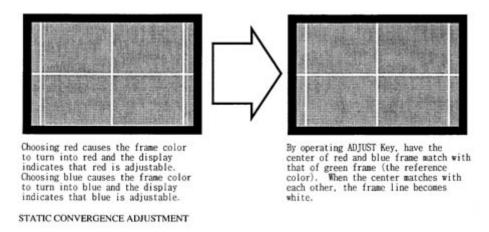
yellow.

Press the B Key of remote control. The blue test pattern is added to the display on the screen. At this time, the frame color turns into blue.

By operating the Adjust key of the remote control "up/down/left/right", have the center of the blue match with that of yellow. When blue color is superimposed on yellow color, it seems to be white.

By pressing the WRITING KEY, have the adjustment status stored. After it has been stored, the Adjustment Mode is exited automatically, and the normal mode returns. If the Test Key is pressed down for approximately 3 seconds without having the adjustment status stored, pre adjustment status will remain.

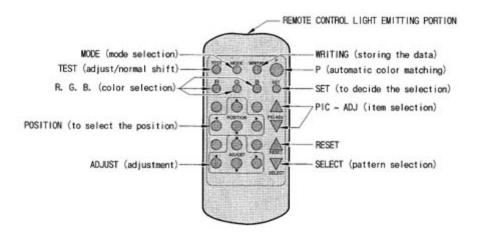
The R.G.B. Keys have screen display color change functions. Pressing the key of the color presently shown on the screen causes the color to disappear, therefore, for adjustment, press the key again.



ADJUSTMENT OF TOSHIBA PROJECTOR (THE TYPE WITHOUT CONTROL PANEL)

The Remote Control is used for adjustment of the type without Control Panel. When adjusting the Projector, direct the Remote Control's light emitting portion towards the Projector Screen.

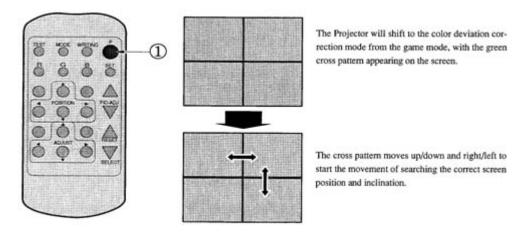
REMOTE CONTROL BUTTONS



AUTOMATIC COLOR MATCHING

The Projector may be subject to color deviations affected by earth magnetism, the building's steel frames, etc. When the Projector is initially installed of the Projector's installation position is changed, have the color matching performed automatically.

Keep pressing the p button (red) for approximately 3 seconds to have the ensuing movements performed automatically. When the green cross pattern movements are finished, similar detection is performed sequentially in order of red and then blue cross movements. After detecting by green, red and blue cross movements, the game mode returns with the color deviation status being corrected

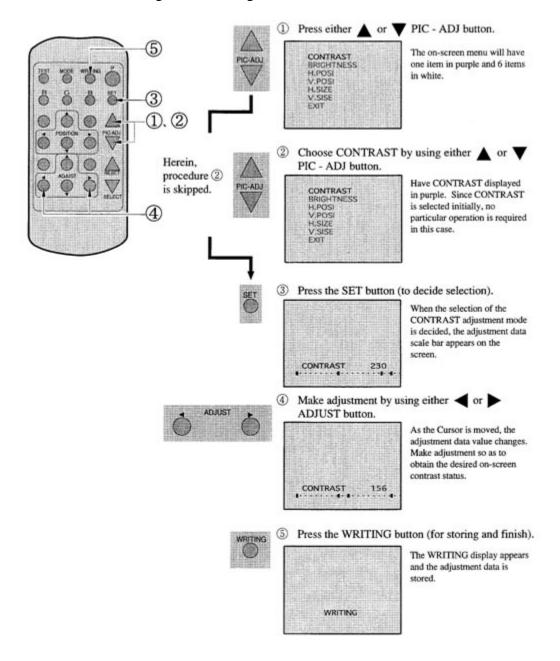


Although very rarely, the TRY AGAIN error display in red may appear. At this time, press the P button (red) for approximately 3 seconds. Even after the above operation is repeated, if the error condition still exists, then display shifts to PLEASE ADJ. In this Case, the auto color matching function can not be used. Contact the place of contact herein stated or where the product was purchased from.

If the automatic color matching indicates an error, color matching can manually be performed. Refer to CONVERGENCE ADJUSTMENT (manual color matching).

ADJUSTING THE ON-SCREEN CONTRAST

Although the on-screen picture quality has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary. Changing the CONTRAST causes the light and shade of the on-screen images to be changed.



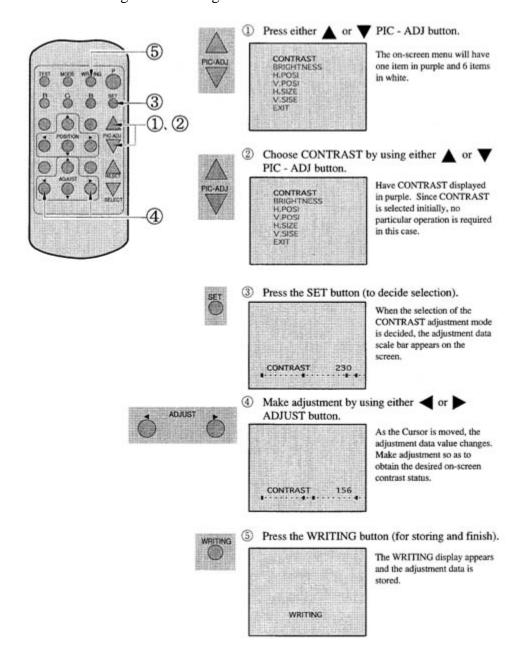
When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure "2" and press the SET BUTTON.

To continue adjusting other menu items, repeat procedure "2~4"

Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE ON-SCREEN BRIGHTNESS

Although the on-screen picture quality has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary. Changing the BRIGHTNESS causes the light and shade of the on-screen images to be changed.



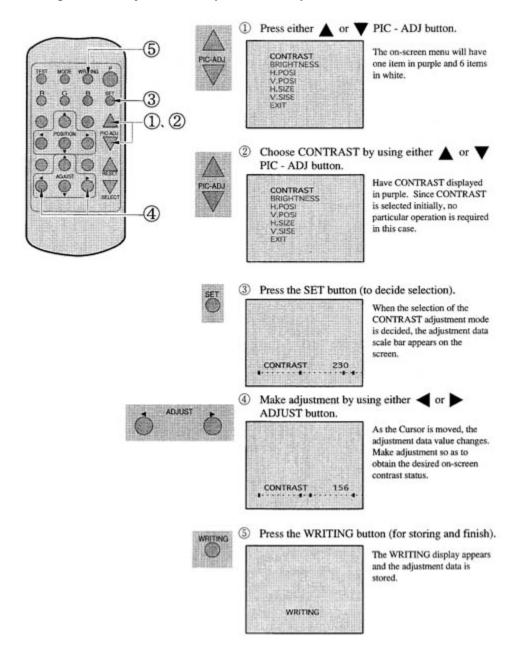
When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure "2" and press the SET BUTTON.

To continue adjusting other menu items, repeat procedure "2~4"

Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE ON-SCREEN CONTRAST

Although the on-screen display position (H. POSI, V. POSI) has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary.



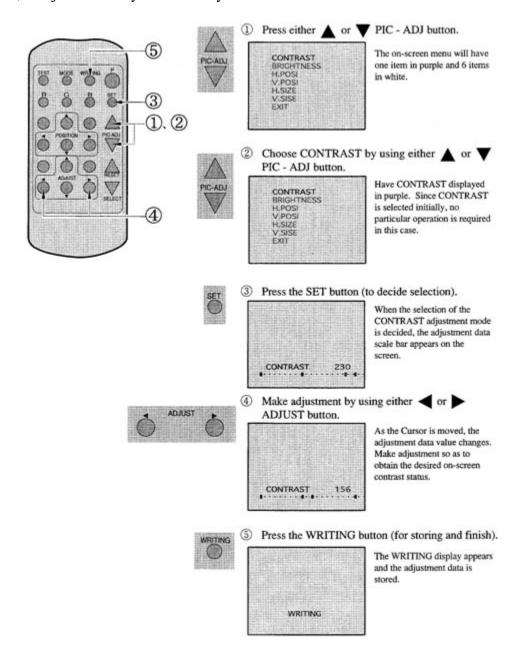
When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure "2" and press the SET BUTTON.

To continue adjusting other menu items, repeat procedure "2~4"

Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE SCREEN SIZE

Although the on-screen size (H. SIZE, V. SIZE) has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary.



When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure and press the SET BUTTON.

To continue adjusting other menu items, repeat procedure "2~4"

Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

CONVERGENCE ADJUSTMENT (manual color matching)



To avoid circuitry malfunctioning due to electrical load increase, never utilize CONVERGENCE ADJUSTMENT (Line Convergence Adjustment in particular) for adjusting screen size changes.

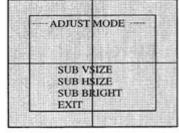
There is no means to restore the Convergence Adjustment data once stored, to its original state. To avoid changing the screen size by erroneously using convergence adjustment, do not perform the green Line Convergence Adjustment.

As such, be sure to perform the adjustment work from this page onward by the Technical staff and the location's maintenance Personnel who are well versed in such adjustment work. In the Static Convergence Adjustments, if satisfactory adjustments can not be performed, do not make another convergence adjustment inadvertently. Contact the office herein stated or where the product was purchased from. To avoid making the adjustment work ineffective, do not press the RESET button during adjustment.



To discontinue adjustment work, keep pressing the TEST button for approximately 3 seconds at the stage before storing the adjustment data by pressing the WRITING button.

Should the screen be abnormally disturbed by noise due to static electricity, etc., turn the power off without storing the adjustment data.



Adjustment menu used in the factory.

Pressing the "up or down" PIC-ADJ button in the Convergence Adjustment Mode status will display the Adjustment Menu as this is the one applied at the factory.

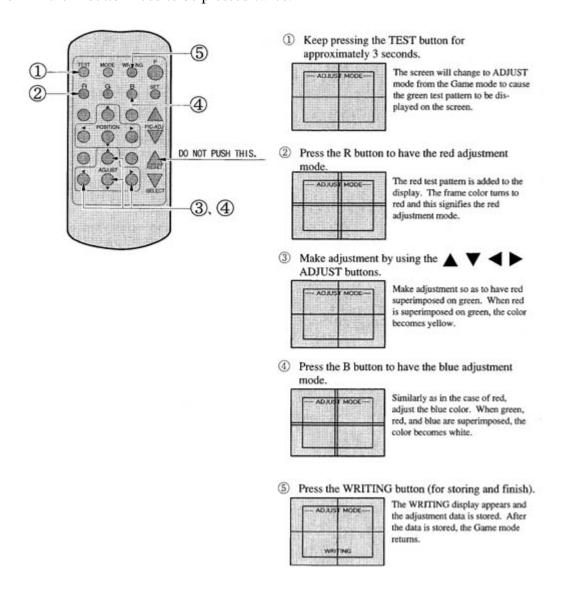
Adjusting this menu causes the Customer's adjustment range to be deviated.

Should the menu shown right be displayed by mistake, first choose EXIT by using either "up or down" PIC-ADJ button and then press the SET button.

STATIC CONVERGENCE ADJUSTMENT

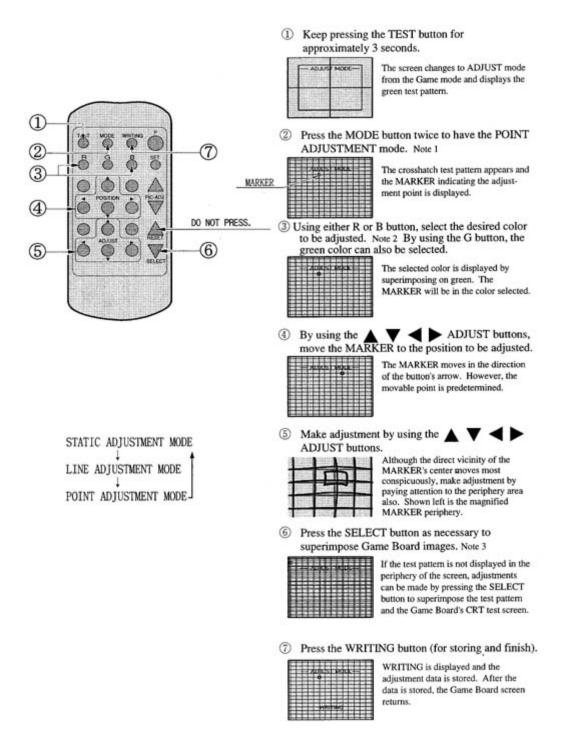
In the static convergence adjustment, each of red and blue images is comprehensively moved to and superimposed on the green color. If automatic color matching function is not sufficiently satisfactory, perform this adjustment. Be sure to perform automatic color matching before starting the above adjustment.

When either of "2" "4" COLOR SELECT buttons (R,B) is pressed, if the color desired to be adjusted disappears, press that particular button again. For example, if the red color needs to be adjusted again at the stage of "4" the R button need to be pressed twice.



POINT CONVERGENCE ADJUSTMENT

In the POINT CONVERGENCE adjustment, each of red, green, and blue images is partially moved for color matching. The adjustment may be necessary when the Game Board is replaced or changed, or screen size is changed. Be sure to perform automatic color matching before starting.



NOTE 1:

When the MODE button is pressed, the adjustment modes will circulate as follows:

NOTE 2:

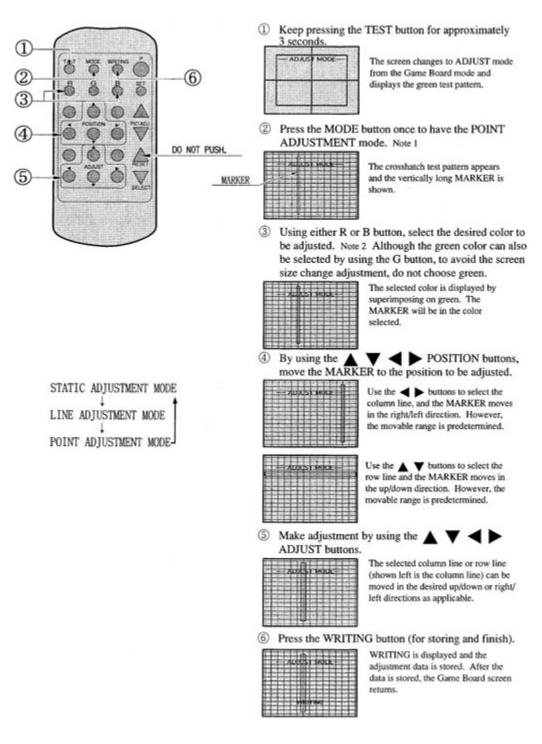
When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted is erased, press that particular button again.

NOTE 3:

By repeatedly pressing the SELECT button, only the Projector's TEST pattern screen and the screen superimposing the Game Board Test pattern can be alternately displayed.

LINE CONVERGENCE ADJUSTMENT

In the LINE CONVERGENCE adjustment, the adjustment point of the column line (vertical) or row line (horizontal) is comprehensively moved for color matching. It is convenient to utilize this adjustment when color of the column line row line is uniformly deviated.



NOTE 1:

When the MODE button is repeatedly pressed, the adjustment modes will circulate as follows:

NOTE 2:

When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted is erased, press that particular button again.

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13. REPLACEMENT OF FLUORESCENT LAMP AND LAMPS

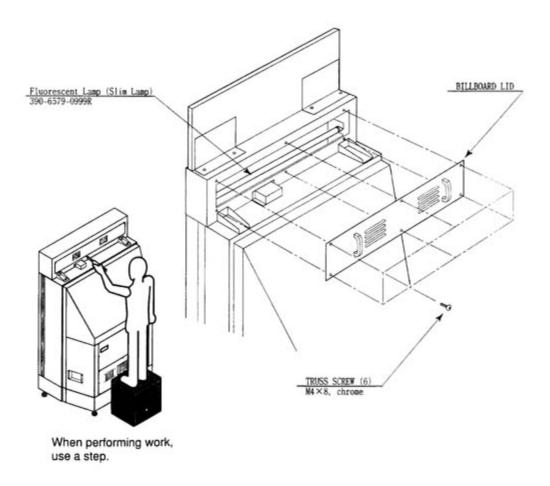
When performing the work, be sure to turn power off. Working with power on can cause an electric shock or short circuit accident.

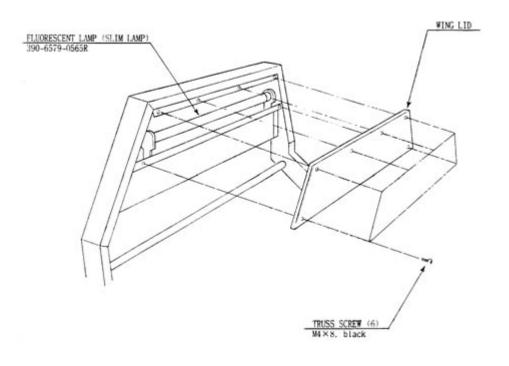
The Fluorescent Lamp, when it gets hot, can cause burns. Be very careful when replacing the Fluorescent Lamp. To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Not using a step or using an unstable step can cause a violent falling down accidents.

13 - 1 REPLACEMENT OF FLUORESCENT LAMP

Take off the 3 screws which secure the Holder on the upper part of Billboard.

Take out the billboard from the cabinet and replace the fluorescent lamp (20W)





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14. PERIODIC INSPECTION TABLE

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



Be sure to check once a year 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 dust as is accumulated can cause a fire or electrical shock.

Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the interior cleaning. Using the product with dust as is accumulated in the interior without cleaning can cause a fire or accident. Note that cleaning the interior parts can be performed on a pay-basis.

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CONTROLLER	Cleaning Volume Check Check VR	as required Weekly Monthly	6 6
COIN SELECTOR	Check COIN SW COIN SELECTOR cleaning	Monthly Trimonthly	6 8
PROJECTOR	C.R.T. cleaning Check adjustments	Weekly Monthly	3,6,9
GAME BD	Setting check	Monthly	6
INTERIOR	Cleaning	Annually	see above.
POWER PLUG	Inspection and cleaning	Annually	see above.
CABINET	Cleaning	As necessary	see below

SURFACE		
CABINET	Ensure that adjusters are in contact with the floor	3

CLEANING CABINET SURFACES



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

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15. TROUBLE SHOOTING

Should trouble occur, first check connector connections.

PROBLEMS	CAUSE	COUNTERMEASURES	
With Main SW ON, no activation	Power is not supplied. Power Supply/Voltage is not correct. AC Main fuse	Plug in correctly. Make sure that power supply/voltage is correct. Check fuse. Remove the cause of overload and replace fuse.	
PTV screen is blackened and no sound is emitted.	POWER SW is OFF. Connections within the base are defective.	1.> Check to see if the POWER SW is ON. 2.> Check the BNC connector connections of the PTV TERMINAL BD and VPM BUFFER BD in CONTROL CABI. 3.> Check the Main Fuse.	
PTV screen is all blue. Irregular communications between each board.		1.> Check the communication cable connection between the Game BD and I/O BD. 2.> Turn the POWER SW back on again.	
The color of the image on PTV screen is incorrect.	Connector connections are defective.	Check the connection for the RGB and SYNC connectors of the PTV TERMINAL BD and VPM BUFFER BD.	
The image on PTV screen has color deviation.	Affected by magnetic field of installation location. Sound volume	Make CONVERGENCE adjustment. (see section 9)	

Replacement of Fuse Page 2 of 3

No sound is	adjustment is not appropriate.	Adjust sound volume. (see section 6)	
emitted.	Sound BD and speaker are malfunctioning.	Perform sound test to find and replace defective parts. (see section 6)	
Controller	Due to environmental changes, etc., sighting became inappropriate.	Perform sighting adjustment in the TEST MODE. (see section 6)	
operation is not satisfactory.	Micro switch malfunctioning.	Replace the micro switch. (see section 7) Replace the Sensor BD.	
	Sensor BD malfunctioning	(see section 7)	
The Fluorescent lamp does not light up. The Fluorescent tube is burnt out.		Replace the Fluorescent tube. (see section 10)	

15 - 1 REPLACEMENT OF FUSE



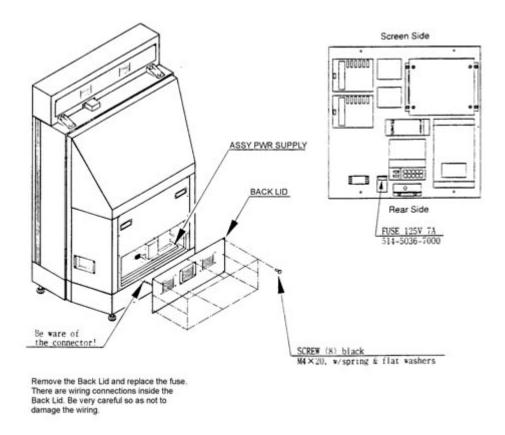
In order to prevent an electric shock, be sure to turn power off before performing work by touching the interior parts of the product.Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.



After eliminating the cause of the blowing of fuse, replace the fuse.

Depending on the cause of the fuse blowing, using the fuse as is blown can cause generation of heat resulting in fire.

(1.) Turn off the AC Unit's Main SW.



- (2.) Unplug from the Plug Socket.
- (3.) Remove the 2 truss screws, unlock with the Master Key, and remove the Back Door from the rear part of the Front Cabi.
- (4.) Two types of fuse are on the Power Supply Unit.

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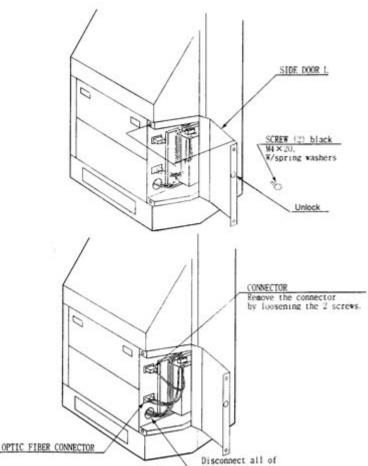
16. GAME BOARD

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In order to prevent an electrical shock, be sure to turn power off before performing work by touching the interior parts of the product.

Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

Do not expose the Game BD, etc. without a good reason. In this product, setting changes are made during the test mode. The Game BD need not be operated. Use the Game BD, etc. as is with the same setting made at the time of shipment.



16 - 1 REMOVING THE IC BOARD

The IC board such as Game BD, etc., is on the Rear side of the Front Cabi.

Take out the 2 Truss screws, unlock with the Master Key, and remove the Back Door from the rear part of the Front Cabinet.

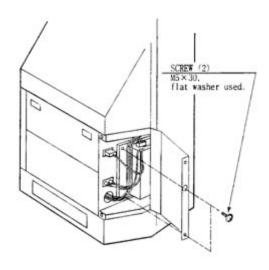
Take out the 3 screws, unlock with the Master Key, and remove the Back Door from the rear part of the

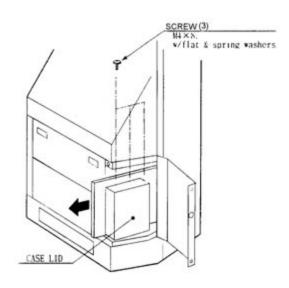
Front Cabinet.

the wiring connectors

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16 - 2 COMPOSITION OF GAME BOARD

(1) GAME BD SRT DX

(833-13371)



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17. DESIGN RELATED PARTS



ITEM NO.	PART NO.	DESCRIPTION
1	421-9797	STICKER PTV SIDE L SRT
2	421-9798	STICKER PTV SIDE R SRT
3	422-0670- 01	PLAY INSTR SH SRT DX ENG
4	SRT-0207- B	STICKER LIGHT COVER
5	SRT-0501- B	STICKER BILLBOARD FRAME
6	SRT-0505- B	STICKER CIBIE
7	SRT-2001- B	STICKER CASTROL
8	SRT-2001- C	STICKER DEI
9	SRT-2001- D	STICKER MICHELIN
10	SRT-2002- B	DESIGN PLATE CNTRL PNL
11	SRT-2003- B	STICKER SHIFT COVER
12	SRT-2151- B	STICKER START VIEW
13	SRT-2401- B	STICKER SEAT BASE
14	SRT-2403- A	STICKER NO.1
15	SRT-2403- B	STICKER SEAT TITLE

16	SRT-2403- C	STICKER SEAT SIDE L
17	SRT-2403- D	STICKER SEAT SIDE R
18	SRT-2403- E	STICKER SEAT UNDER L
19	SRT-2403- F	STICKER SEAT UNDER R
20	SRT-3001- B	STICKER REAR SIDE L
21	SRT-3001- C	STICKER REAR SIDE R
22	SRT-3001- D	STICKER REAR UPPER
23	SRT-3001- E	STICKER REAR BACK
24	SRT-3019- B	STICKER FRONT COVER SIDE L
25	SRT-3020- B	STICKER FRONT COVER SIDE R
26	SRT-3039- B	STICKER CNTRL PNL UP L
27	SRT-3039- C	STICKER CNTRL PNL SIDE L
28	SRT-3040- B	STICKER CNTRL PNL UP R
29	SRT-3040- C	STICKER CNTRL PNL SIDE R
30	SRT-3301- B	STICKER TEIN
31	SRT-3302- B	STICKER C ONE L
32	SRT-3303- B	STICKER C ONE R
33	SRT-2011	BELT F
34	SRT-3307	BELT R
35	SPG-2002	STEERING EMBLEM
36	DYN-0011	DENOMI PLATE W/O ORIGINAL
37	421-7308	DENOMINATION SHEET 1 GAME