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1st PRINTING MAR 98

SEGA

SEGA RALLY 2

SEGA RALLY™

CHAMPIONSHIP

DLX VERSION

OWNER'S MANUAL



SEGA ENTERPRISES, USA

MANUAL NO. 4200-6374-02



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.

SPECIFICATIONS

Installation space:	112 in.(L) x 52 in.(W)
Height:	91 in.
Weight:	Approx. 1180 lbs.
Power maximum current:	8.4 Amp AC 120V 60 Hz
MONITOR:	50" INCH Projector

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 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)

Customer Service

45133 Industrial Drive

Fremont, CA 94538

Phone 650-802-1750

Fax 650-802-1754

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 benzene, thinner, etc.

Location: This is 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

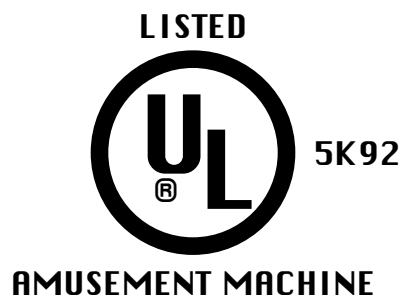
- Verify the amperage of the branch circuit outlet before plugging in the power plug. Do not overload the circuit.
- Avoid using an extension cord. If one is required, use an extension cord of type SJT, 16/3 AWG rated min. 120 VAC, 7A.
- Moving this unit requires a minimum clearance (of doors, etc.) 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.



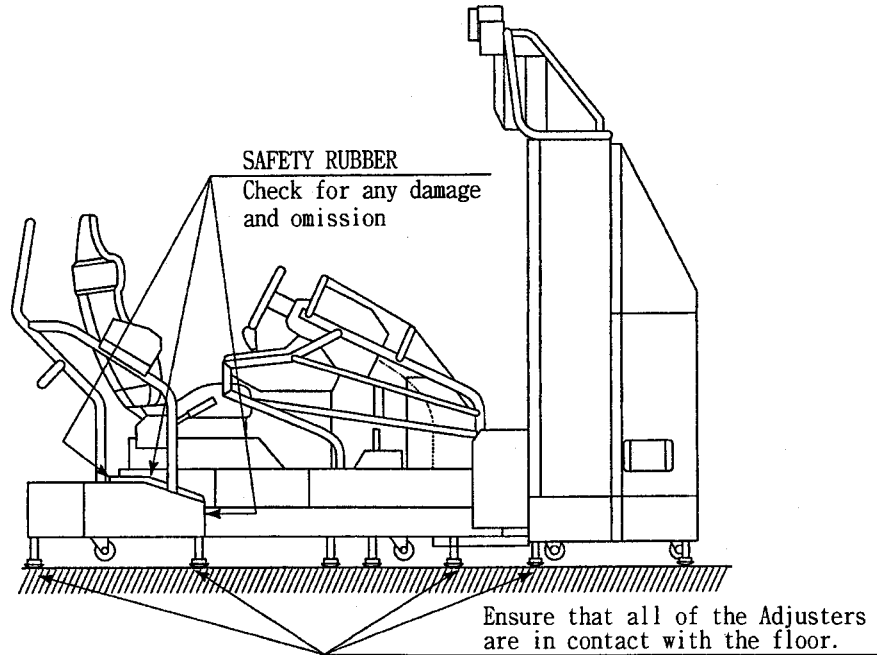
1 . PRECAUTIONS TO BE HEEDED FOR OPERATION

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

PRECAUTIONS TO BE HEEDED FOR OPERATION BEFORE STARTING THE 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.



- 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.



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 HEHEDED DURING OPERATION



CAUTION!

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

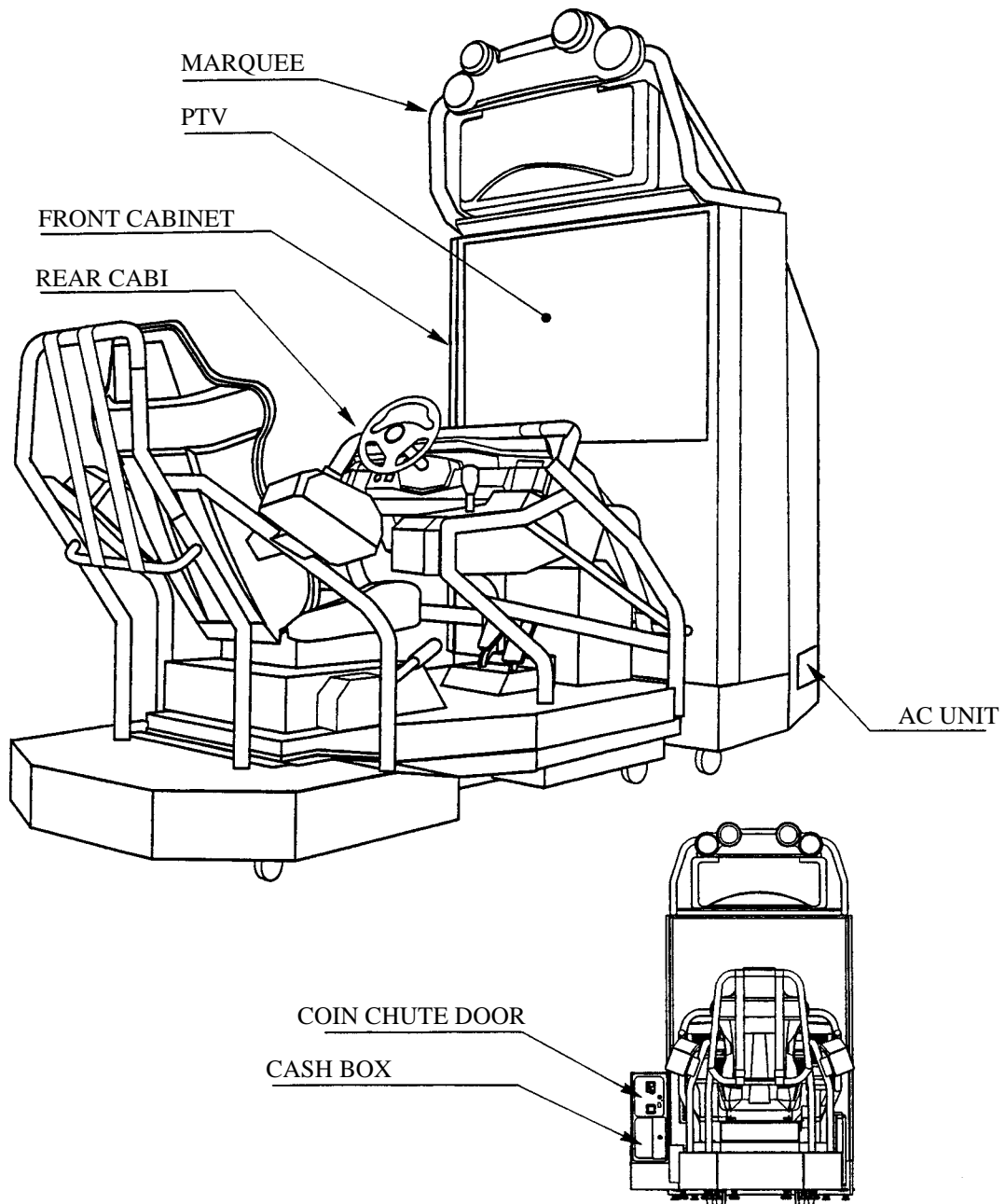
- * Intoxicated persons
- * Those who have high blood pressure or heart problems.
- * Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.
- * Persons susceptible to motion sickness.
- * Persons whose acts runs counter to the products warning displays.
- * 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.



CAUTION!

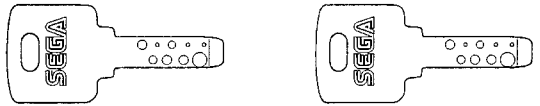
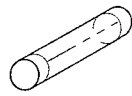
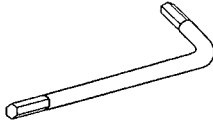
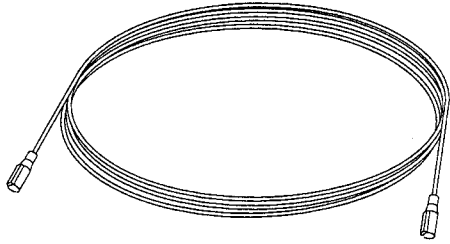
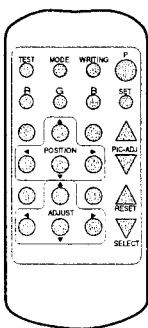
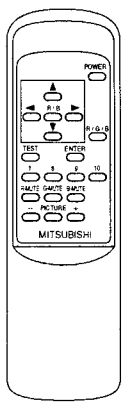
- To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in openings of the product or small openings in or around doors.
- To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without a justifiable reason.
- 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.

2 . NAME OF PARTS



GAME SPECIFICATIONS	WIDTH	LENGTH	HEIGHT	WEIGHT
All measurements are in inches				
Weight-DURING SHIPPING				1250 LBS.
MARQUEE	42"	X 23"	X 22.5"	49 LBS.
FRONT CABINET	44.5"	X 31"	X 70"	433 LBS.
REAR CABINET	53"	X 81"	X 57"	701 LBS.
WHEN ASSEMBLED	53"	X 114"	X 92"	1183 LBS.

3 . ACCESSORIES

<p>DESCRIPTION OWNERS MANUAL Part No. (Qty.) 4200-6374-02 (1) Note Figures 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.</p>	<p>KEY MASTER 220-5576 (2) For opening/closing the doors</p> <p>KEY (2) For the CASHBOX DOOR the doors</p> 	
<p>FUSE 7A 120V Local Purchase (2)</p> 	<p>TAMPERPROOF WRENCH M8 540-0009-01 (1) TOOL</p> 	<p>ASSY FIBER CABLE 600-6275-0500 (2) For communications play</p> 
<p>TOSHIBA Remote Control for Projector Used for adjustment. 200-5536 (1)</p>  <p>MITSUBISHI Remote Control for Projector Used for adjustment. 200-5532 (1)</p>  <p>One of the above 2 types of Remote Controls is used for the Projector.</p>		

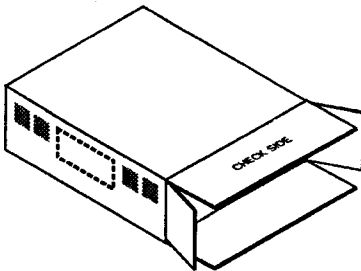


WARNING!

THE SHIPMENT METHOD DESCRIBED BELOW ONLY APPLIES TO 'MODEL 3' BOARDS CONTAINED IN THE FOLLOWING GAMES:

LOST WORLD, VIRTUA FIGHTER 3, SUPER GT, SEGA BASS FISHING, STRIKER 2
HARLEY DAVIDSON, RALLY 2

!!NEVER SHIP MODEL 3 GAME BOARDS OUTSIDE OF CAGE!!



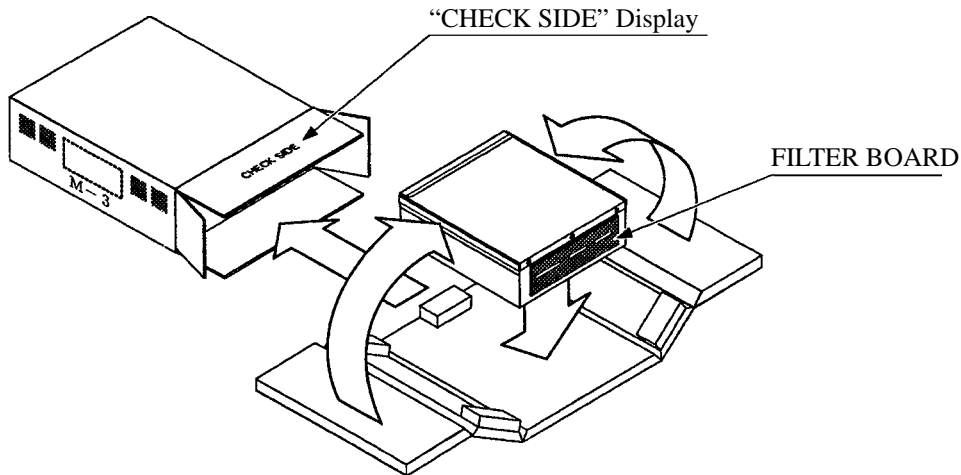
CARTON BOX

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.



WARNING!

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



CAUTION!

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 carrying out the assembly work, follow the procedure in the following 7-item sequence:

- 1 ASSY OF THE FRONT CABINET
- 2 JOINING OF CABINETS
- 3 SECURING IN PLACE (ADJUSTER ADJUSTMENT)
- 4 POWER SUPPLY
- 5 ASSEMBLING CHECK

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.

1

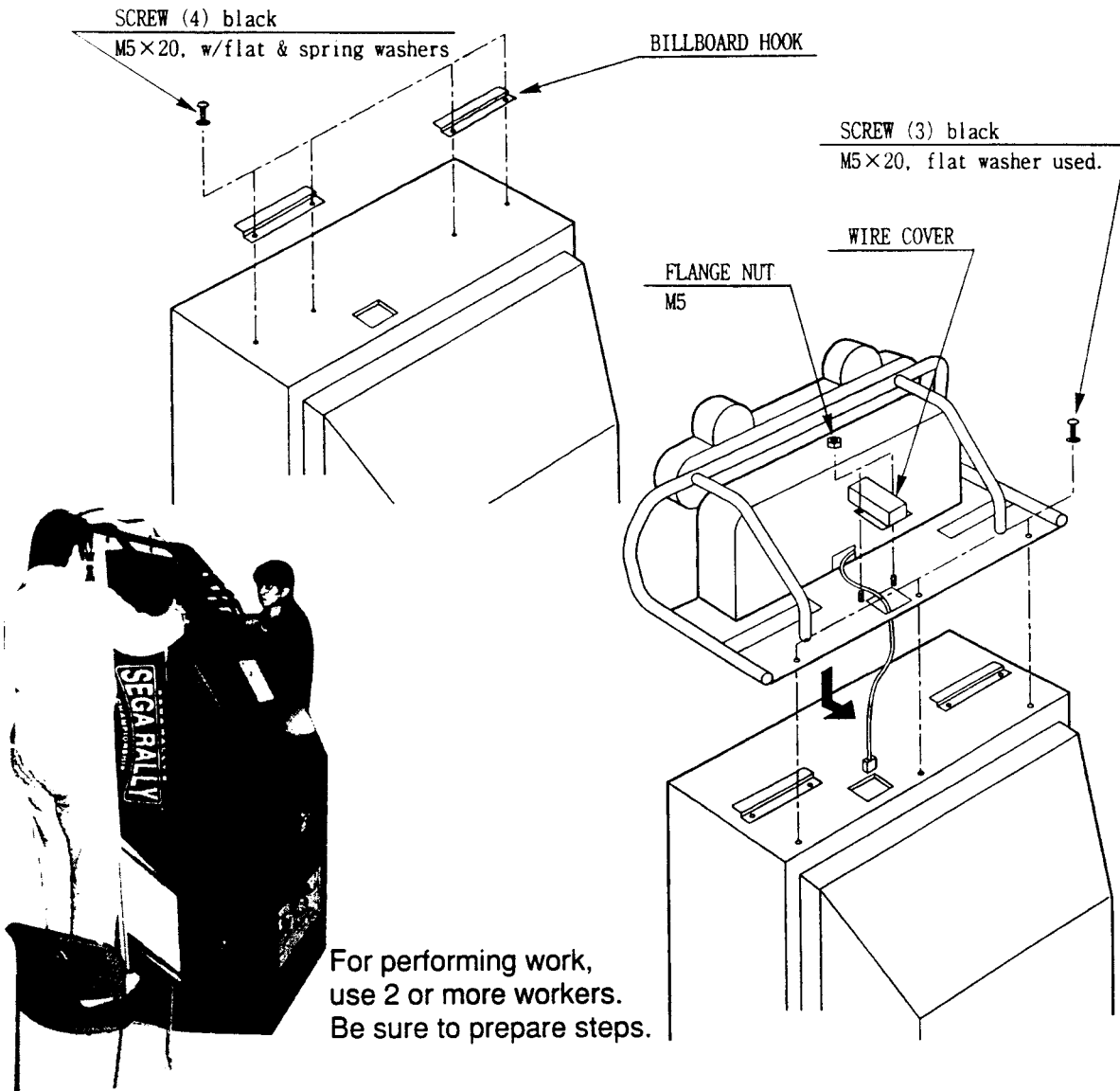
ASSY OF FRONT CABI



CAUTION!

Installing the Billboard by one person is difficult. Be sure to use plural persons to perform work safely and accurately.
To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using a step can cause a violent falling down accident.

- ① Install 2 Billboard Hooks to the top of the PTV.
- ② Mount the Billboard by hooking up to the Billboard hook, and secure with 3 screws.
- ③ Connect the Connector and install the Wire Cover.

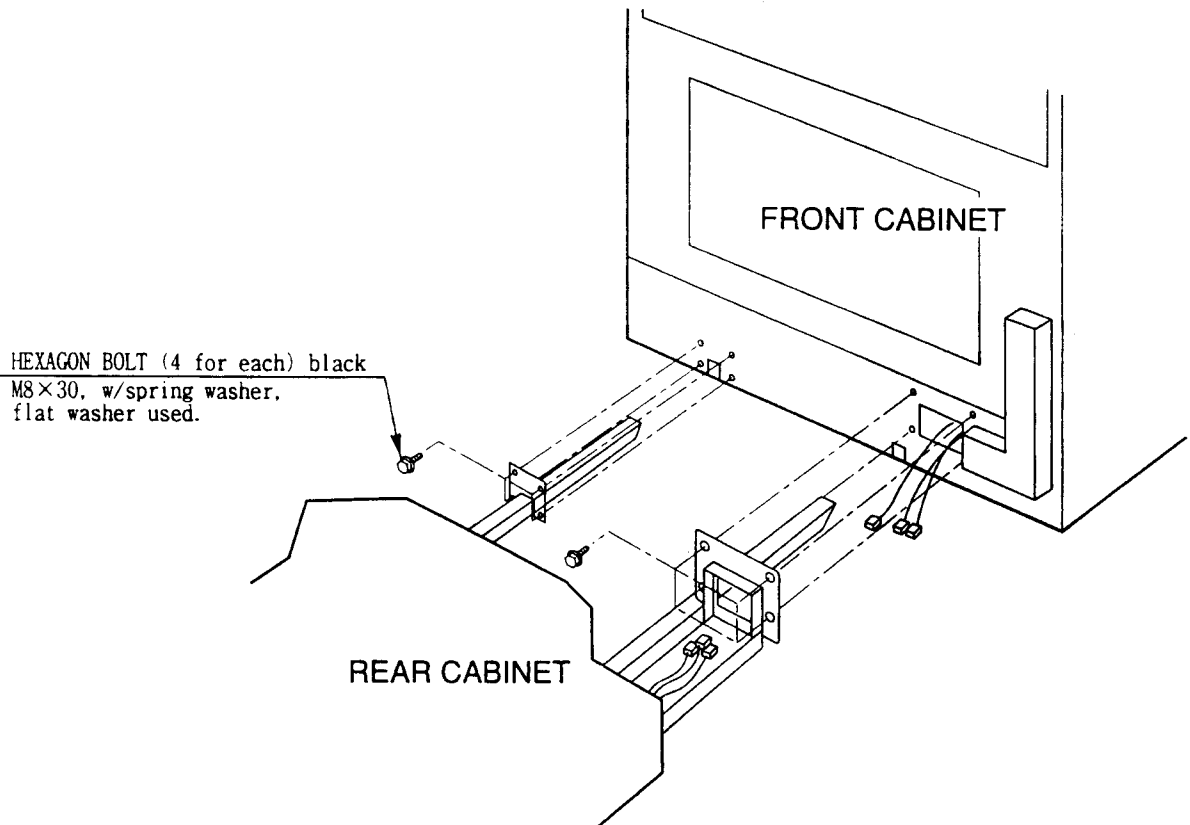
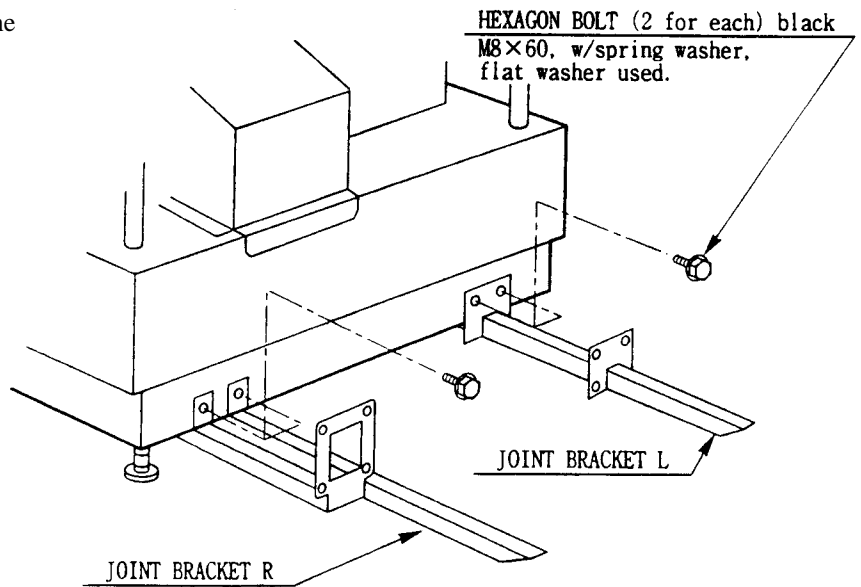


2 JOINING THE CABINETS



Due to its large size, it is very difficult for one person alone to install the billboard. Make sure 2 or more persons are available to perform this work. Attempting to perform the installation alone can cause an accident.

- ① Install the Joint Bracket L & R to the Rear Cabinet Base with 2 hexagon bolts for each. To install Joint Bracket R, lower the Adjuster to an appropriate position.
- ② Insert the Rear Cabinet's Joint Bracket L & R into the Front Cabinet's square holes and secure with 4 hexagon bolts for each.



3

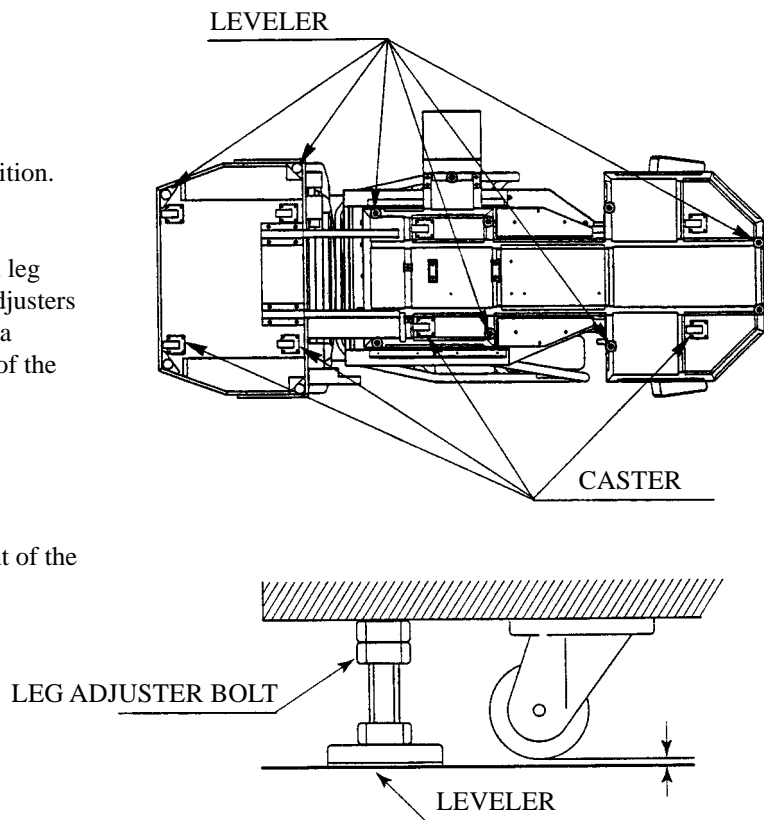
SECURING IN PLACE (ADJUSTER ADJUSTMENT)



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

This machine has 8 each of casters and adjusters (shown below). When the installation position is determined, cause the adjusters to come into contact with the floor directly, make adjustments in a manner so that the casters will be raised approximately 5mm. from the floor and make sure that the machine position is level.

- ① Move the machine to the installation position.
- ② Attach the joint plate for the two internal leg adjusters prior to causing all of the leg adjusters to make contact with the floor. By using a wrench, make adjustments in the height of the leg adjusters to ensure that the machine's position is level.
- ③ After making adjustments, fasten the leg adjuster nut upward and secure the height of the leg adjuster.



4

POWER SUPPLY



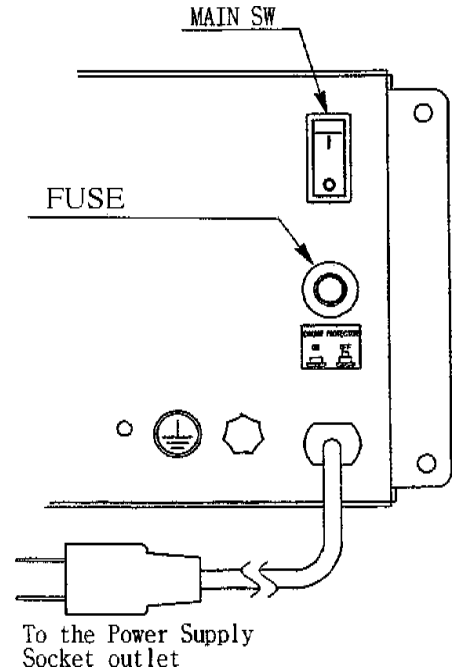
CAUTION!

- 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

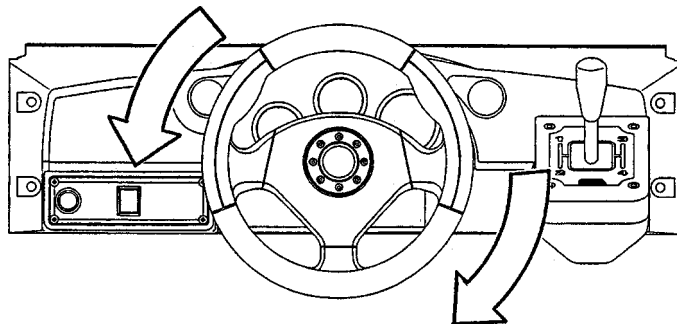
With the AC UNIT'S Main Switch ON, turn the machine's power supply. Simultaneously with turning power on, the machine starts initialization setting movements and displays the initialization setting movement mode on the screen. Do not touch the machine until the initialization setting movements are automatically finished.

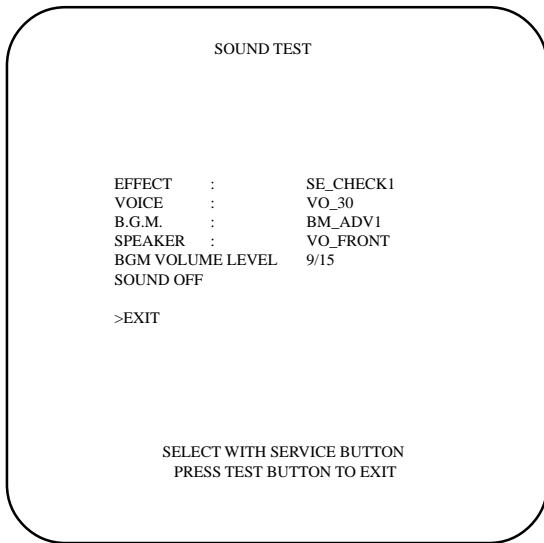
When the power is turned ON, the Billboard's fluorescent lamp lights up, the steering wheel turns right and left and then stops at the centering position. (initialization setting movement).



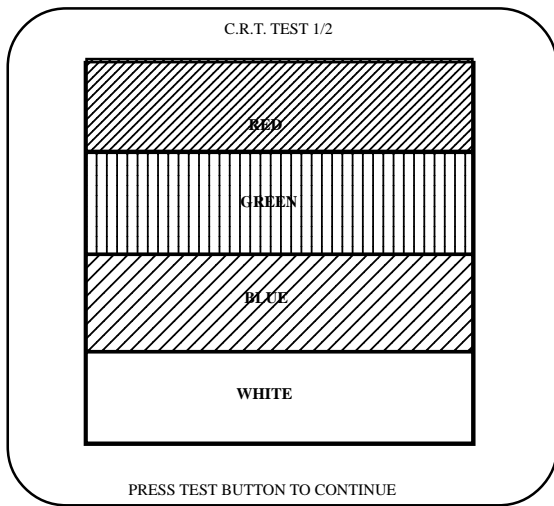
CAUTION!

During initialization setting, do not touch the machine. Wait until the initialization settings are finished automatically. Touching the machine during setting can cause inaccurate settings and game play may not be satisfactory.

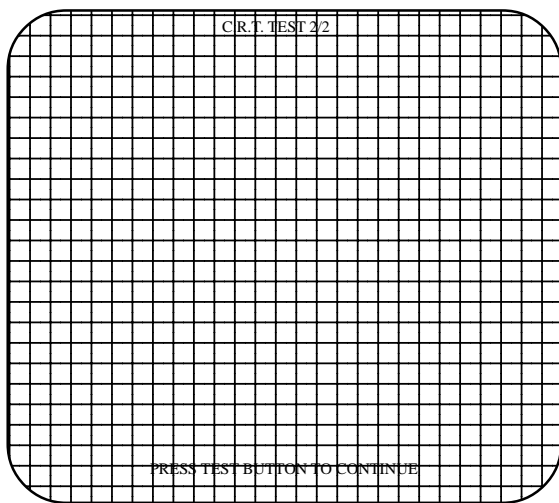




In the TEST mode, selecting SOUND TEST causes the screen, on which sound related BD and wiring connections are tested, to be displayed. be sure to check if the sound is satisfactorily emitted from each of speaker and the sound volume is appropriate.



In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the projector is tested) to be displayed. Although the projector adjustments have been made at the same time of shipment from the factory, color deviation, etc., may occur due to the effect caused by geomagnetism, the location building's steel frames and other game machines in the periphery. By watching the test mode screen, make judgement as to whether an adjustment is needed. If it is necessary, adjust the projector by referring to Section 9.



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

5 . PRECATIONS TO BE HEEDED WHEN MOVING THE MACHINE



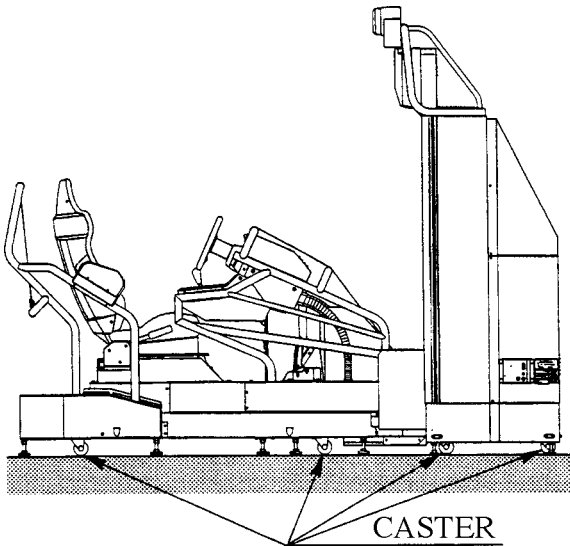
WARNING!

- When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug 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.

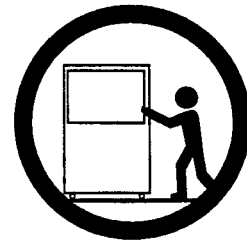


CAUTION!

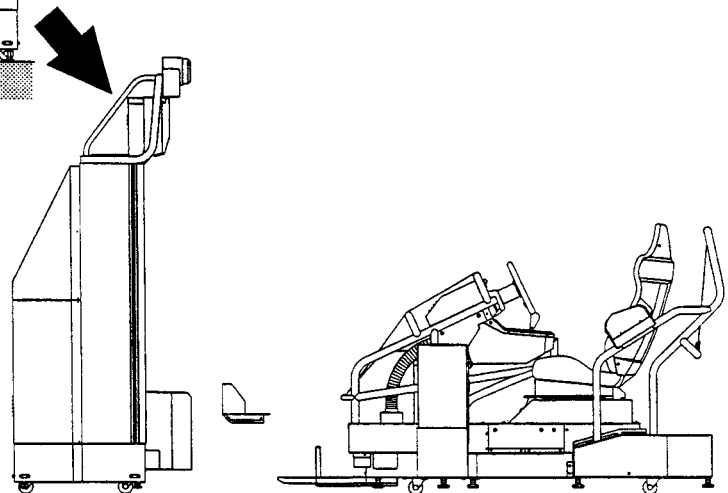
Use care when handling glass made parts. When the glass is damaged, fragments of glass can cause injury



On level surfaces, move the machine by causing the Casters to make contact with the surfaces.



Do not push PTV from the rear side. Pushing the PTV from the rear side can cause the PTV to fall down. Push it from the side.



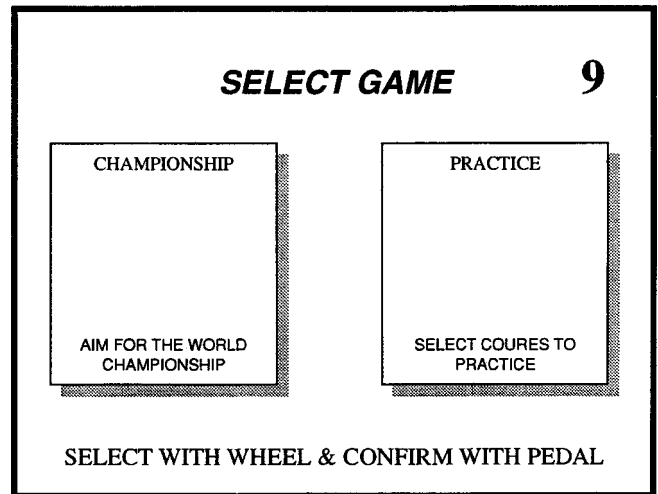
Where there are steps (or step-like differences in grade), move the machine by separating into each unit.

6 . CONTENTS OF GAME

The following explanations apply to the case the product is functioning satisfactorily. Should there be any moves different from the following contents, some sort of faults may have occurred. Immediately look into the cause of the fault and eliminate the cause thereof to ensure satisfactory operation. During the Advertise mode, the Billboard's Decoration Lamp lights up periodically. When the machine is energized, the Billboard's Fluorescent 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 Speaker beside the Monitor.

HOW TO PLAY

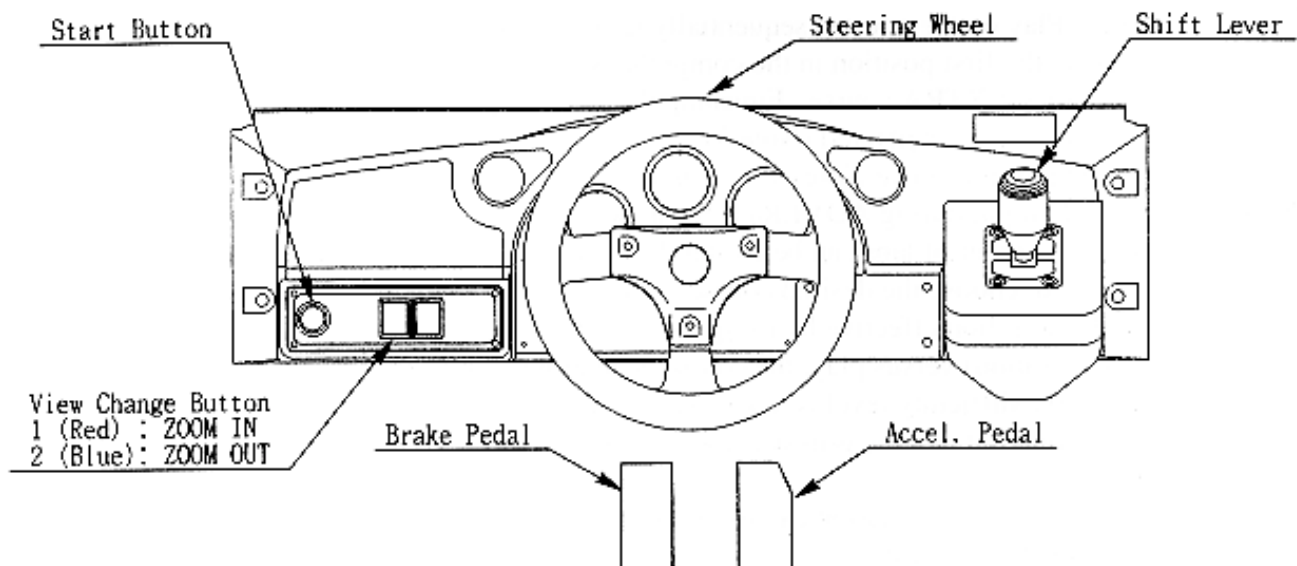
- ① Get in the machine. the seat position is adjustable forward and backward. Facing the monitor, you will find the Lever on the lower right-hand side. Pull the Lever to adjust the seat position.
- ② Insert a coin(s). Insert one play worth of coins to have the Select Mode appear. Up to 9 credits can be counted at a time. Coins inserted after counting 9 will not be counted or rejected. Credits will not be displayed after Select Mode.
- ③ When a coin is inserted in one of the linked seats, the monitor(s) of the other seat(s) will be in the entry acceptance mode and countdown starts. For entry, insert a coin during countdown.
- ④ In the case of 1P play, in the SELECT mode, choose either of CHAMPIONSHIP MODE or PRACTICE MODE. Turn the Steering Wheel to select and confirm by stepping on the Accelerator. In the communication play, PRACTICE MODE is selected compulsorily.



GAME SELECT

When the SELECT mode is displayed, countdown starts. When countdown reaches 0, the course and car being selected will automatically be decided.

After stepping on the Accelerator to confirm, you will proceed to the next SELECT mode in the middle of the countdown by further stepping on the Accelerator.



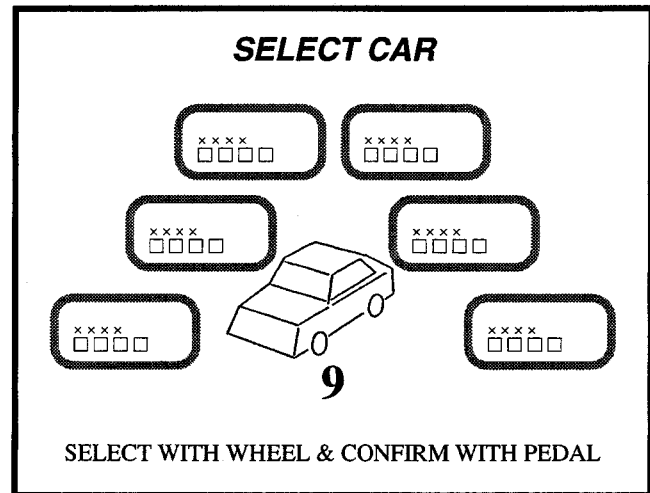
WHEN PLAYING IN TH ECHAMPIONSHIP MODE

Note: In the interactive play, CHAMPIONSHIP MODE can not be selected.

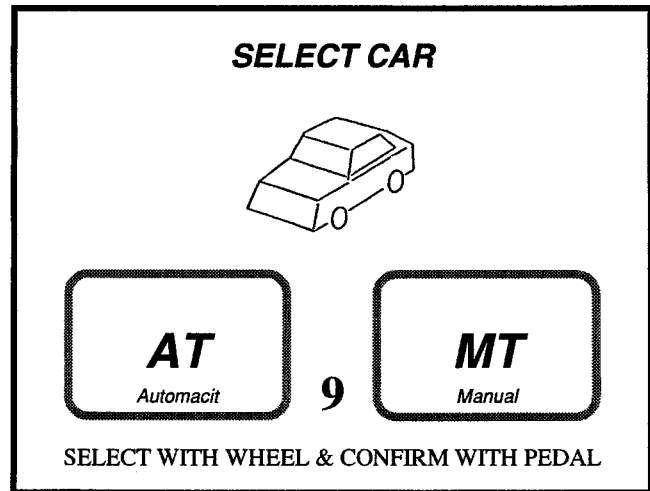
① The car select mode appears. Select from among 6 types. Depending on the type of car, your operating sensation may somewhat vary. Choose the desired car by turning the Steering Wheel, and confirm with the Accelerator Pedal.

② TRANSMISSION SELECT mode appears. Turn the Steering Wheel and select either AT (AUTOMATIC) or MT (MANUAL, 4 SHIFTS), and confirm with pedal.

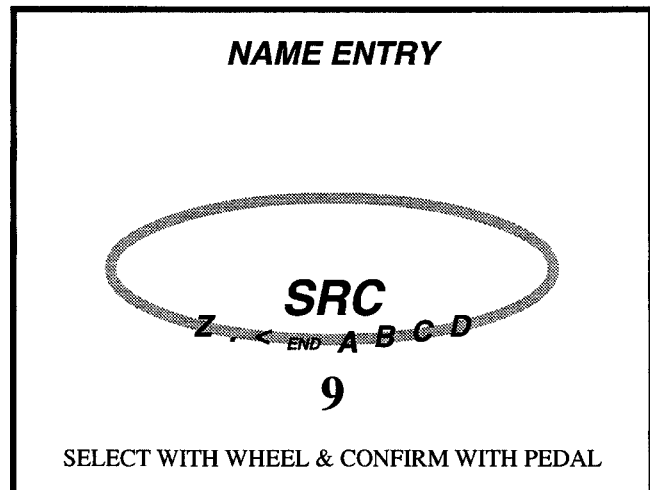
③ The NAME ENTRY MODE appears. Turn the Steering Wheel to choose input characters, and confirm with pedal. After inputing the 3 characters, game starts.



CAR SELECT (1)

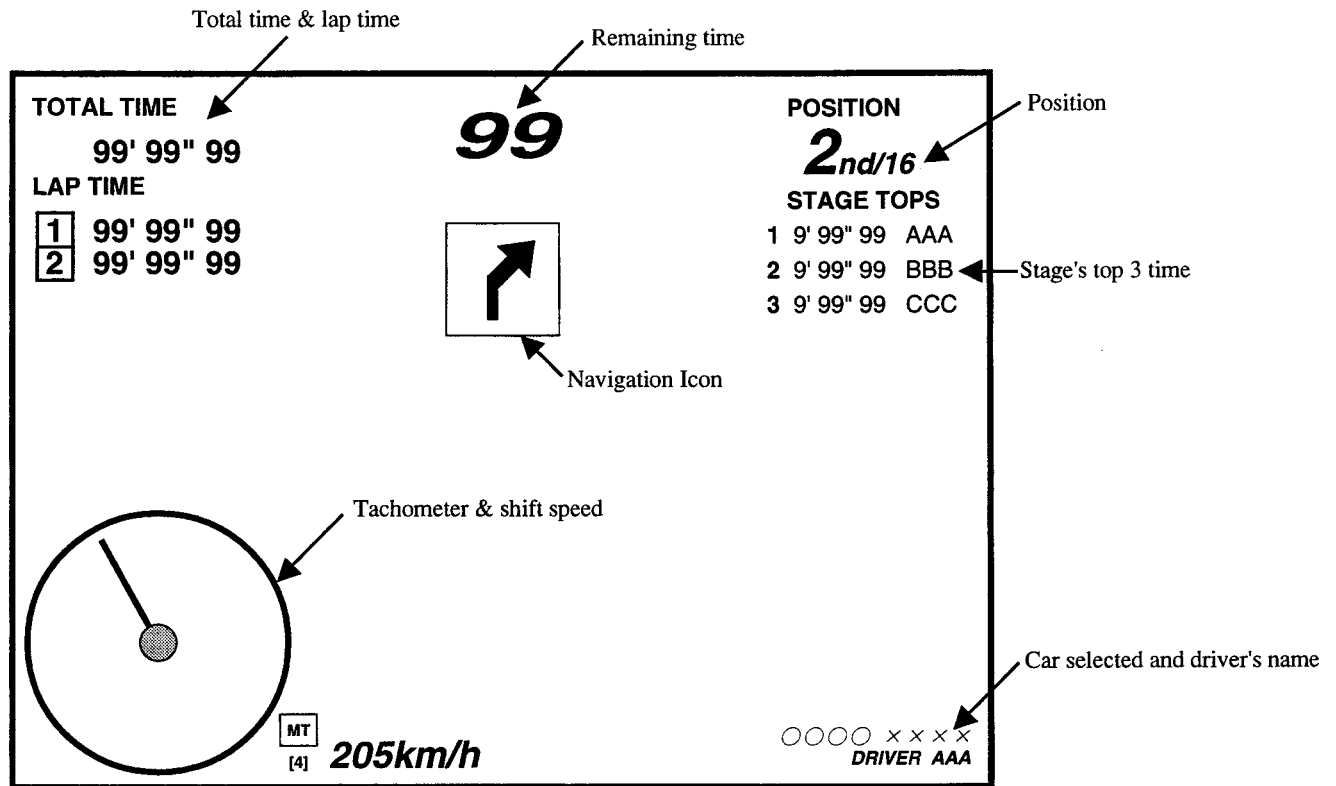


CAR SELECT (2)



NAME ENTRY

- ④ On the upper left portion of the screen, total time & lap time are displayed. The remaining time is shown at the top center and navigation icon is seen at the lower part of the top center. On the upper right-hand side, the present player's position as well as the stage's top 3 times are displayed. The lower left portion shows tachometer and shift speed. The lower right-hand portion indicates the selected car and the driver's name entered.



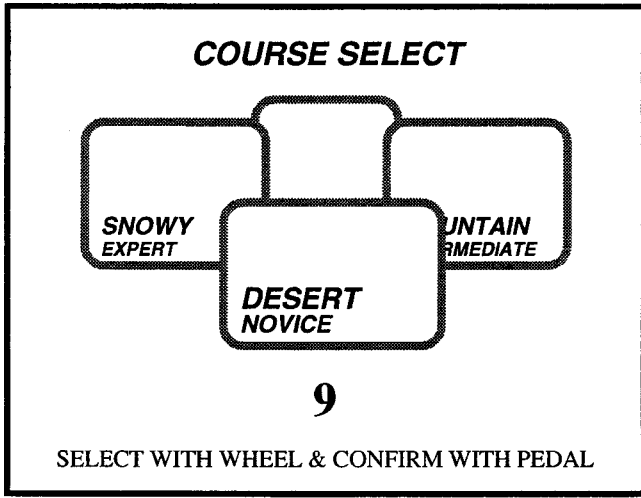
IN-PLAY MODE

- ⑤ After game start, time decreases. Passing a mid-course checkpoint increases time and game continues. Failing to pass the checkpoint within the time limit causes game over. Finishing the GOAL in each stage will let you proceed to the next stage.
- ⑥ In the Championship mode, you proceed starting from DESERT (novice) sequentially to MOUNTAIN (intermediate), SNOWY (expert) with one lap for each, and RIVIERA (expert) with 2 laps.
- ⑦ Finishing the RIVIERA (expert) course results in GAME CLEAR and the game ends.

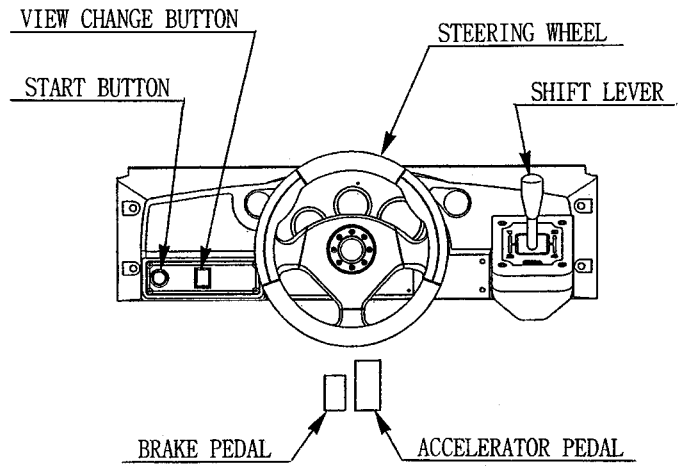
The Steering Wheel and the Cabinet will react depending on the road surface status and car condition during play. Press the View Change Button to shift to a different view.

WHEN PLAYING IN THE PRACTICE MODE

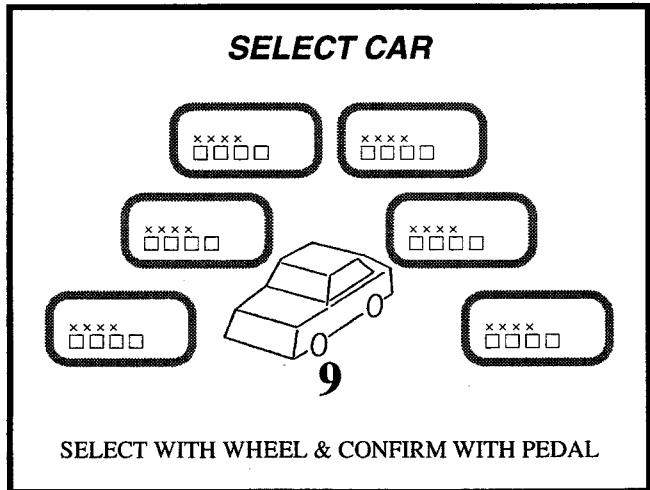
- ① The Course Select mode appears. Turn the Steering Wheel to select and confirm with pedal. In case of communication play, the course is selected by majority.



COURSE SELECT

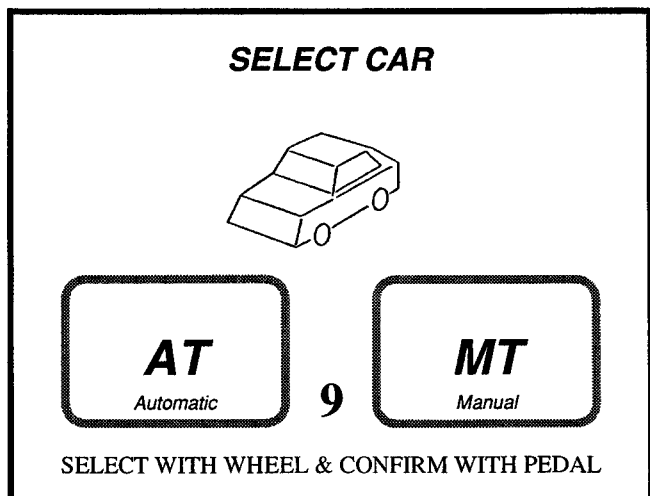


- ② The Car Select Mode appears. Select from among the 6 types. Depending on the type of car, your operating sensation may somewhat vary. Select the desired car with the Steering Wheel. Step on the Accelerator to confirm.



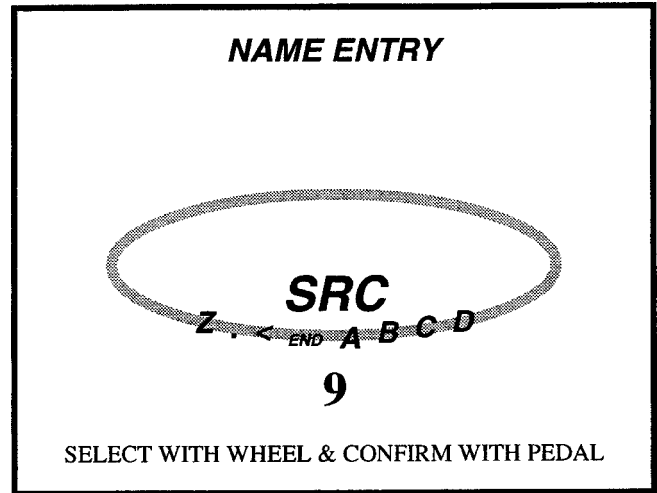
CAR SELECT (1)

- ③ The Transmission Select Mode appears. Turn the Steering Wheel to choose either of AT (AUTOMATIC) or MT (MANUAL, 4 SHIFTS), and confirm with the Accelerator Pedal.



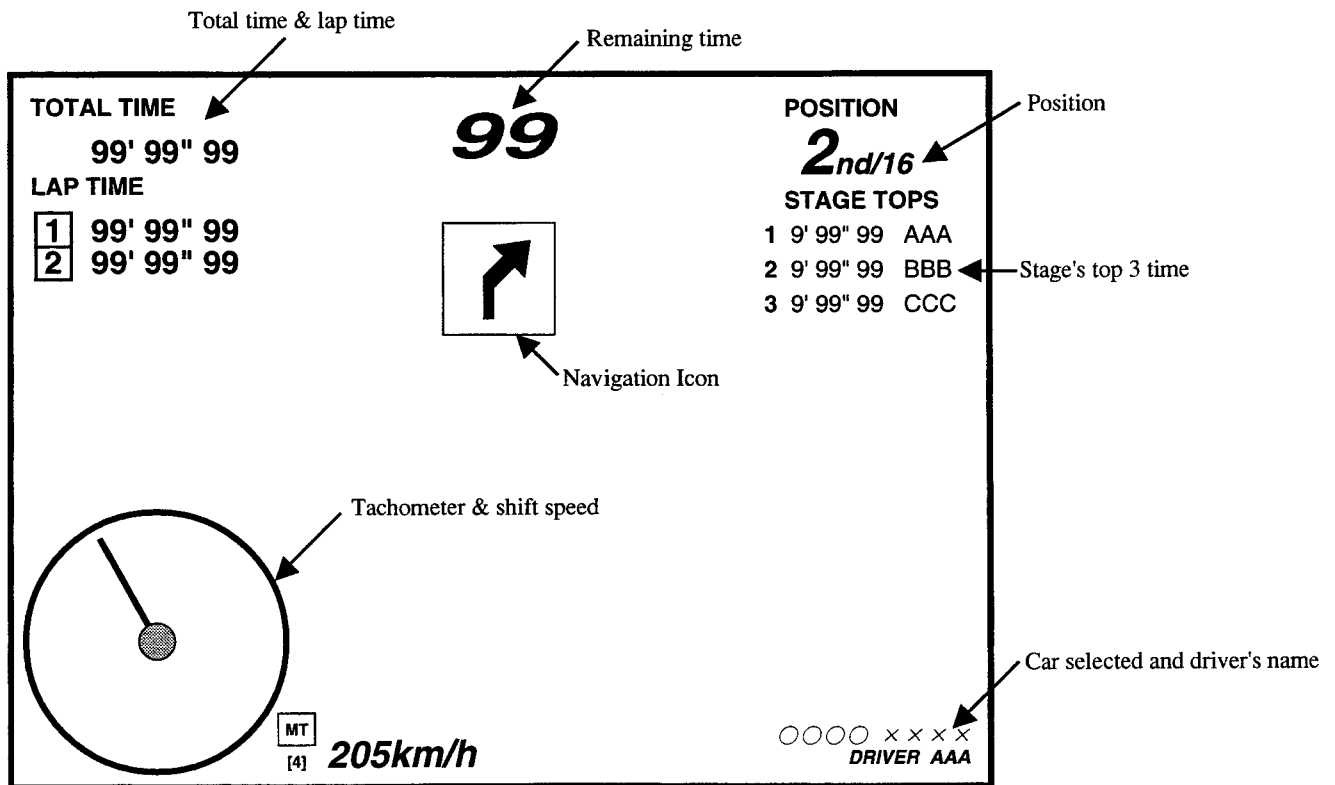
CAR SELECT (2)

- ④ The NAME ENTRY MODE appears. Turn the Steering Wheel to choose input characters, and confirm with pedal. After inputting the 3 characters, game start



NAME ENTRY

- ⑤ On the upper left portion of the screen, total time & lap time are displayed. The remaining time is shown at the top center and navigation icon is seen at the loer part of the top center. on the upper right-hand side, the present player's position as well as the stage's top 3 times are displayed. the lower left portion shows tachometer and shift speed. the lower right-hand portion indicates the selected car and the driver's name entered.



IN-PLAY MODE

- ⑥ After game start, time decreases. Passing a mid-course checkpoint increases time and game continues. Failing to pass the checkpoint within the time limit causes game over. Finishing the GOAL in each stage will let you proceed to the next stage.
- ⑦ In the Championship mode, you proceed starting from DESERT (novice) sequentially to MOUNTAIN (intermediate), SNOWY (expert) with 3 laps for each, and RIVIERA (expert) with 5 laps. Finishing the RIVIERA (expert) course results in GAME CLEAR and the game ends.

7 . EXPLANATION OF TEST AND DATA DISPLAY

By operating the switch unit, periodically perform the tests and data check. When installing the machine intially 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.



IMPORTANT!



IMPORTANT!

When you enter the test mode, the Handlebar and Bike Body are unlocked. Do not lean against the BikeBody when you press the test button. Failure to observe this can cause violent falling down accidents as the Bike Body will bank. When you finish the test mode, the handlebar and Bike Body will be locked.

CAUTIONS TO BE HEEDED WHEN USING THE TEST MODE:

In the case where plural machines are linked for communication play, if even one seat enters the test mode, all of the linked seats will enter the test mode. Therefore, if any one of the linked machines is in play, use care so as not to use the test mode.

The contents of the setting changes made will not be effective unless the test mode is finished in the test mode. When the setting is changed, be sure to "EXIT" in the menu mode. Do not press the TEST BUTTON during network check at the time of turning the power on or exiting from the test mode. If anyone of the linked machines uses the test mode during network check, all other Seats will continue network checking. Cause all of the Seats to reenter the test mode and then have all of the Seats exit from the test mode simultaneously.

TABLE 7 EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION	SECTIONS
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to see that each setting is as per standard setting made at the time of shipment. 2. In the INPUT TEST mode, check each SW and VR. 3. In the OUTPUT TEST mode, check each of lamps. 4. In the MEMORY TEST mode, check ICs on the IC Board.	7 - 10, 7 - 11 7 - 6 7 - 7 7 - 3, 7 - 4
MEMORY	Choose MEMORY TEST in the MENU mode to allow the MEMORY test to be performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.	7 - 3, 7 - 4
PERIODIC SERVICING	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. In the INPUT TEST mode, test the CONTROL device 4. In the OUTPUT TEST mode, check each of lamps.	7 - 10, 7 - 11 7 - 6 7 - 7
CONTROL SYSTEM	1. In the INPUT TEST mode, check each SW and VR. 2. Adjust or replace each SW and VR. 3. If the problem can not be solved yet, check the CONTROL's moves.	7 - 6 8
MONITOR	In the MONITOR ADJUSTMENT mode, check to see if the MONITOR adjustment is appropriately made.	8
IC BOARD	1. MEMORY TEST 2. In the SOUND TEST mode, check the sound related ROMs.	7 - 9 7 - 8
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc	7 - 15

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.

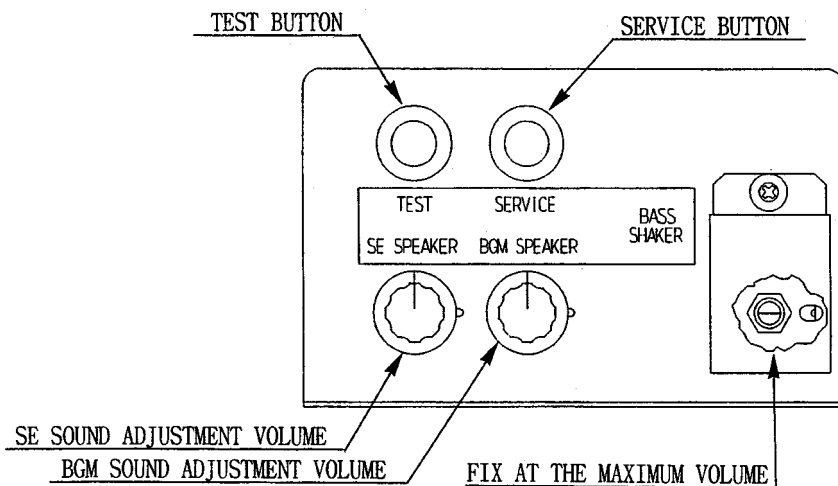


- Adjust to the optimum sound volume by considering the environmental requirements of the installation location.
- If the COIN METER and the game board are electrically disconnected, game play is not possible.

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 .
- 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
meter.



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.

The Following FIGURES/TABLES show the factory recommended settings.

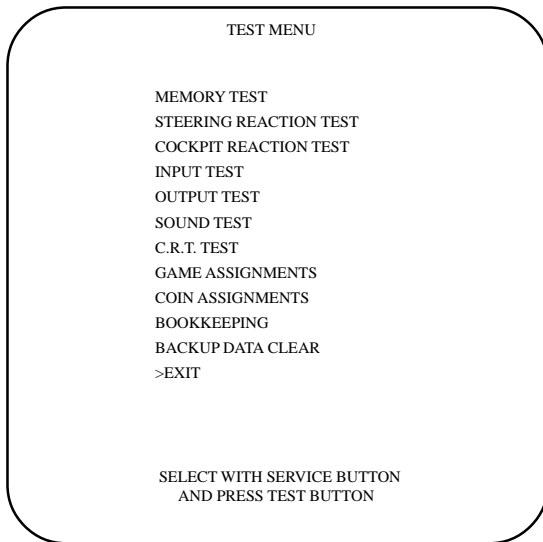


FIG. 7.2 TEST MENU

- 1 Push the TEST BUTTON to cause the following TEST MENU to appear:
- 2 By pushing the SERVICE BUTTON, bring the “>” mark to the desired item and press the TEST BUTTON. This will select the item’s test.
- 3 After the test is complete, move the “>” mark to “EXIT” and press the TEST BUTTON to return to game mode.

7 - 3 MEMORY TEST

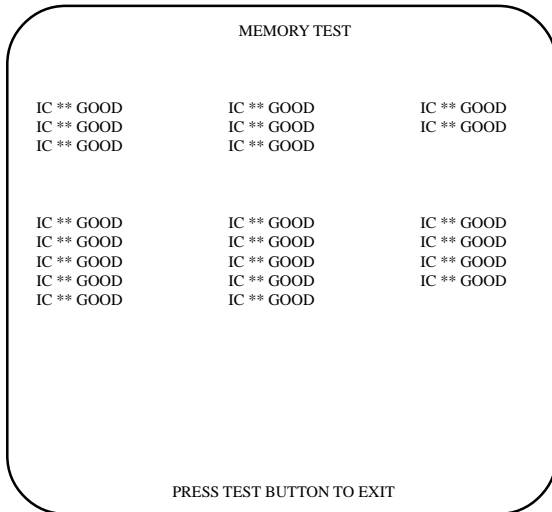


FIG. 7.3 MEMORY TEST

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

This test starts immediately after selection from the menu in the test mode. When in execution, the “TESTING NOW” message will be displayed at the lower part to the screen. Press the Test Button to Exit.

7 - 4 STEERING REACTION TEST

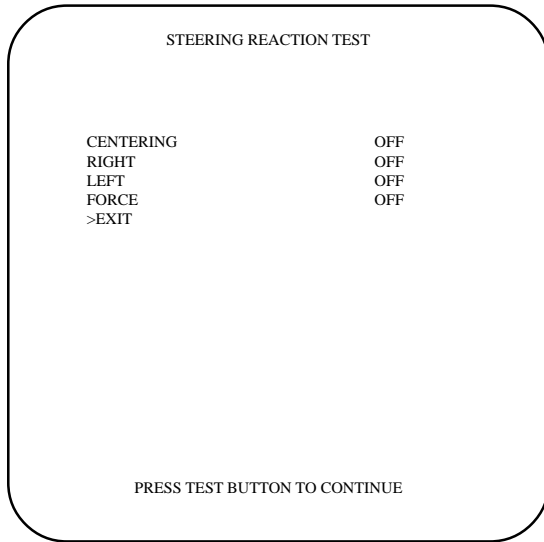


FIG. 7.4 STEERING REACTION TEST

This test allows Steering Wheel reaction mechanism to be tested and reaction force to be set. Press the Service Button to bring the arrow to the desired item to be selected, and press the Test Button to enter the selected item.

CENTERING

Press the Test Button or the Start Button to apply automatic centering to Steering Wheel.

RIGHT

The Steering Wheel turns up to the RIGHT maximum value.

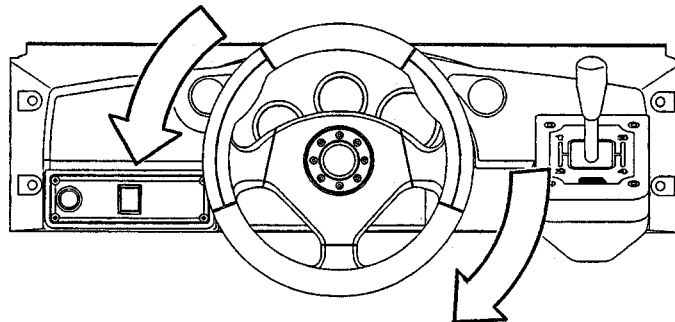
LEFT

The Steering Wheel turns up to the LEFT maximum value.

FORCE Adjusts the Steering Wheel's reaction force.

0/15 (minimum) <---> 15/15 (maximum)

This on-screen adjustment will be effective when the Test Mode is exited. Turning power off while the on-screen display is shown will have the pre-adjustment reaction force remain as it is.



7-5 INPUT TEST

Select INPUT TEST to have the screen shown below appear and to observe the status of each switch and the Control Panel's each V.R. Value. Periodically check the status of each switch and V.R. on this screen.

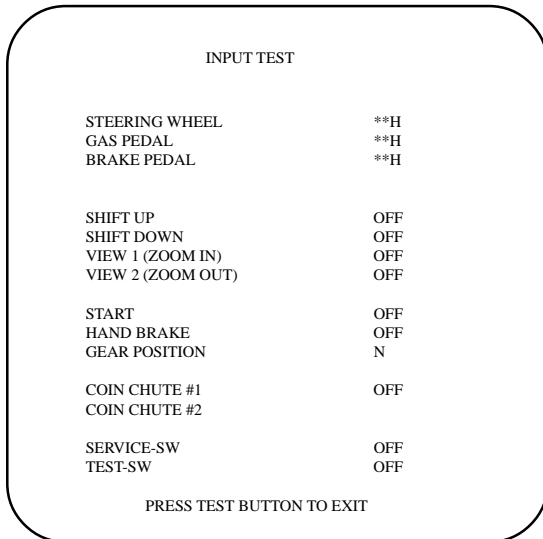


FIG. 7.5 INPUT TEST

- 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.
- To check CHUTE 1 & CHUTE 2 coin switches, open the COIN CHUTE DOOR and insert a coin(s) in the slot.
- Press either the TEST BUTTON or the START BUTTON + VIEW CHANGE BUTTON to return to the test menu.
- GEAR POSITION indicates which shift and SHIFT LEVER is in. "N" means neutral.

THE APPROPRIATE VALUES OF EACH V.R.

STEERING:	Under 30H left	← 80H±2H → (Centering position)	Over 20H right
GAS:	Under 30H	→	Over 20H
BRAKE:	Under 30H (the pedal released)	→	Over 20H (the pedal stepped)

7-6 OUTPUT TEST

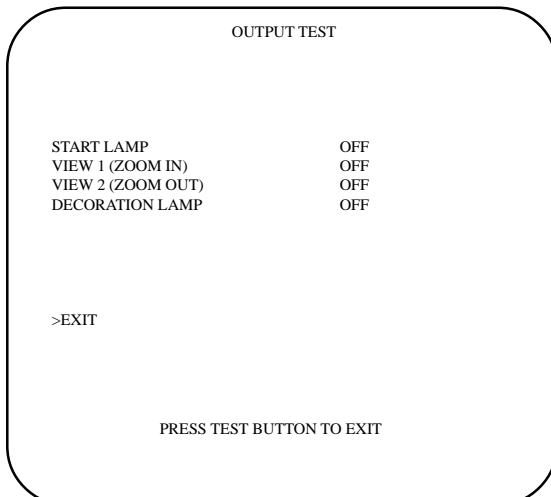


FIG. 7.6 OUTPUT TEST

- 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.
 - Press the test Button to return to the MENU MODE.

7 - 7 SOUND TEST

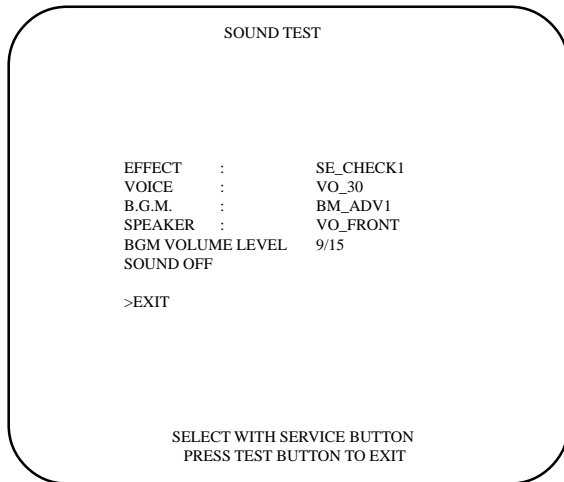


FIG. 7.7 SOUND TEST

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

- **EFFECT:**
Sound effects during game.
- **VOICE:**
Voice of announcement and narration.
- **SPEAKER:**
SE speaker check. Checking front/back and left/right is possible.
- **BGM VOLUME LEVEL:**
BGM sound level. 0/15 (low)~15/15 (high)

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

7 - 8 C.R.T. TEST

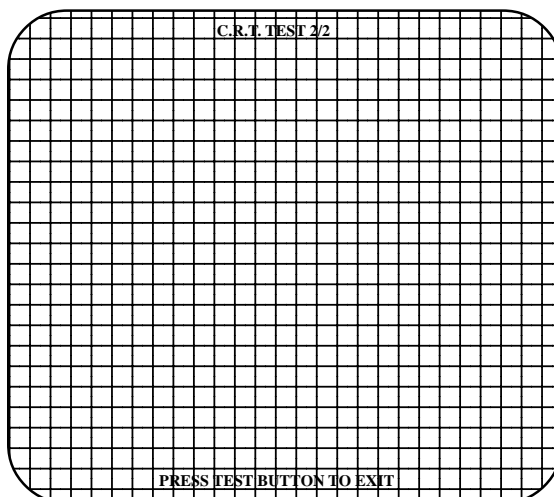
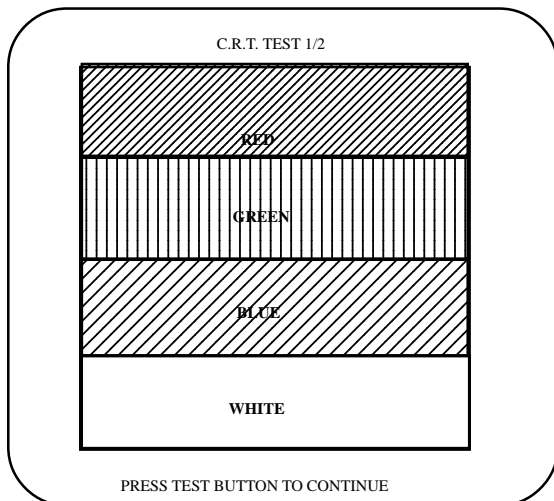


FIG. 7.8 C.R.T. TEST

- 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.

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 CHANGE PROCEDURE



IMPORTANT!

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

- 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.

GAME ASSIGNMENTS

ADVERTISE SOUND	ON
DIFFICULTY	NORMAL
GAME MODE	NORMAL
DEFAULT VIEW	DRIVER
SPEED	KM/H
DISPLY URL	OFF
CABINET TYPE	TWIN
LINK TYPE	MASTER (CAR1)
>EXIT	

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

- **ADVERTISE SOUND**
Determines wether ADVERTISE SOUND is to be emitted or not by the setting to ON when emitting it and to OFF when not emitting it.
- **GAME DIFFICULTY**
Sets the Game Difficulty in 5 catagories from 1 to 8. The greater the number is, the higher the difficulty level becomes. Alternately it may display each catagory by name; Very Easy, Easy, Normal, Hard, Very Hard
- **DISPLAY URL**
Web Page Address indication during advertise.
- **ENGINE VOLUME**
Engine Volume adjustment

- **CABINET TYPE**
Set to DELUXE or STANDARD as applicable. Setting to wrong type can cause failure be sure to set correctly. (i.e. In communication Play Race Leader Lamp does not light up/flash/light out. The Cabinet appearing in the operation explanation mode differs from the type used.)
- **GAME MODE**
Setting of Laps.
NORMAL (normal lap setting)
SPECIAL (special setting for more laps-A long-time game mode for for events etc..)

These FIGURES/TABLES show the factory recommended settings.

7 - 10 COIN ASSIGNMENTS

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 CHANGE PROCEDURE



IMPORTANT!

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

- 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 ASSIGNMENTS			
COIN CHUTE TYPE	COMMON		
CREDIT TO START	2 CREDITS		
CREDIT TO CONTINUE	1 CREDIT		
COIN/CREDIT SETTING	#1		
CHUTE#1	1 COIN	1 CREDIT	
CHUTE#2	1 COIN	1 CREDIT	
MANUAL SETTING			
>EXIT			
SELECT WITH SERVICE BUTTON AND PRESS 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.

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 7.11a, 7.11b) #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 7.11b.
- **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 7.11c).

These FIGURES/TABLES show the factory recommended settings.

TABLE 7.10a COIN/CREDIT SETTING (COIN CHUTE COMMON TYPE)

SETTING	FUNCTIONING OF CHUTE#1	
SETTING #1	1 COIN	1 CREDIT
SETTING #2	1 COIN	2 CREDITS
SETTING #3	1 COIN	3 CREDITS
SETTING #4	1 COIN	4 CREDITS
SETTING #5	1 COIN	5 CREDITS
SETTING #6	1 COIN	2 CREDITS
SETTING #7	1 COIN	5 CREDITS
SETTING #8	1 COIN	3 CREDITS
SETTING #9	1 COIN	4 CREDITS
SETTING #10	1 COIN	5 CREDITS
SETTING #11	1 COIN	6 CREDITS
SETTING #12	2 COINS	1 CREDIT
SETTING #13	1 COIN	1 CREDIT
SETTING #14	1 COIN	2 CREDITS
SETTING #15	1 COIN 2 COINS	1 CREDIT 3 CREDITS
SETTING #16	1 COIN	3 CREDITS
SETTING #17	3 COINS	1 CREDIT
SETTING #18	4 COINS	1 CREDIT
SETTING #19	1 COIN 2 COINS 3 COINS 4 COINS	1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS
SETTING #20	1 COIN	5 CREDITS
SETTING #21	5 COINS	1 CREDIT
SETTING #22	1 COIN	2 CREDITS
SETTING #23	2 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS
SETTING #24	1 COIN	3 CREDITS
SETTING #25	1 COIN 2 COINS 3 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS
SETTING #26	1 COIN	1 CREDITS
SETTING #27	FREE PLAY	

MANUAL SETTING

Selecting MANUAL SETTING in the COIN ASSIGNMENTS mode displays the following screen.

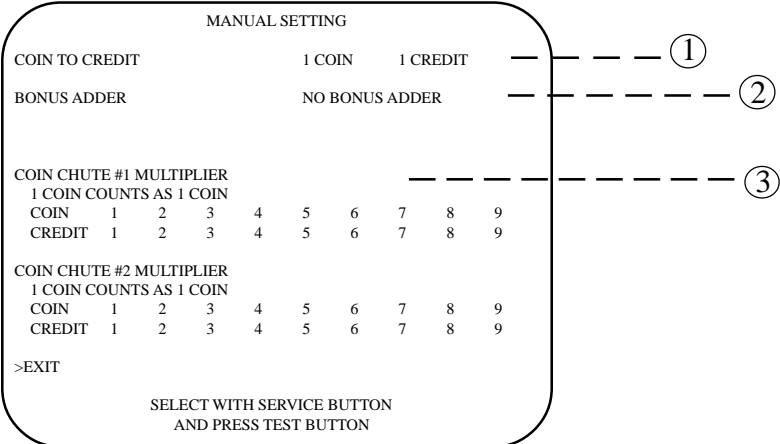


FIG. 7.10b MANUAL SETTING

- ① Determines Coin/Credit setting.
- ② This sets how many coins should be inserted to obtain one Service Coin.
- ③ This sets how many tokens one coin represents.

Table 7.10c 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 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	

7 - 11 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.

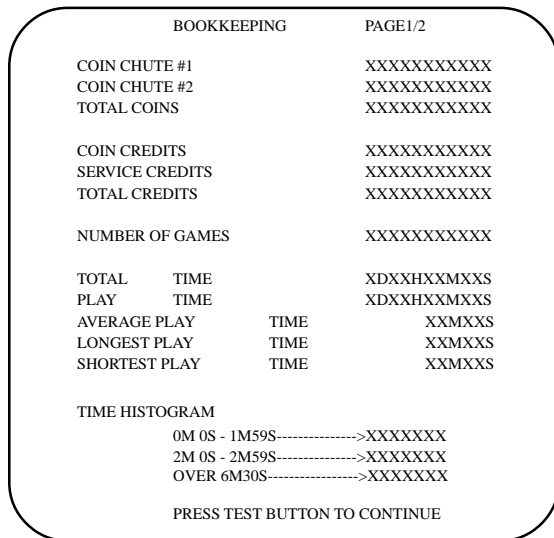


FIG. 7.11a BOOKKEEPING (1/2)

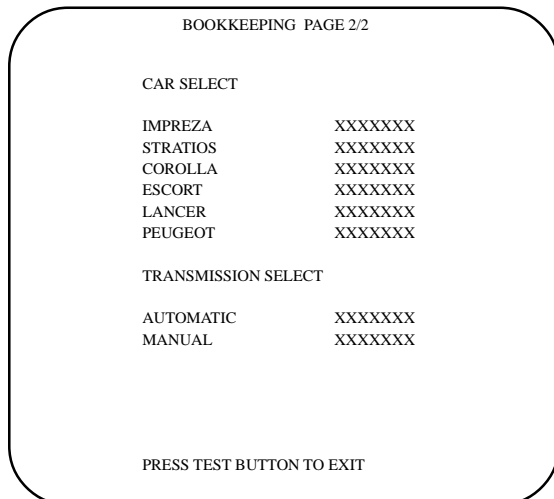


FIG. 7.11b BOOKKEEPING (2/2)

- 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 - 12 BACKUP DATA CLEAR



FIG. 7.12 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, to “NO”, by using the SERVICE BUTTON, and push the TEST BUTTON.
- When the 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 on to the screen.
- Note that the contents of the GAME SETTING, COIN SETTING, and BOARD SETTING are not affected by BACKUP DATA CLEAR operation.

8. STEERING MECHA

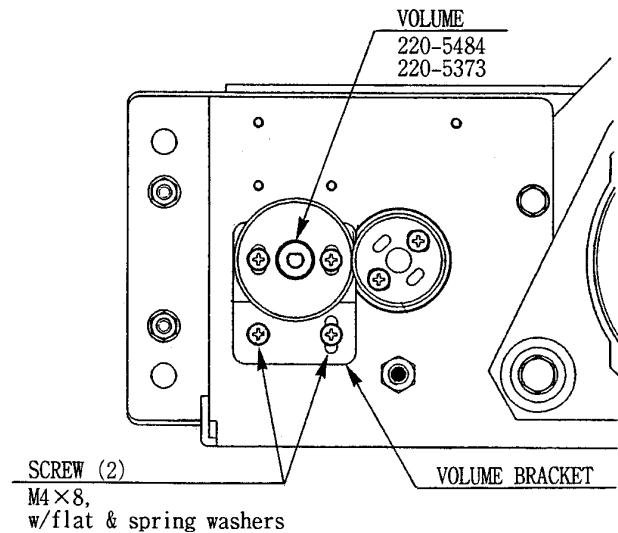
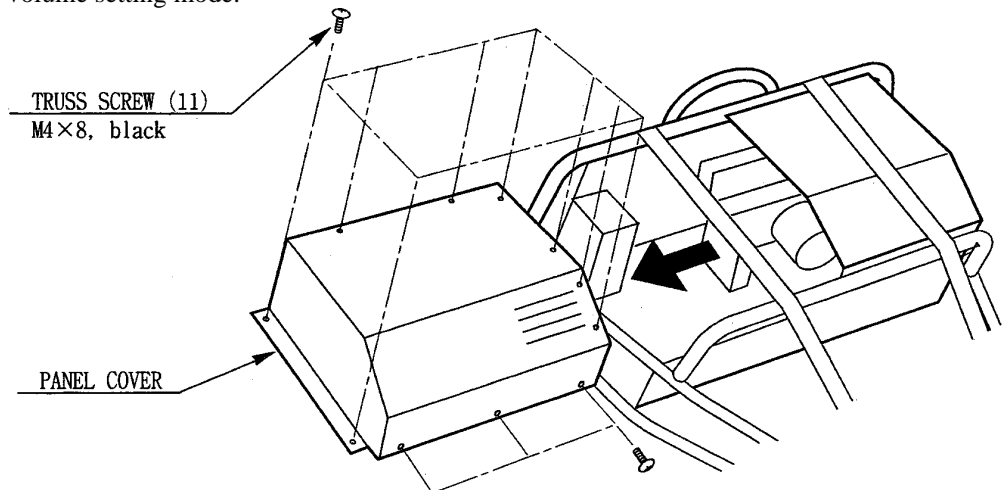


- In order to prevent an electric shock and short circuit, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

In the test mode, if the steering wheel's VR variations are not within the allowable range, the VR installation position adjustments or VR replacement is needed. Also, be sure to apply grease to the VR gear portion once every 3 months.

8 - 1 REMOVING THE CONTROL PANEL

- ① Insert the test mode, have the V.R. value displayed on the screen.
- ② Remove the 11 screws from the right-hand side panel Cover as shown.
- ③ Loosen the 2 screws which secure the Volume Bracket, and you can move the Volume Bracket.
- ④ Moving the Volume Bracket disengages gear mesh.
- ⑤ Secure the handle to the centering position and adjust gear mesh so that the volume value is within the range of 80+/-2H.
- ⑥ Fasten the 2 securing brackets.
- ⑦ Set the volume in the volume setting mode.



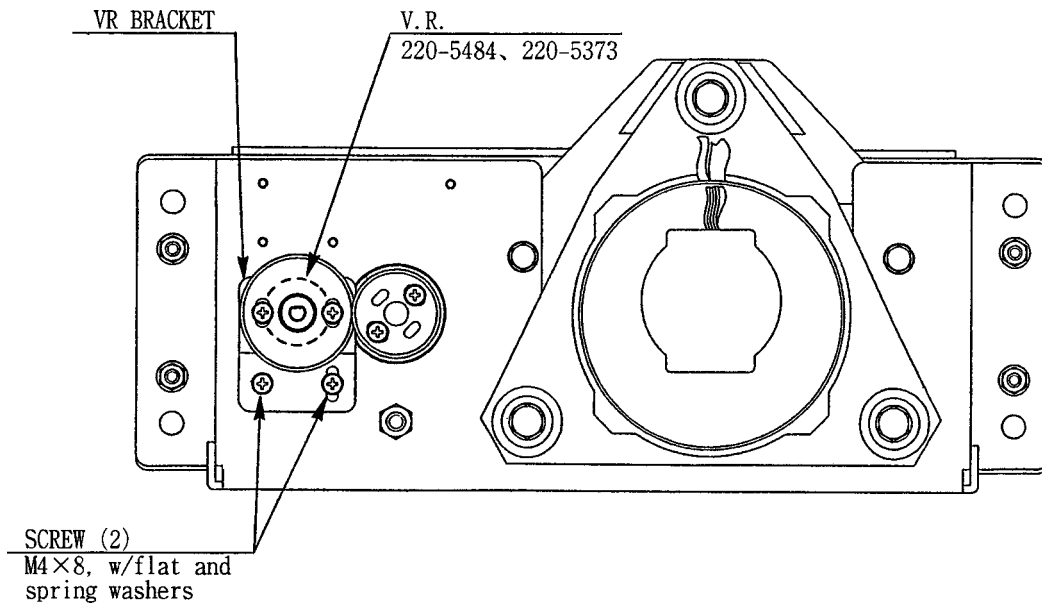
8 - 2 REPLACING AND ADJUSTING THE HANDLE'S VR



- Never touch places other than those specified. Touching places not specified can cause electric shock and/or short circuit.
- After the replacement or adjustment of the VR, be sure to set the variable value of the VR in the test mode's Volume Setting.

REPLACING THE VOLUME

- ① Turn off the power.
- 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.
- ⑤ Adjust Gear mesh and ensure that Volum Value display is within the range of 80+/-2H when the handle is in the centering position.



8 - 3 GREASING

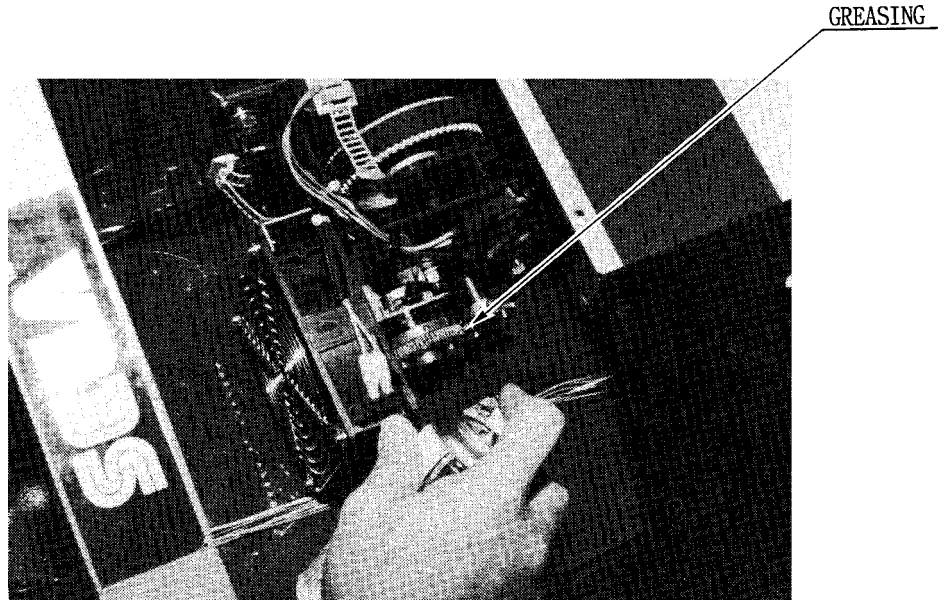


WARNING!

- Never touch places other than those specified. Touching places not specified can cause electric shock and/or short circuit.
- After the replacement or adjustment of the VR, be sure to set the variable value of the VR in the test mode's Volume Setting.

Apply greasing to the Volume gear mesh portion every 3 months.

For spray greasing, use Grease Mate (Part No. 090-0066).



9. SHIFT LEVER



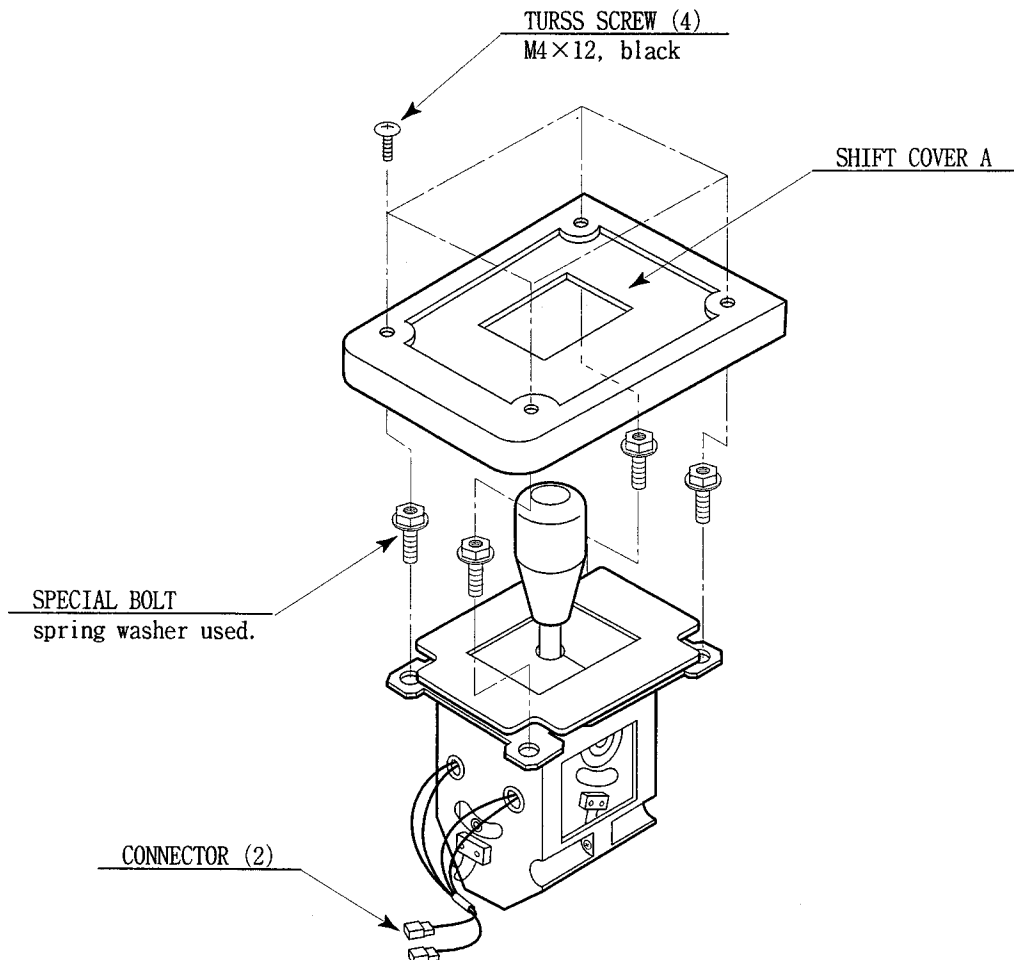
CAUTION!

- In order to prevent electric shock and short circuit, be sure to turn off the power before performing work on the interior parts of the product.
- Be careful not to damage wiring. Damaged wiring can cause electric shock or short circuit.
- Do not touch places other than those specified. Touching places other than those specified can cause an electric shock or short circuit accident.

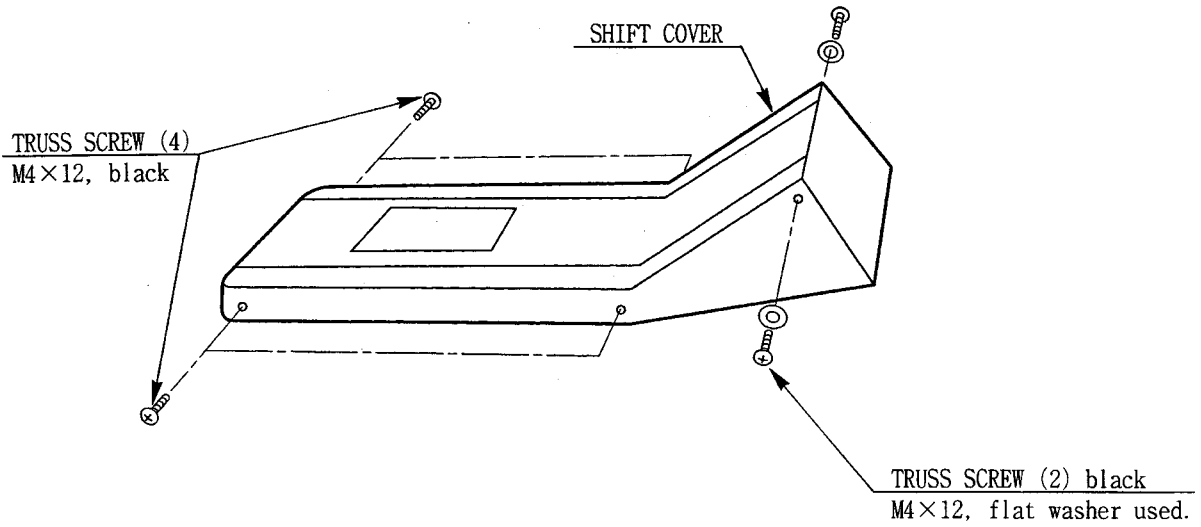
If the Shift Lever operation is not satisfactory, remove the Shift Lever in the following procedure and replace the microswitch.

9 - 1 REMOVING THE SHIFT LEVER

- ① Turn Power off.
- ② Take off the 4 screws and remove SHIFT COVER A.
- ③ Take out the 4 SPECIAL BOLTS and pull the SHIFT LEVER UNIT upward by paying careful attention so as not to damage the wiring.
- ④ Disconnect the 2 connectors to allow the unit to be removed.

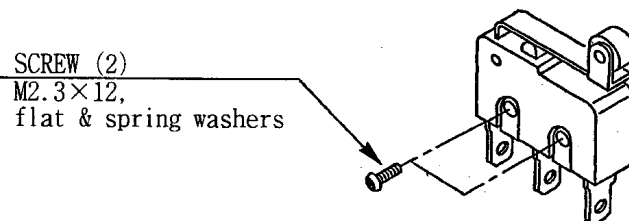
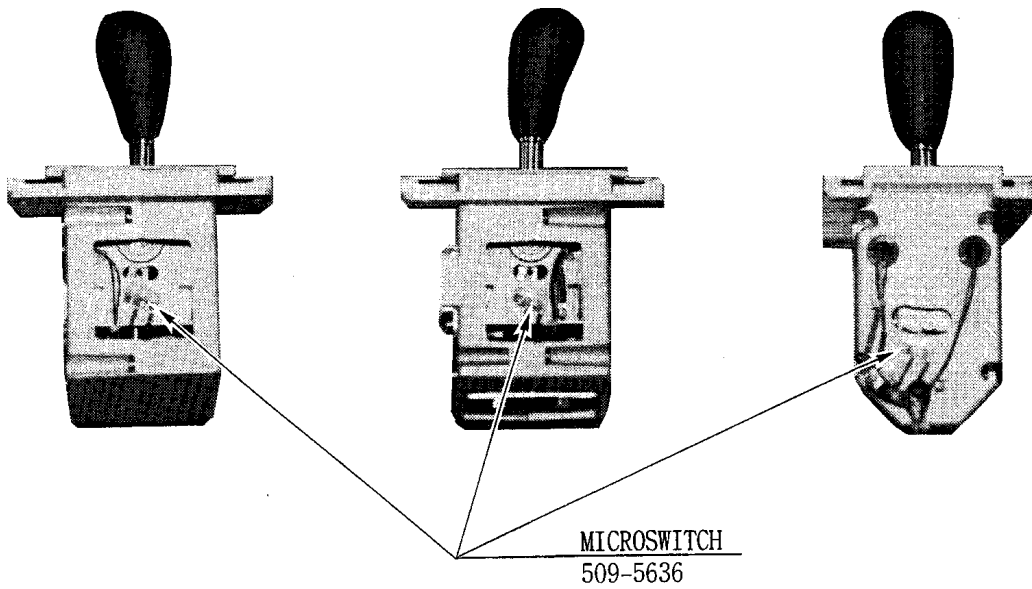


REMOVAL OF SHIFT COVER



9 - 2 SWITCH REPLACEMENT

Each microswitch is secured with 2 screws. Remove the 2 screws and replace the Microswitch.



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

10. ACCEL & BRAKE(S)



WARNING!

- 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.
- 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 the gear mesh portion once every three months.

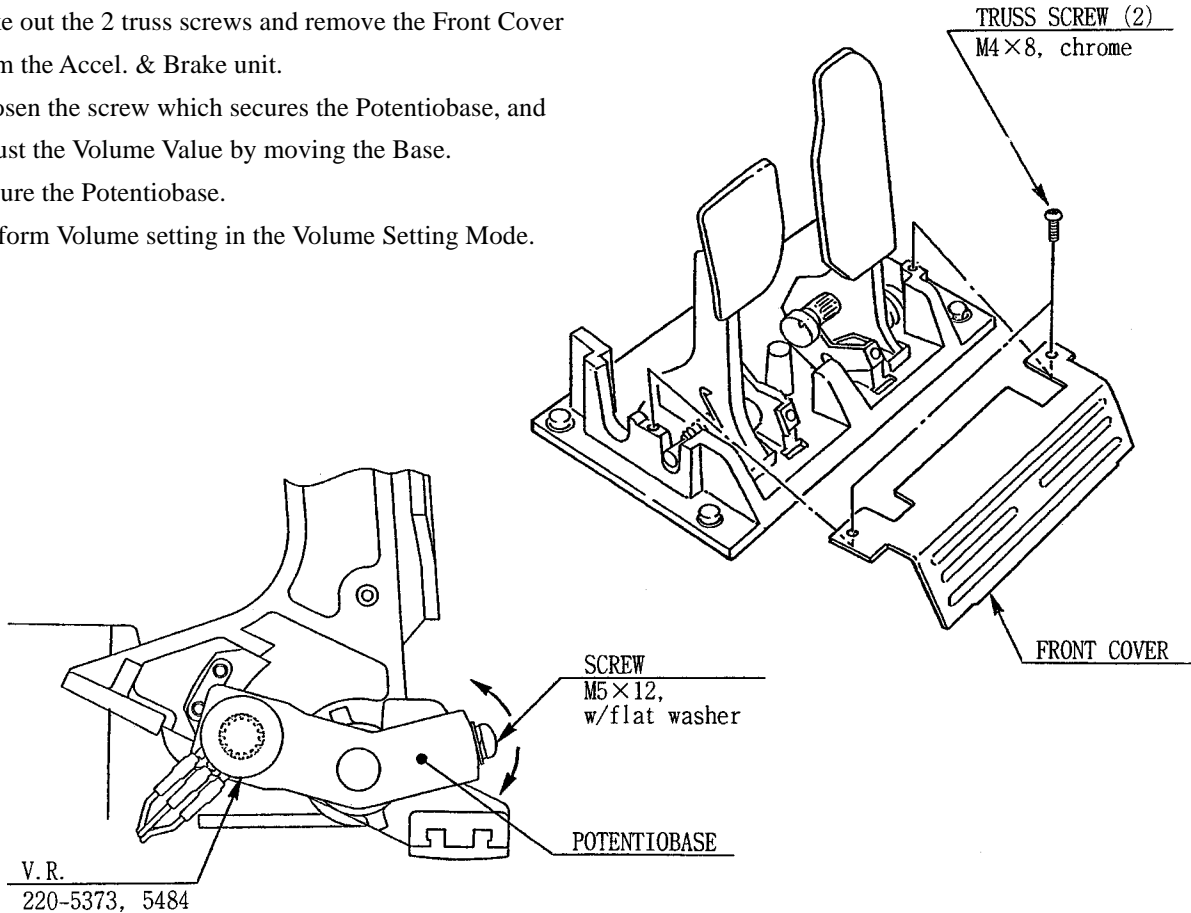
10 - 1 ADJUSTING AND REPLACING THE V.R.

	When released:		When stepped on:
ACCEL. :	Under 30 H	↔	Over C0H
BRAKE :	Under 30 H	↔	Over C0H

Check Volume values in the Test Mode.

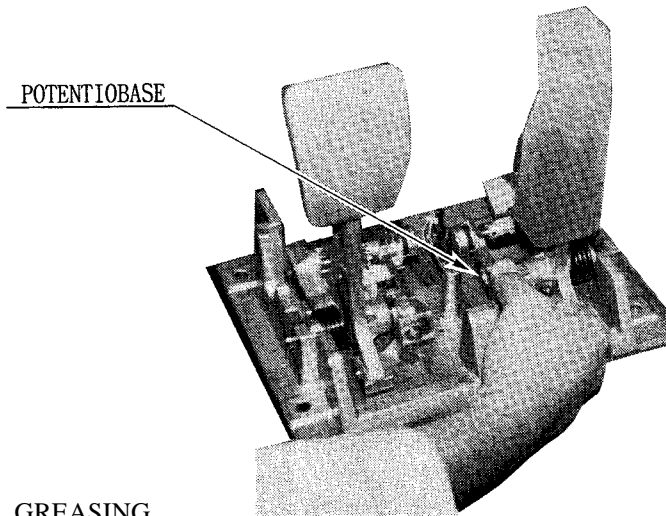
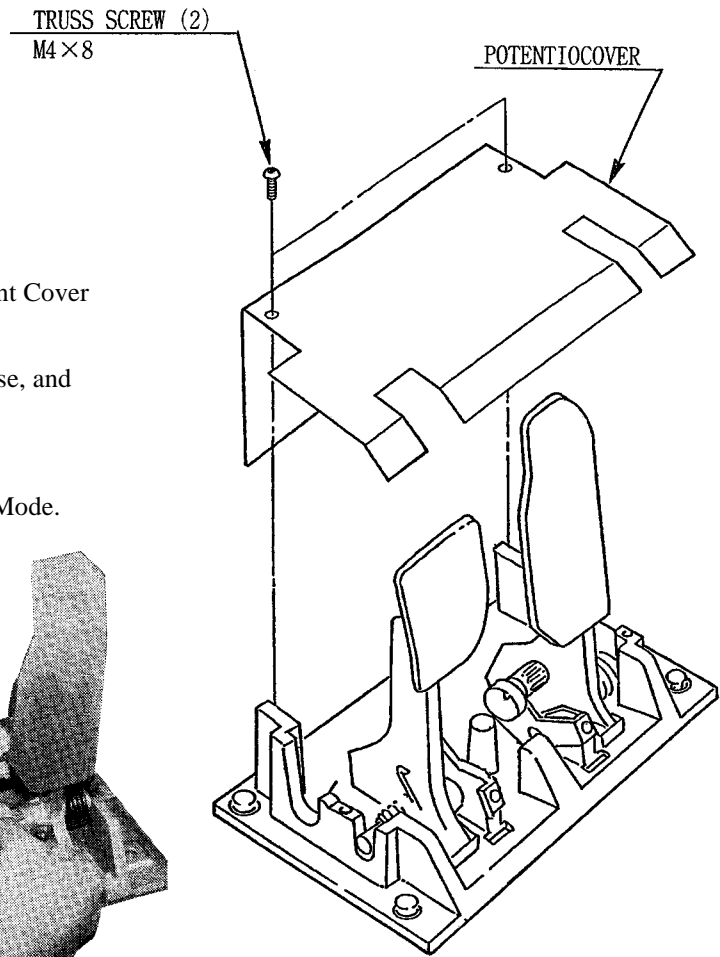
Since work is performed inside the energized cabinet, be very careful so as not to touch undesigned portions. Touching places not specified can cause an electric shock or short circuit.

- 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.



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 an electric shock or short circuit.

- 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.



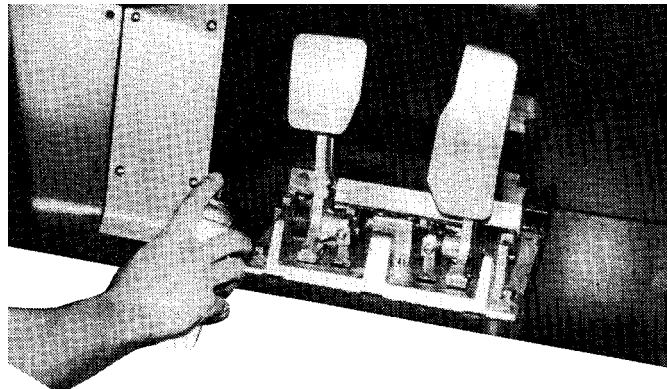
10 - 2 GREASING



IMPORTANT!

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

Once every 3 months, apply greasing to the Spring and Gear Mesh portion. For spray greasing, use GREASE MATE (PART No. 090-0066).





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



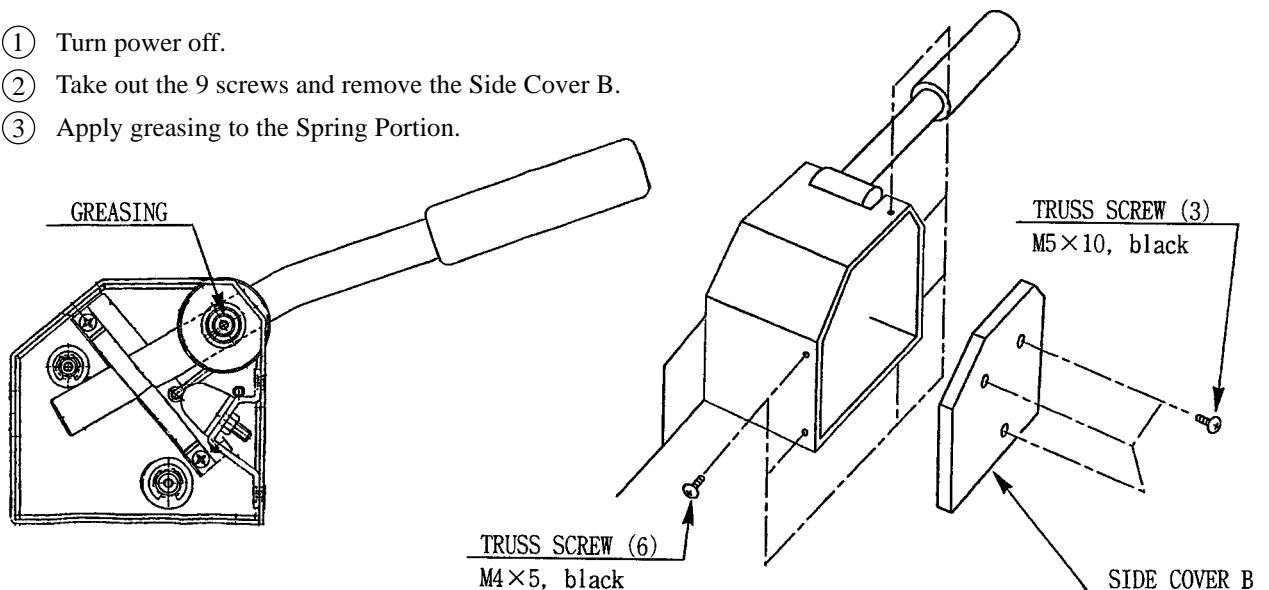
IMPORTANT!

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

10 - 3 GREASING TO THE HANDBRAKE

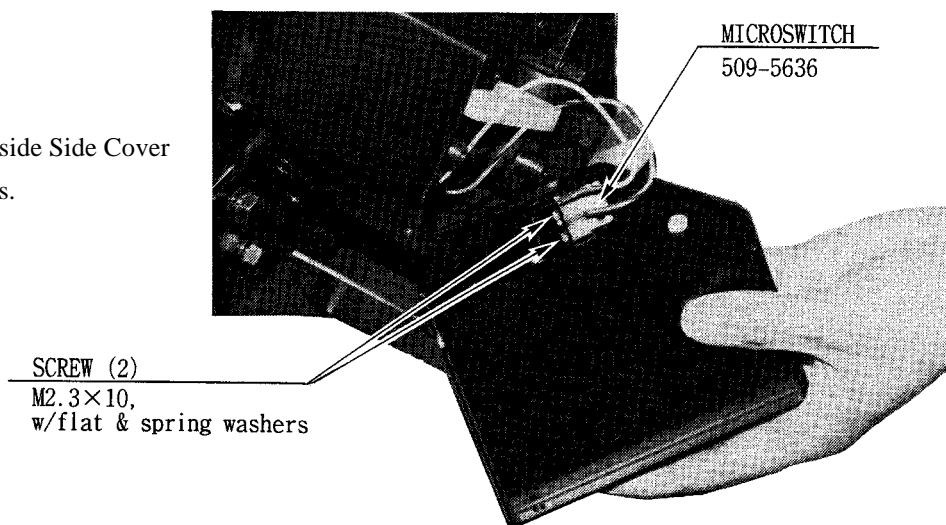
Once every 3 months, apply greasing to the Spring inside the Hand Brake. For spray greasing, use GREASE MATE (PART No. 090-0066)

- ① Turn power off.
- ② Take out the 9 screws and remove the Side Cover B.
- ③ Apply greasing to the Spring Portion.



10 - 4 REPLACING THE HAND BRAKE MICROSWITCH

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



11. MAINTENANCE OF MECHANISM UNIT



Be careful 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 electric shock or short circuit accident.

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

11 - 1 ADJUSTMENT OR 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.

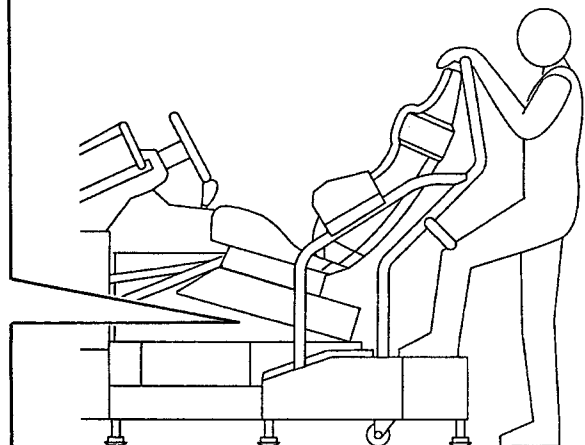
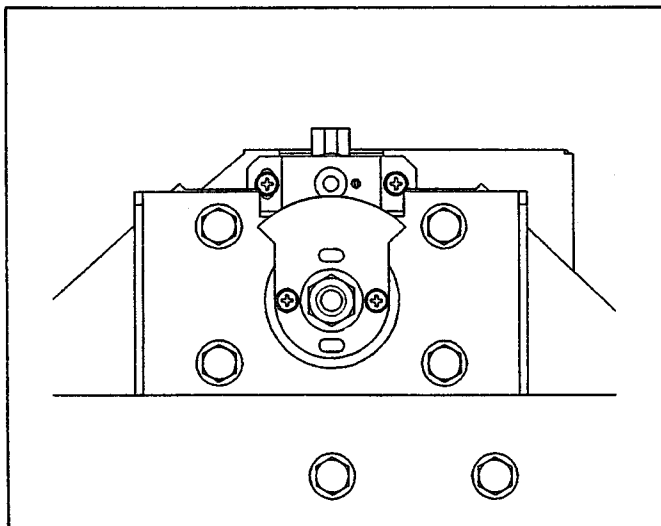
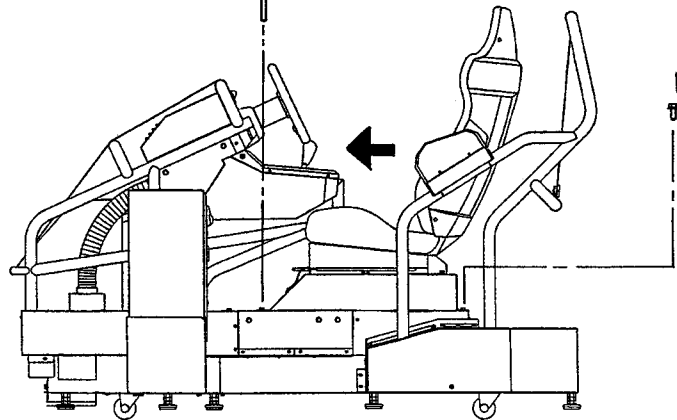
Enter the TEST MODE to check the Volume Value.

Work is performed inside the energized cabinet. Use care 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.

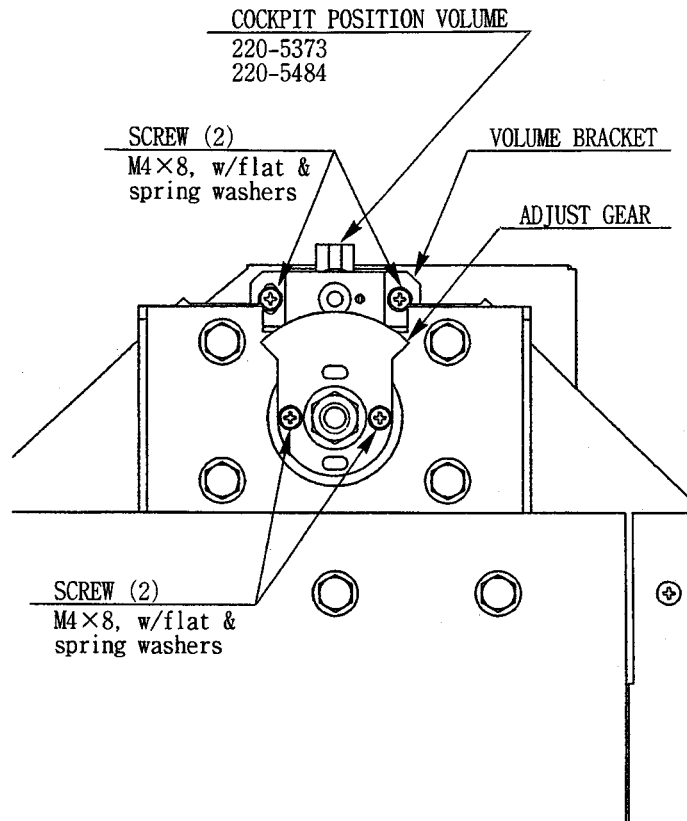
HEXAGON BOLT (2) black
M8×80, w/spring washer,
flat washer used.

HEXAGON BOLT (2) black
M8×20, w/spring washer,
flat washer used.



LOOSEN THE VOLUME

- ① Loosen the 2 screws which secure the Volume Bracket, and move the Bracket.
- ② Move the Volume Bracket to disengage the gear mesh.
- ③ With the front part of the Cockpit inclined up to the top position, adjust gear mesh to ensure the volume value display is within the range of 80 \pm 10H.
- ④ Fasten the 2 screws which secure the Bracket.
- ⑤ In the Cockpit Reaction Test mode, check the volume value.



REPLACING THE VOLUME

- ① Turn the 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.

11 - 2 GREASING



Be careful not to edamage 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 electric shock or short circuit accident.
When performing work, be sure to use plural workers. Working by a single worker alone can cause accidents or parts damage.

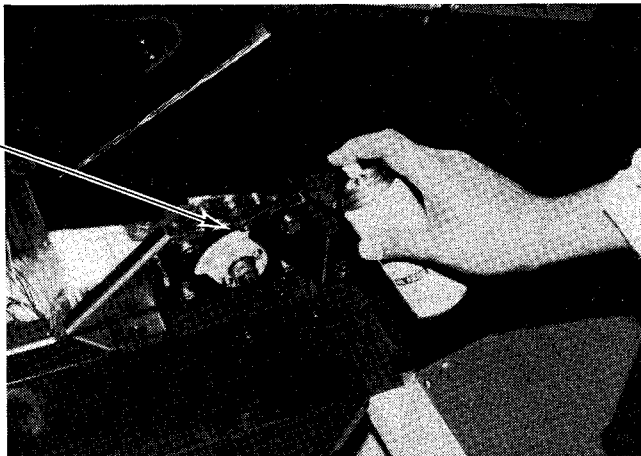


Be sure to use the desiganted grease. Using undesignated grease can cause parts damage. Do not apply greasing to places other than those specified. Greasing to undesignated places can cause malfunctioning and the qualitative deterioration of parts.

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

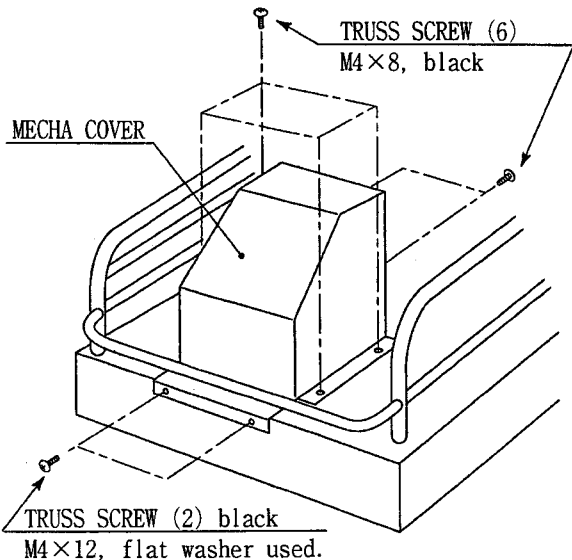
GREASING THE COCKPIT VOLUME

GEAR MESH PORTION

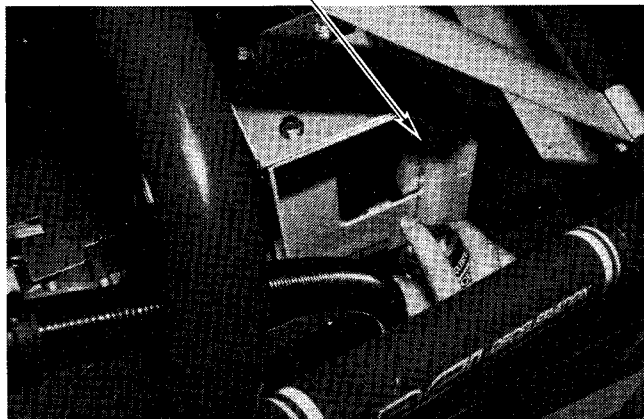


GREASING INSIDE THE MECHA COVER

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

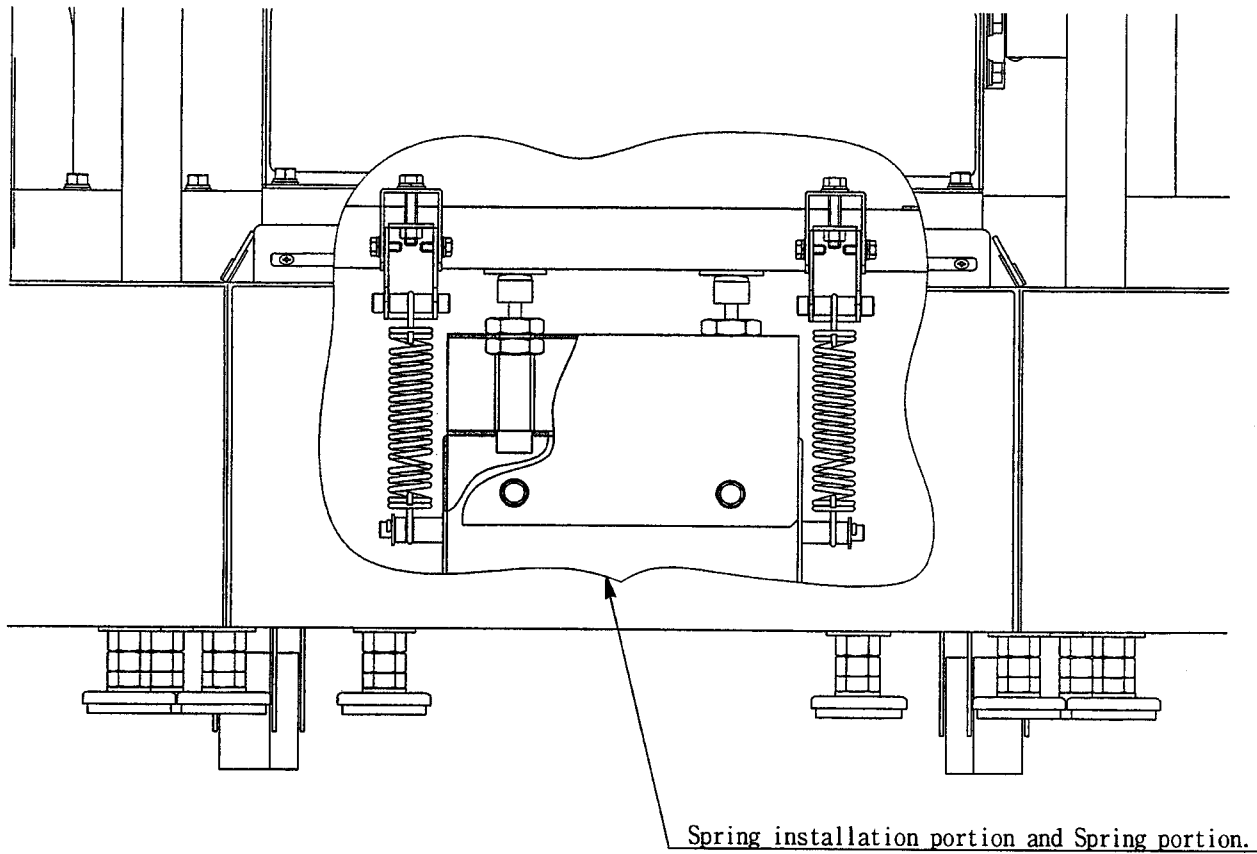


CONTACT FACE OF SWAYING PORTION



GREASING TO THE SPRING PORTION UNDERNEATH THE SEAT

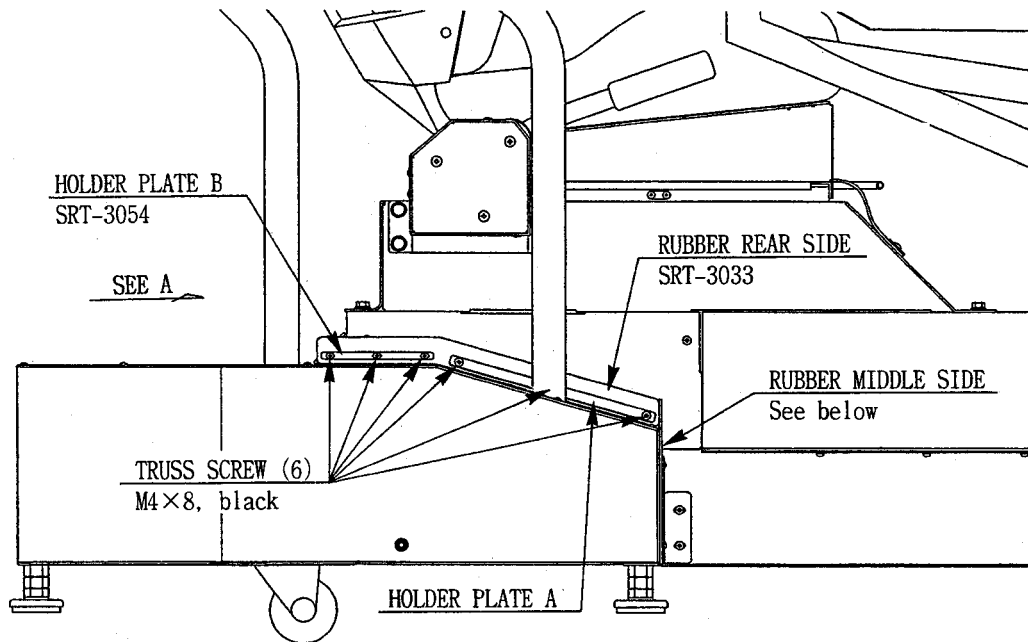
Once every 3 months, apply greasing to the 2 Spring and Spring installation portion underneath the seat. Remove the 4 bolts which secure the seat, and for safety, one person is to incline the seat and another person is to apply greasing.



11 - 3 REPLACING THE SAFETY RUBBER

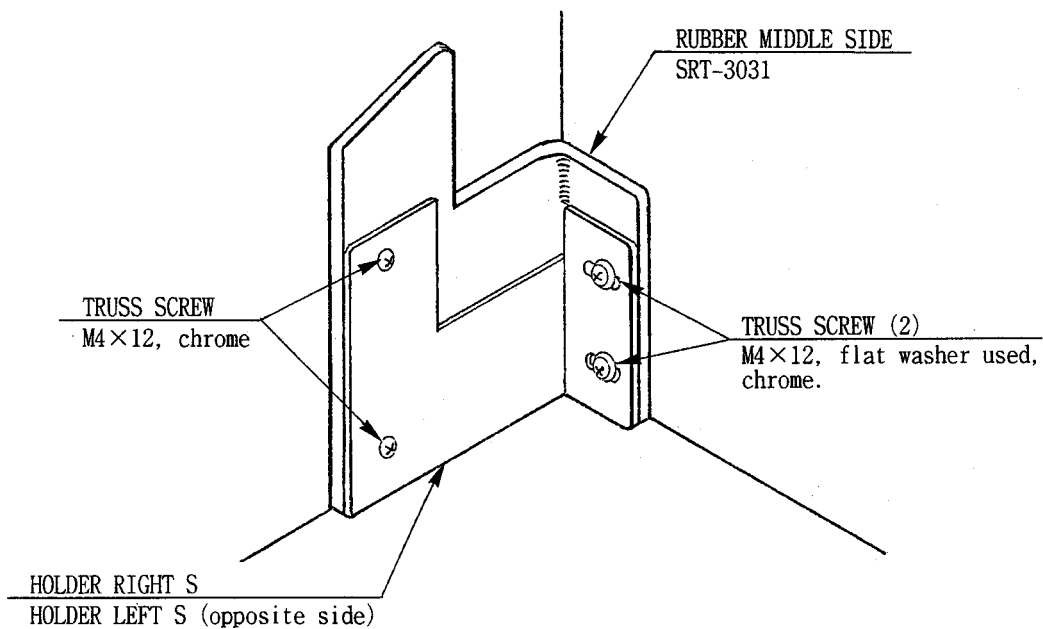


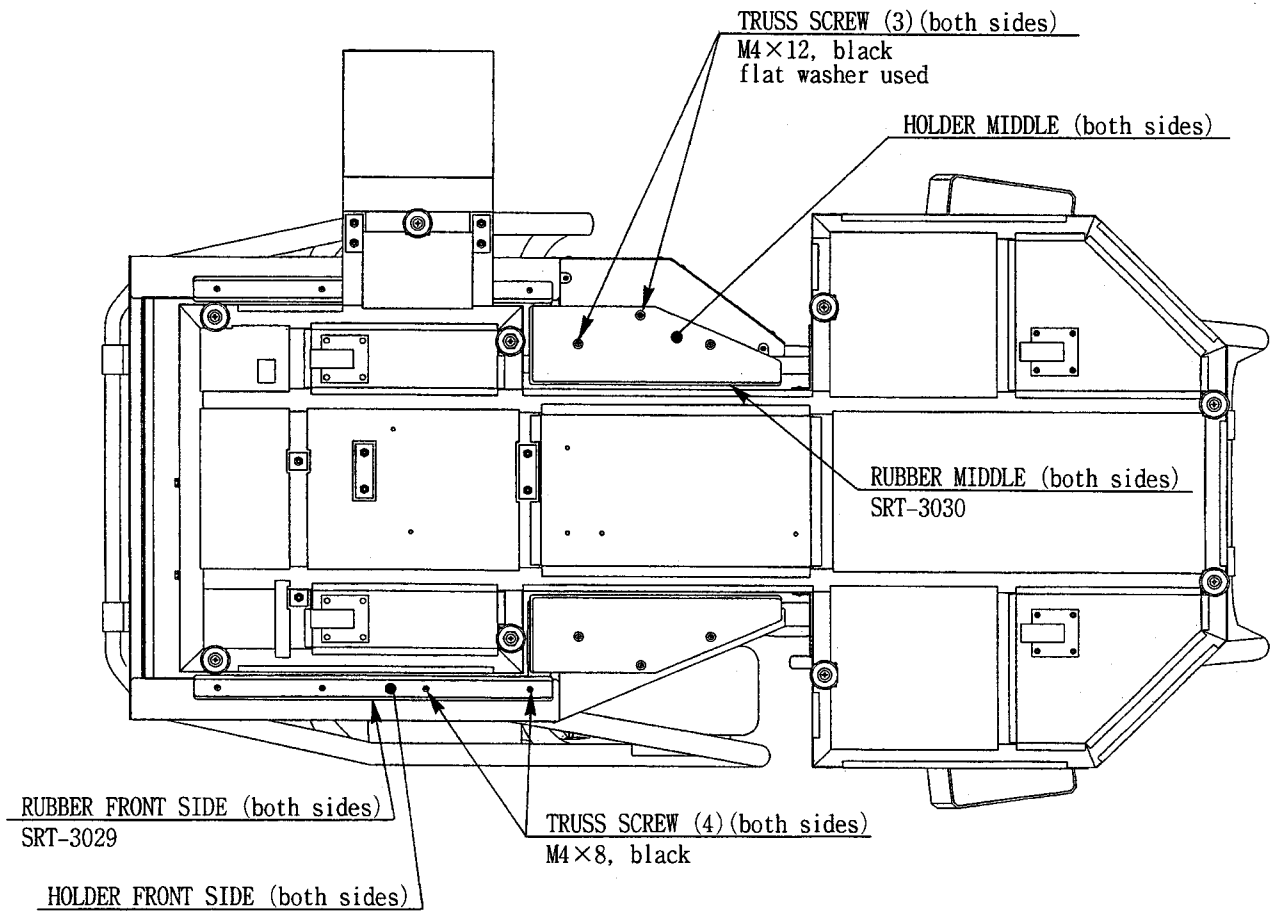
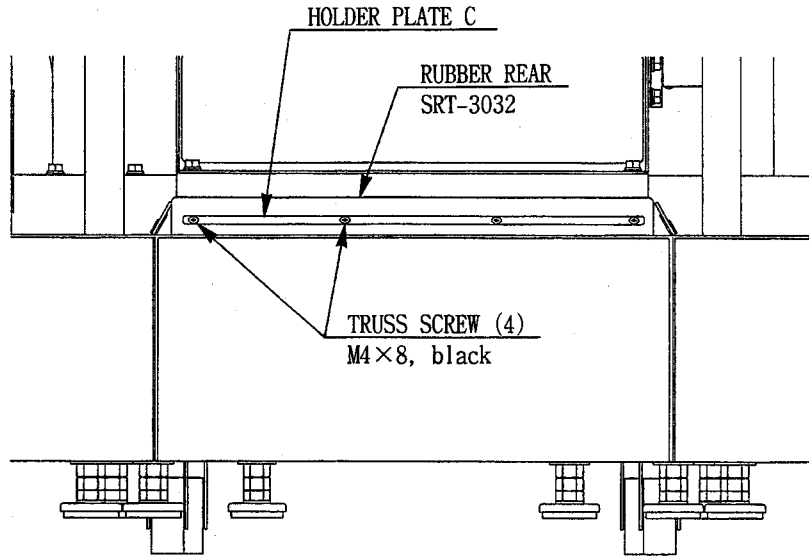
The Safety Rubber is an important, hazard-preventive part. Before commencing daily operation, be sure to check for damage and omission. Operating with the Safety Rubber as is damaged or omitted can cause the customers' fingers to be caught.



INSTALLATION OF SAFETY RUBBER MIDDLE SIDE

To install RUBBER MIDDLE SIDE to the side opposite the Cockpit, turn over the RUBBER and use HOLDER LEFT S. See following page for





12 . 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.

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 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 stain from the shaft and pillow portions by wiping off with a soft cloth, etc.
- ⑥ After wiping as per #5 above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

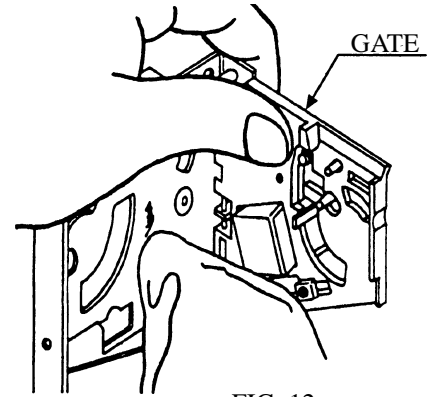


FIG. 12a

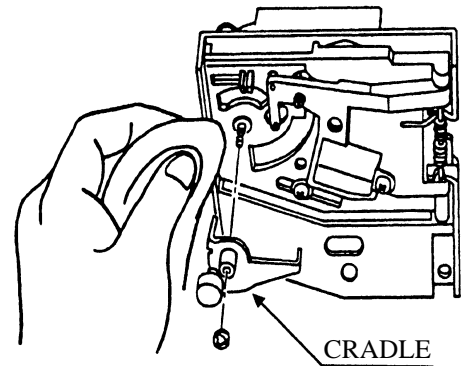


FIG.12b



IMPORTANT!

- 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.

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 when inserted while keeping the REJECT BUTTON is pressed down?

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

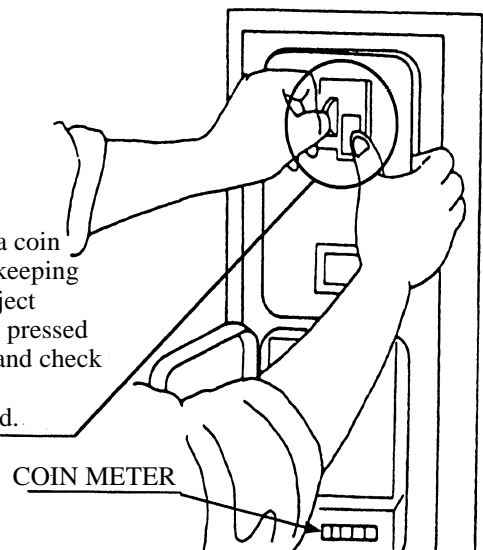


FIG. 12c

OPTIONAL DOLLAR BILL ACCEPTOR

● THE COIN DOOR ASSEMBLY USED ON **RALLY 2 DLX Version** COMES EQUIPPED TO ACCEPT A DOLLAR BILL ACCEPTOR. ALL NEEDED WIRING CONNECTIONS ARE CONVIENENTLY LOCATED INSIDE THE GAME FOR THIS APPLICATION.

● THE COIN DOOR CAN ACCCOMMODATE THE FOLLOWING VALIDATORS:

HOLE POSITION#1 (FORWARD-MOST POSITION)	Mars 2000 series
HOLE POSITION#2	Mars 2000 series DBV45 (JCM)
HOLE POSITION #3	CURRENTLY NOT USED
HOLE POSITION #4	DSI01*

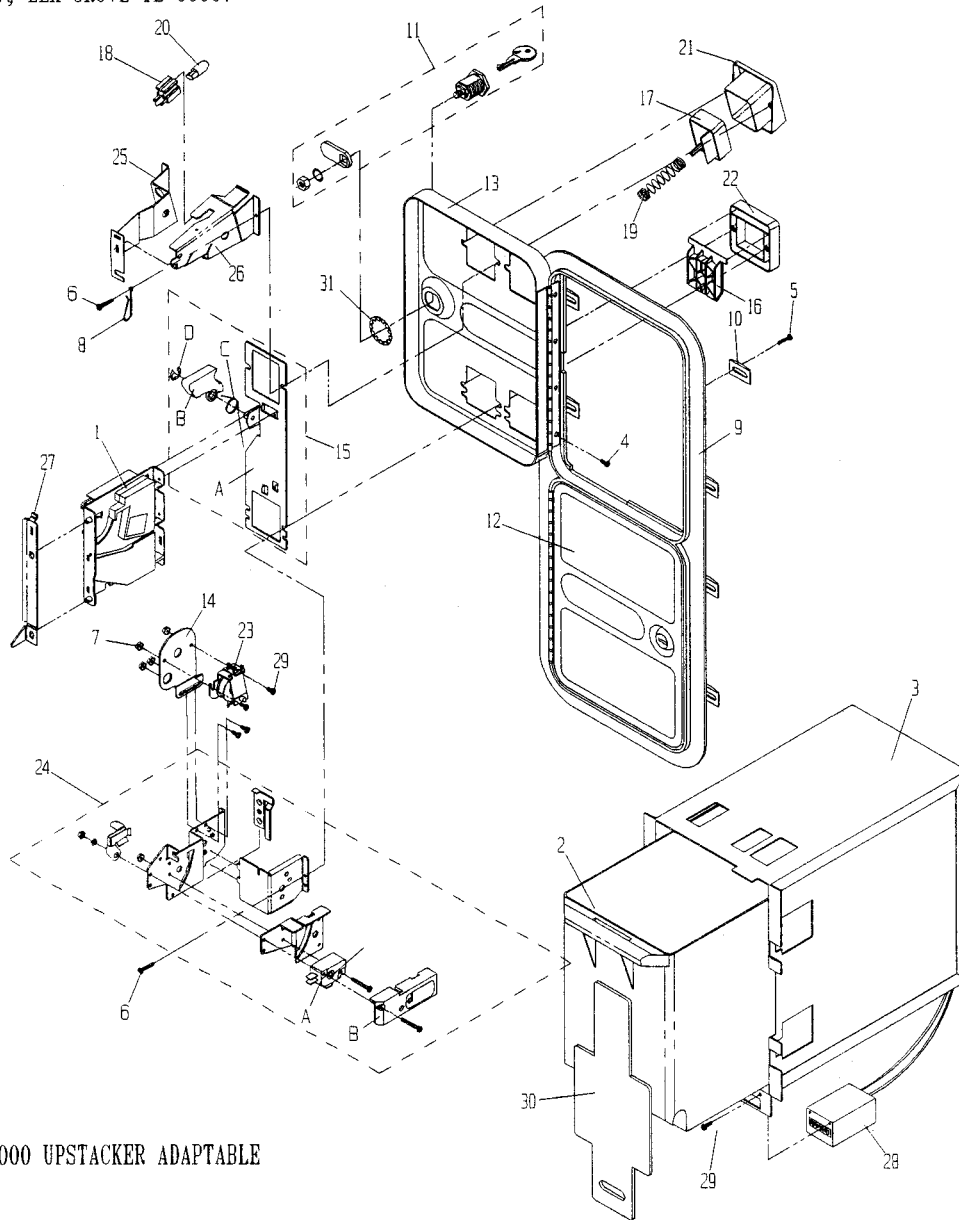
*The back flange on the chute can be removed for hold position #4. If the flange is not removed, it may interfere with the back of the cabinet.

The frame and cashbox enclosure on this coindoor has been modified to accomodate a Mars 2000 series upstacker. A 2000 series stacker can be added by simply removing the top two entry door and replacing it with a one entry door with a cut-out for a stacker. This one entry door can be ordered through Coin Controls or one of Coin Controls authorized distributors. The part number is 91-4000-01. The Mars stacker can be obtained through an authorized Mars distibutor.

COIN CONTROLS INTERNATIONAL

1850 HOWARD ST., ELK GROVE IL 60007
(847) 228-1810

OVER/UNDER TWO ENTRY COIN DOOR*



* MARS SERIES 2000 UPSTACKER ADAPTABLE

PART #	DESCRIPTION	COST	PART #	DESCRIPTION	COST	PART #	DESCRIPTION	COST
1)	12-4050-XX S-10 ACCEPTOR	19.50	16)	91-1109-16 REJECT FLAP NYLON, BLACK	2.70	28)	23-1011-00 12V DC METER	8.50
	12-4150-011 S-7 US #.25	12.00	17)	91-1113-01 ENTRY/REJECT BUTTON 25c	4.45		23-1103-00 4.5V DC METER	8.50
2)	20-4177-00 PLASTIC CASEBOX	7.40	18)	91-1117-00 LAMPHOLDER	1.40	29)	90-1032-01 METER & LOCKOUT SCREW	.25
3)	20-4189-00 ENCLOSURE, Z2000	27.50	19)	91-1121-00 E/R BUTTON SPRING	.80	30)	22-1400-00 LOCKING BAR	7.00
4)	90-1002-00 HINGE SCREW	.25	20)	91-1118-00 6V LAMP WEDGE BASE	.95	31)	90-1019-00 3/4" LOCKWASHER	.25
5)	90-1003-00 CLAMP SCREW	.95	21)	91-1311-16 BUTTON BEZEL BLACK	2.70			
6)	90-1017-00 SCREW BEZEL NYLON	.25	22)	91-1312-16 REJECT BEZEL BLACK	2.70			
7)	90-1206-02 #4-40 KEP NUT	.25	23)	91-2125-00 12V LOCKOUT COIL ASSEMBLY	12.85			
8)	90-1300-00 KEYHOOK	.35	24)	91-2216-16 MICROSWITCH ASSEMBLY	15.00			
9)	91-0508-16 FRAME	30.00	24A)	91-1116-16 MICROSWITCH BLACK	5.40			
10)	91-0506-00 CLAMP	.45		91-1116-11 MICROSWITCH WHITE	5.40			
11)	91-0547-00 DOUBLE D CAM LOCK	5.25		91-1116-10 MICROSWITCH RED	5.40			
12)	91-0603-16 BLACK MINI DOOR	8.40	24B)	91-1125-00 MICROSWITCH PLASTIC COVER	.85			
13)	91-0604-16 2 ENTRY UPPER DOOR	10.00	25)	92-1002-01 COIN INLET LAMP SIDE	1.80			
14)	91-1008-039 LOCKOUT BRACKET	4.30	26)	92-1002-021 COIN INLET COVER SIDE	1.80			
15)	91-1008-107 BASEPLATE ASSEMBLY	5.00	27)	92-1002-10 HOLD DOWN BRACKET	1.50			

13. PROJECTOR



CAUTION!

Since the projector screen is susceptible to damage, pay careful attention to its handling. When cleaning, refrain from using water or volatile chemicals.

Since the Projector has been adjusted at the time of shipment, avoid making further adjustments without good reason.

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 the adjustment by remote control. Note that there are two PROJECTOR makes (HITACHI and MITSUBISHI) and the adjustment method is different between the two. When checking the Adjustment Control Knob, remove the PTV's service door. For the HITACHI PROJECTOR, open the cover in front of the control panel. For the MITSUBISHI PROJECTOR, remove the cover.

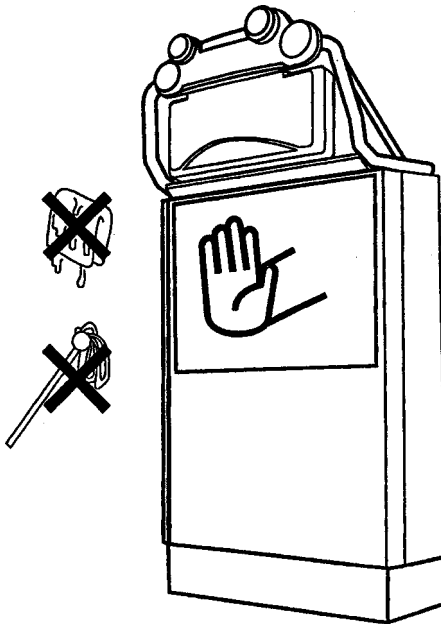


WARNING!

The Projector is subject to color deviation due to Convergence deviation caused by the geomagnetism at the installation location and peripheral magnetic field. After the installation of machine, and before commencing operation, check for Convergence deviation and if deviated, make adjustments.

13 - 1 CLEANING THE SCREEN

When the screen surface becomes dirty with dust, etc., clean it by using a soft cloth such as gauze. When water and volatile chemicals such as benzene and thinners spill onto 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 with a hard material or using a duster.

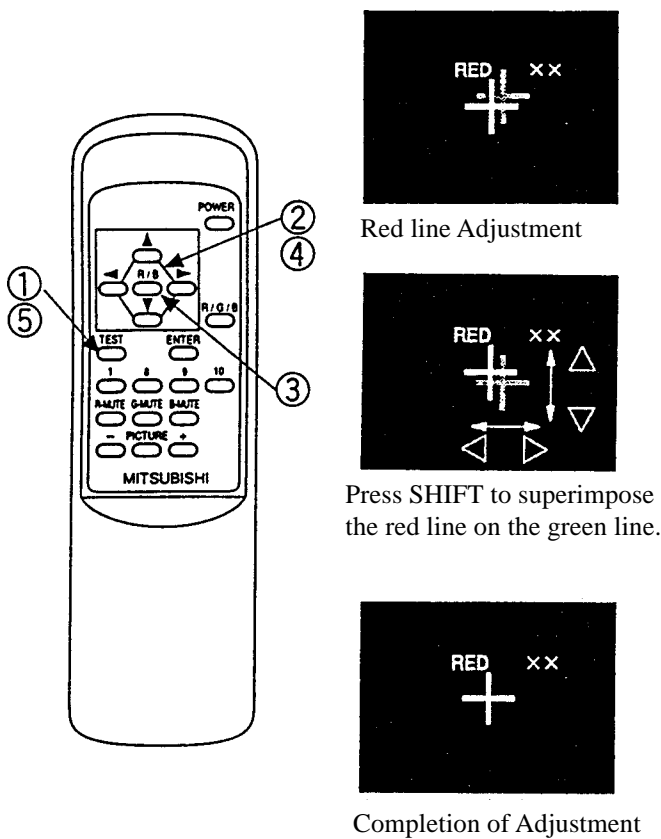




Although Remote Control Buttons other than those specified below do not function even if pressed during Convergence Adjustment, do not press them during adjustment work so as to avoid causing malfunctioning. Operate the Remote Control towards the PTV screen. If directed other than to the PTV screen, the Remote Control does not function.

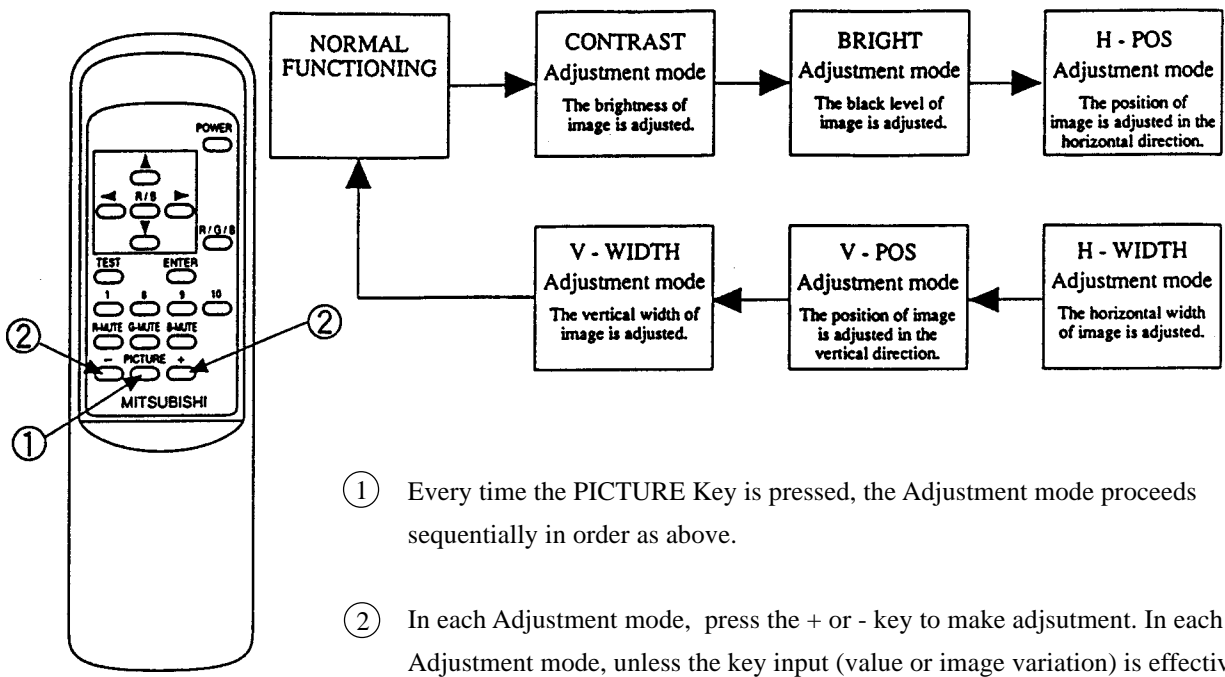
When adjusting MITSUBISHI PROJECTOR, use the Remote Control.

STATIC CONVERGENCE ADJUSTMENT



- ① Press the TEST KEY to have the red line adjustment screen appear.
- ② 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 arrow keys of the remote control. When the red cross is superimposed on the green cross, the green cross turns into yellow or white.
- ③ 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.
- ④ 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.
- ⑤ Press the TEST KEY to exit from the adjustment mode.

During the STATIC CONBVERGENCE ADJUSTMENT MODE, if no action is taken within 5 minutes, the ADJUSTMENT MODE will be exited automatically.



- ① Every time the PICTURE Key is pressed, the Adjustment mode proceeds sequentially in order as above.
- ② In each Adjustment mode, press the + or - key to make adjustment. In each Adjustment mode, unless the key input (value or image variation) is effectively performed within approximately 6 seconds, the Adjustment mode is automatically cancelled and shifts to the normal image. When the horizontal width or vertical width is adjusted, the convergence is automatically corrected (auto adjuster functioning).

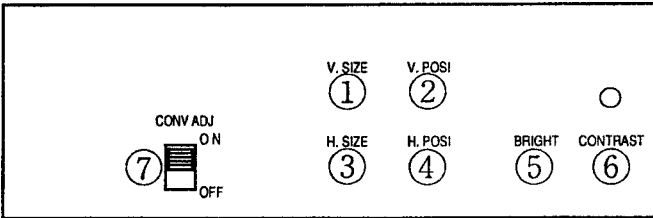
13-3 TOSHIBA PROJECTOR



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

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.

TOSHIBA PROJECTOR CONTROL PANEL

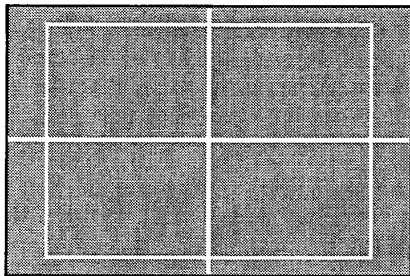


- ① V. SIZE ② H. SIZE ③ V. POSI
- ④ H. POSI ⑤ BRIGHT ⑥ CONTRAST
- ⑦ CONV ADJ If this is not ON, remote control operation is not accepted.

STATIC CONVERGENCE ADJUSTMENT (With the Control Panel)



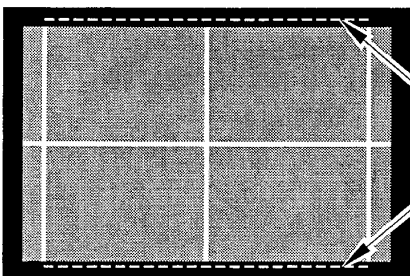
Do not press undesignated key. Pressing any undesignated key can cause malfunction and adjustment fault. Should the key be pressed by mistake, turn power off and turn it back on again. During adjustment, should the screen image be abnormally disfigured due to static electricity and other causes, do not 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.



Test Pattern

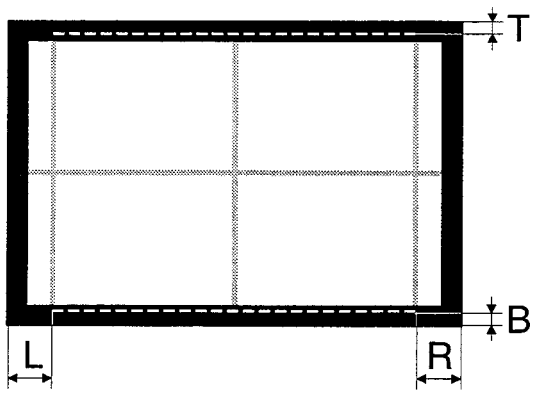
- ① Unless the CONV ADJ SW is ON, remote control operation is not acceptable. At the time of shipment, the SW is set to ON. If remote control is not accepted, check status of this SW.
- ② Direct the remote control towards the PTV screen and keep the Test Key pressed down for approximately 3 seconds. 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.

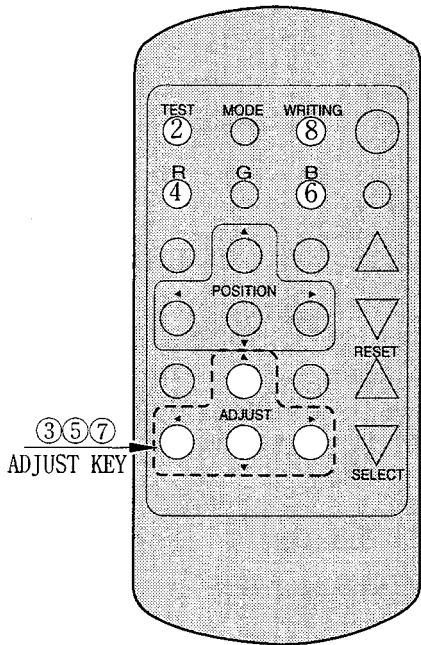


Adjustment Mode

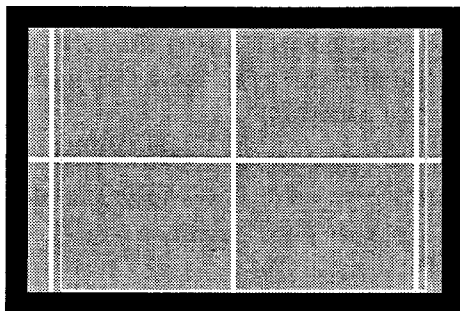
Due to the TV mask, the up/down lines of the Frame Line cannot be seen.



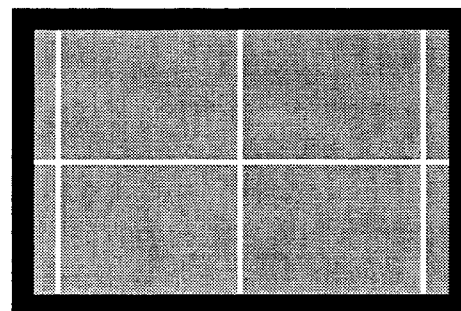
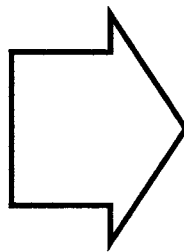
Adjust the position of green frame line to L=R, T=B.



- ③ 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.
- ④ 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.
- ⑤ 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.
- ⑥ 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.
- ⑦ 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.
- ⑧ 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.
- ⑨ 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.



Choosing red causes the frame color to turn into red and the display indicates that red is adjustable. Choosing blue causes the frame color to turn into blue and the display indicates that blue is adjustable.



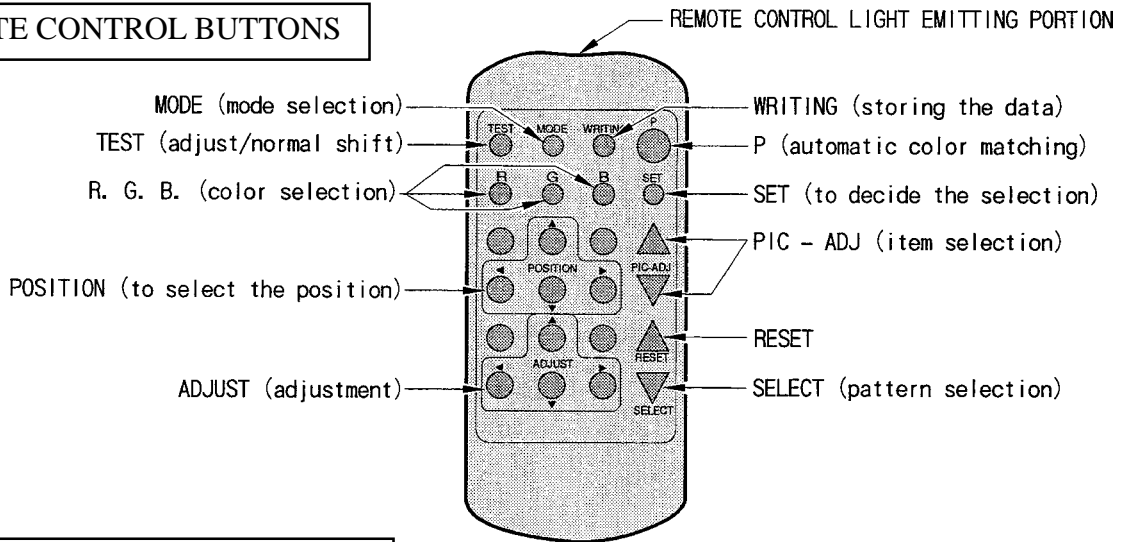
By operating ADJUST Key, have the center of red and blue frame match with that of green frame (the reference color). When the center matches with each other, the frame line becomes white.

STATIC CONVERGENCE ADJUSTMENT

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.

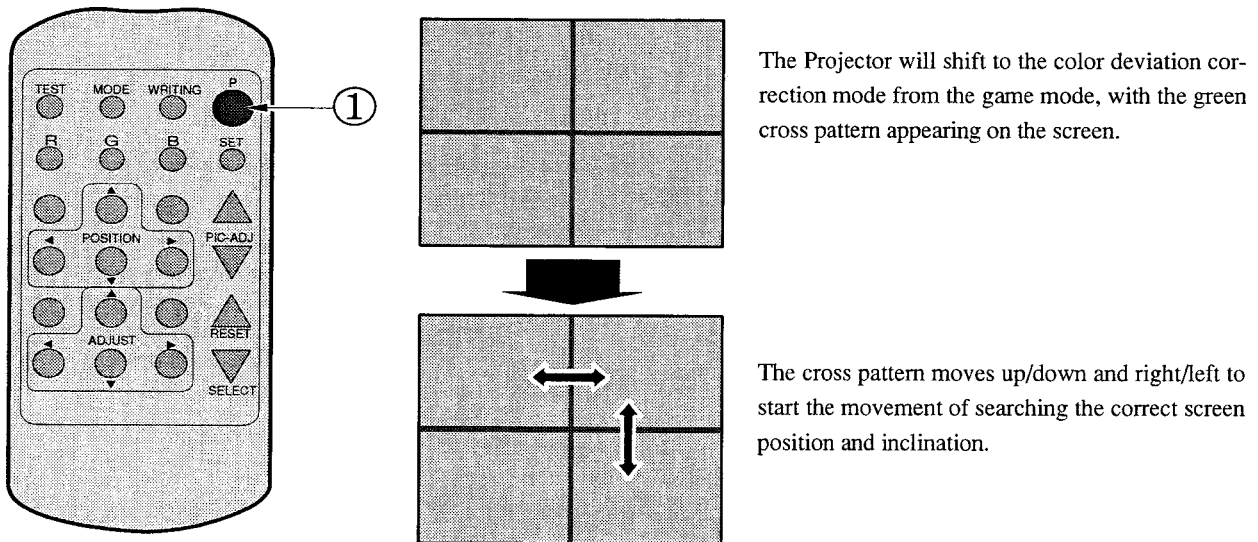
REMOTE CONTROL BUTTONS



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 or 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.



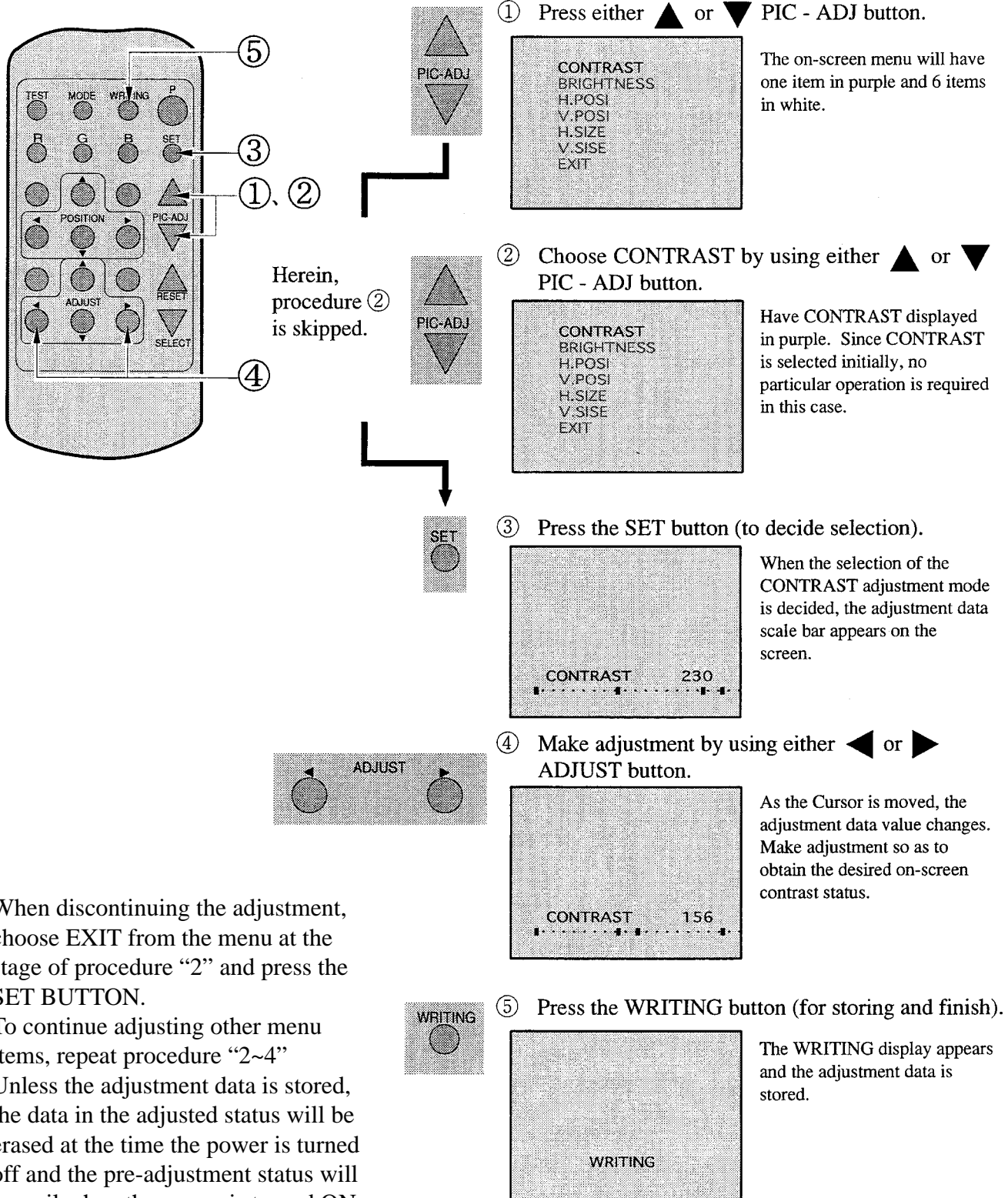
When the green cross pattern movements are finished, similar detection is performed sequentially in order of red and then blue cross movements. After detecting by green, red and blue cross movements, the game mode returns with the color deviation status being corrected.

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 CONVERSION 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.



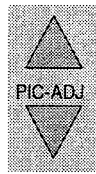
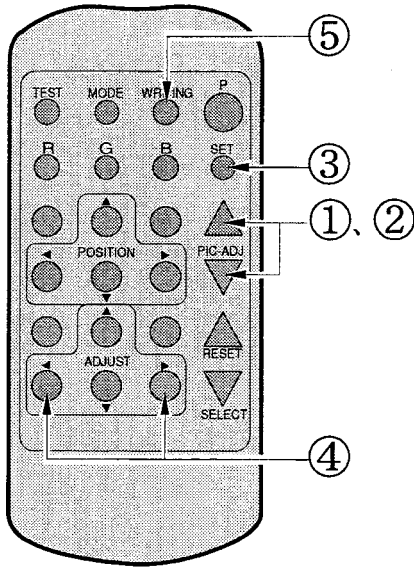
When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure “2” and press the SET BUTTON.

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

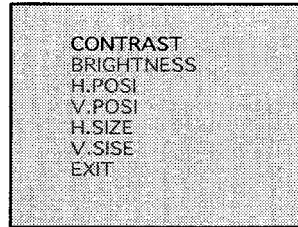
Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE ON-SCREEN BRIGHTNESS

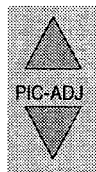
Although the on-screen picture quality has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary. Changing the BRIGHTNESS causes the light and shade of the on-screen images to be changed.



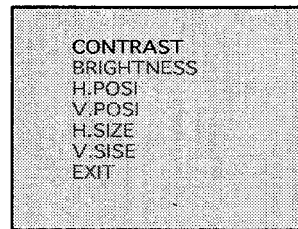
① Press either ▲ or ▼ PIC - ADJ button.



The on-screen menu will have one item in purple and 6 items in white.



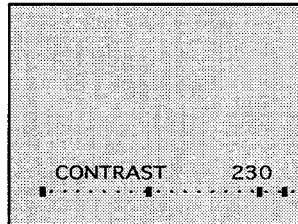
② Choose CONTRAST by using either ▲ or ▼ PIC - ADJ button.



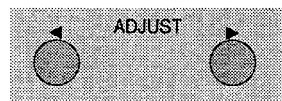
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.



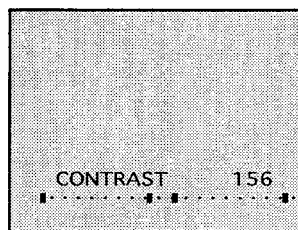
③ Press the SET button (to decide selection).



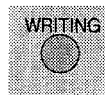
When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.



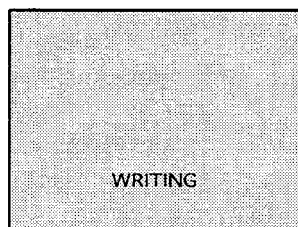
④ Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen contrast status.



⑤ Press the WRITING button (for storing and finish).



The WRITING display appears and the adjustment data is stored.

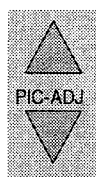
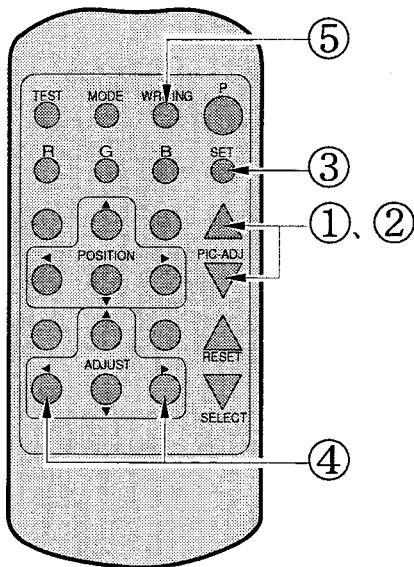
When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure “2” and press the SET BUTTON.

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

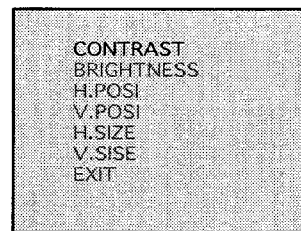
Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE ON-SCREEN CONTRAST

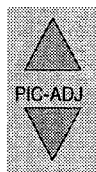
Although the on-screen display position (H. POSI, V. POSI) has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary.



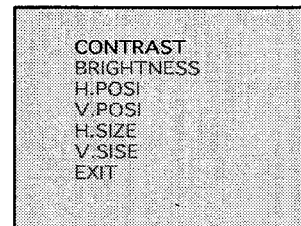
① Press either ▲ or ▼ PIC - ADJ button.



The on-screen menu will have one item in purple and 6 items in white.



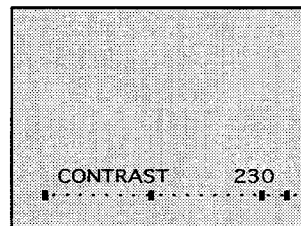
② Choose CONTRAST by using either ▲ or ▼ PIC - ADJ button.



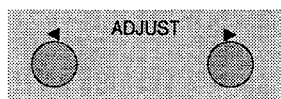
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.



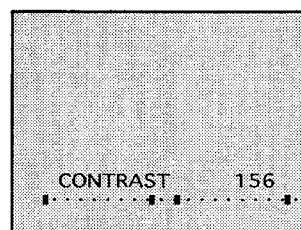
③ Press the SET button (to decide selection).



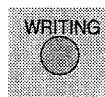
When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.



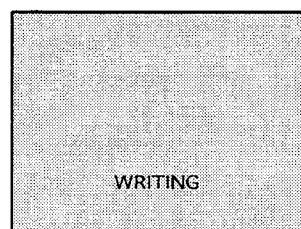
④ Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen contrast status.



⑤ Press the WRITING button (for storing and finish).



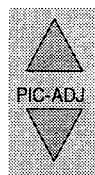
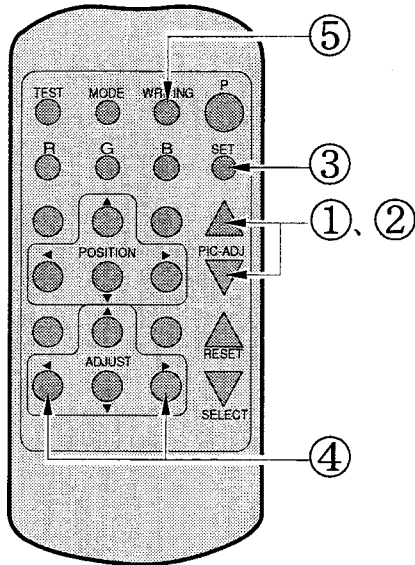
The WRITING display appears and the adjustment data is stored.

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

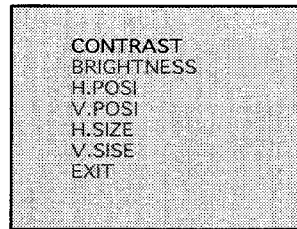
To continue adjusting other menu items, repeat procedure "2~4" Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE SCREEN SIZE

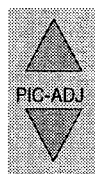
Although the on-screen size (H. SIZE, V. SIZE) has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary.



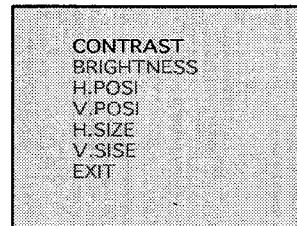
- ① Press either ▲ or ▼ PIC - ADJ button.



The on-screen menu will have one item in purple and 6 items in white.



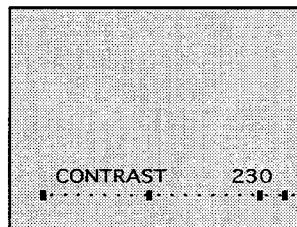
- ② Choose CONTRAST by using either ▲ or ▼ PIC - ADJ button.



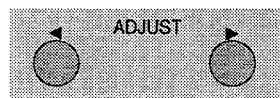
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.



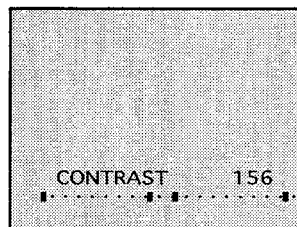
- ③ Press the SET button (to decide selection).



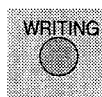
When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.



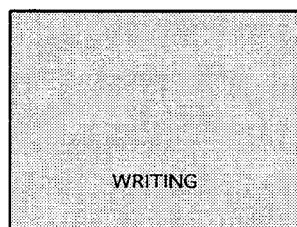
- ④ Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen contrast status.



- ⑤ Press the WRITING button (for storing and finish).



The WRITING display appears and the adjustment data is stored.

When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure ① 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)



CAUTION!

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.



IMPORTANT!

To avoid making the adjustment work ineffective, do not press the RE-SET button during adjustment.

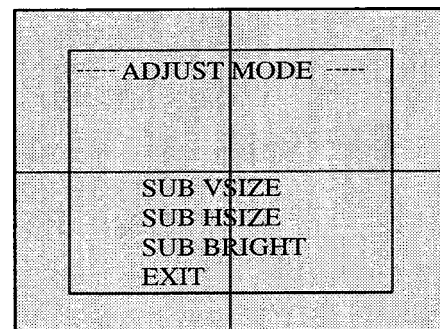
To discontinue adjustment work, keep pressing the TEST button for approximately 3 seconds at the stage before storing the adjustment data by pressing the WRITING button.

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

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.

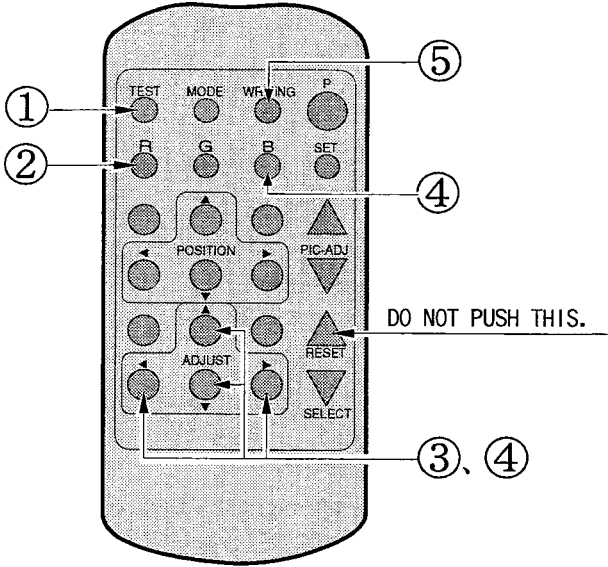
Should the menu shown right be displayed by mistake, first choose EXIT by using either "up or down" PIC-ADJ button and then press the SET button.



Adjustment menu used in the factory.

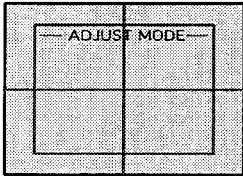
STATIC CONVERGENCE ADJUSTMENT

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.



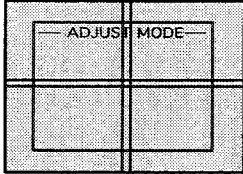
When either of “2” “4” COLOR SELECT buttons (R,B) is pressed, if the color desired to be adjusted disappears, press that particular button again. For example, if the red color needs to be adjusted again at the stage of “4” the R button need to be pressed twice.

- ① Keep pressing the TEST button for approximately 3 seconds.



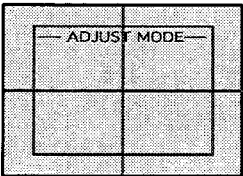
The screen will change to ADJUST mode from the Game mode to cause the green test pattern to be displayed on the screen.

- ② Press the R button to have the red adjustment mode.



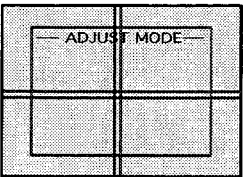
The red test pattern is added to the display. The frame color turns to red and this signifies the red adjustment mode.

- ③ Make adjustment by using the ▲ ▼ ◀ ▶ ADJUST buttons.



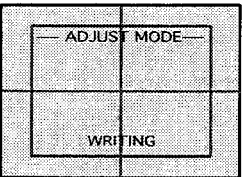
Make adjustment so as to have red superimposed on green. When red is superimposed on green, the color becomes yellow.

- ④ Press the B button to have the blue adjustment mode.



Similarly as in the case of red, adjust the blue color. When green, red, and blue are superimposed, the color becomes white.

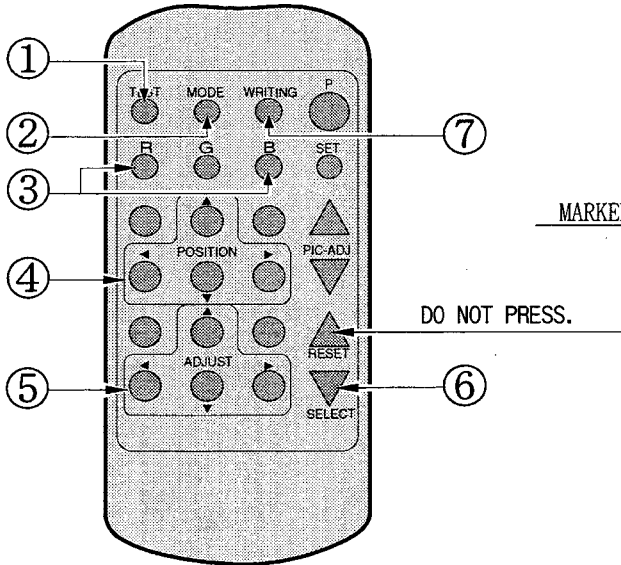
- ⑤ Press the WRITING button (for storing and finish).



The WRITING display appears and the adjustment data is stored. After the data is stored, the Game mode returns.

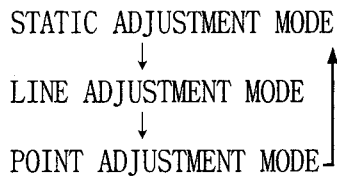
POINT CONVERGENCE ADJUSTMENT

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:



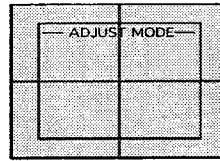
NOTE 2:

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:

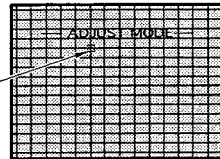
By repeatedly pressing the SELECT button, only the Projector's TEST pattern screen and the screen superimposing the Game Board Test pattern can be alternately displayed.

- Keep pressing the TEST button for approximately 3 seconds.



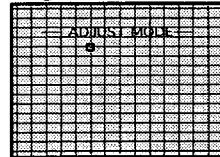
The screen changes to ADJUST mode from the Game mode and displays the green test pattern.

- Press the MODE button twice to have the POINT ADJUSTMENT mode. Note 1



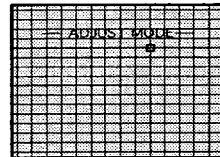
The crosshatch test pattern appears and the MARKER indicating the adjustment point is displayed.

- Using either R or B button, select the desired color to be adjusted. Note 2 By using the G button, the green color can also be selected.



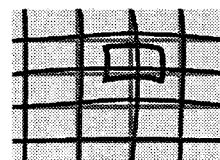
The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

- By using the ▲ ▼ ◀ ▶ ADJUST buttons, move the MARKER to the position to be adjusted.



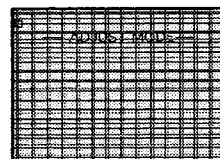
The MARKER moves in the direction of the button's arrow. However, the movable point is predetermined.

- Make adjustment by using the ▲ ▼ ◀ ▶ ADJUST buttons.



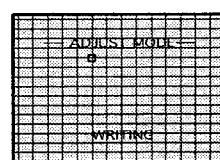
Although the direct vicinity of the MARKER's center moves most conspicuously, make adjustment by paying attention to the periphery area also. Shown left is the magnified MARKER periphery.

- Press the SELECT button as necessary to superimpose Game Board images. Note 3



If the test pattern is not displayed in the periphery of the screen, adjustments can be made by pressing the SELECT button to superimpose the test pattern and the Game Board's CRT test screen.

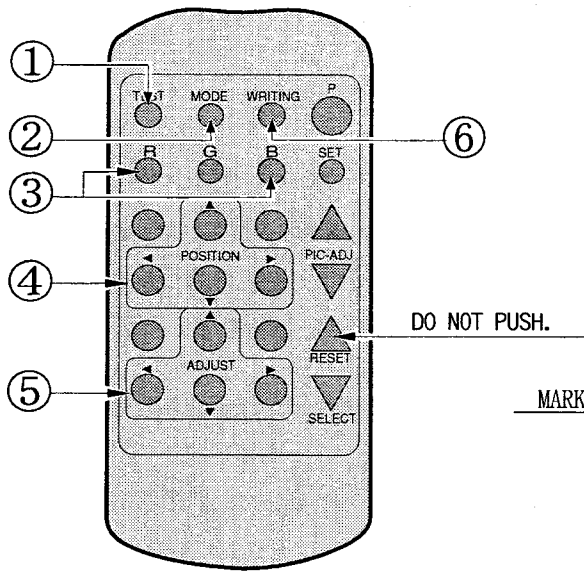
- Press the WRITING button (for storing and finish).



WRITING is displayed and the adjustment data is stored. After the data is stored, the Game Board screen returns.

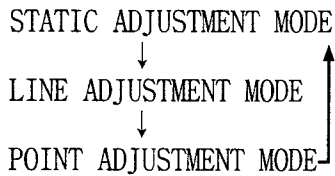
LINE CONVERGENCE ADJUSTMENT

In the LINE CONVERGENCE ADJUSTMENT, the adjustment point of 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 or row is uniformly deviated.



NOTE 1:

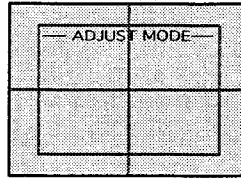
When the MODE button is repeatedly pressed, the adjustment modes will circulate as follows:



NOTE 2:

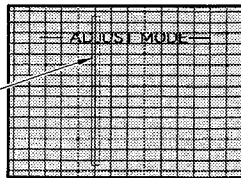
When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted is erased, press that particular button again.

- ① Keep pressing the TEST button for approximately 3 seconds.



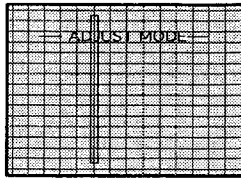
The screen changes to ADJUST mode from the Game Board mode and displays the green test pattern.

- ② Press the MODE button once to have the POINT ADJUSTMENT mode. Note 1



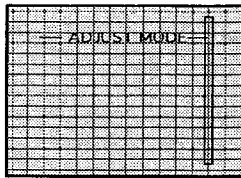
The crosshatch test pattern appears and the vertically long MARKER is shown.

- ③ Using either R or B button, select the desired color to be adjusted. Note 2 Although the green color can also be selected by using the G button, to avoid the screen size change adjustment, do not choose green.

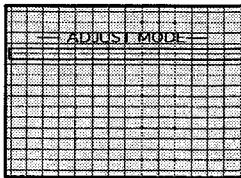


The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

- ④ By using the ▲ ▼ ◀ ▶ POSITION buttons, move the MARKER to the position to be adjusted.

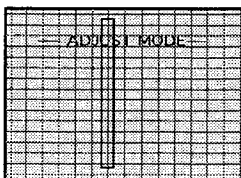


Use the ◀ ▶ buttons to select the column line, and the MARKER moves in the right/left direction. However, the movable range is predetermined.



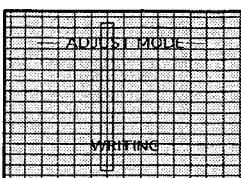
Use the ▲ ▼ buttons to select the row line and the MARKER moves in the up/down direction. However, the movable range is predetermined.

- ⑤ Make adjustment by using the ▲ ▼ ◀ ▶ ADJUST buttons.



The selected column line or row line (shown left is the column line) can be moved in the desired up/down or right/left directions as applicable.

- ⑥ Press the WRITING button (for storing and finish).



WRITING is displayed and the adjustment data is stored. After the data is stored, the Game Board screen returns.

14 . REPLACEMENT OF FLUORESCENT LAMP



WARNING!

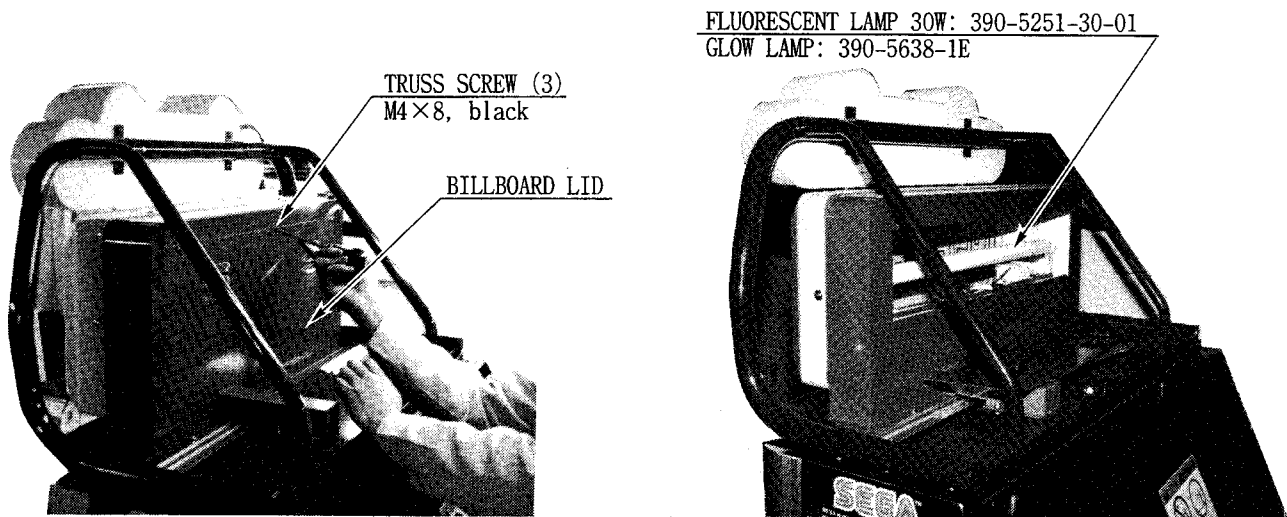
- When performing the work, be sure to turn power off. Working with power on can cause an electric shock or short circuit accident.
- The Fluorescent Lamp, when it gets hot, can cause burns. Be very careful when replacing the Fluorescent Lamp.



CAUTION!

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

14 -1 REPLACEMENT OF FLUORESCENT LAMP



- ① Take out the 2 screws to remove the FL Cover Plate, and replace the Fluorescent Lamp. (FRONT)
- ② Take out the 3 screws to remove Billboard Lid, and replace Fluorescent Lamp. (REAR)



When performing work, prepare a step.

15. 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 securley 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 herin stated or the Distributer, etc. where the product was purchased from, as regards to the interior cleaning. Using the product with dust as is accumulated in the interior without cleaning can cause a fire or short circuit accident. Note that cleaning the interior parts can be performed on a pay-basis.

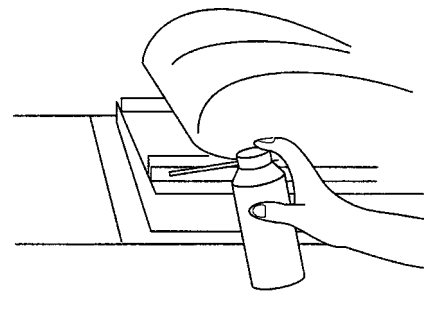
	Item	Interval	Reference
CABINET	Check Adjusters' contact with surface.	Daily	4
HANDLE MECHA	Check lamp.	Monthly	8
	Check VOLUME VALUE.	Monthly	8
	Check ADJUST GEAR engagement.	Trimonthly	9
	Greasing of GEAR.	Trimonthly	9
ACCEL. & BRAKE	Check VOLUME value.	Monthly	10
	Check ADJUST GEAR engagement.	Trimonthly	10
	Gear and Spring portion greasing.	Trimonthly	10
HAND BRAKE	Greasing.	Tri-monthly	10
	Check switches.	Monthly	10
SHIFT LEVER	Check switches.	Monthly	9
COIN CHUTE TOWER	Check COIN SW.	Monthly	4
	Coin insertion test.	Monthly	11
	Cleaning of COIN SELECTOR.	Trimonthly	11
MONITOR	Check adjustments.	Monthly or when moving.	12
	Cleaning of CRT surfaces.	Weekly	12
SEAT	Antistatic measures	Bimonthly	Next page
	Applying grease to Seat Rail	Trimonthly	
GAME BD	MEMORY TEST.	Monthly	7
	Check settings.	Monthly	7
Cabinet surfaces	Cleaning	As occasion arises.	Next page
INTERIOR	Cleaning	Annually	See above.
POWER SUPPLY PLUG	Inspection and cleaning		

CLEANING CABINET SURFACES

If the cabinet is badly stained, use a cloth which is dipped in the chemical detergent liquid diluted with water and then squeezed dry. Do not use thinner, benzine, alcohol or chemical dustcloth as these can damage Cabinet surfaces.

SEAT (Greasing to Seat Rail Portion)

Move the Seat to the rearmost portion and apply spray greasing to the portion shown at the right once every 3 months by using NOK KLUBER L60 or GREASE MATE SEGA PART No. 090-0066. After greasing, move seat a few times forward and backward so as to allow the grease to be applied all over uniformly. Be sure to wipe grease which attaches to the surfaces of the PROTECT RUBBER on the seat Rail, or any excess grease.



16. TROUBLESHOOTING



CAUTION!

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

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

After removing the cause of the blown fuse, replace the fuse. Depending on the cause of the fault, using the fuse as is blown could result in generation of heat and fire.

TROUBLESHOOTING TABLE 14.a

PROBLEMS	CAUSE	COUNTERMEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	Blown Fuse due to momentary overcurrent.	First, remove the cause of overcurrent and reinstate the circuit protector to its original status
	Due to momentary overcurrent, Connect Board fuse is blown.	After removing the cause of overcurrent, replace Connect Board Fuse. 514-5036-8000 FUSE 7A slo
The color on PTV screen is incorrect.	Image adjustment is inappropriate.	Adjust appropriately
Color deviation on PTV screen.	Affected by peripheral machines or the building's steel frames.	Perform convergence adjustment
		Change installation direction or position.
		Move the machine which causes the problem.
No image on PTV screen.	Connector connection fault.	Check connection of the PTV's power connector on the upper part inside the Back Lid on the rear of the Front Cabinet. Check connections of RGB connectors inside the Side Door.

TROUBLESHOOTING TABLE 14.b

PROBLEMS	CAUSE	COUNTERMEASURES
Sound is not emitted.	Incorrect volume adjustment.	Adjust the SWITCH UNIT's sound adjustment volume (control)
	Malfunctioning BD. and Amp.	Perform SOUND TEST
	Connector connection fault.	Check connector connection between the Front and Rear cabinets
Sound Volume is ineffective.	Connector connection fault.	Check connector connection between the Front and Rear cabinets
Operation of Accel., Brake and Pedal are not satisfactory.	V. R. position deviated.	Adjust V. R. value in the test mode.
	V. R. malfunctioning.	Replace the V. R.
	ADJUST GEAR's engagement is not correct.	Adjust the engagement of ADJUST GEAR.
	Connector connection fault.	Check connector connection between the Front and Rear cabinets
SHIFT LEVER doesn't operate satisfactorily.	Switch malfunctioning.	Replace the SW.
Hand Brake operation is not satisfactory.	Switch malfunctioning.	Replace the SW.
Shift Lever, Hand Brake and Switches do not function effectively.	Connector connection fault.	Check connector connection between the Front and Rear cabinets
Steering Wheel reaction is irregular. The center is deviated.	Power-ON check failure.	Redo power-ON and finish power-ON check.
	Steering Wheel Volume deviation.	Adjust Volume value in the Test Mode.
	Steering Wheel Volume malfunctioning.	Replace the Volume.
No Steering Wheel reaction.	Connector connection fault.	Check connector connection between the Front and Rear cabinets
	Due to momentary overcurrent, Motor Drive Board's fuse is blown.	After removing the cause of overcurrent, replace Connect Board Fuse. 514-5037-15000 FUSE 7A SLO
Cockpit reaction is irregular.	Cockpit position Volume deviation.	Adjust Volume value in the Test Mode.
	Cockpit position Volume malfunctioning.	Replace the Volume.
No Cockpit reaction.	Connector connection fault.	Check connector connection between the Front and Rear cabinets
Fluorescent lamp does not light up.	Connector connection fault.	Check connector connection between Billboard and PTV
	Fluorescent Lamp needs replacement.	Replace the fluorescent lamp.

17. GAME BOARD



- 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.

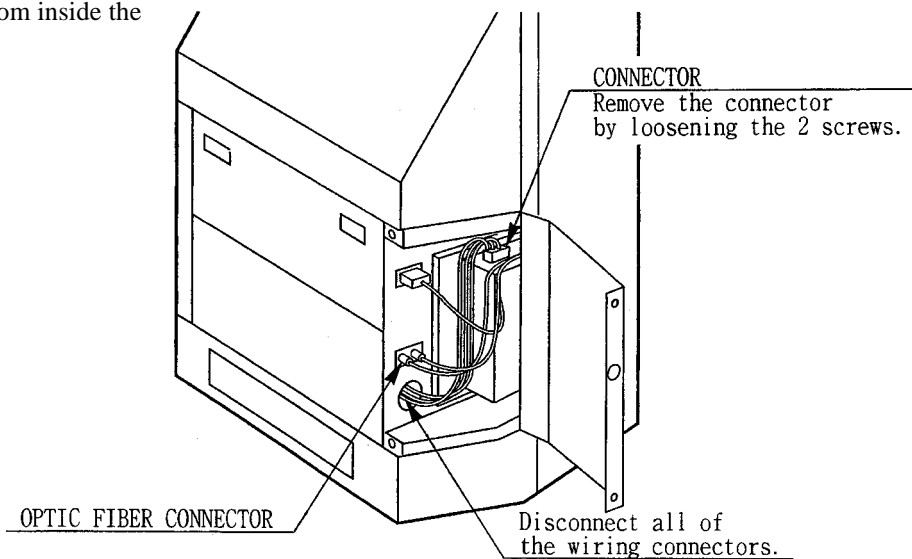
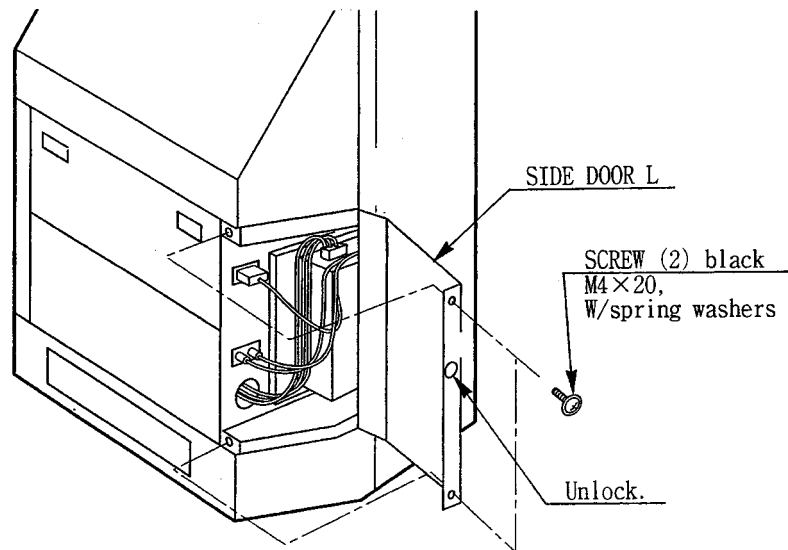


Do not expose the Game BD, etc. without a good reason. In this product, setting changes are made during the test mode. The Game BD need not be operated. Use the Game BD, etc. as is with the same setting made at the time of shipment.

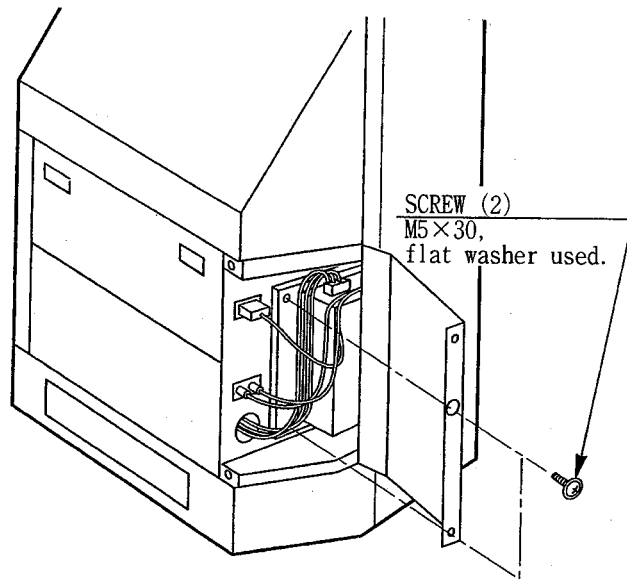
17-1 REMOVING THE GAME BOARD

To replace the IC Board or to change dip switch settings, take out the IC board using the following procedure;

- ① Turn the Power off.
- ② Remove the 2 screws and unlock to open Side Door L.
- ③ Remove the connector from the Terminal by loosening the 2 screws (one each on the left/right side) which secure the connector.
- ④ Disconnect the Optic Fiber Connector.
- ⑤ Remove all of the connectors from inside the cabinet.

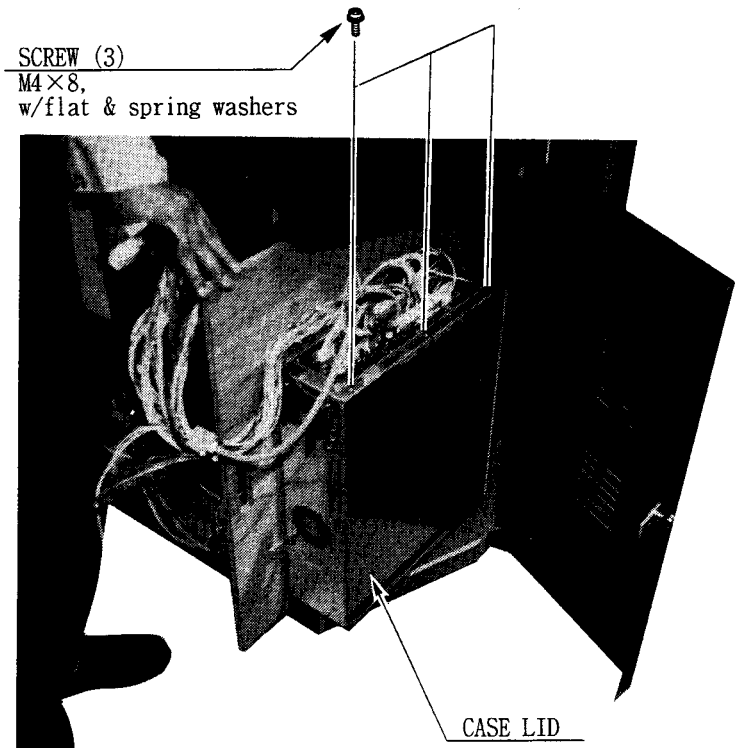


- ⑥ Remove the 2 screws which secure the wooden base on which the Shield Case is mounted.



- ⑦ Withdraw the wooden base with the Shield Case as is mounted. At this time, use care so as not to damage wiring and optic fiber cable.

- ⑧ Take out the 3 screws, remove Case Lid, and the Game Board will appear.

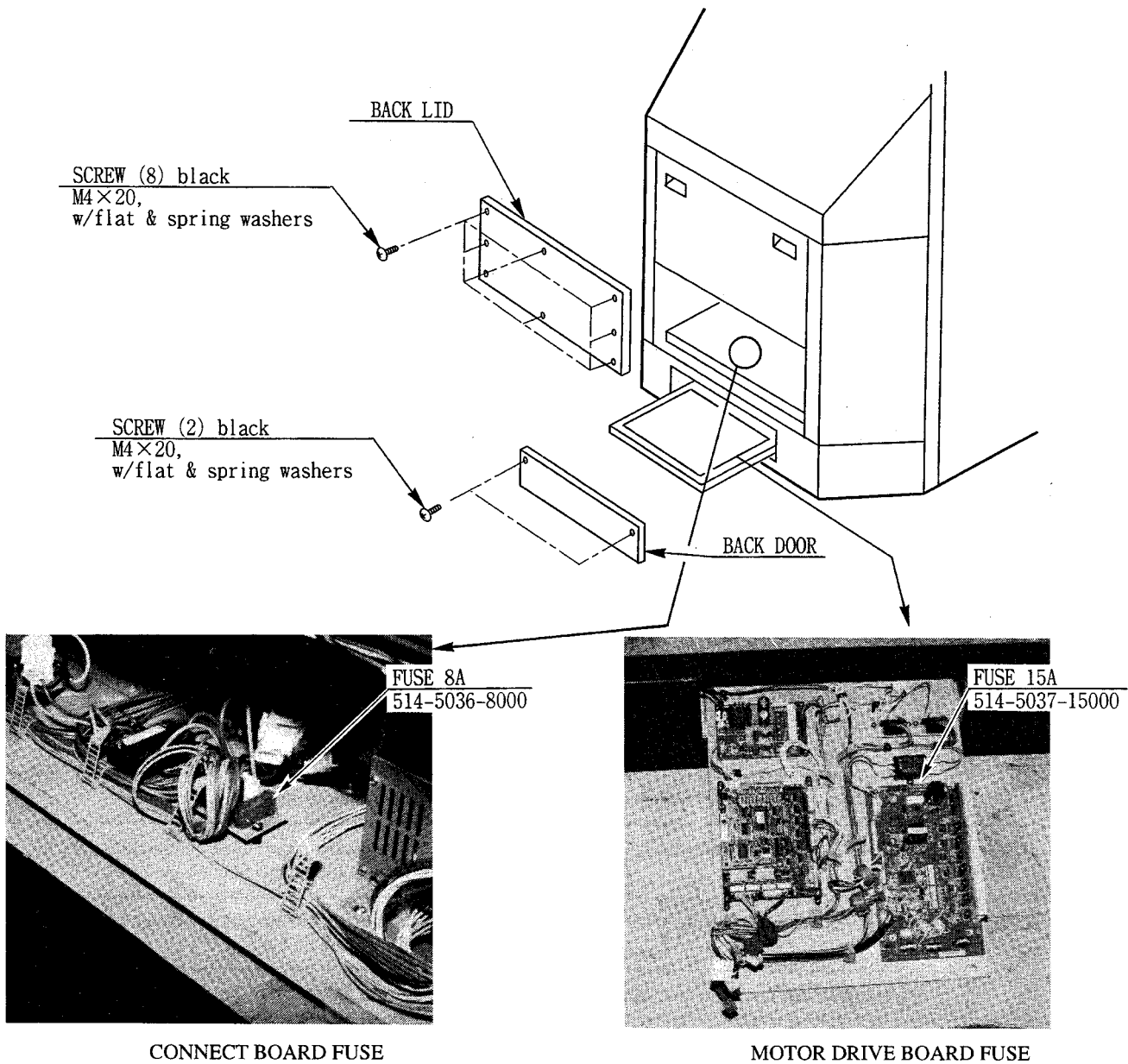


17 - 2 REPLACEMENT OF FUSE



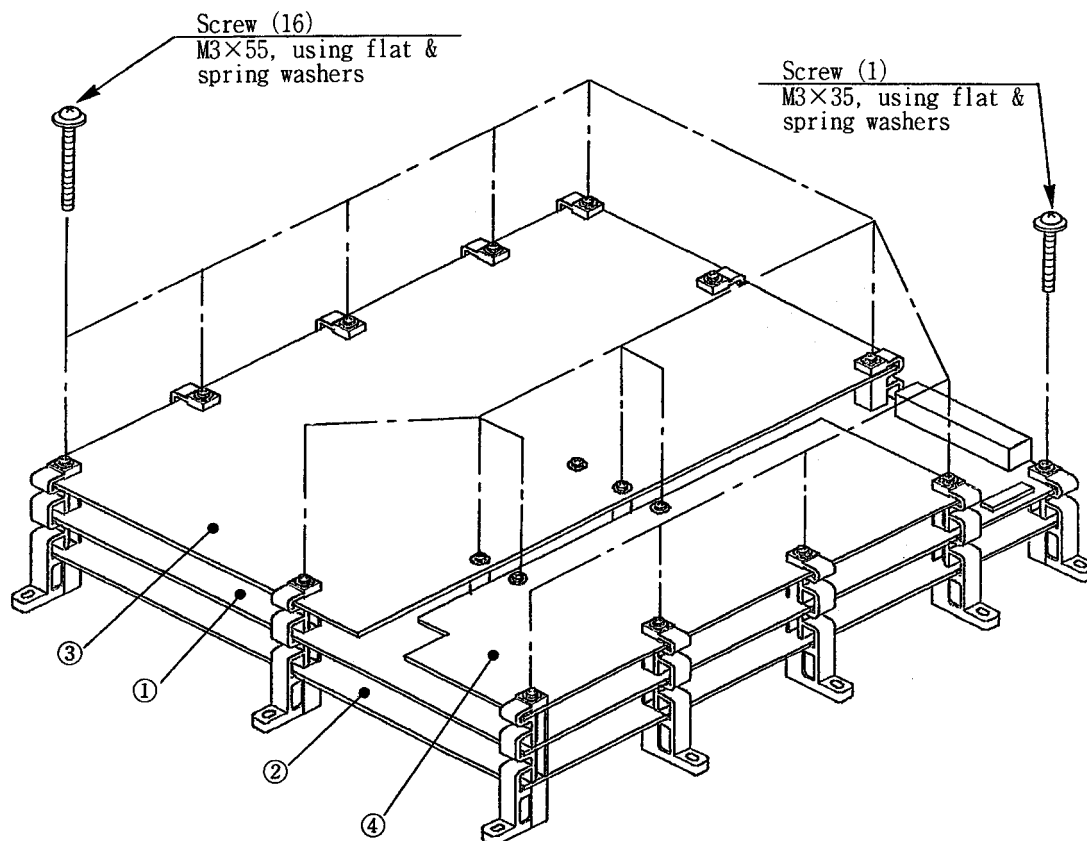
- In order to prevent an electric shock, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident
- After eliminating the cause of the blowing of fuse,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

Remove the Back Lid and replace Fuse. Use care so as not to damage wiring connections inside Back Lid.



17 - 3 COMPOSITION OF GAME BOARD

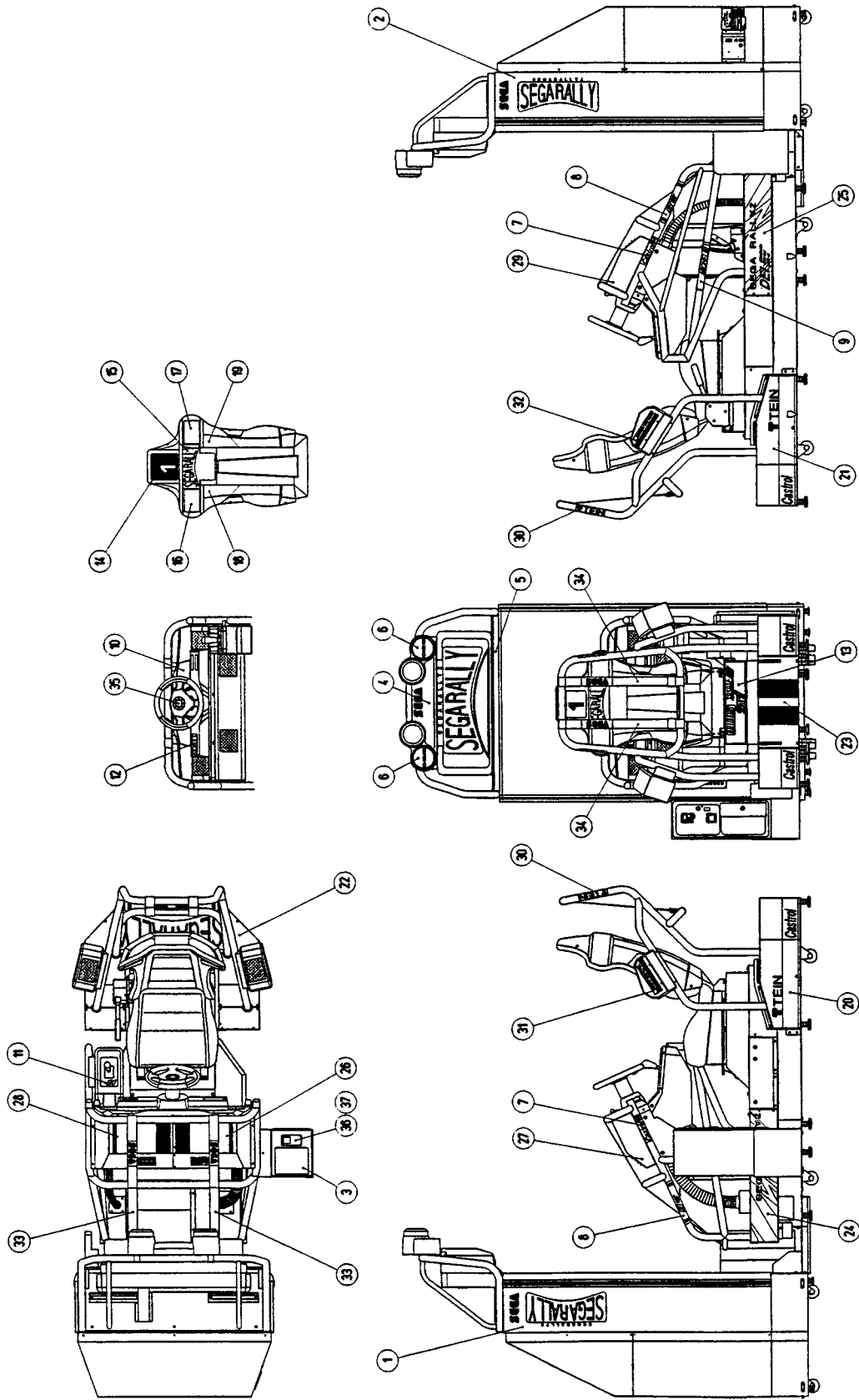
GAME BD SRT TWIN (833-13373)



No.	PART No	DESCRIPTION
①	837-12715-91	MODEL3 STEP2 CPU BOARD
②	837-12716	MODEL3 STEP2 VIDEO BOARD
③	834-13374	ROM BD SRT TWIN
④	837-11861-91	MODEL3 COMM BD COM

NOTE: THIS PICTURE IS FOR REFERENCE ONLY!! UNIT IS NOT TO BE OPENED. EXPOSING THE GAME BD FOR ANY REASON MAY VOID WARRANTY.

18. DESIGN RELATED PARTS

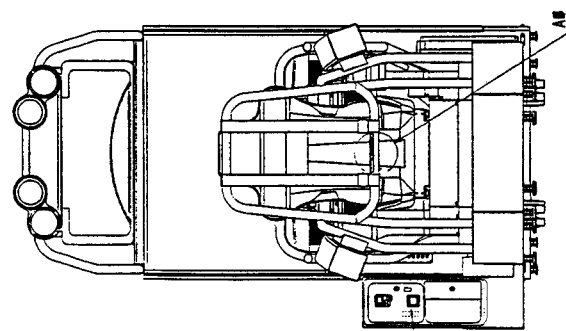
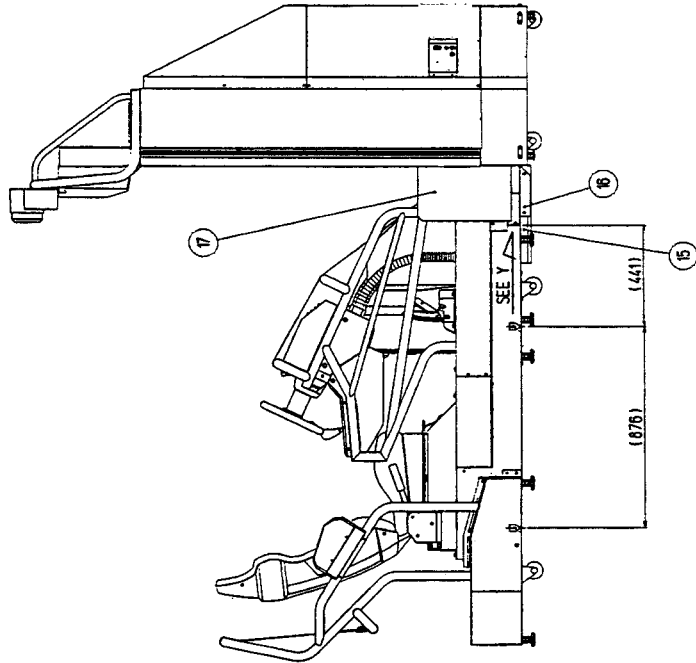
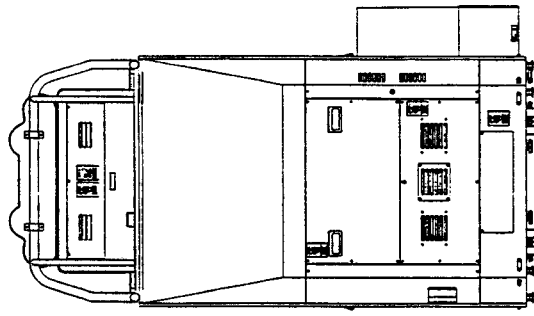
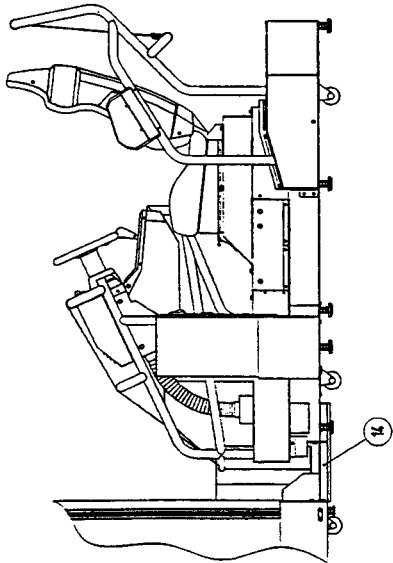
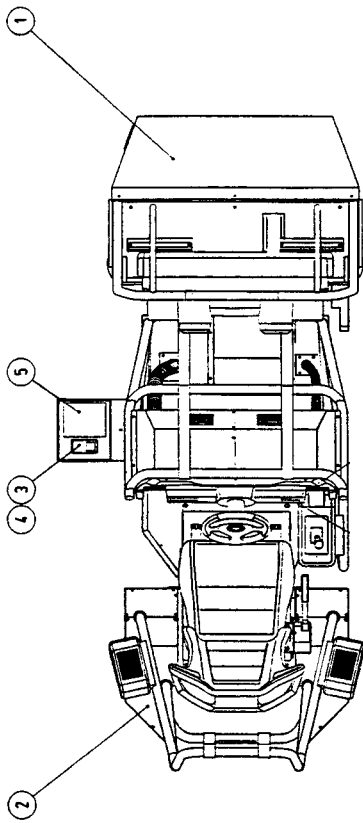


DESIGN RELATED PARTS

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 CNT 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 N01
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 CNT PNL UP L
27	SRT-3039-C	STICKER CNT PNL SIDE L
28	SRT-3040-B	STICKER CNT PNL UP R
29	SRT-3040-C	STICKER CNT 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 1GAME~

19 . PARTS LIST

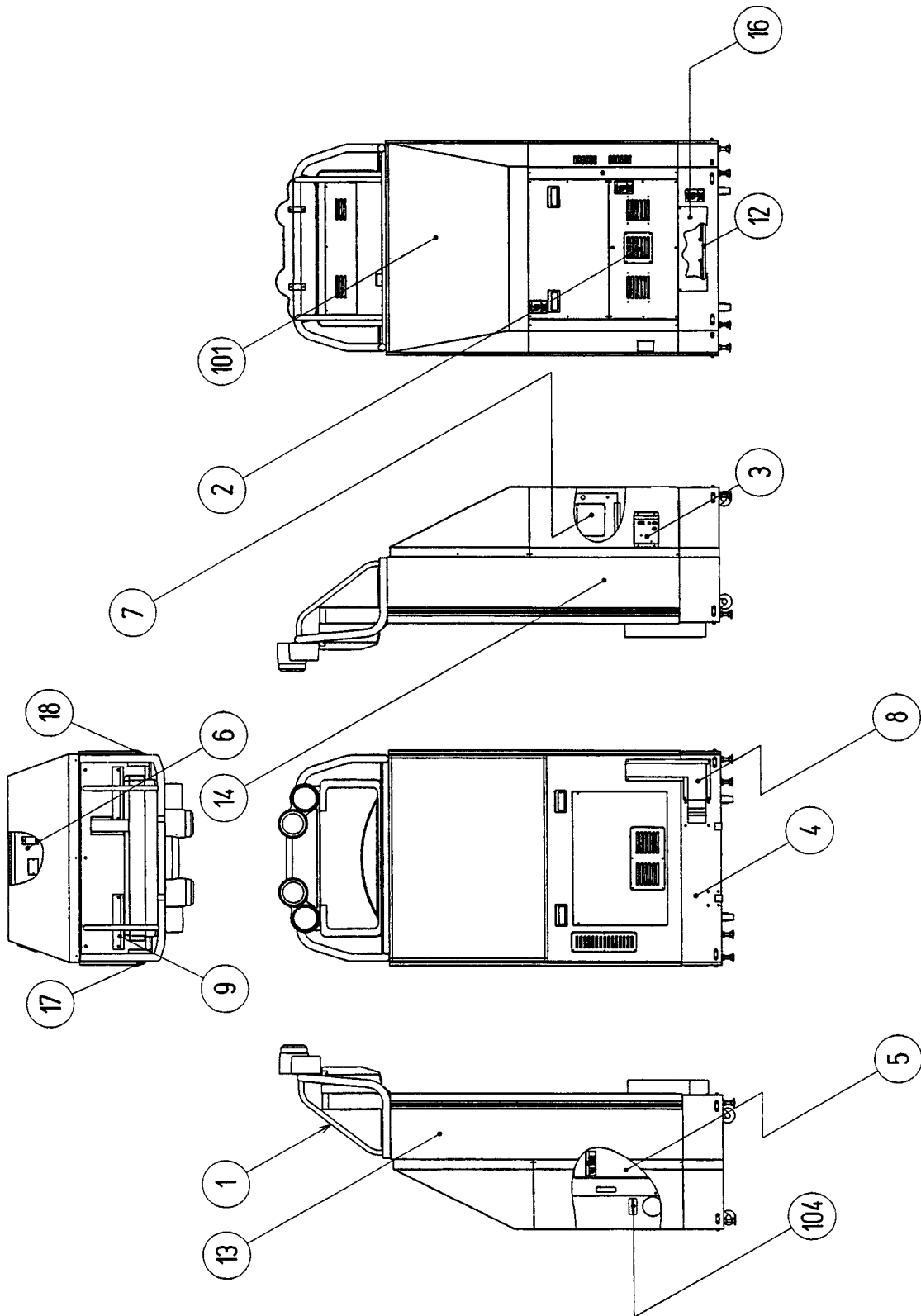
TOP ASSY SEGA RALLY 2 DX



TOP ASSY SEGA RALLY 2 DX

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-1000	ASSY FRONT CABINET
2	SRT-3000	ASSY REAR CABINET
3	DYN-0011	DENOMI PLATE W/O ORIGINAL
4	421-7308-63	DENOMINATION SHEET 1 GAME~
5	422-0670-01-01	PLAY INSTR SH SRT DX
14	SRT-0001	JOINT BRKT L
15	SRT-0002	JOINT BRKT R
16	SRT-0003	WIRE COVER JOINT
17	SRT-0004X	JOINT GAURD FRONT

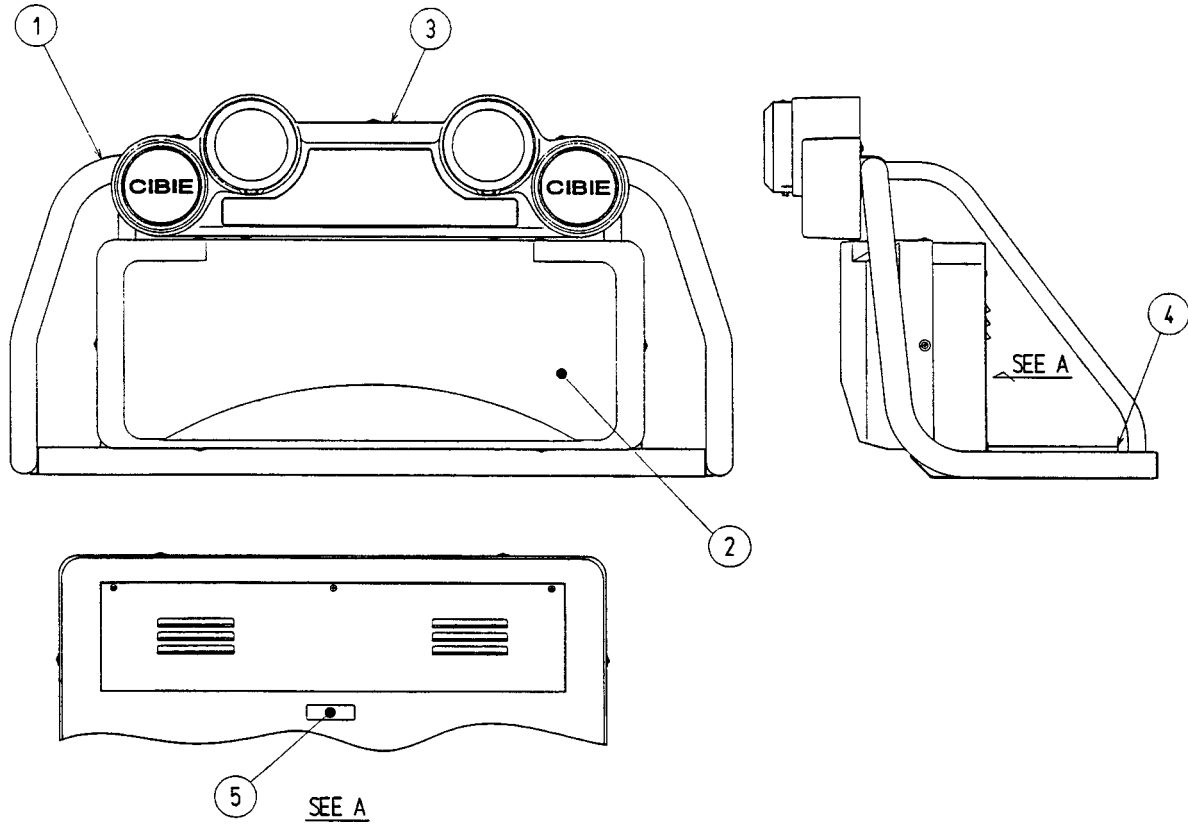
ASSY FRONT CABINET (SRT-1000)



ASSY FRONT CABINET (SRT-1000)

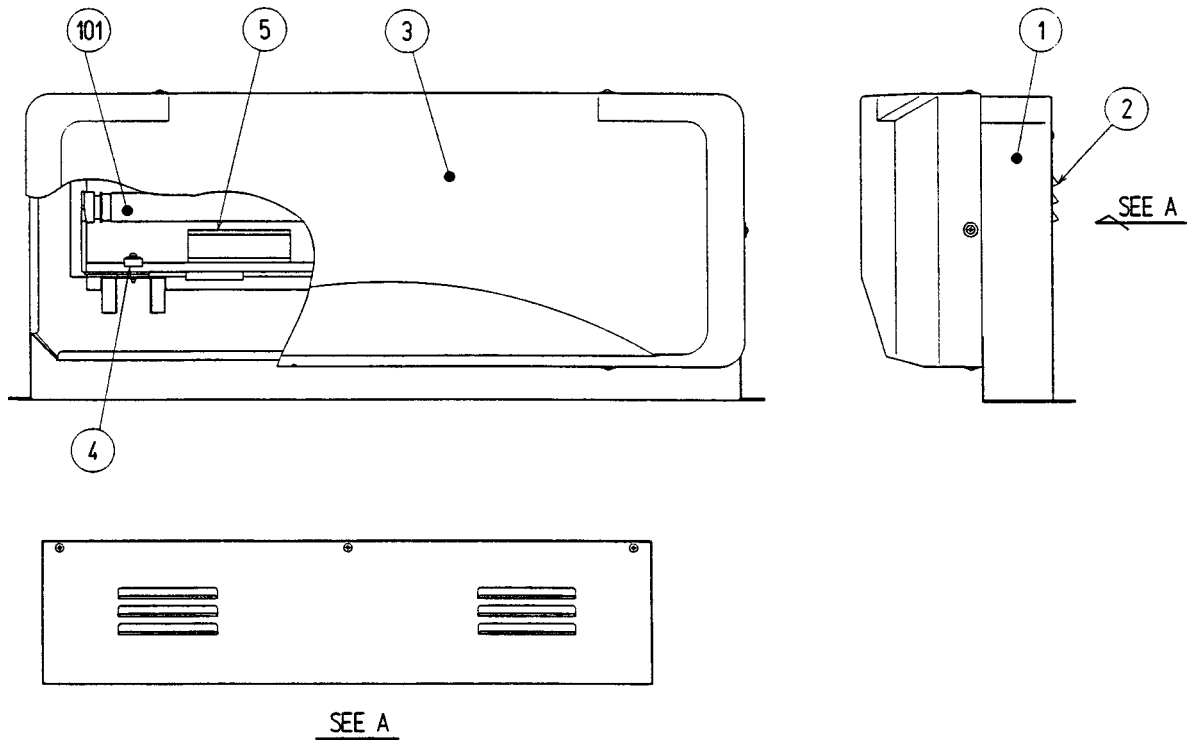
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-0500	ASSY BILLBOARD
2	SRT-1020	ASSY BACK LID
3	SRT-1050	AC UNIT
4	SRT-1100	ASSY FRONT BASE
5	SRT-4000	ASSY MAIN BD
6	SRT-4100	ASSY PWR SUPPLY
7	SRT-4200	ASSY MPEG
8	SRT-1003	PTV JOINT BRKT
9	SPG-0001	BILLBOARD HOOK
12	SRT-4300	ASSY DRIVE BD
16	SRT-1102	BACK DOOR
17	SRT-1004	EDGE GUARD L
18	SRT-1005	EDGE GUARD R
101	200-5709	PTV 50 M 24K GHS65
104	211-5479-01	CONN OPT JOINT

ASSY BILLBOARD (SRT-0500)



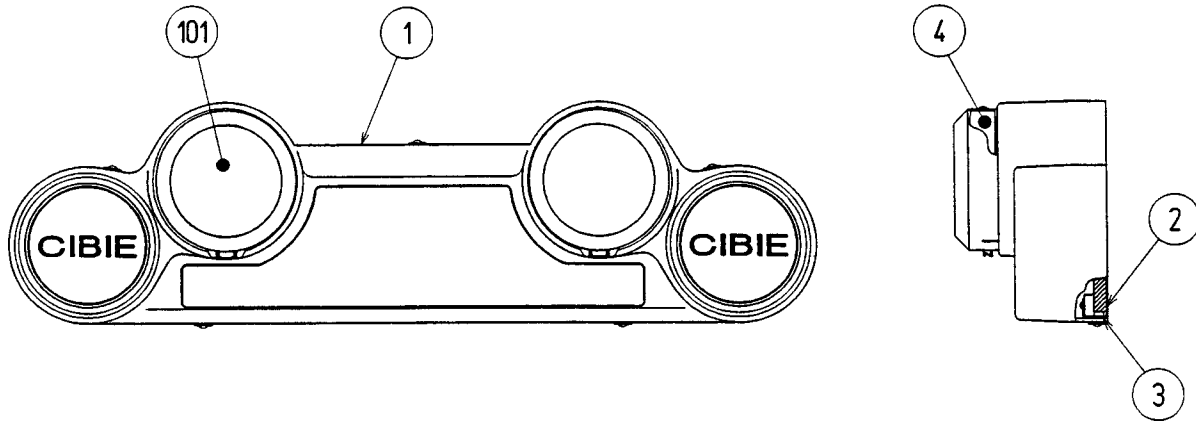
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-0501	BILLBOARD FRAME
2	SRT-0502	ASSY BILLBOARDBOX
3	SRT-0504	ASSY LIGHT COVER
4	SRT-0507	WIRE COVER

ASSY BILLBOARD BOX (SRT-0502)



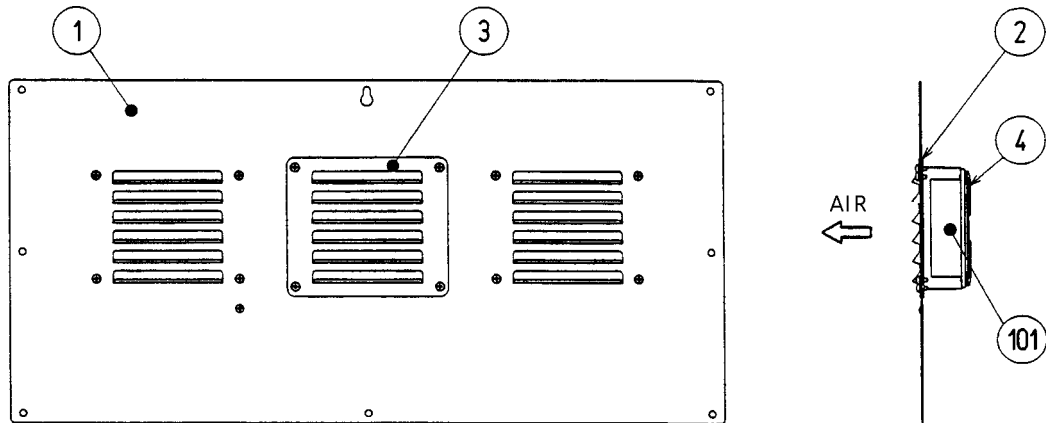
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-0503	BILLBOARD CASE
2	SRT-0204	BILLBOARD LID
3	SRT-0205	BILLBOARD
4	253-5457	FL HOLDER
101	LOCAL PURCHASE	ASSY FL20W EX W/CONN

ASSY LIGHT COVER (SRT-0504)



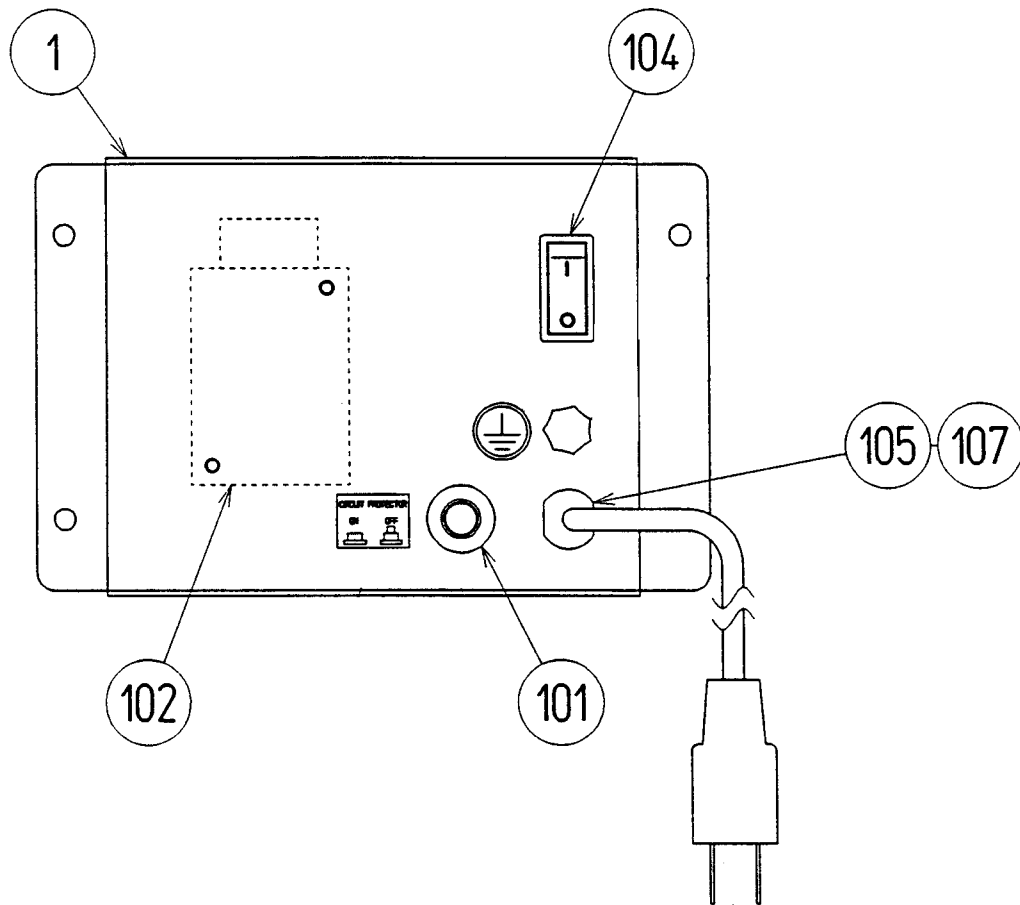
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-0505	LIGHT COVER
2	SRT-0506	LIGHT COVER BASE
3	SRT-0209	L BRKT
4	SRT-2010	LIGHT COVER BRKT
101	253-5461	LIGHT COVER CIBIE

ASSY BACK LID (SRT-1020)



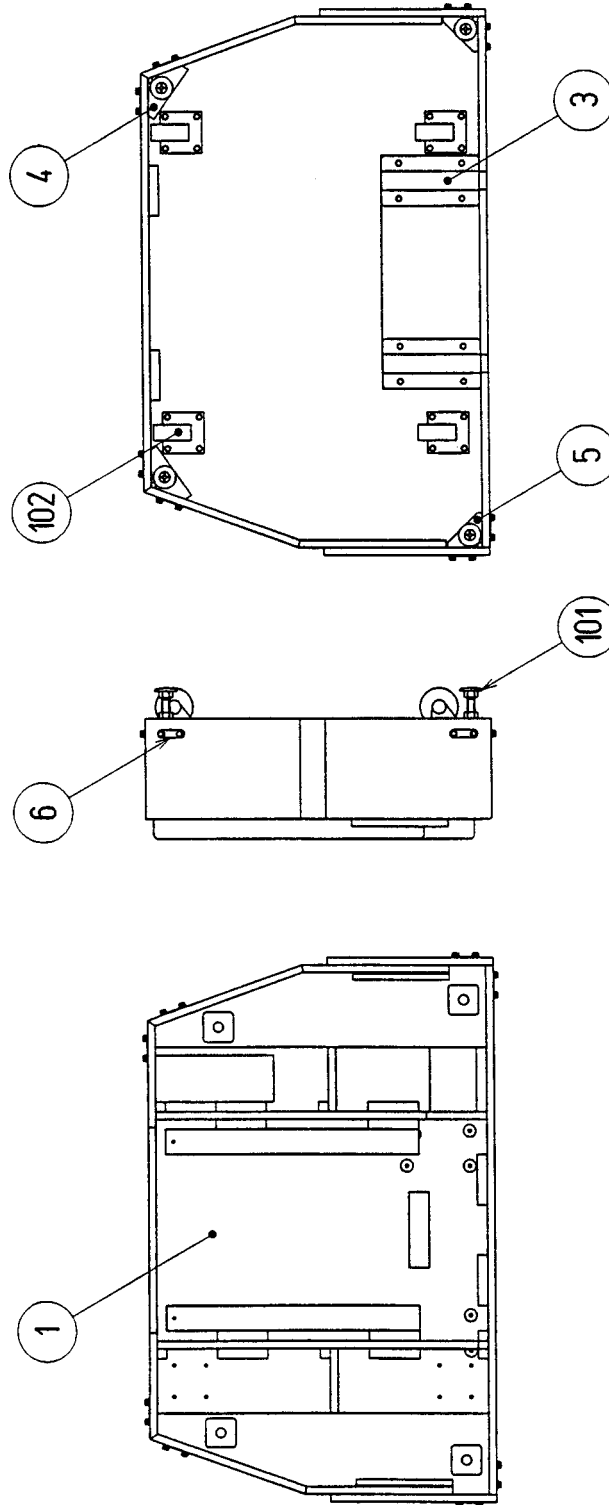
ITEM NO.	PART NO.	DESCRIPTION
1	SPG-1021	BACK LID
2	105-5238-91	FAN BRKT
3	105-5239-04	AIR VENT
4	601-8543	FAN GUARD
101	260-0011-02	AXIAL FLOW FAN AC 100V 50-60Hz

AC UNIT (SRT1-1050)



ITEM NO.	PART NO.	DESCRIPTION
1	TTR-1251	AC BRKT
101	LOCAL PURCHASE	7A FUSE S10
104	509-5453-91-V-B	SW ROCKER J8 V-B
105	600-5843-25	CA & PLUG ASSY L=2.5M
107	280-5134-6N34	BUSHING STRAIN RELIEF 6N34

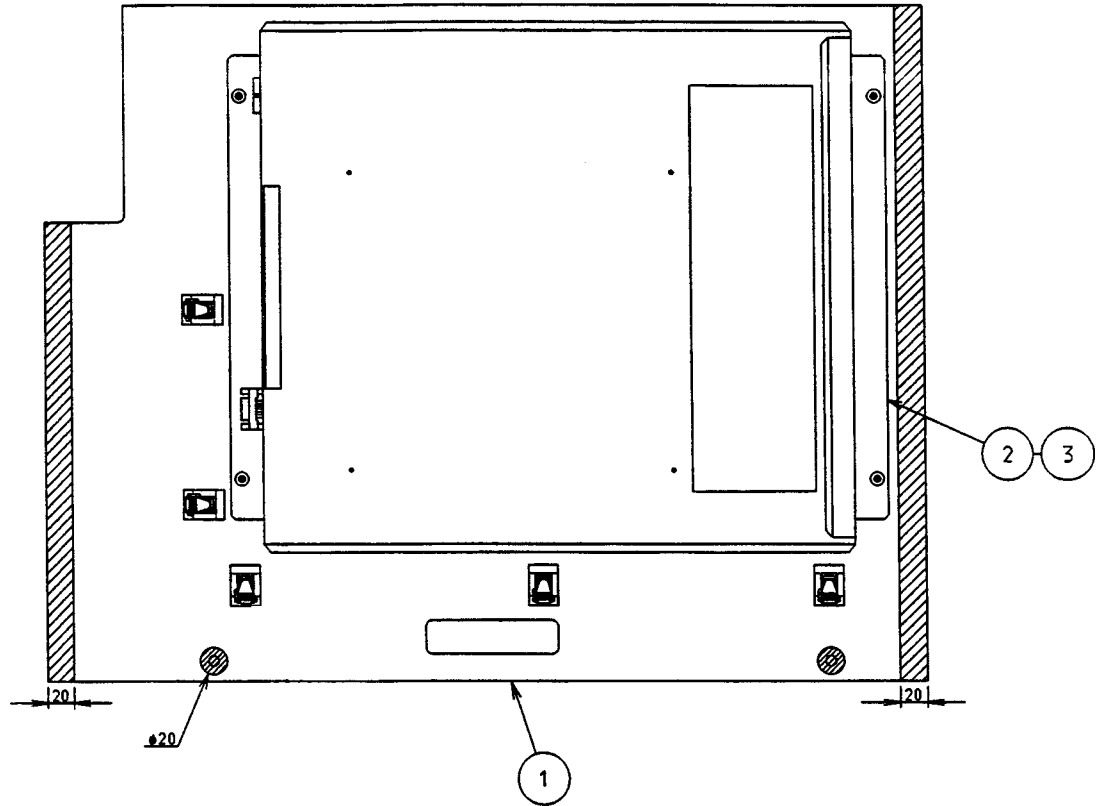
ASSY FRONT BASE (SRT-1100)



ASSY FRONT BASE (SRT-1100)

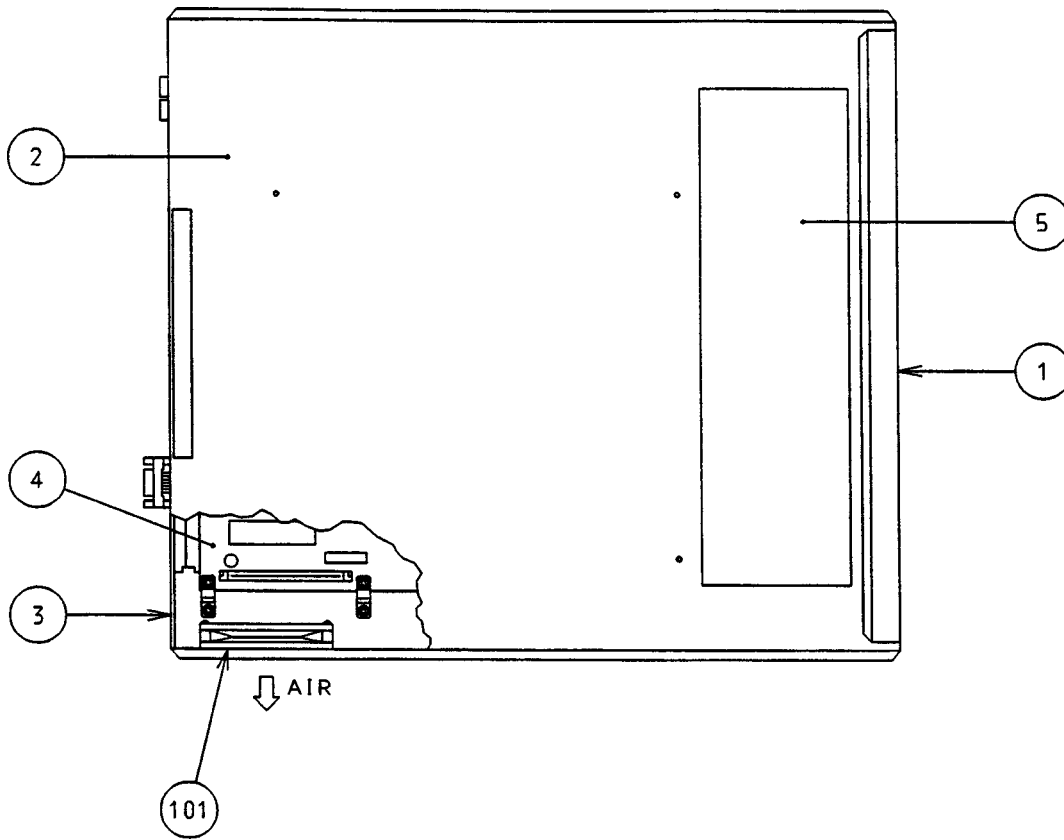
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-1101	WOODEN FRONT BASE
3	SRT-1103	CATCH BRKT
4	SRT-1104	LEG BRKT R
5	ARC-1006	LEG BRACKET
6	117-5233	LEG BRKT BLACK
101	999-0167	LEG ADJUSTER BOLT
102	999-0169	CASTER 2 1/2"

ASSY MAIN BD (SRT-4000)



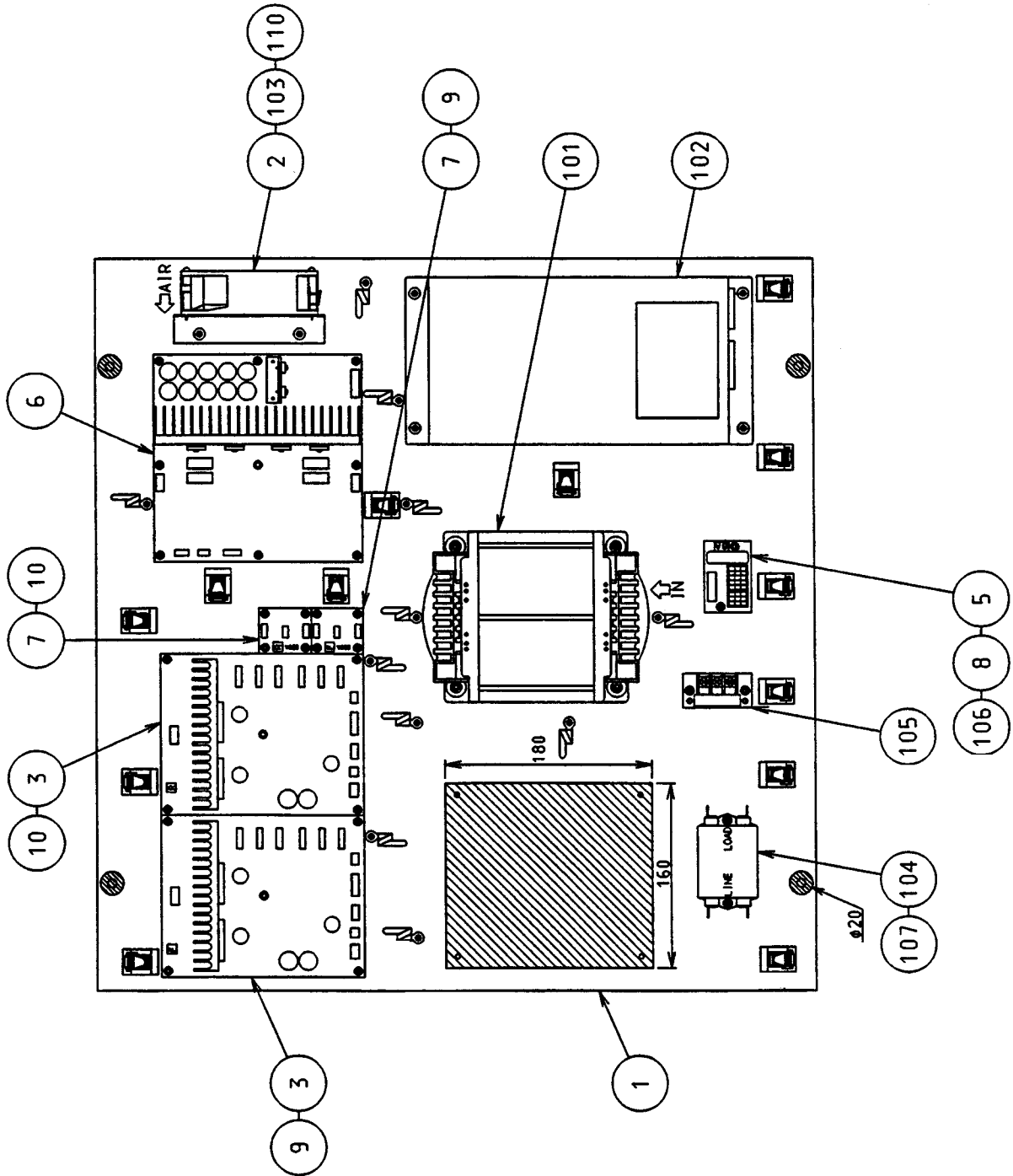
ITEM NO.	PART NO.	DESCRIPTION
1	SPG-4001	WOODEN BASE L
2	SRT-4050	ASSY SHIELD CASE
3	105-5241	SHIELD CASE BRKT

ASSY SHIELD CASE (SRT-4050)



ITEM NO.	PART NO.	DESCRIPTION
1	105-5245X	SHIELD CASE MODEL 3 NVS
2	105-5242X	SHIELD CASE LID MODEL 3
3	839-0932	FILTER BD MODEL 3 SPG
4	833-13371	GAME BD SRT DX
101	260-0064	FAN MOTOR DC 12V

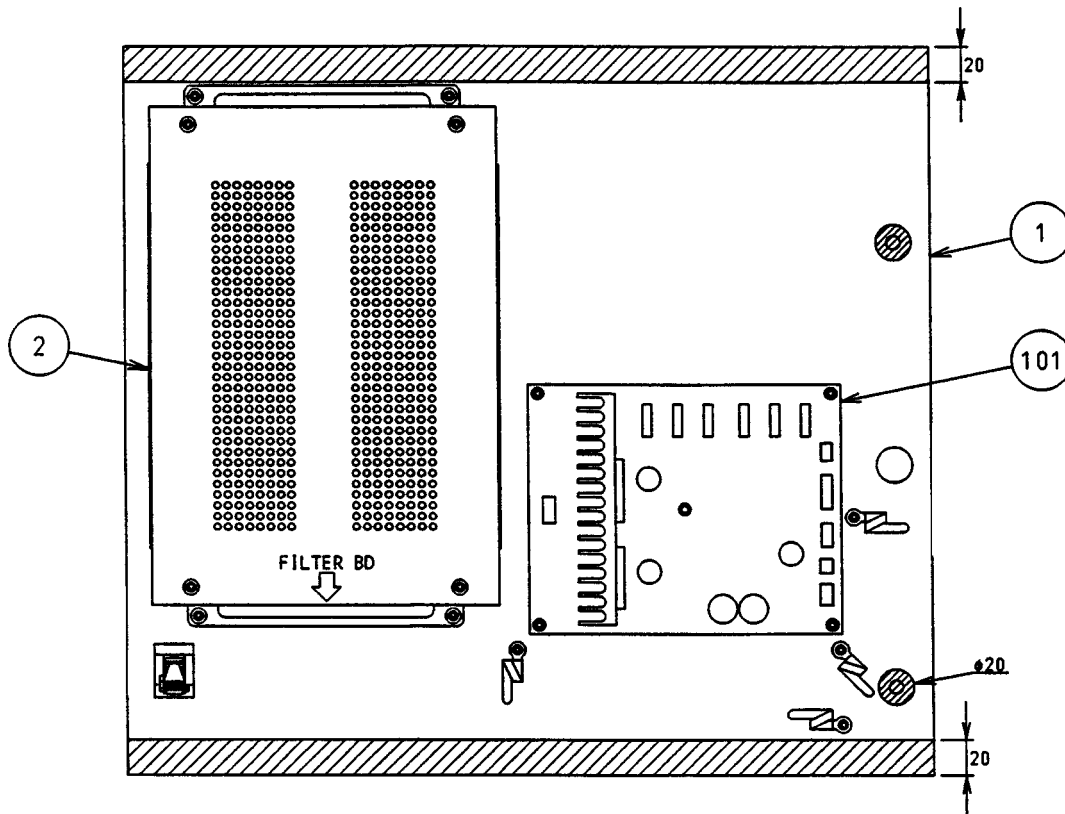
ASSY PWR SPLY (SRT-4100)



ASSY PWR SPLY (SRT-4100)

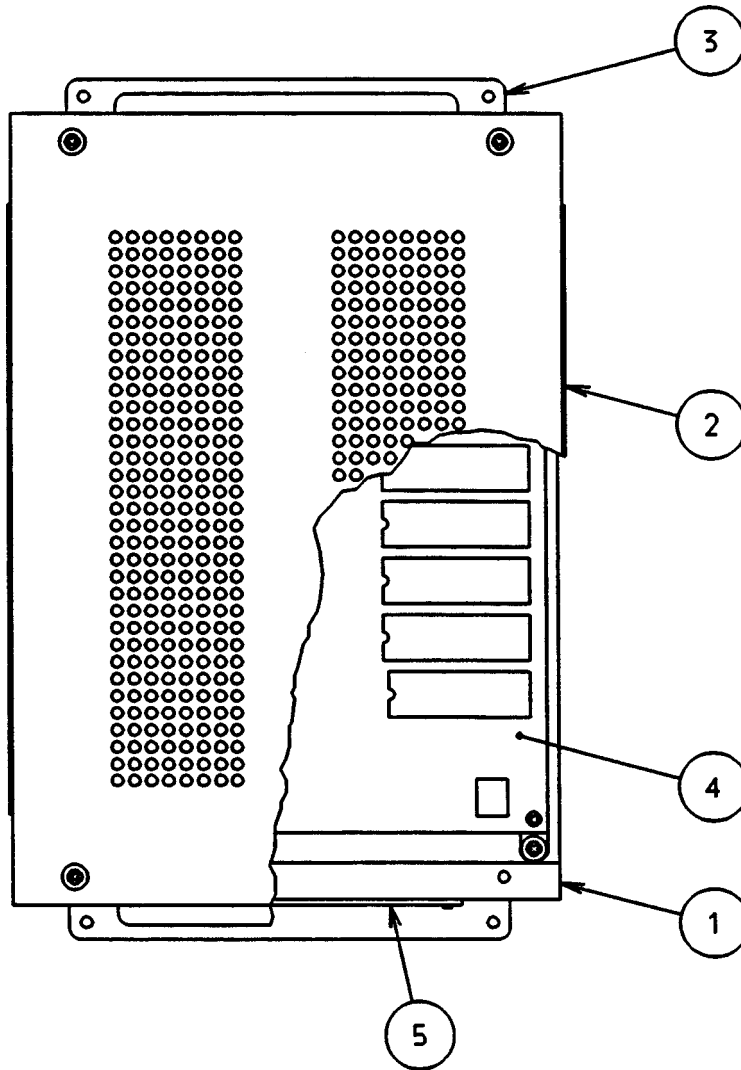
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-4101	WOODEN BSE PWR SPLY
2	BY-4102	FAN MOTOR BRACKET
3	838-11650-22	EQ. PWR AMP SPG TWIN A
5	838-11856-01-UL	CONNECT BD W/FUSE & COVER UL
6	838-13142	BASS AMP 50WX2
7	839-0542	AUDIO MIX BD
101	560-5387	XMFR 23V9.6Ax2 12.5V6x3 19V2A
102	400-5330-02-91	SW REGU FOR MODEL 3
103	260-0011-02	AXIAL FLOW FAN AC100V 50-60Hz
104	270-5115	NOISE FILTER 15A GT-215J
105	117-5225	TERMINAL 3P 20A
106	LOCAL PURCHASE	FUSE 7A SLO

ASSY MPEG (SRT-4200)



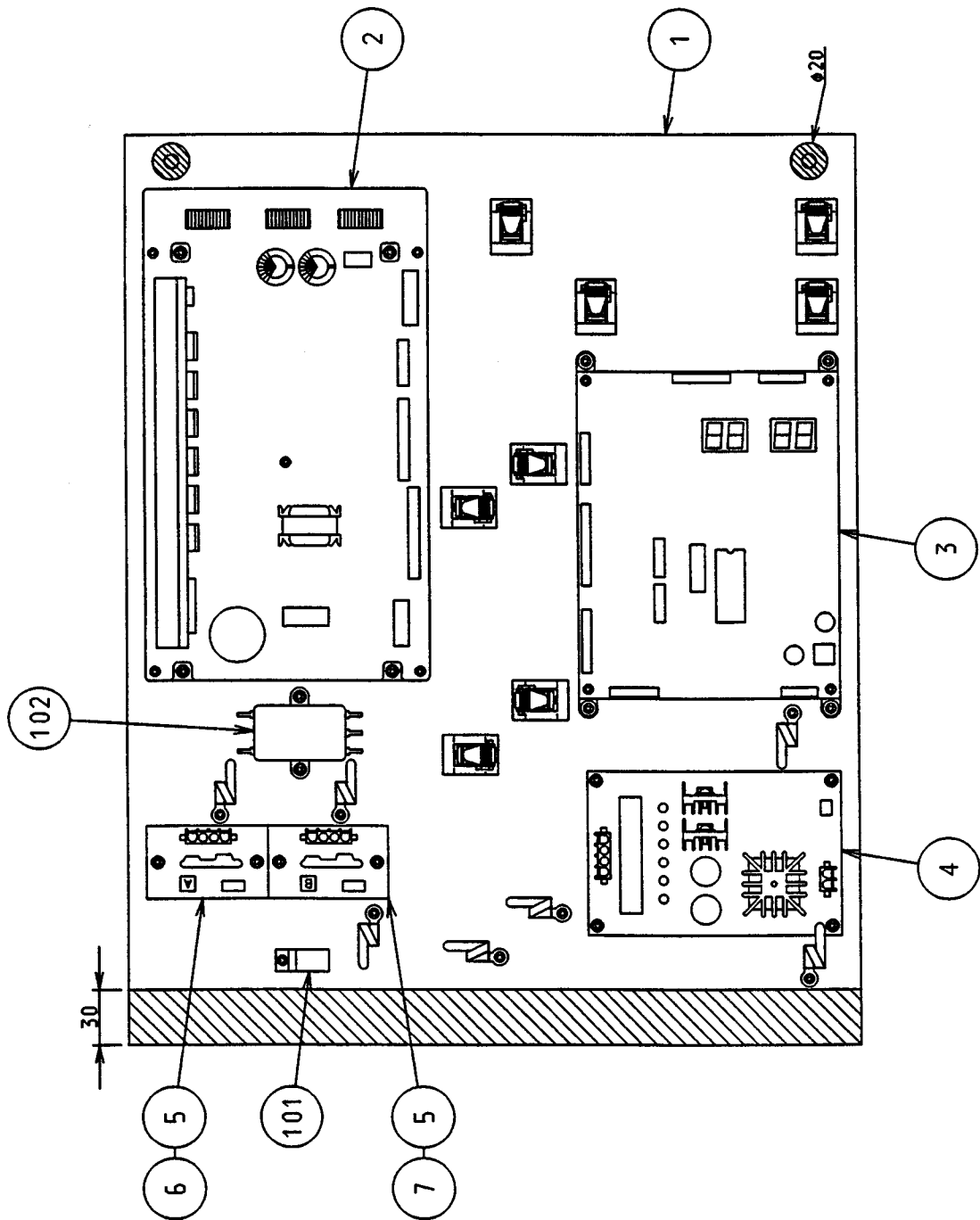
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-4201	WOODEN BASE MPEG
2	SRT-4250	ASSY SHIELD CASE MPEG
101	838-11650-42	EQ. PWR AMP SRT DX M

ASSY SHIELD CASE MPEG (SRT-4250)



ITEM NO.	PART NO.	DESCRIPTION
1	105-5315	SHIELD CASE MPEG
2	105-5316	SHIELD CASE LID MPEG
3	105-5317	SHIELD CASE BRKT MPEG
4	837-13375	SOUND BD SRT DX
5	839-1021	FLT BD DIGITAL SOUND

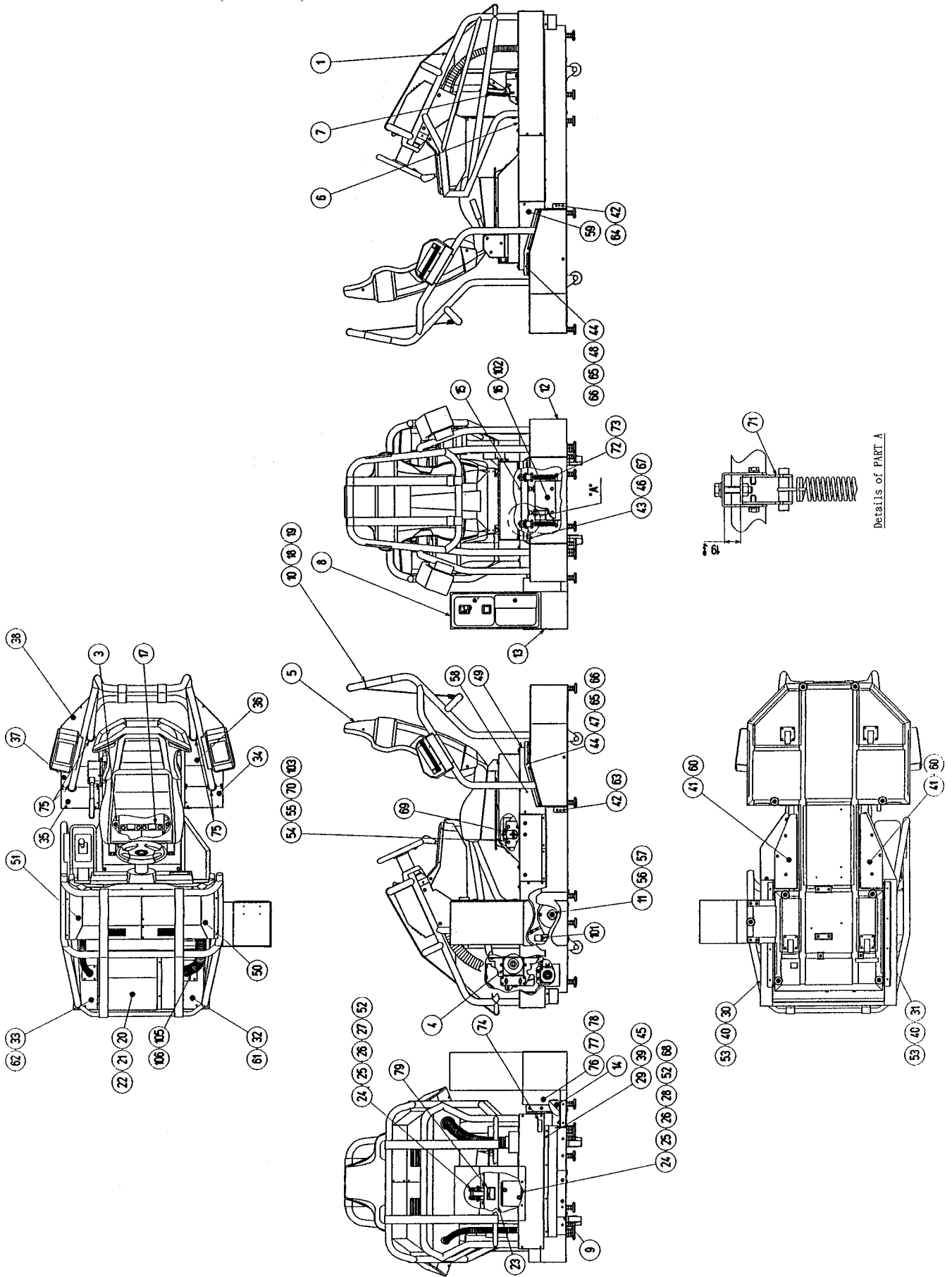
ASSY DRIVE BD (SRT-4300)



ASSY DRIVE BD (SRT-4300)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-4301	WOODEN BASE DRIVE
2	838-12912-91	SERVO MOTOR DRIVE BD
3	838-13366	DRIVE BD SRT
4	839-0451-01	LIGHT CONTROL BD TTR
5	839-1011-01	SSR 1EA BD BR
101	400-5454	RECTIFIER DC 45V
102	270-5020	NOISE FILTER AC250V 6A

ASSY REAR CABINET (SRT-3000)



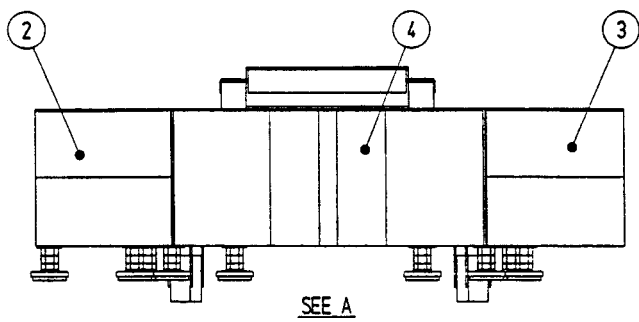
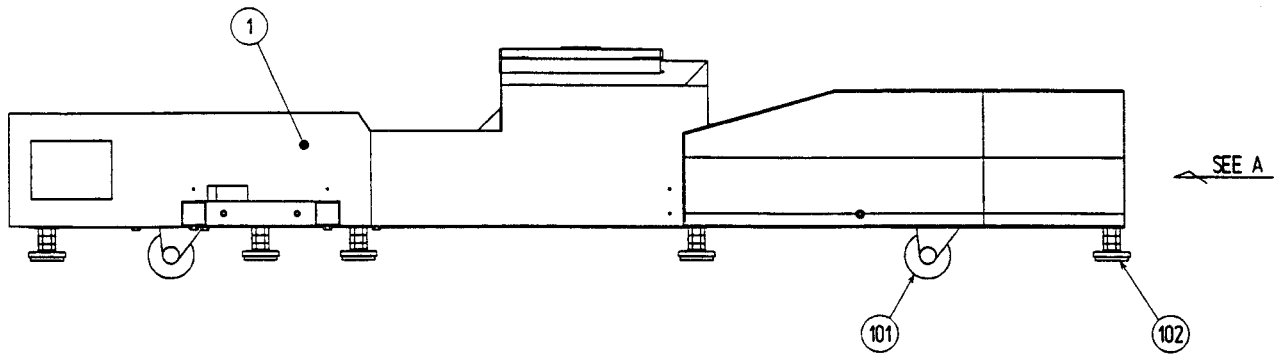
ASSY REAR CABINET (SRT-3000)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2000	ASSY ROLL BAR F
3	SRT-2300	ASSY COCKPIT BASE
4	SRT-2350	ASSY POWDER BRAKE
5	SRT-2400	ASSY SEAT
6	SRT-2460	ASSY FLOOR CENTER
7	SRT-2200	ASSY ACCEL & BRAKE
8	SRT-3100	ASSY COIN CHUTE TOWER
9	SRT-3200	ASSY PULLY BOX
10	SRT-3300	ASSY ROLL BAR R
11	SRT-3400	ASSY BRAKE
12	SRT-3001	REAR BASE
13	SRT-3002	TOWER BASE
14	SRT-3003	WIRE COVER TOWER
15	SRT-3004	STOPPER BAR
16	SRT-3005	DAMPER HOLDER
17	SRT-3006	ROSTA BRKT
18	SRT-3007	PIPE HOLDER F
19	SRT-3008	PIPE HOLDER R
20	SRT-3009	MECHA COVER
21	SRT-3010	COVER BRKT L
22	SRT-3011	COVER BRKT R
23	SRT-3012	PULLEY BOX UPPER
24	SRT-3013	PULLEY BRKT
25	SRT-3014	PULLEY SHAFT
26	SRT-3015	PULLEY COLLAR
27	SRT-3016	UPPER BRKT
28	SRT-3017X	FRONT HOLD BRKT
29	SRT-3018	FRONT COVER
30	SRT-3019	FRONT COVER SIDE L
31	SRT-3020	FRONT COVER SIDE R
32	SRT-3021	FRONT LID L
33	SRT-3022	FRONT LID R
34	SRT-3023	REAR LID FL
35	SRT-3024	REAR LID FR
36	SRT-3025	REAR LID ML
37	SRT-3026	REAR LID MR
38	SRT-3027	REAR LID C
39	SRT-3028	RUBBER FRONT
40	SRT-3029	RUBBER FRONT SIDE
41	SRT-3030	RUBBER MIDDLE
42	SRT-3031	RUBBER MIDDLE SIDE
43	SRT-3032	RUBBER REAR
44	SRT-3033	RUBBER REAR SIDE
45	SRT-3034	HOLDER FRONT
46	SRT-3035	HOLDER REAR
47	SRT-3036	HOLDER LEFT
48	SRT-3037	HOLDER RIGHT
49	SRT-3038	REAR COVER
50	SRT-3039	PANEL COVER L
51	SRT-3040	PANEL COVER R
52	SRT-3057	PULLEY S8M 20

ASSY REAR CABINET (SRT-3000)

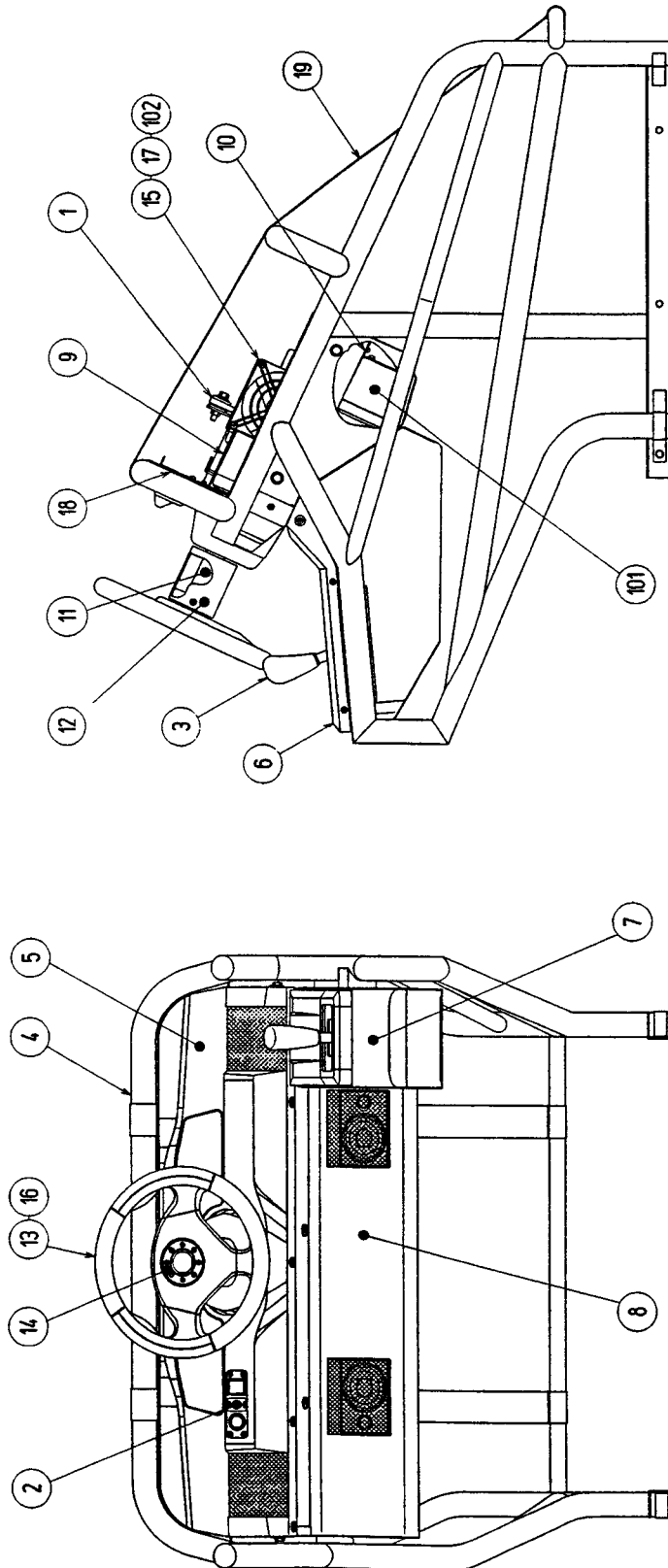
ITEM NO.	PART NO.	DESCRIPTION
53	SRT-3041	HOLDER FRONT SIDE
54	SRT-3042	VOL BASE
55	SRT-3043	VOL BRKT
56	SRT-3044	END SHAFT L
57	SRT-3045	END SHAFT COLLAR L
58	SRT-3046	REAR COVER SIDE L
59	SRT-3047	REAR COVER SIDE R
60	SRT-3048	HOLDER MIDDLE
61	SRT-3049	CONN PLATE L
62	SRT-3050	CONN PLATE R
63	SRT-3051	HOLDER LEFT S
64	SRT-3052	HOLDER RIGHT S
65	SRT-3053	HOLDER PLATE A
66	SRT-3054	HOLDER PLATE B
67	SRT-3055	HOLDER PLATE C
68	SRT-3056	FRONT HOLD SPACER
69	601-6450	GEAR 110
70	601-7944	GEAR 15
71	SRT-3058	SPRING HANG BRKT
72	SRT-3059	SPRING
73	SRT-3060	SPRING PIN
75	SRT-3061	CONCEAL PLATE
76	SRT-3062	TOWER SIDE COVER
77	SRT-3063	RUBBER TOWER SIDE
78	SRT-3064	HOLDER TOWER SIDE
79	440-WS0130-EG	STICKER W GEAR BOX ENG
101	601-5472	RUBBER STOPPER KI-40
102	601-8918	SHOCK ABSORBER RH
103	220-5484	VOL CONT B-5K OHM

REAR BASE (SRT-3001)



ITEM NO.	PART NO.	DESCRIPTION
1	SRT-3001-A	REAR BASE BLANK
2	SRT-3001-B	STICKER REAR SIDE L
3	SRT-3001-C	STICKER REAR SIDE R
101	999-0169	CASTER 2 1/2"
102	999-0167	LEG ADJUSTER

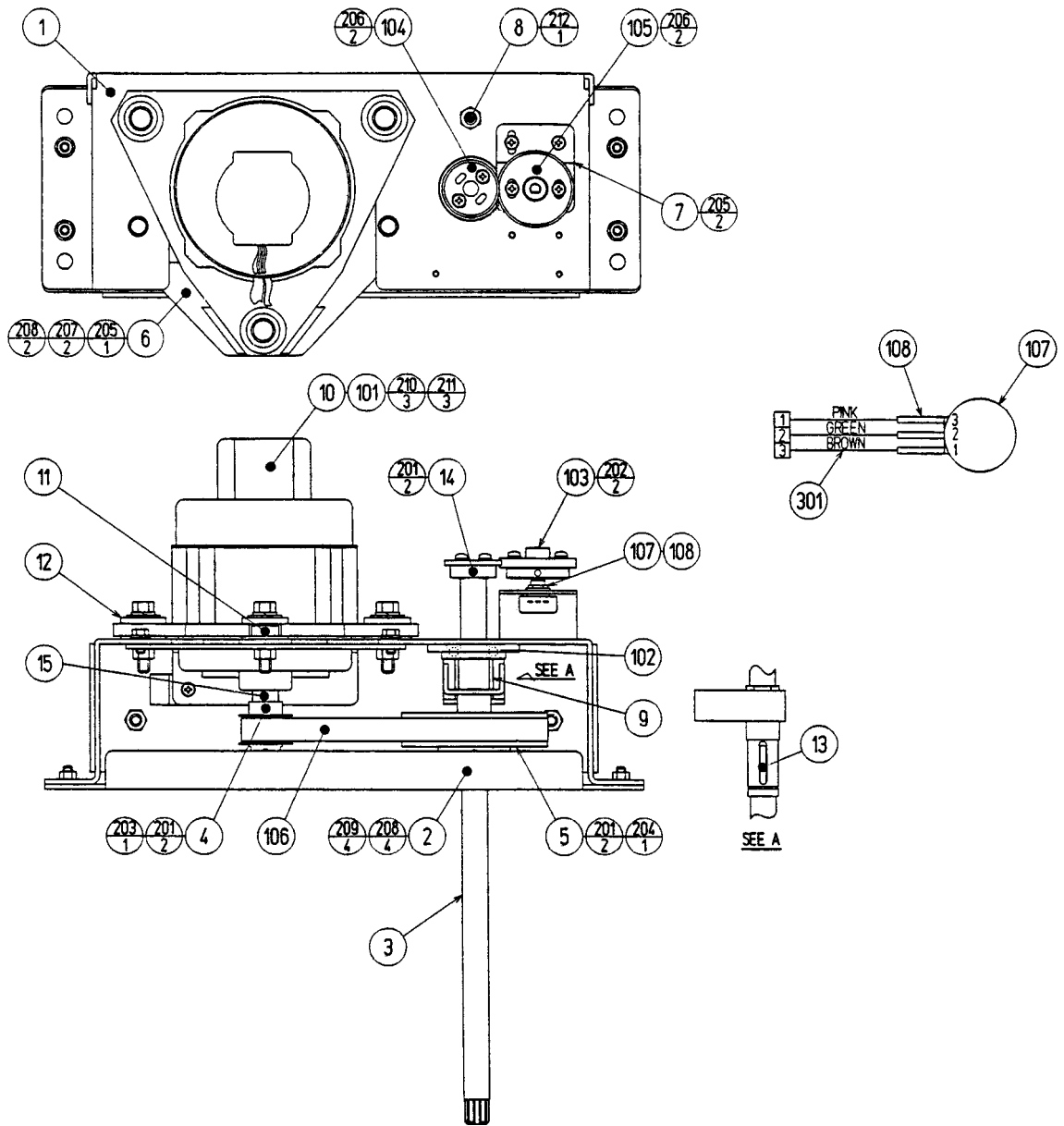
ASSY ROLL BAR F (SRT-2000)



ASSY ROLL BAR F (SRT-2000)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2100	ASSY HANDLE MECHA
2	SRT-2150	ASSY SW PLATE
3	SPG-2150	ASSY 4 SPEED SHIFTER
4	SRT-2001	ROLL BAR F
5	SRT-2002	CNT PNL COVER
6	SRT-2003	SHIFT COVER
7	SRT-2004	SHIFT BOX
8	SRT-2005	PANEL COVER LOWER
9	SRT-2006	SP BRKT UPPER
10	SRT-2007	SP BRKT LOWER
11	SRT-2008	STEERING COLLAR
12	SRT-2009	STEERING BOSS
13	SPG-2001	STEERING WHEEL
14	SPG-2002	STEERING EMBLEM
15	SPG-1203	FAN BRKT
16	SPG-2039	SPACER RING
17	601-8543	FAN GAURD
18	SRT-2010	BELT CLAMP
19	SRT-2011	BELT F
101	130-5185	SPEAKER MINI BOX 40OHM 40W
102	260-0011-02	AXIAL FLOW FAN AC100V 50-60Hz
103	280-0419	HARNESS LUG

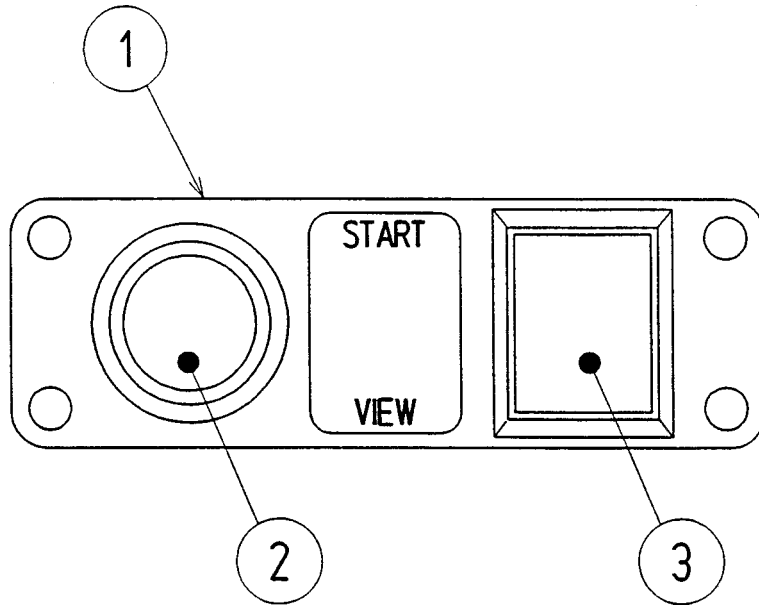
ASSY HANDLE MECHA (SRT-2100)



ASSY HANDLE MECHA (SRT-2100)

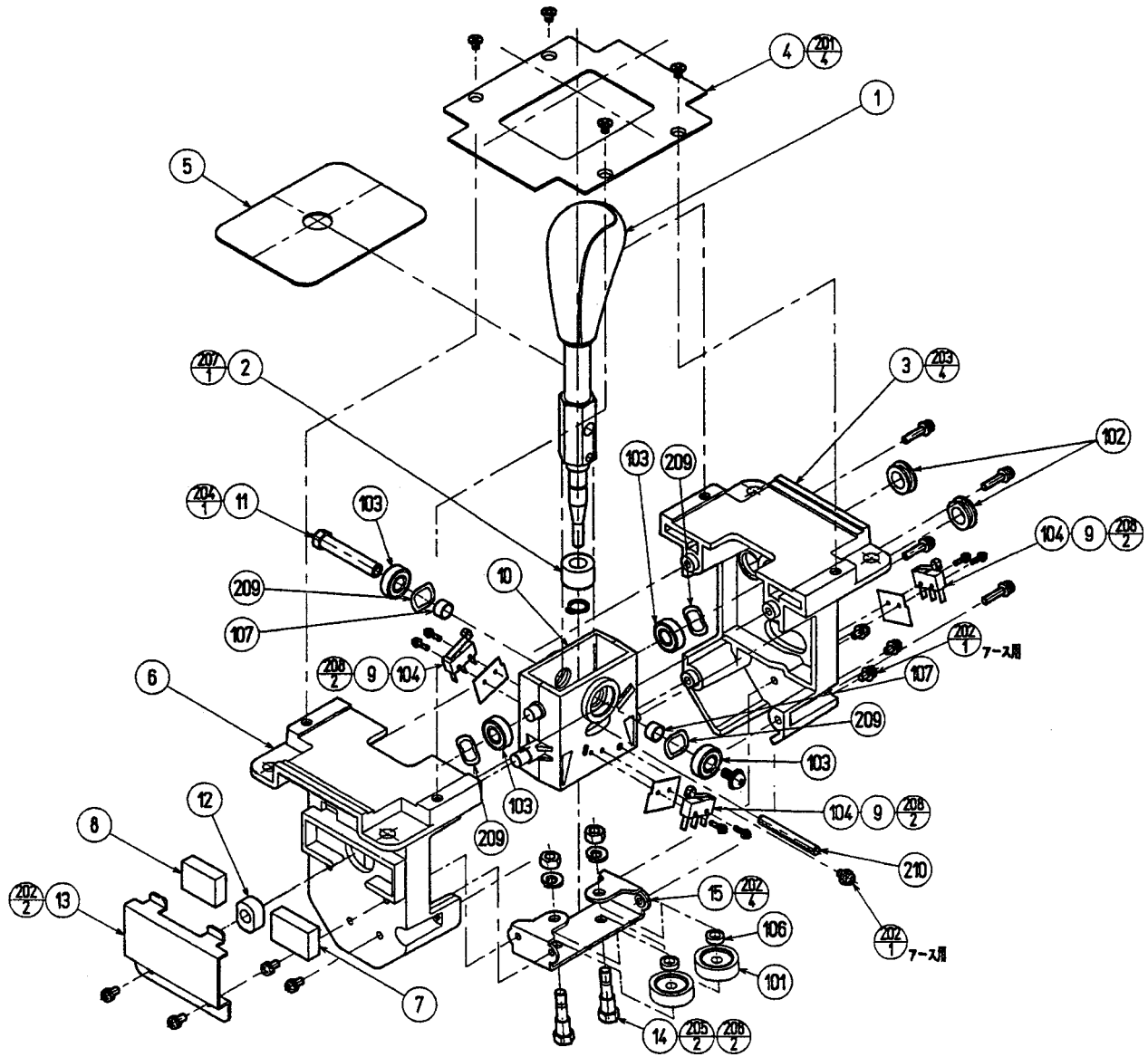
ITEM NO.	PART NO.	DESCRIPTION
1	SPG-2501	HANDLE BASE
2	SPG-2502	BASE LID
3	SPG-2503	HANDLE SHAFT
4	SPG-2504	PULLEY 20 S5M
5	SPG-2505	PULLEY 60 S5M
6	SPG-2506	MOTOR BRKT
7	SPG-2507	VR BRKT
8	SPG-2108	STOPPER BOLT
9	SPG-2109	STOPPER RUBBER
10	SPG-2453	KEY 4X4X40
11	ASK-3502	MOTOR SPACER
12	ASK-3503	MOTOR COLLAR
13	DYN-1270	STOPPER KEY
14	SLC-1130	ADJUST RING
15	SPG 2454	MOTOR SHAFT COLLAR
101	350-5448-01	SERVO MOTOR 500W NEW
102	100-5112	BEARING 17
103	601-8966	GEAR HOLDER
104	601-6172	GEAR 48
105	601-6959	GEAR 64
106	601-9173	TIMING BELT
107	220-5484	VOL CONT B-5K OHM
108	310-5029-F20	SUMITUBE F F 20MM
201	028-A00408-P	SET SCRHEX SKT CUP P M4X8
202	028-A00308-P	SET SCR HEX SKT CUP P M3X8
203	065-S012S0-Z	STP RING BLK OZ S12
204	065-S020S0-Z	STP RING BLK OZ S20
205	000-P00408-W	M SCR PH W/FS M4X8
206	000-P00412-W	M SCR PH W/FS M4X12
207	030-000612-S	HEX BLT W/S M6X12
208	060-F00600	FLT WSHR M6
209	050-U00600	U NUT M6
210	030-000840-S	HEX BLT W/S M8X40
211	068-852216	FLT WSHR 8.5-22X1.6
212	050-U00800	U NUT M8

ASSY SW PLATE (SRT-2150)



ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2151	SW PLATE
2	509-5838-Y	SW PB LW1L-15Y-TK1670
3	509-5495-05	PUSH BUTTON BLUE

ASSY 4 SPEED SHIFTER (SPG-2150)



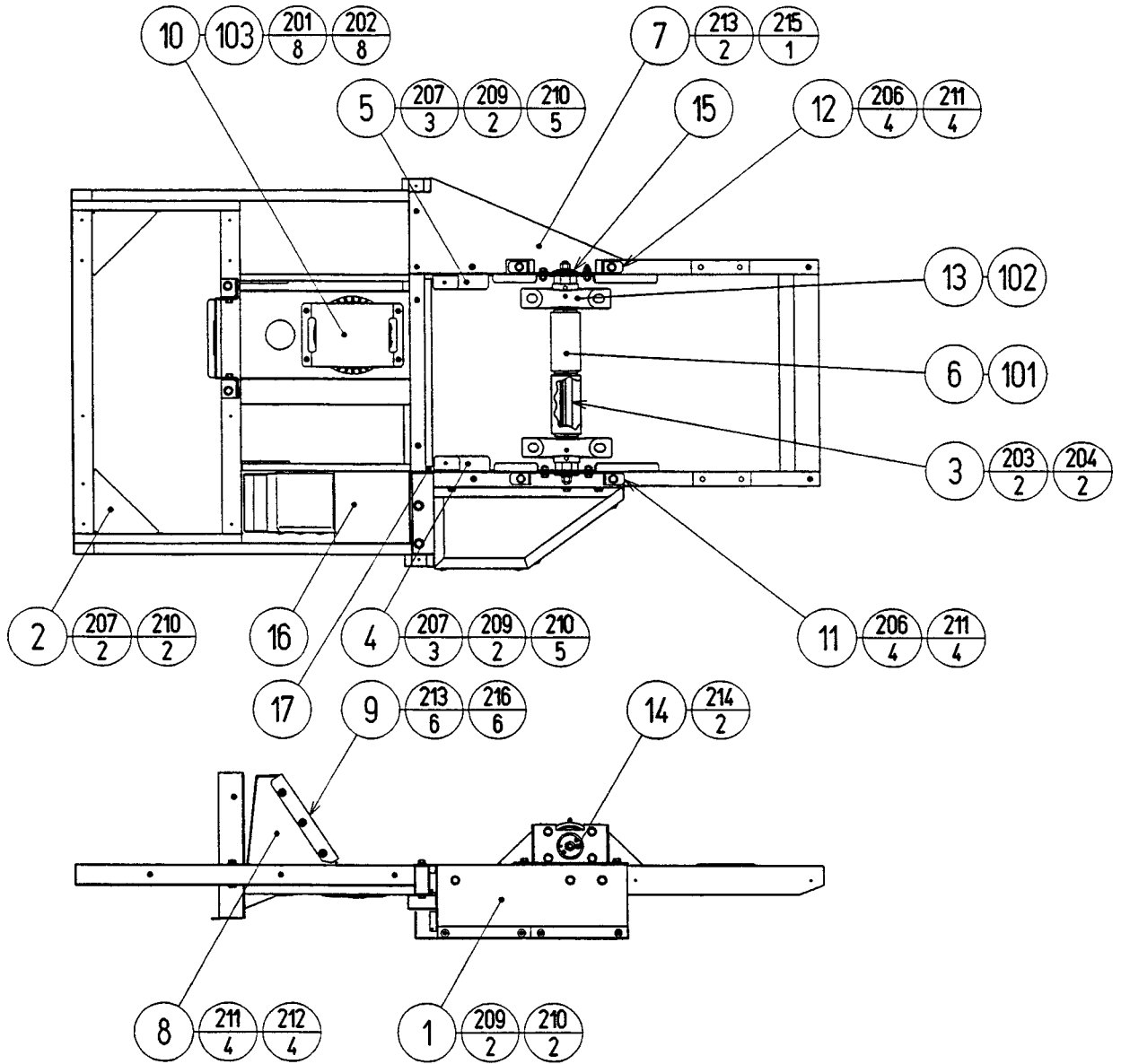
ASSY 4 SPEED SHIFTER (SPG-2150)

ITEM NO.	PART NO.	DESCRIPTION
1	SPG-2151	SHIFT KNOB
2	SPG-2152	STOPPER RUBBER
3	SPG-2153	FRONT BASE
4	SPG-2154	SLIDE COVER
5	SPG-2155	SLIDE PLATE
6	SPG-2156	REAR BASE
7	SPG-2157	RUBBER BLOCK 45
8	SPG-2158	RUBBER BLOCK 65
9	SPG-2159	INSULATOR SHEET
10	SPG-2160	SHAFT CASE
11	SPG-2161	SHAFT BOLT
12	SPG-2162	CENTERING BLOCK
13	SPG-2163	RUBBER CASE
14	SPG-2164	ROLLER BOLT
15	SPG-2165	ROLLER SUPPORT
101	100-5252	BEARING ROLLER 25
102	100-5193	GROMMET 11
103	100-5170	BEARING 8
104	509-5636	SW MICRO TYPE SS-5GL2T
106	280-5306	SPACER FAI 6X30
107	280-5307	SPACER FAI 8X55
201	000-F00406	M SCR FH M4X6
202	000-O00410-W	M SCR PH W/FS M4X10
203	000-P00420-W	M SCR PH W/FS M4X20
204	000-P00508-W	M SCR PH W/FS M5X8
205	050-H00600	HEX NUT M6
206	060-S00600	SPR WSHR M6
207	065-S010S0-Z	STP RING BLK OZ S10
208	FAS-00033	M SCR PH W/FS M2.3X12
209	FAS-650008	WAVE WSHR 12.7-18.1X2.5
210	FAS-450006	SPR PIN WAVE STN 5X45

ASSY ACCEL&BRAKE (SPG-2200)

ITEM NO.	PART NO.	DESCRIPTION
1	SPG-2201	BASE
2	SPG-2202	ACCEL PEDAL
3	SPG-2203	BRAKE PEDAL
4	SPG-2204	ACCEL SPRING
5	SPG-2205	BRAKE SPRING
6	SPG-2206	SHAFT
7	SPG-2207	ACCEL GEAR
8	SPG-2208	BRAKE GEAR
9	SPG-2209	NUETRAL STOPPER
10	SPG-2210	VR PLATE ACCEL
11	SPG-2211	VR PLATE BRAKE
12	SPG-2212	AMPL GEAR
13	SPG-2213	GEAR SHAFT
14	SPG-2214	STOPPER
15	SPG-2215	RUBBER CUSHION
16	SPG-2216	COVER
17	SPG-2217	VR COVER
19	SPG-2219	GEAR STAY
20	SPG-2220	WSHR
21	SPG-2221	NUETRAL STOPPER
101	100-5263	BEARING 12
102	220-5484	VOL CONT B-5K OHM
104	601-7944	GEAR 15
105	310-5029-F15	SUMI TUBE F F 15MM
106	280-0419	HARNES LUG
201	028-A00304-P	SET SCR HEX SKT CUP P M3X4
202	020-000520-OZ	HEX SKT H CAP SCR BLK M5X20
203	000-P00420	M SCR PH M4X20
204	000-P00508-W	M SCR PH W/FS M5X8
205	000-T00408-OC	M SCR TH CRM M4X20
206	FAS-450005	SPR PIN BLK OZ 6X10
207	000-P00405	M SCR PH M4X5
208	FAS-000001	M SCR TH CRM M3X6
209	050-H00500	HEX NUT M5
210	060-F00400	FLT WSHR M4

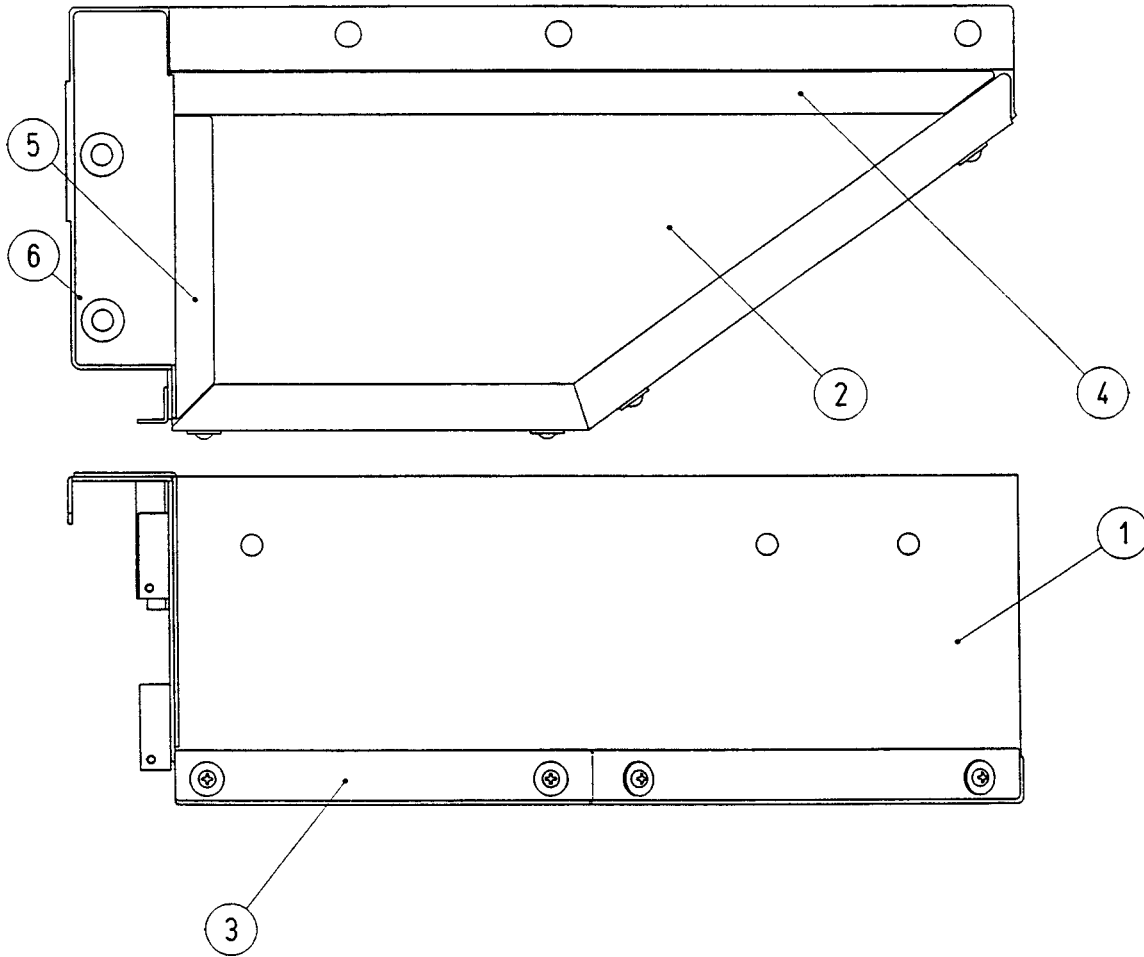
ASSY COCKPIT BASE (SRT-2300)



ASSY COCKPIT BASE (SRT-2300)

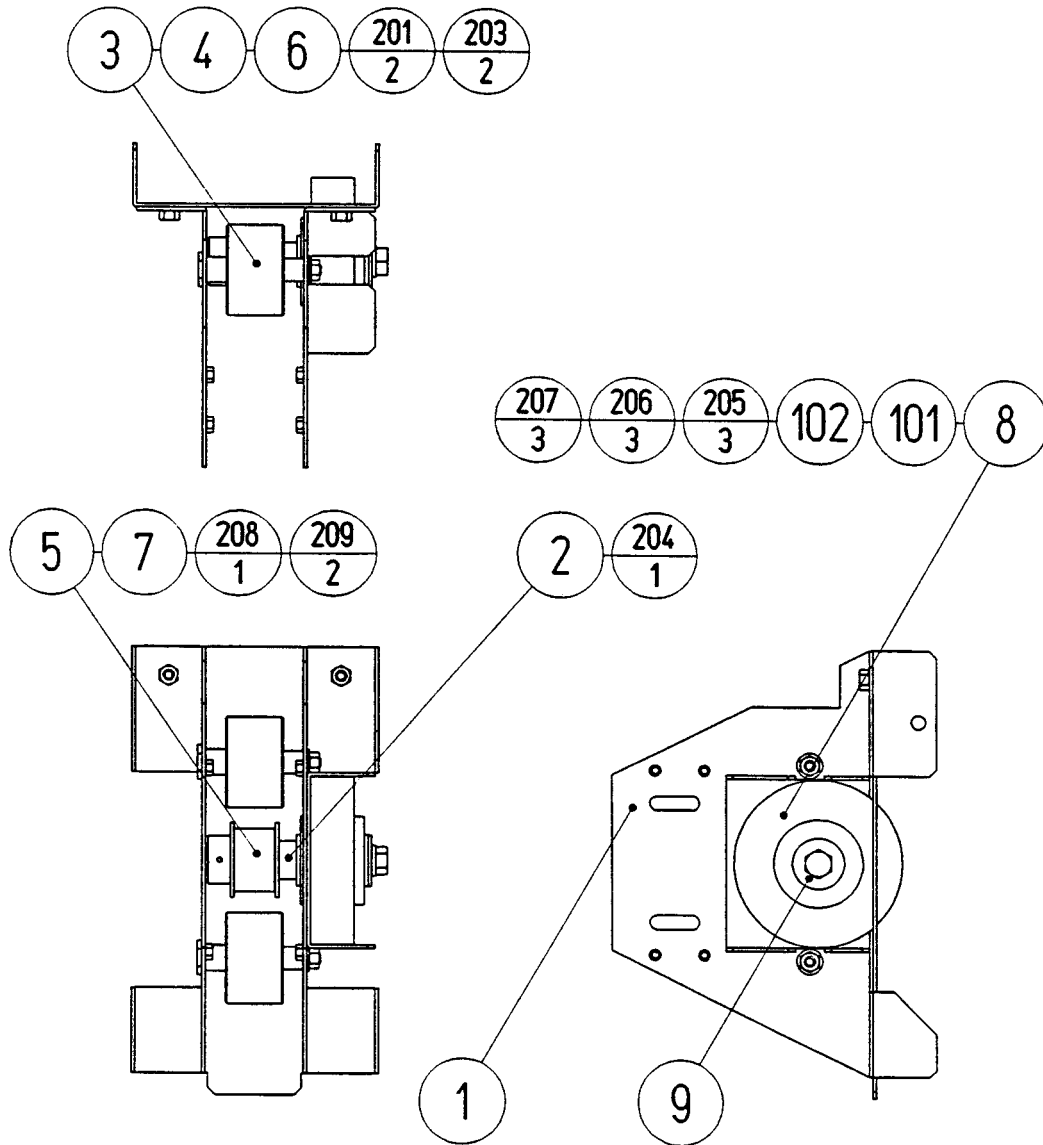
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2470	ASSY SIDE STEP
2	SRT-2301	COCKPIT BASE
3	SRT-2302	BANK SHAFT
4	SRT-2303	BANK SHAFT BRKT L
5	SRT-2304	BANK SHAFT BRKT R
6	SRT-2305	KEY 7X8X118
7	SRT-2306	SIDE STEP R
8	SRT-2307	FOOT REST
9	SRT-2308	FOOT REST COVER
10	SRT-2309	BASS BRKT
11	SRT-2310	BANK GUDE BRKT L
12	SRT-2311	BANK GUIDE BRKT R
13	SRT-2312	KEY 7X8X65
14	SRT-2313	GEAR SPACER
15	SRT-2359	FLT WSHR 12.5-36-2
16	SRT-2314	NON SLIP MAT S
17	SRT-2315	CUSHION
101	601-10035	RUBBER SPRING 38X120
102	100-5317	BEARING 40
103	130-5172	BASS SHAKER
201	050-U00400	U NUT M4
202	060-F00400	FLT WSHR M4
203	050-H01200	HEX NUT M12
204	060-S01200	SPR WSHR M12
206	030-000820-S	HEX BLT W/S M8X20
207	030-000850-SB	HEX BLT W/S BLK M8X50
209	030-000880-SB	HEX BLT W/S BLK M8X80
210	060-F00800-0B	FLT WSHR BLK M8
211	060-F00800	FLT WSHR M8
212	050-U00800	U NUT M8
213	000-T00408-0C	M SCR TH CRM M4X8
214	000-F00410	M SCR FH M4X10
215	000-P00408-W	M SCR PH W/FS M4X8
216	068-441616-0C	FLT WSHR CRM 4.4-16X1.6

ASSY SIDE STEP (SRT-2470)



ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2471	SIDE STEP
2	SRT-2472	STEP MAT
3	SRT-2473	CORNER SASH L
4	SRT-2474	CORNER PLATE A
5	SRT-2475	CORNER PLATE B
6	SRT-2476	NON SLIP MAT L

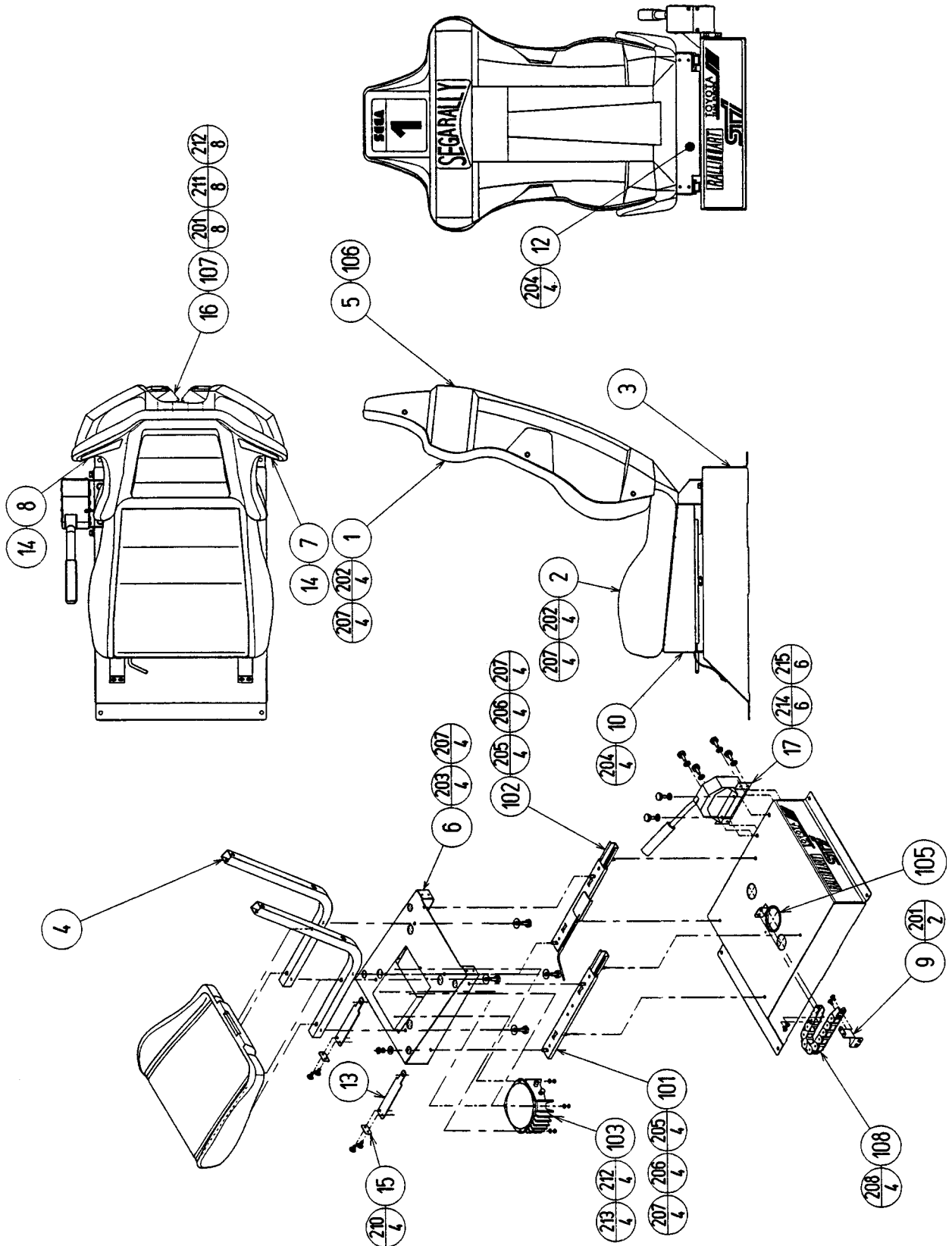
ASSY POWDER BRAKE (SRT-2350)



ASSY POWDER BRAKE (SRT-2350)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2351	FRONT MECHA BASE
2	SRT-2352	POWDER BRAKE SHAFT
3	SRT-2353	IDLER SHAFT
4	SRT-2354	IDLER COLLAR
5	SRT-2355	PULLEY S8M 18
6	SRT-2356	IDLER
7	SRT-2357	KEY 7X7X40
8	SRT-2360	KEY 7X8X36
9	SRT-2359	FLT WSHR 12.5-36-2
101	601-10036	POWDER BRAKE 12NM
201	050-U00800	U NUT M8
203	060-F00800	FLT WSHR M8
204	FAS-300021	HEX BLT W/FS BLK M12X30
205	020-000412-0Z	HEX SKT H CAP SCR BLK OZ M4X12
206	060-S00400	SPR WSHR M4
207	060-F00400	FLT WSHR M4
208	065-S022S0-Z	STP RING BLK OZ S22
209	028-A00408-P	SET SCR HEX SKT CUP P M4X8

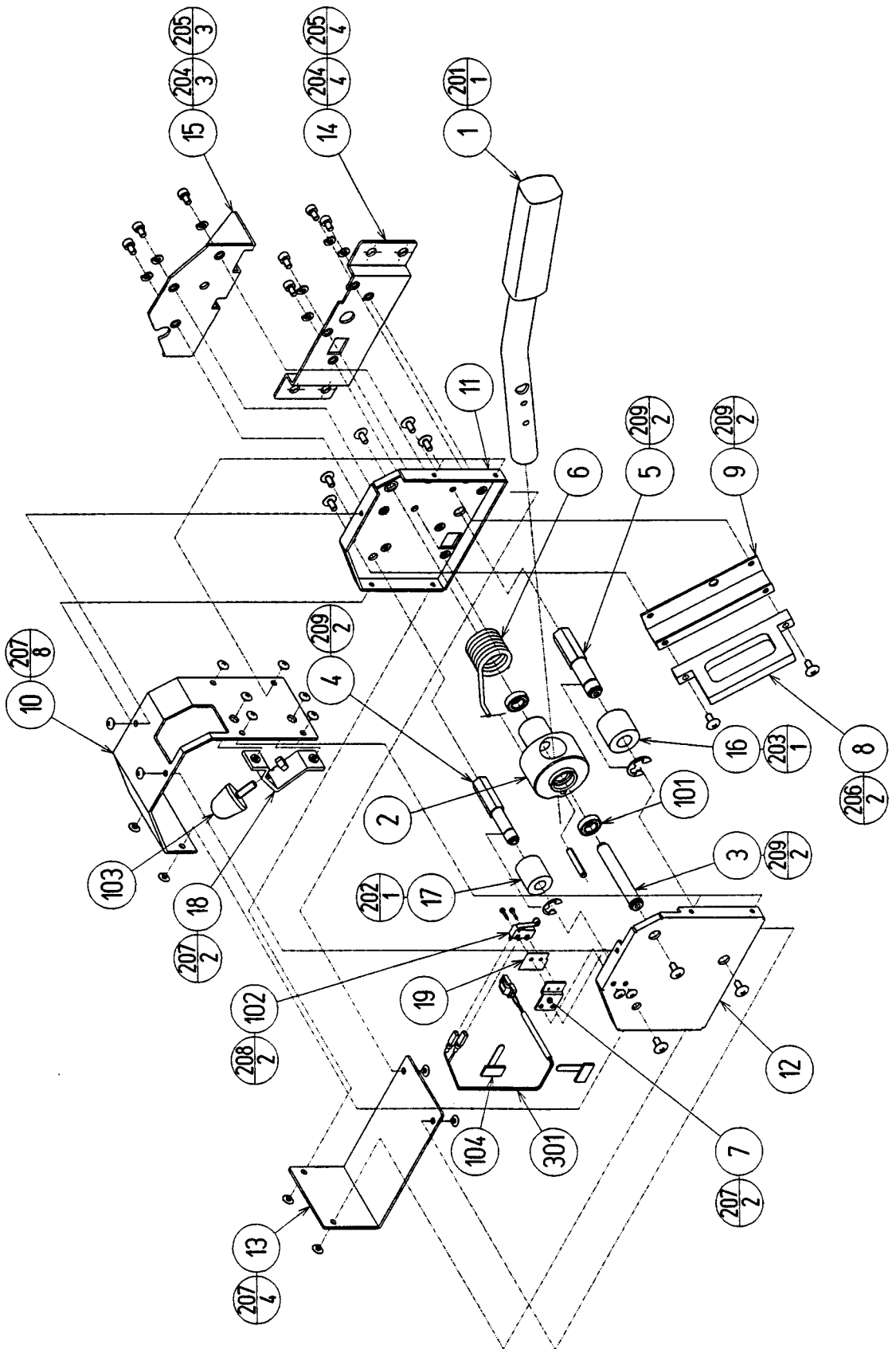
ASSY SEAT (SRT-2400)



ASSY SEAT (SRT-2400)

ITEM NO.	PART NO.	DESCRIPTION
1	SPG-2401	UPPER SEAT
2	SPG-2402	LOWER SEAT
3	SRT-2401	SEAT BASE
4	SRT-2402	SEAT FRAME
5	SRT-2403	SEAT REAR COVER
6	SRT-2404	INCLINED SEAT TRAY
7	STC-1608	SPEAKER NET L
8	STC-1609	SPEAKER NET R
9	SRT-2405	CABLE BEAR BRKT
10	SRT-2406	FRONT TRAY COVER A
12	SRT-2407	REAR TRAY COVER
13	SRT-2408	PROTECT RUBBER
14	SRT-2409	SHOULDER PAD
15	SPG-2411	RUBBER PLATE
16	STC-1607	SP MOUNT BRKT
17	SRT-2200	ASSY HAND BRAKE
101	601-9059	SEAT RAIL L
102	601-9060	SEAT RAIL R
103	130-5172	BASS SHAKER
105	601-6563-225	BUSH 2.4T
106	280-5297	SCRIVET 8 1K31
107	130-5186	DUMMY SPEAKER
108	601-6981-009	CABLE BEAR L=009
201	000-P00410-W	M SCR PH W/FS M4X10
202	030-000850-S	HEX BLT W/S M8X50
203	030-000816-S	HEX BLT W/S M8X16
204	000-T00408-0B	M SCR TH BLK M4X8
205	050-H00800	HEX NUT M8
206	060-S00800	SPR WSHR M8
207	068-852216	FLT WSHR 8.5-22X1.6
208	000-T00616-0B	M SCR TH BLK M6X16
209	010-P00408-F	S-TITE SCR PH W/F M4X8
210	000-T00516-0B	M SCR TH BLK M5X16
211	012-P00412	TAP SCR #2 PH 4X12
212	060-F00400	FLT WSHR M4
213	050-U00400	U NUT M4
214	030-000828-SB	HEX BLT W/S BLK M8X20
215	060-F00800-0B	FLT WSHR BLK M8

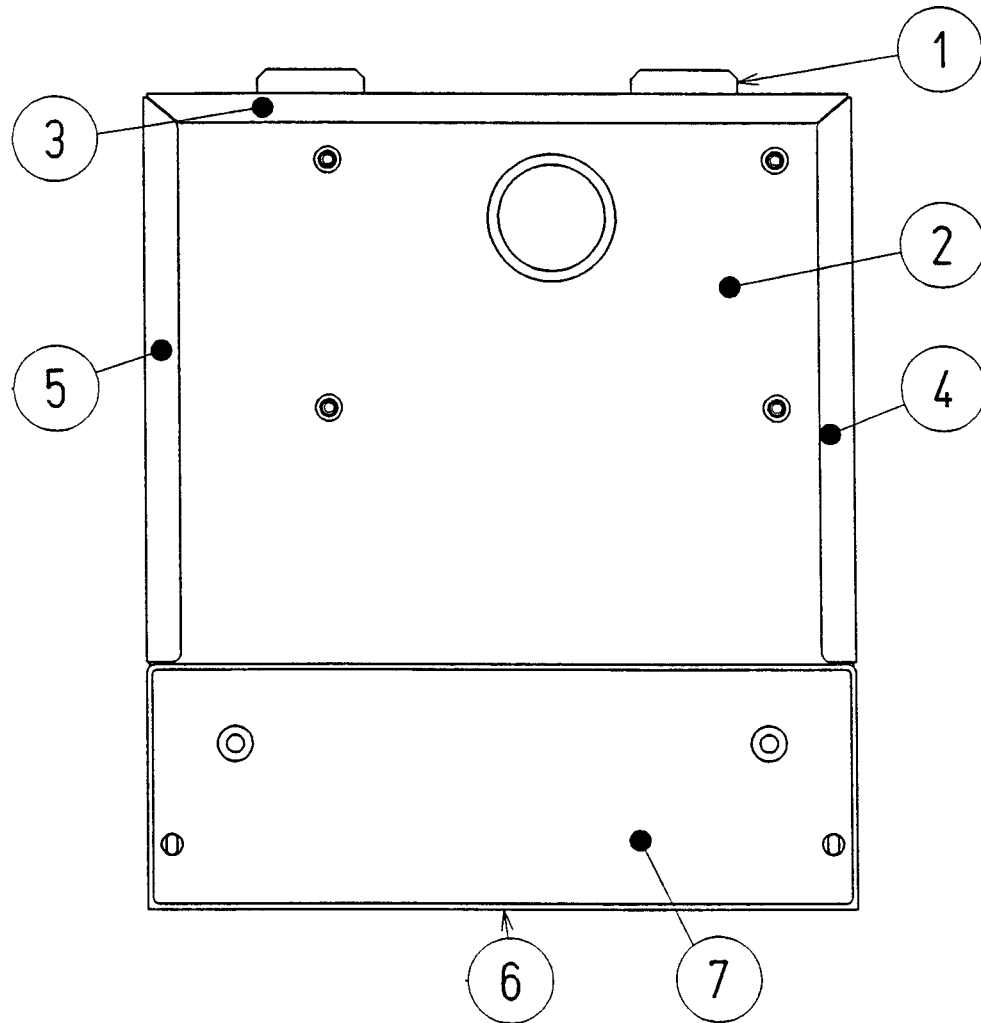
ASSY HAND BRAKE (SRT-2200)



ASSY HAND BRAKE (SRT-2200)

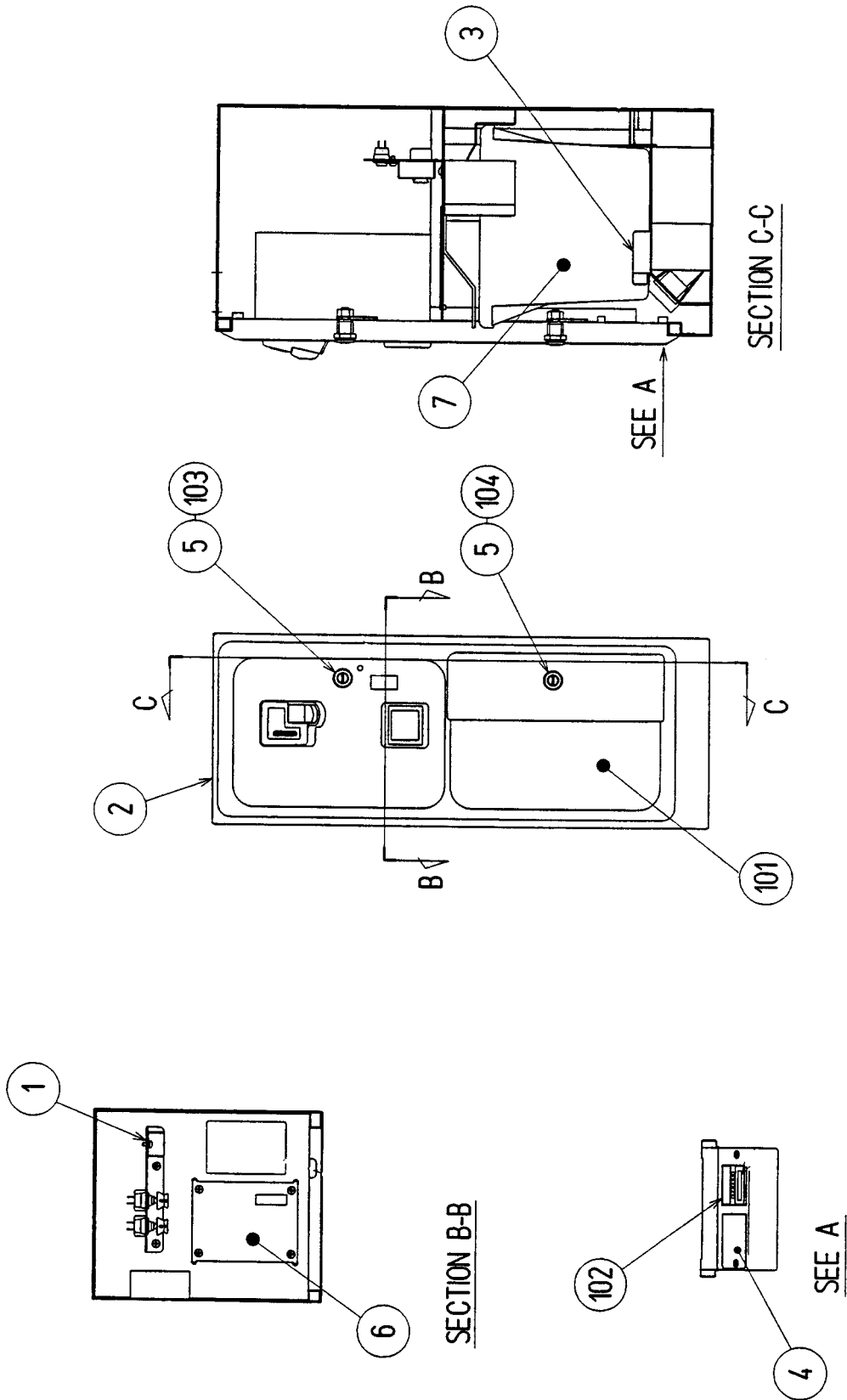
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2201	PIPE SHAFT
2	SRT-2202	PIPE HOLDER
3	SRT-2203	HOLDER SHAFT
4	SRT-2204	STOPPER SHAFT N
5	SRT-2205	STOPPER SHAFT
6	SRT-2206	SPRING
7	SRT-2207	SENSOR STAY
8	SRT-2208	PIPE GUIDE
9	SRT-2209	GUIDE BRKT
10	SRT-2210	FRONT COVER
11	SRT-2211	SIDE COVER A
12	SRT-2212	SIDE COVER B
13	SRT-2213	UNDER COVER
14	SRT-2214	MECHA BRKT
15	SRT-2215	STAY
16	SRT-2216	STOPPER RUBBER
17	SRT-2217	STOPPER RUBBER N
18	SRT-2218	DAMPER STAY
19	SRT-2219	INSULATOR SHEET
101	100-5319	BEARING 10
102	509-5636	SW MICRO TYPE SS-5GL2T
103	601-5564	STOPPER
104	280-5029-F15	CORD CLAMP SR10
201	FAS-450012	SPR PIN BLK OZ 5X30
202	065-E00800	E RING 8MM
203	065-E01000	E RING 10MM
204	020-000508-OZ	HEX SKT H CAP SCR BLK M5X8
205	060-S00500-OB	SPR WSHR BLK M5
206	000-P00516-S	M SCR PH W/S M5X16
207	FAS-000049	M SCR TH BLK M4X5
208	FAS-000050	M SCR PH W/FS M2.3X10
209	FAS-000051	M SCR TH BLK M5X10

ASSY FLOOR CENTER (SRT-2460)



ITEM NO.	PART NO.	DESCRIPTION
1	SRT-2461	FLOOR CENTER
2	SRT-2462	FLOOR MAT
3	SRT-2463	CORNER SASH A
4	SRT-2464	CORNER SASH B
5	SRT-2465	CORNER SASH C
6	SRT-2466	CORNER SASH D
7	SRT-2467	NONSLIP MAT C

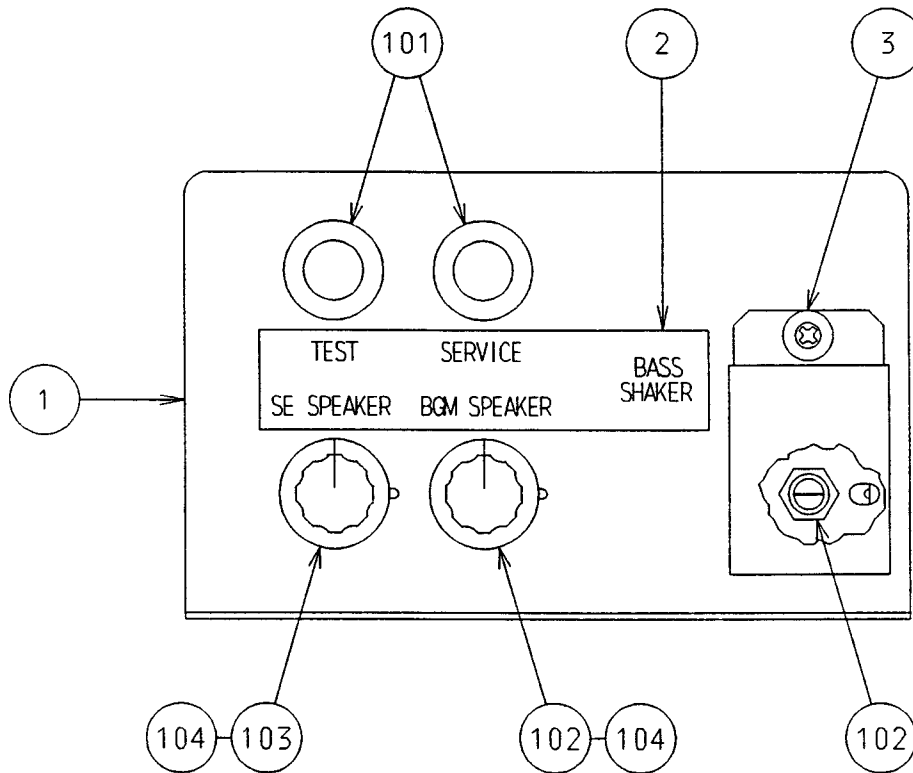
ASSY COINCHUTE TOWER (SRT-3100)



ASSY COINCHUTE TOWER (SRT-3100)

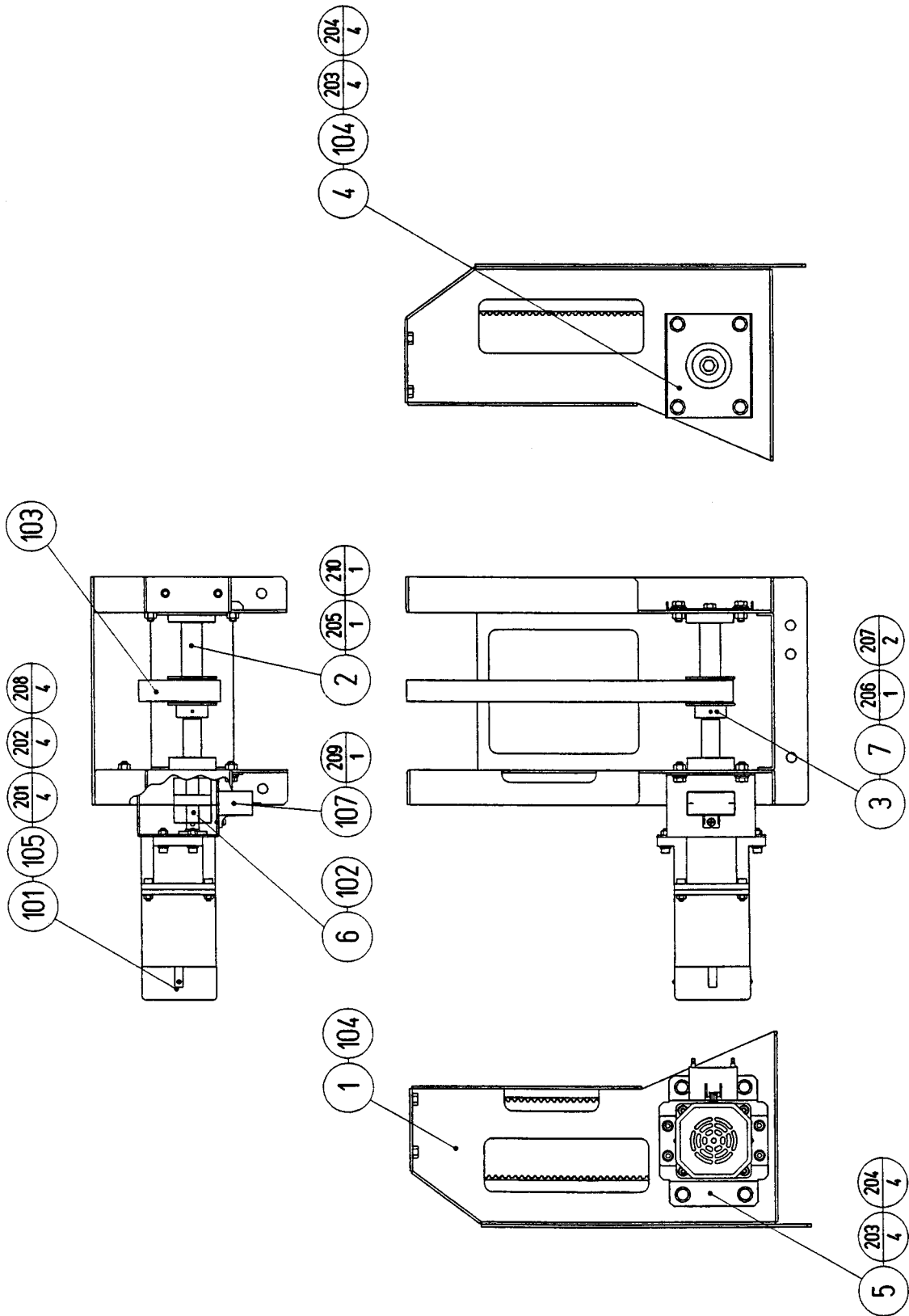
ITEM NO.	PART NO.	DESCRIPTION
1	SRT-3150	SW UNIT
2	HLD-3501	COIN CHUTE TOWER
3	INY-1162	METER BRKT
4	INY-1163	METER HOLE LID
5	DP-1167	TNG LKG
6	105-5171	CHUTE PLATE SINGLE
7	BOX-CASH	CASH BOX
101	220-5482-92-~	ASSY C.C. 2DR
102	220-5412	MAG CNTR W/CONN
103	220-5575	CAM LOCK MASTER W/O KEY
104	220-5574	CAM LOCK W/KEYS

SW UNIT (SRT-3150)



ITEM NO.	PART NO.	DESCRIPTION
1	SRT-3151	SW BRKT
3	SRT-3152	VR COVER
101	509-5028	SW PB 1M
102	220-5179	VOL CONT B-5K OHM
103	220-5296	VOL CONT 5K OHMX2+/-10% RV24G
104	601-0042	KNOB 22M

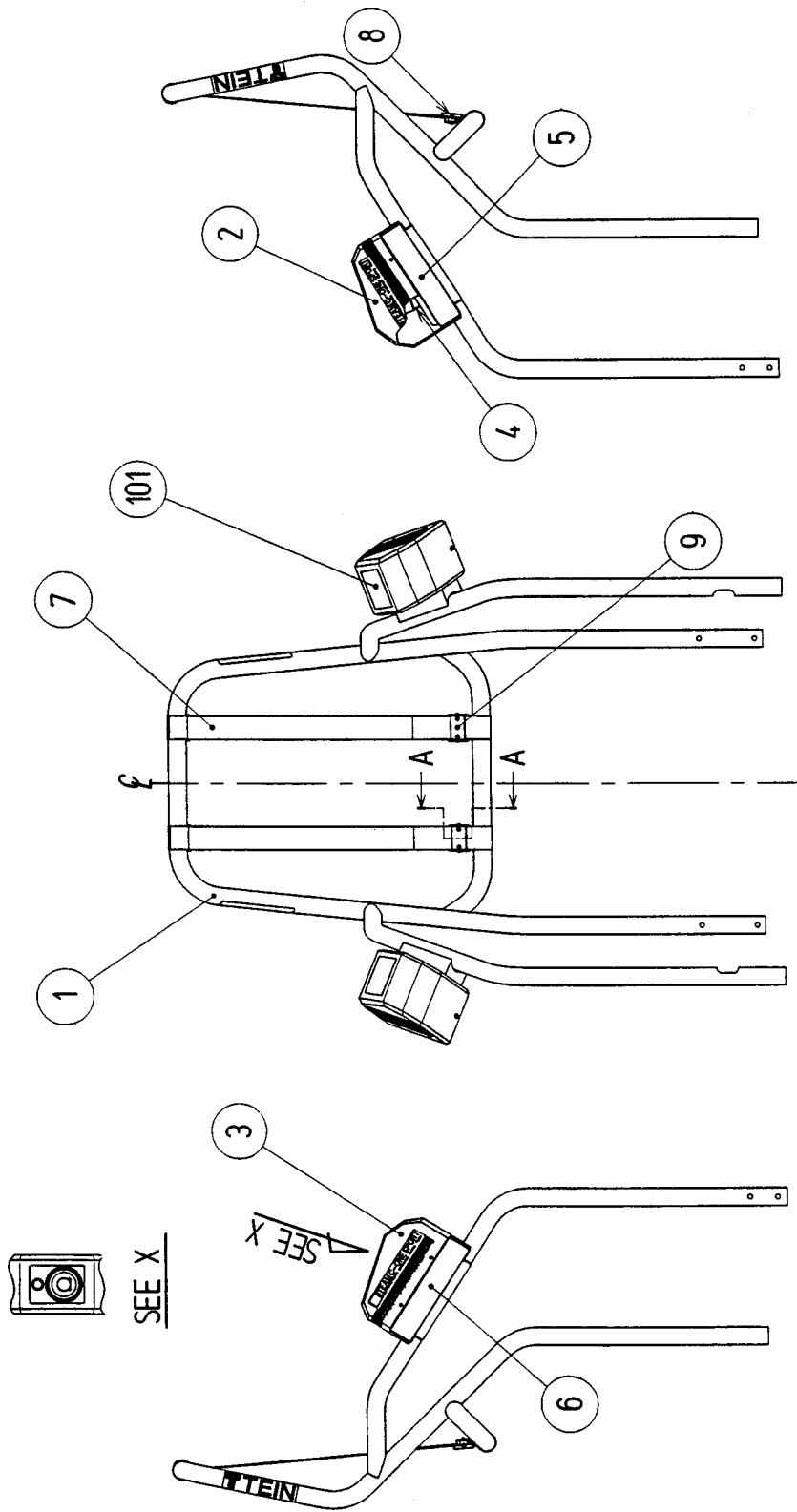
ASSY PULLEY BOX (SRT-3200)



ASSY PULLEY BOX (SRT-3200)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-3201	PULLEY BOX LOWER
2	SRT-3202	MAIN SHAFT
3	SRT-3203	DRIVE PULLEY S8M
4	SRT-3204	MAIN SHAFT HOLDER
5	SRT-3205	MOTOR BRKT
6	SRT-3206	KEY 5X5X17
7	SRT-2357	KEY 7X7X40
101	350-5534-01	MOTOR AC100V 90W 1/25
102	111-1122	COUPLING AL-075
103	601-10039	TIMING BELT 250 S8M 1056
104	100-5316	BEARING 20
105	209-0032	CONN CLOSED END
201	029-0129	HEX SKT H CAP SCR BLK M6X25
202	060-S00600	SPR WSHR M6
203	030-000820-S	HEX BLT W/S M8X20
204	060-F00800	FLT WSHR M8
205	068-852216	FLT WSHR 8.5-22X1.6
206	065-S022S0-Z	STP RING BLK OZ S22
207	028-A00408-P	SET SCR HEX SKT CUP P M4X8
208	060-F00600	FLT WSHR M6
209	000-P00410-W	M SCR PH W/FS M4X16
210	030-000816-S	HEX BLT W/S M8X16

ASSY ROLL BAR R (SRT-3300)

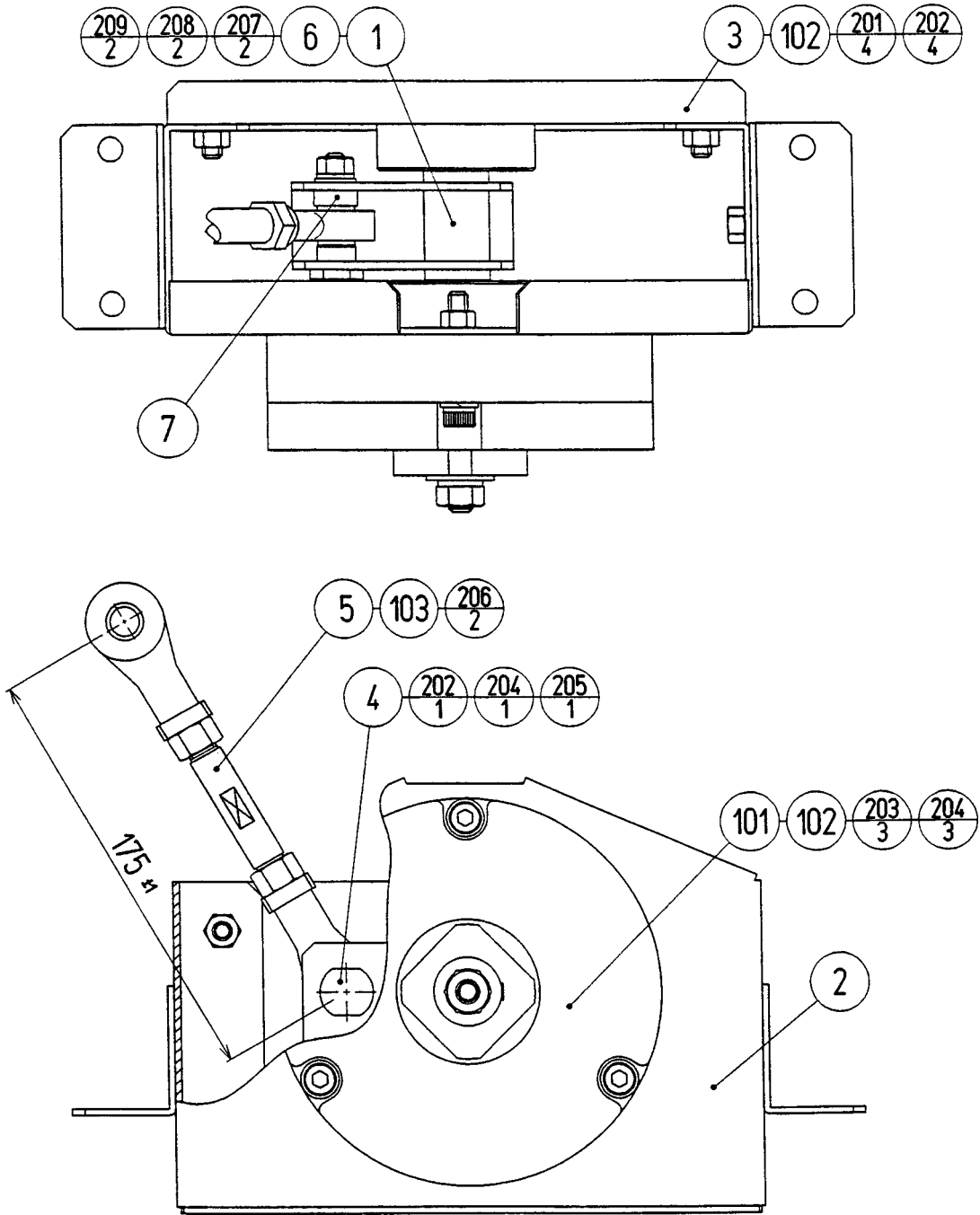


SECTION A-A

ASSY ROLL BAR R (SRT-3300)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-3301	ROLL BAR R
2	SRT-3302	SPEAKER COVER L
3	SRT-3303	SPEAKER COVER R
4	SRT-3304	REAR SP BRKT
5	SRT-3305	REAR SP SUPPORT L
6	SRT-3306	REAR SP SUPPORT R
7	SRT-3307	BELT R
8	SRT-3308	BELT HOLDER A
9	SRT-3309	BELT HOLDER B
101	130-5185	SPEAKER MINI BOX 4OHM 40W

ASSY BRAKE (SRT-3400)



ASSY BRAKE (SRT-3400)

ITEM NO.	PART NO.	DESCRIPTION
1	SRT-3401	BRAKE SHAFT
2	SRT-3402	BRAKE BRKT A
3	SRT-3403	BRAKE BRKT B
4	SRT-3404	END SHAFT
5	SRT-3405	ROD M12
6	SPG-2357	KEY 7X7X32
7	SRT-3045	END SHAFT COLLAR L
101	601-10005	BRAKE BXH-16A
102	100-5266	BEARING FAI25
103	100-5307	RODEND RBH12
201	030-000820-S	HEX BLT W/S M8X20
202	060-F00800	FLT WSHR M8
203	FAS-200014	HEX SKT H CAP SCR BLK OZ M8X45
204	060-S00800	SPR WSHR M8
205	050-U00800	U NUT M8
206	050-H01200	HEX NUT M12
207	050-H01000	HEX NUT M10
208	060-S01000	SPR WSHR M10
209	068-A52820	FLT WSHR 10.5-28X2



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