

1st PRINTING DEC 98

SEGA



DLX VERSION
OWNER'S MANUAL



SEGA ENTERPRISES, INC. USA

MANUAL NO. 4201-6424-01



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.

VISIT OUR WEBSITE!

Netscape: SEU SERVICE HOMEPAGE

Go To: <http://www.seuservice.com/SEGASERVICE/mainpage.html> What's Related

SEGA SERVICE

[\[What's new\]](#) [\[Manuals\]](#) [\[Bulletins\]](#) [\[Part Numbers\]](#) [\[Game Monitors\]](#)
[\[Board Systems\]](#) [\[Mailing List\]](#) [\[SEGA Distributors\]](#) [\[Service Staff\]](#) [\[Darl's Office\]](#) [\[Samples\]](#)



WHAT'S NEW
MANUALS
BULLETINS
PART NUMBERS
GAME MONITORS
BOARD SYSTEMS
MAILING LIST
SEGA DISTRIBUTORS
SERVICE STAFF
DARL'S OFFICE
HOME

[\[Y2K COMPLIANCE\]](#)

Sega Enterprises Inc.,USA
Service Department
Phone (650)-632-7580
Fax (650)-632-7594

Best Viewed with 

Coin-Op Links:
[Star Tech Journal](#)
[Amusement Industry Mega Site](#)

*If you have any questions about this Home Page please
E-Mail to:*
darl.davidson@seu.sega.com
OR
han.rockhill@seu.sega.com

A total of **13910** people have accessed this page.

THIS WEB SITE POWERED BY
WebSTAR 3  



SEGA ENTERPRISES, INC. (USA)

45133 Industrial Drive
Fremont, CA 94538
(650) 632-7580 phone
(650) 632-7594 fax

TABLE OF CONTENTS

INTRODUCTION OF THE OWNERS MANUAL	1
GENERAL PRECAUTIONS	2~3
1. NAME OF PARTS	4
2. ACCESSORIES	5~7
3. ASSEMBLY AND INSTALLATION	8~15
4. PRECAUTIONS TO BE HEEDED WHEN MOVING MACHINE	16
5. CONTENTS OF GAME	17~19
6. EXPLANATION OF TEST AND DATA DISPLAY	20~33
6-1 SWITCH UNIT AND COIN METER	21
6-2 TEST MODE	22
6-3 MEMORY TEST	23
6-4 CALIBRATION TEST	23~24
6-5 FEEDBACK LEVER REACTION TEST	24
6-6 INPUT TEST	25
6-7 OUTPUT TEST	25
6-8 SOUND TEST	26
6-9 C.R.T. TEST	27
6-10 GAME ASSIGNMENTS	28
6-11 COIN ASSIGNMENTS	29~32
6-12 BOOKKEEPING	33
6-13 BACKUP DATA CLEAR	33
7. CONTROLLER	34~37
7-1 ADJUSTING/REPLACING THE VOLUME	34~35
7-2 GREASING	36
7-3 REPLACING THE SWITCH	37
8. COIN SELECTOR	38~40
9. PROJECTOR	41~54
9-1 CLEANING THE SCREEN	41
9-2 MITSUBISHI PROJECTOR	42~43
9-3 TOSHIBA PROJECTOR	44~54
10. REPLACING THE FLUORESCENT LAMP, AND LAMPS	55~58
10-1 REPLACEMENT OF FLUORESCENT LAMP	55~57
10-2 REPLACEMENT OF LAMPS	58
11. PERIODIC INSPECTION TABLE	59
12. TROUBLESHOOTING	60~61
13. GAME BOARD	62~66
13-1 REMOVING THE GAME BOARD	62~63
13-2 COMPOSITION OF THE GAME BOARD	64
13-3 DRIVE BOARD	65~66
14. DESIGN RELATED PARTS	67~68
15. PARTS LIST	69~101
16. WIRING DIAGRAMS	XXX

SPECIFICATIONS

Installation space:	95.8 in.(D) x 46.2 in.(W)
Height:	88.3 in.
Weight:	Approx. 855 lbs.
Power maximum current:	6.67 Amps (AC 120V 60 Hz AREA)
MONITOR:	50" PROJECTION DISPLAY

INTRODUCTION OF THE OWNERS MANUAL

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

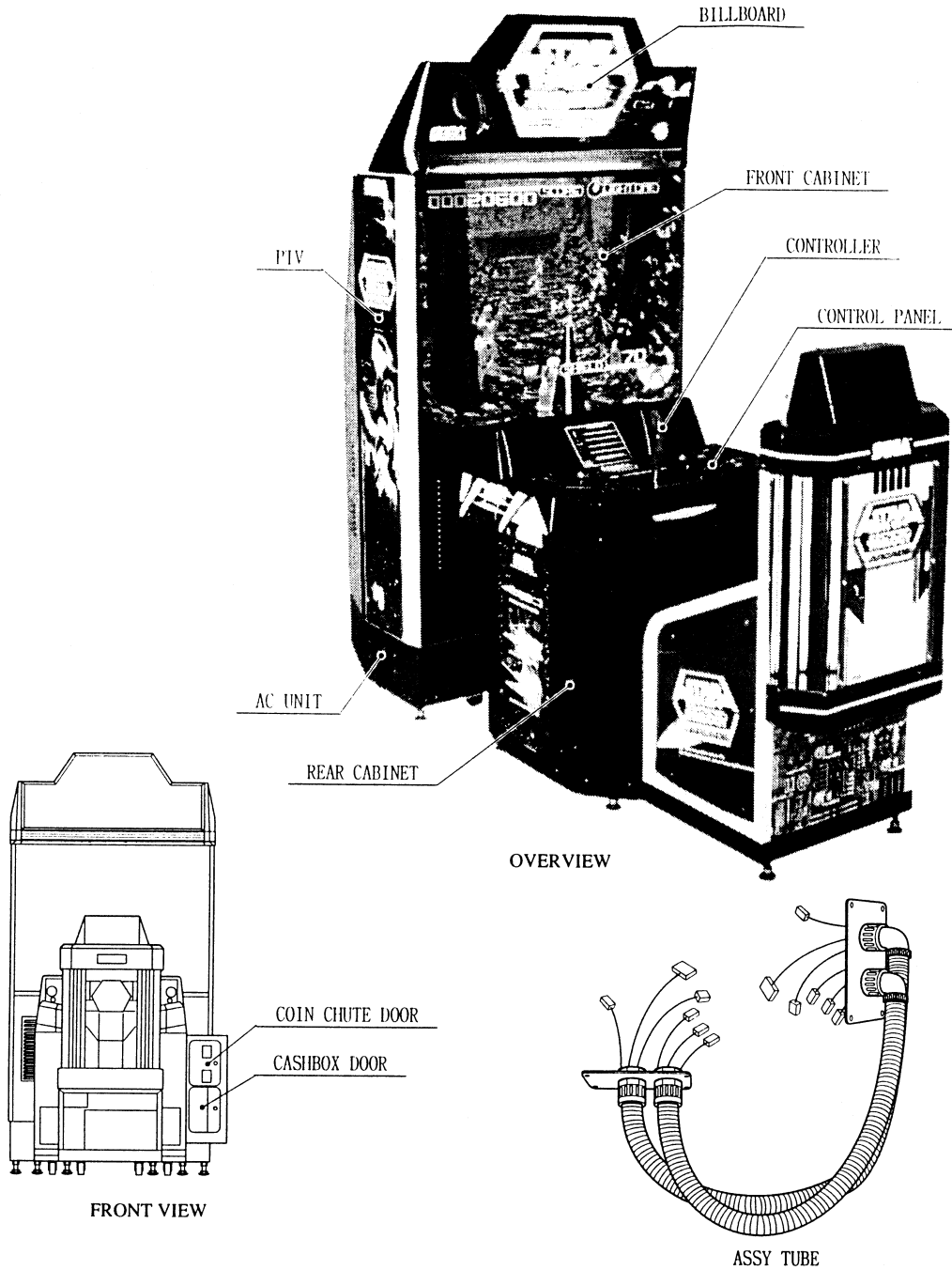
This game has been tested and listed by Underwriters Laboratories, Inc., to ANSI/UL22.

LISTED



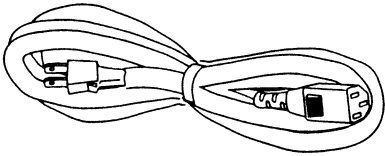
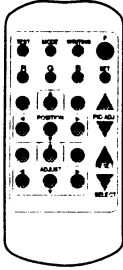
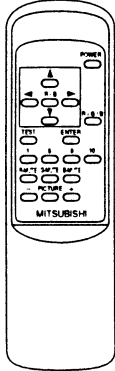
AMUSEMENT MACHINE

1. NAME OF PARTS



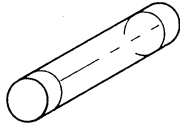
GAME SPECIFICATIONS	WIDTH	HEIGHT	DEPTH	WEIGHT
<i>all measurements are rounded up to the nearest 0.5"</i>				
DURING SHIPPING				~950 LBS.
PTV	43.5"	X 69"	X 30.5"	~442 LBS.
BILLBOARD	43.5"	X 19.5"	X 17"	~40 LBS.
REAR CABINET	40.5"	X 54"	X 55.5"	~376 LBS.
WHEN ASSEMBLED	46.2"	X 88.3"	X 95.8"	~855.5 LBS.

2. ACCESSORIES

<p>DESCRIPTION OWNERS MANUAL Part No. (Qty.) 4201-6424-01 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</p>
<p>AC Cable (Power Cord) 600-6695 600-6695-01 (1) for USA Used for installation,</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>		

FUSE

See parts
section for type.
To replace
Local Purchase Only.

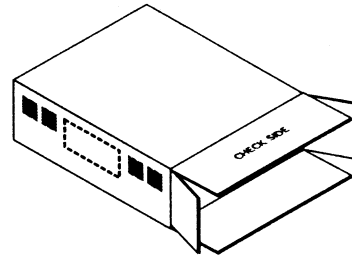


CARTON BOX

601-8928 (2)

Used for transporting the
Game Board.

Refer to Next Page.



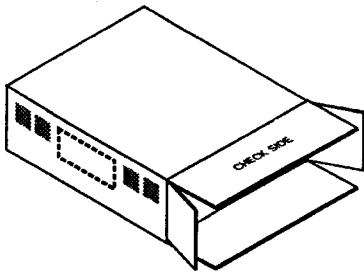


WARNING!

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, DAYTONA 2, DIRT DEVILS, THE OCEAN HUNTER,
STAR WARS TRILOGY

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



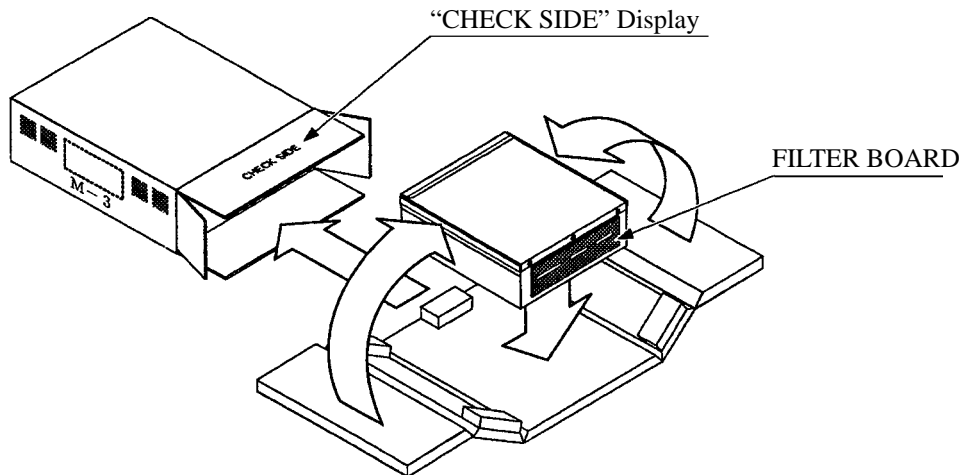
CARTON BOX

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.

3. ASSEMBLING PRECAUTIONS



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 4-item sequence:

- 1 ASSEMBLING OF THE FRONT CABINET
- 2 WIRING CONNECTION BETWEEN PTV AND CABINETS
- 3 SECURING IN PLACE
- 4 POWER SUPPLY
- 5 ASSEMBLY CHECK

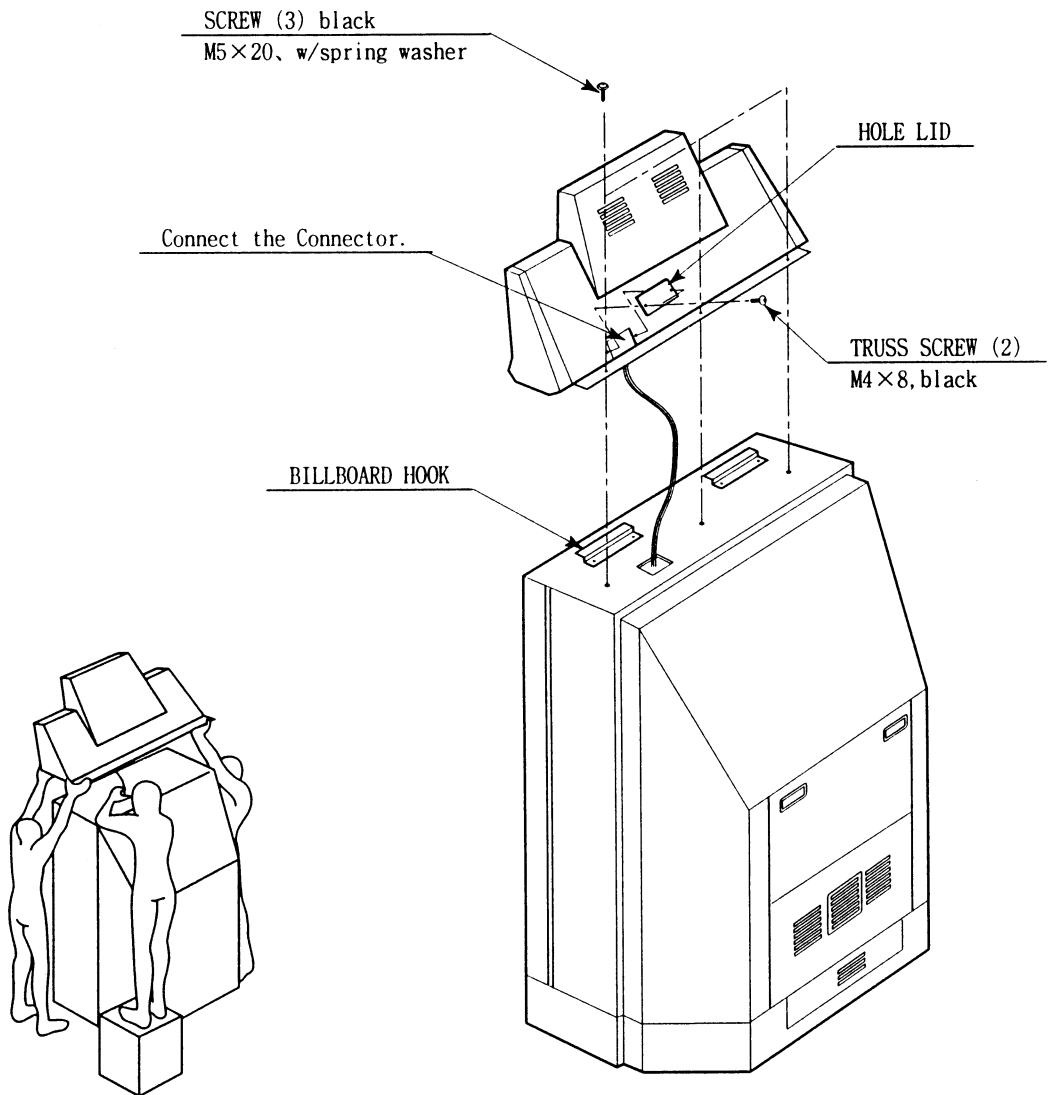
Note that the tools such as a phillips screwdriver and wrench for M16 hexagon bolt w/24 mm width across flats are required for the assembly work.

1 ASSEMBLING OF PTV



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

- ① Support the Billboard by 2 persons, insert it to the Billboard Hooks as shown, and secure with 3 screws.
- ② Take out the 2 screws to remove the Hole Lid from the backside of the Billboard.
- ③ Insert the Billboard's wiring connector into the Terminal Board on the ceiling of the Projection Display.



For performing work,
use 2 or more workers.
Be sure to prepare a step.

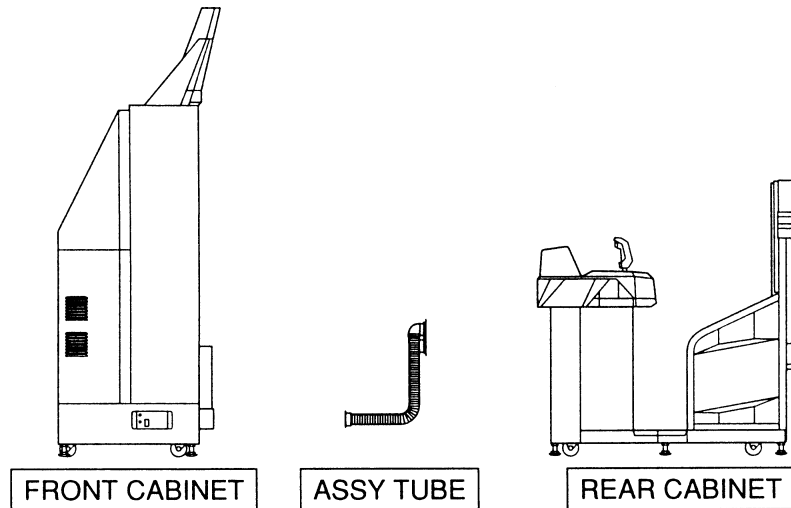
2

WIRING CONNECTIONS BETWEEN PTV AND CABINETS

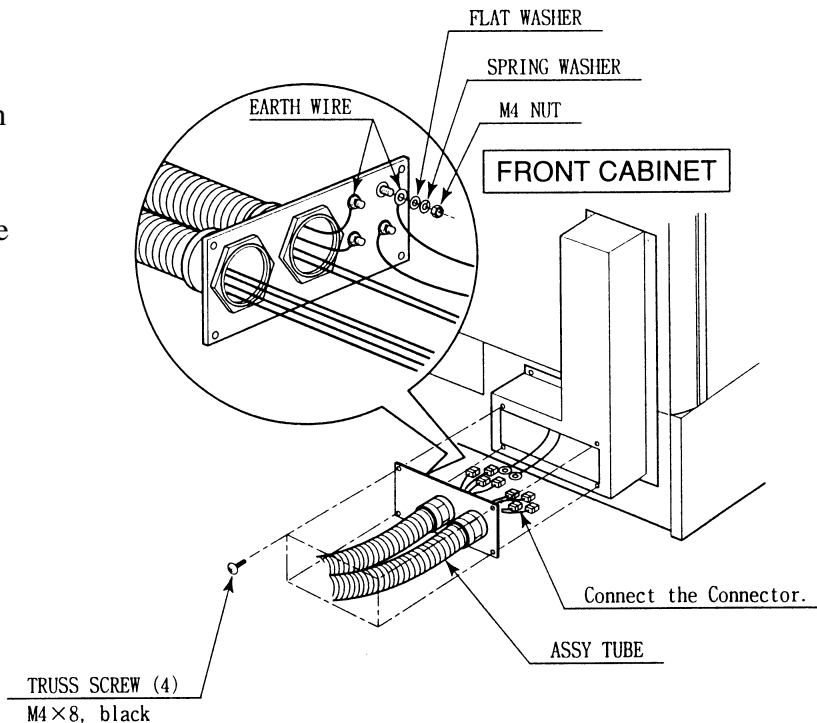


Be sure to connect connectors securely. Incomplete connector connection can cause electric shock accident.
Use care so as not to damage wirings. Damaged wiring can cause electric shock or short circuit accident.

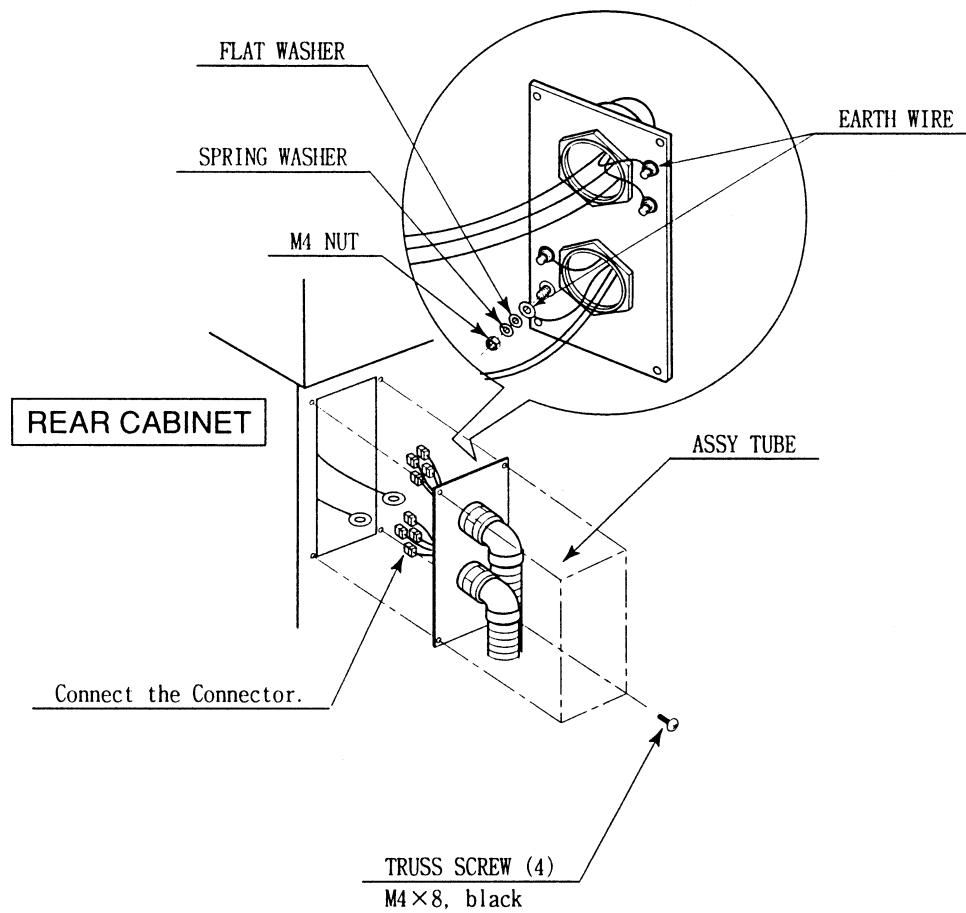
Install the ASSY TUBE to each cabinet joined as per [2] on the previous page. and perform wiring connection on PTV.



- ① The connectors on the side of the ASSY TUBE wiring are all cap type and those on the opposite side are all plug type. The cap side is on the side of the Rear Cabinet.
- ② Connect ASSY TUBE wiring to the Front Cabinet connectors. Make sure that corresponding connectors of identical color and number of pins are connected.
- ③ Connect the Front Cabinet side Earth Wire to the ASSY TUBE with nuts.
- ④ Secure the Box part of the Front Cabinet by using the 4 screws. At this time, use care so that wirings are not caught and damaged.



- ⑤ Secure the Box part of the ASSY TUBE to the Rear Cabinet connectors.
- ⑥ Secure the Rear Cabinet side Earth Wire to the ASSY TUBE with nuts.
- ⑦ Secure the Box part of the ASSY TUBE to the Rear Cabinet by using the 4 screws. At this time, use care so that wirings are not caught and damaged.



3

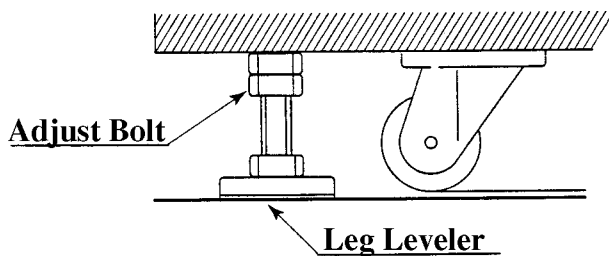
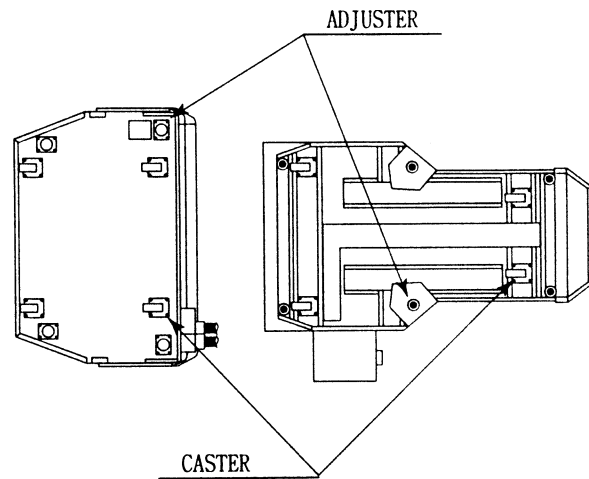
SECURING IN PLACE (ADJUSTER ADJUSTMENT)



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

This machine has 12 each of casters and adjuster (See 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 Cause 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.



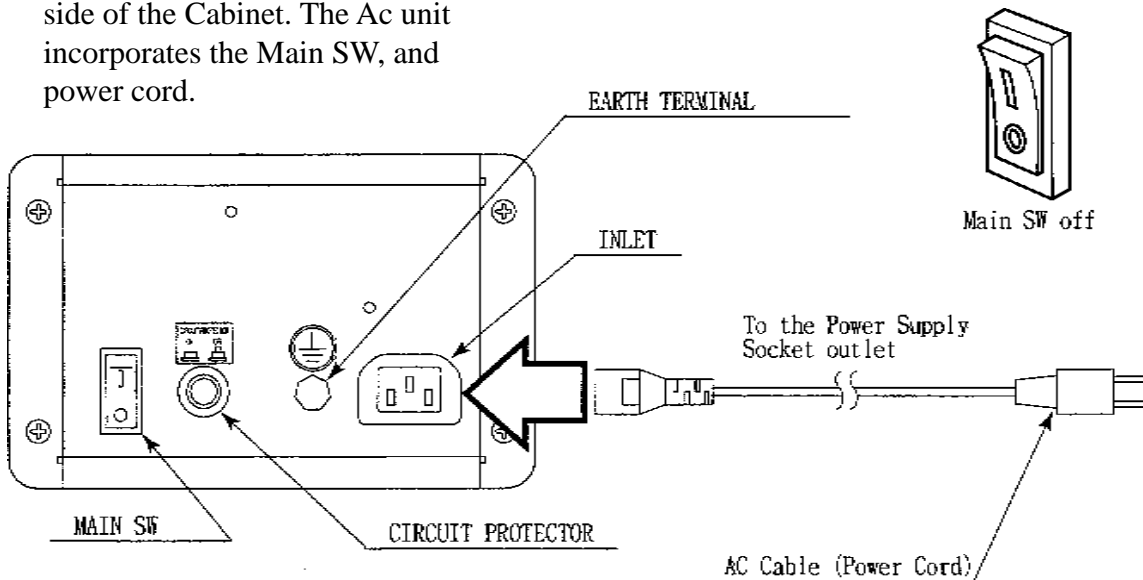
4 POWER SUPPLY



- 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.

The AC unit is mounted on the left side of Front Cabinet DX. The AC Unit incorporates the Main SW. Firmly insert the Power Plug into the Socket Outlet. Turn the Main SW ON to turn power ON.

- ① Ensure that the Main SW is OFF.
- ② The AC unit is located on the left side of the Cabinet. The Ac unit incorporates the Main SW, and power cord.



CAUTIONS TO BE HEEDED WHEN TURNING THE POWER ON



First make sure that no one is in the periphery of the bike body and turn the Main SW on. When the power is turned on, the bike body motion starts automatically. The presence of a person(s) in the periphery of the bike can cause an accident. Turning the AC Unit's Main SW on will cause the machine to start the POWER ON check automatically. In the POWER ON check, the bike body banks left and right, then returns to the centering position and stops. During this check, do not touch the bike body. If you do, the body reaction (at the time course-out or crashing) can not be obtained correctly. The Advertise mode is displayed at the same time the checking is finished. An ERROR display is indicated if irregularity is found in the POWER ON check. In case of an irregular reaction during game, turn power off and turn it back on again to finish the POWER ON check.

5

ASSEMBLING CHECK

In the TEST MODE, ensure that the assembly has been made correctly and IC BD is satisfactory (refer to Section 6).

In the test mode, perform the following test:

```

                MEMORY TEST

IC27 GOOD  IC26 GOOD  IC29 GOOD  IC28 GOOD
IC31 GOOD  IC30 GOOD  IC33 GOOD  IC32 GOOD
IC35 GOOD  IC34 GOOD  IC37 GOOD  IC36 GOOD
IC39 GOOD  IC38 GOOD  IC41 GOOD  IC40 GOOD
IC4  GOOD  IC3  GOOD  IC2  GOOD  IC1  GOOD
IC8  GOOD  IC7  GOOD  IC6  GOOD  IC5  GOOD
IC12 GOOD  IC11 GOOD  IC10 GOOD  IC9  GOOD
IC20 GOOD  IC19 GOOD  IC18 GOOD  IC17 GOOD

IC16 GOOD  IC15 GOOD  IC14 GOOD  IC13 GOOD
IC94 GOOD  IC18 GOOD  IC17 GOOD

                PRESS TEST BUTTON TO EXIT
    
```

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

```

                INPUT TEST

X                --H
Y                --H

EVENT0          OFF
EVENT1          OFF
FIRE0           OFF
FIRE1           OFF

COIN CHUTE #1   OFF
COIN CHUTE #2   OFF
SERVICE        OFF
TEST            OFF

                PRESS TEST AND SERVICE BUTTON TO EXIT
    
```

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

```

                OUTPUT TEST

> EVENT0
  EVENT1
  PANEL

                PRESS TEST BUTTON TO EXIT
    
```

```

          SOUND TEST

> EFFECT   : SE_COIN
  VOICE    : SE_its_a_hit
  B.G.M.   : BM_THEME
  SPEAKER  : SE_XWSHOT_L
  BGM VOLUME LEVEL 15/15
  SOUND OFF
  EXIT

          SELECT WITH SERVICE BUTTON
          AND PRESS TEST BUTTON

```

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.

```

          C. R. T. TEST      PAGE 1/2
0                15                31
  RED
  GREEN
  BLUE
  WHITE
          PRESS TEST BUTTON TO CONTINUE

```

In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed. Although the monitor 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 monitor by referring to Section 9.

```

          C. R. T. TEST      PAGE 2/2
          PRESS TEST BUTTON TO EXIT

```

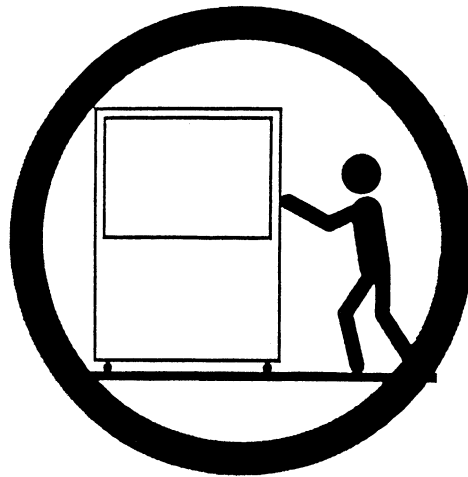
4. PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE



- When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug as is inserted can damage the power cord and cause a fire or electric shock.
- When moving the machine on the floor, retract the Adjusters and ensure that Casters make contact with the floor. During transportation, pay careful attention so that Casters do not tread power cords. Damaging the power cords can cause an electric shock and/or short circuit.
- When lifting the cabinet, be sure to hold the catch portions or bottom part. Lifting the cabinet by holding other portions can damage parts and installation portions, due to the empty weight of the cabinet, and cause personal injury.



Since this machine is a heavy structure of approximately 1000+lbs. its leg adjusters should be retracted when moving the machine over the floor. When moving the machine on the floor with slanted surfaces or step like differences, ensure that the PTV, Front Cabinet and Rear Base are separated. Lifting the Cabinet with those items as is joined can cause the joint portions to be damaged.



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

5. 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.

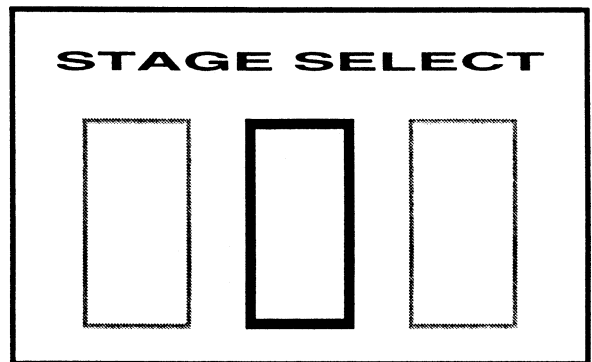
The left/right lamps inside the Control Panel light up during game only.

The EVENT/START button (red button, one each on the left/right side of LEVER) lights up in particular screens only.

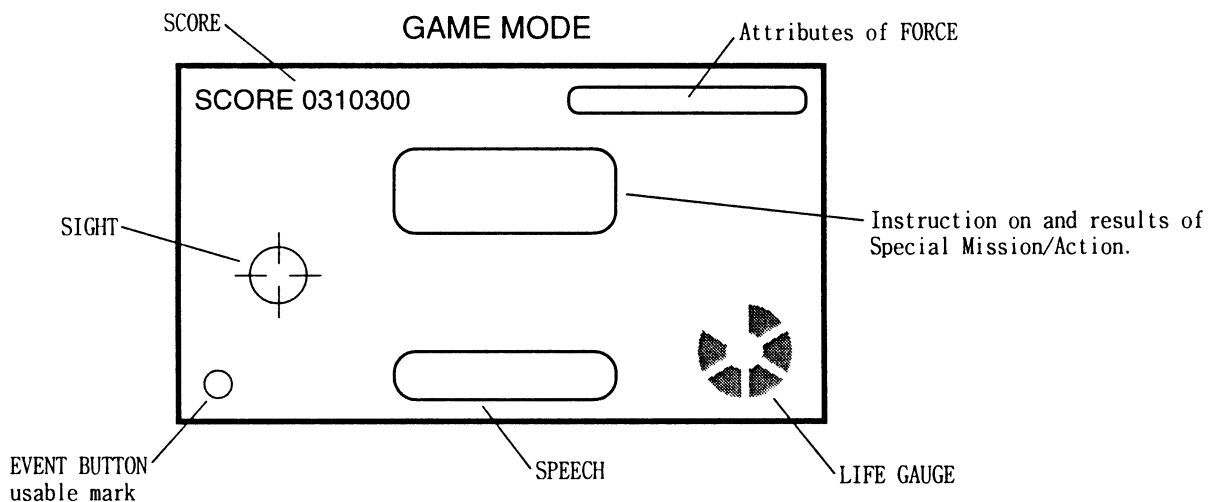
- ① After inserting one play worth of coin(s), press the EVENT/START button to start, and the STAGE SELECT screen appears.
- ② At the time of starting the game, only the 3 stages, i.e., "YAVIN," "HOTH," and "ENDOR FOREST" are displayed. By moving the LEVER left/right, select one from among the 3 stages and pull the trigger to decide. (execute the selection).

NOTE: The player's flight machine used during game is predetermined per STAGE.

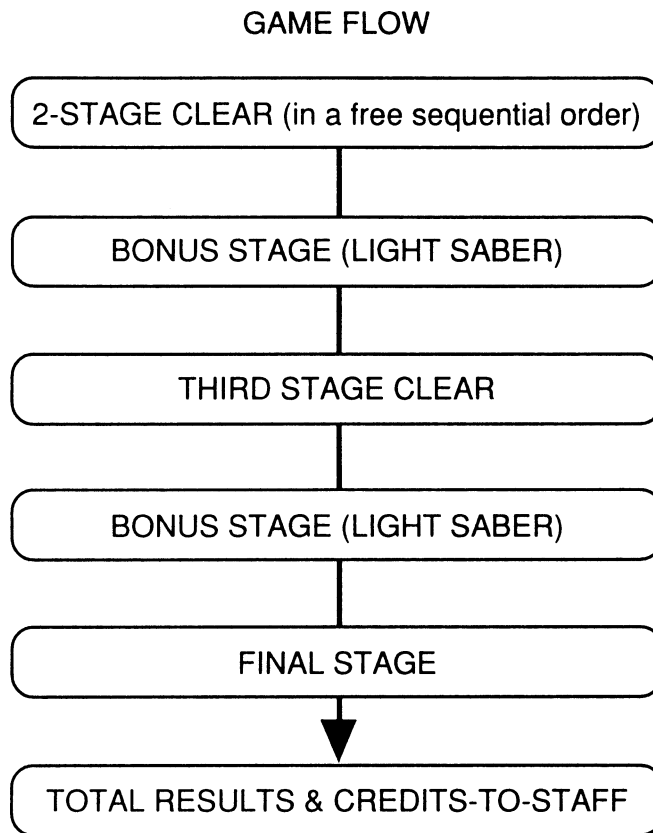
- ③ After the STAGE is determined, the still screen for loading the game data appears for several seconds (this cannot be skipped). Next, Movie Demo based on that particular STAGE's story setting appears for several seconds (this can be skipped by using the EVENT button).
- ④ Move the SIGHT by moving the LEVER up/down and left/right, aim at the target and press either the trigger with the forefinger or the thumbs switch with thumb to attack (the function of the trigger at the position corresponding to the forefinger and that of the Thumb SW. at the position corresponding to a thumb identical). It is not necessary to operate the flight machine. In the stage where the player fights while boarding the flight machine, he can continually shoot by keeping the trigger pressed. The up/down movements of the SIGHT as against the up/down movements of LEVER can be set opposite each other within the TEST mode.



- ⑤ During game, instruction on Special Mission/Action or hints on play may be displayed at the center of the screen. The player can obtain good results by following the instruction. During game, SPEECH sound may be emitted on the lower part of the screen. Although hints on play are included sometimes, basically the SPEECH expressions are intended for presentation effects and do not affect game proceeding.



- ⑥ If the LIFE GAUGE on the lower right side of the screen is depleted, on-screen movements stop and CONTINUE YES or NO is questioned. to continue, insert the necessary number of coins, select YES by moving the LEVER left/right, and then press the EVENT/START button. In case the count becomes 0 (zero), or if NO is selected and EVENT /START button is pressed, continue play is not possible. If CONTINUE is not selected, the present on-stage results are displayed, then the game is over.
(On the still screen for CONTINUE confirmation, the background of screen may become red sometimes, but this is only for presentation effects shown momentarily at the time of being subject to damage and does not mean any irregularity. The status will be restored to the normal background at the same time game restarts.
- ⑦ If all of the 3 STAGES shown at first in the STAGE SELECT screen are cleared, the 4th (FINAL) stage appears. When all of the above stages are cleared, game results are shown and then credits-to-staff are displayed. Credits-to-staff can be skipped by using the EVENT/START button.



EVENT BUTTON

In a specific scene, the on-screen message may instruct you to press the EVENT button. Press either the left/right EVENT buttons as these have the same function.

Even when no particular instruction is given, if a mark is indicated on the lower left side of the screen, or when the Cabinet's EVENT button is lit, some sort of effects can be obtained (for example, a covering fighter appears) by pressing the button. The type of the effects differs depending on the specific scene and stage.

There will be no adverse effect on the proceeding of game play if the button is not pressed. This feature is intended for enabling the player to enjoy playing the game better.

ATTRIBUTES BUTTON

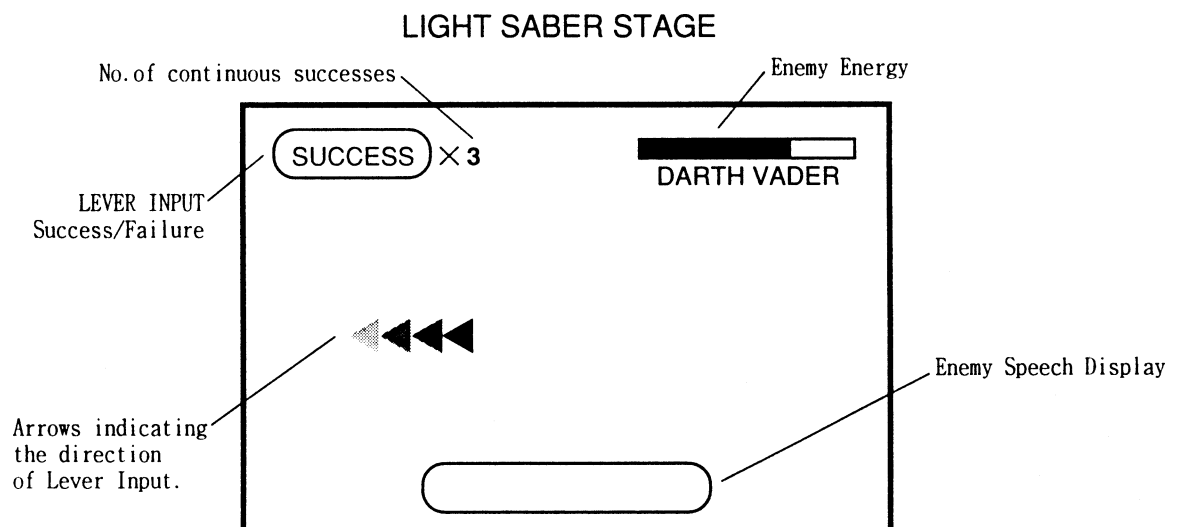
The features of FORCE vary in 6 categories depending on the actions taken during the game, and influence the performance of score, attack, and defense. Taking actions favorable to friends (by saving them for example) causes LIGHT LEVEL to vary from 1 up to 3. On the contrary, doing things unfavorable to friends (by attacking them for example) causes DARK LEVEL to vary from 1 up to 3. The conditions of variation are not displayed in details. The features are intended to allow players to enjoy playing game fully in depth.

LIGHT SABER STAGE

In the LIGHT SABER STAGE (a brief stage in which the player uses a LIGHT SABER), keep inputting the Lever in the direction of the on-screen arrow to proceed with game play.

This is completely a BONUS STAGE and there will be no game over in the middle of play.

The LIGHT SABER STAGE appears once when 2 of the 3 stages are cleared in a free sequential order, and once again when the remaining stage is cleared. (Not displaying at the time of game start).



6. EXPLANATION OF TEST AND DATA DISPLAY

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

TABLE 6 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.	6 - 8, 6 - 9, 6 - 10 6 - 4 6 - 7 6 - 3
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.	6 - 3
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 the lamps.	6 - 3 6 - 8, 6 - 9 6 - 4 6 - 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 hasn't been solved yet, check the CONTROL's moves.	6 - 4 7 7
PROJECTOR	In the PROJECTOR ADJUSTMENT mode, check to see if the PROJECTOR adjustment is appropriately made.	9
IC BOARD	1. MEMORY TEST 2. In the SOUND TEST mode, check the sound related ROMs.	6 - 3 6 - 5
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc	6 - 11

6 - 1 SWITCH UNIT AND COIN METER



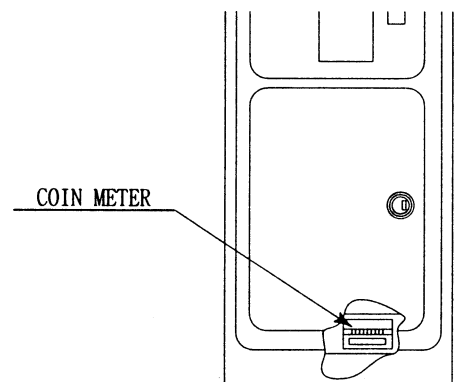
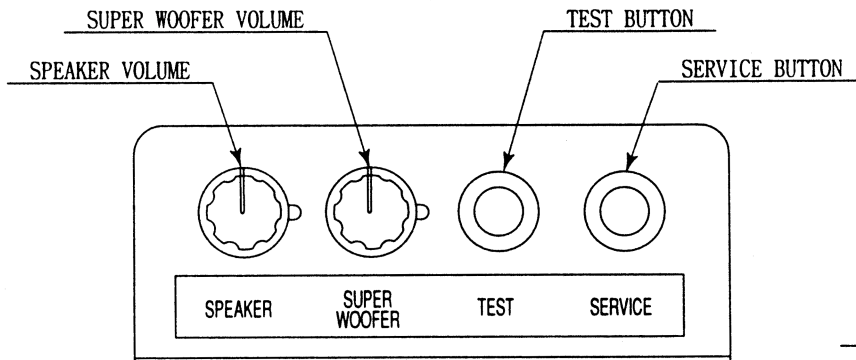
Never touch places other than those specified. Touching places not specified can cause electric shock and short circuit.



- 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:

- ① **SOUND VOLUME SPEAKER**
Controls the speaker volume of all of the machines speakers.
- ② **SOUND VOLUME WOOFER**
Controls the speaker volume only for SEAT & BASE Woofer.
- ③ **TEST BUTTON (TEST SW)**
For the handling of the TEST BUTTON, refer to the section on test mode.
- ④ **SERVICE BUTTON (SERVICESW)**
Gives credits without registering on the coin meter.



6 - 2 TEST MODE

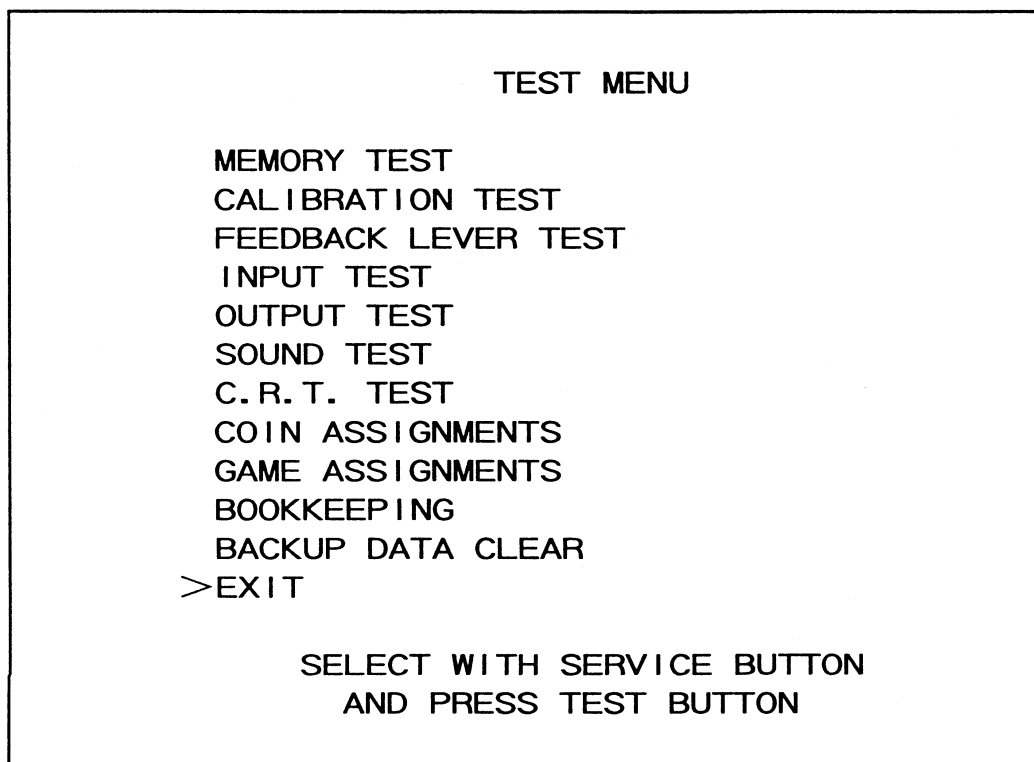


IMPORTANT!

In case settings are changed in GAME ASSIGNMENTS, COIN ASSIGNMENT the setting changes are not effective unless the test mode is exited and the game mode returns to the screen. The setting changes are ineffective if the power is turned off in the test mode.

The TEST MODE allows the functioning of each part of the Cabinet to be checked, the monitor to be adjusted, and the coins and game related various settings to be performed.

SELECTION OF TEST ITEMS



- Press the TEST BUTTON to have the menu displayed on the screen.
- Press the SERVICE BUTTON until the pointer is moved to the desired item to make a selection.
- Bring the pointer to the desired item and press the TEST BUTTON to enter the selected item's test.

6 -3 MEMORY TEST

```

                MEMORY TEST

IC27 GOOD  IC26 GOOD  IC29 GOOD  IC28 GOOD
IC31 GOOD  IC30 GOOD  IC33 GOOD  IC32 GOOD
IC35 GOOD  IC34 GOOD  IC37 GOOD  IC36 GOOD
IC39 GOOD  IC38 GOOD  IC41 GOOD  IC40 GOOD
IC4  GOOD  IC3  GOOD  IC2  GOOD  IC1  GOOD
IC8  GOOD  IC7  GOOD  IC6  GOOD  IC5  GOOD
IC12 GOOD  IC11 GOOD  IC10 GOOD  IC9  GOOD
IC20 GOOD  IC19 GOOD  IC18 GOOD  IC17 GOOD

IC16 GOOD  IC15 GOOD  IC14 GOOD  IC13 GOOD
IC94 GOOD  IC18 GOOD  IC17 GOOD

                PRESS TEST BUTTON TO EXIT
    
```

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

“GOOD” is displayed for normal ICs and “BAD” is displayed for abnormal ICs

- When the test is completed, if the display is as shown left, it is satisfactory.
- After finishing the test, pressing the TEST BUTTON allows the MENU MODE to return on the screen.

6 - 4 CALIBRATION TEST

```

                CALIBRATION TEST

FLIP LEVER          Up→Down,  Down→Up
SETUP CALIBRATION
> EXIT

X MIN ___ CENTER ___ MAX ___
Y MIN ___ CENTER ___ MAX ___
X CURRENT VALUE ___
Y CURRENT VALUE ___

                SELECT WITH SERVICE BUTTON
                AND PRESS TEST BUTTON
    
```

Selecting CALIBRATION TEST causes the following screen to appear and allows the CONTROLLER’s sight to be set.

- By pressing the SERVICE BUTTON, move the arrow (>) to the desired test item.
- Press the TEST BUTTON to select test item.

```

                CALIBRATION TEST

FLIP LEVER          Up→Up,   Down→Down
> SETUP CALIBRATION
EXIT

To set the center position for the controller
leave the controller centered
and press the service button.

X MIN ___ CENTER ___ MAX ___
Y MIN ___ CENTER ___ MAX ___
X CURRENT VALUE ___
Y CURRENT VALUE ___
    
```

```

CALIBRATION TEST

FLIP LEVER          Up→Up,  Down→Down
> SETUP CALIBRATION
EXIT

To set the center range of motion,
move the left, right, up and down.
Then press the service button.

X MIN __ CENTER __ MAX __
Y MIN __ CENTER __ MAX __
X CURRENT VALUE __
Y CURRENT VALUE __

```

- **FLIP LEVER**
Used to intentionally reverse the movements of SIGHT up/down as against LEVER up/down.

- **SETUP CALIBRATION**
Refer to the following screen and explanations.

Move the arrow (>) to SETUP CALIBRATION and then press the TEST BUTTON to display the following message: "To set the Center position for the controller, leave the controller centered and press the service button."

Leave the Lever centered, press the service button CALIBRATION TEST (3), move the Lever fully up/down & left/right, and then press the service button (CALIBRATION(2)).

Select EXIT and press the TEST BUTTON to return to the Menu Mode.

```

CALIBRATION TEST

FLIP LEVER          Up→Up,  Down→Down
> SETUP CALIBRATION
EXIT

X CALIBRATION VALUE __
Y CALIBRATION VALUE __

X MIN __ CENTER __ MAX __
Y MIN __ CENTER __ MAX __
X CURRENT VALUE __
Y CURRENT VALUE __

PRESS TEST BUTTON TO EXIT

```

6 -5 FEEDBACK LEVER REACTION TEST

```

FEEDBACK LEVER REACTION TEST

> CENTERING  ON
  RIGHT      OFF
  LEFT       OFF
  UP         OFF
  DOWN       OFF
  FORCE X     1/7
  FORCE Y     1/7
  EXIT

PRESS TEST BUTTON TO EXIT

```

In this test, check the reaction of Controller (lever).

- **CENTERING**
This refers to the force to return the Lever to the center.

- **FORCE X, FORCE Y**
Allows for by-direction testing (up/down and left/right)
Keep the Test Button pressed down to have the Lever move automatically.

6 - 6 INPUT TEST

When INPUT TEST is selected, the MONITOR will show the following, allowing you to watch the status of each switch.

On the screen, periodically check the status of each switch.

INPUT TEST		
X		--H
Y		--H
EVENT0		OFF
EVENT1		OFF
FIRE0		OFF
FIRE1		OFF
COIN CHUTE #1		OFF
COIN CHUTE #2		OFF
SERVICE		OFF
TEST		OFF

PRESS TEST AND SERVICE BUTTON TO EXIT

- By pressing each switch, if the display on the righthand side of the name of each switch changes to ON from OFF, the SW and the wiring connections are satisfactory.
- Open the COIN CHUTE DOOR and insert a coin from the COIN ENRTY to check the COIN CHUTE SW.

In the INPUT test, pressing the TEST BUTTON causes the menu to return to the screen.

6 - 7 OUTPUT TEST

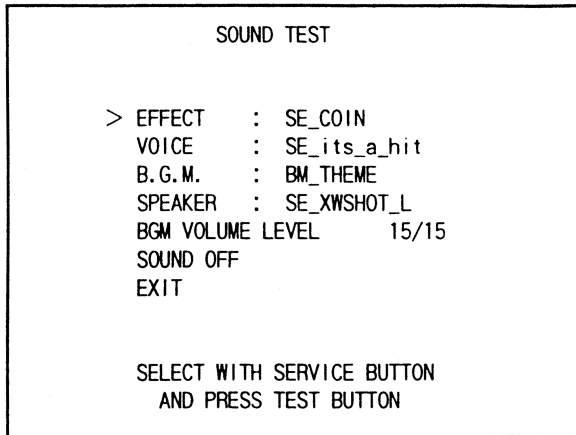
Choose OUTPUT TEST to have the MONITOR screen shown left to appear. This screen allows lamp status to be checked. Periodically check the lamp status in this mode.

OUTPUT TEST	
>	EVENT0
	EVENT1
	PANEL

PRESS TEST BUTTON TO EXIT

- Press the SERVICE BUTTON to move the arrow to the desired lamp test item.
- Press the TEST BUTTON. If the display to the right of the lamp name changes to ON from OFF, the lamp and wiring connection are satisfactory.
- Choose EXIT and press the TEST BUTTON to return to MENU mode (FIG. 6.2).

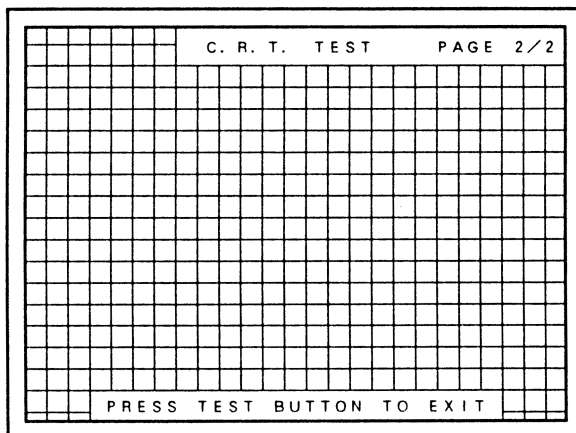
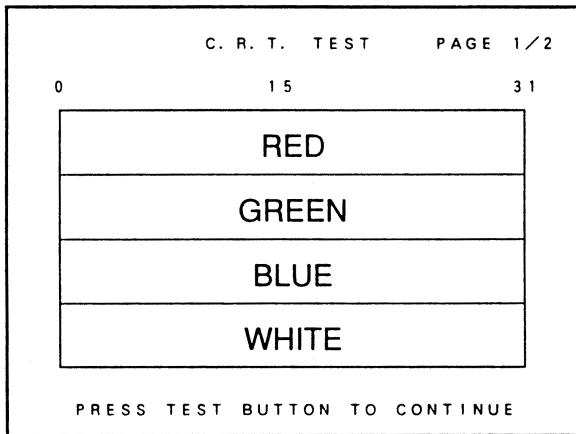
6 - 8 SOUND TEST



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 annuocment and narration during game.
- **B.G.M.:**
Background music during game.
- **SPEAKER:**
SE Speaker check.
- **BGM VOLUME LEVEL:**
BGM sound level 0/15(low)~15/15(high).
- **SOUND OFF:**
Output sound are all off.
- Press the Service button and move the arrow to select the desired type.
- Press the TEST button to have teh desired type of sound emitted.
- Everytime the TEST button is pressed, the next sound is emitted.
- To return to the MENU MODE, select EXIT and press the TEST button.

6 - 9 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 page (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.

6 - 10 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 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.

GAME ASSIGNMENTS	
> COUNTRY	EXPORT
ADVERTISE SOUND	ON
DIFFICULTY	NORMAL
CABINET TYPE	DX
FEED BACK LEVER	ENABLE
EXIT	

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

- **GAME DIFFICULTY**
This game allows by-course difficulty level to be set in 4 levels. Depending on the difficulty level set, the initial time varies.
- **ADVERTISE SOUND**
Setting of sound during Advertise. ON(sound to be emitted), OFF(sound not to be emitted).
- **CABINET TYPE**
Setting of cabinet. Set to DELUXE for this machine.
- **CONTROLLER REACTION**
Sets the Controller's vibration strength and off for no vibration.
- **COUNTRY**
Message language.

**These FIGURES/
TABLES show the
factory recommended
settings.**

6 - 11 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
CREDIT TO START  1 CREDIT
CONTINUE  1 CREDIT
> COIN/CREDIT SETTING #1
COIN CHUTE #1  1COIN 1CREDIT
COIN CHUTE #2  1COIN 1CREDIT

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 6.10a, 6.10b) #27 refers to FREE PLAY.

When the COIN CHUTE TYPE is set to INDIVIDUAL, there are some setting numbers not displayed as indicated in TABLE 6.10b.

● MANUAL SETTING

This allows credit increase setting as against coin insertion to be further set in the manner finer than COIN/CREDIT SETTING (refer to TABLE 6.10c).

TABLE 6.11a 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	1 CREDIT
	2 COINS	3 CREDITS
SETTING #16	1 COIN	3 CREDITS
SETTING #17	3 COINS	1 CREDIT
SETTING #18	4 COINS	1 CREDIT
SETTING #19	1 COIN	1 CREDIT
	2 COINS	2 CREDITS
	3 COINS	3 CREDITS
	4 COINS	5 CREDITS
SETTING #20	1 COIN	5 CREDITS
SETTING #21	5 COINS	1 CREDIT
SETTING #22	1 COIN	2 CREDITS
SETTING #23	2 COINS	1 CREDIT
	4 COINS	2 CREDITS
	5 COINS	3 CREDITS
SETTING #24	1 COIN	3 CREDITS
SETTING #25	1 COIN	1 CREDIT
	2 COINS	2 CREDITS
	3 COINS	3 CREDITS
	4 COINS	4 CREDITS
	5 COINS	6 CREDITS
SETTING #26	1 COIN	6 CREDITS
SETTING #27	FREE PLAY	

TABLE 6.11b COIN/CREDIT SETTING (COIN CHUTE INDIVIDUAL TYPE)

SETTING	FUNCTIONING OF COIN CHUTE	
SETTING #1	1 COIN	1 CREDIT
SETTING #6	1 COIN	2 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 #15	1 COIN	1 CREDIT
	2 COINS	3 CREDITS
SETTING #17	3 COINS	1 CREDIT
SETTING #18	4 COINS	1 CREDIT
SETTING #19	1 COIN	1 CREDIT
	2 COINS	2 CREDITS
	3 COINS	3 CREDITS
	4 COINS	5 CREDITS
SETTING #21	5 COINS	1 CREDIT
SETTING #22	3 COINS	1 CREDIT
	5 COINS	2 CREDITS
SETTING #23	2 COINS	1 CREDIT
	4 COINS	2 CREDITS
	5 COINS	3 CREDITS
SETTING #25	1 COIN	1 CREDIT
	2 COINS	2 CREDITS
	3 COINS	3 CREDITS
	4 COINS	4 CREDITS
	5 COINS	6 CREDITS
SETTING #27	FREE PLAY	

MANUAL SETTING

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

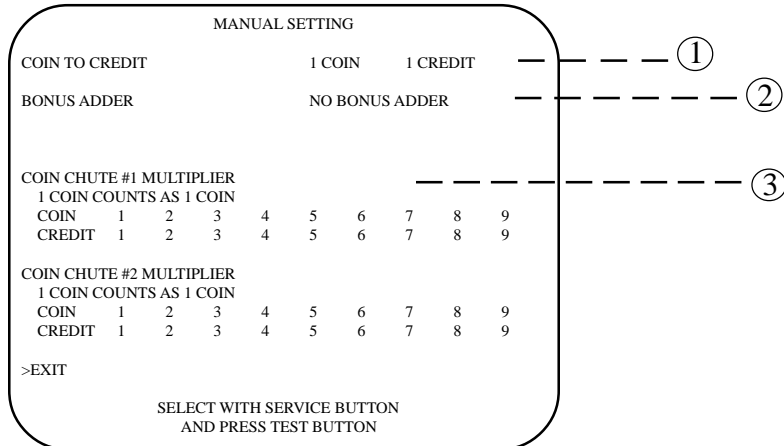


FIG. 6.11b MANUAL SETTING

- 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 6.11c 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

6 - 12 BOOKKEEPING

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

```

          BOOKKEEPING

COIN CHUTE #1          1
COIN CHUTE #2          0
TOTAL COIN             1

COIN   CREDIT          1
SERVICE CREDIT        0
TOTAL   CREDIT          1
NUMBER OF GAMES        1

TOTAL TIME              0D 2H 0M 0S
PLAY TIME               0H 3M30S
AVERAGE PLAY TIME     0H 3M30S
LONGEST PLAY TIME      0H 3M30S
SHORTEST PLAY TIME     0H 3M30S

          TIME HISTOGRAM

0M 0S~1M59S           ---->          0
2M 0S~2M29S           ---->          0
2M30S~2M59S           ---->          0
3M 0S~3M29S           ---->          0
3M30S~3M59S           ---->          0
4M 0S~4M29S           ---->          0
4M30S~4M59S           ---->          0
5M 0S~5M29S           ---->          0
5M30S~5M59S           ---->          0
6M 0S~6M29S           ---->          0
OVER6M30S             ---->          0

          PRESS TEST BUTTON TO EXIT
    
```

- **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.

6 - 13 BACKUP DATA CLEAR

```

          BACKUP DATA CLEAR

          YES (CLEAR )
          > NO  (CANCEL)

          SELECT WITH SERVICE BUTTON
          AND PRESS TEST BUTTON
    
```

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 and sighting adjustment are not affected by BACKUP DATA CLEAR operation.

7. CONTROLLER



Before starting to work, ensure that the power SW is OFF. Failure to observe this can cause electric shock and short circuit accident. Use care so as not to damage wirings. Damaged wiring can cause electric shock and short circuit hazards.

Do not touch undesignated places. Touching places other than those specified can cause electric shock and short circuit accidents.

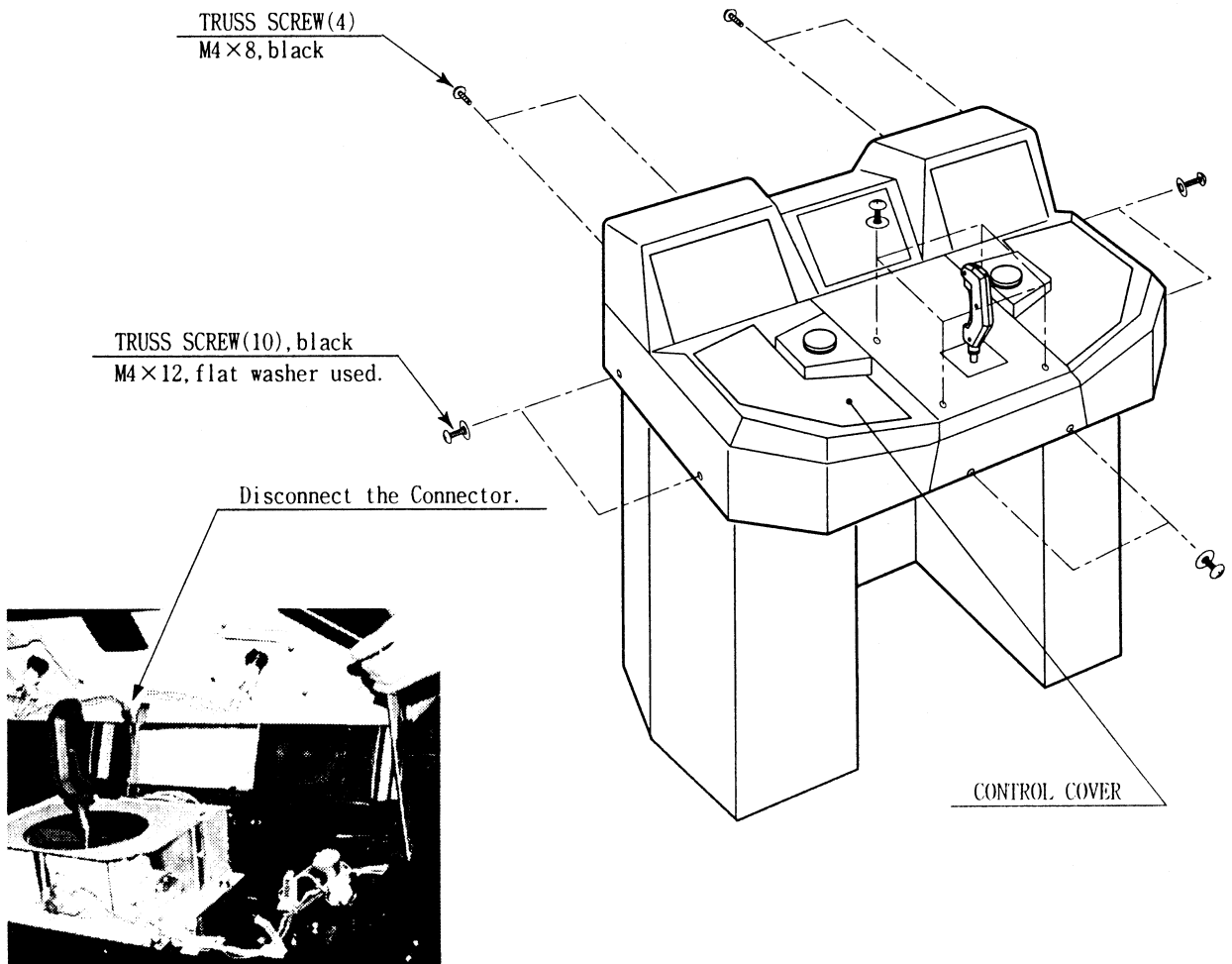
In the test mode, if the controller V.R. value movements are irregular, adjust or replace the V.R. in the following procedure.

7 - 1 ADJUSTING/REPLACING THE VOLUME

Take out the 4 screws and remove the PANEL LID LOWER



This work should be performed by the locations Maintenance Man or Service Man. Performing work by those who do not have the technical expertise can cause electric shock accident.

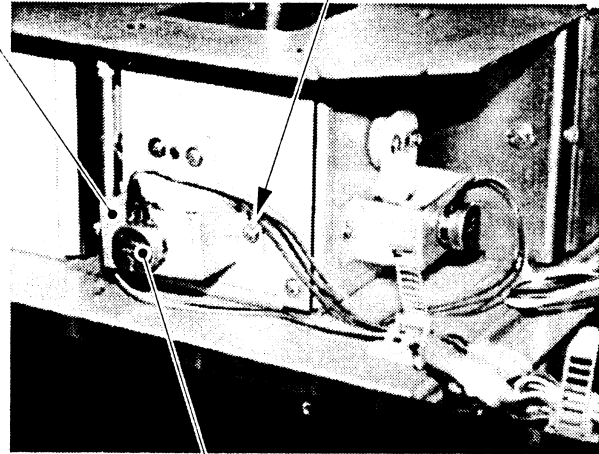


ADJUSTING THE VOLUME

- ① In the Test Mode, have the Volume value indicating screen displayed.
- ② Loosen the 2 screws which secure the Volume Bracket to disengage the gear mesh.
- ③ Ensure the Volume value display is within the range of 70~8F when Controller is positioned straight upward.
- ④ Fasten the 2 screws and secure the Volume Bracket.
- ⑤ After adjustment, be sure to perform Volume setting screen in the TEST MODE.

VOLUME BRACKET

SCREW (2)
M4×8, w/flat and spring washers



VOLUME
220-5373, 220-5484

REPLACING THE VOLUME

- ① Turn the power off.
- ② Disconnect the Connector.
- ③ Remove the Volume Bracket by taking out the 2 screws which secure the Volume Bracket.
- ④ Remove the Volume Gear from the Volume Shaft and replace Volume.
- ⑤ After replacement, adjust the Volume as per the above procedure.

7 - 2 GREASING



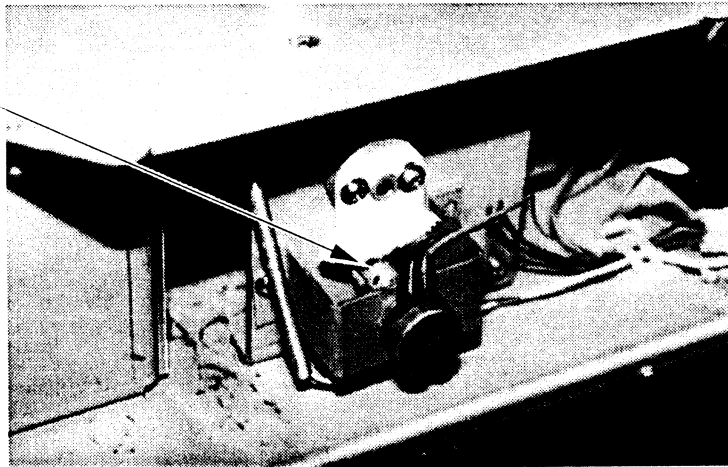
CAUTION!

Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident. Be sure to use the designated grease. Using undesiganted grease can cause parts damage.

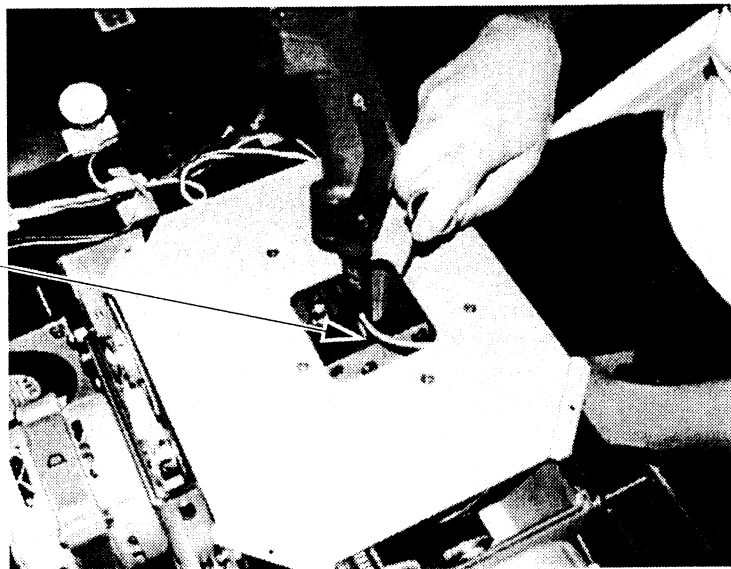
Do not apply greasing to undesiganted places. Failure to observe this can cause malfunctioning or quality deterioration of parts.

Apply spray greasing once every 6 months to the 2 places shown in the figure below, where the spring and gear are engaged. For spray grease, use NOK KLUBER L60 or GREASE MATE.

VOLUME GEAR MESH PORTION



SHAFT'S MOVABLE PORTION



7 - 3 REPLACING THE SWITCH



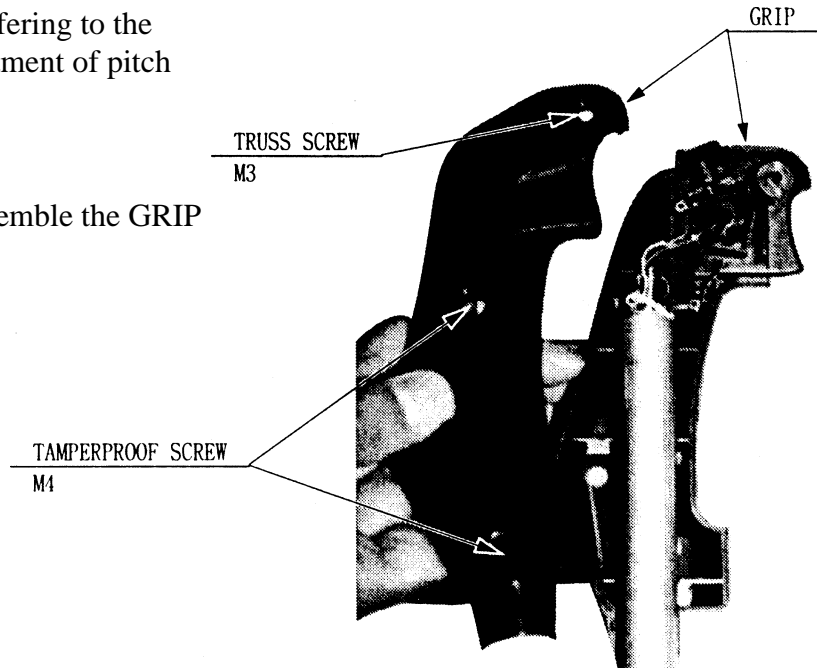
WARNING!

The Controller has some small parts. When disassembling, be very careful so as not to lose parts.

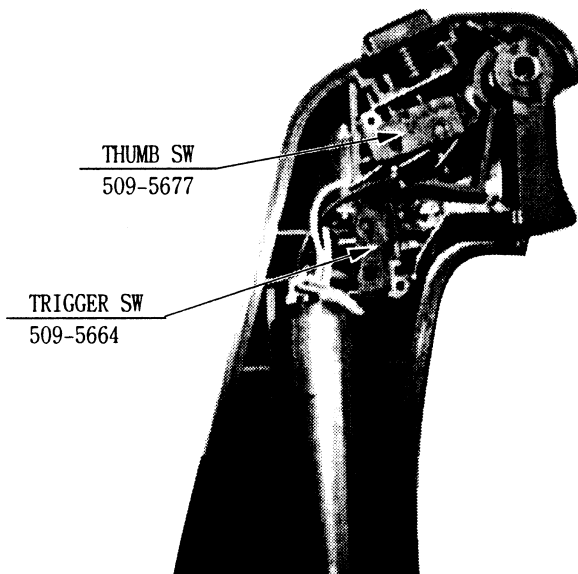
When the Trigger SW is pushed, if the INPUT TEST screen does not display “ON”, the switch inside the GRIP may be malfunctioning and in this case, switch replacement is needed.

- ① Remove the GRIP by first referring to the section on replacement/adjustment of pitch volume.

- ② Remove the screw and disassemble the GRIP



- ③ Replace the Switch.



8. 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.

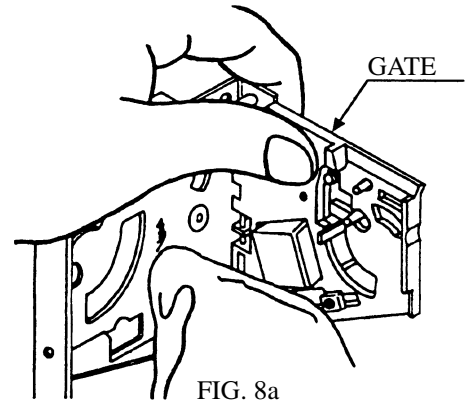


FIG. 8a

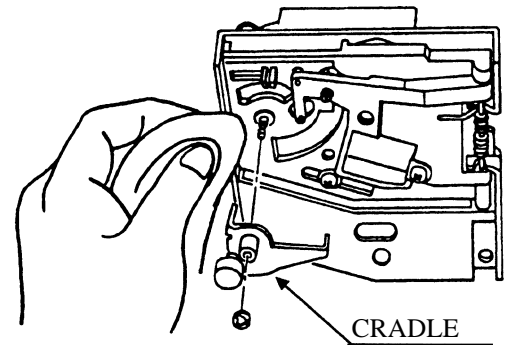


FIG.8b



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 pressed down?

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

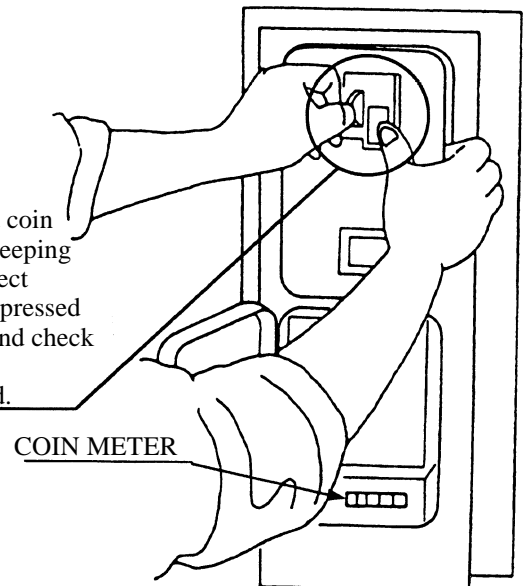


FIG. 8c

OPTIONAL DOLLAR BILL ACCEPTOR

● THE COIN DOOR ASSEMBLY USED ON **STAR WARS TRILOGY DLX** 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*

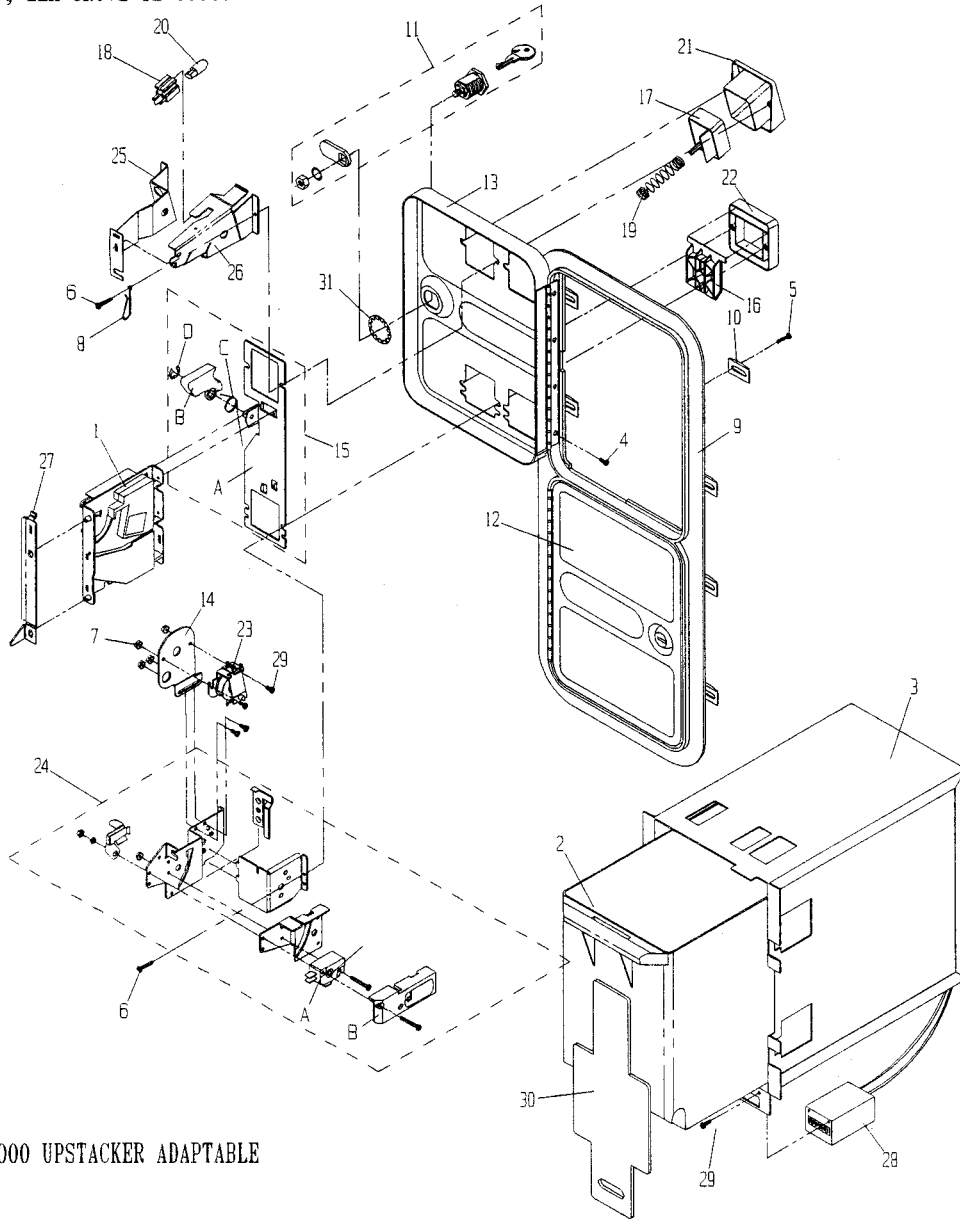
*The back flange on the chute can be removed for hole position #4. If the flange is not removed, it may interfere with the back of the cabinet.

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 # is 91-4000-01. The Mars stacker can be obtained through an authorized Mars distributor.

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 CASHBOX	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 CAN 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			

9. 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.

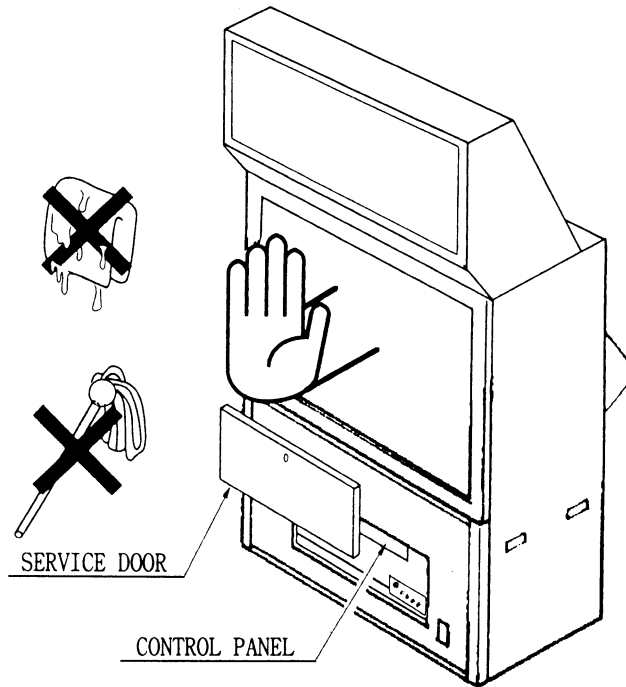


CAUTION!

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.

9 - 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.



9 - 3 MITSUBISHI PROJECTOR

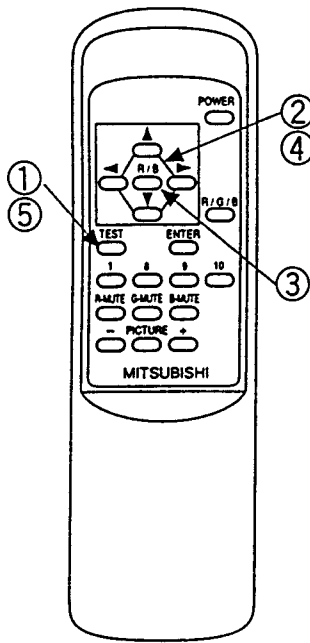


IMPORTANT!

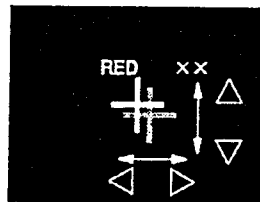
Although Remote Control Buttons other than those specified below do not function even if pressed during Convergence Adjustment, do not press them during adjustment work so as to avoid causing malfunctioning. Operate the Remote Control towards the PTV screen. If directed other than to the PTV screen,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

When adjusting MITSUBISHI PROJECTOR, use the Remote Control.

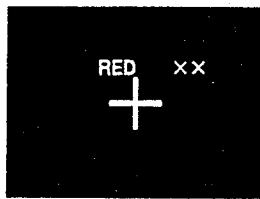
STATIC CONVERGENCE ADJUSTMENT



Red line Adjustment



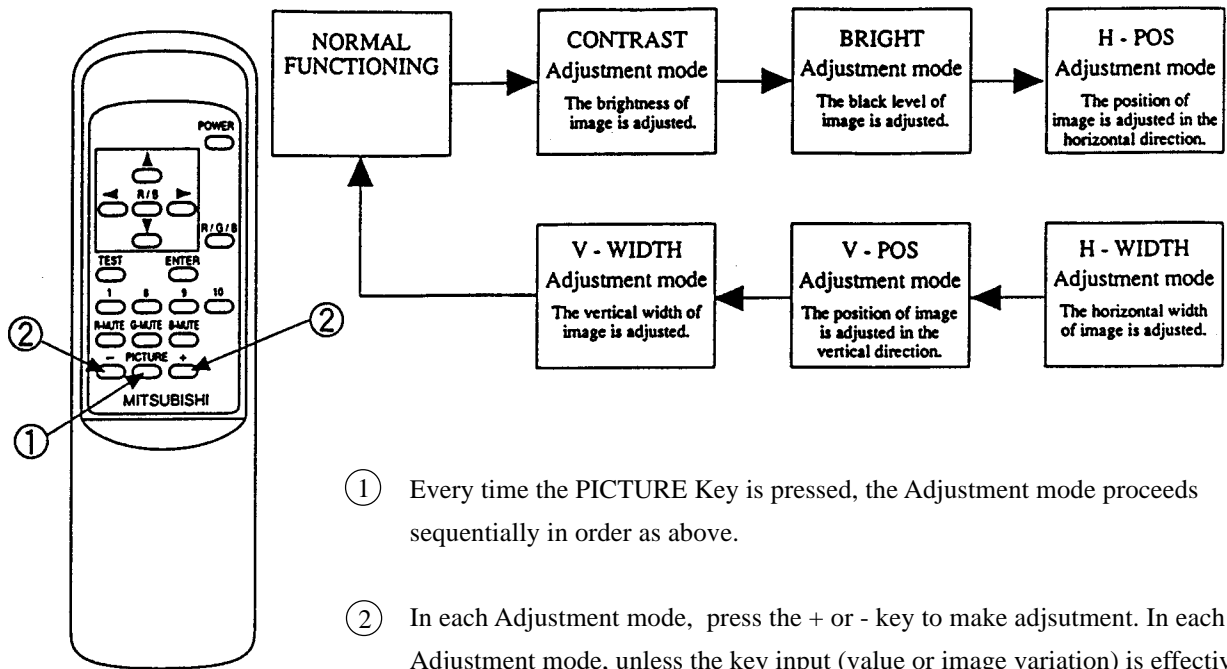
Press SHIFT to superimpose the red line on the green line.



Completion of Adjustment

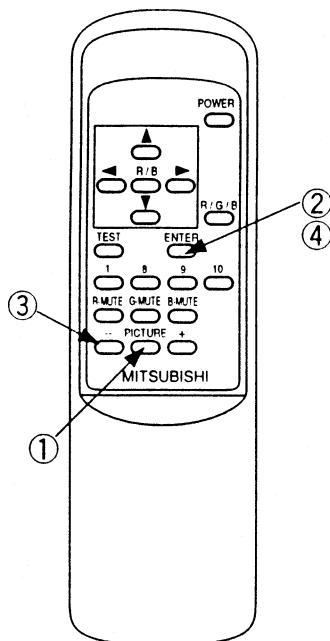
- ① Press the TEST KEY to have the red line adjustment screen appear.
- ② Superimpose the red cross on the green cross at the center of the screen. Move the red cross to the left, right, up, and down respectively with the corresponding arrow keys of the remote control. When the red cross is superimposed 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.



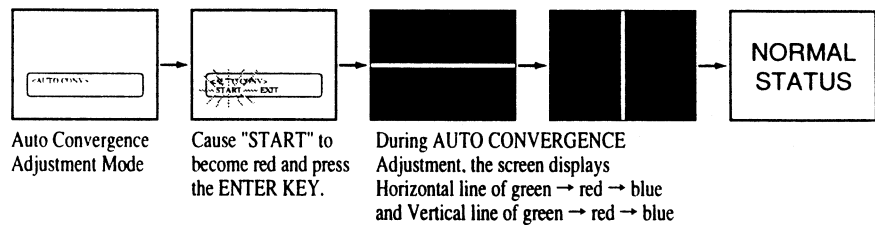
- ① Every time the PICTURE Key is pressed, the Adjustment mode proceeds sequentially in order as above.
- ② In each Adjustment mode, press the + or - key to make adjustment. In each Adjustment mode, unless the key input (value or image variation) is effectively performed within approximately 6 seconds, 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).

AUTO CONVERGENCE ADJUSTMENT



- ① Press the PICTURE KEY to display the AUTO CONVERGENCE Adjustment Mode on the screen (FIG. 12. 2 b).
- ② Press ENTER KEY to display "START EXIT."
- ③ Press the - KEY to cause "START" to become red.
- ④ Press the ENTER KEY to have AUTO CONVERGENCE Adjustment start. The adjustment takes up to 3 minutes at the maximum, and the normal status returns when the adjustment is finished.

If the AUTO CONVERGENCE is not operated satisfactorily due to illumination and malfunctioning, the problem message is displayed on the screen.



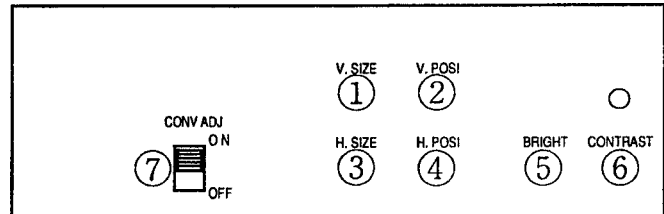
9 - 3 TOSHIBA PROJECTOR



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.

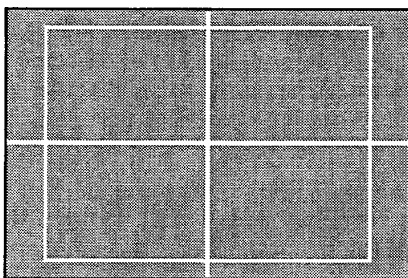
STATIC CONVERGENCE ADJUSTMENT (With the Control Panel)



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.

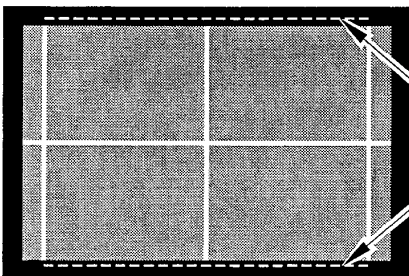
Operate the Remote Control towards the PTV screen. If directed other than to the PTV screen, the Remote Control does not function.



Test Pattern

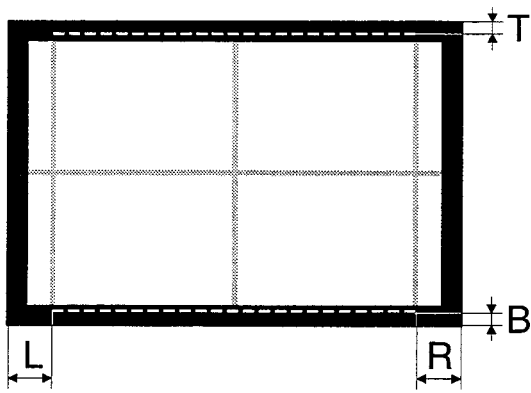
- ① Unless the CONV ADJ SW is ON, remote control operation is not acceptable. At the time of shipment, the SW is set to ON. If remote control is not accepted, check status of this SW.
- ② Direct the remote control towards the PTV screen and keep the Test Key pressed down for approximately 3 seconds.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

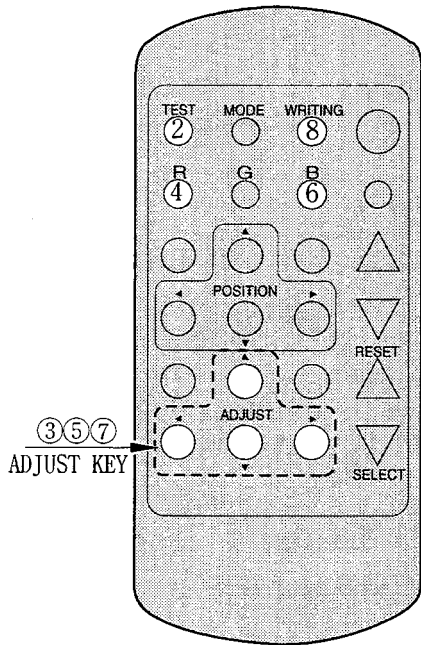


Adjustment Mode

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.

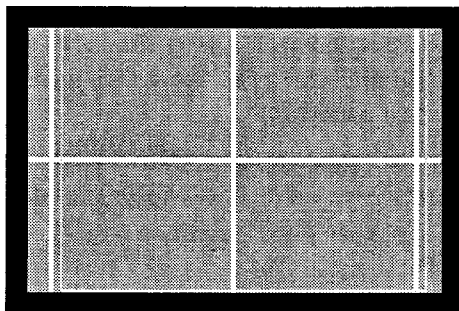
⑤ By operating the Adjust Key of the remote control “up/down/left/right”, have the center red match with that of green. When red color is superimposed on green color, it seems to be yellow.

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.

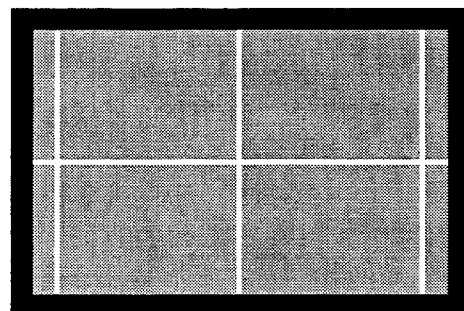
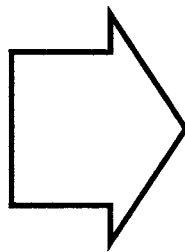
⑦ By operating the Adjust key of the remote control “up/down/left/right”, have the center of the blue match with that of yellow. When blue color is superimposed on yellow color, it seems to be white.

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.



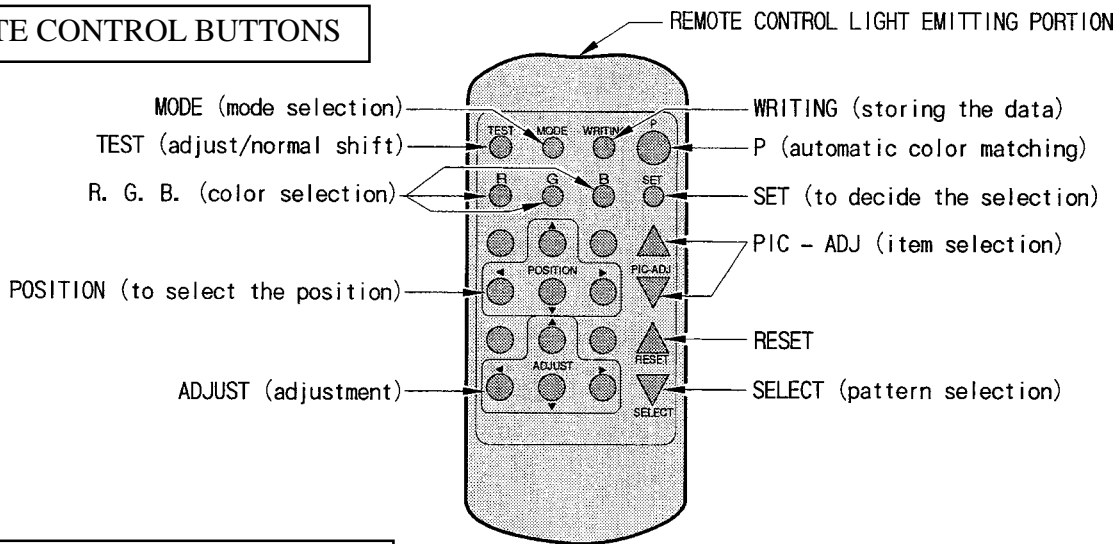
By operating ADJUST Key, have the center of red and blue frame match with that of green frame (the reference color). When the center matches with each other, the frame line becomes white.

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.

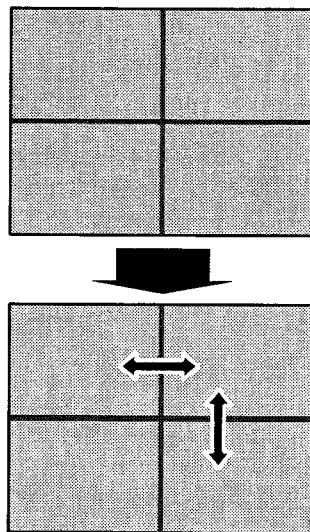
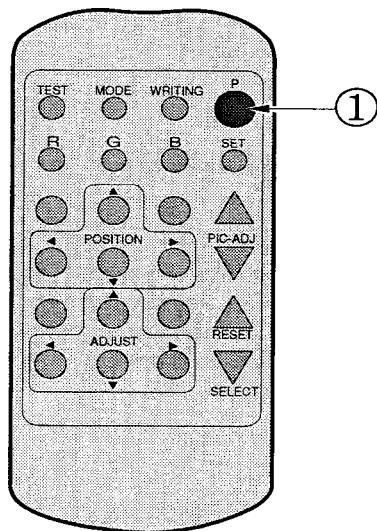
REMOTE CONTROL BUTTONS



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.



The Projector will shift to the color deviation correction mode from the game mode, with the green cross pattern appearing on the screen.

The cross pattern moves up/down and right/left to start the movement of searching the correct screen position and inclination.

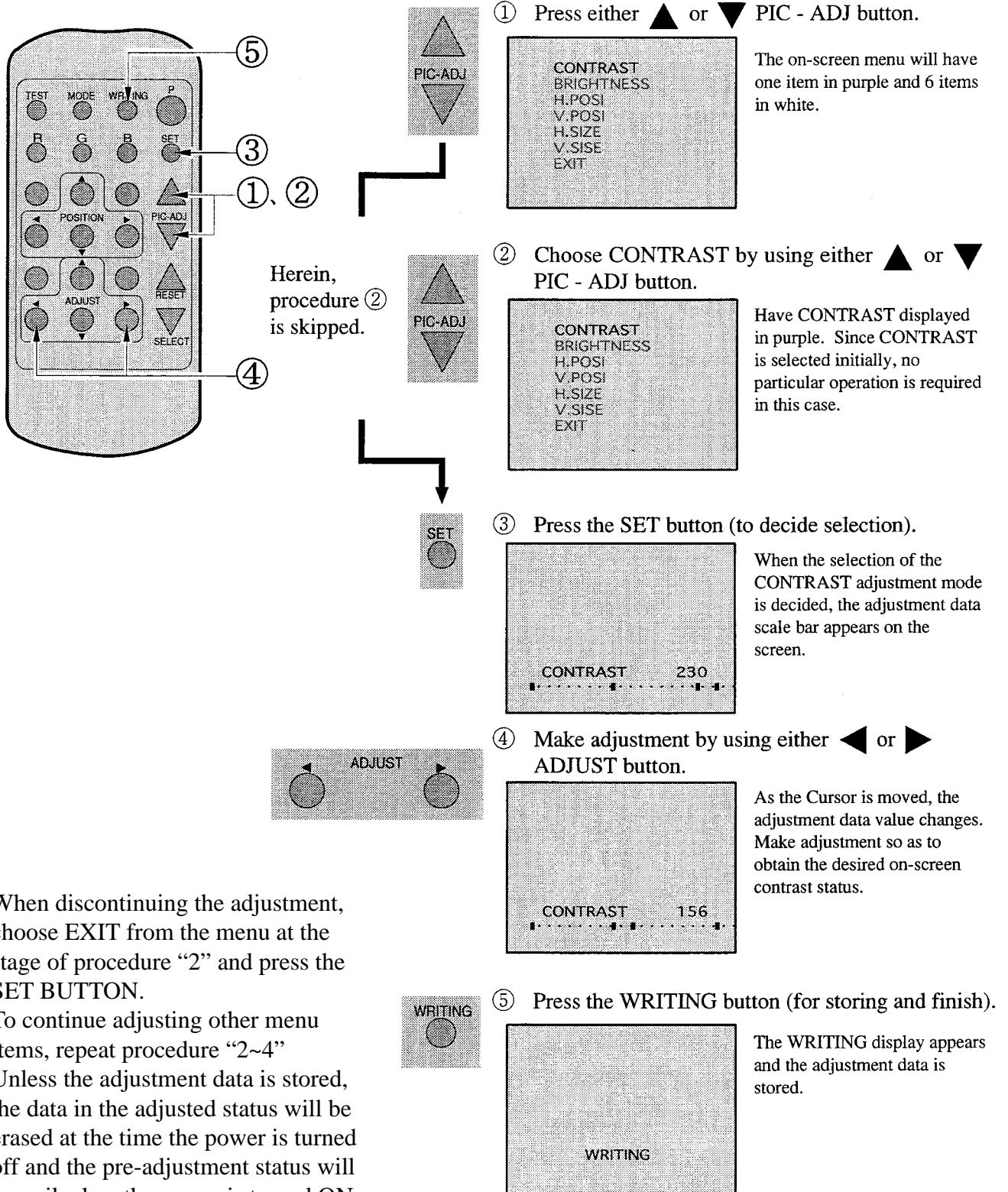
When the green cross pattern movements are finished, similar detection is performed sequentially in order of red and then blue cross movements. After detecting by green, red and blue cross movements, the game mode returns with the color deviation status being corrected.

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

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

ADJUSTING THE ON-SCREEN CONTRAST

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

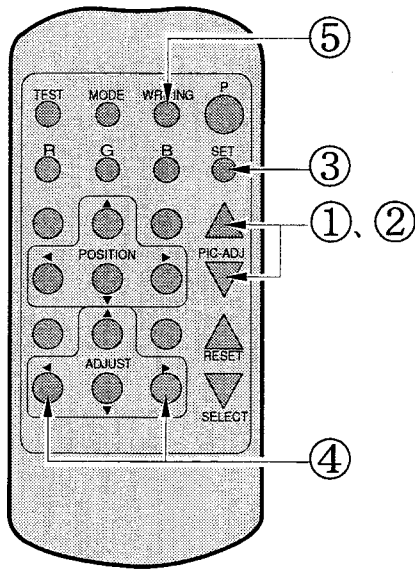


When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure “2” and press the SET BUTTON.

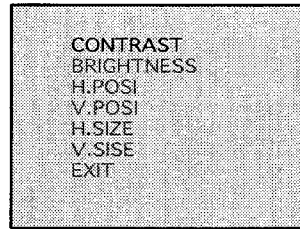
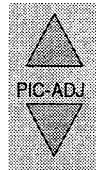
To continue adjusting other menu items, repeat procedure “2~4” Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE ON-SCREEN BRIGHTNESS

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

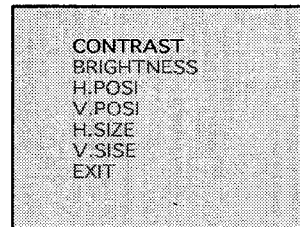
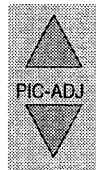


- ① Press either ▲ or ▼ PIC - ADJ button.



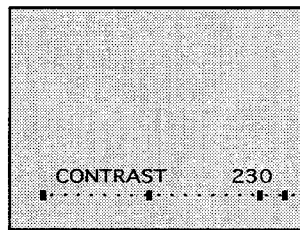
The on-screen menu will have one item in purple and 6 items in white.

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



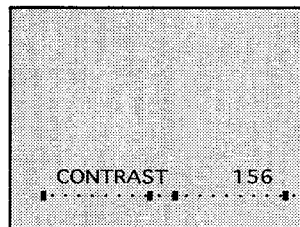
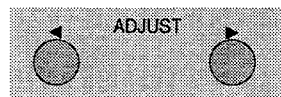
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.

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



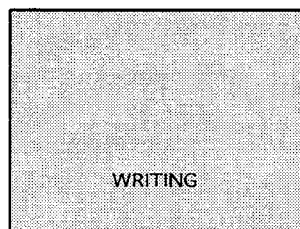
When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.

- 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).



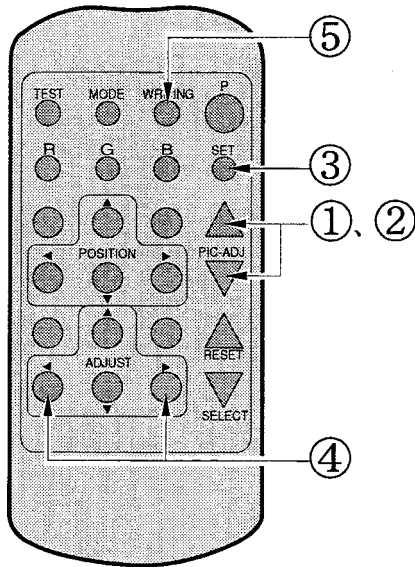
The WRITING display appears and the adjustment data is stored.

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

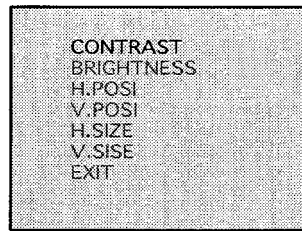
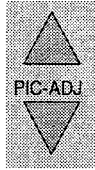
To continue adjusting other menu items, repeat procedure “2~4” Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

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.

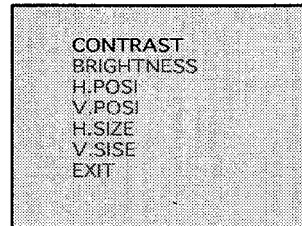
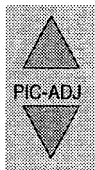


- ① Press either ▲ or ▼ PIC - ADJ button.



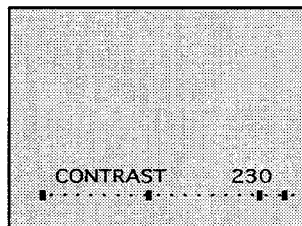
The on-screen menu will have one item in purple and 6 items in white.

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



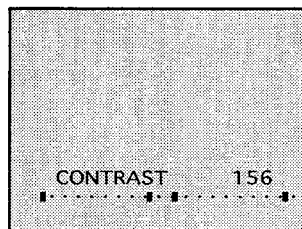
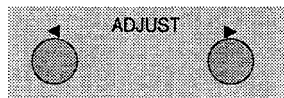
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.

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



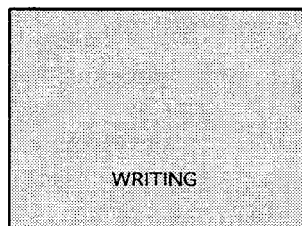
When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.

- 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).



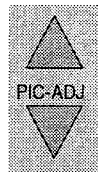
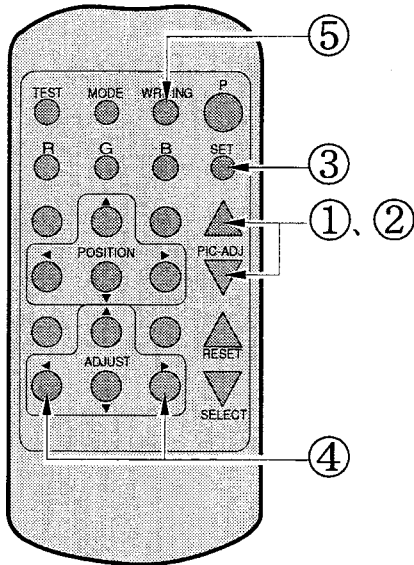
The WRITING display appears and the adjustment data is stored.

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

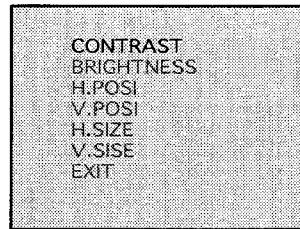
To continue adjusting other menu items, repeat procedure "2~4" Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will prevail when the power is turned ON the next time.

ADJUSTING THE SCREEN SIZE

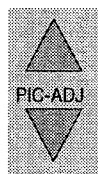
Although the on-screen size (H. SIZE, V. SIZE) has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary.



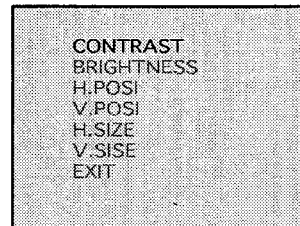
- ① Press either ▲ or ▼ PIC - ADJ button.



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



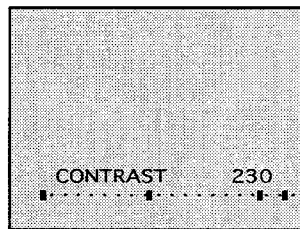
- ② Choose CONTRAST by using either ▲ or ▼ PIC - ADJ button.



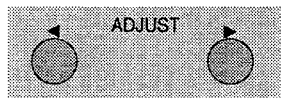
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.



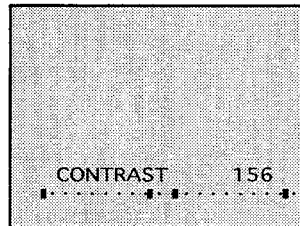
- ③ Press the SET button (to decide selection).



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



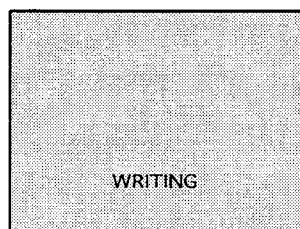
- ④ Make adjustment by using either ◀ or ▶ ADJUST button.



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 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.

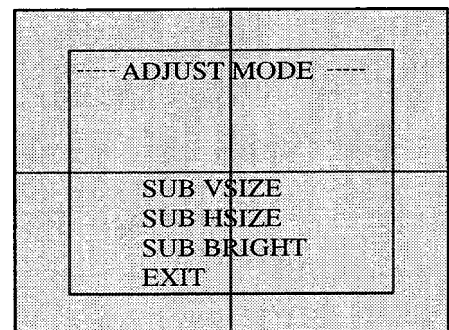
To discontinue adjustment work, keep pressing the TEST button for approximately 3 seconds at the stage before storing the adjustment data by pressing the WRITING button.

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.

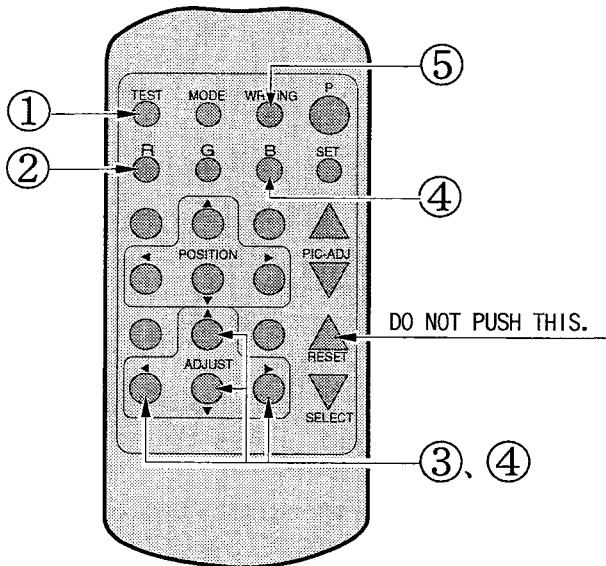
Should the menu shown right be displayed by mistake, first choose EXIT by using either "up or down" PIC-ADJ button and then press the SET button.



Adjustment menu used in the factory.

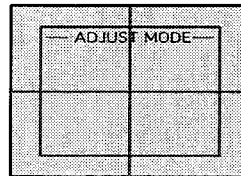
STATIC CONVERGENCE ADJUSTMENT

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.



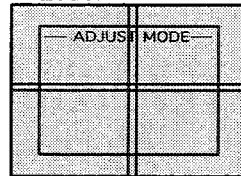
When either of “2” “4” COLOR SELECT buttons (R,B) is pressed, if the color desired to be adjusted disappears, press that particular button again. For example, if the red color needs to be adjusted again at the stage of “4” the R button need to be pressed twice.

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



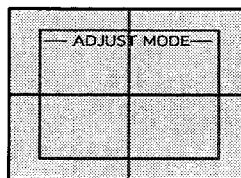
The screen will change to ADJUST mode from the Game mode to cause the green test pattern to be displayed on the screen.

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



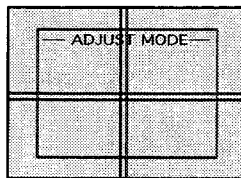
The red test pattern is added to the display. The frame color turns to red and this signifies the red adjustment mode.

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



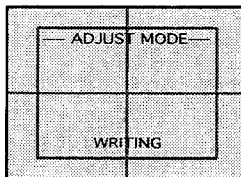
Make adjustment so as to have red superimposed on green. When red is superimposed on green, the color becomes yellow.

- 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.

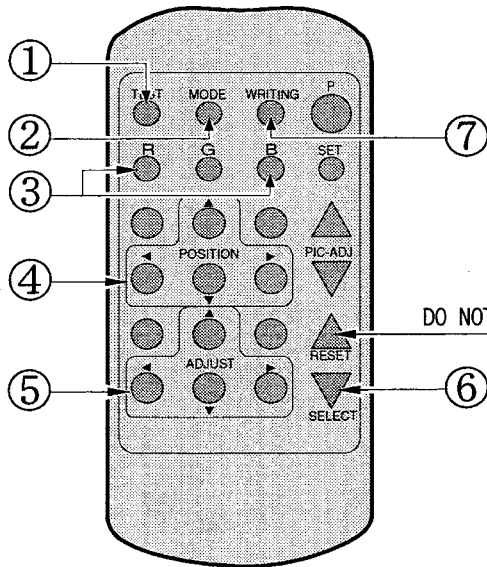
- ⑤ Press the WRITING button (for storing and finish).



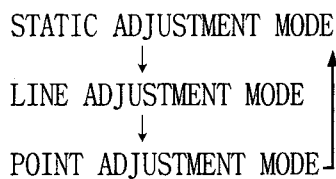
The WRITING display appears and the adjustment data is stored. After the data is stored, the Game mode returns.

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.



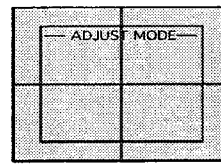
NOTE 1:
When the MODE button is pressed, the adjustment modes will circulate as follows:



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.

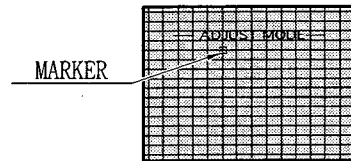
NOTE 3:
By repeatedly pressing the SELECT button, only the Projector's TEST pattern screen and the screen superimposing the Game Board Test pattern can be alternately displayed.

① Keep pressing the TEST button for approximately 3 seconds.



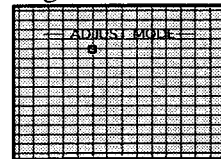
The screen changes to ADJUST mode from the Game mode and displays the green test pattern.

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



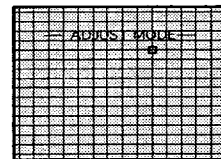
The crosshatch test pattern appears and the MARKER indicating the adjustment point is displayed.

③ 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.



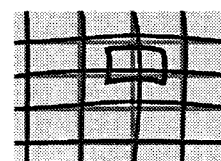
The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

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



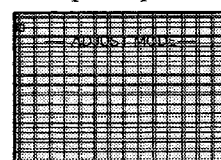
The MARKER moves in the direction of the button's arrow. However, the movable point is predetermined.

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



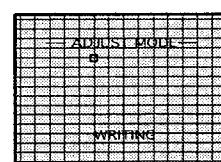
Although the direct vicinity of the MARKER's center moves most conspicuously, make adjustment by paying attention to the periphery area also. Shown left is the magnified MARKER periphery.

⑥ 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.

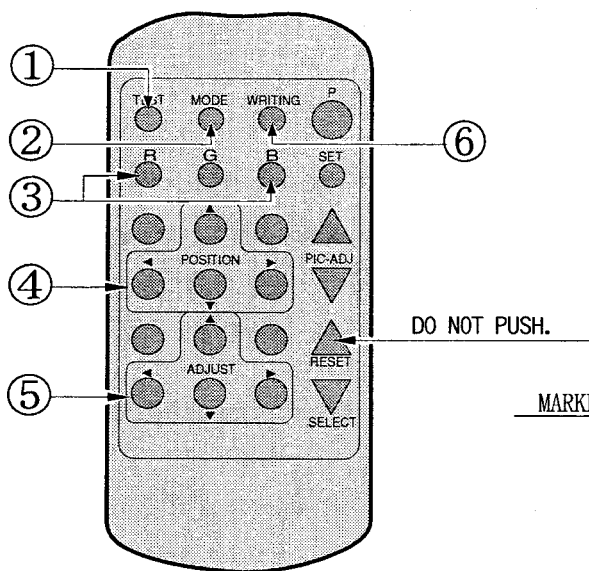
⑦ Press the WRITING button (for storing and finish).



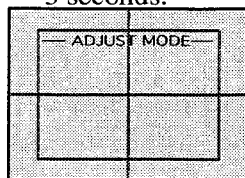
WRITING is displayed and the adjustment data is stored. After the data is stored, the Game Board screen returns.

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.

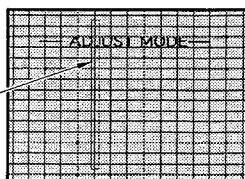


- Keep pressing the TEST button for approximately 3 seconds.



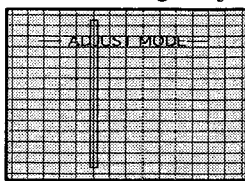
The screen changes to ADJUST mode from the Game Board mode and displays the green test pattern.

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



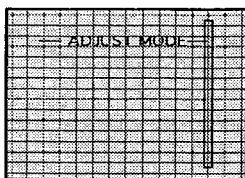
The crosshatch test pattern appears and the vertically long MARKER is shown.

- 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.

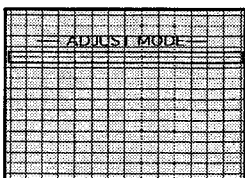


The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

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

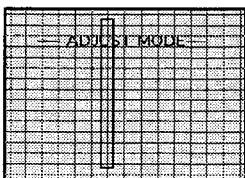


Use the ◀ ▶ buttons to select the column line, and the MARKER moves in the right/left direction. However, the movable range is predetermined.



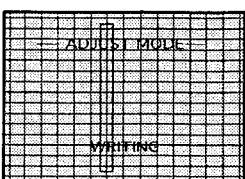
Use the ▲ ▼ buttons to select the row line and the MARKER moves in the up/down direction. However, the movable range is predetermined.

- 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.

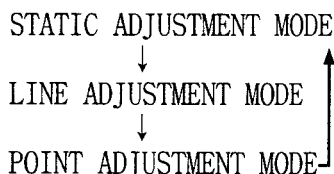
- Press the WRITING button (for storing and finish).



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

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.

10. REPLACEMENT OF FLUORESCENT LAMP AND LAMPS



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

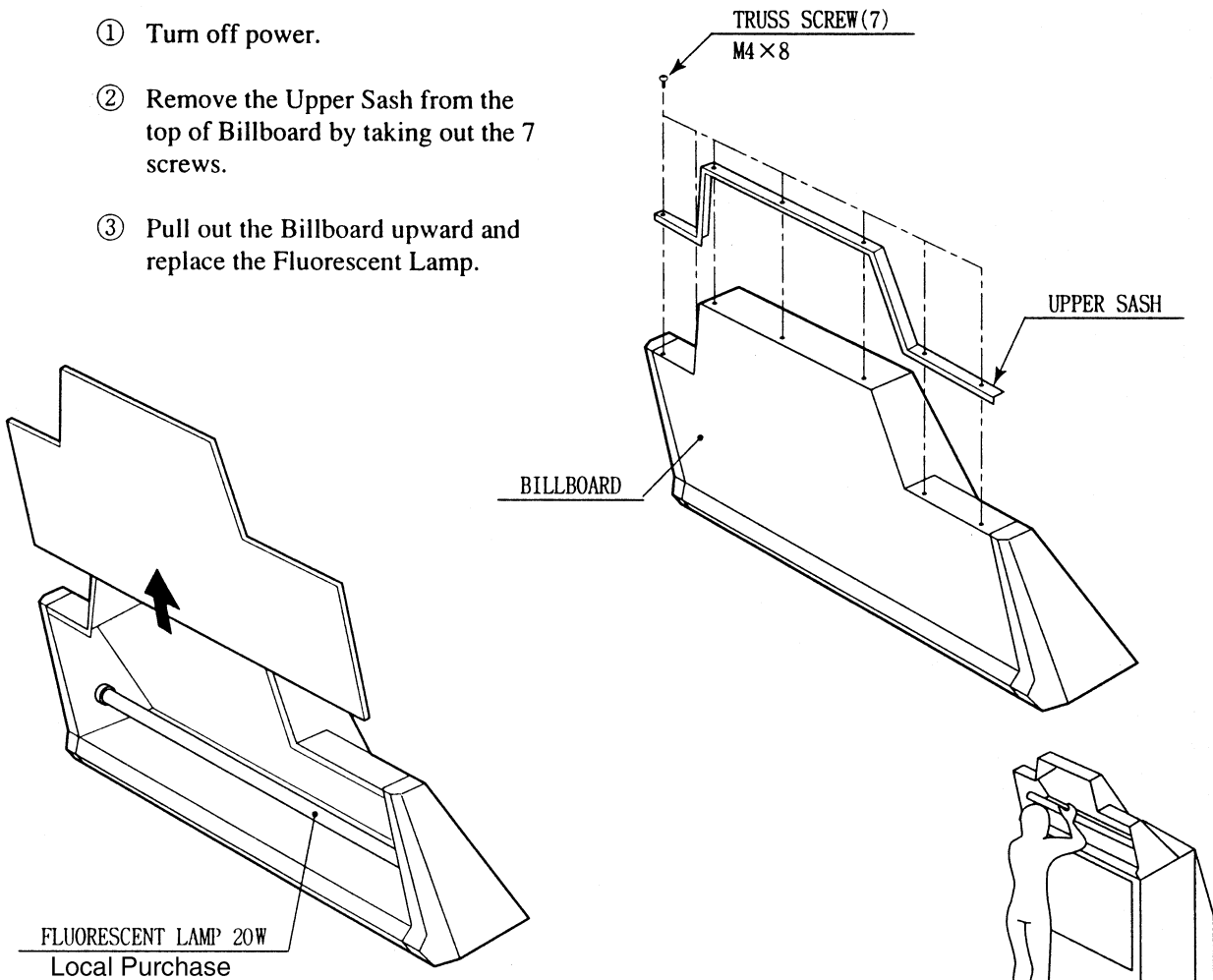


To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Not using a step or using an unstable step can cause a violent falling down accident.

10 - 1 REPLACING THE FLUORESCENT BULB

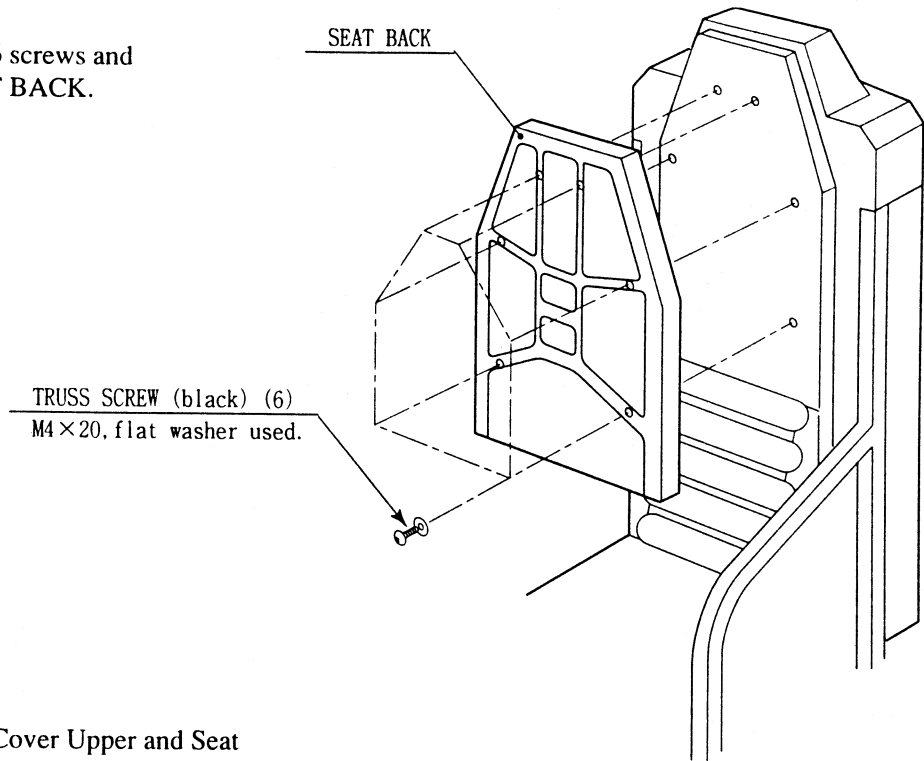
Remove the Billboard Holder and pull out the Billboard to replace the Fluorescent Lamp, and Lamps.

- ① Turn off power.
- ② Remove the Upper Sash from the top of Billboard by taking out the 7 screws.
- ③ Pull out the Billboard upward and replace the Fluorescent Lamp.

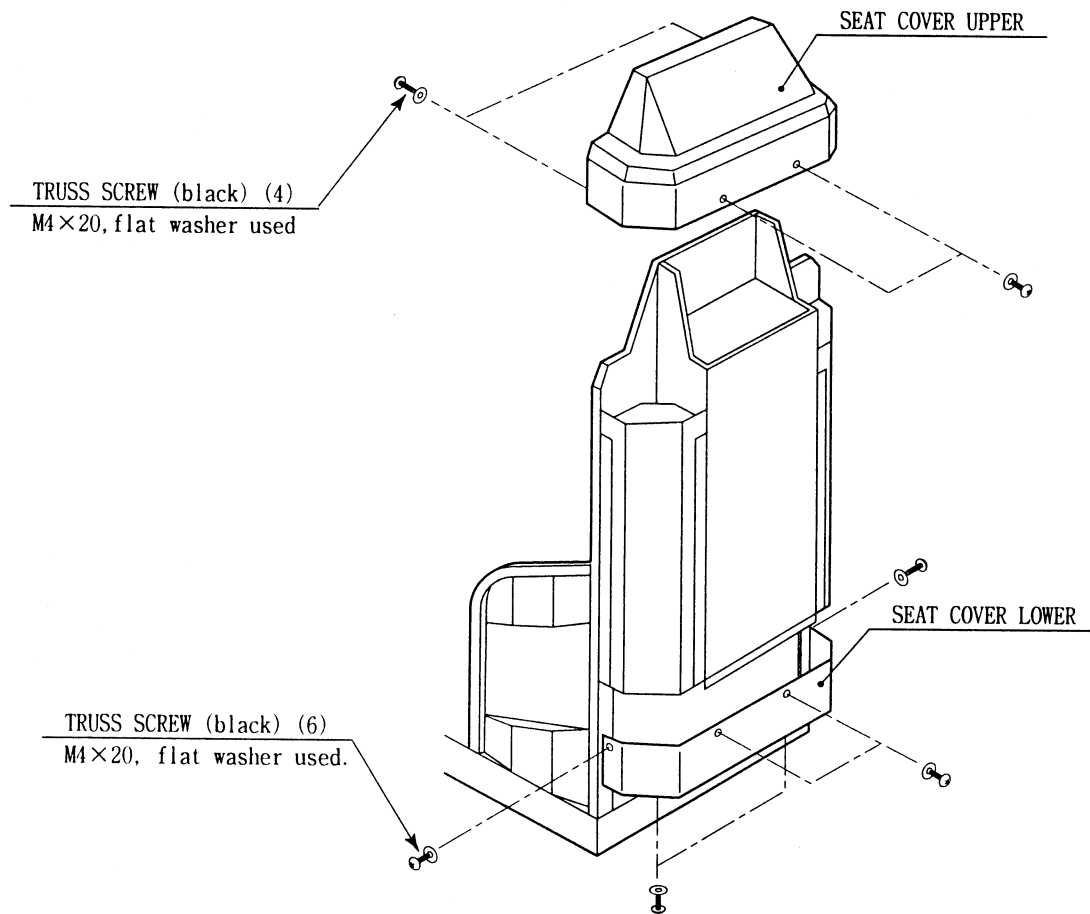


When performing work, prepare a step.

- ① Take out the 6 screws and remove SEAT BACK.



- ② Remove Seat Cover Upper and Seat Cover Lower by taking out the screws from each cover.

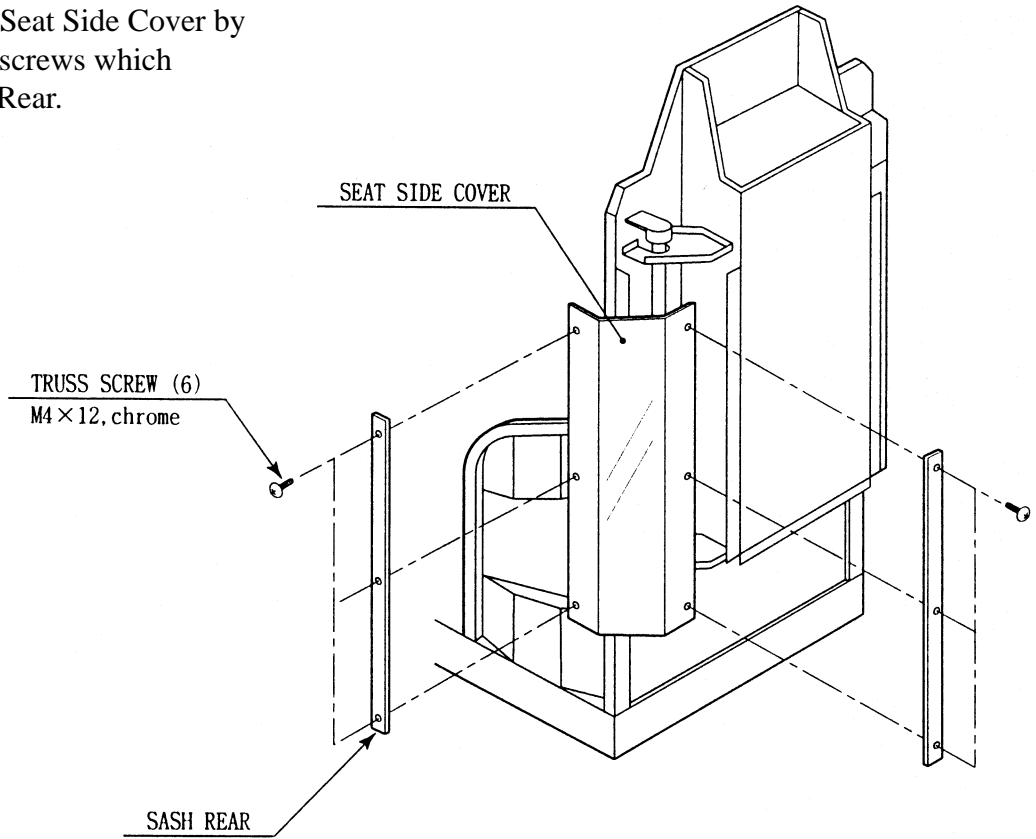




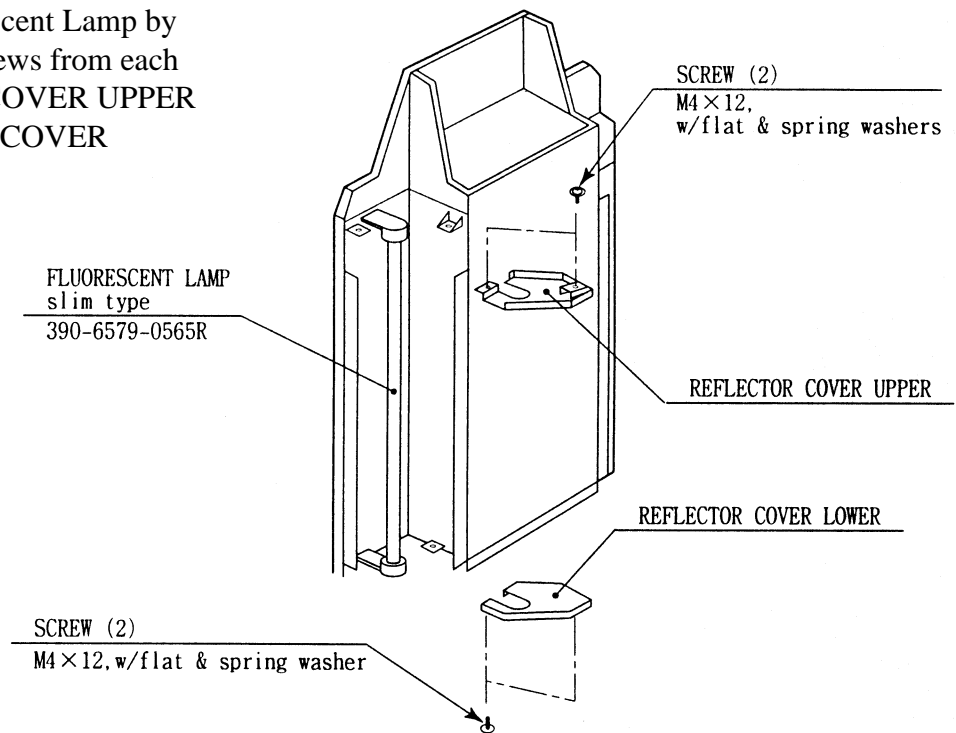
IMPORTANT!

Install SEAT SIDE COVER by securely pressing it against the cabinet.

- ① Remove the Seat Side Cover by taking out 6 screws which secure Sash Rear.



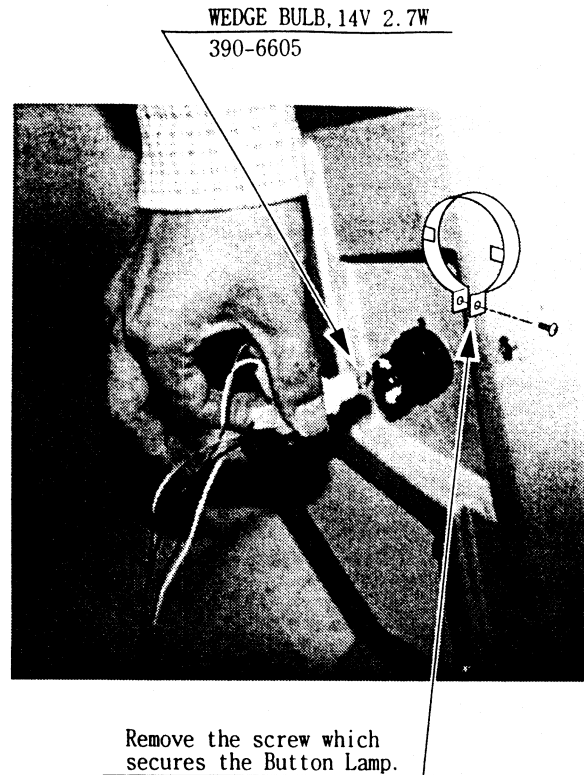
- ② Replace the Fluorescent Lamp by taking out the 2 screws from each of REFLECTOR COVER UPPER and REFLECTOR COVER LOWER



10 - 2 LAMP REPLACEMENT

BUTTON LAMP REPLACEMENT

- ① By referring to the picture at right, remove the Control Cover.
- ② After removing the screw which secures the Button Lamp, hold both sides of the switch portion with fingers and pull it out from the button's base portion as shown. At this time, be careful so as not to damage wiring connected to the switch.
- ③ The Lamp is positioned at the end of switch portion. Pull the lamp out straight without turning it.



REPLACEMENT THE LAMP INSIDE THE CONTROL COVER

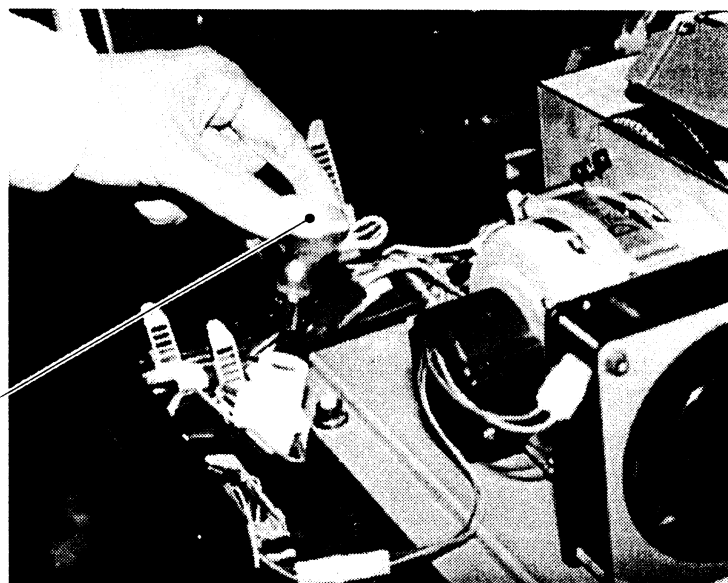


WARNING!

Do not touch the lamp immediately after turning power off. Touching the hot lamp can cause burns.

- ① By referring to the picture shown at right, remove the Control Cover.
- ② Remove the lamp by pressing it lightly.

LAMP 110V 25W
390 5705



11. PERIODIC INSPECTION TABLE

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

When handling the controller, the player will be in direct contact with it. In order to always allow the player to enjoy the game, be sure to clean it regularly.



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

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CONTROL MECHA	Check Volume Value and SW		as required
	Grease to gear portion	Weekly	6
	Check Adj. Gear engagement	Monthly	6
COIN SELECTOR	Check COIN SW	Monthly	6
	COIN SELECTOR cleaning	Trimonthly	8
PROJECTOR	SCREEN cleaning	Weekly	9
	Check adjustments	Monthly	3, 6, 9
GAME BD	Setting check	monthly	6
INTERIOR	Cleaning	Annually	see above.
POWER PLUG	Inspection and cleaning		
CABINET SURFACE	Cleaning	As necessary	see below
CABINET	Ensure that adjusters are in contact with the floor	As necessary	3

CLEANING CABINET SURFACES

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

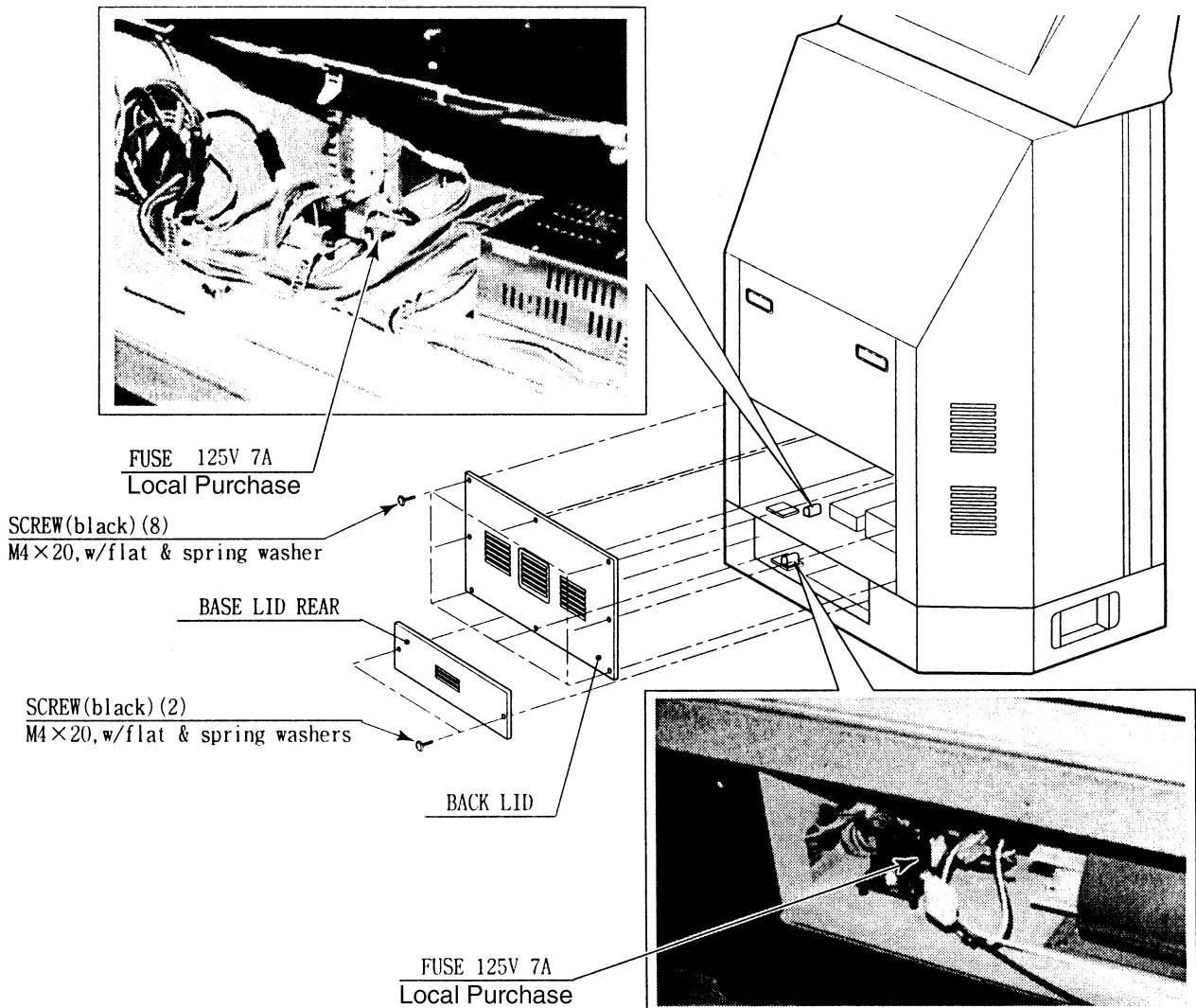
12. TROUBLESHOOTING

Should trouble occur, first check connector connections.

PROBLEMS	CAUSE	COUNTERMEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON. Incorrect power source/voltage. The CIRCUIT PROTECTOR functioned due to momentary overcurrent.	Firmly insert the plug into the outlet. Make sure that the power supply/voltage are correct. First, remove the cause of overcurrent and reinstate the circuit protector to its original status.
The color on PTV screen is incorrect.	Image adjustment is inappropriate.	Adjust appropriately (see Sec.16).
Color deviation on PTV screen.	Affected by peripheral machines or the building's steel frames.	Perform convergence adjustment (see Sec. 12). Change installation direction or position. Move the machine which causes the problem.
No sound is emitted from the Main Speaker.	Connector connection fault. Incorrect volume adjustment. Malfunctioning BD. and Amp.	Check connector connection. Adjust the SWITCH UNIT's sound adjustment volume (control)(see Sec. 9). Perform SOUND TEST (see Sec. 9).
No sound is emitted from the Woofer.	Connector connection fault. Incorrect volume adjustment. Due to momentary overcurrent, fuse is blown. Malfunctioning BD. and Amp.	Check connector connection. Adjust the SWITCH UNIT's sound adjustment volume (control)(see Sec. 9). After removing the cause of overcurrent, replace Fuse (see Sec. 15). 514-5086-3150 FUSE S.B 3150MA 250V HBC CE Perform SOUND TEST (see Sec. 9).
Background music sound is too low.	BGM VOLUME LEVEL need to be increased.	Increase BGM VOLUME LEVEL in the SOUND TEST.
Billboard's Fluorescent lamp does not light up.	Connector connection fault. Fluorescent Lamp needs replacement.	Check connector connection. Replace the fluorescent lamp. (See Sec. 13)
Fluorescent lamp(s) in the rear of the Seat does not light up.	Connector connection fault.	Check connector connection.
Shooting operation can not be performed satisfactorily.	Connector connection fault. Switch malfunctioning.	Check connector connection. In the INPUT TEST of Test mode, check ON/OFF of FIRE 0 & 1. In case of inaction, replace the switch (see Sections 9 and 10).
CURSOR can not be operated satisfactorily.	Connector connection fault. CALIBRATION adjustment failure. Volume malfunctioning.	Check connector connection. In the CALIBRATION TEST of Test Mode, readjust the volume value (see Section 9). Replace the Volume (see Sec. 10).
CONTROLLER reaction is not satisfactory.	Connector connection fault. Game assignments are incorrect. CALIBRATION adjustment failure. Volume deviation. Volume malfunctioning. Gear mesh failure.	Check connector connection. In the GAME ASSIGNMENTS of Test Mode, set the CABINET TYPE to DX. Set FEEDBACK LEVER to ENABLE. In the CALIBRATION TEST of Test Mode, readjust the Volume value (see Sec. 9). Replace the Volume (see Sec. 10). Adjust gear mesh.



- In case fuse replacement other than those stated in this manual are necessary, contact where you purchased the product from for inquiries regarding this manner.
- Fuse replacement other than those specified can cause hazards and are strictly forbidden.
- In order to prevent an electric shock, be sure to turn power off and unplug from the socket outlet before performing work by touching the internal parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause electric shock and short circuit hazards.
- Be sure to use fuses meeting the specified rating. Using fuses exceeding the specified rating can cause of the fire and electric shock hazards.
- After eliminating the cause of the blowing of fuse, replace the fuse. Depending on the cause of fuse blowing, continued use with fuse as is blown can cause generation of heat and fire hazard.



13. 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.

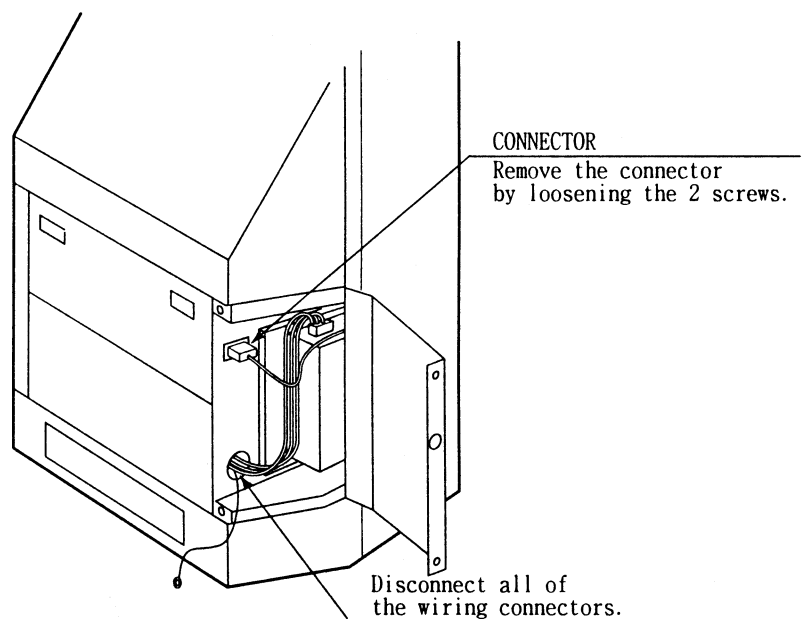
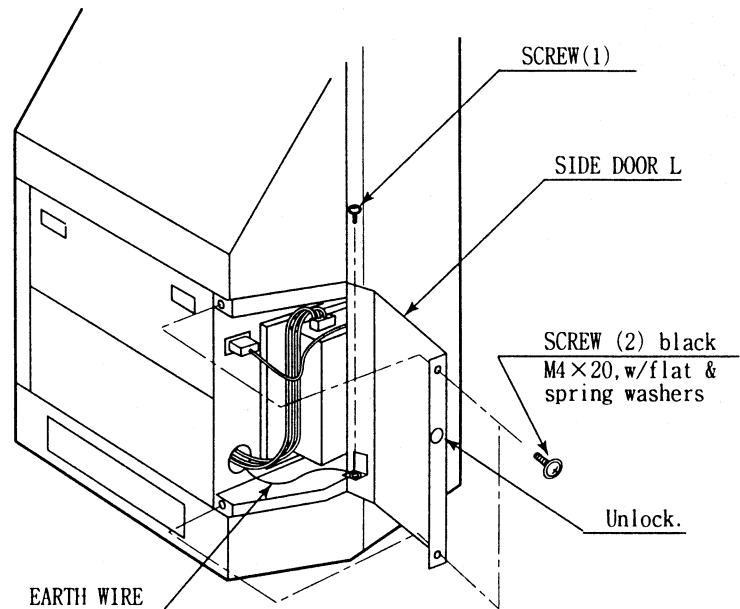


Do not expose the Game BD, etc. without a good reason. In this product, setting changes are made during the test mode. The Game BD need not be operated. Use the Game BD, etc. as is with the same setting made at the time of shipment. The electronic parts on the IC Board could be damaged due to human static electricity.

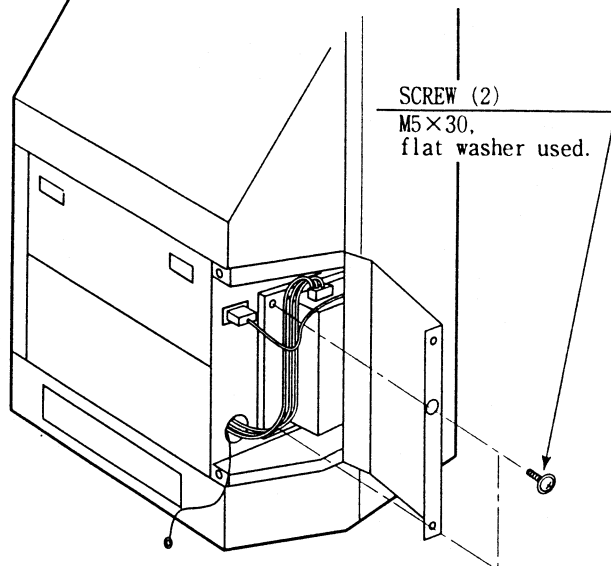
13 - 1 GAME BOARD

When replacing or inspecting the Game BD, take out the Game BD by using the following procedure:

- ① Turn the AC unit's Main SW OFF.
- ② Remove the 2 Truss screws (black) from the upper face of the Front Cabinet, unlock with the Master Key to open the Service Lid.
- ③ Take out the 2 screws shown to remove a total of 6 connectors.
- ④ Hold the catch of the Shield case Base and pull out upward.
- ⑤ Take out the 3 screws to remove the Case Lid from the Shield Case. The Game Board can be viewed.

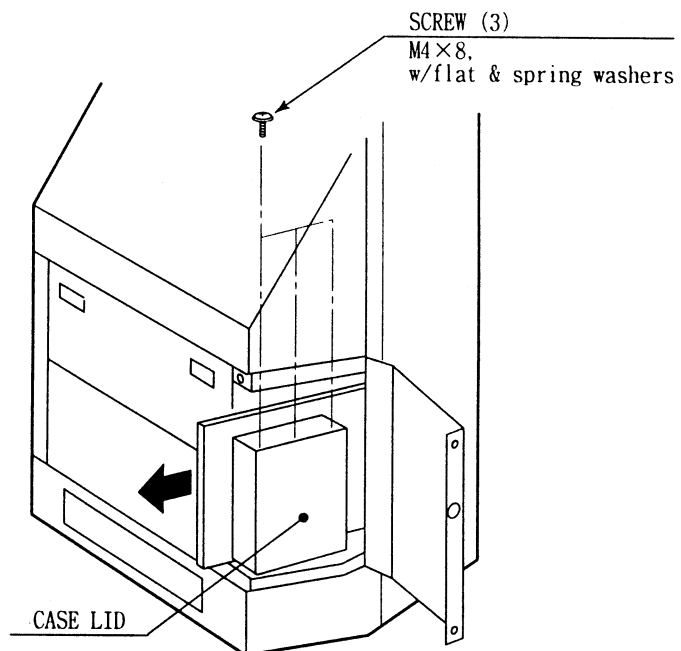


- ⑥ Remove the 2 screws which secure the wooden base on which the Shield Case is mounted.



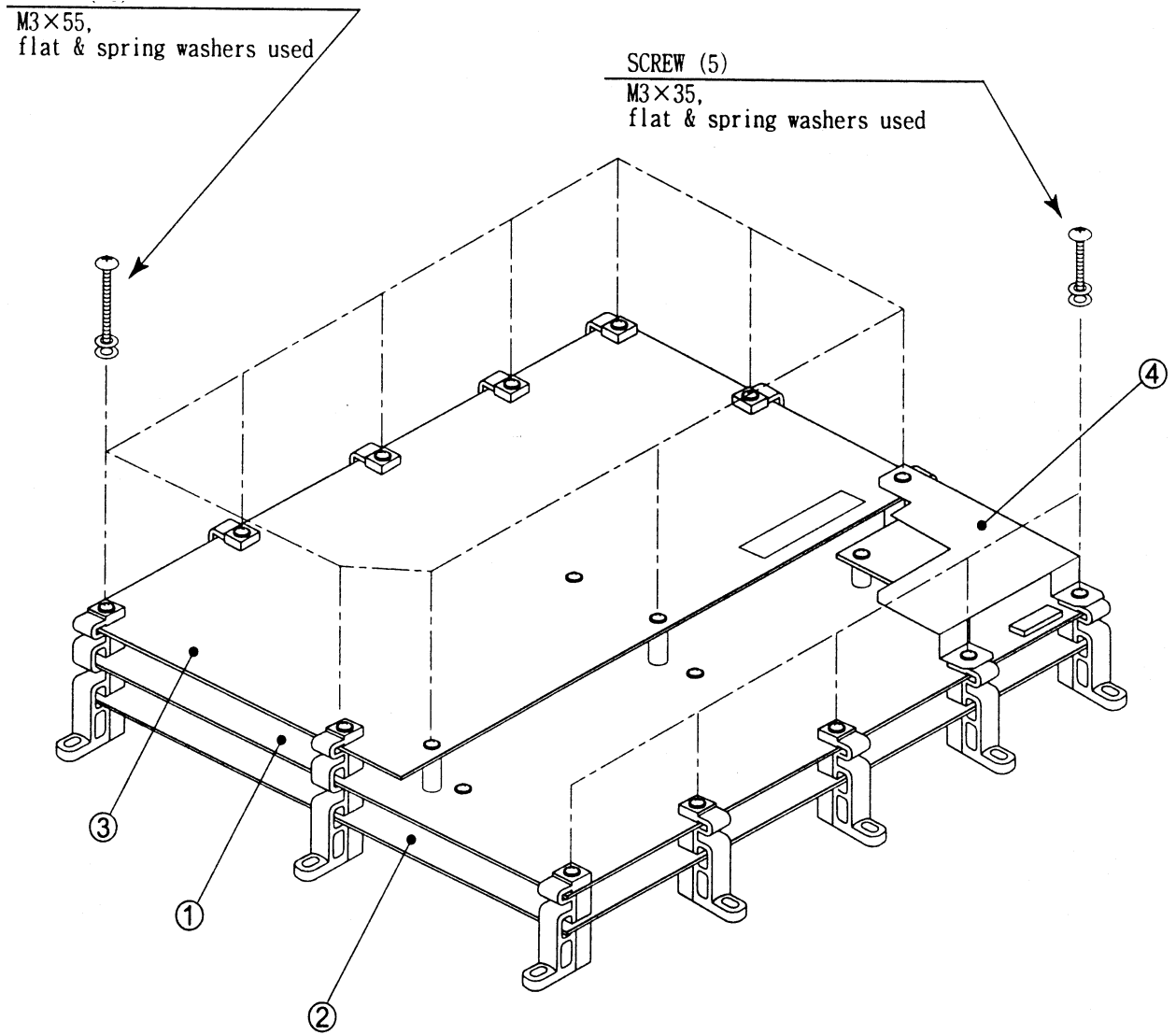
- ⑦ Withdraw the wooden base with the Shield Case as is mounted. At this time, use care so as not to damage the wiring.

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



13 - 2 COMPOSITION OF GAME BOARD

GAME BD OCEAN HUNTER (833-13571)



No.	PART No.	DESCRIPTION
1	837-12715-91	MODEL3 STEP2 CPU BOARD
2	837-13368	MODEL3 STEP2.1 VIDEO BD
	837-12716-91	MODEL3 STEP2 VIDEO BDARD
3	834-13587	ROM BD STAR WARS TRILOGY
4	837-13588-COM	PFSB SEC BD STW COM



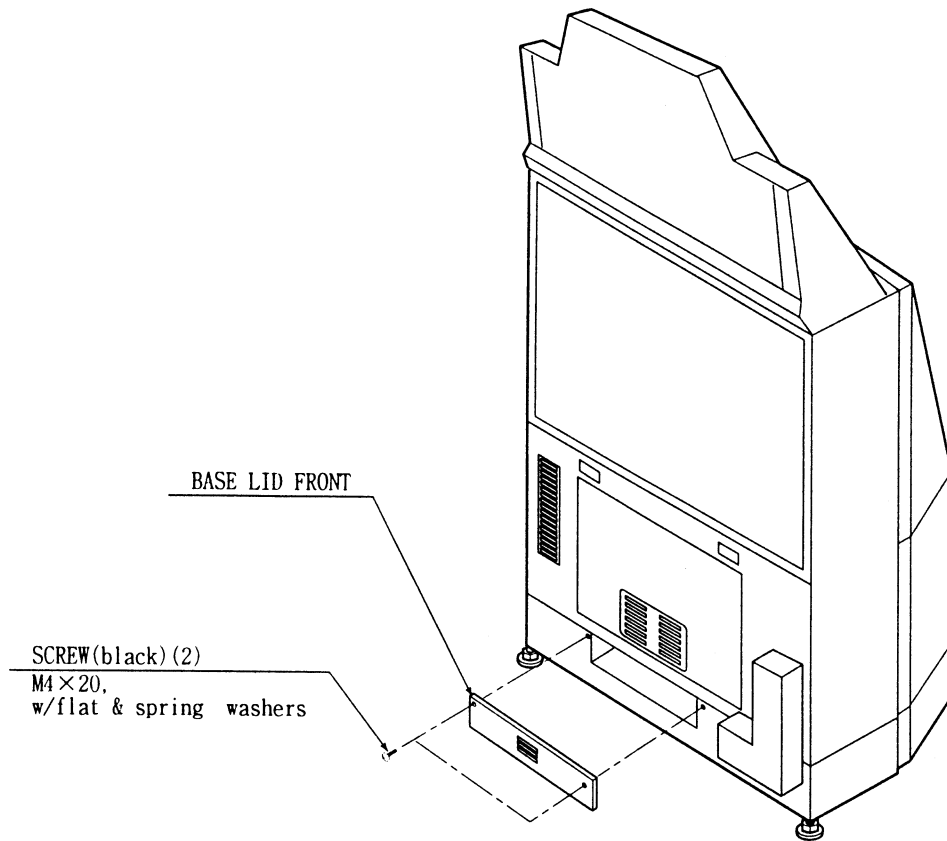
Use care so as not damage wirings. Dmaged wirings can cause electric shock and short circuit accident.
 Do not touch places other than those specified. Touching places not designated can cause electric shock and short circuit hazards.

If an irregularoity occurs in the Drive Board, etc., the ERROR message is shown on the 7-SEG display of the Drive Board. Take countermeasures in the manner corresponding to the ERROR message.

Among the ERROR display as per The tabel shown below, each of Er01 and 02 is displayed at the time an irregularity is found during intialization setting movements when power is turned on, and each of Er 20, 21, 22, and 23, is displayed at the time an irregularity is found when power off and on again message being displayed on the screen.

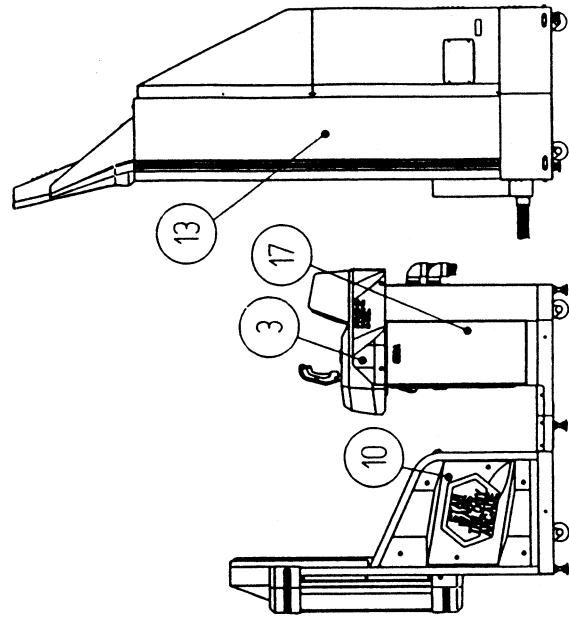
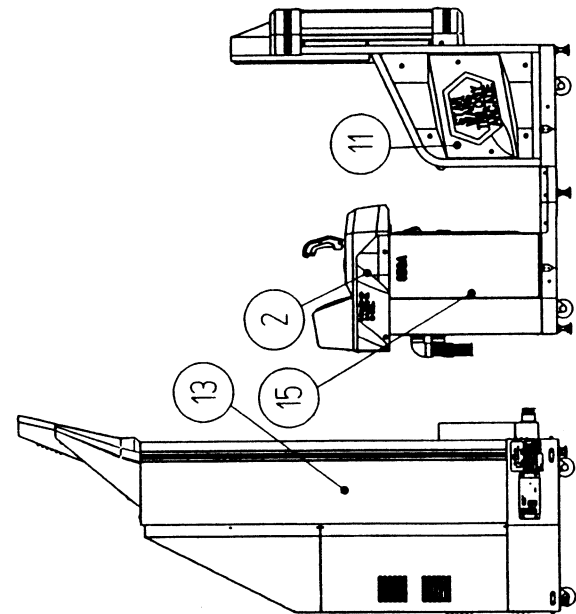
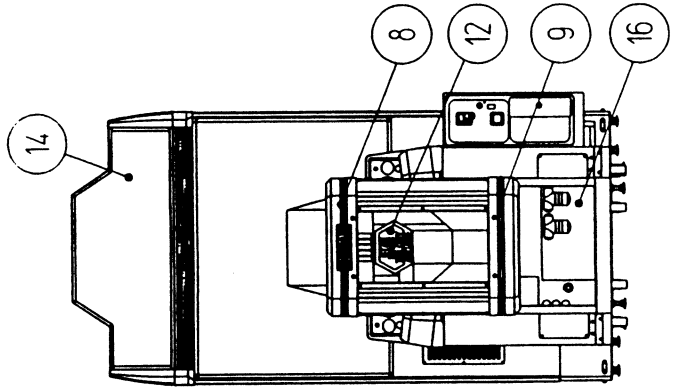
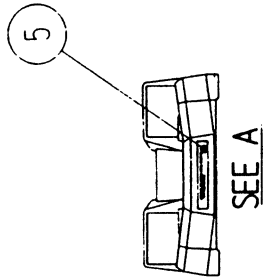
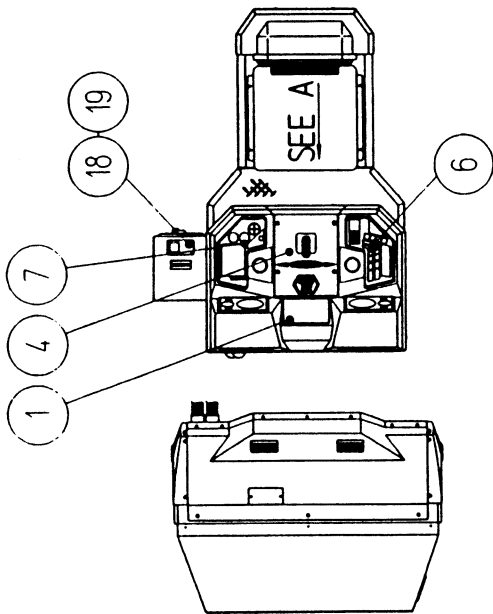
Among the ERROR display as per The Table shown below, each of Er 23, 24, and 25 is displayed when an irregularity is found during game play and ADVERTISE MODE. When an irregularity is found, game proceeds without GRIP reaction.

On-screen ERROR display	7-SEG display on Drive BD.	ERROR	CAUSE/COUNTERMEASURES
"FAILED FEEDBACK LEVER INITIALIZE. POWER OFF AND RESTART THIS SYSTEM." is displayed on the screen and game is finished.	Er 01	ROM ERROR	Malfunctioning of Drive Board. Replace Drive Board.
	Er 02	RAM ERROR	
	Er 20 Er 21	Initialization setting irregularity of motor	Irregularity during initialization setting movement. Finish initialization setting movement by turning power off and then on. Note that when ERROR is displayed,the malfunctioning relates to the Motor System (Motor, Drive BD.which controls the Motor, wirings in between, etc.) Er 20 relates to an Error of X axis and Er 21, Y axis.
	Er 22 Er 23	GRIP CENTERING ERROR	Malfunctioning during INITIALIZATION. Turn off power and turn it back on again to end initialization. If Error is displayed, GRIP VOLUME SYSTEM is malfunctioning. Er 22 relates to an Error of X axis and Er 23, Y axis.
	Er 24 Er 27	ERROR of the Encoder.	Malfunctioning which occurs during operation. First turn the power off and after 10 min., turn it back on again. Note that when this Error is displayed, the malfunctioning relates to the Motor System. Er 24 ~ 26 relate to X axis error and Er 27 ~ 29, Y axis error.
Er 25 Er 28	Overcurrent ERROR		
Er 26	Overheat/Overload		
Er 29			



When GRIP irregularity is found, remove the BASE LID FRONT and the FRONT of the Front Cabinet WITHOUT TURNING POWER OFF, and check the 7-SEG display on the Drive Bd. At this time, if the power is turned off, each of Er 24, 25, 26, 27,28, and 29 which could have occurred during operation may not be displayed. Wirings are connected inside the BASE LID FRONT. When removing BASE LID FRONT, be very careful so as not to damage the wirings.

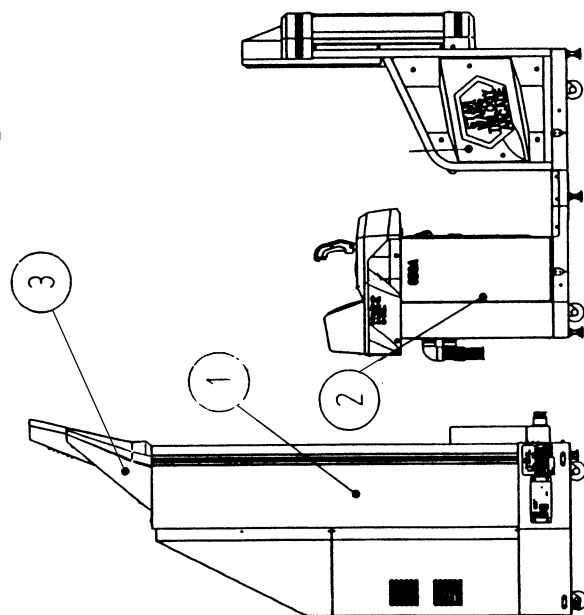
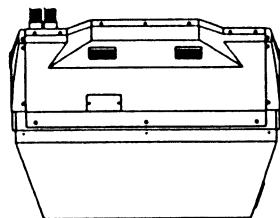
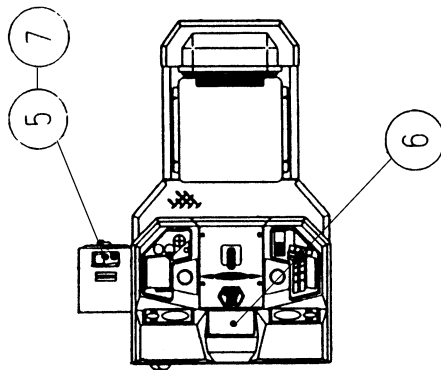
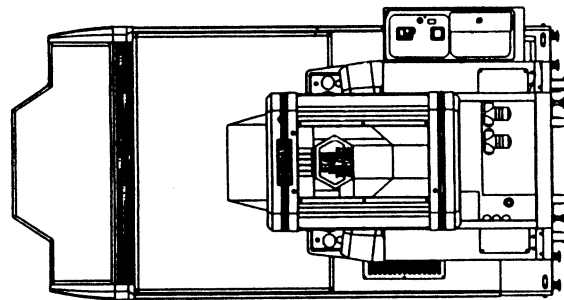
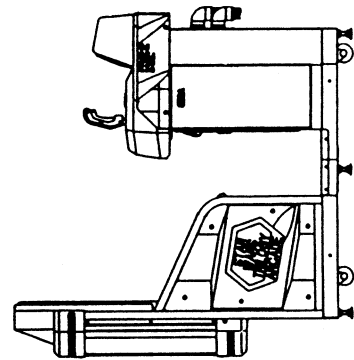
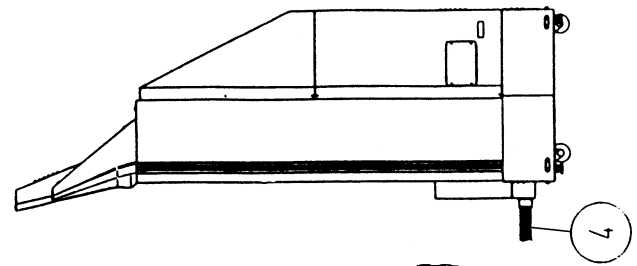
14. DESIGN RELATED PARTS



ITEM NO.	PART NO.	DESCRIPTION
1	422-0707	PLAY INSTR SH STW DX
2	STW-3041-B	STICKER CONTROL PANEL L
3	STW-3041-C	STICKER CONTROL PANEL R
4	STW-3041-D	STICKER CONTROL PANEL C
5	STW-3041-E	STICKER CONTROL PANEL F
6	STW-2004	CNTR SIDE PLATE L
7	STW-2005	CNTR SIDE PLATE R
8	STW-3214-B	STICKER SEAT UPPER
9	STW-3215-B	STICKER SEAT LOWER
10	STW-3219-B	STICKER SEAT SIDE R
11	STW-3220-B	STICKER SEAT SIDE L
12	STW-3221	STICKER SEAT BACK A
13	STW-1006	STICKER PT
14	STW-0508	BILLBOARD PLATE
15	STW-3010	STICKER PILLAR
16	STW-3222	STICKER SEAT BACK B
17	STW-3102	STICKER COIN BOX
18	DYN-0011	DENOMI PLATE W/O ORIGINAL
19	421-7308~	DENOMINATION SHEET 1 GAME

15. PARTS LIST

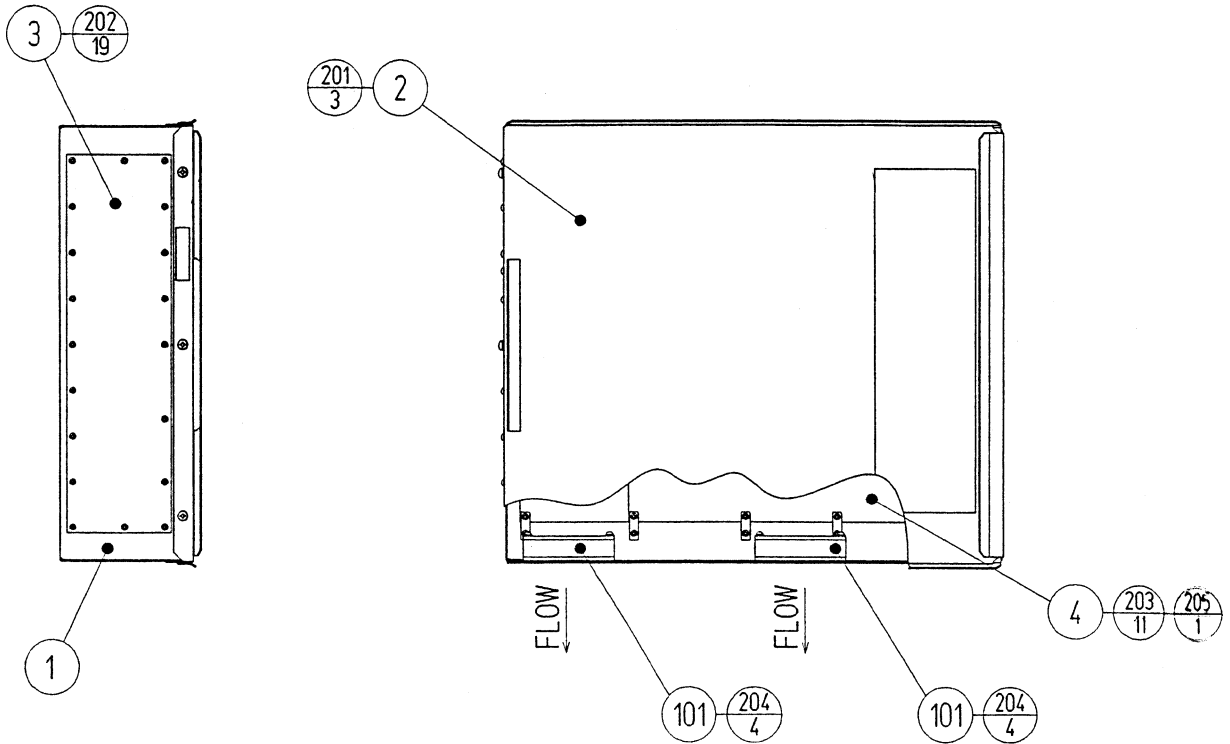
TOP ASSY STAR WARS DX



TOP ASSY STAR WARS DX

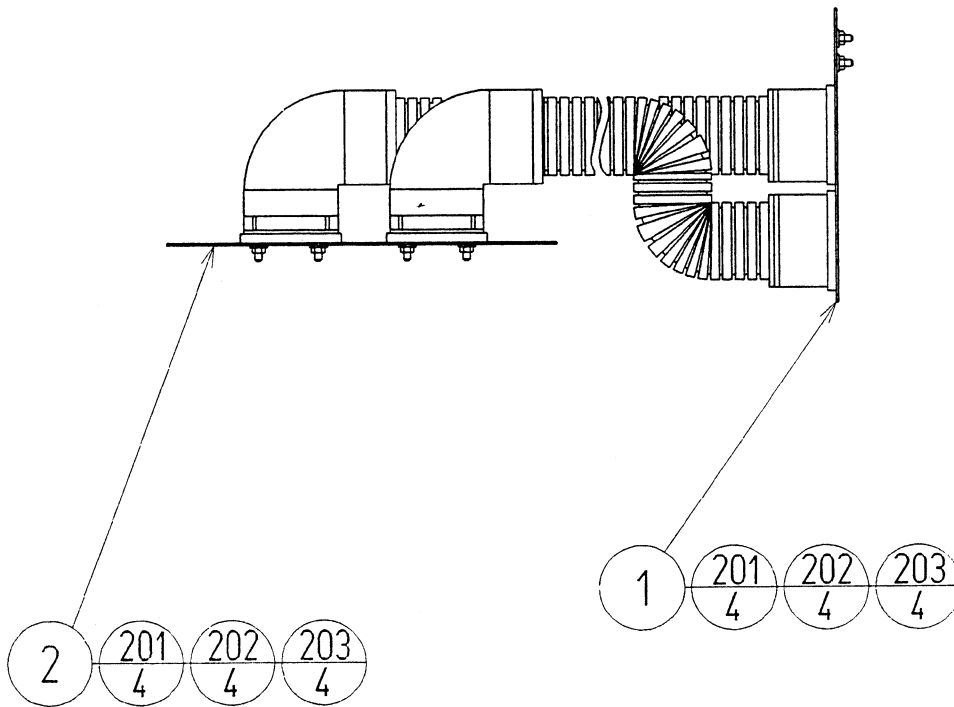
ITEM NO.	PART NO.	DESCRIPTION
1	STW1-1000	ASSY FRONT CABINET
2	STW1-3000	ASSY REAR CABINET
3	STW1-0500	ASSY BILLBOARD
4	STW-0200	ASSY TUBE
5	DYN-0011	DENOMI PLATE W/O ORIGINAL
6	422-0707	PLAY INSTR SH STW DX
7	421-7308~	DENOMINATION SHEET 1GAME~

ASSY SHIELD CASE MAIN (STW-0100)



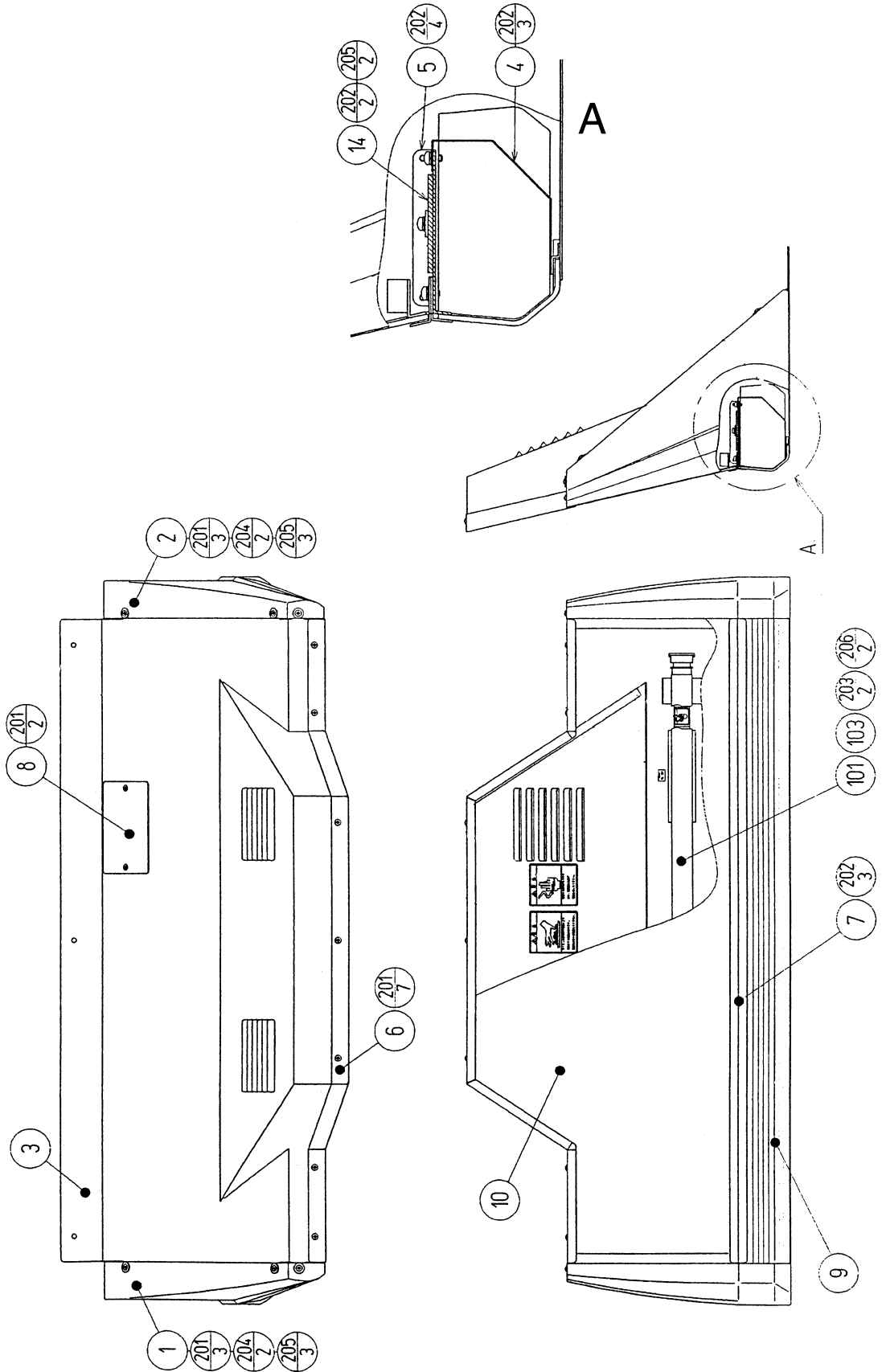
ITEM NO.	PART NO.	DESCRIPTION
1	105-5245X	SHIELD CASE MODEL3 NVS
2	105-5242X	SHIELD CASE LID MODEL3
3	839-0951	FILTER BD MODEL3 JPT
4	833-13586	GAME BD STW TRILOGY
101	260-0064	FAN MOTOR DC12V
201	000-P00408-W	M SCR PH W/FS M4X8
202	010-P00308-F	S-TITE SCR PH W/F M3X8
203	010-P00310-F	S-TITE SCR PH W/F M3X10
204	000-P00320-W	M SCR PH W/FS M3X20
205	010-P00365-F	S-TITE SCR PH W/F M3X65

ASSY TUBE (STW-0200)



ITEM NO.	PART NO.	DESCRIPTION
1	STW-0201	TUBE BRKT FRONT
2	STW-0202	TUBE BRKT REAR
201	050-H00400	HEX NUT M4
202	060-F00400	FLT WSHR M4
203	060-S00400	SPR WSHR M4

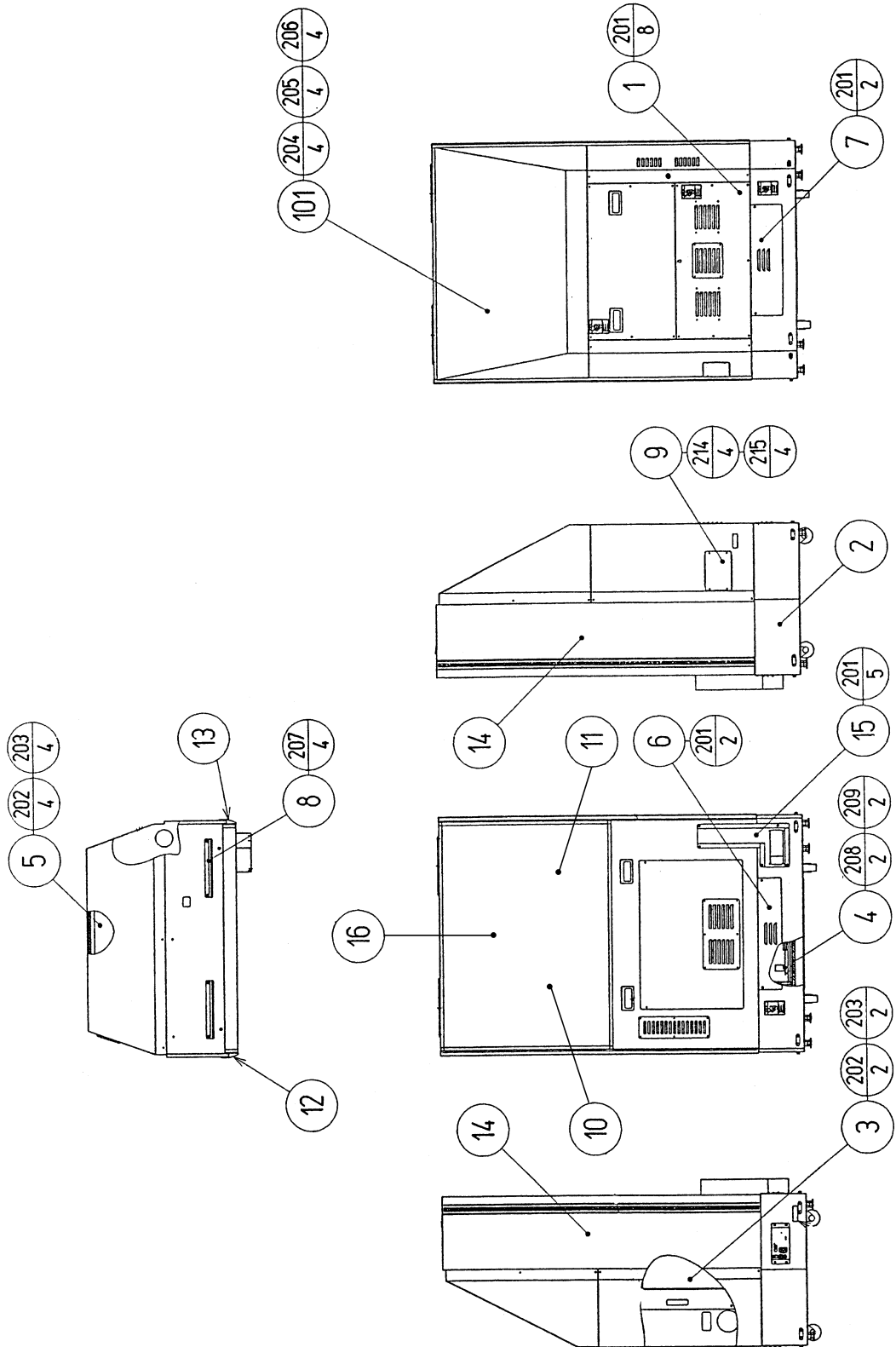
ASSY BILLBOARD (STW1-0500)



ASSY BILLBOARD (STW1-0500)

ITEM NO.	PART NO.	DESCRIPTION
1	STW-0501	BILLBOARD SIDE COVER L
2	STW-0502	BILLBOARD SIDE COVER R
3	STW-0503	BILLBOARD BOX
4	SPG-0504	REFLECTOR
5	SPG-0505	CENTER BRKT
6	STW-0504	UPPER SASH
7	SPG-0507	LOWER SASH
8	STW-0506	HOLE LID BILLBOARD
9	STW-0507	PLATE LOWER
10	STW-0508	BILLBOARD PLATE
14	SPG-0509	CENTER PLATE
101	LOCAL PURCHASE	ASSY FL30W EX W/CONN HIGH T CE
103	LOCAL PURCHASE	FL HOLDER
201	000-T00408-0B	M SCR TH BLK M4X8
202	000-P00408-W	M SCR TPH W/FS M4X8
203	000-P00430-S	M SCR PH W/S M4X30
204	000-F00410	M SCR FH M4X10
205	068-441616-0B	FLT WSHR BLK 4.4-16X1.6
206	068-441616	FLT WSHR 4.4-16X1.6

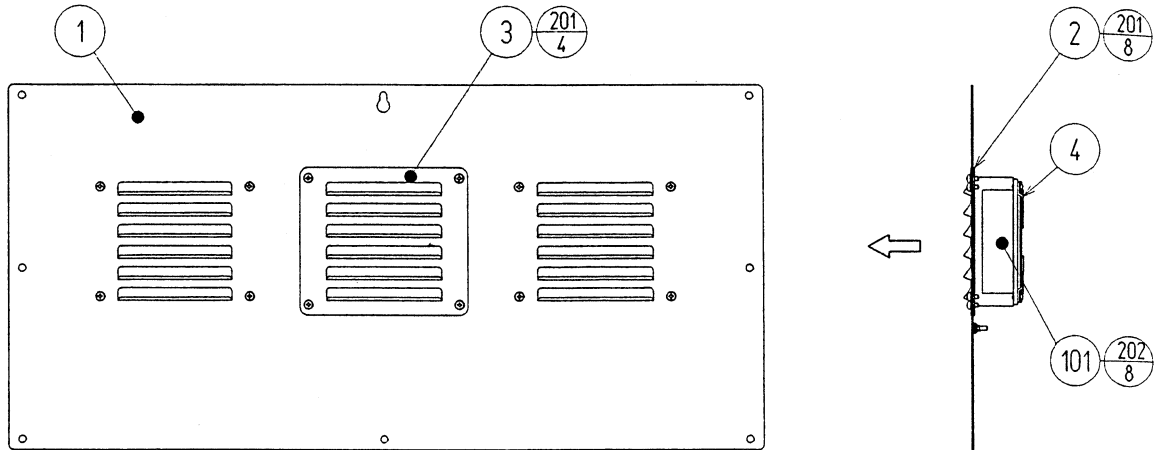
ASSY FRONT CABI (STW1-1000)



ASSY FRONT CABI (STW1-1000)

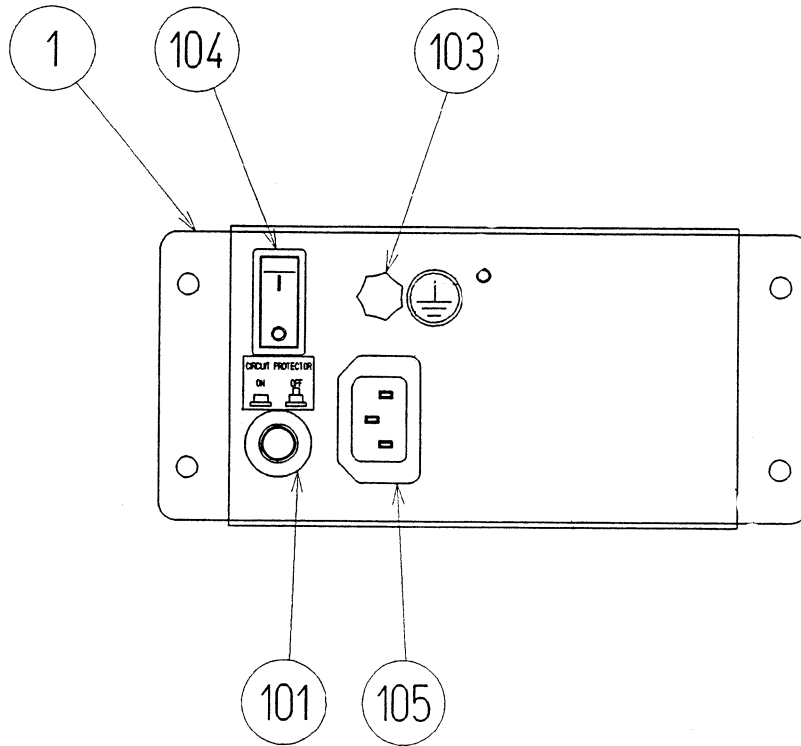
ITEM NO.	PART NO.	DESCRIPTION
1	STW-1020	ASSY BACK LID
2	STW1-1100	ASSY FRONT BASE
3	STW-4000	ASSY MAIN BD STW DX
4	STW-4100	ASSY PWR SPLY STW DX
5	STW-4300	ASSY AUDIO STW DX
6	STW-1002	BASE LID FRONT
7	STW-1003	BASE LID REAR
8	SPG-0001	BILLBOARD HOOK
9	DUT-1007	BACK LID R
10	200-5607	FRESNEL LENS 50"
11	200-5608	LENTICULAR LENS 50"
12	SRT-1004	EDGE GUARD L
13	SRT-1005	EDGE GUARD R
14	STW-1006	STICKER PTV
15	STW-1007	PTV JOINT BRKT
16	200-5601	MONITOR GLASS 50"
201	200-5709CE 200-5734-91	(MIT) PTV 50 M 24K GHS65 PTV 50 M 24K P503SGH
201	000-P00420-WB	M SCR PH W'FS BLK M4X20
202	000-P00530-S	M SCR PH W/S M5X30
203	068-552016	FLT WSHR 5.5-20X1.6
204	030-0010A0	HEX BLT M10X100
205	060-S01000	SPR WSHR M10
206	068-A52820	FLT WSHR 10.5-28X2
207	00-P00520-WB	M SCR PH W/FS BLK M5X20
208	032-000420	WING BLT M4X20
209	068-441616	FLT WSHR 4.4-16X1.6
210	050-H00400	HEX NUT M4
211	060-F00400	FLT WSHR M4
212	060-S00400	SPR WSHR M4
213	011-F00310	TAP SCR FH 3X10
214	FAS-470001	RVT OPEN TYPE BLK 3.2X9.8
215	060-F00400-0B	FT WSHR BLK M4
216	011-F00316	TAP SCR FH 3X16
217	000-P00408-W	M SCR PH W/FS M4X8
218	011-T03512	TAP SCR TH 3.5X12
219	050-H00400	HEX NUT M4
220	060-S00400	SPR WSHR M4
221	060-F00400	FLT WSHR M4

ASSY BACK LID (STW-1020)



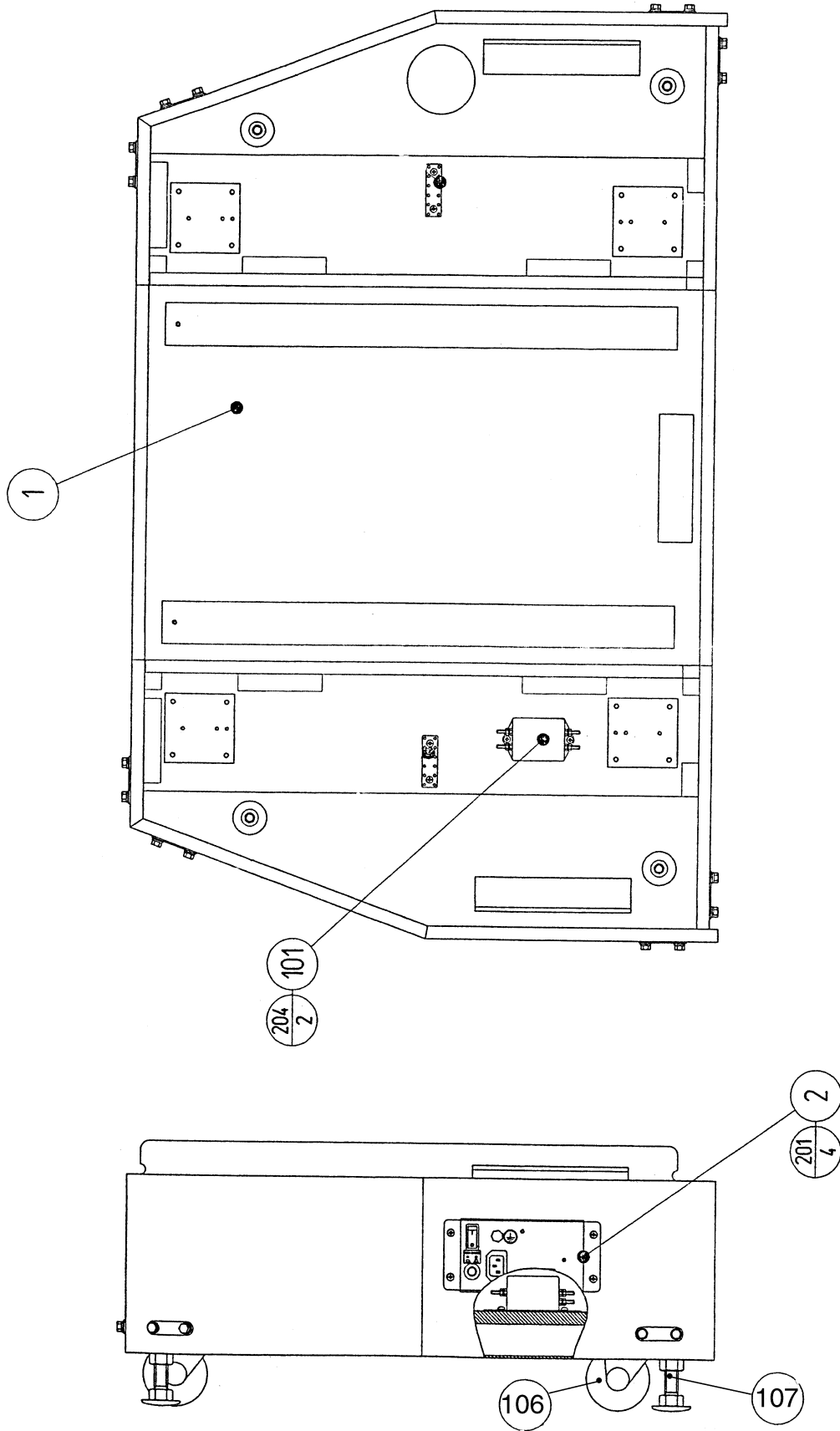
ITEM NO.	PART NO.	DESCRIPTION
1	STW-1021	BACK LID STW
2	105-5238-91	FAN BRKT
3	105-5239-04	AIR VENT
4	601-8543	FAN GUARD
101	260-0011-02	AXIAL FLOW FAN AC100V 50-60Hz
201	000-P00408-WB	M SCR PH W/FS BLK M4X8
202	000-P00312-W	M SCR PH W/FS M3X12

AC UNIT (STW-1050)



ITEM NO.	PART NO.	DESCRIPTION
1	STW-1051	AC BRKT
101	512-5046-15000	C.P. 15000MA CE UL
103	280-0417	TERMINAL BINDING POST BLACK
104	509-5453-91-V-B	SW ROCKER J8 V-B
105	214-0202	AC INLET PANEL TYPE
201	000-P00416-W	M SCR PH W/FS M4X16
202	000-F00410	M SCR FH M4X10

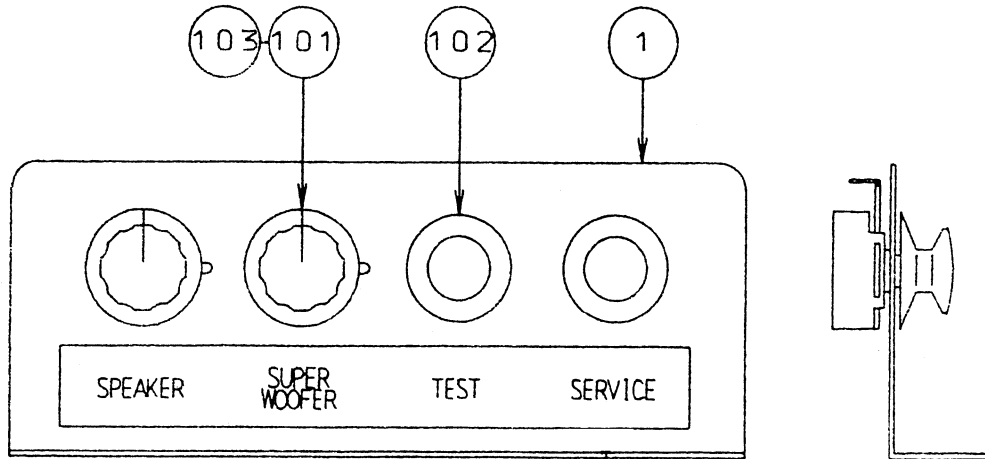
ASSY FRONT BASE (STW1-1100)



ASSY FRONT BASE (STW1-1100)

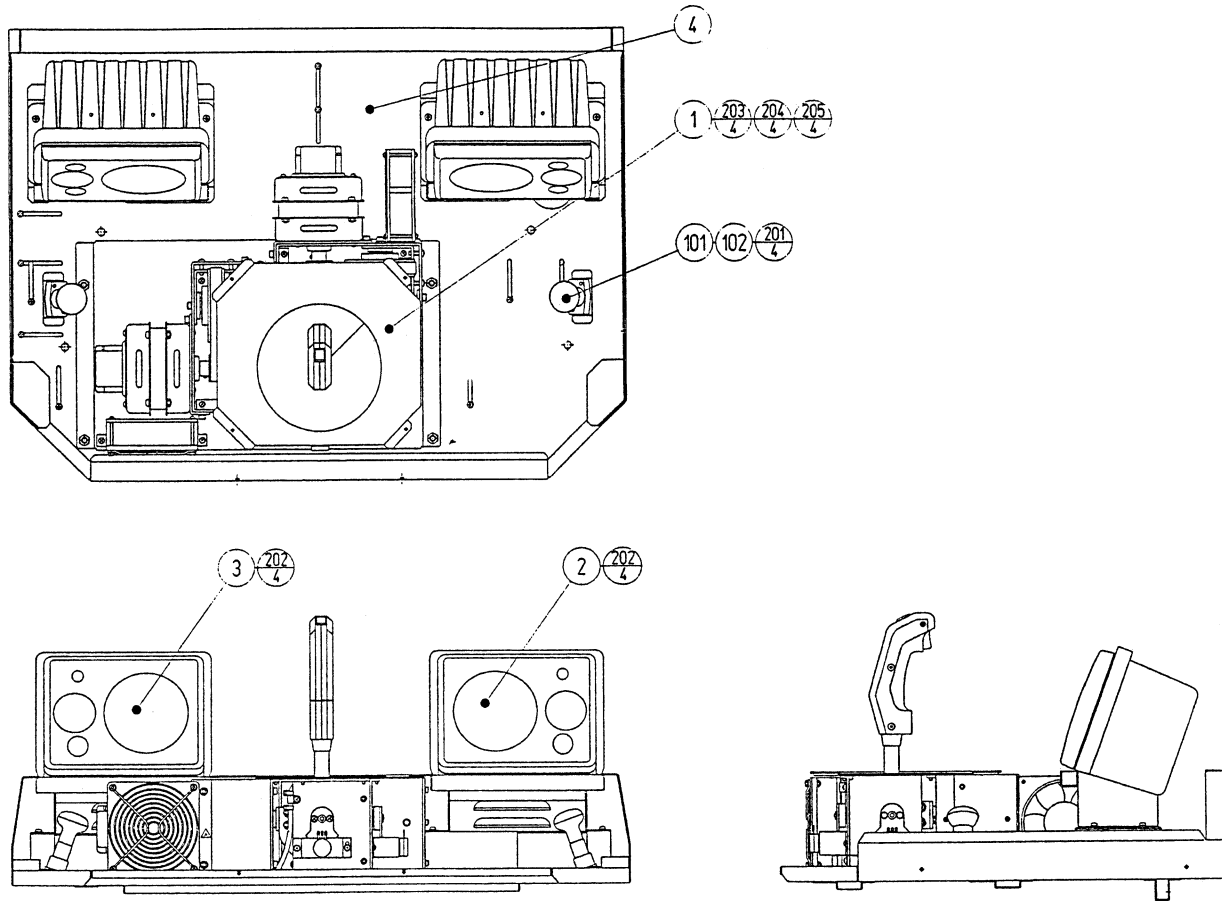
ITEM NO.	PART NO.	DESCRIPTION
1	STW-1101-A	FRONT BASE BLANK
2	STW-1050	AC UNIT STW
4	SRT-1101-A	NUT PLATE M/O
5	STW-1102	NUT PLATE FOR CASTER
6	SRT-1104	LEG BRKT R
7	ARC-1006	LEG BRKT
8	117-5233	PLATE LEG BRKT BLACK
101	270-5081	NOISE FILTER 20A
106	999-0169	CASTER 2 1/2"
107	999-0167	LEG ADJUSTER 1/2X13X3
201	000-P00416-WB	M SCR PH W/FS BLK M4X16
202	011-F00316	TAP SCR FH 3X16
203	011-F00310	TAP SCR FH 3X10
204	011-T03512	TAP SCR TH 3.5X12
205	030-000630-SB	HEX BLT BLK W/S M6X30
206	060-F00600	FLT WSHR M6
207	050-H01600	HEX NUT M16
208	050-H00400	HEX NUT M4
209	060-S00400	SPR WSHR M4
210	060-F00400	FLT WSHR M4

SW UNIT (INY-1180)



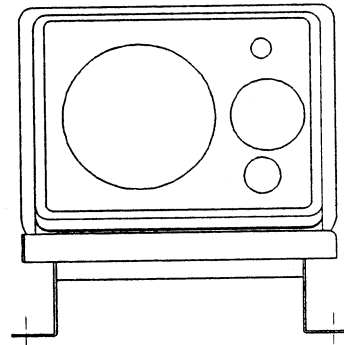
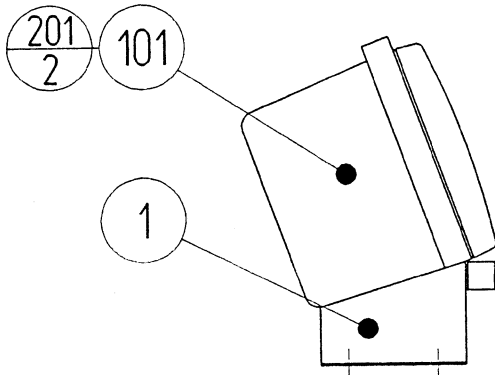
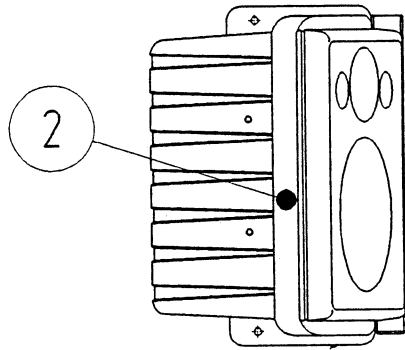
ITEM NO.	PART NO.	DESCRIPTION
1	INY-1181	SW BRKT
101	220-5179	VOL CONT B-5K OHM
102	509-5028	SW PB 1M (MIYAMA DS-412R)
103	601-0042	KNOB 22MM

ASSY CONTROL PANEL (STW-2000)



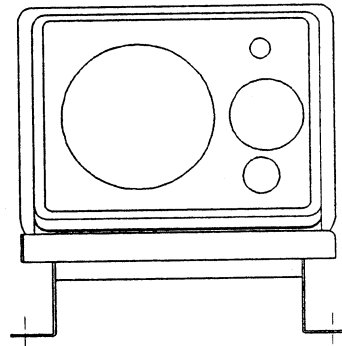
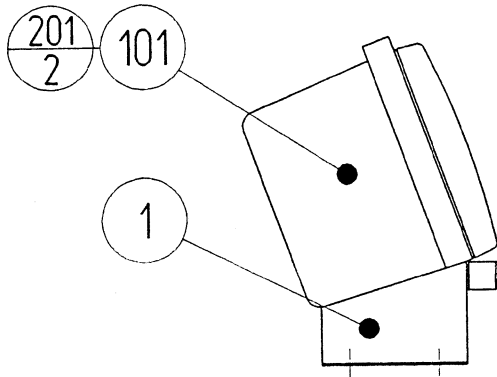
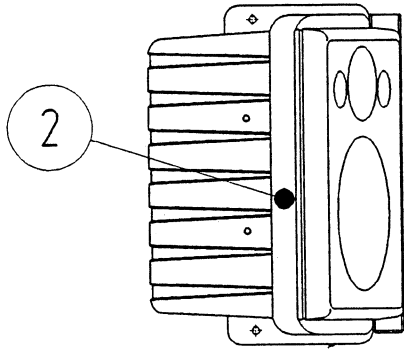
ITEM NO.	PART NO.	DESCRIPTION
1	STW-2100X	ASSY FFB JOYSTICK
2	STW-2020	ASSY SPEAKER R
3	STW-2030	ASSY SPEAKER L
4	STW-2001	CONTROL PANEL BOX
101	214-0216	SWAN SOCKET (#1518 BA15S)
102	390-5705	LAMP 110V25W SINGLE AR
201	000-P00316-S	M SCR PH W/S M3X16
202	000-P00408-WB	M SCR PH W/FS BLK M4X8
203	050-H00800-0B	HEX NUT BLK M8
204	060-F00800-0B	FLT WSHR BLK M8
205	060-S00800-0B	SPR WSHR BLK M8

ASSY SPEAKER R (STW-2020)



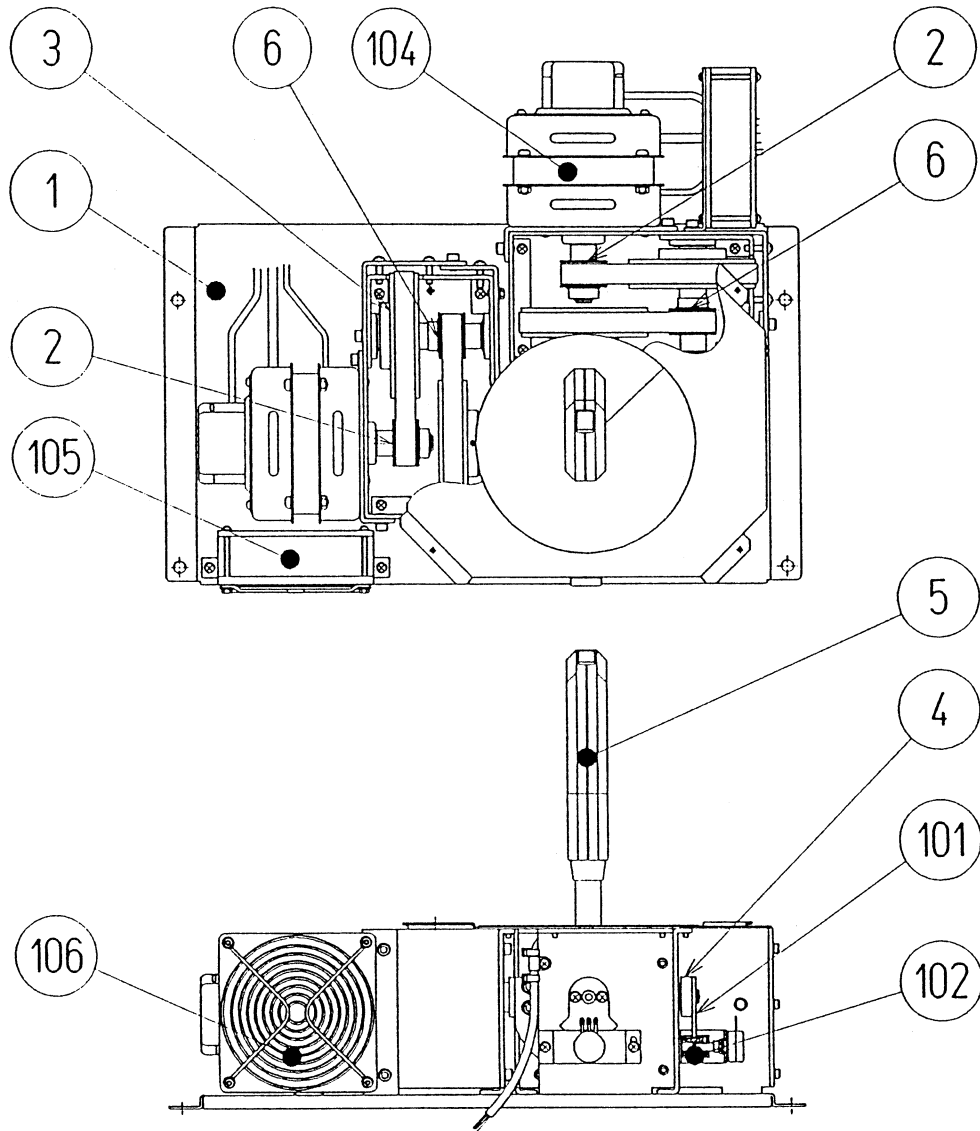
ITEM NO.	PART NO.	DESCRIPTION
1	STW-2021	SPEAKER BRKT R
2	STW-2022	SPEAKER CUSHION
101	130-5195	SPEAKER 8OHM 30W
201	000-P00512-W	M SCR PH W/FS M5X12

ASSY SPEAKER L (STW-2030)



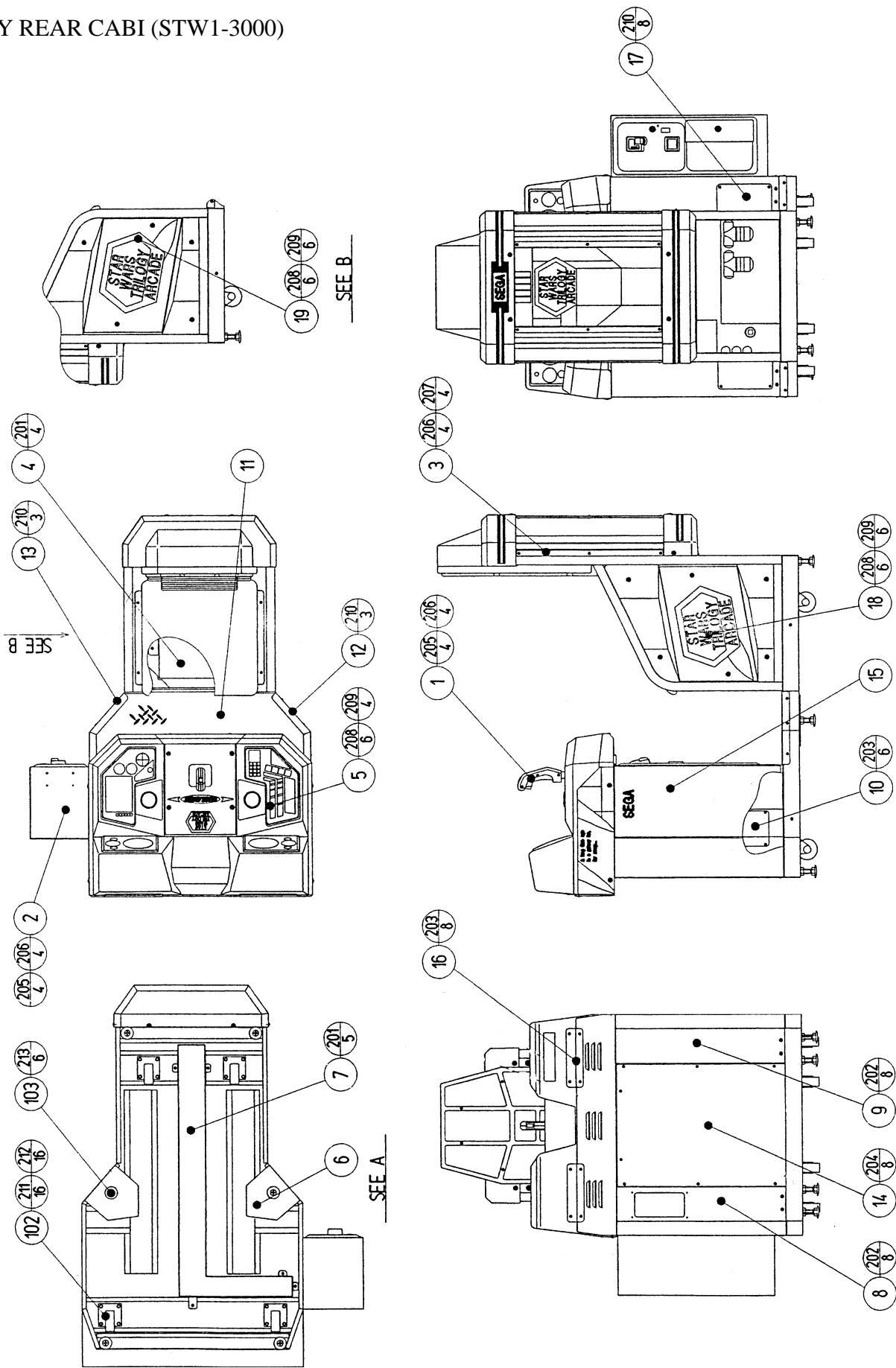
ITEM NO.	PART NO.	DESCRIPTION
1	STW-2031	SPEAKER BRKT L
2	STW-2022	SPEAKER CUSHION
101	130-5195	SPEAKER 8OHM 30W
201	000-P00512-W	M SCR PH W/FS M5X12

ASSY FFB JOYSTICK (STW-2100X)



ITEM NO.	PART NO.	DESCRIPTION
1	STW-2101	ASSY FFB MECHA
2	SPG-2504-01	PULLEY 20 S5M
3	SPG-2505	PULLEY 60 S5M
4	TTR-2009	GEAR HOLDER 80
5	610-0390	ASSY TRIGGER HANDLE (HAPP)
6	SPG-2504-01	PULLEY 20 S5M
101	601-6005	ADJUST GEAR
102	601-7944	GEAR 15
104	350-5512-01	SERVO MOTOR STW
105	260-0011-02	AXIAL FLOW FAN AC 100V 50-60Hz
106	601-8543	FAN GUARD

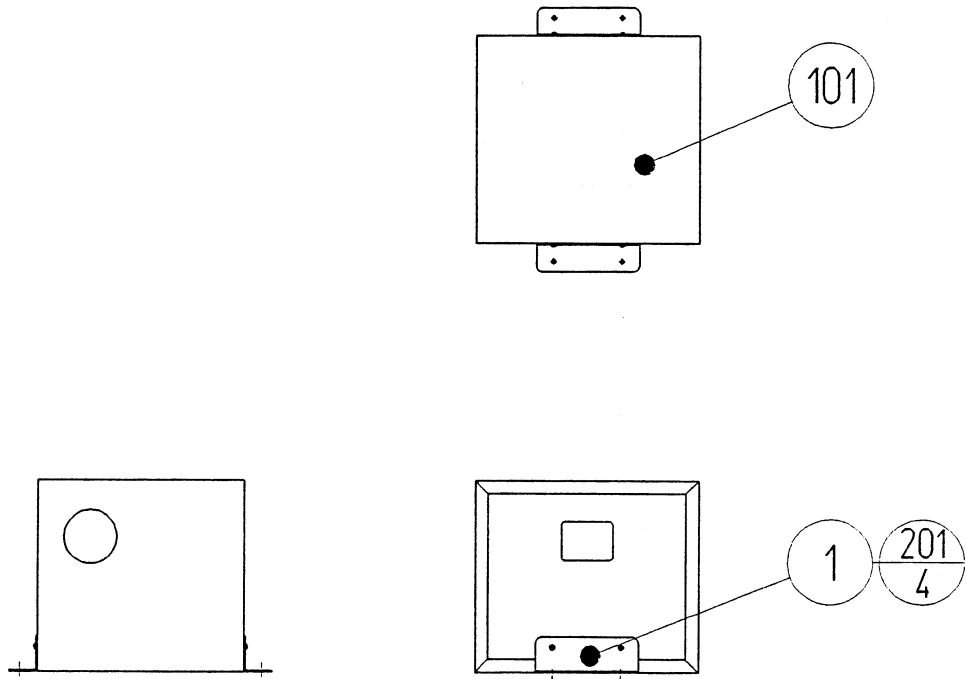
ASSY REAR CABI (STW1-3000)



ASSY REAR CABI (STW1-3000)

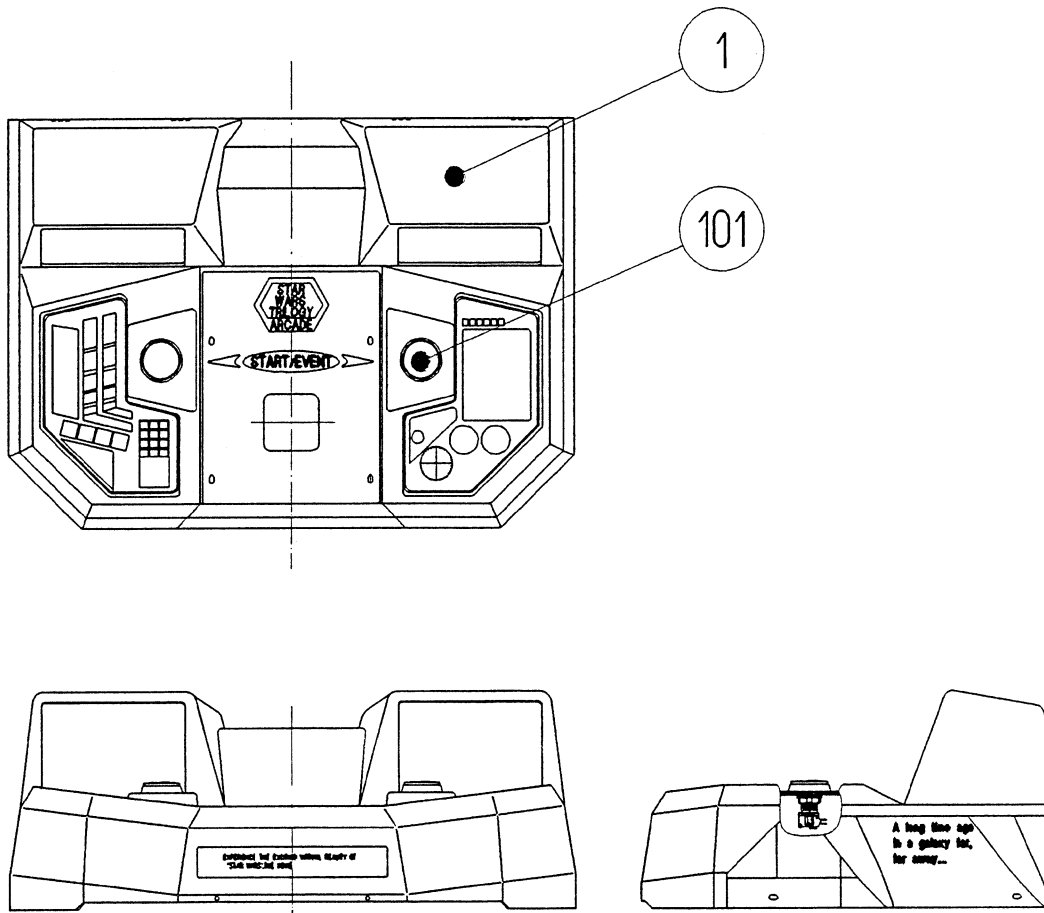
ITEM NO.	PART NO.	DESCRIPTION
1	STW-2000	ASSY CONTROL PANEL
2	STW-3100	ASSY COIN CHUTE TOWER
3	STW-3200	ASSY SEAT
4	STW-3030	ASSY WOOFER
5	STW-3040	ASSY CNTRL COVER
6	STW-3001-A	BASE BLANK
7	STW-3002	WIRE COVER
8	STW-3003	R SIDE PILLAR BOX
9	STW-3004	L SIDE PILLAR BOX
10	STW-3005	SIDE PILLAR COVER
11	STW-3006	REAR MAT
12	STW-3007	CORNER EDGE COVER L
13	STW-3008	CORNER EDGE COVER R
14	STW-3009	FRONT BOARD
15	STW-3010	STICKER PILLAR
16	STW-3011	CNTRL BACK BRKT
17	STW-3012	SIDE PILLAR PROTECTOR
18	STW-3219	SEAT SIDE COVER R
19	STW-3220	SEAT SIDE COVER L
102	999-0169	CASTER 21/2"
103	999-0167	LEG ADJUSTER
201	000-P00408-WB	M SCR PH W/FS BLK M4X8
202	000-T00512-0B	M SCR TH BLK M5X12
203	000-T00408-0B	M SCR TH BLK M4X8
204	000-T00420-0B	M SCR TH BLK M4X20
205	030-000816-SB	HEX BLT W/S BLK M8X16
206	060-F00800-0B	FLT WSHR BLK M8
207	030-000850-SB	HEX BLT W/S BLK M8X50
208	000-T00412-0B	M SCR TH BLK M4X12
209	068-441616-0B	FLT WSHR BLK 4.4-16X1.6
210	000-T00408-0C	M SCR TH CRM M4X8
211	030-000630-SB	HEX BLT BLK W/S M6X30
212	060-F00600	FLT WSHR M6
213	050-H01600	HEX NUT M16

ASSY WOOFER (STW-3030)



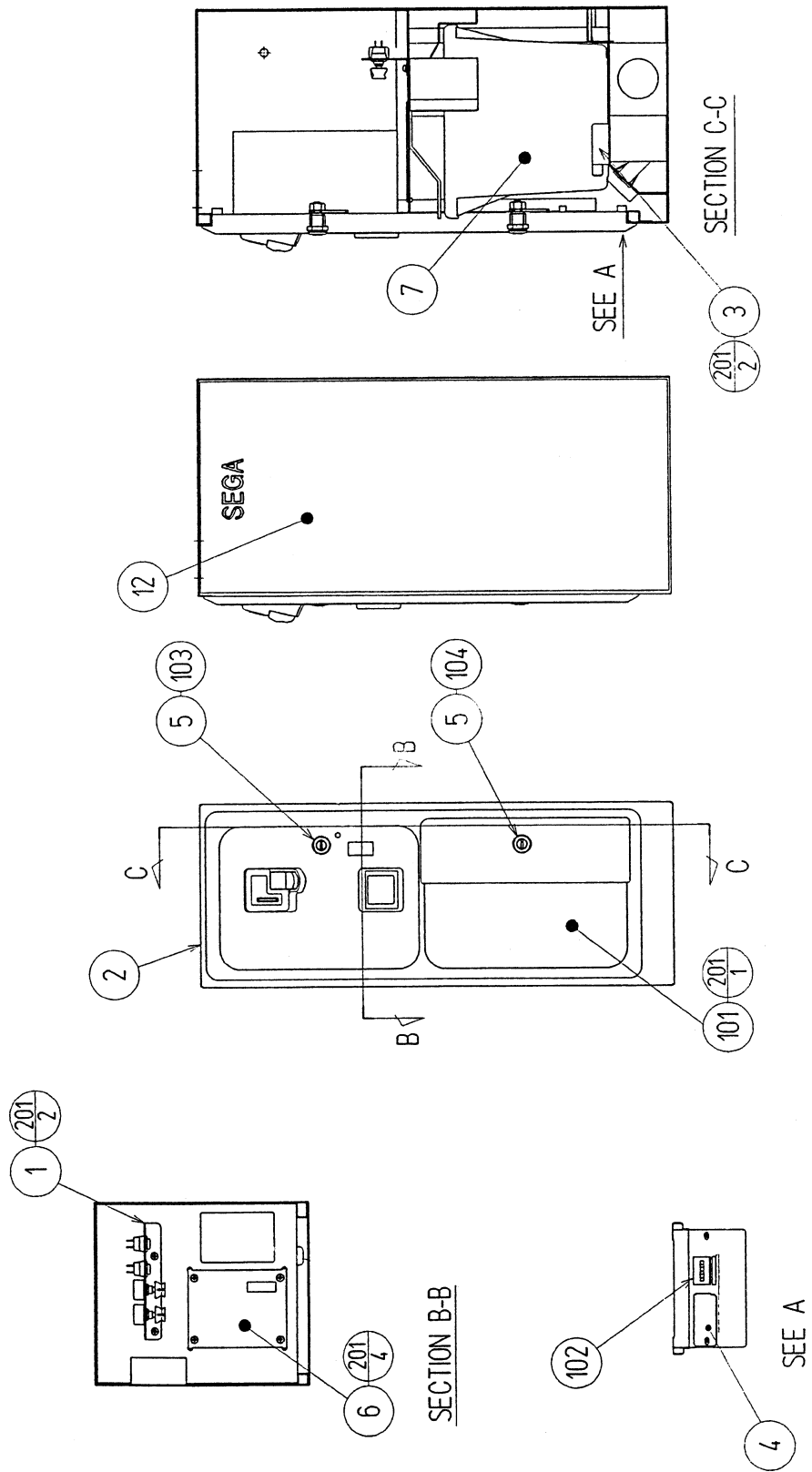
ITEM NO.	PART NO.	DESCRIPTION
1	STW-3031	WOOFER BRKT
101	130-5196	WOOFER 4OHM 80W
201	011-P00312	TAP SCR PH 3X12

ASSY CNTRL COVER (STW-3040)



ITEM NO.	PART NO.	DESCRIPTION
1	STW-3041	CNTRL COVER
101	509-5886-RE	SW PB 60M RED W/H&L 14V 2.7W

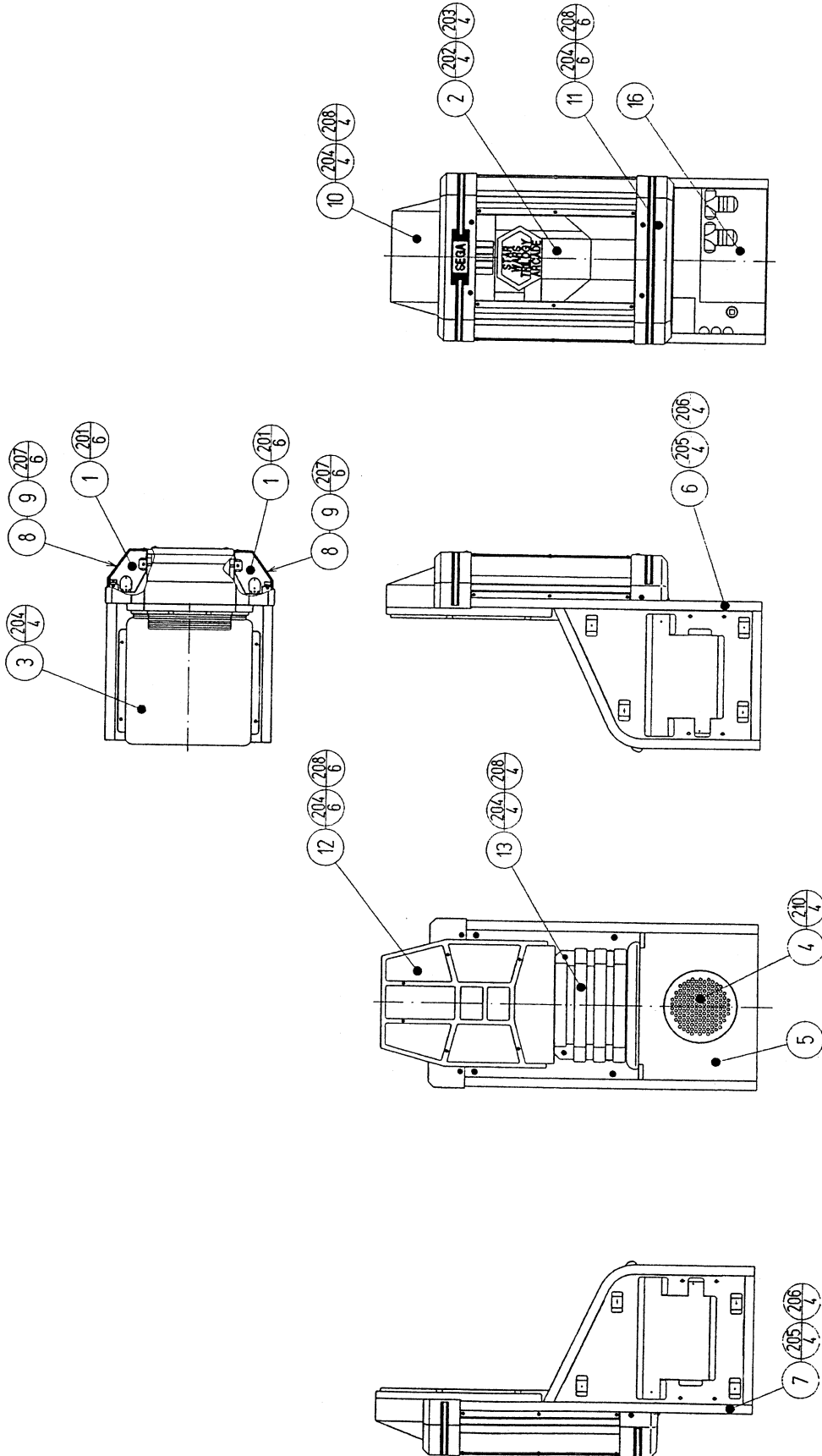
ASSY COIN CHUTE TOWER (STW1-3100)



ASSY COIN CHUTE TOWER (STW1-3100)

ITEM NO.	PART NO.	DESCRIPTION
1	INY-1180	SW UNIT
2	STW-3101	COIN CHUTE TOWER
3	BSS-1471	METER BRKT
4	BSS-1472	METER HOLE LID
5	DP-1167	TNG LKG
6	105-5171	CHUTE PLATE SINGLE
7	BOX-CASH	CASH BOX
12	STW-3102	STICKER COIN BOX
101	220-5237-01	ASSY C.C 2DR
102	220-5643-01	MAG CNTR DC5V 6P WH MZ-674-D04
103	220-5575	CAM LOCK MASTER W/O KEY
104	220-5574	CAM LOCK W/KEYS
201	000-P00408-W	M SCR PH W/FS M4X8

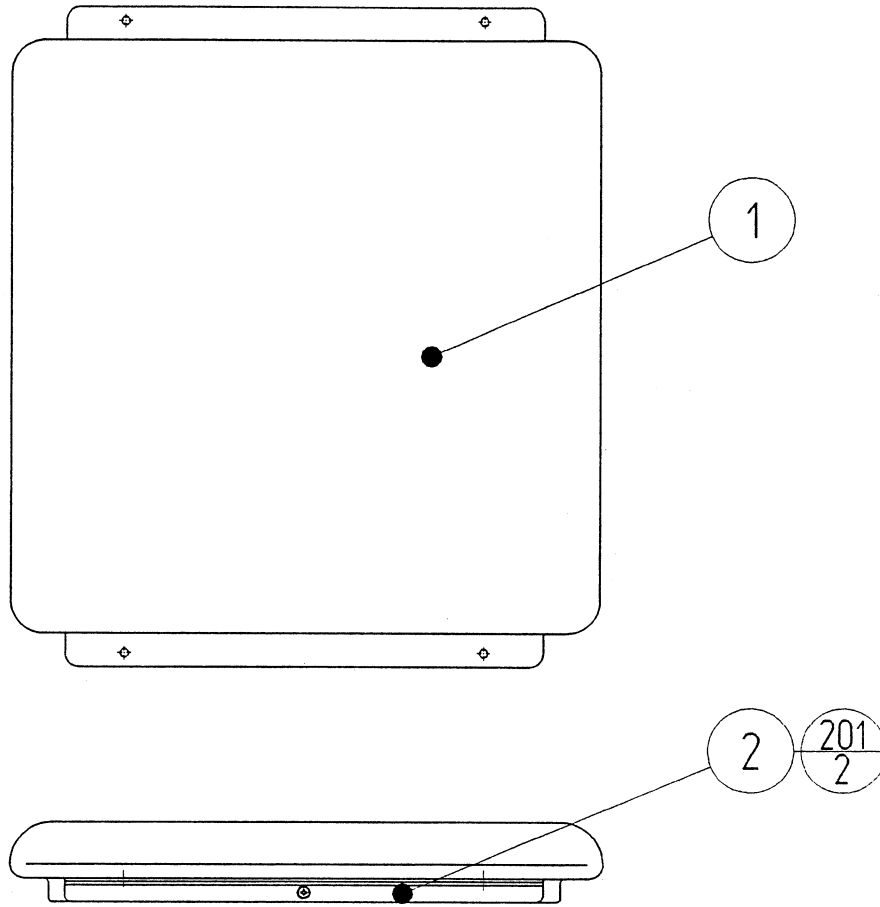
ASSY SEAT (STW1-3200)



ASSY SEAT (STW1-3200)

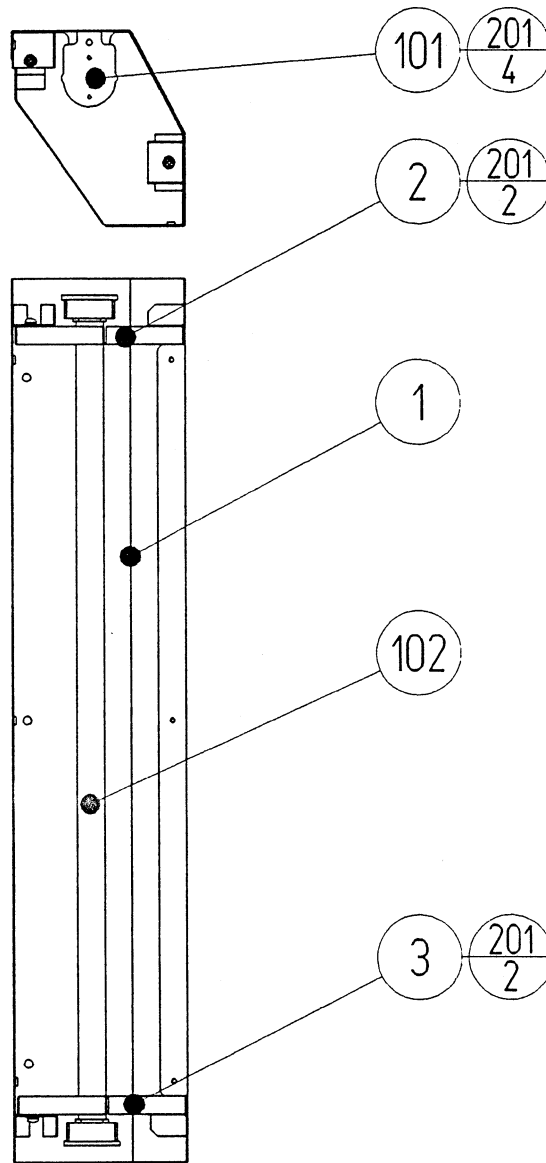
ITEM NO.	PART NO.	DESCRIPTION
1	STW1-3250	ASSY REFLECTOR
2	STW1-3260	ASSY SEAT BACK BOX
3	STW-3240	ASSY CUSHION
4	STW-3203	WOOFER NET
5	STW-3227	SEAT BASE JP
6	STW-3206	SEAT FRAME L
7	STW-3207	SEAT FRAME R
8	STW-3210	SEAT SIDE COVER
9	STW-3213	SASH REAR
10	STW-3214	SEAT COVER UPPER
11	STW-3215	SEAT COVER LOWER
12	STW-3216	SEAT BACK
13	STW-3217	SEAT BACK COVER LOWER
16	STW-3222	STICKER SEAT BACK B
201	000-T00416-0C	M SCR TH CRM M4X16
202	000-T00525-0B	M SCR TH BLK M5X25
203	068-552016-0B	FLT WSHR BLK 5.5-20X1.6
204	000-T00420-0B	M SCR TH BLK M4X20
205	030-000820-SB	HEX BLT W/S BLK M8X20
206	060-F00800-0B	FLT WSHR BLK M8
207	000-T00412-0C	M SCR TH CRM M4X12
208	068-441616-0B	FLT WSHR 4.4-16X1.6
209	012-P00310	TAP SCR M3X10
210	050-F00400	FLG NUT M4

ASSY CUSHION (STW-3240)



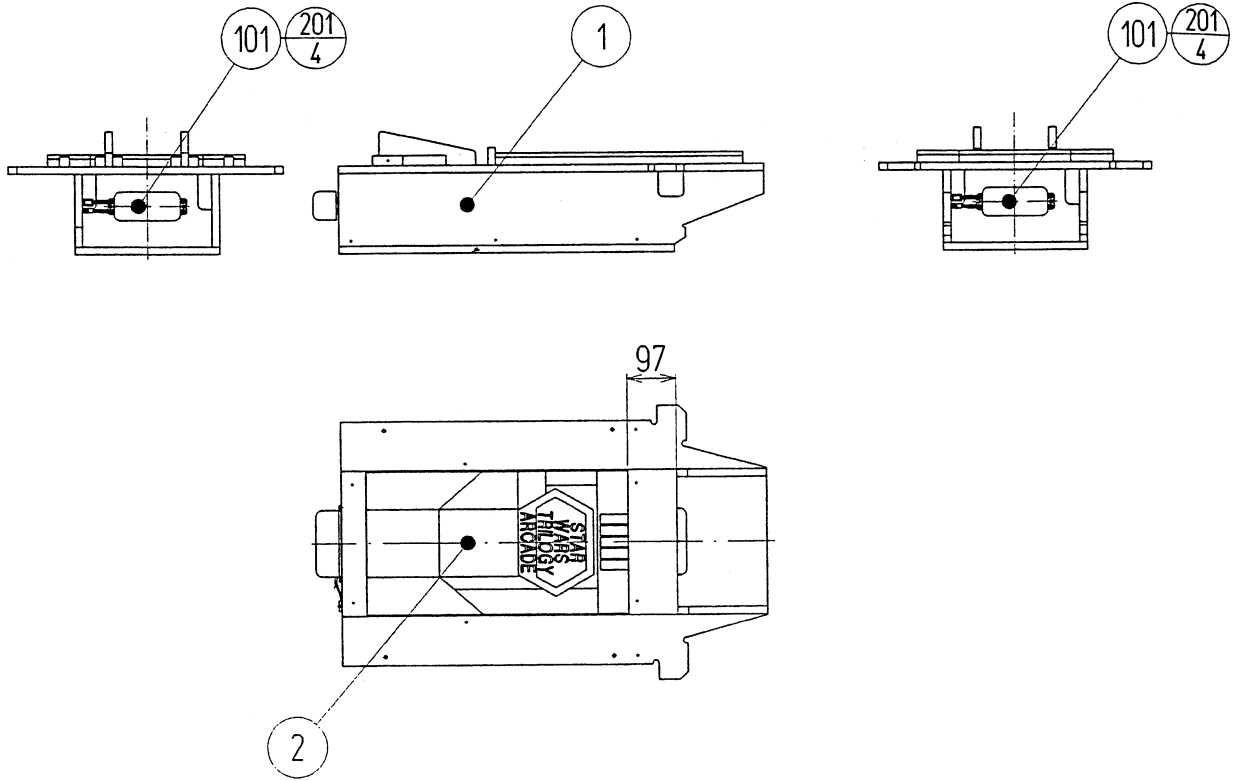
ITEM NO.	PART NO.	DESCRIPTION
1	STW-3241	CUSHION
2	STW-3242	CUSHION BRKT
201	000-P00412-W	M SCR PH W/FS M4X12

ASSY REFLECTOR (STW1-3250)



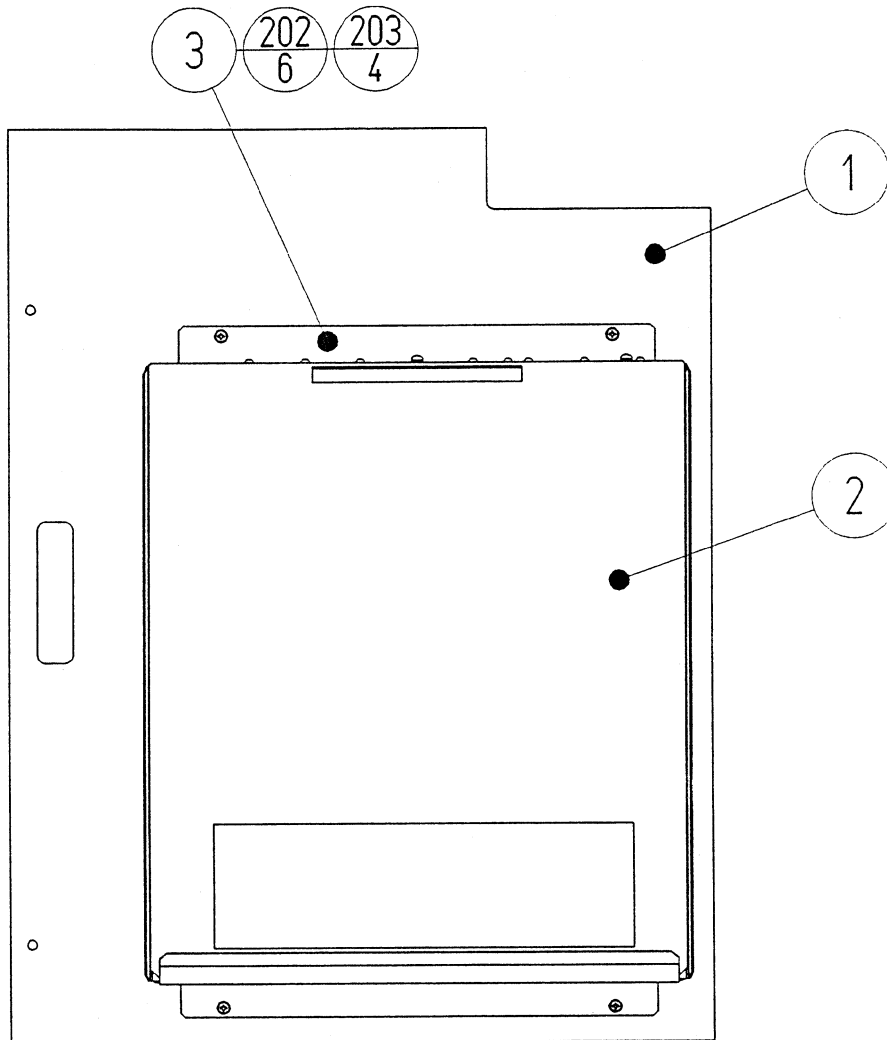
ITEM NO.	PART NO.	DESCRIPTION
1	STW-3251	SEAT BACK REFLECTOR
2	STW-3252	REFLECTOR COVER UPPER
3	STW-3253	REFLECTOR COVER LOWER
101	LOCAL PURCHASE	FL SOCKET W/CONN
102	390-6579-0565R	FL SLIM TYPE 0565MM RED
201	000-P00412-W	M SCR PH W/FS M4X12

ASSY SEAT BACK BOX (STW1-3260)



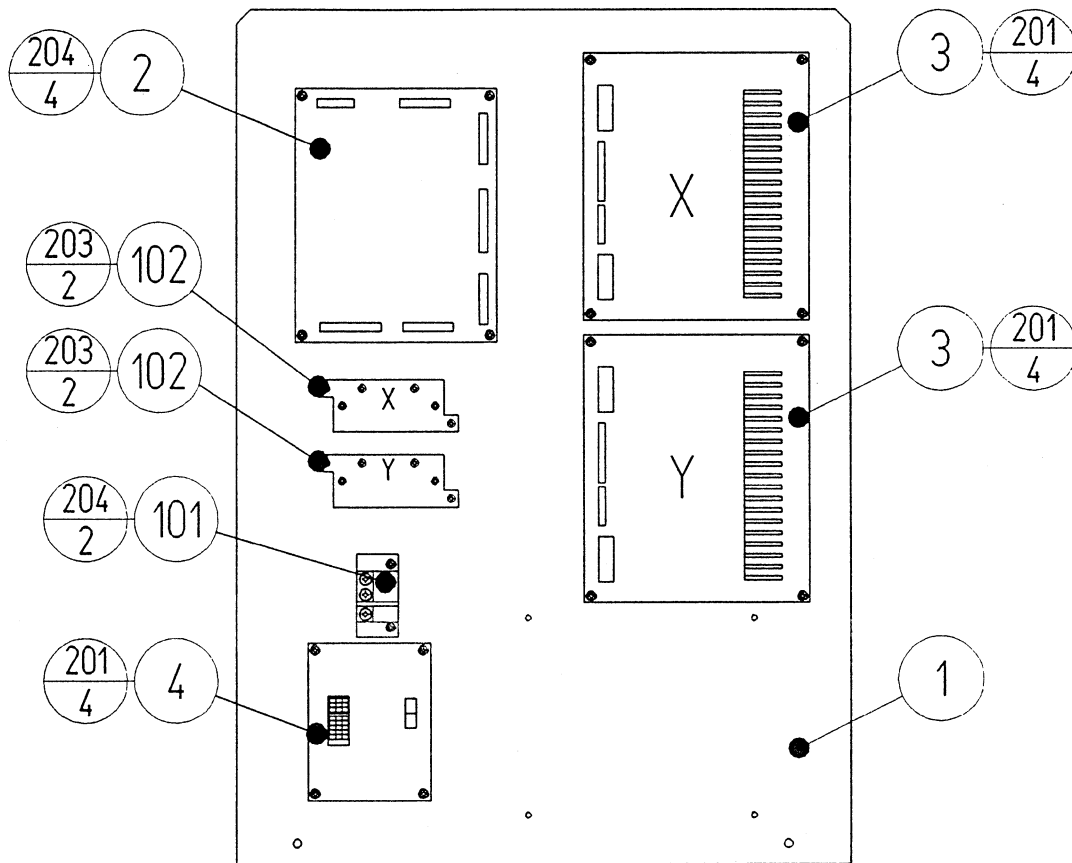
ITEM NO.	PART NO.	DESCRIPTION
1	STW-3261	SEAT BACK BOX
2	STW-3221	STICKER SEAT BACK A
101	LOCAL PURCHASE	COIL BALLAST
201	000-P00420-W	M SCR PH W/FS M4X20
202	011-F00310	TAP SCR FH 3X10

ASSY MAIN BD STW DX (STW-4000)



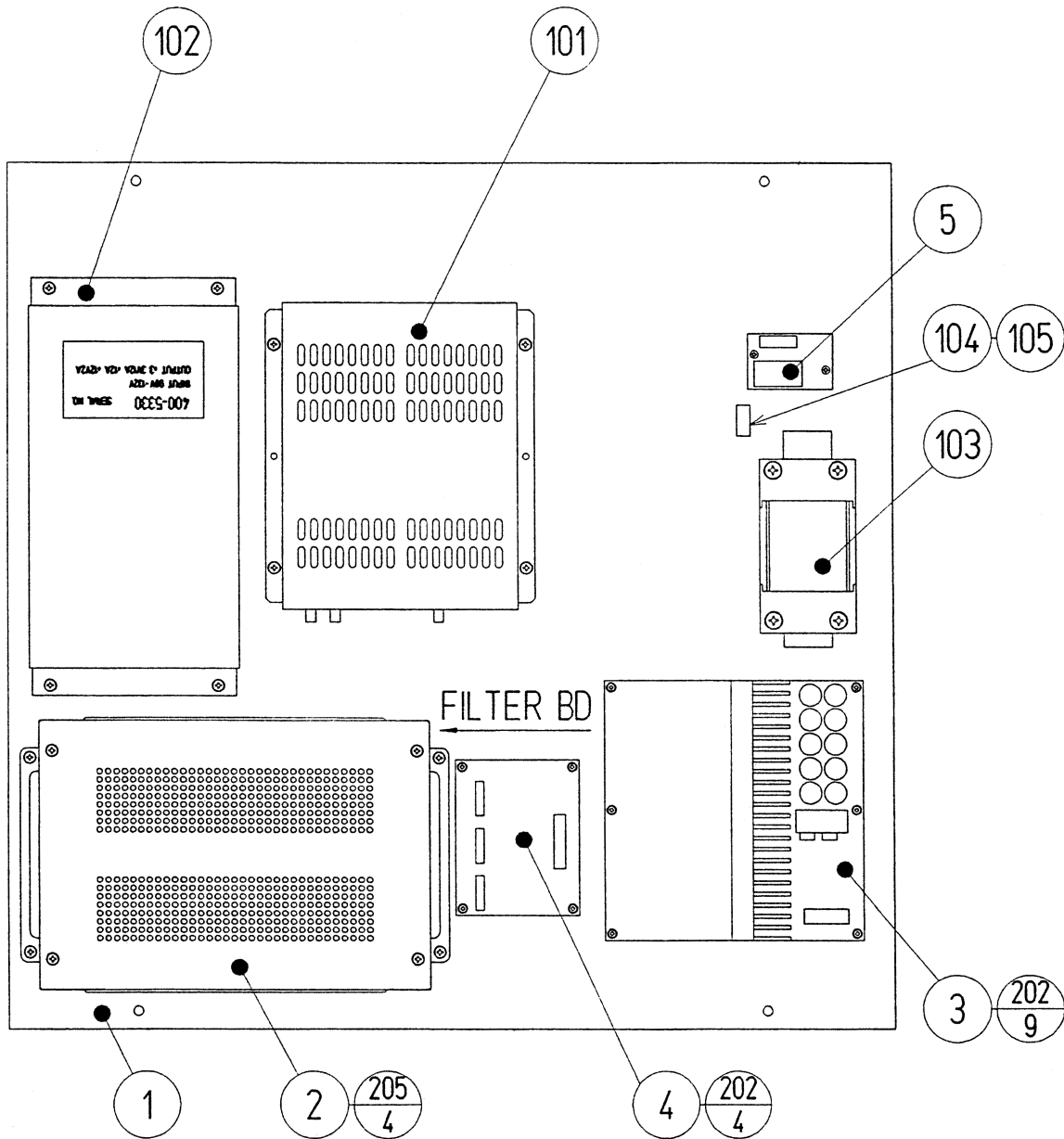
ITEM NO.	PART NO.	DESCRIPTION
1	SPG-4001	WOODEN BASE L
2	STW-0100	ASSY SHIELD CASE MAIN
3	105-5241	SHIELD CASE BRKT
201	011-F00310	TAP SCR FH 3X10
202	000-P00408-W	M SCR PH W/FS M4X8
203	000-P00412-W	M SCR PH W/FS M4X12

ASSY PWR SPLY STW DX (STW-4100)



ITEM NO.	PART NO.	DESCRIPTION
1	STW-4101	WOODEN BASE PWR SPLY
2	838-13585	DRIVE CONTROL BD STW
3	838-13276-01	SERVO DRIVER BD STW
4	838-10801	CONN BD B
101	117-5225	TERMINAL 3P 20A
102	450-5145	SSR AC20A (G3PA-220B-VD)
201	011-P00325	TAP SCR PH 3X25
202	011-F00310	TAP SCR FH 3X10
203	011-T03512	TAP SCR TH 3.5X12
204	011-T03516	TAP SCR TH 3.5X16

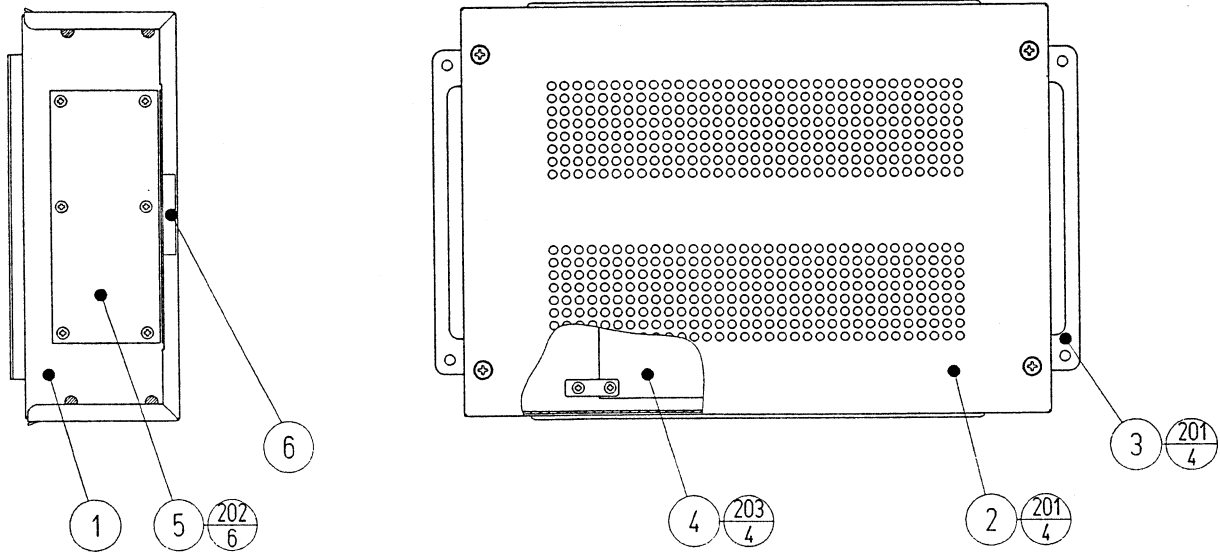
ASSY AUDIO STW DX (STW-4300)



ASSY AUDIO STW DX (STW-4300)

ITEM NO.	PART NO.	DESCRIPTION
1	STW-4301	WOODEN BASE AUDIO
2	STW-4350	ASSY SHIELD CASE DS2
3	838-13604	BASS AMP 50WX1
4	838-13445	AUDIO MIX BD
5	838-11856CE-02	CONNECT BD W/FUSE 6.3A CE
101	601-10369	STEREO PWR AMP 47
102	400-5330-03	SW REGU FOR MODEL 3
103	560-5406-V	XFMR 110V 23V5AX2
104	LOCAL PURCHASE	FUSE 5A SLO
105	514-5084	FUSE HOLDER
201	011-T03512	TAP SCR TH 3.5X12
202	011-P00325	TAP SCR PH 3X25
203	011-F00310	TAP SCR FH 3X10
205	000-P00416-W	M SCR PH W/FS M4X16

ASSY SHIELD CASE DS2 (STW-4350)



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	837-13602	DIGITAL SOUND BD 2 STW
5	839-1021	FLT BD DIGITAL SOUND
201	000-P00408-W	M SCR PH W/FS M4X8
202	010-P00308-F	S-TITE SCR PH W/F M3X8
203	010-P00310-F	S-TITE SCR PH W/F M3X10