

# SEGA<sup>®</sup>

## Dirt Devils

THE OWNERS MANUAL



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## SPECIFICATIONS

Installation space:	64 in.(L) x 39 in.(W)
Height:	77 in.
Weight:	Approx. 550 lbs.
Power maximum current:	8 Amp AC 120V 60 Hz
MONITOR:	29" NANA0 MONITOR (OR) 27" WELLS GARNER MONITOR

## INTRODUCTION OF THE OWNERS MANUAL

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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 DIRT DEVILS, 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### **INSTALLATION PRECAUTIONS**

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

#### **REGULATORY APPROVALS**

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

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

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

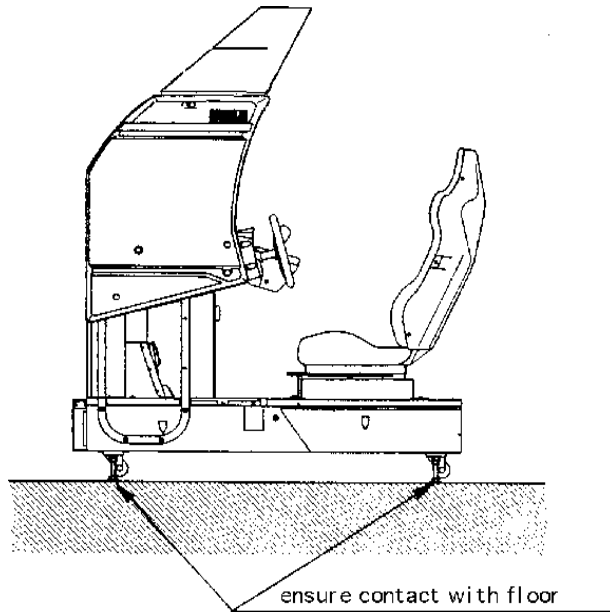
# 1 . PRECAUTIONS TO BE HEDED FOR OPERATION

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

## PRECAUTIONS TO BE HEDED FOR OPERATION BEFORE STARTING THE OPERATION



- In order to avoid accidents, check the following before starting the operation:  
Check if all of the adjusters are in contact with the surface. If they are not, the cabinet can move and cause an accident.



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



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

## PRECAUTIONS TO BE HEEDED DURING OPERATION



CAUTION!

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

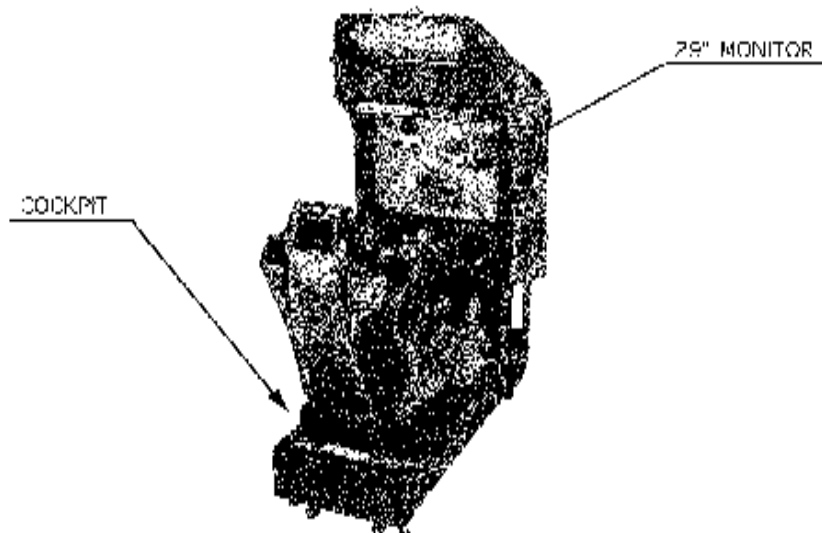
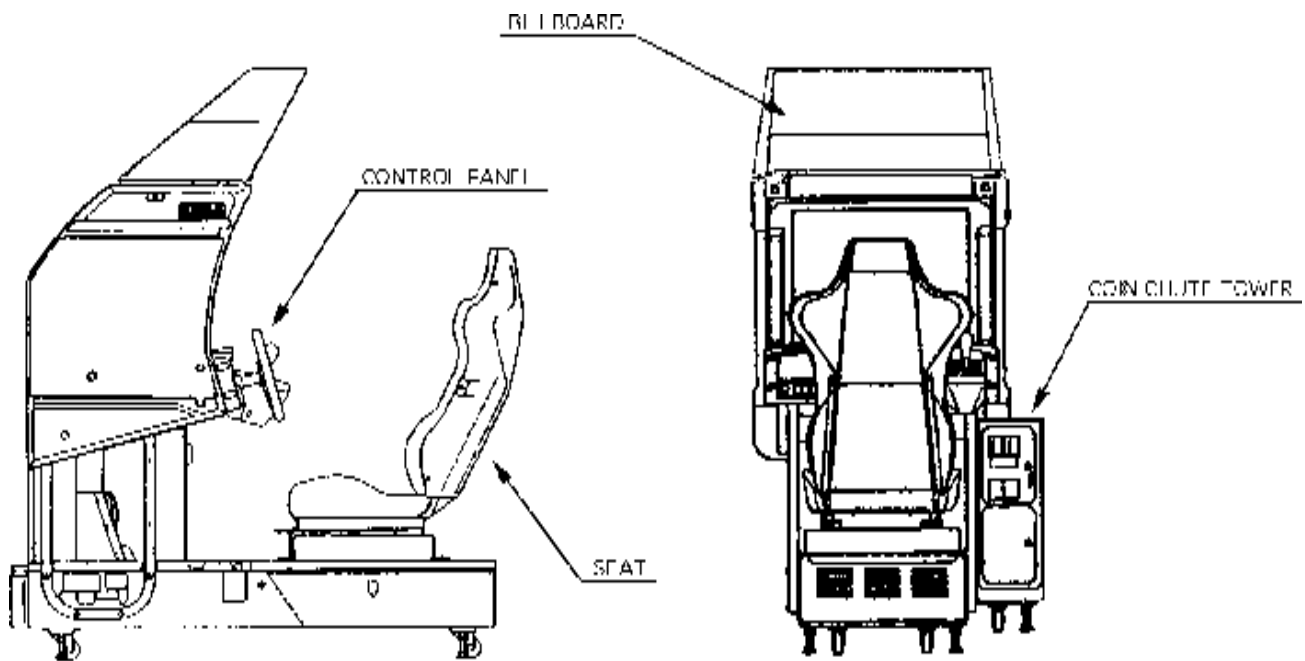
- \* Intoxicated persons
- \* Those who have high blood pressure or heart problems.
- \* Those who have experienced muscle convulsion or loss of consciousness when playing video games, etc.
- \* Persons susceptible to motion sickness.
- \* Persons whose acts runs counter to the products warning displays.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



CAUTION!

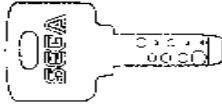
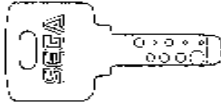
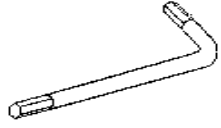
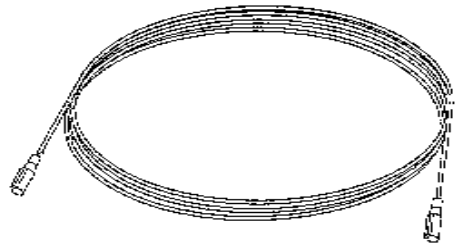
- To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in openings of the product or small openings in or around doors.
- To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without a justifiable reason.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

## 2 . NAME OF PARTS



GAME SPECIFICATIONS	WIDTH in.	LENGTH in.	HEIGHT in.	WEIGHT lbs.
	All measurements are and rounded UP			
DURING SHIPPING	45" X	70" X	84"	~ 600 LBS.
WHEN ASSEMBLED	39" X	64" X	77"	550 LBS.

### 3 . ACCESSORIES

<p>DESCRIPTION OWNERS MANUAL          Part No. (Qty.) <b>999-0705</b>          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>TAMPERPROOF WRENCH          M8 540-0009-01 (1)          TOOL</p> 	<p>ASSY FIBER CABLE          600-6275-0500 (2)          For communications play</p> 	



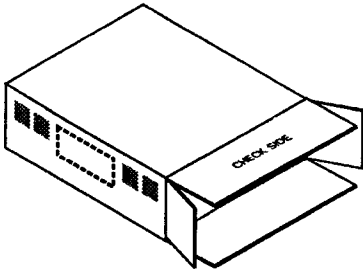


WARNING!

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

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

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



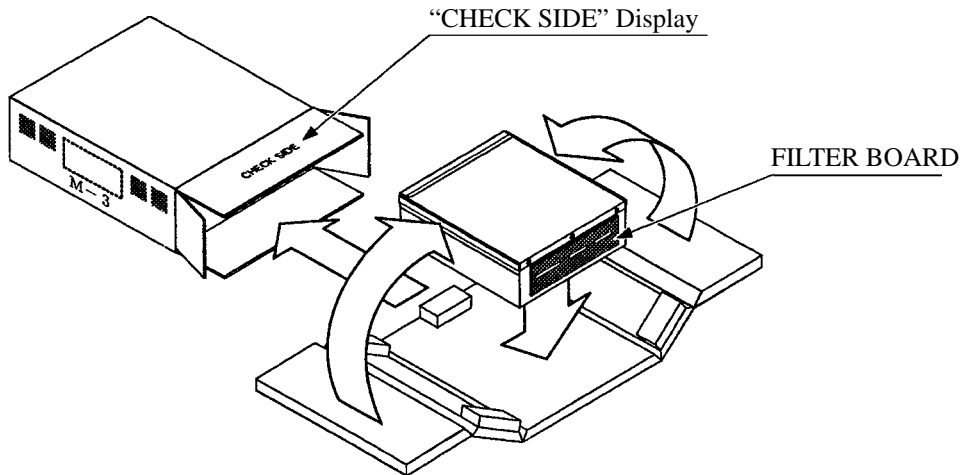
CARTON BOX

601-8928 (1)

Used for transporting the GAME BOARD.

{SUPPLIED WITH YOUR GAME}

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



WARNING!

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

## 4 . ASSEMBLING AND INSTALLATION



CAUTION!

Assembling should be performed as per this manual. Since this is a complex machine, erroneous assembling may cause damage to the machine, or malfunctioning to occur.

When assembling, be sure to perform work by plural persons. Depending on the assembly work, there are some cases in which performing the work by a single person can cause personal injury or parts damage.

When carrying out the assembly work, follow the procedure in the following 5-item sequence:

- 1 ASSY OF THE REAR CABI (COCKPIT)
- 2 ASSY OF BILLBOARD
- 3 SECURING IN PLACE (ADJUSTER ADJUSTMENT)
- 4 POWER SUPPLY
- 5 ASSEMBLING CHECK

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

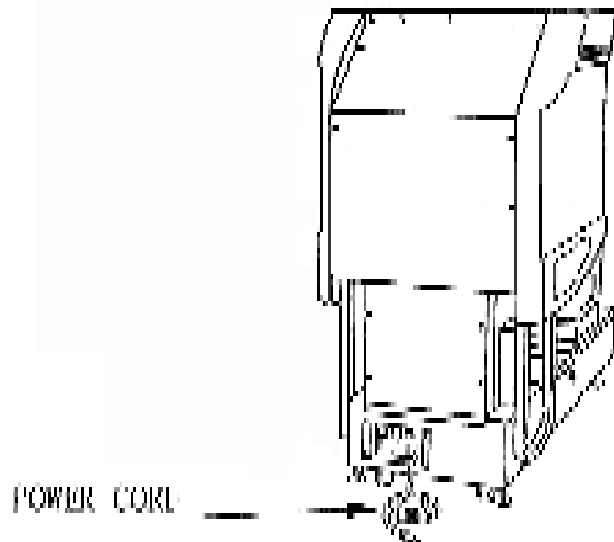
1

ASSY OF REAR CABI (COCKPIT)



CAUTION!

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



- ① Install the coin chute tower on the Right-hand side of cabinet. Open the coin chute door and the cashbox door to secure with the 4 hexagon bolts from inside the doors. Please note that the Coin Chute tower is NOT mounted on the Left-hand side as shown above, and comes pre-installed on this game. This diagram is for removal and re-installation purposes only.

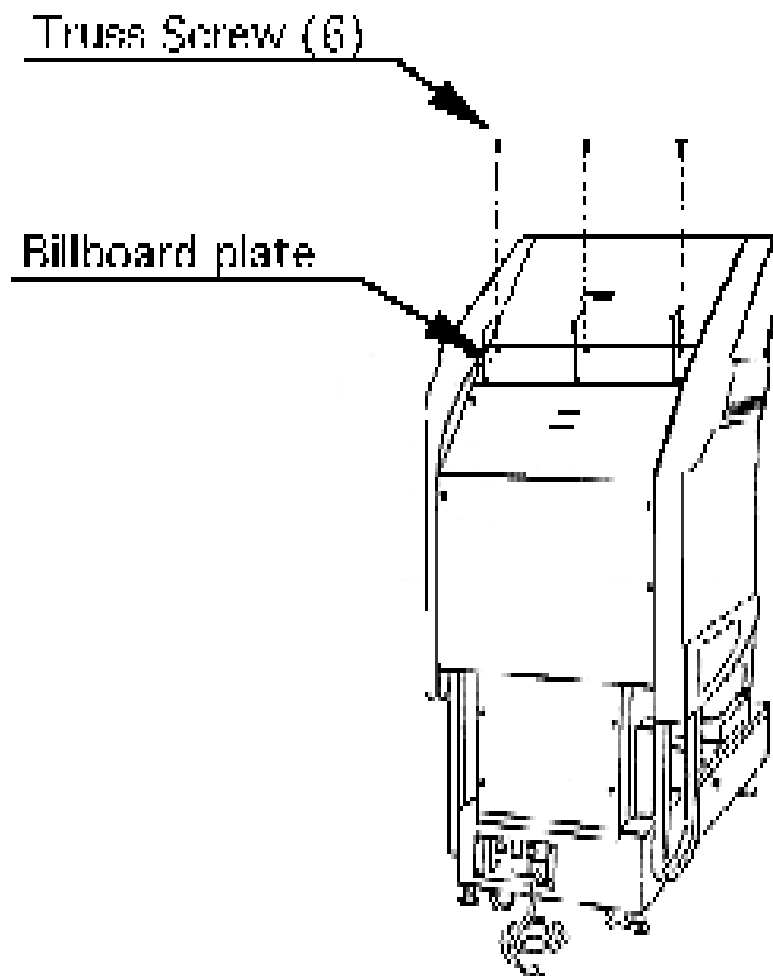
## 2 ASSY OF THE BILLBOARD



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

- ① Mount Billboard on cabinet by ensuring the front lip of the Billboard is securely placed over the mounting bracket already installed on the cabinet. Fasten with the 2 hexagon bolts.
- ② Connect all of the connectors inside the Billboard box (This needs to be done prior to final installation of Billboard Assy).
- ③ Install billboard bracket on rear of Marquee with the 6 truss screws.

NOTE: The game comes pre-assembled and these instructions are for maintenance purposes only.



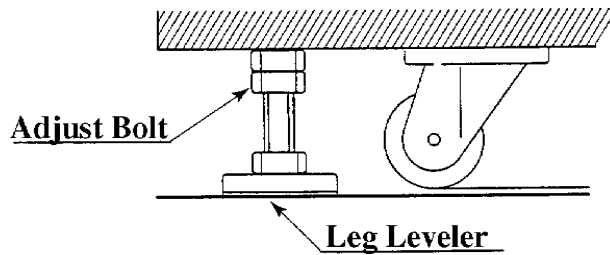
### 3

## SECURING IN PLACE (ADJUSTER ADJUSTMENT)

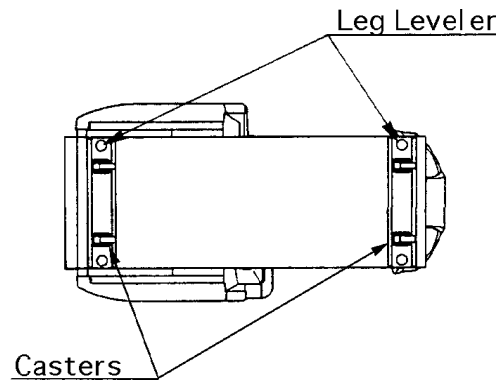


Be sure to have all the Adjusters make contact with the surface. Unless the Adjusters come into contact with the surface, the Cabinet can move of itself, causing an accident.

This machine has 4 each of casters and adjusters (shown below). When the installation position is determined, cause the adjusters to come into contact with the floor directly, make adjustments in a manner so that the casters will be raised approximately 5mm. from the floor and make sure that the machine position is level.



- 1 Move the machine to the installation position.
- 2 Cause all of the leg levelers 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

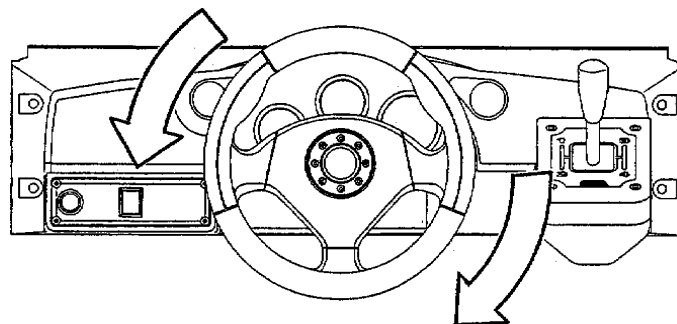
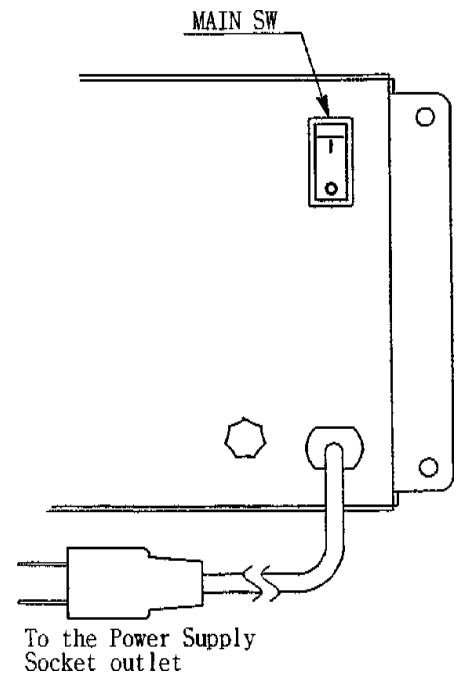
## POWER SUPPLY



- 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.

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

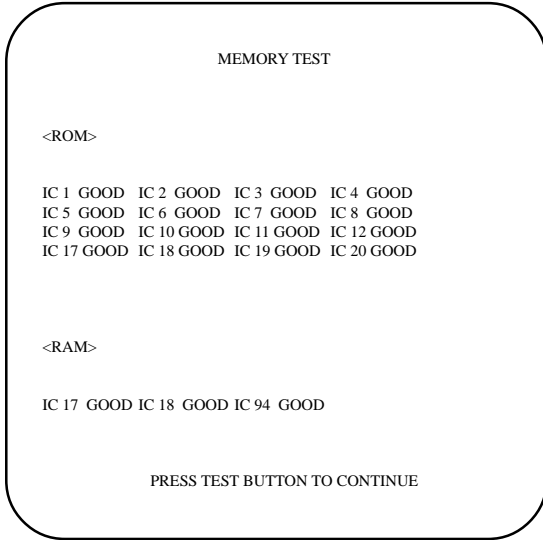
Turning the AC unit's main switch on will cause the machine to start the power check and network check automatically. In the Power On check, the steering wheel turns left and right, and then returns to the centering position and stops. In this check, the values of the VR inside the control panel are corrected. Until this check is finished, and the steering wheel stops, do not touch the steering wheel or play the game. If you do, the steering reaction during the game (reaction at the time of course-out or crash) can not be obtained correctly. In the case of an abnormal reaction during the game, turn power on again from the beginning and complete the power on check. During Network checking, "NETWORK CHECKING" flashes on the screen. When network checking is finished, the demo mode will appear on the monitor screen. After 10 seconds, if the network check is not finished, check the communications connections.



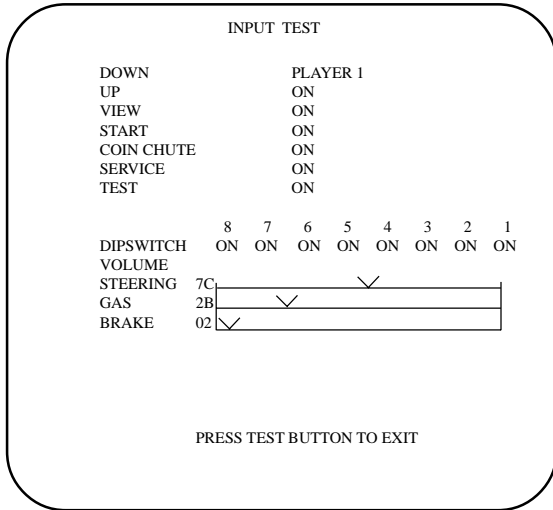
# 5

## ASSEMBLING CHECK

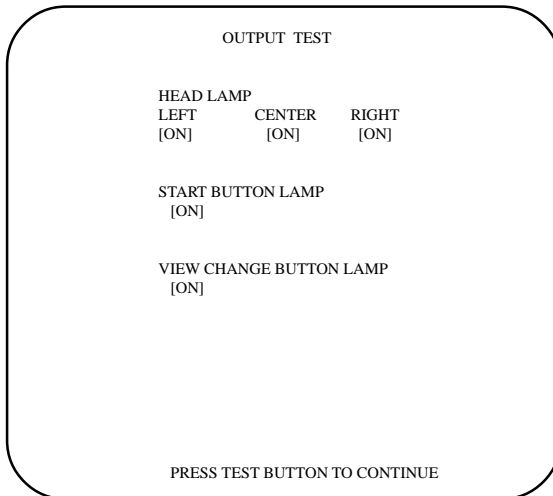
The TEST MENU allows for each part of the cabinet to be checked, the Monitor to be adjusted, and the coin and game related various functions to be performed.



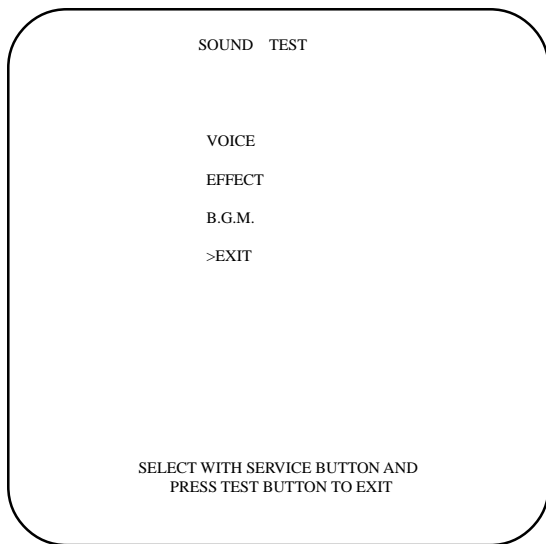
Selecting the MEMORY TEST on the test mode menu screen causes the on-board memory to be tested automatically. The game board is satisfactory if the display beside each IC No. shows GOOD.



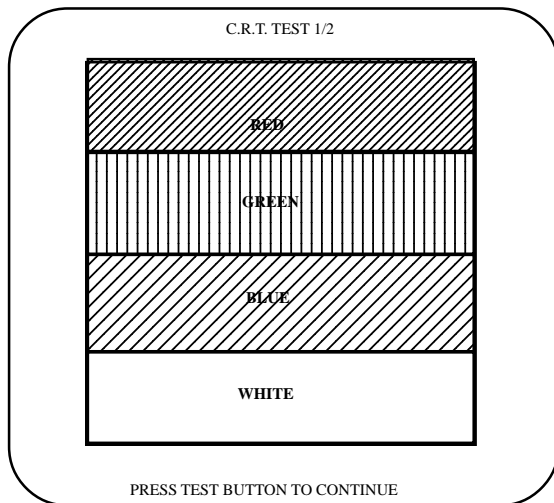
Selecting the INPUT TEST on the Test Mode menu screen causes the screen (on Which each switch and V.R. are tested) to be displayed. Press each switch. For the coin switch test, insert a coin from the coin inlet with the coin chute door being open. If the display beside each switch indicates "ON", the switch and wiring connections are satisfactory. Check the display of V.R. value for steering wheel and accelerator & brake. If the V.R. values are not satisfactory, make adjustments as necessary.



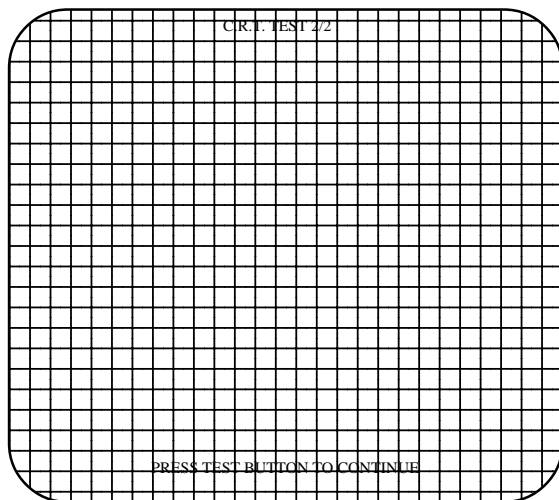
In the OUTPUT TEST mode, carry out lamp test to ensure that each lamp lights up satisfactory.



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



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



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



## 5 . PRECATIONS TO BE HEEDED WHEN MOVING THE MACHINE



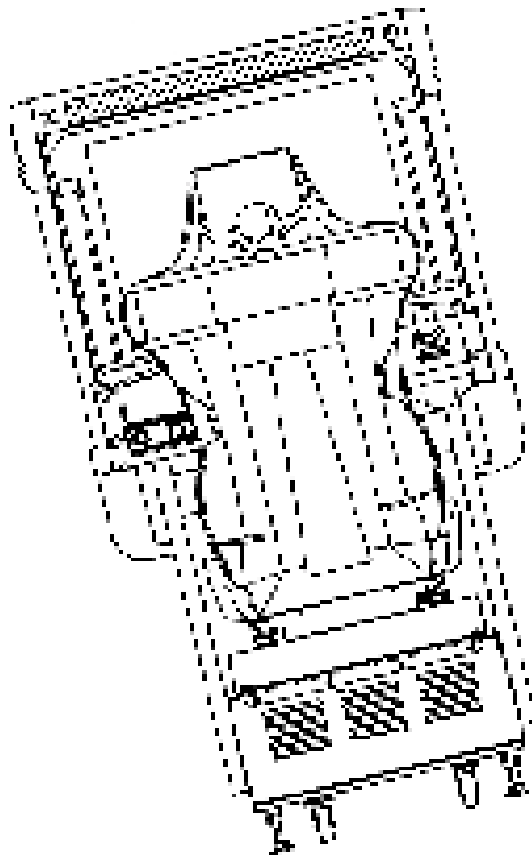
WARNING!

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



CAUTION!

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



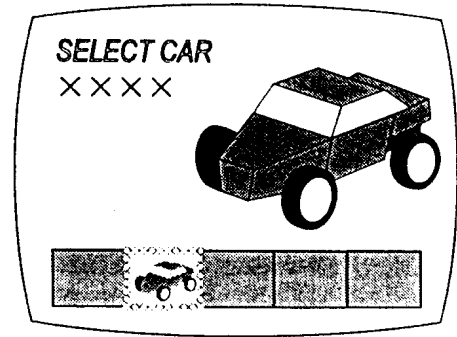
Do not push the cabinet from the left/right direction.

## 6 . CONTENTS OF GAME

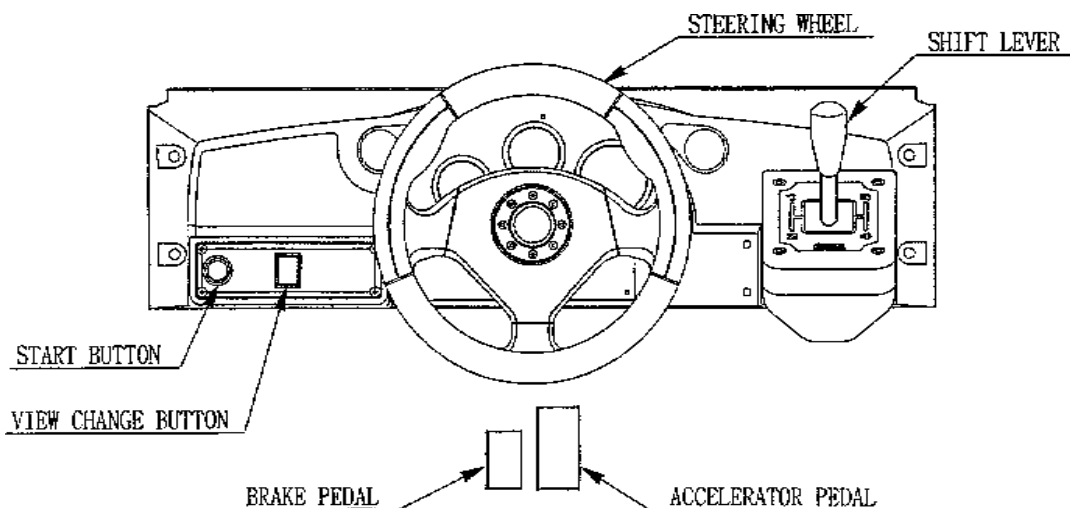
The following explanations apply to the case the product is functioning satisfactorily. Should there be any moves different from the following contents, some sort of faults may have occurred. Immediately look into the cause of the fault and eliminate the cause thereof to ensure satisfactory operation. During the Advertise mode, the Billboard's Decoration Lamp lights up periodically. When the machine is energized, the Billboard's Fluorescent Lamp is always lit. The Steering Wheel repeats centering action periodically. Automatic centering will apply to the Steering Wheel if it is not centered. During the Advertise Mode, sound is emitted from the Speaker beside the Monitor.

### HOW TO PLAY

- ① Get in the Cockpit. The seat can be adjusted in forward and rearward positions. The Lever is located on the lower right (facing the screen) of the Seat. Pull this Lever to make adjustments.
- ② Insert a coin(s). Number of coins is displayed on the lower left of the screen. Inserting one play worth of coin(s) causes the SELECT screen to be displayed. Up to 9 credits can be counted at one time. Coins inserted after counting 9 credits will neither be counted nor returned. Credits will not be displayed in the SELECT mode and during the game play (credits are displayed only during ADVERTISE).



- ③ Select sequentially in order of COURSE, CAR, and TRANSMISSION. Turn the Steering Wheel to choose and decide the selection by stepping on the Accelerator Pedal.  
When the selection mode is displayed, countdown begins. When countdown becomes zero, the type of car and transmission being selected will automatically be determined. Stepping on the Accelerator Pedal after selection determines the course, type of car and transmission. Then, in the middle of countdown, execution proceeds to the next selection mode.



<COURSE SELECT> Any of the following 3 Courses can be selected.

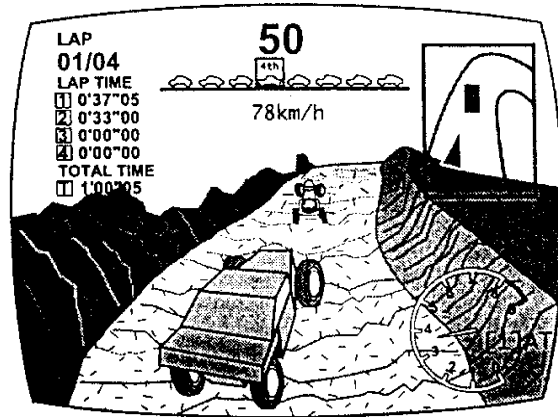
- CANYON COURSE
- STADIUM COURSE
- DESERT COURSE

Intended for finishing the specified number of laps.

<CAR SELECT> Any of the following 5 cars can be selected.

- BUGGY :Light Weight. Suitable for Beginners.
- BAJABUG :Quick and Nimble. Suitable for Beginners.
- TOYOTA TRUCK :A Formidable Fighter. Suitable for Medium Players.
- HUMVEE :Uncompromising Beast. Suitable for Medium Players.
- PROTO :Agile, but Tricky. Suitable for Expert Players.

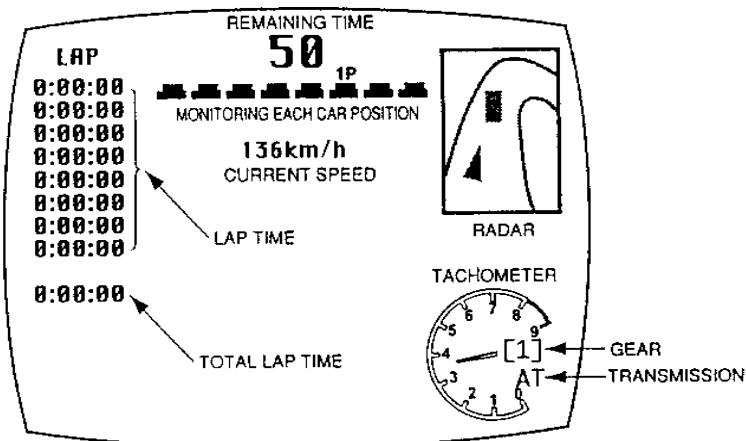
④ Select and decide on either AT (automatic Transmission) or MT (Manual Transmission), and the race starts. (For the same type of Car the Maximum speed in MT is slightly faster than AT.)



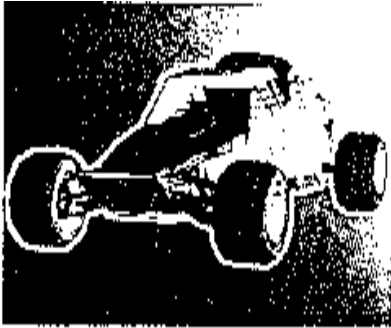
⑤ When the race starts, the limited time period decreases. Since BONUS TIME is awarded every time a course lapn is finished, the player can continue game by increasing remaing time.

⑥ Finishing the goal within the time limit ends the game. Also, the game is over when the limited time becomes Zero.This applies to all courses.

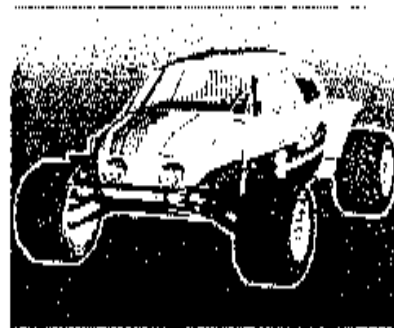
⑦ If the player finishes the specified number of laps, and in addition, if his results are excellent, he can register his name. Turn the steering Wheel to the left and right to choose characters, and step ont the Accelrator Pedal to determine the selection



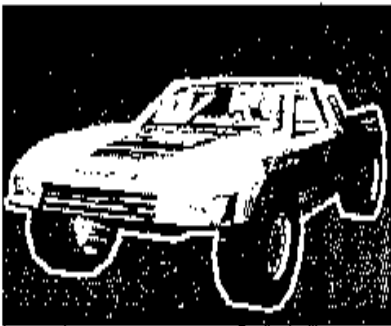
FEATURES OF THE 5 CARS



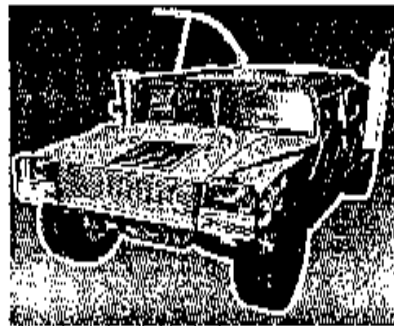
**BUGGY** (for Beginners)  
Features: Light-Weight



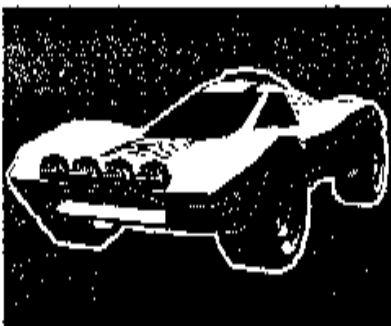
**BAJABUG** (for Beginners)  
Features: Quick & Nimble



**TOYOTA RACETRUCK** (for Medium players)  
Features: A Formidable Fighter



**HUMVEE®** (for Medium players)  
Features: Uncompromising Beast



**PROTO** (for Expert)  
Features: Agile, but Tricky

## 7 . 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.



### CAUTIONS TO BE HEEDED WHEN USING THE TEST MODE:

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

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

TABLE 7 EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION	SECTIONS
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to see that each setting is as per standard setting made at the time of shipment. 2. In the INPUT TEST mode, check each SW and VR. 3. In the OUTPUT TEST mode, check each of lamps. 4. In the MEMORY TEST mode, check ICs on the IC Board.	7 - 10, 7 - 11 7 - 6 7 - 7 7 - 3, 7 - 4
MEMORY	Choose MEMORY TEST in the MENU mode to allow the MEMORY test to be performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.	7 - 3, 7 - 4
PERIODIC SERVICING	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. In the INPUT TEST mode, test the CONTROL device 4. In the OUTPUT TEST mode, check each of lamps.	7 - 10, 7 - 11 7 - 6 7 - 7
CONTROL SYSTEM	1. In the INPUT TEST mode, check each SW and VR. 2. Adjust or replace each SW and VR. 3. If the problem can not be solved yet, check the CONTROL's moves.	7 - 6 8
MONITOR	In the MONITOR ADJUSTMENT mode, check to see if the MONITOR adjustment is appropriately made.	12
IC BOARD	1. MEMORY TEST 2. In the SOUND TEST mode, check the sound related ROMs.	7 - 2 7 - 8
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc	7 - 15

7 - 1 SWITCH UNIT AND COIN METER



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

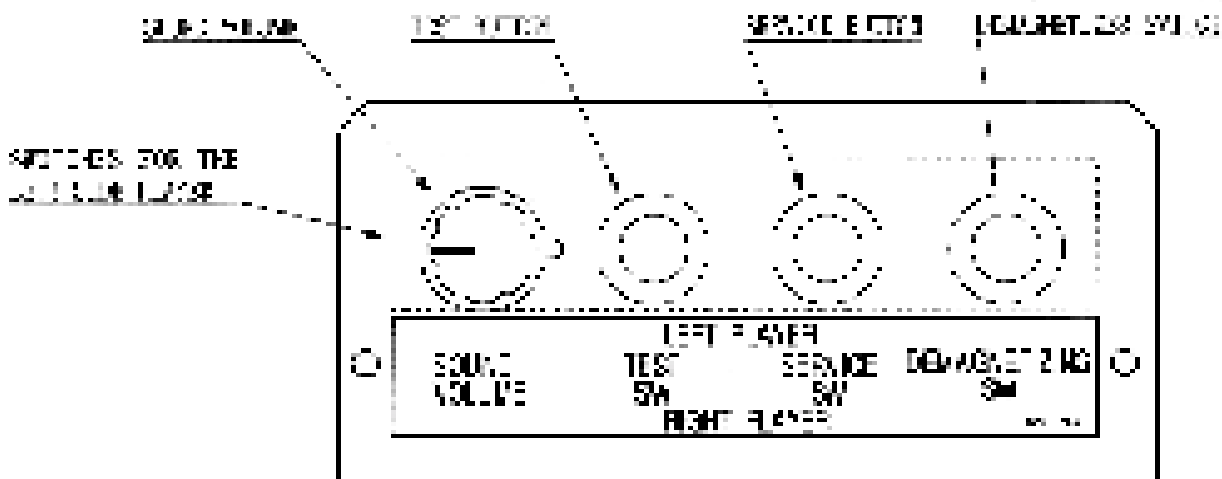


- Adjust to the optimum sound volume by considering the environmental requirements of the installation location.
- If the COIN METER and the game board are electrically disconnected, game play is not possible.

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

SWITCH UNIT

- ① **SOUND VOLUME**  
Controls the speaker volume of the right/left speakers.
- ② **TEST BUTTON (TEST SW)**  
For the handling of the TEST BUTTON, refer to the section on test mode.
- ③ **SERVICE BUTTON (SERVICE SW)**  
Gives credits without registering on the coin meter.



## 7 - 2 TEST MODE

This mainly checks if the operation of the game BD is accurate, and allows for COIN ASSIGNMENTS/GAME ASSIGNMENTS setting and Projector adjustments.

The Following FIGURES/TABLES show the factory recommended settings.

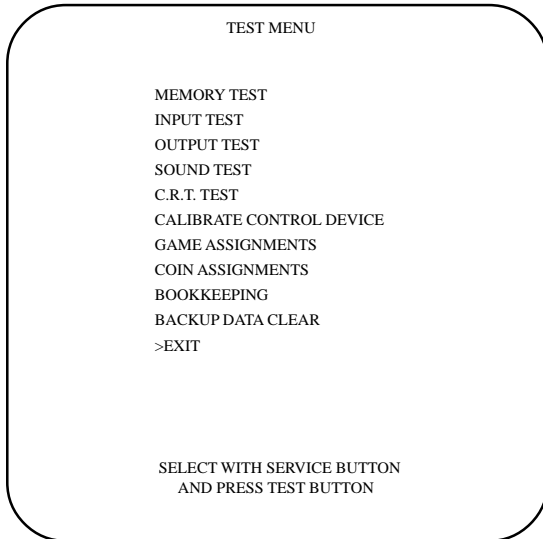


FIG. 7.2 TEST MENU

- ① Push the TEST BUTTON to cause the following TEST MENU to appear:
- ② By pushing the SERVICE BUTTON, bring the “>” mark to the desired item and press the TEST BUTTON. This will select the item’s test. The View Change button #3 (yellow) instead of the test button can be used, and View Change buttons 1 (red) & 2 (blue) instead of service button (for moving arrow) can be used.
- ③ After the test is complete, move the “>” mark to “EXIT” and press the TEST BUTTON to return to game mode.

## 7 - 3 MEMORY TEST

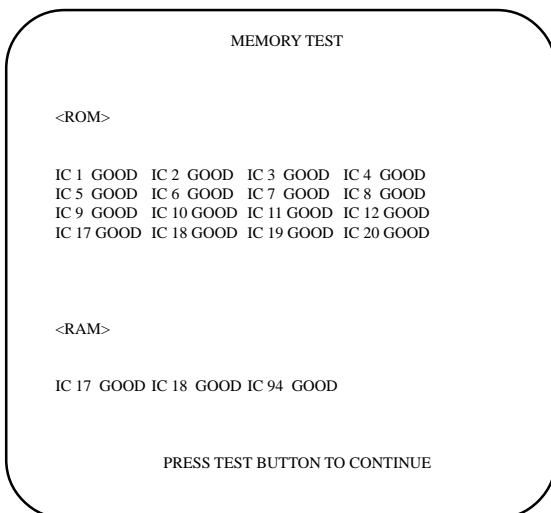


FIG. 7.3a MEMORY TEST

The MEMORY TEST mode is for checking the on-BD memory IC functioning. “GOOD” is displayed for normal ICs and “BAD” is displayed for abnormal ICs

- When the test is completed, if the results are shown left, it is satisfactory.
- During the test, TESTING NOW is displayed on the lower part of the screen. After an elapse of 5 minutes, if the test is not finished, the IC Board may be malfunctioning. Upon finishing the test, press the Test Button to proceed to “CPU ROM TEST”.

### 7 -4 INPUT TEST

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

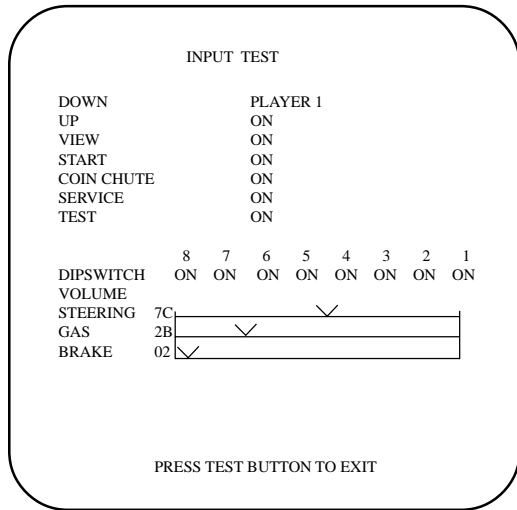
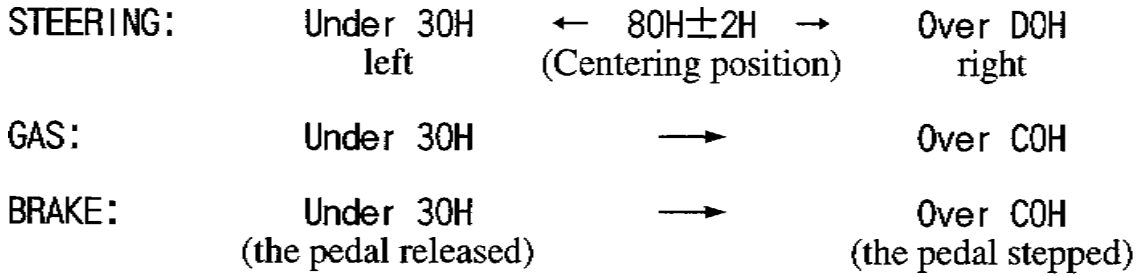


FIG. 7.4 INPUT TEST

- By pressing each switch, if the display on the right-hand side of the name of each switch changes to ON from OFF, the SW and the wiring connections are satisfactory.
- To check CHUTE 1 & CHUTE 2 coin switches, open the COIN CHUTE DOOR and insert a coin(s) in the slot.
- Press either the TEST BUTTON or the START BUTTON + VIEW CHANGE BUTTON to return to the test menu.

As a standard, refer to the following for each of the Volume's adjustment. By operating the Handle (Steering Wheel) and Pedal, if the V of each Volume gauge smoothly moves as the corresponding value varies in a natural manner, then it is satisfactory.



### 7 - 5 OUTPUT TEST

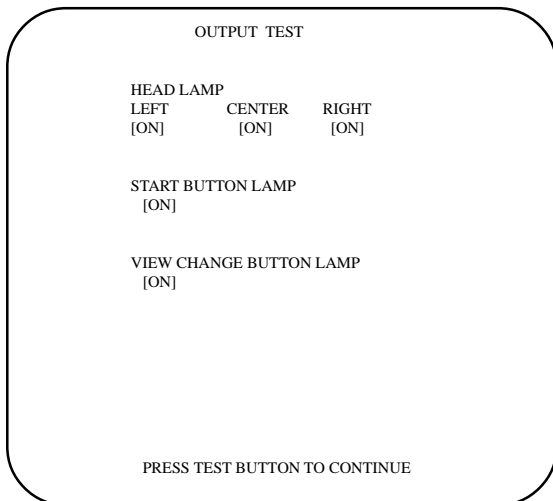
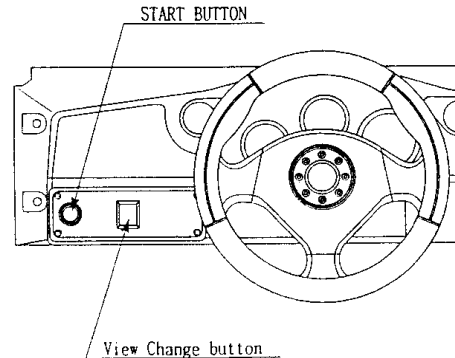


FIG. 7.5 OUTPUT TEST

Choose OUTPUT TEST to cause the following lower screen to appear. In this test, check the status of each lamp.

Selecting OUTPUT TEST displays the screen shown left and enables you to check the status of the View Changes button and the Start button Lamps on the Switch panel, and the Head Lamp. This screen allows lamp status to be checked. Periodically check the Lamp status in this mode. If the Lamp lights up when the display beside the name is ON and goes off when the display is OFF, the wiring connection is satisfactory.





## 7 - 6 SOUND TEST

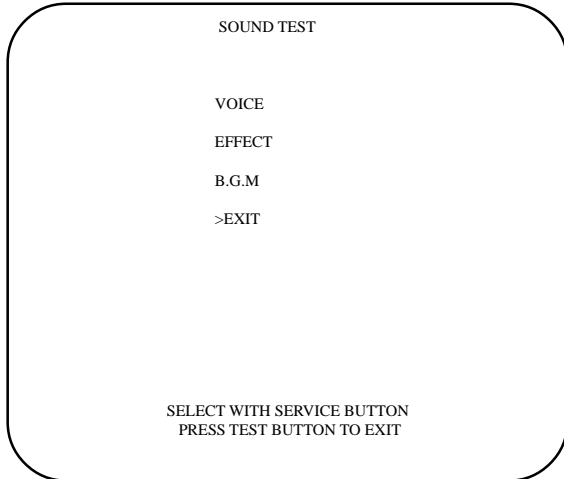
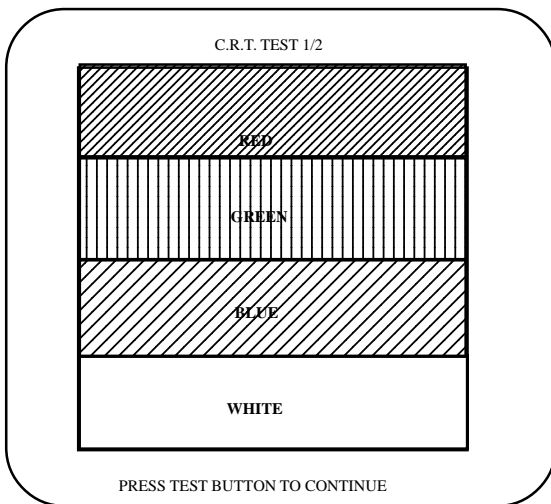


FIG. 7.6 SOUND TEST

This test mode allows each sound related board and speaker to be checked.

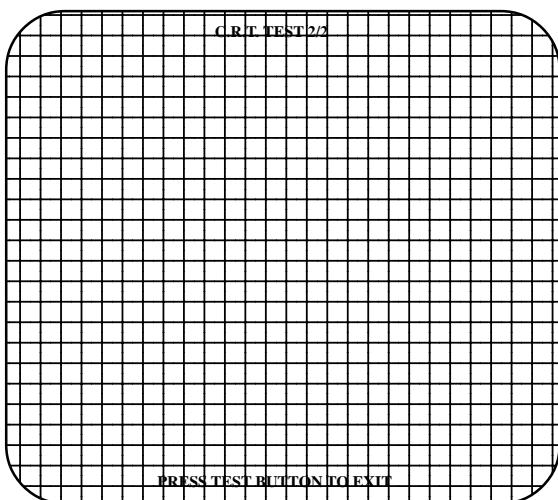
- Press the Service Button to select the sound to be tested, and press the Test Button to have the selected Sound Test screen appear.
- Select EXIT and press the Test Button to return to the Test Menu.

## 7 - 7 C.R.T. TEST



- Select C.R.T. TEST to cause the MONITOR to display the screen shown left, allowing MONITOR adjustment status to be checked.
- Periodically check the MONITOR adjustment status on this screen.
- The screen (1/2) enables color adjustment check to be performed. The color bar of each of the 4 colors, i.e., red, green, blue, and white, is the darkest at the extreme left and becomes brighter towards the extreme right.

- Press the TEST BUTTON to shift to the next screen (2/2).
- The screen (2/2) allows screen size and distortion to be tested.



- Check if the CROSSHATCH FRAME LINE goes out of the screen and if the crosshatch lines are distorted.
- Press the TEST BUTTON to return to the MENU mode.

FIG. 7.7 C.R.T. TEST

## 7 - 8 CALIBRATE CONTROL DEVICE

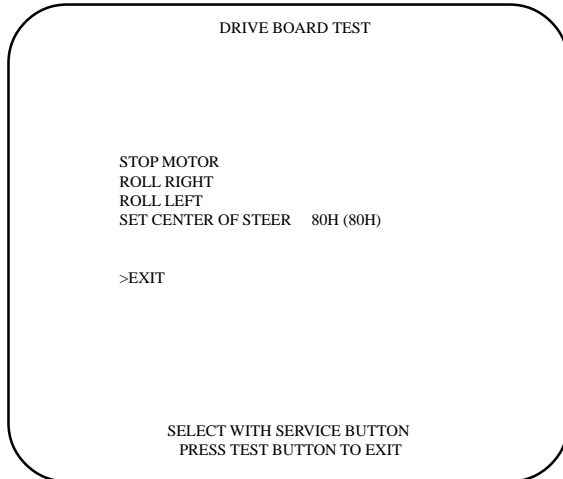


FIG. 7-8 CALIBRATE CONTROL DEVICE

Select CALIBRATE CONTROL DEVICE to have the screen below appear and allow Steering Accelerator and Brake to be Calibrated.

- **CALIBRATE STEERING:**  
By following the on-screen instructions, first turn the Steering Wheel fully to the right/left directions and press the Test Button. In the ensuing screen mode, return the steering wheel to the center and press the Test Button to finish the calibration.
- **CALIBRATE GAS:**  
Fully step on the Gas Pedal and then release it to finish calibration.
- **CALIBRATE BRAKE:**  
Fully step on the Brake Pedal and then release to finish calibration.

## 7 - 9 GAME ASSIGNMENTS

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

### SETTING CHANGE PROCEDURE

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

GAME ASSIGNMENTS	
COUNTRY	EXPORT
GAME DIFFICULTY	EASY
TIME (CANYON)	NORMAL
TIME (STADIUM)	NORMAL
TIME (DESERT)	NORMAL
STEERING FORCE	80%
ADVERTISE SOUND	ON
COMMUNICATION MODE	MASTER
MACHINE ID	1
SPEED METER	KM/H
>EXIT	
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON TO EXIT	

- COUNTRY  
The Country setting cannot be selected
- COMMUNICATION MODE  
For communication play, set one seat to “MASTER” and the rest of the seats to “SLAVE”. The game setting and coin setting, etc. of the MASTER seat apply to the SLAVE seats also. For non-interactive play set to “SINGLE”.
- MACHINE ID  
For interactive play between 2 or more machines (cabinets), the cabinets (starting from left, facing the monitor screen) are numbered in sequential order of No.1, No.2, No. 3, No. 4,...If the same number is used for 2 or more cabinets, or cabinets are numbered in an incorrect sequential order, on screen error display will appear and in this case, no activation takes place..
- GAME DIFFICULTY  
Sets the difficulty level in 4 categories, i.e., EASY, NORMAL, HARD, and HARDEST.
- ADVERTISE SOUND  
Setting of sound during Advertise (ON~sound to be emitted/  
OFF~sound not to be emitted).

- SPEED METER  
Set the SPEED METER display to either MPH or KM/H.

## 7 - 10 COIN ASSIGNMENTS

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

### SETTING CHANGE PROCEDURE



IMPORTANT!

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

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

## 7 - 10 COIN ASSIGNMENTS

COIN ASSIGNMENTS

COIN/CREDIT SETTING	#1		
CHUTE#1	1 COIN		1 CREDIT
CHUTE#2	1 COIN		1 CREDIT
 <b>ADDITIONAL SETTING</b>			
MANUAL SETTING			
 >EXIT			
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON			

- **COIN/CREDIT SETTING**  
Sets the CREDITS increase increment per coin insertion. There are 27 settings from #1 to #27, expressed in XX CREDIT as against XX COINS inserted. (TABLE 7.10a, 7.10b) #27 refers to FREE PLAY. When the COIN CHUTE TYPE is set to INDIVIDUAL, there are some setting numbers not displayed as indicated in TABLE 7.10b.
- **MANUAL SETTING**  
This allows credit increase setting as against coin insertion to be further set in the manner finer than COIN/CREDIT SETTING (refer to TABLE 7.10c).

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

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

# MANUAL SETTING

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

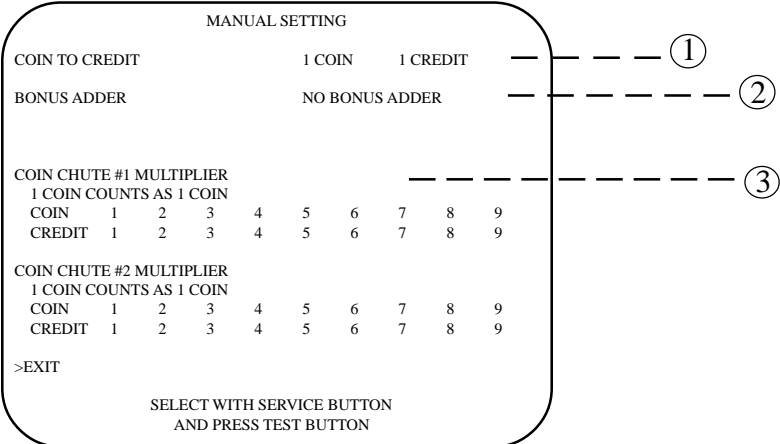


FIG. 7.10b MANUAL SETTING

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

Table 7.10c MANUAL SETTING

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

## 7 - 11 BOOKKEEPING

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

BOOKKEEPING		PAGE1/2
COIN CHUTE #1		XXXXXXXXXXXX
COIN CHUTE #2		XXXXXXXXXXXX
TOTAL COINS		XXXXXXXXXXXX
COIN CREDITS		XXXXXXXXXXXX
SERVICE CREDITS		XXXXXXXXXXXX
TOTAL CREDITS		XXXXXXXXXXXX
NUMBER OF GAMES		XXXXXXXXXXXX
TOTAL	TIME	XXXXXXXXXXXX
PLAY	TIME	XXXXXXXXXXXX
AVERAGE PLAY	TIME	XXMXXS
LONGEST PLAY	TIME	XXMXXS
SHORTEST PLAY	TIME	XXMXXS
PRESS TEST BUTTON TO CONTINUE		

FIG. 7.11a BOOKKEEPING (1/2)

BOOKKEEPING PAGE 2/2			
TIME HISTOGRAM			
COURSE	BEGINNER	ADVANCED	EXPERT
~2M29S	0	0	0
2M30S~2M44S	0	0	0
2M45S~2M59S	0	0	0
3M00S~3M14S	0	0	0
3M15S~3M29S	0	0	0
3M30S~3M44S	0	0	0
3M45S~3M59S	0	0	0
4M00S~4M14S	0	0	0
4M15S~4M29S	0	0	0
4M30S~	0	0	0
PRESS TEST BUTTON TO EXIT			

FIG. 7.11b BOOKKEEPING (2/2)

- **COIN CHUTE#\*:**  
Number of coins put in each Coin Chute.
- **TOTAL COINS:**  
Total number of activations of Coin Chutes.
- **COIN CREDITS:**  
Number of credits registered by inserting coins.
- **SERVICE CREDITS:**  
Credits registered by the SERVICE BUTTON.
- **TOTAL CREDITS:**  
Total number of credits (COIN CREDITS+SERVICE CREDITS).
- **TOTAL TIME:**  
The total energized time.

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

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

## 7 - 12 BACKUP DATA CLEAR

BACKUP DATA CLEAR	
YES (CLEAR)	
>NO (CANCEL)	
SELECT WITH SERVICE BUTTON PRESS TEST BUTTON TO EXIT	

FIG. 7.12 BACKUP DATA CLEAR

- Clears the contents of BOOKKEEPING and high score player ranking entry.
- When clearing, bring the arrow to “YES” and when not clearing, to “NO”, by using the SERVICE BUTTON, and push the TEST BUTTON.
- When the data has been cleared, “COMPLETED” will be displayed. Bring the arrow to “NO” and press the TEST BUTTON to cause the MENU mode to return on to the screen.
- Note that the contents of the GAME SETTING, COIN SETTING, and BOARD SETTING are not affected by BACKUP DATA CLEAR operation.

## 8. HANDLE MECHA

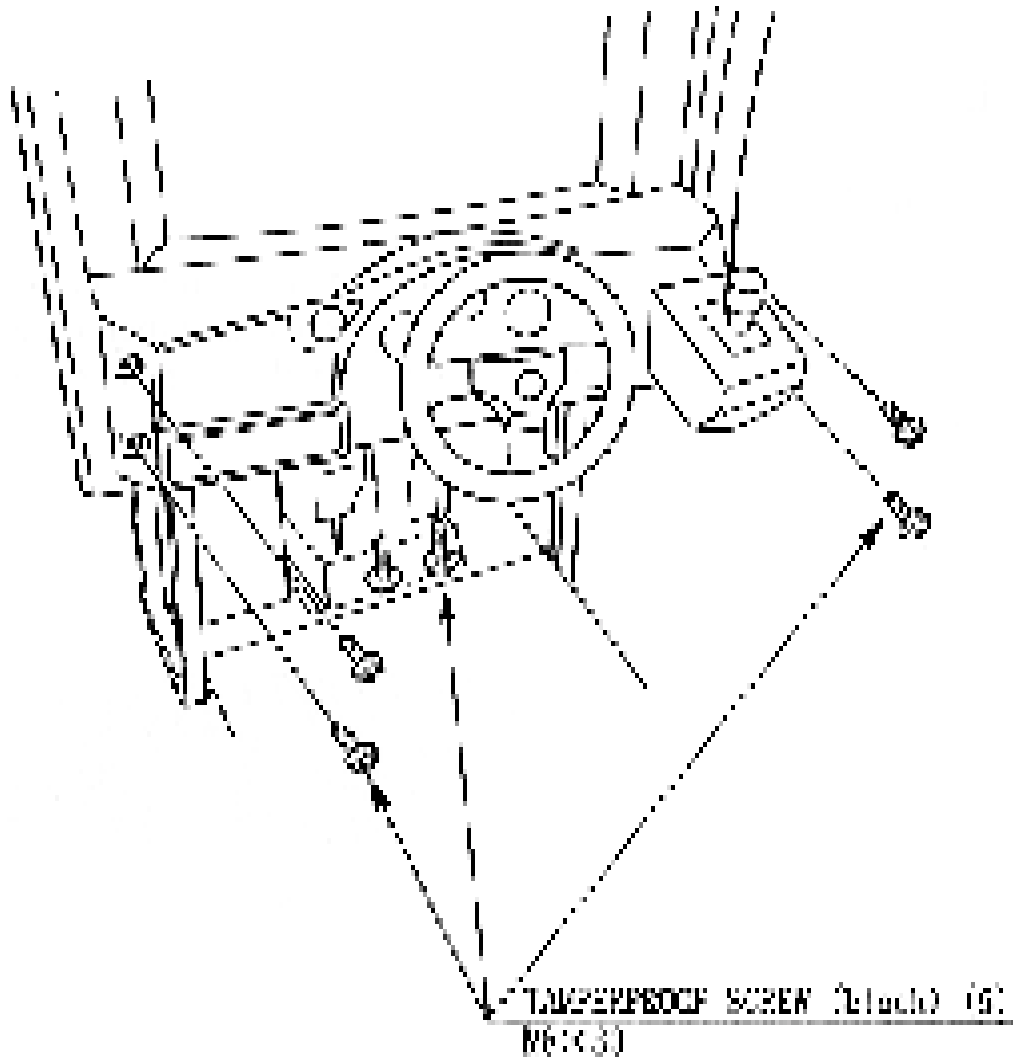


- In order to prevent an electric shock and short circuit, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

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

### 8 - 1 REMOVING THE CONTROL PANEL

- ① Turn the power switch off.
- ② Remove a total of 4 tamperproof screws from both sides of the control panel's front.
- ③ Remove the two tamperproof screws from the underside of the control panel.
- ④ Wiring connectors are connected inside the control panel. Carefully draw the control panel in a manner so as not to damage wiring.
- ⑤ Disconnect the wiring connector.





## 8 - 2 REPLACING AND ADJUSTING THE HANDLE'S VR



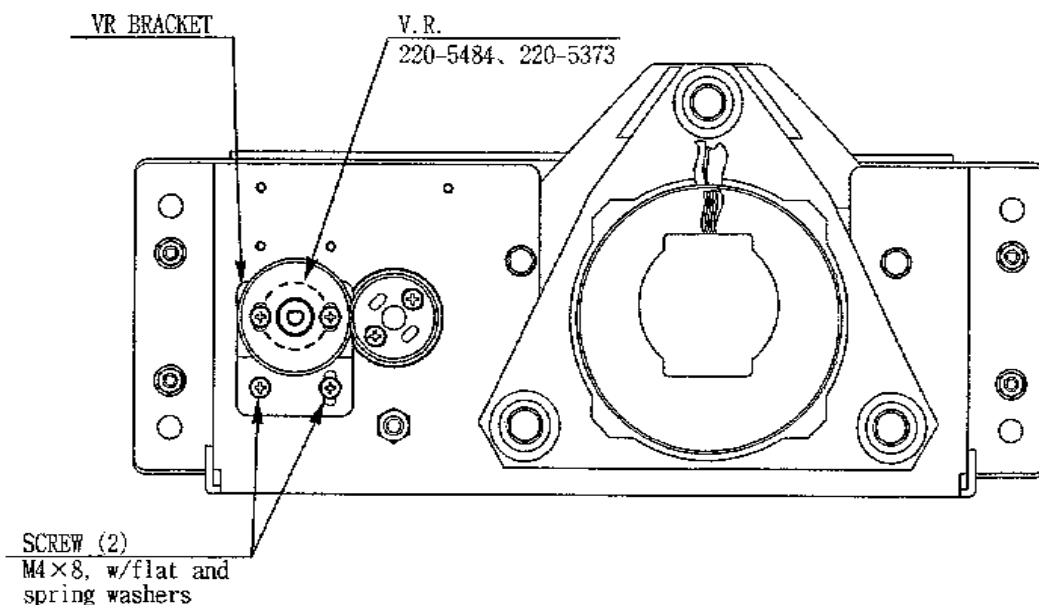
- Never touch places other than those specified. Touching places not specified can cause electric shock and/or short circuit.
- After the replacement or adjustment of the VR, be sure to set the variable value of the VR in the test mode's Volume Setting.

### REPLACING THE VOLUME

- ① Turn off the power.
- ② Disconnect the connector.
- ③ Take out the 2 screws which secure the volume Bracket and remove the Volume Bracket.
- ④ Take out the 2 screws to remove the Volume Gear and replace the Volume.
- ⑤ After replacing the Volume, perform Volume setting in the Volume Setting Mode.

### 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 Gear Mesh.
- ③ With the Steering Wheel in the centering position, cause gears to be engaged in the manner so that the Volume Shaft is in the status shown below.
- ④ Fasten screws which secure the Volume Bracket.
- ⑤ Perform Volume setting as per the Volume Setting Mode.



## 8 - 3 GREASING

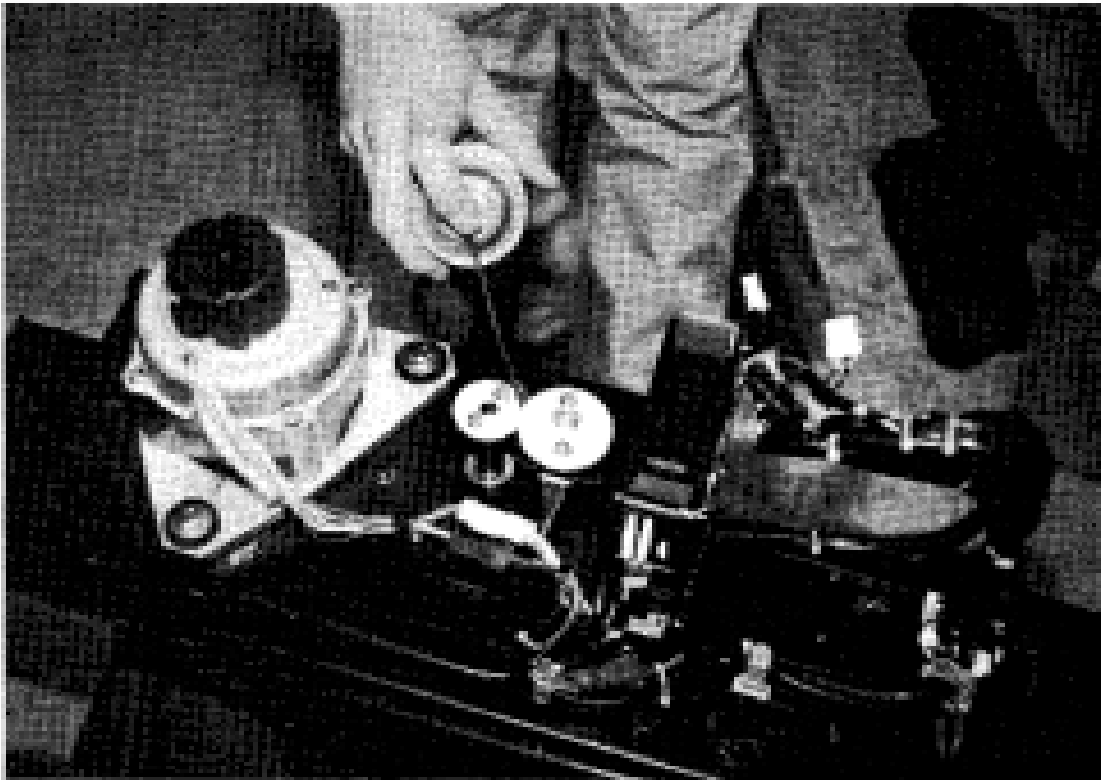


WARNING!

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

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

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



## 9. SHIFT LEVER



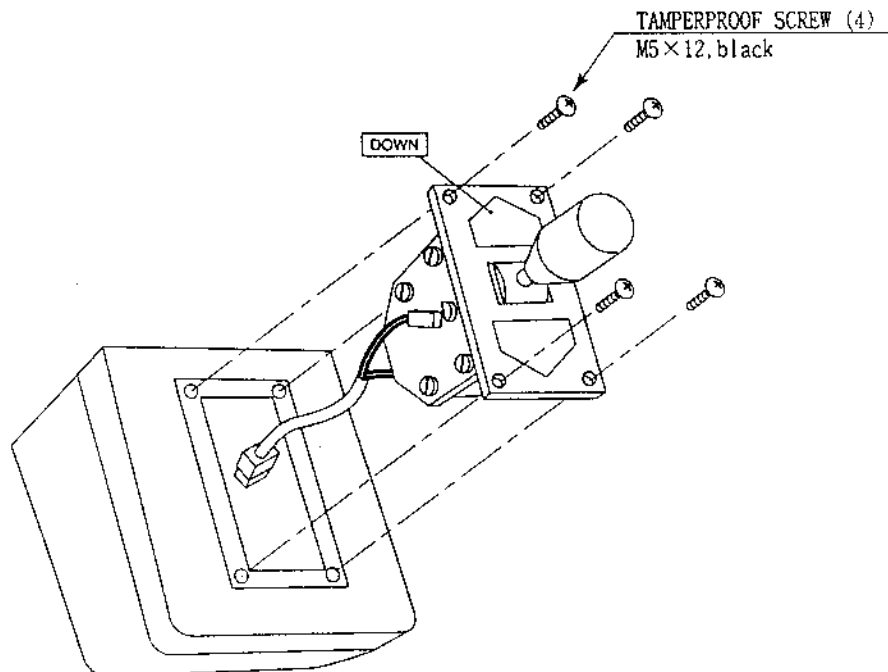
CAUTION!

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

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

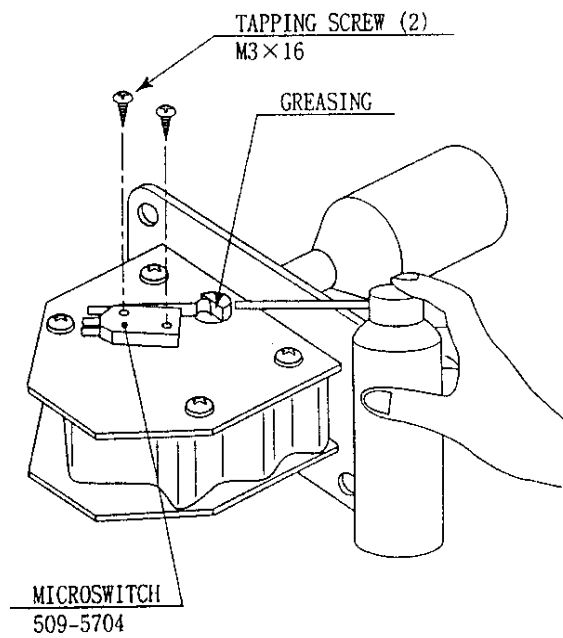
### 9 - 1 REMOVING THE SHIFT LEVER

- ① Turn Power off.
- ② Take out the 4 SPECIAL BOLTS and pull the SHIFT LEVER UNIT upward by paying careful attention so as not
- ③ to damage the wiring. Disconnect the 2 connectors to allow the unit to be removed.
- ④ When reinstalling, follow the procedure oppisite as when removing. At this time, ensure that“DOWN” display appears on the upper part as shown.



## 9 - 2 SWITCH REPLACEMENT

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



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

## 10. ACCEL & BRAKE(S)



WARNING!

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

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

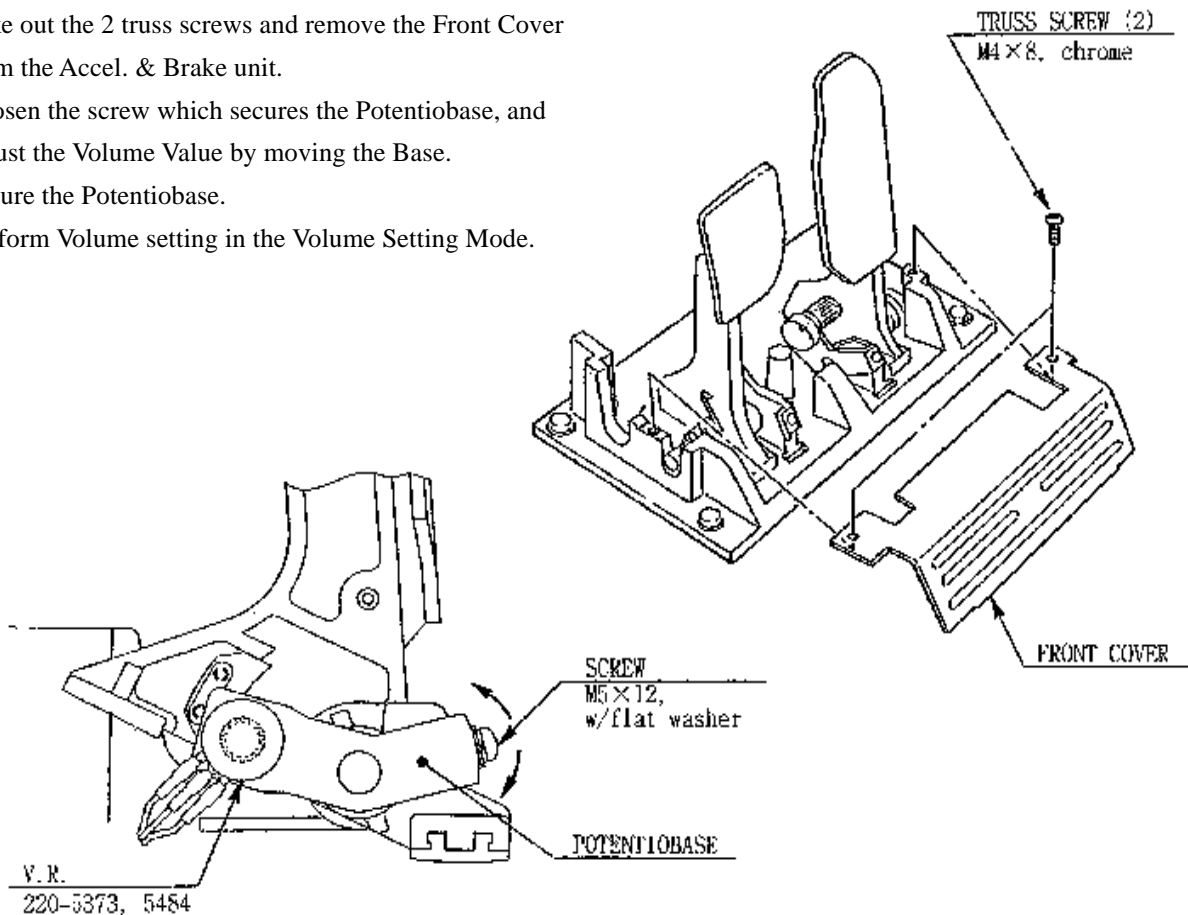
### 10 - 1 ADJUSTING AND REPLACING THE V.R.

	<b>When released:</b>		<b>When stepped on:</b>
<b>ACCEL. :</b>	Under 30 H	↔	Over C0H
<b>BRAKE :</b>	Under 30 H	↔	Over C0H

Check Volume values in the Test Mode.

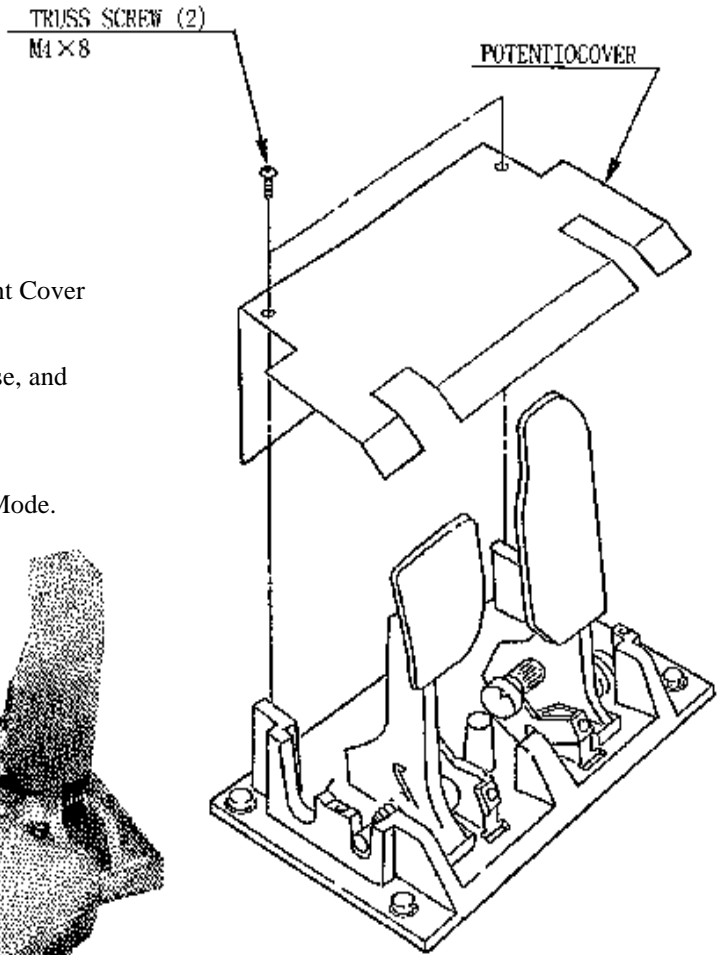
Since work is performed inside the energized cabinet, be very careful so as not to touch undesig-nated portions. Touching places not specified can cause an electric shock or short circuit.

- ① Take out the 2 truss screws and remove the Front Cover from the Accel. & Brake unit.
- ② Loosen the screw which secures the Potentiobase, and adjust the Volume Value by moving the Base.
- ③ Secure the Potentiobase.
- ④ Perform Volume setting in the Volume Setting Mode.



Check Volume values in the Test Mode.  
Since work is performed inside the energized cabinet, be very careful so as not to touch undesignated portions. Touching places not specified can cause an electric shock or short circuit.

- ① Take out the 2 truss screws and remove the Front Cover from the Accel. & Brake unit.
- ② Loosen the screw which secures the Potentiobase, and adjust the Volume Value by moving the Base.
- ③ Secure the Potentiobase.
- ④ Perform Volume setting in the Volume Setting Mode.



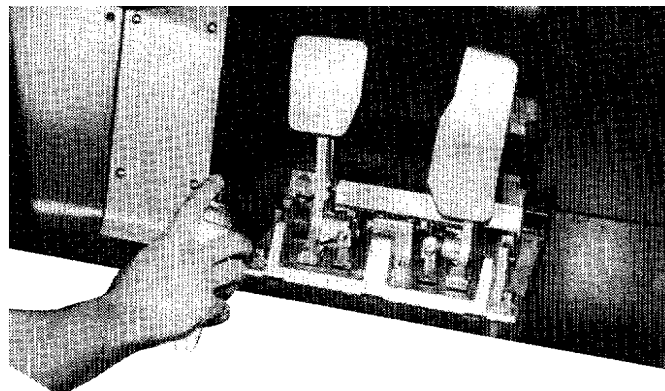
## 10 - 2 GREASING



IMPORTANT!

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

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



# 11 . COIN SELECTOR

## HANDLING THE COIN JAM

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

## 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.

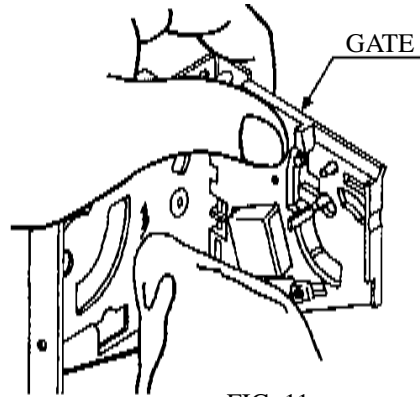


FIG. 11a

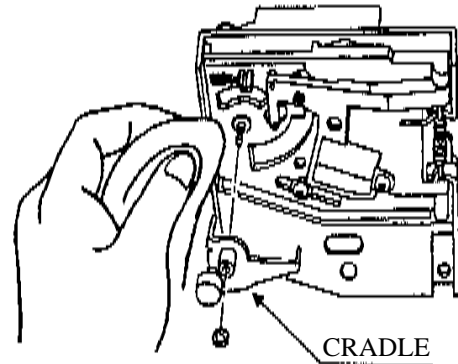


FIG.11b



IMPORTANT!

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

### COIN INSERTION TEST

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

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

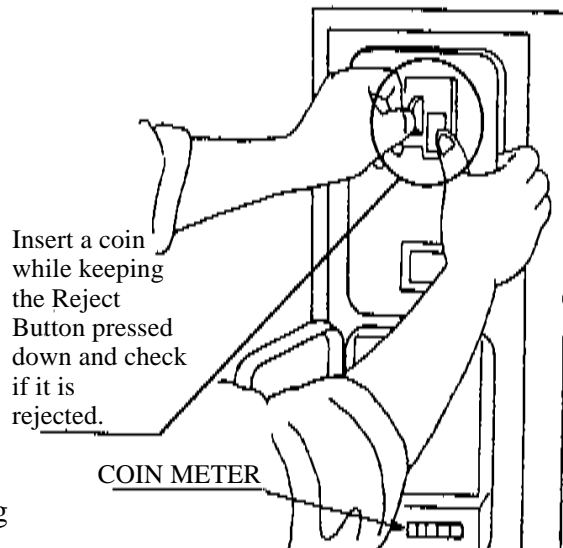


FIG. 11c

## OPTIONAL DOLLAR BILL ACCEPTOR

● THE COIN DOOR ASSEMBLY USED ON **DIRT DEVILS** COMES EQUIPPED TO ACCEPT A DOLLAR BILL ACCEPTOR. ALL NEEDED WIRING CONNECTIONS ARE CONVENIENTLY LOCATED INSIDE THE GAME FOR THIS APPLICATION.

● THE COIN DOOR CAN ACCCOMMODATE THE FOLLOWING VALIDATORS:

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

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

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

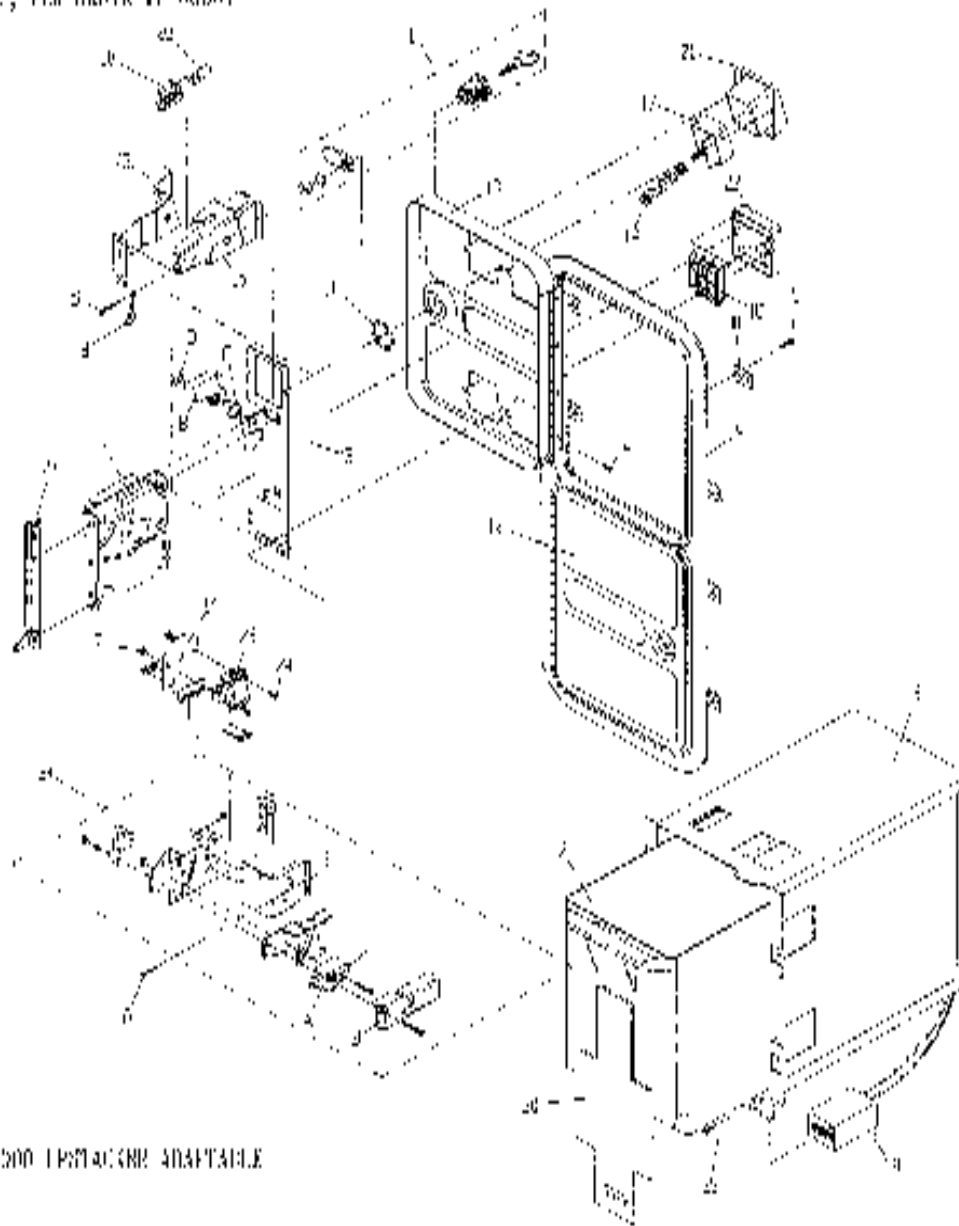


# COIN CONTROLS INTERNATIONAL

1050 HOWARD ST., FIVE CROWD II 60507  
 (847) 228-1810



## OVER/UNDER TWO ENTRY COIN DOOR\*



\*MKS SERIES 2500 ELECTROME ADAPTABLE

PART #	DESCRIPTION	COST	PART #	DESCRIPTION	COST	PART #	DESCRIPTION	COST		
11	15-4050-02	3.50	151	91-113-18	BRACKET TOP MOUNT BRACK	1.75	21	20-1011-06	20' DC METER	2.50
12	15-4131-01	15.00	152	91-113-19	BRACKET MOUNT BOTTOM BR	1.75	22	20-1005-06	1.25 DC METER	6.50
21	20-117-00	5.40	153	91-117-20	CAM PIN	1.40	23	20-1003-01	METER & LOCKOUT COVER	25
31	20-1163-00	17.50	181	91-113-20	91' COIN SPRING	.80	31	20-1400-06	LOCKING KEY	2.00
41	90-1002-00	.25	201	91-1118-00	91' COIN RETURN BRACK	.50	32	20-1005-06	20' DC METER	.25
51	90-1000-00	.25	211	91-111-04	RETURN MOUNT BRACK	2.50				
61	20-1015-00	.25	212	91-1112-04	RETURN MOUNT BRACK	2.50				
71	20-1205-02	.25	213	91-2125-00	20' LOCKOUT TOOL ASSEMBLY	12.95				
81	20-1902-06	.30	214	91-2116-06	MICROSWITCH ASSEMBLY	16.50				
91	21-1005-00	30.00	215	91-1116-06	MICROSWITCH BRACK	6.00				
101	21-1004-06	.40	216	91-1116-01	MICROSWITCH BRACK	6.00				
111	21-1007-06	5.00	217	91-1116-04	MICROSWITCH BRACK	6.00				
121	21-1005-02	1.40	218	21-125-02	MICROSWITCH PLASTIC COVER	.75				
131	21-1004-06	10.00	219	20-1002-01	20' ENTRY MOUNT BRACK	1.80				
141	21-1002-06	4.50	221	20-1002-02	20' ENTRY MOUNT BRACK	1.80				
151	21-1006-00	5.50	271	21-1002-00	HEAD MOUNT BRACK	1.50				

## 12. MONITOR



CAUTION!

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

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

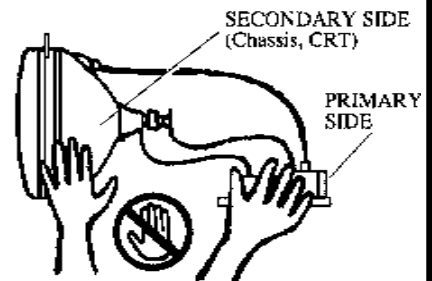


WARNING!

### Primary side and secondary side

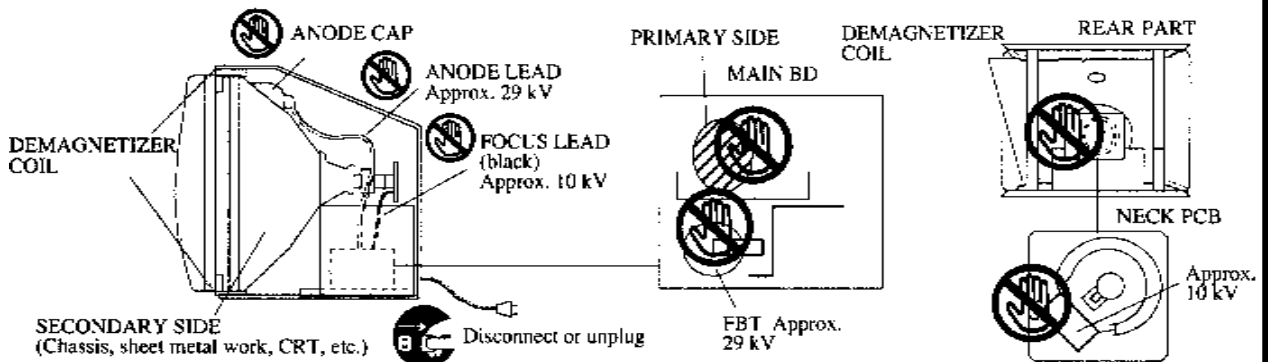
The monitor's circuit which is divided into the Primary side and secondary side, is electrically isolated. Do not touch the primary side and the secondary side simultaneously. Failing to observe the instruction can cause electric shock, and this is very dangerous.

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



### High tension Voltage

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



### Connecting the CRT and PCB

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



CAUTION!

### Static Electricity

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

### Installation and removal

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

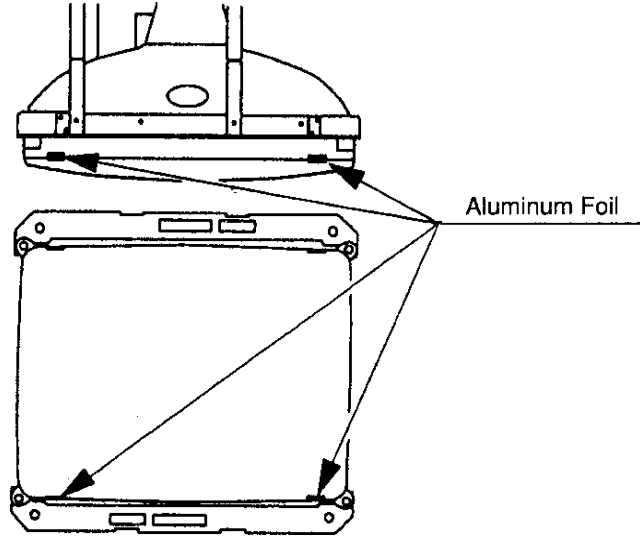


For the purpose of static prevention, special coating is applied to the CRT face of this product. To protect the coating, pay attention to the following points. Damaging the coating film can cause electric shock to the customers. For the caution to be heeded when clearing, refer to the Section of Periodic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

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

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

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

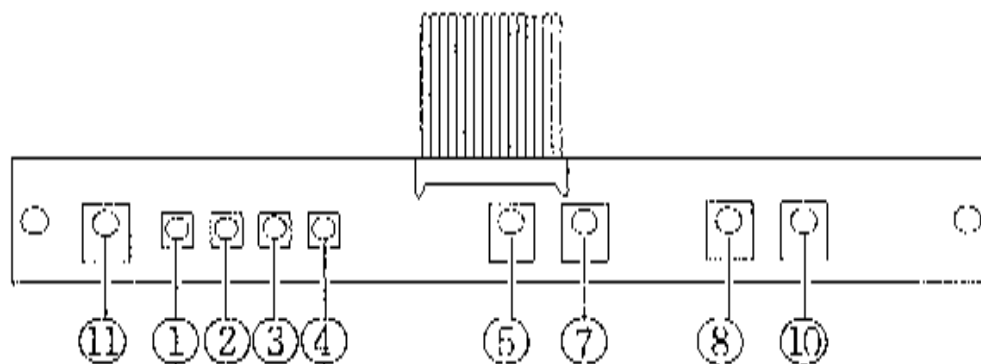


Monitor adjustments have been made at the time of shipment. Therefore do not make further adjustment without a justifiable reason.

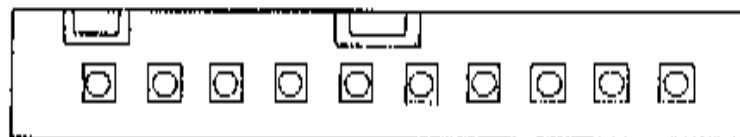
Adjusting the monitor which contains high tension parts is dangerous work. Also, an erroneous adjustment can cause deviated synchronization and image fault, resulting in malfunctioning.

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

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



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



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

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

## 13. REPLACEMENT OF FLUORESCENT LAMP AND LAMPS



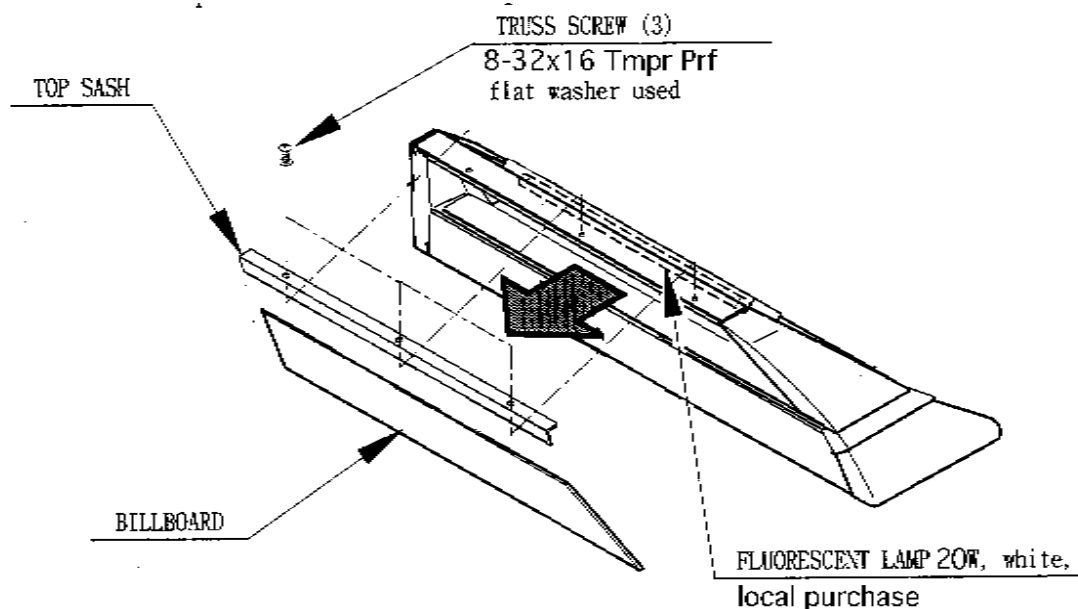
- When performing the work, be sure to turn power off. Working with power on can cause an electric shock or short circuit accident.
- The Fluorescent Lamp, when it gets hot, can cause burns. Be very careful when replacing the Fluorescent Lamp.



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 violent falling down accidents.

### 13 -1 REPLACEMENT OF FLUORESCENT LAMP

- ① Take out the 3 Tamperproof screws from the top billboard sash.
- ② Be sure to disconnect all connectors connected to the Marquee assembly before removing the Billboard and/or performing work.
- ③ Remove the Billboard front Plex by sliding upward to expose FL ASSY.



**NOTE:** To remove the the glow lamps within the lower marquee, the entire billboard assy must be removed from the cabinet.

### 13 - 2 REPLACING THE LAMPS

- 1.> Remove the 2 hex bolts from underneath the Marquee and the 6 truss screws securing the rear Billboard plate.
- 2.> Remove the maquee .This will expose the lamp unit within.
- 3.> Replace bulbs as is necessary then re-install.

### 13. PERIODIC INSPECTION TABLE

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



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

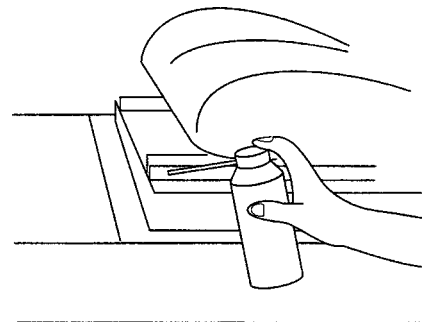
	Item	Interval	Reference
CABINET	Check Adjusters' contact with surface.	Daily	4
HANDLE MECHA	Check lamp.	Monthly	8
	Check VOLUME VALUE.	Monthly	8
	Check ADJUST GEAR engagement.	Trimonthly	9
	Greasing of GEAR.	Trimonthly	9
ACCEL. & BRAKE	Check VOLUME value.	Monthly	10
	Check ADJUST GEAR engagement.	Trimonthly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

#### CLEANING CABINET SURFACES

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

#### SEAT (Greasing to Seat Rail Portion)

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



## 14. TROUBLESHOOTING

Should trouble occur, first check connector connections.

PROBLEMS	CAUSE	COUNTERMEASURES
With Main SW ON, no activation	Power is not supplied. Power supply/voltage is not correct. AC main fuse causes the power to be cut off due to momentary overload.	Plug in correctly Make sure that power supply/voltage is correct. Check fuse. Remove the cause of overload and replace fuse
Operation is unsatisfactory	Volume Setting Failure Poor mesh of V.R. gear. Spring failure due to secular change of Accelerator and Brake Mecha.	Perform Volume setting Adjust or replace V.R. Adjust Gear mesh.. Replace the Spring.
Irregular sound emitted from inside Rear Cabinet	Greasing to gear mesh portion is not satisfactory, or extraneous matter mixed in.	Apply greasing or eliminate extraneous matter.
The color of the image on PROJ. screen is incorrect.	Connector connections are defective.	Check the connection for the RGB and SYNC connectors of the PROJ. TERM. BD and VPM BUFFER BD.
The image on PROJ. screen has color deviation.	Affected by the magnetic field of installation location.	Make CONVERGENCE adjustment. (Refer to Section 12.)
No sound is emitted.	Sound Volume adjustment is not appropriate. Sound BD and speaker are malfunctioning.	Adjust sound volume. (see Section 7). Perform sound test to find and replace defective parts.(Refer to Section 7).
NETWORK check will not finish.	Communication cable's connection failure.	Perform V.R. setting, Adjustment.
Communication play is not possible.	Communication cable's connection failure. Communication Play setting is wrong.	Check for Communication cable disconnection Correctly set in test mode.
No sound from Cockpit.	In correct Cabinet Type Setting.	Correct Cabinet Type Setting.
The Fluorescent lamp does not light up.	The Fluorescent tube is burnt out.	Replace the Fluorescent tube (Refer to Section 11).
Shift operation is not satisfactory in Manual transmission.	Shift SW malfunctioning.	Replace SW

## 15. 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.



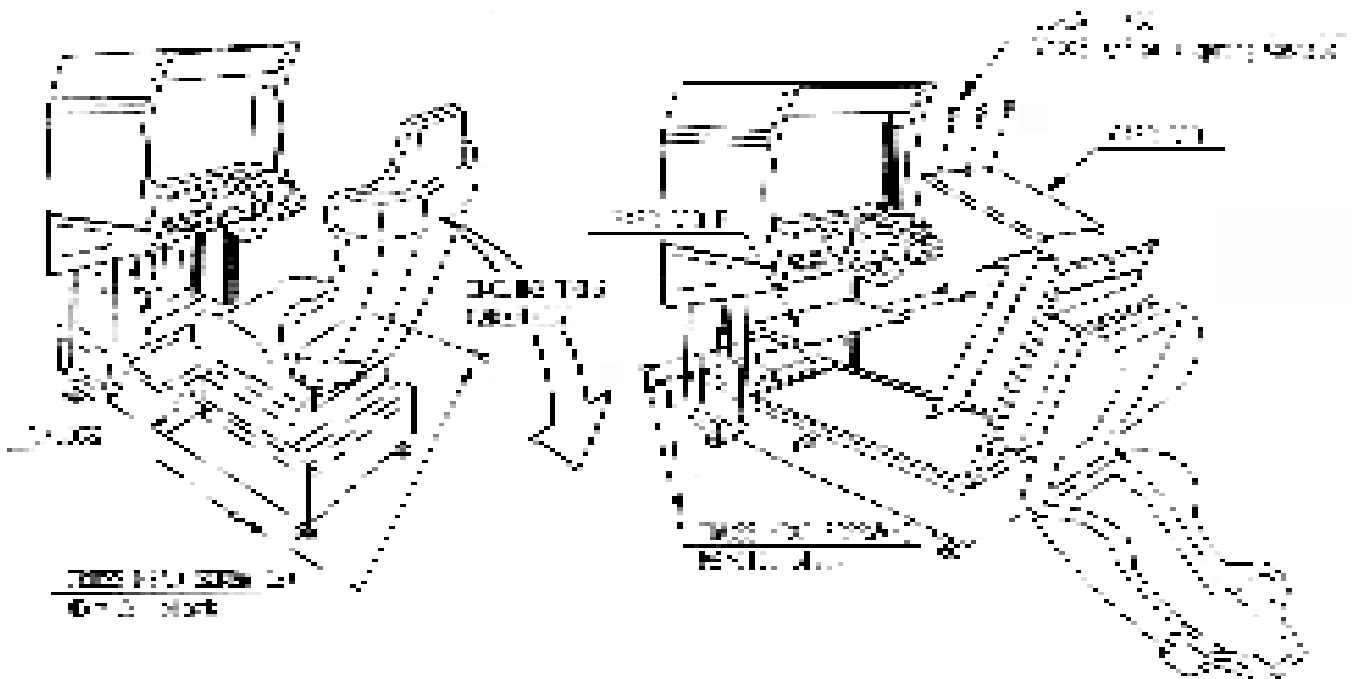
Do not expose the Game BD, etc. without a good reason. In this product, setting changes are made during the test mode. The Game BD need not be operated. Use the Game BD, etc. as is with the same setting made at the time of shipment.

### 15 -1 REMOVING THE GAME BOARD

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

- ① Turn main switch off.
- ② Unlock the base, and remove the 2 truss screws from the side of the base.
- ③ Turn the knob to unlock. The seat can be inclined in the direction shown. When inclining the seat, be careful not to damage seat parts. Carefully rest the backrest portion of the seat on the ground.
- ④ If necessary, protect the seat from damage by using a cloth or blanket on the floor.
- ⑤ Take off the 3 screws to remove the case lid. The game board is inside the shield case.
- ⑥ Take off a total of 4 screws from both sides with the seat being in an inclined state and remove the base lid F.

Removing base lid F allows the Elec Base to be seen.



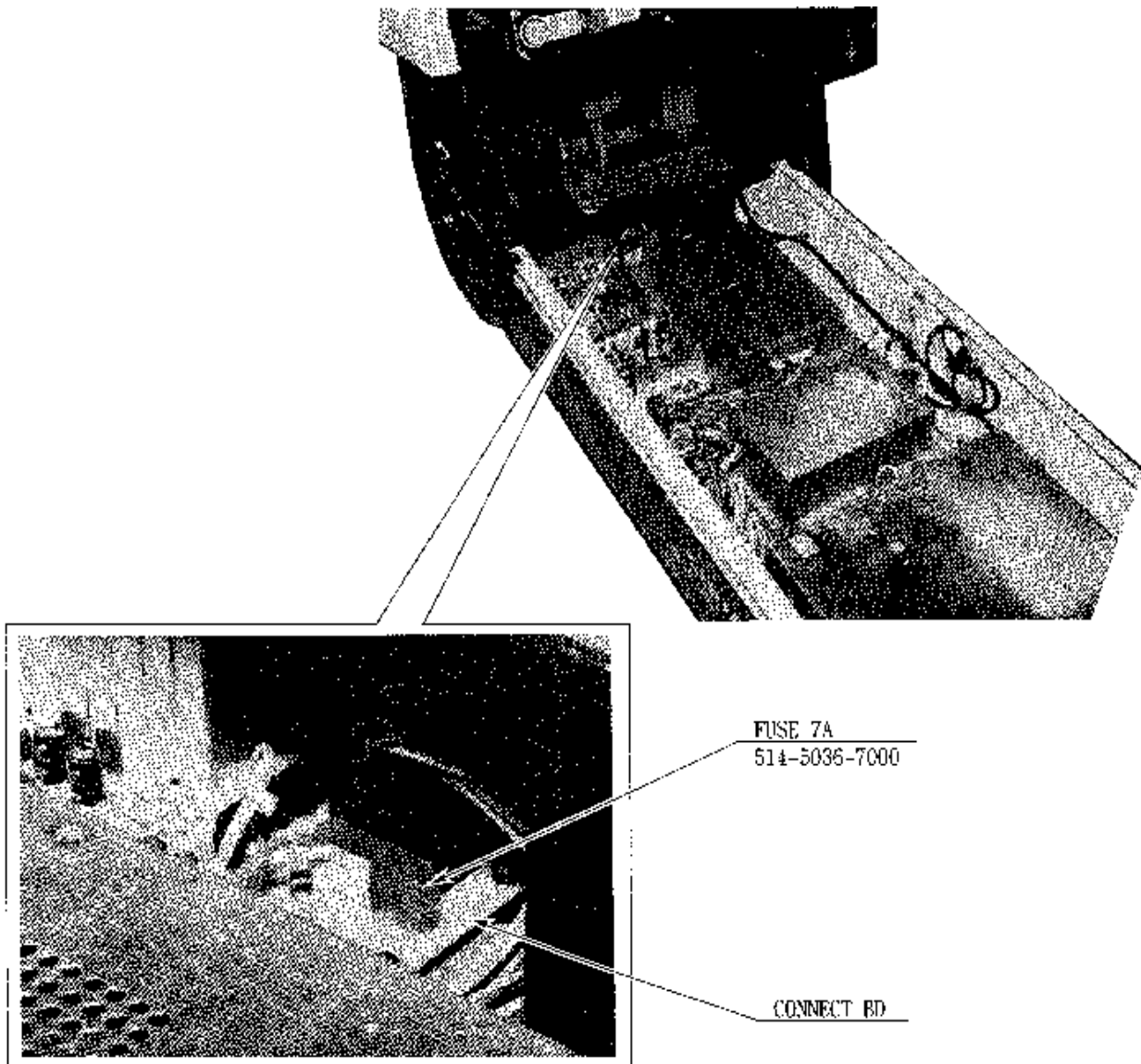


## 15 - 2 REPLACEMENT OF FUSE



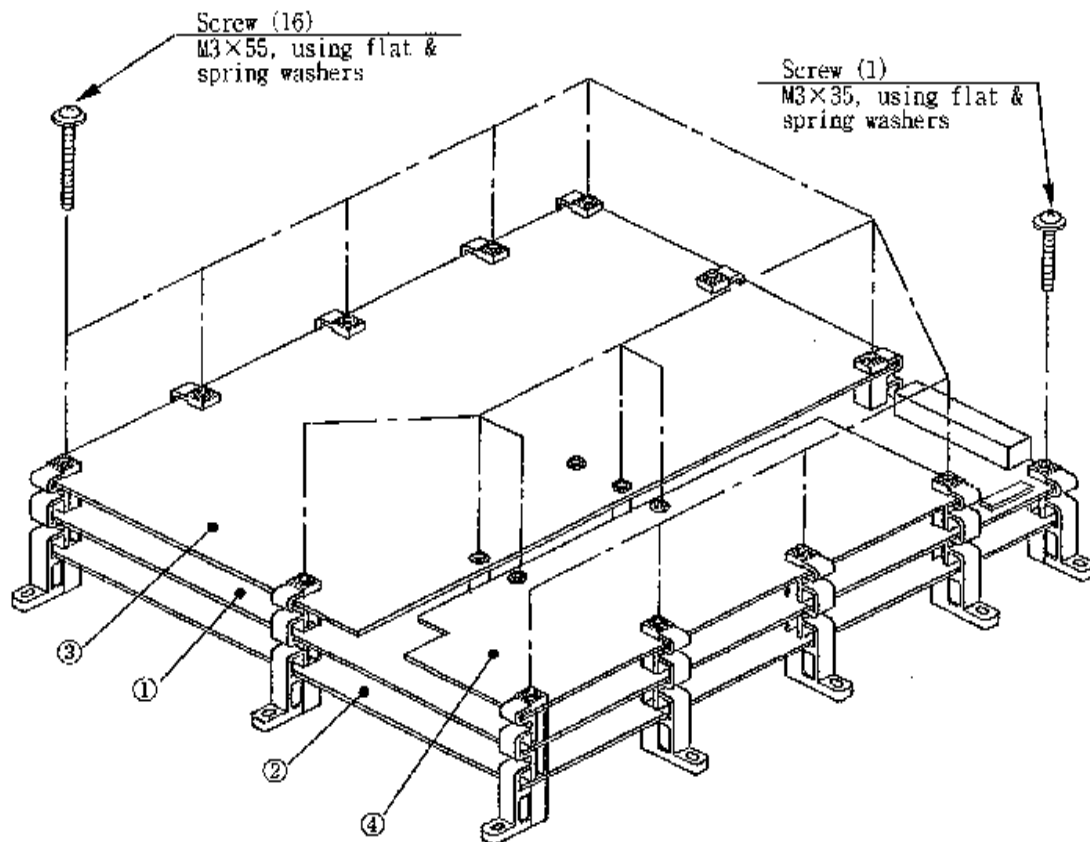
- In order to prevent an electric shock, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident
- After eliminating the cause of the blowing of fuse,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

Incline the Seat and remove the Base Lid to view the Base interior. The composition of the Base interior is as shown below. There is a fuse on each of the Connect BD. and Motor Drive BD. When replacing the fuse, be sure to use the specified one.



# 15 - 3 COMPOSITION OF GAME BOARD

GAME BD DIRT DEVILS (833-13427)



No.	PART No.	DESCRIPTION
①	837-12715-91	MODEL3 STEP2 CPU BOARD
②	837-12716-91 837-13368	MODEL3 STEP2 VIDEO BOARD MODEL3 STEP2.1 VIDEO BD
③	834-13528	ROW BD DRT
④	837-11861-91	MODEL3 COMM BD COM

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

15 - 4 ERROR DISPLAY (DRIVE CONTROL BOARD)



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

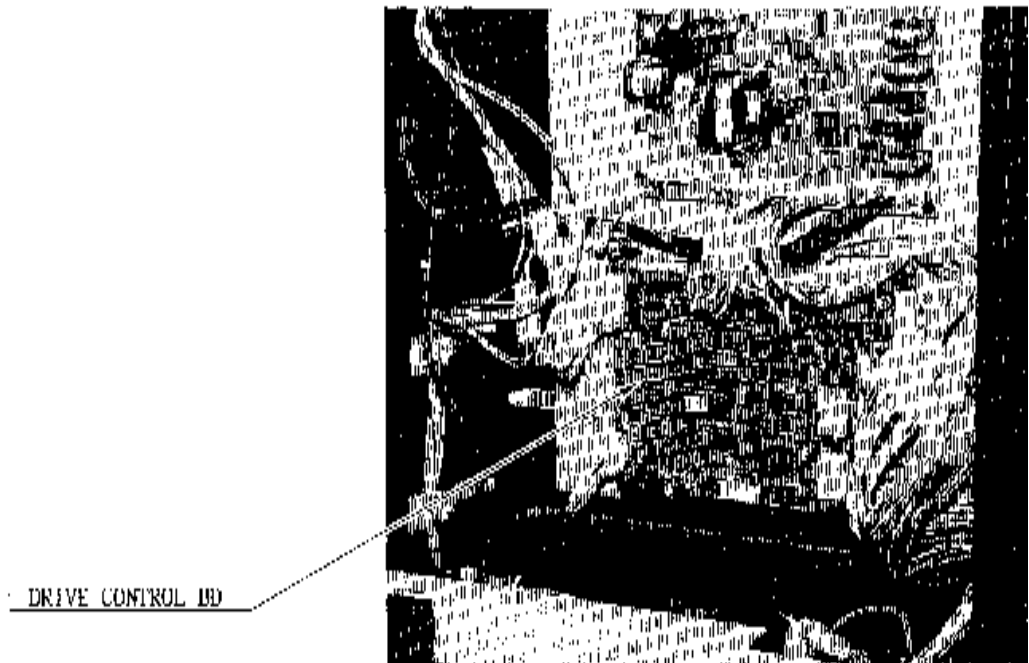
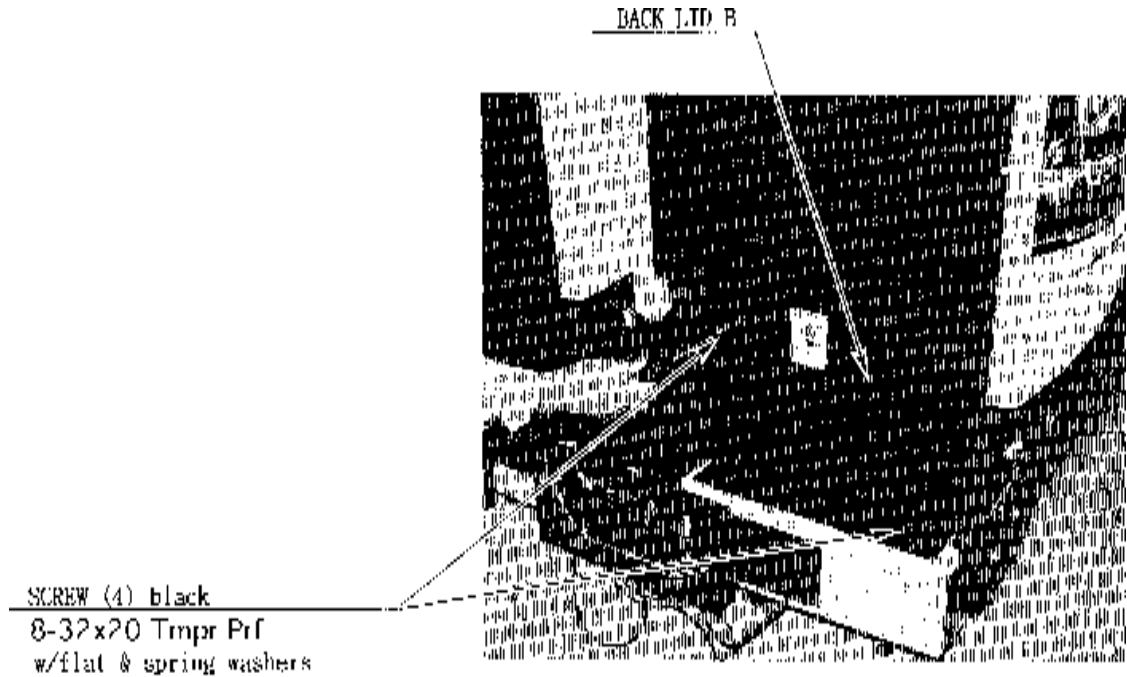
If an irregularity occurs in the Drive Control Board, etc., the ERROR message is shown on the screen and the 7-SEG display on the Drive Control Board. Take countermeasures in the manner corresponding to the ERROR message. Note that even at the time of error occurrence, game play is possible without Steering Wheel reaction.

Among the ERROR display as per the Table listed below, each Er 01, 02, 20, and 22 is displayed if an irregularity is found during initialization setting movements when power is turned on and at the time Test Mode is finished.

From among error displays as per the Table shown below, Er 23, 24, and 25 indicate On-Board 7-SEG error display when an irregularity is found during game and ADVERTISE MODE. If an irregularity is found during game, game play can be continued without Steering Wheel reaction.

7-SEG display on Drive Control BD.	ERROR	CAUSE/COUNTERMEASURES
Er 01 Er 02	ROM ERROR RAM ERROR	Malfunctioning of Drive Control Board. Replace Drive Control Board.
Er 20	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 Control BD which controls the Motor, Drive BD., wirings in between, etc.)
Er 22	Steering Wheel's centering error	Malfunctioning during initial setting movement. Finish initialization setting movement by turning power off and then on. Note that when ERROR is displayed, the malfunctioning relates to the Steering Wheel Volume system.
Er 23 Er 24 Er 25	ERROR of the Encoder incorporated in the motor. Overcurrent ERROR Overheat Overload	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.

If ERROR display is shown on the screen, incline the Seat WITHOUT TURNING POWER OFF, and remove Back Lid B to check the 7-SEG display on the Drive Control Board. At this time, if the power is turned off, each of the Er 23, 24, and 25 which could have occurred during operation may not be displayed.



## 16. COMMUNICATION PLAY



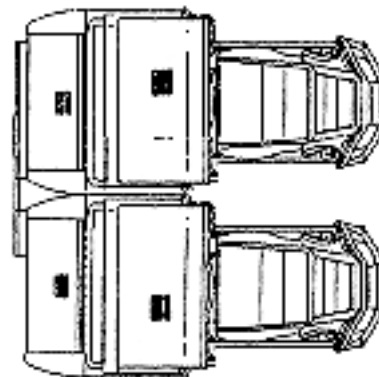
WARNING!

- Before performing between-cabinets connection work, be sure to turn the Power SW OFF and unplug the power plug from the wall socket. Failure to observe this can cause electric shock and/or short circuit accidents.
- Perform assembling as shown in this manual. Erroneous assembling can cause electric shock accidents and malfunctioning.

By linking 4 machines, up to 4 persons can play simultaneously. Although accessory parts are to be installed for communication play, some of the parts will remain as spares.

### 16 - 1 INSTALLATION PRECAUTIONS

- ① Simple multiple machines are to be linked, sufficient power corresponding to the number of machines used need to be supplied. As standard, amperage is 15A (AC100~110~120V area).
- ② Due to the parts used for communication play, interval between machines (each pair) is 20 cm, when connecting three or more machines together. If parts are not installed, adjacent players will come into contact with each other and this can cause accidents and trouble.

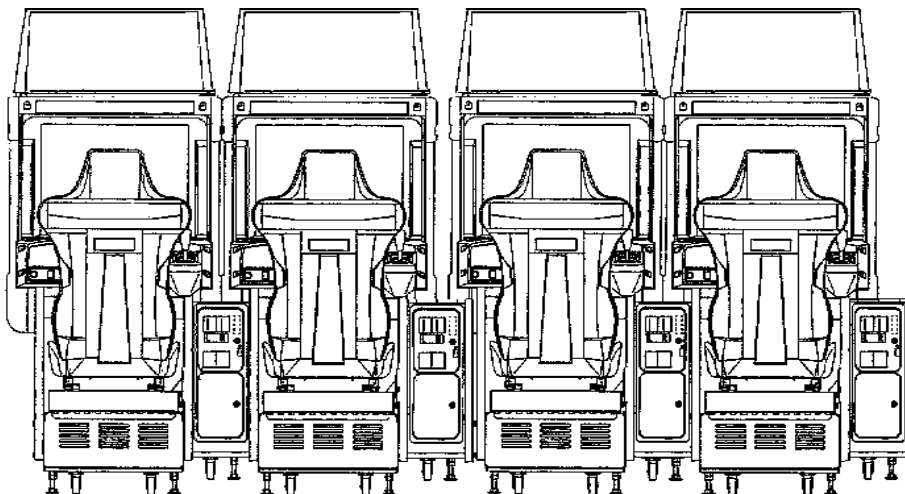


### 16 - 2 CONNECTING THE COMMUNICATION CABLES



IMPORTANT!

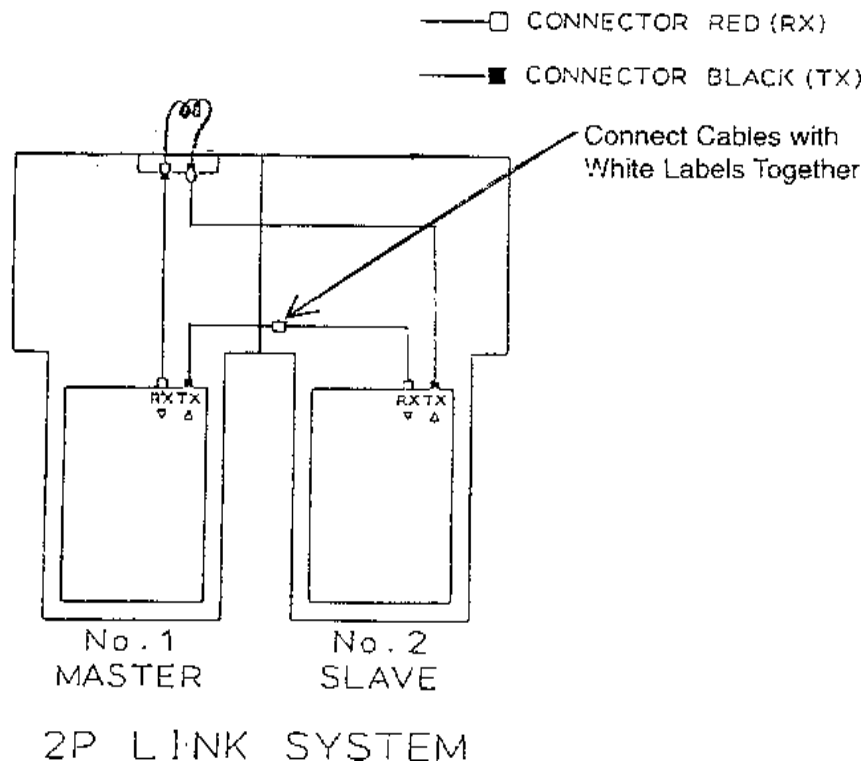
The Communication Cable is optic-fiber made and will break if excessively bent. Handle with care.



- ① To connect your Daytona 2 game with others, setup with one cabinet on the left and one cabinet on the right sides of the Coin Chute Tower. In the parts bag located in the cash box, locate the Opto Cable. this will be needed later, to connect together the opto connections on the rear of the Cash Box Tower. The hardware needed to assemble your Daytona 2 game has been threaded into the proper holes. This was done to insure the bolts thread properly into the T nuts in the Cabinet.
- ② At this time remove the rear cover of the Cash Box Tower.
- ③ Notice the wire harness taped to both sides of the cabinets and Cash Box Tower. On the wireharness connections Black is for the left side, yellow is for the right side viewed from the front. Locate left side cabinet (on/off switch) and Cash Box Tower. Connect the 15, 4 and 2 position connectors together. At this time connect the Opto cable (without white lable) to the Opto connection nearest to the left side of cabinet (viewed from the front). These Opto connections are in the rear of the Cash Box Tower.
- ④ You may elect not to connect the connector at this time, but carefully push connectors in the hole so they are still accessible from the outside of the cabinet.
- ⑤ There are 4 bolts in the NON SLOTTED HOLES, on the side of the cabinet, the 2 on top under the the ledge must be removed. The 2 on the bottom must be loosened about 1/4 inch. Lift up the Cash Box Tower and using the 2 lower slotted holes on the bottom of the Cash Box slip them over the lower protruding bolts and slide the cash box into place. Open the Coin Door and install the 2 upper bolts through the cash box into the cabinet. tighten all 4 bolts.
- ⑥ The Right side of the cabinet gets installed the same way as the left side.



Rear View of Cash Box Tower





During communication play, if communication is interrupted due to a certain cause, ERROR MESSAGE will be displayed, then NETWORK check mode appears on the screen automatically.

Cause all of the seats to enter the Test Mode and change the GAME ASSIGNMENTS of each seat for communication play. Refer to the section on Explanation of Test and Data display for changing procedure.

- ① Press the TEST button to enter the test mode and choose “GAME ASSIGNMENTS”.
- ② Bring the arrow to LINK TYPE and press the TEST BUTTON and set plural number of machines sequentially to CAR 1, CAR2, CAR3 and CAR4 as applicable starting from the extreme left facing the monitor’s front side. If the same number is set for 2 or more cabinets, or if the sequential order is incorrect, the game display, etc. will be confused (different from the actual status). Therefore, be careful of this point.
- ③ In case of communication play, only the settings of GAME DIFFICULTY and GAME MODE need to be performed by the MASTER seat. All other seats (SLAVE) are subject to the setting made by the MASTER CAR1 seat. The above setting change made by any SLAVE seat is not effective and will not be reflected on the game.

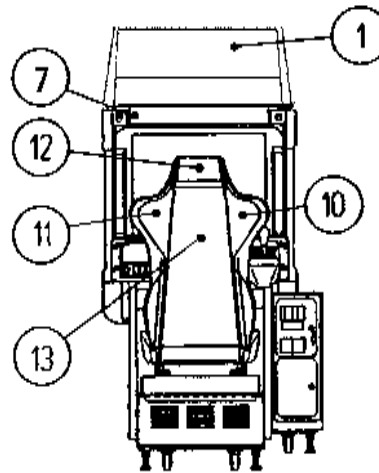
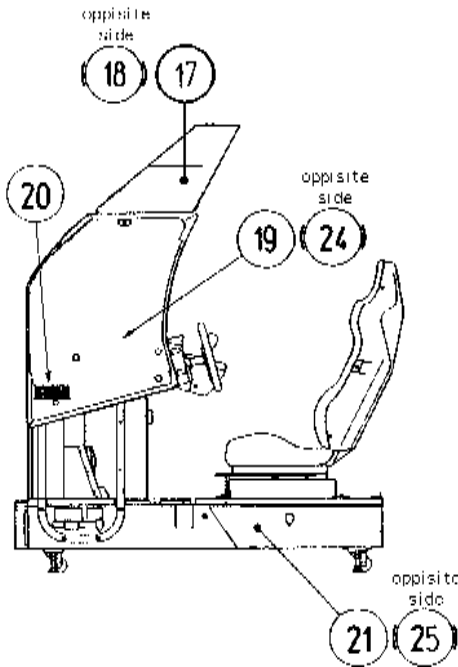
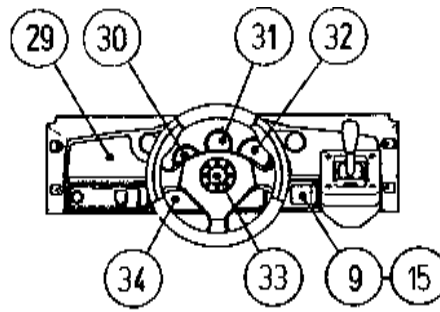
GAME ASSIGNMENTS

COUNTRY	EXPORT
GAME DIFFICULTY	EASY
TIME (CANYON)	NORMAL
TIME (STADIUM)	NORMAL
TIME (DESERT)	NORMAL
STEERING FORCE	80%
ADVERTISE SOUND	ON
COMMUNICATION MODE	MASTER
MACHINE ID	1
SPEED METER	KM/H

>EXIT

SELECT WITH SERVICE BUTTON  
AND PRESS TEST BUTTON TO EXIT

# 17. DESIGN RELATED PARTS

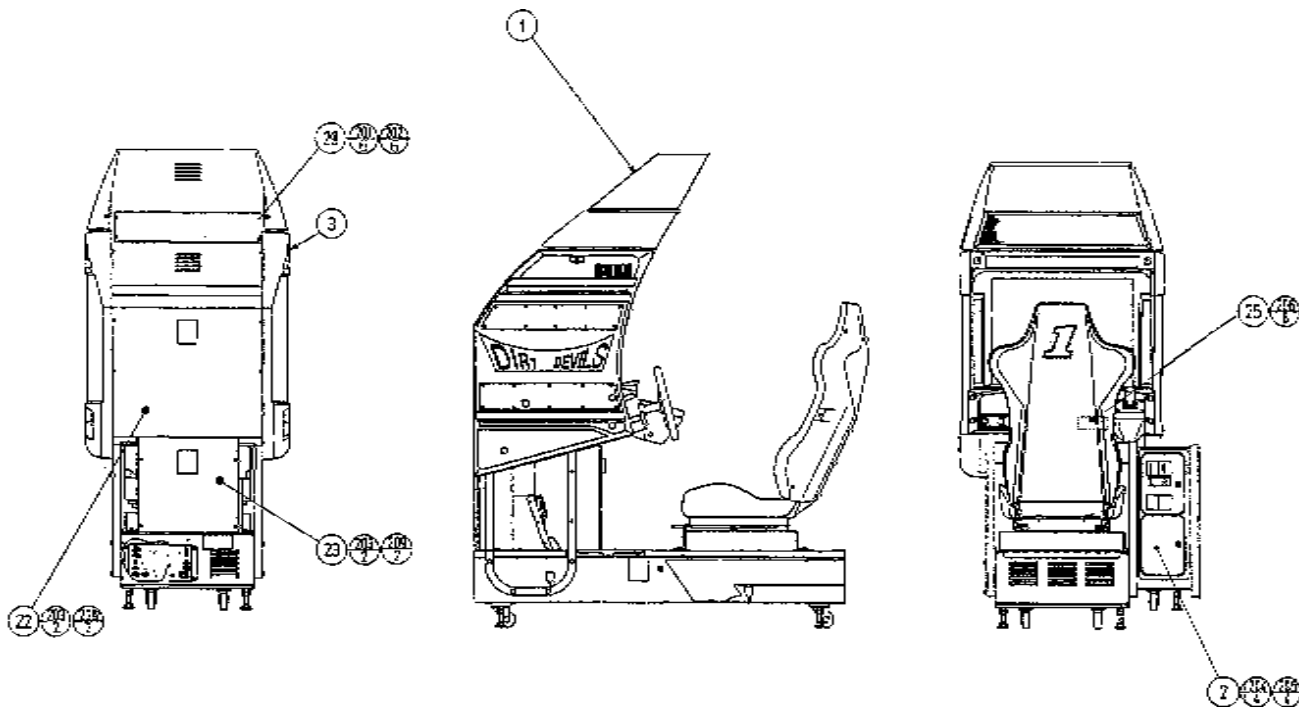


ITEM NO.	PART NO.	DESCRIPTION
1	999-0708	BILLBOARD PLEX DRT STD
7	422-0696-01	SUB INSTR SH DRT ENG
9	DYN-0011	DENOMI PLATE W/O ORIGINAL
10	DRT-1604-E	STICKER RIGHT
11	DRT-1604-D	STICKER LEFT
12	DRT-1604-C	STICKER DIRT DEVILS
13	DRT-1604-B	STICKER CAR 1
	DRT-1605-A	STICKER CAR 2
	421-9931	STICKER CAR 3-4
15	421-7308-~	DENOMINATIN SHEET 1 GAME ~
17	999-0737	DRT STICKER MARQUEE L
18	999-0738	DRT STICKER MARQUEE R
19	DRT-1031-B	STICKER SIDE L
20	999-0739	STICKER SEGA LOGO SPORT
21	DRT-1501-A	STICKER BASE L
24	DRT-1046-B	STICKER SIDE R
25	DRT-1501-B	STICKER BASE R
29	422-0697-01	PLAY INSTR SH DRT ENG
30	DYN-1214-E	DESIGN PL WATER MTR TWIN
31	DYN-1214-D	DESIGN PL OIL MTR TWIN
32	DYN-1214-C	DESIGN PL TACO MTR TWIN
33	SPG-2002	STEERING EMBLEM
34	SPG-1201-E	METER PANEL



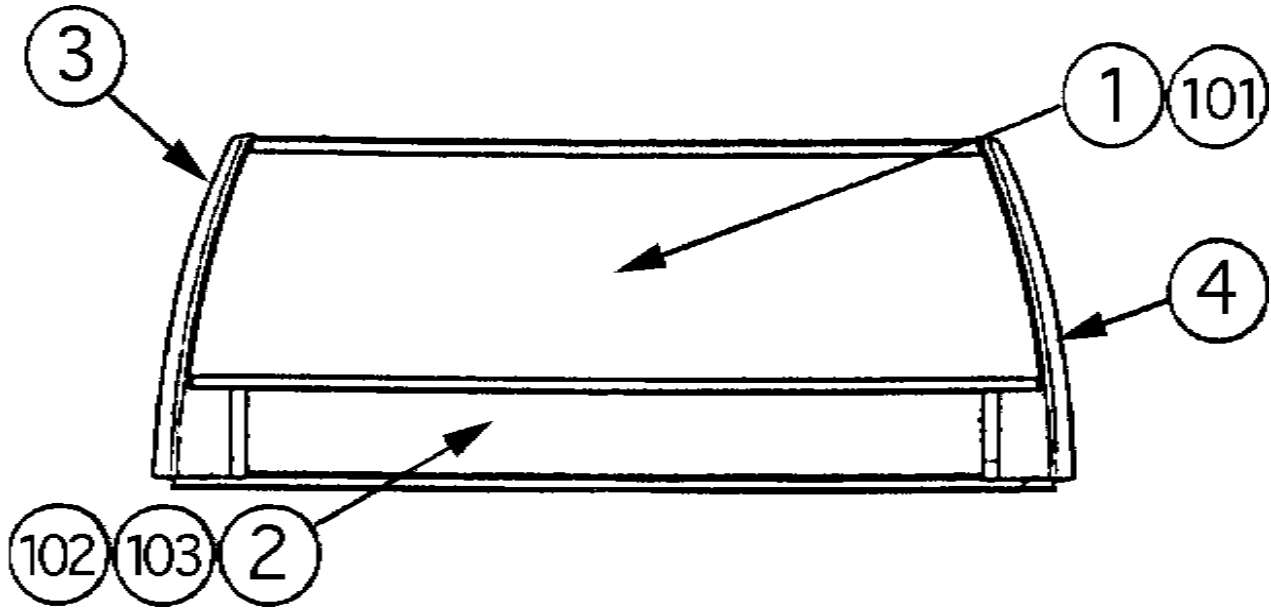
# 18. PARTS LIST

## TOP ASSY DIRT DEVILS



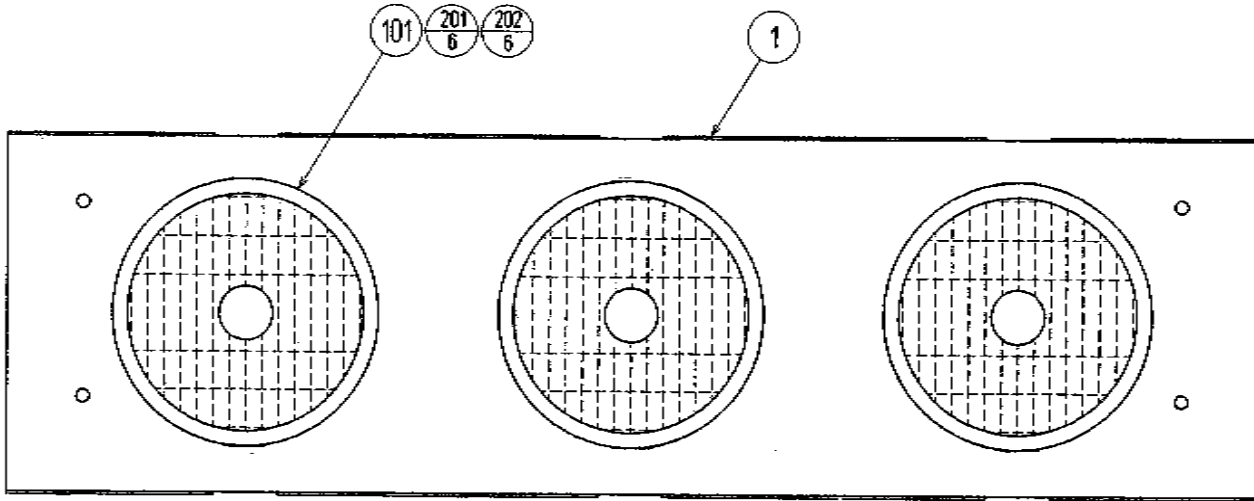
ITEM NO.	PART NO.	DESCRIPTION
1	999-0714	ASSY BILLBOARD
2	DRT1-0300	ASSY COIN CHUTE TOWER
3	DRT1-1000	ASSY COCKPIT
22	INY-0004	BACK LID INY
23	DYN-0008	BACK LID B
25	DYN-0011	DENOMI PLATE W/O ORIGINAL
29	LOCAL PURCHASE	MARQUEE RETAINING PLATE
201	LOCAL PURCHASE	1/4-20X1 1/4" TMPR PRF SCREW
202	068-852216	FLT WSHR M8
203	000-T00440-0B	M SCR PH W/FS BLK M4X40
204	LOCAL PURCHASE	HEX BLT 8/32-20X1
205	LOCAL PURCHASE	SPRG WSHR 8/32-20
206	000-T00416-0C	M SCR TH CRM M4X16
209	010-P00408-F	S-TITE SCR PH W/F M4X8

ASSY BILLBOARD STD (999-0706)



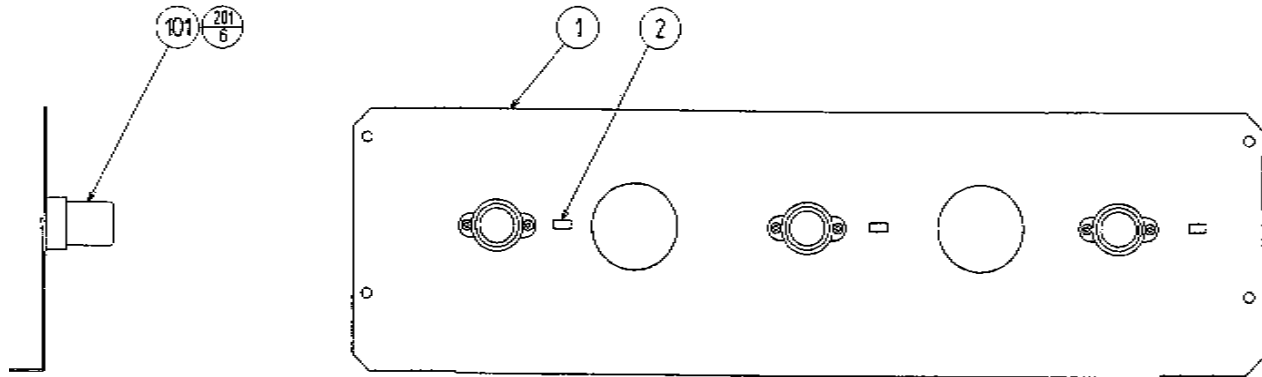
ITEM NO.	PART NO.	DESCRIPTION
1	999-0708	BILLBOARD PLEX
2	999-0733	LOWER MARQUEE GRILL
3	999-0731	MARQUEE COVER L
4	999-0732	MARQUEE COVER R
101	LOCAL PURCHASE	ASSY FL FIXTURE 20W
102	DRT1-0230	LAMP UNIT
103	DRT1-0240	SKT UNIT

LAMP UNIT (DRT1-0230)



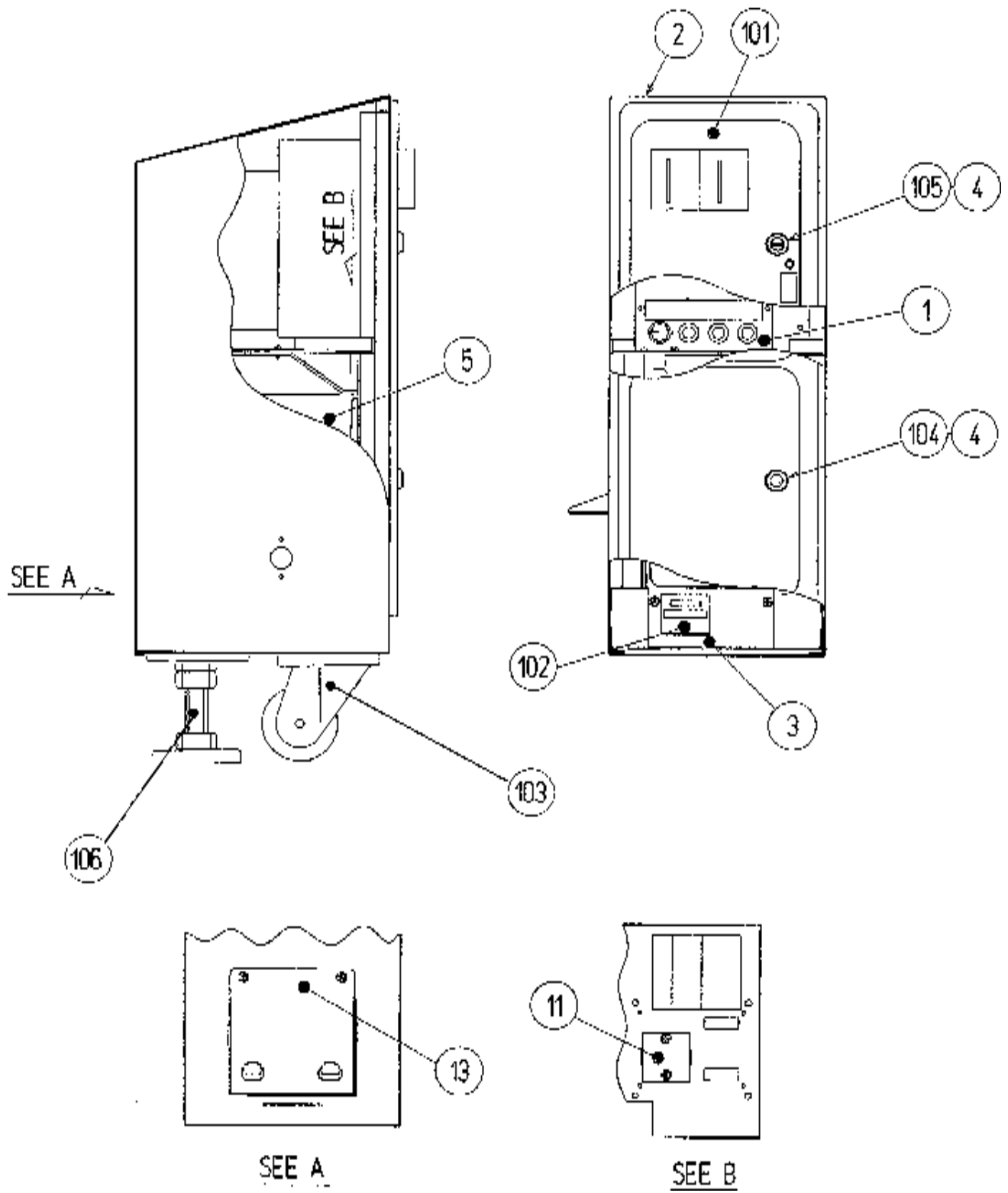
ITEM NO.	PART NO.	DESCRIPTION
1	DRT5-0231	LAMP HOLDER
101	999-0734	ASSY YELLOW LAMP COVER
201	000-T00408-0C	M SCR TH CRM M4X8
202	068-441616-0C	FLT WSHR CRM 4.4-16X1.6

SKT UNIT (DRT1-0240)



ITEM NO.	PART NO.	DESCRIPTION
1	DRT5-0241	SKT HOLDER
101	LOCAL PURCHASE	BULB SKT
201	000-P00320-S	M SCR PH W/S M3X20

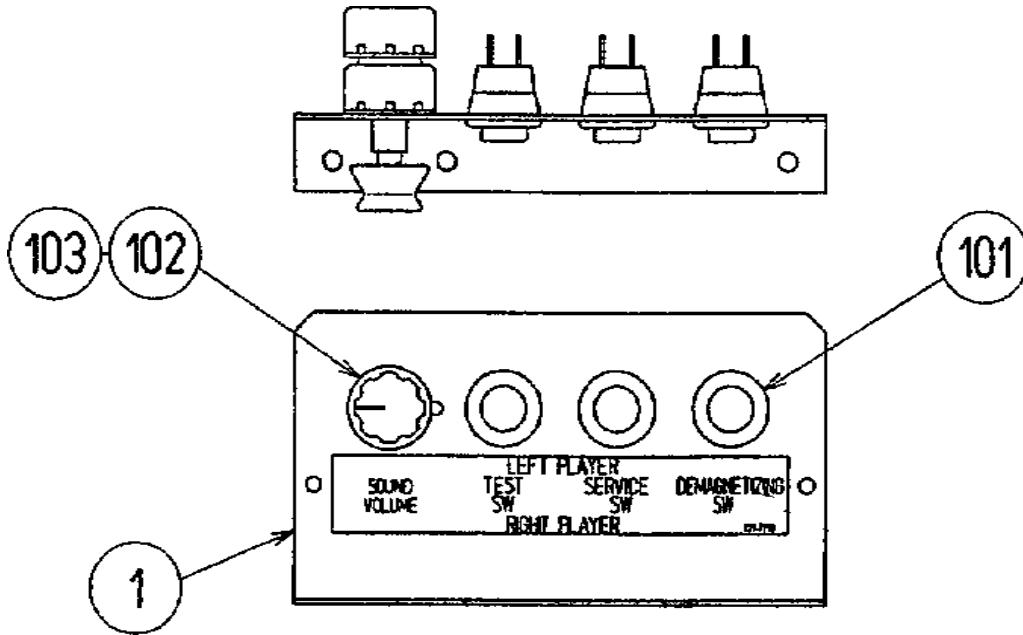
ASSY COINCHUTE TOWER (DRT1-0300)



ASSY COINCHUTE TOWER (DRT1-0300)

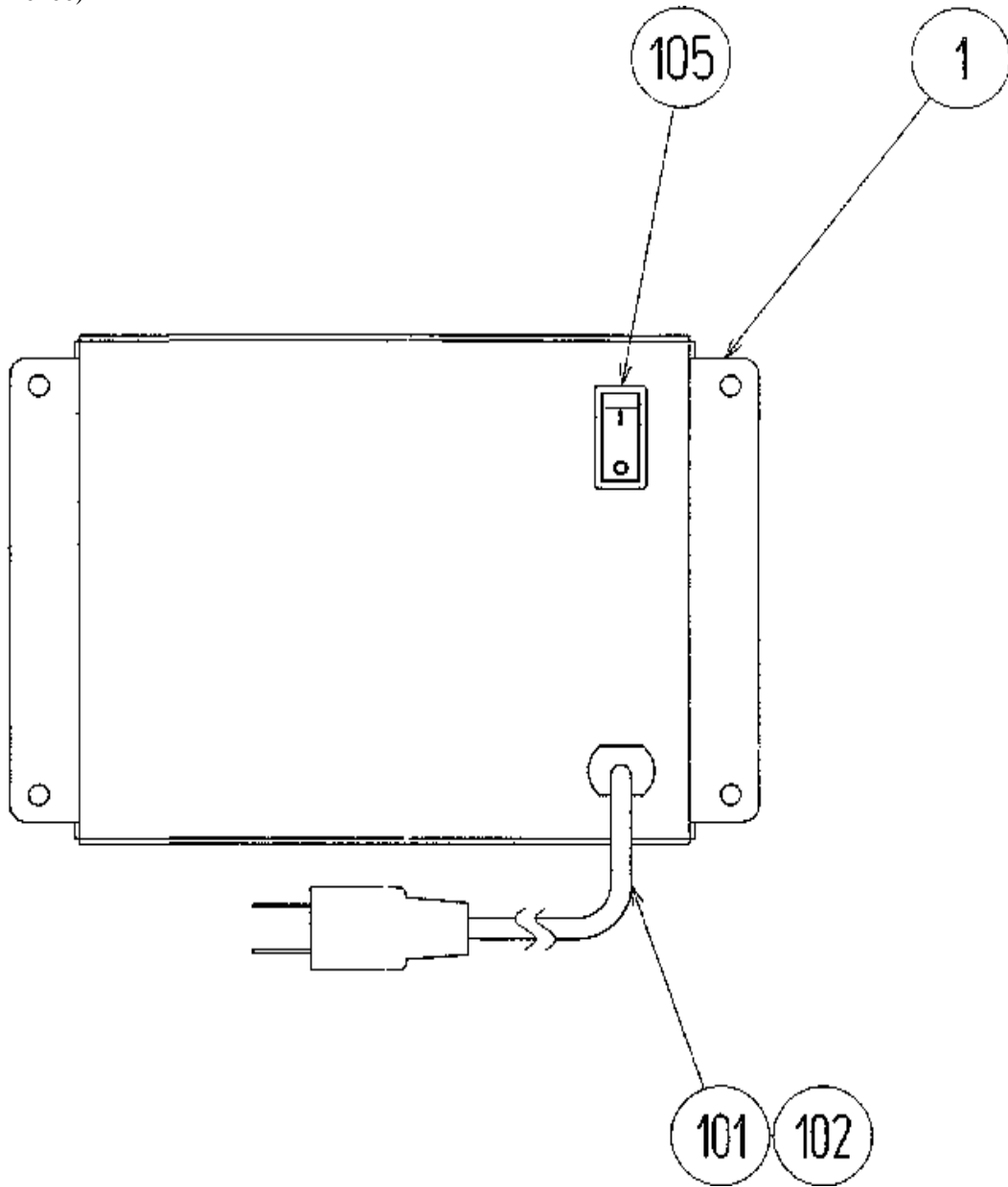
ITEM NO.	PART NO.	DESCRIPTION
1	SPG-0350	SW UNIT
2	SPG-0301	COIN CHUTE TOWER
3	DYN-0302Y	COIN METER BRKT
4	DP-1167	TNG LKG
5	BOX-CASH	CASH BOX
10	DYN-0305	TOWER BRKT
11	105-5202	HOLE COVER
13	SPG-0303	WIRE BOX LID
101	220-5237-92	ASSY C.C. 2DR
102	220-5412	MAG CNTR W/CONN
103	999-0169	CASTER 2 1/2"
104	220-5574	CAM LOCK W/KEYS
105	220-5575	CAM LOCK MASTER W/O KEY
106	999-0176	LEG ADJUSTER

SW UNIT (SPG-0350)



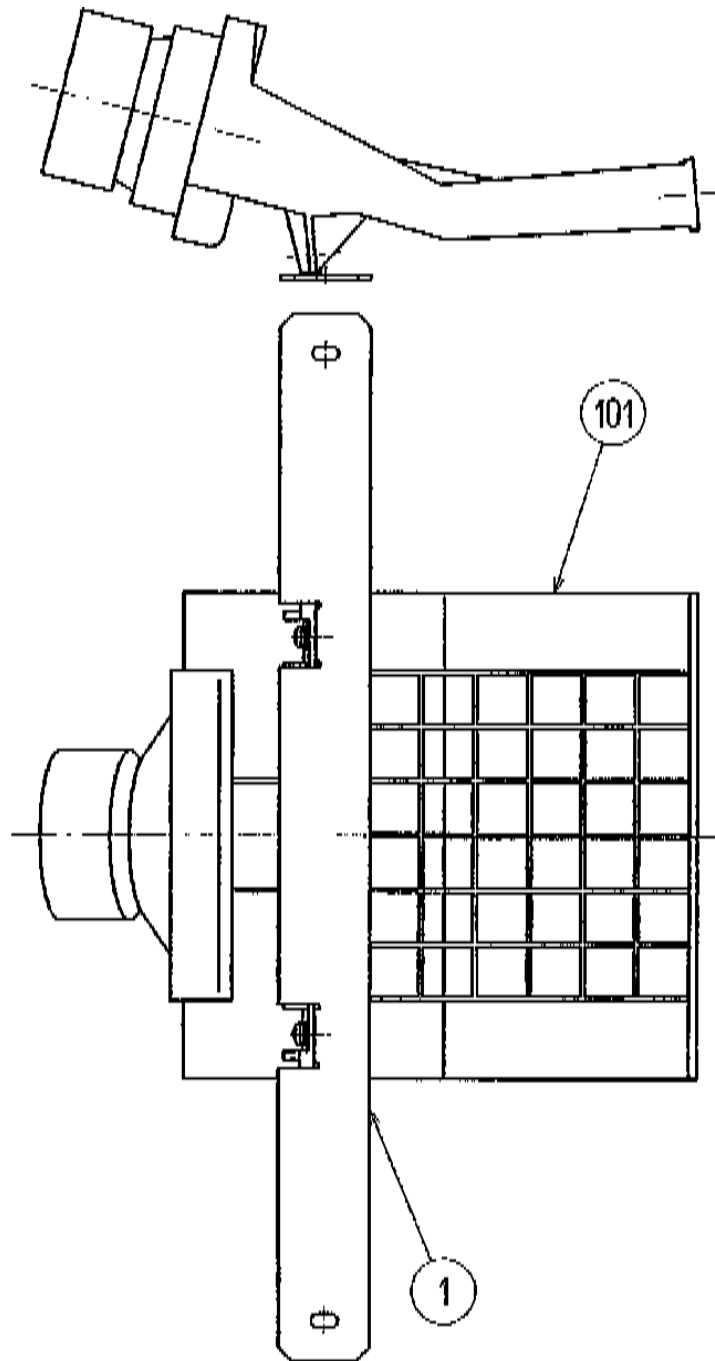
ITEM NO.	PART NO.	DESCRIPTION
1	SPG-0351	SWITCH BRKT
101	509-5028	SW PB 1M
102	220-5179	VOL CONT B-5K OHM
103	601-0042	KNOB 22MM
105	310-5029-F20	SUMI TUBE F F 20MM

AC UNIT (DRT1-0400)



ITEM NO.	PART NO.	DESCRIPTION
1	SPG1-0401X	AC BRKT
101	600-5843-25	CA&PLUG ASSY 15A W//F-L=2.5M
102	280-5134-6N34	BUSHING STRAIN RELIEF 6N34
105	509-5453-91-V-B	SW ROCKER J8 V-B

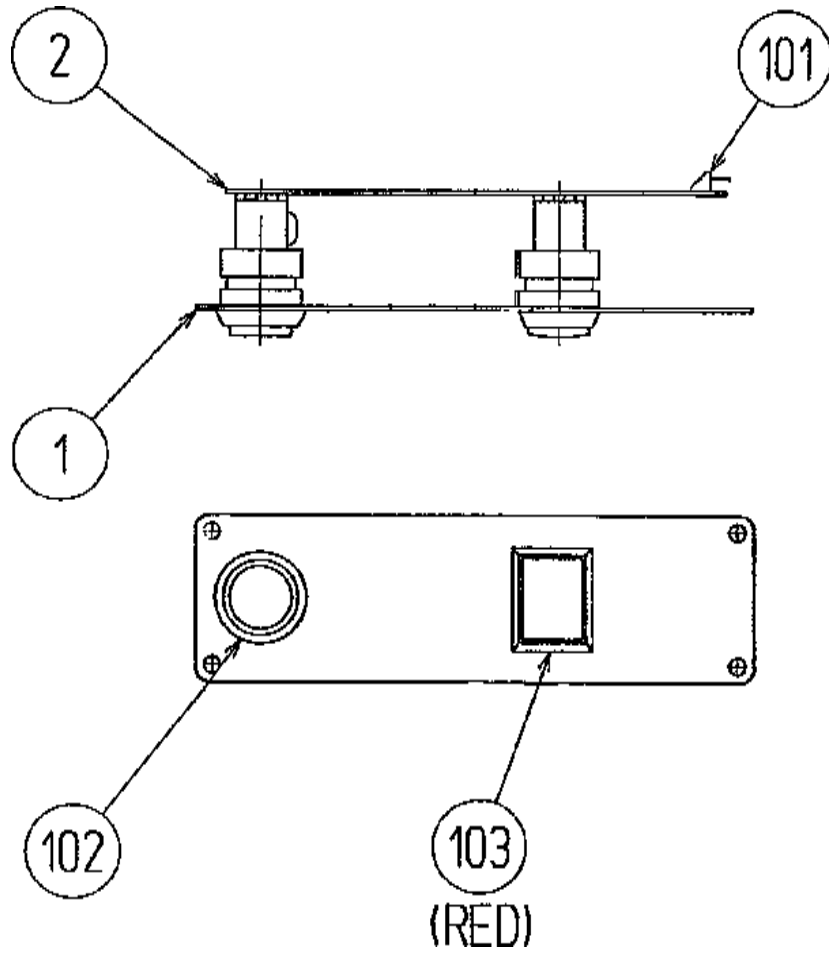
ASSY SPEAKER (SPG-1100)



ITEM NO.	PART NO.	DESCRIPTION
1	INY-1701	SPEAKER BRKT
101	130-5152	SPKR BOX MINI DOME 12W

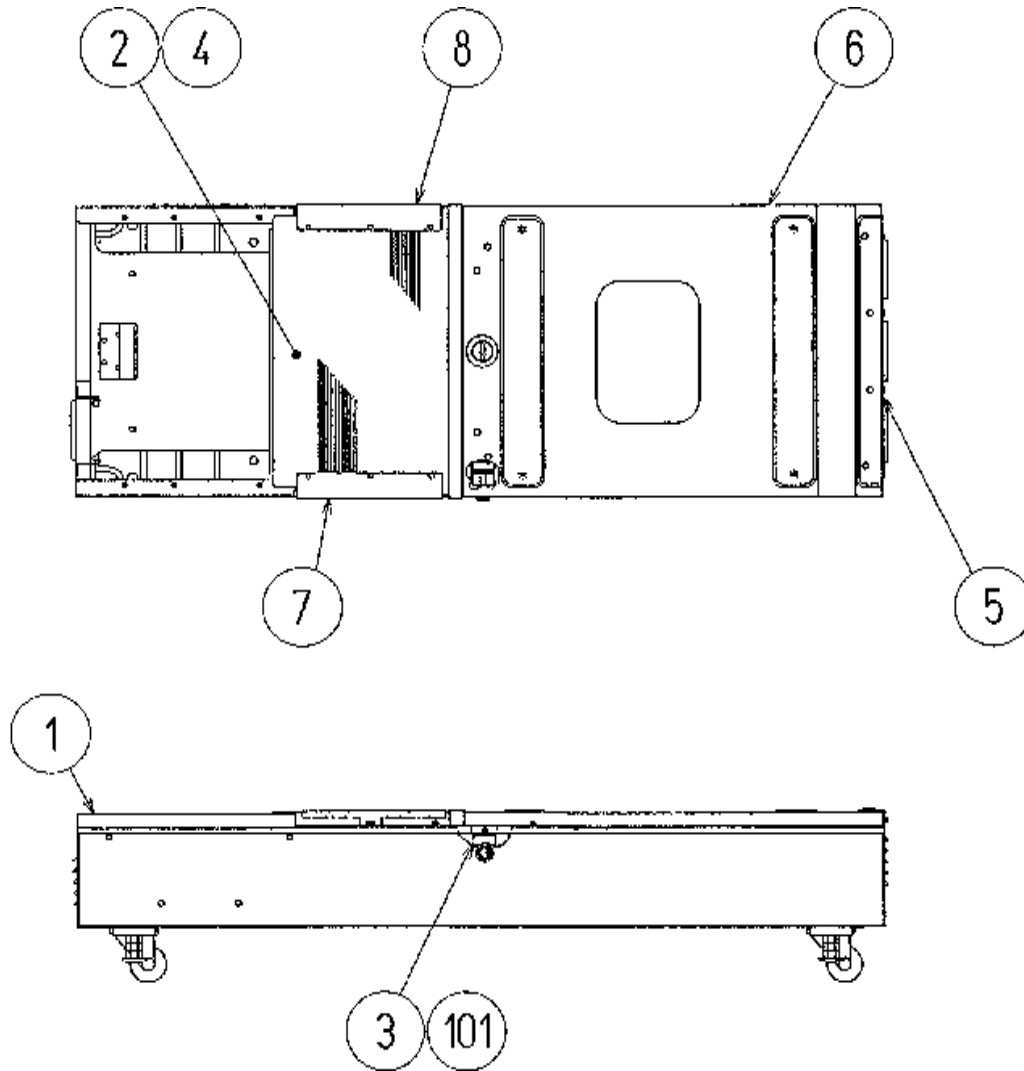


ASSY VIRTUAL BUTTON TWIN (DRT-1290)



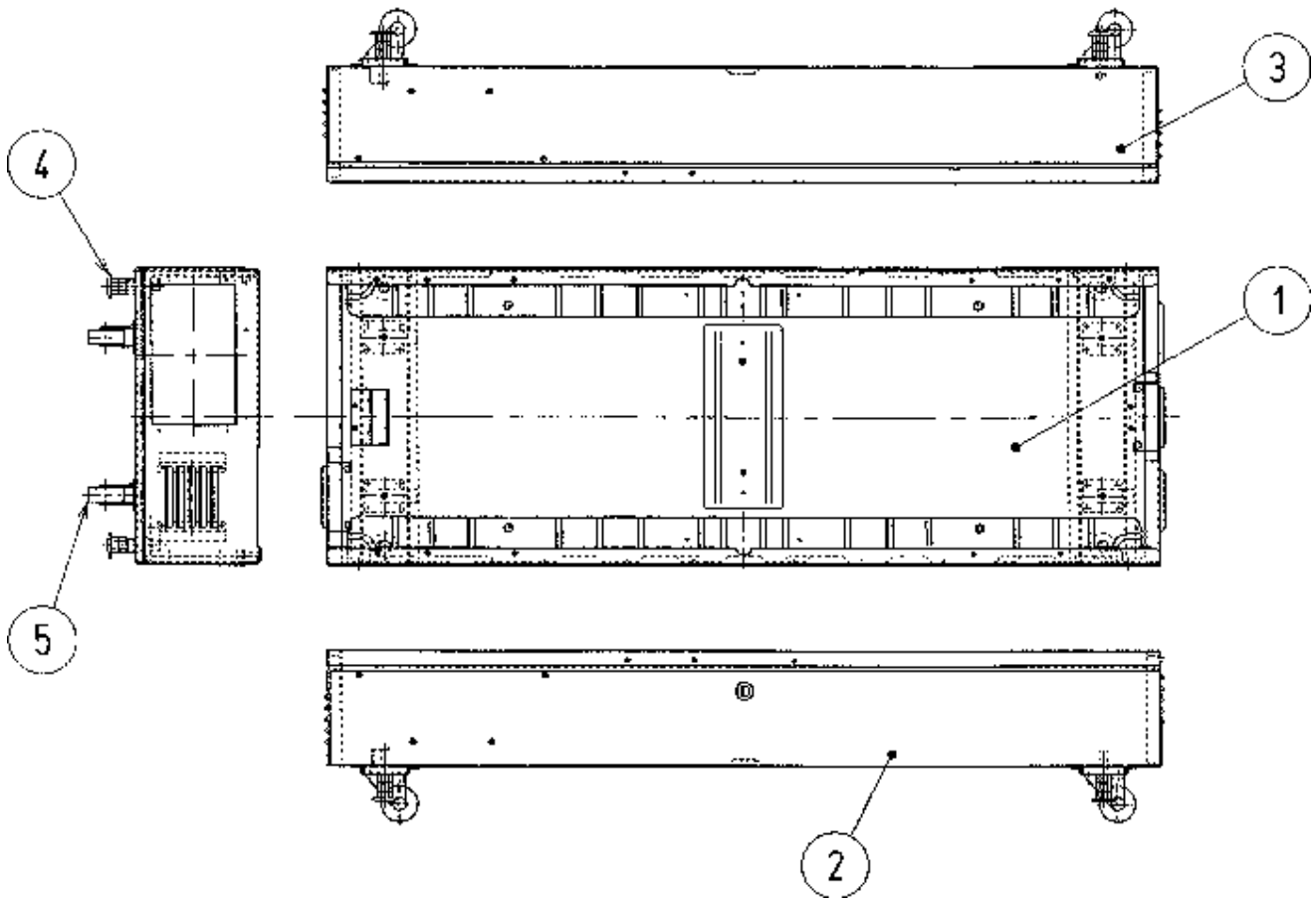
ITEM NO.	PART NO.	DESCRIPTION
1	DRT-1291	VR BUTTON BRKT
2	171-6478B	PC BD LIGHTING SWX5
101	212-5205-12	CONN JST M 12P RTA
102	509-5560-Y	PB SW W/L 6V 1L Y
103	509-5561-R	PB SW W/L 6V 5L R

ASSY BASE BOX (DRT-1500)



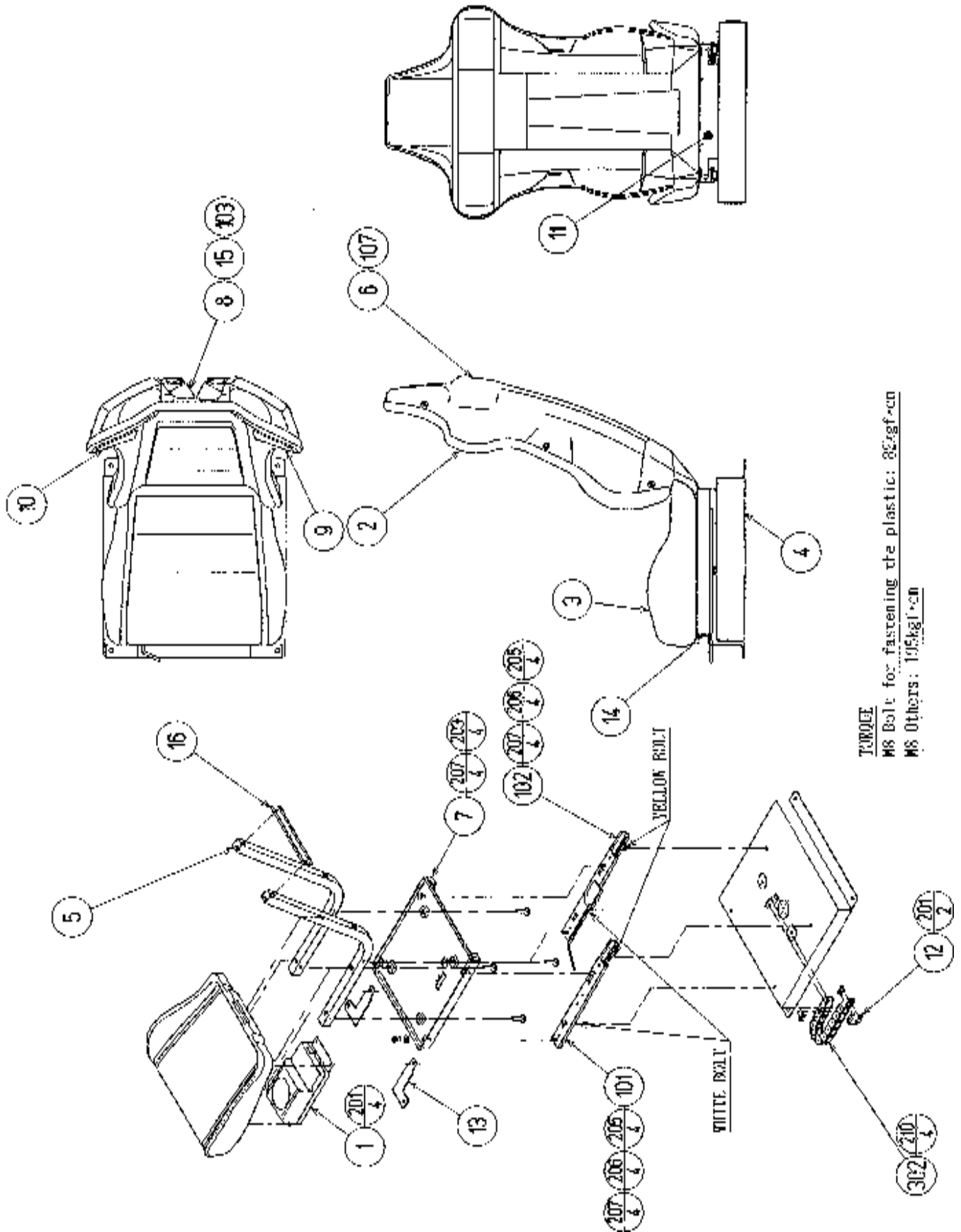
ITEM NO.	PART NO.	DESCRIPTION
1	DRT1-1501	MAIN BASE
2	DYN-2003	BASE LID F
3	DYN-2004	LOCK TNG
4	DYN-2005X	FLOOR MAT
5	DYN-2006	HINGE 480
6	DRT-1510	ASSY BASE LID R
7	DYN-2007X	LID EDGE L
8	DYN-2009X	LID EDGE R
101	220-5575	CAM LOCK MASTER W/O KEY

MAIN BASE (DRT1-1501)



ITEM NO.	PART NO.	DESCRIPTION
1	DYN-2002X-A	MAIN BASE BLANK
2	DRT-1501-A	STICKER BASE L
3	DRT-1501-B	STICKER BASE R
4	999-0167	LEG ADJUSTER BOLT 1/2X13X3
5	999-0169	CASTER 2 1/2"

ASSY SEAT TWIN 1P (DRT-1600)

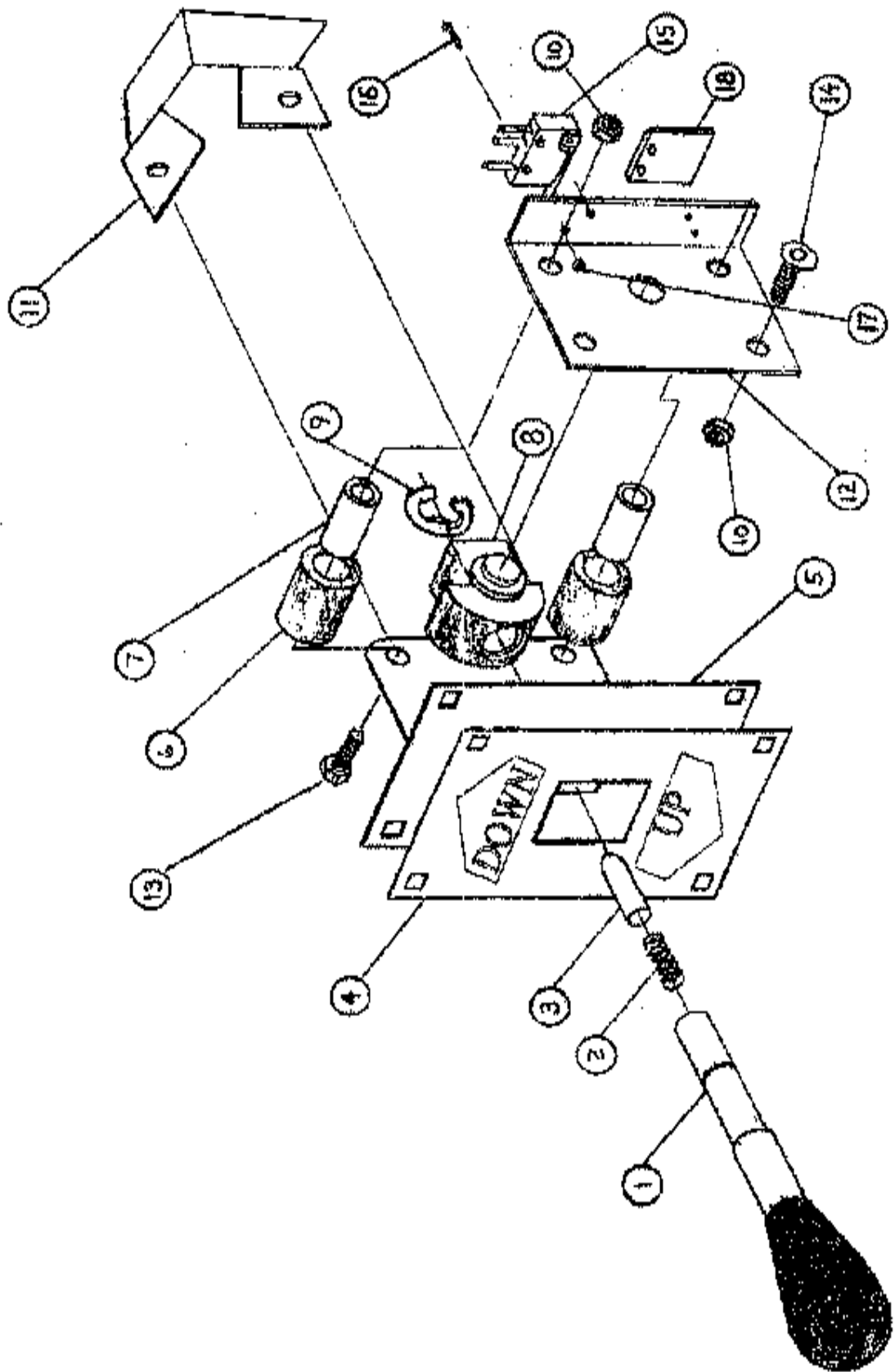


TURBOEE  
 MS Bolt for fastening the plastic: 802gf-cn  
 MS Others: 195kgf-cn

ASSY SEAT TWIN 1P (DRT-1600)

ITEM NO.	PART NO.	DESCRIPTION
1	STC-1650	ASSY WOOFER
2	DRT-1602-A	UPPER SEAT
3	DRT-1603-A	LOWER SEAT
4	STC-2201	SEAT BASE
5	STC-1604	SEAT FRAME
6	DRT-1604-A	SEAT REAR COVER 1P
7	STC-1606	SEAT MOUNT TRAY
8	STC-1607	SP MOUNT BRKT
9	STC-1608	SPEAKER NET L
10	STC-1609	SPEAKER NET R
11	STC-1610	SAFETY GUARD
12	STC-1611	CABLE BEAR BRKT
13	STC-1612	PROTECT RUBBER
14	STC-1613	SAFETY GUARD F
15	INY-1302-B	MASK CUSHION SIDE
101	601-9059	SEAT RAIL L
102	601-9060	SEAT RAIL R
103	130-5159	GULL BOX SPEAKER 80OHM 5W
105	601-6563-188	BUSH 2.4T
106	601-6563-100	BUSH 2.4T
107	280-5297	SCRIVET 8 1K31
201	000-P00410-W	M SCR PH W/FS M4X10
203	030-000816-S	HEX BLT W/S M8X16
205	050-H00800	HEX NUT M8
206	060-S00800	SPR WSHR M8
210	000-T00616-0B	M SCR TH BLK M6X16
211	010-P00408-F	S-TITE SCR PH W/F M4x8

ASSY SHIFTER (6100-0348)



ASSY SHIFTER (6100-0348)

ITEM NO.	PART NO.	DESCRIPTION
1	50-2981-00	KNOB AND SHAFT
2	50-2582-00	SPRING FOR SHAFT
3	50-8392-00	DELTRIN PIN
4	50-1027-02	SHIFTER PLATE
5	50-2983-00	BRACKET LEFT SIDE
6	50-1031-00	RUBBER BUMPER (2)
7	50-2987-00	METAL SPACER FOR BUMPER (2)
8	50-2986-00	TRUNNION
9	50-8118-00	E-RING
10	43-0292-00	NUT HEX NYLOCK M6 (4)
11	50-2985-00	BRACKET, RETURN TO CENTER
12	50-2984-00	BRACKET RIGHT SIDE
13	43-0110-00	CAP SCREW, M6X40 HEX HD (2)
14	43-0415-00	CAPSCREW, M6X16 FLAT HD SOCKET
15	95-4276-00	SWITCH ASSY
16	43-0368-00	SCREW, M2X12MM PHIL PAN HEAD
17	43-0367-00	NUT, M2 HEX (4)
18	80-3001-00	FISH PAPER(2) *NOT AVAILABLE

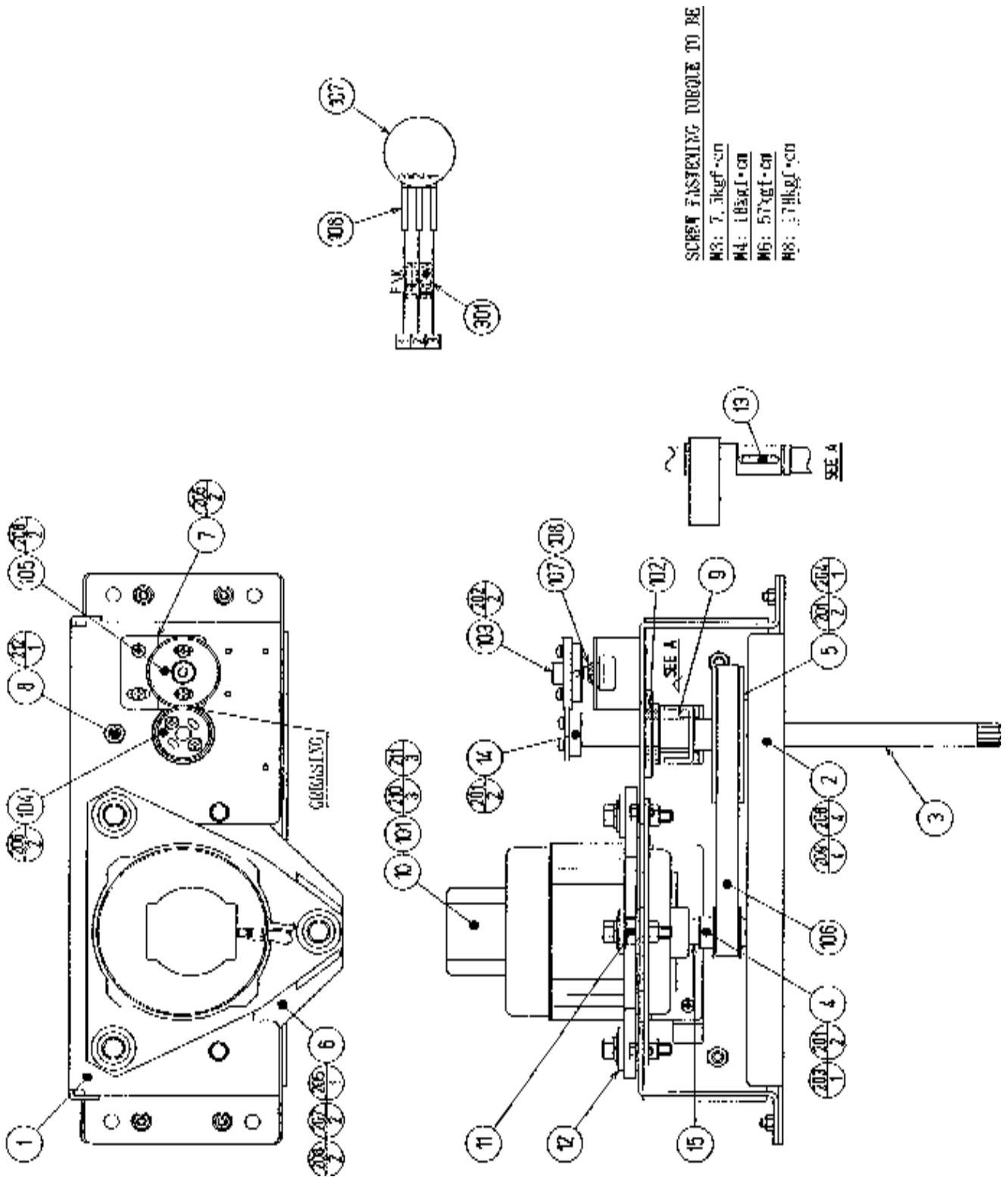




ASSY ACCEL&BRAKE (SPG-2200)

ITEM NO.	PART NO.	DESCRIPTION
1	SPG-2201	BASE
2	SPG-2202	ACCEL PEDAL
3	SPG-2203	BRAKE PEDAL
4	SPG-2204	ACCEL SPRING
5	SPG-2205	BRAKE SPRING
6	SPG-2206	SHAFT
7	SPG-2207	ACCEL GEAR
8	SPG-2208	BRAKE GEAR
9	SPG-2209	NUETRAL STOPPER
10	SPG-2210	VR PLATE ACCEL
11	SPG-2211	VR PLATE BRAKE
12	SPG-2212	AMPL GEAR
13	SPG-2213	GEAR SHAFT
14	SPG-2214	STOPPER
15	SPG-2215	RUBBER CUSHION
16	SPG-2216	COVER
17	SPG-2217	VR COVER
19	SPG-2219	GEAR STAY
20	SPG-2220	WSHR
21	SPG-2221	NUETRAL STOPPER
101	100-5263	BEARING 12
102	220-5484	VOL CONT B-5K OHM
104	601-7944	GEAR 15
105	310-5029-F15	SUMI TUBE F F 15MM
106	280-0419	HARNES LUG
201	028-A00304-P	SET SCR HEX SKT CUP P M3X4
202	020-000520-OZ	HEX SKT H CAP SCR BLK M5X20
203	000-P00420	M SCR PH M4X20
204	000-P00508-W	M SCR PH W/FS M5X8
205	000-T00408-0C	M SCR TH CRM M4X20
206	FAS-450005	SPR PIN BLK OZ 6X10
207	000-P00405	M SCR PH M4X5
208	FAS-000001	M SCR TH CRM M3X6
209	050-H00500	HEX NUT M5
210	060-F00400	FLT WSHR M4

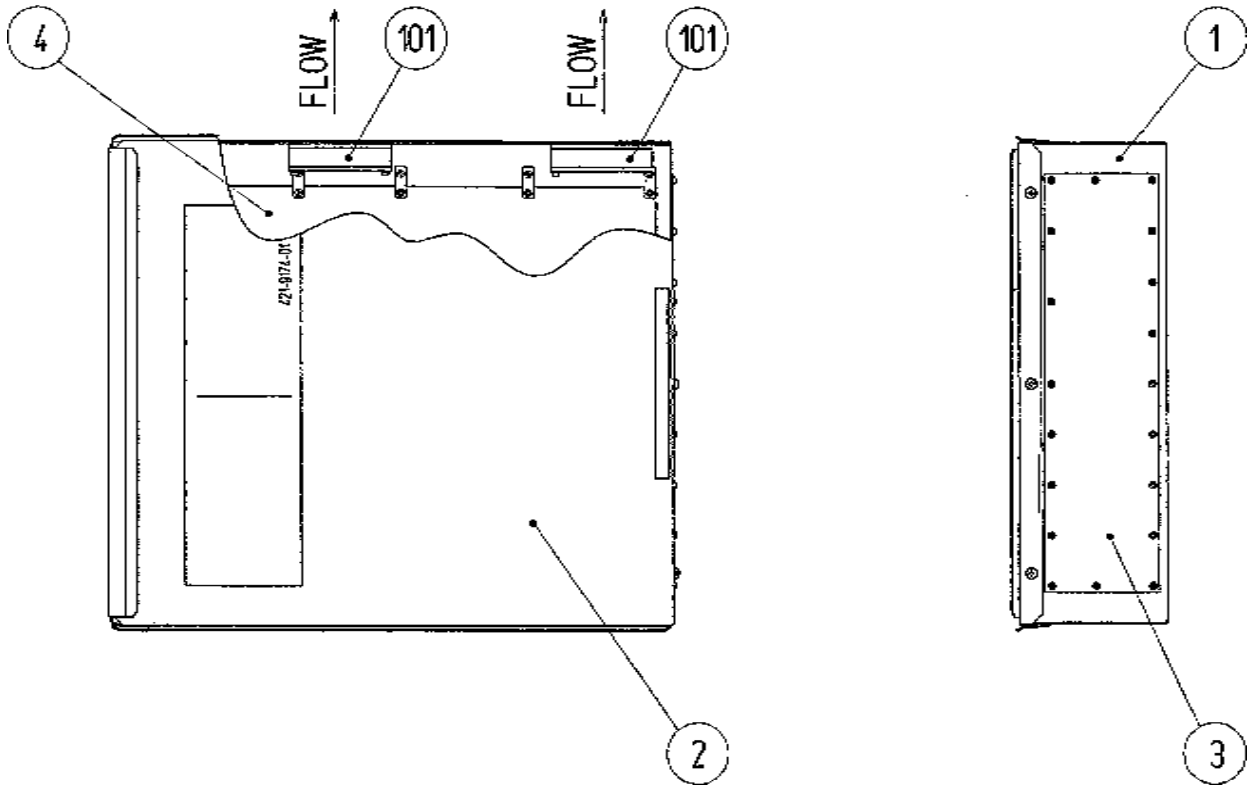
ASSY HANDLE MECHA (SPG-2500)



ASSY HANDLE MECHA (SPG-2500)

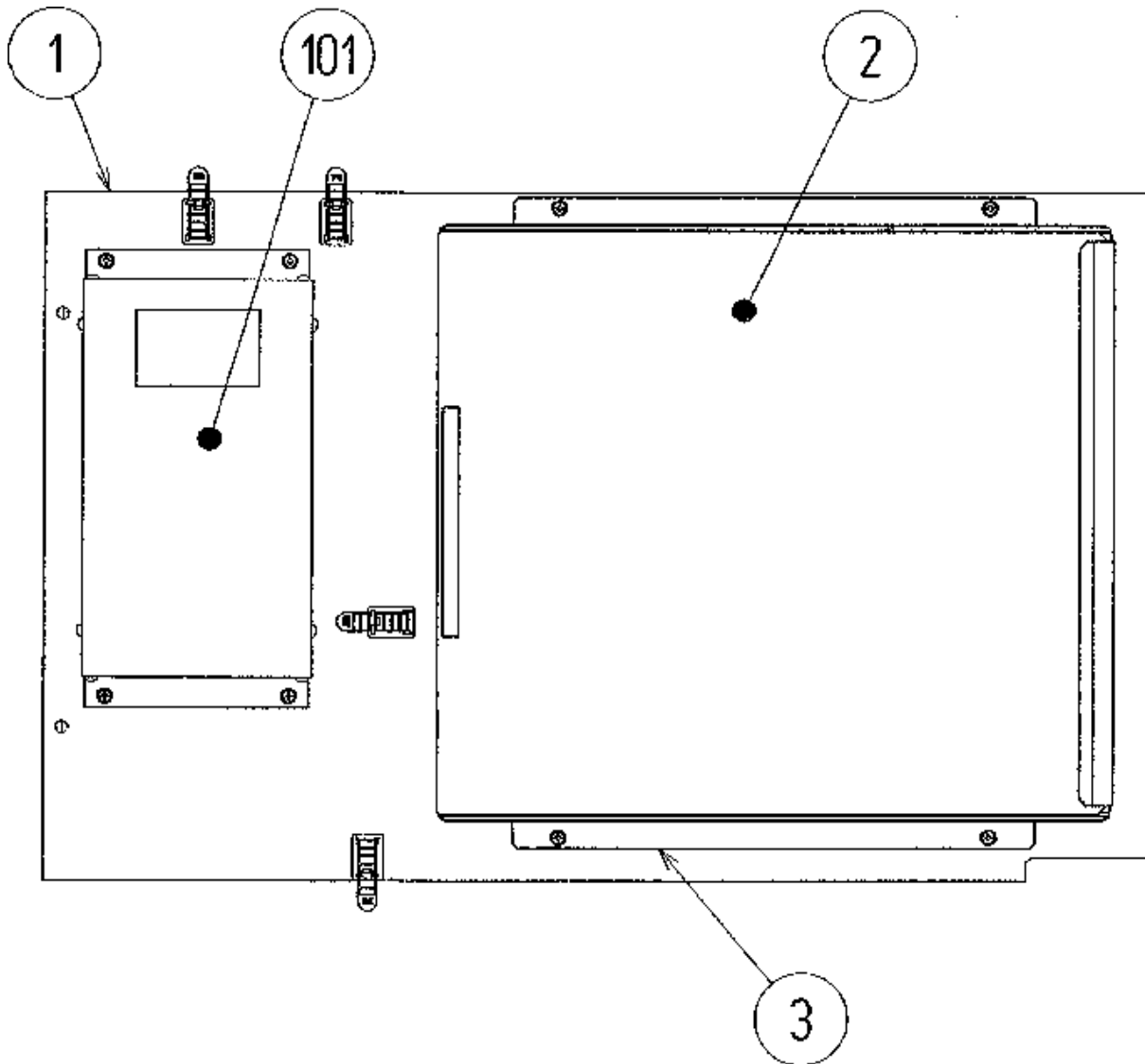
<b>ITEM NO.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	SPG-2501	HANDLE BASE
2	SPG-2502	BASE LID
3	SPG-2503	HANDLE SHAFT
4	SPG-2504	PULLEY 20 S5M
5	SPG-2505	PULLEY 60 S5M
6	SPG-2506	MOTOR BRKT
7	SPG-2507	VR BRKT
8	SPG-2108	STOPPER BOLT
9	SPG-2109	STOPPER RUBBER
10	SPG-2453	KEY 4X4X40
11	ASK-3502	MOTOR SPACER
12	ASK-3503	MOTOR COLLAR
13	DYN-1270	STOPPER KEY
14	SLC-1130	ADJUST RING
15	SPG 2454	MOTOR SHAFT COLLAR
101	350-5448-01	SERVO MOTOR 500W NEW
102	100-5112	BEARING 17
103	601-8966	GEAR HOLDER
104	601-6172	GEAR 48
105	601-6959	GEAR 64
106	601-9173	TIMING BELT
107	220-5484	VOL CONT B-5K OHM
108	310-5029-F20	SUMITUBE F F 20MM

ASSY SHIELD CASE (DRT-4600-01-S)



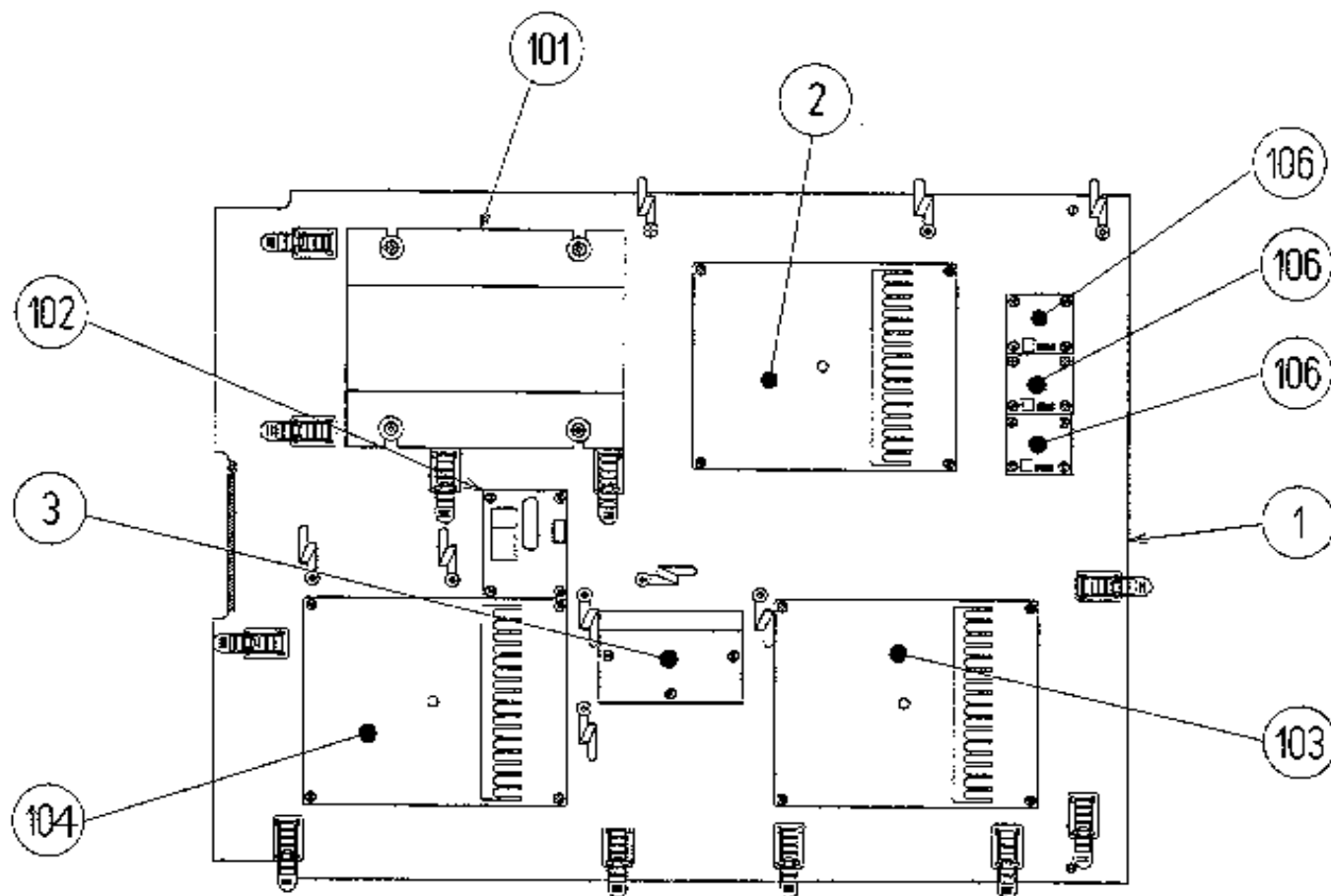
ITEM NO.	PART NO.	DESCRIPTION
1	105-5245X	SHIELD CASE MODEL 3 NVS
2	105-5242X	SHIELD CASE LID MODEL 3
3	839-0932	FILTER BD MODEL 3
4	833-13527-03	GAME BD DRT
101	260-0064	FAN MOTOR DC 12V

ASSY MAIN BD BASE (DRT-4400)



ITEM NO.	PART NO.	DESCRIPTION
1	DRT-4401	WOODEN BASE
2	DRT-4600-01	ASSY SHIELD CASE
3	105-5241	SHIELD CASE BRKT
5	105-5319	CONNECTOR PANEL BRKT
101	400-5330-02-91	SW REGU FOR MODEL 3

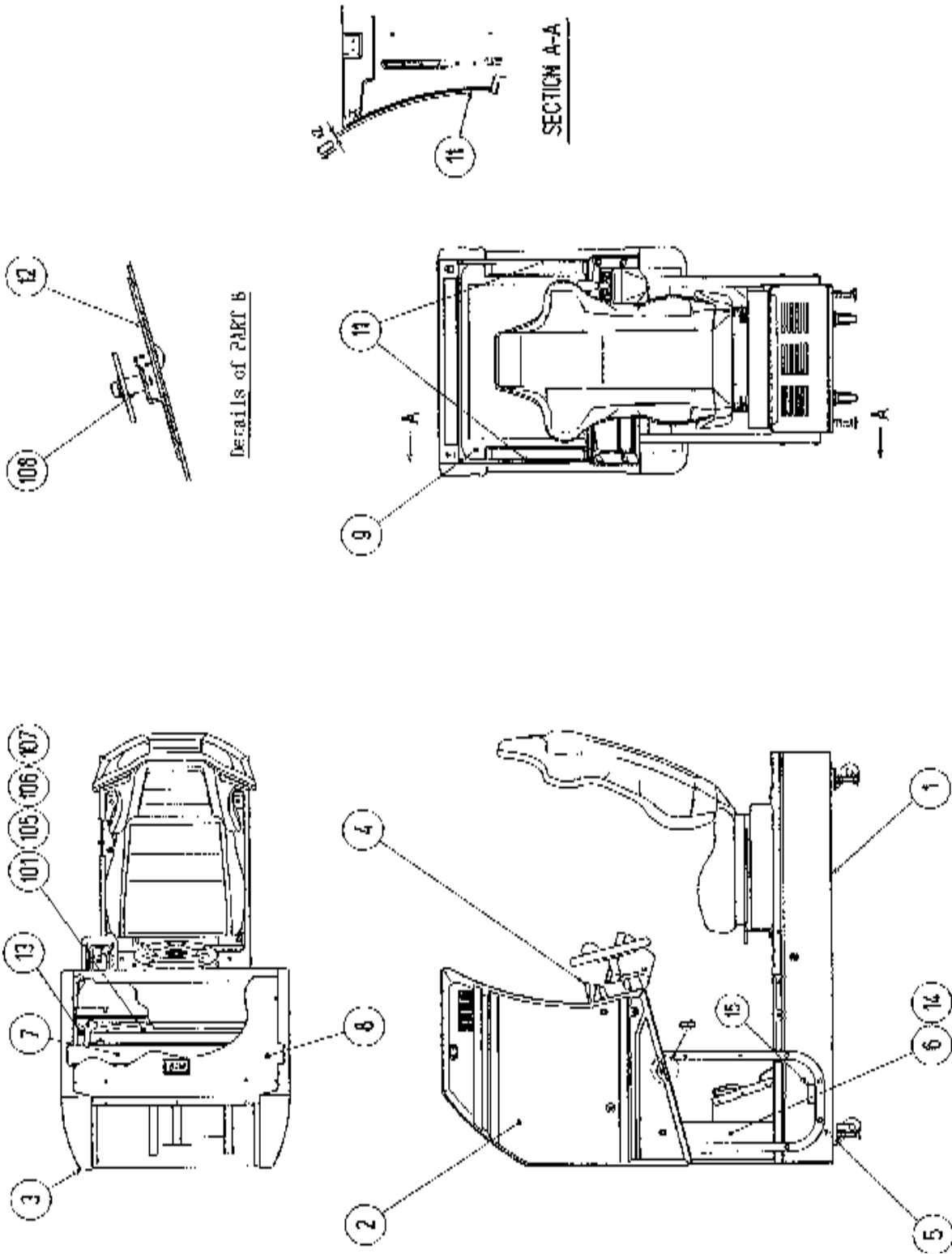
ASSY ELEC BASE (DRT-4500)



ITEM NO.	PART NO.	DESCRIPTION
1	DRT-4501	WOODEN BASE ELEC
2	838-12912-01	SERVO MOTOR DRIVE BD NEW
3	838-11651-91	LOWPASS AMP
101	560-5393	XFMR 100V 8Ax2 WB
102	839-0977-02	SSR BD 3
103	838-12898	DRIVE BD DUT
104	838-13475	PWR AMP 4 CH MIXER
106	839-1011-01	RELAY BOARD

NOTE: THE ELEC BASE MAY APPEAR DIFFERENT FROM PICTURE GIVEN ABOVE PLEASE CONTACT SEGA CUSTOMER SERVICE FOR ASSISTANCE. *Contact information is located on the rear cover of manual.*

ASSY COCKPIT 1P (DRT-1000)

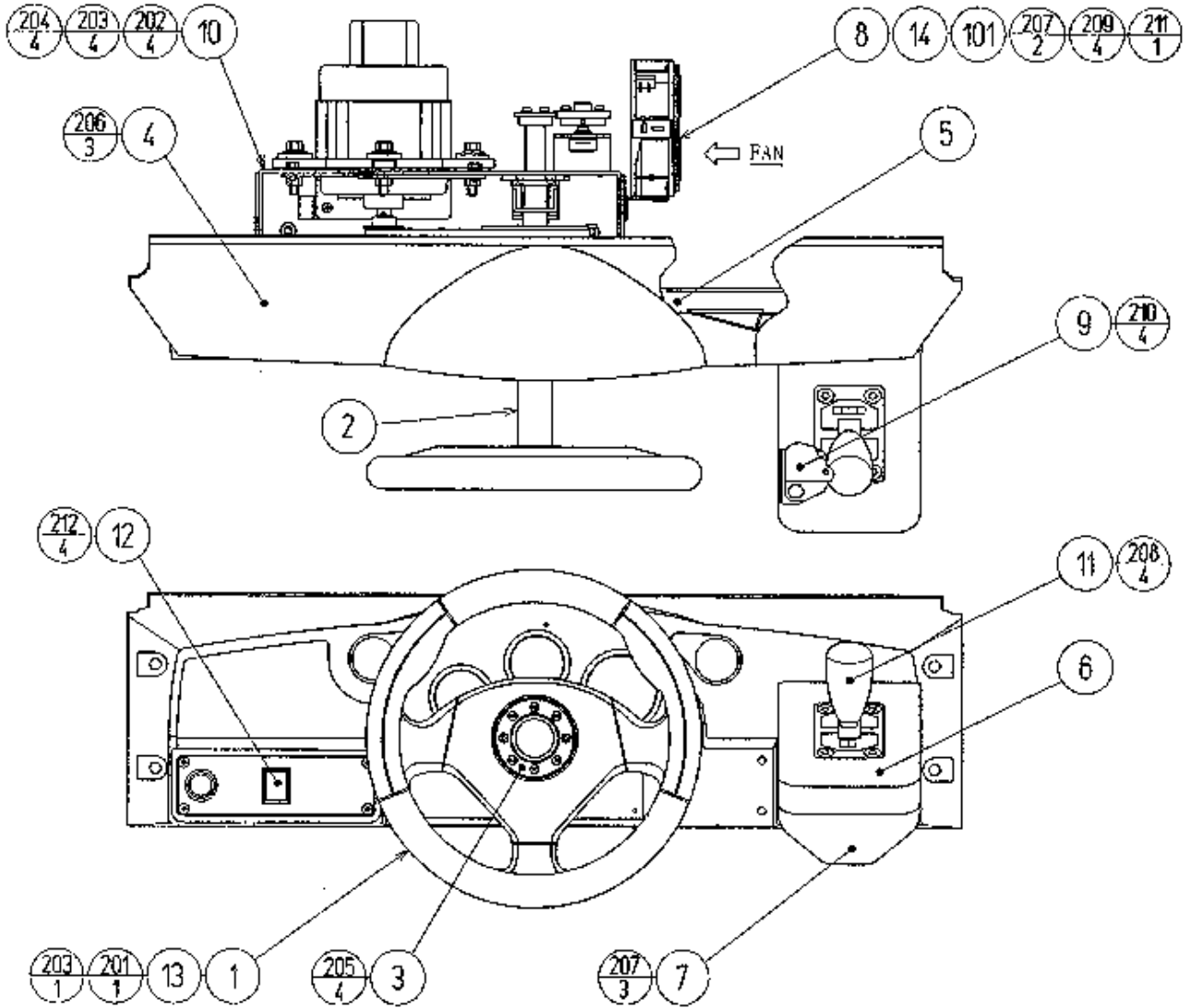


ASSY COCKPIT 1P (DRT-1000)

ITEM NO.	PART NO.	DESCRIPTION
1	DRT-2000	ASSY MAIN BASE 1P
2	DRT5-1031	MONITOR COVER L
3	DRT5-1046	MONITOR COVER R
4	DRT-1200	ASSY CONTROL PANEL TWIN
5	SPG-1004	MONITOR STAND
6	DRT-1001	WIRE COVER BOX
7	INY-1016	MONITOR SUPPORT
8	SPG-1008	ROOF LID
9	999-0699	MONITOR BEZEL
11	130-5160	SPEAKER MINI DOME 12W
12	INY-1015	CRT ADJUST PANEL
13	SPG-1100	ASSY SPEAKER
14	DRT-4550	ASSY DRIVE BD TWIN
101	2001-5242-24-04	ASSY CLR DSPL 29 TYPE 100V
	998-0077	WELLS GARNER U5000 27" MED RES.
107	280-5114	SPACER 6.4-25x2
108	280-5185-6	SPACER TUBE L=6
109	601-6231-C100	EDGING NEW TYPE
110	130-5160	SUB WOOFER 4OHM 30W



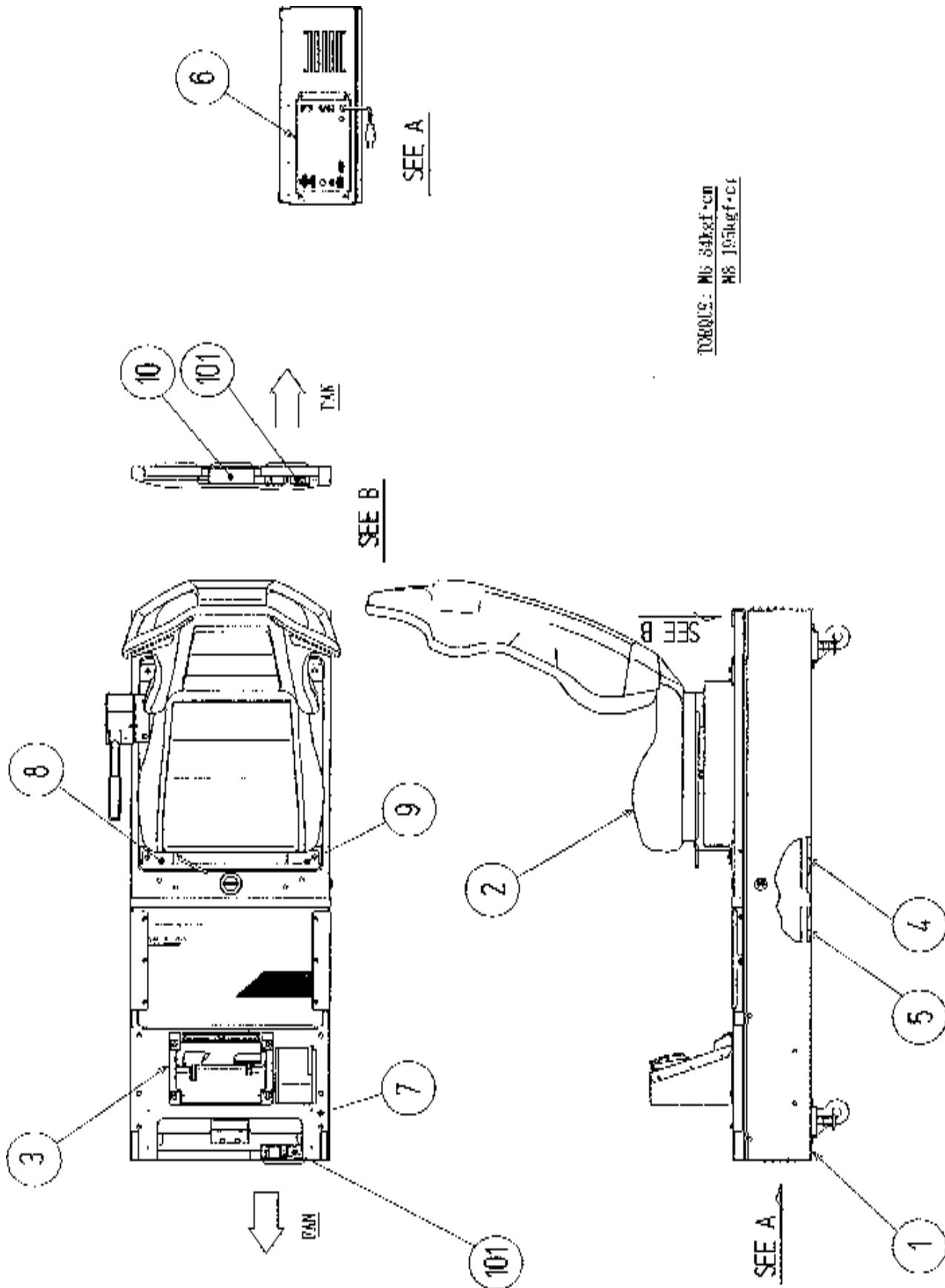
ASSY CONTROL PANEL (DRT-1200-02)



ASSY CONTROL PANEL (DRT-1200-02)

<b>ITEM NO.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	SPG-2001	STEERING WHEEL
2	DYN-1209X	HANDLE COLLAR
3	SPG-2002	STEERING EMBLEM
4	DRT-1202	CONTROL PANEL COVER ENG
5	SPG-1205	CONTROL PANEL BRKT
6	INY-1204	SHIFT COVER INY
7	DYN-1223X	SHIFT COVER B
8	SPG-1203	FAN BRKT
9	LMN-1202	SHIFT BASE
10	SPG-2500	ASSY HANDLE MECHA
11	6100-0348	UP/DOWN SHIFTER (HAPP)
12	DRT-1290	ASSY VIRTUAL BUTTON TWIN
13	SPG-2039	SPACER RING
14	601-8543	FAN GUARD
101	260-0011-02	AXIAL FLOW FAN AC 100V 50-60HZ

ASSY MAIN BASE 1P (DRT-2000)

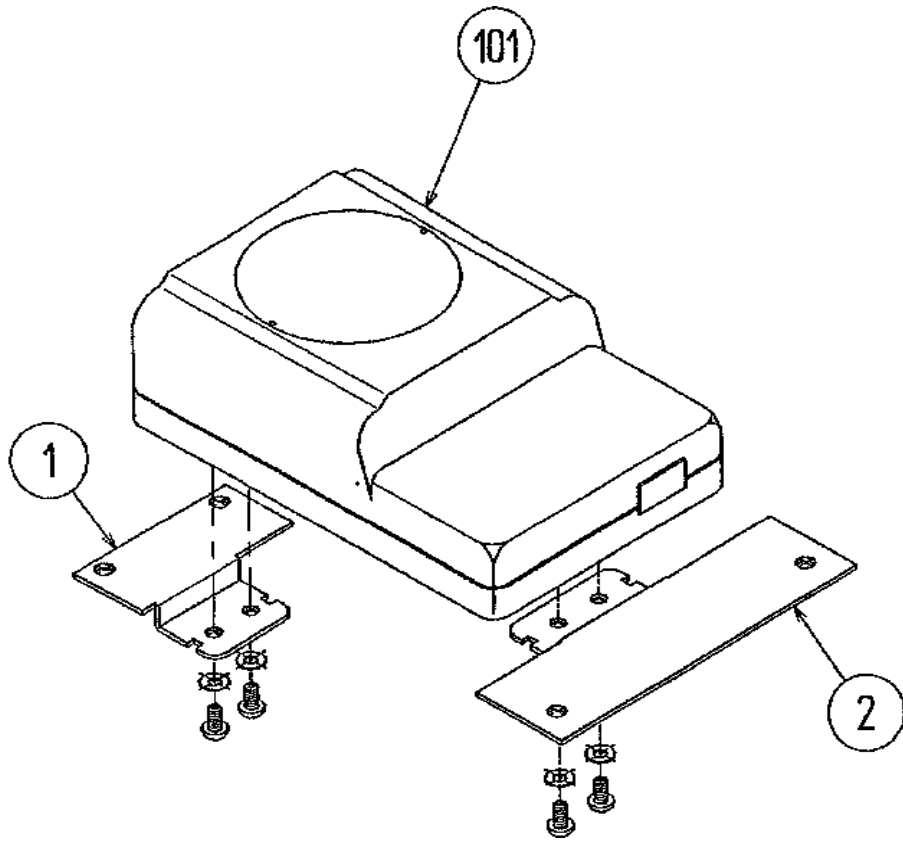


TORQUE: M6 84kgf·cm  
M8 195kgf·cm

ASSY MAIN BASE 1P (DRT-2000)

<b>ITEM NO.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1	DRT-1500	ASSY BASE BOX
2	DRT-1600	ASSY SEAT TWIN 1P
3	SPG-2200	ASSY ACCEL&BRAKE
4	DRT-4400	ASSY MAIN BD BASE
5	DRT-4500	ASSY ELEC BASE
6	DRT5-0400	AC UNIT
7	SPG-1502	PEDAL BASE
8	RAL-2007	RUBBER HOLDER R TWIN
9	RAL-2008	RUBBER HOLDER L TWIN
10	SPG-1503	FAN BRKT
101		AXIAL FLOW FAN 12VDC
102	600-6275-0150	ASSY FIBER CABLE 5 0150CM

ASSY WOOFER (STC-1650)



ITEM NO.	PART NO.	DESCRIPTION
1	STC-1651	WOOFER BRKT F
2	STC-1652	WOOFER BRKT R
101	130-5160	SUB WOOFER 4 OHM 30W