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SEGA™



Touring Car Championship

OWNERS MANUAL

MANUAL NO. 4201-6229-03

INSTALL BILLBOARD

1. Remove four 5/16 hex Billboard installation bolts from the top of both the left and right-side cabinets (8 total). Remove four 5/16 hex Billboard installation bolts from the back edge of the Billboard.
2. Carefully lift the Billboard to the top of the cabinets (see Figure 5).
3. Remove the three access screws from the front edge of the Billboard between the Billboard and Race Leader Marquee.
4. Open the Billboard top section carefully.
5. Attach the Billboard to the top of the game cabinet using four 5/16 hex bolts installed inside the front edge of the Billboard (see Figures 5 and 6). Do not tighten the bolts yet.
6. Attach the Billboard to the top of the game cabinet using 4 5/16 hex bolts installed through the L-bracket along the back outside edge the Billboard (see Figures 5 and 6). Do not tighten the bolts yet.
7. Align the Billboard and tighten all the bolts.
8. From inside the Billboard, connect the three- and four-pin Molex connectors (one each) to provide power to the lamps.
9. Reinstall the three access screws along the front edge of the Billboard to close the Billboard case.

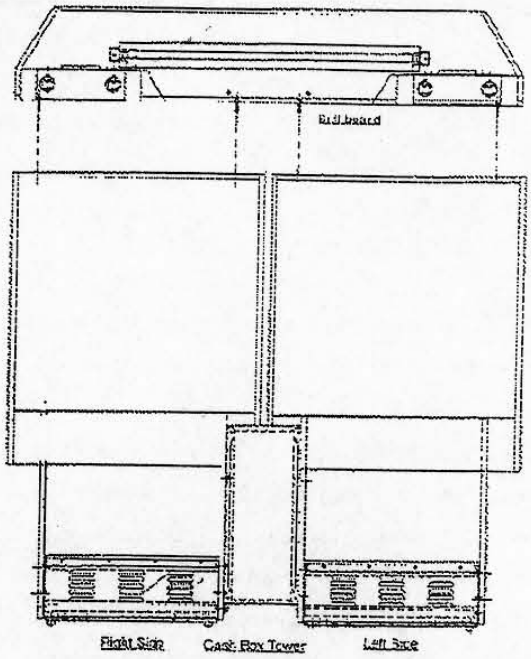


FIGURE 5: BILLBOARD INSTALLATION LOCATION

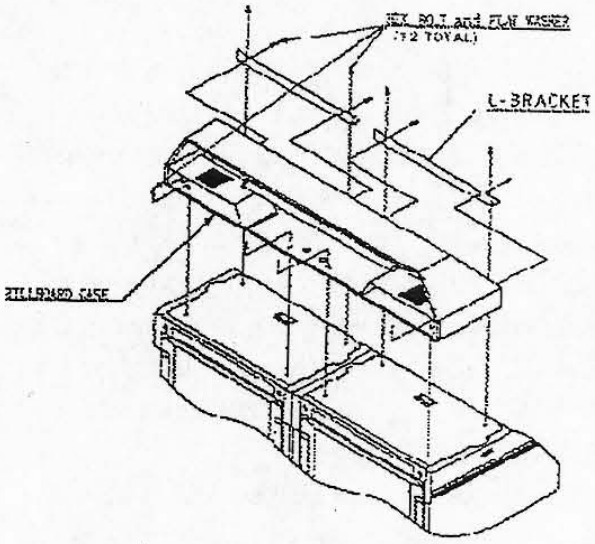


FIGURE 6: BILLBOARD INSTALLATION DETAILS

WARNING!

Make sure that all eight of the leg levelers are in contact with the floor (see Figure 9). If they are not, the cabinet may move and cause an accident.

FIGURE 7: CABINET, BOTTOM VIEW

ADJUST LEG LEVELERS

1. Move the game cabinet to its final installation position. Be sure to allow room for the players to climb on the machine.
2. Adjust the six outboard leg levelers (see Figure 7) on the cabinet by hand so they all make contact with the floor. Continue to adjust levelers until the machine is level and the casters are approximately 5 mm off of the floor (see Figure 8). If the casters are less than 5 mm off of the floor, the game may move during operation and become dangerous.
3. After the adjustments are complete, tighten each leg leveler nut upward to secure the height of the leg leveler. (See Figure 9.)
4. Attach the red joint plate (shipped in Crate 3) to the cabinet's two inner leg levelers (see Figures 7 and 10). Slide the notches in the joint plate over the levelers.
5. Adjust the two inner leg levelers (see Figure 7) on the cabinet by hand so they both make contact with the floor. Continue to adjust levelers until the machine is level and the casters are approximately 5 mm off of the floor (see Figure 8). If the casters are less than 5 mm off of the floor, the game may move during operation and become dangerous.
6. After the adjustments are complete, tighten both leg leveler nuts upward to secure the height of the leg leveler. (See Figure 9.)
7. Since the cabinet is heavy, retract its leg levelers and roll on its casters (see Figure 9) when moving the machine over the floor. Do not move the assembled cabinet over uneven floors, or up or down steps and stairs. Detach the left and right-side cabinets from the Cash Box Tower before moving the cabinets over uneven areas.

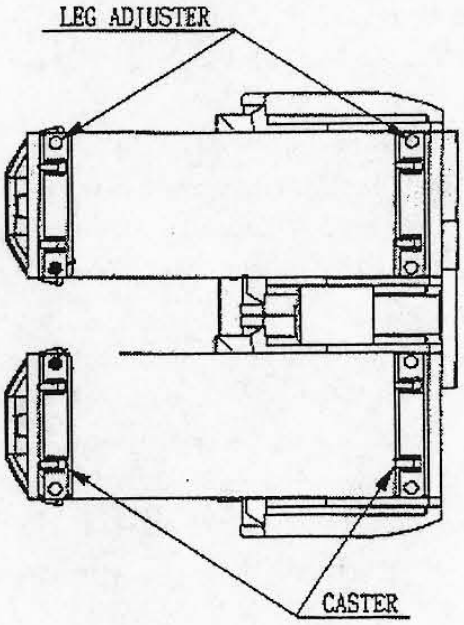
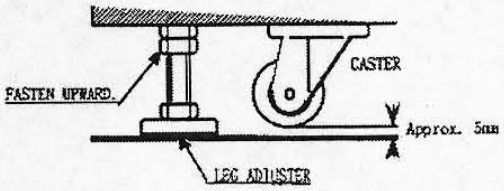


FIGURE 9: LEG LEVELER AND CASTER, SIDE VIEW



Install Right-Side Cabinet

1. Connect the two right-side cable connectors to the Cash Box cable right-side connectors. Feed excess cable into the cabinet or Cash Box Tower.
2. Attach the Cash Box Tower to the inner panel of the right-side cabinet (see Figure 3) by lifting up the Cash Box tower and slipping the lower two slotted holes in the tower side over the lower two bolts and split washers on the right-side cabinet. Watch out for the sloping lower edge of the right-side cabinet monitor when lifting and installing the Cash Box Tower. The fender (large) washer stays between the right-side cabinet and the Cash Box Tower. Be sure that the cables retract into either the cabinet or Cash Box Tower without kinking. Do not tighten the bolts yet.
3. Install the two upper bolts and washers from the inside of the Cash Box Tower (through the non-slotted holes) into the right-side cabinet. After making sure that the cables are not caught between the cabinet and Cash Box Tower, and that the Tower is resting snugly against the cabinet, tighten all four bolts from the inside of the Cash Box Tower.

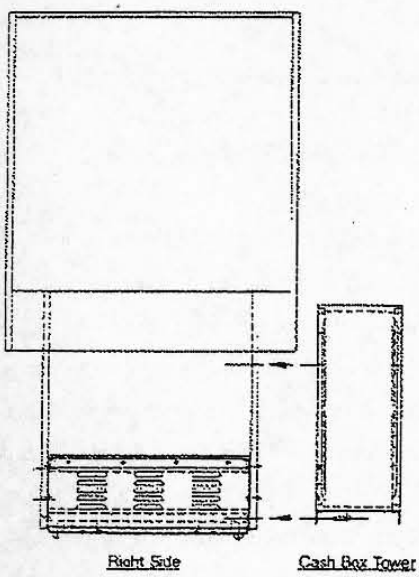


Figure 3: Right-Side Cabinet Installation

Install Left-Side Cabinet

1. Connect the two left-side cable connectors to the Cash Box cable left-side connectors. Feed excess cable into the cabinet or Cash Box Tower.
2. Attach the Cash Box Tower to the inner panel of the left-side cabinet (see Figure 4) by sliding the lower two slotted holes in the Cash Box tower over the lower two bolts and split washers on the left-side cabinet. Watch out for the sloping lower edge of the left-side cabinet monitor. The fender (large) washer stays between the left-side cabinet and the Cash Box Tower. Be sure that the cables retract into either the cabinet or Cash Box Tower without kinking. Do not tighten the bolts yet.
3. Install the two upper bolts and washers from the inside of the Cash Box Tower (through the non-slotted holes) into the left-side cabinet. After making sure that the cables are not caught between the cabinet and Cash Box Tower, and that the Tower is resting snugly against the cabinet, tighten all four bolts from the inside of the Cash Box Tower.

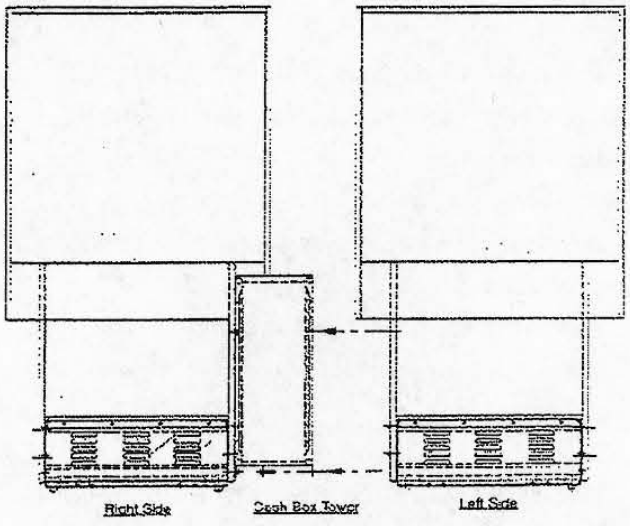


Figure 4: Left-Side Cabinet Installation

SEGA™ TOURING CAR TWIN

QUICK START FOR EASY INSTALLATION

Uncrate Left-Side Cabinet (Crate #1)

1. Move shipping crate #1 containing the left-side cabinet into location near the final installation location while still on the pallet.
2. Carefully remove the shipping bands, and top and sides of the crate.
3. Lift the left-side cabinet out and set on its casters.
4. Roll the left-side cabinet into its approximate installation location. Note: The left-side cabinet has the power cord and the On/Off switch.

Uncrate Right-Side Cabinet (Crate #2)

1. Move shipping crate #2 containing the right-side cabinet into location near the final installation location while still on the pallet.
2. Carefully remove the shipping bands, set aside crate #3, and remove and top and sides of crate #2.
3. Lift the right-side cabinet out and set on its casters.
4. Roll the right-side cabinet into its approximate installation location.

Uncrate Cash Box Tower and Billboard (Crate #3)

1. Move shipping crate #3 containing the Cash Box Tower and the Billboard into location near the final installation location while still on the pallet.
2. Carefully remove the shipping bands, and top and sides of the crate.
3. Lift out the Billboard, two L-brackets, and Joint Plate and set aside in a protected location.
4. Lift the Cash Box Tower out and set near its approximate installation location between the left- and right-side cabinets (see Figure 2).

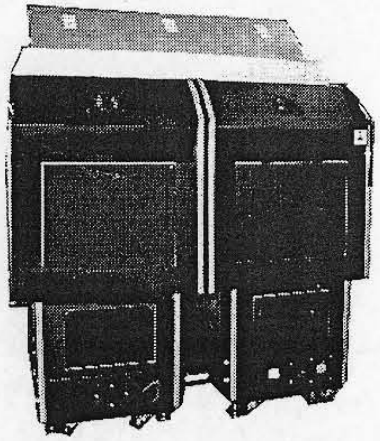


Figure 2: Rear View, Assembled Indy 500 Twin Cabinet

Prepare Cabinets and Tower for Assembly

1. Unscrew and remove the rear cover of the Cash Box Tower and set the cover aside.
2. Untape the wire harnesses from the outside of the inner panels of the left and right-side cabinets and the outside of the Cash Box Tower (see Figure 2).
3. Peel the blue protective covering off all silver trim strips on both left- and right-side cabinets.
4. Remove the upper two bolts and split washers from the outside of the inner panel of the left and right-side cabinets. Keep these bolts and washers available.
5. Loosen approximately 1/4 inch the lower two bolts on the outside of the inner panel of the left and right-side cabinets. Do not remove the lower two bolts.

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Specifications noted herein are subject to change without notice.

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INTRODUCTION OF THE OWNERS MANUAL

SEGA ENTERPRISES, LTD., has for more than 30 years been supplying various innovative and popular amusement products to the world market. This Owners Manual is intended to provide detailed descriptions together with all the necessary installation, game settings and parts ordering information related to the ***TOURING CAR CHAMPIONSHIP***, 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 415-802-1750
Fax 415-802-1754
7:30 am - 4:00 pm, Pacific Standard Time
Monday thru Friday

GAME REGISTRATION INFORMATION

Please take a moment to complete the following information about your new Sega game.
This information will be essential to you in the future, should you need to request parts or service information, or should you sell or transfer the machine.

Game Name:

Serial Number: _____
Date of purchase: _____

Distributor: _____
Salesperson: _____
Phone number: _____

Game moved or sold (date): _____

NOTES:

General Precautions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Installation Precautions

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

Regulatory Approvals

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

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

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

LISTED

UL

5K92

AMUSEMENT MACHINE

SPECIFICATIONS

INSTALLATION ITEMS		
Part No.	Descr.	Qty
600-6275-0500	Assy fiber cable	1
4201-6229-02	Owners manual	1
4211-9141	Sticker Car No. 2~8	1
/	Wrench T15 torx	1
/	Wrench T20 torx	1
/	Wrench T25 torx	1
/	Wrench T27 torx	1

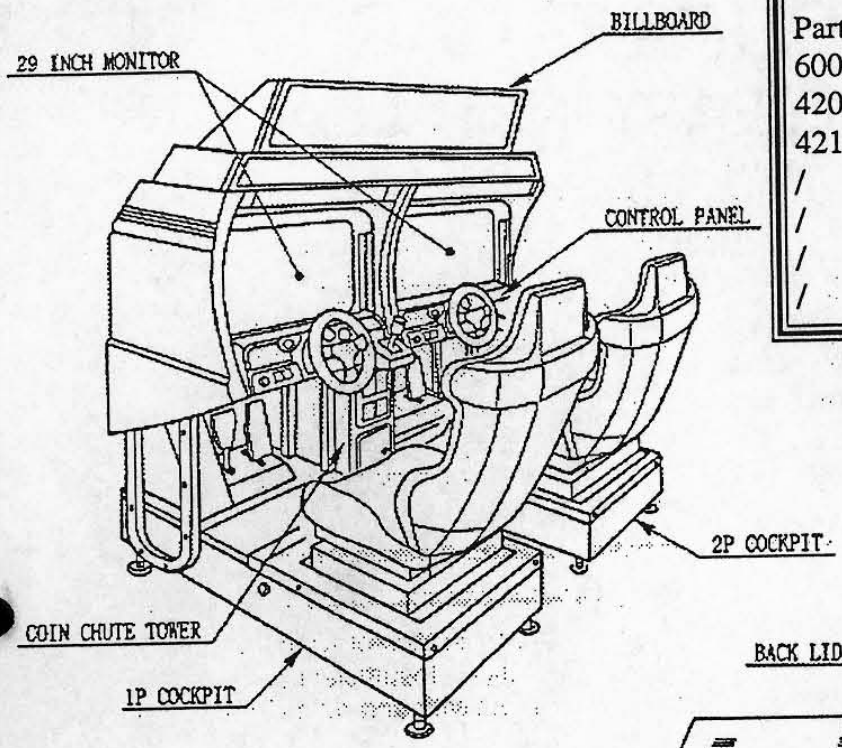


FIG. 4. 1 OVERVIEW

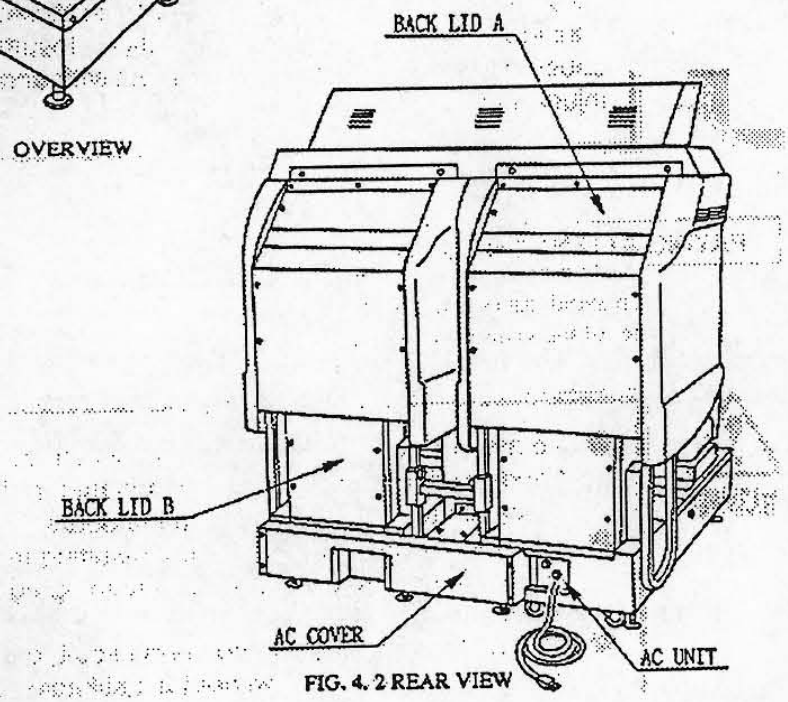


FIG. 4. 2 REAR VIEW

Game Specifications

	Height	Width	Depth	Weight
Cockpit, each seat	70 in	33 in	66 in	
Assembled	76 in	66 in	66 in	1132 lbs

Monitor 29" color monitor, Wells Gardner X 2

SEGA™ TOURING CAR TWIN

QUICK START FOR EASY INSTALLATION

Uncrate Left-Side Cabinet (Crate #1)

1. Move shipping crate #1 containing the left-side cabinet into location near the final installation location while still on the pallet.
2. Carefully remove the shipping bands, and top and sides of the crate.
3. Lift the left-side cabinet out and set on its casters.
4. Roll the left-side cabinet into its approximate installation location. Note: The left-side cabinet has the power cord and the On/Off switch.

Uncrate Right-Side Cabinet (Crate #2)

1. Move shipping crate #2 containing the right-side cabinet into location near the final installation location while still on the pallet.
2. Carefully remove the shipping bands, set aside crate #3, and remove and top and sides of crate #2.
3. Lift the right-side cabinet out and set on its casters.
4. Roll the right-side cabinet into its approximate installation location.

Uncrate Cash Box Tower and Billboard (Crate #3)

1. Move shipping crate #3 containing the Cash Box Tower and the Billboard into location near the final installation location while still on the pallet.
2. Carefully remove the shipping bands, and top and sides of the crate.
3. Lift out the Billboard, two L-brackets, and Joint Plate and set aside in a protected location.
4. Lift the Cash Box Tower out and set near its approximate installation location between the left- and right-side cabinets (see Figure 2).

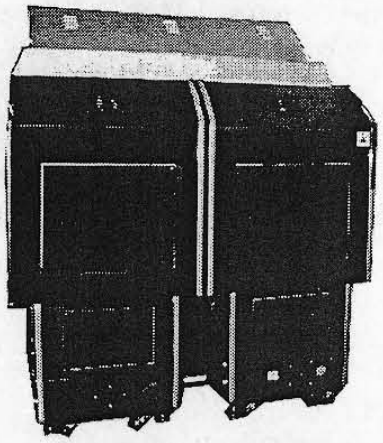


Figure 2: Rear View, Assembled Indy 500 Twin Cabinet

Prepare Cabinets and Tower for Assembly

1. Unscrew and remove the rear cover of the Cash Box Tower and set the cover aside.
2. Untape the wire harnesses from the outside of the inner panels of the left and right-side cabinets and the outside of the Cash Box Tower (see Figure 2).
3. Peel the blue protective covering off all silver trim strips on both left- and right-side cabinets.
4. Remove the upper two bolts and split washers from the outside of the inner panel of the left and right-side cabinets. Keep these bolts and washers available.
5. Loosen approximately 1/4 inch the lower two bolts on the outside of the inner panel of the left and right-side cabinets. Do not remove the lower two bolts.

Install Right-Side Cabinet

1. Connect the two right-side cable connectors to the Cash Box cable right-side connectors. Feed excess cable into the cabinet or Cash Box Tower.
2. Attach the Cash Box Tower to the inner panel of the right-side cabinet (see Figure 3) by lifting up the Cash Box tower and slipping the lower two slotted holes in the tower side over the lower two bolts and split washers on the right-side cabinet. Watch out for the sloping lower edge of the right-side cabinet monitor when lifting and installing the Cash Box Tower. The fender (large) washer stays between the right-side cabinet and the Cash Box Tower. Be sure that the cables retract into either the cabinet or Cash Box Tower without kinking. Do not tighten the bolts yet.
3. Install the two upper bolts and washers from the inside of the Cash Box Tower (through the non-slotted holes) into the right-side cabinet. After making sure that the cables are not caught between the cabinet and Cash Box Tower, and that the Tower is resting snugly against the cabinet, tighten all four bolts from the inside of the Cash Box Tower.

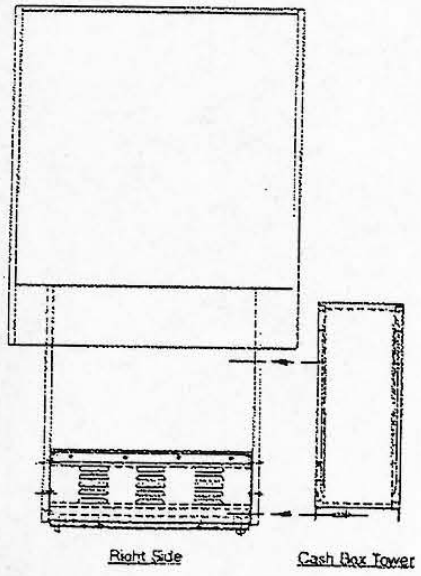


Figure 3: Right-Side Cabinet Installation

Install Left-Side Cabinet

1. Connect the two left-side cable connectors to the Cash Box cable left-side connectors. Feed excess cable into the cabinet or Cash Box Tower.
2. Attach the Cash Box Tower to the inner panel of the left-side cabinet (see Figure 4) by sliding the lower two slotted holes in the Cash Box tower over the lower two bolts and split washers on the left-side cabinet. Watch out for the sloping lower edge of the left-side cabinet monitor. The fender (large) washer stays between the left-side cabinet and the Cash Box Tower. Be sure that the cables retract into either the cabinet or Cash Box Tower without kinking. Do not tighten the bolts yet.
3. Install the two upper bolts and washers from the inside of the Cash Box Tower (through the non-slotted holes) into the left-side cabinet. After making sure that the cables are not caught between the cabinet and Cash Box Tower, and that the Tower is resting snugly against the cabinet, tighten all four bolts from the inside of the Cash Box Tower.

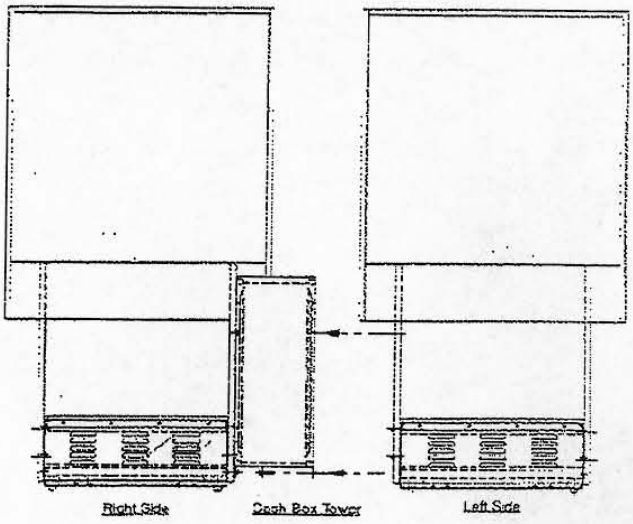


Figure 4: Left-Side Cabinet Installation

INSTALL BILLBOARD

1. Remove four 5/16 hex Billboard installation bolts from the top of both the left and right-side cabinets (8 total). Remove four 5/16 hex Billboard installation bolts from the back edge of the Billboard.
2. Carefully lift the Billboard to the top of the cabinets (see Figure 5).
3. Remove the three access screws from the front edge of the Billboard between the Billboard and Race Leader Marquee.
4. Open the Billboard top section carefully.
5. Attach the Billboard to the top of the game cabinet using four 5/16 hex bolts installed inside the front edge of the Billboard (see Figures 5 and 6). Do not tighten the bolts yet.
6. Attach the Billboard to the top of the game cabinet using 4 5/16 hex bolts installed through the L-bracket along the back outside edge the Billboard (see Figures 5 and 6). Do not tighten the bolts yet.
7. Align the Billboard and tighten all the bolts.
8. From inside the Billboard, connect the three- and four-pin Molex connectors (one each) to provide power to the lamps.
9. Reinstall the three access screws along the front edge of the Billboard to close the Billboard case.

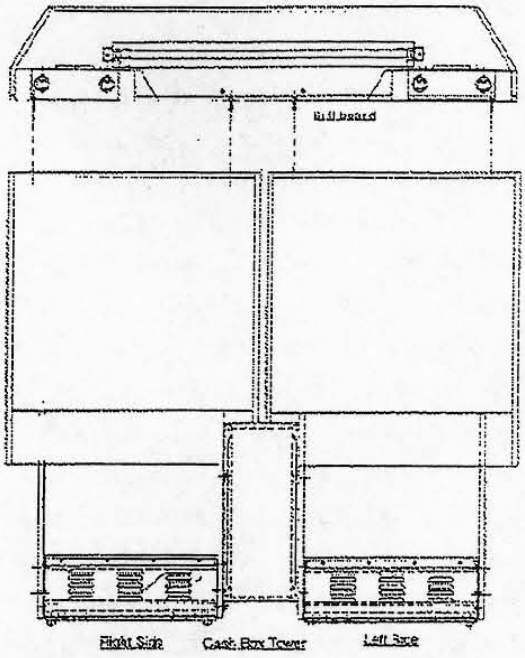


FIGURE 5: BILLBOARD INSTALLATION LOCATION

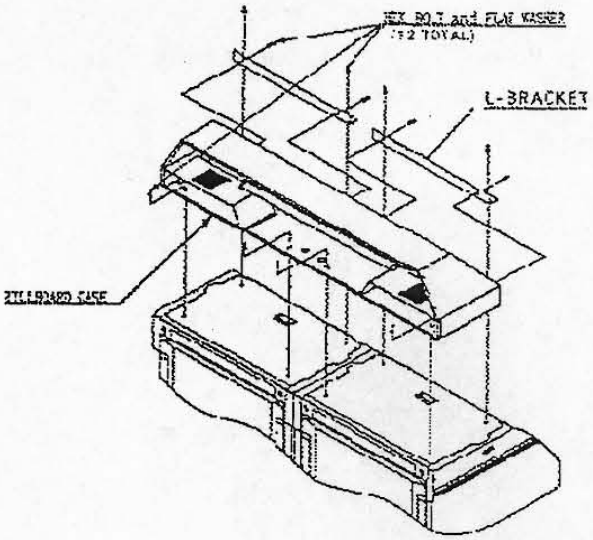


FIGURE 6: BILLBOARD INSTALLATION DETAILS

WARNING!

Make sure that all eight of the leg levelers are in contact with the floor (see Figure 9). If they are not, the cabinet may move and cause an accident.

FIGURE 7: CABINET, BOTTOM VIEW

ADJUST LEG LEVELERS

1. Move the game cabinet to its final installation position. Be sure to allow room for the players to climb on the machine.
2. Adjust the six outboard leg levelers (see Figure 7) on the cabinet by hand so they all make contact with the floor. Continue to adjust levelers until the machine is level and the casters are approximately 5 mm off of the floor (see Figure 8). If the casters are less than 5 mm off of the floor, the game may move during operation and become dangerous.
3. After the adjustments are complete, tighten each leg leveler nut upward to secure the height of the leg leveler. (See Figure 9.)
4. Attach the red joint plate (shipped in Crate 3) to the cabinet's two inner leg levelers (see Figures 7 and 10). Slide the notches in the joint plate over the levelers.
5. Adjust the two inner leg levelers (see Figure 7) on the cabinet by hand so they both make contact with the floor. Continue to adjust levelers until the machine is level and the casters are approximately 5 mm off of the floor (see Figure 8). If the casters are less than 5 mm off of the floor, the game may move during operation and become dangerous.
6. After the adjustments are complete, tighten both leg leveler nuts upward to secure the height of the leg leveler. (See Figure 9.)
7. Since the cabinet is heavy, retract its leg levelers and roll on its casters (see Figure 9) when moving the machine over the floor. Do not move the assembled cabinet over uneven floors, or up or down steps and stairs. Detach the left and right-side cabinets from the Cash Box Tower before moving the cabinets over uneven areas.

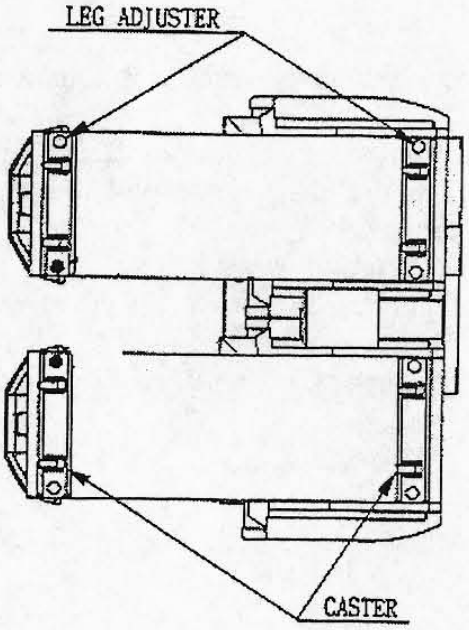
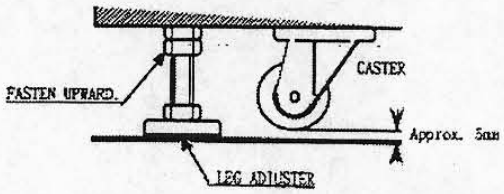


FIGURE 9: LEG LEVELER AND CASTER, SIDE VIEW



INSTALLING THE BILLBOARD

CAUTION!

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 peform the installation alone can cause an accident.

Take out the three truss screws, open the Billboard upper and remove the 2 lamp lids.

Mount the billboard over the 2 cabinets and secure with the 4 hex bolts. When fastening the bolts, be careful of the lamp position. If it is too difficult to perform the work with the lamps in place, remove them temporarily.

Connect 3 connectors which are inside the billboard case.

Attach the two billboard holders to the backside of the billboard case by securing with 4 hexagon bolts for each.

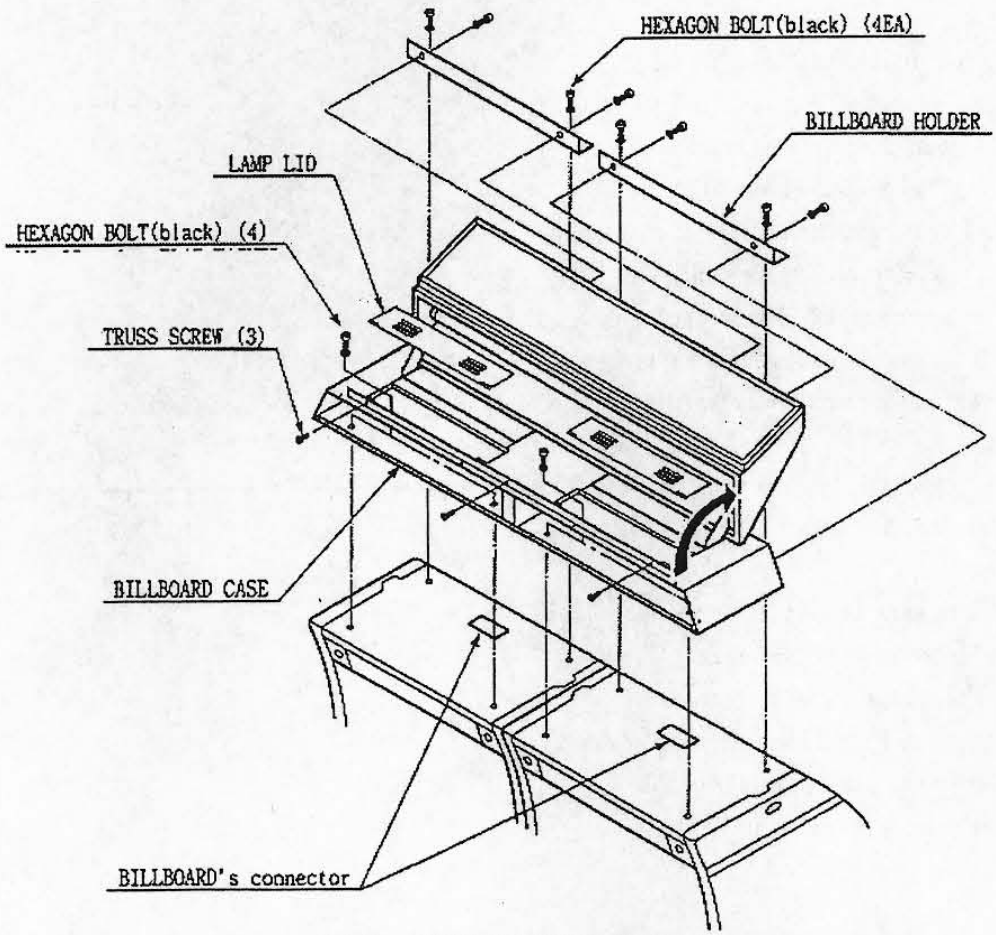
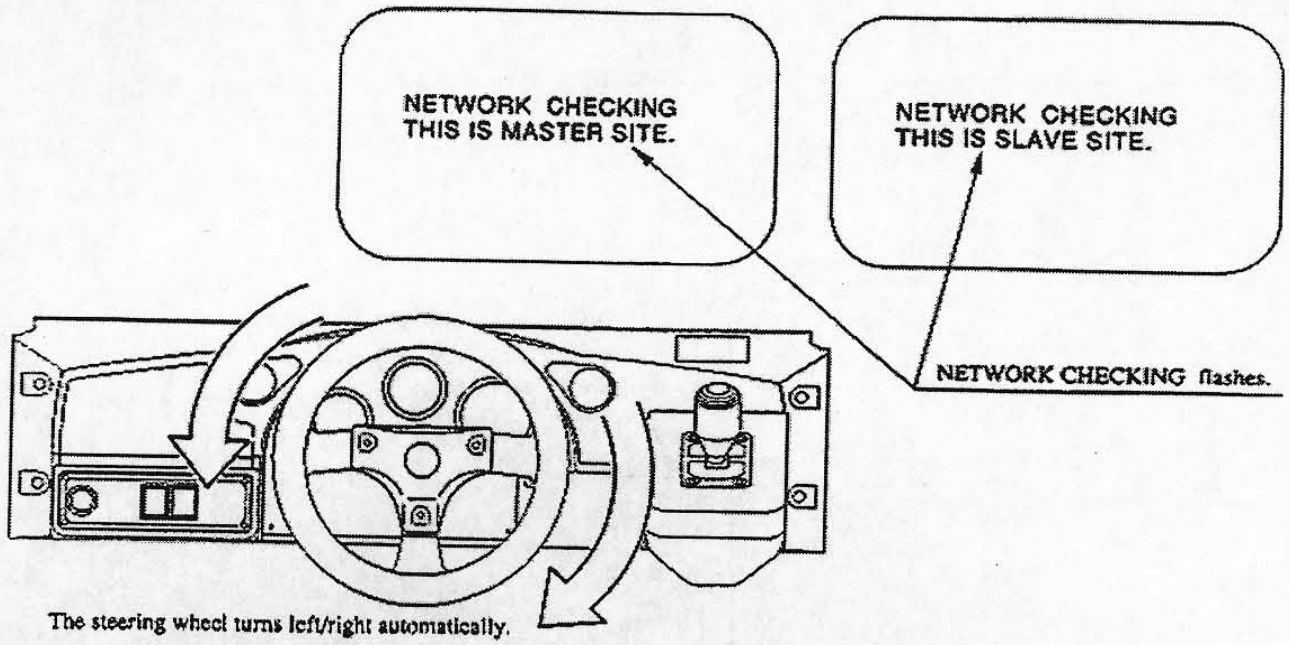


FIG. 6.3 ASSEMBLING THE BILLBOARD



CONNECTING THE POWER SUPPLY

Connect the game to the power supply and turn on power to the game.

POWER ON

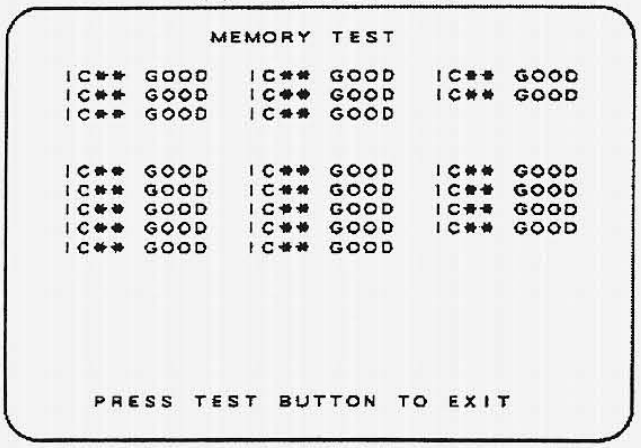
Turning the AC unit's main switch on will cause the machine to start the power on check and network check automatically.
In the Power On check, the steering wheel turns left and right, and then returns to the centering position and stops. In this check, the values of the VR inside the control panel are corrected.
Until the 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 a course-out or crash) can not be obtained correctly.
In the case of an abnormal reaction during the game, turn the 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.

ASSEMBLY CHECK

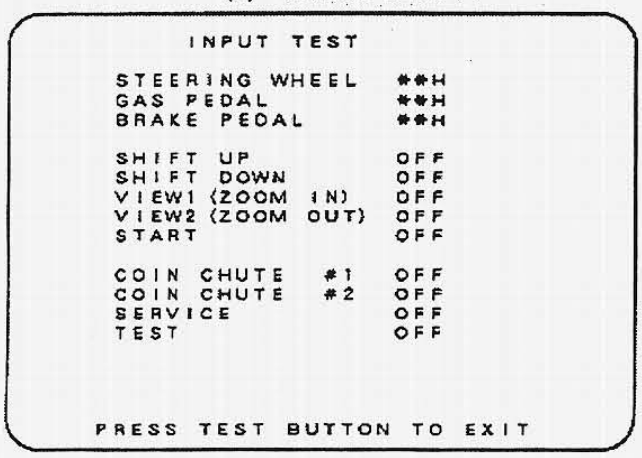
In the test mode, ensure that assembly has been made correctly, and that the IC board is satisfactory. In the test mode, perform the following tests.

(1) MEMORY TEST



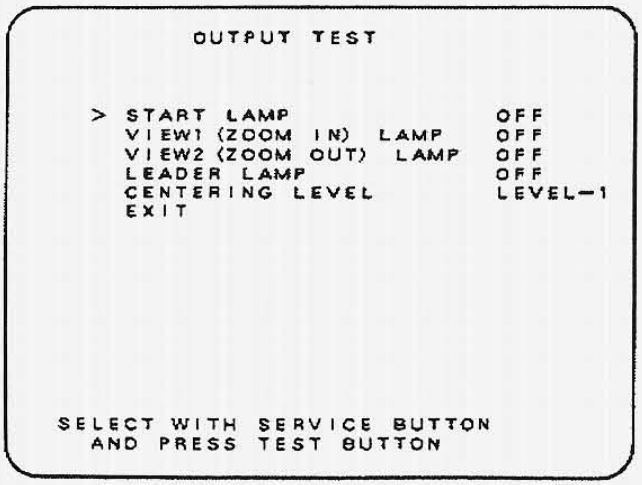
Selecting the memory test from the test menu causes the on-board memory to be tested automatically. The game board is satisfactory if the display beside each IC shows GOOD.

(2) INPUT TEST



Selecting the input test causes the screen on which each VR and switch are tested to appear. Press each switch. For the coin inlet switch test, insert a coin from the 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 VR value for the steering wheel and accelerator and brake. If the VR values are not satisfactory, refer to the mechanical adjustments section.

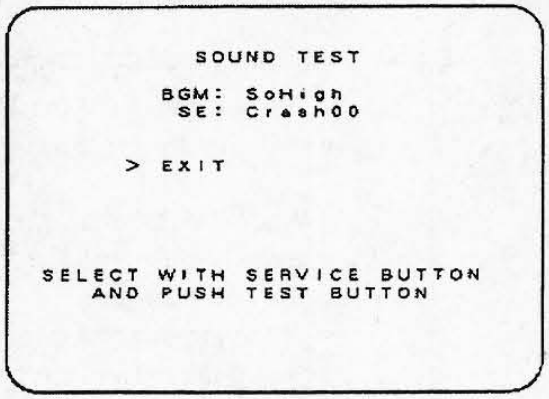
(3) OUTPUT TEST



In the output test mode, carry out lamp test to ensure that each lamp lights up satisfactorily.

(4) SOUND TEST

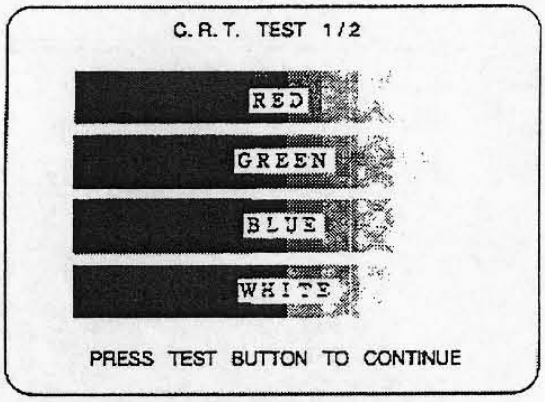
In the test mode, selecting sound test causes the screen in which sound related board and wiring connections are checked to be displayed. Be sure to check that the sound is satisfactorily emitted from each speaker and the sound volume is appropriate.

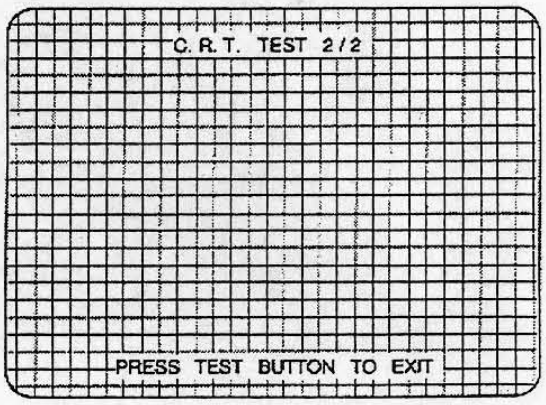


(5) C.R.T. TEST

In the test mode, selecting CRT test allows the monitor adjustment screens to be shown. Although monitor adjustments have been made at the time of shipping, make judgement if adjustments are needed by watching the test screens. If adjustments are needed, refer to the monitor adjustment section of this manual.

Perform all of the above mentioned inspections on a monthly basis.





PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE

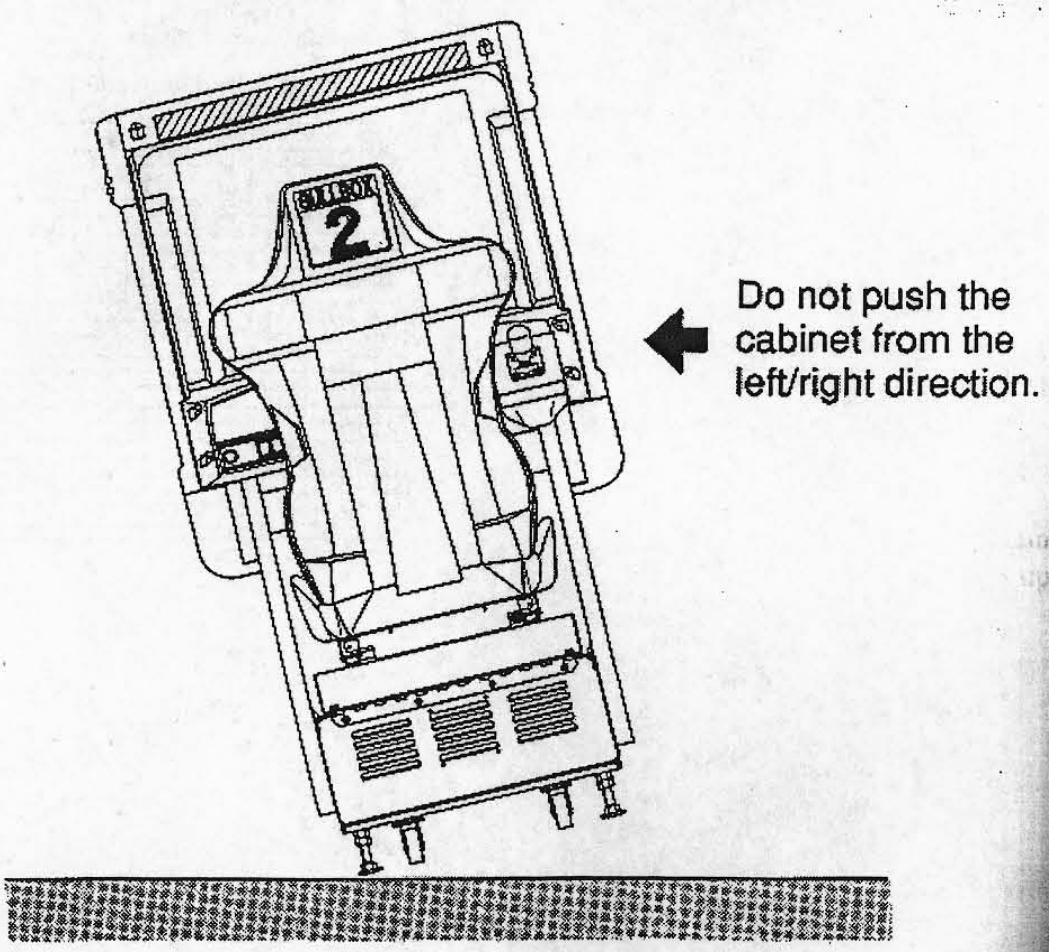
WARNING!

- When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug inserted can cause damage to the power cord.
- When moving the machine on the floor, retract the leg adjusters so that the casters make contact with the floor. Be careful so that casters do not tread over power cords or wiring.
- When moving the machine, do not push the cabinet from the left/right direction. Pushing the cabinet from the left/right can cause the cabinet to fall causing injury and damage to the machine.

STOP

IMPORTANT!

Before transporting, be sure to disassemble the unit. Inclining in an assembled conditon, or moving over a grade or incline can damage the connecting joint.



CONTENTS OF GAME

The following explanations apply to the case the product is functioning satisfactorily. Should there be any moves different from the following contents, some sort of faults may have occurred. Immediately look into the cause of the fault and eliminate the cause thereof to ensure satisfactory operation. The fluorescent lamp in the Billboard is always lit when the product is energized. During ADVERTISE, ADVERTISE mode is displayed on the screen and the sound is emitted from the Speaker incorporated in the Seat (Note 1).

HOW TO PLAY

(1) Enter the machine and be seated. The seat position is adjustable forward and backward. The Lever is located on the lower right-hand side facing the screen. Use the Lever to adjust the seat position .

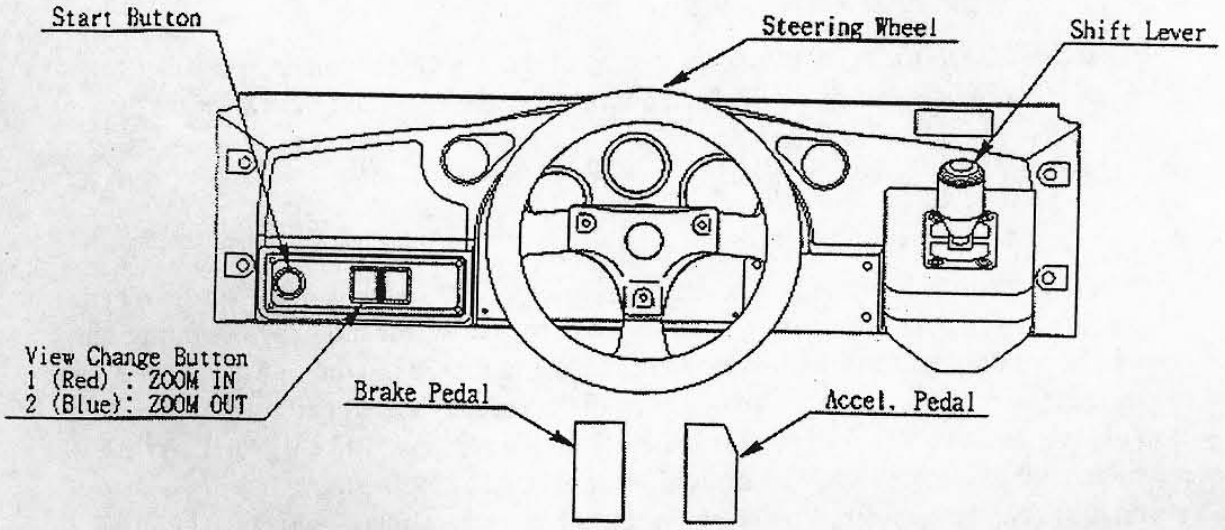
(2) Insert a coin(s). Inserting one play worth of coins allows the selection mode to be displayed onthe screen.

(3) Choose one from among the 4 different kinds of cars. Turn the Steering Wheel to bring the desired car to the center of the screen. By stepping on the pedal, choose either 6-shift MT (manual) or AT (automatic). To choose MT, either step on the gas pedal while stepping on the Brake Pedal, or press the Start button. To choose AT, step on the Gas Pedal.

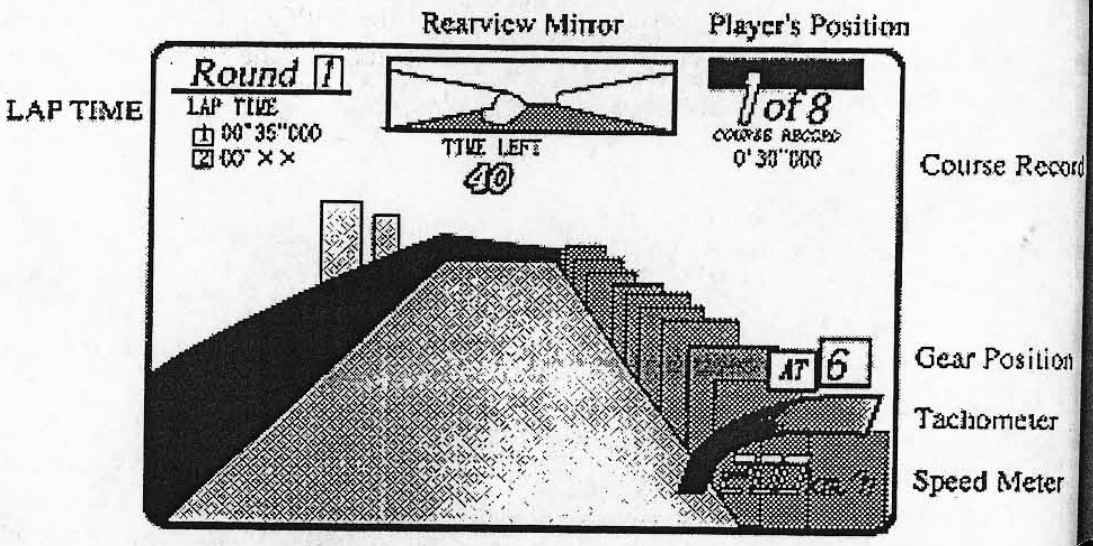
(4) Choosing AT or MT makes the car selection effective. When the select mode is shown on the screen, countdown begins. When the countdown becomes 0, QUALIFY (a preliminary race) starts automatically. If no action is taken until the countdown shows 0, the car being selected which is located in the center of the screen will be used with AT transmission being selected automatically.

(5) When the type of car and transmission are determined, the QUALIFY race begins. The results of the QUALIFY race determines the starting grid of the first race.

(6) Until several seconds after the QUALIFY race has started, other participants' entry is acceptable. The first race begins after the QUALIFY race by all players has been finished.



(7) Lap Time is displayed on the upper left side of the screen, Time Left in the center, the Position of your player on the upper right-hand side, and the Gear Position, Tachometer & Speed Meter on the lower right-hand side respectively.



Game mode screen

(8) The View Change button allows for a 3-step view change. Except in the case of REARVIEW perspective, the rearview mirror is displayed in the upper center portion.
(9) Simultaneously with the race start, the remaining time (Time Left) decreases. Finishing one lap before the Time Left becomes 0 allows the game to be continued with the remaining time added to the next lap Time Left (Note 2). If you fail to finish the lap within the Time Left, the game is over. In the QUALIFY race, the game will not be over even after the time limit. In this case, however, the player will start the first race from the lowest position.
(10) Finishing the race's number of specified laps in each course allows you to proceed to the next course with the present position and the remaining time being carried over. There are 3 race courses. Play on the courses sequentially in order of the first -->second --> Final (course).
(11) If you win the first position in the comprehensive results of the 3 courses, you can play a bonus course called EXTRA course. Finishing the final course with the best total time allows the player name to be registered (Note 3).
OK The setting of the above Notes I ~ 3 can be changed (refer to Section 9).

Note 1 No sound output during ADVERTISE can be set.

Note 2 Specified number of laps can be chosen from among 1, 2, 3 and 20 (for event). When 20 laps are selected, choose the desired course in the car select mode by operating the Shift Lever and make the selection effective by using the Gas Pedal or Start button. In the interactive (communication) versus play, the course is determined by majority. In case of a tie, the course of which the difficulty level is lower will be selected. As the car runs more and more laps, the tire will wear out and the grip strength will be lowered but can be recovered by bringing the car in to the pit.

Note 3 The player name registration can be set before the actual race. The registered name is displayed above each player's car.

SIMPLE ADVICE TO MASTER EACH COURSE

[The 1st Round]

You should not underestimate the slow curves and wide road of this course.

If you approach the first corner at full speed, you will run your car off the course every time. Restrain yourself from picking up speed and release the accelerator a little. Even if you can handle the first corner At full speed, you will collide with a fence after running onto bumps along the road. It is better for you to cut down the speed before entering the first corner.At the gentle curve right before the end of the course, you can not complete the turn if you are pressing the accelerator to the bottom. Trace "out-in-out" line with half acceleration there.At the last corner,it is best to cut the steering wheel earlier and sharply, and to get out of there , increasing speed.You will not usually have a violent collision in this course, but you should concentrate on cutting down your lap time even by 1 second while tracing an efficient line on the course and maintaining the engine speed.

[The 2nd Round]

In this course, as the first corner is tighter than it looks, and you should start to cut the steering wheel earlier and turn the corner whilemoving a center of gravity to the front part of car. If you enter the corner at a drastically high speed, the engine speed will drop. In the middle of the course, it may be difficult to control the car because you are forced to cut the steering wheel left and right many times. If so, release the accelerator and cut the steering wheel earlier to Turn the corners smoothly and trace the inside line of the corners. At the last corner, after brake down strongly, cut the steering wheel immediately, and step on the accelerator. At that time, you need to be careful that you do not brake down for a long time, in order to prevent you from oversteering and the car from running into more inside. If you choose the manual transmission, you had better shift into third at the last corner.

[The Final Round]

As the course curves continuously to the left, you can stay at the top speed. As soon as you pass through the second left corners, release the accelerator and brake down to slide the tires a little and turn the car toward the inside of the next right corner. (a mt user should put the car in third gear.) Do the same way for the corner right after this. (a mt user should put the car in third or forth gear.) And then, at the other right tight corner, approach it from the outside of the track as much as possible, decrease the speed earlier and move to an inside track. Adjust the speed while stepping on the accelerator half way so as not to move to the outside during the continuous corners in the middle of the course. (a mt user should mainly put the car in forth gear and shift gear up and down frequently.)The question is how to clear the last corner. Approach it with decreasing the speed considerably and turn with the tires sliding a little. Turn the steering wheel more and more to the right until reaching the inside and then return it to the center position. After that, control the tail of car sliding by adjusting the accelerator. (a mt user should put the car in second gear.)

THE BASIC METHOD OF DRIVING A TOURING CAR

In real touring car racing, as the tires slide, the engine speed will decrease accordingly. Since this causes a loss of time, every professional driver tries to have the tires of his car gripping the surface of the road by braking down and changing gears appropriately. We reproduce feeling of "gripping" in sega touring car championship and would like all the players to enjoy feeling the tension of driving at the very limits of their abilities.

Therefore, we show you several points below in order to change your way of thinking about driving games with power drifting in the past.

* Slow-In And Fast-Out

If you try to control the speed and adjust a car direction after reaching the margin during turning a corner, you can not make it and clear the corner at high speed due to instability of car's motion.Before any tight corner, you should release the accelerator or brake down. As soon as you reach the inside track of the corner, step on the accelerator gradually. If you understand the method to pass a corner with acceleration, you master "slow-in and fast-out".

* Change Of Weight Balance

All the driving performance of the cars appearing in the game is reproduced in dozens of parameters. therefore, the performance of turning a corner will change every moment depending on the weight balance between the front and the rear of car.

The front tires grip the surface of the road better and the steering wheel is turned more easily if you decrease speed by releasing the accelerator or braking down. On the contrary, the car runs out of a course more easily by understeering resulting from the decrease of the front tires' grip power if you accelerate rapidly. From this phenomena, you can understand importance of "slow-in and fast-out" driving method.

* Out-In-Out

As mentioned above, not only the engine speed decreases but the tail of the car also slides if you try to forcibly drive it by tracing an inappropriate line on the road.It is important in this game that you have a gentle curved line as much as you can in order to prevent the engine speed from decreasing and maintain The tires' grip power. Such delicate and strategic factors have never been seen in any recent driving games.

* Avoid Turning The Steering Wheel Rapidly

During the game play, the view of a player is narrow.As the player's view on the monitor is narrow during the game play, the actual speed is higher than he feels. Therefore, turning the steering wheel to left and right rapidly causes a player driving down the road in a zigzag line. A player should smoothly approach the corner after deciding what degree he turns the steering wheel, and then make slight adjustments by controlling the accelerator.

* Appropriate Driving Method For Each Type Of Wheel-Drive System

When driving a four-wheel-drive car (4wd car), it is almost ok that a player follows the above advice. But for a rear-wheel-drive car with the engine at front (fr car), there is another knack. Basically, it was mentioned that sliding wheels causes the loss of time. As a fr car has plenty of engine power to recover from low engine speed, it happens that sliding wheels a lLittle leads to cut the time. However, a player has to be careful not to continue turning the steering wheel until the tail of car begins to slide.

Although sliding wheels a little leads to cut the time, sliding them a lot causes the loss of time. Also, when driving a fr car, the timing of turning and returning the steering wheel should be a little earlier than that for a 4wd car.For both types of car, the basic method to control them well is to feel the road condition through the steering wheel and respond sensitively to it.

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.



IMPORTANT!

In the case where multiple units are linked for communication play, exiting from the test mode causes the unit to perform the network check automatically. During this time, all of the linked units will not allow the game to be played in normal status.
Therefore, be sure not to enter the test mode if any one of the units is in play. On the other hand, if even one unit is in the test mode, make sure that other machines are not in play.

EXPLANATION OF TEST MODE ITEMS

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 SELF-TEST mode, check ICs on the IC Board.

MEMORY

Choose MEMORY TEST in the MENU mode to allow the MEMORY test to he performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.

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.

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 he solved yet, check the CONTROL's moves.

MONITOR

In the MONITOR ADJUSTMENT mode, check to see if the PROJECTOR adjustment is appropriately made.

IC BOARD

1. MEMORY TEST
2. In the SOUND TEST mode, check the sound related ROMs.

DATA CHECK

Check such data as game play time and histogram to adjust the difficulty level, etc..

SWITCH UNIT AND COIN METER

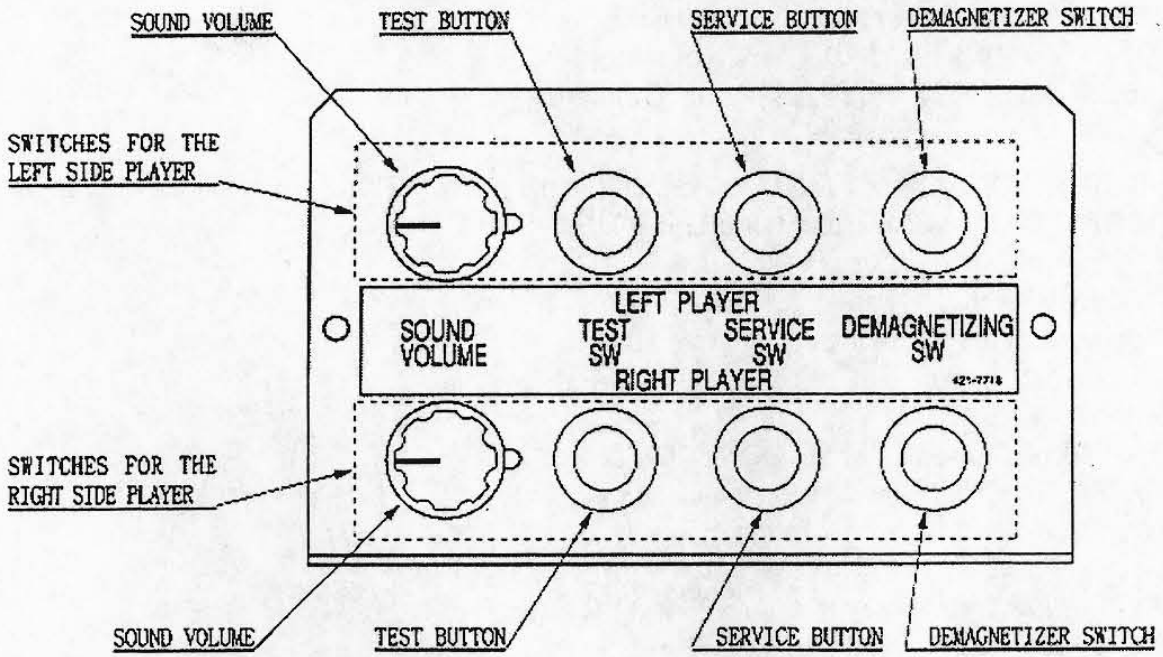
WARNING!

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

IMPORTANT!

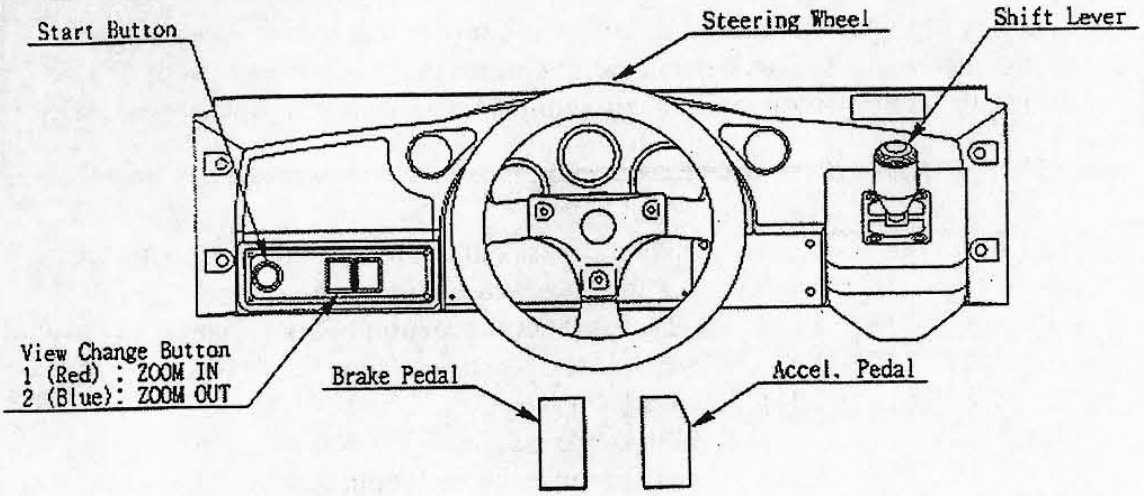
- Adjust to the optimum sound volume, taking into consideration the environmental requirements of the installation location.
- If the coin meter and game board are electronically disconnected, game play is not possible.

Open the coin chute door, and the switch unit shown below will appear.



TEST BUTTON	For the functions of the test button, refer to the following pages.
SERVICE BUTTON	Gives credits without registering on the coin meter.
SOUND VOLUME	Adjusts the sound volume of the speaker incorporated in the backrest of the seat and the sound volume of the superwoofer under the seat.
DEMAGNETIZER SWITCH	Eliminates color unevenness from the screen.

The control panel switches are also used in the test mode. For the function of each, refer to the following pages.



TEST MODE

The test mode allows the functions of each part of the cabinet and screen adjustments to be checked, and coin and game settings to be performed.



IMPORTANT!

When setting changes are made in test mode, be sure to exit the test mode upon completing the changes. Returning to normal mode makes changes effective. Turning the power on/off without exiting the test mode will make setting changes ineffective.

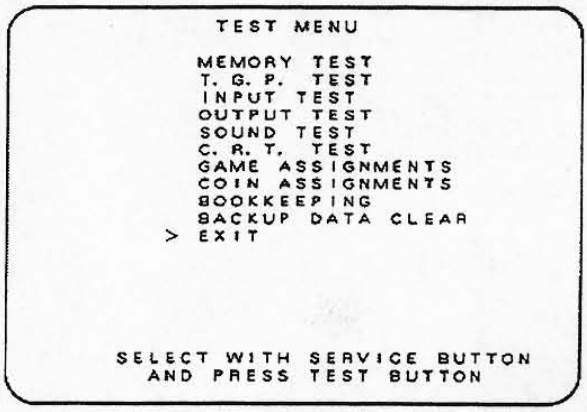


FIG. 9.2 TEST MENU

Press the test button to cause the following test menu to appear on the screen.
Press the service button or view change button until the pointer --> is moved to the desired item to make a selection.
Bring the pointer to the desired item and press either the test button or the start button to make a selection.
After the test is complete, move the pointer --> to exit and press the test button or start button to return to the game mode.

9—3 MEMORY TEST

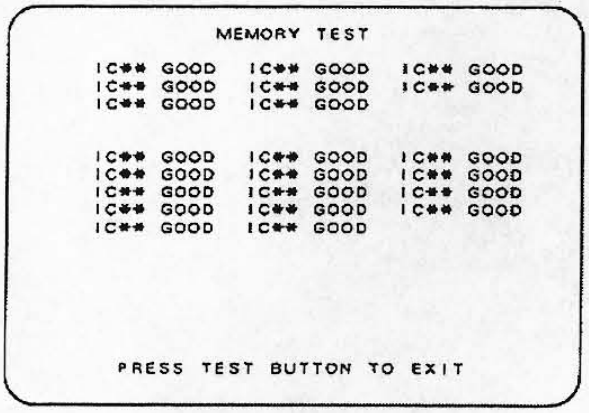


FIG. 9.3 MEMORY TEST

The memory test mode is for automatically checking the on-board memory IC functions.
GOOD is displayed for normal ICs and BAD is displayed in the case of an error.
When the test is completed, if GOOD shows beside all ICs, the result is satisfactory.
If the test is not completed, the IC board may have malfunctioned.
After finishing the test, press the test button to return to the menu mode.

9—4 T.G.P. TEST

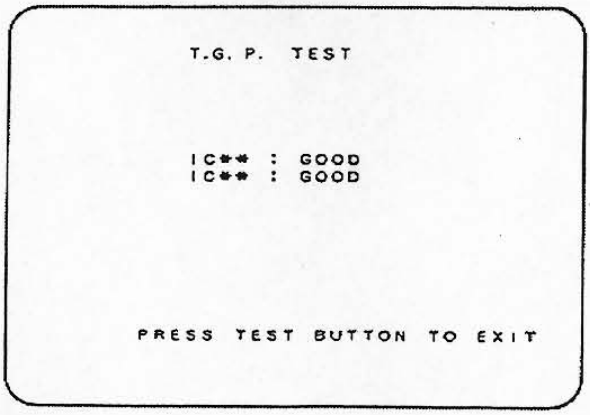


FIG. 9.4 T.G.P. TEST

The TGP test, screen display related ICs are automatically checked. If the display is as shown at left, the result is satisfactory. Press the test button to return to the menu mode.

9—5 INPUT TEST

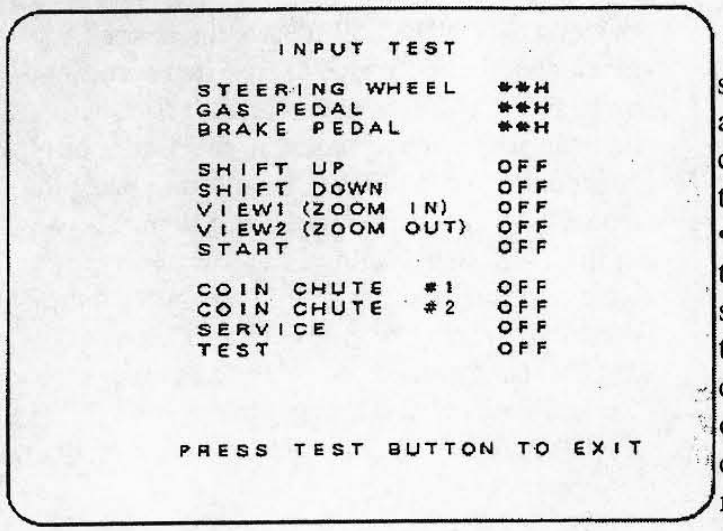


FIG. 9. 5 INPUT TEST

Selecting INPUT TEST causes the screen shown at left and allows each switch status and game play related V. R. values to be checked. On this screen, periodically check the status of each switch & V. R.
• By pressing each switch, if the display on the right-hand side of the name of each switch changes to ON from OFF, the SW and the wiring connections are satisfactory. • To check CHUTE I & CHUTE 2 coin switches, open the COIN CHUTE DOOR and insert a coin(s) in the slot. • To return to the Menu mode, press the Test Button.

THE APPROPRIATE VALUES OF EACH VR

STEERING WHEEL:	UNDER 30H <--	7D~83H	--> OVER C0H
	LEFT	(CENTERING)	RIGHT
GAS PEDAL:	UNDER 30H	---->	OVER C0H
BRAKE PEDAL:	UNDER 30H	---->	OVER C0H
	(PEDAL RELEASED)		(PEDAL PRESSED)

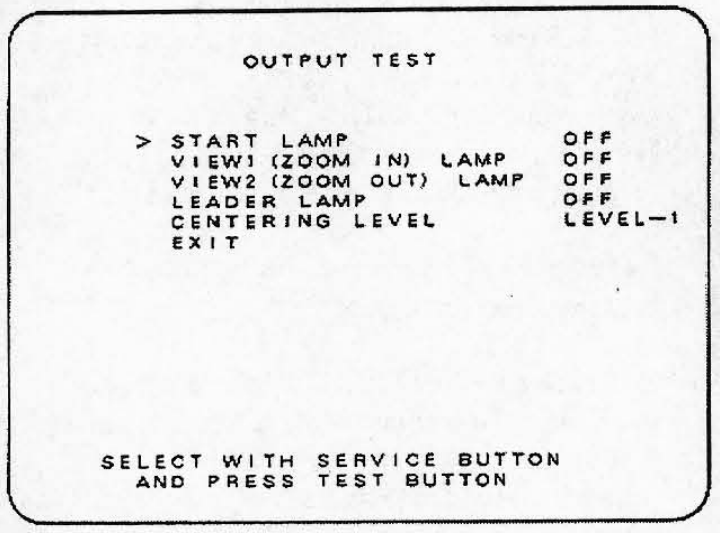


FIG. 9. 6 OUTPUT TEST

This test allows the status of each lamp and Steering Wheel's centering strength to be checked. Periodically check in this mode. Choose OUTPUT TEST to have the Output Test appear on the screen (FIG. 9. 6).
(1) Press either of the SERVICE button or VIEW CHANGE button to move the arrow to the desired test item.
(2) Press either of TEST button or START button. If the display on the right-hand side of the lamp name changes to ON from OFF, and the selected lamp lights up, the lamp and wiring connections are satisfactory. (3) Bring the arrow to CENTERING LEVEL and press either of TEST button or START button. If the display changes to LEVEL I ~ level 8 and the Steering Wheel's centering strength is gradually strengthened, the centering mechanism is satisfactory. Note that in this test mode, the strength can not be set. • Choose EXIT and press the TEST button or START button to return to the Test Menu.

9—7 SOUND TEST

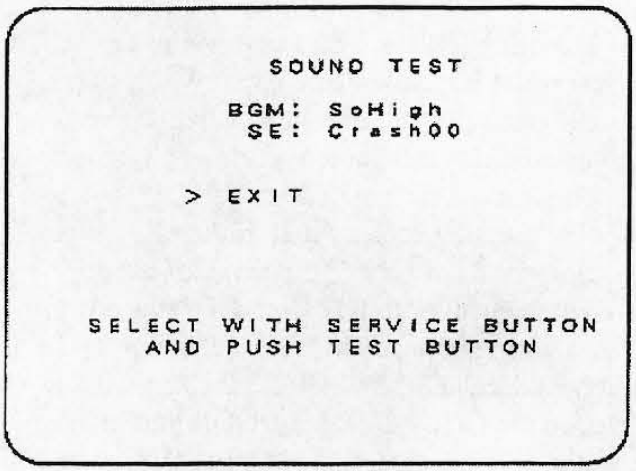


FIG. 9. 7 SOUND TEST

Selecting SOUND TEST allows the desired sound (sound effects, BGM, etc.), to be chosen and heard. In this test, sound related IC Board and the Speaker incorporated in the seat to be checked. Press the SERVICE button to bring the arrow (>) to the desired sound test item. Pressing the TEST button allows the selected type of sound to be emitted. Each time the TEST button is pressed, the next sound is emitted.

- B.G.M. Background music during game.
- SE Sound effects during game.
- EXIT Causes the menu mode to return on to the screen.

9—8 C. R. T. TEST

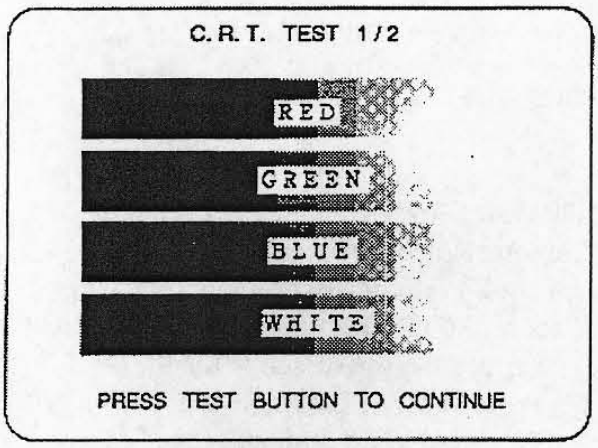


FIG. 9. 8 a C. R. T. TEST

Choose C.R.T. TEST to have the Monitor Adjustment check screen appear. By watching the screen, periodically check if adjustments are needed. For the Adjustment Method, refer to the monitor adjustment section. In the screen as per FIG. 9. 8a, check Monitor color adjustments. By watching this screen, make color adjustments. Each of the R (red), G (green), B (Blue) and white is darkest at the left-hand end and becomes brighter towards the right-hand end.

Press the TEST button to have the following Crosshatch screen appear.

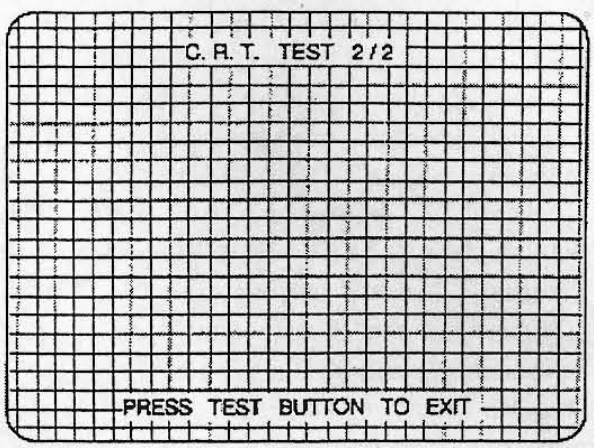


FIG. 9. 8 b C. R. T. TEST

In the screen as per FIG. 9.8b, check monitor size and position adjustments. Check size and position adjustments by watching this screen. Adjust the Monitor to make sure that the crosshatch lines do not go beyond the screen size and crosshatch distortion does not occur.

Press the TEST button to have the menu return to the screen.

GAME ASSIGNMENTS

Select GAME ASSIGNMENTS to have the following screen appear. This allows settings of game difficulty level, etc. to be performed. Each item displays the contents described as follows:

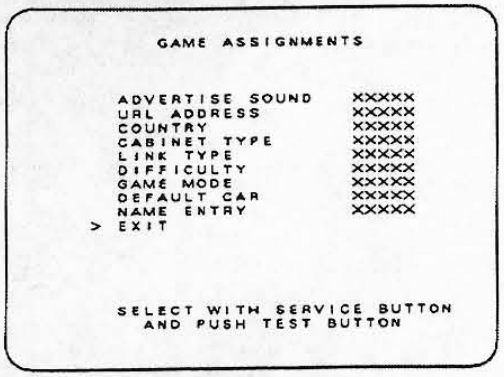


FIG. 9. 9 GAME ASSIGNMENTS

SETTING CHANGE PROCEDURE

(1) Press the SERVICE button or VIEW CHANGE button to bring the arrow (>) to the desired change item.
(2) Press the TEST button or the START button to select the setting change item.
(3) Move the alTow to EXIT and press the TEST button or the START button to return the menu mode to the screen.

•ADVERTISE SOUND — Setting of sound to be emitted during Advertise mode. OFF: No sound ON: Sound emitted.

•URL ADDRESS — Sets the Internet Home Page display during ADVERTISE. OFF: Not displayed ON: Displayed

• COUNTRY — Allows for language setting.

•CABINET TYPE — Set to applicable cabinet type.

• LINK TYPE — If this product is individually used, set 1P side (left) to CAR I and 2P side (right) to CAR 2. For communication play, be sure to set one of the machines to CAR I and set the rest of cars to CAR 2~8 in the manner so that no number will be duplicated.

• DIFFICULTY — There are 4 levels, i., e., EASY, NORMAL, HARD, HARDEST. The difficulty level can be differentiated by varying the race start time and the additional time when passing the checkpoint.

•GAME MODE — Sets the specified number of laps for the course. SHORT refers to one lap, NORMAL to 2 laps, LONG to 3 laps and GRAND PRIX to 20 laps. Use GRAND PRIX for events.

•DEFAULT CAR — Select the type of car initially appearing in the center of the screen. If set to RANDOM, the DEFAULT CAR will be unspecified.

•NAME ENTRY — Sets whether the name entry is to be performed before game or after game. In case of AFTER X, the name of the player with best results will be entered with his ranking being displayed. In case of BEFORE X, the name of each player is entered before game. The name regis tered before game is displayed above his car during game play and the name will be displayed in the ranking if he accomplishes best results. The numeral after AFTER or BEFORE shows the number of charac ters that can be registered (3 or 7 characters).

COIN ASSIGNMENT

The coin assignments mode allows 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."

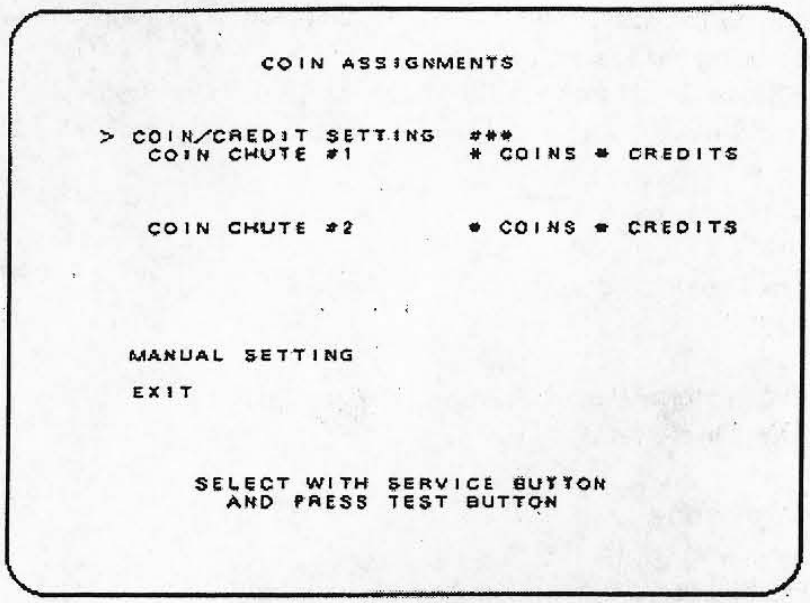


FIG. 9. 10 a COIN ASSIGNMENTS

SETTING CHANGE PROCEDURE

Press the service button to bring the arrow to the desired change item.
Press the test button to select the desired item.
Move the arrow to exit and press the test button to return to the menu screen.

COIN/CREDIT SETTING	How many coins correspond to how many credits. In this machine, select from the table on the following page.
MANUAL SETTING	Allows for finer settings. See table.

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

MANUAL SETTINGS

Selecting manual settings in the coin assigment mode displays the following screen.

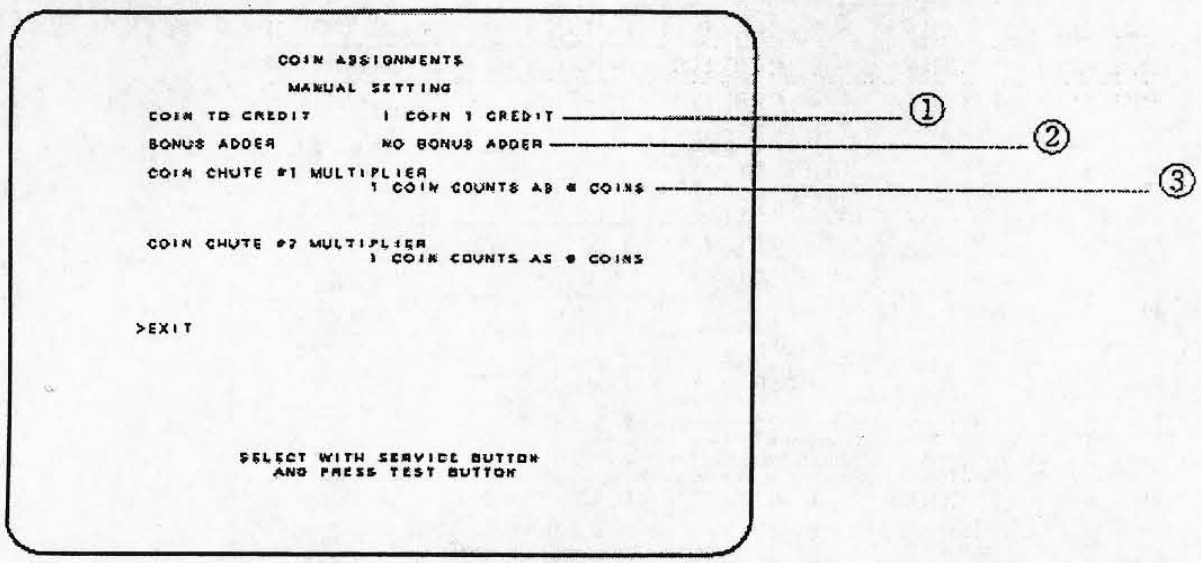


FIG. 9. 10 b COIN ASSIGNMENTS

(1) Determines the 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.

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

BOOKKEEPING

Selecting the BOOKKEEPING in the menu mode displays the bookkeeping data up to the present. Pressing the TEST button or the START button returns the test menu on the screen.

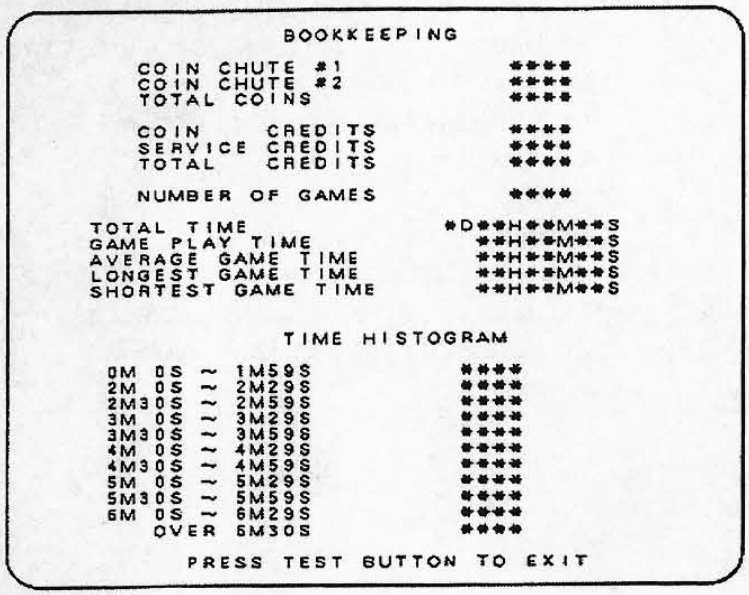


FIG. 9. 11 BOOKKEEPING

•COIN CHUTE#*	Number of coins put in each chute.
• TOTAL COINS	Total number of coins inserted.
• 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.
•TIME HISTOGRAM	Displays the play frequency as against each play time. Refer to this as a standard when setting Game Difficulty, etc.

BACK UP DATA CLEAR

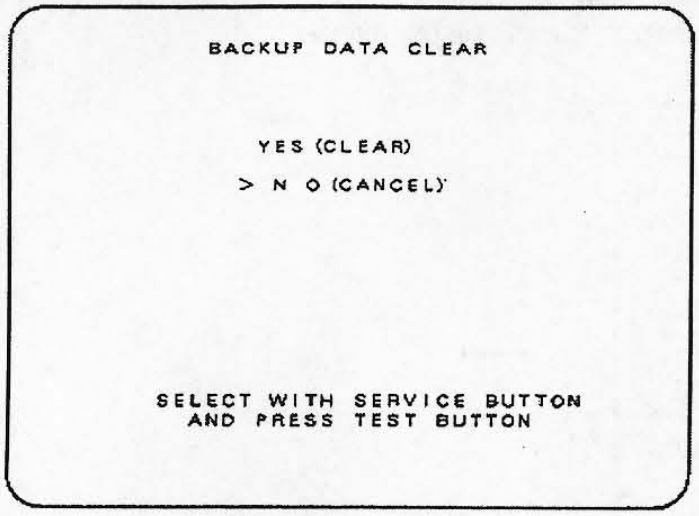


FIG. 9. 12 BACKUP DATA CLEAR

Clears the contents of bookkeeping.
When clearing, use the service button to bring the arrow --> to YES (clear) and press the test button.
When the data has been cleared, "completed" will be shown.
Bring the arrow --> to NO (cancel) and press the test button to return to the menu mode without clearing data.
Also, note that the game setting contents arenot affected by the backup data clear operation.

HANDLE MECHA

WARNING!

Be sure to turn power off before performing work.
This unit is a heavy item, and therefore be very careful when performing the work. Immediately after game play, the motor may still be very hot. When performing removal work, wait until the motor cools off.

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.

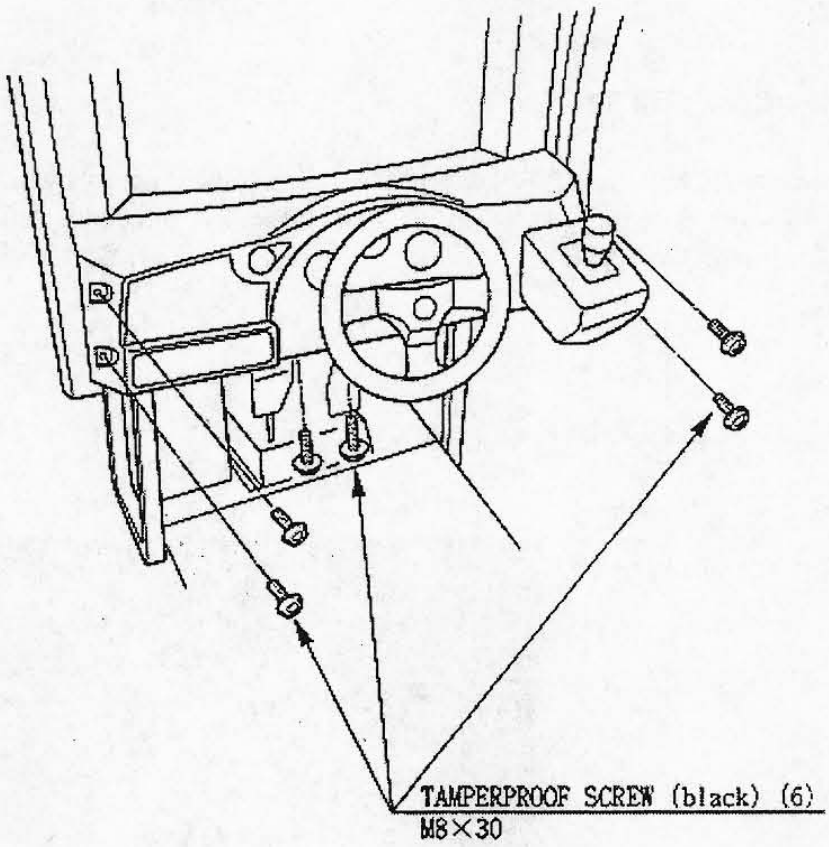
REMOVING THE CONTROL PANEL
Turn the power switch off.

Remove a total of 4 tamperproof screws from both sides of the control panel's front.

Remove the two tamperproof screws from the underside of the control panel.

Wiring connectors are connected inside the control panel. Carefully draw the control panel in a manner so as not to damage the wiring.

Disconnect the wiring connector.



REPLACING AND ADJUSTING THE HANDLE'S VR

WARNING!

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

STOP
IMPORTANT!

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.

The steering wheel's right hand side VR is for the game board and drive control, and the left hand side VR is for the motor drive board. Check the VR value on the test mode screen.
Normally, the VR value for the game board and drive control board is shown on the test mode screen. To check the VR value for the motor drive board, follow the procedure below.
The following sets each VR value.

1 Remove the control panel.
2 Disconnect the connectors (3P yellow, 3P red) of both variable resistors.
3 Connect the wiring connector (3P yellow) which comes from the VR for the motor drive and the connector connected to the VR for the game board and drive control.
4 The steering wheel value on the input test mode screen in the test mode will be the VR value for the motor drive board.
5 After making VR adjustments, connect all connectors.

REPLACING THE VR

After disconnecting the VR to be replaced, take off the 2 screws which secure the VR bracked by using the wrench, and the remove the VR with the gear attached. After replacement, check VR value variations in the test mode.

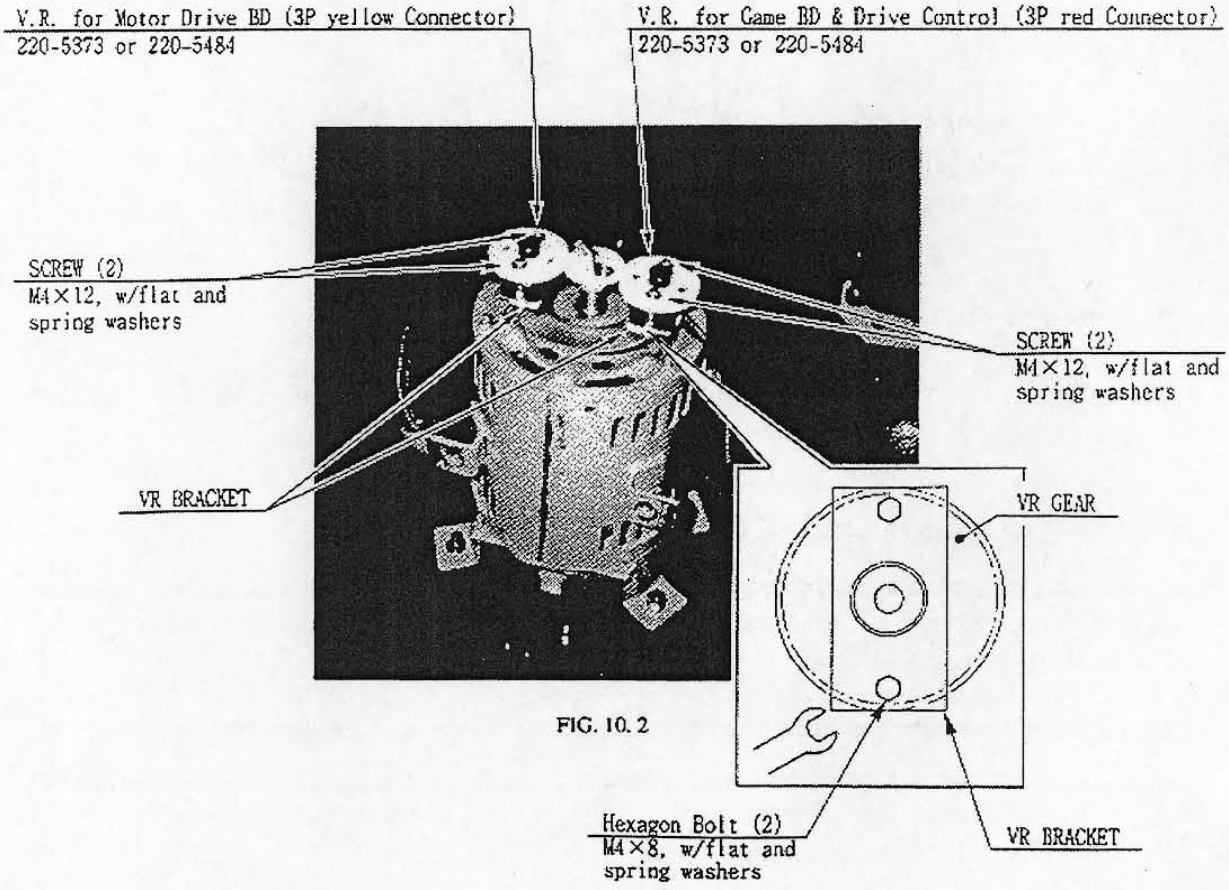


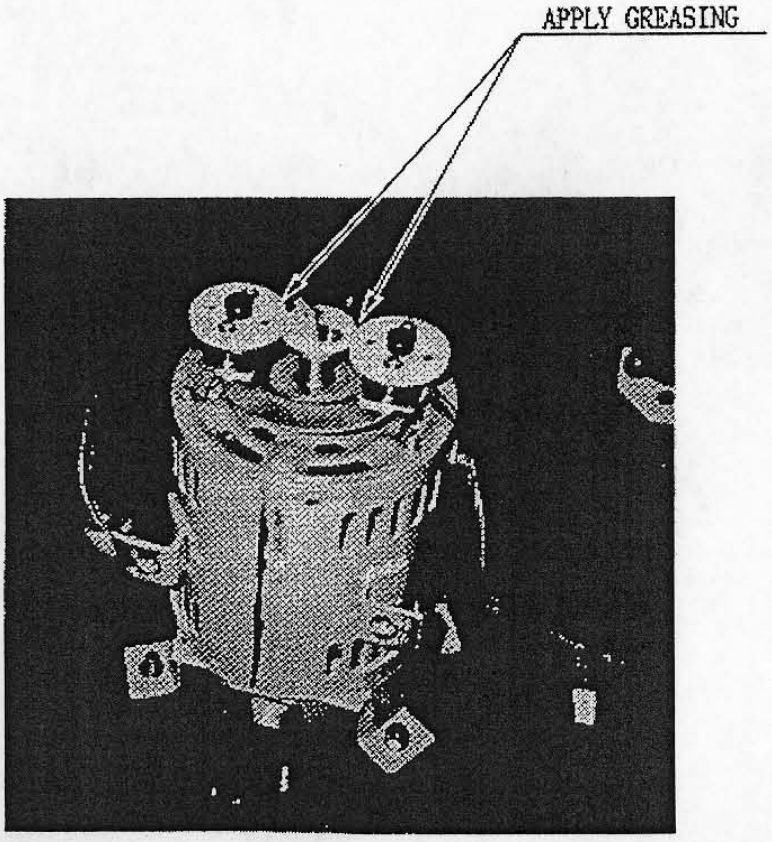
FIG. 10. 2

VR ADJUSTMENT

By using the wrench, loosen the two hexagon bolts which secure the VR bracket, move the VR bracket and disengage the gear mesh.
Ensure that the VR value is within the range of the centering position.
Mesh the gears to secure the VR bracket. At this time, ensure that an appropriate backlash is obtained.
When the steering wheel is in the centering position, if the VR value is not appropriate, make fine adjustments by loosening the 2 screws which secure the VR gear, turning the gear holder and making sure that the VR value is appropriate.
Turn the steering wheel to check VR value variations.

GREASING

Apply greasing to gear portions once every 3 months.



ACCELERATOR AND BRAKE

WARNING!

In order to prevent and 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.

In the test mode, if the accel and brake VR value is not within the acceptable range, an adjustment of the VR installation position or replacement of the VR is needed. Also, grease the mecha's shafts and slding parts once every 3 months.
To perform the above work, take off the 4 screws and remove the back lid B from the rear of the cockpit.

ADJUSTING AND REPLACING THE VR

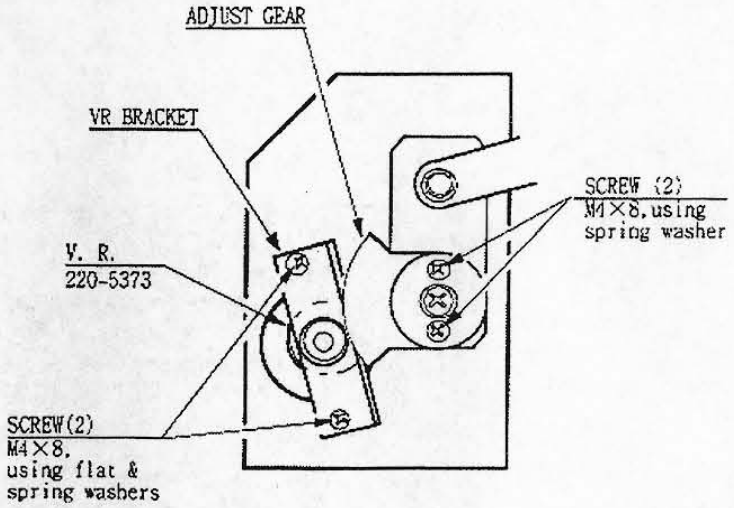
WARNING!

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

The accel and brake mecha can be seen by removing the back lid B. The accel VR is on the left hand side and the brake VR is on the right hand side of the mecha. Check the VR value in the test mode.

METHOD OF VR REPLACEMENT

To replace the VR after taking off the connector from the VR to be replaced, take out the two scres which secure the VR bracket and remove the VR with the bracket and gear. After replacement, check the VR value variations in the test mode.



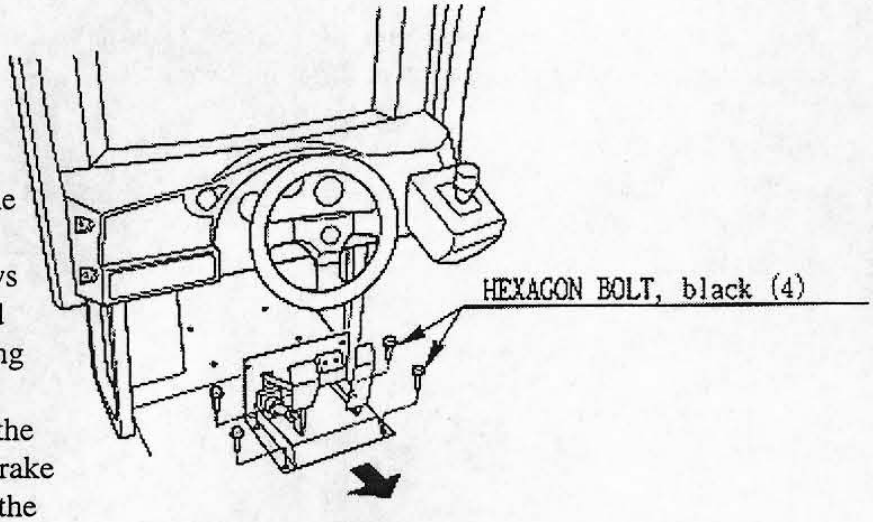
VR ADJUSTMENT

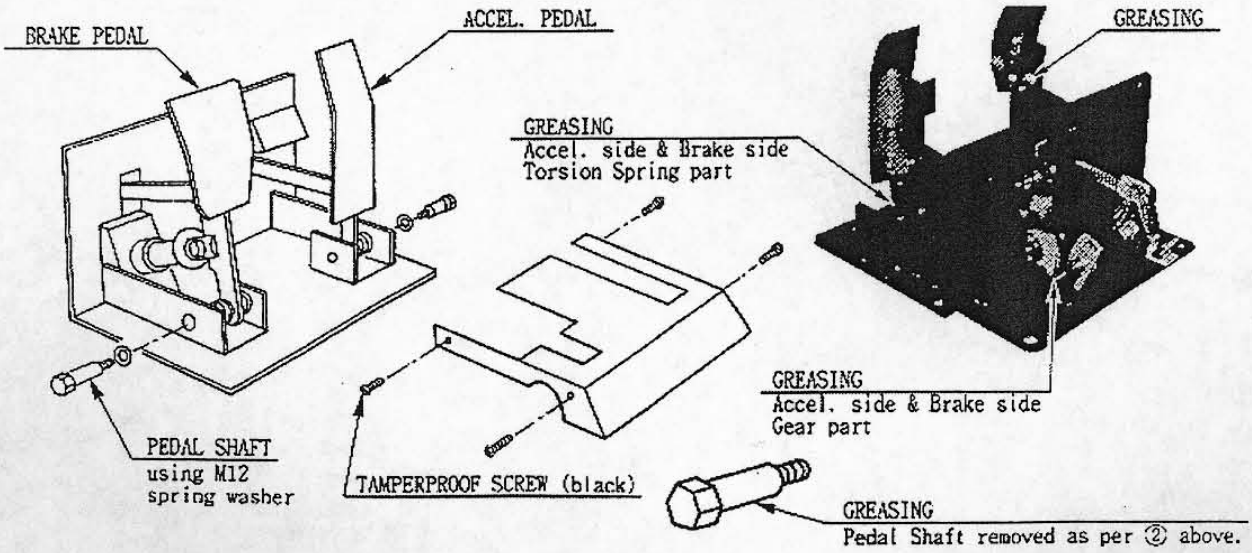
1 Loosen the two screws which secure the VR bracket and move the VR bracket to disengage the gears.
2 Have the VR value match with the value obtained when the pedal is released.
3 Mesh the gears to secure the VR bracket. At this time, be sure to obtain an appropriate backlash.
4 Step on the pedal and check VR value variations. If the value is not within the appropriate range, loosen the 2 screws which secure the adjust gear to make and adjustment.

GREASING

Apply greasing to the gear and shaft portions once every 3 months.
Use the following procedure:

1 Turn the power off.
2 Take off the 4 hexagon bolts to pull out the unit. Be very careful not to damage wiring.
3 Disconnect the wiring connector and move the unit to a work bench or other area to perform the work.
4 Remove the 4 tamperproof screws which secure the pedal cover and remove the pedal cover by moving it forward.
5 Remove the 2 pedal shafts from the lower portions of the accel and brake pedals. At this time, ensure that the pedals are securely attached, as they are subject to torsion spring force.
6 After applying grease to each part, re-assemble by following the opposite of the above disassembly procedure.





SHIFT LEVER

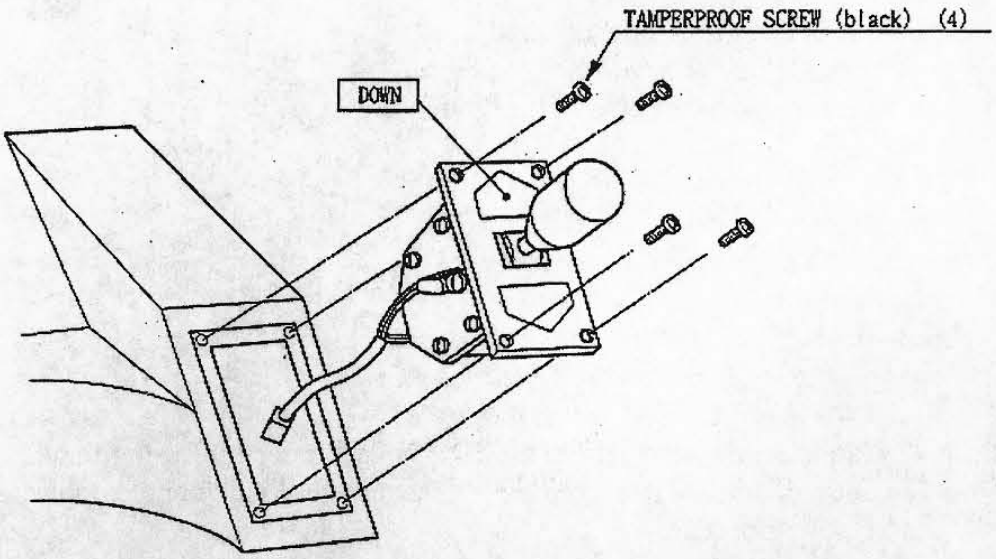
In the test mode, if the shift lever's sw can not be inputted satisfactorily, replace the switch. Apply greasing to the mechanism's sliding portions once every three months.
When performing this work, remove the shift lever unit.

WARNING!

In order to prevent an electric shock and short circuit, be sure to turn off power before performing work.
Be careful so as not to damage wiring. Damaged wiring can cause electric shock or short circuits.

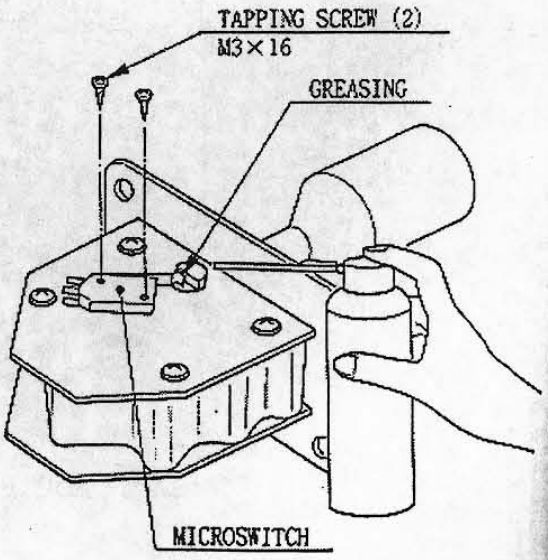
REMOVING THE SHIFT LEVER

Turn the power switch off.
Remove the 4 tamperproof screws to lift the shift lever unit.
Disconnect the connector to remove the shift lever unit.
When re-installing, follow the opposite procedure. This time, be sure that "DOWN" appears on the upper part as shown.



SWITCH REPLACEMENT

Disconnect the wiring connector of the switch to be replaced.
Remove the 2 tapping screws to replace the microswitch.



GREASING

Apply greasing to the specified portions once every three months.

HANDLING THE COIN JAM

If the coin is not rejected even 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 wrung.

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

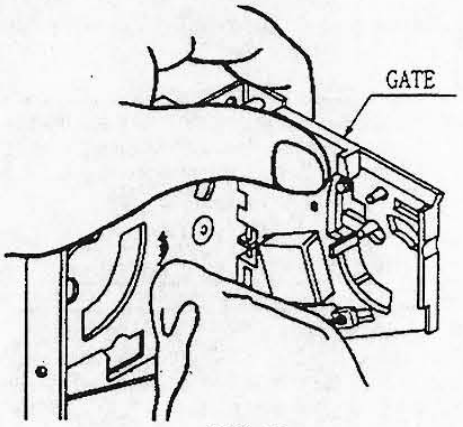


FIG. 10 a

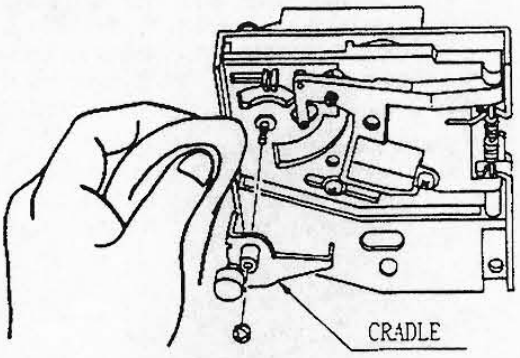


FIG. 10 b

STOP

IMPORTANT!

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

COIN INSERTION TEST

Once every month, when performing the Coin SW Test, simultaneously check the following:

- ☐ Does the Coin Meter count satisfactorily?
- ☐ Does the coin drop into the Cashbox correctly?
- ☐ Is the coin rejected when inserted while keeping the Reject Button pressed down?

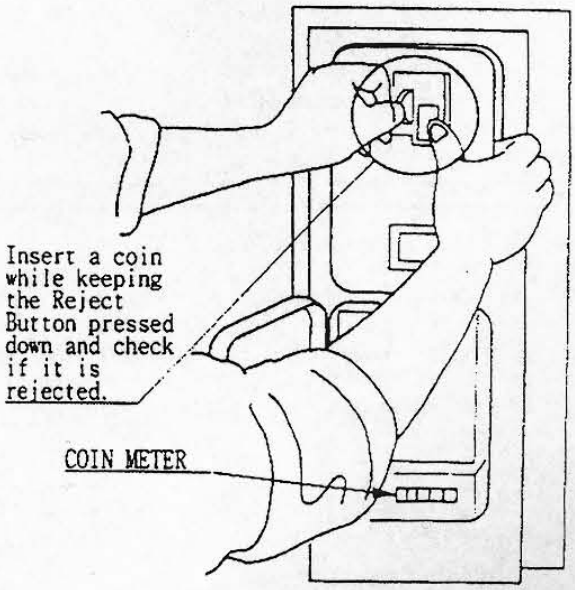


FIG. 10 c

CAUTIONS AND WARNINGS CONCERNING THE SAFETY FOR HANDLING THE MONITORS

Before handling the monitors, be sure to read the following explanations and comply with the caution/ warning instructions given below. Note that the caution/warning symbol marks and letters are used in the instructions.

WARNING — Indicates that handling the monitors erroneously by disregarding this warning may cause a potentially hazardous situation, which could result in death or serious injury.

CAUTION — Indicates that handling the monitors by disregarding this caution may cause a potentially hazardous situation, which could result in personal injury and or material damage.

Indicates that access to a specific part of the equipment is forbidden.

Indicates the instruction to disconnect a power connector or plug.

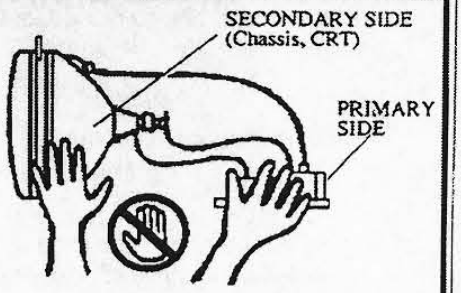
WARNING

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

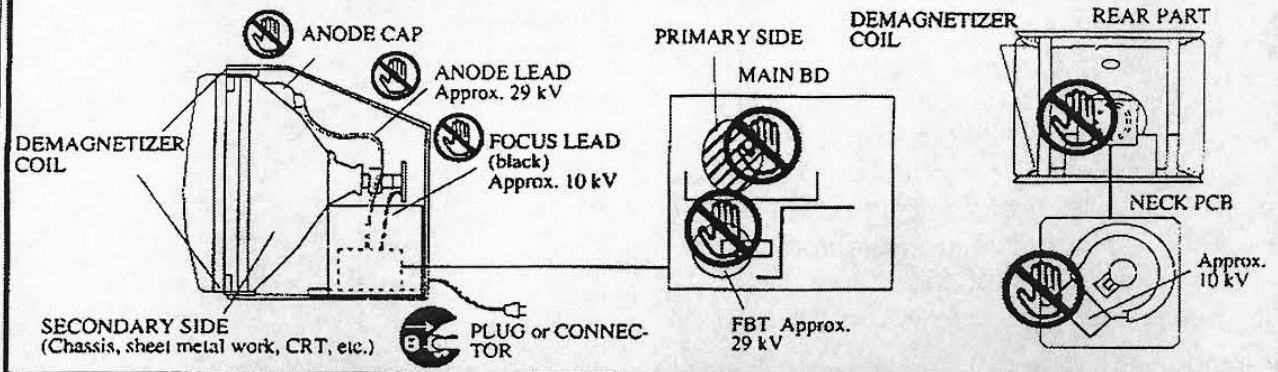
- **Primary side and Secondary side**

The monitor's circuit which is divided into the Primary side and Secondary side, is insulated. Do not touch the primary side, or do not touch both the primary side and the secondary side simultaneously. Not following the instruction can cause shock and this is very dangerous. When making monitor adjustments, use a non-conductive driver and make adjustment without touching any part other than the Adjustment V. R. and knob. Also, be sure not to cause a short-circuit to the Primary side and Secondary side. If short-circuited, it may cause shock or malfunctioning, which is very dangerous.



- **High-tension Voltage**

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



CAUTION

- **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 is 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.

- **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.

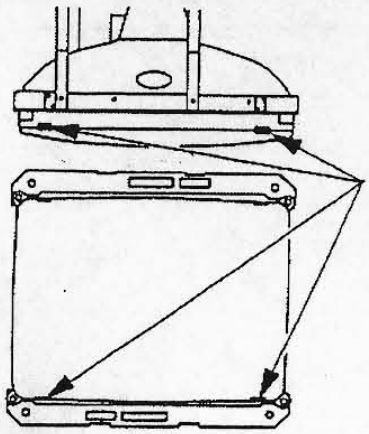
- **Installation and removal**

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 shock and malfunctioning. (For the name of parts, refer to the above Figures).

CAUTION!

For the purpose of static prevention, special coating is applied to the CRT face of this product. To protect the coating, pay attention to the following points. Damaging the coating film can cause electric shock to the customers. For the caution to be heeded when cleaning, 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 the CRT surfaces.
- Avoid applying stickers, seals, etc. on the CRT face.
- Do not remove aluminum foils from the CRT corners. Removing the aluminum foils can cause static prevention effects to be lowered.



14—2 CAUTIONS TO BE HEEDED WHEN CLEANING THE CRT SURFACES

CAUTION!

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

- Remove smears by using a dry, soft cloth (flannels, etc.). Do not use a coarse gauze, etc.
- For smear removing solvent, alcohol (ethanol) is recommended. When using chemical detergent, be sure to follow instructions below:
  - Dilute chemical detergent with water and dip a soft cloth in and then thoroughly wring it to wipe smears off.
  - Do not use a chemical detergent containing an abradant, powder or bleaching agent.
  - Do not use alkaline chemical detergents such as "glass cleaner" available on the market or solvents such as thinner, etc.
- Do not rub or scratch the CRT face with hard items such as brushes, scrub brush, etc.

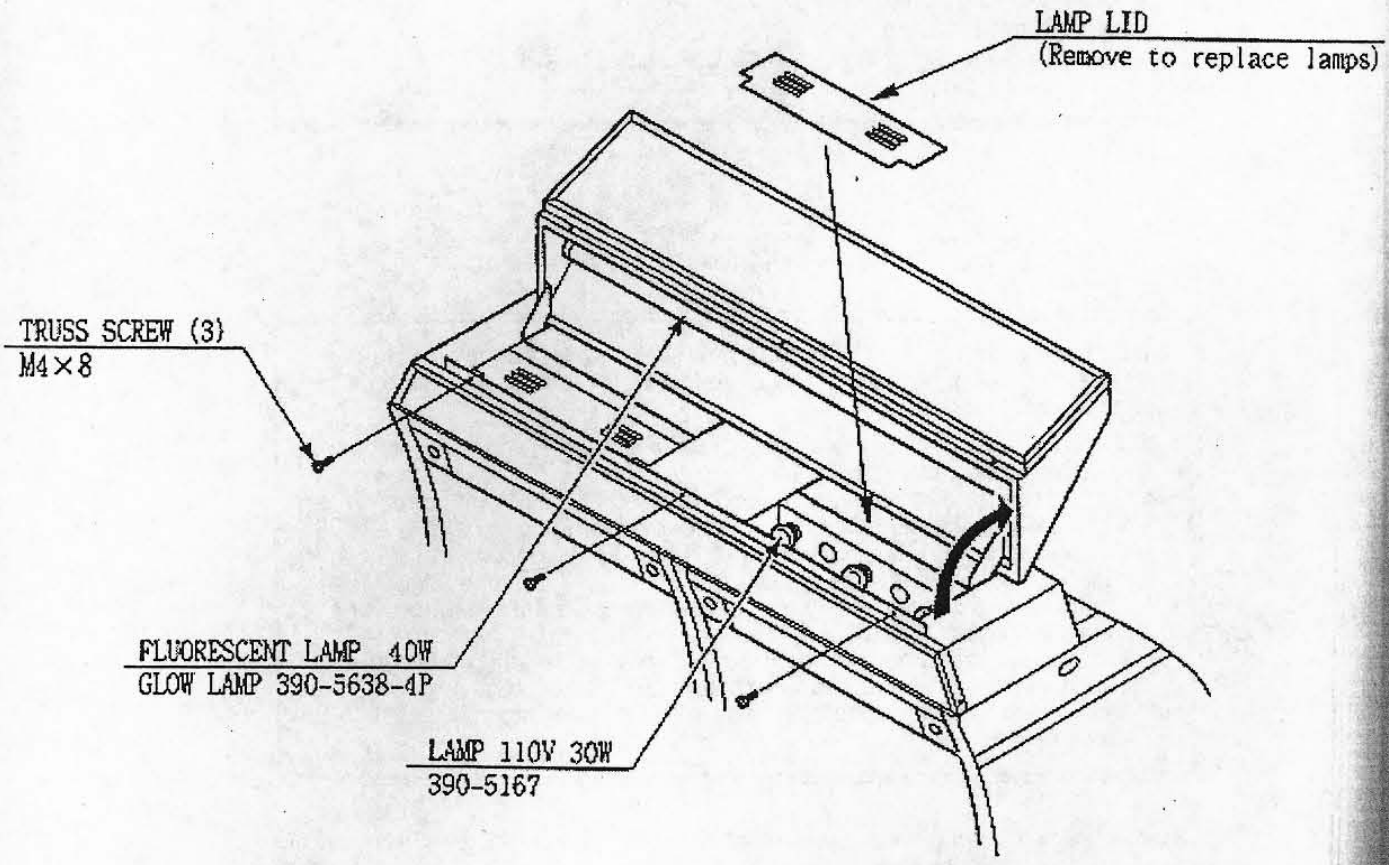
Clean the CRT surfaces once a week. When cleaning, pay attention to the above caution so that the antistatic coating will not come off.

REPLACING THE FLUORESCENT LAMP AND LAMPS

WARNING!

When performing the work, be sure to turn power off. Working with power on can result in electric shock or short circuits.
Hot fluorescent lamps can cause burns. Be very careful when replacing bulbs.

As shown below, remove the 3 truss screws to open the billboard and replace the fluorescent lamp and lamps.



PERIODIC INSPECTION TABLE

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



WARNING!

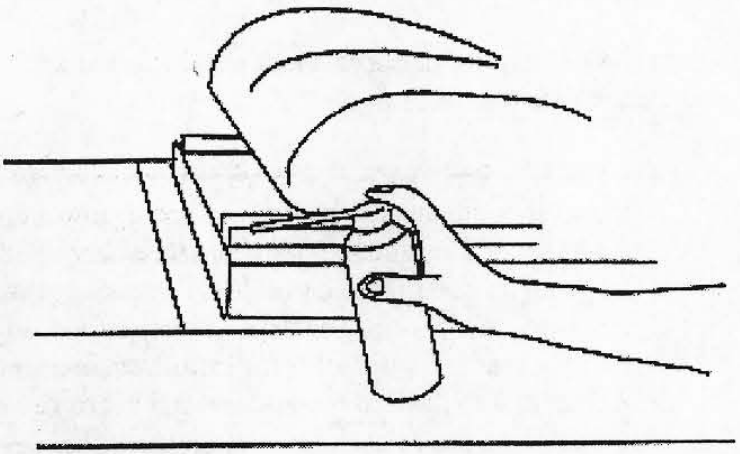
Be sure to check once a year to see if power cords are damaged, the plug is securely inserted, dust is accumulated between the socket outlet and power plug, etc. Using the product with an accumulation of dust can cause a fire or electric shock.
Periodically, at least once per year, perform a thorough interior cleaning. Contact your distributor or the manufacturer for information on interior cleaning. Using the product with accumulated dust on the interior can cause fire or accident.

	Item	Interval	Reference
HANDLE MECHA	Check lamp.	Monthly	9
	Check VOLUME VALUE.	Monthly	6,9
	Check ADJUST GEAR engagement.	Trimonthly	10-1
	Greasing of GEAR.	Trimonthly	10-3
ACCEL. & BRAKE	Check VOLUME value.	Monthly	6,9
	Check ADJUST GEAR engagement.	Trimonthly	11-1
	Greasing of GEAR and bearing.	Trimonthly	11-2
SHIFT LEVER	Check SW.	Monthly	6,9
	Greasing	Trimonthly	12-3
COIN CHUTE TOWER	Check COIN SW.	Monthly	9
	Cleaning of COIN SELECTOR.	Trimonthly	13
MONITOR	Check adjustments.	Monthly	6,9,14
SEAT	Antistatic measures	Bimonthly	5
ME BD	MEMORY TEST.	Monthly	9
	Check settings.	Monthly	9
INTERIOR	Cleaning	Annually	See above.
POWER SUPPLY PLUG	Inspection and cleaning		
REAR CABINET	Applying grease to Seat Rail	Trimonthly	Next page
Cabinet surfaces	Cleaning	As occasion arises.	(FIG. 16)

REAR CABINET

Greasing the Seat Rail Portion

Move the seat to the rearmost position and apply spray grease to the portion shown at right every 3 months.
After greasing, move the seat forward and backward on the rails to allow grease to be spread uniformly. Be sure to wipe off excess grease which comes in contact with the protect rubber on the seat rail, or any other surfaces.



CLEANING CABINET SURFACES

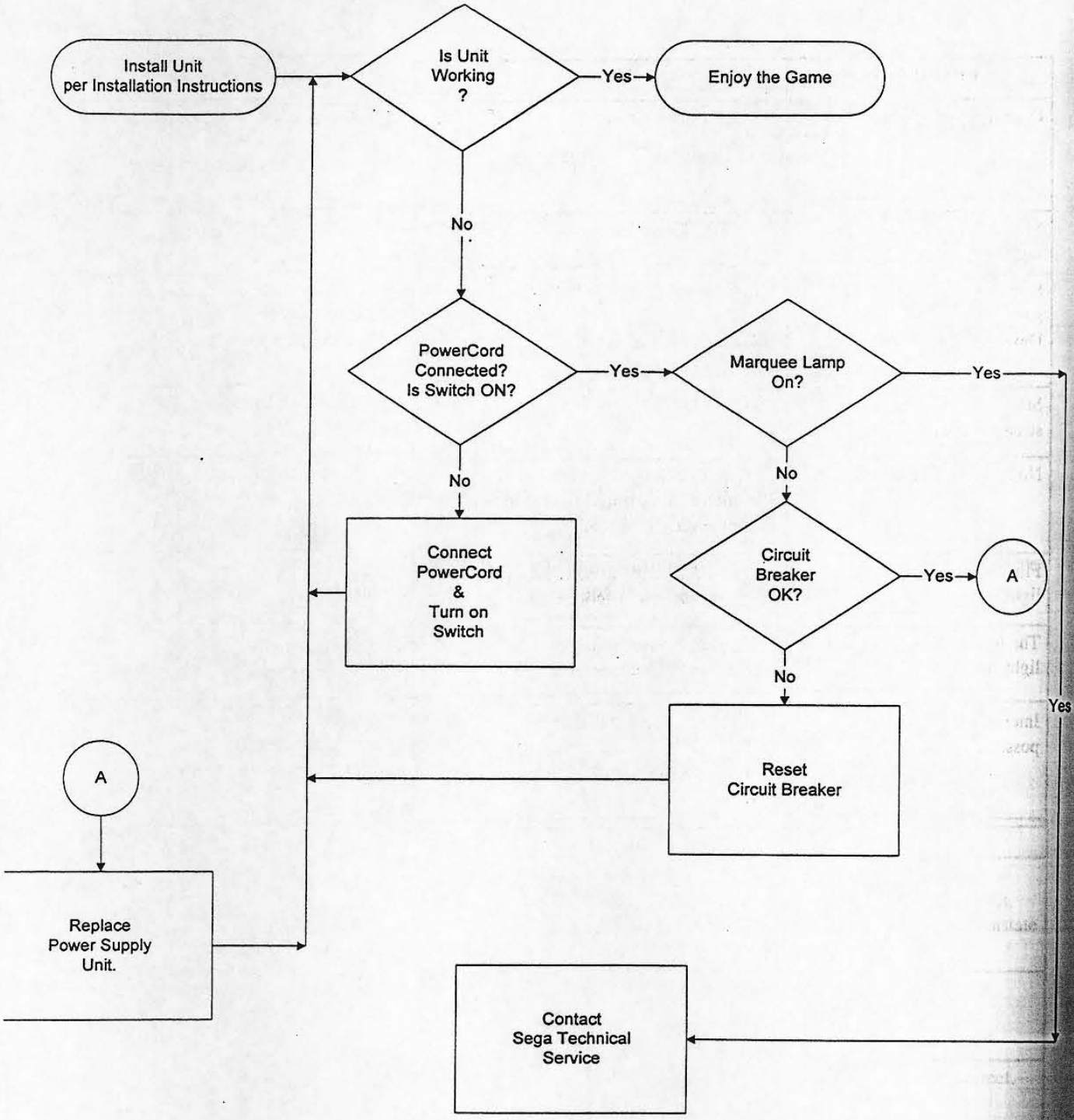
When the cabinet surfaces are badly soiled, remove stains with a soft cloth dipped in water or a dilute chemical detergent and then squeezed dry. To avoid damaging the surface, do not use solvants such as thinner, benzine, etc.,or abrasives, bleaching agents or chemical dustcloths.

TROUBLESHOOTING

In case of problems, check all wiring connections, and consult the table below.

PROBLEMS	CAUSE	COUNTER MEASURES
When the main SW is turned on, the machine is not activated.	The power is not on. Incorrect power source/voltage. AC unit circuit protector activated due to instantaneous overcurrent.	Firmly insert the plug into the outlet. Make sure the power supply/voltage are correct. First, remove the cause of overcurrent and reinstate the circuit protector to it's original status.
The color of the image on Monitor screen is incorrect.	Incorrect monitor adjustment.	Make appropriate adjustments.
The on-screen image sways and/or shrinks.	Power source and voltage are not correct.	Make sure power supply and voltage are correct.
Sound is not emitted.	Sound volume adjustment is not correct. Malfunctioning board and amp Connector connection is incorrect.	Adjust the switch unit volume control. Perform sound test to check. Check connections from base to speaker.

PROBLEMS	CAUSE	COUNTERMEASURES
Operation off accel and brake pedals are not satisfactory.	VR position is deviated. VR malfunctioning. Adjust gear engagement is not correct.	Adjust VR value in the test mode. Replace VR. Adjust the engagement of adjust gear.
Shift lever doesn't operate satisfactorily.	Switch malfunctioning.	Replace the switch.
Steering wheel reaction strength is incorrect. Deviation of center.	Power on check not performed correctly. VR position deviated. VR malfunctioning.	Turn power off then back on again. Complete power on check. Adjust VR value in the test mode. Replace VR.
Steering wheel reaction strength is in sufficient.	Reaction mecha's secular change.	Change the drive control board's Dip Switch settings.
No steering wheel reaction.	Connector connection is incorrect. The motor drive board fuse is blown due to momentary overload.	Check connections from base to handle. Replace the motor drive board fuse.
Fluorescent lamp does not light up.	Fluorescent lamps need replacement. The connector is disconnected.	Replace the lamp. Check connections.
The leader lamp does not light up.	The lamp is burnt out. Connector is disconnected.	Replace the lamp. Check connections.
Interactive play is not possible.	Communication cable is disconnected. Cable connections are not correct. Settings for communication play are not correct.	Connect the cable. Connect the cable correctly. Ensure that the game assignments are correct.



TROUBLESHOOTING CHART

GAME BOARD

WARNING!

In order to prevent electric shock, be sure to turn off power before performing work on the inside of the cabinet.
Be careful so as not to damage wiring. Damaged wiring can cause electric shock and short circuit accidents.

CAUTION!

Do not expose the game board without good reason. In this product, setting changes are made in the test mode. The game board need not be operated. Use the game board with the settings made at the time of shipment.

REMOVING THE GAME BOARD
FOR REFERENCE ONLY!

To replace the IC board or to change dip switch settings, take out the IC board using the following procedure.
Turn the main switch off.
Unlock the base, and remove the two truss screws from the side of the base.
Turn the knob to unlock. The seat can be inclined in the direction shown. When inclining the seat, be careful not to damage the seat parts. Carefully rest the backrest portion of the seat on the ground. If necessary, protect the seat from damage by using a cloth or blanket on the floor.
Take off the three screws to remove the case lid. The game board is inside the shield case.
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.

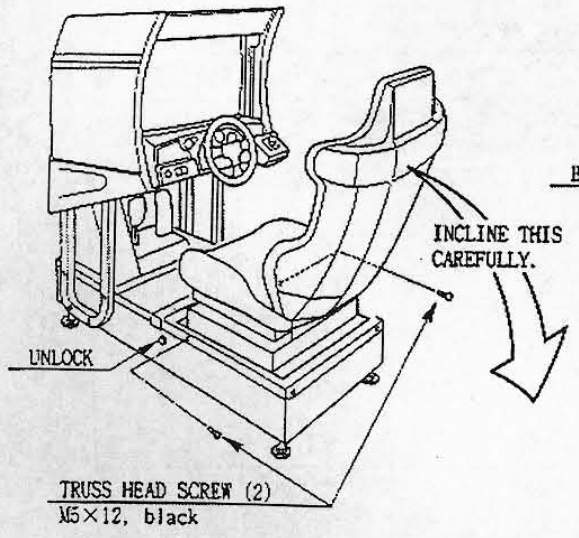


FIG. 18. 1 a

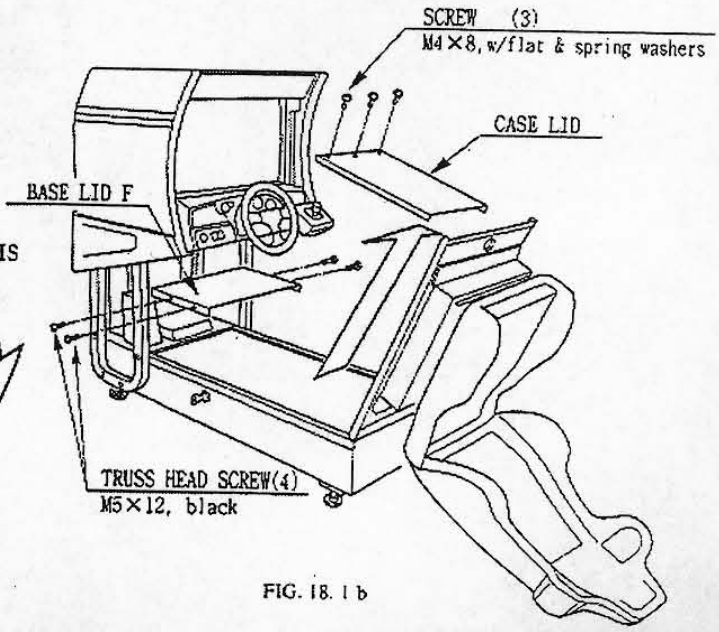
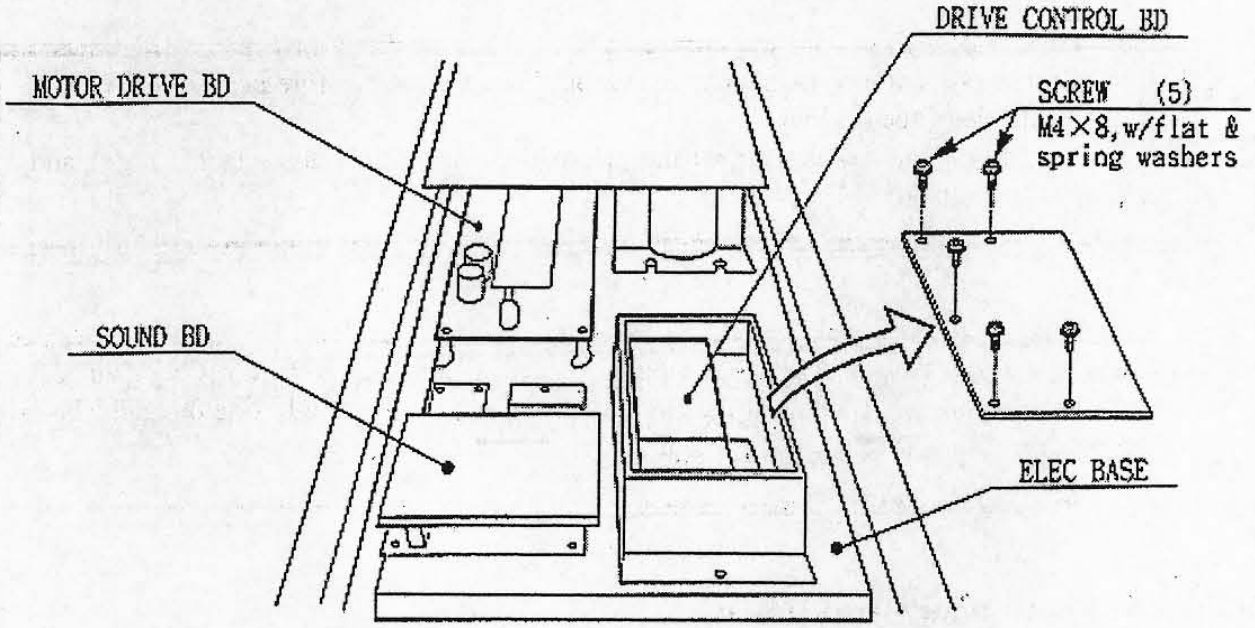
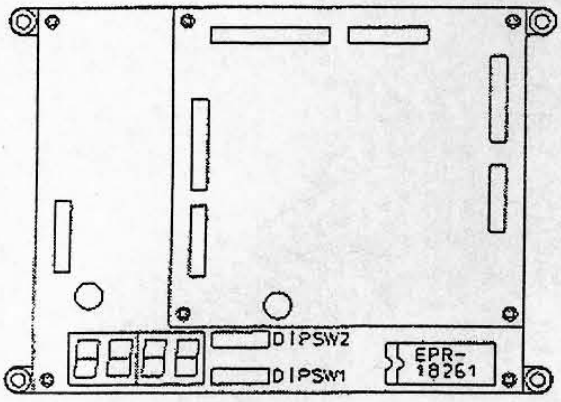


FIG. 18. 1 b



The drive control board is contained in the shield case. The steering wheel reaction strength is set by using the drive control bd dip switch. Remove the 5 screws and open the shield case lid to perform the dip switch settings. Use drive control board's dip switch numbers 1~3. Ensure that all other dip switches are off.



DRIVE CONTROL BD (838-11967)

DIP SW SETTING

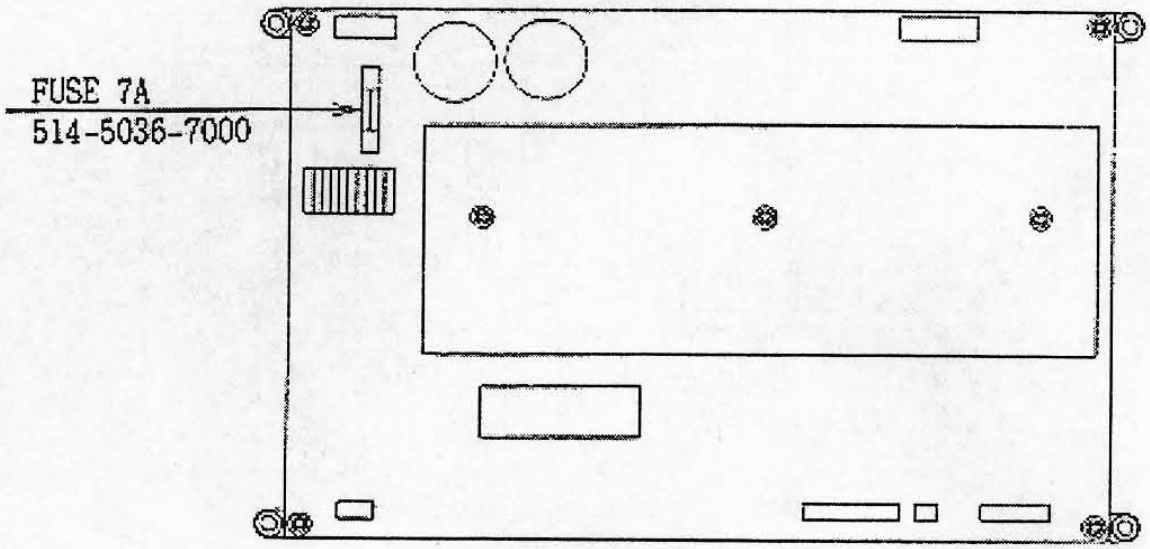
NOTE: The shaded portion refers to the setting at the time of shipment.

1	2	3	FUNCTION
OFF	OFF	OFF	Light
ON	OFF	OFF	
OFF	ON	OFF	
ON	ON	OFF	
OFF	OFF	ON	
ON	OFF	ON	
ON	ON	ON	Heavy

REPLACEMENT AND ADJUSTMENT OF FUSE

WARNING!

In order to prevent an electric shock, be sure to turn power off before performing work by touching the interior of the cabinet.
Be careful so as not to damage wiring. Damaged wiring can cause electric shock or short circuit accidents.
Be sure to use fuses meeting the specified rating. Using fuses exceeding the specified rating can cause fire of electric shock.
After eliminating the cause of the blown fuse, replace the fuse. Continuing to use the product with a blown fuse can cause generation of excess heat, resulting in a fire.



MOTOR DRIVE BD (838-11966)

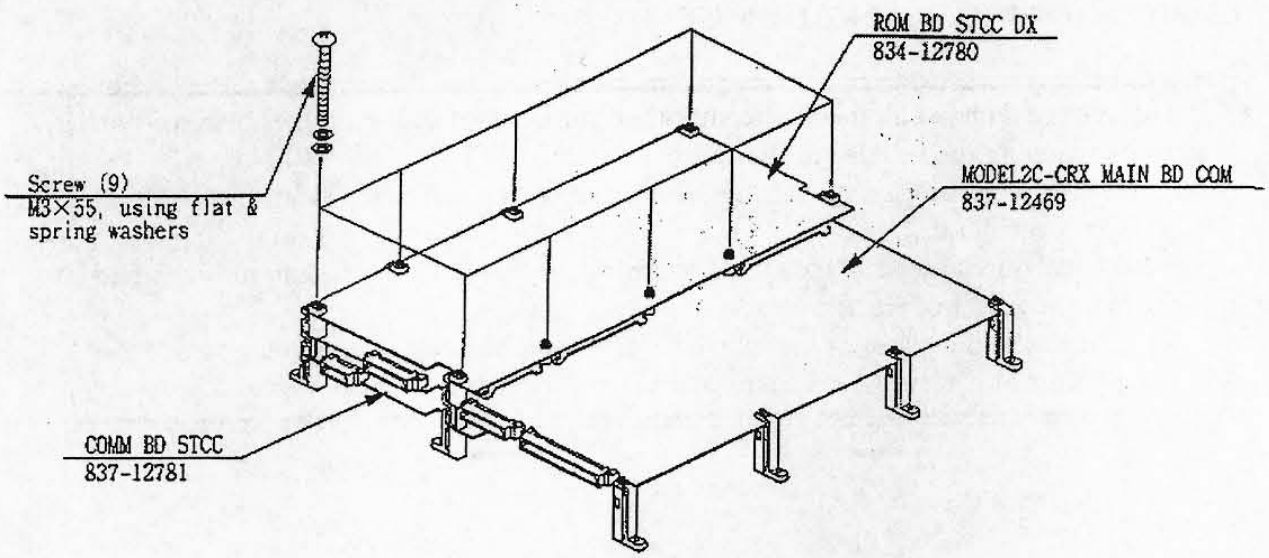


FIG. 18.2a

ROM BD STCC DX (834-12780)

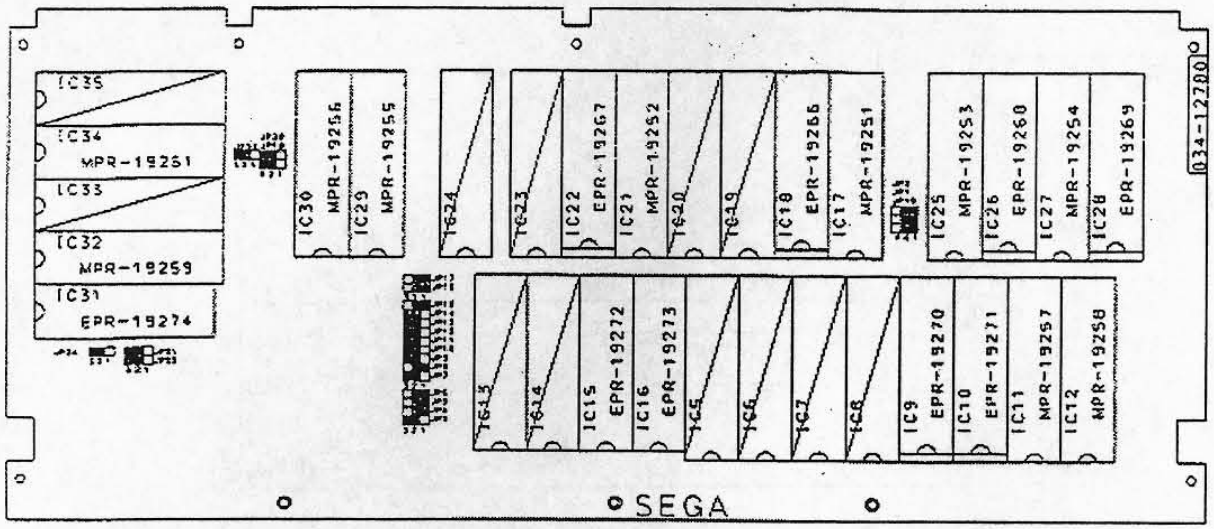


FIG. 18.2b

GAME BOARD SERVICE RECORD

This page is provided for your use in tracking repairs or replacements of your Sega game PCBs and assemblies. This information can help provide a service history for your game should it ever be sold or transferred.

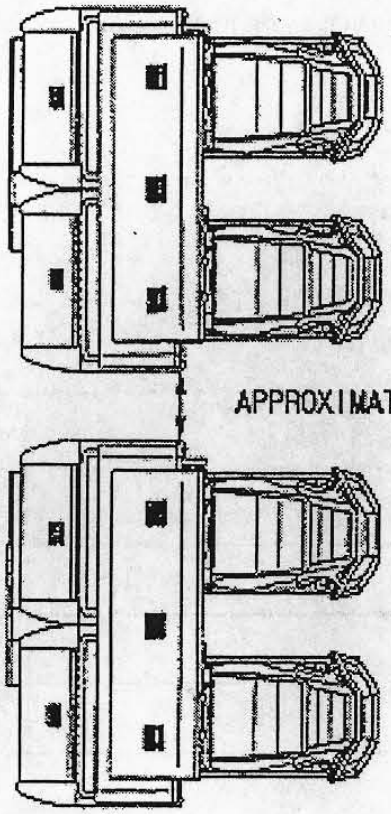
DATE	BOARD ASSY NO.	PCB SERIAL NO.	RMA NO.

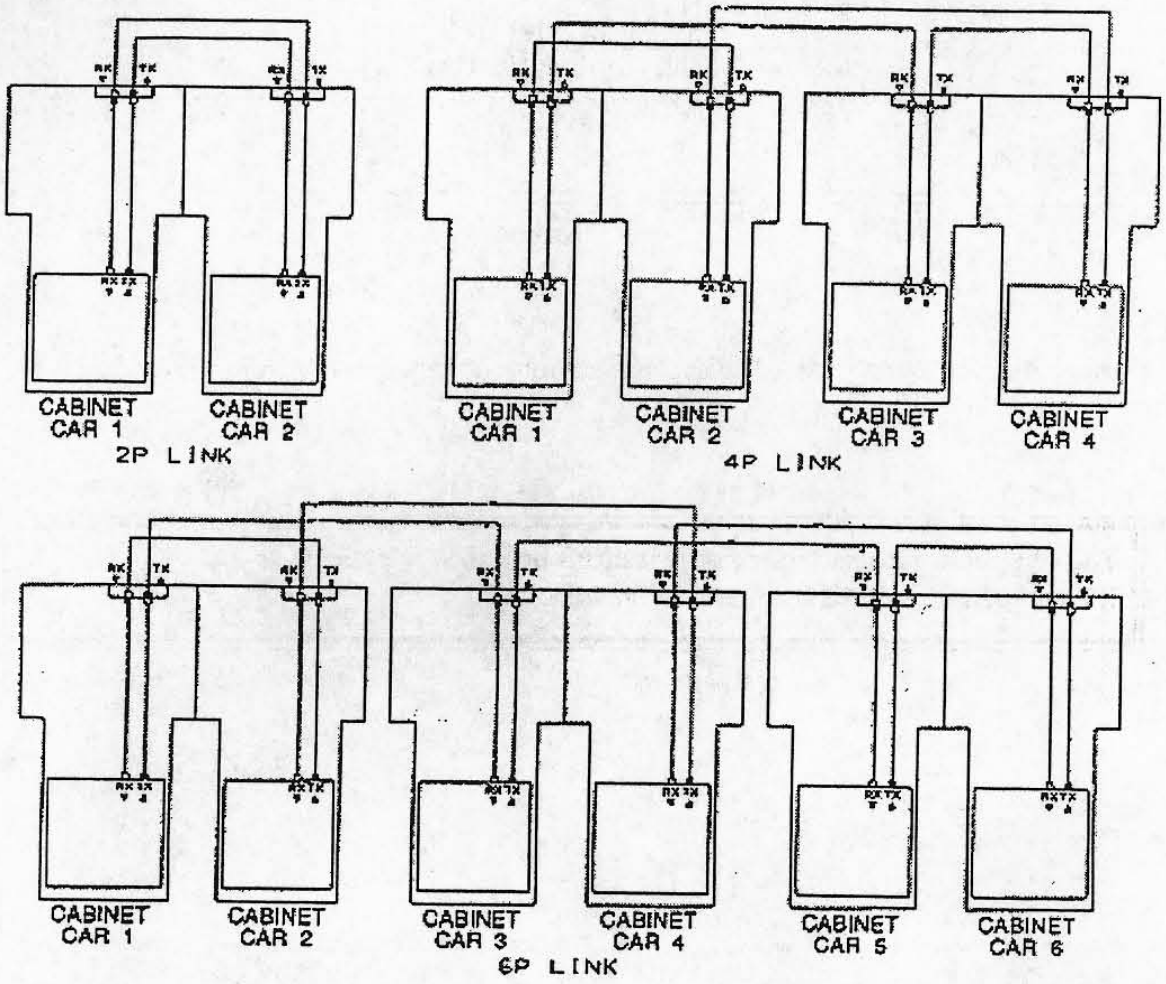
COMMUNICATION PLAY

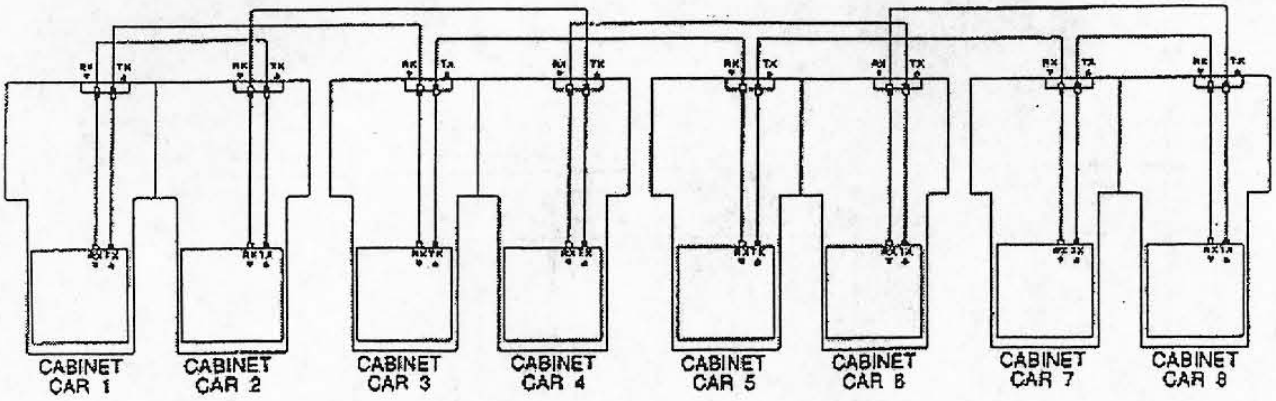
For this game, 4 machines can be connected to allow up to 8 players to play simultaneously.

INSTALLATION PRECAUTIONS

When linking a number of machines, be sure to supply sufficient power for the number of machines. The per unit standard amperage is 100~120V/10A and 220~240V/5A.



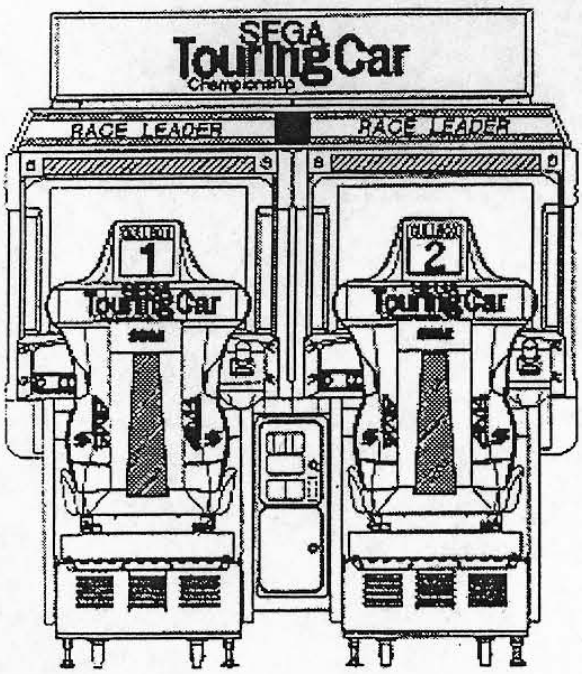

CABINET CAR 1
CABINET CAR 2
2P LINK
CABINET CAR 1
CABINET CAR 2
CABINET CAR 3
CABINET CAR 4
4P LINK
CABINET CAR 1
CABINET CAR 2
CABINET CAR 3
CABINET CAR 4
CABINET CAR 5
CABINET CAR 6
6P LINK

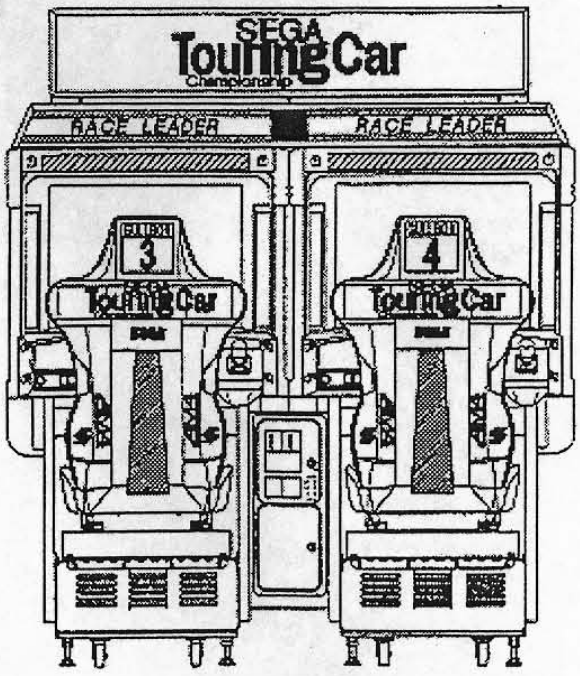


Apply seat number stickers to the seats. The seats are numbered sequentially from the left hand side, when facing the monitor.

CAUTION!

The fiber optic cable used in communications play is very delicate.
It may be easily damaged by excessive bending.







IMPORTANT!

During interactive play, if communication is interrupted due to some cause, the game will be interrupted, and the network check screen will appear on all units.

When performing communication play, the settings of game assignments in the test mode need to be changed.

Cause all of the machines linked to enter the test mode.
Set the link type of the machines to Car 1, Car 2, etc, sequentially in order starting from the left, when facing the monitor. At this time, make sure that no numbers are duplicated.
One machine whose link type is Car 1 will be the master unit. Thereafter, all the other machine's settings, except for advertise sound, cabinet type, and link type will be the same as those of the master unit.
After changing the settings of all machines connected for communication play, make sure that all of the machines exit the test mode.
In the network check, if there is no irregularity, the advertise mode will appear, allowing for communication play.

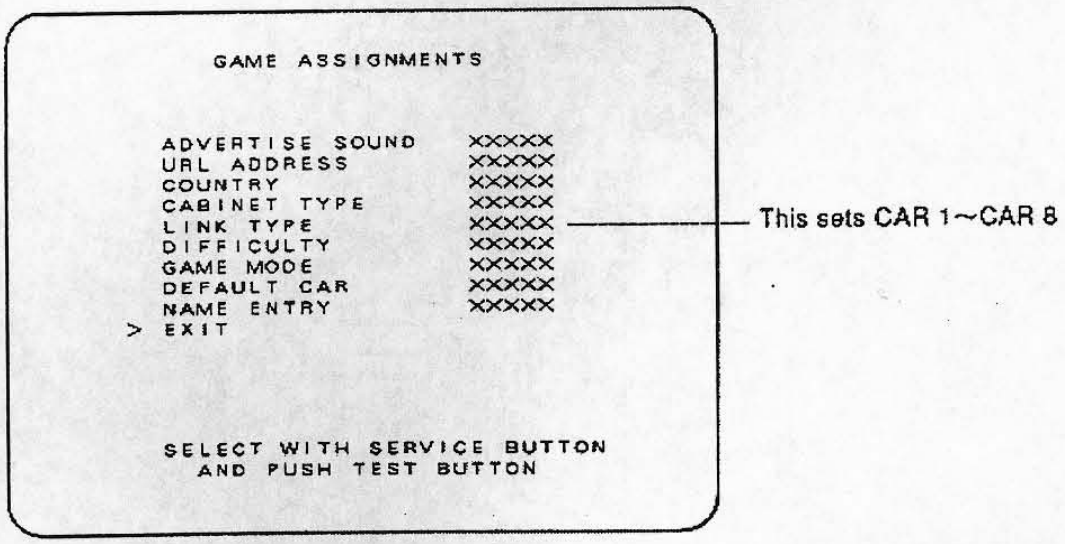


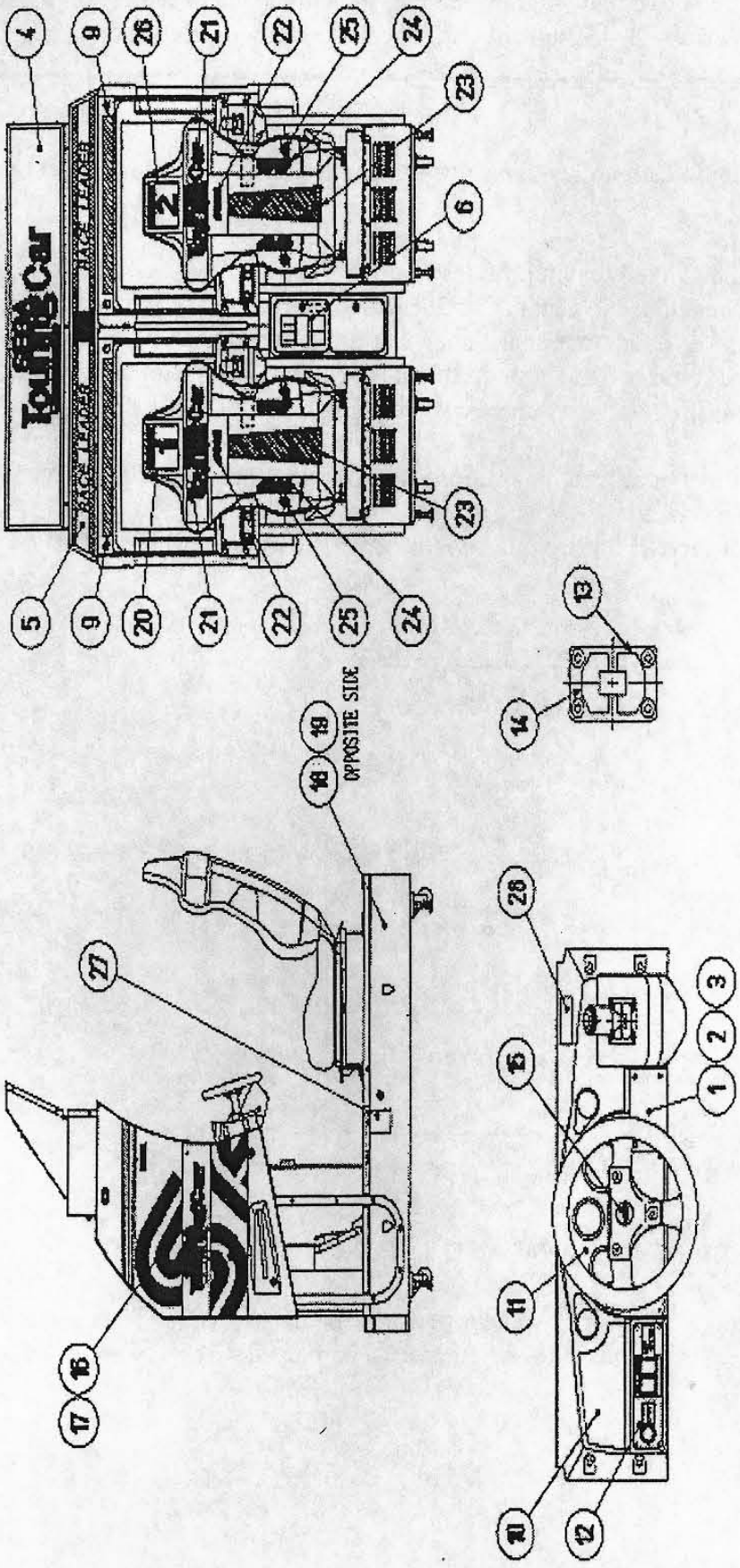
FIG. 20. 3 GAME ASSIGNMENTS

CAUTIONS TO BE HEEDED WHEN USING THE TEST MODE

Exiting from the test mode causes the units to perform the network check immediately. During this time, all of the linked units will not allow the game to be played. Be sure not to enter test mode when any unit is in play.

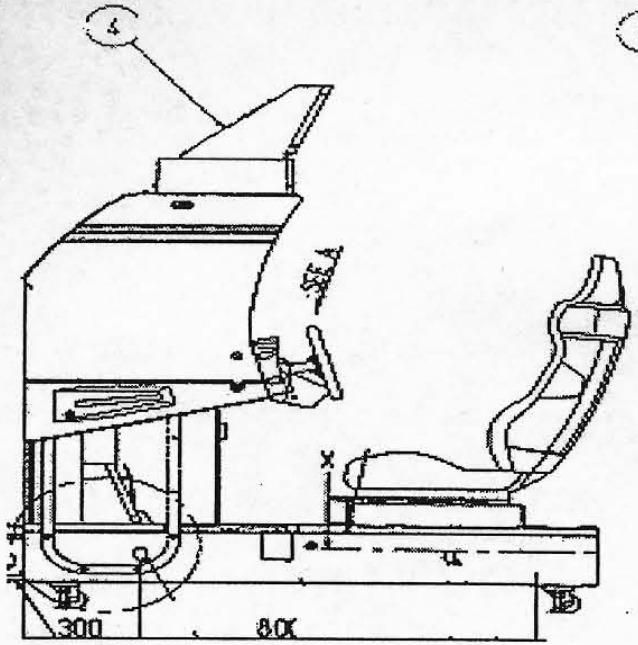
DESIGN RELATED PARTS

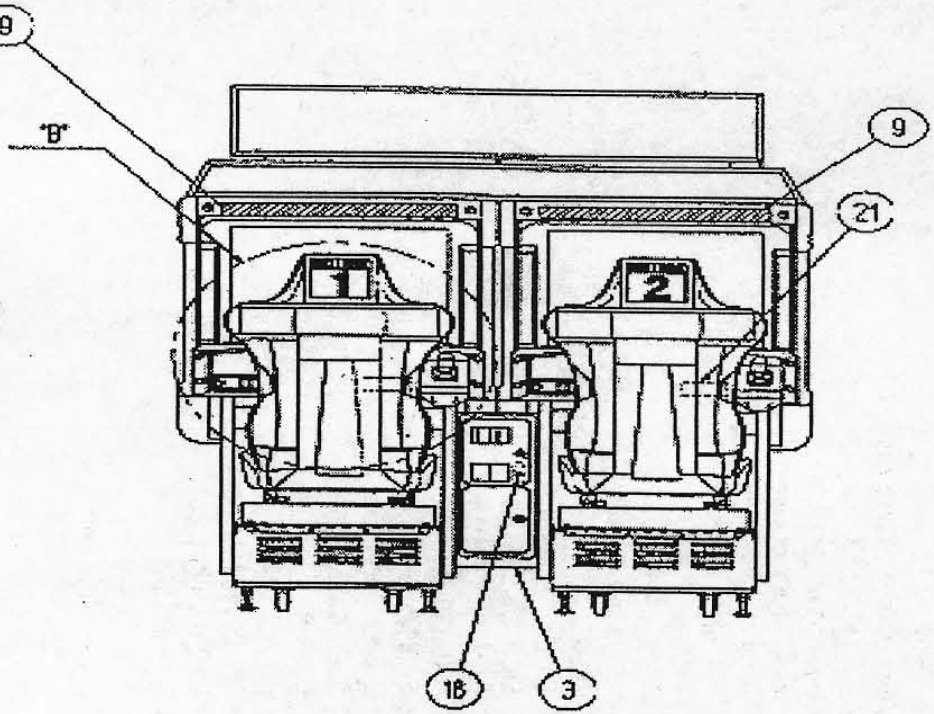
For the Warning Display stickers, refer to Section 1.

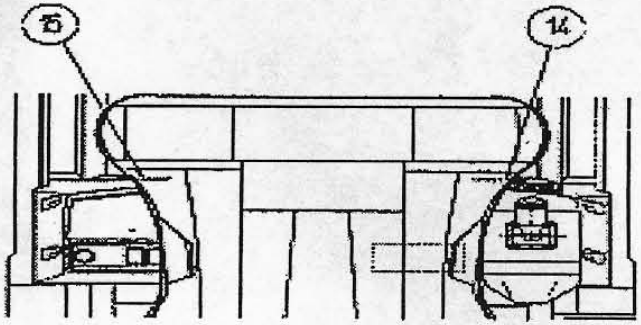


DESIGN RELATED PARTS

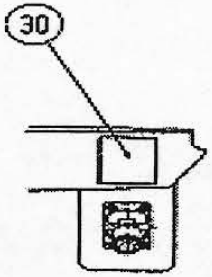
ITEM NO.	PART NO.	DESCRIPTION
1	DYN-OOII	DENOMI PLATE W/O ORIGINAL
2	421-7308-01	DENOMINATION SHEET 1GAME
3	421-7308-55	DENOMINATION SHEET 1GAME
4	4230-0274	BILLBOARD PLATE UPPER
5	4231-0275	BILLBOARD PLATE LOWER
6	DYN-0303	STICKER COIN ENTRY
9	4221-0592-01	SUB INSTR SH STC ENG
10	422-0593-01	PLAY INSTR SH STC TWIN
11	RAL-1205-A	METER PANEL
12	INY-1251-B	SHEET VR SW
13	421-9160	DESIGN PLT SHIFT UP
14	421-9161	DESIGN PLT SHIFT DOWN
15	INY-1203-B	SHEET EMBLEM
16	STC1-1031-B	STICKER SIDE 1P L
17	STC1-1061-B	STICKER SIDE 2P R
18	STC1-2002	STICKER BASE L
19	STC1-2003	STICKER BASE R
20	STC-1605-B	STICKER CAR NO.1
21	STC-1605-C	STICKER COVER UPPER
22	STC-1605-D	STICKER SEGA LOGO
23	STC-1605-E	STICKER COVER C
24	STC-1605-F	STICKER COVER L
25	STC-1605-H	STICKER SATURN MARK
26	STC0-2202-A	STICKER CAR NO. 2 ~ 8
28	440-CSOOIIXJP	STICKER C GRIP HANDLE







Details of PART B

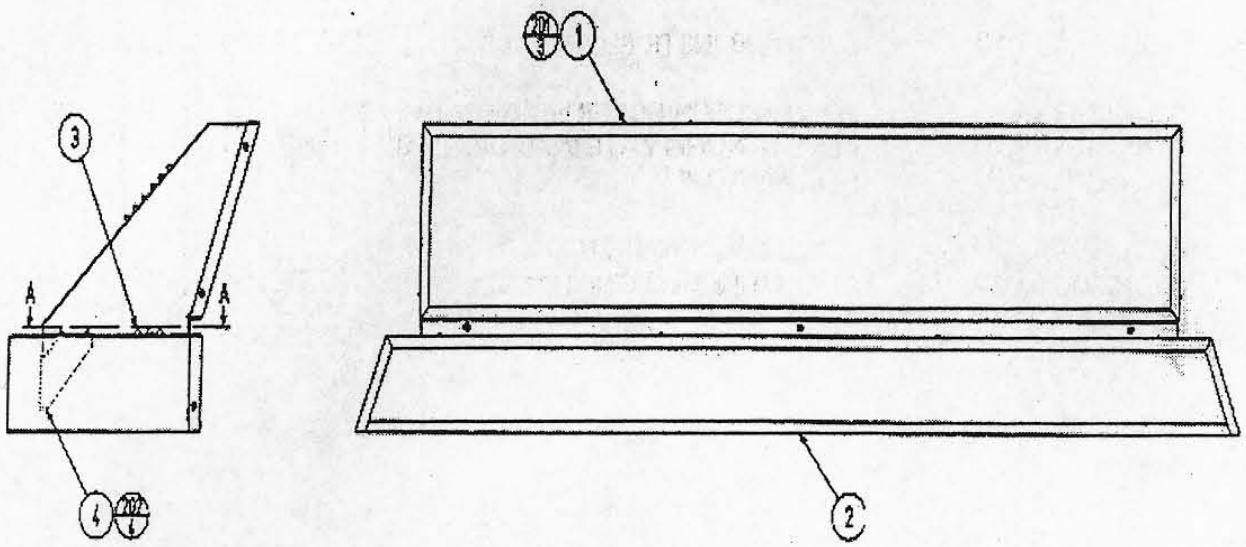


SEE A

TOP ASSY STCC TWIN

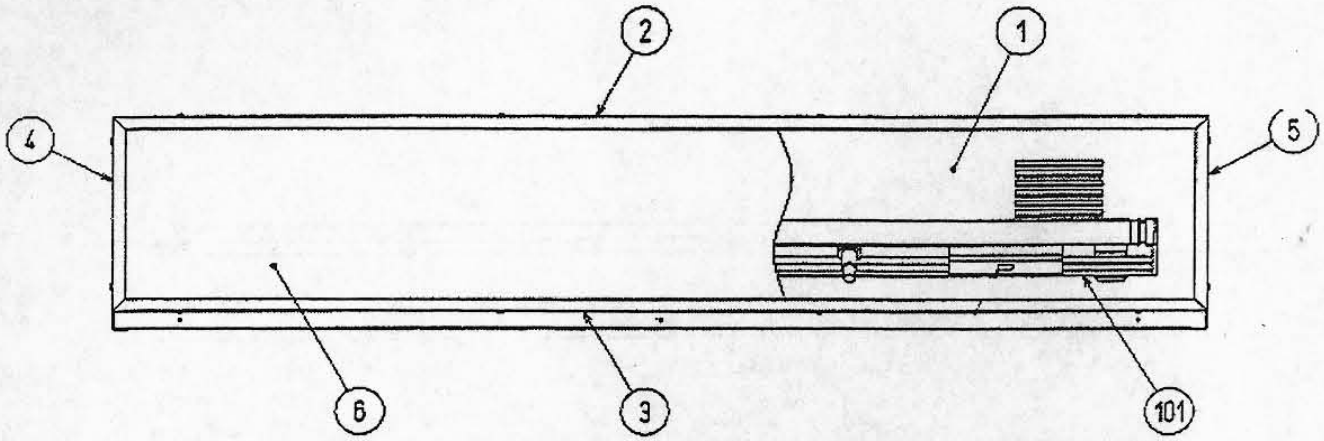
ITEM NO.	PART NO.	DESCRIPTION	NOTE
3	DYN1-0300	ASSY COINCHUTE TOWER	
4	STC1-0200	ASSY BILLBOARD	
9	4221-0592-01	SUB INSTR SH STC ENG	
19	SGM-3863	POLTHN COVER 950X1800x1700	
21	DYN1-OOII	DENOMI PLATE W/O ORIGINAL	
22	DYN1-0010	DENOMI PLATE	
	421-7308- ~	DENOMINATION SHEET ~	
30	440-CSOOIIXEG	STICKER C GRIP HANDLE ENG	

ASSY BILLBOARD (STC1-0200)



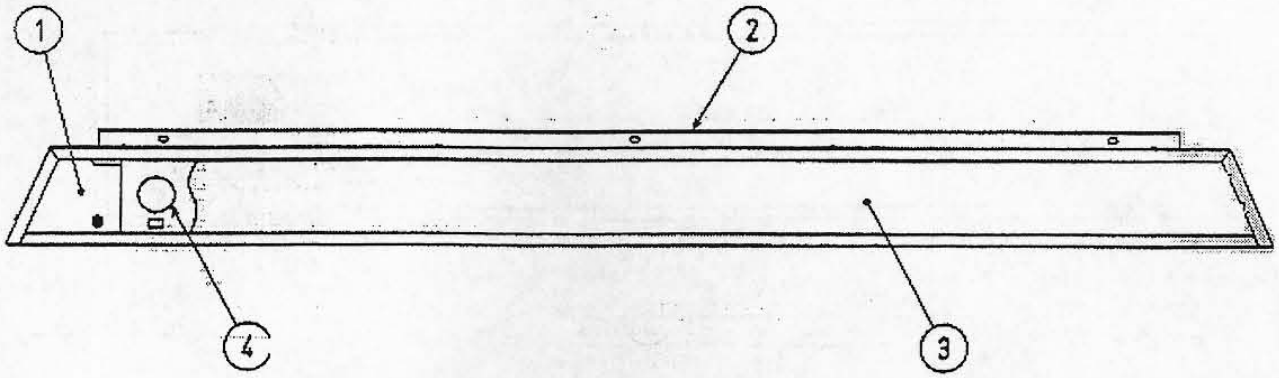
ITEM NO.	PART NO.	DESCRIPTION
1	STC1-0210	ASSY BILLBOARD UPPER
2	STC1-0220	ASSY BILLBOARD LOWER
3	RAL1-0201	LAMP LID
4	RAL1-0202	STAY BRKT

ASSY BILLBOARD UPPER STC-0210



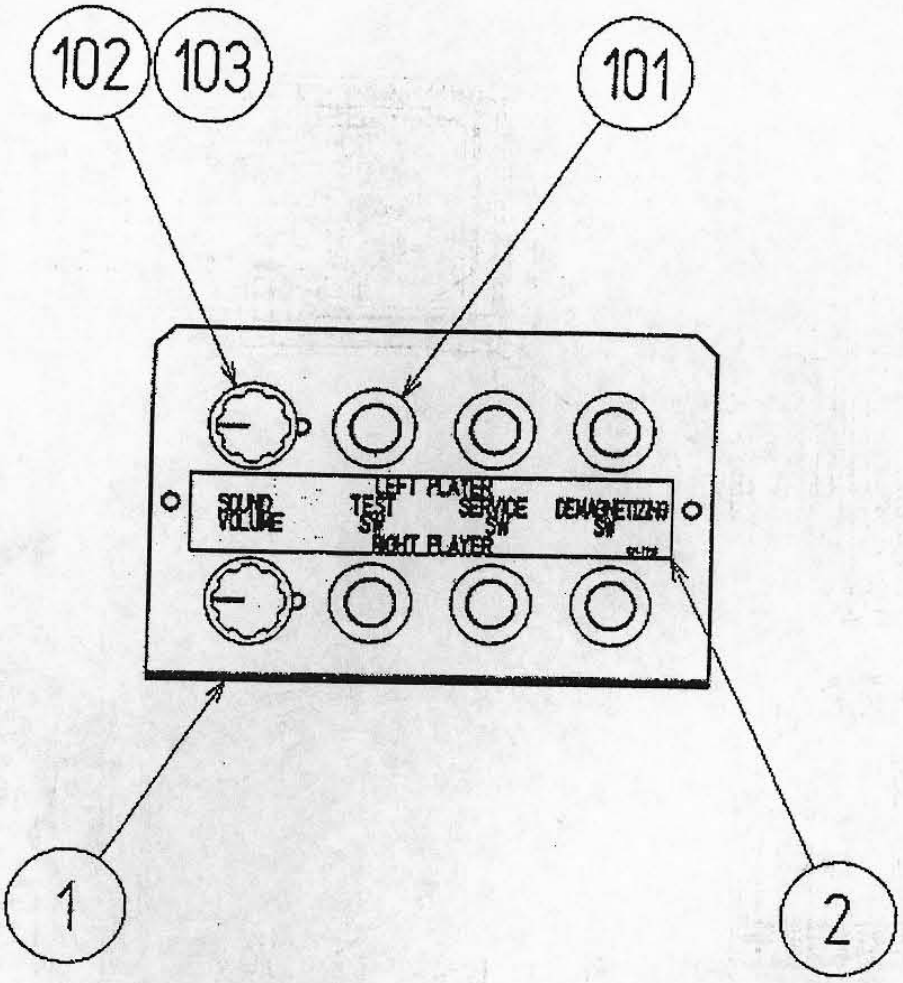
ITEM NO.	PART NO.	DESCRIPTION
1	RAL1-0211	BILLBOARD CASE UPPER
2	RAL1-0212	CORNER EDGE UPPER
3	RAL1-0213	CORNER EDGE LOWER
4	RAL1-0214	CORNER EDGE LEFT
5	RAL1-0215	CORNER EDGE RIGHT
6	4231-0274	BILLBOARD PLATE UPPER
102	280-5009	CORD CLAMP 21

ASSY BILLBOARD LOWER (STC-0220)



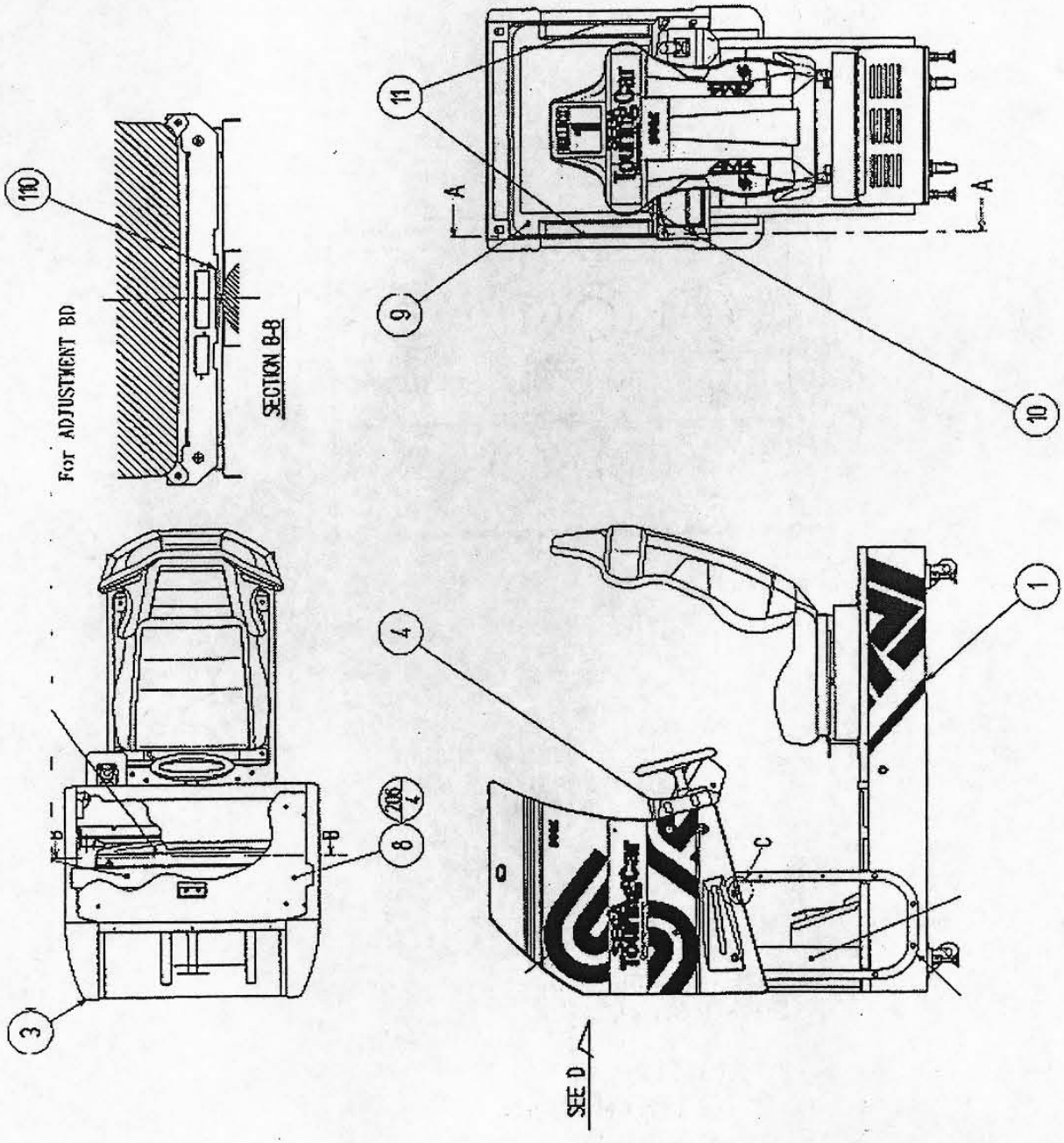
ITEM NO.	PART NO.	DESCRIPTION
1	RAL1-0221	BILLBOARD CASE LOWER
2	RAL1-0222	CORNER EDGE
3	4231-0275	BILLBOARD PLATE LOWER

SW UNIT (DYN1-0350)



ITEM NO.	PART NO.	
1	UCQ1-1035	SWITCH BRACKET
2	4211-7718	STICKER SW INSTR 2P
101	509-5028	SW PB 1M
102	220-5179	VOL CENT B-5K OHM
103	601-0042	KNOB 22MM

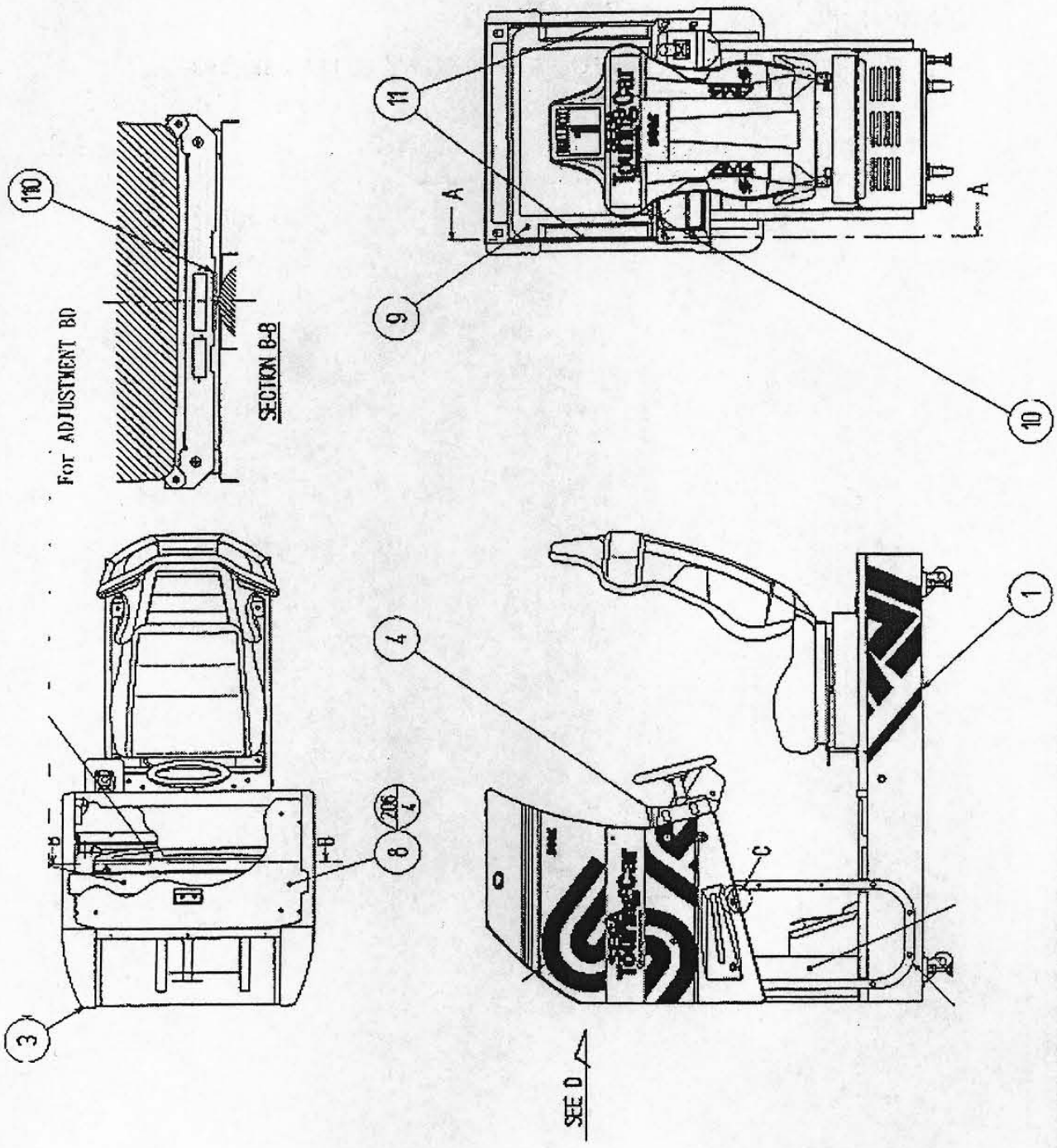
ASSY COCKPIT 1P (STC1-10001)



ASSY COCKPIT 1P (STC-10001)

1	STC1-20001	ASSY MAIN BASE 1P
4	STC-12002	ASSY CONTROL PANEL TWIN
9	TTR-1067	MONITOR MASK
10	DYN-1017	MASK HOLDER
101	GNRC-00456	WELLS GARDNER 25" MID RES 25K5191

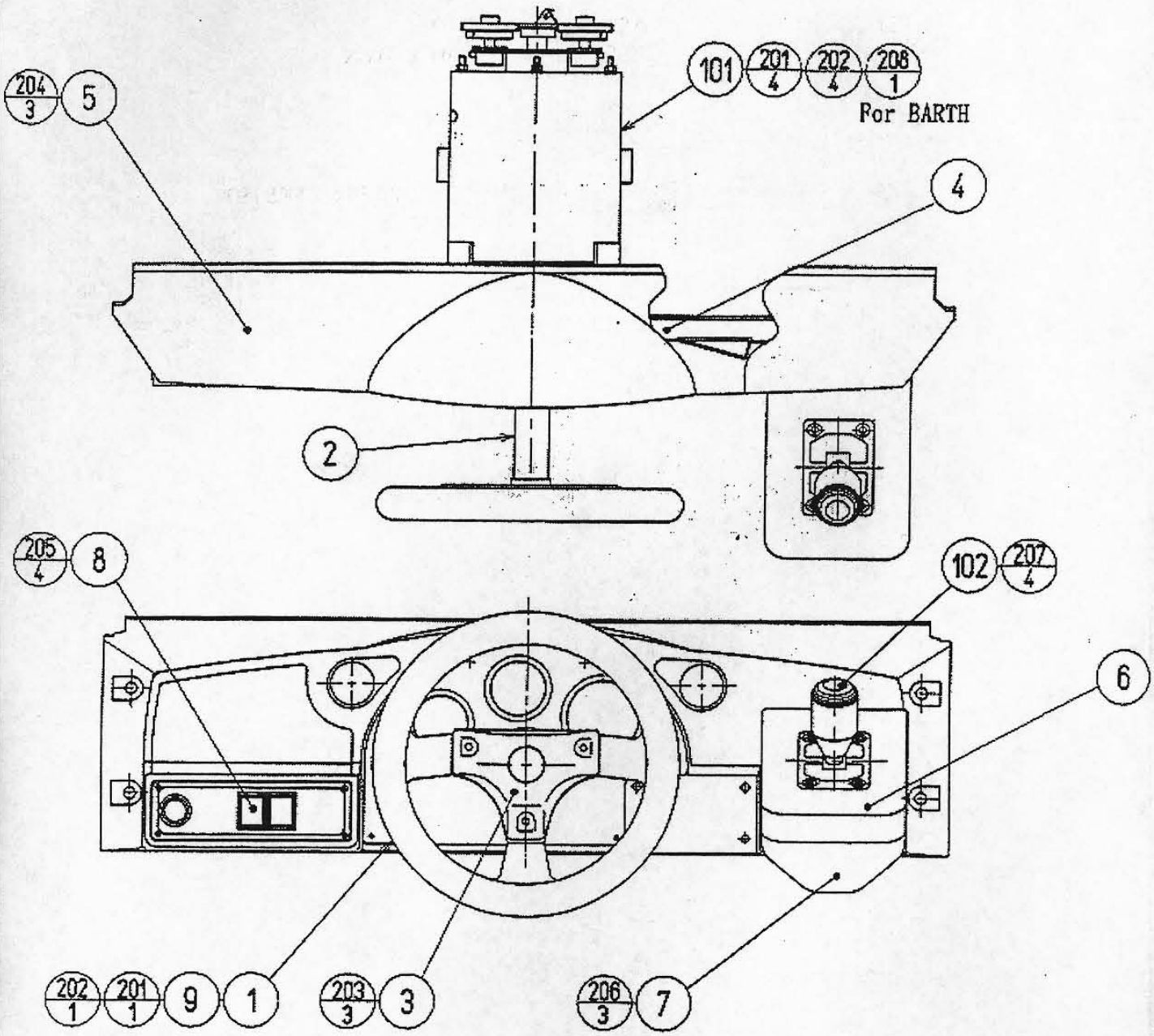
ASSY COCKPIT 2P (STC1-11001)



ASSY COCKPIT 1P (STC-10001)

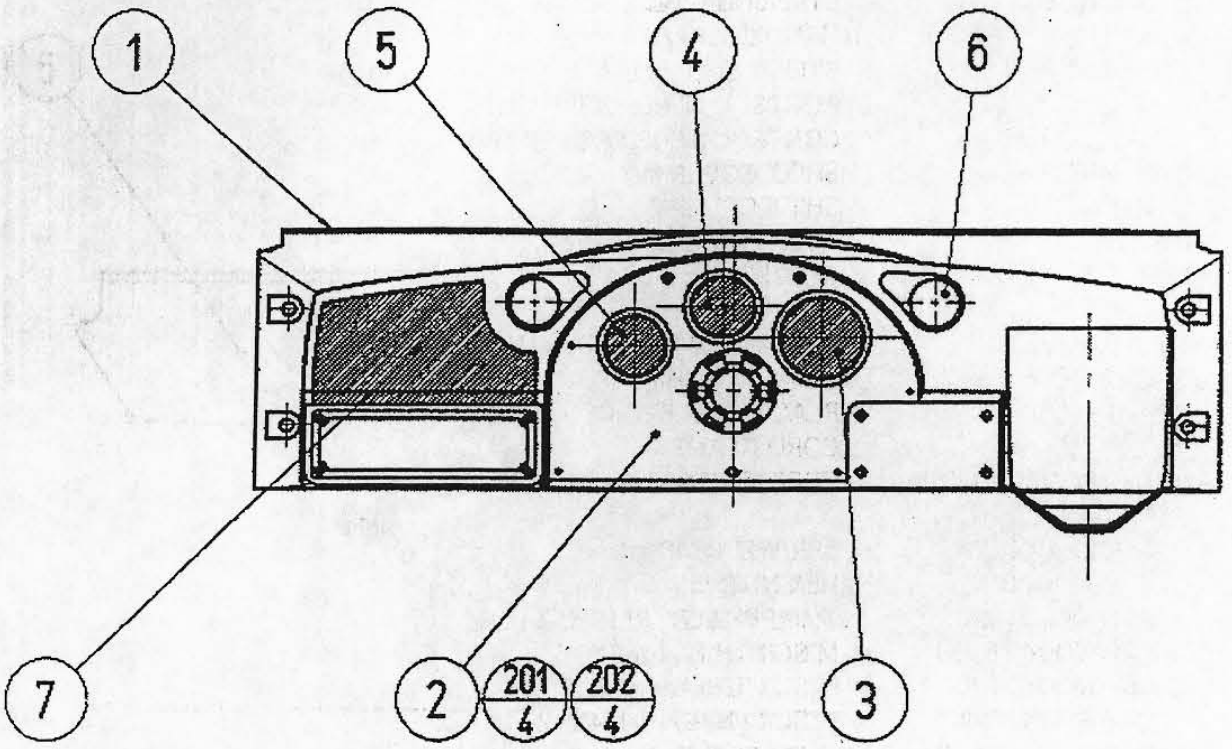
1	STC1-20001	ASSY MAIN BASE 1P
4	STC-12002	ASSY CONTROL PANEL TWIN
9	TTR-1067	MONITOR MASK
10	DYN-1017	MASK HOLDER
101	GNRC-00456	WELLS GARDNER 25" MID RES 25K5191

ASSY CONTROL PANEL TWIN ENG (STC-12002)



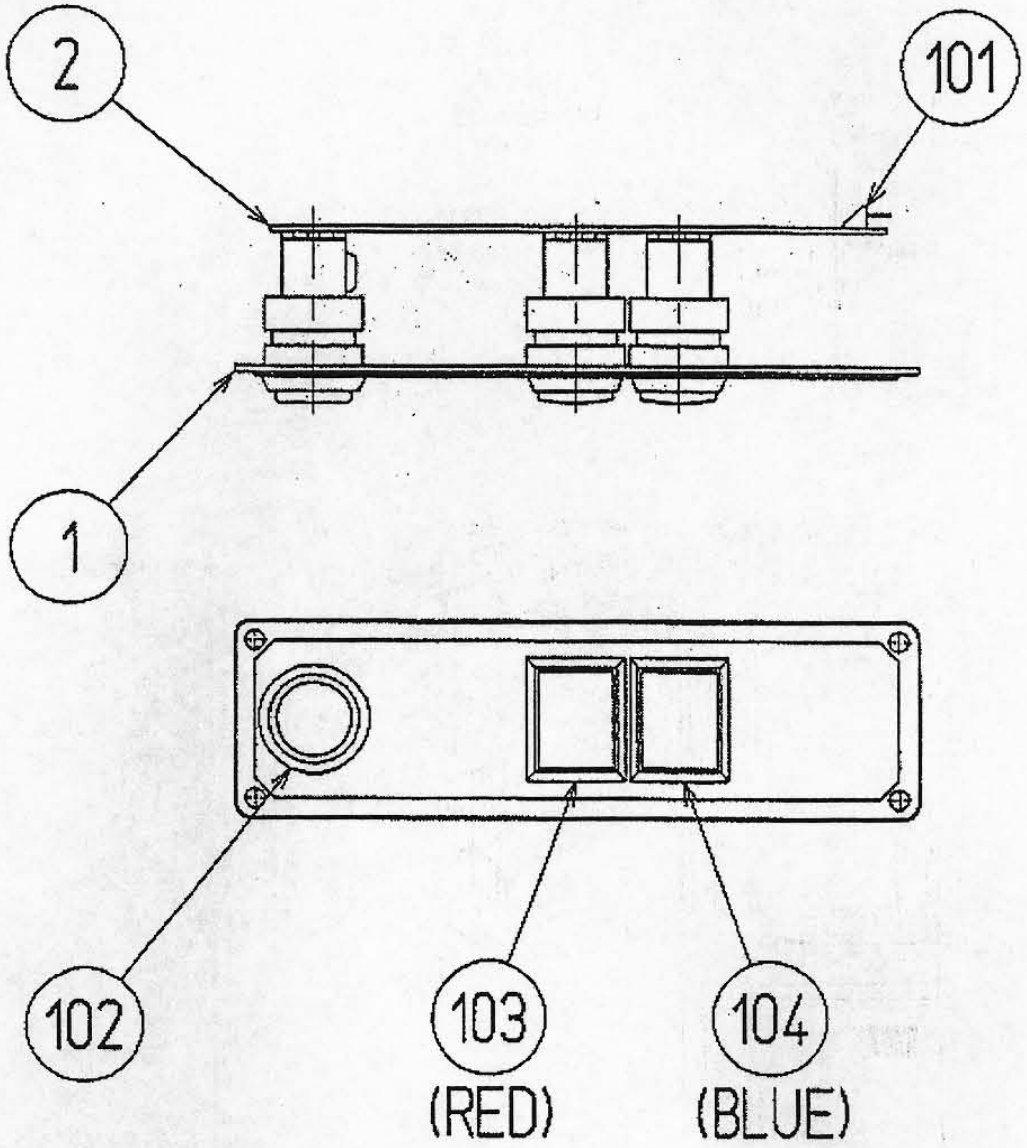
ASSY CONTROL PANEL TWIN ENG (STC-12002)

ITEM NO.	PART NO.	DESCRIPTION
1	DYN-1201	STEERING WHEEL
2	DYN-1209	HANDLE COLLAR
3	INY-1203	STEERING EMBLEM
4	INY-1205	CONTROL PANEL BRKT TWIN
5	STC-1202-01	CONTROL PANEL COVER ENG
6	INY-1204	SHIFT COVER INY
7	DYN-1223	SHIFT COVER B
8	INY-1250	ASSY VIRTUAL BUTTON
9	OUT-2026	SPACER
101	610-0383	ASSY HANDLE MECHA W/MOTOR
102	610-0408	UP/DOWN SHIFTER AL
103	601-0460	PLASTIC TIE BELT 100MM
104	280-5009	CORD CLAMP 21
105	280-5275-SR10	CORD CLAMP SR10
201	060-S00800	SPR WSHR M8
202	050-H00800	HEX NUTM8
203	008-T00512-0B	TMP PRF SCR TH BLK M5X12
204	000-T00416-0B	M SCR TH BLK M4X16
205	000-T00416-0C	M SCR TH CRMM4X16
206	000-P00412-W	M SCR PH W/FS M4X12
207	008-T00516-0B	TMP PRF SCR TH BLK M5X16
208	050-F00400	FLG NUT M4
301	600-6634-24	WIRE HARN EXT SHIFTER
302	600-6634-25	WIRE HARN EXT BUTTON
303	600-6634-32	WIRE HARN EXT MOTOR
304	600-6634-33	WIRE HARN EXT EARTH MOTOR



CONTROL PANEL COVER ENG (STC-1202-01)

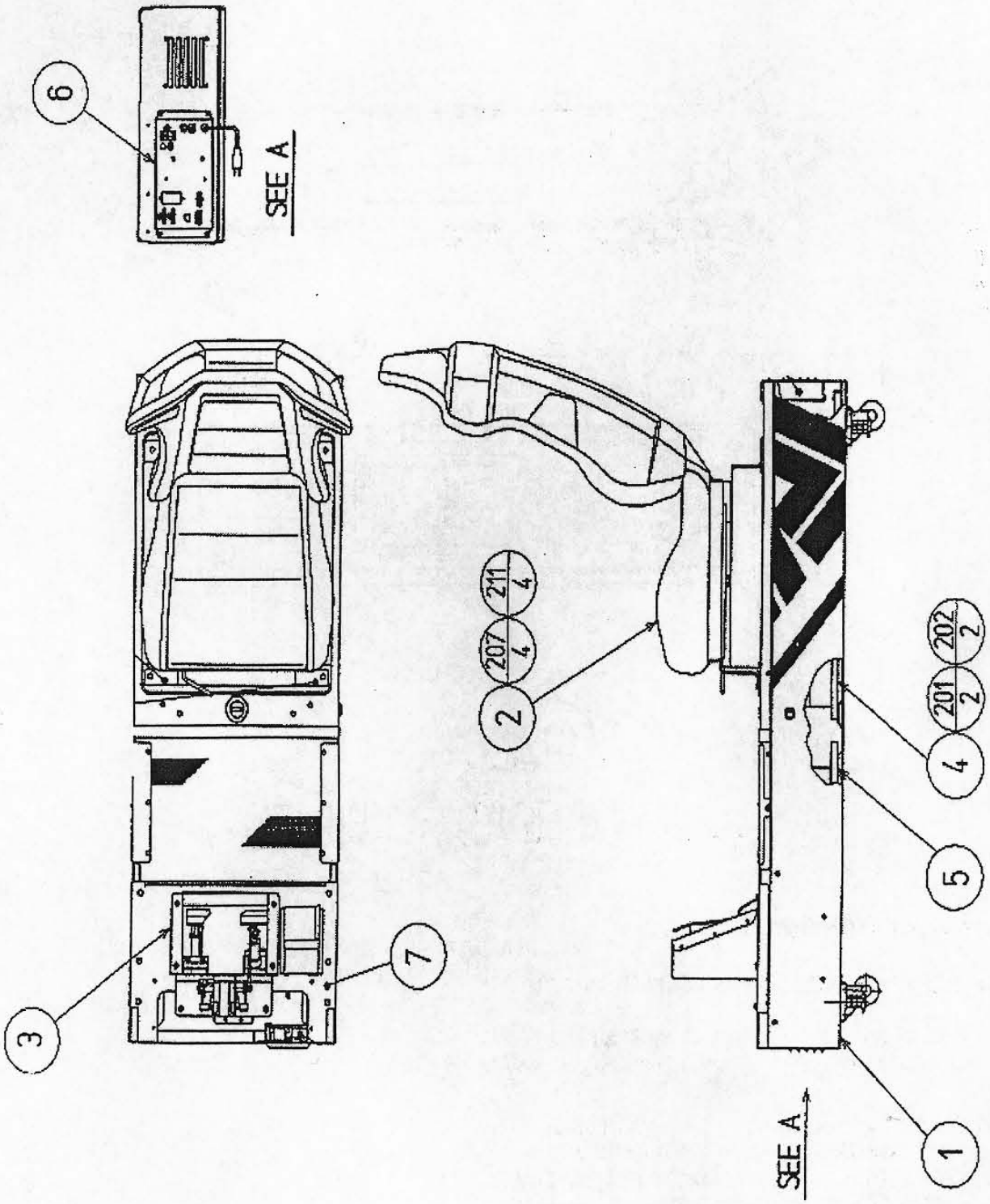
ITEM NO	PART NO	DESCRIPTION
1	DYN-1214-A	CONTROL PANEL COVER BLANK
2	RAL-1205-A	METER PANEL
3	DYN-1214-C	DESIGN PL TACO MTR TWIN
4	DYN-1214-D	DESIGN PL OIL MTR TWIN
5	DYN-1214-E	DESIGN PL WATER MTR TWIN
6	DYN-1203	TWEETER NET
7	422-0593-01	PLAY INSTR SH STC TWIN ENG
201	047-PA3207-6	RVT OPEN TYPE AL 3.2X7.6
202	060-F00300	FLT WSHR M3



ASSY VIRTUAL BUTTON (INY-1250)

ITEM NO.	PART NO.	DESCRIPTION
1	INY-1251	VR SW 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
104	509-5561-S	PB SW W/L 6V 5L S

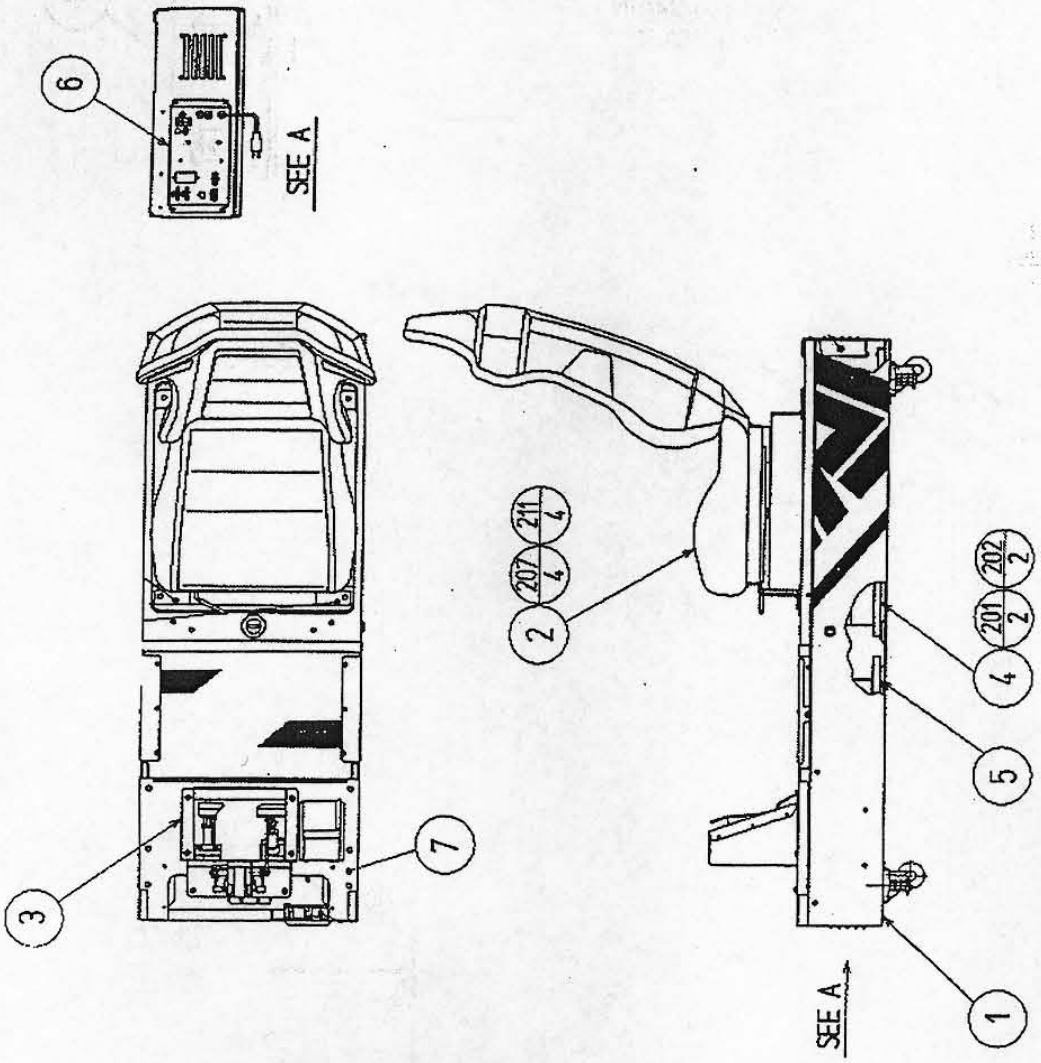
ASSY MA I N BASE 1 P (STC1-20001)



ASSY MA I N BASE 1 P (STC1-20001)

ITEM NO.	PART NO.	
1	STC-2000	ASSY BASE BOX
2	STC-2200	ASSY SEAT TWIN 1P
3	DYN-1300	ASSY ACCEL & BRAKE
4	STC-4400	ASSY MAIN BD BASE
5	STC-4500	ASSY ELEC BASE
	DYN-0400-01	AC UNIT MAIN EXP
7	DYN-2008X	PEDAL BASE
102	600-6275-0150	ASSY FIBER CABLE 5 0150CM

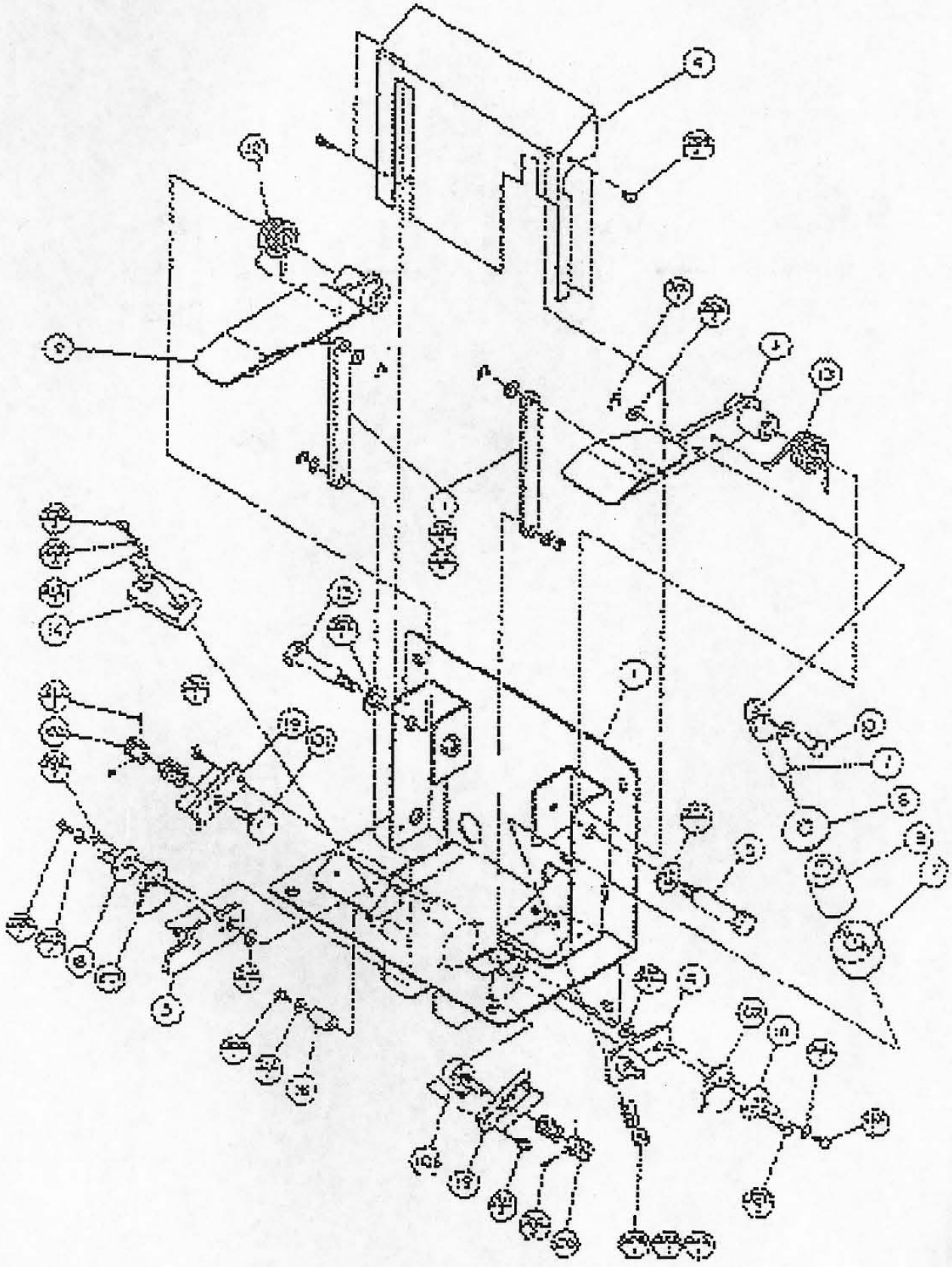
ASSY MAIN BASE 1P (STC1-20001)



ASSY MA I N BASE 1 P (STC1-20001)

ITEM NO.	PART NO.	
1	STC-2000	ASSY BASE BOX
2	STC-2200	ASSY SEAT TWIN 1P
3	DYN-1300	ASSY ACCEL & BRAKE
4	STC-4400	ASSY MAIN BD BASE
5	STC-4500	ASSY ELEC BASE
	DYN-0400-01	AC UNIT MAIN EXP
7	DYN-2008X	PEDAL BASE
102	600-6275-0150	ASSY FIBER CABLE 5 0150CM

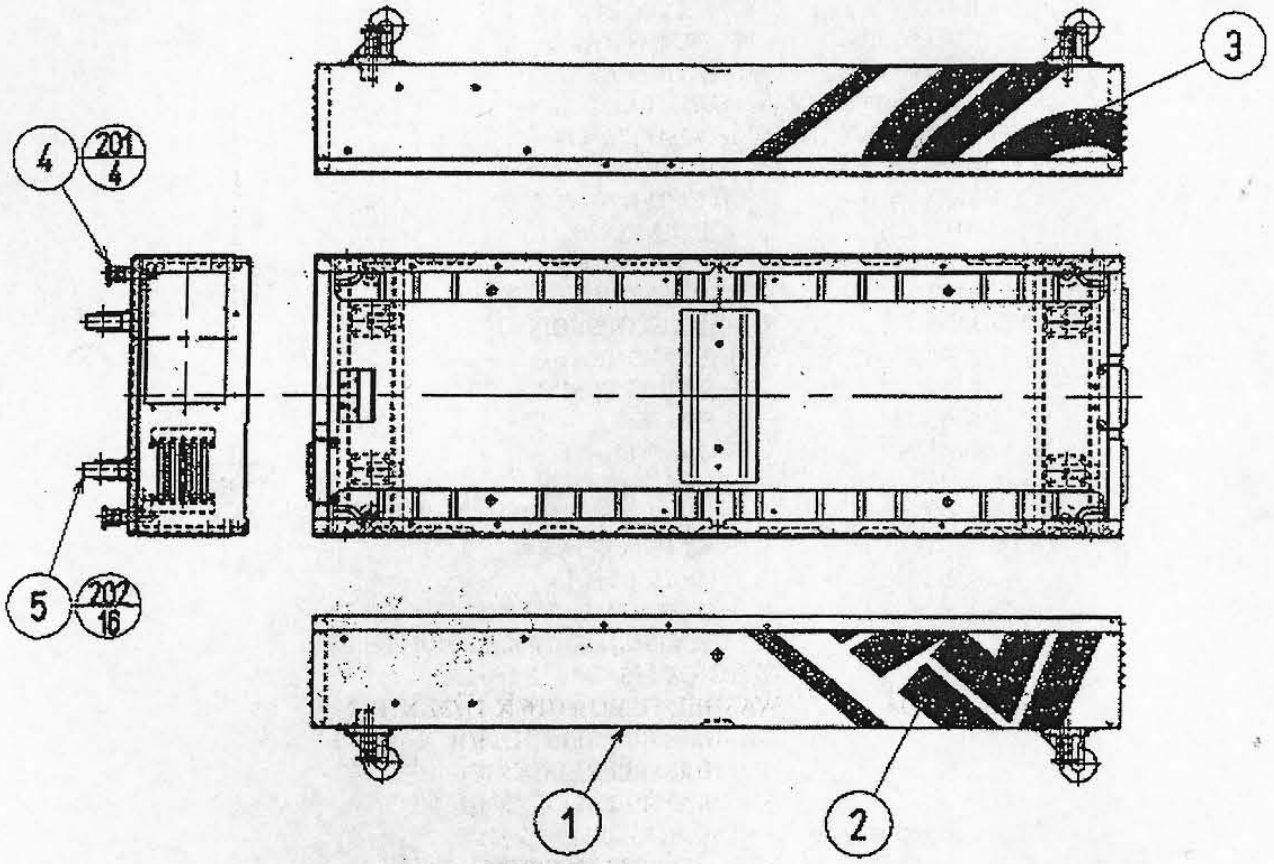
ASSY ACCEL & BRAKE (DYN1-1300)



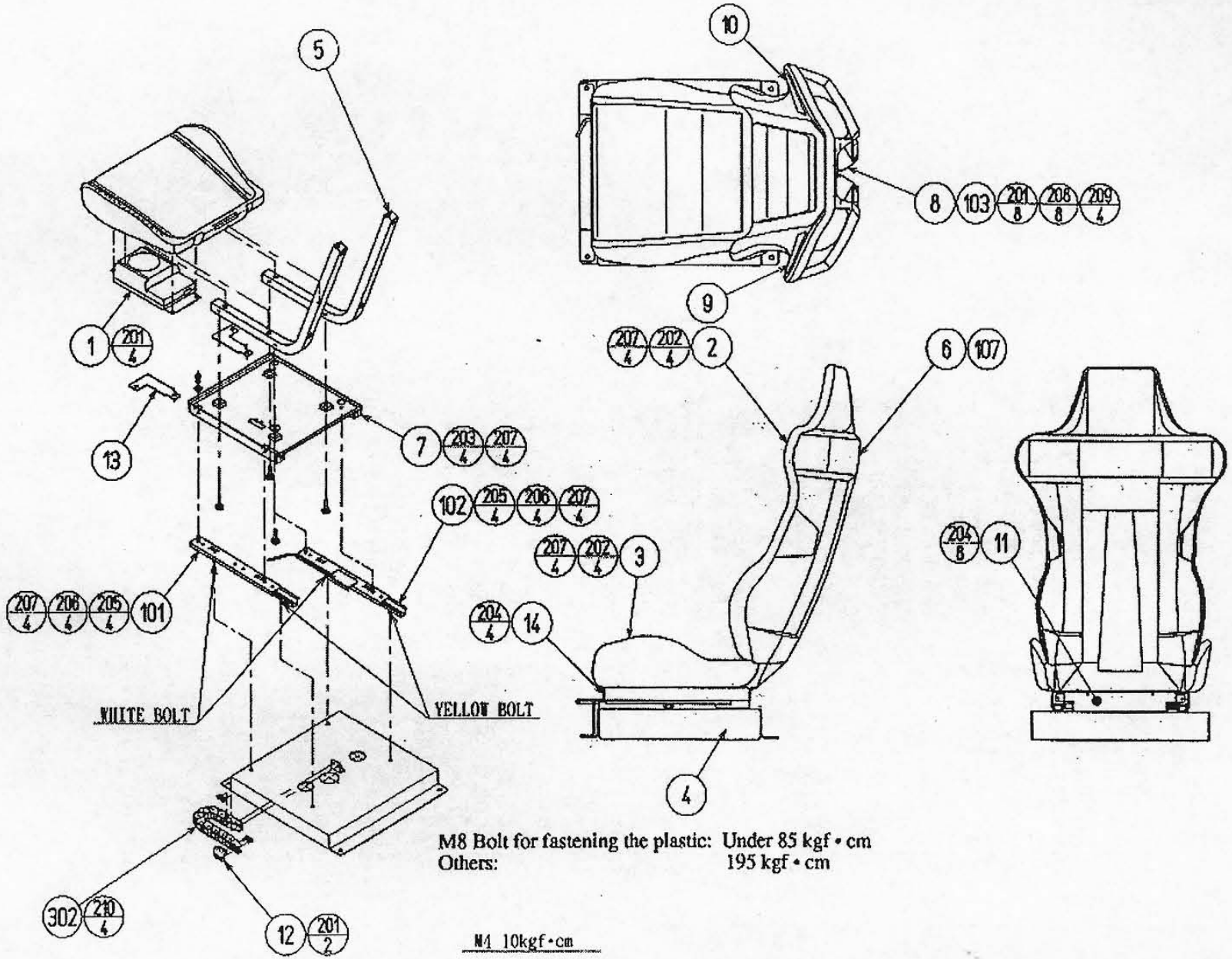
GAS AND BRAKE PEDAL ASSEMBLY P/N DYN1-1300

NO.	PART NO.	DESCRIPTION
1	DYN1-1301	PEDAL BASE
2	BVG-1402	ACCEL PEDAL
3	BVG-1403	BRAKE PEDAL
4	BVG-1404	PEDAL COVER
5	BVG4-1405	SWING ARM A
6	BVG4-1406	SWING ARM B
7	BVG-1407	PUSH ROD
8	BVG-1408	PUSH PLATE
9	BVG-1418	RUBBER BUMPER
10	BVG-1410	PUSH ROD PIN
11	BVG-1411	LINK ROD
12	BVG-1412	TORSION SPRING ACCEL
13	BVG-1413	TORSION SPRING B
14	BVG-1414	RUBBER STOPPER
15	BVG1-1415	PEDAL SHAFT
16	BVG-1416	SWING ARM STOPPER
17	BVG-1417	SPACER
18	GLC-2122	GEAR PLATE
19	RDM-1210	VR BRACKET
101	220-5373	VOL CONT B - 5K OHM
102	601-6005	ADJUST GEAR
103	601-5943	GEAR 20 Ø 15
201		SCREW MS ZN 08-32 X 06 PH PN
203		SCREW MS BO 08-32 X 12 PH PN
205		NUT HEX M6
206	use 069-0000A	WASHER FL BO 11/16 X 11/32 X 3/32
207		WASHER SPLIT LOCK 13/16 X 1/2 X 3/32
208		WASHER SPLIT LOCK 1/4
209		WASHER SPLIT LOCK #8
210	use 065-E00600	E RING 05133-25
211		SET SCR 30 M3 X 06MM
212		WASHER FL 1/2 X 7/32 X 1/16
213		WASHER FL 30 #8
214	DYN-1305	FLT WASHER 12.2-22 X 0.5
215		E RING 05133-18

MAIN BASE (STC-2001)



ITEM NO.	PART NO	DESCRIPTION
1	DYN1-2002X-A	MAIN BASE BLANK
2	STC1-2002	STICKER BASE L
3	STC1-2003	STICKER BASE R
4	999-0167	LEG ADJUSTER BOLT 1/2X13X4"
5	999-0169	CASTER 2"
201	050-H01600-0B	HEX NUT BLK M16
202	030-000616-S	HEX BOLT W/S M6X16



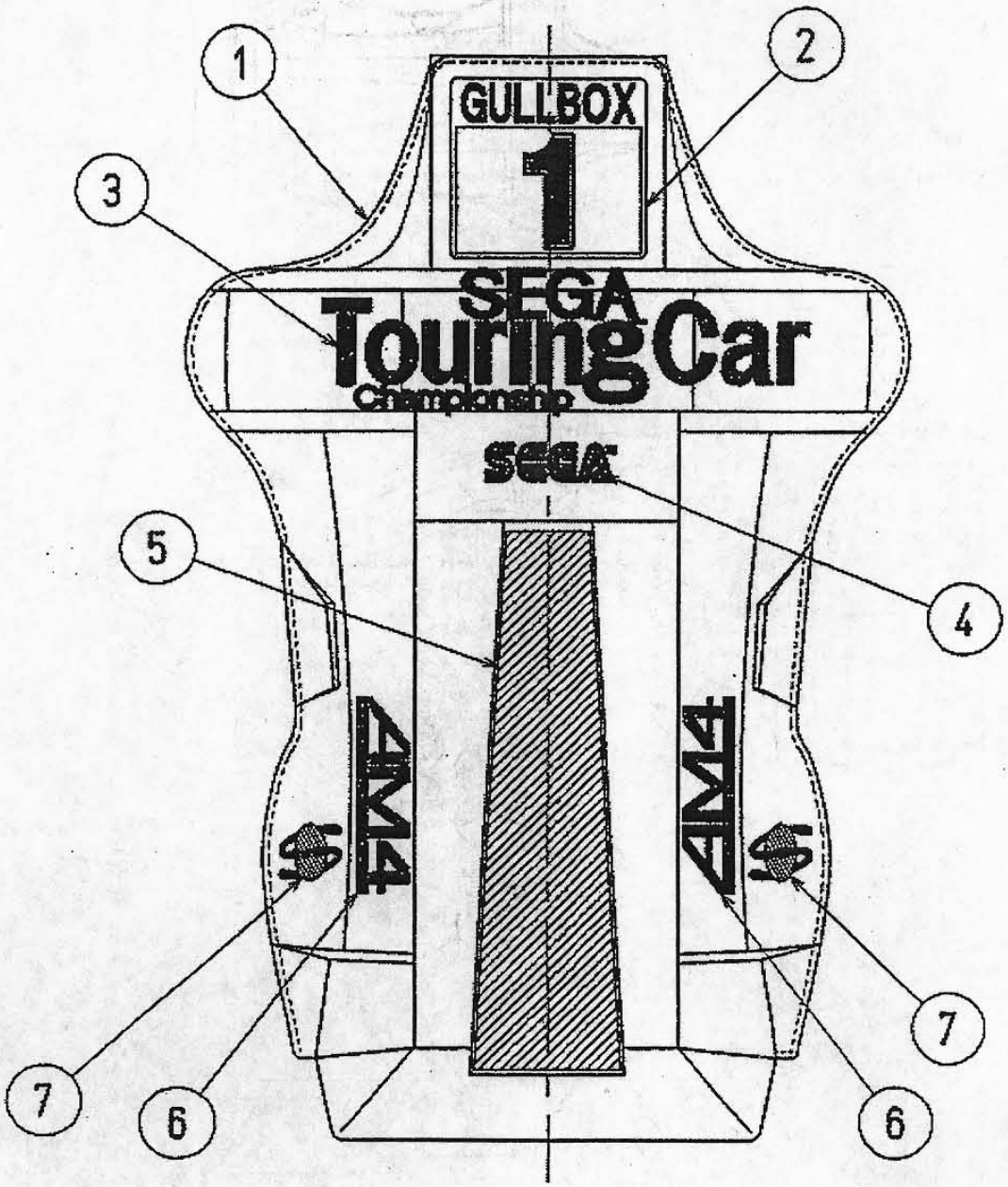
M8 Bolt for fastening the plastic: Under 85 kgf • cm
Others: 195 kgf • cm

M4 10kgf • cm

ASSY SEAT TWIN 1P (STC-2200)

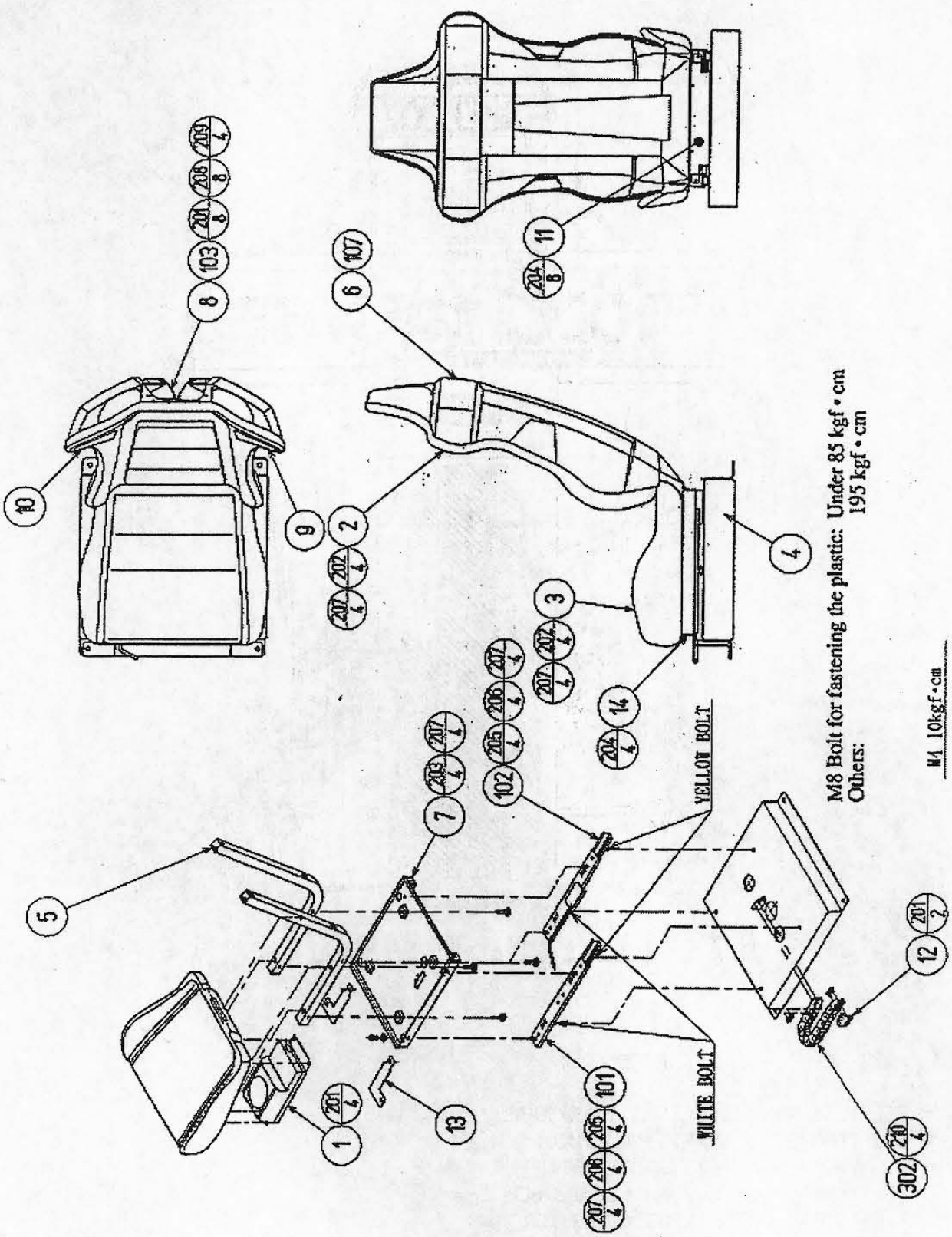
ITEM NO.	PART NO.	DESCRIPTION
1	STC-1650	ASSY WOOFER
2	STC-1601	UPPER SEAT
3	STC-1602	LOWER SEAT
4	STC-2201	SEAT BASE
5	STC-1604	SEAT FRAME
6	STC-1605	SEAT REAR COVER
7	STC-1606	SEAT MOUNT TRAY
8	STC-1607	SP MOUNT BRKT
9	STC-1608	SPEAKER NET L
10	STC-1609	SPEAKER NET R
11	STC-1610	SAFETY GUARD
12	STC-1611	CABLE BEAR BRKT
13	STC-1612	PROTECT RUBBER
14	STC-1613	SAFETY GUARD
101	601-7942	SEAT RAIL AL L
102	601-7981	SEAT RAIL AL R
103	130-5159	GULL BOX SPEAKER 8 OHM 5W
104	280-5009	CORD CLAMP 21
105	601-6563-188	BUSH 2. 4T
106	601-6563-100	BUSH 2. 4T
107	280-5297	SCRIVET 8 IK31
201	OOO-P00410-W	M SCR PH W/FS M4Xlo
202	030-000845-S	HEX BLT W/S M8x45
203	030-000816-S	HEX BLT W/S M8X16
204	OOO-T00408-0B	M SCR TH BLK M4X8
205	050-H00800	HLX NUT M8
206	060-S00800	SPR WSHR M8
207	068-852216	FLT WSHR 8. 5-22 X 1. 6
208	012-P00412	TAP SCR #2 PH 4X12
209	060-F00400	FLT WSHR M4
210	OOO-T00616-0B	M SCR TH BLK M6X16
211	O10-P00408-F	S-TITE SCR PH W/F M4X8
301	600-6774-016	WIRE HARN SPEAKER
302	600-6774-017	WIRE HARN SEAT EXT

SEAT REAR COVER (STC-1605)



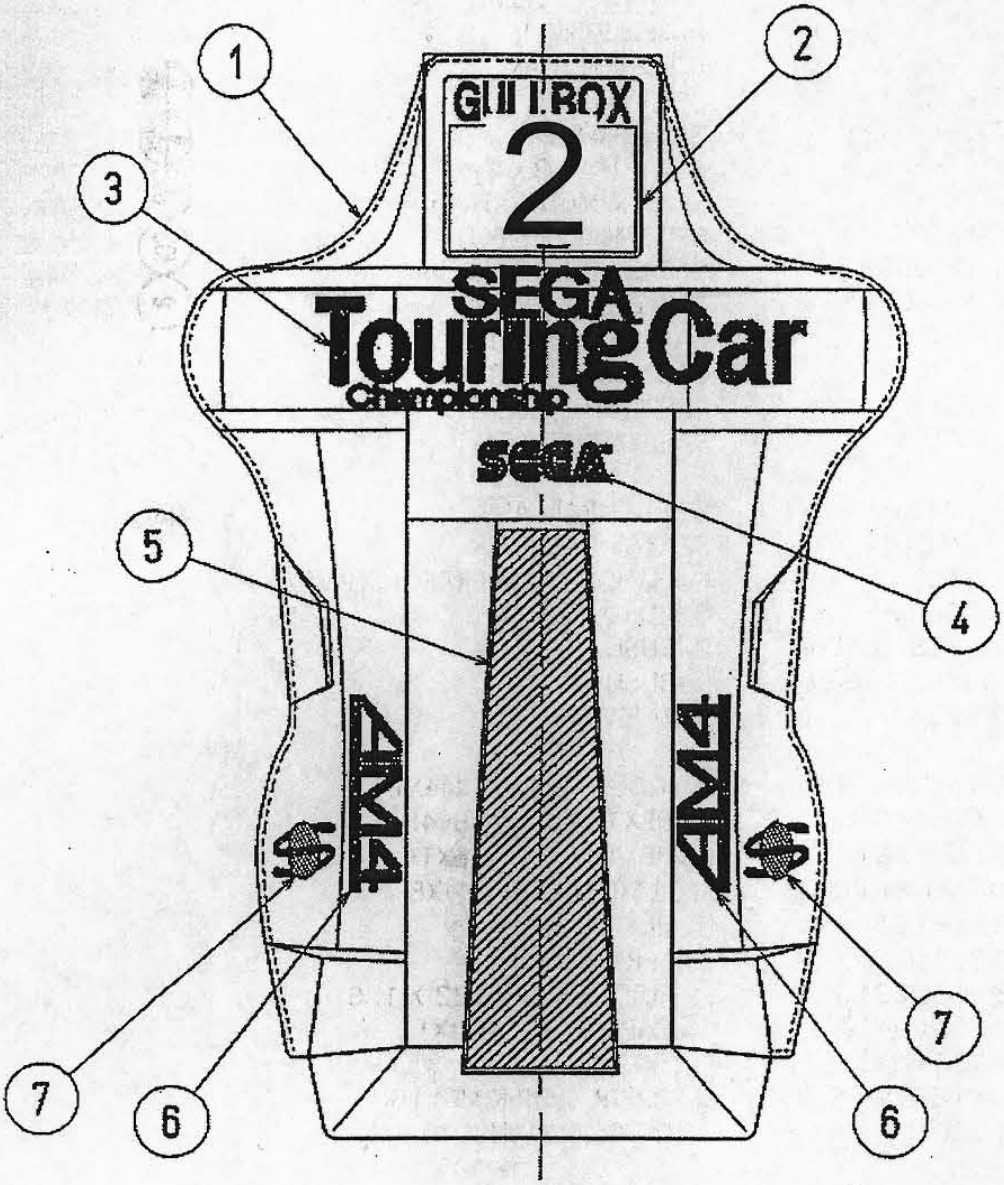
ITEM NO.	PART NO.	DESCRIPTION
1	STC-1605-A	SEAT REAR COVER BLANK
2	STC-1605-B	STICKER CAR NO.1
3	STC-1605-C	STICKER COVER UPPER
4	STC-1605-D	STICKER SEGA LOGO
5	STC-1605-E	STICKER COVER C
6	STC-1605-F	STICKER COVER L
7	STC-1605-H	STICKER SATURN MARK

ASSY SEAT TWIN 1P (STC-2200)



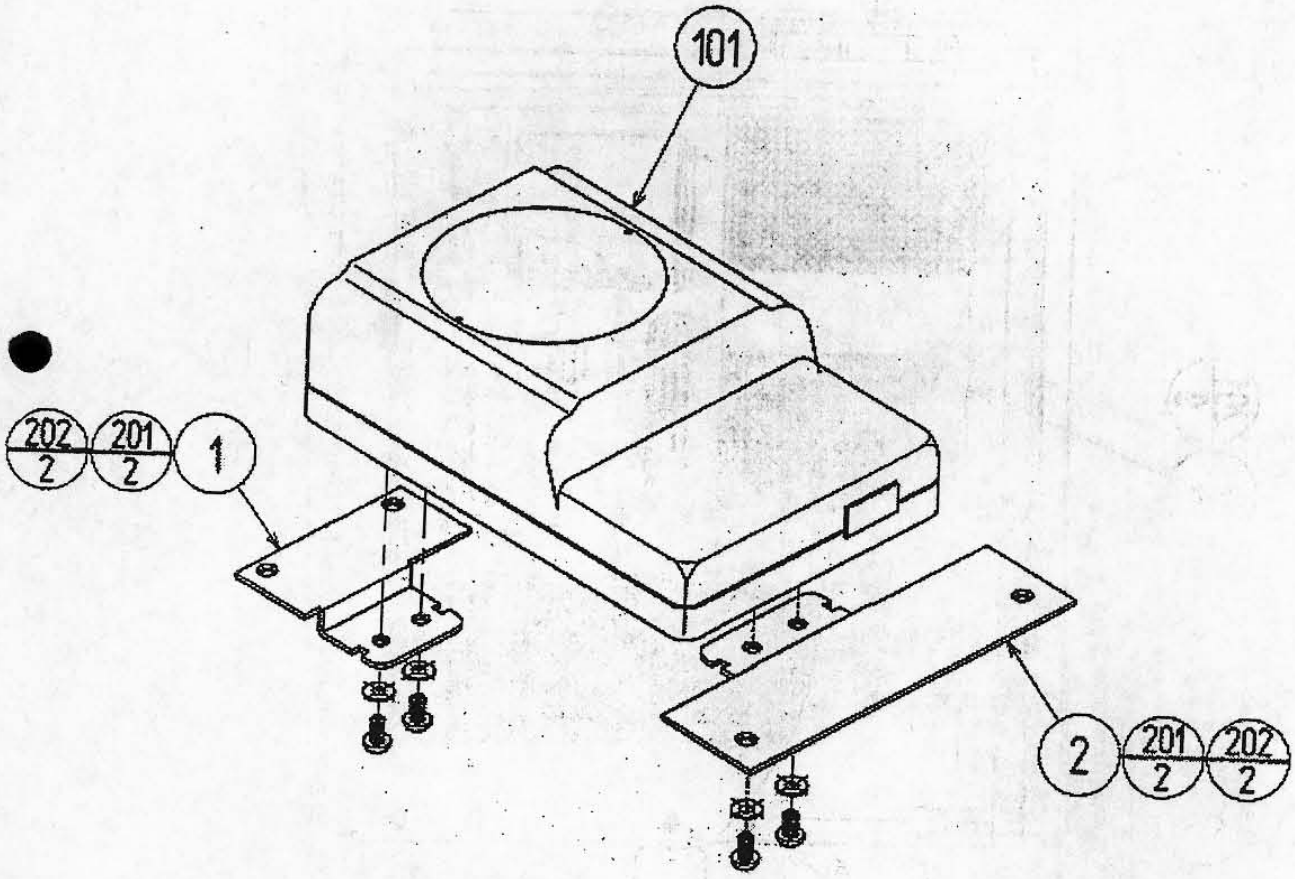
ITEM NO.	PART NO.	DESCRIPTION
1	STC-1650	ASSY WOOFER
2	STC-1601	UPPER SEAT
3	STC-1602	LOWER SEAT
4	STC-2201	SEAT BASE
5	STC-1604	SEAT FRAME
6	STC-1605	SEAT REAR COVER
7	STC-1606	SEAT MOUNT TRAY
8	STC-1607	SP MOUNT BRKT
9	STC-1608	SPEAKER NET L
10	STC-1609	SPEAKER NET R
11	STC-1610	SAFETY GUARD
12	STC-1611	CABLE BEAR BRKT
13	STC-1612	PROTECT RUBBER
14	STC-1613	SAFETY GUARD
101	601-7942	SEAT RAIL AL L
102	601-7981	SEAT RAIL AL R
103	130-5159	GULL BOX SPEAKER 8 OHM 5W
104	280-5009	CORD CLAMP 21
105	601-6563-188	BUSH 2. 4T
106	601-6563-100	BUSH 2. 4T
107	280-5297	SCRIVET 8 IK31
201	OOO-P00410-W	M SCR PH W/FS M4Xlo
202	030-000845-S	HEX BLT W/S M8x45
203	030-000816-S	HEX BLT W/S M8X16
204	OOO-T00408-0B	M SCR TH BLK M4X8
205	050-H00800	HLX NUT M8
206	060-S00800	SPR WSHR M8
207	068-852216	FLT WSHR 8. 5-22 X 1. 6
208	012-P00412	TAP SCR #2 PH 4X12
209	060-F00400	FLT WSHR M4
210	OOO-T00616-0B	M SCR TH BLK M6X16
211	O10-P00408-F	S-TITE SCR PH W/F M4X8
301	600-6774-016	WIRE HARN SPEAKER
302	600-6774-017	WIRE HARN SEAT EXT

SEAT REAR COVER 2P (STC-2202)



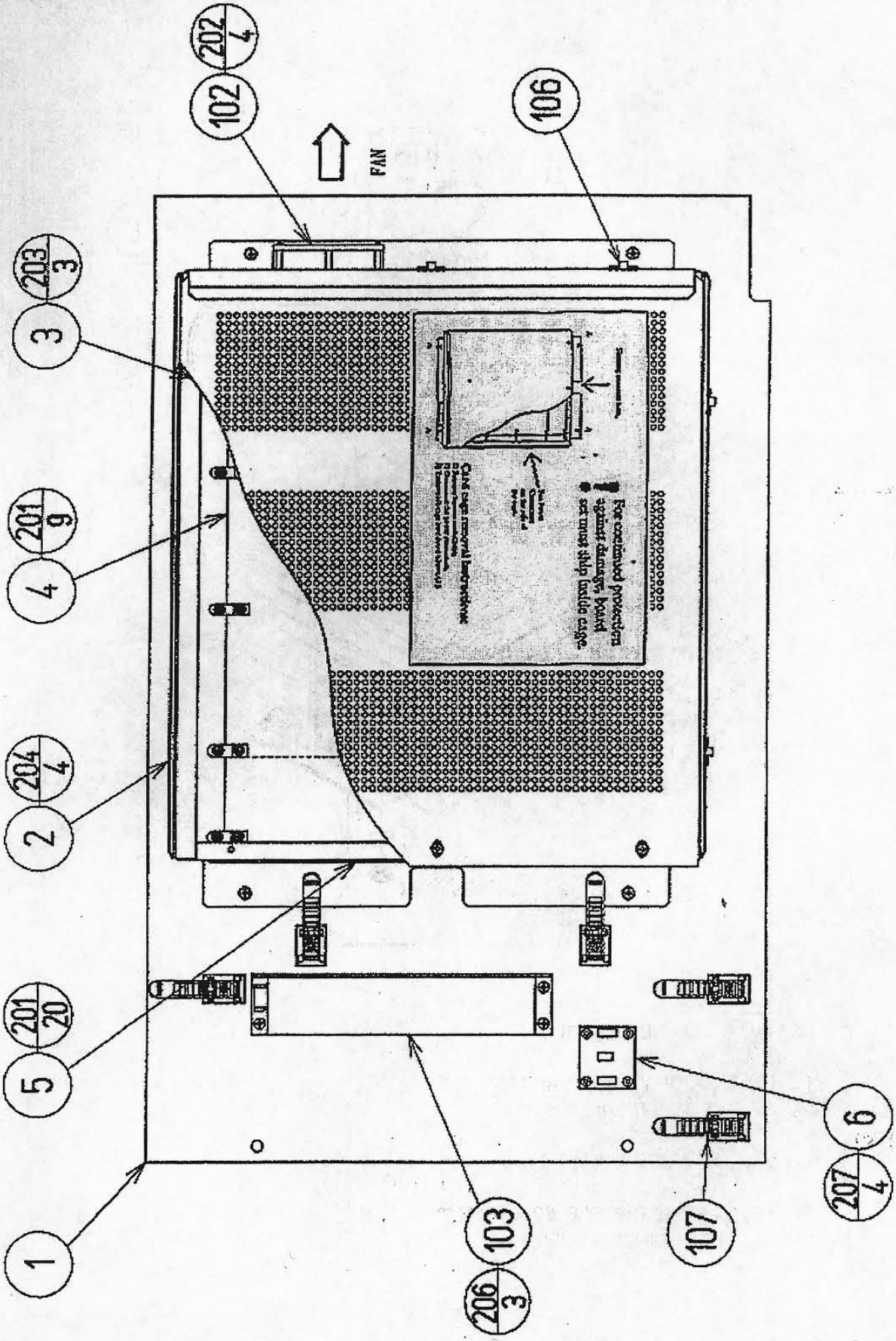
ITEM NO.	PART NO.	DESCRIPTION
1	STC-1605-A	SEAT REAR COVER BLANK
2	STC-2202-A	STICKER CAR NO.1
3	STC-1605-C	STICKER COVER UPPER
4	STC-1605-D	STICKER SEGA LOGO
5	STC-1605-E	STICKER COVER C
6	STC-1605-F	STICKER COVER L
7	STC-1605-H	STICKER SATURN MARK

ASSY WOOFER (STC-1650)



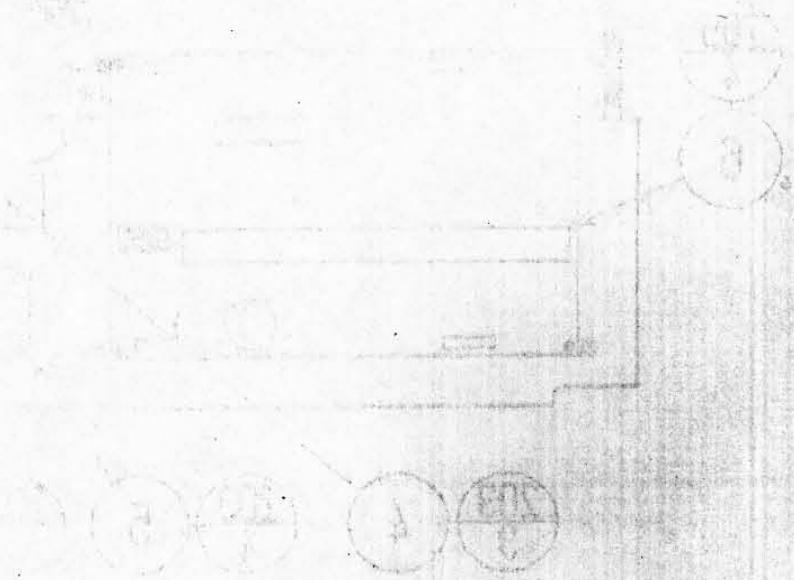
ITEM NO.	PART NO.	DESCRIPTION
1	STC-1651	WOOFER BRKT F
2	STC-1652	WOOFER BRKT R
101	130-5160	SUB WOOFFR 4 OHM 30W
201	012-P00412	TAP SCR #2 PH 4 X 12
202	060-F00400	FLT WSHER M4

ASSY MAIN BOARD BASE (STC1-4400)

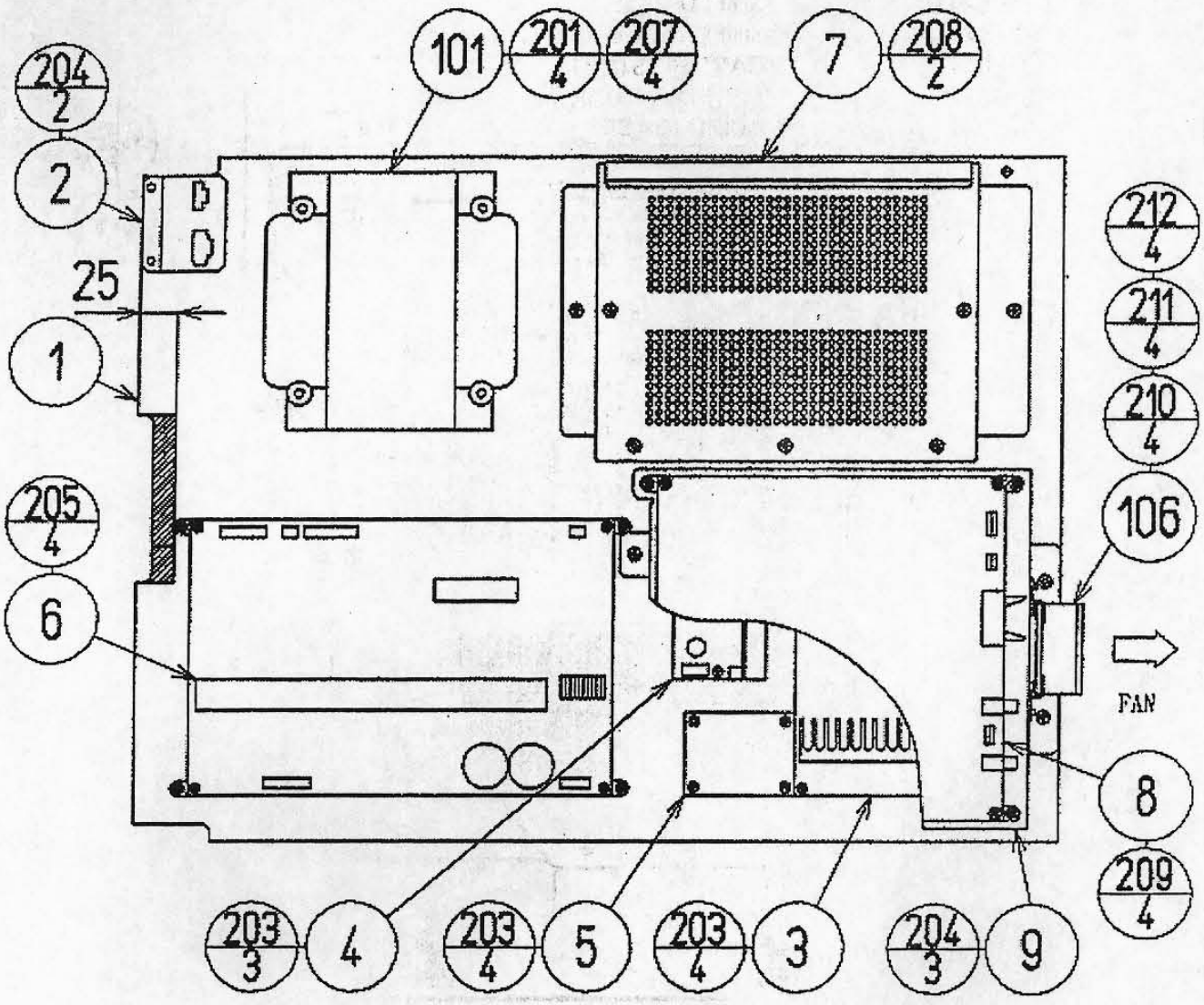


ASSY MAIN BD BASE (STC1-4400)

ITEM NO.	PART NO.	DESCRIPTION
1	INY1-4401	WOODEN BASE
2	1050-5218	SHIELD CASE
3	1051-5219-91	SHIELD CASE LID
4	833-12779	GAME BD STCC DX
5	839-0818	FLT BD B-CRX INY
6	839-0542	AUDIO MIX BD
102	2601-0055	FAN MOTOR DC5V



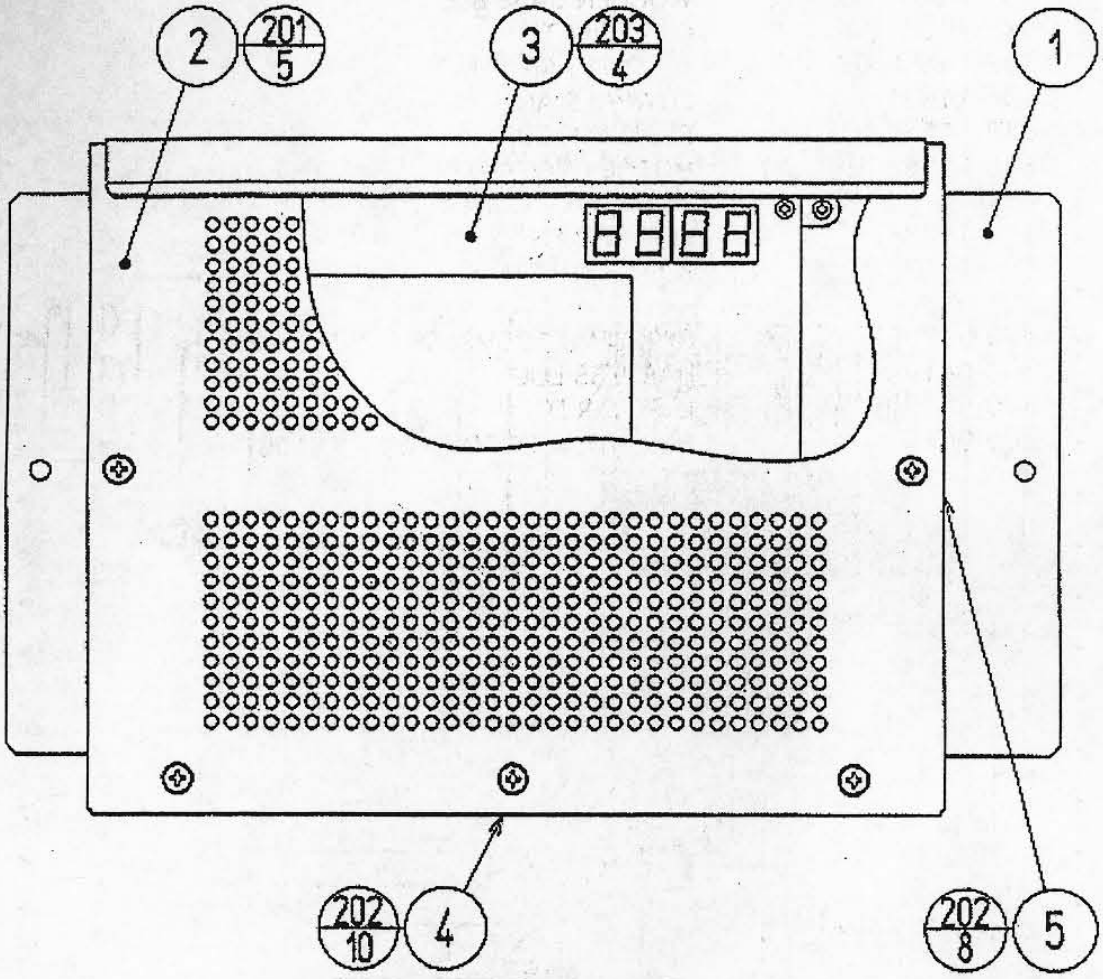
ASSY ELEC BASE (STC1-4500)



ASSY ELEC BASE (STC-4500)

ITEM NO.	PART NO.	DESCRIPTION
1	INY1-4501	WOODEN BASE BLEC
2	DYN-4003	CONN BRKT
3	838-11650-07	EQ. PWR AMP INY
4	838-11651	LOWPASS AMP
5	838-11855-01	SSR CONN BD
6	838-11966	MOTOR DRIVE BD
7	INY-4600	ASSY DRIVE CONTROL BD
8	837-12784	SOUND BD STCC
9	STC-4502	BD MOUNT BRKT
101	5601-5260	PWR XFMR 100V6. 5A 12. 5V6A
104	280-0419	HARNESS LUG
105	270-5052-04	L. FILTER D
106	260-0029	FAN MTR AC-100V M2412PS10B

ASSY DRIVE CONTROL (INY1-4600)



ITEM NO.	PART NO.	
1	INY1-4601	SHIELD CASE
2	INY1-4602	SHIELD CASE LID
3	838-11967	DRIVE CONTROL BD
4	839-0829	FLT BD DRIVE CONTROL BD A
5	839-0830	FLT BD DRIVE CONTROL BD B

TOURING CAR CHAMPIONSHIP MANUAL COMMENTS

SEGA has made every effort to ensure that this manual is accurate. If you find any errors or omissions, or have other comments on the ***TOURING CAR CHAMPIONSHIP*** manual, please write them below, detach, and deliver this page by FAX or mail to:

SEGA ENTERPRISES INC. (USA)
ATTN: Stephanie Voss
45133 Industrial Drive
Fremont, CA 94538 USA
FAX: (415) 802-1754

Comments: _____

Optional Identification Information:

Name: _____
Company: _____
Address: _____
City, State, Zip: _____
Phone: _____
FAX: _____

SEGA

Steering calibration for Touring Car Twin

1. Enter the Test Mode by pressing the Test Button located on the Service Panel inside the upper coin door.

2. Use the Service button or the View Change Buttons (Either) to move the pointer "->" to the item marked " Volume Setting ". Press the Test button to enter this area (See Figure 1).

3. Use either the Service or View change buttons to move the pointer "->" to the item marked "Set & Exit ".

4. Fully Depress the Accelerator & Brake pedals one at a time. You will need to press each pedal to its' full stop, and allow it to return to its' normal "Rest" position.

5. Fully turn the Steering wheel Left & Right to each mechanical stop. Allow the Steering Wheel to return to its' normal "Rest" position. (See Figure 2).

6. Press the Test Button to store the settings and return to the Main Test Menu. Exit the menu by aligning the pointer with " Exit" and pressing the Test Button one final time.

Touring Car is now able to be played.

Figure 1

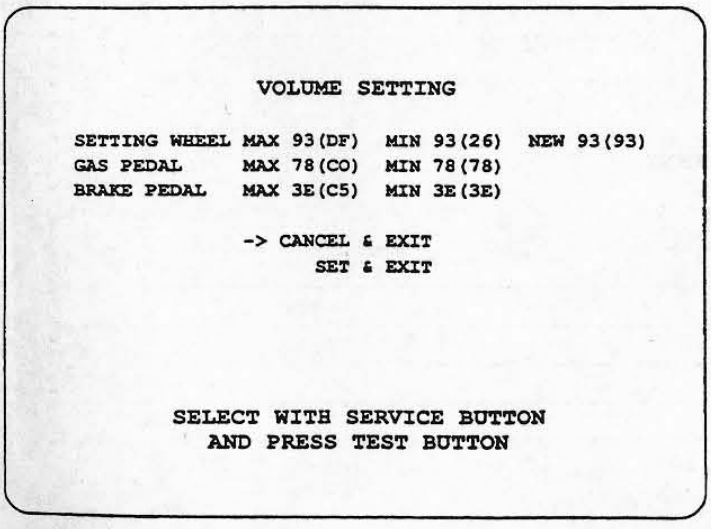
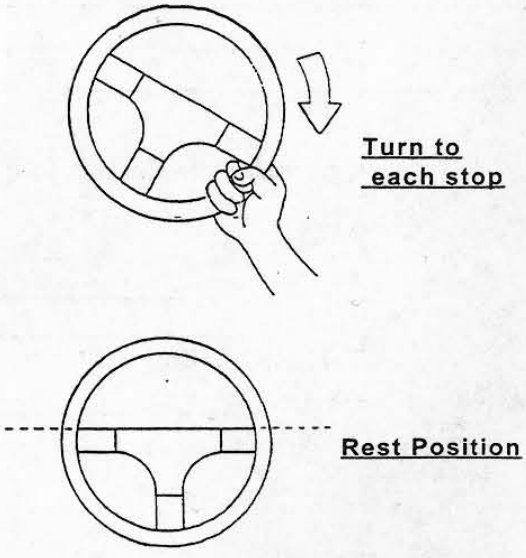
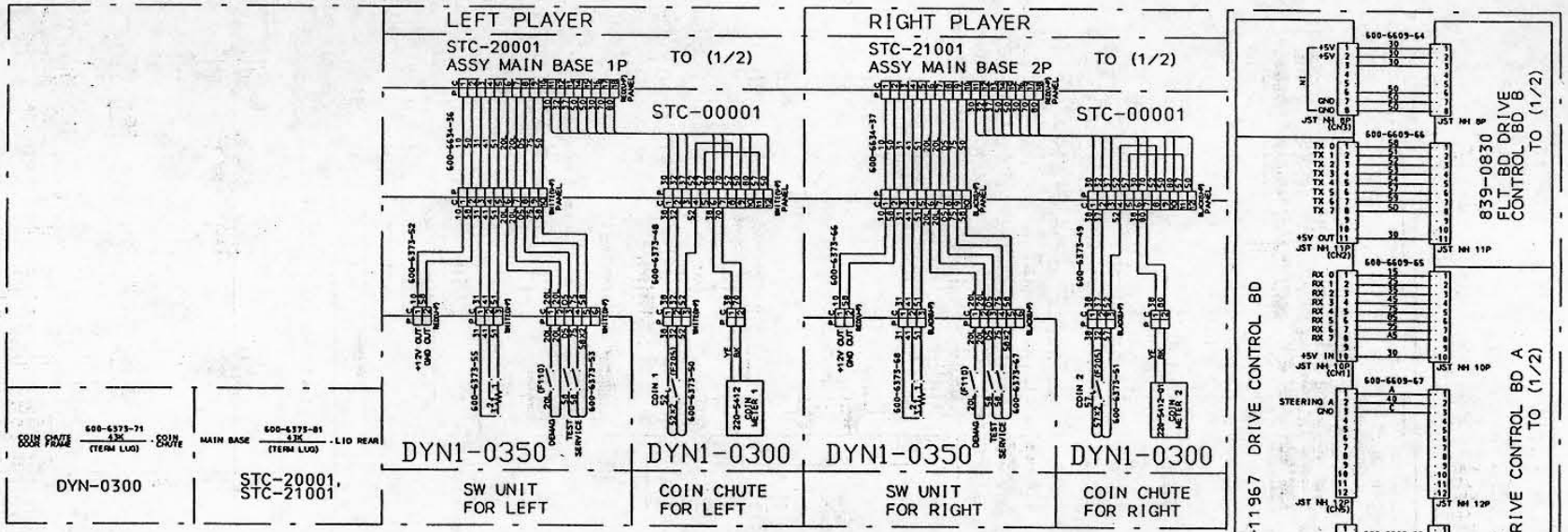
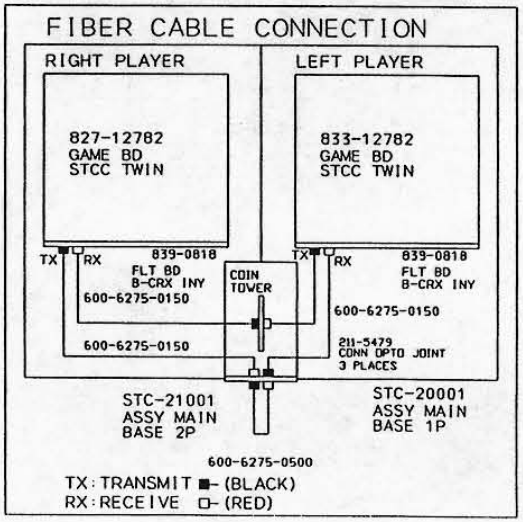


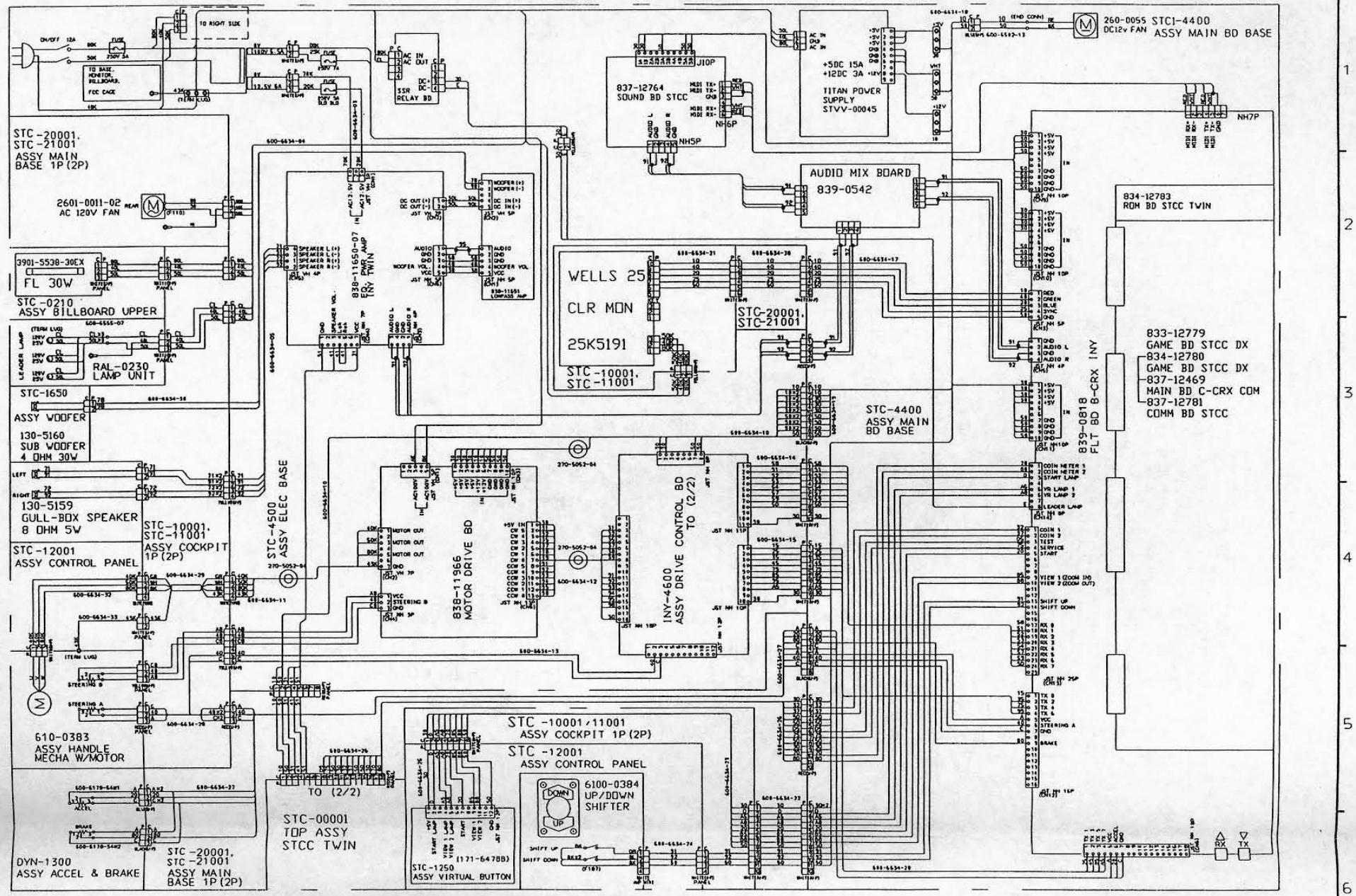
Figure 2




LEFT PLAYER
STC-20001
ASSY MAIN BASE 1P
TO (1/2)
STC-00001
RIGHT PLAYER
STC-21001
ASSY MAIN BASE 2P
TO (1/2)
STC-00001
COIN CHUTE DOOR FRAME
600-6373-71 43K (TERM LUG)
COIN CHUTE
MAIN BASE
600-6373-81 43K (TERM LUG)
LID REAR
DYN-0300
STC-20001, STC-21001
DYN1-0350
SW UNIT FOR LEFT
DYN1-0300
COIN CHUTE FOR LEFT
DYN1-0350
SW UNIT FOR RIGHT
DYN1-0300
COIN CHUTE FOR RIGHT
838-11967 DRIVE CONTROL BD
839-0830 FLT BD DRIVE CONTROL BD B TO (1/2)
839-0829 FLT BD DRIVE CONTROL BD A TO (1/2)
INY-4600
ASSY DRIVE CONTROL BD


FIBER CABLE CONNECTION
RIGHT PLAYER
LEFT PLAYER
827-12782
GAME BD
STCC TWIN
833-12782
GAME BD
STCC TWIN
TX
RX
839-0818
FLT BD
B-CRX INY
600-6275-0150
COIN TOWER
600-6275-0150
600-6275-0150
211-5479
CONN OPTO JOINT
3 PLACES
STC-21001
ASSY MAIN
BASE 2P
STC-20001
ASSY MAIN
BASE 1P
600-6275-0500
TX: TRANSMIT ■- (BLACK)
RX: RECEIVE □- (RED)

| | | |


260-0055 STC1-4400
DC12v FAN ASSY MAIN BD BASE
J10P
837-12764
SOUND BD STCC
NH6P
NH5P
+5DC 15A
+12DC 3A
TITAN POWER
SUPPLY
STVV-00045
NH7P
AUDIO MIX BOARD
839-0542
834-12783
ROM BD STCC TWIN
STC-20001,
STC-21001
ASSY MAIN
BASE 1P(2P)
2601-0011-02
AC 120V FAN
3901-5538-30EX
FL 30W
STC-0210
ASSY BILLBOARD UPPER
RAL-0230
LAMP UNIT
838-11650-07
PWR AMP
INY TWIN
WELLS 25
CLR MDN
25K5191
STC-10001,
STC-11001
STC-1650
ASSY WOOFER
130-5160
SUB WOOFER
4 OHM 30W
130-5159
GULL-BOX SPEAKER
8 OHM 5W
STC-12001
ASSY CONTROL PANEL
STC-10001,
STC-11001
ASSY COCKPIT
1P(2P)
STC-4500
ASSY ELEC BASE
838-11966
MOTOR DRIVE BD
INY-4600
ASSY DRIVE CONTROL BD
TO (2/2)
STC-4400
ASSY MAIN
BD BASE
839-0818
FLT BD B-CRX INY
833-12779
GAME BD STCC DX
834-12780
GAME BD STCC DX
837-12469
MAIN BD C-CRX COM
837-12781
COMM BD STCC
610-0383
ASSY HANDLE
MECHA W/MOTOR
DYN-1300
ASSY ACCEL & BRAKE
STC-20001,
STC-21001
ASSY MAIN
BASE 1P(2P)
TO (2/2)
STC-00001
TOP ASSY
STCC TWIN
STC-10001/11001
ASSY COCKPIT 1P(2P)
STC-12001
ASSY CONTROL PANEL
6100-0384
UP/DOWN
SHIFTER
STC-1250
ASSY VIRTUAL BUTTON
TO RIGHT SIDE
TO BASE
MONITOR
BILLBOARD
FCC CAGE
SSR
RELAY BD
RX
TX

| | | |

SEGA™

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415-802-1754 fax