

# LASER GRAND PRIX™



**SERVICE INSTRUCTIONS  
AND PARTS CATALOG**



**TAITO CORPORATION**

## PREFACE

When setting up this "Laser Grand Prix", never fail to read the Section 2 (Notes for Setting Place) and the Section 3 (Notes for Handling) of this manual.

The setting work includes the connection of the Cabinets, the setting of the Player, the setting of the Disc, and the attaching of the Display Panel.

Again, when setting up this game, carefully read the handling explanation and the stickers attached on the Cabinet.

### Specifications:

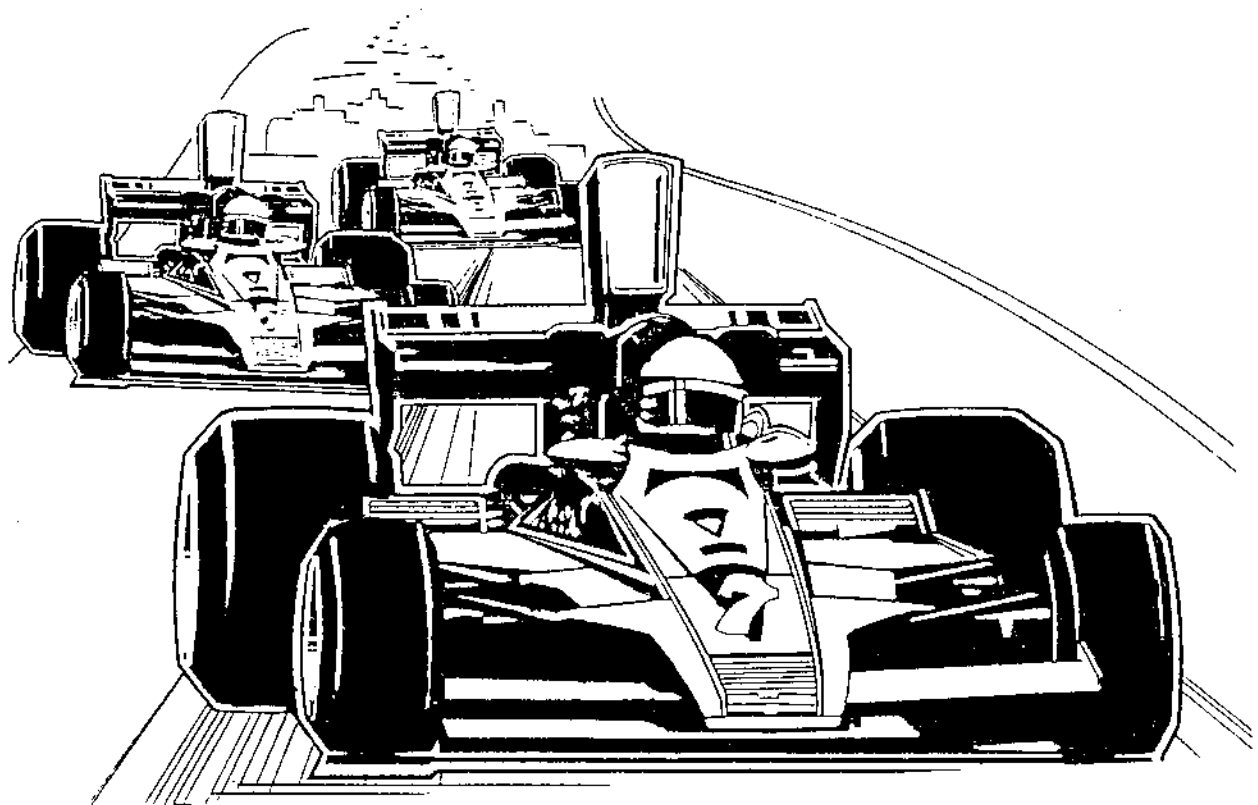
- 1) Power Source  
100 VAC (50/60 Hz)
- 2) Power Consumption  
230 W
- 3) Play Pricing  
1 coin - 1 play (adjustable)
- 4) Dimensions of the Cabinet Assy  
750 Width x 2,306 Depth x 1,813 Height (mm)
- 5) Weight  
Main Cabinet ..... 126 Kg  
Seat Cabinet ..... 77.4 Kg  
Player ..... 24.3 Kg  
Monitor ..... 22.5 Kg

(The Player and the Monitor are included in the Cabinet.)

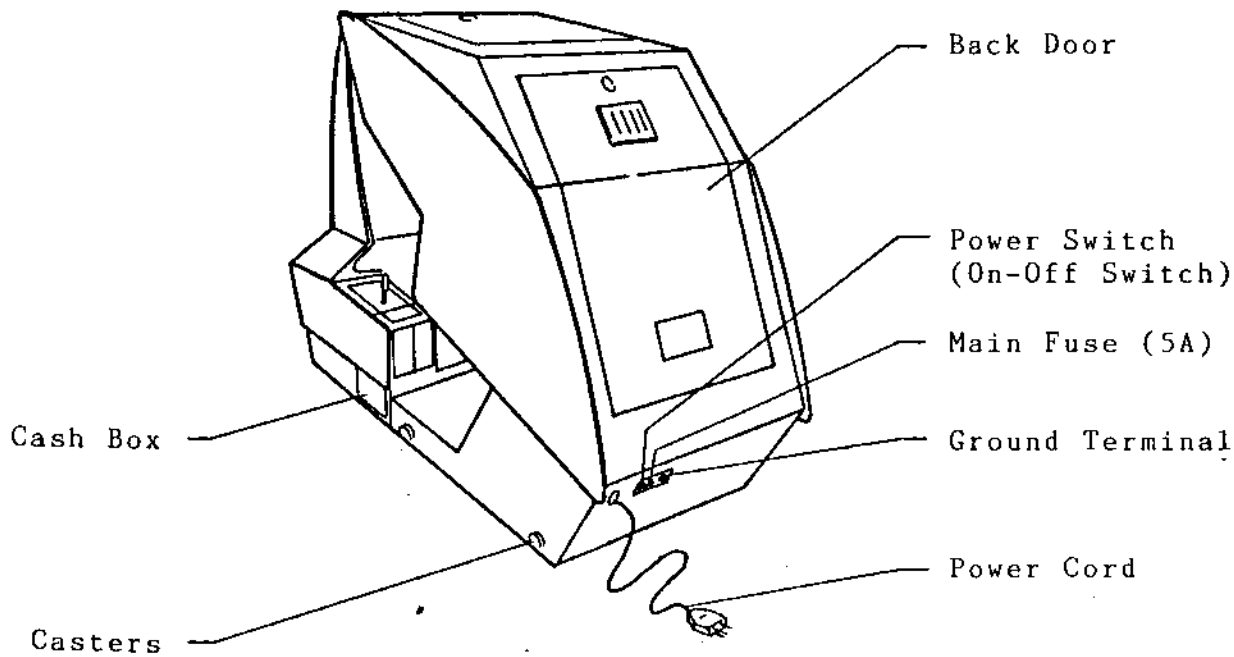
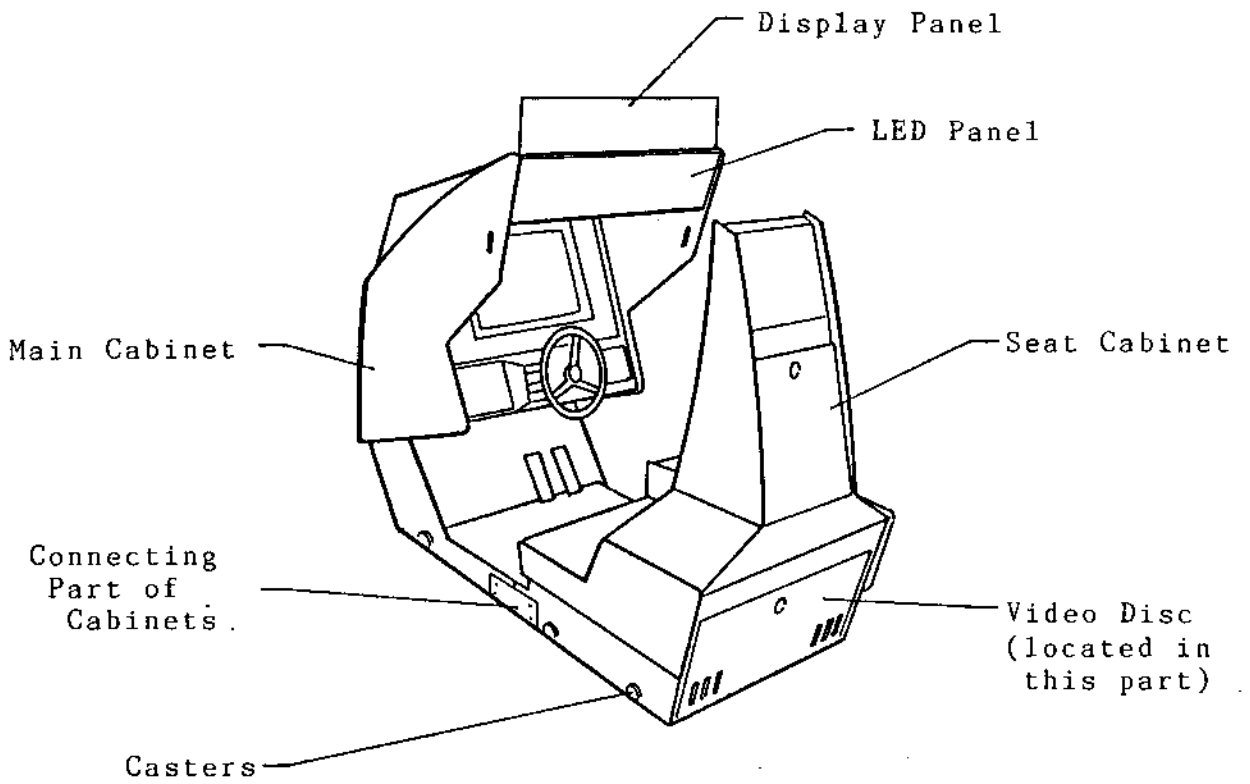
## CONTENTS

1. Name of Part .....	2
2. Notes for Setting Place .....	5
3. Notes for Handling .....	6
4. Daily Safety .....	7
5. Connection of the Main Cabinet and the Seat Cabinet ....	8
6. How to set the Player and the Disc .....	10
6-1. Opening and Closing of the Dust Cover .....	10
6-2. Sipping for the Player and the Lens Cap .....	11
6-3. How to handle the Disc .....	11
6-4. Attachment and Detachment of the Disc .....	12
6-5. How to connect the Player Harnesses .....	13
7. How to attach the Display Panel .....	15
8. Playing Instructions .....	16
9. Adjustment for the Switching Regulator .....	18
10. Adjustment for the PCB's .....	20
11. Adjustment for the Color Display Monitor .....	24
12. Daily Maintenance .....	27
12-1. Opening of the Shift Lever and the Rejector .....	27
12-2. Detaching of the Rejector .....	27
12-3. Exchange and Adjustment of the Coin Switch .....	28
12-4. Exchange and Adjustment of the Shift Lever Switch ...	30
12-5. How to detach the Pedal Box .....	31
12-6. Exchange and Adjustment of the Brake Pedal Switch ...	31
12-7. Exchange and Adjustment of the Accelerator Pot .....	32
12-8. Opening of the Dash Board Panel .....	33
12-9. Exchange of the Sensor PCB Assy .....	33
12-10. Cleaning of the Disc and the Filter .....	34
13. Parts Catalog .....	35
14. Wiring Diagram	

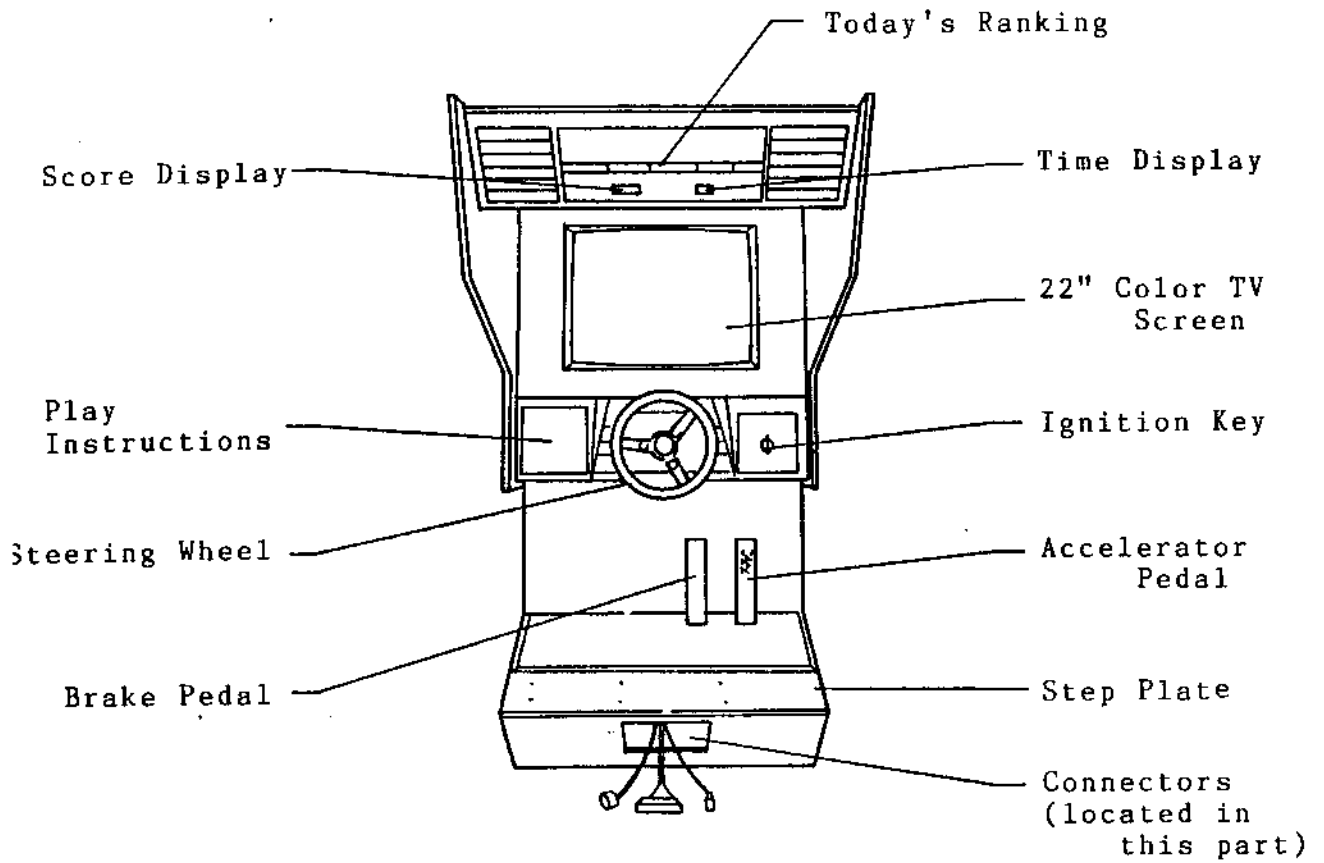
# SERVICE INSTRUCTIONS



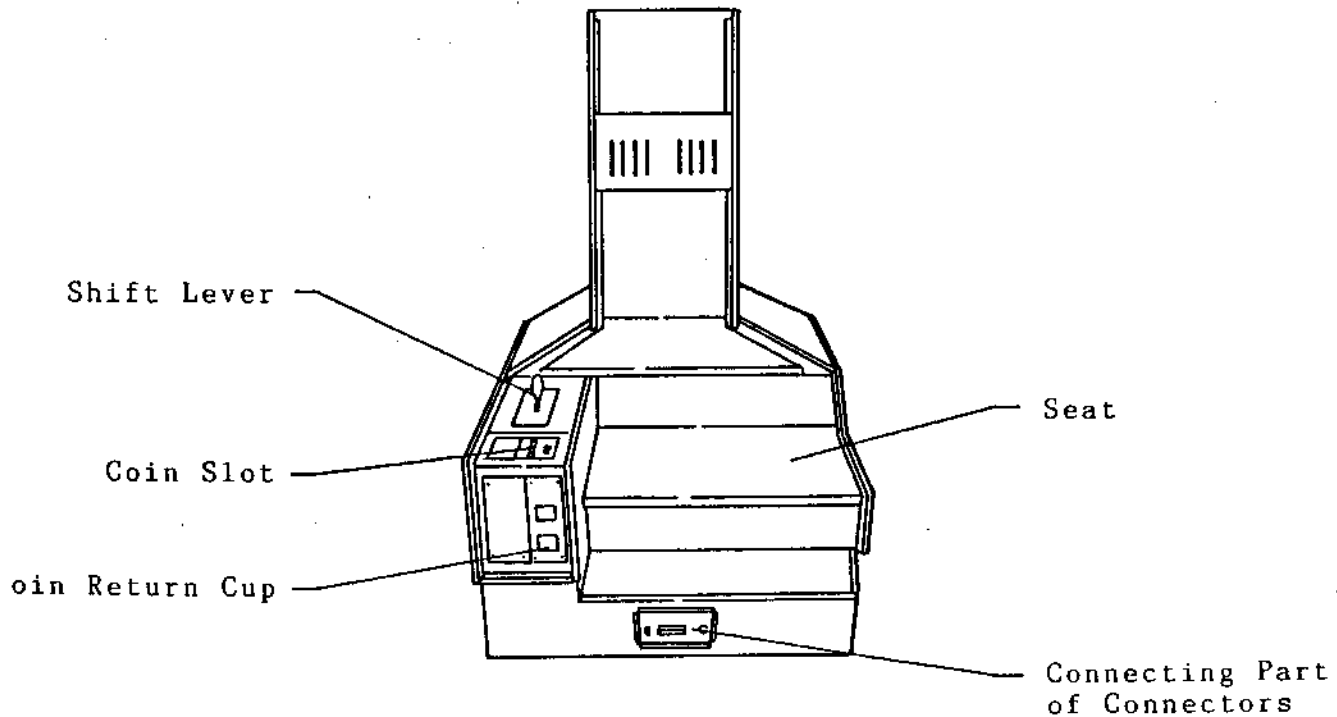
. Name of Part



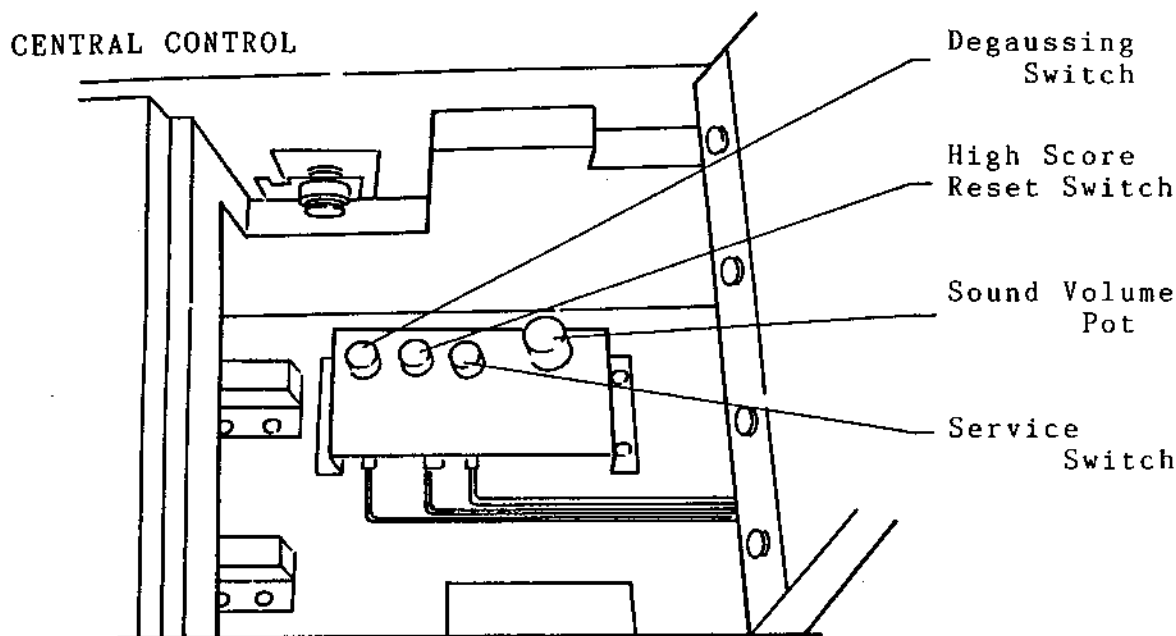
(Part of Main Cabinet)



(Part of Seat Cabinet)



(Switches in the Shift Lever)



\* Central Control

o Degaussing Switch

As this game uses the color Video Monitor, when the machine is set up or transported, color distortion may happen.

In such a case, push the Degaussing Switch. In case of using this Switch continuously, use it at 10-minute intervals.

o High Score Reset Switch

When this Switch is pushed, the today's ranking and high score display are reset to "0".

o Sound Volume Pot

As a rotary switch is used, the sound volume can be controlled in 4 steps. Adjust it according to the location.

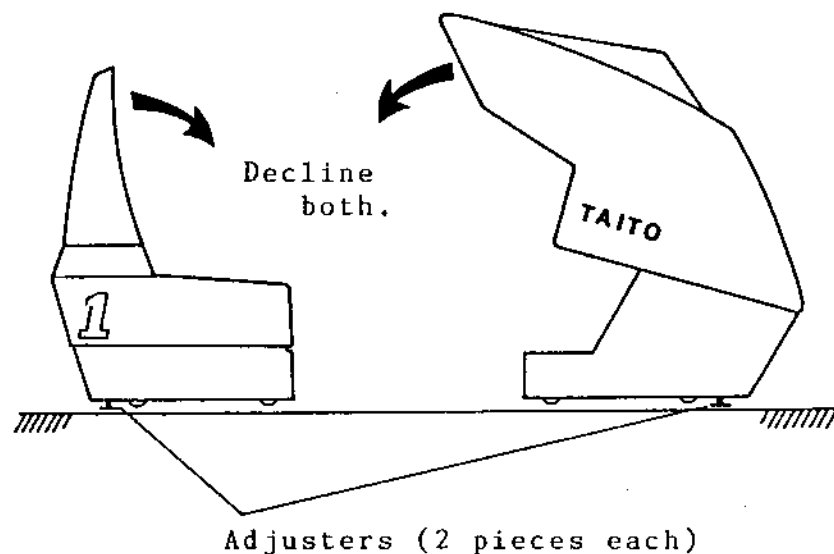
If further adjustments are needed, refer to the section for the adjustment of the PCB's.

o Service Switch

By pushing this Switch, the number of credits can be increased without working the Counter.

### Notes for Setting Place .

- o " Laser Grand Prix " is for indoor use.  
Install the machine indoors only.
  - o Install the machine on a flat-surfaced floor and provide suitable space around the machine.
  - o Do not install the machine in location without vibrations.
  - o Do not install the machine in location with exposure to direct sunlight or excessive heat in order to prevent the unit from rising internal temperature. Also, do not install the machine in humid dusty places.  
(The location room temperature should be less than 30 degree C.)
  - o Do not install the machine in dangerous places viewed from the angle of disaster prevention (such as emergency exit and fire alarm).
- 
- \* When the setting place is decided, adjust the feight of the both Cabinets by declining them and by using each 2 pieces of the adjusters as shown below.
  - \* The connection between the Main Cabinet and the Seat Cabinet should be done after doing the above adjustment.

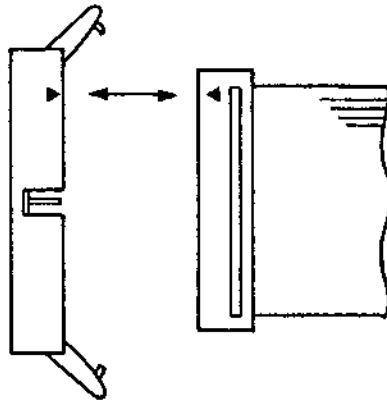




## Notes for Handling

- o As this game uses the color Video Monitor and the Video Disc Player, avoid rough handling in transportation.
- o When the Disc is set into the Player, do it in the location.
  
- o After Setting the Disc, if the machine is moved, screw the Shipping Screws without fail. Otherwise, the Disc may be damaged or the Player may become defective.
- o When the Player itself is moved, never fail to do the shipping for it.
- o The Ground Terminal of the machine should be connected to the ground.
- o The parts of the machine may be loosened during transportation. Therefore, check whether all of the PCB's are correctly mounted and the Connectors are perfectly connected.
- o There are parts with high-voltage in the TV Monitor unit. Attention must be paid so as not to touch them. Also, do not touch the white-paint-locked preadjusted parts.
- o Even if the PCB's are evidently defective, do not attempt to service with ordinary testing equipment, since the internal voltage of the testing equipment may cause damages to the circuitry of the PCB's.
- o Do not disclose the Video Disc Player. There are very dangerous parts in the Player, such as the parts having high-voltages or emitting laser beams.  
Also, do not inspect the inside of the Player, which may cause damages to the parts.
- o If any foreign metal pieces happen to be in the Player, stop operating the Player. Otherwise, they may cause damage to the Player.
- o Never connect or disconnect any of the Connectors for the PCB's while the power is on.

- o When connecting the Flat Cables, pay attention to the connecting direction.



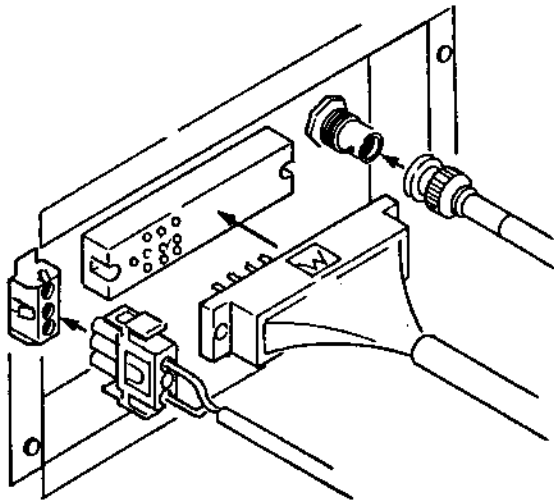
\* After putting the both marks together, connect the Connectors.

- o Only use the specified fuse. If the specified fuse is cut off, turn off the power and stop operating the game.
- o When checking the output voltages, refer to the Wiring Diagram and the adjustment of the Switching Regulator in this manual. If the line voltages are set higher than the specified voltages, it may cause damages to the IC's.
- o If the voltages drop during playing, the screen may stop displaying. In such a case, turn the power off and on again.
- o Do the cleaning of the Disc and the Filter twice a month. Attach them so that no gap exists.

#### . Daily Safety

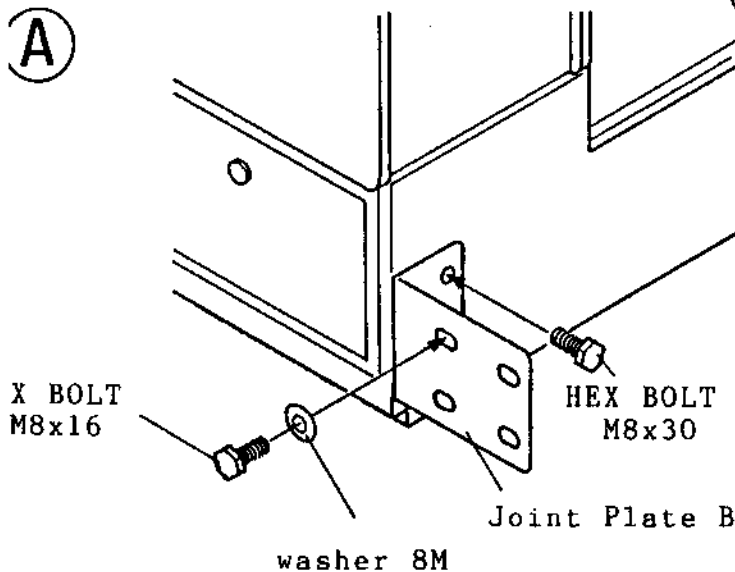
- o Although this game is designed based on our safety standard, any abnormal things may happen in a long period of time. Therefore, it is necessary to take measures to insure it is daily safety.

. Connection of the Main Cabinet and the Seat Cabinet  
 (Do this connection after adjusting the adjusters.)



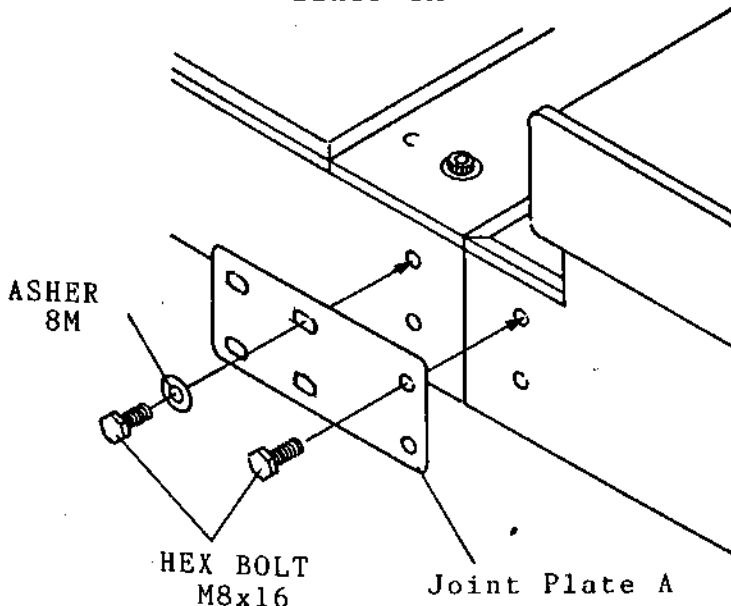
- o Pull out the three connectors from the Main Cabinet.
- o Completely connect the three Connectors into the Seat Cabinet.
- \* There are two kinds of connecting methods. Connect the Connectors according to the seat position.

(A)



(A) : Seat Position  
 (for 160-cm height person)

- o Detach the Joint Plates (A and B) which are temporarily attached to the both sides of the Main Cabinet, and connect the both Cabinets by using those Joint Plates and the Bolts (M8x16 and M8x30).
- o First, attach the two kinds of the Joint Plates to the Seat Cabinet by using the Bolts.



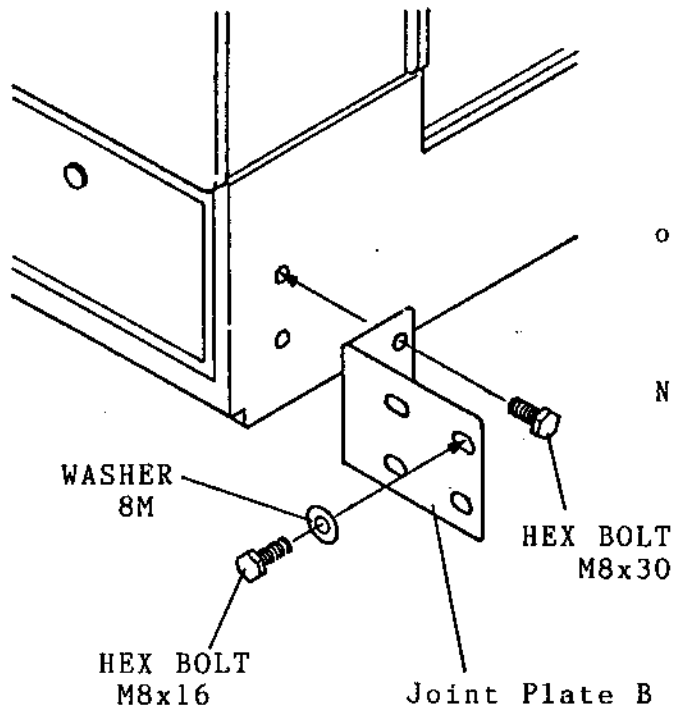
- o The Joint Plate (B) is to be attached to the side of the Cash Box of Seat Cabinet.

Note: The oval hole side of the Joint Plate (A) is to be placed on the Main Cabinet side.

- o Use the Washers for screwing the Bolts on the Main Cabinet side.

Ⓑ : Seat Position (for 170-cm height person)

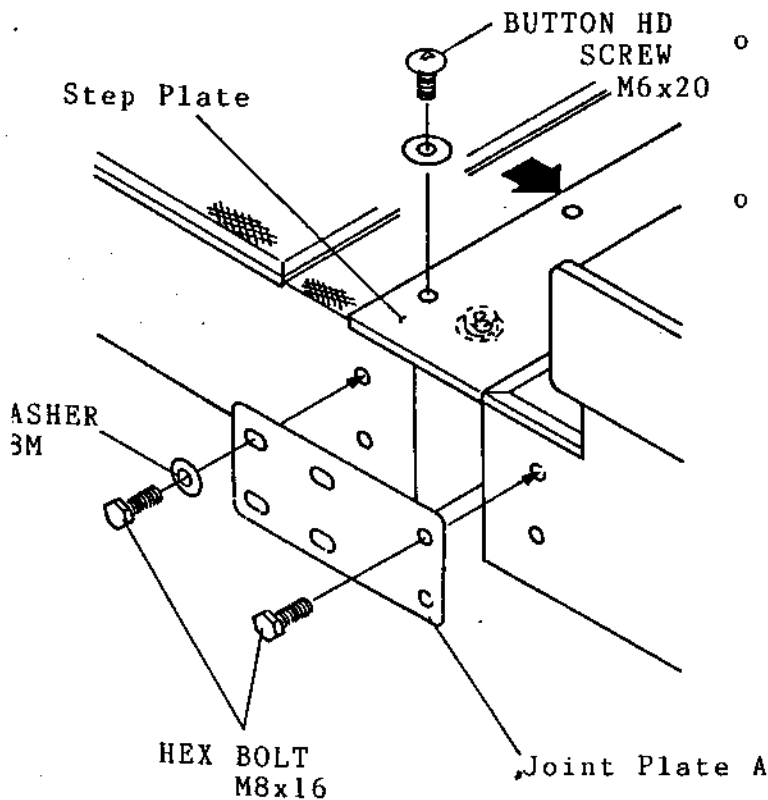
Ⓑ



o Detach the Joint Plates (A and B) which are temporarily attached to the both sides of the Main Cabinet, and connect the both Cabinets by using those Joint Plates and the Bolts.

o First, attach the two kinds of the Joint Plats to the Seat Cabinet.

Note: The oval holes of the Joint Plates (A) is to be placed on the Main Cabinet side.

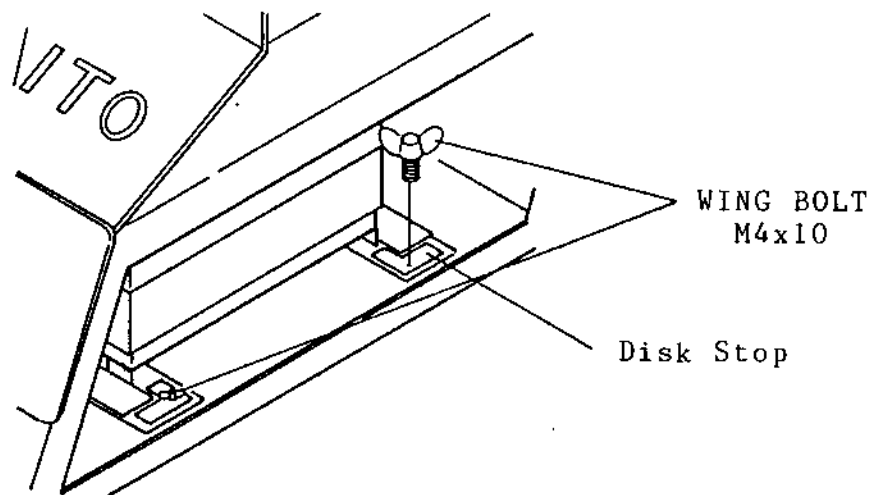


o Use the Washers for screwing the Bolts on the Main Cabinet side.

o Detach 4 pieces of the Button Hd Screw (M6x20) which fix the Step Plate. Then, slide the Step Plate to the Seat side, and fix it again by using the same Bolts.

## How to set the Player and the Disc

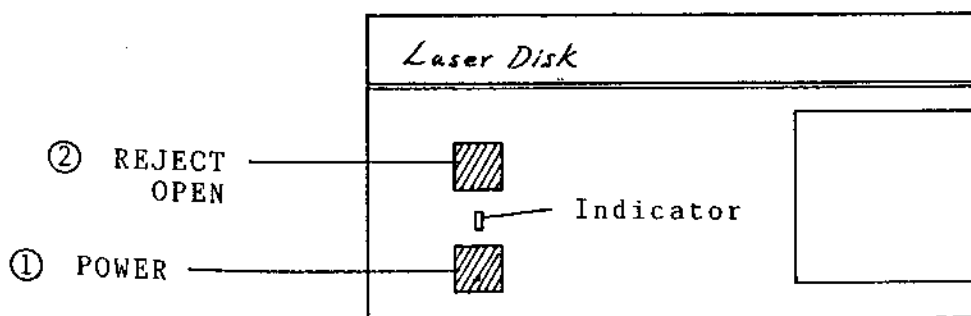
- o The Player and the Disc are attached to the inside of the Back Door of the Seat Cabinet. Open the Back Door, and remove 2 pieces of the Wing Bolts (M4x10) which fix the Player, then pull out the Player and the Disc from the inside of the Cabinet.



### 6-1. Opening and Closing of the Dust Cover

- o Plug the Power Plug of the Player into the AC-Socket located of the Seat Cabinet, and turn the Power Switch on.
- o Push the Power Switch ① ("POWER") of the Player.  
(The Indicator located above the Switch is lit.)
- o After pushing the Reject Open Button ② ("REJECT OPEN"), the Dust Cover can be open by your hand.

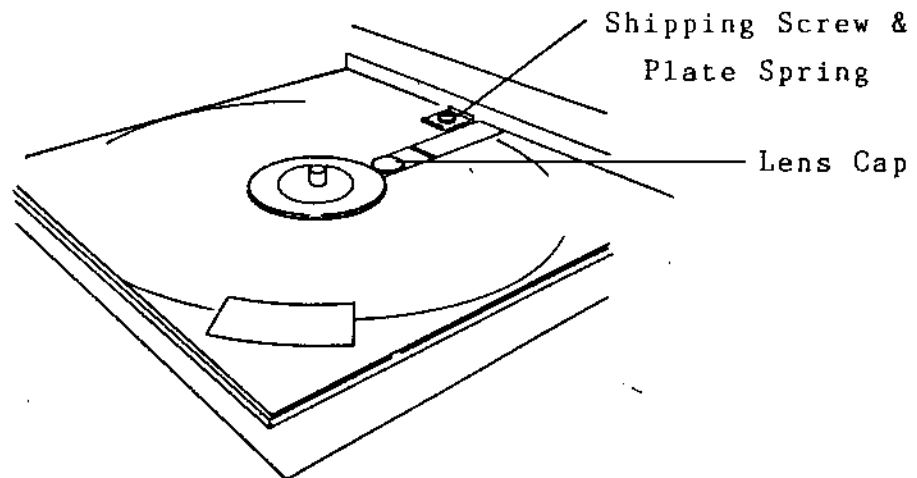
Caution: Do not use any other plugs than the Power Plug of the Player.



## 6-2. Shipping for the Player and the Lens Cap

- o In order to protect the inner parts during transportation, the shipping protection has been done on the Player itself and the Cap has been put on the Lens.  
Before setting the Disc, never fail to remove the Shipping Screw, the Plate Spring and the Cap.
- o Keep the removed Shipping Screw, Plate Spring and Cap for retransportation.

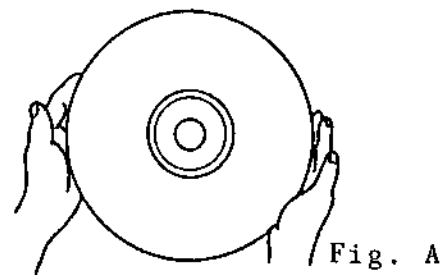
Note: In case that the Player is retransported, use the same Shipping Screw, Plate Spring and Lens Cap without fail.



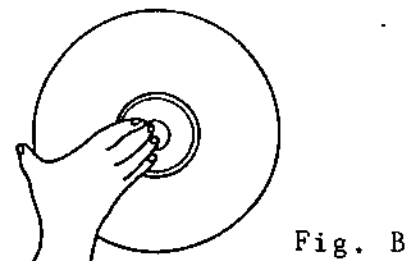
## 6-3. How to handle the Disc

- o When handling the Disc, handle it as the same manner as that for stereo record discs. When holding the Disc, do not touch the signal-recorded surface. Hold it as shown below.

In case of holding the Disc by both hands:



In case of holding the Disc by single hand:



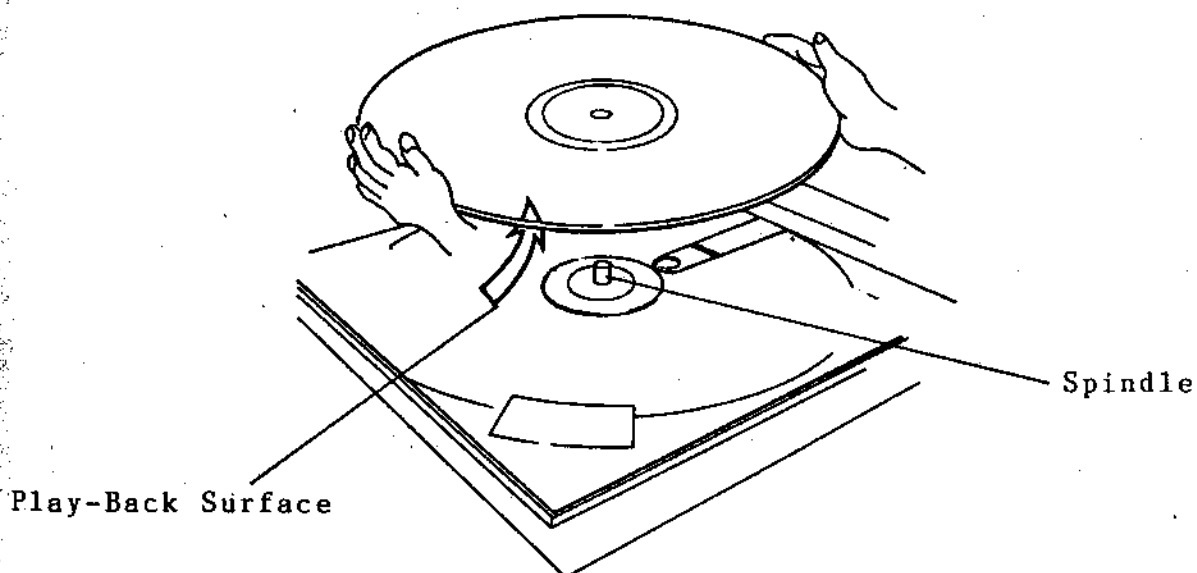
#### 4. Attachment and Detachment of the Disc

When attaching the Disc, set it on the Spindle with facing the play-back surface (the recorded surface) up.

Note: The Shipping Screw, the Plate Spring and the Lens Cap should be removed.

After setting the Disc, close the Dust Cover, turn the power of the Cabinet off, and refer to the section for the connection of the Player Harness.

(The Power Switch "POWER" of the Player is continuously "ON" in this procedure.)



Note for detaching the Disc after setting

When the Disc is detached at the time of game-over for cleaning, turn the power of the Cabinet off without fail. Also, after removing the Harness connected to the Player, then pull out the Player from the Cabinet, and the Dust Cover.

## 5. How to connect the Player Harnesses

Note: When connecting the Harnesses ①, ② and ③, turn the power of the Cabinet off without fail.

The connection should be made after setting in the Guide.

For the above, the setting of the Player is completed.

By closing the Back Door and turning the power of the Cabinet on, the game can be played.

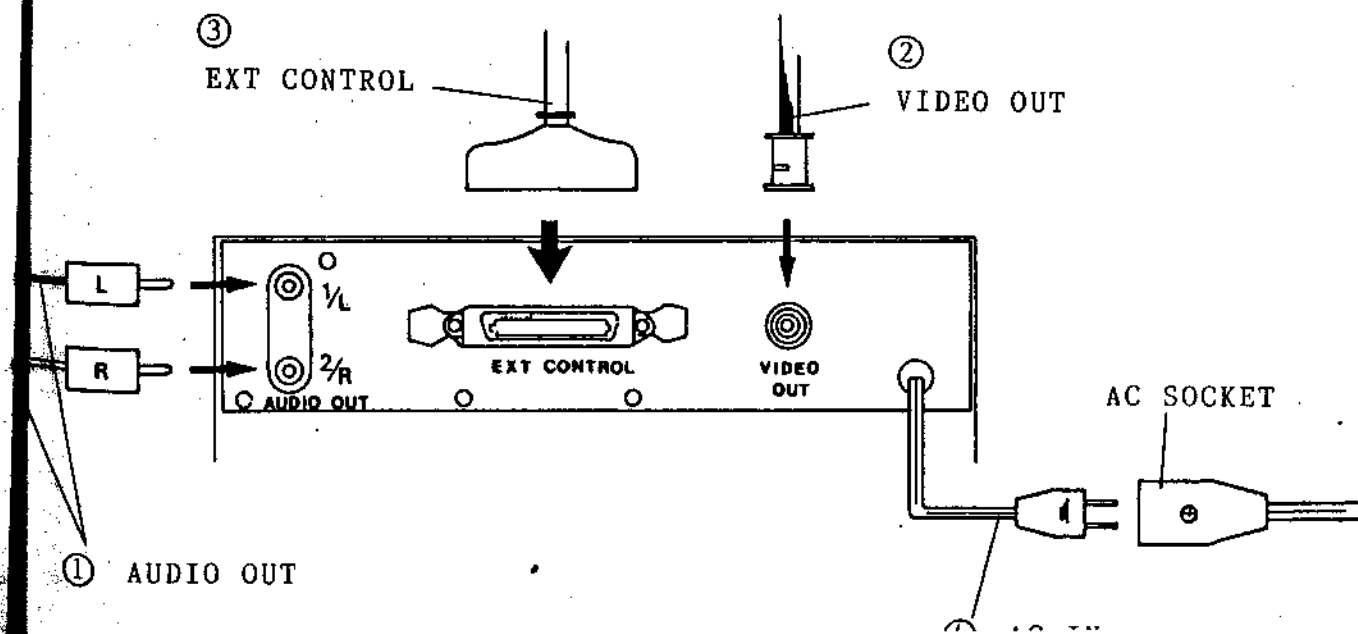
When detaching the Disc, turn the power of the cabinet off and unplug the harnesses ①, ② and ③.

1 : AUDIO OUT (Output Terminal of Audio Signals)

2 : VIDEO OUT (Output Terminal of Video Signals)

3 : EXT CONTROL (Connector used in case that the function of the Player is computer-controlled.)

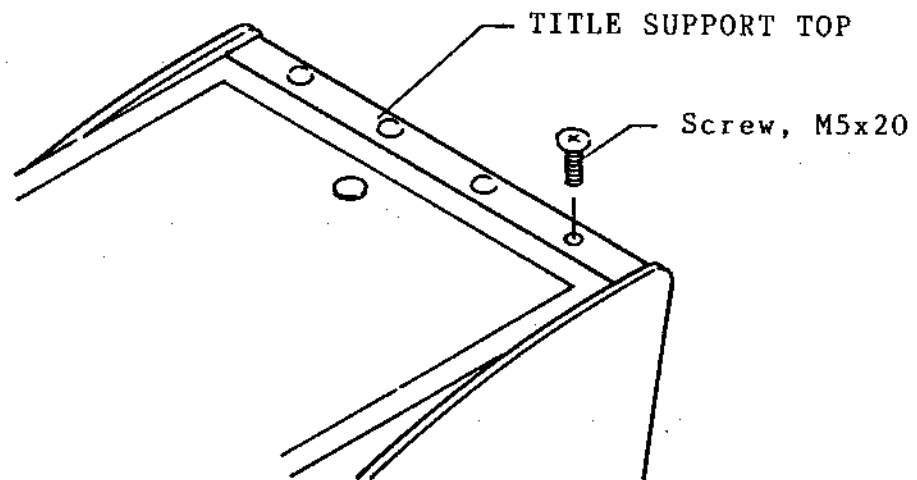
4 : AC-IN (Power Input Plug of 100 VAC)



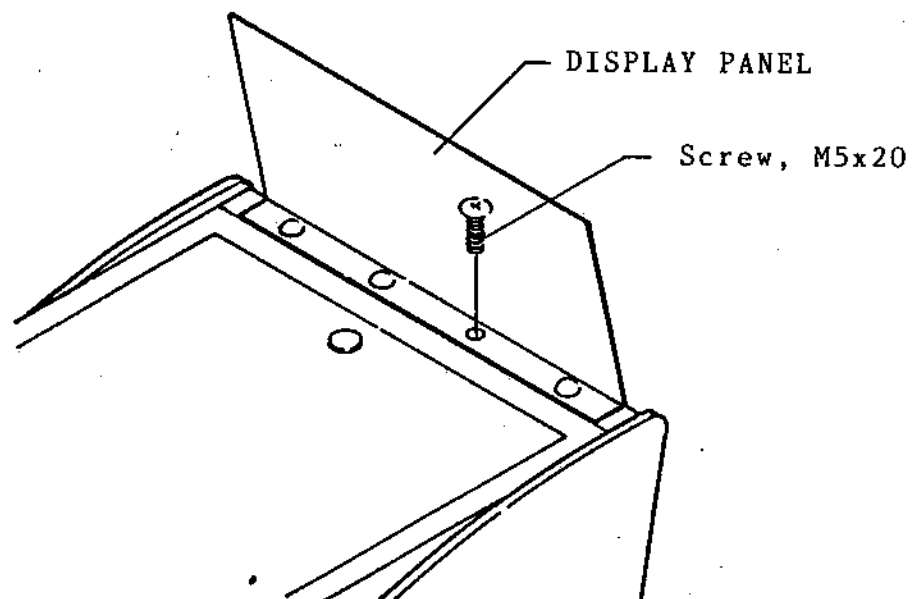


## How to attach the Display Panel

- ① Remove 4 pieces of the screws (M5x20) which fix the Title Support Top for the LED Panel of the Main Cabinet.



- ② Put the Display Panel on the Title Support Top, and fix it by using the same screws (4 pieces of M5x20).



## Playing Instructions

- \* This game is the Grand Prix Race played on the Fuji Speed Way.
- o One - player game
- o 1 coin - 1 play (Adjustable)
- o Insert coin, and turn the Ignition Key.
- o Bring the engine to the maximum torque while in the "NEUTRAL".
- o When the sign says "GO", shift into the "LOW" gear and start racing.  
(If you shift into the "LOW" gear before starting, a penalty is imposed on you.)

### Drag Race: 400-meter Straight Course

- o Your starting position for the GP-Race is determined on your lap time.

GP-Race: If you complete driving within the set time you can challenge the next round. If you clear the fourth round, you can challenge the Spark Race.  
(The set time is adjustable.)

Spark Race: If you complete 2 rounds of this race within the set time, you can go to the glory Fantastic Race.  
(The set time is adjustable.)

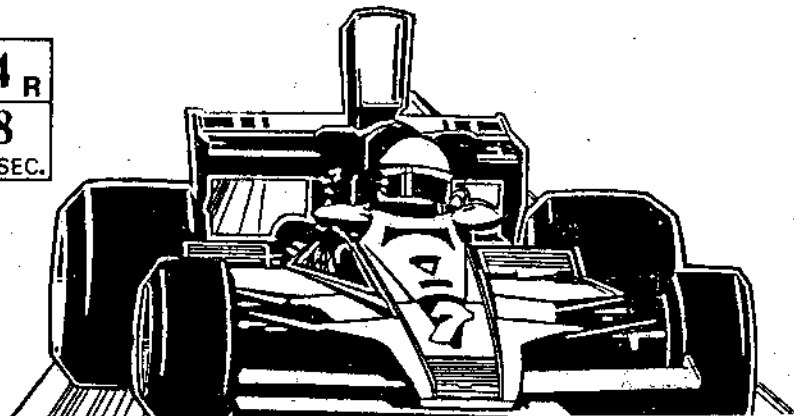
- o The game ends when the time reaches "00".

### GP - RACE

1 <sub>R</sub>	2 <sub>R</sub>	3 <sub>R</sub>	4 <sub>R</sub>
8	60	58	58
SEC.	SEC.	SEC.	SEC.

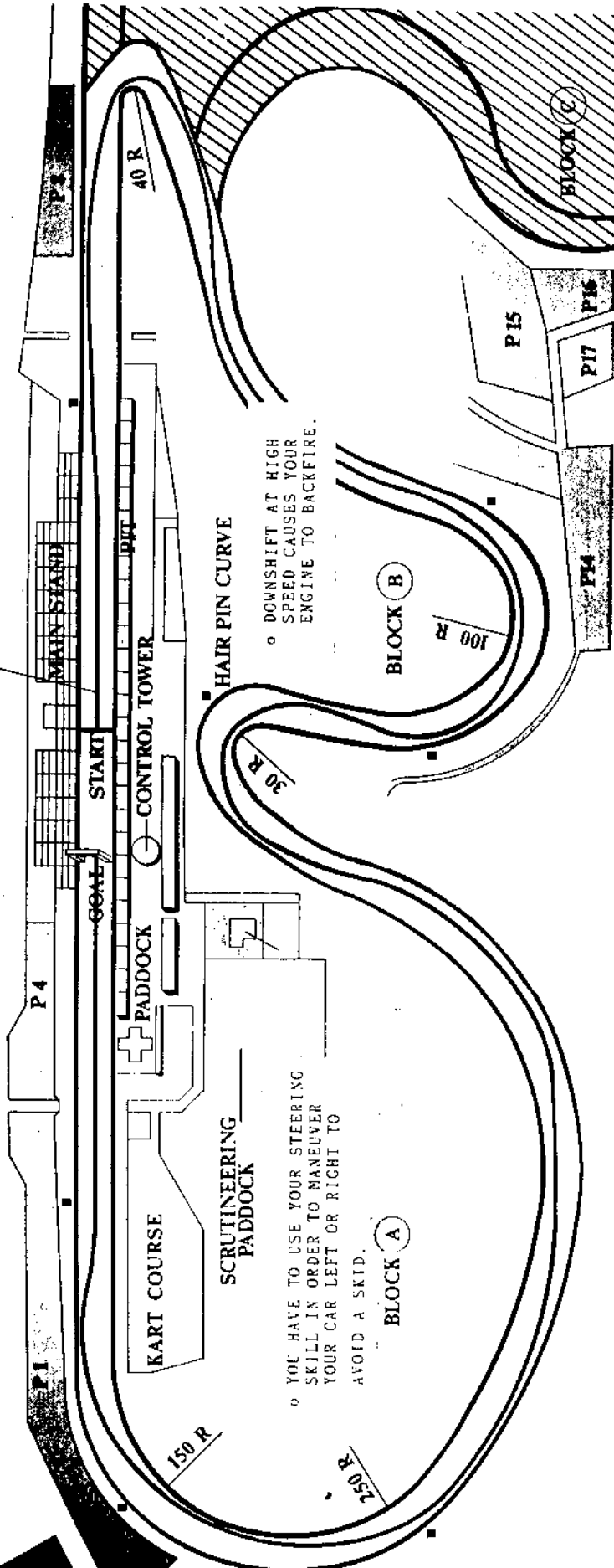
R: Round)

SPARK RACE	
44	SEC.



OVERALL VIEW OF THE COURSE AND DRIVING POINTS

THE PROFESSIONAL DRIVER'S RECORD COURSE



YOU HAVE TO USE YOUR STEERING SKILL IN ORDER TO MANUEVER YOUR CAR LEFT OR RIGHT TO AVOID A SKID.

BLOCK A

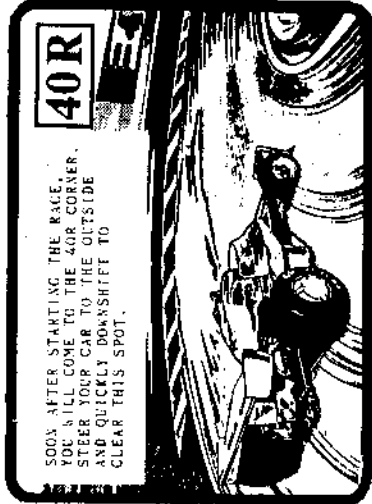
DOWNSHIFT AT HIGH SPEED CAUSES YOUR ENGINE TO BACKFIRE.

BLOCK B

BLOCK C



SHOW OFF YOUR RACING-STEERING SKILL ON THE JOB HAIR-PIN CURVE. TO SAVE WAST TIME, TAKE THE CURVE SLOWLY AND ACCELERATE OUT.



SOON AFTER STARTING THE RACE, YOU WILL COME TO THE 40R CORNER. STEER YOUR CAR TO THE OUTSIDE AND QUICKLY DOWNSHIFT TO CLEAR THIS SPOT.

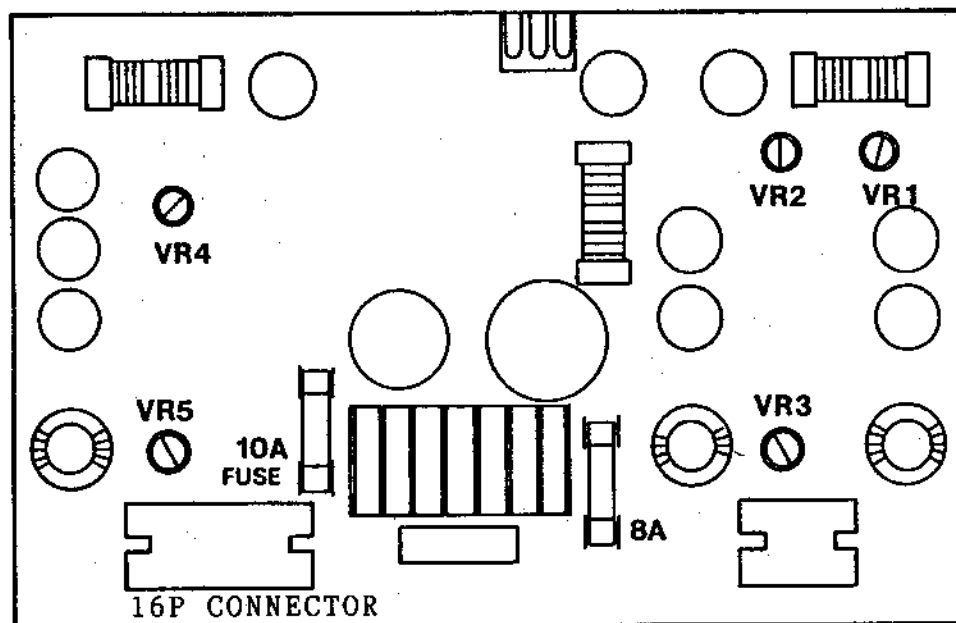
\* MASTER THE PROFESSIONAL DRIVER'S COURSE TO OBTAIN HIGH SCORE.

## Adjustment of the Switching Regulator

(The Switching Regulator is located in the Main Cabinet.)

To set the voltages higher than the standard values will cause damage to the IC's. (Refer to the section for the sensing function.)

When checking the output voltages, refer to the Wiring Diagram in this manual. Adjust the Pots by using a small (-)-type driver.



- VR3 .... The Pot for adjusting the 12 VDC line.  
(adjustable  $\pm 5\%$ )  
Set at 12V.
- VR5 .... The Pot for adjusting the 5 VDC line.  
(adjustable  $\pm 5\%$ )  
Set at 5V.

Note: The 13 VDC is fixed, and there is no pot for adjusting this line. Do not adjust VR1, VR2 and VR4. These Pots are for adjusting the logic circuitry. Careless adjustment on these Pots may cause damage to the circuitry.

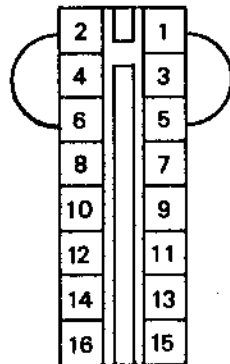
## Sensing Function

(This function is to be used when the output voltages are checked in no load condition.)

The Switching Regulator used in this game has the sensing function.

This function is the function to keep the +5V constant even if the current on the load side (the Main PCB side) of the +5V fluctuates. For this, the sensing function will not work in no load condition (i.e. the Main PCB is removed), and the all circuitry will stop outputting voltages. Therefore, when the output voltages are checked in no load condition, the following work is needed.

### < Switching 16-P Nylon Connector >



Jumper Wires:

Pin 1 — Pin 5

Pin 2 — Pin 6

(Jumper on the back side of the connector on the solder side.)

Note:

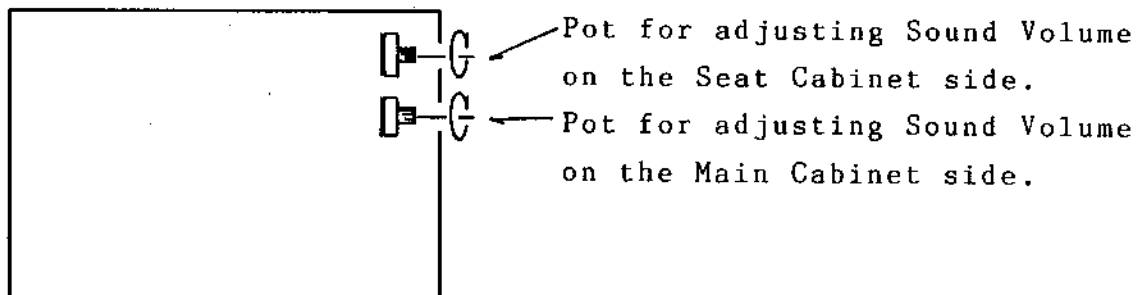
After checking the output voltages, remove the jumper wires without fail. Leaving the jumper wires there will cause malfunction of the circuitry because of the over-voltage prevention circuitry.

Do not turn the Power Switch on and off instantaneously. Doing so will cause repeated rush current occurred and will cause damage to the switching transistors.

## Adjustment of Game PCB

(The PCBs are located in the Main Cabinet.)

### o Adjustment of Sounds



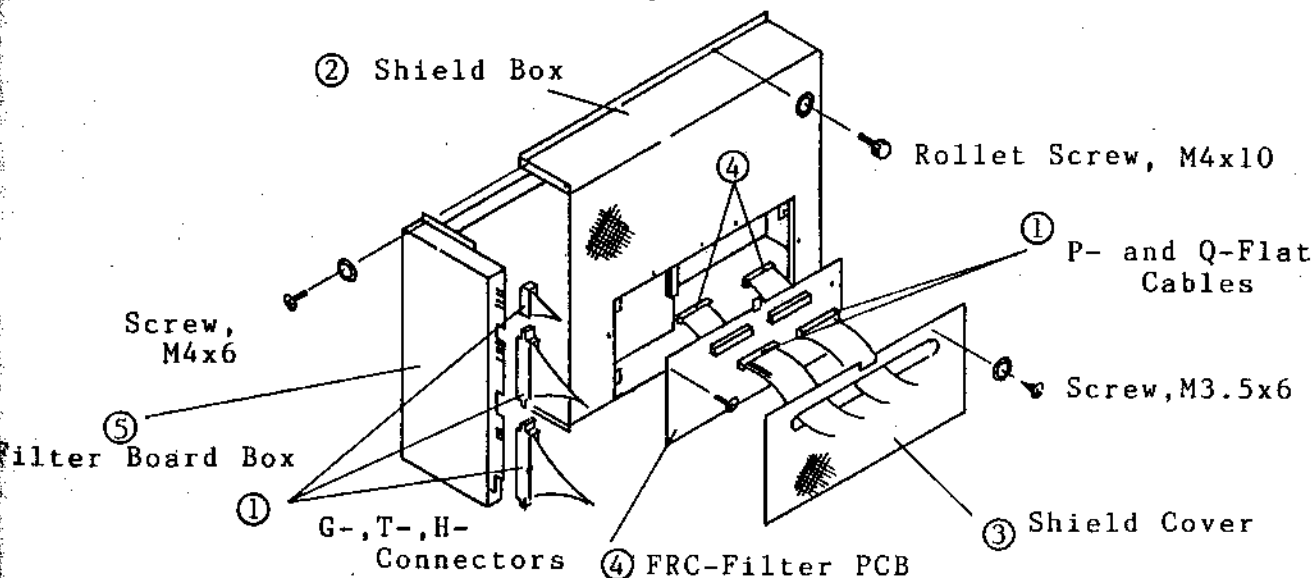
### o Change-over of DIP Switch Settings

The DIP Switches are mounted on the PCBs located in the Shield Case. When changing-over the settings of the DIP Switches, turn the Power Switch off, and take out the Shield Case from the Cabinet.

#### Procedure:

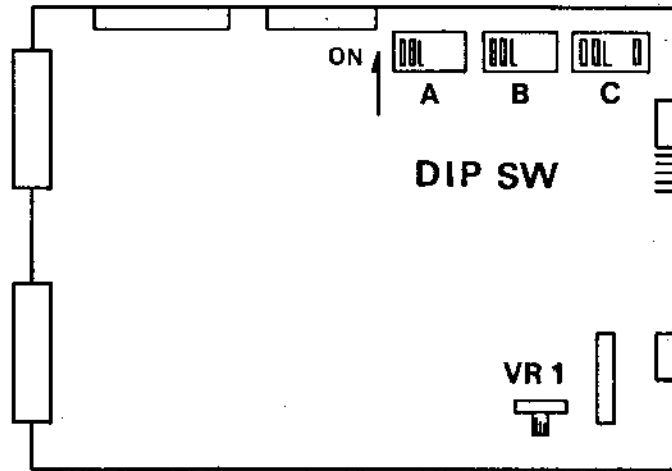
- ① Unplug the G-, T-, and H-Connectors and the P- and Q-Flat Cables.
- ② Take out the Shield Box from the Cabinet.
- ③ Open the Shield Cover.
- ④ Detach the FRC-Filter PCB, and Unplug the P- and Q-Flat Cables connected to the Game PCB.
- ⑤ After removing the Filter Board Box, the Game PCB can be detached from the Shield Case.

When attaching do the above procedure in the reverse order.



The DIP Switches are mounted on the PCBs located in the Shield Case.

(The settings of the DIP Switch can be done only after removing the Shield Case.)



Note: Do not turn the Pot, VR1.

This Pot is for adjusting the synchronization, and preset at the factory. Caseless turning this Pot will cause defect to video images.

o Settings of DIP Switch A: Change-over of Time Settings

Setting	Position	1	2	3	4	5	6	7	8	
GP-Race (1st Round)	* 68 Sec.	ON	ON							
	66 Sec.	OFF	ON							
	64 Sec.	ON	OFF							
	62 Sec.	OFF	OFF							
GP-Race (2nd Round)	62 Sec.			ON	ON					
	* 60 Sec.			OFF	ON					
	58 Sec.			ON	OFF					
	56 Sec.			OFF	OFF					
GP-Race (3rd and 4th Rounds)	60 Sec.					ON	ON			
	* 58 Sec.					OFF	ON			
	56 Sec.					ON	OFF			
	54 Sec.					OFF	OFF			
Spark Race	* 44 Sec.							ON	ON	
	42 Sec.							OFF	ON	
	40 Sec.							ON	OFF	
	38 Sec.							OFF	OFF	

(\*): Factory Settings

o Settings of DIP Switch -B: Change-over of Play Pricing

Setting \ Position	1 Way (Left)				2 Ways (Right)				
	1	2	3	4	5	6	7	8	
*1 coin -1 play	ON	ON	ON	ON	ON	ON	ON	ON	
1 coin -2 plays	OFF				OFF				OFF
1 coin -3 plays	ON	ON				ON			
1 coin -4 plays	OFF				OFF	OFF			
1 coin -5 plays	ON	ON	OFF		OFF	ON	ON		OFF
1 coin -6 plays	OFF					OFF			
1 coin -7 plays	ON	OFF	ON				ON		
1 coin -8 plays	OFF		OFF			OFF	OFF		
2 coins-1 play	ON	ON	ON	OFF		ON	ON	ON	
3 coins-1 play	OFF					OFF			OFF
4 coins-1 play	ON	ON					ON		OFF
5 coins-1 play	OFF					OFF	OFF		OFF
6 coins-1 play	ON	ON	OFF		OFF	ON	ON	OFF	
7 coins-1 play	OFF					OFF			OFF
8 coins-1 play	ON	OFF	ON				ON		
9 coins-1 play	OFF		OFF			OFF	OFF		

(\*): Factory Setting

In case of the 2 ways, the coin inputs of the both coin slots will increase credits independently.

(For example: When setting "2 coins - 1 play", if each one coin is dropped into the both coin slots, no credit is increased.)



o Settings of DIP Switch C

Setting		Position	1	4	5	6	8
Free Play	Free Play		ON				
	* Normal Game		OFF				
Coinage Display	Without			ON			
	* With			OFF			
Year Display	Without				ON		
	* With				OFF		
No Hit Detection	No Hit					ON	
	* Normal Game					OFF	
Coin Slot	2 Ways						ON
	* 1 Way						OFF

(\*): Factory Settings

Note: The positions 2, 3 and 7 are not used in this game, and these positions should be set at "OFF".

§ Free Play

The game can be played without inserting coins.

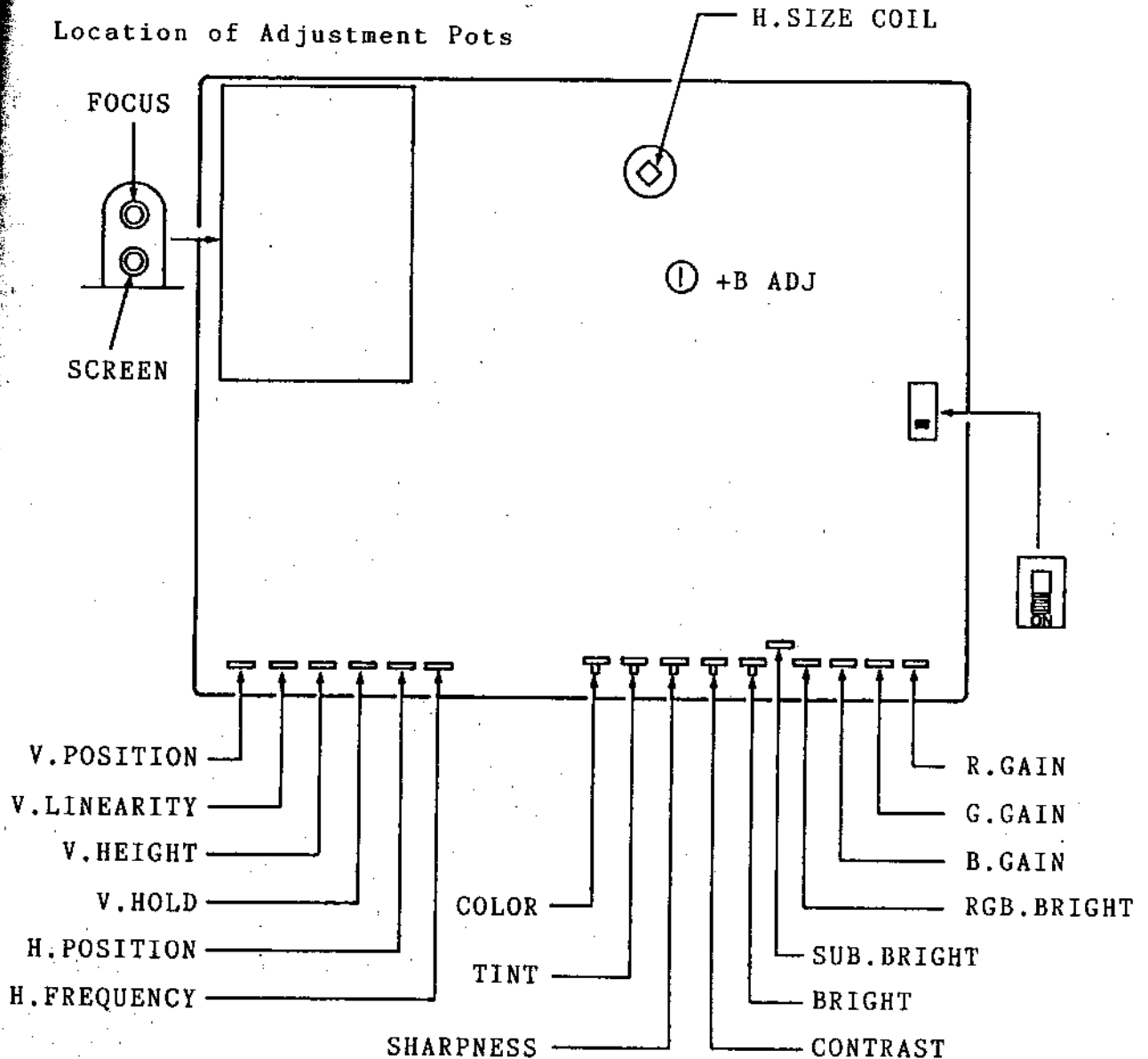
§ No Hit

If the player's car touches the shoulder of the course, the speed of the car is decreased, but if the player's car crashes rival cars, no explosion happens and can proceed to the final game. The time has no relation to this mode.

## Adjustment of Color Display Monitor

This game has the circuitry, in which the NTSC Color images and the RGB input signals are composed by the control signals. This Monitor is a special NTSC color display Monitor.

### Location of Adjustment Pots



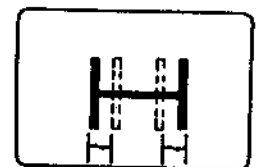
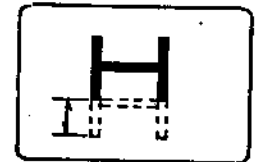
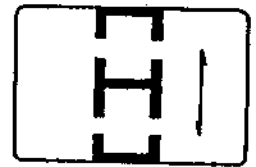
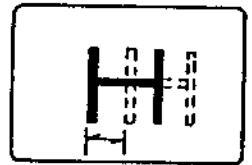
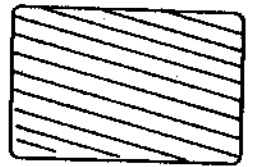
The adjustments have been done at the factory for the best performance, but if necessary, adjust the above Pots by referring the explanation for each adjustment.

Note: Careless adjustment will cause malfunction to the Monitor. Do not touch the white-paint-locked Pots. Also, as the high-voltages exist in the TV Monitor unit, attention must be paid when handling it.

## Explanation for Adjustments

The location of the Adjustment Pots is shown on the previous page.

- o H.FREQUENCY (Horizontal Frequency Adjustment)  
Adjust this Pot, if the horizontal stripes appear on the screen or the screen rolls from left to right.
- o H.POSITION (Horizontal Position Adjustment)  
Adjust this Pot to move the screen left or right for desired positioning.
- o V.HOLD (Vertical Hold Adjustment)  
Adjust this Pot if the screen rolls up or down.
- o V.HEIGHT (Vertical Amplitude Adjustment)  
Adjust this Pot to change the vertical screen size.
- o V.LINEARITY (Vertical Linearity Adjustment)  
Adjust this Pot, if the upper or the lower part of the screen is shrunken.
- o V.POSITION (Vertical Position Adjustment)  
Adjust this Pot to move the screen up or down for desired positioning.
- o H.SIZE COLIL (Horizontal Amplitude Adjustment)  
Adjust this pot to change the horizontal screen size.
- o RGB-GAIN (Logic Screen Image Adjustment)
  - R.GAIN ... for changing red color
  - G.GAIN ... for changing green color
  - B.GAIN ... for changing blue color



o CONTRAST (Player Screen Image Adjustment)

Adjust this Pot to change the contrast of the screen image.

o SHARPNESS (Player Screen Image Adjustment)

Adjust this Pot to control the sharpness of the screen image.

o COLOR (Player Screen Image Adjustment)

Adjust this Pot to control the darkness of the screen image color.

o TINT (Player Screen Image Adjustment)

Adjust this Pot to control the hue of the screen image color.

\* In some cases of setting conditions, the screen color may be distorted. In such a case, use the Degaussing Switch located in the shift lever or a degaussing device.

o +B ADJ

The +B line voltage is set at 106 VDC  $\pm$ 1 VDC.

Normally, Do not adjust this +B line voltage.

o Impedance Switch

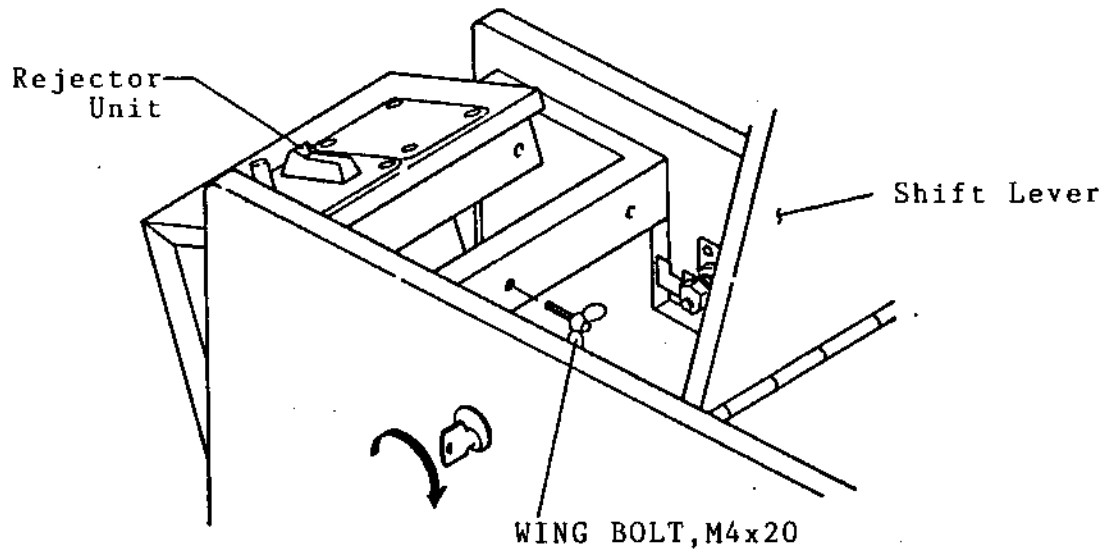
The Impedance Switch is set at 75 Ohm.

Normally, this Switch is set at "ON" position.

## 12. Daily Maintenance

### 12-1. Opening of the Shift Lever Unit and the Rejector Unit

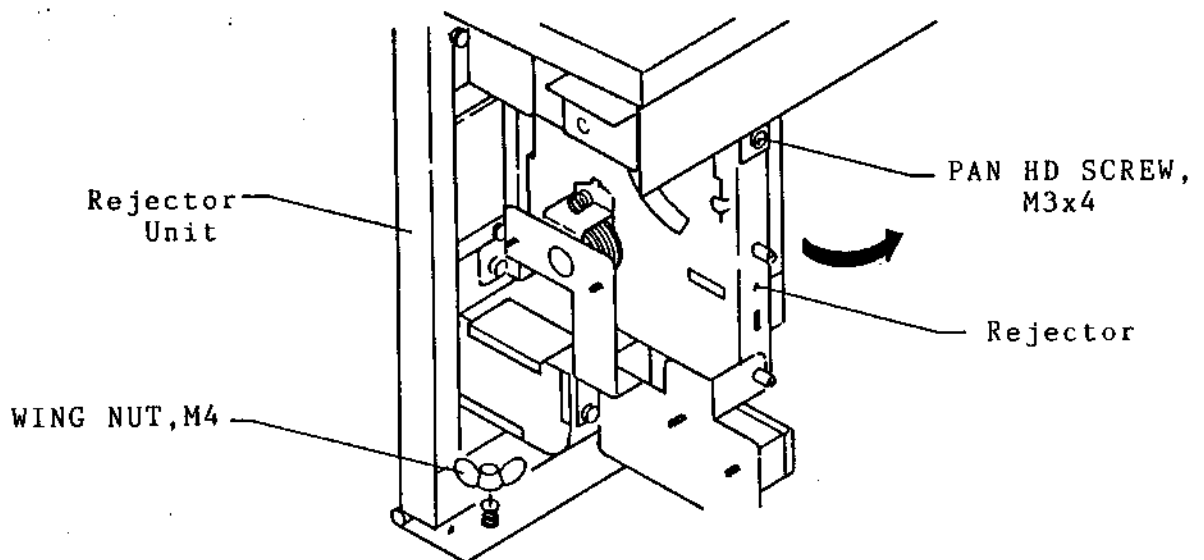
By releasing the both Service Locks, the Shift Lever Unit can be opened. The Rejector Unit can be released by removing 2 pieces of the Wing Bolts (M4x20).



### 12-2. Detachment of the Rejector Unit and the Rejector

By removing 3 pieces of the Wing Nuts (M4), the Rejector Unit can be detached.

The Rejector can be detached by removing the Pan Head Screw (M3x4) and pulling it to the direction shown with the arrow in the following sketch.



### 12-3. Exchange and Adjustment of Coin Switch

\* In case that the Coin Switch does not work (because of the malfunction of the Micro Switch and the Actuator), refer to the following procedure.

#### ① Exchange of the Coin Switch

Remove the Pan Head Screw (M3x25) which fixes the Micro Switch, and detach the Switch from the Holder. And, attach the Switch with the already-properly-adjust Actuator.

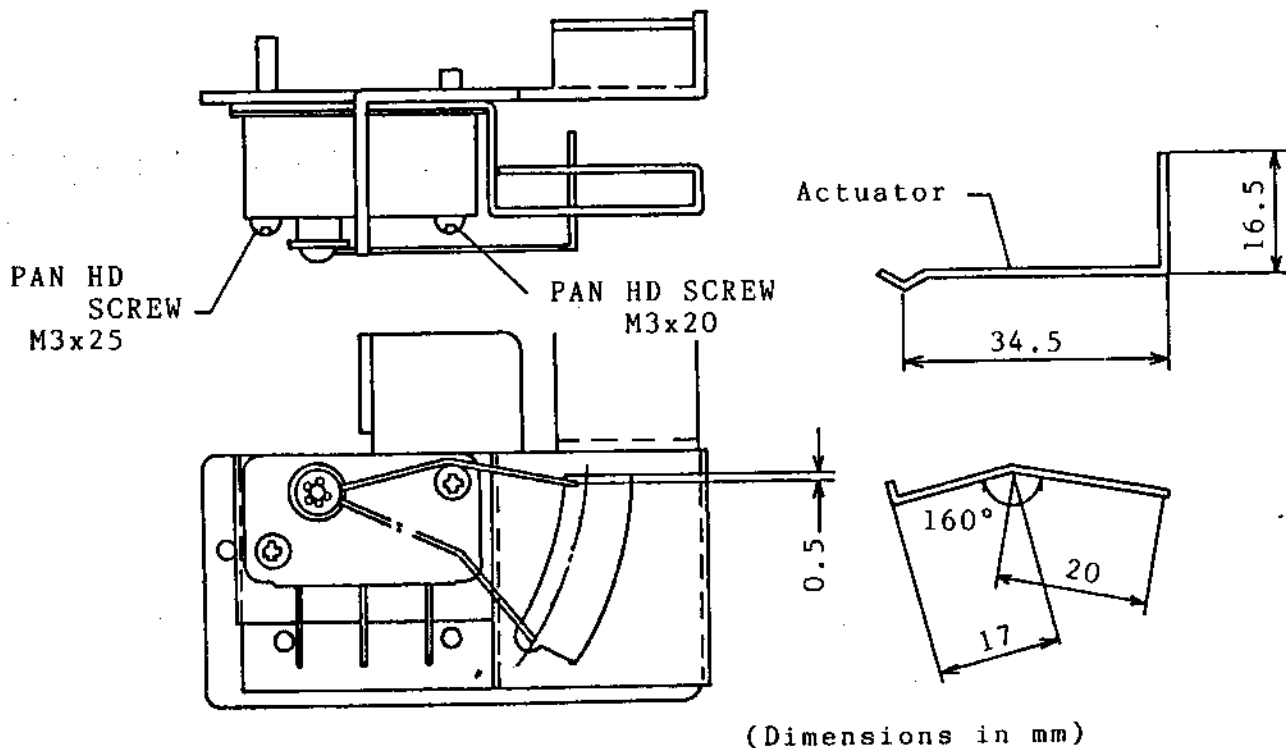
Note: When adjusting the Actuator, refer to the following sketch.

As to the wiring of the Harness, refer to the later page.

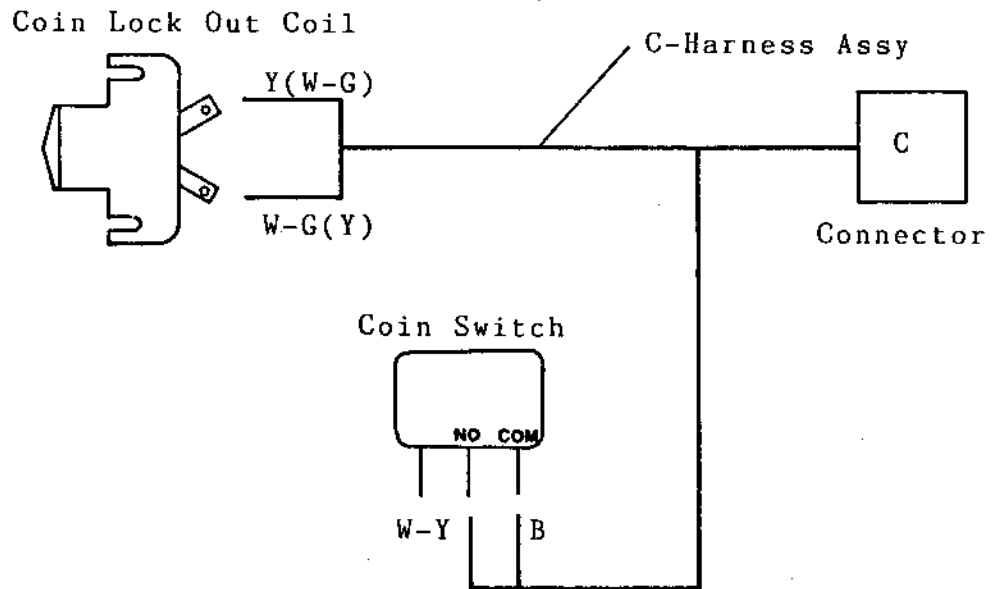
#### ② Adjustment of the Actuator

Attach the Actuator to the Micro Switch, fold it by referring the dimensions as shown below.

The folding work should be done before the Switch is attached to the Holder by using the Screw.



③ Wiring of the Coin Switch and the Coin Lock Out Coil



Where: Y ... Yellow  
W ... White  
G ... Green  
B ... Black

\* No color is specified on the Harness to the Coin Lock Out Coil..

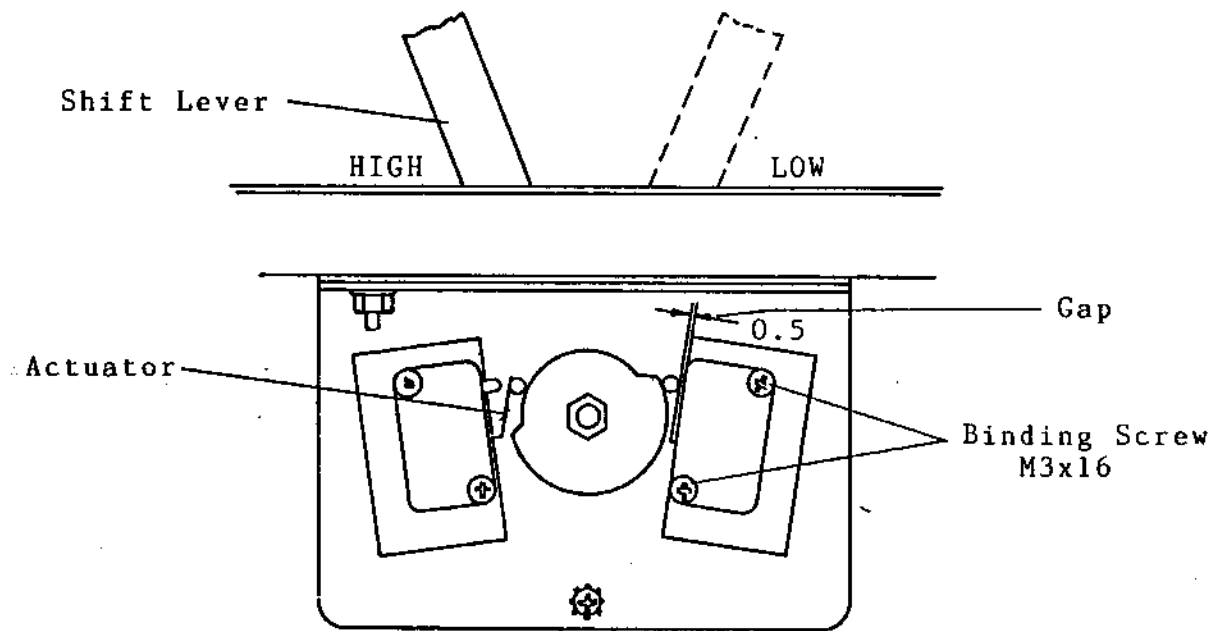
## 12-4. Exchange and Adjustment of the Shift Lever Switch

### ① Exchange

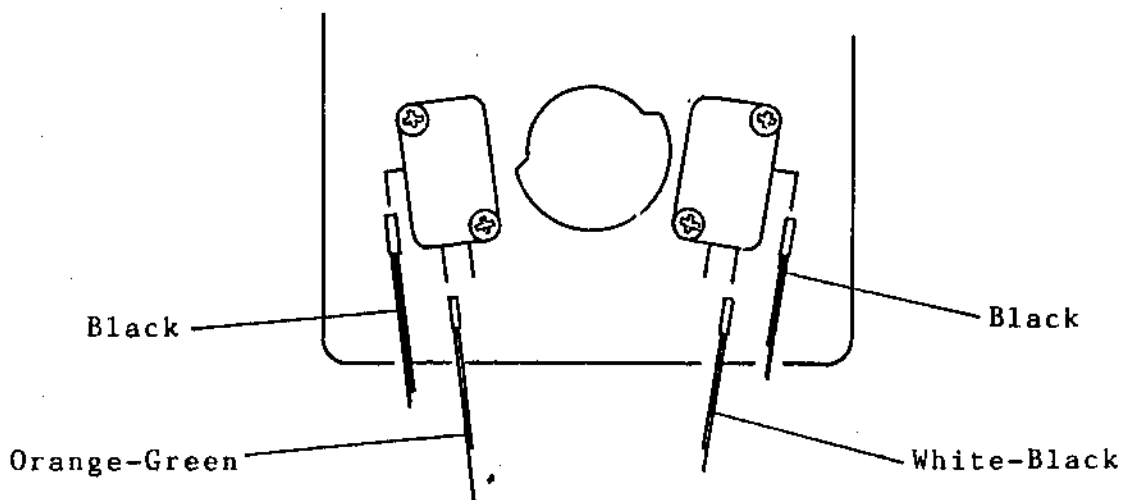
Remove 2 pieces of the Binding Screws (M3x16) which fix the Micro Switch.

### ② Adjustment

Adjust the Switch so that it will be surely at the "ON" position when the Shift Lever is shifted, and the gap between the Actuator and the Switch itself will be 0.5mm.



### ③ Wiring (J-Harness Assy)

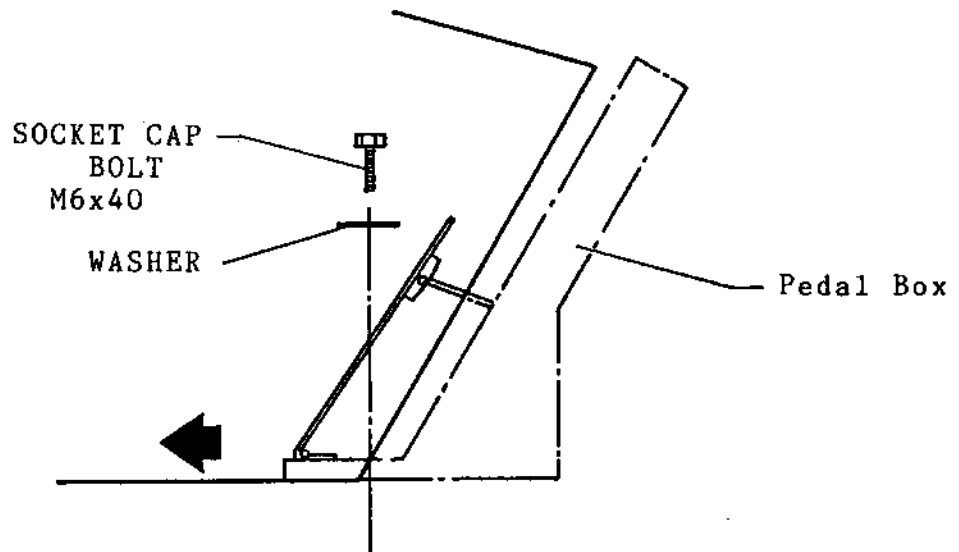




## 12-5. How to detach the Pedal Box

Remove 3 pieces of the Socket Cap Bolts (M6x40) which fix the Box. And, pull the Box toward you and unplug the Connector from the main body, than the Box can be detached.

(The Pedal can be slid toward you by moving the position of the Box fixing holes.)



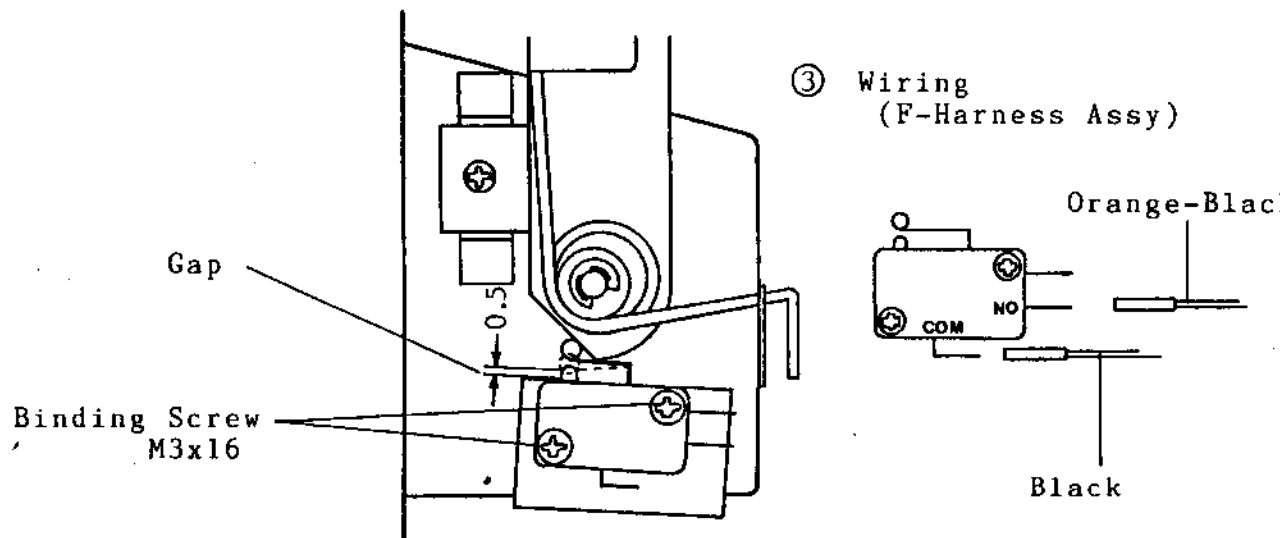
## 12-6. Exchange and Adjustment of the Brake Pedal Switch

### ① Exchange

Remove 2 pieces of the Binding Screws (M3x16) for the Micro Switch.

### ② Adjustment

Adjust the Switch so that it will be surely at the "ON" position when the Pedal is stepped and the gap between the Actuator and the Switch itself will be 0.5 mm.



## 12-7. Exchange and Adjustment of the Accelerator Pot

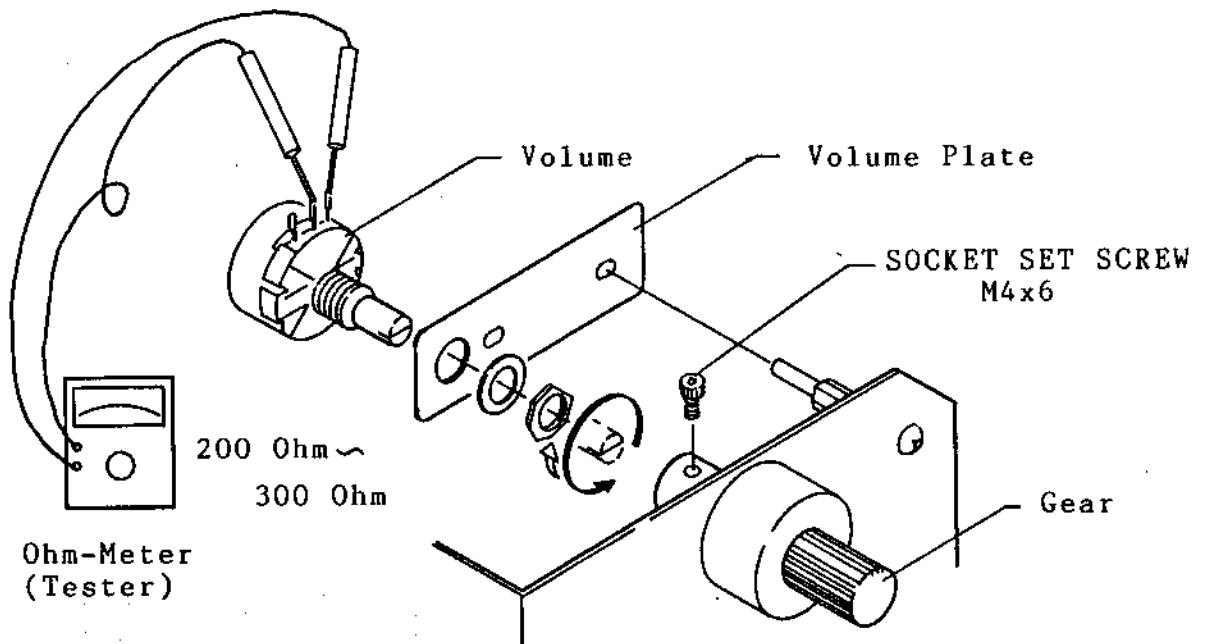
### ① Exchange

Unscrew 2 pieces of the Socket Set Screws (M4x6) which fix the Pot, and pull out it from the Gear.

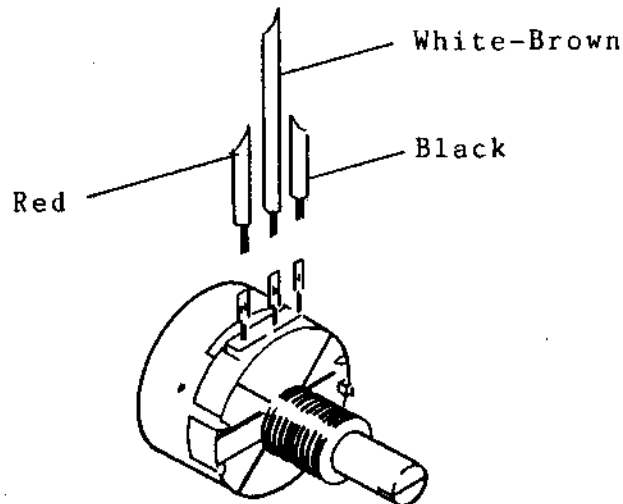
### ② Adjustment

As to the new Pot, after attaching the Pot Plate, turn the Shaft of the Pot counterclockwise to its end, and turn back it until the resistance shows 200~300 Ohm measured by using an ohm meter (tester).

After completing this adjustment, attach the Pot to the Gear in the condition that the Pedal is not stepped.

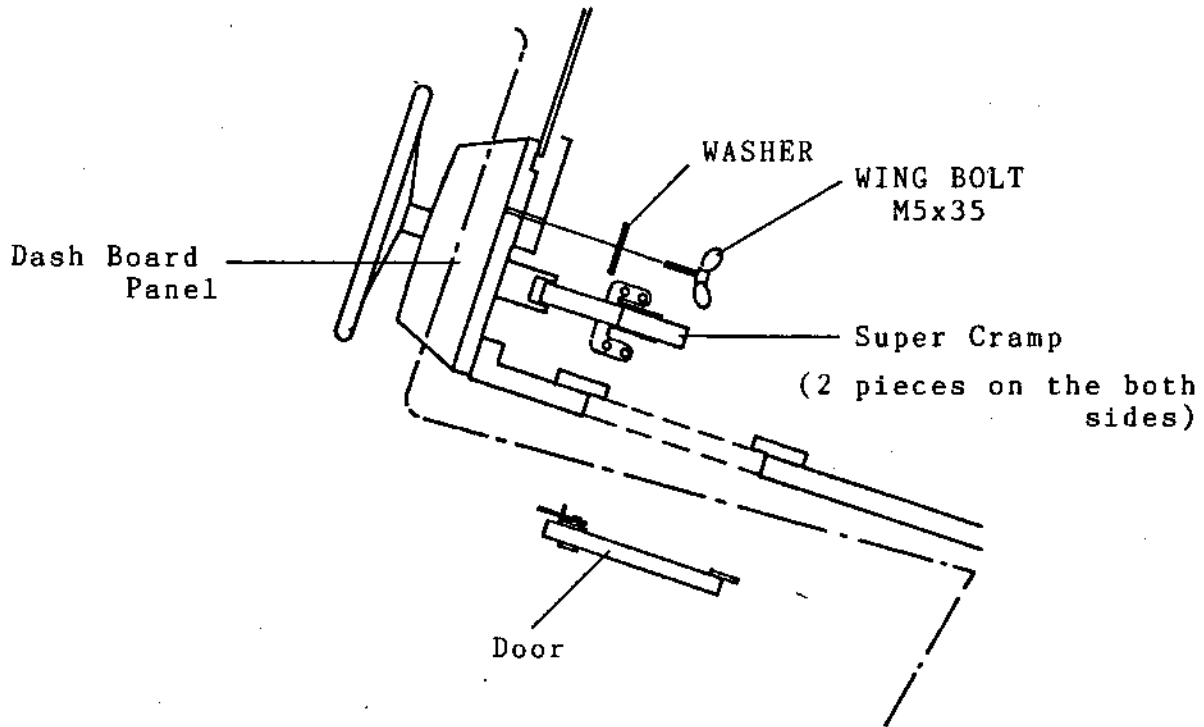


### ③ Wiring (E-Harness Assy)



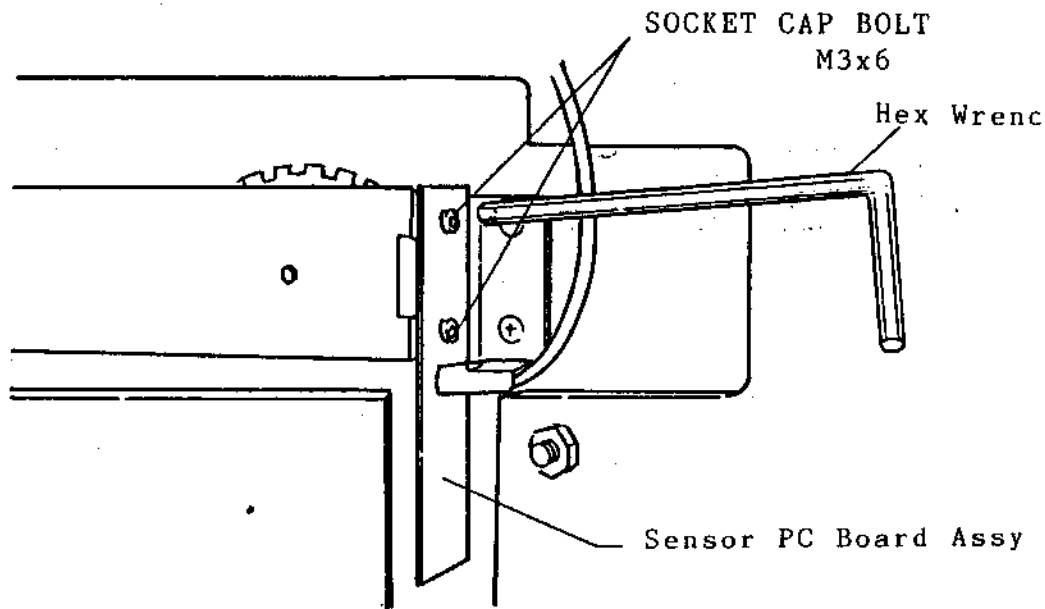
### 12-8. Opening of the Dash Board Panel

Open the Door located under the Dash Board, and remove the Wing Bolt (M5x35) located in the middle back of the Dash Board. And, by releasing the Super Creamps on the both side, the Panel can be opened.



### 12-9. Exchange of the Sensor PCB

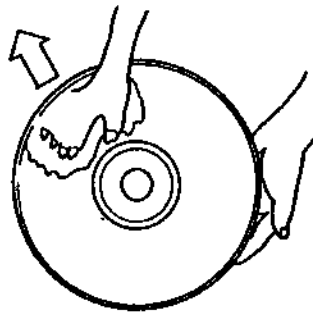
Remove 2 pieces of the Socket Cap Bolts (M3x6) which fix the Sensor PCB Assy by using a hex wrench.



## 12-10. Cleaning of the Disc and Filter

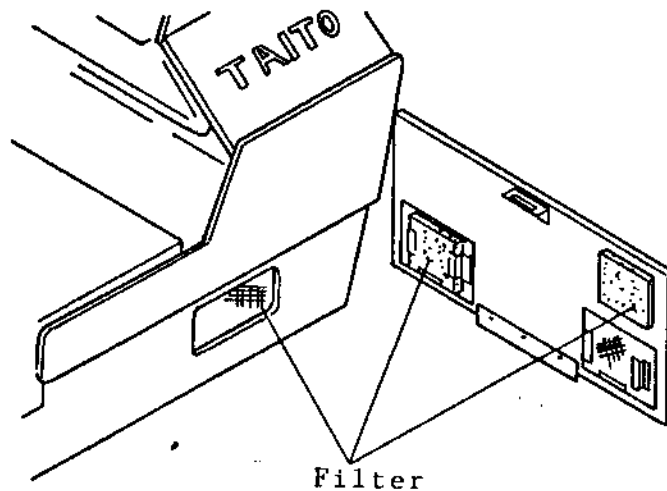
### ① Cleaning of the Disc

- o Clean the Disc twice a month.
- o When cleaning, sweep away dust by using a record cleaner or soft cloth.  
Sweep on the Disc from the center to the outer side as shown below.
- o In case that the Disc is very dirty, wash it.  
After washing, sweep away the water by using soft cloth.

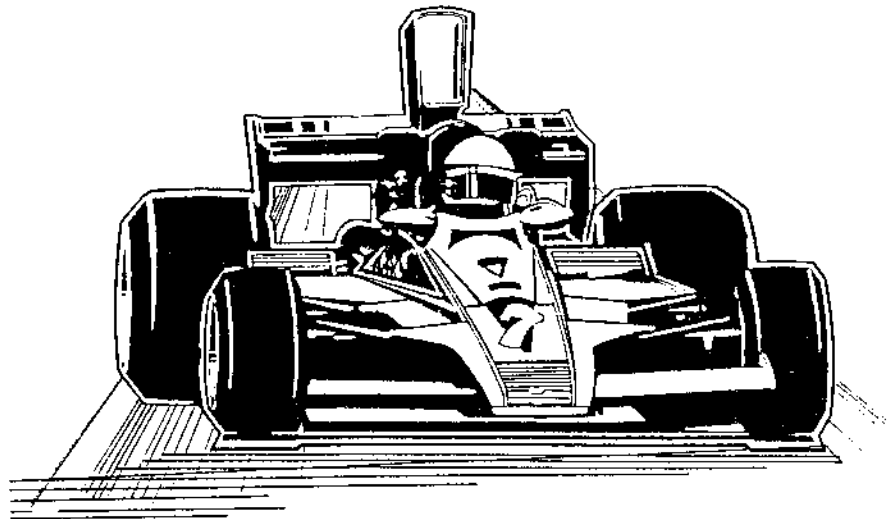


### ② Cleaning of the Filter

- o Wash the Filter twice a month at the same time of cleaning the Disc.  
After washing the Filter, dry it well.  
When attaching, no gap should exist.

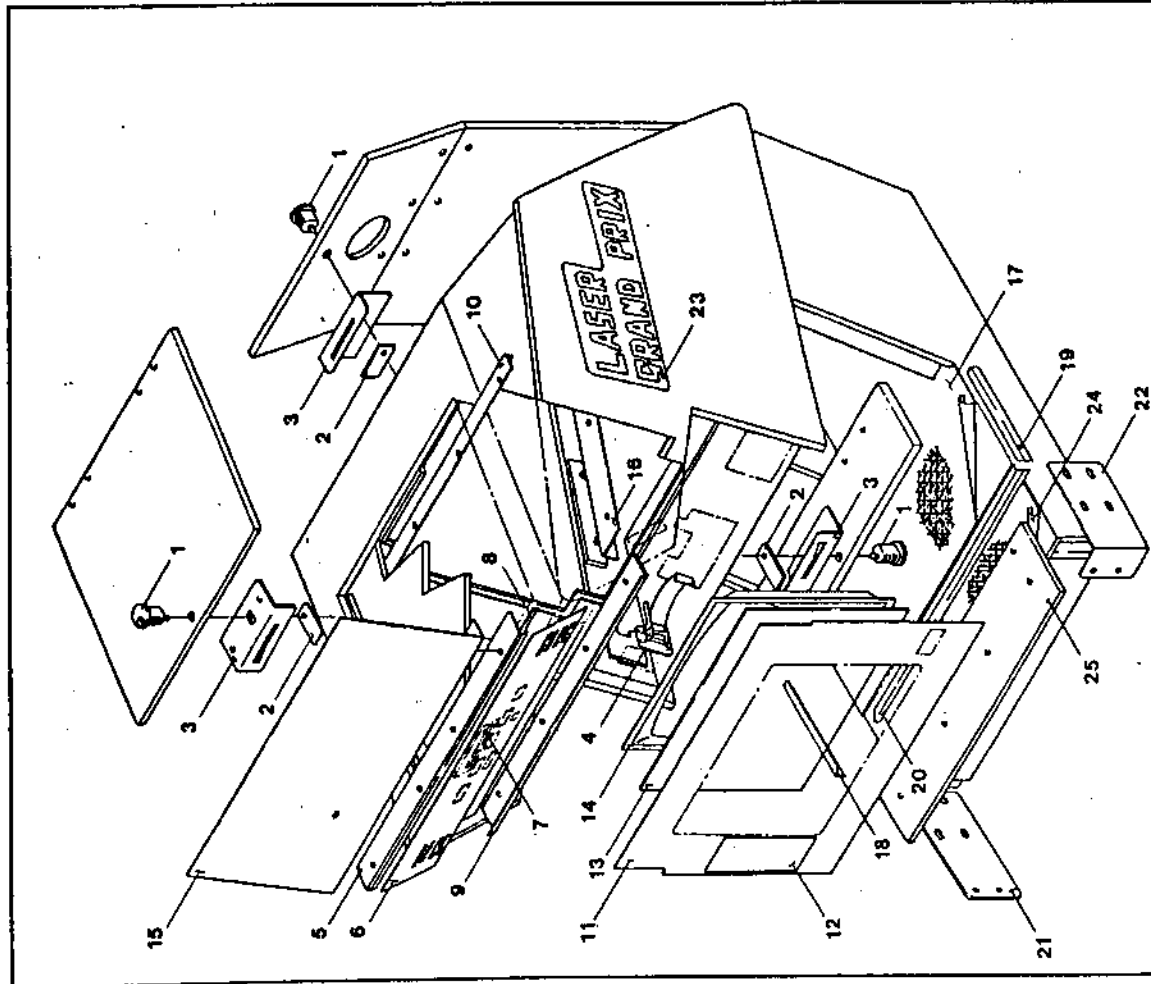


# **PARTS CATALOG**



# LASER GRAND PRIX CABINET ASS'Y

Item	Part No.	Description
		Laser Grandprix Main Cabinet Ass'y (W90 00201A)
1	E50 00111A	Service Lock No.8300 Single
2	E30 00008A	Lock Plate Long-Size
3	E30 00066A	Lock Guard (B)
4	E50 60028A	Super Cramp C-137
5	E30 01707A	Title Support Top
6	G95 00090A	LED Panel
7	G90 00183A	Today's Best Card
8	F90 00603A	Title Sponge
9	E30 01708A	Title Support Bottom
10	E30 01706A	Front Support
11	G95 00091A	Front Panel
12	G15 00042A	Front Sticker
13	F90 00597A	Color Plate 22"
14	F90 00596A	Video Mask 22"
15	G95 00105A	Display Panel
16	E30 01703A	Video Base
17	F90 00601A	Mat
18	E30 01699A	Trim (L) L=210mm
19	E30 01700A	Trim (R) L=210mm
20	E30 01698A	Trim L=720mm
21	E30 01704A	Joint Plate (A)
22	E30 01705A	Joint Plate (B)
23	G15 00036A	Cabinet Sticker Side
24	F90 00617A	Step Mat
25	E30 01761A	Step Plate
		Cabinet Ass'y
M07 00026A		Speaker Ass'y 8 ohm 10W 12cm
M90 00360A		Fan Ass'y
M90 00315A		Video Ass'y TC-V8N22(T)
M08 00049A		Control Board Ass'y
M03 00248A		Pedal Box Ass'y
M01 10002A		



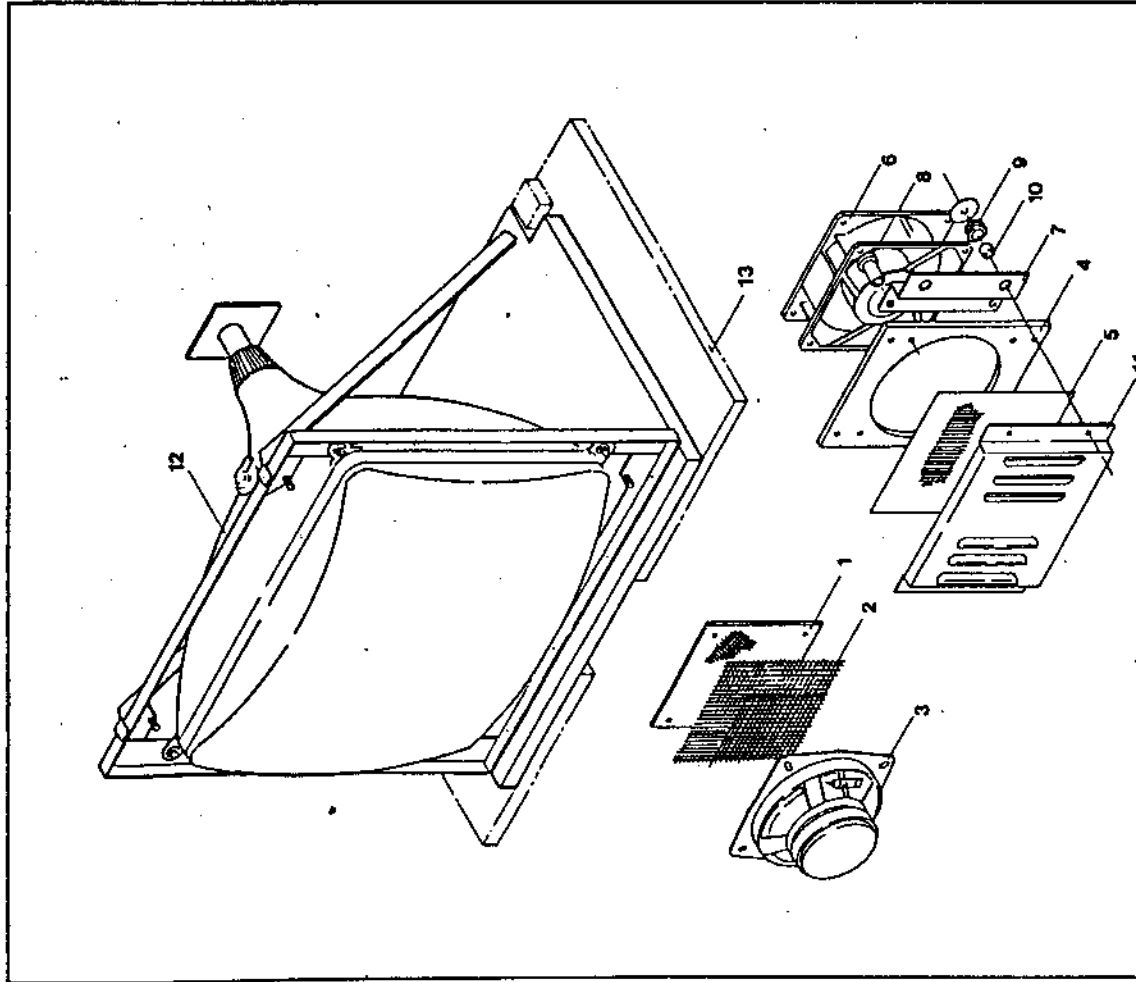
# SPEAKER, FAN & VIDEO ASS'Y

Item	Part No.	Description
		Speaker Ass'y (M90 00360A) 8 OHM 10W 12cm
1	E30 01690A	Speaker Plate
2	F90 00230A	Net
3	A60 00014A	Speaker 8 ohm 10W 12cm

Fan Ass'y (M90 00915A)		
4	D20 00093A	Fan Spacer
5	E30 01372A	Woven Wire Cloth
6	C12 00059A	Fan EB114B-38-2
7	E30 01373A	Fan Bracket
8	F90 00066A	Quitlight Q-3
9	F20 00004A	Grommet NG-79-C
10	E10 00009A	Spacer
11	E30 01370A	Fan Cover

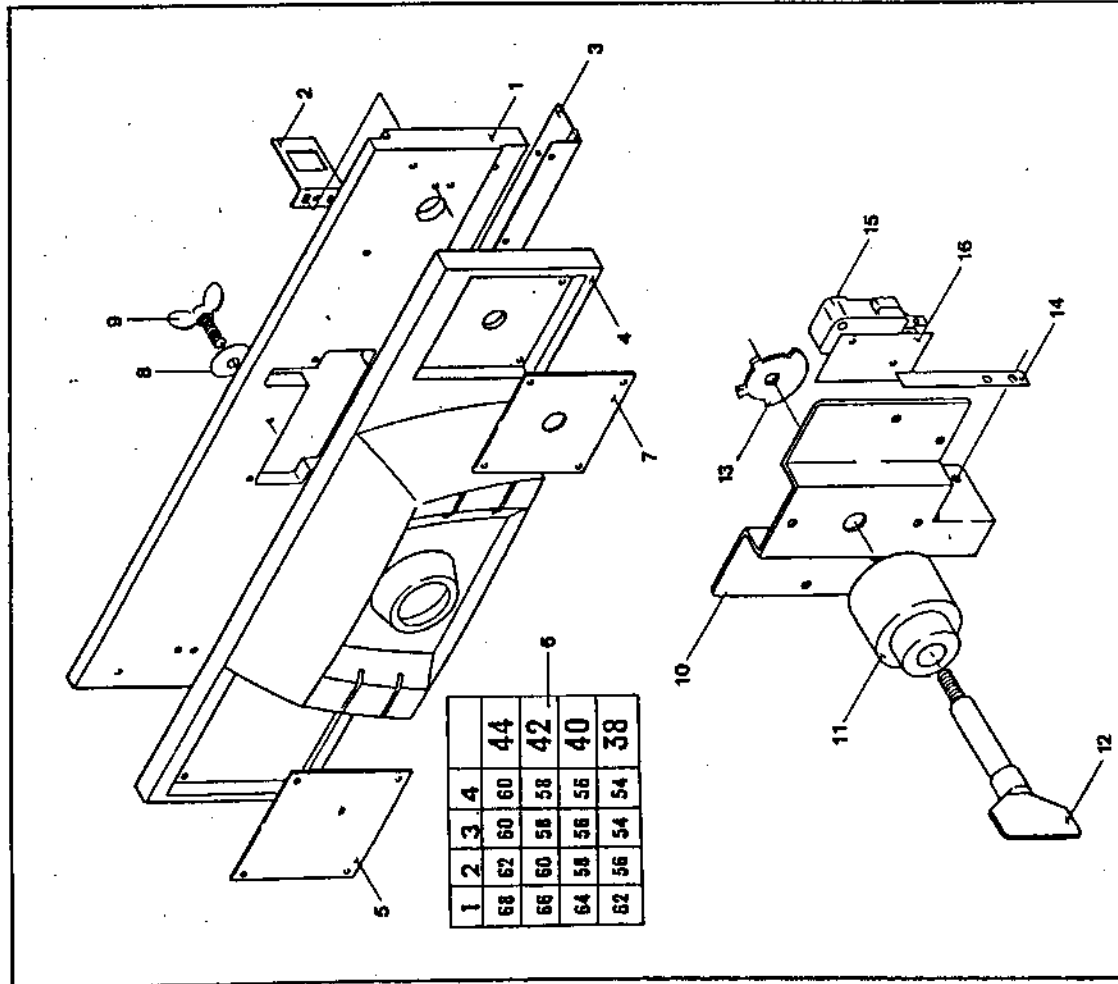
Video Ass'y (M08 00049A)		
12	M08 00049A	Video Ass'y TC-V8N22(T)

Main Cabinet Ass'y (M90 00201A)		
13	D20 00143A	Video Board (L)



# CONTROL BOARD & KEY SWITCH ASS'Y

Item	Part No.	Description
		Control Board Ass'y (M03 00248A)
1	D20 00140A	Control Board
2	E30 00160A	Hook
3	E50 60068A	Control Hinge
4	F90 00595A	Dash Board Panel
5	G35 00201A	Instruction Plate
6	G35 00206A	Indication Card
7	G95 00093A	Key Plate
8	P27 00025A	Plain Washer 5.5x22x1.6T
9	P05 00078A	Wing Bolt M5x35
		Key Switch Ass'y
	M90 00371A	Key Switch Ass'y
	M01 10001A	Handle Mechanism Ass'y
		Key Switch Ass'y (M90 00371A)
10	E30 00489A	Key Base
11	E10 00105A	Key Bush
12	E30 00488A	Key
13	E30 00487A	Switch Cam
14	E40 00040A	Cam Spring
15	G02 00083A	Micro Switch AH7155660
16	F90 00150A	Insulator V-Type

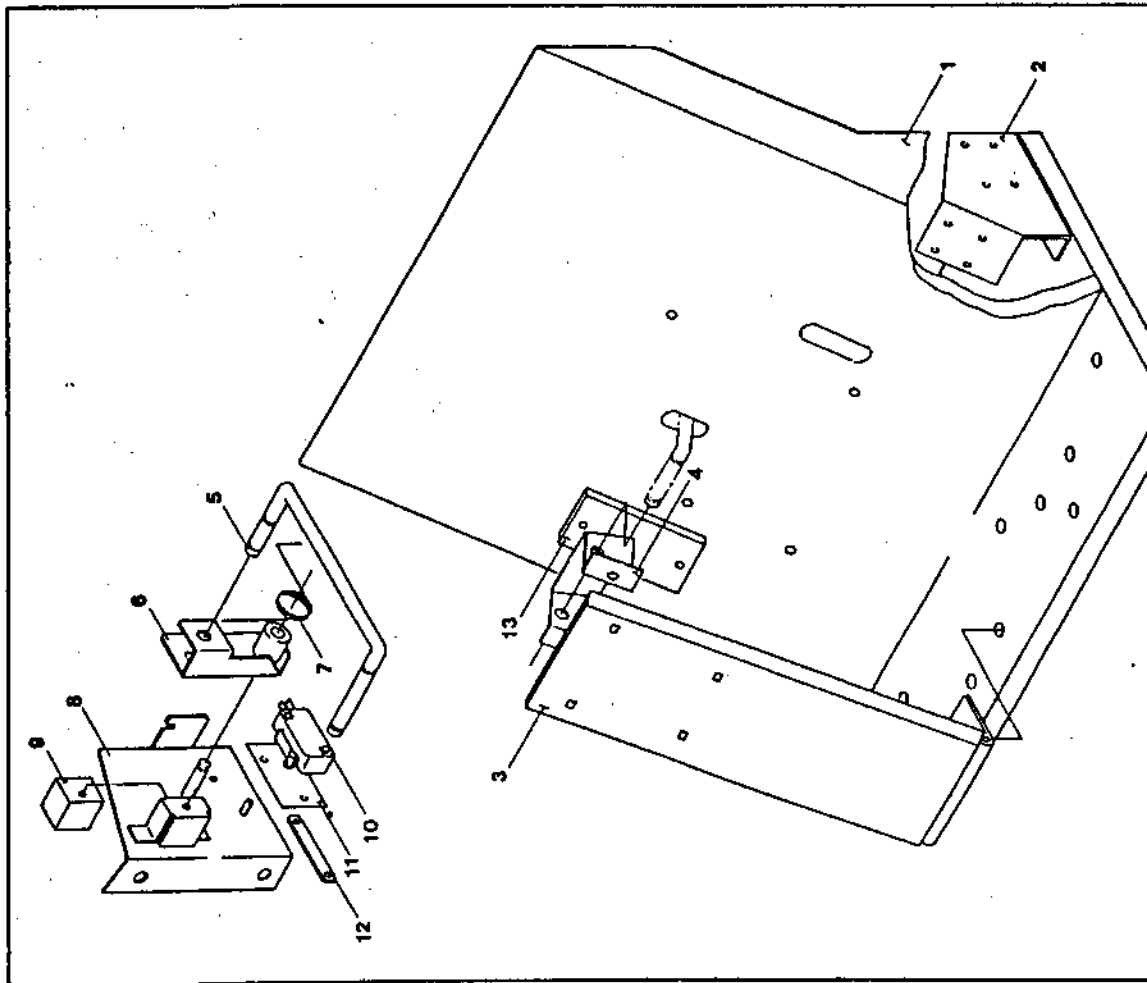






# PEDAL BOX & BRAKE MECHANISM ASS'Y

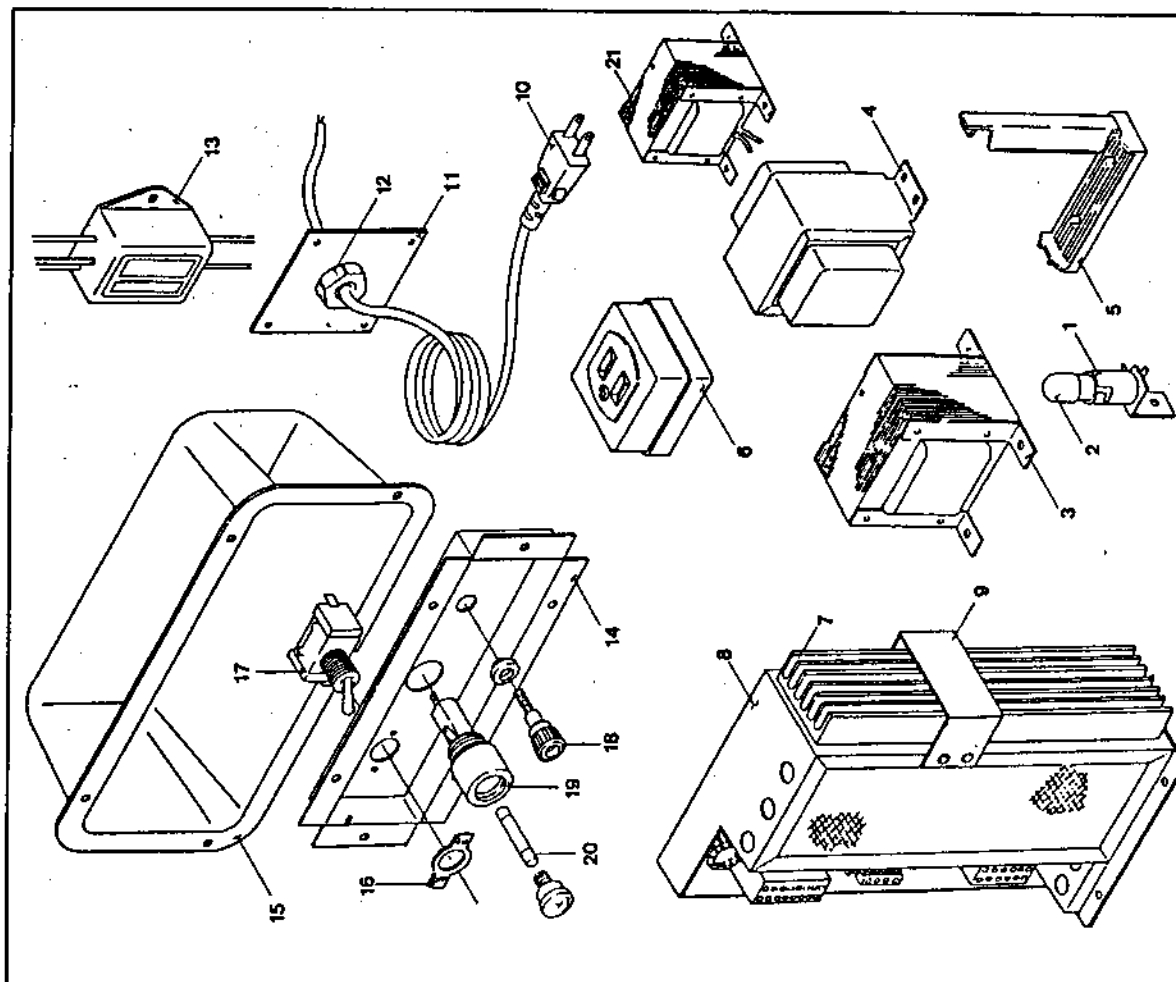
Item	Part No.	Description
		Pedal Box Ass'y (M01 10002A)
1	D20 00141A	Pedal Box
2	E30 01758A	Pedal Box Support (R)
	E30 01757A	Pedal Box Support (L)
		Accelerator Mechanism Ass'y
M01 10003A		Accelerator Mechanism Ass'y
M01 10004A		Brake Mechanism Ass'y
L90 00448A		E Harness Ass'y
L90 00449A		F Harness Ass'y
		Brake Mechanism Ass'y (M01 10004A)
3	E30 01720A	Pedal
4	E30 01680A	Pedal Bracket
5	E10 00404A	Link
6	E90 00431A	Link Cam
7	E40 00120A	Spring
8	E90 00432A	Base Plate
9	F90 00604A	Bumper Rubber
10	C02 00083A	Micro Switch AH7155660
11	F90 00150A	Insulator V-Type
12	E30 00153A	Top Plate
13	F90 00605A	Pedal Rubber



# SWITCHING & POWER LINE ASS'Y

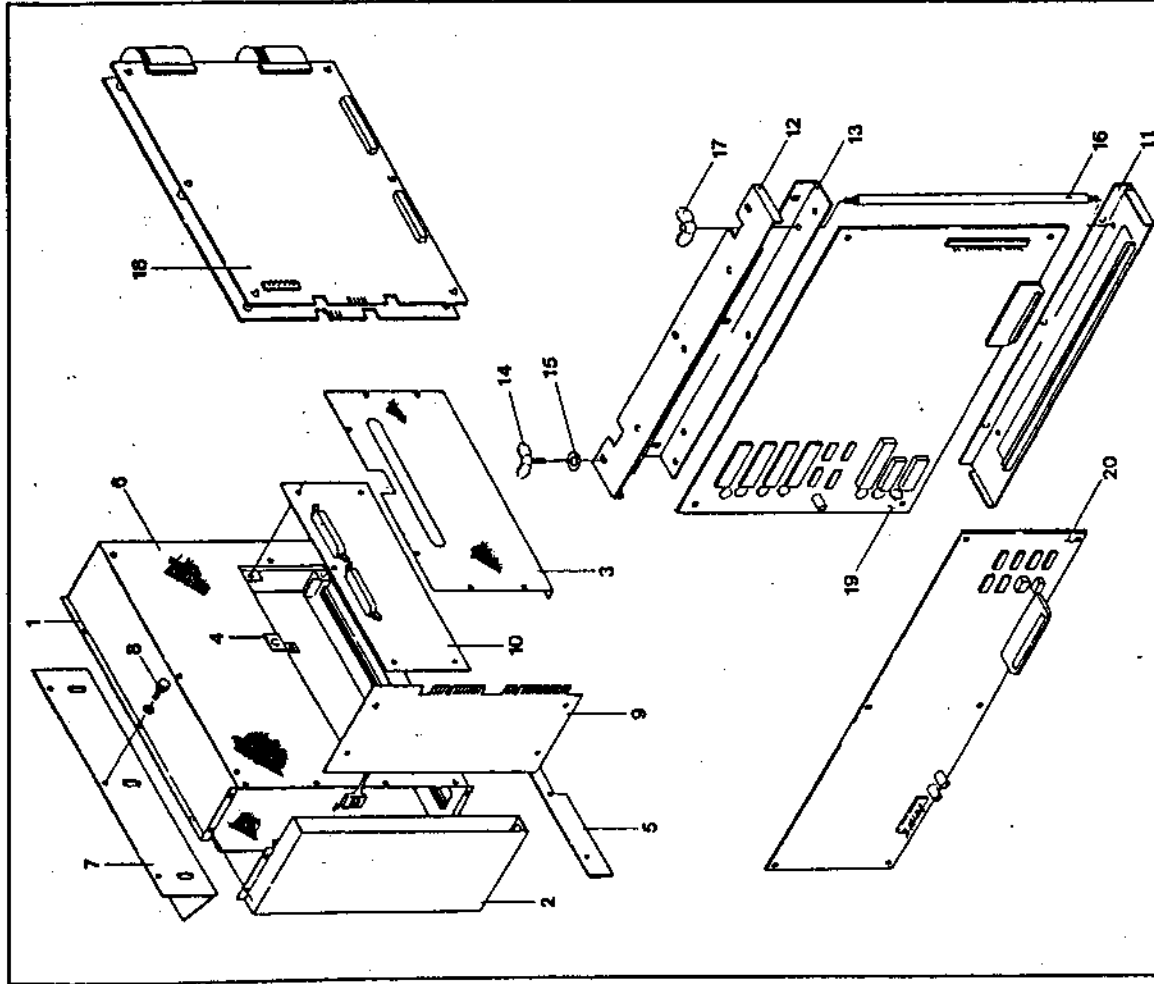
Part No. Description

1	Main Electric Ass'y (W90 00203A)
2	Lamp Socket L-Type
3	Pilot Lamp 12V 150mA
4	Transformer Ass'y
5	Video Transformer
6	FRC Clamp
	AC Receptacle
	Switching Regulator Ass'y
	Power Line Ass'y
	Shield Box Ass'y
	PC Board Guide Ass'y - Sound
	Sound PC Board Ass'y
	Main PC Board Ass'y
	Timer & Score PC Board Ass'y
	Main Harness Ass'y
	Z-N-U Harness Ass'y
	N Harness Ass'y
	Q1-S1 Harness Ass'y
	FRC Harness Ass'y 50P L-1300mm
	FRC Harness Ass'y 40P L-2700mm
7	Switching Regulator Ass'y (M41 00006A)
8	Switching Regulator Ass'y
9	Regulator Box
	Regulator Stop
10	Power Line Ass'y (W90 00205A)
	AC Cord
11	Mold Cord Plate
12	Mold Cord Bush
13	Noise Filter ZMB-2206-02
14	Switch Box
15	Switch Cover
16	Guide Plate ON-OFF
17	Toggle Switch ET125A-12
18	Earth Terminal
19	Fuse Holder S-N 2058
20	Fuse 5A
	Z Harness Ass'y
	Earth Harness Ass'y
21	Transformer



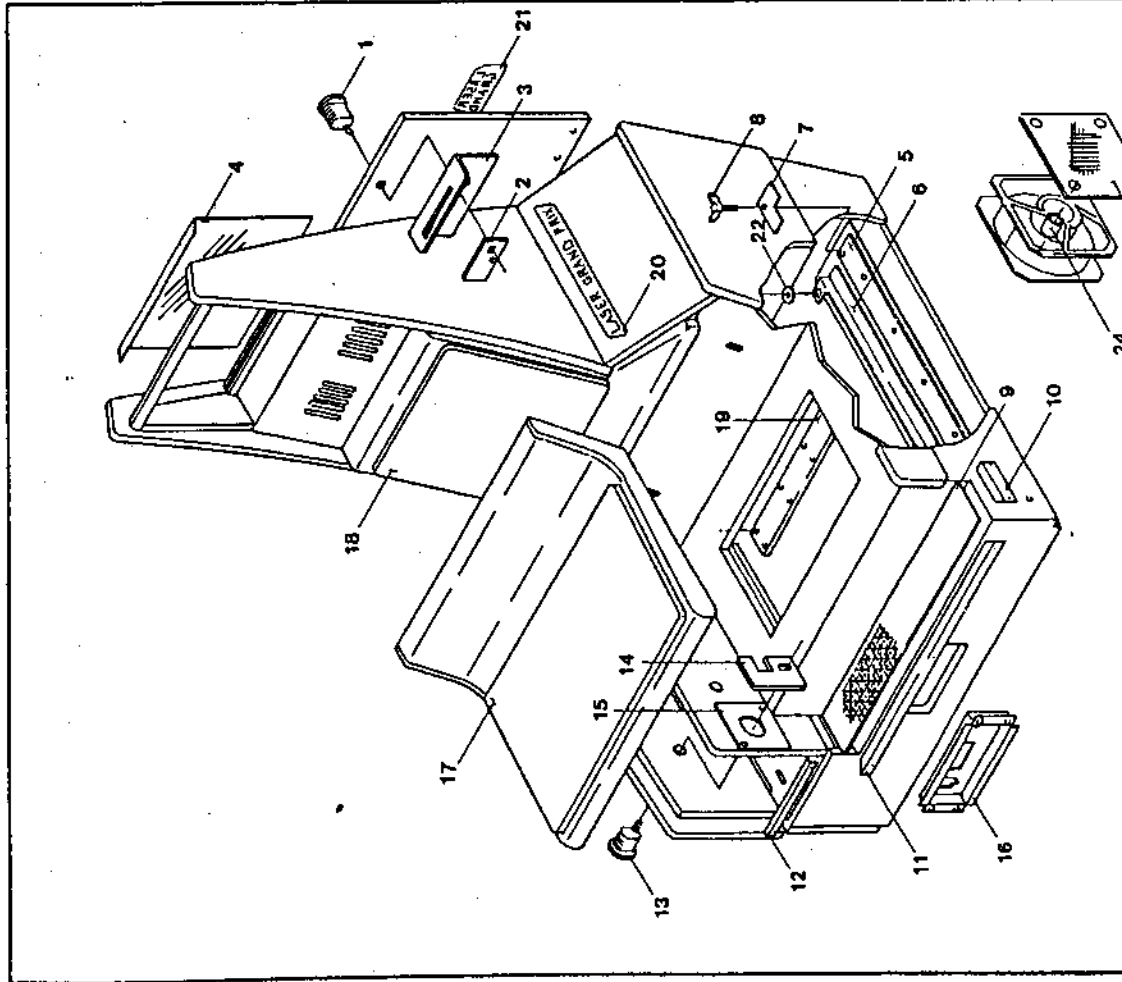
# PC BOARD & GUIDE ASS'Y

Item	Part No.	Description
		Shield Box Ass'y (M90 00379A)
1	H90 00106A	Shield Box
2	E30 01792A	Filter Board Box
3	E30 01790A	Shield Cover
4	E30 01802A	Board Support Bracket
5	E30 01791A	Guide Refl
6	E30 01845A	Shield Box Cover
7	E30 01846A	Guide Bracket
8	P05 00060A	Roller Screw M4x10
9	X90 00123A	Filter PC Board Ass'y
10	X90 00124A	FRC Filter PC Board Ass'y
		PC Board Guide Ass'y (M90 00365A) SOUND
11	H90 00099A	PC Board Guide (A-S)
12	H90 00100A	PC Board Guide (B-S)
13	E30 01764A	Guide Bracket (S)
14	P05 00043A	Wing Bolt M3x10
15	P27 00004A	Plain Washer 3M
16	E10 00212A	Shaft
17	P22 00005A	Wing Nut M3
		Main PC Board Ass'y
18	M42 00366B	Main PC Board Ass'y
19	X20 00032A	Sound PC Board Ass'y
20	X60 00010A	Timer & Score PC Board Ass'y



# LASER GRAND PRIX SEAT CABINET ASS'Y

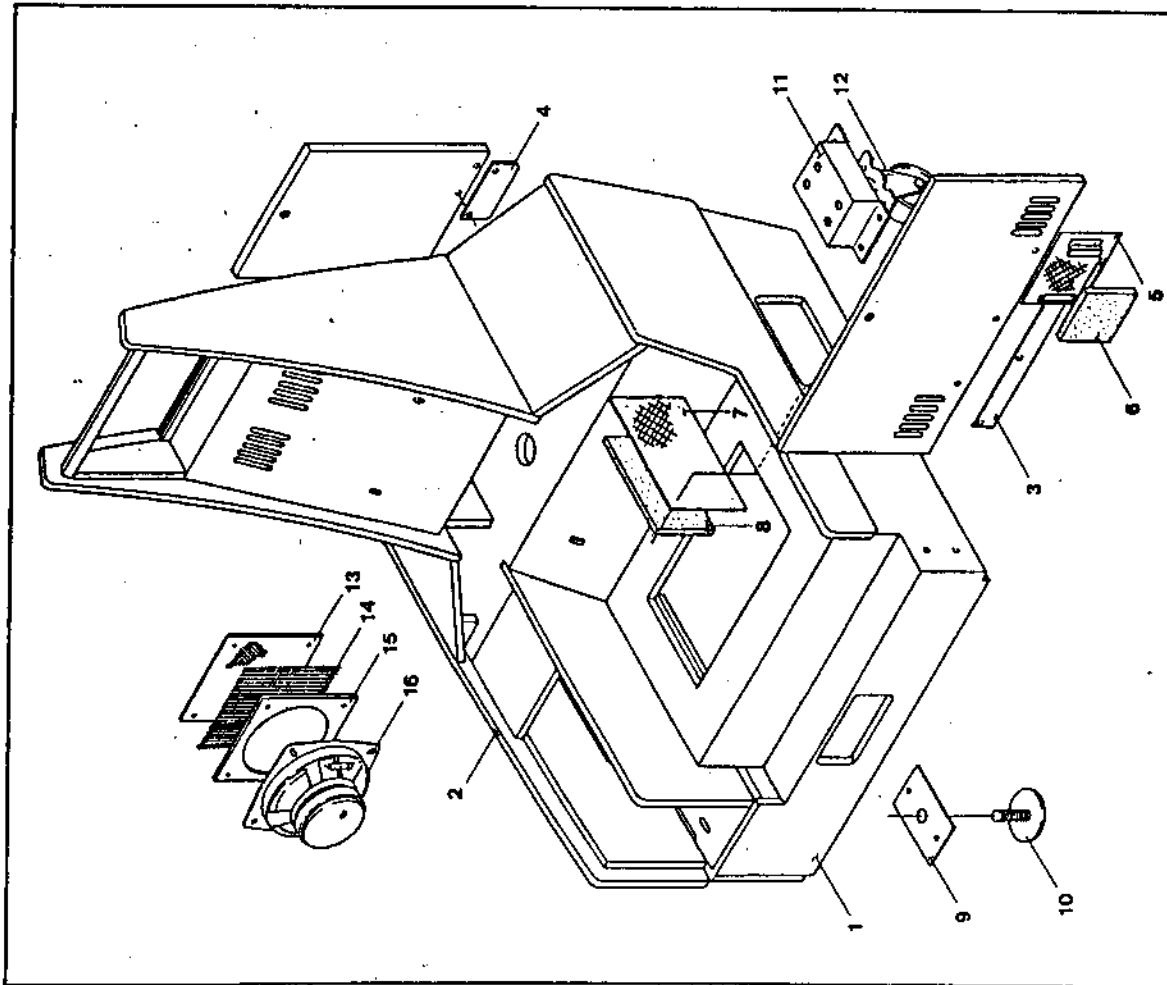
Item	Part No.	Description
		Laser Grandprix Seat Cabinet Ass'y (W90 00202A)
1	E50 0011A	Service Lock No.8300 Single
2	E30 00008A	Lock Plate Long-Size
3	E30 00066A	Lock Guard (B)
4	F90 00600A	Swork
5	E30 01702A	Disk Guide
6	E30 01855A	Disk Stay L
7	E30 01729A	Disk Stop
8	P05 00055A	Wing Bolt M4x10
9	F90 00602A	Seat Mat
10	E30 01695A	Trim L=90mm
11	E30 01697A	Trim L=540mm
12	E30 01696A	Trim L=180mm
13	E50 00110A	Service Lock No.8300 Double
14	E30 01686A	Key Lock
15	E30 01689A	Lock Washer
16	E30 01710A	Connector Box
17	F90 00598A	Seat (A)
18	F90 00599A	Seat (B)
19	E30 01694A	Seat Bracket
20	G15 00035A	Seat Sticker Side
21	G15 00037A	Seat Sticker Back
22	F90 00635A	Disk Bumper
23	E30 01716A	Fan Punching
24	E10 00289A	Board Spacer R
	M07 00027A	Seat Cabinet Ass'y
	M90 00315A	Fan Ass'y
	M90 00300A	Speacker Ass'y 8 ohm 10W 12cm
	M40 00019A	Cash Box Ass'y
	M90 00372A	Disk Player LD-V1001
	C51 00001A	Laser Disk "LASER GRANDPRIX"
	M01 10005A	Shift Board Ass'y
	M05 00021A	Reflector Board Ass'y



# SEAT CABINET & SPEAKER ASS'Y

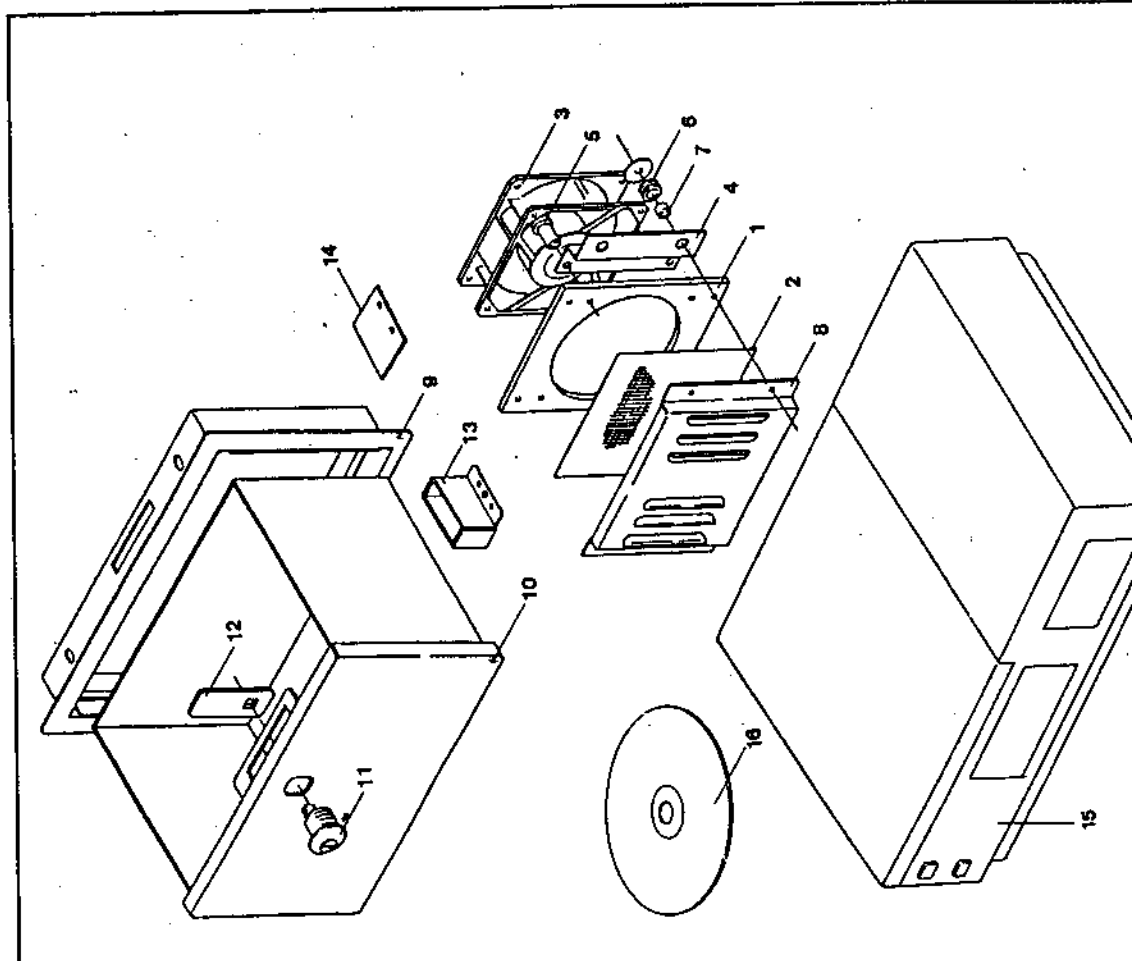
Item	Part No.	Description
1		Seat Cabinet Ass'y (M07 00027A)
2	D30 00036A	Seat Cabinet
3	F90 00042A	Cabinet Edge Black
4	E30 01693A	Door Stopper L=320mm
5	E30 00021A	Back Door Stopper
6	E30 01718A	Filter Plate (S)
7	F90 00607A	Filter (S)
8	E30 01717A	Filter Plate (L)
9	F90 00606A	Filter (L)
10	E30 01762A	Adjuster Plate
11	E30 00006A	Adjuster
12	E30 01760A	Caster Bracket S
	E50 60069A	Caster 420R-N,D=38mm

13		Speaker Ass'y (M90 00300A) 8 OHM 10W 12cm
14	E30 01336A	Punching Metal
15	F90 00230A	Net
16	D20 00046A	Speaker Board
	A60 00014A	Speaker 8 ohm 10W 12cm



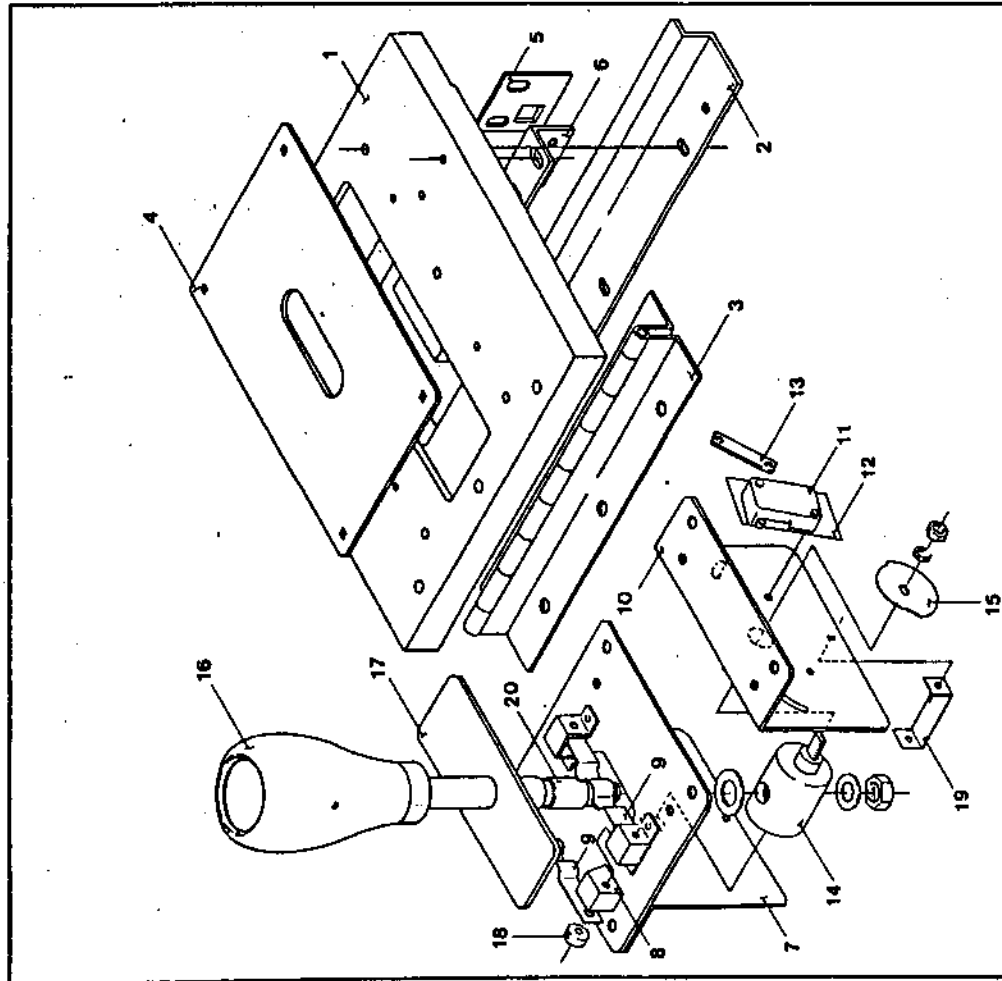
# FAN, CASH BOX & LASER DISC ASS'Y

Item	Part No.	Description
	Fan Ass'y (M90 00315A)	
1	D20 00093A	Fan Spacer
2	E30 01372A	Woven Wire Cloth
3	C12 00059A	Fan EB114B-38-2
4	E30 01373A	Fan Bracket
5	F90 00066A	Quiltight Q-3
6	F20 00004A	Grommet NG-79-C
7	E10 00009A	Spacer
8	E30 01370A	Fan Cover
	Cash Box Ass'y (M04 00019A)	
9	E30 01721A	Cash Box Frame
10	E30 01722A	Cash Box
11	E50 00102A	Dom Lock C818 R90°
12	E30 00177A	Lock Plate (C)
13	E30 01683A	Coin Bracket
14	E30 01851A	Shutter Plate
15	M90 00372A	Disk Player LD-V1001
16	C51 00001A	Laser Disk "LASER GRANDPRIX"



# SHIFT BOARD & LEVER ASS'Y

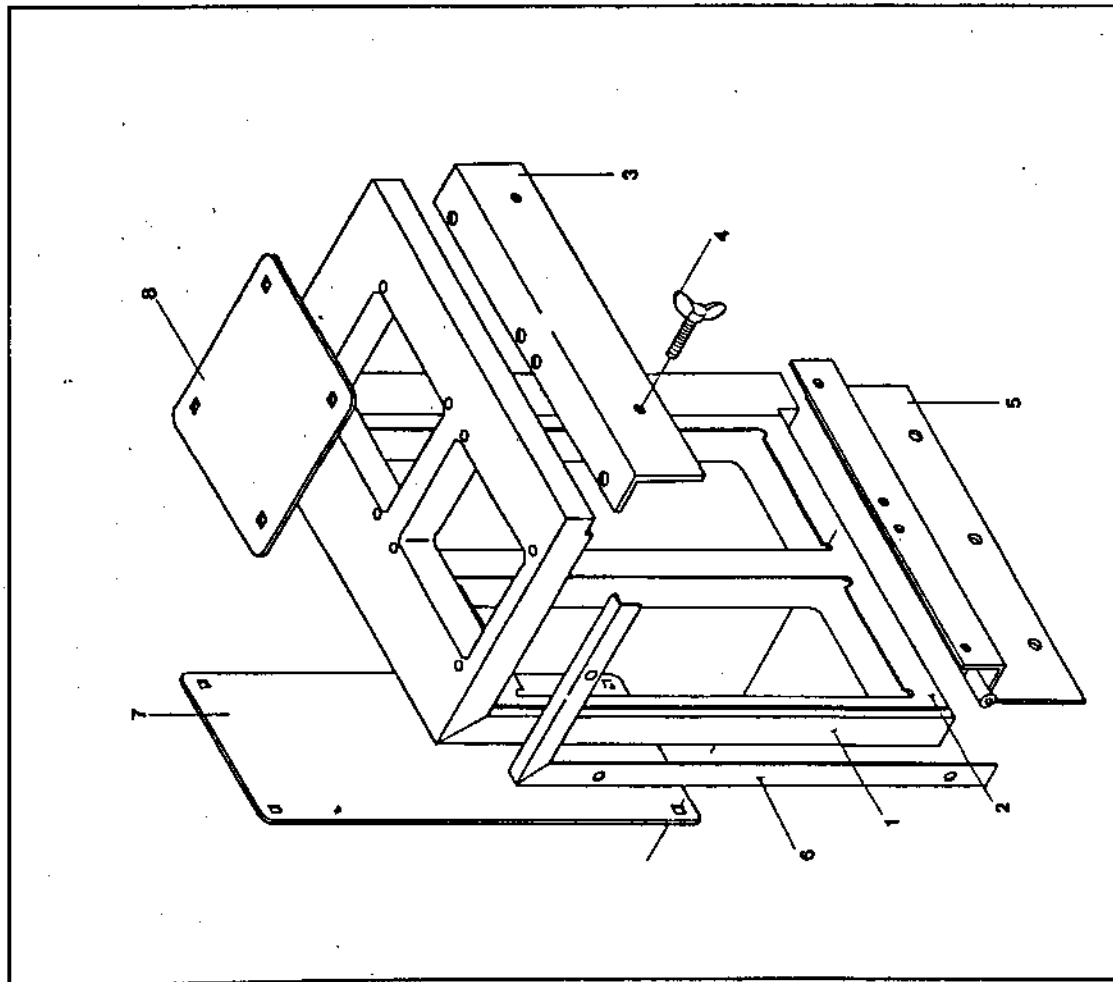
Item	Part No.	Description
		Shift Board Ass'y (M01 10005A)
1	D20 00145A	Shift Board
2	E30 01719A	Shift Board Joint
3	E50 60067A	Shift Hinge (S)
4	G95 00092A	Shift Plate
5	E30 00991A	Hook
6	E30 00978A	Hook Bracket
		Shift Lever Ass'y
	M01 10006A	Shift Lever Ass'y
		Shift Lever Ass'y (M01 10006A)
7	E30 01724A	Shift Bracket (A)
8	F90 00609A	Rubber Bumper
9	E40 00121A	Tension Spring
10	E30 01725A	Shift Bracket (B)
11	C02 00083A	Micro Switch AH7155660
12	F90 00150A	Insulator V-Type
13	E30 00153A	Tap Plate
14	E10 00407A	Center Shaft
15	E30 01434A	Cam
16	H90 00094A	Shift Lever
17	F90 00554A	Mask
18	F90 00608A	Spacer Rubber
19	E30 01459A	Spacer
20	E10 00405A	Roller
	L90 00450A	J Harness Ass'y





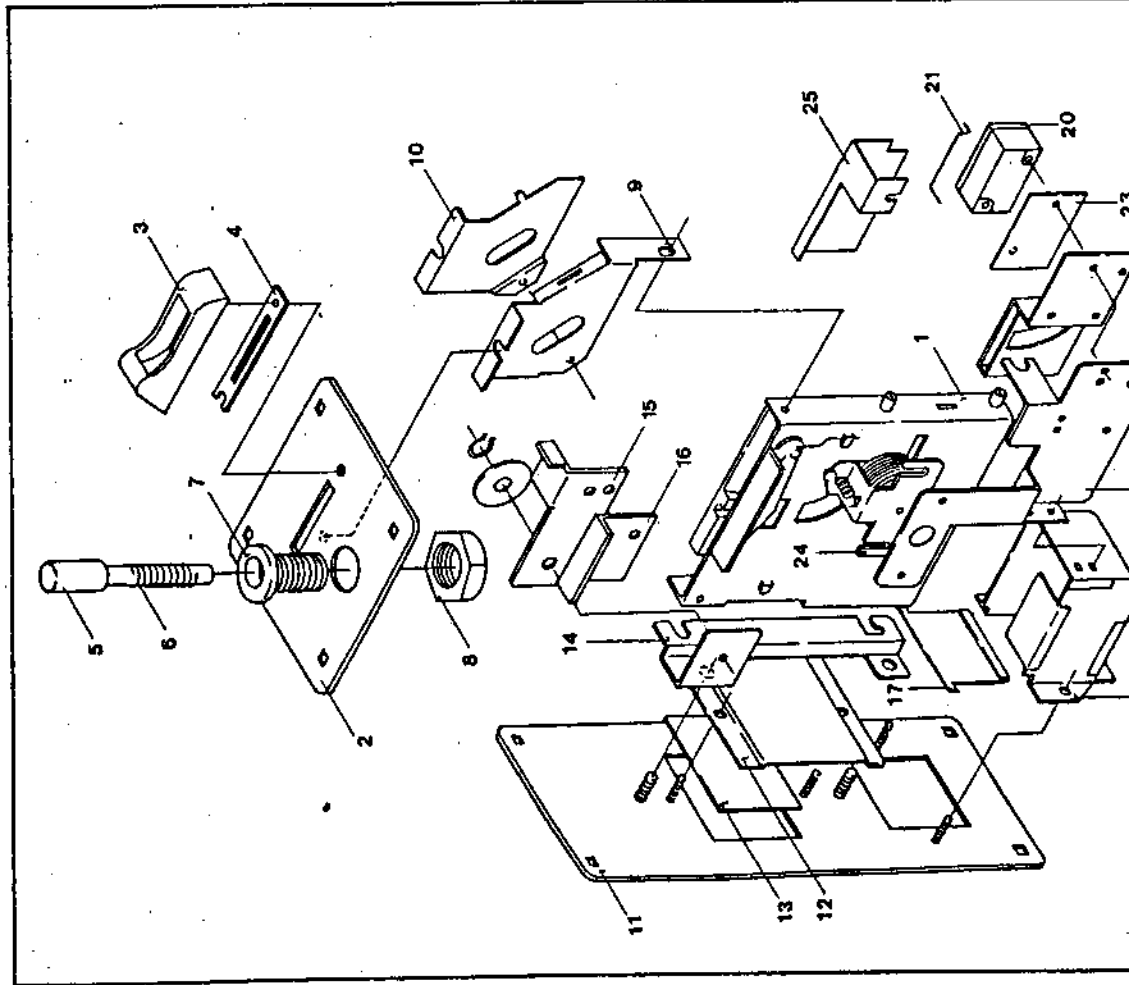
# REFLECTOR BOARD & SHUT ASS'Y

Item	Part No.	Description
1	D20 00142A	Reflector Board
2	E30 01714A	Reflector Support
3	E30 01715A	Joint Support
4	P05 00060A	Wing Bolt M4x20
5	E50 60066A	Shift Hinge (L)
	P22 00007A	Wing Nut M4
6	E30 01849A	Reflector Board Cover
	M05 00023A	Reflector Ass'y
		Reflector Shut Ass'y
7	M05 00023A	Reflector Shut Ass'y 1 Way (M05 00023A)
	E30 01713A	Entry Shutter
8	E30 01767A	Entrance Shutter



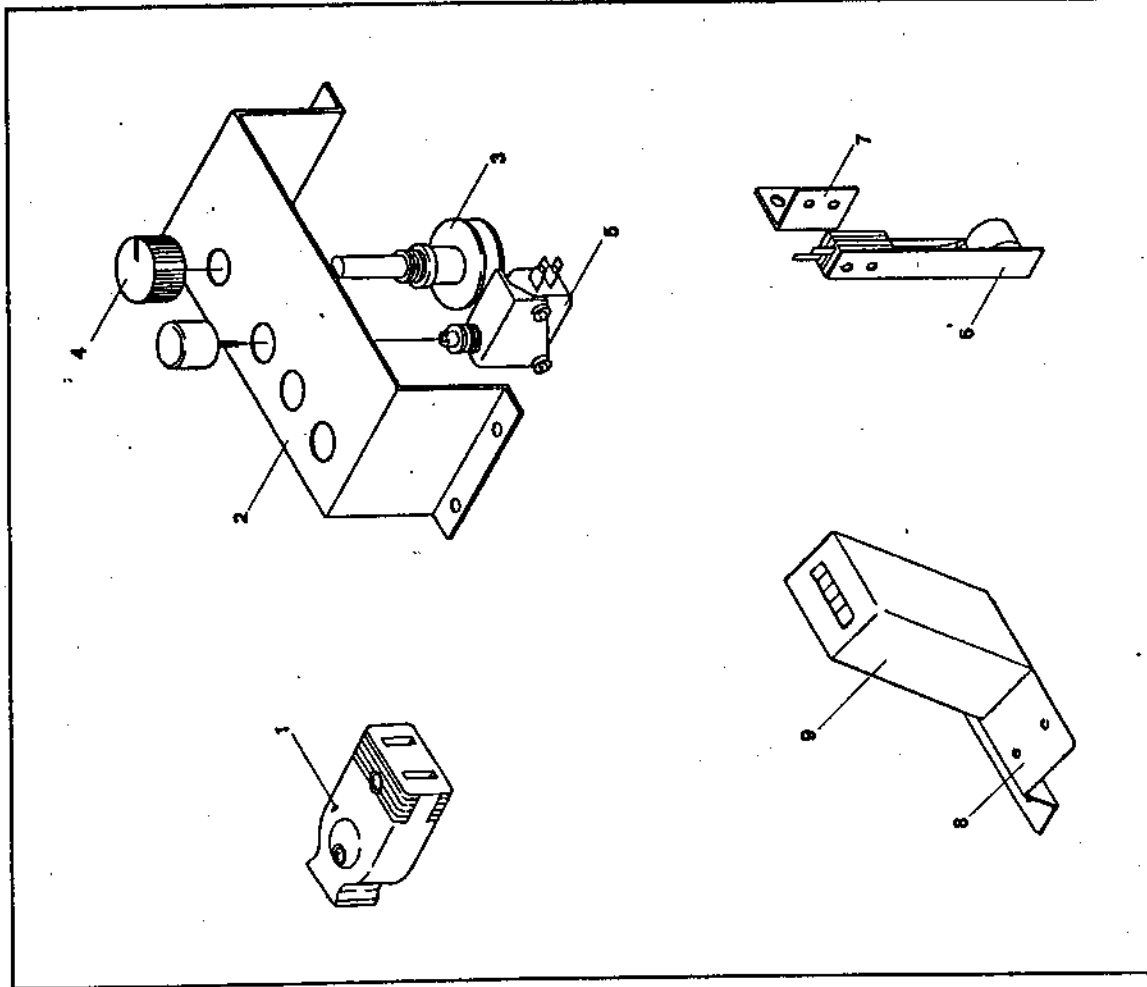
# REJECTOR ASS'Y 1WAY

Item	Part No.	Description
1		Rejector AD-81PP
2	E30 01691A	Coin Entrance
3	E20 00087A	Coin Entry Molding
4		Entry Plate
5	E10 00403A	Cancel Button
6	E40 00001A	Cancel Button Spring
7	E10 00054A	Cancel Button Holder
8	E10 00007A	Holder Nut
9	E30 01681A	Coin Chute (A)
10	E30 01682A	Coin Chute (B)
11	E30 01712A	Entry Base
12	E30 01227A	Price Cover
13		Price Card
14	E30 01226A	Holder Support
15	E30 01684A	Lever (A)
16	E30 01685A	Lever (B)
17	E30 01225A	Cup Door
18	E30 01207A	Cup
19	E30 01206A	Chute Bracket
20	C02 00052A	Micro Switch C-5G3-3
21	C03 00001A	Actuator CAA-1
22	E30 00285A	MS Coin Guide
23	F90 00148A	Insulator C-5G, Type-3
24	C11 00802A	Coin Lockout Coil DC-12V
25	E30 00180A	Actuator Cover
		C Harness Ass'y



# CENTRAL CONTROL & TILT ASS'Y

Item	Part No.	Description
1		Seat Cabinet Electric Ass'y (M90 00204A)
	C05 50461A	AC Socket
	L10 00039A	Main Seat Harness Ass'y
	L90 00453A	U Harness Ass'y
	L90 00451A	K Harness Ass'y
	L90 00456A	Pl-Q1 Harness Ass'y
	M90 00363A	Central Control Ass'y
	M90 00364A	Tilt Ass'y
		Central Control Ass'y (M90 00363A)
2	E30 01711A	Volume & Switch Bracket
3	C02 00164A	Rotary Switch
4	E90 00416A	Knob
5	C02 00033A	Push Button Switch VAQ-4R
		Tilt Ass'y (M90 00364A)
6	C04 01027A	Tilt Switch
7	E30 01688A	Tilt Stray
		Laser Grandprix Seat Cabinet Ass'y (M90 00202A)
8	E30 01850A	Counter Bracket (110°)
9	C17 00008A	Counter ME-5





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