

JALECO



STANDARD TYPE

GRAND PRIX STAR



THIS MANUAL IS MADE FOR USE WITH THE 2-IN-1 SITDOWN CABINET
CONSTRUCTED IN JAPAN.

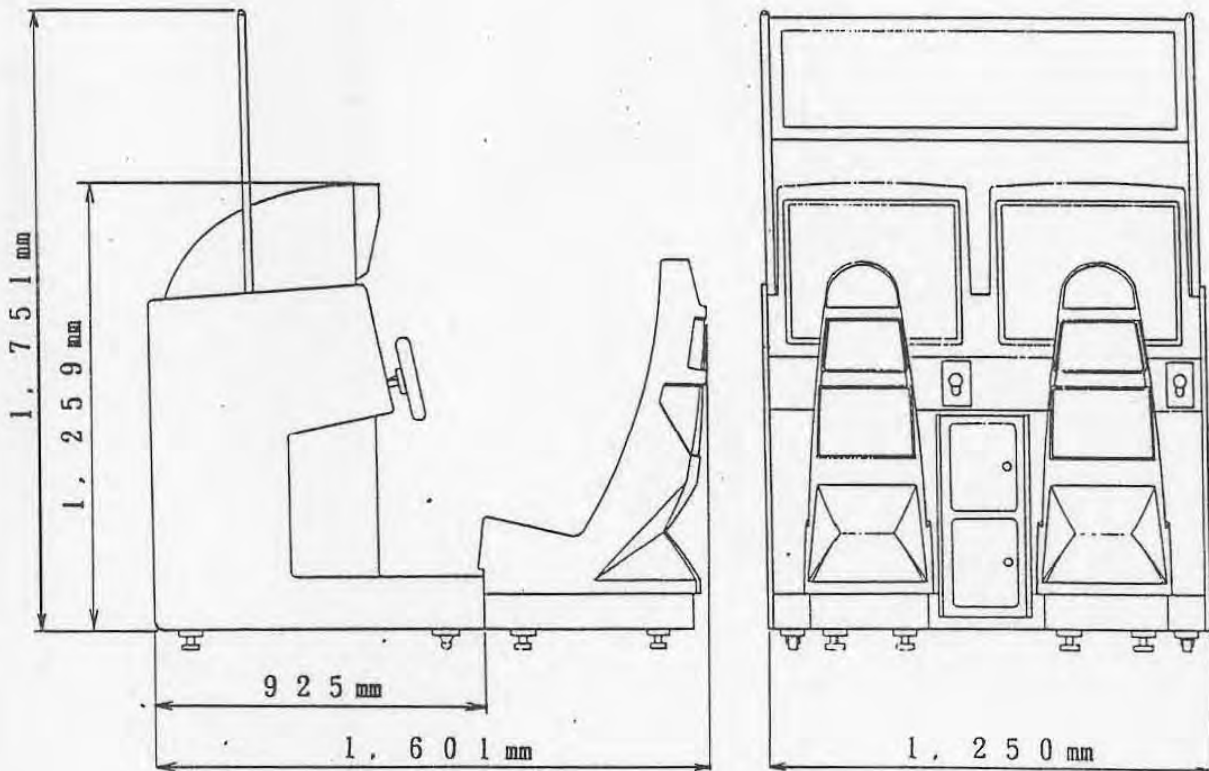
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1. SPECIFICATION

- 1) Power usage
- 2) Power consumption
- 3) Monitor
- 4) Dimensions

*AC 100V (50/60 Hz)
Approx. 350W
25" color (two)
*Width 1,250mm
*Depth 1,601mm
*Height 1,751mm



- 6) Machine weight
- 7) Coin box capacity
- 8) Coin - credit setting

*Approx. 210 kg
*2,500 (Y100 coin size)
1 coin, 1 credit--4 coins, 1 credit

9) Accessories:

Cash box key	X	1
Coin entry/maintenance door key	X	3
Manual	X	1
Fuse (6A/125V)	X	1
Potentiometer (5K ohm)	X	1
Lamp (for the start/race alone button)	X	1
Hexagon wrench 2mm	X	1
Hexagon wrench 5mm	X	1
Seat No. 1 sticker	X	1
Seat No. 2 sticker	X	1
Seat No. 3 sticker	X	1
Seat No. 4 sticker	X	1

ATTENTION: Specifications are subject to change without prior notification.
If this machine is altered in any way without prior written consent from
the manufacturer, Jaleco Ltd. holds no responsibility

2. WARNINGS

2-1 Installation

This machine is for use indoors. The following locations are not suitable.

1. Outdoors
2. In places where there is exposure to rain, leaks, or direct sunlight. In addition, damp or humid places, dusty places or near a heat source. Places of high temperature or places where the formation of dew is possible.
3. To ensure safety, before operation, this machine must be placed in a location with an emergency exit, and a fire extinguisher must be nearby.
4. This machine must not be placed on an unstable surface. In addition, any incline or any other surface which is not flat cannot be used.
5. This machine must not be placed near dangerous, inflammable materials or volatile chemicals.

2-2 Transportation

Please take care during transportation so that no excessive shocks are incurred by the machine. Also, make sure the seat unit is removed from the machine.

2-3 Operation

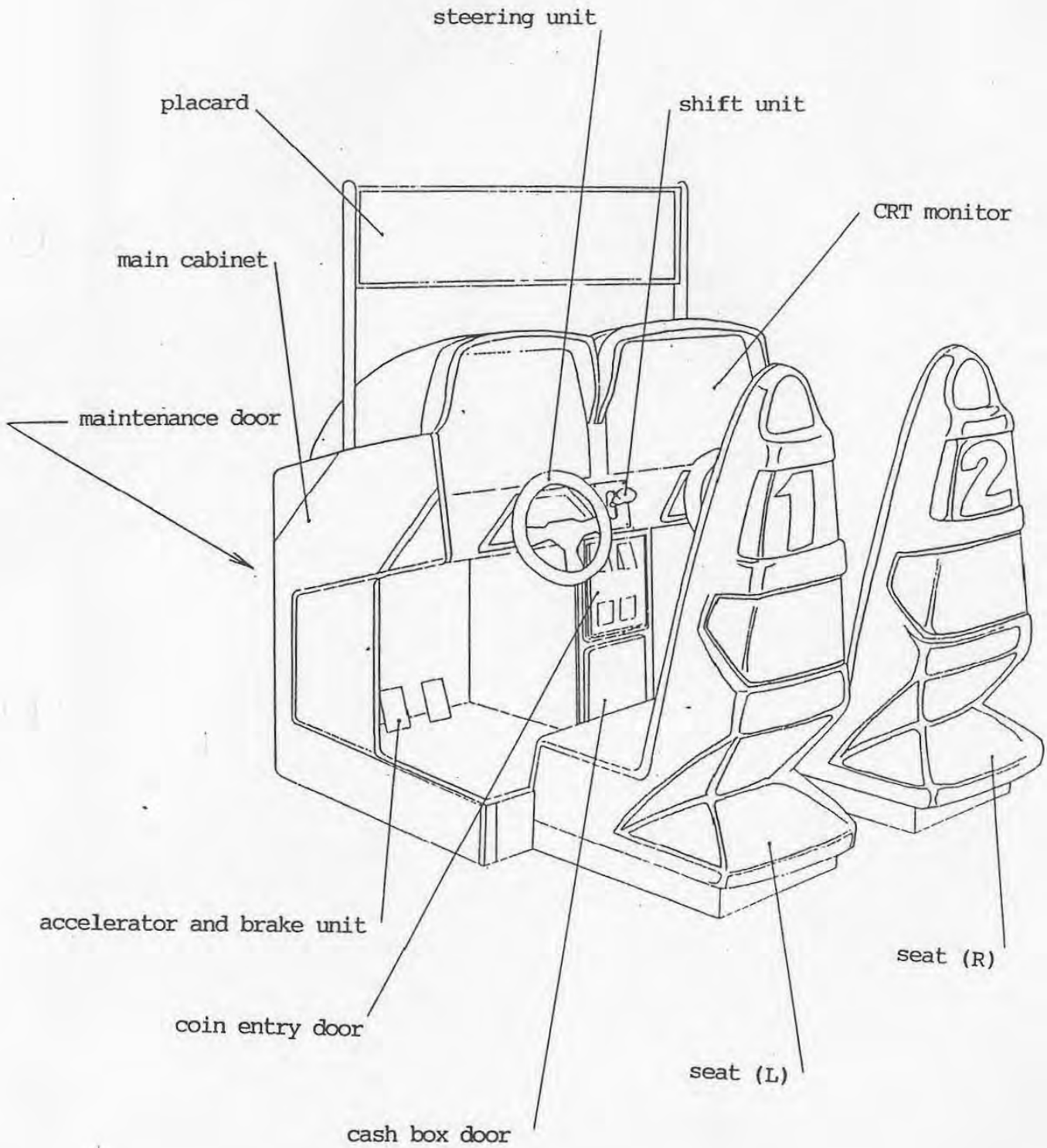
1. To ensure that this machine functions properly, it must be connected directly to a wall or power outlet, and not to an extension outlet with other machines running off it. The machine will not function correctly if the voltage supply is low or fluctuating.
2. Please make sure that the machine's power cord is attached firmly to the wall outlet or extension cord of the proper gauge and grounded.
3. Before disconnecting the power cord, make sure the power switch is turned off.
4. It is dangerous to pull the power cord out even for a second while the machine is on.

5. Please make sure that the power cord is placed in a secure manner so as to avoid being tripped over.
6. Only use fuses which meet the current electrical standards for this machine.
7. When disconnecting the power cord, please be sure to pull the plug and not the power cord.
8. Testing the PCB using a tester may cause damage to the PCB from the tester's voltage.

2-4 Turning on/Re-setting

When the machine is turned on in the morning or when the machine is turned off and then turned on for resetting, the accelerator should not be pressed down; otherwise, the car will not speed up correctly when played.

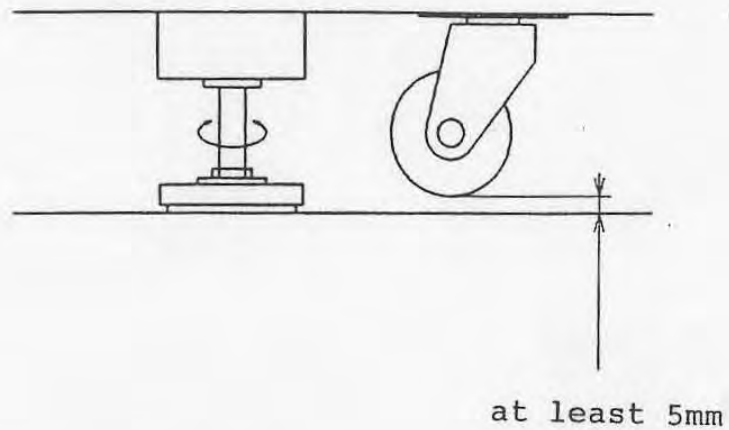
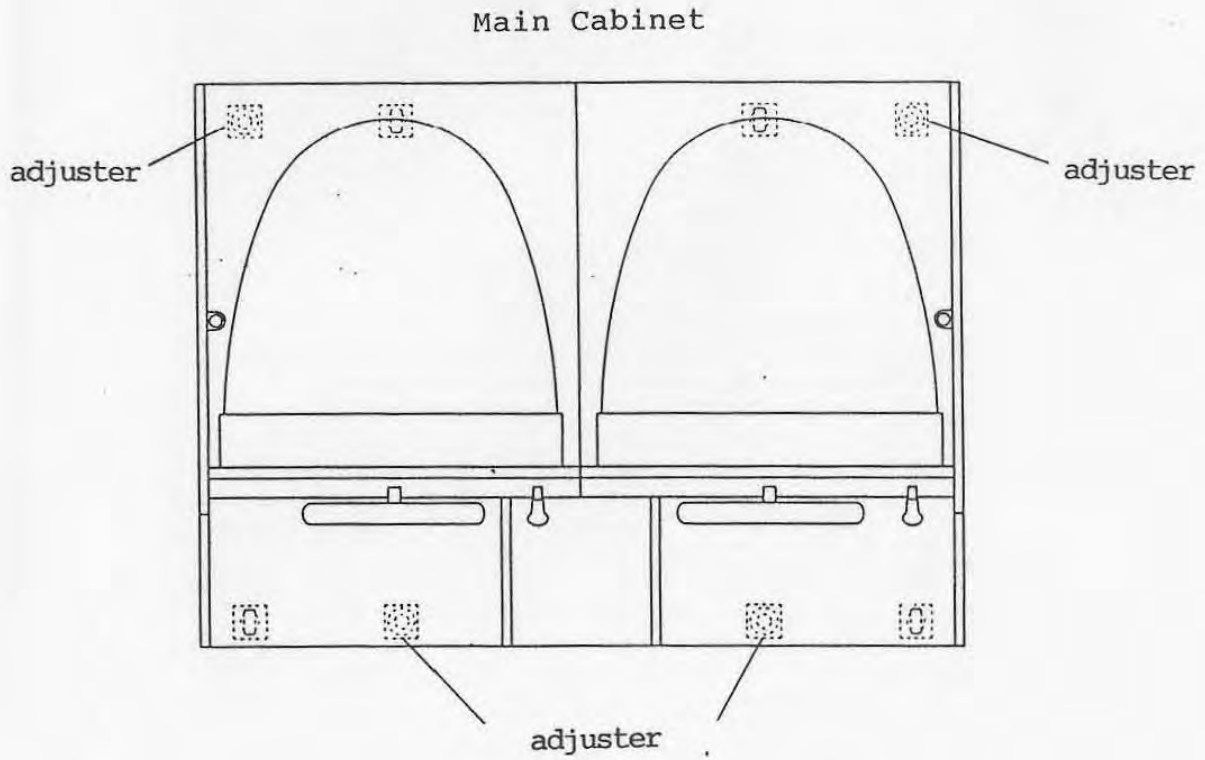
3. IDENTIFICATION OF MAIN CABINET PARTS



4. ASSEMBLY

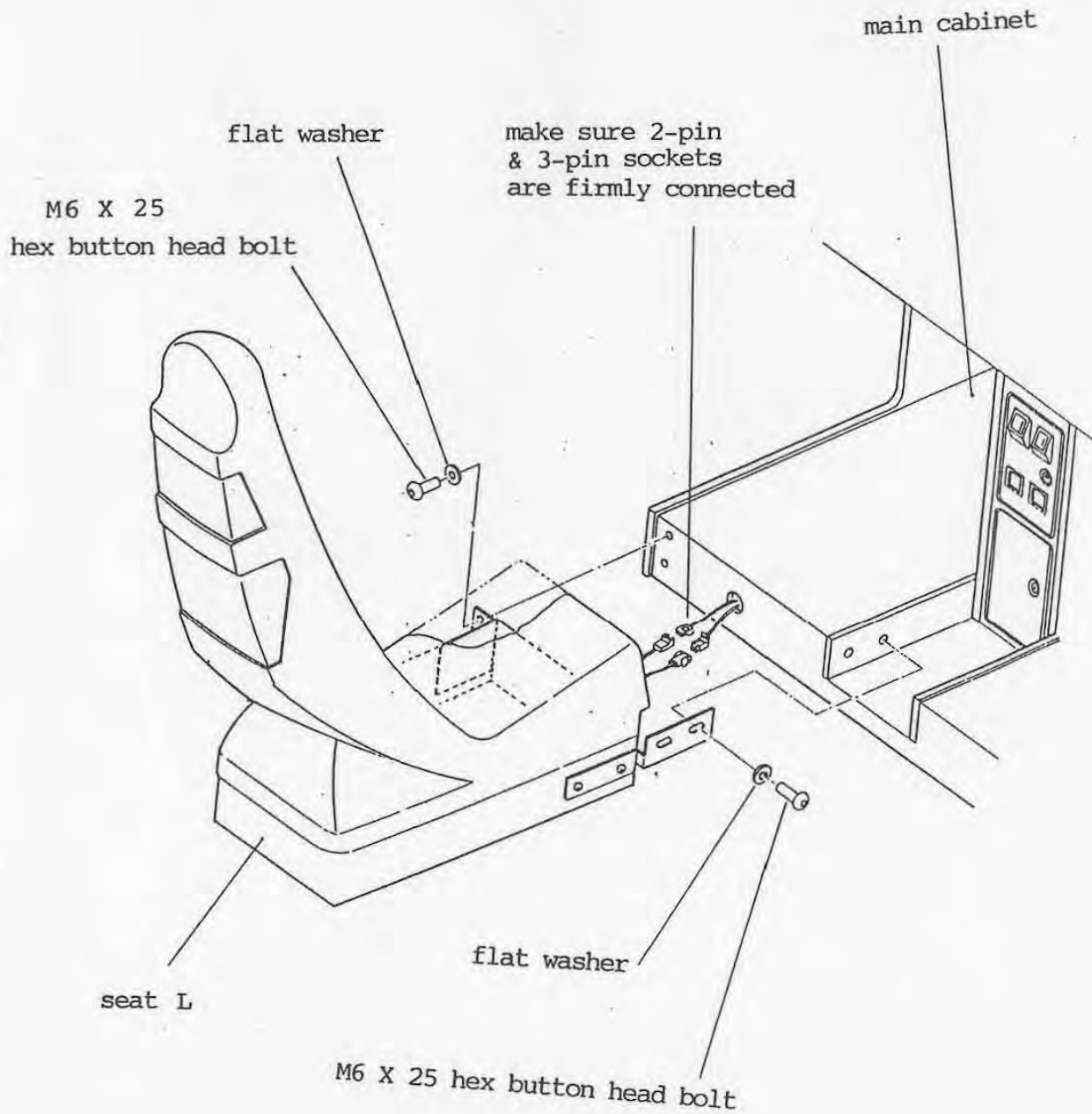
4-1 MAIN CABINET

Use the four adjusters, located on the bottom of the machine, to make sure there is at least a 5mm space between the wheels and the floor.



4-2 SEAT UNIT

First attach the connector from the main cabinet to the connector on the seat unit. Then, secure the seat on the cabinet using the flat washers and the button head bolts. Take care not to pinch the connector or cable in-between the seat and the cabinet.

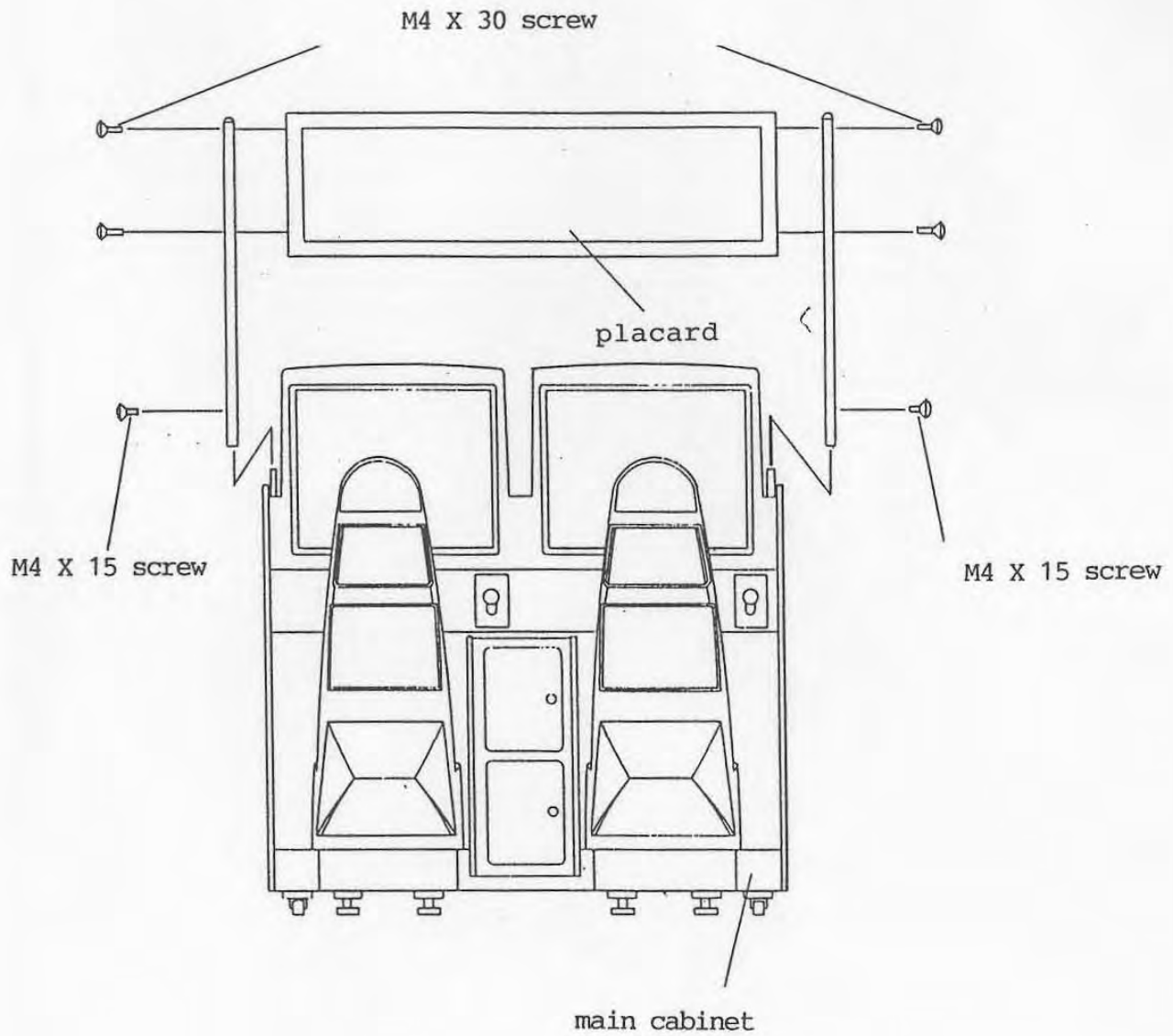


Seat (R) is installed in a similar fashion except the left and right will be the opposite of the diagram (seat L)

ATTENTION: When dis-assembling, make sure to disconnect the connectors, otherwise, the cord may break.

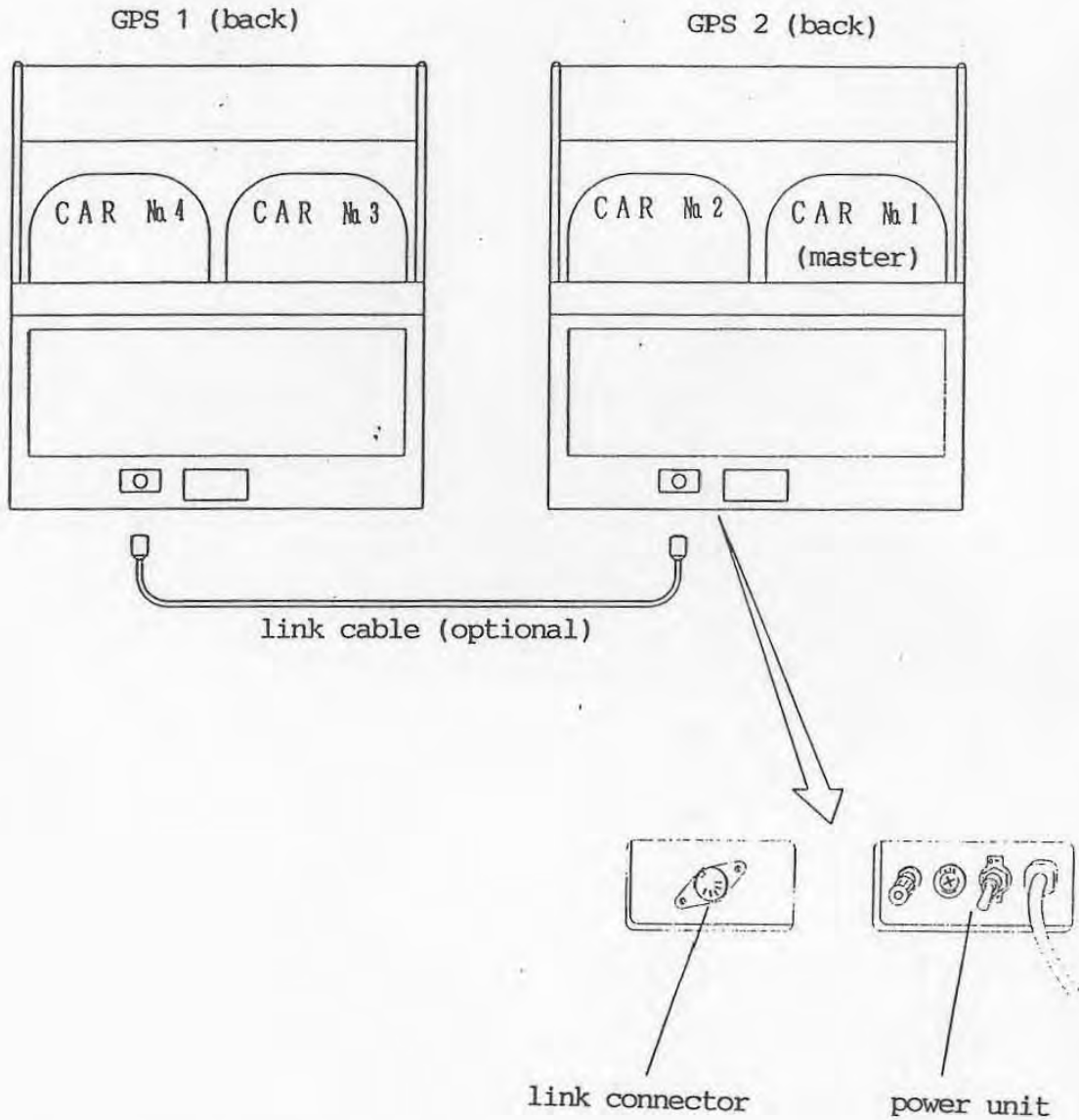
4-3 PLACARD

Fasten the placard onto the main cabinet using flat screws.



4-4 COMMLINK SYSTEM (optional)

When connecting two machines to allow a four player game, the commlink cable is necessary.



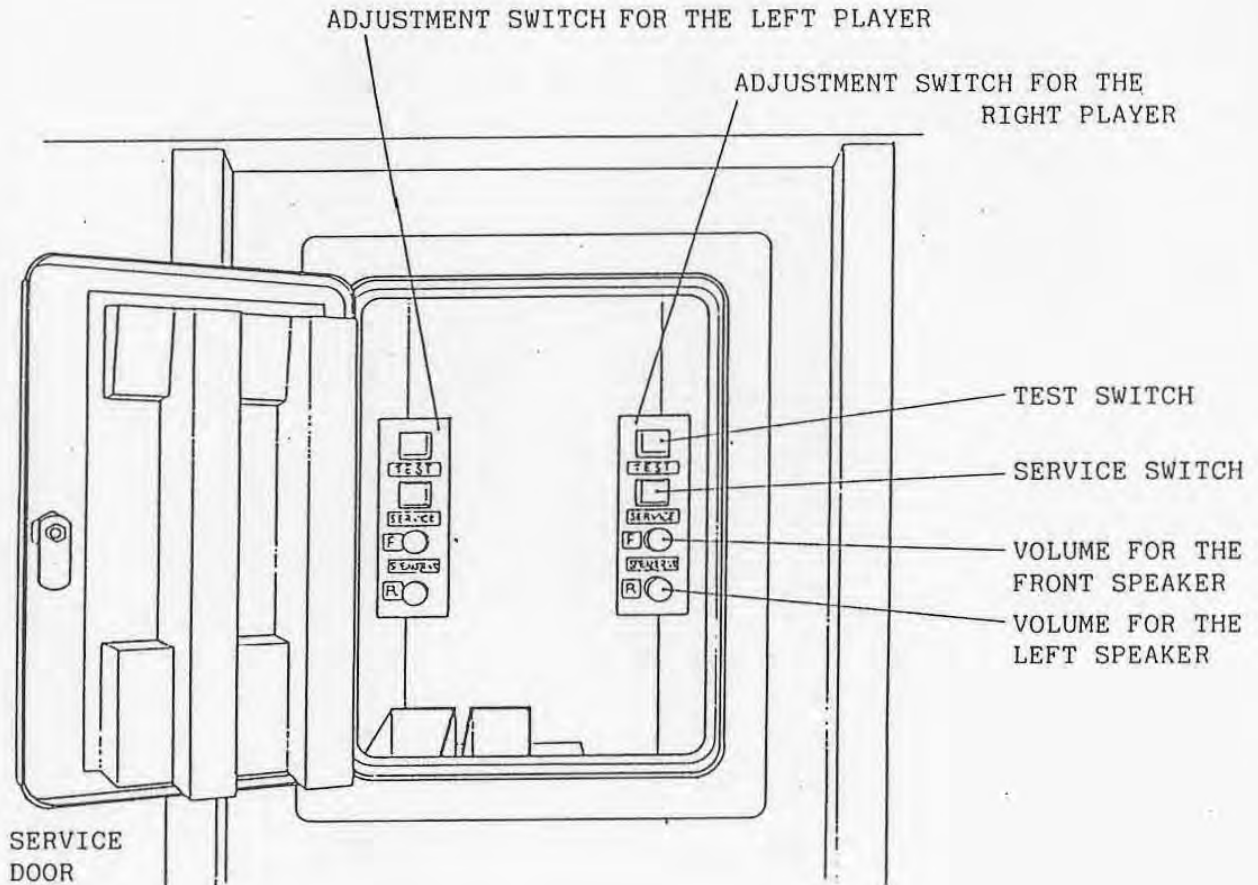
ATTENTION: When using the 4 player mode, the dip switches need to be set accordingly (see 5-4).

ATTENTION: Try to keep the link cable separate from the other cables when assembling.

5. ADJUSTMENTS

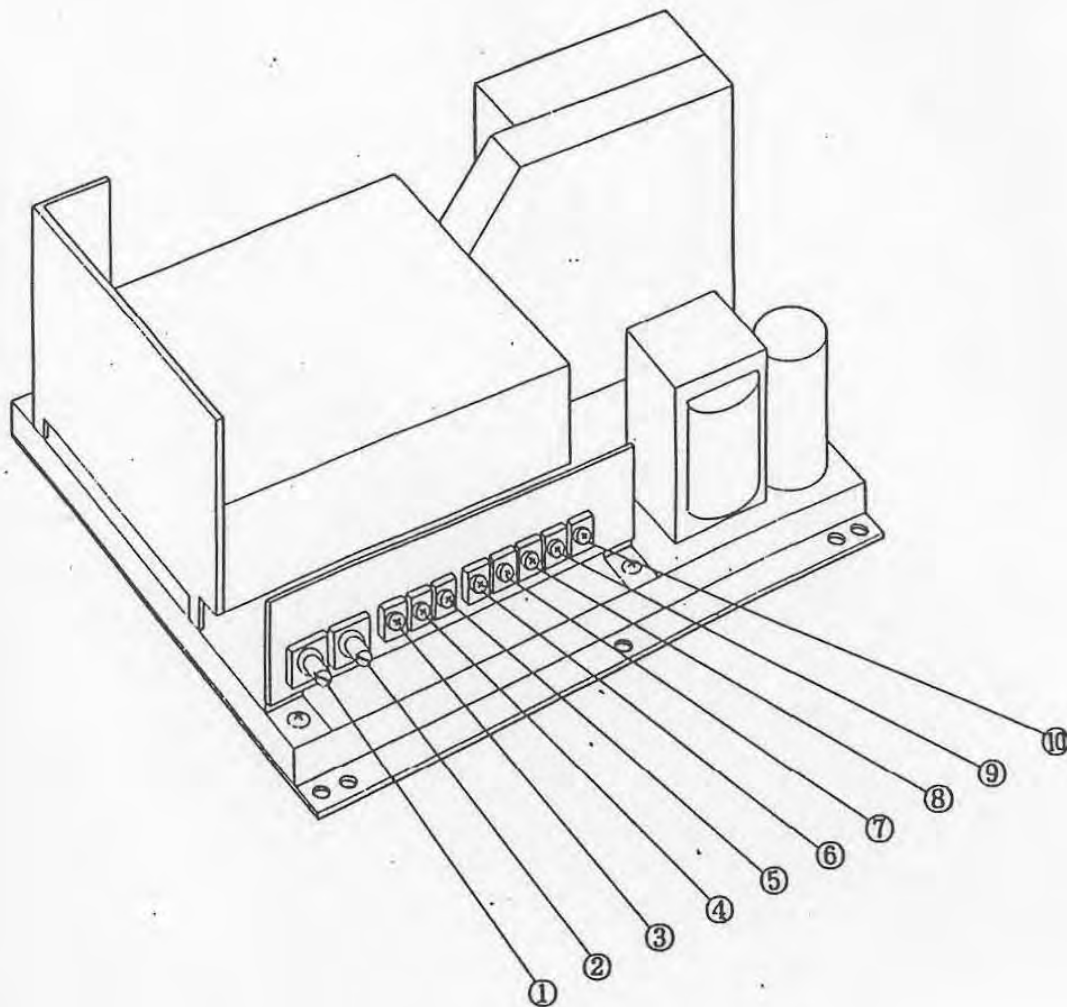
5-1 CONTROL PANEL

The adjustment switches are located inside the coin entry door (see diagram). The switches on the right side are for the right player and the switches on the left side are for the left player.



1. Test switch
This switch is to be used to run a check of the game's systems. Refer to "test mode" section 5-4 of this manual.
2. Service switch
For use in servicing the coin counter, allows an increase in the number of credits without affecting the coin counting mechanism.
3. Speaker volume (F)
Regulates the volume of the cabinet's speaker.
4. Speaker volume (R)
Regulates the volume of the seat's speaker.

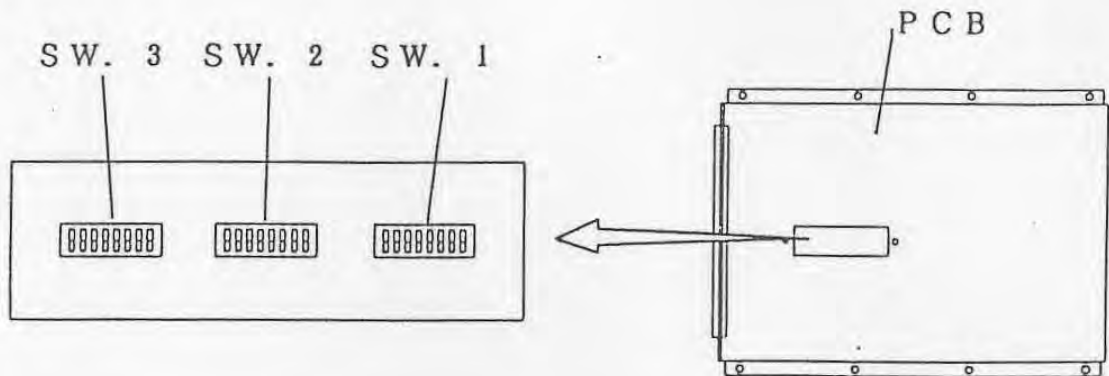
5-2 MONITOR, ADJUSTMENTS



1. Brightness
2. Contrast
3. B. BKG
4. G. BKG
5. R. BKG
6. Vertical positioning
7. Vertical hold (tracking)
8. Horizontal positioning
9. Horizontal hold (tracking)
10. Horizontal size

5-3 DIP SWITCH SETTINGS

Removing the dip switch cover on the PCB will reveal the dip switches in the following diagram.



GRAND PRIX STAR (VERSION 1.1) WITHOUT "RACE TOGETHER" BUTTON

1. Credit switch setting (SW. 1)

DIP SWITCH #1		1	2	3	4	5	6	7	8
COINCHUTE #1	1 COIN 1 CREDIT	OFF	OFF	OFF					
	1 COIN 2 CREDITS	ON	OFF	OFF					
	1 COIN 3 CREDITS	OFF	ON	OFF					
	1 COIN 4 CREDITS	ON	ON	OFF					
	1 COIN 5 CREDITS	OFF	OFF	ON					
	1 COIN 6 CREDITS	ON	OFF	ON					
	1 COIN 7 CREDITS	OFF	ON	ON					
	2 COINS 3 CREDITS	ON	ON	ON					
COINCHUTE #2	1 COIN 1 CREDIT				OFF	OFF	OFF		
	1 COIN 2 CREDITS				ON	OFF	OFF		
	1 COIN 3 CREDITS				OFF	ON	OFF		
	1 COIN 4 CREDITS				ON	ON	OFF		
	2 COINS 1 CREDIT				OFF	OFF	ON		
	3 COINS 1 CREDIT				ON	OFF	ON		
	4 COINS 1 CREDIT				OFF	ON	ON		
5 COINS 1 CREDIT				ON	ON	ON			
FREE PLAY	NO							OFF	
	YES							ON	
NOT USED - KEEP SWITCH TO "OFF"									OFF

2. Play control setting (SW. 2)

DIP SWITCH #2		1	2	3	4	5	6	7	8
NOT USED - KEEP SWITCH TO "OFF"		OFF							
NOT USED - KEEP SWITCH TO "ON"			ON						
DIFFICULTY LEVEL	STANDARD			OFF	OFF				
	DIFFICULT			ON	OFF				
	MORE DIFFICULT			OFF	ON				
	EASY			ON	ON				
PLAY TIME	NORMAL					OFF			
	UNLIMITED					ON			
SOUND IN ATTRACT MODE	NECESSARY						OFF		
	UNNECESSARY						ON		
NOT USED - KEEP SWITCH TO "OFF"								OFF	
NOT USED - KEEP SWITCH TO "OFF"									OFF

3. Commlink switch setting (SW. 3)

DIP SWITCH #3			SWITCH NO.							
MACHINE	PCB SET	CAR COLOUR	1	2	3	4	5	6	7	8
NO. 1	NO. 1	RED & WHITE	ON	ON	ON	ON				
	NO. 2	RED	OFF	OFF	ON	ON				
NO. 2	NO. 3	BLUE & WHITE	OFF	ON	OFF	ON				
	NO. 4	BLUE	OFF	OFF	OFF	ON				
NOT USED - KEEP THESE 4 SWITCHES TO "OFF"							OFF	OFF	OFF	OFF

MACHINE NO. 2 IS NOT APPLICABLE UNLESS 2 MACHINES ARE LINKED.

5-4 TEST MODE

Running the following tests will confirm that your machine is working correctly. These tests will assure you that the wiring and switches are correctly adjusted. In addition, the monitor's screen color and the sound adjustment can be checked.

1. Test Functions

If the coin entry door is opened and the "test switch" is pressed, the following screen will be displayed which lists each type of test that can be carried out.

Press the "start" ("race alone") button to move the arrow to the desired test heading, then press the "test switch" to execute the selected test.

To return to the game mode, simply align the arrow with the "exit" heading and press the "test switch."

```
⇒ ROM RAM
   MONITOR POSITION
   COLOR BAR
   I/O
   DIP SW
   SOUND
   COMMUNICATION
   EXIT
```

ROM/RAM.....checks the ROMs and RAMs on the board
MONITOR POSITION.....a test pattern display for monitor
adjustment
COLOR BAR.....a color bar display for color adjustment
I/O.....checks the switches, lamps, potentiometers,
etc.
DIP SWITCH.....shows the current DIP switch settings
SOUND.....checks the sound ROM/RAM and the power
amplifier
COMMUNICATION.....checks the link system

2. TEST MODE SCREEN HEADINGS

1) ROM/RAM CHECK

The following screen will be displayed when the ROM/RAM check is selected.
 If the ROM/RAM are functioning correctly, "OK" will be displayed.
 If there is a fault on the ROM/RAM, "NG" will be displayed.

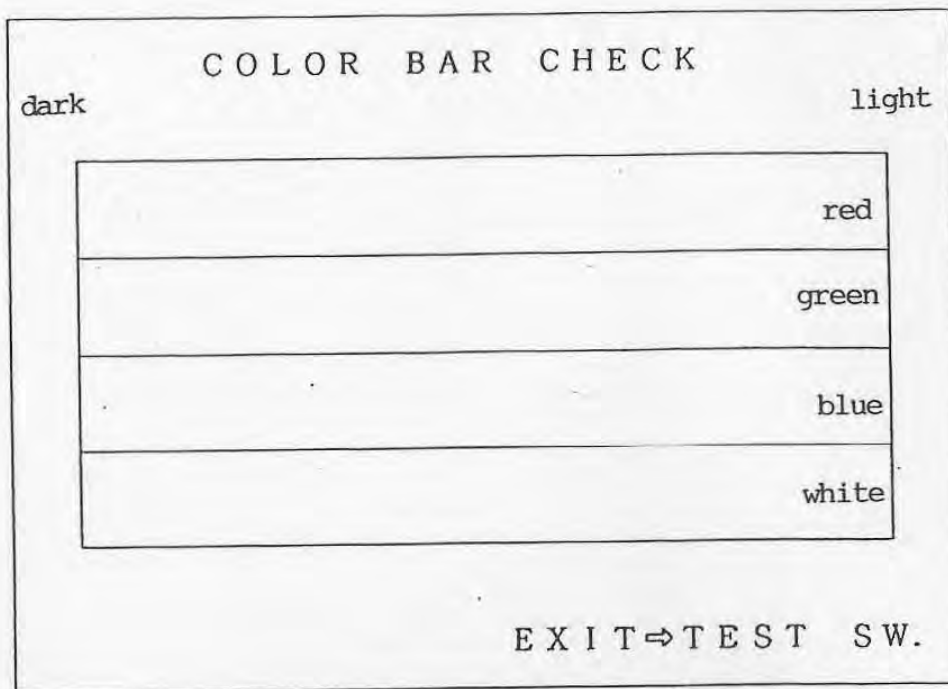
ROM RAM CHECK		
MAIN		
VRAM		OK
SCRATCH RAM		OK
COLOR RAM		OK
ROAD COM. RAM		OK
OBJECT RAM		OK
PROGRAM ROM		OK
ROAD		
SCRATCH RAM		OK
ATTRIBUTE RAM		OK
ROAD COM. RAM		OK
PROGRAM ROM		OK
EXIT ⇨ TEST SW.		

2) MONITOR POSITION CHECK

This pattern will appear for monitor adjustment.

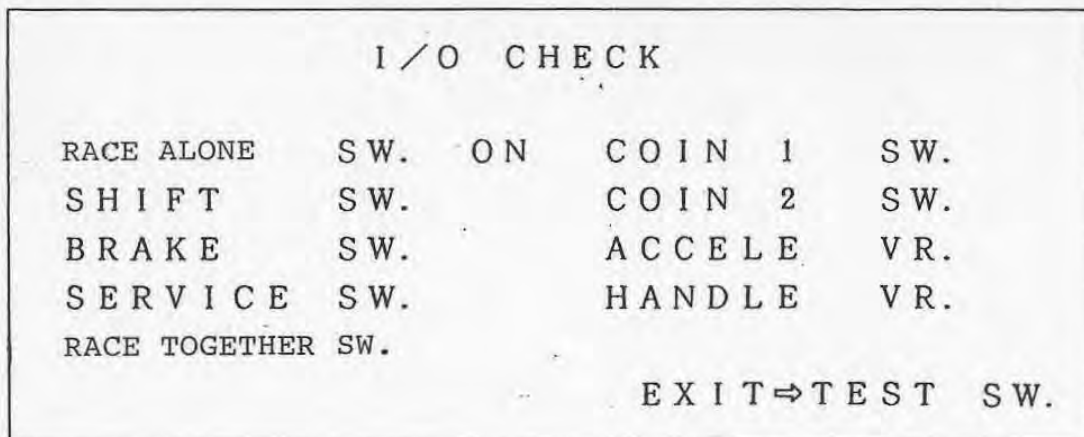
MONITOR POSITION CHECK																														
																												EXIT ⇨ TEST SW.		

3) COLOR BAR CHECK



This screen will be displayed for the color bar check.

4) I/O CHECK



Checks the switches, lamps, and potentiometers.

When the "start" ("race alone") button is pressed, the lamps will go on and "ON" will be displayed if normal.

When the "shift" is set on high, "ON" will be displayed if normal.

When the other switches are pushed, "ON" will be displayed if normal.

When the accelerator is not pressed, the normal reading is 80 ± 10 .

When the steering wheel is not touched, the normal reading is 80 ± 2 . (At 80 ± 1 a high pitched sound will occur.)

When the "test switch" is pressed again, the screen will change to display steering wheel shock and seat motor.

```

      I / O  C H E C K

⇒ S T E E R I N G      S H O C K

      S E A T  M O T O R

      E X I T

```

Press the "start" ("race alone") button to move the arrow to the desired heading, then press the "test switch" to execute the selected test.

5) DIP SWITCH CHECK (only "ON" will be displayed)

```

      D I P  S W .  C H E C K

D I P  S W .  1
      1   2   3   4   5   6   7   8

D I P  S W .  2
      1   2   3   4   5   6   7   8
      ON  ON

D I P  S W .  3
      1   2   3   4   5   6   7   8
      ON  ON  ON  ON

      E X I T ⇒ T E S T  S W .

```

This screen will show for the DIP switch check.

6) SOUND CHECK

SOUND CHECK			
SOUND	ROM	1	OK
SOUND	ROM	2	OK
SOUND	RAM	1	OK
SOUND	RAM	2	OK
SOUND	CODE		
EXIT⇒TEST SW.			

The sound ROMs, RAMs, and power amplifier are checked with this test. If a ROM or RAM is normal, then "OK" will be displayed. If there is a fault, then "NG" will be displayed.

A musical scale will sound from the front speaker, then the back speaker, and finally both speakers.

When the "start" ("race alone") button is pressed a car engine sound will play.

7) COMMUNICATION CHECK

COMMUNICATION CHECK			
COMMUNICATION MASTER (SLAVE)			
CAR No.	1		OK
CAR No.	2		OK
CAR No.	3		NOT CONNECTED
CAR No.	4		WAITING
EXIT⇒TEST SW.			

This display is the screen of CAR NO. 1

When the cabinets are connected, it is possible to run a COM-LINK COMMUNICATION CHECK. However, if the other cabinets do not have the "COMMUNICATION CHECK" display on the screen, this test will not run.

The following will be displayed when:

Normal.....	OK
Faulty.....	NG
Not connected.....	NOT CONNECTED
Power is off.....	NOT CONNECTED
Not being checked.....	WAITING

When testing from CAR NO. 2, it will check the connection with CAR NO. 1, 3, 4.

Similar checks will occur if tested from CAR NO. 3 or 4.

6. HOW TO PLAY

This is a racing game where a player has control of a car in a circuit.

Up to 4 players can race with the commlink system. Players can choose from Germany (a high speed course through a forest), Monaco (a technical course through the town), or Japan (an original course through Tokyo).

When a coin is inserted and the "start" ("race alone") button pressed, the screen will display the course choices. To choose a course, turn the steering wheel to the desired course and press "start" ("race alone"). During the entry time (10 seconds), if another player inserts a coin and presses the "start" ("race alone") button, he can participate in the same race.

In the case where each player chooses different courses, the course with the majority will be chosen. However, if there is no majority the computer will decide the course.

In the race, for each lap there are two check points. If a player fails to reach the check point within the given time, the game is over.

The goal is to complete four laps. After the fourth lap there will be a commendation ceremony for the first three positions.

Controls:

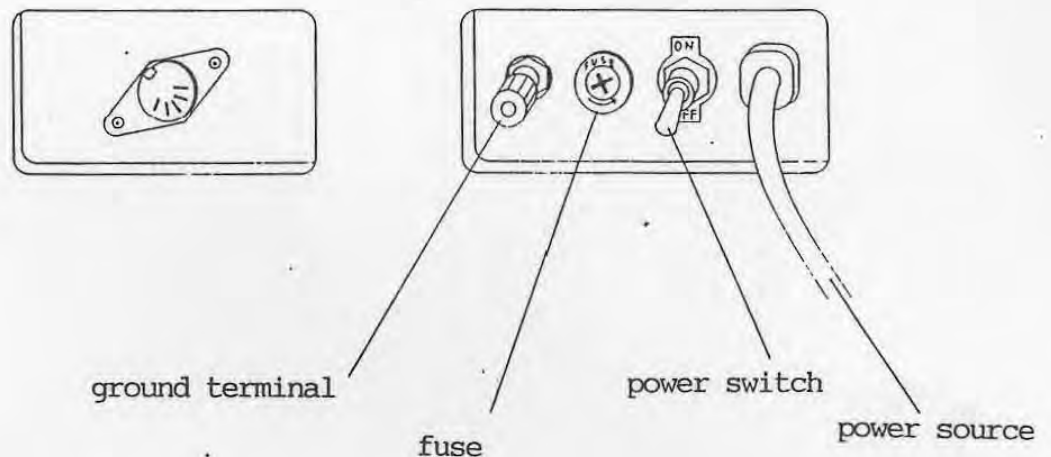
- 1 Accelerator: Stepping on this pedal will increase the speed of the player's car.
- 2 Brake: Stepping on this pedal will decrease the speed of the player's car.
- 3 Steering wheel: Turning the wheel left or right will change the car's direction.
- 4 Shift: Changes the gear from high and low.

7. BASIC MAINTENANCE

7-1 POWER UNIT

The power unit can be found on the lower part of the back of the cabinet. If the fuse blows, replace it with a 6A 125V fuse.

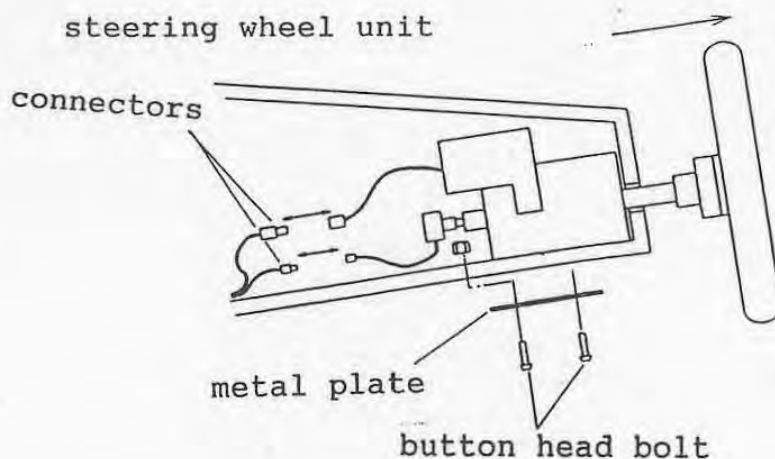
ATTENTION: Before replacing a blown fuse, be sure to find the cause and eliminate it.



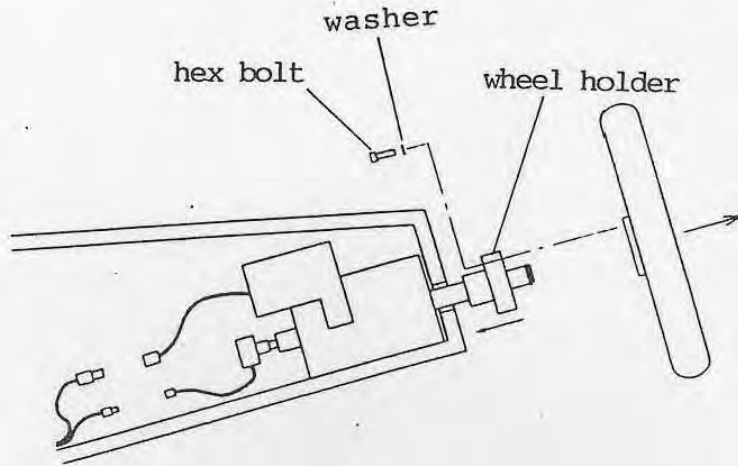
7-2 STEERING WHEEL

Dis-assembling

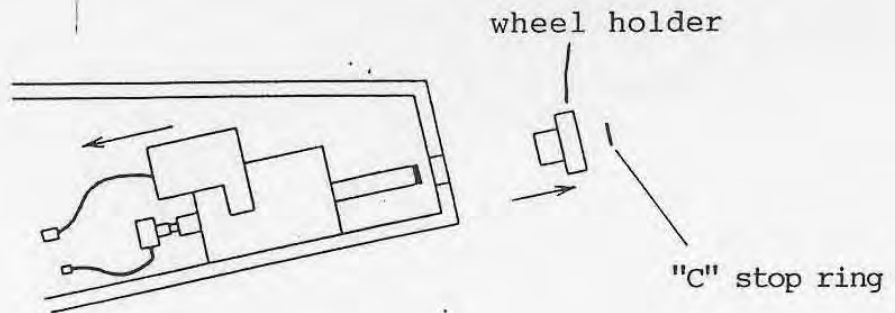
1. Open the maintenance door and disconnect the two cords (one for the motor and one for the potentiometer) from the steering wheel unit.
2. Remove the grounding hex nut from the maintenance door side, then remove the four button head bolts from the bottom of the steering wheel unit.
3. Remove the entire unit from the cabinet.



4. Remove the steering wheel by taking out the three hex bolts in the base.

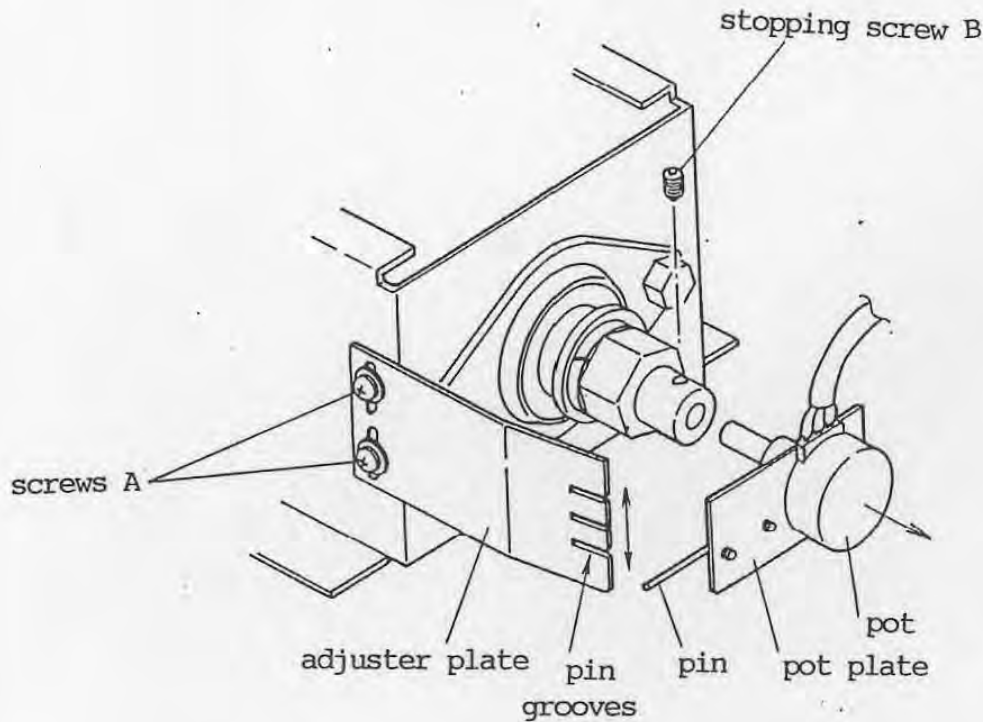


5. Remove the "C" stop ring, and remove the wheel holder.
6. Take the drive unit out through the maintenance door, take care not to get the cords caught.



Adjusting the potentiometer (this can be done while it is still connected to the machine)

1. Run the I/O test mode so that it is displayed on the screen (see 5-4 test mode section).
2. Keep the steering wheel level.
3. Loosen screws A and move the adjuster plate up and down to adjust. The test mode screen will display "HANDLE VR:" When it is settled in the 78-82 range tighten the A screws.
4. If the range cannot be reached by moving the adjuster plate, loosen screw A a little more and move the pin to another groove, then repeat step 3.



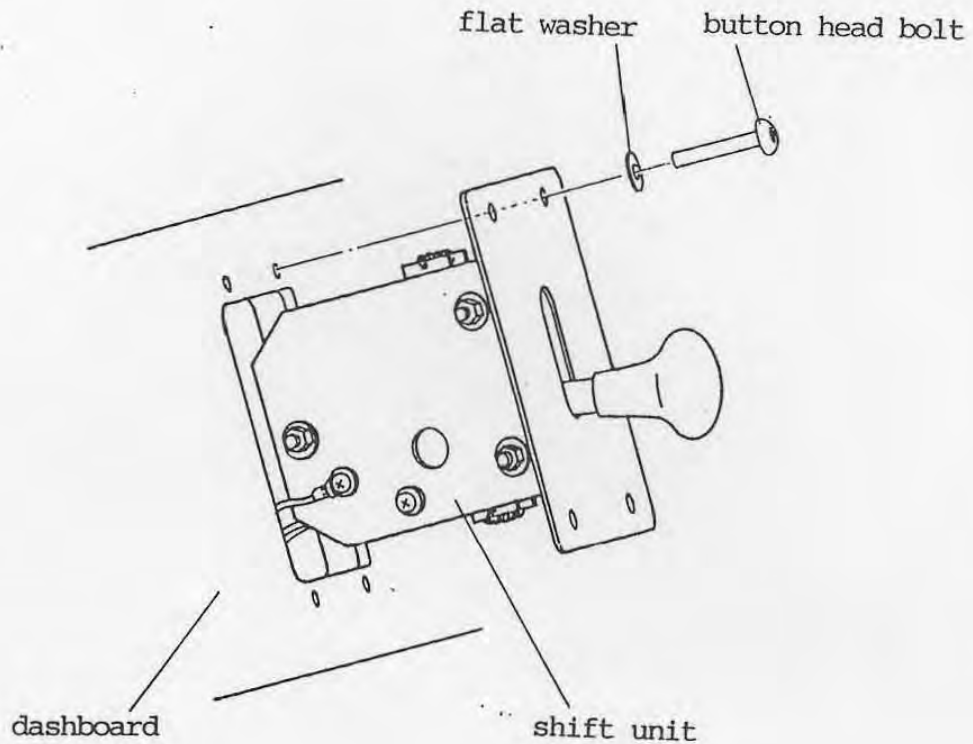
Changing the potentiometer

5. Disconnect the pot connector.
6. Remove stopping screw B and pull out the pot knob.
7. Remove the nut on the pot plate and change the pot.
8. Once the pot is replaced onto the volume plate (please be careful not to move the pin and pot terminal's direction), then reconnect the connector.
9. Check to make sure that the "Handle Vr." on the I/O test mode is in the range of 78-82 by moving the pot shaft.
10. With this completed, replace the pot knob and stopping screw B.
11. Then go back to "pot adjustment" section to reconfirm the pot value.

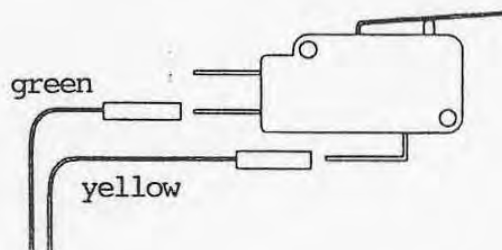
7-3 SHIFT UNIT

Unfasten the 4 button head bolts on the front of the unit. Then disconnect the microswitch terminal and grounder. The shift unit can now be taken out.

ATTENTION: Do not force the cord which is connected to the microswitch terminal and grounder when disconnecting or it may break.



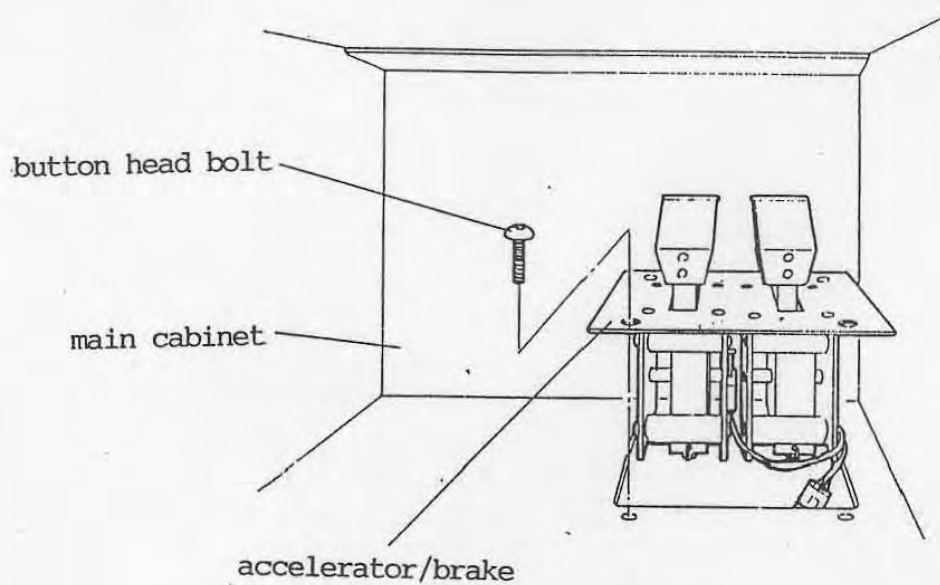
The following diagram is the wiring for the microswitch.



7-4 ACCELERATOR/BRAKE UNIT

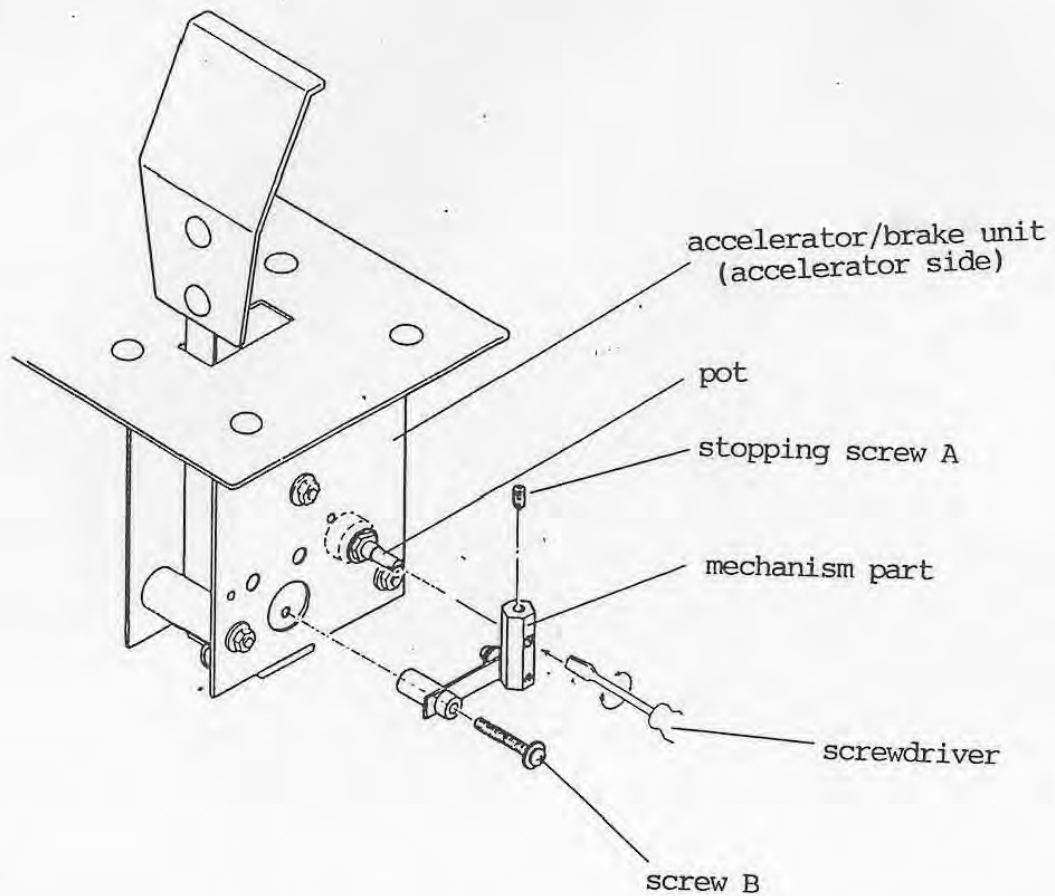
Removing the accelerator/brake unit

The accelerator/ brake unit can be removed by unscrewing the four button head bolts (as shown in the diagram). Taking care not to break the cord, disconnect the connector.



Adjusting the potentiometer (this is done while the pot connector is still connected)

1. Run the I/O test (refer to 5-4 test mode section)
2. Remove stopping screw A.
3. Adjust the pot using a small screwdriver, then replace screw A once the "Accele Vr." on the screen is in the 70-90 range (make sure that the accelerator is not pressed).



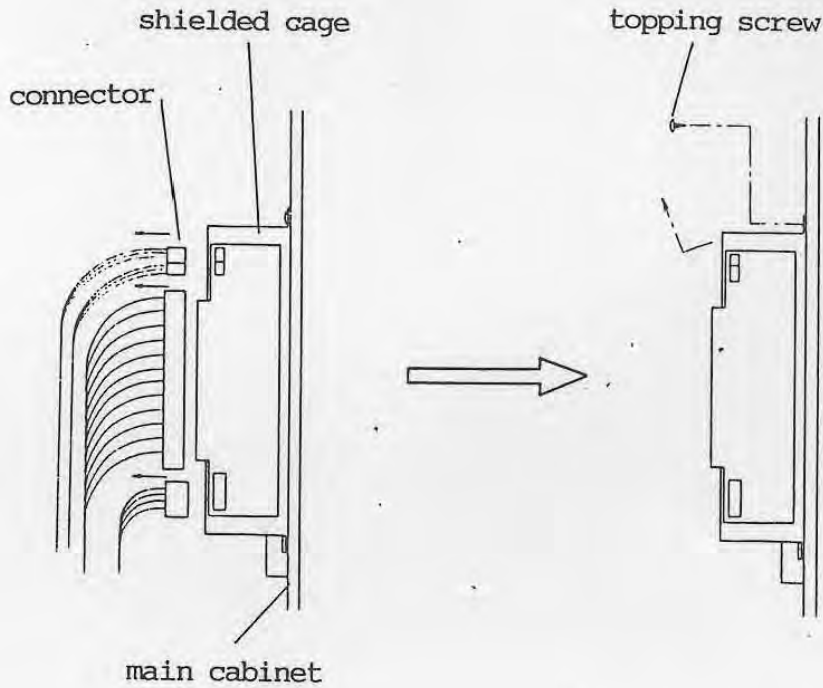
Changing the potentiometer

4. Disconnect the connector and the cord.
5. By removing stopping screw A and screw B, this mechanism part can be removed.
6. Then remove the nut holding the pot, and change the pot.
7. Replace the mechanism part and screw B, then follow the directions for pot adjustment.

7-5 REMOVING THE GAME PC BOARD

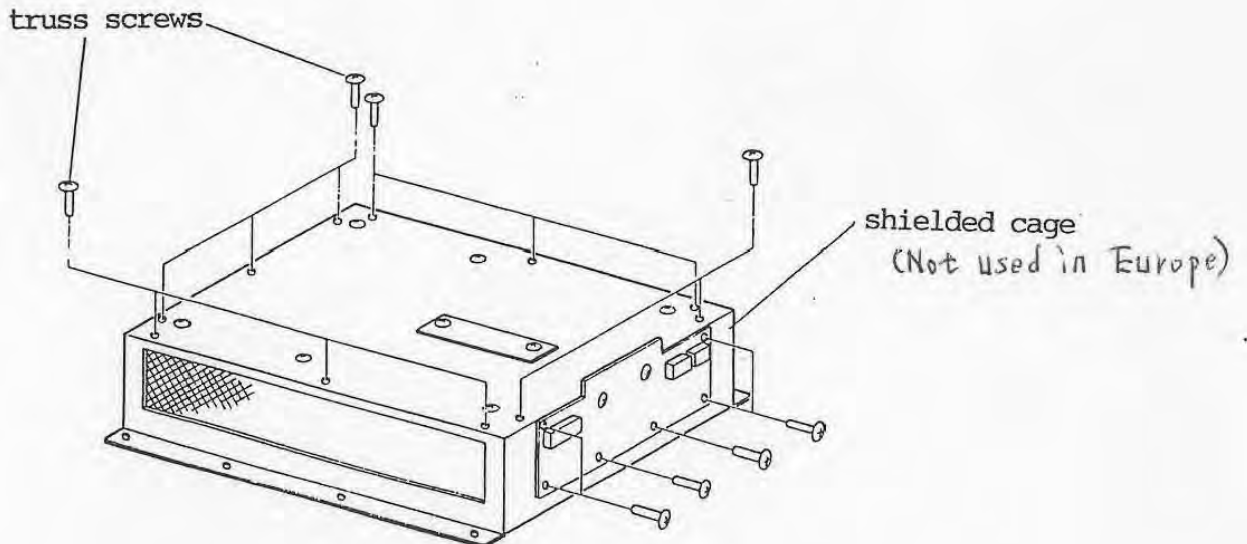
Removing the shielded cage (Shielded cage is used only in Japan & U.S.A.)

1. Open the maintenance door.
2. Disconnect the three connectors coming from the shielded cage.
3. Remove the four topping screws holding the case to the cabinet. The cage can now be removed.



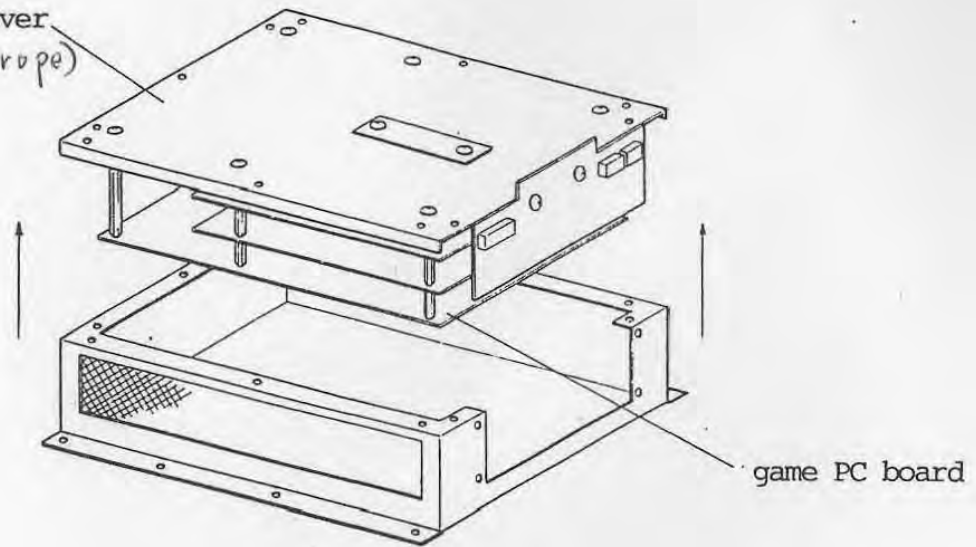
*Removing the game PC board

- *1. Remove the 17 small truss screws as shown in the diagram.



2. Now the shielded cage cover and game PC board can be removed.

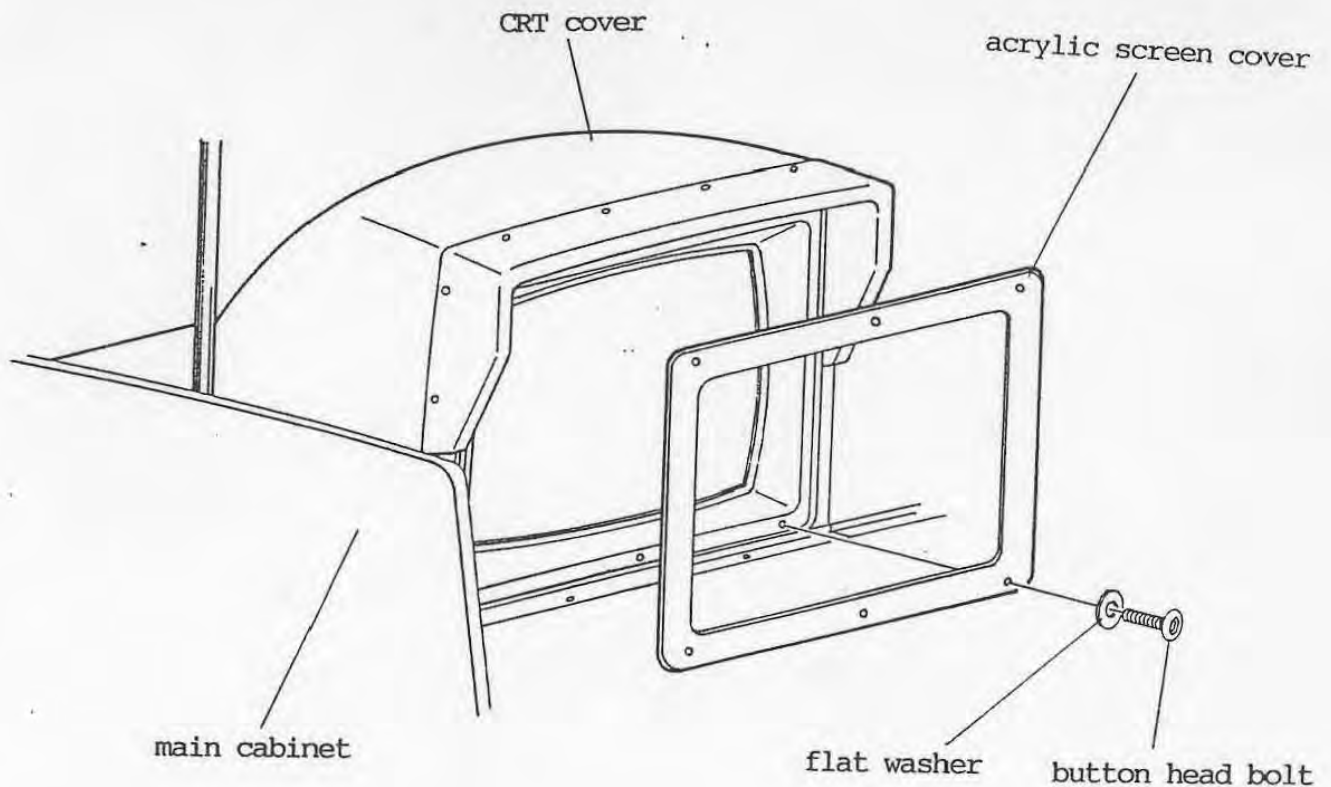
shielded cage cover
(Not used in Europe)



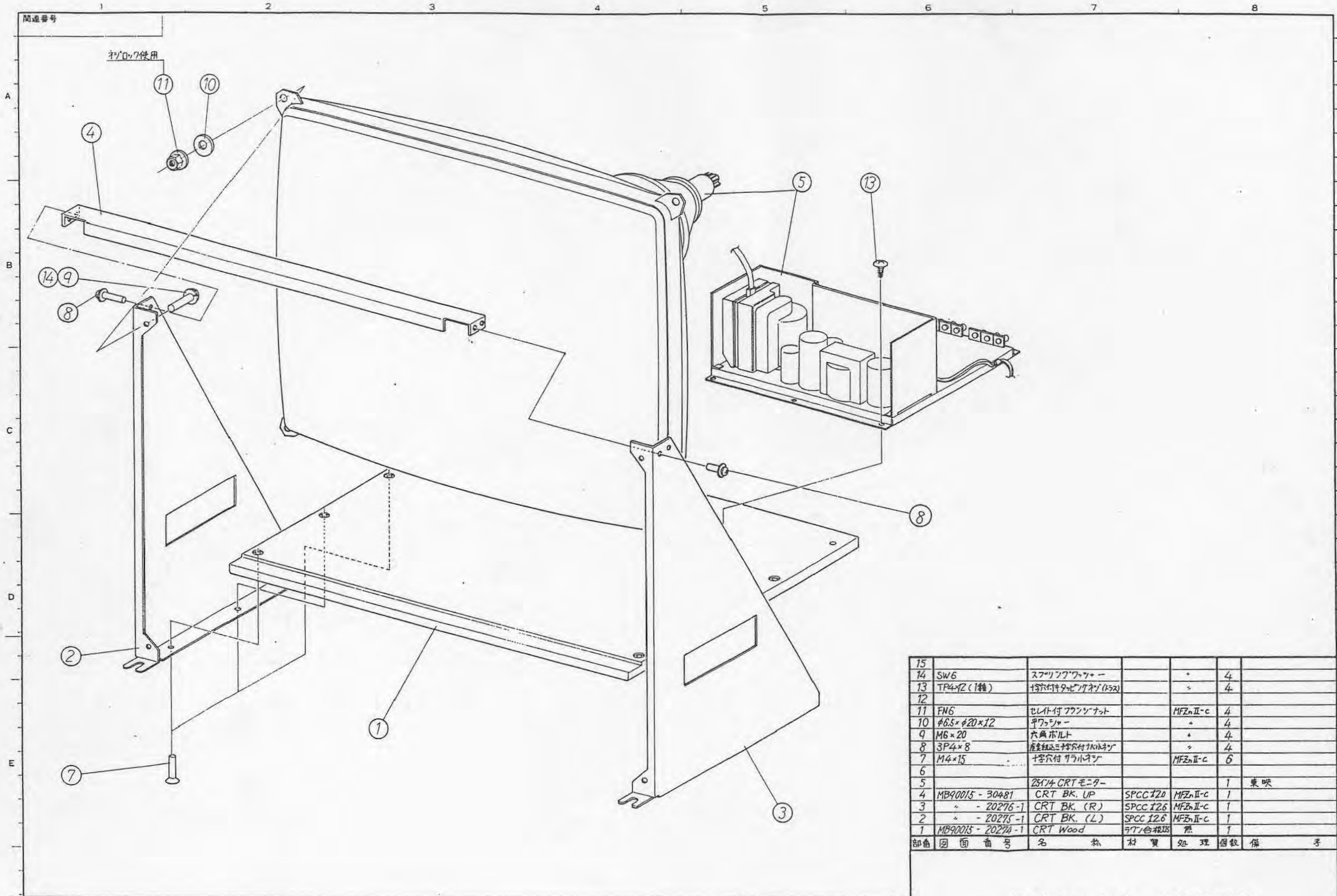
7-6 REMOVING THE ACRYLIC SCREEN COVER

The acrylic screen cover can be removed after the 6 button head bolts are removed.

ATTENTION: When replacing, be sure not to screw the button head bolts in too tight, otherwise the acrylic cover may break.



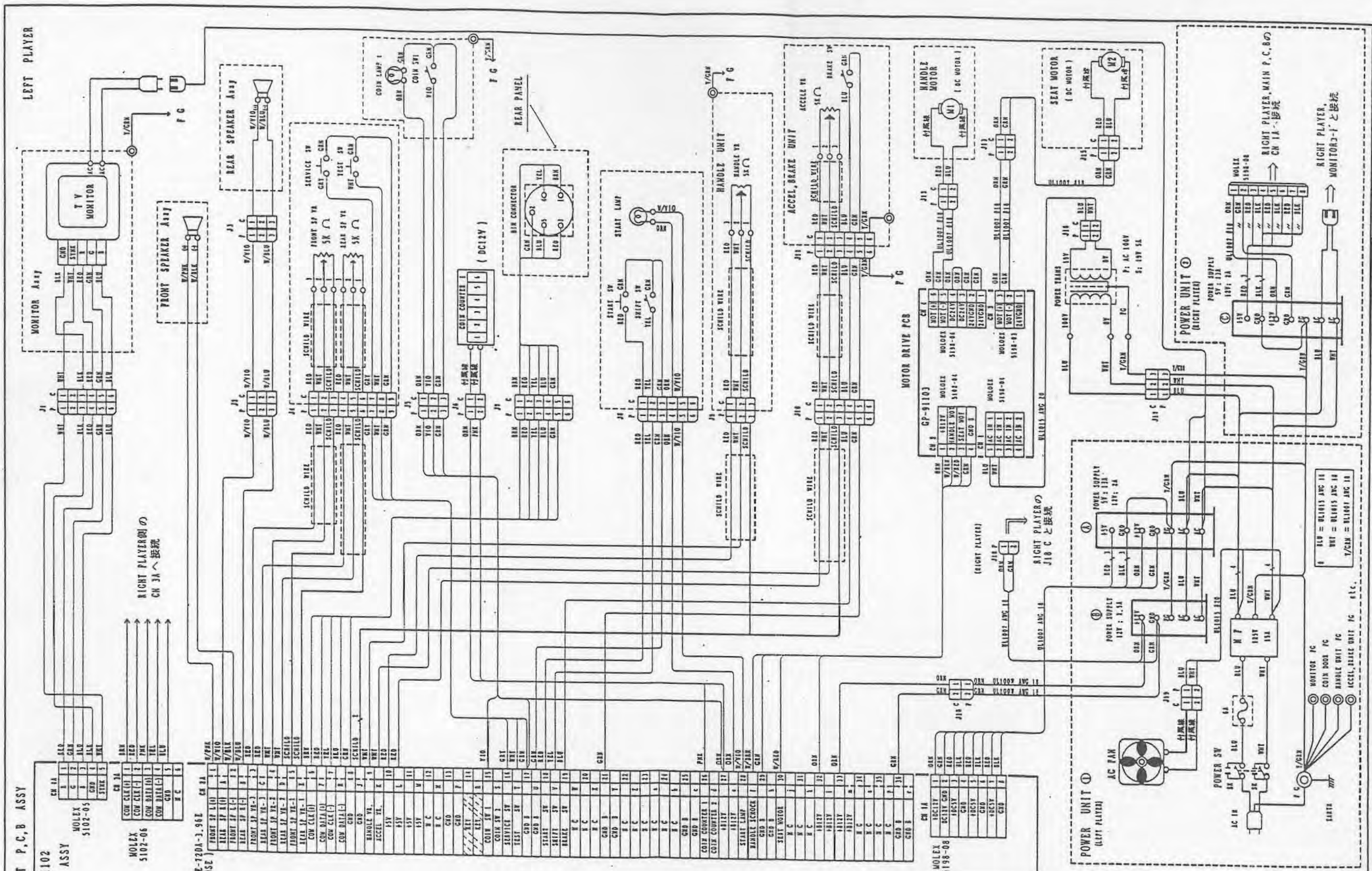
関連番号



15						
14	SW6	スワッチワーク		*	4	
13	TP4×2 (1種)	十字穴付タビネジ (152)		*	4	
12						
11	FN6	セリ付ワッシャー		MFZ-II-c	4	
10	φ6.5×φ20×12	平ワッシャー		*	4	
9	M6×20	六角ボルト		*	4	
8	3P4×8	産業用十字穴付ナット		*	4	
7	M4×15	十字穴付ナット		MFZ-II-c	6	
6						
5		251/4 CRTモニター			1	東映
4	MB90015-30481	CRT BK. UP	SPCC120	MFZ-II-c	1	
3	" - 20276-1	CRT BK. (R)	SPCC126	MFZ-II-c	1	
2	" - 20275-1	CRT BK. (L)	SPCC126	MFZ-II-c	1	
1	MB90015-20274-1	CRT Wood	ワッシャー		1	
部品 図面 番号 名 称 材 質 処 理 個 数 備 考						

記号

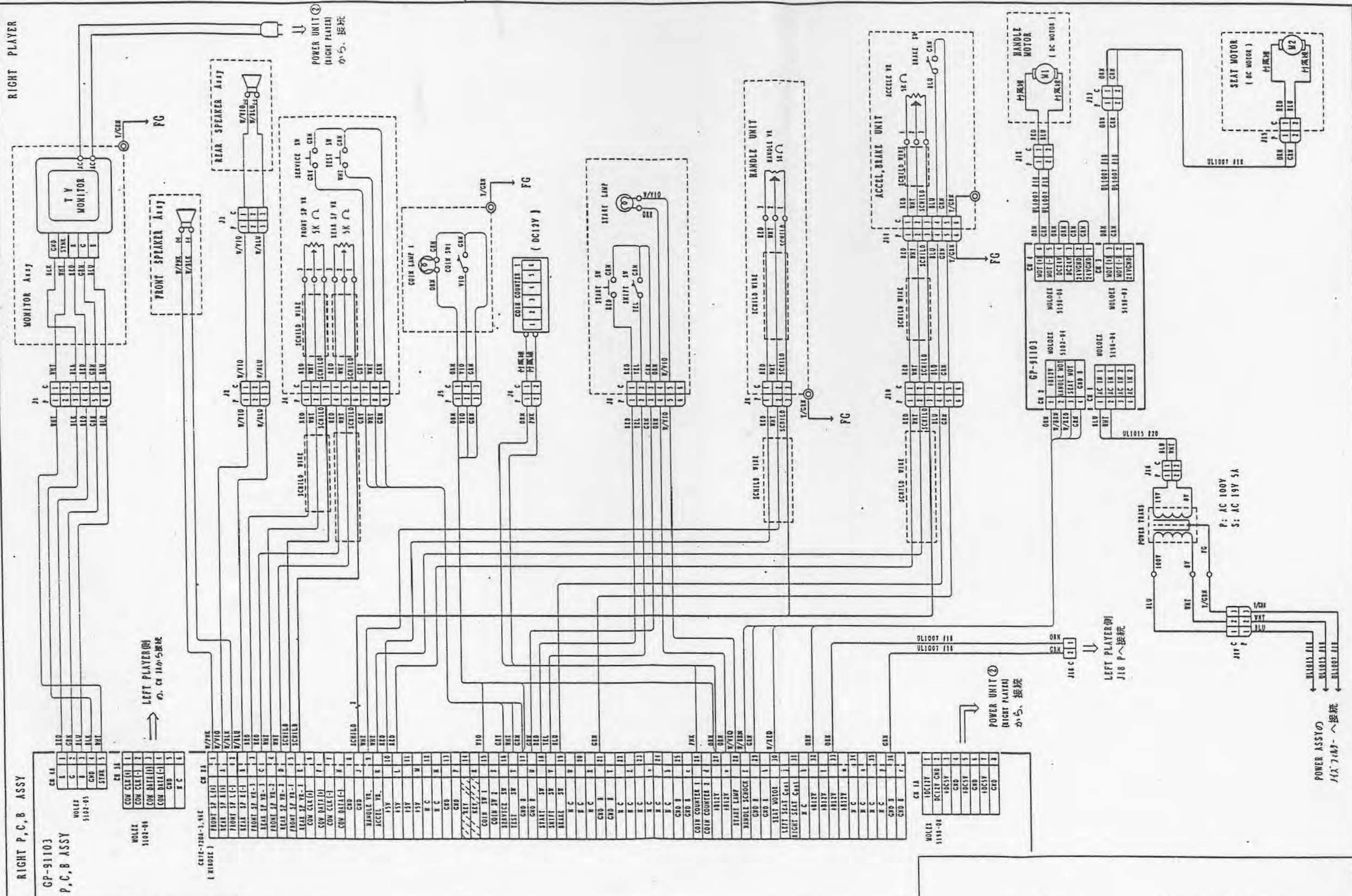
CRT Monitor Ass'y MF90015-10076



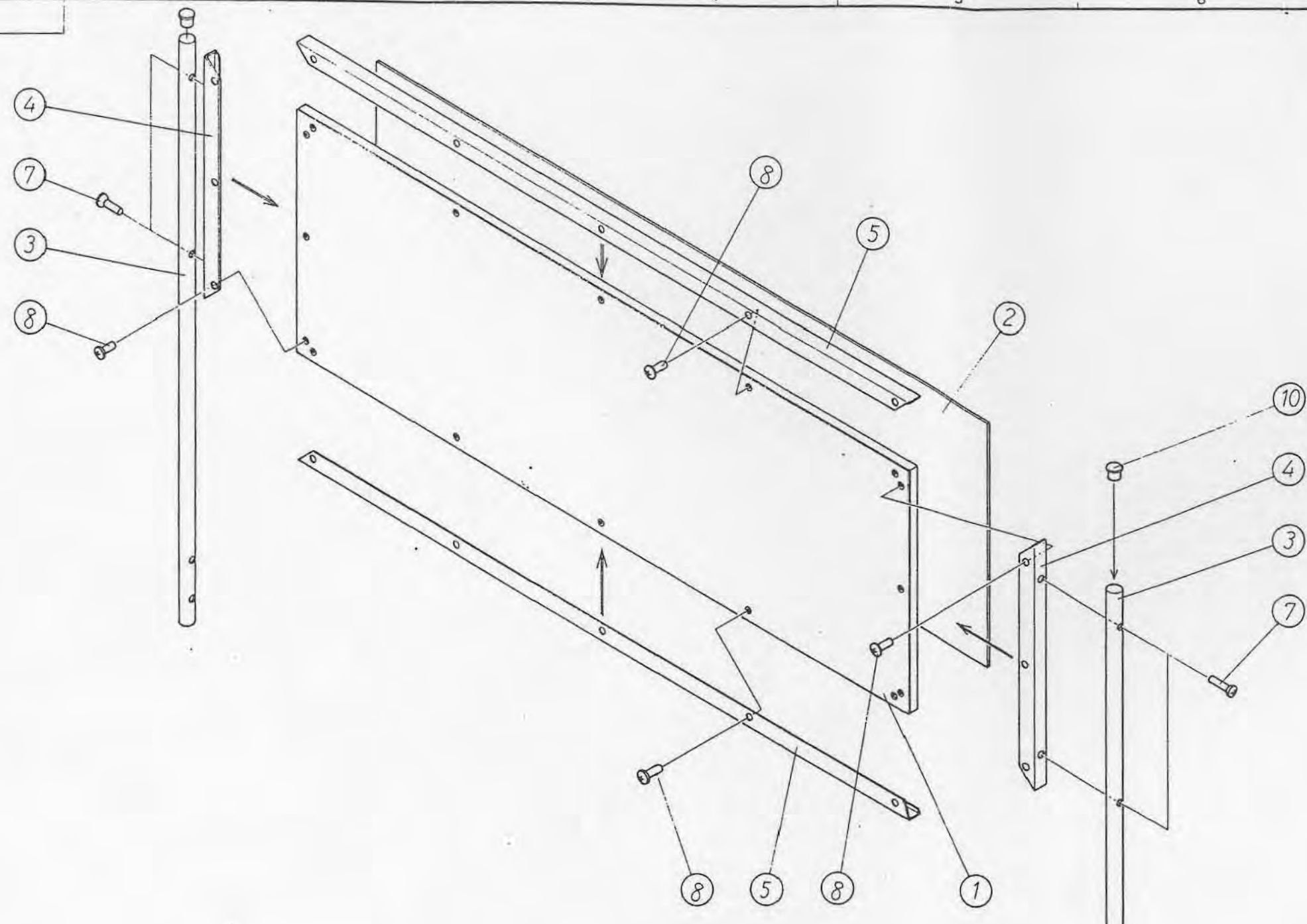
This differs from country to country.

1 指定なき線材は、UL1007 AWG 22
 2 FG は、必要とする金属部 全てから接続して下さい。
 3 コネクター番号の Pは、プラグコネクター Cは、キャップコネクターを示す。

* BLU → UL1015 AWG 18
 WHT → UL1015 AWG 18
 Y/GRN → UL1007 AWG 18



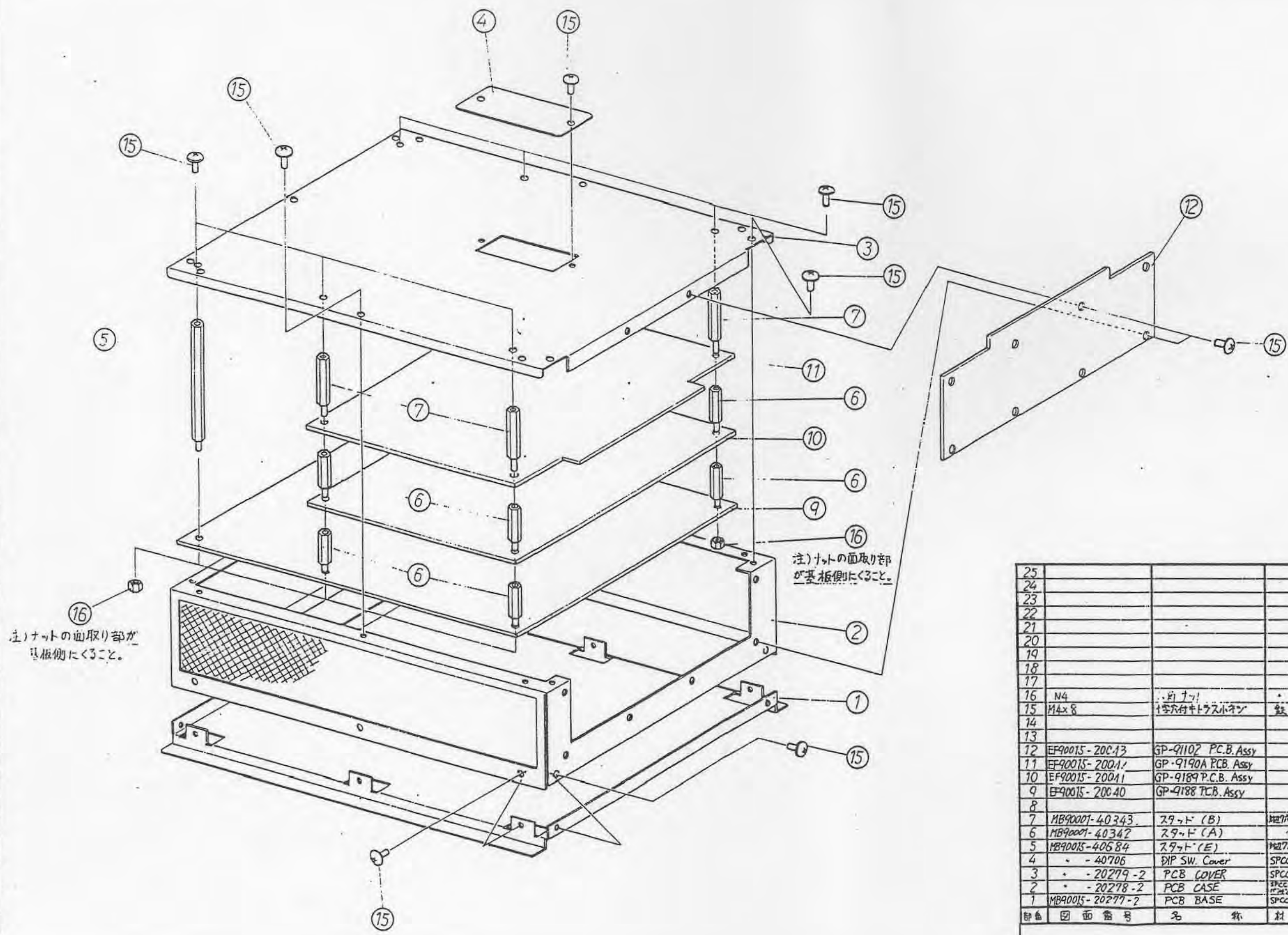
関連番号



11						
10	108-11702	弁丸中径 22mm R		70-4	2	
9						
8	M4 x 12	十字穴付キバイト小ネジ		黒70-1	16	
7	M4 x 30	十字穴付キバイト小ネジ		70-4	4	
6						
5	MB90015-30469	Bill Board BK (B)	SUS430110	表面ミカキ	2	
4	"-30468	Bill Board BK (A)	SUS430110	表面ミカキ	2	
3	"-30467	Bill Board Pipe	鉄141#22.2	70-41号	2	
2	"-30466	Bill Board Acrylic	透明77#112	70-41号	1	
1	MB90015-20273	Bill Board Wood	57'合板112	黒面黒ホリ板	1	
部番	図面番号	名称	材質	処理	個数	備考

記事

Bill Board Ass'y MF90015-10075



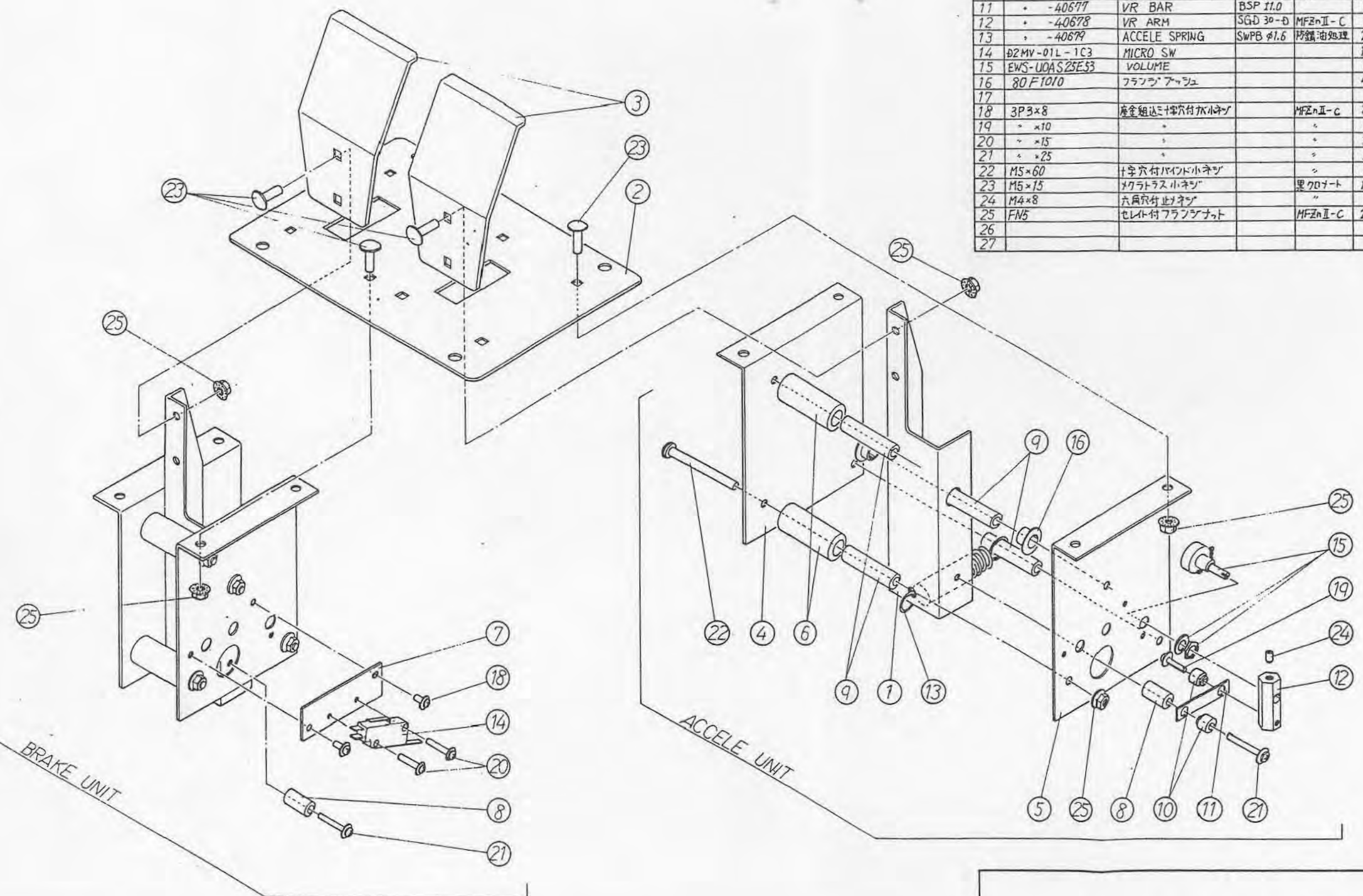
25							
24							
23							
22							
21							
20							
19							
18							
17							
16	N4	ナット				6	
15	M4x8	六角穴付きネジ	鉄	MFEnI-C		37	
14							
13							
12	EF90015-20013	GP-91102 PCB Assy				1	FILTER P.C.B.
11	EF90015-20011	GP-9190A PCB Assy				1	SOUND P.C.B.
10	EF90015-20041	GP-9189 P.C.B. Assy				1	OBJ P.C.B.
9	EF90015-20040	GP-9188 PCB Assy				1	MAIN/ROAD P.C.B.
8							
7	MB90001-40343	スロット (B)	MFEnI-C			4	
6	MB90001-40342	スロット (A)	"			8	
5	MB90015-40684	スロット (E)	MFEnI-C			2	
4	-40706	DIP SW. Cover	SPCC 11.2	ユ=7070		1	
3	-20279-2	PCB COVER	SPCC 11.2	ユ=7070		1	
2	-20278-2	PCB CASE	SPCC 11.2	ユ=7070		1	
1	MB90015-20277-2	PCB BASE	SPCC 11.2	ユ=7070		1	
部品	関連番号	名称	材質	処理	個数	備考	

記号 ①②③④ & ⑫ are used only in Japan & U.S.A.

PCB CASE Ass'y MF90015-10074

関連番号

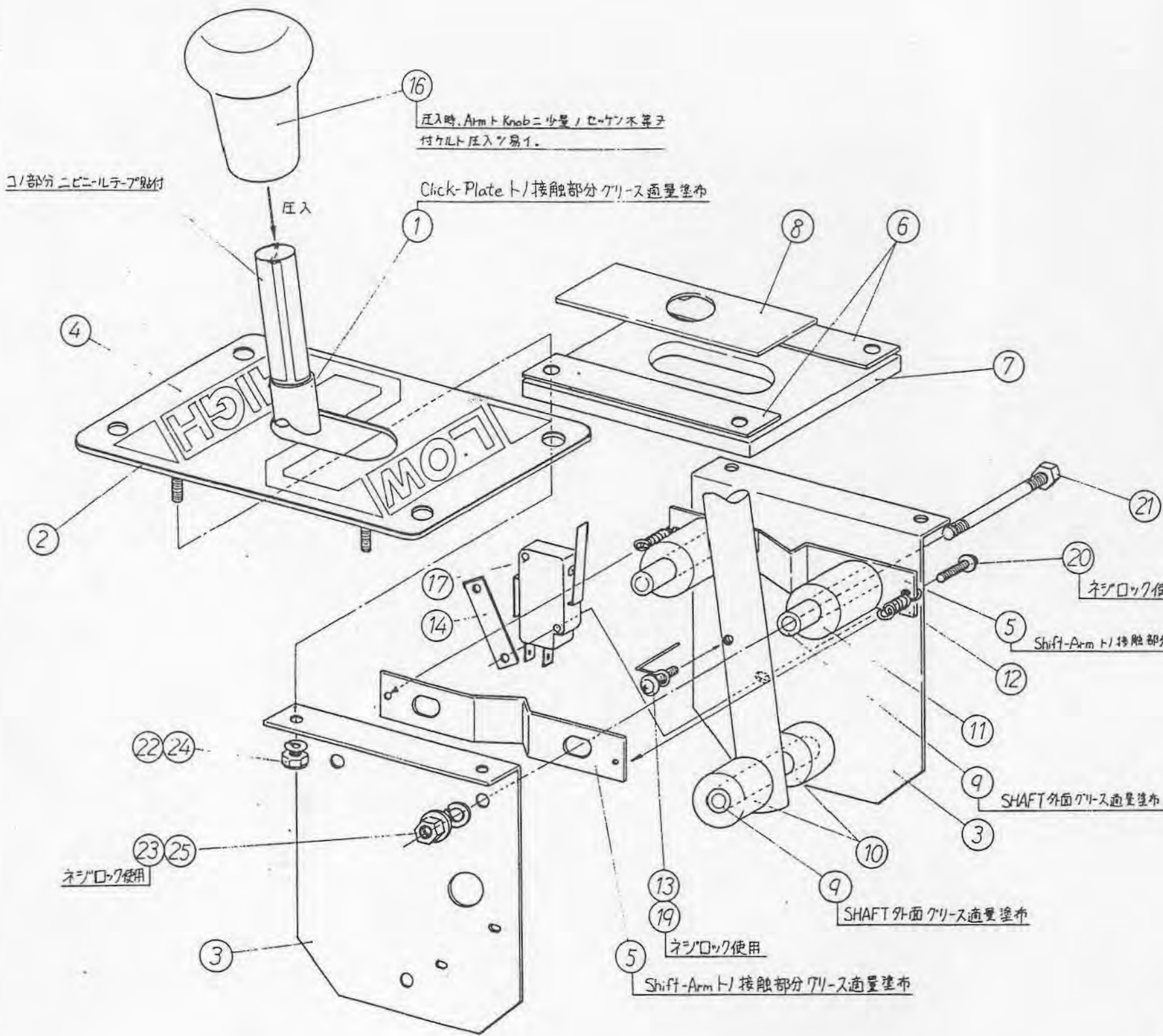
部番	図面番号	名称	材質	処理	個数	備	考
1	MB90015-20173	PEDAL ARM	SPCC13.2	MFZnII-C	2		
2	"-20269	ACCELE COVER	SPCC12.0	黒ワロノット	1		
3	"-30322	PEDAL	SPCC13.2	黒ワロノット	2		
4	"-30324	ACCELE BK. (B)	SPCC12.0	MFZnII-C	2		
5	"-30325-1	" (A)	"	"	2		
6	"-40399	PEDAL RUBBER	NR 特選'90's		4		
7	"-40400	SW PLATE	SPCC 11.6	MFZnII-C	1		
8	"-40401-1	SW POST	S35C	MFZnII-C	2		
9	"-40402	PEDAL SHAFT	S35C	MFZnII-C	8		
10	"-40676-1	BAR GUIDE	S30-40C	MFZnII-C	2		
11	"-40677	VR BAR	BSP 11.0		1		
12	"-40678	VR ARM	SGD 30-D	MFZnII-C	1		
13	"-40679	ACCELE SPRING	SwPB φ1.6	防錆油処理	2		
14	D2MV-01L-1C3	MICRO SW			1	オムロン	
15	EWS-UOAS25E53	VOLUME			1	SKD	(社F)
16	80F1010	フランジ アンジュ			4	オリス	
17							
18	3P3×8	座金組込十字穴付小ネジ		MFZnII-C	2		
19	"×10	"		"	1		
20	"×15	"		"	2		
21	"×25	"		"	2		
22	M5×60	十字穴付バインド小ネジ		"	8		
23	M5×15	六角トラス小ネジ		黒ワロノット	12		
24	M4×8	六角穴付止ネジ		"	1		
25	FN5	セレット付フランジナット		MFZnII-C	20		
26							
27							



ACCELE/BRAKE UNIT MF90015-10073

1 2 3 4 5 6 7 8
 関連番号

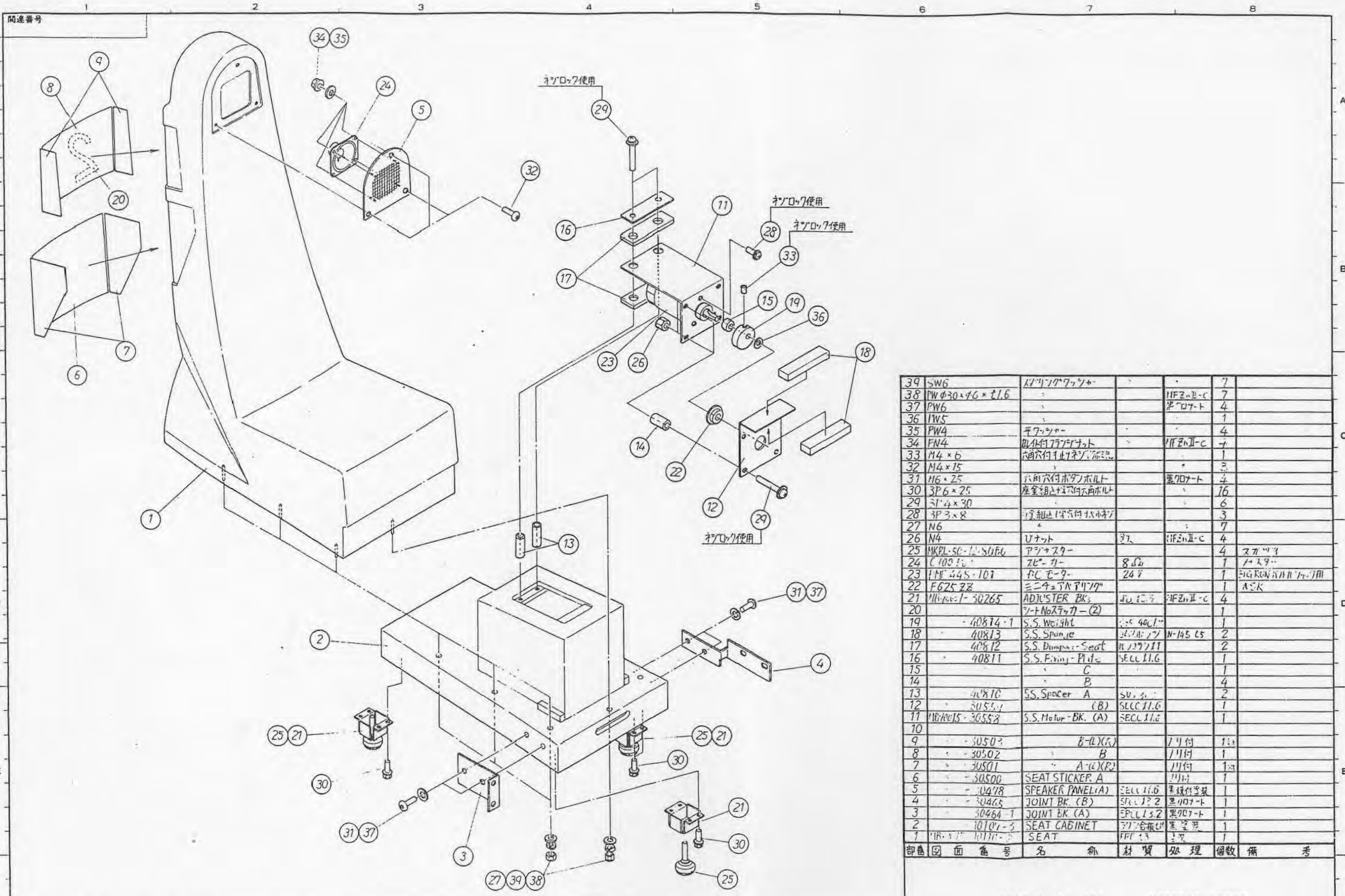
部番	図面番号	名称	材質	処理	数量	備考
1	MB90015-30563-1	Shift-Arm	S30-35C#15	MFC-2号	1	
2	"-30560	Shift-Panel	SPCC 12	黒70ナット	1	
3	MB90016-30404	THROT PLATE	SPCC 12	MFZnII-c	2	
4	MB90015-40816-1	シフトアームスチッパ	FKS	印刷	1	
5	"-40815	Click-Plate	SPCC 11.6	MFZnII-c	2	
6	MB90016-40559-1	SPACER (A)	"	"	2	
7	"-40560-1	ARM LIMITTER	ジュゴン	"	1	
8	"-40561-1	THROT COVER	塩ビ板 11	"	1	
9	"-40562-1	THROT SHAFT	S35C #8	MFZnII-c	3	
10	"-40563	SPACER (B)	ジュゴン #20	"	2	
11	"-40564	THROT RUBBER	7L9/JL1117	"	2	
12	"-40565	CLICK SPRING	SWP #0.5	防錆処理	2	
13	"-40566-2	SW PIN	SWP #0.8	MFZnII-c	1	
14	MB88004-40083-1	SW PLATE	SPCC 11.6	MFZnII-c	1	
15						
16	No. 4	Shift Knob			1	リノタコム
17	62MV-01L-1C3	MICRO SW			1	オムロン
18						
19	3P 3×10	産金組込ニ十字穴付ナット	鉄	MFZnII-c	1	
20	3P 3×18	"	"	"	2	
21	M5×50	六角ボルト	"	"	3	
22	N4	ワッシャー	"	"	4	
23	FN5	セリ付フランジナット	"	"	3	
24	SW4	スプリングワッシャー	"	"	4	
25	SWS	"	"	"	3	
26						
27						
28						
29						



注) Click-Plate は、上図ノ向トテ取付ケルコト。

記号 Shift Ass'y MF90015-10072

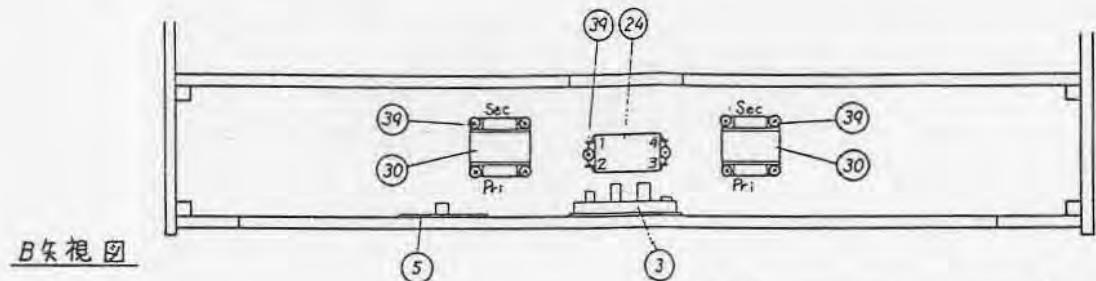
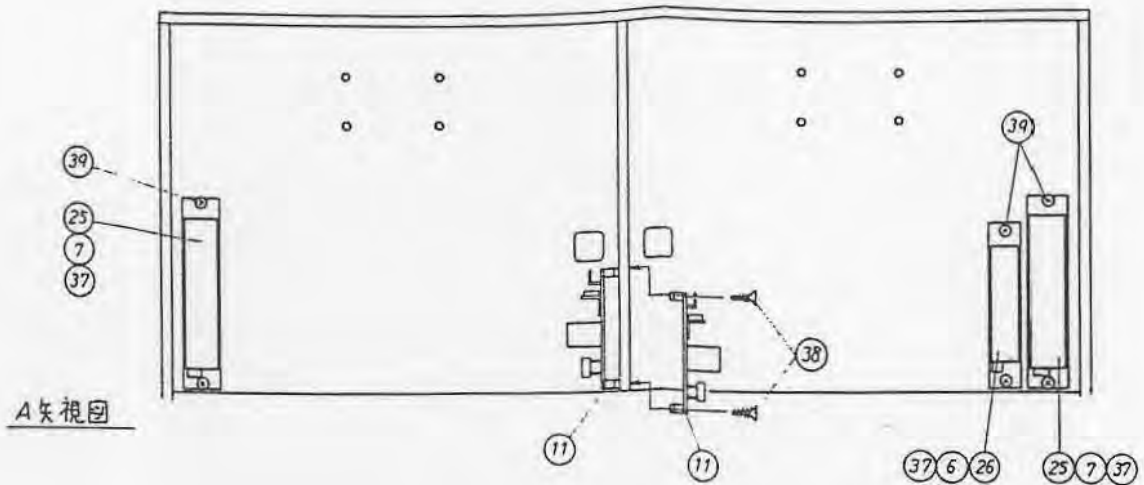
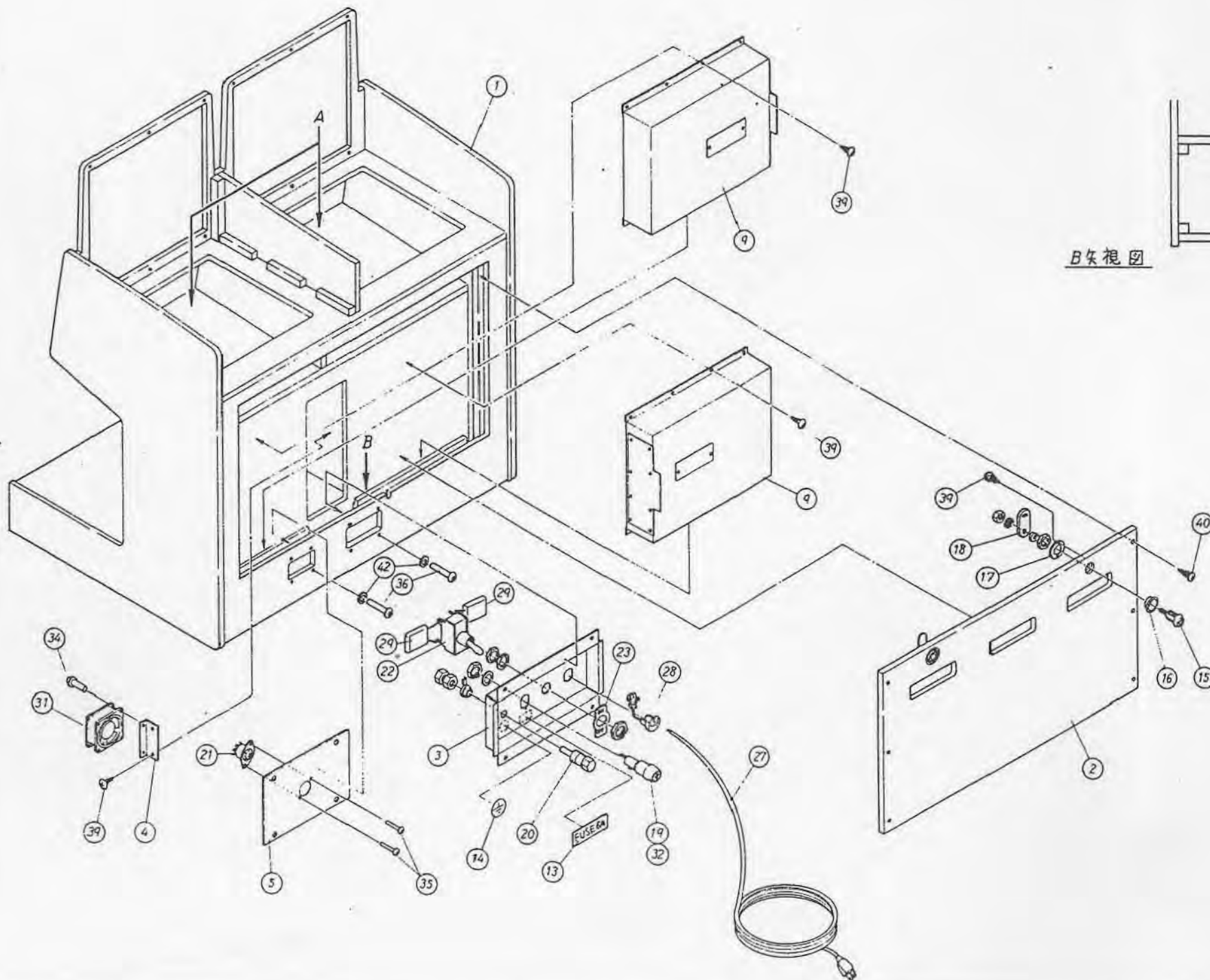




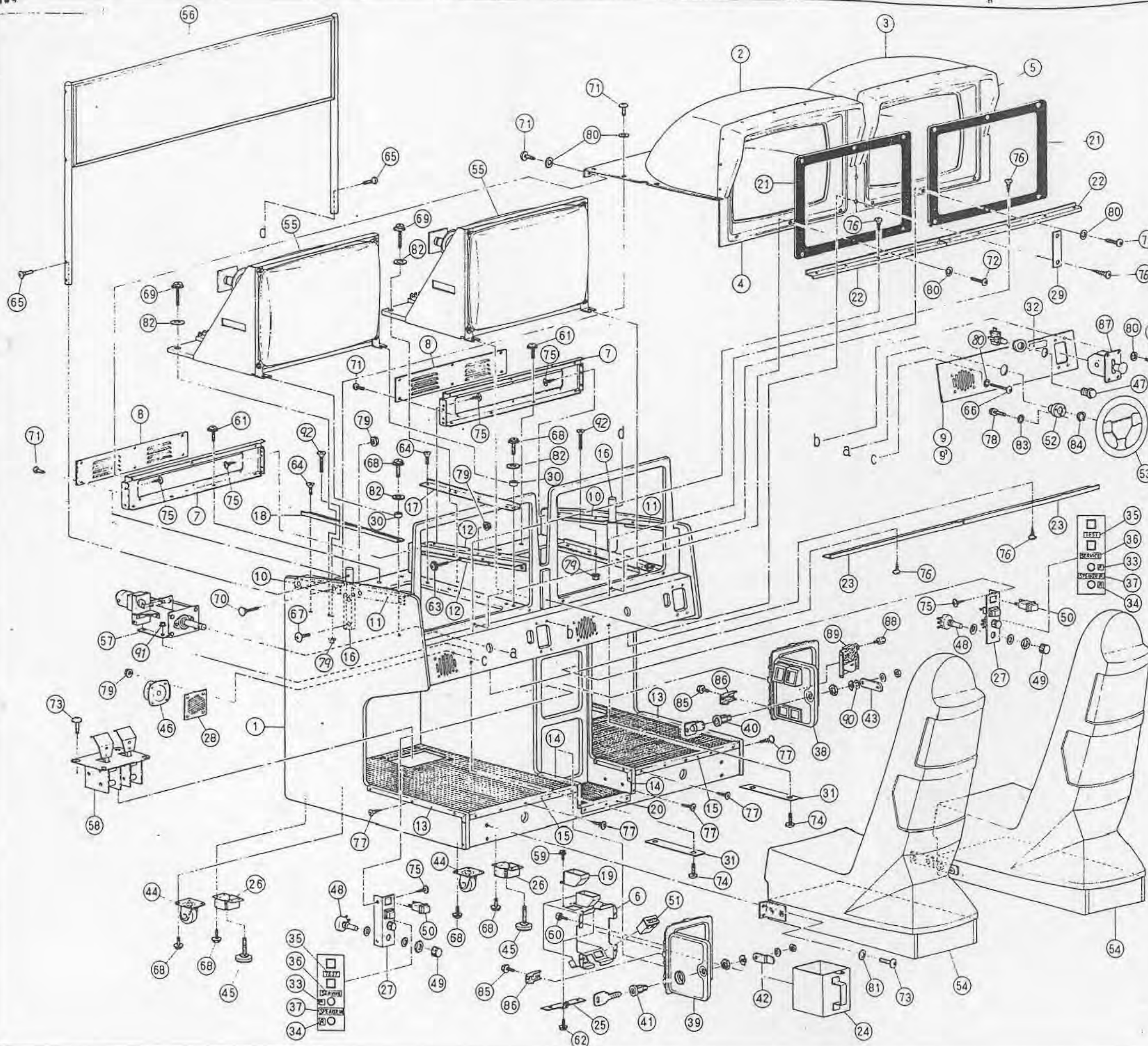
39	SW6	ネジローソク用ナット			7		
38	PWφ30×46×t1.6			IFZ-II-C	7		
37	PW6			ネジローソク	4		
36	PW5				1		
35	PW4	平ワッシャー			4		
34	FN4	丸山付ワッシャー		IFZ-II-C	1		
33	M4×6	六角穴付止りネジ			1		
32	M4×15				3		
31	M6×25	六角穴付ボルト		ネジローソク	4		
30	3P6×25	座金組込六角穴付六角ボルト			16		
29	3P4×30				6		
28	3P3×8	六角穴付止りネジ			3		
27	N6				7		
26	N4	ワッシャー	ワッ	IFZ-II-C	4		
25	MKRL-50-11.5/16.6	アライスター			4		
24	C10010	スポンジ	8.5φ		1		
23	44S-107	ICモーター	24V		1		
22	F625Z8	ミニチュア調整ネジ			1		
21	MILV-1-30265	ADJUSTER BK.		IFZ-II-C	4		
20		シートメーター(2)			1		
19	40874-1	S.S. Weight	φ54φ11		1		
18	40873	S.S. Sponge	30×40×7	N-145 L5	2		
17	40872	S.S. Dampner-Seat	11.7φ11		2		
16	40871	S.S. Fixing-Plate	SECL11.6		1		
15		C			1		
14		B			4		
13	40870	S.S. Spacer A	50.0φ		2		
12	30557	(B)	SECL11.6		1		
11	MILV15-30558	S.S. Motor-BK. (A)	SECL11.6		1		
10							
9	30507	B-(L)(R)		1/1付	1		
8	30502	B		1/1付	1		
7	30501	A-(L)(R)		1/1付	1		
6	30500	SEAT STICKER A		1/1付	1		
5	30478	SPEAKER PANEL(A)	SECL11.6	黒色付塗装	1		
4	30465	JOINT BK. (B)	SECL11.2	黒色付	1		
3	30464-1	JOINT BK. (A)	SECL11.2	黒色付	1		
2	10107-3	SEAT CABINET		黒色付	1		
1	10107-1	SEAT		黒色付	1		
部品	図面	番号	名称	材質	処理	個数	備考

記 事
 SEAT Ass'y (L)は JOINT BK.(A),(B)の取付けが左右対象となる。又「シートメーター」は(1)を付ける。
 JOINT BK.は仮止めして置いて本体と接続する際に本締めの方が良い。

SEAT Ass'y (R) MF90015-10070



50					
49					
48					
47					
46					
45					
44					
43					
42	W4	ネジワッシャー	※	型7H上	8
41					
40	1F4x25 (1種)	(R.17)	*	4'107-ト	6
39	1F4x12 (1種)	(1.72)	*	1F205-C	20
38	1F3x12 (1種)	1.5x1.5mm 1.5x1.5mm	*	7D-4	8
37	1/4 x 10	1.5x1.5mm 1.5x1.5mm	*	1F205-C	8
36	1/4 x 20	1.5x1.5mm 1.5x1.5mm	*	7D1-ト	2
35	1/2.6 x 10	1.5x1.5mm 1.5x1.5mm	*	1F205-C	2
34	1/4 x 35	1.5x1.5mm 1.5x1.5mm	※	1F205-C	2
33					
32	5-A / 125V	ガラス管ヒューズ			1
31	WE 55 B3	ACアダプ(コアダプ)	規格947		1
30	BRX015-30035	トランス			2
29	S1201	スイッチ			2
28		ACアダプ用ケーブル			1
27	1-A35-130	ACコイル	3m		1
26	P31-12N		12V2.5A		1
25	10K-100-3H	3A-570V電源	1.5A		2 (2LJ-)
24	EM 205-G111	NOISE FILTER	250V-1A		1
23		ON/OFF PLATE	S-421用		1
22	S-421	POWER SWITCH			1 (SABIN用)
21	IC51250-01-6201	DINソケット			1
20	T-6500	アスタロイト			1 (1L-1A-1)
19	FH 032	FUSEホルダ			1 (ECHO)
18		止りネジ			2
17	HL-1	ネジ止めネジ			2
16	L4-102	左折リネジ			2
15	9502	六角ボルト	φ17.4		2
14		ネジ止めネジ			1
13	h87045-40656	ネジ止めネジ	φ17.4		1
12					
11	1F4015 20044	GP4103 P.C.B. Assy			2
10					
9	1F4015-10074	P.C.B. CASE Assy			2
8					
7	2S-046-40170-1	2A-570V電源			2
6	1F205-40AYU	2A-570V電源	SVC116	1F205-C	1
5	-40X21	COM. BK (1)	SVC112	1F205-C	1
4	-40X22	FAN BK	SVC116	1F205-C	1
3	-30477	POWER SUPPLY BK	SVC112	1F205-C	1
2	70207	NEAR FOOT			1
1	1F4015-10074	MAIN CABINET			1
部品図面番号 品名 数量 処理 備考 伝 達					



94			
93			
92	M 4 x 30	十字穴付ネジ(小径)	2
91	FN 6	CL付付ネジ(フランジナット)	2
90	PW 8	平ワッシャー	1
89	AD-8/P	COIN SELECTOR (100)	2
88	MF90015-10072	SHIFT UNIT ASSY	2
87		セリワッシャー	2
86		止付ネジ	2
85	M 5 x 20	十字穴付ネジ(六角ボルト)	8
84	#20	六角穴付ネジ(止付)	2
83	#6	六角穴付ネジ(ボルト用ワッシャー)	6
82	PW #6.5 x 20 x 2		8
81	PW 6		8
80	PW 4	平ワッシャー	46
79	FN 4	セリ付ネジ(フランジナット)	22
78	M 6 x 20	六角穴付ネジ(ボルト)	6
77	TP 3 x 12 (+)	十字穴付ネジ(ワッシャー)	31
76	TP 4 x 12 (+)	十字穴付ネジ(ワッシャー)	22
75	TP 4 x 12 (1種)	十字穴付ネジ(ワッシャー)	12
74	M 6 x 30		8
73	M 6 x 25		15
72	M 4 x 25		20
71	M 4 x 10	六角穴付ボルト(六角ボルト)	30
70	M 4 x 25	六角穴付ボルト	8
69	Z P 6 x 35		4
68	Z P 6 x 25	六角穴付ネジ(六角ボルト)	36
67	M 6 x 25	十字穴付ネジ(ワッシャー)	4
66	M 4 x 30	六角穴付ボルト	8
65	M 4 x 15	十字穴付ネジ(ワッシャー)	2
64	M 4 x 15	十字穴付ネジ(ワッシャー)	14
63	Z P 4 x 30		4
62	Z P 4 x 8		3
61	Z P 4 x 15		8
60	Z P 4 x 8		4
59	Z P 3 x 8	六角穴付ネジ(六角ボルト)	4
58	* - 10073	ACCELE/BRK UNIT ASSY	2
57	* - 10071	STEERING UNIT ASSY	2
56	* - 10075	Bill Board Assy	1
55	* - 10076	CRT Monitor Assy	2
54	MF90015-10070	SEAT UNIT ASSY (L) (R)	2
53	* - 10114-1	STEERING WHEEL	2
52	MB90015-30457-0	Boss	2
51	GX-06P	電圧カウンタ	2
50	SDP-103C-10BB	PUSH スイッチ	4
49		VR用ツマミ	4
48	RV16YN-11SB-14	16型 VR 5Kn	4
47	OBSA-30	照光式押ボタンSW.	2
46	C100P03	SPEAKER (3x3Watts 100Hz)	2
45	MKRL-50-12-80B6	アジスター	4
44	K-100HBG-50	キャスター	4
43	ST-50001-0	止付金具	1
42		止付金具 NO.2	1
41		Zロック(ラジウム)	1
40	9502	ハネロフ (両面 2x124mm)	1
39	ADD	Cash BOX DOOR	1
38	ADD-S2	COIN SELECTOR DOOR	1
37		*SPEAKER VR	2
36		*SERVICE	2
35		*TEST スイッチ用シール	2
34	* - 40898-0	Rシール	2
33	* - 40897-0	Fシール	2
32	* - 40840-0	シール	2
31	* - 40819-0	S.U. Fixing Plate	4
30	* - 40701-0	Guide Rail Shaft	4
29	* - 40683-1	PLATE	1
28	* - 40682-0	SPEAKER PANEL (B)	2
27	MB90015-40681-0	SWITCH BK. (L) (R)	1
26	* - 30265-0	ADJUSTER BK.	4
25	* - 30202-0	HOOK BK.	1
24	MB90001-30200-0	Cash BOX	1
23	* - 30553-0	* * * (B)	2
22	* - 30552-0	Dash Board BK. (A)	2
21	* - 30498-0	Masking Panel	2
20	* - 30496-0	CORNER BK. (D)	1
19	* - 30479-1	COIN CHUTE	2
18	* - 30472-1	* * * (B)	2
17	* - 30471-1	Guide Rail BK. (A)	2
16	* - 30470-1	Bill Board Guide	2
15	* - 30463-0	* * * (C)	2
14	* - 30462-1	* * * (B)	1
13	* - 30461-1	CORNER BK. (A)	1
12	* - 30460-1	* * * (C)	1
11	* - 30459-1	* * * (B)	1
10	* - 30458-1	CRT COVER BK. (A)	1
9	* - 20290-0	Dash Board (R) (L) (R)	1
8	* - 20280-0	* * * (B)	2
7	* - 20270-1	REAR COVER (A) (L) (R)	1
6	* - 10115-0	Cash BOX COVER	1
5	* - * - *	(R)	1
4	* - 10112-2	Escutcheon (L)	1
3	* - * - *	(R)	1
2	* - 10111-1	CRT COVER (L)	1
1	MB90015-10108-6	MAIN CABINET	1

MAINCABINET Ass'y MF90015-10069 1/2

RIGHT PLAYER

RIGHT MAIN PCB ASSY

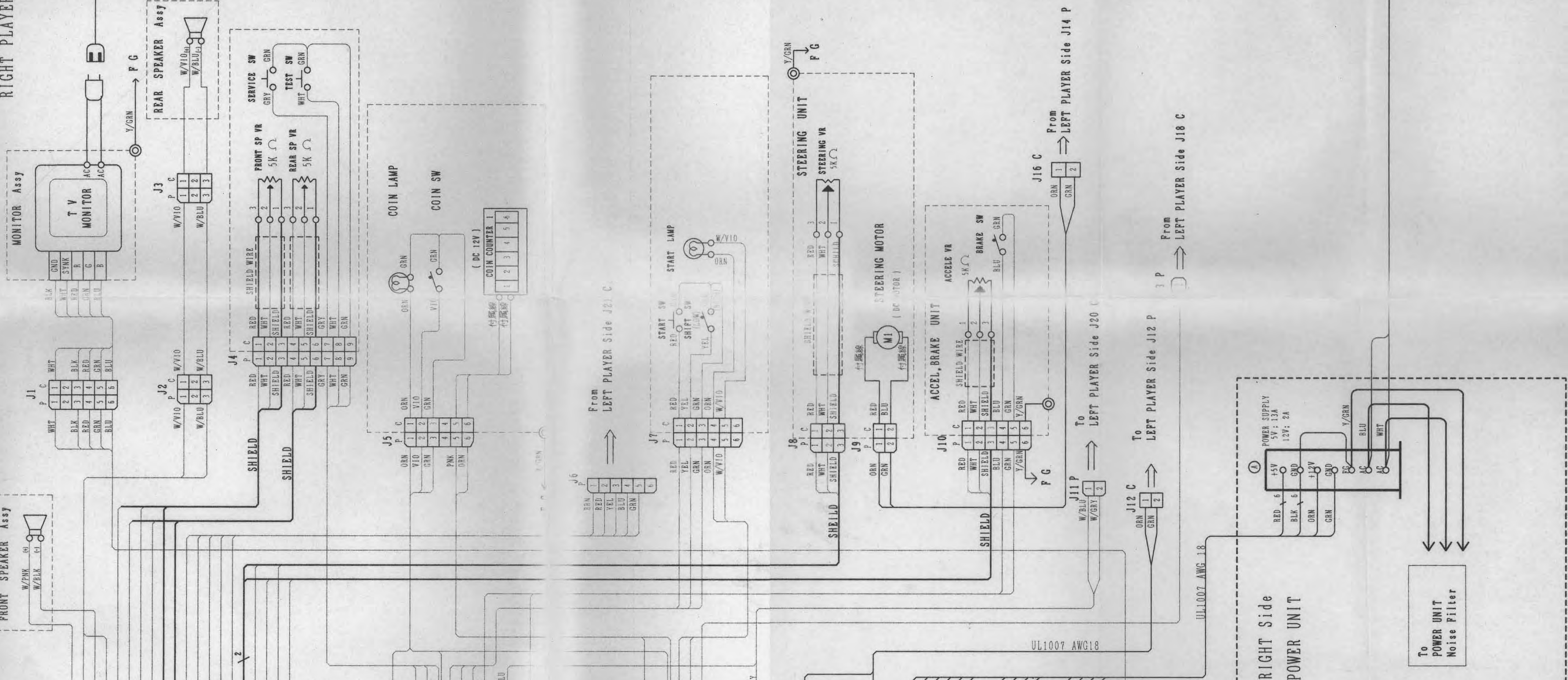
GP-9190A PCB

GP-9189 PCB

GP-9188A PCB

CRT# 720A-3, 96E
(HIROSE)

CONN	WIRE COLOR	TERMINAL	FUNCTION
CN 2	W/PNK	1	FRONT SP L(H)
	W/VIO	2	REAR SP R(H)
	W/BLK	3	FRONT SP L(-)
	W/BLU	4	REAR SP R(-)
	RED	5	FRONT SP VR-3
	RED	6	REAR SP VR-2
	WHT	7	FRONT SP VR-1
	WHT	8	REAR SP VR-1
	SHIELD	9	COM CLK(H)
	SHIELD	10	COM CLK(-)
	RED	11	COM DATA(H)
	RED	12	COM DATA(-)
	BLU	13	GND
	GRN	14	GND
	SHIELD	15	STEERING VR
	WHT	16	ACCEL VR
	RED	17	+5V
	RED	18	+5V
	N/C	19	N/C
	N/C	20	N/C
N/C	21	N/C	
N/C	22	N/C	
N/C	23	N/C	
N/C	24	N/C	
N/C	25	N/C	
GND B	26	COIN COUNTER 1	
GND B	27	COIN COUNTER 2	
+B12V	28	START SW	
+B12V	29	SHIFT SW	
W/VIO	30	STEERING SHOCK I	
W/BRN	31	GND B	
ORN	32	RACE LAMP	
ORN	33	N/C	
ORN	34	+B12V	
ORN	35	+B12V	
ORN	36	N/C	
ORN	37	N/C	
ORN	38	N/C	
ORN	39	N/C	
ORN	40	N/C	
ORN	41	N/C	
ORN	42	N/C	
ORN	43	N/C	
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ORN	78	N/C	
ORN	79	N/C	
ORN	80	N/C	
ORN	81	N/C	
ORN	82	N/C	
ORN	83	N/C	
ORN	84	N/C	
ORN	85	N/C	
ORN	86	N/C	
ORN	87	N/C	
ORN	88	N/C	
ORN	89	N/C	
ORN	90	N/C	
ORN	91	N/C	
ORN	92	N/C	
ORN	93	N/C	
ORN	94	N/C	
ORN	95	N/C	
ORN	96	N/C	
ORN	97	N/C	
ORN	98	N/C	
ORN	99	N/C	
ORN	100	N/C	



REMARKS: 1 All lead wires are UL1007 AWG22 unless otherwise specified.
 2 PG (frame ground) should all be connected to earth.
 3 P (plug) of the connector means male connector and C (cap) of the connector means female connector.

記号	年月日	改訂	個所	担当	材質	名称	GRAND PRIX STAR	変番
承認	検図	検図			処理	図番	WIRING DIAGRAM	
2.20.92 2.20.92 2.17.1992 19.1992 T. Yamamoto S. Umada M. Tanaka KAWASAKI					個数	公差	EW90015-20025	2/2
					尺度			



LEFT PLAYER

MONITOR Assy

REAR SPEAKER Assy

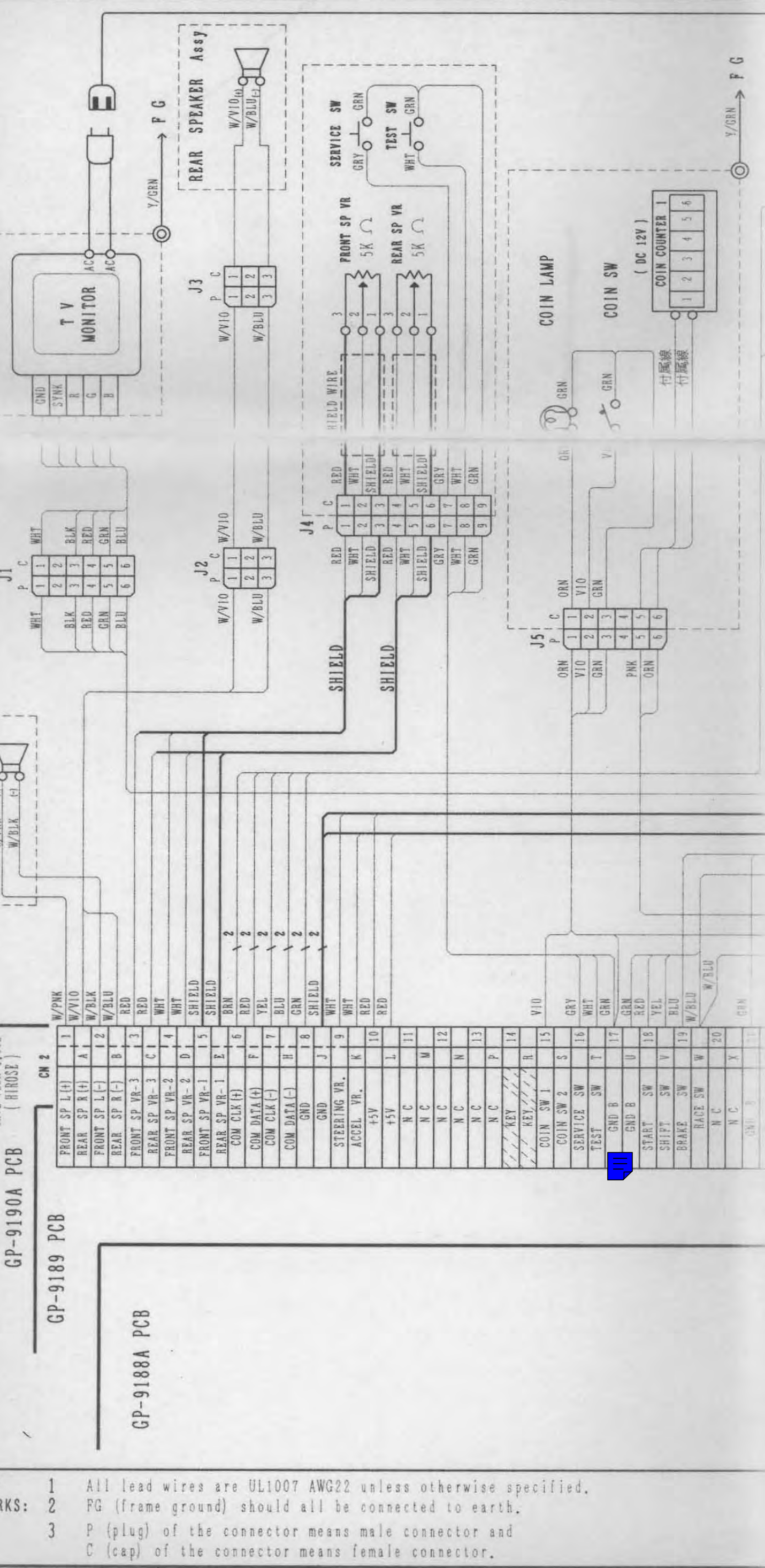
FRONT SPEAKER Assy

LEFT MAIN PCB ASSY

GP-9190A PCB

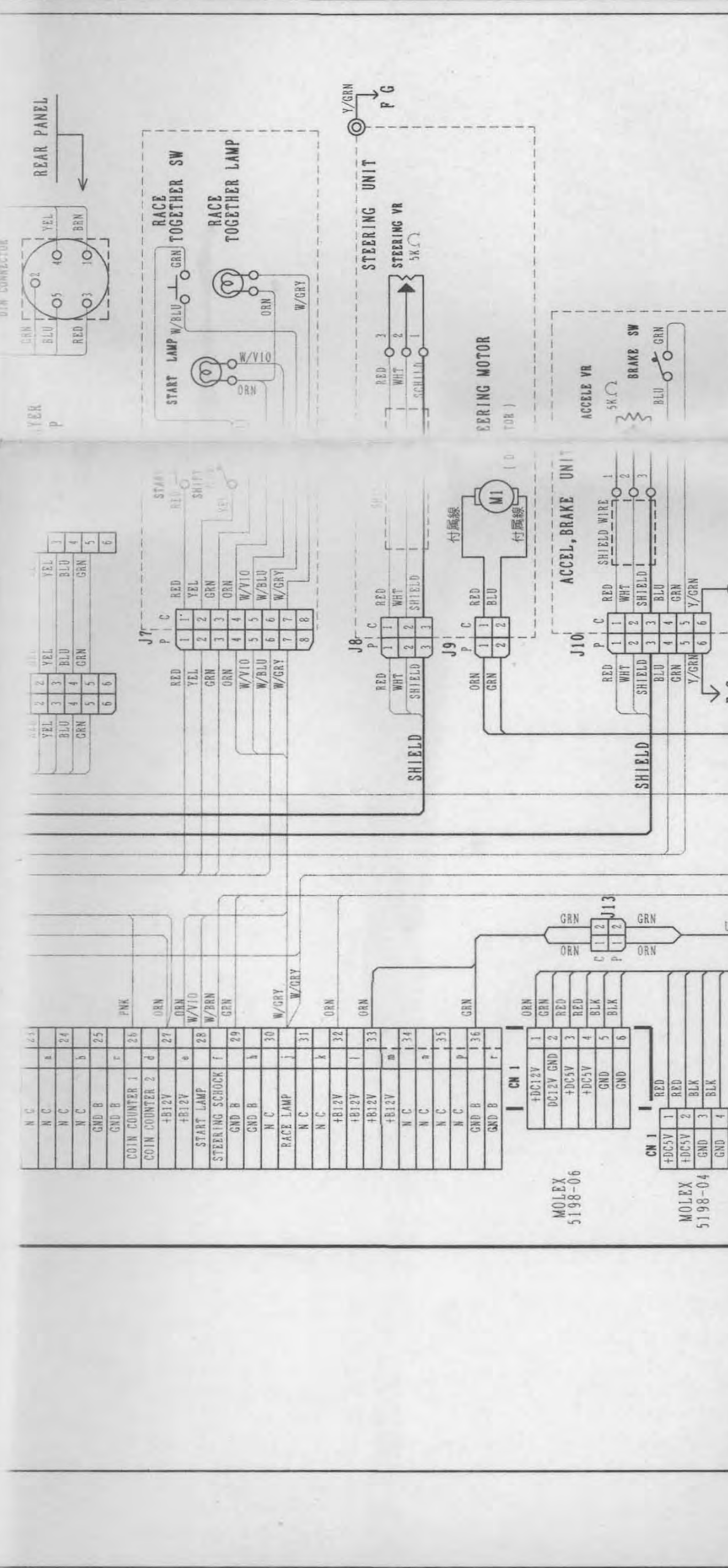
GP-9189 PCB

GP-9188A PCB



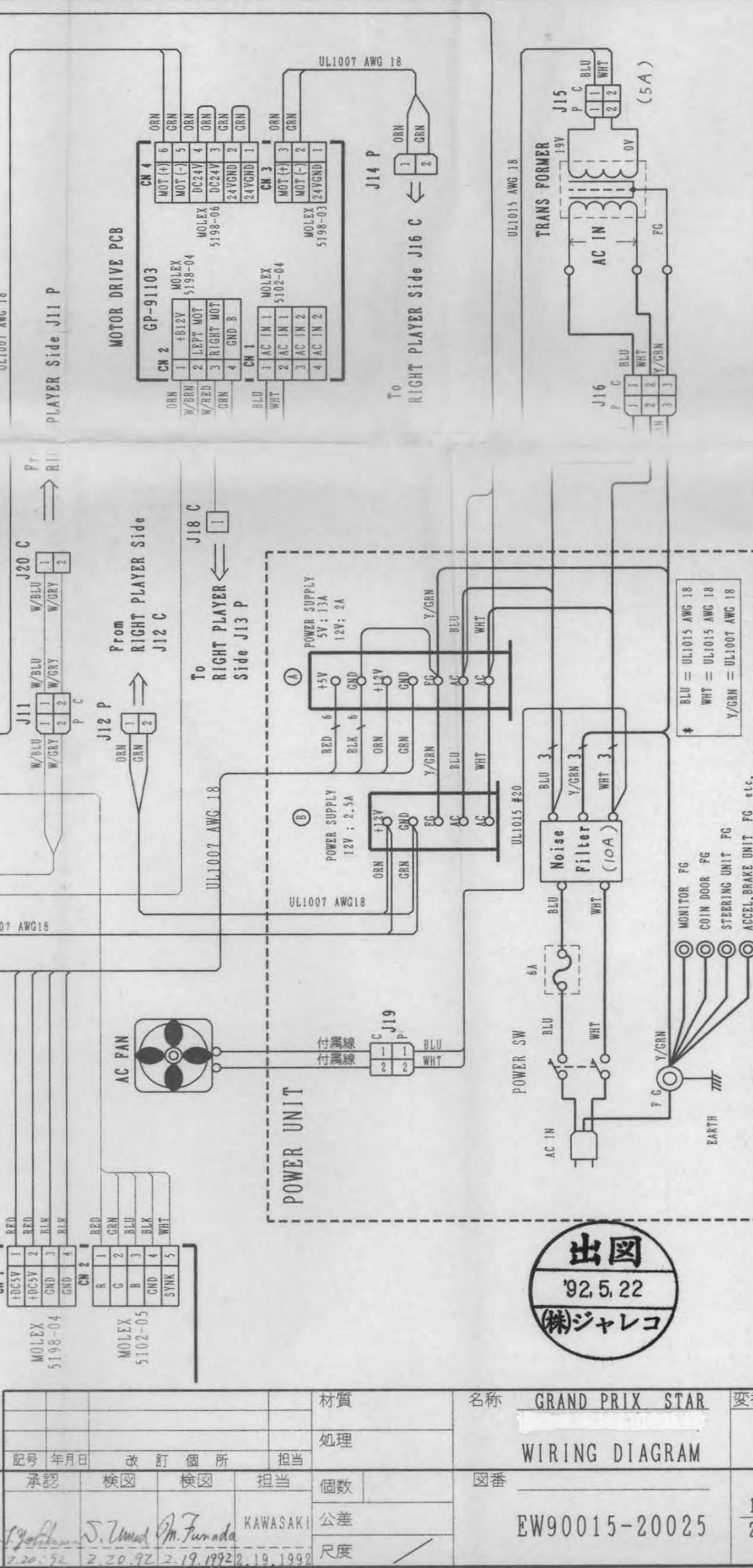
Terminal	Color	Terminal	Color
1	W/PNK	17	GRN
2	W/VIO	18	GRN
3	W/BLK	19	YEL
4	W/BLU	20	W/BLU
5	RED	21	GRN
6	BLU	22	GRN
7	RED	23	GRN
8	WHT	24	GRN
9	SHIELD	25	GRN
10	RED	26	GRN
11	RED	27	GRN
12	RED	28	GRN
13	RED	29	GRN
14	RED	30	GRN
15	RED	31	GRN
16	RED	32	GRN
17	RED	33	GRN
18	RED	34	GRN
19	RED	35	GRN
20	RED	36	GRN

REMARKS: 1 All lead wires are UL1007 AWG22 unless otherwise specified.
 2 FG (frame ground) should all be connected to earth.
 3 P (plug) of the connector means male connector and C (cap) of the connector means female connector.



Terminal	Color	Terminal	Color
1	RED	17	GRN
2	RED	18	GRN
3	RED	19	YEL
4	RED	20	W/BLU
5	RED	21	GRN
6	RED	22	GRN
7	RED	23	GRN
8	RED	24	GRN
9	RED	25	GRN
10	RED	26	GRN
11	RED	27	GRN
12	RED	28	GRN
13	RED	29	GRN
14	RED	30	GRN
15	RED	31	GRN
16	RED	32	GRN
17	RED	33	GRN
18	RED	34	GRN
19	RED	35	GRN
20	RED	36	GRN

REMARKS: 1 All lead wires are UL1007 AWG22 unless otherwise specified.
 2 FG (frame ground) should all be connected to earth.
 3 P (plug) of the connector means male connector and C (cap) of the connector means female connector.



Terminal	Color	Terminal	Color
1	RED	17	GRN
2	RED	18	GRN
3	RED	19	YEL
4	RED	20	W/BLU
5	RED	21	GRN
6	RED	22	GRN
7	RED	23	GRN
8	RED	24	GRN
9	RED	25	GRN
10	RED	26	GRN
11	RED	27	GRN
12	RED	28	GRN
13	RED	29	GRN
14	RED	30	GRN
15	RED	31	GRN
16	RED	32	GRN
17	RED	33	GRN
18	RED	34	GRN
19	RED	35	GRN
20	RED	36	GRN

REMARKS: 1 All lead wires are UL1007 AWG22 unless otherwise specified.
 2 FG (frame ground) should all be connected to earth.
 3 P (plug) of the connector means male connector and C (cap) of the connector means female connector.



記号	年月日	改訂	箇所	担当	承認	検図	検図	担当	個数	公差	尺度
名称 GRAND PRIX STAR 変番 WIRING DIAGRAM 図番 EW90015-20025 1/2											





JALECO

GP-9188A PCB	CN1	MOLEX	5198-04
	CN2	"	5102-05
GP-9189 PCB	CN1	"	5198-04
GP-9190A PCB	CN1	"	5198-06
	CN2	HIROSE	CR7E-72DA-396E
GP-91103 H.D. PCB	CN1	MOLEX	5102-04
	CN2	"	5298-04
	CN3	"	5198-03
	CN4	"	5198-06

(2) HIROSE CR7E-72DA-396E

(2) MOLEX 5102-04 MOLEX ORDER# 22-01-1044

(2) " 5102-05 " 22-01-1054

(2) " 5198-03 " 10-22-1032

(6) " 5198-04 " 10-22-1042

(4) " 5198-06 " 10-22-1062

5198-N Crimp Terminal Housing

- 3-8 circuits
- Same as 5197 but with second circuit void

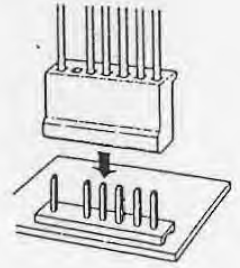
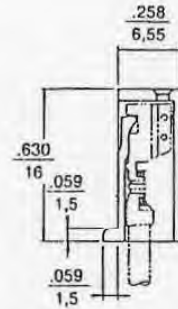
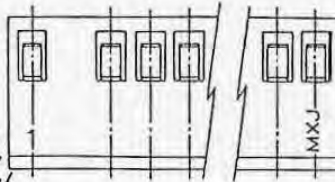
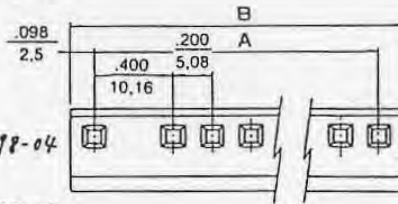
GP-9188A P.C.B CN1 5198-04

GP-9189A P.C.B CN1 5198-04

GP-9190A P.C.B CN1 5198-06

MOTOR DRIVE P.C.B

GP-91103 P.C.B CN1. CN3. CN4
5198-04 5198-03 5198-06



Ordering and Dimensional Information - in. (mm)

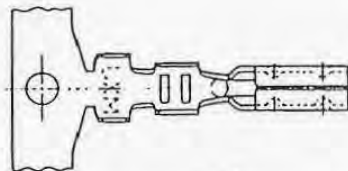
Circuits	Order No.	Dim. A	Dim. B	Circuits	Order No.	Dim. A	Dim. B
3	10-22-1032	.599 (15,2)	.795 (20,2)	6	10-22-1062	1.197 (30,4)	1.394 (35,4)
4	10-22-1042	.799 (20,3)	.996 (25,3)	7	10-22-1072	1.398 (35,5)	1.594 (40,5)
5	10-22-1052	1.0 (25,4)	1.197 (30,4)	8	10-22-1082	1.598 (40,6)	1.795 (45,6)

.156" (3,96 mm) Crimp Terminal and Housing

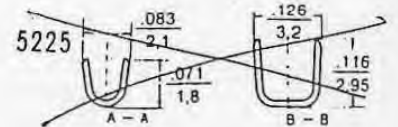
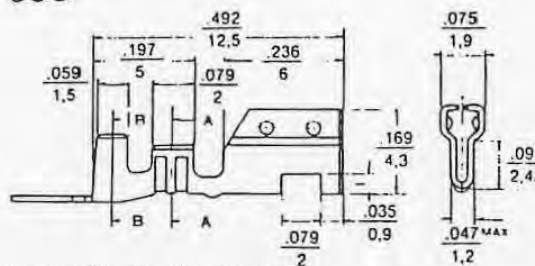
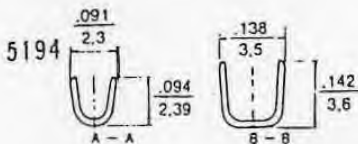
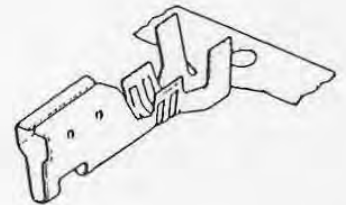


5194/5225 Series Crimp Terminal

- 4 point contact
- Used in Molex 5195, 5196, 5197, 5198 housing series
- Wire range: #18-#24 AWG and 22-28 AWG
- Anti-fishhooking contact design
- Current rating 7 amps max.



Inches
mm



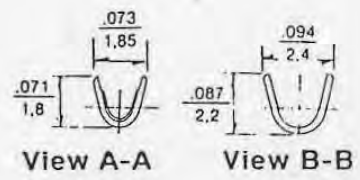
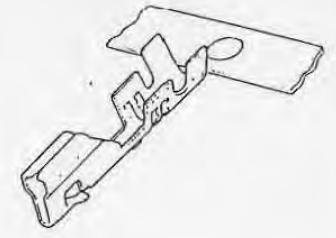
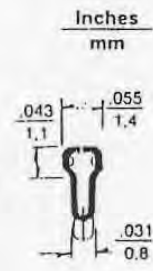
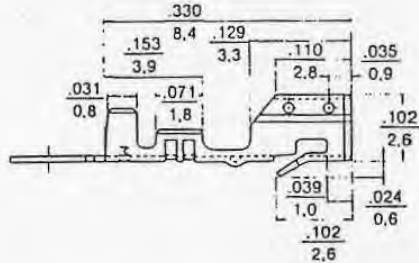
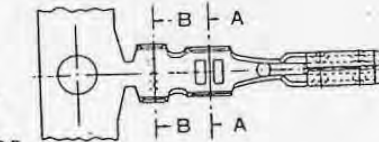
Ordering and Dimensional Information - in. (mm)

Order No.	Terminal	Wire Gauge	Insulation Diameter	Contact Material	Automatic Tooling		Tool
					Press	Crimp Die	
08-70-1031	Chain	AWG #18 ~ #24	φ 1,3mm ~ 3,2 mm	Tin Plated Brass	11-26-0033 M15A	11-26-0028 JM5859A	11-26-0058 JHTR5904
08-70-1030	Loose				—	—	
08-70-1029	Chain	AWG #22 ~ #28	φ 1,2 mm ~ 2,6 mm		11-26-0033 M15A *	11-26-0028 JM5859A	
08-70-1028	Loose				—	—	

Recommended wire range assumes stranded wire.

5103 Series Crimp Terminal

- Low profile
- 4 point contact
- Pre-tinned brass or phosphor bronze
- Used in Molex 5102, 5207, 5208, 5209 housing series
- Wire range: #22-#28 AWG
- Anti-fishhooking contact design

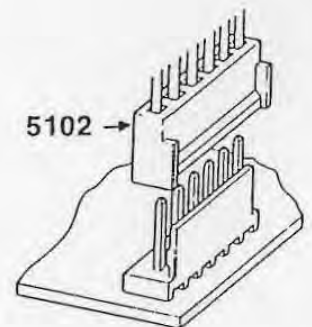
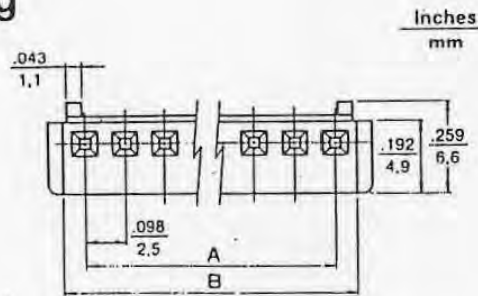


MOLEX

Order No.	Terminal	Wire Gauge	Insulation Diameter	Contact Material	Hand Tool	Automatic Tooling		Extraction Tool
						Press	Crimp Die	
08-70-0056	Chain	AWG #22 - #28	φ1,9 MAX.	Tin Plated Brass	—	M15A 11-26-0033	JM5857A 11-26-0023	11-26-7074 J5800-008
08-70-0057	Loose				JHTR 5907	—	—	
08-70-0058	Chain			Tin Plated Phos. Bronze	—	M15A 11-26-0033	JM5857A 11-26-0023	
08-70-0059	Loose			JHTR5907	—	—		

5102 Series Crimp Terminal Housing

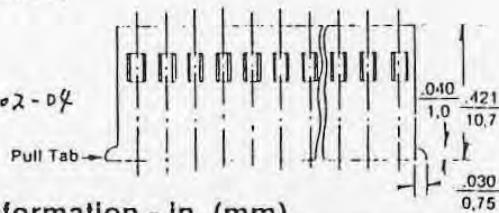
- 2-15 Circuits
- Low profile
- UL 94V-0 nylon 6/6
- Molded pull tab
- Friction lock
- Accepts Molex terminal 5103
- Mates with Molex 5045, 5046 header series



GP-9188A P.C.B CNZ 5102-05

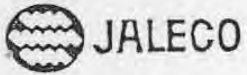
MOTOR DRIVE P.C.B

GP-91103 P.C.B CNZ 5102-04



Ordering and Dimensional Information - in. (mm)

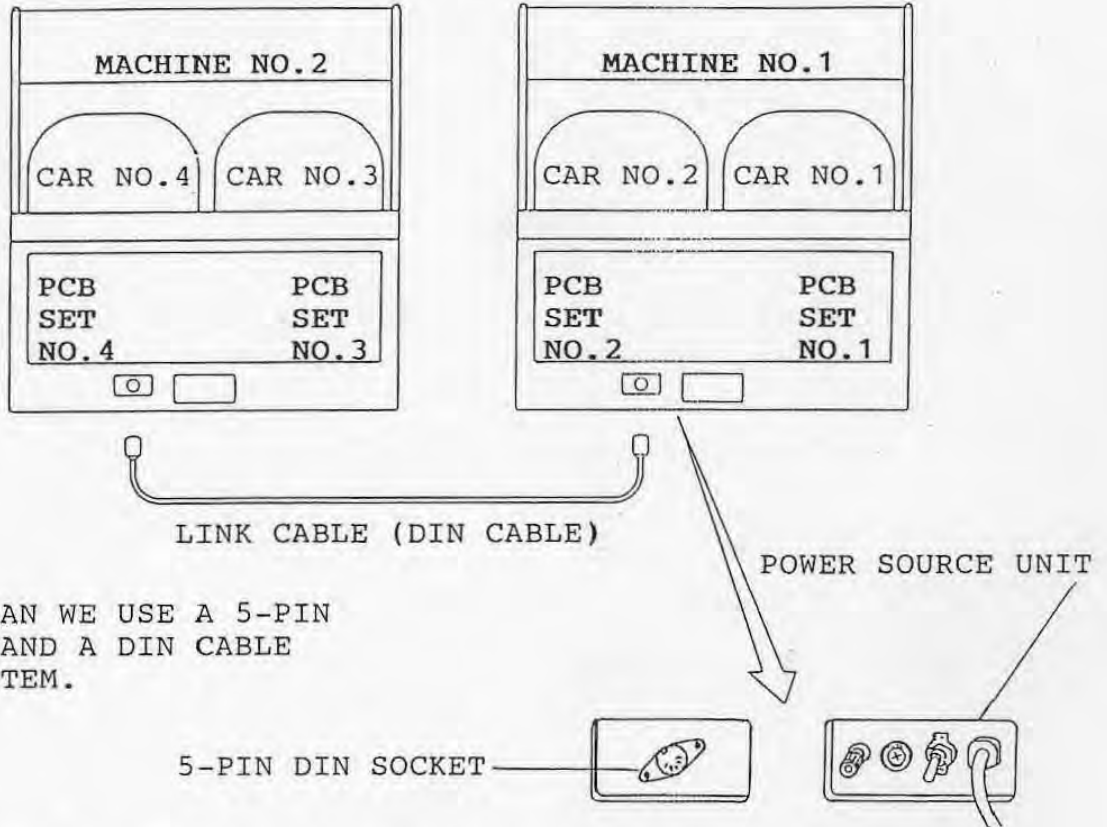
Circuits	Order No.	Dim. A	Dim. B	Circuits	Order No.	Dim. A	Dim. B
2	22-01-1024	.098 (2,5)	.236 (6,0)	9	22-01-1094	.787 (20,0)	.925 (23,5)
3	22-01-1034	.197 (5,0)	.335 (8,5)	10	22-01-1104	.886 (22,5)	1.024 (26,0)
4	22-01-1044	.295 (7,5)	.433 (11,0)	11	22-01-1114	.984 (25,0)	1.122 (28,5)
5	22-01-1054	.394 (10,0)	.531 (13,5)	12	22-01-1124	1.083 (27,5)	1.220 (31,0)
6	22-01-1064	.492 (12,5)	.630 (16,0)	13	22-01-1134	1.181 (30,0)	1.319 (33,5)
7	22-01-1074	.591 (15,0)	.728 (18,5)	14	22-01-1144	1.280 (32,5)	1.417 (36,0)
8	22-01-1084	.689 (17,5)	.827 (21,0)	15	22-01-1154	1.378 (35,0)	1.516 (38,5)



GRAND PRIX STAR - COMMUNICATION LINK SYSTEM

TWO 2-IN-1 MACHINES CAN BE LINKED SO THAT UP TO 4 PLAYERS CAN RACE TOGETHER ON THE SAME COURSE SIMULTANEOUSLY. THE CONNECTOR FOR THE LINK SYSTEM SHOULD BE FITTED ON THE REAR SIDE OF THE CABINET - NEAR THE FLOOR AS ILLUSTRATED BELOW:

(VIEWED FROM THE REAR SIDE)



HERE IN JAPAN WE USE A 5-PIN DIN SOCKET AND A DIN CABLE FOR THE SYSTEM.

WHEN TWO 2-IN-1 MACHINES ARE LINKED, THE DIP SWITCHES OF ALL 4 PCB SETS SHOULD BE SET AS FOLLOWS:

DIP SWITCH #2 - SWITCHES NOS. 3 & 4 - DIFFICULTY LEVEL
PLEASE SET ALL TO THE SAME DIFFICULTY LEVEL.

DIP SWITCH #2 - SWITCH NO. 7 - RACE COURSES
PLEASE SET ALL TO THE SAME POSITION. ("OFF" IS RECOMMENDED.)

DIP SWITCH #3 - RACING CARS
PLEASE SET UP AS FOLLOWS:

MACHINE	PCB SET	CAR	SWITCH NO.							
			1	2	3	4	5	6	7	8
NO. 1	NO. 1	NO. 1	ON	ON	ON	ON				
	NO. 2	NO. 2	OFF	OFF	ON	ON				
NO. 2	NO. 3	NO. 3	OFF	ON	OFF	ON				
	NO. 4	NO. 4	OFF	OFF	OFF	ON				
NOT USED - KEEP THESE 4 SWITCHES TO "OFF"							OFF	OFF	OFF	OFF

GRAND PRIX STAR (VERSION 2.0) WITH "RACE TOGETHER" BUTTON

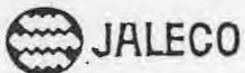
DIP SWITCH #1			1	2	3	4	5	6	7	8
COINCHUTE #1	1 COIN	1 CREDIT	OFF	OFF	OFF					
	1 COIN	2 CREDITS	ON	OFF	OFF					
	1 COIN	3 CREDITS	OFF	ON	OFF					
	1 COIN	4 CREDITS	ON	ON	OFF					
	1 COIN	5 CREDITS	OFF	OFF	ON					
	1 COIN	6 CREDITS	ON	OFF	ON					
	1 COIN	7 CREDITS	OFF	ON	ON					
	2 COINS	3 CREDITS	ON	ON	ON					
COINCHUTE #2	1 COIN	1 CREDIT				OFF	OFF	OFF		
	1 COIN	2 CREDITS				ON	OFF	OFF		
	1 COIN	3 CREDITS				OFF	ON	OFF		
	1 COIN	4 CREDITS				ON	ON	OFF		
	2 COINS	1 CREDIT				OFF	OFF	ON		
	3 COINS	1 CREDIT				ON	OFF	ON		
	4 COINS	1 CREDIT				OFF	ON	ON		
	5 COINS	1 CREDIT				ON	ON	ON		
FREE PLAY	NO								OFF	
	YES								ON	
NOT USED - KEEP SWITCH TO "OFF"										OFF

DIP SWITCH #2			1	2	3	4	5	6	7	8
NOT USED - KEEP SWITCH TO "OFF"			OFF							
NOT USED - KEEP SWITCH TO "ON"				ON						
DIFFICULTY LEVEL	STANDARD				OFF	OFF				
	DIFFICULT				ON	OFF				
	MORE DIFFICULT				OFF	ON				
	EASY				ON	ON				
PLAY TIME	NORMAL						OFF			
	UNLIMITED						ON			
SOUND IN ATTRACT MODE	NECESSARY							OFF		
	UNNECESSARY							ON		
RACE COURSES	PLAYER'S SELECTION								OFF	
	***FIXED ORDER								ON	
NOT USED - KEEP SWITCH TO "OFF"										OFF

***COURSE SELECTION IS FIXED IN ORDER OF GERMANY, MONACO & JAPAN.

DIP SWITCH #3			SWITCH NO.							
MACHINE	PCB SET	CAR COLOUR	1	2	3	4	5	6	7	8
NO. 1	NO. 1	RED & WHITE	ON	ON	ON	ON				
	NO. 2	RED	OFF	OFF	ON	ON				
NO. 2	NO. 3	BLUE & WHITE	OFF	ON	OFF	ON				
	NO. 4	BLUE	OFF	OFF	OFF	ON				
NOT USED - KEEP THESE 4 SWITCHES TO "OFF"							OFF	OFF	OFF	OFF

MACHINE NO. 2 IS NOT APPLICABLE UNLESS 2 MACHINES ARE LINKED.



GRAND PRIX STAR - RACE COURSES

WHEN DIP SWITCH #2, PIN #7 IS SET TO "ON", THE RACE COURSES ARE FIXED IN THE ORDER OF GERMANY, MONACO, AND THEN JAPAN.

WHEN THE ABOVE PIN IS SET TO "OFF" THE RACE COURSES ARE SELECTED BY THE PLAYER AS FOLLOWS:

1. WHEN THE 2-IN-1 MACHINE IS ON BY ITSELF, AND:

- A. IF BOTH PLAYERS SELECT THE SAME COURSE, THE GAME STARTS ON THAT COURSE.
- B. IF BOTH PLAYERS SELECT DIFFERENT COURSES AND IF THE "RACE TOGETHER" BUTTON IS PRESSED THE COURSE IS AS FOLLOWS:

<u>ONE PLAYER</u>	<u>OTHER PLAYER</u>	<u>COURSE</u>
GERMANY	JAPAN	GERMANY
GERMANY	MONACO	GERMANY
JAPAN	MONACO	MONACO

(IN OTHER WORDS THERE IS A PRIORITY ORDER OF GERMANY FIRST, MONACO SECOND, AND JAPAN THIRD)

- 2. WHEN 2 MACHINES ARE LINKED AND 3 OR 4 PLAYERS SELECT DIFFERENT COURSES THE COURSE WILL BE CHOSEN BY THE MAJORITY. IN THE CASE OF A TIE (2 PLAYER SELECT ONE COURSE AND THE OTHER 2 PLAYERS SELECT A DIFFERENT COURSE, OR 3 PLAYERS SELECT 3 DIFFERENT COURSES), THE COURSE WILL BE CHOSEN USING THE ABOVE PRIORITY ORDER.

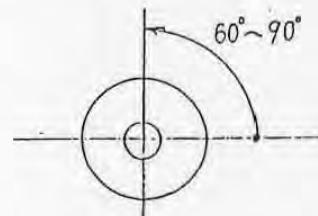


GRAND PRIX STAR - DUAL FOOT PEDAL ASSEMBLY

THE FOOT PEDAL ASS'Y IS COMPOSED OF THE ACCELERATOR AND BRAKE.

THE BRAKE WORKS WITH A MICROSWITCH.

THE ACCELERATOR WORKS WITH A POTENTIOMETER (5 K-OHM). THE DESIRABLE TURNING ANGLE OF THE POTENTIOMETER IS $60^\circ - 90^\circ$. A LARGER ANGLE EXCEEDING 90° IS WORKABLE, TOO. HOWEVER, IF IT IS TOO LARGE, A SLIGHT STEP-ON TO THE PEDAL WOULD INSTANTANEOUSLY ACCELERATE THE CAR UP TO ITS TOP SPEED AND REDUCE THE PLAYER'S CONTROL TO A MINIMUM THUS DEPRIVING THE GAME OF PLAYABILITY.



IN THE ORIGINAL JAPANESE-MADE CABINET THE FOOT PEDALS COME UP THROUGH THE FLOOR OF THE MACHINE. IF YOU PLAN TO USE A STANDARD SPANISH TYPE OF THE ASS'Y WHICH IS TO BE FIXED TO THE CABINET SO THAT ITS PEDALS WILL COME OUT FROM THE WALL, THEY SHOULD BE ADJUSTED IN A POSITION WHERE THE PLAYER CAN COMFORTABLY USE THEM.

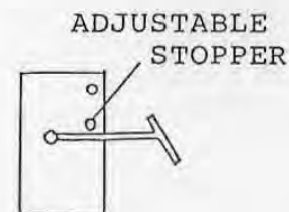


JAPANESE PEDALS



SPANISH PEDALS

SPANISH PEDALS



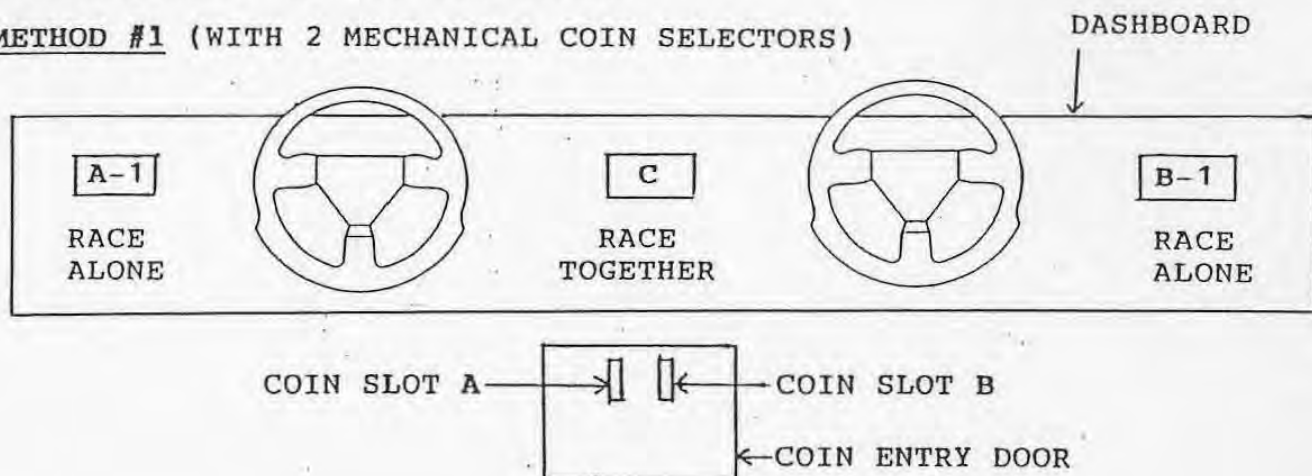
DURING PRODUCTION, THE ON-SCREEN TESTS SHOULD BE USED TO CONFIRM THAT THE ACCELERATOR PEDAL IS CORRECTLY ADJUSTED. WHEN THE PEDAL IS IN THE UP (NOT DEPRESSED) POSITION THE "ACCELE VR." ON THE ON-SCREEN DISPLAY (I/O CHECK) SHOULD BE 80 ± 10 . WHEN FULLY DEPRESSED THE ORIGINAL READING SHOULD BE REDUCED BY MORE THAN 22. A FINAL TEST IS TO PLAY THE GAME AS A SINGLE PLAYER (NOT TOGETHER AS COMPETING PLAYERS) AT EACH SEAT (SCREEN) AND WATCH THE MAXIMUM SPEED ON THE LONG STRAIGHT PART OF THE COURSE AT WHICH TIME YOU SHOULD REACH 207 MPH (334 KMPH).

GRAND PRIX STAR - STEERING WHEEL

THE SAME ON-SCREEN TEST ("HANDLE VR." ON I/O CHECK) SHOULD BE USED TO TEST THE STEERING ADJUSTMENTS. AT THE CENTRAL POSITION THE READING SHOULD BE 80 ± 2 .

GRAND PRIX STAR (2-PLAYER SITDOWN GAME)

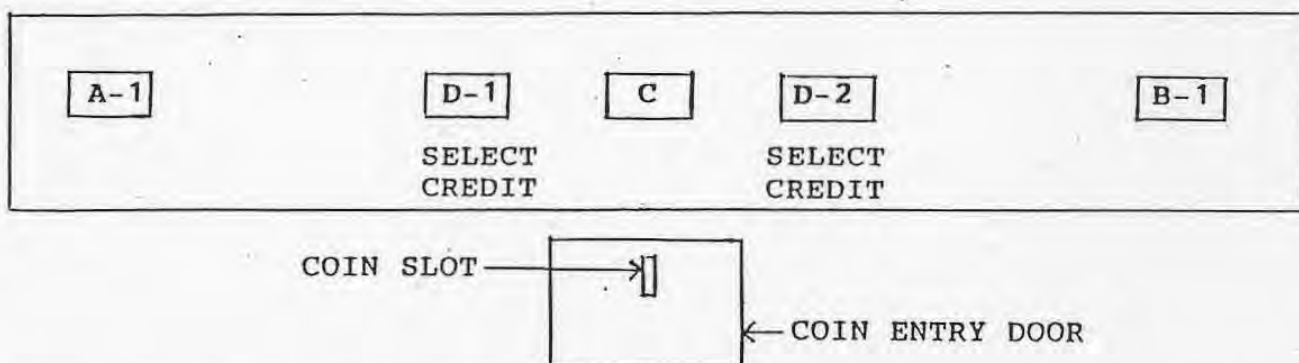
TWO MACHINES CAN BE LINKED SO THAT UP TO 4 PLAYERS CAN COMPETE SIMULTANEOUSLY ON THE SAME TRACK.

METHOD #1 (WITH 2 MECHANICAL COIN SELECTORS)


WHEN A COIN IS INSERTED INTO SLOT A, THE A-1 BUTTON IS ILLUMINATED. WHEN A COIN IS INSERTED INTO SLOT B, THE A-1 BUTTON IS TURNED OFF AND THE C BUTTON IS ILLUMINATED INSTEAD.

IF A COIN IS INSERTED INTO SLOT B FIRST AND THEN ANOTHER COIN INTO SLOT A, THE B-1 BUTTON IS ILLUMINATED FIRST AND THEN TURNED OFF, AND THE C BUTTON IS TURNED ON.

THAT IS, WHEN THE LEFT AND RIGHT HAND GAMES ARE BOTH CREDITED PROPERLY, ONLY THE C BUTTON IS ILLUMINATED. WHEN THE C BUTTON IS PRESSED, THE COUNTDOWN STARTS IMMEDIATELY.

METHOD #2 (WITH ONE ELECTRONIC COIN VALIDATOR)


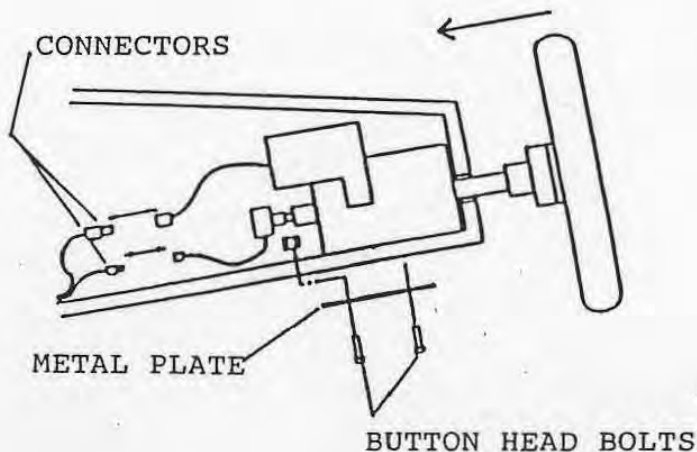
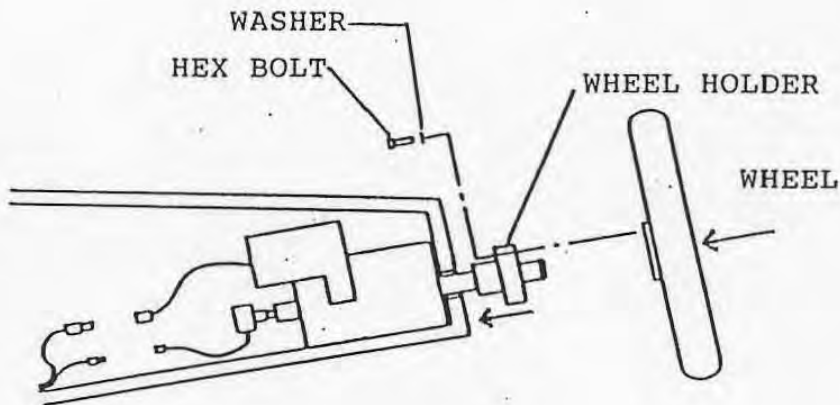
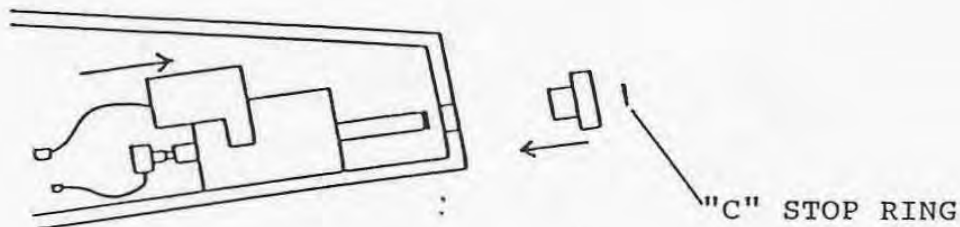
AFTER COINS ARE INSERTED INTO THE SAME ONE SLOT PROPERLY FOR THE LEFT AND RIGHT HAND GAMES, WHEN THE D-1 BUTTON IS PRESSED, THE A-1 BUTTON IS ILLUMINATED, AND WHEN THE D-2 BUTTON IS PRESSED, THE A-1 BUTTON IS TURNED OFF AND THE C BUTTON IS ILLUMINATED INSTEAD.

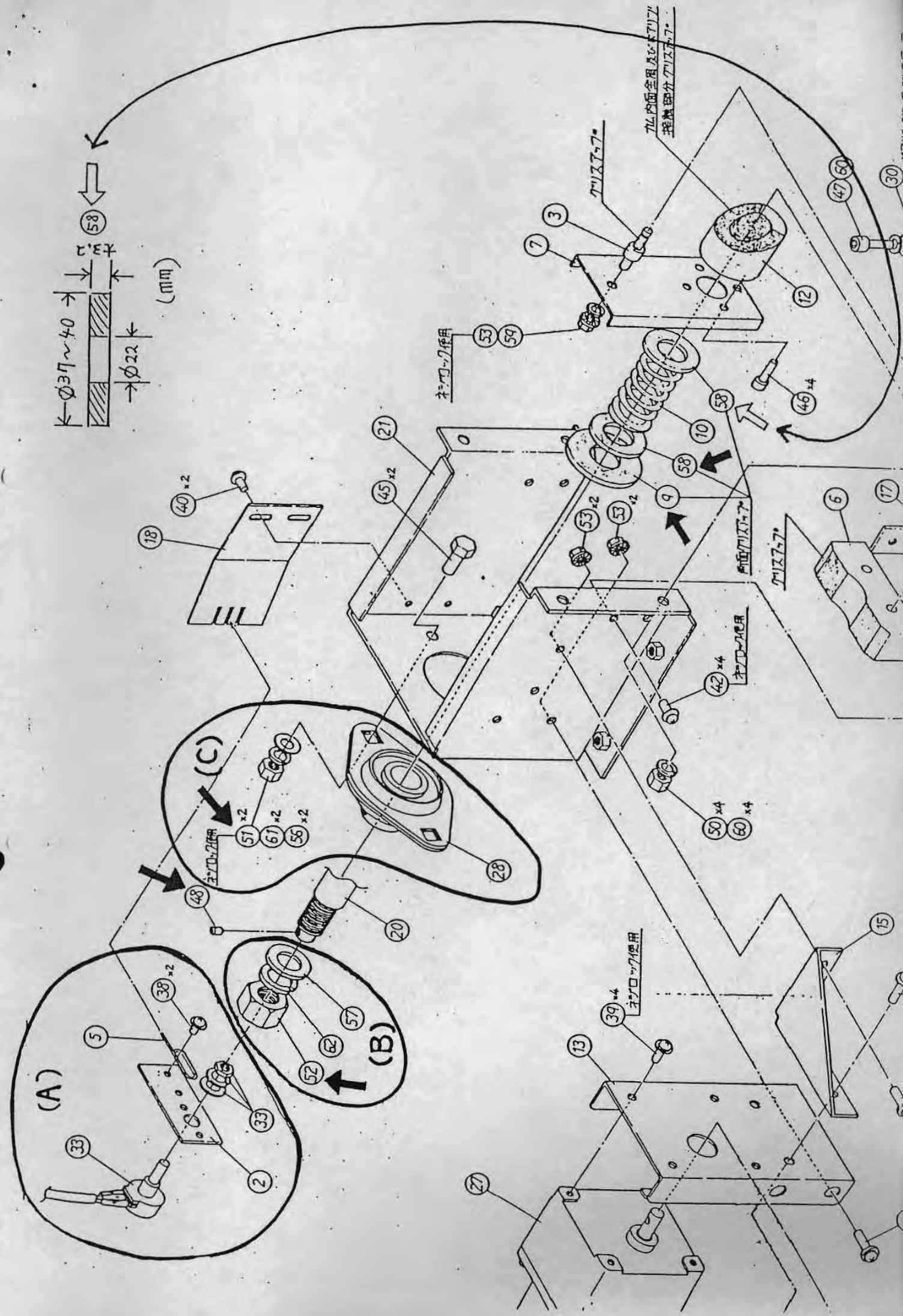
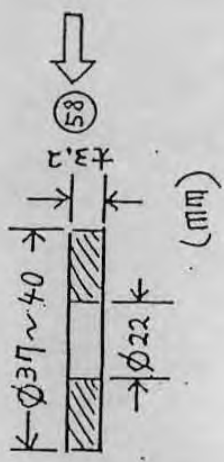
IT IS ADVISABLE THAT THE C BUTTON BE LARGER IN SIZE THAN ALL THE OTHER BUTTONS IN EITHER METHOD. WHEN EITHER THE A-1 OR B-1 BUTTON IS ILLUMINATED AND PRESSED, THE GAME WILL IMMEDIATELY START AS A SINGLE PLAYER GAME.

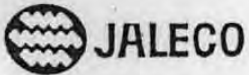
RE: GPS - STEERING WHEEL ASS'Y

WHEN STRONGER "REVERSE PULL" IS DESIRED ON THE STEERING WHEEL, ANOTHER THICK WASHER (58) SHOULD BE INSERTED INSTEAD OF THE SPRING BEING REPLACED WITH A STRONGER ONE. PLEASE REFER TO THE NEXT PAGE WHEN YOU READ THE FOLLOWING INSTRUCTIONS:

- (1) LOOSEN SCREW (48) AND REMOVE POTENTIOMETER UNIT (A).
- (2) UNFASTEN NUT (52) AND REMOVE SECTION (B).
- (3) UNFASTEN NUT (51) AND REMOVE SECTION (C).
- (4) REMOVE WASHER (9) AND ADD ONE MORE WASHER (58) BESIDE THE ORIGINAL WATER (58).
- (5) REASSEMBLE THE STEERING WHEEL ASS'Y.

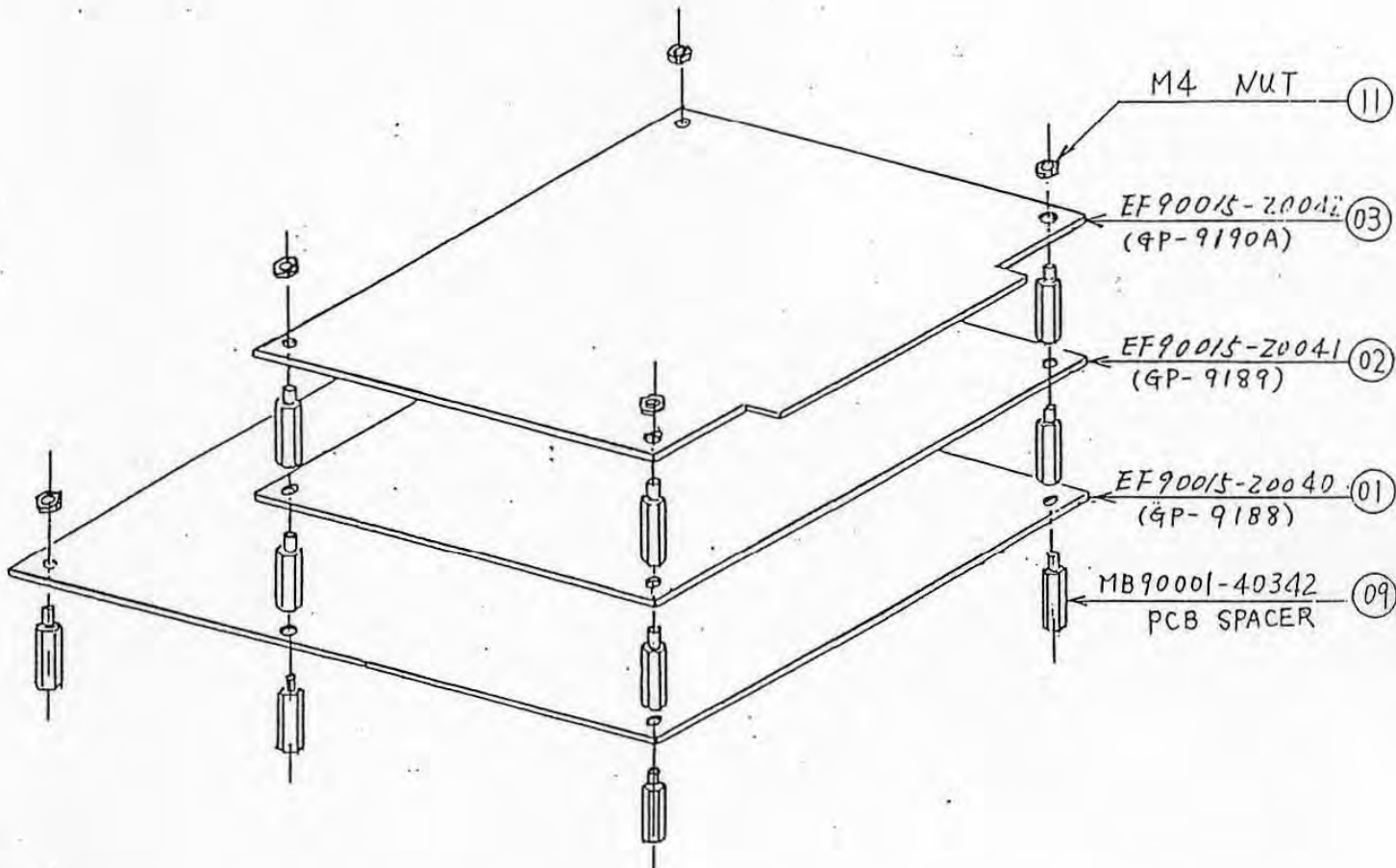






GRAND PRIX STAR - PCB SET

THE PCB SET IS BROKEN DOWN INTO 3 PIECES (GP-9188, GP-9189 & GP-9190A) SO AS TO SAVE THE AIR FREIGHT CHARGES TO A MINIMUM IN YOUR BEHALF. PLEASE SET IT UP AS ILLUSTRATED BELOW:



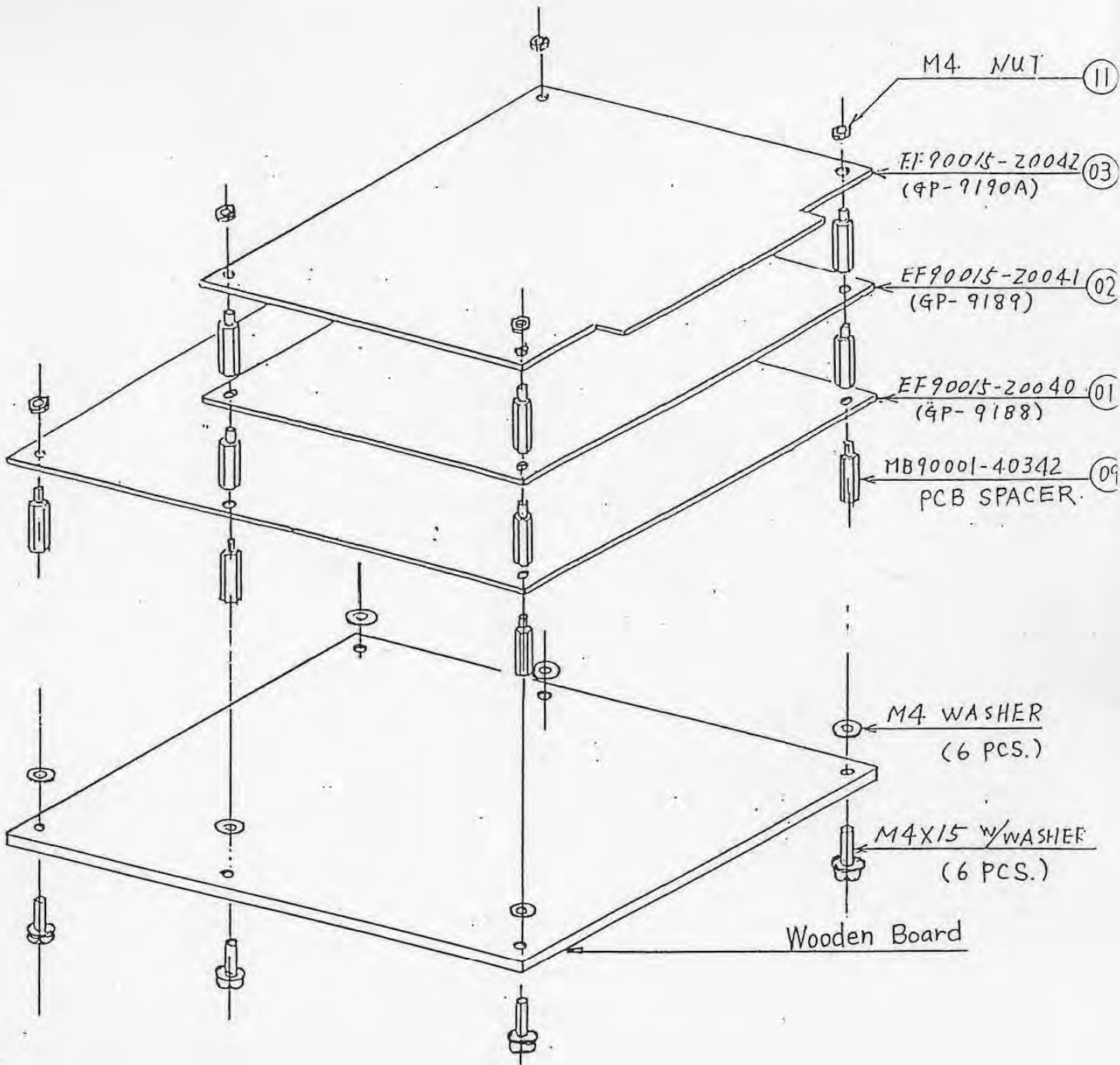
EACH PCB SET IS ACCOMPANIED WITH:

- | | |
|--|---------|
| (1) 50P FLAT CABLE ASS'Y (NOT SHOWN ABOVE) | 1 PC. |
| (2) 34P FLAT CABLE ASS'Y (NOT SHOWN ABOVE) | 1 PC. |
| (3) PCB SPACER (4 + 4 + 6 =) | 14 PCS. |
| (4) M4 NUT | 6 PCS. |

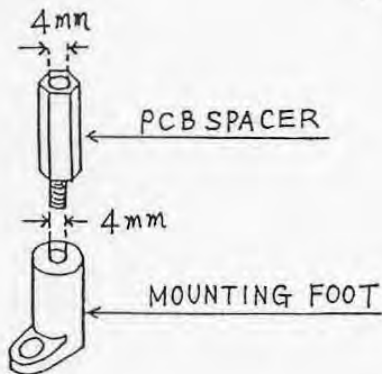
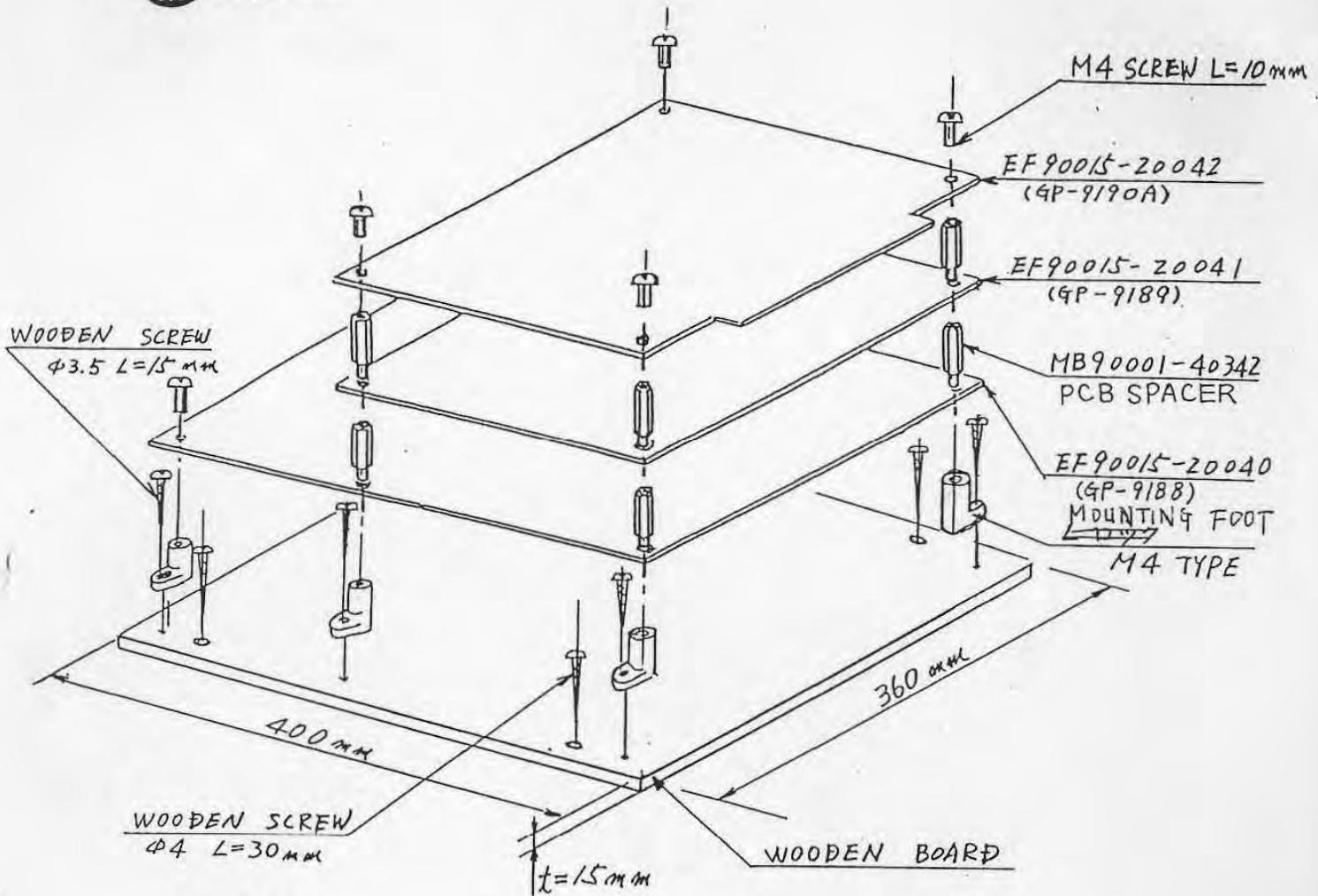
DRIVER PCB GP-91103 IS NOT SHOWN ABOVE, EITHER.



GRAND PRIX STAR - HOW TO INSTALL THE PCB SET IN THE CABINET



THERE ARE MANY METHODS TO INSTALL THE PCB SET IN THE CABINET. ONE OF THE BEST ONES WOULD BE TO SETTLE THE PCB SET ON A WOODEN PIECE OF BOARD AS ILLUSTRATED ABOVE, AND PUT IT INSIDE THE CABINET. THE ATTACHED DRAWING MB90015-40873-0 MIGHT HELP YOU PREPARE THE WOODEN BOARD. THE WOODEN BOARD, AND M4X15 SCREWS WITH WASHER, AND M4 WASHERS SHOULD ALL BE PROCURED ON YOUR SIDE.



M4 SCREW L=10mm	6 EA
MOUNTING FOOT	6 EA
EF90015-20040 M4 TYPE	6 EA
MB90001-40342 PCB SPACER	8 EA
WOODEN SCREW φ3.5 L=15mm	6 EA
WOODEN SCREW φ4 L=30mm	4 EA

IF YOU INTEND TO MOUNT THE PCB SET ON THE WOODEN BOARD USING MOUNTING FEET (BOOT-SHAPED PLASTIC PIECES) INSTEAD, YOU SHOULD PROCURE SUCH FEET WITH AN M4 THREAD SIZE TO MATCH THE PCB SPACERS (METAL PILLARS).

THE MOUNTING FEET ARE AVAILABLE ONLY WITH AN M3 THREAD SIZE HERE IN JAPAN AND WE ARE UNABLE TO SUPPLY THE NECESSARY FEET WITH AN M4 THREAD SIZE FROM JAPAN.