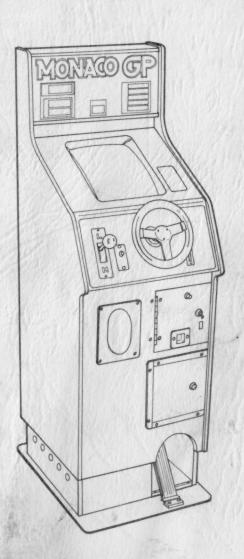
SEGA MODEL

SERVICE MANUAL & PARTS CATALOG



SEGA ENTERPRISES LTD.

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Note: Details contained herein may be changed without notice for making improvements.

1 INSTALLATION

- 1. As the SEGA Monaco GP is for "indoor use", do not install outdoors.
- 2. When installing, avoid the following places.
 - O Near indoor pools or showers
 - O Where leaks exist
 - O Under direct sunlight
 - O Near heaters or other heat emitting devices
 - O Where hazardous items (volatile fluids, gas cylinders etc.)
 - O Where vibrations are severe (near construction sites where jack hammers etc. are used)
 - O Inclined places
 - O Near fire extinguishing equipment
 - O Near emergency exits
 - O Set power transformer changeover switch to 90V in locations where the power is normally below 90V.

2 CARE IN OPERATION

1. Inspection

- Are the IC boards and other connectors firmly connected.
- O Connect ground wire as prescribed. (Never connect to gas pipes, water pipes or electrical conduits)
- O Arrange line cords and ground wires in the aisle so they will not be tripped over.

2. Care in Handling

- O Always turn off the power supply switch before handling.
- O Avoid inserting and pulling the plug in rapid succession.
- O Do not check the IC board circuit with a tester.

3. Care in Usage

- O Care should be taken to avoid dragging or dropping the machine when transporting to prevent damage to the CRT.
- O Use fuse of stipulated rating.
- O As high voltage is present in the monitor and TV PCB, adjustments or repairs should be left up to a serviceman and should never be touched by the layman.

- As color alignment may become disturbed due to terrestrial magnetism when the machine is moved or its direction changed, demagnetize the unit by pushing the demagnetizing switch.
- O Refrain from holding the steering wheel or shift lever when transporting the machine.

4. Servicing

O How to remove the power supply unit:

The power supply unit is located in the bottom part of the machine. First remove the 3 wing nuts (M5) from the IC board unit, remove the IC board from the rail and pull out the power supply unit.

O How to remove the handle unit:

The handle unit and shift lever can be removed together with the front panel.

The unit may be removed by first removing the connector and then removing the hooks on both sides.

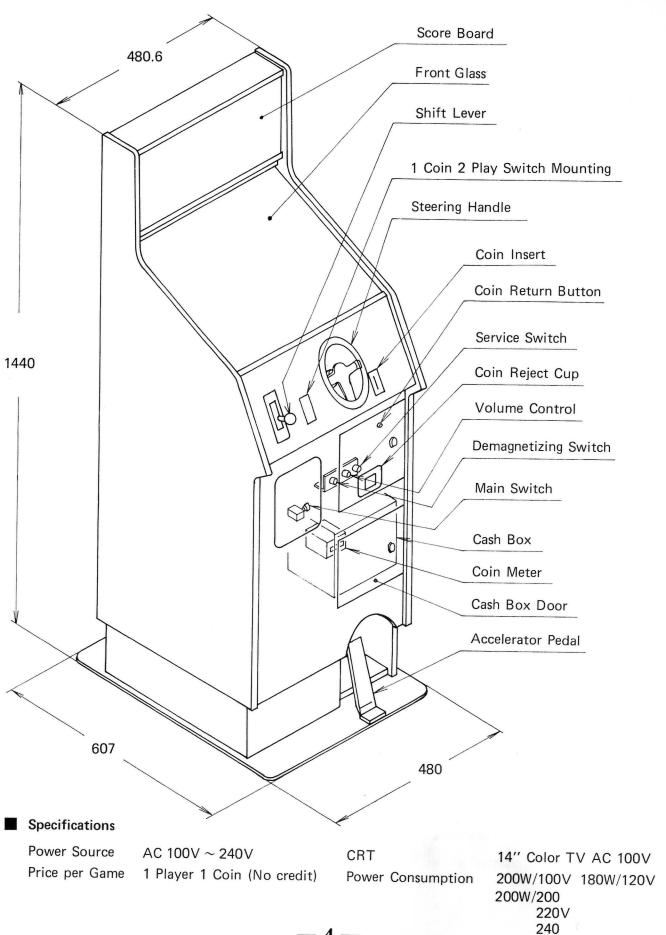
O How to remove the TV:

The TV may be removed by removing the front panel unit, front glass and 4 screws.

5. 1 Coin 2 play changeover switch (optional)

- (1) Remove the cover plate of the front panel switch mounting and replace with MO-0019 (Instruction & Switch Ass'y).
- (2) As it is wired to the front panel, solder connections in accordance with the circuit diagram.
- (3) Open 1.5ϕ holes in the 1 coin per coin play plate and install the 81496 plate using 177-013 Parker screws.
- (4) Set the changeover switch 96577-P on the main board to 2 play.

3 EXTERNAL VIEW



4 HOW TO PLAY

1. Insert Coin

- O Depress accelerator to start your car which will appear at the lower right of the screen.
- O The object is to drive as fast and far as possible with skilfull handling of the accelerator and steering wheel.
- O Play against time until the timer reads "0".
- 2. Your car (red) will be returned to the starting position if you hit an obstacle or another car.
- 3. Extended play will be awarded if score is over 2,000 points when timer reads "0". 1 Car will be added at this time and game can be played until this car is gone.
- 1 Extra player's car will be added when score reaches 4,000, 6,000 and 8,000 points (max. 3 cars).
- 5. Game over when all player's cars are gone.
- 6. High score is 9999 points.
 - Speed of player's car increases and game becomes more difficult when score exceeds
 6,000 points. Speed of the other cars vary when speed exceeds 8,000 points.
 - Score increases at double speed when passing through tunnels and over slip zones and water puddles.

7. Sound effects

O Types of sound Speeding car (player's car), passing sound (other cars), crash sound, slip zone and water puddle sounds, emergency vehicle (wrecker) sound, fanfare and signal sound (when extended play is won).

8. Score and timer

O The following indications appear on the glass in front of the driver.

TODAY	S BEST 5
1 sT	9999
2 ND	8000
3 RD	7650
4 тн	7000
5 тн	5400



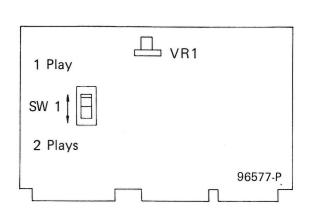
90

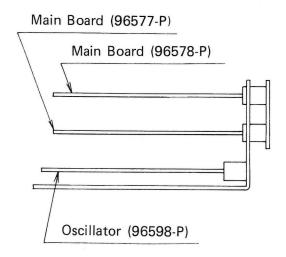
5 IC BOARD ADJUSTMENTS

1. Main Board (96577-P)

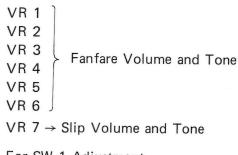
VR 1 : Set to standard 90 sec. Game Time

SW 1 : Changeover Switch to 1 Player or 2 Players





2. Oscillator (96598-P)



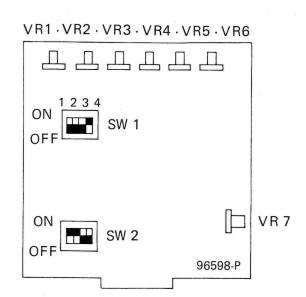
For SW 1 Adjustment

1. 2. $3 \rightarrow OFF$

 $4 \rightarrow$ Normal Operation when ON

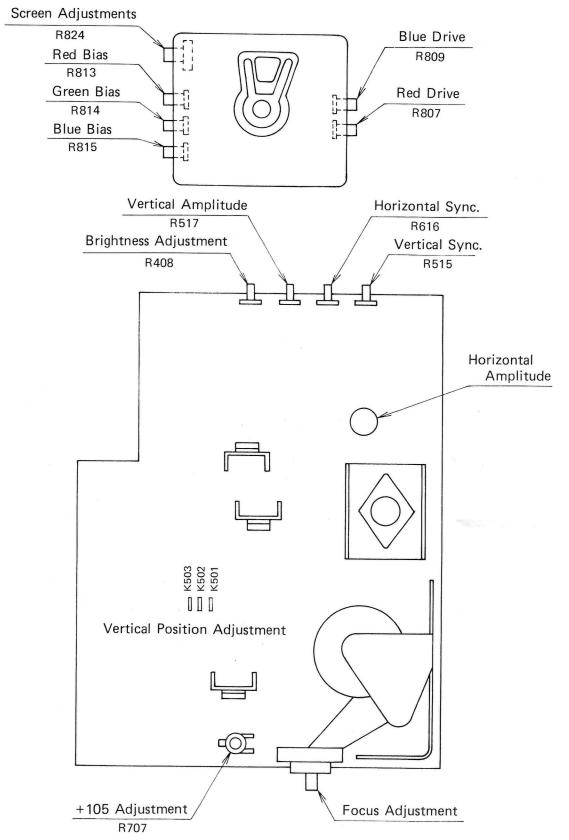
SW 2

Switch	1	2	3	4
Stereo Sound (Cockpit Type)	OFF	OFF	N	
Monaural Sound (Stand, Table Type)	ON	ON	No use	



As the volume control has been pre-set at the factory, refrain from touching unless absolutely necessary.

6 COLOR MONITOR ADJUSTMENTS



 As the volume control has been preset at the factory, refrain from touching the controls unless absolutely necessary.

1. Brightness Adjustment (Sub-Bright R408)

The CRT beam current will increase to increase brightness when turned clockwise.

2. Horizontal Amplitude (Amplitude in vertical direction as the H-size L601 CRT is in the vertical direction)

Turn coil core clockwise to increase amplitude. Amplitude will be minimum when the core is turned counter clockwise and is at the top of the bobbin.

3. Vertical Amplitude (Amplitude in horizontal direction as the V-size R517 CRT is in the horizontal direction)

Turn dual directional horizontal amplitude control clockwise to increase amplitude.

4. Vertical Position Adjustment (Horizontal position adjustment as the CRT is in the vertical direction)

If the chip inserted in K502 is inserted in K501, the center of the picture will shift to the right.

If this chip is inserted in K503, the center of the picture will shift to the left.

- 5. Vertical Sync. (Horizontal sync. as the V-Hold R515 CRT is in the vertical direction)
 This V-Hold control will stop flow of picture from left to right or right to left.
- 6. Horizontal Sync. (Vertical position adjustment as the H-Hold R616 CRT is in the vertical direction)

This control is to obtain synchronism when the horizontal oscillations or frequency drifts and slanted lines appear.

Picture can be shifted down by turning this control clockwise within the range in which the picture will not commence to flow.

7. Setting the +B Voltage (R707)

Adjust so the 105V line (TP91) is 105V. Turn clockwise to raise voltage.

8. Red Drive (R-Drive R807), Blue Drive (B-Drive R809)

Adjust mainly for bright white to white. When turned clockwise, it will be greenish (or bluish) white.

9. Red Bias (R-Bias R813), Green Bias (G-Bias R814), Blue Bias (B-Bias R815)

These 3 controls are used mainly to adjust intermediate tones and white balance in the dark portions. When turned clockwise, this color will turn dark gray.

If the white balance adjustments in 8 and 9 are carried out while changing green and blue drive instead of independently, not only will the bright white change but the color tone of the gray portion will also change. Conversely, even if the red, green and blue drives are changed, the color tone of the bright white portion will change.

10. Screen Adjustment (Screen R824)

As in the case of the brightness adjustment, beam current will increase to increase brightness when this control is turned clockwise. However, as white balance will be destroyed if the screen adjustment control is moved excessively, it will be advisable to adjust brightness with the brightness control. After completing brightness white balance adjustments in 7, 8 and 9, check and confirm that the beam current setting (DC voltage across R301) does not exceed -7.0V.

11. Focus

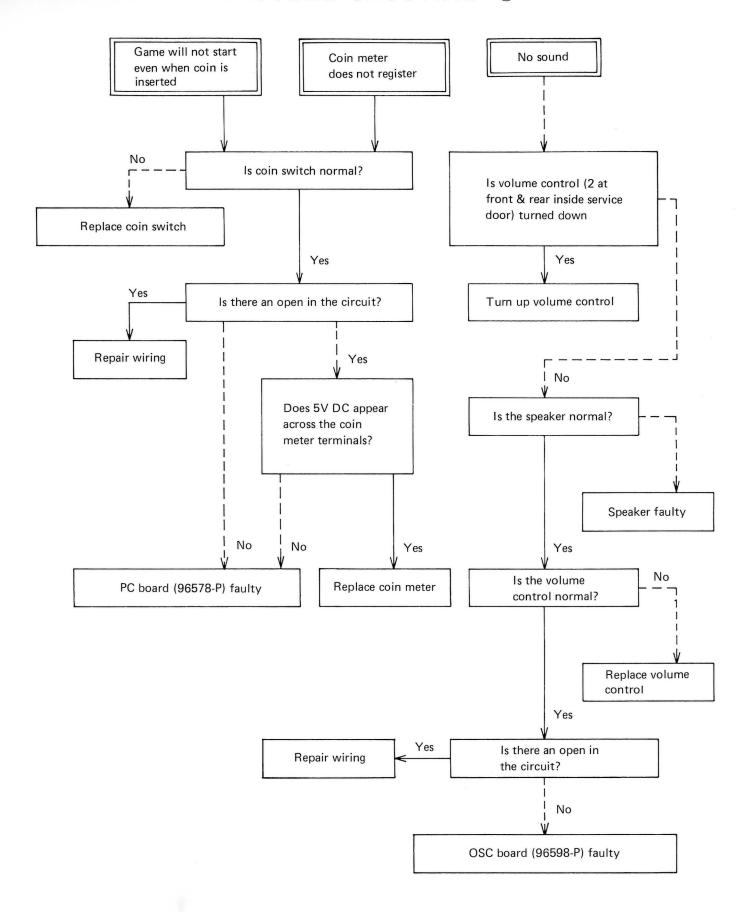
Adjust for clearest picture. It will always be desirable to carry out focus adjusements after brightness adjustments.

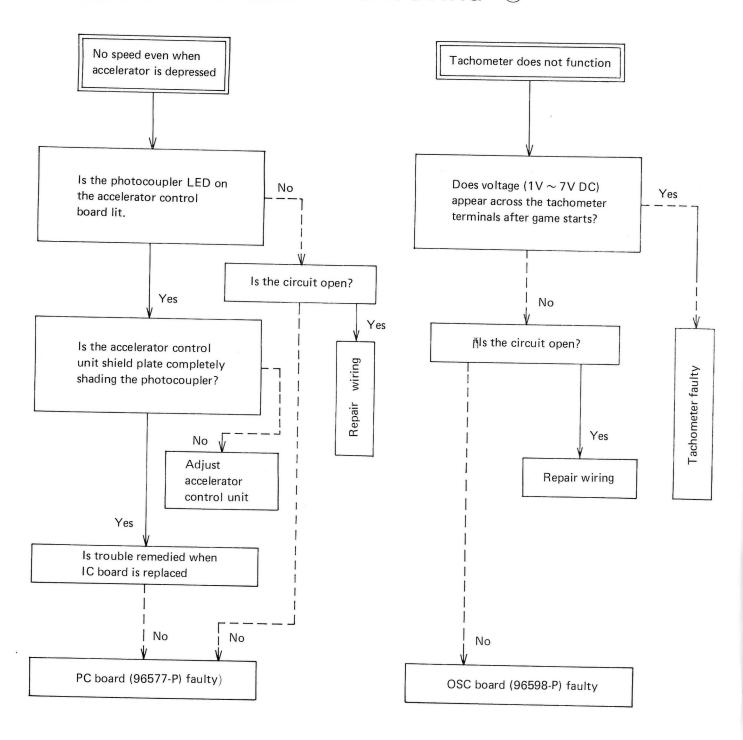
When it is believed that trouble has developed, always confirm the following items.

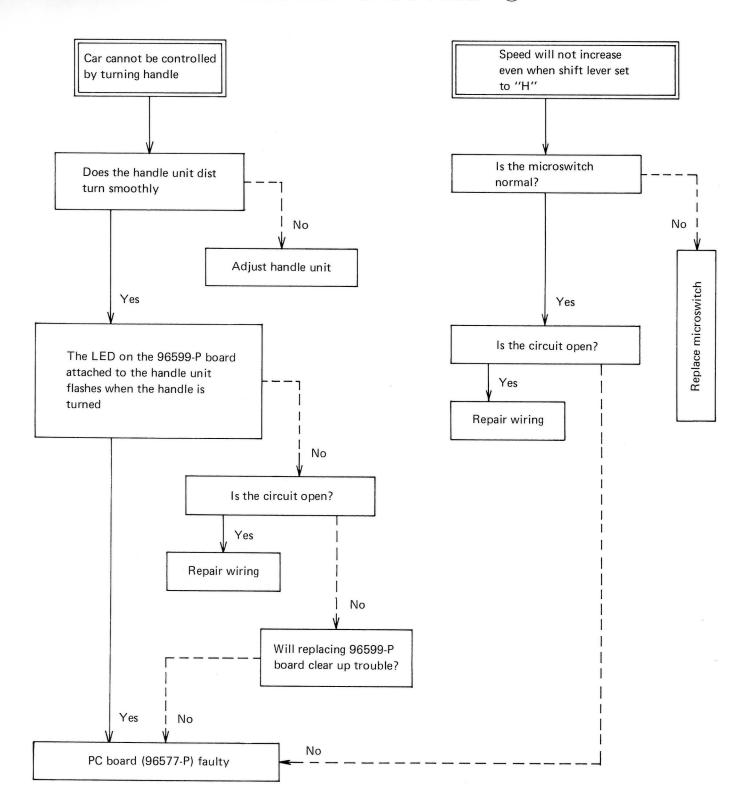
- O Is the fuse intact (Always use fuse of the designated rating). When the replaced fuse burns out again, this will indicate that another component is defective.
- O Are there any poor connections (connectors) or open circuits. Special care must be taken to ensure connectors are firmly inserted troubles due to faulty contacts can be considered from various sources.

Note: Always turn off the power when inserting or removing the connectors.

- O There will be times when a normal picture will not appear when the power supply switch is turned on. As this may sometimes be corrected by a setting of the control circuit, turn power supply switch on and off several times.
- O When testing meters, switches etc. with a tester, always first pull the IC board connectors.

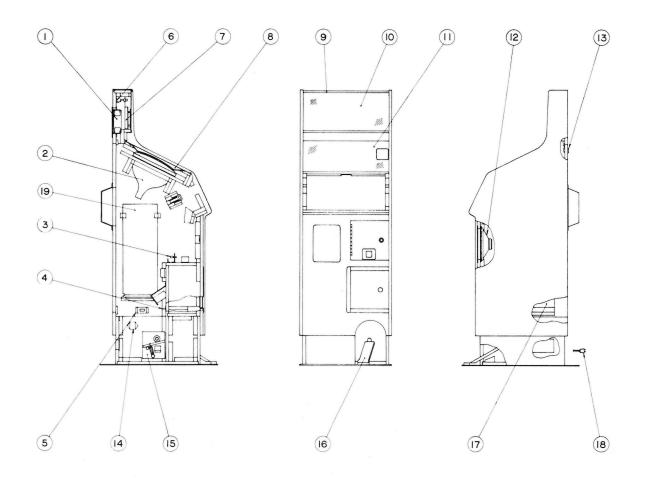






PARTS CATALOG

CABINET ACCESSORY ASSY

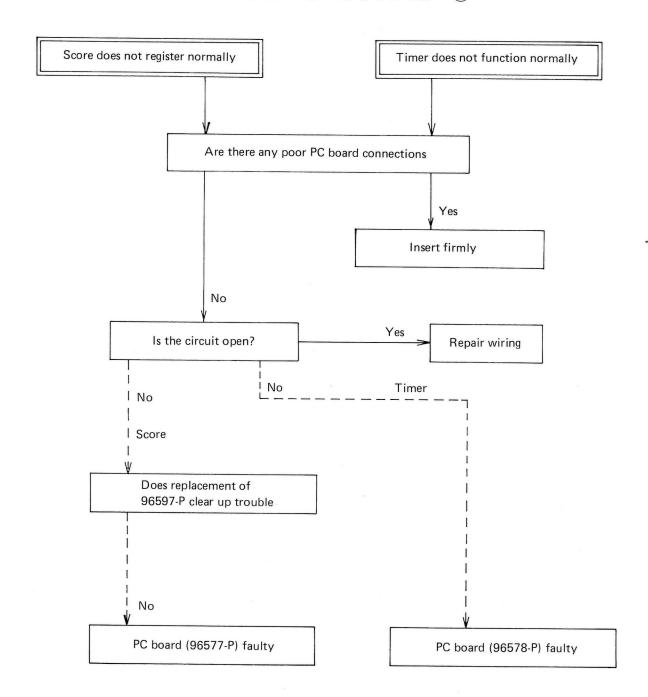


2	CI-20006	Color Display Assy, 14H, 90
2	S-96477	Push Button Switch, 2T.
0	S-93157	Volume Control, B-25KΩ
4	S-91654	Rectifier, Silicon Diode
5	S-90834	Switch, Push Button Type
6	S-94428	Bulb, 6.3V, 0.25A
7	MO-42001	Score Board Assy
	S-96600	L.E.D., Numeric Display, Red
	S-96679	L.E.D., Numeric Display,
		2 Digit, Red
8	DO-1021	Color TV Mask, 14
9	MO-1032	Ornament Frame
10	MO-1033	Top Glass
11	MO-1064	Front Glass
	MO-1060	Play Instructions Plate
12	S-91359X	Speaker, $187x130$ mm, 8Ω
13	LS-1064	Ace Cylinder Lock, L.S. Type
14	S-96634	Noise Filter, AC 250V, 4A
15	MO-1016	Accelerator Pedal Assy
	PC-1206	Photocoupler Unit, A
	PC-1207	Photocoupler Unit, B
	SG-1112	Accelerator Pedal Shaft
	GP-1040	Shoulder Screw
	GP-1042	Extension Spring
	FL-3031	Extension Spring
	DH-3318	Shoulder Screw
16	S-80807	Accelerator Pedal
17	96577-P	IC Board Assy, Monaco GP, A
	96578-P	IC Board Assy, Monaco GP, B
	96598-P	Oscillator, Monaco GP
18	90759X	Cable & Plug Assy
19	96597-P	Score Display IC Board Assy

Description Axial Flow Fan, AC100V

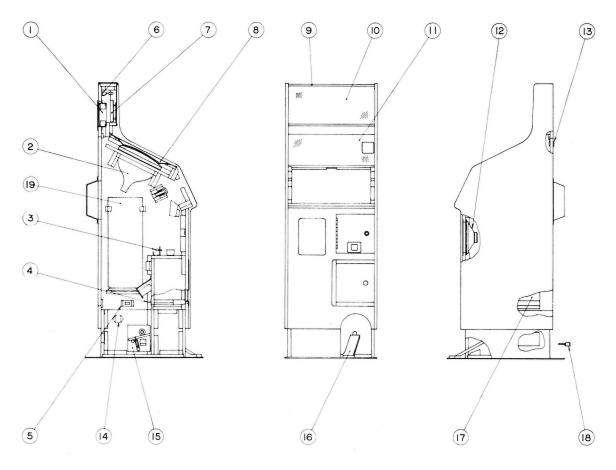
Item Part No.

1 S-96626



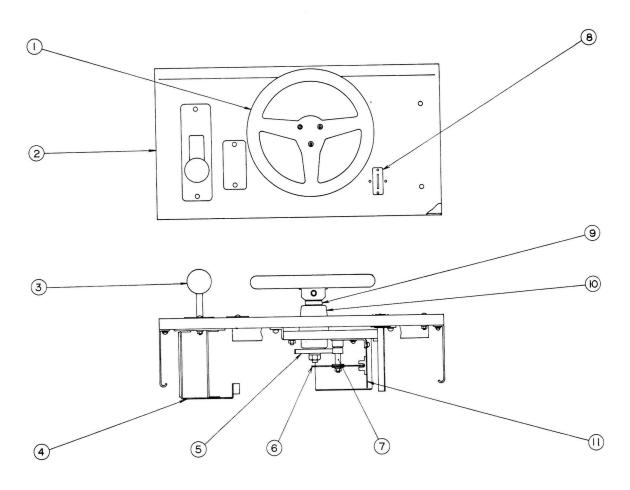
PARTS CATALOG

CABINET ACCESSORY ASSY



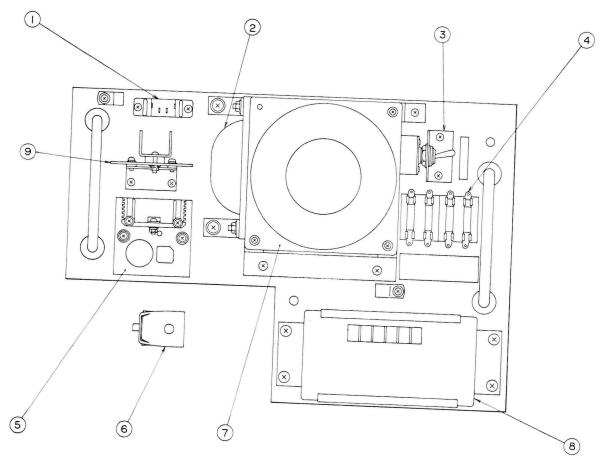
Iten	n Part No.	Description
1 2	S-96626 CI-20006	Axial Flow Fan, AC100V Color Display Assy, 14H, 90
2	S-96477	Push Button Switch, 2T.
	S-93157	Volume Control, B-25K Ω
4	S-91654	Rectifier, Silicon Diode
5	S-90834 S-94428	Switch, Push Button Type Bulb, 6.3V, 0.25A
7	MO-42001	Score Board Assy
	S-96600	L.E.D., Numeric Display, Red
	S-96679	L.E.D., Numeric Display,
_		2 Digit, Red
8	DO-1021	Color TV Mask, 14
9 10	MO-1032 MO-1033	Ornament Frame Top Glass
11	MO-1033	Front Glass
	MO-1060	Play Instructions Plate
12	S-91359X	Speaker, 187x130mm, 8Ω
13		Ace Cylinder Lock, L.S. Type
14		Noise Filter, AC 250V, 4A
15	MO-1016	Accelerator Pedal Assy
	PC-1206 PC-1207	Photocoupler Unit, A Photocoupler Unit, B
	SG-1112	Accelerator Pedal Shaft
	GP-1040	Shoulder Screw
	GP-1042	Extension Spring
	FL-3031	Extension Spring
4.0	DH-3318	Shoulder Screw
16 17	S-80807	Accelerator Pedal
17	96577-P 96578-P	IC Board Assy, Monaco GP, A IC Board Assy, Monaco GP, B
	96598-P	Oscillator, Monaco GP
18	90759X	Cable & Plug Assy
19	96597-P	Score Display IC Board Assy

PARTS CATALOG CONTROL PANEL ASSY

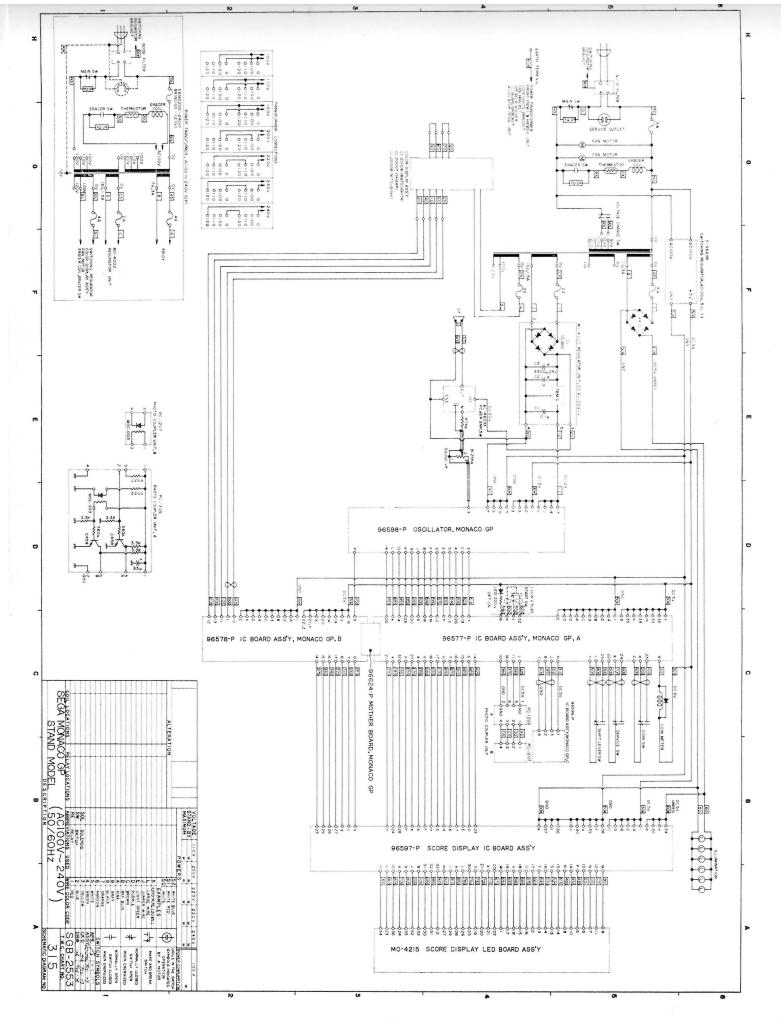


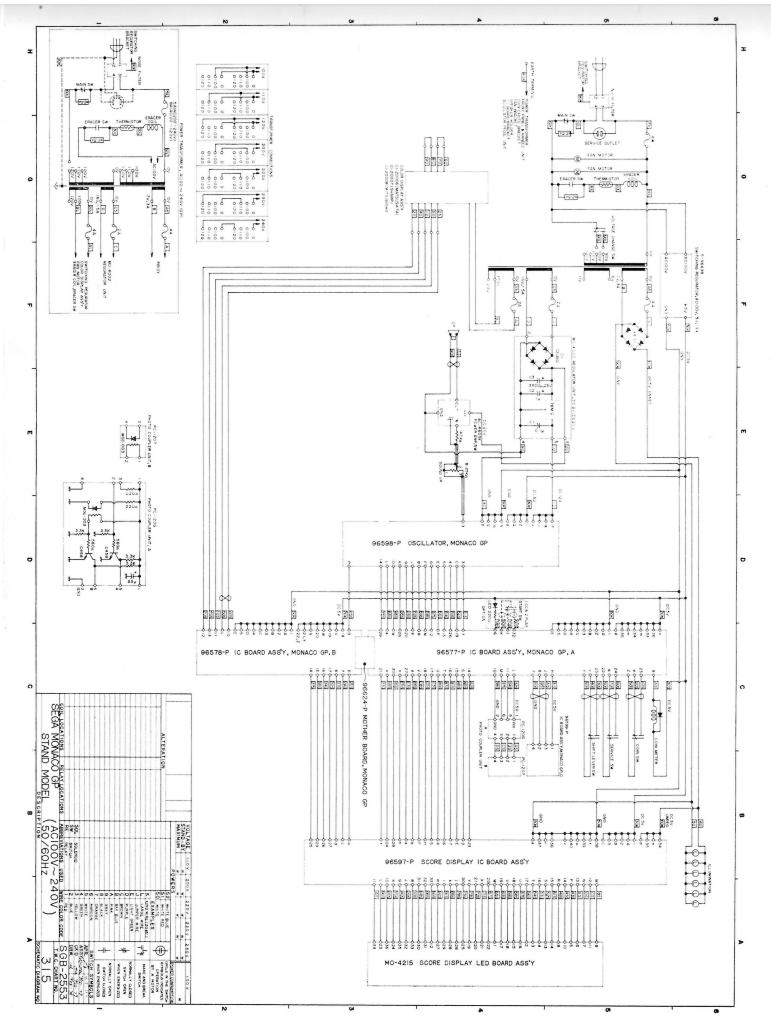
It	em	Part No.	Description
3	2	MO-2021 MO-2018 MP-1025 MO-2023 RR-1012 SH-3022 2P-11600 2P-11601 FC-2541 S-80216 S-91421 MO-2009	Steering Handle Front Panel Handle Ball, Red Transmission Assy Handle Assy Cam Assy Rubber Bumper Rubber Retainer Compression Spring Steel Ball, 10.3188¢ Switch, Micro Type Spur Gear, 60T
	6	MO-2007 MO-2008	Disc Spur Gear, 14T
	8 9 10	PT-0212 MO-2020	Coin Entry Plate, ¥100 Steering Wheel Shaft Housing IC Board Assy, Monaco GP, C

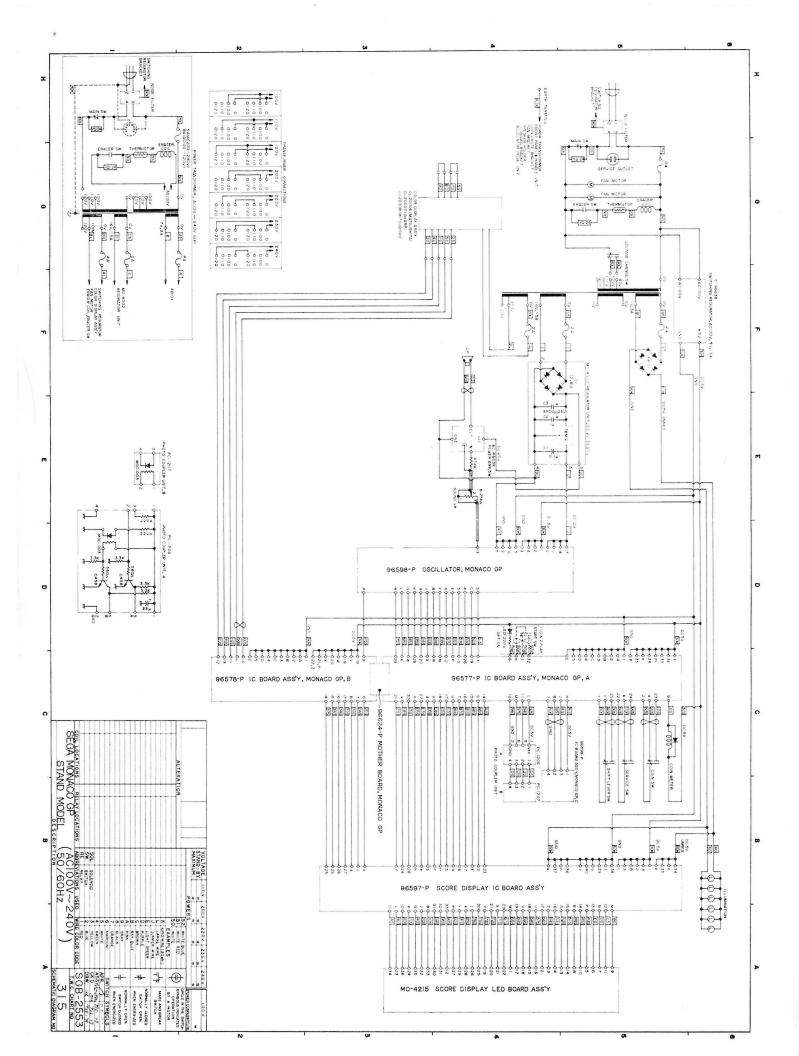
PARTS CATALOG POWER SUPPLY ASSY



Ite	m Part No.	Description
1 2	S-94441 96627	Rectifier, Silicon Diode Power Transformer, 7V, 11V,
3 4	S-96395 S-90644 S-91941	Switch Toggle, SP-DT, 15A Fuse, 2A Fuse, 4A
5	S-91151 MO-4002 S-96262	Fuse, 8A Regulator Unit, DC12V, 20V AC Cord, Connector Body,
7 8	S-96626 S-96638	Axial Flow Fan, AC100V Switching Regulator, AC100N
9	BC-4603X	5V, 15A Power Amplifier, 5W







カラー モニター の 調整 TV VOLUME ADJUSTMENT INSTRUCTIONS

VR463 UPPER PINCUSHION CONTROL(上側糸巻歪補正) VR 461 BOTH SIDE PINCUSHION CONTROL (面側糸巻歪補正) VR462 LOWER PINCUSHION CONTROL (下側) 杀卷至補正) _VR704 BLUE BIAS VR 703 GREEN BIAS VR702 RED BIAS VR501-H-HOLD(水平同期) VR931 +112V ADJ. FOCUS / CRT BIAS VR 401 V-HOLD (垂直同期)

0

S-9659Z-P COLOR DISPLAY, 14H TYPE

VR402 V-SIZE(垂直振幅)