

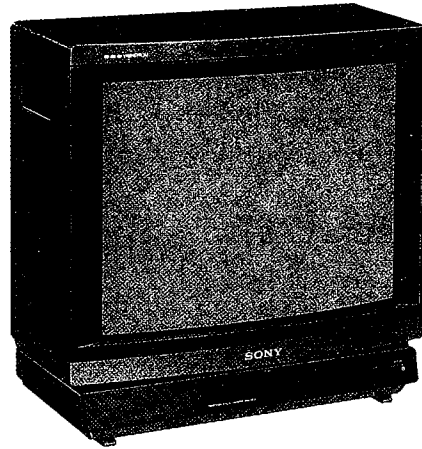
2575

# SSM-2010

## SERVICE MANUAL

*US Model*

*Chassis No.: SCC-A05H-A*



## P3ACHASSIS

### SPECIFICATIONS

Color system	NTSC system
Picture tube	Microblack Trinitron tube 20-inch picture measured diagonally 21-inch picture tube measured diagonally
Inputs	Audio phono jack, 408 mVrms (100% modulation), high impedance Video BNC connector Composite video, 1 Vp-p, sync negative, 75 ohms termination switchable
Outputs	Audio Phono jack Video BNC connector
Speaker	8 ohms
Power requirements	120 V AC, 60 Hz
Power consumption	125 W (max.)
Weight	Approx. 23 kg (50 lb 12 oz)
Dimensions	Approx. 512 × 489 × 475 mm (w/h/d) (20 <sup>1</sup> / <sub>4</sub> × 19 <sup>3</sup> / <sub>8</sub> × 18 <sup>3</sup> / <sub>4</sub> in.)

Design and specifications are subject to change without notice.

# TRINITRON® COLOR MONITOR SONY®




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**WARNING !!**

**AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.**

**SAFETY-RELATED COMPONENT WARNING !!**

**COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.**

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).  
Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

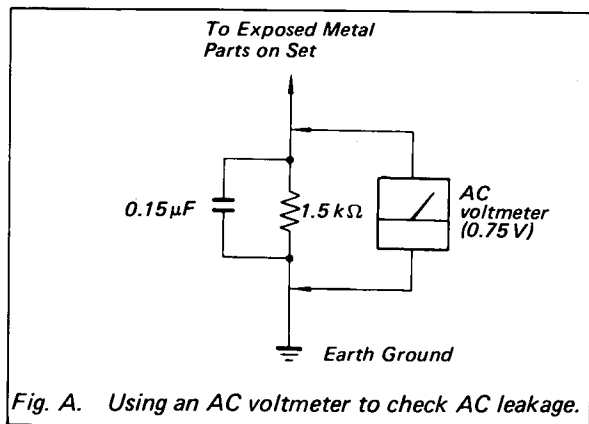


Fig. A. Using an AC voltmeter to check AC leakage.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

## HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

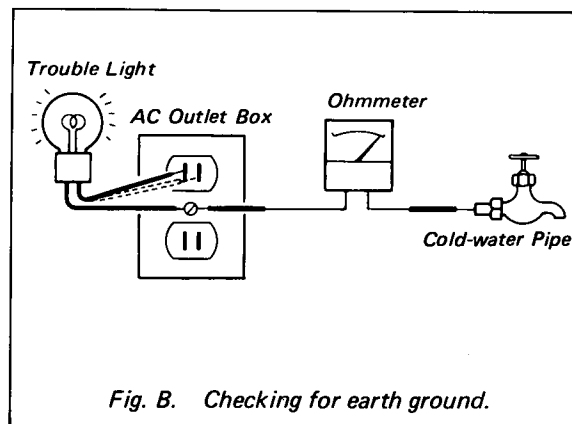
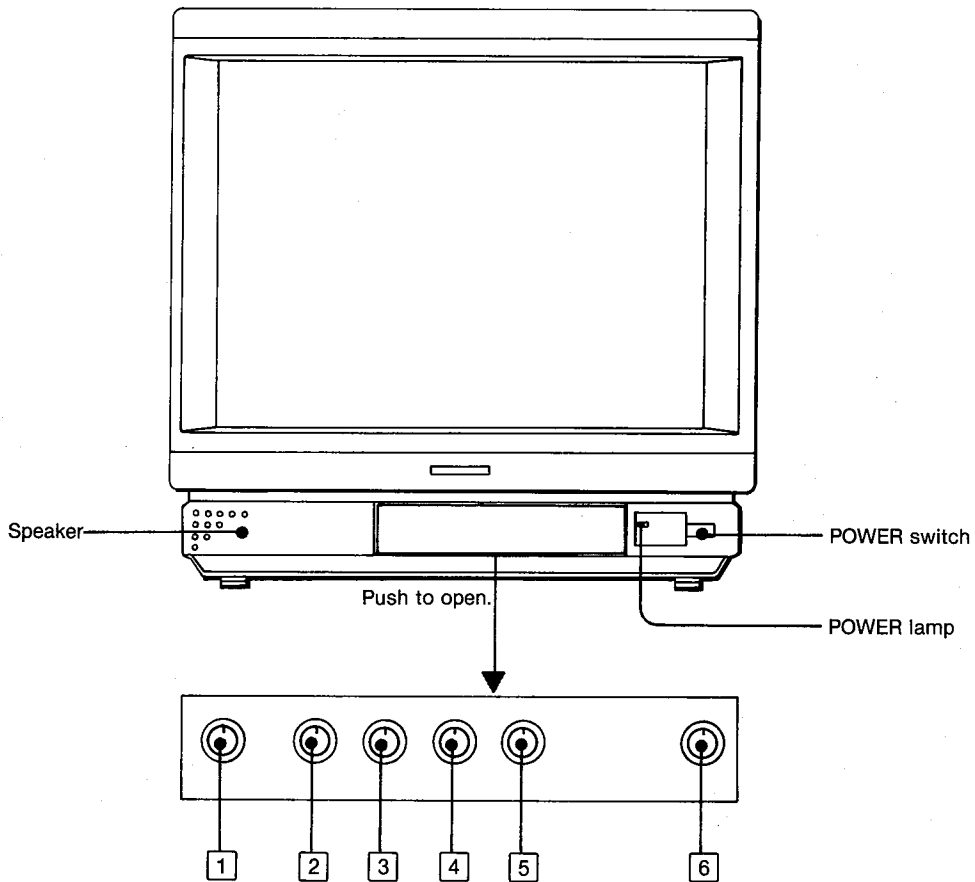


Fig. B. Checking for earth ground.

## SECTION 1 GENERAL

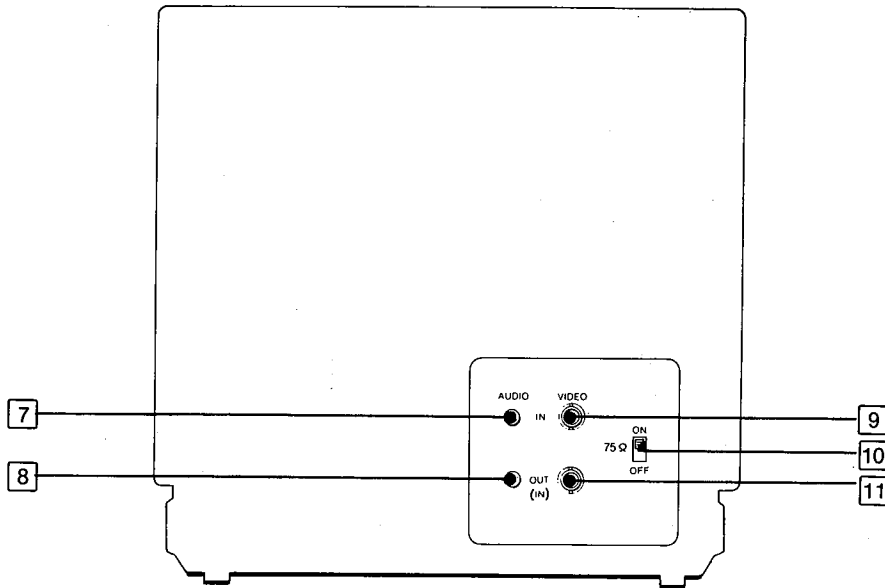
### 1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

#### FRONT PANEL



- |  |  |
|--|--|
| <p><b>1 VOLUME control</b><br/>Turn clockwise for more volume or counterclockwise for less.</p>                  | <p><b>4 COLOR control</b><br/>Turn clockwise for more intensity or counterclockwise for less.</p>                    |
| <p><b>2 SHARPNESS control</b><br/>Turn clockwise for more sharpness or counterclockwise for less.</p>            | <p><b>5 HUE control</b><br/>Turn clockwise to make the tones greenish or counterclockwise to make them purplish.</p> |
| <p><b>3 BRIGHT (brightness) control</b><br/>Turn clockwise for more brightness or counterclockwise for less.</p> | <p><b>6 PICTURE control</b><br/>Turn clockwise for more contrast or counterclockwise for less.</p>                   |

## REAR PANEL



**7** AUDIO IN (input) jack (phono jack)

**8** AUDIO OUT (IN) (output/input) jack (phono jack)

Set the 75-ohm switch to ON when using as input and OFF when using as output.

**9** VIDEO IN (input) connector (BNC)

**10** 75-ohm termination switch

When only the AUDIO/VIDEO IN connectors are used (nothing is connected to the AUDIO/VIDEO OUT (IN) connectors), or when using the AUDIO/VIDEO OUT (IN) connectors as inputs, set this switch to ON.

When both connectors are used together for a loop-through connection, set this switch to OFF.

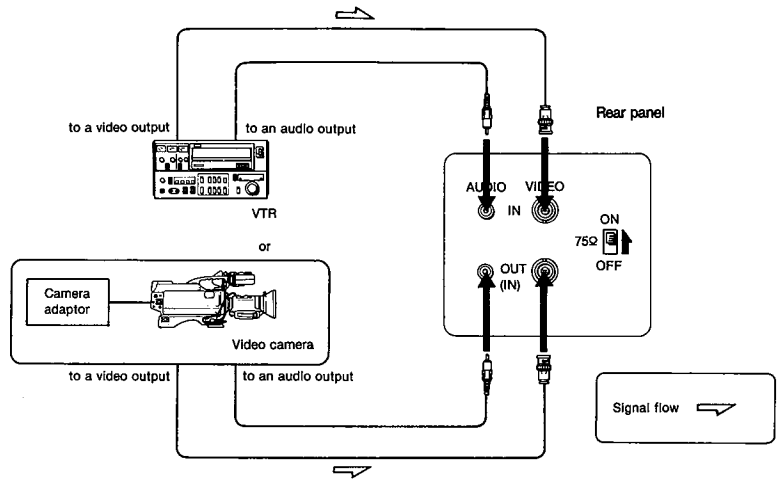
**11** VIDEO OUT (IN) (output/input) connector (BNC)

Set the 75-ohm switch to ON when using as input and OFF when using as output.

1-2. SYSTEM CONNECTIONS

- Before making connections, make sure that the POWER switch is turned off.
- Connect the unit to an AC 120 V power outlet after making connections.

Connecting Several Monitors – Loop-through connection

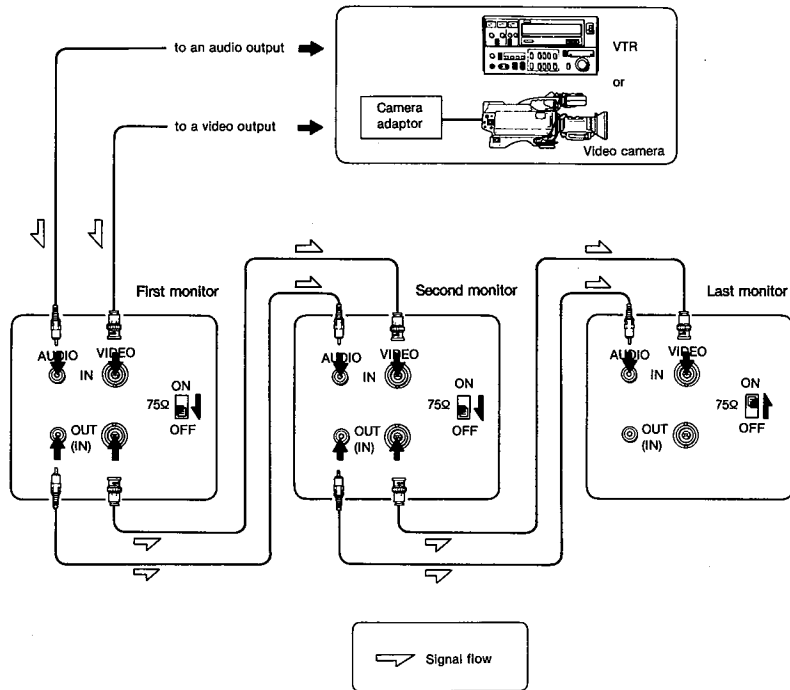


Note (when using)

When VTR's (or cameras) are connected to both AUDIO/VIDEO IN and AUDIO/VIDEO OUT (IN) connectors, turn off the power on one of them.

Connecting Several Monitors – Loop-through connection

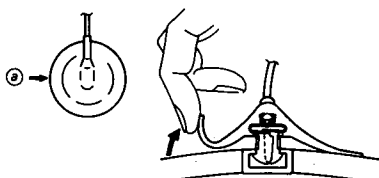
A loop-through connection is convenient for monitoring the same picture on several monitors. Up to 3 monitors can be connected without significant loss of signal.



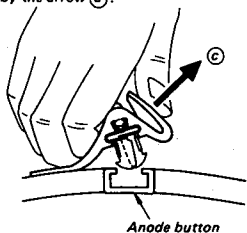
## SECTION 2 DISASSEMBLY

### 2-1. PICTURE TUBE REMOVAL

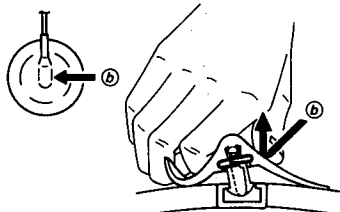
#### • Removing Procedures



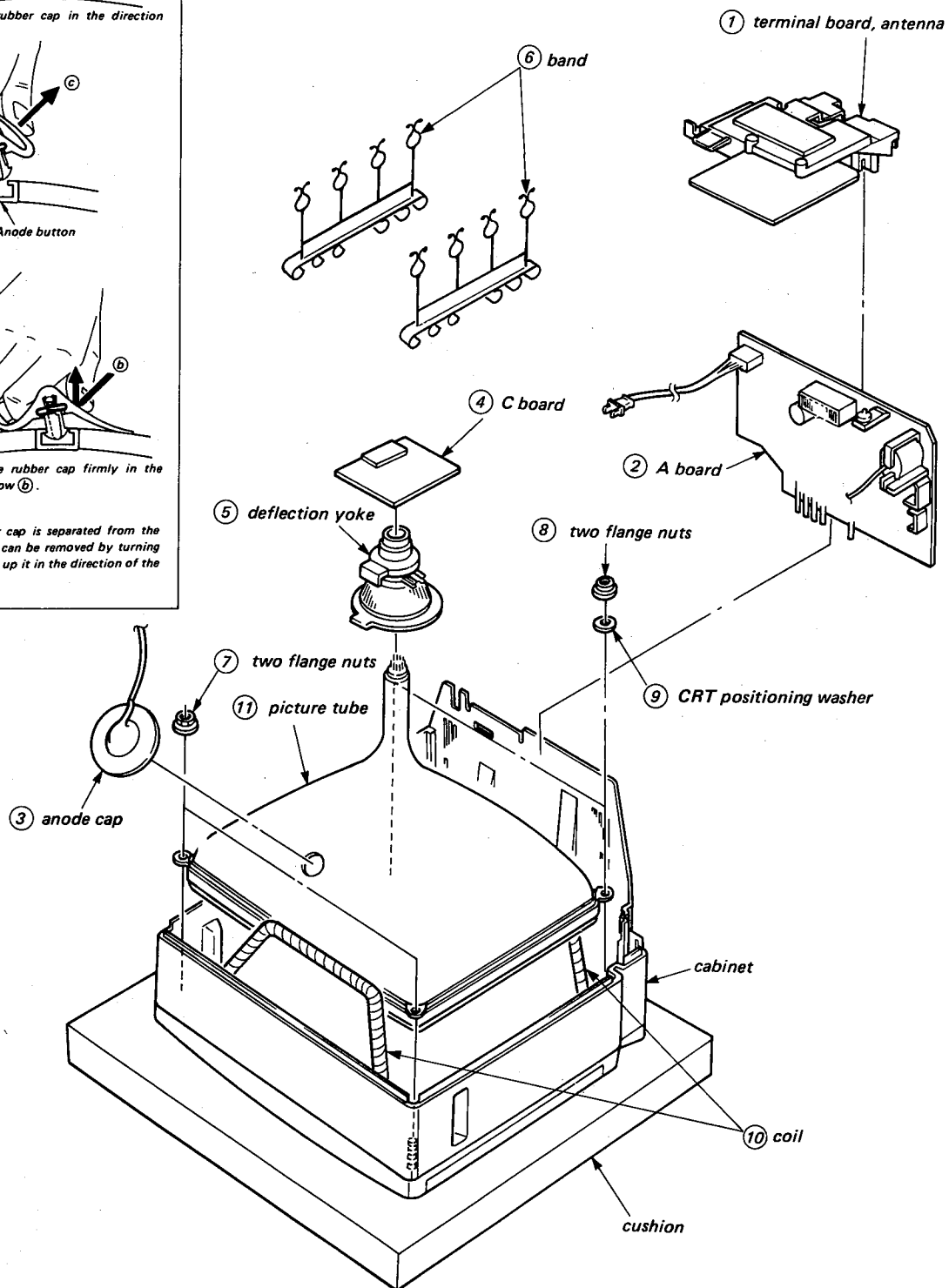
① Turn up one side of the rubber cap in the direction indicated by the arrow (a).



② Using a thumb, pull up the rubber cap firmly in the direction indicated by the arrow (b).



③ When one side of the rubber cap is separated from the anode button, the anode cap can be removed by turning up the rubber cap and pulling it in the direction of the arrow (c).



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:

PICTURE control ..... MAXIMUM

BRIGHTNESS control ..... MAXIMUM

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. White Balance
5. Sub Brightness

**Note:** Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser

#### 3-1. BEAM LANDING

Preparation:

- Feed in the white pattern.
- Before starting, degauss the entire screen.
  1. Loosen deflection yoke screw.
  2. Adjust purity control as shown in Fig. 3-1.
  3. Slide deflection yoke as far forward as it will go.
  4. Turn the raster signal of the pattern generator to red.
  5. Adjust purity control to center vertical red band as shown in Fig. 3-2.
  6. Slide deflection yoke back for a uniform red screen.
  7. Check green and blue rasters for uniformity by performing the same way as steps 4, 5 and 6.
  8. Tighten the deflection yoke screw.
  9. Check if mislanding appears at corners a-d as shown in Fig. 3-3. If mislanding is observed, correct it as shown in Fig. 3-3.
  10. Confirm that beam landing is correct when the receiver is faced in all directions.

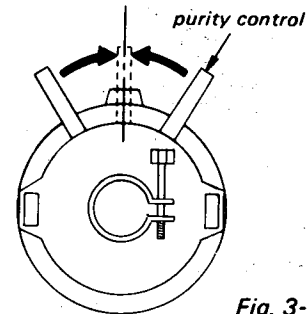


Fig. 3-1.

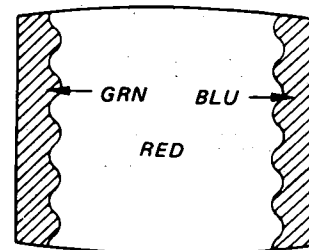


Fig. 3-2.

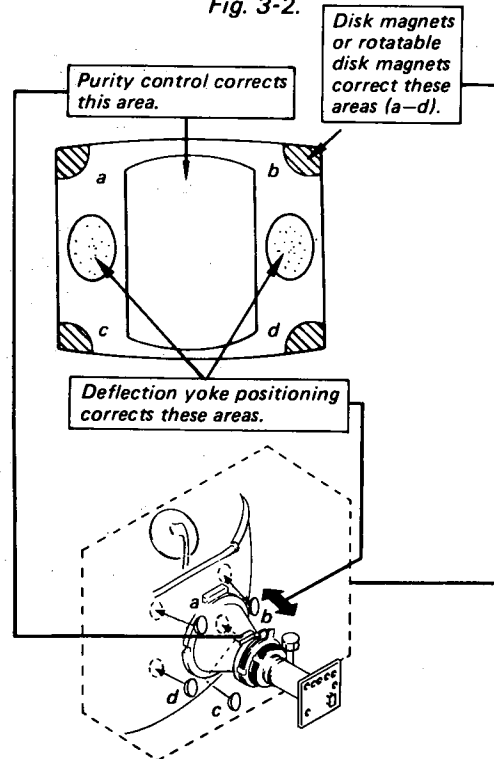
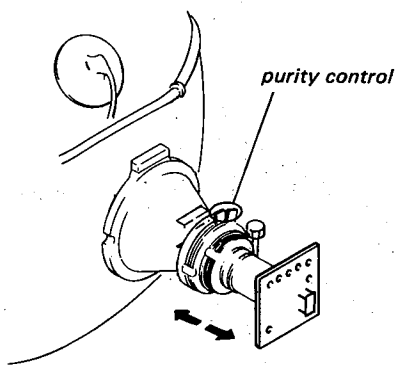


Fig. 3-3.

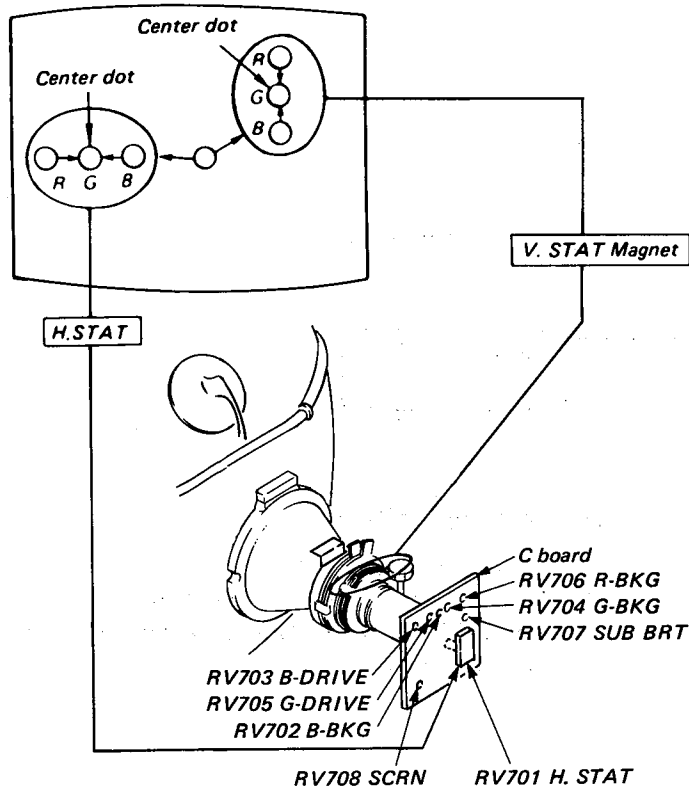


### 3-2. CONVERGENCE

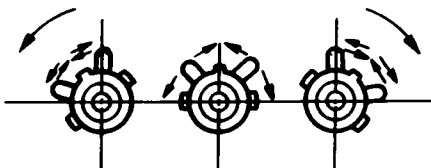
#### Preparation:

- Before starting, perform FOCUS, H. SIZE and V. SIZE adjustments.
- Set BRIGHTNESS control to fully counterclockwise.
- Feed in the dot pattern.

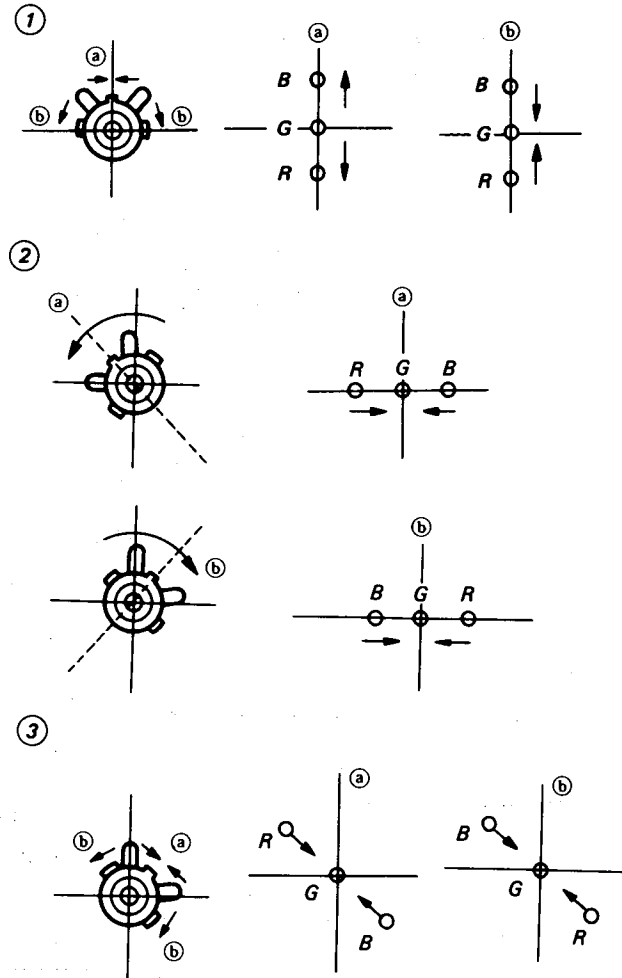
#### (1) Horizontal and Vertical Static Convergence



1. Adjust H. STAT VR to coincide red, green and blue dots on the center of screen (Horizontal movement)
  2. Adjust V. STAT magnet to coincide red, green and blue dots on the center of screen (Vertical movement)
  3. If the red, green and blue dots do not coincide on the center of screen with H. STAT VR, perform horizontal convergence adjustment using H. STAT VR and V. STAT magnet as shown below. (In this case, H. STAT VR and V. STAT magnet effect each other.)
- Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



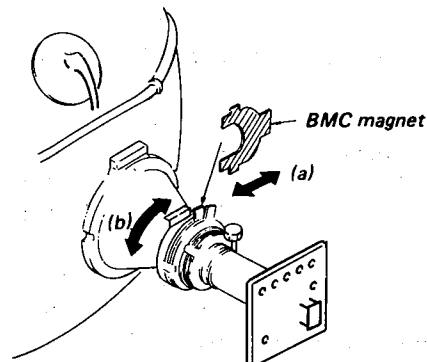
4. When the V. STAT magnet is moved in the direction of arrow (a) and (b), Red, Green and Blue dots move as shown below.



If blue dot does not coincide with red and green dots, perform following steps.

- Move BMC magnet (a) to correct insufficient H. static convergence.
- Rotate BMC magnet (b) to correct insufficient V. static convergence.

In either case, repeat Beam Landing Adjustment.

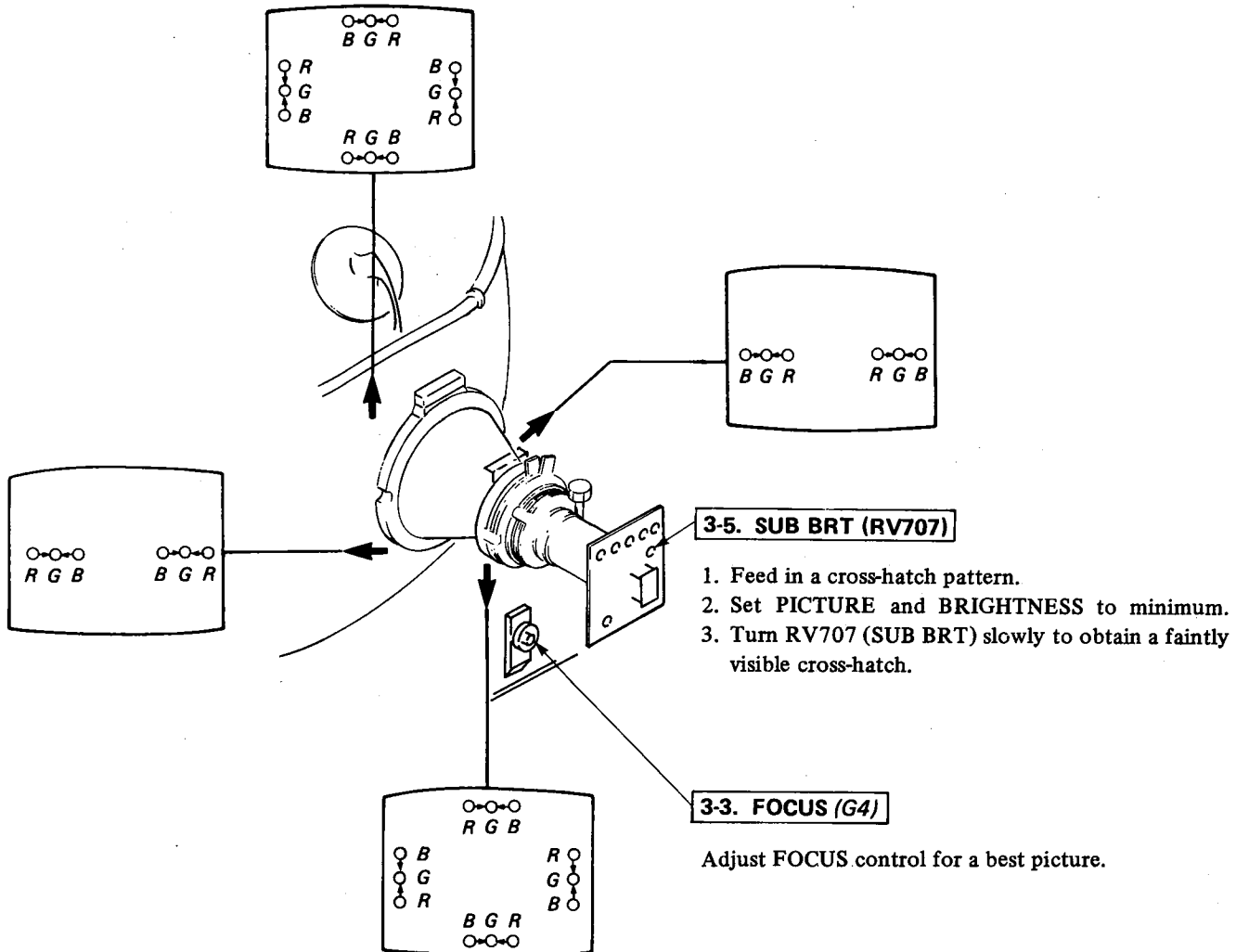


**(2) Dynamic Convergence Adjustment****Preparation:**

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

1. Loosen deflection yoke screw.
2. Remove deflection yoke spacers.

3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.


**3-4. WHITE BALANCE**


Feed in the cross-hatch pattern.

1. Set BRIGHTNESS and PICTURE controls to minimum.
2. Turn RV703 (B. DRIVE) and RV705 (G. DRIVE) fully counterclockwise.
3. Set RV706 (R. BKG), RV704 (G. BKG), RV702 (B. BKG) and RV707 (SUB BRT) to mechanical center.
4. Turn RV708 (SCREEN) slowly to obtain a faintly visible cross-hatch. Note the color that first becomes visible by turning RV708. Do not turn a BKG control for this color.
5. Adjust the other two BKG controls for best white balance (neutral gray) of the faint cross-hatch.
6. Set BRIGHTNESS and PICTURE controls to maximum. Observation the screen and adjust the DRIVE controls for best white balance.
7. Repeat Steps 1 through 6 several times.

A

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
L503	1-410-6 -31	MICRO INDUCTOR 33UH		RESISTOR			
L504	1-459-313-00	COIL WITH CORE (HWC)		R250	1-249-411-11	CARBON 330 5% 1/6W	F
L505	1-459-104-00	COIL, DUST CORE		R251	1-246-987-11	CARBON 47K 5% 1/8W	F
L506	1-407-365-00	COIL, CHOKE		R252	1-249-459-11	CARBON 12K 5%	1/4W
L507	1-408-349-00	COIL, CHOKE		R253	1-249-434-11	CARBON 27K 5%	1/6W
L508	1-408-239-00	MICRO INDUCTOR 4.7MMH		R254	1-249-417-11	CARBON 1K 5%	1/6W
L509	1-459-390-00	COIL (WITH CORE)		R255	1-249-429-11	CARBON 10K 5%	1/6W
L510	1-459-626-11	HLC		R256	1-249-429-11	CARBON 10K 5%	1/6W
L511	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE		R301	1-215-471-00	METAL 120K 1%	1/6W
L513	1-410-665-31	MICRO INDUCTOR 15UH		R302	1-249-438-11	CARBON 56K 5%	1/6W
L514	1-459-407-00	COIL, FERRITE CHOKE		R303	1-249-429-11	CARBON 10K 5%	1/6W
L601	1-408-225-00	MICRO INDUCTOR 3.3UH		R304	1-215-479-00	CARBON 270K 5%	1/6W
L602	1-408-225-00	MICRO INDUCTOR 3.3UH		R305	1-249-468-11	CARBON 82K 5%	1/4W
L603	1-410-686-11	MICRO INDUCTOR 1MMH		R306	1-249-437-11	CARBON 47K 5%	1/6W
L604	1-408-417-00	MICRO INDUCTOR 47UH		R307	1-249-429-11	CARBON 10K 5%	1/6W
L605	1-408-429-00	MICRO INDUCTOR 470UH		R308	1-249-411-11	CARBON 330 5%	1/6W
L606	1-408-421-00	MICRO INDUCTOR 100UH		R309	1-249-411-11	CARBON 330 5%	1/6W
L607	1-408-421-00	MICRO INDUCTOR 100UH		R310	1-249-411-11	CARBON 330 5%	1/6W
L608	1-408-421-00	MICRO INDUCTOR 100UH		R311	1-249-429-11	CARBON 10K 5%	1/6W
L609	1-408-421-00	MICRO INDUCTOR 100UH		R312	1-247-713-11	CARBON 1K 5%	1/4W
L610	1-408-421-00	MICRO INDUCTOR 100UH		R313	1-246-507-00	CARBON 27K 5%	1/4W
NEON LAMP				R315	1-249-417-11	CARBON 1K 5%	1/6W
NL501	1-519-237-11	LAMP, NEON		R316	1-249-411-11	CARBON 330 5%	1/6W
MODULE				R318	1-249-417-11	CARBON 1K 5%	1/6W
PM501	1-235-962-11	PROTECTOR MODULE (PM-8)		R319	1-249-417-11	CARBON 1K 5%	1/6W
TRANSISTOR				R320	1-249-417-11	CARBON 1K 5%	1/6W
Q201	8-729-178-54	TRANSISTOR 2SC2785		R323	1-249-427-11	CARBON 6.8K 5%	1/6W
Q301	8-729-178-54	TRANSISTOR 2SC2785		R328	1-249-414-11	CARBON 560 5%	1/6W
Q302	8-729-178-54	TRANSISTOR 2SC2785		R329	1-249-441-11	CARBON 100K 5%	1/6W
Q303	8-729-178-54	TRANSISTOR 2SC2785		R330	1-247-849-00	CARBON 5.6K 5%	1/6W
Q304	8-729-178-54	TRANSISTOR 2SC2785		R333	1-249-417-11	CARBON 1K 5%	1/6W
Q305	8-729-117-54	TRANSISTOR 2SA1175		R334	1-249-413-11	CARBON 470 5%	1/6W
Q310	8-729-117-54	TRANSISTOR 2SA1175		R335	1-249-425-11	CARBON 4.7K 5%	1/6W
Q311	8-729-178-54	TRANSISTOR 2SC2785		R336	1-249-425-11	CARBON 4.7K 5%	1/6W
Q354	8-729-117-54	TRANSISTOR 2SA1175		R340	1-249-430-11	CARBON 12K 5%	1/6W
Q371	8-729-178-54	TRANSISTOR 2SC2785		R341	1-247-717-11	CARBON 2.2K 5%	1/4W
Q398	8-729-178-54	TRANSISTOR 2SC2785		R350	1-249-437-11	CARBON 47K 5%	1/6W
Q501	8-729-107-26	TRANSISTOR 2SD1585-K		R352	1-215-491-00	CARBON 820K 5%	1/6W
Q502	8-729-117-54	TRANSISTOR 2SA1175		R353	1-249-429-11	CARBON 10K 5%	1/6W
Q550	8-729-168-82	TRANSISTOR 2SC2688		R359	1-249-431-11	CARBON 15K 5%	1/6W
Q551	8-729-203-80	TRANSISTOR 2SD1555-LB-S1		R361	1-249-429-11	CARBON 10K 5%	1/6W
Q599	8-729-177-43	TRANSISTOR 2SD774		R362	1-216-449-11	METAL OXIDE 56 5%	2W F
Q601	8-729-255-12	TRANSISTOR 2SC2551		R366	1-249-430-11	CARBON 12K 5%	1/6W
Q602	8-729-255-12	TRANSISTOR 2SC2551		R367	1-249-436-11	CARBON 39K 5%	1/6W
Q603	8-729-178-54	TRANSISTOR 2SC2785		R368	1-249-417-11	CARBON 1K 5%	1/6W
Q604	8-729-178-54	TRANSISTOR 2SC2785		R369	1-247-713-11	CARBON 1K 5%	1/4W
Q605	8-729-178-54	TRANSISTOR 2SC2785		R371	1-249-417-11	CARBON 1K 5%	1/6W
Q606	8-729-117-54	TRANSISTOR 2SA1175		R375	1-249-434-11	CARBON 27K 5%	1/6W
				R378	1-215-920-11	METAL OXIDE 3.3K 5%	3W F
				R379	1-215-920-11	METAL OXIDE 3.3K 5%	3W F
				R380	1-249-419-11	CARBON 1.5K 5%	1/6W F
				R381	1-249-419-11	CARBON 1.5K 5%	1/6W F

- The components identified by  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

A

Ref.No.	Part No.	Description				Remark	Ref.No.	Part No.	Description				Remark
R382	1-202-80-00	SOLID	10K		1/2W		R558	1-249-410-11	CARBON	270	5%	1/6W	
R387	1-247-714-11	CARBON	1.2K	5%	1/4W		R559	1-249-415-11	CARBON	680	5%	1/6W	
R388	1-249-405-11	CARBON	100	5%	1/6W		R560	1-247-719-11	CARBON	3.3K	5%	1/4W	
R389	1-249-419-11	CARBON	1.5K	5%	1/6W		R563	1-246-511-00	CARBON	39K	5%	1/4W	
R390	1-249-417-11	CARBON	1K	5%	1/6W		R565	1-249-441-11	CARBON	100K	5%	1/6W	
R391	1-249-427-11	CARBON	6.8K	5%	1/6W		R566	1-246-535-00	CARBON	390K	5%	1/4W	
R392	1-249-437-11	CARBON	47K	5%	1/6W		R567	△ 1-216-353-51	METAL OXIDE	212	5%	1W	F
R393	1-249-425-11	CARBON	4.7K	5%	1/6W		R570	1-216-431-11	METAL OXIDE	560	5%	1W	F
R394	1-249-399-11	CARBON	33	5%	1/6W		R572	1-249-423-11	CARBON	3.3K	5%	1/6W	
R395	1-249-433-11	CARBON	22K	5%	1/6W		R573	1-247-764-11	CARBON	10K	5%	1/2W	F
R396	1-249-435-11	CARBON	33K	5%	1/6W		R574	1-216-345-11	METAL OXIDE	0.47	5%	1W	F
R397	1-249-434-11	CARBON	27K	5%	1/6W		R577	1-216-451-11	METAL OXIDE	120	5%	2W	F
R398	1-249-423-11	CARBON	3.3K	5%	1/6W		R579	△ 1-249-415-51	CARBON	680	5%	1/6W	F
R501	1-215-920-11	METAL OXIDE	3.3K	5%	3W	F	R580	1-216-428-00	METAL OXIDE	180	5%	1W	F
R502	1-216-484-00	METAL OXIDE	3.9K	5%	3W	F	R581	1-247-708-11	CARBON	470	5%	1/4W	F
R503	1-249-408-11	CARBON	180	5%	1/6W		R582	1-215-863-11	METAL OXIDE	100	5%	1W	F
R504	1-249-411-11	CARBON	330	5%	1/6W		R583	1-215-863-11	METAL OXIDE	100	5%	1W	F
R505	1-214-780-00	METAL	130K	1%	1/4W		R586	1-247-746-11	CARBON	390	5%	1/2W	
R506	1-247-702-11	CARBON	150	5%	1/4W		R587	△ 1-215-899-51	METAL OXIDE	15K	5%	2W	F
R507	1-247-849-00	CARBON	5.6K	5%	1/6W		R589	1-249-441-11	CARBON	100K	5%	1/6W	
R508	1-249-465-11	CARBON	47K	5%	1/4W		R590	1-216-445-11	METAL OXIDE	12	5%	2W	F
R509	1-246-507-00	CARBON	27K	5%	1/4W		R591	1-216-345-11	METAL OXIDE	0.47	5%	1W	F
R510	1-249-422-11	CARBON	2.7K	5%	1/6W		R598	1-249-389-11	CARBON	4.7	5%	1/6W	F
R511	1-202-727-00	SOLID	4.7M	10%	1/2W		R599	1-249-419-11	CARBON	1.5K	5%	1/6W	
R512	1-249-411-11	CARBON	330	5%	1/6W		R601	1-202-719-00	SOLID	1M	10%	1/2W	
R513	1-215-472-00	METAL	130K	1%	1/6W		R602	△ 1-205-792-11	CEMENTED	1.8	5%	10W	
R514	1-214-765-00	METAL	33K	1%	1/4W		R603	1-249-429-11	CARBON	10K	5%	1/6W	
R515	1-249-427-11	CARBON	6.8K	5%	1/6W		R605	△ 1-205-700-11	CEMENTED	200	5%	20W	F
R516	1-249-428-11	CARBON	8.2K	5%	1/6W		R606	1-247-721-11	CARBON	4.7K	5%	1/4W	
R517	1-247-713-11	CARBON	1K	5%	1/4W		R607	1-247-704-11	CARBON	220	5%	1/4W	
R519	1-249-424-11	CARBON	3.9K	5%	1/6W		R610	1-207-636-00	WIREWOUND	100	10%	2W	F
R521	1-247-887-00	CARBON	220K	5%	1/6W		R611	1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R523	1-247-713-11	CARBON	1K	5%	1/4W		R612	1-205-746-11	CEMENTED	6.8K	5%	15W	
R524	1-249-417-11	CARBON	1K	5%	1/6W		R613	1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R525	1-249-419-11	CARBON	1.5K	5%	1/6W		R614	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R526	1-249-747-11	CARBON	1.5M	5%	1/4W		R615	1-216-463-00	METAL OXIDE	12K	5%	2W	F
R527	1-249-748-11	CARBON	1.8M	5%	1/4W		R616	1-247-719-11	CARBON	3.3K	5%	1/4W	F
R530	1-249-433-11	CARBON	22K	5%	1/6W		R617	1-249-401-11	CARBON	47	5%	1/6W	F
R535	1-249-419-11	CARBON	1.5K	5%	1/6W	F	R618	1-247-895-00	CARBON	470K	5%	1/6W	
R539	1-215-373-31	METAL	10	1%	1/6W		R619	1-205-753-11	CEMENTED	10K	5%	10W	
R540	1-247-703-11	CARBON	180	5%	1/4W		R620	1-249-417-11	CARBON	1K	5%	1/6W	
R541	1-247-723-11	CARBON	6.8K	5%	1/4W		R621	1-215-926-00	METAL OXIDE	33K	5%	3W	F
R542	1-247-719-11	CARBON	3.3K	5%	1/4W		R622	1-249-429-11	CARBON	10K	5%	1/6W	
R543	1-249-430-11	CARBON	12K	5%	1/6W		R623	1-249-411-11	CARBON	330	5%	1/6W	
R544	1-249-424-11	CARBON	3.9K	5%	1/6W		R624	1-249-429-11	CARBON	10K	5%	1/6W	
R545	1-247-714-11	CARBON	1.2K	5%	1/4W		R625	1-249-425-11	CARBON	4.7K	5%	1/6W	
R549	1-249-415-11	CARBON	680	5%	1/6W	F	R626	1-249-425-11	CARBON	4.7K	5%	1/6W	
R550	1-249-429-11	CARBON	10K	5%	1/6W		R627	1-249-437-11	CARBON	47K	5%	1/6W	
R551	1-249-462-11	CARBON	22K	5%	1/4W		R628	1-249-465-11	CARBON	47K	5%	1/4W	
R553	1-249-413-11	CARBON	470	5%	1/6W		R629	1-249-441-11	CARBON	100K	5%	1/6W	
R554	1-249-427-11	CARBON	6.8K	5%	1/6W		R630	1-249-441-11	CARBON	100K	5%	1/6W	
R555	1-249-413-11	CARBON	470	5%	1/6W		R632	1-249-429-11	CARBON	10K	5%	1/6W	
R556	1-216-352-11	METAL OXIDE	1.8	5%	1W	F	R634	1-249-429-11	CARBON	10K	5%	1/6W	

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.





U

Ref.No.	Part No.	Description	Remark
U3	*1-566-054-11	PIN, CONNECTOR 2P	

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MISCELLANEOUS  
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	△ 1-230-786-12	RESISTER ASSY, HIGH-VOLTAGE	
	△ 1-451-268-21	DEFLECTION YOKE (SY-153C)	
	1-452-032-00	MAGNET, DISK; 10MM $\phi$	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\phi$	
	1-452-277-00	MAGNET, BMC	
	△ 1-559-008-11	CORD, POWER (WITH CONNECTOR)	
L901	△ 1-426-227-23	COIL, DEMAGNETIZATION	
SP901	1-503-749-11	SPEAKER	
T504	△ 1-439-415-11	TRANSFORMER ASSY, FLYBACK	
V901	△ 8-738-752-05	PICTURE TUBE (A51JUH50X)	

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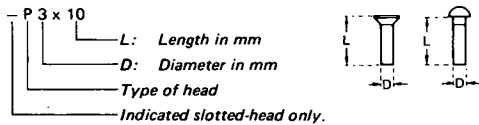
ACCESSORIES AND PACKING MATERIALS  
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Part No.	Description	Remark
*4-341-771-01	CUSHION (UPPER) (ASSY)	
*4-341-772-01	CUSHION (LOWER) (ASSY)	
*4-377-015-01	BAG, PROTECTION	
4-482-414-21	MANUAL, INSTRUCTION	
*4-385-724-01	INDIVIDUAL CARTON	
4-491-213-22	INSTRUCTION	

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

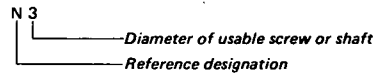
## HARDWARE NOMENCLATURE

Screw:



Unless otherwise indicated, it means cross-recessed head (Phillips type).

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
<b>SCREWS</b>			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
<b>SELF-TAPPING SCREWS</b>			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
<b>SET SCREWS</b>			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
<b>NUT</b>			
N		nut	
<b>WASHERS</b>			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
<b>RETAINING RINGS</b>			
E		retaining ring	
G		grip-type retaining ring	