

KV-1221R

RM-702

Canadian Model

Chassis No. SCC-266C-A



TRINITRON®
COLOR TV

ATTENTION !

POUR ÉLIMINER TOUT RISQUE D'ÉLECTROCUTION ET DE DESTRUCTION DES CIRCUITS ÉLECTRONIQUES, LORS DU DÉPANNAGE DE L'APPAREIL, CAPOT ARRIÈRE ÔTÉ, S'ASSURER QUE CELUI-CI EST BRANCHÉ SUR UN TRANSFORMATEUR D'ISOLATION CORRECTEMENT DIMENSIONNÉ.

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UN TRAMÉ ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DU CIRCUIT QUI SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT SONT IDENTIFIÉS DANS CE MANUEL. SUIVRE LES PROCÉDURES QUAND LES COMPOSANTS CRITIQUES SONT REMPLACÉS OU LE FONCTIONNEMENT IMPROPRE EST SUSPECTÉ.

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.

SONY®
SERVICE MANUAL

SPECIFICATIONS

Television System:	Canadian TV standards
Color System:	NTSC
Picture Tube:	30.3cm, 12" (screen measured diagonally), 90° deflection TRINITRON system
Semiconductors:	39 transistors, 3 FETs, 13 ICs and 59 diodes (including LED)
Antennas:	VHF: 75Ω unbalanced (telescopic dipole antenna*) UHF: 300Ω balanced (loop antenna*) * Note: Supplied with accessories
Channel Coverage:	VHF channels: 2-13 UHF channels: 14-83 (a total of up to 14 preselected channels)
Intermediate Frequencies:	Picture i-f carrier: 45.75MHz Color subcarrier: 42.17MHz Sound i-f carrier: 41.25MHz
Sound System:	4.5MHz intercarrier Output power: 1.5W (at 10% harmonic distortion) Speaker: 8 x 12cm (3 ¹ / ₈ x 4 ³ / ₄ inches) oval, 8Ω

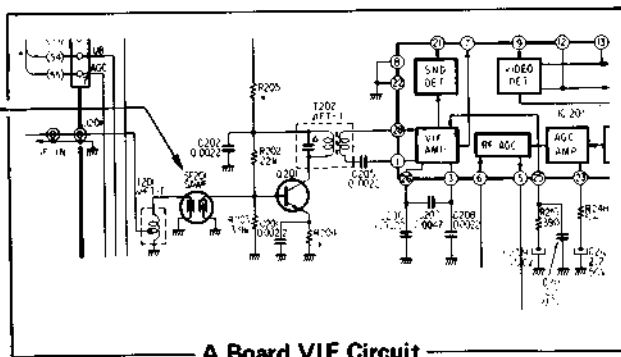
Video System:	R.G.B. cathode drive
Automatic Controls:	ABL (automatic brightness limiter) ACC (automatic color control) ACK (automatic color killer) ADG (automatic degaussing) AFC (automatic frequency control) AFT (automatic fine tuning) AGC (automatic gain control) ANC (automatic noise canceller) APC (automatic phase control) AVR (automatic voltage regulator)
Anode Voltage:	22kV at zero beam current (no adjustment)
Power Requirements:	120V ac, 60Hz
Power Consumption:	100W ac (max), 71W ac (average) 2.5W ac in standby condition
Dimensions:	Approx. 336 (w) x 397 (h) x 400 (d) mm 13 ¹ / ₄ (w) x 15 ³ / ₈ (h) x 15 ³ / ₄ (d) inches
Net Weight:	Approx. 12.5kg (27lb 8 oz)
Accessories Supplied:	Earphone (ME-20B) VHF telescopic dipole antenna (AN-16) UHF loop antenna (AN-15) Antenna connector (EAC-25) Remote commander (RM-702) Channel number segments Instruction manual

NEW DEVICE DESCRIPTION

SAWF: Surface Acoustic-Wave Filter

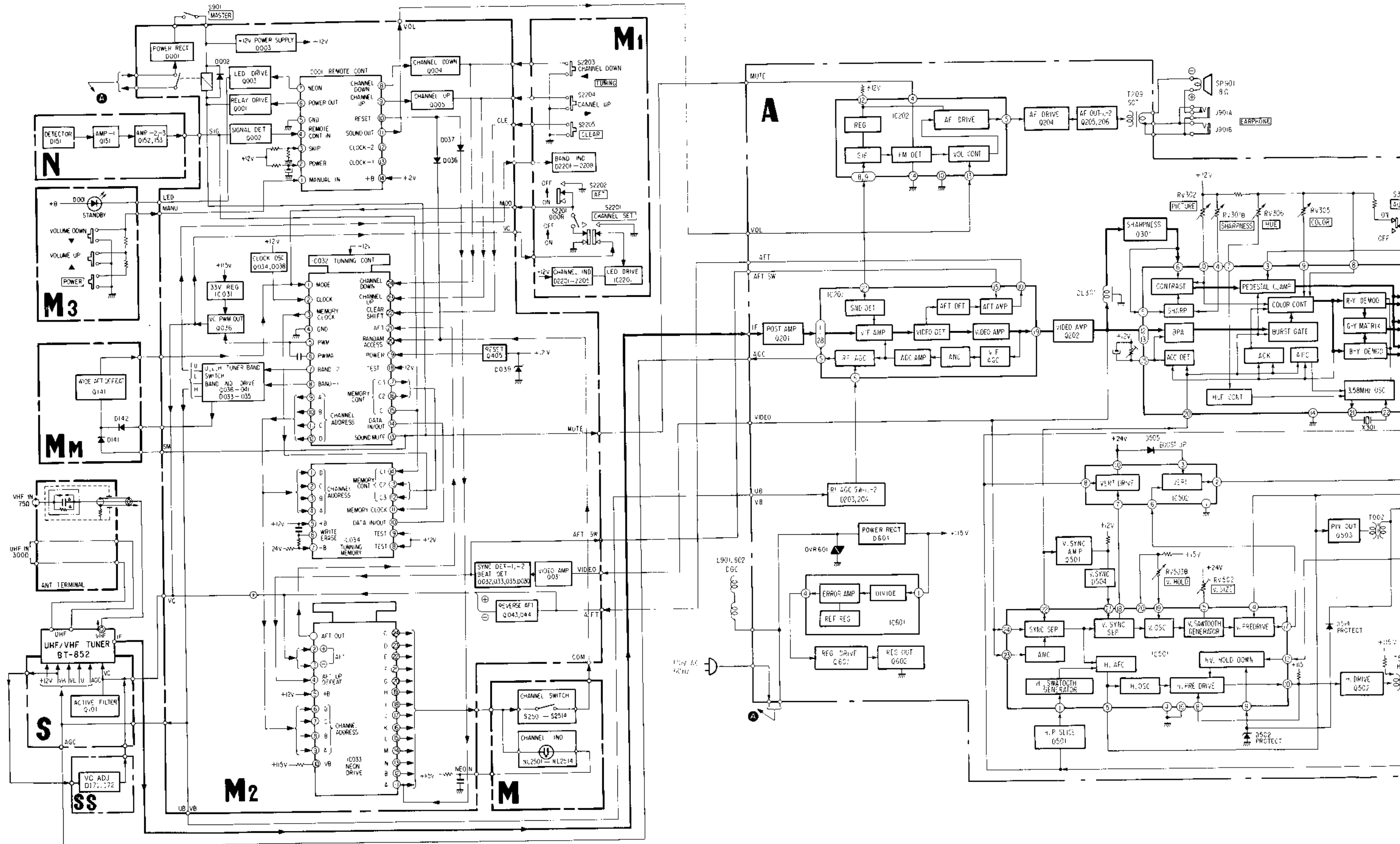
SAWF (SF201) is used for VIF filter in this set instead of L/C filters.

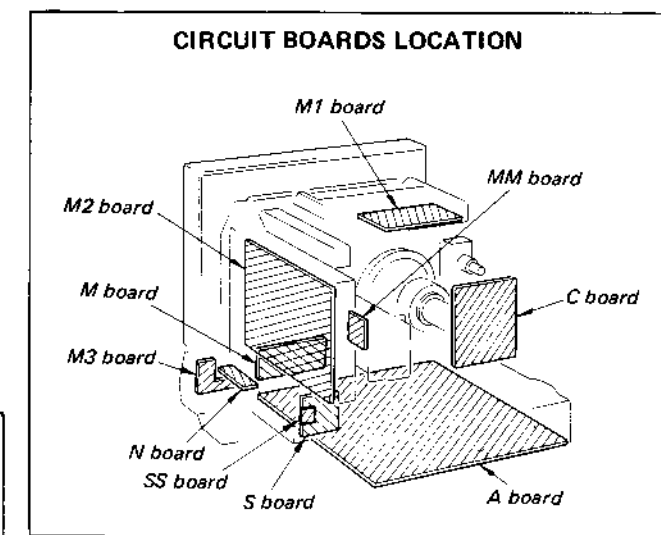
The SAWF consists of two couple of comb patterned electrodes. One is at input side, other at output side. The electrical input signal is changed to the acoustic signal at the input electrodes. The changed acoustic signal is transmitted on the surface of piezo-electrical material. Then the acoustic signal is changed to the electrical signal at the output electrodes.



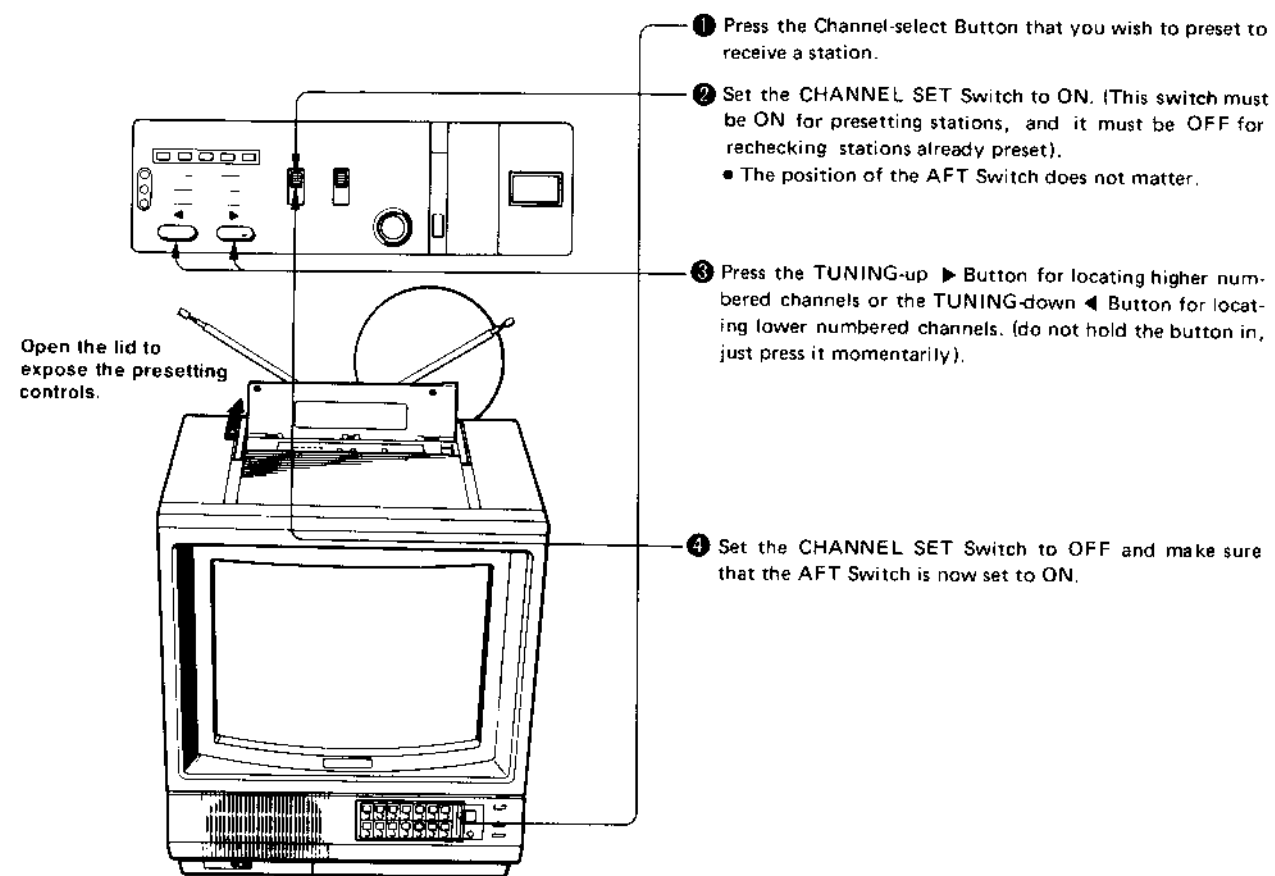
SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM



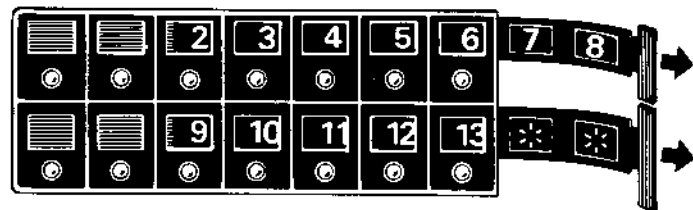


1-2. CHANNEL PRESETTING

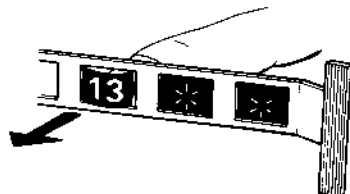


1-3. CHANNEL NUMBER SEGMENT SETTING

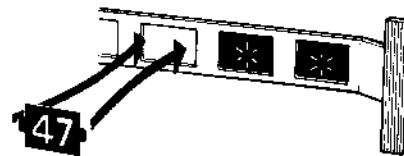
1 Remove the Channel Indicator Sheets.



2 Press the segment out from the rear.



3 Install the correct number segment.

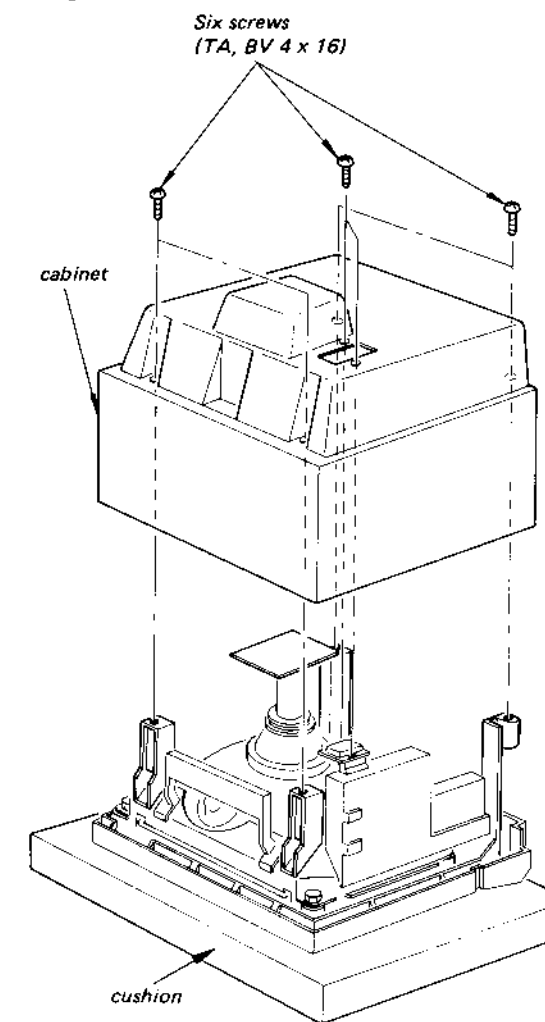


4 Replace the sheets in the original position.

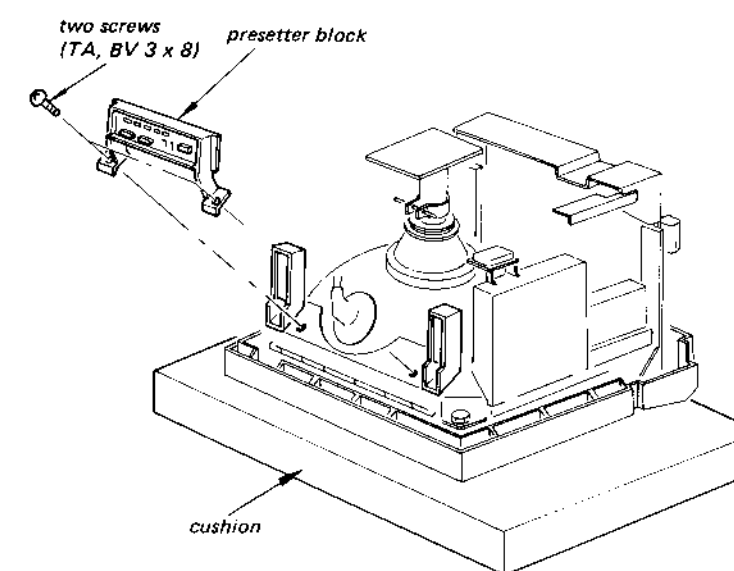
SECTION 2
DISASSEMBLY

Note: • Follow the disassembly procedure in the numerical order given.

2-1. CABINET REMOVAL



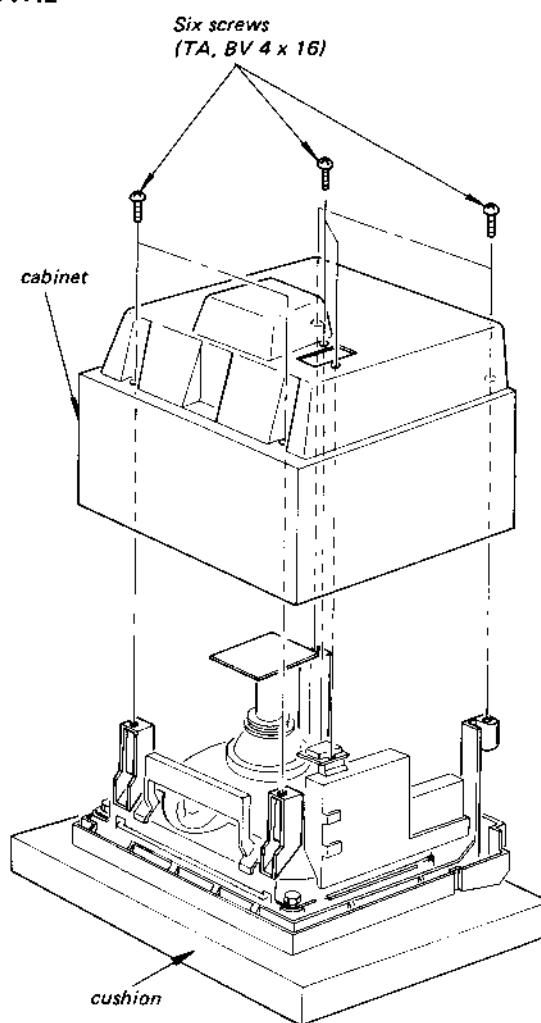
2-2. PRESET SECTION REMOVAL



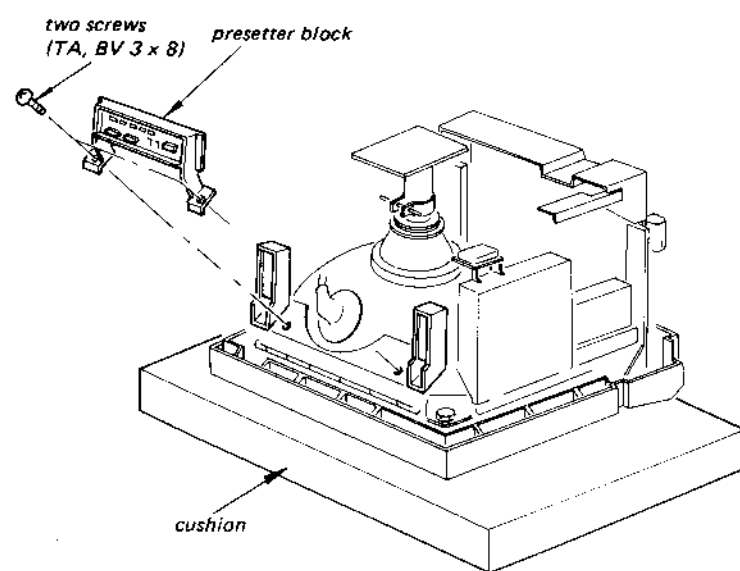
SECTION 2 DISASSEMBLY

Note: • Follow the disassembly procedure in the numerical order given.

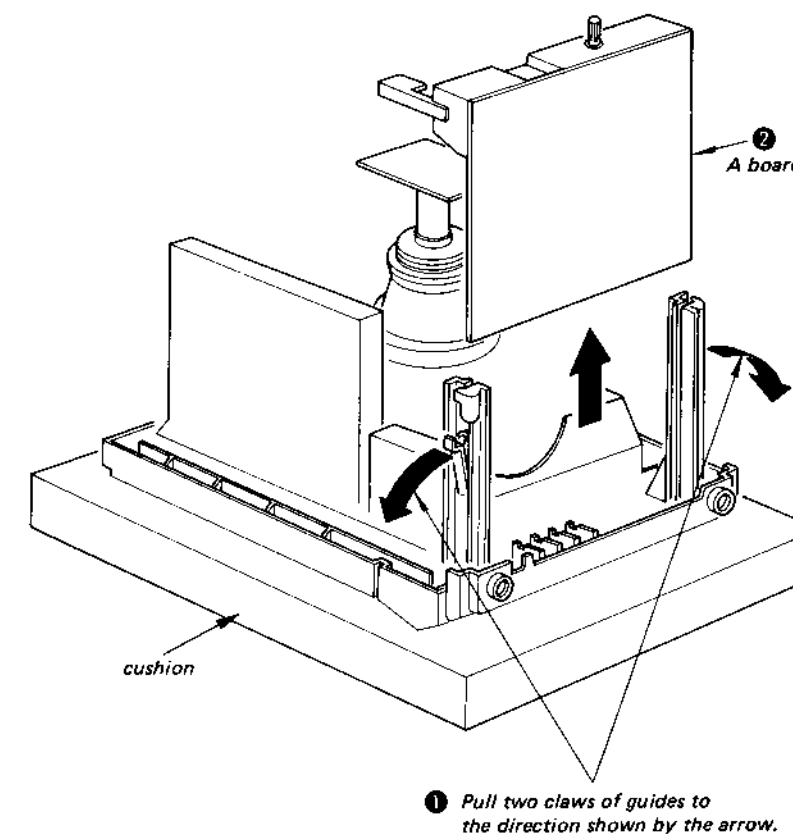
2-1. CABINET REMOVAL



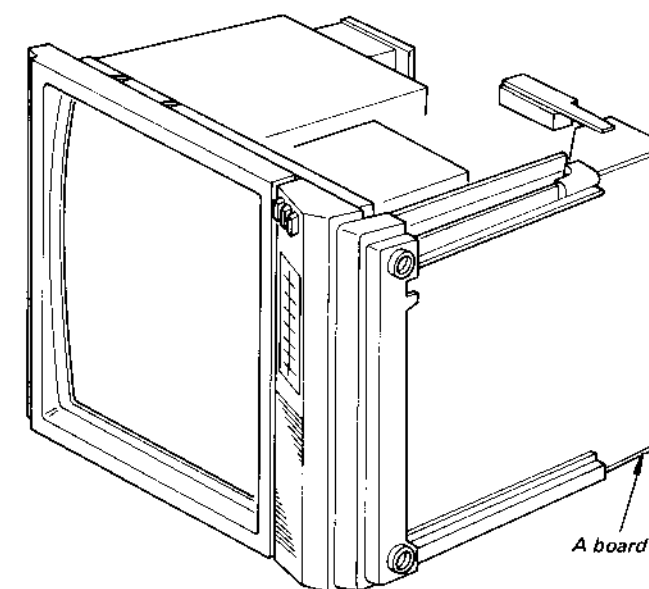
2-2. PRESET SECTION REMOVAL



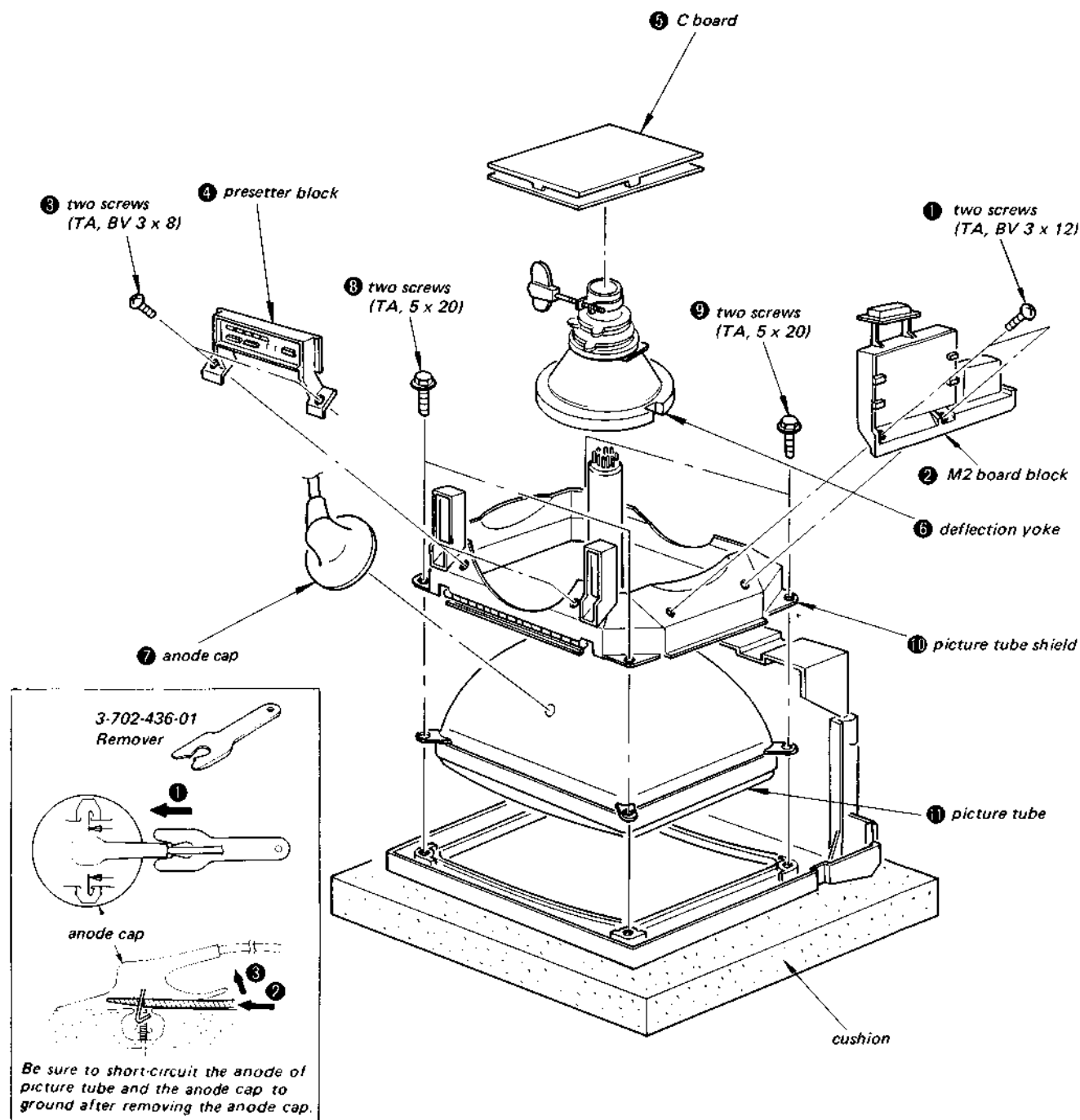
2-3. A BOARD REMOVAL



2-4. FOR CHECKING A BOARD UP



2.5. PICTURE TUBE REMOVAL



SECTION 3 SETUP 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 switches should be set as follows unless otherwise noted:

PICTURE controlmaximum
(fully clockwise)

BRIGHT controlmaximum
(fully clockwise)

AFT switch ON (close channel presetting compartment lid)

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. White Balance

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. Disconnect leads **B** and **C** on the C board.
 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.
To get a uniform green screen,
connect lead **C** on the C board and disconnect leads **R** and **B**
To get a uniform blue screen,
connect lead **B** on the C board and disconnect leads **R** and **C**
After these checks, connect the leads **R**, **C** and **B**
 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.

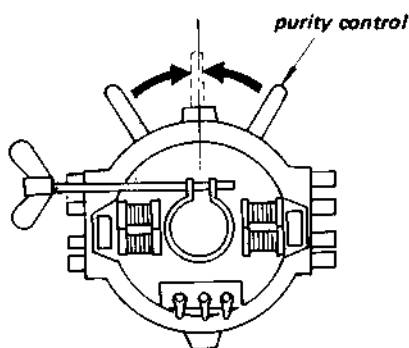


Fig. 3-1.

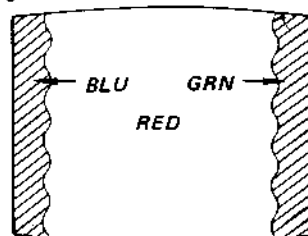
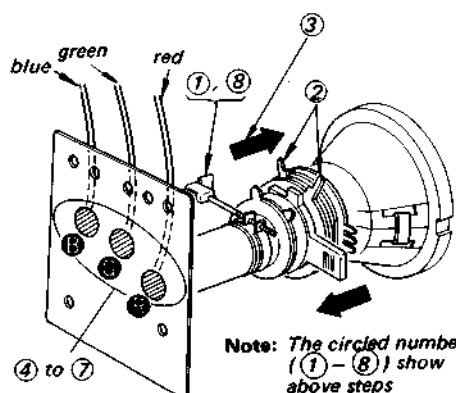


Fig. 3-2.



Note: The circled numbers (1) - (8) show above steps

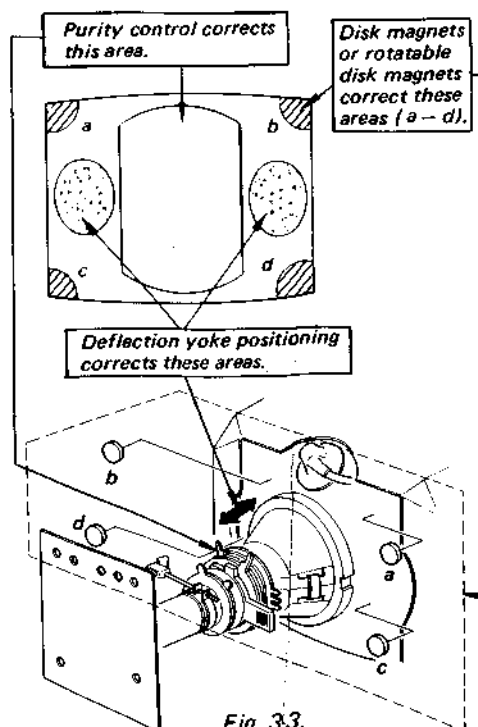


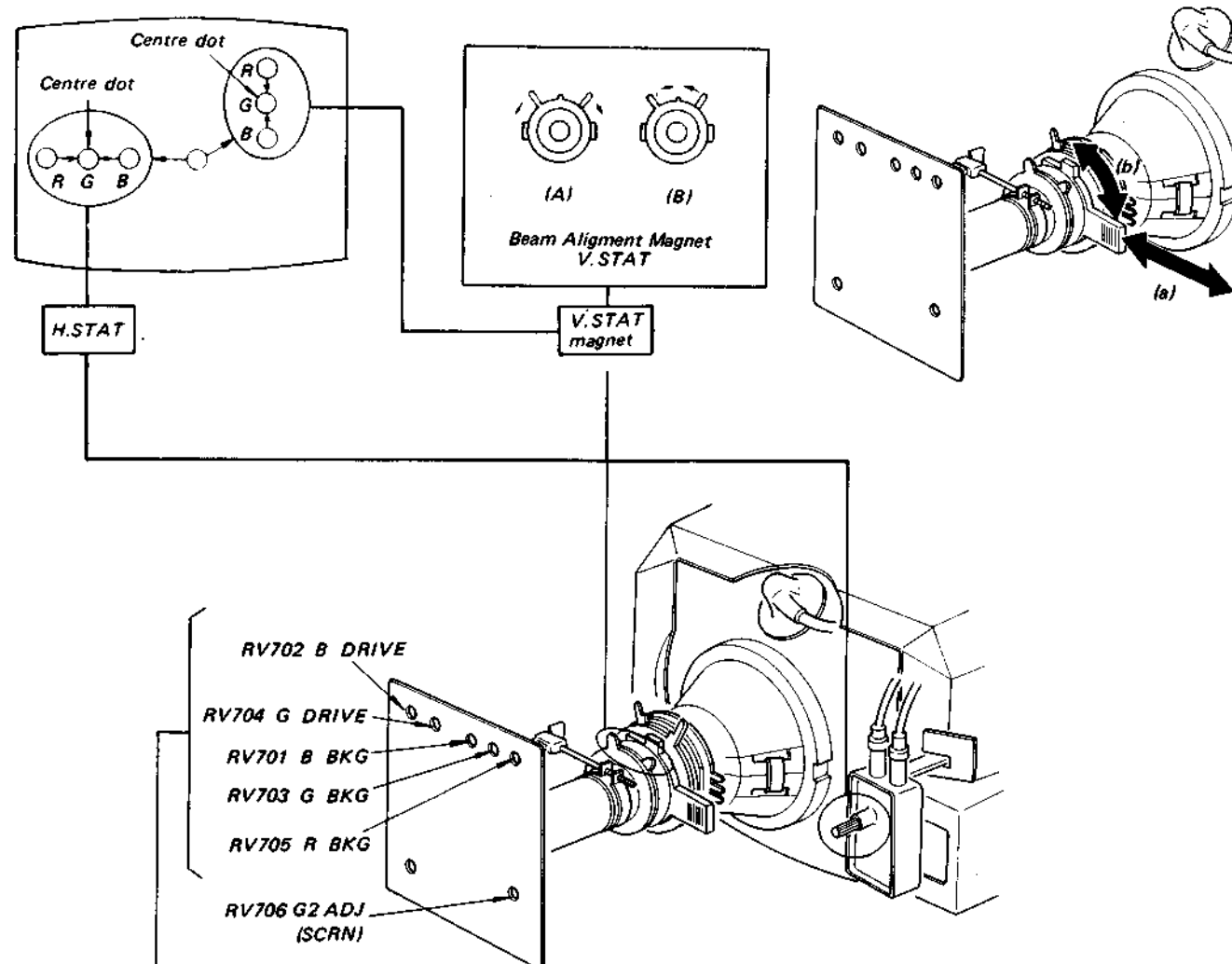
Fig. 3-3.

3-2. CONVERGENCE

Preparation:

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

(1) Horizontal and Vertical Static Convergence



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.

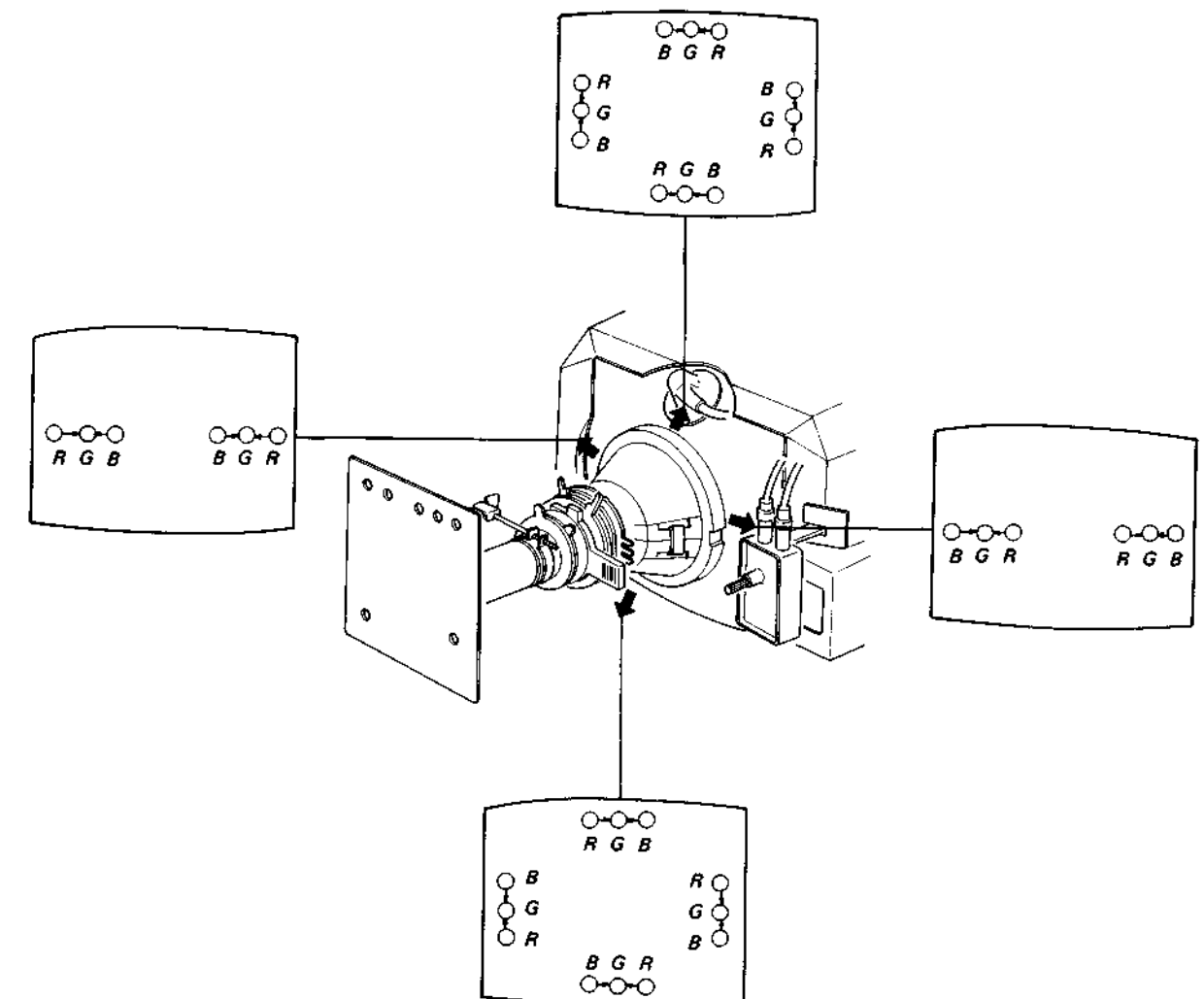
In either case, repeat Beam Landing Adjustment.

(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.



3-3. WHITE BALANCE

Feed in the cross-hatch pattern.

1. Turn PICTURE and BRIGHT controls fully counterclockwise.
2. Turn RV702 (B.DRIVE) and RV704 (G.DRIVE) fully clockwise.
3. Set RV701 (B.BKG), RV703 (G.BKG), and RV705 (R.BKG) to mechanical center.

4. Turn RV706 (SCRN) slowly to obtain a faintly visible cross-hatch. Note the color that first becomes visible by turning RV706. 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. Turn PICTURE and BRIGHT controls fully clockwise. Observe the screen and adjust the DRIVE controls for best white balance.
7. Repeat Steps 1 through 6 several times.

SECTION 4

CIRCUIT ADJUSTMENTS

Note: (1) TEST EQUIPMENT REQUIRED

1. Oscilloscope
2. Digital multimeter
3. Color-bar/pattern generator
4. Variable auto-transformer
5. Isolation transformer
6. Regulated-dc power supply

(2) INPUT SIGNAL

When making these adjustments, supply a color-bar or an off-air signal.

(3) CONTROL SETTINGS

Controls and switches should be set as follows when making checks and adjustments unless otherwise noted.

PICTURE control	}	Set for best picture
BRIGHT control		
COLOR control		
V.HOLD control		Set for stable picture
AFT switch.		ON (close channel presetting compartment lid)

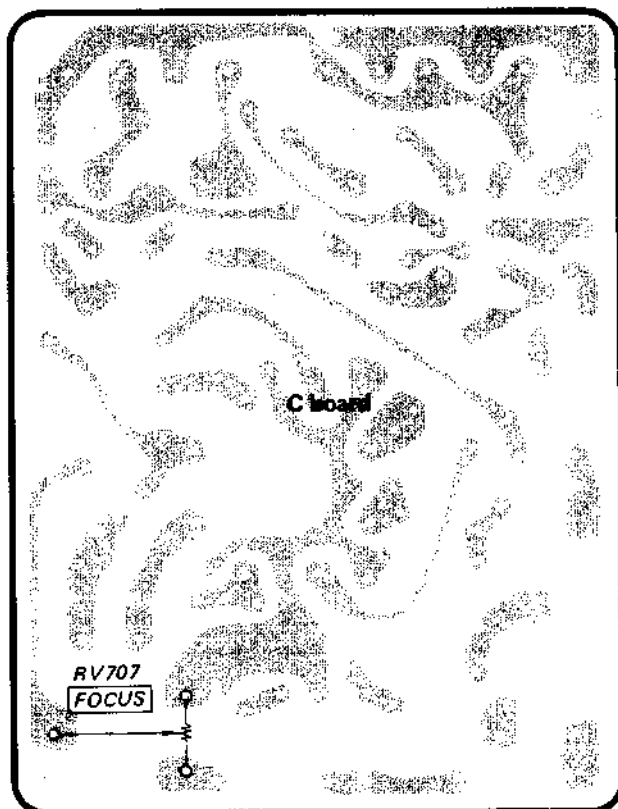
- (4) These adjustments should be performed with the rated power supply voltage unless otherwise noted.

(5) CIRCUIT ADJUSTMENTS

Adjustment	Circuit Board	Page
FOCUS	C	14
VC ADJ	SS	14
R563 adjustment	A	15 – 17
COLOR SYNC		
H. FREQ		
PIN AMP		
SUB BRT		
ACC		
SIF		
SUB CONTRAST		
RF AGC		
CHECK AFTER IC601 REPLACED		
FREQ ADJ	M ₂	18, 19
CLOCK ADJ		

4-1. C BOARD ADJUSTMENT

FOCUS Adjust RV707 for best focus.



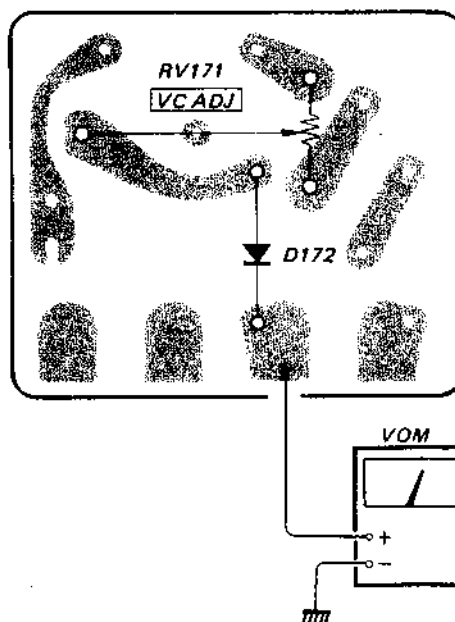
4-2. SS BOARD ADJUSTMENT

VC ADJ

1. Turn RV171 for a minimum reading on VOM.
2. Slide the CHANNEL SET switch to ON and press the CLEAR and the TUNING ► buttons.
3. Slide the CHANNEL SET switch to OFF just when the yellow band indicator lamp lights.
4. Feed in the TV signal ($f_v = 169.25\text{MHz}$).
5. Adjust RV171 for a best tuning position.
6. Feed in an off-air signal and confirm that the channel-7 is properly received.

Simple Method:

1. Turn RV171 for a minimum reading on VOM.
2. Feed in an off-air signal and receive the channel-7.
3. Note the voltage to subtract 1.5V from the VOM reading.
4. Slide the CHANNEL SET switch to ON and press the CLEAR button.
5. Press the TUNING ► button several times, until the yellow band indicator lamp lights. Slide the CHANNEL SET switch to OFF just when the yellow lamp lights.
6. Adjust RV171 for the noted voltage at step 3 on VOM.
7. Confirm that the channel-7 is properly received.



4-3. A BOARD ADJUSTMENTS

R563 Adjustment

When replacing the following components, make this adjustment.
D502, C505, IC501, R508, R528, R529, R563

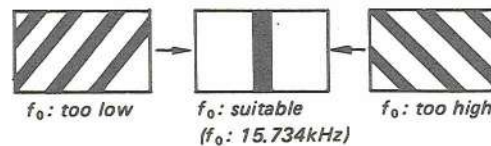
1. Supply the 18.2 to 18.4 V dc to TP85 with the regulated-dc power supply and confirm that the HV hold down circuit operates. (When the HV hold down circuit operates, raster disappears.)

Note: As soon as the HV hold down circuit operates, turn the POWER switch OFF.

2. Supply the 119 to 121 V dc to TP91 (115V line) with the regulated-dc power supply and confirm that the set is normally operated on any of all channels. (The HV hold down circuit does not operate.)
3. When the set is normally operated with 120 V ac, confirm that the voltage at TP85 is 13.5 to 16.5 V dc.
4. If steps 1 to 3 are not satisfied, select the resistance value of R563 and repeat above steps.

H. FREQ

1. Tune in an off-air signal.
2. Adjust PICTURE, BRIGHT and V. HOLD control for the suitable and stable picture.
3. Short-circuit between the pins 24 of IC501 and ground with a jumper during this adjustment.
4. Adjust RV501 for the stable picture as shown.



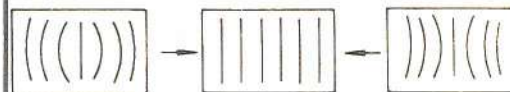
5. Confirm that the stable picture is obtained on other channels.

COLOR SYNC

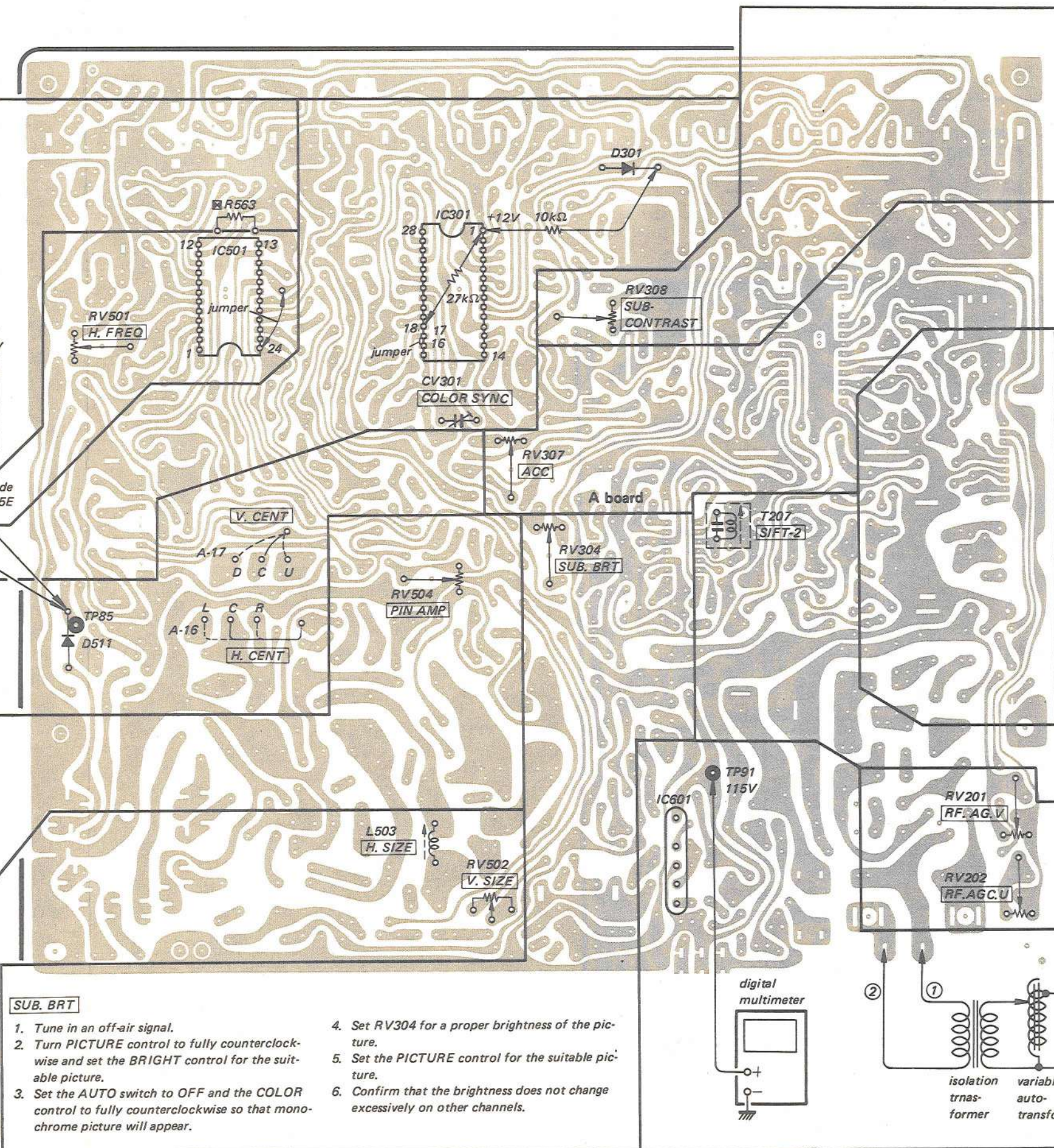
1. Feed in a color-bar signal from color-bar/pattern generator.
2. Set the switch and controls as shown below.
AUTO switch ON
BRIGHT control } mechanical center
COLOR control } fully clockwise
PICTURE control fully clockwise
3. Connect a resistor (27k Ω) between the pins 18 and 1 of IC301.
4. Connect a resistor (10k Ω) between D301 cathode and pin 1 of IC301.
5. Short-circuit between the pins 16 and 17 of IC301 with a jumper.
6. Adjust CV301 to obtain the stable color picture.
7. Disconnect the 27k Ω resistor, 10k Ω resistor and the jumper.

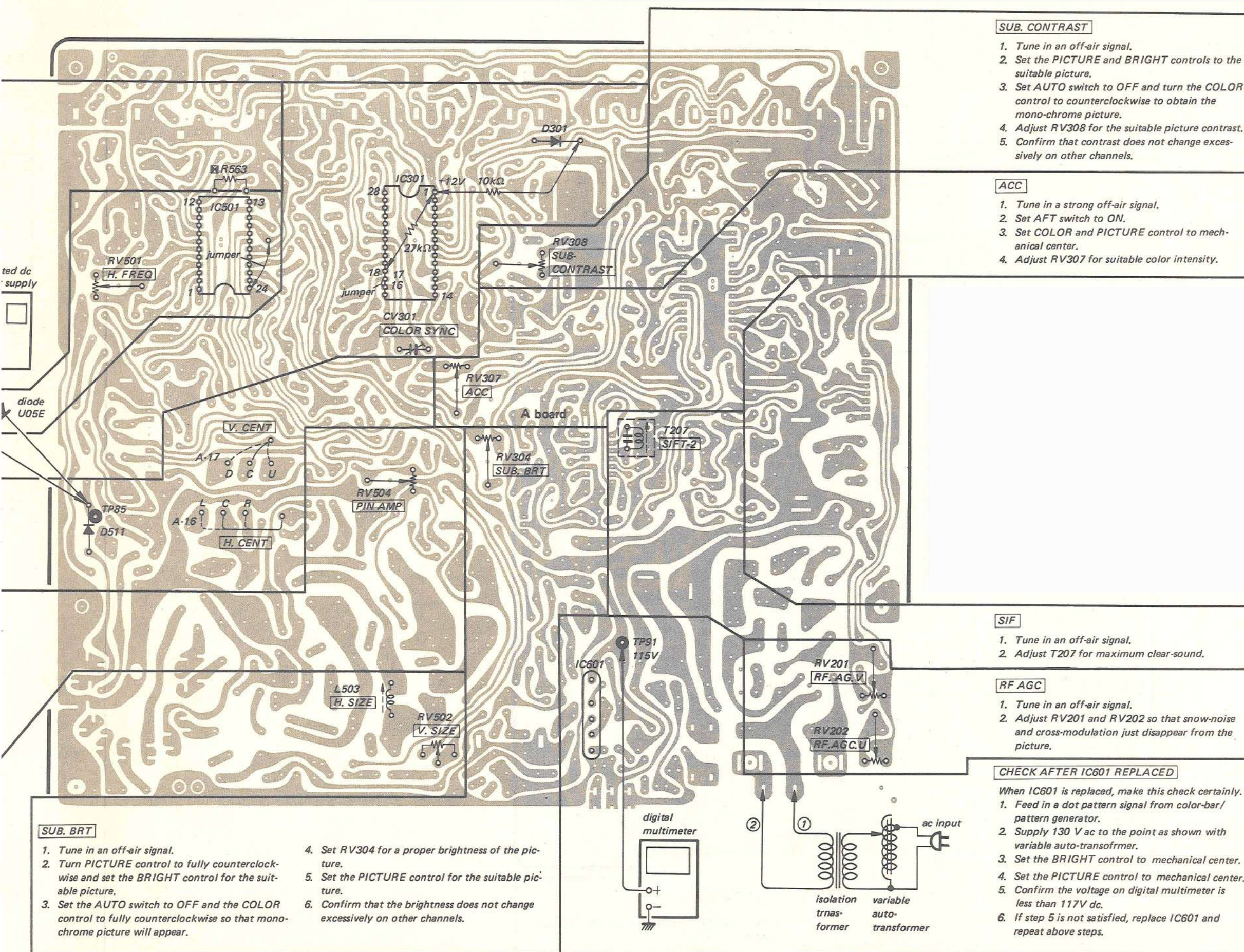
PIN AMP

Adjust RV504 to make vertical lines straight as shown below.

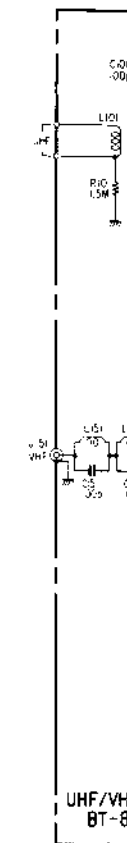
**SUB. BRT**

1. Tune in an off-air signal.
2. Turn PICTURE control to fully counterclockwise and set the BRIGHT control for the suitable picture.
3. Set the AUTO switch to OFF and the COLOR control to fully counterclockwise so that monochrome picture will appear.
4. Set RV304 for a proper brightness of the picture.
5. Set the PICTURE control for the suitable picture.
6. Confirm that the brightness does not change excessively on other channels.



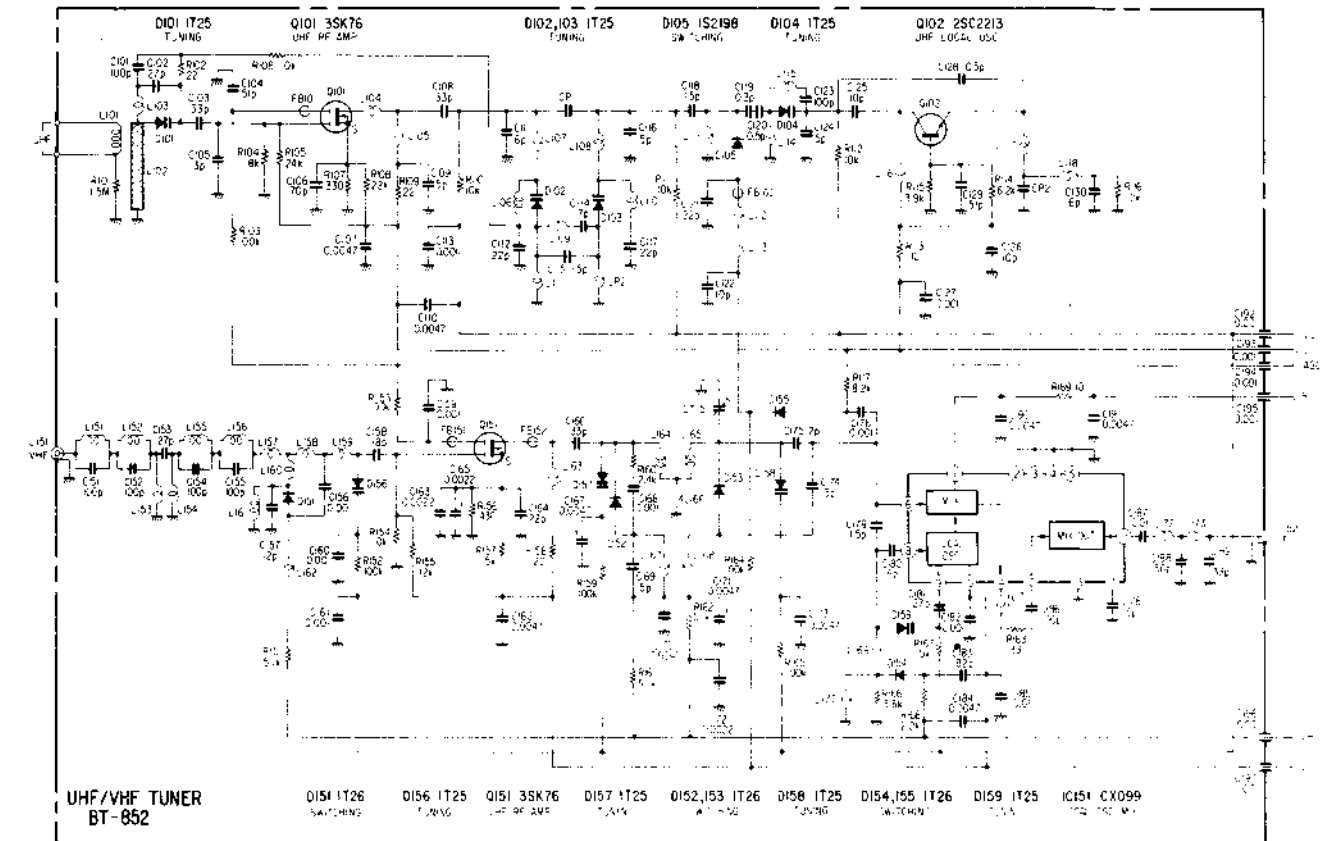
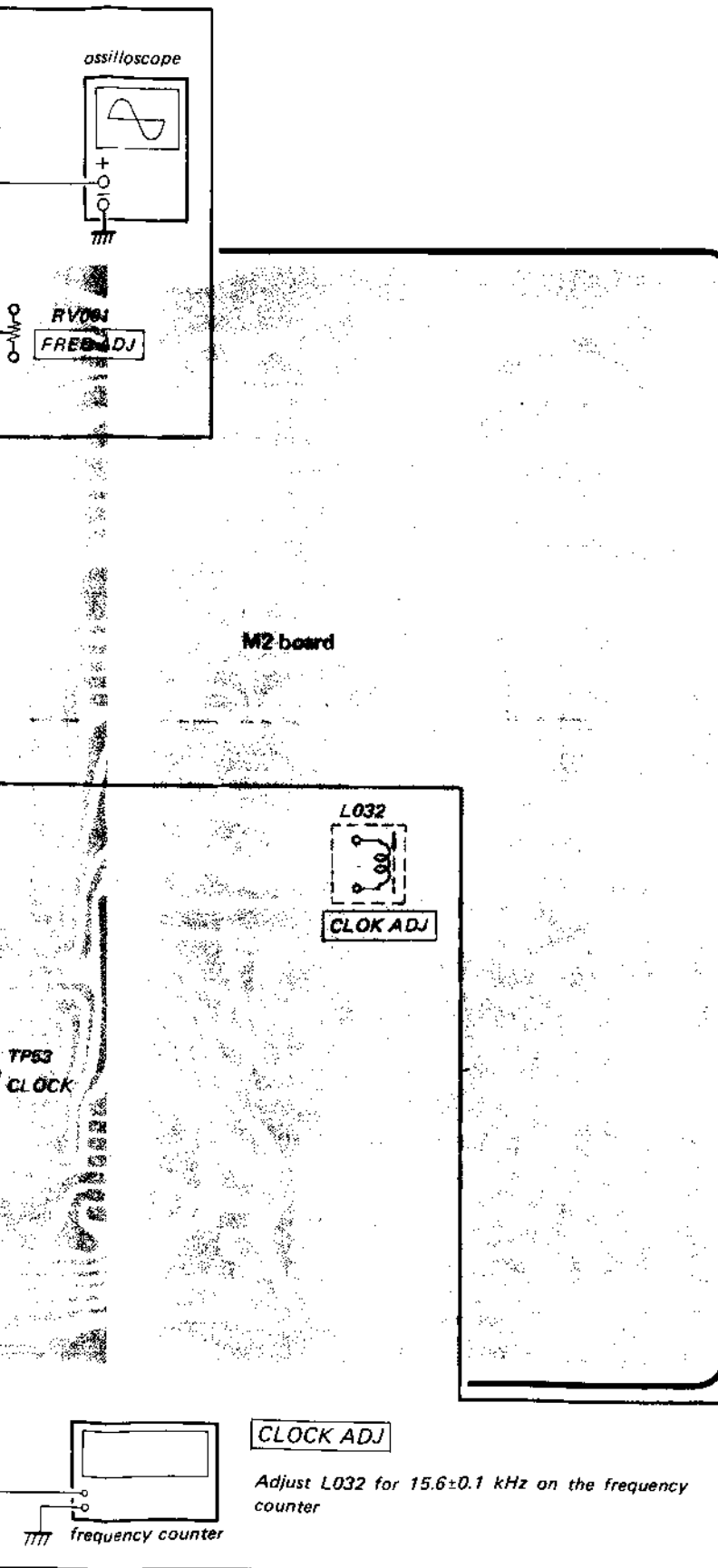


5-1.



SECTION 5 DIAGRAMS

5-1. UHF/VHF TUNER SCHEMATIC DIAGRAM



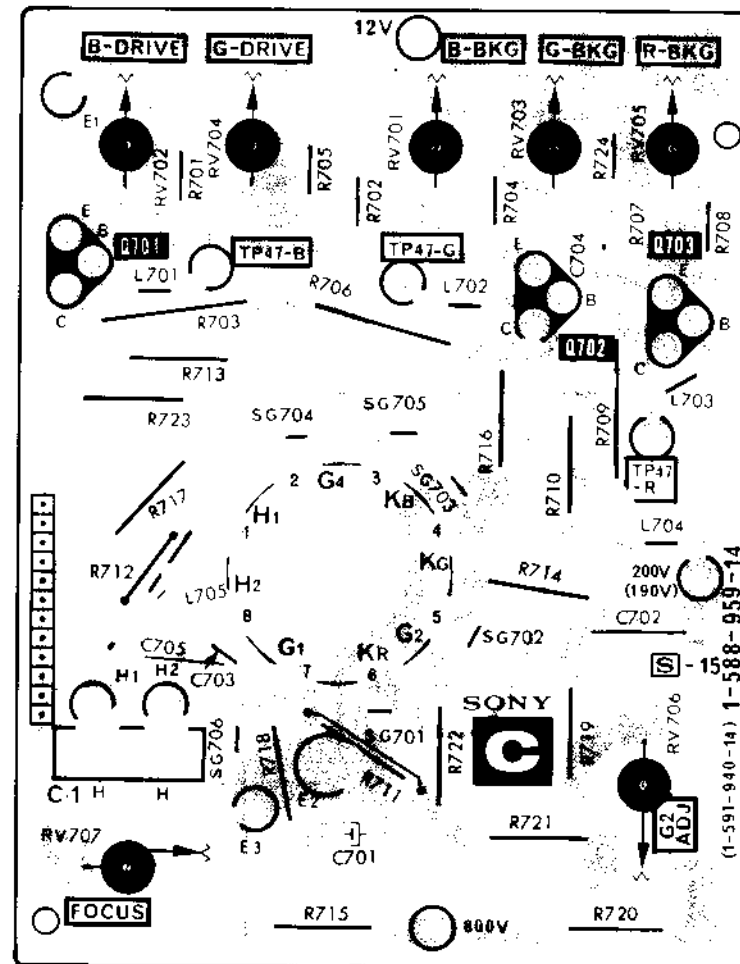
• Tuner reference numbers are not included in the Electrical Parts List.

5.2. MOUNTING DIAGRAM — Conductor Side —

[R, G, B OUT]

C

— C Board —



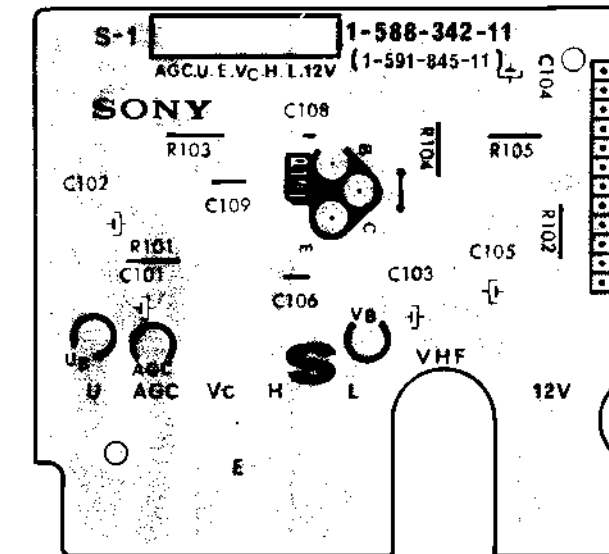
S

[TUNER, ACTIVE FILTER]

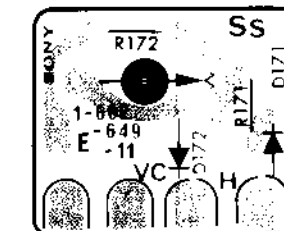
SS

[VC ADJ]

— S Board —



— SS Board —



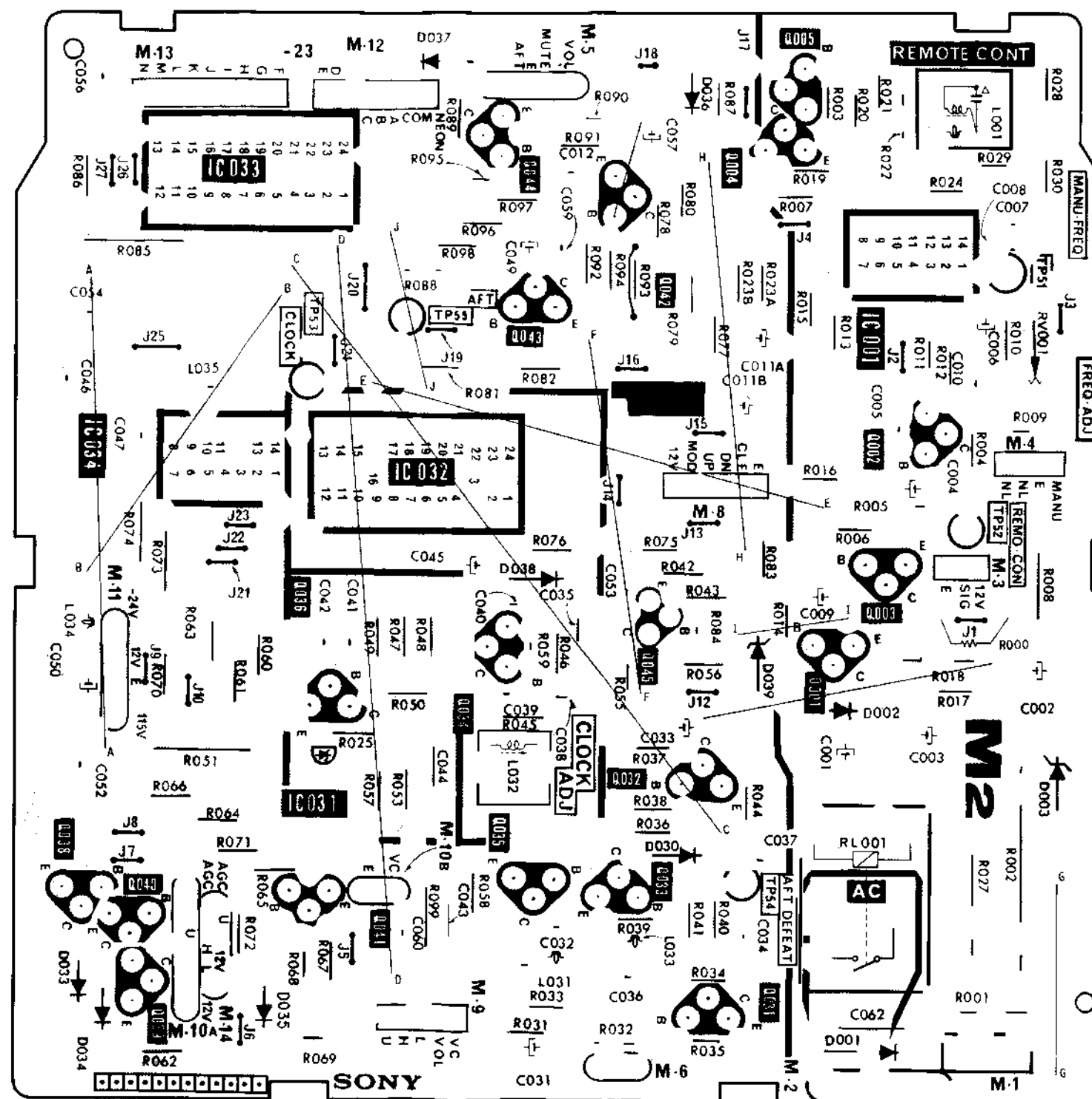
M2

M2

BAND SWITCH, TUNING MEMORY
REMOTE CONT, NEON DRIVE,
TUNING CONT

- M2 Board -

Q, IC	D	ADJ
005	037	
044, 004	036	
IC033		
042		
IC001		
043		
		RV001
002		
IC034		
IC032		
003	038	
045		
034 001	039	
036	002	
032	003	L032
IC031		
038, 041, 035	030	
040 033		
039	033	
031	034	
	035	
	001	
Q, IC	D	ADJ



[CHANNEL PRESET]

M1

[CHANNEL SELECT,
INDICATOR LAMP]

M

[SWITCH]

M3

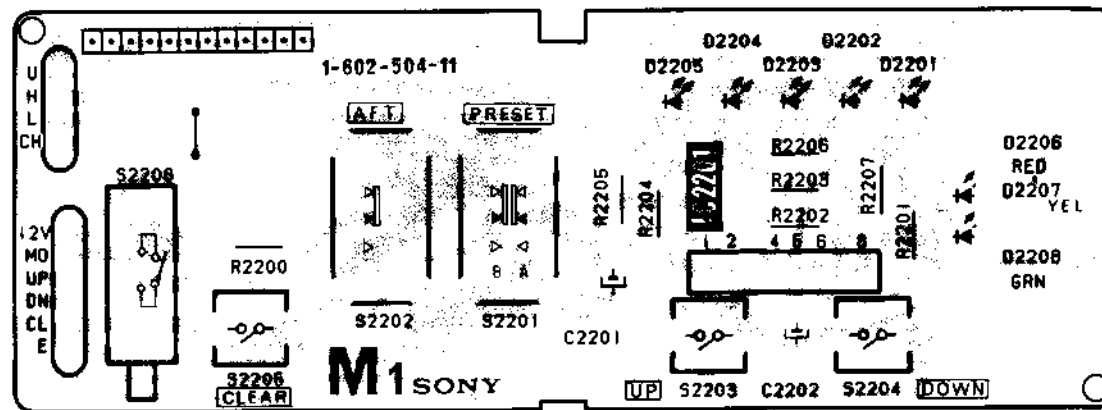
MM

[WIDE AFT DEFEAT]

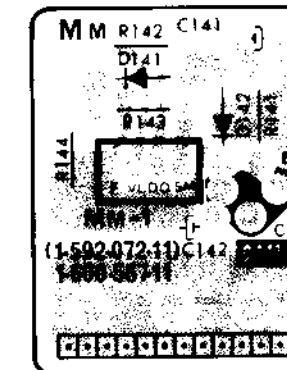
N

[DETECTOR, INF AMP]

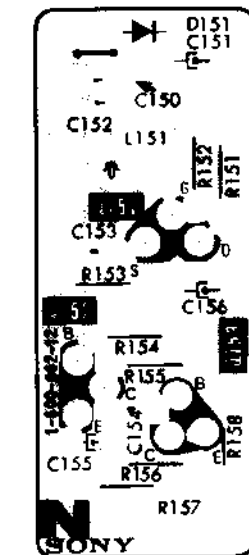
– M1 Board –



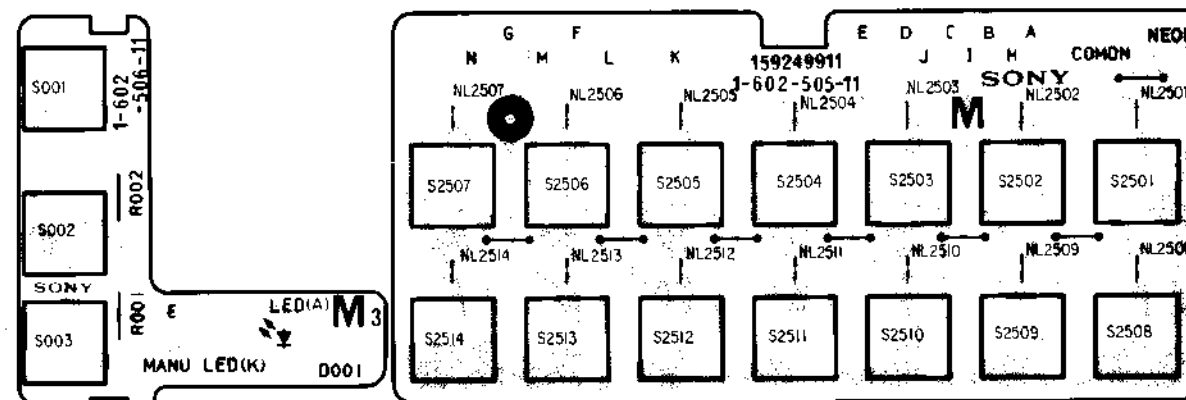
— M M Boards —



– N Board –



— M and M3 Board —



A

A

VIF, SIF, CHROMA, Y. AMP, H. DEF,
V. DEF, AF. OUT, CUSTOMER CONTROL,
POWER SUPPLY

A

B

C

D

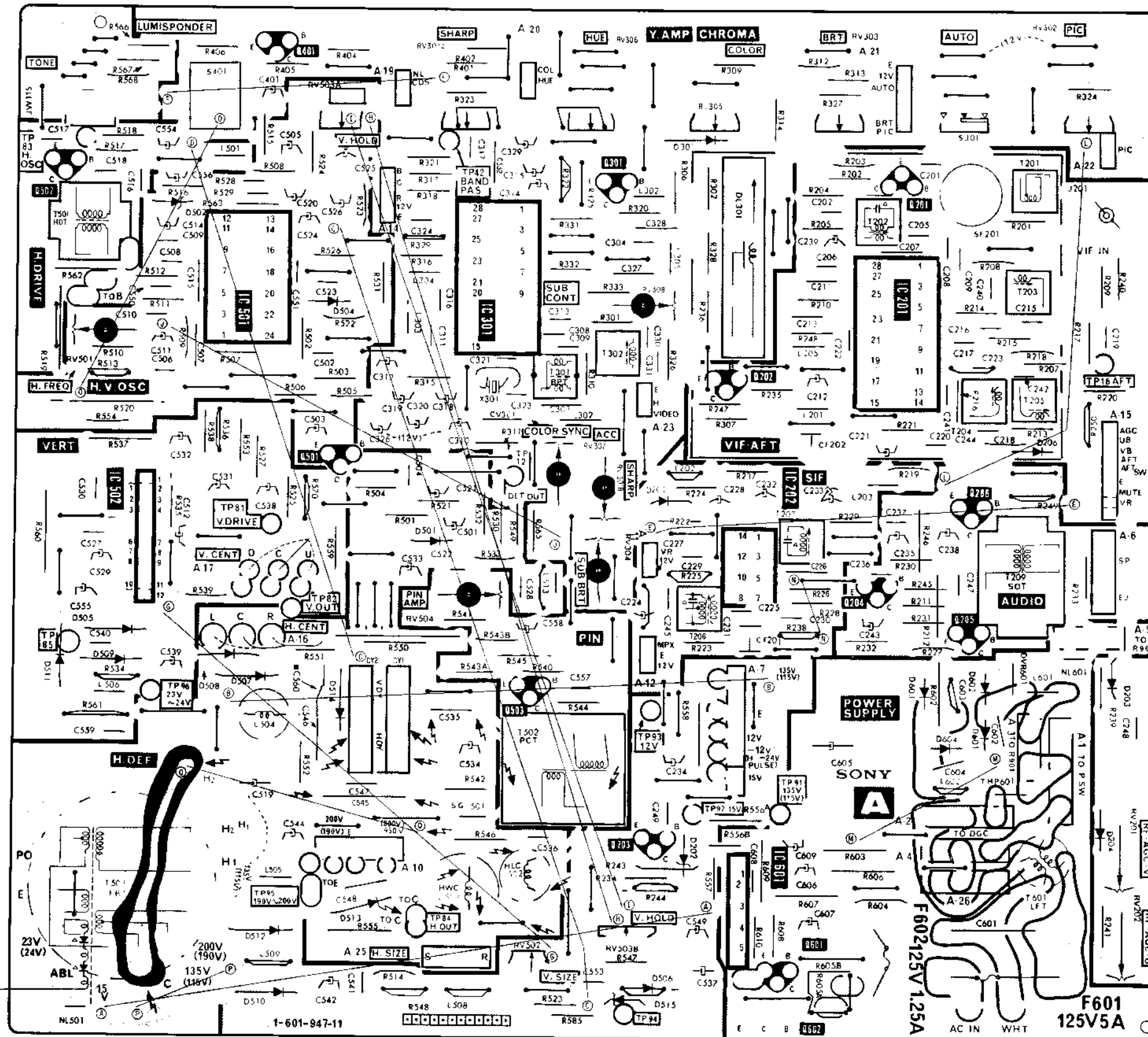
E

F

G

- A Board -

IC	Q	D	ADJ
401			
301			
502			
301, 201			
502			
501, 301			
201			
504			
RV308			
RV501			
202			
CV301			
RV307			
501			
206			
201			
T207			
RV301B			
RV304			
501			
RV504			
204			
205			
505			
T206			
508			
511, 509			
507			
603, 602			
514			
601			
604			
203			
204			
202			
RV201			
513			
L503			
512			
RV502			
RV202			
506			
510, 515			
602			
IC	Q	D	ADJ



5-3. SCHEMATIC DIAGRAM

Note: Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. k Ω : 1000 Ω , M Ω : 1000 k Ω
- $\square$: nonflammable resistor.
- Δ : internal component.
- $\square$: panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by $\boxtimes$ 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.
- When replacing components identified by $\boxtimes$, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by $\boxtimes$ and repeat the adjustment until the specified value is achieved. (Refer to R563 adjustment on page 15). When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ($\boxtimes$)	Adjustment
C505, D502, IC501, R508, R528, R529, R563	R563 adjustment

- Voltages are dc with respects to ground unless otherwise noted.
- Readings are taken with a 20,000-ohm-per-volt VOM.
- $\square$: adjustment for repair.
- Readings are taken with a color-bar signal input.
- Voltages on M2 board are taken with set selected to channel A (VHF) position.
- Voltage variations may be noted due to normal production tolerances.
- Do not touch the terminal 1 and 2 of IC001 marked $\boxtimes$ on M2 board with VOM probe, as B+ voltage will not be supplied to the set.

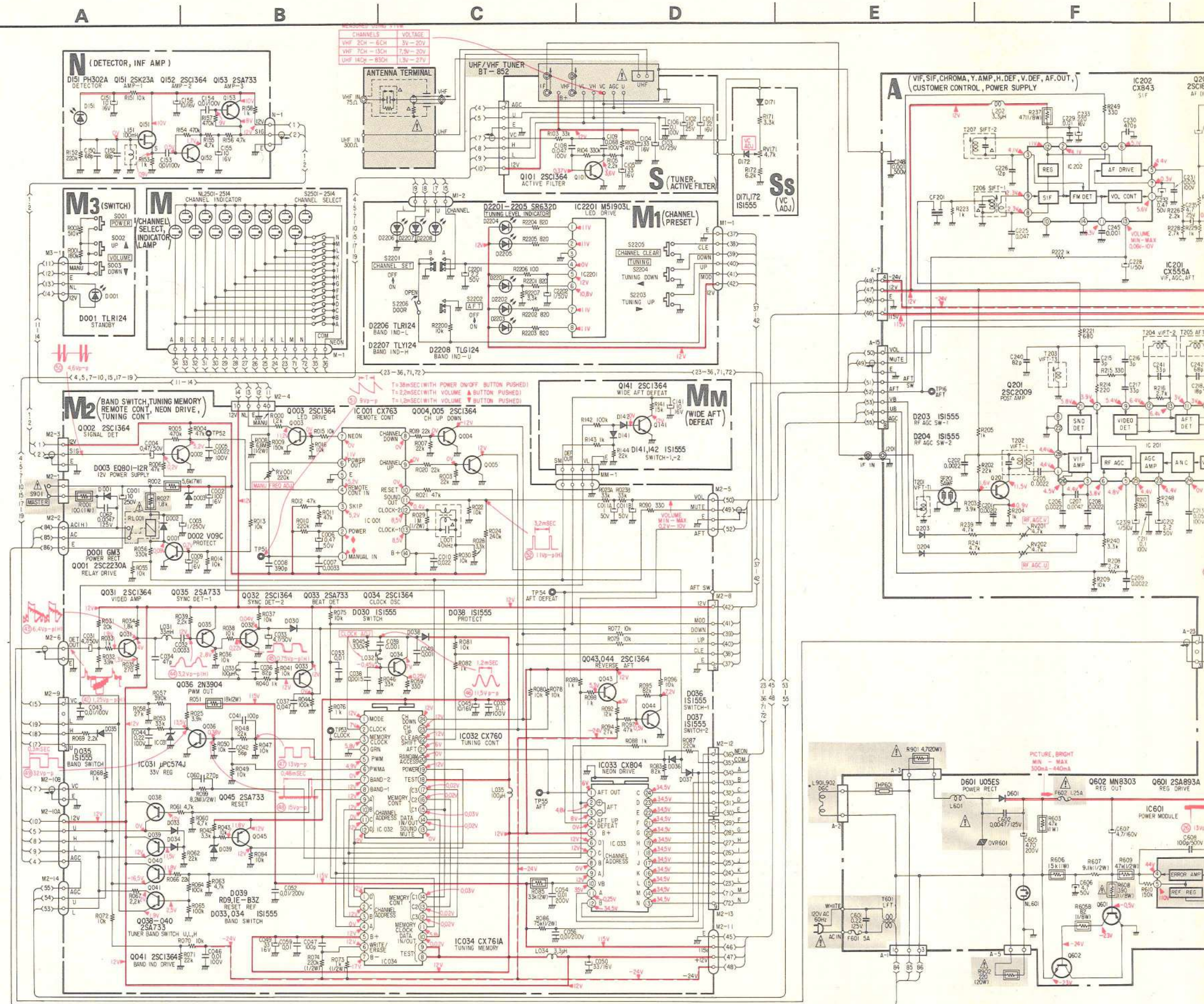
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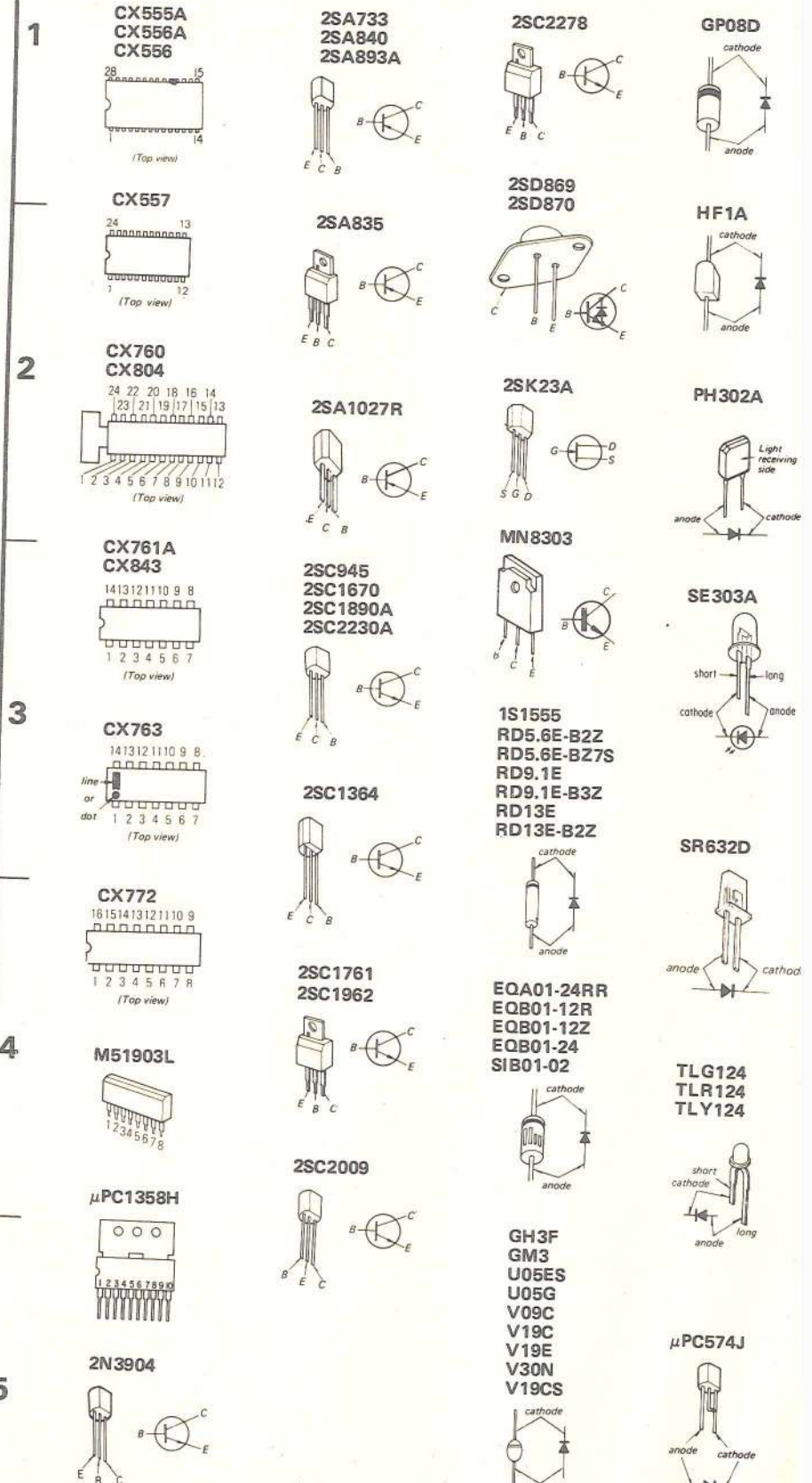
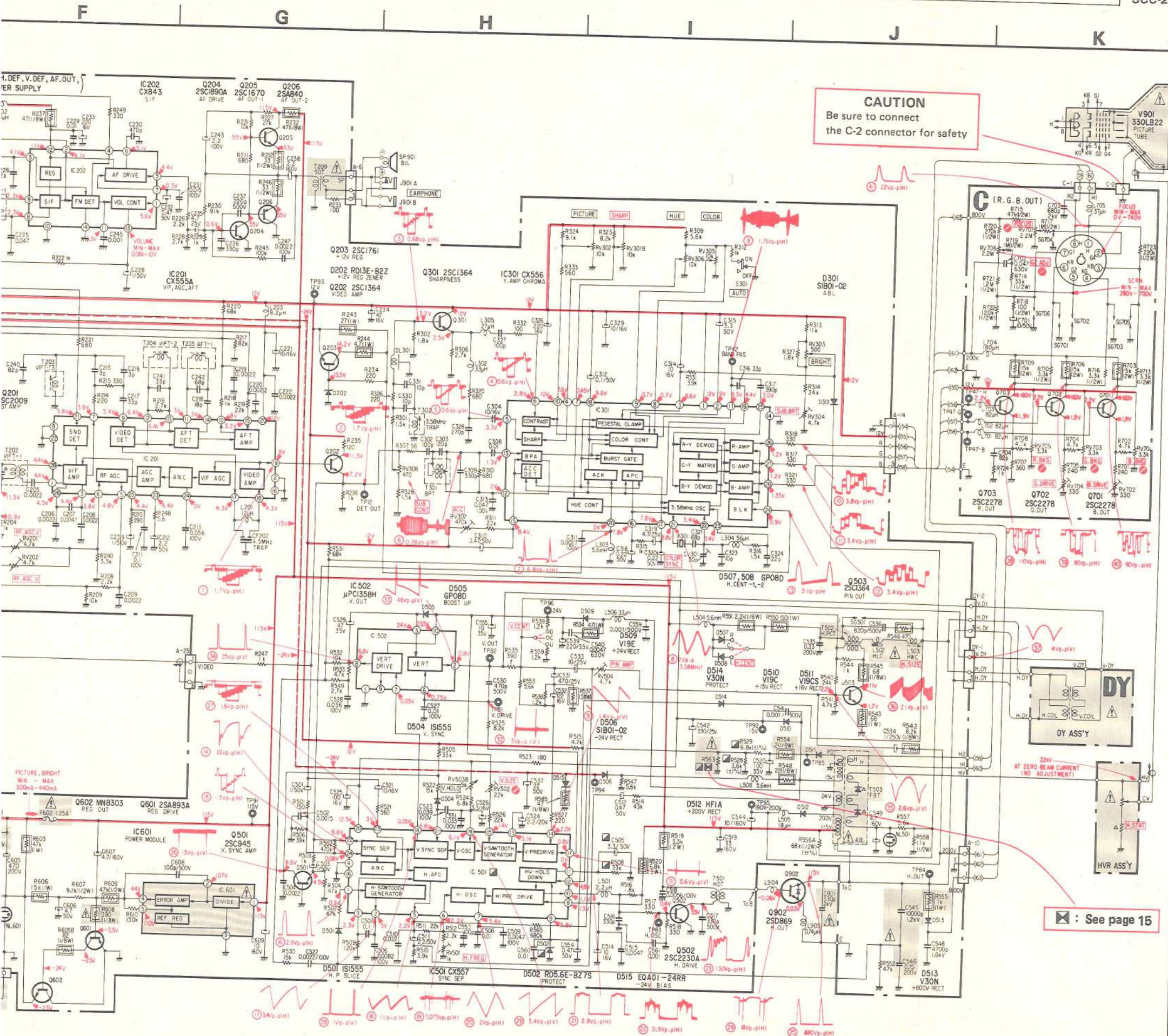
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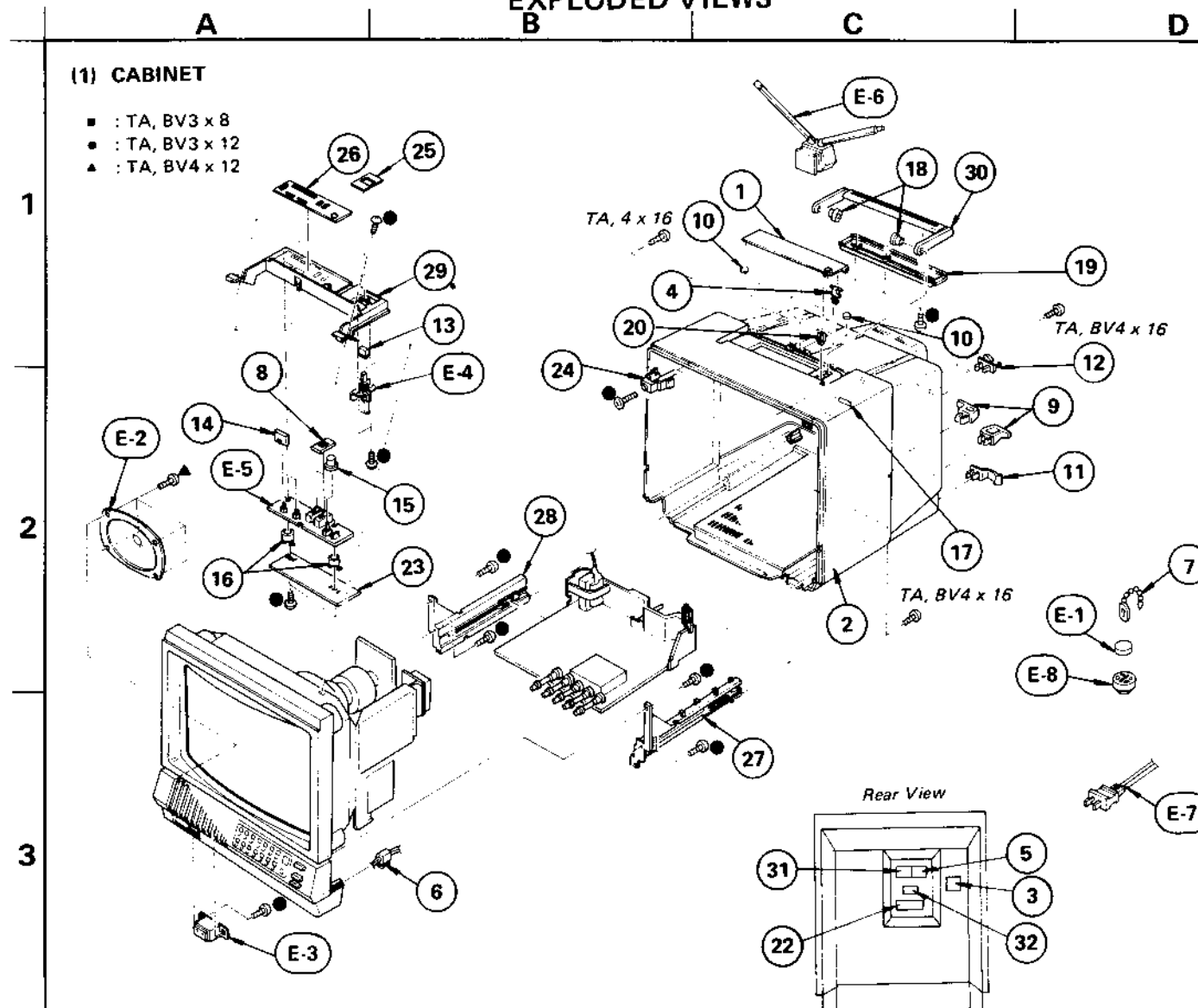
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5





SECTION 6 EXPLODED VIEWS



No.	Part No.	Description	Remark
1	X-4344-005-0	DOOR ASSY, PRESET	61
2	X-4344-009-0	CABINET ASSY	52,55,60, 61,62,63, 68,69,70, 71,75,81,
3	3-701-043-00	LABEL, CSA VIDEO	
4	3-703-035-11	SHAFT, LID	
5	3-703-281-00	LABEL, DOC (A)	
6	4-316-102-00	HOLDER, AC CORD	
7	4-308-870-00	CLIP, LEAD WIRE	
8	4-314-869-00	INSULATOR, SLIDE SWITCH	
9	4-316-003-00	HOLDER, CORD	
10	4-316-264-11	CUSHION	
11	4-329-127-00	CLAMPER, CORD	
12	4-329-439-00	CLAMPER, FEEDER	
13	4-333-101-00	PUSH BUTTON	

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

No.	Part No.	Description	Remark
14	4-335-304-00	BUTTON, TUNING	
15	4-335-306-00	BUTTON, CLEAR	
16	4-335-705-00	SPACER	
17	4-335-706-00	SHAFT, HANDLE	
18	4-335-709-00	BUSHING	
19	4-336-839-00	ORNAMENT (LOWER), HANDLE	
20	4-342-511-00	RETAINER, DOOR	
22	4-344-034-00	LABEL, MODEL NUMBER	
23	4-344-003-00	COVER, INSULATING	
24	4-344-004-00	STOPPER, ROD	
25	4-344-008-00	LABEL, SWITCH	
26	4-344-025-00	LABEL, PRESET	
27	4-344-026-00	GUIDE (RIGHT), CHASSIS	
28	4-344-027-00	GUIDE (LEFT), CHASSIS	
29	4-344-028-00	HOUSING, PRESET	
30	4-344-030-00	HANDLE	
31	3-701-829-01	LABEL, X-RAY CERTIF	
32	3-703-228-00	LABEL, CAUTION	

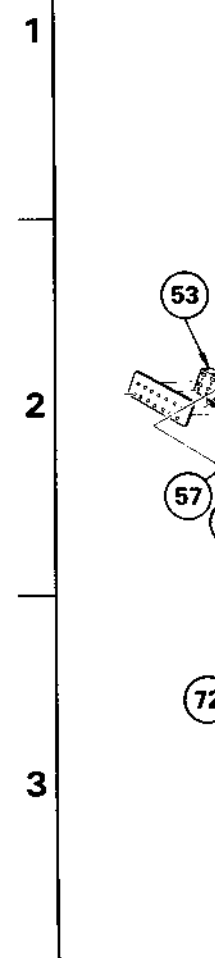
- As to the part numbered with E-, refer to the electrical parts list.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

Note: Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(2) MASK

- : TA, BV x 8
- : TA, BV x 12
- ▲ : TA, BV x 16



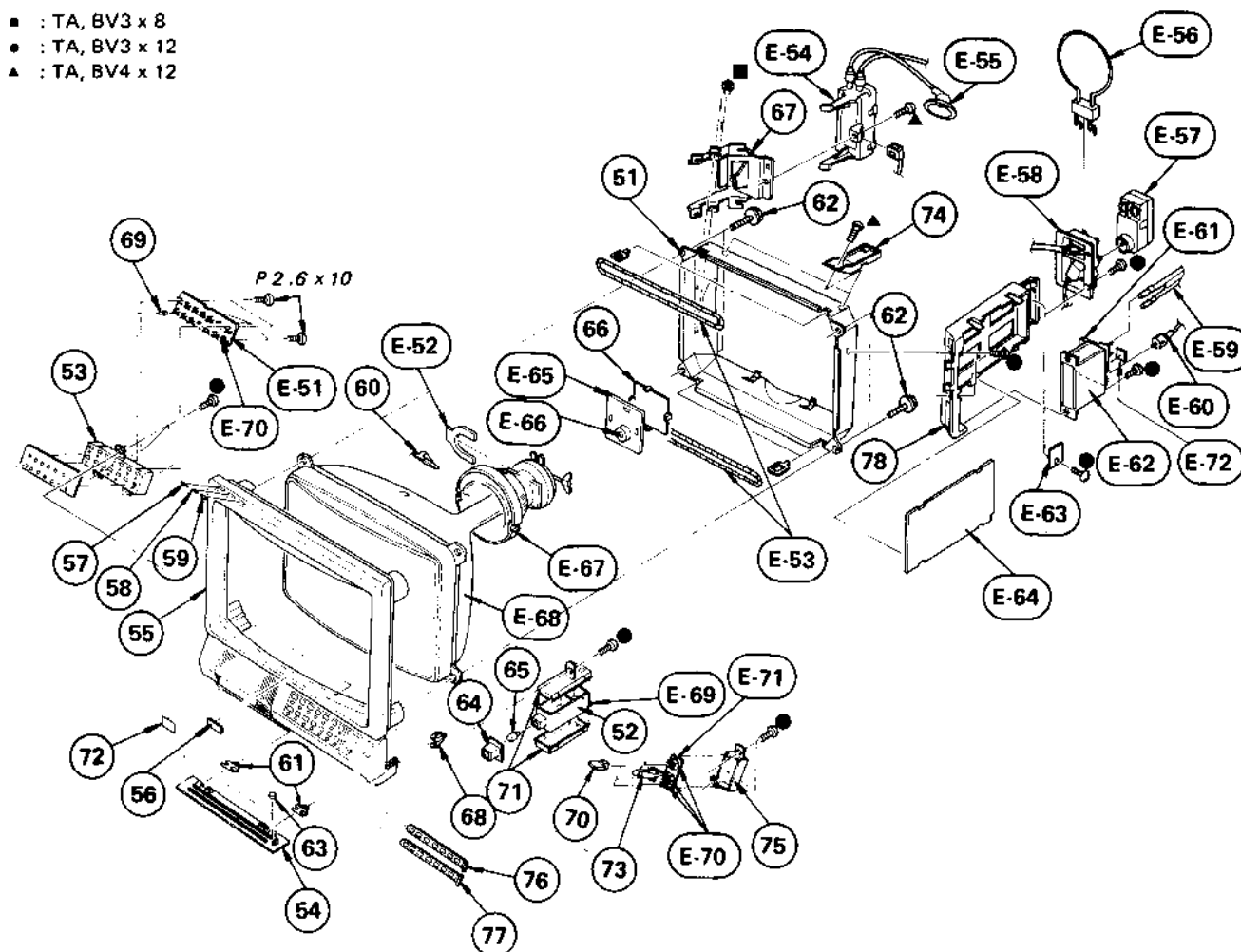
No.	Part No.	Description	Remark
51	4-344-005-0	DOOR ASSY, PRESET	
52	4-344-009-0	CABINET ASSY	
53	3-701-043-00	LABEL, CSA VIDEO	
54	3-703-035-11	SHAFT, LID	
55	3-703-281-00	LABEL, DOC (A)	
56	4-316-102-00	HOLDER, AC CORD	
57	4-308-870-00	CLIP, LEAD WIRE	
58	4-314-869-00	INSULATOR, SLIDE SWITCH	
59	4-316-003-00	HOLDER, CORD	
60	4-316-264-11	CUSHION	
61	4-329-127-00	CLAMPER, CORD	
62	4-329-439-00	CLAMPER, FEEDER	
63	4-333-101-00	PUSH BUTTON	

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

Note: Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : TA, BV3 x 8
- : TA, BV3 x 12
- ▲ : TA, BV4 x 12



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	●:X-4320-005-0	SHIELD ASSY, PICTURE TUBE		64	●:4-333-114-00	COVER, RAY CATCHER	
52	●:X-4344-003-0	CASE (MAIN) ASSY, SHIELD		65	4-333-115-00	TUBE, OPTICAL	
53	X-4344-004-0	HOUSING ASSY, TUNING		66	4-335-329-00	INSULATOR, C PC BOARD	
54	X-4344-006-0	DOOR ASSY, SUB CONTROL	13	67	●:4-335-338-00	BRACKET, HV	
55	X-4344-008-0	BEZEL ASSY	4,6,7,8,9 11,18,22	68	4-342-511-00	RETAINER, DOOR	
				69	4-344-005-00	BUTTON, TUNING	
				70	4-344-006-00	PUSH BUTTON	
56	3-701-845-00	EMBLEM, SONY		71	●:4-344-009-00	LID, SHIELD CASE, RAY CATCHER	
57	3-701-911-01	CHIP, COLOR; RED		72	4-344-010-00	LABEL, EARPHONE	
58	3-701-911-11	CHIP, COLOR; GREEN		73	●:4-344-013-00	HOLDER, LED	
59	3-701-911-21	CHIP, COLOR; BLUE		74	●:4-344-016-00	STAY	
60	3-703-003-00	SPACER, DY		75	●:4-344-019-00	BRACKET, VR	
61	3-703-035-11	SHAFT, LID		76	4-344-020-00	HOLDER (U), LABEL	
62	4-307-249-00	SCREW, TAPPING, 5X20		77	4-344-024-00	HOLDER (L), LABEL	
63	4-316-264-11	CUSHION		78	●:4-344-033-00	BRACKET, M PC BOARD	

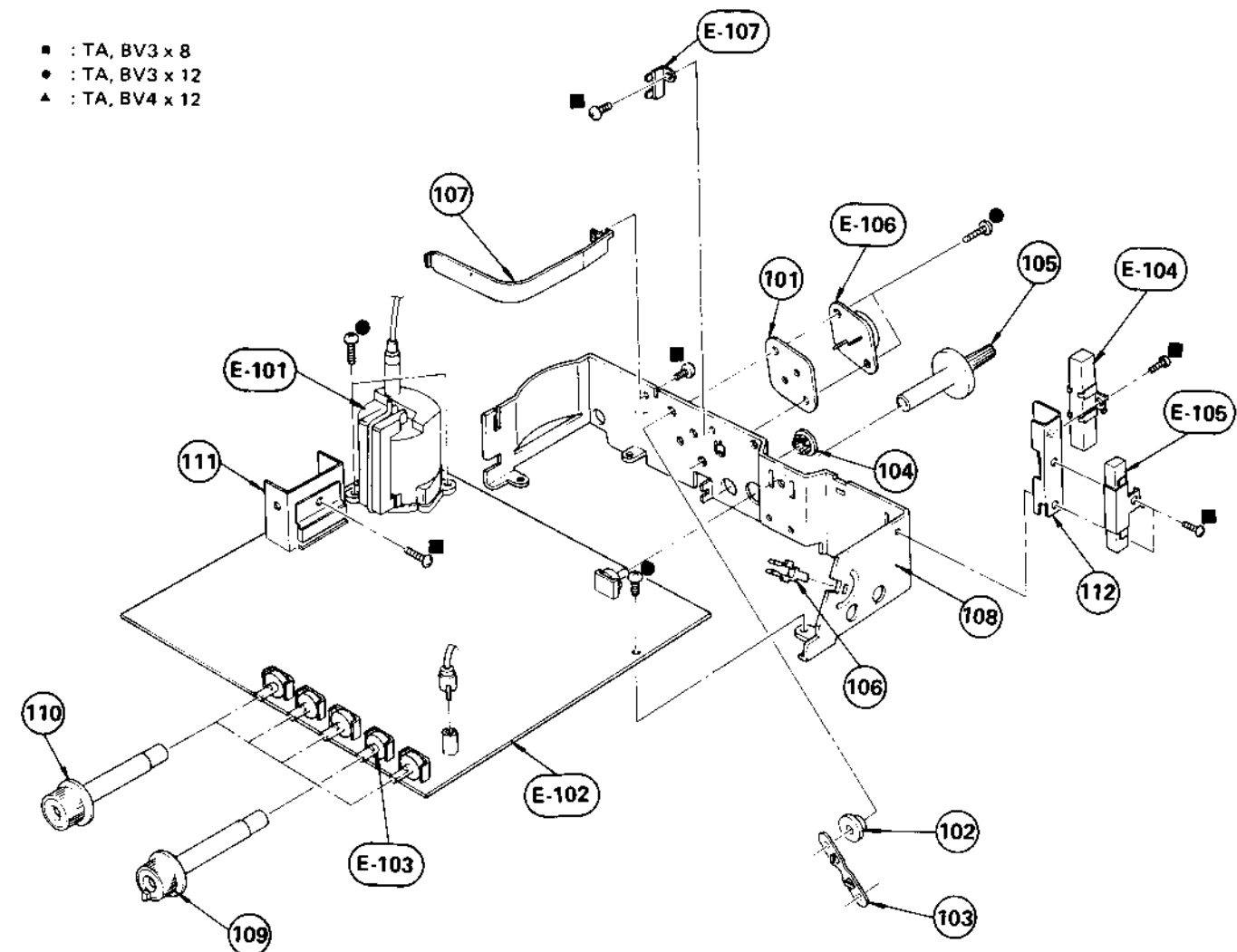
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- As to the part numbered with E-, refer to the electrical parts list.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

Note: Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : TA, BV3 x 8
- : TA, BV3 x 12
- ▲ : TA, BV4 x 12



<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
101	3-701-353-00	SPACER, MICA		107	4-335-320-00	RING, SHORT, FBT	
102	3-703-320-00	BUSHING (A), TRANSISTOR		108	4-335-339-00	HEAT SINK	
103	4-302-432-00	BRACKET, TRANSISTOR		109	4-337-708-00	KNOB, SELECTION	
104	4-328-903-00	BUSHING, HEAT SINK		110	4-337-710-00	KNOB, CONTROL	
105	4-332-437-00	KNOB, V-HOLD		111	4-340-905-00	HEAT SINK, V OUT	
106	4-333-157-00	RETAINER, AC CORD		112	4-344-014-00	BRACKET, RESISTOR, CEMENT-COATED	

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- As to the part numbered with E-, refer to the electrical parts list.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

Note: Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 7 ELECTRICAL PARTS LIST

N	M3	M	C
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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
•1-600-862-00	N BOARD		E-69			SWITCH	
•1-551-930-00	CONNECTOR, 3P			S001	1-553-329-00	SWITCH, PUSHBUTTON	E-70
•4-330-112-00	CAP, SHIELD			S002	1-553-329-00	SWITCH, PUSHBUTTON	E-70
•4-330-114-00	COVER, RAY CATCHER			S003	1-553-329-00	SWITCH, PUSHBUTTON	E-70
•4-333-185-00	PLATE, SHIELD; COIL			*****			
•4-344-009-00	LID, SHIELD CASE; RAY CATCHER			•1-602-505-00	M BOARD		E-51
	CAPACITOR			•1-551-939-00	CONNECTOR, 9P		
C150	1-102-525-00	CERAMIC 68PF	5% 50V	•1-555-341-00	CONNECTOR, 7P		
C151	1-123-316-00	ELECT 10MF	20% 16V		NEON LAMP		
C152	1-102-525-00	CERAMIC 68PF	5% 50V	NL2501	1-519-194-00	LAMP, NEON	
C153	1-108-626-11	MYLAR 0.01MF	10% 100V	NL2502	1-519-194-00	LAMP, NEON	
C154	1-108-626-11	MYLAR 0.01MF	10% 100V	NL2503	1-519-194-00	LAMP, NEON	
				NL2504	1-519-194-00	LAMP, NEON	
C155	1-123-316-00	ELECT 10MF	20% 16V	NL2505	1-519-194-00	LAMP, NEON	
C156	1-123-316-00	ELECT 10MF	20% 16V				
	DIODE			NL2506	1-519-194-00	LAMP, NEON	
D151	8-719-100-33	DIODE PH302A		NL2507	1-519-194-00	LAMP, NEON	
	COIL			NL2508	1-519-194-00	LAMP, NEON	
L151	1-409-315-00	COIL		NL2509	1-519-194-00	LAMP, NEON	
	TRANSISTOR			NL2510	1-519-194-00	LAMP, NEON	
Q151	8-722-381-20	TRANSISTOR 2SK23A-812		NL2511	1-519-194-00	LAMP, NEON	
Q152	8-729-663-47	TRANSISTOR 2SC1364		NL2512	1-519-194-00	LAMP, NEON	
Q153	=>8-729-612-77	TRANSISTOR 2SA1027R		NL2513	1-519-194-00	LAMP, NEON	
	RESISTOR			NL2514	1-519-194-00	LAMP, NEON	
R151	1-246-497-00	CARBON 10K 1/4 W 5%			SWITCH		
R152	1-246-529-00	CARBON 220K 1/4 W 5%		S2501	1-553-329-00	SWITCH, PUSHBUTTON	E-70
R153	1-246-473-00	CARBON 1K 1/4 W 5%		S2502	1-553-329-00	SWITCH, PUSHBUTTON	E-70
R154	1-246-537-00	CARBON 470K 1/4 W 5%		S2503	1-553-329-00	SWITCH, PUSHBUTTON	E-70
R155	1-246-489-00	CARBON 4.7K 1/4 W 5%		S2504	1-553-329-00	SWITCH, PUSHBUTTON	E-70
				S2505	1-553-329-00	SWITCH, PUSHBUTTON	E-70
R156	1-246-489-00	CARBON 4.7K 1/4 W 5%		S2506	1-553-329-00	SWITCH, PUSHBUTTON	E-70
R157	1-246-537-00	CARBON 470K 1/4 W 5%		S2507	1-553-329-00	SWITCH, PUSHBUTTON	E-70
R158	1-246-473-00	CARBON 1K 1/4 W 5%		S2508	1-553-329-00	SWITCH, PUSHBUTTON	E-70
*****				S2509	1-553-329-00	SWITCH, PUSHBUTTON	E-70
•1-602-506-00	M3 BOARD		E-71	S2510	1-553-329-00	SWITCH, PUSHBUTTON	E-70
•1-555-198-00	CONNECTOR, 4P			S2511	1-553-329-00	SWITCH, PUSHBUTTON	E-70
•4-344-013-00	HOLDER, LED			S2512	1-553-329-00	SWITCH, PUSHBUTTON	E-70
	DIODE			S2513	1-553-329-00	SWITCH, PUSHBUTTON	E-70
D001	8-719-812-41	DIODE TLR124		S2514	1-553-329-00	SWITCH, PUSHBUTTON	E-70
	RESISTOR			*****			
R001	1-246-527-00	CARBON 180K 1/4 W 5%		•A-1330-257-A	C BOARD, COMPLETE		E-65
R002	1-246-538-00	CARBON 510K 1/4 W 5%		1-526-086-XX	SOCKET, PICTURE TUBE		E-66
				•1-551-655-00	CONNECTOR, 5P		
				•1-551-682-00	CONNECTOR, MINIATURE; 3P		
				•1-588-959-00	C BOARD		
					PLUG		
				C1	•1-508-786-00	2P PLUG	

NOTE:

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

• =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

• Items marked "•" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μ F, PF : μ PF

RESISTORS
• All resistors are in ohms.

COILS
• MMH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

C MM M2

Ref.No.	Part No.	Description	Remark
<u>CAPACITOR</u>			
C701	1-123-356-00	ELECT 10MF 20% 50V	
C702	1-129-737-00	POLYPROPYLENE 0.047MF 20% 630V	
C703	1-102-249-00	CERAMIC 680PF 20% 2KV	
C704	1-102-971-00	CERAMIC 82PF 5% 50V	
<u>COIL</u>			
L701	1-407-704-11	MICRO INDUCTOR LF-8 82UH	
L702	1-407-704-11	MICRO INDUCTOR LF-8 82UH	
L703	1-407-704-11	MICRO INDUCTOR LF-8 82UH	
L704	1-407-708-11	MICRO INDUCTOR LF-8 180UH	
L705	1-421-401-00	COIL, FERRITE CHOKE	
<u>TRANSISTOR</u>			
Q701	8-729-322-78	TRANSISTOR 2SC2278	
Q702	8-729-322-78	TRANSISTOR 2SC2278	
Q703	8-729-322-78	TRANSISTOR 2SC2278	
<u>RESISTOR</u>			
R701	1-246-458-00	CARBON 240 1/4 W 5%	
R702	1-246-489-00	CARBON 4.7K 1/4 W 5%	
R703	1-206-692-00	METAL 15K 2 W 5% nonflammable	
R704	1-246-489-00	CARBON 4.7K 1/4 W 5%	
R705	1-246-458-00	CARBON 240 1/4 W 5%	
R706	1-206-692-00	METAL 15K 2 W 5% nonflammable	
R707	1-246-462-00	CARBON 360 1/4 W 5%	
R708	1-246-489-00	CARBON 4.7K 1/4 W 5%	
R709	1-206-692-00	METAL 15K 2 W 5% nonflammable	
R710	1-202-585-00	SOLID 3.3K 1/2 W 10%	
R713	1-202-585-00	SOLID 3.3K 1/2 W 10%	
R714	1-202-609-00	SOLID 33K 1/2 W 10%	
R715	1-202-613-00	SOLID 47K 1/2 W 10%	
R716	1-202-585-00	SOLID 3.30K 1/2 W 10%	
R717	1-202-645-00	SOLID 1M 1/2 W 10%	
R718	1-202-549-00	SOLID 100 1/2 W 10%	
R719	1-202-645-00	SOLID 1M 1/2 W 10%	
R720	1-202-631-00	SOLID 27K 1/2 W 10%	
R721	1-202-647-35	SOLID 1.2M 1/2 W 10%	
R722	1-202-623-00	SOLID 120K 1/2 W 10%	
R723	1-202-629-35	SOLID 220K 1/2 W 10%	
R724	1-246-473-00	CARBON 1K 1/4 W 5%	
<u>VARIABLE RESISTOR</u>			
RV701	1-226-209-00	RES, ADJ, CARBON 3.3K	
RV702	1-222-515-12	RES, ADJ, CARBON 330	
RV703	1-222-515-31	RES, ADJ, CARBON 330	
RV704	1-226-209-00	RES, ADJ, CARBON 3.3K	
RV704	1-222-515-12	RES, ADJ, CARBON 330	
RV704	1-222-515-31	RES, ADJ, CARBON 330	
RV705	1-226-209-00	RES, ADJ, CARBON 3.3K	
RV706	1-226-063-00	RES, ADJ, CARBON 2.2M	
RV707	1-226-114-00	RES, ADJ, METAL 2.2M	

NOTE:

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

* =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

* Items marked "A" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

* All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
* MF : μ F, PF : μ PF

RESISTORS
* All resistors are in ohms.

COILS
* MMH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
<u>SPARK GAP</u>			
SG701	1-519-063-XX	SPARK GAP	
SG702	1-519-063-XX	SPARK GAP	
SG703	1-519-063-XX	SPARK GAP	
SG704	1-519-063-XX	SPARK GAP	
SG705	1-519-063-XX	SPARK GAP	
SG706	1-519-063-XX	SPARK GAP	

Δ :1-600-567-00 <u>MM BOARD</u> E-63			
<u>CAPACITOR</u>			
C141	1-123-316-00	ELECT 10MF 20% 16V	
<u>DIODE</u>			
D141	8-719-815-55	DIODE 1S1555	
D142	8-719-815-55	DIODE 1S1555	
<u>PLUG</u>			
MM1	Δ :1-560-124-00	PLUG, CONNECTOR; 4P	
<u>TRANSISTOR</u>			
Q141	8-729-663-47	TRANSISTOR 2SC1364	
<u>RESISTOR</u>			
R141	1-246-501-00	CARBON 15K 1/4 W 5%	
R142	1-246-521-00	CARBON 100K 1/4 W 5%	
R143	1-246-473-00	CARBON 1K 1/4 W 5%	
R144	1-246-505-00	CARBON 22K 1/4 W 5%	

Δ :A-1306-086-A <u>M2 BOARD, COMPLITE</u> E-64			
Δ :1-551-674-00	CONNECTOR, 3P		
Δ :1-561-798-00	CONNECTOR, 7P		
Δ :1-555-043-00	CONNECTOR, 3P		
Δ :1-555-198-00	CONNECTOR, 4P		
Δ :1-561-025-00	CONNECTOR, MINIATURE; 4P		
Δ :4-334-254-00	CASE (MAIN), SHIELD		
Δ :4-334-255-00	LID, UPPER; M2 SHIELD CASE		
Δ :4-334-256-00	LID, REAR; M2 SHIELD CASE		
<u>CONNECTOR</u>			
A15	Δ :1-551-784-00	CONNECTOR, 8P	
<u>CAPACITOR</u>			
C001	1-123-254-00	ELECT 10MF 250V	
C002	1-123-320-00	ELECT 100MF 20% 16V	
C003	1-123-003-00	ELECT 1.0MF 250V	
C004	1-123-351-00	ELECT 0.47MF 20% 50V	
C005	1-108-618-11	MYLAR 0.0022MF 10% 100V	

Ref.No.	Part No.	Description	Remark
C006	1-123-351-00	ELECT 0.47MF	20% 50V
C007	1-108-798-11	MYLAR 0.0033MF	5% 50V
C008	1-102-822-00	CERAMIC 390PF	5% 50V
C009	1-123-316-00	ELECT 10MF	20% 16V
C010	1-108-841-11	MYLAR 0.022MF	10% 50V
C011A	1-123-352-00	ELECT 1MF	20% 50V
C011B	1-123-352-00	ELECT 1MF	20% 50V
C031	1-123-355-00	ELECT 4.7MF	20% 50V
C032	1-102-123-00	CERAMIC 0.0033MF	10% 50V
C033	1-123-355-00	ELECT 4.7MF	20% 50V
C034	1-101-880-00	CERAMIC 47PF	5% 50V
C035	1-108-638-00	MYLAR 0.1MF	10% 100V
C036	1-102-971-00	CERAMIC 82PF	5% 50V
C037	1-101-006-00	CERAMIC 0.047MF	50V
C038	1-130-020-00	FILM 0.0015MF	5% 50V
C039	1-130-018-00	FILM 0.001MF	5% 50V
C040	1-130-018-00	FILM 0.001MF	5% 50V
C041	1-102-973-00	CERAMIC 100PF	5% 50V
C042	1-101-884-00	CERAMIC 56PF	5% 50V
C043	1-108-626-11	MYLAR 0.01MF	10% 100V
C044	1-108-642-11	MYLAR 0.22MF	10% 100V
C045	1-123-316-00	ELECT 10MF	20% 16V
C046	1-108-626-11	MYLAR 0.01MF	10% 100V
C047	1-102-973-00	CERAMIC 100PF	5% 50V
C049	1-123-318-00	ELECT 33MF	20% 16V
C050	1-123-318-00	ELECT 33MF	20% 16V
C052	1-108-692-11	MYLAR 0.01MF	10% 200V
C053	1-101-118-00	CERAMIC 0.01MF	20% 50V
C054	1-108-692-11	MYLAR 0.01MF	10% 200V
C056	1-108-692-11	MYLAR 0.01MF	10% 200V
C059	1-102-129-00	CERAMIC 0.01MF	10% 50V
C060	1-102-980-00	CERAMIC 270PF	5% 50V
C062	1-102-446-00	CERAMIC 0.0047MF	125V
DIODE			
D001	=>8-719-911-55	DIODE U05G	
D002	8-719-900-93	DIODE V09C	
D003	8-719-930-12	DIODE EQB01-12Z	
D030	8-719-815-55	DIODE 1S1555	
D033	8-719-815-55	DIODE 1S1555	
D034	8-719-815-55	DIODE 1S1555	
D035	8-719-815-55	DIODE 1S1555	
D036	8-719-815-55	DIODE 1S1555	
D037	8-719-815-55	DIODE 1S1555	
D038	8-719-815-55	DIODE 1S1555	
D039	8-719-191-07	DIODE RD9.1E	
IC			
IC001	8-757-630-00	IC CX763	
IC031	8-759-157-40	IC UPC574J	
IC032	8-757-600-00	IC CX760	
IC033	8-758-040-00	IC CX804	

NOTE:

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

* =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

* Items marked " **A** " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

* All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
* MF : μ F, PF : μ P

RESISTORS
* All resistors are in ohms.

COILS
* MMH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

M2

S

SS

Ref.No.	Part No.	Description	Remark
R012	1-246-513-00	CARBON 47K 1/4 W 5%	
R013	1-246-497-00	CARBON 10K 1/4 W 5%	
R014	1-246-497-00	CARBON 10K 1/4 W 5%	
R015	1-246-497-00	CARBON 10K 1/4 W 5%	
R016	1-246-497-00	CARBON 10K 1/4 W 5%	
R019	1-246-505-00	CARBON 10K 1/4 W 5%	
R020	1-246-505-00	CARBON 22K 1/4 W 5%	
R021	1-246-513-00	CARBON 47K 1/4 W 5%	
R022	1-246-497-00	CARBON 10K 1/4 W 5%	
R023A	1-246-509-00	CARBON 33K 1/4 W 5%	
R023B	1-246-509-00	CARBON 33K 1/4 W 5%	
R024	1-246-530-00	CARBON 240K 1/4 W 5%	
R025	1-246-487-00	CARBON 3.9K 1/4 W 5%	
R027	1-247-014-11	CARBON 1.0K 1/4 W 5% nonflammable	
R028	1-246-485-00	CARBON 3.3K 1/4 W 5%	
R029	1-202-645-00	SOLID 1.00M 1/2 W 20%	
R030	1-246-497-00	CARBON 10K 1/4 W 5%	
R031	1-246-504-00	CARBON 20K 1/4 W 5%	
R032	1-246-487-00	CARBON 3.9K 1/4 W 5%	
R033	1-246-473-00	CARBON 1K 1/4 W 5%	
R034	1-246-479-00	CARBON 1.8K 1/4 W 5%	
R035	1-246-459-00	CARBON 270 1/4 W 5%	
R036	1-246-497-00	CARBON 10K 1/4 W 5%	
R037	1-246-497-00	CARBON 10K 1/4 W 5%	
R038	1-246-497-00	CARBON 10K 1/4 W 5%	
R039	1-246-481-00	CARBON 2.2K 1/4 W 5%	
R040	1-246-473-00	CARBON 1K 1/4 W 5%	
R041	1-246-497-00	CARBON 10K 1/4 W 5%	
R042	1-246-485-00	CARBON 3.3K 1/4 W 5%	
R043	1-246-497-00	CARBON 10K 1/4 W 5%	
R044	1-246-521-00	CARBON 100K 1/4 W 5%	
R045	1-246-533-00	CARBON 330K 1/4 W 5%	
R046	1-246-509-00	CARBON 33K 1/4 W 5%	
R047	1-246-497-00	CARBON 10K 1/4 W 5%	
R048	1-246-505-00	CARBON 22K 1/4 W 5%	
R049	1-246-497-00	CARBON 10K 1/4 W 5%	
R050	1-246-497-00	CARBON 10K 1/4 W 5%	
R051	1-206-694-00	METAL 18K 2 W 5% nonflammable	
R053	1-246-509-00	CARBON 33K 1/4 W 5%	
R055	1-246-497-00	CARBON 10K 1/4 W 5%	
R056	1-246-533-00	CARBON 330K 1/4 W 5%	
R057	1-246-535-00	CARBON 390K 1/4 W 5%	
R058	1-246-507-00	CARBON 27K 1/4 W 5%	
R059	1-246-461-00	CARBON 330 1/4 W 5%	
R060	1-246-489-00	CARBON 4.7K 1/4 W 5%	
R061	1-246-489-00	CARBON 4.7K 1/4 W 5%	
R062	1-246-505-00	CARBON 22K 1/4 W 5%	
R063	1-246-489-00	CARBON 4.7K 1/4 W 5%	
R064	1-246-521-00	CARBON 100K 1/4 W 5%	
R065	1-246-521-00	CARBON 100K 1/4 W 5%	
R066	1-246-505-00	CARBON 22K 1/4 W 5%	
R067	1-246-481-00	CARBON 2.2K 1/4 W 5%	
R068	1-246-473-00	CARBON 1K 1/4 W 5%	

NOTE:

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

* All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS

* MF : μ F, PF : μ P

RESISTORS

* All resistors are in ohms.

COILS

* MH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
R069	1-246-481-00	CARBON 2.2K 1/4 W 5%	
R070	1-246-497-00	CARBON 10K 1/4 W 5%	
R071	1-246-505-00	CARBON 22K 1/4 W 5%	
R072	1-246-497-00	CARBON 10K 1/4 W 5%	
R073	1-244-873-00	CARBON 1.00K 1/2 W 5%	
R074	1-244-929-00	CARBON 220K 1/2 W 5%	
R075	1-246-497-00	CARBON 10K 1/4 W 5%	
R076	1-246-473-00	CARBON 1K 1/4 W 5%	
R077	1-246-497-00	CARBON 10K 1/4 W 5%	
R078	1-246-497-00	CARBON 10K 1/4 W 5%	
R079	1-246-497-00	CARBON 10K 1/4 W 5%	
R080	1-246-497-00	CARBON 10K 1/4 W 5%	
R081	1-246-497-00	CARBON 10K 1/4 W 5%	
R082	1-246-473-00	CARBON 1K 1/4 W 5%	
R083	1-246-519-00	CARBON 82K 1/4 W 5%	
R084	1-246-497-00	CARBON 10K 1/4 W 5%	
R085	1-206-700-00	METAL 33K 2 W 5% nonflammable	
R086	1-244-918-00	CARBON 75K 1/2 W 5%	
R087	1-246-529-00	CARBON 220K 1/4 W 5%	
R088	1-246-473-00	CARBON 1K 1/4 W 5%	
R089	1-246-473-00	CARBON 1K 1/4 W 5%	
R090	1-246-461-00	CARBON 330 1/4 W 5%	
R092	1-246-499-00	CARBON 12K 1/4 W 5%	
R094	1-246-507-00	CARBON 27K 1/4 W 5%	
R095	1-246-519-00	CARBON 82K 1/4 W 5%	
R096	1-246-497-00	CARBON 10K 1/4 W 5%	
R097	1-246-513-00	CARBON 47K 1/4 W 5%	
R098	1-246-473-00	CARBON 1K 1/4 W 5%	
R099	1-202-667-00	SOLID 8.2M 1/2 W 20%	

RELAY

RL001 **A** 1-515-338-00 RELAY

VARIABLE RESISTOR

RV001 1-224-551-00 RES, ADJ, CARBON 220K

A 1-602-649-00 SS BOARD

E-72

DIODE

D171 8-719-815-55 1S1555
D172 8-719-815-55 1S1555

RESISTOR

R171 1-246-485-00 CARBON 3.3K 1/4W 5%
R172 1-246-492-00 CARBON 6.2K 1/4W 5%

VARIABLE RESISTOR

RV171 1-222-518-12 RES, ADJ, CARBON 4.7K

A 1-588-342-00 S BOARD

E-61

CAPACITOR

C101 1-123-317-00 ELECT 22MF 20% 16V
C102 1-121-398-00 ELECT SINGLE 10MF 25V
C103 1-121-398-00 ELECT SINGLE 10MF 25V
C104 1-121-403-00 ELECT SINGLE 33MF 16V
C105 1-123-318-00 ELECT 33MF 20% 16V
C106 1-108-638-00 MYLAR 0.1MF 10% 100V
C108 1-108-634-11 MYLAR 0.047MF 10% 100V
C109 1-108-636-11 MYLAR 0.068MF 10% 100V

TRANSISTOR

Q101 8-729-663-47 TRANSISTOR 2SC1364

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S A

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
RESISTOR				C220	1-102-121-00	CERAMIC 0.0022MF	10% 50V
R102	1-246-465-00	CARBON 470 1/4 W 5%		C221	1-123-316-00	ELECT 10MF	20% 16V
R103	1-246-509-00	CARBON 33K 1/4 W 5%		C222	1-102-121-00	CERAMIC 0.0022MF	10% 50V
R104	1-246-533-00	CARBON 330K 1/4 W 5%		C225	1-101-006-00	CERAMIC 0.047MF	50V
R105	1-246-481-00	CARBON 2.2K 1/4 W 5%		C226	1-161-294-00	CERAMIC 12PF	5% 50V
PLUG				C228	1-123-352-00	ELECT 1MF	20% 50V
S1	1-560-127-00	PLUG, CONNECTOR; 7P		C229	1-101-118-00	CERAMIC 0.01MF	20% 50V
*****				C230	1-102-114-00	CERAMIC 470PF	10% 50V
	1-A-1295-411-A	A BOARD, COMPLETE	E-102	C231	1-108-628-11	MYLAR 0.015MF	10% 100V
	1-508-915-11	PLUG, 1P		C232	1-123-351-00	ELECT 0.47MF	20% 50V
	1-509-832-00	CONNECTOR, 1P		C233	1-123-321-00	ELECT 220MF	20% 16V
	1-509-887-00	CONNECTOR, 1P		C234	1-123-319-00	ELECT 47MF	20% 16V
	1-517-072-00	LAMP HOLDER		C235	1-123-328-00	ELECT 4.7MF	20% 25V
	1-526-575-00	SOCKET, PLUG		C236	1-102-820-00	CERAMIC 330PF	5% 50V
	1-533-146-00	HOLDER, FUSE		C237	1-102-244-00	CERAMIC 220PF	10% 500V
	4-334-250-00	CASE, SHIELD (MAIN)		C238	1-123-026-00	ELECT 2.2MF	160V
	4-334-251-00	LID, UPPER, SHIELD CASE		C239	1-123-352-00	ELECT 1MF	20% 50V
	4-334-252-00	LID, REAR, SHIELD CASE		C240	1-102-496-00	CERAMIC 82PF	5% 50V
	4-335-320-00	RING, SHORT; FBT		C241	1-102-518-00	CERAMIC 33PF	5% 50V
	4-340-905-00	HEAT SINK, V OUT		C242	1-102-494-00	CERAMIC 68PF	5% 50V
PLUG				C243	1-123-381-00	ELECT 2.2MF	20% 100V
A1	1-506-349-21	3P PLUG		C245	1-102-074-00	CERAMIC 0.001MF	10% 50V
A2	1-508-786-00	2P PLUG		C247	1-108-618-11	MYLAR 0.0022MF	10% 100V
A3	1-508-786-00	2P PLUG		C248	1-102-038-00	CERAMIC 0.001MF	500V
A5	1-506-371-00	2P PLUG		C302	1-161-271-00	CERAMIC 100PF	5% 50V
A6	1-508-765-00	3P PLUG		C303	1-161-272-00	CERAMIC 120PF	5% 50V
A7	1-508-766-00	4P PLUG		C304	1-121-259-11	ELECT 10MF NONPOLARIZED	16V
A10	1-508-765-00	3P PLUG		C308	1-101-004-00	CERAMIC 0.01MF	50V
A14	1-560-125-00	PLUG, CONNECTOR; 5P		C309	1-102-820-00	CERAMIC 330PF	5% 50V
A15	1-560-128-00	PLUG, CONNECTOR		C310	1-123-351-00	ELECT 0.47MF	20% 50V
A23	1-560-123-00	PLUG, CONNECTOR; 3P		C311	1-108-619-00	MYLAR 0.0027MF	10% 100V
CAPACITOR				C312	1-123-586-00	ELECT 0.1MF	20% 50V
C201	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C313	1-108-634-11	MYLAR 0.047MF	10% 100V
C202	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C314	1-123-316-00	ELECT 10MF	20% 16V
C205	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C315	1-123-354-00	ELECT 3.3MF	20% 50V
C206	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C316	1-102-963-00	CERAMIC 33PF	5% 50V
C207	1-161-328-51	CERAMIC 4700PF	30% 50V	C317	1-102-822-00	CERAMIC 390PF	5% 50V
C208	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C318	1-123-447-00	ELECT 0.22MF	20% 50V
C209	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C319	1-123-328-00	ELECT 4.7MF	20% 25V
C211	1-108-638-00	MYLAR 0.1MF	10% 100V	C320	1-123-447-00	ELECT 0.22MF	20% 50V
C212	1-123-353-00	ELECT 2.2MF	20% 50V	C321	1-101-888-00	CERAMIC 68PF	5% 50V
C213	1-108-635-11	MYLAR 0.056MF	10% 100V	C323	1-102-947-00	CERAMIC 10PF	5% 50V
C215	1-102-503-00	CERAMIC 3PF	0.25PF 50V	C324	1-102-959-00	CERAMIC 22PF	5% 50V
C216	1-102-503-00	CERAMIC 3PF	0.25PF 50V	C326	1-123-321-00	ELECT 220MF	20% 16V
C217	1-102-963-00	CERAMIC 33PF	5% 50V	C327	1-161-271-00	CERAMIC 100PF	5% 50V
C218	1-161-82-00	CERAMIC 18PF	5% 50V	C328	1-161-316-00	CERAMIC 270PF	10% 50V
C219	1-102-121-00	CERAMIC 0.0022MF	10% 50V	C329	1-123-316-00	ELECT 10MF	20% 16V
				C330	1-102-858-00	CERAMIC 10PF	0.5PF 50V
				C331	1-102-858-00	CERAMIC 10PF	0.5PF 50V
				C501	1-123-352-00	ELECT 1MF	20% 50V
				C502	1-161-003-00	CERAMIC 0.0015MF	10% 25V
				C503	1-123-352-00	ELECT 1MF	20% 50V
				C504	1-161-194-00	CERAMIC 0.0022MF	10% 25V
				C505	1-123-354-00	ELECT 3.3MF	10% 50V

NOTE:

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

• =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

• Items marked "A" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS

• MF : μ F, PF : μ P

RESISTORS

• All resistors are in ohms.

COILS

• MMH : mH, μ H : μ H

Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

A

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C506	1-108-625-00	MYLAR 0.0082MF	10% 100V	<u>CERAMIC FILTER</u>			
C507	1-161-025-00	CERAMIC 0.1MF	10% 25V	CF201	1-527-260-00	CERAMIC FILTER	
C508	1-130-203-00	POLYPROPYLENE 0.01MF	5% 50V	CF202	1-409-332-00	CERAMIC TRAP	
C509	1-108-622-11	MYLAR 0.0047MF	10% 100V	<u>TRIMMER</u>			
C510	1-161-017-00	CERAMIC 0.022MF	10% 25V	CV301	1-141-212-00	CAP, TRIMMER	
C511	1-123-353-00	ELECT 2.2MF	20% 50V	<u>DIODE</u>			
C512	1-123-351-00	ELECT 0.47MF	20% 50V	D202	8-719-113-07	DIODE RD13E	
C514	1-123-316-00	ELECT 10MF	20% 16V	D203	8-719-815-55	DIODE 1S1555	
C515	1-161-328-51	CERAMIC 4700PF	30% 50V	D204	8-719-815-55	DIODE 1S1555	
C516	1-102-820-00	CERAMIC 330PF	5% 50V	D301	=>8-719-200-02	DIODE 10E2	
C517	1-102-030-00	CERAMIC 330PF	10% 500V	D501	8-719-815-55	DIODE 1S1555	
C518	1-108-623-00	MYLAR 0.0056MF	10% 100V	D502	8-719-156-25	DIODE RD5.6E-8Z7S	
C519	1-123-024-51	ELECT 33MF	160V	D504	8-719-815-55	DIODE 1S1555	
C520	1-123-345-00	ELECT 100MF	20% 35V	D505	=>8-719-911-55	DIODE U05G	
C521	1-123-316-00	ELECT 10MF	20% 16V	D506	=>8-719-200-02	DIODE 10E2	
C522	1-108-618-11	MYLAR 0.0022MF	10% 100V	D507	=>8-719-911-55	DIODE U05G	
C523	1-108-633-11	MYLAR 0.039MF	10% 100V	D508	=>8-719-911-55	DIODE U05G	
C524	1-131-361-00	TANTALUM ELECT 2.2MF	20% 20V	D509	=>8-719-305-15	DIODE GH3F	
C525	1-123-320-00	ELECT 100MF	20% 16V	D510	=>8-719-305-15	DIODE GH3F	
C526	1-131-197-00	ELEC TANTALUM 3.3MF	10% 16V	D511	▲ 8-719-901-94	DIODE V19CS	
C527	1-108-626-11	MYLAR 0.01MF	10% 100V	D512	=>8-719-305-15	DIODE GH3F	
C528	1-108-635-11	MYLAR 0.056MF	10% 100V	D513	=>8-719-305-15	DIODE GH3F	
C529	1-123-344-00	ELECT 47MF	20% 35V	D514	=>8-719-305-15	DIODE GH3F	
C530	1-102-228-00	CERAMIC 470PF	10% 500V	D515	=>8-719-931-24	DIODE EQB01-24	
C531	1-123-585-00	ELECT 470MF	10% 25V	D601	=>8-719-911-55	DIODE U05G	
C532	1-123-584-00	ELECT 22MF	10% 16V	<u>DELAY LINE</u>			
C533	1-123-329-00	ELECT 10MF	20% 25V	DL301	1-415-200-00	DELAY LINE	
C534	1-123-003-00	ELECT 1.0MF	250V	<u>VARISTOR</u>			
C535	1-130-162-00	POLYPROPYLENE 0.33MF	5% 200V	DVR601	▲ 1-800-641-00	VARISTOR	
C536	1-102-212-00	CERAMIC 820PF	10% 500V	<u>PLUG</u>			
C537	1-123-357-00	ELECT 22MF	20% 50V	DY1	● 1-506-349-21	3P PLUG	
C539	1-123-346-00	ELECT 220MF	20% 35V	DY2	● 1-506-349-21	3P PLUG	
C540	1-129-710-00	PLASTIC 0.0047MF	10% 630V	<u>FUSE</u>			
C541	1-101-038-51	CERMIC 0.001MF	500V	F601	▲ 1-532-221-11	FUSE 5A	
C542	1-123-335-00	ELECT 330MF	20% 25V	F602	▲ 1-532-570-00	FUSE, 1.25A	
C544	1-121-999-00	ELECT 10MF	160V	<u>CONNECTOR</u>			
C545	▲ 1-130-345-00	MEDIUM-VOLT 0.01MF	3% 1.2KV	H1	● 1-555-187-00	CONNECTOR, MINIATURE; 2P	
C546	▲ 1-108-961-11	POLYETHYLENE 0.15MF	10% 200V	HC21	● 1-555-187-00	CONNECTOR, MINIATURE; 2P	
C548	1-102-223-00	CERAMIC 4700PF	20% 1.6KV	<u>IC</u>			
C549	1-121-246-00	ELECT 4.7MF	160V	IC201	8-759-600-05	IC CX555A	
C550	1-102-973-00	CERAMIC 100PF	5% 50V	IC202	8-759-608-43	IC CX843	
C551	1-108-632-11	MYLAR 0.033MF	10% 100V	IC301	=>8-759-105-56	IC CX556	
C554	1-123-351-00	ELECT 0.47MF	20% 50V	IC501	8-759-105-57	IC CX557	
C555	1-123-341-00	ELECT 10MF	20% 35V				
C559	1-102-038-00	CERAMIC 0.001MF	500V				
C560	1-102-129-00	CERAMIC 0.01MF	10% 50V				
C601	▲ 1-108-745-00	METAL 0.22MF	20% 125V				
C602	▲ 1-161-748-00	CERAMIC 0.0047MF	125V				
C605	1-125-221-00	ELECT 470MF	200V				
C606	1-123-355-00	ELECT 4.7MF	20% 50V				
C607	1-121-246-00	ELECT 4.7MF	160V				
C608	1-101-810-00	CERAMIC 100PF	5% 500V				
C609	1-121-999-00	ELECT 10MF	160V				

NOTE:

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

• =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

• Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μ F, PF : μ PF

RESISTORS
• All resistors are in ohms.

COILS
• MMH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

A

A

- The components identified by **A** 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.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
IC502	8-759-113-58	IC UPC1358H		R219	1-246-505-00	CARBON 22K 1/4 W 5%		R503	1-246-473-00	CARBON 1K 1/4 W 5%		R559	1-246-475-00	CARBON 1.2K 1/4 W 5%	
IC601	A 1-231-462-00	MODULE, POWER		R220	1-246-517-00	CARBON 68K 1/4 W 5%		R504	1-246-513-00	CARBON 47K 1/4 W 5%		R563	A 1-246-475-00	CARBON 1.2K 1/4 W 5%	
COIL				R221	1-246-469-00	CARBON 680 1/4 W 5%		R505	1-246-509-00	CARBON 33K 1/4 W 5%		R565	1-246-541-00	CARBON 680K 1/4 W 5%	
L201	1-407-694-11	MICRO INDUCTOR LF-8 12UH		R222	1-246-473-00	CARBON 1K 1/4 W 5%		R506	1-246-511-00	CARBON 39K 1/4 W 5%		R585	1-246-987-11	CARBON 47 1/8 W 5% nonflammable	
L202	1-407-687-11	MICRO INDUCTOR LF-8 3.3UH		R223	1-246-473-00	CARBON 1K 1/4 W 5%		R507	1-246-513-00	CARBON 47K 1/4 W 5%		R603	1-213-163-00	METAL 47K 1 W 5% nonflammable	
L203	1-407-692-11	MICRO INDUCTOR LF-8 8.2UH		R226	1-246-481-00	CARBON 2.2K 1/4 W 5%		R508	1-246-509-00	CARBON 33K 1/4 W 5%		R605B	1-246-989-11	CARBON 82 1/8 W 5% nonflammable	
L302	1-407-699-11	MICRO INDUCTOR LF-8 33UH		R227	1-246-507-00	CARBON 27K 1/4 W 5%		R509	1-246-523-00	CARBON 120K 1/4 W 5%		R606	1-213-157-00	METAL 15K 1 W 5% nonflammable	
L303	1-408-163-00	COIL, CORE 5.6MMH		R228	1-246-483-00	CARBON 2.7K 1/4 W 5%		R510	1-246-487-00	CARBON 3.9K 1/4 W 5%		R607	1-244-896-00	CARBON 9.1K 1/2 W 5%	
L304	1-407-702-11	MICRO INDUCTOR LF-8 56UH		R229	1-246-473-00	CARBON 1K 1/4 W 5%		R511	1-246-505-00	CARBON 22K 1/4 W 5%		R608	A 1-247-037-00	CARBON 390 1/8 W 5% nonflammable	
L305	1-407-698-11	MICRO INDUCTOR LF-8 27UH		R230	1-246-520-00	CARBON 91K 1/4 W 5%		R512	1-246-481-00	CARBON 2.2K 1/4 W 5%		R609	1-244-913-00	CARBON 47K 1/2 W 5%	
L501	1-407-685-00	MICRO INDUCTOR LF-8 2.2UH		R231	1-246-497-00	CARBON 10K 1/4 W 5%		R514	1-246-512-00	CARBON 43K 1/4 W 5%		R610	1-246-525-00	CARBON 150K 1/4 W 5%	
L502	A 1-459-295-00	COIL, FERRITE (HLC)		R232	1-246-987-11	CARBON 47 1/8 W 5% nonflammable		R515	1-246-489-00	CARBON 4.7K 1/4 W 5%		VARIABLE RESISTOR			
L503	A 1-459-292-00	COIL, FERRITE		R233	1-246-449-00	CARBON 100 1/4 W 5%		R516	1-246-479-00	CARBON 1.8K 1/4 W 5%		RV201	1-226-135-00	RES, ADJ, CARBON 4.7K	
L504	1-407-501-31	MICRO INDUCTOR LF-5 5.6MMH		R234	1-246-457-00	CARBON 220 1/4 W 5%		R517	1-246-461-00	CARBON 330 1/4 W 5%		RV202	1-226-135-00	RES, ADJ, CARBON 4.7K	
L505	1-407-696-00	MICRO INDUCTOR LF-8 18UH		R235	1-246-451-00	CARBON 120 1/4 W 5%		R518	1-246-461-00	CARBON 330 1/4 W 5%		RV301B	1-222-787-12	RES, ADJ, CARBON 10K	
L506	1-407-699-11	MICRO INDUCTOR LF-8 33UH		R236	1-246-473-00	CARBON 1K 1/4 W 5%		R519	1-206-676-00	METAL 3.3K 2 W 5% nonflammable		RV302	1-222-078-00	RES, VAR, CARBON 10K	
L508	1-407-203-XX	MICRO INDUCTOR LF-5 5.6MMH		R237	1-246-987-11	CARBON 47 1/8 W 5% nonflammable		R520	1-206-745-00	METAL 6.8K 3 W 5% nonflammable		RV303	1-226-408-00	RES, VAR, CARBON 500	
L601	A 1-421-403-00	COIL, CHOKE		R239	1-246-489-00	CARBON 4.7K 1/4 W 5%		R521	1-246-467-00	CARBON 560 1/4 W 5%		RV304	1-222-518-12	RES, ADJ, CARBON 4.7K	
NEON LAMP				R240	1-246-485-00	CARBON 3.3K 1/4 W 5%		R522	1-246-501-00	CARBON 15K 1/4 W 5%		RV305	1-226-075-00	RES, VAR, CARBON 10K	
NL501	1-519-108-XX	LAMP, NEON		R241	1-246-489-00	CARBON 4.7K 1/4 W 5%		R523	1-246-455-00	CARBON 180 1/4 W 5%		RV306	1-226-075-00	RES, VAR, CARBON 10K	
NL601	1-519-108-XX	LAMP, NEON		R243	1-213-124-00	METAL 27 1 W 5%		R524	1-246-493-00	CARBON 6.8K 1/4 W 5%		RV307	1-224-552-00	RES, ADJ, CARBON 470K	
TRANSISTOR				R244	1-212-368-00	METAL 4.7 1 W 5% nonflammable		R525	1-246-495-00	CARBON 8.2K 1/4 W 5%		RV308	1-222-516-13	RES, ADJ, CARBON 470	
Q201	8-765-300-00	TRANSISTOR 2SC2009		R245	1-246-521-00	CARBON 100K 1/4 W 5%		R526	1-246-505-00	CARBON 22K 1/4 W 5%		RV501	1-226-819-00	RES, ADJ, METAL 1K	
Q202	8-729-663-47	TRANSISTOR 2SC1364		R246	1-246-875-00	CARBON 33 1/2 W 5% nonflammable		R527	1-246-457-00	CARBON 220 1/4 W 5%		RV502	1-226-217-00	RES, ADJ, CARBON 22K	
Q203	8-763-113-00	TRANSISTOR 2SC1761		R247	1-246-473-00	CARBON 1K 1/4 W 5%		R528	1-214-145-00	METAL 3.6K 1/4 W 1%		RV503B	1-226-077-00	RES, VAR, CARBON 5K	
Q204	8-729-309-06	TRANSISTOR 2SC1890A		R248	1-246-419-00	CARBON 5.6 1/4 W 5%		R529	1-214-152-00	METAL 6.8K 1/4 W 1%		RV504	1-222-518-12	RES, ADJ, CARBON 4.7K	
Q205	=>8-765-170-01	TRANSISTOR 2SC1962		R249	1-246-461-00	CARBON 330 1/4 W 5%		R530	1-246-501-00	CARBON 15K 1/4 W 5%		SWITCH			
Q206	=>8-762-020-00	TRANSISTOR 2SA835		R301	1-246-477-00	CARBON 1.5K 1/4 W 5%		R531	1-246-517-00	CARBON 68K 1/4 W 5%		S301	1-553-176-00	SWITCH, ROTARY	E-103
Q301	8-729-663-47	TRANSISTOR 2SC1364		R302	1-246-479-00	CARBON 1.8K 1/4 W 5%		R532	1-246-497-00	CARBON 10K 1/4 W 5%		FILTER			
Q501	=>8-729-663-47	TRANSISTOR 2SC1364		R306	1-246-483-00	CARBON 2.7K 1/4 W 5%		R533	1-246-489-00	CARBON 4.7K 1/4 W 5%		SF201	1-404-227-31	FILTER, SURFACE WAVE; SAWF	
Q502	8-729-213-11	TRANSISTOR 2SC2230A		R307	1-246-443-00	CARBON 56 1/4 W 5%		R534	1-213-127-00	METAL 47 1 W 5% nonflammable		SPARK GAP			
Q503	=>8-729-663-47	TRANSISTOR 2SC1364		R309	1-246-491-00	CARBON 5.6K 1/4 W 5%		R535	1-246-463-00	CARBON 390 1/4 W 5%		SG501	1-519-063-XX	SPARK GAP	
Q601	8-729-309-36	TRANSISTOR 2SA893A		R310	1-246-469-00	CARBON 680 1/4 W 5%		R537	1-212-362-00	METAL 1.5 1 W 5% nonflammable		TRANSFORMER			
Q602	8-729-383-03	TRANSISTOR MN8303		R311	1-246-505-00	CARBON 22K 1/4 W 5%		R538	1-246-475-00	CARBON 1.2K 1/4 W 5%		T201	1-404-265-00	VIFT	
RESISTOR				R312	1-246-473-00	CARBON 1K 1/4 W 5%		R539	1-246-475-00	CARBON 1.2K 1/4 W 5%		T202	1-404-229-00	VIFT 44MHZ	
R202	1-246-505-00	CARBON 22K 1/4 W 5%		R313	1-246-498-00	CARBON 11K 1/4 W 5%		R540	1-246-506-00	CARBON 24K 1/4 W 5%		T203	1-404-181-00	COIL, VIF	
R203	1-246-487-00	CARBON 3.9K 1/4 W 5%		R314	1-246-506-00	CARBON 24K 1/4 W 5%		R541	1-246-489-00	CARBON 4.7K 1/4 W 5%		T204	1-404-182-00	COIL, VIF	
R204	1-246-473-00	CARBON 1K 1/4 W 5%		R315	1-246-473-00	CARBON 1K 1/4 W 5%		R542	1-247-439-00	CARBON 8.2K 1/8 W 5%		T205	1-404-181-00	COIL, VIF	
R205	1-246-473-00	CARBON 1K 1/4 W 5%		R316	1-246-477-00	CARBON 1.5K 1/4 W 5%		R543	1-213-129-00	METAL 68 1 W 5% nonflammable		T206	1-403-360-00	COIL, SIF	
R208	1-246-481-00	CARBON 2.2K 1/4 W 5%		R317	1-246-461-00	CARBON 330 1/4 W 5%		R544	1-246-473-00	CARBON 1K 1/4 W 5%		T207	1-403-871-00	SIFT-2 COIL	
R209	1-246-497-00	CARBON 10K 1/4 W 5%		R318	1-246-461-00	CARBON 330 1/4 W 5%		R545	1-247-032-00	CARBON 68 1/8 W 5% nonflammable		T209	A 1-427-394-00	TRANSFORMER, OUTPUT	
R210	1-246-463-00	CARBON 390 1/4 W 5%		R320	1-246-469-00	CARBON 680 1/4 W 5%		R546	1-247-009-00	CARBON 470 1/4 W 5% nonflammable		T301	1-425-995-00	TRANSFORMER, INPUT	
R211	1-246-469-00	CARBON 680 1/4 W 5%		R321	1-246-461-00	CARBON 330 1/4 W 5%		R547	1-246-491-00	CARBON 5.6K 1/4 W 5%		T302	1-409-193-00	COIL 3.58MHZ TRAP	
R212	1-246-875-00	CARBON 33 1/2 W 5% nonflammable		R322	1-246-495-00	CARBON 8.2K 1/4 W 5%		R548	1-246-984-11	CARBON 22 1/8 W 5% nonflammable		T501	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE	
R214	1-246-457-00	CARBON 220 1/4 W 5%		R324	1-246-496-00	CARBON 9.1K 1/4 W 5%		R549	1-246-483-00	CARBON 2.7K 1/4 W 5%		T502	A 1-421-351-00	H.PCT	
R215	1-246-461-00	CARBON 330 1/4 W 5%		R326	1-246-457-00	CARBON 220 1/4 W 5%		R550	1-213-133-00	METAL 150 1 W 5% nonflammable		T503	A 1-439-250-00	TRANSFORMER ASSY, FLYBACK	E-101
R216	1-246-483-00	CARBON 2.7K 1/4 W 5%		R327	1-246-479-00	CARBON 1.8K 1/4 W 5%		R551	1-246-996-00	CARBON 2.2K 1/8 W 5% nonflammable					
R217	1-246-519-00	CARBON 82K 1/4 W 5%		R328	1-246-477-00	CARBON 1.5K 1/4 W 5%		R552	1-246-513-00	CARBON 47K 1/4 W 5%					
R218	1-246-473-00	CARBON 1K 1/4 W 5%		R331	1-246-487-00	CARBON 3.9K 1/4 W 5%		R553	1-246-491-00	CARBON 5.6K 1/4 W 5%					
				R332	1-246-449-00	CARBON 100 1/4 W 5%		R554	A 1-246-979-00	CARBON 1.2 1/8 W 5% nonflammable					
				R333	1-246-467-00	CARBON 560 1/4 W 5%		R555	A 1-213-143-00	METAL 1K 1 W 5% nonflammable					
				R501	1-246-453-00	CARBON 150 1/4 W 5%		R556	1-214-909-00	METAL 68K 1/2 W 1%					
				R502	1-246-537-00	CARBON 470K 1/4 W 5%		R557	1-246-491-00	CARBON 5.6K 1/4 W 5%					
								R558	1-244-898-00	CARBON 11K 1/2 W 5%					

NOTE:

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

=>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
MF : μ F, PF : μ P

RESISTORS
All resistors are in ohms. COILS
MH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:

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

=>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
MF : μ F, PF : μ P

RESISTORS
All resistors are in ohms. COILS
MH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

A M1

Ref.No.	Part No.	Description	Remark
T601	▲.1-421-357-00	TRANSFORMER, LINE FILTER	
		<u>THERMISTOR</u>	
THP601	▲.1-800-686-00	THERMISTOR	
		<u>CRYSTAL</u>	
X301	1-527-396-00	CRYSTAL, OSC	

	●.1-602-504-00	M1 BOARD	E-5
	●.1-555-338-00	CONNECTOR, 5P	
	●.1-555-356-00	CONNECTOR, 6P	
		<u>CAPACITOR</u>	
C2201	1-123-353-00	CAP, ELECT 2.2MF 20% 50V	
C2202	1-123-352-00	CAP, ELECT 1MF 20% 50V	
		<u>DIODE</u>	
D2201	8-719-106-34	DIODE SR632D	
D2202	8-719-106-34	DIODE SR632D	
D2203	8-719-106-34	DIODE SR632D	
D2204	8-719-106-34	DIODE SR632D	
D2205	8-719-106-34	DIODE SR632D	
D2206	8-719-812-41	DIODE TLR124	
D2207	8-719-812-42	DIODE TLY124	
D2208	8-719-812-43	DIODE TLG124	
		<u>IC</u>	
IC2201	8-759-619-03	IC M51903L	
		<u>RESISTOR</u>	
R2200	1-246-497-00	CARBON 10K 1/4 W 5%	
R2201	1-246-471-00	CARBON 820 1/4 W 5%	
R2202	1-246-471-00	CARBON 820 1/4 W 5%	
R2203	1-246-471-00	CARBON 820 1/4 W 5%	
R2204	1-246-471-00	CARBON 820 1/4 W 5%	
R2205	1-246-471-00	CARBON 820 1/4 W 5%	
R2206	1-246-449-00	CARBON 100 1/4 W 5%	
R2207	1-246-485-00	CARBON 3.3K 1/4 W 5%	
		<u>SWITCH</u>	
S2201	1-552-656-00	SWITCH, SLIDE	
S2202	1-552-656-00	SWITCH, SLIDE	
S2203	1-552-774-00	SWITCH, PUSHBUTTON	
S2204	1-552-774-00	SWITCH, PUSHBUTTON	
S2205	1-552-774-00	SWITCH, PUSHBUTTON	
S2206	1-552-437-00	SWITCH, LEVER	

NOTE:

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

• =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

• Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μ F, PF : μ F

RESISTORS
• All resistors are in ohms.

COILS
• MMH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ACCESSORIES AND PACKING MATERIALS		
Part No.	Description	Remark
Y-2063-103-0	ANTENNA, LOOP (AN-15)	E-56
Y-2201-611-0	ANTENNA, TELESCOPIC DIPOLE (AN-16)	E-6
1-504-034-32	EARPHONE, MAGNETIC (ME-208)	
1-513-379-00	CONNECTOR, ANTENNA (EAC-25)	E-57
3-701-352-00	BAG, POLYETHYLENE	
3-701-628-00	BAG, POLYETHYLENE	
4-316-037-00	BAG, POLYETHYLENE	
4-335-355-00	LABEL, INSTRUCTION PRESET	
4-344-022-00	LABEL (B), INDICATOR	
4-344-040-01	CARTON	
4-344-036-01	CUSHION (LEFT UPPER)	
4-344-037-01	CUSHION (RIGHT UPPER)	
4-344-038-01	CUSHION (LEFT LOWER)	
4-344-039-01	CUSHION (RIGHT LOWER)	
4-495-954-31	MANUAL, INSTRUCTION	

NOTE:

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

• =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

• Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

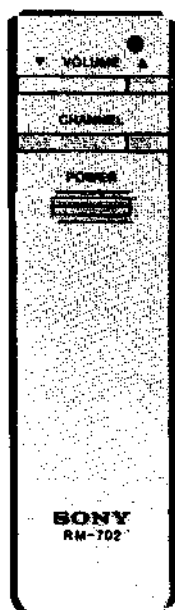
CAPACITORS
• MF : μ F, PF : μ F

RESISTORS
• All resistors are in ohms.

COILS
• MMH : mH, UH : μ H

Note: Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

RM-702



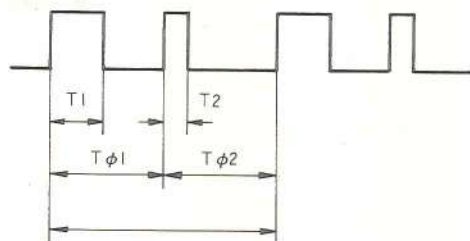
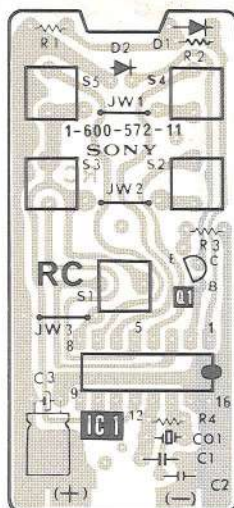
REMOTE COMMANDER

SPECIFICATIONS

- Control System:** Infrared control
Semiconductors: 1 transistor, 2 diodes & 1 IC
Power Requirements: 3V dc, batteries size "AA" (IEC designation R6)
2 pcs.
Dimensions: Approx. 36 (w) x 21.5 (h) x 133 (d) mm
1³/₈ (w) x 7⁷/₈ (h) x 5¹/₄ (d) inches
Net Weight: 80g (3 oz) including batteries
Accessories supplied: Battery size "AA" (IEC designation R6)

1. MOUNTING DIAGRAM

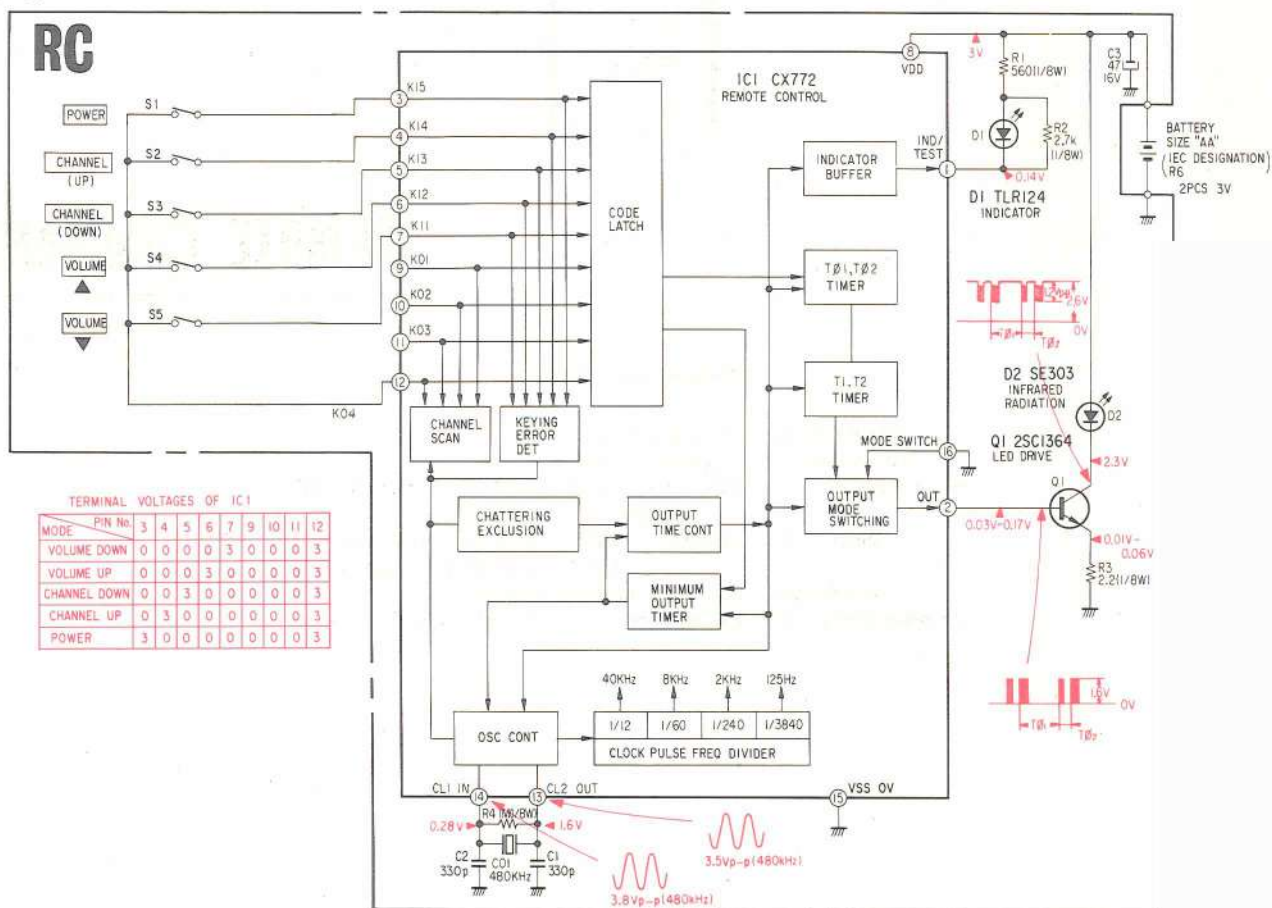
– Conductor Side –



$\begin{matrix} T \phi 1 \\ T \phi 2 \end{matrix}$	3ms	5.5ms	8.5ms	13ms	22ms
13ms	SND/DN	SND/UP	CH/UP	CH/DN	Power

- $T_1 = 1.5\text{ms}$
- $T_2 = 0.75\text{ms}$
- Carrier (f_0) = 40kHz

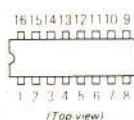
2. SCHEMATIC DIAGRAM



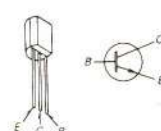
Note:

- All capacitors are in μF unless otherwise noted. 50WV or less are not indicated except for electrolytics. $p : \mu\mu\text{F}$
- All resistors are in ohms, $\frac{1}{8}\text{W}$.
 $k\Omega : 1000\Omega$, $M\Omega : 1000k\Omega$
- : panel designation.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 20,000-ohm-per-volt VOM.
- Voltage variations may be noted due to normal production tolerances.

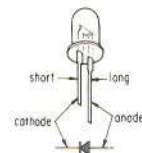
CX772



2SC1364



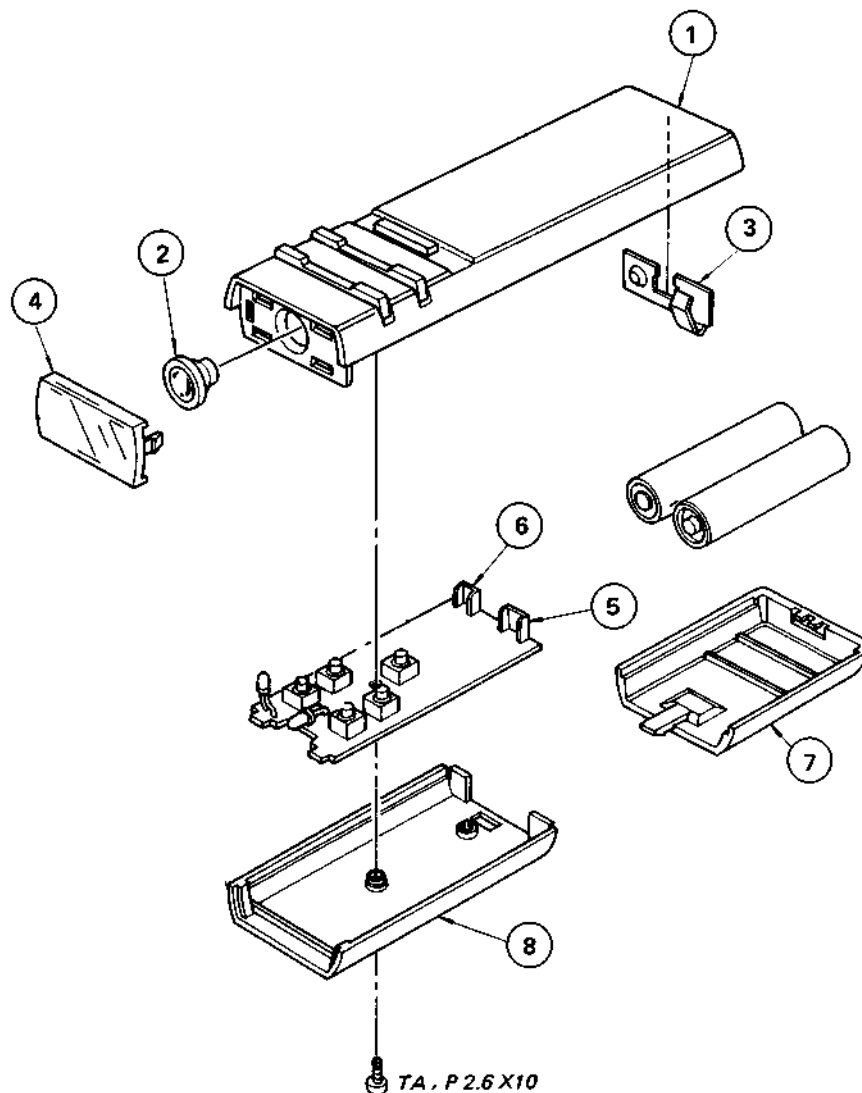
SE303A



TLR124



3. EXPLODED VIEW



No.	Part No.	Description
1	X-4338-001-6	CASE (UPPER) ASSY
2	2-249-913-00	MIRROR, REFLECTION
3	4-334-234-00	TERMINAL (C), BATTERY
4	4-338-005-00	PLATE, FROSTED

Remark	No.	Part No.	Description	Remark
	5	4-338-006-00	TERMINAL (+), BATTERY	
	6	4-338-007-00	TERMINAL (-), BATTERY	
	7	4-338-008-00	COVER, BATTERY CASE	
	8	4-338-009-00	CASE (LOWER)	

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- As to the part numbered with E-, refer to the electrical parts list.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

Note: Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

RC

Ref.No.	Part No.	Description	Remark
	1-600-572-00	RC BOARD	
<u>CAPACITOR</u>			
C1	1-102-832-00	CAP, CERAMIC 330PF	10% 50V
C2	1-102-832-00	CAP, CERAMIC 330PF	10% 50V
C3	1-123-319-00	CAP, ELECT 47MF	20% 16V
<u>OSCILLATOR</u>			
C01	1-527-476-00	OSCILLATOR, CERAMIC	
<u>DIODE</u>			
D1	8-719-812-41	DIODE TLR124	
D2	8-719-103-03	DIODE SE303A	
<u>IC</u>			
IC1	8-759-607-72	IC CX772	
<u>TRANSISTOR</u>			
Q1	8-729-663-47	TRANSISTOR 2SC1364	
<u>RESISTOR</u>			
R1	1-246-780-00	RES, CARBON 560	1/8 W 5%
R2	1-246-780-00	RES, CARBON 2.7K	1/8 W 5%
R3	1-246-751-00	RES, CARBON 2.2	1/8 W 5%
R4	1-246-053-00	RES, CARBON 1M	1/8 W 5%
<u>SWITCH</u>			
S1	1-552-868-21	SWITCH, PUSHBUTTON	
S2	1-552-868-21	SWITCH, PUSHBUTTON	
S3	1-552-868-21	SWITCH, PUSHBUTTON	
S4	1-552-868-21	SWITCH, PUSHBUTTON	
S5	1-552-868-21	SWITCH, PUSHBUTTON	

NOTE:

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

• =>: Due to standardization, interchangeable-replacements may be substituted for parts specified in the diagrams.

• Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μ F, PF : μ pF

RESISTORS
• All resistors are in ohms.

COILS
• MMH : mH, OH : μ H

Note: Les composants identifiés par une trame et une marque **A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.**

STANDARD PARTS LIST

*** CAPACITOR ELECT ***

uF	6.3V	10V	16V	25V	35V	50V	100V	160V	250V	350V
	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
0.47						1-121-726				
1.0						391	1-123-249	1-123-252	1-123-003	1-121-168
2.2						450	250	026		1-123-028
3.3				1-121-392		393	1-121-995		004	006
4.7				395		396	1-123-255	1-121-246	1-121-759	007
10			1-121-651	398		738	1-121-126	999	1-123-254	008
22			479	480	1-121-662	152	996			022
33			403	404	652	405	997	1-123-253		
47		1-121-352	409	410	653	411	1-123-251	919		
100		414	415	416	357	417	084			
220	1-121-419	420	421	422	261	423				
330	751	805	521	654	655	656				
470	424	425	426	733	361	810				
1000		736	245	657	388	1-123-061				
2200	658	659	660	1-123-067	984					
3300	661	1-121-075	1-123-071							

*** CAPACITOR ***

MYLAR			
uF	50V	100V	200V
	10%	10%	10%
0.001	1-108-227	1-108-365	1-108-403
0.0012	351	365	410
0.0015	228	367	411
0.0018	352	368	412
0.0022	230	369	413
0.0027	353	370	414
0.0033	232	371	415
0.0039	354	372	416
0.0047	234	373	417
0.0056	355	374	418
0.0063	237	375	419
0.0082	356	376	420
0.01	239	377	421
0.012	357	378	422
0.015	240	379	423
0.018	358	380	424
0.022	242	381	425
0.027	359	382	426
0.033	244	383	427
0.039	360	384	428
0.047	246	385	429
0.056	361	386	430
0.068	249	387	431
0.082	362	388	432
0.1	251	389	433
0.12	363	390	434
0.15	252	391	435
0.18	364	392	436
0.22	254	393	437
0.27	854		
0.33	855		
0.39	856		
0.47	857		

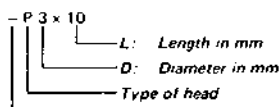
CERAMIC					
	pF	Part No.		pF	Part No.
	0.5	1-101-837		100	1-102-973
	0.75	586		110	815
	1.0	1-102-934		120	816
	1.5	1-101-576		130	1-101-081
	2.0	1-102-935		150	361
S	3	936	S	160	367
L	4	937	L	180	1-102-976
	5	942		200	977
	6	943		220	978
	7	944		240	979
	8	945		270	980
	9	946		300	981
	10	947		330	820
	11	948		360	821
	12	949		390	822
	13	950		430	823
	15	951		470	824
	16	952		510	1-101-059
	18	953			
	20	959		560	1-102-115
	22	959		630	116
	24	960		820	117
	27	961		1000	074
	30	962		1200	118
	33	963		1500	119
	36	964		1800	120
	39	965		2200	121
	43	966		2700	122
	47	1-101-880		3300	123
	51	882		3900	124
	56	884		4700	125
	62	886		5600	126
	68	888		6800	127
	75	890		8200	128
	82	1-102-971		10000	129
	91	972			

1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00

HARDWARE NOMENCLATURE

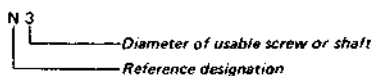
Screw:



Indicated slotted-head only.

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

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
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		brazer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
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
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation

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SUPPLEMENT

No. 2
November, 1976

Subject: Replacement UHF/VHF Tuner and Production Changes

This supplement updates the service manual to include production changes.
File this supplement with the service manual.

1. REPLACEMENT UHF/VHF TUNER

The BT-851 tuner is used as a replacement in KV-2000E receivers.

1-1. CHANGED PARTS LIST

Note: When replacing UHF/VHF tuner, change values of R128, R133 and C128 simultaneously.

Ref. No.	Former Part No./Description	New Part No./Description
	1-463-190-00 ④ UHF/VHF tuner, 176K	1-463-172-00 ① UHF/VHF tuner, BT-851
R128	300Ω ¼W carbon	390Ω ¼W carbon
R133	560Ω ¼W carbon	330Ω ¼W carbon
C128	1-101-884-11 ⑤ 56 pF 50V ceramic	

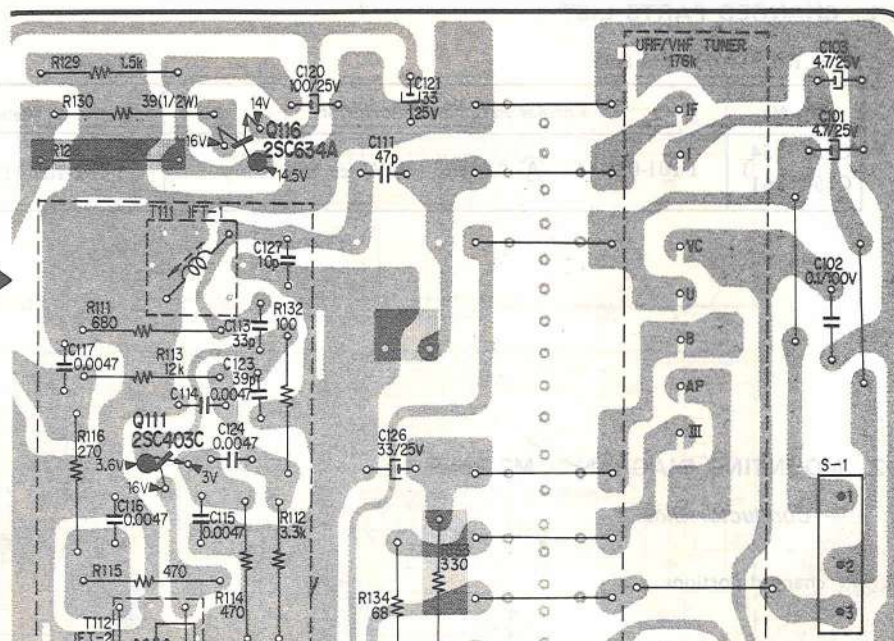
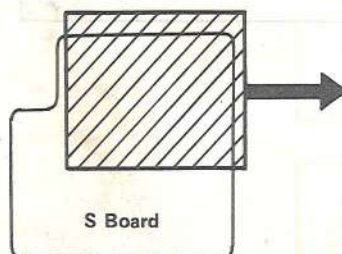
1-2. INTERCHANGEABILITY

Former and new UHF/VHF tuners are interchangeable.

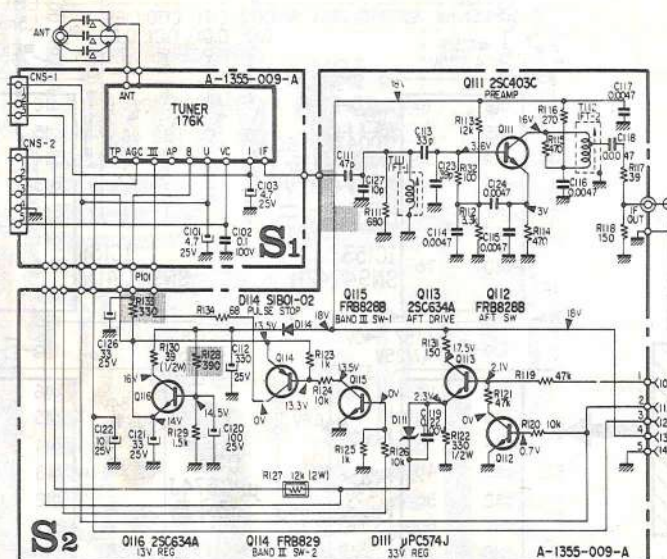
1-3. MOUNTING DIAGRAM - S Board -

— Conductor Side —

: changed portions.

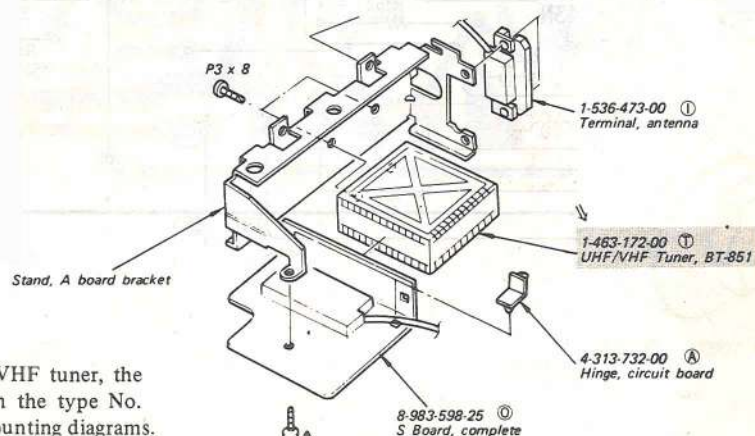


1-4. SCHEMATIC DIAGRAM



1-5. EXPLODED VIEW

On page 42



⇒: Due to the replacement UHF/VHF tuner, the type BT-851 is different from the type No. shown in the schematic and mounting diagrams.

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