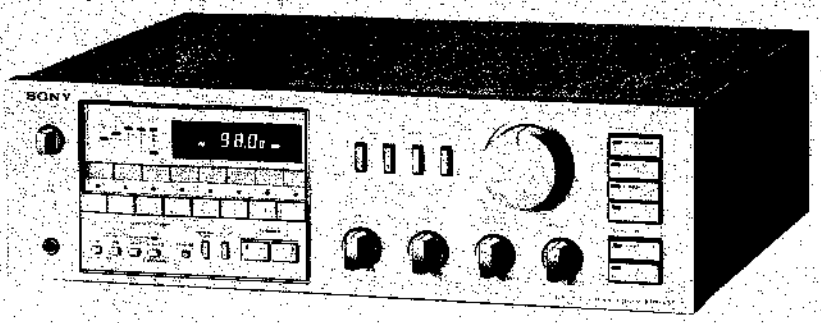
STR-V55

659

US Model
Canadian Model
AEP Model
UK Model
E Model



WARNING!!

THIS SET USES THE SWITCHING-TYPE POWER-SUPPLY CIRCUIT, WHICH IS DIRECTLY CONNECTED TO THE AC POWER LINE. AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD.

FM-STEREO/FM-AM RECEIVER

QUARTZ

SPECIFICATIONS

GENERAL

Power Requirements: 120 V ac, 60 Hz (US, Canadian model)
220 V ac, 50/60 Hz (AEP model)
240 V ac, 50/60 Hz (UK model)
110, 120, 220, 240 V ac adjustable, 50/60 Hz (E model)

Power Consumption: 125 W (US model)
195 W (Canadian model)
240 W (AEP, E model)
300 W (UK model)

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME 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 DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

AC Outlet: (US, Canadian, E model) 1 switched, 100 W
1 unswitched, 300 W

Dimensions: US, AEP, UK, E model:
Approx. 430 (w) x 135 (h) x 380 (d) mm
17 (w) x 5 ⅜ (h) x 14 ⅞ (d) inches
Canadian model:
Approx. 460 (w) x 135 (h) x 380 (d) mm
18 (w) x 5 ⅜ (h) x 14 ⅞ (d) inches
including projecting parts and controls

Weight: US, AEP, UK, E model:
Approx. 6.8 kg, 15 lb (net)
Approx. 8.0 kg, 17 lb 11 oz (in shipping carton)
Canadian model:
Approx. 7.6 kg, 16 lb 13 oz (net)
Approx. 8.8 kg, 19 lb 7 oz (in shipping carton)

FM TUNER SECTION

Tuning Range: 87.5 – 107.5 MHz (US, Canadian model)
87.5 – 108.0 MHz (AEP, UK, E model)

Antenna Terminals: 300 Ω balanced, 75 Ω unbalanced

– Continued on page 2 –

SONY®
SERVICE MANUAL

Intermediate Frequency: 10.7 MHz

AEP, UK model:

	At 40 kHz deviation
Sensitivity:	at 46 dB quieting 18.3 dBf, 4.5 μV (13 dB) (mono) 38.3 dBf, 45 μV (33 dB) (stereo)
Usable Sensitivity:	11.2 dBf, 2.0 μV (6 dB) (IHF) 9.8 dBf, 1.7 μV (4.5 dB) (S/N 26 dB)
Signal-to-Noise Ratio:	72 dB (mono), 66 dB (stereo)
Harmonic Distortion:	
at 100 Hz	0.1 % (mono), 0.25 % (stereo)
at 1 kHz	0.1 % (mono), 0.2 % (stereo)
at 6 kHz	0.15 % (mono), 0.2 % (stereo)

US, Canadian, E model:

	At 75 kHz deviation
Sensitivity:	at 50 dB quieting 16.1 dBf, 3.5 μV (10.8 dB) (mono) (US, Canadian model) 18.3 dBf, 4.5 μV (13 dB) (mono) (E model) 36.1 dBf, 35 μV (30.8 dB) (stereo) (US, Canadian model) 38.3 dBf, 45 μV (33 dB) (stereo) (E model)
Usable Sensitivity:	10.3 dBf, 1.8 μV (5.1 dB) (IHF) (US, Canadian model) 11.2 dBf, 2.0 μV (6 dB) (IHF) (E model)
Signal-to-Noise Ratio:	75 dB (mono), 70 dB (stereo) (US, Canadian model) 77 dB (mono), 71 dB (stereo) (E model)
Harmonic Distortion:	
at 100 Hz	0.1 % (mono), 0.2 % (stereo)
at 1 kHz	0.1 % (mono), 0.15 % (stereo)
at 6 kHz	0.15 % (mono), 0.2 % (stereo)

Separation: 40 dB at 100 Hz, 50 dB at 1 kHz, 35 dB at 10 kHz (AEP, UK, E model)
40 dB at 100 Hz, 45 dB at 1 kHz, 35 dB at 10 kHz (US, Canadian model)

Frequency Response: 40 Hz – 12.5 kHz ± 0.3 dB (DIN)
30 Hz – 15 kHz $^{+0.5}_{-1.5}$ dB

Selectivity: 80 dB (300 kHz) (AEP, UK model)
80 dB (400 kHz) (US, Canadian model)
85 dB (400 kHz) (E model)

Capture Ratio: 1.0 dB (US, Canadian, E model)
1.5 dB (AEP, UK, E model)

AM Suppression Ratio: 60 dB (AEP, UK, E model)
50 dB (US, Canadian model)

Image Response Ratio: 85 dB

IF Response Ratio: 100 dB

Spurious Response Ratio: 95 dB

RF Intermodulation: 78 dB (IHF), 93 dB (2.4 MHz) (AEP, UK, E model)
65 dB (US, Canadian model)

Sub-carrier Product Ratio: 55 dB (AEP, UK, E model)
40 dB (US, Canadian model)

Muting Threshold: Approx. 25.2 dBf, 10 μV (20 dB) (AEP, UK, E model)
Approx. 20 dBf, 5.5 μV (14.8 dB) (US, Canadian model)

Auto Tuning Level: LOW: 30 dBf, MID: 40 dBf, HIGH: 55 dBf (AEP, UK, E model)
LOW: 25 dBf, MID: 40 dBf, HIGH: 60dBf (US, Canadian model)

AM TUNER SECTION

Tuning Range: AEP, UK model:
522 kHz – 1602 kHz (9 kHz steps)
US, Canadian, E model:
522 kHz – 1602 kHz (9 kHz steps)
530 kHz – 1610 kHz (10 kHz steps)

Antenna: Ferrite-rod antenna, External antenna terminal

Intermediate Frequency: 450 kHz

Usable Sensitivity: 250 μV/m (48 dB/m), ferrite-rod antenna (AEP, UK, E model)
300 μV/m (49.5 dB/m) (US, Canadian model)
100 μV (40 dB), external antenna, at 1,000 kHz

Signal-to-Noise Ratio: 52 dB at 50 mV/m (34 dB/m) (AEP, UK, E model)
50 dB at 50 mV/m (34 dB/m) (US, Canadian model)

Harmonic Distortion: 0.5 % at 50 mV/m (34 dB/m), 400 Hz

Selectivity: 40 dB at 9 kHz (AEP, UK, E model)
40 dB at 10 kHz (US, Canadian model)

AMPLIFIER SECTION

Continuous RMS Power Output: (less than 0.02% THD, both channels driven simultaneously)
At 1 kHz
55 + 55 W (8 Ω)
At 20 Hz – 20 kHz
55 + 55 W (8 Ω)
According to DIN 45500
55 + 55 W (8 Ω)

Power Bandwidth (IHF): 5 Hz – 35 kHz (AEP, UK, E model)

Total Harmonic Distortion: US, Canadian model:
Less than 0.006 % at 2 V output, (20 Hz – 20 kHz)
AEP, UK, E model:
Less than 0.02 % at rated output

Intermodulation (IM) Distortion: (60Hz : 7kHz = 4 : 1)
Less than 0.02 % from 250 mV to rated output (US, Canadian model)
Less than 0.02 % at rated output (AEP, UK, E model)

Frequency Response: Power Amp Section:
dc –40 kHz $^{+0}_{-1}$ dB
Preamp Section:
PHONO: RIAA equalization curve ± 0.5 dB
AUX, TAPE1, 2: 5 Hz – 200 kHz $^{+0}_{-1}$ dB

SERVICING NOTES

INSTALLATION PRECAUTION

The epoxy resin used in a light-emitting diode is a kind of thermosetting resin, but as a light-emitting must let the light pass through, its heat resistance cannot be raised by mixing silica or glass fiber.
Thus, the resin used in the light-emitting diodes is usually weak against heat. As the tensile strength is not so strong while it is heated, note the following precautions during soldering.

1) Perform the soldering within 5 seconds with a soldering iron below 25W. The clearance between the end of the diode's body and the circuit board should be more than 3 mm ($^1/_8$") (Fig. 1).

2) When changing the position of the light-emitting diode, do not move it right after soldering, but move it after it naturally cools off.

3) When bending the lead terminals, be sure to bend the point 2 mm ($^3/_{32}$") farther from the end of the diode's body. At this time, fix the foot of the terminal with a round nose plier and be sure that no force is applied to the diode's body. If not, a crack may occur (Fig. 2).

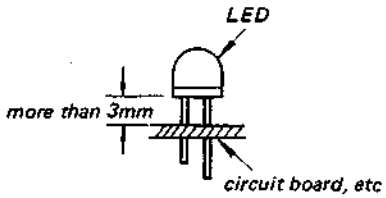


Fig. 1

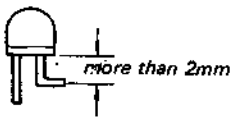


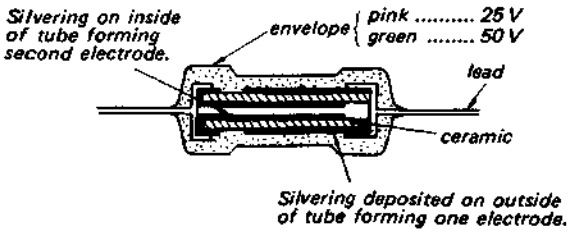
Fig. 2

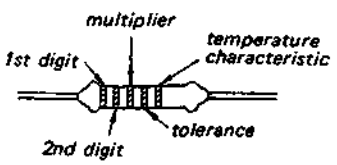
THE CERAMIC CAPACITORS

This set uses tube-type ceramic capacitors whose shape is identical with the carbon resistors, and be careful not to use resistors in place of capacitors in repairing.

Disc-type ceramic capacitors can be used for replacing those originally used in the set.

Two kinds of drilled holes are provided in some patterns for mounting the tube-type and disc-type ceramic capacitors. Use appropriate holes where applicable.

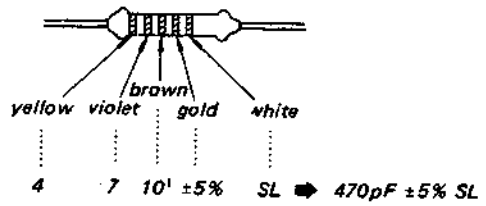




COLOR CODE (in pF)

Color	1st or 2nd Digit	Multiplier	Tolerance	Temperature characteristic
brown	1	10^1		Y
red	2	10^2		D
orange	3	10^3		
yellow	4	10^4		RH
green	5			
blue	6			
violet	7			UJ
gray	8		±30%	X
white	9			SL
black	0	10^0	±20%	CH
gold		10^{-1}	± 5%	V
silver		10^{-2}	±10%	B

Example:



Damping Factor: 50 at 1 kHz, 8 Ω
Dynamic Headroom: 0.5 dB
Residual Noise: Less than 0.23 mV at 8 Ω (AEP, UK, E model)

Inputs:

	Sensitivity	Impedance	S/N	Weighting network
PHONO MM	2.5 mV (−50 dB)	50 kΩ	85 dB 78 dB*	A
PHONO MC	0.25 mV (−70 dB)	100 Ω	70 dB 68 dB*	A
AUX, TAPE 1, 2	150 mV (−13.5 dB)	50 kΩ	98 dB 86 dB*	A
POWER IN (US, Canadian model)	1.0 V (2.95 dB)	50 kΩ	116 dB	A

* '78 IHF, Measured with rated output power into 8 Ω loads (both channels driven simultaneously) at 1 kHz

Outputs:

REC OUT 1, 2	Voltage 150 mV Impedance 10 kΩ
HEADPHONES	Accepts low impedance headphones
SPEAKERS	8 – 16 Ω speakers are suitable
PRE OUT (US, Canadian model)	Voltage 1.5 V (5.5 dB) Impedance 2 kΩ

Measured with rated input, FM 30 % modulation

Frequency Response: (US, Canadian model) PHONO: RIAA equalization curve ± 0.5 dB
AUX, TAPE 1, 2: 5 Hz – 50 kHz $^{+0}_{-1}$ dB

Tone Controls: BASS: ± 10 dB at 50 Hz
TREBLE: ± 10 dB at 20 kHz

Loudness Control: (att. 30dB) +10 dB at 50 Hz, +3 dB at 10 kHz

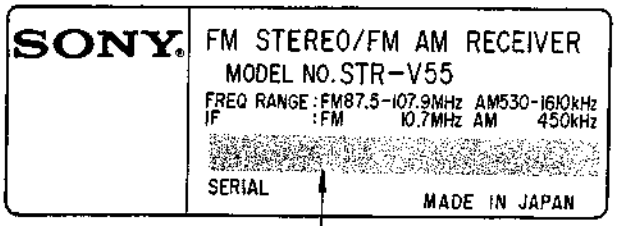
Filter: LOW: 12 dB/octave attenuation below 15 Hz

Audio Muting: Att. 20 dB

MODEL IDENTIFICATION

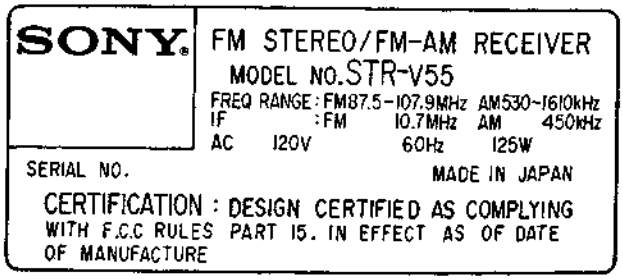
– Specification Lebel –

Canadian, E model

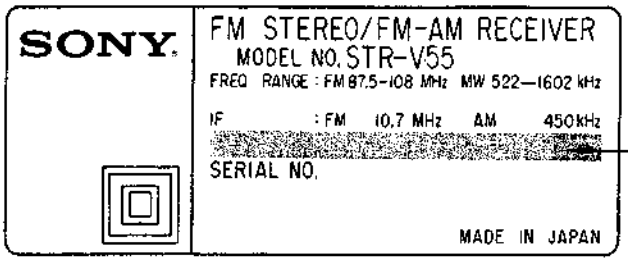


CANADIAN Model: *AC 120V~* *60Hz* *195W*
E Model: *AC 110, 120, 220, 240V~* *50/60Hz* *240W*

US model



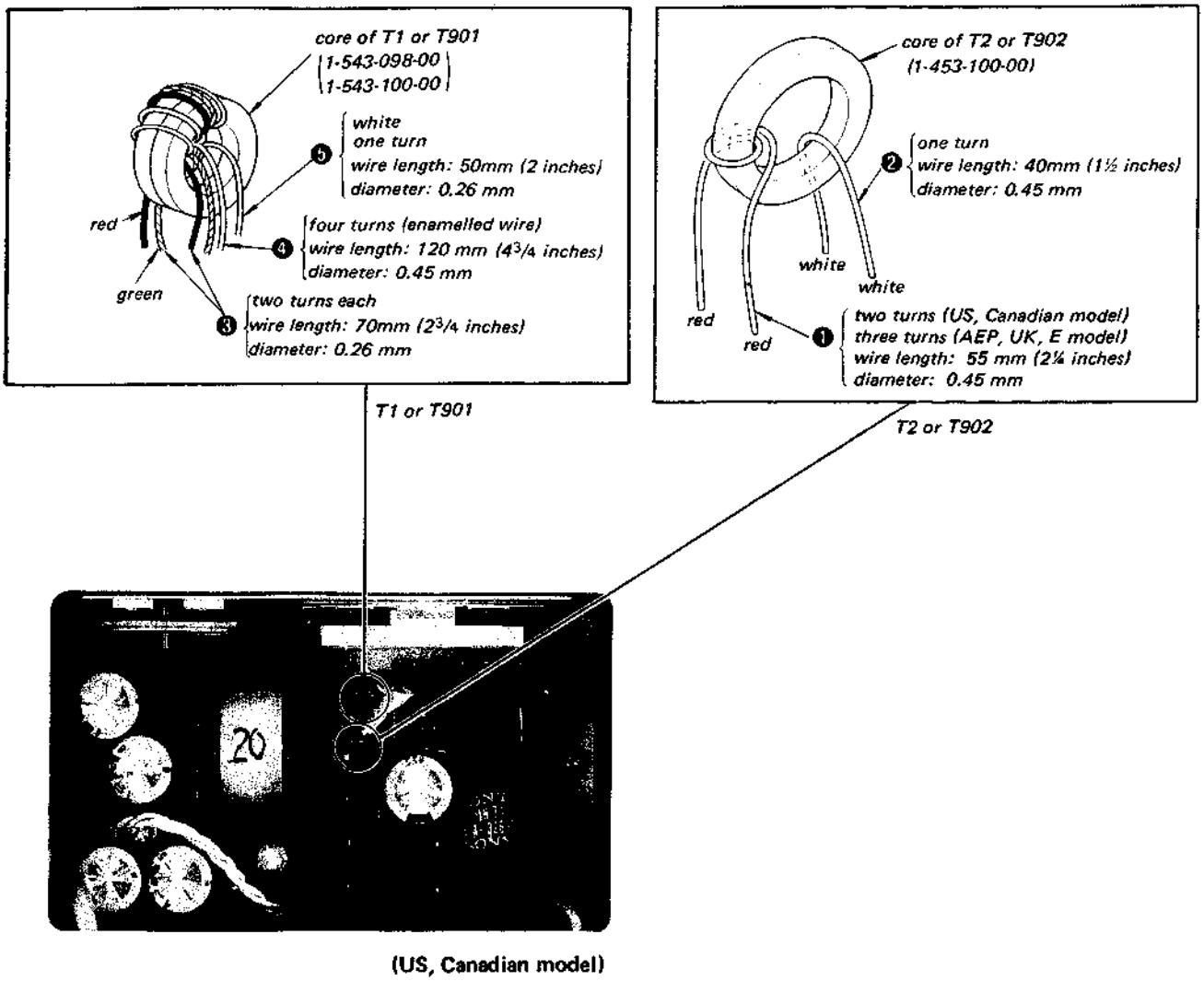
AEP, UK model



AEP Model: *AC 220V~* *50/60Hz* *240W*
UK Model: *AC 240V~* *50/60Hz* *300W*

REPLACEMENT OF THE TRANSFORMES IN THE INVERTER CIRCUIT

The lead wire arrangement for each of T1 (US, Canadian model) or T901 (AEP, UK, E model) and T2 (US, Canadian model) or T902 (AEP, UK, E model) in the inverter circuit are shown below.
As the repair parts, T1 (US, Canadian model) or T901 (AEP, UK, E model) and T2 (US, Canadian model) or T902 (AEP, UK, E model) are formed by only iron core. Thus, if the coils are defective, arrange a new transformers as shown below. Note that the lead lengths must be exact. Also wind the coil carefully.



(US, Canadian model)

Handling Precautions for MOS ICs (IC402, IC405, IC406) (US, Canadian model) (IC401, IC405) (AEP, UK, E model)

Generally, the insulation resistance of the oxide layer in MOS IC structures is very high, and the oxide layer is very thin. Because of this, it is possible that the static voltages usually present on clothes and the human body will be enough to generate a potential difference across the insulator, high enough to cause a breakdown of the insulating layer.

The following precautions should be taken while handling these ICs.

(Particular care should be taken under conditions of low humidity.)

Precautions in Replacing MOS ICs

1. Store new ICs by inserting them into a urethane-polyester cushion (which is somewhat conductive), or wrapping it in aluminum foil, so that all the pins are at the same potential.
   (The ICs should be stored in that manner until mounted on the circuit board.)

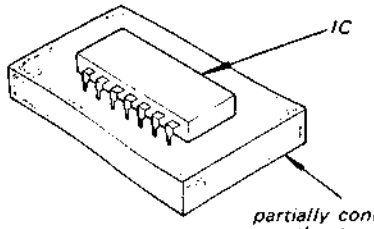


Fig. A

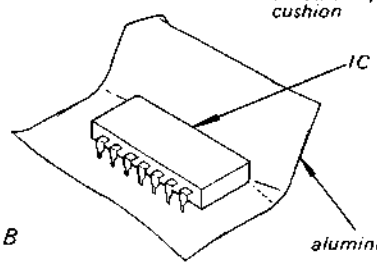


Fig. B

2. Check the soldering iron for possible power-line leakage current. Make sure that there is no leakage path by connecting an ohmmeter to the tip of the soldering iron and the plug as shown in Fig. C. If there is a leakage path, use some other soldering iron.

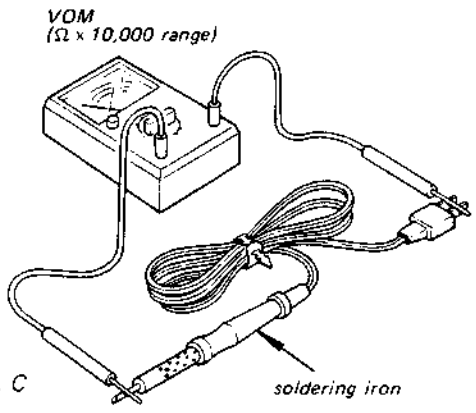


Fig. C

3. Equalize any potential difference between the clothes, the tools in use, the work bench, the set being worked on, and the packaged IC by touching them all in succession with the hands or a conductive wire or tool.
4. The following are effective methods for handling ICs that remove the potential difference across the oxide layer.
   - Use a paper clip modified by soldering in a wire braid insert.

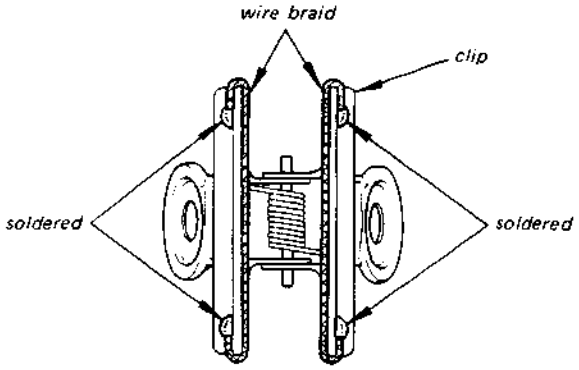


Fig. D Make sure that there is no solder on the inside.

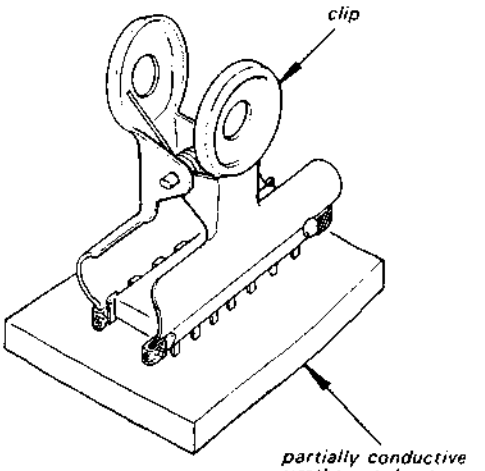


Fig. E

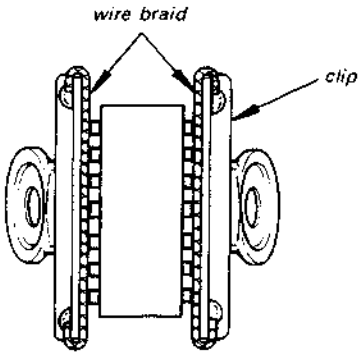


Fig. F Make sure that all the pins are in contact with the wire braid (all the pins will then be at the same potential.).

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- Take a short length of fine bare wire and wind it around the IC so that it shorts all the pins of the IC, while it is still in the urethane-polyester cushion or aluminum foil. This ensures that all the pins are at the same potential.

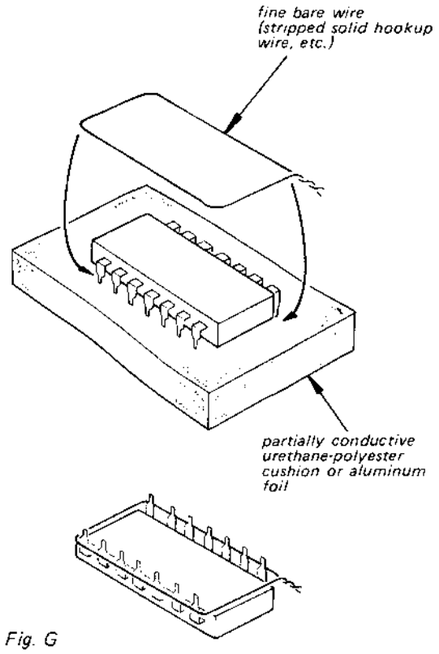


Fig. G

- When it is necessary to handle the IC with the fingers, do not touch any pin, and hold the IC at the ends of its plastic-package case as shown in Fig. H.

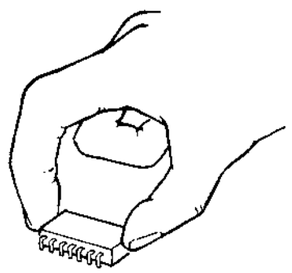


Fig. H

5. Method of Mounting
Insert the IC while holding it with the modified clip, and solder all the pins with the clip still shorting the pins. (Similarly, solder all the pins while the bare shorting wire is still wound around them.). Remove the clip or the bare shorting wire only after all the pins have been soldered.

Precaution while Checking C-MOS ICs

The C-MOS ICs (Complementary MOS) are MOS ICs that have their output sections made up of N-channel and P-channel push-pull stages to increase their speed of operation. If the output terminal of these ICs comes into contact with B+ or B– voltage, then the FET which is ON at that time will either become shorted or open.

This is valid for all the output sections that are connected together by the interconnections. Even the circuits that are physically separated (and not on the same board) can be destroyed simultaneously.

Example:

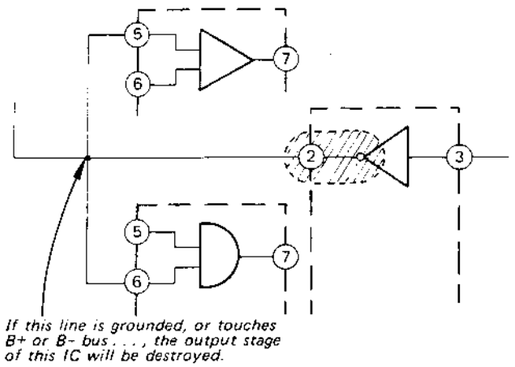
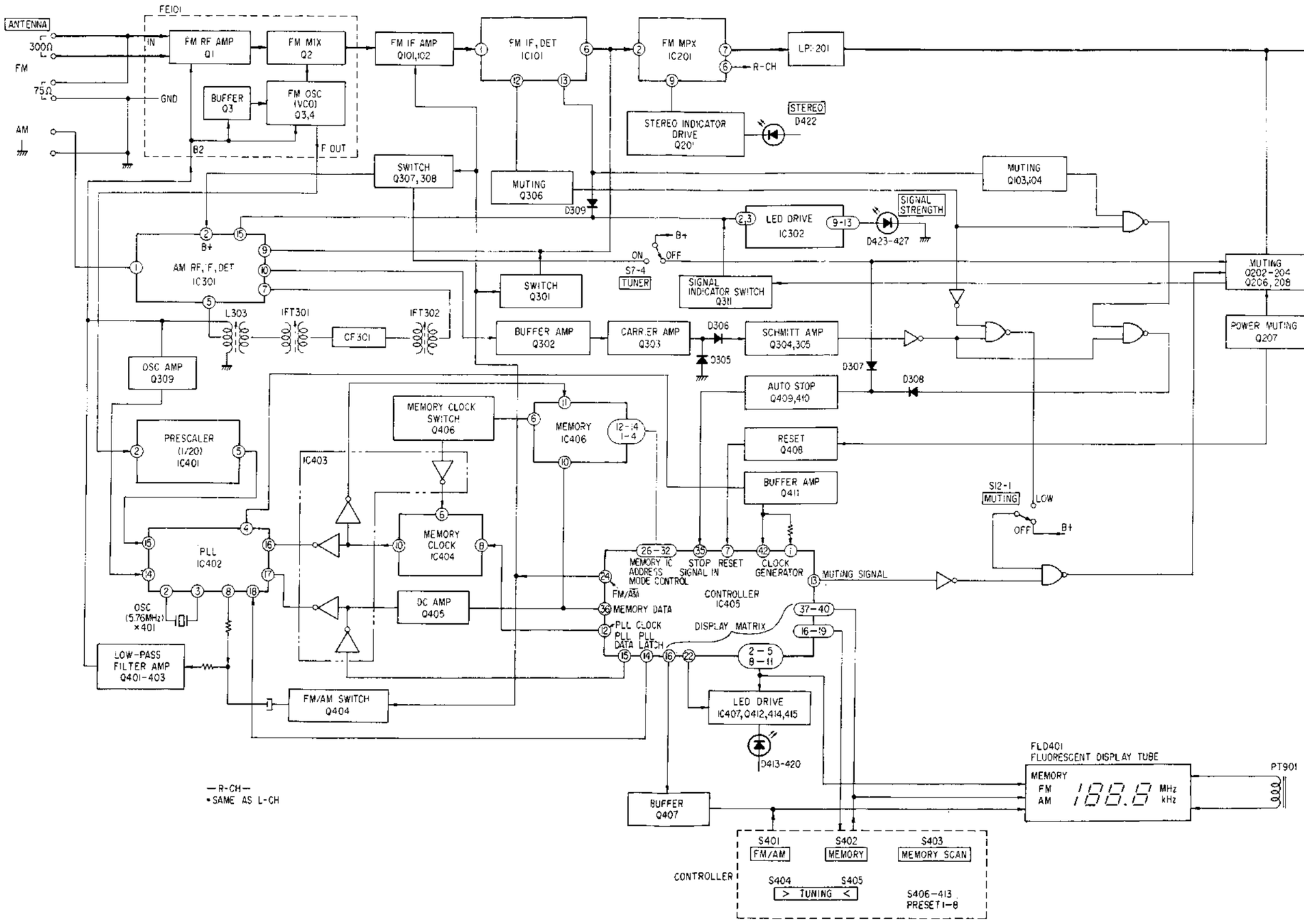


Fig. I

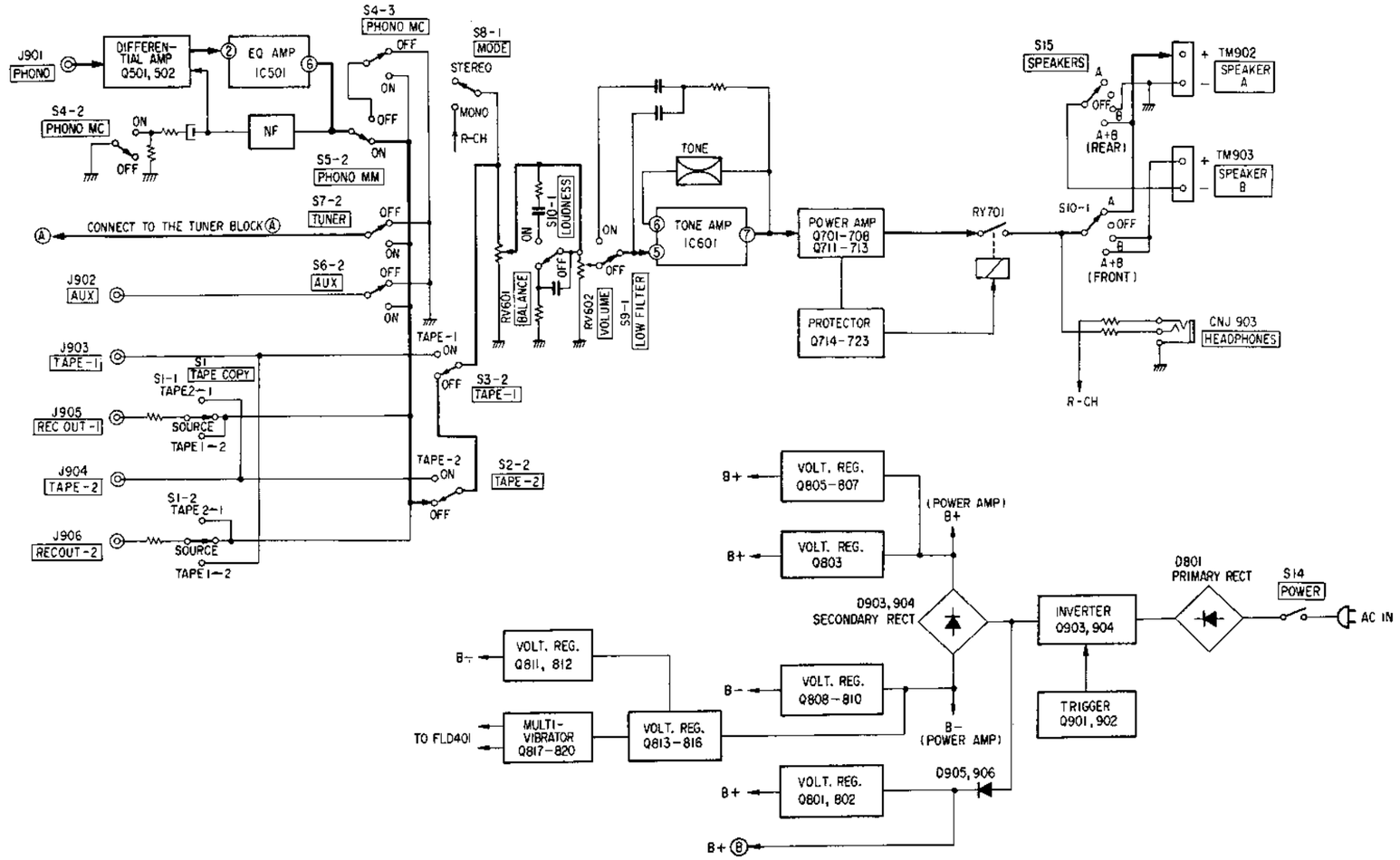
MEMO

1-1. BLOCK DIAGRAMS

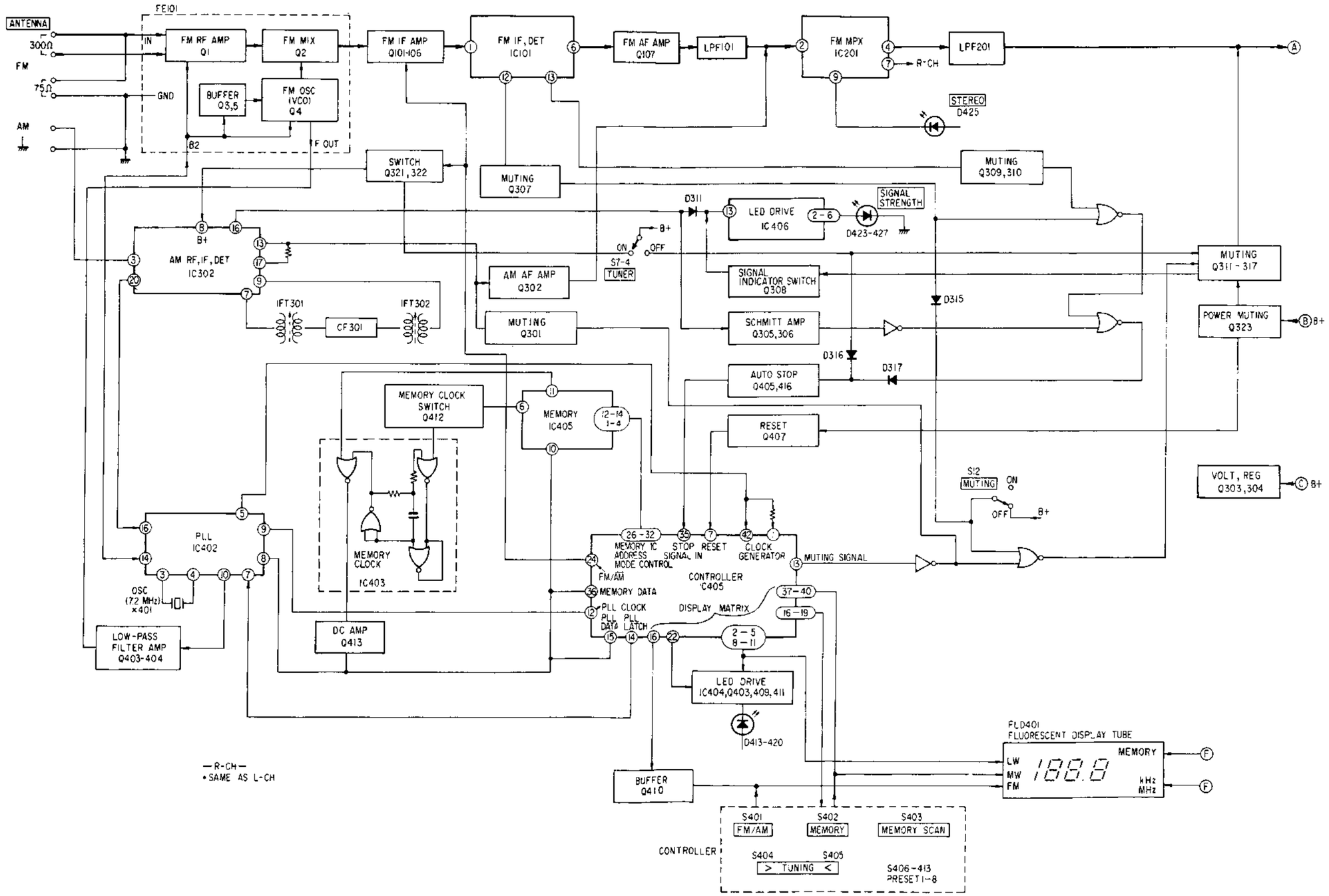
(1) Tuner Section (US, Canadian model)



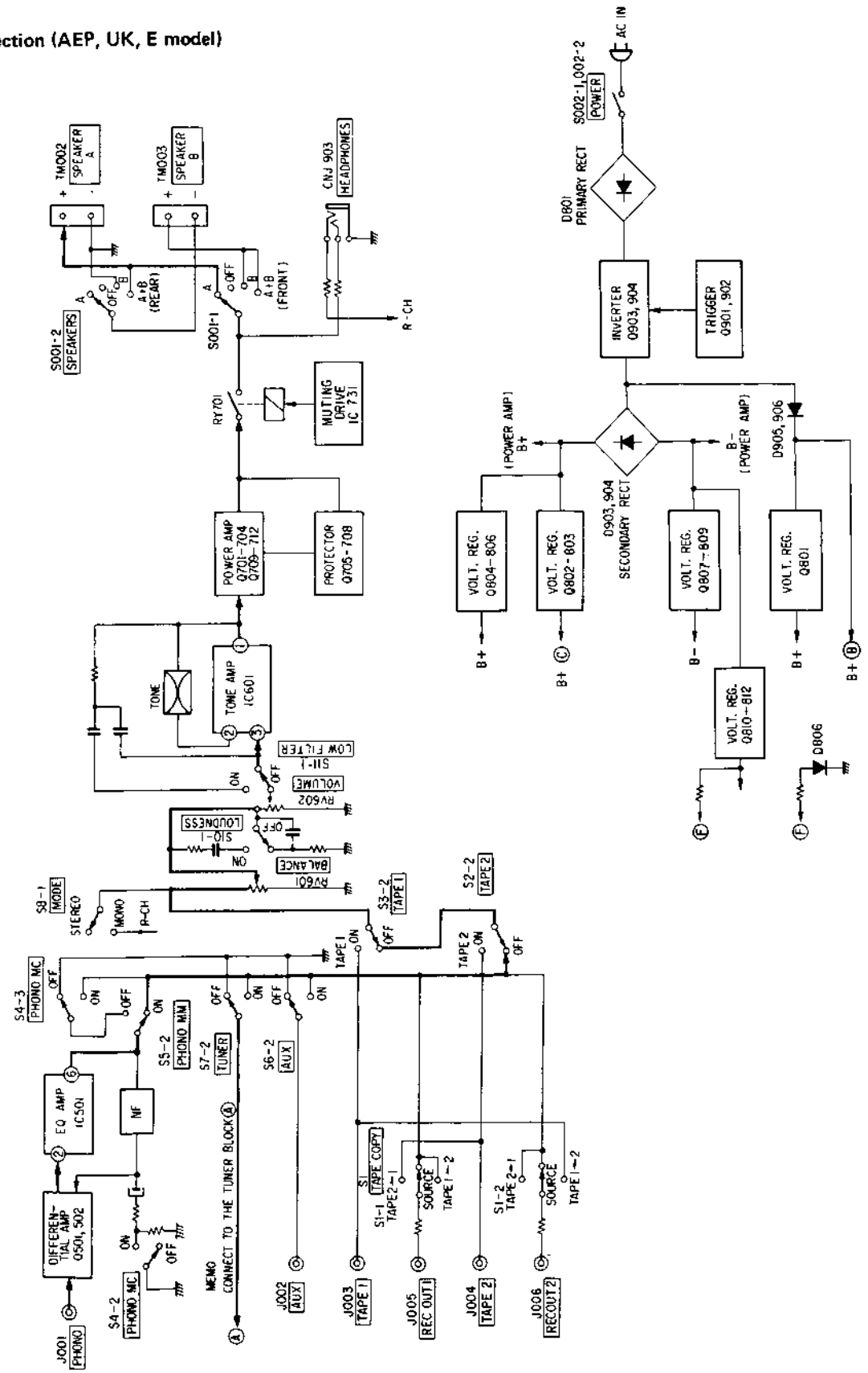
(2) Amp Section (US, Canadian model)



(3) Tuner Section (AEP, UK, E model)



(4) Amp Section (AEP, UK, E model)



1-2. CIRCUIT DESCRIPTION

In the power supply section of conventional audio equipment, ac input power is usually changed in voltage by a transformer and is rectified to obtain a dc voltage. The disadvantages of this are as follows;

1. Voltage regulation is poor.
2. Hum in the output results if large filter are not used.
3. High-power output can not be obtained without a very large transformer.

To eliminate these problems, the pulse-locked power supply is used in this set. In the power supply, after a dc voltage is obtained by rectifying the ac input power, a 20kHz pulse signal is generated in the inverter. The pulse signal is converted to the desired-voltage signal by a high-frequency transformer which has a small ferrite-core, and is then rectified to produce dc voltages.

Fig. 1 shows the block diagram of the pulse-locked power supply. This power supply has the following advantages;

1. The source impedance can be made smaller so better voltage regulation of less than 7% can be obtained.
2. Square waves as high in frequency as 20kHz are used, so hum does not occur.
3. Efficiency is very high, since the dc resistance of the high-frequency transformer is small and a high-efficiency inverter is used.
4. This power supply consists of small components that result in a very small size and a light weight. This power supply is half the size and less than one quarter the weight of a conventional power supply.

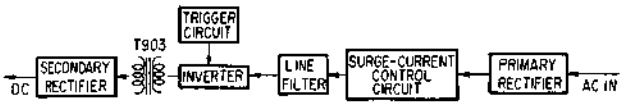


Fig. 1

The following circuit description is based on the AEP, UK and E models. The US and Canadian models are identical to the AEP, UK and E models, and reference numbers are different from the AEP, UK, and E models.

1-2-1. SURGE-CURRENT CONTROL CIRCUIT (See Fig. 2)

Since the pulse-locked power supply directly rectifies ac power input, if S002 (POWER) is set to ON without a surge-current control circuit, a large surge-current charging C804 will flow and damage S002 (POWER).

To prevent this, R802 is added in series with S002 (POWER) to control the rush-current. This resistor is shorted by RY801 after dc voltage appears in the secondary rectifier circuit.

1-2-2. LINE FILTER (See Fig. 2)

To eliminate the high-frequency ripple noise component produced in the inverter, a line filter is installed. The line filter consists of L901, C901 through C904, and C915 through C917. L901 is a bifilar RF choke using a ferrite toroidal core.

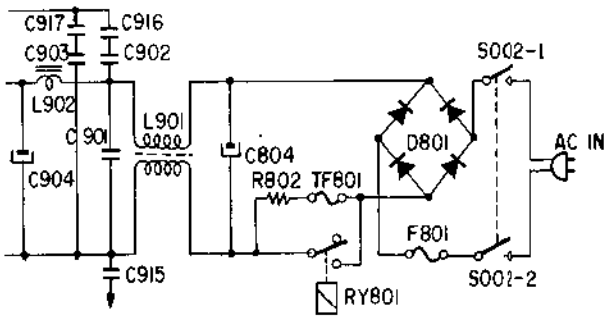


Fig. 2

1-2-3. INVERTER TRIGGER CIRCUIT (See Fig. 3)

Setting switch S002 (POWER) to ON is not sufficient to start the inverter oscillating; a trigger signal is also required for inverter oscillation. The operation is as follows;

1. When S002 (POWER) is set to ON, current ① through R901 charges C908.
2. After switching ON the power, the base-emitter voltage Vbe of Q901 becomes the voltage Vs across R905 with some delay due to the time constant of R904 and C907. When Vbe becomes approximately 0.6V, Q901 turns on and so does Q902 accordingly.
3. When both Q901 and Q902 turned on, the charge in C908 discharges through the winding N1 of T901 and R902 (current flow ②), and the inverter starts oscillating. Once the inverter oscillated, a voltage is generated across the winding N2 of T903. This voltage at the winding N2 is rectified by diodes D901 and D902, not making Vbe a load of winding N1. Thus the inverter maintains a smooth and normal oscillation.

1-2-4. INVERTER CIRCUIT

The inverter consists of two transistors and generates a square-wave signal of about 20kHz.

Fig. 4. shows the principle of the inverter. By turning S1 and S2 on and off alternately, the square-wave signal shown in Fig. 4 is generated at the secondary side of converter transformer T903. In short, dc current is changed to a square-wave signal by switching action.

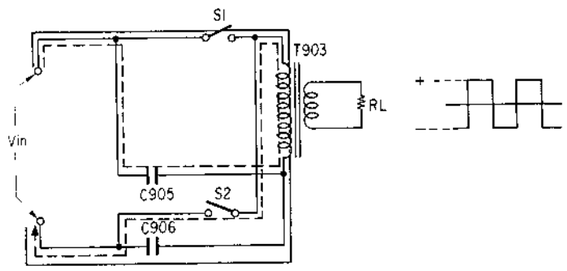


Fig. 4

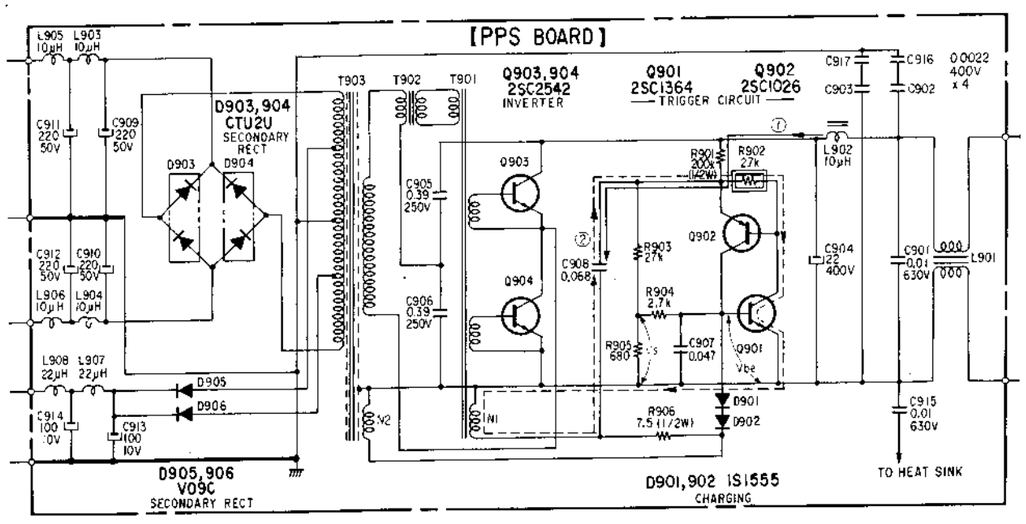


Fig. 3

The details are as follows (See Fig. 5).

1. A trigger pulse signal is generated at the winding N1 by the inverter trigger circuit.
2. Assume that a voltage is generated with which Q903 at the winding N3 turns on and Q904 at the winding N4 turns off with the first trigger pulse.
3. Q903 turned on and the current ① flows through Q903, transformer windings N5 and N6, and C906 from the point ⊕ to ⊖.
4. At the same time, a current is also induced in the winding N7. This current in turn induces an electromotive force at the winding N3 through T901 by current-feedback effect. This induced electromotive force at the winding N3 also acts as a power to further turn Q903 on.
5. On the other hand, the winding N2 is also wound in the transformer T903. So N2 generates a voltage. This voltage is then applied to the winding N1 through R906.
6. The winding N1 is wound in the transformer T901, the voltage in N1, in turn, generates also a voltage in the winding N3 through the voltage-feedback action and this voltage in N3 adds the power for Q903 to further turning on.
7. With these two feedbacks, i.e., both the current and voltage, Q903 sufficiently saturates and it applies power to T903.
8. Now T901 also saturates in due course and it no longer keeps power to turn Q903 on.
9. As soon as Q903 losts the power, it turns off. And when Q903 turned off, a voltage of oppsite polarity to the initial state (first half cycle) is generated in the winding N2 throught the winding N6.
10. This voltage of opposite polarity, built up in N2 increases an electromagnetic flux also in the opposite direction to the initial state, generates a voltage in N4 of a such direction to turn Q904 on.
11. As a result, the current ② flows from the point ⊕ to point ⊖ through C905, transformer windings N6 and N5, and Q904.
12. Once Q904 has turned on, it keeps itself turning on as in the case of the first half cycle of Q903's operation until T901 is saturated by both the current and voltage feedbacks.
13. When T901 thus saturated in the second half cycle, Q904 turns off and Q903, in turn, turns on again and the oscillating operation continues.
14. Thus a square-wave signal is obtained at the secondary winding of T903 as shown in Fig. 5 from the alternating turning on and off operation of Q903 and Q904.

1-2-5. SECONDARY RECTIFIER CIRCUIT (See Fig. 5)

The secondary rectifier circuit is to convert the square-wave signal made in the above-mentioned converter transformer back into dc voltage. This circuit consists of D903 through D906, L903, L905, L908, and C909 through C914 as shown in Fig. 6 below. High-speed type diodes are used for the rectifying devices and the square-wave is rectified without a significant rectifying power loss.

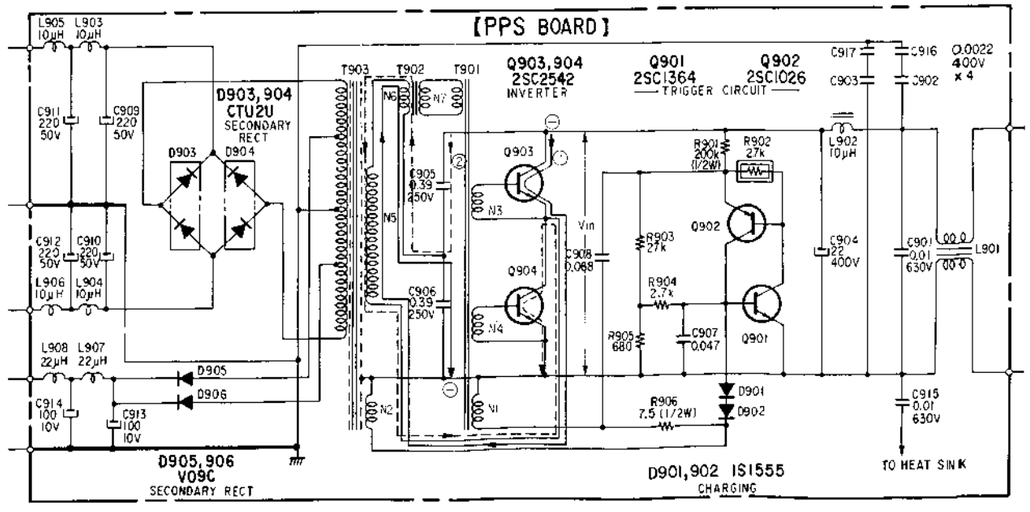


Fig. 5

1-2-6. OUTLINE OF μPD552C-037 (IC405) (US, Canadian model) or μPD553C-065 (IC401) (AEP, UK, E model)

This is a four-bit control microcomputer composed of ALU, ROM, RAM, I/O Ports and control circuit all of which are processed in four-bit parallel manner and are included on a small single chip.

P-channel MOS
ROM (1000 x 8-bits)
RAM (64 x 4-bits)
Input Ports
A and B
Input/output Ports
C and D
Output Ports
E, F, G, H and I
} four-bits each except for Port I which is three bits

Clock Frequency: 360kHz
Input signal is obtained from terminal 4 (US, Canadian model) or 6 (AEP, UK, E model) of the divider output in PLL μPD2819C (US, Canadian model) or CX778 (AEP, UK, E model).

42-pin Plastic Dual-in-Line Package

I/O Ports: Table 1

Port	Terminal	Function
PA_0	33	AUTO/$\overline{\text{MANUAL}}$
PA_1	34	$\overline{\text{9kHz}}$/10kHz (US, Canadian model)
PA_2	35	Input for AUTO TUNING stop signal
PA_3	36	Input for memory IC's data
PB_{0-3}	37–40	Refer to Fig. 6 or 7.
PC_{0-3}	2–5	
PD_{0-3}	8–11	
PF_{0-3}	16–19	
PG_0	22	
PG_1	23	Output for switch matrix
PG_2	24	FM/$\overline{\text{AM}}$
PG_3	25	N/A
PE_0	12	Clock output for PLL memory IC
PE_1	13	Output for muting pulse
PE_2	14	Output for PLL
PE_3	15	Output for PLL and memory IC
PH_0	26	Outputs for memory IC address
PH_1	27	
PH_2	28	
PH_3	29	
PI_0	30	→C1
PI_1	31	→C2
PI_2	32	→C3

Outputs for memory IC mode control

μPD2819C (IC402) (US, Canadian model)

This is a CMOS LSI for the PLL frequency synthesizer designed for AM and/or FM radio/receiver.

Outline of μPD2819C:
18-pin molded DIP (dual-in-line package)

Data inputs are only three (3) because the data are put into the IC successively.

Has two input terminals for programmable divider and these terminals are selectable according to the program data (AM/FM).

Has an output (terminal 4) of 360 kHz for the controller.

Refer to the schematic diagram for its block diagram.

Table 2. Function of Terminals:

Terminal	Function
1	5 V power supply
2	5.76 MHz crystal oscillator
3	
4	Output 1 for 360 kHz clock signal
5	90 kHz test terminal 3
6	25 Hz clock signal output 2
7	unlock-detection terminal "1" (high) when PLL is locked, pulsative waveform when PLL is unlocked
8	Output terminal for phase comparator
9	Test terminal 1 for frequency comparison
10	Test terminal 2 for programmable divider's output
11	Input terminal for filter amp
12	Output terminal for filter amp
13	Grounding terminal
14	Input terminal 1 for programmable divider (AM)
15	Input terminal 2 for programmable divider (FM)
16	Shift register clock
17	Shift register data
18	Latch clock

Note: Terminals 16 - 18 are the input terminals for the program to decide the division ratio of the programmable divider, switching of terminals 11 and 12, and to decide the comparison frequency.

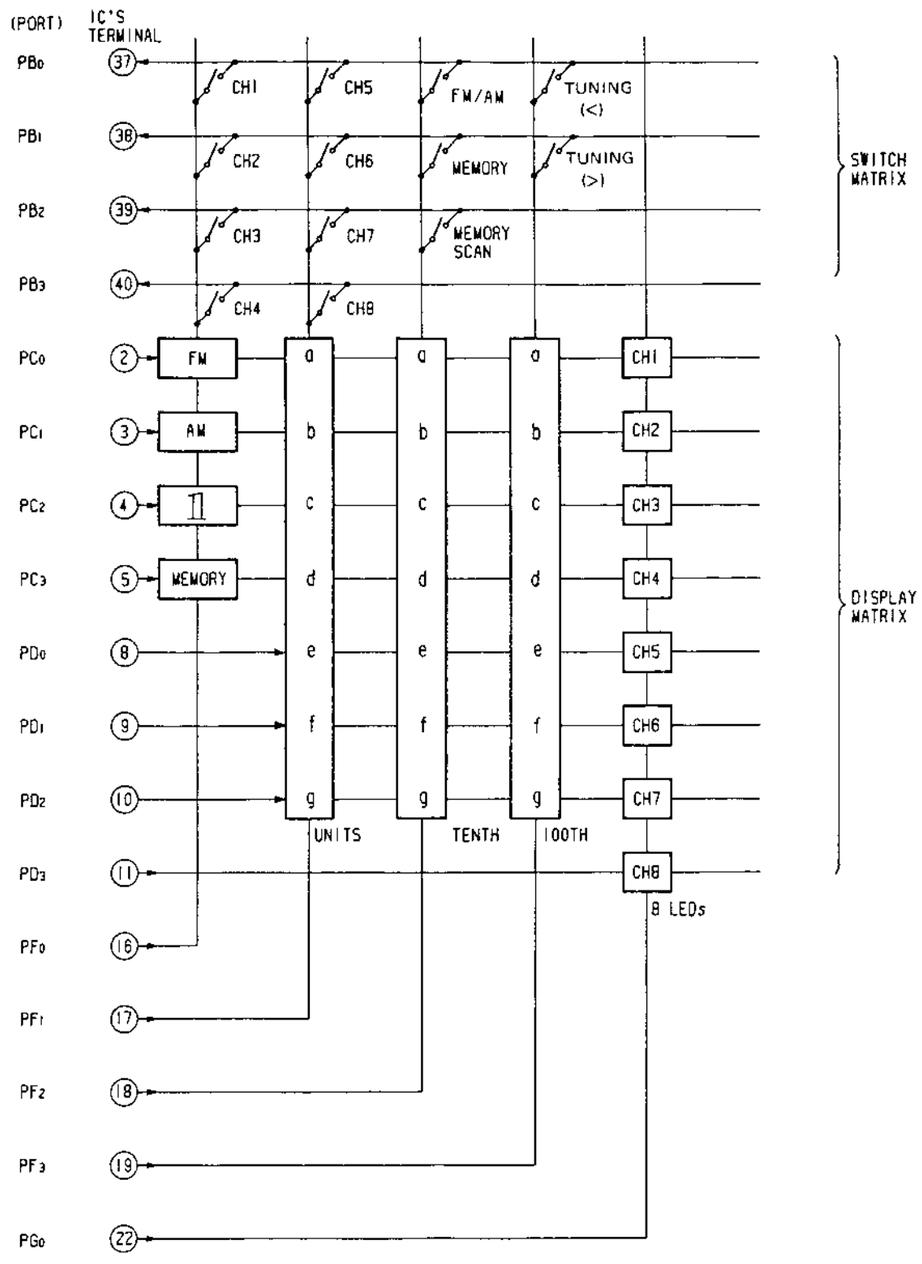


Fig. 6 Switches and Indication Matrix
(US, Canadian model)

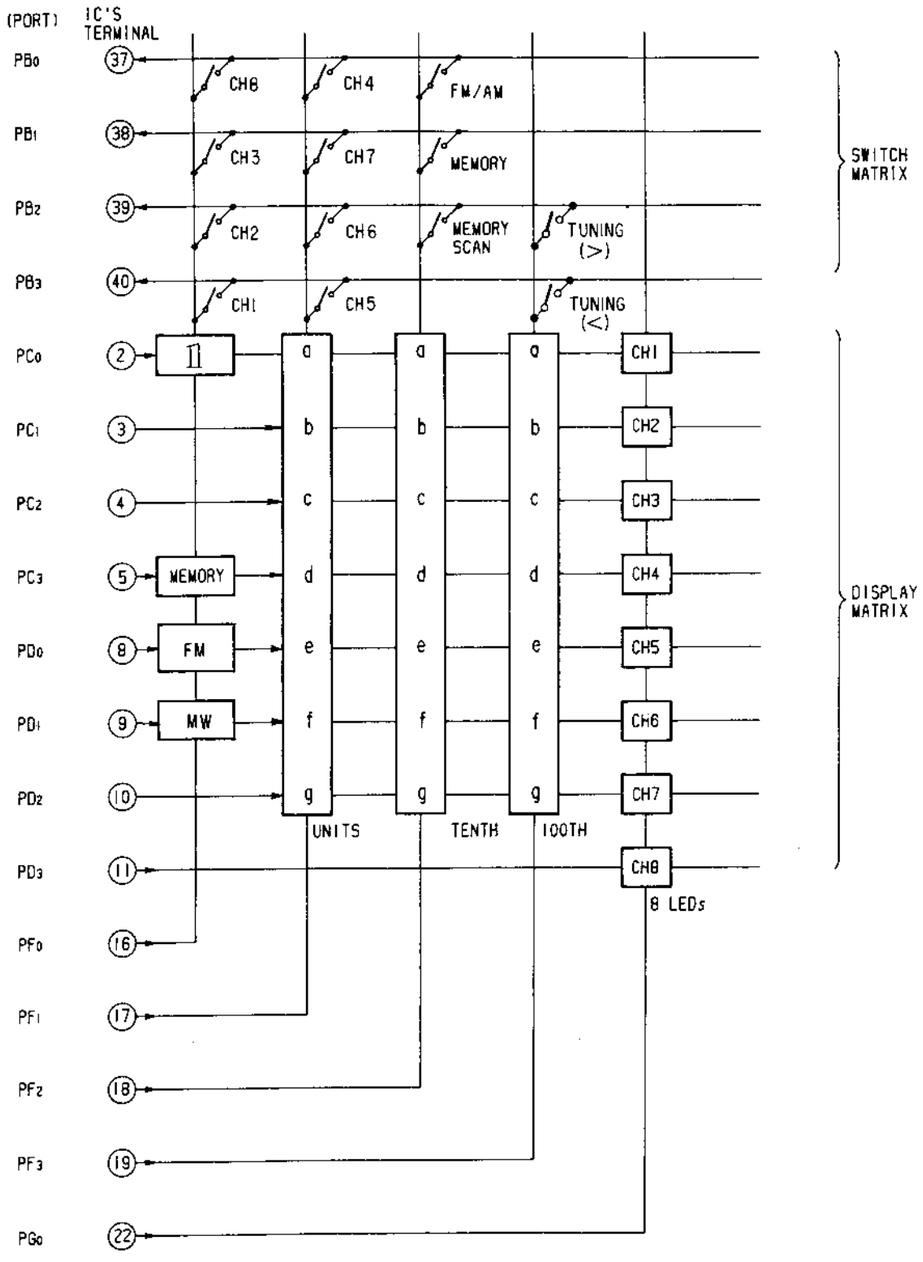


Fig. 7 Switches and Indication Matrix
(AEP, UK, E model)

1-2-7. MEMORY IC CX761 (IC406) (US, Canadian model) or CX761A (IC405) (AEP, UK, E model)

Outline of CX761 or CX761A:

(a) This is a non-volatile memory IC. Has 228 (14 words x 16 bits + 4 bits) non-volatile memory transistors built in, and works for reading, erasure and writing the data word.
(b) Because of being a non-volatile type memory, this IC maintains the memorized informations for a long time without a battery back-up after the power switch is turned off.
(c) Word address is done by the BCD inputs.
(d) Silicon-type P-channel enhancement MNOS IC construction.
(e) 14-pin molded DIP casing.

Refer to the schematic diagram for the block diagram.

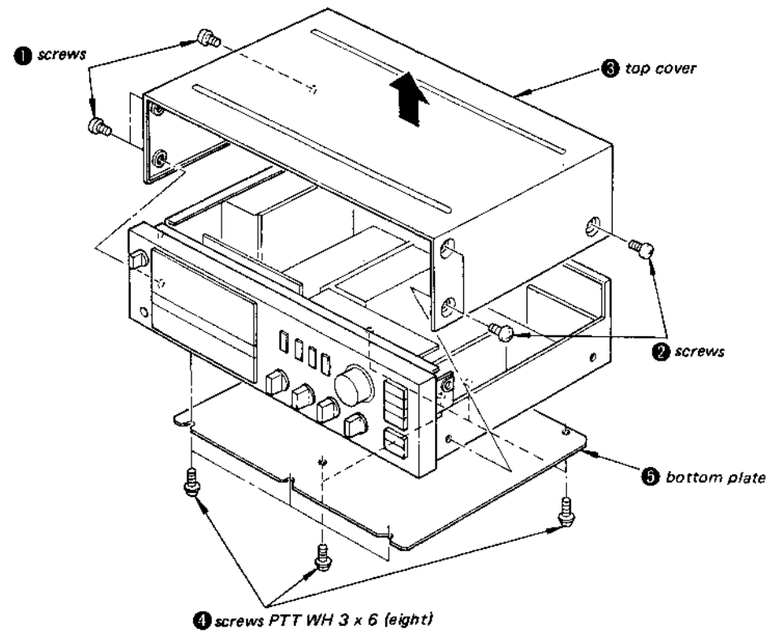
Table 3. Function of Terminals:

Terminal	IN or OUT	Function
1	IN	Word address D
2	IN	Word address C
3	IN	Word address B
4	IN	Word address A
5	IN	Power supply input
6	IN/OUT	Writing and erasure control inputs/memory-BUSY output
7	IN	Power supply input
8	IN/OUT	Inputs and outputs for test checkout
9	IN	Test signal
10	IN/OUT	Combined data inputs and data outputs
11	IN	Input for synchronous clock
12	IN	Input for mode control C3
13	IN	Input for mode control C2
14	IN	Input for mode control C1

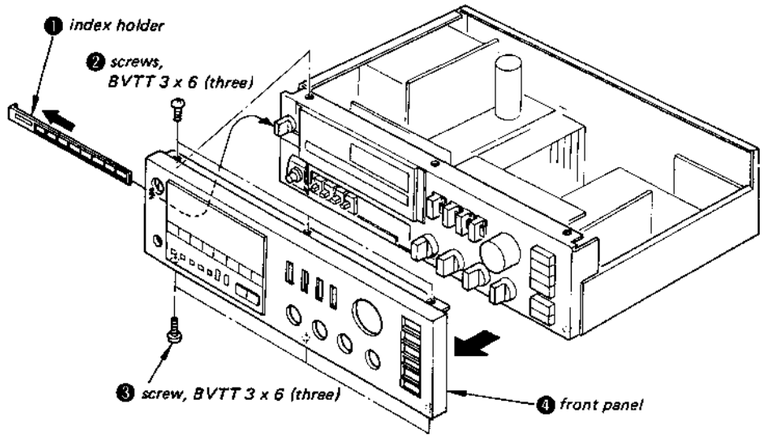
SECTION 2
DISASSEMBLY

- Follow the disassembly procedure in the numerical order given.

TOP COVER AND BOTTOM PLATE REMOVAL



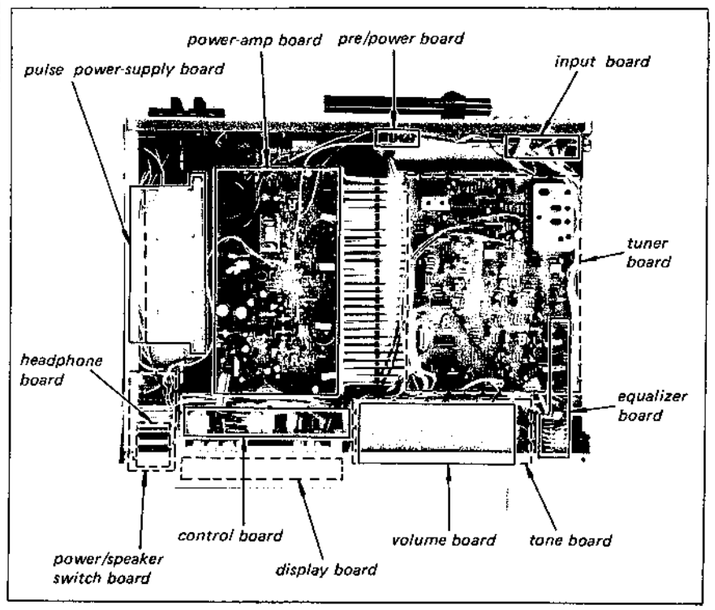
FRONT PANEL REMOVAL



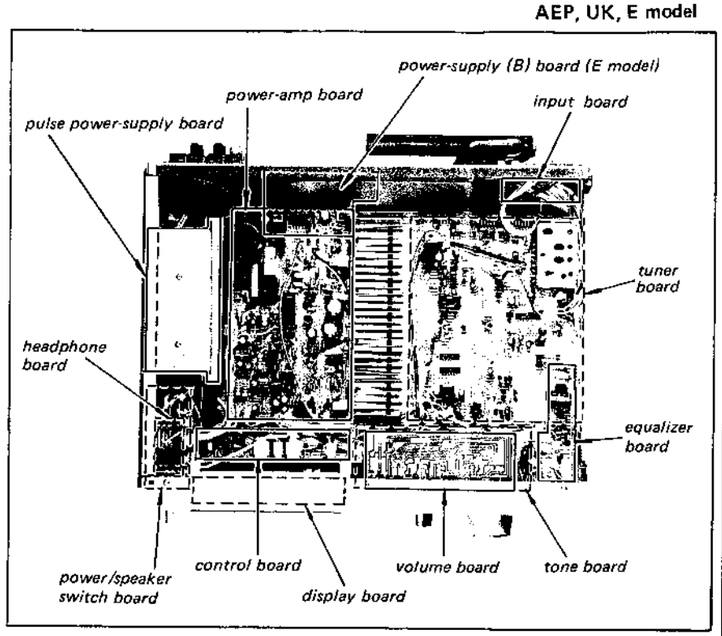
CIRCUIT BOARDS LOCATION

With the set removed shown below, each circuit board can be checked.

US, Canadian model



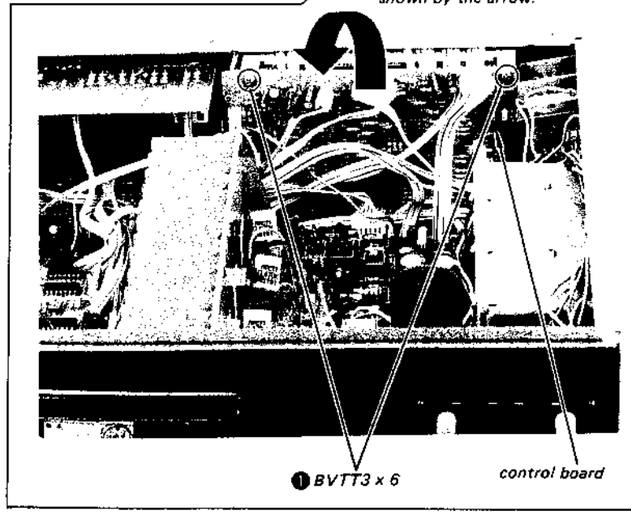
AEP, UK, E model



CONTROL BOARD REMOVAL

US, Canadian model

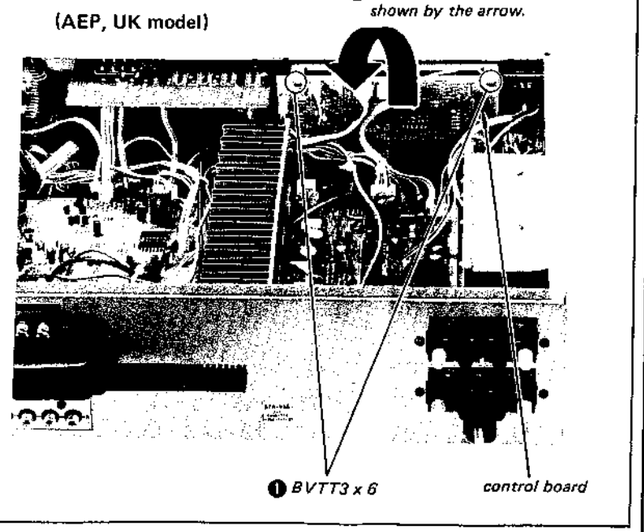
❷ Pull up the board in the direction shown by the arrow.



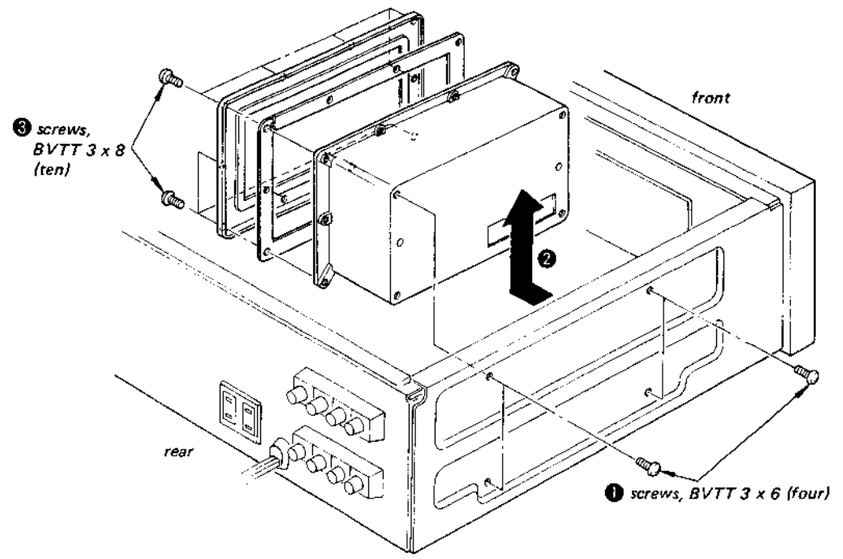
AEP, UK, E model

(AEP, UK model)

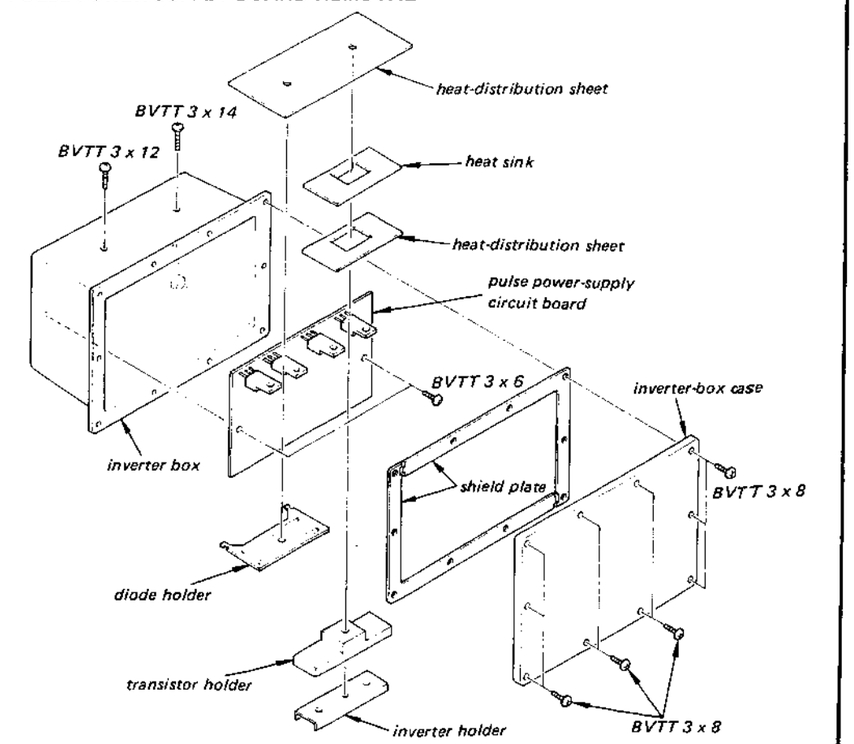
❷ Pull up the board in the direction shown by the arrow.



PULSE POWER BLOCK REMOVAL



PULSE POWER SUPPLY BOARD REMOVAL



SECTION 3
ADJUSTMENTS

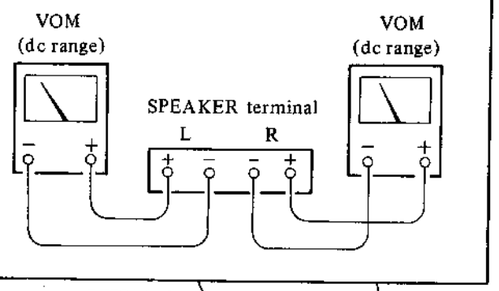
3-1. AMPLIFIER SECTION

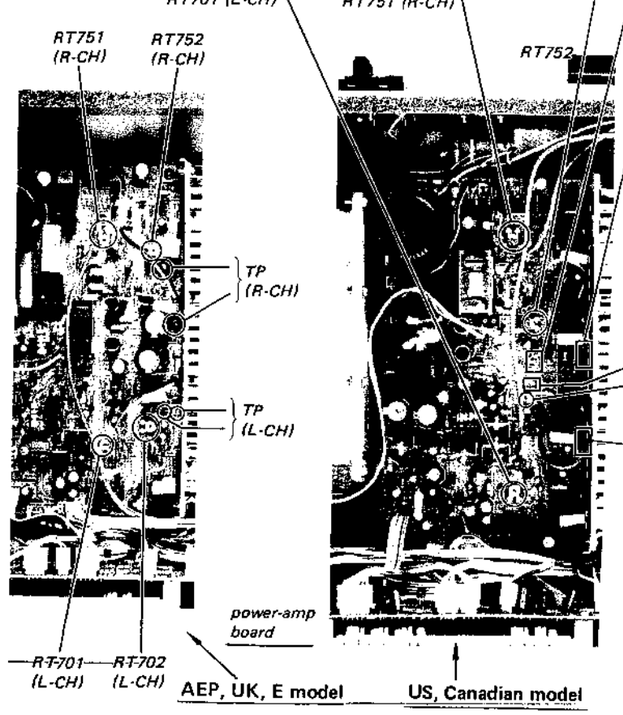
Note:
1. DC bias and DC balance adjustments should be made several minutes later after the POWER switch is turned on (POWER ON.).
2. Make DC bias adjustment first.
3. Repeat DC bias and DC balance adjustments two or three times.
4. After replacing the power transistors, DC bias and DC balance adjustments should be made.

DC Balance Adjustment
(With no signal input)

–L-CH–
Adjust RT701 for 0V dc reading on VOM.

–R-CH–
Adjust RT751 for 0V dc reading on VOM.



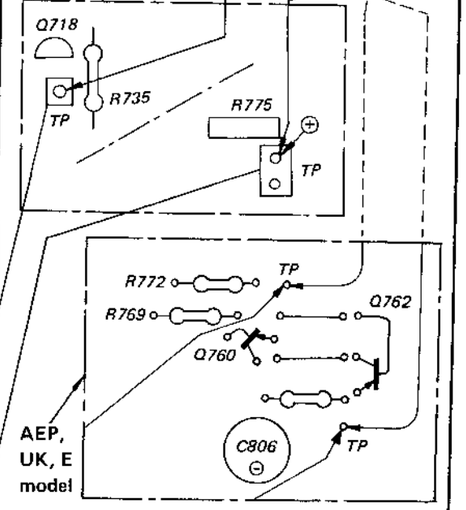


DC Bias Adjustment
(With no signal input)

–R-CH–
Adjust RT752 for 10mV dc reading on VOM.

VOM
(dc range)

US, Canadian model

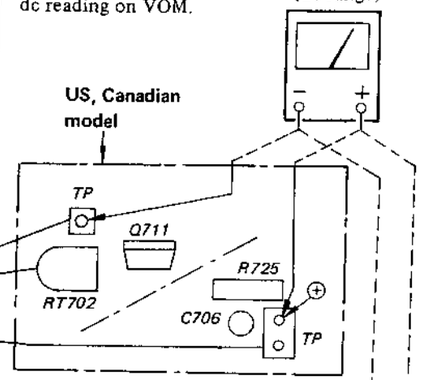


AEP, UK, E model

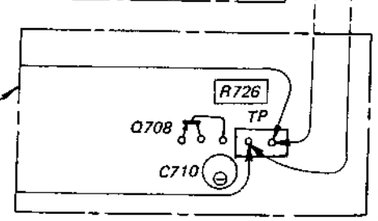
–L-CH–
Adjust RT702 for 10mV dc reading on VOM.

VOM
(dc range)

US, Canadian model



AEP, UK, E model



3-2. FM SECTION

FM stereo standard signal	FM monaural standard signal
Carrier frequency: 98MHz Modulation: Audio 400Hz 33.75kHz deviation (US, Canadian, E model) 16.25kHz deviation (AEP, UK model) Sub carrier 38kHz 33.75kHz deviation (US, Canadian, E model) 16.25kHz deviation (AEP, UK model) Pilot signal 19kHz 7.5kHz deviation	Carrier frequency: 98MHz Modulation: 400Hz, 75kHz deviation (100%) (US, Canadian, E model) 40kHz deviation (100%) (AEP, UK model)

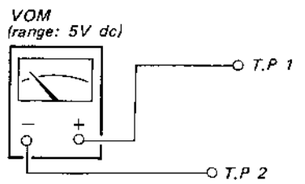
FM DISCRIMINATOR (IFT101) ALIGNMENT 1 (PRIMARY SIDE)

Setting: FUNCTION switch: TUNER
FM/AM switch: FM
MODE switch: MONO
TUNING switch: Detuned position

Procedure:

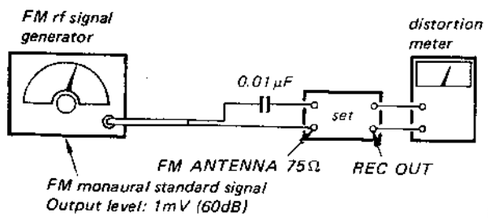
Adjust the orange core (primary-side) of IFT 101 for 0V reading on VOM.

Note: When replacing the ceramic filters (CF101–CF104), perform this alignment.



FM DISCRIMINATOR (IFT101) ALIGNMENT 2 (SECONDARY SIDE)

Setting: FUNCTION switch: TUNER
FM/AM switch: FM
MODE switch: MONO



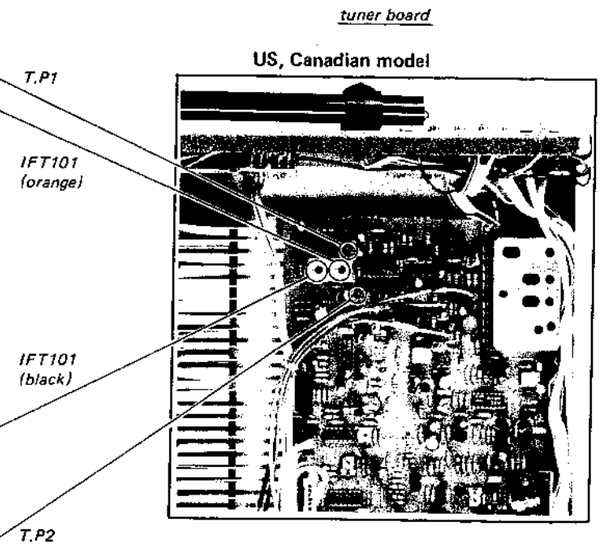
Procedure:

Tune the set to 98 MHz and adjust the black core (secondary side) of IFT101 for minimum distortion.

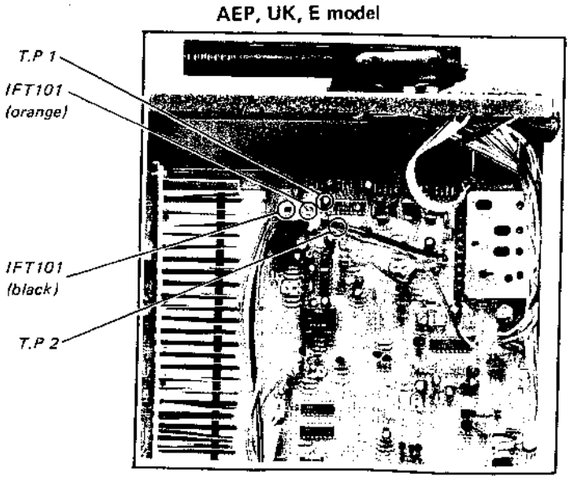
Note: Repeat the primary-side and secondary-side alignments several times.

tuner board

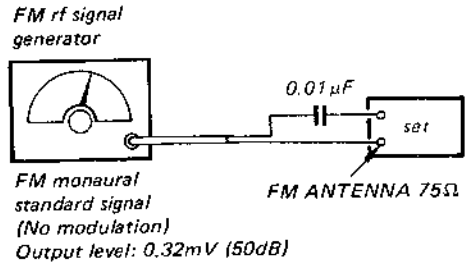
US, Canadian model

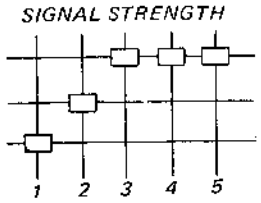


AEP, UK, E model



SIGNAL INDICATOR ADJUSTMENT



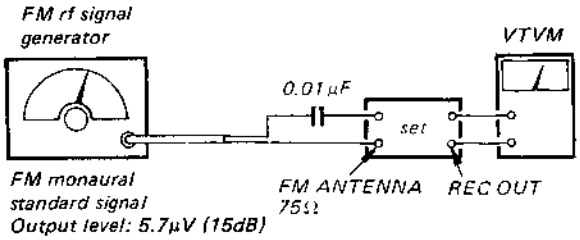


Procedure:

Tune the set to 98MHz and adjust RT301 (US, Canadian model) or RT101 (AEP, UK, E model) for all five LEDs of SIGNAL STRENGTH indicator lighting.

FM MUTING LEVEL ADJUSTMENT

Setting: TUNING LEVEL-LOW switch: ON

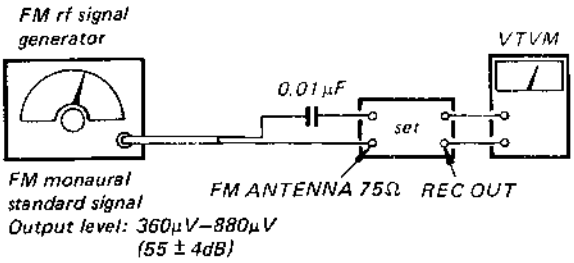


Procedure:

1. Tune the set to 98MHz.
2. Turn RT102 (US, Canadian model) or RT103 (AEP, UK, E model) until the VTVM reading drops to 0V.

FM TUNING LEVEL ADJUSTMENT

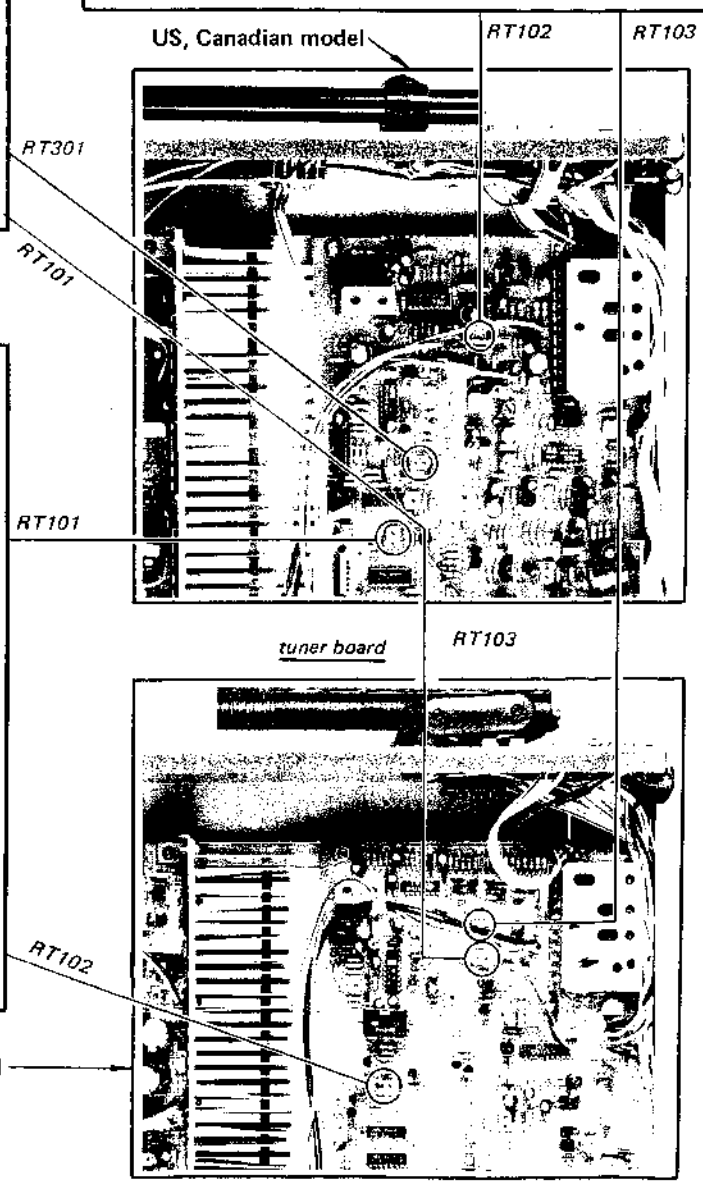
Setting: TUNING LEVEL switch: HIGH



Procedure:

Tune the set to 98MHz.

By varying the output level of the FM signal generator from 360μV (51dB) to 880μV (59dB), adjust RT101 (US, Canadian model) or RT102 (AEP, UK, E model) so that the frequency scanning stops (observing the frequency indicator of the set).

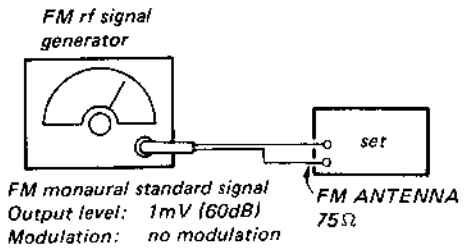


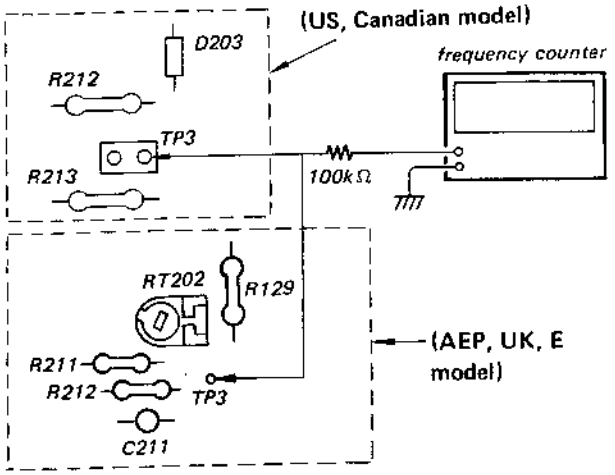
VCO ADJUSTMENT

Setting:

FUNCTION switch: TUNER
FM/AM switch: FM
MODE switch: MONO

A) Regular Method





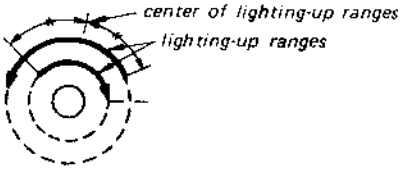
Procedure:

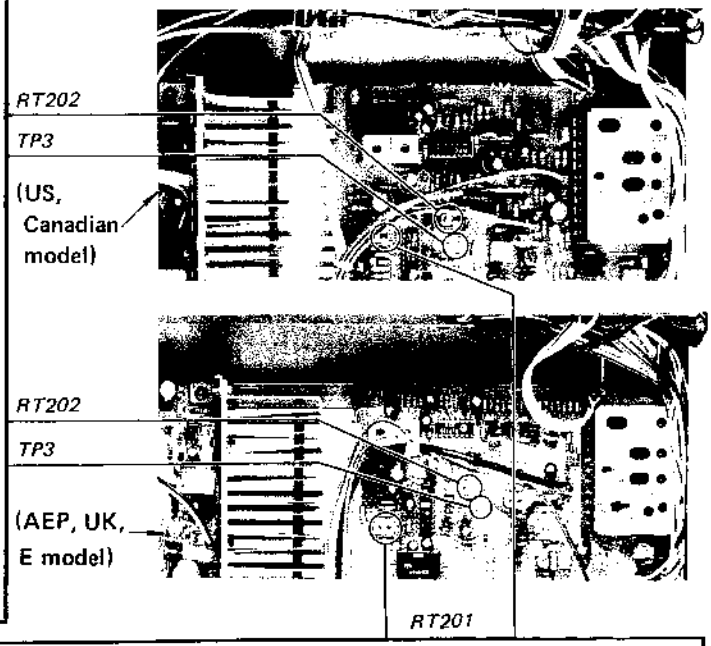
1. Tune the set to 98MHz.
2. Adjust RT202 for 76kHz ±100Hz reading on the frequency counter.

B) Simple Method

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT202 clockwise or counterclockwise and memorize the lighting-up ranges of STEREO lamp.
3. Secure RT202 at the center of the lighting-up range of both turns as shown below.

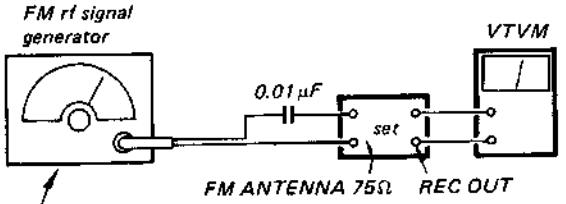




FM STEREO SEPARATION ADJUSTMENT

Setting:

FUNCTION switch: TUNER
FM/AM switch: FM
MODE switch: STEREO/FM-AM MUTING



Carrier frequency: 98MHz
Output level: 1mV (60dB)
Modulation:
Audio (400Hz): 33.75kHz deviation (US, Canadian, E model)
16.25kHz deviation (AEP, UK model)
Pilot (19kHz): 7.5kHz deviation
Sub channel (38kHz): 33.75kHz deviation (US, Canadian, E model)
16.25kHz deviation (AEP, UK model)

Procedure:

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RT201 resistor for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RT201 resistor for minimum reading.

L-CH Stereo Separation: Ⓐ – Ⓑ
R-CH Stereo Separation: Ⓒ – Ⓓ

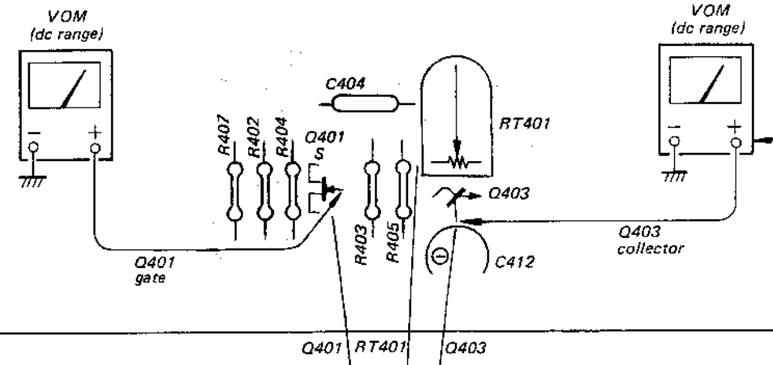
The separations of both channels should be equal.

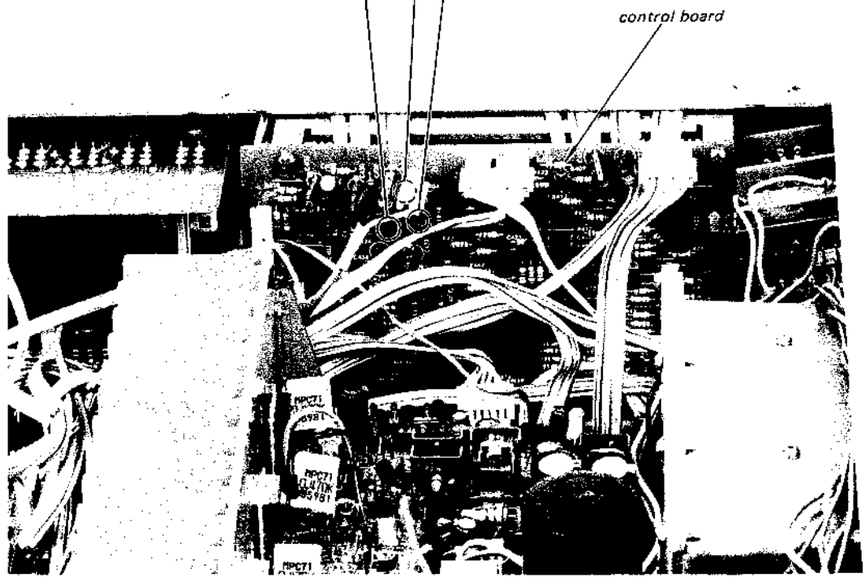
US, Canadian model

PLL AJUSTMENT

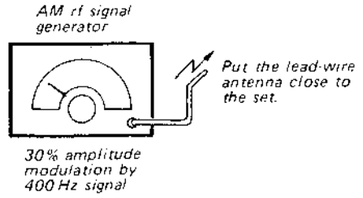
Procedure:

1. Tune the set to 98 MHz.
2. Turn RT401 to obtain 0.4V at the gate lead of Q401.

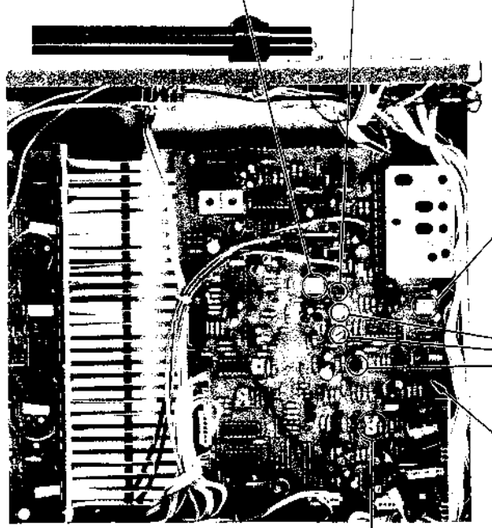




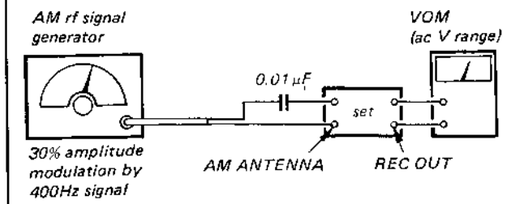
3-3. AM SECTION



AM FREQUENCY COVERAGE ADJUSTMENT (9/10kHz step)		
Frequency Counter Indication	1602/1610kHz	522/530kHz
Q403 Collector Voltage	25V	1V
Adjust	CT302	L303



AM TRACKING ADJUSTMENT



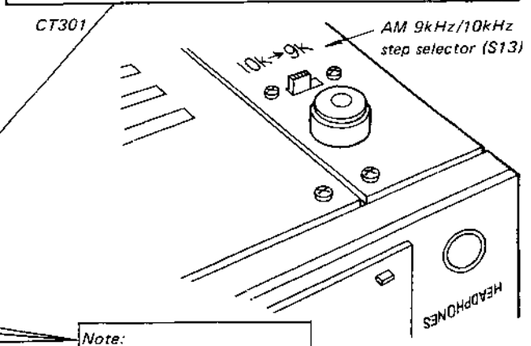
Output level: 30–100μV (30–40dB)
Carrier frequency: 603/600, 1395/1400kHz (9/10kHz step)

Procedure:

Tune the set to the frequency of AM rf signal generator and adjust L1 and CT301 for maximum reading on the VOM.

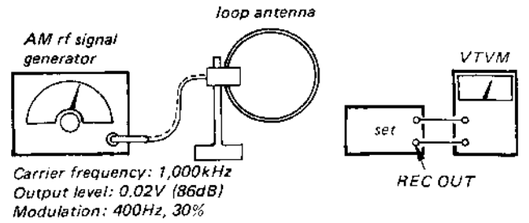
	AM Rf Signal Generator Frequency	Adjust	VOM Reading
1	603/600kHz	Core of L1	maximum
2	1395/1400kHz	CT301	

Note: Repeat the above adjustment several times ending with CT301.



AM TUNING ELVEL ADJUSTMENT

Setting: TUNING LEVEL–LOW switch: ON



Procedure:

1. Place the loop antenna at a distance of 60cm ($23^5/_8$") away from the ferrite-rod antenna in the set.
2. Turn RT302 until the VTVM reading drops to 0V with the output level of AM signal generator of 86 ±4dB.

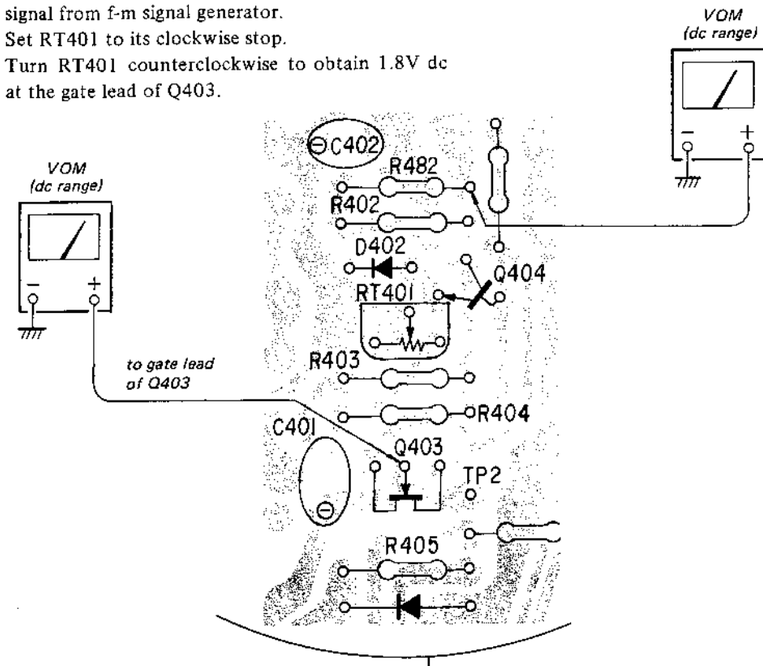
AEP, UK, E model

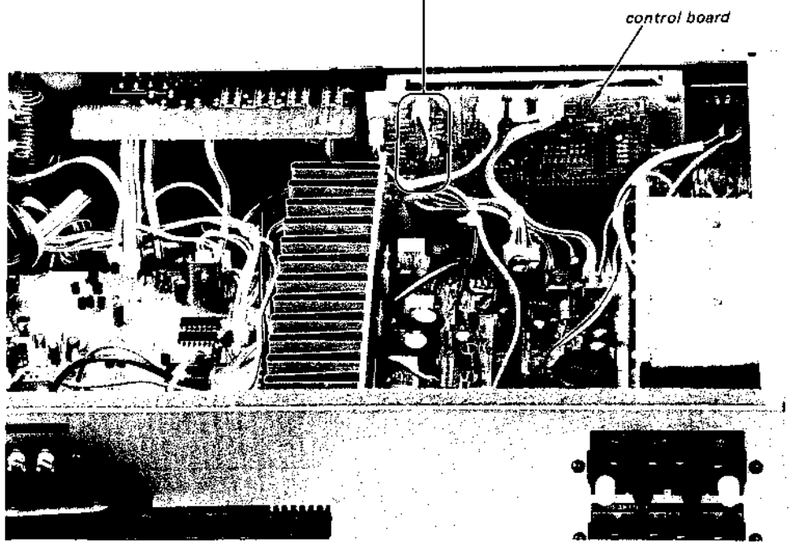
PLL ADJUSTMENT

Setting: FM/AM switch: FM

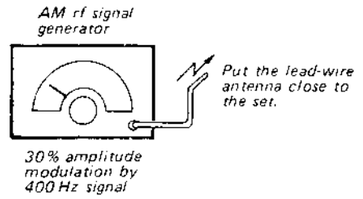
Procedure:

1. Tune the set to 87.5 MHz and receive a 87.5 MHz signal from f-m signal generator.
2. Set RT401 to its clockwise stop.
3. Turn RT401 counterclockwise to obtain 1.8V dc at the gate lead of Q403.



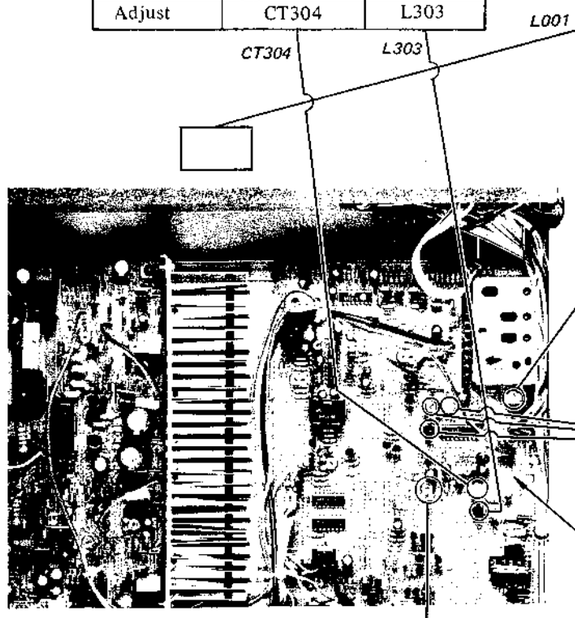


3-3. AM SECTION

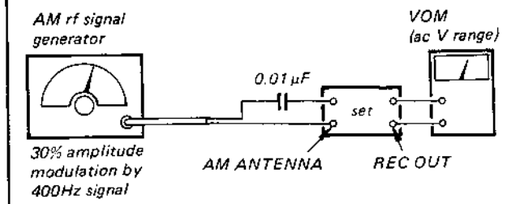


Set S16 to "9kHz" side.

AM FREQUENCY COVERAGE ADJUSTMENT		
Frequency Counter Indication	1602kHz	522kHz
VOM reading	22V	1.5V
Adjust	CT304	L303



AM TRACKING ADJUSTMENT



Output level: 30–100µV (30–40dB)
Carrier frequency: 603, 1404kHz

Procedure:

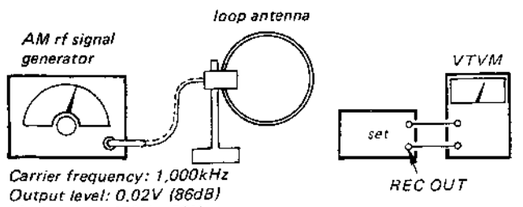
Tune the set to the frequency of AM rf signal generator and adjust L001 and CT302 for maximum reading on the VOM.

	AM Rf Signal Generator Frequency	Adjust	VOM Reading
1	603kHz	Core of L001	maximum
2	1404kHz	CT302	

Note: Repeat the above adjustment several times ending with CT302.

AM TUNING LEVEL ADJUSTMENT

Setting: TUNING LEVEL–LOW switch: ON

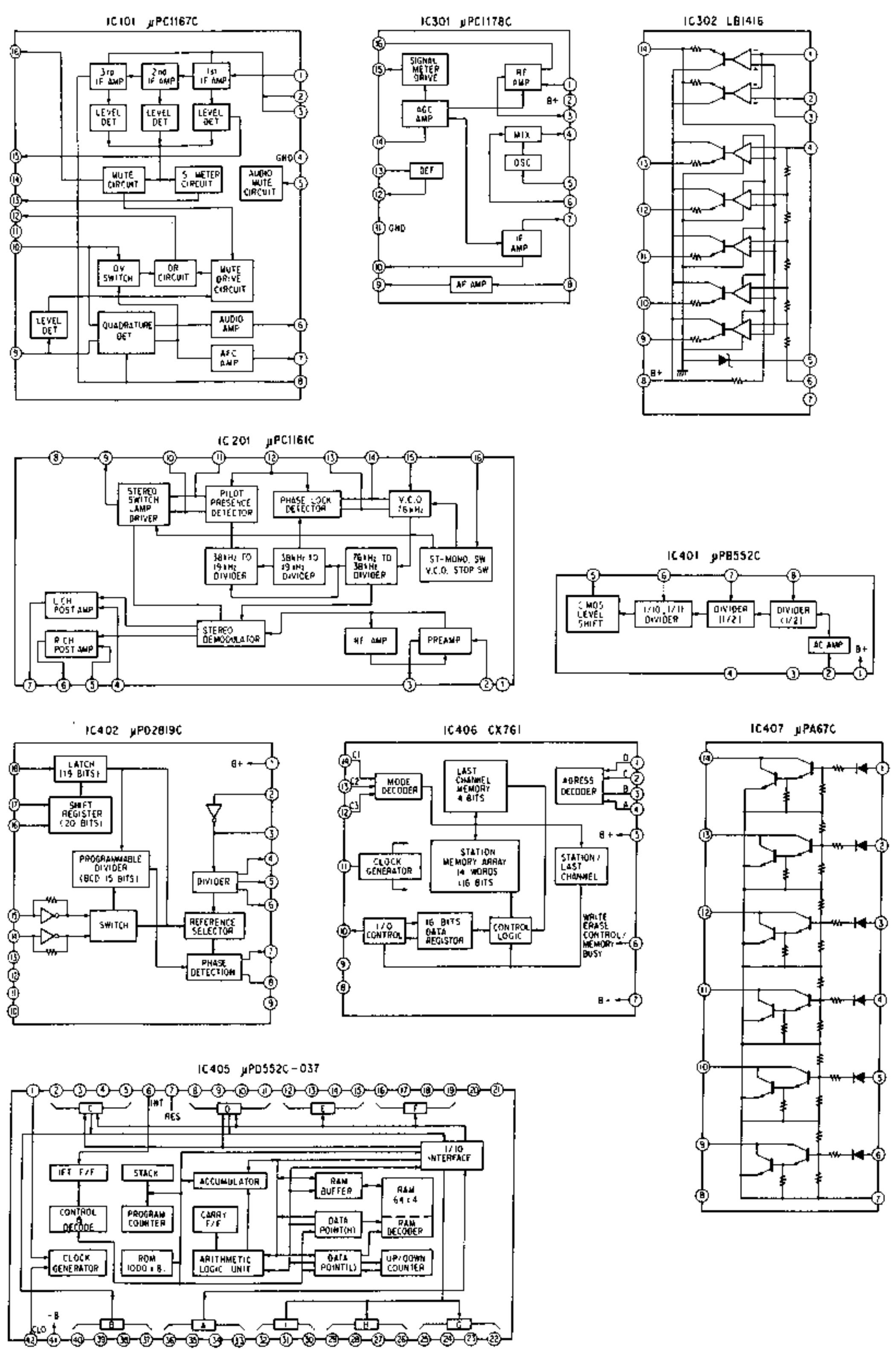


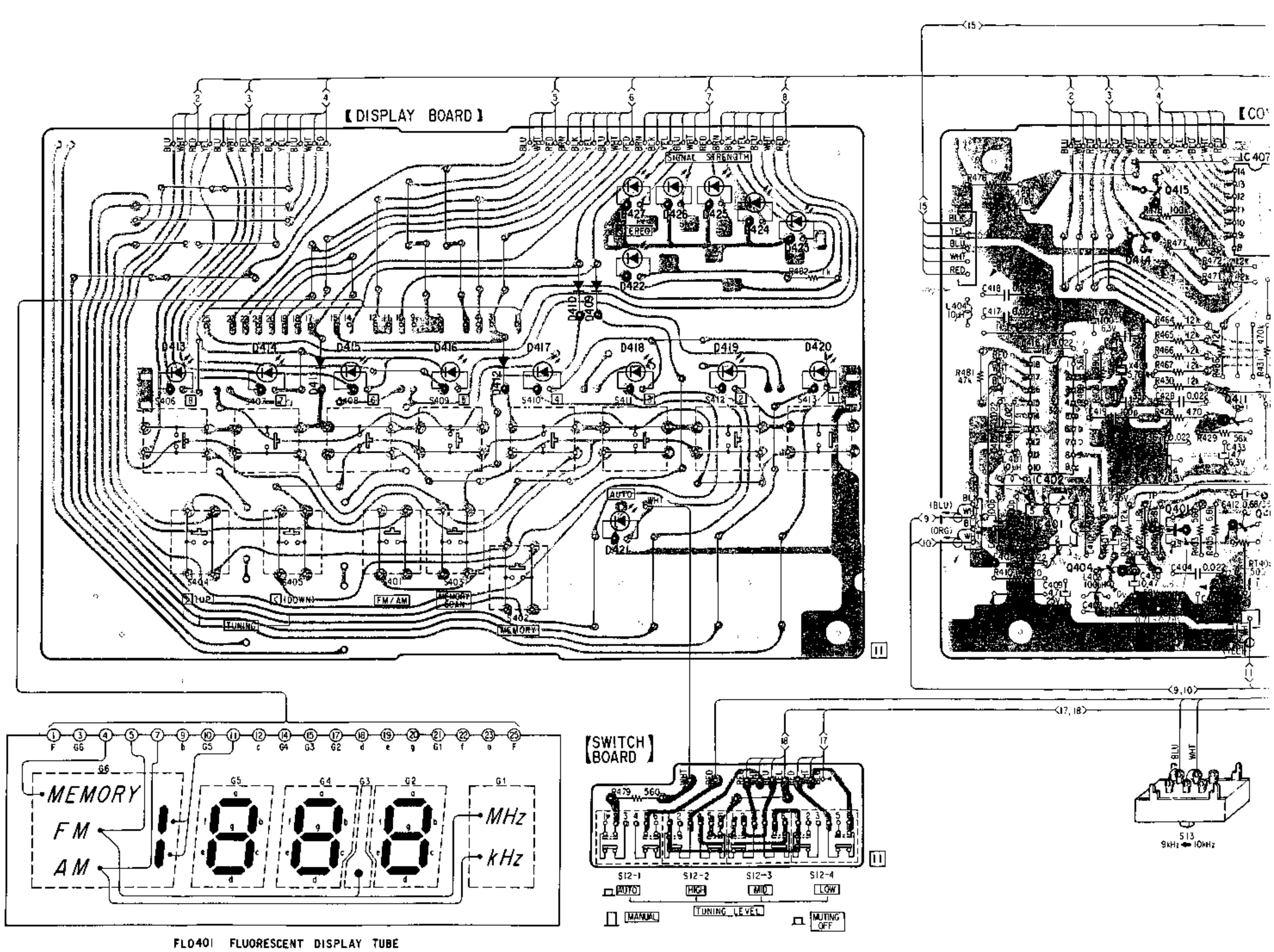
Procedure:

1. Place the loop antenna at a distance of 60cm ($23^5/_8$") away from the ferrite-rod antenna in the set.
2. Turn RT301 until the VTVM reading drops to 0V with the output level of AM signal generator of 86 ±4dB.

4-1. MOUNTING DIAGRAM – Tuner Section – (US, Canadian model)

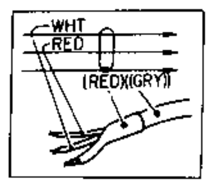
– Conductor Side –



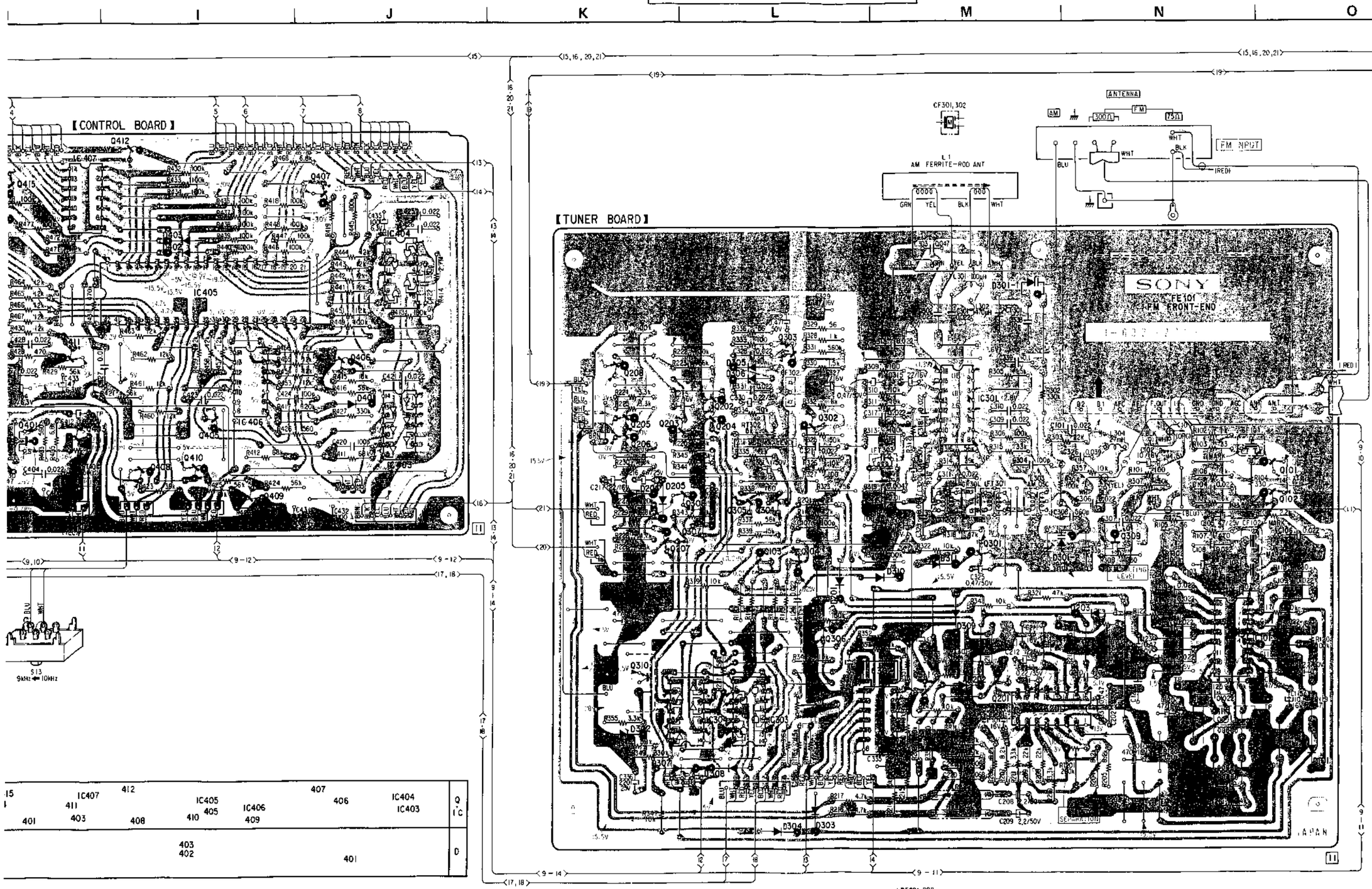


IC															IC402 IC401	404	415 414	401	IC407 411 403
D	413	414	411	415	416	412	417	410	409	427 422 418 421	426	425 419	424	423 420					

Note: • Color code of sleeving over the end of the jacket.



• [ ] : indicates side identified with part number.
• : signal path
• : L-CH signal path
• : R-CH signal path



Q, IC	D
	301-1
303 208	305 306
IC301 202 205 203,204 206 302	
101	
308 102 305,304	204 205
307 207 309 301 103,104	301-2 311 201,310
	309 203
306 IC101	
310 201 311	202
IC304, IC303 IC302, IC201	302 101 307,308
	303 304
Q, IC	D

Q / IC	
401 403 408 410 405 409 IC405 IC406 411 IC407 412 407 406 IC404 IC403	
	403 402 401

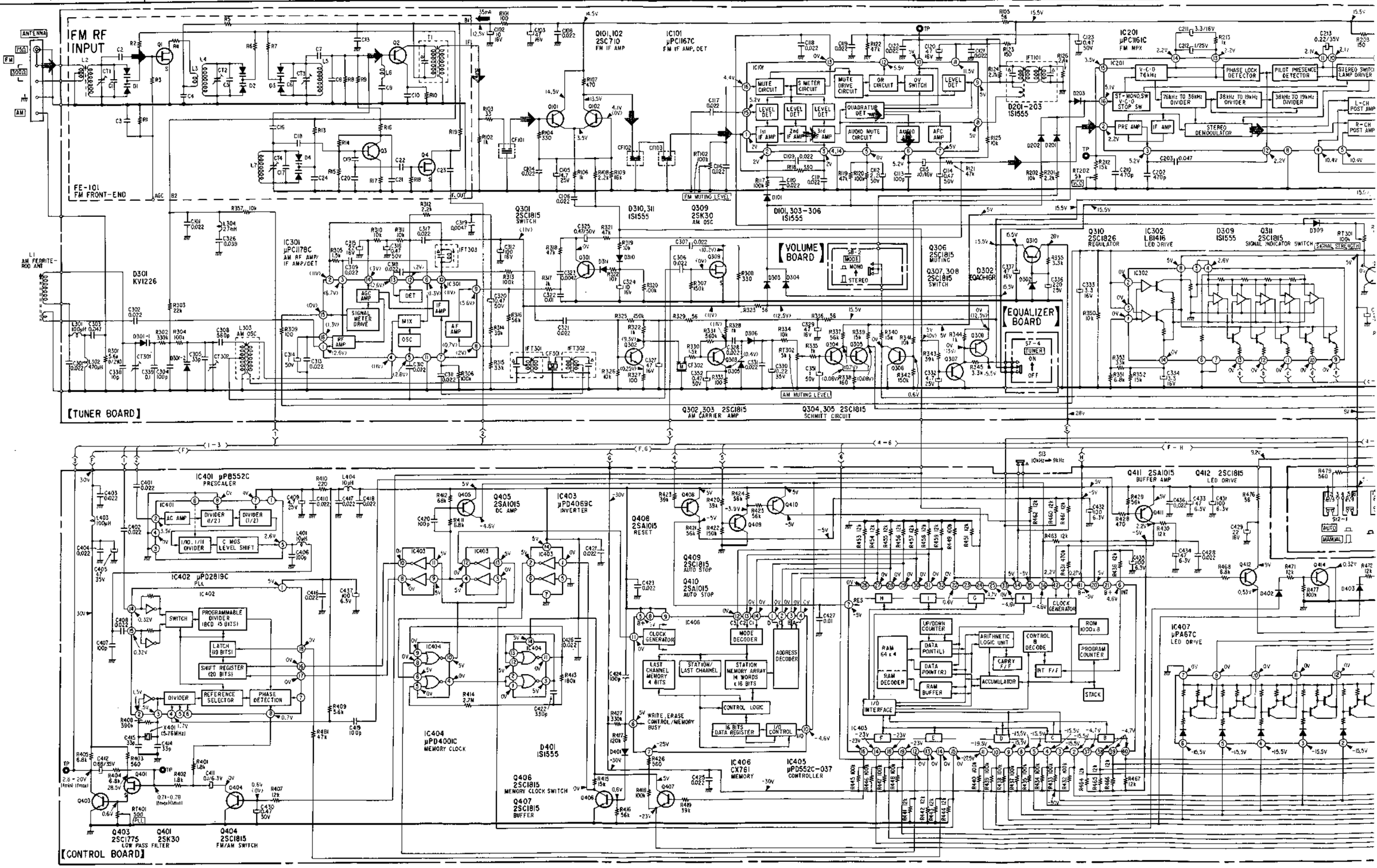
pattern

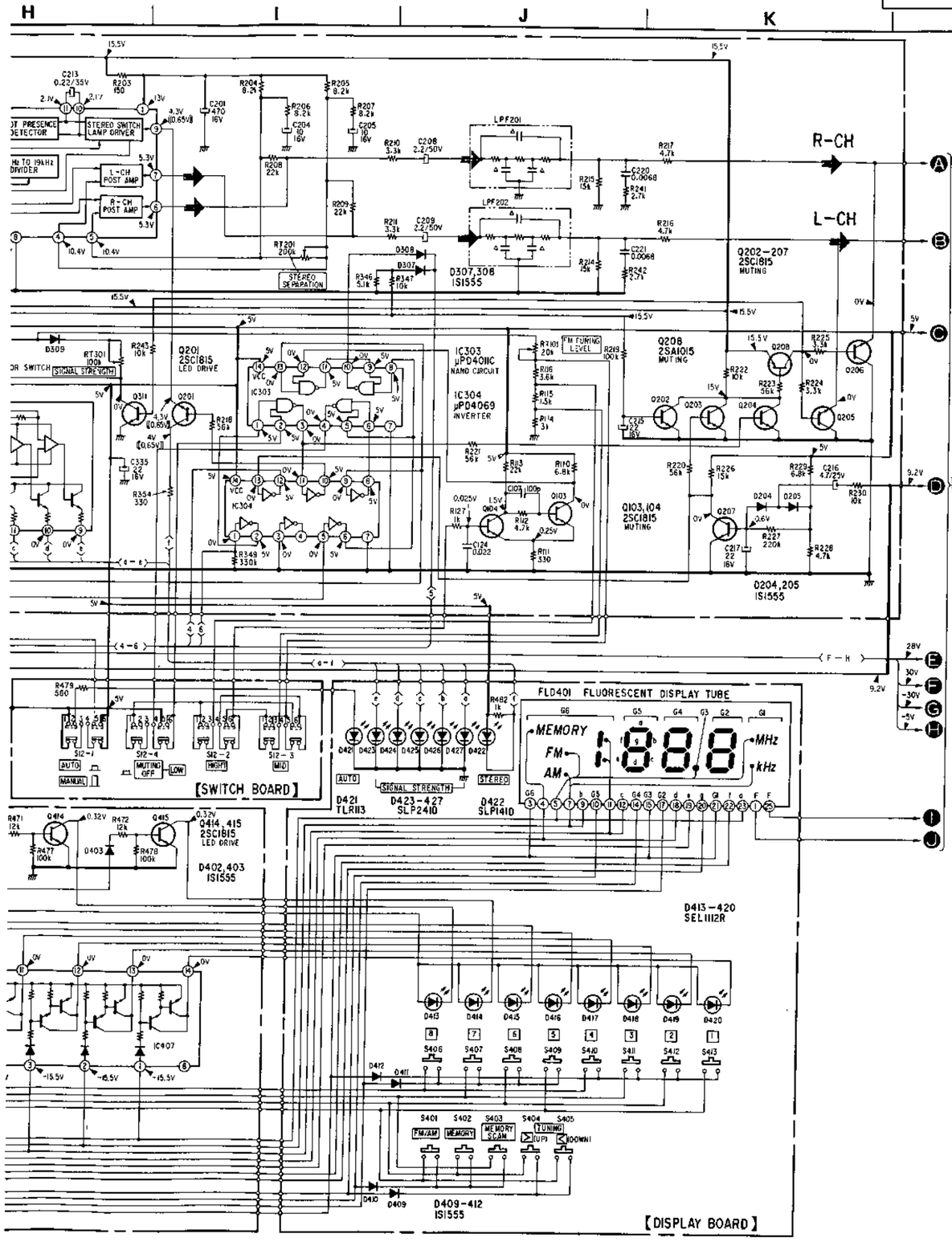
4-2. SCHEMATIC DIAGRAM (1) – Tuner Section – (US, Canadian model)

US, Canadian model

STR-V55 STR-V55

US, Canadian model





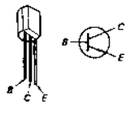
Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- △ : internal component.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——— : B+ bus.
- – – – : B– bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 kΩ/V).
  [[ ]] : FM STEREO
  < > : AM
  no mark : FM
- Voltage variations may be noted due to normal production tolerances.
- ➡ : signal path
- Switch

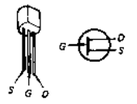
Ref. No.	Switch	Position
S7	FUNCTION TUNER	OFF
S8	MODE	STEREO
S12	TUNING LEVEL	MANUAL
S13	AM 9kHz/10kHz	10kHz
S401	FM/AM	FM
S402	MEMORY	OFF
S403	MEMORY SCAN	OFF
S404	TUNING (UP)	OFF
S405	TUNING (DOWN)	OFF
S406–413	preset (1–8)	OFF

- **Replacement Semiconductors**
  For replacement, use semiconductors except in ( ).

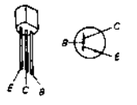
Q101, 102: 2SC710



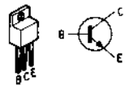
Q309, 401: 2SK30A (2SK30)



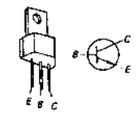
Q103, 104, 201–207, 301–308, 311, 404, 406, 407, 409, 412, 414, 415: 2SC1364 (2SC1815)



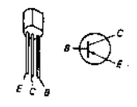
Q310: 2SC1986D



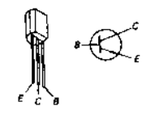
(2SC1826)



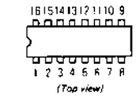
Q208, 405, 408, 410, 411: 2SA1015



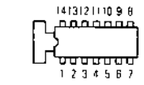
Q403: 2SC1775



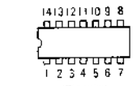
IC101: μPC1167C
IC201: μPC1161C
IC301: μPC1178C



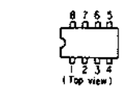
IC302: LB1416



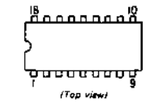
IC303: μPD4011C
IC304, 403: μPC4069C
IC404: μPD4001C



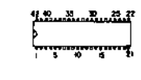
IC401: μPB552C



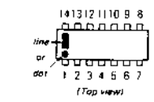
IC402: μPC2819C



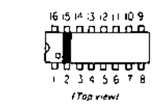
IC405: μPD552C037



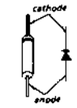
IC406: CX761A (CX761)



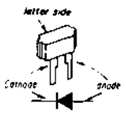
IC407: μPA67C



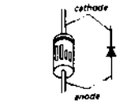
D101, 201–205, 303–311, 409–412: 1S1555



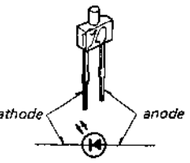
D301: KV1226



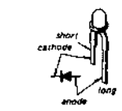
D302: EQB01-16 (EQA01-16R)



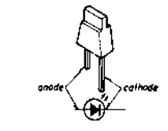
D413–420: SEL1112R



D421: TLR124 (TLR113)



D422: SLP141B (SLP141D)
D423–427: SLP241B (SLP241D)



4-3. MOUNTING DIAGRAM (2) – Amp Section – – *Conductor Side* – (US, Canadian model)

US, Canadian model

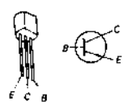
Replacement Semiconductors

For replacement, use semiconductors except in ( ).

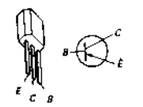
Q501, 502, 551, 552: 2SC2545

Q503, 701–704, 709, 716–721, 751–754, 759, 802, 803, 807, 811, 812, 816, 819, 820, 902: 2SC1364 (2SC1634)

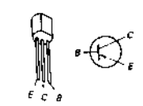
Q723: 2SC1890A



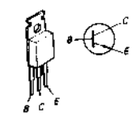
Q710, 760, 810, 815, 817, 818, 901 : 2SA1027R



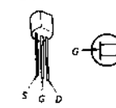
(2SA733)



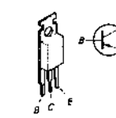
Q801, 805: 2SC1173



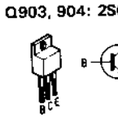
Q804, 806, 809, 814: 2SK34



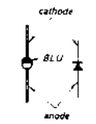
Q808, 813: 2SA473



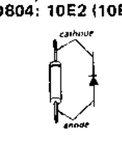
Q903, 904: 2SC2767



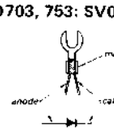
D701, 751: MV-12N



D702, 752, 704–708 711, 754–757, 901, 902: 1S1555 D804: 10E2 (10E1)

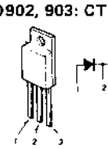


D703, 753: SV04S

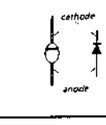


D801: S4VB40

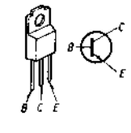
D902, 903: CTU2U



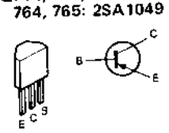
D905, 906: V09C



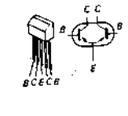
Q601, 651: 2SC1636



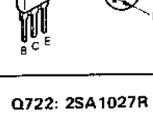
Q711, 761: 2SB528



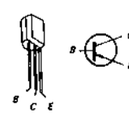
Q705, 755: 2SA979



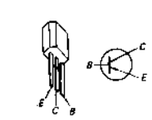
Q712, 762: 2SC2681



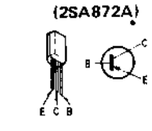
Q706, 756: 2SA904A



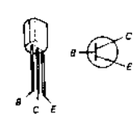
Q722: 2SA1027R



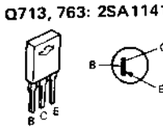
(2SA872A)



Q707, 757: 2SC1914A



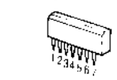
Q713, 763: 2SA1141



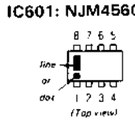
Q708, 758: 2SD358

Q714, 715, 764, 765: 2SA1049

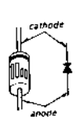
IC501, 551: M5214L



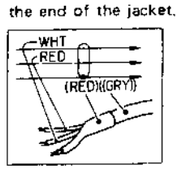
IC601: NJM4560D



D501, 709: EQB01-10 (EQA01-10R)
D710: EQB01-20 (EQA01-20R)
D803: EQB01-06 (EQA01-06R)
D805, 807: EQB01-30 (EQA01-30R)
D806: EQB01-24 (EQA01-24R)
D808: EQB01-05 (EQA01-05R)

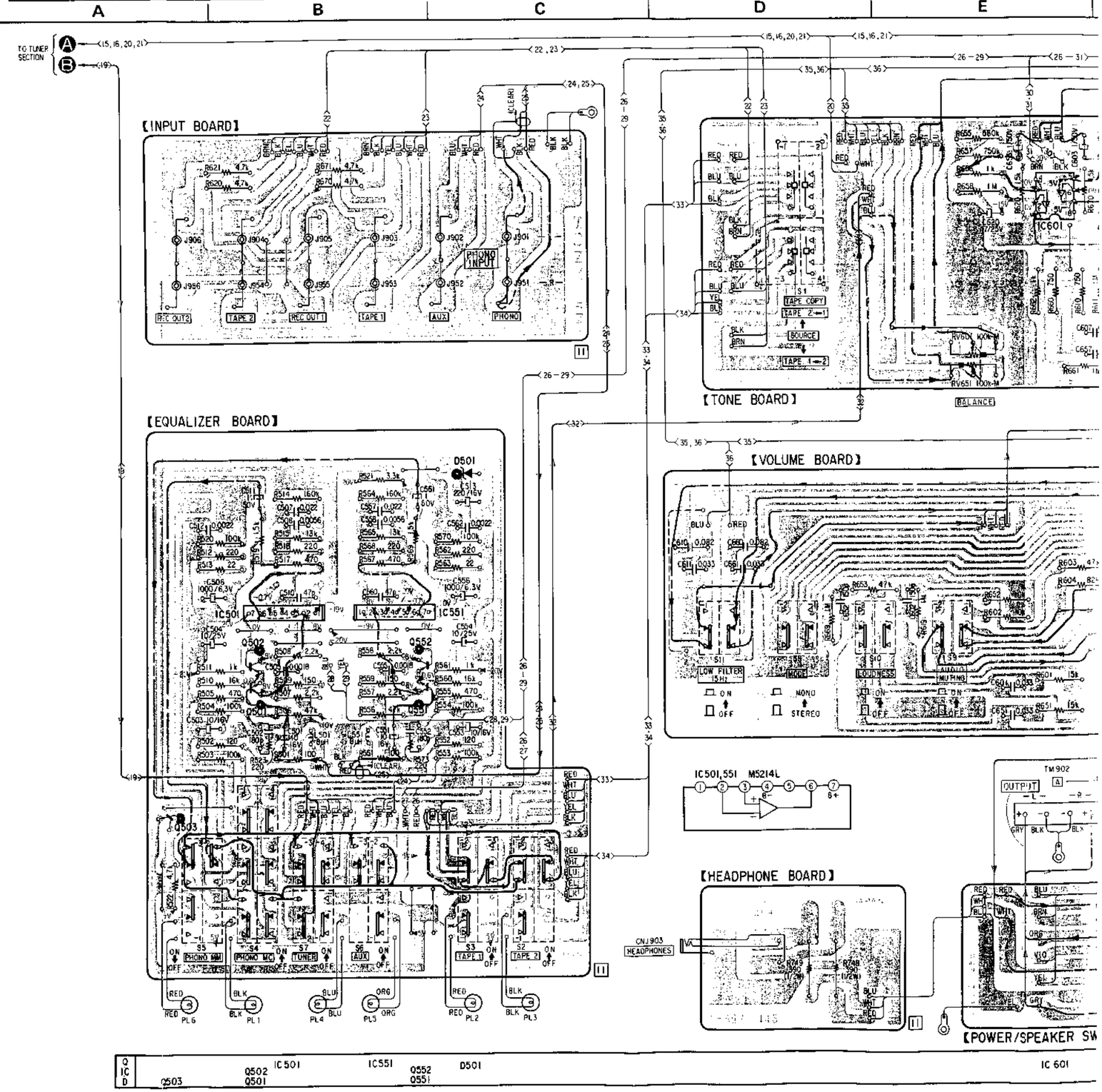


- Color code of sleeving over the end of the jacket.



Note:

- ——→ : signal path
- ——→ : L-CH signal path
- ——→ : R-CH signal path
- [ ]← : indicates side identified with part number.
- · B+ pattern



F G H I J K L

1 2 3 4 5

【POWER AMP BOARD】

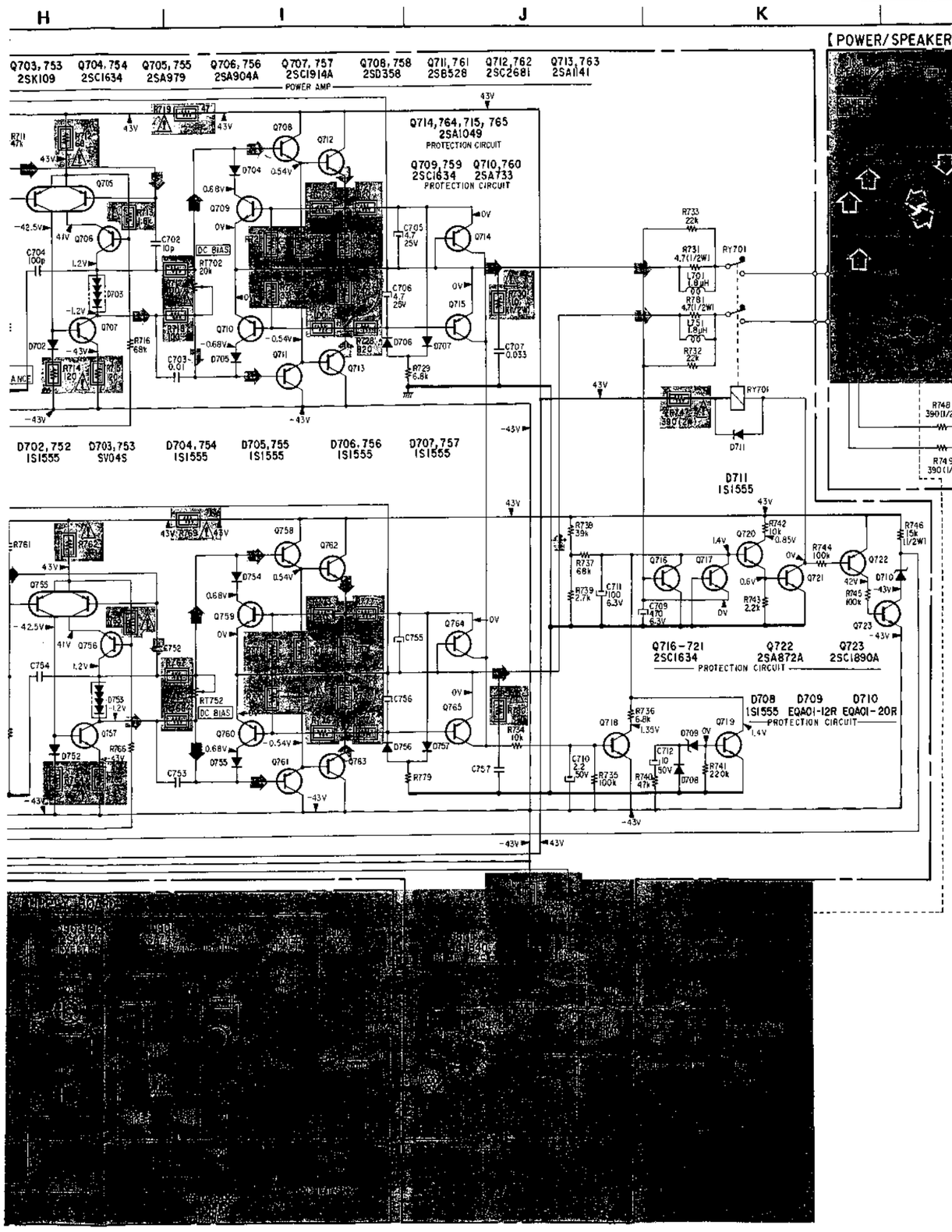
【PULSE POWER SUPPLY BOARD】

【PRE/POWER BOARD】

【R/SPEAKER SWITCH BOARD】

Q	D
IC 601	Q601 Q651

【TONE BOARD】
【EQUALIZER BOARD】
【POWER AMP BOARD】
【PRE/POWER BOARD】
【VOLUME BOARD】
【INPUT BOARD】
L-CH
R-CH
PHONO INPUT
TAPE COPY
SOURCE
Q503 2SC1634
LAMP DRIVE
IC501
M5214L
EQ AMP
Q501, 551, 502, 552
2SC2545
DIFFERENTIAL AMP
IC601
NJM4560D
TONE AMP
Q601,651
2SC1636
MUTING
D501
EQA01-10R
D701,751
MV12N
D702,752
IS1555
Q701,751
2SC1634
Q702,752
2SC1634
Q703,753
2SK109
Q704,754
2SC1634
Q811, 812
2SC1634
Q817, 818
2SA733
MULTIVIBRATOR
Q805 2SC1173
Q807 2SC1634
Q806 2SK34
REGULATOR
Q803
2SC1634
Q804
2SK34
D804
10E1
D806
EQA01-24R
D807
EQA01-30R
D805 EQA01-30R
D808
EQA01-05R
Q819, 820
2SC1634
MULTIVIBRATOR
Q816
2SC1634
Q815
2SA733
Q813
2SA473
Q814
2SK34
REGULATOR
Q810
2SA733
Q808
2SA473
Q809
2SK34
Q801
2SC1173
Q802
2SC1634
D803
EQA01-06R
FLUORESCENT DISPLAY TUBE
TO TUNER SECTION
PHONO MC
PHONO MM
TAPE 1
TAPE 2
AUX
TUNER
MODE
AUDIO MUTING
LOUDNESS
LOW FILTER 15Hz
BALANCE
VOLUME
TREBLE
TONE
BASS
DC BALANCE



- Components for right channel have same values as for left channel. Reference numbers are 50 higher than L-CH.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- : nonflammable resistor.
- : panel designation.
- : adjustment for repair.
- ——: B+ bus.
- – – –: B– bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions in FM mode with a VOM (20 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.
- : signal path
- Switch

Ref. No.	Switch	Position
S1	TAPE COPY	SOURCE
S2	TAPE 2	OFF
S3	TAPE 1	OFF
S4	PHONO MC	OFF
S5	PHONO MM	ON
S6	AUX	OFF
S7	TUNER	OFF
S8	MODE	STEREO
S9	AUDIO MUTING	OFF
S10	LOUDNESS	OFF
S11	LOW FILTER 15Hz	OFF
S14	POWER	OFF
S15	SPEAKERS	A

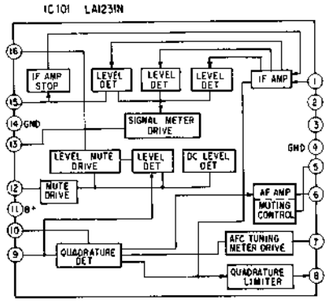
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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.

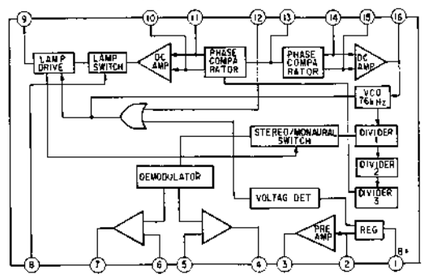
A B C D E F G H

1

IC 101 LA1231N

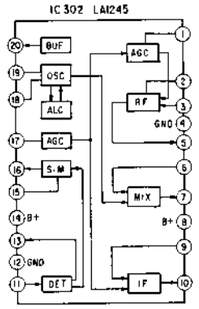


IC 201 HA12016

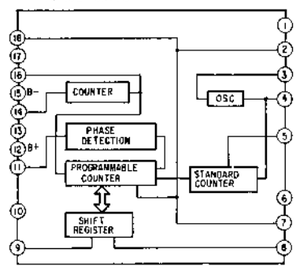


2

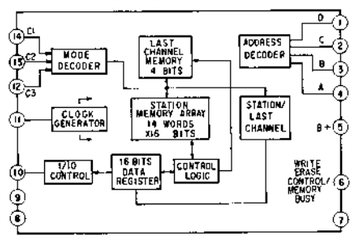
IC 302 LA1245



IC 402 CX778

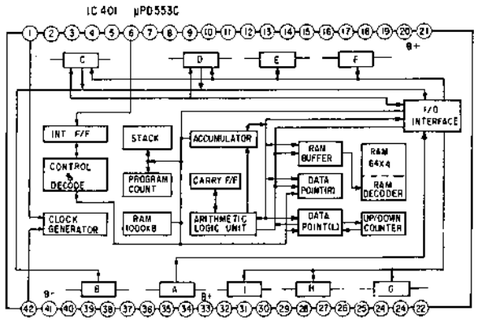


IC 405 CX761

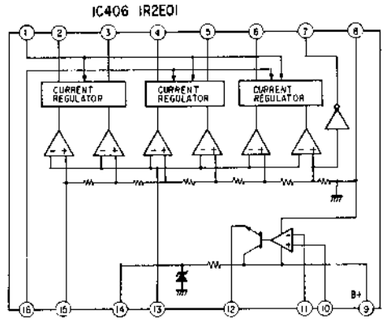


3

IC 401 μPD553C

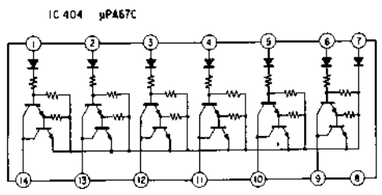


IC406 IR2E01



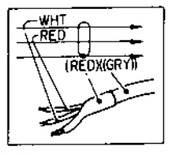
4

IC 404 μPA67C



Note:

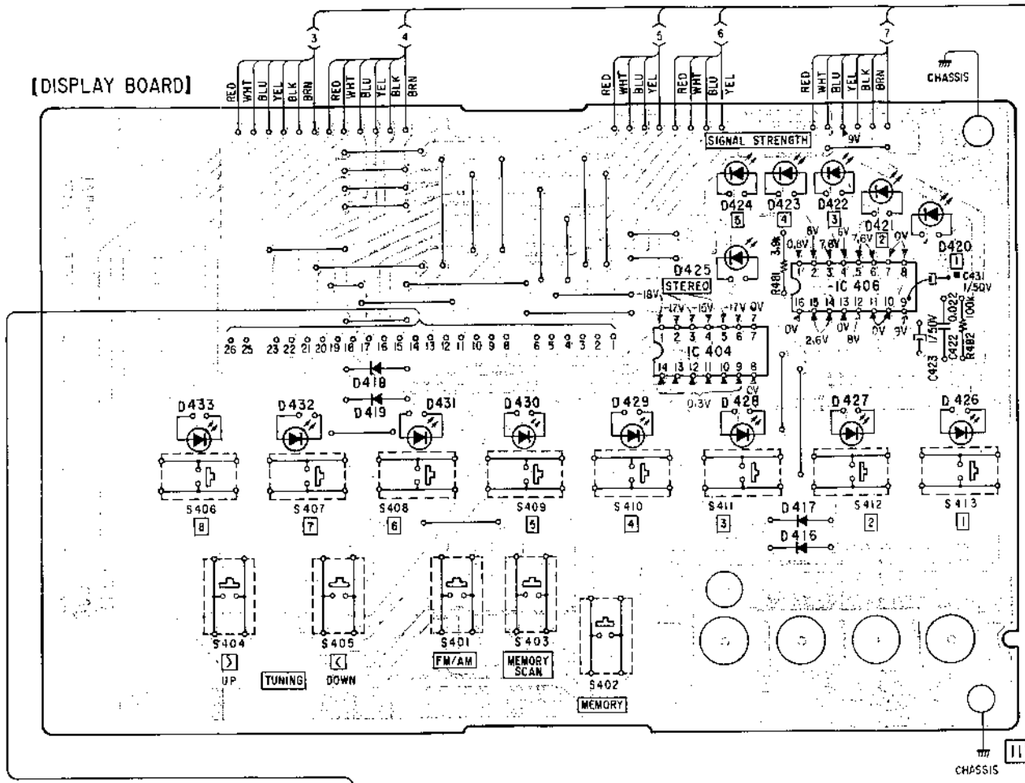
- Color code of sleeving over the end of the jacket.



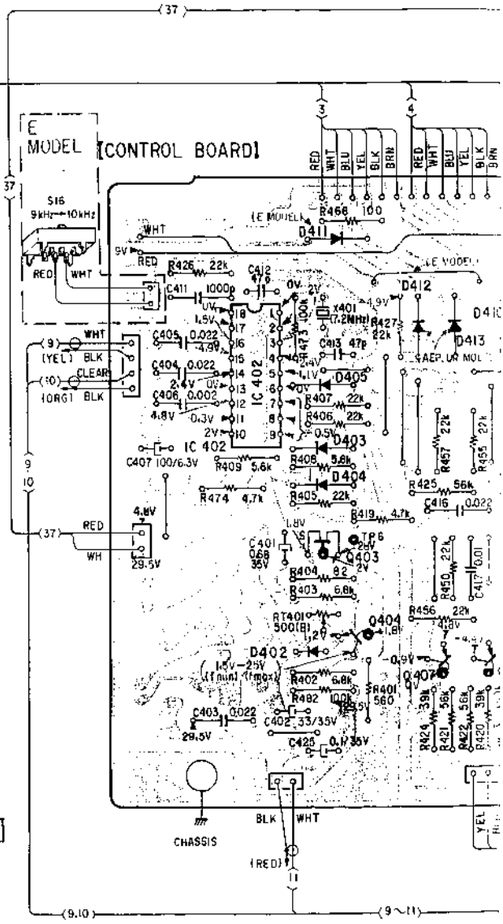
- [ ]– : indicates side identified with part number.
- ▬▬▶▬▬ : signal path
- ▬▬▶ : L-CH signal path
- ▬·▬▶ : R-CH signal path
- : B + pattern

5

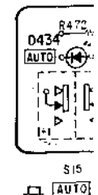
[DISPLAY BOARD]

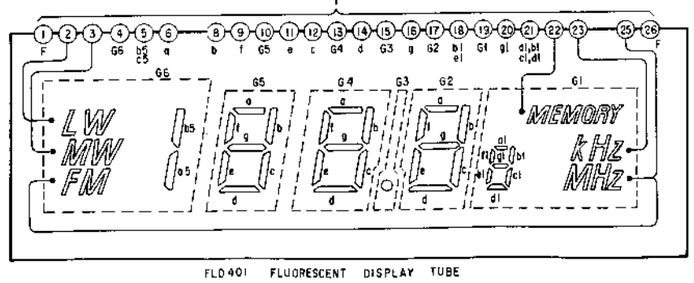


[CONTROL BOARD]



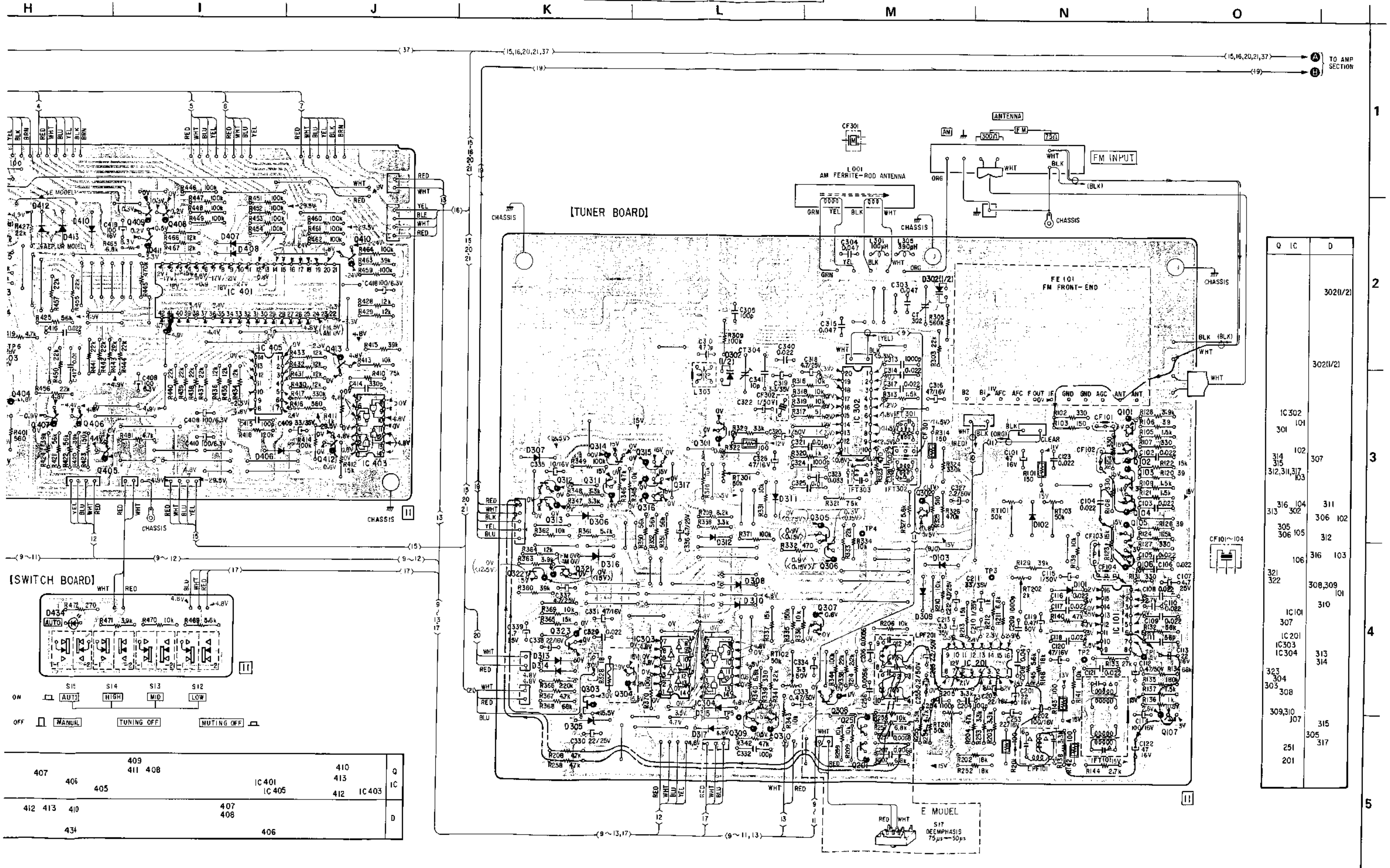
[SWITCH BOAR



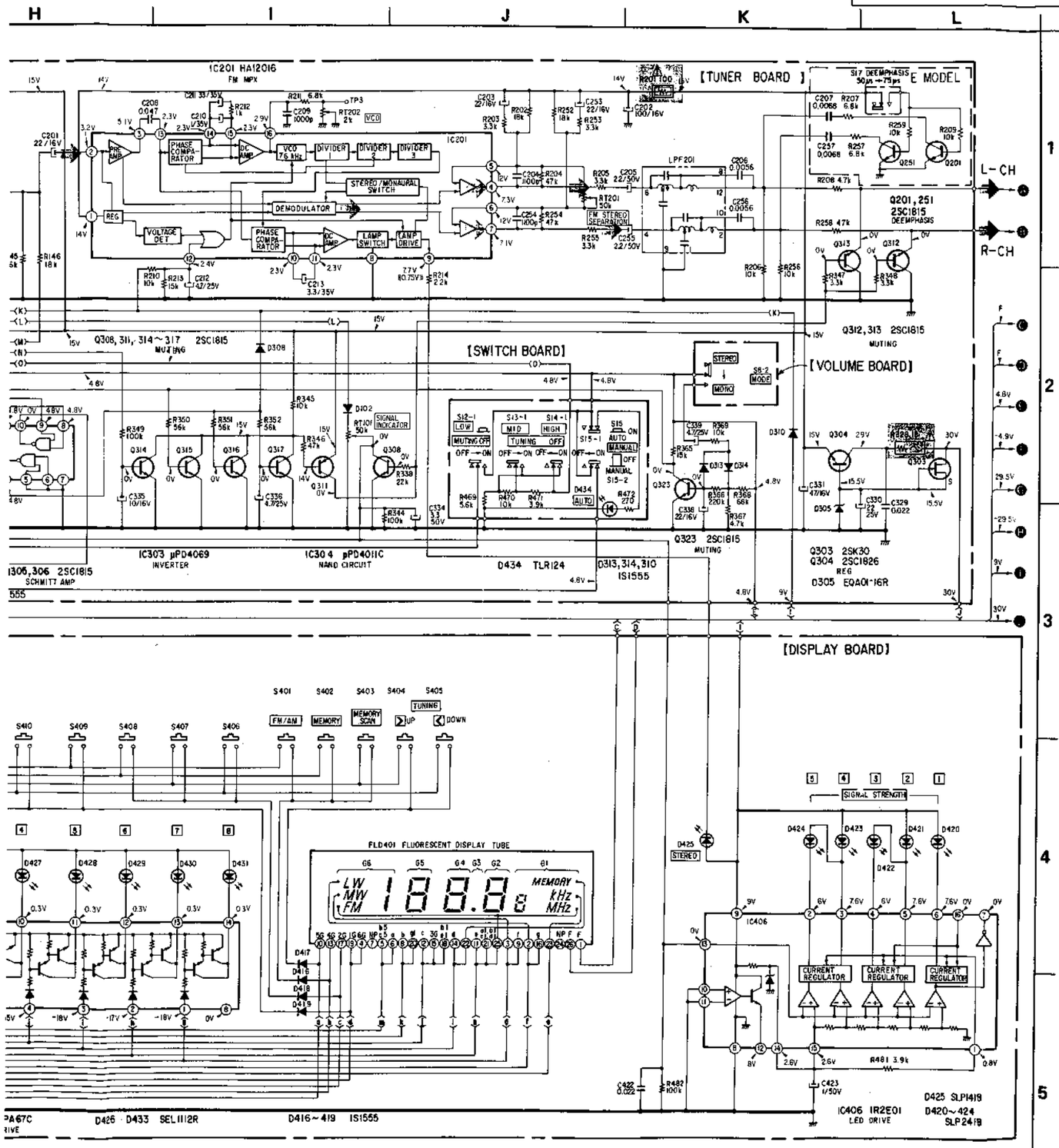


FLD401 FLUORESCENT DISPLAY TUBE

Q / IC								IC404		IC 406		IC402								
D	433	432	418 419	431	430	429	424 425 428	423	424	421	420	403 404	407	406	411 405 403 404 402	412	413	410 434


H
I
J
K
L
M
N
O
1
2
3
4
5
TO AMP SECTION
[TUNER BOARD]
[SWITCH BOARD]
CHASSIS
ANTENNA
FM INPUT
L001 AM FERRITE-ROD ANTENNA
FE101 FM FRONT-END
IC 401
IC 405
IC 403
IC 302
IC 303
IC 304
IC 101
IC 201
E MODEL
S17 DEEMPHASIS 75µs—50µs
S15
S14
S13
S12
ON
OFF
AUTO
HIGH
MID
LOW
MANUAL
TUNING OFF
MUTING OFF
CF101~104

FM RF INPUT
ANTENNA
FM
AM
FE101 FM FRONT END
AGC
Q101~106 2SC710
FM IF AMP
D101,103,306,307,309 1S1555
IC101 LA1231N
FM IF AMP, DET
QUADRATURE LIMITER
IF AMP
LEVEL DET
QUADRATURE DET
DC LEVEL DET
AFC/TUNING METER DRIVE
METER DRIVE
LEVEL MUTE DRIVE
MUTE DRIVE
AF AMP MUTE CONTROL
IFT101
LPF101
Q107
[EQ BOARD]
S7-4 TUNER
FM TUNING LEVEL
AM TUNING LEVEL
IC303
IC304
D315
D311,315 1S1555
Q307,309,310 2SC1815
MUTING
Q305,306 2SC1815
SCHMITT AMP
L001 AM FERRITE-ROD ANTENNA
IC302
BUF
OSC
ALC
AGC
RF
S.M
DET
MIX
IF
D302 KV1226
IC302 LA1245
AM RF AMP IF AMP/DET
D312,316,317 1S1555
301 2SC1815
MUTING
Q302 2SC1815
AM AF AMP
Q321,322 2SC1815
SWITCH
[CONTROL BOARD]
IC402 CX778
PLL
COUNTER
PROGRAMMABLE COUNTER
PHASE DETECTION
SHIFT REGISTER
STANDARD COUNTER
OSC
X4011(7.2MHz)
Q403 2SK30
Q404 2SC900
LOW PASS FILTER
D402 MVI2N
D403~405 1S1555
IC405
CLOCK GENERATOR
MODE DECODER
ADDRESS DECODER
LAST CHANNEL MEMORY 4 BITS
STATION/LAST CHANNEL
STATION MEMORY ARRAY 14 WORDS X16 BITS
WRITE, ERASE CONTROL/MEMORY BUSY
CONTROL LOGIC
16 BITS DATA REGISTER
I/O CONTROL
IC401
UP/DOWN COUNTER
DATA POINT(L)
DATA POINT(R)
RAM 64×4
RAM DECODER
RAM BUFFER
ARITHMETIC LOGIC UNIT
CARRY F/F
ACCUMULATOR
CONTROL DECODE
INT F/F
ROM 1000×8
PROGRAM COUNTER
STACK
I/O INTERFACE
CLOCK GENERATOR
D410~413 1S1555
D411 : E MODEL
D412, 413 : AEP,UK MODEL
Q405 2SC1634
Q406 2SA1015
AUTO STOP
Q411 2SC1815
LED DRIVE
Q407 2SA1015
RESET
Q408,409 2SC1815
LED DRIVE
Q410 2SC1815
BUFFER
Q407,408 1S1555
IC403 μPD4011C
MEMORY CLOCK
Q412 2SC1634
MEMORY CLOCK SW
Q413 2SC1634
DC AMP
D406 1S1555
IC405 CX761A
MEMORY
IC401 μPD553C-065
CONTROLLER
IC404 μPA67C
LED DRIVE



Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- △ : internal component.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——: B+ bus.
- — — —: B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20kΩ/V).

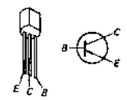
  [[ ]] : FM STEREO
  ( ) : AM
  no mark : FM

- Voltage variations may be noted due to normal production tolerances.
- ➡ : signal path
- Switch

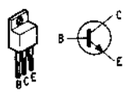
Ref. No.	Switch	Position
S7	TUNER	ON
S12	MUTING OFF (LOW)	OFF
S13	TUNING OFF (MID)	OFF
S14	TUNING OFF (HIGH)	ON
S15	MANUAL	ON (AUTO)
S401	FM/AM	OFF
S402	MEMORY	OFF
S403	MEMORY SCAN	OFF
S404	TUNING (UP)	OFF
S405	TUNING (DOWN)	OFF
S406–413	Preset (1 – 8)	OFF

Replacement Semiconductors

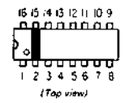
2SA1015



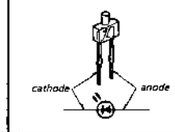
2SC1986



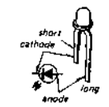
HA12016



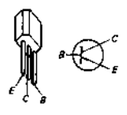
SEL1112R



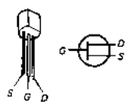
TLR124



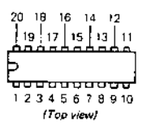
2SA1027R



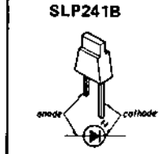
2SK30
2SK30A
2SA30A-GR3



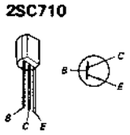
LA1245



SLP1413B
SLP241B

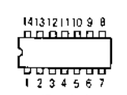


2SC710

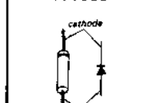


CA1231N
IR2E01
CA1231

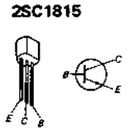
μPA67C



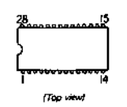
1S1555



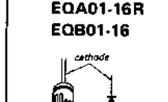
2SC900
2SC1362
2SC1364
2SC1634
2SC1815



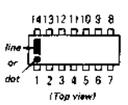
μPD553C-065



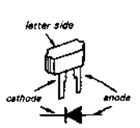
EQA01-16R
EQB01-16



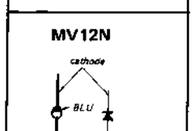
CX761A
MB84069B
μPD4069
μPD4011C



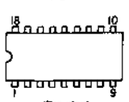
KV1226



MV12N



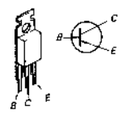
CX778



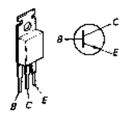
4-7. MOUNTING DIAGRAM (4) – Amp Section – (AEP, UK, E model)

Replacement Semiconductors

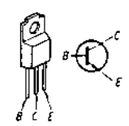
2SA473



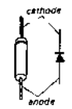
2SC1173



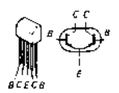
2SD358



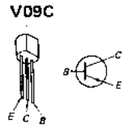
1S1555
10E1
10E2
RD27E-B
RD27E-B2Z



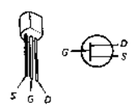
2SA979



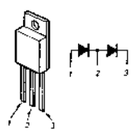
2SC1364
2SC1634
2SC2545
V09C



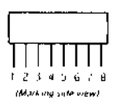
2SK34



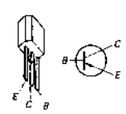
CTU-2U
CTU-22U



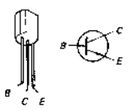
HA12002



2SA1026
2SA1027R

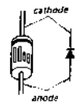


2SC1914

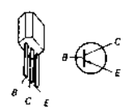


M5214L

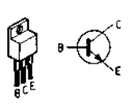
EQA01-05R
EQA01-06R
EQA01-10R
EQA01-30R
EQB01-05
EQB01-06
EQB01-10
EQB01-30



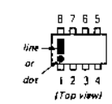
2SA1049



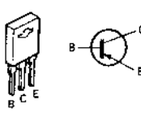
2SC2542
2SC2542A



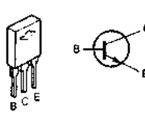
NJM4560D



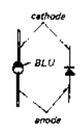
2SA1141



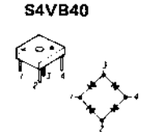
2SC2681



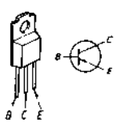
MV12N



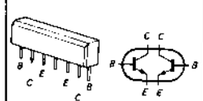
S4VB40



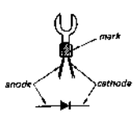
2SB528



2SC2725

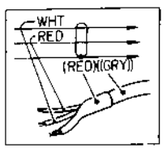


SV04S



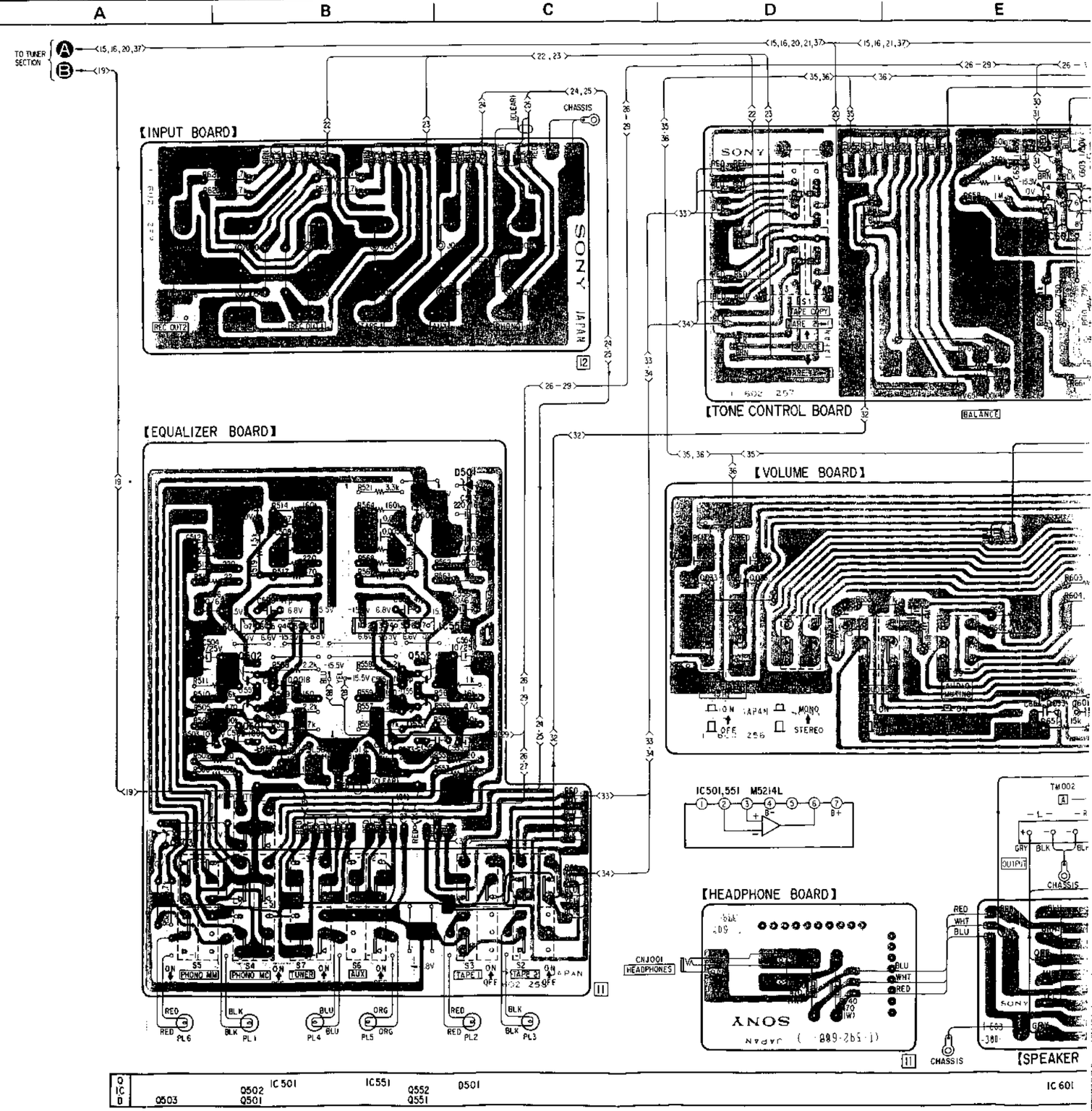
Note:

- Color code of sleeving over the end of the jacket.



- : indicates side identified with part number.

- : signal path
- : L-CH signal path
- : R-CH signal path
- : B+ pattern
- : B- pattern



E F G H I J K L M

1 2 3 4 5

【POWER AMP BOARD】

【PULSE POWER SUPPLY BOARD】 (COMPONENT SIDE)

AEP, U.K. MODEL

【SPEAKER SWITCH BOARD】

IC 601

IC, Q	D
751	
753	
759	
761	903
	901
757	
755	902
752	
756	904
758	
760	
762	
710	
712	
811,810	
704,702,803	
708,706 812	
802	
810	
808	
707,705 807	
805	
804,809	
711	806
709	
703	
701	
Q	D

	D
756	
754,755	
753	
752	
902,901	
751	
757	
801	
733	903
732	905
	906
IC731	
	904
731	
701	
707	
802	
805	
804	
702,803	
703	
704,705,706	
806	
Q	D

Note:

- Components for right channel have same values as for left channel. Reference numbers are 50 higher than L-CH.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- FW : nonflammable resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——: B+ bus.
- — — —: B- bus.
- Voltages are dc with respect to ground unless otherwise noted. ( ) : UK model
- Readings are taken under no-signal (detuned) conditions in FM mode with a VOM (20 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.

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.

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

AEP, UK, E model STR-V55

E F G H I J K L

1 2 3 4 5

[POWER AMP BOARD]

Q701,751 2SC2725 | Q702,752 2SC1364 | Q703,753 2SA979 | Q704,754 2SC1914A | Q709,759 2SD356 | Q710,760 2SB528 | Q711,761 2SC2681 | Q712,762 2SA1141 | Q705,755,706,758 2SA1049 | Q706,756,707,757 2SC1364

POWER AMP

PROTECTOR

D701,751 MV12N | D702,752 1S1555 | D703,753 SV045 | D704,754 1S1555 | D705,755 1S1555 | D706,756 1S1555 | D707,757 1S1555

DC BIAS (L) RT701

DC BALANCE (L)

DC BIAS (R) RT752

DC BALANCE (R)

[SPEAKER SWITCH BOARD]

L-CH PHONO OUTPUT R-CH

TM002

SPEAKER

TM003

CNJ903 HEADPHONES

[HEADPHONE BOARD]

AEP, UK MODEL

D732,733 1S1555

E MODEL D732

D731 RD27E8

IC731 HA12002 MUTING DRIVE

[TONE CONTROL BOARD]

IC601 NJM4560D TONE AMP

TREBLE TONE BASS

VOLUME

AUDIO MUTING ON→OFF S9-1

LOUDNESS ON→OFF S10-1

LOW FILTER 15Hz OFF→ON S11-1

[TONE BOARD]

AUDIO MUTING ON→OFF S9-2

LOUDNESS ON→OFF S10-2

LOW FILTER 15Hz OFF→ON S11-2

PL3 TAPE 2 PL2 TAPE 1 PL6 PHONO MM PL5 AUX PL4 TUNER

S2-1 TAPE 2 S3-1 TAPE 1 S5-1 PHONO MM S6-1 AUX S7-1 TUNER

MC POSITION

E MODEL

AEP,UK MODEL

Q802 2SC1634 REGULATOR | Q803 2SK34 | D802 10E1

D804 EQA01-30R

Q811 2SK34 | Q809 2SA1026 | Q807 2SA473 | Q808 2SK34 | Q801 2SC1173 | D803 EQA01-06R

VOLT. REG

[PPS BOARD]

85V P-P | 5.2V P-P

AEP, UK MODEL

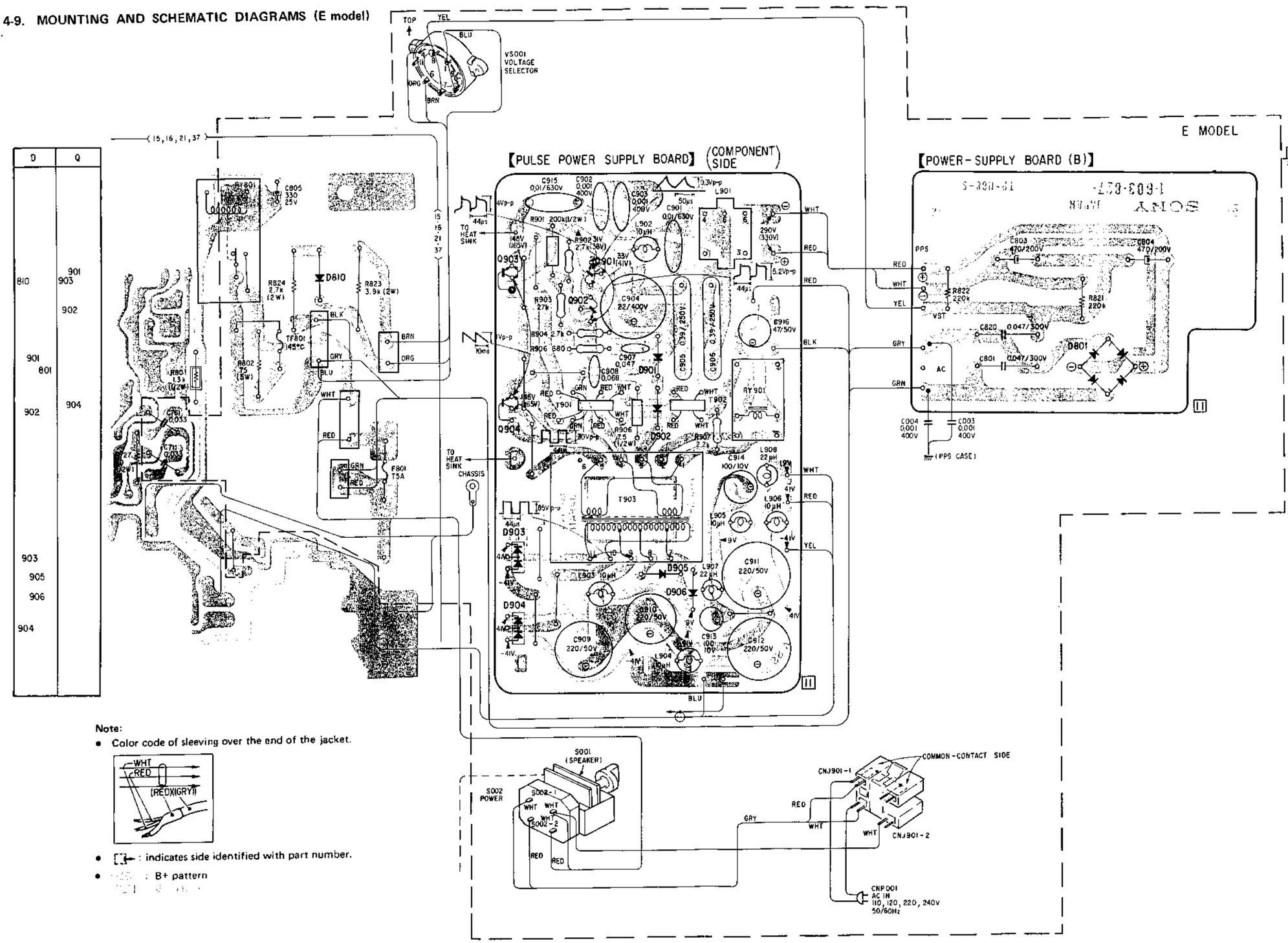
AEP, UK MODEL

• Switch

Ref. No.	Switch	Position
S001	SPEAKERS	A
S002	POWER	OFF
S1	TAPE COPY	SOURCE
S2	TAPE 2	OFF
S3	TAPE 1	OFF
S4	PHONO MC	OFF
S5	PHONO MM	ON
S6	AUX	OFF
S7	TUNER	OFF
S8	MODE	STEREO
S9	AUDIO MUTING	OFF
S10	LOUDNESS	OFF
S11	LOW FILTER 15Hz	OFF

• ➡ : R-CH ▨ : L-CH

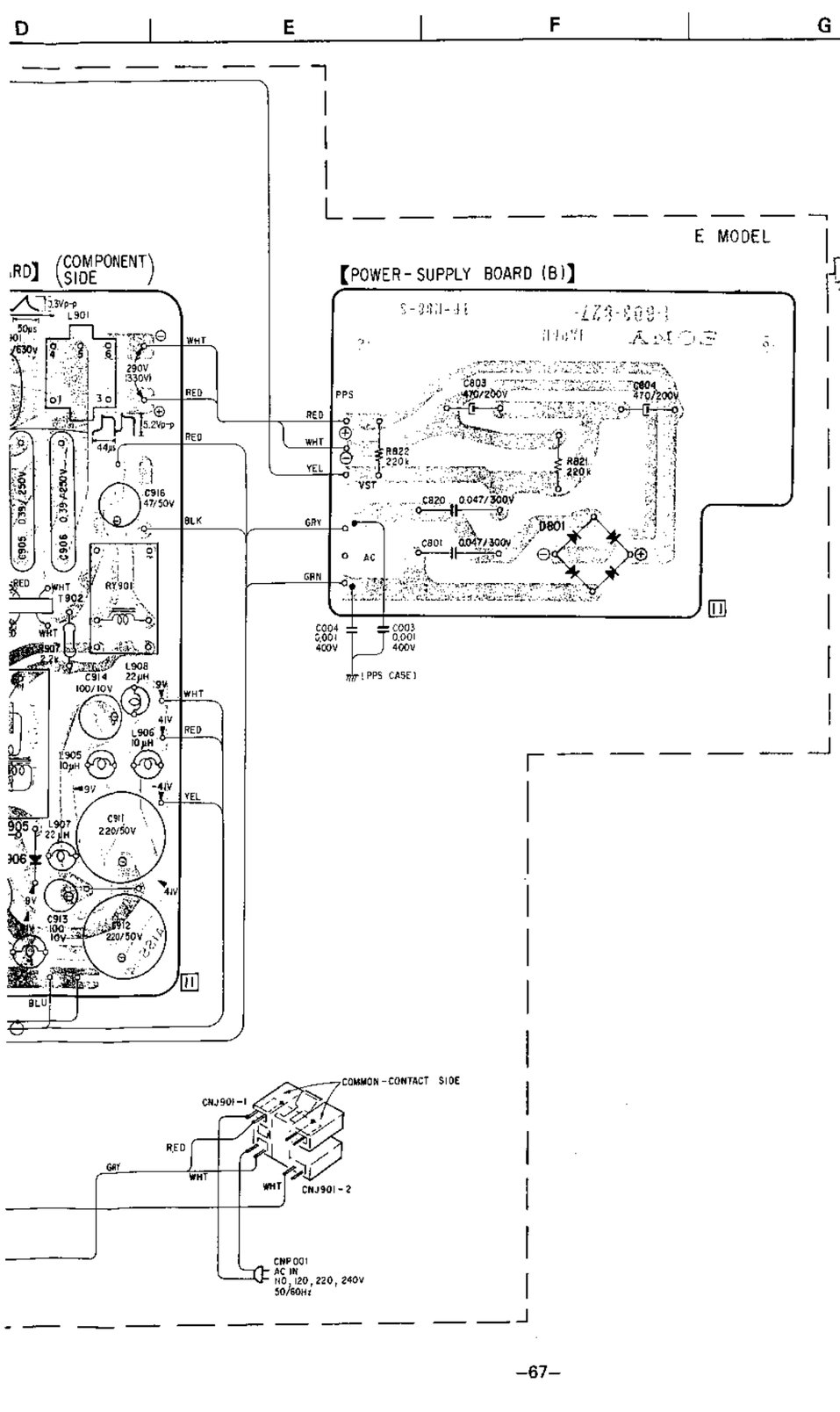
4-9. MOUNTING AND SCHEMATIC DIAGRAMS (E model)

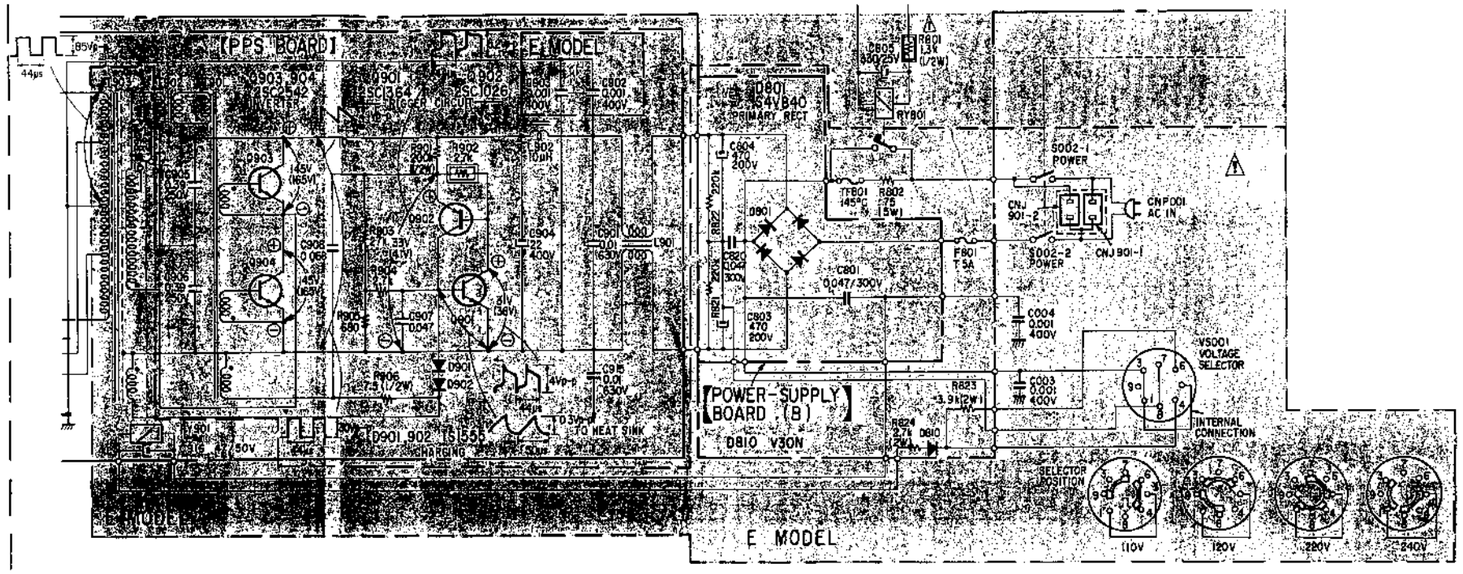


Note:

- Color code of sleeving over the end of the jacket.

- : indicates side identified with part number.
- : B+ pattern



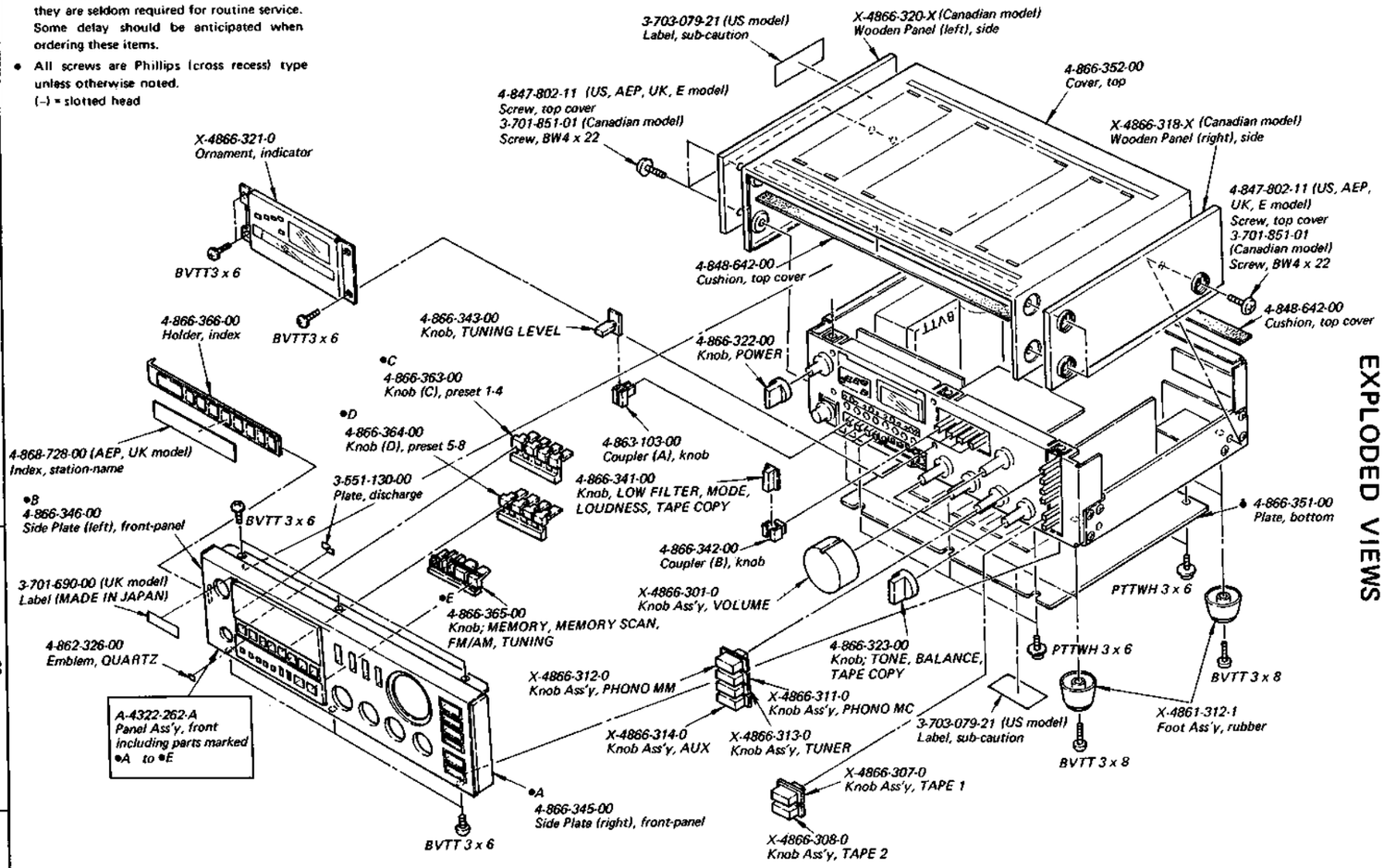


Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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.

(1)

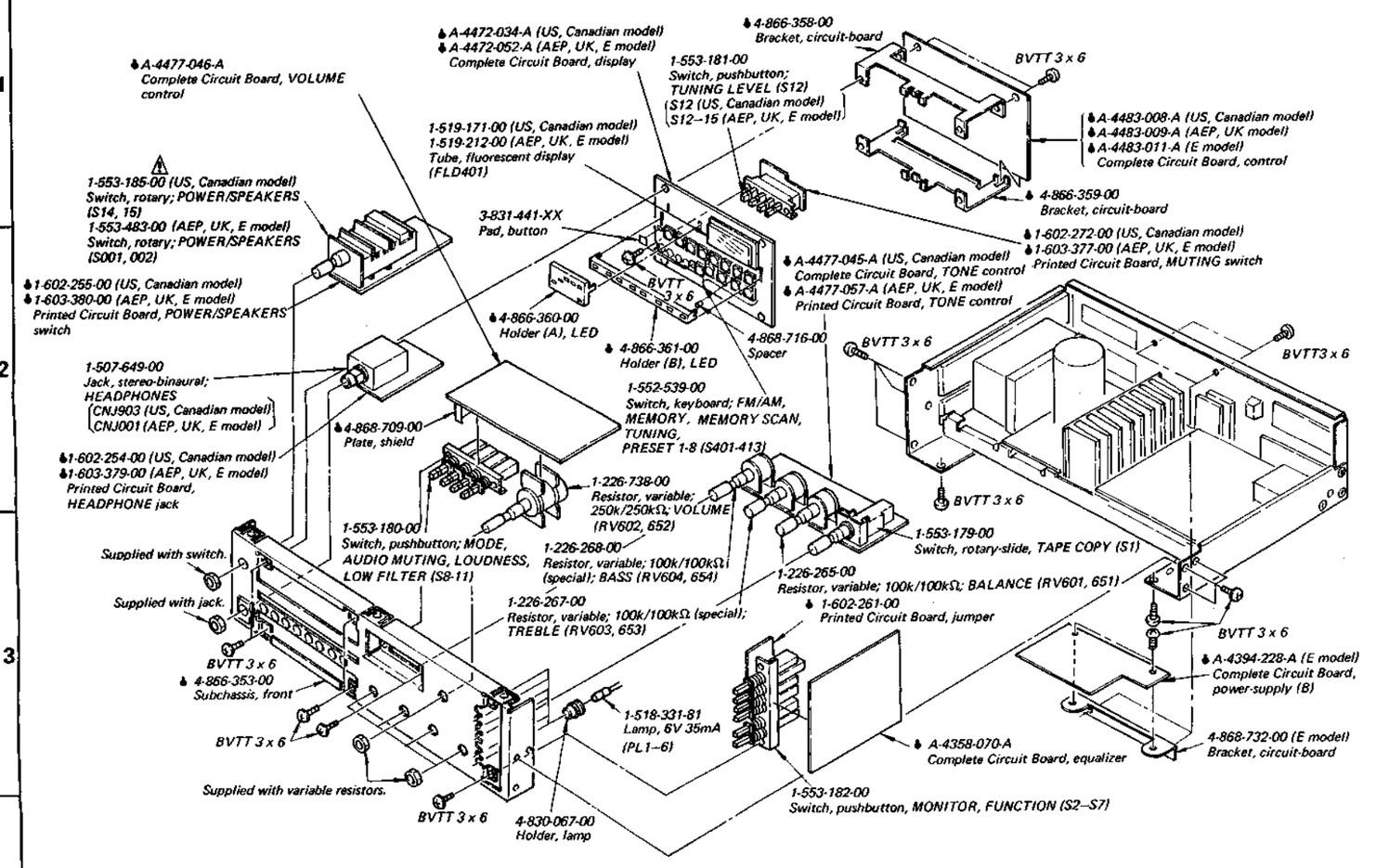
Note:
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
(–) = slotted head



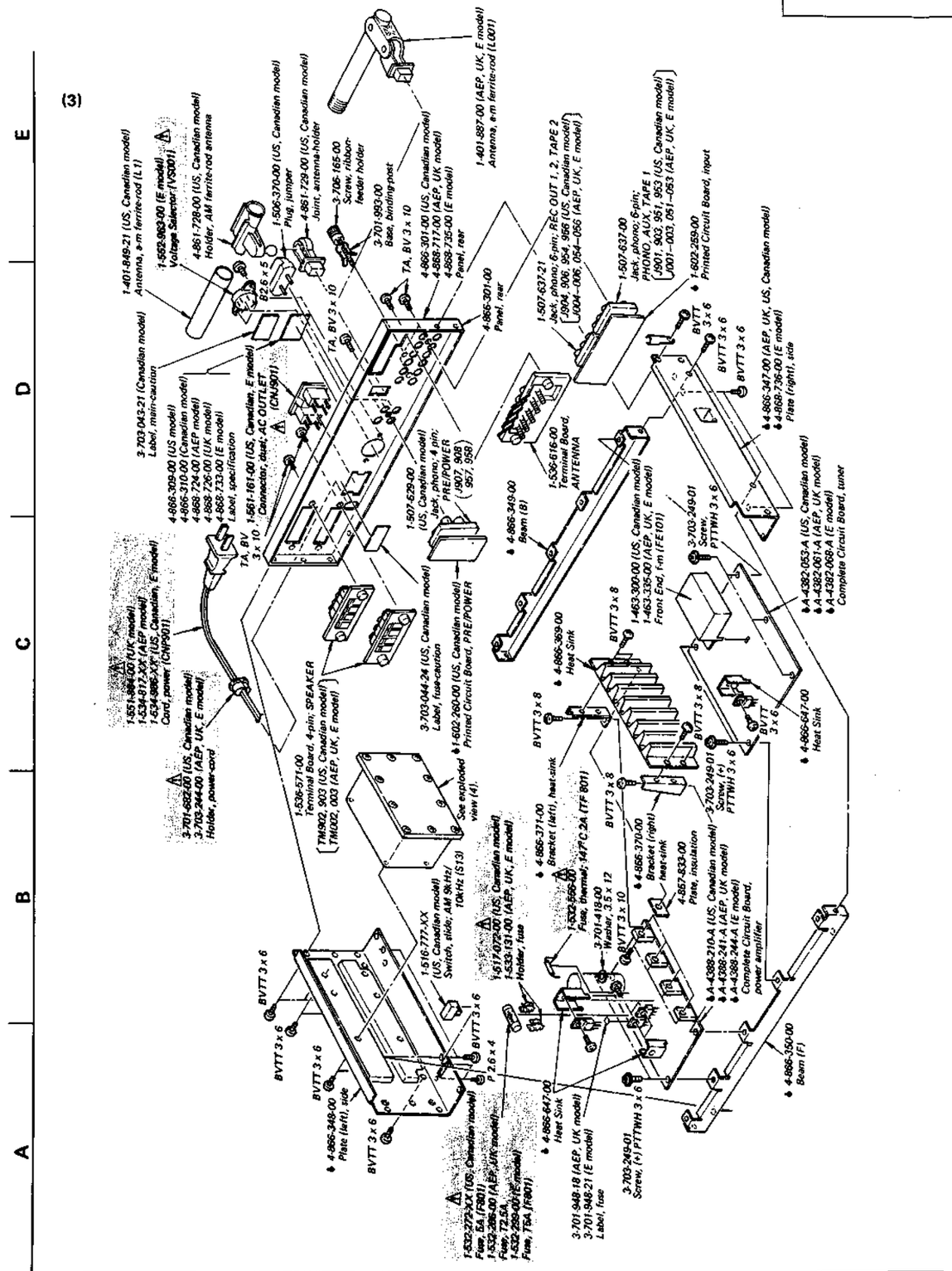
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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.

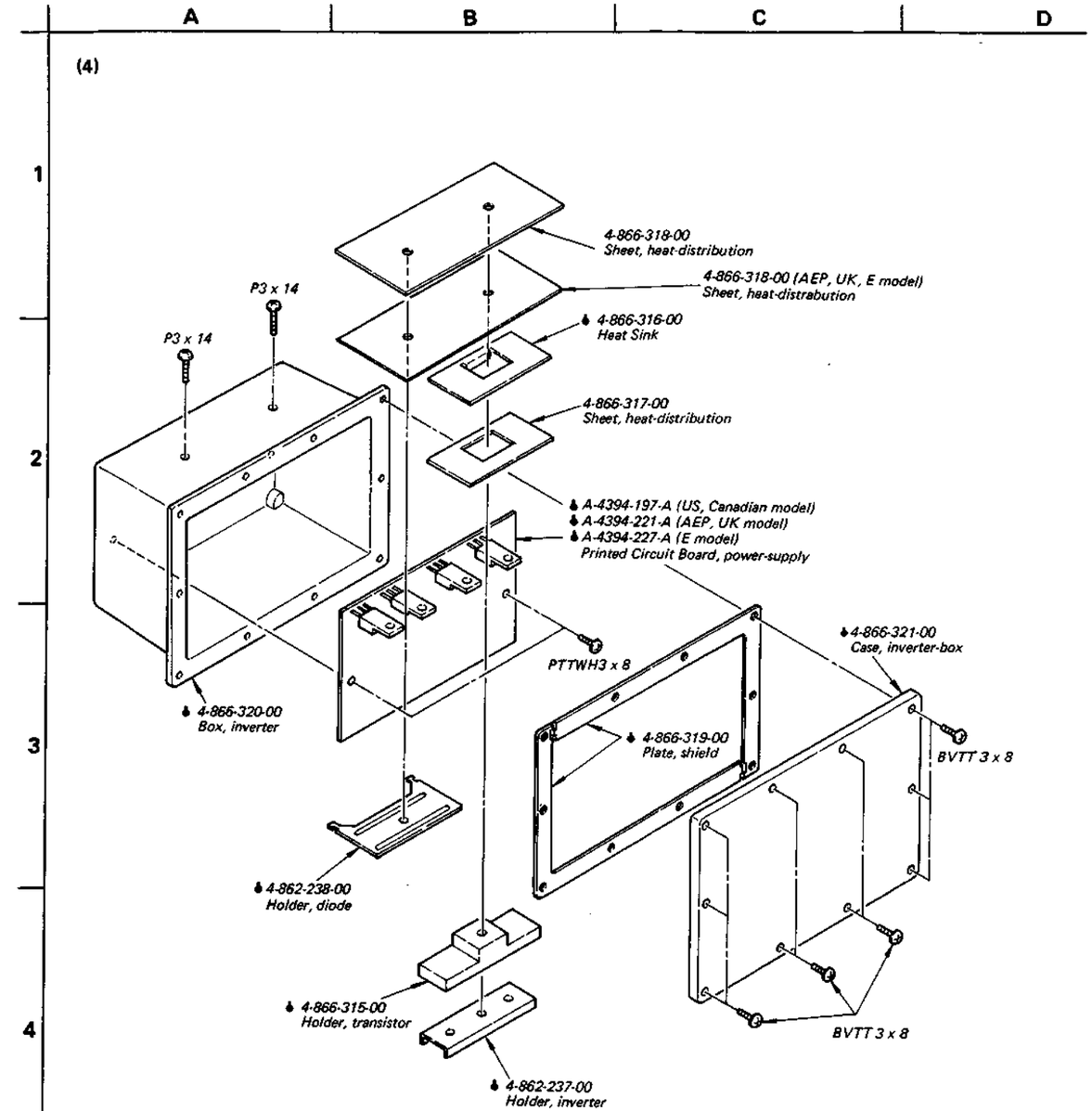
(2)



(3)


1-401-849-21 (US, Canadian model) Antenna, a.m ferrite-rod (L1)
1-552-863-00 (E model) Voltage Selector (VS801)
4-861-728-00 (US, Canadian model) Holder, AM ferrite-rod antenna
1-506-370-00 (US, Canadian model) Plug, jumper
4-861-729-00 (US, Canadian model) Joint, antenna-holder
3-706-165-00 Screw, ribbon-feeder holder
3-701-993-00 Base, binding-post
1-401-887-00 (AEP, UK, E model) Antenna, a.m ferrite-rod (L001)
3-703-043-21 (Canadian model) Label, main-caution
4-866-309-00 (US model)
4-866-310-00 (Canadian model)
4-868-724-00 (AEP model)
4-868-726-00 (UK model)
4-868-733-00 (E model) Label, specification
1-561-161-00 (US, Canadian, E model) Connector, duct; AC OUTLET (CN1901)
4-866-301-00 Panel, rear
4-866-301-00 (US, Canadian model)
4-868-717-00 (AEP, UK model)
4-868-735-00 (E model) Panel, rear
1-507-637-21 Jack, phone; 6-pin; REC OUT 1, 2, TAPE 2 (904, 906, 954, 956 (US, Canadian model) 004–006, 054–056 (AEP, UK, E model))
1-507-637-00 Jack, phone; 6-pin; PHONO, AUX, TAPE 1 (901, 903, 951, 953 (US, Canadian model) 001–003, 051–053 (AEP, UK, E model))
1-602-259-00 Printed Circuit Board, input
1-507-629-00 (US, Canadian model) Jack, phone; 4 pin; PRE/POWER (907, 908) (957, 958)
1-536-616-00 Terminal Board, ANTENNA
4-866-349-00 Beam (B)
1-463-300-00 (US, Canadian model)
1-463-335-00 (AEP, UK, E model) Front End, f-m (FE101)
3-703-249-01 Screw, PTTWH 3 x 6
4-866-369-00 Heat Sink
4-866-347-00 (AEP, UK, US, Canadian model)
4-868-736-00 (E model) Plate (right), side
A-4382-053-A (US, Canadian model)
A-4382-061-A (AEP, UK model)
A-4382-068-A (E model) Complete Circuit Board, tuner
1-551-884-00 (UK model)
1-534-912-XX (AEP model)
1-534-936-XX (US, Canadian, E model) Cord, power (CNP901)
3-701-602-00 (US, Canadian model)
3-703-244-00 (AEP, UK, E model) Holder, power-cord
1-536-571-00 Terminal Board, 4-pin; SPEAKER TMS02, 903 (US, Canadian model) TMO02, 003 (AEP, UK, E model)
3-703-044-24 (US, Canadian model) Label, fuse-caution
1-602-260-00 (US, Canadian model) PRE/POWER Printed Circuit Board
See exploded view (4).
4-866-371-00 Bracket (left), heat-sink
4-866-370-00 Bracket (right), heat-sink
4-857-833-00 Plate, insulation
A-4388-210-A (US, Canadian model)
A-4388-241-A (AEP, UK model)
A-4388-244-A (E model) Complete Circuit Board, power amplifier
4-866-360-00 Beam (F)
4-866-348-00 Plate (left), side
4-866-647-00 Heat Sink
1-516-777-XX (US, Canadian model) Switch, slide; AM 9k Hz/ 10k Hz (S13)
1-532-272-XX (US, Canadian model) Fuse, 5A (F801)
1-532-285-00 (AEP, UK model) Fuse, T2.5A
1-532-259-00 (E model) Fuse, T6A (F801)
1-532-566-00 Fuse, thermal; 347°C 3A (TF 801)
1-533-131-00 (AEP, UK, E model) Holder, fuse
3-701-418-00 Washer, 3.5 x 12
3-701-948-18 (AEP, UK model)
3-701-948-21 (E model) Label, fuse
3-703-249-01 Screw, (+) PTTWH 3 x 6
BVTT 3 x 6
BVTT 3 x 8
TA, BV 3 x 10
P 2.6 x 4
TA, BV 3 x 10 82.6 x 5

(4)


4-866-318-00 Sheet, heat-distribution
4-866-318-00 (AEP, UK, E model) Sheet, heat-distrabution
4-866-316-00 Heat Sink
4-866-317-00 Sheet, heat-distribution
A-4394-197-A (US, Canadian model)
A-4394-221-A (AEP, UK model)
A-4394-227-A (E model) Printed Circuit Board, power-supply
4-866-321-00 Case, inverter-box
4-866-319-00 Plate, shield
4-866-320-00 Box, inverter
4-862-238-00 Holder, diode
4-866-315-00 Holder, transistor
4-862-237-00 Holder, inverter
P3 x 14
PTTWH3 x 8
BVTT 3 x 8

SECTION 6
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
		SEMICONDUCTORS
		Transistors
Q101–104	8-729-671-14	2SC710
Q105, 106	8-729-671-14	2SC710 (AEP, UK, E model)
Q107	8-729-663-47	2SC1364 (AEP, UK, E model)
Q201–207	8-729-663-47	2SC1364 (US, Canadian model)
Q208	8-729-201-52	2SA1015 (US, Canadian model)
Q301, 302	8-729-663-47	2SC1364
Q303	8-729-203-04	2SK30A (AEP, UK, E model)
	8-729-663-47	2SC1364 (US, Canadian model)
Q304	8-729-398-62	2SC1986 (AEP, UK, E model)
	8-729-663-47	2SC1364 (US, Canadian model)
Q305–308	8-729-663-47	2SC1364
Q309	8-729-203-04	2SK30A (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
Q310	8-729-308-72	2SC1986D (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
	8-729-612-77	2SA1027R (AEP, UK, E model)
Q311	8-729-663-47	2SC1364 (US, Canadian model)
Q312–317	8-729-663-47	2SC1364 (AEP, UK, E model)
Q321, 322	8-729-663-47	2SC1364 (AEP, UK, E model)
Q401	8-729-203-04	2SK30A (US, Canadian model)
Q402	8-729-377-58	2SC1775 (US, Canadian model)
Q403	8-729-203-05	2SK30A-GR3 (AEP, UK, E model)
	8-729-377-58	2SC1775 (US, Canadian model)
Q404	8-729-665-47	2SC1362 (AEP, UK, E model)
	8-729-663-47	2SC1364 (US, Canadian model)
Q405	8-729-201-52	2SA1015 (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
Q406, 407	8-729-201-52	2SA1015 (AEP, UK, E model)
	8-729-663-47	2SC1364 (US, Canadian model)
Q408	8-729-663-47	2SC1364 (AEP, UK, E model)
	8-729-201-52	2SA1015 (US, Canadian model)
Q409	8-729-663-47	2SC1364
Q410, 411	8-729-201-52	2SA1015 (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
Q412	8-729-663-47	2SC1364
Q413	8-729-663-47	2SC1364 (AEP, UK, E model)
Q414, 415	8-729-663-47	2SC1364 (US, Canadian model)
Q501, 551 Q502, 552	8-729-354-52	2SC2545
Q503	8-729-663-47	2SC1364
Q601, 651	8-761-622-00	2SC1636 (US, Canadian model)
Q701, 751	8-729-663-47	2SC1364 (US, Canadian model)
	8-729-672-52	2SC2725 (AEP, UK, E model)
Q702, 752	8-729-663-47	2SC1364
Q703, 753	8-729-610-92	2SK109 (US, Canadian model)
	8-729-697-92	2SA979 (AEP, UK, E model)
Q704, 754	8-729-663-47	2SC1364 (US, Canadian model)
	8-729-601-42	2SC1914A (AEP, UK, E model)
Q705, 755	8-729-697-92	2SA979 (US, Canadian model)
	8-729-204-91	2SA1049 (AEP, UK, E model)
Q706, 756	8-729-609-42	2SA904A (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
Q707, 757	8-729-601-42	2SC1914A (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
Q708, 758	8-729-635-82	2SD358 (US, Canadian model)
	8-729-204-91	2SA1049 (AEP, UK, E model)
Q709, 759	8-729-663-47	2SC1364 (US, Canadian model)
	8-729-635-82	2SD358 (AEP, UK, E model)
Q710, 760	8-729-612-77	2SA1027R (US, Canadian model)
	8-729-652-82	2SB528 (AEP, UK, E model)
Q711, 761	8-729-652-82	2SB528 (US, Canadian model)
	8-729-168-11	2SC2681 (AEP, UK, E model)
Q712, 762	8-729-168-11	2SC2681 (US, Canadian model)
	8-729-114-11	2SA1141 (AEP, UK, E model)
Q713, 763	8-729-114-11	2SA1141 (US, Canadian model)
Q714, 715 Q764, 765	8-729-204-91	2SA1049 (US, Canadian model)
Q716–721	8-729-663-47	2SC1364 (US, Canadian model)
Q722	8-729-612-77	2SA1027R (US, Canadian model)
Q723	8-729-309-06	2SC1890A (US, Canadian model)
Q801	8-729-217-33	2SC1173
Q802	8-729-663-47	2SC1364
Q803	8-729-663-47	2SC1364 (US, Canadian model)
	8-729-634-03	2SK34 (AEP, UK, E model)
Q804	8-729-634-03	2SK34 (US, Canadian model)
	8-729-217-33	2SC1173 (AEP, UK, E model)
Q805	8-729-217-33	2SC1173 (US, Canadian model)
	8-729-634-03	2SK34 (AEP, UK, E model)
Q806	8-729-634-03	2SK34 (US, Canadian model)
	8-729-663-47	2SC1364 (AEP, UK, E model)
Q807	8-729-247-33	2SA473 (AEP, UK, E model)
	8-729-663-47	2SC1364 (US, Canadian model)
Q808	8-729-634-03	2SK34 (AEP, UK, E model)
Q809	8-729-612-77	2SA1027R (AEP, UK, E model)
	8-729-634-03	2SK34 (US, Canadian model)
Q810	8-729-612-77	2SA1027R (US, Canadian model)
	8-729-247-33	2SA473 (AEP, UK, E model)
Q811	8-729-663-47	2SC1364 (US, Canadian model)
	8-729-634-03	2SK34 (AEP, UK, E model)
Q812	8-729-663-47	2SC1364
Q813	8-729-247-33	2SA473 (US, Canadian model)
Q814	8-729-634-03	2SK34 (US, Canadian model)
Q815	8-729-612-77	2SA1027R (US, Canadian model)
Q816	8-729-663-47	2SC1364 (US, Canadian model)
Q817, 818	8-729-612-77	2SA1027R (US, Canadian model)
Q819, 820	8-729-663-47	2SC1364 (US, Canadian model)
Q901 ⚠	8-729-663-47	2SC1364 (AEP, UK, E model)
	8-729-612-77	2SA1027R (US, Canadian model)
Q902 ⚠	8-729-612-77	2SA1027R (AEP, UK, E model)
	8-729-663-47	2SC1364 (US, Canadian model)
Q903, 904 ⚠	8-729-954-21	2SC2542 (AEP, UK, E model)
	8-729-976-71	2SC2767 (US, Canadian model)
		ICs
IC101	8-759-111-67	μPC1167C (US, Canadian model)
	8-759-812-31	LA1231 (AEP, UK, E model)
IC201	8-759-111-61	μPC1161C (US, Canadian model)
	8-759-320-16	HA12016 (AEP, UK, E model)
IC301	8-759-111-78	μPC1178C (US, Canadian model)
IC302	8-759-814-16	LB1416 (US, Canadian model)
IC303	8-759-140-11	μPD4011C (US, Canadian model)
	8-759-984-69	MB84069B (AEP, UK, E model)
IC304	8-759-140-69	μPD4069C (US, Canadian model)
	8-759-140-11	μPD4011C (AEP, UK, E model)
IC401	8-759-155-21	μPB552C (US, Canadian model)
	8-759-153-65	μPD553C-065 (AEP, UK, E model)
IC402	8-759-128-19	μPD2819C (US, Canadian model)
	8-759-607-78	CX778 (AEP, UK, E model)
IC403	8-759-140-69	μPD4069C (US, Canadian model)
	8-759-140-11	μPD4011C (AEP, UK, E model)
IC404	8-759-140-01	μPD4001C (US, Canadian model)
	8-759-100-67	μPA67C (AEP, UK, E model)
IC405	8-759-152-37	μPD552C037 (US, Canadian model)
	8-757-611-00	CX761A (AEP, UK, E model)
IC406	8-757-611-00	CX761A (US, Canadian model)
	8-759-920-10	1R2E01 (AEP, UK, E model)
IC407	8-759-100-67	μPA67C (US, Canadian model)
IC501, 551	8-759-652-14	M5214L
IC601	8-759-745-60	NJM4560D
IC731	8-759-320-02	HA12002 (AEP, UK, E model)
		Diodes
D101	8-719-815-55	1S1555
D102, 103	8-719-815-55	1S1555 (AEP, UK, E model)
D201–205	8-719-815-55	1S1555 (US, Canadian model)
D301	8-719-912-27	KV1226 (US, Canadian model)
D302	8-719-912-27	KV1226 (AEP, UK, E model)
	8-719-931-16	EQB01-16 (US, Canadian model)
D303, 304	8-719-815-55	1S1555 (US, Canadian model)
D305	8-719-931-16	EQB01-16 (AEP, UK, E model)
	8-719-815-55	1S1555 (US, Canadian model)
D306–312	8-719-815-55	1S1555
D313–317	8-719-815-55	1S1555 (AEP, UK, E model)
D401, 402	8-719-815-55	1S1555 (US, Canadian model)
D402	8-719-912-00	MV12N (AEP, UK, E model)
D403	8-719-815-55	1S1555
D404–408	8-719-815-55	1S1555 (AEP, UK, E model)
D409	8-719-815-55	1S1555 (US, Canadian model)
D410–412	8-719-815-55	1S1555
D413–415	8-719-311-12	SEL1112R (US, Canadian model)
D416–419	8-719-815-55	1S1555 (AEP, UK, E model)
	8-719-311-12	SEL1112R (US, Canadian model)
D420	8-719-311-12	SEL1112R (US, Canadian model)
	8-719-922-41	SLP241B (AEP, UK, E model)

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

Note: 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.

Ref. No.	Part No.	Description
D421	8-719-812-41	TLR124 (US, Canadian model)
	8-719-922-41	SLP241B (AEP, UK, E model)
D422–424	8-719-922-41	SLP241B
D425	8-719-922-41	SLP241B (US, Canadian model)
	8-719-900-41	SLP141B (AEP, UK, E model)
D426	8-719-311-12	SEL1112R (AEP, UK, E model)
	8-719-922-41	SLP241B (US, Canadian model)
D427	8-719-311-12	SEL1112R (AEP, UK, E model)
	8-719-922-41	SLP241B (US, Canadian model)
D428–433	8-719-311-12	SEL1112R (AEP, UK, E model)
D434, 435	8-719-815-55	1S1555 (AEP, UK, E model)
D501	8-719-931-10	EQB01-10
D701, 751	8-719-912-00	MV-12N
D702, 752	8-719-815-55	1S1555
D703, 753	8-719-300-11	SV04S
D704, 754 D705, 755 D706, 756 D707, 757	8-719-815-55	1S1555
D708	8-719-815-55	1S1555 (US, Canadian model)
D709	8-719-931-10	EQB01-10 (US, Canadian model)
D710	8-719-931-20	EQB01-20 (US, Canadian model)
D711	8-719-815-55	1S1555 (US, Canadian model)
D731	8-719-127-25	RD27E-B2Z (AEP, UK, E model)
D732	8-719-815-55	1S1555 (E model)
D732, 733	8-719-815-55	1S1555 (AEP, UK model)
D801	⚠8-719-504-40	S4VB40
D802	8-719-815-55	1S1555 (US, Canadian model)
	8-719-200-02	10E2 (AEP, UK, E model)
D803	8-719-931-06	EQB01-06
D804	8-719-200-02	10E2 (US, Canadian model)
	8-719-931-06	EQB01-06 (AEP, UK, E model)
D805	8-719-931-30	EQB01-30
D806	8-719-931-05	EQB01-05 (AEP, UK, E model)
	8-719-931-24	EQB01-24 (US, Canadian model)
D807	8-719-931-30	EQB01-30 (US, Canadian model)
D808	8-719-931-05	EQB01-05 (US, Canadian model)
D810	⚠8-719-305-15	GH3F (E model)
D901, 902	⚠8-719-815-55	1S1555

Ref. No.	Part No.	Description
D903, 904	⚠8-719-300-22	CTU-22U
D905, 906	⚠8-719-900-93	V09C

CAPACITORS

All capacitors are in μF. Common capacitors are omitted.
Refer to the lists on pages 81 and 82 for their part numbers.

C003, 004	⚠1-161-737-00	0.001 400V (E model)
C507, 557	1-130-305-00	0.0056 100V polyethylene (AEP, UK, E model)
C508, 558	1-130-291-00	0.0056 100V polyethylene (AEP, UK, E model)
C801	⚠1-108-749-52	0.047 125V mylar (US model)
C801	⚠1-130-197-21	0.047 125V film (Canadian model)
C801	⚠1-130-342-51	0.47 300V film (AEP, UK model)
C801	⚠1-161-737-00	1000p 400V (E model)
C802, 803	⚠1-161-734-11	2200p 400V (AEP, US model)
C802	⚠1-161-747-11	2200p 125V (US, Canadian model)
C803	⚠1-125-179-11	1000 200V elect (US, Canadian model)
C803	⚠1-125-178-00	470 220V elect (E model)
C804	⚠1-125-178-00	470 200V elect (E model)
C804	⚠1-125-233-11	220 400V elect (AEP, UK model)
C805	⚠1-123-335-51	330 25V elect (AEP, UK, E model)
C820	⚠1-130-234-00	0.047 220V elect (E model)
C830	⚠1-121-422-00	220 25V elect (US, Canadian model)
C901	⚠1-130-141-11	0.01 630V film
C902, 903	⚠1-161-734-11	2200p 400V (AEP, UK model)

Ref. No.	Part No.	Description
C902, 903	⚠1-161-741-00	1000p 400V (E model)
C902, 903	⚠1-161-516-11	0.001 125V (US model)
C902, 903	⚠1-161-746-00	0.001 125V (Canadian model)
C904	⚠1-123-565-00	33 200V elect (US, Canadian model)
	⚠1-123-402-00	22 400V elect (AEP, UK, E model)
C905, 906	⚠1-130-357-00	1 250V film (US, Canadian model)
	⚠1-130-533-00	0.39 250V film (AEP, UK, E model)
C907	⚠1-108-595-00	0.047 mylar
C908	⚠1-108-599-00	0.068 mylar
C909–912	⚠1-123-361-00	220 50V elect
C913, 914	⚠1-123-307-00	100 10V elect
C915	⚠1-130-141-00	0.01 630V film
C916	⚠1-123-359-00	47 50V elect (E model)
C916, 917	⚠1-161-734-11	2200p 400V (AEP, UK model)
CT301	1-141-171-XX	Trimmer (US, Canadian model)
CT301	1-141-171-XX	Trimmer (US, Canadian model)
	1-141-180-00	Trimmer (AEP, UK, E model)
CT304	1-141-171-XX	Trimmer (AEP, UK, E model)

RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on the last page for their part numbers.
kΩ : 1000Ω, MΩ : 1000kΩ

R001	⚠1-202-725-11	3.3M ½W composition (US, Canadian model)
R101, 201	⚠1-247-107-51	100 ¼W carbon (nonflammable) (AEP, UK, E model)
R142, 143	⚠1-247-107-51	100 ¼W carbon (nonflammable) (AEP, UK, E model)
R301	⚠1-244-821-00	5.6k ½W
R314	⚠1-247-111-51	150 ¼W carbon (nonflammable) (AEP, UK, E model)

Ref. No.	Part No.	Description
R322	⚠1-247-107-51	100 ¼W carbon (nonflammable) (AEP, UK, E model)
R328	⚠1-247-089-51	18 ¼W carbon (nonflammable) (AEP, UK, E model)
R705, 755 R706, 756	⚠1-247-135-51	1.5k ¼W carbon (nonflammable)
R709, 759	⚠1-247-123-51	470 ¼W carbon (nonflammable)
R711, 761	⚠1-247-121-51	390 ¼W carbon (nonflammable) (AEP, UK, E model)
R712, 762	⚠1-247-103-51	68 ½W carbon (nonflammable) (US, Canadian model)
R713, 763	⚠1-212-879-51	82 ¼W fusible (AEP, UK, E model)
	⚠1-247-137-51	1.8k carbon (nonflammable) (US, Canadian model)
R714, 764 R715, 765	⚠1-247-109-51	120 ¼W carbon (nonflammable)
R717, 767	⚠1-247-107-51	100 ¼W carbon (nonflammable) (US, Canadian model)
R718, 768	⚠1-247-107-51	100 ¼W carbon (nonflammable)
R719, 769	⚠1-247-107-51	100 ¼W carbon (nonflammable) (AEP, UK, E model)
	⚠1-247-099-51	47 ¼W carbon (nonflammable) (US, Canadian model)
R720, 770	⚠1-212-873-51	47 ¼W fusible (AEP, UK, E model)
R720, 770 R721, 771	⚠1-247-095-51	33 carbon (nonflammable) (US, Canadian model)
R722, 772	⚠1-247-119-51	330 carbon (nonflammable) (US, Canadian model)
R723, 773	⚠1-247-107-51	100 carbon (nonflammable) (US, Canadian model)
R724, 774	⚠1-217-158-00	0.47 5W metal-plate (US, Canadian model)
	⚠1-247-119-51	330 ¼W carbon (nonflammable) (AEP, UK, E model)
R725, 775	⚠1-217-158-00	0.47 5W metal-plate

Ref. No.	Part No.	Description
R726, 776	⚠1-217-158-00	0.47 5W metal-plate (AEP, UK, E model)
	⚠1-247-107-51	100 ¼W carbon (nonflammable) (US, Canadian model)
R727, 777 R728, 778	⚠1-247-129-51	820 ¼W carbon (nonflammable) (US, Canadian model)
R730, 780	⚠1-247-192-51	10 ½W carbon (nonflammable) (US, Canadian model)
R731, 781	1-244-817-10	4.7 ½W (US, Canadian model)
R734	1-206-670-00	1.8k 2W metal oxide (nonflammable)
R736	⚠1-247-240-51	1k ½W carbon (nonflammable) (AEP, UK, E model)
R740, 790	⚠1-213-139-51	470 1W metal oxide (nonflammable) (AEP, UK, E model)
R746	1-244-901-00	15k ½W (US, Canadian model)
R747	⚠1-206-654-51	390 2W metallized-film (US, Canadian model)
R748, 749	1-244-863-00	390 ½W (US, Canadian model)
R801	⚠1-217-294-00	4.7 5W wire-wound (US, Canadian model)
	⚠1-247-243-51	1.3k ½W carbon (nonflammable) (AEP, UK, E model)
R802	⚠1-247-243-51	1.3k ½W carbon (nonflammable) (US, Canadian model)
	⚠1-205-599-11	75 5W composition (nonflammable)
R803, 804	⚠1-247-188-51	4.7 ½W carbon (nonflammable) (US, Canadian model)
	⚠1-212-849-00	4.7 fusible (AEP, UK, E model)
R807	⚠1-247-105-51	82 ¼W carbon (nonflammable) (US, Canadian model)
R808	⚠1-247-119-51	330 ¼W carbon (nonflammable) (AEP, UK, E model)
	⚠1-247-218-51	120 ½W carbon (nonflammable) (US, Canadian model)
R812	⚠1-247-119-51	330 carbon (nonflammable) (AEP, UK, E model)
	⚠1-247-218-51	120 ½W carbon (nonflammable) (US, Canadian model)
R813	1-206-642-51	120 2W metal oxide (nonflammable)
R814	⚠1-212-857-00	10 fusible (nonflammable) (AEP, UK, E model)
R817, 818	1-206-644-51	150 2W metal oxide (nonflammable) (AEP, UK, E model)
R820	⚠1-247-089-51	18 carbon (nonflammable) (AEP, UK, E model)
R821, 822	⚠1-246-529-15	220k ¼W carbon (nonflammable) (E model)
R822	⚠1-206-648-51	220 2W metal oxide (US, Canadian model)
R823	⚠1-206-678-11	3.9k 2W metal oxide (nonflammable) (E model)
R824	⚠1-206-674-11	2.7k 2W metal oxide (nonflammable) (E model)
R901	⚠1-244-928-00	200k ½W (AEP, UK, E model)
	⚠1-244-921-00	100k ½W (US, Canadian model)
R902	⚠1-247-141-00	2.7k carbon (nonflammable) (AEP, UK, E model)
	⚠1-211-553-00	2.7k carbon (nonflammable) (US, Canadian model)
R903	⚠1-246-507-25	27k
R904	⚠1-246-483-00	2.7k
R905	⚠1-246-469-00	680
R906	⚠1-244-821-00	6.8 ½W (US, Canadian model)
	⚠1-244-822-00	7.5 ½W (AEP, UK, E model)
R907	⚠1-246-481-00	2.2k (E model)
RT101	1-226-237-00	20k-B, adjustable; fm tuning level (US, Canadian model)
	1-226-238-00	50k-B, adjustable; signal indicator (AEP, UK, E model)
RT102	1-226-238-00	50k-B, adjustable; fm tuning level (AEP, UK, E model)
	1-226-239-00	100k-B, adjustable; fm muting level (US, Canadian model)
RT103	1-226-238-00	50k-B, adjustable; fm muting level (AEP, UK, E model)
RT201	1-226-238-00	50k, adjustable; stereo separation (AEP, UK, E model)
	1-226-240-00	200k-B, adjustable; stereo separation (US, Canadian model)
RT202	1-226-235-00	5k-B, adjustable; VCO
RT301	1-226-238-00	50k, adjustable; a-m tuning level (AEP, UK, E model)
	1-226-239-00	100k-B, adjustable; signal strength (US, Canadian model)
RT302	1-226-235-00	5k-B, adjustable; a-m muting level (US, Canadian model)
RT401	1-226-232-00	500-B, adjustable; PLL
RT701, 751	1-226-232-00	500-B, adjustable; dc balance
RT702, 752	1-226-237-00	20k-B, adjustable; dc bias
RV601, 651	1-226-265-00	100k/100k, variable; BALANCE
RV602, 652	1-226-738-00	250k/250k-B, variable; VOLUME
RV603, 653	1-226-267-00	100k/100k, variable; TREBLE
RV604, 654	1-226-268-00	100k/100k, variable; BASS

MISCELLANEOUS

CF101–103	1-527-307-99	Filter, ceramic (US, Canadian, E model)
CF101–104	1-527-344-91	Filter, ceramic (AEP, UK model)
CF104	1-527-307-99	Filter, ceramic (E model)
CF301	1-527-402-00	Filter, mechanical (US, Canadian, E model)
	1-527-403-00	Filter, mechanical (AEP, UK model)
CF302	1-527-403-00	Filter, mechanical (US, Canadian model)
	1-527-732-00	Filter, ceramic (AEP, UK, E model)
CNJ001	1-507-649-00	Jack, stereo-binaural; HEADPHONES (AEP, UK, E model)
CNJ901	1-561-161-00	Connector, dual; AC OUTLET (US, Canadian, E model)
CNJ903	1-507-649-00	Jack, stereo-binaural; HEADPHONES (US, Canadian model)
CNP001	⚠1-534-817-XX	Cord, power (AEP model)
CNP001	⚠1-551-884-00	Cord, power (UK model)
CNP901	⚠1-534-986-XX	Cord, power (US, Canadian, E model)
F801	⚠1-532-286-00	Fuse, T2.5A (AEP, UK model)
	⚠1-532-272-00	Fuse, 5A (US, Canadian model)
	⚠1-532-299-00	Fuse, T5A (E model)
FE101	1-463-335-00	Front End, f-m (AEP, UK, E model)
	1-463-300-00	Front End, f-m (US, Canadian model)
FLD401	1-519-212-00	Tube, fluorescent display (AEP, UK, E model)
	1-519-171-00	Tube, fluorescent display (US, Canadian model)
IFT101	1-404-258-00	Transformer, discriminator (AEP, UK, E model)
	1-404-170-00	IFT, f-m (US, Canadian model)
IFT301	1-409-323-00	Coil, mechanical-filter
IFT302	1-409-324-00	Coil, mechanical-filter
IFT303	1-404-189-00	IFT, a-m (US, Canadian model)
	1-404-266-00	IFT, a-m (AEP, UK, E model)
J001, 051 J002, 052 J003, 053	1-507-637-00	Jack, phono; 6-pin; PNONO, AUX, TAPE 1 (AEP, UK, E model)
J901, 951 J902, 952 J903, 953	1-507-637-00	Jack, phono; 6-pin; PHONO, AUX, TAPE 1 (US, Canadian model)
J004, 054 J005, 055 J006, 056	1-507-637-21	Jack, phono; 6-pin; REC OUT 1, 2, TAPE 2 (AEP, UK, E model)
J904, 954 J905, 955 J906, 956	1-507-637-21	Jack, phono; 6-pin; REC OUT 1, 2, TAPE 2 (US, Canadian model)
L001	1-401-887-00	Antenna, a-m ferrite-rod (AEP, UK, E model)
L1	1-401-849-21	Antenna, a-m ferrite-rod (US, Canadian model)
L301	1-407-169-XX	100μH, microinductor
L302	1-407-177-XX	470μH, microinductor (US, Canadian model)
L303	1-405-927-00	Coil, a-m OSC (AEP, UK, E model)
	1-405-898-00	Coil, a-m OSC (US, Canadian model)
L304	1-407-878-00	27mH, microinductor (US, Canadian model)
L305	1-407-176-XX	390μH, microinductor
L401	1-407-199-00	10μH, microinductor (US, Canadian model)
L403	1-407-169-XX	100μH, microinductor (US, Canadian model)
L404	1-407-190-00	10μH, microinductor (US, Canadian model)
L501, 551	1-407-519-00	8μH, microinductor
◆L701, 751	1-420-838-00	1.8μH, microinductor

Ref. No.	Part No.	Description
L901	⚠1-421-340-00	Coil, line-filter choke (AEP, UK, E model)
L902–906	⚠1-421-328-11	Coil, line-filter choke (US, Canadian model)
	⚠1-421-329-00	10μH, choke coil
L907, 908	⚠1-407-161-XX	22μH, microinductor
LPF101	1-231-729-00	Filter, lowpass (AEP, UK, E model)
LPF201	1-231-224-00	Encapsulated Component (US, Canadian model)
	1-231-574-00	Filter, lowpass (AEP, UK, E model)
LPF202	1-231-224-00	Encapsulated Component (US, Canadian model)
PL1–6	1-518-331-81	Lamp, pilot; 6V 35mA
RY701	1-553-227-00	Relay (US, Canadian model)
RY731	1-515-348-00	Relay (AEP, UK, E model)
RY801	⚠1-515-347-00	Relay
RY901	⚠1-515-349-00	Relay (E model)
S001, 002	⚠1-553-483-00	Switch, rotary; POWER/SPEAKERS (AEP, UK, E model)
S1	1-553-179-00	Switch, rotary-slide; TAPE COPY
S2–7	1-553-182-00	Switch, pushbutton; MONITOR, FUNCTION
S8–11	1-553-180-00	Switch, pushbutton; AUDIO MUTING, LOUDNESS, MODE, LOW FILTER
S12	1-553-181-00	Switch, pushbutton; TUNING LEVEL (US, Canadian model)
S12–15	1-553-181-00	Switch, pushbutton; TUNING LEVEL (AEP, UK, E model)
S13	1-516-777-XX	Switch, slide; AM 9kHz/10kHz (US, Canadian model)
S14, 15	⚠1-553-185-00	Switch, rotary; POWER/SPEAKERS (US, Canadian model)
S401–413	1-552-539-00	Switch, keyboard; MEMORY, MEMORY SCAN, FM/AM, TUNING, preset 1 to 8
T1	⚠1-543-098-00	Core (US, Canadian model)
	⚠1-543-100-00	
T2	1-543-100-00	Core (US, Canadian model)
T3	1-446-606-00	Transformer, inverter (US, Canadian model)
T901	⚠1-543-098-00	Core (AEP, UK, E model)
	⚠1-543-100-00	
T902	⚠1-543-100-00	Core (AEP, UK, E model)
T903	⚠1-446-844-00	Transformer, converter (AEP, UK, E model)

Ref. No.	Part No.	Description
TF801	⚠1-532-556-00	Fuse, thermal; 147°C 2A
TF802	⚠1-532-556-00	Fuse, thermal; 147°C 2A (AEP, UK model)
TM002,003	1-536-571-00	Terminal Board, 4-pin; SPEAKER (AEP, UK, E model)
TM902,903	1-536-571-00	Terminal Board, 4-pin; SPEAKER (US, Canadian model)
VS001	⚠1-552-963-00	Voltage Selector (E model)
X401	1-527-404-00	Crystal, quartz (US, Canadian model)
	1-527-731-00	Crystal, quartz (AEP, UK, E model)
	♦1-506-370-00	Plug, jumper (US, Canadian model)
	♦1-508-799-00	Terminal Strip
	♦1-508-800-00	Terminal Strip (E model)
	♦1-508-809-00	Terminal Strip (US, Canadian model)
	♦1-508-811-00	Terminal Strip (US, Canadian model)
	♦1-508-812-00	Terminal Strip (AEP, UK, E model)
	♦1-508-833-00	Terminal Strip (US, Canadian model)
	⚠1-517-072-00	Holder, fuse (US, Canadian model)
	⚠1-533-131-00	Holder, fuse (AEP, UK, E model)
	♦1-535-115-00	Terminal Strip, 2-pin
	♦1-535-116-00	Terminal Strip, 3-pin
	♦1-535-118-00	Terminal Strip, 5-pin
	♦1-535-135-00	Terminal Strip (US, Canadian model)
	1-536-616-00	Terminal Board, ANTENNA
	♦1-560-060-00	Pin, connector
	♦1-560-061-00	Pin, connector
	♦1-560-063-00	Connector, 5-pin
	♦1-560-064-00	Connector, 6-pin (US, Canadian model)
	♦1-560-065-00	Connector, 8-pin (US, Canadian model)

COMPLETE CIRCUIT BOARDS

♦A-4358-070-A	Equalizer
♦A-4382-053-A	Tuner (US, Canadian model)
♦A-4382-061-A	Tuner (AEP, UK model)
♦A-4382-068-A	Tuner (E model)
♦A-4388-210-A	Power Amplifier (US, Canadian model)
♦A-4388-241-A	Power Amplifier (AEP, UK model)
♦A-4388-244-A	Power Amplifier (E model)
♦A-4394-197-A	Power Supply (US, Canadian model)
♦A-4394-221-A	Power Supply (AEP, UK model)
♦A-4394-227-A	Power Supply (E model)
♦A-4394-228-A	Power Supply (B) (E model)
♦A-4472-052-A	Display (AEP, UK, E model)
♦A-4477-045-A	TONE Control (US, Canadian model)
♦A-4477-046-A	VOLUME Control
♦A-4477-057-A	TONE Control (AEP, UK, E model)
♦A-4483-008-A	Control (US, Canadian model)
♦A-4483-009-A	Control (AEP, UK model)
♦A-4483-011-A	Control (E model)

PRINTED CIRCUIT BOARDS

♦1-602-254-00	HEADPHONE Jack (US, Canadian model)
♦1-602-255-00	POWER/SPEAKER Switch (US, Canadian model)
♦1-602-259-00	Input
♦1-602-260-00	Separate (US, Canadian model)
♦1-602-261-00	Jumper
♦1-602-272-00	MUTING Switch (US, Canadian model)
♦1-603-377-00	MUTING Switch (AEP, UK, E model)
♦1-603-379-00	Headphone Jack (AEP, UK, E model)
♦1-603-380-00	POWER/SPEAKER Switch (AEP, UK, E model)

ACCESSORIES AND PACKING MATERIALS

Part No.	Description
1-501-161-00	Feeder Antenna, FM
3-701-630-00	Bag, plastic; instruction manual
3-783-169-12	Manual, instruction (UK, E model)
3-783-169-12	Manual, instruction (AEP model)
3-795-037-11	Manual, instruction (Dutch and Swedish) (AEP model)
3-783-169-21	Manual, instruction (US model)
3-783-169-21	Manual, instruction (Canadian model)
3-794-809-31	Manual, instruction (French) (Canadian model)
4-809-251-00	Bag, plastic; set
4-866-387-00	Sheet, station-index (US, Canadian, E model)
4-866-398-00	Cushion (top)
4-866-399-00	Cushion (bottom)
4-868-707-00	Carton (US, AEP, UK, E model)
4-868-708-00	Carton (Canadian model)
4-868-713-00	Cushion (top)
4-868-714-00	Cushion (bottom)
4-868-729-00	Sheet, station-index (AEP, UK, E model)

SONY-STANDARD REPLACEMENT CAPACITORS AND RESISTORS LIST

ELECTROLYTIC CAPACITORS

CAP. (μF)	RATING → : Use the high voltage rated one.					
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→	→	→	1-121-392-00	→	1-121-393-00
4.7	→	→	→	1-121-395-00	→	1-121-396-00
10	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
22	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-415-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000	–	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	–
3300	1-121-661-00	1-123-075-00	1-123-071-00	–	–	–

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	–	–	–	–
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00	–	1-123-028-00
3.3	1-121-995-00	–	1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00	–	–
47	1-123-251-00	1-121-919-00	–	–
100	1-123-084-00	–	–	–

CERAMIC CAPACITORS

CAP. (pF)	RATING 50 VOLT. PART No.	CAP. (pF)	50 VOLT. PART No.	CAP. (pF)	50 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

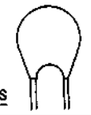
0.001μF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

CAP. (μF)	RATING → : Use the high voltage rated one. 25 VOLT. PART No.	50 VOLT. PART No.	CAP. (μF)	25 VOLT. PART No.	50 VOLT. PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

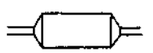
MYLAR CAPACITORS

CAP. (μF)	RATING 50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	–	–
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	–	–
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	–	–
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	–	–
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



TANTALUM CAPACITORS

CAP. (μF)	RATING 3.15 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.
0.01					→	→	1-131-396-00
0.015						→	1-131-397-00
0.022						→	1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	–	–	–	–	1-131-412-00	→	1-131-406-00
0.68	–	–	–	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	–	–	1-131-418-00	–	1-131-413-00	→	1-131-408-00
1.5	–	1-131-421-00	–	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	–	1-131-419-00	–	1-131-414-00	1-131-355-00	1-131-349-00
3.3	–	1-131-422-00	–	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	–	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	–	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	–
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	–			
68	1-131-394-00	1-131-388-00	–	–			
100	1-131-395-00	–	–	–			



TANTALUM CAPACITORS

CAP. (μF)	RATING 3 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	35 VOLT. PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			–	–	1-131-262-00	1-131-278-00
0.33			–	–	1-131-263-00	1-131-279-00
0.47			1-131-169-00	–	1-131-264-00	1-131-280-00
0.68			–	1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	–	1-131-266-00	1-131-282-00
1.5		1-131-250-00	–	–	1-131-267-00	1-131-283-00
2.2		–	–	1-131-259-00	1-131-268-00	1-131-284-00
3.3		–	1-131-255-00	–	1-131-269-00	–
4.7		1-131-251-00	1-131-171-00	–	1-131-270-00	–
6.8		–	–	1-131-260-00	1-131-271-00	–
10	–	–	1-131-256-00	–	1-131-272-00	–
15	–	1-131-252-00	–	1-131-261-00		
22	–	–	1-131-257-00	–		
33	1-131-176-00	1-131-253-00	1-131-173-00	–		
47	1-131-288-00	1-131-174-00	–	–		
100	1-131-177-00					

1/16 WATT CARBON RESISTOR

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
2.0	—	13	—	91	1-210-354-00	620	1-210-367-00	4.3k	1-209-772-00	30k	1-210-380-00	200k	1-210-839-00
2.2	—	15	—	100	1-210-355-00	680	1-210-106-00	4.7k	1-209-773-00	33k	1-210-381-00	220k	1-210-840-00
2.4	—	16	—	110	1-210-356-00	750	1-210-107-00	5.1k	1-209-774-00	36k	1-210-394-00	240k	—
2.7	—	18	1-211-688-00	120	1-210-357-00	820	1-210-108-00	5.6k	1-209-775-00	39k	1-210-382-00	270k	1-210-841-00
3.0	—	20	—	130	1-210-358-00	910	1-210-368-00	6.2k	1-209-776-00	43k	1-210-383-00	300k	—
3.3	—	22	—	150	1-210-102-00	1.0k	1-204-122-00	6.8k	1-209-777-00	47k	1-210-384-00	330k	1-210-842-00
3.6	—	24	—	160	1-210-359-00	1.1k	1-210-369-00	7.5k	1-209-778-00	51k	1-210-385-00	360k	—
3.9	—	27	—	180	1-210-360-00	1.2k	1-209-765-00	8.2k	1-209-779-00	56k	1-210-386-00	390k	1-210-843-00
4.3	—	30	1-210-845-00	200	1-210-361-00	1.3k	1-210-370-00	9.1k	1-209-780-00	62k	1-210-387-00	430k	—
4.7	—	33	1-210-846-00	220	1-210-362-00	1.5k	1-209-766-00	10k	1-209-781-00	68k	1-210-388-00	470k	1-210-844-00
5.1	—	36	1-210-847-00	240	1-209-762-00	1.6k	1-210-371-00	11k	1-210-374-00	75k	1-210-389-00	510k	—
5.6	—	39	1-210-848-00	270	1-210-363-00	1.8k	1-209-878-00	12k	1-210-111-00	82k	1-210-390-00	560k	1-211-695-00
6.2	—	43	1-210-849-00	300	1-210-364-00	2.0k	1-209-767-00	13k	1-210-375-00	91k	1-210-391-00	620k	—
6.8	—	47	1-210-395-00	330	1-209-763-00	2.2k	1-209-768-00	15k	1-210-112-00	100k	1-210-115-00	680k	1-211-696-00
7.5	—	51	1-210-101-00	360	1-210-103-00	2.4k	1-209-769-00	16k	1-210-376-00	110k	—	750k	—
8.2	—	56	1-210-351-00	390	1-210-365-00	2.7k	1-209-770-00	18k	1-210-113-00	120k	1-210-836-00	820k	1-211-698-00
9.1	—	62	1-210-352-00	430	1-210-366-00	3.0k	1-210-372-00	20k	1-210-377-00	130k	—	910k	—
10	—	68	1-210-353-00	470	1-209-764-00	3.3k	1-204-123-00	22k	1-210-114-00	150k	1-210-837-00	1 M	—
11	—	75	1-210-392-00	510	1-210-104-00	3.6k	1-210-373-00	24k	1-210-378-00	160k	—		
12	—	82	1-210-393-00	560	1-210-105-00	3.9k	1-209-771-00	27k	1-210-379-00	180k	1-210-838-00		

1/8 WATT CARBON RESISTOR

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
2.0	—	13	1-246-821-00	91	1-246-831-00	620	1-246-841-00	4.3k	1-246-851-00	30k	1-246-861-00	200k	1-246-871-00
2.2	1-246-751-00	15	1-246-761-00	100	1-246-771-00	680	1-246-781-00	4.7k	1-246-791-00	33k	1-246-801-00	220k	1-246-811-00
2.4	—	16	1-246-822-00	110	1-246-832-00	750	1-246-842-00	5.1k	1-246-852-00	36k	1-246-862-00	240k	1-247-054-00
2.7	1-246-752-00	18	1-246-762-00	120	1-246-772-00	820	1-246-782-00	5.6k	1-246-792-00	39k	1-246-802-00	270k	1-247-046-00
3.0	—	20	1-246-823-00	130	1-246-833-33	910	1-246-843-00	6.2k	1-246-853-00	43k	1-246-863-00	300k	1-247-055-00
3.3	1-246-753-00	22	1-246-763-00	150	1-246-773-00	1.0k	1-246-783-00	6.8k	1-246-793-00	47k	1-246-803-00	330k	1-247-047-00
3.6	—	24	1-246-824-00	160	1-246-834-00	1.1k	1-246-844-00	7.5k	1-246-854-00	51k	1-246-864-00	360k	1-247-056-00
3.9	1-246-754-00	27	1-246-764-00	180	1-246-774-00	1.2k	1-246-784-00	8.2k	1-246-794-00	56k	1-246-804-00	390k	1-247-048-00
4.3	—	30	1-246-825-00	200	1-246-835-00	1.3k	1-246-845-00	9.1k	1-246-855-00	62k	1-246-865-00	430k	1-247-057-00
4.7	1-246-755-00	33	1-246-765-00	220	1-246-775-00	1.5k	1-246-785-00	10k	1-246-795-00	68k	1-246-805-00	470k	1-247-049-00
5.1	—	36	1-246-826-00	240	1-246-836-00	1.6k	1-246-846-00	11k	1-246-856-00	75k	1-246-866-00	510k	1-247-058-00
5.6	1-246-756-00	39	1-246-766-00	270	1-246-776-00	1.8k	1-246-786-00	12k	1-246-796-00	82k	1-246-806-00	560k	1-247-050-00
6.2	—	43	1-246-827-00	300	1-246-837-00	2.0k	1-246-847-00	13k	1-246-857-00	91k	1-246-867-00	620k	1-247-059-00
6.8	1-246-757-00	47	1-246-767-00	330	1-246-777-00	2.2k	1-246-787-00	15k	1-246-797-00	100k	1-246-807-00	680k	1-247-051-00
7.5	1-246-818-00	51	1-246-828-00	360	1-246-838-00	2.4k	1-246-848-00	16k	1-246-858-00	110k	1-246-868-00	750k	1-247-060-00
8.2	1-246-758-00	56	1-246-768-00	390	1-246-778-00	2.7k	1-246-788-00	18k	1-246-798-00	120k	1-246-808-00	820k	1-247-052-00
9.1	1-246-819-00	62	1-246-829-00	430	1-246-839-00	3.0k	1-246-849-00	20k	1-246-859-00	130k	1-246-869-00	910k	1-247-061-00
10	1-246-759-00	68	1-246-769-00	470	1-246-779-00	3.3k	1-246-789-00	22k	1-246-799-00	150k	1-246-809-00	1 M	1-247-053-00
11	1-246-820-00	75	1-246-830-00	510	1-246-840-00	3.6k	1-246-850-00	24k	1-246-860-00	160k	1-246-870-00		
12	1-246-760-00	82	1-246-770-00	560	1-246-780-00	3.9k	1-246-790-00	27k	1-246-800-00	180k	1-246-810-00		

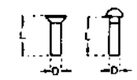
1/4 WATT CARBON RESISTORS

Ω	Part No.	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	1.0M	1-246-545-00
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	1.1M	1-210-814-00
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	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-576-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-577-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-578-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-579-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-580-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-581-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-582-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-583-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-584-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-585-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-586-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-587-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-588-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-589-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
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	5.1M	1-244-762-00
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:

– P 3 x 10
- L: Length in mm
- D: Diameter in mm
- Type of head
- Indicated slotted-head only. Unless otherwise indicated, it means cross-recessed head (Phillips type).



Nut, Washer, Retaining ring:

N 3
- Diameter of usable screw or shaft
- Reference designation

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		braizer-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	

9-958-770-02

Sony Corporation

80I0483-1
Printed in Japan