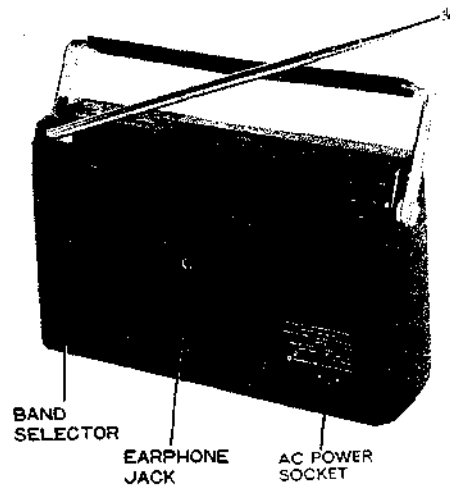
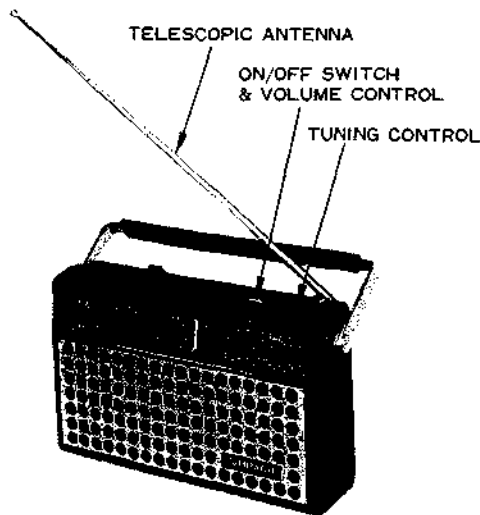


SERVICE MANUAL

NO. 771 77



SPECIFICATIONS

CIRCUIT SYSTEM	FM/AM superheterodyne	SPEAKER.....	2 $\frac{3}{8}$ " (6.6cm) P.M., 8 Ω
TUNING RANGE	FM: 88~108MHz	AUDIO OUTPUT	350mW (Max.)
	AM: 530~1605kHz		200mW (THD 10%)
INTERMEDIATE FREQUENCY.....	FM: 10.7MHz	SENSITIVITY.....	FM: 10 dB (Max.), 15 dB (practical)
	AM: 465kHz		AM: 35 dB (Max.), 48 dB (practical)
TRANSISTOR.....	9	ANTENNA	FM: Telescopic antenna
DIODE	11		AM: Built-in ferrite-core antenna
VARISTOR	1	DIMENSIONS	4 $\frac{1}{4}$ " (H) \times 7 $\frac{1}{4}$ " (W) \times 1 $\frac{5}{16}$ " (D)
THERMISTOR.....	1	WEIGHT	1 lbs 6 oz
POWER SUPPLY	AC: 220-240V, 50Hz	ACCESSORIES	Earphone.....1
	DC: 6V (IEC R6 \times 4)		Power cord.....1
CURRENT CONSUMPTION	15mA (with no signal)		

PORTABLE RADIO

July 1975

77

BLOCK DIAGRAM

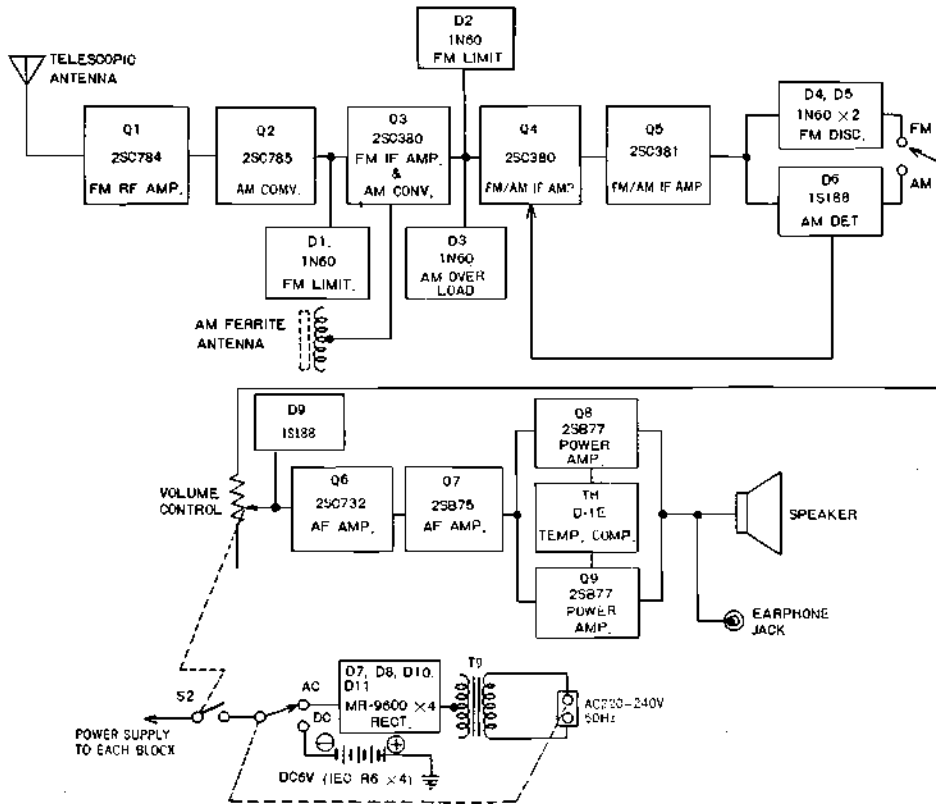


Fig. 1

DISASSEMBLY

1. Removal of rear case

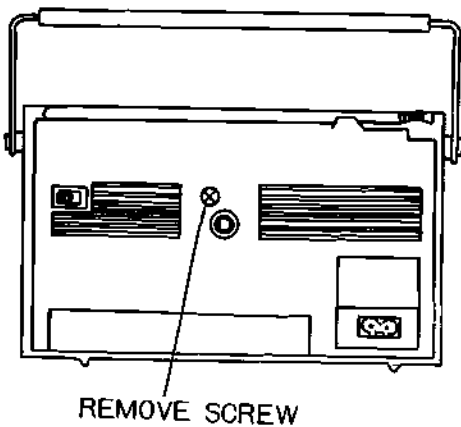


Fig. 2

2. Removal of circuit board

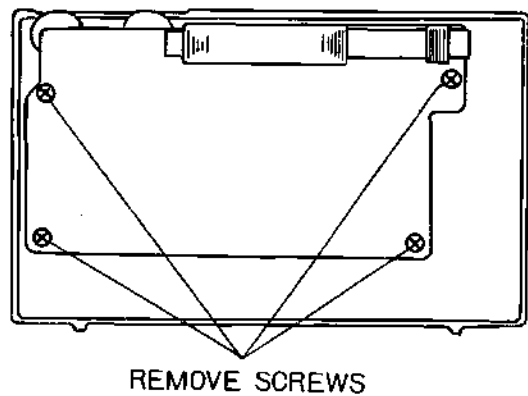
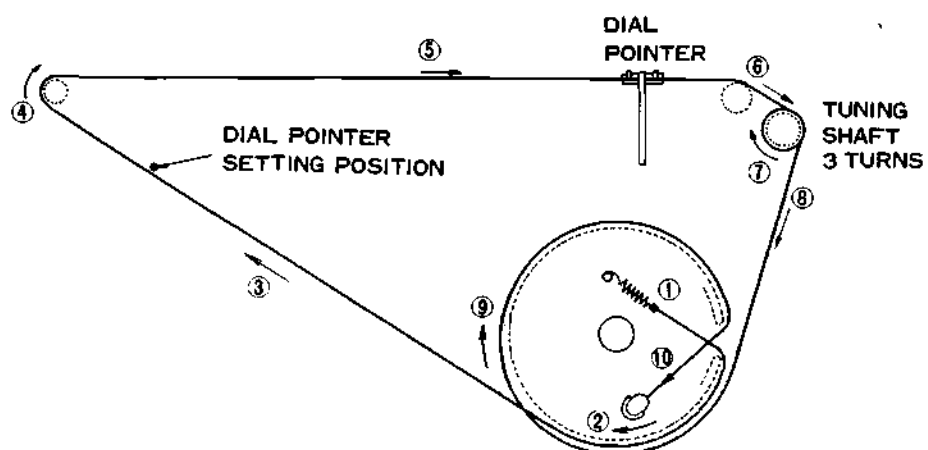


Fig. 3

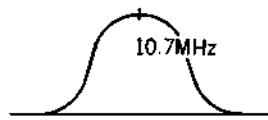
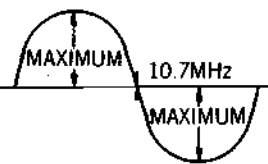
DIAL CORD STRINGING



VARIABLE CAPACITOR: FULLY COUNTERCLOCKWISE.

Fig. 4

CIRCUIT ADJUSTMENT

Step	Adjustment circuit	Connection	Signal or Sweep generator	Pointer position	Adjustment parts	How to adjust	
FM CIRCUIT							
①	FM-IF	Sweep Generator...Connect output terminal to TP1. Oscilloscope...Connect vertical terminal to TP2.	10.7 ± 1MHz	High freq. end	T5, T4, T3, T2, T1	① Turn core (T5) fully clockwise. ② Adjust core (T4, T3, T2, T1) to be this waveform. 	
②	FM-DISCRI				T5	Adjust core (T5) for maximum output. 	
③	FM-RF	Covering	Signal Generator...Connect to telescopic antenna through a dummy antenna shown in Fig. 5.	87MHz (For Germany: 87.5MHz)	Low freq. end	L4	Adjust core for maximum output.
		Tracking	Vacuum Tube Voltmeter...Connect AC probe to TP2.	109MHz (For Germany: 108MHz)	High freq. end	CT2	
				90MHz	90MHz	L2	Adjust core for maximum output.
				106MHz	106MHz	CT1	Adjust core for maximum output.

Step	Adjustment circuit	Connection	Signal or sweep generator	Pointer position	Adjustment parts	How to adjust	
AM CIRCUIT							
①	AM-IF		High freq. end	465kHz	T8, T7, T6	Adjust core for maximum output.	
			Low freq. end	515kHz	L6		
②	AM-RF	Covering	Signal Generator...Connect output terminal to loop antenna.	High freq. end	1,650kHz		CT3
		Tracking	Vacuum Tube Voltmeter...Connect AC probe to TP3.	600kHz	600kHz		L5
			1,400kHz	1,400kHz	CT4		

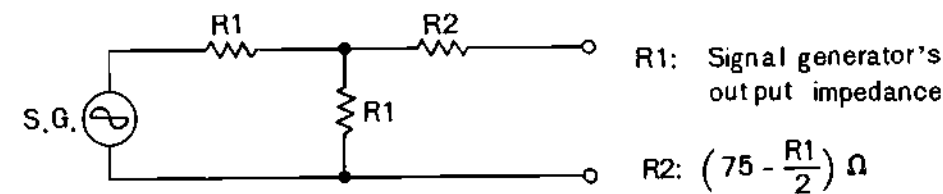


Fig. 5

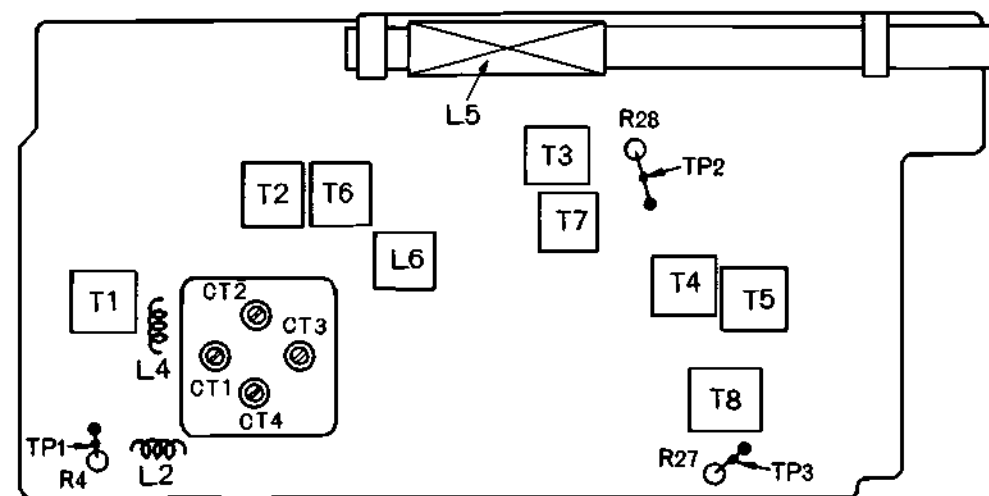
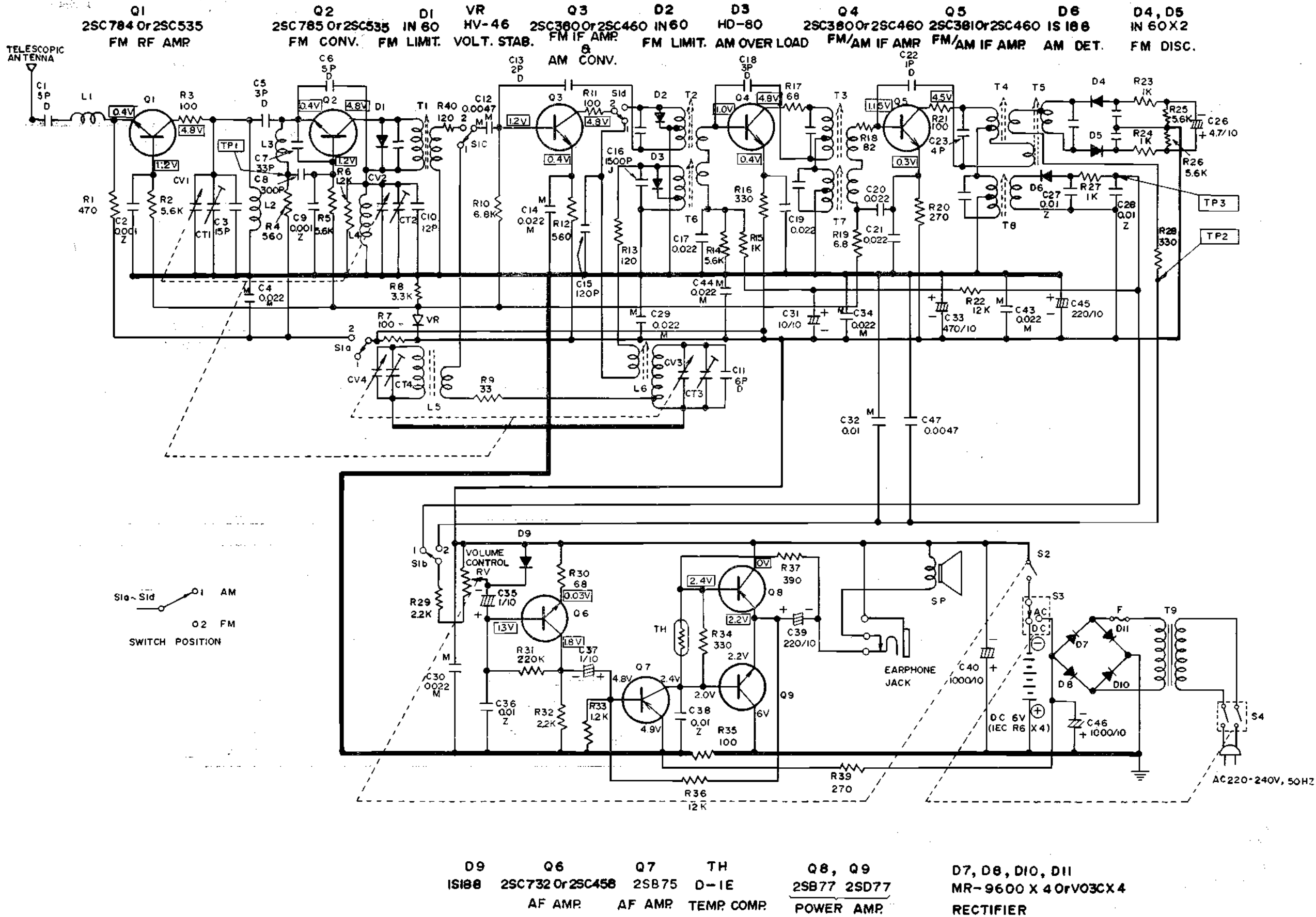


Fig. 6

SCHEMATIC DIAGRAM



NOTE

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

RESISTORS

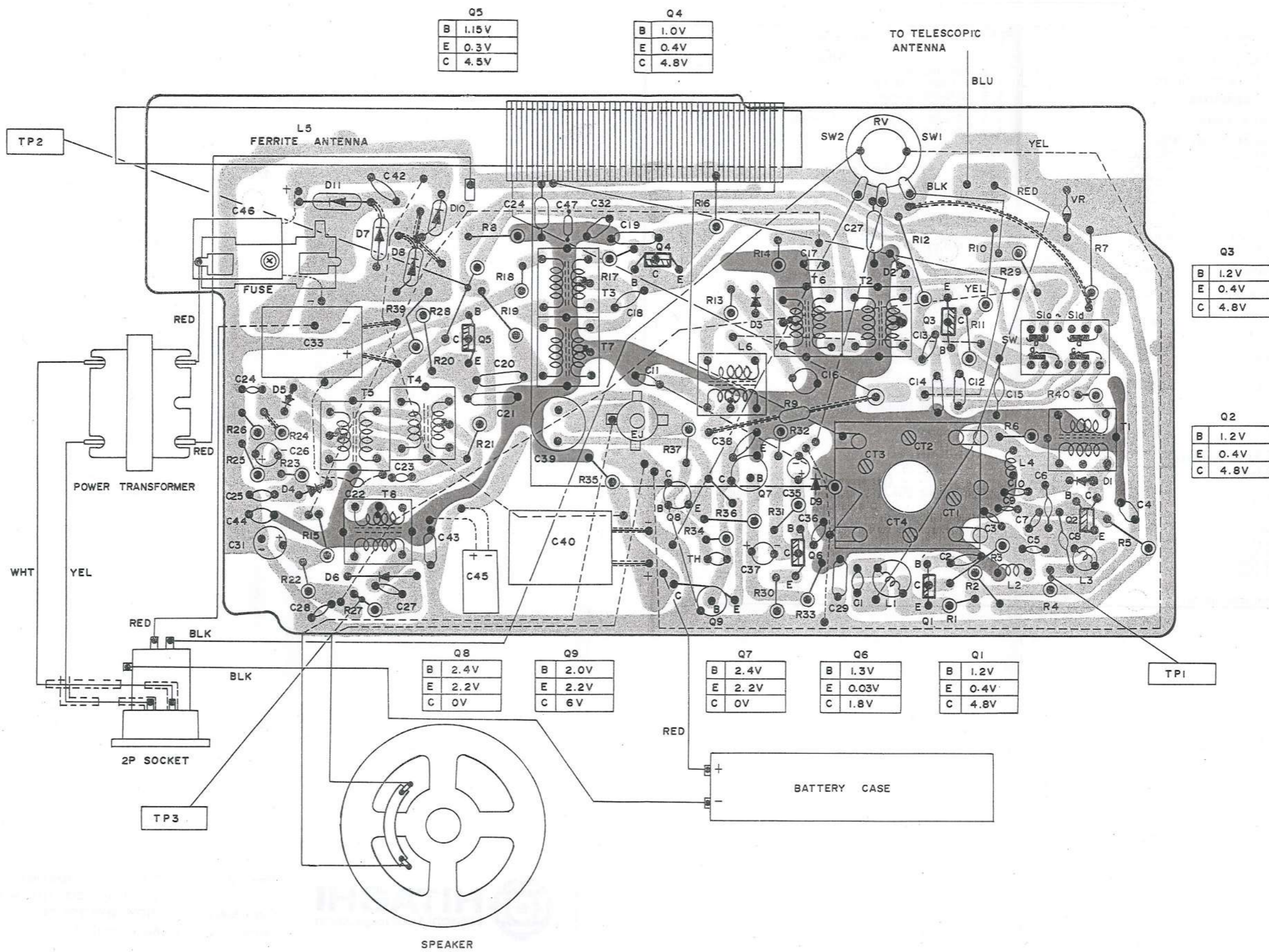
Value	No indicated : Ω K : 1000 Ω
Wattage	No indicated : 1/4W.
Tolerance	No indicated : $\pm 5\%$ K : $\pm 10\%$
Sort	No indicated : Carbon film RC : Composition RS : Metal oxide
Example	R101.....Circuit No. 150.....Value RS · I · K.....Sort · Wattage · Tolerance

CAPACITORS

Value	No indicated : μF P : pF						
Voltage	No indicated : 50WV						
Tolerance	No indicated : $\pm 10\%$ J : $\pm 5\%$ M : $\pm 20\%$ Z : +80, -20% D : $\pm 0.5 pF$ C : $\pm 0.25 pF$						
Sort	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"></td> <td>Ceramic</td> </tr> <tr> <td style="text-align: center;"></td> <td>Electrolytic</td> </tr> <tr> <td style="text-align: center;"></td> <td>Mylar</td> </tr> </table>		Ceramic		Electrolytic		Mylar
	Ceramic						
	Electrolytic						
	Mylar						
Example	C101.....Circuit No. 10/25.....Value/ voltageSort						

3. Be sure to make your orders of resistors and capacitors with value, Voltage, tolerance and sort.
4. When replacing capacitors marked with \ast , Use specified ones stated on parts list since required temperature characteristics.

CIRCUIT BOARD DIAGRAM



KH-832E

REPLACEMENT PARTS

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
CAPACITORS:			COILS:		
CV 1~4 CT 1~4	5052081	Plastic Variable capacitor	L 1	0324003	FM Antenna
RESISTORS:			L 2	5126381	FM RF
RV	0151430	Variable resistor	L 3	0324003	Choke
SEMI-CONDUCTOR:			L 4	0318526	FM OSC.
Q 1	0573511	Transistor	L 5	5112921	Ferrite-core Antenna
Q 2	0573511	Transistor	L 6	5220198	AM OSC.
Q 3	0573487	Transistor	for Final assembly		
Q 4	0573487	Transistor	6290181	Knob for tuning	
Q 5	0573487	Transistor	6290171	Knob for volume	
Q 6	5320064	Transistor	5731001	Earphone	
Q 7	0573117	Transistor	5743898	Power cord	
Q 8	5320295	Transistor	for Front case assembly		
Q 9	5320305	Transistor	6101091	Front case assembly	
VR	5340022	Varistor	5411191	Speaker	
TH	0576056	Thermistor	for Rear case assembly		
D 1)	0575019	Diode	1N60P	6101111 Rear case assembly	
D 2)				6331091 Handle	
D 3)				6726971 Handle ring	
D 4)	0575019	Diode	1N60P	6325361 Handle spring	
D 5)				7534381 Handle shaft	
D 6)	5330331	Diode	1S188FM-1	6172021 Battery lid assembly	
D 9)				5750251 Telescopic antenna	
D 7)				for Chassis assembly	
D 8)	5330001	Diode	VO3C	6342831 Pulley	
D 10)				6342881 Pulley	
D 11)				0711306 Panhead screw 2.6mm ϕ ×6mm for pulley mounting	
TRANSFORMER:			6316232 Spring		
T 1	0329603	FM IFT	6394111 Pointer		
T 2)	0329602	FM IFT	6171111 Battery case		
T 3)			5651043 2P socket		
T 4	0326026	Discri	for P.C.B assembly		
T 5	0326028	Discri	0721304	Pan head screw 2.6mm ϕ ×4mm for V.C mounting	
T 6	0329501	AM IFT	0532163	Slide switch	
T 7	0322115	AM IFT	0543217	Earphone jack	
T 8	0322118	AM IFT			
T 9	5211821	Power transformer			



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 Tel. Tokyo (212) 1111 (80 lines)
 Cable Address : "HITACHY" TOKYO
 Codes : All Codes Used

Printed in Japan
 '75 (K)