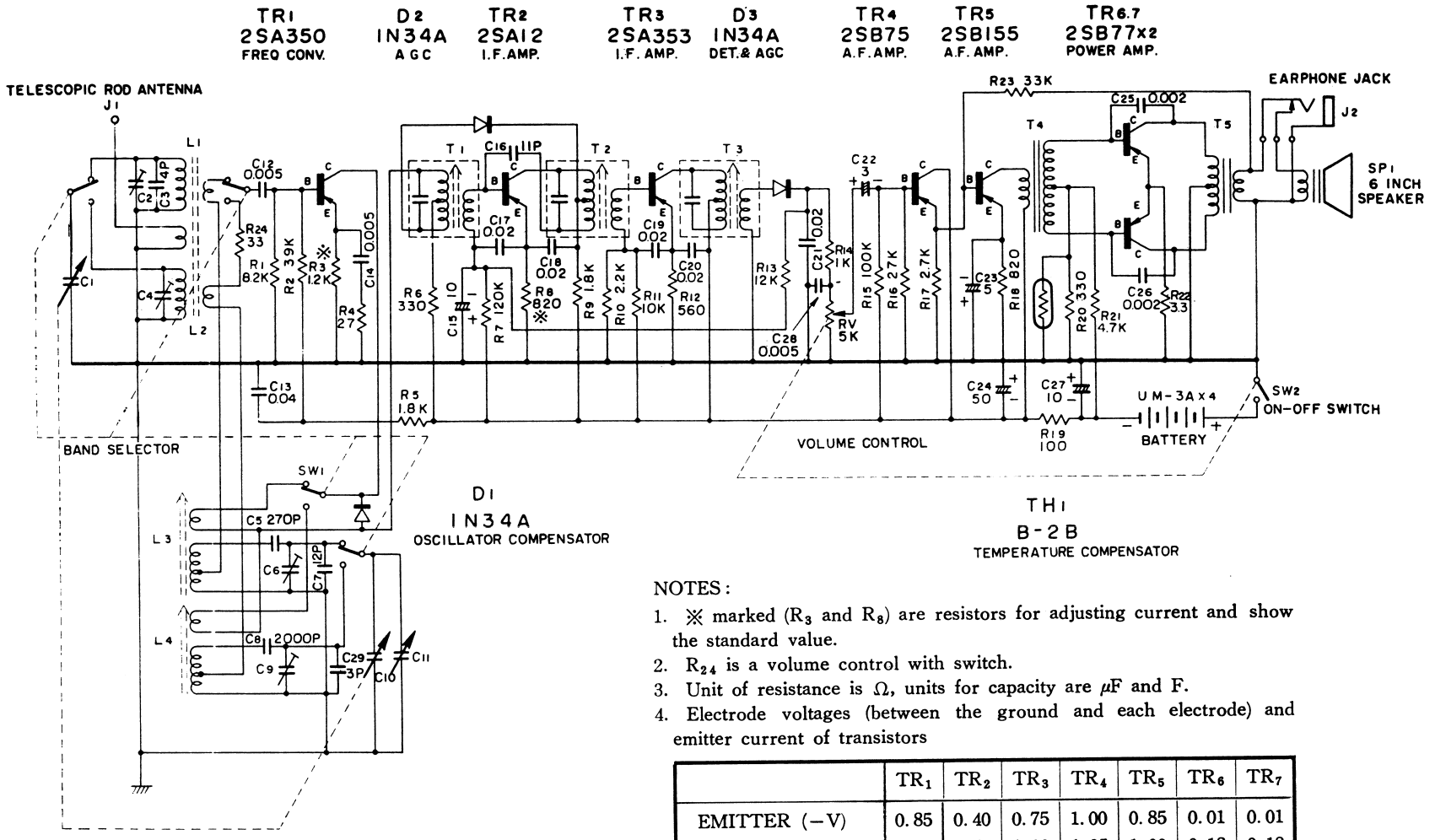
HITACHI WH-758

CIRCUIT DIAGRAM WH-758



NOTES:

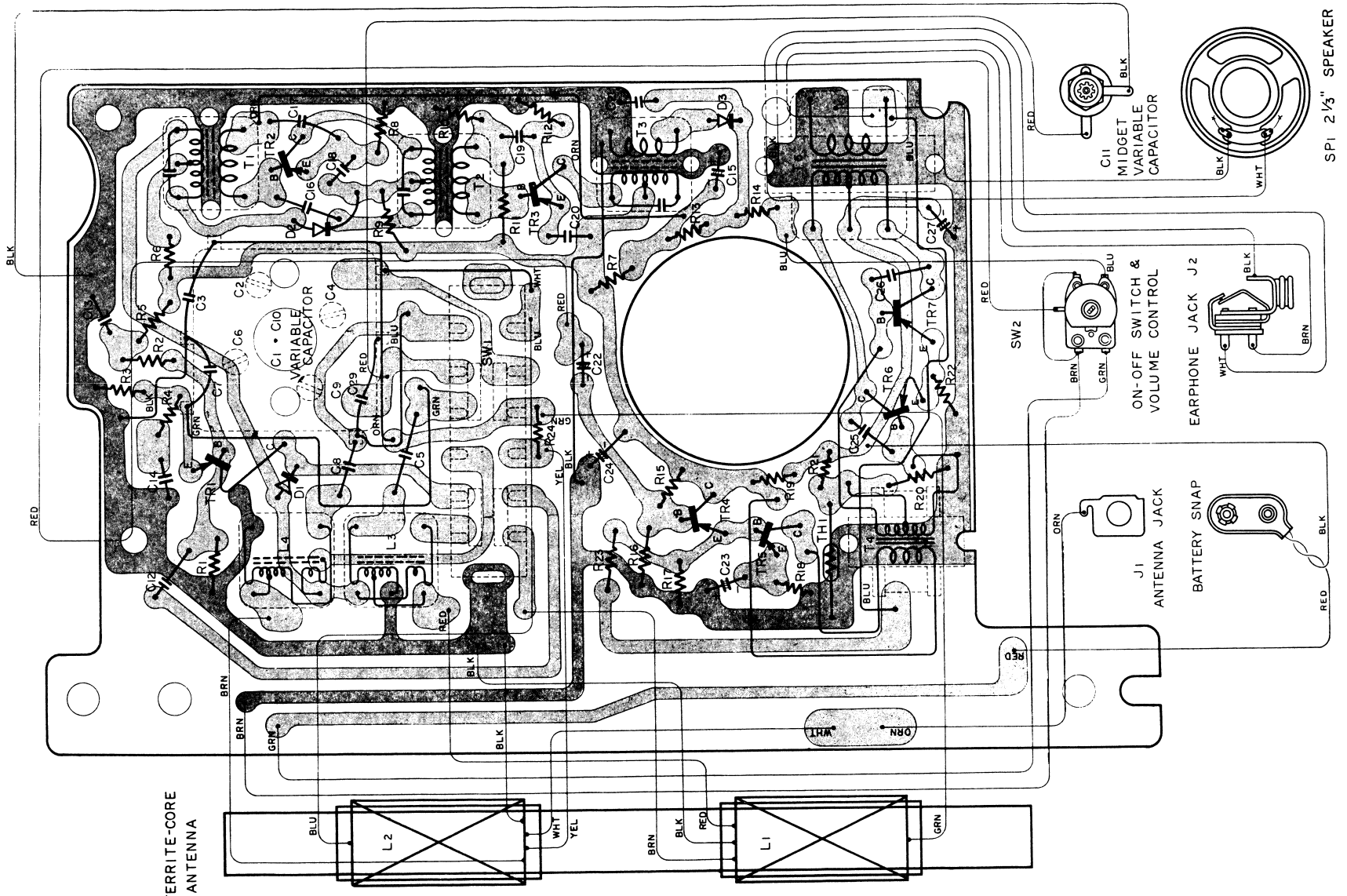
1. ※ marked (R_3 and R_8) are resistors for adjusting current and show the standard value.
2. R_{24} is a volume control with switch.
3. Unit of resistance is Ω, units for capacity are μF and F.
4. Electrode voltages (between the ground and each electrode) and emitter current of transistors

	TR_1	TR_2	TR_3	TR_4	TR_5	TR_6	TR_7
EMITTER (−V)	0.85	0.40	0.75	1.00	0.85	0.01	0.01
BASE (−V)	0.95	0.50	1.00	1.05	1.00	0.18	0.18
COLLECTOR(−V)	5.40	4.70	5.60	5.60	4.40	6.00	6.00
EMITTER CURRENT (mA)	0.7	0.5	1.3	0.4	1.0	1.5	1.5

5. DC resistance values of transformers (Unit: Ω)

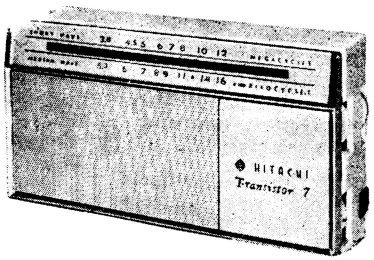
	T_1	T_2	T_3	T_4	T_5
PRI.	5	5	4	1,000	15
SEC.	0.2	0.2	0.8	650	8.6

HITACHI WH-758



CIRCUIT BOARD DIAGRAM

HITACHI TRANSISTOR PORTABLE RADIO MODEL WH-758



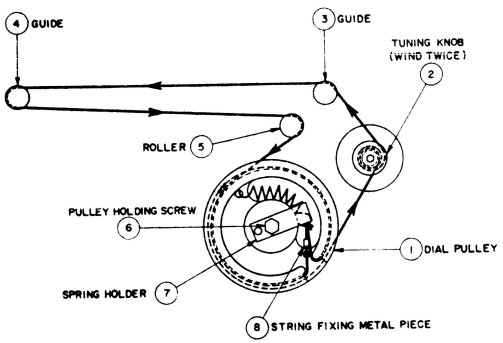


Fig. 4 Threading Dial String

SPECIFICATIONS

CIRCUIT SYSTEM ..... 7 Transistor Superheterodyne
TUNING RANGE ..... Medium Wave (530~1,605kc)
Short Wave (3.8~12Mc)
INTERMEDIATE FREQUENCY 455kc
TRANSISTOR COMPONENT
2SA350 ..... Frequency Converter
2SA12 ..... 1st I. F. Amp.
2SA353 ..... 2nd I. F. Amp.
2SB75 ..... 1st A. F. Amp.
2SB155 ..... 2nd A. F. Amp.
2SB 77×2 ..... Class-B Push-pull Power Amp.
GERMANIUM DIODE
IN34A ..... Oscillator Compensator
IN34A ..... Det. & A. G. C.
IN34A ..... A. G. C.

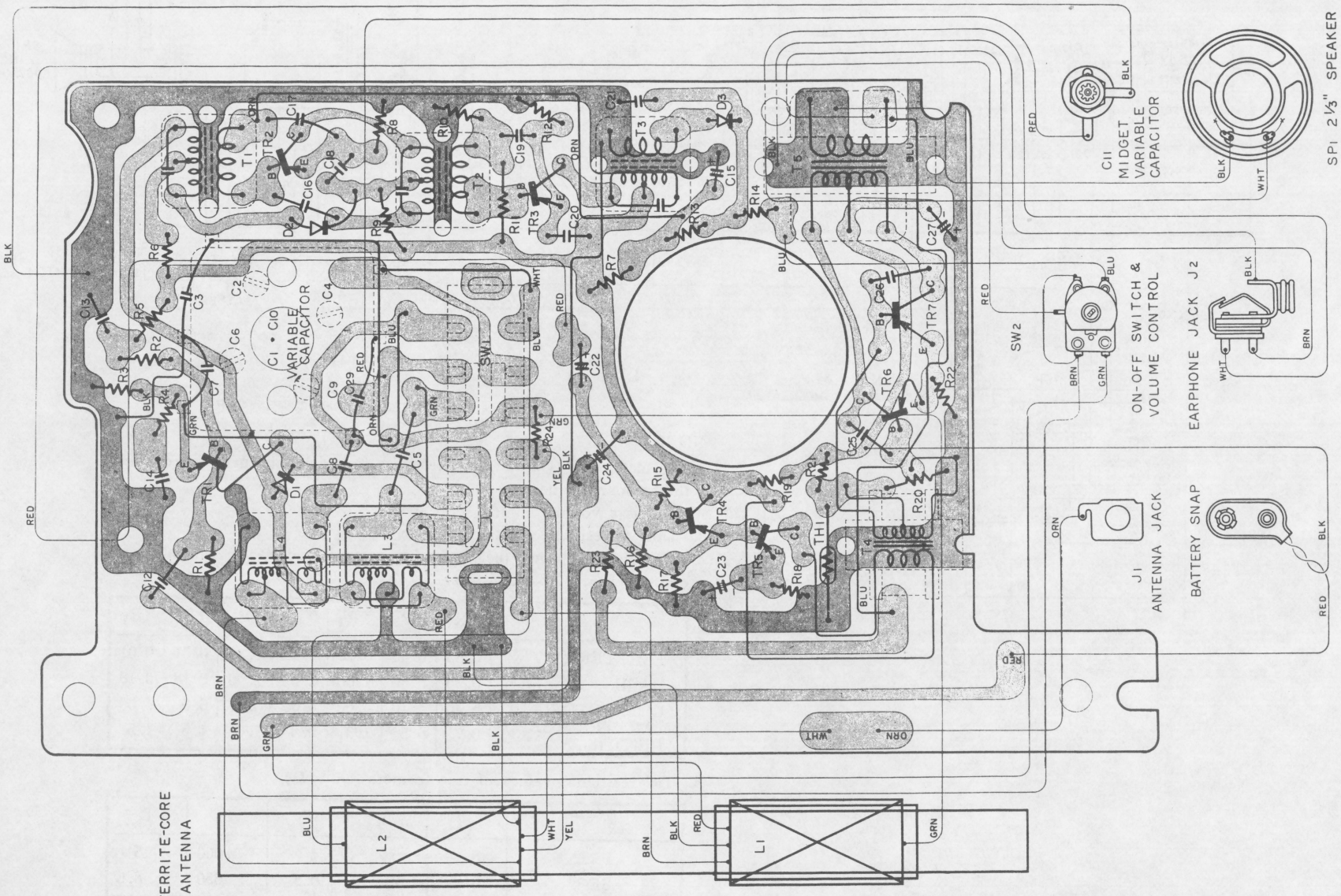
THERMISTOR
B-2B ..... Temperature Compensator
SPEAKER ..... 2¼" P. M.
POWER OUTPUT ..... 280mW (Maximum)
180mW (Undistorted)
EARPHONE JACK ..... One. Hitachi magnetic earphone EL-216 is recommended
ANTENNA ..... Ferrite-core antenna, telescopic rod antenna built-in and external antenna wire attached.
POWER SOURCE..... 6 volts (Penlight battery×4)
DIMENSIONS..... 3¼" (82mm) High, 6" (152mm) Wide, 1½" (40mm) Deep
WEIGHT ..... Approx. 0.9 lbs. (400g) including batteries.

ALIGNMENT PROCEDURE

1. Use a battery with a voltage of over 5.5V when the ON-OFF switch is turned (with no signal).
2. Turn the band selector switch to the band to be adjusted, turn the volume control on to its maximum position and place the fine tuning knob on the center of its range (position where the black indication of the base can be seen).
3. Connect the output terminals of the oscillator (modulated with 400 ~/s or 1,000 ~/s), through 10 pF, to the rod antenna; connect the oscillator ground terminal to the radio's ground board. Connect the output meter (vacuum tube voltmeter or tester with range less than AC 3V) to the earphone jack of the radio.
4. To prevent "body effect" in adjusting, use a completely insulated screw driver.
5. Adjust according to the table on the right. As the set is adjusted, the deflection of the output meter becomes greater; decrease the oscillator output so that the meter deflection will not exceed a maximum of 1.5V.

Circuit Adjusted	Step	Dial Pointer Setting	Oscillator Frequency	Adjust for max. output
IF	①	Gang fully open	455kc	T_3
	②	Gang fully open	445kc	T_2
	③	Gang fully open	445kc	T_1
	④			Repeat steps ① and ②
RF (MW)	⑤	Gang fully close	520kc	L_3
	⑥	Gang fully open	1,650kc	C_6
	⑦			Repeat steps ⑤ and ⑥
	⑧	600kc	600kc	L_2
	⑨	1,400kc	1,400kc	C_2
	⑩			Repeat steps ⑧ and ⑨
RF (SW)	⑪	Gang fully close	3.7Mc	L_4
	⑫	Gang fully open	12.5Mc	C_9
	⑬			Repeat steps ⑪ and ⑫
	⑭	4Mc	4Mc	L_2
	⑮	Gang fully open	12.5Mc	C_4
	⑯			Repeat steps ⑭ and ⑮

HITACHI WH-758



CIRCUIT BOARD DIAGRAM