

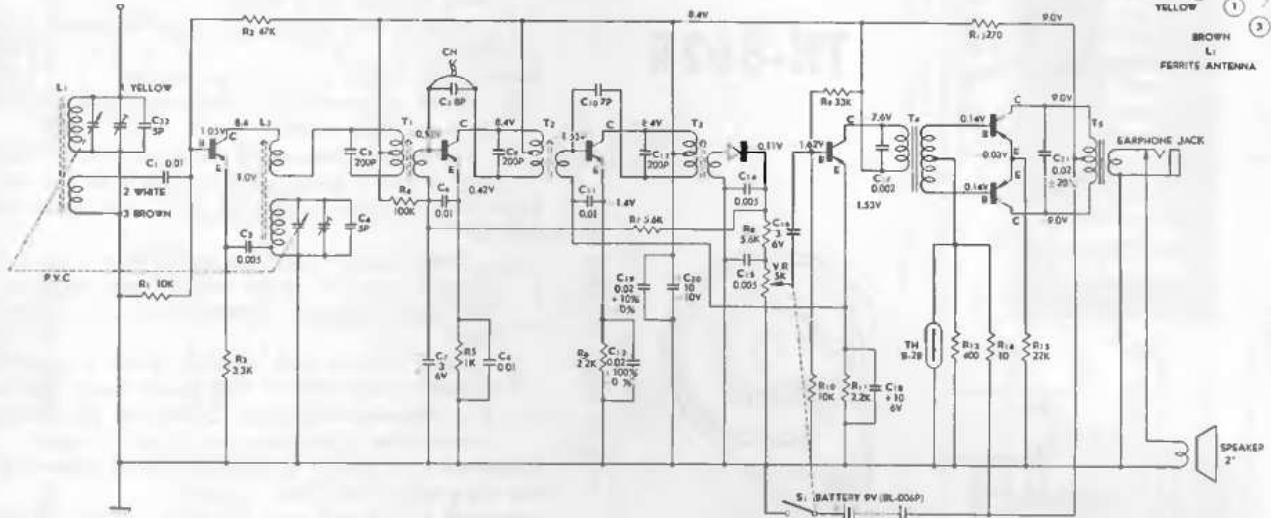
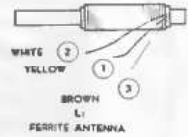


**Hitachi, Ltd.**

Tokyo Japan

**model TH-666R**

CONV. TR<sub>1</sub> 2N 219    1ST. I.F. TR<sub>2</sub> 2N 218    2ND. I.F. TR<sub>3</sub> 2N 218    DETECTOR DIODE IN 34 A    A.F. AMP. TR<sub>4</sub> 2N 215    POWER AMP. TR<sub>5</sub> 6 2N 217



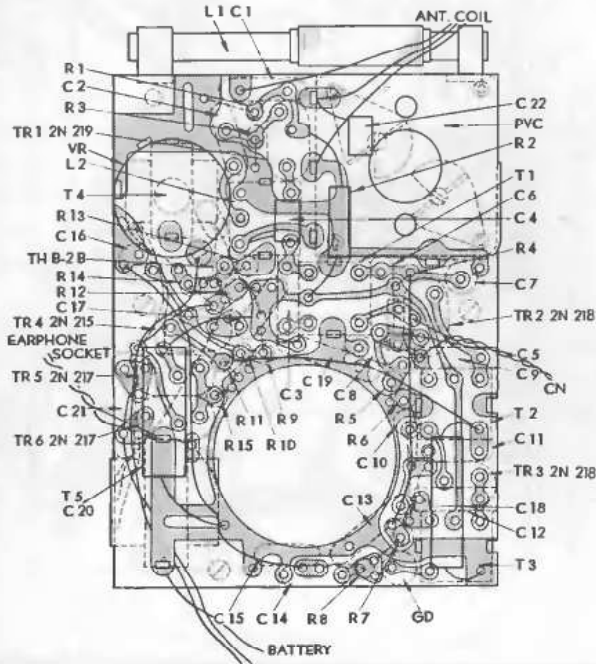
1. The first thing to check when the receiver is inoperative, is the battery with the receiver turned on. A new battery should test 9 volts although the receiver can be expected to operate with a battery which tests 5 volts or more.
2. To check for a circuit defect which would cause excessive battery drain, an overall current measurement and supplementary voltage measurements should be made.
3. The output circuit used in this receiver is of the "Class B" type. It should be noted that in "Class B" output the Battery Current increases greatly with increased signal input.
4. Extreme care should be used to avoid accidental shorting of transistor elements to the circuit ground. This is especially true of the output transistors; if the junction of R<sub>13</sub>-R<sub>14</sub> should be accidentally grounded for a few seconds, the output transistor would be permanently damaged.

5. With no signal input, the A.G.C. source as measured at the base of the TR<sub>2</sub> will be 0.5 volts negative in respect to ground. Rectifier signal voltage will make this point less negative in respect to chassis ground.
6. Do not remove any transistor from its socket (or reinsert it) when the set is turned on.
7. Oscillator performance can not be judged by measurement of a D.C. voltage developed across a resistor. Measurement of oscillator signal strength with an A.C. voltmeter at the emitter terminal of TR<sub>1</sub> will give an indication of oscillator performance.
8. Voltage measurements should be made only with a sensitive voltmeter.
9. Interchanging transistors in the IF stages may necessitate realignment.

**ALIGNMENT PROCEDURE**

Connect an output meter across the voice coil terminals of the speaker and turn the receiver volume control to maximum.

For all alignment operations, connect the low side of the test oscillator to the receiver chassis and keep the oscillator output as low as possible to avoid A.G.C. action.



Step	Connect high side of S.G. to	S.G. output	Dial pointer setting	Adjust for Max. output
1	Variable tuning capacitor terminal of oscillator	455 kc	Quiet point near 1,600 kc	IFT <sub>2</sub> IFT <sub>3</sub> IFT <sub>1</sub>
2	Variable tuning capacitor terminal of oscillator	repeat	step 1	
3	Short wire placed near antenna for radiated signal	525 kc	Lowest frequency of dial scale	Dust core of oscillator coil L <sub>2</sub>
4	Short wire placed near antenna for radiated signal	1,630 kc	Highest frequency of dial scale	Trimmer of oscillator variable capacitor
5	Short wire placed near antenna for radiated signal		Repeat 3 and 4	
6	Short wire placed near antenna for radiated signal	650 kc	650 kc	Move antenna coil
7	Short wire placed near antenna for radiated signal	1,300 kc	1,300 kc	Trimmer of antenna variable capacitor