

ADJUSTMENT

The Mitsubishi transistor radio is completely adjusted and every part is set in place with wax or enamel to keep the adjusted parts safe and in order. So that, these parts should not be touched. If, by any chance, the replacement and readjustment of the part are required, a test oscillator, vacuum-tube-type voltmeter (V.T.V.M) or circuit tester should be used in making such adjustments in accordance with the procedures mentioned in the following table.

1) Measurement of Output Voltage

Avoid to measure the maximum value of the sound distortion only with ear. Measurement of the output voltage should be done between

both ends of the voice coil of the speaker with a vacuum-tube-type voltmeter (V.T.V.M) or a high class circuit tester (AC Range) which is capable of measuring the voltage up to approximately 1 volt.

2) Test Oscillator

Use the test oscillator at 400c/s or 1,000 c/s (modulated freq.) and the signal of 455kc or AM broadcast frequencies. The oscillator should be of the little-in-output-leakage type and capable of squeezing the output satisfactorily. Procedure of the adjustment is given in the following table. The earth side of the oscillator should be connected to the earth side of the radio.

3) Cautions on Adjustment

A screw driver made of bakelite stick should be used for adjusting the core of the oscillator coil and I.F. transformer in order to eliminate deviation of the adjustment. A screw driver used should be so precisely fit to the screw slot as not to become cranky and the adjustment should be made by turning the screw driver to left or right slowly without pressing it strongly. Turning the core clockwise, tuning frequency is reduced. After the adjustment has been made,

trimmer capacitors and antenna coils should be fixed in place with enamel or wax.

4) Connection of Test Oscillator

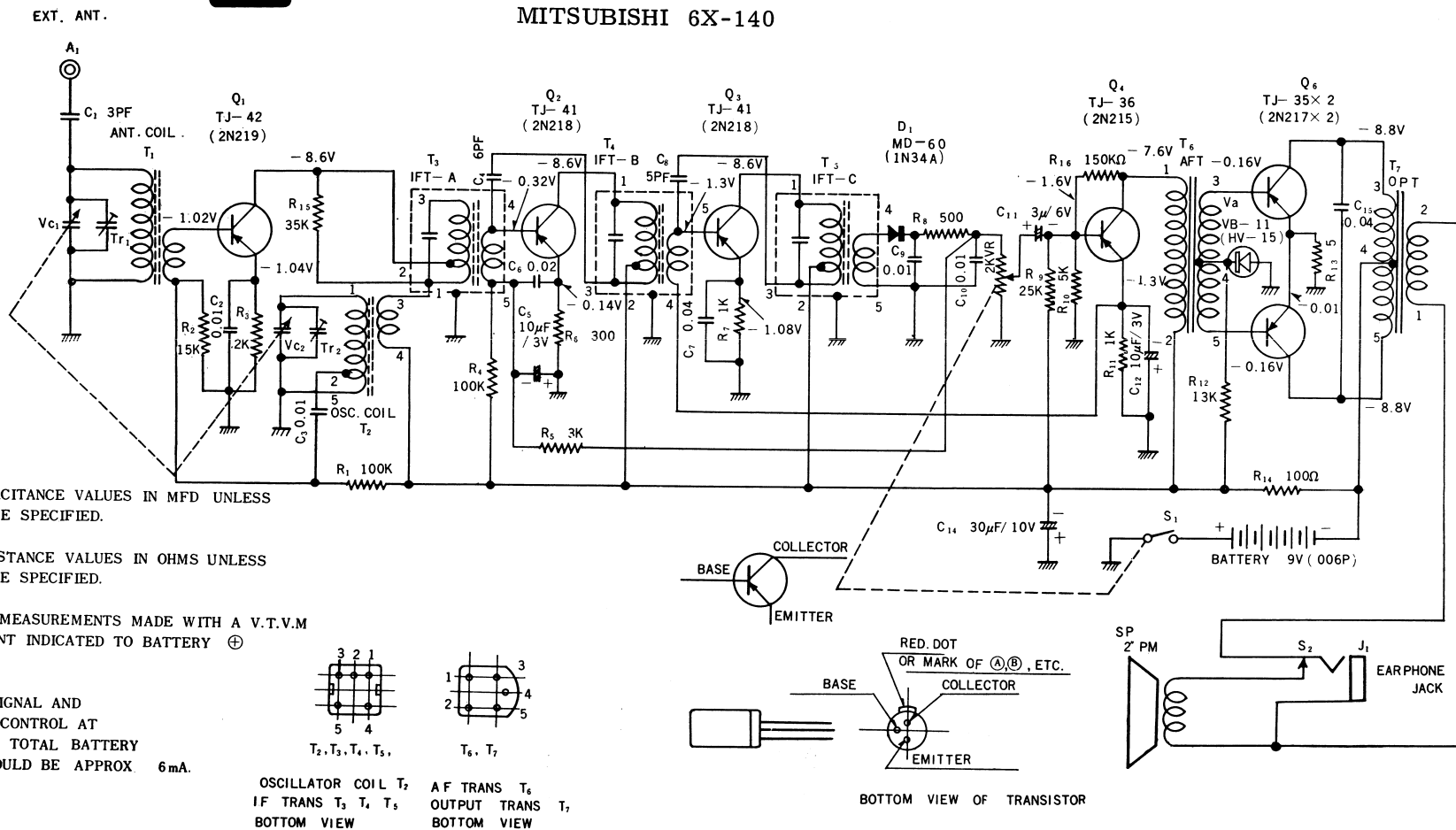
Various measurements and adjustments are made in the factory with the signal of the oscillator being coupled inductively with the coaxial coil. However, to make these measurements or adjustments easier, it is advisable to connect the oscillator with the auxiliary antenna terminal of the radio, with a resistance of approximately 3k Ω connected in series.

ORDER OF ADJUSTMENT

Step	Circuits to be adjusted	Frequency of Test Oscillator (kc)	Dial Indication	Points to be adjusted	Remark
1	Intermediate Frequency Circuit	455	Near 1600 kc where no signal is present	IFT-C	Adjust to the maximum output of oscillator, being kept as low as possible. Adjust repeatedly so that fading grade of the left becomes equal to that of the right at near ± 10 kc.
2				IFT-B	
3				IFT-A	
4				Repeat step 1, 2 & 3	
5	Oscillator Circuit	530	530 (Lowest point)	Core of oscillator Coil T ₂	Adjust the core so that 530kc can be caught with maximum output.
6		1650	1650 (Highest point)	Trimmer capacitor Tr ₂ of oscillator	Adjust the trimmer capacitor so that 1650kc can be received.
7	Tuning Circuit	600	Near 600kc (tune in)	Move antenna coil T ₁ to left and right	Keep the coil in position where the max. sound volume is available.
8		1300	Near 1300kc (tune in)	Trimmer capacitor Tr ₁ of antenna circuit	Adjust the trimmer so as to have the maximum sound volume.
9		600	Near 600kc (tune in)	Move antenna coil T ₁ to left and right	Same as step 7
10		1300	Near 1300kc (tune in)	Trimmer capacitor Tr ₁ of antenna circuit	Same as step 8



MITSUBISHI 6X-140



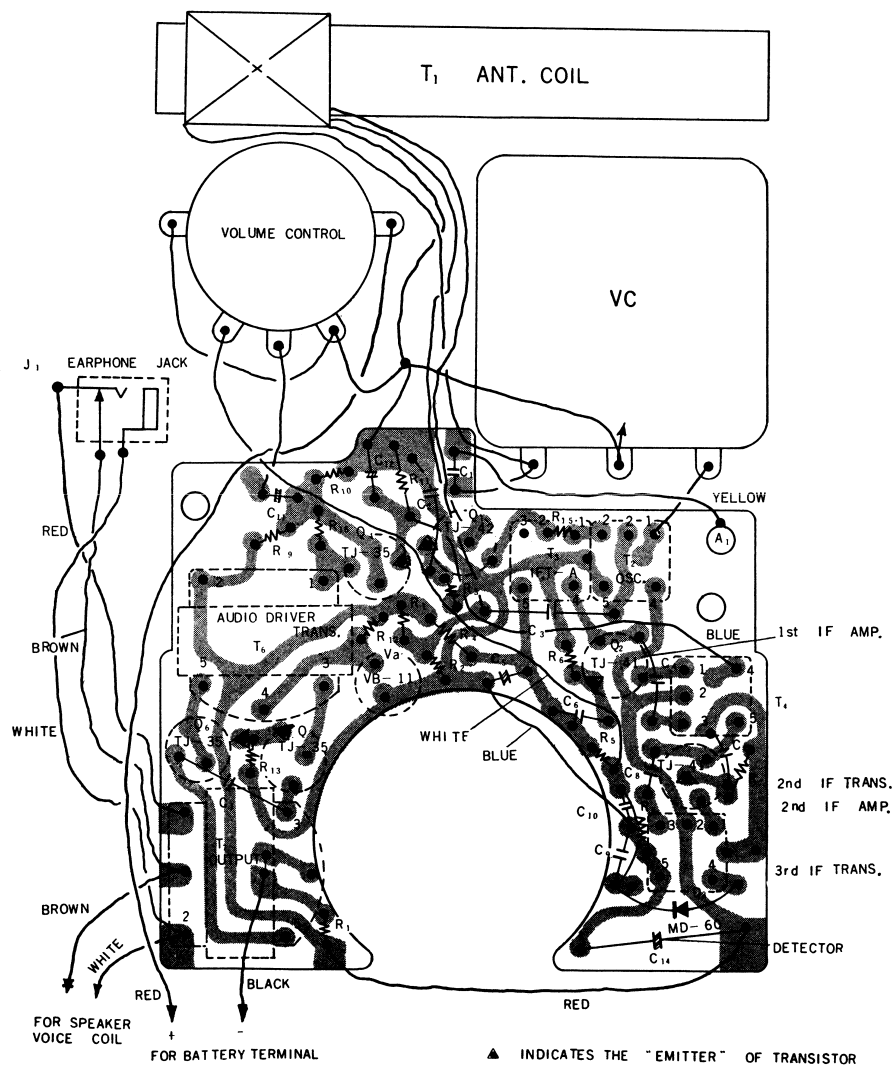


Fig 3 MODEL 6X-140 PRINTED CIRCUIT DIAGRAM

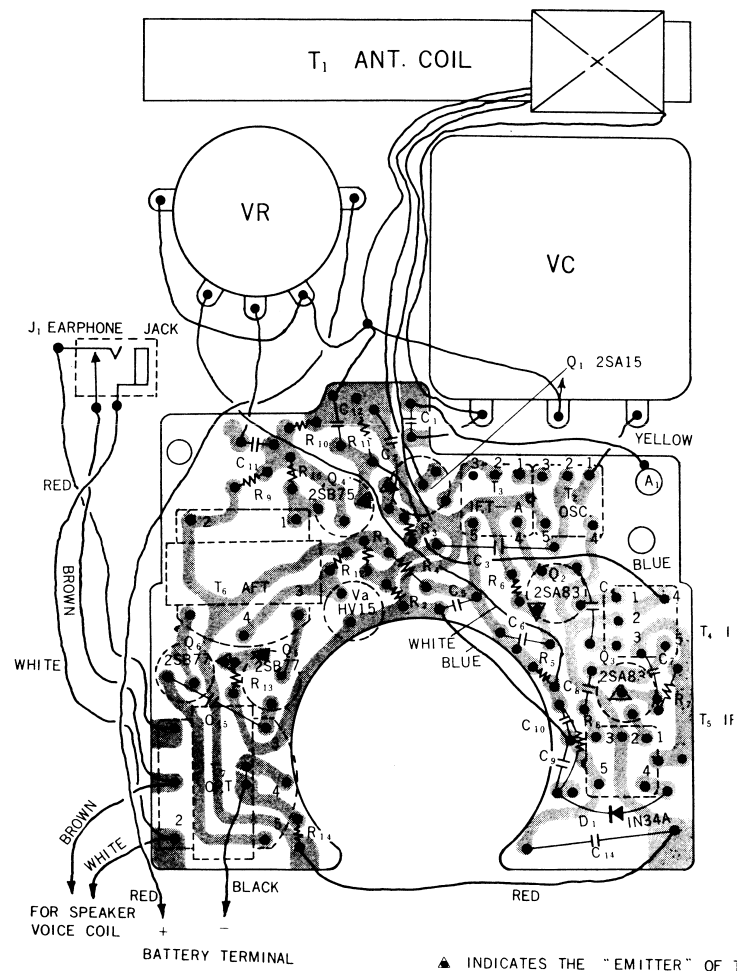


Fig 5 MODEL 6X-145 PRINTED CIRCUIT DIAGRAM

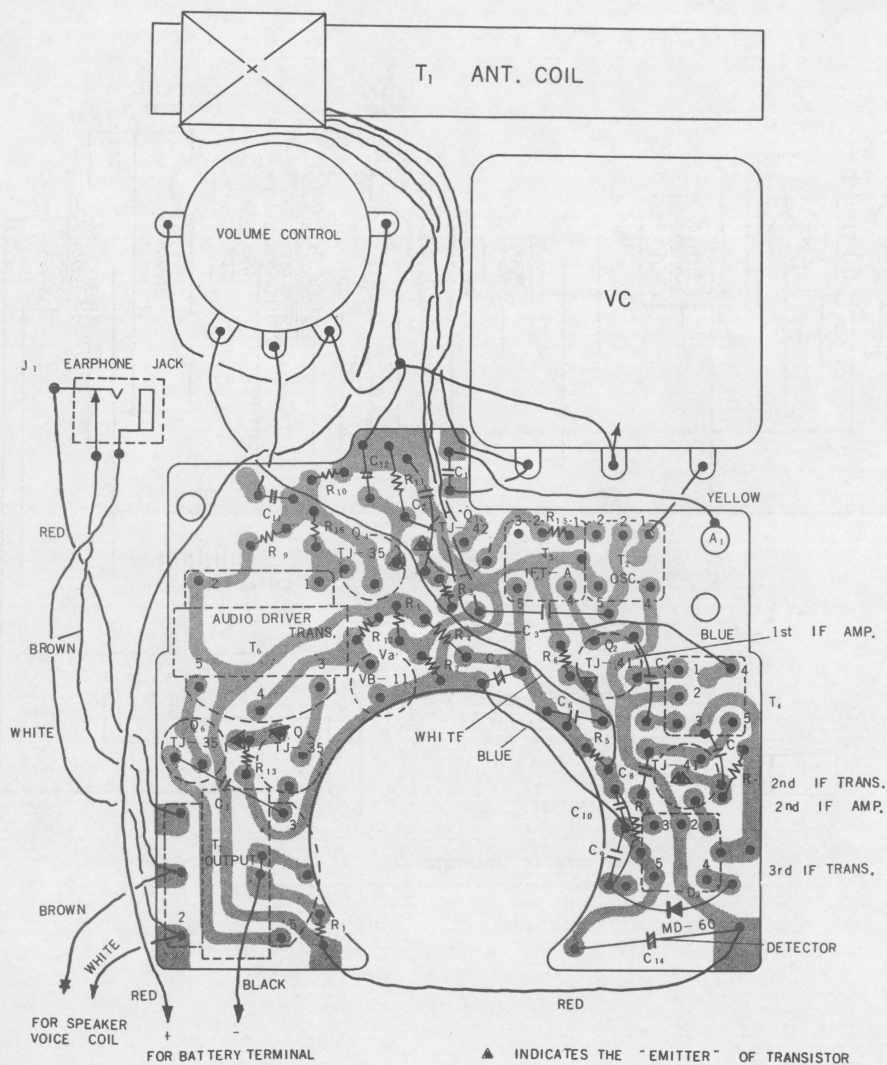


Fig 3 MODEL 6X-140 PRINTED CIRCUIT DIAGRAM

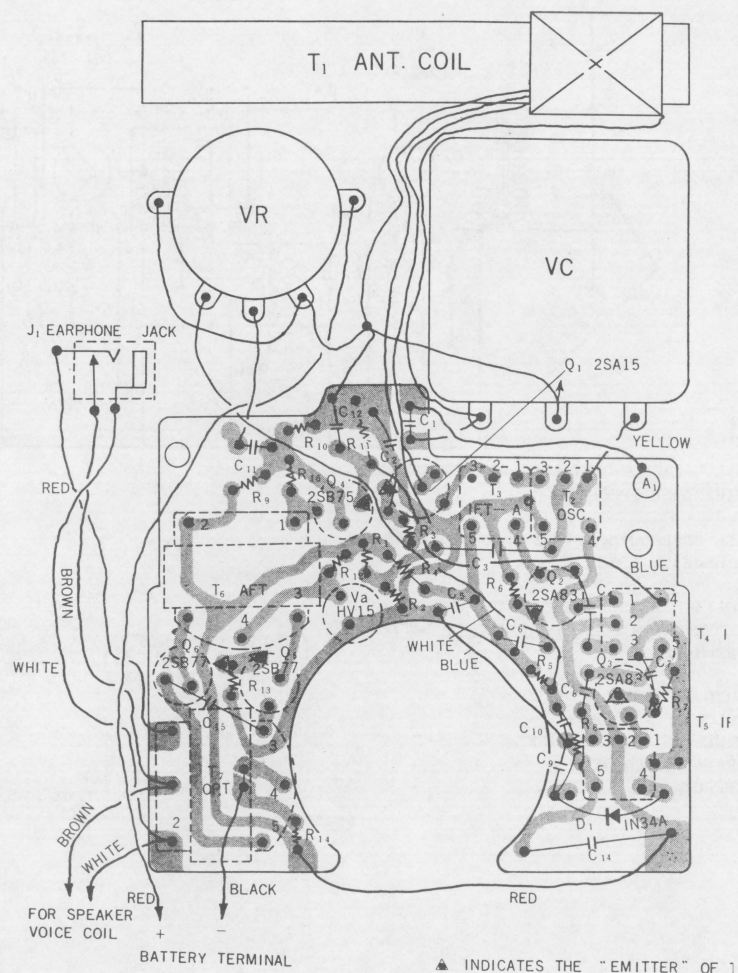
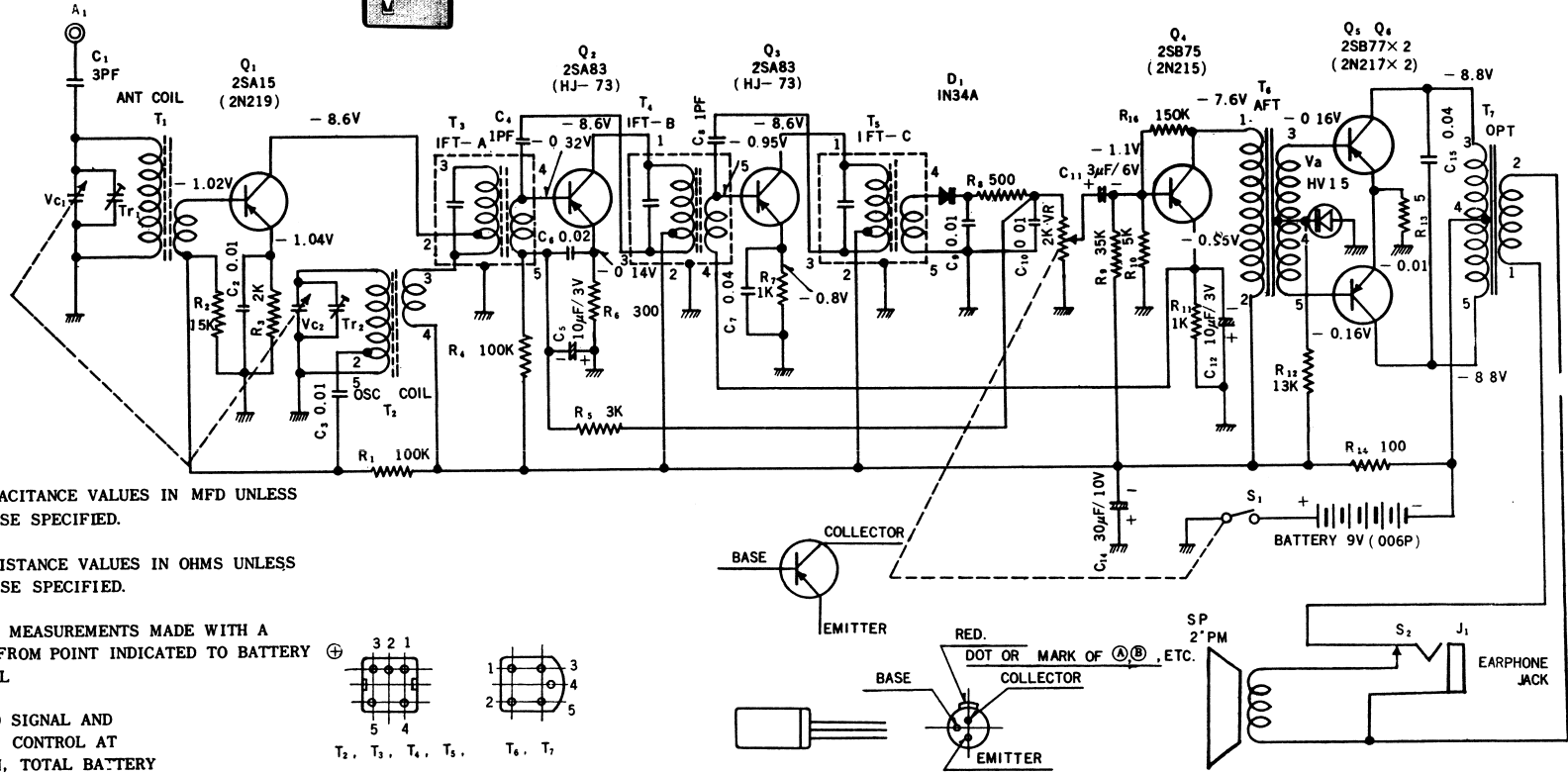
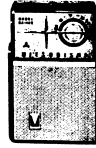
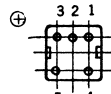


Fig 5 MODEL 6X-145 PRINTED CIRCUIT DIAGRAM

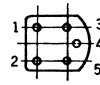


NOTES :

1. ALL CAPACITANCE VALUES IN MFD UNLESS OTHERWISE SPECIFIED.
2. ALL RESISTANCE VALUES IN OHMS UNLESS OTHERWISE SPECIFIED.
3. VOLTAGE MEASUREMENTS MADE WITH A V.T.V.M FROM POINT INDICATED TO BATTERY TERMINAL
4. WITH NO SIGNAL AND VOLUME CONTROL AT MINIMUM, TOTAL BATTERY DRAIN SHOULD BE APPROX. 6mA.



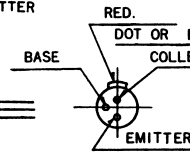
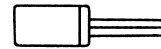
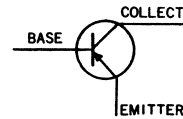
T₂, T₃, T₄, T₅.



T₆, T₇.

OSC COIL T₂,
IF TRANS. T₃, T₄, T₅
BOTTOM VIEW

A F TRANS T₆
OUTPUT TRANS T₇
BOTTOM VIEW



BOTTOM VIEW OF TRANSISTOR