

ZENITH "ROYAL 650" Chassis 6JT45Z1

General Description: Six-transistor (plus two crystal diodes), medium-wave receiver with earphone socket.

Power Supply: 6-volts (four 1.5-volt cells).

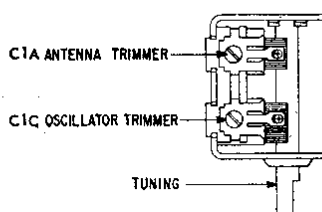
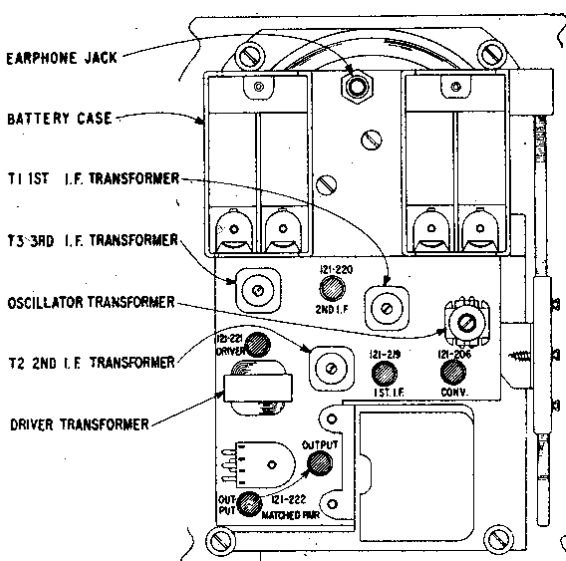
Waveband: M.W. 540-1600 kc/s.

Transistors: Texas Instruments: 12I-206 (frequency changer); 12I-219 (1st I.F.); 12I-220 (2nd I.F.); 12I-221 (driver); 12I-222 (matched output). All *p-n-p* types.

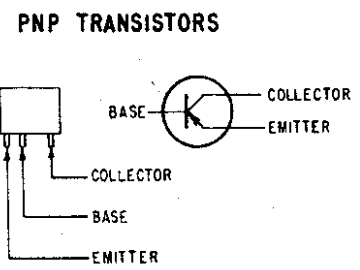
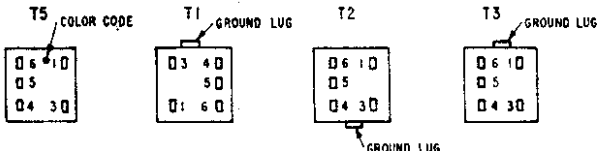
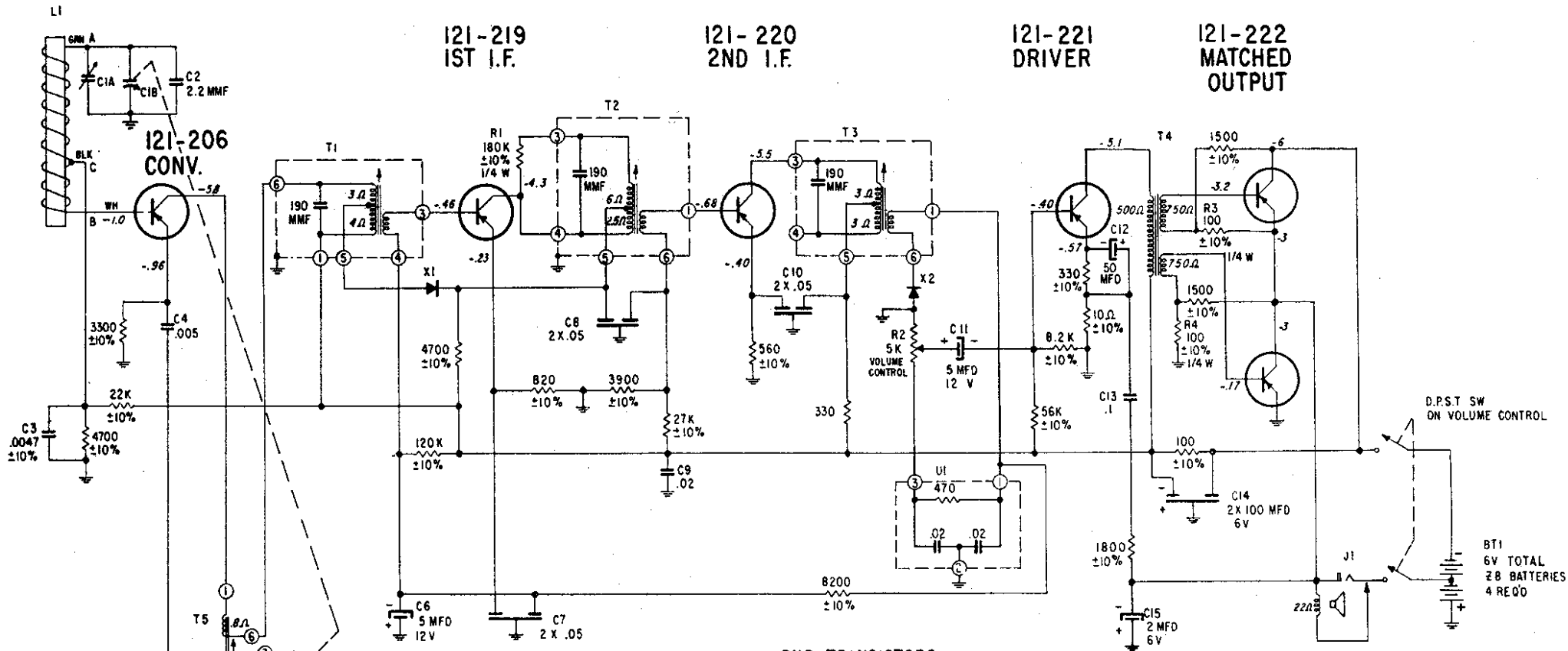
Alignment Procedure:

Operation	Input Frequency	Connect Inner Conductor From Oscillator To	Connect Outer Shield Conductor to	Set Dial To	Adjust
1	455 kc/s.	One turn loosely coupled to rod aerial	Chassis	600 kc/s.	T ₁ , T ₂ , T ₃
2	1620 kc/s.			gang open	C ₁ C T ₅ core C ₁ A
3	600 kc/s.			600 kc/s.	
4	1260 kc/s.			1260 kc/s.	
5	Repeat 2, 3 and 4				

Overload Diode: X₁ diode acts as a variable R.F. load across a portion of the primary of the 1st I.F. transformer, thus preventing overload on strong signals. On strong signals the A.G.C. voltage is increased and is fed to the base of the 1st I.F. amplifier, this tends to reduce the collector current of the 1st I.F. As the collector current decreases the collector voltage in the 1st I.F. rises and approaches that of the collector voltage of the mixer; when this occurs, X₁ begins to conduct and loads down the 1st I.F. transformer.



CHASSIS LAY-OUT



NOTES:
 ALL RESISTORS ARE CARBON, 1/2 WATT, ±20% TOLERANCE UNLESS OTHERWISE SPECIFIED.
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL CONDENSERS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL USING AN A.C.-D.C. OR VACUUM TUBE VOLTMETER.

GROUND'S CHASSIS

BATTERY CURRENT DRAIN APPROX. 6.5 MA WITH VOLUME CONTROL AT MINIMUM.

SPEAKER IMPEDANCE 22Ω AT 400 CPS

CIRCUIT DIAGRAM—ZENITH "ROYAL 650" CHASSIS 6JT45Z1

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