

ZENITH "ROYAL 50" Chassis 6GT40Z1

General Description: Six-transistor (plus two crystal diodes), medium-wave receiver with earphone socket. In some models an alternative chassis (number *6GT40Z2) is fitted, see note.

Power Supply: Two 1.5-volt pen light cells or two 1.34-volt mercury batteries.

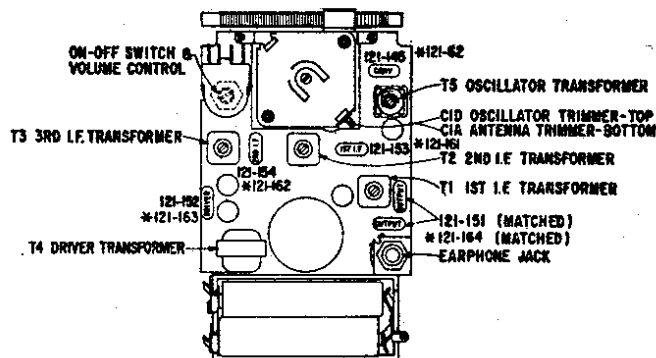
Wavebands: M.W. 540-1600 kc/s.

Transistors: Chassis 6GT40Z1. Frequency changer 12I-145 or 2N1108; 1st I.F. 12I-153 or R375; 2nd I.F. 12I-154 or R510; Driver 12I-152 or R497; Output matched 12I-151 or R509. Texas Instruments, all *p-n-p* types.

Note: The alternative chassis *6GT40Z2 is basically similar but uses R.C.A. transistors with a number of component value changes. Zenith and standard designations for the transistors used are: 12I-62 or 2N411; 12I-161 or 2N410; 12I-162 or 2N410; 12I-163 or 2N408J; matched 12I-164 or 2N408. The 47k-resistor connected between C6 and C10 is replaced by 68k. The primary of T4 is 400 ohms. Neutralising components are added for the I.F. stages: a 12-pF capacitor is connected from the base of the first I.F. to terminal 6 of T2; an 8.2 pF in series with 8.2k is connected between the base of the 2nd I.F. and terminal 1 of T3.

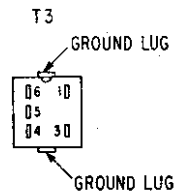
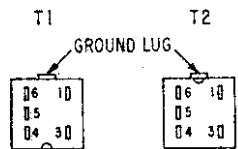
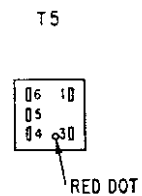
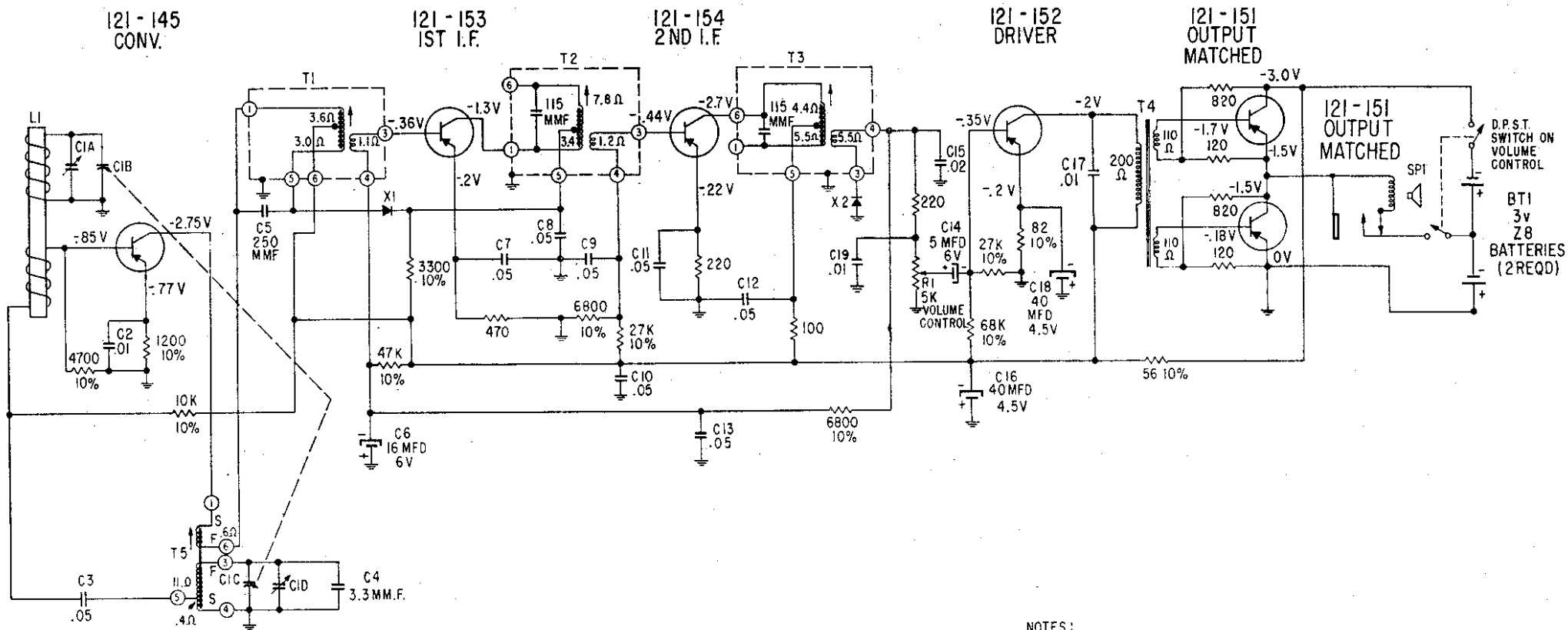
Alignment Procedure: Inject signals via one turn loop across generator output loosely coupled to ferrite rod aerial, with outer shield connected to chassis.

Operation	Input Signal Frequency	Set Dial To:	Adjustments
1	455 kc/s.	600 kc/s.	T ₁ , T ₂ , T ₃
2	1620 kc/s.	gang open	C ₁ D
3	600 kc/s.	Near 600 kc/s.	T ₅ while rocking gang
4	1260 kc/s.	1260 kc/s.	C ₁ A
5	Repeat 2, 3 and 4		

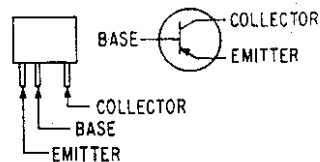


TRANSISTOR AND TRIMMER LAY-OUT

This applies to both chassis 6GT40Z1 and *6GT40Z2



PNP TRANSISTOR



NOTES:
 ALL RESISTORS ARE CARBON, 1/4 WATT, $\pm 20\%$ 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.
 χ DENOTES CHASSIS

BATTERY CURRENT DRAIN: APPROXIMATELY 12M.A. WITH VOLUME CONTROL AT MINIMUM.
 SPEAKER IMPEDANCE: 11 OHMS

CIRCUIT DIAGRAM—ZENITH "ROYAL 50" CHASSIS 6GT40Z1