

ZENITH "ROYAL 500H" Chassis 8HT40Z2

General Description: Eight-transistor (plus crystal diode), medium-wave receiver with earphone socket. R.F. stage and separate mixer/oscillator stages.

Power Supply: 6-volt battery (four 1.5 volt cells or pen light batteries).

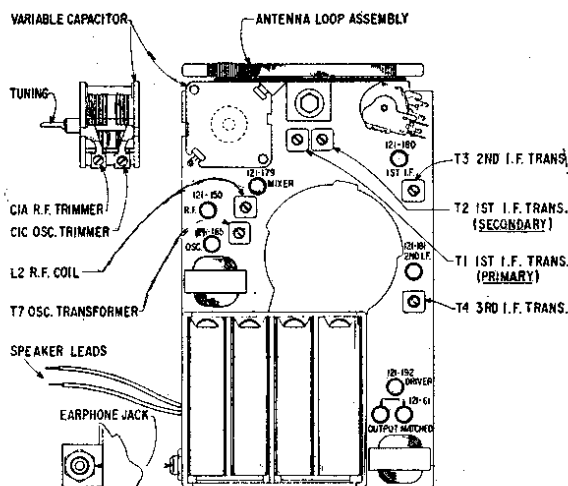
Waveband: M.W. 540-1600 kc/s.

Transistors: R.F. 12I-150 or 2N1631; Mixer 12I-179 or 2N152T; Oscillator 12I-185 or 2N1525; 1st I.F. 12I-180 or 2N1525; 2nd I.F. 12I-181 or 2N1525; Driver 12I-192 or 2N407; Output matched 12I-161 or 2N407. R.C.A. *p-n-p* transistors. Crystal diode, X03-19.

Alignment Procedure: Inject signals by one turn loop across generator output loosely coupled to ferrite rod aerial.

Operation	Input Signal Frequency	Set Dial To	Adjustments
1	455 kc/s.	600 kc/s.	T ₁ , T ₂ , T ₃ , T ₄
2	455 kc/s.	600 kc/s.	L ₂ for minimum output
3	1620 kc/s.	Gang open	C ₁ C
4	600 kc/s.	Near 600 kc/s.	T ₇ , Adjust T ₇ for maximum output while rocking gang. Tune T ₇ for maximum output regardless of dial accuracy.
5	Repeat 3 and 4		
6	1260 kc/s.	1260 kc/s.	C ₁ A

Component Replacement: Resistors and capacitors should be replaced by clipping out the defective part and neatly soldering in the new part. If a unit, such as the oscillator coil or I.F. transformer is to be removed, heat the mounting lugs with a pencil type soldering iron and move them away from the soldered connection with long-nosed pliers or a metal pick. Continue heating the lugs and brush away the molten solder with a small stiff glue



TRANSISTOR AND TRIMMER LAY-OUT

brush. Remove the defective unit by lifting it off the chassis. Before inserting the new unit, be certain that the lug holes are open and free from solder. Forcing a lug against a solder filled lug hole may break the bond between the chassis base and the printed wiring. It is, therefore, necessary to exercise care when replacing units.

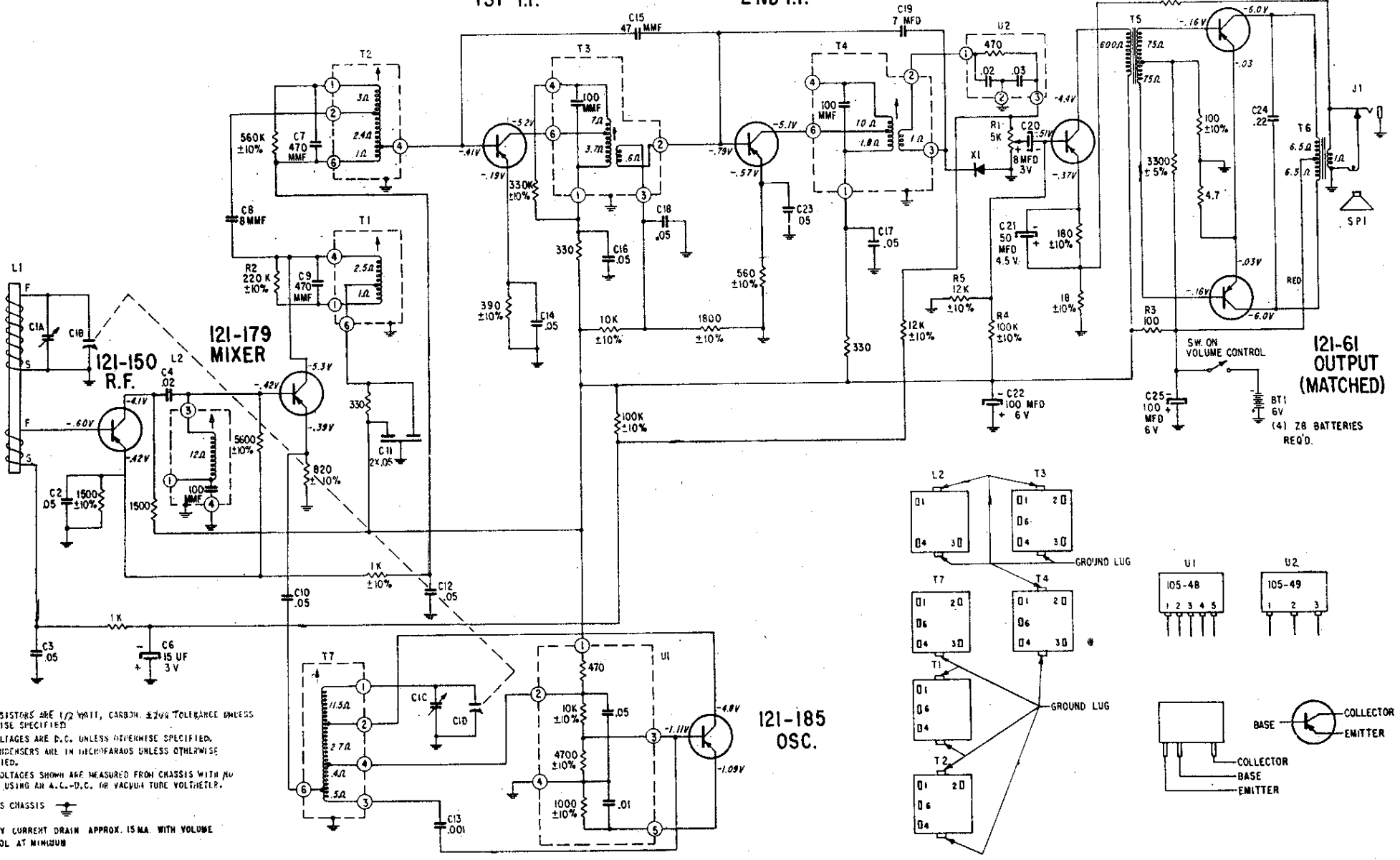
Zenith recommend the use of the following tools for printed circuit servicing: good pair of long-nose pliers; sharp wire cutters; small stiff glue brush (for solder removal); pencil type soldering iron with small tip (25 watts or less). Note that excessive heat may damage the printed circuit during component replacement if a soldering pencil iron or gun of higher wattage rating is used. It is advisable to tin leads on component before soldering; and to use solder with low melting point. A small metal pick is also useful.

121-180
1ST I.F.

121-181
2ND I.F.

121-192
DRIVER

121-61
OUTPUT
(MATCHED)

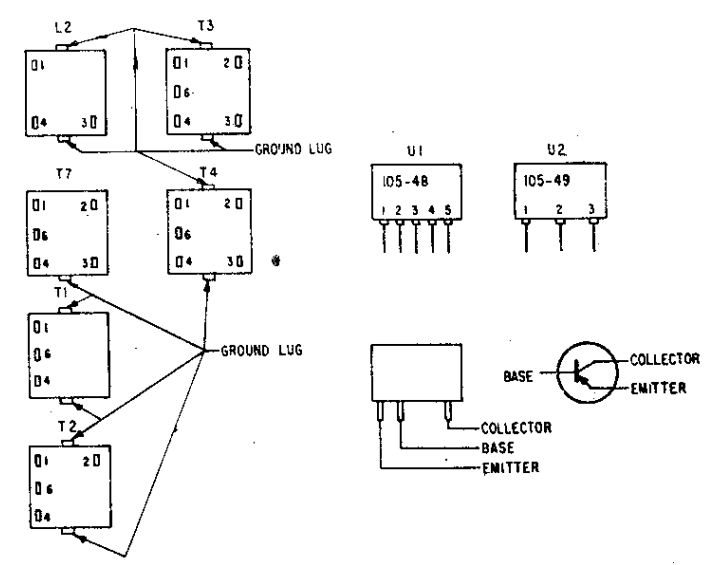


NOTES:
 ALL RESISTORS ARE 1/2 WATT, CARBON, ±2% TOLERANCE UNLESS OTHERWISE SPECIFIED.
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL CONDENSERS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL USING AN A.C.-D.C. OR VACUUM TUBE VOLTMETER.

DEFOTES CHASSIS

BATTERY CURRENT DRAIN APPROX. 15 MA. WITH VOLUME CONTROL AT MINIMUM

SPEAKER IMPEDANCE 16 OHMS



ZENITH

CIRCUIT DIAGRAM—ZENITH "ROYAL 500H" CHASSIS 8HT40Z2