

ZENITH

"ROYAL" Models 285, 500

General Description: This chassis (8KT40Z2) is fitted to Models Royal 285F, 285J, 285W, 285Y, 500WEI and 500YEI. Eight-transistor (plus crystal diode), M.W.-only (540-1600 kc/s) portable receiver with tuned input R.F. stage and separate mixer and oscillator transistors. Untuned coupling between R.F. and mixer stage includes I.F. trap to eliminate any R.F. harmonic interference falling into the I.F. band. Speaker impedance 45 ohms, accessory earphone 15 ohms.

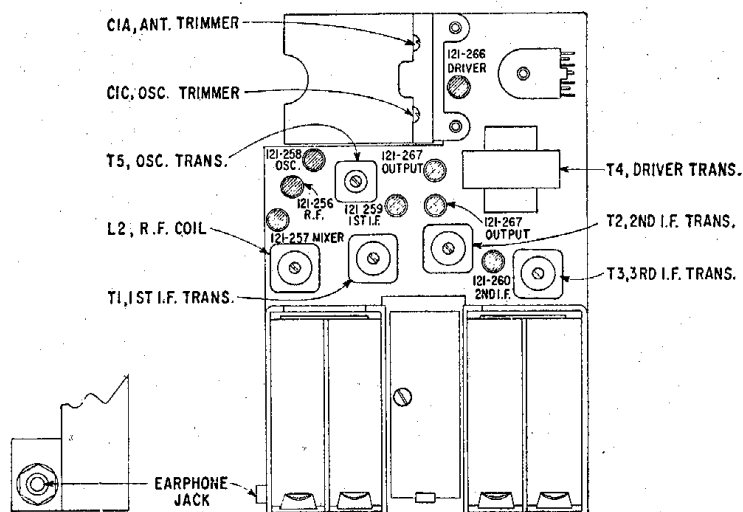
Semiconductors: Transistor numbers shown on circuit diagram are Zenith part numbers corresponding to following R.C.A. types: (121-256) 2N1632; (121-257) 2N1526; (121-258) 2N1524; (121-259) 2N1524; (121-260) 2N1524; (121-266) 2N406; (121-267) pair 2N408. (X1) crystal diode 103-19 or 103-44.

Alignment: Inject signals by one turn loop loosely coupled to aerial.

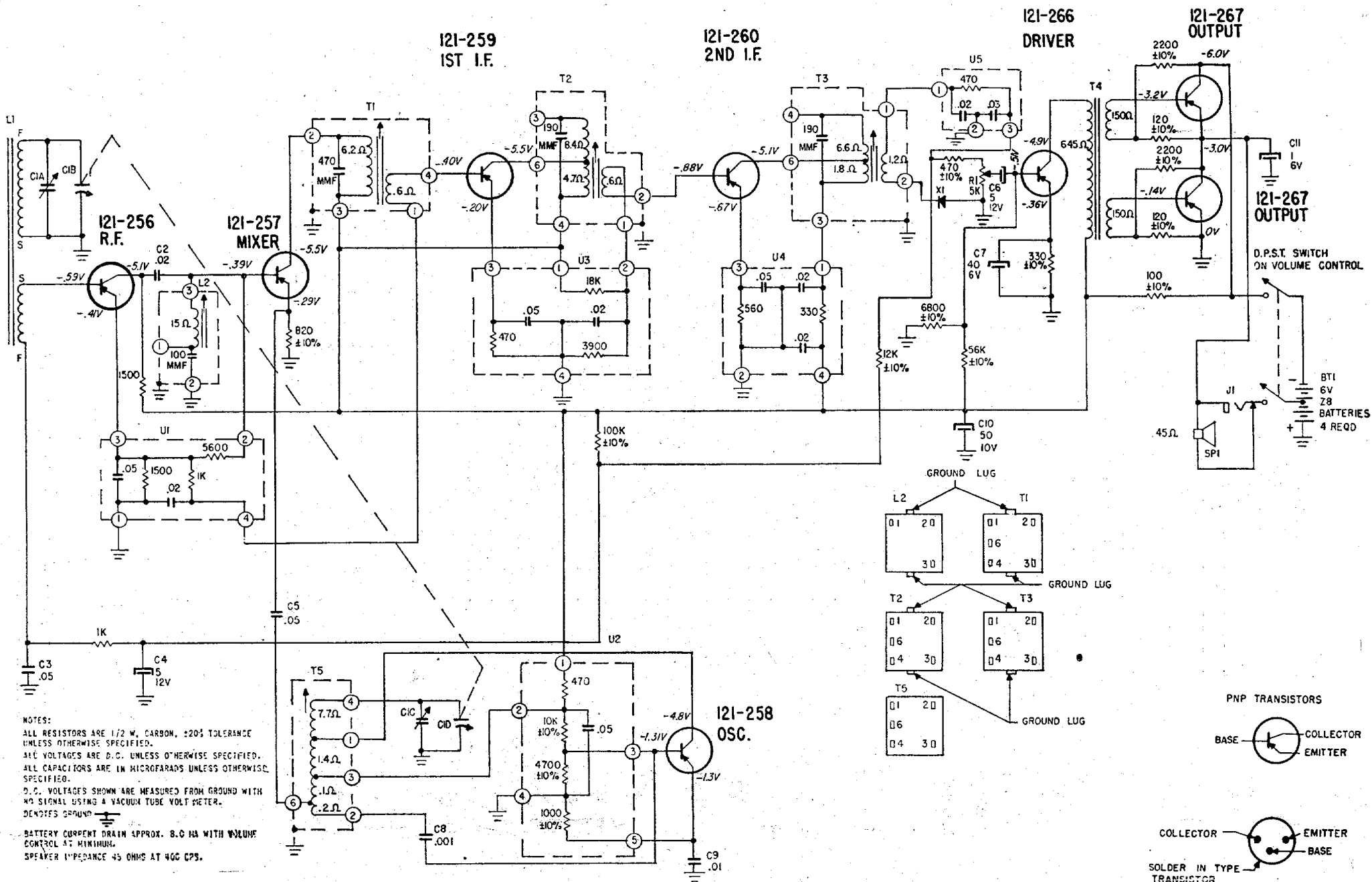
Operation	Input (kc/s.)	Set Dial (kc/s.)	Adjust	Purpose, etc
1	455	600	T ₃ , T ₂ , T ₁	I.F. alignment
2	455	600	L ₂ for minimum	I.F. trap
3	1620	gang open	C ₁ C	Oscillator to dial scale
4	600	near 600	T ₅ slug	Rock gang and tune for maximum regardless of dial accuracy.
5				Repeat steps 3 and 4
6	1260	1260	C ₁ A	Align loop aerial

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

glue brush. Remove defective unit by lifting it off chassis. Before inserting new unit, be certain that lug holes are open and free from solder. Forcing a lug against a solder-filled lug hole may break bond between chassis base and printed wiring, and care should be exercised. Open or damaged section of printed wiring can be replaced by soldering short jumper wire across points to be connected.



TRANSISTOR & TRIMMER LAYOUT



NOTES:
 ALL RESISTORS ARE 1/2 W. CARBON, ±20% TOLERANCE UNLESS OTHERWISE SPECIFIED.
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 D.C. VOLTAGES SHOWN ARE MEASURED FROM GROUND WITH NO SIGNAL USING A VACUUM TUBE VOLT METER.
 ⏏ DENOTES GROUND.
 BATTERY CURRENT DRAIN APPROX. 8.0 MA WITH VOLUME CONTROL AT MINIMUM.
 SPEAKER IMPEDANCE 45 OHMS AT 400 CPS.

CIRCUIT DIAGRAM—ZENITH "ROYAL" MODELS 285, 500 (CHASSIS 8KT40Z2)

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