

NOBLITT-SPARKS INDUSTRIES INC.

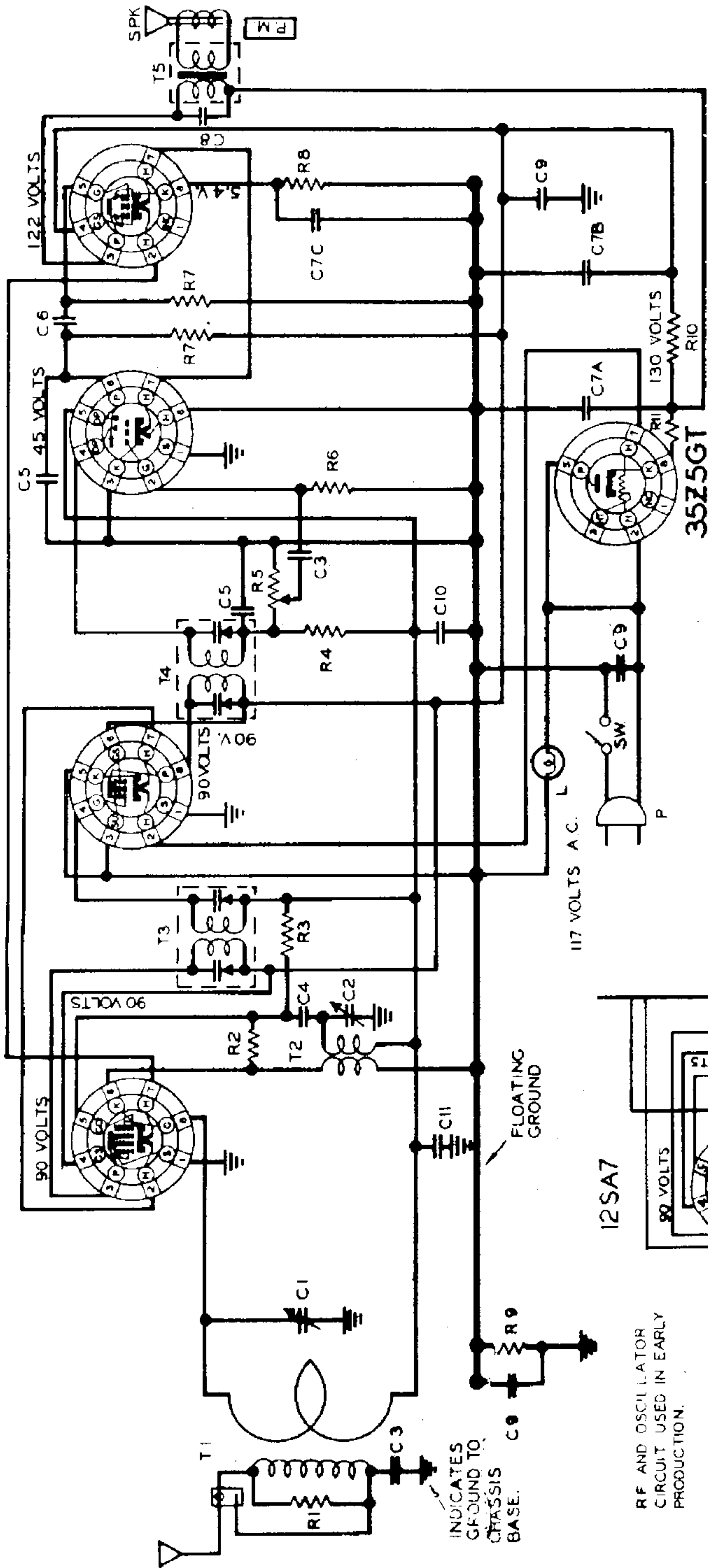


50L6GT

12SQ7

12SK7

12SA7



1946

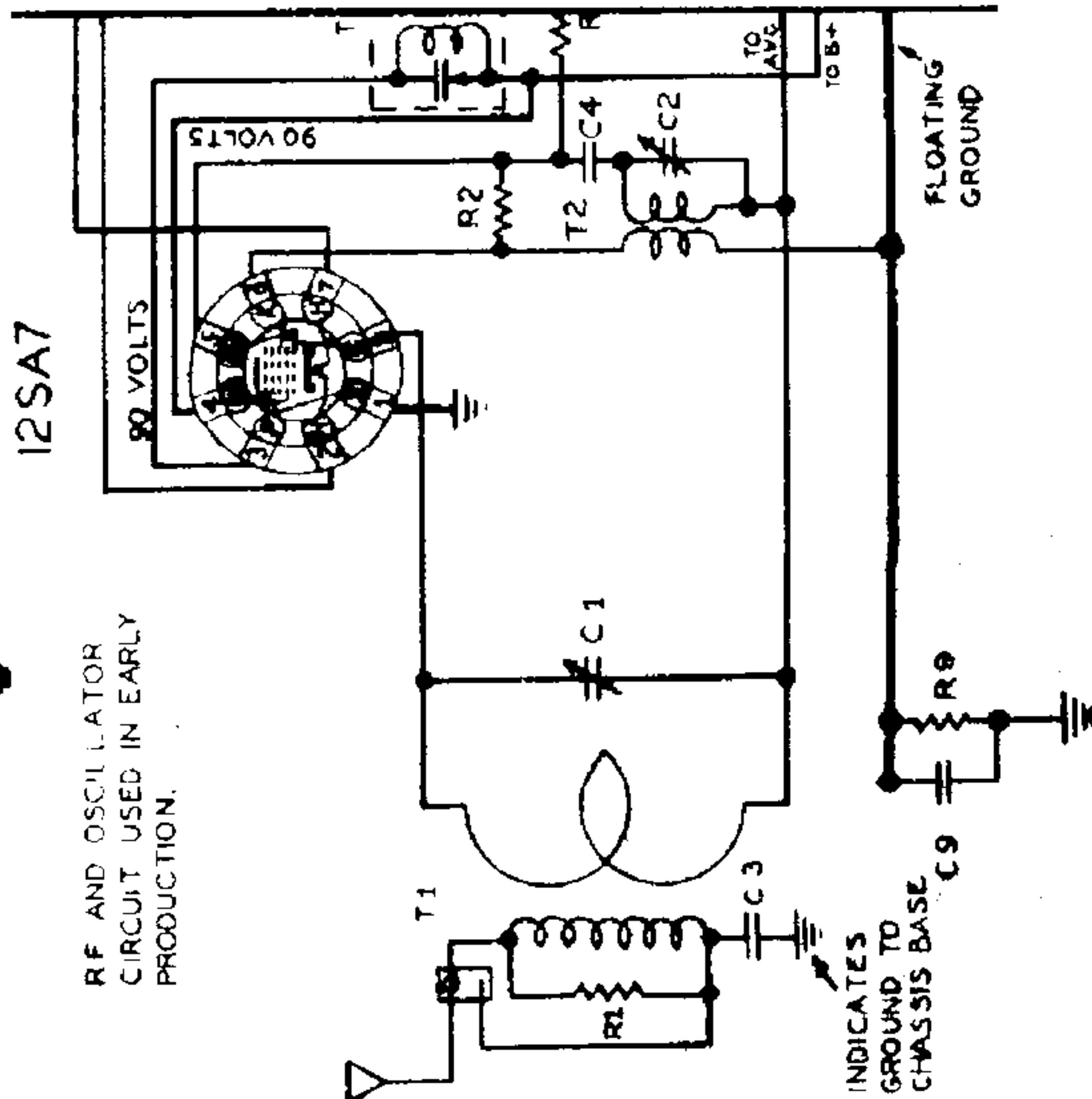
TUBE SOCKETS ARE VIEWED FROM UNDER SIDE OF CHASSIS. VOLTAGE READINGS SHOWN AT SOCKET PRONGS ARE TO FLOATING GROUND AND ARE TAKEN WITH NO SIGNAL. A C LINE VOLTAGE AT I17 VOLTS. WHERE NO READING IS GIVEN THE VOLTAGE IS ZERO OR TOO LOW TO READ.

SERVICES HINTS AND CIRCUIT CHANGES.

Sets made previously to March, 1946 had the Variable Condenser rotors connected to the AVC line instead of being grounded to chassis base and did not have the .1 ufd condenser C-11 connected from the AVC line to chassis base. (In a few sets this is a .05 ufd condenser C-9)

On the early sets, if the dial pointer, shaft, or metal pulley on variable is allowed to touch the dial scale, or plate, the rotor of variable will be grounded, causing noise and distortion. The circuit was changed to eliminate this condition.

If distortion or a chopped output signal is encountered in this set, try replacing the 50L6 tube.



RF AND OSCILLATOR CIRCUIT USED IN EARLY PRODUCTION.

INDICATES GROUND TO CHASSIS BASE

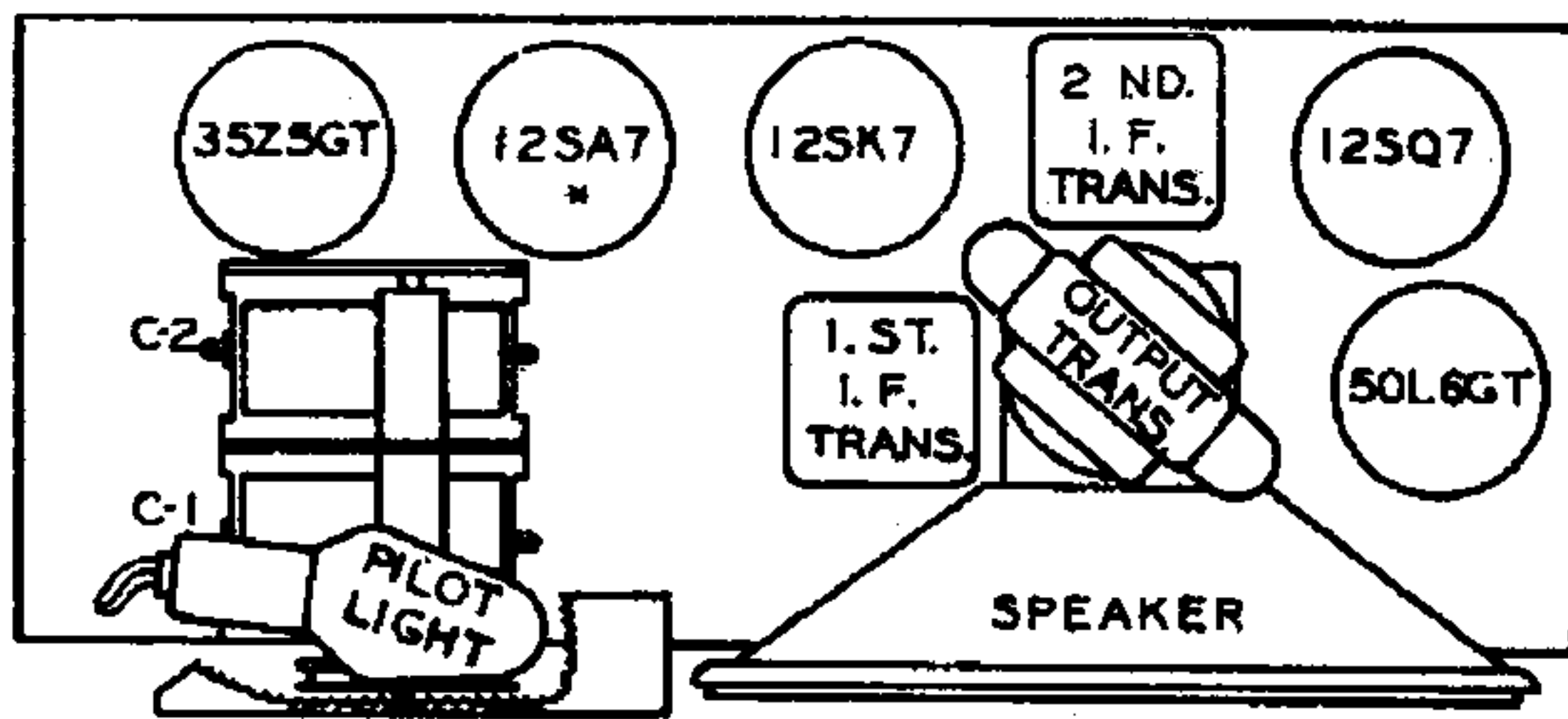
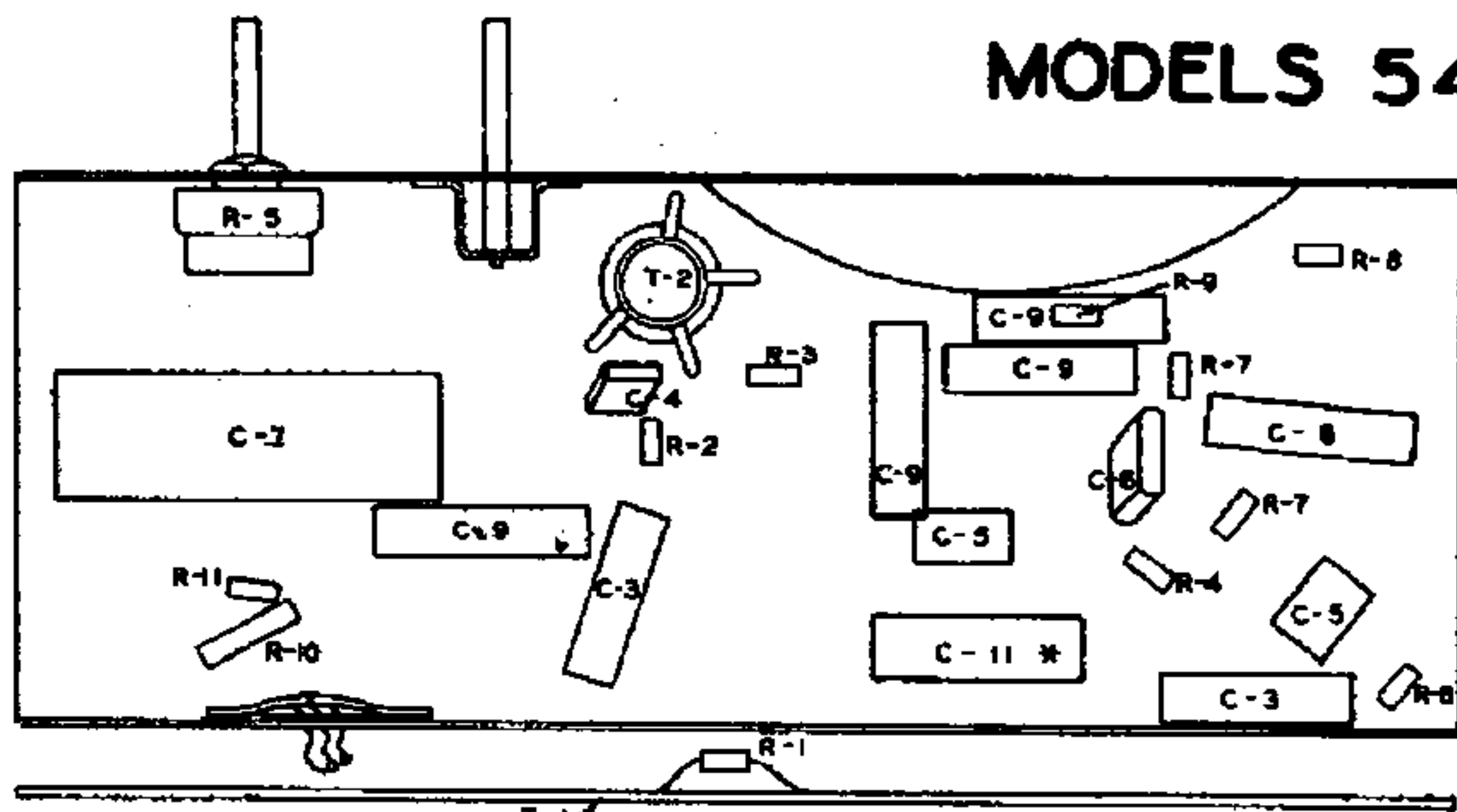
INDICATES GROUND TO CHASSIS BASE.

IF PEAK 455 KC

MODELS 544, 544A,
Chassis RB-201

NOBLITT-SPARKS INDUSTRIES INC.

MODELS 544 & 544A



LOCATION OF PARTS UNDER CHASSIS

OUTLINE FOR TUBE LAYOUT

PRELIMINARY.

* ON SETS MADE PREVIOUS TO MAY 1948 THE 12SA7 TUBE WAS LOCATED BETWEEN THE VARIABLE CONDENSER AND 1ST. I.F. TRANSFORMER

- Output meter connection Across loudspeaker voice coil
- Output meter reading to indicate 200 milliwatts (standard output)8 volts
- Dummy antenna value to be used in series with generator output See chart below
- Connection of generator output lead See chart below
- Connection of generator ground lead *Floating ground
- Generator modulation 30% 400 cycles
- Position of Volume Control Fully clockwise
- Position of dial pointer with variable fully closed Horizontal
- Place the set loop in the same position with respect to the rear of the chassis, and the same distance from the chassis, as it would be with the set mounted in the cabinet.

Position of Variable	Frequency of Generator	Dummy Antenna	Generator Output Connection	Trimmers adjusted in Order Shown for Max. Output	Function of Trimmer
Open	455	.01 mfd.	12SA7 Grid (Stator of front section of variable condenser)	Top of 2nd & 1st IF Trans.	IF
1400	1400	.00005 mfd.	Antenna Clip (With blue wire removed)	C2; C1, trimmers on Rear & Front sections of Variable Condenser	Osc. Ant.
600	600	.00005 mfd.	Antenna Clip (With blue wire removed)	**Adj. antenna section plates of variable cond. for Max. output.	Antenna

If a standard test loop is used with the signal generator for alignment of the receiver, the blue wire will be left in the antenna clip, and the approximate sensitivities should be 300 uv/m and 250 uv/m or less at 600 Kc and 1400 Kc respectively.

Approximate stage by stage sensitivities for 200 Milliwatt output.

IF. - 455 Kc. -----	3350 uv	Antenna 1000 Kc -----	50 uv
Mixer 455 Kc. -----	75 uv	Antenna 1400 Kc -----	25 uv
Mixer 1000 Kc. -----	60 uv	Antenna 600 Kc -----	50 uv

The alignment procedure should be repeated in the original order for greatest accuracy. Always keep the output from the signal generator at its lowest possible value to make the AVC action of the receiver ineffective.

*A floating ground connection can be obtained on either of the lugs on the back of the AC switch or the black lead on the Volume Control.

**AS THE CONDENSERS ARE ALL TRACKED BEFORE LEAVING THE FACTORY IT IS NOT PROBABLE THAT THE PLATES WILL NEED TO BE ADJUSTED UNLESS WIDE VARIATIONS IN TUBES ARE ENCOUNTERED.

The outside plates on the antenna section of the variable condenser are cut, so they can be bent in or out to give more or less capacity at any given position of the rotor, after the trimmers on the variable have been adjusted at 1400 Kc. A disc type tuning wand affords a quick method of determining whether more or less capacity is needed in the antenna circuit. If the output increases when the Iron end of the wand is placed near the loop, the plates should be bent in to give more capacity. If the output increases when the brass or aluminum end of the wand is placed near the loop the plates should be spread out. If the wand indicates

cont'd on next page