

NOTE: VOLTAGES MEASURED WITH 6.3 VOLT BATTERY.  
\*MEASURED WITH 300,000 OHM VOLT METER.  
ALL VOLTAGES TAKEN BETWEEN POINT INDICATED AND GROUND.

257

| No. | Part No. | Description      |
|-----|----------|------------------|
| C1  | 100-22   | .05x200 v.       |
| C2  | 129-21   | .0002 Mica       |
| C3  | 100-9    | .05x200 v.       |
| C4  | 100-20   | .1x200 v.        |
| C5  | 129-12   | .00025 Mica      |
| C6  | 119-31   | 5.0x200 v. lytic |
| C7  | 119-31   | 5.0x200 v. lytic |
| C8  | 129-5    | .0001 Mica       |
| C9  | 100-20   | .1x200 v.        |
| C10 | 100-26   | .02x400 v.       |
| C11 | 100-9    | .05x200 v.       |
| C12 | 100-34   | .005x1200 v.     |
| C13 | 100-20   | .1x200 v.        |

| C14       | 100-40  | .5x200 v.                 |
|-----------|---------|---------------------------|
| C15       | 100-40  | .5x200 v.                 |
| C16       | 100-19  | .006x600 v.               |
| C17       | 100-35  | .5x200 v.                 |
| RESISTORS |         |                           |
| R1        | 130-132 | 10M ohm—1/3 W. Insulated  |
| R2        | 130-12  | 50M ohm—1/3 W.            |
| R3        | 130-17  | 10M ohm—1/3 W.            |
| R4        | 130-133 | 15M ohm—1/4 W.            |
| R5        | 130-110 | 1 megohm—1/10 W.          |
| R6        | 130-4   | 3 megohm—1/3 W.           |
| R7        | 101-64  | 1 megohm—Volume Control   |
| R8        | 130-134 | 1 megohm—1/3 W. Insulated |
| R9        | 130-100 | 150M ohm—1/3 W.           |
| R10       | 130-135 | 150M ohm—1/3 W. Insulated |

| R11                 | 130-37  | 750M ohm—1/3 W.                  |
|---------------------|---------|----------------------------------|
| R12                 | 106-32  | 3.5 ohm—1/4 W.                   |
| R13                 | 130-136 | 200 ohm Insulated—1/2 W.         |
| MISCELLANEOUS PARTS |         |                                  |
| T1                  | 111-58  | Antenna Coil                     |
| T2                  | 110-51  | Oscillator Coil                  |
| T3                  | 108-89  | Input I. F.                      |
| T4                  | 108-90  | Output I. F.                     |
| T5                  | 104-79  | Power Transformer                |
| T6                  | 114-55  | Output transformer (see speaker) |
| L1                  | 105-34  | Filter Choke                     |
| L2                  | 105-35  | R. F. "B" Choke                  |
| L3                  | 105-19  | Choke                            |
| L4                  | 114-55  | 4.6 ohm speaker field            |

## SERVICE NOTES:

Voltages taken from different points of circuit to chassis are measured with volume control full on, all tubes in their sockets and speaker connected, with a volt meter having a resistance of 1000 ohms per volt.

## ALIGNING I. F. TRANSFORMERS: (465 K.C.)

Part No. 108-90. Output I.F. Transformer  
Part No. 108-89. Input I.F. Transformer

These I.F. transformers have two adjustments, both of which are accessible from the top of chassis (see top view—Fig. 1, page 2).

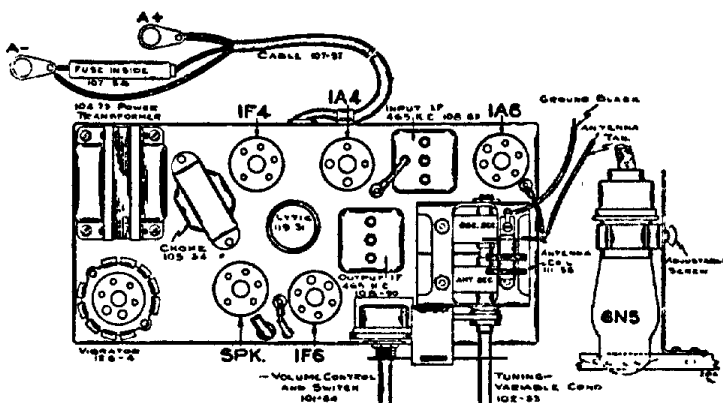
1. With volume control full on (the extreme right of its rotation), and with the variable condenser set to minimum capacity position, make the following adjustments:

- Connect external oscillator set at 465 kilocycles, in series with "Dummy 1", to the control grid cap of the type 1A4 tube, and adjust the output I.F. transformer No. 108-90 to resonance.
- Move oscillator output clip from grid of 1A4 to grid cap of 1A6 and adjust input I.F. transformer (No. 108-89) to resonance.
- With oscillator still connected to 1A6, readjust output I.F. transformer (108-90) if necessary.

## R. F. ALIGNMENT: (535-1720 K.C.)

1. With gang condenser in its minimum capacity position, plates entirely out of mesh, connect an external oscillator in series with "Dummy 2", to tan antenna and black ground leads and make the following adjustments:

- With external oscillator set at 1720 kilocycles, adjust oscillator trimmer (rear section of gang condenser).
- Re-set external oscillator to 1400 kilocycles, rotate condenser, pick up oscillator signal and adjust antenna trimmer to resonance (front section of gang condenser).
- Check sensitivity at 600 and 1000 kilocycles.



TOP VIEW

The tube complement of this chassis consists of the following tubes:

The type and function of each tube is as follows:

- 1—Type 1A6 Pentagrid Mixer, First Detector-oscillator
- 1—Type 1A4 Super-control R.F. Pentode, I.F. Amplifier (465 K.C.)
- 1—Type 1F6 Duplex Diode Pentode Second Detector, A.V.C. and First Audio.
- 1—Type 1F4 Pentode Output Amplifier.
- 1—Type 6N5 Cathode-Ray Tuning Eye.

## DUMMY ANTENNAS:

The following dummy antennas are used in aligning and are referred to in the following alignment instructions as "Dummy 1" and "Dummy 2."

Dummy 1: (I.F.)—Consists of a .1 mfd. condenser connected in series with the external oscillator.

Dummy 2: (Broadcast)—Consists of a 200 mmfd. condenser and a 20 ohm resistor connected in series with each other and in series with the external oscillator.