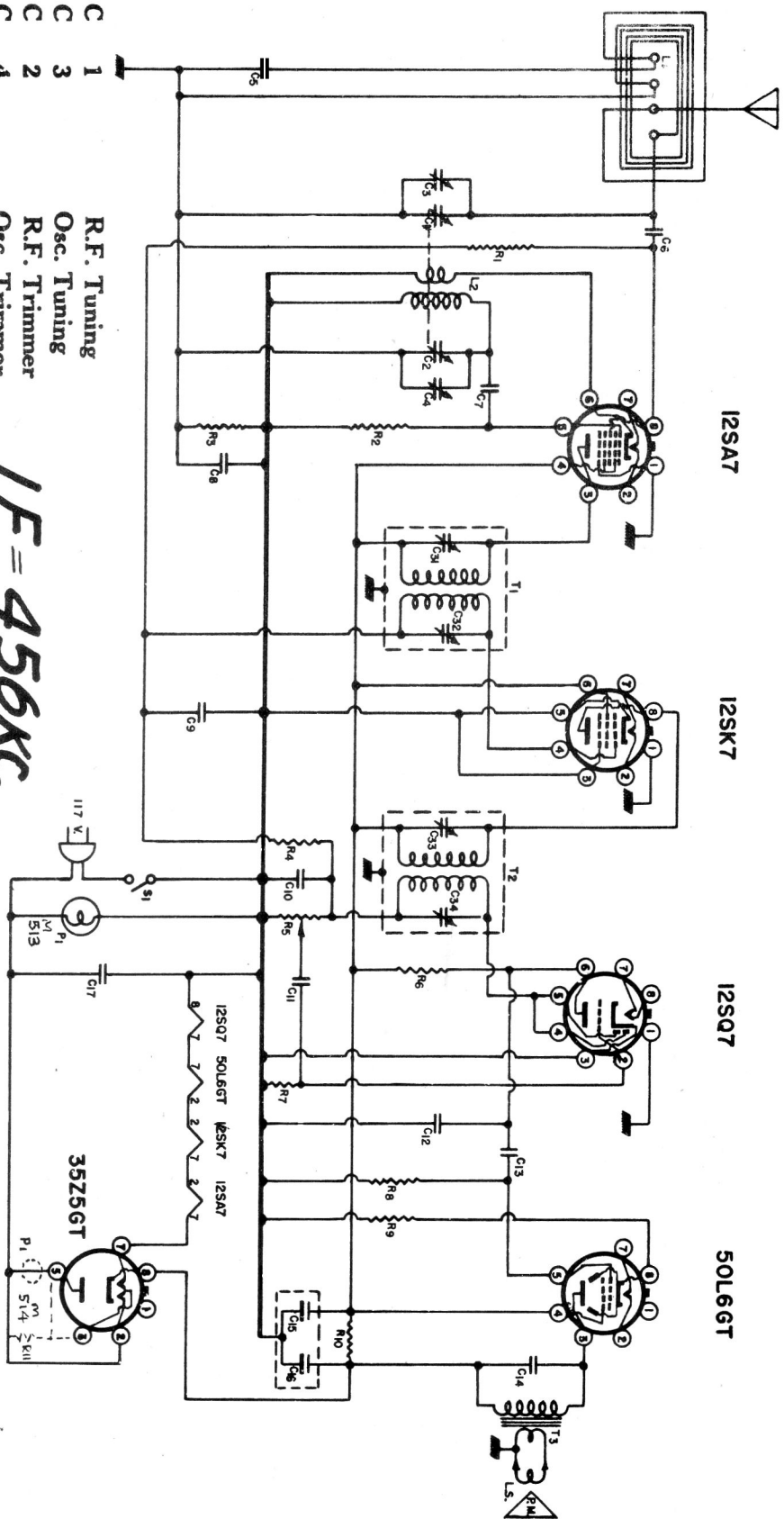




**IF = 456kc.**

**1949-50**

**AC-DC**

**MODELS**

**M513-M514**

**NOTE: All resistors are 1/2 watt unless otherwise shown.**

|      |    |                          |
|------|----|--------------------------|
| C    | 1  | R.F. Tuning              |
| C    | 2  | Osc. Tuning              |
| C    | 3  | R.F. Trimmer             |
| C    | 4  | Osc. Trimmer             |
| C    | 5  | .001 mfd.                |
| C    | 6  | 100 mmfd.                |
| C    | 7  | 100 mmfd.                |
| C    | 8  | .025 mfd. (Resonant)     |
| C    | 9  | .05 mfd.                 |
| C    | 10 | 470 mmfd.                |
| C    | 11 | .005 mfd.                |
| C    | 12 | 220 mmfd.                |
| C    | 13 | .01 mfd.                 |
| C    | 14 | .02                      |
| C    | 15 | 30 mfd. filter condenser |
| C    | 16 | 60 mfd. filter condenser |
| C    | 17 | .02 mfd.                 |
| L    | 1  | Loop Antenna             |
| L    | 2  | Oscillator Coil          |
| L.S. | 1  | Speaker 5" P.M.          |
| P    | 1  | Pilot Light              |

|   |    |                                |
|---|----|--------------------------------|
| R | 1  | 1 Megohm                       |
| R | 2  | 22,000 ohm                     |
| R | 3  | 1 Megohm                       |
| R | 4  | 2.2 Megohm                     |
| R | 5  | 500,000 Pot. & Switch S.P.S.T. |
| R | 6  | 220,000 ohm                    |
| R | 7  | 6.8 Megohm                     |
| R | 8  | 470,000 ohm                    |
| R | 9  | 180 ohm                        |
| R | 10 | 1500 ohm 1 watt                |
| R | 11 | 68 ohm                         |

|   |   |                                    |
|---|---|------------------------------------|
| S | 1 | Switch (on Vol. Control No. 10633) |
| T | 1 | Transformer 1st I.F.               |
| T | 2 | Transformer 2nd I.F.               |
| T | 3 | Output Transformer                 |

**ALIGNMENT DATA ON  
SHEET 14**

# M-513 ALIGNMENT PROCEDURE

| CONNECT S.C. OUTPUT | INPUT FREQUENCY | RECEIVER DIAL SETTING | ADJUST             | CIRCUIT RESONATED        | REMARKS                   |
|---------------------|-----------------|-----------------------|--------------------|--------------------------|---------------------------|
| <b>*12SA7</b>       |                 |                       |                    |                          |                           |
| Det. Grid           | 455 KC.         | Gang at min.          | C34,C33<br>C32,C31 | No. 2 I.F.<br>No. 1 I.F. | Adjust for<br>Max. output |
| †Ant. Lead          | 600 KC.         | 600 KC.               | C5                 | Oscillator               | Adjust for<br>resonance   |
| Ant. Lead           | 1500 KC.        | 1500 KC.              | C4<br>C3           | Oscillator<br>R.F.       | Adjust for<br>Max. output |

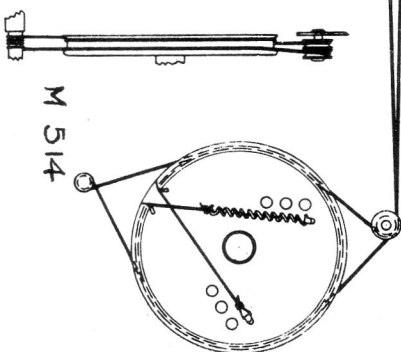
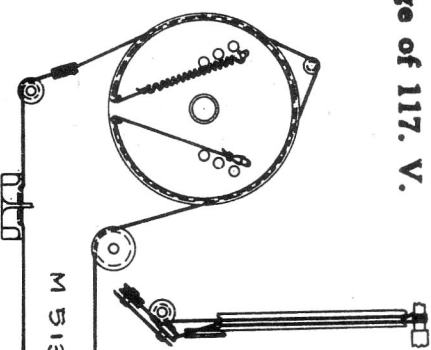
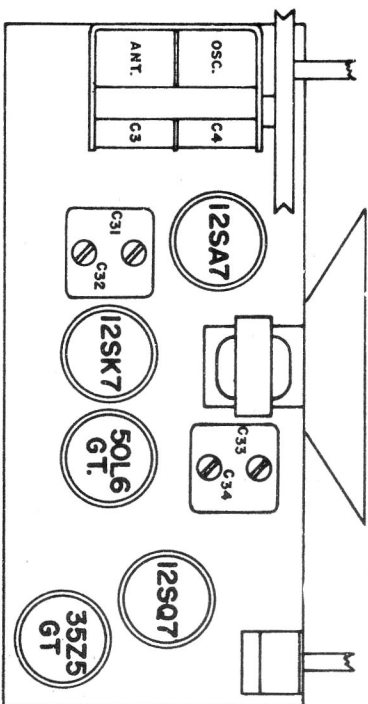
\*Short oscillator section of gang through 0.1 mfd. capacitor to chassis.

†Before proceeding with R.F. alignment see that pointer is set over last division on right hand side of dial scale with gang at minimum.

## SOCKET VOLTAGES

| TYPE   | PLATE  | SCREEN | GRID  | CATHODE FILAMENT |
|--------|--------|--------|-------|------------------|
| 12SA7  | 80 V.  | 80 V.  | ..... | 12 V.            |
| Det.   | 80 V.  | 80 V.  | ..... | 12 V.            |
| 12SK7  | 55 V.  | .....  | ..... | 12 V.            |
| 12SQ7  | 112 V. | 80 V.  | ..... | 50 V.            |
| 50L6GT | .....  | 6 V.   | ..... | 35 V.            |
| 35Z5GT | .....  | 115 V. | ..... | 35 V.            |

NOTE—All voltages measured with line voltage of 117. V.



AC - DC  
MODELS  
M513-M514

CIRCUIT DATA ON  
SHEET 13