

## VOLTAGES AT SOCKETS

Line Voltage: 117—Volume Control Maximum  
Readings taken with 1000 Ohm-per-volt meter

Antenna Shorted to Ground  
Position of Band Switch Standard Wave

| TUBE | FUNCTION             | VOLTAGE BETWEEN SOCKET PRONG AND GROUND (Unless otherwise indicated) |             |                  |             |                   |             |               |             |
|------|----------------------|--|-------------|------------------|-------------|-------------------|-------------|---------------|-------------|
|      |                      | Prong No. 1  | Prong No. 2 | Prong No. 3      | Prong No. 4 | Prong No. 5       | Prong No. 6 | Prong No. 7   | Prong No. 8 |
| 6J7  | 1st Det.             | 0  | 6.2(1)      | 90               | 90          | 5                 |             | 6.2(1)        | 5           |
| 6K7  | 1F                   | 0  | 6.2(1)      | 230              | 100         | 2.0               |             | 6.2(1)        | 2.0         |
| 6C5  | Osc.                 | 0  | 6.2(1)      | 140              |             |                   |             | 6.2(1)        | 0           |
| 6Q7  | 1st Audio & 2nd Det. | 0  | 6.2(1)      | 100              |             |                   |             | 6.2(1)        | 0(12)       |
| 6F6  | Power Amp.           | 0  | 6.2(1)      | 210              | 230         |                   |             | 6.2(1)        | 0(13)       |
| 5Y3G | Rectifier            | 0  | 5.0(4)      | 630(5)           |             |                   | 630(5)      |               | 5.0(4)      |
|      |                      | Plate to Ground  |             | Target to Ground |             | Cathode to Ground |             | Across Heater |             |
| 6G5  | Tuning Indicator     | 20   |             | 230              |             | 0                 |             | 6.2 A.C.      |             |

- (1) A.C. voltage as read across heater terminals 2 and 7  
(2) Bias (115 volts) as read across resistor R15  
(3) Bias (114 volts) as read across resistors R15 and R16

- (4) A.C. voltage as read across heater terminals 2 and 8  
(5) A.C. voltage as read across terminals 4 and 6

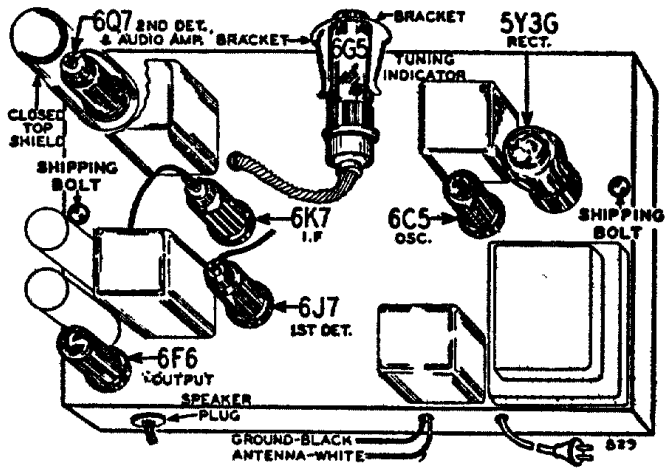
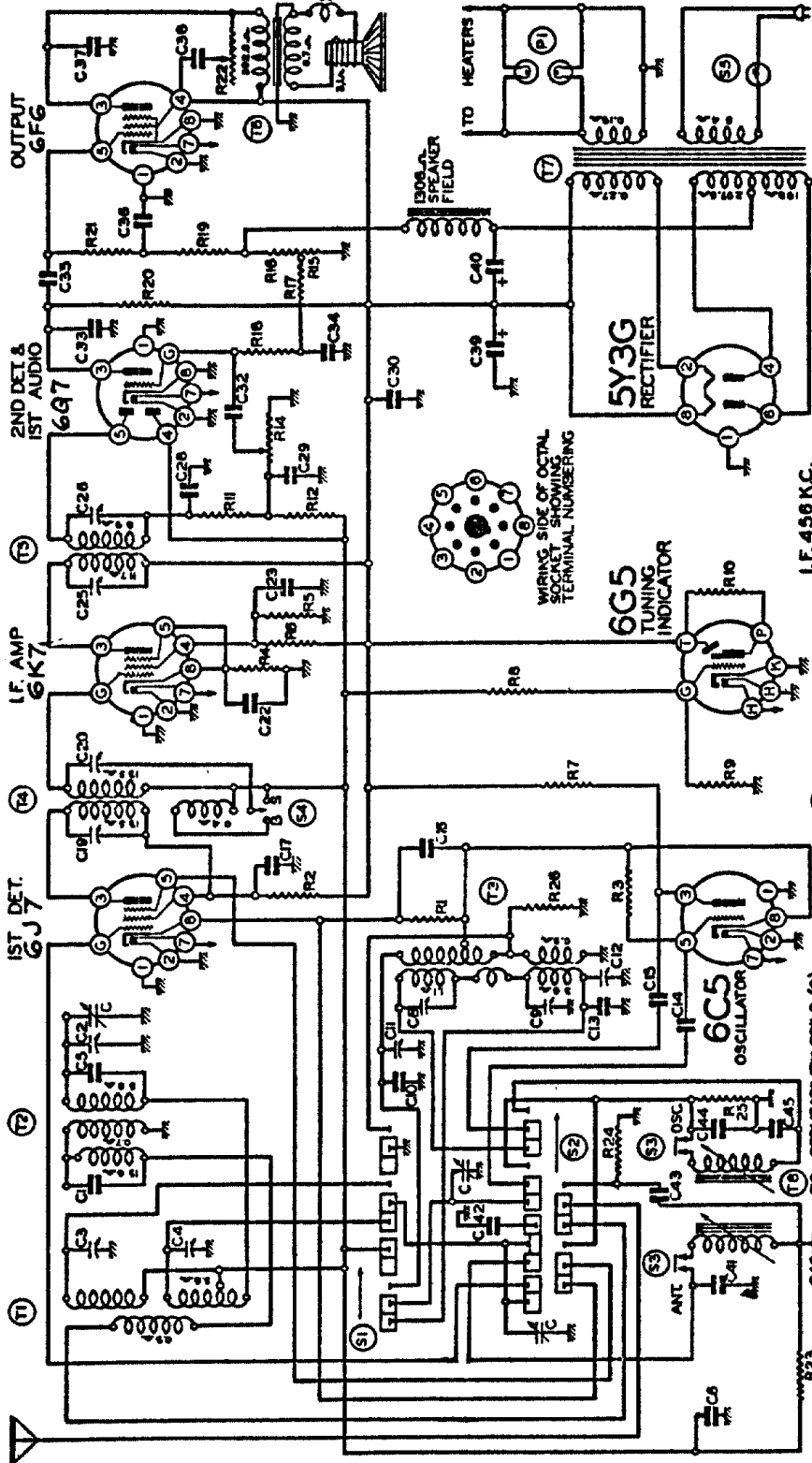


Fig. 1—Location of Tubes; Top View of Chassis



FOR ALIGNMENT SEE INDEX

FOR TUNER DATA, SEE INDEX

|   |        |     |          |     |          |     |    |     |                       |     |        |      |           |     |                  |
|---|--------|-----|----------|-----|----------|-----|----|-----|-----------------------|-----|--------|------|-----------|-----|------------------|
| 12 mid. 340 v. wet lyric                                  | 44c31  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 471 mmf. mica condenser - 1%                              | 44c32  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .05 x 200 v. tubular condenser                            | 44c33  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .01 x 200 v. tubular condenser                            | 44c34  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 285 mmf. mica condenser - 1%                              | 44c35  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 800 mmf. mica condenser - 2-1/2%                          | 44c36  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 2000 mmf. mica condenser - 2-1/2%                         | 44c37  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| PARTS   |        |     |          |     |          |     |    |     |                       |     |        |      |           |     |                  |
| Antenna Transformer and can assembly                      | 9A813  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 1st antenna coil assembly                                 | 9A812  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| Oscillator coil and can assembly                          | 9A814  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 1st I.F. Transformer and can assembly                     | 9A815  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 2nd I.F. Transformer and can assembly                     | 9A816  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| Output Transformer (See "Speakers")                       | 53X144 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 117 v. 60 cycle power transformer                         | 110-81 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 1550 to 900 kc. antenna and oscillator permeability coils | 110-81 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 1110 to 700 kc. antenna and oscillator permeability coils | 110-82 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 840 to 530 kc. antenna and oscillator permeability coils  | 110-83 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| Band change switch  | 2A84   | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| Manual to automatic change switch                         | 125-49 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| Push button switch for automatic tuner                    | 125-50 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| Selectivity Switch  | 2A78   | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| "On - Off" Switch   | 5      | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 6-8 v. bayonet type pilot dial lamp                       | 7A32   | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| FOR ALIGNMENT SEE INDEX                                   |        |     |          |     |          |     |    |     |                       |     |        |      |           |     |                  |
| 2-25 mmf. 2nd antenna                                     | 17A76  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 10 mmf. mica condenser                                    | 47c63  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .05 x 180 volt tubular                                    | 46c80  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 40 - 100 mmf. - 600 kc. trimmer                           | 17A35  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 250 - 50 mmf. - 600 kc.                                   | 17A76  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 2-25 mmf. - oscillator                                    | 47c63  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 2-25 mmf. - oscillator                                    | 47c63  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 10 mmf. mica condenser                                    | 47c63  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 35 mmf. mica condenser                                    | 47c63  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .01 x 360 v. tubular                                      | 46c120 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .02 x 180 v. tubular                                      | 46c187 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .04 x 360 v. tubular                                      | 46c212 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 15-55 mmf. 1st I.F. trimmer                               | 17A57  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 15-55 mmf. 2nd I.F. trimmer                               | 46c187 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .02 x 180 v. tubular                                      | 46c202 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 70-150 mmf. 2nd I.F. Trimmers                             | 17A34  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 150-250 mmf. 1st I.F. trimmer                             | 47c56  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 50 mmf. mica condenser                                    | 47c56  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 50 mmf. mica condenser                                    | 47c56  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .1 x 360 v. tubular condenser                             | 46c105 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .005 x 360 v. tubular condenser                           | 46c147 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 250 mmf. mica condenser                                   | 47c65  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .1 x 180 v. tubular condenser                             | 46c98  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .02 x 360 v. tubular condenser                            | 46c202 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .1 x 180 v. tubular condenser                             | 46c98  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .002 x 600 v. tubular condenser                           | 46c100 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| .05 x 600 v. tubular condenser                            | 46c108 | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 30 mid. 260 v. wet lyric                                  | 46c15  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| CONDENSERS  |        |     |          |     |          |     |    |     |                       |     |        |      |           |     |                  |
| 3 gang condenser less Dial and Drive Assembly             | 14A70  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 250 mmf. mica condenser                                   | 47c69  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 2-25 mmf. 1st antenna                                     | 17A76  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |
| 2-25 mmf.   | 17A76  | 6Q7 | 1ST DET. | 6J7 | 1ST DET. | 6K7 | 1F | 6Q7 | 2ND DET. & AUDIO AMP. | 6F6 | OUTPUT | 5Y3G | RECTIFIER | 6G5 | TUNING INDICATOR |