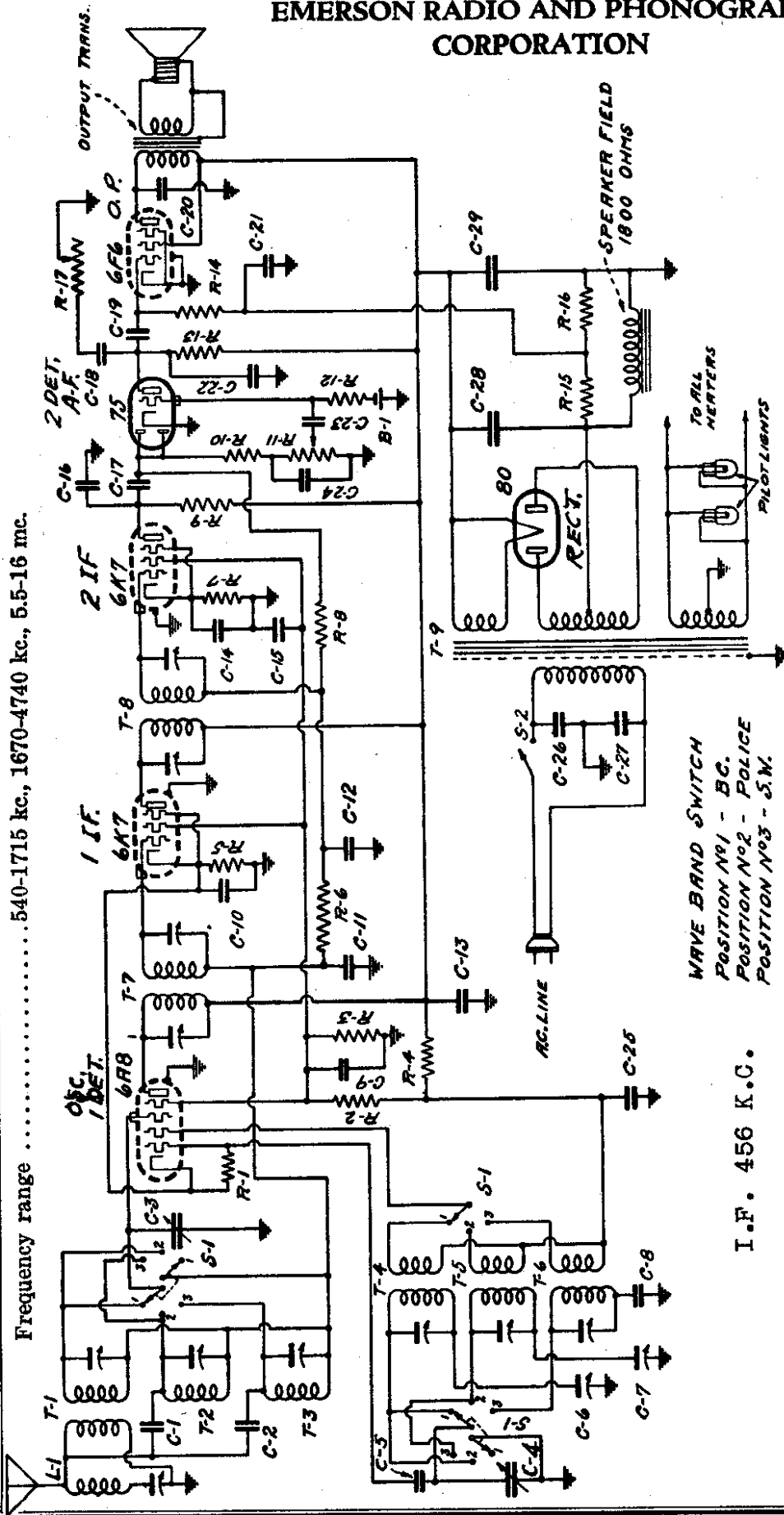


EMERSON RADIO AND PHONOGRAPH CORPORATION

MODELS 34C, 101  
Chassis C6, D6  
Schematic  
Voltage

Frequency range .....540-1715 kc., 1670-4740 kc., 5.5-16 mc.



WAVE BAND SWITCH  
POSITION N°1 - BC.  
POSITION N°2 - POLICE  
POSITION N°3 - S.M.

I.F. 456 K.C.

Readings should be taken with a 1000 ohms-per-volt meter. Voltages listed are from point indicated to ground, with no signal. Line voltage for these readings was 117.5 v., a.c., 60 cycles.

| Tube        | Plate | Screen | Osc. Plate | Cathode | Fil     |
|-------------|-------|--------|------------|---------|---------|
| 6A8         | 250   | 75     | 160        | 5       | 6.3 a-c |
| 6K7 1st i-f | 250   | 75     | —          | 5       | 6.3 a-c |
| 6K7 2nd i-f | 145   | 75     | —          | 5       | 6.3 a-c |
| 75          | 100   | —      | —          | 0       | 6.3 a-c |
| 6F6         | 225   | 250    | —          | 0       | 6.3 a-c |

B plus at 80 filament—355 volts.  
Voltage across speaker field—105 volts.

MODELS 34C,101  
Chassis C6,D6  
Alignment,Parts

EMERSON RADIO AND PHONOGRAPH CORPORATION

4. When replacing the chassis in the cabinet take precautions to keep any part of the dial and condenser assembly from hitting the cabinet, otherwise microphonism will result.

REPLACEMENT PARTS

| ITEM        | PART NO. | DESCRIPTION                                           |
|-------------|----------|-------------------------------------------------------|
| L1          | MMT-149  | 456 kc tunable wave trap.....                         |
| T1, T2, T3  | XXT-186  | Three band antenna coil assembly.....                 |
| T4, T5, T6  | XXT-187  | Three band oscillator coil assembly.....              |
| T7          | XXT-188A | 456 kc 1st i-f transformer.....                       |
| T8          | XXT-189A | 456 kc 2nd i-f transformer.....                       |
| T9          | XXT-190  | Power transformer.....                                |
| R11         | XXR-185A | Volume control—25 megohm.....                         |
| R17, S2     | XXR-186A | Tone control with switch—25 megohm.....               |
| R7          | KR-51    | 2,500 ohm—1/4 watt carbon resistor.....               |
| R1, R9      | KR-53    | 50,000 " " " ".....                                   |
| R10, R14    | KR-54    | 100,000 " " " ".....                                  |
| R13         | LR-61    | 200,000 " " " ".....                                  |
| R16         | XXR-202  | 210,000 " " " ".....                                  |
| R5          | KR-55    | 250,000 " " " ".....                                  |
| R12         | KR-56    | 500,000 " " " ".....                                  |
| R8          | KR-57    | 1 meg. " " " ".....                                   |
| R15         | XXR-208  | 1.1 " " " ".....                                      |
| R5          | FFR-126  | 500 ohm wire-wound resistor—1/2 watt.....             |
| R2, R3, R4  | XXR-194  | 30,000 ohm metal clad wire-wound tapped resistor..... |
|             |          | R2=10,400 ohms—1 watt                                 |
|             |          | R3=18,000 ohms—1 watt                                 |
|             |          | R4= 6,800 ohms—1/4 watt                               |
| C3, C4      | XXC-187  | Two-gang variable condenser.....                      |
| C23, C29    | XXC-188  | Dual 8 mf dry electrolytic condenser.....             |
| C6, C7      | JJC-144D | Dual padding condenser.....                           |
|             |          | C6—250 to 500 mmf.                                    |
|             |          | C7—800 to 1600 mmf.                                   |
| C1, C2, C16 | IC-133A  | .00025 mf mica condenser.....                         |
| C5          | EC-24A   | .0001 mf mica condenser.....                          |
| C17         | AC-7A    | .00025 mf mica condenser.....                         |
| C22, C24    | IC-47    | .0005 mf mica condenser.....                          |
| C8          | XXC-197  | .0088 mf mica condenser.....                          |
| C18         | XXC-207  | .005 mf 400 v. tubular condenser.....                 |
| C20         | ZC-115   | .006 mf-1000 v. tubular condenser.....                |
| C23         | CCC-127  | .01 mf-200 v. tubular condenser.....                  |
| C19         | KC-58    | .01 mf-400 v. tubular condenser.....                  |
| C11, C12    | BC-12    | .05 mf-200 v. tubular condenser.....                  |
| C26, C27    | XXC-220  | Dual .01 mf, 250 volt condenser.....                  |
| C9, C14     |          | .1 mf-200 v. tubular condenser.....                   |
| C10, C15    | AC-6     | .1 mf-200 v. tubular condenser.....                   |
| C13, C25    | EEC-132  | .1 mf-400 v. tubular condenser.....                   |
| C21         | BC-13    | .25 mf-200 v. tubular condenser.....                  |
|             | XXS-127  | 6" dynamic speaker.....                               |
|             | 2BS-180  | 10" dynamic speaker.....                              |
| S1          | XXS-117A | Wave-band switch.....                                 |
|             | KL-8     | Pilot light, 6-8 volt, 15 amp.....                    |
|             | XXD-25B  | Airplane dial.....                                    |
|             | XXZ-195  | Escutcheon with crystal.....                          |
| B1          | XXZ-218  | Bias cell.....                                        |

When Ordering Replacement Parts Specify Part Number

\*Item number locates the article on the Schematic Diagram.

ADJUSTMENTS

This receiver was carefully aligned and adjusted at the factory. No one but a serviceman experienced with short-wave receivers should attempt to re-align the receiver.

An oscillator with frequencies of 456, 600, 1600, 1800, 4500 and 15,000 kc. should be used. In addition, an output meter should be used across the voice coil or output transformer for indicating maximum response.

Alignment Procedure:

1. Set variable condenser to minimum and turn wave-band switch to broadcast (clockwise). Introduce a 456 kc. signal on grid of the 6AS tube. Adjust both trimmers of each of the two i-f transformers for maximum deflection on the output meter (maximum response). Repeat the process.
2. Remove 456 kc. signal from 6A3 grid and feed it through the antenna. Adjust the 456 kc. interference trap trimmer for *minimum* response. The trap trimmer is at the rear wall beneath the chassis deck.
3. With pointer at 600 feed 600 kc. through the antenna and adjust the broadcast series padder (headless set-screw, closest to front) for maximum response. Move pointer to 1600, feed 1600 kc., and align the broadcast oscillator (on left row, nearest front) and then the antenna (on right row, furthest from front). Return to 600 kc. and readjust padder, rocking the variable condenser for maximum response. Return to 1600 kc. again and check. (See General Instructions below).
4. Set switch at police-band (central position) and pointer at 1800. Feed 1800 kc. and align police-band series padder (headless set-screw, furthest from front). Move pointer to 4500, feed 4500 kc., and align oscillator (middle one at left) and antenna (middle one at right). Return to 1800 kc. and readjust series padder, rocking for maximum response. Return again to 4500 kc. and check.
5. Set switch at short-wave (counter-clockwise) and pointer at 15 megacycles (the thin line on the dial marking the edge of the 19 meter band). Feed 15,000 kc. and align the short-wave oscillator (furthest from front at left), choosing the minimum capacity peak, and then the antenna (nearest front at right) choosing the maximum capacity peak. The receiver is now completely aligned.

General Instructions

Always choose the minimum capacity peak on oscillator trimmers and maximum capacity peaks on antenna trimmers. The last motion in adjusting trimmers should always be a tightening one, not a loosening one.

Never leave a trimmer with the outside plate so loose that there is no tension on the screw. Either bend the plate up or remove the screw entirely. Loose screws are a source of noise, frequency drift and microphonism.

In aligning antenna trimmers on the high-frequency signals there is usually a tendency for the oscillator to drift, due to interlocking. To compensate for this always keep re-tuning the variable condenser as you align.

GENERAL NOTES

1. The receiver should never be turned on with either the speaker plug or the 42 tube out of its respective socket, since the rapid rise in rectifier voltage will damage the electrolytic condenser.
2. Bias for the grid of the audio section of the 75 tube is obtained by means of a very small one-volt battery (bias cell). Do not put a voltmeter across this bias cell. Check it by temporarily replacing with a new cell or some other one-volt source and noting results. To remove the bias cell, simply pull up on the spring clip and lift the cell from its cup. The cell assembly is mounted on a bakelite strip on the inside of the right-hand chassis wall. On replacing the cell be sure the clip makes good contact.
3. Pilot lights may be replaced by slipping the push-on sockets off the dial and unscrewing the bulbs. It is not necessary to remove either the dial or chassis from cabinet.