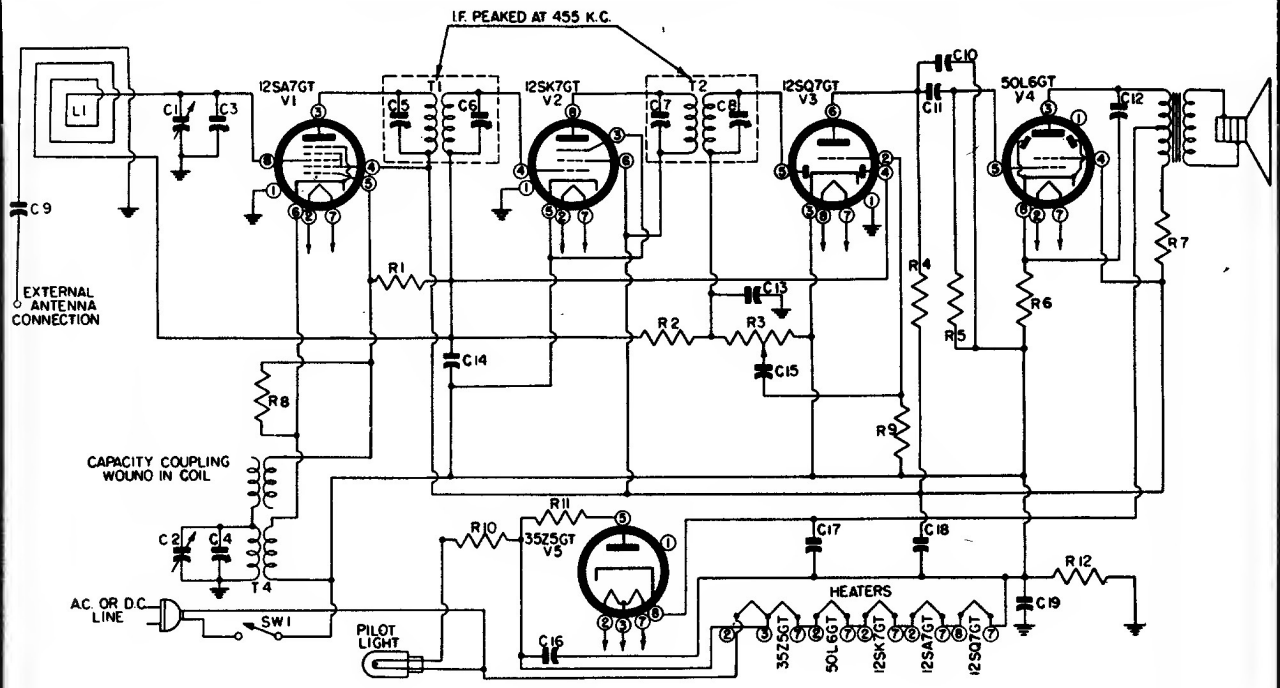
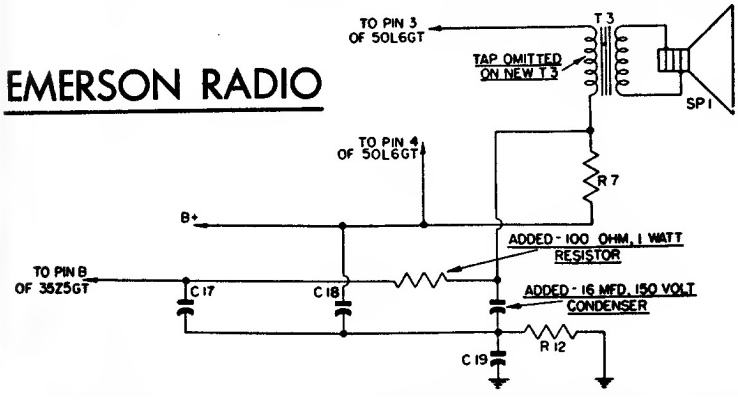


Schematic Symbol	Part No.	DESCRIPTION
C1, C2	900160	Two-gang variable condenser
*C3, C4		Trimmers, part of variable condenser
*C5, C6, C7, C8		Trimmers, part of i-f transformers
C9, C15	920010	0.002 mfd., 600 V. paper condenser
C10	920240	500 mmfd., 600 V. paper condenser
C11, C12	920020	0.02 mfd., 400 V. paper condenser
C13	910000	220 mmfd., 600 V. mica condenser
C14	920040	0.1 mfd., 200 V. paper condenser
C16	920030	0.05 mfd., 400 V. paper condenser
C17, C18	925000	Dual electrolytic condenser, 150 V.; C20—30 mfd., C21—50 mfd.
C19	920050	0.2 mfd., 200 V. paper condenser
L1	700000	Loop antenna assembly, or
L1	700200	Loop antenna assembly
R1, R9	397000	15 meg., ¼ watt carbon resistor
R2	321330	3.3 meg., ¼ watt carbon resistor
R3	390000	Volume control with line switch
R4, R5	321130	470,000 ohms, ¼ watt carbon resistor
R6	340290	150 ohms, ½ watt carbon resistor
R7	370490	1000 ohms, 1 watt carbon resistor
R8	310810	22,000 ohms, ¼ watt carbon resistor
R10	340010	6.8 ohms, ¼ watt carbon resistor
R11	397040	15 ohms, 1 watt wire-wound resistor
R12	321050	220,000 ohms, ¼ watt carbon resistor

EMERSON RADIO



MODELS: 507, 509, 518

(Model 522, Chassis 120004, is similar to these models).

CHASSIS MODEL: 120005

Some 120005 chassis have a modified filter circuit and untapped output transformer. The partial schematic circuit diagram et the left indicates the revision.

Emerson Radio

Models: 507, 509, 518
Chassis: 120005

ADJUSTMENTS

An oscillator with frequencies of 455, 600, and 1425 kc. is required.

An output meter should be connected across the primary or secondary of the output transformer for observing maximum response.

Plug the receiver into the power supply outlet in such a way that the ground side of the power line is connected to the receiver B—.

Always use as weak a test signal as possible, turning down the output of the test oscillator as the alignment of the receiver progresses.

Location of Coils and Trimmer Adjustments

The first i-f transformer (T2) is mounted on top of the chassis deck to the right of the variable condenser. The trimmers (C6, C7) are accessible through holes in the top of the can.

The second i-f transformer (T3) is mounted on top of the chassis between the variable condenser and the speaker. The trimmers (C8, C9) are accessible through holes in the top of the can.

The trimmer for the antenna (C5) and the trimmer for the oscillator coil (C11) are located on the variable condenser. The trimmer on the front section is for the oscillator coil.

The oscillator coil (T4) is located underneath the chassis. The loop antenna acts as the antenna coil.

I-F Alignment

1. Rotate the variable condenser to the minimum capacity position.
2. Feed 455 kc. to the converter grid (stator of the r-f section of the variable condenser) and adjust the four i-f trimmers for maximum response.

R-F Alignment

1. Connect the oscillator to a coil composed of three to four turns of wire wound in a circle approximately 12" in diameter. This coil should be held parallel to and in line with the loop antenna of the receiver at a distance of 15 to 20 inches.
2. Radiate a signal at 1425 kc., set the dial indicator to 1425 kc., and adjust the trimmers on the variable condenser (C5, C11) for maximum response.
3. Radiate a 600 kc. signal and tune in the signal on the receiver. Adjust the loose outside turn of the loop antenna for maximum response. This loose turn may be moved to either side of the center. Fasten it in the position which gives maximum response.
4. Repeat steps (2) and (3) until no further improvement is evident.

FREQUENCY RANGE: 540-1620 kc.

VOLTAGE ANALYSIS

	PIN NUMBER							
TUBE	1	2	3	4	5	6	7	8
12SA7			89	89	*-10			*-1.6
12SK7				*-1.6		89		89
12SQ7		*-0.7		*-1.6	*-0.5	37.5		
50L6			110	89				6.2
35Z5				116		116		117

The voltage readings are d-c measurements taken from B- (line switch) to the indicated tube-socket pin. A 1000 ohm-per-volt meter should be used for all readings except those indicated by an asterisk (*), which should be taken with a vacuum-tube voltmeter (adjusted to measure d-c). These readings were obtained with a power input of 117 volts, 60 cycles a.c. Measurements made with 117 volts d.c. input will be lower than those given above. Take readings with the volume control set at minimum and the variable condenser in the closed (maximum capacity) position.