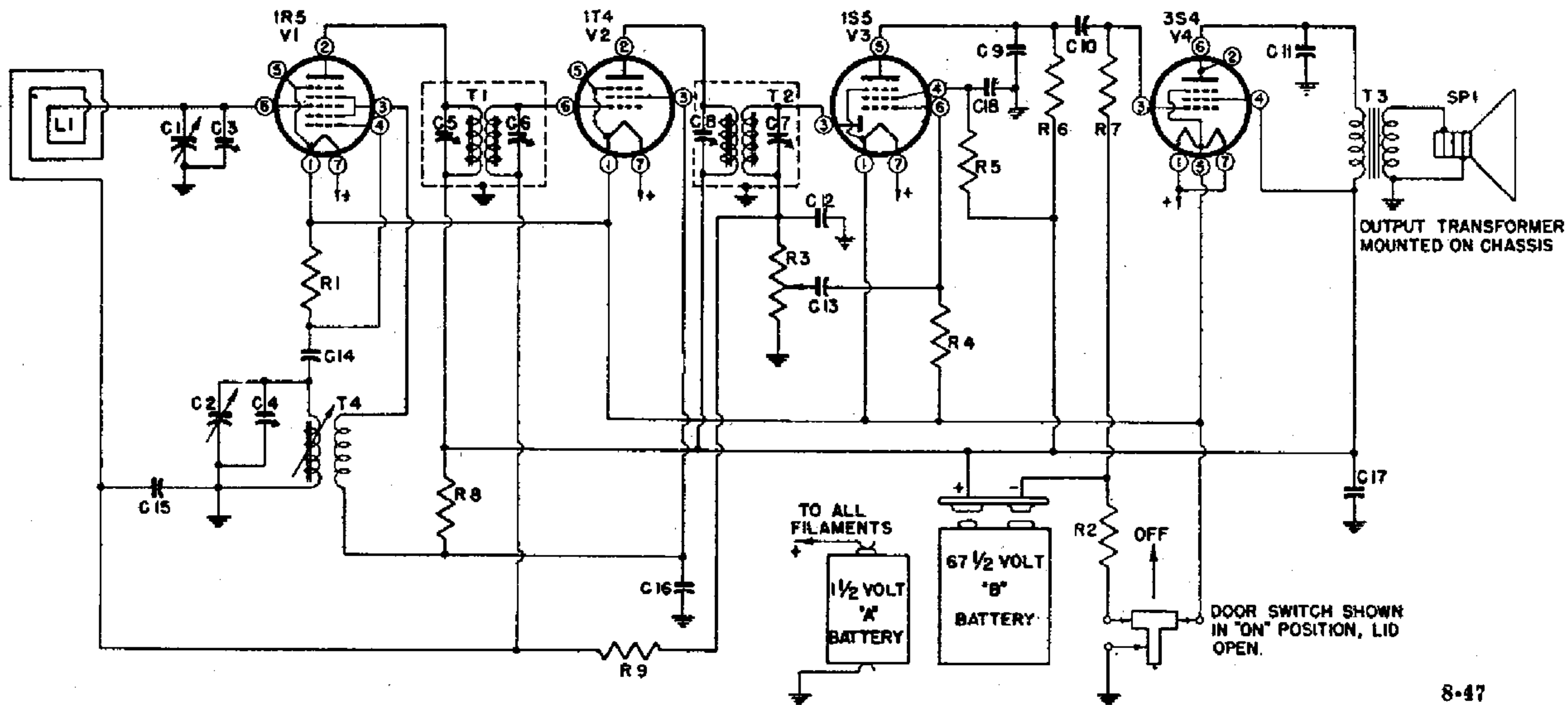


EMERSON RADIO AND PHONO. CORP.

MODEL 558, Chassis 120058



8-47

DESCRIPTION

TYPE: Pocket portable (battery operated) superheterodyne.

FREQUENCY RANGE: 540-1600 kc.

TYPE OF TUBES:

- 1—1R5, oscillator-modulator
- 1—1T4, i-f amplifier
- 1—1S5, 2nd detector, a.v.c., a-f amplifier
- 1—3S4, pentode output

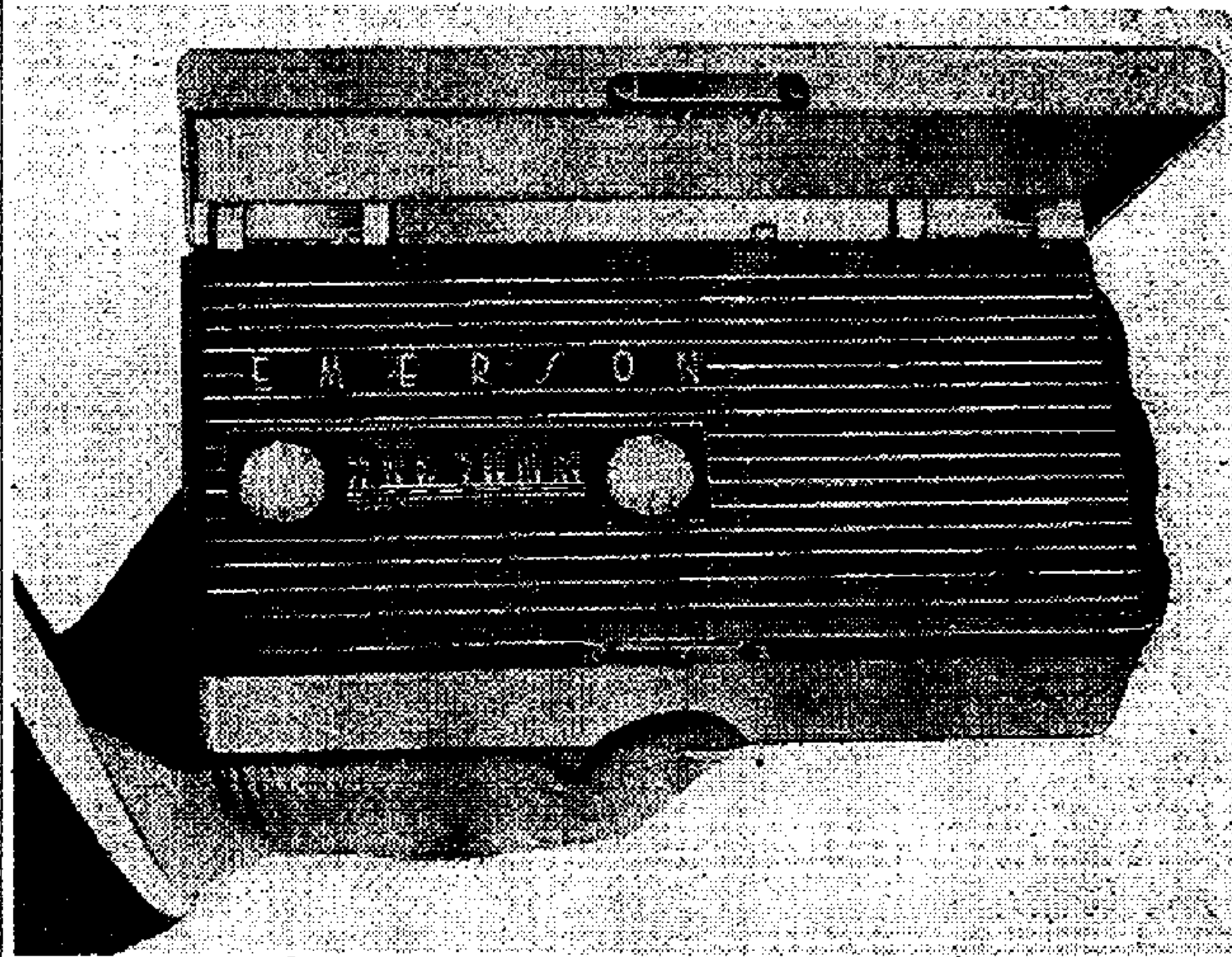
POWER SUPPLY: "A" and "B" batteries.

VOLTAGE RATING:

- "A" Battery—1.5 volts
- "B" Battery—67.5 volts

CURRENT DRAIN:

- "A" Battery—0.25 amp.
- "B" Battery—0.0075 amp.



REPLACEMENT PARTS LIST

Schematic Symbol	†Part No.	DESCRIPTION	Schematic Symbol	†Part No.	DESCRIPTION
C1, C2	900022	Two-gang variable condenser	R2	340470	820 ohms, 1/2 watt resistor
*C3, C4		Trimmers, part of variable condenser	R3	390025	1 meg., volume control
*C5, C6		Trimmers, part of first i-f transformer	R4	351450	10 meg., 1/2 watt resistor
*C7, C8	928013	Trimmers, part of second i-f transformer	R5, R9	351330	3.3 meg., 1/2 watt resistor
C9, C14		100 mmfd., ceramic condenser	R6	351130	470,000 ohms, 1/2 watt resistor
C10, C13	920495	0.001 mfd., 200 volt condenser	R7	351250	1.5 meg., 1/2 watt resistor
C11	920496	0.005 mfd., 200 volt condenser	R8	340730	10,000 ohms, 1/2 watt resistor
C12	928104	212 mmfd., ceramic condenser	SP1	180029	Speaker, 3-inch P.M.
C15	920494	0.05 mfd., 200 volt condenser	T1	720028	First i-f transformer, or
C16	920120	0.02 mfd., 100 volt condenser	T1	720034	First i-f transformer
C17	925063	16 mfd., 100 volt electrolytic condenser	T2	720028	Second i-f transformer, or
C18	920485	0.01 mfd., 100 volt condenser	T2	720035	Second i-f transformer
L1	700008	Loop antenna	T3	734011	Output transformer
R1	350970	100,000 ohms, 1/2 watt resistor	T4	716011	Oscillator coil
				510040	On-off lid switch
				540260	Rivet, lid switch
				585007	"B" battery cable

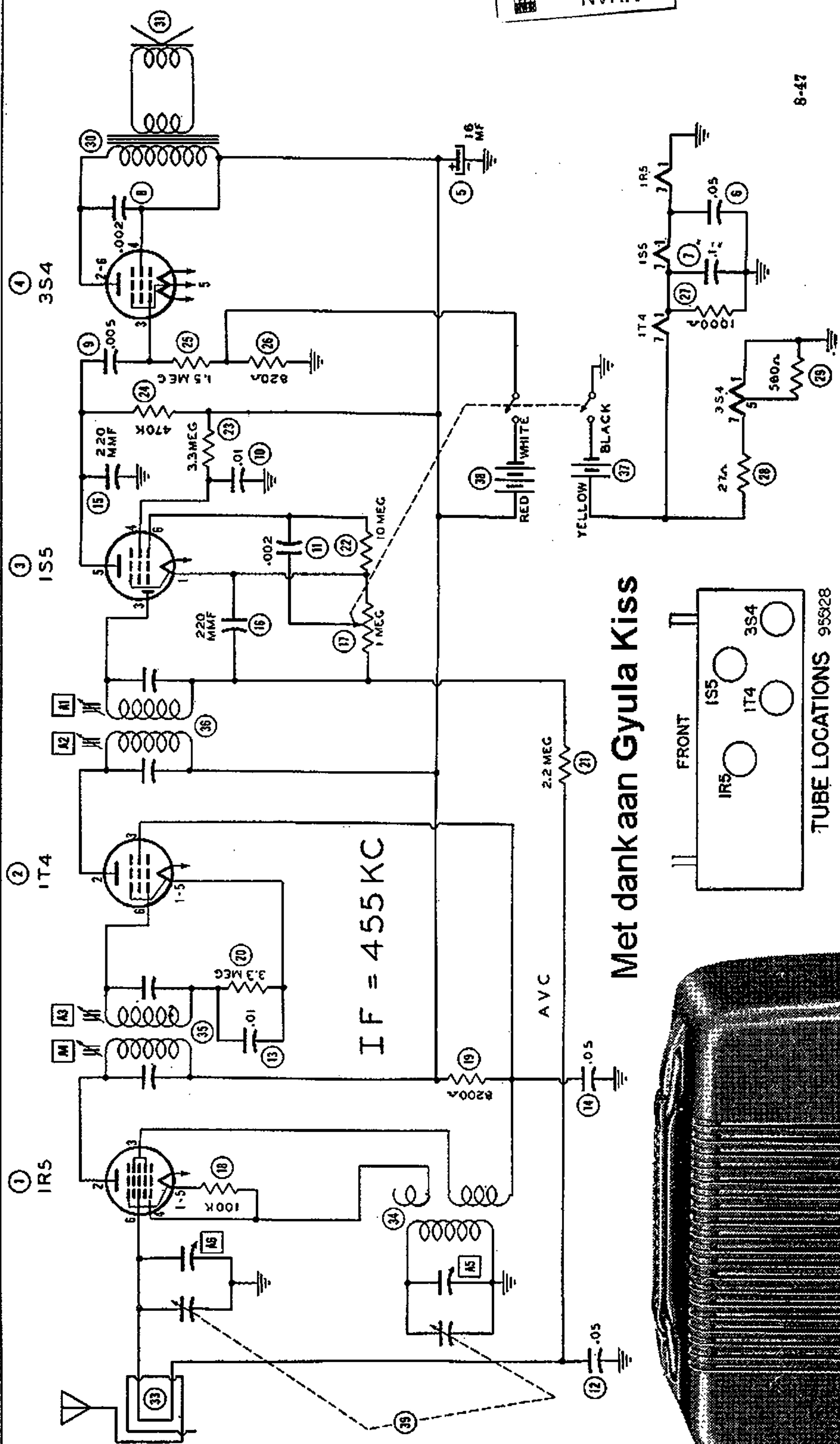
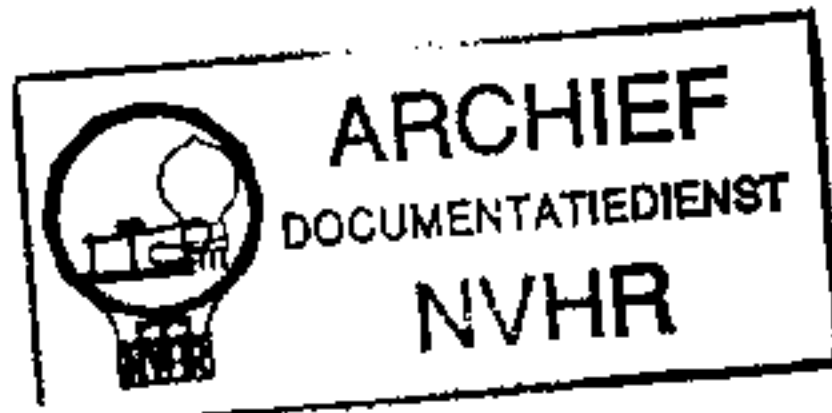
† Specify part numbers when ordering.

* Not supplied separately.

EMERSON RADIO AND PHONO. CORP.

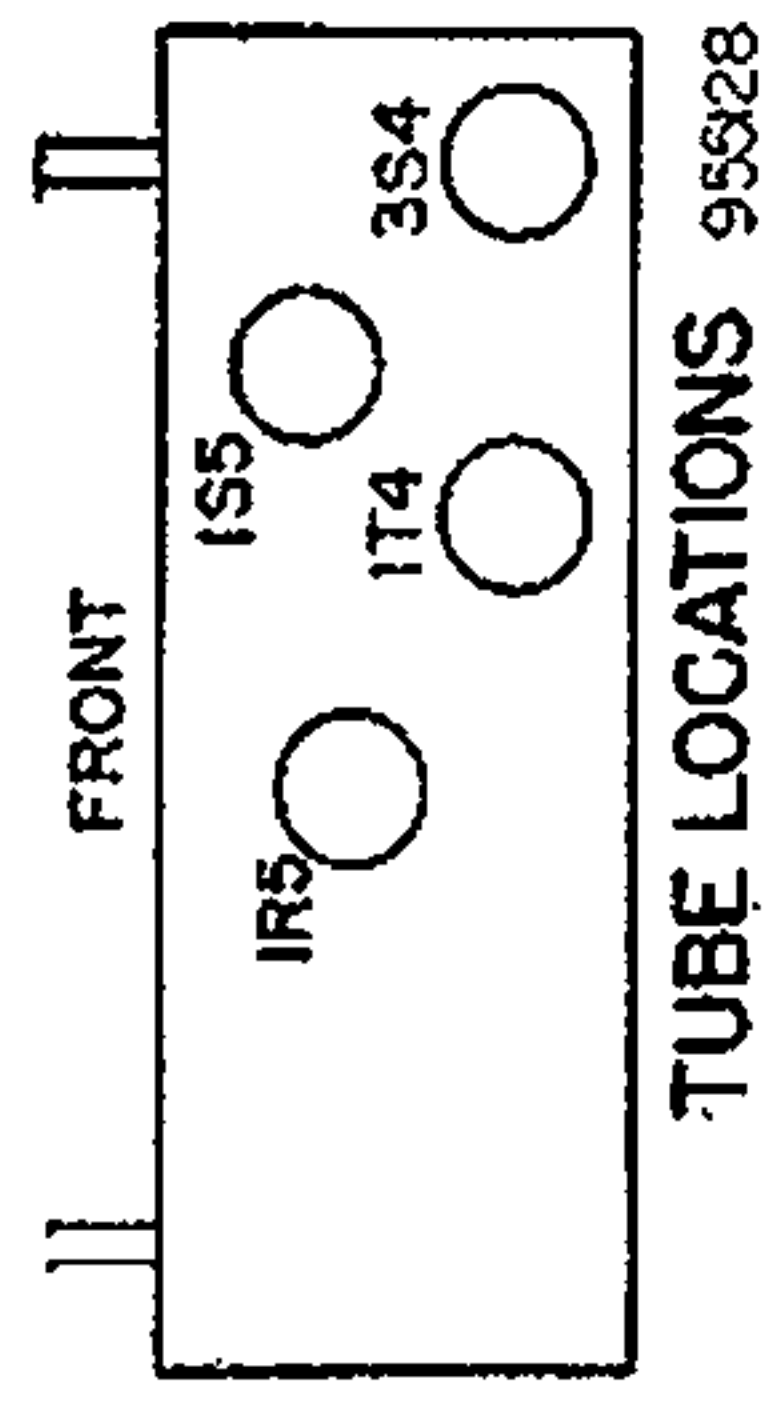
MODEL 558, Chassis 120058

Ned. Ver. v. Historie v/d Radio



8-47

Met dank aan Gyula Kiss



TYPE: Battery operated portable superheterodyne.

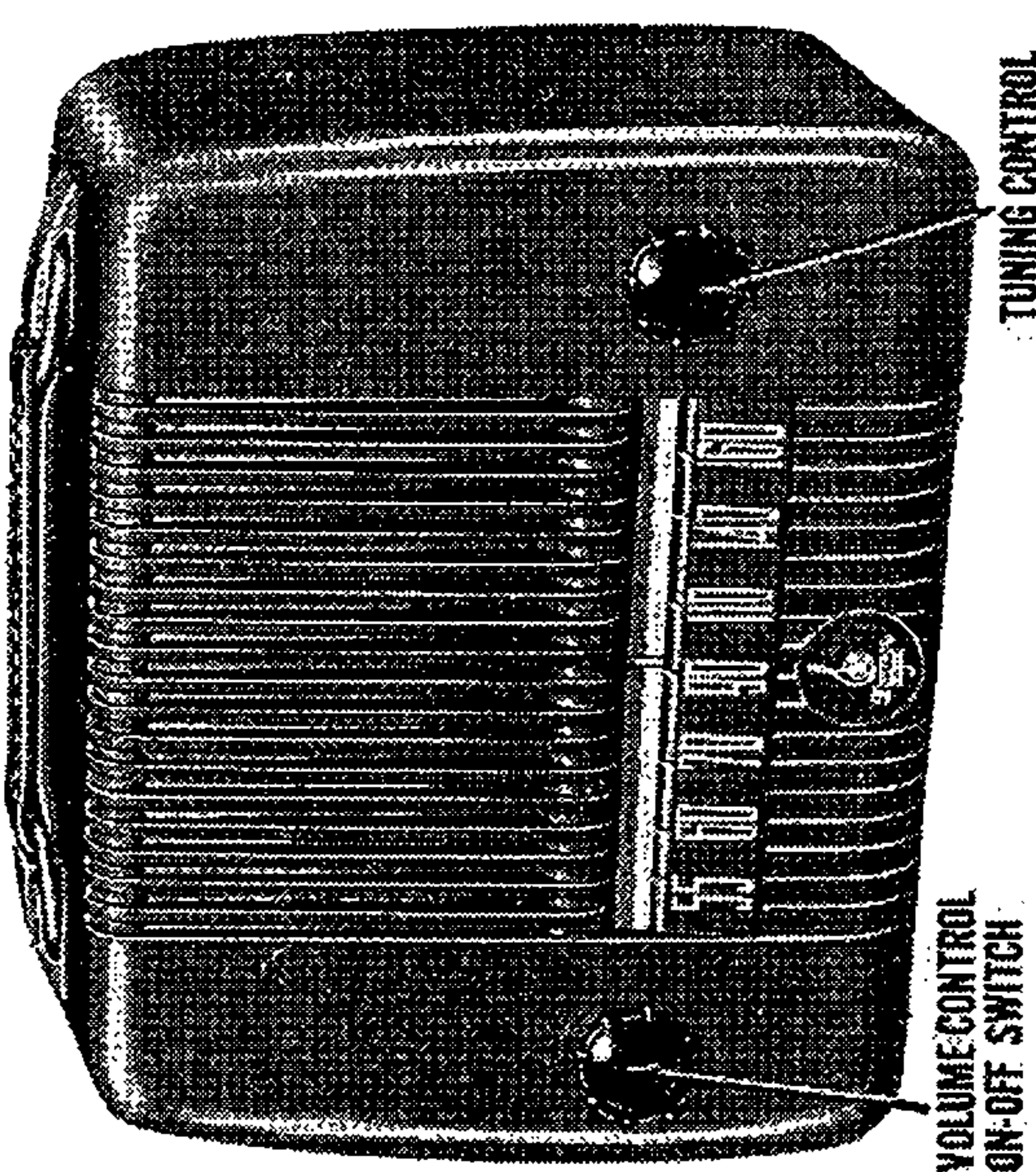
FREQUENCY RANGE: 540-1620 kc.

TYPE OF TUBES:
 1—1R5, converter
 1—1T4, i-f amplifier
 1—1S5, detector, a-f amplifier, a.v.c.
 1—3S4 or 3Q4, power output

POWER SUPPLY: "A" and "B" batteries.

VOLTAGE RATING:
 "A" Battery—4.5 volts
 "B" Battery—67.5 volts

CURRENT DRAIN:
 "A" Battery—104 ma.
 "B" Battery—7.5 ma.



EMERSON RADIO AND PHONO. CORP.

MODEL 558, Chassis 120058

CABINET AND DIAL PARTS

460029	Plastic bottom shell, black	540160	Rivet, female catch, cover to metal front
460039	Plastic bottom shell, ivory	540160	Rivet, male catch, shell to metal front
460069	Plastic bottom shell, green	540360	Rivet, female catch, shell to metal front
460028	Plastic lid, black	410143	Lid hinge, spring loaded
460038	Plastic lid, ivory	410144	Lid hinge stop
460068	Plastic lid, green	540370	Rivet, lid hinge to lid
630058	Plastic loop cover, black	540160	Rivet, lid hinge to metal front
410140	Metal front	540470	Rivet, lid hinge to hinge stop
460031	Knob, black	470259	Hinge assembly, shell to metal front
460037	Knob, ivory	540160	Rivet, hinge to metal front
460061	Knob, green	520038	Dial crystal
541170	Knob retaining clip	520041	Dial backplate
460009	Handle, extruded plastic	525016	Dial pointer
410519	Handle ring	280038	Drive shaft
410959	Release catch, male	587526	Dial drive spring
411055	Release catch, female		
540460	Reinforcing plate, cover release catch		
	Rivet, male catch, cover to metal front		

The following voltage readings are d-c measurements taken from B- (chassis) to the indicated tube-socket pin. A 1000 ohms-per-volt meter should be used for all readings except those indicated by an asterisk (*), which should be taken with a d-c vacuum-tube voltmeter. Take readings with the volume control set at minimum and the variable condenser closed. Use fresh batteries.

TUBE	1	2	3	4	5	6	7
1R5		60	55	*.8		*0.2	1.5
1T4		60	35			*0.2	1.5
1S5			*0.2	*17	*25	*0.1	1.5
3S4	1.5	59	*6.5	60	59		1.5

BATTERY REPLACEMENT

- Slide the button on the release catch near the handle in the direction of the arrow. This loosens the bottom shell and permits it to be swung open on the hinge, making the batteries accessible.
- Insert the batteries as shown in the above diagram.
- To reassemble, hold the chassis face down with the batteries in place. Close the bottom shell over the chassis and press the handle end of the shell so that it snaps into place.

ADJUSTMENTS

An oscillator with frequencies of 455, 600, 1420, and 1620 kc is required.
An output meter should be connected across the primary or secondary of the output transformer for observing maximum response.

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

Turn the volume control on full.

Location of Coils and Trimmer Adjustments

The first i-f transformer is located next to the 1R5 tube. The trimmers are accessible through holes in the top of the can.

The second i-f transformer is located between the 1T4 and 1S5 tubes. The single trimming core screw extends from the end of the can. Trimmers are accessible through holes in the top of the can.

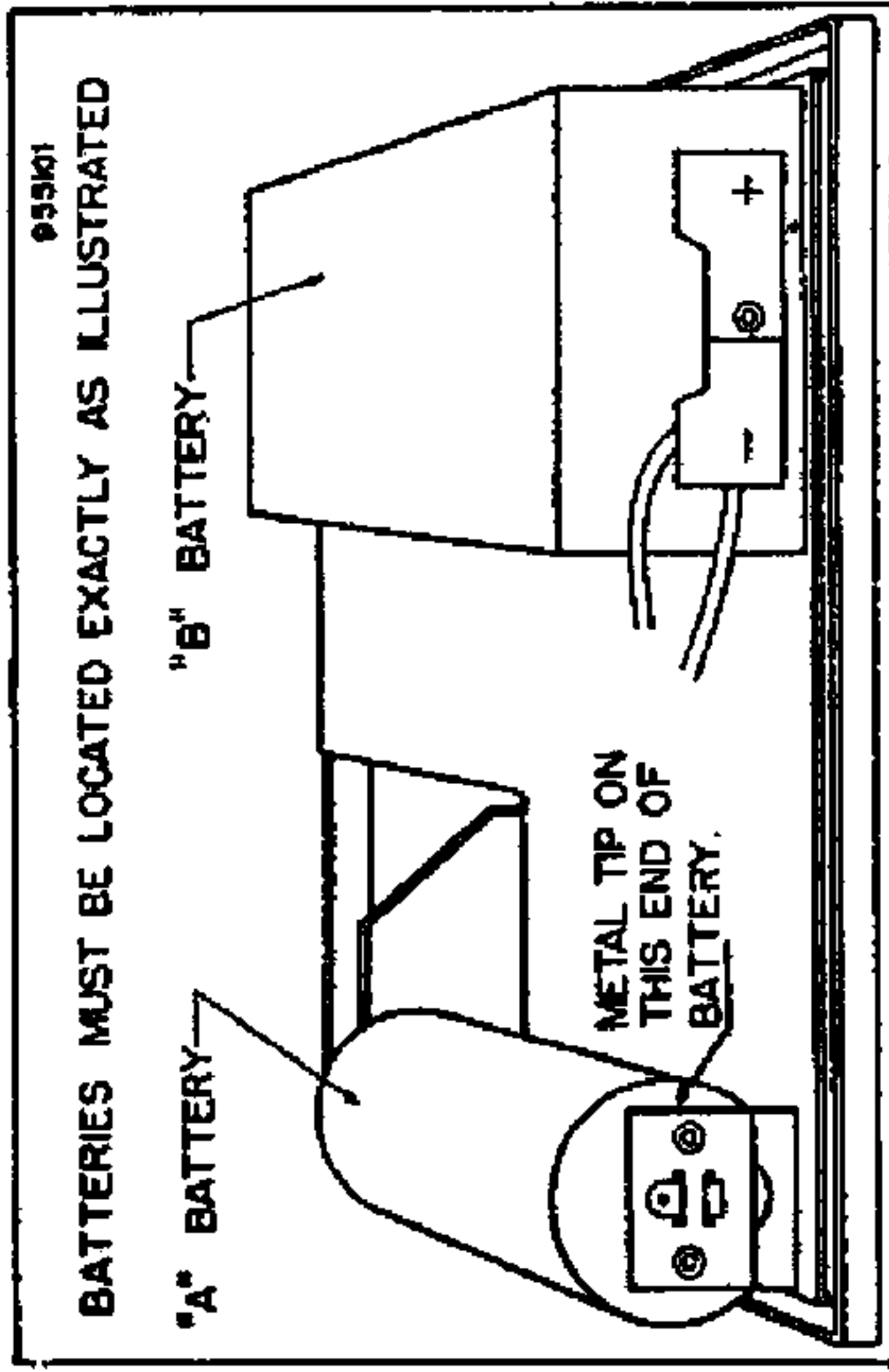
The oscillator coil is located behind the on-off switch. The trimmer for the oscillator is located on the smaller variable condenser section. The 600 kc oscillator core adjustment is the brass screw protruding from the end of the oscillator coil.

The loop antenna acts as the antenna coil. The trimmer for the loop is located on the larger section of the variable condenser.

- I-f Alignment**
- Rotate the variable condenser to the minimum capacity position.
 - Feed 455 kc to the grid (pin 6) of the 1R5 tube through a 0.01 mfd. condenser.
 - Adjust the four i-f trimmer screws for maximum response. (Clip the test signal lead to the stator of the larger capacity section of the variable condenser.)

R-f Alignment

- Connect the test oscillator to a coil composed of three or four turns of wire wound in a circle approximately 12 inches in diameter. This coil should be placed parallel to and in line with the receiver loop at a distance of approximately 15 to 20 inches.
- Radiate a signal at 1620 kc, rotate the variable condenser to minimum capacity, and adjust the oscillator trimmer, on the smaller section of the variable condenser, for maximum response.
- Radiate a signal at 1420 kc, tune in the 1420 kc signal, and adjust the antenna trimmer, on the larger section of the variable condenser, for maximum response.
- Radiate a signal at 600 kc, set the dial indicator to 60, and adjust the oscillator coil core trimmer while rocking the variable condenser for maximum response.
- Return to 1620 kc and check alignment. If readjustment is necessary, repeat Steps 2 to 4 until no further improvement is noted.



GENERAL NOTES

- If replacements are made in the r-f section of the circuit, the receiver should be carefully realigned.
- The receiver has a self-contained antenna and does not require additional antenna or ground connections.
- The self-contained loop antenna has directional properties. It is important, therefore, once the station is tuned in, to rotate the cabinet back and forth through a quarter of a circle (90 degrees), leaving it at the position where the station is received with maximum volume.
- The receiver is turned on when the lid is open and turned off when the lid is closed. Always close the lid when the set is not in use.
- Remove batteries as soon as they are exhausted. The "A" battery will require more frequent replacement than the "B" battery.
- Replace the 1.5 volt "A" battery with a standard D-size flashlight cell (1-5/16" dia.). Replace the 67.5 volt "B" battery with Eveready Minimax No. 467 or equivalent.