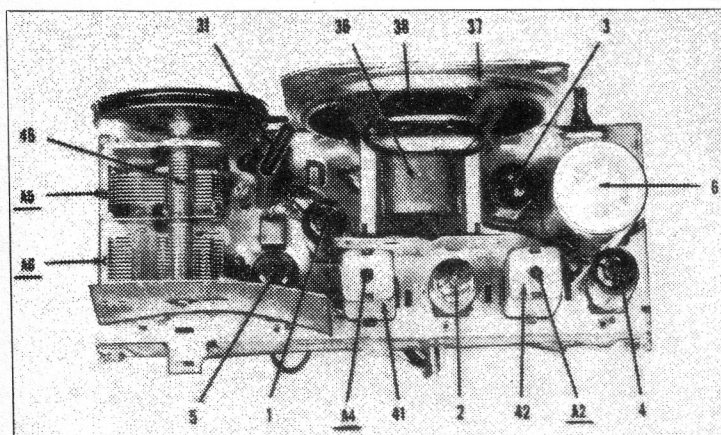
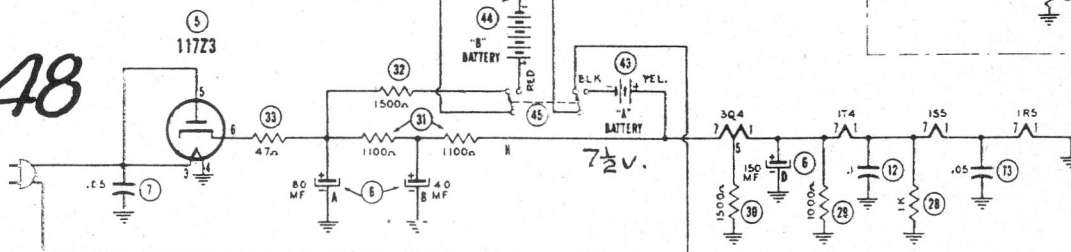
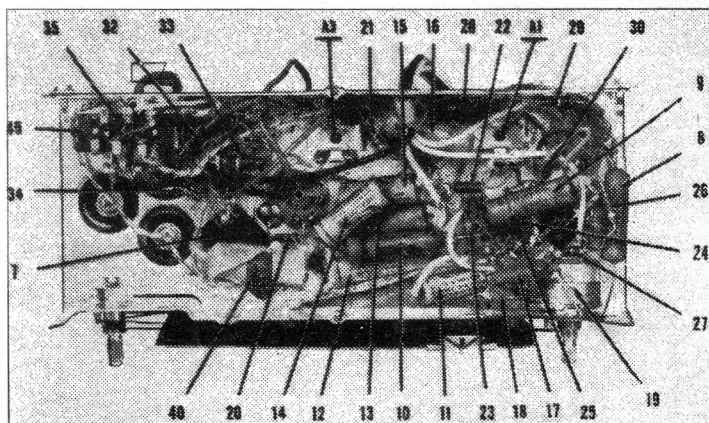
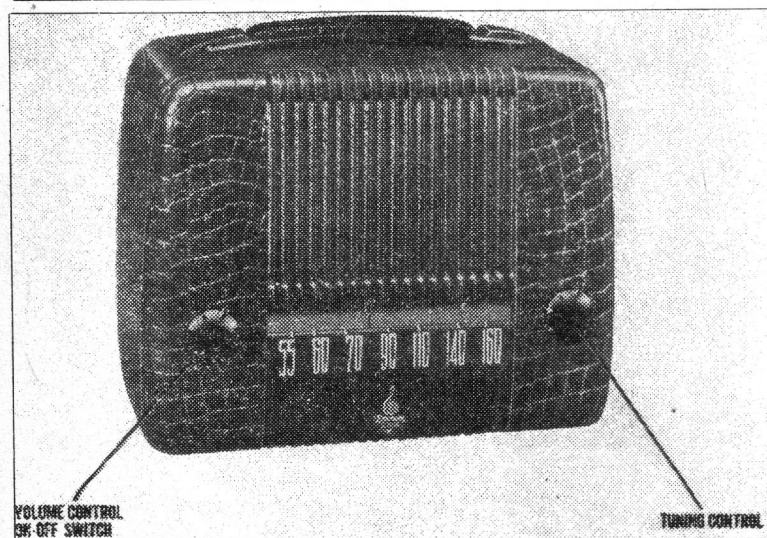


1947-48



**AC-DC. BATTERY  
PORTABLE  
MODEL  
559**

CHASSIS 120059  
FURTHER INSTRUCTIONS ON  
DATA SHEETS 10-11.



# EMERSON

# DATA SHEET 9

## ALIGNMENT

Use battery power when available. If A-C power is used, use an isolation transformer when available. If not, connect a 0.1 mfd. condenser in series with low side of the signal generator and B—. Loop should be maintained in same relative position to chassis as when receiver is in cabinet. Volume control should be at maximum position; output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	0.1 mfd.	High side to rear stator of variable condenser. Low side to chassis.	455 kc	Variable condenser fully open.	Across voice coil.	A1, A2 A3, A4	Adjust for maximum output. If a-c power is used without an isolation transformer, reduce dummy antenna to 200 mmfd. to reduce hum modulation.
2		Loop	1620 kc	Variable condenser fully open.	Across voice coil.	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3		Loop	1400 kc	Tune for maximum output.	Across voice coil.	A6	Adjust for maximum output.

## VOLTAGE READINGS

SYMBOL	TUBE TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7
1	1R5	0	90DC	62DC	†—14.8DC	0	0	1.4DC
2	1T4	2.7DC.	90DC	62DC	0	2.7DC	0.1DC	4.2DC
3	1S5	1.4DC	0	0.1DC	16DC	28.5DC	0	2.7DC
4	3Q4	4.2DC	85DC	0	90DC	5.6DC	85DC	7DC
5	117Z3	0	106DC	117AC	0	117AC	117DC	106DC

† Oscillator Grid Voltages Are Measured By Vacuum-Tube Voltmeter.

## RESISTANCE READINGS

SYMBOL	TUBE TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7
1	1R5	*	3,500	11,000	100,000	*	3 Meg.	*
2	1T4	*	3,500	11,000	3 Meg.	*	3 Meg.	*
3	1S5	*	Inf.	1 Meg.	3 Meg.	500,000	10 Meg.	*
4	3Q4	*	3,800	1.5 Meg.	3,500	*	3,800	*
5	117Z3	Inf.	2,000	450	0	450	2,000	2,000

\* Do Not Use Ohmmeter to Measure Filament Resistance.

# CHASSIS 120059 AC-DC. BATTERY PORTABLE MODEL 559 ALIGNMENT DATA

1—Voltage and resistance readings taken in a.c.-d.c. position.

2—Voltage readings are in volts and resistance readings in ohms unless otherwise specified.

3—D-C voltage measurements are at 20,000 ohms per volt; a-c voltages measured at 1000 ohms per volt.

4—Socket connections are shown as bottom views.

5—Measured values are from socket pin to common negative.

6—Line voltage maintained at 117 volts for voltage readings.

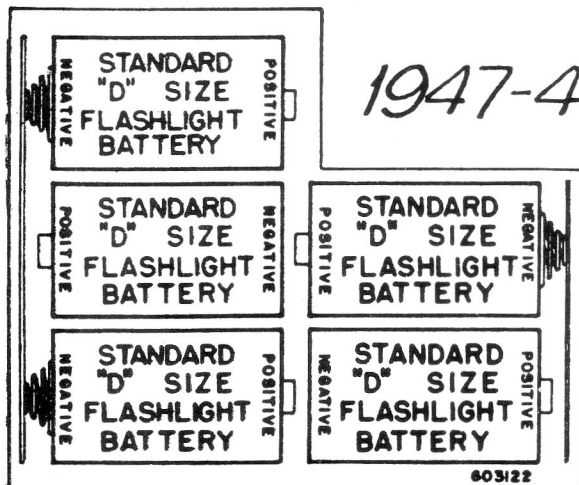
7—Nominal tolerance on component values makes possible a variation of  $\pm 15\%$  in voltage and resistance readings.

8—Volume control at maximum, no signal applied for voltage measurements.

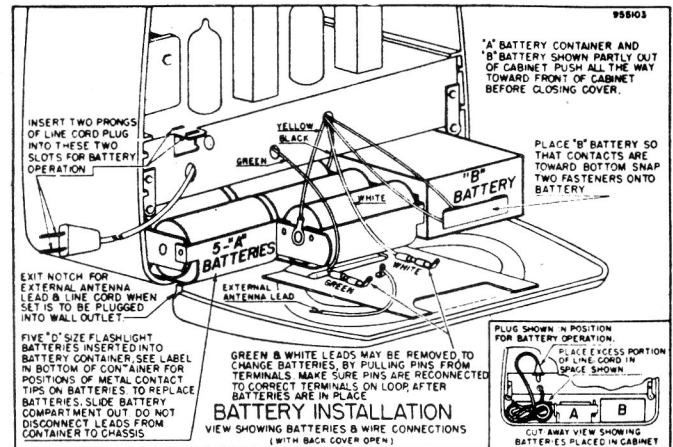
**CIRCUIT ON DATA SHEET 9  
INSTRUCTIONS ON SHEET 11**

## GENERAL NOTES

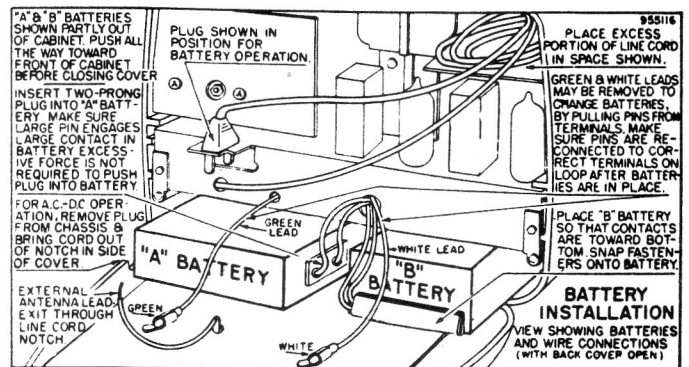
1. A.C.-D.C. Operation: Swing open the rear cover; it is held in place by two spring latches at the top. Take out the line cord, removing the plug from its receptacle at the rear of the chassis. Insert the plug in the wall outlet. If the power supply is d.c. and the receiver does not operate at first, remove the plug from the wall outlet, turn it half way around and reinsert it in the outlet, thus obtaining the proper polarity.
2. Battery Operation: Remove the line plug from the electrical outlet. Insert the plug all the way into the receptacle at the rear of the receiver. This is important since the receiver will not operate from batteries with the plug out of the receptacle. The loose portion of the cord can then be coiled and placed in the cabinet.
3. If replacements are made in the r-f section of the circuit, the receiver should be carefully realigned.
4. The receiver has a self-contained antenna and normally does not require additional antenna or ground connection. For permanent home installations, however, in a location far removed from broadcasting stations, an additional outside antenna may be used. The outside antenna connection should be made to the colored lead at the rear of the cabinet. Use no ground connection.
5. The self-contained loop antenna has directional properties. It is important, therefore, once the station is tuned in, that the cabinet be rotated on its base back and forth through a quarter of a circle (90) degrees), and left at the position where the station is received with maximum volume.
6. Battery Complement: Model 559 is made in two types, each employing different battery complements. One type uses one 4½-volt "A" battery, Eveready No. 746 or equivalent, and one 67½-volt "B" battery, Eveready No. 467 Minimax or equivalent. The other type uses five 1½-volt standard D-size flashlight cells, Eveready No. 950 or equivalent, and the same 67½-volt "B" battery as the first type, Eveready No. 467 Minimax or equivalent.
7. After inserting batteries make sure battery leads are kept away from the loop antenna.



Method of inserting five 1½-volt cells in frame provided with Model 559 employing this type of "A" battery.



Battery Installation Drawing for Model 559 employing five 1½-volt "A" batteries (Eveready No. 950 or other standard D-size flashlight cell) and one 67½-volt "B" battery (Eveready No. 467 or equivalent).



Battery Installation Drawing for Model 559 employing one 4½-volt "A" battery (Eveready No. 746 or equivalent) and one 67½-volt "B" battery (Eveready No. 467 or equivalent).

# AC-DC. BATTERY PORTABLE MODEL 559 CHASSIS 120059 INSTRUCTIONS I.F. 455 KC

CIRCUIT  
ON 9  
ALIGNMENT  
DATA ON 10

