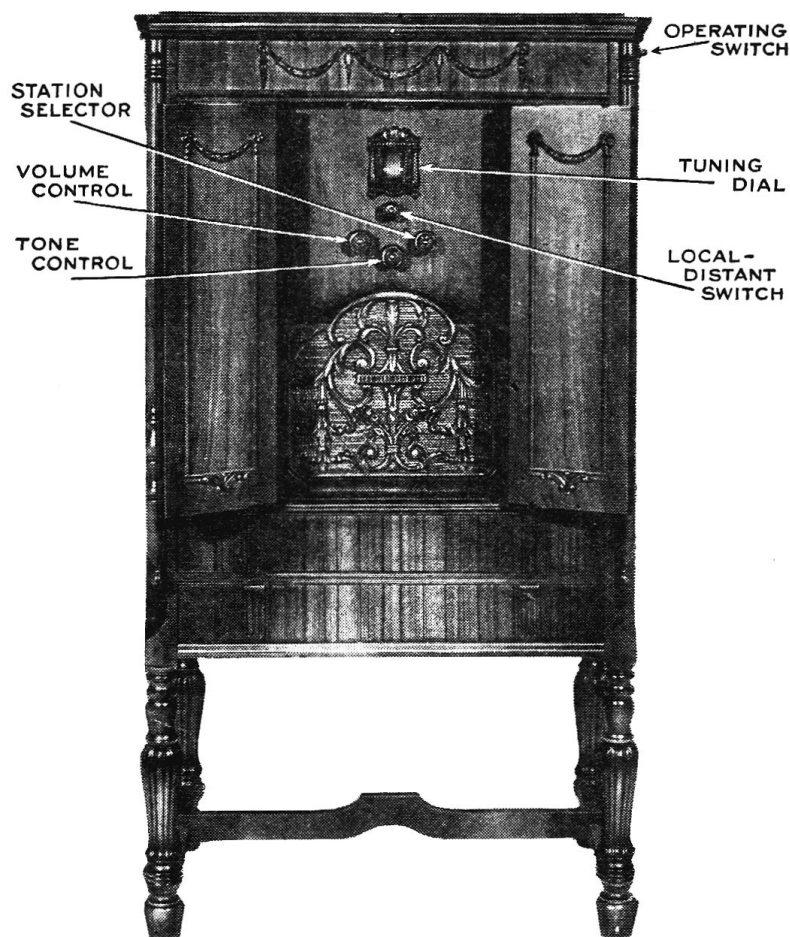


# GENERAL ELECTRIC

## RADIO

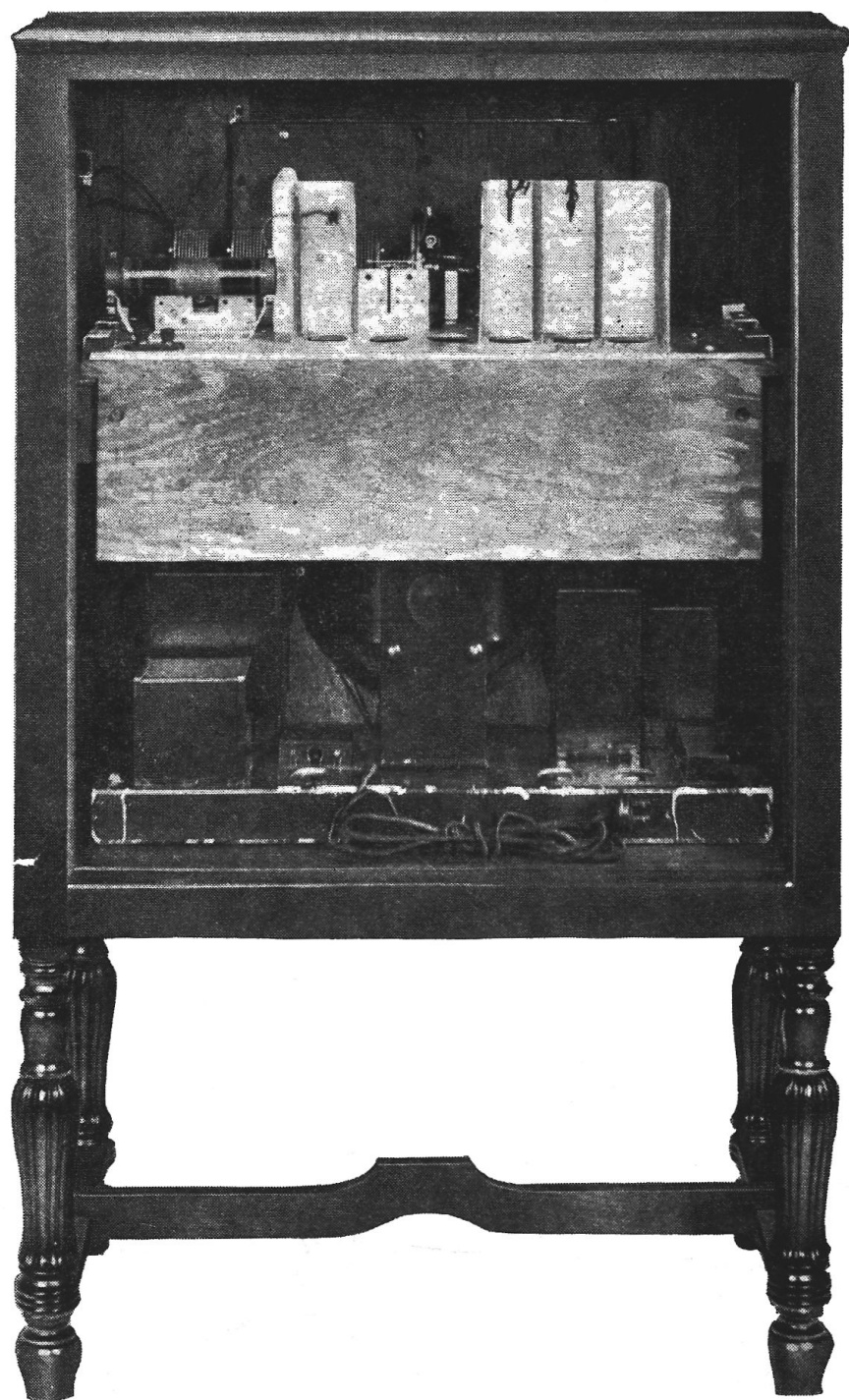
### MODEL H-51

#### SERVICE NOTES



MODEL H-51

GENERAL ELECTRIC COMPANY  
MERCHANDISE DEPARTMENT  
BRIDGEPORT, CONN.



*Figure 1—Rear interior cabinet view of the complete instrument*

# GENERAL ELECTRIC RADIO H-51

## SERVICE NOTES

### Electrical Specifications

Voltage Rating .....	105-125 Volts
Frequency Rating .....	50-60 Cycles, or 25-40 Cycles
Power Consumption .....	60 cycles—120 Watts; 25 Cycles—125 Watts
Recommended Antenna Length.....	25-75 Feet
Type of Circuit.....	A. C. Screen Grid Super-Heterodyne
Type and Number of Radiotrons....	4 UY-224, 2 UY-227, 2 UX-245, 1UX-280—Total, 9
Number of Radio Frequency Stages.....	1
Type of First Detector.....	Tuned Input Grid Bias
Number of Intermediate Stages.....	2
Type of Second Detector.....	Power Grid Bias
Type of Tone Control—Variable resistance in series with condenser across output of 2nd detector	
Number of Audio Stages.....	1 (Push-Pull)
Type of Rectifier.....	Full Wave, UX-280
Type of Loudspeaker.....	Dynamic
Wattage Dissipation in L. S. Field.....	10 (110 V., 85 M. A.)
Undistorted Output .....	3.0 Watts

### Physical Specifications

Height .....	48 Inches
Depth .....	16 Inches
Width .....	27½ Inches
Weight Alone .....	120 Lbs.
Weight Packed for Shipment.....	175 Lbs.

### INTRODUCTION

This instrument is a console model radio receiver employing the same circuit and chassis as the Model H-31 with the exception that it includes a tone control. The cabinet is of a high-boy type and includes doors. Figure 1 shows a rear interior cabinet view.

### ELECTRICAL DESCRIPTION OF CIRCUITS

The assembly wiring is shown in Figure 2. The electrical description of this circuit is given in the Model H-31 Service Notes and will not be repeated here. The tone control is, however, a new feature and therefore a description of its action seems necessary.

The tone control consists of a 40,000-ohm potentiometer in series with a .025 mfd. fixed condenser. This arrangement is shunted around a choke placed in the second detector plate circuit. With the resistor arm at the extreme "high" position, the reactor is shorted and the full amount of the resistance is placed in series with the condenser, thus giving the normal fidelity of the receiver. As the potentiometer arm is moved toward the extreme "low" position, the choke and condenser both become effective, and thus reduce the high frequency output of the receiver. The amount of this reduction is dependent on the position of the potentiometer arm, operated by the tone control knob.

Figure 3 shows the correct connections for attaching a magnetic pick-up.

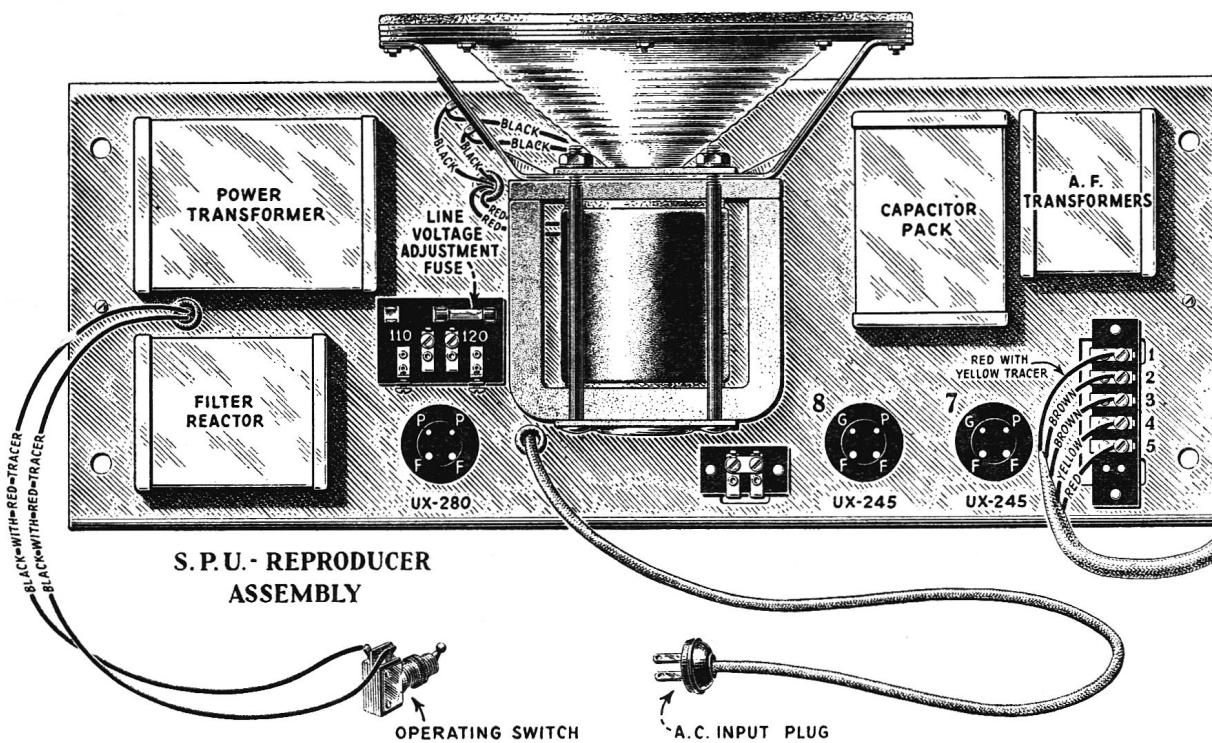
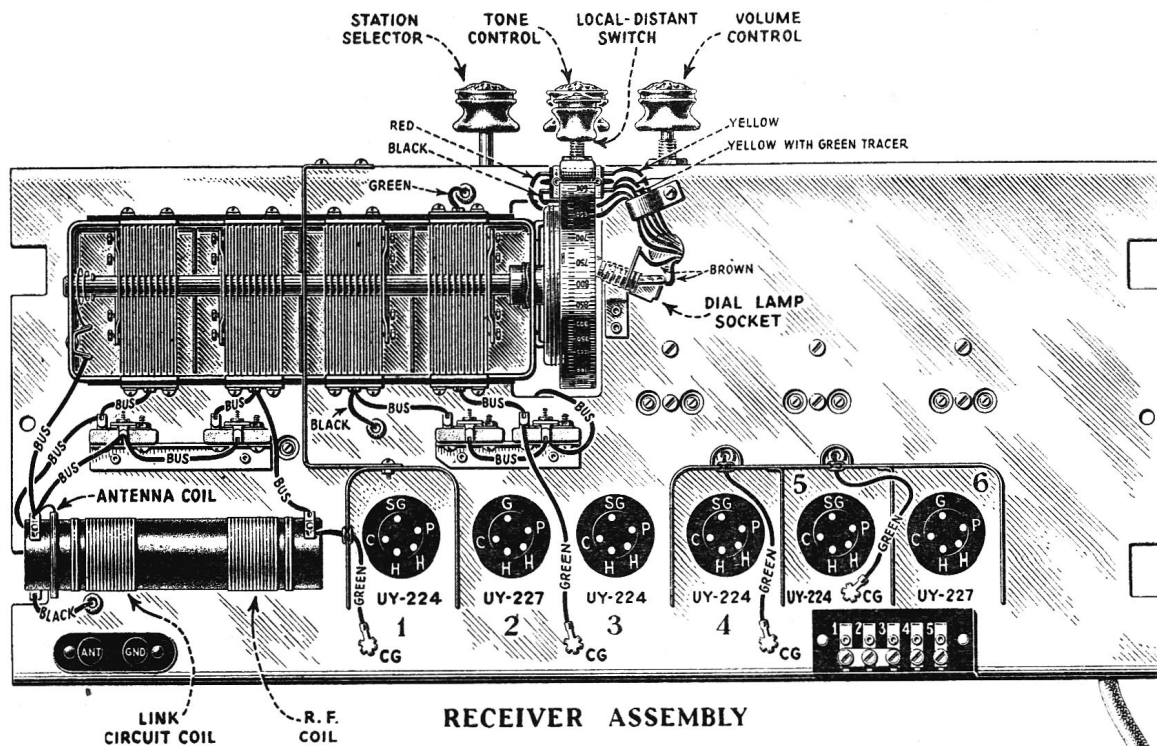


Figure 2—Assembly wiring of the complete instrument

## PART I—INSTALLATION

The reader is referred to the Model H-31 Service Notes for the following data on installation.

Antenna (Outdoor type).

Antenna (Indoor type).

Special antenna installations for noisy locations.

Ground.

Radiotrons.

Location.

Adjustment for line voltages.

Jerky action of station selector.

Use of local-distant switch.

Precautions for excessively loud signals.

Removal of shipping blocks and screws.

### (1) BLOWN FUSE

A blown fuse may be caused by the following:

- (a) Connecting the set to a D.C. line.
- (b) Plate to plate short of Radiotron UX-280.
- (c) Shorted condenser in capacitor pack.
- (d) Shorted filament or heater contacts or dial lamp socket.
- (e) Defective power transformer.

Any of the above causes must be cleared up before a new fuse is installed otherwise the new fuse will blow as soon as the old one is replaced and the power turned "On."

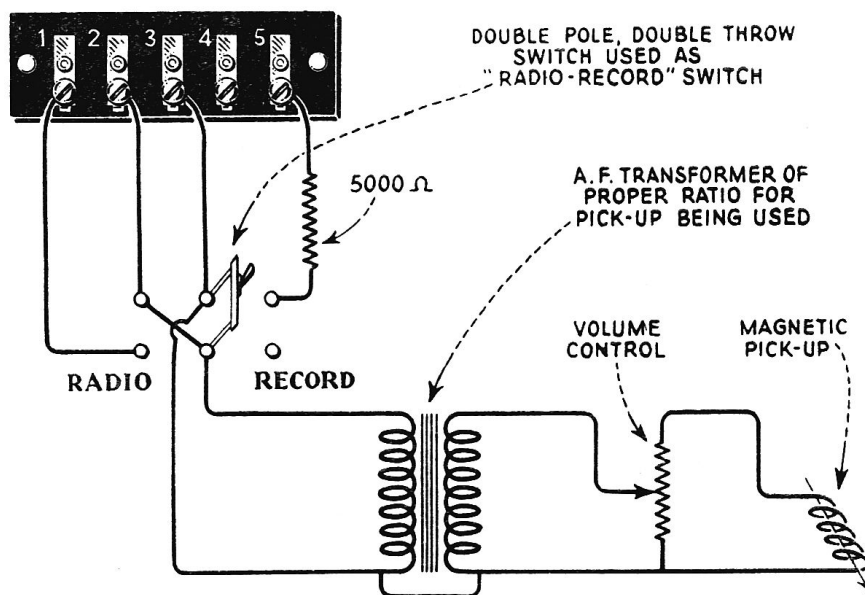


Figure 3—Connections for attaching a magnetic pick-up

## PART II—SERVICE DATA ON RADIO RECEIVER

The receiver assembly and S. P. U. are very similar in both mechanical and electrical characteristics to that used in Model H-31. For service information on these units other than that contained herein the reader is referred to the service notes on Model H-31. This includes:

Antenna system failures.

Radiotron sockets and prongs.

Noisy volume control.

Broken condenser drive cord.

Excessive hum.

Acoustic howl.

Low volume.

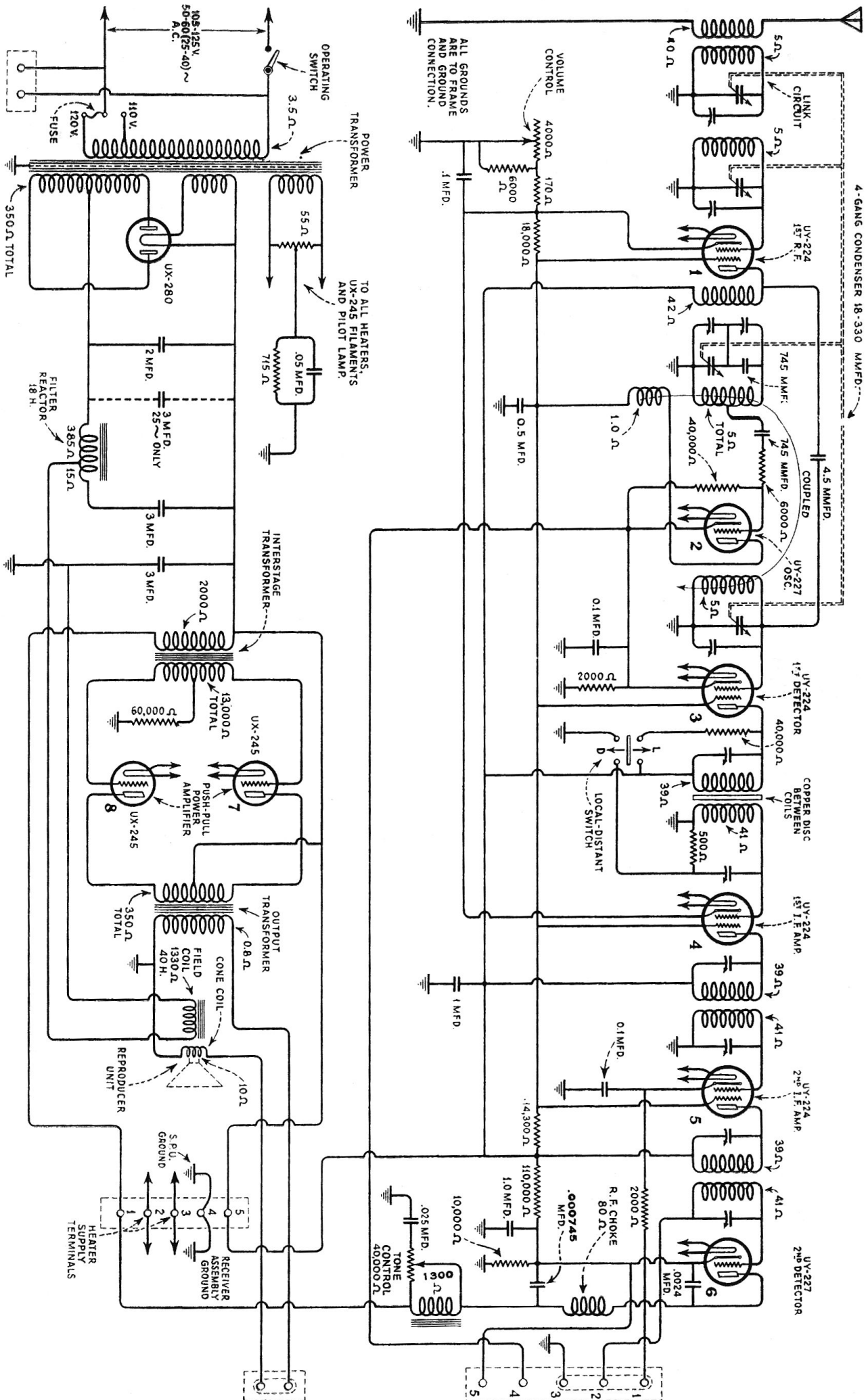


Figure 4—Schematic circuit diagram