

MODEL A-43

Voltage Rating _____ 105-125 Volts
Frequency Rating _____ 25-60 or 50-60 Cycles
Power Consumption _____ 40 Watts
Number and Type of Radiotrons—

1 Type-6A8, A Type-6F7, 1 Type-4L, 1 Type-1-V
Undistorted Output _____ 1.9 Watts
Frequency Range _____ 540-1500 K. C. and 1600-3500 K. C.

This receiver is a four-tube superheterodyne incorporating features such as wide tuning range, electro-dynamic loudspeaker, two-point tone control, illuminated dial and the inherent sensitivity, selectivity and tone quality of the superheterodyne.

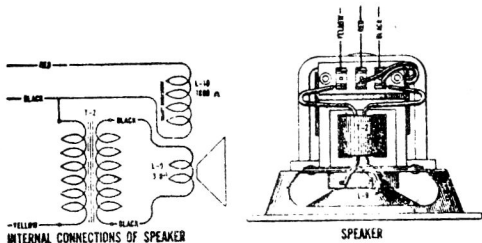


Figure C—Loudspeaker Wiring

The following description of the circuit describes several new design features which are incorporated in this receiver.

The first tube is a combined first detector and oscillator using Radiotron Type 6A8. Separate tuned circuits are provided for each function. The detector coil is tapped so that the tuning range may be extended merely by shorting out a portion of the coil. The oscillator circuit is not tapped, the high frequency range being obtained by use of its second harmonic instead of the fundamental for obtaining the I. F. frequency.

The next tube is a combined I. F. stage and second detector using Radiotron Type-6F7. It has two sets of elements, one being used as a screen grid I. F. amplifier and one as a triode detector. The I. F. frequency in this receiver is 460 K. C. The output stage is a single Pentode Type-41.

The rectifier is a Type-1-V used in a half-wave rectifying circuit. A feature of this circuit is that only one transformer secondary is used. This is accomplished by having a cathode type rectifier, a series arrangement of filaments and a tapped secondary winding.

Figure A shows the schematic circuit, Figure B the wiring diagram and Figure C the loudspeaker wiring.

Line-up Adjustments

The detector and oscillator line-up trimmer capacitors are adjusted by setting both the detector and an external oscillator first at 1400 K. C. and adjusting the tuning capacitor trimmer capacitors for maximum output, then changing the oscillator frequency and setting to 600 K. C. and adjusting the submounted trimmer capacitor for maximum output. The F. adjustments are made by adjusting the two trimmer capacitors located on the first I. F. transformer for maximum output when a 460 K. C. signal is connected between the control grid of the first detector and ground. Be sure and set the station selector at a point where no signal is being received when making I. F. adjustments.

RADIOTRON SOCKET VOLTAGES

120 Volt, 60 Cycle Line—Maximum Volume Control Selling—No Signal

Radiotron No.		Cathode to Control Grid, Volts D. C.	Cathode to Screen Grid, Volts, D. C.	Cathode to Plate, Volts D. C.	Plate Current, M. A.	Heater or Filament, Volts
Type-6A8	First Detector	1.25	70	235	2.5	6.3
	Oscillator	---	---	180	3.5	
Type-6F7	I. F.	1.25	70	235	5.5	6.3
	Second Detector	19	---	145*	0.4	
Type-41	Output	17	240	230	26.5	6.3
Type-1-V	Rectifier	---	---	335 RMS	50	6.3

*Actual voltage cannot be measured with ordinary voltmeter.

REPLACEMENT PARTS

Key No.	Stock No.	DESCRIPTION	Key No.	Stock No.	DESCRIPTION
		<u>RECEIVER ASSEMBLIES</u>			
R-7	S-1151	Socket - 6 contact tube socket		4104	Shield - Tube shield
R-1	S-1293	Resistor - 1500 ohms - Carbon Type 1/2 watt		4256	Pilot Lamp - Package of 2
	S-1354	Resistor - 100,000 ohms - Carbon Type 1/4 watt.....		4449	Knob - Volume control, or Range Switch, or Tone control knob - Package of 2
R-10	S-1365	Resistor - 1 megohm - Carbon Type 1/2 watt.....	C-4 C-6	6300	Socket - 4 Contact tube socket.....
	S-1442	Socket - 6 Contact metal tube socket	C-22 C-23)	6660	Condenser - 2 Gang tuning condenser.....
	2747	Contact Cap - Package of 2	C-13 C-19)	6661	Capacitor Pack - Comprising two 5.0 mfd. and two 8.0 mfd. capacitors.....
R-9	3077	Resistor - 30,000 ohms - Carbon Type 1/2 Watt.....	L-4 L-5	6662	Transformer - First intermediate frequency transformer.....
C-5	3459	Capacitor - 80 mmfd.....	L-6 L-7	6663	Transformer - Second intermediate frequency transformer.....
	3572	Socket - 7 Contact tube socket.....	L-2	6664	Coil - Oscillator Coil.....
	3584	Ring - Oscillator Coil Retaining Ring - Package of 2		6665	Shield - Oscillator coil shield and mounting bracket
R-2	3602	Resistor - 60,000 ohms - Carbon Type 1/2 Watt.....	L-1	6666	Coil - Antenna coil.....
R-11	3632	Resistor - 500 ohms - Carbon Type 1 Watt.....	K-6	6667	Volume Control.....
C-1	3701	Capacitor - .01 mfd. capacitor.....	S-1	6668	Switch - Range switch.....
C-17	3713	Capacitor - .05 mfd. capacitor.....	S-2	6669	Switch - Tone control switch.....
L-8	3857	Coil - Detector choke coil.....	C-20 C-21	6787	Capacitor - Comprising one .005 mfd. and one .017 mfd. capacitor.....
	3858	Socket - Dial Lamp Socket and Bracket.....	C-10	7641	Capacitor - 4.0 mfd.....
C-16	3865	Capacitor - 160 mmfd.....	T-1	9465	Transformer - Power Transformer 105-125 Volts 25 and 60 Cycles.....
R-8	3869	Resistor - 17,000 ohms - Carbon type 1/2 watt			
C-3	3873	Capacitor - 1500 mmfd. capacitor.....			
C-14	3877	Capacitor - 0.1 mfd. capacitor.....			
	3886	Reflector - Dial light reflector.....			
	S-1550	Dial-Station selector dial - package of 2..			<u>REPRODUCER ASSEMBLIES</u>
R-4	3889	Resistor - 25,000 ohms - Carbon Type 3 watt	T-2	S-1473	Transformer - Output Transformer.....
C-15	3932	Capacitor - 2,400 mmfd.....		9588	Cone - Reproducer cone.....
C-2	3933	Capacitor - 630 mmfd.....		S-1472	Coil Assembly - Comprising field coil, magnet and cone support, less output transformer.....
C-7	4000	Capacitor - adjustable capacitor.....			
L-11	4018	Coil - Choke coil.....		S-1541	Reproducer - Complete.....
	4075	Knob - Station selector knob.....			

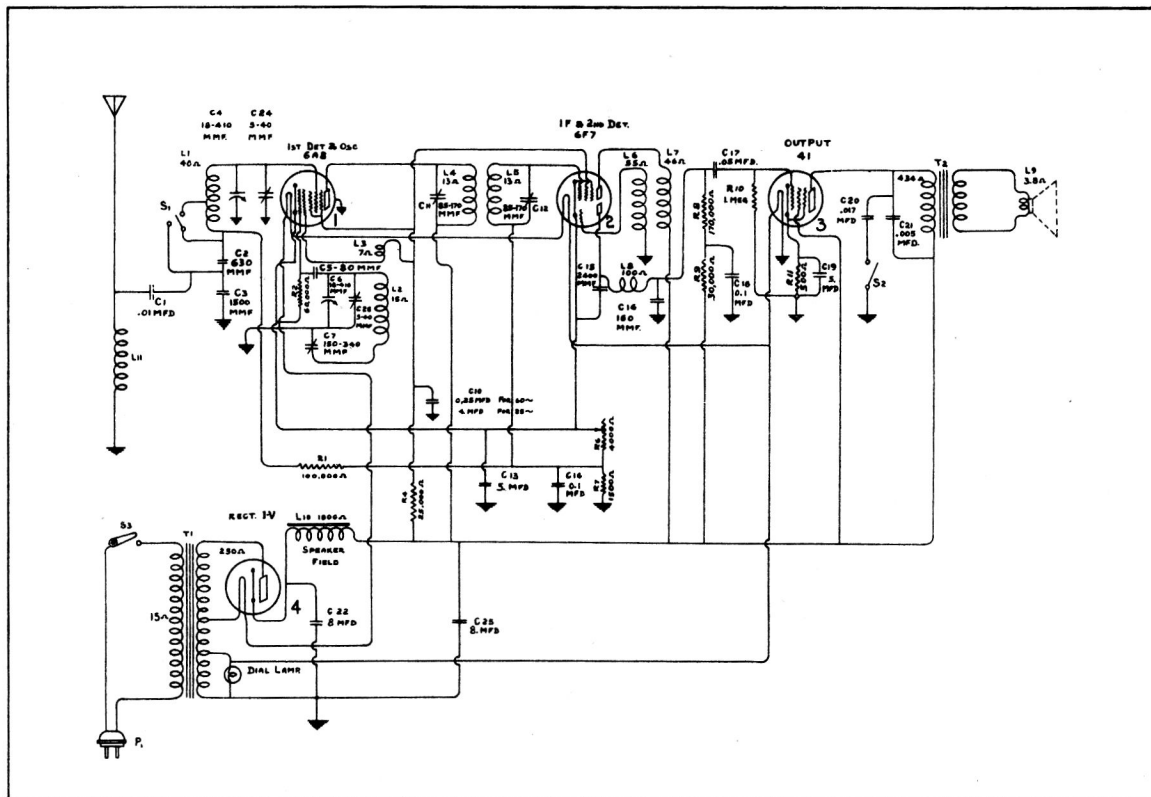


Figure A—Schematic Circuit Diagram

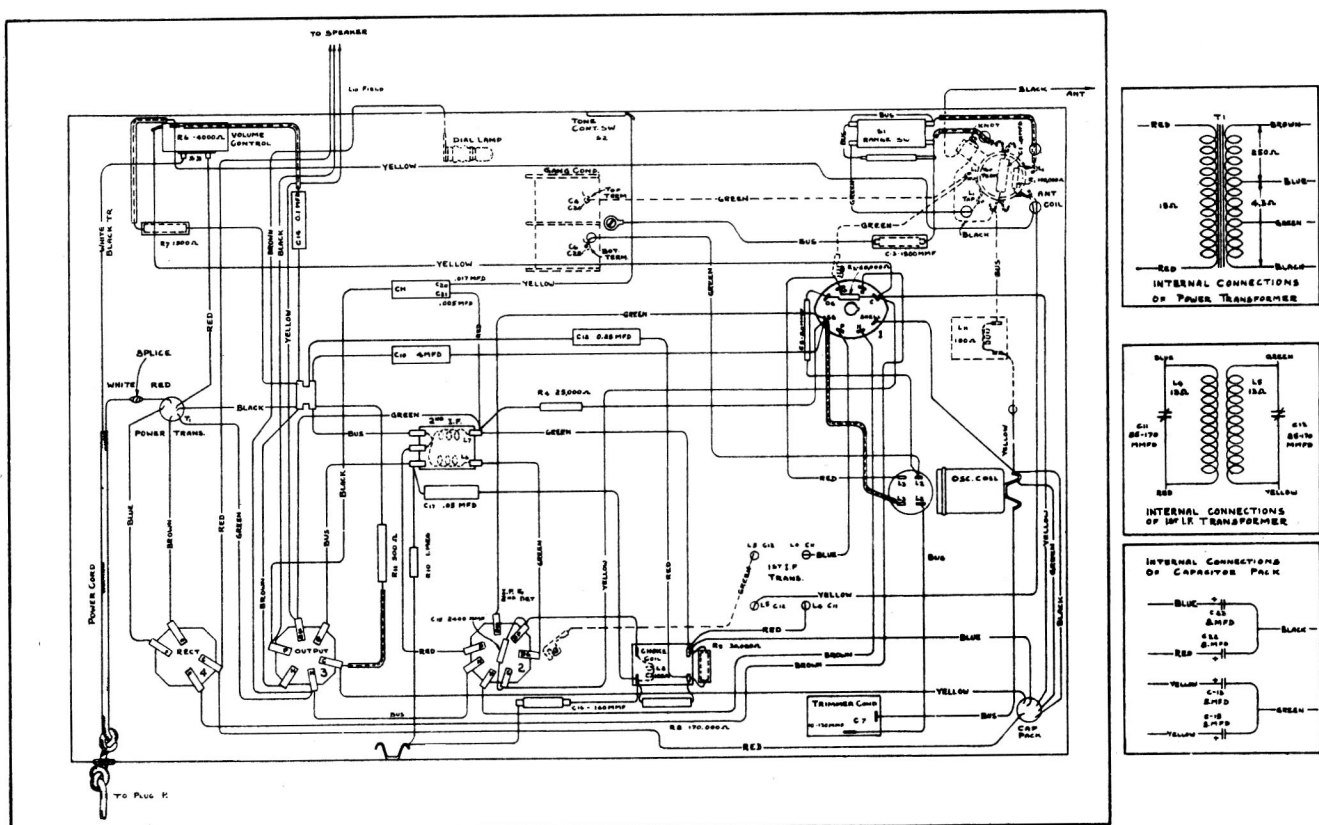


Figure B—Wiring Diagram