

MODEL G-6B

Six-Tube, Single-Band, Battery-Operated, Superheterodyne Receiver

Electrical Specifications

Frequency Range530—1,720 kc Alignment Frequency1,500 kc (osc., ant.)
 Immediate Frequency460 kc

RADIOTRON COMPLEMENT

(1) Type-1D7G	First Detector—Oscillator	(4) Type-1H4G	Driver
(2) Type-1D5GP	Intermediate Amplifier	(5) Type-1H4G	Driver
(3) Type-1F7G..	Second Det., A-F Amp., and A.V.C.	(6) Type-1J6G	Power Output

BATTERIES REQUIRED

"A", 2 1/2-volt Air Cell, or one 2-volt storage battery; "B", two 45-volt, heavy-duty, plug-in type B batteries; "C", one 4 1/2 volt plug-in type C battery.

CURRENT CONSUMPTION

"A" at 2 volts	0.54 Ampere
"B" at 90 volts	15.5 ma.
Fuse Rating	½ Amp.

POWER OUTPUT

Undistorted	1500	Milliwatts
Maximum	600	Milliwatts

LOUDSPEAKER

Type: permanent-magnet dynamic. Diameter: 6 inches. Voice coil impedance: $2\frac{1}{4}$ ohms at 400 cycles.

Mechanical Specifications

Height	10 inches
Width	17 inches
Depth	7 inches
Weight (net)	13 pounds
Weight (shipping)	16 pounds
Chassis Base Dimensions	9 ⁷ / ₈ inches x 5 ⁷ / ₈ inches x 2 inches
Over-all Height of Chassis	6 ³ / ₄ inches
Operating Controls	(1) Tuning, (2) { Operating Switch } { and Tone Control }
Tuning Drive Ratio	7 to 1

General Description

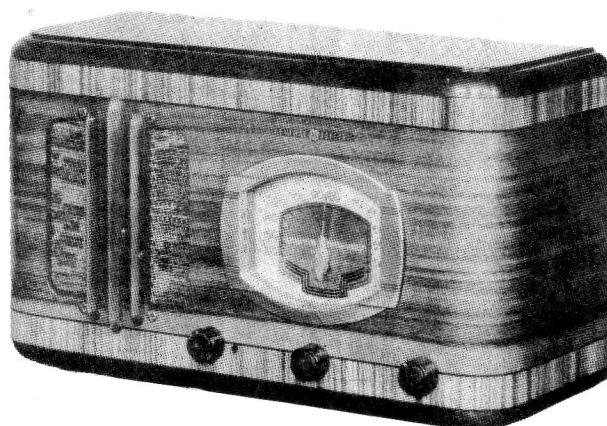
This model contains a six-tube chassis, battery operated, mounted in a table type cabinet. The superheterodyne circuit is employed, incorporating such features of design as magnetite core i-f trans-

formers; automatic volume control; diode detection; resistance coupled audio system; sensitive, six-inch; permanent-magnet, dynamic loudspeaker with dust screen; low current drain; and a big, easy-to-read, dial.

Service Data

The various diagrams of this booklet contain such information as will be needed to isolate causes for defective operation if such develops. The ratings of the resistors, capacitors, coils, etc., are indicated

adjacent to the symbols signifying these parts on the diagrams. Identification titles such as R1, L1, C1, etc., provide reference between the illustrations and Replacement Parts List.



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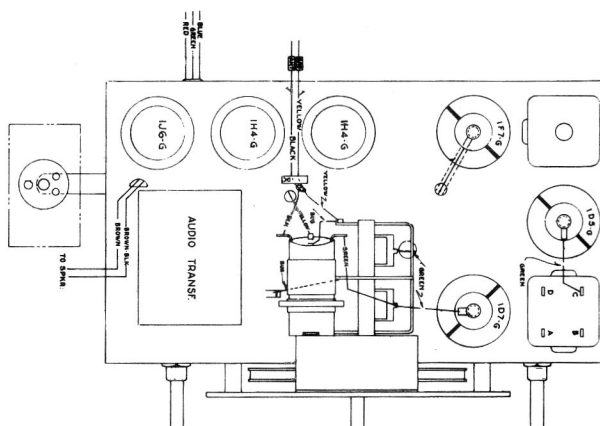


Figure 1—Radiotron and Trimmer Locations

Alignment Procedure

Calibrate the tuning dial by adjusting dial pointer to the low-frequency (end) calibration mark on dial scale with the gang tuning-condenser plates in full-mesh position. This is a friction adjustment.

Perform alignment in proper order, tabulated below, starting with No. 1 and following all operations across, then No. 2, etc. Adjustment locations are shown on figures 1, and 4.

Cathode-ray alignment is preferable, if an output indicator is used, connect it across the loudspeaker voice-coil and advance the receiver volume control to full-volume position.

Connect the "low" output terminal of the test oscillator to the receiver chassis for all alignment operations. Regulate the output of the test oscillator so that minimum signal is applied to the receiver to obtain an observable output indication. This will avoid a-v-c action.

The term "Dummy antenna" means the device which must be connected between the "high" test-oscillator output and the point of connection to the receiver in order to obtain ideal alignment. "No signal, 550-750 kc" means that the receiver should be tuned to a point between 550 and 750 kc where no signal or interference is received from a station or local (heterodyne) oscillator.

Order of Alignment	Test Oscillator			Receiver Dial Setting	Circuit to Adjust	Adjustment Symbols	Adjust to Obtain
	Connection to Receiver	Dummy Antenna	Frequency Setting				
1	I-F Amp. Grid Cap	.001 Mfd.	460 kc	No Signal 550-750 kc	2nd I-F Trans.	L7 and L8	Max. (peak)
2	1st Det.-Osc. Grid Cap	.001 Mfd.	460 kc	No Signal 550-750 kc	1st I-F Trans.	L5 and L6	Max. (peak)
3	Ant. Lead	200 Mmfd.	1,500 kc	1,500 kc	"A" Osc.	C7	Max. (peak)
4	Ant. Lead	200 Mmfd.	1,500 kc	1,500 kc	"A" Ant.	C2	Max. (peak)
5	Ant. Lead	200 Mmfd.	600 kc	Rock Thru 600 kc	"A" Osc.	L3	Max. (peak)

Loudspeaker.—Centering of the loudspeaker is made in the usual manner with three narrow paper feelers after first removing the front dust cover. This may be removed by softening its cement with a light application of acetone, using care not to allow the acetone to flow into the air gap. The dust cover should be cemented back in place with ambroid upon completion of adjustment.

Phonograph Attachment.—A terminal board is provided for connecting a phonograph into the audio

amplifying circuit. The Model R-93 Record Player should be connected as follows: Remove link between terminals 1 and 2 on terminal board. Connect green wire in Radio-Record switch cable to terminal 1, yellow to terminal 2, and shield extension to terminal 3. Tape unused red and blue leads separately. Connect a 2-conductor twisted cable between the Record Player binding posts and the screw terminals on Radio-Record switch.

RADIOTRON VOLTAGES HAVING SUPPLY VOLTAGES OF:— 2.0 V "A"; 91 V "B" and -4.5 V "C"

Radiotron		Plate	Screen-Grid	Grid	Filament
1D7G	Conv.	90.5 V	40.5 V	-1.0 V	2.0 V
	Osc.	91 V			
1D5GP	I.F.	91 V	40.5 V	-1.0 V	2.0 V
1F7G	Det.				2.0 V
	Audio	32 V	20 V	-1.0 V	
1H4G	Driver	88.5 V		-4.5 V	2.0 V
1H4G	Driver	88.5 V		-4.5 V	2.0 V
1J6G	Output	89 V		0	2.0 V

REPLACEMENT PARTS MODEL G6B

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
RECEIVER ASSEMBLIES			
12717	Board-Phonograph terminal board.....	S-1856	Knob-Tone control and operating switch knob - Package of 2.....
S-2103	Cable-3 conductor battery cable approximately 60" long, complete with flexible resistor, fuse, fuse connector and two battery plugs.....	S-1830	Knob-Volume control or Tuning Shaft Knob - Package of 2.....
12607	Cap-First I.F. transformer shield cap...	12827	Plug-"B" Battery cable plug.....
12581	Cap-Second I.F. transformer shield cap...	11341	Plug-"C" Battery plug.....
11350	Cap-Grid contact cap - Package of 5....	S-2115	Resistor-0.50 ohm flexible resistor complete with clip (R-12).....
13307	Capacitor-56 Mmfd. (C-10).....	14284	Resistor-22,000 ohms, carbon type, 1/10 watt (R-4).....
12813	Capacitor-82 Mmfd. (C-5).....	12738	Resistor-27,000 ohms, carbon type, 1/4 watt (R-1).....
14262	Capacitor-110 Mmfd. (C-9).....	23432	Resistor-47,000 ohms, carbon type, 1/4 watt (R-9).....
12404	Capacitor-120 Mmfd. (C-12, C-13).....	5029	Resistor-56,000 ohms, carbon type, 1/4 watt (R-2).....
14712	Capacitor-180 Mmfd. (C-15).....	11398	Resistor-220,000 ohms, carbon type, 1/10 watt (R-5).....
13003	Capacitor-180 Mmfd. (C-19).....	11323	Resistor-270,000 ohms, carbon type, 1/4 watt (R-7).....
13967	Capacitor-360 Mmfd. (C-8).....	5035	Resistor-560,000 ohms, carbon type, 1/4 watt (R-8).....
3932	Capacitor-.0025 Mfd. (C-22, C-24).....	13730	Resistor-1 Megohm, carbon type, 1/4 watt (R-6).....
5148	Capacitor-.007 Mfd. (C-18).....	11626	Resistor-2.2 Megohm, carbon type, 1/4 watt (R-3).....
14393	Capacitor .01 Mfd. (C-17, C-20).....	14887	Retainer-Vernier Tuning shaft retainer- Package of 20.....
5196	Capacitor-.035 Mfd. (C-23).....	S-2118	Shaft-Vernier Tuning Shaft.....
4839	Capacitor-0.1 Mfd. (C-4, C-11, C-14, C-16).....	11196	Socket-Radiotron socket.....
12484	Capacitor-0.25 Mfd. (C-3).....	S-2039	Shield-1D5GP, 1F7G or 1D7G radiotron shield.....
S-2028	Capacitor-8 Mfd. (C-21).....	S-2119	Spring-Tuning condenser drive cord spring - Package of 3.....
S-2064	Clip-Radiotron shield grounding clip- Package of 10.....	S-2112	Tone control and operating switch (R-11, S1, S2).....
S-2029	Coil-Antenna coil (L1, L2).....	14261	Transformer-1st I.F. transformer (L5, L6, C-9, C10).....
S-2030	Coil-Oscillator coil (L3, L4).....	14283	Transformer-2nd I.F. transformer (L7, L8, C12, C13, C-15, R-4, R5).....
S-2106	Condenser-2-gang variable tuning condenser (C1, C2, C6, C7).....	S-2113	Transformer-Audio transformer pack (T1, T2).....
12006	Core-Adjustable core and stud for 1st or 2nd I.F. transformer.....	S-2114	Volume control (R-10).....
S-2107	Cord-Tuning drive cord - Package of 2..	REPRODUCER ASSEMBLIES	
S-2109	Dial-Station selector dial scale assembly.....	S-2044	Cap-Dust cap for reproducer cone-Pkg. of 5
S-2120	Drum-Tuning condenser drum.....	S-2020	Cone-Reproducer cone.....
S-2105	Escutcheon-Station selector escutcheon and crystal.....	S-2045	Reproducer-Reproducer complete.....
11982	Fastener-Station selector dial scale fastener (Package of 25).....		
3748	Fuse-1/4 ampere fuse.....		
6516	Fuse connector complete.....		
S-2111	Indicator-Station selector indicator pointer.....		
S-1838	Holder-Bias cell holder.....		