



RCA VICTOR

MODEL 62



Six-Tube, Three-Band, A-C, Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

1947 No. 12

GENERAL SERVICE DIVISION

RCA VICTOR COMPANY LTD.



Electrical and Mechanical Specifications

FREQUENCY RANGE

Standard Broadcast S.B. 540-1600 kc.

Short Wave 49-31M 5.7-13.0 mc.

25-19M 11.6-16.0 mc.

Intermediate Frequency 455 kc.

Tuning Drive Ratio 18 to 1

RADIOTRON COMPLEMENT

(1) Type 6BA6 R. F. Amplifier

(2) Type 6BE6 Converter

(3) Type 6BA6 I.F. Amplifier

(4) Type 6AT6 Det., A.V.C., & 1st A.F.

(5) Type 6K6GT/G Power Output

(6) Type 5Y3GT/G Rectifier

POWER OUTPUT

Undistorted 2 watts

Maximum 3 watts

LOUDSPEAKER

Type 6 inch round P.M.

Voice Coil Impedance 3.2 ohms at 400 cycles

POWER SUPPLY RATINGS

Rating A 105-125 volts, 50-60 cycle, 70 watts

Rating B 105-125 volts, 25-60 cycle, 70 watts

CABINET DIMENSIONS

Height 11 inches

Width 17 $\frac{3}{4}$ inches

Depth 8 $\frac{3}{4}$ inches

GENERAL DESCRIPTION

The Model 62 is a six tube, three band, table type superheterodyne receiver, designed to cover the broadcast band and two short wave bands. Features of the design include: Built-in loop antenna for broadcast band reception; Short-wave "hank" antenna; Powdered iron

core I.F. transformers, antenna, R.F., and oscillator coils; Automatic volume control; Full range variable tone control; Three edge-lighted lucite dials, one for each band; Phono input socket with PHONO position on range switch; 6 inch dustproof round P.M. loudspeaker.

CIRCUIT ARRANGEMENT

The circuit uses a tuned R.F. stage in which the loop antenna operates as the first tuned circuit on the standard broadcast band. For short wave reception a "hank" antenna is connected to the short wave antenna coil primary. This antenna coil operates as the first tuned circuit on the short wave bands. Both short wave bands use the same antenna, R.F. and Oscillator coils. On the 49-31M band, the coils are tuned in the usual manner.

while on the 25-19M band they are tuned by padders in series with each section of the tuning condenser. The R.F. amplifier stage is followed by a converter stage which supplies 455 kc. signals to the permeability tuned I.F. amplifier. A double-diode-triode acts as a second detector A.V.C. and first audio amplifier. This is followed by a pentode output stage which drives the 6 inch P.M. loudspeaker.

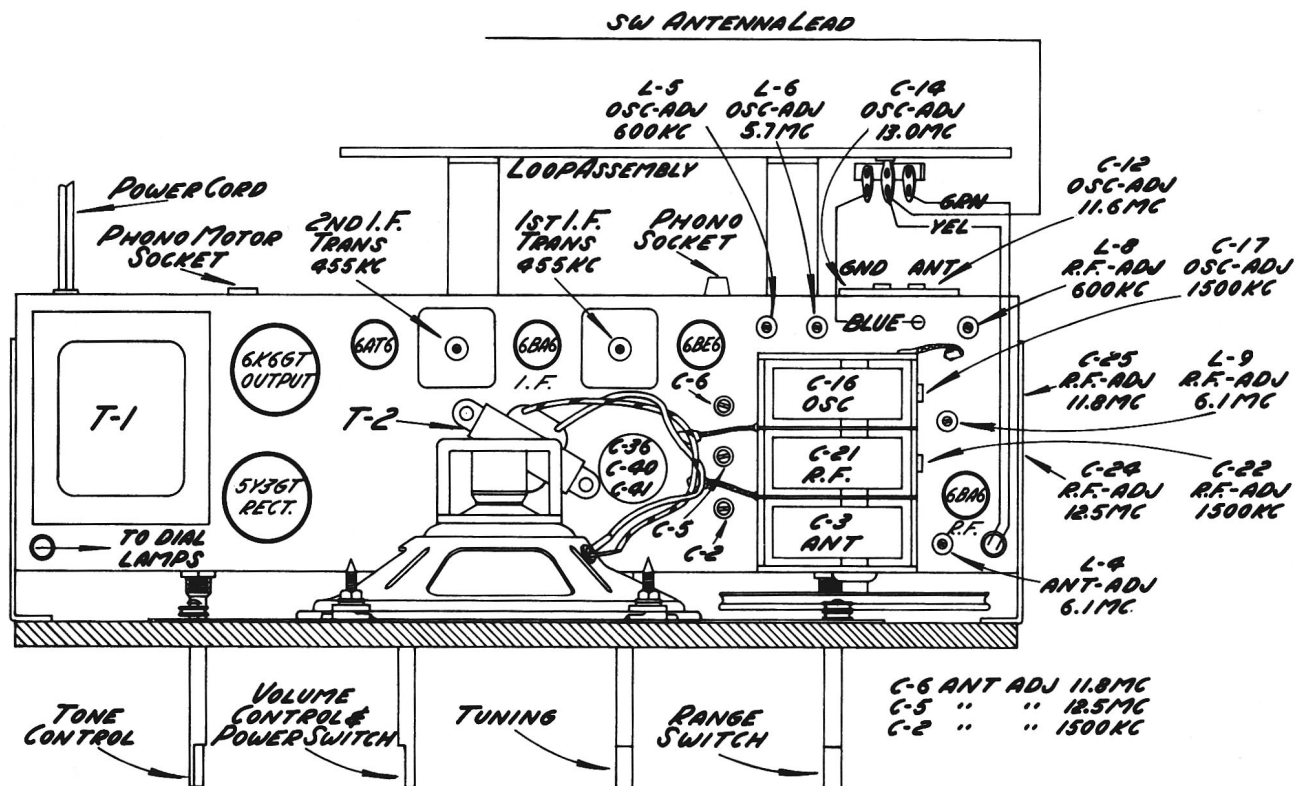


Figure 1—Chassis Layout and Alignment Adjustments.

ALIGNMENT PROCEDURE

Before aligning set, completely mesh the gang and set the dial pointer on the calibration point at the extreme left hand end of the dial.

When making a complete alignment follow in proper sequence the tabulated form below.

If only a portion of the circuit is to be aligned select the portion required, followed by the remaining steps in the chart.

For "S.B.", 49-31M and 25-19M band alignment use output meter across voice coil keeping Test Oscillator output as low as possible to prevent AVC action.

Cathode-ray oscilloscope and sweep signal generator alignment of the 455 kc. A.M. I.F. transformers is the preferable method. Connect oscilloscope across the volume control. If the required equipment is not available use the method outlined below.

ALIGNMENT CHART

Order of Alignment		TEST OSCILLATOR					Receiver Dial Setting	Circuit To Adjust	Adjustment Symbols	Notes
		Connect "HI" Side To	Connect "LO" Side To	Dummy Antenna	Frequency Setting	Range Selector				
A.M. ALIGNMENT	1	6BA6 1st I.F. Grid	Ground	.01 mfd.	455 K.C. 30% mod. 400 Cy. A.M.	S.B.	High freq. end of dial	2nd I.F. Trans.	L12, L13	Adjust for max. A.C. voltage across voice coil
	2	6BE6 Converter Grid	Same	Same	Same	Same	Same	1st I.F. Trans.	L10, L11	Same
S.B. ALIGNMENT	3	"A" on Ant. Ter. Board	Ground	200 m.m.f.	1500 K.C. 30% mod. 400 Cy. A.M.	S.B.	1500 K.C. on dial	Oscillator	C17	Adjust for max. A.C. voltage across voice coil
	4	Same	Same	Same	Same	Same	Same	R.F.	C22	Same
	5	Same	Same	Same	Same	Same	Same	Ant.	C2	Same
	6	Same	Same	Same	600 K.C. 30% mod. 400 Cy. A.M.	Same	600 K.C. on dial	Oscillator	L5	*Same
	7	Same	Same	Same	Same	Same	Same	R.F.	L8	Same
	*NOTE: - Rock Oscillator in to loop at 600 K.C.									
	8	Repeat steps 3 to 7 for maximum output								
49-31M ALIGNMENT	9	"A" on Ant. Ter. Board	Ground	300 ohms	5.7 Mc. 30% mod. 400 Cy. A.M.	49-31M	Low freq. end of dial	Oscillator	L6	Adjust for max. A.C. voltage across voice coil
	10	Same	Same	Same	13.0 Mc. 30% mod. 400 Cy. A.M.	Same	High freq. end of dial	Oscillator	C14	Same
	Repeat steps 9 and 10 for maximum output.									
	11	Same	Same	Same	6.1 Mc. 30% mod. 400 Cy. A.M.	Same	Tune in test osc. signal	R.F.	L9	**Same
	**NOTE:- Rock R.F. circuit in to oscillator. Do not readjust osc. circuit.									
	12	Same	Same	Same	Same	Same	Same	Ant.	L4	Same
	13	Same	Same	Same	11.8 Mc. 30% mod. 400 Cy. A.M.	Same	Tune in test osc. signal	R.F.	C25	**Same
	14	Same	Same	Same	Same	Same	Same	Ant.	C6	Same
15 Repeat steps 11 to 14 for maximum output.										
25-19M ALIGNMENT	16	"A" on Ant. Ter. Board	Ground	300 ohms	11.6 Mc. 30% mod. 400 Cy. A.M.	25-19M	Low freq. end of dial	Oscillator	C12	Adjust for max. A.C. voltage across voice
	17	Same	Same	Same	12.5 Mc. 30% mod. 400 Cy. A.M.	Same	Tune in test osc. signal	R.F.	C24	***Same
	***NOTE:- Rock R.F. circuit in to oscillator. Do not readjust osc. circuit.									
	18	Same	Same	Same	Same	Same	Same	Ant.	C5	Same
	19 Check at high freq. end of dial. Receiver should tune to 16 Mc. approx.									

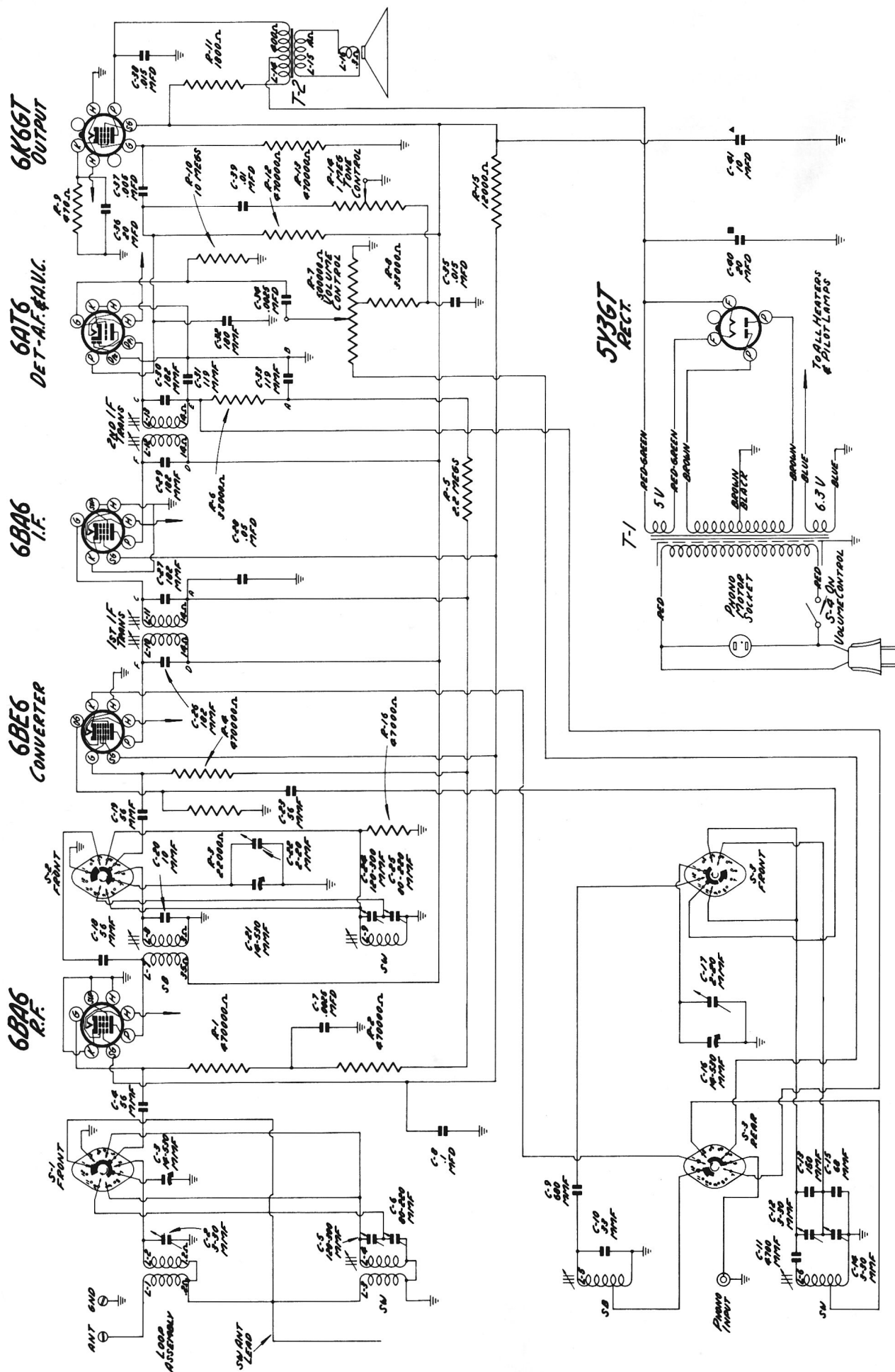


Figure 2—Schematic Diagram—Range Switch in Phono Position.

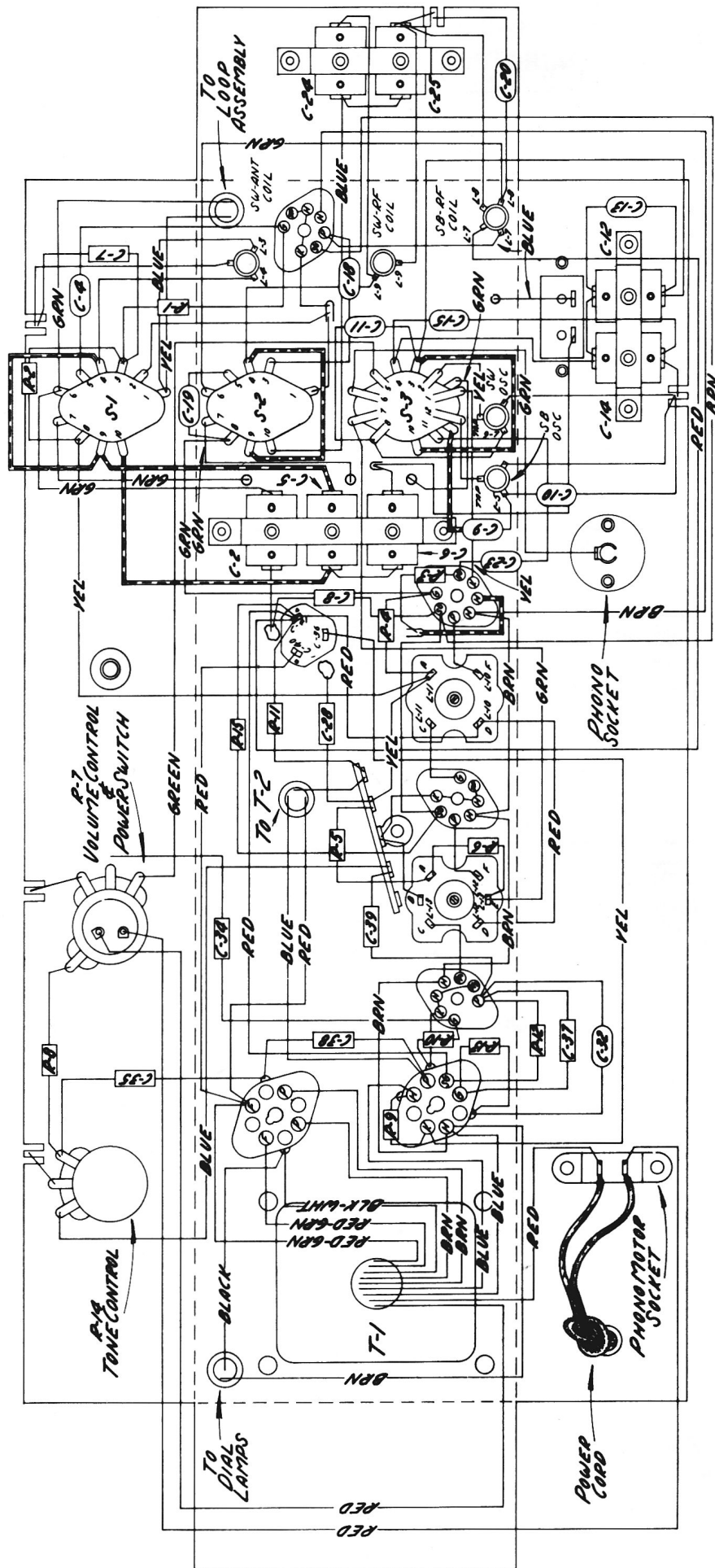


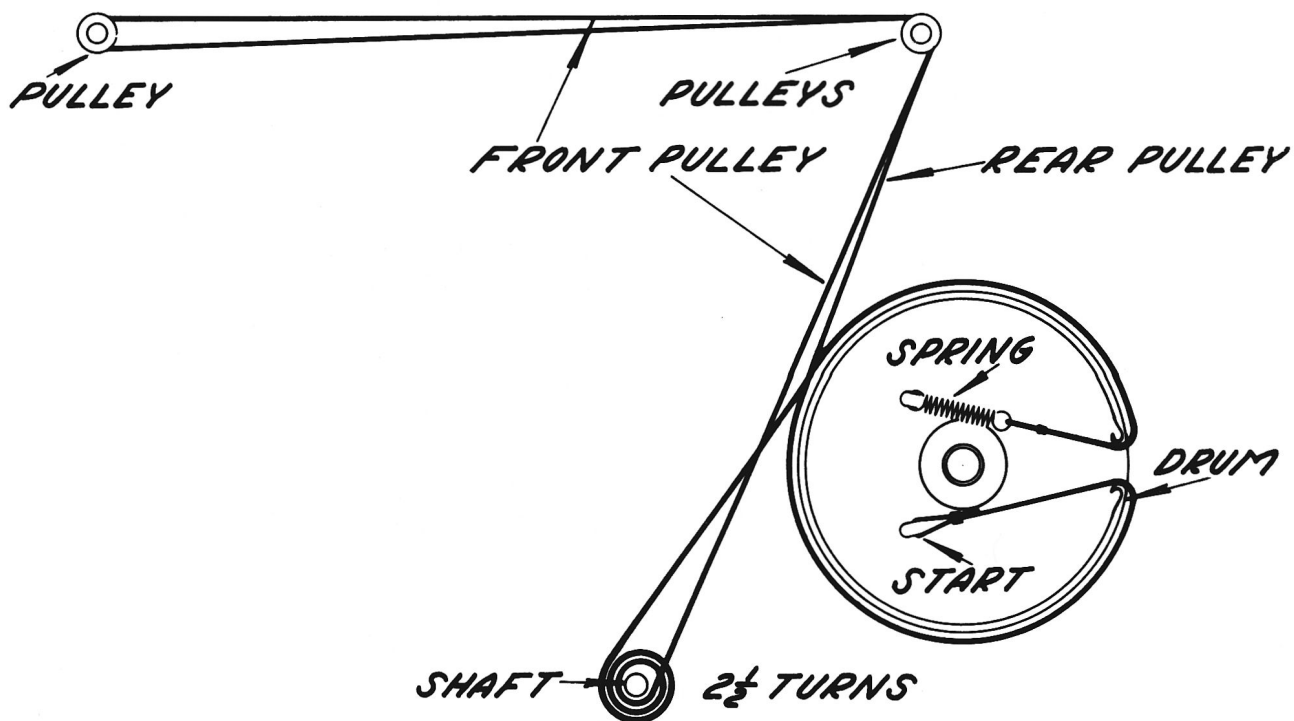
Figure 3—Wiring Diagram.

RADIOTRON SOCKET VOLTAGES

TYPE	CIRCUIT	PLATE	SCREEN	CONT. GRID	OSC. GRID		CATHODE	HEATER
					FREQ.			
6BA6	R. F.	260	120					6.3 A.C.
6BE6	Converter	260	120		600 Kc.	-6		6.3 A.C.
					1500 Kc.	-10		
					6.1 Mc.	-2		
					12 Mc.	-5.5		
					15.8 Mc.	-6		
6BA6	I. F.	260	120					6.3 A.C.
6AT6	Det. AVC & 1st Audio	60						6.3 A.C.
6K6GT/G	Output	300	260				18	6.3 A.C.
5Y3GT/G	Rectifier	300 A.C. (Pin 4) 300 A.C. (Pin 6)						5.0 A.C. (Pin 2 to Pin 8)

"B" Voltage measured from rectifier filament to ground 300 volts.

Note:—All the above values hold within plus or minus 20% when measured with an RCA Voltohmmst or equivalent, on a line voltage of 11 volts. All voltages except the rectifier filament voltage are measured to chassis.



DRUM SHOWN WITH GANG AT MAX. CAPACITY

Figure 4—Dial Cord Stringing

REPLACEMENT PARTS FOR MODEL 62

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers.

All parts and prices subject to change or withdrawal without notice.

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
RECEIVER ASSEMBLIES			
12930	Board-Ant.terminal board.....	30992	Resistor-10 Megohms 1/2 watt(R10)
S-3717	Capacitor-Trimmer(C14,C12).....	S-3726	Switch-Range Switch(S1,S2,S3)....
S-3718	Capacitor-Trimmer(C24,C25).....	S-3875	Shaft-Drive Shaft.....
S-3719	Capacitor-Trimmer(C2,C5,C6).....	14278	Socket-Phono Input.....
31709	Capacitor-10 Mmfd.Ceramic(C20)....	36500	Socket-Tube socket(Miniature less centre shield).....
39616	Capacitor-33 MMF mica(C10).....	31319	Socket-Tube socket (octal).....
39622	Capacitor-56 MMF mica (C4,C19,C23, C18).....	36069	Socket-Tube socket(Miniature with centre shield).....
39624	Capacitor-68 MMF mica (C15).....	S-3878	Scale-Dial Scale(Broadcast).....
12725	Capacitor-150 MMF mica (C13).....	S-3879	Scale-Dial Scale(49-31M).....
39634	Capacitor-180 MMF mica (C32).....	S-3880	Scale-Dial Scale(25-19M).....
14498	Capacitor-680 MMF mica (C9).....	S-3710	Transformer 1st I.F. (C26,C27, L10,L11).....
39668	Capacitor-4700 MMF mica (C11).....	S-3711	Transformer-2nd I.F. (C29,C30, C31,C33,L12,L13).....
S-3646	Capacitor-.005 Mfd. (C37).....	S-3722	Transformer-Power-60 cycles(T1)..
S-3644	Capacitor-.0025 Mfd.(C7,C34).....	S-3721	Transformer-Power-25 cycles(T1)..
S-3649	Capacitor-.015 Mfd.(C35,C38).....	S-3725	Volume Control-500,000 ohms(R7, S4).....
S-3648	Capacitor-.01 Mfd. (C39).....	S-3724	Tone Control-1 Meg. (R14).....
S-3653	Capacitor-.05 Mfd. (C28).....	SPEAKER ASSEMBLIES	
S-3655	Capacitor-.1 Mfd. (C8).....	S-4253	Cone-Cone and voice coil assy. (L16).....
S-3720	Capacitor-Electrolytic(C36,C40,C41)	S-3723	Speaker.....
S-3706	Condenser-Variable (with drive drum)(C3,C21,C22,C16,C17).....	S-3933	Output Transformer (T2), (L14, L15).....
S-3712	Coil-Antenna Coil Short Wave(L3,L4)	MISCELLANEOUS ASSEMBLIES	
S-3713	Coil-R.F.Coil Standard Broadcast (L7,L8).....	S-3467	Cord-Power cord.....
S-3714	Coil-R.F.Coil Short Wave (L9).....	S-4256	Cloth-Grille cloth.....
S-3715	Coil-Osc.Coil Short Wave (L6).....	S-3876	Cord-Drive cord.....
S-3716	Coil-Osc.Coil Standard Broadcast (L5).....	S-2824	Socket-A.C.....
S-3877	Indicator-Dial Pointer.....	31418	Spring-Drive cord tension(Pkg.2).
S-3899	Loop-Ant.loop (L1,L2).....	35814	Knob-Range.....
30499	Resistor-470 ohms 1/2 watt (R9)....	35775	Knob-Volume,tuning and tone.....
S-3682	Resistor-1800 ohms W.W. (R11).....		
43765	Resistor-12,000 ohms (R15).....		
30492	Resistor-22,000 ohms 1/2 watt (R3).		
30685	Resistor-33,000 ohms 1/2 watt (R6, R8).....		
30787	Resistor-47,000 ohms 1/2 watt(R16).		
30648	Resistor-470,000 ohms 1/2 watt (R2,R1,R4,R12,R13).....		
30649	Resistor-2.2 Megohms 1/4 watt(R5)..		

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