



RCA Victor

MODELS BT 40 & BT 44

**FIVE-TUBE, SINGLE BAND, SUPERHETERODYNE
BATTERY RECEIVER**

TECHNICAL INFORMATION AND SERVICE DATA

1946 No. 14

SERVICE DIVISION

RCA VICTOR COMPANY LIMITED

MONTREAL



BT 40



BT 44

Electrical and Mechanical Specifications

Frequency Range540 kcs. to 1600 kcs.

Intermediate Frequency455 kcs.

RADIOTRON COMPLEMENT

- (1) Type-1R5First Detector—Oscillator
- (2) Type-1T4Intermediate Amplifier
- (3) Type-1S5Second-Detector, A.V.C.,
and A-F Amplifier
- (4) Type-3Q4Power Output

POWER OUTPUT RATING

Undistorted18 watts
Maximum48 watts

Batteries Required One No. 758T Eveready Pack.
OR "A"—one 1.4 Volt Air Cell or 1.5 Dry Cell. "B"—two 45 Volt heavy duty "B" Batteries.

LOUDSPEAKER

Type4" x 6" Elliptical P.M.
Voice-Coil Impedance3.4 Ohms at 400 Cycles

CABINET DIMENSIONS

Height 9 ¼ inches
Width12 7/8 inches
Depth 8 ½ inches

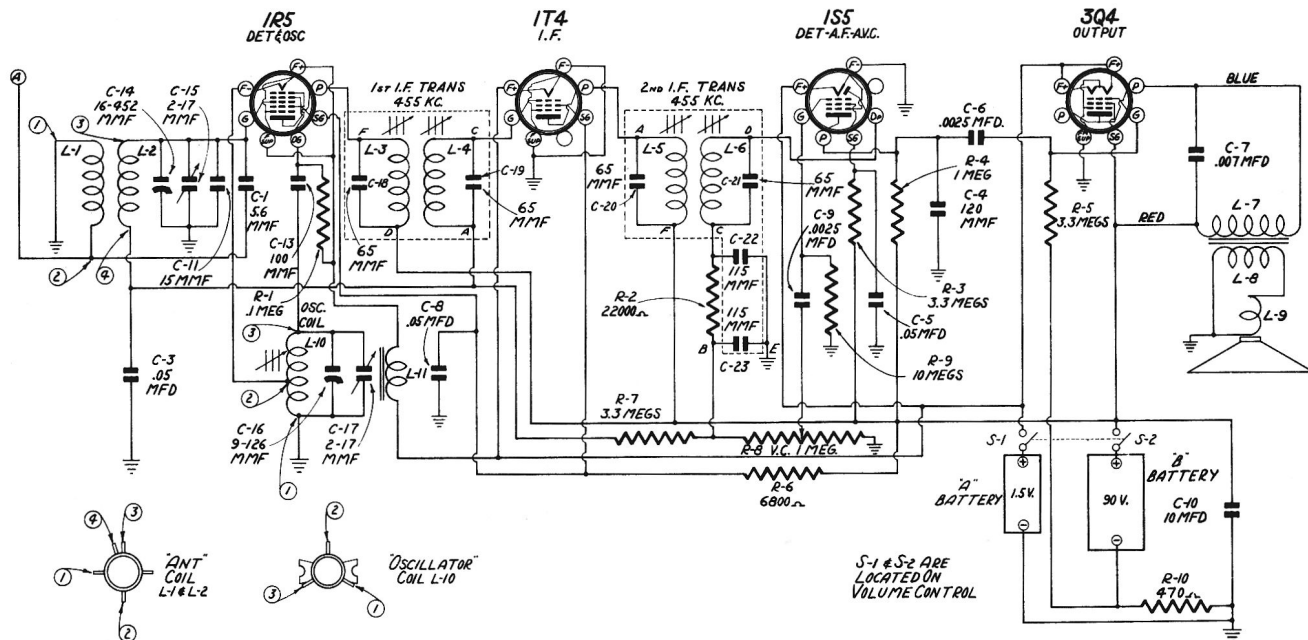
CURRENT CONSUMPTION

"A" at 1.4 Volts.....250 Ma.
"B" at 90 Volts 13 Ma.

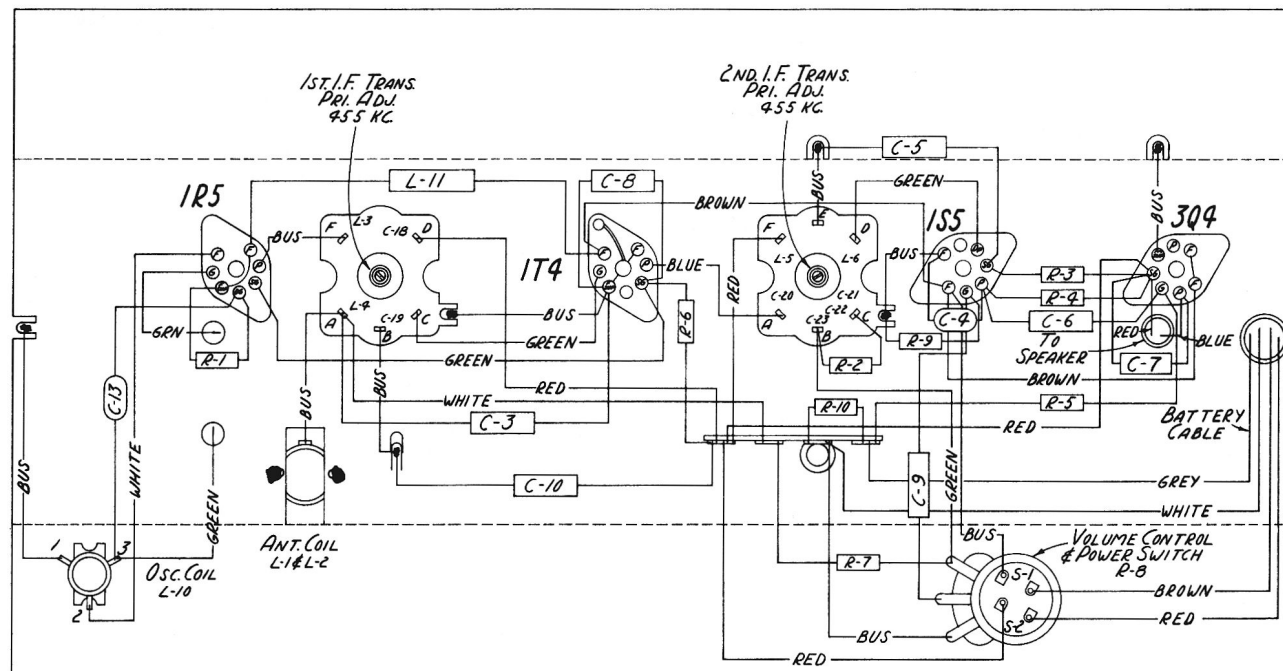
General Description

The Models BT-40 and BT-44 are four tube, battery operated superheterodyne receivers, covering the broadcast band only. Features of design include:—New type midget tubes; straight line dial; precision

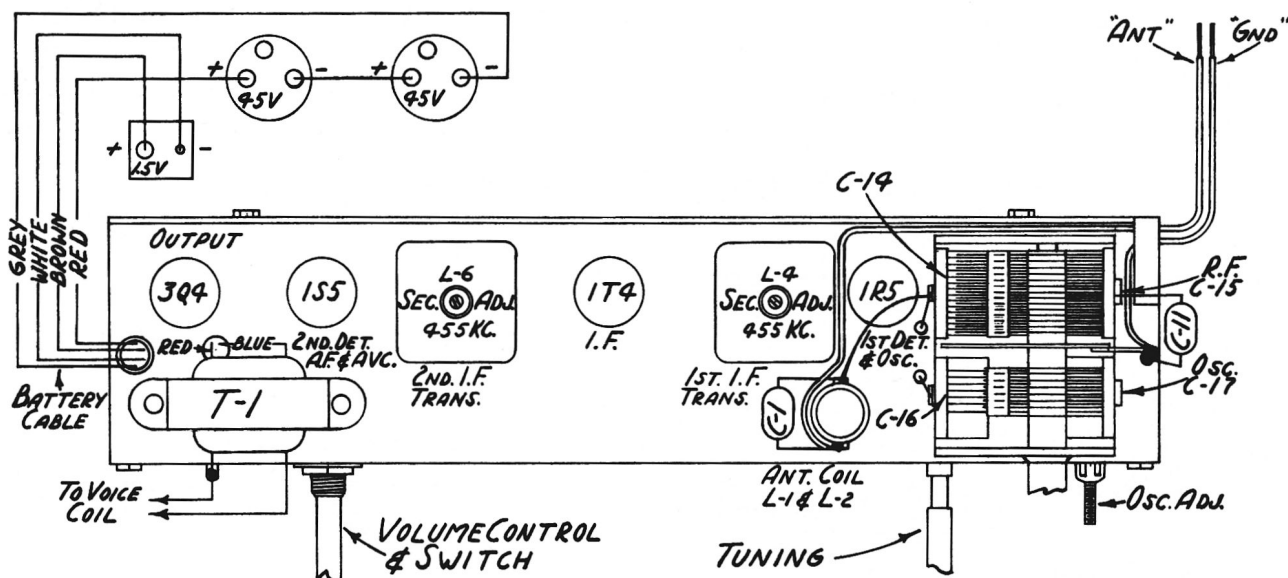
built iron core I. F. transformers; exceptionally low current drain; and a four inch by six inch elliptical speaker; all housed in a wooden cabinet of modern design.



Schematic Circuit Diagram



Chassis Wiring Diagram



Chassis Layout and Alignment Adjustments

Alignment Procedure

Steps	Connect the high side of the test osc. to—	Tune test osc. to—	Turn radio dial to—	Adjust the following for max. output
No. 1	Grid of 1T4 through .01 Mfd.	455 k.c.	Quiet Point at 600 k.c.	L5 - L6 2nd I.F. Transf.
No. 2	Grid of 1R5 through .01 Mfd.		End of Dial	L3 - L4 1st I.F. Transf.
No. 3	Ant. Term. through 200 Mmfd.	1630 k.c.	Full clockwise (out of mesh)	C17 (osc.)
No. 4	Ant. Term. through 200 Mmfd.	1500 k.c.	1500 k.c.	C15 (Ant.)
No. 5	Ant. Term. through 200 Mmfd.	600 k.c.	600 k.c.	Rock in Osc. slug for max.
No. 6	REPEAT 3 - 4 - 5			

Output Meter Alignment

If this method is used, connect the meter across the voice coil, and turn the volume control to maximum.

Test Oscillator

For all alignment operations, connect the low side of the test-oscillator to the receiver chassis through a .01 capacitor, and keep the output as low as possible to avoid A.V.C. action.

Pre-Setting Dial

With the gang condenser in full mesh, adjust the pointer so that it lines up with the first mark on the left of the dial scale.

Radiotron Voltages

Type	Plate	Screen Grid	Bias	Filament
1R5	90	60		1.5V
1T4	90	60		1.5V
1S5	40	36		1.5V
3Q4	86	88	-6.2	1.5V

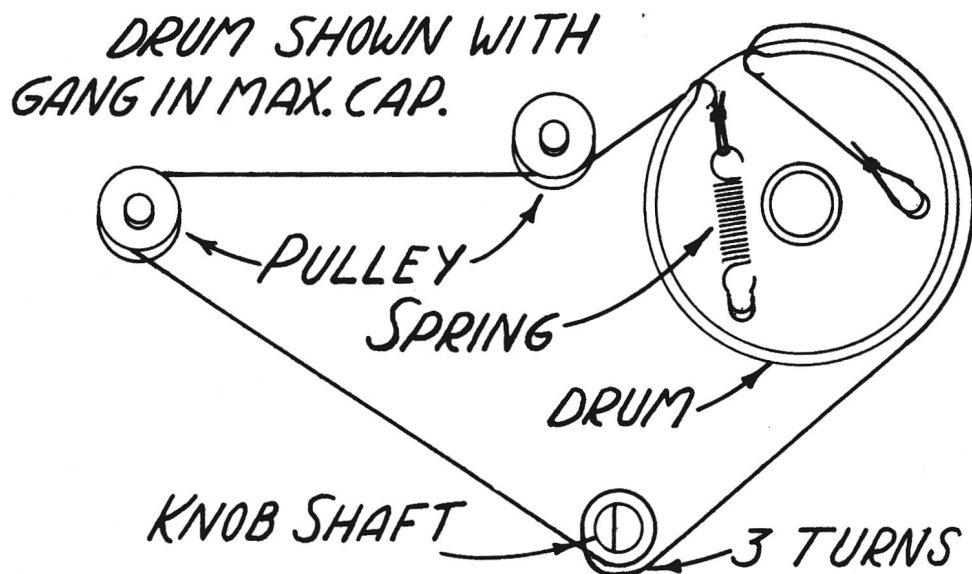
NOTE—Readings taken with a receiver supply of 90 Volts "B" and 1.4 Volts "A". Should hold within $\pm 20\%$.

REPLACEMENT PARTS FOR MODELS BT 40 & BT 44

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

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
RECEIVER ASSEMBLIES		SPEAKER ASSEMBLIES	
39601	Capacitor, Mica 5.6 Mmf.. (C1).....	35849	Dust Cap (Pkg. 3).....
39608	Capacitor, " 115 Mmf. (C11).....	S-3569	Cone & Voice Coil Assembly (L9)...
39628	Capacitor, " 100 Mmf. (C13).....	S-3502	Speaker - Complete.....
12724	Capacitor, " 120 Mmf.. (C4).....	S-3531	Transformer-Output (L7, L8).....
5148	Capacitor, .007 Mfd. (C7).....		
5107	Capacitor, .0025 Mfd. (C6, C9)....		
4886	Capacitor, .05 Mfd. (C3, C5, C8)...		
S-3221	Capacitor, Electrolytic, 10 Mfd (C10)		
S-3525	Variable Condenser & Drum (C14, C15, C16, C17).....		
S-3695	Choke, Filament choke (L11).....		
S-3528	Coil, Oscillator coil (L10).....		
S-3529	Coil, Antenna coil (L1, L2).....		
30499	Resistor, 470 Ohms 1/4 watt (R10)...	35814	Knob Assembly.....
14659	Resistor, 6800 Ohms 1/4 watt (R6)...	35775	Knob Assembly.....
30492	Resistor, 22,000 Ohms 1/4 watt (R2)...	S-3696	Cord-Indicator Drive Cord.....
14560	Resistor, 100,000 Ohms 1/4 watt (R1)...	S-3532	Indicator Station Selector Pointer
13730	Resistor, 1 Megohm 1/4 watt (R4)...	S-3534	Cable Battery Cable.....
12928	Resistor, 3.3 Megohm 1/4 watt (R3, R5, R7).....	12827	Plug "B" Battery Cable Plug.....
13601	Resistor, 10 Megohm 1/4 watt (R9)...	S-2398	Plug "A" Battery Cable Plug.....
30585	Spring, Drive cord tension (Pkg. 2)...		
S-3533	Shaft, Drive shaft.....		
S-3567	Scale, Dial scale.....		
36500	Socket, Tube socket.....		
S-3526	Transformer I.F. 1st (L3, L4, C18, C19)		
S-3527	Transformer I.F. 2nd (L5, L6, C20, C21, C22, C23)...		
S-3530	Volume Control 1 Meg. (R8, S1, S2)....		

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



Dial Drive Cord