



RCA Victor

MODEL NIPPERETTE

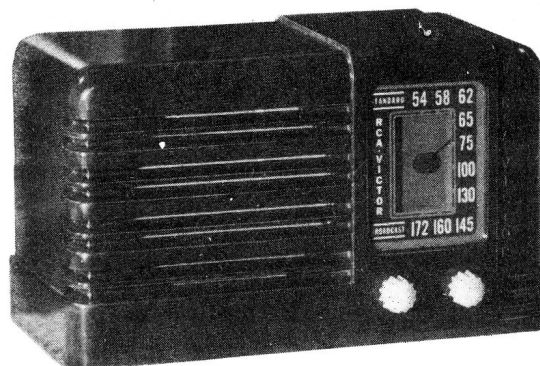
Four-Tube, Single-Band, Battery-Operated Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL

General Description

The "Nipperette" is a four tube, battery operated receiver housed in a molded plastic cabinet of unusual design. Features of design include:—New low drain 1.4 volt tubes; full A.V.C. circuit; diode detection; resistance coupled audio system; sensitive, four inch, permanent magnet, dynamic loudspeaker; exceptionally low current drain and a large, easy to read dial.



Electrical Specifications

Frequency Range 540—1,720 k.c. Alignment Frequency 1500 kc., (osc., ant.)
Intermediate Frequency 455 k.c.

RADIOTRON COMPLEMENT

(1) Type 1A7GT.....First Detector—Oscillator	(2) Type 1N5GT I. F. Amplifier
(3) Type 1H5GT.....Second Det., A.F. and A.V.C.	(4) Type 1T5GT Power Output

BATTERIES REQUIRED

"A" one 1.4 Volt Air Cell or 1.5 Dry Cell; "B" two 45 Volt heavy duty "B" Batteries

CURRENT CONSUMPTION

"A" at 1.4 Volts 0.2 Amps.
"B" at 90 Volts 9.6 Ma.

POWER OUTPUT

Undistorted 100 Milliwatts
Maximum 200 Milliwatts

LOUDSPEAKER

Type Permanent Magnet Dynamic
Diameter 4 inches
Voice Coil Impedance 2.2 Ohms at 400 Cycles

Mechanical Specifications

	Height	Width	Depth
Cabinet Dimensions	5 1/8 inches	8 5/8 inches	4 1/2 inches
Weight (net)			4 3/4 lbs.
Operating Controls	(1) Power Switch—Volume; (2) Tuning		

Alignment Procedure

Calibrate the tuning dial by adjusting dial pointer to the vertical position when the gang tuning-condenser plates are in full mesh.

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

Cathode Ray Alignment is the preferable method.

Connections for the oscillograph are shown in Fig. No. 2.

Output Meter Alignment.—If this method is used, connect the meter across voice coil, and turn the receiver volume control to maximum.

Test-Oscillator.—For all alignment operations, connect the low side of the test-oscillator to the receiver chassis, and keep the output as low as possible to avoid A.V.C. action.

Service Data

The various diagrams of this booklet contain all information necessary to quickly isolate causes for defective operation if such develops. The ratings of resistors, capacitors, coils, etc., are indicated adjacent

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

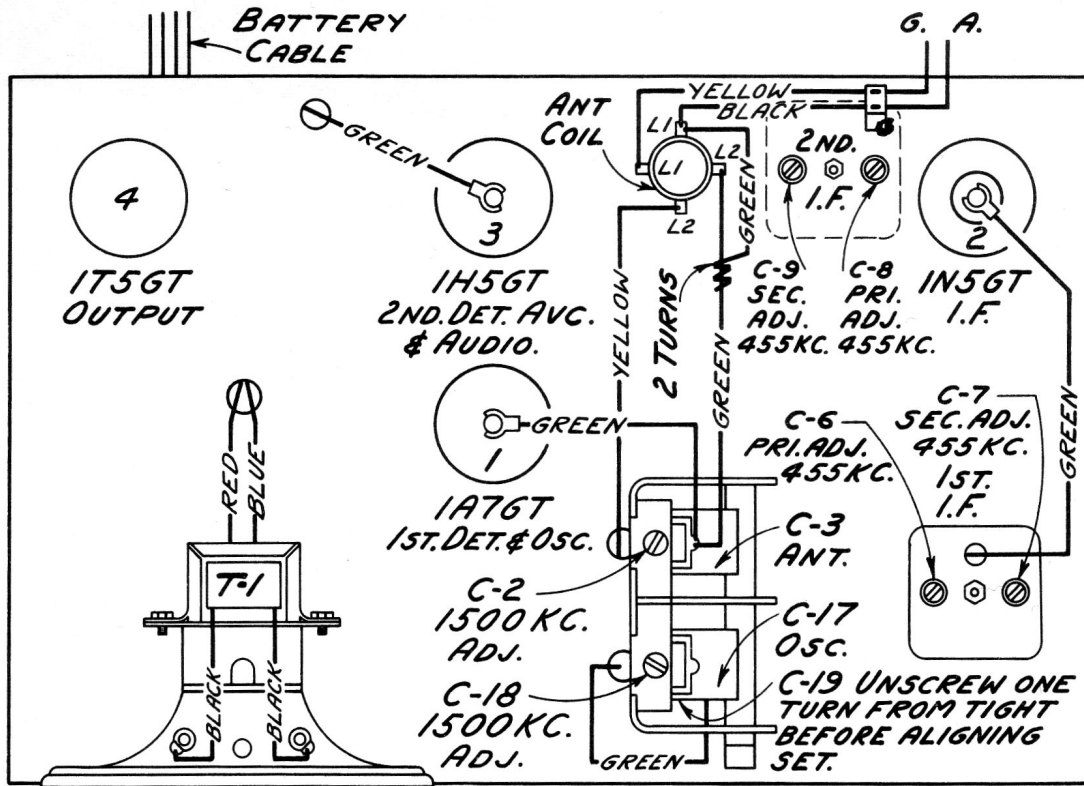


Fig. No. 1 Tube and Trimmer Locations.

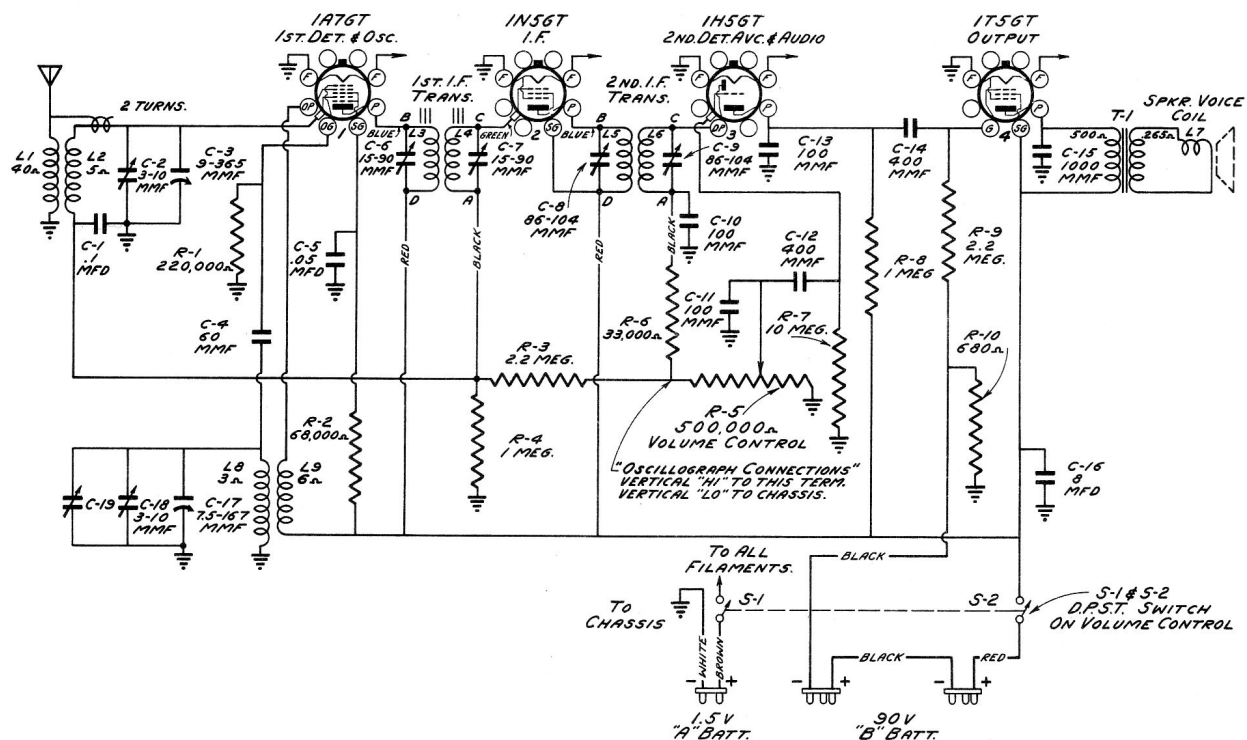


Fig No. 2 Schematic Circuit Diagram

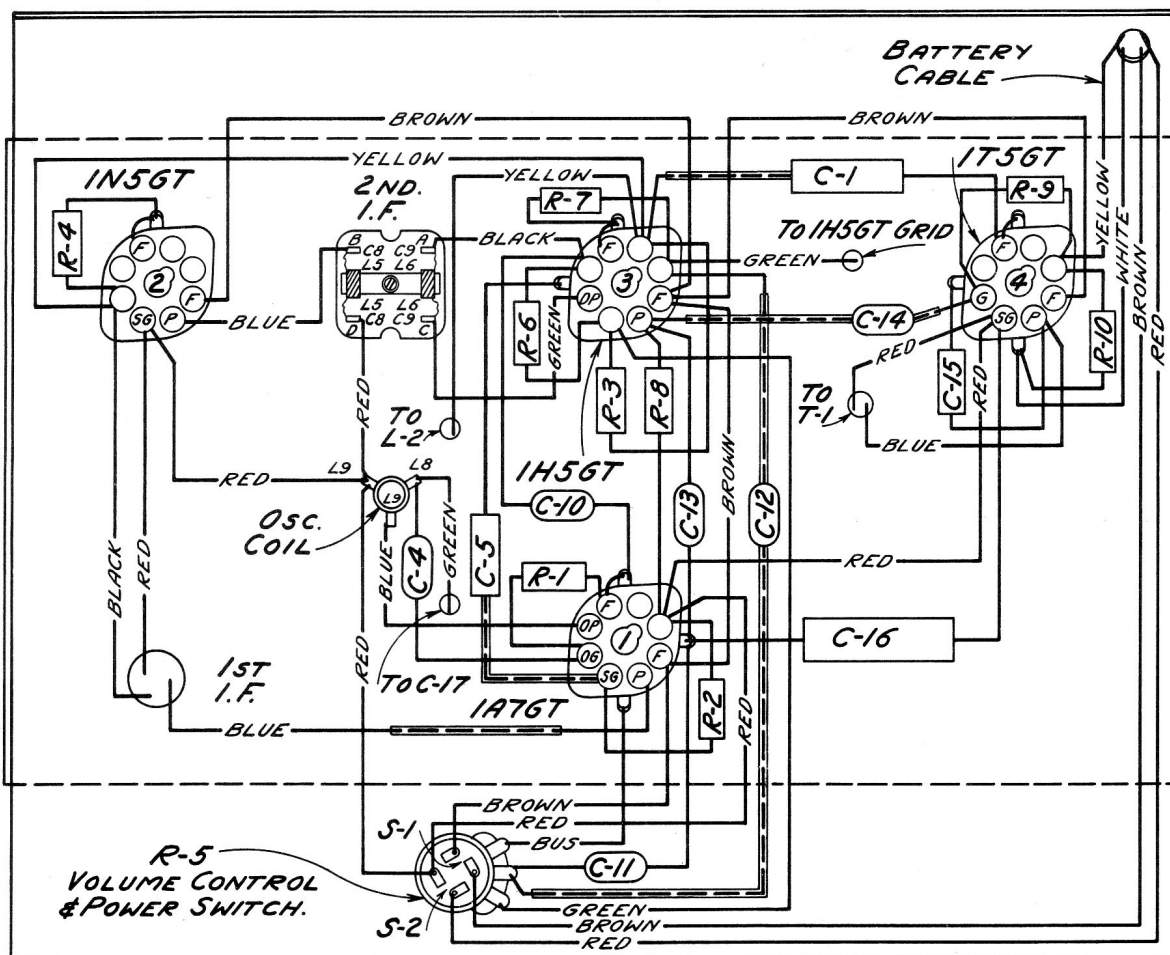


Fig. No. 3 Chassis Wiring Diagram

Alignment Procedure

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output
No. 1	1N5-G I-F grid cap, in series with 0.01 mfd.	455 kc	Quiet point between 550-750 kc	C8 and C9 (2nd I-F transformer)
No. 2	1A7-G 1st-det. grid cap, in series with 0.01 mfd.	455 kc		C6 and C7 (1st I-F transformer)
No. 3	Antenna lead, in series with 200 mmfd.	1,500 kc	1,500 kc	C18† (oscillator) C2 (antenna)
No. 4	Antenna lead, in series with 200 mmfd.	600 kc	600 kc	C18* (oscillator) C2* (antenna)

† Trimmer C19 on gang condenser should be unscrewed one complete turn from tight, before adjusting C18.

* Rock gang in and out to obtain 600 k.c. adjustment.

Precautionary Lead Dress

1. Twisted green wire from antenna coil to gang must be 2 turns and kept clear of rotor.
2. Green lead to volume control must be dressed close to chassis.

Radiotron Voltages

Readings taken with a receiver supply of 90 Volts "B" and 1.4 Volts "A".

Radiotron	Plate	Screen Grid	Grid	Filament
(1) 1A7GT Converter 1A7GT Oscillator	83V 83V	45V*	—	1.4V
(2) 1N5GT I.F.	83V	83V	—	1.4V
(3) 1H5GT Detector and Audio	64V	—	—	1.4V
(4) 1T5GT Output	80V	83V	—7.4V*	1.4V

NOTE—Values with asterisk () are operating voltages in circuits with high series resistance. The actual measured value will be lower, depending on the voltmeter loading.

Measurements are made to chassis, with set tuned to a quiet point and the volume control at minimum. Values should hold within approximately plus or minus 20% with rated battery voltage.

REPLACEMENT PARTS FOR NIPPERETTE

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			
S-2746	Cable-Battery cable complete with plugs.....	32945	Shaft-Station selector shaft.....
13057	Capacitor-60 mmfd. (C4).....	32537	Socket-Tube socket.....
12720	Capacitor-100 mmfd. (C10, C11, C13)	30585	Spring-Drive cord tension spring (Pkg.2).....
30433	Capacitor-1000 mmfd. (C15).....	S-2749	Transformer-1st I.F. transformer (L3, L4, C6, C7).....
4886	Capacitor-.05 mfd. (C5).....	S-2750	Transformer-2nd I.F. transformer (L5, L6, C8, C9).....
4839	Capacitor-0.1 mfd. (C1).....	S-2751	Volume control and power switch (R5, S1, S2).....
33303	Capacitor-8 mfd. (C16).....	REPRODUCER ASSEMBLIES (CRL-516-1)	
32572	Coil-Antenna coil (L1, L2).....	32907	Cap-Dust cap for cone centre (Pkg.5).....
32573	Coil-Oscillator coil (L8, L9)...	S-2427	Cone-Reproducer cone assembly (L7)...
S-2747	Condenser-2 gang variable tuning condenser (C2, C3, C17, C18, C19).....	S-2753	Reproducer complete.....
S-2432	Cord-Drive Cord.....	S-2754	Transformer-Output (T-1).....
35117	Drum-Drive cord indicator drum and set screws.....	MISCELLANEOUS ASSEMBLIES	
S-2398	Plug-2 prong male battery plug.	S-2755	Cabinet-Molded plastic cabinet (Walnut).....
12827	Plug-3 prong male battery plug.	35124	Dial-Station selector glass dial scale & retainer.....
12262	Resistor-680 ohm, 1/4 watt	32571	Knob-Tuning or volume control knob
12454	Resistor-33,000 ohm, 1/4 watt (R6)	32667	Spring-Knob retaining spring (Pkg. 5).....
13715	Resistor-68,000 ohm, 1/4 watt (R2)		
12264	Resistor-220,000 ohm, 1/4 watt (R1)		
S-2496	Resistor-1 meg., 1/10 watt (R4, R8)		
12679	Resistor-2.2 meg., 1/4 watt (R3, R9).....		
13601	Resistor-10 meg., 1/4 watt (R7)...		
32943	Retainer-Dial scale retaining clip & washer (Pkg.10).....		