RCA Victor

MODEL NIPPERETTE-A

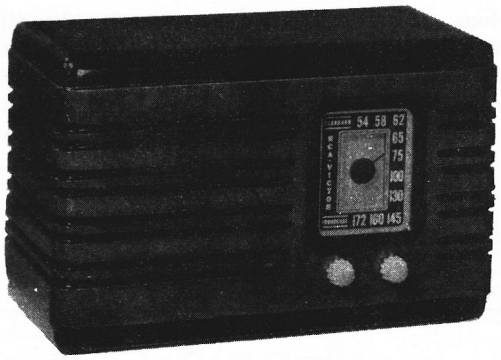
Four-Tube, Single-Band, Battery-Operated Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL

General Description

The "Nipperette-A" is a four tube, battery operated receiver. 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 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
Diameter ..... 4 inches
Actuating Coil Resistance ..... 205 ohms.

Mechanical Specifications

	Height	Width	Depth
Cabinet Dimensions	6⅝ inches	10 inches	5 inches
Weight (net)			4¾ 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.

Note: When aligning or operating this model a good ground connection is essential.

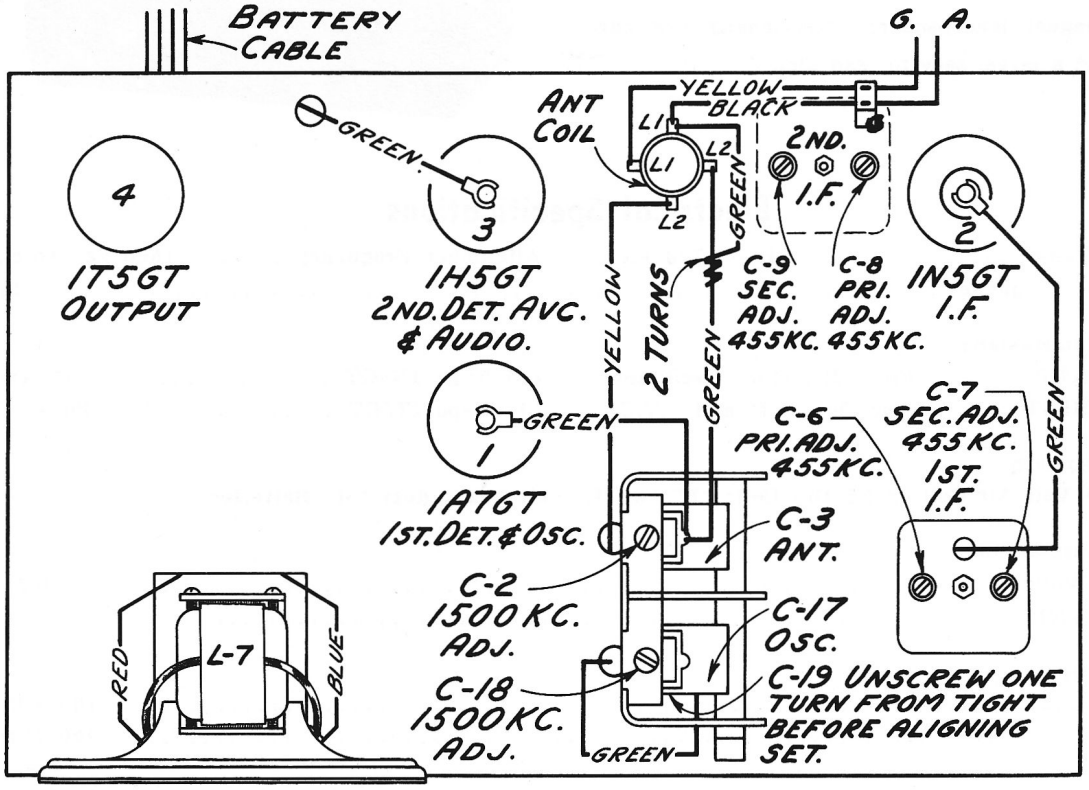


Fig. No. 1 Tube and Trimmer Locations.

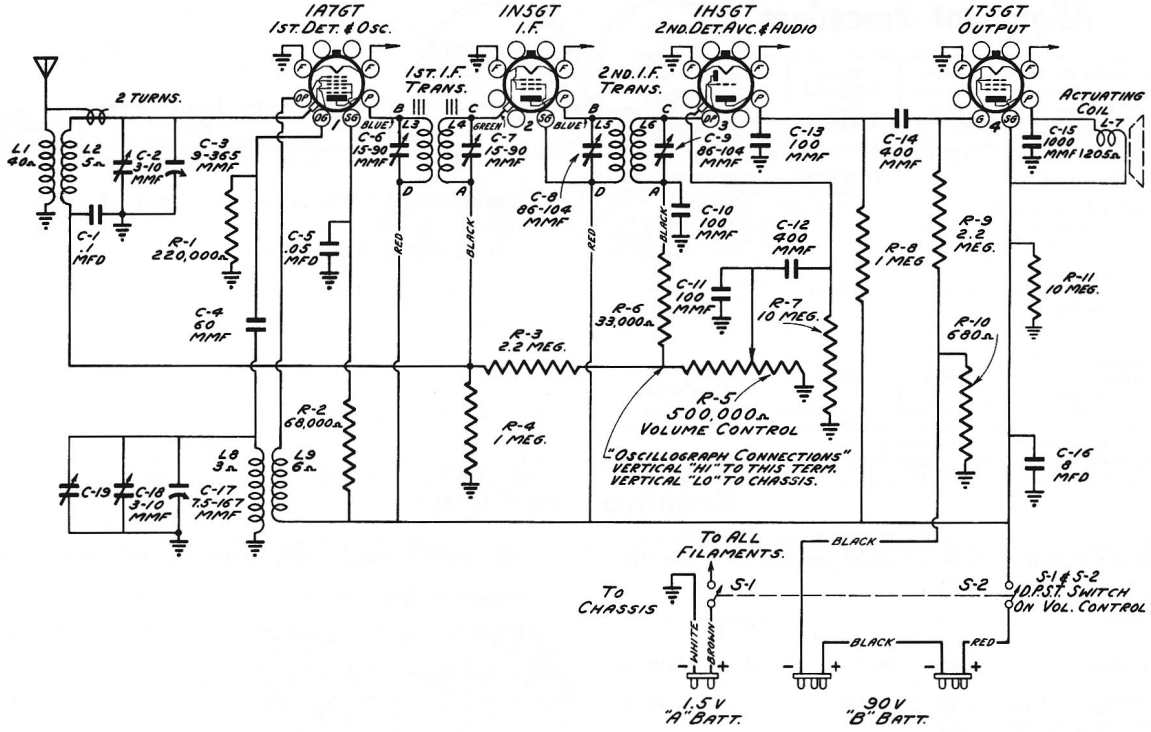


Fig No. 2 Schematic Circuit Diagram

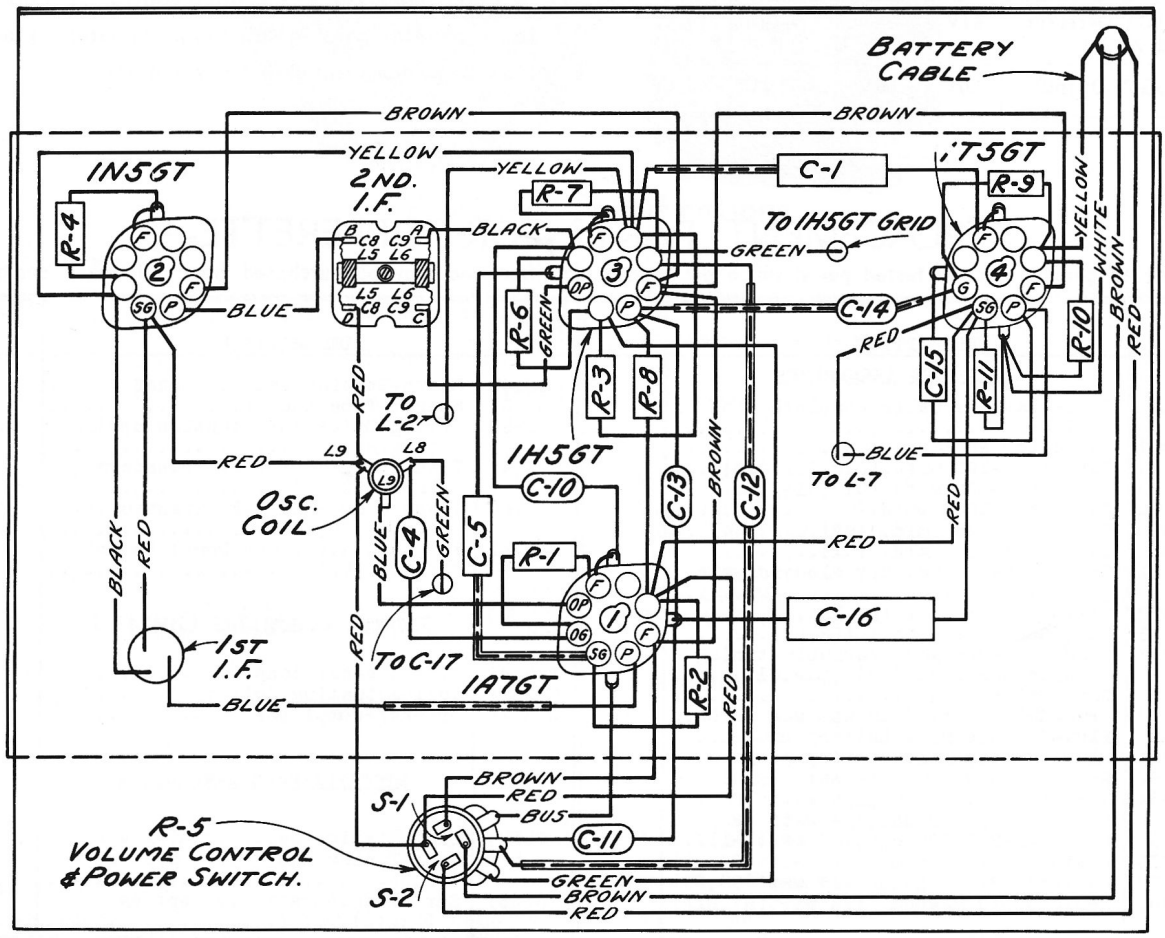


Fig. No. 3 Chassis Wiring Diagram

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-A

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

STOCK NO.	DESCRIPTION
	RECEIVER ASSEMBLIES
S-2746	Cable-Battery Cable complete with plugs
13057	Capacitor-60 mmfd. (C4)
12720	Capacitor-100 mmfd.(C10,C11,C13)
30433	Capacitor-400 mmfd.(C12,C14)
12725	Capacitor-1000 mmfd.(C15)
4886	Capacitor-.05 mfd. (C5)
4839	Capacitor-0.1 mfd. (C1)
S-3221	Capacitor-8 mfd. dry electrolytic (C16)
32572	Coil-Antenna Coil (L1,L2)
32573	Coil-Oscillator Coil (L8,L9)
S-2747	Condenser-Two gang variable tuning condenser (C2,C3,C17,C18,C19)
S-2432	Cord-Drive cord
35117	Drum-Drive cord drum and set screw
S-2398	Plug-2 prong male battery plug
12827	Plug-3 prong male battery plug
12262	Resistor-680 ohm, 1/4 watt (R10)
12454	Resistor-33,000 ohm,1/4 watt (R6)
13715	Resistor-68,000 ohm,1/4 watt (R2)
12264	Resistor-220,000 ohm,1/4 watt(R1)
13730	Resistor- 1 megohm - 1/4 watt(R4,R8)
12679	Resistor-2.2 megohm- 1/4 watt(R3,R9)
13601	Resistor-10 megohm -1/4 watt(R7,R11)

STOCK NO.	DESCRIPTION
32945	Shaft-Station selector shaft
32537	Socket-Tube socket
30585	Spring-Drive cord tension spring (Pkg.2)
S-2749	Transformer-1st I.F. Transformer (L3,L4,C6,C7)
S-2750	Transformer-2nd I.F. Transformer (L5,L6,C8,C9)
S-2751	Volume Control and Power Switch (R5,S1,S2)
	SPEAKER ASSEMBLIES (104743-1)
S-3386	Cone-Speaker cone
S-3387	Coil-Actuating Coil (L7)
S-3274	Speaker-complete
	MISCELLANEOUS ASSEMBLIES
35124	Dial-Station selector dial scale
32571	Knob-Tuning and Volume Control Knob
32667	Spring-Knob retaining spring (Pkg.5)