



RCA Victor

MODELS VRA-55 & 56

Five Tube, Single Band, A.C. Superheterodyne Radio Phonograph Combination

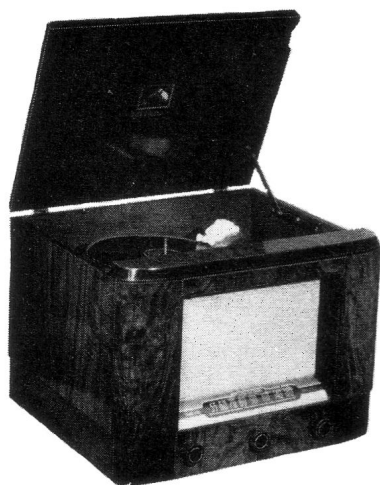
TECHNICAL INFORMATION AND SERVICE DATA

1946 No 15

SERVICE DIVISION

RCA VICTOR COMPANY LIMITED

MONTREAL



VRA 56



VRA 55

Electrical and Mechanical Specifications

FREQUENCY RANGE 540 k.c. to 1630 k.c.

Intermediate Frequency 455 k.c.

RADIOTRON COMPLEMENT

- (1) Type-6SA7 First Detector-Oscillator
- (2) Type-6SK7 Intermediate Amplifier
- (3) Type-6SQ7 2nd Det., A.V.C. & A.F.
- (4) Type-6K6GT Power Output
- (5) Type-5Y3GT Full Wave Rectifier

Pilot Lamp (2) Mazda 51, 6.3 volts, 0.2 amp.

LOUDSPEAKER (VRA 56)

Type 4" x 6" Elliptical P.M.
Voice-Coil Impedance 3.4 Ohms at 400 Cycles

POWER SUPPLY RATINGS

Rating A 105-125 volts, 50-60 cycles, 65 watts
Rating B 105-125 volts, 25-60 cycles, 65 watts

POWER OUTPUT

Undistorted 2 Watts
Maximum 3.13 Watts

PHONOGRAPH

Type Automatic
Record Capacity Twelve 10-inch or Ten 12-inch
Turntable Speed 78 r.p.m.

LOUDSPEAKER (VRA 55)

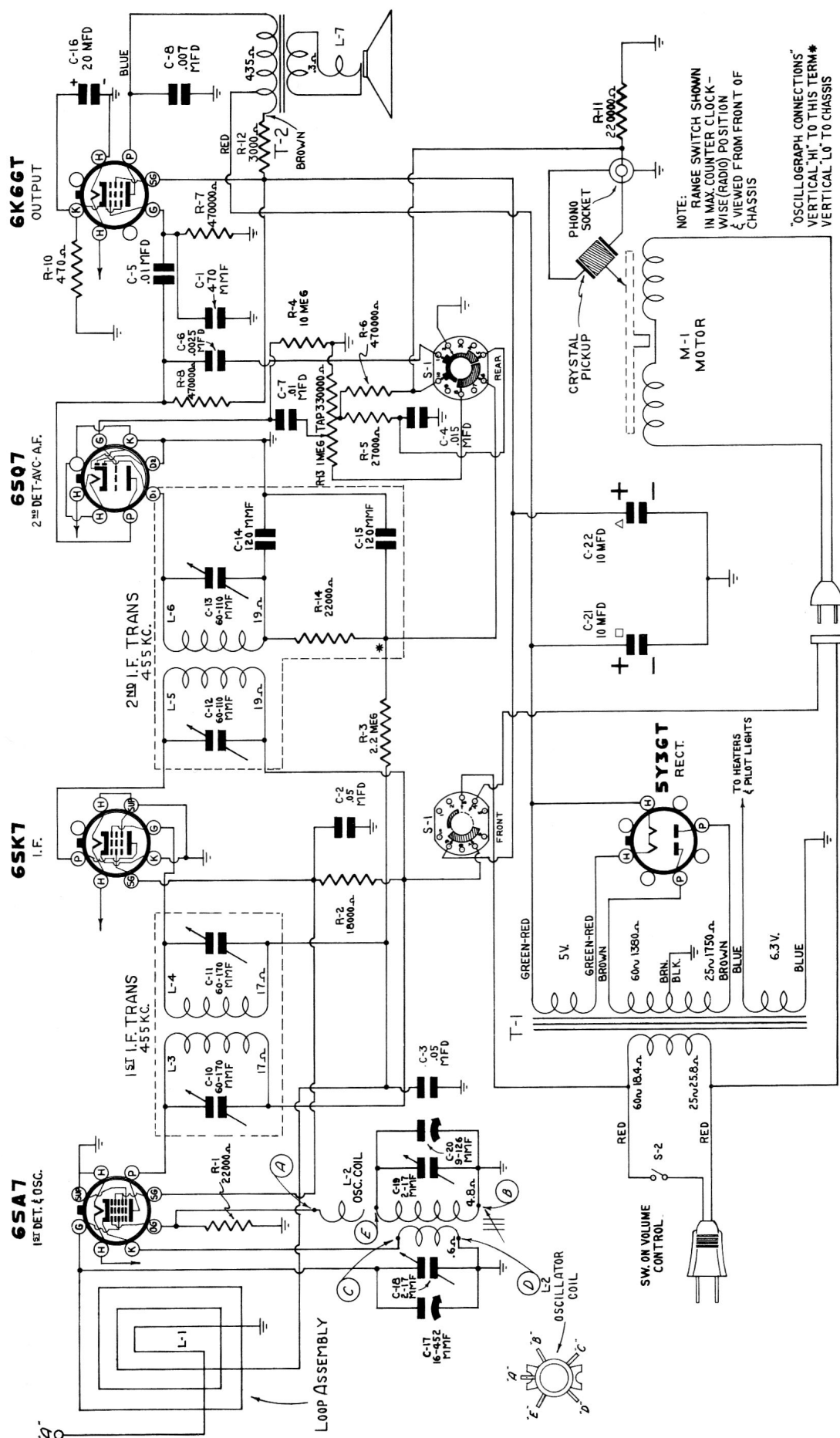
Type 12 inch permanent magnet dynamic
Voice-Coil Impedance 2.2 Ohms at 400 Cycles

General Description

Models VRA 55 & 56 are five tube, single band, A.C., superheterodyne radio and phonograph combinations. Features of design include: Built in loop antenna: I.F. transformers of efficient design: stable oscillator cir-

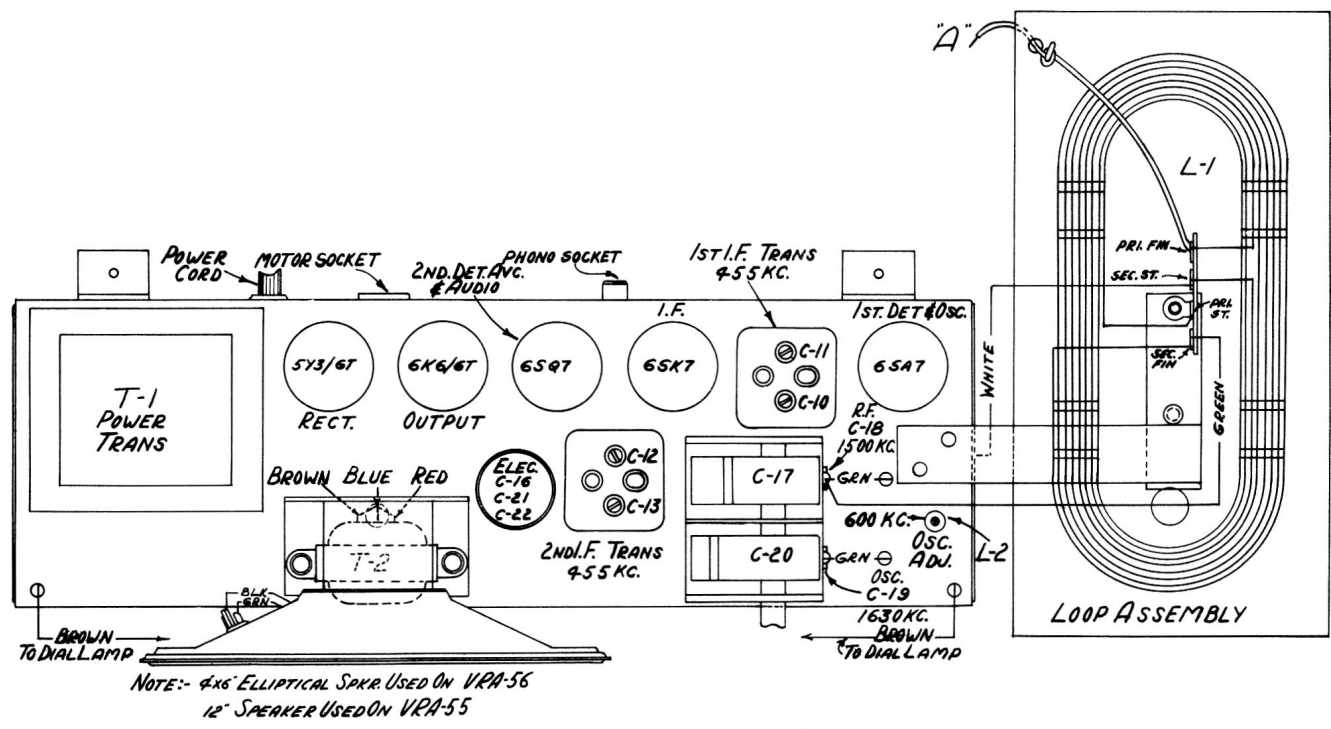
cuit: Edge lighted straight line dial: and a well filtered power supply.

Features of automatic record player: designed to play twelve ten-inch or ten twelve-inch records: light weight crystal pickup and a constant speed rim drive motor.



Schematic Circuit Diagram

Chassis Wiring Diagram



Chassis Layout and Alignment Adjustments

Alignment Procedure

Steps	Connect the high side of test-osc. to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output—
1	Grid of 6SK7 through .01 Mfd.	455 KC.	Quiet point	C12 2nd I.F.
2	Grid of 6SA7 through .01 Mfd.		at 600 KC.	C10 1st I.F.
3	Use 220 Mmfd. Dummy Ant.	1630 KC.	Out of mesh	C19 (Osc.)
4	Use 220 Mmfd. Dummy Ant.	1500 KC.	Resonance at 1500 KC.	C18 (RF)
5	Use 220 Mmfd. Dummy Ant.	600 KC.	600 KC.	Rock Osc. Slug (L2) for Max. Output
6		REPEAT	3 — 4 — 5	

Output meter alignment: Connect the meter across the 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 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, the pointer should be adjusted so that it lines up with the first mark on the left of the dial scale.

Cathode Ray alignment is the preferable method. Connections for the oscillograph are shown in the schematic diagram.

SERVICE DATA

Refer to Model No. 960260-2 Service Notes for all replacement parts and service details on automatic changer mechanism.

RADIOTRON SOCKET VOLTAGES

Type	Plate	Screen Grid	Cathode	Heater
6SA7	235 V.	80 V.	—	6.3 V.
6SK7	235 V.	80 V.	—	6.3 V.
6SQ7	90 V.	—	—	6.3 V.
6K6GT	300 V.	245 V.	15V	6.3 V.
5Y3GT	DC Output Across C22 — 300 V.			5.0 V.

The above voltages should hold within plus or minus 20% when measured with a line voltage of 117 volts.

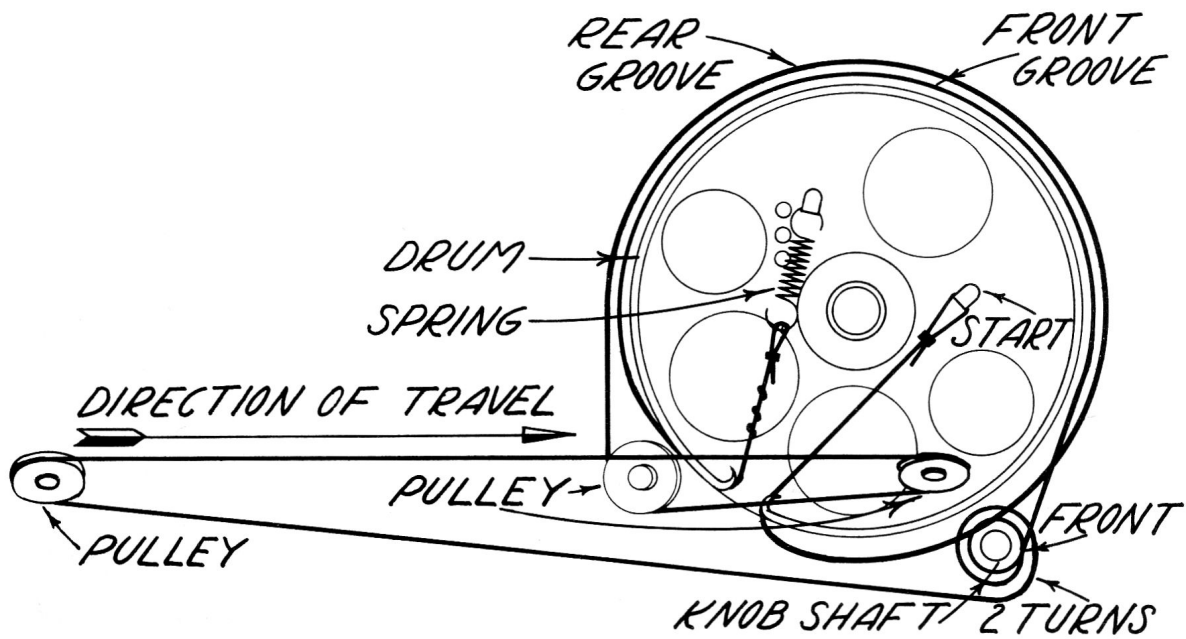
REPLACEMENT PARTS LIST FOR MODELS VRA-55 & 56

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 (VRA56)	
39644	Capacitor-470 Mmf. (C1).....	35849	Dust Cap (Pkg.3).....
36854	Capacitor-.0025 Mfd.(C6).....	S-3867	Cone-Cone & Voice Coil Assy. (L7)..
5148	Capacitor-.007 Mfd.(C8).....	S-3866	Speaker-Complete.....
11315	Capacitor-.015 Mfd.(C4).....	S-3507	Transformer-Output (T2).....
4937	Capacitor-.01 Mfd. (C5,C7).....	SPEAKER ASSEMBLIES (VRA55)	
32787	Capacitor-.05 Mfd. (C2,C3).....	31825	Dust Cap (Pkg.5).....
32240	Capacitor-Electrolytic 10-10-20 Mfd. (C16,C21,C22).....	S-2565	Cone-Cone & Voice Coil Ass'y.(L7)..
S-3497	Condenser-Variable & Drum (C17, C18,C19,C20).....	S-2566	Speaker-Complete.....
S-3480	Coil-Oscillator Coil (L2).....	S-3637	Transformer-Output (T2).....
S-3581	Indicator-Station selector pointer.	AUTOMATIC RECORD CHANGER MECHANISM	
S-3508	Loop-Ant.loop & bracket ass'y (L1)..	(Refer to Model No.960260-2 Service Notes for Replacement Parts and Service Data.)	
30681	Resistor-470 ohms 1/4 watt (R10)...	MISCELLANEOUS ASSEMBLIES	
S-3521	Resistor-3000 ohms W.W.5 watt (R12)	S-3499	Cord-Indicator Drive Cord.....
30151	Resistor-18,000 ohms 1 watt (R2)...	S-3520	Dial Scale.....
30492	Resistor-22,000 ohms 1/4 watt(R1, R14).....	S-3947	Decal-VRA56 - 1 Set.....
12738	Resistor-27,000 ohms 1/4 watt(R5)...	S-3582	Knob-Tone & Phono Switch.....
12264	Resistor-220,000 ohms 1/4 watt(R11)	S-3634	Knob-Volume & Tuning.....
12285	Resistor-470,000 ohms 1/4 watt(R6, R7,R8).....	S-3909	Lid Support - VRA56.....
12679	Resistor-2.2 Megohms 1/4 watt(R3)..	S-3910	Lid Hinges - VRA56.....
13601	Resistor-10 Megohms 1/4 watt(R4)..	11765	Pilot Light - Mazda #51.....
S-3506	Shaft-Drive shaft ass'y.....	14270	Spring-Knob retaining spring (Pkg.2).....
31418	Spring-Drive cord tension (Pkg.2)..	S-4009	Spring-Motorboard Mounting.....
S-3498	Switch-Tone & phono switch (S1)....		
32537	Socket-Tube socket.....		
S-2824	Socket-AC for phono motor.....		
14278	Socket-Phono input.....		
S-3503	Transformer 1st I.F.(L3,L4,C10,C11)		
S-3504	Transformer 2nd I.F.(L5,L6,C12,C13, C14,C15,R14).....		
S-2317	Transformer Power 60 cy. (T1).....		
S-3501	Transformer Power 25 cy. (T1).....		
S-3505	Volume Control 1 Megohm (S2,R13)...		

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

CAUTION—Before placing record player in operation, the four mounting bolts painted red, underneath the motor board, are to be removed.



DRUM SHOWN WITH
GANG AT MAX. CAPACITY

Drive Cord