RCA Victor

MASTER

Six-Tube, Two-Band, A-C, D-C, Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

1947 No. 1

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL

Electrical and Mechanical Specifications

Frequency Range
Broadcast....540-1600 kc
Short Wave....9-12 mc

Intermediate Frequency....455 kc

Tube Complement
(1) RCA-12SG7....R-F Amplifier
(2) RCA-12SA7....1st Det.—Osc.
(3) RCA-12SK7....I-F Amplifier
(4) RCA-12SQ7....2nd Det., A.V.C., and A-F Amplifier
(5) RCA-35L6-GT/G....Power Output
(6) RCA-35Z5-GT/G....Rectifier

Pilot Lamps....Mazda No. 1490, 3.2 volts

Power Output
Undistorted....1.0 watts
Maximum....1.5 watts

Loudspeaker
Size....4 x 6" elliptical P.M.
V.C. Impedance....3.4 ohms at 400 cycles

Power Supply Rating
105-125 volts, AC, 50 or 60 cycles, or DC....27.6 watts

REPLACEMENT PARTS FOR MASTER

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		12928	Resistor-3.3 Megohms 1/4 watt(R6).	
71113	Capacitor-Trimmer (C1).....		30271	Resistor-4.7 Megohms 1/4 watt(R9).	
71121	Capacitor-Trimmer (C2).....		70390	Spring Drive Cord tension(Pkg.2)..	
12948	Capacitor-Mica 33 MMF (C9).....		70467	Shaft-Drive shaft.....	
12723	Capacitor-Mica 56 MMF (C11).....		37605	Socket-Tube socket.....	
71156	Capacitor-Ceramic 108 MMF (C8)....		S-3579	Socket-Phono socket and jack.....	
71157	Capacitor-Ceramic 146 MMF (C3)....		71112	Switch-Range and tone (S2).....	
12694	Capacitor-Mica 220 MMF (C10),..		71132	Scale-Dial scale.....	
12952	Capacitor-Mica 330 MMF (C22)...		S-3573	Transformer-1st I.F.(L11,L12,C13, C14).	
33640	Capacitor-.005 Mfd.(C23).....		S-3574	Transformer-2nd I.F.(L13,L14,C17, C18).	
34459	Capacitor-.002 Mfd.(C25).....		38410	Volume Control .5 Meg. (R8,S1)....	
32787	Capacitor-.05 Mfd.(C15,C27).....				
36248	Capacitor-.02 Mfd.(C21,C24).....				
4937	Capacitor-.01 Mfd.(C26).....				
4839	Capacitor-.1 Mfd.(C12,C16).....				
70408	Capacitor-Electrolytic 30-50 Mfd. (C28,C29)			**SPEAKER ASSEMBLIES**	
71110	Condenser-Variable (C4,C5,C6,C7)..		35849	Dust Cap (Pkg.3).....	
S-3575	Coil-Antenna Coil (L3).....		S-3516	Cone-Cone & voice coil assy.(L17).	
S-3576	Coil-Oscillator Coil "A"band(L7,L8)		S-3580	Speaker-Complete.....	
S-3577	Coil-Oscillator Coil "C" band(L5,L6)		S-3572	Transformer-Output (L15,L16).....	
S-3578	Coil-Wave trap (L9,L10).....				
71114	Indicator-Station selector pointer.				
71117	Loop-Antenna loop (L1,L2).....			**MISCELLANEOUS ASSEMBLIES**	
30189	Resistor-120 ohms (R12).....				
30731	Resistor-1200 ohms 1/2 watt (R13)..		S-3935	Cabinet-Brown.....	
30694	Resistor-3900 ohms 1/2 watt (R2)...		S-3934	Cabinet-Ivory.....	
30436	Resistor-12,000 ohms 1/2 watt (R1).		34662	Cord-Drive Cord.....	
30685	Resistor-33,000 ohms 1/2 watt (R4).		S-3870	Knob-Brown.....	
12412	Resistor-47,000 ohms 1/4 watt (R7).		S-3871	Knob-Ivory.....	
14583	Resistor-220,000 ohms 1/2 watt (R3,R5,R10).....		71116	Pilot Lamp-Mazda #1490.....	
			30900	Spring-Knob Retaining Spring (Pkg.5).....	
30648	Resistor-470,000 ohms 1/2 watt(R11)				

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

MASTER

Alignment Procedure

Test Oscillator.—Connect high side of test oscillator as shown in chart Connect low side through a 0.1 mf. capacitor to common "–B." Keep the output signal as low as possible to avoid A.V.C. action.

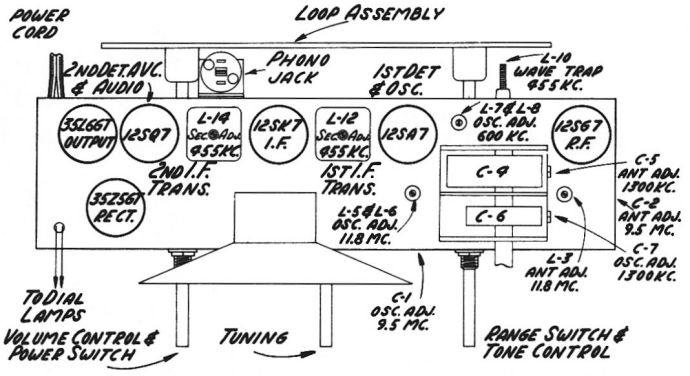
Output Meter.—Connect meter across speaker voice coil. Turn volume control to maximum clockwise position, station selector switch to broadcast maximum high position (pos. 2), for broadcast alignment and to position 3 for high frequency band.

Cathode-Ray Alignment is the preferable method. Connections for the oscillograph are shown on the schematic diagram.

Calibration Scale.—The glass tuning dial may be easily removed from the cabinet and temporarily attached to the dial back plate.

Power Supply Polarity.—For operation on d-c, the power plug must be inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

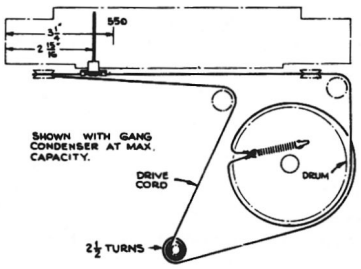
Steps	Connect high side of Test oscillator to—	Tune test set to—	Turn radio dial to—	Adjust the following for maximum peak output
1	Grid of 12SK7 in Series with .1 Mfd.	455 kc	Quiet point at 1600 kc end of dial	L13—L14 2nd I.F.
2	Grid of 12SA7 in Series with .1 Mfd.			L11—L12 1st I.F.
3	Antenna in series with 200 Mmfd.			L10 for minimum output (Wave trap)
4		1300 kc	1300 kc	C7 (Osc.) C5 (Ant.)
5		600 kc	600 kc	L8 While rocking gang
6	Repeat Steps 4 & 5			
7	Antenna in series with 50 MMF	9.5 mc	9.5 mc	C1 (Osc.)
8		9.5 mc	9.5 mc	C2 (Ant.) While rocking gang
9		11.8 mc	11.8 mc	L6 (Osc.)
10				L3 While rocking gang
11	Repeat Steps 9 & 10			



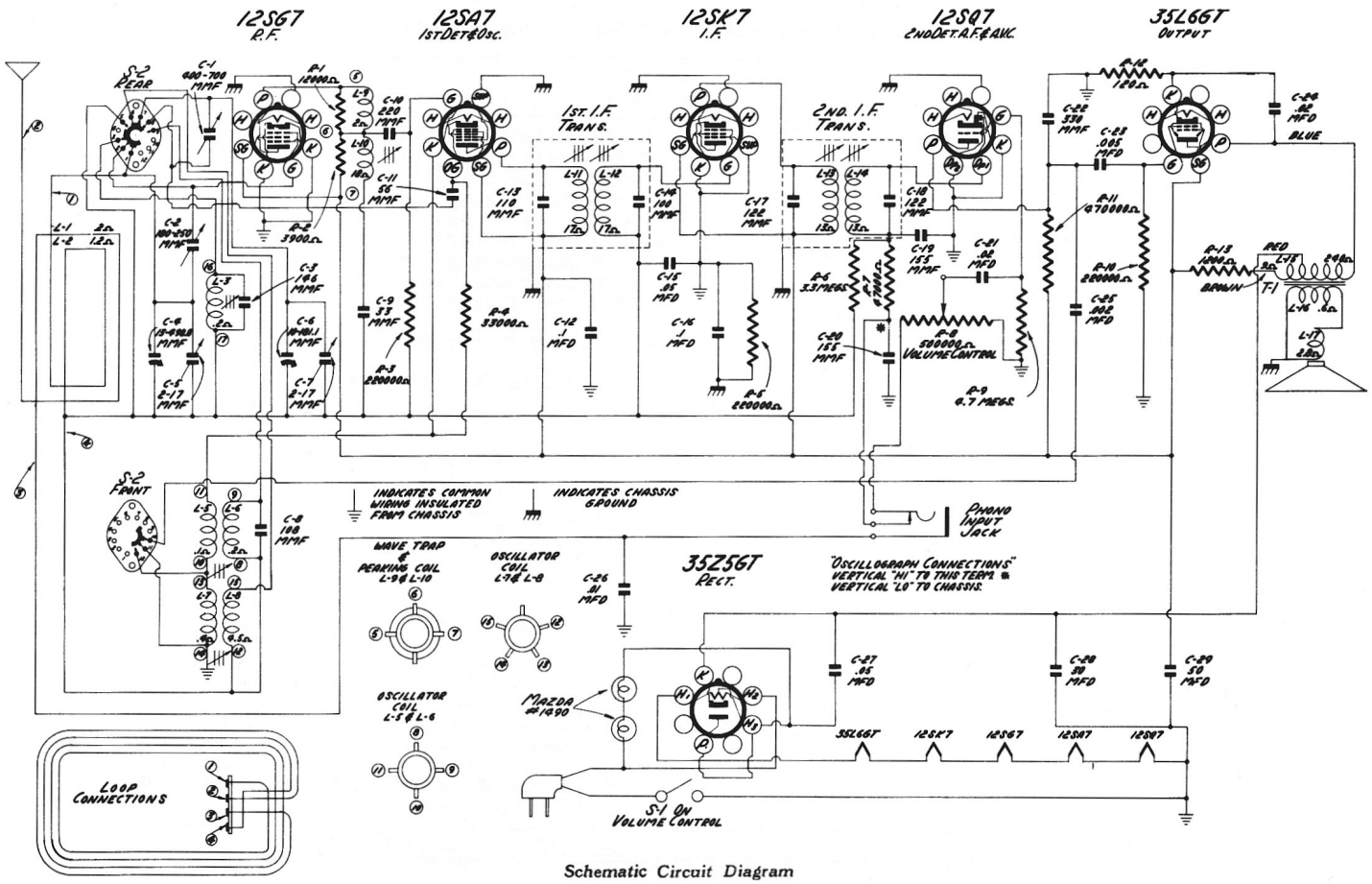
Tube and Trimmer Locations

Lead Dress

1. Dress all filament and power leads down to chassis and as far as possible from all audio grid and plate wiring.
2. Dress power cord back and away from C-21 (1st audio coupling condenser).
3. Dress C-21 toward 12SQ7 socket and away from the switch.
4. Dress C-24 (output by-pass condenser) down to chassis.
5. Dress blue lead from phono jack to volume control in air and away from output transformer.
7. Dress all leads and parts away from oscillator coils.
8. Dress C-10 (R.F. coupling condenser) back to chassis.
9. Avoid excessive lead lengths in C-3 (short wave fixed trimmer) and short wave antenna coil.
10. Dress pilot light leads (above chassis) toward dial support and away from the 35Z5 tube.



Note: C19-C20 built in 2nd I.F. Transformer



Schematic Circuit Diagram