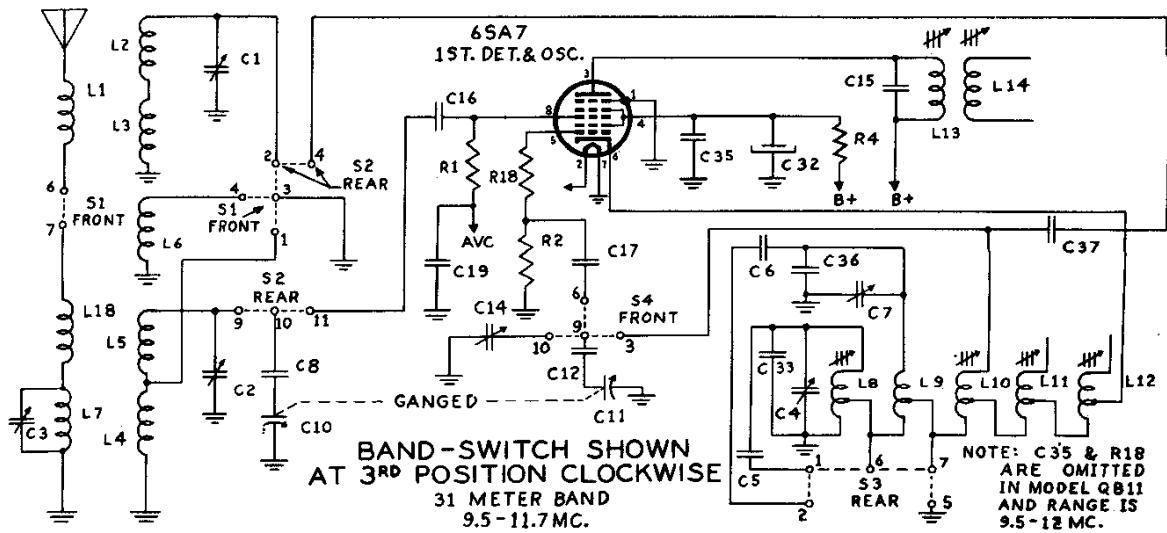
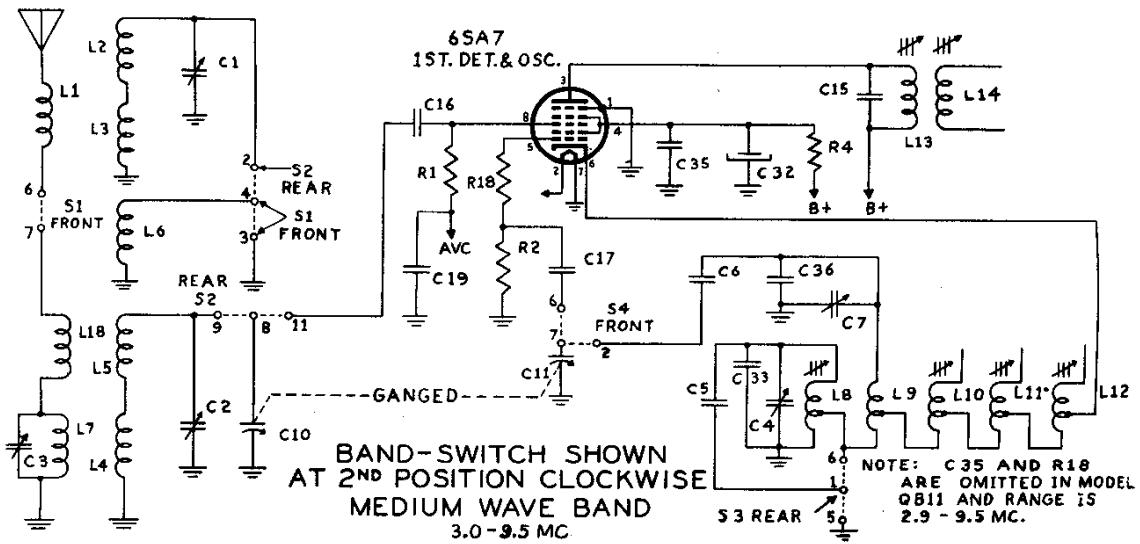
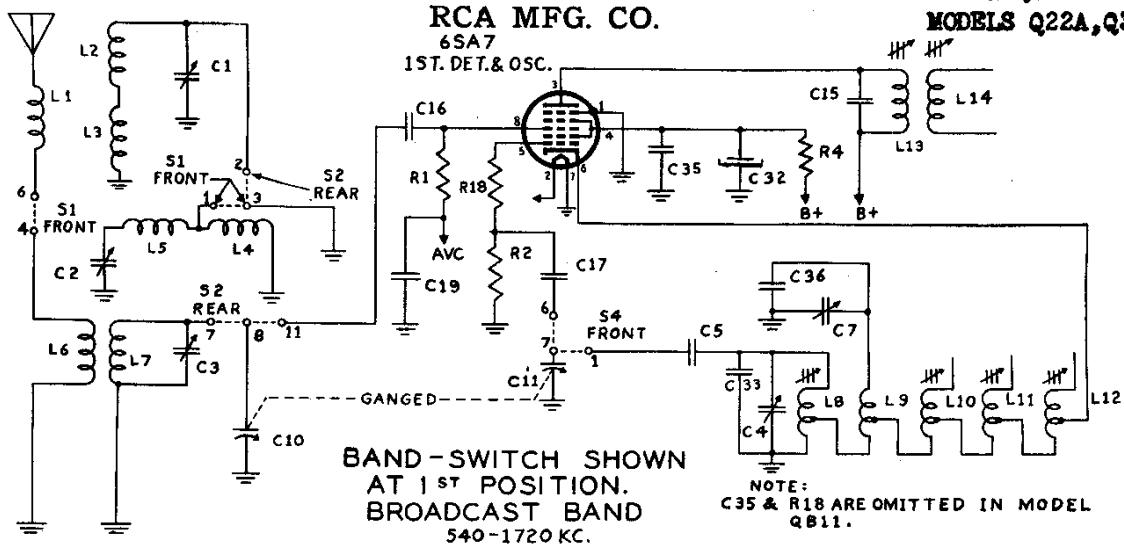


R.C.A. Victor Co., Inc.

	Model: Q22A	Chassis:	Year: Pre 1948
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
Riders Volume 15 - RCA 15-9			
Riders Volume 15 - RCA 15-10			
Riders Volume 15 - RCA 15-13			
Riders Volume 15 - RCA 15-14			
Riders Volume 15 - RCA 15-15			

MODEL QB11
MODELS Q22A, Q32

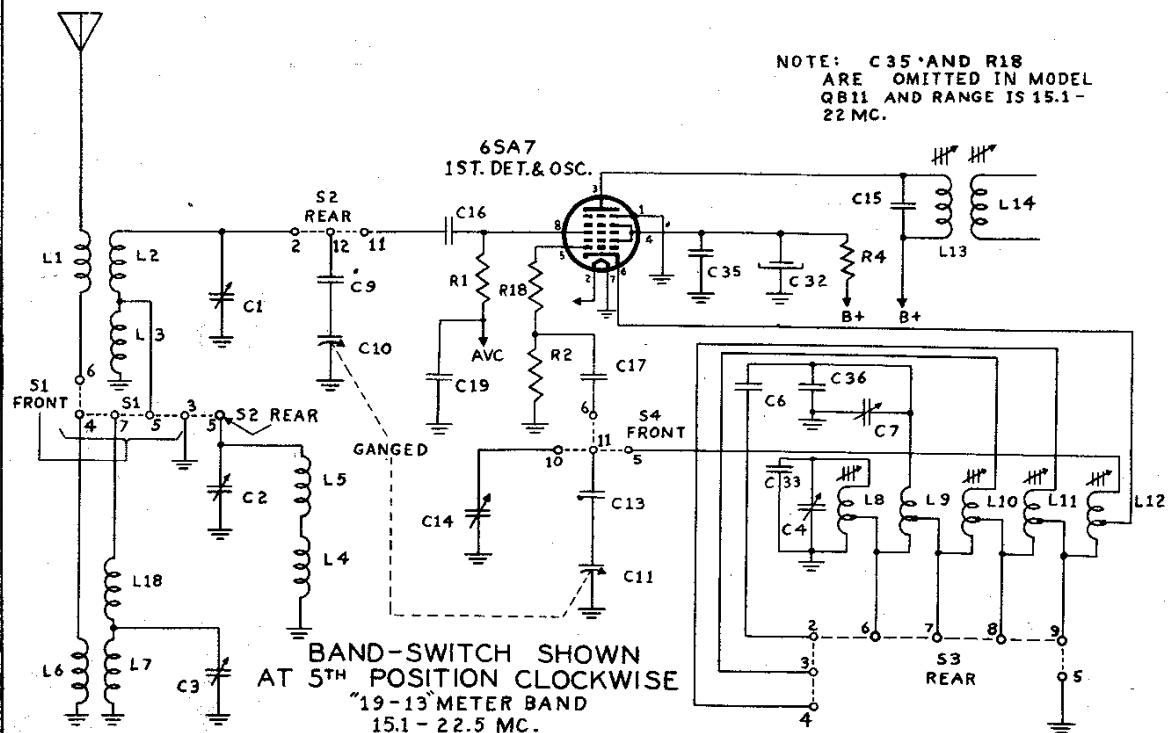
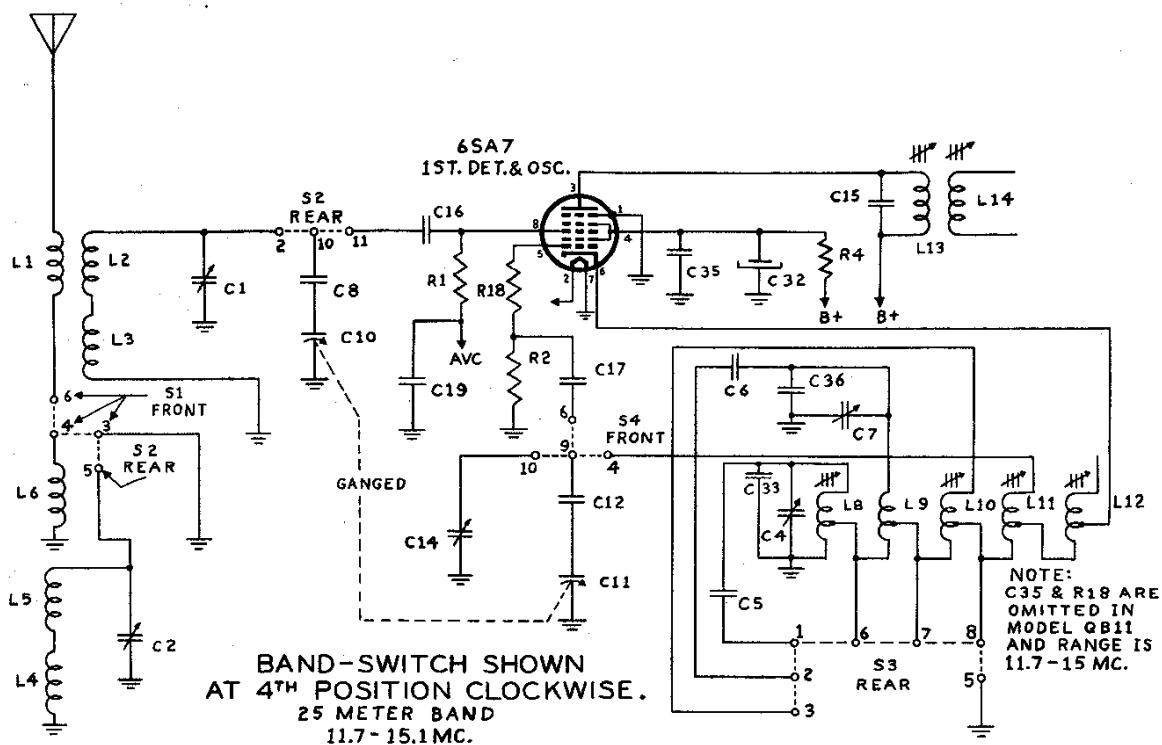


"clarified schematics"

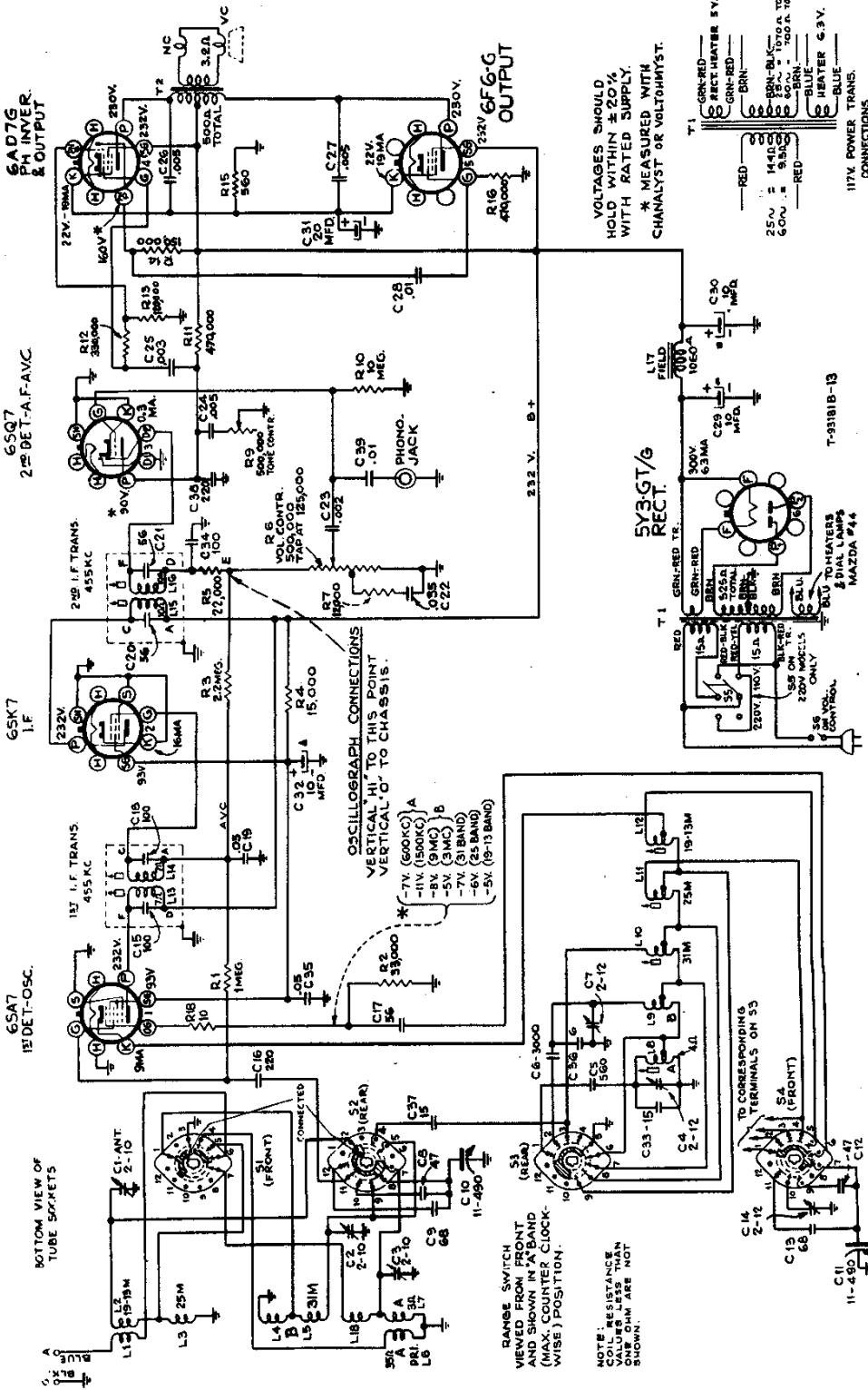
PAGE 15-10 RCA

MODEL QB11
MODELS Q22A, Q32

RCA MFG. CO.



RCA MFG. CO.



For Clarified schematics see pp. 15-9, -10.

Cathode-Ray Alignment is the preferable method. Connections for the oscillograph are shown on the Schematic Circuit Diagram.

Output Meter Alignment.—If this method is used, 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, and keep the oscillator output as low as possible to avoid a-v-c action.

Calibration Scale on Indicator-Drive-Cord Drum.—The tuning dial is fastened in the cabinet and cannot be used for reference during alignment; therefore a calibration scale is attached to the indicator-drive-cord drum which is mounted on the shaft of the gang condenser. The setting of the gang condenser is read on this scale, which is calibrated in degrees. The correct setting of the gang in degrees, for each alignment frequency, is given in the alignment table.

As the first step in r-f alignment, check the position of the drum. The "180°" mark on the drum scale must be vertical, and directly over the center of the gang-condenser shaft when the plates are fully meshed. The drum is held to the shaft by means of two set screws, which must be tightened securely when the drum is in the correct position.

To determine the corresponding frequency for any setting of the calibration scales, refer to the calibration scale drawing which shows the dial with 0-180° calibration scales drawn at top and bottom.

Pointer for Calibration Scale.—Improvise a pointer for the calibration scale by fastening a piece of wire to the gang-condenser frame, and bend the wire so that it points to the "180°" mark on the calibration scale when the plates are fully meshed.

Dial-Indicator Adjustment.—After fastening the chassis in the cabinet, attach the dial indicator to the drive cable with indicator at the 540 kc mark (the first mark on "A" band to the left of "550") and gang condenser fully meshed. The indicator has a spring clip for attachment to the cable.

Spread-Band Alignment.—The most satisfactory method of aligning or checking the spread-band ranges is on actual reception of short-wave stations of known frequency, by adjusting the magnetic-core oscillator coil for each spread-band so that these stations come in at the correct points on the dial.

In exceptional cases, when the set is being serviced in a location where the noise level is high enough to prevent reception of short-wave stations, a test-oscillator may be used for alignment, but an extremely high degree of accuracy is required in the frequency settings of the test-oscillator, as a slight error will produce considerable inaccuracy on the spread-band dials. The frequency settings of the test-oscillator may be checked by one or both of the following methods:

- Determine the exact dial settings of the test-oscillator (for frequencies at or close to the specified alignment frequencies) by zero-beating the test-oscillator against short-wave stations of known frequency.
- Use harmonics of the standard-broadcast range of a test-oscillator, first checking the frequency settings on this range by means of a crystal-controlled oscillator, or by zero-beating against standard broadcast stations.

When a test oscillator is employed for spread-band alignment, a final check should be made on actual reception of short-wave stations of known frequency, and the magnetic-core oscillator coil for each band should be retouched so that the stations come in at the correct points on the dial.

Frequency Ranges

Standard Broadcast ("A" Band)	..... 540-1,720 kc (556-174 m)
Medium Wave ("B" Band)	..... 3.0-9.5 mc (100-31.6 m)
"31" Meter Spread Band	..... 9.5-11.7 mc (31.6-25.6 m)
"25" Meter Spread Band	..... 11.7-15.1 mc (25.6-19.9 m)
"19-13" Meter Spread Band	..... 15.1-22.5 mc (19.9-13.3 m)

Intermediate Frequency 455 kc

Tuning Drive Ratio 25 to 1

Power Supply Ratings

Symbol	Voltages	Frequency (cycles)	Watts
Rating A	105-125	50-60	65
Rating B	105-125	25-60	65
Rating C	105-125, 200-250	50-60	65

(Shipped in 225-250 volt position)

Victrola Attachment.—A jack is provided on the rear of chassis for connection to a Victrola Attachment. The cable from the attachment should be terminated in a Stock No. 31048 plug.

When Victrola is not in use its plug should be removed. When Victrola is in use the volume control on the radio should be at minimum end, if necessary, tune set off frequency from any very strong station.

Power Output Rating

Undistorted	..... 3 watts
Maximum	..... 3.5 watts

Loudspeaker

Model	..... 92517-1
Type (Electrodynamic)	..... 6½ inches
V-C Impedance at 400 c.p.s.	..... 3.4 ohms

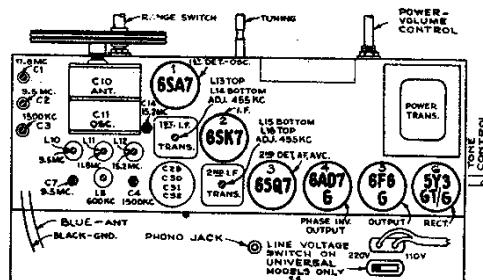
Steps	Connect the high side of the test-osc. to—	Tune test-osc. to—	Range switch	Turn radio dial to—	Adjust the following for max. peak output
1	6SK7 I-F grid in series with .01 mfd.				L15 and L18 2nd I-F Trans.
2	6SA7 1st Det. grid in series with .01 mfd.	455 kc	A	Quiet Point near 180°	L19 and L14 1st I-F Trans.
3				138.50	L11 (osc.)** C1 (ant.)
4			25 M	170	C14 (osc.)*
5	Ant. lead in series with 300 ohms				Repeat steps 3 and 4
6		15.2 mc	19-13 M	158°	L12 (osc.)**
7			9.5 mc	31 M	L10 (osc.)** C2 (ant.)
8			8.5 mc	B	C7 (osc.)***
9	Ant. lead in series with 200 mfd.	1,500 kc		28°	C4 (osc.) C3 (ant.)
10			800 kc	150°	L8 (osc.) (Rock gang)
11					Repeat steps 9 and 10

* Use minimum capacity peak if two can be obtained. Check image to determine that C14 has been adjusted to the correct peak by tuning receiver to approximately 14.23 mc (29°) where a weaker signal should be received.

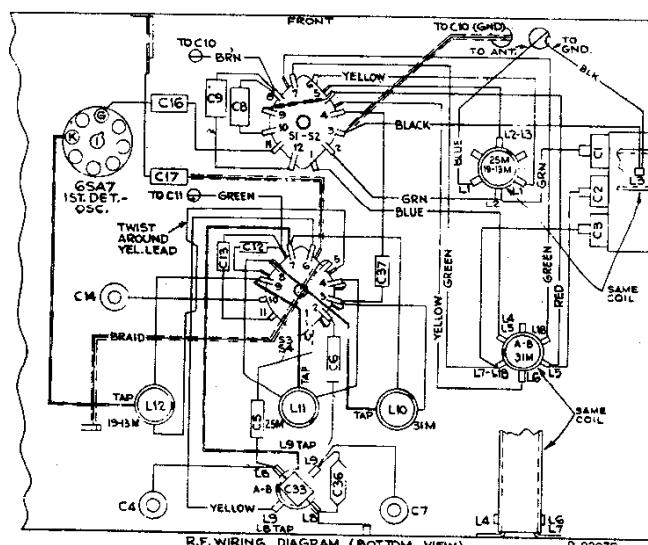
** If two peaks can be obtained use the one obtained when the core screw is farthest out (counter-clockwise).

*** Peak at minimum capacity if two peaks can be obtained.

NOTE: Oscillator tracks above signal on all bands.



Tube and Trimmer Locations

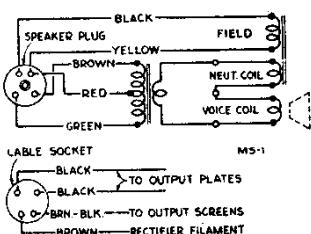


R.F. WIRING DIAGRAM (BOTTOM VIEW) P-92070

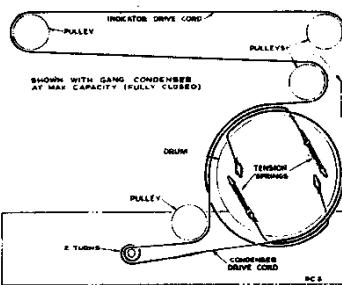
RCA MFG. CO.

Replacement Parts

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION	
CHASSIS ASSEMBLIES				
RC-507				
35640	Bracket—Drive cord pulley bracket complete with one (1) pulley	30436	Resistor—12,000 ohms, 1/4 watt (R7)	
35639	Bracket—Drive cord pulley bracket complete with three (3) pulleys	35595	Resistor—15,000 ohms, 3 watt (R4)	
35622	Bracket—Flywheel support bracket	30492	Resistor—22,000 ohms, 1/4 watt (RS)	
37976	Bracket—Tone control support bracket	30685	Resistor—33,000 ohms, 1/4 watt (R2)	
35642	Calibrator—Drive drum calibrator	30180	Resistor—120,000 ohms, 1/4 watt (R13)	
12714	Capacitor—Air trimmer (2-12 mmf.) (C4, C7, C14)	30493	Resistor—150,000 ohms, 1/4 watt (R14)	
33014	Capacitor—Electrolytic, consisting of three (3) sections of 10 mfd., 450 volts, and one (1) section of 20 mfd., 25 volts (C29, C30, C31, C32)	14983	Resistor—330,000 ohms, 1/4 watt (R12)	
34654	Capacitor—Mica trimmer, triple, 2.5-10 mmf. (C1, C2, C3)	30548	Resistor—470,000 ohms, 1/2 watt (R11, R16)	
35846	Capacitor—Ceramic, 6 mmf. (C36)	30652	Resistor—1 megohm, 1/4 watt (R1)	
36012	Capacitor—Ceramic, 15 mmf. (C37)	30849	Resistor—2.2 megohms, 1/4 watt (R3)	
45465	Capacitor—Ceramic, 15 mmf. (C33)	30992	Resistor—10 megohms, 1/4 watt (R10)	
70582	Capacitor—Ceramic, 47 mmf. (C8)	14350	Screw—28-32 square head set screw for drive drum	
35644	Capacitor—Ceramic, 47 mmf. (C12)	35633	Shaft—Range switch indicator knob shaft	
39622	Capacitor—Mica, 56 mmf. (C17)	35637	Shaft—Tuning knob shaft	
59632	Capacitor—Mica, 56 mmf. (C20, C21)	31364	Socket—Lamp socket	
70586	Capacitor—Mica, 68 mmf. (C9)	14278	Socket—Phono input socket	
35645	Capacitor—Ceramic, 68 mmf. (C13)	31251	Socket—Tube socket	
39628	Capacitor—Mica, 100 mmf. (C15, C18, C34)	31418	Spring—Drive cord or indicator cord spring.	
39636	Capacitor—Mica, 220 mmf. (C16, C38)	12007	Spring—Retaining spring for I-F transformers' core and stud assemblies	
70667	Capacitor—Mica, 560 mmf. (C5)	31261	Spring—Retaining spring for oscillator coils' core and stud assemblies	
70687	Capacitor—Mica, 3000 mmf. (C6)	35621	Switch—Range switch (S1, S2, S3, S4)	
70601	Capacitor—Tubular, .002 mfd., 200 volts (C23)	32827	Switch—Voltage switch (SS)	
70624	Capacitor—Tubular, .003 mfd., 600 volts (C25)	35636	Transformer—First I-F transformer (L13, L14, C15, C18)	
70627	Capacitor—Tubular, .005 mfd., 800 volts (C24)	35628	Transformer—Second I-F transformer (L15, L16, C20, C21)	
70648	Capacitor—Tubular, .005 mfd., 1000 volts (C26, C27)	32852	Transformer—Power transformer, 105-125 volts, 50/60 cycle or 105-125/200-250 volts, 50/60 cycle (T1)	
70610	Capacitor—Tubular, .01 mfd., 200 volts (C39)	35588	Transformer—Power transformer, 105-125 volts, 25/60 cycle (T1)	
70631	Capacitor—Tubular, .01 mfd., 600 volts (C28)	33726	Washer—"C" washer for idler pulley	
70614	Capacitor—Tubular, .035 mfd., 200 volts (C22)	2917	Washer—"C" washer for tuning knob shaft	
70615	Capacitor—Tubular, .05 mfd., 200 volts (C19)	SPEAKER ASSEMBLY		
70638	Capacitor—Tubular, .05 mfd., 600 volts (C35)	70578	STAMPED 92517-1J	
35631	Coil—Antenna coil, 19-13 meter and 25 meter bands (L1, L2, L3)	5118	Cone—Cone and voice coil assembly	
35632	Coil—Antenna coil, "A," "B" and 31 meter bands (L4, L5, L6, L7, L18)	70583	Plug—4-prong male plug for speaker	
35623	Coil—Oscillator coil, "A" and "B" bands (L8, L9)	70584	Speaker—6½-inch E.M. speaker complete with cone and "voice coil less plug and output transformer	
35624	Coil—Oscillator coil, 19-13 meter band (L12)	Transformer—Output transformer (T2)		
35625	Coil—Oscillator coil, 25 meter band (L11)	Note: If stamping on speaker in instrument does not agree with above speaker number, order replacement parts by referring to model number of instrument, number stamped on speaker and full description of part required.		
35626	Coil—Oscillator coil, 31 meter band (L10)	MISCELLANEOUS ASSEMBLIES		
35619	Condenser—Variable tuning condenser (C10, C11)	35649	Back—Cabinet back for Q22A	
35629	Control—Tone control (R9)	71038	Back—Cabinet back for Q32	
35620	Control—Volume control and power switch (R6, S6)	70579	Decal—Trade mark decal	
32624	Cord—Drive cord (approx. 28 inches overall length)	35854	Dial—Glass dial scale	
34662	Cord—Indicator cord (approx. 53 inches overall length)	36658	Extension—Tone control shaft extension for Q32	
12006	Core—Adjustable core and stud assemblies for I-F transformer	35647	Frame—Dial frame complete less indicator	
35788	Core—Adjustable core and stud for "A" and "B" band oscillator coil	70581	Grille—Grille cloth for Q22A	
31259	Core—Adjustable core and stud for 19-13 meter, 25 meter and 31 meter oscillator coil	X1611	Grille—Grille cloth for Q32	
35627	Drum—Drive drum less calibrator	70588	Indicator—Station selector indicator	
35638	Flywheel—Tuning knob shaft flywheel	35652	Knob—Range indicator knob	
5040	Plug—Contact female plug for speaker cable	35655	Knob—Range switch knob	
35641	Pulley—Drive cord pulley	35650	Knob—Tone control knob	
35630	Pulley—Idler pulley located between the range switch and tuning knob shafts	34489	Knob—Tuning or volume control knob	
34761	Resistor—10 ohms, 1/4 watt (R18)	11881	Lamp—Dial lamp (Mazda No. 44)	
30735	Resistor—560 ohms, 1 watt (R15)	14270	Spring—Retaining spring for tone control, volume control, range switch and tuning knobs	
		4982	Spring—Retaining spring for range indicator knob	



Connections and Colors of Loudspeaker and Cable



Dial-Indicator and Drive Mechanism