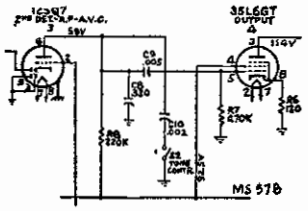
RCA 66X1, 66X2, RC-1038, 66X3, 66X4, 66X7, 66X8, 66X9, Chassis RC-1038A

These models are similar to Model 66X1, Chassis RC-1038, appearing on *pages 15-89 through 15-91 of Rider's Volume XV*. The following additions have been made to the parts list.

Stock No.	*Description*
72753	Plate—dial back plate complete with four (4) pulleys less dial for models 66X3, 66X4, 66X7, 66X8, 66X9
6134	Resistor—1200 ohms, 1 watt, (R11)
72514	Back—cabinet back for 66X7 and 66X9
72721	Back—cabinet back for 66X8
X1627	Baffle—baffle board and grill cloth for 66X7, 66X8, 66X9
Y1423	Cabinet—catalin (black) cabinet for 66X7
Y1408	Cabinet—catalin (red) cabinet for 66X8
Y1393	Cabinet—catalin (black and white) cabinet for 66X9
72822	Dial—glass dial scale for 66X3, 66X7, 66X8, 66X9
72678	Knob—control knob (black) for 66X7 and 66X9
71821	Knob—control knob (maroon) for 66X8
72295	Socket—phono

RCA 66X11, 66X12, 66X13, Chassis RC-1046C, RC-1046D, RC-1046E

These models are the same as Model 66X11, chassis RC-1046A, on *pages 17-29 and 17-30 of Rider's Volume XVII*, except for the following change. The capacitor C10 (tone-control circuit) which was connected



Capacitor C10 is here connected to the plate of the 12SQ7 a-f amplifier tube.

to the grid of the 35L6GT output tube, is now connected to the plate of the 12SQ7 a-f amplifier tube, as shown.

RCA 66X11, 66X12, 66X13, Chassis RC-1046C, RC-1046D, RC-1046E. Second Production

These models are similar to Model 66X11, chassis RC-1046A, on *pages 17-29 and 17-30 of Rider's Volume XVII*. They incorporate the changes listed in the June 1948 issue of SUCCESSFUL SERVICING, in addition to the following changes. The parts list should be amended as follows:

CHASSIS ASSEMBLIES

Change: 72896 Plate—to read
72896 Plate—dial back plate complete with drive cord pulleys for Model 66X11.

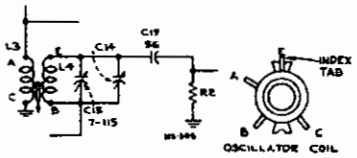
Add: 72601 Plate—dial back plate complete with drive cord pulleys for Model 66X12.

MISCELLANEOUS

Change: 73169 Back—to read
73169 Back—cabinet back for Model 66X13—walnut

Add: 73278 Back—cabinet back for Model 66X13 mahogany
71893 Decal—trade mark decal

The stock number of the dial cord should be 72953 instead of 72913. This cord is supplied in 250 foot reels. Approximately 56 inches are required for the first



Oscillator Circuit
RC-1046C, RC-1046E

Schematic otherwise identical to RC-1046,-A,-B except ant. tuning cond. C12 is 10-398 mmfd., only one dial lamp used on RC-1046E.

production and approximately 49 inches for the second production.

The differences between these various chassis are as follows. Chassis RC-1046C uses oscillator coil without capacity winding, L5. Capacitor C19 is used and a tuning capacitor without C16 is used. Two dial lamps type number 1490 are used. Chassis RC-1046E is the same as RC-1046C, except that only one dial lamp, Type 47, is used. For oscillator circuit see accompanying diagram.

73172	Capacitor—ceramic, 56$\mu\mu$f (C19)
73163	Coil—Oscillator coil complete with adjustable core and stud (L3, L4)
73164	Capacitor—Variable tuning capacitor (C12, C13, C14, C15)

RCA 612V1, 612V3, AND 612V4

These models appear on *pages* 17-31 *to* 17-43 *of Rider's Volume XVII*. The alignment tabulation should be corrected to read as follows.

Step No. 12—Repeat steps 10 and 11 for exact calibration.

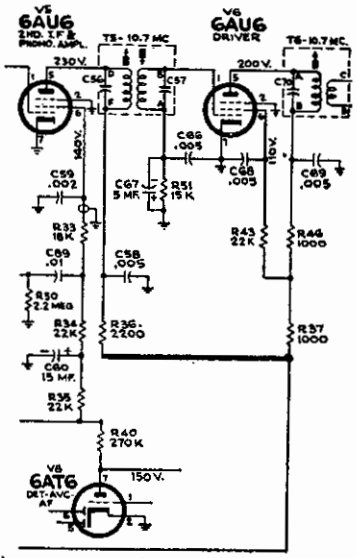
Step No. 18—Repeat steps 16 and 17 for maximum output.

On chassis RS-123, the electrolytic capacitor C1B has been changed from 15μf to 50μf.

RCA 612V1, 612V3, 612V4, Chassis RK-121

These models, appearing on *pages* 17-31 *to* 17-43 *of Rider's Volume XVII*, have been changed as follows. R36 is no longer connected to the junction of R35-R40-R22-R25. It is now connected to R37 and terminal #11 of S5. This change removes the plate voltage from V5 (6AU6) when the range switch is in the "Phono" position, and is illustrated here.

If the shielded lead of the power cable touches the speaker frame, noise will be caused. The power cable should be clamped in such a position to prevent contact with the speaker frame.



This new connection for R36 removes the plate voltage from V5 when the range switch is in the "Phono" position.

RCA Record Changer Model 960015

This model is shown on *RCD.CH. Page 15-11 of Rider's Volume XV*. If binding or freezing of turntable bearing occurs, the turntable shaft should be removed and polished with very fine emery cloth or crocus cloth. Clean off any bearing metal or foreign particles from the shaft, including the set-screw burr. Next, bevel the top edge of the top bearing slightly, with a knife or scraper. Clean the shaft and the bearing with carbon tetrachloride, removing oil and grease and being certain to clean out any chips which may have dropped into the bottom bearing. Lubricate all moving surfaces with a light coating of a very light-bodied grease.

If records do not separate properly and it is found necessary to adjust record slide actuating lever, proceed as follows:

1. Rotate separator shelf to 10" position.
2. Remove 10" landing adjustment bolt.
3. Press down on reject button and rotate turntable by hand in the normal direction until a "click" is heard (reject actuating slide latching).
4. Loosen set screws "G" and set record actuating lever ⅜ inch from bracket as indicated in Fig. 2 of service data.
5. Tighten set screws "G" and replace landing adjustment bolt.
6. Make necessary landing adjustment as described in service data.

NOTE: This method just described makes the set screw "G" more accessible and is therefore found more convenient. This method can be substituted for step No. 9 under Preliminary Adjustments.

RADIO CORP. OF AMERICA

MODELS 66X11, Ch. RC1046A; 66X12, Ch. RC-1046; 66X13, 66X14, 66X15, Ch. RC1046B

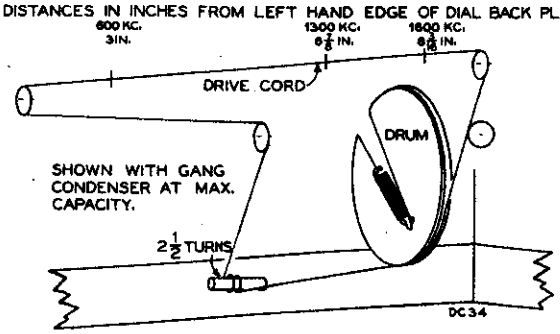
Alignment Procedure

Test Oscillator.—Connect high side of test oscillator as shown in chart. Connect low side through a .01 mf capacitor to common "—B." Keep the output signal as low as possible to avoid AVC action.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output
1	Stator of C-12 in series with .01 mfd.	455 kc	Quiet-point 1,600 kc end of dial	Sec. and pri. 2nd I-F trans.
2				Sec. and pri. 1st I-F trans.
3	Ant. lead in series with 200 mmfd.	1,600 kc	1,600 kc	C14 (osc.)*
4		1,300 kc	1,300 kc	C13 ant.
5		600 kc	600 kc	L4 (osc.) Rock in
6	Repeat steps 3, 4 and 5.			

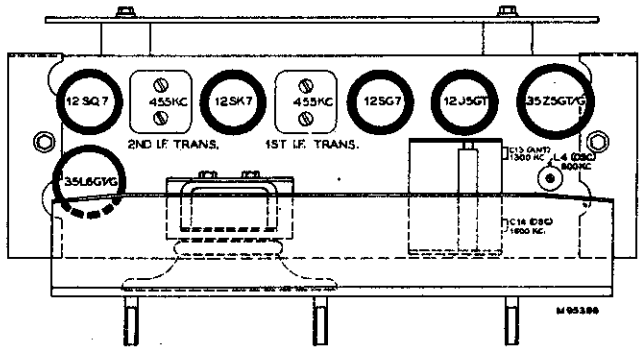
*Left hand osc. trimmer should be pre-set approx. ¼ turn from tight.

DISTANCES IN INCHES FROM LEFT HAND EDGE OF DIAL BACK PLATE



Output Meter.—Connect leads between speaker voice coil and chassis. Turn volume control to maximum clockwise, tone control to maximum highs (clockwise).

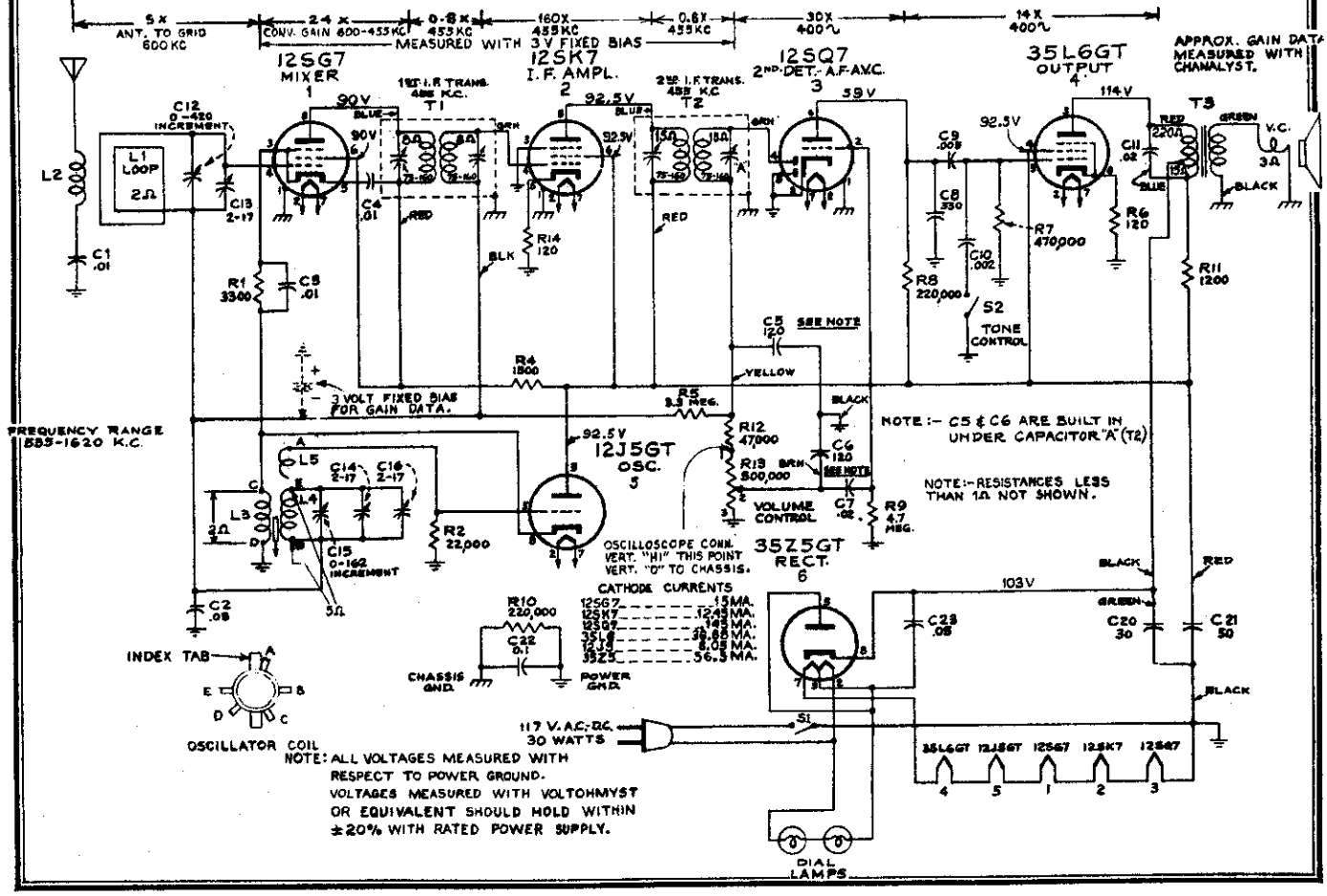
Dial Pointer Adjustment.—Rotate tuning condenser fully counterclockwise (plates closed). Adjust indicator pointer to 2⅛" from left hand edge of dial back plate.



Critical Lead Dress

1. Dress output plate bypass capacitor (C-11 .02 mf) against chassis.
2. Dress 35L6GT plate lead (red) against chassis and away from volume control, leads and terminals.
3. Dress audio coupling capacitor (C-7 .02 mf) away from 35L6GT heater leads.
4. Dress tone control lead against front apron.
5. Dress 2nd i-f yellow and brown leads away from output plate bypass capacitor (C-11, .02 mf.) and away from all heater leads.
6. Dress lead to speaker voice coil away from tuning shaft "C" washer.
7. Dress tone control capacitor (C-10, .002 mf.) away from oscillator coil.
8. Dress all uninsulated leads away from each other and away from chassis to prevent short circuits.
9. Dress blue and green leads of both i-f transformers back in shields leaving exposed lengths as short as possible.

DIAL INDICATOR AND DRIVE MECHANISM



Montgomery Ward 64WG-1050B, 1050D, 74WG-1050D

These models are the same as Model 64WG-1050A on *pages 15-75 to 15-77 of Rider's Volume XV*, except for the following changes. The 0.1-μf capacitor C-11, is connected between pin 1 of the 1R5 oscillator-detector tube and the common negative circuit instead of the chassis ground.

In the D models, a 1000-ohm resistor, R-13, is connected between pin 7 of the 3S4 output tube and the common negative circuit. The following should be added to the parts list.

Ref. No.	Part No.	Description
R-13	B84102	100 ohms, 0.05 watt, carbon

Montgomery Ward 64WG-1050C

This model is the same as Model 64WG-1050A on *pages 15-75 to 15-77 of Rider's Volume XV*, except for the following changes. The 1500-ohm resistor R-3 is now connected from the center tap of the filament of the 3S4 output tube to the common negative circuit, lug 4 on the changeover switch, instead of to the positive filament lead (pin 7) of the 1S5 oscillator-detector tube, lug 9 of the changeover switch.

A 100-ohm resistor R-12 has been connected between R-11 and the selenium rectifier.

Ref. No.	Part No.	Description
R-12	D84101	100 ohms, 2.0 watt, carbon

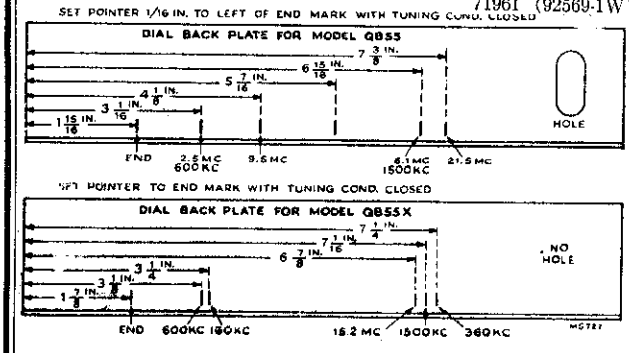
RCA QB55X Chassis RC-563-K

This model appears on *pages 17-9 through 17-11 of Rider's Volume XVII*. In some chassis two 2000-$\mu\mu$f capacitors in parallel are used in place of the specified 3900 $\mu\mu$f capacitor C7.

RCA QB55, QB55X

Model QB55, chassis RC-563A, appears *on pages 15-27 through 15-29 of Rider's Volume XV*. Model QB55X, chassis RC-563K, appears on *pages 17-9 through 17-11 of Rider's Volume XVII*. A viscoloid damper has been added to the stator plates of the oscillator section of the tuning capacitor to reduce microphonics on short wave reception.

Some of these sets have dial back plates without the score marks which may be used as a reference during alignment. The glass dial scale may be removed from the cabinet and used as a reference during alignment, or the check points indicated in the accompanying diagram may be used.



Check points to be used when aligning the RCA models QB55 and QB55X

RCA Q109 (RC-602), Q109X (RC-602A)

The following voltage - current table should be added to the service data appearing in *Rider's Manual Volume 18, pages RCA 18-3 through 18-10.*

Socket Voltages — Cathode Currents
Local-Phono-Distant Switch in Distant Position.

Tube		Plate Volts	Screen Volts	Cathode Volts	Cathode Current
1	6SG7	137	112	0	13.1 ma
2	6SA7	260	103	0	12.2
3	6SK7	235	103	1.3	13.3
4	6SQ7	86*	.....	0	0.4
5	6F6G	257	260	19.2	23.5
6	6F6G	257	260	19.2	23.5
7	6AT6	90*	.....	0	0.7
8	6U5	260	21*	0	2.1
9	5Y3G	.....	.....	355.	90.0

*Measured with Chanalyst or Voltohmyst

In LOCAL position the cathode circuit of the 6SG7, the RF amplifier, is opened ("A" Band only) and the voltages are correspondingly higher due to the absence of cathode current in this tube.

The stock number of the speaker cone should be changed to read:

No. 70972 Cone — Cone and voice coil assembly

RCA Q10, Q10A, Q10A2, Q10-2, Q10-3, Q110

This material appears in *Rider's Manual Volume 15, pages 15-5 through 15-7*. In the event that regeneration develops in the receiver, it may be due to a resonant condition due to electrolytic capacitor C21 being parallel with capacitor C11 (0.1-μf). Three methods have been used at the factory to correct this condition. These are:

(1) C11 may be 0.05-μf instead of 0.1-μf
(2) An additional 0.1-μf capacitor may be added in parallel with C11
(3) The RED and GREEN leads of the electrolytic capacitor (C21 and C22) may be interchanged

In some chassis, R1 may be 2.0 megohms instead of 2.2 megohms.

RCA 8V7, 67V1, 67AV1, 710V2

Model 8V7 appears on *pages 18-15 through 18-16 of Rider's Volume XVIII*. Models 67V1, 67AV1 appear on *pages 16-35 through 16-39 of Rider's Volume XVI*. Model 710V2 appears on *pages 18-55 through 18-60 of Rider's Volume XVIII*. An alternate Speaker (stamped 92569-1K) has been used as a substitute for the listed speaker (or speakers) in these models.

Add the following to the parts list: Under "Speaker Assemblies" add the following: 92569-1K.

70574 Cone—Cone and voice coil assembly.
31539 Plug—5 prong male plug for speaker.
37899 Transformer—Output transformer.

Replace complete speaker with Stock No. 71961 (92569-1W).

RCA 66X11, 66X12, 66X13

These models appear on *pages 17-29 through 17-30 of Rider's Volume XVII*. Some oscillator coils which were specified for the first production (RC-1046A, RC-1046, RC-1046B) of these models have been used on the second production (RC-1046C, RC-1046D, RC-1046E).

Some oscillator coils and associated coupling capacitors (C19) which were specified for the second production have been used on the first production.

If replacement is necessary — use the specified parts — the range of inductance adjustment may be insufficient if used otherwise.

RCA QU-62

This model appears on *pages 17-13,14 through 17-20 of Rider's Volume XVII*. In some instruments the speakers listed following have been used as alternates for the speakers listed in the parts list.

Speaker Assemblies 92520-1K

70574 Cone—cone and voice coil assembly
5118 Plug — 3 prong male plug for speaker
70686 Speaker—12" PM speaker complete with cone and voice coil less plug

(Used as alternate for PM speaker stamped 92469-4W)

Speaker Assemblies 92516-2K

70574 Cone—cone and voice coil assembly
5119 Plug—3 contact female plug for speaker
31539 Plug — 5 prong male plug for speaker
70573 Speaker—12" EM speaker complete with cone and voice coil less output transformer and plugs
70688 Transformer—output transformer (T4)

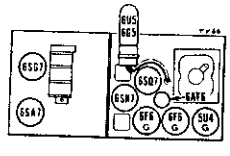
(Used as alternate for EM speaker stamped 92566-3W)

The alternate speakers will not fit on the mounting bolts used with the original speakers. If a replacement which differs from the original equipment speaker becomes necessary, it is suggested that the mounting bolts be cut off and the replacement speaker mounted using rubber grommets, spacers, and wood screws.

The top view of this model is shown on *page 17-18 of Rider's Volume XVII*. The tuning capacitor has six sections—C1 and C2 Ant, C14 and C15 R.F., and C11 and C31 Osc. The tube and trimmer location view shows only C1, C14 and C31, which are used on the "A" and "B" bands only.

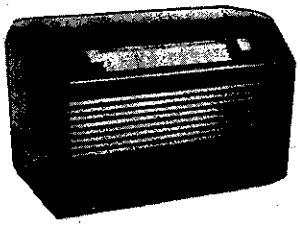
The following change should be made in the parts list on *page 17-20*. Replace Stock No. 31970 spring with Stock No. 31418 spring—Drive or indicator cord spring.

The instrument label used on some instruments is incorrect in showing tube locations. The r-f shelf assembly should be turned 90° clockwise. The correct tube locations are illustrated in the accompanying diagram.

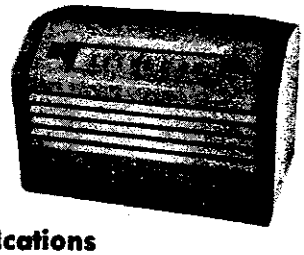


The correct tube locations for the RCA Model QU-62.

Models 66X11, 66X12, 66X13, 66X14, 66X15 RADIO CORP. OF AMERICA



← *66X13—(Wood Walnut)*

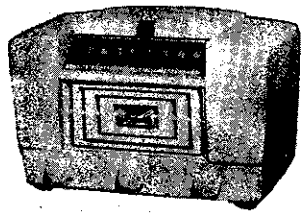


→ *66X14—(Wood Blonde)*
66X15—(Wood Mahogany).

Circuit Description

The superhetrodyne circuit is used, incorporating separate mixer, and oscillator stages; one stage of intermediate frequency amplification, a combined second detector-AVC-first audio stage, a beam power output stage, and a half wave rectifier. A loop antenna with provisions for an external antenna is used. A new standard two section variable capacitor of the cut plate type is used. The oscillator coil has a movable powdered iron core for inductance adjustment. Both I.F. transformers are compression tuned and AVC is applied to both the R.F. and I.F. stages. Optimum signal to noise ratio and I.F. stability is obtained by low initial bias on 1st detector and degenerative cathode resistor in the I.F. stage.

66X11—(Brown Plastic)
66X12—(Ivory Plastic) →



Specifications

Frequency Range.....540-1600 kc

Intermediate Frequency.....455 kc

Power Output

Undistorted.....1.0 watt
Maximum.....1.5 watts

Tube Complement

(1) RCA-12SG7.....Converter
(2) RCA-12SK7.....I.F. Amplifier
(3) RCA-12SQ7.....2nd Det., A.V.C., and A.F. Amplifier
(4) RCA-35L6GT.....Power Output
(5) RCA-12J5GT.....Oscillator
(6) RCA-35Z5GT.....Rectifier

Loudspeaker (92572-2)

Type.....5-inch PM
V. C. Impedance.....3.2 ohms at 400 cycles

Cabinet Dimensions	Height	Width	Depth
66X11 (Brown Plastic)	8 5/16"	13 5/16"	7 1/16"
66X12 (Ivory Plastic)	8 5/16"	13 5/16"	7 1/16"
66X13 (Wood—Walnut)	9 1/16"	14 1/4"	7 1/16"
66X14 (Wood—Blonde)	9 1/16"	14 1/4"	7 1/16"
66X15 (Wood—Mahogany)	9 1/16"	14 1/4"	7 1/16"

Power Supply Rating

105-125 volts, AC, 50 or 60 cycles, or DC.....30 watts

Pilot Lamp.....2 type 1490 3.2 volts, 0.16 amp.

Tuning Drive Ratio.....20.8:1

Replacement Parts

STOCK No.	DESCRIPTION
	CHASSIS ASSEMBLIES **RC-1046—66X12** **RC-1046A—66X11** **RC-1046B—66X13, 66X14, 66X15**
72571	Capacitor—Mica, 330 mmf. (C8)
70601	Capacitor—Tubular, .002 mfd., 200 volts (C10)
70606	Capacitor—Tubular, .005 mfd., 400 volts (C9)
70610	Capacitor—Tubular, .01 mfd., 400 volts (C1, C3, C4)
70611	Capacitor—Tubular, .02 mfd., 400 volts (C7, C11)
70615	Capacitor—Tubular, .05 mfd., 400 volts (C2, C23)
70617	Capacitor—Tubular, 0.1 mfd., 400 volts (C22)
39152	Capacitor—Electrolytic, comprising 1 section of 30 mfd., 150 volts and 1 section of 50 mfd., 150 volts (C20, C21)
*72604	Coil—Oscillator coil (L3, L4, L5, C15)
*72607	Condenser—Variable tuning condenser (C12, C13, C14, C16)
36228	Control—Tone control (S2)
38410	Control—Volume control and power switch (R13, S1)
34662	Cord—Drive cord (approx. 56" overall length) (NOTE: Before assembling, stretch to full length)
*72798	Dial—Dial scale (polystyrene) for 66X13, 66X14, and 66X15
*72603	Drum—Drive drum
72283	Grommet—Rubber grommet to mount tuning condenser (3 required)
*72799	Indicator—Station selector indicator for 66X13, 66X14, and 66X15
*72606	Indicator—Station selector indicator for 66X11 and 66X12
71116	Lamp—Dial lamp—Type No. 1490
*72697	Loop—Antenna loop complete (L1, L2)
*72765	Nut—Speed nut to fasten dial logotype for 66X13, 66X14, and 66X15 (2 required)
*72601	Plate—Dial back plate complete with four (4) pulleys less dial for 66X12
*72797	Plate—Dial back plate complete with four (4) pulleys less dial for 66X13, 66X14, 66X15
*72896	Plate—Dial back plate complete with four (4) pulleys less dial for 66X11
72602	Pulley—Drive cord pulley
30189	Resistor—120 ohms, ½ watt (R6, R14)
38896	Resistor—1200 ohms, 1 watt (R11)
30654	Resistor—1500 ohms, ½ watt (R4)
30733	Resistor—3300 ohms, ½ watt (R1)
30492	Resistor—22,000 ohms, ½ watt (R2)
30787	Resistor—47,000 ohms, ½ watt (R12)
14583	Resistor—220,000 ohms, ½ watt (R8, R10)
30648	Resistor—370,000 ohms, ½ watt (R7)
31417	Resistor—3.3 megohms, ½ watt (R5)
30931	Resistor—4.7 megohms, ½ watt (R9)
71798	Screw—No. 8—32 x 5/16" square head set screw for drive drum
*72608	Shaft—Tuning knob shaft
*72605	Socket—Lamp socket
37605	Socket—Tube socket
31418	Spring—Drive cord spring
70411	Transformer—First I.F. transformer (T1)
70412	Transformer—Second I.F. transformer (T2) (C5, C6)
36800	Transformer—Audio transformer (T3)
33726	Washer—"C" washer for tuning shaft

STOCK No.	DESCRIPTION
	SPEAKER ASSEMBLIES **92572-2**
72201	Speaker—5" P.M. speaker complete with cone and voice coil
	SPEAKER ASSEMBLIES **92510-1D** **92510-1F** **92510-1M** **92510-1R** **92510-1W**
70413	Speaker—5" P.M. speaker complete with cone and voice coil
	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.
	MISCELLANEOUS ASSEMBLIES
*72646	Back—Cabinet back for 66X11
*72647	Back—Cabinet back for 66X12
*72829	Back—Cabinet back for 66X13
*72830	Back—Cabinet back for 66X14
*72897	Back—Cabinet back for 66X15
*72648	Baffle—Baffle board for 66X11 and 66X12
Y1400	Cabinet—Brown plastic cabinet for 66X11
Y1401	Cabinet—Ivory plastic cabinet for 66X12
36890	Clamp—Dial clamp—L.H.—for 66X11 and 66X12
36891	Clamp—Dial clamp—R.H.—for 66X11 and 66X12
*72802	Clamp—Dial clamp (1 set) for 66X13, 66X14, and 66X15
*72652	Dial—Glass dial scale for 66X11 and 66X12
37831	Fastener—Push fastener for backs for 66X11 and 66X12
71595	Feet—Rubber feet for 66X13, 66X14 and 66X15 cabinets (4 required)
X1650	Grille—Grille cloth for 66X13, and 66X15
X1651	Grille—Grille cloth for 66X14
*72651	Holder—Jewel holder for 66X11 and 66X12
*72650	Jewel—Decorative polystyrene jewel for cabinet front for 66X11, and 66X12
71821	Knob—Control knob—maroon—for 66X11, 66X13, and 66X15
*72645	Knob—Control knob—ivory—for 66X12
*72800	Knob—Control knob—brown—for 66X14
*72649	Motif—Decorative motif cabinet top for 66X11 and 66X12
*72803	Motif—Decorative motif for cabinet for 66X13, 66X14 and 66X15
71126	Nut—Speed nut for fastening motif for 66X11 and 66X12
72765	Nut—Speed nut for fastening motif for 66X13, 66X14, and 66X15
30900	Spring—Retaining spring for knobs
*72804	Window—Dial window for 66X13, 66X14, and 66X15