General Electric Co.

Model: 600	Chassis:	Year: Pre 1951
Power:	Circuit:	IF:
Tubes:		
Bands:		

Resources

- Riders Volume 22 - CHANGES 22-4
- Riders Volume 21 - GE 21-57
- Riders Volume 21 - GE 21-58
- Riders Volume 21 - GE 21-60

General Electric 505, 506, 507, 508, 509, 530

Change Step 1 (column 2) of the Alignment Chart to read "12BA6 grid pin (1)," and Step 2 (column 2) to read "12SA7 grid pin (8)." Change the tube type numbers of the I-F Stage Gains to read: 12SA7 grid to 12BA6 grid—50 at 455 kc; 12BA6 grid to 12SQ7 diode plate—50 at 455 kc.

General Electric 509, 530

Catalogue items RWL-009 and RWL-106 should be deleted from the Parts List and replaced by the following items: RWL-025, Cord, power cord and plug (brown, heavy duty type) for Model 530; RWL-024, Cord, power cord and plug (white, heavy duty type) for Model 509.

General Electric 515, 516, 517, 518

Catalogue items RWL-009 and RWL-016 should be deleted from the Parts List and replaced by the following items: RWL-025, Cord, power cord and plug (brown, heavy duty type) for Models 515, 517, 518; RWL-026, Cord, power cord and plug (ivory, heavy duty type) for Model 516.

General Electric 521, 522

Delete items RDK-217, RDS-090 and RWL-009 from the Parts List, and add the following items: RDK-237, Knob, tuning dial wheel with scale embossed; RWL-025, Cord, power cord and plug (brown, heavy duty, type).

General Electric 600, 601, 603, 604

The description "maroon for Models 600 and 601" should be added to Stock items RAB-096, RAU-308, RHY-010, and RHB-006. The following additional replacement parts have been added to the Parts List for Models 600, 601, 603, and 604.

Part No.	*Description*
RAB-125	Back, cabinet back, tan, less hinges (603)
RAB-126	Back, cabinet back, green, less hinges (604)
RAU-327	Cabinet, cabinet body, tan (less back, handle and hardware) (603)
RAU-328	Cabinet, cabinet body, green (less back, handle and hardware) (604)
RDK-204	Knob, volume or tuning, green (604)
RDK-205	Knob, volume or tuning, tan (603)
RHB-014	Button, plug button, tan, in cabinet over alignment trimmers (603)
RHB-015	Button, plug button, green, in cabinet over alignment trimmers (604)
RHM-052	Clip, for rim-mounting speaker
RHM-062	Clip, for hole-mounting speakers
RHW-024	Cup washer, retaining washer for item RMS-217, handle shock spring
RHY-016	Handle, cabinet handle, tan (603)
RHY-017	Handle, cabinet handle, green (604)
RJP-028	Plug, battery connecting plug P1
RMS-216	Guide spring, used with item RMC-040
RMS-217	Spring, shock spring for cabinet handle
UCG-022	Capacitor, 56 $\mu\mu$f, mica, C15.

General Electric 752

A 47-$\mu\mu$f, silver mica capacitor, C3, was added to the circuit of later receivers to prevent parasitic oscillation. C3 has been added from ground to the junction of R6 and the f-m terminal of S1E. In the Visual Alignment Chart, Step 5 of FM-IF Alignment, change adjustment "Core of T4" to read "Core of T9."

Hallicrafters S-41G, S-41W

In the Alignment Data Table for these models, under the column headed Adjust Trimmers, add C-4A to Step 1, C-4B to Step 2, and C-4C to Step 3. In some models the two capacitors marked C2 have been replaced by variable iron core T6.

Jewel 349, 949

Model 349 is the same as Model 949. The Alignment Procedure for these models is the same as that for Models 921, 935 and 936, except that "Reduce input as needed to keep output near 1.28 volts (0.5 watt)" should read "to keep output near 0.4 volt (0.5 watt)," and in the third column, 12BE6 grid (mentioned twice) should read 1R5 grid. The Parts List for Models 349 and 949 is given below:

Ref. No.	*Part No.*	*Description*
C1	30-17A	Variable capacitor, 2 gang, 420 & 162 $\mu\mu$f
C2, 3, 11	32-4	Tubular paper capacitor, 0.05 μf, 200 v
C4, 6	32-29	Tubular paper capacitor, 0.01 μf, 200 v
C5, 7	32-17	Tubular paper capacitor, 0.002 μf, 200 v
C8	32-20	Tubular paper capacitor, 0.005 μf, 200 v
C9	32-5	Tubular paper capacitor, 0.05 μf, 400 v
C10	32-32	Tubular paper capacitor, 0.2 μf, 200 v
C12, 13	35-4	Mica capacitor, 100 $\mu\mu$f, 500 v
C14	31-16A	Electrolytic capacitor, 50 x 30 μf, 150 v
C15	31-17	Electrolytic capacitor, 200 μf, 15 v
R1	20-49	100K, ¼ w, 20%
R2	20-46	3.3M, ½ w, 20%
R3	20-6	2.2M, ½ w, 20%
R4	20-42	8.2K, ½ w, 20%
R5	20-57	10M, ¼ w, 20%
R6	20-53	4.7M, ½ w, 20%
R7	20-74	220K, ¼ w, 20%
R8	20-14	1M, ½ w, 20%
R9	20-31	47 ohms, 1 w, 10%
R10	20-143	2.5K, 8 w, 5% ww
R11	20-134	2.7K, 1 w, 10%
R12	20-109	1.5K, ½ w, 10%
R13, 14	20-67	1K, ½ w, 10%
R15	50-17	Volume control, 1 megohm, DPST switch (S2)
T1	61-12	Input i-f transformer
T2	61-13	Output i-f transformer
L1	62-16	Loop
L2	60-10	Oscillator coil
S1	65-4	Manual slide switch, DPDT
	73-3	Selenium rectifier, 65 ma
	80-15	4" p.m. speaker with output transformer
	120-28	Leatherette cabinet
	120-29	Front panel and baffle board
	W122-24	Volume knob
	W122-19	Selector knob
	123-9	Plastic dial.

Jewel 920A

The Alignment Procedure and Parts List for Model 920A is the same as that for Models 921, 935, 936.

Jewel 964

In later Model 964 receivers, pin 5 of the 12AT6 is connected to the junction of the i-f transformer and pin 6, instead of to the junction of the antenna coil and the 4.7-megohm resistor (going to the i-f transformer). The Alignment Procedure is the same as that given for Models 921, 935, and 936, except that 1500 kc, under Coupling Capacitor, should read 50 $\mu\mu$f; under Connections to Receiver should be Antenna (Disconnect antenna hank by unsoldering), and under Ground Connection should be B—. The seven markings on the dial represent 550 kc, 650 kc, 750 kc, 900 kc, 1100 kc, 1400 kc, and 1600 kc, respectively.

Jewel 955

The Alignment Procedure for Model 955 is the same as that given for Model 954. Model 955 also uses 12SA7, 12SQ7, 50L6, and 35Z5. The Parts List is as follows:

Ref. No.	*Part No.*	*Description*
C1,	32-17	Tubular paper capacitor, 0.002 μf, 200 v
C2	32-4	Tubular paper capacitor, 0.05 μf, 200 v
C4,	32-29	Tubular paper capacitor, 0.01 μf, 200 v
C6	32-5	Tubular paper capacitor, 0.05 μf, 400 v
C7	35-4	Mica capacitor, 100 μf, 500 v
C8	31-20	Electrolytic capacitor 50 x 30 μf 150 v
C9	30-18	Variable capacitor, 420 & 162 $\mu\mu$f
R1	20-5	22K, ½ w, 20%
R2	20-7	4.7M, ½ w, 20%
R3	20-8	10M, ½ w, 20%
R4	20-19	470K, ½ w, 20%
R5	20-14	330K, ½ w, 20%
R6	20-73	1.5K, 1 w, 20%
R7	20-93	22 ohms, ½ w, 20%
R8	20-96	22 ohms, 1 w, 20%
R9	50-11B	Volume control, 2 megohms, SPST switch
	60-12	Oscillator coil, with spring clip
61-5 or	61-14	I-f transformer, with solder tabs
	62-17	Antenna coil
	47-3	Antenna hank, 15'
	80-17	4" p.m. speaker with output transformer
	120-30A	Cabinet (specify color)
	122-15	Knob (2) (specify color)

Midwest KC-16

The mixer coil plate should be grounded to the front apron of the chassis with tinned copper braid to reduce f-m—r-f regeneration.

Montgomery Ward 94GSE-3011B

Model 94GSE-3011B differs from Model 84GSE-3011A only in type of cabinet covering and cabinet hardware as listed below:

Part Number	*Description*
MW7E179-3	Cabinet
MW20E449-2	Rear door with hinges, antenna post and line cord
MW20E461	Handle with mounting brackets.

Motorola BKOA, CT8A, GM9TA, GMOT, HNO, ILOTC, KR9A, OEO, PCO, PC9A, SR9A, Ch. 10A

The above models all use Chassis 10A. Model BKOA is used in 1950 Buick Special, Super and Roadmaster cars. It will also accommodate 1949 Buick Super and Roadmaster; also the 50-70 Series 1948, '47, '46, and '42 Buick cars. Model CT8A is used in 1948 Chevrolet. It will also accommodate 1947, '46, '42, and '41 Chevrolet cars. Model GM9TA is used in 1949 and 1948 GMC and Chevrolet trucks. Model GMOT is used in 1950, '49, and '48 GMC and Chevrolet trucks. Model HNO is used in 1950 Hudson (Pacemaker, Super, and Commodore). Model ILOTC is used in International L-Line trucks. Model KR9A is used in 1949 Kaiser and Frazer. Model OEO is used in 1950 Series 76 and 88, all 1949 and 1948 Futuramic Oldsmobile cars. Model PCO is used in 1950 and 1949 Pontiac cars. Model PC9A is used in 1949 Pontiac cars. Model SR9A is used in 1949 Studebaker cars.

Philco 50-621

This model completed production without change and appears as Run #1 only. The following corrections and additions have been made to the Parts List:

Part No.	*Description*
34-8003-1	Selenium rectifier, 100 ma, CR1
10761-3	Cabinet, brown
10761-4	Cabinet, beige
10761-5	Cabinet, green
54-4712-3	Back, brown
54-4712-4	Back, beige
54-4712-5	Back, green
Delete	Front
Delete	Shield base.

MODELS 600, 601, 603, 604

SPECIFICATIONS

CABINET:	Composition ..... plastic Height ..... 7½ inches Length ..... 10½ inches Width ..... 5½ inches Weight (with batteries) Model 600 ..... 8 pounds Model 601, 3, 4 ..... 8¾ pounds
POWER SUPPLY:	Model 600 Battery Operation only. Battery ..... Eveready No. 756, or equivalent Model 601, 3, 4 (AC or DC Operation) Voltage ..... 105–120 volts Frequency (on AC) ..... 50–60 cycles Power Consumption ..... 15 watts Battery Operation Battery ..... Eveready No. 756 or equivalent
OPERATING FREQUENCIES:	Broadcast Band ..... 540–1600 KC I-F Amplifier ..... 455 KC
POWER OUTPUT:	Undistorted ..... 130 milliwatts Maximum ..... 200 milliwatts
LOUDSPEAKER:	Type ..... Alnico PM Outside Cone Diameter ..... 4 inches Voice Coil Impedance (400 cycles) ... 3.2 ohms
TUBE COMPLEMENT:	Oscillator-Converter ..... 1R5 I-F Amplifier ..... 1T4 Detector Audio Amplifier ..... 1S5 Power Amplifier 3V4

GENERAL INFORMATION

The Model 600 or 601, 3, 4, portable radio is a four-tube superheterodyne broadcast receiver with a range of 540 to 1600 kc. The Model 600 operates on battery only, while for the Model 601, 3, 4 the power source may be either 105 to 120 volts, 50 to 60 cycles, or direct current, when a power outlet is available. The receiver will also operate from its battery source, thus making it independent of external electric power, providing excellent operation in any location where external power is not available.

BATTERY—AC OR DC OPERATION (MODEL 601, 603, 604 ONLY)

The left knob turns on the battery provided that the power plug is well inserted into the socket on the chassis.

For AC or DC supply (105-120 volts, 50 to 60 cycle operation), the same knob switches on the power when the power plug is pulled out of its socket on the chassis and inserted into the house outlet.

ELECTRICAL CIRCUIT ALIGNMENT

ALIGNMENT FREQUENCIES

R-F ..... 1620 and 1500 KC
I-F ..... 455 KC

EQUIPMENT REQUIRED

1. Test Oscillator with Tone Modulation.
2. AC Output Meter.
3. .05 Mf. Paper Capacitor.
4. Insulated Screwdriver.
5. Antenna Loop.

PROCEDURE—GENERAL

The Alignment Chart gives the alignment procedure with correct sequence of trimmer adjustments.

The chassis must be removed from the cabinet during i-f alignment.

ALIGNMENT CHART

Step	Test-Osc. Connected to:	Test-Osc. Frequency	Radio Pointer Setting	Adjust for Maximum Meter Reading
1	1T4 grid (Pin 6) in series with .05 mf capacitor	455 KC	550 KC	2nd I-F transformer (T2) primary and secondary coils.
2	1R5 grid (Pin 6) in series with .05 mf capacitor	455 KC	550 KC	1st I-F transformer (T1) primary and secondary coils.
3	Inductively coupled	1620 KC	Gang condenser completely open	C2B
4	Inductively coupled	1500 KC	Tune for max. signal. Then set dial pointer at 1500 KC on dial mark	C1B

The test oscillator output signal should be attenuated so that the output meter reading never exceeds ½ volt. Connect the capacitor listed in column 2 of Alignment Chart between the "high side" of the test oscillator and the point of input specified.

The output meter should be connected to the chassis ground; the "high side" of the oscillator output should be connected as indicated in the Alignment Chart. During the entire alignment procedure, the volume control should be at its maximum position. For alignment of the oscillator and r-f trimmers, the input signal should be inductively coupled to the radio loop antenna by connecting a 4-turn, 6-inch diameter loop of bell wire across the signal generator output terminals, and locate the loop about one foot from the radio loop antenna. To prevent possible errors in peak readings, the position of the loop with respect to the radio loop antenna should not be changed during any one set of adjustments.

STAGE GAIN AND VOLTAGE CHECKS

Stage gain by vacuum voltmeter or similar measuring device may be used to check circuit performance and isolate trouble. The gain values listed may have tolerances of 20 per cent. Reading should be taken with low signal input so that the AVC is not effective.

1. R-F STAGE GAINS

	600	601, 3, 4,	
1R5 Grid (Pin 6) to 1T4 (Pin 6)	17	20	@1000 KC
1T4 Grid (Pin 6) to 1S5 Diode Plate (Pin 3)	65	50	@ 455 KC

2. AUDIO GAINS

.02 volt at 400 cycles across volume control (R4) with control set at maximum will give approximately .050 watts output across speaker voice coil.

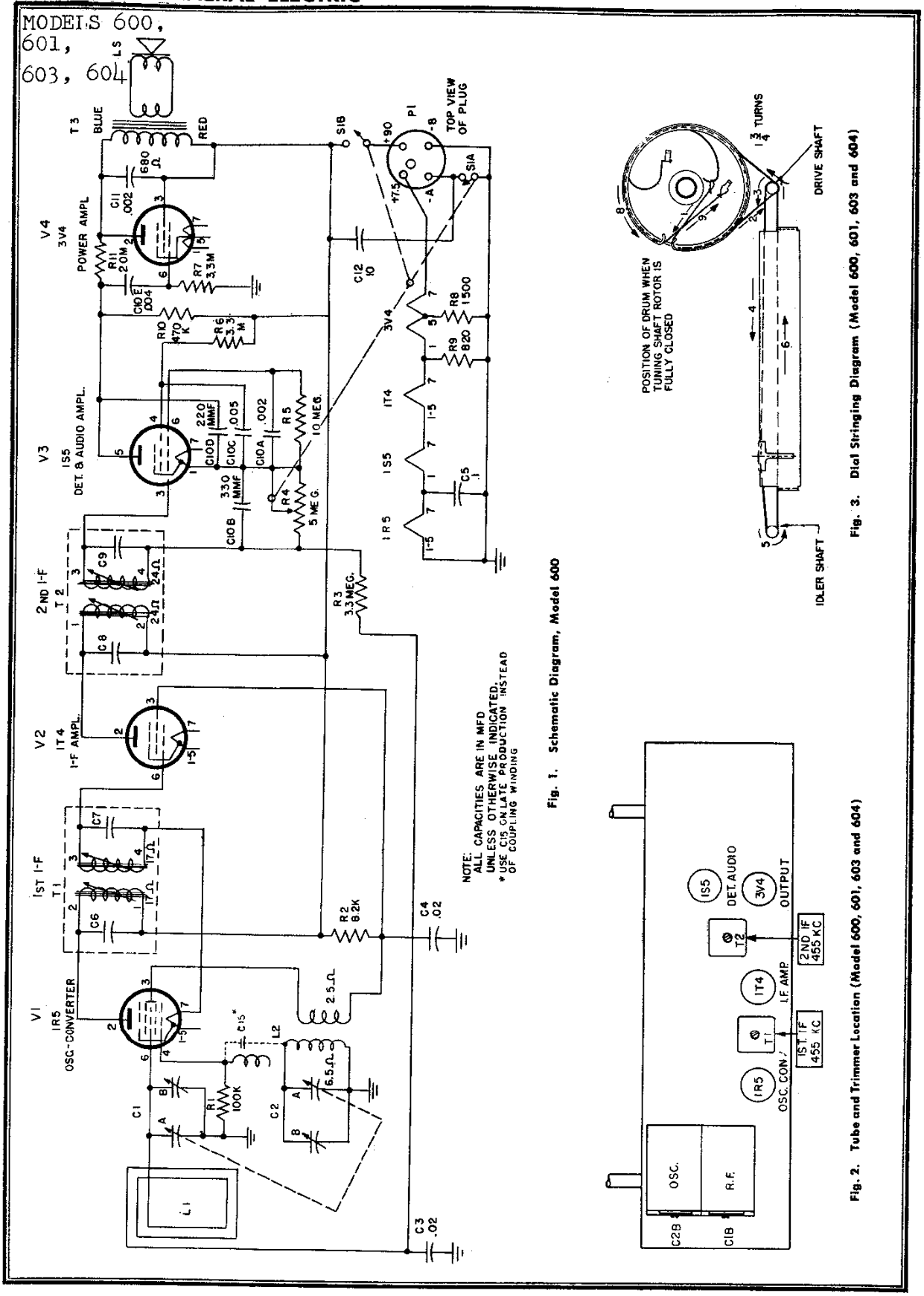
3.

DC voltage developed across oscillator grid resistor (R1) averages 2.0 volts at 1000 kc with respect to B minus.

4. SOCKET PIN VOLTAGES

Fig. 5 and 6 show voltages from all tube pins to B—. Voltage readings much lower than those specified may help localize defective components or tubes.

MODELS 600, 601, 603, 604



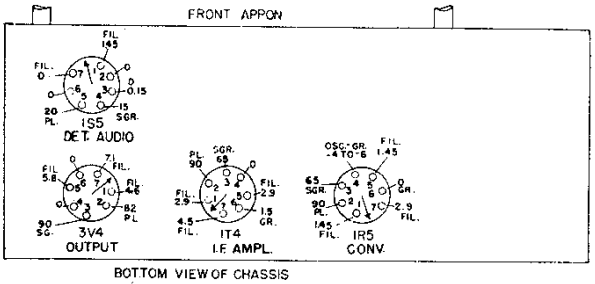
NOTE:
ALL CAPACITIES ARE IN MFD
UNLESS OTHERWISE INDICATED.
*USE C15 ON LATE PRODUCTION INSTEAD OF COUPLING WINDING

Fig. 1. Schematic Diagram, Model 600

Fig. 3. Dial Stringing Diagram (Model 600, 601, 603 and 604)

Fig. 2. Tube and Trimmer Location (Model 600, 601, 603 and 604)

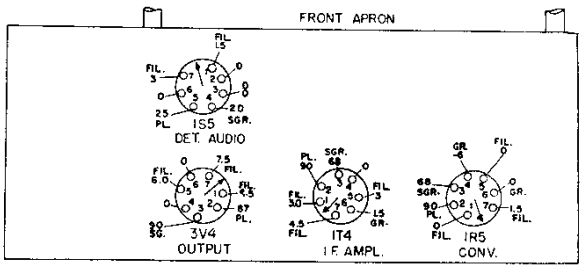
MODELS 600,
601, 603, 604



BOTTOM VIEW OF CHASSIS

DC VOLTAGE TO B MINUS MEASURED WITH 20,000 OHMS PER VOLT METER. RECEIVER OPERATING ON 120 VOLTS A.C. BATTERY VOLTAGES ARE SIMILAR.

Fig. 5. Socket Voltages, Model 600



BOTTOM VIEW OF CHASSIS

DC VOLTAGE TO B MINUS MEASURED WITH 20,000 OHMS PER VOLT METER. RECEIVER OPERATING ON FRESH BATTERY.

Fig. 6. Socket Voltages, Model 601, 603 and 604

MODELS 600, 601, 603, AND 604

REPLACEMENT PARTS LIST

Cat. No.	Symbol	Description
		UNIVERSAL REPLACEMENT PARTS
*UCC-002	C11	CAPACITOR—.002 mf, 200 v, paper
*UCC-009	C3, 4	CAPACITOR—.02 mfd, 200 v, paper
*UCC-028	C14	CAPACITOR—.05 mfd, 400 v, paper
*UCC-042	C13	CAPACITOR—.03 mfd, 400 v, paper
*UCC-048	C5	CAPACITOR—.1 mfd, 400 v, paper
*URD-045	R9††	RESISTOR—680 ohms, ½ w, carbon
*URD-047	R9†	RESISTOR—820 ohms, ½ w, carbon
*URD-053	R8	RESISTOR—1500 ohms, ½ w, carbon
*URD-071	R2	RESISTOR—8200 ohms, ½ w, carbon
*URD-097	R1	RESISTOR—100,000 ohms, ½ w, carbon
*URD-113	R10††, 14††	RESISTOR—470,000 ohms, ½ w, carbon
*URD-133	R3, 6, 7	RESISTOR—3.3 meg, ½ w, carbon
*URD-145	R5	RESISTOR—10 meg, ½ w, carbon
*URE-021	R12††	RESISTOR—68 ohms, 1 w, carbon
*URE-057	R13††	RESISTOR—2200 ohms, 1 w, carbon
*UOP-457		SPEAKER—PA speaker, 4 inches
*RHJ-005††		SPACER—For tuning capacitor
*RHM-062		CLIP—Speaker clip
*RHY-010		HANDLE—Handle for cabinet
*RJC-016		TERMINAL—Speed nut
*RJS-024††		MOUNTING PLATE—For electrolytic capacitor
*RJS-100		SOCKET—Tube socket for 1R5
*RJS-124		SOCKET—Tube socket for 1S5 & 3V4
*RJS-125		SOCKET—Tube socket for 1T4 tube
*RHC-015		CLIP—Oscillator coil clip
*RJC-016		TERMINAL—Speed nut
*RLC-101	L2	COIL—Oscillator coil
*RLL-035	L1	LOOP—Loop antenna
*RMC-040		CATCH—Spring catch
*RMS-118		SPRING—Dial spring
*RMU-049		SHAFT—Tuning shaft
*RRC-107	R4, S1	VOLUME CONTROL—Volume control and switch
*RRD-1015	R11†	RESISTOR—20 meg, ½ w, carbon
*RRW-042	R11††	RESISTOR—2300 ohms, 10 w, w.w.
*RSW-058	S2††	SWITCH—Power plug switch
*RTL-052	T1††	TRANSFORMER—I-F transformer
*RTL-051	T2†	TRANSFORMER—I-F transformer
*RTL-079	T1†, 2††	TRANSFORMER—I-F transformer
*RTO-070	T3	TRANSFORMER—Output transformer
*RWL-005††		POWER CORD
		SPECIALIZED REPLACEMENT PARTS
*RAB-096		BACK—Cabinet back
*RAU-308		CABINET—Plastic cabinet
*RCE-095††	C12A, B, C	CAPACITOR—Electrolytic capacitor 40 mf, 150 v; 40 mf, 250 v; 200 mf, 20 v
*RCE-098†	C12	CAPACITOR—Electrolytic capacitor 10 mf
*RCT-036	C1, 2	CAPACITOR—Tuning capacitor
*RCW-3015	C10A, B, 10C, D, E	CAPACITOR—Ceramic combination 220 mmf, .002 mf, .005, 220 mmf, .004 mf
*RDC-032		DIAL CORD
*RDK-136		KNOB
RDP-050		POINTER—Dial pointer
*REX-005	SR	RECTIFIER—Selenium rectifier
*RHB-006		BUTTON—Plug button
*RHC-015		CLIP—Oscillator coil clip
*RHC-016		COTTER PIN—For drive axle
*RHC-020		COTTER PIN—Cotter pin for handle
*RHE-009		EYELET—Eyelet for cabinet
*RHG-006††		GROMMET—For power cord
*RHG-018††		GROMMET—For tuning capacitor
*RHI-009		HINGE—Hinge for cabinet

*Used on other Models.
†For Model 600 only.
††for Model 601, 3, 4 only.