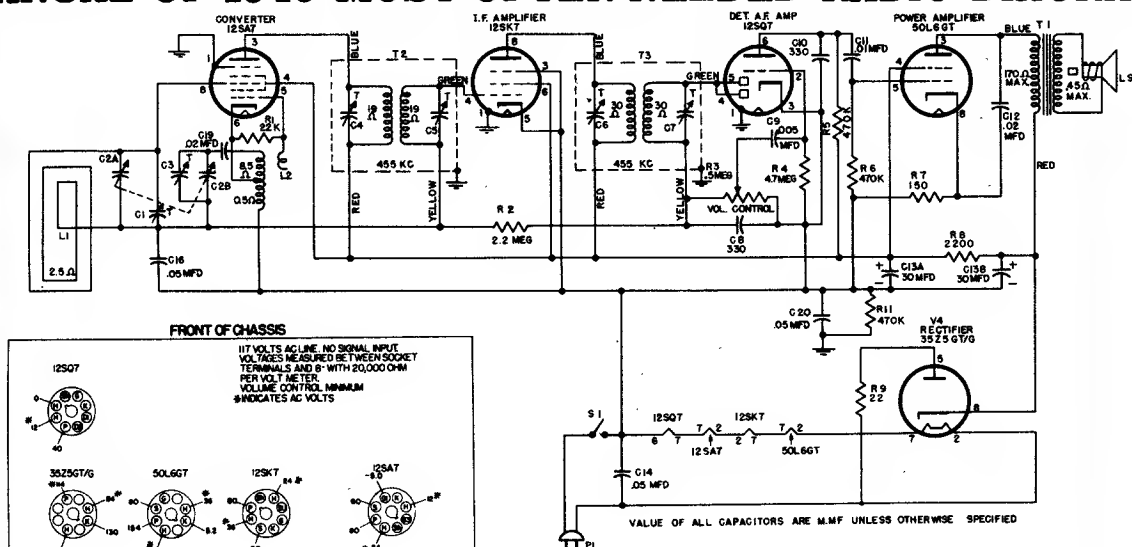




General Electric Co.			
	Model: 115	Chassis:	Year: Pre 1950
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
Beitmans 1949 39			
Riders 18 (XVIII) GE 18-13			
Riders 18 (XVIII) GE 18-14			
Riders 21 (XXI) CHANGES 21-2			

MANUAL OF 1949 MOST-OFTEN-NEEDED RADIO DIAGRAMS



I-F ALIGNMENT

Connect an output meter across the voice coil. Turn the volume control to maximum. Set test oscillator to 455 KC and keep the oscillator output as low as a readable meter reading will permit. Apply signal to the converter grid through a .05 mfd. capacitor and align progressively the trimmers in the 2nd and 1st I-F transformer cans.

R-F ALIGNMENT

Apply the R-F alignment signals through a standard IRE dummy antenna to the primary on the loop. With the gang condenser wide open, align the oscillator trimmer (C3) to 1720 KC. Change the generator signal to 1500 KC, tune the receiver to the signal and peak the antenna trimmer (C1) for maximum output.

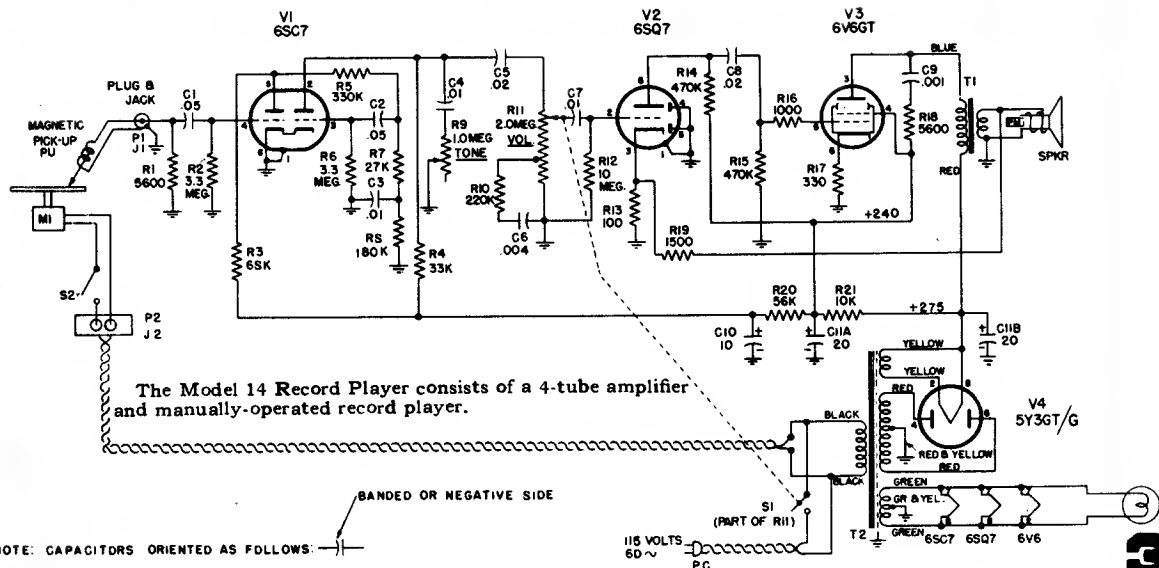
GENERAL ELECTRIC

MODELS 102, 102W, 107, 107W, 114, 114W, 115, 115W

GENERAL ELECTRIC

RECORD PLAYER

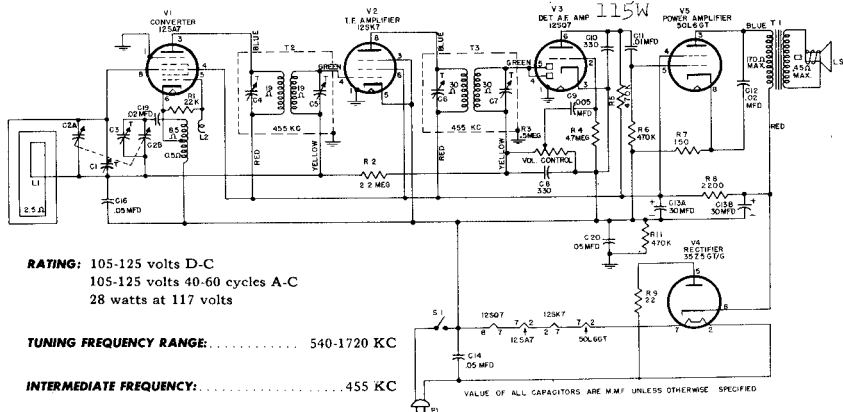
MODEL 14



GENERAL ELECTRIC CO. MODELS 102, 102W, 107,

107W, 114, 114W, 115,

115W



ALIGNMENT PROCEDURE

ALIGNMENT FREQUENCIES

I-F 455 KC
R-F 1720 and 1500 KC

The location of all trimmers is shown in Fig. 1.

I-F ALIGNMENT

Connect an output meter across the voice coil. Turn the volume control to maximum. Set test oscillator to 455 KC and keep the oscillator output as low as a readable meter reading will permit. Apply signal to the converter grid through a .05 mfd. capacitor and align progressively the trimmers in the 2nd and 1st I-F transformer cans.

R-F ALIGNMENT

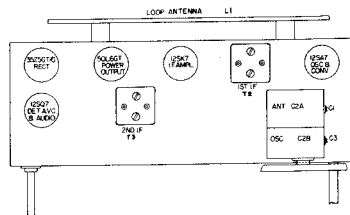
Apply the R-F alignment signals through a standard IRE dummy antenna, to the primary on the loop. With the gang condenser wide open, align the oscillator trimmer (C3) to 1720 KC. Change the generator signal to 1500 KC, tune the receiver to the signal and peak the antenna trimmer (C1) for maximum output.

PRECAUTION

If the signal generator is A-C operated, use an isolating transformer between the power supply and the radio receiver power input. The use of an isolating capacitor is not recommended, as A-C through the capacitor will introduce hum modulation and/or create the possibility of a burned-out signal generator attenuator.

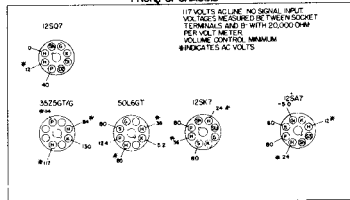
LOUDSPEAKER "ALNICO V" MAGNET DYNAMIC

Outside Cone Diameter 4 in.
Voice Coil Impedance (400 cyc) 3.2 ohms



Tube and Trimmer Location

FRONT OF CHASSIS



BOTTOM VIEW OF CHASSIS

Socket Voltage Diagram

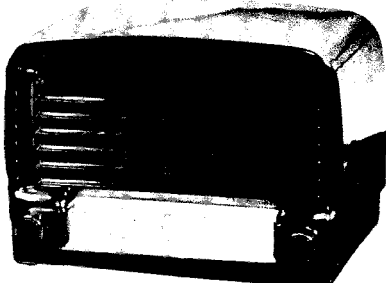
GENERAL INFORMATION

These models are 5-tube (including rectifier) superheterodyne receivers in distinctively styled brown plastic and white urea cabinets. These receivers incorporate built-in antenna, automatic volume control, oversize permanent magnet speaker and beam power output.

TUBES

Converter and Oscillator 12SA7
I-F Amplifier 12SK7
Det. Audio, AVC 12SQ7
Power Output 50L6GT
Rectifier 35Z5GT

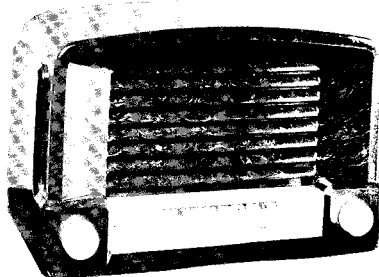
MODELS 102, 102W, 107, GENERAL ELECTRIC CO.
107W, 114, 114W, 115, 115W



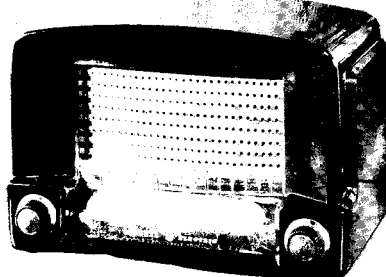
MODEL 102



MODEL 107W



MODEL 114



MODEL 115

Cat. No.	Symbol	Description
UNIVERSAL REPLACEMENT PARTS		
UCC-625	C9	CAPACITOR—.005 mf., 600 v., paper
UCC-630	C11, 17	CAPACITOR—.01 mf., 600 v., paper
UCC-631	C12, 19	CAPACITOR—.02 mf., 600 v., paper
UCC-635	C14, 16, 20	CAPACITOR—.05 mf., 600 v., paper
UCU-640	C8, 10	CAPACITOR—.330 muf., mica
UOP-487		SPEAKER—4-inch PM speaker, same as 5403D7
UOX-009		SPEAKER REPAIR KIT
URD-009	R9	RESISTOR—22 ohms, $\frac{1}{4}$ w., carbon
URD-029	R7	RESISTOR—150 ohms, $\frac{1}{4}$ w., carbon
URD-081	R1	RESISTOR—22,000 ohms, $\frac{1}{4}$ w., carbon
URD-113	R5, 6, 11	RESISTOR—470,000 ohms, $\frac{1}{4}$ w., carbon
URD-129	R2	RESISTOR—2.2 meg., $\frac{1}{4}$ w., carbon
URD-137	R4	RESISTOR—4.7 meg., $\frac{1}{4}$ w., carbon
URF-457	R8	RESISTOR—330 ohms, 2 w., carbon

SPECIALIZED REPLACEMENT PARTS

RAB-070	L1	BACK—Cabinet back with loop
RAU-028		CABINET—Brown (Model 102)
RAU-029		CABINET—Brown (Model 107)
RAU-030		CABINET—Brown (Model 115)
RAU-031		CABINET—Ivory (Model 115W)
RAU-032		CABINET—Ivory (Model 114W)
RAU-033		CABINET—Brown (Model 114)
RAU-034		CABINET—Ivory (Model 107W)
RAU-035	C1, 2A, 2B, C3	CABINET—Ivory (Model 102W)
RCT-029		CAPACITOR—2-section tuning capacitor
RDC-033		CORD—Dial drive cord, 10 yds min.

Cat. No.	Symbol	Description
SPECIALIZED REPLACEMENT PARTS (Cont'd)		
RDK-020		KNOB—Control knob, Models 102W, 107W, 114W for knurled shaft
RDK-031		KNOB—Control knob for 102, 107, and 114 for knurled shaft
RDK-121		KNOB—Control knob for Model 115 for knurled shaft
RDK-122		KNOB—Control knob for Model 115W for knurled shaft
RDS-063		SCALE—Dial scale for Models 115 and 115W
RHG-017		GROMMET—(3 used for mounting tuning capacitor)
RHH-004		SNAP FASTENER—For mounting cabinet back to cabinet
RHJ-005		SPACER—For mounting tuning capacitor
RHM-046		CLIP—For mounting dial scale
RJS-003		SOCKET—Octal tube socket
RMW-040		PULLEY—Idle pulley for dial cord
RRC-077	R3, S1	CONTROL—Volume control, includes power switch with knurled shaft
SCE-001	C13A, B	CAPACITOR—30 mf., 150 v.; 30 mf., 150 v., dry electrolytic
SDK-011		KNOB—White, for flat shaft
SDP-001		POINTER—Dial scale pointer
SDS-019		SCALE—Dial scale for Models 102, 102W, 107, 107W, 114, and 114W
SLC-020	L4	COIL—Oscillator coil
SMS-013	R3, S1	SPRING—Dial cord tension spring
STC-003		VOLUME CONTROL and switch with flat shaft
STL-007	T2	TRANSFORMER—1st IF transformer
STL-008	T3	TRANSFORMER—2nd IF transformer
STO-005	T1	TRANSFORMER—Output transformer
SWL-001		CORD—Power cord

General Electric 50

This model appears on pages 15-1 through 15-4 of *Rider's Manual Volume XV*. The following items should be added to the parts list:

Symbol Part No.	Description
R4 RRC-013	1.0-megohm volume control
RJS-060	Tube socket, miniature tube socket for 35W4 rectifier
RJX-010	Assembly, tube socket and mounting plate assembly for 35W4 rectifier
RHH-004	Snapfastener, for mounting cabinet-back

General Electric 106

This model appears on pages 16-9 through 16-10 of *Rider's Manual Volume XV*. Part no. RJX-005 should be changed to read RJX-007. Delete part no. ROP-006. Add part no. UOX-001, cone, replacement speaker cone.

General Electric 115, 115W

These models appear on page 18-15 of *Rider's Manual Volume XVIII*. The following changes have been made in the parts list.

Delete catalogue numbers and parts RDK-121 and RDK-122.

Add the following:

RAG-019	Grille, for Model 115 and 115W
RDK-150	Knob and bezel, brown, for Model 115
RDK-151	Knob and bezel, white, for Model 115W.

General Electric 118, 119

These models appear on pages 19-3 through 19-10 of *Rider's Manual Volume XIX*. The following changes should be made in the parts list. RLC-001 should be changed to RLC-061, T4, coil, oscillator coil. RAY-054 should be RAY-054.

Add:

RAY-056	Cabinet, Model 119 (oak)
RDK-037	Knob, plain, fawn colored
RDK-040	Knob, with arrow, fawn colored
RHH-004	Snapfastener, holds cabinet back to cabinet on Model 118

General Electric 123, 124

These models appear on pages 20-13 through 20-15 of *Rider's Manual Volume XX*. The following changes should be noted in the replacement parts list. Item RDS-063 is a metal dial scale, tan color, with red and white figures. Later production receivers use the same type scale except for color. The later scale, cat. no. RDS-091, is gold in color, with brown and white figures.

The following catalogue numbers have been changed: URD-127 should read URD-137, R5, Resistor, 4.7 megohms, 1/2 W, carbon; RAU-037 should read RAU-307, Cabinet, Model 124 plastic cabinet (ivory).

General Electric 303

This model appears on pages 16-37 through 16-39 of *Rider's Manual Volume XV*. The symbol for RSW-019, switch, tone control switch, should read S4. Stock no. RMX-013 should be changed to read stock no. RMX-079.

General Electric 125

This model is identical mechanically and electrically to the late production Model 123 and 124 receivers, which appear on pages 20-13 through 20-15 of *Rider's Manual Volume XX*. Model 125 is identified by its maroon color plastic cabinet. The cabinet replacement is listed as: RAU-321, Cabinet, plastic, for Model 125.

General Electric 123, 124, 125, 135, 136, 226

Models 123, 124, and 125 appear on pages 20-13 through 20-15 of *Rider's Manual Volume XX*. Models 135 and 136 appear on pages 20-16 through 20-18 of the same Volume. Model 226 appears on pages 20-27 through 20-29 of the same Volume.

The grid resistor, URD-113, 470,000 ohms, 1/2 watt, carbon, has been changed in later production receivers to URD-121, 1 megohm. This change improved the audio gain.

General Electric 135, 136, 226

Models 135 and 136 appear on pages 20-16 through 20-18 of *Rider's Manual Volume XX*. Model 226 appears on pages 20-27 through 20-29 of the same Volume.

Later production receivers use a new type output transformer having a tapped primary. The tapped section to the B+ lead is connected in series with the power-supply filter resistor at the input filter capacitor. B+ ripple current through this winding is out of phase with ripple current to the receiver tubes, thus producing bucking voltage and reducing hum. The transformer leads are connected as follows: yellow to input filter capacitor, red to filter resistor, blue to plate of input tube, and secondary leads to speaker voice coil.

The new transformer, catalogue number RTO-078, will be carried in replacement stock in place of the original early production items RTO-063 and RTO-075 for the Models 135, 136, and 226, respectively.

General Electric 141, 143

Instability on the high end of the broadcast band might be caused by an oscillator coil whose coupling winding has changed its coupling capacitance. This defect can be corrected by replacing the coupling winding with a capacitor C15 of the value 56 μ fd, catalogue number UCG-022. This capacitor connects the "high" side of the tuning capacitor C2 with the oscillator grid, pin 4, of the tube V1, 1R5.

Later production receivers always use capacitor C15 in conjunction with a new type of oscillator coil, RLC-101. This item replaces coil formerly catalogued RLC-089.

The hinge used in these receivers can easily be removed and replaced in the plastic cabinet or cover by the application of heat. To remove the hinge from the back cover or cabinet proper, heat the hinge at the half to be removed from the cabinet with a soldering iron. The hinge may then be pulled out of the groove of the plastic hinge recess. Since the cabinet plastic softens at a relatively low temperature, it will be unnecessary to apply the heat very long. To replace the hinge into the new unit, first start the hinge into the slotted recess in the plastic, then heat the hinge with the soldering iron and gently push the hinge into place.

General Electric 124, 135, 136

Model 124 appears on pages 20-13 through 20-15 of *Rider's Manual Volume XX*; Models 135 and 136 appear on pages 20-16 through 20-18 of the same Volume.

Where speakers have broken loose from cabinet mountings, or damage occurs when servicing receiver, the speaker can be re-mounted using screws in place of the original clips where the mounting bosses are broken. It is suggested that all four bosses be re-worked to use screws for mounting, since the operation of removing the speaker may result in the breaking of additional bosses.

- The repair procedure is outlined as follows:
1. Cut off speaker mounting bosses and file flat to the level of the speaker baffle ring.
 2. Drill hole 5/16-inch deep in each boss with #42 or 3/32-inch diameter drill.
 3. Mount speaker with self-tapping screws #4 \times 1/4 inch long, Shakeproof Type 25, catalogue number RHS-044.

General Electric 233 Kaiser-Frazer

This model appears on pages 18-9 through 18-36 of *Rider's Manual Volume XVIII*. Noise in the form of rattle can be attributed to mechanical insecurity of parts, loose fittings, and screw fastenings, etc. Some of these are:

1. Loose tone control knobs and loose tone and volume control shafts may rattle against the cast grille. The keyway in the tone control shaft may be spread slightly to provide a tighter fit to the control knob.
2. If the shaft assembly seems loose or tends to rattle within the grille mounting hole, a 3/4-inch length of #1 spaghetti (fabric or cambric tubing) may be slipped over the shaft assembly and into the bushing. This will displace the loose fitting and cushion against rattle.
3. Vibration of the screen which is set behind the case instrument panel grille causes a buzz sound when loose. The screen may be shimmed at its four corners to stabilize its mounting.

Suggestions for improving circuit and pick-up noise are as follows:

1. The former condition can be improved by antenna selection and careful peaking of the antenna trimmer to increase sensitivity and reduce noise. For metropolitan areas, a 62-inch antenna is quite adequate, while in outlying country areas the antenna length of 93 inches is recommended. Adjustment of the antenna trimmer is important and should not be overlooked. Every receiver installation should be adjusted for normal operation after the receiver has been operating approximately 15 minutes to reach normal operating temperatures, and with antenna fully extended. Tune in one of the weakest stations at approximately 1,200 kc, or near the higher-frequency end of the dial scale. Adjust trimmer for minimum noise level and maximum clarity on station used for test.
2. Noise pick-up may come from various sources, chiefly from ignition circuits of the car. The recommended noise suppressor and noise filter of capacitor units should be checked. To eliminate wheel static insert about 1/2 ounce of powdered graphite through the valve of all four tire tubes. This will provide a ground leakage path to dampen static radiation.