



General Electric Co.			
	Model: 118	Chassis:	Year: Pre 1950
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
Beitmans 1949 41			
Riders 19 (XIX) GE 19-8			
Riders 19 (XIX) GE 19-9			
Riders 19 (XIX) GE 19-10			
Riders 20 (XX) CHANGES 20-3			
Riders 21 (XXI) CHANGES 21-2			

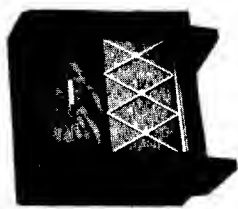
MANUAL OF 1949 MOST-OFTEN-NEEDED RADIO DIAGRAMS

GENERAL ELECTRIC

**RADIO
SERVICE DATA**

FOR

MODELS 118, 119W and 119M



119M and 119W

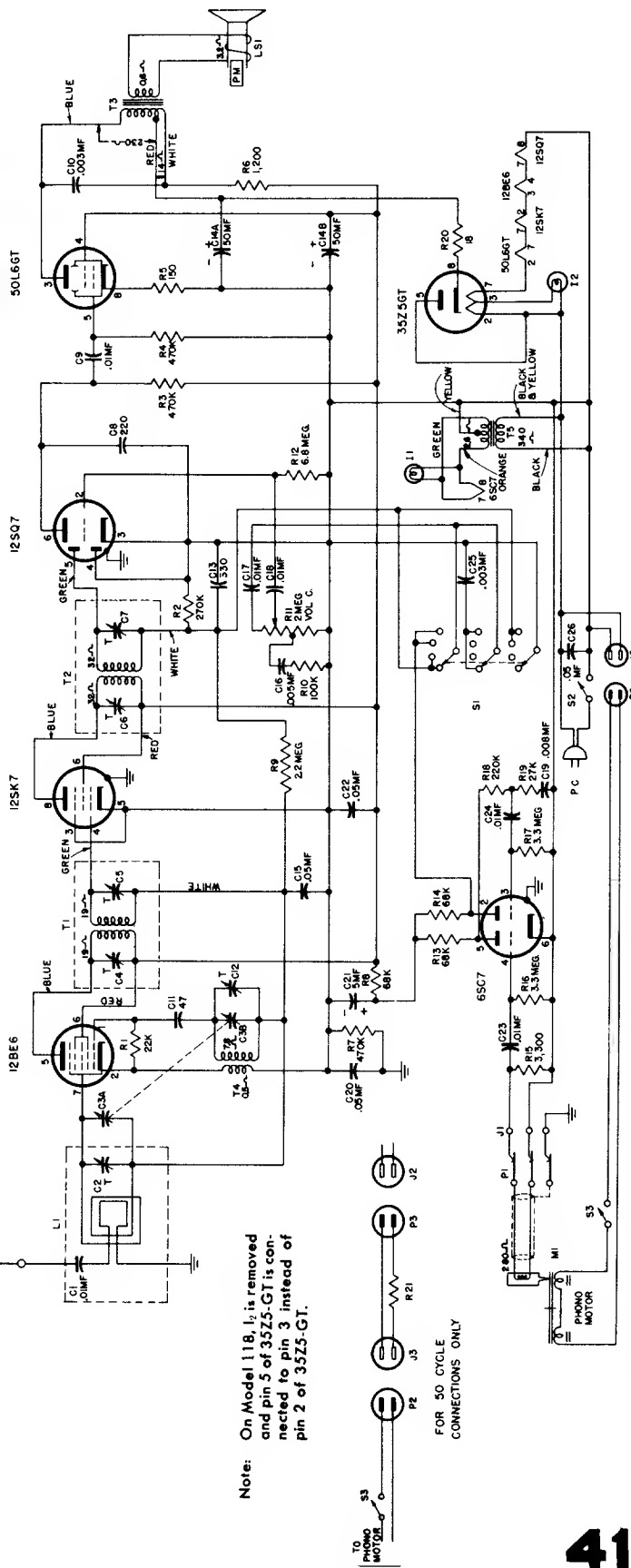
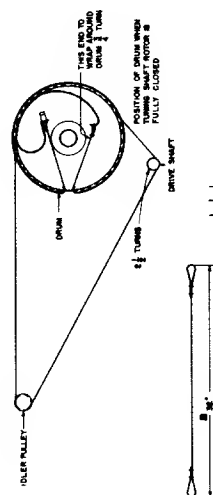
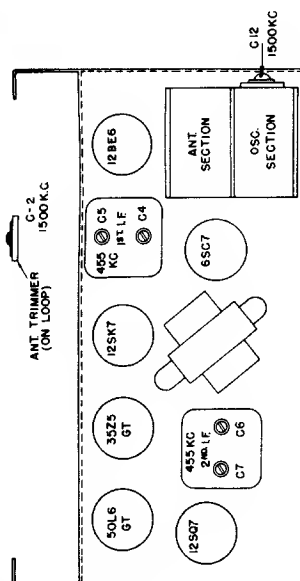
ALIGNMENT CHART

Step	Connect Test-Oscillator To:	Test Oscillator Setting	Dial Setting	Adjust Trimmers For Max. Output
1	12SK7 grid (Pin 4) In series with .05 mf.	455 kc	—	C6 and C7
2	12BE6 grid (Pin 7) in series with .05 mf.	455 kc	—	C4 and C5 Readjust C6 and C7
3	Blue wire on loop in series with 200 mmf. and 470 ohm.	1500 kc	1500 kc	C12 (Osc.); C2 (Ant.) ^a

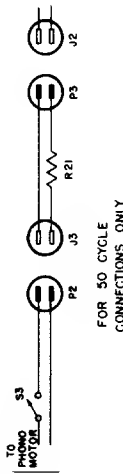
* Rock gang condenser when making alignment.

The oscillator trimmer is accessible by tilting the chassis slightly in the cabinet. The antenna trimmer is on the loop and is accessible from the rear of the cabinet. The locations of these trimmers are shown in Figure 3.

The output meter should be connected across the loudspeaker voice coil terminals. The low side of the test oscillator should be connected to B minus; the high side should be connected as indicated in the Alignment Chart.

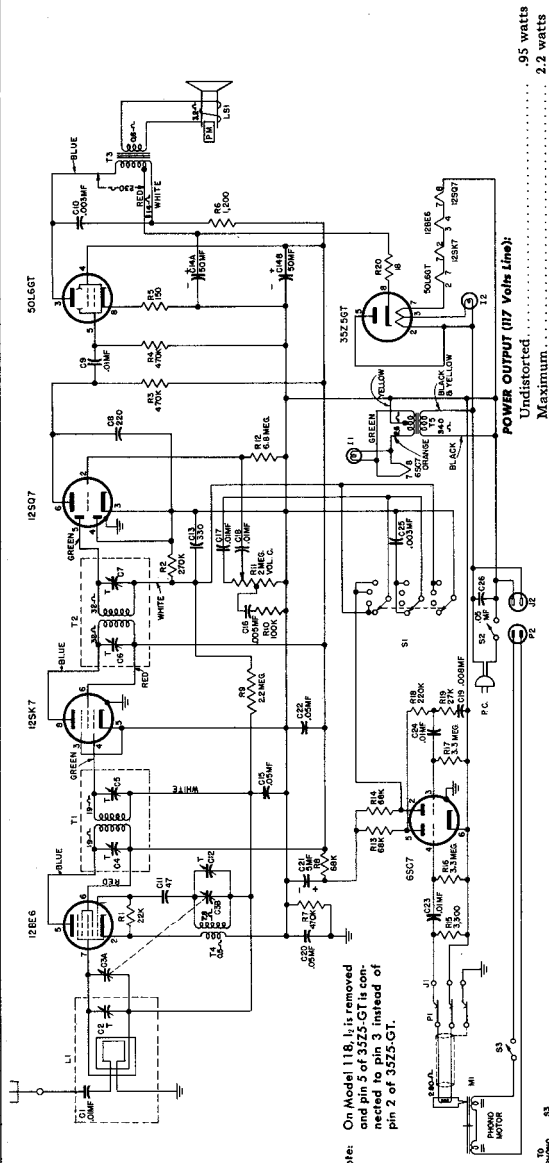


Note: On Model 118, I_p is removed and pin 5 of 35Z5-GT is connected to pin 3 instead of pin 2 of 35Z5-GT.



MODELS 118,
119M, 119W

GENERAL ELECTRIC CO.



Note: On Model 118, I_1 is removed and pin 5 of 35Z5-GT is connected to pin 3 instead of pin 2 of 35Z5-GT.

POWER OUTPUT (117 Volts Line):
Undistorted 95 watts
Maximum 2.2 watts

LOUDSPEAKER:
Model 118
Type Alnico PM Alnico PM
Outside Cone Diameter 5.25 inches 12 inches
Voice Coil Impedance at 400 cps 3.2 ohms 3.2 ohms

PHONOGRAPH PICK-UP:

Type Variable Reluctance
D-C Resistance 280 ohms

TUBE COMPLEMENT:

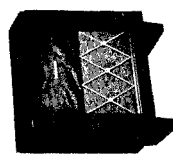
Converter-Oscillator Type 12BE6
I-F Amplifier Type 12SK7
Detector and Audio Amplifier Type 12SQ7
Output Type 50L6
Phono Preamplifier Type 6SC7
Rectifier Type 35Z5
Pilot Lamps Mazda No. 47

Dial cord wiring

Operating Frequencies:
Broadcast Band 540-1600 kc
I-F Amplifier 455 kc

ELECTRICAL (INPUT):

Voltage (A-C only) A5
Frequency 105-125
Wattage (on Radio) 35
Wattage (on Phono) 55



119M and 119W

STAGE GAIN AND VOLTAGE CHECKS

Stage gain measurements may be made with a vacuum tube voltmeter to check circuit performance and to locate stages which are not operating properly. The gain values listed may have a tolerance of 20 per cent. Readings should be taken with the AVC shorted to B minus.

1. R-F STAGE GAINS.

Antenna to 12BE6 Grid 3.5 at 1000 kc
12BE6 Grid to 12SK7 Grid 50. at 455 kc

2. AUDIO GAIN.

The power output across the speaker voice coil should be approximately $\frac{1}{2}$ watt with .95 volts at 400 cps applied between the high side of the volume control (R11) and ground.

3. OSCILLATOR GRID BIAS.

The d-c voltage developed across the oscillator grid leak resistor (R1) averages 4.5 volts at 1000 kc.

4. SOCKET PIN VOLTAGES.

Figure 4 shows typical tube pin voltages. All readings should be made from the pins to B minus unless otherwise indicated.

ELECTRICAL CIRCUIT ALIGNMENT**EQUIPMENT REQUIRED:**

1. Test oscillator with audio tone modulation.
2. A-C output meter, $1\frac{1}{2}$ volts full scale.
3. Insulated screwdriver.

ALIGNMENT PROCEDURE:

The Alignment Procedure is given in table form. All i-f alignments may be made with the chassis removed from the cabinet. However, the r-f alignments should be made with the chassis and loop mounted in the cabinet, as the relative position of the loop antenna with respect to the chassis materially affects the alignment.

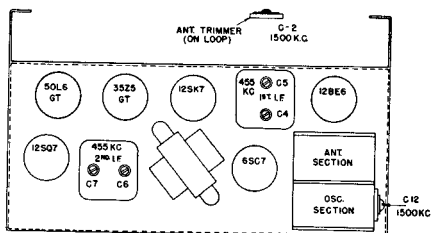
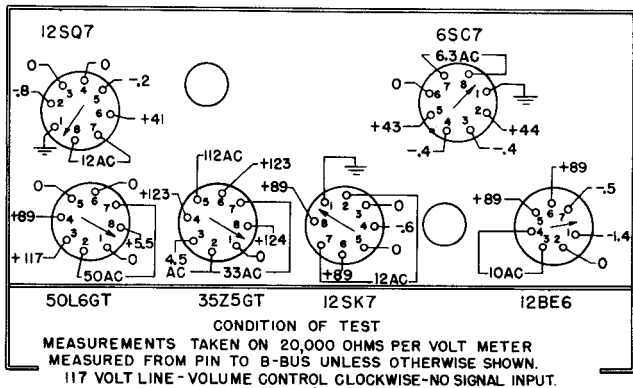
The oscillator trimmer is accessible by tilting the chassis slightly in the cabinet. The antenna trimmer is on the loop and is accessible from the rear of the cabinet. The locations of these trimmers are shown in Figure 3.

The output meter should be connected across the loudspeaker voice coil terminals. The low side of the test oscillator should be connected to B minus; the high side should be connected as indicated in the Alignment Chart. During the entire alignment procedure, the radio volume control should be in its maximum position. The test oscillator output signal should be attenuated so that the output meter reading never exceeds $1\frac{1}{4}$ volts.

ALIGNMENT CHART

Step	Connect Test-Oscillator To:	Test Oscillator Setting	Dial Setting	Adjust Trimmers For Max. Output
1	12SK7 grid (Pin 4) in series with .05 mf.	455 kc	—	C6 and C7
2	12BE6 grid (Pin 7) in series with .05 mf.	455 kc	—	C4 and C5 Readjust C6 and C7
3	Blue wire on loop in series with 200 mmf. and 470 ohms.	1500 kc	1500 kc	C12 (Osc.); C2 (Ant.)*

* Rock gang condenser when making alignment.

**Tube and Trimmer Location****Socket Voltage Diagram****BOTTOM VIEW OF CHASSIS**

MODELS 118,
119M, 119W
MODEL 150

Cat. No.	Symbol	Description	Cat. No.	Symbol	Description
UNIVERSAL REPLACEMENT PARTS					
UCC-008	C23	CAPACITOR—.01 mfd., 200 v., paper	RCE-056	C21	CAPACITOR—5 mfd., 150 v., electrolytic
UCC-025	C17	CAPACITOR—.01 mfd., 200 v., paper	RCN-014	C26	CAPACITOR—Phenolic capacitor for Model 118
UCC-028	C15, C20, C26	CAPACITOR—.05 mfd., 400 v., paper	RCR-026	C3A, C3B	CAPACITOR—Tuning capacitor for Model 119
UCC-040	C1, C24	CAPACITOR—.01 mfd., 600 v., paper	RCV-005	C3	CAPACITOR—Trimmer for Model 118
UCC-045	C26	CAPACITOR—.05 mfd., 600 v., paper	RCV-034		RCV-034—For Model 119
UCC-623	C25	CAPACITOR—.003 mfd., 400 v., paper	RDC-032		CORD—Dial cord (10 yds. min.)
UCC-620	C11	CAPACITOR—.47 mfd., mica	RDE-036		KNOB—Plain
UCC-622	C12	CAPACITOR—.20 mfd., mica	RDE-037		KNOB—With arrow
UCC-049	C13	CAPACITOR—330 mfd., mica	RDS-055		SCALE—Dial scale
UCC-050		SPRINGER—Model 118	RDS-056		SCALE—Dial scale pointer assembly
UCC-1247		SPRAKER—Model 119, Same as S525D7	RHC-008		CLIP—For mounting filter capacitor
DOX-005		SPRAKER REPAIR KIT—For Model 119	RHG-015		GROMMET—Rubber grommet for Model 118
DOX-006		SPRAKER REPAIR KIT—For Model 118	RHI-005		SPACER—For mounting tuning capacitor
URD-629	R5	RESISTOR—150 ohms, $\frac{1}{4}$ w., carbon	RHM-011		STUD—For dial idler retaining ring
URD-615	R15	RESISTOR—330 ohms, $\frac{1}{4}$ w., carbon	RHM-016		STUD—For dial idler pulley
URD-081	R1	RESISTOR—270 ohms, $\frac{1}{4}$ w., carbon	RHM-017		CLIP—Oscillator coil clip
URD-083	R10	RESISTOR—27,000 ohms, $\frac{1}{4}$ w., carbon	RHS-003		STUD—For mounting dial scale
URD-084	R10	RESISTOR—27,000 ohms, $\frac{1}{4}$ w., carbon	RHS-003		STUD—For mounting scale
URD-085	R4, R13, R14	RESISTOR—1200 ohms, $\frac{1}{4}$ w., carbon	RHS-005	P3	SPACER—Between loop and cabinet
URD-097	R27	RESISTOR—100,000 ohms, $\frac{1}{4}$ w., carbon	RIS-063		SOCKET—Octal tube socket
URD-105	R18	RESISTOR—60,000 ohms, $\frac{1}{4}$ w., carbon	RIS-067		SOCKET—For dial idler
URD-107	R18	RESISTOR—270,000 ohms, $\frac{1}{4}$ w., carbon	RIS-031		SOCKET—Tube socket for 6SC7
URD-108	R18	RESISTOR—270,000 ohms, $\frac{1}{4}$ w., carbon	RIS-033		SOCKET—Bezel pilot light socket
URD-109	C1, R4, R7, R8	RESISTOR—470 ohms, $\frac{1}{4}$ w., carbon	RIS-034	J2, J3	SOCKET—Phono pickup
URD-129	R9	RESISTOR—2.2 meg., $\frac{1}{4}$ w., carbon	RIS-092		SOCKET—Miniature for 12BE6
URD-133	R16, R17	RESISTOR—3.3 meg., $\frac{1}{4}$ w., carbon	RIS-097		SOCKET—Phono pickup
URF-051		RESISTOR—1200 ohms, $\frac{1}{4}$ w., carbon	RLC-001	T4	COIL—Oscillator coil
SPECIALIZED REPLACEMENT PARTS					
RAC-050		LID—For Model 119 walnut	RLI-026	L1	LOOP ASSEMBLY—Model 119
RAC-051		LID—For Model 119 mahogany	RMB-018		ASSEMBLY—Model 118
RAL-001		BEZEL—For pilot light	RMM-034		HOOD—Hood for dial light
RAL-002		BEZEL—For Model 119	RMM-039		HOOD—Hood for dial light
RAN-003		BASE—For Model 119 mahogany	RMS-118		SPRING—Dial cord tension spring
RAV-041		CABINET—Walnut Model 118	RMO-035		SHAFT—Tuning shaft
RAV-045		CABINET—Mahogany Model 119M	RNV-041		CORD—Dial cord idler pulley
RAV-054		CABINET—Model 118	RCW-005	R11	VOLUME CONTROL—2 meg.
RAV-055		CABINET—Model 119M	RCW-005	R20	RESISTOR—70 ohms, wirewound, for
RCC-074	C9	CAPACITOR—.01 mfd., 400 v., paper	RRE-008		RESISTOR—18 ohms, 1 w., wirewound
RCC-074	C10	CAPACITOR—.03 mfd., 600 v., paper	RRL-001		RESISTOR—10 ohms, 1 w., wirewound
RCC-082	C1	CAPACITOR—.01 mfd., 200 v., paper	RTF-001	T5	TRANSFORMER—Filament transformer for 6SC7
RCC-083	C2	CAPACITOR—.01 mfd., 200 v., paper	RTL-050	T1	TRANSFORMER—1st I-F transformer
RCC-085	C6	CAPACITOR—.005 mfd., 200 v., paper	RTL-051	T2	TRANSFORMER—2nd I-F transformer
RCE-050	C14B	CAPACITOR—50-50 mfd., electrolytic, 150 v.	RWL-009	T3	TRANSFORMER—Output transformer for Model 118
					CORD—Power cord

Cat. No.	Symbol	Description	Cat. No.	Symbol	Description
UNIVERSAL REPLACEMENT PARTS			SPECIALIZED REPLACEMENT PARTS (CONT'D)		
UCC-625	C13	CAPACITOR—0.003 mlf., 600 v., paper	RCW-1074	C5	CAPACITOR—100 mmf., ceramic
UCC-625	C12	CAPACITOR—0.005 mlf., 600 v., paper	RCW-3013	C11A,B,C,D	CAPACITOR—0.002-220-005, c.c.
UCC-631	C10	CAPACITOR—0.02 mlf., 600 v., paper			(range)
UCC-633	C10	CAPACITOR—0.03 mlf., 600 v., paper	RDC-932		DIAL CORD—Roll of 25 yards
UCE-007	C5, 8, 9	CAPACITOR—0.01 mlf., 600 v., paper	RDE-142		RDX—Carson knob
UOP-488	L81	CAPACITOR—100 mlf., 5 v., electrolytic	RDE-148		RDN—Matsushita knob
		LOUDSPEAKER—4-in. permanent magnet	RDD-940		POINTER—Dial pointer
URD-009	R1	RESISTOR—22 ohms, $\frac{1}{4}$ w., carbon	RDS-072		Dial scale
URD-041	R6	RESISTOR—470 ohms, $\frac{1}{4}$ w., carbon	RE-001	SR	SELENIUM RECTIFIER
URD-053	R4, 5	RESISTOR—1500 ohms, $\frac{1}{4}$ w., carbon	RH-018		SENDING COIL
URD-067	R11	RESISTOR—5000 ohms, $\frac{1}{4}$ w., carbon	RH-015		CLIP—Clip for oscillator coil
URD-070	R10	RESISTOR—10,000 ohms, $\frac{1}{4}$ w., carbon	RIB-016		RIBBON COIL
		RESISTOR—33,000 ohms, $\frac{1}{4}$ w., carbon	RHG-018		GROMMET—Grommet for tuning condenser
URD-077	R9	RESISTOR—100,000 ohms, $\frac{1}{4}$ w., carbon	RHI-005		HI-Loop—Hinge for back spacer
URD-113	R7, 15	RESISTOR—470,000 ohms, $\frac{1}{4}$ w., carbon	RHI-052		SPACER—For tuning condenser
		RESISTOR—2.2 meg., $\frac{1}{4}$ w., carbon	RIM-005		CLIP—Oscillator coil
URD-120	R12, 16, 18	RESISTOR—2.2 meg., $\frac{1}{4}$ w., carbon	RIM-050		BOSS CAP FOR HANDLE
URD-133	R14, 19	RESISTOR—2.2 meg., $\frac{1}{4}$ w., carbon	RIR-005		RIVET—Tubular rivet for door hinge
URD-137	R17	RESISTOR—4.7 meg., $\frac{1}{4}$ w., carbon	RHX-013		CLIP—Tubular clip for handle
URE-059	R2	RESISTOR—2700 ohms, $\frac{1}{4}$ w., carbon	RIP-025		HANDLE—Handle assembly
			RJS-024		PLUG—Battery plug
					MOUNTING PLATE—For electrolytic capacitor
			RIS-068		SOCKET—Tube socket
			RIS-100		CLIP—Oscillator coil
			RJC-008	L2	LOOP—Loop antenna
			RLI-029	L1	CLIP—Coil clip
			RMS-539		SPRING—Dial spring
			RMS-118		SPRING CATCH
			RMS-154		SILEY—Idle pulley
			RMW-009	R13, S1, AB	VOLUME CONTROL—Volume control
RAB-076		CABINET BACK—Plastic cabinet back, maroon			
RAB-080		CABINET BACK—Plastic (mahogany and gray)	RKW-027	R3	RESISTOR—2300 ohms, 10 w.
RA5-001		STRAP—Battery strap	RKW-048	SA2, B	TRANSFORMER—1st I-F transformer
RA5-038		CABINET—Plastic cabinet (maroon)	RTL-052	T1	TRANSFORMER—2nd I-F transformer
RAU-042		CABINET—Plastic cabinet (mahogany)	RTI-079	T2	TRANSFORMER—Output I-F transformer
RCZ-069	C2A, B, C	CAPACITOR—200 mf., 25 v., electrolytic	ROT-050	T3	TRANSFORMER—Output I-F transformer
RCW-032	C1	CAPACITOR—200 mf., 25 v., electrolytic	RWL-005		CORD—Power cord
RCW-037	C21	CAPACITOR—430 mmf., ceramic	SJS-068		CONNECTING PIN FOR LOOP ANTENNA
RCW-1073	C1	CAPACITOR—47 mmf., ceramic			

*Some receivers have UCC-635 instead.

Farnsworth P71

This model appears on pages RCD, CH, 15-1 through 19-10 of *Rider's Manual Volume XIX*. The following changes should be noted in the parts list:

Part No. 07594 Turntable assembly, changed to 15241

64437 Tone arm counterbalance spring, changed to 64343.

Part number 44064, phono motor, has been deleted. This is shown on pages RCD, CH, 19-5. It is available as Part Number 11437 only. Motor parts, Numbers 15237, 37241, 54308, 64471, and 92335, are no longer available as separate parts. If any of these are required, a complete motor assembly, No. 11437, must be ordered.

Farnsworth P72 Record Changer

This record changer may be found on pages RCD, CH, 18-26 through RCD, CH, 18-9 of *Rider's Volume XVIII*. A production change has been made in the Surfa-Sonic Control. The 0.02- μ f capacitor has been changed to 0.1 μ f. The 3,300-ohm resistor has been changed to 2,200 ohms.

The following have been deleted from the parts list:

Part No.	Description
25276	0.02 μ f, 200 v
77240	3,300 ohms, $\frac{1}{2}$ w
25182	0.1 μ f, 200 v
77184	2,200 ohms, $\frac{1}{2}$ w

Farnsworth P71, P72, P73

Model P71 appears on pages RCD, CH, 19-1 through 19-10 of *Rider's Manual Volume XIX*, and Models P72 and P73 appear on pages RCD, CH, 18-1 through 18-9 of *Rider's Manual Volume XVIII*. There appears to be some misunderstanding concerning the correct nomenclature of parts numbers 58584 and 64407. Part 58584 is correctly titled "Starting Lever Spring". The function of this part is to exert the proper amount of tension on part 58583, starting reset lever, which in turn performs the dual purpose of transmitting the motion of the trip mechanism to the starting lever, thus setting the starting lever in the proper position for starting the change cycle and also resetting the starting and reject levers, after the change cycle has started, to their proper positions. Part 64407 performs the operation of transmitting the motion from the reject button mechanism to the reject lever, thus starting the change cycle. Part 64407 is referred to in the parts list as the "Trip Spring". In order to avoid future misunderstanding, the nomenclature of this part has been changed to read—Part #64407, Reject lever spring.

Farnsworth 41E Capehart Record Changer

This record changer may be found on pages RCD, CH, 18-26 through RCD, CH, 18-46 of *Rider's Volume XVIII*. The change cycle is placed into operation when the trip finger releases the mercury switch dog (part number 561222). If, for any reason, a changer should fail to cycle properly and, upon checking, the trip mechanism is found to be operating normally, it is suggested that the top of the mercury switch Reset Lever (part number 561221) be examined to make sure that it is smooth. Many hours of operation may tend to wear a groove in the top of the Reset Lever which would tend to hold the dog in place, thus resisting the action of the trip mechanism. This condition is caused by normal

wear due to friction between the two parts.

When this condition is found, it is recommended that the mercury switch Reset Lever be replaced by a new one. The new stock has been hardened to provide longer operating life.

In an early production run, a mercury switch with a metal shell or housing was used. Due to the slow action and greater angle of drop necessary to actuate this switch, it has since been replaced by one using a glass housing or bulb. Changers employing the metal-housed mercury switch should be checked for positive switch action, especially if it has been reported that the changer cycles continuously, or more than once for a single tripping action.

In such cases, it is recommended that the metal switch be replaced with the more positive glass bulb type (part number 90147).

The contacts of the Play Control switch must be set so that positive contact is made when the play control knob is set in OFF position. In this position the contact points must be OPEN.

It is not necessary to remove the play control to adjust these contacts on the majority of the Model 41-E changers now in use. A 5/16" diameter observation hole has been added to the back of the play control housing directly in line with the contact points. With the changer on the service bench, it is an easy matter to insert a screwdriver or a pair of long nose pliers and bend the contact springs slightly.

This operation is a little more difficult with the changer in the cabinet, as there is only about a 3-inch clearance between the back of the play control housing and the side of the cabinet. A small inspection mirror, a "knob" type screwdriver and a penlite will be helpful in making these adjustments when the changer is in the cabinet.

Federal 1021, 1031, 1032, and 1540

These models are the same as Model 1030T, appearing on pages 16-5 through 16-8 of *Rider's Volume XVI*, except for the cabinets.

Federal 1024TB

This model appears on pages 17-1 through 17-3 of *Rider's Volume XVII*. Some sets have been equipped with a 12SK7 tube as an i-f amplifier instead of the 6BS7. This gives better performance.

Federal 1027, 1035

These models are the same as Model E1025TB, appearing on pages 16-1 through 16-4 of *Rider's Volume XVI*, except for the cabinets.

Federal 1028TB, 1029

These models are the same as Model 1024TB, appearing on pages 17-1 through 17-3 of *Rider's Volume XVII*, except for the following changes. A 12SK7 tube is used as the i-f amplifier instead of the 6BS7. The cathode resistor (R2) of the i-f amplifier can be either 1500 ohms or 750 ohms. C17 can be either 470 μ f or 1000 μ f. R13 (in filament lead) has been eliminated, and pin 2 of the 50L6GT tube connected to pin 7 of the 35Z5GT tube.

Federal 1034

This model is the same as Model 1024TB, appearing on pages 17-1 through 17-3 of *Rider's Volume XVII*, except for the cabinet.

General Electric 41, 42, 43

These models appear on pages 17-1, 2 through 17-15 of *Rider's Volume XVII*. To increase the sensitivity at certain points on the broadcast and shortwave bands, a 470- μ f capacitor, C111, catalog number UCU-544, has been added between terminals 3 and 5 on the first i-f transformer. On early production sets without this capacitor, the following should be done:

1. This capacitor should be added between terminals 9 and 10 of wafer #6 on the band switch.
2. The orange, green, and black leads from terminals 5, 3, and 8 of the first i-f transformer to the band switch should be grouped together and pressed to chassis.
3. C108, a 0.02- μ f bypass capacitor, ground end, should be removed and grounded under the mounting lug of the first i-f plate coil.

General Electric 50

This model appears on pages 16-1 through 16-4 of *Rider's Volume XV*. Add to the description of catalog number RAU-009 Cabinet—plastic cabinet, the color "Brown Mottled." Also, add the following to the parts list:

Cat. No.	Description
RAU-017	Cabinet—plastic cabinet (black)
RAU-018	Cabinet—plastic cabinet (dark ivory)
RAU-019	Cabinet—plastic cabinet (ivory and red)
RAU-024	Cabinet—plastic cabinet (white urea)

General Electric 118, 119

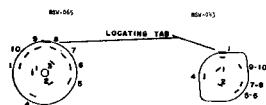
These models appear on pages 19-8 through 19-10 of *Rider's Volume XIX*. The green grid lead and blue plate lead of the first i-f transformer must be dressed as far as possible to the rear of the chassis and against the chassis. Coupling capacitor C24 should never lie against any possibility of r-f leakage into the phono-preamplifier which causes stations to be heard while operating the phonograph.

The following changes should be made in the parts list. Add P2 under symbol for R1P-003. Delete: RCN-014, C26, Capacitor—phenolic, for Model 118. Add to UCC-045: C26, Capacitor, 0.05 μ f, 600 v, paper, for Model 118.

General Electric 118, 119M, 119W

These models appear on pages 19-8 through 19-10 of *Rider's Manual Volume XIX*. The phono radio switch S1, catalogue number RSW-043 has been changed to RSW-065 and the new switch is wired as follows:

Connect terminals 1 and 3 together. Connect terminals 5 and 6 together. Connect terminals 7 and 8 together and then connect terminals 9 and 10 together. The leads may then be transferred from the old switch to the corresponding terminals on the new switch RSW-065, as shown in the accompanying diagram.



General Electric 118, 119.

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 18-9B 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.