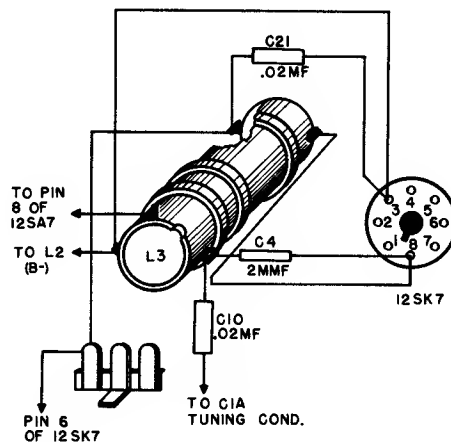


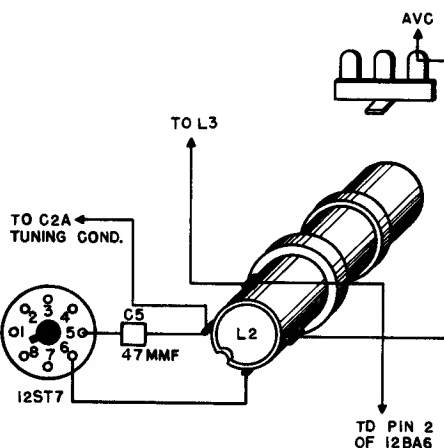


General Electric Co.			
	Model: 423	Chassis:	Year: Pre 1952
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
Beitmans 1952 57			
Riders 22 (XXII) GE 22-4			
Riders 22 (XXII) GE 22-5			
Riders 22 (XXII) GE 22-6			

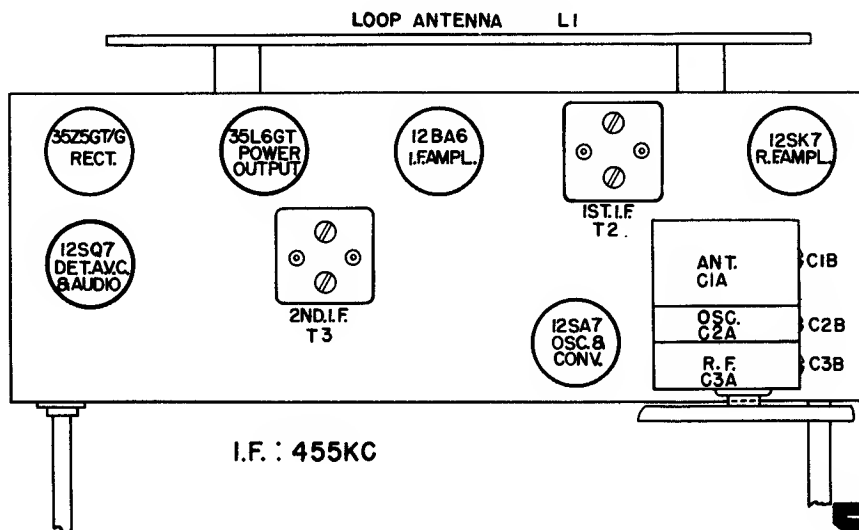
GENERAL ELECTRIC

[illegible]

Wiring Diagram for R.F. Coil



Wiring Diagram for Oscillator Coil



PAGE 22-4 GENERAL ELECTRIC

MODELS 422, 423

SPECIFICATIONS

CABINET:	Model 422.....Mahogany plastic Model 423.....Ivory plastic																								
POWER SUPPLY:	Voltage.....105-120 volts a-c or d-c Frequency.....50 or 60 cycles Wattage.....30 watts																								
OPERATING FREQUENCIES:	Broadcast Band.....540-1600 KC I.F. Amplifier.....455 KC																								
POWER OUTPUT:	Undistorted.....1 watt Maximum.....1.75 watts																								
LOUDSPEAKER:	Type.....Alnico 5 PM Outside cone Diameter... 5 1/4 inches Voice coil impedance at 400 cycles.....3.2 ohms																								
TUBE COMPLIMENT:	<table><tr><th>SYMBOL</th><th>PURPOSE</th><th>TYPE</th></tr><tr><td>V1</td><td>RF Amplifier</td><td>12SK7</td></tr><tr><td>V2</td><td>Oscillator Converter</td><td>12SA7</td></tr><tr><td>V3</td><td>IF Amplifier</td><td>12BA6</td></tr><tr><td>V4</td><td>Detector-Audio Ampl.</td><td>12SK7</td></tr><tr><td>V5</td><td>Rectifier</td><td>35Z5</td></tr><tr><td>V6</td><td>Audio Power Ampl.</td><td>35L6GT</td></tr><tr><td>11</td><td>Pilot Lamp</td><td>GE Mazda No. 47</td></tr></table>	SYMBOL	PURPOSE	TYPE	V1	RF Amplifier	12SK7	V2	Oscillator Converter	12SA7	V3	IF Amplifier	12BA6	V4	Detector-Audio Ampl.	12SK7	V5	Rectifier	35Z5	V6	Audio Power Ampl.	35L6GT	11	Pilot Lamp	GE Mazda No. 47
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GENERAL INFORMATION

The Models 422 or 423 is a five-tube (plus rectifier tube) a-c or d-c superheterodyne AM standard broadcast receiver equipped with an efficient built-in antenna loop and incorporating automatic volume control, a permanent magnet speaker, and beam power output.

CAUTION: USE ISOLATION TRANSFORMER TO ISOLATE THE RECEIVER FROM THE POWER LINE.

ELECTRICAL CIRCUIT ALIGNMENT

Equipment required:

1. Test oscillator with tone modulation.
2. AC voltmeter, 1 1/2 volts full scale.
3. Paper capacitor, 0.05 mf.
4. Insulated screwdriver.
5. Coupling loop for test oscillator (see text).
6. Isolation transformer.

Alignment Procedure:

The alignment steps are given in table form of Alignment Chart. Adjustment trimmers are shown in the illustration of Fig. 2.

1. The chassis is removed from the cabinet with the antenna loop and back attached and the speaker leads reconnected.

2. An isolation transformer should be used for the receiver power source when aligning or servicing AC-DC receivers to prevent short circuiting of equipment and shock hazard.

3. The output meter is connected across the terminals of the loudspeaker voice coil.

4. The receiver volume control should be turned to maximum and test oscillator signal output attenuated during alignment to develop not more than 1 1/4 volts output meter reading at the loudspeaker.

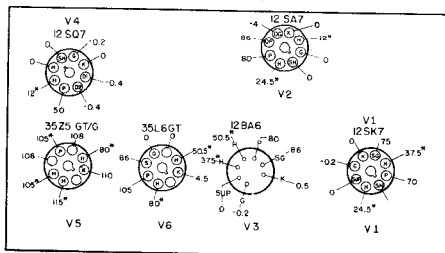
5. For i-f alignment, the high side of the signal generator output cable should be connected through a .05 mfd. paper capacitor to the points indicated in the Alignment Chart. The low side of the output cable is connected to the receiver chassis.

6. To align the oscillator and r-f trimmers, the signal generator output is inductively coupled to the radio loop, L1, by connecting a four-turn, six-inch diameter loop of bell wire across its output terminals and then locating the loop about one foot from the radio loop antenna. To prevent possible errors in comparative peak readings, the position of signal generator loop with respect to the radio loop antenna should not be changed during measurement.

ALIGNMENT CHART

ALIGNMENT CHART				
Step	Connect Test Oscillator to:	Test Osc. Setting	Radio Dial Setting	Adjust Trimmers For Maximum
I-F ALIGNMENT				
1	V3, 12BA6 grid (Pin 1), in series with 0.5 mfd.	455 KC		C9 and C8 of second i-f transformer T3.
2	V2, 12SA7 grid (Pin 8) in series with .05 mfd.			C7 and C6 of first i-f transformer, T2.
3				Recheck adjustment of C9, C8, C7, C6, for maximum
R-F ALIGNMENT				
4	Inductively coupled to radio loop.	1620 KC	Minimum capacity C1A,C1B	C3, oscillator trimmer
5		1500 KC	Tune for Maximum	C1, r-f trimmer C2, ant. trimmer

FRONT OF CHASSIS

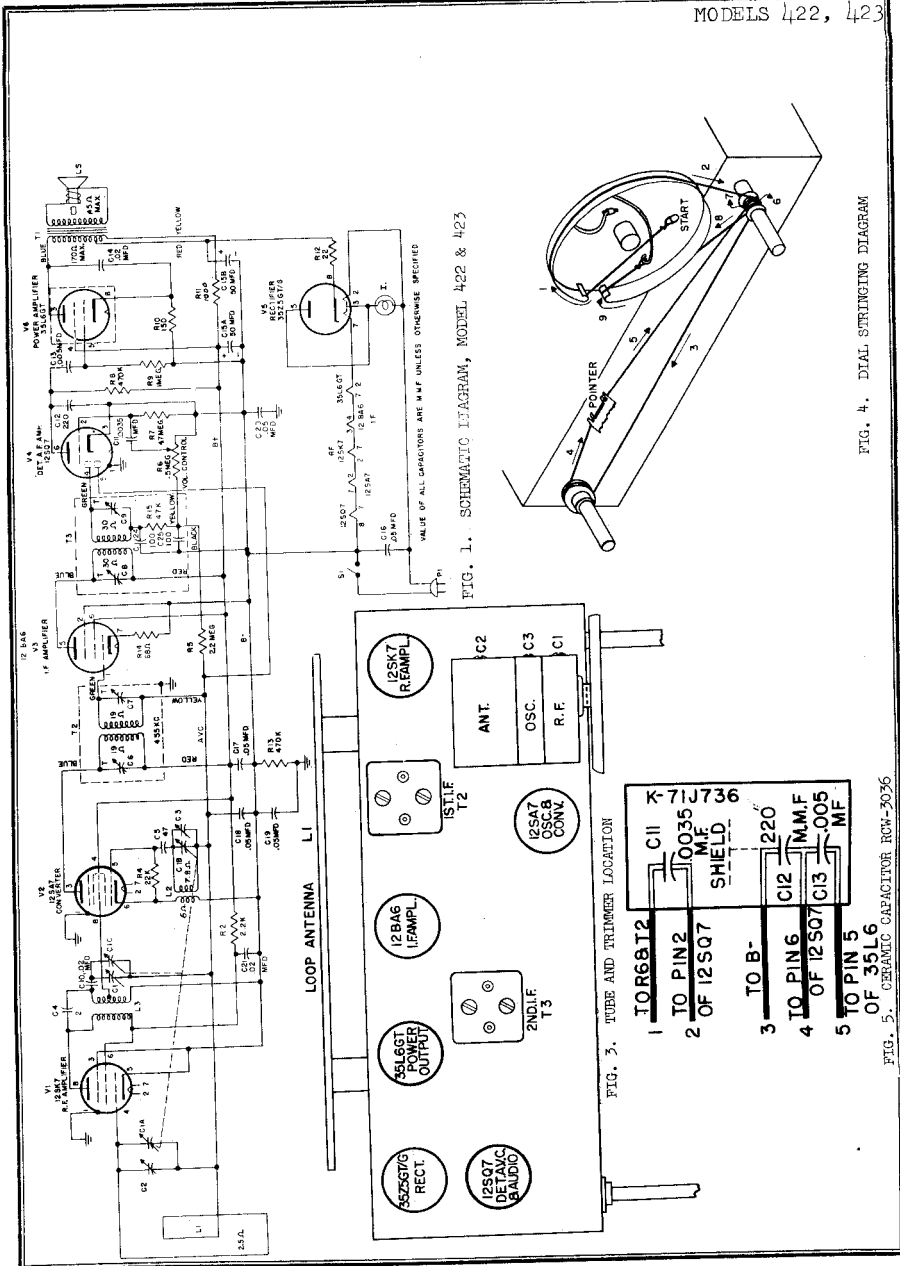


17 VOLTS AC LINE, NO SIGNAL INPUT
VOLTAGES MEASURED BETWEEN
SOCKET TERMINALS AND G WITH
20,000 OHMS PER VOLT METER.
VOLUME CONTROL MINIMUM
★ INDICATES AC VOLTS.

BOTTOM VIEW OF CHASSIS

FIG. 2. SOCKET VOLTAGE DIAGRAM

S-422



PAGE 22-6 GENERAL ELECTRIC

MODELS 422, 423

MODELS 422 AND 423 REPLACEMENT PARTS LIST

CAT. NO.	SYMBOL	DESCRIPTION
CAPACITORS		
RCE-050 *	C15A,B	50 mf., 150 v., 50 mf., 150 v.; dry electrolytic
RGN-039 *	C4	2 mf., mica
RCT-046 *	C1A,B,C, C2,C3	Tuning capacitor with trimmers
RCW-3036 *	C11,C12, C13	.0035 mf., 220 mmf., .005 mf., three section ceramic (see UCC-037, UCC-039, UCU-1036)
UCC-037 *	C11	.003 mf., 600 v., paper (alternate replacement for RCW-3036)
UCC-039 *	C13	.005 mf., 600 v., paper (alternate replacement for RCW-3036)
UCC-041 *	C14,C21	.02 mf., 600 v., paper
UCC-045 *	C16,C17, C18, C19,C20	.05 mf., 600 v., paper
UCU-020 *	C5	47 mmf., mica
UCU-1036 *	C10,C12	220 mmf., mica (alternate replacement for RCW-3036)

RESISTORS & POTENTIOMETER

RRC-149 *	R6,S1	POTENTIOMETER - 500,000 ohms; volume control and switch S1
URD-009 *	R12	RESISTOR - 22 ohms, 1/2 w., carbon
URD-021 *	R14	RESISTOR - 68 ohms, 1/2 w., carbon
URD-029 *	R10	RESISTOR - 150 ohms, 1/2 w., carbon
URD-057 *	R2	RESISTOR - 2.2 K ohms, 1/2 w., carbon
URD-081 *	R4	RESISTOR - 22,000 ohms, 1/2 w., carbon
URD-113 *	R8,R13	RESISTOR - 470,000 ohms, 1/2 w., carbon
URD-121 *	R9	RESISTOR - 1 meg., 1/2 w., carbon
URD-129 *	R5	RESISTOR - 2.2 meg., 1/2 w., carbon
URD-137 *	R7	RESISTOR - 4.7 meg., 1/2 w., carbon
URF-049 *	R11	RESISTOR - 1000 ohms, 1/2 w., carbon

COILS & TRANSFORMERS

RLC-105 *	L2	COIL - Oscillator
RLI-125 *	L3	COIL - R-F
RTL-115 *	T2	TRANSF. - First I-F
RTL-116 *	T3	TRANSF. - Second I-F
RTO-083 *	T1	TRANSF. - Audio output

MISCELLANEOUS ELECTRICAL

RJS-003 *		SOCKET - Tube socket
RJS-141 *		SOCKET - Tube, for 12BA6
ROP-020 *		SPEAKER - PM, 5 1/4"

CAT. NO.	SYMBOL	DESCRIPTION
MISCELLANEOUS ELECTRICAL		
RWL-009		POWER CORD - A-C power cord and plug
RWL-016 *		POWER CORD - Model 423
RWX-043		ASSEMBLY - Pilot light socket

MISCELLANEOUS MECHANICAL

RDC-032 *		CORD - Bulk dial cord
RDP-064		POINTER - Dial scale
RHC-018		CLIP - Loop clip
RHC-024 *		CLIP - Capacitor clip
RHC-038 *		CLIP - For R-F coil
RHG-006 *		GROMMET - On tuning shaft
RHG-018 *		GROMMET - Cushion mounting for tuning capacitor
RHG-032 *		GROMMET - Speaker lead ins
RHI-017 *		STRAIN RELIEF
RHJ-007 *		SPACER - Spacer bushing for mounting tuning capacitor
RHR-010 *		RIVET - For terminal board
RHR-013 *		RIVET - For output transf.
RHS-061 *		SCREW - For loop back mounting
RHS-062 *		SCREW - For chassis mounting
RHS-063		SCREW - For tuning capacitor mounting
RJC-004 *		CONNECTOR - Antenna loop lead connecting clip
RMC-002 *		CLIP - For oscil. coil
RMM-035 *		SHIELD - Tube shield
RMM-200 *		HOOD - Pilot light hood
RMS-118 *		SPRING - Dial cord tension spring
RMW-070 *		PULLEY - Idler pulley
RMX-196		SHAFT AND BUSHING - Tuning shaft and mounting bushing, late prod.
RMX-200		DRIVE SHAFT AND BUSHING ASSEMBLY, early prod.

CABINET & CABINET PARTS

RAB-142 *	L1	CABINET BACK - With antenna loop
RAG-038 *		ASSEMBLY - Grill cloth assembly, Model 422
RAG-039 *		ASSEMBLY - Grill cloth assembly, Model 423
RAU-353		CABINET - Mahogany cabinet (plastic) for Model 422
RAU-354		CABINET - Ivory cabinet (plastic), for Model 423
RDE-124		ESCUTCHEON - Dial esc.
RDS-110		SCALE - Dial scale
RDK-181 *		KNOB - For Model 422
RDK-229 *		KNOB - For Model 423

*Parts used on previous models.