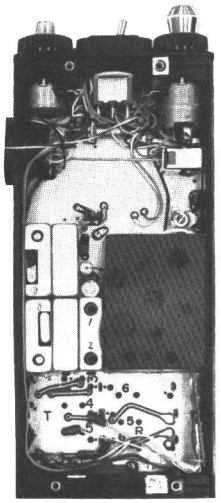
MOBILE RADIO

MASTR®

MVP Personal

SYSTEMS BOARD AND CASE ASSEMBLY 19D423171G1



SYSTEMS BOARD AND CASE ASSEMBLY 19D423171G1

SPECIFICATIONS *

MODEL NUMBERS

19D423171G1

150.8-174 MHz

CONTROLS

Volume ON-OFF Switch

Squelch Control

Six-Frequency Selector Switch

PTT Switch

Tone Option Switch

Collapsible Antenna

*These specifications are intended primarily for the use of the serviceman. Refer to the appropriate Specification Sheet for the complete specifications.

GENERAL ELECTRIC

TABLE OF CONTENTS

ILLUSTRATIONS

NOTICE

No one should be permitted to handle any portion of the equipment that is supplied with high voltage; or to connect any external apparatus to the units while the units are supplied with power. KEEP AWAY FROM LIVE CIRCUITS!

DESCRIPTION

System Board A701 contains plug in Audio Module A1, 5.4 Voltage Regulator Module A2, Compensator Module A3, Modulator Module A4 and oscillator modules A5, A6 and A10 through A13 for the PY transmitter. In addition to the transmitter modules, the system board contains oscillator modules A14 and A15 for the receiver and system interconnections for the transmitter, receiver, tone options and operating controls.

CIRCUIT ANALYSIS

When "ON" - "OFF" switch S701 is in the "ON" position, switched +7.5 VDC for the receiver, is connected through PTT switch S1 to P702-3. Receiver RF input from the antenna is also connected through S1 to J3. Pressing S1 applies +7.5 VDC to +5.4 Volt Regulator Module A2, Modulation Module A4, J9 for the PA, and J10 for the exciter. RF is connected from PA RF Output J4 through S1 and low pass filter circuit L4, L5, C4, C5 and C11 to the antenna.

Receiver audio is connected directly from P702-2 to Speaker/Microphone LS1. Transmitter audio is coupled from LS1 through C2 and R1 to Audio Module A1.

Rotary switch S1 selects transmitter and receiver oscillator modules by applying +5.4 VDC to Pin 2 of the selected modules.

Volume control R701 and Squelch control R702 is connected to the receiver through P702 and P703.

REPEATING OSCILLATOR MODULES

Both the transmitter and receiver can be adapted to repeat the use of the same frequency without the use of additional Oscillator Modules. The Oscillator Module is replaced by a diode, allowing the frequency selector switch to have the same frequency on one or more switch positions enen though only one Oscillator Module is used for each of the repeated channels. A typical diagram with repeated Oscillator Modules is shown in Figure 1.

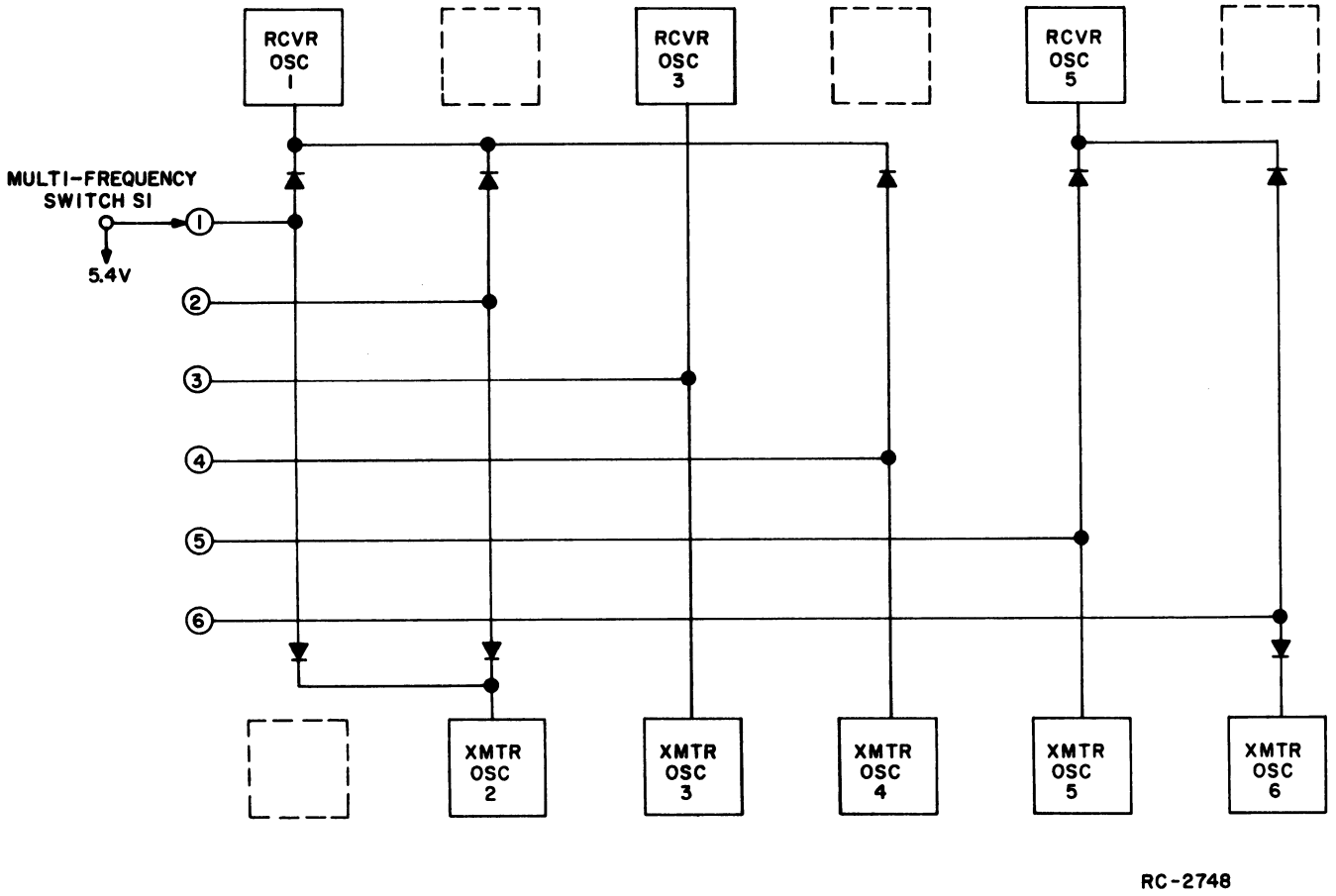


Figure 1 - Repeating Oscillator Modules

Complete instructions for multi-frequency modifications are contained in the Multi-Frequency Modification diagram (see Table of Contents).

For radios equipped with Channel Guard, Type 90 Encoders/Decoders or Type 99 Decoders, repeating Oscillator Modules also permit switching or disabling tones on the same RF frequency with the multi-frequency switch. Also the tone and RF frequency can be changed at the same time.

GENERAL ELECTRIC COMPANY • MOBILE COMMUNICATIONS DIVISION
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502 U.S.A.

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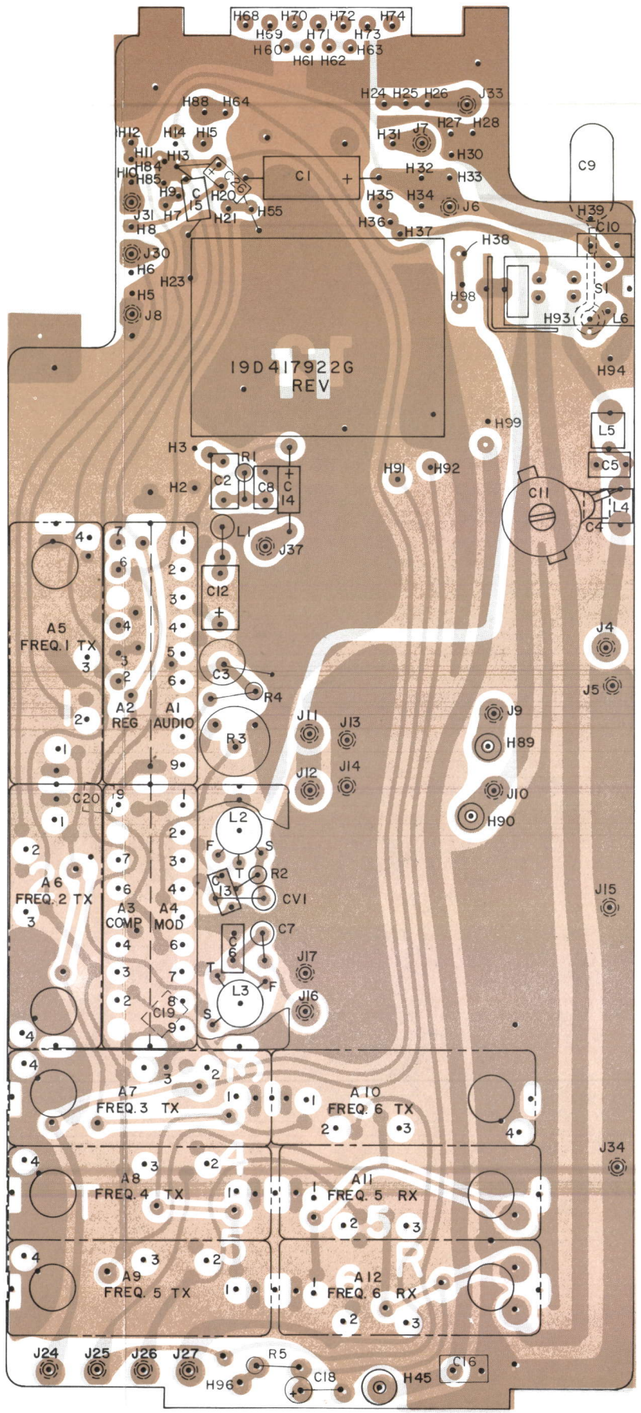
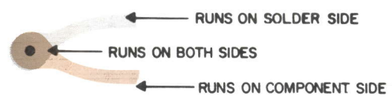
COMPONENT SIDE

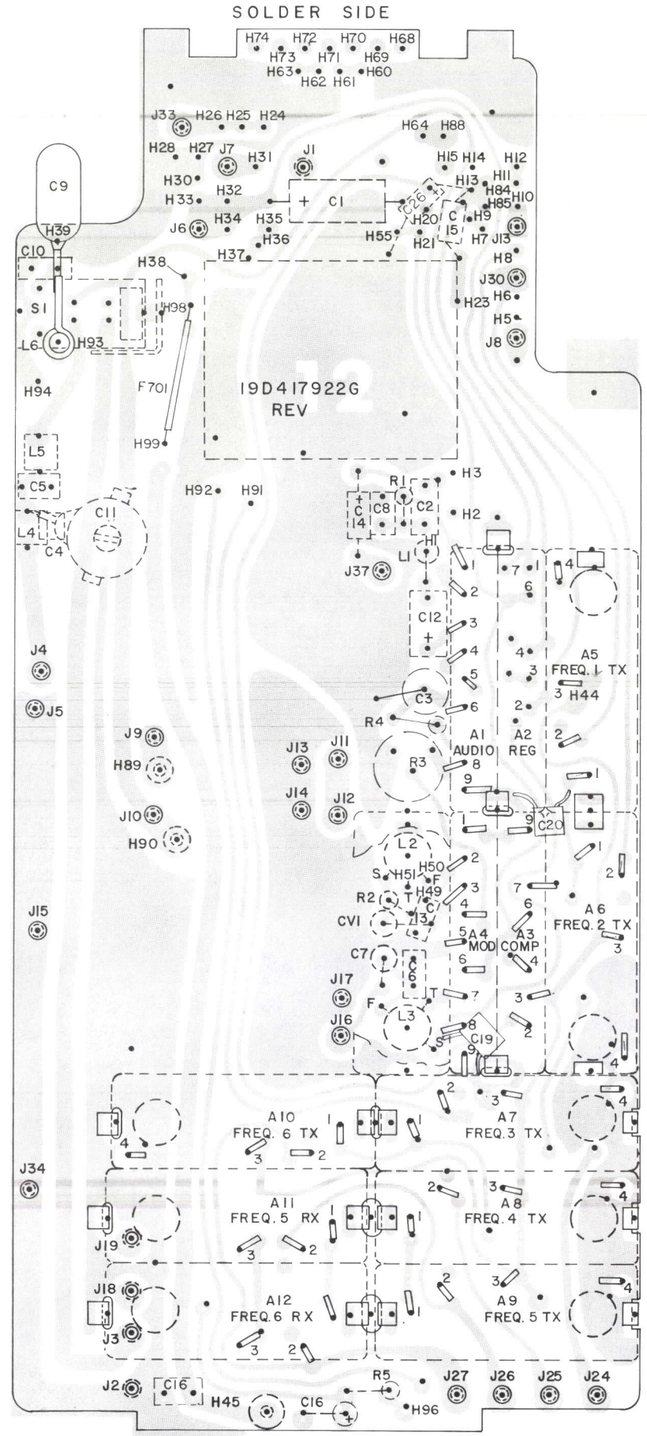


(19D417921, Sh. 2, Rev. 12)
(19D417921, Sh. 3, Rev. 11)



(19D423309, Rev. 7)

SOLDER SIDE



(19D417921, Sh. 2, Rev. 12)

OUTLINE DIAGRAM

138—174 MHz SYSTEM BOARD


ANTENNA
SPEAKER/MIC LS1
ROTARY SWITCH
VOLUME SQUELCH
SYSTEM BOARD
19D417922
P702
SQL. ARM
SQL. HI
VOL. ARM
VOL. HI
AUDIO OUT
7.5V SWITCHED
GND
P703
VOL. & SQL LOW
FREQ. 1
FREQ. 2
TONE SWITCH
+7.5V
FREQ. 3
FREQ. 4
PA RF OUT
RCVR RF IN
ON-OFF SWITCH
FUSE WIRE 19A115060P42
SLEEVE WITH 4038593P4
DA SLEEVE WITH 4038593P5
AUDIO A1
REG A2
FREQ. 1 A5 TX
FREQ. 2 A6 TX
A7 FREQ. 3 TX
A8 FREQ. 4 TX
A9 FREQ. 5 TX
A10 FREQ. 6 TX
A11 FREQ. 5 RX
A12 FREQ. 6 RX
COMPENSATOR A3
MOD A4
TONE IN
MOD ADJUST
5.4V KEYED
7.5V
EXCITER R.F. IN

SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.

THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PL19D423171G1	B
PL19D417922G1	G

ALL RESISTORS ARE 1/8 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH=MILLIHENRYS OR H=HENRYS.

IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

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NOTES:

1. DA=#22 AWG. DM=#26 AWG.
(*) THESE ITEMS ARE PART OF SWITCH KIT PL19A130530G1
2. □ R1701 IS IS PART OF KIT 19A130602G1.
3. GND MAY BE MADE THROUGH CAN ONLY ON SICOMS.

SCHEMATIC DIAGRAM

150.8—174 MHz SYSTEM BOARD

(19B622149, Rev. 17)

PARTS LIST

LBI4903E

SYSTEM BOARD AND CASE ASSEMBLY
19D423171G1
AND
ASSOCIATED ASSEMBLIES

SYMBOL	GE PART NO.	DESCRIPTION
A701		SYSTEM BOARD 19D417922G1
A1	19C320062G1	Audio Transmitter.
A2*	19C320070G1	Regulator.
		In REV A & earlier:
	19C311905G2	Regulator.
A3	19C320061G3	Oscillator Compensator.
A4	19C320084G1	Modulator.
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	5491674P30	Tantalum: 39 µf ±20%, 10 VDCW; sim to Sprague Type 162D.
C2*	19A116192P1	Ceramic: 0.01 µf ±20%, 50 VDCW; sim to Erie 8121 SPECIAL.
		In REV B & earlier:
	19A116244P2	Ceramic: 0.022 µf ±20%, 50 VDCW.
C3	5491674P42	Tantalum: 47 µf ±20%, 6 VDCW; sim to Sprague Type 162D.
C4 and C5	19A116114P20	Ceramic: 6 pf ±5%, 100 VDCW; temp coef 0 PPM.
C6	19A700221P47	Ceramic: 33 pf ±5%, 100 VDCW; temp coef -80 PPM.
C7	19A700013P13	Phenolic: 1.0 pf ±5%, 500 VDCW.
C8	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW; temp coef -3300 PPM.
C9	5496218P36	Ceramic disc: 5.0 pf ±0.25 pf, 500 VDCW, temp coef 0 PPM.
C10	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW; temp coef -3300 PPM.
C11	19A700012P2	Variable, ceramic: 2.5-20 pf, 200 VDCW, temp coef -250 to -700 Parts/M/°C; sim to Panasonic ECV-1Z20X32.
C12	19C307102P19	Tantalum: 68 µf ±20%, 4 VDCW.
C13	19A700227P65	Ceramic: 100 pf ±5%, 100 VDCW; temp coef -1500 PPM.
C14	5491674P1	Tantalum: 1.0 µf +40-20%, 10 VDCW; sim to Sprague Type 162D.
C15	19A700221P44	Ceramic: 27 pf ±5%, 100 VDCW; temp coef -80 PPM.
C16	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW; temp coef -3300 PPM.
C17*	5491674P1	Tantalum: 1.0 µf +40-20%, 10 VDCW; sim to Sprague Type 162D. Added by REV B.
C18*	5491674P1	Tantalum: 1.0 µf +40-20%, 10 VDCW; sim to Sprague Type 162D. Added by REV D.
C19*	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW; temp coef -3300 PPM. Added by REV F.
C20	19A700229P65	Ceramic: 100 pf ±5%, 100 VDCW; temp coef -3300 PPM.
		- - - - - - - - DIODES AND RECTIFIERS - - - - - - -
CV1	5495769P9	Silicon, variable capacitance, 33 pf nominal.
		- - - - - - - - - - - - FUSES - - - - - - - - - - - -
F701*	19A127884P1	Fuse Kit. Added by REV E.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - -
J1 thru J5	19A116366P4	Contact, electrical: sim to Concord 10-891-1.
J6 thru J8	19A116366P2	Contact, electrical: sim to Cambion 460-3233-01-03.
J9 and J10	19A116366P4	Contact, electrical: sim to Concord 10-891-1.
J15 thru J19	19A116366P4	Contact, electrical: sim to Concord 10-891-1.
J24 thru J27	19A116366P4	Contact, electrical: sim to Concord 10-891-1.
J30 and J31	19A116366P4	Contact, electrical: sim to Concord 10-891-1.
J33 and J34	19A116366P2	Contact, electrical: sim to Cambion 460-3233-01-03.
J37	19A116366P2	Contact, electrical: sim to Cambion 460-3233-01-03.
		- - - - - - - - - - - - INDUCTORS - - - - - - - - - -
L1	19B209420P114	Coil, RF: 1.20 µh ±10%, 0.18 ohms DC res max; sim to Jeffers 4436-1K.
L2	19A127798G1	Coil. Includes:
	19B209436P1	Tuning slug.
L3	19B216910G1	Coil. Includes:
	19B209436P1	Tuning slug.
L4 and L5	19B216320P3	Coil.
L6	19A127815P2	Coil.
		- - - - - - - - - - - - RESISTORS - - - - - - - - - -
R1*	3R151P152J	Composition: 1.5K ohms ±5%, 1/8 w.
		In REV B & earlier:
	3R151P222J	Composition: 2.2K ohms ±5%, 1/8 w.
R2	3R151P103J	Composition: 10K ohms ±5%, 1/8 w.
R3	19A116412P4	Variable, cermet: 250K ohms ±10%, 0.16 w; sim to Helipot Model 62 PR.
R4	3R151P101K	Composition: 100 ohms ±10%, 1/8 w.
R5*	3R151P223J	Composition: 22K ohms ±5%, 1/8 w. Added by REV D.
		- - - - - - - - - - - - SWITCHES - - - - - - - - - - -
S1*	19A116250P2	Slide: 4-10 mA at 14 VDC; sim to Chicago Switch Series 23-020.
		In REV F & earlier:
	19A116250P1	Slide: 4-10 mA at 14 VDC; sim to Chicago Switch Series 23-020.
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J701		Connector. Includes:
	19B216891G1	Spring.
	19D413467P1	Fastener.
		- - - - - - - - - - - - PLUGS - - - - - - - - - - - -
P701	19A115834P4	Contact, electrical: sim to AMP 2-332070-9.
P702 and P703	19A127569G1	Plug: 8 contacts.
		- - - - - - - - - - - - RESISTORS - - - - - - - - - -
R701	19A116227P1	Variable, carbon film: 25K ohms ±20%, 1/8 w; Switch (S702): SPST, 3 amp at 125 VAC; sim to Mallory Type MZC.
R702	19A116227P2	Variable, carbon film: 25K ohms ±10%, 1/8 w; sim to Mallory Type MZC.
		- - - - - - - - - - - - SWITCHES - - - - - - - - - - -
S701		(See Mechanical Parts items 44-49).
S702		(Part of R701).
		- - - - - - - - - - - - CABLES - - - - - - - - - - - -
W1		CABLE ASSEMBLY 19C330826G2
		- - - - - - - - - - - - PLUGS - - - - - - - - - - - -
P702 and P703	19A116137P3	Socket, crystal: 8 contacts; sim to Cinch 133-98-92-061 SPECIAL.
		ASSOCIATED ASSEMBLIES
		- - - - - - - - - - OSCILLATORS - - - - - - - - - -
		NOTE: When reordering, give GE part number and specify exact frequency needed.
A5 thru A10		$Fx = \frac{\text{Freq. Operating}}{12}$
	4EG27A10	Oscillator Module. (TRANSMITTER).
A11 and A12		$Fx = \frac{\text{Freq. Operating} - 20}{9}$
	4EG36A10	Oscillator Module. (RECEIVER).
		FRONT COVER ASSEMBLY 19C317416G9 LOW POWER 19C317416G11 HIGH POWER
		- - - - - - - - - - LOUDSPEAKERS - - - - - - - - - -
LS1*	19A134949P1	Permanent magnet: 2.00 inch, 8 ohms ±15% voice coil imp, 50 Hz ±500 Hz resonant, 500 MW; sim to Oaktron T6703.
		Earlier than REV A:
	19A116090P1	Permanent magnet: 2.00 inch, 8 ohms ±10% voice coil imp, 450 Hz ±112 Hz resonant; freq range 400-3000 Hz.
		- - - - - - - - - - - - PLUGS - - - - - - - - - - - -
P1 and P2	19A115834P4	Contact, electrical: sim to AMP 2-332070-9.
		MULTI FREQUENCY KIT 19A130530G1
		- - - - - - - - - - - - SWITCHES - - - - - - - - - - -
S1	19B219515G1	Rotary: 1 section, 1 pole, (adj 2-10 position), non-shorting; sim to Grayhill 50MY23155-1-8N.
		HI SPLIT KIT 19A127838G1
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C11	19A700221P47	Ceramic: 33 pf ±5%, 100 VDCW; temp coef -80 PPM.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
	19B216897G3	Rear Cover. (STANDARD).
	19B216897G4	Rear Cover. (BELT CLIP).
	19B219953G3	Antenna Assembly. (See items 5, 40-43).
	19D413522G4	Battery, rechargeable.
	4038831P4	Alignment Tool, fork tip.
	19B219079G1	Alignment Tool, allen tip.
	7150729P4	Allen wrench. (Used with No. 10 set screw or No. 5-6 socket head cap screw).
		MECHANICAL PARTS (SEE RC2814)
1	19A127319P1	Hex nut: No. 1/4-32.
2	4037064P18	Washer, non metallic.
3	4035630P1	Washer: teflon.
4	19B232784G2	Knob assembly. (Includes items 5 & 6).
5	19A143453P2	Set screw, self locking: No. 3-48 x 3/16. (Part of item 4).
6	19A137254P1	Insert, tapered. (Part of item 4).
7	N513P604C	Pin. (Stop for item 4 knob- Not Used).
8	19B227270G1	Grille. (Used in low power only).
	19B227270G2	Grille. (Used in Hi Power only).
9	NP280150P1	Nameplate. (GE monogram).
10	NP280150P2	Nameplate. (GE monogram- Hi Power).
11	4038593P7	Insulated sleeving. (Specify length).
12	19A137792P2	Rod.
13	19D423170G2	Case assembly. (Includes items 7, 22, 27, 28, 54, 59, 61, 62).
14	19B216858P1	Insert. (Used in low power only on front cover).
15	N681P5002C6	Screw, phillips head: No. 2-50 x 1/8.
16	N170P9004C17	Cap screw: No. 4-40 x 1/4. (Heat sink screw used in Hi Power only- Screw location varies from Hi Band to 450 Band).
17	NP270687	Nameplate. (Property of General Electric).
18	19A134548P1	Insert, threaded.
19	19A130472P1	Cover.
20		(Not Replaceable).
21	19A127779G8	Antenna tube. (Includes teflon insert 19A129651P1).
22	19B216875P1	Support.
23	19A130516P1	Plate. (Not Used).
24	19C321435P1	Insert.
25	N146P503C	Tap screw: No. 2-32 x 3/16. (Not Used).
26	19C321437P1	Dummy plug.
27	19A115983P3	Seal, "O" ring; sim to Parker Seal 2-10.
28	N509P606C	Dowel pin: 1/16 x 3/8.
29	19B219510P1	Insulator.
30	19A130397P1	Strap.
31	19C317394P6	Gasket.
32	19B216897G3	Rear Cover Assembly. (Without clip).
33	19B216897G4	Rear Cover Assembly. (With clip).
34	19C317394P4	Gasket.
35	19A143483P1	Diaphragm.
36	19A116270P1	Tape, pressure sensitive. (Specify length).
37	N330P602F22	Eyelet, metallic.
38	19B226644P1	Support.
39	19C311491P3	Can. (A1-A4).
40	19A129649P1	Antenna cap.
41	19A129652P1	Nut, knurled: thd. size 7/16 x 40.
42	19C320352P1	Bushing.
43	19C320383P2	Antenna rod.
44	19A129734P1	Spring.
45	19A130926P1	Plate nut.
46	N401P1C6	Flatwasher. (Not Used).
47	19A137791P1	Button.
48	N55P1006	Machine screw, slotted: No. 0-80 x 1/4.
49	19C320559P2	Collar.
50	19A127762P1	Strap.
51	19A115794P3	Flathead screw: No. 2-56 x 5/16. (Part of J701).
52	19D413467P1	Fastener. (Part of J701).
53	19B216891G1	Spring assembly. (Part of J701).
54	19A129723P1	Rivet.
55	19A130426G2	Knob.
56	19A127319P2	Hexnut: No. 1/4-28.
57	19A143880P1	Washer, nylon: 1/4 inch.
58	19A134425P1	Screw, hexhead: No. 2-56 -2 or 3A.
59	19C317383P1	Dummy plug.
60	N70P703C6	Set screw: No. 3-48 x 3/16.
61	19A127802P1	Rivet, shield.
62	19A116773P805	Tap screw, Phillips POZIDRIV®: No. 4-24 x 5/16.
63	19A130993P1	Gasket. (Not Used).
64		(Not Used).
65	19A130586P1	Insulator. (Part of J701).
66	19B232109P1	Button plug.
67	19A129651P1	Teflon insert. (Part of item 21).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

PRODUCTION CHANGES

Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter," which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for descriptions of parts affected by these revisions.

REV. A - System Board & Case Assembly 19D423171G1
To incorporate metal nuts for screws securing PTT switch.
Changed nuts.

REV. B - To increase travel of PTT button.
Changed button, collar and activator.
Deleted gasket and disc.
Added two flat washers.

REV. A - System Board 19D417922G1
Incorporated into initial shipment.

REV. B - To incorporate a new 5.4v regulator.
Changed A2 and added C17.

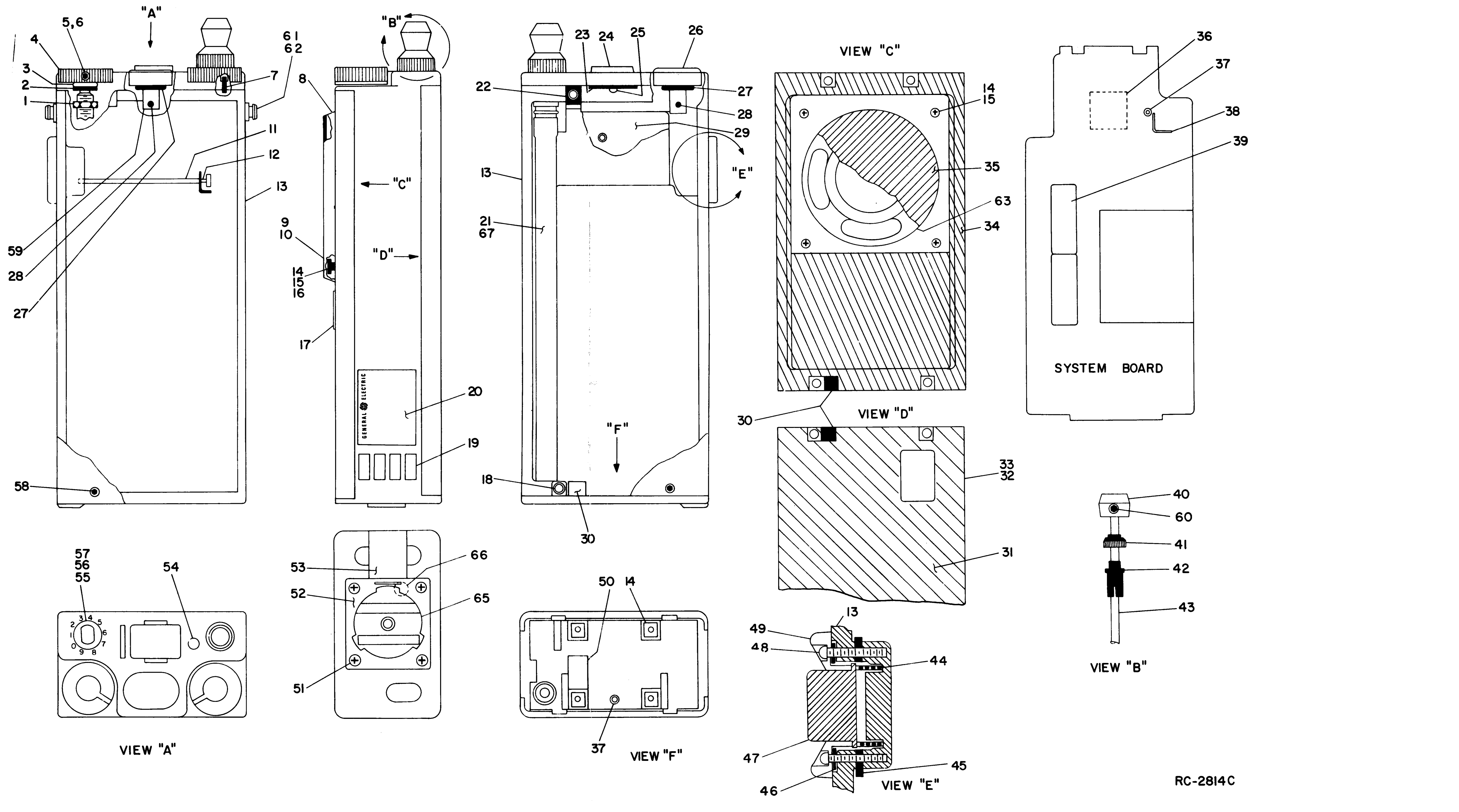
REV. C - To improve quality of transmitted audio.
Changed C2 and R1.

REV. D - To make MVP high band compatible with option 4192.
Added C18 and R5.

REV. E - To incorporate new fuse wire.
Changed F701 to 3.6 ampere fuse wire.

REV. F - To improve operation of modulation circuit.
Added C19 and C20.

REV. G - To improve operation.
Changed PTT switch S1.



RC-2814C

MULTI-FREQUENCY MODIFICATIONS

(19D423192, Sh. 1, Rev. 7 & Sh. 2, Rev. 1)

The multi-frequency modifications include instructions for adjusting the stop post on multi-frequency switch S1, for adding oscillator modules, for repeating frequencies, and repeating oscillator modules.

1- STOP POST ADJUSTMENT

CAUTION

Due to the small size of the stop posts, be very careful when making adjustments to avoid losing the stops.

1. Remove the multi-frequency switch as directed in the Disassembly Procedure (See LBI-4995).
2. Turn the shaft fully counterclockwise as viewed from the knob end.
3. Unscrew the panel seal to gain access to the stop post (see Figure 1).
4. Install the stop post in the appropriate hole as shown in the following chart.

STOP POST ADJUSTMENTS	
No. of Freq.	Wove Adjustment Stop To:
2	H2
3	H3
4	H4
5	H5
6	H6

5. Replace the panel seal with the side marked "Bottom" against surface "Z".
6. Re-install the Multifrequency Switch.

2- ADDING OSCILLATOR MODULES

1. After completing the stop post adjustment, connect the leads from multi-frequency switch S1 as shown in the following chart (see Figure 3 for connection points). Tape back all unused leads.
2. Place the oscillator module(s) in the proper holes (see Figure 3). Then bend over tabs on the can and solder to the adjacent pads (see Figure 2).

CONNECTION CHART			
FROM	TO	WIRE COLOR	S1 POSITION
S1-C1	H11 (solder)	BL	
S1-1	J31	W-BK	1
S1-2	J30	W-O	2
S1-3	J24	B	3
S1-4	J25	R	4
S1-5	J26	O	5
S1-6	J27	Y	6
S1-7	Let Hang	G	7
S1-8	Let Hang	BL	8

3. Bend the leads of the oscillator module as shown in Figure 2 (or appropriate Outline Diagram) and solder to the adjacent pads.
4. For two or more transmitter frequencies and one receiver frequency, remove the jumper from H7 to H10 and add a sleeved jumper (#26 AWG) from H7 to H13 on the Systems Board.
5. For two or more receiver frequencies and one transmitter frequency, remove the jumper from H8 to H10 and add a sleeved jumper (#26 AWG) from H20 and H21 on the Systems Board.

3- REPEATING FREQUENCIES

For repeating both transmitter and receiver frequencies without adding additional oscillator modules, add a sleeved jumper (#26 AWG) between the frequencies to be repeated. For example, if transmitter and receiver channels 1 and 5 are to be repeated, add the jumper from S1-1 to S1-5.

4- REPEATING OSCILLATOR MODULES

To repeat frequencies for the transmitter only or the receiver only, diodes can be used in place of oscillator modules.

1. Set the stop on S1 and install the oscillator modules whose frequencies are not to be repeated as directed in Section I and II.
2. Install the oscillator(s) whose frequencies are to be repeated as directed above except solder the Number 2 pin to the "E" pad instead of the "P" pad (see Figure 2).
3. For every channel that a frequency is being repeated, assemble a diode 19A115100P1 in the space normally intended for the oscillator module by putting the annode lead in the Number 2 hole, bending it over and soldering to the "P" pad. The cathode lead will be terminated later.
4. For each different frequency that is repeated, an additional diode (19A115100P1) is to be assembled in respective channel closest to the oscillator module being repeated. Assemble the diode in the Number 1 hole, annode lead down and sleeved, and connect to the associated "E" pad. Then run the jumper from this pad to the "P" pad of related oscillator module.

The cathode end of the diodes should be connected together using mid air connections. Make the connection and run the wire down the side of the diode along the component side of the board to the next diode, and so on until all the diode's cathodes are connected together. Route these wires to give the shortest connections. Now connect a lead to the cathode of the diode that is closest to the repeated oscillator module and run this lead down the side of the diode and through any empty hole or slot to the solder side of the board, and connect the lead to the "E" pad of the oscillator module. Next, sleeve the diodes as shown in Figure 4.

Example: Channel 3 and 4 to be same as Channel 1.
Channel 5 and 6 to be same as Channel 2.

1. Assemble the oscillator module in Channels 1 and 2 as normal except connect the Number 2 lead to the "E" pad instead of "P" pad.
2. Assemble (1) diode in the Number 2 hole, anode lead down, in each of Channels 3, 4, 5, & 6 and solder to "P" pads.
3. Since two frequencies are being repeated, two additional diodes will be required, one in the Number 1 hole of Channel 3 and the other in the Number 1 hole of Channel 5. Sleeve, bend, and solder leads to the "E" pad. Connect jumper between the "E" pad of the Number 3 Channel and "P" pad of oscillator module Number 1. Connect a jumper between the "E" pad of Number 5 Channel and "P" pad of oscillator module Number 2.
4. Connect the top lead (cathode) of diodes (3) in Channel 3 and 4 to each other by soldering jumper wire to leads, dressing the wire down the side of the diodes and along the board. Connect a jumper from the top of diode in the Number 1 hole of Channel 3 to the "E" pad of oscillator module Number 1. Run the wire down through the board using any available hole or slot to the solder side. Connect the jumper from the diode in Channel Number 5 to oscillator module Number 2 in the same manner.
5. Connect top lead (cathode) of diodes (3) in channel 5 & 6 to each other by soldering jumper wire to lead, dressing wire down the side of the diodes and along the board. Connect jumper from top of diode in #1 hole of channel 5 to "E" pad of SICOM #2. Run wire down through board using any available hole or slot, to solder side.

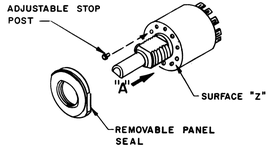
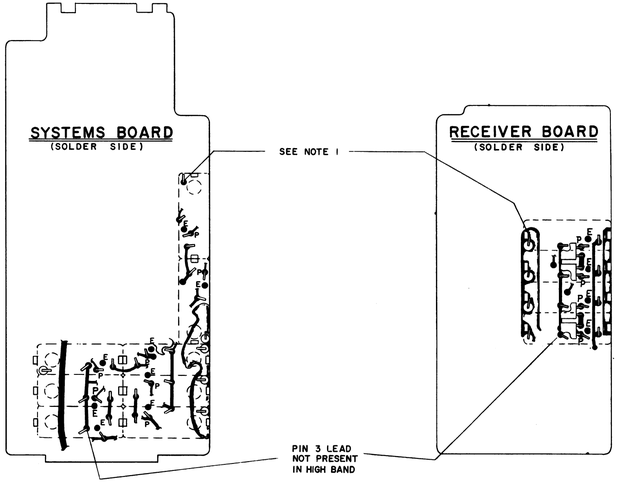
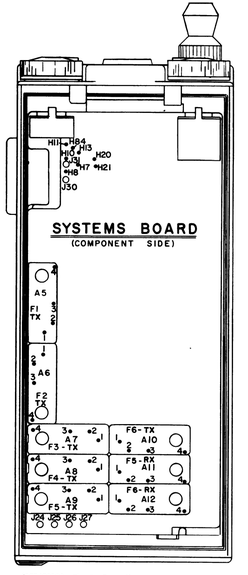


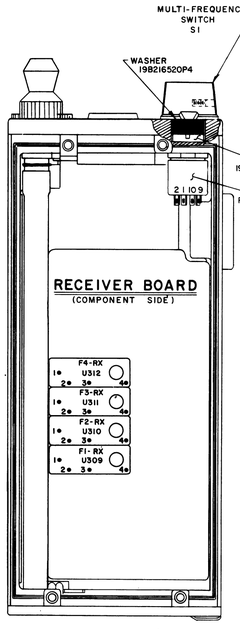
Figure 1 - Stop Post Adjustment



(19D423192, Sh. 2, Rev. 1)

Figure 2 - Oscillator Module and Diode Installation





(19D423192, Sh. 1, Rev. 6)

Figure 3 - Oscillator Mounting Positions & S1 Connection Points

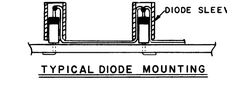


Figure 4 - Typical Diode Mounting