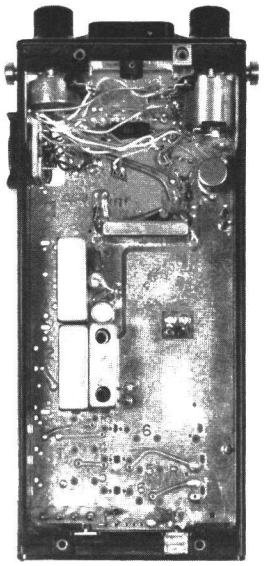
MOBILE RADIO

MASTR®

MVP Personal

SYSTEMS BOARD AND CASE ASSEMBLY 19D417330G8



Maintenance Manual LBI31077

DATAFILE FOLDER - DF4100

SYSTEMS BOARD AND CASE ASSEMBLY 19D417330G8

SPECIFICATIONS *

MODEL NUMBERS
19D417330G8

CONTROLS

450-470 MHz

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

DESCRIPTION

System Board A707 provides system interfacing between the transmitter, receiver, tone options and operating controls in the 450-470 MHz, six frequency, local operated MVP, PY Series. The system board contains transmitter oscillator modules A5 through A10. Other modules on the system board are receiver oscillator modules A11 and A12, audio amplifier module A1, 5.4 Volt regulator module A2, compensator module A3, and modulator module A4. The system board also contains system relay K1 and audio and DC switching circuits.

CIRCUIT ANALYSIS

AUDIO SWITCHING

Audio switching for local speaker/microphone LS1 is controlled by forward biasing diode CR5 (See Figure 1). Pressing PTT switch S701 causes the PTT circuit to complete the conduction path of CR5 to system ground. Pressing S701 also causes system relay K1 to apply bias voltage to the anode of CR5. Audio from the local speaker/microphone is then applied through CR5 to the input of transmitter audio module A1.

Receiver audio is connected directly to the internal speaker/microphone.

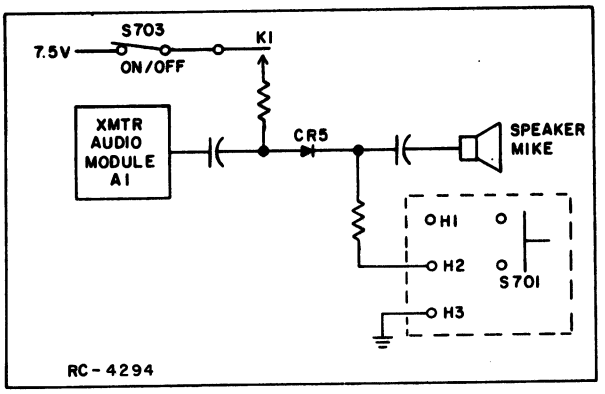


Figure 1 - Audio Switching

DC SWITCHING

Operation of the system relay, keyed locally, is controlled by diode CR2 and PTT circuit A705 (See Figure 2). Pressing PTT switch S701 causes the PTT circuit to complete the conduction path of K1 through CR2 to system ground. Completing the conduction path energizes K1 to switch the battery voltage to the transmitter audio and regulator module. Energizing K1 also connects the transmitter output to the antenna.

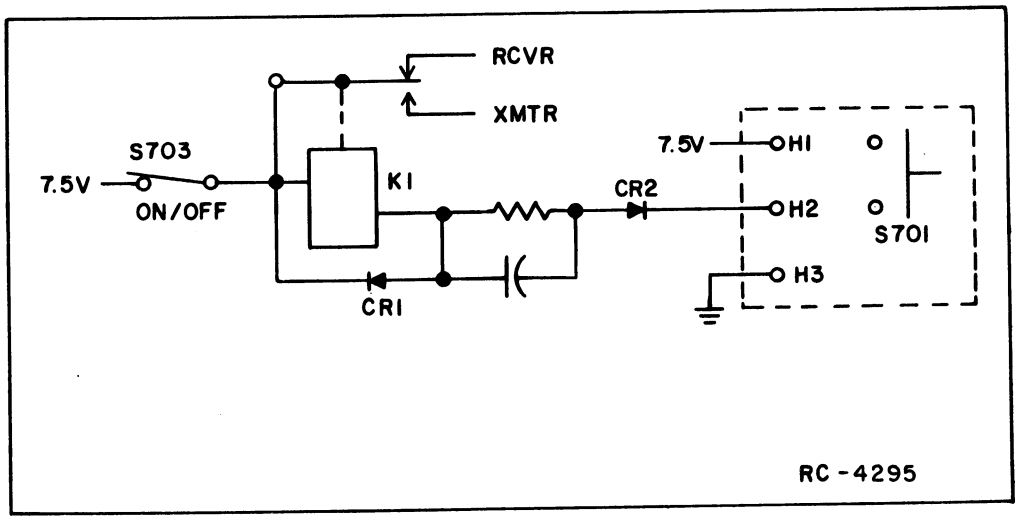


Figure 2 - DC Switching

PTT Switch (A705)

Solid state PTT switch S701 forward biases diodes CR2 and CR5 to energize relay K1, keying the radio and applying audio from the local speaker/microphone to the input of the transmitter audio module.

When S701 is pressed, NPN transistor Q1 of A705 conducts. Transistor Q1 conducting, provides a conduction path to ground for diode CR2. Relay K1 is energized and the radio is keyed.

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 even though only one Oscillator Module is used for each of the repeated channels. A typical diagram with repeated Oscillator Modules is shown in Figure 3.

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.

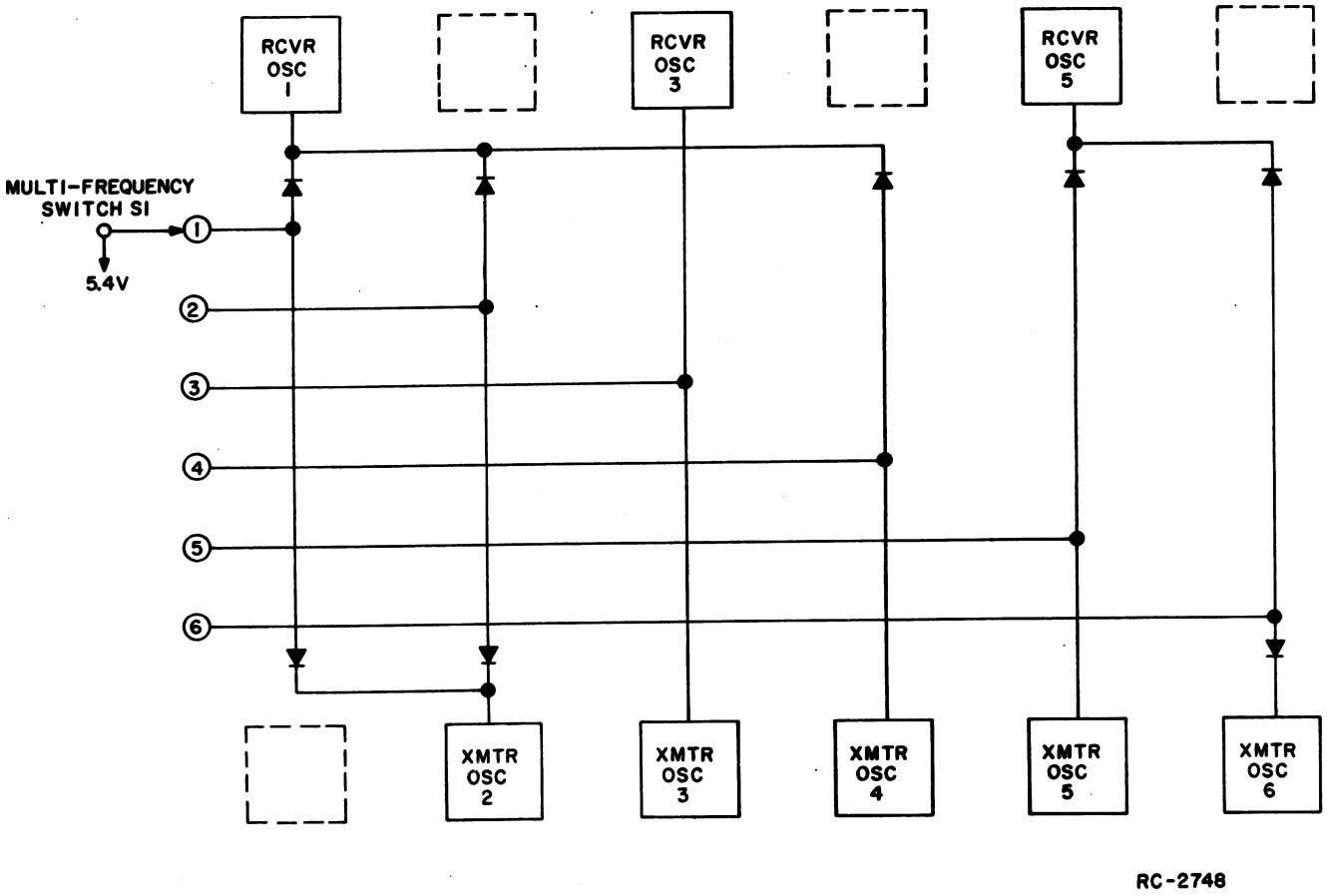


Figure 3 - Repeating Oscillator Modules

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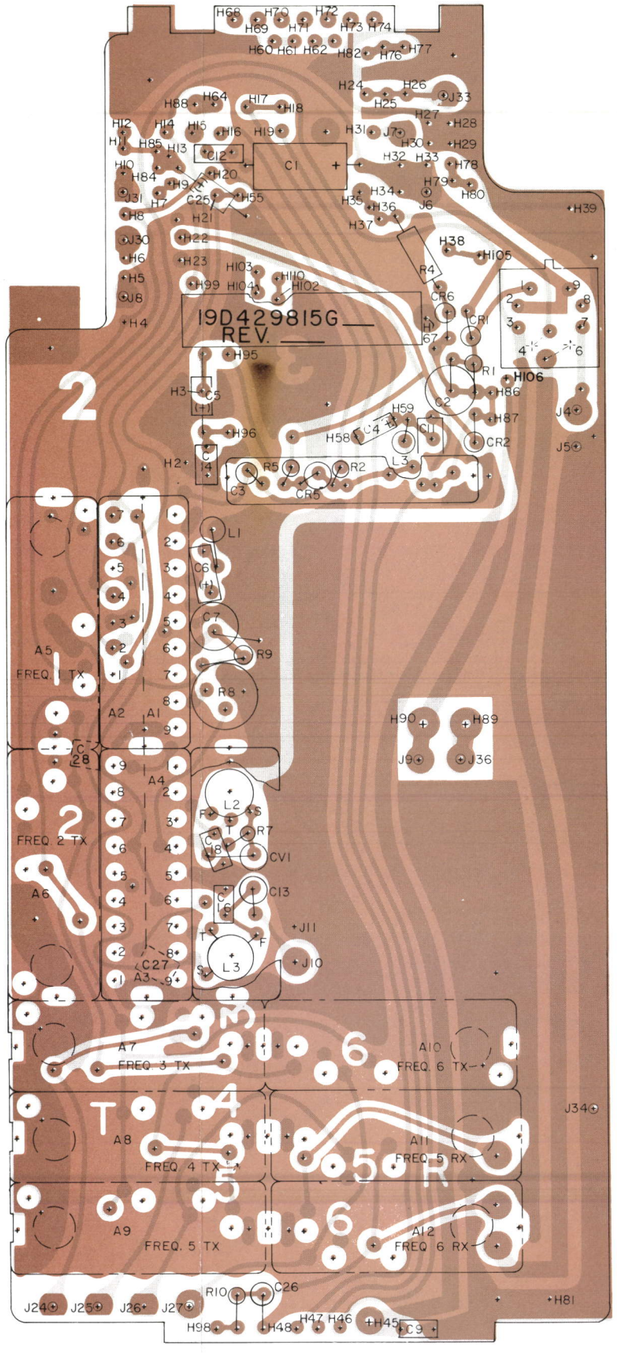
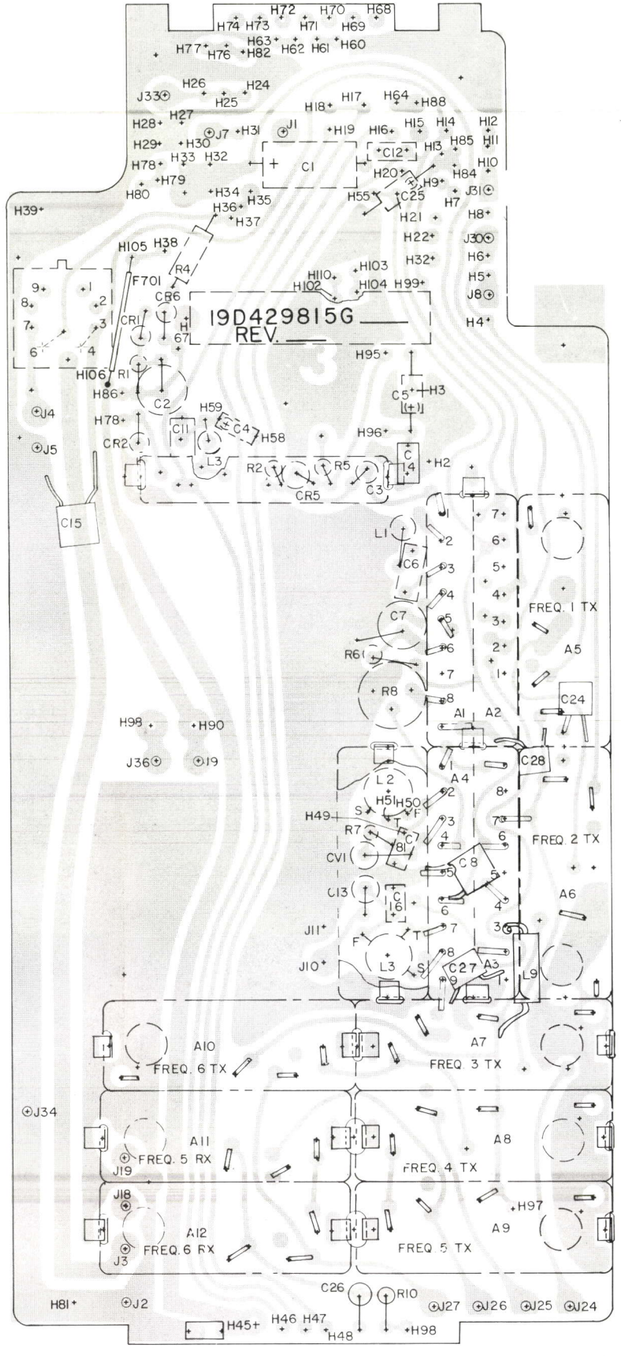
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502 USA

GENERAL ELECTRIC

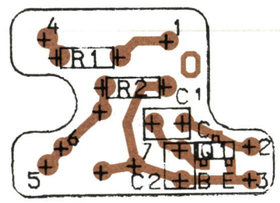
COMPONENT SIDE



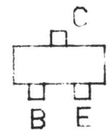
SOLDER SIDE



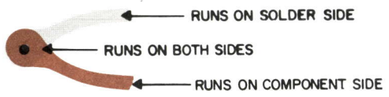
A705



LEAD IDENTIFICATION FOR Q1



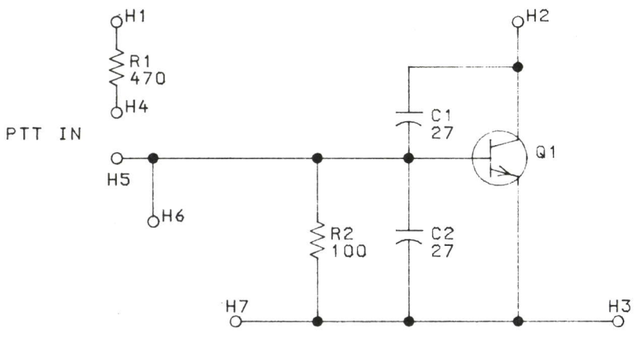
(19B233822, Rev. 0)
(19A143811, Sh. 1, Rev. 0)
(19A143811, Sh. 2, Rev. 0)



CR1, CR5
CR6, CV1

LEAD FORMING FOR
CR2 — C6, C6
C26

C3



(19B233837, Rev. 1)

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.

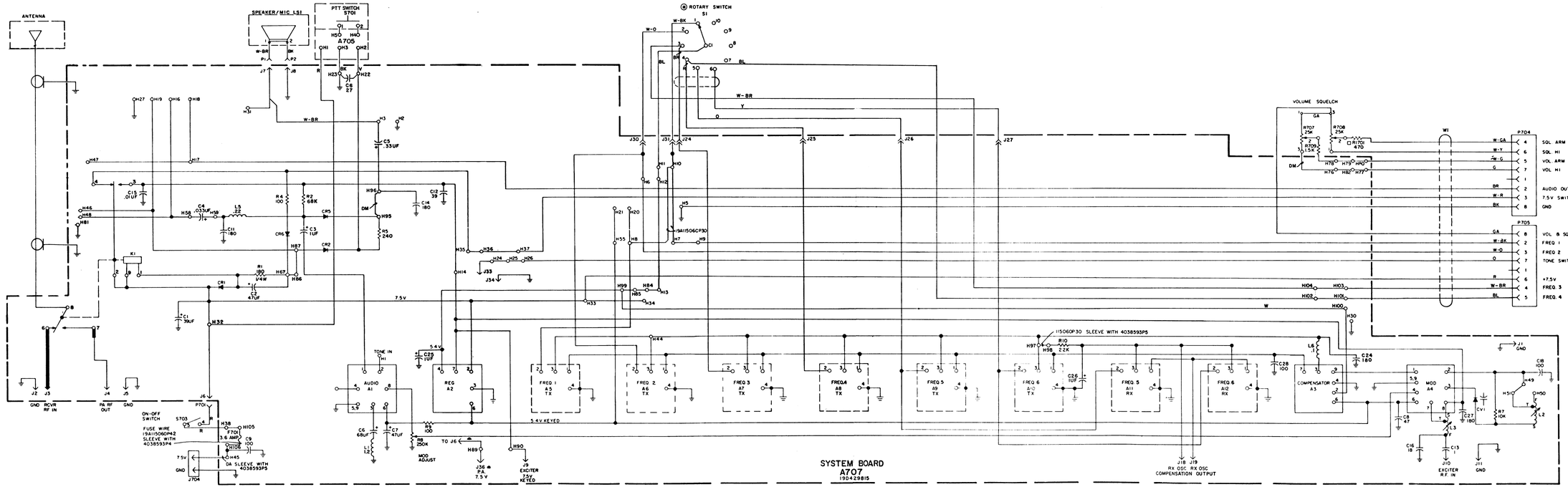
OUTLINE DIAGRAM

450—470 MHz SYSTEM BOARD

(19D429814, Sh. 2, Rev. 3)
(19D429814, Sh. 3, Rev. 2)

(19D429814, Sh. 2, Rev. 3)

(19D430207, Rev. 2)



LOCAL, NEW PTT

MODEL NO	REV LETTER
PLI9D429815G1	E
PLI9D417330G6	

ALL WIRE T # 28 UNLESS OTHERWISE SPECIFIED.

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 MICROFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF= MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS.

□ R1701 IS PART OF KIT PLI9A135060Z01

NOTES:
1. ⏏ USED IN HI POWER UNIT ONLY
2. DA = #22AWG
3. ⊘THESE ITEMS ARE PART OF KIT
4. GROUND MAY BE MADE THROUGH CAN ONLY ON SICOMS.

SCHEMATIC DIAGRAM

450—470 MHz SYSTEM BOARD

Issue 1

(19R601733, Rev. 0)

PARTS LIST

SYSTEM BOARD/CASE ASSEMBLY
19D417330G8
ISSUE 1

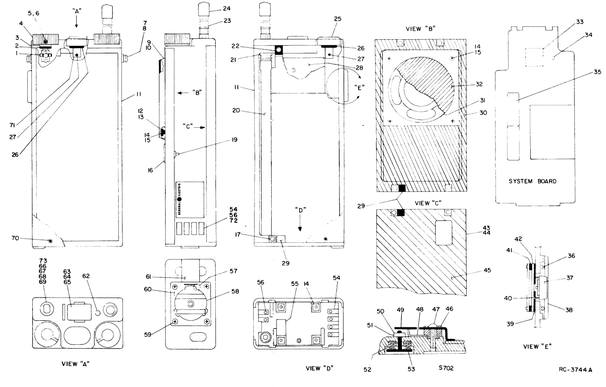
SYMBOL	GE PART NO.	DESCRIPTION
A705		PTT SWITCH BOARD 19B223821G1
		- - - - - - - - - CAPACITORS - - - - - - - - -
C1 and C2	19A700221P44	Ceramic: 27 pf ±5%, 100 VDCW.
		- - - - - - - - - TRANSISTORS - - - - - - - - -
Q1	19A134739P1	Silicon, PNP.
		- - - - - - - - - RESISTORS - - - - - - - - -
R1	3R151P471J	Composition: 470 ohms ±5%, 1/8 w.
R2	3R151P101J	Composition: 100 ohms ±5%, 1/8 w.
A707		SYSTEM BOARD 19D429815G1
A1	19C320062G1	Audio Transmitter.
A2	19C328070G1	Voltage Regulator.
A3	19C320061G3	Oscillator Compensator.
A4	19C320084G1	Modulator.
		- - - - - - - - - CAPACITORS - - - - - - - - -
C1	5491674P30	Tantalum: 39 µf ±20%, 10 VDCW; sim to Sprague Type 162D.
C2	5491674P42	Tantalum: 47 µf ±20%, 6 VDCW; sim to Sprague Type 162D.
C3	5491674P1	Tantalum: 1.0 µf +40-20%, 10 VDCW; sim to Sprague Type 162D.
C4	5491674P51	Tantalum: 0.033 µf ±10%, 20 VDCW; sim to Kemet T376P33K.
C5	5491674P52	Tantalum: 0.33 µf ±10%, 20 VDCW; sim to Kemet T376B034K020AS.
C6	19C307102P19	Tantalum: 68 pf ±20%, 4 VDCW; sim to Corning Electronics S68S8.
C7	5491674P42	Tantalum: 47 µf ±20%, 6 VDCW; sim to Sprague Type 162D.
C8	19A700226P53	Ceramic: 47 pf ±5%, 100 VDCW; temp coef -750 PPM.
C10	19A700226P65	Ceramic: 100 pf ±5%, 100 VDCW; temp coef -750 PPM.
C11	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW; temp coef -3300 PPM.
C12	19A700221P49	Ceramic: 39 pf ±10%, 100 VDCW; temp coef -80 PPM.
C13	19A700013P13	Phenolic: 1.0 pf ±5%, 500 VDCw.
C14	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW.
C15	19A116192P1	Ceramic: 0.01 µf ±20%, 50 VDCW.
C16	19A700221P38	Ceramic: 18 pf ±5%, 100 VDCW, temp coef -80 PPM.
C18	19A700227P65	Ceramic: 100 pf ±5%, 100 VDCW, temp coef -1500 PPM.
C24	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW.
C25 and C26	5491674P1	Tantalum: 1.0 µf +40-20%, 10 VDCW; sim to Sprague Type 162D.

SYMBOL	GE PART NO.	DESCRIPTION
C27	19A700229P73	Ceramic: 180 pf ±10%, 100 VDCW.
C28	19A700229P65	Ceramic: 100 pf ±5%, 100 VDCW.
		- - - - - - - - DIODES AND RECTIFIERS - - - - -
CR1	19A115250P1	Silicon, fast recovery, 225 ma, 50 PIV.
CR2	5494922P1	Silicon; sim to Type 1N456.
CR5	5494922P1	Silicon; sim to Type 1N456.
CR6	19A115250P1	Silicon, fast recovery, 225 ma, 50 PIV.
CV1	5495769P9	Silicon, capacitive.
		- - - - - - - - - - FUSES - - - - - - - - - -
F701	19A127884G1	Fuse Kit.
		- - - - - - - - JACKS AND RECEPTACLES - - - - -
J1 thru J5	19A116636P4	Contact, electrical: sim to Concord 10-891-1.
J6 thru J8	19A116636P2	Contact, electrical: sim to Cambion 323301-03.
J9 thru J11	19A116636P4	Contact, electrical: sim to Concord 10-891-1.
J18 thru J21	19A116636P4	Contact, electrical: sim to Concord 10-891-1.
J24 thru J27	19A116636P4	Contact, electrical: sim to Concord 10-891-1.
J30 and J31	19A116636P4	Contact, electrical: sim to Concord 10-891-1.
J33 and J34	19A116636P2	Contact, electrical: sim to Cambion 3233-01-03.
		- - - - - - - - - - RELAYS - - - - - - - - - -
K1	19B209562P2	Hermetic sealed: between 45-100 ohms, 2 form C contacts, 5.0 VDC nominal, 1.0 w max operating; sim to GE 19C831002A2.
		- - - - - - - - - INDUCTORS - - - - - - - - -
L1	19B209420P114	Coil, RF: 1.20 µh ±10%, 0.18 ohms DC res max; sim to Jeffers 4436-1K.
L2	19A122798G1	Coil: 6.05-6.9 µh. Includes:
	19B209436P1	Tuning slug.
L3	19B219527G1	Coil. Includes:
	19B209436P1	Tuning slug.
L4	19B219527G3	Coil. Includes:
	19B209436P1	Tuning slug.
L5	19B209420P105	Coil, RF: 220 µh ±10%; sim to Jeffers 4416-5K.
L6	19B209420P101	Coil, RF: 100 µh ±10%, sim to Jeffers 4416-1K.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	19A700106P45	Composition: 180 ohms ±5%, 1/4 w.
R2	3R151P683J	Composition: 68K ohms ±5%, 1/8 w.
R4	3R151P101J	Composition: 100 ohms ±5%, 1/8 w.
R5	3R151P241J	Composition: 240 ohms ±5%, 1/8 w.
R7	3R151P103J	Composition: 10K ohms ±5%, 1/8 w.
R8	19A116412P4	Variable, cermet: 250K ohms ±10%, 1/2 w; sim to Helipot Model 62 PF.
R9	3R151P101J	Composition: 100 ohms ±5%, 1/8 w.
R11	3R151P223J	Composition: 22K ohms ±5%, 1/8 w.

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - JACKS AND RECEPTACLES - - - - - - -
J704		See Mechanical Parts RC3744 items 57-61.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P701	19A115834P4	Contact, electrical: sim to AMP 2-332070-9.
P704 and P705	19A116137P3	Socket, crystal: 8 contacts; sim to Cinch 133-98-92-001. (Part of W1A).
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R707	19A116227P1	Resistor/Switch: variable, carbon film, 25K ohms ±20%, 1/8 w, (includes S703), rotary, SPST, 3 amps at 125 VAC; sim to Mallory Type MZC.
R708	19A116227P2	Variable, carbon film: 25K ohms ±20%, 1/8 w; sim to Mallory Type MZC.
R709	3R151P152J	Composition: 1.5K ohms ±5%, 1/8 w.
R1701	3R152P471J	Composition: 470 ohms ±5%, 1/4 w. (Part of Intrinsically Safe Kit 19A130602G1).
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S701		See Mechanical Parts RC3744 items 36-42.
S703		(Part of R707).
		- - - - - - - - - - CABLES - - - - - - - - - -
W1A	19C330826G2	Cable. (Includes P704 & 705).
W2B	19A144162G2	RF: (Specify length).
		ASSOCIATED ASSEMBLIES
		- - - - - - - - - OSCILLATORS - - - - - - - - -
		NOTE: When reordering, give GE Part Number and specify exact frequency needed.
A5 thru A10	4EG27A11	Transmitter Oscillator Module. FX= Fo/24
A11 and A12	4EG28A10	Receiver Oscillator Module. FX= Fo-23 MHz/24
		FRONT COVER ASSEMBLY 19C317416G9 LOW POWER 19C317416G10 HIGH POWER
		- - - - - - - - - LOUDSPEAKERS - - - - - - - - -
LS1	19A134949P1	Permanent magnet: 2.00 inch, 8 ohms ±15% voice coil imp, 500 Hz ±50 Hz resonant; sim to Oaktron Sample No. T6703.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1 and P2	19A115834P4	Contact, electrical: sim to AMP 2-332070-9.
		MULTI-FREQUENCY KIT 19A130530G1
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S1	19B219515G1	Switch Assembly.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
	19B216897G3	Rear Cover. (without clip).
	19B216897G4	Rear Cover. (with clip).
	19B209548P1	Antenna Assembly.
	19D413522G4	Rechargeable Battery.
	4038831P5	Alignment tool, fork tip.
	19B219079G1	Alignment tool, allen tip.

SYMBOL	GE PART NO.	DESCRIPTION
	7150729P4	Allen wrench. (Used with No. 10 set screw or No. 3-56 socket head cap screw).
	19A134457P1	Tuning tool, variable capacitor. (.029 inch square metal tip).
		MECHANICAL PARTS (SEE RC3744)
1	19A127319P1	Hex nut: 1/4-32.
2	4037064P18	Washer, non metallic: 1/4 inch.
3	4035630P1	Washer, teflon: 1/4 inch.
4	19B232784G2	Knob assembly. (Includes items 5 & 6).
5	R70BP703C6	Set screw: No. 3-48 x 3/16. (Part of item 4).
6	19A137254P1	Insert, tapered. (Part of item 4).
7	19A127802P1	Rivet shield.
8	19A116773P805	Tap screw, Phillips POZIDRIV®: No. 4-24 x 5/16.
9	19B227270G1	Grille. (Used in low power only).
10	19B227270G2	Grille. (Used in high power only).
11	19D423170G1	Case. (Includes items 7, 17, 22, 54, 56 & 62).
12	NP280150P1	Nameplate. (GE Monogram).
13	NP280150P2	Nameplate. (GE Monogram - HI POWER).
14	19B216858P1	Insert.
15	N681P5002C6	Screw, phillips head: No. 2-56 x 1/8.
16	NP270687	Nameplate. (Property of General Electric).
17	19A134548P1	Threaded insert.
18		(Not Used).
19	R170P9004C17	Cap screw: No. 4-40 x 1/4.
20	19A127779G8	Antenna tube. (Includes item 21, teflon insert).
21	19A129651P1	Teflon insert.
22	19B216875P1	Support.
23	19B209548P1	Antenna assembly.
24		(Not Used).
25	19C323413P1	Dummy plug.
26	19A115983P3	"O" ring.
27	R50P9606C	Dowel pin: 1/16 x 3/8.
28	19B219510P1	Insulator.
29	19A130397P1	Strap.
30	19C317394P4	Gasket.
31	19A130993P1	Gasket. (Not Used).
32	19A143483P1	Diaphragm.
33	19A116270P1	Tape, pressure sensitive. (Specify length).
34	N330P602F22	Metallic eyelet.
35	19C311491P3	Can.
36	N55P1006	Machine screw, slotted steel: No. 0-80 x 3/8 (Part of S701).
37	19C328416G1	Button assembly. (Part of S701).
38	19C328407P1	Collar. (Part of S701).
39	19A137621P1	Plate. (Part of S701).
40	19A137620P1	Spring. (Part of S701).
41	N207P1C6	Hex nut. (Part of S701).
42	19B209943P2	Switch, push. (Part of S701).
43	19B216897G3	Rear cover assembly. (without clip).
44	19B216897G4	Rear cover assembly. (with clip).

SYMBOL	GE PART NO.	DESCRIPTION
45	19C317394P6	Gasket.
46	19B216865P1	Insulator. (Part of S702). (Not Used).
47	N647P5004C	Cap screw: No. 2-56 x 1/4. (Part of S702). (Not Used).
48	19B216864P1	Contact. (Part of S702). (Not Used).
49	19B216863P1	Spring contact. (Part of S702). (Not Used)
50	N910P6C6	Retaining ring. (Part of S702). (Not used).
51	19A127754P1	Gasket. (Part of S702). (Not Used).
52	19A127755P1	Spring. (Part of S702). (Not Used).
53	19B216862P1	Contact. (Part of S702). (Not Used).
54	19A127753P1	Contact. (Not Used)
55	19A127762P1	Strap.
56	N330P605F22	Metallic eyelet. (Not Used).
57	19B232109P1	Button plug.
58	19A130586P1	Insulator.
59	19A115794P3	Flat head screw: steel, No. 2-56 x 5/16.
60	19D413467P1	Fastener.
61	19B216891G1	Spring.
62	19A129723P1	Rivet.
63	19C317050P1	Protective Cover. (Not Used).
64	19B219540P1	Catch. (Not Used).
65	19A129390P1	Disc. (Not Used).
66	19A130426G2	Knob assembly. (Includes items 67 & 68).
67	19A130517P1	Insert. (Part of item 66).
68	19A143453P2	Set screw: No. 3-48 x 3/16. (Part of item 66).
69	19A143880P1	Washer, non metallic. (Located against hex nut, item 1).
70	19A134425P1	Machine screw, hex: No. 2-56 x 3/16.
71	19C317383P1	Dummy plug. (Not Used).
72	4033198P18	Metallic eyelet. (Not Used).
73	19A127319P2	Nut, hex: No. 1/4-28.



*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

MULTI-FREQUENCY MODIFICATIONS

(19D429830, Sh. 1 Rev. 2 & Sh. 2, Rev. 0)

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.	Move 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.

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	BR	3
S1-4	J25	R	4
S1-5	J26	O	5
S1-6	J27	Y	6
S1-3	H104	W-R	3
S1-4	H102	W-Y	4

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).
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 1 and 2.
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 connectionns. 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.

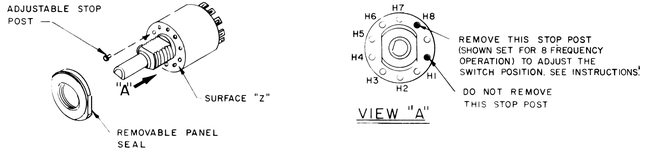
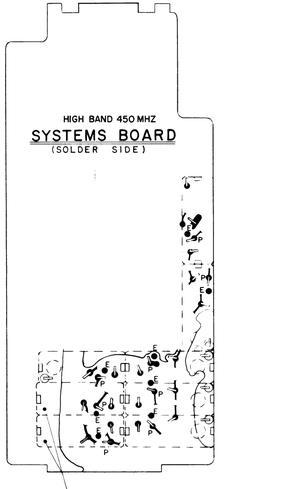


Figure 1 - Stop Post Adjusment



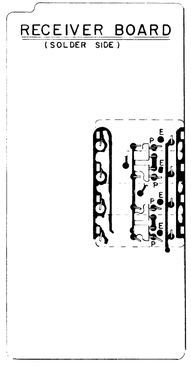
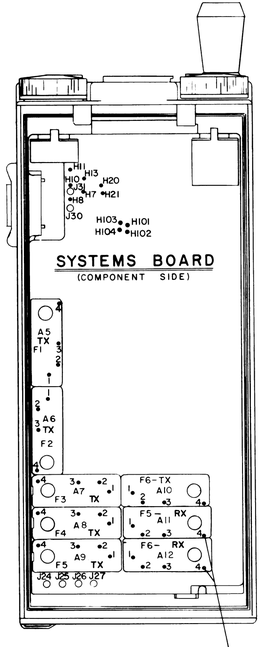


Figure 2 - Oscillator Module and Diode Installation



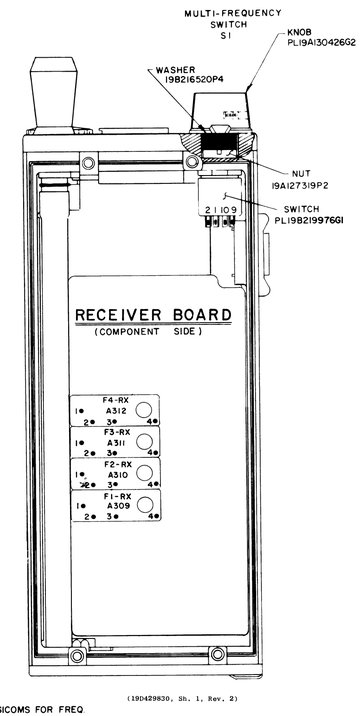


Figure 3 - Oscillator Mounting Positions & S1 Connection Points

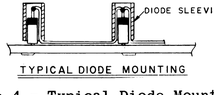


Figure 4 - Typical Diode Mounting