MOBILE RADIO

MASTR® II

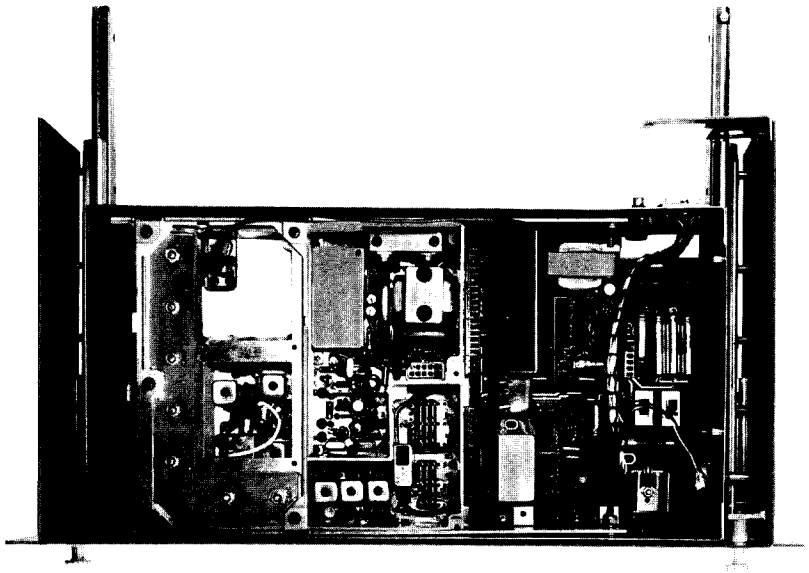
MAINTENANCE MANUAL

AUXILIARY RECEIVER 19D417546G7 & G8 & ANTENNA MATCHING UNITS 19C321150G1-G2

Maintenance Manual LBI30766D

(Supersedes LBI4915)
DATAFILE FOLDER - DF9035

AUXILIARY RECEIVER 19D417546G7 & G8
ANTENNA MATCHING UNITS 19C321150G1-G2



SPECIFICATIONS *

DIMENSIONS (HXWXD)	3.5-inches x 19-inches x 13.5 inches
AUDIO OUTPUT	
Remote Line Level	2.7 Volts RMS (+11 dBm) (If receiver is used in Tone Remote Base Station, line level should be set at 1.0 Volt RMS (+2.0 dBm).
Local Control VOLUME Adjust	6.3 Volts RMS
ANTENNA MATCHING UNIT	
Power Divider Loss	3.5 dB
Output Impedance, each output port	50 ohms
Isolation Between each output port	20 dB (15 dB at 450-512 MHz)

*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

WARNING

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.

COMBINATION NOMENCLATURE

1st Digit	2nd Digit	3rd Digit	4th Digit	5th Digit	6th & 7th Digits	8th Digit
Package	Options	Channel Spacing	No. of Freq.	Options	Frequency Range	Oscillator Stability
R 12 VDC Rec. Without AMU	**1** Standard	**4** 20 kHz	**A** 1 Freq.	**S** Standard	**12** 25-30 MHz	**A** ±5 PPM
M 12 VDC Rec. With AMU	**2** Secur-it Tone Notch Filter	**5** 25 kHz		**N** Noise Blanker	**13** 30-36 MHz	**B** ±2 PPM
S 121 VAC Rec. Without AMU	**3** Voting Tone Board	**6** 30 kHz		**P** Preampli-fier	**23** 36-42 MHz	**E** ±1 PPM
T 121 VAC Rec. With AMU	**4** Squelch Operated Relay			**U** Channel Guard	**33** 42-50 MHz	
	5 Notch Filter & Voting Board			**W** CG & NB	**44** 66-78 MHz	
	6 Notch Filter & SOR			**G** CG & Preamp	**45** 77-88 MHz	
	7 Line Response Compensator				**56** 138-150.8 MHz	
	8 Tone Notch Filter & Compensator				**66** 150.8-174 MHz	
	9 Compensator & Voting Tone Board				**77** 406-420 MHz	
	A Compensator & Squelch Operated Relay				**88** 450-470 MHz	
	B Compensator & Notch Filter & Voting Tone Board				**89** 470-494 MHz	
	C Compensator & Notch Filter & Squelch Operated Relay				**91** 494-512 MHz	
					96 806-825 MHz	

DESCRIPTION

The General Electric MASTR® II Station Auxiliary Receivers are available for mounting in MASTR II Base Stations or in MASTR II Multiple Receiver Stations. The Auxiliary Receiver consists of a 2-rack unit shelf with space for the receiver RF circuits, the oscillator/multiplier, the IFAS and MIF assemblies together with a System Board and a 10-Volt Regulator Board. 13 VDC is required to power the shelf.

In MASTR II Base Station applications (Options 9538-9541), power for operating the Auxiliary Receiver is provided by the Base Station Power Supply. These options also include a 19B226307 Overlay Harness. Refer to the Interconnection Diagram listed in the Table of Contents.

In MASTR II Multiple Receiver Station applications, power for operating the receivers is provided by a power supply designed specificially for this station. Refer to LBI30731.

Operating an auxiliary receiver in voting systems where no external power supply is available requires the use of the 19C311855G1 Power Supply. This supply is mounted on the rear panel of the receiver. No service speaker should be used with this supply.

The Auxiliary Receiver can be supplied with an Antenna Matching Unit (Options 9536 or 9537). A phono connector is used for interconnecting the receiver and AMU. When the receiver is not used with an AMU, a coaxial cable (19A129312G4) fitted with an auxiliary UHF antenna connector is provided. Refer to the Installation Instructions listed in the Table of Contents.

The Auxiliary Receiver System Board accomodates several option boards either individually or in combination. Option boards that plug into jacks on the System Board include the Voting Tone Board (19C320880G1) used in Receiver Voting Systems or the Squelch Operated Relay (SOR) 19C320913G1, used in external control applications.

A Secur-it Tone Notch Filter (19C328328G3), used in Tone Remote Systems, mounts on the side of the receiver system board chassis. A Line Response Compensator Board (19C328328G2) is available for use in Voting Tone Systems. This compensator provides means for adjusting the audio response at the receiver end of a telephone line. A third version of this board (19C328328G1) includes both the Tone Notch Filter and the Line Response Compensator.

A Channel Guard Decode Board (19D417261G6) may be plugged into the System Board at P908 and P909. A Tone Reject Filter (19C320627G1) is used with the Channel Guard Decode Board to prevent the CG tone from being fed into the telephone line. The filter attenuates below 203.5 Hertz.

The 13-Volt DC input to the 10-Volt Regulator is fused. A Light Emitting Diode (LED) is provided on the front panel of the receiver to indicate when power is applied. A power ON-OFF switch is provided on the Regulator Board. Another LED on the front panel indicates carrier activity. The receiver chassis swings out for servicing.

INSTALLATION

The Auxiliary Receiver is installed directly above the station power supply in MASTR II Base Stations. The 19C321150 Antenna Matching Unit is located directly above the Receiver. Refer to the Installation Diagram (See Table of Contents). Refer to the Installation Instructions in LBI30761 for mounting the Auxiliary Receiver in the Multiple Receiver Station.

ADJUSTMENT

The initial adjustment for the receiver includes tuning the input circuit to match the antenna. Refer to the FRONT END ALIGNMENT PROCEDURE in the MAINTENANCE MANUAL for the receiver.

MASTR II Remote Control Station Adjustment

To adjust the LINE LEVEL Control R936, located on the System Board, use the following procedure.

1. Connect a signal generator to the Auxiliary Receiver antenna jack J2402. Set the generator to the receiver frequency, modulated at 3 kHz deviation by a 1000 Hz signal. Disable Channel Guard (if present) by opening switch S802 on the Regulator Board.

2. Adjust the LINE LEVEL control R936 on the System Board for a reading of 2.7-Volts RMS (+11 dBm) as measured at the Base Station Audio pair.

   If the receiver is used with a Tone Control Base Station, adjust the LINE LEVEL Control for a reading of 1.0-Volt RMS (+2 dBm).

To adjust the VOL SET Control R930 and the SQUELCH Control R2401, use the following procedure.

1. Connect an 8.2 ohm, 1-Watt resistor across J2401-9 and 10, located on the rear panel of the Auxiliary Receiver.

2. Connect an AC VTVM across the 8.2 ohm resistor and adjust R930 for a reading of 2.7-Volts RMS on the meter.

3. Disconnect the 8.2 ohm resistor. Disconnect the signal generator.

4. Turn the SQUELCH Control R2401 clockwise (to the right) as far as possible.

5. Adjust the VOLUME control R3 on the 19C3207828 Service Speaker until the noise is easily heard in the speaker but is not annoyingly loud.

6. Turn the SQUELCH Control counterclockwise (to the left) until the noise just disappears, then advance the control another 20 degrees.

MASTR II Local Control Base Stations

To adjust the VOL SET Control R930 and the SQUELCH Control R2401, use the following procedure.

1. Apply a 1000 microvolt on-frequency signal modulated by 1,000 Hertz with ±3 kHz deviation to the Auxiliary Receiver Antenna Jack J2402.

2. Disconnect MASTR Local Controller cable from station input (P1102 from J1).

3. Connect an 8.0 ohm, 5-Watt resistor across J2401-9 and 10, located at the rear of the Auxiliary Receiver.

4. Connect an AC VTVM across the 8.0 ohm resistor and adjust R930 for a reading of 6.3-Volts RMS on the meter.

5. Disconnect the 8.0 ohm resistor and connect the Controller cable to the station. Disconnect the signal generator from J2402.

6. Turn the SQUELCH control (R2401) clockwise (to the right) as far as possible.

7. Adjust the VOLUME Control on the MASTR Local Controller until the noise is easily heard in the Controller speaker but is not annoyingly loud.

8. Turn the SQUELCH control counterclockwise (to the left) until the noise just disappears, then advance the control another 20 degrees.

CIRCUIT ANALYSIS

10-Volt Regulator Board 19C320918G1

The hybrid integrated circuit U801 includes the 10-Volt Regulator and regulator amplifier. Regulator pass transistor Q801 is mounted to the heat sink located on the printed board. The regulator circuit provides a closely controlled supply voltage for the receiver, Channel Guard and other options when present. Input voltage (A+) for the Regulator is supplied from the station power supply via J2401-2 or some other external source.

The Auxiliary Receiver ON/OFF switch S801 (located on the Regulator Board) is normally left in the ON position. Turning on the station power supply applies voltage through S801 and input filter C801-L801 to pin 1 of the regulator hybrid U801. The regulator amplifier output at pin 2 of U801 is applied to the base of Q801, causing Q801 to conduct. The voltage at pin 3 of U801 is the regulated 10-Volts output. A high-impedance source at pin 5 of U801 provides a stable 5-Volt compensation input to the receiver ICOM.

Two Light Emitting Diodes are provided on the front panel of the Receiver. LED CR801 (ON INDICATOR) is illuminated when power is applied to the Regulator and switch S801 is in the ON position. When a signal is received, the received unsquelch sensor (RUS) voltage developed by the receiver operates the RUS switch Q909 on the System Board. Conduction of Q909 operates Q802 on the Regulator Board. Conduction of Q802 turns on LED CR802 (CARRIER ACTIVITY LIGHT).

System Board 19D429764G1

The Auxiliary Receiver System Board contains the VOL SET control R930, the de-emphasis and line driver circuits for remote control applications, and jacks which accommodate the various options available. The System Board also mates directly with the receiver modules through J903 and J904.

VOLUME/SQUELCH HI from the receiver audio pre-amp is connected via J904-11 to the VOL SET Control R930 and SQUELCH Control R2401. The VOL SET arm is returned to the receiver IFAS Board where the audio is amplified by the receiver audio power amplifier circuit. The audio output of the PA is then connected to the speaker leads at J2401-9 and 10. The station VOL SET control is normally adjusted for 5-Watts output and the speaker level is controlled by the MASTR Local Controller VOLUME control. In multiple-receiver applications, the jumper between H1 and H2 on the 19C320918 Regulator Board is removed, disconnecting A+ from the receiver PA output transformer. This allows the audio

to be applied to the Multiple Receiver PA and speaker and limits the current drain requirements.

In MASTR II remote applications, the VOL/SQ HI is coupled through the LINE DRIVER circuits to the remote audio pair. The audio is connected through the high-pass filter consisting of C907-C908 and R901-R902. This filter attenuates 60 and 120 Hertz to reduce the hum and noise. The output of emitter-follower Q901 is passed through a de-emphasis network C909 and R906. This network provides a 6 dB/octave rolloff. The signal is then amplified by Q902 and fed to another emitter follower Q903.

The audio is coupled to the line driver through C914, Q904 amplifies the signal. The LINE LEVEL control R936 is connected in the collector circuit of Q904 and allows feeding the audio to the line driver Q907. Q906 serves as an audio switch controlled by the RUS circuit. As long as the RUS switch Q909 is turned off (receiver squelched), CR905 is forward biased allowing Q906 to conduct. Conduction of Q906 grounds the audio path between Q904 and Q907, preventing the audio from being passed to the line. When the receiver unsquelches, the RUS lead goes high. This turns Q909 on, turning off CR905 and Q906. The audio is now allowed to pass to the output amplifier Q908 and to the line transformer T901. CR902, CR903 and VR901 are provided for line surge protection.

When the 19D417261G6 Channel Guard Board is used, the RX MUTE lead is controlled by the Channel Guard Board. When no CG tone of the proper frequency is present, the board holds the RX MUTE lead at ground potential. When a CG tone of the proper frequency is detected, the ground on the RX MUTE lead is removed and the RUS lead will then go high when the receiver squelch opens. Activating the CG MONITOR switch at the station control unit causes the Channel Guard Board to remove ground from the RX MUTE lead, allowing the receiver to operate on noise squelch.

Channel Guard Filter 19C320627G1

The Channel Guard Filter attenuates frequencies below 203.5 Hertz to prevent the Channel Guard tone from being applied to the line. The filter board is plugged into the System Board at P906 and P907.

Audio and tone is applied to the filter input (J1-1) from the pre-amp. The audio is coupled to the 187 Hertz Notch Filter composed of Q1, Q2 and associated circuitry. Negative feedback for the filter is connected from the collector of Q2 to the junction of C2-R2.

The Notch Filter output is applied to a Low-Pass Filter consisting of Q3 and Q4. Negative feedback is developed across R12. The output of Q4 is coupled to the output lead J2-3 through C9 and returned to the pre-amp circuit.

Tone Notch Filter 19C328328G3

In Tone Remote Systems the 19C328328G3 Tone Notch Filter is used for removing the 2175 Hertz Secur-it tone from the audio path. The audio is connected to the filter at J906 on the System Board. The filter is composed of series-resonant shunts L1-C1 and L3-C3 along with parallel resonant trap L2-C2. The filter notches out the 2175 Hz component from the audio and returns the audio to the System Board via J905. Resistor R937 is removed in Tone Remote Systems.

Line Response Compensator 19C328328G2

A telephone line usually introduces attenuation as a function of frequency to the audio signal. The Line Response Compensator introduces gain at the appropriate frequencies with the net effect being a flat frequency response.

Audio applied to the compensator input at J908 on the System Board is amplified by buffer amplifier AR1-D and applied to the two active bandpass filters AR1-A and AR1-B. The 300 Hz and 3000 Hz filters boost the audio at these frequencies and the result is summed by the low-Q 1000 Hz filter AR1-C. This 1000 Hz filter provides the required attenuation for a resultant response control from -1 to +10 dB at 300 Hz, 3000 Hz referenced to the 1000 Hz level. Gain control R12 is adjusted at the factory and should require no further adjustment. The compensator output is applied to J909 on the System Board. The +10 VDC for operating the compensator circuits is applied via J910 on the System Board.

Tone Notch Filter/Line Response Compensator 19C328328G1

The 19C328328G1 board combines the Tone Notch Filter and Line Response Compensator in systems requiring both functions.

Squelch Operated Relay Board 19C320913G1

The Squelch Operated Relay (SOR) Board plugs into the Auxiliary Receiver System Board at the P902 position. The SOR provides four sets of Form "C" relay contacts. A harness (19A122717G5) is provided for connecting any two sets of the Form "C" contact pins. The contacts of the relay are rated at 2 Amperes, for either 24 VDC or 121 VAC application.

When a signal is received and the receiver unsquelches, a positive voltage appears on the RUS line at P904-8. This positive voltage is applied to the base of Q1, turning the transistor on. Conduction of Q1 operates Q2. Conduction of Q2 turns on Q3 which, in turn, energizes relay K1.

Voting Tone Board 19C320879G1

The Voting Tone Board is used in Voting Selector Systems and is plugged into the same plug (P902) which accomodates the SOR Board. Thus both of these options cannot be used simultaneously. Refer to LBI4913 for a description of the Voting Tone Board.

Voting Tone Board 19C328276G2 (Option 9656)

The 19C328276G2 Voting Tone Board is used in Voting Systems when test tones are desired for line response adjustment. The test tones are normally 400, 1000 and 2500 Hz with optional status tones of 1600, 2175 and 2400 Hz available. Three momentary pushbutton switches are provided for enabling each of the test tones. The 19C328276G2 Voting Tone Board is described in LBI30767.

Antenna Matching Units (Options 9536-9537)

The Antenna Matching Units are designed to match two or more (up to a total of four) receivers to a single antenna. The Antenna Matching Units may be operated with any receiver having an input impedance of approximately 50 ohms. The AMU chassis is designed for standard rack mounting. The frequency range of both units are listed in the following chart.

OPTION	9536 & 9703	9537 & 9704
MODEL	19C321150G1	19C321150G2
Freq. Range in Megahertz	42.5-174 MHz	450-512 MHz
Power Dividers	Z1, Z2, Z3	Z4, Z5, Z6

Antenna Matching Unit Options 9536 and 9537 are used with MASTR II Base Station Auxiliary Receiver applications. Options 9703 and 9704 are used with MASTR II Multiple Receiver Stations.

The receive antenna is connected to J1 on the Antenna Matching Unit. The antenna cable W1 is connected to the input jack J1 on the first power divider (Z1 or Z4). The two outputs of the first power divider (J2 and J3) are coupled to the input jacks of two other power dividers which, in turn, feed up to four receivers. Each power divider has a 3.5 dB loss and 20 dB isolation (15 dB in the 450-512 MHz unit) between output posts. The characteristic impedance of all four receiver output posts on the power dividers is 50 ohms to match the input impedance of the receivers. If only two receivers are used with an Antenna Matching Unit, the insertion loss can be reduced by 3.5 dB if only one power divider is used.

Power Supply 19C311855G1

The 19C311855G1 Power Supply is used when more than one auxiliary receiver is used in the MASTR II station. The 120-Volt, 50/60 Hz supply provides the required +13-Volts for operating the receiver.

Connecting P501 to a voltage source applies 120 VAC to the primary of stepdown transformer T501. The AC voltage developed across the secondary windings of T501 is rectified by full-wave bridge rectifiers CR501 through CR504. The rectified output is filtered by C501 and regulated by VR501 and Q501. The +13 V output is connected through P502 and P503 to P1-1 and P1-2 on the 19B226440G2 harness.

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

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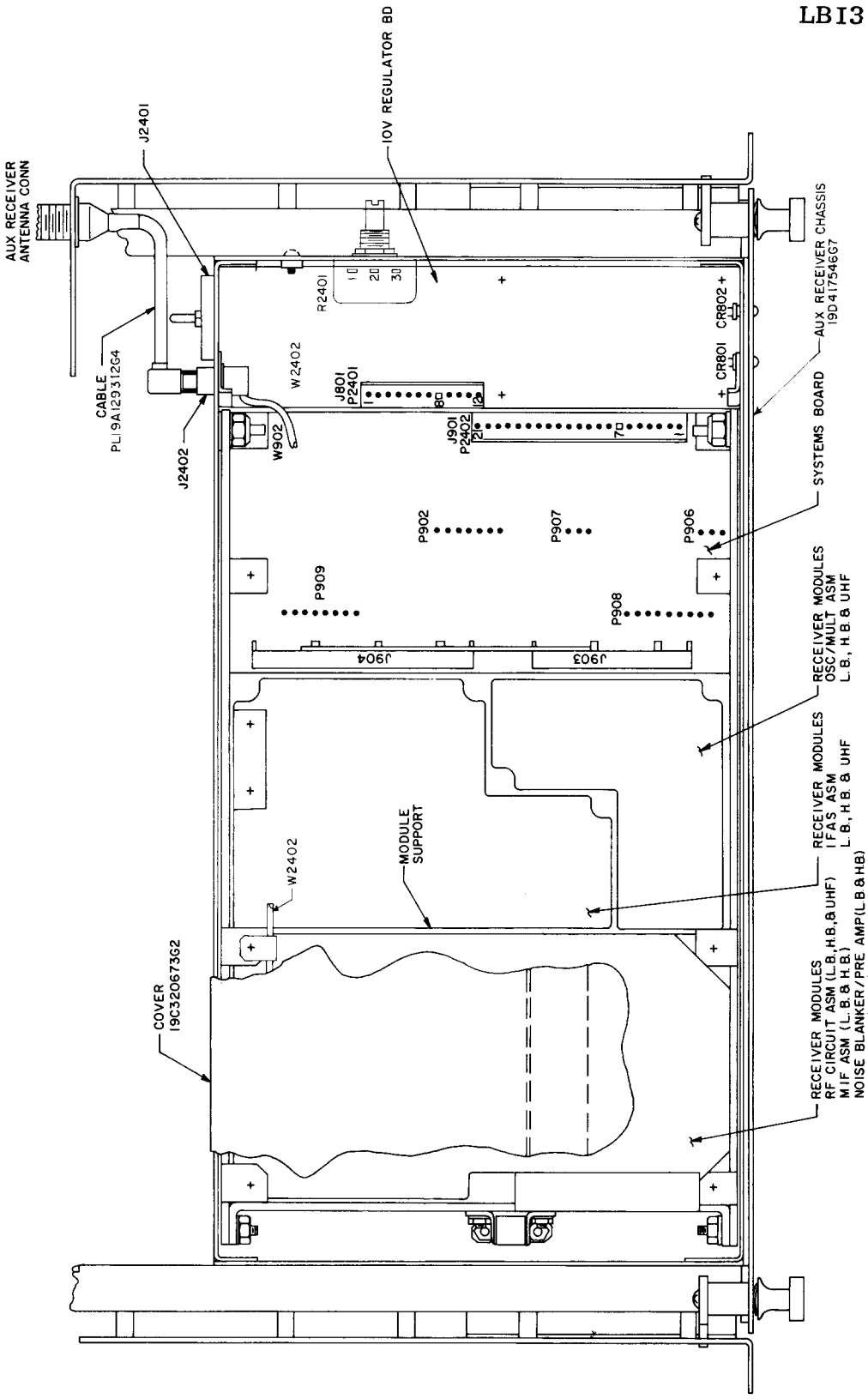
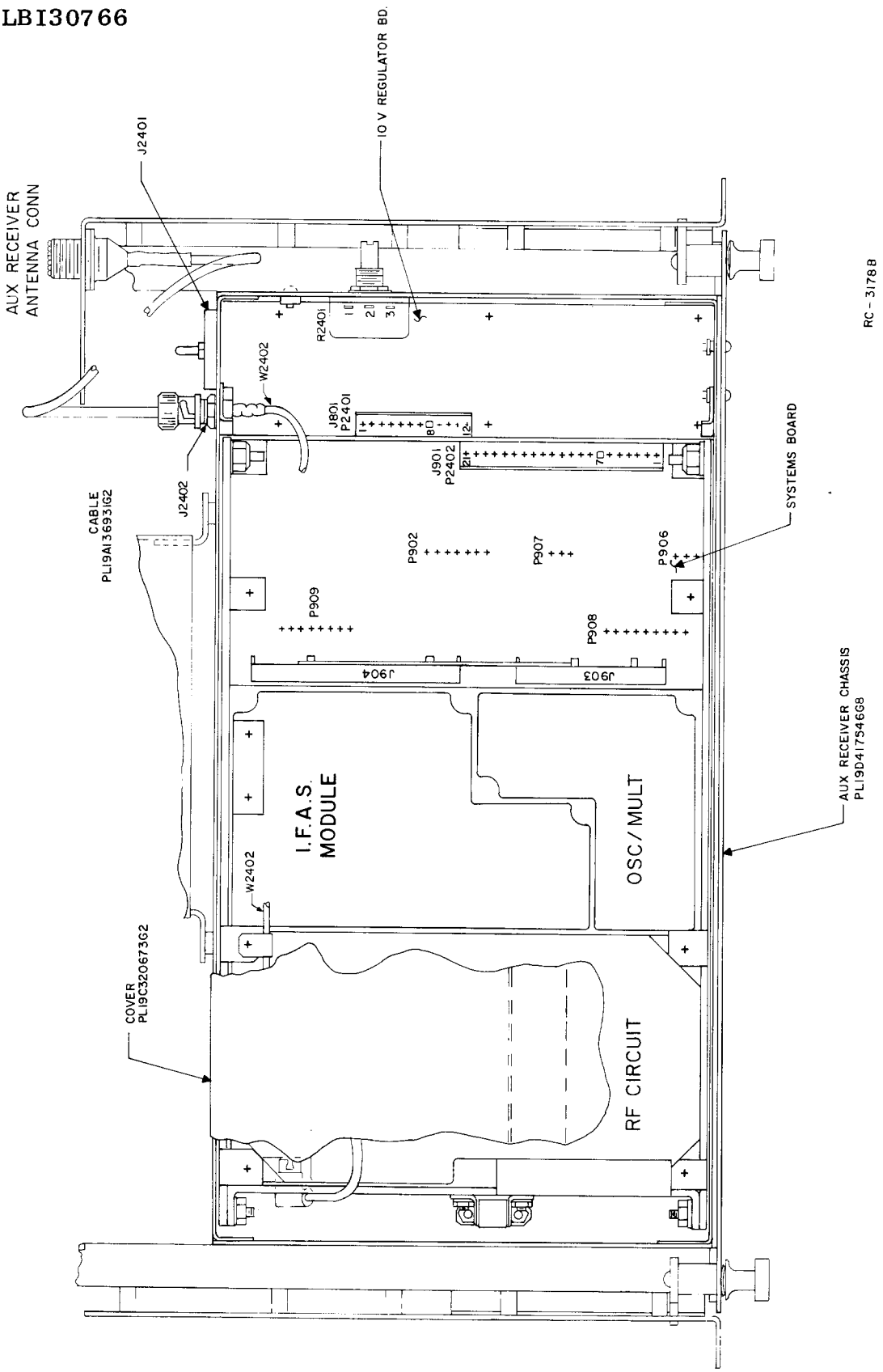


OUTLINE DIAGRAM

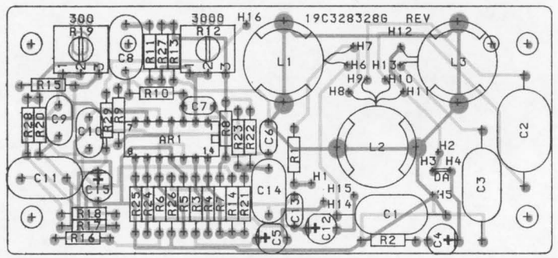
AUXILIARY RECEIVER CHASSIS
LO-BAND, HI-BAND & UHF
19D417546G7



OUTLINE DIAGRAM

800 MHz AUXILIARY RECEIVER CHASSIS
19D417546G8

TONE NOTCH FILTER/LINE RESPONSE COMPENSATOR 19C328328G1-G3



(19C328331, Rev. 0)
(19B232614, Sh. 1, Rev. 0)
(19B232614, Sh. 2, Rev. 0)

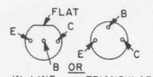
AUXILIARY RECEIVER SOR BOARD 19C320913G1

LEAD IDENTIFICATION FOR Q3

TRIANGULAR
VIEW FROM LEAD END

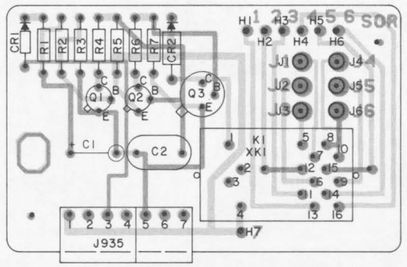
NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.

LEAD IDENTIFICATION FOR Q1 & Q2



IN-LINE TRIANGULAR
VIEW FROM LEAD END

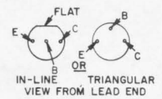
NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.



(19C321796, Rev. 1)
(19A130059, Sh. 1, Rev. 0)
(19A130059, Sh. 2, Rev. 0)

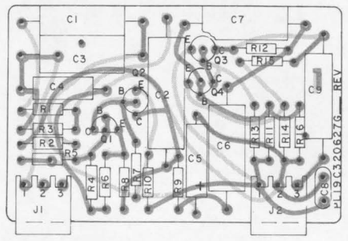
CHANNEL GUARD FILTER 19C320627G1

LEAD IDENTIFICATION FOR Q1 — Q4



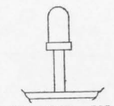
IN-LINE TRIANGULAR
VIEW FROM LEAD END

NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.

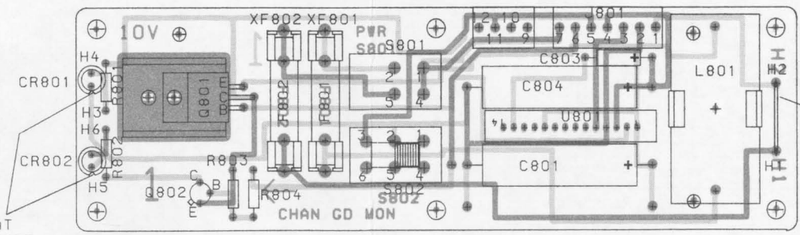


(19C321338, Rev. 1)
(19C320625, Sh. 2, Rev. 1)
(19C320625, Sh. 3, Rev. 1)

10-VOLT REGULATOR 19C320918G1



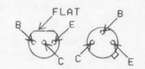
TYP. ASSY. FOR CR801 & CR802



NOTCH OR FLAT DENOTES CATHODE

(19C321792, Rev. 4)
(19B226221, Sh. 1, Rev. 1)
(19B226221, Sh. 2, Rev. 1)

LEAD IDENTIFICATION FOR Q802



IN-LINE TRIANGULAR
TOP VIEW

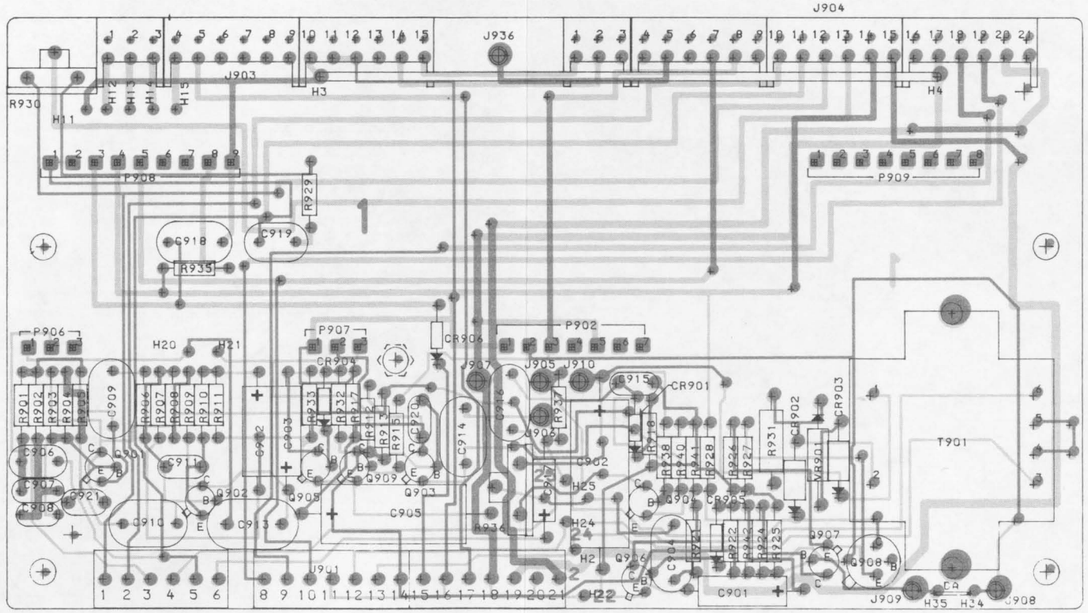
NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.

RUNS ON SOLDER SIDE
RUNS ON BOTH SIDES
RUNS ON COMPONENT SIDE

AUXILIARY RECEIVER SYSTEM BOARD 19D429764G1

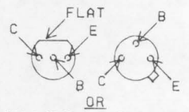
LEAD IDENTIFICATION FOR Q908

TRIANGULAR
TOP VIEW



(19D429765, Rev. 1)
(19B232874, Sh. 1, Rev. 1)
(19B232874, Sh. 2, Rev. 1)

LEAD IDENTIFICATION FOR Q901-Q907, Q909



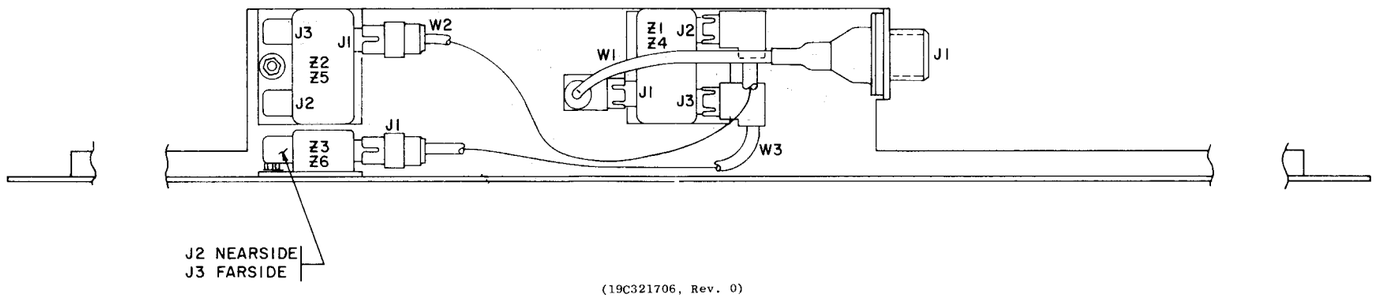
IN-LINE TRIANGULAR
TOP VIEW

NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.

OUTLINE DIAGRAMS

SOR, SYSTEM & REGULATOR BOARDS, CHANNEL GUARD & TONE NOTCH FILTER

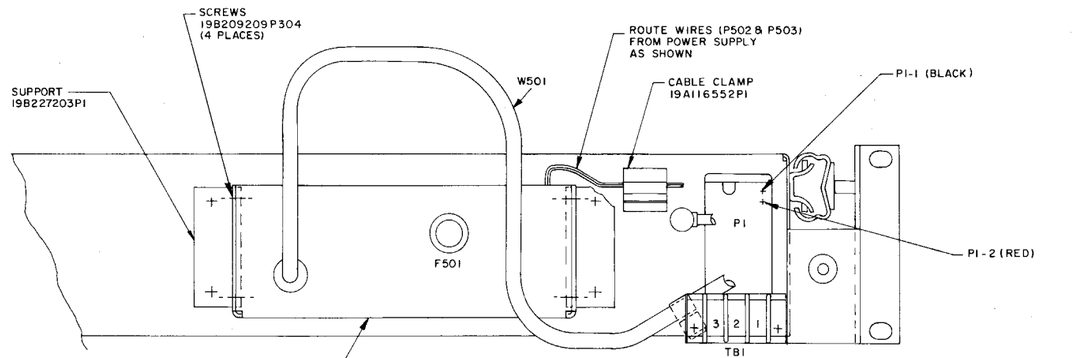
ANTENNA MATCHING UNITS 19C321150G1 & G2

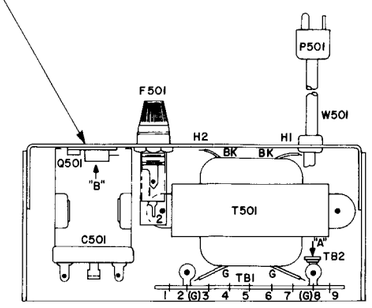


(19C321706, Rev. 0)

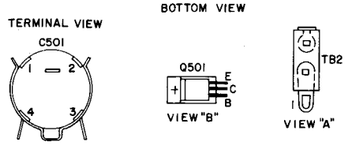
POWER SUPPLY 19C311855G1

REAR VIEW OF AUXILIARY RECEIVER





RC-2981



OUTLINE DIAGRAMS

ANTENNA MATCHING UNITS
AND POWER SUPPLY

PARTS LIST

LBI4921B

AUXILIARY RECEIVER 10-VOLT REGULATOR BOARD
19C320918G1

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - - CAPACITORS - - - - - - - - -
C801	19A115680P24	Electrolytic: 400 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C803	5496267P28	Tantalum: 0.47 µf ±20%, 35 VDCW; sim to Sprague Type 150D.
C804	19A115680P10	Electrolytic: 200 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX.
		- - - - - - - - - DIODES AND RECTIFIERS - - - - -
CR801 and CR802	19A134146P4	Diode, optoelectronic: red; sim to Opcoa LSM-6L.
		- - - - - - - - - - - FUSES - - - - - - - - - -
F801*	1R16P3	Quick blowing: 1 amps at 250 v; sim to Littelfuse 312001 or Bussmann AGC-1.
		Earlier than REV A:
	1R16P6	Quick blowing: 3 amps at 250 v; sim to Littelfuse 312003 or Bussmann AGC-3.
F802*	1R16P6	Quick blowing: 3 amps at 250 v; sim to Littelfuse 312003 or Bussmann AGC-3. Added by REV A.
		- - - - - - - JACKS AND RECEPTACLES - - - - - - -
J801		Includes:
	19A116659P11	Connector, printed wiring: 7 contacts; sim to Molex 09-64-1071. (Quantity 1).
	19A116659P13	Connector, printed wiring: 4 contacts; sim to Molex 09-64-1041. (Quantity 1).
		- - - - - - - - - - - INDUCTORS - - - - - - - - -
L801	19A115894P1	Audio freq: 1.0 mh ind., 0.35 ohms DC res.
		- - - - - - - - - - TRANSISTORS - - - - - - - - -
Q801	19A116375P1	Silicon, PNP.
Q802	19A115768P1	Silicon, PNP; sim to Type 2N3702.
		- - - - - - - - - - - RESISTORS - - - - - - - - -
R801 and R802	3R152P102J	Composition: 1K ohms ±5%, 1/4 w.
R803	3R152P821K	Composition: 820 ohms ±10%, 1/4 w.
R804	3R152P682K	Composition: 6.8K ohms ±10%, 1/4 w.
		- - - - - - - - - - - SWITCHES - - - - - - - - - -
S801	19B209261P9	Slide: DPST, 2 poles, 2 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11A1244.
S802	19B209261P13	Slide: DPDT, SR, 2 poles, 2 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11B-1017B.
		- - - - - - - - INTEGRATED CIRCUITS - - - - - - -
U801*	19D416564G4	Regulator, 10 volt.
		In REV A and earlier:
	19D416564G3	Regulator, 10 volt.
		- - - - - - - - - - - SOCKETS - - - - - - - - - -
XF801	19A116688P1	Fuse, clip. (Quantity 2).
XF802*	19A116688P1	Fuse, clip. (Quantity 2). Added by REV A.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - -
	7118719P10	Clip, spring tension; sim to Prestole E-50019-003. (Secures L801).
	19A130082P1	Heat sink.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

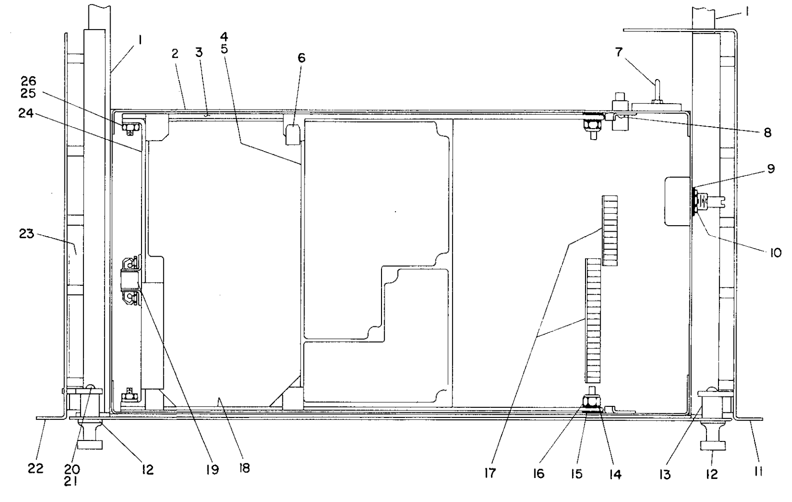
PARTS LIST

AUXILIARY RECEIVER CHASSIS
19D417546G7 LOW, HIGH, UHF BAND
19D417546G8 900 BAND

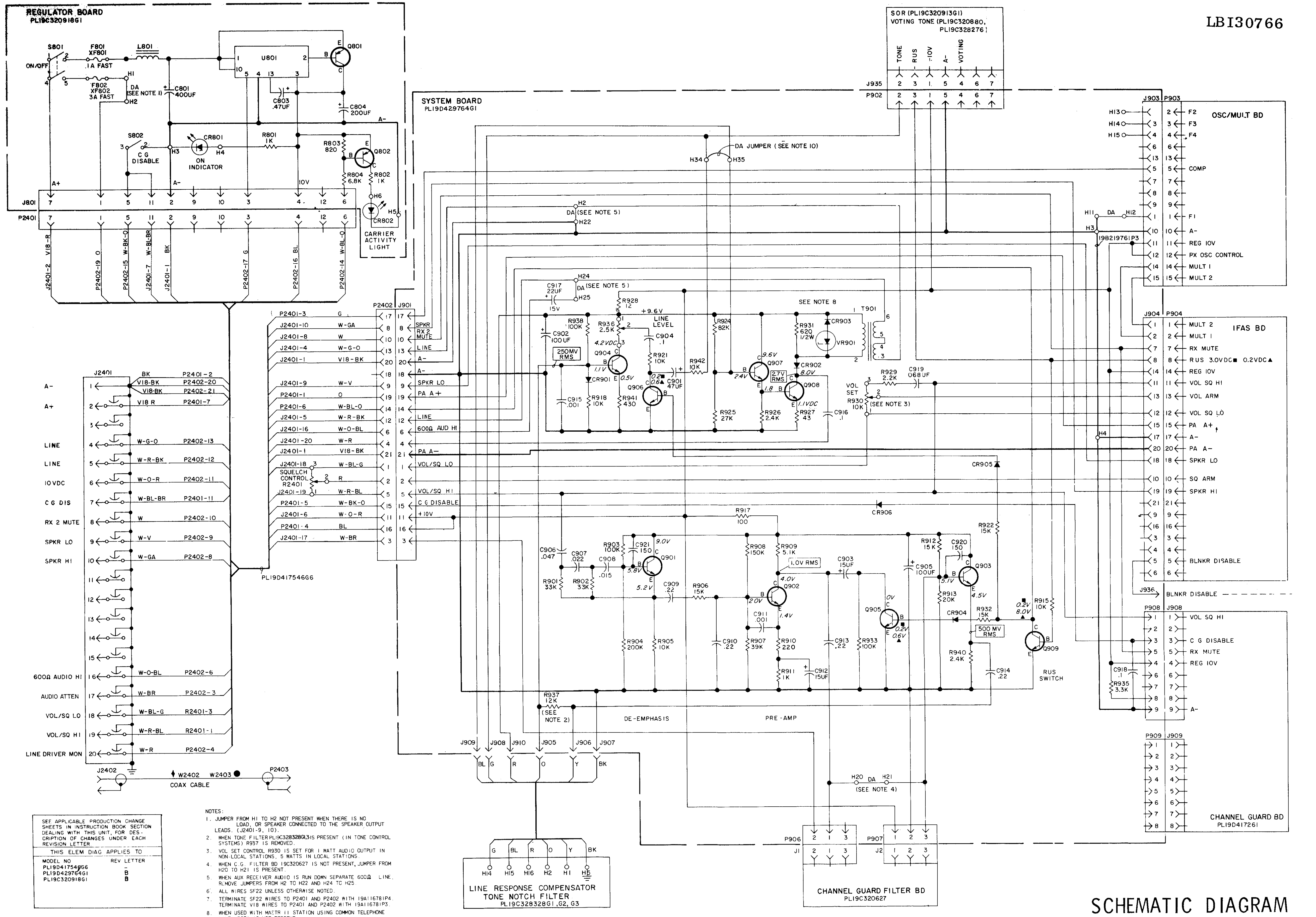
SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - - CABLES - - - - - - - - - -
W2402	5491689P105	Cable, RF: approx 14 inches long. Includes J2402 and P2403.
W2403	19A136930G2	Cable, RF: approx 21 inches long. Includes J2402 (19A115938P12), and P2403 (7104941P17).
W2404		HARNESS ASSEMBLY 19D417546G6
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J2401	19C303426G1	Connector: 20 pin contacts.
		- - - - - - - - - - - PLUGS - - - - - - - - - -
P2401		Includes:
	19A116659P21	Shell.
	19A116781P5	Contact, electrical: wire range No. 18-24 AWG; sim to Molex 08-50-0106. (terminal 7).
	19A116781P6	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0108. (terminals 1-6, 11).
	19B209519P1	Polarity tab. (terminal 8).
P2402		Includes:
	19A116659P25	Shell.
	19A116781P5	Contact, electrical: wire range No. 18-24 AWG; sim to Molex 08-50-0106. (terminals 20, 21).
	19A116781P6	Contact, electrical: wire range No. 22-26 AWG; sim to Molex 08-50-0108. (terminals 1-6, 8-17, and 19).
	19B209519P1	Polarity tab. (terminal 7).
		HARDWARE KIT 19A130031G5
	19A116773P108	Tap screw, Phillips POZIDRIV®: No. 7-19 x 1/2. (Quantity 5).
	19B209209P304	Tap screw, Phillips Pozidriv®: No. 6-32 x 1/4. (Quantity 5).
	19B209209P307	Tap screw, Phillips Pozidriv®: No. 6-32 x 7/16. (Quantity 7).
	19B201074P304	Tap screw, Phillips POZIDRIV®: No. 6-32 x 1/4. (Quantity 5).
	19B201074P305	Tap screw, Phillips POZIDRIV®: No. 6-32 x 5/16. (Quantity 14).
	19B201074P306	Tap screw, Phillips POZIDRIV®: No. 6-32 x 3/8. (Quantity 17).
	19B201074P310	Tap screw, Phillips POZIDRIV®: No. 6-32 x 5/8. (Quantity 4).
	7147306P2	Insulator, bushing. (Quantity 4).
		ASSOCIATED ITEMS
		CABLE ASSEMBLY 19B227932G1
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J2404		Connector. Includes printed wire connector (19A116659P14) & electrical contact (19A116781P6).
		- - - - - - - - - - - PLUGS - - - - - - - - - -
P2404	19A116659P55	Connector, printed wiring: 3 contacts; sim to Molex 09-65-1031.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	GE PART NO.	DESCRIPTION
		MECHANICAL PARTS (SEE RC2752)
1	19B209480P1	Drawer slide.
2	19C320899G1	Can.
3	19B226035G2	Support.
4	19C320664G1	Frame. (LOW-HIGH-UHF BAND).
5	19C320664G2	Frame. (900 MHz BAND).
6	4029851P11	Clip loop.
7	19A121676P1	Guide pin.
8	19B201074P204	Tap screw, Phillips POZIDRIV®: No. 4-40 x 1/4. (Secures J2402).
9	7115130P9	Lockwasher, internal tooth: No. 3/8; sim to Shakeproof 1220-2.
10	7165075P2	Hex nut, brass: thd. size No. 3/8-32.
11	19B226216G1	Support.
12	19C318151P1	Knob.
13	19B218178P1	Pawl.
14	19A115161P2	Bearing, sleeve.
15	N402P39C6	Flatwasher: No. 10.
16	4035664P8	Nut, self locking.
17	19B209519P1	Polarity tab.
18	19B226035G1	Support.
19	19A115874P1	Catch, friction.
20	N193P1208C6	Tap screw, phillips head: No. 6-20 x 1/2.
21	5493361P8	Washer, spring tension: sim to Shakeproof 3502-20-11.
22	19B226216G2	Support.
23	19C320917G1	Support.
24	19B226105G2	Support.
25	7141225P3	Hex nut: No. 6-32.
26	N404P13C6	Lockwasher, internal tooth: No. 6.



RC-2752A



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
PL19D417546G6	-
PL19D429764G1	B
PL19C320918G1	B

NOTES:

1. JUMPER FROM H1 TO H2 NOT PRESENT WHEN THERE IS NO LOAD, OR SPEAKER CONNECTED TO THE SPEAKER OUTPUT LEADS. (J2401-9, 10).
2. WHEN TONE FILTER PL19C328328G1,3 IS PRESENT (IN TONE CONTROL SYSTEMS) R937 IS REMOVED.
3. VOL SET CONTROL R930 IS SET FOR 1 WATT AUDIO OUTPUT IN NON-LOCAL STATIONS, 5 WATTS IN LOCAL STATIONS.
4. WHEN C.G. FILTER BD 19C320627 IS NOT PRESENT, JUMPER FROM H20 TO H21 IS PRESENT.
5. WHEN AUX RECEIVER AUDIO IS RUN DOWN SEPARATE 600Ω LINE, REMOVE JUMPERS FROM H2 TO H22 AND H24 TO H25.
6. ALL WIRES SF22 UNLESS OTHERWISE NOTED.
7. TERMINATE SF22 WIRES TO P2401 AND P2402 WITH 19A116781P4. TERMINATE V18 WIRES TO P2401 AND P2402 WITH 19A116781P3.
8. WHEN USED WITH MASTR II STATION USING COMMON TELEPHONE LINE, R931 IS NOT PRESENT.
9. ● 900 MHZ ONLY.
   ⧫ LB, HB & 450 MHz
10. WHEN LINE COMPENSATOR PL19C328328G1,G2 IS PRESENT, DA JUMPER BETWEEN H34 AND H35 IS NOT PRESENT.

ALL RESISTORS ARE 1/4 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.

(19E501751, Rev. 4)

VOLTAGE READINGS

1. ALL DC MEASUREMENTS MADE WITH 20,000 OHMS-PER-VOLT METER AND ARE TYPICAL. NO AUDIO PRESENT WHEN READINGS MADE.
2. ALL AC MEASUREMENTS MADE AT NOMINAL INPUT LEVELS WITH AC VTVM.

■RECEIVER UNSQUELCHED
▲RECEIVER SQUELCHED

SCHEMATIC DIAGRAM

AUXILIARY RECEIVER 19D417546G7 & G8

Issue 2

PARTS LIST

AUXILIARY RECEIVER SYSTEM BOARD
19D429764G1
ISSUE 3

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - - CAPACITORS - - - - - - - -
C901	5496267P2	Tantalum: 47 µf ±20%, 6 VDCW; sim to Sprague Type 150D.
C902	19A115680P7	Electrolytic: 100 µf +150% -10%, 15 VDCW; sim to Mallory Type TTX.
C903	5496267P14	Tantalum: 15 µf ±20%, 20 VDCW; sim to Sprague Type 150D.
C904	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
C905	19A115680P7	Electrolytic: 100 µf +150% -10%, 15 VDCW; sim to Mallory Type TTX.
C906	19A116080P205	Polyester: 0.047 µf ±5%, 50 VDCW.
C907	19A116080P203	Polyester: 0.022 µf ±5%, 50 VDCW.
C908	19A116080P202	Polyester: 0.015 µf ±5%, 50 VDCW.
C909 and C910	19A116080P109	Polyester: 0.22 µf ±10%, 50 VDCW.
C911	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C912	5496267P14	Tantalum: 15 µf ±20%, 20 VDCW; sim to Sprague Type 150D.
C913 and C914	19A116080P9	Polyester: 0.22 µf ±20%, 50 VDCW.
C915	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C916	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
C917	5496267P10	Tantalum: 22 µf ±20%, 15 VDCW; sim to Sprague Type 150D.
C918	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
C919	19A116080P108	Polyester: 0.068 µf ±10%, 50 VDCW.
C920 and C921	5494481P1	Ceramic disc: 150 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
		- - - - - - - DIODES AND RECTIFIERS - - - - - - -
CR901	19A115250P1	Silicon, fast recovery, 225 mA, 50 PIV.
CR902 and CR903	4037822P7	Silicon, 1000 mA, 800 PIV.
CR904 thru CR906	19A115250P1	Silicon, fast recovery, 225 mA, 50 PIV.
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J901		Connector. Includes:
	19A116659P11	Connector, printed wire: sim to Molex 09-64-1071. (Quantity 2).
	19A116659P12	Connector, printed wire: sim to Molex 09-64-1061.
J903		Connector. Includes:
	19A116659P1	Connector, printed wire: sim to Molex 09-52-3032.
	19A116659P4	Connector, printed wire: sim to Molex 09-52-3062. (Quantity 2).
J904		Connector. Includes:
	19A116659P1	Connector, printed wire: sim to Molex 09-52-3032.
	19A116659P4	Connector, printed wire: sim to Molex 09-52-3062. (Quantity 3).
J905 thru P910	4033513P4	Contact, electrical: sim to Bead Chain L83-3.
J936	4033513P4	Contact, electrical: sim to Bead Chain L83-3.
		- - - - - - - - - - - PLUGS - - - - - - - - -
P902	19A116779P1	Contact, electrical: sim to Molex 08-50-0404. (Quantity 7).
P906	19A116779P1	Contact, electrical: sim to Molex 08-50-0404. (Quantity 3).
P907	19A116779P1	Contact, electrical: sim to Molex 08-50-0404. (Quantity 3).
P908	19A116779P1	Contact, electrical: sim to Molex 08-50-0404. (Quantity 9).
P909	19A116779P1	Contact, electrical: sim to Molex 08-50-0404. (Quantity 8).
		- - - - - - - - - TRANSISTORS - - - - - - - - -
Q901 and Q902	19A116774P1	Silicon, NPN; sim to Type 2N5210.
Q903	19A115910P1	Silicon, NPN; sim to Type 2N3904.
Q904	19A116774P1	Silicon, NPN; sim to Type 2N5210.
Q905 and Q906	19A115910P1	Silicon, NPN; sim to Type 2N3904.
Q907	19A116774P1	Silicon, NPN; sim to Type 2N5210.
Q908	19A115300P4	Silicon, NPN.
Q909	19A115910P1	Silicon, NPN; sim to Type 2N3904.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R901 and R902	3R152P333J	Composition: 33K ohms ±5%, 1/4 w.
R903	3R152P104J	Composition: 100K ohms ±5%, 1/4 w.
R904	3R152P204J	Composition: 200K ohms ±5%, 1/4 w.
R905	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R906	3R152P153J	Composition: 15K ohms ±5%, 1/4 w.
R907	3R152P393J	Composition: 39K ohms ±5%, 1/4 w.
R908	3R152P154J	Composition: 150K ohms ±5%, 1/4 w.
R909	3R152P512J	Composition: 5.1K ohms ±5%, 1/4 w.
R910*	3R152P221J	Composition: 220 ohms ±5%, 1/4 w.
		In REV A:
	3R152P161J	Composition: 160 ohms ±5%, 1/4 w.
		Earlier than REV A:
	3R152P241J	Composition: 240 ohms ±5%, 1/4 w.
R911	3R152P102J	Composition: 1K ohms ±5%, 1/4 w.
R912	3R152P153J	Composition: 15K ohms ±5%, 1/4 w.
R913	3R152P203J	Composition: 20K ohms ±5%, 1/4 w.
R915	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R917	3R152P101J	Composition: 100 ohms ±5%, 1/4 w.
R918	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R921	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R922	3R152P153J	Composition: 15K ohms ±5%, 1/4 w.
R924	3R152P823J	Composition: 82K ohms ±5%, 1/4 w.
R925	3R152P273J	Composition: 27K ohms ±5%, 1/4 w.
R926	3R152P242J	Composition: 2.4K ohms ±5%, 1/4 w.
R927	3R152P430J	Composition: 43 ohms ±5%, 1/4 w.
R928	3R152P120J	Composition: 12 ohms ±5%, 1/4 w.
R929	3R152P222K	Composition: 2.2K ohms ±10%, 1/4 w.
R930	19B209358P106	Variable, carbon film: approx 300 to 10,000 ohms ±10%, 0.25 w; sim to CTS Type X-201.
R931	3R77P621J	Composition: 620 ohms ±5%, 1/2 w.
R932	3R152P153J	Composition: 15K ohms ±5%, 1/4 w.
R933	3R152P104K	Composition: 100K ohms ±10%, 1/4 w.
R935	3R152P332K	Composition: 3.3K ohms ±10%, 1/4 w.
R936	19B209358P116	Variable, carbon film: approx 25 to 2500 ohms ±10%, 0.2 w; sim to Stackpole RJ1-44442.
R937	3R152P123J	Composition: 12K ohms ±5%, 1/4 w.
R938*	3R152P104J	Composition: 100K ohms ±5%, 1/4 w.
		Earlier than REV A:
	3R152P104J	Composition: 100K ohms ±5%, 1/4 w.
R940	3R152P242J	Composition: 2.4K ohms ±5%, 1/4 w.
R941	3R152P431J	Composition: 430 ohms ±5%, 1/4 w.
R942	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
		- - - - - - - - - TRANSFORMERS - - - - - - - - -
T901	19A116736P1	Audio freq: 300-6000 Hz, +0.7dB -0.5dB, Power: +12dBm max DC, 45 mA, combined, Pri 1: 600 ohms, Sec 2 & 3: 600 ohms split.
		- - - - - - - - VOLTAGE REGULATORS - - - - - - - -
VR901	19A116325P4	Zener: 5.0 w, 12 v. nominal.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	5491541P302	Spacer, hex: 6-32 x 1/2 thread.
	N80P13006C6	Machine screw: No. 6-32 x 3/8. (Secures spacer to board).
	19B219761P3	Jumper. (Located between J903 & J904).
	4036555P1	Insulator, washer: nylon. (Used with Q908).

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.

10 Volt Regulator 19C320918G1

REV. A - To correct distortion at the 600 ohm output. Changed F801 fuse and added XF802 fuse and socket.

REV. B - To improve transmitter operation. Changed U801.

Auxiliary Receiver System Board 19D429764G1

REV. A - To improve performance. Changed R910 and R938.

REV. B - To eliminate dipping in the audio output. Changed R910.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

LBI-4813

CHANNEL GUARD FILTER BOARD
19C320627G1

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	19C300075P47001G	Polyester: 47,000 pf ±2%, 100 VDCW; sim to GE Type 61F.
C2	19C300075P10002G	Polyester: 100,000 pf ±2%, 100 VDCW; sim to GE Type 61F.
C3	19C300075P47001G	Polyester: 47,000 pf ±2%, 100 VDCW; sim to GE Type 61F.
C4	19C300075P10001G	Polyester: 10,000 pf ±2%, 100 VDCW; sim to GE Type 61F.
C5	5496267P14	Tantalum: 15 µf ±20%, 20 VDCW; sim to Sprague Type 150D.
C6 and C7	19C300075P47001G	Polyester: 47,000 pf ±2%, 100 VDCW: sim to GE Type 61F.
C8	19A116080P4	Polyester: 0.033 µf ±20%, 50 VDCW.
C9	19C300075P47001G	Polyester: 47,000 pf ±2%, 100 VDCW: sim to GE Type 61F.
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J1 and J2	19A116659P5	Connector, printed wiring: 3 contacts; sim to Molex 09-52-3031.
		- - - - - - - - - TRANSISTORS - - - - - - - - -
Q1	19A116774P1	Silicon, NPN; sim to Type 2N5210.
Q2 and Q3	19A115768P1	Silicon, PNP; sim to Type 2N3702.
Q4	19A116774P1	Silicon, NPN; sim to Type 2N5210.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	19C314256P21782	Metal film: 17,800 ohms ±1%, 1/4 w.
R2	19C314256P29091	Metal film: 9090 ohms ±1%, 1/4 w.
R3	19C314256P21782	Metal film: 17,800 ohms ±1%, 1/4 w.
R4	19C314256P21472	Metal film: 14,700 ohms ±1%, 1/4 w.
R5	19C314256P22152	Metal film: 21,500 ohms ±1%, 1/4 w.
R6	19C314256P23481	Metal film: 3480 ohms ±1%, 1/4 w.
R7	3R152P103J	Compoition: 10,000 ohms ±5%, 1/4 w.
R8	19C314256P21621	Metal film: 1620 ohms ±1%, 1/4 w.
R9	19C314256P21001	Metal film: 1000 ohms ±1%, 1/4 w.
R10	3R152P751J	Compoition: 750 ohms ±5%, 1/4 w.
R11	19C314256P21303	Metal film: 130,000 ohms ±1%, 1/4 w.
R12	19C314256P22151	Metal film: 2150 ohms ±1%, 1/4 w.
R13	3R152P103J	Compoition: 10,000 ohms ±5%, 1/4 w.
R14	19C314256P24641	Metal film: 4640 ohms ±1%, 1/4 w.
R15	19C314256P22100	Metal film: 210 ohms ±1%, 1/4 w.
R16	19C314256P21543	Metal film: 154,000 ohms ±1%, 1/4 w.

*COMPONENTS ADDED, DELETED CR CHANGED BY PRODUCTION CHANGES

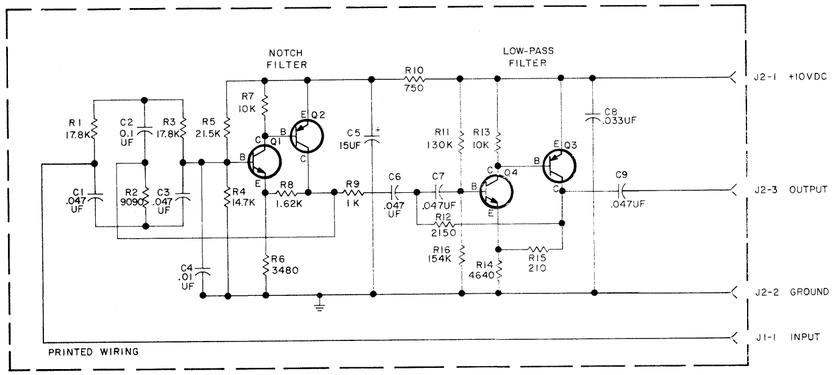
PARTS LIST

TONE NOTCH FILTER/LINE RESPONSE
COMPENSATOR BOARD
19C328328G1

SYMBOL	GE PART NO.	DESCRIPTION
AR1	19A134511P1	Integrated circuit, linear: Quad OP AMP; sim to NSCLM 224N or MLM 224P.
		- - - - - - - - - - CAPACITORS - - - - - - - -
C1	19A116738P2	Polystyrene: 6800 pf ±2.5%, 33 VDCW; sim to Mial Series 617.
C2	19A116738P3	Polystyrene: 0.010 µf ±2.5%, 33 VDCW; sim to Mial Series 617.
C3	19A116738P2	Polystyrene: 6800 pf ±2.5%, 33 VDCW; sim to Mial Series 617.
C4	19A134202P15	Tantalum: 6.8 µf ±20%, 35 VDCW.
C5	19A134202P6	Tantalum: 22 µf ±20%, 15 VDCW.
C6 and C7	19A116080P215	Polyester: 0.0047 µf ±5%, 50 VDCW.
C8	19A116080P107	Polyester: 0.1 µf ±10%, 50 VDCW.
C9 and C10	19A116080P205	Polyester: 0.047 µf ±5%, 50 VDCW.
C11	19A116080P109	Polyester: 0.22 µf ±10%, 50 VDCW.
C12	19A134202P6	Tantalum: 22 µf ±20%, 15 VDCW.
C13	19A116080P213	Polyester: 0.0022 µf ±5%, 50 VDCV.
C14	19A116080P207	Polyester: 0.1 µf ±5%, 50 VDCW.
C15	19A134202P6	Tantalum: 22 µf ±20%, 15 VDCW.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1	19B205354G5	Coil.
L2	19B205354G4	Coil.
L3	19B205354G5	Coil.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1 and R2	3R152P202J	Composition: 2K ohms ±5%, 1/4 w.
R3	19C314256P23013	Metal film: 301K ohms ±1%, 1/4 w.
R4	19C314256P24752	Metal film: 47.5K ohms ±1%, 1/4 w.
R5	19C314256P26651	Metal film: 6.65K ohms ±1%, 1/4 w.
R6	19C314256P27501	Metal film: 7.5K ohms ±1%, 1/4 w.
R7 and R8	19C314256P21502	Metal film: 15K ohms ±1%, 1/4 w.
R9 and R10	19C314256P23012	Metal film: 30.1K ohms ±1%, 1/4 w.
R11	19C314256P22002	Metal film: 20K ohms ±1%, 1/4 w.
R12	19A116559P112	Variable, cermet: 500K ohms ±20%, 0.18 w; sim to CTS Series 360.
R13	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R14 and R15	19C314256P21742	Metal film: 17.4K ohms ±1%, 1/4 w.
R16 and R17	19C314256P23482	Metal film: 34.8K ohms ±1%, 1/4 w.
R18	19C314256P22002	Metal film: 20K ohms ±1%, 1/4 w.
R19	19A116559P112	Variable, cermet: 500K ohms ±20%, 0.18 w; sim to CTS Series 360.
R20	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R21 thru R23	19C314256P21102	Metal film: 11K ohms ±1%, 1/4 w.
R24	19C314256P23482	Metal film: 34.8K ohms ±1%, 1/4 w.
R25 and R26	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R27 and R28	19C314256P25492	Metal film: 54.9K ohms ±1%, 1/4 w.
R29	3R152P331J	Composition: 330 ohms ±5%, 1/4 w.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - -
	4029840P2	Contact, electrical: sim to Amp 42827-2. (Hung in wiring on wires from H1, H2, H5, H14-H16).
	N80P13005C6	Machine screw: No. 6-32 x 5/16. (Secures component board).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures component board).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

CHANNEL GUARD FILTER 19C320627G1

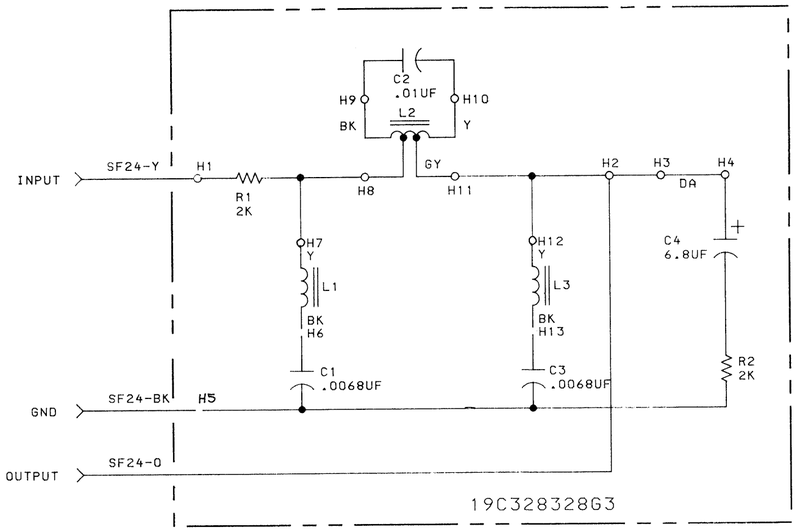


SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.	
THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PL19C320627G1	

(19C320628, Rev. 0)

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.

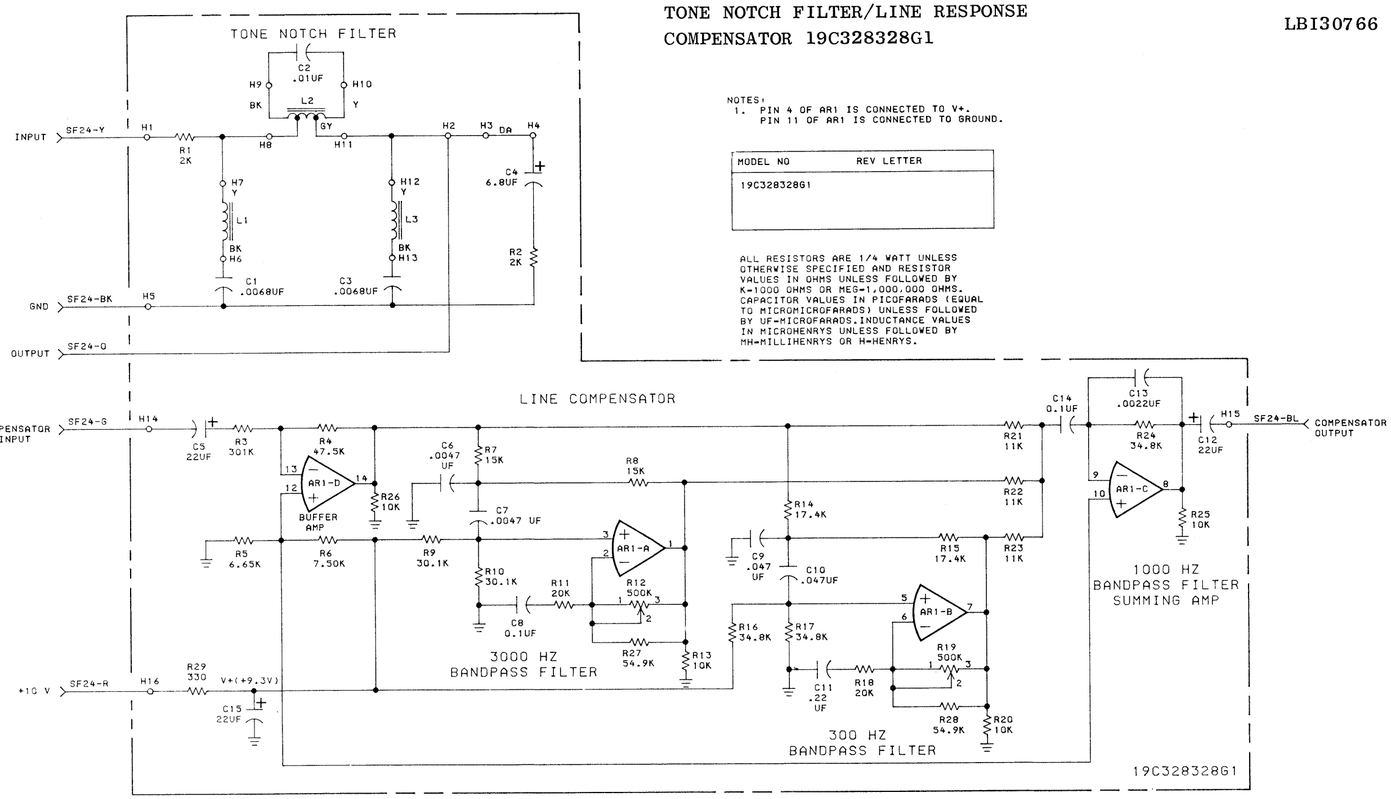
TONE NOTCH FILTER 19C328328G3



(19C328343, Rev. 1)

MODEL NO	REV LETTER
PL19C32832863	

TONE NOTCH FILTER/LINE RESPONSE COMPENSATOR 19C328328G1



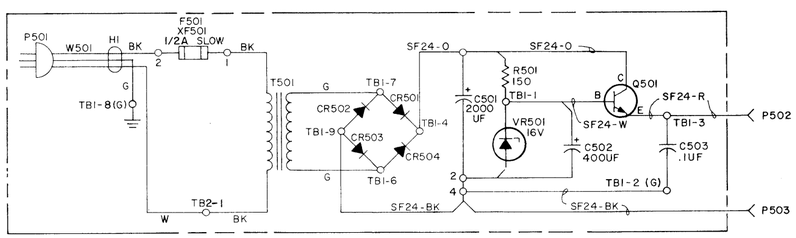
NOTES:
1. PIN 4 OF AR1 IS CONNECTED TO V+.
   PIN 11 OF AR1 IS CONNECTED TO GROUND.

MODEL NO	REV LETTER
19C328328G1	

ALL RESISTORS ARE 1/4 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.

(19D429483, Rev. 1)

POWER SUPPLY 19C311855G1



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
19C311855G1	C

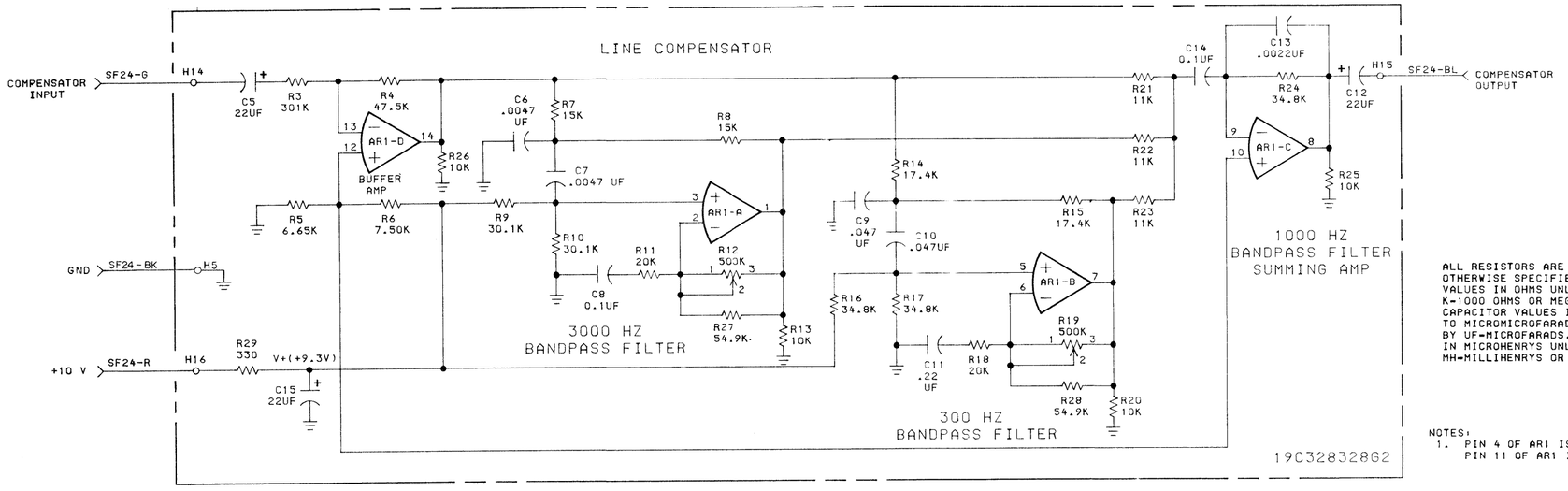
ALL RESISTORS ARE 1/2 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH=MILLIHENRYS OR H=HENRYS.

(19B216280, Rev. 5)

SCHEMATIC DIAGRAMS

CHANNEL GUARD FILTER,
POWER SUPPLY, TONE NOTCH FILTERS
AND LINE COMPENSATOR

LINE RESPONSE COMPENSATOR 19C328328G2



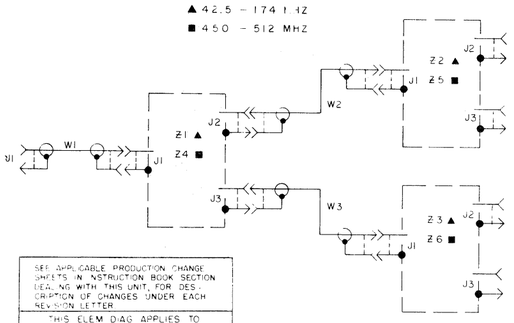
(19D429481, Rev. 2)

ALL RESISTORS ARE 1/4 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.

NOTES:
1. PIN 4 OF AR1 IS CONNECTED TO V+.
   PIN 11 OF AR1 IS CONNECTED TO GROUND.

MODEL NO	REV LETTER
19C328328G2	

ANTENNA MATCHING UNITS 19C321150G1 & G2



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
19C321150G1 19C321150G2	

(19B226529, Rev. 1)

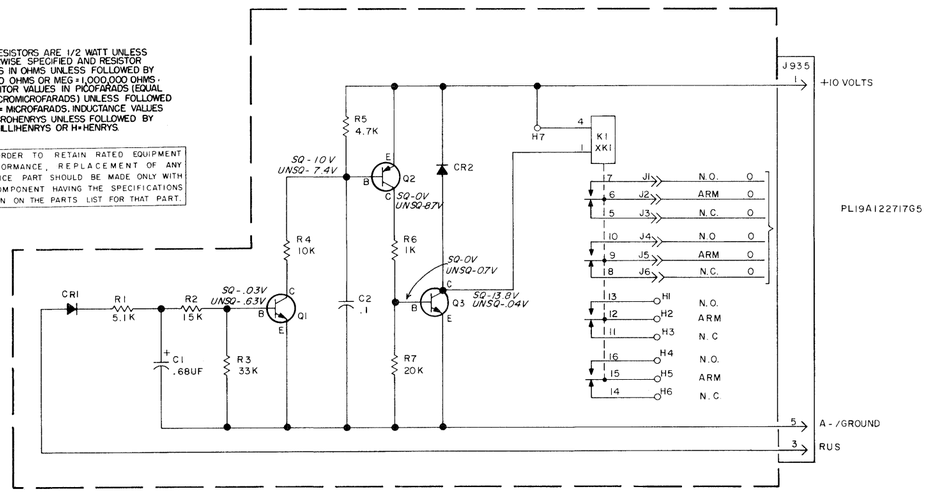
SQUELCH OPERATED RELAY 19C320913G1

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
PL19C320913G1	A

ALL RESISTORS ARE 1/2 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.



(19C320915, Rev. 3)

SCHEMATIC DIAGRAMS

LINE RESPONSE COMPENSATOR, SQUELCH OPERATED RELAY AND ANTENNA MATCHING UNITS

PARTS LIST

TONE NOTCH FILTER BOARD
19C328328G3

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - CAPACITORS - - - - - - - - -
C1	19A116738P2	Polystyrene: 6800 pf ±2.5%, 33 VDCW; sim to Mial Series 617.
C2	19A116738P3	Polystyrene: 0.010 µf ±2.5%, 33 VDCW; sim to Mial Series 617.
C3	19A116738P2	Polystyrene: 6800 pf ±2.5%, 33 VDCW; sim to Mial Series 617.
C4	19A134202P15	Tantalum: 6.8 µf ±20%, 35 VDCW.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1	19B205354G5	Coil.
L2	19B205354G4	Coil.
L3	19B205354G5	Coil.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1 and R2	3R152P202J	Composition: 2K ohms ±5%, 1/4 w.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - -
	4029840P2	Contact, electrical: sim to Amp 42827-2. (Hung in wiring on wires from H1, H2, H5).
	N80P13005C6	Machine screw: No. 6-32 x 5/16. (Secures component board).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures component board).

PARTS LIST

LBI4924A

AUXILIARY RECEIVER SOR BOARD
19C320913G1

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - CAPACITORS - - - - - - - - -
C1*	5496267P29	Tantalum: 0.68 µf ±20%, 35 VDCW; sim to Sprague Type 150D.
		Earlier than REV A:
	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
C2	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
		- - - - - - - - DIODES AND RECTIFIERS - - - - - - - -
CR1	19A115250P1	Silicon, fast recovery, 225 mA, 50 PIV.
CR2	4037822P1	Silicon, 1000 mA, 400 PIV.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - -
J1 thru J6	4033513P4	Contact, electrical: sim to Bead Chain L93-3.
J935		Includes:
	19A116659P5	Connector, printed wiring: 3 contacts; sim to Molex 09-52-3031. (Quantity 1).
	19A116659P7	Connector, printed wiring: 4 contacts; sim to Molex 09-52-3041. (Quantity 1).
		- - - - - - - - - - RELAYS - - - - - - - - - -
K1	19C300957P2	Armature: 12 VDC nominal, 1.5 w max operating, 185 ohms ±10% coil res, 4 form C contacts; sim to Allied Control T154X-316.
		- - - - - - - - - - TRANSISTORS - - - - - - - - -
Q1	19A115910P1	Silicon, NPN; sim to Type 2N3904.
Q2	19A115852P1	Silicon, PNP; sim to Type 2N3906.
Q3	19A115300P2	Silicon, NPN; sim to Type 2N3053.
		- - - - - - - - - - RESISTORS - - - - - - - - -
R1	3R152P512J	Composition: 5.1K ohms ±5%, 1/4 w.
R2	3R152P153J	Composition: 15K ohms ±5%, 1/4 w.
R3	3R152P333J	Composition: 33K ohms ±5%, 1/4 w.
R4	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R5	3R152P472J	Composition: 4.7K ohms ±5%, 1/4 w.
R6	3R152P102J	Composition: 1K ohms ±5%, 1/4 w.
R7	3R152P203J	Composition: 20K ohms ±5%, 1/4 w.
		- - - - - - - - - - SOCKETS - - - - - - - - - -
XK1	5491595P7	Relay: 10 contacts; sim to Allied Control 30054-4.
		- - - - - - - - - - MISCELLANEOUS - - - - - - -
	5491595P9	Retainer: spring; sim to Allied Control 30040-2. (Used with K1).
	4036555P1	Insulator, washer: nylon. (Used with Q3).

*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 - To improve operation of S.O.R. Board. Changed C1.

PARTS LIST

LBI-4922

ANTENNA MATCHING UNIT
19C321150G1 42.5-174 MHz
19C321150G2 450-512 MHz

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J1		(Part of W1).
		- - - - - - - - - - CABLES - - - - - - - - - -
W1	19A127854G7	RF: approx 5-1/2 inches long. (Includes J1).
W2 and W3	5491689P91	Cable, RF: approx 7-1/2 inches long.
		- - - - - - - - - - NETWORKS - - - - - - - - - -
Z1 thru Z3		POWER SEPARATOR 19C317281G1
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1 and C2	7489162P5	Silver mica: 9 pf ±5%, 500 VDCW; sim to Electro Motive Type DM-15.
C3	7489162P8	Silver mica: 15 pf ±5%, 500 VDCW; sim to Electro Motive Type DM-15.
		- - - - - - - - - - TERMINALS - - - - - - - - -
E1	19A116355P1	Terminal, stud: sim to USECO 1481-B.
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J1 thru J3	7104941P16	Connector, phono: jack; sim to Cinch National Tel. Barrel Ceramic.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1		COIL ASSEMBLY 19B216711G1
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R152P101J	Composition: 100 ohms ±5%, 1/4 w.
L2	19B216738G1	Coil.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1		(Part of L1).
		- - - - - - - - - - NETWORKS - - - - - - - - - -
Z4 thru Z6		POWER SEPARATOR 19C317352G1
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1 and C2	5496218P35	Ceramic disc: 4.0 pf ±0.25 pf, 500 VDCW, temp coef 0 PPM.
C3	5496218P34	Ceramic disc: 3.0 pf ±0.25 pf, 500 VDCW, temp coef 0 PPM.
		- - - - - - - - - - TERMINALS - - - - - - - - - -
E1	19A116355P1	Terminal, stud: sim to USECO 1481-B.
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J1 thru J3	7104941P16	Connector, phono: Jack; sim to Cinch National Tel. Barrel Ceramic.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1		COIL ASSEMBLY 19B216827G1
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R77P101J	Composition: 100 ohms ±5%, 1/2 w.
L2	19B216829G1	Coil.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

PARTS LIST

LBI30206A

AUXILIARY RECEIVER POWER SUPPLY
19C311855G1

SYMBOL	GE PART NO.	DESCRIPTION
		STATION POWER SUPPLY 19C311855G1
		- - - - - - - - - - CAPACITORS - - - - - - - - -
C501	7476442P23	Electrolytic, twist-prong: 2000 µf +250-10%, 50 VDCW; sim to PR Mallory FP070A.
C502	19A115680P24	Electrolytic: 400 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C503	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
		- - - - - - - - DIODES AND RECTIFIERS - - - - - - - -
CR501 thru CR504	4037822P1	Silicon, 1000 mA, 400 PIV.
		- - - - - - - - - - - FUSES - - - - - - - - - - -
F501	7487942P3	Slow blowing: 1/2 amp at 250 v; sim to Bussmann MDL-1/2.
		- - - - - - - - - - - PLUGS - - - - - - - - - -
P501		(Part of W501).
P502 and P503	4036634P1	Contact, electrical; sim to AMP 42428-2.
		- - - - - - - - - - TRANSISTORS - - - - - - - - -
Q501*	19A116742P1	Silicon, NPN.
		In REV B and earlier:
	19A116118P1	Silicon, NPN.
		- - - - - - - - - - - RESISTORS - - - - - - - - -
R501*	3R152P151J	Composition: 150 ohms ±5%, 1/4 w.
		In REV B and earlier:
	3R77P221K	Composition: 220 ohms ±10%, 1/2 w.
		- - - - - - - - - TRANSFORMERS - - - - - - - - - -
T501	5493743P1	Power: step down: Pri: 117 v, 50/60 Hz, Sec 1: 12.6 v ±3%, 2 amps.
		- - - - - - - - TERMINAL BOARDS - - - - - - - -
TB1	7775500P25	Phen: 7 insulated, 2 grounded terminals.
TB2	7775500P44	Phen: 1 insulated, 1 grounded terminal.
		- - - - - - - - VOLTAGE REGULATORS - - - - - - - -
VR1	19A115528P6	Zener: 1 w, 6.6 MW.
		- - - - - - - - - - CABLES - - - - - - - - - -
W501	19A134567P1	Power: 3 conductor, approx 6 feet long.
		- - - - - - - - - - SOCKETS - - - - - - - - - -
XF501	19B209005P1	Fuseholder, post type, phen: 15 amps at 250 v; sim to Littelfuse 342012.
		HARNESS ASSEMBLY 19B226440G2
		- - - - - - - - - - - PLUGS - - - - - - - - - - -
P1	19C303506P1	Connector, phen: 20 contacts.
		- - - - - - - - TERMINAL BOARDS - - - - - - - - -
TB1	19C301086P1	Feed-thru, phen: 3 terminals; sim to GE CR151D.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	4029851P14	Clip loop: 1/4 inch. (Used with Harness).
	4029851P12	Clip loop: 1/8 inch. (Used with Harness).
	19A116768P9	Bushing, strain relief: sim to Heyco SR-6P3-4.
	19A134016P1	Insulator, bushing. (Used with Q501).
	19A116023P1	Insulator, plate. (Used with Q501).

*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 - To comply with OSHA safety standards. Changed W501.

REV. B - To improve regulation. Changed C501, F501 and R501; added C502, C503, Q501 and VR501.

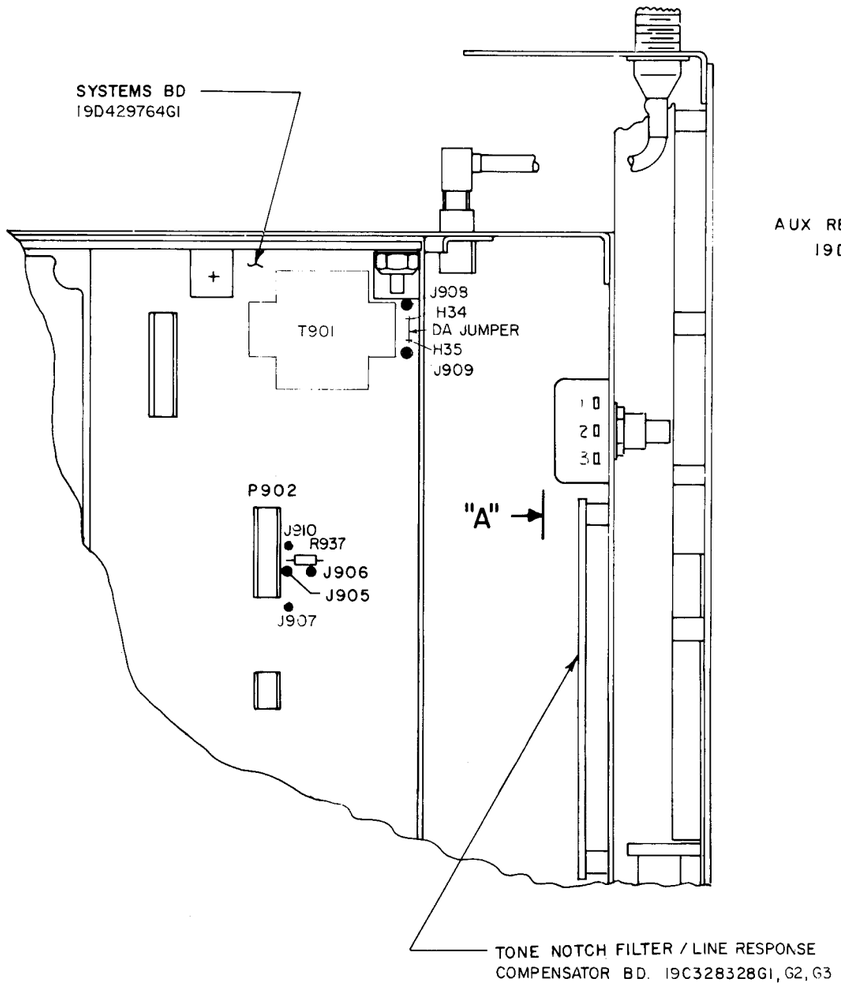
REV. C - To improve performance. Changed Q501 and R501.

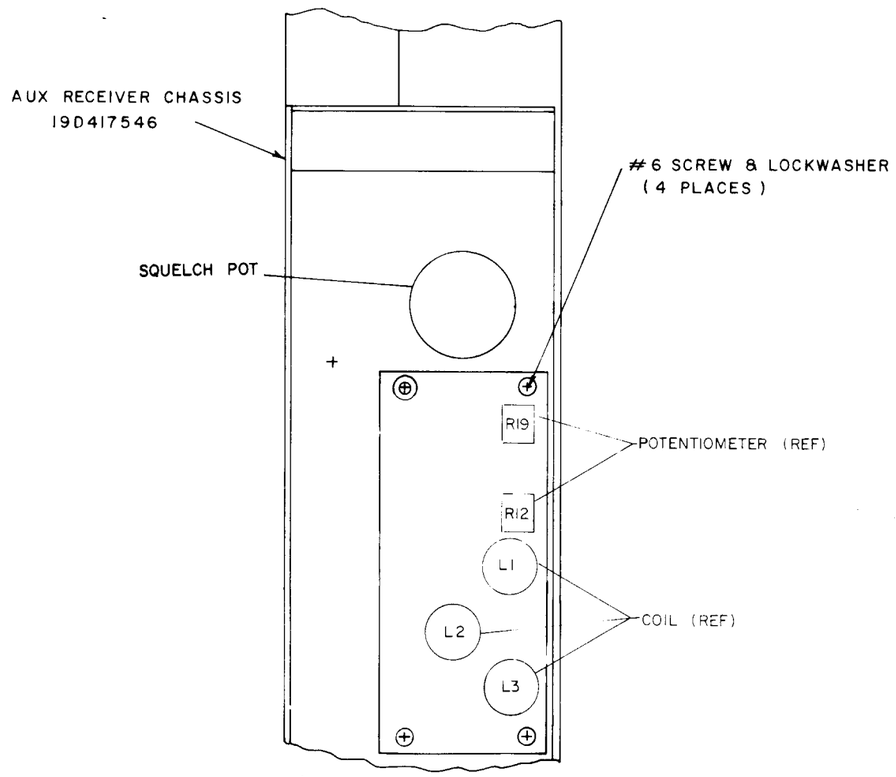
PARTS LIST

LINE RESPONSE COMPENSATOR BOARD
19C328328G2

SYMBOL	GE PART NO.	DESCRIPTION
AR1	19A134511P1	Integrated circuit, linear: Quad OP AMP; sim to NSCLM 224N or MLM 224P.
		- - - - - - - - - - CAPACITORS - - - - - - - -
C5	19A134202P6	Tantalum: 22 µf ±20%, 15 VDCW.
C6 and C7	19A116080P215	Polyester: 0.0047 µf ±5%, 50 VDCW.
C8	19A116080P107	Polyester: 0.1 µf ±10%, 50 VDCW.
C9 and C10	19A116080P205	Polyester: 0.047 µf ±5%, 50 VDCW.
C11	19A116080P109	Polyester: 0.22 µf ±10%, 50 VDCW.
C12	19A134202P6	Tantalum: 22 µf ±20%, 15 VDCW.
C13	19A116080P213	Polyester: 0.0022 µf ±5%, 50 VDCW.
C14	19A116080P207	Polyester: 0.1 µf ±5%, 50 VDCW.
C15	19A134202P6	Tantalum: 22 µf ±20%, 15 VDCW.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R3	19C314256P23013	Metal film: 301K ohms ±1%, 1/4 w.
R4	19C314256P24752	Metal film: 47.5K ohms ±1%, 1/4 w.
R5	19C314256P26651	Metal film: 6.65K ohms ±1%, 1/4 w.
R6	19C314256P27501	Metal film: 7.5K ohms ±1%, 1/4 w.
R7 and R8	19C314256P21502	Metal film: 15K ohms ±1%, 1/4 w.
R9 and R10	19C314256P23012	Metal film: 30.1K ohms ±1%, 1/4 w.
R11	19C314256P22002	Metal film: 20K ohms ±1%, 1/4 w.
R12	19A116559P112	Variable, cermet: 500K ohms ±20%, 0.18 w; sim to CTS Series 360.
R13	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R14 and R15	19C314256P21742	Metal film: 17.4K ohms ±1%, 1/4 w.
R16 and R17	19C314256P23482	Metal film: 34.8K ohms ±1%, 1/4 w.
R18	19C314256P22002	Metal film: 220K ohms ±1%, 1/4 w.
R19	19A116559P112	Variable, cermet: 500K ohms ±20%, 0.18 w; sim to CTS Series 360.
R20	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R21 thru R23	19C314256P21102	Metal film: 11K ohms ±1%, 1/4 w.
R24	19C314256P23482	Metal film: 34.8K ohms ±1%, 1/4 w.
R25 and R26	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R27 and R28	19C314256P25492	Metal film: 54.9K ohms ±1%, 1/4 w.
R29	3R152P331J	Composition: 330 ohms ±5%, 1/4 w.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - -
	4029840P2	Contact, electrical: sim to Amp 42827-2. (Hung in wiring on wires from H5, H14-H16).
	N80P13005C6	Machine screw: No. 6-32 x 5/16. (Secures component board).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures component board).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES





VIEW "A"

(19D417634, Sh. 3, Rev. 0)

INSTRUCTIONS FOR INSTALLING THE TONE NOTCH FILTER/LINE RESPONSE COMPENSATOR BD 19C328328G1.

1. REMOVE COVER (IF PRESENT).
2. ON SYSTEM BD 19D429764G1
   2.1 REMOVE R937
   2.2 CUT CUT DA JUMPER BETWEEN H34 AND H35.
3. ASM FILTER/COMPENSATOR BD TO INSIDE OF AUX RECEIVER CHASSIS USING 6 SCREWS AND LOCKWASHERS (FURNISHED). ORIENT BD AS SHOWN IN VIEW A.
4. CONNECT GREEN WIRE FROM FILTER/COMPENSATOR BD TO J908; BLUE WIRE TO J909, RED WIRE TO J910; ORANGE WIRE TO J905; YELLOW WIRE TO J906, BLACK WIRE TO J907.
5. REPLACE COVER.

INSTRUCTIONS FOR INSTALLING LINE RESPONSE COMPENSATOR BD 19C328328G2.

1. REMOVE COVER (IF PRESENT).
2. CUT CUT DA JUMPER BETWEEN H34 AND H35 ON SYSTEM BD 19D429764G1.
3. ASM COMPENSATOR BD TO INSIDE OF AUX RECEIVER CHASSIS USING 6 SCREWS AND LOCKWASHERS (FURNISHED). ORIENT POTENTIOMETERS AS SHOWN IN VIEW A.(COILS NOT PRESENT)
4. CONNECT GREEN WIRE FROM COMPENSATOR BD TO J908; BLUE WIRE TO J909, RED WIRE TO J910; BLACK WIRE TO J907.
5. REPLACE COVER.

INSTRUCTIONS FOR INSTALLING TONE NOTCH FILTER BD 19C328328G3.

1. REMOVE COVER (IF PRESENT).
2. REMOVE R937 FROM SYSTEM BD 19D429764G1.
3. ASSEMBLE FILTER BD TO INSIDE OF AUX RECEIVER CHASSIS USING 6 SCREWS AND LOCKWASHERS (FURNISHED). ORIENT COILS AS SHOWN IN VIEW A. (POTENTIOMETERS NOT PRESENT)
4. CONNECT ORANGE WIRE FROM FILTER BD TO J905; YELLOW WIRE TO J906; BLACK WIRE TO J907.

INSTALLATION INSTRUCTIONS

TONE NOTCH FILTER/LINE RESPONSE COMPENSATOR 19C328328G1-G3

Issue 1

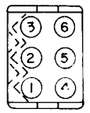


FIG. 1
(P5)

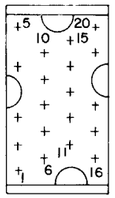


FIG. 2
(P1)

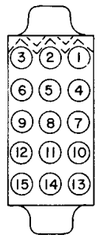


FIG. 3
(J1)

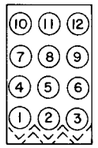


FIG. 4
(P2)

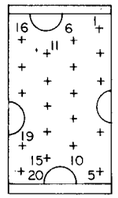
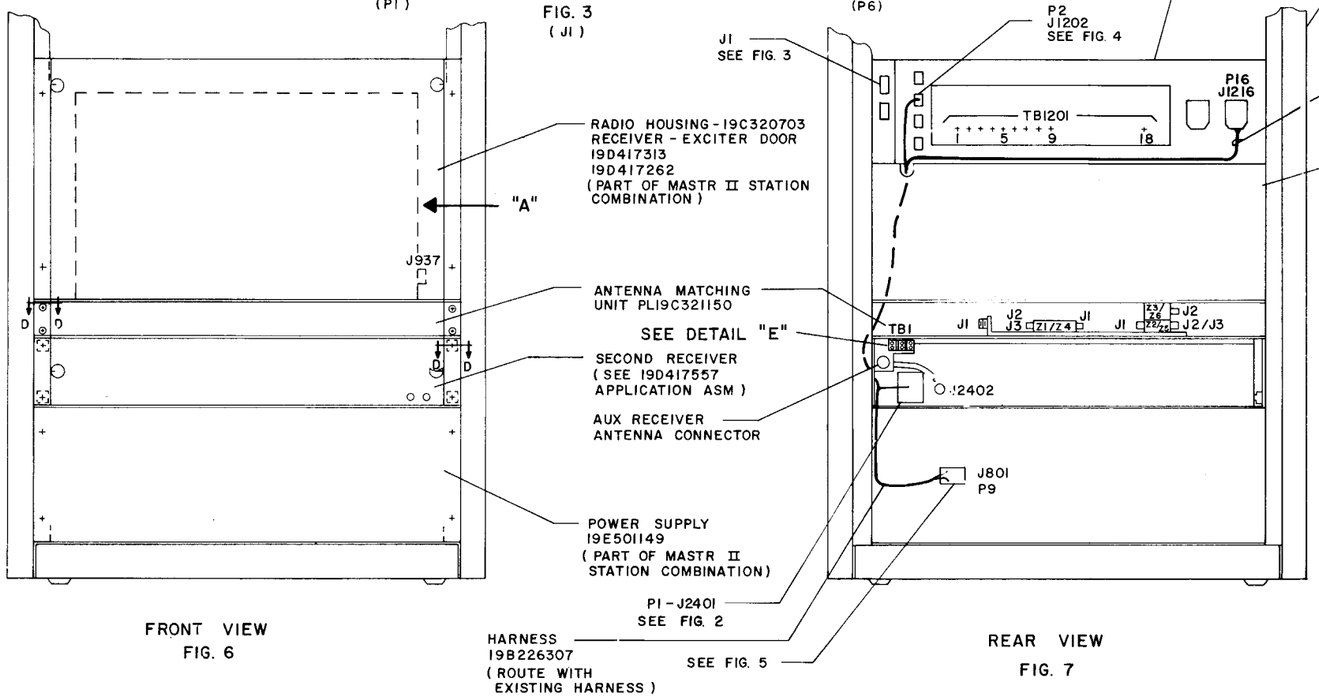


FIG. 8
(P6)

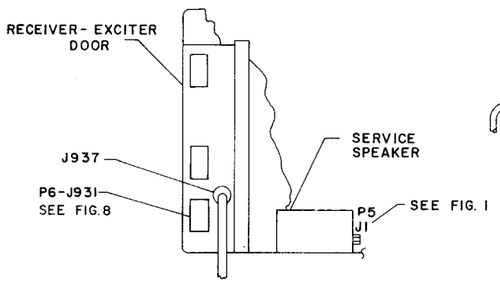
FIG. 5
(P9)

THIS INSTRUCTION COVERS THE INSTALLATION OF SECOND RECEIVER AND ANTENNA MATCHING UNIT INTO MASTR II STATION COMBINATIONS

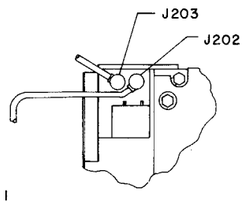


FRONT VIEW
FIG. 6

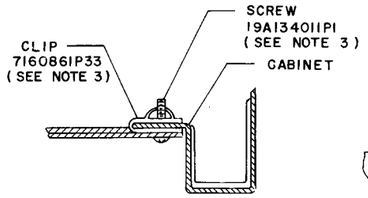
REAR VIEW
FIG. 7



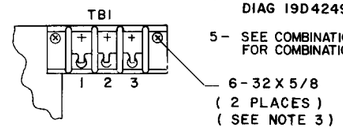
VIEW "A"
(PARTIAL)



VIEW "B"
(PARTIAL)



SECTION D-D
(TYP 8 PLACES)



DETAIL "E"

NOTES:

1 - SEE COMBINATION INTERCONNECTION DIAG. 19D417611.

2 -

3 - PART OF HARDWARE KIT PL19A13012762

4 - SEE COMBINATION INTERCONNECTION DIAG 19D424989 FOR 'EACOM' APPLICATION.

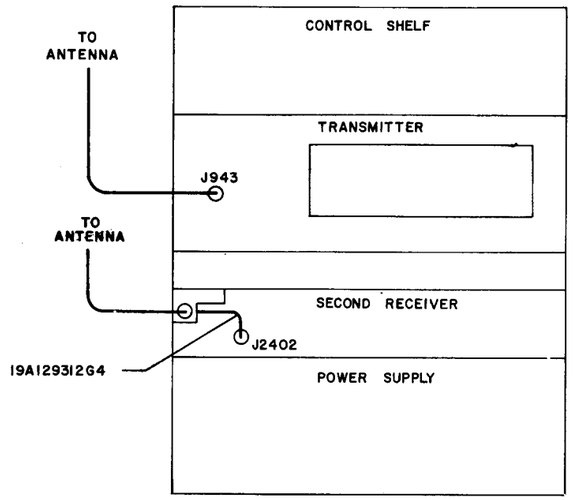
5 - SEE COMBINATION INTERCONNECTION DIAG 19D429271 FOR COMBINATION WITH CHANNEL GUARD MONITOR.

INSTALLATION INSTRUCTIONS

AUXILIARY RECEIVER & ANTENNA MATCHING UNIT

(19D417615, Sh. 1, Rev. 5)

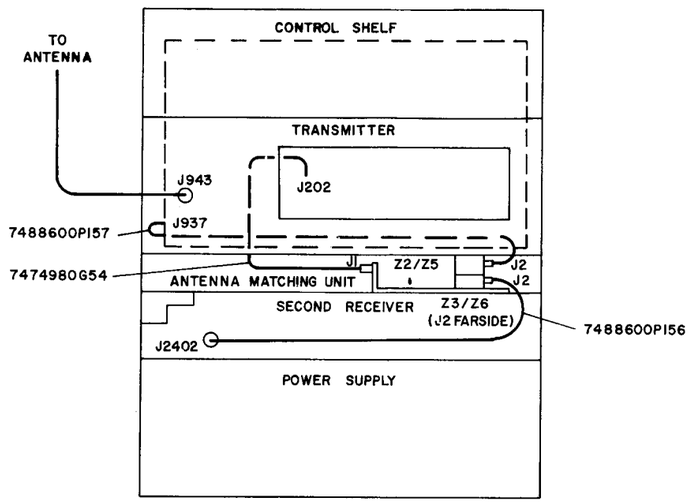
ANTENNA CABLE CONNECTION



INTERMITTENT DUTY W/O AMU

STATION COMBINATION NO. -I---E--S---
K, J, R, T / N, P, U, W, G

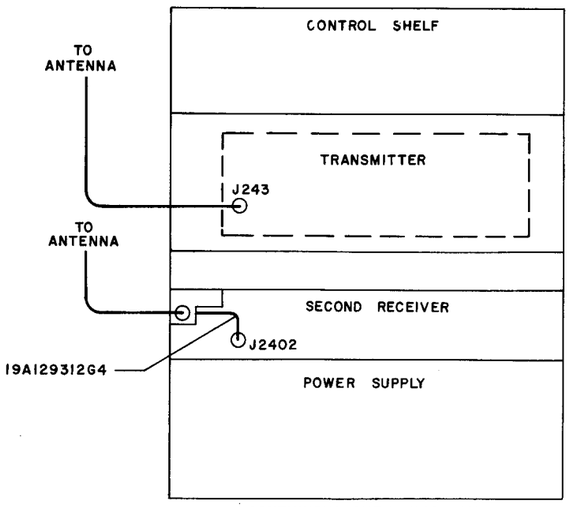
FIG. 8



INTERMITTENT DUTY W/ AMU

STATION COMBINATION NO. -I---E--S---
K, J, R, T / N, P, U, W, G

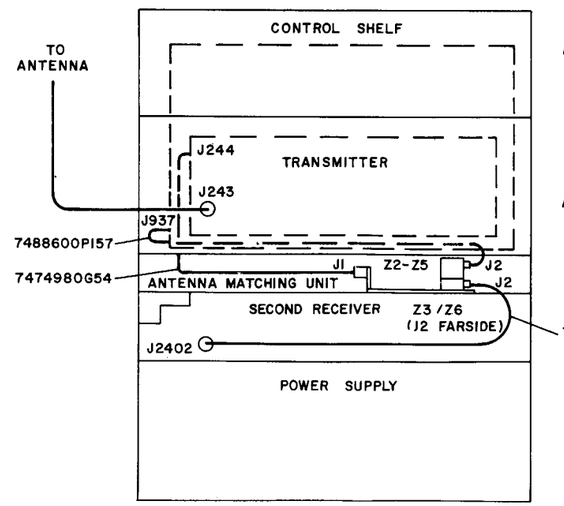
FIG. 9



CONTINUOUS DUTY W/O AMU

STATION COMBINATION NO. -C---E--S---
K, J, R, T / N, P, U, W, G

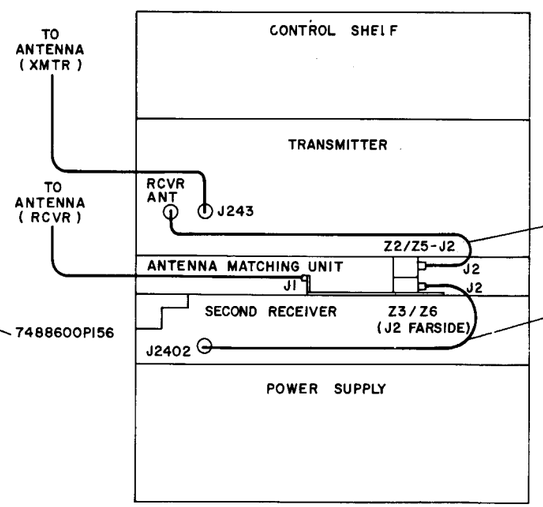
FIG. 10



CONTINUOUS DUTY W/AMU

STATION COMBINATION NO. -C---E--S---
K, J, R, T / N, P, U, W, G

FIG. 11



CONTINUOUS DUTY W/AMU
(DUPLEX OPERATION)

STATION COMBINATION NO. -C---E--D---
R, T / L

OR -C---N-------
U, V, Y

FIG. 12

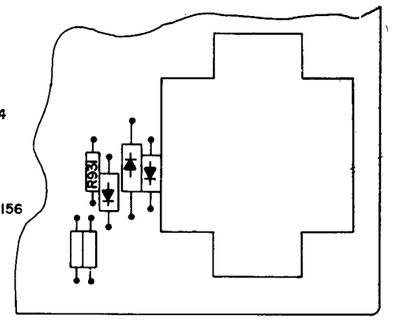


FIG. 13

INSTRUCTIONS FOR INSTALLING:

THIS INSTRUCTION COVERS THE INSTALLATION OF SECOND RECEIVER AND ANTENNA MATCHING UNIT INTO MASTR II STATION COMBINATIONS.

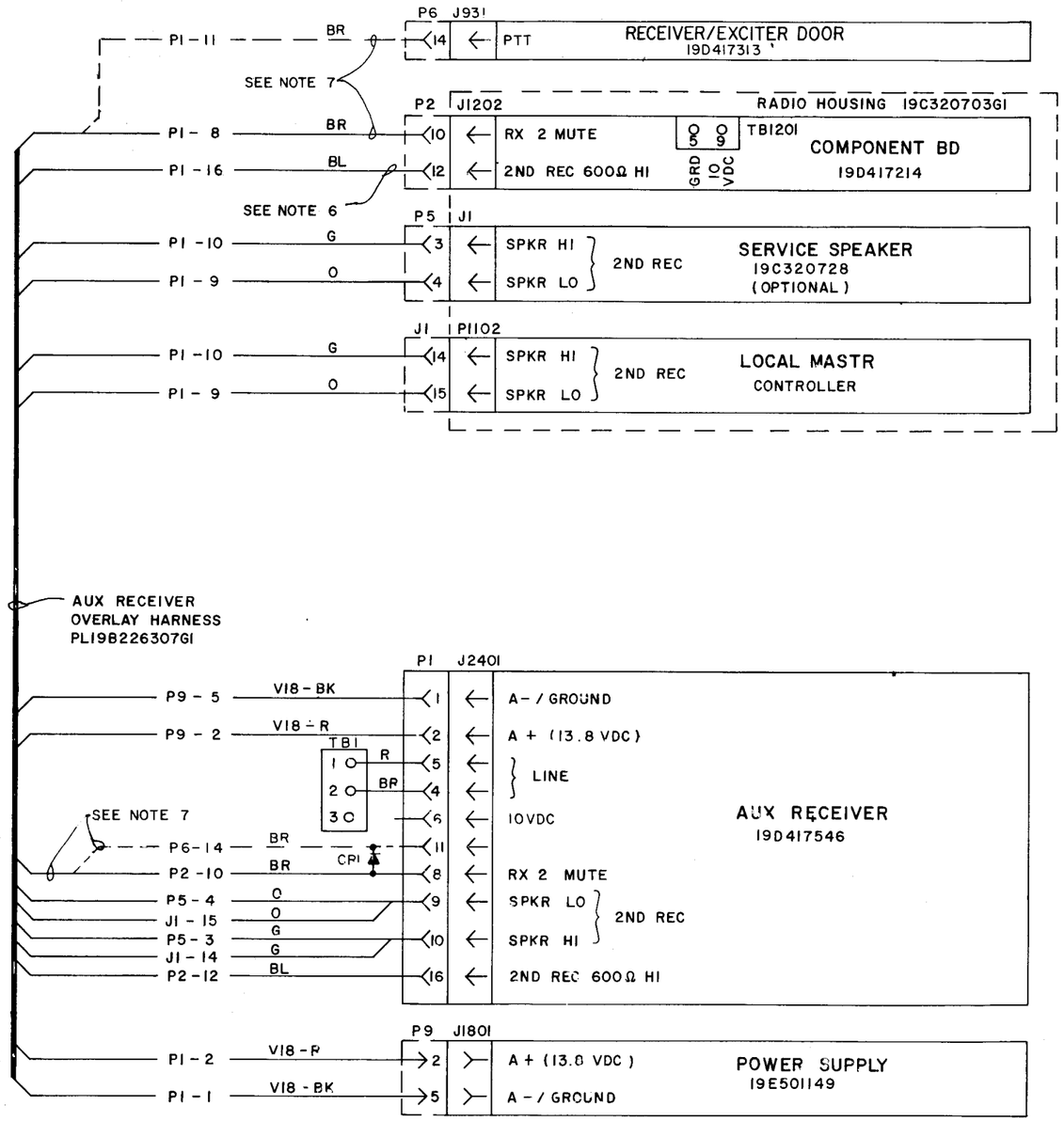
AUXILIARY RECEIVER 19D417456

1. INSTALL 4 CLIPS (7160861P33) AS SHOWN IN FIG. 6.
2. MOUNT AUXILIARY RECEIVER IN 2 RU SPACE IMMEDIATELY ABOVE STATION POWER SUPPLY (19E501149) USING HARDWARE SUPPLIED (SEE FIG. 6), LEAVING A 1 RU SPACE BETWEEN AUXILIARY RECEIVER AND RADIO HOUSING (19C320703).
3. INSTALL OVERLAY HARNESS PL19B226307 AS SHOWN IN FIG. 7. SEE INTERCONNECT DIAGRAM 19D417611 & 19D424989.
4. REMOVE R931 FROM AUX RX SYSTEM BD 19D417549G1. (SEE FIG. 13)

ANTENNA MATCHING UNIT PL19C321150

1. MOUNT ANTENNA MATCHING UNIT IMMEDIATELY BELOW RADIO HOUSING (19C320703), LEAVING 2 RU SPACE BETWEEN ANTENNA MATCHING UNIT AND STATION POWER SUPPLY (19E501149) FOR AUXILIARY RECEIVER, IF NOT PRESENT. (SEE FIG. 6 & FIG. 7).
2. MOUNT AUXILIARY RECEIVER IN 2 RU SPACE BETWEEN ANTENNA MATCHING UNIT AND STATION POWER SUPPLY, IF NOT ALREADY PRESENT. (SEE INSTRUCTION FOR MOUNTING AUXILIARY RECEIVER).
3. CONNECT RF CABLES AS SHOWN IN FIG. 9 OR FIG. 11 OR FIG. 12 OR FIG. 14.
4. PKG ANY EXTRA CABLES & SHIP W/ STATION.
5. IN FIG. 14 DISCONNECT W1 FROM Z1/Z4-J1 AND TAPE TO ANTENNA MATCHING UNIT J1 FOR MECHNICAL SUPPORT.

(19D417615, Sh. 2, Rev. 8)



(19D417611, Rev. 12)

INTERCONNECTION DIAGRAM

AUXILIARY RECEIVER OVERLAY HARNESS 19B226307G1

NOTES: (FOR PL19B226307 WIRING HARNESS)

1. ALL WIRE TO BE SF-22 UNLESS OTHERWISE NOTED.
2. WIRES TO P2, J1 & P5 TO BE TERMINATED WITH C5496809P17.
3. WIRES TO P9 TO BE TERMINATED WITH 19B209288P2.
4. CONNECTORS P2, P5, P6, P9 & J1 ARE PART OF 19C320811 HARNESS.
5. CONNECTIONS TO P1 & TB1 TO BE SOLDERED.
6. ON ALL STATIONS WITH LOCAL CONTROL, (COMBINATION NO. V - E-J-K), TAPE BACK OR SLEEVE BLUE WIRE.
7. INCORPORATED ONLY IN LOCAL CONTROL INTERMITTENT DUTY STATIONS (COMBINATION NO. -I--E-----).
   A. ROUTE THE BR WIRE TO THE RECEIVER/EXCITER DOOR. CONNECT AND SOLDER TO P6-14.
   B. ON THE AUX RX, REMOVE THE BR WIRE FROM P1-8 AND CONNECT TO P1-11.
   C. ON THE AUX RX, ADD DIODE CR1 (FROM HDW KIT 19A130127G2) WITH ANODE CONNECTED TO P1-8 AND CATHODE CONNECTED TO P1-11. SOLDER BOTH CONNECTIONS.

PARTS LIST

LBI-30605

AUXILIARY RECEIVER OVERLAY HARNESS
19B226307G1

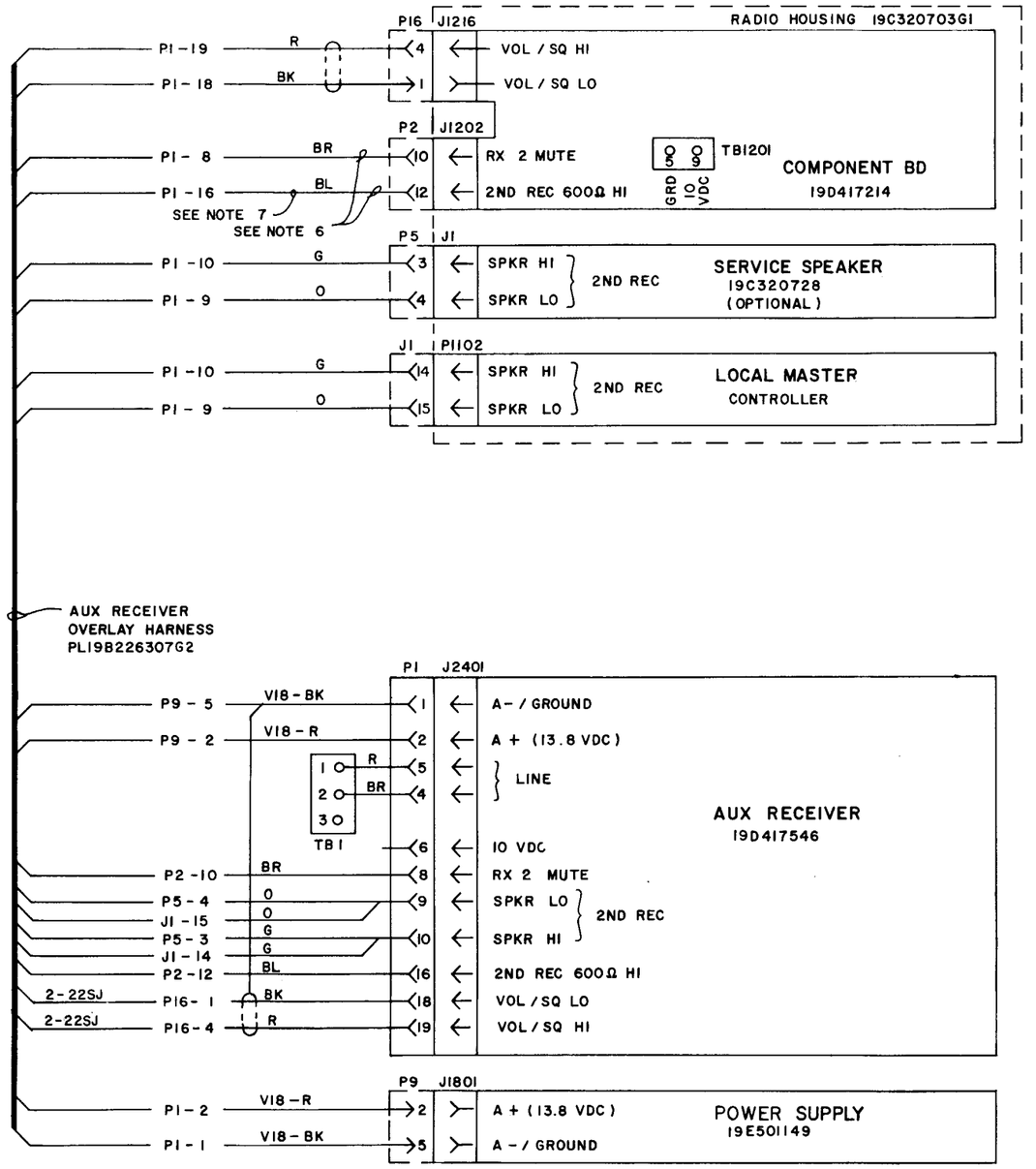
SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1	19C303506P1	Connector, phen: 20 contacts.
		- - - - - - - - TERMINAL BOARDS - - - - - - - -
TB1	19C301086P1	Feed-thru, phen: 3 terminals; sim to GE CR151D.
		- - - - - - - - - MISCELLANEOUS - - - - - - - -
	19B209288P2	Contact, male: sim to Molex 1190-T. (P9-2, P9-5).
	5496809P17	Contact, female: sim to Molex Products 1381-T. (P2-10, P2-12, P5-3, P5-4, J1-14, J1-15).
	N80P13004C6	Machine screw, phillips: No. 6-32 x 1/4. (Used with TB1).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Used with TB1).

PARTS LIST

AUXILIARY RECEIVER OVERLAY HARNESS (EACOM)
19B226307G2

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - - PLUGS - - - - - - - - - - -
P1	19C303506P1	Connector, phen: 20 contacts.
P16		Connector. Includes:
	19B209288P20	Shell.
	19B209288P29	Contact: female, wire size No. 22-30 AWG; sim to Molex 1433. (P16-4).
	19B209288P30	Contact: male, wire size No. 22-30 AWG; sim to Molex 1434. (P16-1).
		- - - - - - - - - TERMINAL BOARDS - - - - - - - - -
TB1	19C301086P1	Feed-thru, phen: 3 terminals; sim to GE CR151D.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - -
	19B209288P2	Contact, male: sim to Molex 1190-T. (P9-2, P9-5).
	19B209288P29	Contact, female: sim to Molex 1434. (J1-14, J1-15, P2-10, P2-12, P5-3, P5-4).
	N80P13004C6	Machine screw, phillips: No. 6-32 x 1/4. (Used with TB1).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Used with TB1).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.



NOTES: (FOR PL19B226307 WIRING HARNESS)

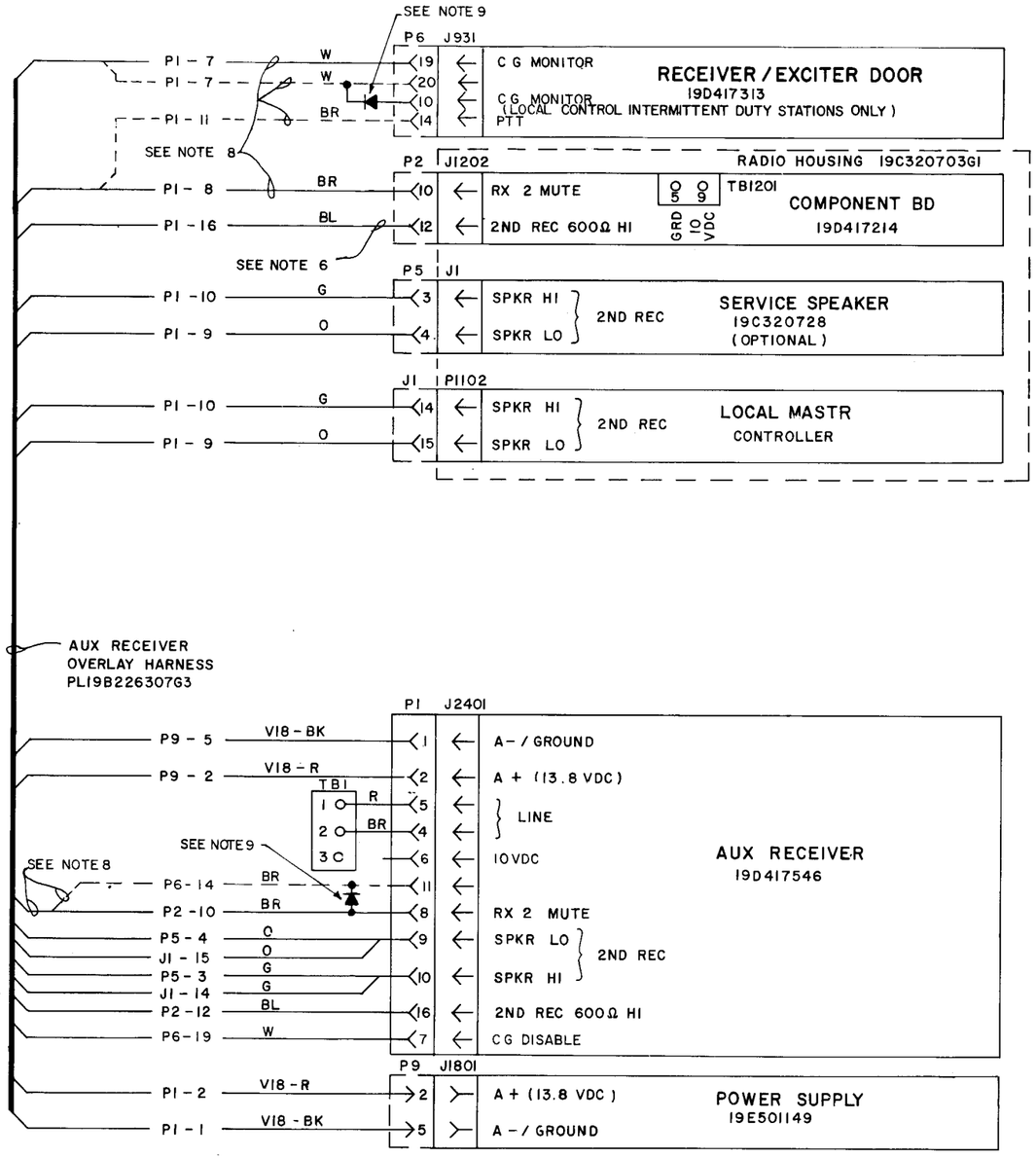
1. ALL WIRE TO BE SF22 UNLESS OTHERWISE NOTED.
2. WIRES TO P2, P5, P16-4 & J1 TO BE TERMINATED WITH 19B209288P29.
3. TERMINATE WIRE AT P16-1 WITH 19B209288P30.
4. WIRES TO P9 TO BE TERMINATED WITH 19B209288P2.
5. CONNECTORS P2, P5, P9 & J1 ARE PART OF 19C320811 HARNESS.
6. CONNECTIONS TO P1 & TB1 TO BE SOLDERED.
7. IF P2 IS NOT PRESENT, TAPE OR SLEEVE BR & BL WIRES.
8. IN LOCAL/REMOTE STATIONS TAPE BACK OR SLEEVE BLUE WIRE.

(19D424989, Rev. 3)

INTERCONNECTION DIAGRAM

AUXILIARY RECEIVER OVERLAY HARNESS
(EACOM) 19B226307G2

Issue 1



NOTES: (FOR PLI9B226307 WIRING HARNESS)

1. ALL WIRE TO BE SF-22 UNLESS OTHERWISE NOTED.
2. WIRES TO P2, J1 & P5 TO BE TERMINATED WITH C5496809P17.
3. WIRES TO P9 TO BE TERMINATED WITH 19B209288P2.
4. CONNECTORS P2,P5,P6,P9 & J1 ARE PART OF 19C320611 HARNESS.
5. CONNECTIONS TO P1, P6 & TB1 TO BE SOLDERED.
6. ON ALL STATIONS WITH LOCAL CONTROL, (COMBINATION NO. V - E-J-K), TAPE BACK OR SLEEVE BLUE WIRE
7. STRIP & TIN W WIRE TO P6 .31 ±.06 & LET HANG. CONNECTION IS MADE AT INSTALLATION.
8. DASHED LINES SHOW HARNESS AS MODIFIED FOR USE IN LOCAL CONTROL INTERMITTENT DUTY STATIONS
9. DIODE SUPPLIED AS MODIFICATION KIT PLI9A137396G1. INSTALLED ONLY WHEN HARNESS IS MODIFIED PER NOTE 8.
10. INCORPORATE ONLY IN LOCAL CONTROL INTERMITTENT DUTY STATIONS (COMBINATION NO. -I--E-----).
    A. ROUTE THE BR WIRE TO THE RECEIVER/EXCITER DOOR. CONNECT AND SOLDER TO P6-14.
    B. ON AUX RX REMOVE THE BR WIRE FROM P1-8 AND CONNECT TO P1-11.
    C. ON THE AUX RX ADD DIODE CR1 (FROM HDW KIT 19A130127G2) WITH ANODE CONNECTED TO P1-8 AND CATHODE CONNECTED TO P1-11. SOLDER BOTH CONNECTIONS.

PARTS LIST

AUXILIARY RECEIVER OVERLAY HARNESS
WITH CHANNEL GUARD MONITOR
19B226307G3

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - - PLUGS - - - - - - - - - -
P1	19C303506P1	Connector, phen: 20 contacts.
		- - - - - - - - TERMINAL BOARDS - - - - - - - -
TB1	19C301086P1	Feed-thru, phen: 3 terminals; sim to GE CR151D.
		- - - - - - - - - MISCELLANEOUS - - - - - - - -
	19B209288P2	Contact, male: sim to Molex 1190-T. (P9-2, P9-5).
	5496809P17	Contact, female: sim to Molex Products 1381-T. (P2-10, P2-12, P5-3, P5-4, J1-14, J1-J15).
	N80P13004C6	Machine screw, phillips: No. 6-32 x 1/4. (Used with TB1).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Used with TB1).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

INTERCONNECTION DIAGRAM

(19D429271, Rev. 2)

AUXILIARY RECEIVER OVERLAY HARNESS
WITH CHANNEL GUARD MONITOR