

# **INSTRUCTIONS FOR REMOTE KEYING PANEL INTERFACE OPTION 7442**

(FOR MASTR PRO '72 REMOTE/REPEATER STATION)

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## **DESCRIPTION**

Option 7442 modifies the MASTR PRO '72 Remote/Repeater Station when used with the Remote Keying Panel in voting systems. The option adds a 19D413943G3 Tone/Audio Panel which allows using the station receiver as one of the voting system satellite receivers. A special 19A129631G3 overlay harness is used to connect the Tone/Audio Panel. Modification Kit 19A129630G1 adds the two option jacks J1203 and J1204 to the Station Control Shelf.

Repeater Board Modification Kit 19A130070G1 and Audio Board Modification Kit 19A130078G1 prevent the station from keying for approximately 200 milliseconds when the receiver squelch is opened. This allows the Remote Keying System to key the station as though it were a remote control station. Remote priority thus overrides the repeat keying. If the remote Keying should fail, the repeater will then automatically key (after the 200 millisecond delay), providing emergency backup to the Remote Keying System.

The station must also be modified for 4-Wire Audio. Installation of the 4-Wire Audio Kit 19A129508G1 is provided in the Remote Control Shelf MAINTENANCE MANUAL LBI-4490.

DF-9025

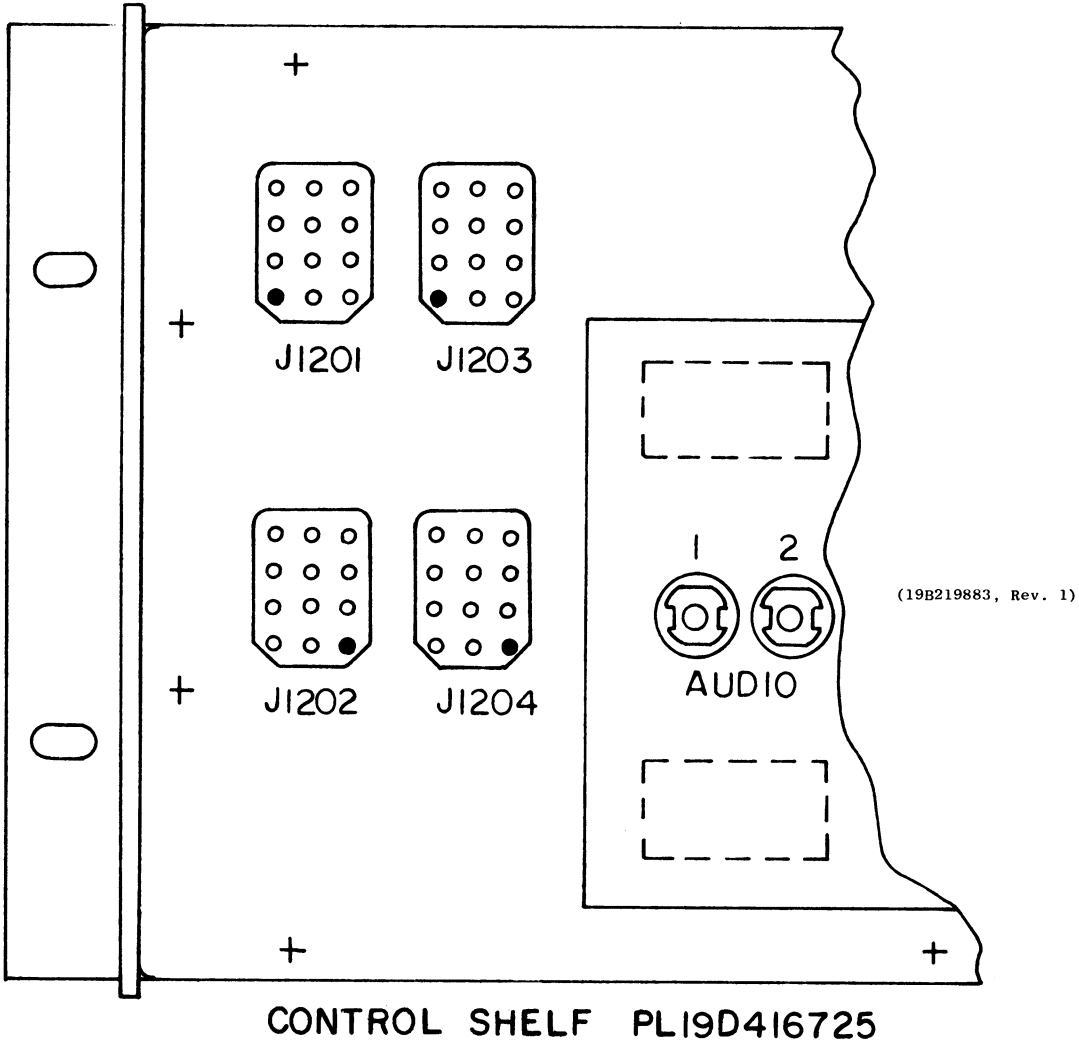
MOBILE RADIO DEPARTMENT  
GENERAL ELECTRIC COMPANY  
LYNCHBURG, VIRGINIA 24502

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**PARTS LIST**  
LBI-4999  
OPTION JACK KIT  
19A129630G1

SYMBOL	GE PART NO.	DESCRIPTION
J1203	19A116647P4	----- JACKS AND RECEPTACLES ----- Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1204	19A116647P6	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5927.



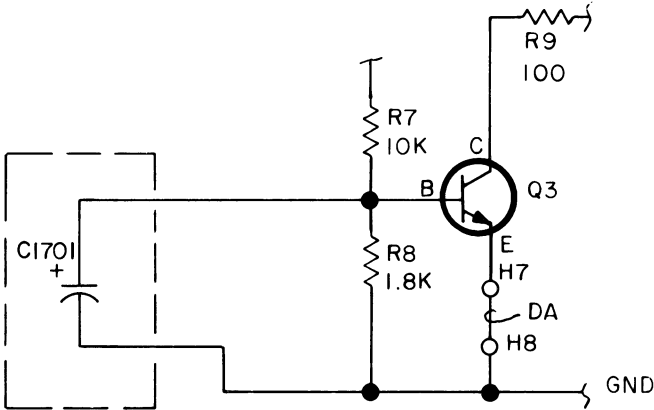
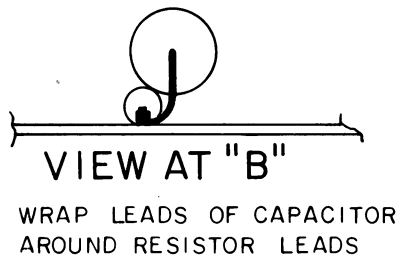
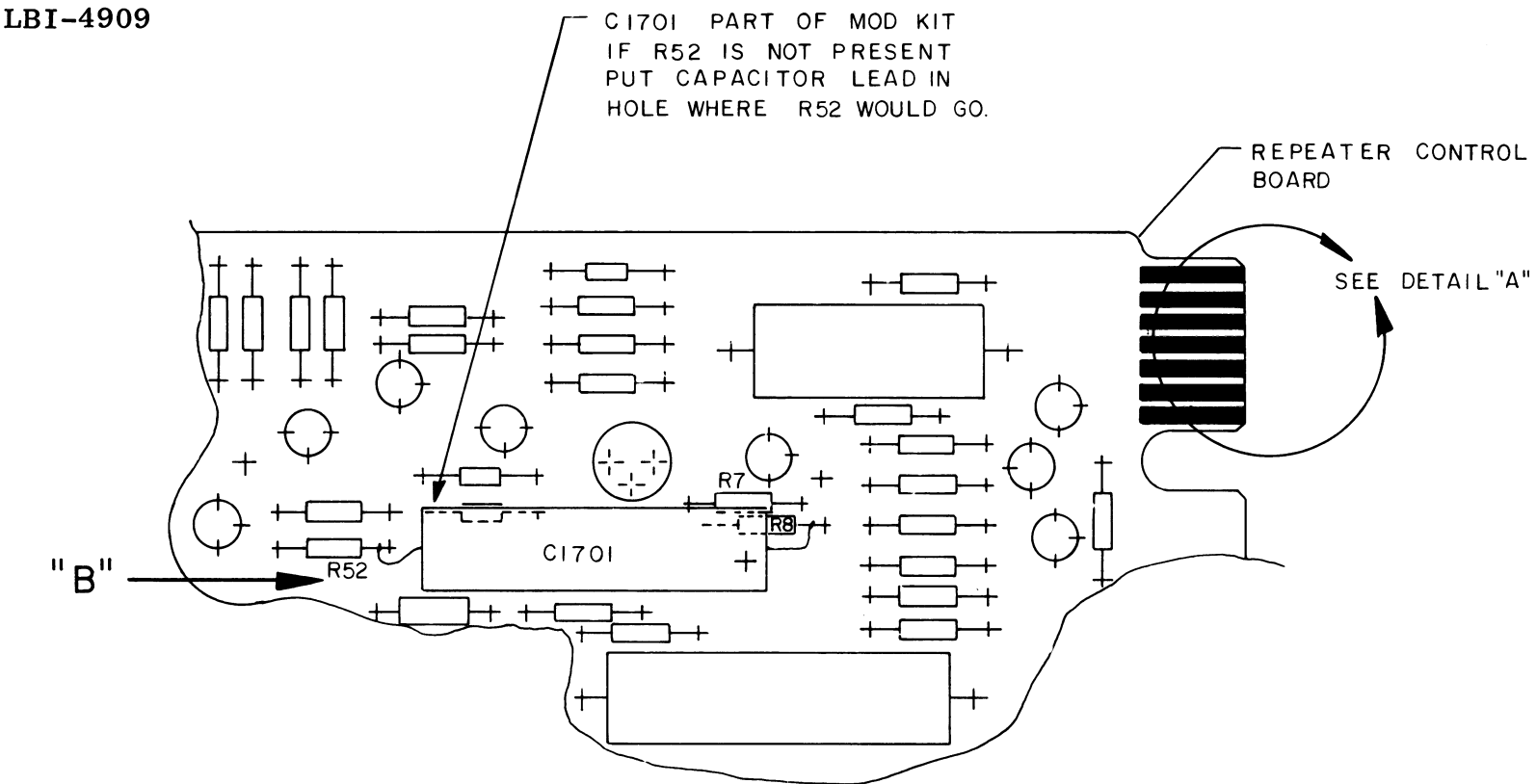
THESE INSTRUCTIONS COVER THE INSTALLATION OF THE OPTION JACK KIT PL19A129630 ON THE CONTROL SHELF.

INSTRUCTIONS FOR INSTALLING (PL19A129630)  
OPTION JACK KIT.

1. INSTALL J1203 ON BACK PLANE BY SOLDERING IN PLACE. TAKE NOTICE OF THE ORIENTATION OF THE JACK AND ALSO THE LOCATION OF THE "KEY" PIN.
2. INSTALL J1204 ON BACK PLANE BY SOLDERING IN PLACE. TAKE NOTICE OF THE ORIENTATION OF THE JACK AND ALSO THE LOCATION OF THE KEY PIN.

**INSTALLATION INSTRUCTIONS**

OPTION JACK KIT 19A129630G1



THESE INSTRUCTIONS COVER THE INSTALLATION OF THE PL19A130070G1 MODF KIT IN THE 19D416675 REPEATER CONTROL BOARD FOR USE WITH THE REMOTE KEYING PANEL.

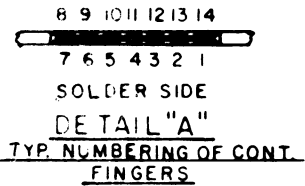
- INSTRUCTIONS:
1. INSTALL CAPACITOR AS SHOWN & SOLDER LEADS.
  2. AFTER ADDITION OF THIS KIT TEST BY APPLYING A PROPER INPUT (GND) TO PIN A12 AND OBSERVING A1. THE OUTPUT SHOULD BE DELAYED BY 200 m SEC. +20%.

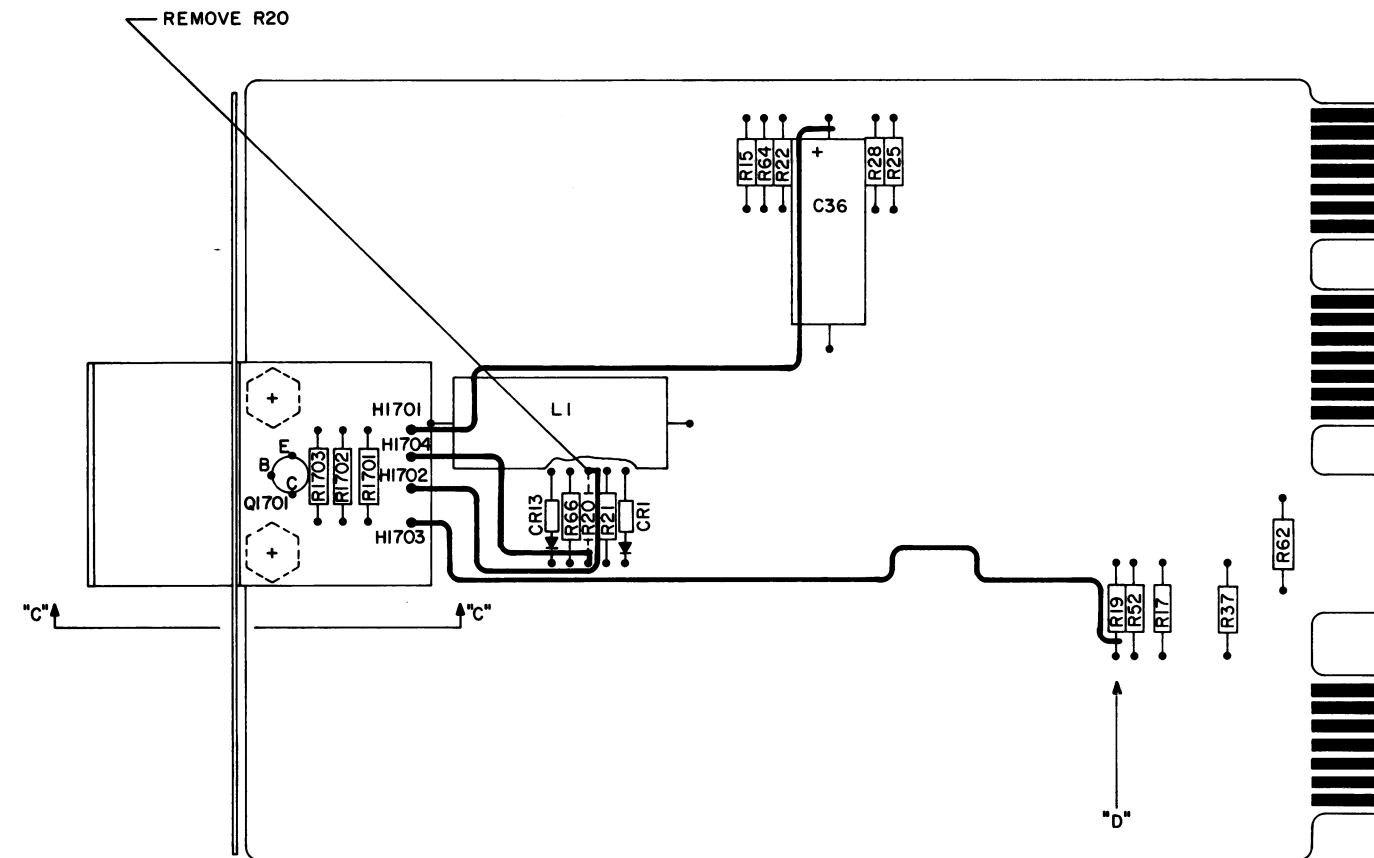
INSTALLATION INSTRUCTIONS

REPEATER BOARD MODIFICATION KIT  
19A130070G1

PARTS LIST  
LBI-4998  
REPEATER BOARD MODIFICATION KIT  
19A130070G1

SYMBOL	GE PART NO.	DESCRIPTION
C1701	19A115680P10	----- CAPACITORS ----- Electrolytic: 200 $\mu$ f +150% -10%, 18 VDCW; sim to Mallory Type TTX.





THESE INSTRUCTIONS COVER THE INSTALLATION OF THE PL19A130078G1  
MOD KIT IN THE 19D416667 AUDIO BOARD FOR USE WITH THE REMOTE  
KEYING PANEL.

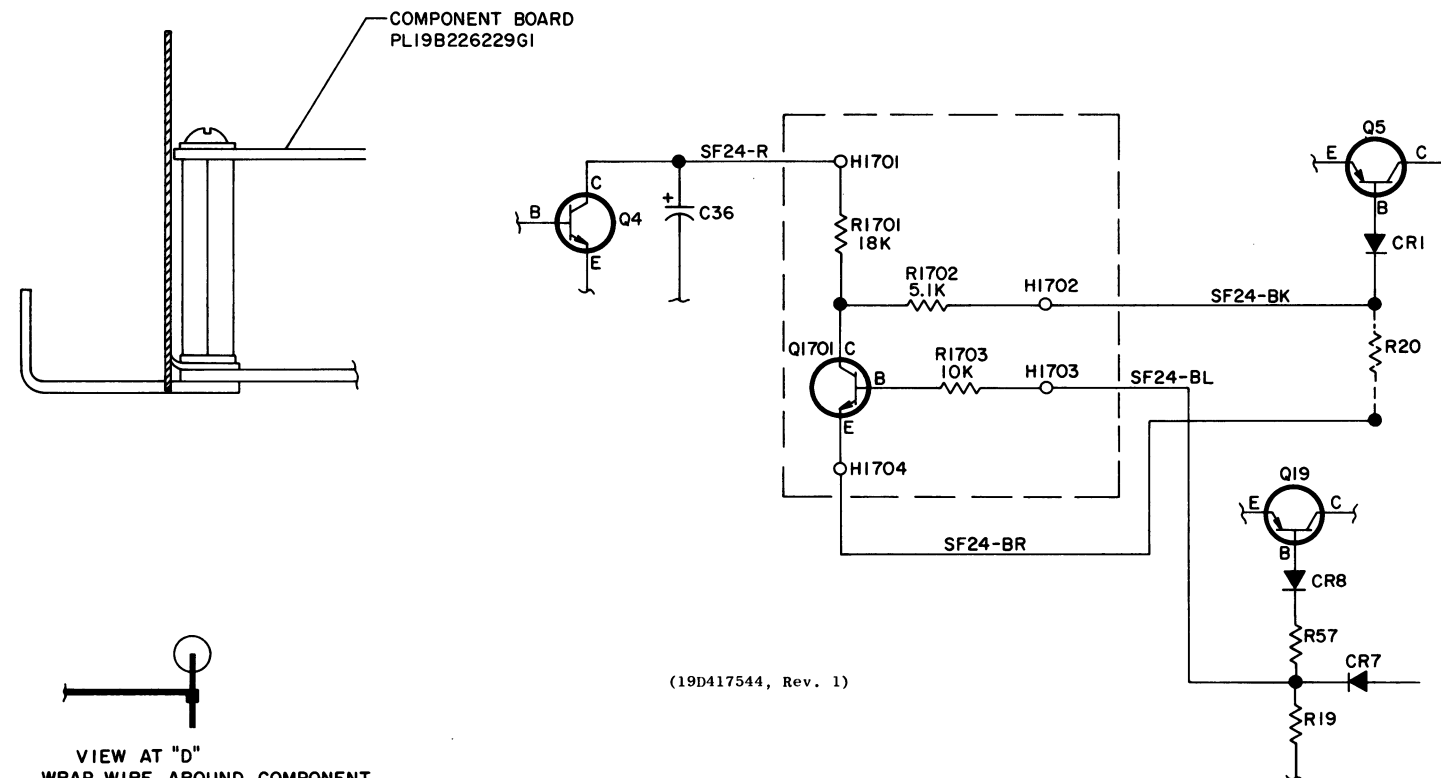
INSTRUCTIONS:

1. REMOVE R20.
2. REMOVE 2 #4 NUTS SECURING HANDLE AND FRONT PANEL TO PRINTED BOARD. REPLACE WITH 1.10" LONG SPACERS AND DISCARD NUTS.
3. MOUNT PL19B226229G1 COMPONENT BOARD TO SPACERS USING 2 #4 X 1/4 LG. SCREWS AND L'WASHERS.
4. SOLDER THE 4 LEADS COMING FROM PL19B226229G1 COMPONENT BOARD AS SHOWN. (TWO LEADS GO IN HOLES FORMERLY USED BY R20).
5. TEST PER INSTRUCTIONS BELOW.

TEST INSTRUCTIONS:

NOTE A MONITOR RECEIVER IS REQUIRED FOR THIS TEST.

1. INJECT A STANDARD SIGNAL TO THE RECEIVER IN THE STATION.  
(100uv, 1000 Hz @3KHz DEVIATION)
2. CHECK AUDIO AT MONITOR.
3. CONNECT A MASTR CONTROLLER TO THE DUPLEX AUDIO PAIR ON THE CONTROL SHELF.
4. WHILE INJECTING THE SIGNAL TO THE RECEIVER, KEY THE MASTR CONTROLLER. OBSERVE THAT THE MASTR CONTROLLER HAS SUPERVISION OVER REPEAT AUDIO.



VIEW AT "D"  
WRAP WIRE AROUND COMPONENT  
LEAD. TYP. (2 PLACES)

## INSTALLATION INSTRUCTIONS

**AUDIO BOARD MODIFICATION KIT**  
**19A130078G1**

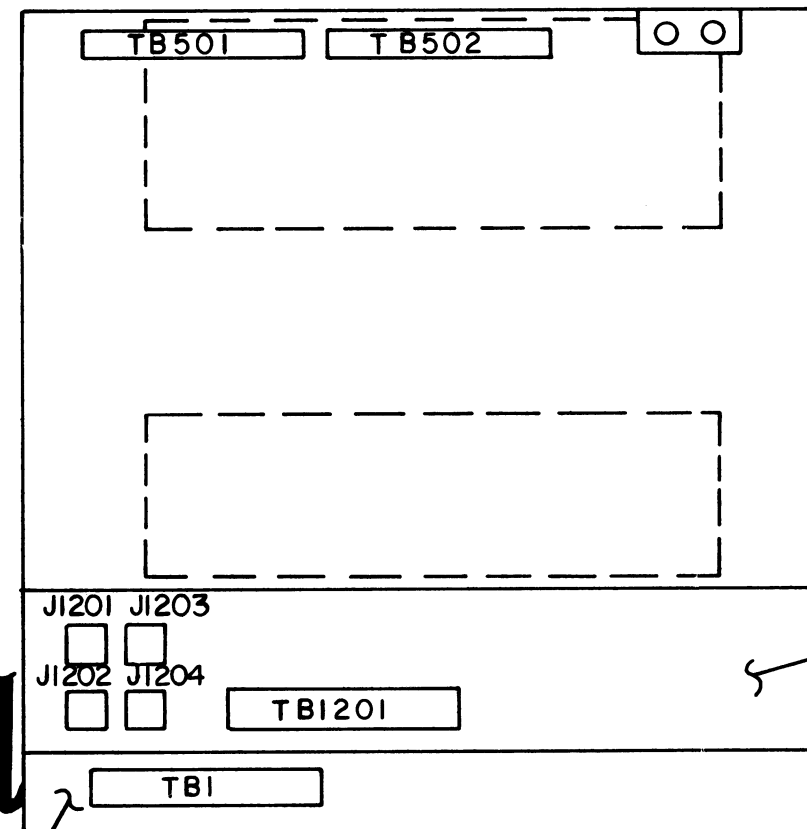
**PARTS LIST**  
LBI-4966  
AUDIO BOARD MODIFICATION KIT  
19A130078G1

SYMBOL	GE PART NO.	DESCRIPTION
		COMPONENT BOARD 19B226229G1
		- - - - - TRANSISTORS - - - - -
Q1701	19A115889P1	Silicon, NPN.
		- - - - - RESISTORS - - - - -
R1701	3R152P183J	Composition: 18,000 ohms ±5%, 1/4 w.
R1702	3R152P512J	Composition: 5100 ohms ±5%, 1/4 w.
R1703	3R152P103J	Composition: 10,000 ohms ±5%, 1/4 w.
		- - - - - MISCELLANEOUS - - - - -
	7142162P81	Spacer: 4-40 x 1/4 tap both ends.
	N404P11C6	Lockwasher, internal tooth: No. 4.
	N80P9004C6	Screw, phillips: panhead, No. 4-40 x 1/4.

POWER SUPPLY  
4EP38

HARNESS  
PL19A129631 G3

TONE/AUDIO PANEL  
PL19D413943  
MOUNT WITH #12-24  
X 1/2 LG. SCREW



REAR VIEW

(19B226949, Rev. 1)

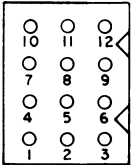
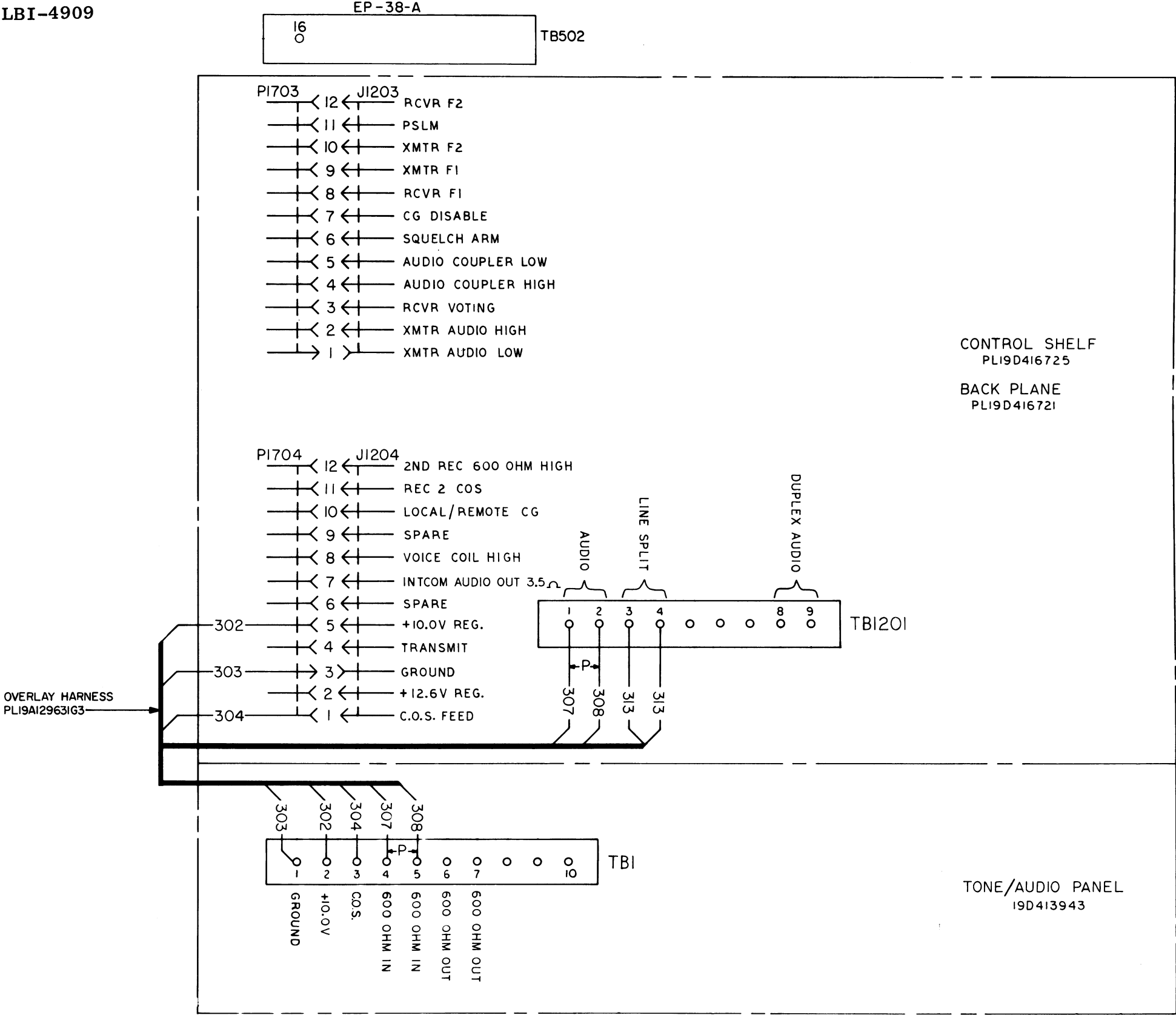
INSTRUCTIONS:

1. INSTALL TONE-AUDIO PANEL PL19D413943 AS SHOWN.
2. INSTALL OVERLAY HARNESS PL19A129631G3 AND MAKE CONNECTIONS PER WIRING DIAGRAM 19D423369.
3. SPOT TIE THE OVERLAY HARNESS TO EXISTING CABINET HARNESS.
4. TEST PER 19A129448.
5. IF 19D413943G5 TONE/AUDIO PANEL IS PRESENT GROUND GREEN LEAD OF POWER CORD TO A CHASSIS MOUNTING SCREW.

CONTROL SHELF  
PL19D416725  
BACK PLANE  
PL19D416721

**INSTALLATION INSTRUCTIONS**

TONE/AUDIO PANEL 19D413943G3  
AND HARNESS 19A129631G3



- INSTRUCTIONS:
- CABLE SHOULD BE CONSTRUCTED IN ACCORDANCE WITH WIRING INSTRUCTION 19A121850.
  - CABLE SHOULD BE CONSTRUCTED IN SUCH A WAY AS TO ALLOW ENOUGH SLACK TO PERMIT MOUNTING A 3.50" OPTION PANEL BETWEEN CONTROL SHELF AND TONE/AUDIO PANEL.
  - ALL WIRES ARE SF22 EXCEPT AS FOLLOWS:  
303 & 313 ARE 16 AWG.  
307 & 308 ARE 2-22 {BR 0
  - TERMINATE WIRES AS FOLLOWS:  

WIRE	AT	TERMINAL
302 & 304	CONTROL SHELF	5496809P17
303	CONTROL SHELF	19B209288P2
303	TONE/AUDIO PANEL	19B209260P102
302, 304	TONE/AUDIO PANEL	19B209260P103
307, 308	TONE/AUDIO PANEL	19B209260P103
307, 308, 313	CONTROL SHELF	19B209260P103
  - MARK WIRES IN CABLE ON BOTH ENDS WITH CORRESPONDING WIRE NUMBER USING MARKER STRIP 19B209090.

(19D423369, Rev. 0)

INTERCONNECTION DIAGRAM

REMOTE KEYING PANEL INTERFACE