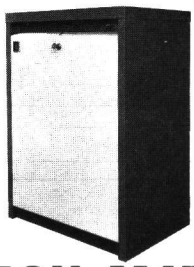
MOBILE RADIO

MASTR® II

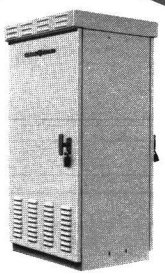
LOCAL CONTROL CONTINUOUS DUTY STATION COMBINATION

MAINTENANCE MANUAL LBI 4786 C

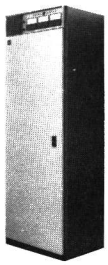
DATAFILE FOLDER – DF 9033



DESK MATE STATION



POLE MOUNT STATION



FLOOR MOUNT STATION

GENERAL ELECTRIC

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ILLUSTRATIONS

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.

High-level RF energy in the transmitter Power Amplifier assembly can cause RF burns. KEEP AWAY FROM THESE CIRCUITS WHEN THE TRANSMITTER IS ENERGIZED!

SPECIFICATIONS*

EIA DIMENSIONS (H X W X D)	
DESK MATE (30-Inch)	30-1/4" X 21-1/2" X 15"
DESK MATE (40-Inch)	44-1/4" X 21-1/2" X 15" (Adding louvered door for Continuous Duty PA adds 1/2-inch to depth dimension)
POLE MOUNT	45" X 21-1/2" X 21"
FLOOR MOUNT	69" X 23" X 21"
WEIGHT	
DESK MATE (30-Inch)	160 lbs.
DESK MATE (40-Inch)	180 lbs.
POLE MOUNT	225 lbs.
FLOOR MOUNT	290 lbs.
INPUT VOLTAGE	121/242 VAC, 60 Hertz Only (50 Hertz Optional)

AC INPUT POWER

RF OUTPUT POWER	TRANSMIT	RECEIVE	STANDBY
LOW BAND			
50 Watts	270 Watts	75 Watts	40 Watts
100 Watts	560 Watts	105 Watts	65 Watts
HIGH BAND			
35 Watts	270 Watts	75 Watts	40 Watts
65 Watts	270 Watts	75 Watts	40 Watts
110 Watts	560 Watts	105 Watts	65 Watts
UHF BAND			
20 Watts	270 Watts	75 Watts	40 Watts
40 Watts	270 Watts	75 Watts	40 Watts
75 Watts	270 Watts	75 Watts	40 Watts
100 Watts	560 Watts	105 Watts	65 Watts
TEMPERATURE RANGE		-30° to +60° C (-22° F to +140° F)	

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

FCC FILING NUMBERS

25-50 MHz

MODEL SERIES	DUTY CYCLE (EIA)	POWER OUTPUT (Internally Adjustable)	FCC FILING NUMBER	
			5 ppm Freq. Stab.	2 ppm Freq. Stab.
(●)I64E...	Intermittent	15 to 50 W	KT-56-A	KT-56-C
(●)I74E...	Intermittent	50 to 100 W	KT-59-A	KT-59-C
(●)I64 (K, J, R or T)...	Intermittent	15 to 50 W	KT-57-A	KT-57-C
(●)I74 (K, J, R or T)...	Intermittent	50 to 100 W	KT-60-A	KT-60-C
(●)C64...	Continuous	15 to 50 W	KT-58-A	KT-58-C
(●)C74...	Continuous	50 to 100 W	KT-61-A	KT-61-C

72-76 MHz

MODEL SERIES	DUTY CYCLE (EIA)	POWER OUTPUT (Internally Adjustable)	FCC FILING NUMBER
(●)I54 (Local)	Intermittent	8-25 W	KT-155A
(●)I54 (Remote)	Intermittent	8-25 W	KT-156-A
(●)C54...	Continuous	8-25 W	KT-157-A

138-174 MHz

MODEL SERIES	DUTY CYCLE (EIA)	POWER OUTPUT (Internally Adjustable)	FCC FILING NUMBER	
			5 ppm Freq. Stab.	2 ppm Freq. Stab.
(●)I56E...	Intermittent	10 to 35 W	KT-41-A	KT-41-C
(●)I66E...	Intermittent	10 to 65 W	KT-42-A	KT-42-C
(●)I76E...	Intermittent	20 to 110 W	KT-43-A	KT-43-C
(●)I56 (K, J, R or T)...	Intermittent	10 to 35 W	KT-44-A	KT-44-C
(●)I66 (K, J, R or T)...	Intermittent	10 to 65 W	KT-45-A	KT-45-C
(●)I76 (K, J, R or T)...	Intermittent	20 to 110 W	KT-46-A	KT-46-C
(●)C56...	Continuous	10 to 35 W	KT-47-A	KT-47-C
(●)C66...	Continuous	10 to 65 W	KT-48-A	KT-48-C
(●)C76...	Continuous	20 to 100 W	KT-49-A	KT-49-C

406-512 MHz

MODEL SERIES	DUTY CYCLE (EIA)	POWER OUTPUT (Internally Adjustable)	FCC FILING NUMBER
(●)I45E...	Intermittent	1 to 20 W	KT-50-D
(●)I55E...	Intermittent	1 to 40 W	KT-53-D
(●)I65E...	Intermittent	10 to 75 W	KT-117-C
(●)I75E...	Intermittent	30 to 100 W	KT-118-C
(●)I45 (L, J, R or T)...	Intermittent	1 to 20 W	KT-51-D
(●)I55 (K, J, R or T)...	Intermittent	1 to 40 W	KT-54-D
(●)I65 (K, J, R or T)...	Intermittent	10 to 75 W	KT-115-C
(●)I75 (K, J, R or T)...	Intermittent	30 to 100 W	KT-116-C
(●)C45	Continuous	1 to 20 W	KT-52-D
(●)C55...	Continuous	1 to 40 W	KT-55-D
(●)C65...	Continuous	10 to 75 W	KT-113-C
(●)C75...	Continuous	30 to 100 W	KT-114-C

(●) Cabinet Style 1st Digit "D", "S", "P" or "V")
Applicable to FCC Rules Part Numbers 21, 89, 91 & 93

NOTE: FCC Filing Number not relevant to equipment operating in 406 to 420 MHz frequency range.

COMBINATION NOMENCLATURE

1 st Digit	2nd Digit	3rd Digit	4th Digit	5th Digit	6th Digit	7th Digit	8th & 9th Digit	10th Digit
Mechanical Package	Duty Cycle	Power Output	Channel Spacing (KHz)	Control	No. of Frequency	Options	Frequency Range (MHz)	Oscillator Stability
D 30 - inch Desk Mate Cabinet	**C** Continuous Duty	**4** 8 - 20 Watts	**4** 20	**E** Extended Local	**A** 1 TX 1 RX	**D** Duplex	**12** 25 - 30	**A** ±5 PPM
S 44 - inch Desk Mate Cabinet		**5** 21 - 40 Watts	**5** 25		**B** 2 TX 1 RX	**G** CG & UHS	**13** 30 - 36	**B** ±2 PPM
P Pole Mount Cabinet		**6** 41 - 80 Watts	**6** 30		**C** 2 TX 2 RX	**L** CG & Duplex	**23** 36 - 42	**C** PLL*** ±5 PPM
V Floor Mount Cabinet		**7** 81 - 128 Watts			**D** 1 TX 2 RX	**N** Noise Blanker	**33** 42 - 50	**D** PLL*** ±2 PPM
					E 3 TX 3 RX	**P** UHS	**44** 66 - 78	
					F 4 TX 4 RX	**S** Standard	**45** 77 - 88	
						U Channel Guard	**56** 138 - 150.8	
						W CG & NB	**66** 150.8 - 174	
							77 406 - 420	
							88 450 - 470	
							89 470 - 494	
							91 494 - 512	

* D & L Combinations are PTT with separate receiver antenna cables.

** L Station Combination have simultaneous Encode/Decode Channel Guard.

*** Phase-Lock-Loop.

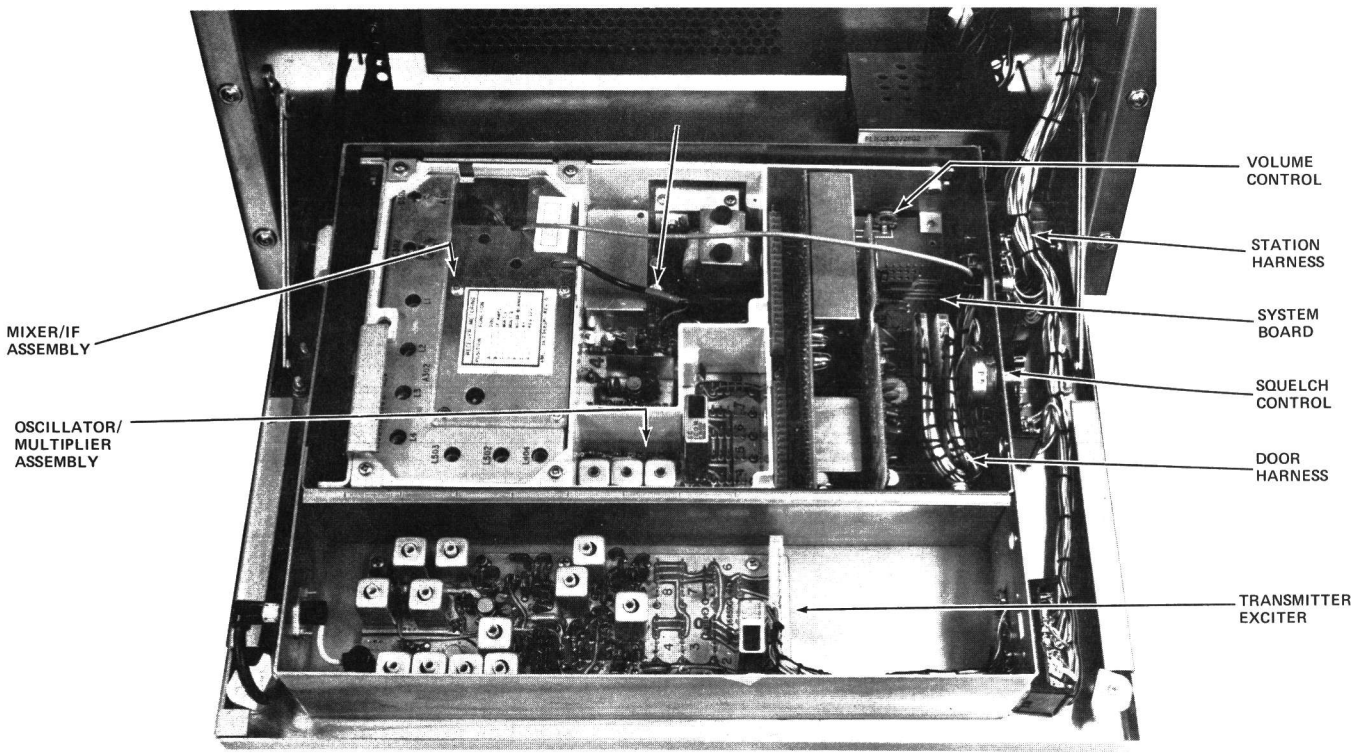


Figure 1 - Radio Panel Front Door

DESCRIPTION

The General Electric MASTR®II Local Control Continuous Duty radio station combinations are designed for extended local control, but with full-function control capability. The station receiver is mounted on a shielded enclosure on the radio panel front door, along with a receiver system board which accomodates Channel Guard and other option boards. Jacks are provided on the system board for plug-in interface with the options and control functions. The transmitter exciter is located in a separate shielded compartment on the radio panel front door. See Figure 1.

The transmitter power amplifier hinges from the bottom rack of the radio housing. The PA consists of a frame mounted to a heat sink. A cover snaps over the frame to form an RF-tight enclosure for the PA board assembly. Directly above the PA assembly is the station control shelf. A mother board is mounted to this shelf which accomodates the station 10-Volt Regulator and Control Module. This module plugs into the J1205 position of the mother board.

The 10-Volt Regulator and Control Module supplies the regulated 10-Volts DC for station operation; contains the transmit/receive switching controls. A station microphone pre-amplifier is also provided on the module printed board. Front panel controls provided on the Regulator include the REM PTT and INTERCOM switches along with the TX LIGHT Light Emitting Diode (LED). See Figure 2.

The Local Control Continuous Duty Station may be converted to a Local/Remote, Remote (DC or Tone) Control, Repeater, Remote/Repeat or Local Repeat Combination by plugging the appropriate modules into the Control Shelf Mother Board.

The station power supply is connected to a 121-Volt AC power source. Conversion from 121 VAC to 242 VAC is made by jumper changes on the back of the power supply front panel. The input voltage is stepped down to 12 Volts by a ferro-resonant transformer which provides line regulation of ±2% for a ±20% primary change. A power switch, primary and secondary fuses and two AC outlets are located on the power supply front panel. A high-current fuse for the PA supply is located on the back of the power supply chassis.

INITIAL ADJUSTMENT

After the MASTR II Local Control Continuous Duty station has been installed, the transmitter and receiver must be adjusted by an electronics technician who holds a First or Second Class FCC Radiotelephone or Radiotelegraph license before the station can be placed in operation.

Make sure that a RADIO TRANSMITTER IDENTIFICATION Form (FCC FORM 452-C or General Electric Form NP270303) has been filled out and attached to the transmitter.

TRANSMITTER ADJUSTMENT

The adjustment for the transmitter includes measuring the forward and reflected power and adjusting the antenna length for optimum ratio, then setting the transmitter to rated power output (or to the specific power output which may be required by the FCC station authorization). Next, measuring the frequency and modulation and entering these measurements on the FCC required station records.

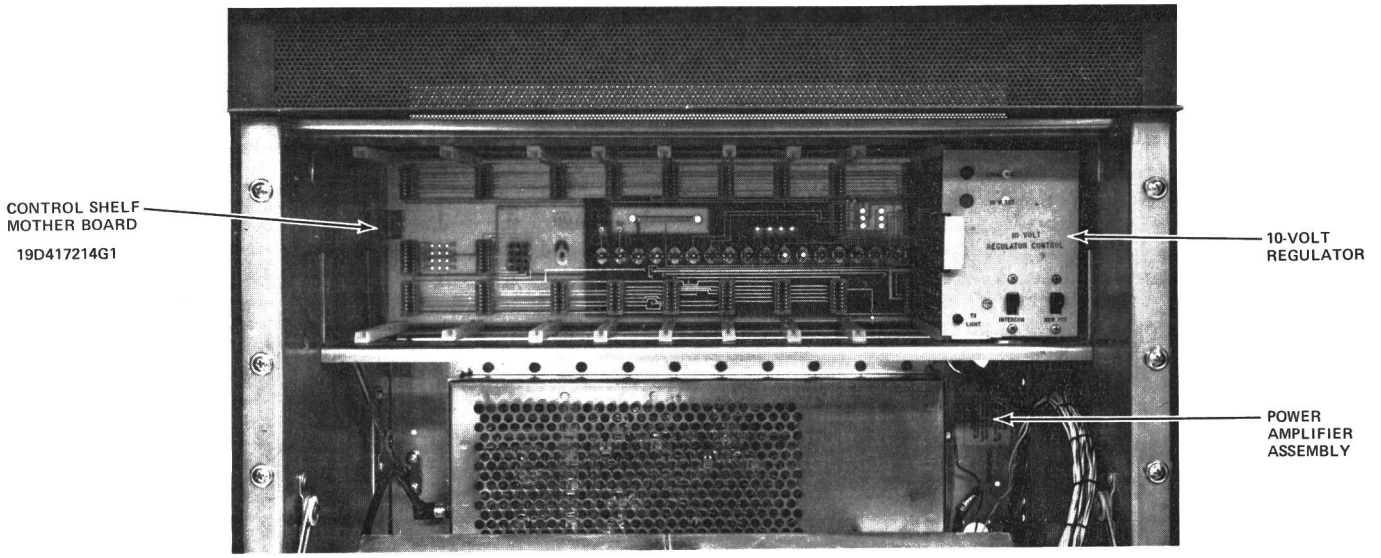


Figure 2 - Control Shelf and PA Assemblies

To set the transmitter modulation, perfrom the following procedure:

1. Set the MIC GAIN control R14 on the 10-Volt Regulator/Control Board to its fully clockwise position.

2. Apply a 1000 Hertz, 30 millivolt RMS signal across B1 and B2 of the 10-Volt Regulator/Control Board. Connect a 0.5 microfarad (or larger) DC blocking capacitor in series with the MIC HI lead (B1).

3. Set MOD ADJUST control R127 on the transmitter exciter for a 4.5 KHz deviation as indicated on a frequency modulation monitor.

4. While talking in a normal voice at the station microphone, adjust MIC GAIN Control R14 for a deviation of 3 KHz as measured on the deviation monitor.

For the complete transmitter adjustment, refer to the ALIGNMENT PROCEDURE in the MAINTENANCE MANUAL for the transmitter.

RECEIVER 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.

To set the station VOLUME control (R3 on the System Board) use the following procedure:

1. Apply a 1000 microvolt on-frequency test signal modulated by 1,000 Hertz with ±3 KHz deviation to the receiver antenna jack J937.

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

3. Connect an 8.0 ohm, 5-watt resistor across METERING jack J905 terminals 1 and 2 on the System Board. Connect an AC VTVM across the 8.0 ohm resistor and adjust R3 for a reading of 6.3 Volts RMS on the meter.

4. Disconnect the 8.0 ohm resistor and connect the Controller cable to the station.

CAUTION

Adjustment of VOLUME CONTROL to settings higher than instructed in the INITIAL ADJUSTMENT may result in damage to the station service speaker or local controller speaker.

To set the station SQUELCH control (R901 on the Receiver/Exciter door) use the following procedure:

MAINTENANCE CHECK	INTERVAL BETWEEN CHECKS	
	Every 6 Months	As Required
Transmitter Alignment - Compare meter readings at transmitter multiplier metering jacks with voltages read during initial tune up. Touch up multiplier tuning. Check power output. (See Alignment Procedure for Transmitter).		X
Receiver - While receiving an unmodulated signal on the station frequency(s), adjust OSC-1 trimmer for each operating frequency for a zero discriminator reading. (See the Receiver Alignment Procedure MAINTENANCE Section).		X
Transmission Line - Check for positive indication of pressure on transmission line pressure guage (if pressurized line is used).	X	
Antenna - Check antenna & mast for mechanical stability.	X	
Mechanical Inspection - Visually check cables, plugs, sockets, terminal boards & components for good electrical connections. Check for tightness of nuts, bolts & screws to make sure that nothing is working loose from its mounting.	X	
Cleaning - Use a vacuum cleaner to remove dust which has accumulated inside the cabinet.	X	
Frequency Check - Check transmitter frequency & deviation as required by FCC.		X

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

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

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

The radio is now ready to receive messages from other radios in the system.

MAINTENANCE

To insure high operating efficiency and to prevent mechanical and electrical failures from interrupting system operations, routine checks should be made of all mechanical and electrical parts at regular intervals. This preventive maintenance should include the checks as listed in the table of Maintenance Checks.

Test and Troubleshooting Procedures

The individual Maintenance Manual for the transmitter and receiver describe standard test procedures which the serviceman can use to compare the actual performance of the transmitter or receiver against the specifications of the unit when shipped from the factory. In addition, specific troubleshooting procedures are available to assist the serviceman in troubleshooting the transmitter and receiver.

REMOVING IC's (and all other soldered-in components) can be easily accomplished by using a de-soldering tool such as a SOLDA-PULLT® or equivalent. To remove an IC, heat each lead separately on the solder side and remove the old solder with the de-soldering tool.

An alternate method is to use a special soldering tip that heats all of the pins simultaneously.

SYSTEM DESCRIPTION

(Refer to Figure 3)

Receiver

The station receiver consists of an oscillator/multiplier assembly (OSC/MULT), RF Assembly, Mixer/IF Assembly (MIF) and an IF-Audio and Squelch Assembly (IFAS). In receivers with noise blankers, the noise blanker circuit replaces the standard MIF board. Refer to the Receiver MAINTENANCE MANUAL for a complete description of the station receiver.

Transmitter

The station transmitter consits of an exciter board assembly and a power amplifier assembly. The PA assembly consists of a PA printed wiring board mounted on a heat sink at the rear of the radio housing. Refer to the Transmitter MAINTENANCE MANUAL for a complete description of the station transmitter.

System Board A901

The station System Board is located on the Radio Panel Front Door and the receiver modules plug directly into the board. Along the edge of the System Board are two connectors which interconnect to the MASTR Local Controller and Power Supply. Plug-in Channel Guard and Carrier Control Timer option jacks are provided. A metering jack is provided for accomodating the General Electric Model 4EX3A11 Test Set. VOLUME Control R3 is located on the System Board. SQUELCH Control R901 is located on the Radio Panel Front Door.

A jumper is normally present between J933-4 and J933-8 in single-frequency transmit stations. A jumper is also present between H47 and H48 on A901 in single-frequency receive stations. In multiple-receive stations, selecting a particular receive frequency at the MASTR Local Controller applies a ground to the particular pin at J931 corresponding to the frequency selected. The ground is then connected via the System Board printed wiring to the receive OSC/MULT to select the desired oscillator.

In 3 or 4-frequency stations it is not necessary to use more than one ICOM per frequency. If an ICOM is to be used in more than one position (if 159.075 is desired for both receive F1 and receive F3, for example), a DA jumper between the desired positions is all that is necessary.

For receive frequencies, insert the jumpers in the A901 System Board near the OSC/MULT Assembly. For transmit frequencies, jumper at the J933/P8 connector.

VOLUME/SQUELCH from the receiver Audio Pre-Amp is connected via J904-12 to the VOLUME (R3) and SQUELCH (R901) controls. The VOLUME 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 J904-18 and 19. The station VOLUME control (R4) is normally adjusted for 5-Watts output and the speaker level is controlled by the MASTR Local Controller VOLUME Control.

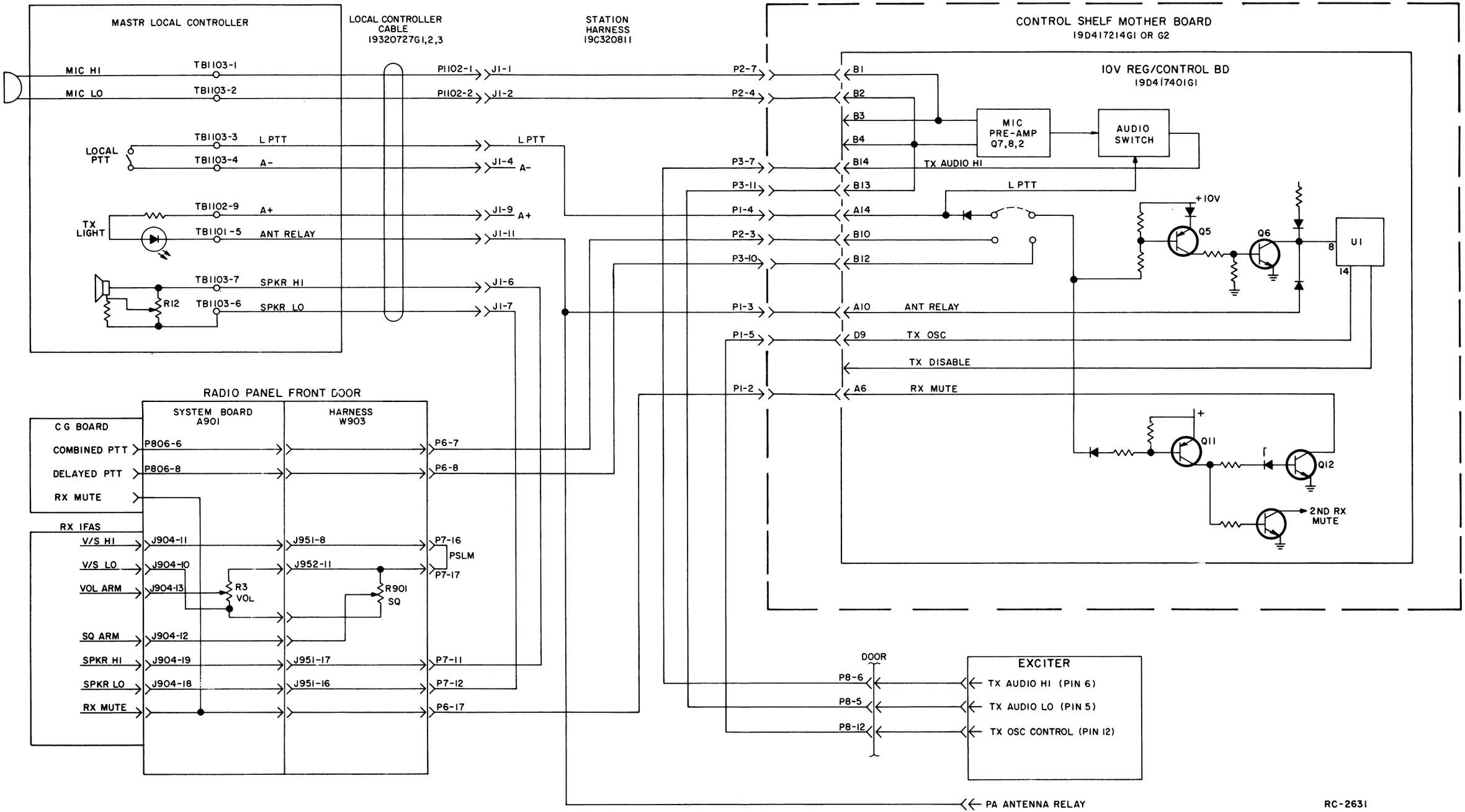
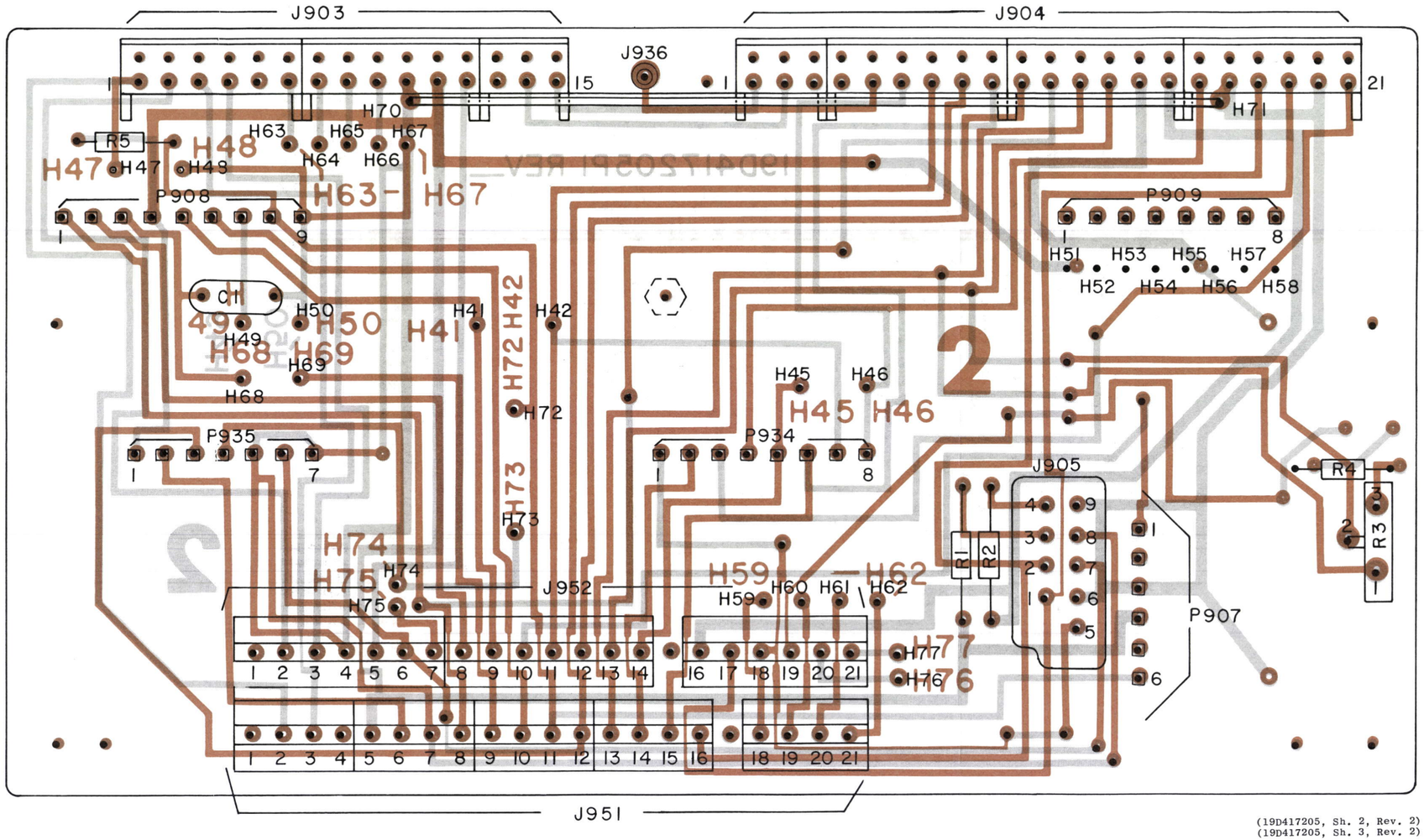


FIGURE 13 - SYSTEM BLOCK DIAGRAM



(19D417205, Sh. 2, Rev. 2)
(19D417205, Sh. 3, Rev. 2)

(19D423147, Rev. 0)

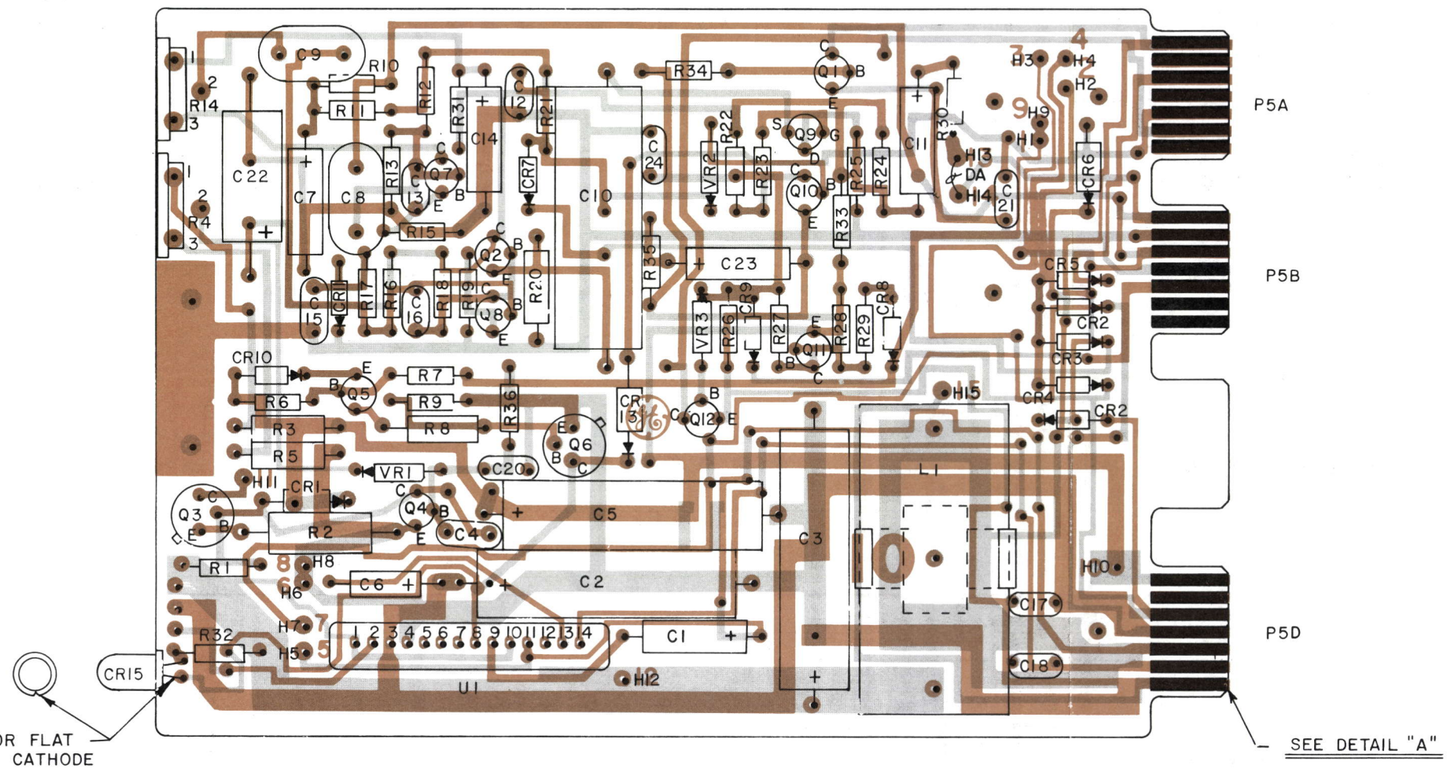
REFER TO WIRING DIAGRAM FOR THE FOLLING CONNECTIONS	
FROM	TO
H41	H42
H50	H77
H45	H46
H47	H48
H68	H69
H49	H76

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

OUTLINE DIAGRAM

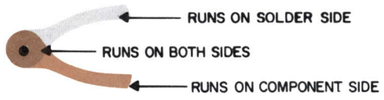
SYSTEM BOARD A901

COMPONENT BOARD A2

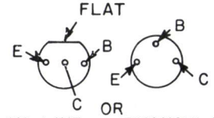


(19D423132, Rev. 7)
(19D417241, Sh. 2, Rev. 11)
(19D417241, Sh. 3, Rev. 10)

REFER TO WIRING DIAGRAM FOR THE FOLLOWING CONNECTIONS.	
FROM	TO
H2	H1
H3	H9



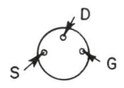
LEAD IDENTIFICATION FOR Q1 - Q8, Q10 - Q12

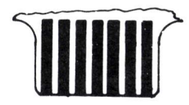


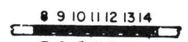
VIEW FROM LEAD END

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

LEAD IDENTIFICATION FOR Q9





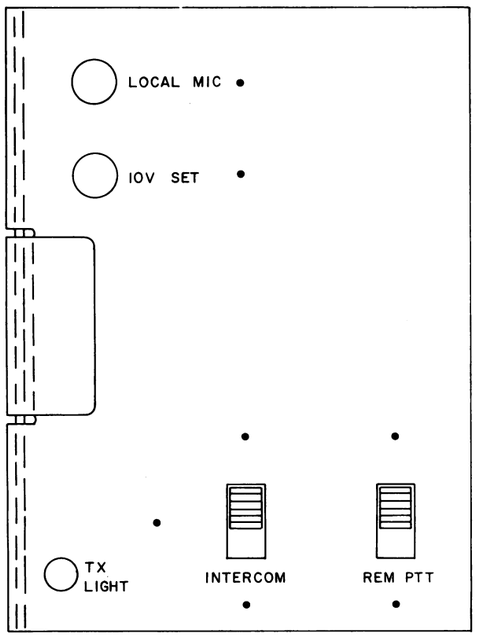


DETAIL "A"

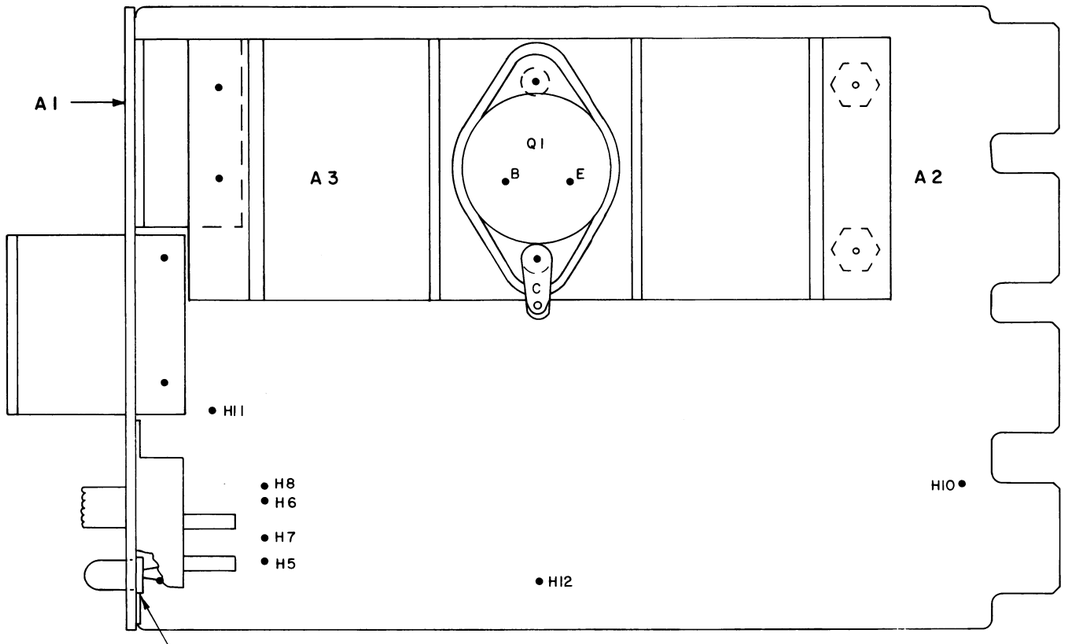
TYP. NUMBERING OF CONT. FINGERS

OUTLINE DIAGRAM

10 VOLT REGULATOR/CONTROL
COMPONENT BOARD A2

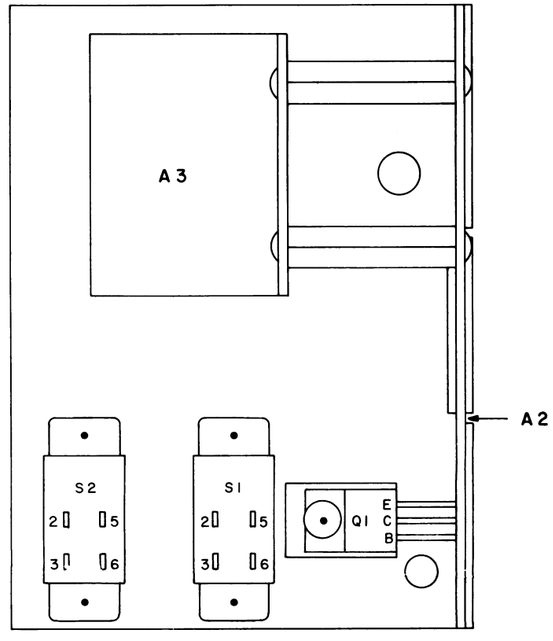


FRONT PANEL (A1)



FLANGE OF DIODE MUST BE MOUNTED FLUSH AGAINST PANEL.

(19D423128, Rev. 0)

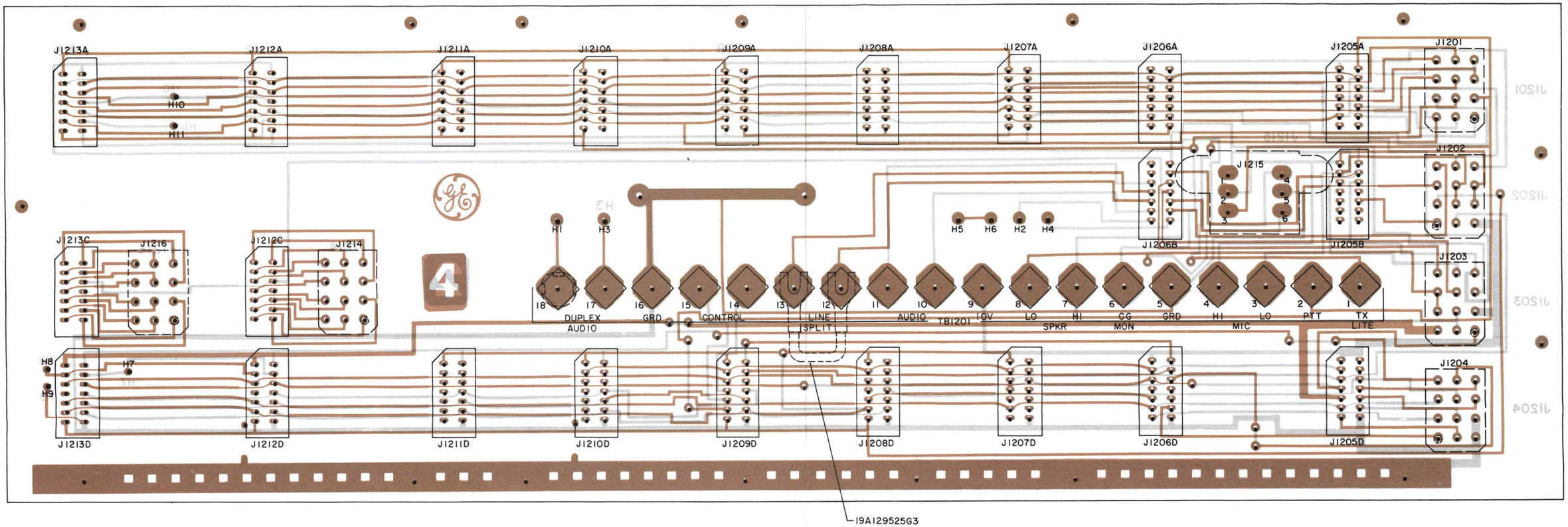


FRONT PANEL (A1)
REAR VIEW

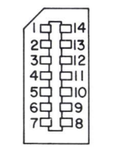
REFER TO WIRING DIAGRAM FOR THE FOLLOWING CONNECTIONS.	
FROM	TO
A3-Q1-B	A2-H11
A3-Q1-C	A2-H10
A3-Q1-E	A2-H12
A1-S1-3	A2-H5
A1-S1-2	A2-H6
A1-S2-3	A2-H7
A1-S2-2	A2-H8

OUTLINE DIAGRAM

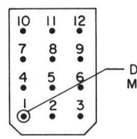
10 VOLT REGULATOR/CONTROL BOARD
19D417401G1



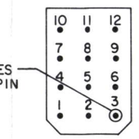
(19R622158, Rev. 0)
(RC-2706)
(19E501181, Sh. 2, Rev. 2)
(19E501181, Sh. 3, Rev. 4)



TYP MOUNTING
FOR J1205-J1213



TYP MOUNTING
FOR J1201, J1203,
J1214, J1216
FARSIDE VIEW

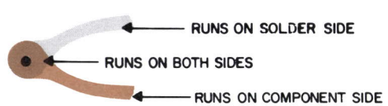


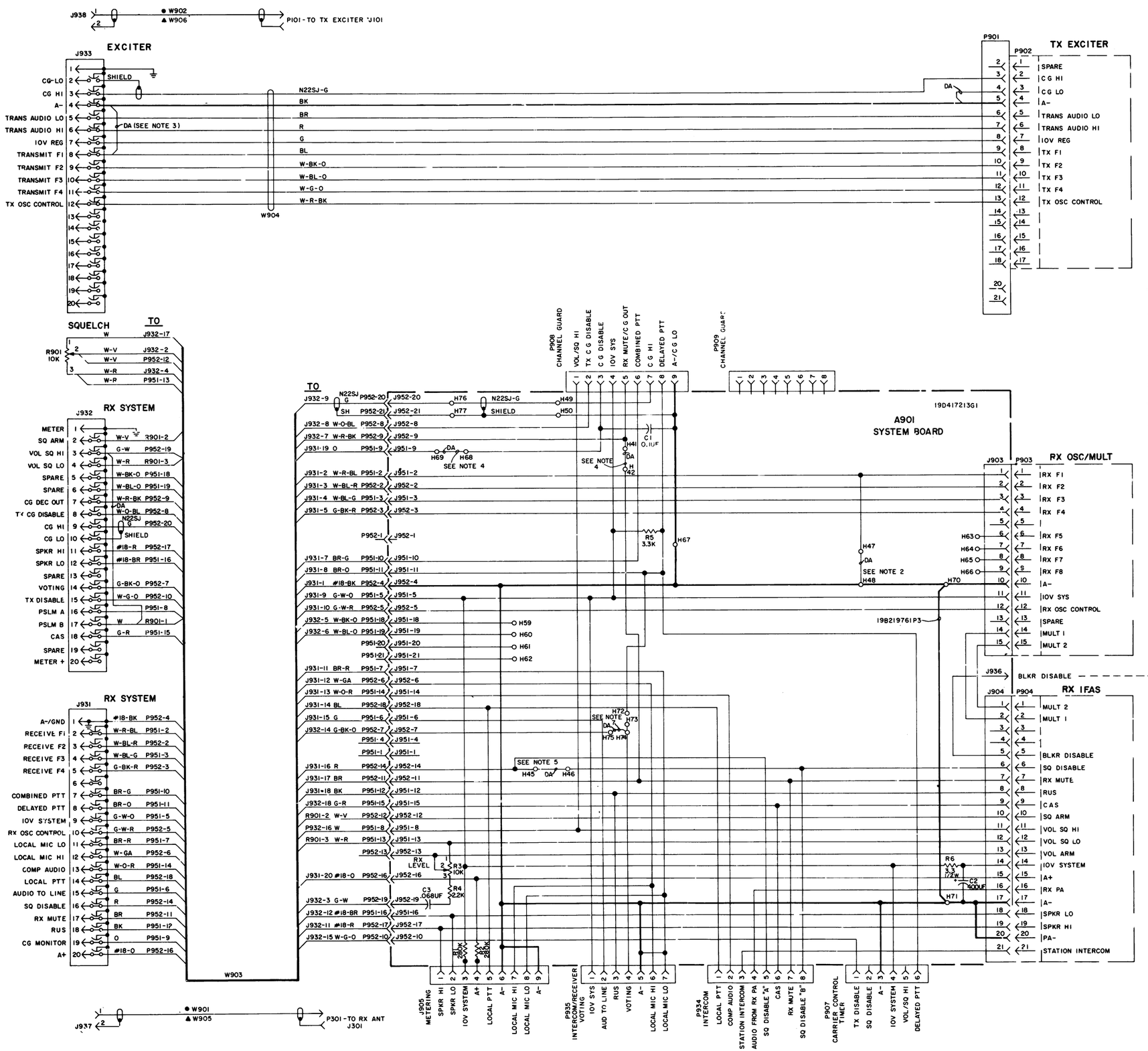
TYP MOUNTING
FOR J1202 &
J1204
FARSIDE VIEW

OUTLINE DIAGRAM

CONTROL SHELF MOTHER BOARDS
19D417214G1 & G2

10 Issue 1





NOTES:

1. ALL WIRE #22 UNLESS NOTED.
2. JUMPER FROM A901-H47 TO A901-H48 PRESENT IN SINGLE FREQUENCY RECEIVE STATIONS.
3. DA FROM J933 PIN 4 TO PIN 8 PRESENT IN SINGLE FREQ. TRANSMIT STATIONS.
4. JUMPER FROM A901-H41 TO A901-H42 AND A901-H69 TO A901-H68 PRESENT IN ALL STATIONS EXCEPT CHANNEL GUARD REPEATERS OR CHANNEL GUARD REMOTE/REPEAT STATIONS.
5. JUMPER FROM A901-H45 TO A901-H46 NOT PRESENT WITH INTERCOM.
6. CARRIER CONTROL TIMER MAY NOT BE USED IN C.G. REPEATER OR C.G. REMOTE/REPEAT STATIONS.
7. IN 2 WIRE DC CONTROL SYSTEMS WITH VOTING TONE BOARD, JUMPER FROM A901-H74 TO A901-H75 IS NOT PRESENT. JUMPER FROM A901-H72 TO A901-H73 IS PRESENT.
   IN 4 WIRE STATIONS WITH VOTING TONE BOARD, JUMPERS H74 - H75, H72 - H73 ARE NOT PRESENT.
8. ▲ 800 MHz
   ● LB HB & 450 MHz

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.

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.

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
PL19D417213G1	
PL19D417262G1	
PL19D417262G4	

SCHEMATIC DIAGRAM

RADIO PANEL FRONT DOOR 19D417262G1

Issue 4

(19E501154, Rev. 12)

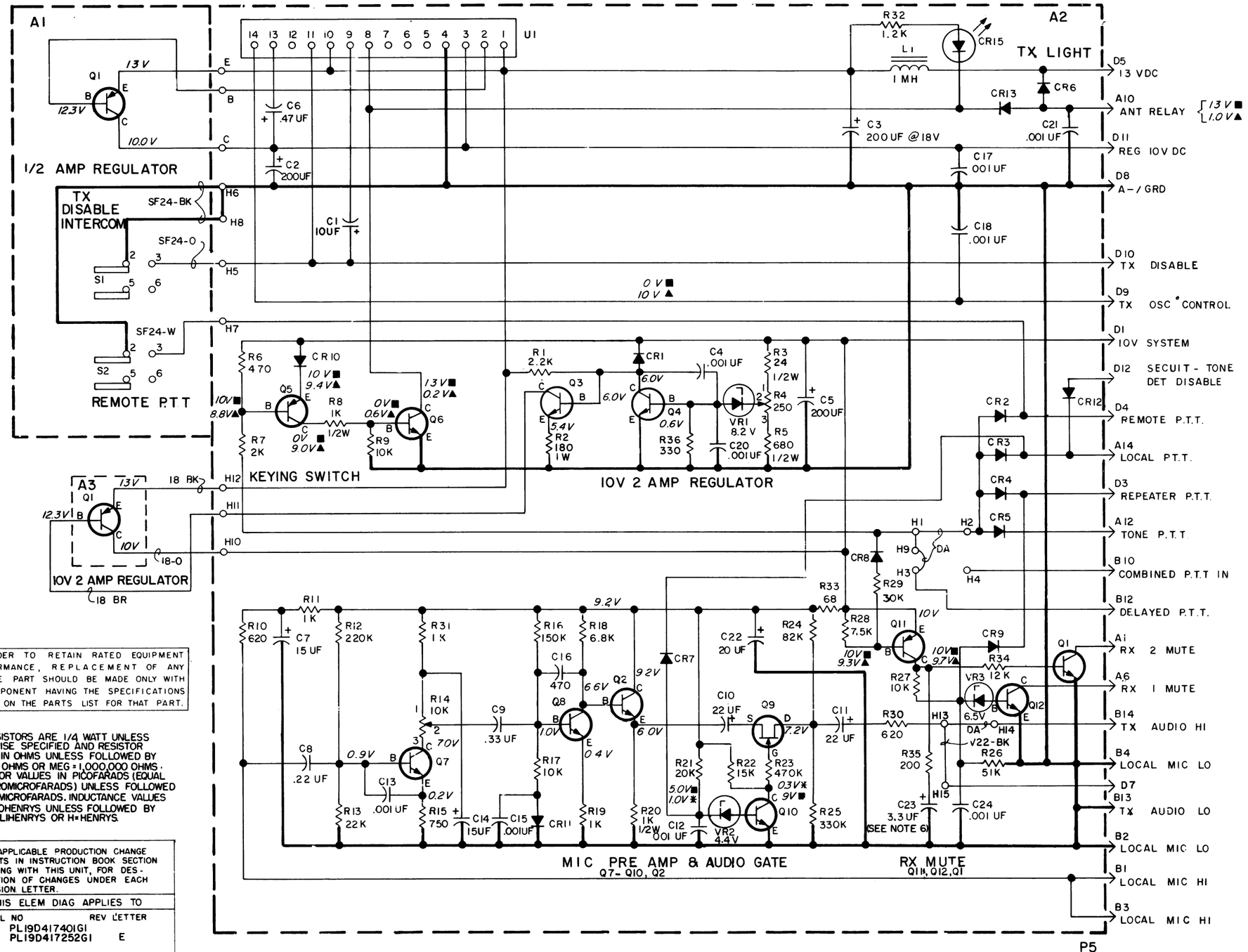
PARTS LIST

LBI-4801A

MASTR II STATION RADIO PANEL
FRONT DOOR ASSEMBLY
19D417262G1

SYMBOL	GE PART NO.	DESCRIPTION
		DOOR ASSEMBLY 19D417262G1
A901		COMPONENT BOARD 19D417213G1
		- - - - - - - - - CAPACITORS - - - - - - - - -
C1	19A116080P7	Polyester: 0.1 µf ±20%, 50 VDCW.
C2	19A115680P24	Electrolytic: 400 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C3	19A116080P106	Polyester: 0.068 µf ±10%, 50 VDCW.
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J903		Connector. Includes:
	19A116659P1	Connector: 3 contacts; sim to Molex 09-52-32. (Quantity 1).
	19A116659P4	Connector: 6 contacts; sim to Molex 09-52-3062. (Quantity 2).
J904		Connector. Includes:
	19A116659P1	Connector: 3 contacts; sim to Molex 09-52-3032. (Quantity 1).
	19A116659P4	Connector: 6 contacts; sim to Molex 09-52-3062. (Quantity 3).
J905	19B219374G2	Connector: 9 contacts.
J936	4033513P4	Contact, electrical: sim to Bead Chain L93-3.
J951		Connector. Includes:
	19A116659P13	Connector: 4 contacts; sim to Molex 09-56-1041. (Quantity 5).
J952		Connector. Includes:
	19A116659P11	Connector: 7 contacts; sim to Molex 09-56-1071. (Quantity 2).
	19A116659P12	Connector: 6 contacts; sim to Molex 09-56-1061. (Quantity 1).
		- - - - - - - - - - PLUGS - - - - - - - - - -
P907	19A116779P1	Contact, electrical: sim to Molex 08-54-0404. (Quantity 6).
P908	19A116779P1	Contact, electrical: sim to Molex 08-54-0404. (Quantity 9).
P909	19A116779P1	Contact, electrical: sim to Molex 08-54-0404. (Quantity 8).
P934	19A116779P1	Contact, electrical: sim to Molex 08-54-0404. (Quantity 8).
P935	19A116779P1	Contact, electrical: sim to Molex 08-54-0404. (Quantity 7).
		- - - - - - - - - - RESISTORS - - - - - - - - -
R1 and R2	19C314256P22803	Metal film: 280,000 ohms ±1%, 1/4 w.
R3	19B209358P106	Variable, carbon film: approx 75 to 10,000 ohms ±10%, 0.25 w; sim to CTS Type X-201.
R4	3R152P222J	Compositon: 2200 ohms ±5%, 1/4 w.
R5	3R152P332J	Composition: 3300 ohms ±5%, 1/4 w.
R6	7147161P15	Composition: 3.3 ohms ±5%, 1/2 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W901	5491689P105	Cable, RF: approx 12 inches long, 350 VRMS, 500 VDC operating voltage. Includes J937, P301.
W902	5491689P104	Cable, RF: approx 3-5/8 inches long, 350 VRMS, 500 VDC operating voltage. Includes J938, P101.
W903		CABLE ASSEMBLY 19D417262G2
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J931 and J932	19C303426G1	Connector: 20 pin contacts.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P951 and P952		Connector. Includes:
	19A116659P25	Shell.
	19A116781P5	Contact, electrical: wire No. 16-20 AWG; sim to Molex 08-50-0106.
	19A116781P6	Contact, electrical: wire No. 22-26 AWG; sim to Molex 08-50-0108.
		- - - - - - - - - - RESISTORS - - - - - - - - -
R901	5496870P31	Variable, carbon film: 10,000 ohms ±20%; sim to Mallory LC(10K).
W904		EXCITER CABLE 19D417262G3
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J933	19C303426G1	Connector: 20 pin contacts.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P901		Connector. Includes:
	19A116659P25	Shell.
	19A116781P5	Contact, electrical: wire No. 16-20 AWG; sim to Molex 08-50-0106.
	19A116781P6	Contact, electrical: wire No. 22-26 AWG; sim to Molex 08-50-0108.
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	19C320679G1	Door.
	19B218178P1	Pawl. (Part of door latch).
	19C318151P1	Knob. (Part of door latch).
	N193P1208C6	Tap screw: No. 6 x 1/2. (Part of door latch).
	5493361P8	Washer, spring tension. (Part of door latch).
	19A121676P1	Guide pin. (Used with J931-J933).
	19B209519P1	Polarizing tab. (Used with P901, P951, P952).
	7115130P9	Lockwasher: sim to Shakeproof 1220-2. (Used with R901 mounting).
	7165075P2	Hex nut, brass: No. 3/8-32. (Used with R901 mounting).
	19A115874P1	Catch, friction. (Latches A901).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.



NOTES:

1. FOR CARRIER SQUELCH (NON-CHANNEL GUARD) STATIONS, JUMPER H1-H2 & H3-H9 ARE PRESENT.
2. FOR CHANNEL GUARD LOCAL, REMOTE OR LOCAL/REMOTE STATIONS JUMPER H9-H3 & H2-H4 ARE PRESENT.
3. FOR CHANNEL GUARD REPEATERS USING DECODE ONLY (NO ENCODE), JUMPER H1-H2 IS PRESENT.
   FOR CHANNEL GUARD REPEATERS USING BOTH ENCODE AND DECODE, JUMPER H2-H4 AND H3-H9 ARE PRESENT.
4. FOR DUPLEX OPERATION OTHER THAN REPEATERS, Q12 IS NOT PRESENT.
5. WHEN SECOND RECEIVER MUTE ON TRANSMIT IS NOT DESIRED, CUT OUT Q1.
6. IN REPEAT, REMOTE/REPEAT AND LOCAL/REPEAT STATIONS, C23 IS NOT PRESENT.
7. WHEN OPTIONS 9555, 9556, AND 9589 (BACK TO BACK REPEATERS) ARE APPLIED, JUMPER FROM H13 TO H14 IS REMOVED AND A JUMPER FROM H13 TO H15 IS ADDED.

VOLTAGE READINGS

ALL READINGS MADE WITH 20,000 OHMS-PER-VOLT METER. ALL READINGS TYPICAL.

▲ TRANSMITTER KEYED

■ TRANSMITTER UNKEYED

✕ LPTT KEYED

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.

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.

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
PLI9D417401G1	
PLI9D417252G1	E

(19D417270, Rev. 7)

SCHEMATIC DIAGRAM

10 VOLT REG/CONT BOARD
19D417401G1

PARTS LIST

LBI-4802E

10-VOLT REGULATOR/CONTROL
19D417401G1

SYMBOL	GE PART NO.	DESCRIPTION
A1		PANEL 19C320809G1
		- - - - - - - - - TRANSISTORS - - - - - - - - -
Q1	19A116375P1	Silicon, PNP.
		- - - - - - - - - - SWITCHES - - - - - - - - -
S1 and S2	19B209261P11	Slide: 4PDT, 4 poles, 2 positions, .5 amp VDC or 3 amps VAC at 125 v; ; sim to Switchcraft XW-1712A.
A2		REGULATOR BOARD 19D417252G1
		- - - - - - - - - CAPACITORS - - - - - - - - -
C1	19B200240P10	Tantalum: 10 µf ±5%, 15 VDCW.
C2 and C3	19A115680P10	Electrolytic: 200 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C4	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C5	19A115680P10	Electrolytic: 200 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX.
C6	5496267P28	Tantalum: 0.47 µf ±20%, 35 VDCW; sim to Sprague Type 150D.
C7	5496267P14	Tantalum: 15 µf ±20%, 20 VDCW; sim to Sprague Type 150D.
C8	19A116080P9	Polyester: 0.22 µf ±20%, 50 VDCW.
C9	19A116080P10	Polyester: 0.33 µf ±20%, 50 VDCW.
C10	19B209233P1	Electrolytic, non-polarized: 25 µf ±20%, 25 VDCW; sim to Sprague 41D.
C11	5496267P10	Tantalum: 22 µf ±20%, 15 VDCW; sim to Sprague Type 150D.
C12 and C13	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C14	5496267P14	Tantalum: 15 µf ±20%, 20 VDCW; sim to Sprague Type 150D.
C15	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C16	5494481P107	Ceramic disc: 470 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C17 and C18	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C19*	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap. Deleted by REV D.
C20 and C21	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
C22	19A115680P3	Electrolytic: 20 µf +150% -10%, 25 VDCW; sim to Mallory Type TTX.
C23	5496267P209	Tantalum: 3.3 µf ±10%, 15 VDCW; sim to Sprague Type 150D.
C24	5494481P111	Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
		- - - - - - - DIODES AND RECTIFIERS - - - - - -
CR1	4037822P1	Silicon.
CR2 thru CR5	19A115250P1	Silicon.
CR6	4037822P1	Silicon.
CR7 thru CR12	19A115250P1	Silicon.
CR13	4037822P1	Silicon.
CR15	19A134146P4	Diode, optoelectronic: red; sim to Opcoa LSM-6L.
		- - - - - - - - - - INDUCTORS - - - - - - - - -
L1	19A115894P1	Audio freq: 1.0 mh ind., 0.35 ohms DC res.
		- - - - - - - - - - PLUGS - - - - - - - - -
P5		(Part of printed board 19D417241P1).
		- - - - - - - - - TRANSISTORS - - - - - - - - -
Q1 and Q2	19A115889P1	Silicon, NPN.
Q3	19A115300P2	Silicon, NPN; sim to Type 2N3053.
Q4	19A115889P1	Silicon, NPN.
Q5	19A115768P1	Silicon, PNP; sim to Type 2N3702.
Q6	19A115300P2	Silicon, NPN; sim to Type 2N3053.
Q7 and Q8	19A116774P1	Silicon, NPN; sim to Type 2N5210.
Q9	19A134137P1	N Type, field effect; sim to Type 2N3458.
Q10	19A115889P1	Silicon, NPN.
Q11	19A115768P1	Silicon, PNP; sim to Type 2N3702.
Q12	19A115889P1	Silicon, NPN.
		- - - - - - - - - RESISTORS - - - - - - - - -
R1	3R152P222J	Composition: 2.2K ohms ±5%, 1/4 w.
R2*	3R78P181J	Composition: 180 ohms ±5%, 1 w.
		In REV A and earlier:
	3R77P301J	Composition: 300 ohms ±5%, 1/2 w.
R3*	3R77P240J	Composition: 24 ohms ±5%, 1/2 w.
		Earlier than REV A:
	3R77P101K	Composition: 100 ohms ±10%, 1/2 w.
R4	19B209358P101	Variable, carbon film: approx 25 to 250 ohms ±10%, 0.2 w; sim to CTS Type X-201.
R5	3R77P681K	Composition: 680 ohms ±10%, 1/2 w.
R6	3R152P471J	Composition: 470 ohms ±5%, 1/4 w.
R7	3R152P202J	Composition: 2K ohms ±5%, 1/4 w.
R8	3R77P102K	Composition: 1K ohms ±10%, 1/2 w.
R9	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R10	3R152P621J	Composition: 620 ohms ±5%, 1/4 w.
R11	3R152P102J	Composition: 1K ohms ±5%, 1/4 w.
R12	3R152P224J	Composition: 220K ohms ±5%, 1/4 w.
R13	3R152P223J	Composition: 22K ohms ±5%, 1/4 w.
R14	19B209358P106	Variable, carbon film: approx 300 to 10K ohms ±10%, 0.25 w; sim to CTS Type X-201.
R15	3R152P751J	Composition: 750 ohms ±5%, 1/4 w.
R16	3R152P154J	Composition: 150K ohms ±5%, 1/4 w.
R17	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R18	3R152P682J	Composition: 6.8K ohms ±5%, 1/4 w.
R19	3R152P102K	Composition: 1K ohms ±10%, 1/4 w.
R20	3R77P102K	Composition: 1K ohms ±10%, 1/2 w.
R21	3R152P203J	Composition: 20K ohms ±5%, 1/4 w.
R22	3R152P153J	Composition: 15K ohms ±5%, 1/4 w.
R23	3R152P474J	Composition: 470K ohms ±5%, 1/4 w.
R24	3R152P823J	Composition: 82K ohms ±5%, 1/4 w.
R25	3R152P334J	Composition: 330K ohms ±5%, 1/4 w.
R26	3R152P513J	Composition: 51K ohms ±5%, 1/4 w.
R27	3R152P103J	Composition: 10K ohms ±5%, 1/4 w.
R28	3R152P752J	Composition: 7.5K ohms ±5%, 1/4 w.
R29	3R152P303J	Composition: 30K ohms ±5%, 1/4 w.
R30	3R152P621J	Composition: 620 ohms ±5%, 1/4 w.
R31	3R152P102J	Composition: 1K ohms ±5%, 1/4 w.
R32	3R152P122J	Composition: 1.2K ohms ±5%, 1/4 w.
R33	3R152P680J	Composition: 68 ohms ±5%, 1/4 w.
R34	3R152P123J	Composition: 12K ohms ±5%, 1/4 w.
R35	3R152P201J	Composition: 200 ohms ±5%, 1/4 w.
R36*	3R152P331J	Composition: 330 ohms ±5%, 1/4 w. Added by REV A.
		- - - - - - - INTEGRATED CIRCUITS - - - - - -
U1*	19D416564G4	10-Volt Regulator.
		In REV D and earlier:
	19D416564G3	10-Volt Regulator.
		- - - - - - - - VOLTAGE REGULATORS - - - - - - -
VR1	4036887P40	Silicon, Zener.
VR2	4036887P4	Silicon, Zener.
VR3	4036887P6	Silicon, Zener.
A3		HEAT SINK ASSEMBLY 19B226114G2
		- - - - - - - - - TRANSISTORS - - - - - - - - -
Q1	19A116758P1	Silicon, PNP; sim to Type 2N4399.
		- - - - - - - - - MISCELLANEOUS - - - - - - - -
	19B219690G1	Handle assembly.
	19A116023P1	Insulator, plate. (Used with Q1 on A1).
	19A134016P1	Insulator, bushing. (Used with Q1 on A1).
	4036555P1	Insulator, washer: nylon. (Used with Q3 and Q6 on A2).
	7118719P10	Clip, spring tension: sim to Prestole E-50019-003. (Used with L1 on A2).
	4029974P1	Insulator, plate. (Used with Q1 on A3).
	19A121882P1	Washer, shield. (Used with Q1 on A3).
	4036994P1	Terminal, solderless. (Used with Q1 on A3).
	19B226013P1	Heat sink. (Used with Q1 on A3).
	19A121175P11	Insulator. (Used with C10 on A2).

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 - Regulator Board 19D417252G1

To correct noisy Regulator.
Changed R3 and added R36.

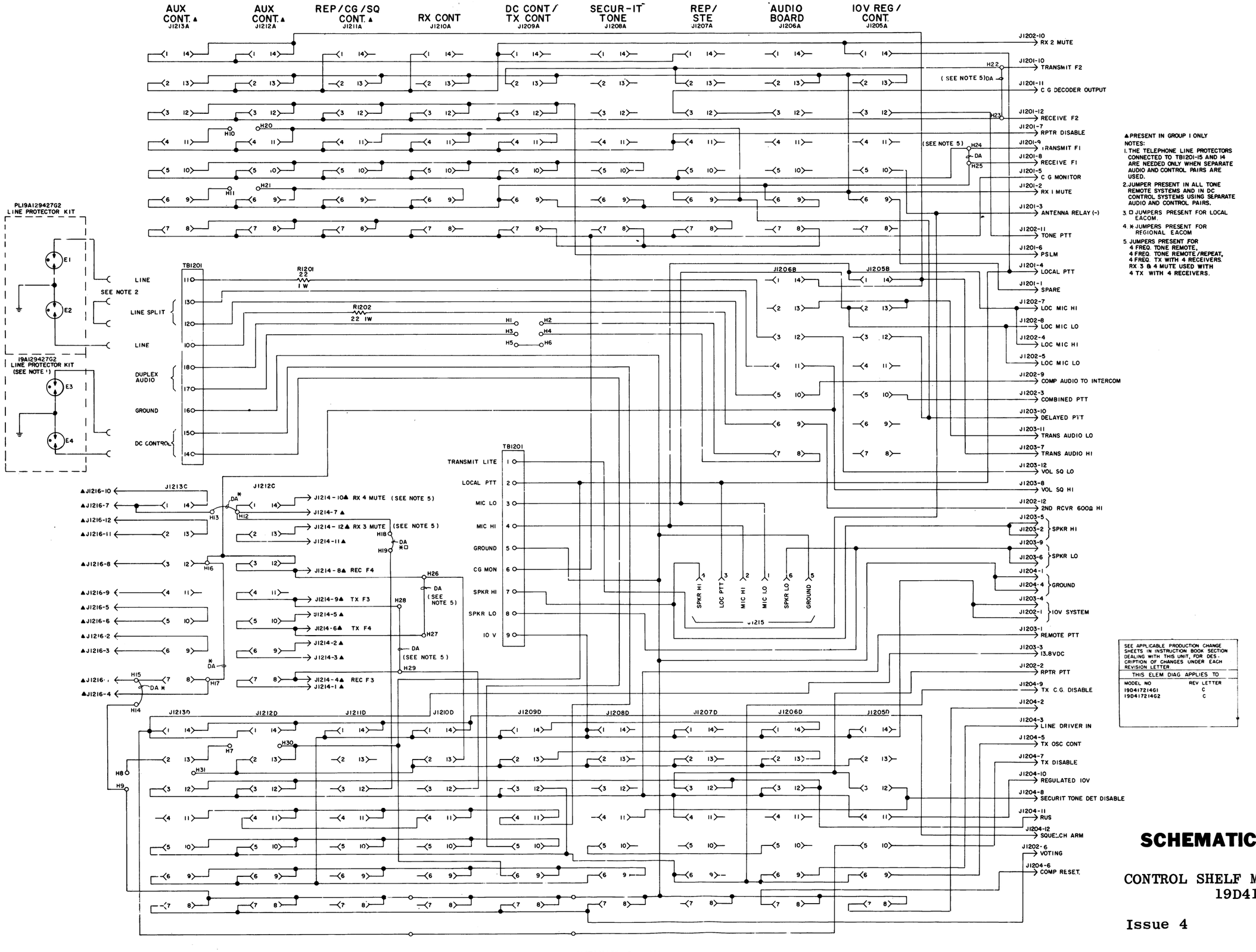
REV. B - To optimize the regulator bias.
Changed R2.

REV. C - To prevent local Mic audio from going to the wrong transmitter in back-to-back repeaters.
Added a jumper between H13 and H14 and a black wire between H13 and H15.

REV. D - To eliminate 150 MHz oscillation in Regulator.
Deleted C19.

REV. E - To prevent regulator from sending transmit pulse during switch-off delay period.
Changed V1.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.



▲PRESENT IN GROUP I ONLY

NOTES:

1. THE TELEPHONE LINE PROTECTORS CONNECTED TO TB1201-15 AND 14 ARE NEEDED ONLY WHEN SEPARATE AUDIO AND CONTROL PAIRS ARE USED.
2. JUMPER PRESENT IN ALL TONE REMOTE SYSTEMS AND IN DC CONTROL SYSTEMS USING SEPARATE AUDIO AND CONTROL PAIRS.
3. □ JUMPERS PRESENT FOR LOCAL EACOM.
4. ✱ JUMPERS PRESENT FOR REGIONAL EACOM
5. JUMPERS PRESENT FOR 4 FREQ. TONE REMOTE, 4 FREQ. TONE REMOTE/REPEAT, 4 FREQ. TX WITH 4 RECEIVERS. RX 3 & 4 MUTE USED WITH 4 TX WITH 4 RECEIVERS.

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
19D417214G1	C
19D417214G2	C

SCHEMATIC DIAGRAM

CONTROL SHELF MOTHER BOARD
19D417214G1 & G2

(19E501157, Rev. 11)

PARTS LIST

LBI-4811A

CONTROL SHELF MOTHER BOARD
19D417214G1, G2

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1201	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1202	19A116647P6	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5927.
J1203	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1204	19A116647P6	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5927.
J1205A	19A116446P5	Connector, printed wiring: 14 contacts.
J1205B	19A116446P5	Connector, printed wiring: 14 contacts.
J1205D	19A116446P5	Connector, printed wiring: 14 contacts.
J1206A	19A116446P5	Connector, printed wiring: 14 contacts.
J1206B	19A116446P5	Connector, printed wiring: 14 contacts.
J1206D	19A116446P5	Connector, printed wiring: 14 contacts.
J1207A	19A116446P5	Connector, printed wiring: 14 contacts.
J1207D	19A116446P5	Connector, printed wiring: 14 contacts.
J1208A	19A116446P5	Connector, printed wiring: 14 contacts.
J1208D	19A116446P5	Connector, printed wiring: 14 contacts.
J1209A	19A116446P5	Connector, printed wiring: 14 contacts.
J1209D	19A116446P5	Connector, printed wiring: 14 contacts.
J1210A	19A116446P5	Connector, printed wiring: 14 contacts.
J1210D	19A116446P5	Connector, printed wiring: 14 contacts.
J1211A	19A116446P5	Connector, printed wiring: 14 contacts.
J1211D	19A116446P5	Connector, printed wiring: 14 contacts.
J1212A	19A116446P5	Connector, printed wiring: 14 contacts.
J1212C	19A116446P5	Connector, printed wiring: 14 contacts.
J1212D	19A116446P5	Connector, printed wiring: 14 contacts.
J1213A	19A116446P5	Connector, printed wiring: 14 contacts.
J1213C	19A116446P5	Connector, printed wiring: 14 contacts.
J1213D	19A116446P5	Connector, printed wiring: 14 contacts.
J1214	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1215	19B219627G1	Connector: 6 contacts.
J1216	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
		- - - - - - - - - - RESISTORS - - - - - - - - -
R1201* and R1202*	3R78P220J	Composition: 22 ohms ±5%, 1 w. Added by REV A.
		- - - - - - - - TERMINAL BOARDS - - - - - - - -
TB1201	19A116667P3	Plate nut. (Quantity 18).
		- - - - - - - - - MISCELLANEOUS - - - - - - - -
	19A129525G3	Cable: approx 3 inches long.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

PRODUCTION CHANGES

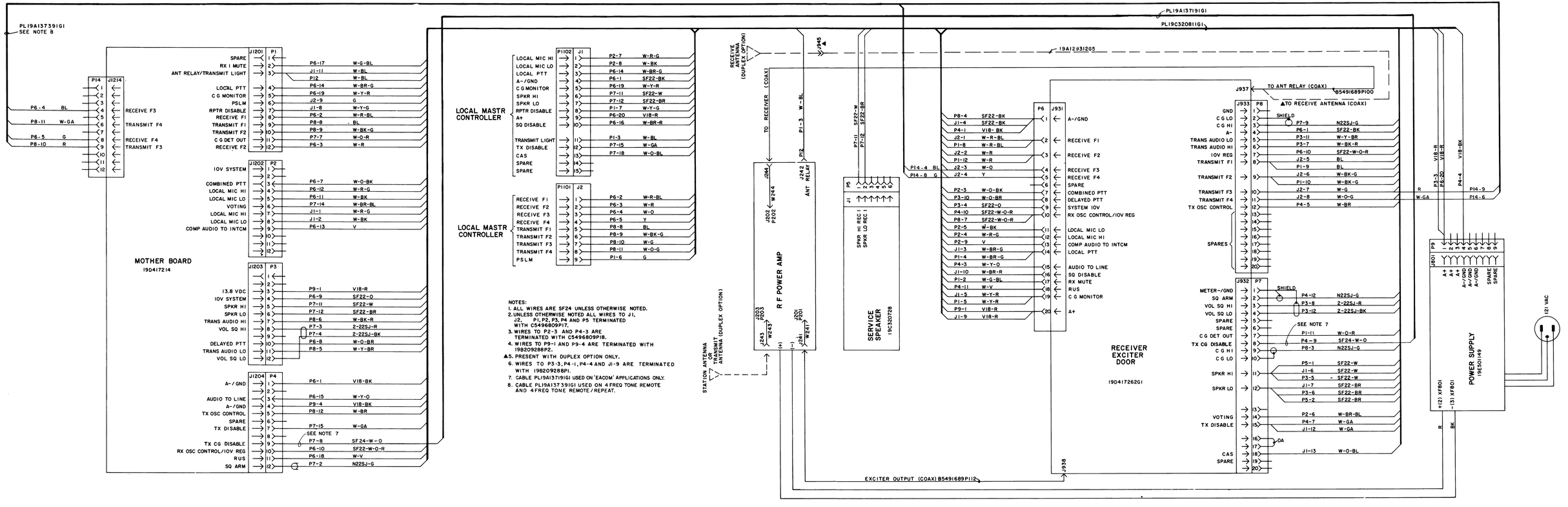
Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter", which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for descriptions of parts affected by these revisions.

Control Shelf Mother Board 19D417214G1 & G2

Rev. A - To incorporate line surge protection and change polarity of DC control leads. Added R1201 and R1202. Changed connections from TB1201-15 - J1209D-5 to TB1201-15 - J1209D-4 and from TB1201-14 - J1209D-4 to TB1201-14 - J1209-5.

Rev. B - Changed printed board to provide outputs for EACOM Systems.

Rev. C - Changed printed board to accomodate 4-frequency tone system.



(198622032, Rev. B)

INTERCONNECTION DIAGRAM

CONTINUOUS DUTY STATION HARNESS
WITHOUT METERING 19C320811G1

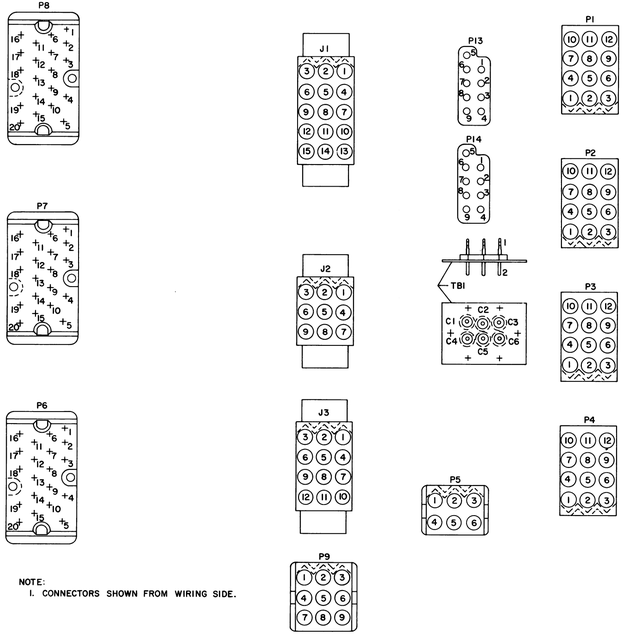
PARTS LIST

LBI-4796

MASTR II CONTINUOUS DUTY
STATION HARNESS
19C320811G1

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - JACKS AND RECEPTACLES - - - - - -
J1		Connector. Includes:
	19B209288P5	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 13).
J2		Connector. Includes:
	19B209288P3	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
		- - - - - - - - - - - - PLUGS - - - - - - - - - -
P1		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 11).
P2		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 6).
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
P3		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
P4		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 7).
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
P5		Connector. Includes:
	19B209288P23	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 2).
P6 thru P8	19C303506P1	Connector, phen: 20 contacts.
P9		Connector. Includes:
	19B209288P4	Shell.
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	19B209288P2	Contact, electrical: male; sim to Molex 1190-T. (Quantity 1).
P12	19A115793P1	Contact, electrical: sim to Malco 2700.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

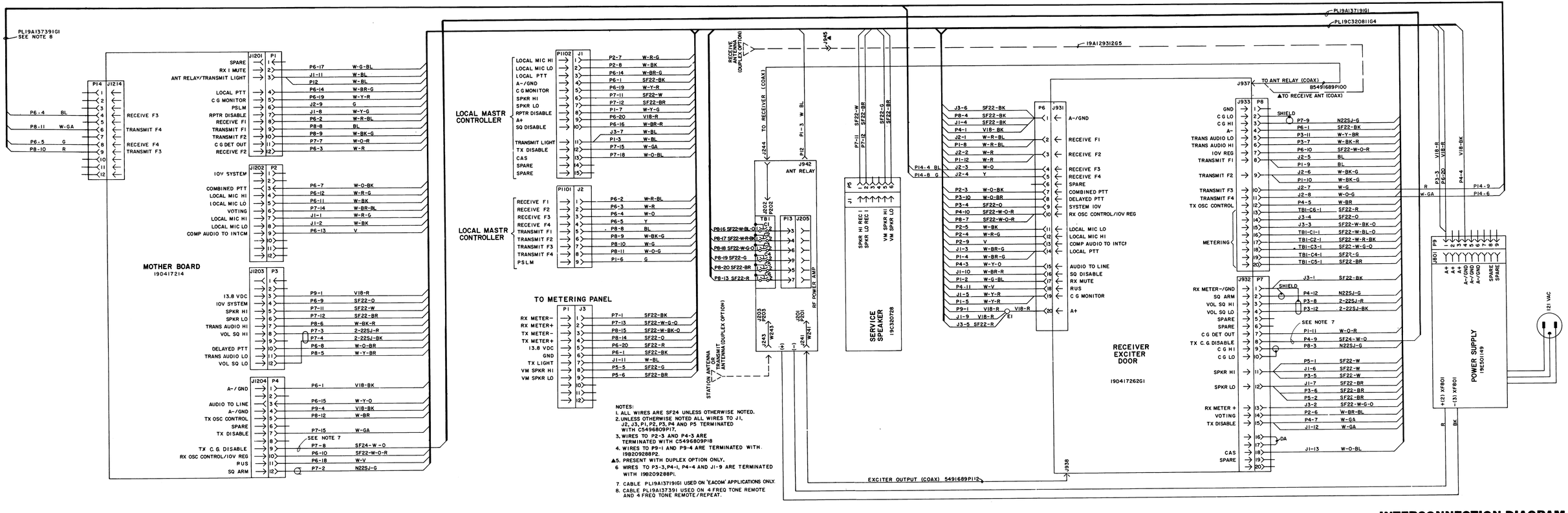


NOTE:
1. CONNECTORS SHOWN FROM WIRING SIDE.

(19C328112, Rev. 0)

OUTLINE DIAGRAM

HARNESS 19C320811



NOTES:
1. ALL WIRES ARE SF24 UNLESS OTHERWISE NOTED.
2. UNLESS OTHERWISE NOTED ALL WIRES TO J1, J2, J3, P1, P2, P3, P4 AND P5 TERMINATED WITH C5496809P17.
3. WIRES TO P2-3 AND P4-3 ARE TERMINATED WITH C5496809P18
4. WIRES TO P9-1 AND P9-4 ARE TERMINATED WITH I98209288P2.

▲5. PRESENT WITH DUPLEX OPTION ONLY.

6. WIRES TO P3-3, P4-1, P4-4 AND J1-9 ARE TERMINATED WITH I98209288P1.

7. CABLE PL19A137191G1 USED ON 'EACOM' APPLICATIONS ONLY.

8. CABLE PL19A137391 USED ON 4 FREQ TONE REMOTE AND 4 FREQ TONE REMOTE/REPEAT.

INTERCONNECTION DIAGRAM

CONTINUOUS DUTY STATION HARNESS
WITH METERING 19C320811G4

Issue 4

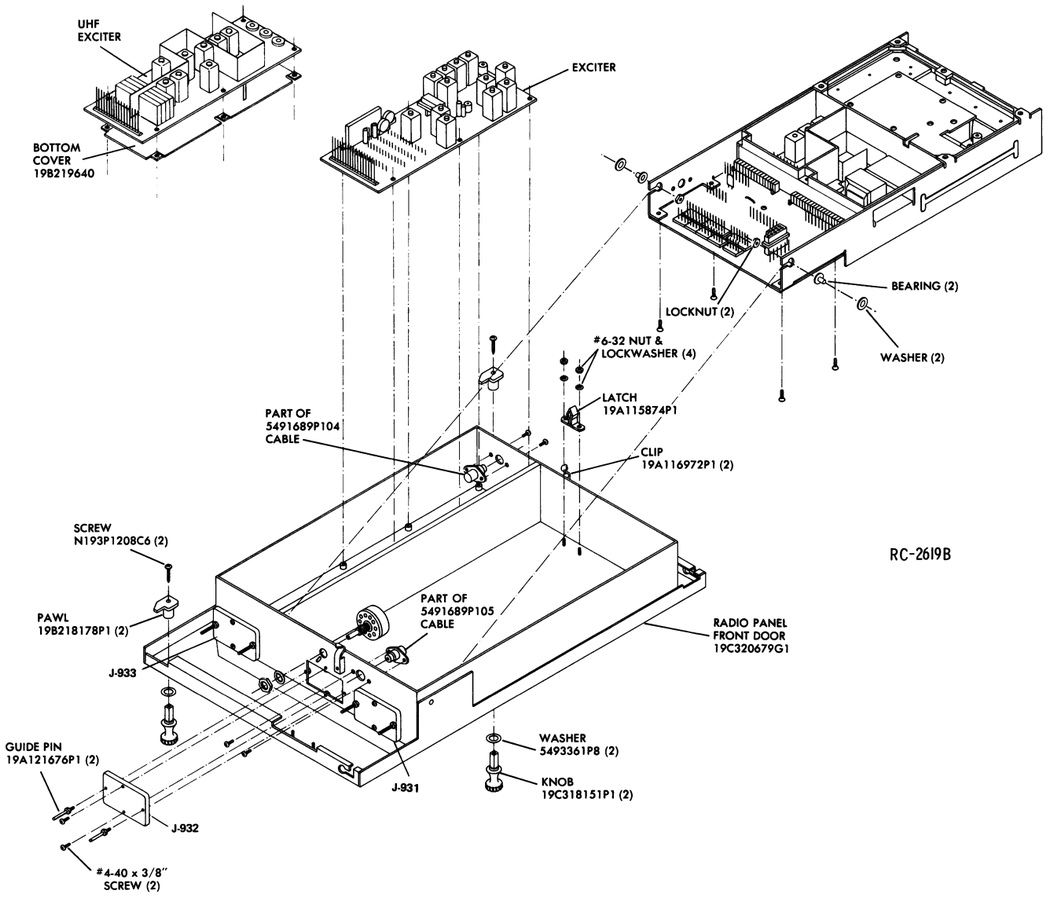
PARTS LIST

LBI-4799

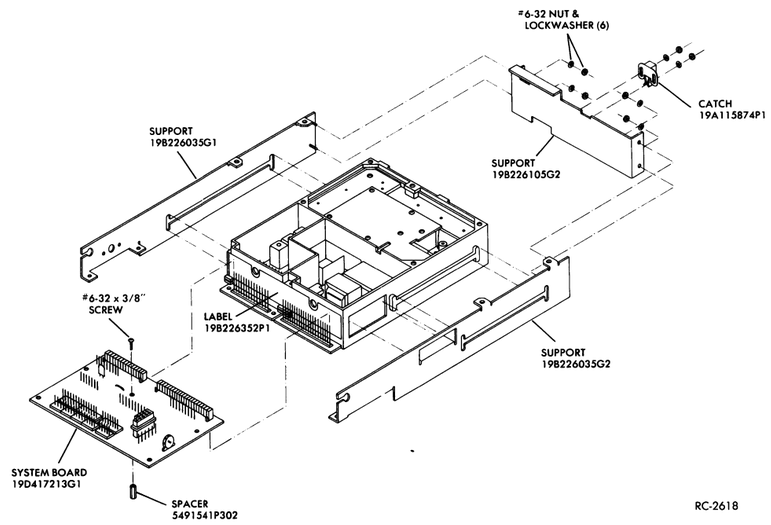
MASTR II CONTINUOUS DUTY
STATION HARNESS WITH METERING
19C320811G4

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - JACKS AND RECEPTACLES - - - - - -
J1		Connector. Includes:
	19B209288P5	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 13).
J2		Connector. Includes:
	19B209288P3	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
J3		Connector. Includes:
	19B209288P25	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 11).
P2		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 6).
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
P3		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
P4		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 7).
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
P5		Connector. Includes:
	19B209288P23	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 4).
P6 thru P8	19C303506P1	Connector, phen: 20 contacts.
P9		Connector. Includes:
	19B209288P4	Shell.
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	19B209288P2	Contact, electrical: male; sim to Molex 1190-T. (Quantity 1).
P12	19A115793P1	Contact, electrical: sim to Malco 2700.
P13	19B219534P1	Plug: 9 pins.
		- - - - - - - - TERMINAL BOARDS - - - - - - - -
TB1	19A130051G1	Plate.

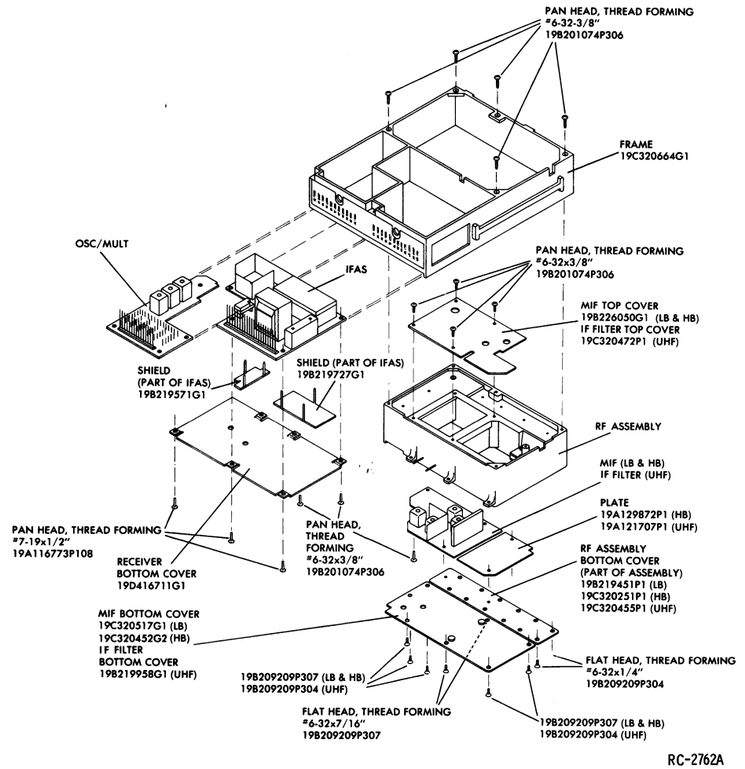
*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



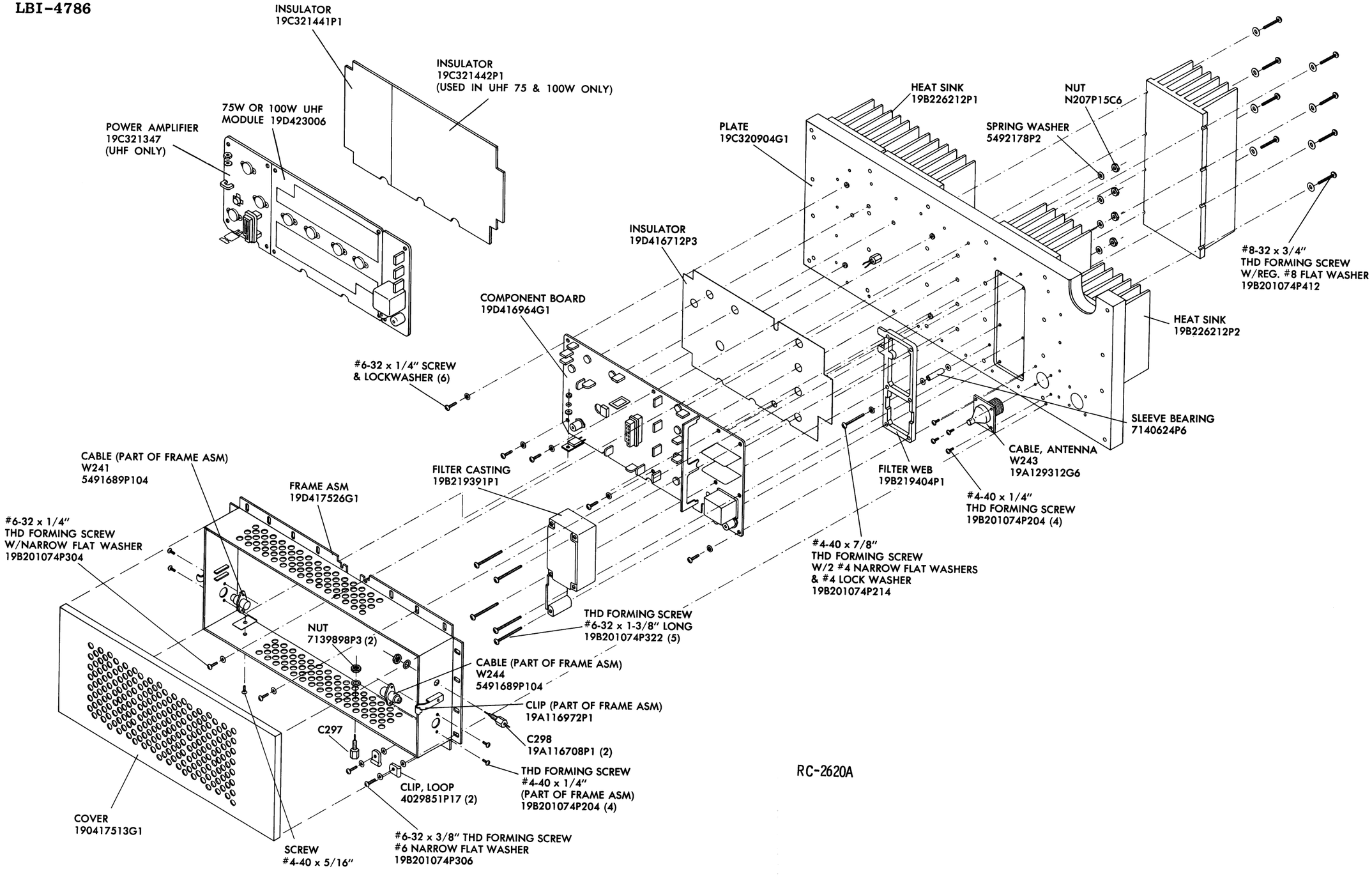
RC-2619B



RC-2618



RC-2762A



RC-2620A

MECHANICAL PARTS BREAKDOWN

TRANSMITTER POWER AMPLIFIER

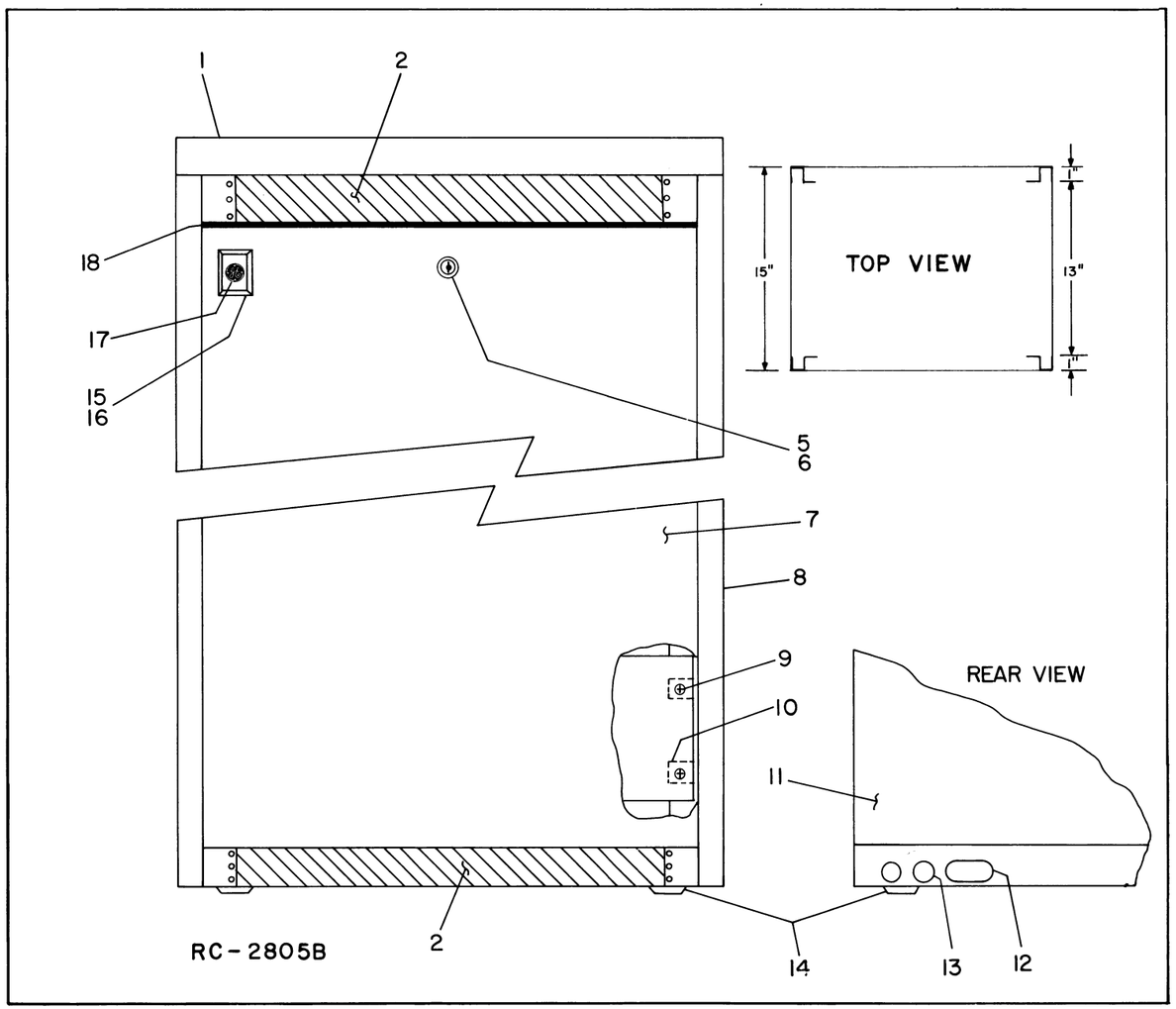
PARTS LIST

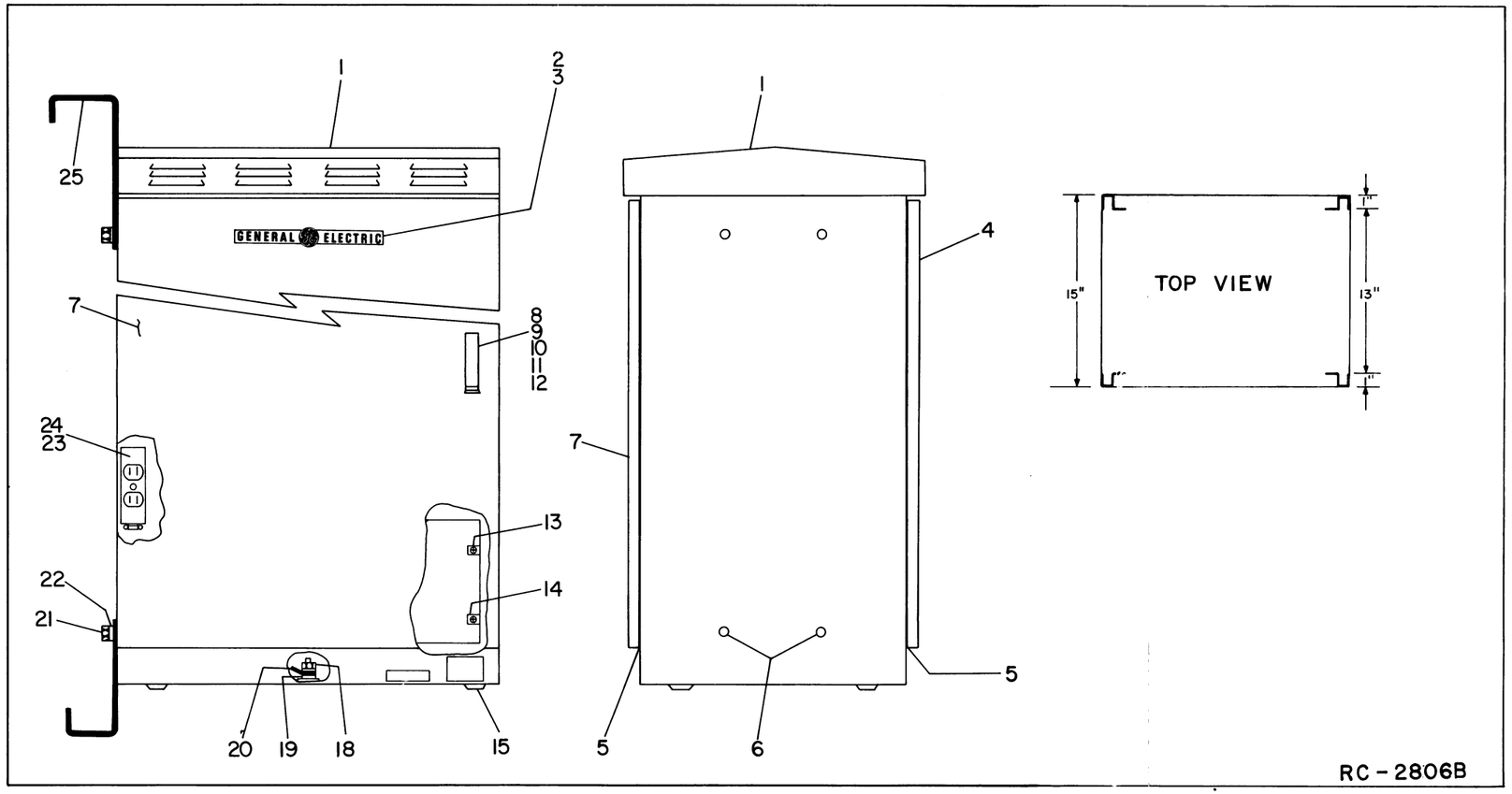
LBI-4975C

DESK MATE STATION CABINET
CONTINUOUS AND INTERMITTANT DUTY
(SEE RC-2805)

SYMBOL	GE PART NO.	DESCRIPTION
		30 INCH CABINET
1	19C320655P1	Top.
2	19C320654P1	Screen.
3		(Not Used).
4		(Not Used).
5	5491682P23	Lock. Yale and Towne F6557DX1.
6	5491682P4	Key. Yale and Towne BF-10A.
7	19C320744G7	Front door.
8	19D417231G3	Cabinet. (LESS DOORS). (Includes items 1 and 2).
9	19A134011P1	Tap screw: No. 10-16 x 3/4. (Quantity 52).
10	7160861P32	Nut, sheet spring; sim to Tinnerman C1794-10Z-24. (Quantity 52).
11	19C320744G8	Rear door.
12	19A134032P1	Protective plug. (Quantity 1).
13	19A134014P6	Bushing, strain relief: sim to Heyco UB-1093.
14	19A134015P1	Protective plug: sim to Caplug BPF-1/2. (Quantity 4).
15	19C311298P1	Frame. (Used with monogram).
16	4031053P7	Nut, sheet spring; sim to Tinnerman C12046-012-67. (Quantity 1).
17	NP257660	Nameplate.
18	NP276429	Nameplate. (GENERAL ELECTRIC).
		44 INCH CABINET
1	19C320655P1	Top.
2	19C320654P1	Screen.
3		(Not Used).
4		(Not Used).
5	5491682P23	Lock. Yale and Towne F6557DX1.
6	5491682P4	Key. Yale and Towne BF-10A.
7	19C320744G9	Front door.
8	19D417231G4	Cabinet. (LESS DOORS). (Includes items 1 and 2).
9	19A134011P1	Tap screw: No. 10-16 x 3/4. (Quantity 52).
10	7160861P33	Nut, sheet spring; sim to Tinnerman C19640-10AB-3B. (Quantity 52).
11	19C320744G10	Rear door.
12	19A134032P1	Protective plug. (Quantity 1).
13	19A134014P6	Bushing, strain relief: sim to Heyco UB-1093.
14	19A134015P1	Protective plug: sim to Caplug BPF-1/2. (Quantity 4).
15	19C311298P1	Frame. (Used with monogram).
16	4031053P7	Nut, sheet spring; sim to Tinnerman C12046-012-67. (Quantity 1).
17	NP257660	Nameplate.
18	NP276429	Nameplate. (GENERAL ELECTRIC).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES





PARTS LIST

LBI-4976C

POLE MOUNT STATION CABINET
CONTINUOUS AND INTERMITTANT DUTY
19D417550G1
(SEE RC-2806)

SYMBOL	GE PART NO.	DESCRIPTION
1	19D417550G1	Cabinet.
2	19B209531P1	Nameplate. (GENERAL ELECTRIC).
3	4031310P7	Nut, push on: sim to Tinnerman C610-012-24.
4	19D417543G2	Door, left hand.
5	19A134128P1	Door seal. (Front and rear).
6	19A134059P1	Protective plug.
7	19D417543G1	Door, right hand.
8	19A134049P1	Door handle.
9	19A130554P1	Strike catch.
10	N84P15008C6	Machine screw: No. 8-32 x 1/2.
11	N403P16C6	Lockwasher, external tooth: No. 8.
12	N210P15C6	Hex nut: No. 8-32.
13	19A134011P1	Tap screw: No. 10-16 x 3/4. (Quantity 52).
14	7160861P33	Nut, sheet spring; sim to Tinnerman C19640-10AB-3B. (Quantity 52).
15	19A134015P2	Protective plug.
16		(Not Used).
17		(Not Used).
18	N210P21C6	Hex nut: No. 1/4-20.
19	N403P25C6	Lockwasher, external tooth: 1/4 inch.
20	19A115141P2	Solderless terminal: sim to ILSCO SLU70.
21	N22P25016C6	Cap screw: No. 3/8-16 x 1.
22	N405P43C6	Lockwasher, spring type: 3/8 inch.
23	19B226350G1	Outlet strip.
24	19B209103P506	Tap screw: No. 10-32 x 3/8. (Secures outlet strip).
25	19C320942P1	Mounting bracket.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

PARTS LIST

LBI-4977B

FLOOR MOUNT STATION CABINET
CONTINUOUS AND INTERMITTANT DUTY
19D417358G1
(SEE RC-2804)

SYMBOL	GE PART NO.	DESCRIPTION
1	19D417623G1	Grille.
2	19B226318P1	Grille plate. (Located under grille).
3	19B219744G2	Strain relief.
4	N80P15008C6	Machine screw: No. 8-32 x 1/2.
5	N210P15C6	Hexnut: No. 8-32.
6	N403P16C6	Lockwasher, external tooth: No. 8.
7	19A126220P1	Gasket, door.
8	19B209539P2	Lock, rear door: sim to Chicago Lock Co. 1703-6T.
9	19B209539P3	Key. Sim to Chicago Lock Co. 1000 GE.
10	19C320756G2	Door, rear. 64 inch.
11	19C320756G1	Door, front. 59 inch.
12	19A134011P1	Tap screw: No. 10-16 x 3/4. (Quantity 52).
13	7160861P33	Nut, sheet spring; sim to Tinnerman C19640-10AB-3B. (Quantity 16).
14	19B226160P2	Support.
15	N80P16008C6	Machine screw: No. 10-32 x 1/2.
16	N403P19C6	Lockwasher: No. 10.
17	19B226094P2	Support.
18	N80P21012C6	Machine screw: No. 1/4-20 x 3/4.
19	N403P25C6	Lockwasher, external tooth: 1/4 inch.
20	N402P41C6	Flatwasher: No. 1/4.
21	N80P15006C6	Machine screw: No. 8-32 x 3/8.
22	7160861P5	Nut, sheet spring; sim to Tinnerman C1505-1032-157.
23	19B226094P1	Support.
24	19A129902P1	Spring.
25	19B226088P1	Pin hinge.
26	19B226092G1	Frame.
27	19B209539P1	Lock, front. Sim to Chicago Lock Co. 4260-1.
28	N80P16007C6	Machine screw: No. 10-32 x 7/16.
29	N210P16C6	Hexnut: No. 10-32.
30	7160861P31	Nut, sheet spring; sim to Tinnerman C18610-031.
31	NP257660	Nameplate. (GE).
32	4031053P7	Nut, sheet spring; sim to Tinnerman C12046-012-67.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES