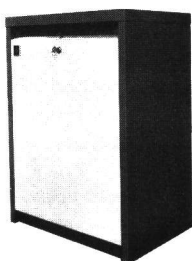


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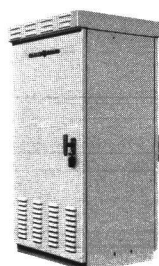
MASTR[®] II

**EACOM TONE CONTROL
STATION COMBINATIONS
MAINTENANCE MANUAL LBI30622**

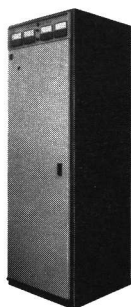
DATAFILE FOLDER – DF9046



**DESK MATE
STATION**



**POLE MOUNT
STATION**



**HIGH POWER
STATION**



**FLOOR MOUNT
STATION**

GENERAL  ELECTRIC

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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!

Hi-level RF energy in the Transmitter Power Amplifier Assembly can cause RF burns. KEEP AWAY FROM THESE CIRCUITS WHEN THE TRANSMITTER IS ENERGIZED!

SPECIFICATIONS

LB130622

EIA DIMENSION (H X W X D)

DESK MATE (30-Inch)
DESK MATE (40-Inch)

30-1/4" X 21-1/2" X 15"
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"

HIGH POWER FLOOR MOUNT

69" X 23" X 25.5"

WEIGHT

DESK MATE (30-Inch)
DESK MATE (40-Inch)
POLE MOUNT
FLOOR MOUNT
HIGH POWER

160 lbs.
180 lbs.
225 lbs.
290 lbs.
403 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
100 Watts
250 Watts
300 Watts

270 Watts
560 Watts
870 Watts
960 Watts

75 Watts
105 Watts
200 Watts
200 Watts

40 Watts
65 Watts
176 Watts
176 Watts

HIGH BAND

35 Watts
65 Watts
110 Watts
250 Watts
300 Watts

270 Watts
270 Watts
560 Watts
725 Watts
810 Watts

75 Watts
75 Watts
105 Watts
200 Watts
200 Watts

40 Watts
40 Watts
65 Watts
176 Watts
176 Watts

UHF BAND

20 Watts
40 Watts
75 Watts
100 Watts
200 Watts

270 Watts
270 Watts
270 Watts
560 Watts
1000 Watts

75 Watts
75 Watts
75 Watts
105 Watts
200 Watts

40 Watts
40 Watts
40 Watts
65 Watts
176 Watts

TEMPERATURE RANGE

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

COMBINATION NOMENCLATURE

1st Digit	2nd Digit	3rd Digit	4th Digit	5th Digit	6th Digit	7th Digit	8th & 9th Digits	10th Digit
Mechanical Package	Duty Cycle	RF Power Output	Channel Spacing	Control	Number of Freq.	Options	Frequency Range MHz	Oscillator Stability
D 30 - inch Desk Mate	1 Intermittent Duty	4 8 - 16 Watts	4 20 kHz	T Tone Remote	A 1 TX 1 RX	G CG & UHS	12 25-30 13 30-36	A 5 PPM
S 44 - inch Desk Mate	C Continuous Duty	5 18 - 38 Watts	5 25 kHz		B 2 TX 1 RX	U Channel Guard	23 36-42 33 42-50	B 2 PPM
P Pole Mount		6 38 - 66 Watts	6 30 kHz			W CG & NB	56 138-150.5 66 150.5-174	C PLL* ±5 PPM
V Floor Mount		7 66 - 128 Watts					77 406 - 420 88 450 - 470	D PLL* ±2 PPM
		8 128 - 256 Watts					99 470 - 494 91 494 - 512	
		9 256 - Up Watts						

*Phase-Lock-Loop

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
(●)VC94...	Continuous	150 to 300 W	KT-39-A	KT-39-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-46-C
(●)I76 (K, J, R or T)...	Intermittent	20 to 110 W	KT-46-A	KT-47-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
(●)VC96...	Continuous	250 to 300 W	KT-79-A	KT-79-A

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 (K, 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
(●)VC85...	Continuous	100 to 200 W	KT-88-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.

DESCRIPTION

The General Electric MASTR® II EACOM Tone Remote Control Radio Combinations are designed for the Emergency and Administrative Communication System to permit radio communication with local or regional hospital mobile units, other hospitals in the local coverage area and in the case of regional stations, with other regional hospitals in the coverage area. Both types of station operate under the control of an EACOM MASTR® Controller.

EACOM STATION OPTIONS

9626	9628	9642	9644
Local Area Station Single Freq. TX & RX 20 to 100 Watts Single Digital De- coder	Regional Area Station Two Freq. TX & RX 20 to 100 Watts Two Ditial Decoders	Local Area Station Single Freq. TX & RX 128 to 300 Watts Single Digital De- coder	Regional Area Station Two Freq. TX & RX 128 to 300 Watts Two Ditial Decoders

Local Area Stations

The Local Area Station is equipped with a single-frequency transmitter, a single-frequency receiver and a tone remote control shelf. Transmission from station to mobile and portable units takes place on the F1 channel with Channel Guard protection. Signaling between local area hospitals utilizes F1 transmission without Channel Guard protection, but with coded tone transmission that originates at the dial encoder on the remote control console.

When a signal modulated by the proper "station call" or "all call" digital code is received, the decoder produces a Channel Guard disable output which unmutes the receiver and allows the audio to be heard.

Regional Station

The Regional Station is equipped with a two-frequency transmitter, a single-frequency station receiver, a single-frequency auxiliary receiver and a tone remote control shelf containing two digital decoders. Transmission from station to local mobile and portable units takes place on the F1 channel with Channel Guard protection. Signaling between local area hospitals utilizes the F1 channel without Channel Guard protection, but with coded tone transmission that originates at the dial encoder on the remote control console.

Signaling between regional hospitals utilizes coded tone modulation on the F2 channel. When a signal modulated by the proper "station call" or "all call" digital code is received by either the station receiver or the auxiliary receiver, the associated decoder produces an output which unmutes the receiver and allows the audio to be heard.

Station Equipment

The station receiver is mounted in a shielded enclosure on the radio panel front

door, along with a system board which accommodates Channel Guard and other option boards. Jacks are provided on the system board for plug-in interface with the options and control functions. See Figure 1.

The transmitter exciter is located in a separate shielded compartment on the radio panel front door. The continuous duty transmitter power amplifier hinges from the bottom of the radio housing. The PA assembly consists of a frame mounted to a heat sink. A cover snaps over the frame to form an RF-right enclosure for the PA board assembly. The intermittent-duty transmitter power amplifier and heat-sink assembly is hinged to the radio panel at the rear.

Directly above the PA assembly is the station control shelf. A mother board is mounted to this shelf which accommodates the 10-Volt Regulator/Control Board, the Tone Control Modules and the Digital Decoder(s). The 10-Volt Regulator Control Module supplies the regulated 10-Volts DC for station operation. The module contains the transmit/receive switching controls and a station microphone pre-amplifier. Front panel controls include the REM PTT and INTERCOM switches along with the TX light emitting diode (LED). External control connections are made to TB1201, located on the back of the mother board. See Figure 2.

The station power supply is connected to a 121 VAC 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 $\pm 2\%$ for a $\pm 20\%$ primary change. A power switch, primary and secondary fuses and two AC outlets are located on the front panel. A high-current fuse is located on the back panel.

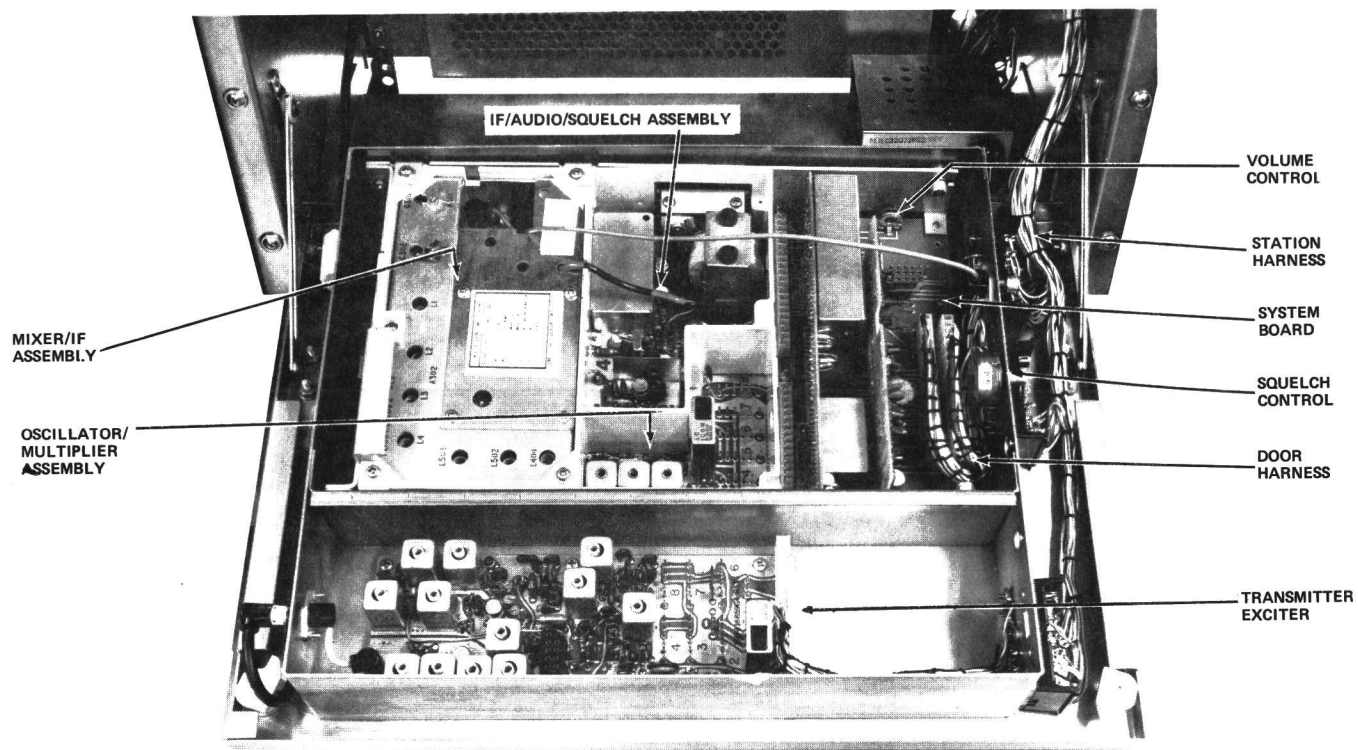


Figure 1 - Radio Panel Front Door

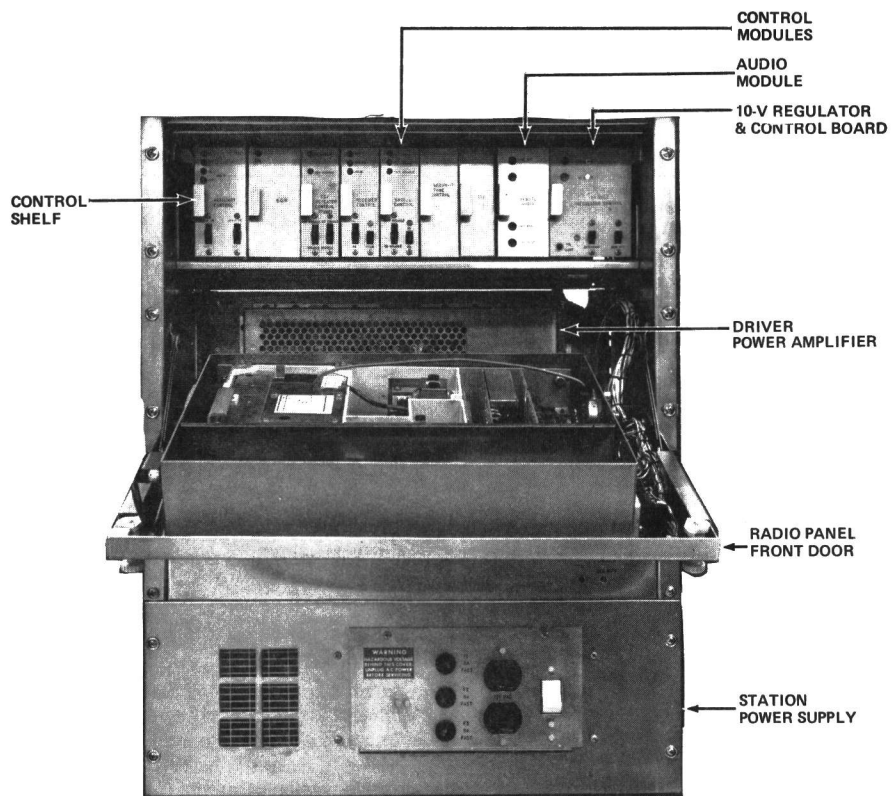


Figure 2 - Station Assemblies

The auxiliary receiver used in Regional Stations is located directly above the station power supply. Refer to the Auxiliary Receiver MAINTENANCE MANUAL (LBI4915) for a description of this receiver assembly.

High Power Station Equipment

A typical rack-up of the equipment in the high power station is shown in Figure 3. The station receiver is mounted in a shielded enclosure on the radio panel front door, along with a System Board which accommodates Channel Guard and other option boards. Jacks are provided on the System Board for plug-in interface with options and control functions. The transmitter exciter is located in a separate shielded compartment on the radio panel door. See Figure 1.

The transmitter Drive power amplifier hinges from the bottom of the radio housing. The Driver PA assembly consists of a frame mounted to a heat sink. A cover snaps over the frame to form an RF-tight enclosure for the Driver PA board assembly.

The RF High Power Amplifier mounts at the top of the rack under the meter panel. A blower is used to cool the PA tubes in the Power Amplifier and is mounted on the front of the PA Power Supply.

Directly above the Driver PA assembly is the station control shelf. A mother board is mounted to this shelf which accommodates the 10-Volt Regulator/Control and Tone Control Modules. The 10-Volt Regulator/Control Module supplies the regulated 10 Volts DC for station operation. The module contains the transmit/receive switching controls and a station microphone pre-amplifier. Front panel controls include the REM PTT and INTERCOM switches along with the TX Light Emitting Diode (LED). External control connections are made to TB1201, located on the back of the mother board. See Figures 3 and 4.

For ease of servicing the station contains centralized metering. A meter panel at the top of the station operates in conjunction with the Meter Function switch on the Power Panel and the transmit and Receive switches inside the Radio Panel Front Door.

The station power supply and the PA Power supply are connected through the Power Panel to a 117 VAC power source. The station power supply contains a power switch, primary and secondary fuses and two AC outlets located on the front panel. A high current fuse is located on the back panel for the Driver PA. The station power supply provides input voltage for the station Receiver, Control, Exciter and PA Driver.

The PA Power Supply provides the filament, grid, antenna relay and High voltage for the RF Power Amplifiers. The

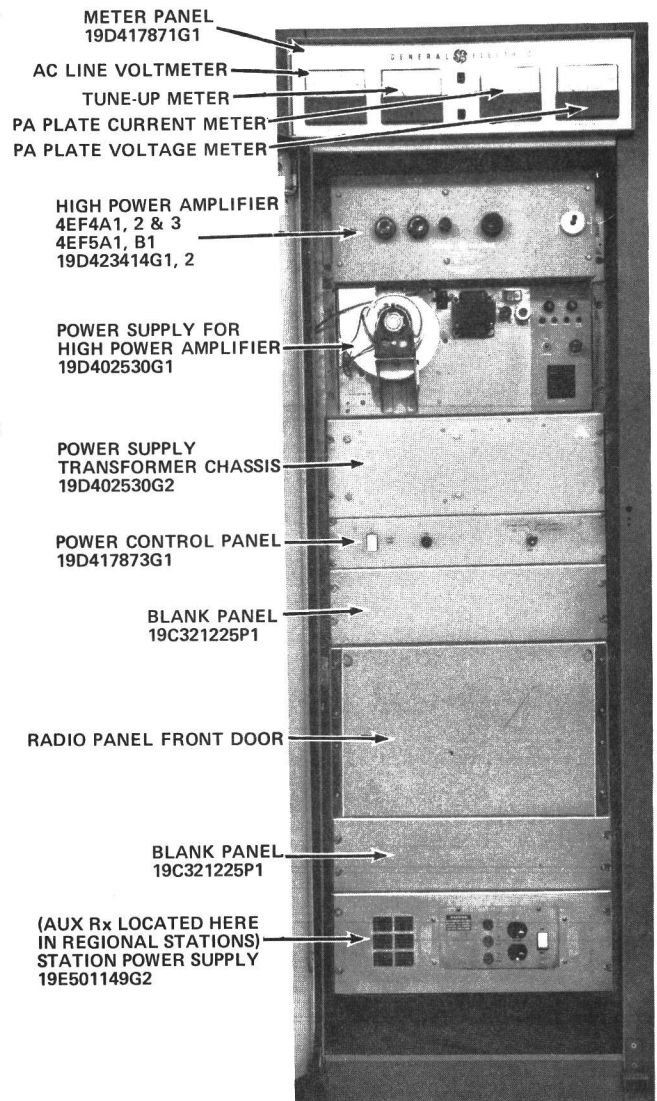


Figure 3 - Front View of High Power Station with door removed.

power supply consists of a main chassis and a transformer chassis, mounted separately in the station cabinet.

INITIAL ADJUSTMENT

After the MASTR II Remote Control 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.

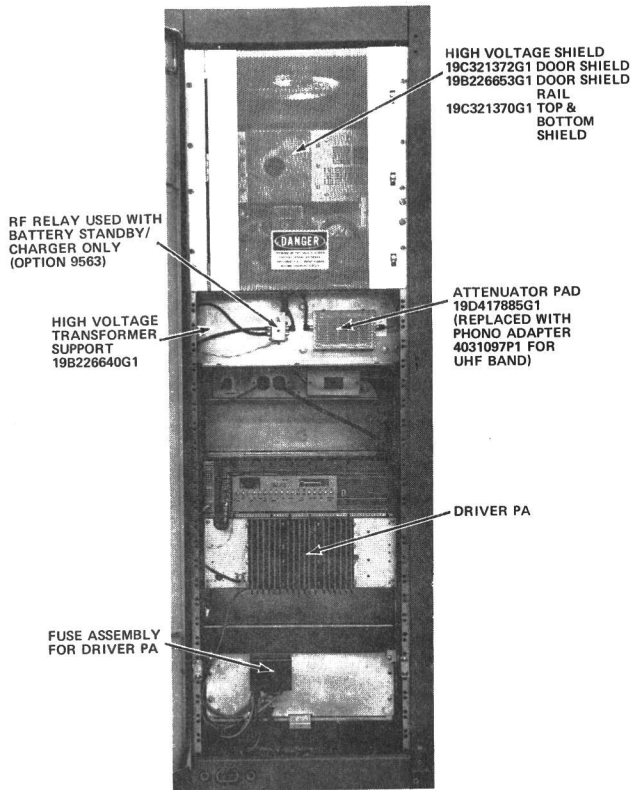


Figure 4 - Rear View of High Power Station with door removed.

TRANSMITTER ADJUSTMENT

The adjustment for the transmitter includes measuring the forward and reflected power and adjusting the antenna length for optimum ration, 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.

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 1000 Hertz with ± 3 kHz deviation to the receiver antenna jack J937.

2. Turn service speaker switch to RCVR position.
3. Connect an AC VTVM across J905 terminals 1 & 2 and adjust R3 for a reading of 2.7 Volts RMS on the meter.

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:

1. Turn the SQUELCH control clockwise (to the right) as far as possible.
2. Adjust VOLUME control R3 on the 19C320728 Service Speaker until the noise is easily heard in the speaker, but is not annoyingly loud.
3. Turn the SQUELCH control counter-clockwise (to the left) until the noise just disappears, then advance control another 20 degrees.

REMOTE CONTROL ADJUSTMENTS

The transmitter modulation gain, the remote audio input and line output must be adjusted before placing the station in operation. Refer to the EACOM Tone Remote Control MAINTENANCE MANUAL (LBI30623) for these adjustments.

LOCAL MICROPHONE LEVEL ADJUSTMENTS

After the remote control adjustments have been completed, the local MIC GAIN control (R14) on the 10-Volt Regulator Board should be adjusted. When the MASTR II mobile microphone is used with the station, the MIC GAIN control should be adjusted for minimum gain (close to full counterclockwise). Adjust for a deviation of 4.5 kHz. Increasing the MIC GAIN control too far clockwise will over-drive the microphone pre-amplifier and this should be avoided.

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.

MAINTENANCE CHECK	INTERVAL BETWEEN CHECKS	
	Every 6 Months	As Required
<u>Transmitter Alignment</u> - 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
<u>Receiver</u> - 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
<u>Transmission Line</u> - Check for positive indication of pressure on transmission line pressure gauge (if pressurized line is used).	X	
<u>Antenna</u> - Check antenna & mast for mechanical stability.	X	
<u>Mechanical Inspection</u> - 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	
<u>Cleaning</u> - Use a vacuum cleaner to remove dust which has accumulated inside the cabinet.	X	
<u>Frequency Check</u> - Check transmitter frequency & deviation as required by FCC.		X

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.

SYSTEM DESCRIPTION

Receiver

The station receiver consists of an oscillator/multiplier assembly (OSC/MULT), RF Assembly, Mixer/IF Assembly (MIF) and IF-Audio-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 consists of an exciter board assembly and a power amplifier assembly. In continuous duty transmitters,

the PA assembly consists of a printed wiring board mounted on a heat sink at the rear of the radio housing. In intermittent duty stations, the heat sink assembly is fastened to two sheet metal adaptor plates which hinge at the radio panel. Refer to the Transmitter MAINTENANCE MANUAL for a complete description of the station transmitters.

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 with the Remote Control Shelf and Power Supply. Plug-in Channel Guard and Carrier Control Timer option jacks are provided. A metering jack is provided for accommodating 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.

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 & 19. The station VOLUME control (R3) is normally

adjusted for 1 Watt output and the station speaker level is controlled by the service speaker VOLUME control.

Tone Remote Control

Remote control functions are accomplished by applying two or three tones in sequence at the prescribed level to the transmission medium at a remote control console for detection at the control modules on the control shelf. One (in local stations) or two (in regional stations) digital decoder(s) are used to decode remote dial codes applied to the transmission medium. Refer to the EACOM Tone Remote Station Control Shelf MAINTENANCE MANUAL (LBI30623) and the Digital Decoder MAINTENANCE MANUAL (LBI30624) for a complete description of this system.

Channel Guard

The Channel Guard Board (19D417261G1) is plugged into the System Board at P908 and P909. Each MASTR II receiver is equipped with a tone reject filter to prevent the CG tone from being heard in the speaker. In addition, all transmitters have a Channel Guard Modulation control to adjust for proper deviation.

Channel Guard is a continuous-tone controlled squelch system that provides communications control in accordance with EIA standard RS-220. The system utilizes standard tone frequencies from 71.9 to 203.5 Hertz with both the encoder and decoder operating on the same frequency. The STE circuit (Squelch Tail Eliminator) employs a phase shift of approximately 180° in the encode function to eliminate undesirable noise burst after each transmission.

The decoder operates in conjunction with the receiver to inhibit all calls that are not tone coded with the proper Channel Guard tone frequency. The VOLUME/SQUELCH output of the receiver is applied to the Channel Guard decoder at P908-1.

As long as no signal is received properly coded with the CG tone, a ground is supplied through P908-5 to mute the receiver. When a properly coded signal is received, the receiver unsquelches and the desired signal is heard. In duplex combinations, a separate decoder is used in the receiver.

A Channel Guard Filter (19C320627G1) is used in the Remote Audio Board to attenuate frequencies below 203.5 Hertz to prevent the Channel Guard tone from being applied to the remote audio pair.

Meter Panel (High-Power Stations)

The Meter Panel is mounted at the top of the cabinet and contains four meters and two indicator lamps. The function of the four meters are; AC Line Voltmeter, Tune-up Meter, PA Plate Current Meter and PA Plate Voltage Meter. The meter panel is operated in conjunction with the Tune-up meter switch on the Power Panel to meter all the necessary Tune-up functions of the station. The green indicator lamp glows when the station is turned on. The red indicator lamp glows when the station transmitter is keyed.

Power Control Panel (High-Power Stations)

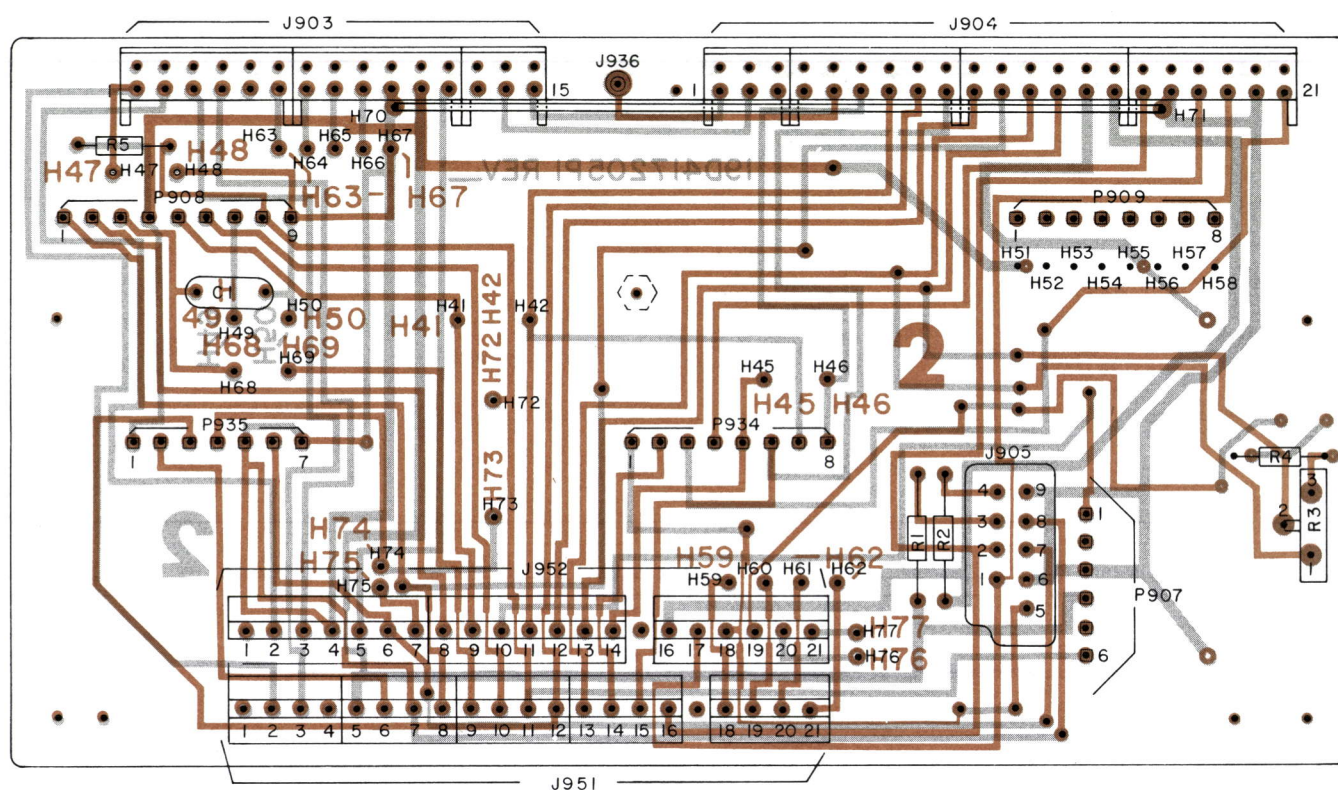
The Power Control Panel mounts above the Radio Panel Front Door and contains two switches, a fuse and an AC outlet. S1 is the cabinet power switch that supplies power to the AC outlet J1 through the main 15 amp fuse F1. The power cords for the station Power Supply and the High Power PA Power Supply plug into J1. S2 is the Tune-up Function switch for the Meter Panel.

Attenuator Pad (High Power Stations)

The 19D417885G1 RF attenuator pad mounts on the back of the transformer chassis and provides 3.5 dB attenuation between the Driver PA and the High Power PA. The Attenuator pad is used in Low and High Band stations.

MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

GENERAL  ELECTRIC

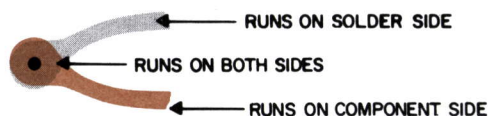


(19D417205, Sh. 2, Rev. 2)
(19D417205, Sh. 3, Rev. 2)

(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

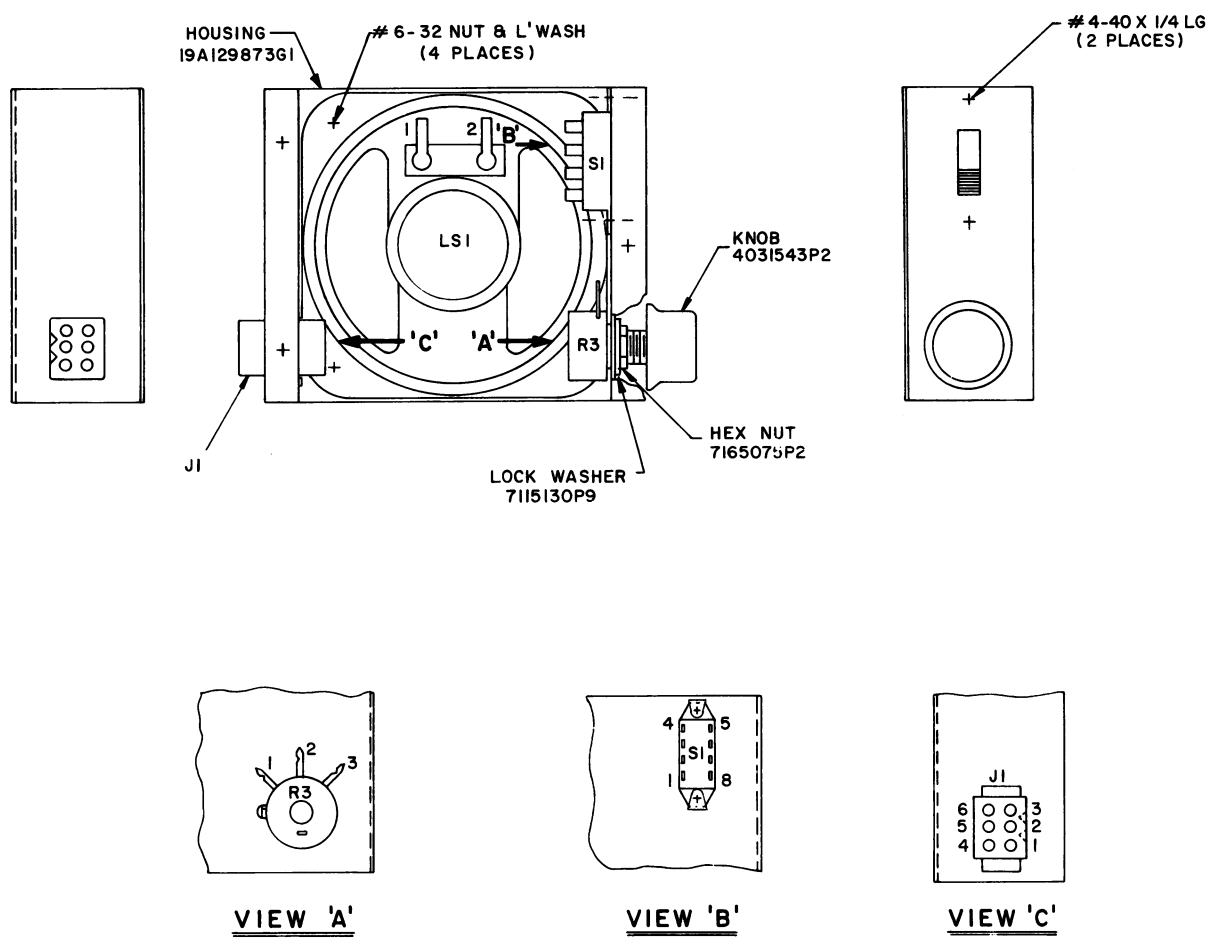


OUTLINE DIAGRAM

SYSTEM BOARD A901

Issue 1

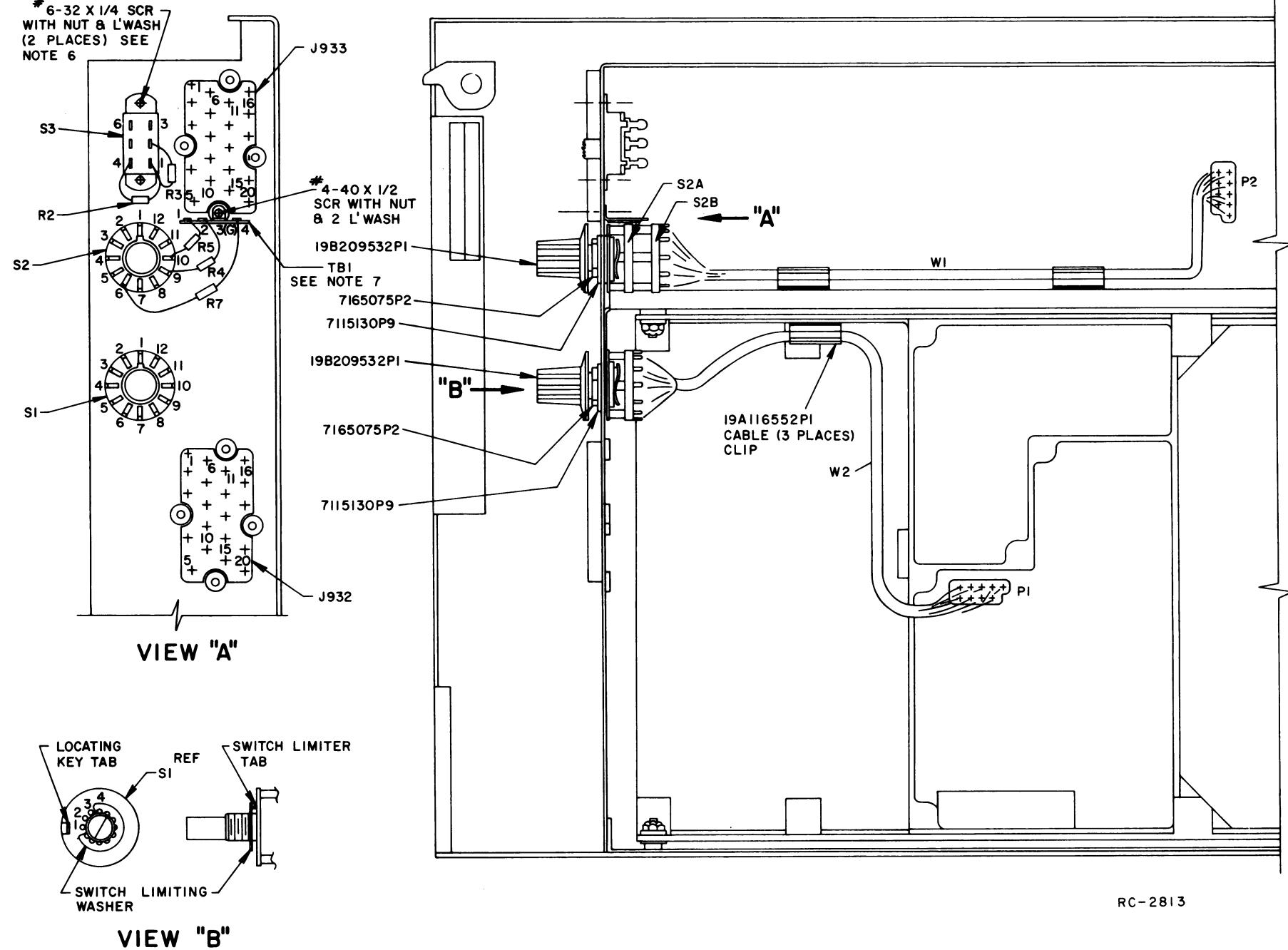
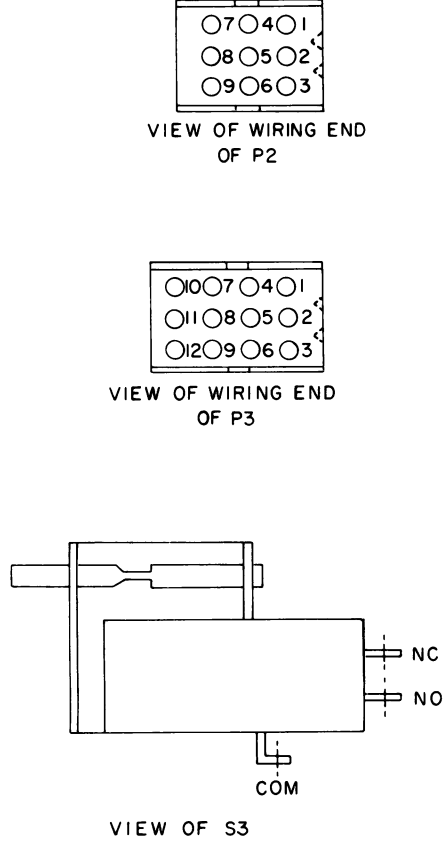
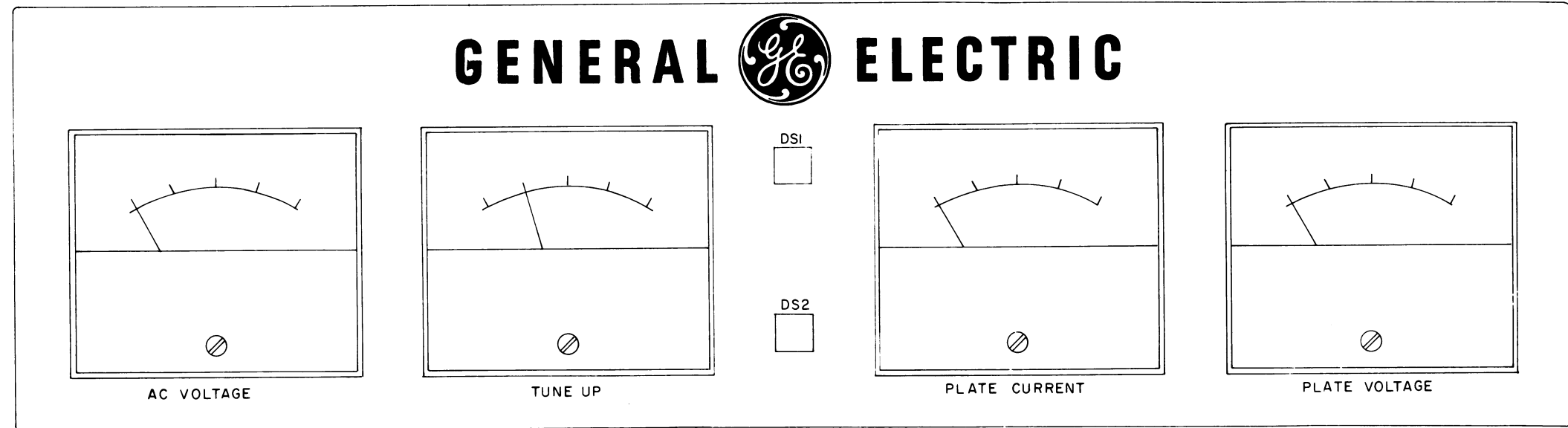
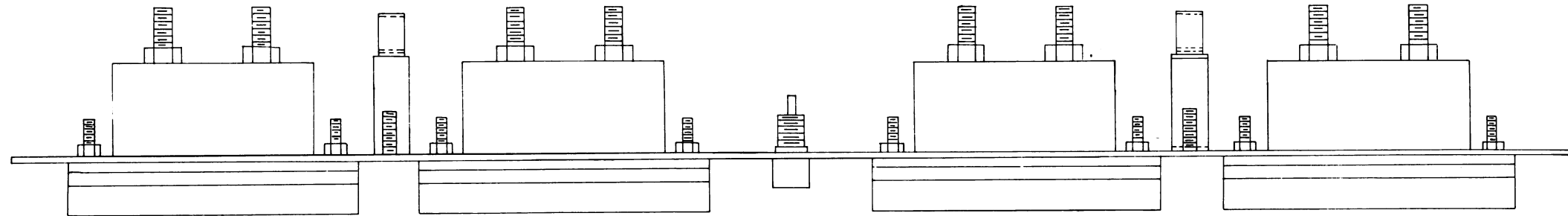
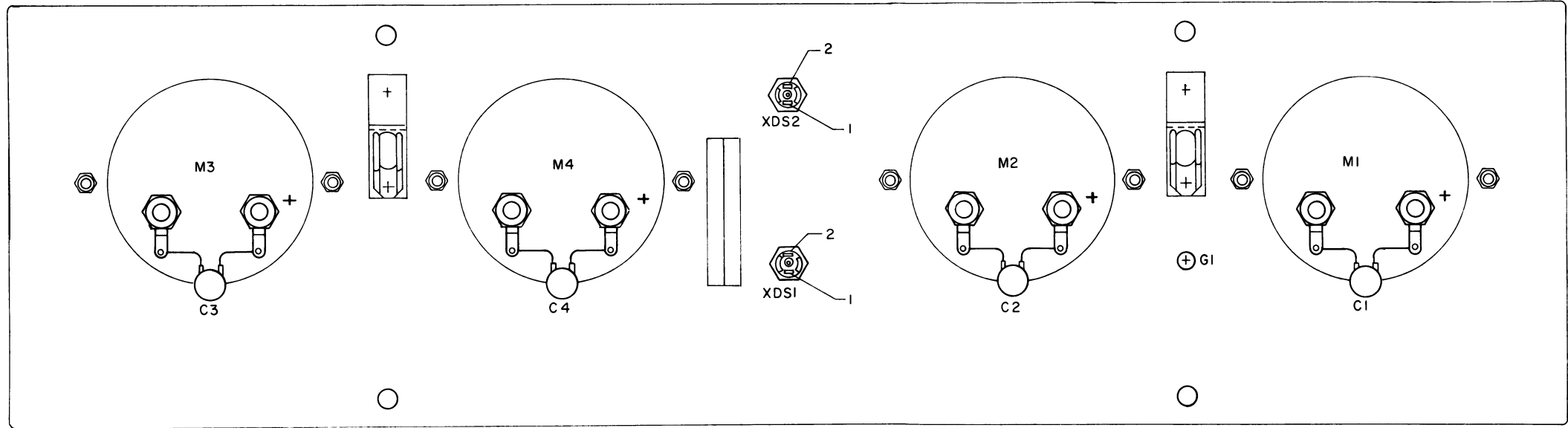
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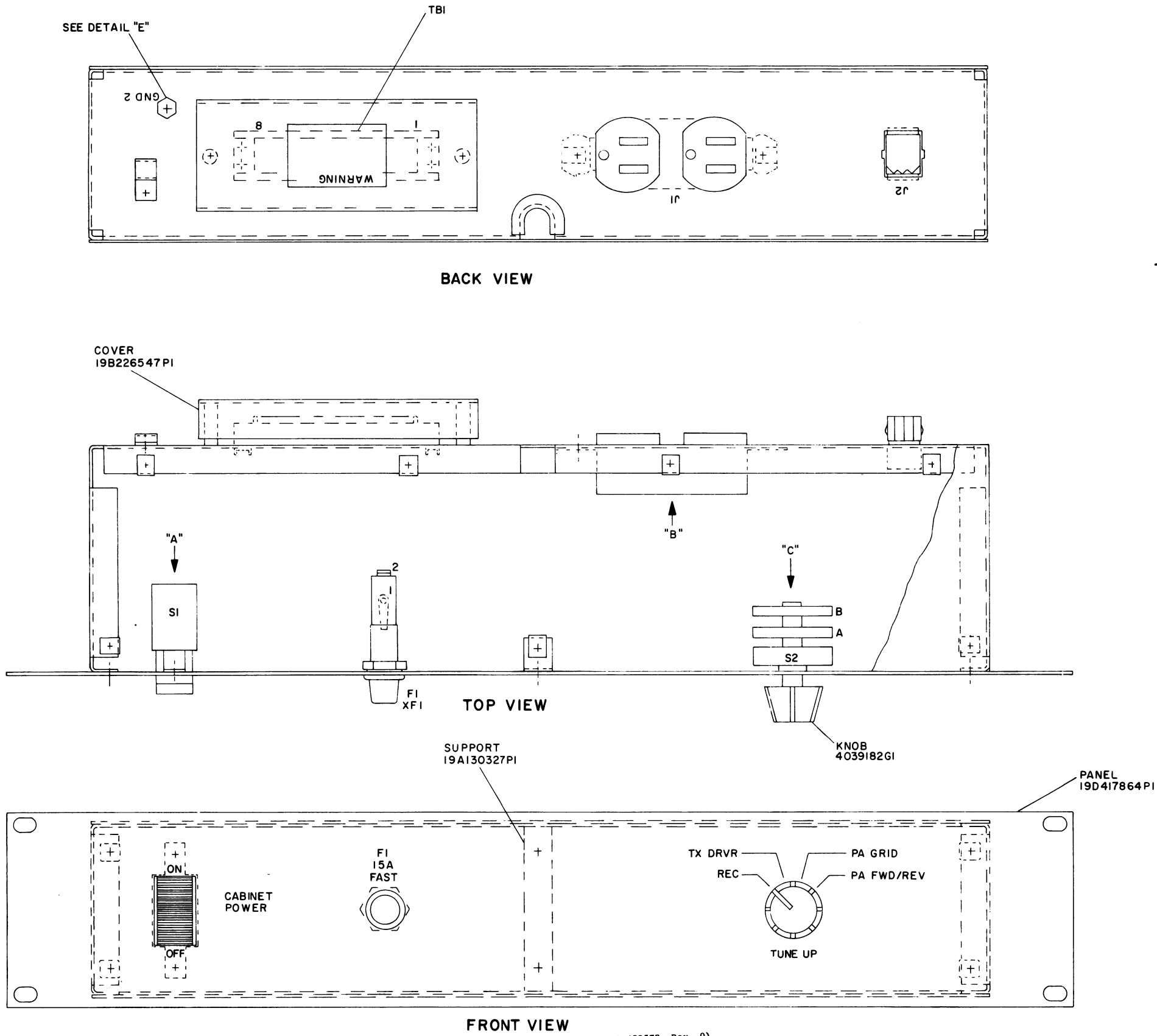
(19C321475, Rev. 1)

OUTLINE DIAGRAM

SERVICE SPEAKER 19C320728G1



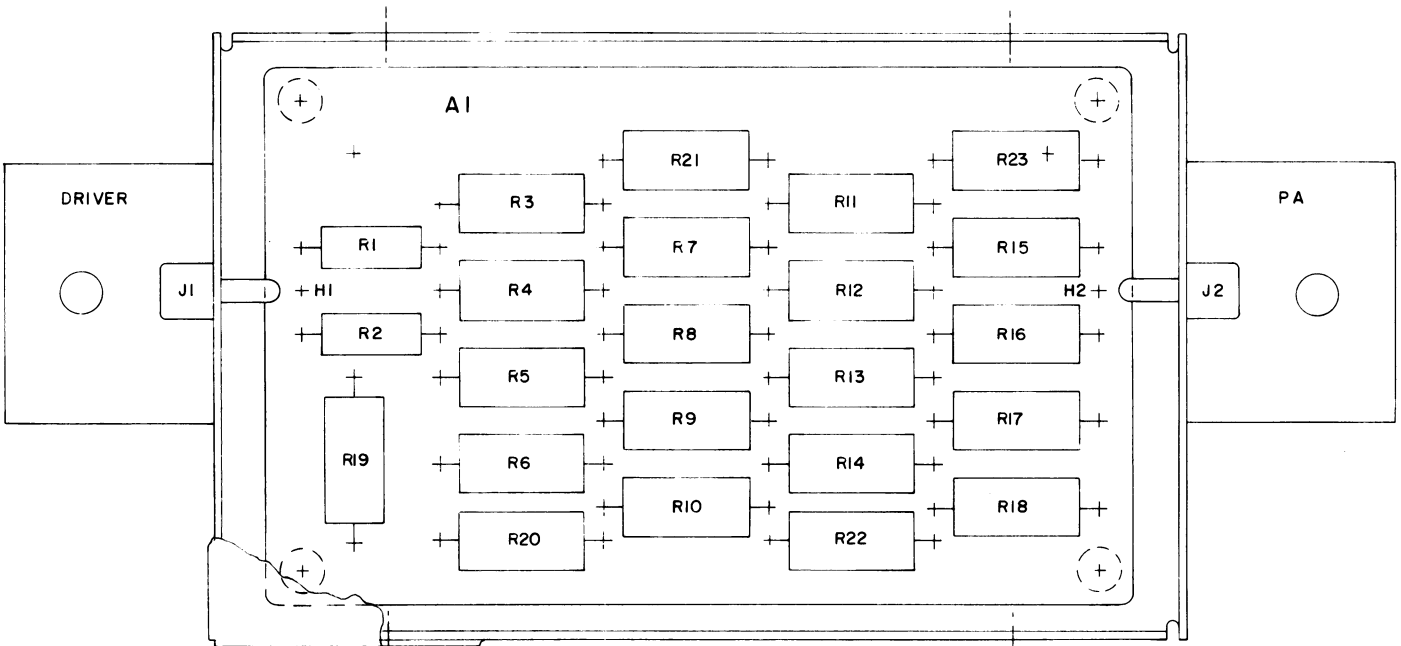
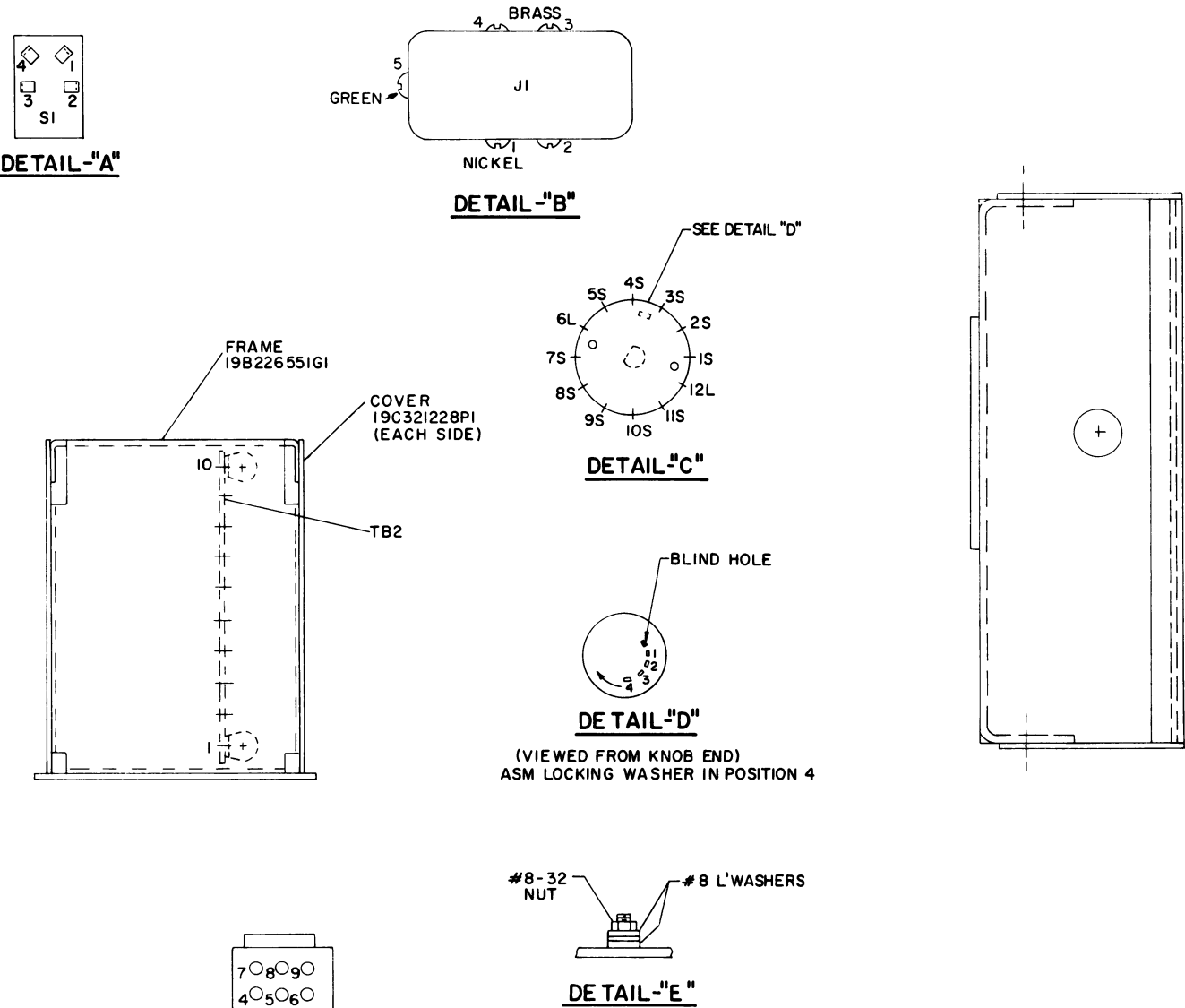
RC-2813



(19D423573, Rev. 0)

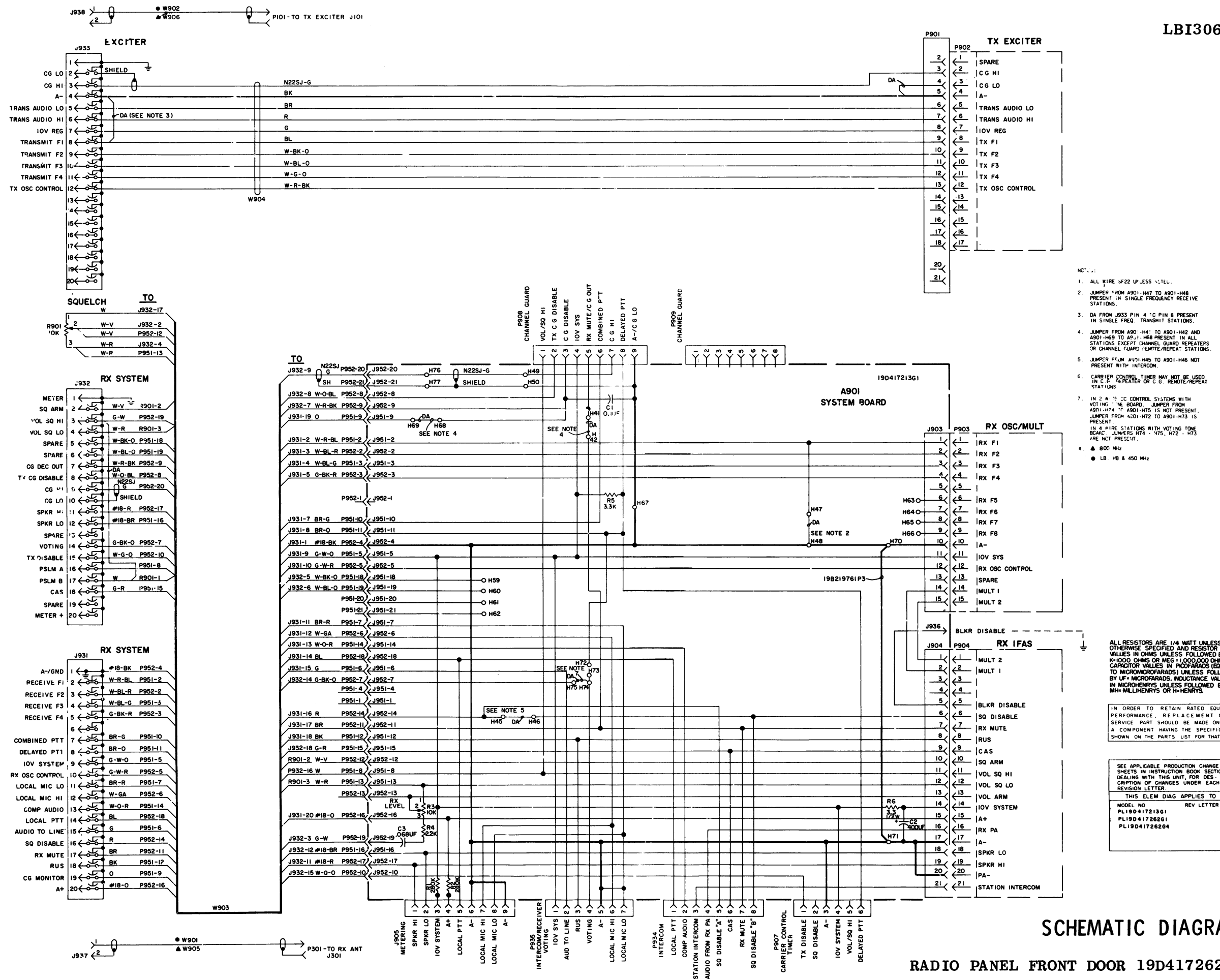
OUTLINE DIAGRAM

POWER CONTROL PANEL & ATTENUATOR PAD



CONNECTION CHART		
FROM	TO	WIRE
A1-H1	J1	DB
A1-H2	J2	DB

(19D423572, Rev. 0)



SCHEMATIC DIAGRAM

RADIO PANEL FRONT DOOR 19D417262G1

Issue 1

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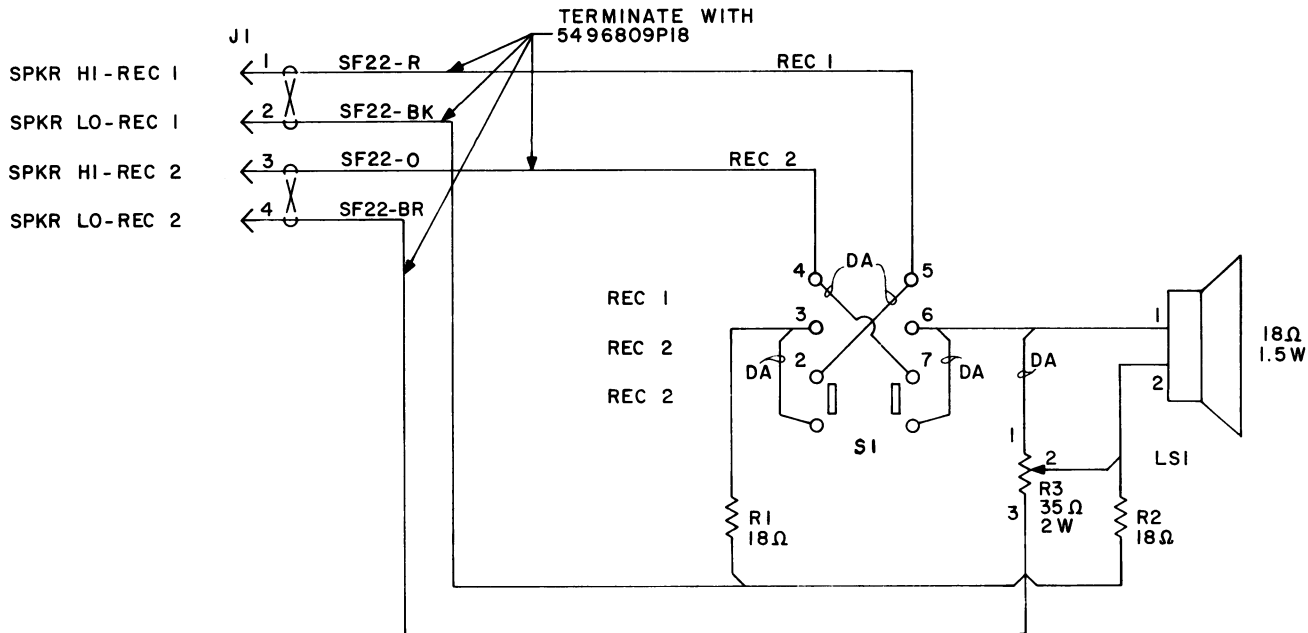
PARTS LIST

LBI-4801A
MASTR II STATION RADIO PANEL
FRONT DOOR ASSEMBLY
19D417262G1

SYMBOL	GE PART NO.	DESCRIPTION
A901		DOOR ASSEMBLY 19D417262G1 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 Composition: 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.

SYMBOL	GE PART NO.	DESCRIPTION
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.



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
PL 19C320728G1 A

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 5 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS CAPACITOR VALUES IN PICO FARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF= MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H= HENRYS

(19C320734, Rev. 3)

SCHEMATIC DIAGRAM

SERVICE SPEAKER 19C320728G1

PARTS LIST

LBI-4820A

SERVICE SPEAKER
19C320728G1

SYMBOL	GE PART NO.	DESCRIPTION
J1		----- JACKS AND RECEPTACLES -----
	19B209288P22	Connector. Includes:
	5496809P18	Shell. Contact, electrical: male; sim to Molex 1380-T.
LS1		----- LOUDSPEAKERS -----
	19A115964P1	Permanent magnet: 3.5 inch, 18 ohms $\pm 10\%$ imp, 15 to 19 ohms $\pm 20\%$ DC res, resonant frequency 290 Hz; sim to Oaktron S-9847.
R1		----- RESISTORS -----
	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR.
	19B209490P1	Variable, wirewound: 35 ohms $\pm 20\%$, 2.25 w; sim to CTS Type 118.
	5493035P52	Wirewound: 8.2 ohms $\pm 10\%$, 5 w; sim to Hamilton Hall Type HR.
S1		----- SWITCHES -----
	19B209261P5	Slide: DPTT, 2 poles, 3 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11D1033B.
		----- MISCELLANEOUS -----
	4031543P2	Knob. (Used with R3).
	7115130P9	Lockwasher: sim to Shakeproof 1220-2. (Used with R3).
	7165075P2	Hex nut, brass: No. 3/8-32. (Used with R3).

*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 eliminate factory wiring errors caused by duplication of wire colors.

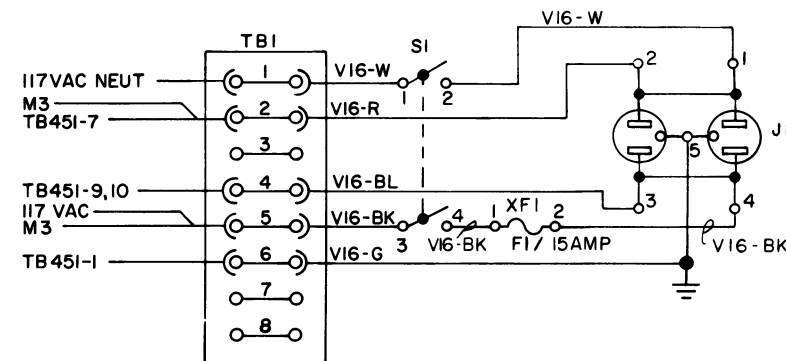
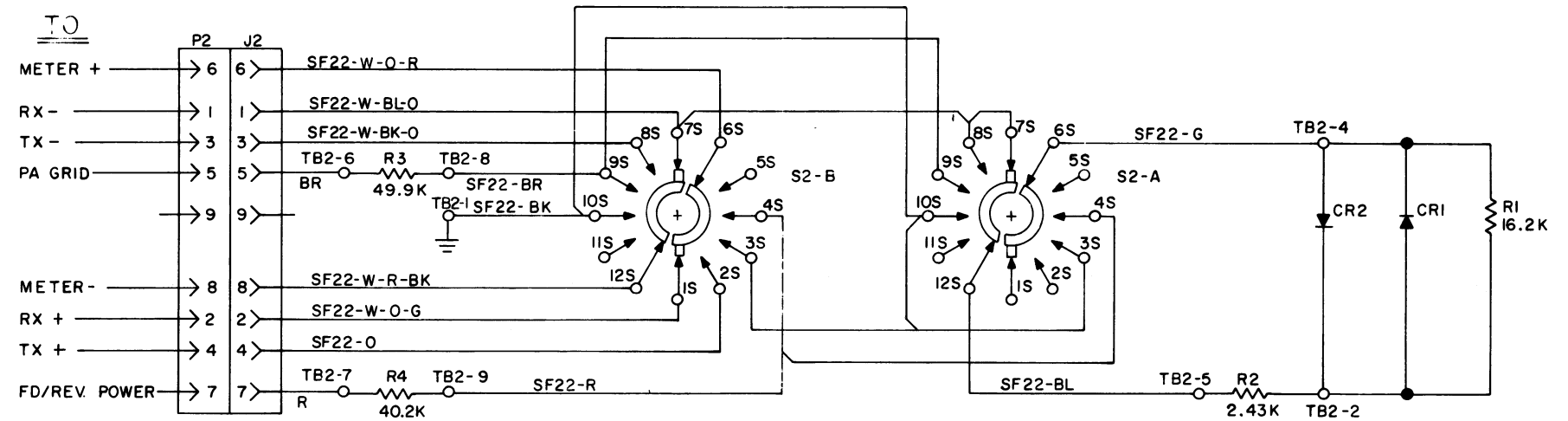
Change wire connection on:
J1-1 from SF22-O to SF22-R
J1-2 from SF22-BR to SF22-BK
(No Parts List changes)

PARTS LIST

LBI-4905

POWER PANEL
19D417873G1

SYMBOL	GE PART NO.	DESCRIPTION
CR1 and CR2	5494922P1	----- DIODES AND RECTIFIERS ----- Silicon: sim to 1N456.
F1	7484390P3	----- FUSES ----- Quick blowing: 15 amp 250 v; sim to Littelfuse 314015 or Bussmann ABC-15.
J1	19B209395P1	----- JACKS AND RECEPTACLES ----- Receptacle, power: 3 wire grounding type, 15 amps at 125 v; sim to Circle F Mfg. 1517-2.
J2	19B209288P3	Connector. Includes: Shell.
	5496809P17	Connector: female contact: sim to Molex Products 1381-T.
R1	19C314256P31622	----- RESISTORS ----- Metal film: 16,200 ohms $\pm 1\%$, 1/2 w.
R2	19C314256P32431	Metal film: 2430 ohms $\pm 1\%$, 1/2 w.
R3	19C314256P34992	Metal film: 49,900 ohms $\pm 1\%$, 1/2 w.
R4	19C314256P34022	Metal film: 40,200 ohms $\pm 1\%$, 1/2 w.
S1	19B209498P1	----- SWITCHES ----- Push: DPST, 20 amps and 220 VRMS; sim to McGill 0811-0188.
S2	5495227P30	Rotary: 2 sections, 4 poles, 2 to 5 adj stop positions, non-shorting contacts, 2 amps at 28 VDC or 1 amp at 110 VAC; sim to Oak Type "F".
TB1	19C301087P4	----- TERMINAL BOARDS ----- Phen: 8 terminals; sim to GE CR151D.
TB2	7775500P20	Phen: 10 terminals.
XF1	4037402P2	----- SOCKETS ----- Fuseholder: 15 amps at 250 v; sim to Littelfuse 342001.
		HARNESS ASSEMBLY 19D417873G2 (Includes J2)
	19C321228P1	----- MISCELLANEOUS ----- Cover. (Power Panel).
	19B226547P1	Cover. (Located over TB1).
	5491480P4	Clip loop: sim to Adel Precision Type 754E.
	4039182G1	Knob. (S2).
	7160508P2	Nut, sheet spring: sim to Tinnerman C1356-632-24. (Used with TB1).
	7160861P2	Nut, sheet spring: sim to Tinnerman C880-632-157. (J1 and frame).
	7165075P2	Hex nut, brass: No. 3/8-32. (Used with S2).
	7115130P9	Lockwasher: sim to Shakeproof 1220-2. (Used with S2).
	19B209268P106	Terminal, solderless: sim to AMP 41184. (Used with TB2).
	19B226664G1	Power cord.



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 MICROFARADS) UNLESS FOLLOWED BY UF=MICROFARADS, INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS.

NOTES:

1. TERMINATE WIRES AT TBI WITH
19B209268P101.
2. TERMINATE WIRES AT JI WITH
19B209268P106.
3. TERMINATE WIRES AT SI WITH
4029484P2.

(19C321241, Rev. 2)

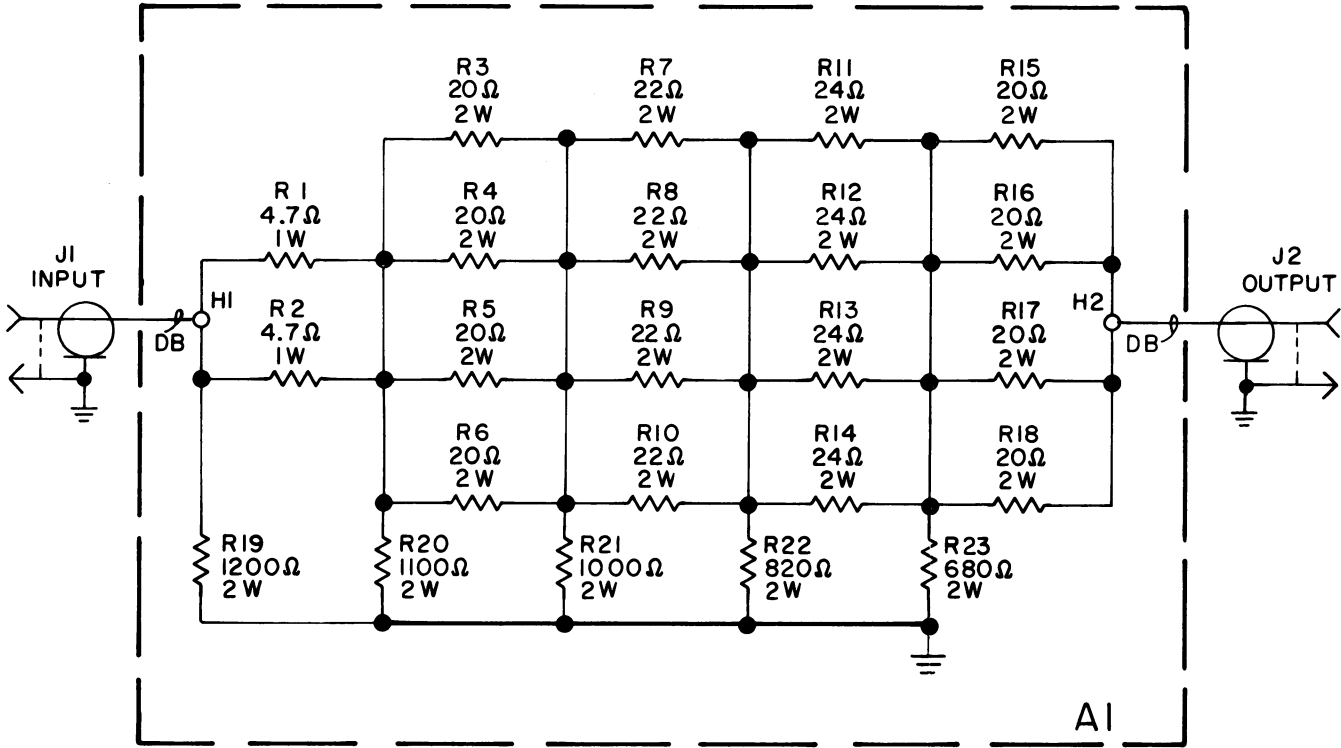
SCHEMATIC DIAGRAM AND PARTS LIST

POWER CONTROL PANEL 19D417873G1

Issue 1

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*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.



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.

(19B226573, Rev. 1)

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

PLI9D417885G1

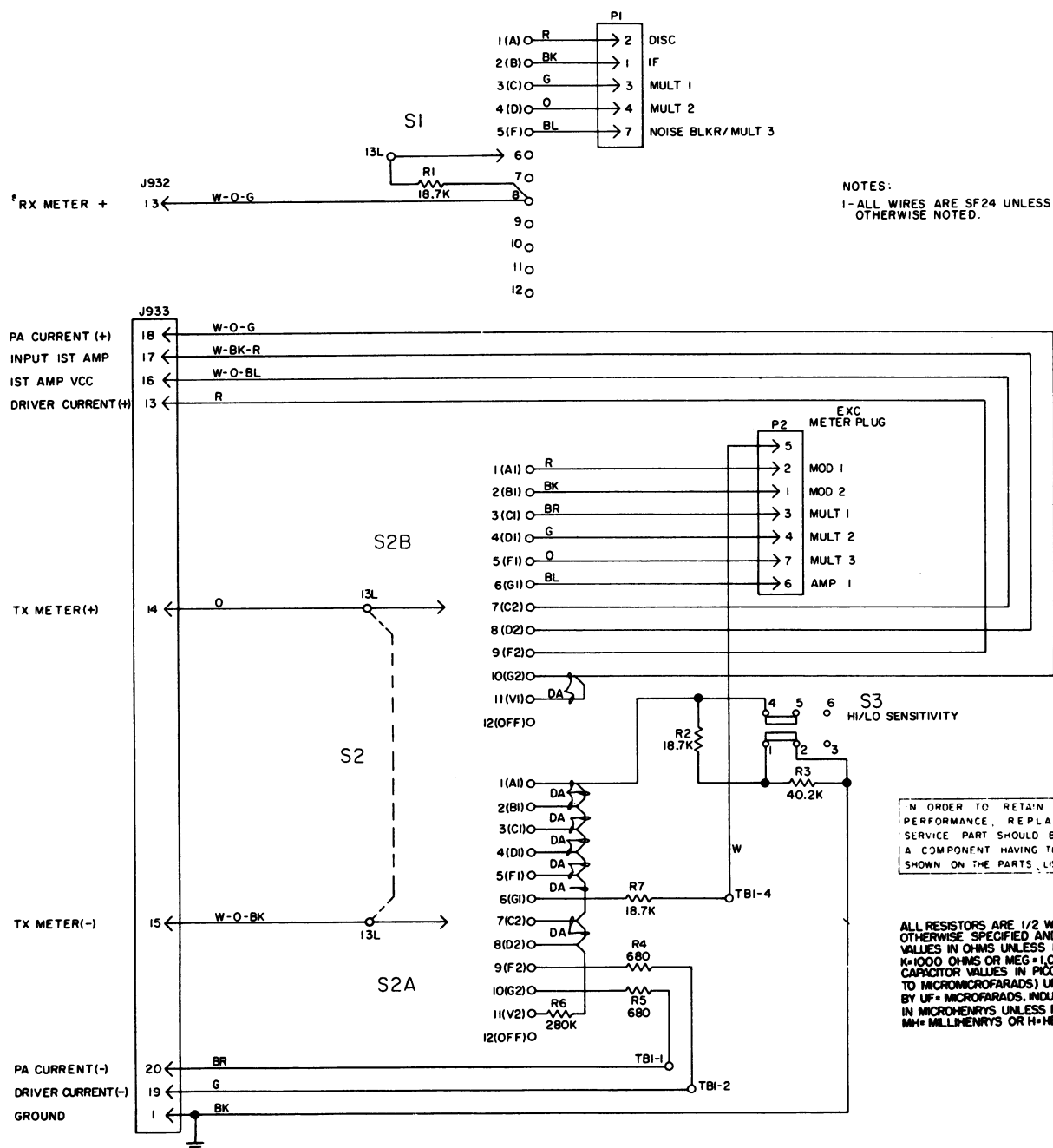
PARTS LIST

LBI-4904
ATTENUATOR PAD
19D417885G1

SYMBOL	GE PART NO.	DESCRIPTION
A1		COMPONENT BOARD 19C321246G1
		----- RESISTORS -----
R1 and R2	5490205P8	Composition: 4.7 ohms ±5%, 1 w.
R3 thru R6	3R79P200J	Composition: 20 ohms ±5%, 2 w.
R7 thru R10	3R79P220J	Composition: 22 ohms ±5%, 2 w.
R11 thru R14	3R79P240J	Composition: 24 ohms ±5%, 2 w.
R15 thru R18	3R79P200J	Composition: 20 ohms ±5%, 2 w.
R19	3R79P122J	Composition: 1200 ohms ±5%, 2 w.
R20	3R79P112J	Composition: 1100 ohms ±5%, 2 w.
R21	3R79P102J	Composition: 1000 ohms ±5%, 2 w.
R22	3R79P821J	Composition: 820 ohms ±5%, 2 w.
R23	3R79P681J	Composition: 680 ohms ±5%, 2 w.
		----- JACKS AND RECEPTACLES -----
J1 and J2	7104941P16	Connector, phono: Jack; sim to National Tel. Barrel Ceramic.
		----- MISCELLANEOUS -----
	19B201074P304	Tap screw, Phillips POZIDRIV®: No. 6-32 x 1/4.

SCHEMATIC DIAGRAM
AND PARTS LIST

ATTENUATOR PAD 19D417885G1



(19D417597, Rev. 3)

SCHEMATIC DIAGRAM

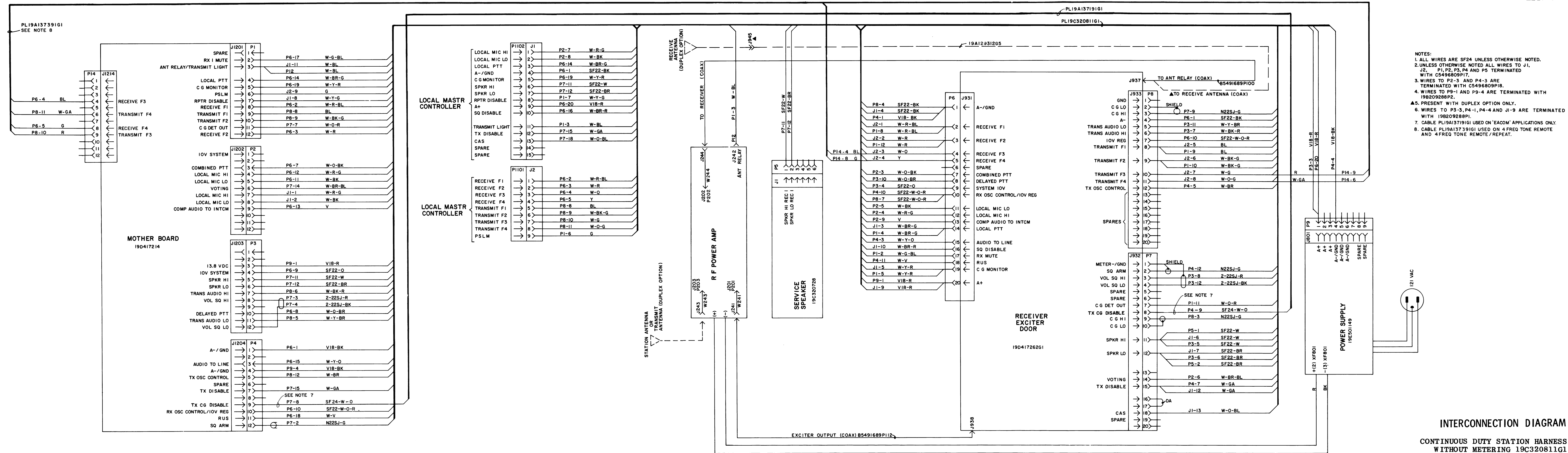
METER SWITCHING KIT 19B226293G1

PARTS LIST

LBI-4846

METERING KIT
19B226293G1

SYMBOL	GE PART NO.	DESCRIPTION
P1 and P2	19B219534P1	----- PLUGS ----- Connector: 9 pin, male.
		----- RESISTORS -----
R1 and R2	19C314256P31872	Metal film: 18,700 ohms $\pm 1\%$, 1/2 w.
R3	19C314256P34022	Metal film: 40,200 ohms $\pm 1\%$, 1/2 w.
R4 and R5	3R152P68LJ	Composition: 680 ohms $\pm 5\%$, 1/4 w.
R6	19C314256P22803	Metal film: 280,000 ohms $\pm 1\%$, 1/4 w.
R7	19C314256P31872	Metal film: 18,700 ohms $\pm 1\%$, 1/2 w.
S1	5495454P39	----- SWITCHES ----- Rotary: 1 section, 1 pole, 2 to 12 position (adj stop), non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type A.
		Rotary: 2 sections, 2 poles, 2 to 12 position (adj stop), non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type A.
		Slide: DPDT, 2 poles, 2 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 46206L.
TB1	7487424P6	----- TERMINAL BOARDS ----- Miniature, phen: 3 terminals.
W1		----- CABLES ----- HARNESS ASSEMBLY 19B226293G2 (Includes P1, R1, S1)
		HARNESS ASSEMBLY 19B226293G3 (Includes P2, R6, S2)
W2		----- MISCELLANEOUS ----- Hex nut, brass: No. 3/8-32. (Used with S1 and S2).
		Lockwasher: sim to Shakeproof 1220-2. (Used with S1 and S2).
		Knob, screw on. (Used with S1 and S2).
		Cable clip.

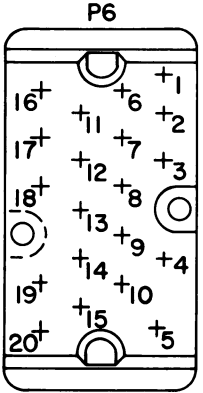
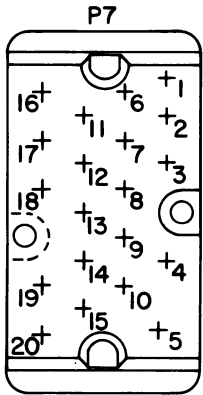
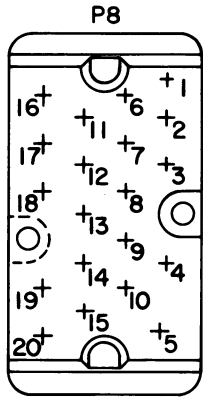


PARTS LIST

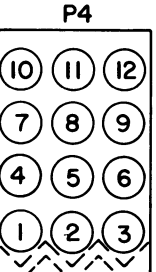
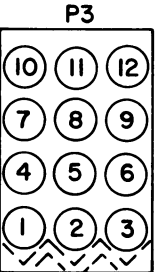
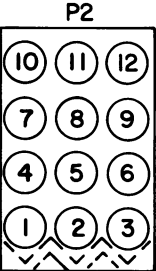
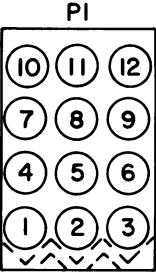
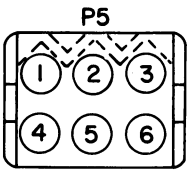
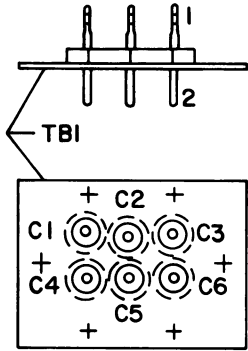
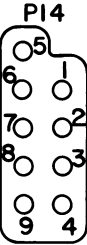
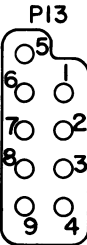
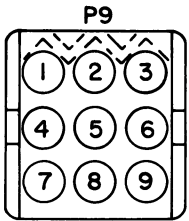
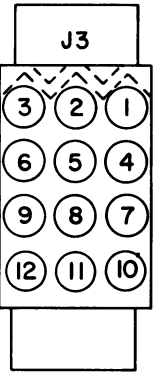
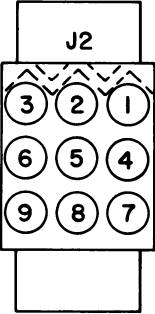
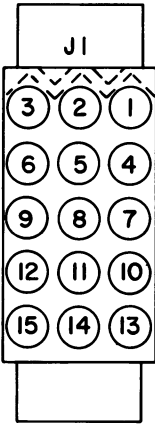
LBI-4796

MASTR II CONTINUOUS DUTY
STATION HARNESS
19C320811G1

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



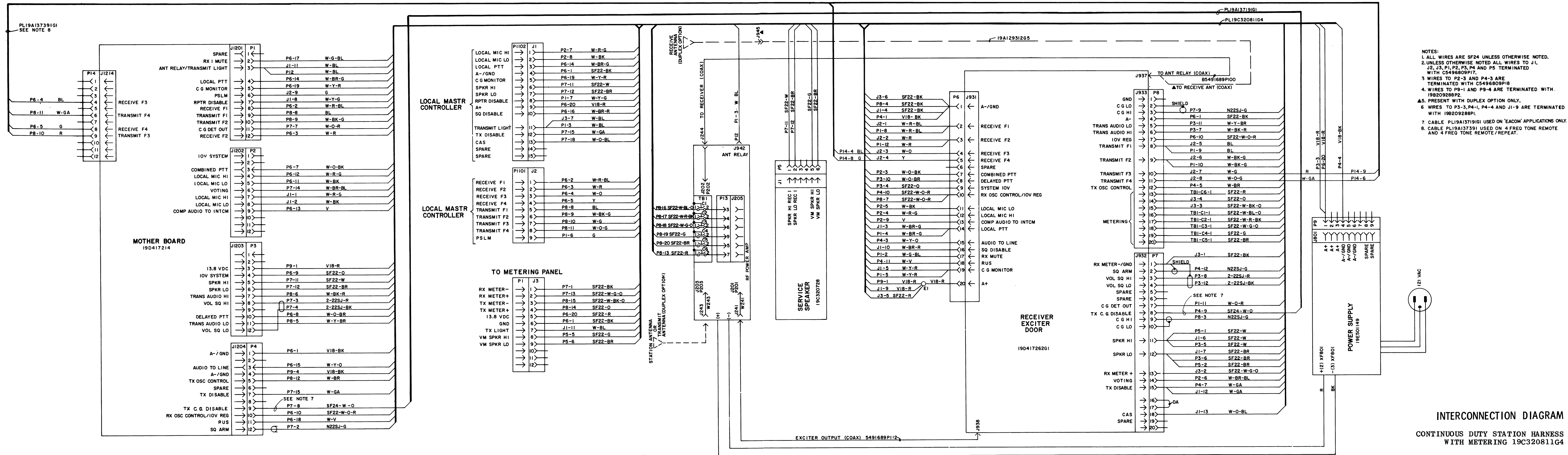
NOTE:
I. CONNECTORS SHOWN FROM WIRING SIDE.



OUTLINE DIAGRAM

HARNESS 19C320811

(19C328112, Rev. 0)

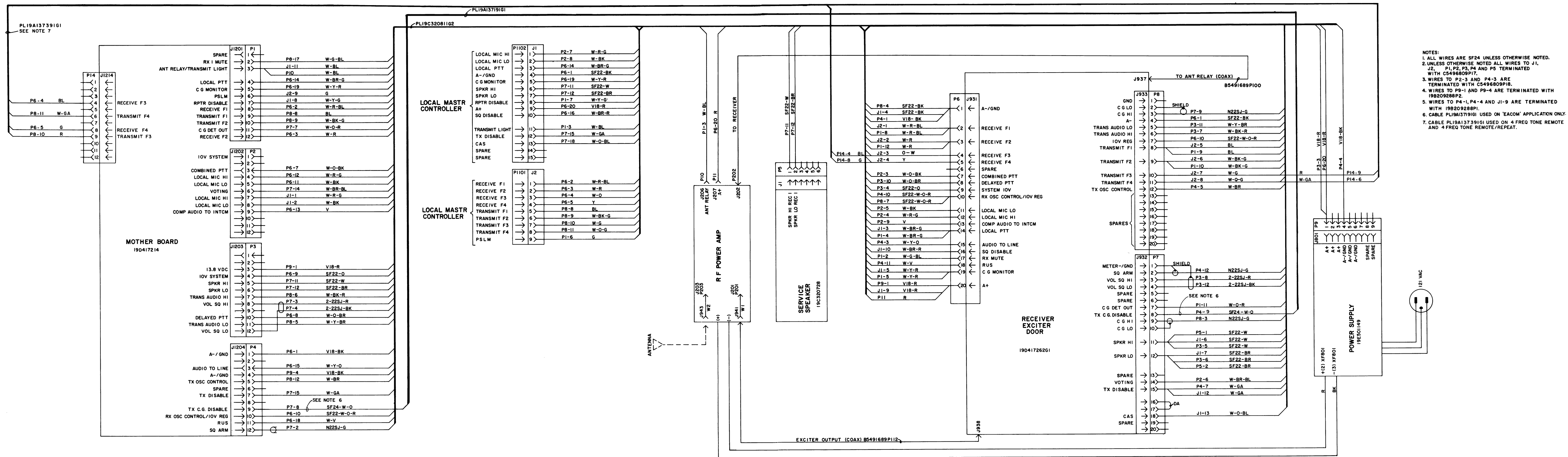


PARTS LIST

LBI-4799
MASTER II CONTINUOUS DUTY
STATION HARNESS WITH METERING
19C320811G4

SYMBOL	GE PART NO.	DESCRIPTION
J1	19B209288P5	- - - - - JACKS AND RECEPTACLES - - - - - Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 13).
	5496809P17	
J2	19B209288P3	Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
	5496809P17	
J3	19B209288P25	Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
	5496809P17	
P1	19B209288P20	- - - - - PLUGS - - - - - Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 11).
	5496809P17	
P2	19B209288P20	Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 6).
	5496809P17	
P3	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	16B209288P20	
P4	5496809P17	Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
	19B209288P20	
P5	5496809P17	Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 7).
	5496809P18	
P6 thru P8	19C303506P1	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	19B209288P23	
P9	5496809P17	Connector. Includes: Shell. Contact, electrical: female; sim to Molex 1381-T. (Quantity 4).
	19B209288P4	
P12	5496809P18	Connector, phen: 20 contacts.
	19B209288P2	
P13	19A115793P1	Connector. Includes: Shell. Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	19B219534P1	
T81	19A115793P1	Contact, electrical: sim to Malco 2700.
	19B219534P1	
T81	19A130051G1	Plug: 9 pins.
	19A130051G1	
T81	19A130051G1	- - - - - TERMINAL BOARDS - - - - - Plate.
	19A130051G1	

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

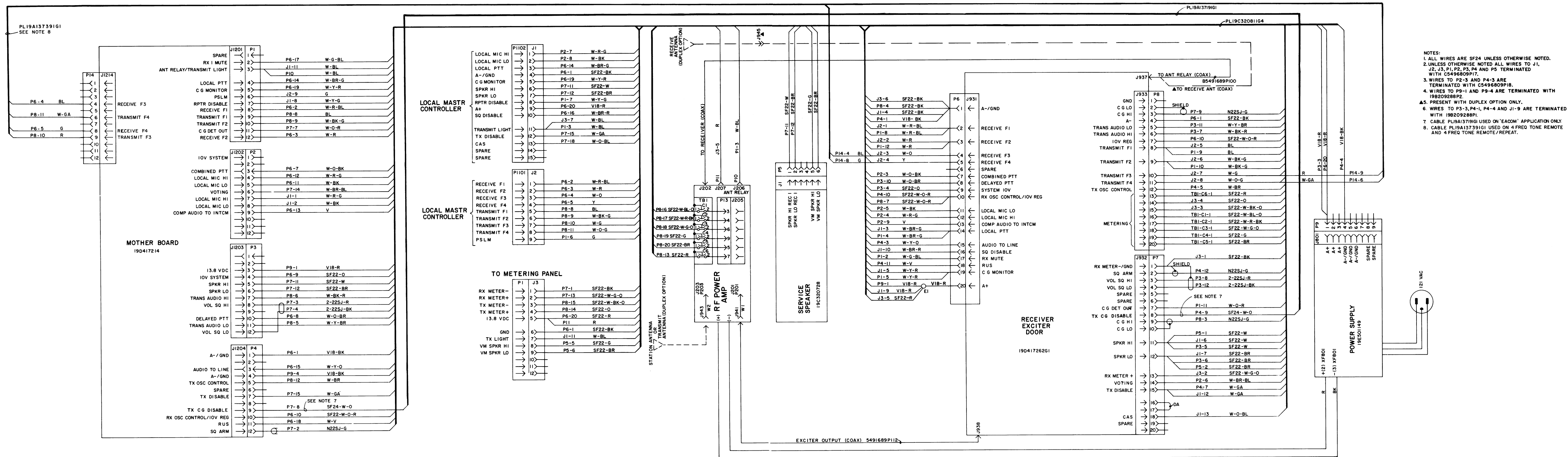


PARTS LIST

LBI-4797
MASTR II INTERMITTENT DUTY
REMOTE CONTROL STATION HARNESS
19C320811G2

SYMBOL	GE PART NO.	DESCRIPTION
J1		- - - - - JACKS AND RECEPTACLES - - - - -
		Connector. Includes:
	19B209288P5	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 13).
J2		Connector. Includes:
		Shell.
	19B209288P3	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
P1		- - - - - PLUGS - - - - -
		Connector. Includes:
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 11).
P2		Connector. Includes:
		Shell.
	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:
		Shell.
	19B209288P20	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
P4		Connector. Includes:
		Shell.
	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:
		Shell.
	19B209288P23	Shell.
	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 2).
P6 thru P8	19C303506P1	Connector, phen: 20 contacts.
P9		Connector. Includes:
		Shell.
	19B209288P4	Shell.
	5496809P18	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	19B209288P2	Contact, electrical: male; sim to Molex 1190-T. (Quantity 1).
P10 and P11	4036634P1	Contact, electrical; sim to AMP 42428-2.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



PARTS LIST

LBI-30073

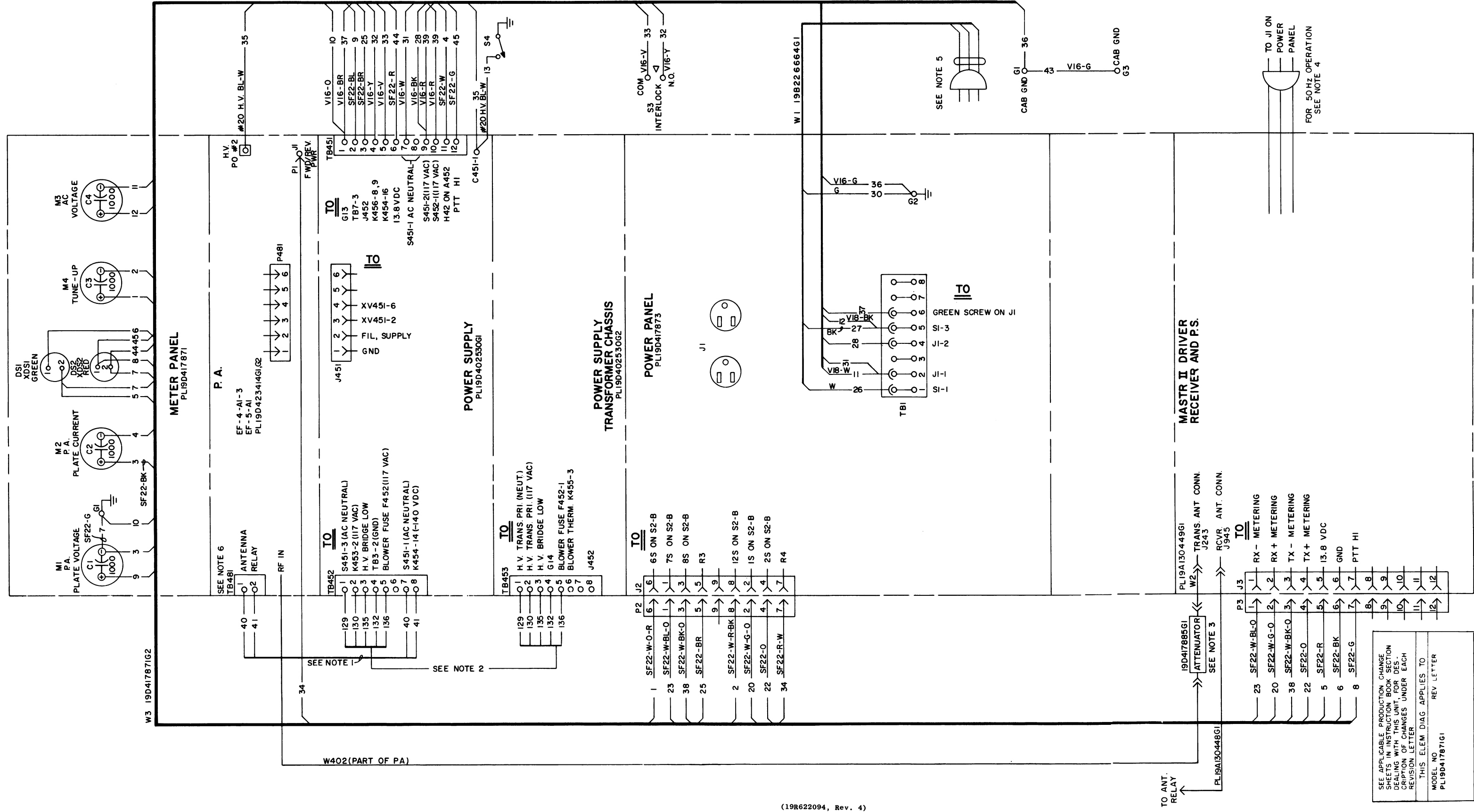
MASTR II INTERMITTENT DUTY
STATION HARNESS WITH METERING
19C320811G5

SYMBOL	GE PART NO.	DESCRIPTION
J1		- - - - - JACKS AND RECEPTACLES - - - - -
	19B209288P5	Connector. Includes:
		Shell.
J2	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 13).
		Connector. Includes:
		Shell.
J3	19B209288P3	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
	5496809P17	Connector. Includes:
		Shell.
P1	19B209288P25	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
	5496809P17	Connector. Includes:
		Shell.
P2		- - - - - PLUGS - - - - -
	19B209288P20	Connector. Includes:
		Shell.
P3	5496809P17	Contact, electrical: female; sim to Molex 1381-T. (Quantity 11).
		Connector. Includes:
		Shell.
P4	19B209288P20	Contact, electrical: female; sim to Molex 1381-T. (Quantity 6).
	5496809P17	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	5496809P18	Connector. Includes:
P5		Shell.
	19B209288P20	Contact, electrical: female; sim to Molex 1381-T. (Quantity 9).
	5496809P17	Connector. Includes:
P6 thru P8		Shell.
	19B209288P20	Contact, electrical: female; sim to Molex 1381-T. (Quantity 7).
	5496809P17	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
P9	5496809P18	Connector. Includes:
		Shell.
	19B209288P23	Contact, electrical: female; sim to Molex 1381-T. (Quantity 2).
P10 and P11	19C303506P1	Connector, phen: 20 contacts.
		Connector. Includes:
		Shell.
P13	19B209288P4	Contact, electrical: male; sim to Molex 1380-T. (Quantity 1).
	5496809P18	Contact, electrical: male; sim to Molex 1190-T. (Quantity 1).
	19B209288P2	Contact, electrical; sim to AMP 42428-2.
TB1	4036634P1	Connector, plug: 9 male contacts.
		- - - - - TERMINAL BOARDS - - - - -
	19A130051G1	Plate.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	GE PART NO.	DESCRIPTION
C1 thru C4	5494481P11	----- CAPACITORS ----- Ceramic disc: 1000 pf ±20%, 1000 VDCW; sim to RMC Type JF Discap.
DS1 and DS2	19C307037P35	----- INDICATING DEVICES ----- Lamp, incandescent: 14.00 v; sim to GE 382.
M1	19A134035P4	----- METERS ----- Meter, panel: 1.0 MADC movement; sim to GE 50-251300PAPALJBM.
M2	19A134035P3	Meter, panel: 500 MADC movement; sim to GE 50-251300KMKM1JBL.
M3	19A134035P2	Meter, panel: 100 ohm/volt mechanism, AC movement; sim to GE 50-251344PZP21JAD.
M4	19A134035P1	Meter, panel: ~10/0/50 µa DC movement; sim to GE 50251300CMCM1JAA.
P1	7165458P2	----- PLUGS ----- Tip plug, solderless: red; sim to E.F. Johnson 105-302.
P2	19B209288P4 5496809P18	Connector. Includes: Shell. Connector: male contact: sim to Molex Products 1380-T.
P3	19B209288P24 5496809P18	Connector. Includes: Shell. Connector: male contact: sim to Molex Products 1380-T.
S3	5490346P1	----- SWITCHES ----- Push, door interlock: SPDT, 10 amps at 125 or 240 VAC, 0.5 amp at 125 VDC or 0.25 amp at 250 VDC; sim to Micro Switch Type 2AC5.
XDS1 and XDS2	19B209509P1	----- SOCKETS ----- Lampholder: sim to Dialco 183-9730-14-602.
		HARNESS ASSEMBLY 19D417871G2 (Includes P1-P3, and S3)
		----- MISCELLANEOUS -----
NP279836		Nameplate.
19B209509P2		Lens, red. (Used with DS2).
19B209509P3		Lens, green. (Used with DS1).
4029851P7		Cable clamp, nylon: sim to Weckesser 3/8-4-128.
19A130299P1		Support. (Used with cable clamps).
4033714P2		Terminal. (Used on terminals of M1-M4).
19B209268P106		Terminal. (PO No. 2).
19B209268P110		Terminal. (Used with S3).
19B209268P101		Terminal. (Used with TB1 and TB451).
19B209260P26		Terminal, solderless. (Located at C451-1).
7491823P7		Terminal, solderless: wire size No. 16-14 AWG. (Located on wires 7 and 10 at cabinet ground).
7491823P8		Terminal, solderless: wire size No. 16-14 AWG. (Located on wire 36 ground, and both ends of wire 43).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

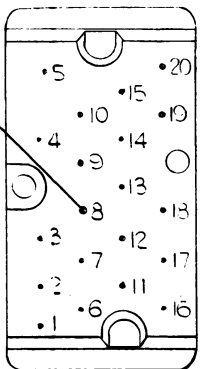
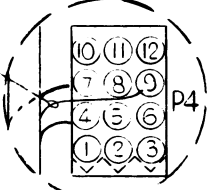
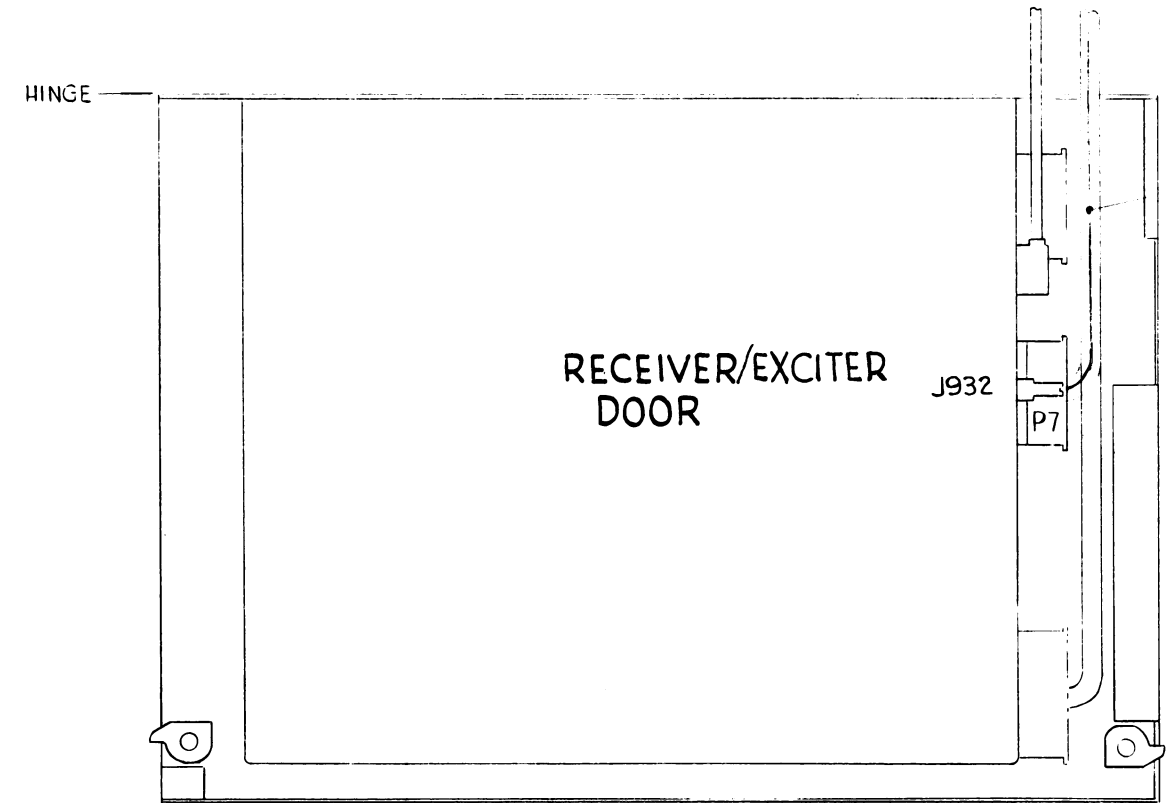
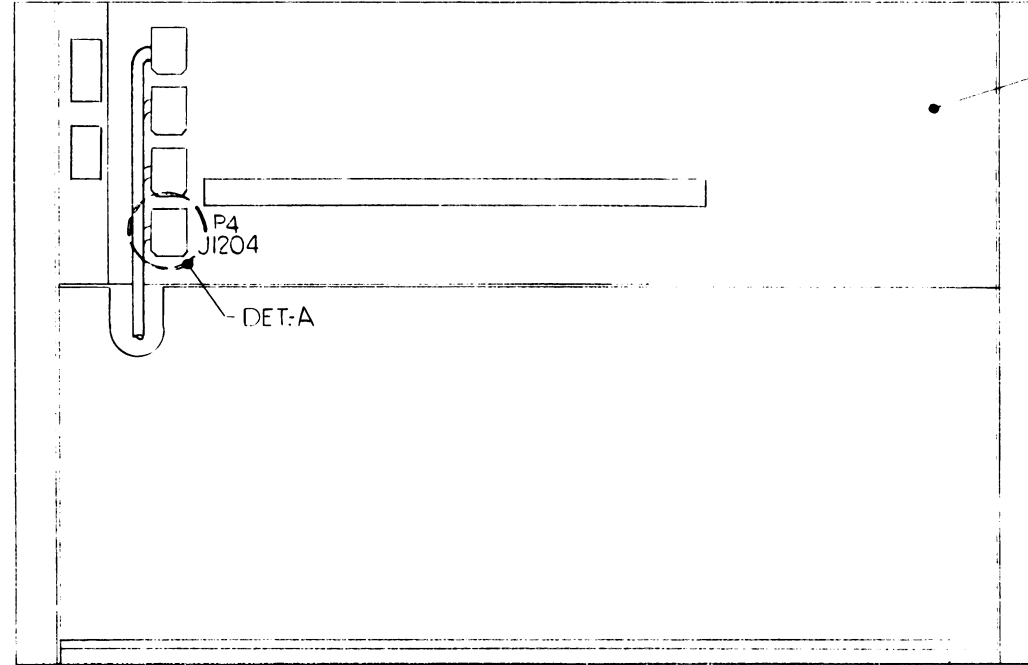
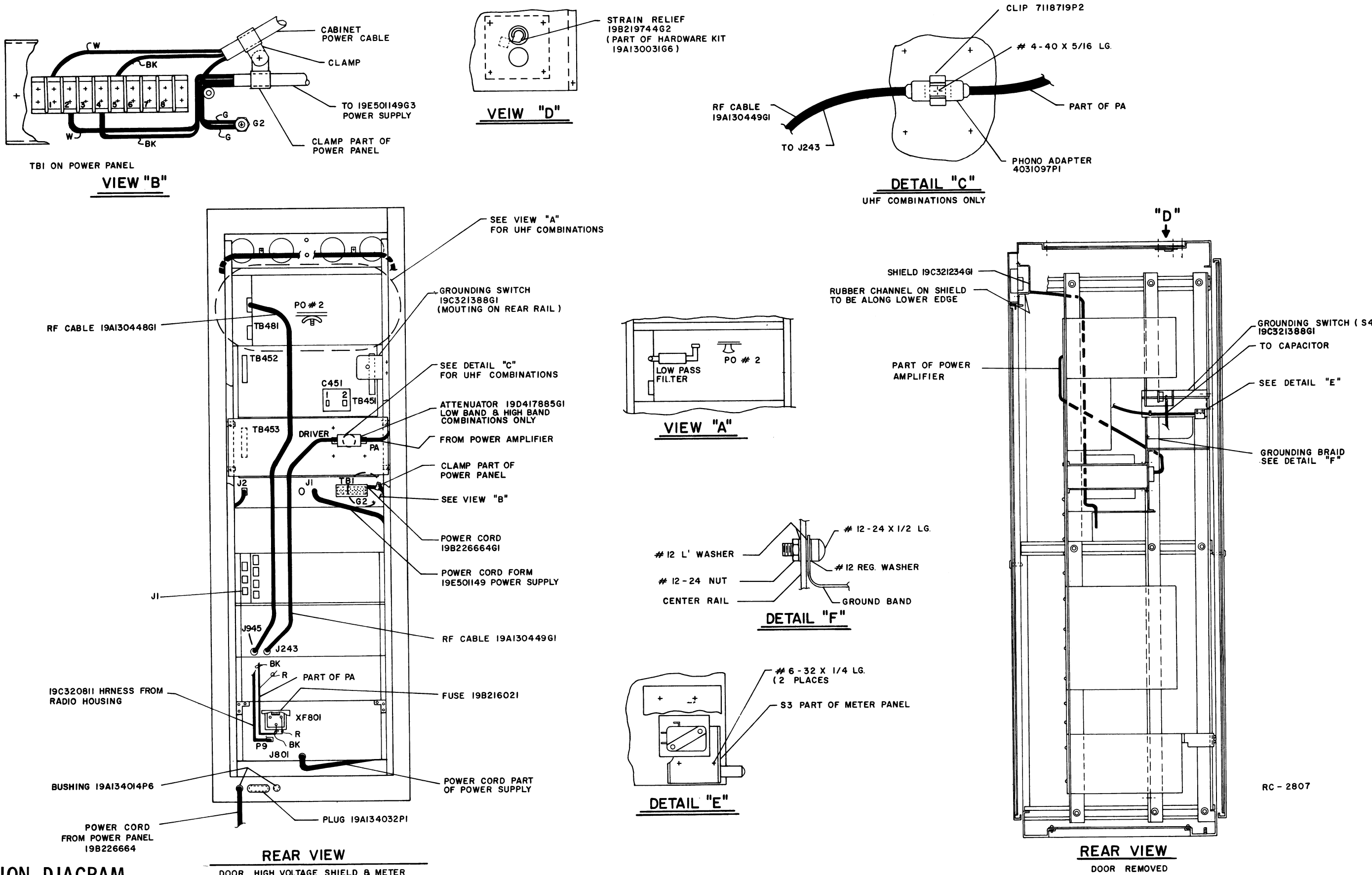


INTERCONNECTION DIAGRAM

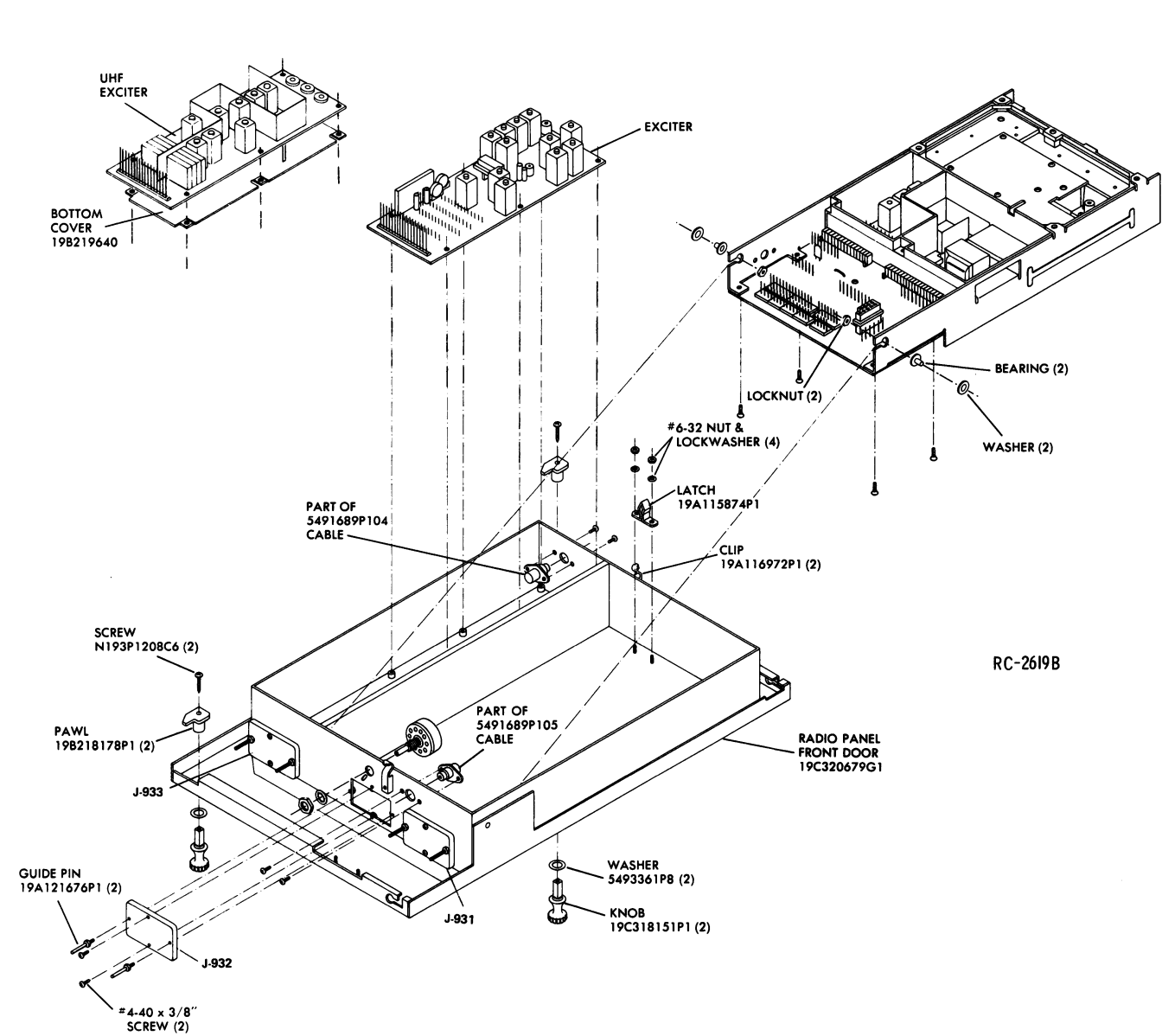
HIGH POWER OVERLAY HARNESS 19D417871G2
AND METER PANEL PARTS LIST

INSTALLATION DIAGRAM

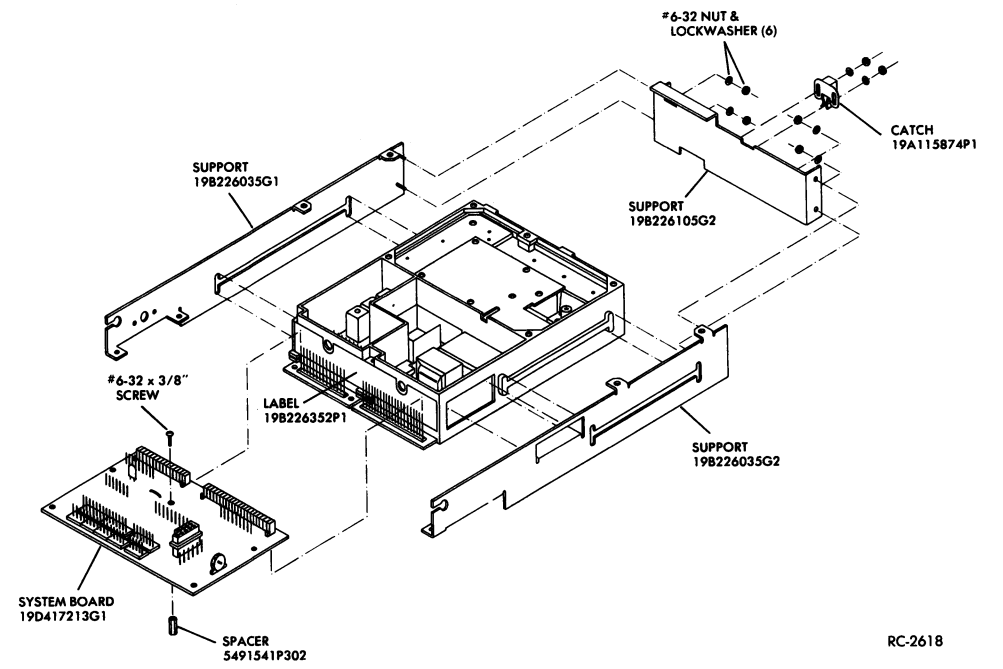
HIGH POWER CABLING AND
EACOM SYSTEMS OVERLAY HARNESS



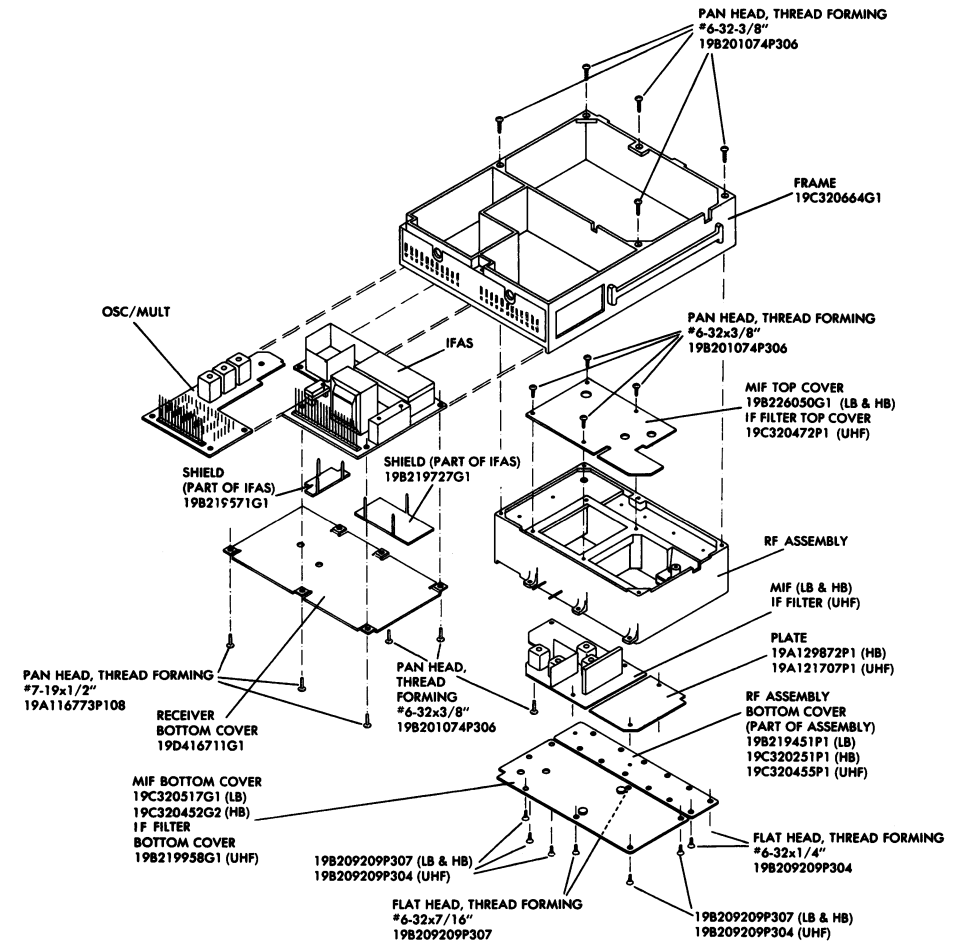
- THESE INSTRUCTIONS COVER THE INSTALLATION OF THE 19A137191 OVERLAY HARNESS ON THE 19C320811 SYSTEM HARNESS IN EACOM APPLICATIONS.
1. INSERT TERMINAL OF OVERLAY HARNESS IN CAVITY NUMBER 9 OF P4 ON MOTHER BOARD.
 2. ROUTE OVERLAY HARNESS ALONG SYSTEM HARNESS TO P7 ON RECEIVER EXCITER DOOR. SOLDER OVERLAY HARNESS TO P7-8.
 3. SPOT TIE OVERLAY HARNESS IN PLACE.



RC-2619B

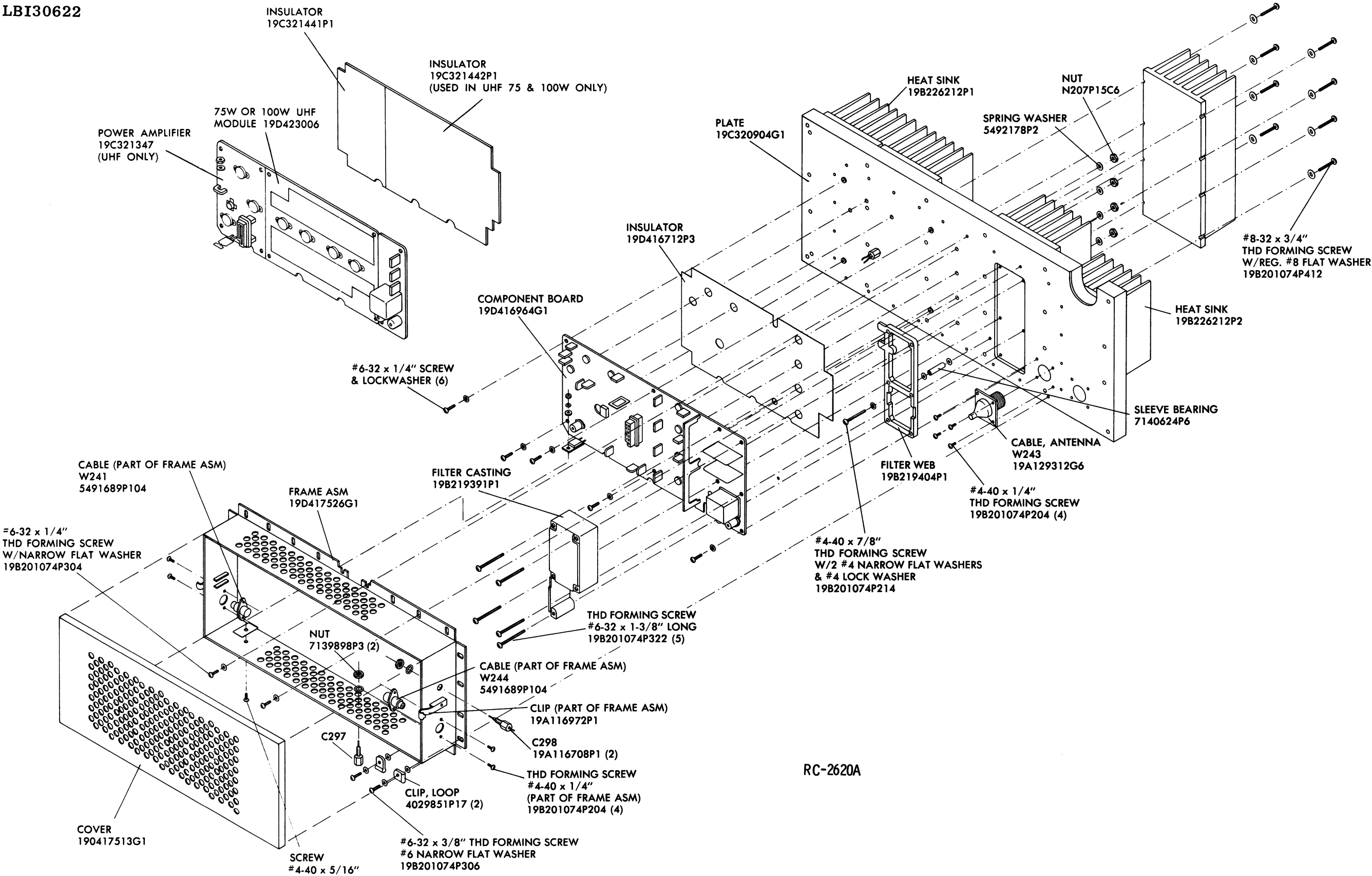


RC-2618



RC-2762A

MECHANICAL PARTS BREAKDOWN
RADIO PANEL FRONT DOOR



MECHANICAL PARTS BREAKDOWN

TRANSMITTER POWER AMPLIFIER/DRIVER

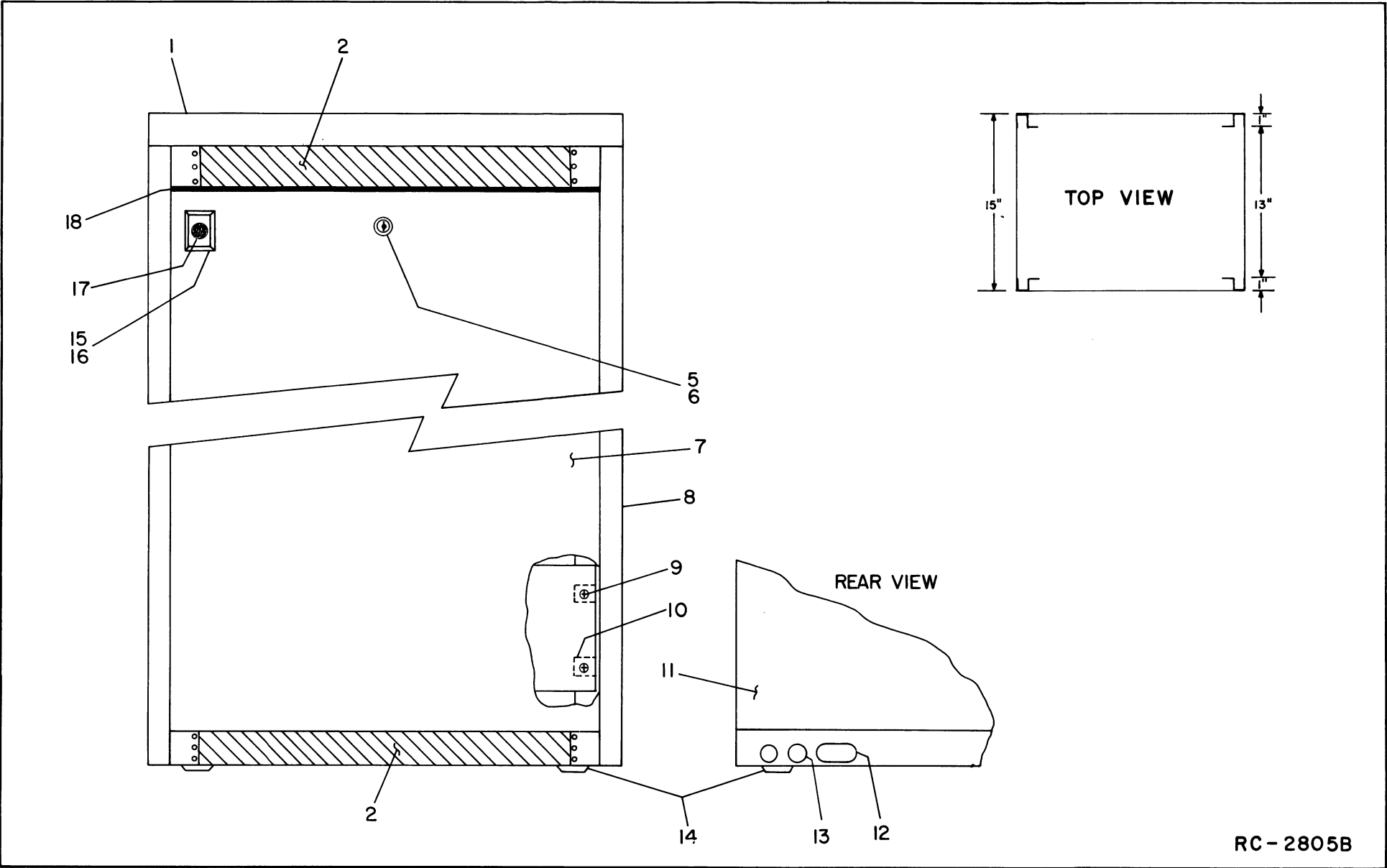
PARTS LIST

LBI-4975C

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

LBI30622

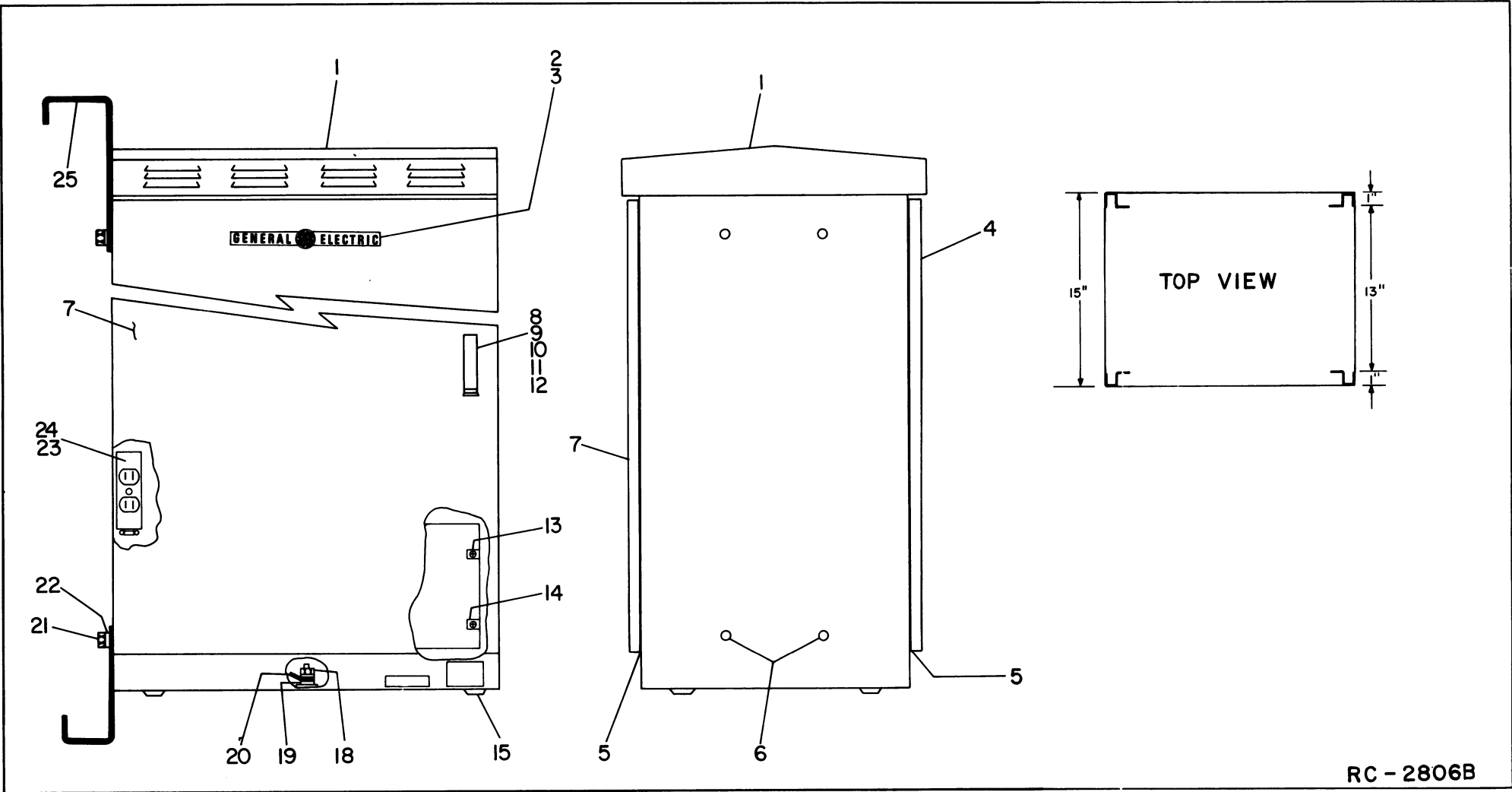
SYMBOL	GE PART NO.	DESCRIPTION
30 INCH CABINET		
1	19C320655P1	Top.
2	19C320654P1	Screen.
3		(Not Used).
4		(Not Used).
5	5491682P23	Lock. Yale and Towne F6557DX1.
6	5491682P4	Key. Yale and Towne BF-10A.
7	19C320744G7	Front door.
8	19D417231G3	Cabinet. (LESS DOORS). (Includes items 1 and 2).
9	19A134011P1	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).



MECHANICAL PARTS BREAKDOWN

DESK MATE STATION CABINET

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



MECHANICAL PARTS BREAKDOWN

POLE MOUNT STATION CABINET

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

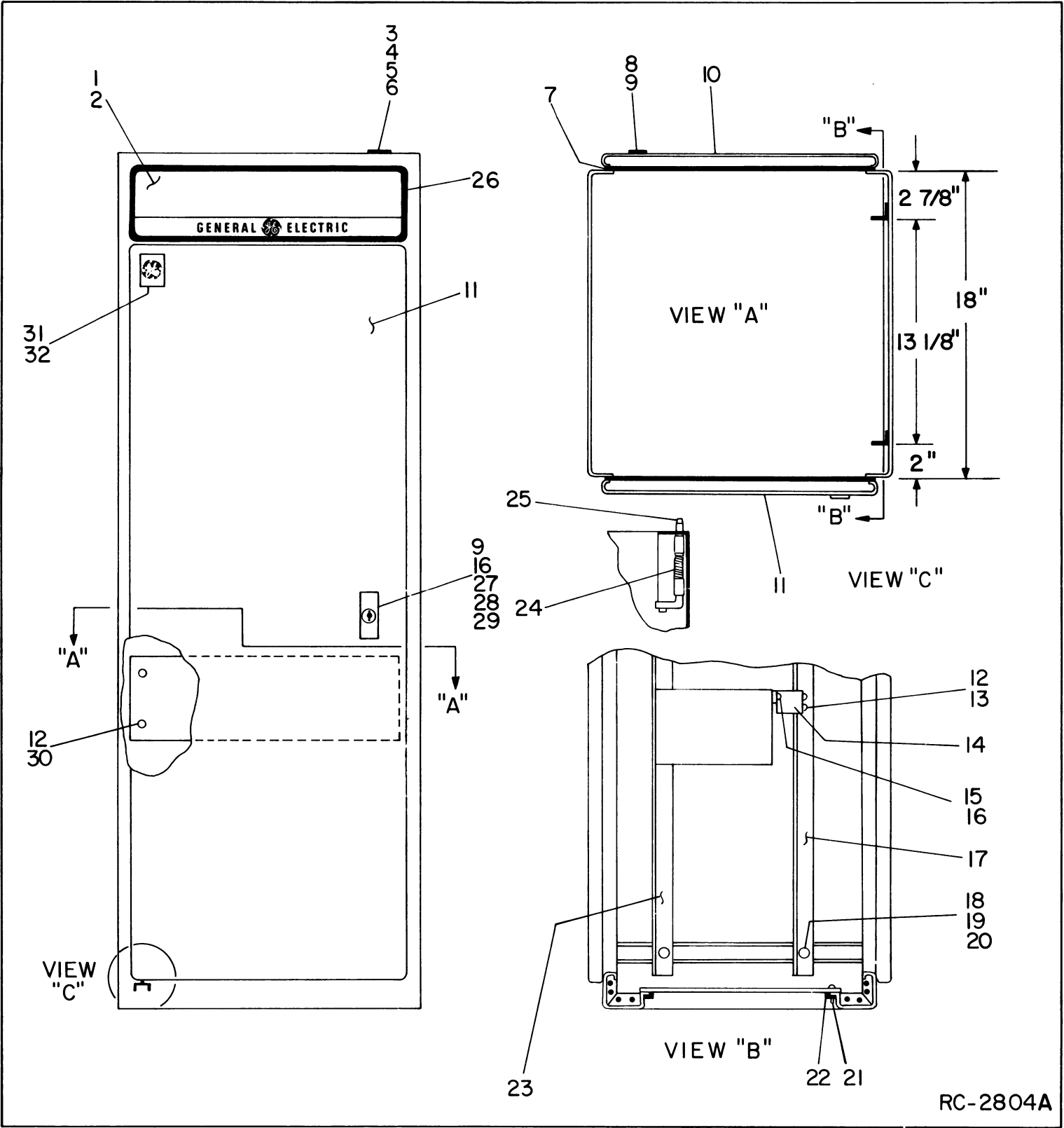
LBI-4977B

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.

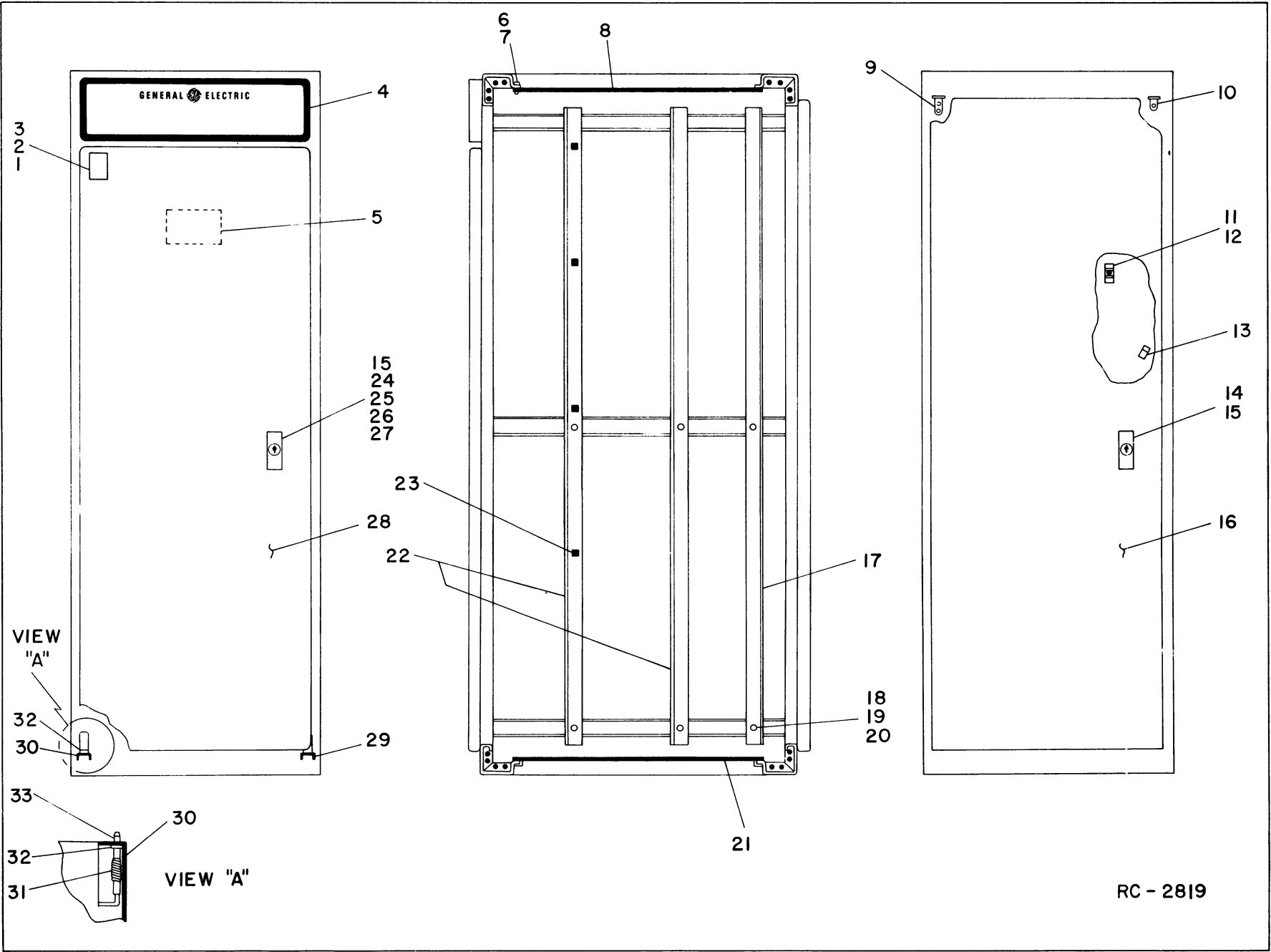
*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

LBI30622



MECHANICAL PARTS BREAKDOWN

FLOOR MOUNT STATION CABINET



MECHANICAL PARTS BREAKDOWN

HIGH POWER STATION CABINET

34 Issue 1

PARTS LIST

LBI-4970

MASTR II HIGH POWER STATION

(SEE RC-2819)

SYMBOL	GE PART NO.	DESCRIPTION
1	NP275660	Nameplate. (GE monogram).
2	19C311298P1	Frame. (Used with monogram).
3	4031053P7	Nut, sheet spring; sim to Tinnerman C12046-012-67.
4	19B226092G1	Frame.
5	19A130126G1	Card holder. (FCC license).
6	N80P16006C6	Screw, phillips: No. 10-32 x 3/8.
7	7160861P5	Nut, sheet spring: sim to Tinnerman C1505-1032-157.
8	19B226559P2	Top cover.
9	19A129903P1	Door support.
10	19A129903P2	Door support.
11	7118719P2	Clip, spring tension: sim to Prestole E-50001-041.
12	N80P9005C6	Screw, phillips: No. 4-40 x 5/16.
13	5491480P4	Clamp: sim to Adel Precision Products Corp. Type 754E. (Cabinet Power Cable).
14	19B209539P2	Lock, rim: sim to Chicago Lock Co. No. 1703-6T.
15	19B209539P3	Key: No. 1000 GE.
16	19C320756G2	Rear door.
17	19B226094P2	Mounting bar.
18	N80P21012PC6	Screw, phillips: No. 1/4-20 x 3/4.
19	N402P41C6	Flatwasher: 1/4 inch.
20	N403P25C6	Lockwasher, external tooth: 1/4 inch.
21	19B226559P1	Bottom cover.
22	19B226094P1	Mounting bar.
23	19A116496P1	Cable clamp.
24	19B209539P1	Lock: sim to Chicago Lock Co. No. 4260-1.
25	N80P16007C6	Screw, phillips: No. 10-32 x 7/16.
26	N210P16C6	Hexnut: No. 10-32.
27	N403P19C6	Lockwasher, external tooth: No. 10.
28	19C320756G1	Front door.
29	19B226572G2	Door support.
30	19B226572G1	Door support.
31	19A129902P1	Spring.
32	4035237P1	Washer.
33	19B226088P1	Hinge pin.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

(Service Speakers for MASTR II Stations, EACOM
Stations and IMTS Stations)

The 19C320728G1 Service Speaker has been replaced by 19C320728G2.
An Outline Diagram, Schematic Diagram, and Parts List for the new
Service Speaker are provided with this addendum. The Receiver
Initial Adjustment for the Volume Control remains the same except
for the level in Step 3, which is changed from 2.7 Volts RMS to
6.3 Volts RMS. The CAUTION is changed as follows:

CAUTION

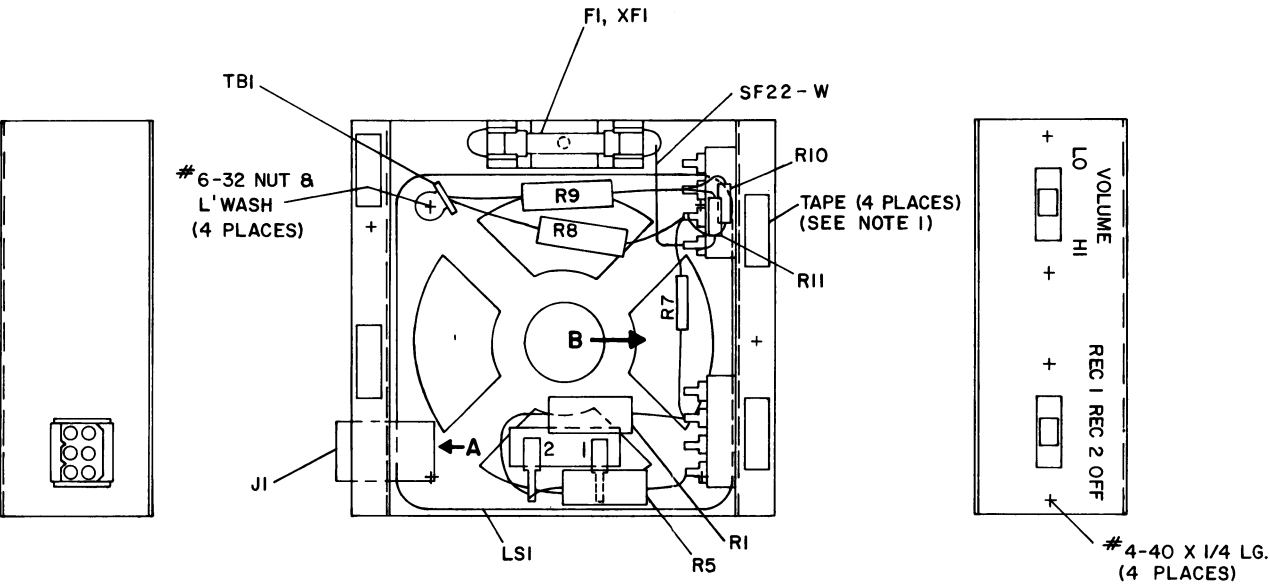
Adjustment of VOLUME Control to settings higher than
instructed in the INITIAL ADJUSTMENT will result in
blowing the service speaker fuse or damage the Local
Controller Speaker.

Step 2 of the station SQUELCH Control Adjustment is removed.

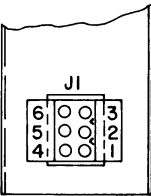
MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

GENERAL  ELECTRIC

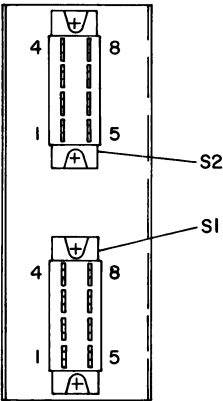
OUTLINE DIAGRAM



NOTES:
1. INSTALL TAPE ALONG FLANGE, ONE ON EACH SIDE
OF MOUNTING HOLES.



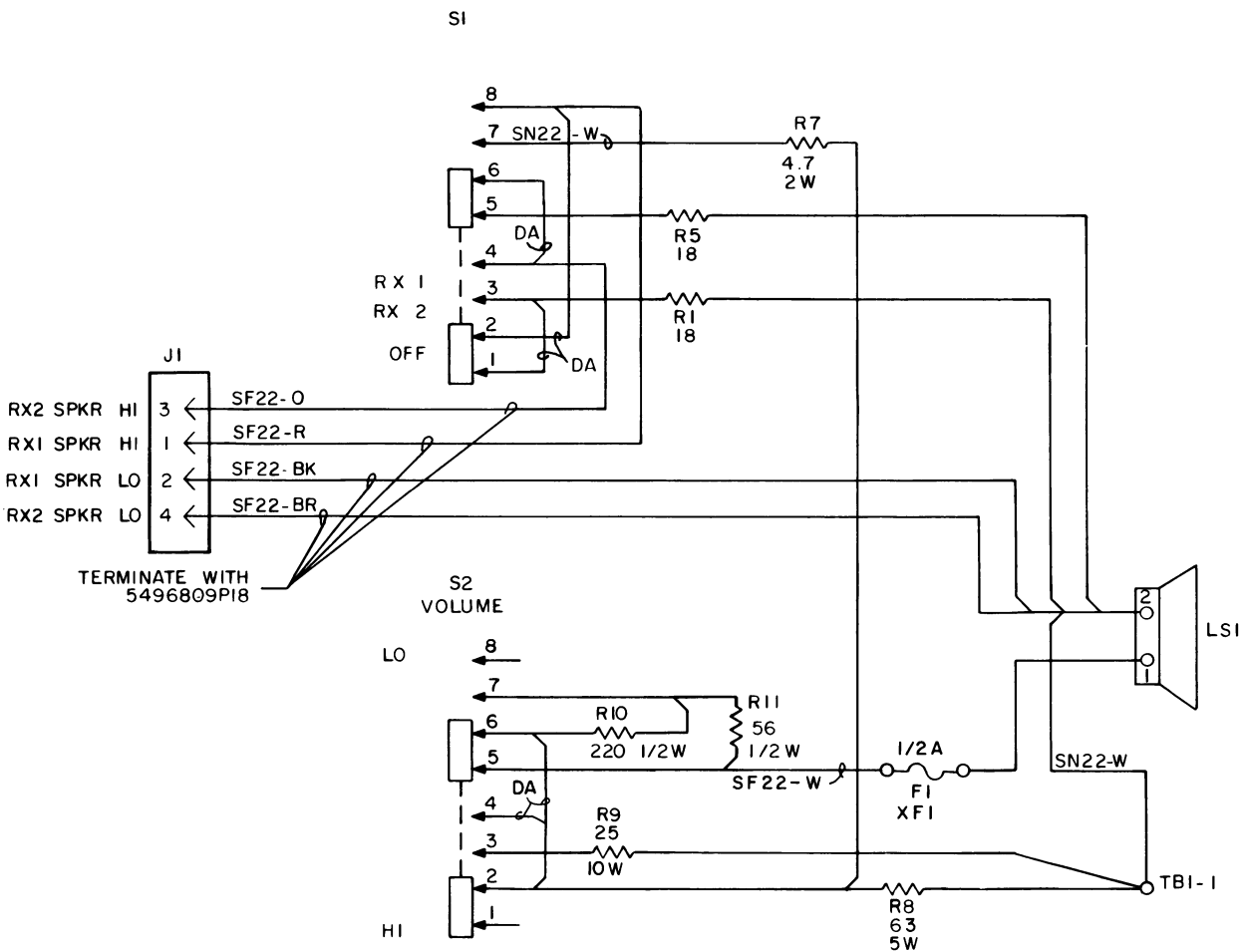
VIEW A



VIEW B

(19C328482, Rev. 1)

SCHEMATIC DIAGRAM



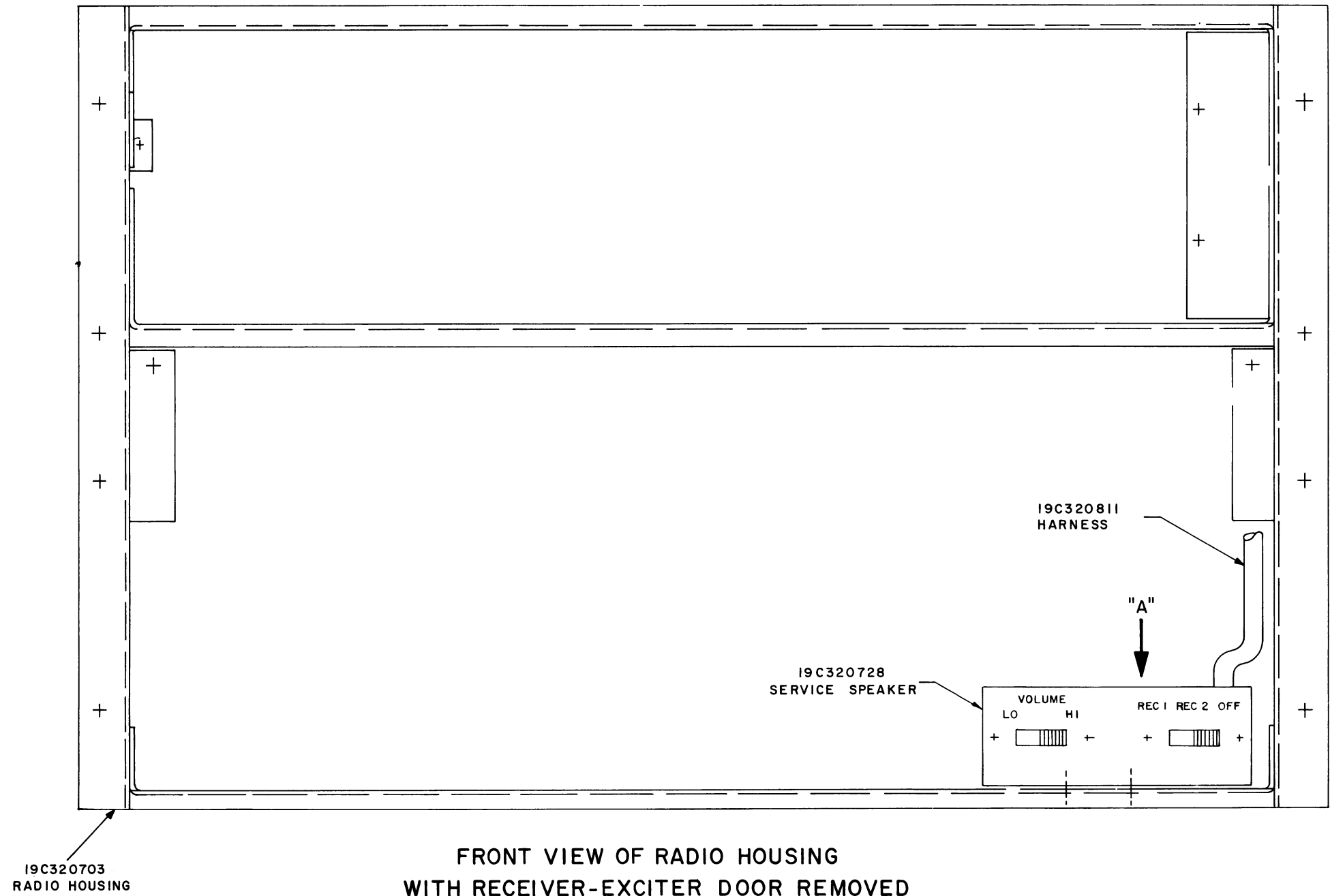
SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.	
THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PL19C320728G2	E

ALL RESISTORS ARE .5 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG=1,000,000 OHMS. CAPACITOR VALUES IN PICO FARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF= MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS.

(19C320731, Rev. 7)

SERVICE SHEET

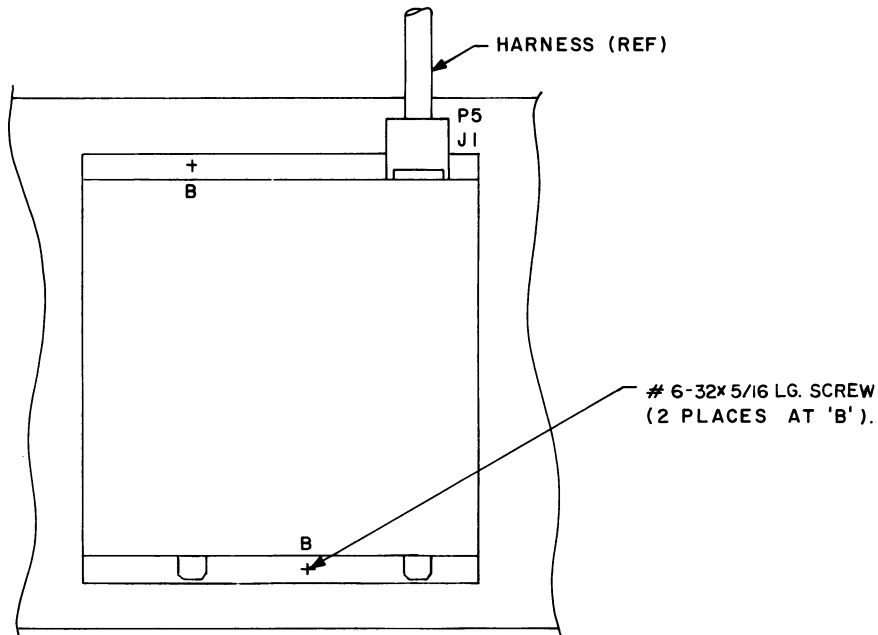
SERVICE SPEAKER 19C320728G2



THESE INSTRUCTIONS COVER THE INSTALLATION OF THE 19C320728 SERVICE SPEAKER TO THE 19C320703 RADIO HOUSING.

INSTRUCTIONS:

1. MOUNT 19C320728 (SERVICE SPEAKER) TO 19C320703 (RADIO HOUSING) AS SHOWN. USE #6-32 x 5/16 LG SCREW, L' WASHERS & NUTS SUPPLIED.
2. CONNECT P5 OF 19C320811 (HARNESS) WITH J1 OF 19C320728 (SERVICE SPEAKER).



VIEW AT "A"
(PARTIAL)

(19D429499, Rev. 0)

INSTALLATION INSTRUCTIONS

SERVICE SPEAKER

ADDENDUM TO LBI4787E, LBI4788E,
LBI4964B, LBI30622 & LBI8877

PARTS LIST

LBI4816B

SERVICE SPEAKER
19C320728G2

SYMBOL	GE PART NO.	DESCRIPTION
F1*	1R16P1	----- FUSES ----- Quick blowing: 1/2 amp 250 v; sim to Littelfuse 312.500 or Bussmann AGC-1/2. In REV D:
	1R16P14	Quick blowing: 3/8 amp 250 v; sim to Littelfuse 312.375 or Bussmann AGC-3/8. Added by REV D.
J1		----- JACKS AND RECEPTACLES ----- Connector. Includes:
	19B209288P22 5496809P18	Shell. Contact, electrical: male; sim to Molex 1380-T.
LS1	19A115964P1	----- LOUDSPEAKERS ----- Permanent magnet: 3.5 inch, 18 ohms $\pm 10\%$ imp, 15 to 19 ohms $\pm 20\%$ DC res, resonant frequency 290 Hz; sfm to Oaktron S-9847.
		----- RESISTORS -----
R1	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR.
R2*	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. Deleted by REV D.
R3*	19B209490P1	Variable, wirewound: 35 ohms $\pm 20\%$, 2.25 w; sim to CTS Type 118. Deleted by REV D.
R4*	5493035P52	Wirewound: 8.2 ohms $\pm 10\%$, 5 w; sim to Hamilton Hall Type HR. Deleted by REV C.
R5*	5493035P53	Wirewound: 18 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. Added by REV B.
R6*	5493035P27	Wirewound: 10 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. Added by REV C. Deleted by REV D.
R7*	19B209022P31	Wirewound: 4.7 ohms $\pm 5\%$, 2 w; sim to IRC Type BWH. Added by REV D.
R8*	5493035P17	Wirewound: 63 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type HR. In REV D:
	3R78P620J	Composition: 62 ohms $\pm 5\%$, 1 w. Added by REV D.
R9*	5493035P44	Wirewound: 25 ohms, $\pm 5\%$, 10 w. sim to Hamilton Hall Type HR. In REV D:
	19B209022P48	Wirewound: 24 ohms $\pm 5\%$, 2 w; sim to IRC Type BWH. Added by REV D.
R10*	3R77P221J	Composition: 220 ohms $\pm 5\%$, 1/2 w. Added by REV D.
R11*	3R77P560J	Composition: 56 ohms $\pm 5\%$, 1/2 w. Added by REV D.
		----- SWITCHES -----
S1	19B209261P5	Slide: DPTT, 2 poles, 3 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11D1033B.
S2*	19B209261P5	Slide: DPTT, 2 poles, 3 positions, .5 amp VDC or 3 amps VAC at 125 v; sim to Switchcraft 11D1033B. Added by REV D.
		----- TERMINAL BOARDS -----
TB1*	7775500P44	Phen: 2 terminals. Added by REV D.
		----- SOCKETS -----
XF1*	7141008P1	Fuseholder: 30 amps at 125 v; sim to Bussman 2863. Added by REV D.

SYMBOL	GE PART NO.	DESCRIPTION
		----- MISCELLANEOUS -----
	4031543P2	Knob. (Used with R3).
	7115130P9	Lockwasher; sim to Shakeproof 1220-2. (Used with R3).
	7165075P2	Hex nut, brass: No. 3/8-32. (Used with R3).
	4032480P1	Nut, sheet spring: sim to Vector Electronic Co. No. 440. (Secures S1, S2).
	N80P9004C6	Machine, screw: No. 4-40 x 1/4. (Secures S1, S2)
	N80P13005C6	Machine, screw: No. 6-32 x 5/16. (Secures Service speaker).
	7141225P3	Hex nut: No. 6-32. (Secures Service Speaker).
	N404P13C6	Lockwasher, internal tooth: No. 6. (Secures Service Speaker).

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 eliminate factory wiring errors caused by duplication of wire colors.

Change wire connection on:
J1-1 from SF22-0 to SF22-R
J1-2 from SF22-BR to SF22-BK
(No Parts List changes)

REV. B - To provide load for receiver when service speaker switch is in "OFF" position. Added R5 and DA Jumper between S1-1 and S1-3.

REV. C - To prevent oscillation and to protect R3 from overload. Deleted R4 and added R6.

REV. D - To prevent component damage due to excessive voltage. Deleted R2, R3 and R6. Added F1, XF1, R7-11, S2 and TB1.

REV. E - To protect speaker from excessive drive. Changed F1, R8 and R9.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES