

 **MOBILE RADIO**

MASTR

PROGRESS LINE

MAINTENANCE MANUAL



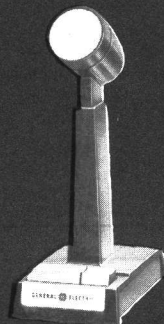
**DESK MATE
STATION**

**TWO-WAY FM
DESK-MATE
STATION
COMBINATION**

**LOCAL / TONE REMOTE
LOCAL / DC REMOTE**

LBI-4522B

DF-9032



**DESK
MICROPHONE**

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.

EQUIPMENT INDEX

EQUIPMENT	TYPE OR MODEL NUMBER
Transmitter	ET-55-A through ET-60-H
Receiver	ET-39-A through ER-42-L
Desk Mate Cabinet	7354211G4
Station Power Supply	EP-38-A
Antenna Relay (mounts on EP-38-A)	19A121260G1
Control Shelf	19D416725G1
Local/Tone Remote Control	
Control Shelf System Board (Back Plane)	19D416721G1
Audio Board	19D416667G3, G4
Intercom Board	19D416758G1
SECUR-IT Tone Board	19D416728G1
Transmitter Control Board	19D416660G1, G4
Local/DC Remote Control	
Control Shelf System Board (Back Plane)	19D416721G2
Control Shelf Blank Panel	19D320228P1
Audio Board	19D416667G3, G4
Intercom Board	19D416758G1
DC Control Board	19D416661G1--G4
Extender Board	19D416760G1
Local Control Panel	19D416799G1
Multi-Frequency Switches	19A121629G1--G5
Microphone (with Channel Guard)	4EM28B10
(without Channel Guard)	4EM28A10
117-VAC Power Cable	7491206P1
Alignment Tools (hex slug type)	4038831P2
(slotted screw type)	4033530G2

SPECIFICATIONS*

DIMENSIONS (H x W x D)	30-3/8" x 14" x 25-1/2"
WEIGHT	Approximately 112 pounds
DUTY CYCLE (Transmit & Receive)	Continuous
INPUT VOLTAGE	117 VAC, $\pm 10\%$, 50/60 Hz
INPUT POWER	Transmit: 1.66 amps max., 195 Watts Receive: 0.8 amps max., 95 Watts
TEMPERATURE RANGE	-30°C (-22°F) to +60°C (+140°F)

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

COMBINATION NOMENCLATURE

1st Digit	2nd Digit	3rd Digit	4th Digit	5th Digit	6th Digit	7th Digit	8th & 9th Digits
Mechanical Package	Operating Voltage	RF Power Output Range	Channel Spacing	Control	Number of Freq.	Options	Frequency Range
D Desk Mate Station	T 117 VAC	5 16—38 Watts	4 20 kHz	K Local/DC Remote Control Station	A 1-Freq. T 1-Freq. R	S Standard	11 25—33 MHz
		6 38—64 Watts	6 30 kHz	J Local/Tone Remote Control Station	B 2-Freq. T 1-Freq. R	N Noise Blanker	22 33—42 MHz
		7 64—128 Watts	7 40 kHz		C 2-Freq. T 2-Freq. R	U Channel Guard	33 42—50 MHz
			8 50 kHz		D 1-Freq. T 2-Freq. R	W Noise Blanker & Channel Guard	44 66—77 MHz
			9 60 kHz		E 3-Freq. T 3-Freq. R	P UHS Receiver	45 77—88 MHz
					F 4-Freq. T 4-Freq. R	G UHS Receiver & Channel Guard	55 132—150.8 MHz
							66 150.8—174 MHz
							77 406—420 MHz
							88 450—470 MHz
							89 470—494 MHz
							91 494—512 MHz

DESCRIPTION

General Electric MASTR Progress Line Desk Mate stations are attractively styled base stations that are designed to meet the most stringent requirements in the field of Two-Way FM Radio.

The Desk Mate cabinet can be located on either side of a desk to provide additional working space. All operating controls are conveniently located on the control panel on the front of the cabinet. Both the transmitter exciter and the receiver are fully transistorized. Silicon transistors are used throughout for added reliability.

SERVICING

Both side panels on the station cabinet can be easily removed to gain access to the transmitter, receiver and power supply. The transmitter and receiver modules are equipped with centralized metering jacks, and are mounted on swingout chassis for simplified alignment and troubleshooting.

The transmitter and receiver modules may be used interchangeably in mobile and

station installations. No modifications are required when transferring the units from one type of operation to another.

The station may also be equipped with an optional built-in Station Test Metering Panel to facilitate servicing.

TRANSMITTER

The transmitter assembly consists of the transistorized exciter board and the power amplifier section. The standard transmitter may be equipped with:

- One through four frequencies
- Channel Guard (tone squelch)

RECEIVER

The fully transistorized receiver is completely contained in an aluminum casting, which provides excellent electrical shielding and reduces the effects of vibration. The standard receiver may be equipped with:

- One through four frequencies
- Channel Guard (tone squelch)
- Noise Blanker
- RF Preamplifier

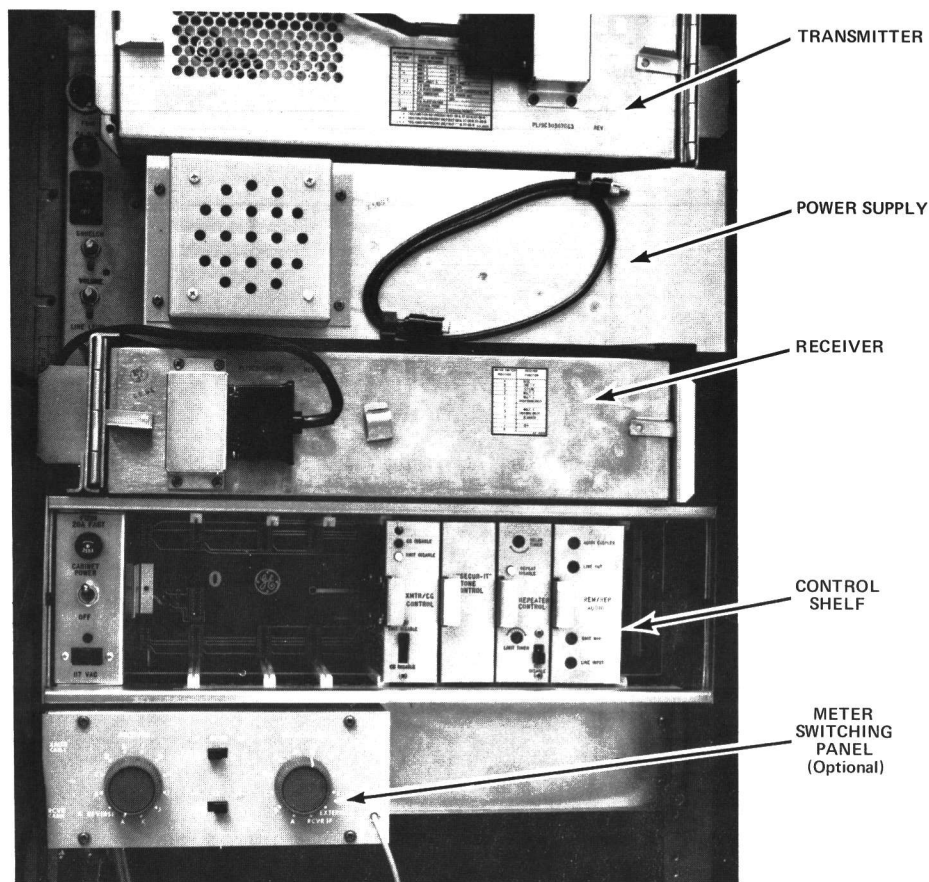


Figure 1 - Typical Station Equipment Arrangement

POWER SUPPLIES

Station Power Supply Type EP-38-A provides operating voltages for the transmitter, receiver and control shelf. In addition to plate, screen and bias voltages for the transmitter, the power supply provides:

- Regulated -20 Volts for the transistorized transmitter exciter-board.
- Regulated +10 Volts for the receiver, transmitter Channel Guard, and Control Shelf.
- Regulated +12.6 Volts for transmitter filaments, receiver audio, relays, and pilot lights.

Antenna Switching Relays

The antenna switching relay (K502) is mounted on the power supply. Keying the transmitter energizes the relay, which connects the transmitter output to the antenna. When the transmitter is unkeyed, K502 is de-energized and the receiver is connected to the antenna.

Receiver Power Supply (Optional)

Receiver power supply Type EP-39-A is provided when the Desk Mate Station is equipped with a second receiver.

LOCAL CONTROL PANEL

The Local Control Panel is conveniently located on the front of the Desk Mate Station and contains all operating controls for the station.

The VOLUME control (R901), SQUELCH control (R902), ON-OFF switch (S901), INTERCOM-SUPV switch (S903) and indicator lights are located on the front of the Control Panel below the speaker grille. Two additional mounting holes are provided for option switches. The loudspeaker and AC connection terminal board are mounted on the rear of the Control Panel.

Multi-Frequency Switch (S902)

In two-, three- or four-frequency units, a multi-frequency switch is located on the Control Panel for selecting the desired frequency. The switch connects +10 Volts to the selected receiver oscillator switching diode, and connects the transmitter switching diode to ground. The unit will then operate on the frequency determined by each of the crystal-controlled oscillators.

Intercom-Supervisory Switch (S903)

Intercom-Supervisory Switch S903 is a two-position toggle switch located in the transmitter keying circuit. When S903 is in the INTERCOM-SUPV position, transmitter keying is disabled. This prevents station operation by associated Transistorized Control Consoles (giving the station supervisory control), and permits intercom operation between the station and the consoles. The normal (down) position of S903 permits normal remote control station operation.

Optional Handset and Hookswitch

Handset Model 4EM26C10 and Hookswitch 19B204867G2 are optional equipment for MASTR Desk Mate Local/Remote Control Stations. With the handset on the hookswitch, audio can be heard through speaker LS901. When the handset is lifted off the hookswitch, the normally closed contacts of S1 in the hookswitch open, muting the speaker. The call can be heard in the handset earpiece. The push-to-talk button on the handset is pressed to transmit a message.

The handset plug connects to J901 located on the rear grille of the station cabinet.

CONTROL SHELF ASSEMBLY

Control Shelf 19D416725G1 contains the System Board, the AC input circuit and plug-in printed wire modules with solid state circuitry for up to six DC Remote Control functions and up to twelve Tone Remote Control functions. The Control Shelf also contains the Intercom Module.

AC Input

The 117-VAC input is connected directly to TB1202-1 and -2 on the Control Shelf. Power switch S1201 is wired in series with the Local Control Panel power switch S901. To operate the station, S1201 must always be in the ON position as both S1201 and S901 are in series. Turning off either switch will cut off the power to the station. When both switches are in the ON position the green pilot light will be illuminated.

An optional 220/110 Volt AC Stepdown Transformer Kit is available for use when the input line voltage is 220 Volts AC.

WARNING

117 VAC is always present at terminals 1 and 2 of TB1202, even when S1201 is in the OFF position. Always use care when servicing the cabinet power module on the Control Shelf.

Telephone Lines

Instructions for connecting the Remote Station to the telephone line(s) are included in the Maintenance Manual LBI-4490 for the Control Shelf.

INITIAL ADJUSTMENT

After the MASTR Desk Mate Station has been installed as described in the Installation Manual, the transmitter, receiver, power supply and Remote Control Panel must be adjusted by an electronics technician who holds a 1st or 2nd Class FCC Radio-telephone or Radiotelegraph license before the station can be placed in operation.

TEST EQUIPMENT REQUIRED

The following test equipment is required for the adjustment of both transmitter and receiver:

1. A tuning tool and a screwdriver.
2. GE Test Meter Type EX-3-A, Station Test Metering Panel (Optional), or a 20,000 ohms-per-Volt multimeter.
3. A signal source operating at the system frequency (preferably the transmitter which will normally be monitored by the receiver).

TRANSMITTER ADJUSTMENT

The initial adjustment for the transmitter includes:

- Loading the power amplifier into the antenna.
- Checking the frequency and modulation.

For the Initial Adjustment procedure, refer to the ALIGNMENT PROCEDURE in the MAINTENANCE MANUAL for the transmitter.

RECEIVER ADJUSTMENT

The initial adjustment for the receiver includes:

- Zeroing the receiver to the system operating frequency.
- Matching the antenna transformer to the antenna.

For the Receiver Initial Adjustment Procedure, refer to the FRONT END ALIGNMENT PROCEDURE in the MAINTENANCE MANUAL for the receiver.

POWER SUPPLY ADJUSTMENT

The initial adjustment for the power supply includes:

- Turning on power switch S501.
- Setting VOLUME control R511 to mid-range and setting SQUELCH control R512 fully clockwise. This will enable the VOLUME and SQUELCH controls on the front panel to be adjusted for operation near mid-range.

CONTROL SHELF ADJUSTMENT

The initial adjustment for the control shelf includes:

- Turning the power switch (S1201) ON.
- Adjusting the required Tone or DC controls.

For tone and DC controls adjustment procedures, refer to Maintenance Manual LBI-4490 for the Control Shelf.

OPERATION

The basic procedures for receiving and transmitting messages are as follows:

TO RECEIVE A MESSAGE

1. Turn the radio on by pressing the ON button to the ON position. The green power-on light will glow, indicating that power is applied to the unit.
2. Turn the SQUELCH control clockwise (to the right) as far as possible.
3. Adjust the VOLUME control until the "hissing" sound is easily heard but not annoyingly loud.
4. Now, slowly turn the SQUELCH control counterclockwise (to the left) until the "hissing" sound disappears.

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

TO TRANSMIT A MESSAGE

1. Apply power to the transmitter by pressing the ON button to the ON position. Let the unit warm up for 30 seconds.

2. Press the push-to-talk button on the microphone and speak in a normal (or softer) voice six inches away from the front of the mike. Release the button as soon as the message has been given. The red signal light on the Control Panel will glow each time the microphone is pressed, indicating that the transmitter is on the air. The receiver is muted whenever the transmitter is keyed.

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, receiver and power supply.

For best results in servicing the station, the TEST PROCEDURES should be used in conjunction with the TROUBLESHOOTING PROCEDURES. Both sheets are listed in the Table of Contents of the applicable Maintenance Manual.

MAINTENANCE

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

PREVENTIVE MAINTENANCE

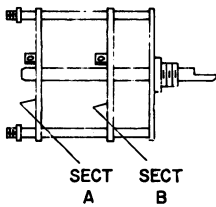
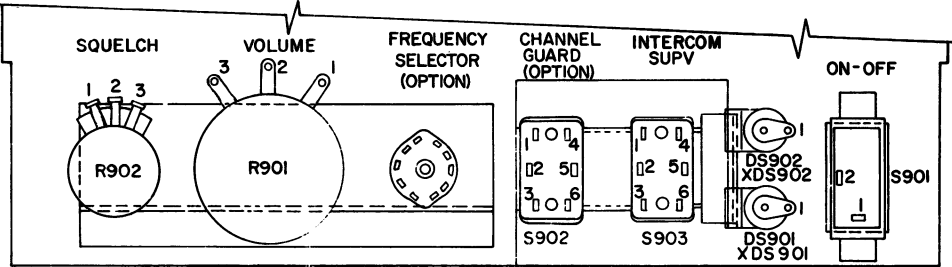
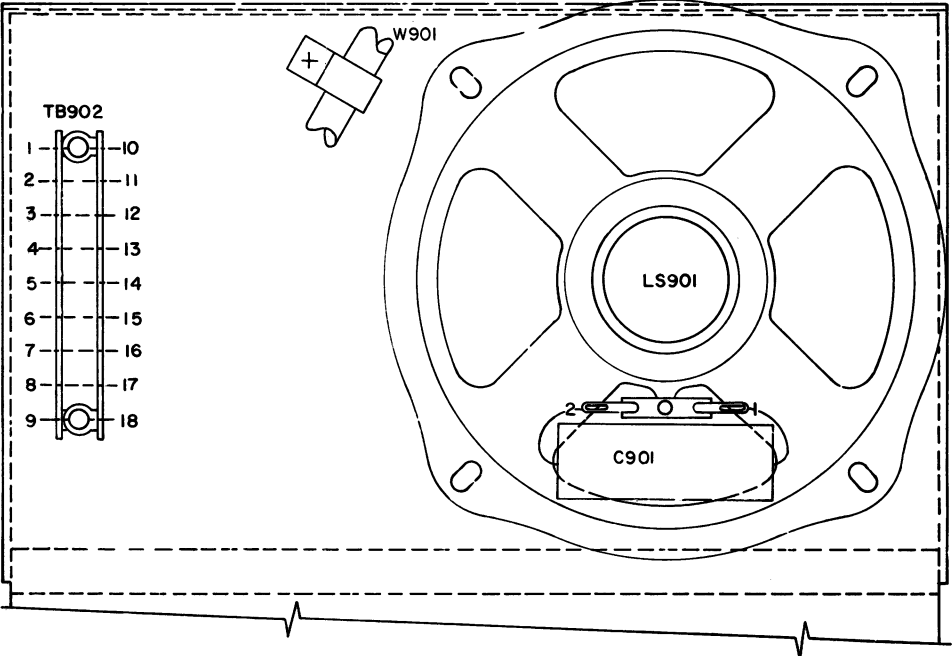
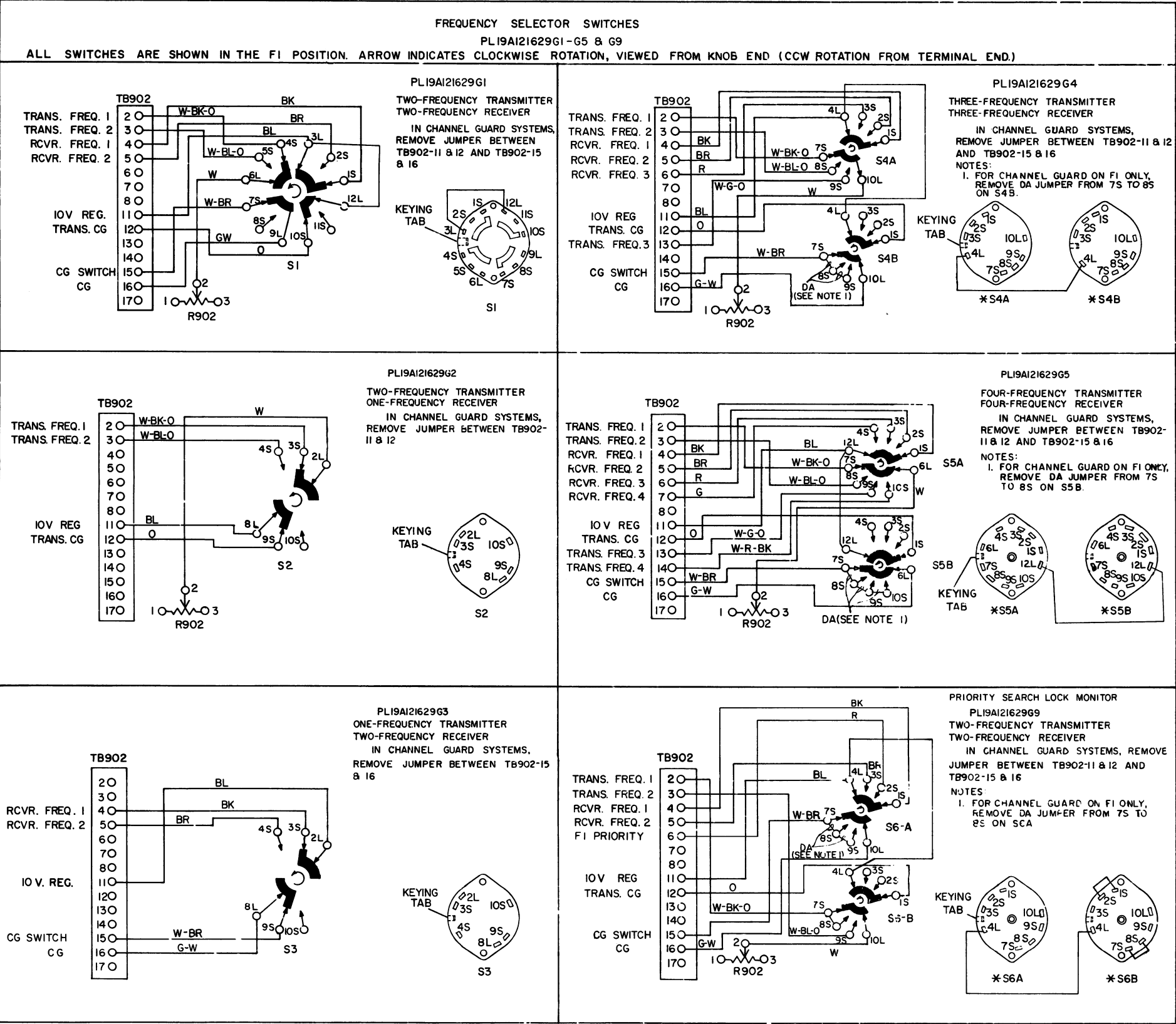
To insure high operating efficiency and to prevent mechanical and electrical failures from interrupting system operations, routine checks should be made of all mechanical and electrical parts. This preventive maintenance should include the maintenance checks listed below:

CHECK THE FOLLOWING ONCE A YEAR:

- | | |
|--|--------------------------|
| 1. Transmitter frequency and deviation (FCC requires this check-up ONCE a year)..... | <input type="checkbox"/> |
| 2. Measure and record the antenna system VSWR..... | <input type="checkbox"/> |
| 3. Check input voltage at TB1202-1-2 on Control shelf. Reading should be within 20% of 117 VAC. (Also check during routine service calls)..... | <input type="checkbox"/> |
| 4. Compare and record transmitter meter readings with voltages taken during initial tune-up. Retune, if necessary..... | <input type="checkbox"/> |
| 5. Compare and record receiver meter readings with voltages taken during initial tune-up. Retune, if necessary..... | <input type="checkbox"/> |
| 6. Check for positive indication of pressure on transmission line pressure gauge (if pressurized line is used)..... | <input type="checkbox"/> |
| 7. Clean dust from fan blades and lubricate bearings..... | <input type="checkbox"/> |
| 8. Burnish pitted or coated relay contacts to smooth out metallic deposits or remove the coating..... | <input type="checkbox"/> |

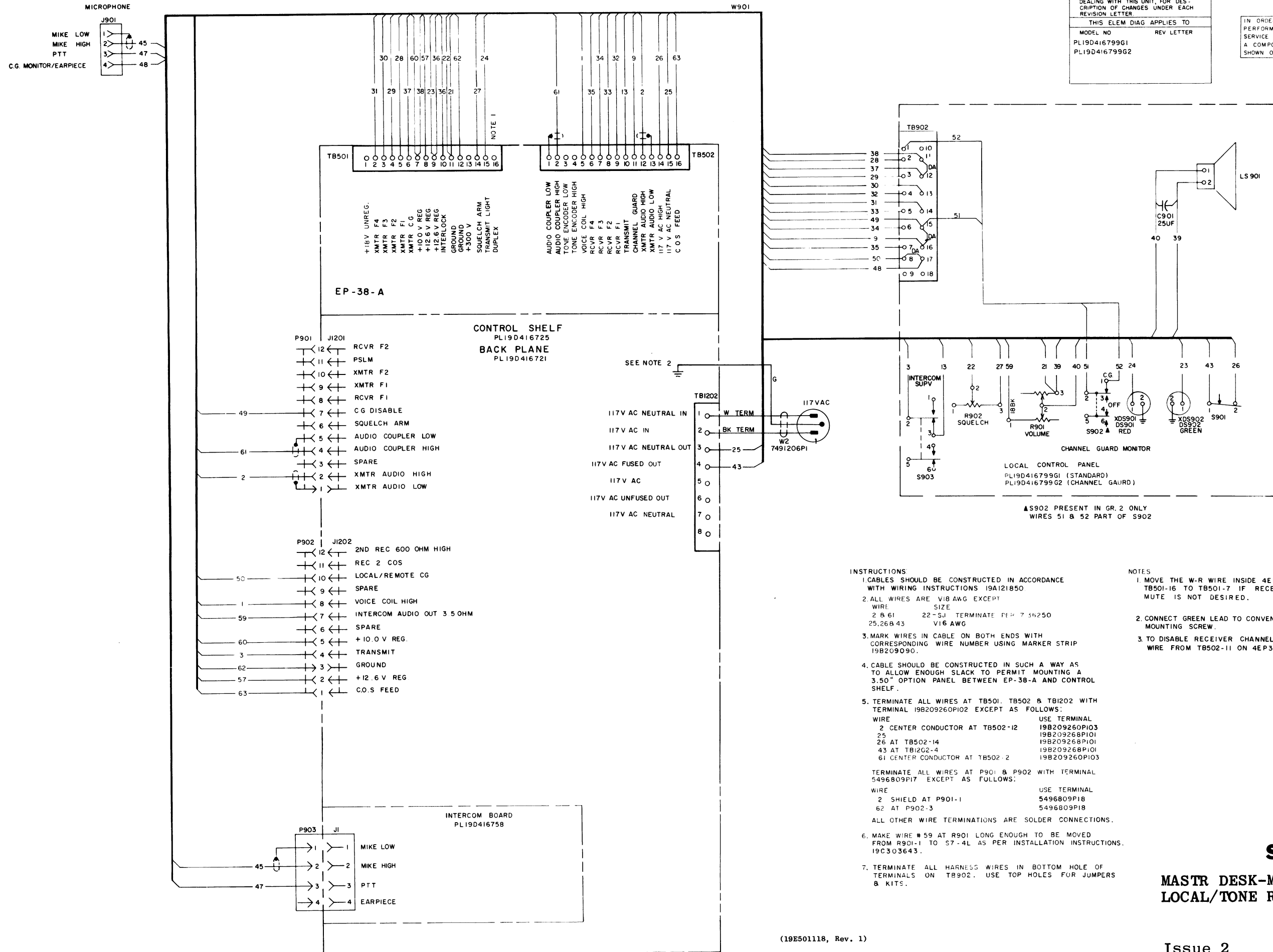
MAKE THE FOLLOWING MAINTENANCE CHECKS DURING ROUTINE SERVICE CALLS:

- | | |
|--|--------------------------|
| 1. Check antenna lines and mast for mechanical stability..... | <input type="checkbox"/> |
| 2. Visually check: | |
| External cables..... | <input type="checkbox"/> |
| Internal cables..... | <input type="checkbox"/> |
| Plugs..... | <input type="checkbox"/> |
| Sockets..... | <input type="checkbox"/> |
| Terminal boards..... | <input type="checkbox"/> |
| 3. Check for tightness of nuts, bolts, and screws to make sure nothing is working loose from its mounting..... | <input type="checkbox"/> |
| 4. Replace tubes as necessary. (It may be convenient to replace all station tubes during the yearly check-up)..... | <input type="checkbox"/> |



* MOUNT SWITCH WAFERS
SECTION A AND SECTION B
AS SHOWN ABOVE

OUTLINE DIAGRAM
 MASTR DESK-MATE STATION COMBINATION
 LOCAL/TONE REMOTE & LOCAL/DC REMOTE
 CONTROL PANEL



PARTS LIST

LBI-4526

LOCAL/REMOTE CONTROL PANEL
19D416799G1, G2

SYMBOL	GE PART NO.	DESCRIPTION
C901	19B209233P1	----- CAPACITORS ----- Electrolytic, non-polarized: 25 µf ±20%, 25 VDCW; sim to Sprague 41D.
		----- INDICATING DEVICES ----- Lamp, incandescent: 14 v; sim to GE 756.
DS901 and DS902	19C307037P19	----- JACKS AND RECEPTACLES ----- (Part of W901).
J901		
LS901	19C307123P3	----- LOUDSPEAKERS ----- Permanent magnet, 6-inch: 3.2 ohms ±10% voice coil imp, 7.5 w max operating, 150-300 Hz resonance, paper dust cap; sim to Russell Speaker S-34068.
		----- PLUGS ----- (Part of W901).
P901 thru P903		----- RESISTORS -----
R901	7478301P48	Variable, audio, L-pad: 3.5 ohms ±15%, 4 w; sim to PR Mallory L-pad.
R902	5493662P5	Variable, carbon film: 2500 ohms ±20%, 0.5 w; sim to CTS Series 45.
S901	19B209147P1	----- SWITCHES ----- Push: SPST, 3 amps at 250 VAC or 6 amps at 125 VAC; sim to Cutler-Hammer 8134K6.
		Toggle: DPDT, 6 amps at 125 VAC/VDC; sim to Cutler-Hammer 8373K8.
		Toggle: DPDT, 6 amps at 125 VAC/VDC; sim to Cutler-Hammer 8373K8.
S902	19B219746G1	
S903	5491899P4	
TB902		----- TERMINAL BOARDS ----- (Part of W901).
W901		----- CABLES ----- HARNESS ASSEMBLY 19A129452G1
J901	19A116061P2	----- JACKS AND RECEPTACLES ----- Receptacle: 4 female contacts; sim to Amphenol Type 91-PN4F-1000.
P901 thru P903		----- PLUGS ----- Connector. Includes:
	5496809P17	Contact, pin: female, brass; sim to Molex Products 1381-T. (Quantity 11).
	5496809P18	Contact, pin: male, brass; sim to Molex Products 1380-T. (Quantity 2).
	19B209288P20	Shell: sim to Molex Products 1360R-1.
TB902	7775500P19	----- TERMINAL BOARDS ----- Phenolic: 9 terminals.
XDS901 and XDS902	19B209342P2	----- SOCKETS ----- Lampholder, bayonet: sim to Leecraft 7-04.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	GE PART NO.	DESCRIPTION
		----- MISCELLANEOUS -----
	19B204642P1	Grille.
	19A115679P1	Knob, push-on: sim to Rohden Mfg Co. 25107.5-7E. (Used with R901, R902, S901).
	19A122727P1	Support. (Used with XDS901, XDS902).
	N402P37C6	Plain washer: No. 6. (Used with LS901).
	7763541P8	Cable clip, spring tension. (Used with W901).
	7115195P2	Hex nut: No. 15/32-32. (Used with S903).
	7115130P11	Lockwasher: No. 15/32; sim to Shakeproof 1222-1. (Used with S903).
	4032230P1	Ring, retaining: sim to Waldes Kohinoor 5131-37. (Used with dummy plug).
	N402P13C6	Plain washer: No. 3/8, steel. (Used with dummy plug).
	4032256P1	Dummy plug.
	7165075P2	Hex nut, brass: No. 3/8-32. (Used with R902).
	7127662P1	Flatwasher, steel: No. 5/8. (Used with R901, R902, and dummy plug).
	7115130P9	Lockwasher: sim to Shakeproof 1220-2. (Used with R901 and R902).
	7160861P4	Nut, sheet spring: sim to Tinnerman C6452-8Z-67. (Secures grille to support).
	N111P1508C6	Tap screw, phillips: No. 8-32 x 1/2. (Secures grille to support).
	NP243513	Nameplate. (GE).
	NP257587	Nameplate, etched aluminum. (WITHOUT CHANNEL GUARD).
	4032237P1	Lens, panel light: green plastic lens; sim to Dialight Type 5004. (Used with DS902).
	4032237P2	Lens, panel light: red plastic lens; sim to Dialight Type 5004. (Used with DS901).
	19B209342P3	Lampholder, bayonet: sim to Leecraft 700-50. (Used with DS901 and DS902).
	19B201074P204	Tap screw: No. 4-40 x 1/4. (Secures Indicator Support).
	NP249235	Nameplate, etched aluminum. (WITH CHANNEL GUARD).

PARTS LIST

LBI-3624B

FREQUENCY - SELECTOR SWITCHES
19A121629G1-G5, G9

SYMBOL	GE PART NO.	DESCRIPTION
		----- SWITCHES -----
S1	5495454P18	Rotary: 4 poles, 2 positions, non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type "A" or Centralab Series 100.
S2 and S3	5495454P1	Rotary: 2 poles, 2 positions, non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type "A" or Centralab Series 100.
S4	5495454P20	Rotary: 2 sections, 4 poles, 3 positions, non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type "A" or Centralab Series 100.
S5	5495454P25	Rotary: 1 section, 2 poles, 2 positions, non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type "A" or Centralab Series 100.
S6	5495454P20	Rotary: 2 sections, 4 poles, 3 positions, non-shorting contacts, 2 amps at 25 VDC or 1 amp at 110 VAC; sim to Oak Type "A" or Centralab Series 100.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

PARTS LIST

LBI-3561A

DESK-MATE STATION CABINET
7354211-G4

SYMBOL	GE PART NO.	DESCRIPTION
	7354211-P8	Door: (fits either side).
	4035449-P5	Bumper, door: rubber, sim to Atlantic India Rubber 1165.
	N529P38C	Plug. (for cable Knockouts at bottom of assembly).
	7354211-P7	Mounting rack. (2 drilled angles).
	5491682-P13	Lock and Key. Sim to Yale and Towne F7678DX1. Includes Key 5491682-P4 (Yale and Towne BF-10A).
	N80P19008C13	Screw, phillips: 12-24 x 1/2. (Used to secure rack panel assemblies).
	N403P21C13	Lockwasher: external tooth, No. 12. (Used to secure rack panel assemblies).
	19A121317-G2	Interconnection Harness.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

PARTS LIST

LBI-3623B

MAGNETIC CONTROLLED DESK MICROPHONE

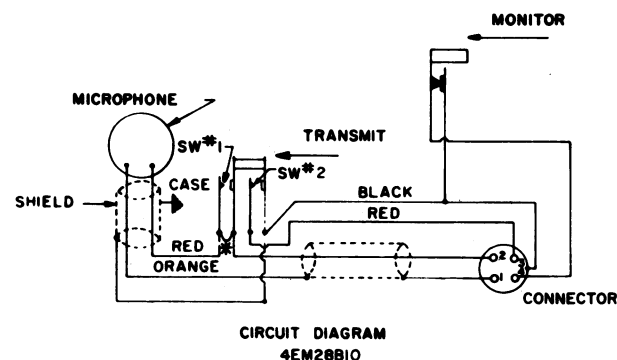
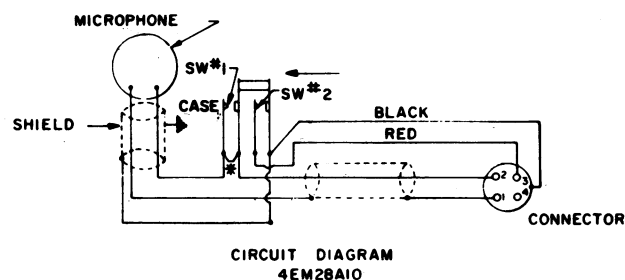
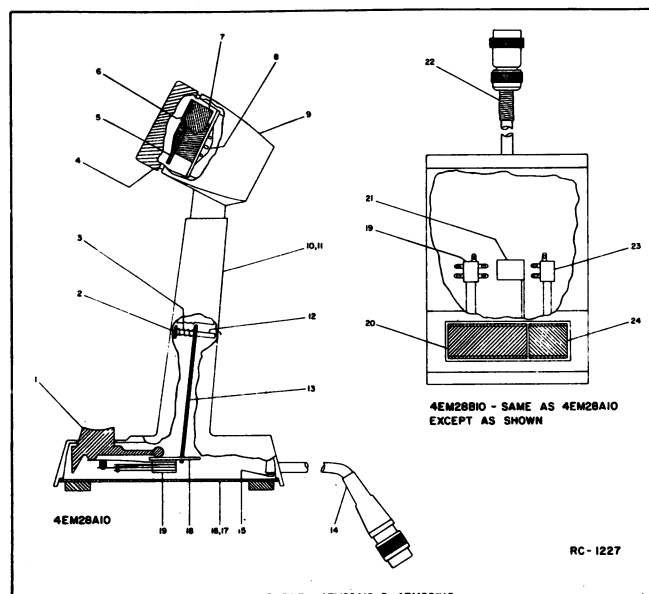
MODEL 4EM28A10 (19C307105-P1)

MODEL 4EM28B10 (19C307106-P1)

(SEE RC-1227)

SYMBOL	G-E PART NO.	DESCRIPTION
MECHANICAL PARTS		
MODEL 4EM28A10		
1		Pushbutton. Shure Brothers RP-68.
2		Washer. Shure Brothers 30A697.
3		Spring. Shure Brothers 44A149.
4		Cap and grille. Shure Brothers RP-72.
5		Magnetic controlled cartridge. Shure Brothers RP-13.
6		Washer. Shure Brothers 34A223.
7		Shield. Shure Brothers 53A528.
8		Damping pad. Shure Brothers 20B33.
9		Housing. (Part of item 4).
10		Base. (Part of item 4).
11		(Not used).
12		Pin. Shure Brothers 31A848.
13		Bracket. Shure Brothers 53A637.
14		Cable and plug. Shure Brothers RP-65.
15		Cable clamp. Shure Brothers 53A532.
16		Bottom plate. Shure Brothers 90A1015.
17		(Not used).
18		Mounting bracket. Shure Brothers 53A633.
19		Switch. Shure Brothers RP-70.
MODEL 4EM28B10		
1		(Not used).
2		Washer. Shure Brothers 30A697.
3		Spring. Shure Brothers 44A149.
4		Cap and grille. Shure Brothers RP-72.
5		Magnetic controlled cartridge. Shure Brothers RP-13.
6		Washer. Shure Brothers 34A223.
7		Shield. Shure Brothers 53A528.
8		Damping pad. Shure Brothers 20B33.
9		Housing. (Part of item 4).
10		(Not used).
11		Base. (Part of item 4).
12		Pin. Shure Brothers 31A848.
13		Bracket. Shure Brothers 53A637.
14		(Not used).
15		Cable clamp. Shure Brothers 53A532.
16		(Not used).
17		Bottom plate. Shure Brothers 90B1015.
18		Mounting bracket. Shure Brothers 53A633.
19		Switch. Shure Brothers RP-71.
20		Pushbutton (Transmit). Shure Brothers RP-69.
21		Locking arm. Shure Brothers 53A667.
22		Cable and plug. Shure Brothers RP-66.
23		Switch. (Part of item 19).
24		Pushbutton (Monitor). (Part of item 20).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.



* JUMPER MAY BE REMOVED FOR PARALLEL OR SPECIAL OPERATION

NOTES:

1. SWITCH #1 OF THE MICROPHONE CIRCUIT MUST CLOSE FIRST AND OPEN LAST.
2. MONITOR AND TRANSMIT BUTTONS ARE MECHANICALLY INTERLOCKED, MAKING IT NECESSARY TO PRESS MONITOR BUTTON BEFORE TRANSMITTING. TO MONITOR CONTINUOUSLY, PRESS MONITOR BUTTON DOWN AND SLIDE FORWARD TO "LOCK" POSITION. PRESS AND PUSH BACK BUTTON TO RELEASE. TO OPERATE MONITOR AND TRANSMIT FUNCTIONS INDEPENDENTLY, REMOVE LOCKING ARM BRACKET (PART 21 SHOWN ABOVE AND IN PARTS LIST).

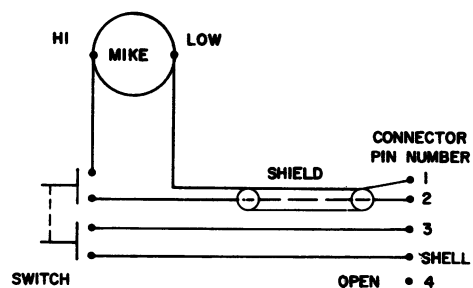
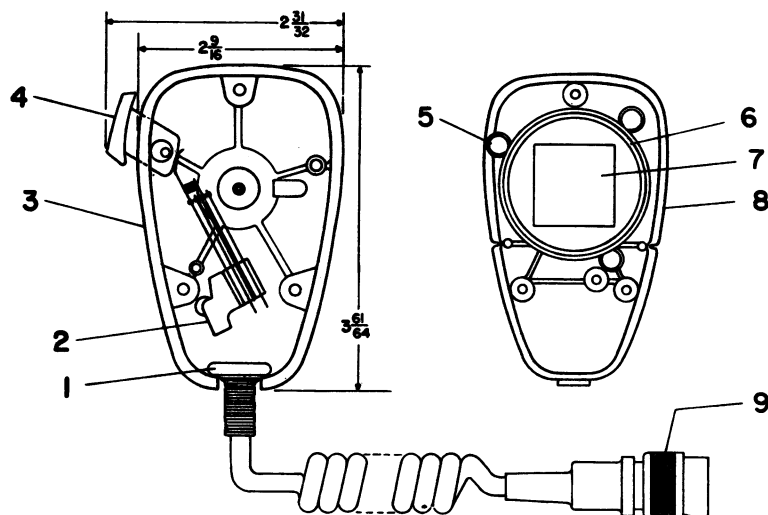
PARTS LIST

LBI-3558B

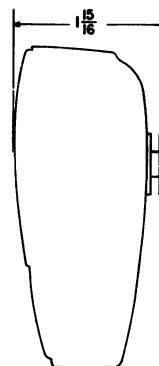
MILITARY MICROPHONE
 MODEL 4M25A10
 (PL-198209102-01)
 (SEE RC-1163)

SYMBOL	G-E PART NO.	DESCRIPTION
MECHANICAL PARTS		
MODEL 4M25A10		
1		Cable clamp. Shure Brothers MP-16.
2		Switch. Shure Brothers MP-26.
3		Case (back) and mounting button: plastic. Shure Brothers MP-67.
4		Switch button: red plastic. Shure Brothers MP-28.
5		Spring. Shure Brothers MP-1.
6		Shield. Shure Brothers MP-23.
7		Magnetic controlled cartridge. Shure Brothers MP-13.
8		Case (front) plastic. (Part of item 3).
9		Cable and plug: approx 6 feet long. Shure Brothers MP-14.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.



WIRING DIAGRAM



RC-1163D

PARTS LIST

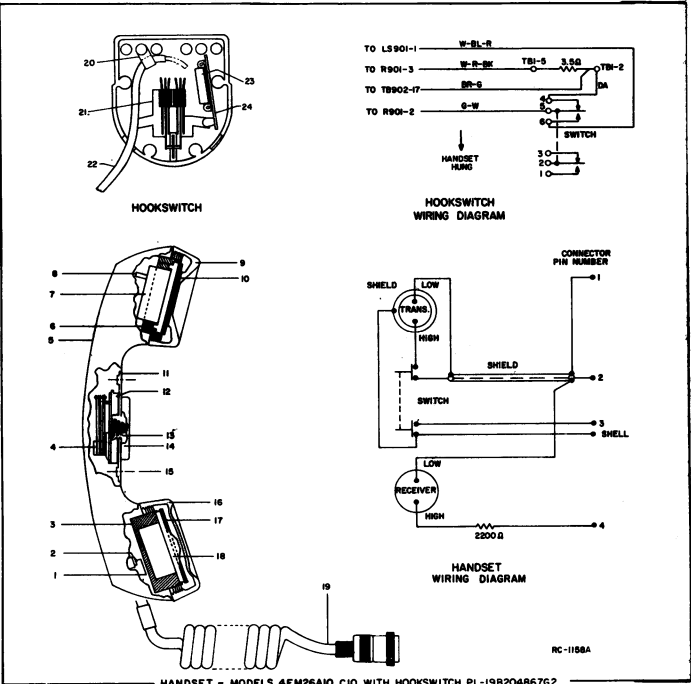
LB1-4522

LB1-3559B

HANDSET
MODEL 4EM26A10
MODEL 4EM26C10
19B209100G1

SYMBOL	GE PART NO.	DESCRIPTION
		(REFER TO RC-1158)
1		Self tap screw, blind head: No. 4 x 5/16. Shure Brothers 30CS40C.
2		Cable clamp. Shure Brothers 53A532.
3		Shield. Shure Brothers RP19.
4		Switch. Shure Brothers RP81.
5		Case. Shure Brothers RP49. (Used in 4EM26A10). Case. Shure Brothers 21RP899F. (Used in 4EM26C10).
6		Adapter. Shure Brothers 65A230.
7		Magnetic controlled cartridge. Shure Brothers RP41.
8	3R77P222K	Composition: 2200 ohms $\pm 10\%$, 1/2 w.
9		Receiver cap. (Part of item 5).
10		Washer. Shure Brothers 34A321.
11		Escutcheon. Shure Brothers 53A536A.
12		Actuator. Shure Brothers 53A556.
13		Spring. Shure Brothers 44A140.
14		Plunger bar. Shure Brothers RP82.
15		Flat head screw, socket cap: No. 4-40 x 1/4. Shure Brothers 30CS57B.
16		Transmitter cap. (Part of RP49).
17		Washer. Shure Brothers 34A309.
18		Magnetic controlled cartridge. Shure Brothers RP13.
19		Cable and plug. Shure Brothers RP48. (Used in 4EM26A10). Cable and plug. Shure Brothers 21RP738F. (Used in 4EM26C10).
		HOOKSWITCH ASSEMBLY 19B204867G2
		----- MISCELLANEOUS -----
20	4029851P5	Cable clamp; sim to WEC Kesser 3/16-4.
21	19A121612P1	Holder and switch: thermoplastic case, contact rating 1 amp at 125 v.
22	19A121720G1	Cable: approx 8-1/2 feet long.
23	5493035P10	Resistor, wirewound, ceramic: 3.5 ohms $\pm 5\%$, 5 w; sim to Hamilton Hall Type ER.
24	7775500P55	Terminal board, phen: 5 terminals.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



ORDERING SERVICE PARTS

Each component appearing on the schematic diagram is identified by a symbol number, to simplify locating it in the parts list. Each component is listed by symbol number, followed by its description and GE Part Number.

Service Parts may be obtained from Authorized GE Communication Equipment Service Stations or through any GE Radio Communication Equipment Sales Office. When ordering a part, be sure to give:

1. GE Part Number for component
2. Description of part
3. Model number of equipment
4. Revision letter stamped on unit

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, contact the nearest Radio Communication Equipment Sales Office of the General Electric Company.

MAINTENANCE MANUAL

LBI-4522

**MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502**

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