

 **MOBILE RADIO**

MASTR[®]

Progress Line

MAINTENANCE MANUAL



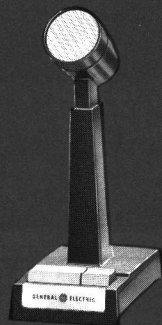
DESK-MATE STATION

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

LOCAL/REMOTE

LBI-4144B

(DF-9014)



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-D
Receiver	ER-39-A through ER-42-H
Desk Mate Cabinet	7354211-G4
Station Power Supply	4EP38A11
Antenna Relay	19A121260-G1
Line Amplifier	4EA24A10, 11
Local Control Panel	19D402460-G6
Multi-Frequency Switches	19A121629-G1 through -G5
Remote Control Panel	4KC16A12
Remote Channel Guard Control	19A122231-G8
Microphone (with Channel Guard) (without Channel Guard)	4EM28B10 4EM28A10
117-VAC Power Cable	7491206-P1
Two-Prong Plug Adapter	7160486-P1
Alignment Tools (hex slug type) (slotted screw type)	4038831-P2 403530-G2
Lock Assembly Keys Lock (with key)	5491682-P4 (BF-10A) 5491682-P13

OPTIONAL EQUIPMENT

EQUIPMENT	OPTION NO.	TYPE OR MODEL NUMBER
Priority Search Lock Monitor	7676 & 7677	19A127679-G1
Handset Hookswitch	7701 & 7703	4EM26A10 19B204867-G2
Control Panel (with Channel Guard Switch)	7703 & 7707	19D402460-G5
Application Kit for Type 90 and Type 99 Tone Decoders	7711	19B204996-G1
Receiver Power Supply (Standard) Antenna Relay	7721 & 7722	4EP39A11 19A121260-G2
Receiver Power Supply (With C.G.) Antenna Relay	7712 & 7713	4EP39A12 19A121260-G2
Two-Frequency Monitoring Two Receivers - single frequency transmitter Two Receivers - two frequency transmitter	7721 7722	19A121629-G7 19A121629-G8
Station Test Metering Panel: Meter Panel Assembly Meter Switching Panel Assembly	7609	19A121953-G1 19A121460-G1
Transmitter Metering Cover	7648	19C303676-G3
Receiver Metering Cover	7649	19C303676-G2
220/110-volt Stepdown Transformer Kit	7608	19A121971-G1
Military Microphone	7705 & 7707	19B209102-P1

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: 1100 watts Receive: 176 watts
OPERABLE 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 Specification 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	M 117 VAC	5 16—38 watts	4 20 kHz	K Local/ Remote Control Station	A 1-Freq. T 1-Freq. R	S Standard	11 25—33 MHz
		6 38—64 watts	6 30 kHz		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 (71.9—156.7 Hz)	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 (71.9—156.7 Hz)	55 132—150.8 MHz
							66 150.8—174 MHz
							77 406—420 MHz
							88 450—470 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.

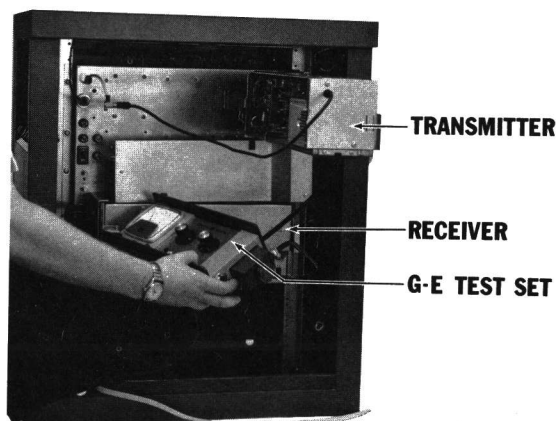


Figure 1 - Transmitter-Receiver Test

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

POWER SUPPLIES

Station Power Supply Model 4EP38A11 provides operating voltages for both the transmitter and receiver. 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 and for transmitter Channel Guard
- Regulated +12.6 volts for transmitter filaments, receiver audio, relays, and pilot lights

Antenna Switching Relay

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 Model 4EP39A11 is provided when the Desk Mate Station is equipped with a second receiver.

LINE AMPLIFIER

Line Amplifier Models 4EA24A10, 11 are used for matching the receiver output to a 600-ohm telephone pair in remote control applications.

The amplifier assembly is mounted on the back of the power supply over the VOLUME and SQUELCH controls.

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 station 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 4EM26A10 and Hookswitch 19B204867-G2 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.

REMOTE CONTROL PANEL

The Remote Control Panel contains the AC input circuit, remote channel guard control, Intercom-Compressor and telephone line connections. The panel is mounted on

the chassis mounting frame below the Transmitter-Receiver Power Supply.

AC Input

The 117-VAC input is connected directly to TB706-1 and -2 on the Remote Control Panel. Power switch S702 is wired in series with the Local Control Panel power switch S901. To operate the station, S702 must always be in the ON position as both S702 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 with the input line voltage is 220 volts AC.

WARNING

117-VAC is always present at terminals 1 and 2 of TB706, even when S901 is in the OFF position. Always use care when servicing the Remote Control Panel.

Intercom-Compressor

An Intercom-Compressor is used in Local/Remote Station applications to equalize audio output levels over a wide range of microphone or line input levels. The circuit operates as a mike-to-line Compression Amplifier in the transmit or intercom mode, and as a line-to-speaker or receiver-to-speaker Compression Amplifier in the receive mode. The Intercom-Compressor is described in the Remote Control Panel Maintenance Manual.

Telephone Lines

Instructions for connecting the Remote Station to the telephone line(s) are included in the Maintenance Manual for the Remote Control Panel.

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 Radiotelephone 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 PROCEDURE

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.

LINE AMPLIFIER ADJUSTMENT

The initial adjustment for the line amplifier consists of setting LINE LEVEL ADJUST R1501 located on the power supply for 2.7 volts RMS (+11 dB) at the telephone pair.

For the line amplifier adjustment procedure, refer to the Maintenance Manual for the power supply.

REMOTE CONTROL PANEL ADJUSTMENT

The initial adjustment for the remote control panel includes:

- Turning the power switch (S702) ON.
- Adjusting the AUDIO LEVEL CONTROL R701.

For the Remote Control Panel Initial Adjustment Procedure, refer to the Maintenance Manual for the Remote Control Panel.

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 button is pressed, indicating that the transmitter is on the air. The receiver is muted whenever the transmitter is keyed.

MAINTENANCE

TEST AND TROUBLESHOOTING PROCEDURES

The individual Maintenance Manual for the transmitter and receiver describe stan-

dard 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, 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.

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:

PREVENTIVE MAINTENANCE PROGRAM

CHECK THE FOLLOWING ONCE A YEAR:

1. Transmitter frequency and deviation (FCC requires this check-up ONCE a year) ☐
2. Measure and record the antenna system VSWR ☐
3. Check input voltage at TB706-1-2 on control panel. Reading should be within 10% of 117 VAC. (Also check during routine service calls). ☐
4. Compare and record transmitter meter readings with voltages taken during initial tune-up. Retune, if necessary ☐
5. Compare and record receiver meter readings with voltages taken during initial tune-up. Retune, if necessary ☐
6. Check for positive indication of pressure on transmission line pressure gauge (if pressurized line is used) ☐
7. Clean dust from fan blades and lubricate bearings ☐
8. Burnish pitted or coated relay contacts to smooth out metallic deposits or remove the coating ☐

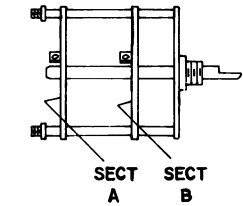
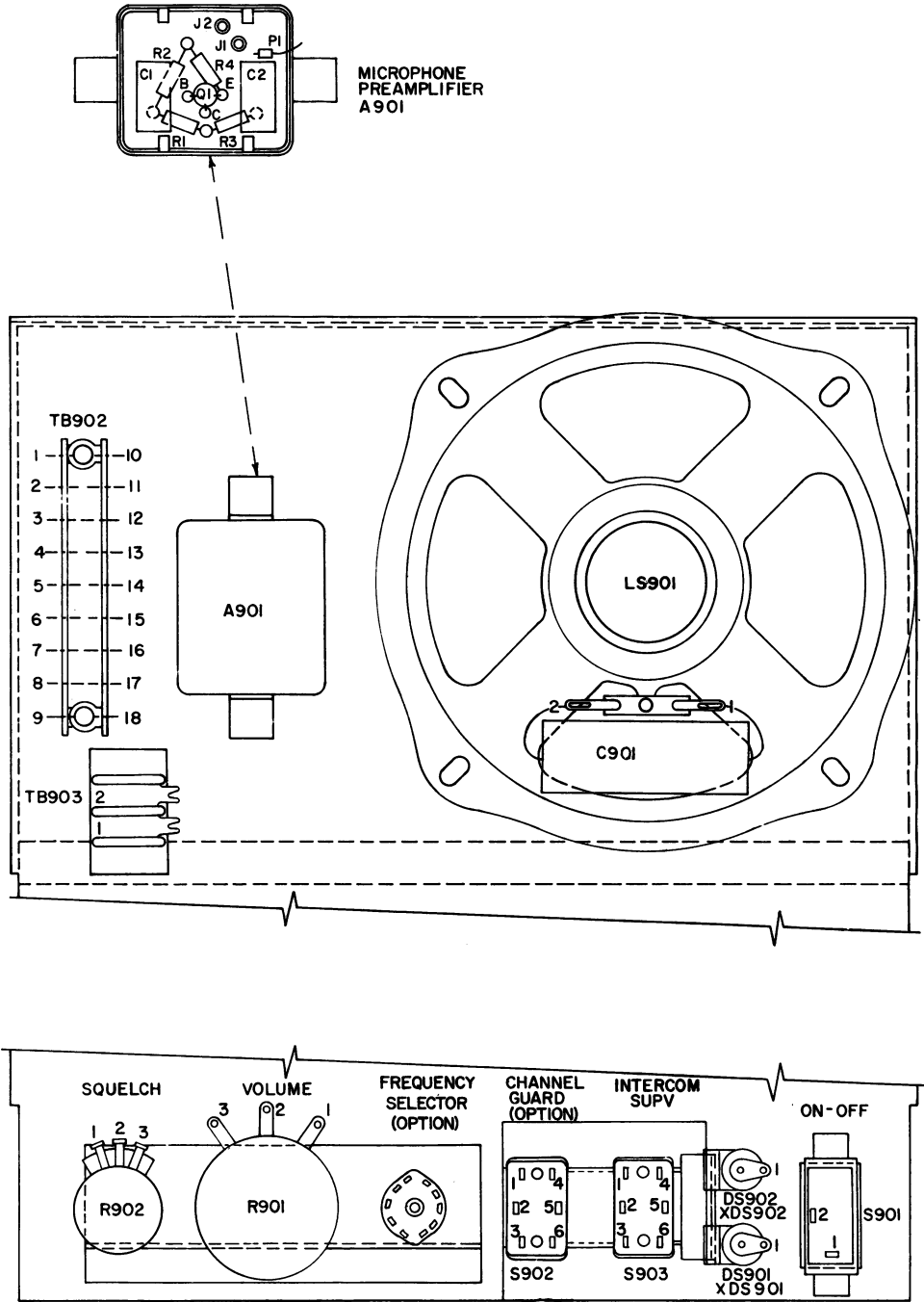
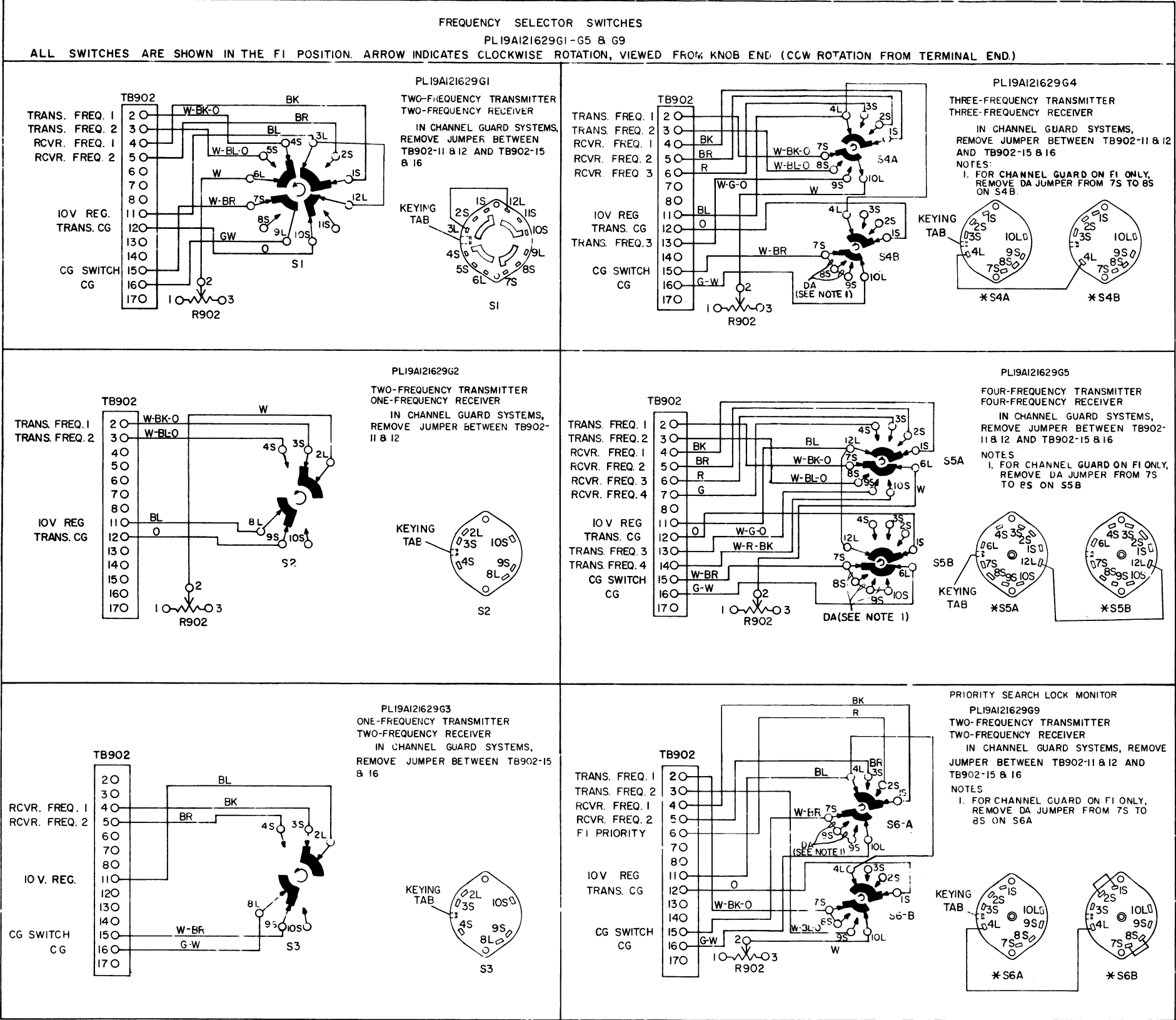
MAKE THE FOLLOWING MAINTENANCE CHECKS DURING ROUTINE SERVICE CALLS:

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

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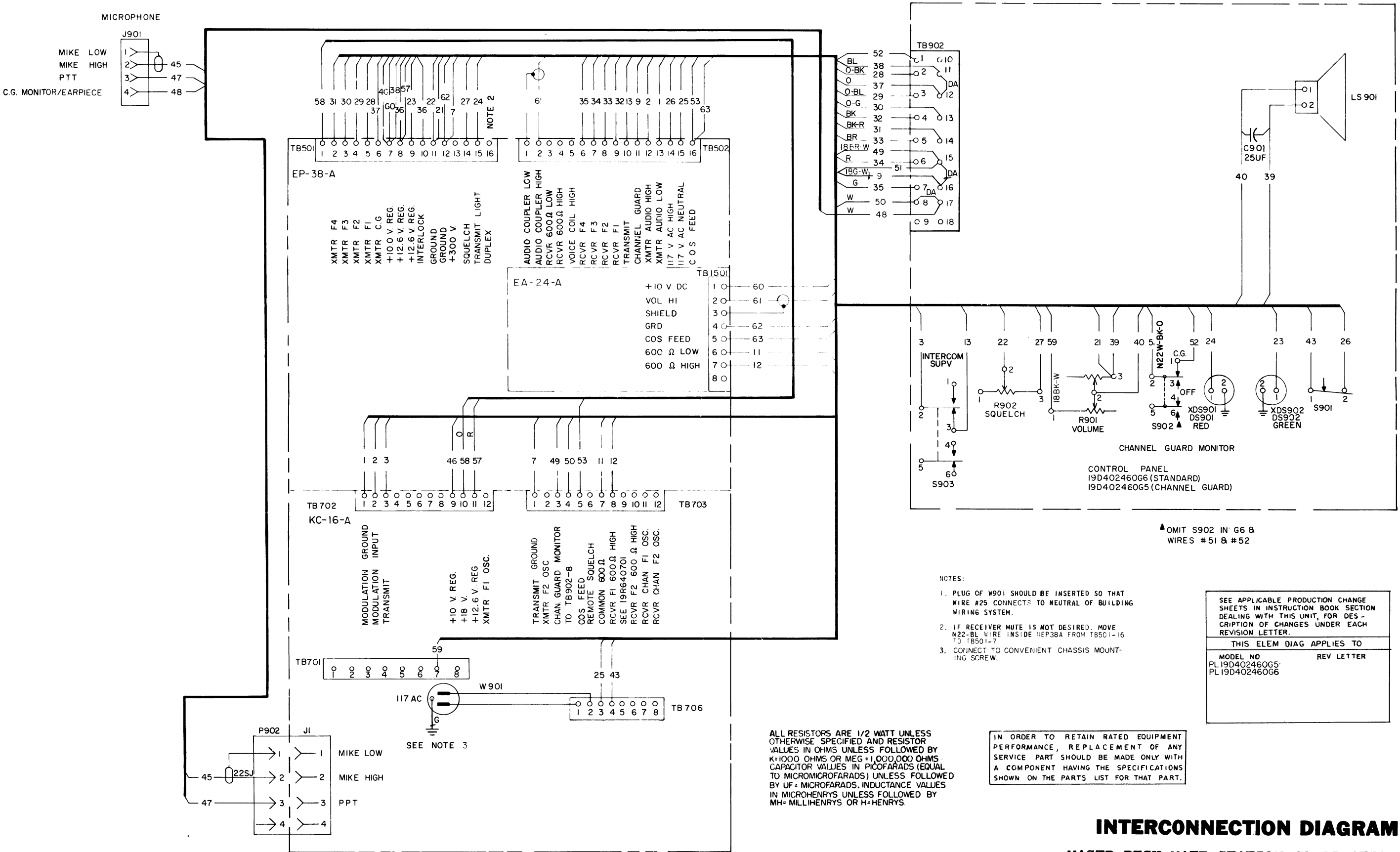


* MOUNT SWITCH WAFERS
SECTION A AND SECTION B
AS SHOWN ABOVE

OUTLINE DIAGRAM

MASTR DESK-MATE STATION COMBINATION
LOCAL/REMOTE CONTROL PANEL

(19D402583, Rev. 7)



INTERCONNECTION DIAGRAM
MASTR DESK-MATE STATION COMBINATION
LOCAL/REMOTE CONTROL PANEL

(19D413494, Rev. 3)

PARTS LIST

LBI-4154
 MASTR DESK-MATE STATION
 FRONT END CONTROL PANEL
 19D402460-G5, G6

SYMBOL	GE PART NO.	DESCRIPTION
C901	19B209233-P2	----- CAPACITORS ----- Electrolytic, non-polorized: 25 μ f \pm 20%, 25 VDCW; sim to Sprague 4DC.
		----- INDICATING DEVICES ----- Lamp, incandescent: 14 v; sim to GE 756.
		----- JACKS AND RECEPTACLES ----- Connector, chassis: 4 female contacts.
DS901 and DS902	19C307037-P19	----- LOUDSPEAKERS ----- Permanent magnet, 6-inch: 3.2 ohms \pm 10% voice coil imp, 7.5 w max operating, 150-300 Hz resonance, paper dust cap; sim to Pioneer S-709524.
		----- PLUGS ----- Connector, cable: 4 male contacts; sim to Amphenol Type 91-MC4M.
		----- RESISTORS ----- Attenuator, variable, audio, L pad: 3.5 ohms, 4 w, 40 db max attenuation min.
J901	19A116061-P1	Variable, carbon film: 2500 ohms \pm 20%, 0.5 w; sim to CTS Series 45.
LS901	19C307123-P3	----- SWITCHES ----- Push: SPST, 3 amps at 250 VAC or 6 amps at 125 VAC; sim to Cutler-Hammer 8134KB.
		Toggle: DPDT, 3 amps at 250 VAC or 6 amps at 125 VDC; sim to Cutler-Hammer 8373KB.
		----- TERMINAL BOARDS ----- Phen: 9 terminals.
P902	7478726-P6	----- CABLES ----- Cord and plug: 3 conductor, 10 amps at 125 VRMS max, approx 15 feet long.
R901	7478301-P48	----- SOCKETS ----- Lamp: sim to Leecraft 7-04-1.
R902	5493662-P5	----- MISCELLANEOUS ----- Interconnection Harness.
S901	19B209147-P1	MECHANICAL PARTS (SEE RC-1557)
S902 and S903	5491899-P4	Nameplate: etched aluminum. (Used without Channel Guard).
TB902	7775500-P19	Nameplate: etched aluminum. (Used with Channel Guard).
		Knob. (Used with R901, R902 and Dummy).
		Grille.
W901	7491206-P1	Nut: sheet spring; sim to Tinnerman C6452-82-157.
XDS901 and XDS902	19B209342-P2	
	19A121317-G14	
1	NP257587	
2	NP249235	
3	19A115679-P1	
4	19B204642-P1	
5	7160861-P4	
6		

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

SYMBOL	GE PART NO.	DESCRIPTION
6	N111P1508C13	Phillips screw: No. 8-18 x 1/2 inch.
7	7763541-P8	Cable clamp.
8	19B204803-G1	Support.
9	4032256-P1	Shaft: nylon, dummy.
10	19B204800-P1	Support. (Used with R901 and R902).
11	4032230-P1	Retaining ring: sim to Waldes Kohinoor 5131-37.
12	M402P13C13	Plain washer.

PARTS LIST

LBI-4149
 MASTR DESK MATE STATION CABINET
 7354211-G2

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 F7678DXL. 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-G15	Interconnection Harness.

PARTS LIST

LBI-3624B
 FREQUENCY - SELECTOR SWITCHES
 19A121629G1-G5, G9

SYMBOL	GE PART NO.	DESCRIPTION
S1	5495454P18	----- SWITCHES ----- 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 a ps 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.

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 - PL-19D402460-G3 & 4

To provide intercom and supervisory control with Local/Remote Control Stations. Deleted A901, changed XDS 901 & XDS 902, and added S903.

REV. B - 19D402460-G3 & G4

To improve Audio quality. Added C901 across speaker terminals.

REV. C - 19D402460-G3 & G4

To incorporate speaker with increased output. Changed LS901.

PARTS LIST

LBI-36238

MAGNETIC CONTROLLED DESK MICROPHONE

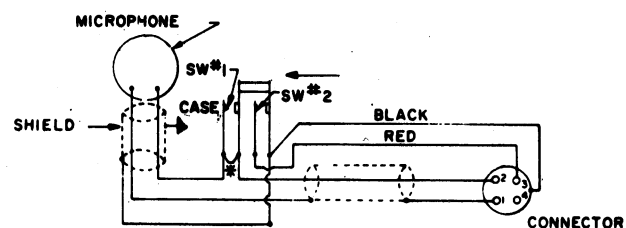
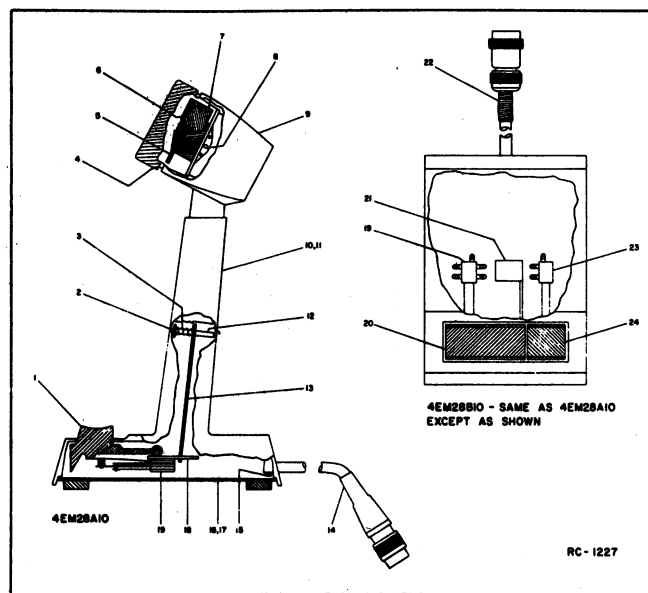
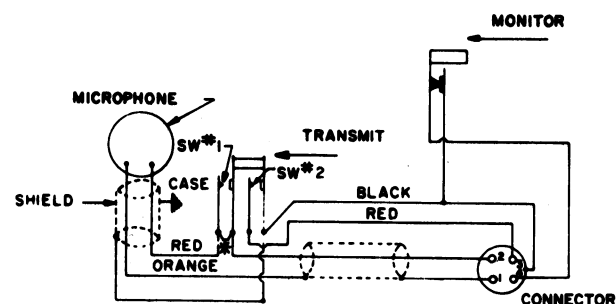
MODEL 4EM28A10 (19C307105-P1)

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.

CIRCUIT DIAGRAM
4EM28A10CIRCUIT DIAGRAM
4EM28B10

* JUMPER MAY BE REMOVED FOR PARALLEL OR SPECIAL OPERATION

NOTES:

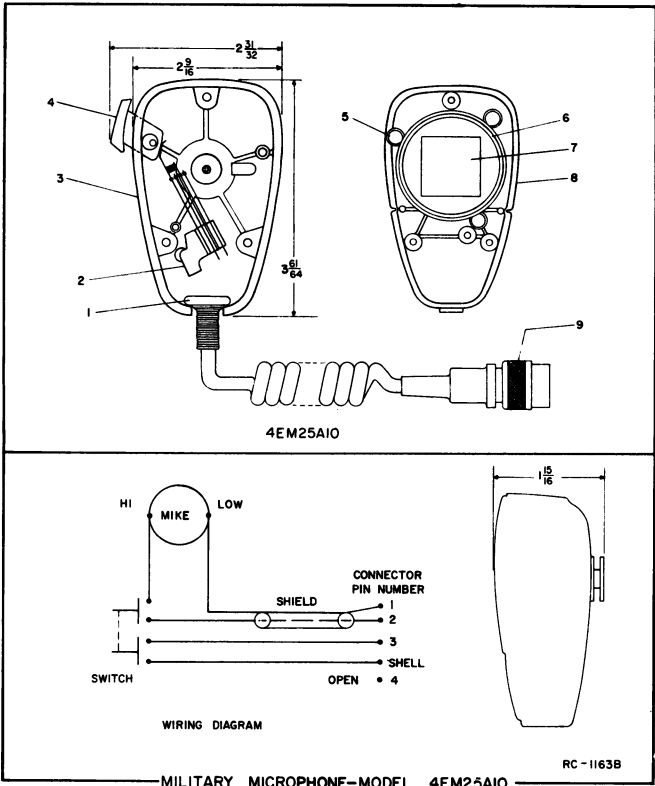
1. SWITCH #1 OF THE MICROPHONE CIRCUIT MUST CLOSE FIRST AND OPEN LAST.
2. MONITOR AND TRANSMIT BUTTONS ARE MECHANICALLY INTERLOCKED, MAKING IT NECESSARY TO PRESS MONITOR BUTTON BEFORE TRANSMITTING. TO MONITOR CONTINUOUSLY, PRESS MONITOR BUTTON DOWN AND SLIDE FORWARD TO "LOCK" POSITION. PRESS AND PUSH 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 4EM25A10
(PL-19B209102-P1)
(SEE RC-1163)

SYMBOL	G-E PART NO.	DESCRIPTION
		MECHANICAL PARTS
		MODEL 4EM25A10
1		Cable clamp. Shure Brothers RP-16.
2		Switch. Shure Brothers RP26.
3		Case (back) and mounting button: plastic. Shure Brothers RP-67.
4		Switch button: red plastic. Shure Brothers RP-25.
5		Spring. Shure Brothers RP-1.
6		Shield. Shure Brothers RP-23.
7		Magnetic controlled cartridge. Shure Brothers RP-13.
8		Case (front) plastic. (Part of item 3).
9		Cable and plug: approx 6 feet long. Shure Brothers RP-14.



*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

PARTS LIST

LBI-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 30C640C.
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 30C557B.
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 BR.
24	7775500P55	Terminal board, phen: 5 terminals.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

