

 **MOBILE RADIO**

MASTR

PROGRESS LINE

MAINTENANCE MANUAL

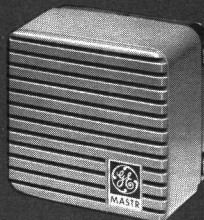


FLOOR MOUNT STATION

**TWO-WAY FM
FLOOR MOUNT
STATION
COMBINATION**

**HIGH POWER
REPEATER**

LBI-3630E



SPEAKER

DF-9014

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 Exciters	ET-54-A, through ET-59-C
Power Amplifier (25 - 50 MHz)	4EF4A1, 2, 3
Power Amplifier (132-174 MHz)	4EF5A1
Power Amplifier (450-470 MHz)	4EF6A1
Power Amplifier Power Supply	4EP6A1 or 4EP6B1
Receiver	ER-39-A through ER-42-H
Cabinet	19C303465-G2
Station Power Supply	4EP38A10 -12
Control Panel	4KC19A10
Microphone	4EM25A10
Microphone Mounting Kit	7141414-G2
Five-Watt Speaker	4EZ16A21
117-VAC Power Cable	7491206-P1
Two-Prong Plug Adapter	7160486-P1
Alignment Tools (hex slug type)	4038831-P2
(slotted screw type)	4033530-G2
Door Handle with Lock (and Key Keys	7488490P1 LL-802
Meter Switching Circuit	19A121460G1
Meter Panel	19C303518G2

OPTIONAL EQUIPMENT

EQUIPMENT	OPTION NO.	TYPE OR MODEL NUMBER
Transmitter Exciter Metering Cover	7648	19C303676-G1
Receiver Metering Cover	7649	19C303676-G2
220/110 Volt Stepdown Transformer Kit	7606	19C307148-P1
Cabinet Blower	7902	4029917-G2
Line Voltmeter	7901	19A120042-G5

SPECIFICATIONS*

DIMENSIONS (H x W x D)	69" x 22" x 23"
WEIGHT	Approximately 395 pounds
DUTY CYCLE (Transmit & Receive)	Continuous
INPUT VOLTAGE	117 VAC, $\pm 10\%$, 50/60 Hz
INPUT POWER	Transmit: 9.3 amps max 1100 w. Receive: 1.5 amps max 176 w.
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 Frequencies	Options	Frequency Range
V Floor-Mount Station	M 117 VAC	8 128—256 watts	4 20 KHz	Y Repeater Station	A 1-Freq. T 1-Freq. R	S Standard	11 25—33 MHz
		9 Over 256 watts	5 25 KHz			U Channel Guard (71.9—156.7 Hz)	22 33—42 MHz
			6 30 KHz			V Channel Guard (162.2—203.5 Hz)	33 42—50 MHz
			7 40 KHz				55 132—150.8 MHz
			8 50 KHz				66 150.8—174 MHz
			9 60 KHz				77 406—420 MHz
							88 450—470 MHz

DESCRIPTION

The General Electric MASTR Progress Line Floor Mount Station is a complete two-way High Power Repeater Station. The station can be placed in building adjacent to the antenna installation or it may be located in another location suitable to your communication requirements. The transmitter exciter board and the receiver are fully transistorized. Silicon transistors are used throughout for added reliability.

A muffin fan is used to air-cool the transmitter and 12.6 Volt regulator transistors. The fan is mounted on the front of the Transmitter-Receiver Power Supply. A blower is also used to cool the PA tubes in the Power Amplifier and is mounted on the front of the PA Power Supply. An optional cabinet blower is available for continuous duty and high temperature operation. This blower mounts in the bottom of the cabinet.

Both front and back doors on the station cabinet can be opened 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 swing-out 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.

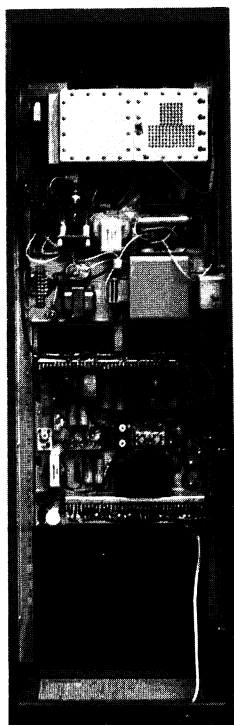


Figure 1

The rear door is interlocked to protect personnel from voltages when the door is opened. A 117 VAC receptacle mounted in the cabinet provides AC for service equipment.

TRANSMITTER ASSEMBLY

The transmitter assembly consists of the transmitter exciter and power amplifier. The PA is air-cooled by a blower mounted on the PA power supply chassis. 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 (25-50 MHz and 132-174 MHz)

POWER SUPPLIES

Transmitter Exciter Receiver Power Supply (4EP38A10-12)

Station Power Supply Model 4EP38A10-12 provides operating voltage for both the transmitter exciter and receiver. 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.

PA Power Supply (4EP6B1)

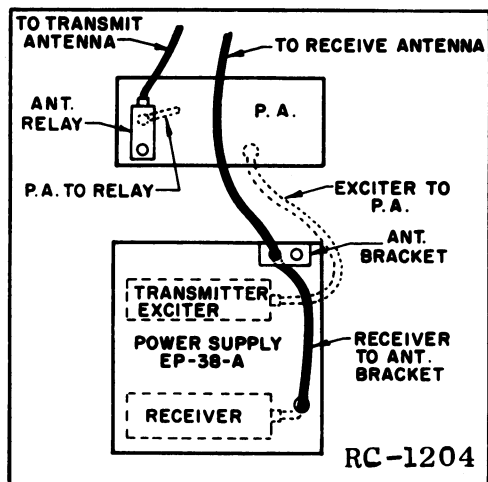
The power supply provides the B-plus plate and screen grid voltages for the PA (types EF-4-A, EF-5-A and EF-6-A). In addition, the following voltages are provided for the PA:

- 6 volts regulated filament supply
- 140 volts DC antenna relay supply

Antenna Circuits

The transmission line from the antenna tower is coupled to the top connector on the antenna relay located on the Power Amplifier chassis. The antenna is coupled from the front connector on the relay directly to the high power amplifier. A coax

cable connects the high power amplifier plug P482 to the exciter jack J103 (Transmitter Exciter on Transmitter-Receiver Power Supply chassis). The receive transmission line connects directly to the left socket on the antenna mounting bracket located on the Transmitter-Receiver Power Supply chassis.



Antenna Connections
Rear View
Figure 2

REPEATER CONTROL PANEL

The Control Panel contains the AC input circuit, audio coupler, carrier operated relay, 5-second and 3-minute timers, and the channel guard filter (if used). 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. All power to the station is controlled by switch S701 on the control panel. When S701 is turned ON, the green Power-On light on the meter panel will become illuminated.

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

WARNING

117-volts AC is always present at TB706-1 and -2, even when S701 is in the OFF position. Always use care when servicing the Control Panel.

SURGE PROTECTION

Surge Protection Thyrector 19A115095P2 is connected across the 117 Volt Line in high power station combinations for lightning protection and to eliminate voltage surges on the input power leads. The thyrector is connected between terminals 3 and 4 of TB706 located on Control Panel KC-16-A or KC-19-A.

MICROPHONE

A microphone is mounted inside the station for use during service and maintenance work by the serviceman. The microphone is connected to jack J902 located on the front side of the power supply.

SPEAKER

The speaker is designed for an audio output of five Watts. The speaker leads connect to TB501-11 and TB502-5 on the Transmitter-Receiver Power Supply. Audio output is adjusted by VOLUME Control (R511) on Transmitter-Receiver Power Supply.

NOTE

When a speaker is not used, a 3.5 ohm, 10-watt resistor must be connected from TB501-11 to TB502-5 as a substitute for the speaker load impedance

METERING CIRCUITS

Meter Panel (19C303518G2)

The Meter Panel is located above the front door on the station cabinet. The panel contains the following meters:

- Meter M901 — measures test voltages in transmitter circuits.
- Meter M902 — measures test voltages in receiver circuits.
- Meter M903 — measures PA Plate current in Transmitter power amplifier.
- Meter M904 — measures the PA Plate voltage of the power amplifier.
- Line Voltmeter 19A120042G5 (option) continuously monitors line voltage. The meter is a 0-150 VAC voltmeter connected across the 117 VAC line.

Meter Switching Panel Assembly (19A121460G1)

The Meter Switching Panel Assembly is mounted on the front of the accessory panel and contains the switches and circuitry for switching from stage to stage in the receiver and transmitter. The voltage readings for each stage is indicated on the meters

located in the Meter Panel. The Meter Switching Panel Assembly includes:

- Plug P1001 — plugs into transmitter centralized metering jack J102 (or J1001 if optional transmitter top cover is used).
- Plug P1002 — plugs into receiver centralized metering jack J442 (or J1002 if optional receiver top cover is used).
- Test Probe P1003 — to measure high power amplifier grid voltage.
- Switch S1001 — to switch transmitter voltage test points into points into the test meter circuit.
- Switch S1002 — to switch receiver voltage test points into the test meter circuit.
- Switch S1004 — Test probe polarity reversing switch.

The Meter voltage check points are in the table below:

Test probe P1003 is used to measure the high voltage power amplifier grid current/voltage and plugs into the PA grid jack on the high power supply.

Refer to the transmitter and/or receiver maintenance manual for the proper voltage readings for each stage tested.

Transmitter voltage readings will be indicated on transmitter "tune up" meter (M901) and receiver readings will be indicated on the receiver "tune up" meter (M902). Both meters are located on the Meter Panel.

CIRCUIT ANALYSIS

The voltage test points in the receiver and transmitter are connected through the connecting cables to lug terminals on the receiver and transmitter voltage wafer switches. With the receiver switch in the "A" meter switch position for example, the discriminator output voltage is connected by the switch to TB901-11 and 12 through wire numbers 22 and 23 to receiver meter (M902) in the Meter Panel. If the transmitter switch is in the "F" position, for example, the PA grid voltage is connected by the switch to TB901-9 and 10, through wire numbers 20 and 22 to meter (M901) in the Meter Panel.

Switch S1003 is used to connect the 3-volt multiplying resistor into the receiver meter circuit. Test probe P1003 is used to measure the high power amplifier grid drive. When using the test probe, turn the transmitter switch S1001 to the "External" position. R1002 is a multiplier resistor in series with the test probe to make the meter 3-volts full scale when using the external probe.

Resistor R1007 is a multiplier resistor in series with the receiver meter when switch S1003 is in the 3-volt position. Silicon rectifiers CR1001, CR1002, resistors R1003 and R1004 in the transmitter meter circuit and CR1003, CR1004, R1005 and R1006 in the receiver meter circuit protect the meters from overload and voltage spikes.

Tx (S1001) & Rx (S1002) Switch Position No.	Transmitter Function	Meter Range Full Scale	Receiver Function	Meter Range Full Scale
A B C**	MULT 1 MULT 2 AMPL 3	1 V 1 V 1 V	DISC 2nd IF 1st LIM	1 V* 1 V* 1 V*
D E*** F	MULT 3 AMPL/MULT 4 PA GRID	1 V 1 V 1 V	MULT 1 MULT 2 -----	1 V* 1 V* 1 V*
G H*** I	PA PLATE CURRENT POWER OUTPUT 20 VOLTS	1 V 1 V 30 V	AUDIO PA BLANKER -----	1 V* 1 V* 1 V*
J K L/VM	PA PLATE VOLTAGE EXTERNAL PROBE RECEIVER 2nd IF	1,000 V 3 V 1 V	10-VOLTS ----- -----	15 V

* can be increased to 3 V by switch S1003.

** not used in ET-54-A.

*** used only in ET-59-D.

NOTE

For continuous monitoring of test voltages, optional transmitter and receiver top covers, (19C303676-G3 and -G2, respectively) are available. The covers contain external sockets to attach the transmitter and receiver cables from the Meter Switching Panel Assembly.

INITIAL ADJUSTMENT

After the Station has been installed as described in the Installation Manual, the transmitter exciter PA receiver, power supply and 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. Built-in metering circuits are provided with this station.

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. 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 assembly includes:

- Tuning grid & plate controls on PA.
- Loading the power amplifier into the antenna.
- Checking the frequency and modulation.

For the Initial Adjustment procedure, refer to the transmitter exciter and power amplifier MAINTENANCE MANUAL.

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 switch S501 ON.
- Adjusting VOLUME (R511) and SQUELCH (R512) as follows:
Set SQUELCH to the point at which the noise disappears; then set VOLUME to optimum listening level.

CONTROL PANEL ADJUSTMENT

The initial adjustment for the control panel includes:

- Turning switch S701 ON.
- Adjusting AUDIO COUPLER LEVEL (R2) on Audio Coupler Circuit Board.

For the complete adjustment procedure, refer to the MAINTENANCE MANUAL for Control Panel Model 4KC19A10.

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 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 on the following page.

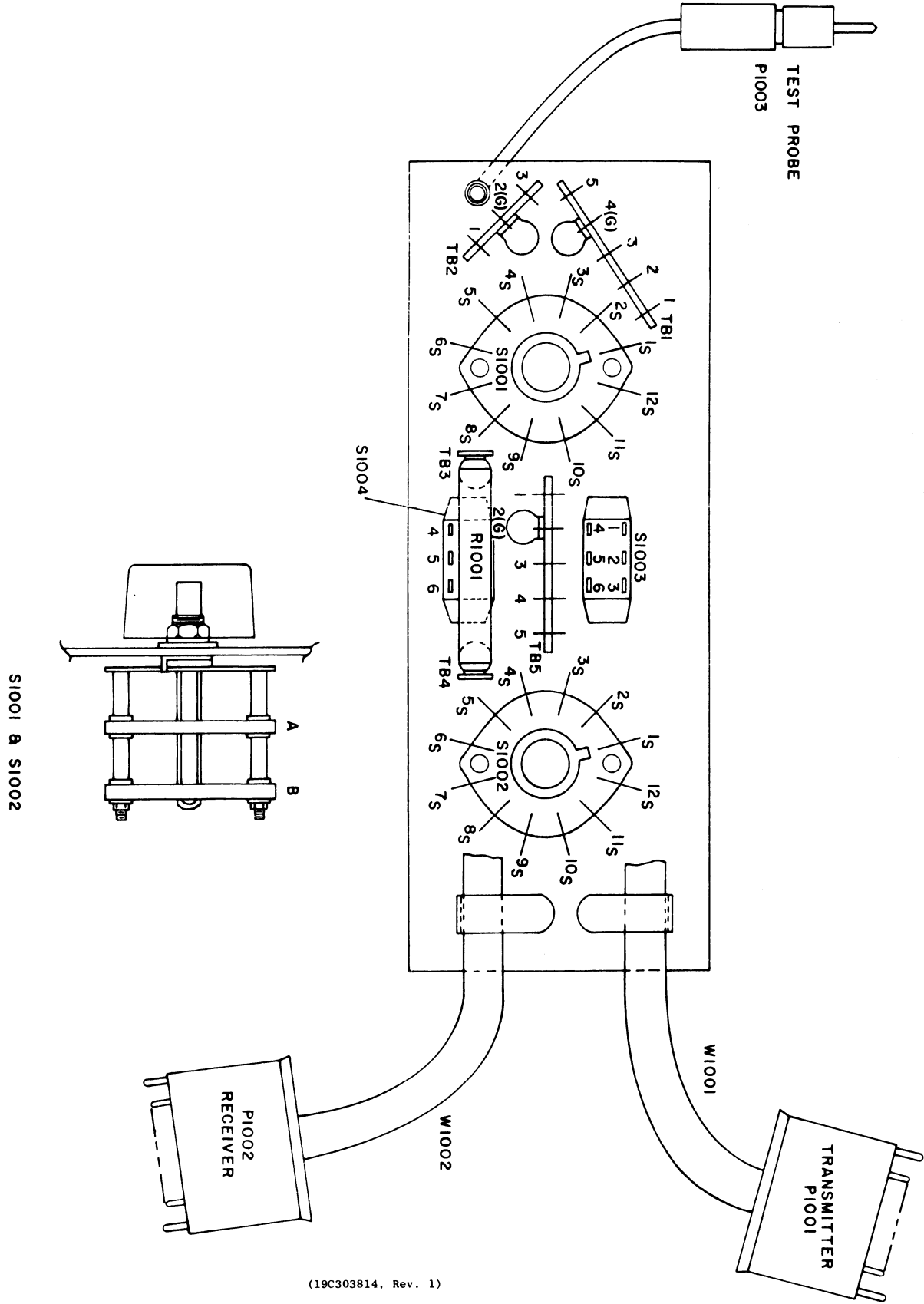
PREVENTIVE MAINTENANCE PROGRAM

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 and -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 voltage taken during initial tune-up. Retune, if necessary. ☐
5. Compare and record receiver meter readings with voltage 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 for 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.) ☐

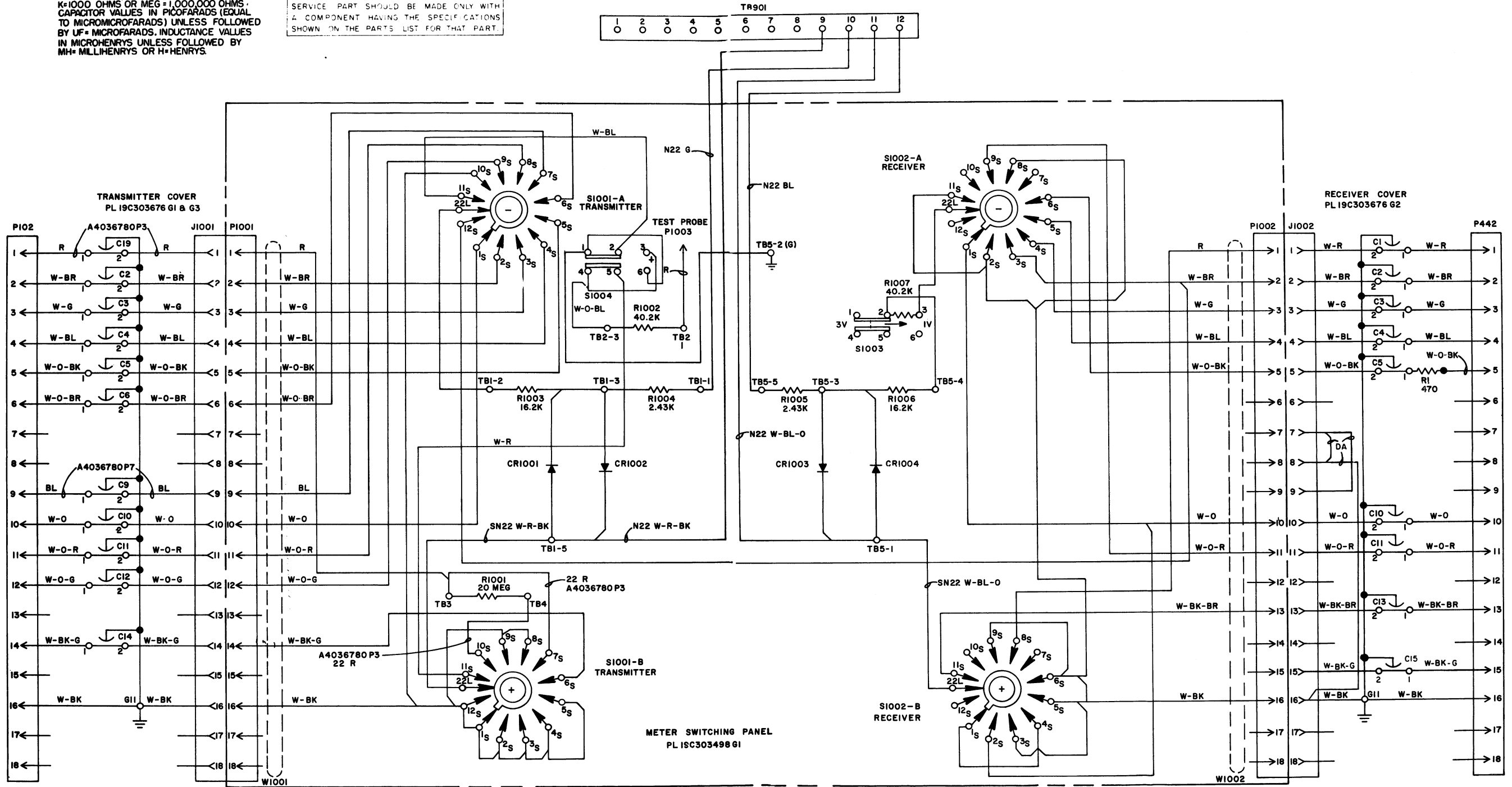


OUTLINE DIAGRAM

MASTR FLOOR-MOUNT STATION COMBINATION
METER SWITCHING PANEL

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

IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.



SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.

THIS ELEM DIAG APPLIES TO
MODEL NO 19C303498G
REV. LETTER A
19C303676G2 B

NOTES:

1. ALL WIRES ARE DA UNLESS OTHERWISE SHOWN IN METER SWITCHING PANEL.
2. ALL WIRES ARE #24 UNLESS OTHERWISE SHOWN IN RECEIVER & TRANSMITTER COVER.
3. TERMINATE ALL WIRES NOT USED IN W1001 & W1002 BY CUTTING OFF FLUSH WITH CABLE JACKET.

SCHEMATIC DIAGRAM

MASTR FLOOR-MOUNT STATION COMBINATION
METER SWITCHING

(19D402334, Rev. 9)

PARTS LIST

LBI-3565B
METER SWITCHING PANEL ASSEMBLY
PL-19A121460-G1

SYMBOL	G-E PART NO.	DESCRIPTION
		METER SWITCHING PANEL PL-19C303498-G1
		----- DIODES AND RECTIFIERS -----
CR1001 thru CR1004	5494922-P1	Silicon; sim to Type 1N456.
		----- PLUGS -----
P1001		(Part of W1001).
P1002		(Part of W1002).
P1003	4032797-P1	Probe, test: solderless; sim to Birnbach Type 415 (red).
		----- RESISTORS -----
R1001	5496955-P576	Deposited carbon, epoxy coated: 20 megohms ±2%, 2 w; sim to Texas Instruments Type CD2R.
R1002	5495948-P359	Deposited carbon, epoxy coated: 40,200 ohms ±1%, 1/2 w; sim to Texas Instruments Type CD1/2MR.
R1003	5495948-P321	Deposited carbon, epoxy coated: 16,200 ohms ±1%, 1/2 w; sim to Texas Instruments Type CD1/2MR.
R1004 and R1005	5495948-P238	Deposited carbon, epoxy coated: 2430 ohms ±1%, 1/2 w; sim to Texas Instruments Type CD1/2MR.
R1006	5495948-P321	Deposited carbon, epoxy coated: 16,200 ohms ±1%, 1/2 w; sim to Texas Instruments Type CD1/2MR.
R1007	5495948-P359	Deposited carbon, epoxy coated: 40,200 ohms ±1%, 1/2 w; sim to Texas Instruments Type CD1/2MR.
		----- SWITCHES -----
S1001 and S1002	19C307113-P2	Rotary: 2 sections, 2 poles, 12 positions, non-shorting contacts, 2 amps at 28 VDC or 1 amp at 110 VDC; sim to Oak 235585-K2.
S1003 and S1004	7145098-P1	Slide: DPDT, 3/4 amp at 125 VAC or 1/2 amp at 125 VDC; sim to Stackpole SS-150.
		----- TERMINAL BOARDS -----
TB1	7775500-P9	Phen: 5 terminals.
TB2	7775500-P7	Phen: 3 terminals.
TB3 and TB4	7775500-P46	Phen: 1 terminal.
TB5	7775500-P9	Phen: 5 terminals.
		----- CABLES -----
W1001	19C303568-P2	Metering: includes 18 pin plug (P1001) rated at 1000 VDC max, approx 38 inches long.
W1002	19C303568-P2	Metering: includes 18 pin plug (P1002) rated at 1000 VDC max, approx 38 inches long.
		----- MISCELLANEOUS -----
	PL-19B204861-G1	Chassis: approx 18-5/8 x 4-11/32 x 3-9/32 inches. (Used in PL-19C303498-G1).
	7763541-P6	Cable clamp. (Used with P1001 and P1002 in PL-19C303498-G1).
	7487773-P6	Knob: red; sim to Eastman Chemical 28739. (Used with S1001 and S1002 in PL-19C303498-G1).

SYMBOL	G-E PART NO	DESCRIPTION
	PL-19B204590-G1	----- MISCELLANEOUS(Cont'd) ----- Box: approx 18-5/8 x 4-11/32 x 3-9/32 inches. (Used in PL-19A121460-G1).
	4029030-P11	Rubber channel seal: approx 2-1/2 inches long. (Used in PL-19A121460-G1).
		COVER ASSEMBLY PL-19C303676-G1 (TRANSMITTER STATION METERING) PL-19C303676-G2 (RECEIVER STATION METERING) PL-19C303676-G3 (TRANSMITTER STATION METERING, VENTILATED)
		----- CAPACITORS -----
C1	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C. (Used in PL-19C303676-G1 & G3).
C2 thru C5	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C.
C6	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C. (Used in PL-19C303676-G1 & G3).
C9	7485975-P17	Ceramic dielectric, feed-thru: axial leads, 470 pf ±20%, 750 VDCW; sim to Erie Style 327. (Used in PL-19C303676-G1 & G3).
C10 and C11	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C.
C12	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C. (Used in PL-19C303676-G1 & G3).
C13	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C. (Used in PL-19C303676-G2).
C14	5493392-P7	Ceramic, feed-thru: .001 µf +100% -0%, 500 VDCW; sim to Allen-Bradley Type FA5C. (Used in PL-19C303676-G1 & G3).
C15*	5493392-P7	Ceramic, feed thru, .001 µf, +100% - 0%, 500 VDCW. (Used in 19D303676-G2). Added by REV. B.
C19	7485975-P17	Ceramic dielectric, feed-thru: axial leads, 470 pf ±20%, 750 VDCW; sim to Erie Style 327. (Used in PL-19C303676-G1 & G3).
		----- JACKS AND RECEPTACLES -----
J1001	19B209125-P2	Connector: 18 contacts rated at 5 amps min at 1000 VDC max. (Used in PL-19C303676-G1 & G3).
J1002	19B209125-P2	Connector: 18 contacts rated at 5 amps min at 1000 VDCW max. (Used in PL-19C303676-G2).
		----- PLUGS -----
P102	19B204727-P1	Connector: 18 contacts rated at 1000 VDC max. (Used in PL-19C303676-G1 & G3).
P442	19B204727-P1	Connector: 18 contacts rated at 1000 VDC max. (Used in PL-19C303676-G2).
		----- RESISTORS -----
R1*	3R77-P471K	Fixed Composition, 470 ohms, ±10%, 1/2 w. (Used in 19D303676-G2). Added by REV. A.

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 3 db loss in receiver sensitivity with cover on.
Added R1 to receiver metering cover.

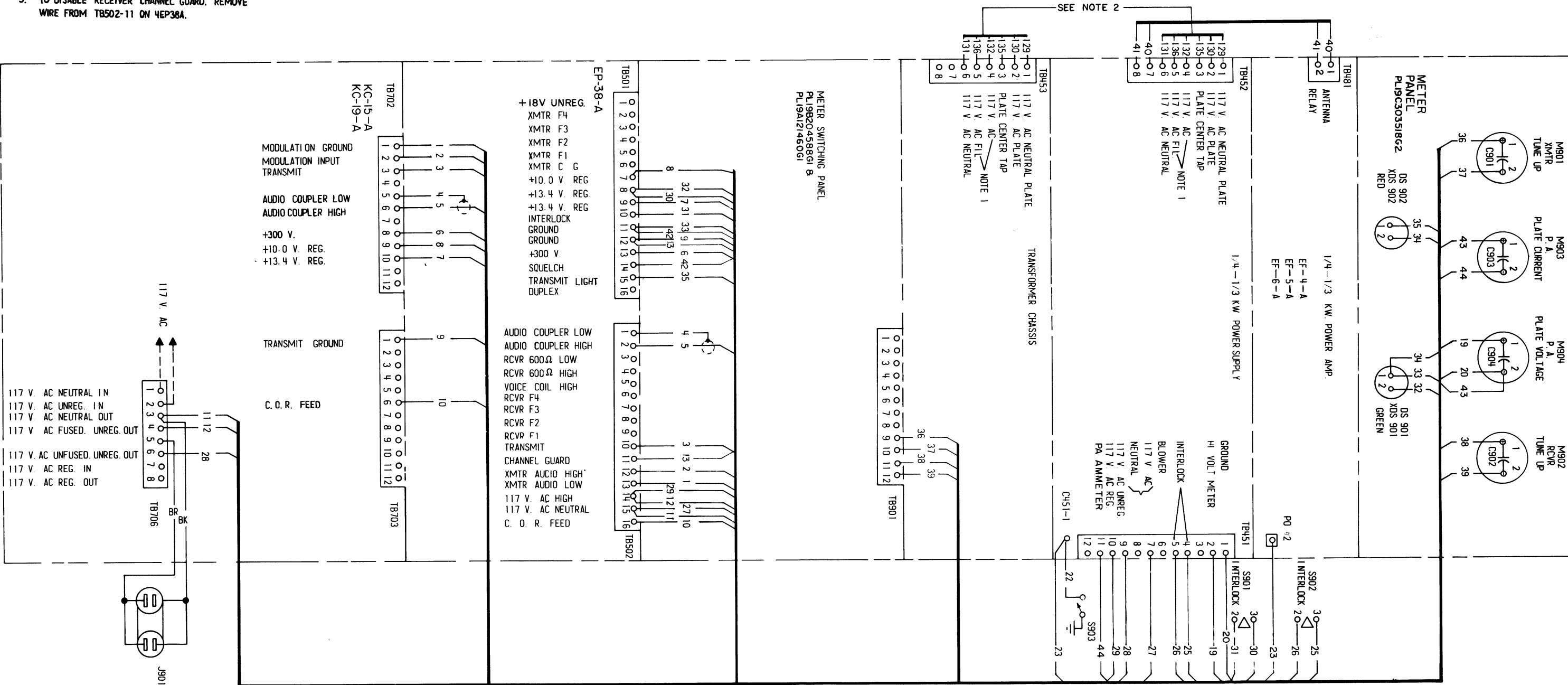
REV. B — To allow audio metering with cover. Added C15.

PARTS LIST			SYMBOL	GE PART NO.	DESCRIPTION
LB1-3564A					
HIGH POWER FLOOR MODEL STATION CABINET 19C303465G1, G2					
SYMBOL	GE PART NO.	DESCRIPTION			
----- JACKS AND RECEPTACLES -----					
J901	4029758G1	Duplex outlet, phen: polarized, 15 amps at 125 v.	M903	5491869P4	Milliammeter, DC: 0-500 MADC, 500 ma movement, 3-1/2 inch; sim to GE Type DO-91.
----- SWITCHES -----			M904	5491869P5	Voltmeter, DC: 0-3000 VDC, 1 ma movement, 3-1/2 inch; sim to GE Type DO-91.
S901*	19A115887P1	Push: 10 amps at 125/250 VAC; sim to Microswitch 2AC1. Earlier than REV A:	XDS901	7141855P13	Lamp: cylindrical green plastic lens; sim to Dialight 135-410-1432.
	7141440P1	Push, door interlock: SPDT, 10 amps at 125 or 250 VAC.	XDS902	7141855P12	Lamp: cylindrical red plastic lens; sim to Dialight 135-410-1431.
S902	5490346P1	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.	----- MISCELLANEOUS -----		
S903	5491274G1	Door interlock, grounding.	NP243462		Chassis: approx 21-5/8 x 6-3/4 x 7/8 x 1/8 inches, etched aluminum.
----- MISCELLANEOUS -----			LINE VOLT-METER 19A120042G5		
	N529P30C13	Plug button: approx 7/8 inch dia. (Located on top of cabinet).	C1	3R81P102M	Ceramic disc: radial leads, .001 μ f \pm 20%, 500 VDCW; sim to Radio Materials Type JL Discap.
	5491480P5	Cable clamp: sim to Adel Precision Type 754. (Located in top of cabinet).	----- CAPACITORS -----		
	4038217P1	Cable clamp: sim to Thomas and Betts 3302. (Located in bottom of cabinet).	M1	5491869P7	Voltmeter, AC: 0-150 VAC, 100 ohms per volt movement, 3-1/2 inch; sim to GE Type DO-91.
CABINET ASSEMBLY 7668242G14			----- METERS -----		
----- MISCELLANEOUS -----				5491241G2	Blower Motor assembly: 117 VAC, 50/60 Hz, 1700 RPM.
	5498454G1	Cabinet shell: approx 69 x 22 x 5/8 inches.		19B200425P3	Filter: permanent type, steel electrogalvanized Media uncoated.
	5495572G1	Rear door: approx 66 x 21-3/4 x 5/8 inches.	----- CABINET BLOWER -----		
	7774537P1	Angle mounting: approx 63-1/2 x 1-1/2 x 1/8 inches.	4029917G2		
	7488490P1	Door handle: includes key LL-802; sim to Yale and Towne S1410S.			
	5495571G6	Front door: approx 59 x 21-3/4 x 5/8 inches.			
	4031566P1	Rear door grill: approx 15-1/4 x 12 x 1/16 inches.			
	5493646G1	Instruction book holder: approx 13-1/2 x 9-1/2 x 5/16 inches.			
Ground lug. Ilasco SLU-70.					
METER PANEL ASSEMBLY 19C303518G1 (Used in 19C303465G1) 19C303518G2 (Used in 19C303465G2)					
----- CAPACITORS -----					
C901 thru C904	5494481P11	Ceramic disc: 1000 pf \pm 20%, 1000 VDCW; sim to RMC Type JF Discap.			
----- INDICATING DEVICES -----					
DS901 and DS902	19C307037P19	Lamp, incandescent: miniature, 14 v \pm 0.1 v; sim to GE 756.			
----- METERS -----					
M901 and M902	5491869P11	Microammeter: -10/0/+50 μ a, 3-1/2 inch; sim to GE Type DO-91.			

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

NOTES:

- CONNECTIONS ARE FOR 60 CYCLE OPERATION. FOR OTHER FREQUENCIES, REMOVE CONNECTIONS TO TB452-4 AND 5 AND JUMPER BETWEEN THEM.
- WIRES #129-132, 135 & 136 ARE PART OF EP-6-A RUNNING LIST.
- TB706-1 MUST BE CONNECTED TO GROUND OR NEUTRAL OF THE BUILDING WIRING SYSTEM.
- MOVE N22-BL WIRE ON 4EP38A10-11 OR N22BR WIRE ON 4EP38A12 INSIDE 4EP38 FROM TB501-16 TO TB501-7.
- TO DISABLE RECEIVER CHANNEL GUARD, REMOVE WIRE FROM TB502-11 ON 4EP38A.



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

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MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

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