MOBILE RADIO

INSTALLATION OF LINE AMPLIFIER MODEL 4EA23A10

3750A

INSTALLATION SPECIFICATIONS

Dimensions (H x W x D)	5-1/2" x 11-3/8" x 12-1/8"
Power Requirements (maximum)	20 watts @ 117 volts AC, ±10%, 50/60 Hz
Weight	18 pounds
Temperature Range	-30°C to +60°C (-22°F to +140°F)

INSTALLING THE LINE AMPLIFIER

The compactly-designed Line Amplifier can be mounted on a desk, shelf or table. The unit should be located so that it is convenient to a 117-volt outlet and the telephone terminal block.

CONNECTIONS

All telephone line and external speaker connections are made to terminal board TB1501 located at the rear of the unit. Make the connections as follows:

Telephone Line Input - Connect the telephone line input pair to TB1501-6 and -9. If a DC control voltage is present on the line, make sure that the optional DC blocking capacitor is connected between TB1501-7 and -8.

External Speaker Option - Connect the lead to the external speaker(s) to TB1501-1 and -2.

Line Output Transformer Option - Connect the telephone line output pair to TB1501-3 and -4.

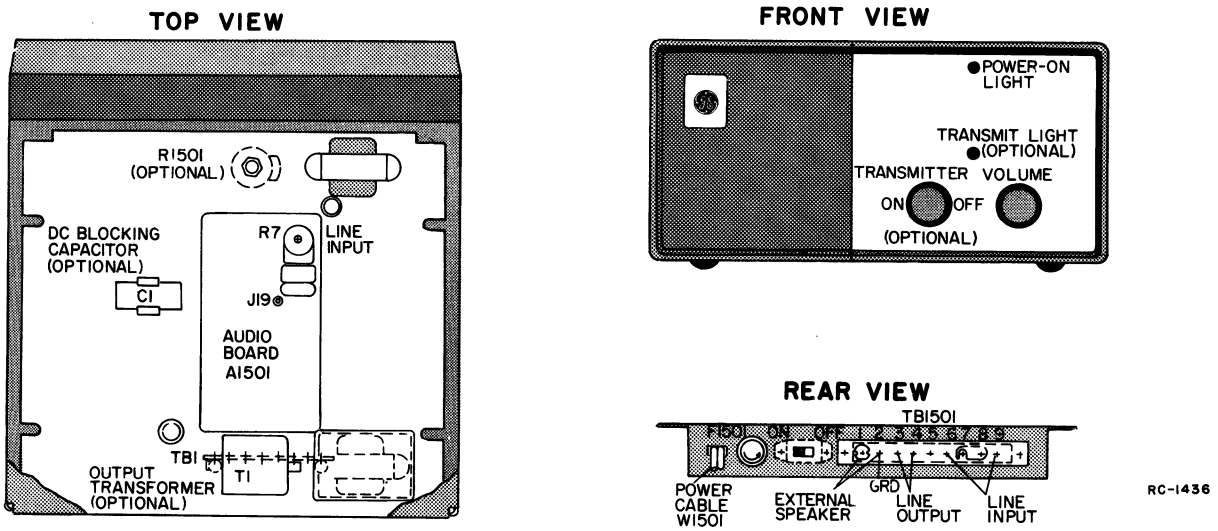
Power Cable - Connect the power cable (W1501) to a 117-VAC, 50/60 Hz source.

Dial Page Monitor Option - The Dial Page Monitor Option requires five wire-line connections between the Line Amplifier and the Dial Page Terminal. Connect the wires as shown on the following chart. The resistance of the light and switch wires must be less than 100 ohms per wire.

FUNCTION	MAKE CONNECTIONS BETWEEN:	
	Line Amplifier	Dial Page Station
Transmit On-Off Switch	TB1501-3	TB1-12
Transmit Light Lamp Control -12 volts DC	 TB1501-4 TB1501-5	 TB2-6 TB1-13
Audio Pair Audio High Audio Low	 TB1501-6 TB1501-9	 TB1-10 TB1-11

In addition to the above connections, it is recommended that a connection be made from the chassis of the amplifier (TB1501-2) to a good earth ground. After all connections have been made, refer to the Adjustment Procedure before placing the unit in operation.

ADJUSTMENT PROCEDURES



Before adjusting the Line Amplifier, make sure that the AC power line and all telephone line connections have been made. Turn the power switch (S1501) to the ON position.

LINE INPUT

The LINE INPUT control (R7) has been adjusted at the factory so that the threshold of compression is 75 millivolts RMS (-20 dBm). This control should be readjusted during installation so that the threshold of compression is no higher than necessary. Excessive compression will accentuate line noise during pauses in transmission.

1. Apply a +18 dBm, 1000 Hz signal across the source end of the telephone line having the largest line loss (this may be a base station or remote control console). If the source is intended to operate at a level of less than +18 dbm output, set the signal generator for this lower level.

2. Adjust the LINE INPUT control (R7) for threshold of compression indicated by a reading of 0.4 volt DC measured from J19 (on the audio board) to ground.

EXTERNAL SPEAKER OPTION

1. Disconnect the external speakers and connect an AC-VTVM across TB1501-1 and -2.

2. Turn the VOLUME control (on the front panel) fully counterclockwise.

3. Apply a 1000-Hz signal across TB1501-6 and -9. Increase the signal level to produce threshold of compression (0.4 volt DC measured from J19 to ground).

4. Adjust R1501 (on the amplifier chassis) for an AC-VTVM reading of 3.5 volts.

LINE OUTPUT TRANSFORMER OPTION

1. Make sure that the telephone line output (or some other 600-ohm load) is connected across TB1501-3 and -4.

2. Connect an AC-VTVM across TB1501-3 and -4.

3. Apply a 1000-Hz signal across TB1501-6 and -9. Increase the signal level to produce threshold of compression (0.4 volt DC measured from J19 to ground).

4. Adjust R1501 (on the amplifier chassis) for a meter reading of 6 volts RMS (+18 dBm) or desired output level. For an output level of 0 dBm or less, remove the 13-ohm resistor from TB1-2 and -3, and adjust R1501 for desired output level.

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