

KS-20449 AMPLIFIER INSTALLATION, CONNECTIONS, AND MAINTENANCE

1. GENERAL

- 1.01** This section covers the installation, connections, and maintenance of the KS-20449 L1 amplifier.
- 1.02** This section is reissued to:
- Incorporate material from Section 024-174-400 which is canceled
 - Add an installation test for the amplifier
 - Delete the schematic diagram and add it to Section 024-174-500.

This section does not affect the Equipment Test List. Since this reissue is a general revision, arrows ordinarily used to indicate changes have been omitted.

2. INSTALLATION AND CONNECTIONS

- 2.01** The KS-20449 L1 amplifier (Fig. 1 and 2) may be installed on a 23-inch relay rack using a 189A mounting plate drilled for mounting the KS-20449 L1 amplifier, or may be mounted vertically on rails similar to the mounting used for the KS-16754 amplifier. The modified 189A mounting plate will accommodate three amplifiers.
- 2.02** External connections and internal strapping to the amplifier should be made to TB1, located on the rear of the amplifier, as shown in Fig. 3.
- 2.03** The amplifier may be operated from either a 24- or 48-volt positive or negative grounded power supply.

3. TEST AND ADJUSTMENTS

- 3.01** Test the KS-20449 amplifier with a signal applied to the input. (For example, dialing the central office milliwatt supply test line.) Monitor

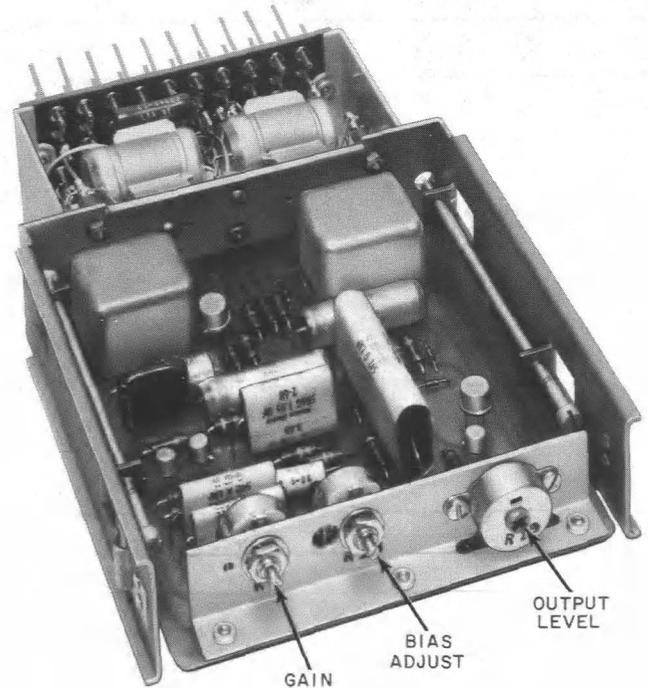


Fig. 1—KS-20449 Amplifier—Front View with Cover Removed

the incoming line with a test receiver. The signal level should be comparable to that in the receiver of a telephone set.

- 3.02** Using a KS-6854 screwdriver, or equivalent, turn gain control (Fig. 1) completely counterclockwise to obtain minimum gain.

- 3.03** Turn gain control clockwise until maximum loudness is reached or up to a point just before crosstalk is heard. If the amplifier tends to howl when a telephone transmitter is connected to the line, reduce the amplifier gain until howling is eliminated.

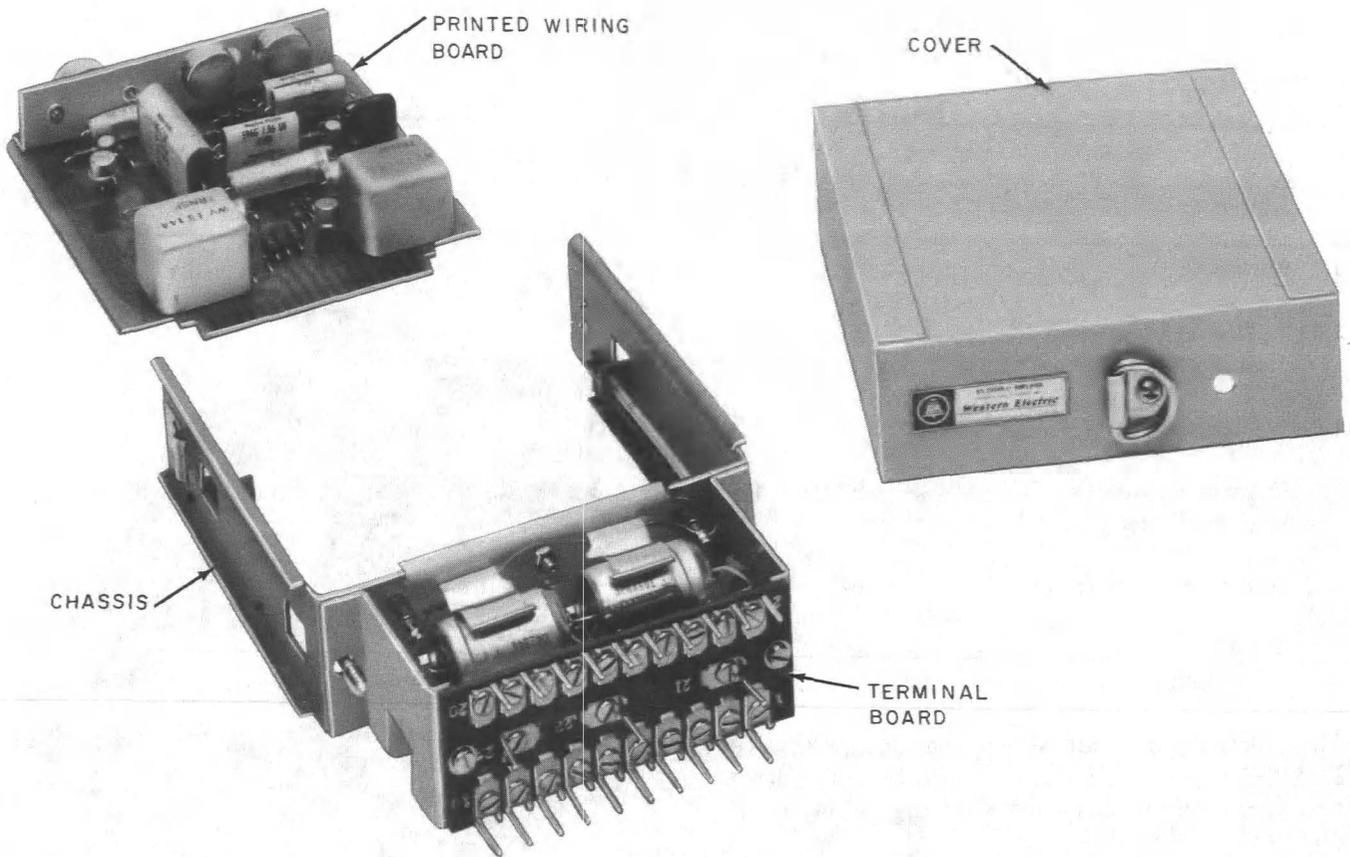


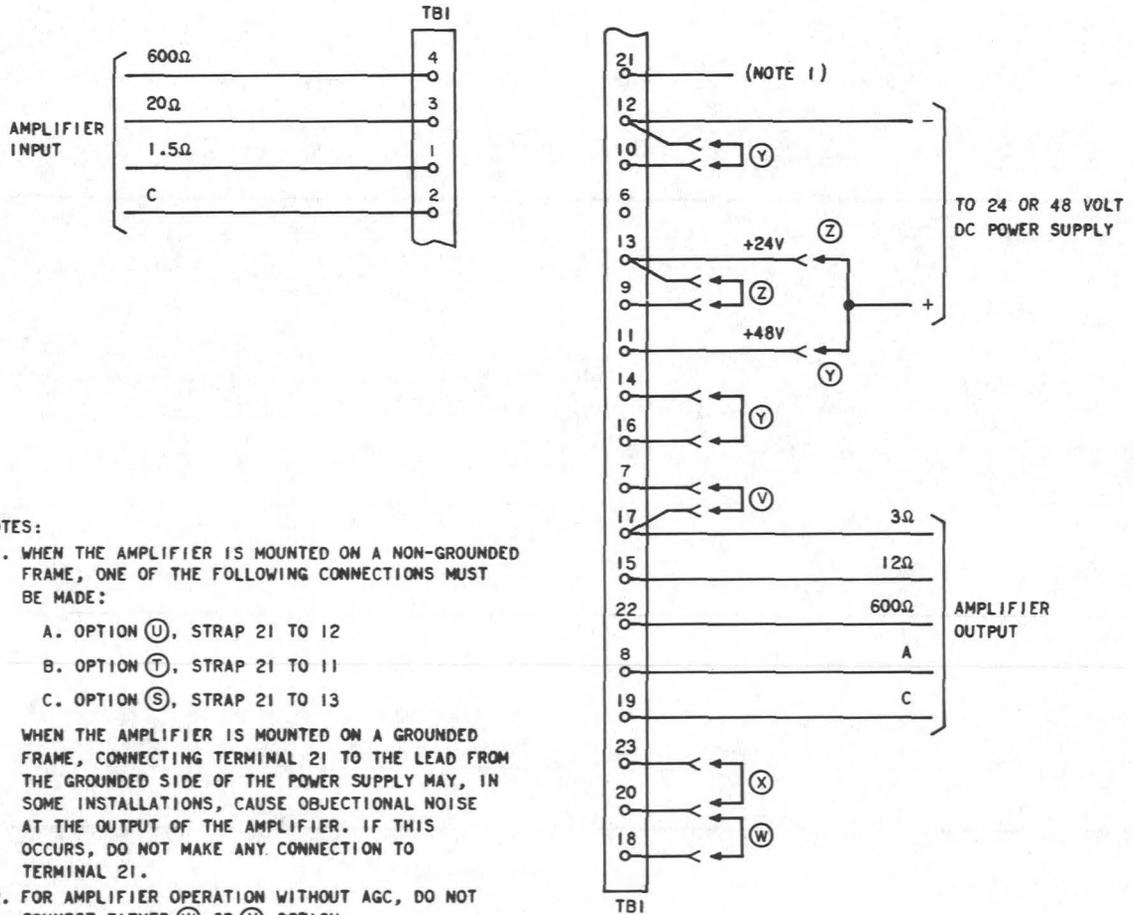
Fig. 2—KS-20449 Amplifier—Terminal View with Printed Wiring Board and Cover Removed

4. MAINTENANCE

4.01 The tests in Section 024-174-500 should be made to determine the performance of the amplifier when clearing troubles. If trouble in the amplifier is indicated by the tests and the

trouble cannot be cleared, the entire amplifier should be replaced and returned to repair center.

4.02 Refer to CD-99531-01 for detailed description of amplifier operation. The schematic diagram is shown in Section 024-174-500.



NOTES:

1. WHEN THE AMPLIFIER IS MOUNTED ON A NON-GROUNDED FRAME, ONE OF THE FOLLOWING CONNECTIONS MUST BE MADE:

- A. OPTION (U), STRAP 21 TO 12
- B. OPTION (T), STRAP 21 TO 11
- C. OPTION (S), STRAP 21 TO 13

WHEN THE AMPLIFIER IS MOUNTED ON A GROUNDED FRAME, CONNECTING TERMINAL 21 TO THE LEAD FROM THE GROUNDED SIDE OF THE POWER SUPPLY MAY, IN SOME INSTALLATIONS, CAUSE OBJECTIONAL NOISE AT THE OUTPUT OF THE AMPLIFIER. IF THIS OCCURS, DO NOT MAKE ANY CONNECTION TO TERMINAL 21.

2. FOR AMPLIFIER OPERATION WITHOUT AGC, DO NOT CONNECT EITHER (W) OR (X) OPTION.

(S)	POSITIVE GROUND BATTERY (-24 VOLT)	(NOTE 1)
* (T)	POSITIVE GROUND BATTERY (-48 VOLT)	
(U)	NEGATIVE GROUND BATTERY (+24 OR +48 VOLT)	
(V)	OUTPUT LEVEL CONTROL (CONNECT TO LEADS A AND C)	
* (W)	SLOW ATTACK TIME (≈ 15 USEC)	
(X)	FAST ATTACK TIME (≈ 2 USEC)	
* (Y)	48 VOLT OPERATION	
(Z)	24 VOLT OPERATION	
* OPTION FURNISHED WITH AMPL BY MANUFACTURER		

Fig. 3—KS-20449 L1 Amplifier—LD Connections and Options