

**N3 CARRIER TELEPHONE SYSTEM**  
**LINE TERMINATING UNIT (J99300AL)**  
**CHECK OF LINE CURRENT**

When a local power source is not available at a repeater point, dc power can be supplied to the repeater over the two cable pairs used for carrier transmission by means of simplex arrangements. In this manner, one electron-tube repeater or up to three transistor repeaters in series with one 240-type amplifier in parallel may be powered from a J99300AL line terminating unit. When unsoldered twisted cable splices are present in the high-frequency line, a small amount of direct current may be applied to the cable pairs to seal the splices. The section, which is fed sealing current, may be beyond the repeater receiving power from the N3 terminal. Adjustments are made by setting screw-type switches in the line terminating unit for the various line current conditions. The J99300AL unit does not provide regulated line current.

This section is reissued to specify voltage limits for the N1-H repeater (electron-tube repeater modified for hybrid integrated networks) and to make other miscellaneous changes. Since this revision is of a general nature, arrows ordinarily used to indicate changes have been omitted. This reissue does not affect Equipment Test Lists.

The purpose of the following in-service test is to measure the line current by measuring the voltage drop across a 10-ohm resistor, which is connected in series with the line current path.

**APPARATUS:**

- 1—KS-14510 Volt-Ohm-Milliammeter (VOM) or equivalent (20,000 ohms per volt)

**STEP**

**PROCEDURE**

**Note:** Before performing this test, all line repeaters and 240-type amplifiers receiving power from the carrier terminal must be in place (Sections 362-400-300, 362-430-501, and 362-450-300).

- 1 From the carrier layout record (CLR) card, determine the repeatered line equipment arrangement receiving power from the carrier terminal.
- 2 On the VOM set the range selector switch to DC VOLTS 12 position.
- 3 At the line terminating unit connect the VOM red test probe to the SX CUR + (brown) jack and the black test probe to the SX CUR - (black) jack (Fig. 1).

STEP	PROCEDURE
4	Measure the voltage at the SX CUR jacks. Reset the VOM range selector switch to obtain an indication as close as possible to full scale deflection.  <i>Requirement:</i> See Table A.
5	If the requirement of Step 4 is met, proceed to Step 6. If it is not met, make out-of-service tests per Section 362-904-502. Repeat Steps 3 and 4.
6	Disconnect the VOM from the SX CUR jacks.

TABLE A

REPEATERED LINE EQUIPMENT ARRANGEMENT	VOLTAGE LIMITS	
	LINEUP	MAINTENANCE
Electron-Tube Repeater with or without 240-type amplifier	1.65 to 1.75	1.60 to 1.80
Electron-Tube Repeater Plus Sealing Current	1.85 to 1.95	1.78 to 2.02
*N1-H Repeater (Note)	0.45 to 0.55	0.42 to 0.58
N1-H Repeater Plus Sealing Current	0.58 to 0.72	0.54 to 0.76
*N1A or N2 Transistor Repeater — Average Cable Temperature (+30° to +70° F)	1.08 to 1.12	1.04 to 1.17
*Transistor Repeater — Extreme Cable Temperature (Below +30° and Above +70° F)	1.05 to 1.15	1.00 to 1.44
Sealing Current Only	0.16 to 0.22	0.15 to 0.24
No Power Transmitted	0.0	0.0

\* When a 240-type amplifier is in the power feed circuit and precedes an N1-H, N1A, or N2 repeater, the limits are increased by 0.25 volt. If the 240-type amplifier follows the last N1-H, N1A, or N2 repeater, use limits shown.

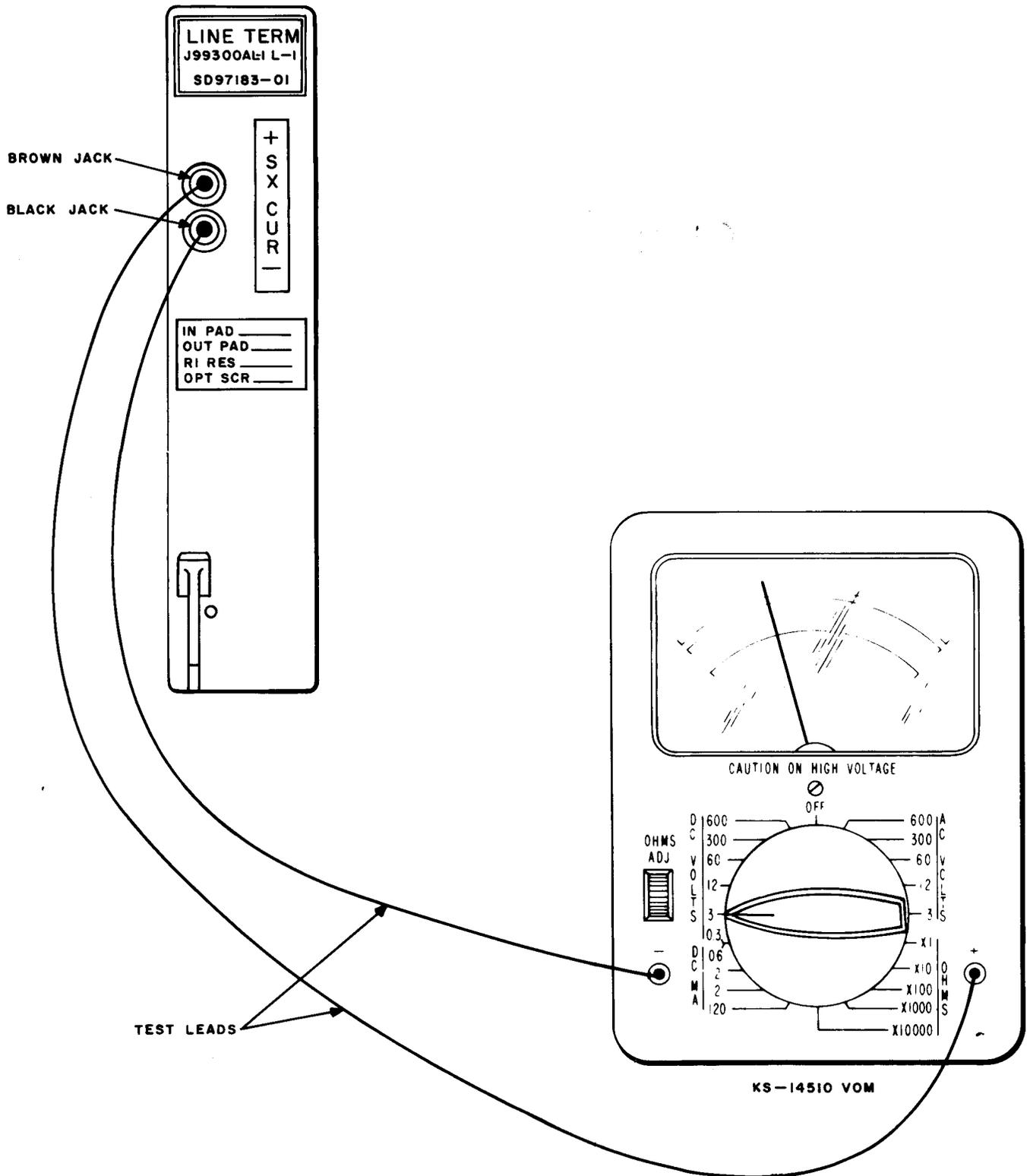


Fig. 1—J99300AL Line Terminating Unit—Measurement of Line Current