

**TYPE N2 CARRIER REPEATERS  
REPEATERED HIGH-FREQUENCY LINE  
PRELIMINARY TESTS  
REPEATER POWER PROVISIONS  
CHECK OF VOLTAGE POLARITY, CURRENT, AND  
CURRENT BYPASS AND SEALING CURRENT  
PROVISIONS**

When installing N2 repeaters, certain checks and tests should be made to prevent damage to the repeater. These include checks of voltage polarity both to and from the repeater, voltage measurements to ensure that the proper amount of current is being drawn by each repeater, and checks and tests of sealing current provisions included in the repeater cabinet or bay.

The purpose of this section is to provide general instructions for installing the N2 repeater and checks and tests of voltage polarity, repeater current, and sealing current provisions for locally powered and remotely powered N2 repeaters.

**Note:** The tests and checks in this section apply only to N2 repeaters being installed in N2 repeater bays or cabinets. If N2 repeaters are used in N1A repeater mountings or if the particular system being installed requires N2 and N1A repeaters in combination on the same power string, preliminary installation checks and tests for the *N1A repeater* or *N2 repeater in N1A mounting facilities* (using N2 to N1A adapters) are contained in Section 362-405-516.

**APPARATUS:**

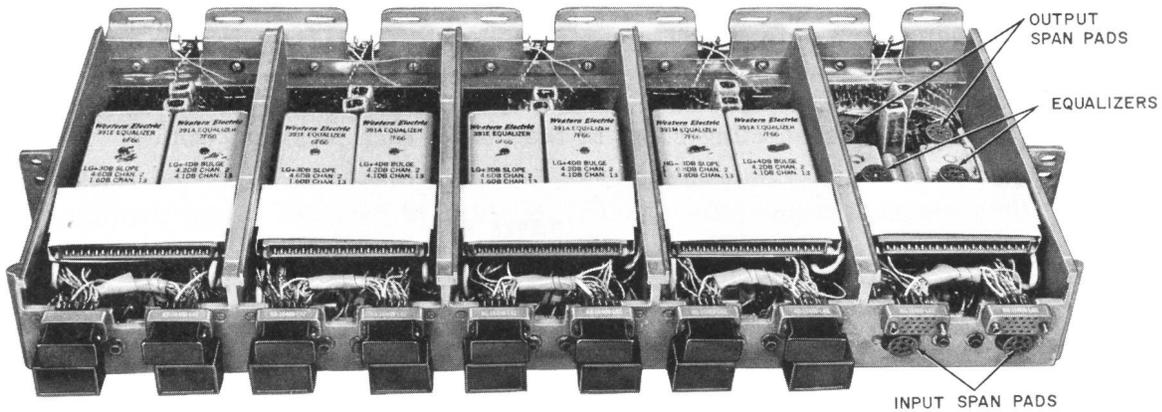
- 1 — KS-14510, L1 Volt-Ohm-Milliammeter (VOM), or equivalent, with KS-14510, L8 Test Leads

STEP	PROCEDURE
	<b>A. Locally Powered Repeaters</b>
	<i>Before Inserting Repeater</i>
1	Open all line switches T1 through T4 and R1 through R4 by turning each screw two or more revolutions counterclockwise. These screw-type switches are located at the rear of each repeater position, or in some cases at the top of the bay.
	<b>Warning:</b> <i>As much as 260 volts may be present on the screw portion of these switches.</i>

STEP	PROCEDURE
2	If dc power is transmitted over the line, one or two power connecting boards may be required on the terminal strip at the rear of each repeater position. These boards are specified in Section 362-455-501. Ascertain that the procedures in that section have been performed before continuing to Step 3.
3	If sealing current is received from a remote power point, screw-fasten the power connecting board (TERM SX, ED-3C050-30) to the terminal strip at the rear of each repeater position as specified on the carrier layout card.
4	Plug required span pads and equalizers into the repeater mounting shelf. Pad and equalizer values are specified on the carrier layout card. Figure 1 shows span pad and equalizer locations on the mounting shelf.
5	Close line switches T1 through T4 and R1 through R4 by turning each screw fully clockwise.
6	<p>Check the polarity and magnitude of the voltage between TP1 and TP2 on the repeater mounting.</p> <p><b>Requirement:</b> Less than 4.0 vdc. TP1 must be positive.</p>
7	<p>If power is sent over the line, set the VOM to the 300-volt scale and check the voltage polarity as specified in Table A. The magnitude of the voltage is unimportant.</p> <p><b>After Inserting Repeater</b></p>
8	<p>Set the VOM to the 12-volt scale and measure the voltage between TP1 and TP2. The requirements are provided in Table B. (Final voltage measurements and checks on the repeater unit itself are contained in Section 362-460-501.)</p> <p style="text-align: center;"><b>B. Remotely Powered Repeaters</b></p> <p><b>Before Inserting Repeater</b></p>
1	<p>Open all line switches T1 through T4 and R1 through R4 by turning each screw two or more revolutions counterclockwise. These screw-type switches are located at the rear of each repeater position in a bay or at the right side of the repeater cabinet.</p> <p><b>Warning:</b> As much as 260 volts may be present on the screw portion of these switches.</p>
2	Screw-fasten one or two power connecting boards per ED-3C061-30, groups 1 through 12, to the terminal strip at the rear of each repeater position as specified on the carrier layout card.
3	Plug required span pads and equalizers into the repeater mounting shelf. Pad and equalizer values are specified on the carrier layout card. Figure 1 shows span pad and equalizer locations on the mounting shelf.

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4	Close line switches T1 through T4 and R1 through R4 by turning each screw fully clockwise.																																
5	Set the VOM to the 300-volt scale and check the polarity of the incoming voltage as specified in Table C. If power is continued to succeeding repeaters, also check the polarity of the outgoing voltage. The magnitude of the voltage is unimportant.																																
6	<p><i>After Inserting Repeater</i></p> <p>No further tests are required unless the N2 repeater is the last repeater on the power string. For the last repeater, set the VOM to the 12-volt scale and measure the voltage between TP1 and TP2. The requirements are provided in Table B. (Final voltage measurements and checks on the repeater unit itself are contained in Section 362-460-501.)</p>																																
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**Fig. 1 — Span Pad and Equalizer Locations**