



**TYPE N1, O, AND ON CARRIER TELEPHONE SYSTEMS
OVERALL CHANNEL LINEUP—TRANSMISSION AND SIGNALING
SIGNALING RECEIVER AND OVERALL PULSING TESTS**

1. GENERAL

must be inserted in the section in accordance with the filing instruction above.

1.001 This addendum supplements Section 362-305-515, Issue 5. The attached pages

1.002 This addendum is issued to add a requirement to Step 13, which was omitted in Addendum 1.

Attached:

Page 3 dated May 1973, reissued

Page 4 dated May 1973, revised

Page 4.1 dated May 1973, added

STEP	PROCEDURE
	<p>Note: If no voltage is obtained, the SIG potentiometer may be turned slightly clockwise until a measurement is obtained.</p>
6	<p>If the requirement cannot be met, replace tube V45 and recheck operation; and, if necessary, replace V41 and, finally, V42. If this is ineffective, replace signaling relay K41; use the 603A tool and eject the relay perpendicularly to its socket to avoid damaging the relay base. As a last resort, replace the expander-signaling subassembly and repeat all tests.</p>
	<p>Caution: ♦Type 276N relays bearing date stamps 1971, 26th week through 1972, 13th week should not be used as a replacement for K41 relays in N1 channel units.♦</p>
7	<p>Connect the E jack of the 2B signaling test set to the E_G jack of the channel test stand using the 2P1D cord. All keys of the 2B test set are normal.</p>
8	<p>Connect the S1 jack to TP3.</p>
9	<p>Turn the SIG potentiometer to extreme counterclockwise and observe that the L lamp on the 2B set is extinguished; then slowly turn the SIG potentiometer clockwise until the L lamp on the 2B test set just lights.</p>
10	<p>If the requirement cannot be met, replace tube V45 and recheck operation; and, if necessary, replace V41 and finally V42. If this is ineffective, replace signaling relay K41; use the 603A tool and eject the relay. As a last resort, replace the expander-signaling subassembly and repeat all tests.</p>
	<p>Caution: ♦Type 276N relays bearing date stamps 1971, 26th week through 1972, 13th week should not be used as a replacement for K41 relays in N1 channel units.♦</p>
11	<p>Remove the connection from S1 jack to TP3 and repeat Step 4. If a readjustment is necessary in Step 4, repeat Steps 5 through 8.</p>
	<p>Overall Pulsing Test and Adjustment</p>
	<p>Where this test is made on a periodic basis it should be made between patching bays (if provided) with the L jack of the 2B signaling test set connected to the SIG L jack associated with the channel under test. The calibration of the 2B test set should be made just prior to the final adjustment and measurement of percent break.</p>
	<p>At the Transmitting Terminal</p>
12	<p>Set up the 2B signaling test set to send 12 pps at 58 percent break as follows.</p> <ol style="list-style-type: none"> (1) Set all keys to normal. Turn SCALE SEL switch to PPS, OG-BG to OG, and ADJ % BK to M. (2) Put dummy plug in P jack. Adjust CAL % BK potentiometer to obtain 100 percent on black scale on meter. Remove plug from P jack. (3) Adjust the ADJ PPS potentiometer for 12 pps. (4) Adjust the ADJ % BK potentiometer for 58 percent break on black scale on meter. (5) Operate PLS key to LINE.

STEP	PROCEDURE				
13	<p>At the Receiving Terminal</p> <p>Set up the 2B signaling test set to receive and measure the pulses as follows.</p> <ol style="list-style-type: none"> (1) Set all keys to normal. (2) Put dummy plug in P jack. Adjust CAL % BK to obtain 100 percent black scale on meter. Remove plug from P jack. (3) Operate MEAS % BK key to LINE. (4) Read the percent break on the red scale on meter. <p>Requirement:</p> <table data-bbox="305 814 868 877"> <tr> <td>Lineup</td> <td>62 percent break</td> </tr> <tr> <td>Maintenance</td> <td>56 to 64 percent break</td> </tr> </table>	Lineup	62 percent break	Maintenance	56 to 64 percent break
Lineup	62 percent break				
Maintenance	56 to 64 percent break				
14	<p>If the requirement cannot be met, replace tube V45 and recheck operation; and, if necessary, replace V41 and finally V42. If this is ineffective, replace signaling relay K41; use the 603A tool and eject the relay. As a last resort, replace the expander-signaling subassembly and repeat all tests.</p> <p>Caution: ♦Type 276N relays bearing date stamps 1971, 26th week through 1972, 13th week should not be used as a replacement for K41 relays in N1 channel units.♦</p> <p>Note 1: When the requirement is not met on lineup, adjust BRK potentiometer to obtain 62 percent break.</p> <p>Note 2: When the requirement is not met on maintenance, do not adjust the BRK potentiometer to meet the requirements. A complete signaling realignment should be done.</p>				
15	<p>After the signaling receiver has been properly aligned in Steps 1 through 10, check the condition of capacitors C44 and C62 by the minimum length of pulse test. At the transmitting terminal, set the ADJ % BK switch to S and the ADJ % BK potentiometer to the maximum counterclockwise position. Slowly turn the ADJ % BK potentiometer clockwise until a deflection just starts to appear on the percent break meter of the 2B test set at the receiving terminal.</p>				
16	<p>Restore the PLS key to normal at the transmitting terminal and read the percent break on the black scale on meter.</p> <p>Requirement: Minimum of 12 percent break.</p>				
17	<p>If this requirement cannot be met, replace the expander-signaling subassembly and repeat the tests.</p> <p>Requirement: Minimum of 12 percent break.</p>				

STEP	PROCEDURE
18	Remove all test connections and replace channel unit in terminal mounting.
19	After complete lineup, recheck pulsing from the patch bay after the unit has been in the terminal at least 3 hours and has reached its operating temperature.