

**TYPE N1 CARRIER TELEPHONE SYSTEM — TERMINAL EQUIPMENT  
CHANNEL UNIT LINE-UP — TRANSMITTING  
COMPRESSOR TESTS AND ADJUSTMENTS**

This section is reissued to change the maximum compressor output requirement and to change the compressor input test to a trouble investigation test only. It also adds test point information for the C&D Program compressor.

The voice frequencies are fed into the compressor circuit either directly (4-wire operation), or through a terminating set located in the channel unit (2-wire operation).

This test describes the method for measuring and adjusting the compressor circuit and provides a means for making maintenance measurements on modified channel units.

**APPARATUS:**

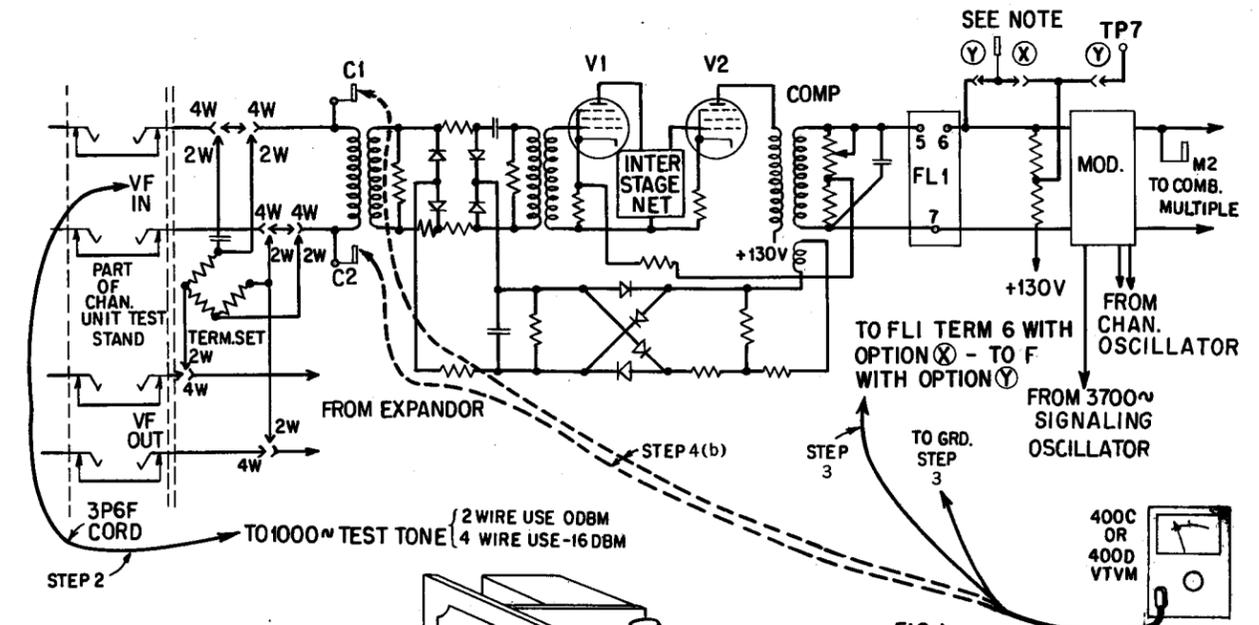
- 1 — Hewlett-Packard Model 400C or 400D Vacuum Tube Voltmeter (VTVM)
- 1 — Channel Unit Test Stand (J98705M)
- 1 — 3P6F Cord (used to connect 1000-cycle testing tone to the Channel Unit Test Stand)
- 1 — W2DW Cord (used to connect the VTVM to test points)
- 2 — 1W13B Cords
- 2 — 364 Tools
- 2 — 365 Tools

**ADJUSTMENT OF COMPRESSOR OUTPUT**

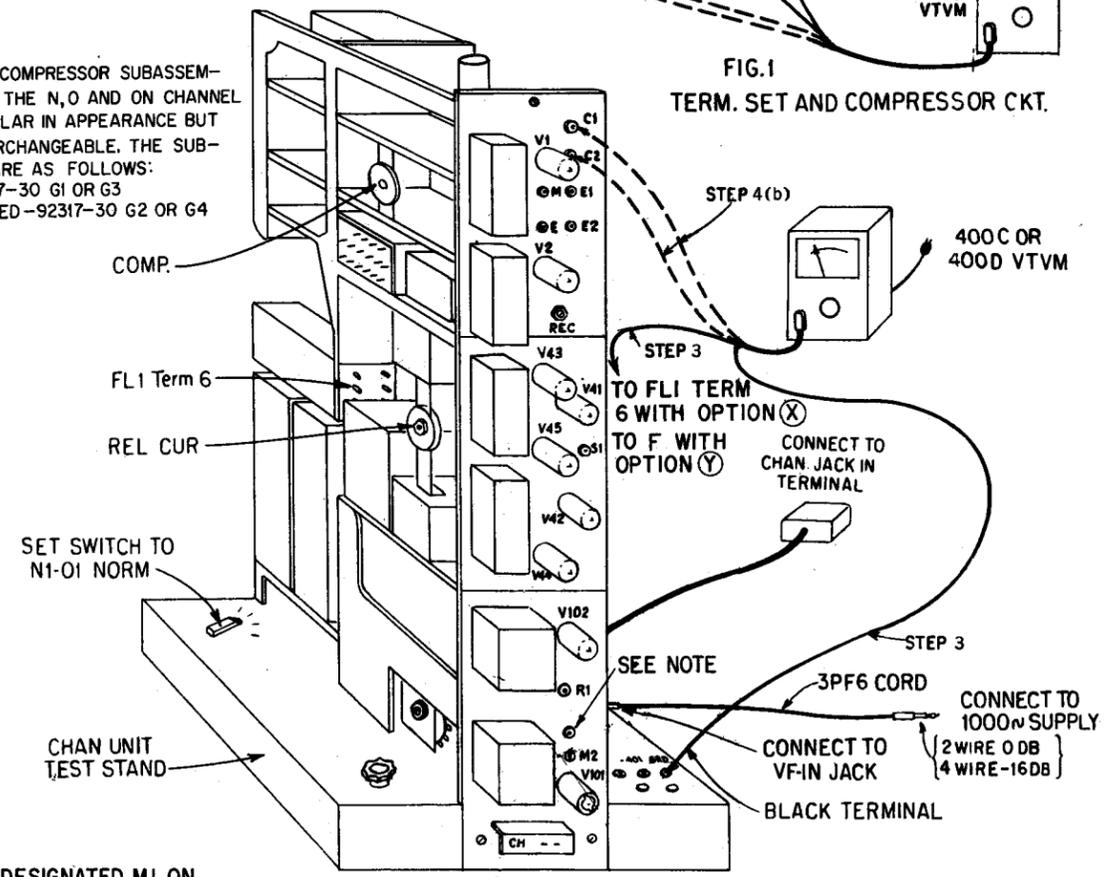
STEP	PROCEDURE
1	Remove the channel from service and place it in a channel unit test stand.
2	Patch the 1000-cycle test tone to the VF IN jacks on the channel unit test stand as follows —  Channel arranged for 2-wire operation    0 dbm Channel arranged for 4-wire operation   -16 dbm
3	Using a W2DW cord, connect the 400-type vacuum tube voltmeter as follows —  ORIGINAL channel units — Between terminal 6 of the FL1 filter and the GRD jack on the channel unit test stand.  MODIFIED channel units — Between the F jack and the GRD jack on the channel unit test stand.  C AND D PROGRAM channel units — Between the M jack and the GRD jack on the channel unit test stand.

STEP	PROCEDURE
4	<p>Adjust the COMP potentiometer for a maximum reading. The meter should indicate a reading of —</p> <p><b>Requirement:</b></p> <p style="padding-left: 40px;">At least +8.5 db</p> <p>(a) If the requirement is met proceed to Step 5.</p> <p>(b) If the requirement can not be met, connect the 400-type VTVM to the C1 and C2 jacks (using a W2DW cord) and measure the compressor input. The level should be about <math>-16 \pm 0.5</math> db with some variation caused by the grounded VTVM (must be grounded for safety reasons).</p> <p>Where this requirement is not met for 2-wire operation it is an indication that the C1 and C2 capacitors in the built-in resistance hybrid may be defective; in which case the compressor subassembly should be replaced.</p> <p>(c) If the requirement still can not be met check the electron tubes in the compressor subassembly.</p> <p>(d) If the requirement still can not be met replace the compressor subassembly.</p>
5	<p>Adjust the COMP potentiometer for a reading of —</p> <p><b>Requirement:</b></p> <p style="padding-left: 40px;">+8.0 db</p>
6	<p>If no other tests are to be made, remove the test connections and replace the channel unit in the terminal mounting.</p>
<b>MAINTENANCE MEASUREMENT OF COMPRESSOR OUTPUT</b>	
<i>These tests can only be made on MODIFIED channel units.</i>	
STEP	PROCEDURE
1	<p>Remove the channel from service.</p>
2	<p>Connect a 1000-cycle test tone to the input of the channel unit under test, using one of the following methods —</p> <p>(a) Have the far office dial up the 1000-cycle, milliwatt supply over the channel under test.</p> <p>(b) Patch the 1000-cycle test tone to the MOD IN, or equivalent VF IN, jacks of the channel under test as follows —</p> <p style="padding-left: 40px;">Channel arranged for 2-wire operation     0 dbm  Channel arranged for 4-wire operation    -16 dbm</p>

STEP	PROCEDURE
3	<p>Using a W2DW cord, connect the 400-type VTVM between the F jack and chassis ground.</p> <p><b>Requirement:</b></p> <p style="text-align: center;">+8.0 ± 0.5 db</p> <p>If the requirement can not be met place the channel unit in a channel unit test stand and check the compressor as described in the adjustment procedure above.</p>
4	<p>Remove the 1000-cycle test tone. With the 400-type VTVM connected according to Step 3, check the noise at the output of the compressor. The meter reading should be —</p> <p><b>Requirement:</b></p> <p style="text-align: center;">-19 db or less</p> <p>(a) The noise measurement should <i>only</i> be made with the channel mounted in the terminal mounting.</p> <p>(b) If the requirement can not be met terminate the MOD IN, or equivalent VF IN, jacks of the channel under test in 600 ohms to determine whether the noise is being received from the central office equipment connected to the channel.</p> <p>(c) If the measurement still exceeds the limits, place a P57A shield over the 667A compressor input transformer (T2). If the limit is still not met, replace the compressor and/or the carrier frequency subassemblies.</p>



CAUTION: THE COMPRESSOR SUBASSEMBLIES USED IN THE N, O AND ON CHANNEL UNITS ARE SIMILAR IN APPEARANCE BUT ARE NOT INTERCHANGEABLE. THE SUBASSEMBLIES ARE AS FOLLOWS:  
 N — ED-92317-30 G1 OR G3  
 O AND ON — ED-92317-30 G2 OR G4



NOTE:  
 JACK DESIGNATED M1 ON ORIGINAL UNITS AND F ON MODIFIED UNITS  
 OPTION (X) — ORIGINAL CHANNEL UNITS  
 OPTION (Y) — MODIFIED CHANNEL UNITS