

**N3 CARRIER TELEPHONE SYSTEM**  
**OVERALL CHANNEL LINE-UP**  
**COMPANDOR AND CHANNEL NET GAIN**

◆ In the N3 Terminal and in the Type B and C N3-L Junctions, voice frequencies at the transmitting end of a channel enter the compressor circuit of a compandor unit, where the volume range is reduced by one-half. In the N3 Terminal and in the Type C N3-L Junction, the compressed signals are passed through the channel modulator to the line where, because of compression, satisfactory signal-to-interference ratios are maintained. In the Type B N3-L Junction, the compressed signals from the channel modulator are translated to L carrier frequencies for transmission over L carrier facilities. No line-up adjustments are provided in the compressor circuit.

At the receiving end in the N3 Terminal and in the Type B and C N3-L Junctions voice frequencies from the channel demodulators are coupled to the associated expandor circuits, which restore the speech to the original volume range. With the Type B N3-L Junction, it is first necessary for the L carrier frequencies to be translated back to N3 group frequencies.

The purpose of this test is to measure and adjust the overall channel net gain. A 1000-Hz test tone is applied to the channel at the transmitting end and the expandor output is measured at the receiving end. The OUT ADJ potentiometer on the compandor unit provides a means for adjusting the gain of the expandor circuit and, thus, the received signal level at the N3 Terminal or N3-L Junction VF output. Test connections are made at the 4-wire VF jacks in the jack field, whether located in the packaged N3 Terminal or N3-L Junction bay or at a central location in the office. The channel must be removed from service before this test is performed.◆

This section is reissued to include the Type B and C N3-L Junctions.

**APPARATUS:**

J64021A Transmission Measuring Set (TMS) or J64040B Transmission Measuring System

3P6 Cord (to connect -16 dBm test tone to MOD IN VF IN jack)

3P17 Cord (to connect TMS to DEM OUT or VF OUT jack).

STEP	PROCEDURE
1	<p><i>Note:</i> These tests should be made only when the compressor and modem units at the transmitting terminal, the high-frequency line, and the receiving terminal modem unit are within their requirements.</p> <p>Remove the channel from service.</p> <p><b>At The Transmitting Terminal</b></p>
2	<p>Patch a 1000-Hz (600-ohm source test tone at -16 dBm to the MOD IN or VF IN jack in the jack field or patch bay.</p> <p><b>At The Receiving Terminal</b></p>
3	<p>Connect the TMS to the DEM OUT or VF OUT jack and adjust the OUT ADJ potentiometer on the compandor unit for an indication of +7.0 dBm on the TMS.</p>