

**TYPE N1, O, AND ON CARRIER TELEPHONE SYSTEMS –
OVERALL CHANNEL LINE-UP
SPECIAL SERVICES CHANNEL UNIT – RECEIVING SECTION**

This section is reissued to clarify the use of enhanced line-up levels for data on N1 carrier.

Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

The 7-db enhanced line-up level for the N1 special services channel unit provides improved signal-to-noise ratio for services where this is required. The enhanced line-up levels are specified for alternate voice/data and B1 data channel use. Other usage should be determined by the transmission engineering department. Enhanced line-up levels are not provided for O and ON special services channel units, since the higher carrier sideband level provides nearly the same performance as do the enhanced levels of N1.

The purpose of this test is to measure and adjust the VF receiving section of the special services channel unit. The special services channel unit consists of a VF subassembly and a carrier frequency subassembly. On N1 carrier channels, the F carrier frequency subassembly cannot be substituted for the FA unit.

This test should only be made when the transmitting portion of the channel at the distant end and the received carrier frequency tests at the testing end are within the requirements.

APPARATUS:

- 1 — Hewlett-Packard 400-type Vacuum Tube Voltmeter (VTVM)
- 1 — Transmission Measuring Set, 40B, 21A TMS, or equivalent (600-ohm measuring set)
- 1 — W2DW Cord
- 1 — Channel Unit Test Stand (J98705M) (required where test jacks are not available in patching bay or equivalent)
- 1 — P19A Cord

| STEP | PROCEDURE |
|------|---|
| 1 | The channel must be out of service. Where test jacks are not available in the patching bay or equivalent, the use of the channel unit test stand is required. Before the test stand is used with a special service channel unit, the 130v, 1/8 ampere fuse should be replaced with a 3/8 ampere fuse. |
| 2 | At the transmitting terminal, patch a 1000-cycle tone of proper power value (–13 dbm or –16 dbm) into the MOD IN, or equivalent VF IN jacks, of the channel being tested. |
| 3 | Verify that the VF subassembly at the transmitting terminal has been adjusted for the proper transmitting level. |

| STEP | PROCEDURE | | | | | | | | | |
|------------------|--|--|------------|--|------------|-------------------|-------------------|------------------|---------------|--|
| 4 | Rotate the N-O switch on the left side of the subassembly to the N position for N1 carrier and to O position for O and ON carrier. | | | | | | | | | |
| 5 | <p>Connect the VTVM between jack J6 and chassis ground. Measure the input level to the receiving section of the VF subassembly.</p> <p>Requirements:</p> <table data-bbox="203 577 1209 724"> <thead> <tr> <th></th> <th data-bbox="641 598 771 619">NORMAL USE</th> <th data-bbox="966 577 1209 640">ALTERNATE VOICE/DATA, BI DATA, OR SPECIAL APPLICATIONS</th> </tr> </thead> <tbody> <tr> <td data-bbox="227 661 365 682">N1 Carrier</td> <td data-bbox="576 661 812 682">+11.8 to +14.8 db</td> <td data-bbox="966 661 1193 682">+18.8 to +21.8 db</td> </tr> <tr> <td data-bbox="227 693 446 714">O and ON Carrier</td> <td data-bbox="576 693 763 714">+12.0 ±1.0 db</td> <td></td> </tr> </tbody> </table> <p>Note: In the case of O and ON carrier, adjust R potentiometer to meet the requirement.</p> | | NORMAL USE | ALTERNATE VOICE/DATA, BI DATA, OR SPECIAL APPLICATIONS | N1 Carrier | +11.8 to +14.8 db | +18.8 to +21.8 db | O and ON Carrier | +12.0 ±1.0 db | |
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| 6 | <p>Disconnect the VTVM.</p> <p>Receiving VF Output</p> | | | | | | | | | |
| 7 | Connect a 600-ohm transmission measuring set to the DEMOD OUT, or equivalent VF OUT jacks. | | | | | | | | | |
| 8 | <p>Adjust the REC potentiometer on the channel unit for the required value.</p> <p>Requirement: Line-up value specified on circuit order.</p> | | | | | | | | | |
| 9 | Remove all test connections. | | | | | | | | | |

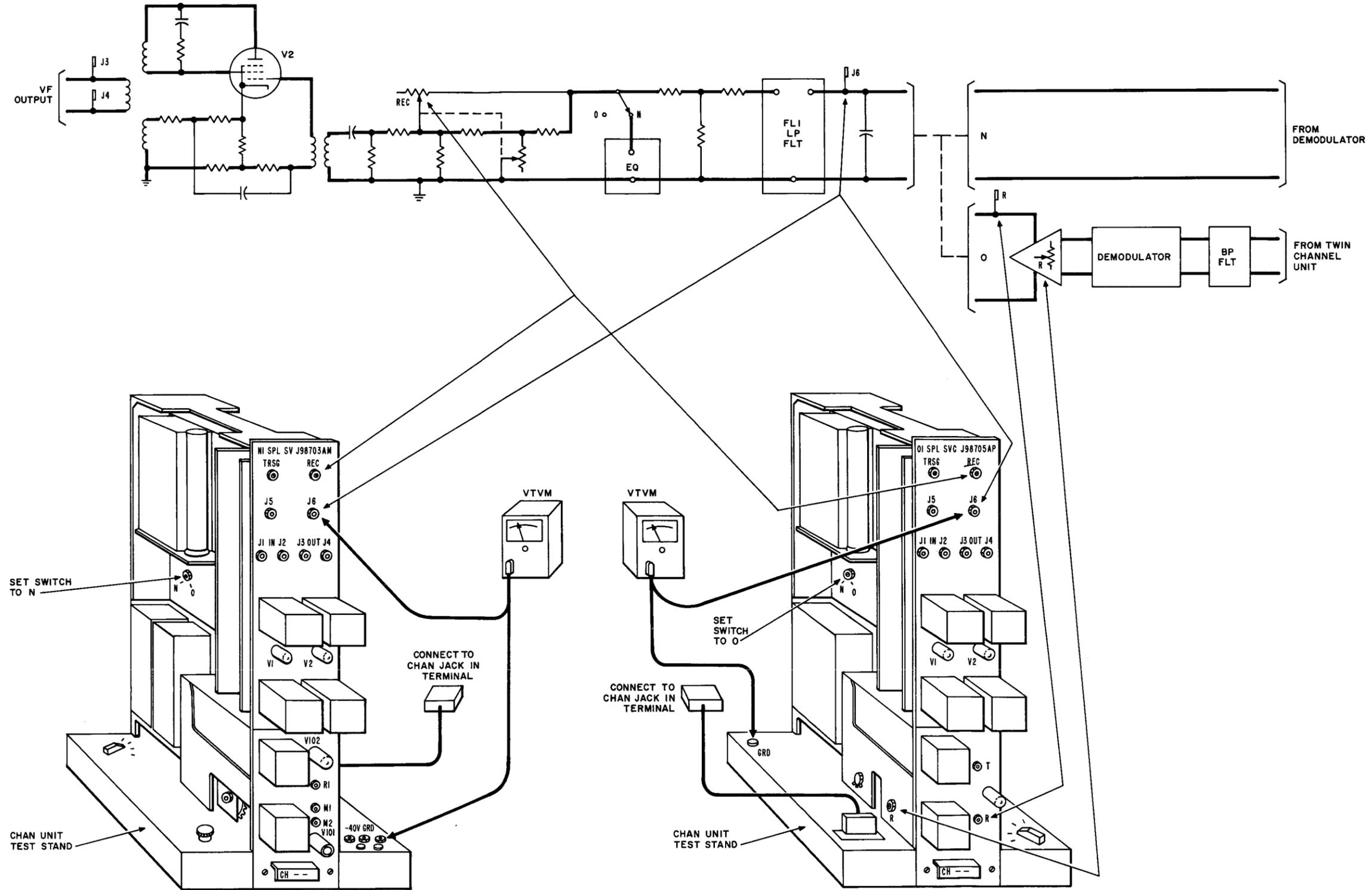


Fig. 1 — Special Services Channel Unit