3779C-45A

S E R V I C E N O T E

SUPERSEDES: 3779C-45

HP 3779C Primary Multiplex Analyzer

Serial Numbers: 0000U00000 / 999U99999

Duplicate Service Notes: 3779D-49A

Improved GvL Measurement when high noise levels are present.

Situation:

Inconsistent inaccurate results may be obtained when using the HP 3779C to perform measurements on lines where excessive levels of spurious Out-of-Band transverse or common-mode noise are present - refer to Service Note 3779C-15 for more information on this.

This Service Note provides details of an alternative Gain v Level Measurement which will provide improved accuracy under these adverse conditions.

Explanation:

The alternative measurement uses the 3779C Independent TX-RX facility to perform the equivalent of the Gain v Level measurement. This eliminates inaccuracies due to insufficient autorange settling time, as the complete measurement is performed in separate steps controlled by the operator.

Continued

DATE: 31 May 1994

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION: **INFORMATION ONLY**		
AUTHOR:	ENTITY:	ADDITIONAL INFORMATION:
GH	1400	

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Procedure:

1. Connect the 3779C to the System under Test and setup System and Channel Parameters to match this system - see the HP 3779C Operating Manual (HP part number 03779-90006) for full setup detail.

2. Select Independent Tx-Rx on the 3779C.

3. Setup the 3779C Display as described on page 4-11 (A-A), 5-13 (A-D), or 5-22 (D-A) of the HP 3779C Operating Manual RX FILTER 2 (40Hz), RX FREQUENCY 1.01kHz, TX SIGNAL TONE 1 (Tone), TX FREQUENCY 1.01kHz and TX LEVEL -10dBm0 (reference).

4. Run the measurement and note the result. Subtract -10dBm0 from this result to get the Reference Gain. Call this A dB. For example, if the result is -10.5dBm0, A will be -0.5dB.

5. Set the Tx Signal Level to the first value required to be measured and run the measurement, noting the new result. Subtract the Tx Level from this result to get the measured gain. Call this B dB. For example, if the Tx Level is set to -40dBm0 and the result is 40.9Bm0 then B will 0.9dB.

6. Subtract A from B to get the first GvL value. Call this C dB. In the above example, C will be -0.4dB.

7. Repeat steps 5 and 6 for each value of Tx Signal Level to be measured.