S E R V I C E N O T E

SUPERSEDES: NONE

E1333A 3 Channel Universal Counter

Serial Numbers: See text

E1333A Service Manual / E1333-90010

Frequency performance tests falling intermittently

Situation:
There is a manual update (E1333-90091) to the E1333A service manual (E1333-90010) that affected the frequency measurements test. The update modifies the source amplitude values shown on pages 4-11, 4-12, 4-13 and 4-14 (which affected tests on all three channels), and the update also corrected the high and low limits on the performance test record for channel three. The previous manual inadvertently used 90-day specifications for channel three on the performance test record instead of one-year.

Because the test procedures and specifications were not correct, many of the E1333A modules would fail the frequency performance tests. The most prevalent problems were on channel three, due to the incorrect specifications on the test record.

Serial numbers affected: The change in test procedures is not tied to a specific serial number range of hardware, but is related instead to the service manual which is not serialized.

Continued

DATE: 25 September 1992

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR:	ENTITY:	ADDITIONAL INFORMATION:
GP	0900	

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Solution/Action:
Note the changes to the manual and insure that the new procedures and test specifications are being tested to using either manual procedures or with any automated test software that may be used. Also, there is another method of making the trigger level zero adjustment that is both easier and more accurate than that found in the service manual.

Alternate Procedure for Trigger Level Zero Adjustment
Channel 1

1. Measure the voltage and polarity on U4 *(see below) pin 7 with a DVM and record the value.
2. Monitor the polarity and voltage on U4 pin 8 with a DVM, and adjust R11 until the voltage is the same as that seen on pin 7. The voltage on pin 8 should be within 0.5 mV of pin 7.

Channel 2

3. Measure the voltage and polarity on U4 pin 10 with a DVM and record the value.
4. Monitor the polarity and voltage on U4 pin 9 with a DVM and adjust R10 until the voltage is the same as that seen on pin 10. The voltage on pin 10 should be within 0.5mV of pin 9.

* U4 is not labeled on the printed circuit board. With the front of the board facing you, locate the four relay components between input channels 1 and 2. The 16-pin component, customer part number (18)26-1884, directly behind the fourth relay is U4.

The absolute voltage on reference pins 7 and 9 is not an issue. The issue is making sure that the voltage on pin 8 equals the voltage on pin 7, and that the voltage on pin 9 equals the voltage on pin 10.