

## S E R V I C E N O T E

SUPERSEDES: None

**8753E Vector Network Analyzer**

**Serial Numbers:** US 3739XXXX  
 US3816XXXX  
 JP3802XXXX  
 JP3816XXXX

Only instruments with Option 006 and Firmware Revision Numbers less than 7.40 are affected. 8753E Option 011 Instruments are not affected.

**8753E Performance Test for External Source Mode Frequency Range**

**To Be Performed By:** Agilent-Qualified Personnel and Customers

**Situation:**

The performance test for confirming operation of External Source Mode in the specified frequency range, 300 kHz to 3 GHz (6 GHz), will detect a small number of failures for instruments that have 6 GHz capability, option 006. There is a small probability that phase lock will not be acquired under conditions of: external source power level of -20 dBm and frequencies above 3 GHz. Incorrect firmware is the cause for these failures. When power levels of -20 dBm to 0 dBm are used for external source mode (auto), phase lock errors occur due to an incorrect algorithm for frequency sensing.

The performance test affected is titled: External Source Mode Frequency Range and is found in the following manuals:

8753E Network Analyzer Service Guide	Part Number 08753-90374 (Ch. 2)
8753E System Verification and Performance Test Guide	Part Number: 08753-90394

*Continued*

DATE: December 1998

## ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

**INFORMATION ONLY**AUTHOR:  
FDENTITY:  
5320ADDITIONAL INFORMATION:  
None

**Solution / Action:**

When phase lock errors are observed for this performance test, service center technicians and customers performing their own calibrations should change the power level of the external source from the -20 dBm specified in the instructions for the performance test to a lower level of -25 dBm and run the test again. If there are no phase lock errors detected when the test is performed with lower power, the instrument can be declared to have passed this performance test and the instrument's hardware is functioning properly in external source mode.

The next firmware upgrade scheduled for the 8753E will include a correction to the algorithm involved. The firmware revision will be available before the end of calendar 1998. Customers wishing to update firmware can download the next version from both internal and external websites as well as purchasing it through their local field engineer.