E4417A-07

S E R V I C E　　　　N O T E

Supersedes:
NONE

Agilent E4417A EPM-P Peak & Average Power Meter

Serial Numbers: GB00000000 / GB99999999

Firmware Bug May Cause Triggering Problems

Parts Required:

P/N	Description	Qty.
NONE		

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:
INFORMATION ONLY
AUTHOR: FC   PRODUCT LINE: PN
ADDITIONAL INFORMATION:

Agilent Technologies

April 2, 2004

Situation:

The E4417A power meter has a known firmware bug that can affect triggering. This bug will be fixed in a future firmware release, but in the meantime there is a simple fix that can be applied.

How does the bug manifest itself?

The bug creates a fault condition that can be seen in one of two ways.

- The E4417A will not trigger when used with an E932x sensor in Video Bandwidth LOW, MED, or HIGH mode. i.e. The reading on the display will be static.
- The E4417A will display -270.00dBm if an E932x sensor is connected to the power meter, and the Video Bandwidth mode is already LOW, MED or HIGH.

The following procedure can be used to prove that this fault condition is present:

- Connect an E932x sensor to the suspect channel of the E4417A.
- Press PRESET, select DEFAULT, and press CONFIRM.
- Press CHANNEL, and select CHANNEL A SETUP or CHANNEL B SETUP accordingly.
- Navigate to the VIDEO B/W option, and change its state to LOW, MED or HIGH.
- Press DONE to return to the measurement display.
- Disconnect the E932x sensor from the suspect channel.
- Reconnect the E932x sensor to the suspect channel.
- The display will read -270.00dBm if the fault condition is present.

Why does this happen?

This has been traced to a bug in firmware revision A2.04.07. It has been determined that the internal state registers of the E4417A can be set-up in an unforeseen configuration – if the Video Bandwidth setting is changed to LOW, MED or HIGH whilst the E4417A is in this configuration, it will not trigger correctly.

Does this affect the measurement accuracy of my E4417A?

No, this only affects the triggering capability of the E4417A. Once the triggering problem is cleared, any measurements that are made will be accurate.

Solution/Action:

The fault condition can be quickly and easily cleared.
- Connect an E932x sensor to the affected channel.
- Press PRESET, select GSM900, and press CONFIRM.
- Press PRESET, select DEFAULT, and press CONFIRM.

Additional Notes:

1. This is channel-specific, and can affect either, or both, channels of the E4417A.

2. Both channels of the E4417A can be cleared simultaneously if two sensors are attached to it.

3. The fault condition will not re-occur during normal use of the E4417A. The only way it may re-occur is via the recovery procedure for a failed firmware download. This recovery procedure may require that a 'memory clear' operation be performed on the E4417A, effectively resetting the internal state registers back to the unwanted configuration.