

MODIFICATION RECOMMENDED –
CORRECTS MANUFACTURING OR DESIGN DEFECTS

E7401A-08A

S E R V I C E N O T E

Supersedes:
E7401A-08

E7401A EMC Analyzer

Serial Numbers: All

Firmware Update Required

To Be Performed By: Agilent-Qualified Personnel or Customer

Parts Required:

P/N	Description	Qty.
N/A	Instrument Firmware	

Firmware version A.14.02 or later, which can be downloaded for free from:

http://www.agilent.com/find/emc_firmware

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	X IMMEDIATELY <input type="checkbox"/> ON SPECIFIED FAILURE X AGREEABLE TIME	STANDARDS:	LABOR: 0.5 Hours
LOCATION CATEGORY:	X CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE X SERVICE CENTER	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AUTHOR: MPM	PRODUCT LINE: 12	AGILENT RESPONSIBLE UNTIL: EOS	
ADDITIONAL INFORMATION:			

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Situation:

There are 2 potential problems with the EMC measurement routines that have been identified in instrument firmware revisions A.14.01 and earlier. They are:

1. A problem where the EMI Detector Auto-Ranging operation results in an incorrect setting of the reference level; yielding signals that are significantly above the top graticule and beyond the measurement range of the instrument. The Auto-Ranging operation is automatically invoked when either the Quasi-Peak or EMI Average detectors are selected. This can also affect the results of both the “Measure at Marker” and “Auto Measure” functions, as they both use this Auto-Ranging function.

This can only be seen with signal levels greater than approx. 45dBuV that are four divisions or more from the top graticule on-screen.

2. A problem where E7403A, E7404A, and E7405A instruments with Option AYX (fast zero span sweep times) perform the “Measure At Marker” and “Auto-Measure” functions using the incorrect detector.

This can only be seen if the signal being measured is at least 5 divisions down from the top graticule. When the “Measure at Marker” routine is run with all detectors selected (default configuration) the measurement may return a value for the EMI Average detector that is way too low.

Both of these problems could potentially cause the analyzer to return incorrect values for either the “Measure at Marker” or “Auto Measure” functions.

Item #1 could also cause the manual use of either the Quasi-Peak or EMI Average detector to auto-range the signal off the top of the screen.

Solution/Action:

The firmware in all E7400A Series EMC Analyzers should be updated to version A.14.02 or later whether the user has experienced either of the problems listed above or not.

The latest instrument firmware can be found, along with installation instructions, at:

http://www.agilent.com/find/emc_firmware