

Security Features and Volatility Documentation

Agilent Technologies, Inc.
8753E, 8753ET/ES and 8719D/ET/ES, 8720D/ET/ES and 8722D/ET/ES
Network Analyzer



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Contacting Agilent Sales and Service Offices

Assistance with test and measurements needs and information on finding a local Agilent office is available on the internet at, <http://www.agilent.com/find/assist>. If you do not have access to the internet, please contact your field engineer.

Note: In any correspondence or telephone conversation, refer to the product by its model number and full serial number. With this information, the Agilent representative can determine whether your unit is still within its warranty period.

Product Declassification and Security

Model Number(s):

- 8753E (Obsolete)
- 8753ET (Obsolete)
- 8753ES (Obsolete)
- 8719D (Obsolete)
- 8720D (Obsolete)
- 8722D (Obsolete)
- 8719ET (Obsolete)
- 8720ET (Obsolete)
- 8722ET (Obsolete)
- 8719ES (Obsolete)
- 8720ES (Obsolete)
- 8722ES (Obsolete)

Product Name: Network Analyzer

Introduction

This document describes instrument security features and the steps to declassify an instrument through memory sanitization or removal. For additional information please go to <http://www.agilent.com/find/ad> and click on the security instrument tab.

- Service Guide 8753E Standard Option (08753-90366)
- Service Guide 8753E Option 011 (08753-90367)
- Quick Reference Guide – Standard (08753-90368)
- Quick Reference Guide – Option 011 (08753-90373)
- Service Guide 8753ES Option 011 Network Analyzers (08753-90485)
- Service Guide 8753ET/ES Network Analyzers (08753-90484)
- Reference Guide 8753ES Option 011 Network Analyzers (08753-90480)
- Reference Guide, 8753ET/ES Network Analyzers (08753-90473)
- Service Guide 8719D/20D/22D Network Analyzers (08720-90292)
- User’s Guide 8719D/20D/22D Network Analyzers (08720-90288)
- Service Guide 8719ET/ES /20ET/ES /22ET/ES (08720-90397)

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Terms and Definitions

Definitions:

Clearing – Clearing is the process of eradicating the data on media before reusing the media so that the data can no longer be retrieved using the standard interfaces on the instrument. Clearing is typically used when the instrument is to remain in an environment with an acceptable level of protection.

Sanitization – Sanitization is the process of removing or eradicating stored data so that the data cannot be recovered using any known technology. Instrument sanitization is typically required when an instrument is moved from a secure to a non-secure environment such as when it is returned to the factory for calibration. (The instrument is declassified) Agilent memory sanitization procedures are designed for customers who need to meet the requirements specified by the US Defense Security Service (DSS). These requirements are outlined in the “Clearing and Sanitization Matrix” issued by the Cognizant Security Agency (CSA) and referenced in National Industrial Security Program Operating Manual (NISPOM) DoD 5220.22M ISL 01L-1 section 8-301.

Security erase – Security erase is a term that is used to refer to either the clearing or sanitization features of Agilent instruments.

Instrument declassification – A term that refers to procedures that must be undertaken before an instrument can be removed from a secure environment such as is the case when the instrument is returned for calibration. Declassification procedures will include memory sanitization and or memory removal. Agilent declassification procedures are designed to meet the requirements specified by the DSS NISPOM security document (DoD 5220.22M chapter 8)

System Components

Product/System includes the following components

Model number	Name	Description	Reference/Remarks
8753E	RF Network Analyzer	30 kHz to 3 or 6 GHz RF Network Analyzer	Volatile and Non Volatile Memory on CPU board
8753ET/ES	RF Network Analyzer	30 kHz to 3 or 6 GHz Network Analyzer	Volatile and Non Volatile Memory on CPU board
8719D/ET/ES	Microwave Vector Network Analyzer	50 MHz to 13.5 GHz Network Analyzer	Volatile and Non Volatile Memory on CPU board
8720D/ET/ES	Microwave Vector Network Analyzer	50 MHz to 20 GHz Network Analyzer	Volatile and Non Volatile Memory on CPU board
8722D/ET/ES	Microwave Vector Network Analyzer	50 MHz to 40 GHz Network Analyzer	Volatile and Non Volatile Memory on CPU board

Instrument Memory and Volatility Information

This section contains information on the types of memory available in your instrument. It explains the size of memory, how it is used, its location, volatility, and the sanitization procedure.

Summary of instrument memory - base instrument

Memory Type and Size	Is Memory user accessible as a mass storage device?	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
4MB DRAM	No	Yes	No	Firmware operating memory	Operating system (not user)	CPU board	Cycle power
2 MB CMOS SRAM	Yes	Yes	Yes	Instrument states, measurement calibration data, power meter calibration data, use calibration kit definitions, memory traces, user preset	Firmware upgrades and user-saved data	CPU board	Memory Reset Option
8K EEPROM	No	Yes	Yes	Factory calibration/configuration data	Factory default setting	CPU board	Not writable by the customer

Summary of instrument memory - option 011

Memory Type and Size	Is Memory user accessible as a mass storage device?	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
4MB DRAM	No	Yes	No	Firmware operating memory	Operating system (not user)	CPU board	Cycle power
2 MB CMOS SRAM	Yes	Yes	Yes	Instrument states, measurement calibration data, power meter calibration data, use calibration kit definitions, memory traces, user preset	Firmware upgrades and user-saved data	CPU board	Memory Reset Option
8K EEPROM	No	Yes	Yes	Factory calibration/configuration data	Factory default setting	CPU board	Not writable by the customer

Memory Clearing, Sanitization and/or Removal Procedures

This section explains how to clear, sanitize, and remove memory from you instrument for all memory that can be written to during normal operation and for which the clearing and sanitization procedure is more than trivial such as rebooting your instrument.

4MB DRAM

Description and purpose	Provides the RAM space for the main processor.
Size	4MB
Memory clearing	Cycle power
Memory sanitization	N/A
Memory removal	This memory can not be removed without damaging the instrument
Write protecting	N/A
Memory validation	N/A
Remarks	

2MB CMOS SRAM

Description and purpose	Used for storage of firmware. Normal use of the SAVE/RECALL features will store frequencies, power, and/or calibrations in this memory area
Size	2MB
Memory clearing	Memory Reset option
Memory sanitization	SERVICE MENU->PEEK/POKE->RESET MEMORY.
Memory removal	This memory cannot be removed without damaging the instrument
Write protecting	N/A
Memory validation	N/A
Remarks	See below

Normal use of the SAVE/RECALL features will store frequencies, power, and/or calibrations in this memory area. Agilent provides a method to absolutely clear this memory. It is the Memory Reset option, which is accessed by the System hard key, followed by the soft-key sequence:

SERVICE MENU->PEEK/POKE->RESET MEMORY (Preset).

This MUST be followed by an instrument Preset (green button). Clearing memory this way also removes the UPRESET (user preset) register that may have been in the RAM disc.

Note that normal power-up (and Preset) behavior is to copy some data from EEPROM into this CMOS area. Thus, even though you may clear all CMOS with the Memory Reset sequence above, the next boot-up of the instrument will repopulate a few memory locations with default values.

These items are internal instrument setup values such as display colors, and factory default calibrations. No customer specific info is here, (other than options and serial number), and the customer is unable to modify the EEPROM source of this internal information. The parts are four 512K X 8 SDRAM chips

8K EEPROM

Description and purpose	Used to hold factory calibration and option configuration
Size	8K
Memory clearing	Not writable by the customer
Memory sanitization	N/A
Memory removal	This memory cannot be removed without damaging the instrument
Write protecting	N/A
Memory validation	N/A
Remarks	

User and Remote Interface Security Measures

Not applicable.

Procedure for Declassifying a Faulty Instrument

Model is already obsolete and out of support. No repair and replaceable parts available.
Recommended to discard and destroy the CPU board.