

E5505A Phase Noise Measurement Test System Product Security



E5505-90008
Printed in USA
1/12/2005

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Notes

Revision History

Revision: A.01.00	
<u>Modification</u>	<u>Date</u>
Version A.01.00	1/12/2005

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 E5505A phase noise system 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

System Model Number: E5505A
Product Name: Phase Noise Measurement System
Product Family Name: E5500
Alternate Product Numbers: N/A

This document describes E5505A Phase Noise Measurement System security features and the steps to declassify the E5505A through memory sanitization or removal. For additional information please go to www.agilent.com/find/ad and click on “Instrument Security”.

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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)

E5505A Phase Noise System components

Product/System includes the following components

Model number	Name	Description	Reference/Remarks
N5500A	Test Set	Standard configuration, 50 kHz to 1.6 GHz, 0 to 23 dBm	
N5500A Opt 001	Test Set	Adds 1.2 to 26.5 GHz, 0 to 30 dBm input and AM noise to standard configuration	
N5500A Opt 201	Test Set	Adds 1.2 to 26.5 GHz, 0 to 10 dBm input to standard configuration	
N5501A	Downconverter	Low noise 6.6 GHz downconverter	
N5502A	Downconverter	Low noise 18 GHz microwave downconverter	
N5507A	Downconverter	Low noise 26.5 GHz microwave downconverter	
N5508A	Microwave Source	Low noise 25.8 GHz microwave source	
N5508A Opt 002	Microwave Source	Low noise 25.8 GHz tunable microwave source	
IPC-610	Advantech - PC	E5505A Phase Noise System Controller	

N5500A Test Set Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for N5500A test set	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5500A phase noise test set does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5500A memory clearing, sanitization and/or removal procedures

DRAM (Volatile Memory)

Description and purpose	Stores current measurement state for the N5500A test set.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the test set.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the test set. The N5500A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the test set. The N5500A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5500A sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5500A Option 001 Test Set Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for N5500A/001 test set	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5500A option 001 phase noise test set does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5500A Opt 001 memory clearing, sanitization and/or removal procedures**DRAM (Volatile Memory)**

Description and purpose	Stores current measurement state for the N5500A/001 test set.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the test set.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the test set. The N5500A/001 must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the test set. The N5500A/001 must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5500A Opt 001 sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5500A Option 201 Test Set Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for N5500A/201 test set	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5500A option 001 phase noise test set does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5500A Opt 201 memory clearing, sanitization and/or removal procedures**DRAM (Volatile Memory)**

Description and purpose	Stores current measurement state for the N5500A/201 test set.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the test set.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the test set. The N5500A/201 must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the test set. The N5500A/201 must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5500A Opt 201 sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5501A 6.6 GHz Downconverter Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for the N5501A downconverter	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5501A phase noise downconverter does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5501A memory clearing, sanitization and/or removal procedures

DRAM (Volatile Memory)

Description and purpose	Stores current measurement state for the N5501A downconverter.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the downconverter.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the downconverter. The N5501A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the downconverter. The N5501A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5501A sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5502A 18 GHz Downconverter Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for the N5502A downconverter	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5502A phase noise downconverter does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5502A memory clearing, sanitization and/or removal procedures

DRAM (Volatile Memory)

Description and purpose	Stores current measurement state for the N5502A downconverter.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the downconverter.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the downconverter. The N5502A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the downconverter. The N5502A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5502A sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5507A 26.5 GHz Downconverter Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for the N5507A downconverter	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5507A phase noise downconverter does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5507A memory clearing, sanitization and/or removal procedures

DRAM (Volatile Memory)

Description and purpose	Stores current measurement state for the N5507A downconverter.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the downconverter.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the downconverter. The N5507A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the downconverter. The N5507A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5507A sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5508A 25.8 GHz Microwave Source Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for the N5508A Mw Source	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5508A phase noise microwave source does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5508A memory clearing, sanitization and/or removal procedures

DRAM (Volatile Memory)

Description and purpose	Stores current measurement state for the N5508A microwave source.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the microwave source.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the microwave source. The N5508A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the microwave source. The N5508A must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5508A sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

N5508A Opt. 002 25.8 GHz Tunable Microwave Source Instrument memory

Summary of instrument memory

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Volatile Memory DRAM 128 KB	Yes	No	Stores current measurement state for the N5508A/002 Mw Source	User Modifiable	A6 PS/Controller board	Cycle power
Non-Volatile Memory EEPROM 2 KB	No	Yes	Stores model #, serial #, options, calibration constants during calibration	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present
Non-Volatile Memory EPROM 1 MB	No	Yes	Firmware for instrument operation	Non - User Modifiable	A6 PS/Controller board	Not required, no measurement data present

The N5508A/002 phase noise microwave source does not store any measurement parameters while in the power off state.

Summary of optional instrument memory - option xxx

Memory type and size	Writable during normal operation?	Data Retained when powered off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
N/A						

N5508A Opt 002 emory clearing, sanitization and/or removal procedures**DRAM (Volatile Memory)**

Description and purpose	Stores current measurement state for the N5508A/002 microwave source.
Size	128 kb
Memory clearing	Cycle power
Memory sanitization	Cycle power
Memory removal	This memory cannot be removed without damaging the microwave source.
Write protecting	N/A
Remarks:	

EEPROM (Non-Volatile Memory)

Description and purpose	Stores model #, serial #, options, calibration constants during calibration.
Size	2 KB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the microwave source. The N5508A/002 must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

EPROM (Non-Volatile Memory)

Description and purpose	Firmware for instrument operation.
Size	1 MB
Memory clearing	Not required, no measurement data present
Memory sanitization	Not required, no measurement data present.
Memory removal	This memory cannot be removed without damaging the microwave source. The N5508A/002 must be returned to Agilent for re-calibration.
Write protecting	N/A
Remarks:	

NOTE: Cycling power or turning off the N5508A Opt 002 sanitizes all instrument memory with the following exception:

- The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.

E5505A PC Controller (Advantech IPC-610 PC)

The Agilent E5505A phase noise software stores user data and therefore the PC will need to be declassified following your normal PC declassification procedures.

The E5505A phase noise software stores user data in a measurements file (*.pnm).

User and remote interface security measures

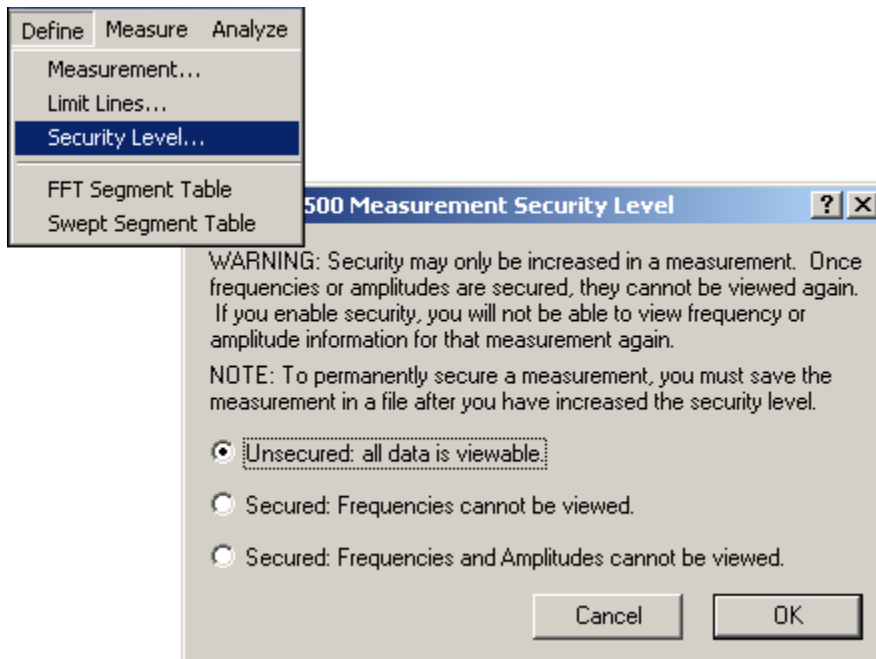
Screen and annotation blanking (Frequency and Amplitude)

CAUTION: Implementing either of the “secured” levels described below is not reversible for that measurement file (*.pnm) only. Once the frequency or frequency/amplitude data has been blanked, it can not be recovered. If you need a permanent copy of the data, you can print out the graph and parameter summary before you secure the data and store the printed data in a secure location.

An alternate method of storing classified data is to save the measurement file (*.pnm), including the real frequency/amplitude data onto a floppy disk or CD and secure the data. It can then be recalled at a later date.

Security Level Procedure:

1. From the define menu, choose Security Level.
2. Choose one of the security options provided:
 - Unsecured: all data is viewable.
 - Secured: Frequencies cannot be viewed.
 - Secured: Frequencies and amplitudes cannot be viewed.



Advantech IPC-610 PC USB mass storage device security

CAUTION: Incorrectly editing the registry may severely damage your system. Before making changes to the registry, it is strongly recommended that you back up the registry and any valued data on the computer.

To prevent USB write capability on Windows XP[®] SP2, create a new registry key of:

HKLM\System\CurrentControlSet\Control\StorageDevicePolicies.

Then create a **REG_DWORD** entry in it called **WriteProtect**. Set it to "1" and you'll be able to read from USB drives but not write to them

Remote access interfaces

The user is responsible for providing security for the I/O ports for remote access by controlling physical access to the I/O ports. The I/O ports must be controlled because they provide access to all user settings and user states.

The I/O ports include RS-232, GPIB and LAN.

The LAN port provides the following services, which can be selectively disabled:

- a) http
- b) ftp
- c) sockets
- d) telnet

There is also a 'ping' service, which presently cannot be selectively disabled. The concern here might be that it is possible to discover IP addresses of connected instruments in order to query their setups over the net or break into the code.

Procedure for declassifying non-functioning instrument

Model number	Name	Non-functioning Instrument Declassification Requirements
N5500A	Test Set	Cycling power or turning off the instrument sanitizes all instrument memory with the following exception: <ul style="list-style-type: none"> • The EEPROM stores model #, serial #, options, and calibration constants generated during calibration. Measurement data is not stored in the EEPROM.
N5500A Opt 001	Test Set	
N5500A Opt 201	Test Set	
N5501A	Downconverter	
N5502A	Downconverter	
N5507A	Downconverter	
N5508A	Microwave Source	
N5508A Opt 002	Microwave Source	
IPC-610	Advantech - PC	The Agilent E5505A phase noise software stores user measurement data and therefore a non-functioning PC will need to be declassified following your normal PC declassification procedures.

Appendix A: List of E5500 Phase Noise System Supported Equipment

The E5500 phase noise system supports the following equipment (Analyzers, Sources, etc). For product security information specific to each instrument, refer to their individual product declassification and security documentation.

Baseband Source

E1441A

Counters

53131A

53132A

53181A

E1420B

5316A

5316B

FFT Analyzers

89410A

E1430A

E1437A

3561A

Sources

E8241A

E8244A

E8251A

E8254A

E8257C

E8257D

E8267C

8643A

8644B

8657A

8657B

8662A

8663A

8664A

8665A

8665B

E4400B

E4420B

E4421B

E4422B

E4423B

E4424B

E4425B

E4426B
E4426B
E4430B
E4431B
E4432B
E4433B
E4434B
E4435B
E4436B
E4437B
8642A
8642B

Swept Analyzers

E4440A
E4443A
E4445A
E4446A
E4448A
71100C
71100P
71200C
71200P
71209C
71209P
71210C
71210P
71910C
71910P
8560E
8561E
8562E
8563E
8564E
8565E
E4401B
E4402B
E4403B
E4404B
E4405B
E4407B
E4408B
E4411B
E4401A
E4402A
E4403A
E4404A

E4405A
3585A
3585B
71100A
71200A
71210A
8560A
8561A
8561B
8562A
8562B
8563A
8566A
8566B
8568A
8568B
E4411A

