

**TLA5000B Series Logic Analyzer  
Declassification and Security  
Instructions**

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# Preface

This document helps customers with data security concerns to sanitize or remove memory devices from the TLA5000B Series Logic Analyzers.

These products have data storage (memory) devices and data output devices (USB ports). These instructions tell how to clear or sanitize the memory devices and disable the data output devices. The instructions also tell how to declassify an instrument that is not functioning.

**Products** The following Tektronix products are covered by this document:

- All TLA5000B Series Logic Analyzers

**Related Documents** *TLA5000 Series Tektronix Logic Analyzer Service Manual*, Tektronix part number 071-1305-00.

**Terms** The following terms may be used in this document:

- **Clear.** This removes data on media/memory before reusing it in a secured area. All reusable memory is cleared to deny access to previously stored information by standard means of access.
- **Erase.** This is equivalent to clear.
- **Media storage/data export device.** Any of several devices that can be used to store or export data from the instrument, such as a USB port.
- **Nonvolatile memory.** Data is retained when the memory device power is removed.
- **N/A.** Not applicable (is not necessary for this product or products).
- **Remove.** This is a physical means to clear the data by removing the memory device from the instrument. Instructions are available in the product Service Manual.
- **Sanitize.** This eradicates the data from media/memory so that the data cannot be recovered by other means or technology. This is typically used when the device will be moved (temporarily or permanently) from a secured area to a non-secured area.
- **Scrub.** This is equivalent to sanitize.
- **User-modifiable.** The user can write to the memory device during normal instrument operation, using the instrument interface or remote control.
- **Volatile memory.** Data is lost when the instrument is powered off.



# Clear and Sanitize Procedures

## Memory Devices

The following tables list the volatile and nonvolatile memory devices.

**Table 1: Volatile Memory Devices**

Type and minimum size	Function	User Modifiable <sup>1</sup>	Data input method	Location	To clear	To sanitize
Memory, CMOS, DRAM, 8 MB X 16	Stores acquired user data	Yes	TLA acquisition data	Acquisition board	Remove power for at least 20 seconds	Remove power for at least 20 seconds
Memory; DRAM, CMOS; 1 MB X 16	Stores instrument code	No	Firmware processor	Interface board	Remove power for at least 20 seconds	Remove power for at least 20 seconds
Motherboard DDR2 DIMM	OS processor system memory	No	OS Application software	Micro-ATX board	Remove power for at least 20 seconds	Remove power for at least 20 seconds
Motherboard CMOS memory	User can set BIOS settings for Motherboard	Yes	BIOS setup	Micro-ATX board	Load custom defaults	Remove battery for at least 20 seconds

<sup>1</sup> During normal instrument operation.

**Table 2: Nonvolatile Memory Devices**

Type and minimum size	Function	User Modifiable <sup>1</sup>	Data input method	Location	To clear	To sanitize
Hard Disk Drive; 3.5 in., 80 GB, SATA	Contains operating system, applications software, captured waveform records, instrument settings, and user programs	Yes	User input via OS utilities and applications software	Internal	Load recovery media	Use DOD approved scrubbing software package, or remove and destroy HDD
Memory, CMOS, NVRAM; 32 KB X 8	Stores calibration constants	Yes	Programmed during calibration	Acquisition board	Recalibrate	N/A. No user data.
CMOS, EPROM, 8 KB	Front panel keypad code	No	Programmed by vendor. Read only.	Front-Panel board	N/A. Read only.	N/A. Read only.
Memory; CMOS, Flash; 4 MB X 8	Stores instrument code	Yes	Programmed by software during firmware upgrade	Interface board	Re-flash firmware	N/A. No user data.
Memory; PRGM, CMOS, Flash; 128 KB	Stores video BIOS for the LCD display	No	Programmed by vendor. Read only.	Interface board	N/A. No user data.	N/A. Read only.
8 MB Flash	Contains Motherboard BIOS configuration date	No	Programmed by vendor application. Read only.	Micro-ATX board	N/A. Read only.	N/A. Read only.

<sup>1</sup> During normal instrument operation.

## Data Export Devices

The following table lists the data export devices. Detailed procedures to disable these devices are shown following the table.

**Table 3: Data Export Devices**

Type	Function	User Modifiable <sup>1</sup>	Data input method	Location	To disable
USB host port	Supports removable USB flash drive. User storage of instrument setups and exported waveform data.	Yes	Save	USB host port on front and rear of the instrument.	Files can be deleted or overwritten on the instrument or a PC; USB flash drive can be removed and destroyed. The USB host port can be disabled. (See page 2, <i>Disabling USB, Floppy Drive, and CD-RW Capability.</i> )
CD-RW, DVD-ROM drive	Store and transport data	Yes	User input	Front panel	Remove all CDs and DVDs. Rewritable CDs can be formatted, stored in a secure area, or destroyed. Non-rewritable CDs or DVDs can either be stored or destroyed. The drive can be disabled. (See page 2, <i>Disabling USB, Floppy Drive, and CD-RW Capability.</i> )
Floppy drive	Data import/export	Yes	User input	Internal	Remove all floppy disks and format them (don't use "Quick Format"), store them, or destroy them. Non-rewritable disks can either be stored or destroyed. The drive can be disabled. (See page 2, <i>Disabling USB, Floppy Drive, and CD-RW Capability.</i> )
LAN Ethernet	Transfer data.	Yes	User input	Rear panel	The LAN can be disabled. (See page 4, <i>To disable LAN Ethernet Connectivity Using the BIOS.</i> ) (See page 4, <i>To Disable LAN Ethernet Using the Windows Device Manager.</i> )

<sup>1</sup> During normal instrument operation.

### Disabling USB, Floppy Drive, and CD-RW Capability

The following instructions give a method to disable the built-in USB and CD-RW capability. Using the BIOS disables the devices for DOS programs, while the Windows Device Manager disables the devices for Windows programs. These procedures disable both USB and the CD-RW to prevent their use.



**To Disable USB, Floppy Drive, and CD-RW for Windows Using the Windows Device Manager.**

1. Connect a PS2 mouse and a PS2 keyboard to the instrument before powering on (because USB will be disabled).
2. Log on to the instrument as an administrator.
3. From the Windows Start menu, select Control Panel, and then select System.
4. Select the Hardware tab.
5. Click Device Manager.
6. Expand the Universal Serial Bus controllers entry by clicking the + next to it.
7. Double-click the first USB Root Hub entry.
8. Select the Power tab.
9. If the Device Description is anything other than Generic USB Hub, click the General tab, and select Do not use this device (disable) in the Device Usage drop-down list.

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**NOTE.** *It is critical to leave the USB Root Hub operating; otherwise, the front panel will not function.*

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10. Click OK.
11. Repeat steps 7 through 9 for each USB Root Hub shown in the Device Manager window.
12. Expand DVD/CD-ROM drives in the Device Manager window.
13. Right-click TEAC DW-224E-C, and select Disable.
14. Expand the Floppy disk drives entry in the Device Manager window.
15. Right-click TEAC FD-05PUW USB Device, and select Disable.
16. Reboot the instrument to make the changes effective.
17. Password-protect the Windows Administrator account and set up Guest accounts for end users so that these changes cannot be easily reversed.

**To disable LAN Ethernet Connectivity Using the BIOS**

1. Press F2 during instrument Boot Up to go to the BIOS configuration menu.
2. Go to Advanced > Peripheral Configuration.
3. Set Onboard LAN to Disabled.
4. Press Esc one time to return to the main BIOS configuration menu.

Press F10, and select OK to save changes and exit. The LAN system will be disabled and no longer allow data traffic in or out.

**To Disable LAN Ethernet Using the Windows Device Manager**

1. Connect a PS2 mouse and a PS2 keyboard to the instrument before powering on (because USB will be disabled).
2. Log on to the instrument as an administrator.
3. From the Windows Start menu, select Control Panel, and then select System.
4. Select the Hardware tab.
5. Click Device Manager.
6. Expand the device category Network Adapters.
7. Double click on the Intel® PRO/100 VE Network Connection.
8. Click the General tab, and select Do not use this device (disable) in the Device Usage drop-down list.

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## Built-In Security Features

These instruments do not have built-in security features.

To secure the instrument setups or waveform data, you must remove the hard disk drive and store it in a safe place. Additional removable hard drives (Tektronix part number 065-0753-00) can be purchased from Tektronix. If the hard drive has been removed and a new hard drive is installed, you need to install the operating system and instrument application software. You can use the Operating System Restore DVD and Product Software CD that were shipped with the instrument.

# Troubleshooting

## How to Clear or Sanitize a Non-Functional Instrument

If your instrument is not functioning, proceed as follows. Refer to your organization's policies regarding storage or disposal of any removed items.

For removal instructions, refer to the *TLA5000 Series Tektronix Logic Analyzer Service Manual*, Tektronix part number 071-1305-00, available on the Tektronix Web site at [www.tektronix.com/manuals](http://www.tektronix.com/manuals).

After removal of a board, refer to your company's internal policies regarding handling or disposal of the board.

**Internal Hard Disk Drive** Remove the Internal Hard Disk Drive and return the product to Tektronix. A new drive will be installed, and the instrument will be repaired and adjusted as necessary.

**CD-RW/DVD ROM Drive** Remove all CDs and DVDs before you return the instrument to Tektronix for repair.

If the CD drive is not functional and you are unable to eject a disc, you might need to remove the CD drive assembly.

**USB Flash Drive** Remove the USB flash drive before you return the instrument to Tektronix for repair.

After removal of the USB flash drive, refer to your company's internal policies regarding handling or disposal of the flash drive.

**Charges** Replacement of any missing hardware will be charged according to the rate at the time of replacement.

## How to Recover from Clearing or Removing the Instrument's Memory

If the hard drive has been scrubbed, you can reinstall the operating system using the Image CD that came with the Logic Analyzer. This returns the Logic Analyzer hard drive to the initial factory shipped state.