

**TDS1000B and TDS2000B Series
Digital Storage Oscilloscope
Declassification and Security Instructions**

Revision A

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Tektronix

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Preface

This document helps customers with data security concerns to sanitize or remove memory devices from TDS1000B and TDS2000B Series Digital Storage Oscilloscopes.

These products have data storage (memory) devices and data output devices (USB ports). These instructions tell how to do the following:

- Clear or sanitize the memory devices
- Clear or sanitize an instrument that is not functioning

Products

The following Tektronix products are covered by this document:

TDS1001B
TDS1002B
TDS1012B
TDS2002B
TDS2004B
TDS2012B
TDS2014B
TDS2022B
TDS2024B

Related Documents

The *TDS1000B and TDS2000B Series Digital Storage Oscilloscope Service Manual*, part number 071-1828-XX, is available on the Tektronix Web site at www.tektronix.com/manuals.

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. Various devices that are used to store or export data from the instrument, such as a USB port.

Nonvolatile memory. Data is retained when the instrument is powered off.

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 memory device can be written to by the user during normal instrument operation, using the instrument's user 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 in the standard instrument and listed options.

You only need to perform the *Clear Flash Procedure* to clear the instrument. (See page 2, *Clear Flash Procedure*.)

Table 1: Volatile Memory Devices

Type and minimum size	Function	User Modifiable	Input method	Location	Process to clear
SDRAM, 512K X 32	Acquisition memory for holding and processing waveforms, and processor system RAM.	Only by processor system.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	Remove power from the instrument for at least 20 seconds.
SRAM, 128K X 8	Shared memory between the acquisition system and the USB processor.	Only by processor system.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	Remove power from the instrument for at least 20 seconds.
Real-time clock, which contains battery backed-up memory	Unused.	Unused.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	N/A
USB 2.0 OTG host/peripheral controller, 8K X 16 RAM	Contains USB controller program and data memory.	Only by processor system.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	Remove power from the instrument for at least 20 seconds.
SRAM, 64K X16	Data memory for the USB processor.	Only by processor system.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	Remove power from the instrument for at least 20 seconds.

Table 2: Nonvolatile Memory Devices

Type and minimum size	Function	User Modifiable	Input method	Location	Process to clear
FLASH, 8M X 8, 4M X 16	Holds instrument firmware, current setup, saved setups, saved reference waveforms, hard copy image files, and calibration constants.	Only by processor system.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	See the <i>Clear Flash Procedure</i> that follows this table.
EEPROM, SERIAL, 1M	Program memory for the USB processor.	No.	N/A	TDS1001B, TDS1002B, TDS1012B, TDS2002B, TDS2012B, TDS2022B 2-channel Acquisition board. TDS2004B, TDS2014B, TDS2024B 4-channel Acquisition board.	N/A

Clear Flash Procedure

This procedure does not erase or change factory calibration constants.

1. Push the front panel DEFAULT SETUP button to recall the default setup.
2. Push the front panel SAVE/RECALL button.
3. Push the Action option (side bezel) button until Save Setup is selected.
4. Push the Save To option button until Setup is selected.
5. Push the Setup option button until 1 is selected.
6. Push the Save option button to overwrite setup 1 with the default setup.
7. Push the Setup and Save option buttons again to overwrite the next setup with the default setup. Repeat this step until setup 1 is selected again.
8. Push the front panel CH 1 MENU button, and then push the Coupling option button until Ground is selected.
9. Push the front panel SAVE/RECALL button.
10. Push the Action option button until Save Waveform is selected. Push the Save To option button until Ref is selected. Push the Source option button until CH1 is selected.
11. Push the To option button until RefA is selected. Push the Save option button to overwrite reference waveform RefA with the null waveform.
12. Push the To and the Save option buttons again to overwrite the next reference waveform with the null waveform. Repeat this step until reference RefA is selected again.

- 13.** Insert a USB flash drive into the USB Flash Drive port on the front of the oscilloscope.
- 14.** Push the front panel UTILITY button.
- 15.** Push the Options option button.
- 16.** Push the Printer Setup option button.
- 17.** Push the PRINT Button option until Saves Image To File is selected.
- 18.** Push the File Format option button until JPG is selected.
- 19.** Remove any probes from the BNC front panel connectors.
- 20.** Push the front panel PRINT button to overwrite the hardcopy image file with an image that does not contain any useful information.
- 21.** Power off the oscilloscope, and then power on the oscilloscope to complete the process.

Data Export Devices

The following table lists the data export devices in the standard instrument and listed options.

Table 3: Data Export Devices

Type	Function	User Modifiable	Input method	Location	Process to disable
USB host port	Supports removable USB flash drive. User storage of reference waveforms, screen images, and instrument setups.	Yes.	Save.	USB host port on front of instrument.	Files can be deleted or overwritten on the oscilloscope or a PC; USB flash drive can be removed and destroyed. The USB host port cannot be disabled.
USB device port	Supports remote control and data transfer to a PC.	Yes.	Remote control via USBTMC.	USB device port on rear of instrument.	The USB device port cannot be disabled.

Troubleshooting

How to Clear or Sanitize a Non-Functional Instrument

If your instrument is not functioning and you need to clear or sanitize it, proceed as follows:

Acquisition Board

Remove the Acquisition board and return the product to Tektronix. A new Acquisition board will be installed, and the instrument will be repaired and adjusted as necessary.

For removal instructions, refer to the *TDS1000B and TDS2000B Series Digital Storage Oscilloscope Service Manual*, part number 071-1828-XX, available on the Tektronix Web site at www.tektronix.com/manuals.

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

USB Flash Drive

Remove the USB flash drive and 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.