



**DPO70E Series Optical Probes
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 DPO7OE Series Optical Probes.

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

- Reference** The procedures in this document are written to meet the requirements specified in:
- NISPOM, DoD 5220.22–M, Chapter 8
 - ISFO Process Manual for Certification & Accreditation of Classified Systems under NISPOM

- Products** The following Tektronix products are covered by this document:
- DPO7OE1 33 GHz Optical Probe
 - DPO7OE2 59 GHz Optical Probe

Related documents *DPO7OE Series User Manual* (Tektronix part number 071-3558-xx).

- 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.
 - **Instrument declassification.** A term that refers to procedures that must be undertaken before an instrument can be removed from a secure environment. Declassification procedures include memory sanitization and memory removal, and sometimes both.
 - **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 instrument is powered off.
 - **Power off.** Some instruments have a “Standby” mode, in which power is still supplied to the instrument. For the purpose of clearing data, putting the instrument in Standby mode does not qualify as powering off. For these products, you will need to either press a rear-panel OFF switch or remove the power source from the instrument.

- **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 accessible.** User is able to directly retrieve the memory device contents.
- **User-modifiable.** The user can write to the memory device during normal instrument operation, using the instrument interface or remote control.
- **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 in the standard instrument and listed options. Detailed procedures to clear or sanitize these devices, if any, are shown following each table.

Terminology

The following terms are used in the tables in this section:

- User data – Describes the type of information stored in the device. Refers to waveforms or other measurement data representing signals connected to the instrument by users.
- User settings – Describes the type of information stored in the device. Refers to instrument settings that can be changed by the user.
- Both – Describes the type of information stored in the device. It means that both user data and user settings are stored in the device.
- None – Describes the type of information stored in the device. It means that neither user data nor user settings are stored in the device.
- Directly – Describes how data is modified. It means that the user can modify the data.
- Indirectly – Describes how data is modified. It means that the instrument system resources modify the data and that the user cannot modify the data.

Table 1: Nonvolatile memory devices

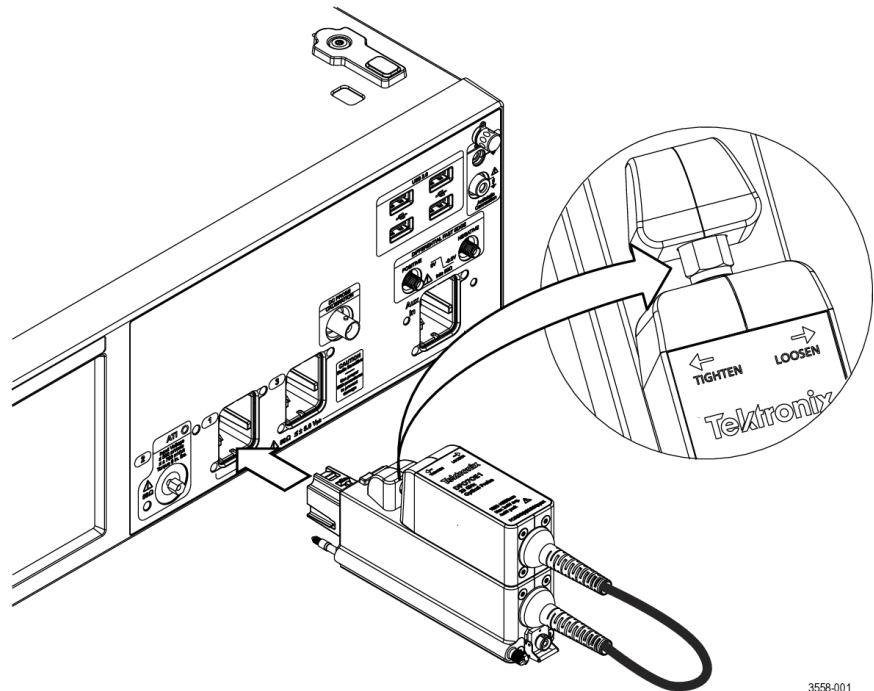
Type and min. size	Function	Type of user info stored	Method modification	Data input method	Location	User accessible	To clear	To sanitize
Microcontroller Flash Memory, 128 kb	Storage of user calibrated wavelength conversion gain	Scaler conversion gain values	Read/Write	Scope GUI user calibration procedure	U204 on the OE Power and Control board inside the probe carrier	No	Use the oscilloscope GUI to erase the user-calibrated wavelength conversion gains (See page 2, <i>Clear flash procedure.</i>)	Remove U204 on the OE Power and Control board inside the probe carrier

- Clear flash procedure**
1. Install the probe on a DPO/MSO70000 C/DX/SX model oscilloscope:
 - a. Remove the probe from the hard case.
 - b. If necessary, attach the probe shuttle to the carrier by setting the shuttle into the slot on top of the probe carrier and sliding the shuttle forward. As shown on the shuttle label, tighten the nut on the probe shuttle counter-clockwise using a torque wrench set to 8 in-lbs.



CAUTION. To prevent damage to the probe, do not over-torque the shuttle electrical connector.

- c. Plug the probe into the oscilloscope.
- d. Tighten the thumbscrew on the rear of the probe to secure the probe to the oscilloscope. Once the probe has been connected to the oscilloscope, the probe will be automatically detected by the system.



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2. To view the Vertical Setup screen for the probe, select the oscilloscope channel with the probe installed, and then select **Vertical > Vertical Setup**.
3. In the Vertical Setup screen, click **Probe Cal** to open the Probe Setup screen.

- If there are user defined wavelengths stored on the probe, there will be a **User Cal'd** radio button at the bottom of the Wavelength list as shown below. If the radio button does not appear, no user-defined wavelengths are stored on the probe.



- If user-defined wavelengths are stored on the probe, click **Erase User Wavelengths**. The User Cal'd radio button will disappear.
- Remove the probe from the oscilloscope.

Troubleshooting

How to clear or sanitize a nonfunctional instrument

If your instrument is not functioning, perform the following actions and return the instrument for Tektronix for repair. Describe the initial problem with the product. Tektronix will install replacement parts and then repair and return the instrument.

User-calibrated wavelength conversion gains

User calibrated wavelength conversion gains are stored in the probe microcontroller flash memory, reference designator U204. If the user calibrated gains cannot be removed using the TekScope interface (See page 2, *Clear flash procedure.*), U204 must be removed from the OE Power and Control board inside the probe carrier.

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

Using the Erase User Wavelengths button in TekScope does not require any special recovery procedure. (See page 2, *Clear flash procedure.*) The probe can continue to be used, and new user calibrated wavelength conversion gains can be stored. If U204 is removed from the OE Power and Control board, the entire probe must be returned to Tektronix for repair and calibration.

Change log

Document part number	Revision date	Change description
077-1378-01	Oct 26, 2018	Added DPO7OE2 probe.