Tektronix®

TCR801 Optical Clock Recovery
Declassification and Security Instructions

Register now!
Click the following link to protect your product.
www.tek.com/register

077-1651-00

Table of Contents

Preface

This document helps customers with data security concerns to sanitize or remove memory devices from their instrument.

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.

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

This document covers the following Tektronix product:

- TCR801 Optical Clock Recovery

Terms

The following terms may be used in this document:

- **Clear.** This removes data on media / memory. All reusable memory is cleared to deny access to previously stored information using 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 involve memory sanitization or memory removal and sometimes both.
- **Media storage/data export.** This refers to any of several devices that can be used to store or export data from the instrument, such as a USB port.
- **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 is moved (temporarily or permanently) from a secured area to a non-secured area.
- **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.
- **Nonvolatile memory.** Data is retained when the instrument is powered off.
- **Volatile memory.** Data is lost when the instrument is powered off.

Clear and sanitize procedures

Memory devices

The following tables and procedures identify volatile and non-volatile memory devices in the TCR801 instrument and how to clear and/or sanitize them.

Terms

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.
- **None**. Describes the type of information stored in the device. It means that neither user data or 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.

Volatile memory devices

Table 1: Volatile memory devices

Type & min. size	Function	Type of user info stored	Backed up by battery?	Method of modification	Data input method	Location	User accessible	To clear / sanitize
DRAM 2 GB	Holds OS Processes	None	Yes	Indirectly	Written by OS	Digital board	No	Remove power from the instrument for at least 5 mins

Nonvolatile memory devices

Table 2: Nonvolatile memory devices

Type & min. size	Function	Type of user info stored	Method of modification	Data Input method	Location	User accessible	To clear / sanitize
FRAM 32 KB	MCU system memory	None	None	Factory configuration, written by processor system	Digital board	No	Not applicable, does not contain user data or settings. Clearing would disable instrument functionality.

Table continued…

Type & min. size	Function	Type of user info stored	Method of modification	Data Input method	Location	User accessible	To clear / sanitize
NAND storage 16 GB	OS system storage	The internal logs store user datarates, loop bandwidths, and input power information.	Default value saving via GUI and Manufacturing backdoor commands	Factory config, written by user via GUI and manufacturing backdoor commands	Digital board	Yes	Send a CREC:RESET command to clear user defaults. To clear internal logs, power cycle the unit 6 times using the front panel button. Manufacturing / Service can clear everything else like calibration if required.
NOR flash memory 512 MB	FPGA configuration files	None	JTAG port on board	Factory configuration	Digital board	No	Not applicable, does not contain user data or settings. Clearing would disable instrument functionality.

Media and data export devices

The following table lists the data export devices in the instrument. Detailed procedures to disable these devices, if any, are shown in the following table.

Table 3: Media storage / Data export disable

Type	Function	Method of modification	Data input method	Location	User accessible	To disable
USB device port	Supports remote control and data transfer to a PC.	Directly	Remote control via USBTMC	USB device port on rear of instrument.	-	The USB device port cannot be disabled.
LAN Ethernet connector	Transfer data	Directly	N/A	Rear panel, AFG3100 series only	-	N/A