PWS4000 Series
Linear DC Power Supplies
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 PWS4000 Series Linear DC Power Supplies.

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

Products

The following Tektronix product is covered by this document:

- PWS4205
- PWS4305
- PWS4323
- PWS4602
- PWS4721

Related Documents

The following table lists the documentation that is available for these products and shows where you can find it: in a printed manual, on the product documentation CD-ROM, or on the Tektronix Web site.

Table i: Product documentation

Item	Purpose	Location
User Manual	Provides operation and application information. This manual is available in English, Spanish, French, German, Portuguese, Italian, Russian, Korean, Simplified Chinese, and Traditional Chinese.	Product Documentation CD and available at www.tektronix.com/manuals
Specifications and Performance Verification Technical Reference	Specifications and procedures for checking instrument performance.	Product Documentation CD and available at www.tektronix.com/manuals
Programmer Manual	SCPI command reference for remotely controlling the instrument.	Product Documentation CD and available 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 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-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 nonvolatile and volatile memory devices. Detailed procedures to sanitize or clear these devices are shown after the tables.

Table 1: Nonvolatile memory devices

Type and minimum size	Function	User modifiable	Data input method	Location	To clear	To sanitize
EEPROM, 8k x 8 bit	Current setup, saved setups, and calibration constants	Yes	Firmware operations and user input	Main board		See Clear Flash and EEPROM Procedure following this table
Flash 8k x bit	ListData	Yes	Firmware operations and user input	Main board		See Clear Flash and EEPROM Procedure following this table
AT91SAM7X256, 256k Flash		No	Firmware update	CPU board		
STM32F103C8, 64k – 128k Flash		No	Firmware update	Main board		

Table 2: Volatile memory devices

Type and minimum size	Function	User modifiable	Data input method	Location	To clear	To sanitize
AT91SAM7X256, 64k SRAM		No	Firmware operations	CPU board	Cycle power with a minimum of 15 seconds off	
STM32F103C8, 20k SRAM		No	Firmware operations	Main board	Cycle power with a minimum of 15 seconds off	

Clear Flash and EEPROM Procedure

1. Press the front-panel **Shift** button.
2. Press the front-panel **.** button.
3. Press the front-panel **2** button.

Clear STM32F103 and AT91SAM Procedure

1. Press the front-panel power button to turn the instrument off.
2. Wait at least 15 seconds before turning the instrument back on.

Data Export Device

The following table lists the data export device. There are no procedures to disable this device.

Table 3: Data export devices

Type and minimum size	Function	User modifiable	Data input method	Location	To disable
USB device port	Supports remote control and data transfer to a PC	Yes	Remote control through USBTMC	Rear-panel of instrument	Cannot be disabled

Troubleshooting

How to Clear or Sanitize a Nonfunctional Instrument

To sanitize a nonfunctional instrument, remove the Main and CPU boards and return the instrument to Tektronix for installation of replacement boards.

How to Recover from Sanitizing the Nonvolatile Memory of the Instrument

After performing the Clear Flash and EEPROM Procedure, the power supply will return to the factory default setting. Therefore, a recovery procedure is not necessary.