

## Instrument Security Procedures

### Model:

190-062, 190-102, 190-104, 190-202, 190-204, 190-502, 190-504

### Product Name:

190 Series II ScopeMeter®

### Instrument Description:

ScopeMeter® Test Tool

### Memory Description:

The 190 Series II ScopeMeter® test tool has these memory devices:

1. D4000 Controller “Spider”. Contains a mask ROM 4k x 32 with the initial program that holds the operating code for the product and a RAM 1k x 32 to temporarily store stack values for computing actions.
2. D4001: 1x 4 Mb SRAM. Memory is used to store the actual screen and instrument setup.
3. D5000, D5002, 2x 64 Mb Flash EEPROM  
Non-volatile memory used to store:
  - operating code (instrument firmware) for the product
  - calibration constants
  - user-saved screens and instrument setup information
4. D5001, D5003: 2x 8 Mb SRAM memory used to store the actual screen and instrument setup.

### Memory Cleaning Instructions:

The operating code (instrument firmware) stored in D5000, D5002 can be read with dedicated remote interface commands (only available for use by Product Development).

The instrument firmware can be loaded selectively with firmware downloads that are distributed through the Fluke website. Fluke Service Centers can load firmware and configure the instrument with Service tools.

#### **Caution**

**The upgrade tool will erase all saved screens and instruments setups.**

Calibration constants stored in D5000, D5002 can be read with special remote interface commands (only available for use by Fluke Product Development or Fluke Service Centers). The calibration constants are generated when the test tool is sent through its calibration process and are fundamental to the test tool operation.

If the test tool is not powered through its power adapter, remove the battery for 10 minutes to clear all data held in SRAM.

To remove the battery:

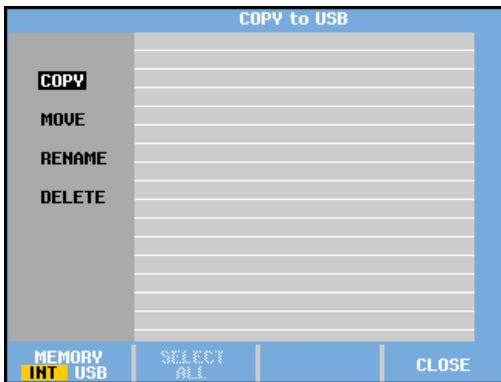
1. Disconnect the test tool from all voltage sources.
2. Open the battery door on the back of the Product.
3. Lift the battery out of the instrument.

*Note*

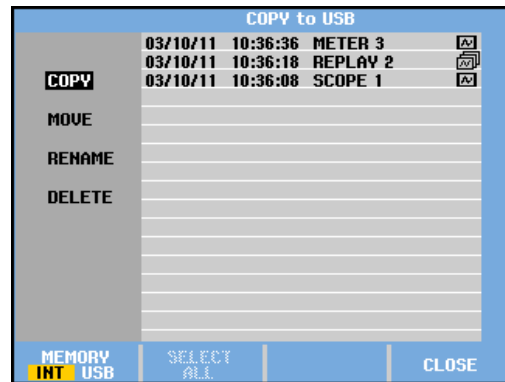
*Battery removal does not affect screen copies and setup information that the user has stored with the **SAVE > Save to internal** menu steps described in chapter 5 of the user manual.*

To clear screens and instrument setups saved by the user:

1. Push the SAVE button.
2. Press F4 (FILE OPTIONS).
  - If you see the screen shown Figure 1, no screens and setups are stored. Press F4 (CLOSE) to exit.
  - If you see the screen shown in Figure 2, continue at step 3.



**Figure 1.**



**Figure 2.**

3. Select DELETE with the up/down arrow keys.
4. Press ENTER.
5. Press F2 (SELECT ALL).
6. Press ENTER.
7. Press F4 (YES) to confirm the Clear action.

This menu also is used to clear individual waveforms and setups.

Alternatively, you can use a single control that erases all user-specific settings and stored data including the stored waveforms and setup information:

1. Select the USER key.
2. Press F1 (OPTIONS).
3. Use the cursor keys to select FACTORY DEFAULT.
4. Press ENTER.
5. Press F4 (YES) to confirm the selection.