# Instrument Security Procedures

**Model:**
    810
**Product Name:**
    Vibration Tester

## Instrument Description:

The Fluke 810 Vibration Tester is used in vibration analysis to diagnose mechanical faults on rotating equipment.

## Memory Description:

1. 64kB Internal SRAM (On-chip RAM)
   This area is used by iROM (On-chip boot code) and cannot be accessed by user.

2. 256MB DDR2 RAM (System RAM)
   This area is used by OS and application (FW and UI) and cannot be accessed by user.

3. 128MB NAND Flash
   This memory area is used for storing boot-loader, OS image, firmware, UI application, and Diagnostic engine images.

4. 256 bytes EEPROM
   This area is used to store calibration information and related data.
    1-byte    -- Calibration status
    4-bytes   -- Last calibrated date
    96-bytes -- Calibration constants
    5-bytes   -- Calibration password
    7-bytes   -- Reserved for EEPROM test

5. Storage Card
   a. 2GB Internal Storage Card
      Instrument Setup settings and Transactional Data (Machine Setup, Measurement, Diagnostic data) is stored in the internal SD card. Also used for storing FW/UI/DE debug log files.
   b. 2GB External Storage card
      Once internal SD card is full, transactional data is stored in the external SD card.

## Memory Cleaning Instructions:

1. Internal SRAM/DDR2 RAM
   This area is volatile and the contents are lost on power off.

2. Nand Flash
   - The OS/boot-loader images are updated from the boot-loader menu using the serial port. As serial port is not accessible externally, the device has to be opened and serial port needs to be connected to upgrade the images.
   - The FW/UI/DE images (Vibration Tester.cab) are updated using the Viewer Software (PC application) over USB.

3. EEPROM
   - The 1-byte Calibration status, 4-byte Last calibrated date and 96 byte calibration constants are updated during calibration process (Auto/Manual).
   - The 5-byte calibration password is updated during password change from the Manual calibration menu or this password can be reset to factory default by opening the DD unit and shorting the "RST1-RST2" pins on the digital board.
   - The 7-byte EEPROM test bytes are updated during EEPROM test.

4. Storage Card
   Once the storage card is full, memory can be released by using the "MEMORY" key in the 810 unit. The user can navigate to the "View by Machine Setup" menu and delete the machine setups from memory.