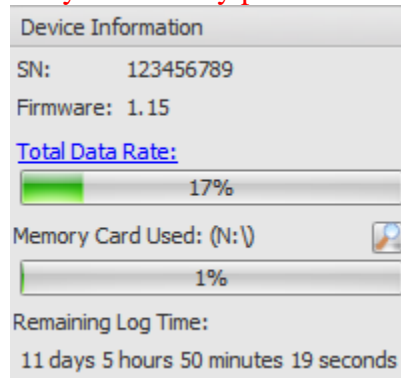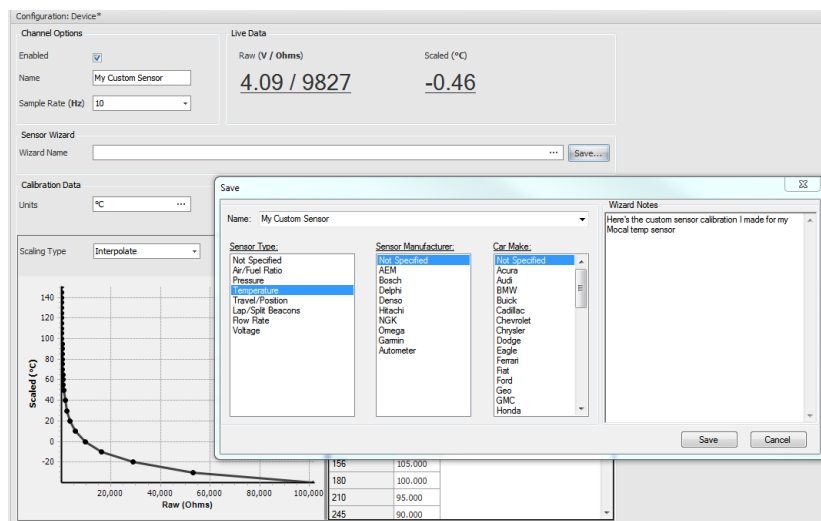|		DATE
		10/19/12

AQ-1 Software/Firmware Update Procedure

This document will detail the procedure for updating the PC software used to connect and configure the AEM AQ-1 Data Acquisition System as well as updating the firmware within the device itself. This procedure is as follows; please make careful note of the steps detailed in red, below.

1. **Preparation**
   1.1. Connect to your AQ-1 device with your existing software and make note of what firmware version is currently installed. This information will be required by technical support should you have any problems with the update process.

   1.2. Make sure all logs have been downloaded from the AQ-1 and saved as DAQ files on your hard drive.
   1.3. Save any custom sensor calibrations into the sensor/wizard database as the AQ-1 configuration will be reset as part of this process.

		DATE
		10/19/12

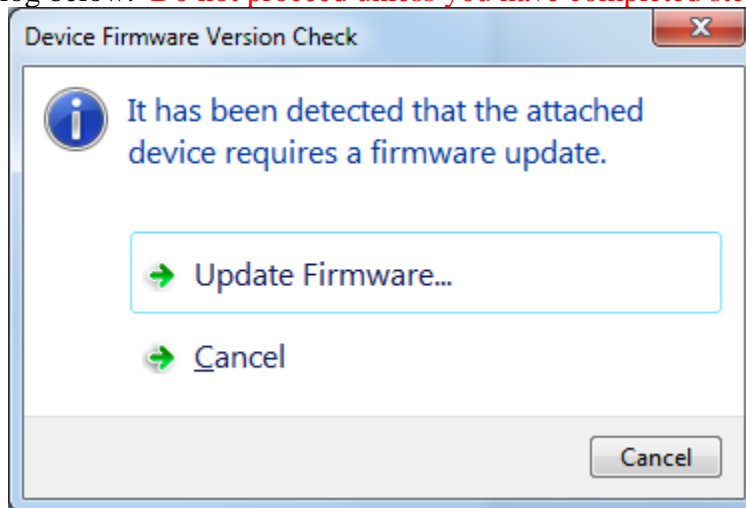# AQ-1 Software/Firmware Update Procedure

2. **Download**
   2.1. Navigate to the **AEM Performance Electronics Homepage** and download the latest AQ-1 installer from the 'Catalog & Software Downloads' section.

3. **PC Software Installation**
   3.1. Close any AEM software that may be running on your PC.
   3.2. Run the AQ-1 installation file and follow the on-screen prompts.
   3.3. Launch the newly installed AQ-1 application and attempt to connect to the AQ-1 device through USB.
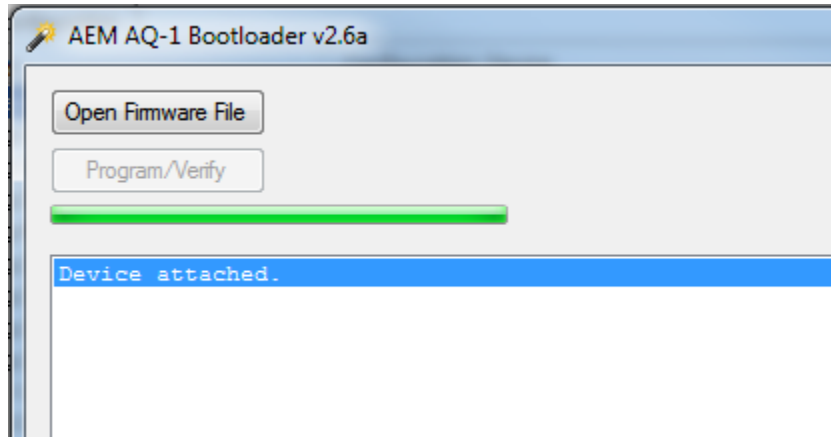
4. **AQ-1 Firmware Update**
   4.1. The software will detect if your device's firmware requires update and present the dialog below. Do not proceed unless you have completed step 1 above.
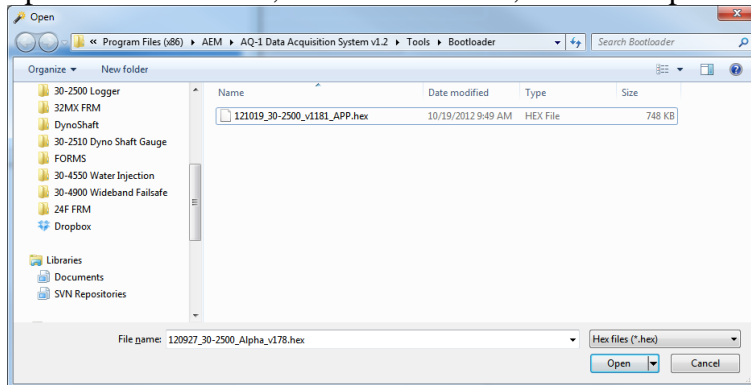

   4.2. Select 'Update Firmware…' after which the 'AEM AQ-1 Bootloader v2.6a' window should appear.

   4.3. The 'Open Firmware File' button should become active and the message 'Device attached' should appear in the message box. This may take up to sixty seconds if Windows needs to configure this USB device prior to use. If this button does not become active within sixty seconds then contact AEM Technical Support at 1-800-423-0046 or emstech@aempower.com. See the 'Troubleshooting' section at the end of this document for additional information.

		DATE
	![AEM Performance Electronics logo]	10/19/12

AQ-1 Software/Firmware Update Procedure

4.4. Click 'Open Firmware File', select the hex file, and click open.

4.5. Once loaded, click Program/Verify and following the status updates in the message window until the update process has completed. Close the 'AEM AQ-1 Bootloader v2.6a' window.

5. Completion

5.1. The device should now reset and connect to the new PC software. The currently loaded firmware is as displayed in the lower left hand corner of the AQ software.
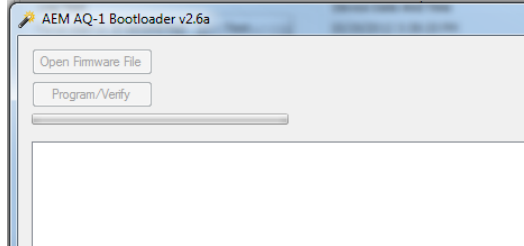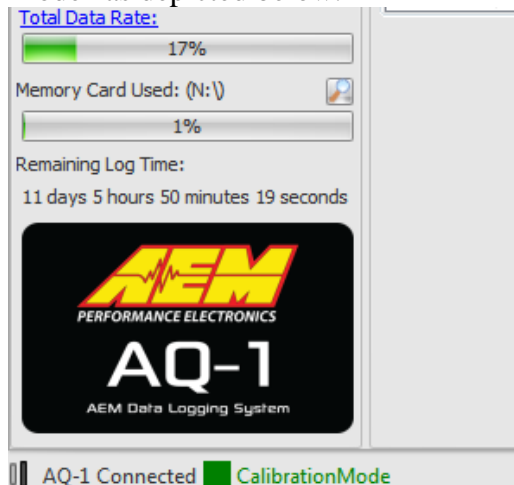
AQ-1 Software/Firmware Update Procedure

Troubleshooting

Problem: The 'Open Firmware File' button does not become active within sixty seconds (Section 4.3).

- Unplug USB connection and reconnect, preferably into a different PC USB port. Make notice of any activity in the Windows "System Tray" notification area. Windows must configure and install devices when they are plugged into each USB port of the PC.

-
- Reboot PC and try process again, starting at step 3.3
- If the user is still unable to get an active 'Open Firmware File' button and is unable to update to the latest firmware then the newly installed PC software will be unable to connect to their device. In this case, the user should uninstall the PC software and re-install AQ-1 software v1.1 as downloaded from www.aemelectronics.com. The user should then connect to the device using the v1.1 software and check to see if the device is in "Calibration Mode" as depicted below.

- If the device is in 'Calibration Mode' and the firmware version, as noted in Section 1.1, is "v1.15" then the user should contact AEM Technical Support at 1-800-423-0046 or emstech@aempower.com.