



FlowTracker Handheld ADV[®] Firmware Version 3.9 Release Notes

IMPORTANT NOTE

If you are updating from FlowTracker firmware version 3.1 or later, you can proceed with the instructions provided in this Release Note. **However**, if you are planning to update from a FlowTracker firmware version **earlier than version 3.1**, please follow the instructions provided in the Release Notes for firmware version 3.1 [FlowTracker Release Notes (FWv3.1 SWv2.10).pdf], except that you will use the hh039.hex and hh039.sfc files.

FlowTracker firmware version 3.9 has been released. All production systems shipped on or after May 10, 2012 have version 3.9 installed. The latest FlowTracker software is version 2.30.

- **Section 1 – System Information**
- **Section 2 – Changes in Version 3.9**
- **Section 3 – Installing Firmware and Software Updates**
- **Section 4 – Contact Information**

1. System Information

FlowTracker firmware version 3.9 requires 512 KB of internal memory. Note that:

- Systems shipped in 2002 or later have 512 KB of memory. As such, FlowTracker serial numbers P135 and later do not require a hardware upgrade.
- Systems shipped in 2001 **may** require a hardware upgrade. If your FlowTracker's serial number is before P135, please contact SonTek/YSI to see if a hardware upgrade is needed.
NOTE: Systems meeting this criterion must NOT update their firmware until you verify with SonTek that the hardware upgrade is not needed.

2. Changes in Version 3.9

The changes in this release do not affect user operation or measurement data. No changes were made to the measurement procedure or data format.

- All changes in version 3.9 are completely backward compatible with older systems.
- The Temperature Data displayed on the FlowTracker screen from the System Functions Menu will now match the temperature value displayed in SonUtils from a *sensor* command.
- The temperature sensor sampling during data collection remains unchanged.

3. Installing Firmware and Software Updates

To install firmware version 3.9:

- Before updating your FlowTracker's firmware:
 - Review the **IMPORTANT NOTE** at the beginning of this Release Note.
 - Ensure your FlowTracker meets the system requirements listed in §1 (above).

- Download all data files from the FlowTracker to your computer, and then format the FlowTracker's recorder.
- If necessary, download the *FlowTracker Firmware v3.9 Update Package* from our web site (<http://www.sontek.com/product/fw/ftfw.htm>). This package contains the firmware hex file (hh039.hex) and access code file (hh039.sfc) needed to install the firmware. Extract these files and save them to a folder on your computer.
- If needed, download *SonUtils* version 4.00 (or later) from the SonTek/YSI website.
 - <http://www.sontek.com/product/sw/sonutils/sonutils.htm>
 - Install *SonUtils* on your computer following the instructions provided.
- Connect the FlowTracker to a COM port on your computer.
- Run *SonUtils* and select the appropriate COM port in the upper left portion of the screen.
- Click the **Break** icon to establish communications with the system.
 - You should see a wake up message from the FlowTracker.
- Click **Instrument|Update Firmware**.
- Use the **Browse** window to select the firmware hex file (hh039.hex).
 - The access code should load automatically.
 - Use the **Binary** transfer mode, and be sure the **Verify new firmware** and **Use fast connection** boxes are selected.
 - Click **Start** when ready.
- *SonUtils* will show updates as the new firmware is loaded; this takes about five minutes.
- After installing the firmware update, run the Automatic QC Test. This test is normally run at the start of each data file, with the results being recorded to the data file. However, you can also run this test before opening a data file (but the results are not recorded).
 - From the **Main Menu**, press **2** for **System Functions**.
 - From **System Functions**, select **7** for **Auto QC Test**.
 - Place the probe in moving water well away from any underwater obstacles.
 - The FlowTracker collects data for about 30 seconds.
 - The data are analyzed based on several criteria (Noise Level, SNR, Peak Shape, Peak Location).
 - If any warnings are issued, you are given an option to repeat the test.
 - Repeat the test once, after carefully checking that the probe and sampling volume are well away from any underwater obstacles.
 - If multiple warnings are received, run *ADVCheck* or *BeamCheck* from a PC to evaluate FlowTracker system performance in more detail.

To install *FlowTracker* software version 2.30:

- Download and install *FlowTracker* (version 2.30) software from the SonTek website.
 - <http://www.sontek.com/product/sw/flowtracker/flowtracker.htm>

4. Contact Information

For additional information, please contact SonTek customer service.

Telephone: +1-858-546-8327
FAX: +1-858-546-8150
E-mail: support@sontek.com
Web: <http://www.sontek.com>