

FlowTracker Handheld ADV[®] Firmware 3.2 Release

IMPORTANT NOTE

If you are updating from FlowTracker firmware version 3.1 to 3.2, 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 hh032.hex and hh032.sfc files.

FlowTracker firmware version 3.2 has been released. The latest FlowTracker software is version 2.11.

- **Section 1 – System Requirements**
- **Section 2 – Installing Firmware and Software Updates**
- **Section 3 – Changes in Version 3.2**

1. System Requirements

FlowTracker firmware version 3.2 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. Installing Firmware and Software Updates

To install firmware version 3.2:

- Before updating your FlowTracker's firmware:
 - o Review the **IMPORTANT NOTE** at the beginning of this Release Note.
 - o Ensure your FlowTracker meets the system requirements listed in §1 (above).
 - o Download all data files from the FlowTracker to your computer, and then format the FlowTracker's recorder.
- If necessary, download the *FlowTracker Firmware v3.2 Update Package* from our web site (<http://www.sontek.com/product/fw/ftfw.htm>). This package contains the firmware hex file (hh032.hex) and access code file (hh032.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.
 - o <http://www.sontek.com/product/sw/sonutils/sonutils.htm>
 - o 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.
 - o You should see a wake up message from the FlowTracker.

- Click **Instrument|Update Firmware**.
- Use the **Browse** window to select the firmware hex file (hh032.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 2.11:

- Download and install the *FlowTracker* (version 2.11) software from the SonTek website.
 - <http://www.sontek.com/product/sw/flowtracker/flowtracker.htm>

3. Changes in Version 3.2

The new firmware corrects an issue that occurred only in **General** data collection mode.

- This was an intermittent issue that only affected *displayed* data values.
 - The issue occurs only in **General** data collection mode; it will not occur in **Discharge** mode. This issue affects only a few users.
 - When the issue occurs, mean velocity and other data for the first measurement in a file would display values of zero (0).
 - If the file was downloaded to a PC and opened with the *FlowTracker* software, the **HTML** data report and ***.DIS** files would also show zero (0) for these values.
- Data collected for these measurements are not lost. The full measurement data can be accessed from the ***.SUM** and ***.DAT** output files created by the *FlowTracker* software.
- No documentation was affected by version 3.2 changes. As such, *FlowTracker* documents (Technical Manual, Users Manual, and Quick Start Guide) will still list version 3.1.
- For additional information, please contact SonTek customer service.

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