

Low-Flow Quick Start

Flow cell hardware, Flow-Sense software, and the TROLL's water quality sensors can help determine when to collect a water sample from a well for analysis. Based on user input, software calculates the volume of the flow cell and tubing, and the time to exchange one volume at the specified pumping rate. Indicator parameters are

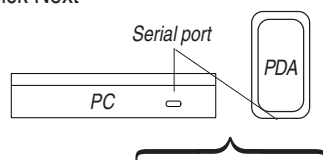
monitored at software-calculated or user-specified frequency. Meter and graph views help show when values falls within the specified target range per ASTM methodology. Custom output reports are easily created. For more detailed information, see the MP TROLL Operator's Manual on the In-Situ software/resource CD.

1 In the office: Install & launch the software

Install Win-Situ 4 and Win-Situ Sync on a desktop/laptop PC from the software CD. Connect the MP TROLL to the PC and launch Win-Situ. First-time users: click Next through 4 screens of the Connection Wizard to set up the COM port.



TIP: Pocket-Situ 4 is pre-installed on the RuggedReader®. Ensure Microsoft® ActiveSync® is installed on the PC to enable transfer of files between the computers.



2 Prepare the Multi-Parameter TROLL

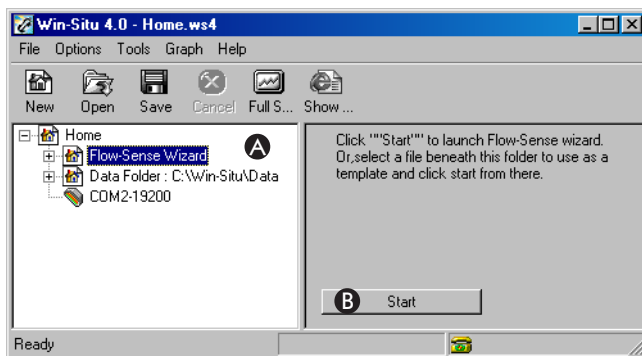
Calibrate the water-quality sensors. See the MP TROLL Quick Start, or the Operator's Manual on the software CD for detailed information.



TIP: To reduce the need for input on a PDA in the field, prepare the Low Flow information on your desktop or laptop PC ahead of time, as described here.

3 Launch the Flow-Sense Wizard

from Win-Situ's Tools menu, or from the Navigation tree as shown below:



4 Assemble the site data

The Flow-Sense Wizard will prompt for the following information for the output report:

- Well diameter & depth
- Pump model & type
- Tubing type
- Screen length
- Depth to water, top of screen & pump intake

Software volume calculations will use this input:

- Tubing inner diameter
- Tubing length

5 Enter values & save field template files

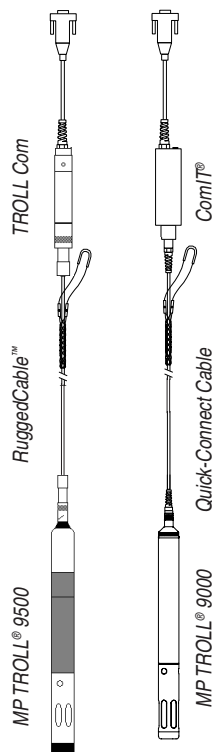
For each well, execute the Wizard and enter site information. Estimate pumping rate and final drawdown. Let stabilization phase run for at least one reading, then click **Accept**. When the Wizard asks if you want to save the file, give each one a meaningful name, for example: "Well ABC template.flo"

6 Copy template files to the RuggedReader

On your next ActiveSync connection, In-Situ's synchronization utility Win-Situ Sync will prompt you for Low Flow templates you wish to transfer to the PDA.



TIP: If Win-Situ Sync does not launch automatically, select it from the In-Situ Inc. group in Programs on the Windows Start Menu. Be sure the option Transfer data files from Desktop to Field Unit is checked .

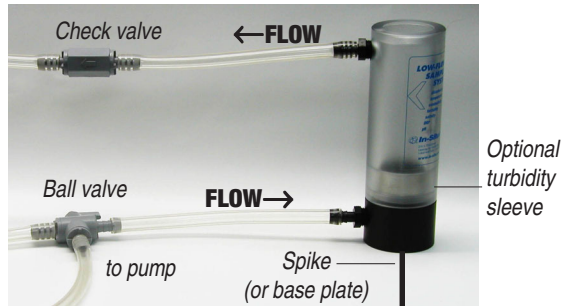


7 In the field: Connect the MP TROLL to the RuggedReader

8 Prepare the flow cell

Connect valves and tubing to flow cell body. Attach spike or base plate. Connect tubing to pump. Insert the calibrated MP TROLL into the flow cell.

TIP: The inlet and outlet do not have to be exactly aligned as shown here.



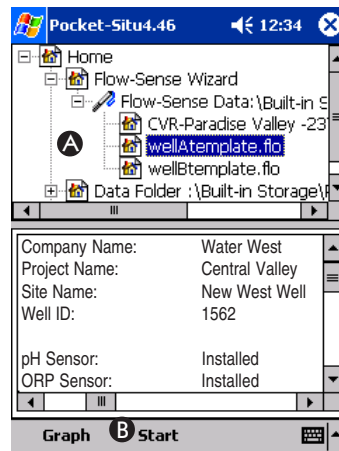
9 Start the pump

Turn on the pump and determine the optimum final pumping rate and final stabilized drawdown from static water level.

10 Launch the Flow-Sense Wizard on the RuggedReader

- A In Pocket-Situ, navigate to the Flow-Sense Wizard/Flow-Sense Data branch of the tree and select the template file for the well you are sampling.
- B Tap **Start**. Values from the highlighted file will be used to initialize the Wizard.

TIP: When prompted in the Wizard, verify that the Pocket-Situ unit settings are the same as those on your desktop PC.

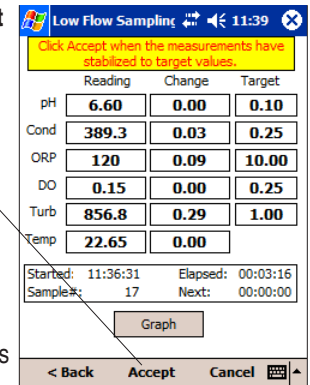


11 Supply Final Pumping Rate and Stabilized Drawdown

and any other variables that are not in the template file (e.g., calculated volume and sampling rate). Verify stabilization ranges, then click **Start**.

12 Let the Wizard run until values stabilize, then collect samples

When values appear stable, select **Accept**. Save the data file under a different name than the template file. The default file name is the Project name, Site name, Well I.D., and date, but you can rename it any way you like.

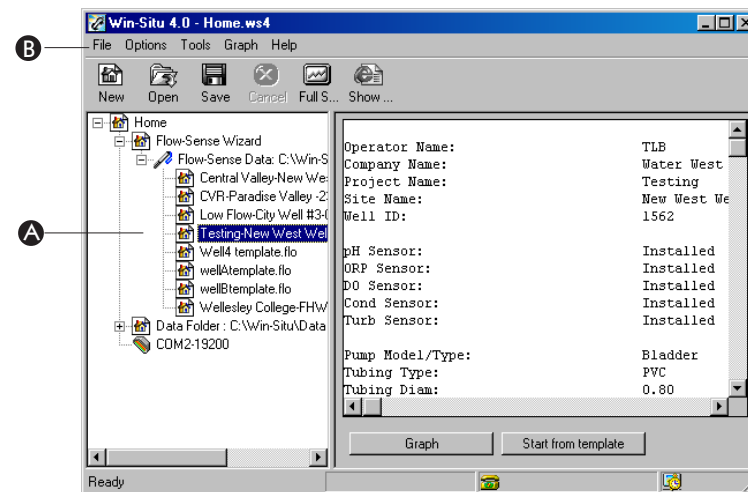


13 In the office—copy .flo files back to desktop PC

Connect the computers in ActiveSync and the Win-Situ Sync utility will automatically copy the resultant .FLO files back to the PC.

14 Open a file in Win-Situ and create an output report in Microsoft® Excel™

- A Launch Win-Situ, navigate to the Flow-Sense Wizard/Flow-Sense Data branch of the tree, and select a low flow data file.
- B On the File menu, select Export to Excel.



The report will open in an Excel spreadsheet. The spreadsheet includes brief instructions for using a custom Excel output report template installed with Win-Situ. The template is named InSituLowFlow.xlt. If Excel does not display it in the default folder, look for it in the Templates directory of the Microsoft operating system.