

Setting Up Your First Unit:

Choose RTU from the Menu and choose Add New. Enter a name to identify the unit. Enter the phone number of the unit, including any other numbers that you might need to dial the unit such as a number to dial out, a 1 for long distance numbers, etc. Choose the number of meter runs. The Password box contains the password that Sentinel sends to the unit to access it. If the Versaflo's password has been changed, you need to put the correct password in the password box to have access to the unit. Now click on the Communications tab. Click on the Com port that your modem uses. Choose 1200 baud under baud rate. 2400 baud may cause problems. If you encounter problems trying to connect to the unit, you may want to clear the Modem Init String field. Now click on the Scheduling tab. This is where you set up Sentinel to poll (pull data from the unit). The Number of Retries is the number of times Sentinel will try to poll the unit in case it fails to poll it the first time. The Time between Retries (Min) is the amount of time in minutes in which Sentinel will wait before retrying a poll. To add a scheduled poll, click on Add. Now enter the time at which you want Sentinel to poll the unit in military (24-hour clock) time. Choose the days in which you want Sentinel to poll this unit at the time you entered. Choose the logs which you want to retrieve. Click on OK. You can add another schedule if you wish to poll the unit at different times on different days or multiple times on some days. There are a lot of different scheduling combinations, but usually, you'll only need one schedule for a fixed time every day. The Edit button is used to edit existing schedules. The Delete button is used to delete existing schedules. You need not worry about the Flow Cal Defaults tab unless you are using Coastal's Flow Cal Program. Click on OK.

Programming The Unit:

Choose the unit you want to program from the list of units and choose Register Map from the RTU menu. Refer to the Register Map fields in the Sentinel help document for details on what the different registers do.

The required registers to program are the analog input configurations (4-11), Primary/Secondary Meter Run Type (56-57), Primary/Secondary orifice/meter metal type (58-61), Primary Carbon Dioxide content (525), Primary Nitrogen content (526), Primary Orifice Plate bore diameter (528), Primary Meter Tube ID (529), and the low and high readings for the analog inputs/outputs (553-572). If you have inputs hooked up to the digital inputs, you also need to program the digital input configurations (12-15). If you have a Second Meter Run, you also need to program the Secondary Carbon Dioxide content (532), Secondary Nitrogen Content (533), Secondary Orifice Plate bore diameter (535), and the Secondary Meter Tube ID (536).

To enable the unit to dialout on alarms, you must program the enable dialouts(16-38), phone dialout modes(39-46), number of voice repetitions on dialout(49), ID string for voice callout(129), phone numbers(200-207), recognition times(302-314), alarm selections(315-322), maximum number of calls(323), time between calls in seconds(324),

time between dialing rounds(325), voice report input configuration(326), voice report output configuration(336), customized voice messages(339-354), and alarm limits(500-517).

To control the LCD Display properties, you must program the LCD screen change time(331), LCD input configuration(334), and the LCD output configuration(335).

Other recommended registers to program are the number of rings till answer(0), modem configuration(3), and clock properties(66-71).

Using the C Programming Interface:

To use this feature, you must already have written the C program you want to run on the unit. Choose the unit then click on RTU from the menu and choose C Programming Interface. Click on the Variables tab and click on the connect button(the button with the picture of a phone. Click on the Program Entry tab, and click on Open, and open the C program that you need for this unit. Click on Send program to the RTU. Enter a value for the Run Interval(secs) box and click on compile. The program is now compiled and running.

To view variables, click on the Variables tab and click on the toggle the automatic variable retrieval button to turn on automatic retrieval.

To change the values of the variables, click on the variables tab and change the corresponding values of the variables you wish to change. Now click on the Update the variables on the RTU button.

Using the RS 232 Port:

You need to connect the computer to the unit with an RS 232 cable. After having done that, click on the unit that you wish to establish an RS 232 connection with. Click on RTU from the Menu and choose Properties. Click on the Communications tab and check the Direct Connection via RS 232 cable box and choose the COM port for the RS 232 cable. Click on OK. You are now ready to use Sentinel using the RS 232 connection instead of a modem connection.

Polling:

After making schedules for polling your units, you should leave the computer on for Sentinel to poll your units at their scheduled time. Polling retrieves the logs that you specified when you set up the schedule.

Viewing Data:

To view data collected from a unit, choose a unit and choose RTU from the menu and choose View Historical Data. This will bring up a window to view the data of your choice. You can also graph your data by clicking on a column label and clicking on the Graph button.