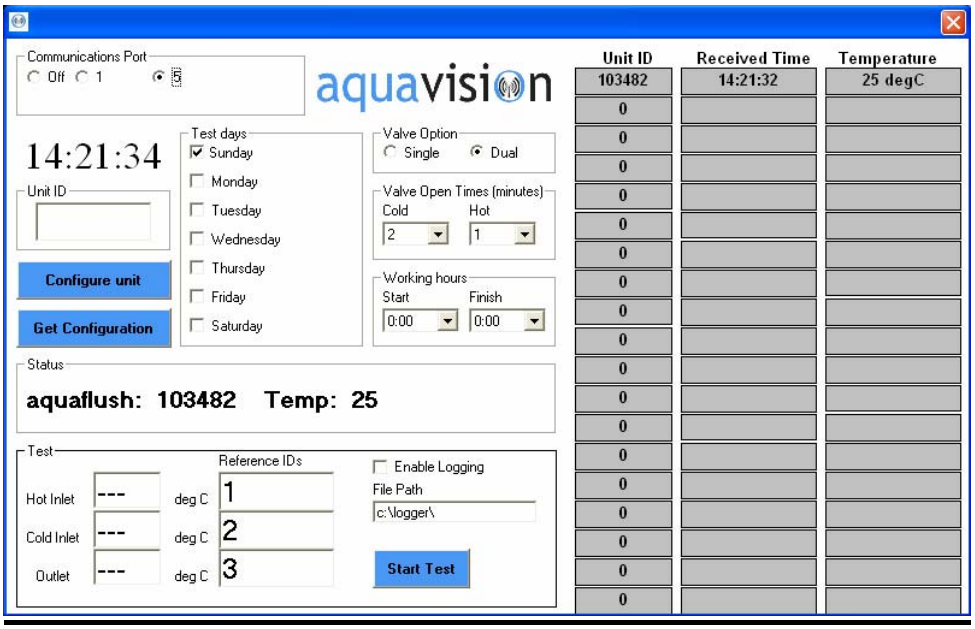
AquaFlush Programming User Manual



Warning: This manual contains important safety and operating information. Please read, understand and follow the instructions in the manual.

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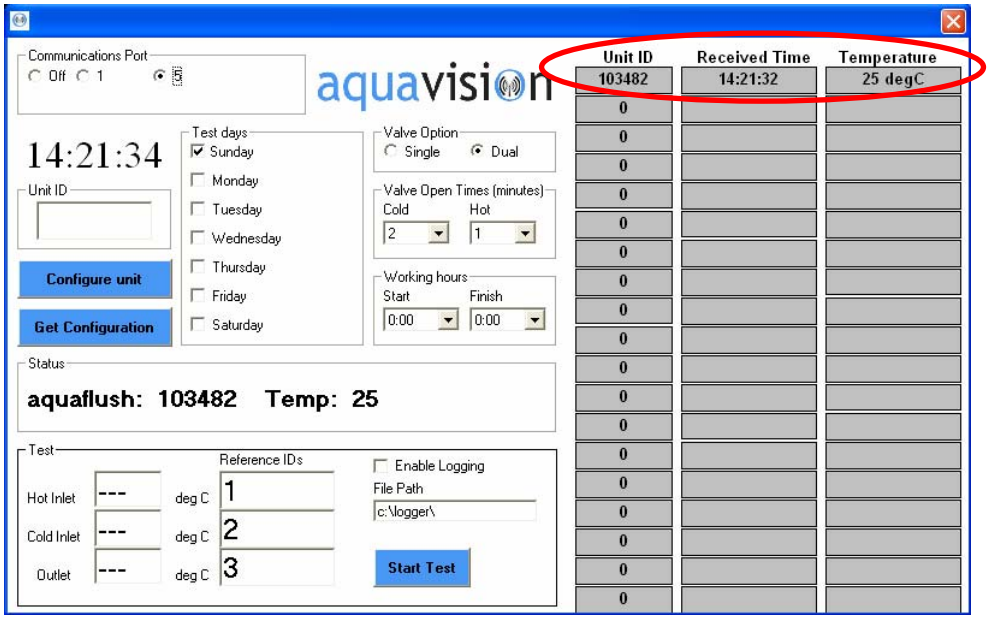
Starting the Software

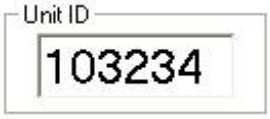
Select the COM port to which the USB receiver is attached (if unclear which one it is, see COM ports in Device manager).

Units broadcasting will appear on the right hand list with their current temperature values (Units only broadcast every hour, so it is possible for them not to appear for a while). If you wish a particular unit to come in, place a magnet near the test marker (see unit) for 3 seconds and then release it.

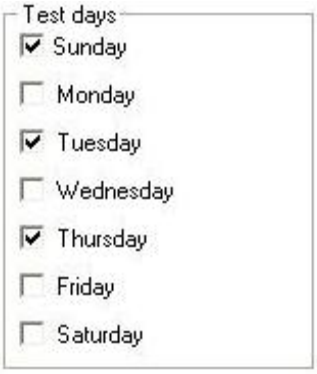


Configuring a Unit

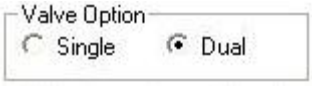
Type in the ***AquaFlush*** unit ID which can be found on the unit casing.



Select the options you wish to configure. The days checked will be the ones on which the unit performs a full flushing within the given hours. The unit will not flush on the days left unchecked.

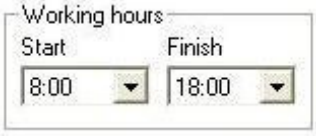


Selecting a Single Valve option will automatically set the hot valve open time to 0. Use this option when programming a single valve unit or if you have not connected the hot water on a dual valve unit, otherwise select Dual.



The hot and cold open times are given in minutes. For times greater than 8 minutes, only even numbers can be chosen up to 20 minutes. Select the time you wish each of the valves to remain open during testing. This time should be long enough for the water to travel from the tank into the unit. If the selected time is not long enough, the pipes will not be fully flushed causing the system to perform below expectations, and the temperature of the water may not reach its true set point, causing an alarm to be raised. Remember, the water on the pipes is likely to be at ambient temperature. Only when the water is flowing from the tanks will it reach its expected temperature.

The start and finish of the working hours determine when the flushing is to be performed on the selected days. If both times are the same, the flushing will be performed at that time. If they are different, the flushing will be executed on the hour at any given hour within this period for each selected day (the specific hour will vary from day to day).



Once you have selected your configuration, press ***Configure Unit***. The system status will display a message indicating you should power up the unit or swipe the magnet causing it to communicate with the USB receiver. Remember if you leave the magnet for less than 3 seconds, the unit will not send a message, thus it will not be programmed. Equally, if left for too long (more than 7 seconds), it will start a full flush. Once the unit sends its data, the USB receiver will send the configuration command and await an acknowledgement. If the acknowledge is received, the software will display a successful configuration message in green. If it fails, it will display a red message indicating the configuration has failed. In this case repeat the procedure to configure the unit.

Configuration File

The default configuration for the software parameters can be found in the ***aquaflush.cfg*** file. It is a text based file with fixed length, comma separated fields with the following format:

FFFFFFF,CC,HH,SS,EE, COLDREF, HOTREF, OUTREF

Where ***FFFFFFF*** can be either 1 or 0 indicating the flush option (1= flush, 0=don't flush) for each day of the week SMTWTFS.

CC is the cold valve open time which can be a value between 0-22 (the number must be two digits, so use a leading space or 0 for numbers below 10).

HH is the hot valve open time which can be a value between 0-22 (the number must be two digits, so use a leading space or 0 for numbers below 10).

SS is the start of the working day (the number must be two digits, so use a leading space or 0 for numbers below 10).

EE is the end of the working day (the number must be two digits, so use a leading space or 0 for numbers below 10).

COLDREF, ***HOTREF***, and ***OUTREF*** are the serial numbers of the transmitters to be used as reference for testing purposes (if any). The serial numbers must be 7 digits, so use leading spaces or 0s when the number has fewer digits. In case no reference is used, leave 7 spaces for each of these.

If the configuration file is absent, no defaults will be loaded.

Retrieving the configuration
To learn the configuration of a preconfigured unit, you can press the ***Get Configuration*** button. The system status will display a message indicating you should power up the unit or swipe the magnet causing it to communicate with the USB receiver. If successful, the software will display a green message indicating the success, and the data fields will reflect the configuration of the selected unit. If the communication fails, a red message will indicate so. In this case, please repeat the procedure.

Setting the time
If the software is not set to configure or retrieve the unit information when activated, the system will simply update the time of the given unit. If successful, this message will be displayed in blue. There is no error message for when the time has not been updated since the system does this automatically every time a unit reports. The blue message is provided for when you need to be certain that the time has been updated successfully.

Monitoring
When performing a test on a unit, it is possible to see the results of the PC software. The results for ambient (outlet), cold, and hot temperatures are displayed on the bottom left. If the ***Start Test*** button has been pressed, the software will also indicate a pass/fail condition based on whether the received values are within the expected range. The testing option can take two conditions as reference. If the ***Reference ID*** boxes are left empty, the test will expect the cold water to be below 20ºC and the hot water to be above 50 ºC.

If the ***Reference IDs*** are filled with the serial number of known temperature transmitters, the unit measurements will be verified against those of the transmitters to within one degree.

The pass/fail results will be displayed both via a message in the status windows or by setting the corresponding temperature reading colour to green/red (in the example the hot test passed, but the cold failed). The last read value for each unit will always be seen in these three columns at the right hand side of the software.

Logging

If the Enable Logging check box is ticked, the system will save all incoming temperature reads into a ***.csv*** file which will be located at the file path underneath the check box. The software will generate a separate ***.csv*** file for every day it is logging, saving the ***Unit ID***, ***Time Received*** and ***Temperature***. The header of the file will indicate these:

Unit ID Received Time Temperature

HWM-Water Ltd
Ty Coch Ltd
Llantarnam Park Way
Cwmbran
NP44 3AW