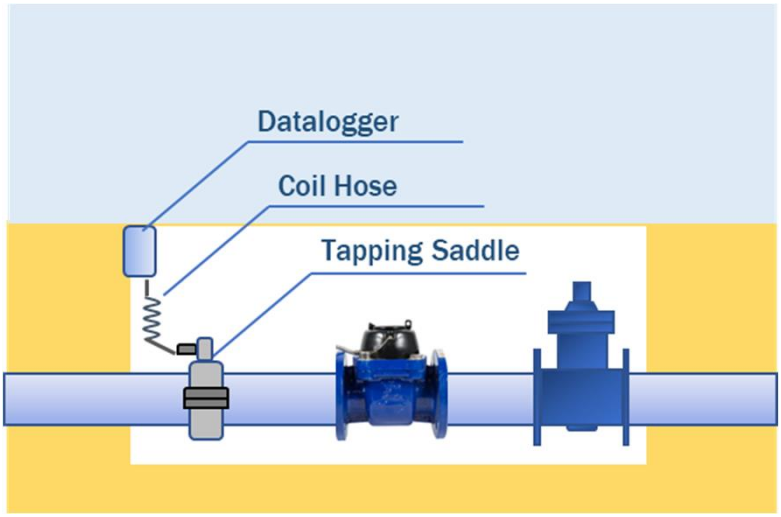
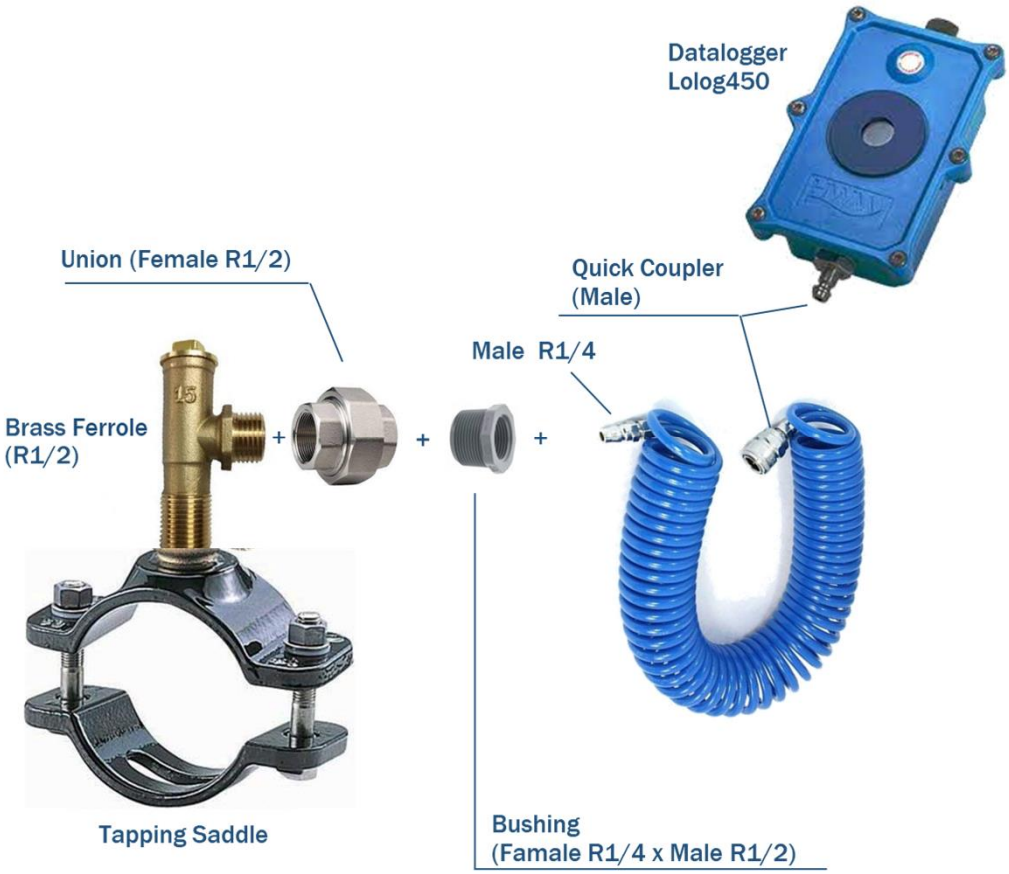
Standard Operating Procedure of Pressure Datalogger (Lolog450)

Different Ways of Connection

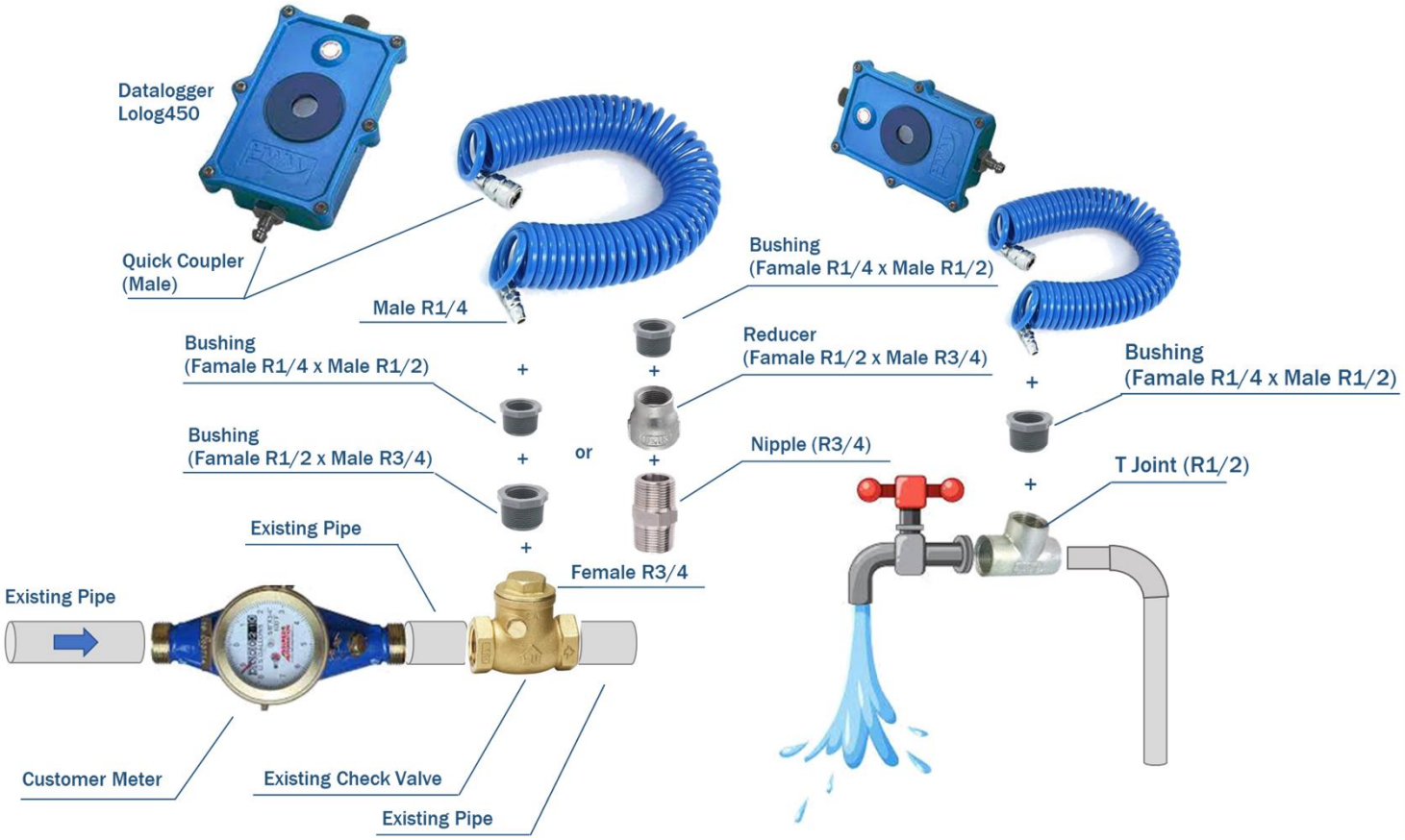
How to connect datalogger with tapping saddle



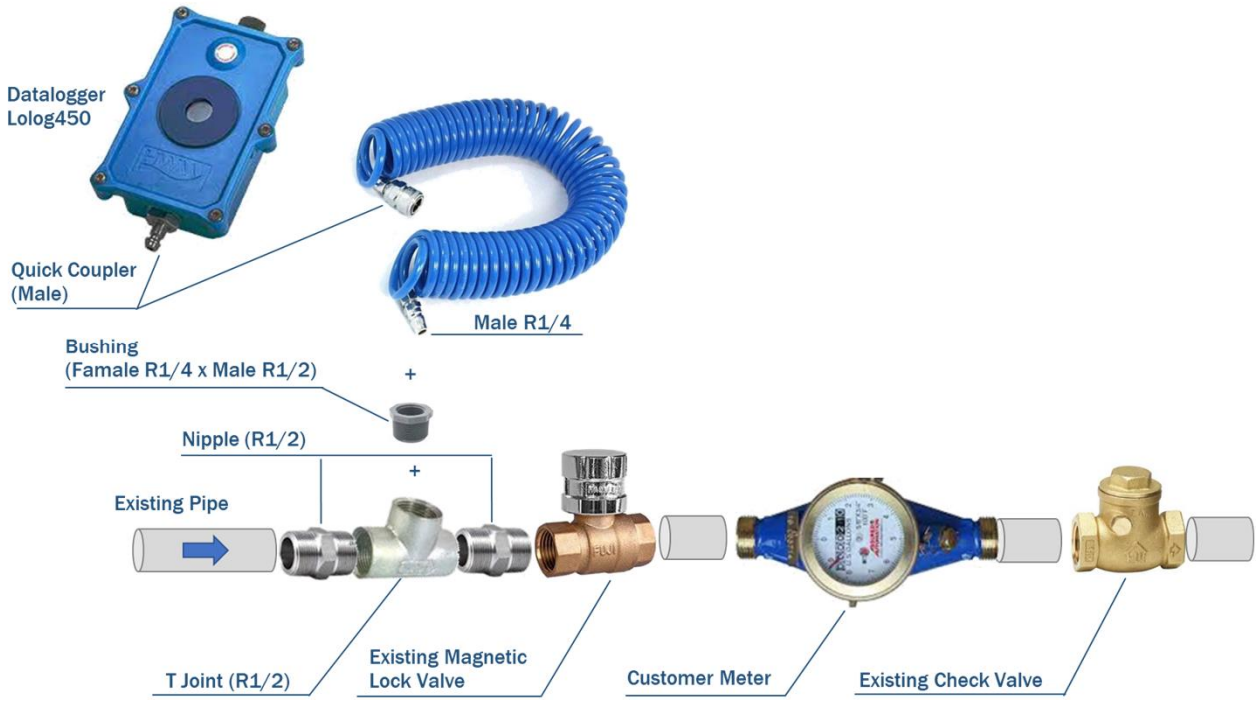


Connection of Datalogger

How to connect datalogger on the downstream side of water meter



How to connect datalogger on the upstream side of the water meter



Setting of Datalogger

Step 1

Download and run the Radwin installation file from the HWM website at http://www.hwmglobal.com)
Home » Support » Help & Downloads

The latest version of the programming software is: Radwin Ver 4.84

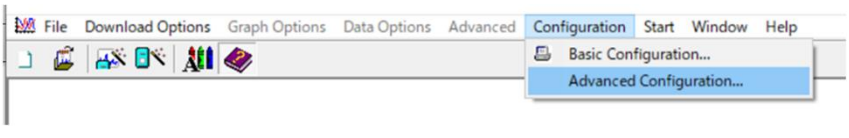
Step 2

Connect the USB plug to a spare USB port on your computer or the Serial plug to a spare Serial port on your computer.

Position the reader head on the logger as shown below

Step 3

Start Radwin View (unless already running) and from the menu select [Configuration] >> [Advanced Configuration…].

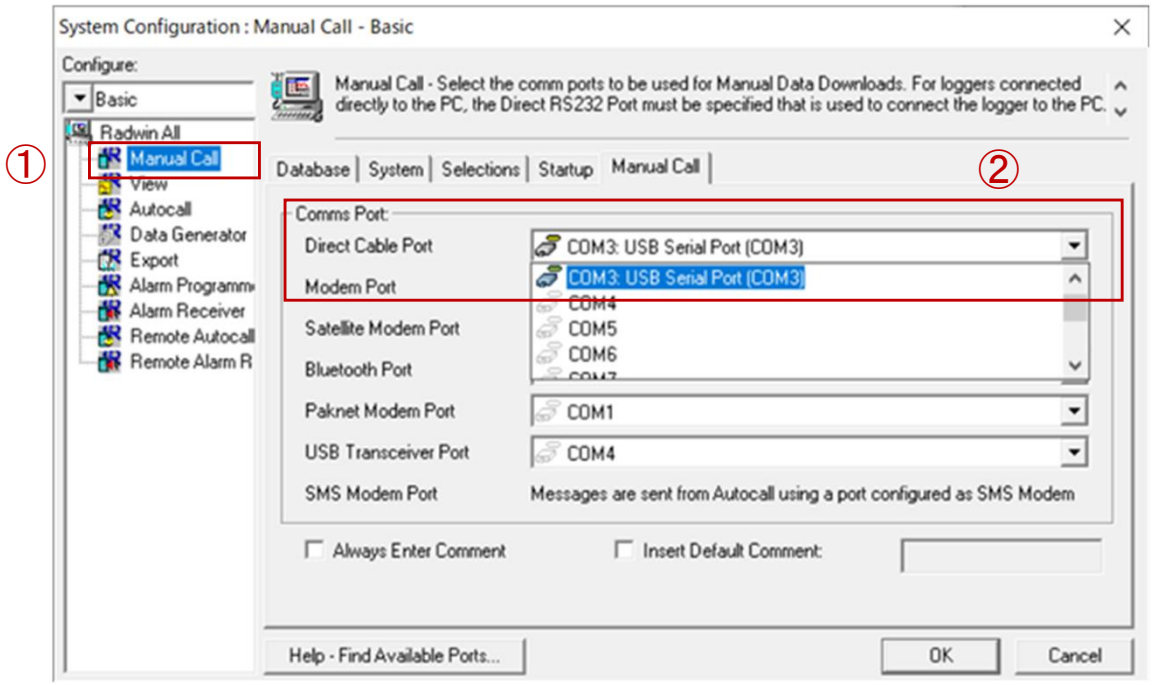


Setting of Datalogger

Step 4

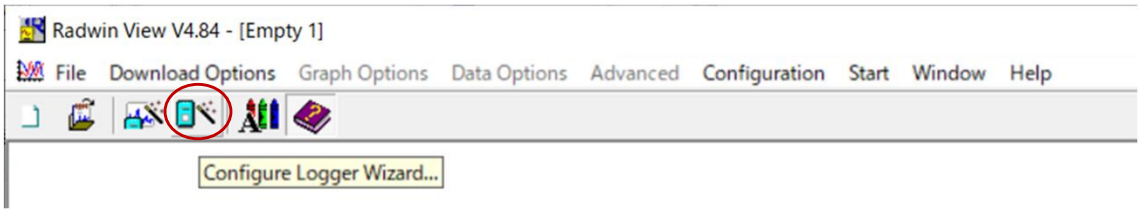
4. The menu below shows details of all the setup functions available to Radwin, for the Communications port configuration click the <<Manual Call>> item from the list.

5. The Manual Call menu now appears, from the Direct Cable Port dropdown list pick the COM port that you will be using.



Step 5

From the menu, click the button to launch the [Configure Logger Wizard].

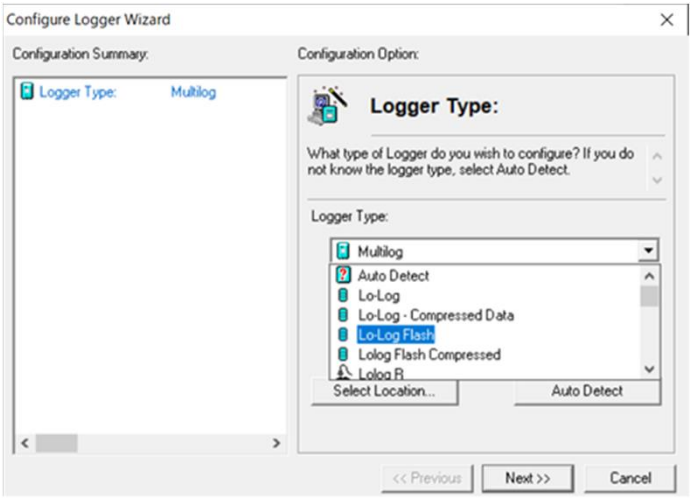


Setting of Datalogger

Step 6

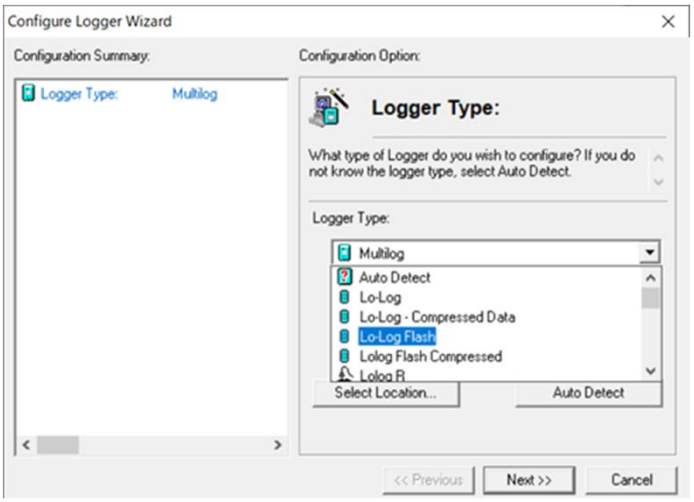
Radwin now needs to know the type of logger you are using. You can either select this from the Logger Type drop down menu (LoLog Flash) or click the <<Auto Detect>> button to allow Radwin to discover the type automatically.

Then click <<Next>> to continue.



Step 7

You need to tell Radwin how the logger is currently connected to the computer. As you are physically connected to the logger, choose the default type, “Direct (Cable)”

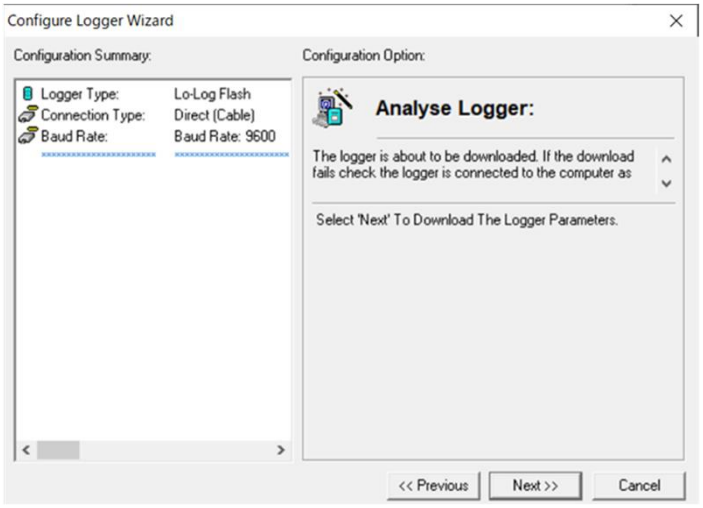


Then click <<Next>> to continue.

Setting of Datalogger

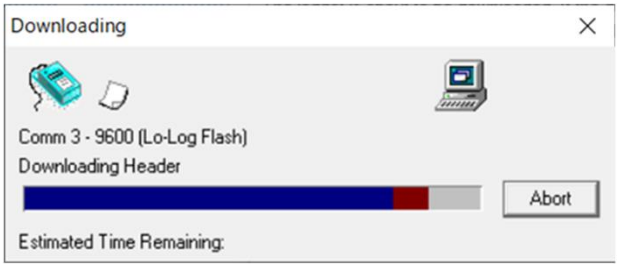
Step 8

You are now ready to download the current settings from the logger.



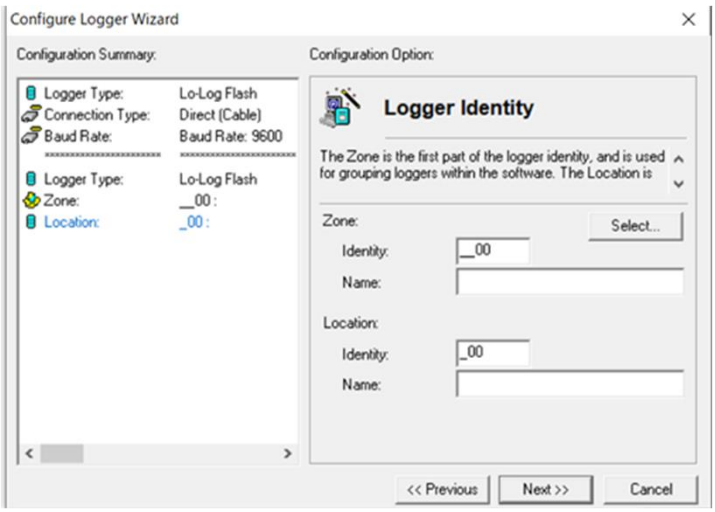
Step 9

Radwin will now retrieve the current settings from the logger,



Step 10

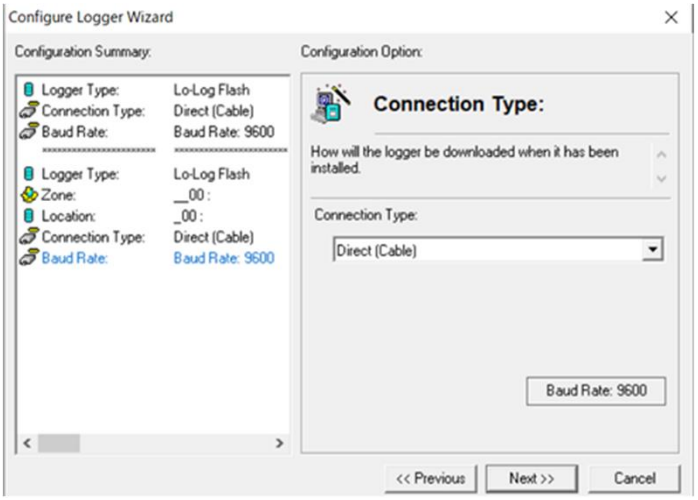
You now are able to give your logger a unique identity - Enter the details in the four fields according to your chosen Zone and Location plan as described on page 26 and then click <<Next>>.



Setting of Datalogger

Step 11

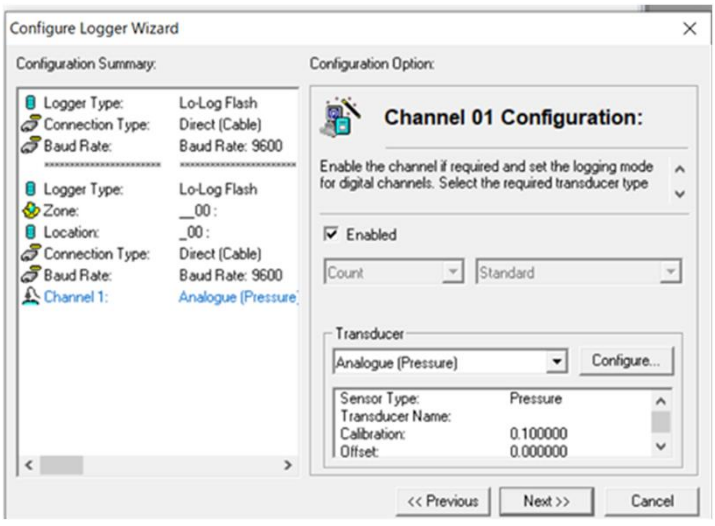
You now need to define how the logger will transfer its data for downloading.
For this logger it will be by 'Direct Cable'.
You now need to configure the channels (1 channel per signal/sensor) that you wish to use. (This manual show for datalogger with only 1 channel)



Step 12

The Channel 01 configuration menu appears as below:-

To turn ON the Pressure channel, tick the "Enabled" box.
The default transducer is for a pressure transducer with a Calibration factor of 0.1. If you are configuring any other type of sensor, please refer to HWM support.
To turn ON the Pressure channel, tick the "Enabled" box.

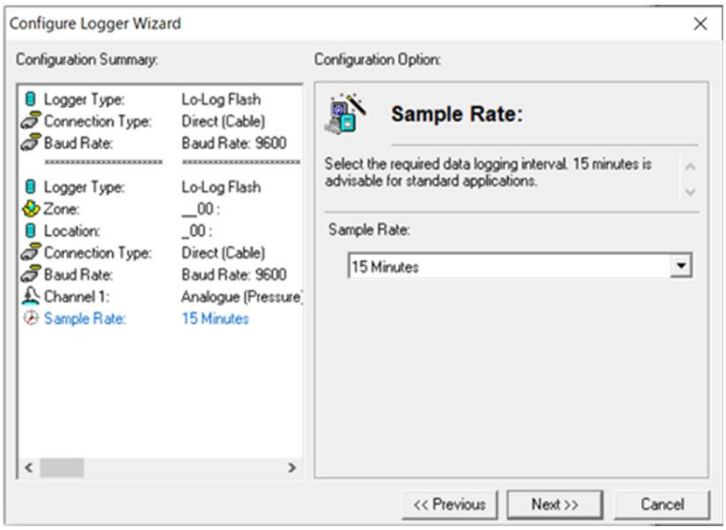


To turn ON the Pressure channel, tick the "Enable" box.
The default transducer is for a pressure transducer with a Calibration factor of 0.1.
If you are configuring any other type of sensor, please refer to HWM support.
Click <<Next>> to continue.

Setting of Datalogger

Step 13

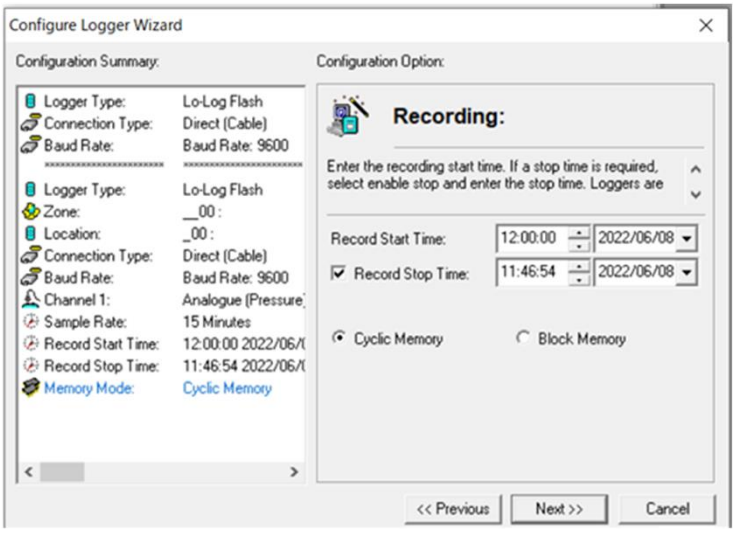
Next you need to specify the Sample Rate that you require.



In most cases the default setting of 15 minutes will be sufficient, however, if you wish to change the rate, simply select a period from 1 min to 24 hrs from the dropdown menu.
In case of analysis of the inflow water volume in reservoir using the water level fluctuation, 1 min will be convenient for this purpose.
Click <<Next>> to move on

Step 14

You now need to choose how the logger is to record data.



This setting is based on set time of your PC.
Be assure that the time & date here are before the current time & date.

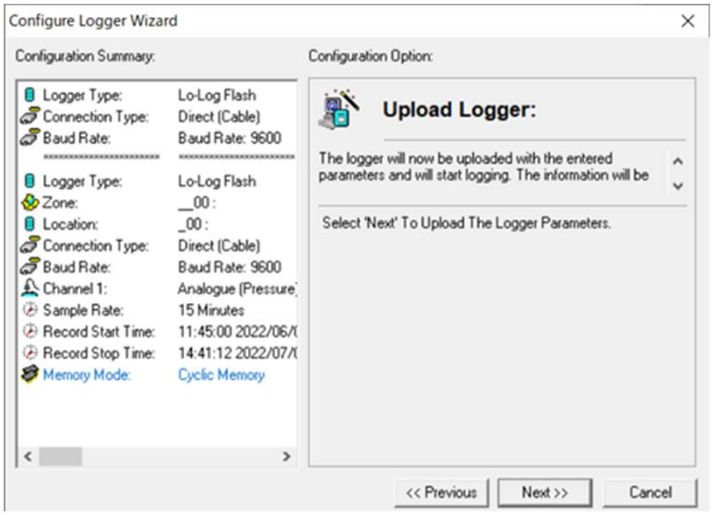
[Record Start Time]
The logger will automatically start recording at the set time here.

[Record Stop Time]
If you want to stop recording at a specific time, tick the box to set the time.

Click <<Next>> to continue.

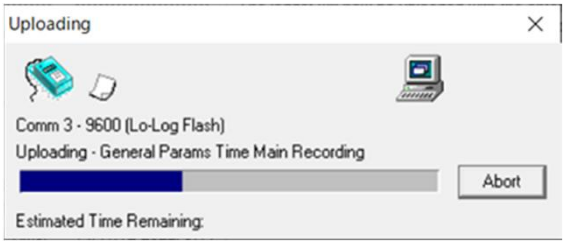
Setting of Datalogger

Step 15



Check your configuration in the summary box.
Click <<Previous>> to return through the menus to make any corrections.

To begin the programming sequence, Click <<Next>>.

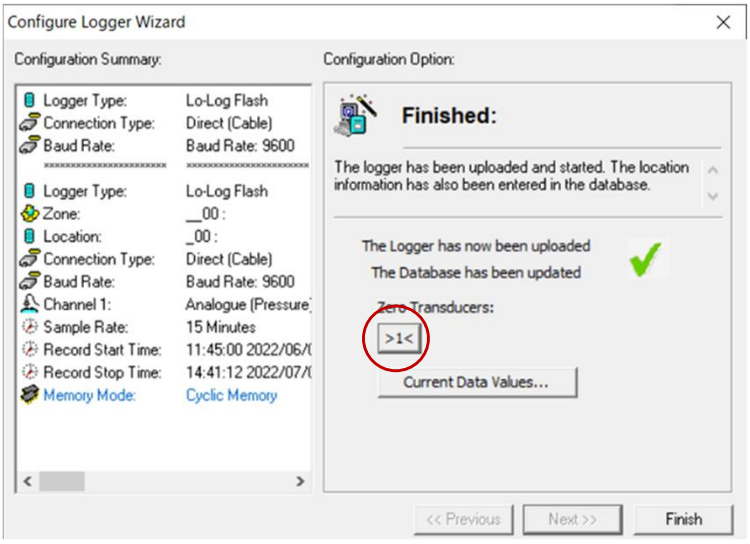


Programming will now take place…
Note that the bar will turn Red once programming begins.
Note: If the programming step fails at this point simply wait 60 seconds and retry.

Step 16

Radwin has now completed the programming sequence for your logger and stored its details on your computer. It is now recording and will begin logging data.

To obtain an accurate value, press the “Zero Transducers >1<” button to perform a calibration with the unconnected value set to zero.

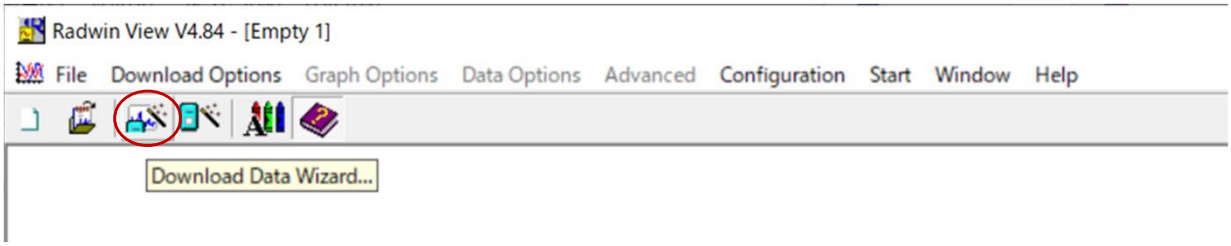


Data Downloading from Datalogger

Step 1

The information that has been recorded by, and stored in, the data logger can be downloaded directly to a PC and viewed by using the Radwin Download Data Wizard.

Select the Download data wizard from the Download Options drop-down menu or the wizard icon on the title page. Proceed after each option by clicking on the Next button.

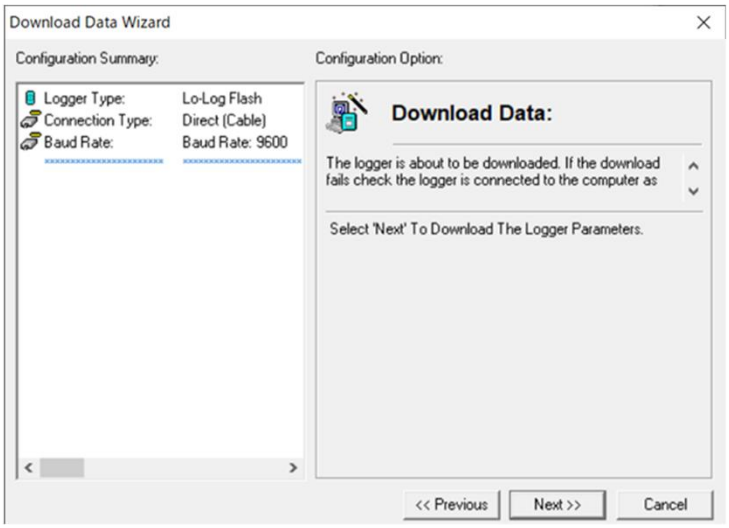


Select the type of logger (i.e. Lo Log Flash) being used and its location (from select location) – Next>>
Select the type of connection to the logger (Direct RS232) and the Baud Rate (9600) – Next>>
This is similar to the procedure used to configure the logger.
After making the above selections, the Download Data screen will appear.

Step 2

The logger is about to be downloaded. If the download fails, check the logger is connected to the computer as specified and the connection configuration is correct.

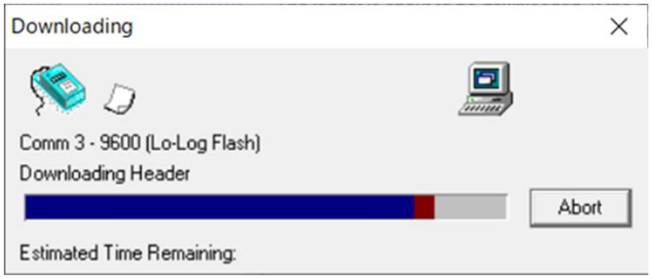
Click the Next button for the software to download the logger parameters.



Data Downloading from Datalogger

Step 3

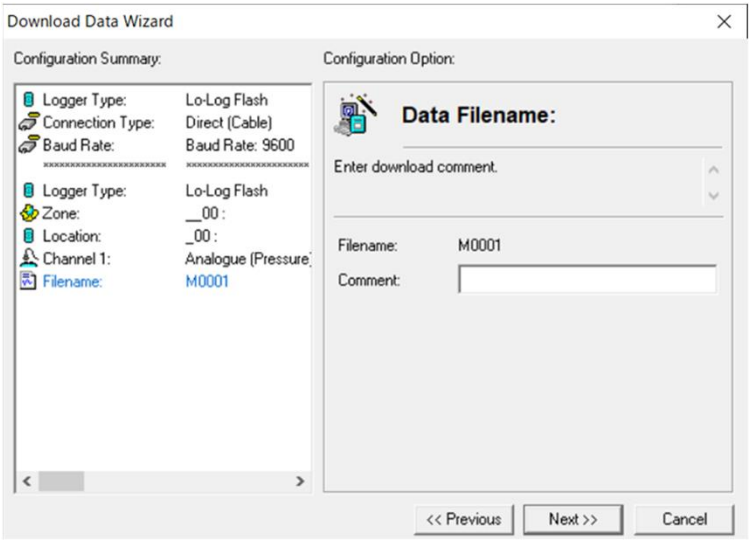
The following screen will now appear to show the Logger Parameters are being downloaded.



The wizard then allows the operator the opportunity to change the transducer configuration for the data downloaded from each channel of the logger. Follow the procedures used to configure the logger if changes are required.
Proceed through the logger configuration screens until you arrive at the Data Filename screen.

Step 4

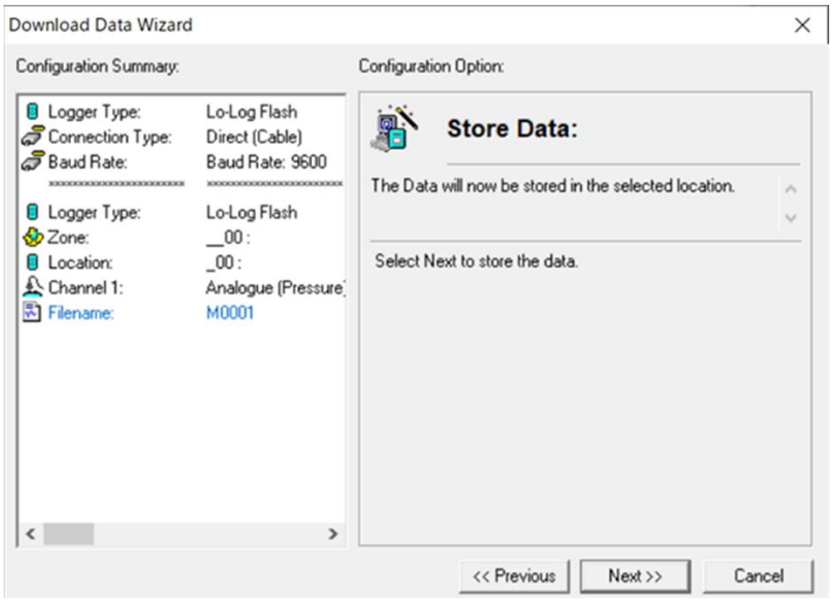
The Data Filename screen assigns a filename for the data to be stored, but allows the operator to insert a text comment into the Comment field (i.e. date of transfer, logger identity) that will be stored as part of the file.



Data Downloading from Datalogger

Step 5

The recorded data will now be stored into the selected location shown in the Configuration Summary panel.



Click <<Next>> to store the data.
The Finish Screen will now appear.
Click the Finish button to exit the Download Logger Wizard.
After the Finish button has been clicked and the data downloaded, the recorded data will be displayed as a graph and data table.

Showing Graphs of Pressure Data

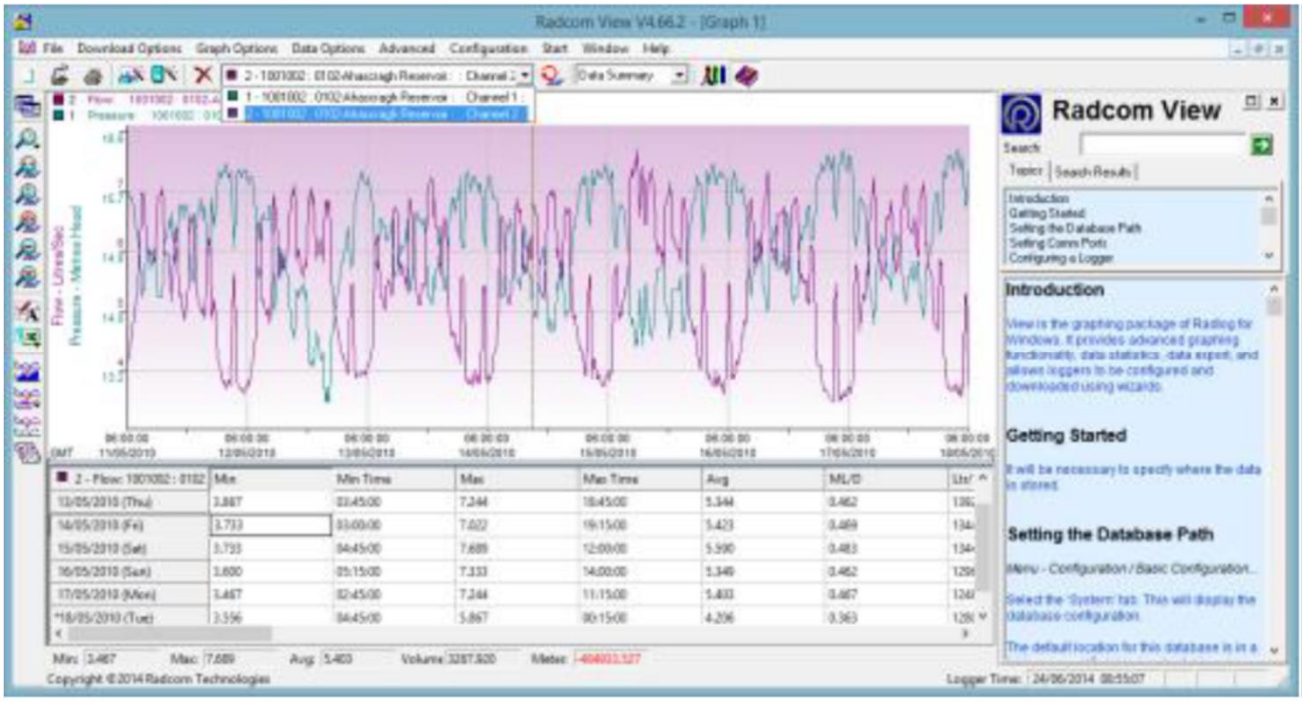
Step 1

The graph and data table can be manipulated to display information for either channel. The type of graph and the format of the displayed data can be altered either by using the drop-down menu, the toolbars or by right clicking on the mouse.

[Selecting the Input Channel Data to be viewed]

The graph and table will display the data stored for each channel. If the logger has a single input, the data for that channel will be displayed. If the logger has two inputs the information for the either channel can be selected by either:

Using the drop-down menu on the toolbar, clicking on the 'Cycle Through Graphs' icon or right clicking on the mouse and selecting the required channel from the Graph Select option -

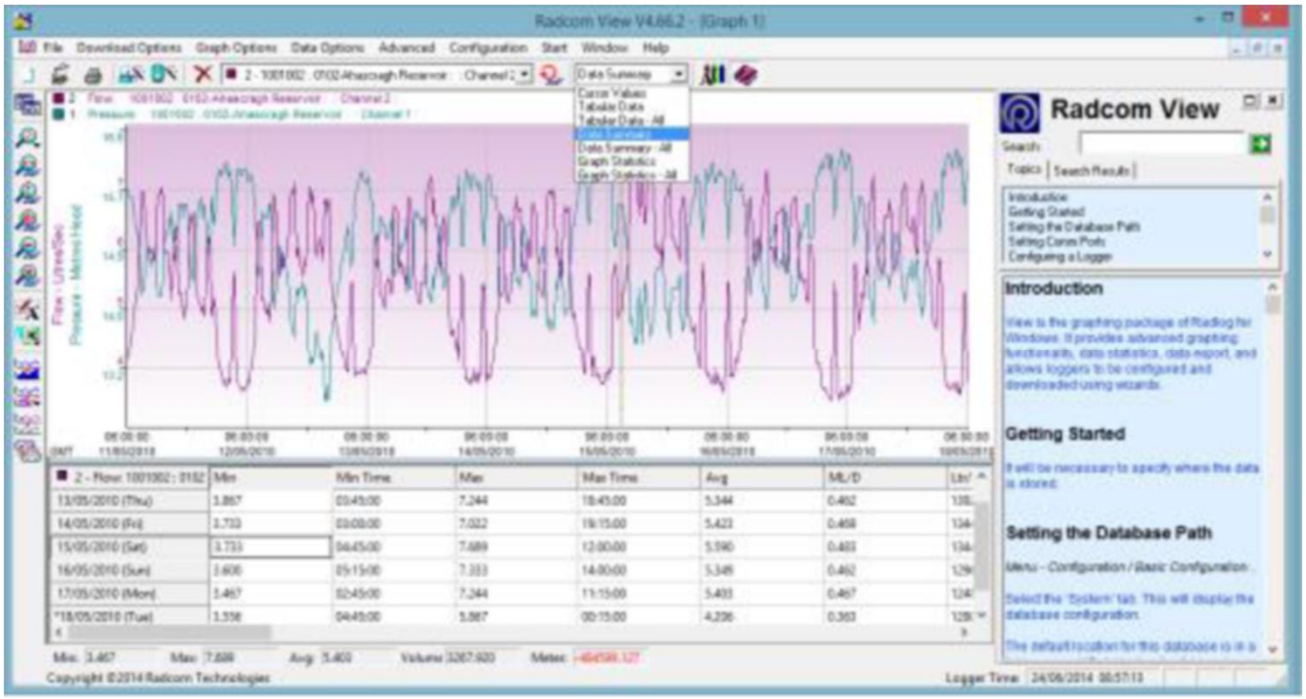


Showing Graphs of Pressure Data

Step 2

[Changing the Information in the Data Table]
The information that is displayed in the data table below the graph can be changed to show Cursor Values, Tabular Data, Data Summary or Graph Statistics. The cursor values option displays the value for each graph, while the other options display the values for the selected channel. The information in the table can be opened in .CSV or .TXT file format. The required information can be selected by either:

Selecting the option from the [Data Options] tab on the main menu, or by clicking on the Toolbar to display the options for the Table Data



Showing Graphs of Pressure Data

Step 3

The data format options are summarized in the table below -

Cursor Values	Displays graph data values for each graph in the tabular data table below the graph as the cursor is moved across the graph.
Tabular Data	Displays tabular data for the current graph in the tabular data table. The value at the cursors position is highlighted in the table as the cursor is moved across the graph.
Data Summary	Displays a daily summary for the current graph in the tabular data table. The day of the cursors position is highlighted in the table as the cursor is moved across the graph.
Graph Statistics	Displays Statistics for the current graph in the tabular data table. The statistics are for the currently visible time span of the graph.
Open CSV File (MS Excel)	Writes the contents of the tabular data table to a temporary CSV file that is automatically opened using the default CSV file viewer - normally MS Excel.
Open TXT File	Writes the contents of the tabular data table to a temporary TXT, file that is automatically opened using the default TXT file viewer.

The operator can change the style of the graph, view the graph from different axes, remove a graph from the display, or copy and export the graphs to be viewed by other programs. These options can be selected by either:

Clicking on the Graph Options tab on the main menu, clicking on the Zoom toolbar icons , or right clicking on the mouse and selecting the required Graph Type or Zoom option -
By right clicking on the mouse and selecting Cursor Position from the menu, the data value (Day, Date, Time and recorded value) will be displayed for the position of the cursor in the current graph.

Showing Graphs of Pressure Data

Step 4

A summary of the options is shown in the table below-

[ZOOM OPTIONS]

Zoom Time Region	Puts the graph in Zoom X axis mode. Left click the graph once to specify the start point, and again to specify the end point.
Zoom Y Axis Region	Puts the graph in Zoom Y axis mode. Left click the graph once to specify the start point, and again to specify the end point.
Zoom Y Axis Region and Time Region	Puts the graph in Zoom XY axis mode. Left click the graph once to specify the start point, and again to specify the end point.
Zoom Out	Zooms out to the previous zoom level
Zoom Full	Displays the graph full size removing all zoom levels.

[GRAPH OPTIONS]

Points	Displays graphs as single data points.
Line	Displays graphs with data points as joined lines.
Filled Line	Same as Line but fills the area under the graph.
3D Line	Same as Line but with a 3D effect.
Bar	Each data point is displayed as a bar.
3d Bar	Same as Bar but with a 3D effect.
Remove Graph	Removes the current graph - indicated as the top most graph title above the graph
Remove All Graphs	Removes all displayed graphs. Export
Export Data	Allows an export format to be selected and exports the data to a file.
Copy Graph to Clipboard	Puts a copy of the graph on the clipboard so it may be pasted into other application as an image.