



Ref: FAQ030

Version: 1.0

Title – Function sets & Look up tables

Made By: AB_10/03/14 (Issue 1)

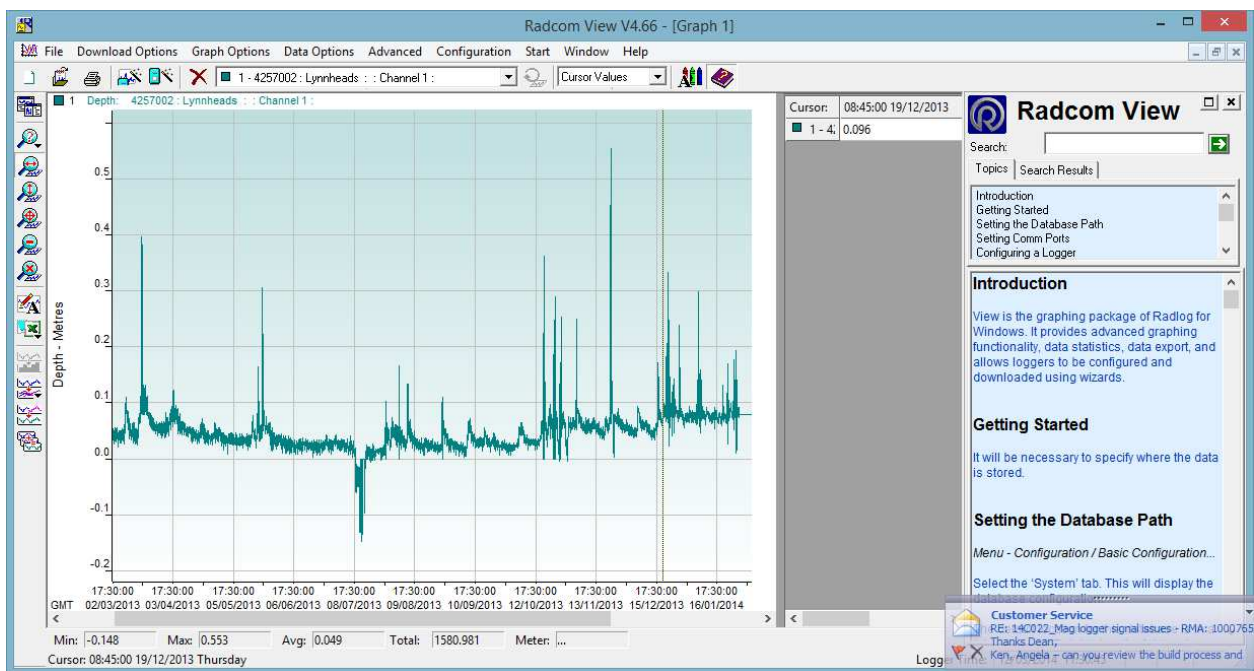
Question – Creating Lookup Tables and Function Sets in Radwin

Example - If you want to convert level or depth to flow you need to create a Function Set and Lookup table within Radwin software. Essentially, we will calculate the flow rates at different depths, use a Lookup table within Radwin to automatically convert the depth to flow rate at varying levels, and Radwin will then substitute the depth measurement into a displayed flow rate. This needs to be done after you have configured a logger.

Note that if you are using SonicSens to measure depth then the SonicSens configuration application Software can be used to output water flow directly (See the SonicSens Manual)

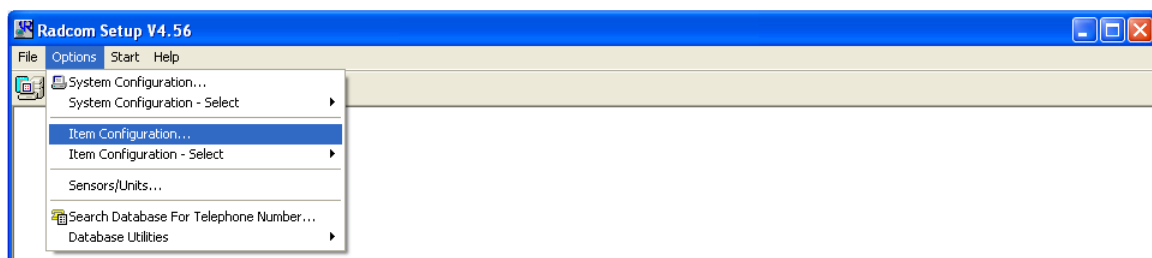
Note that this guide does not show you how to setup/program a logger.

Initially we have a graph showing the depth of water flowing over a known weir –



To convert this to flow the first thing which needs to be created is a Lookup Table.

To do this, open Radwin Setup, then click Options → Item Configuration.





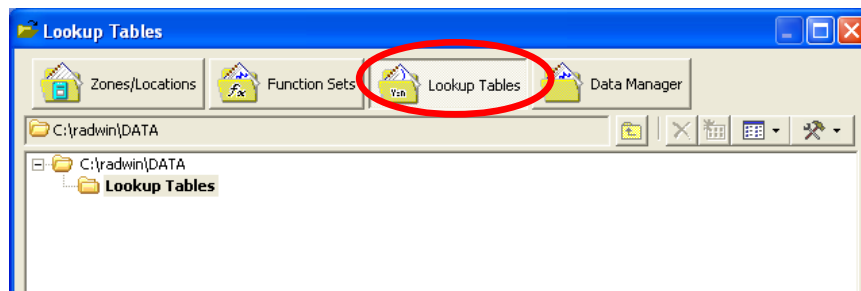
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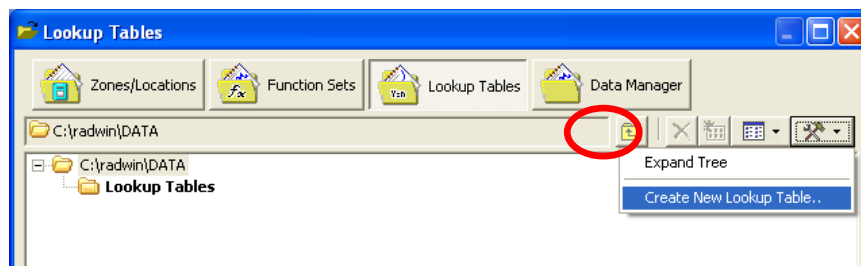
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This will open the Locations screen. Click the Lookup Tables button at the top of the screen.



Click on the Tools icon → Create New Lookup Table



This will open the Lookup Table screen. Here you can create your lookup table.

	Input	Output
1		
2		
3		
4		

Multiplication Values
Input: 1.000000
Output: 1.000000

You can give your Lookup Table an Identity and a Name. You must enter in the Input which Radwin will receive from the logger, and the Output to be displayed on the graph. The lookup table must contain at least two sets of Input/Output values. (Multiplication values can be used to scale the values if required – default is Input 1.0 and output 1.0)



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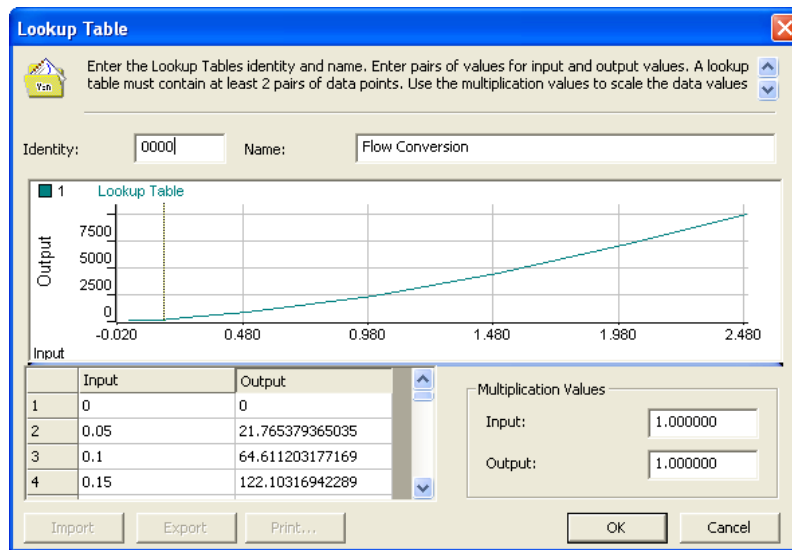
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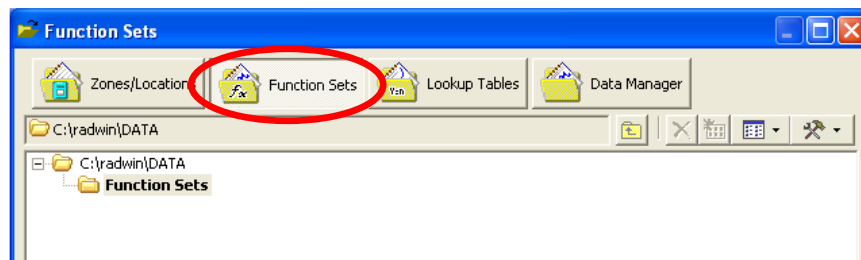
When you enter at least two sets of Input / Output values, then a graph will appear in the centre of the screen showing a graph of the Input vs. the Output values (how the data will be scaled).

For converting level measurement to flow measurement, the values must be converted using the formula for the type of restriction you are using.

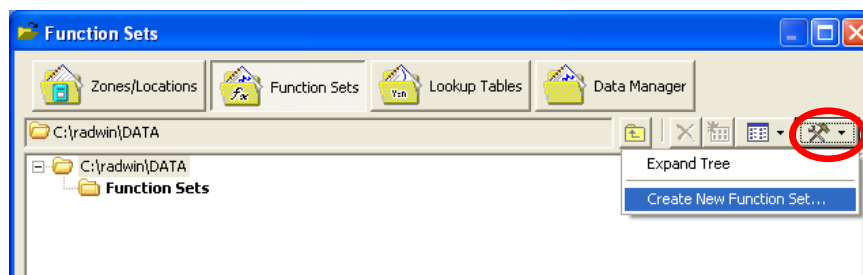
Note: The below values have been entered for a Parshall Flume. The more conversion data points which you enter into the Lookup Table, then the more accurate the Output will be.



When you have finished, click the OK button to close the screen. The Lookup Tables screen will then open, and your Lookup Table will appear in the list. Click on the Function Sets button at the top of the screen.



Click on the Tools icon → Create New Function Set



This will open the Function Set Configuration screen. Here you can create your Function Set.

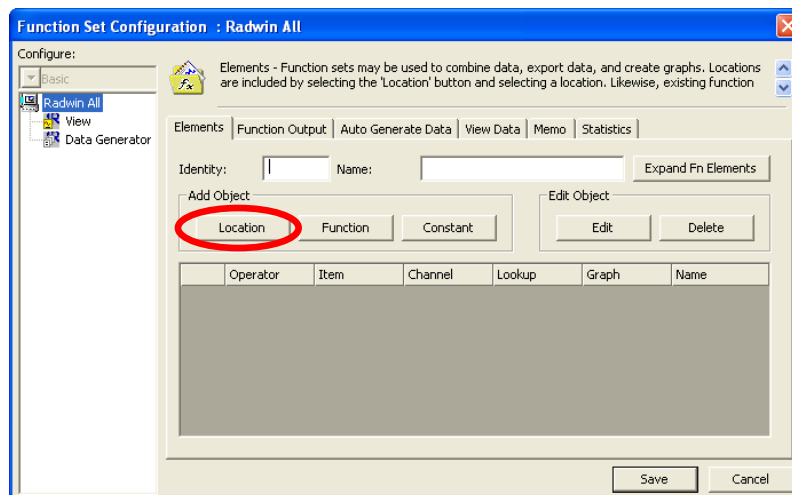


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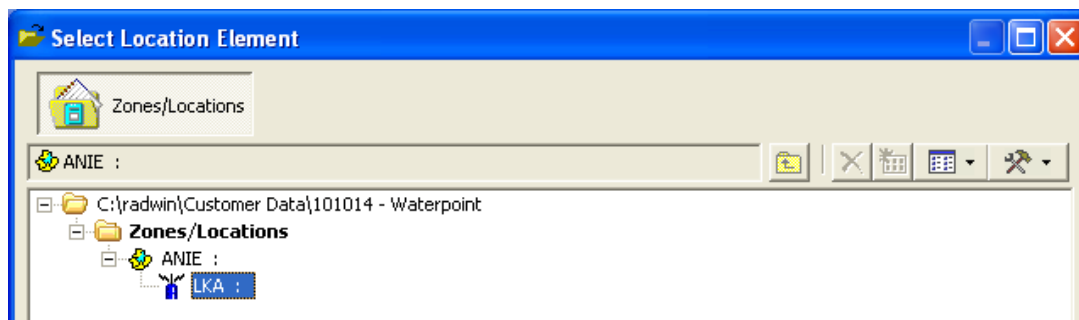
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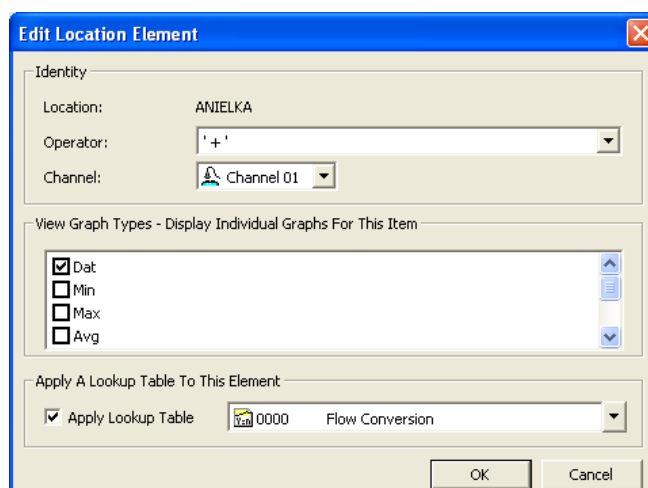
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You can give your Function Set an Identity and a Name. You must select the Location of the logger which you have setup. To do this, click the 'Location' button. This will open the Select Location screen where you can choose the data to apply the Lookup Table to.



When you click the OK button, the Edit Location Element screen will open. Here you can choose the Lookup Table which you want to apply to the data, by clicking the Apply Lookup Table checkbox, and then selecting by clicking on the arrow in the textbox, you can select the Lookup Table to be used. To exit this screen, click the OK button.





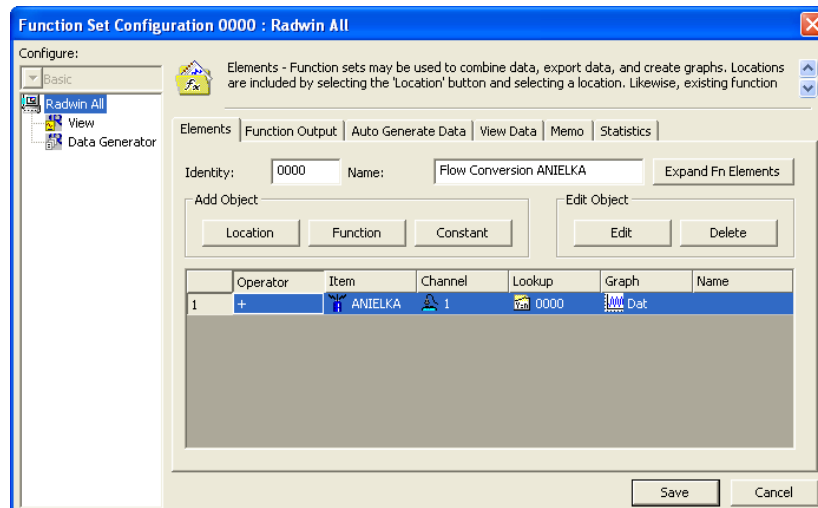
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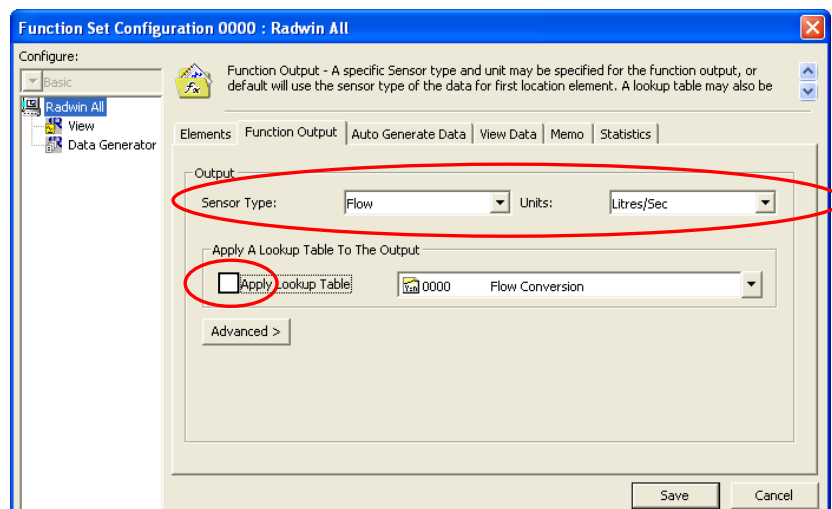
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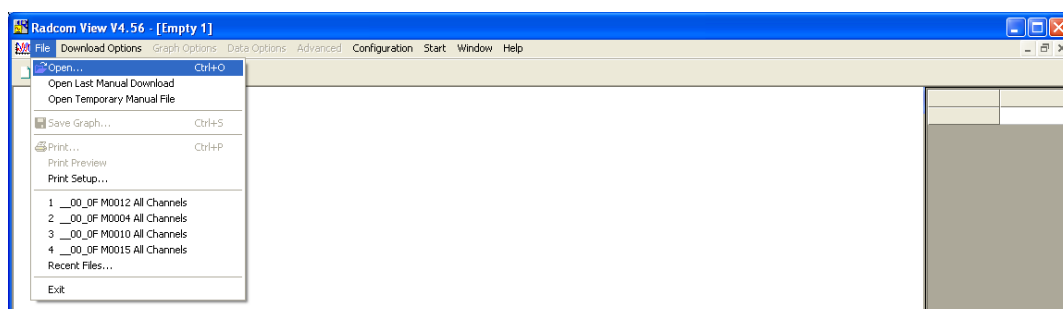
This will show the Location and Lookup Table applied in the Function Set Configuration screen.



Click the Function Output tab to choose the Sensor Type and the Units, but do not check the 'Apply Lookup Table' checkbox (it was already selected above). Then click 'Save' to exit.



Click the Cancel button to exit the Function Sets screen. Then open Radwin View. Click File → Open.





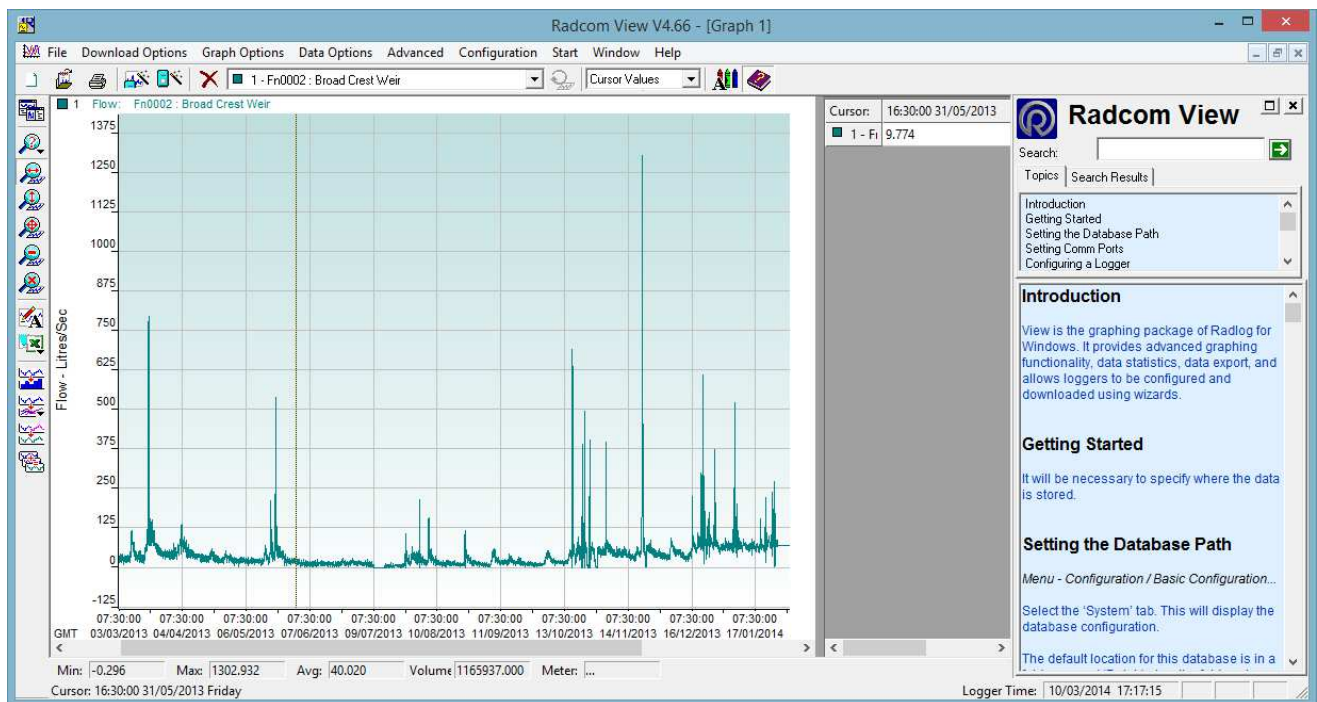
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Then click on the Function Sets button at the top of the screen. Then select the Function Set which you have just created which will open the graph.



Document History:

Edition	Date of Issue	Modification	Notes
1st	11/03/14	Release	