

ULTRA Log

INSTRUCTION MANUAL

ULTRA LOG (SECOND EDITION)

July 2009

Part Number M-100-LOG-002P

COPYRIGHT

© Pulsar Process Measurement Limited, 2003 -09. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form without the written permission of Pulsar Process Measurement Limited.

WARRANTY AND LIABILITY

Pulsar Process Measurement Limited guarantee for a period of 2 years from the date of delivery that it will either exchange or repair any part of this product returned to Pulsar Process Measurement Limited if it is found to be defective in material or workmanship, subject to the defect not being due to unfair wear and tear, misuse, modification or alteration, accident, misapplication or negligence.

DISCLAIMER

Pulsar Process Measurement Limited gives nor implies any process guarantee for the this product, and shall have no liability in respect of any loss, injury or damage whatsoever arising out of the application or use of any product or circuit described herein.

Every effort has been made to ensure accuracy of this documentation, but Pulsar Process Measurement Limited cannot be held liable for any errors.

Pulsar Process Measurement Limited operates a policy of constant development and improvement and reserves the right to amend technical details as necessary.

TECHNICAL ENQUIRIES

Please contact Pulsar Process Measurement Limited for technical support.

COMMENTS AND SUGGESTIONS

If you have any comments or suggestions about this product, then please contact:

Pulsar Process Measurement Limited

Cardinal Building
Enigma Business Centre
Sandy's Road
Malvern
Worcestershire
WR14 1JJ
United Kingdom

Tel: + 44 (0) 870 6039112
Fax: + 44 (0) 870 6039114

Pulsar Process Measurement Inc.

PO Box 5177
Niceville
FL 32578 - 5177
USA

Tel: + 1 850 279 4882
Fax: + 1 850 279 4886

Contents

Chapter 1 Start Here	1
About this Manual	1
About the <i>Ultra Log</i> Software	2
Specification	3
System Requirements.....	3
Chapter 2 Installation and Connections	5
Installing Your Software	5
Connection Details	5
Chapter 3 How To Run Ultra Log.....	7
Display Screens	7
Registration Screen.....	7
Passcode Screen.....	8
Data Logging Screen.....	9
Communication Port Configuration	10
Security and Passwords.....	10
Dynamic Variables Available for Logging	11
Chapter 4 The Menu bar	15
Drop Down Menus.....	15
File.....	15
Setup.....	15
Re-Program.....	15
Modem Controls.....	16
Help	16
Chapter 5 How to set up Logging.....	17
Log Setup Screen.....	17
Unit Setup	17
Point 1 Measurements	18
Point 2 Measurements	18
Application.....	18
Status	18
Input/Output.....	18
Totalisers	18
Volume.....	19
Flow.....	19
Log Setup Summary.....	19
Bytes Per Log.....	19
Log Interval	19
Log Duration.....	19
Log Wrapping.....	19
Select All.....	19
Select None	20
Setup Unit	20
Get Unit Info.....	20
How to Set up Logging	21
Chapter 6 How to Transfer Data.....	23
Data Transfers (Screen).....	23

Get Log Info from Unit	24
Log Information.....	24
Get Log Data from Unit	25
Get Log Data from File	26
Clear Log Data in Unit	26
How to Transfer Data	26
Chapter 7 Viewing and Editing Charts.....	27
Charts Screen.....	27
Control Icons.....	29
Display Options	30
Graph Controls.....	30
Control Buttons.....	31
Chapter 8 Troubleshooting	36

Congratulations on your purchase of *Ultra Log* software package. This software package has been developed specifically for use with the Pulsar *Ultra* range.

It has been designed to give you years of trouble free performance, and a few minutes spent reading this operating manual will ensure that your installation is as simple as possible.

About this Manual

It is important that this manual is referred to for correct installation and operation.

There are various parts of the manual that offer additional help or information as shown:

Tips



TIP

At various parts of this manual you will find tips to help you.

Additional Information

Additional Information

At various parts of the manual, you will find sections like this that explain specific items in more detail.

About the *Ultra* Log Software

The *Ultra* Log Software Package is a powerful tool that is used in conjunction with the optional data logging board available with the Pulsar *Ultra* range and will provide you with all the tools required to get the most from the powerful data logging capability of the Pulsar *Ultra* range of products.

The *Ultra* Log software is used to programme the Pulsar *Ultra* series data logging facility and download any data stored in the Pulsar *Ultra* unit so that it maybe interrogated and viewed and stored.

Dependent on the amount of data to be logged, and the frequency of logging chosen, the Pulsar *Ultra* series can provide data logging of information for a period of time in excess of 12 months.

Specification

System Requirements

Operating System	Windows 9X, 2000, ME, XP, Vista.
Processor Speed	133 Mhz (Minimum)
Memory	32 Mb (Minimum)
Disk Space	6 Mb (approx)

This page left blank intentionally

Installing Your Software

Installation of the *Ultra* Software is simple, just insert the CD into your drive and follow the instructions on the screen.

Ultra Log will create its own directory under C:\Program Files\UltraLog Version xx called 'UltraLog'.

If Autorun is not enabled on your computer, then you will need to click on your Start menu, click on Run, then use the Browse facility to locate the Set-up file in your CD drive.

Once the installation is complete, a shortcut icon will be created and installed onto your desktop, labelled 'UltraLog' simply double click on this icon to open the initial screen.

Connection Details

Connection to your computer is via a standard RS232 serial connection. A connector and lead can be supplied with your software package if requested.

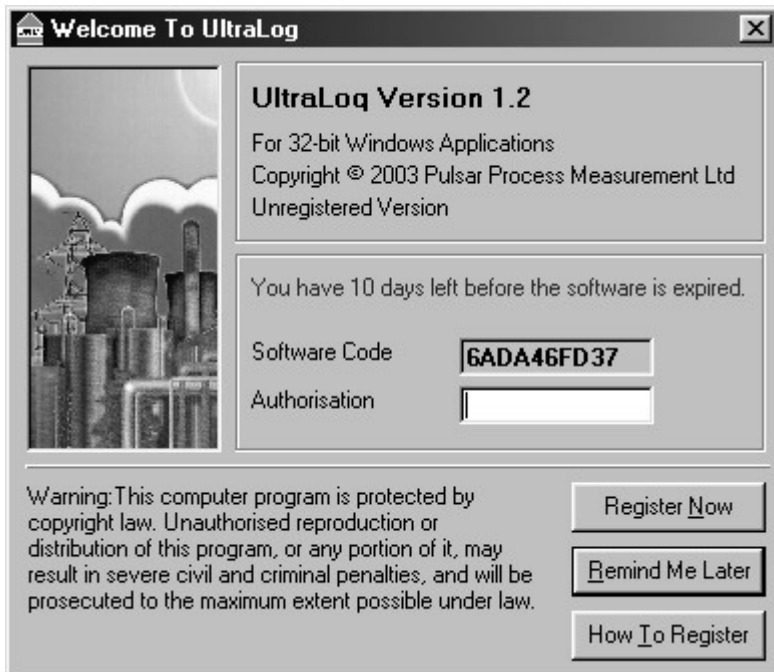
Connection to the Pulsar *Ultra* series is via the RJ11 plug, the connector socket can be found in line with the terminal blocks, as detailed in the manual of the Pulsar *Ultra* instrument being used.

This page left blank intentionally

To run the UltraLog software, once the installation is complete, double click the UltraLog shortcut that has been installed onto your desktop, during installation, this will open the initial screen. As shown below.

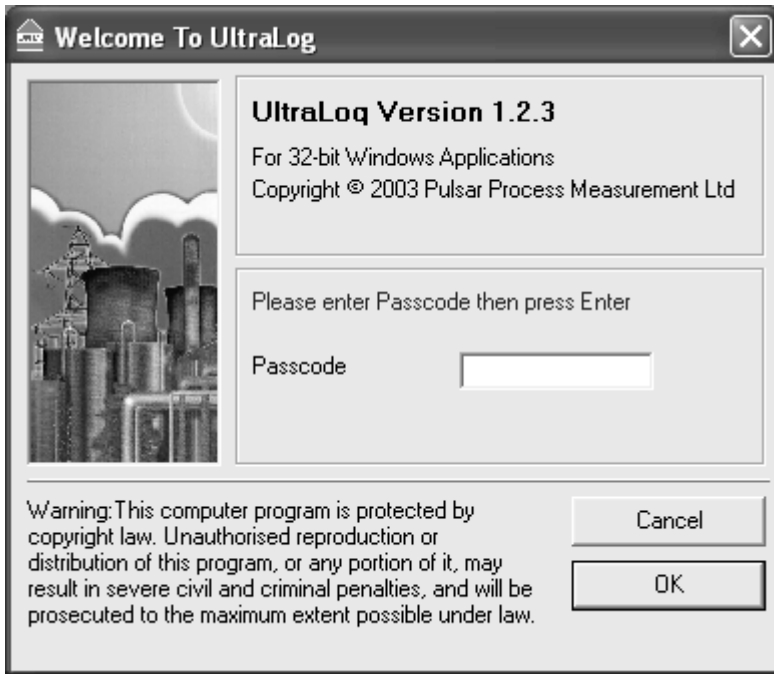
Display Screens

Registration Screen.



In order to continue press the (remind me later) key and the screen below will appear on your desktop.

Passcode Screen



Key in the passcode 1997 and press enter to run your program.

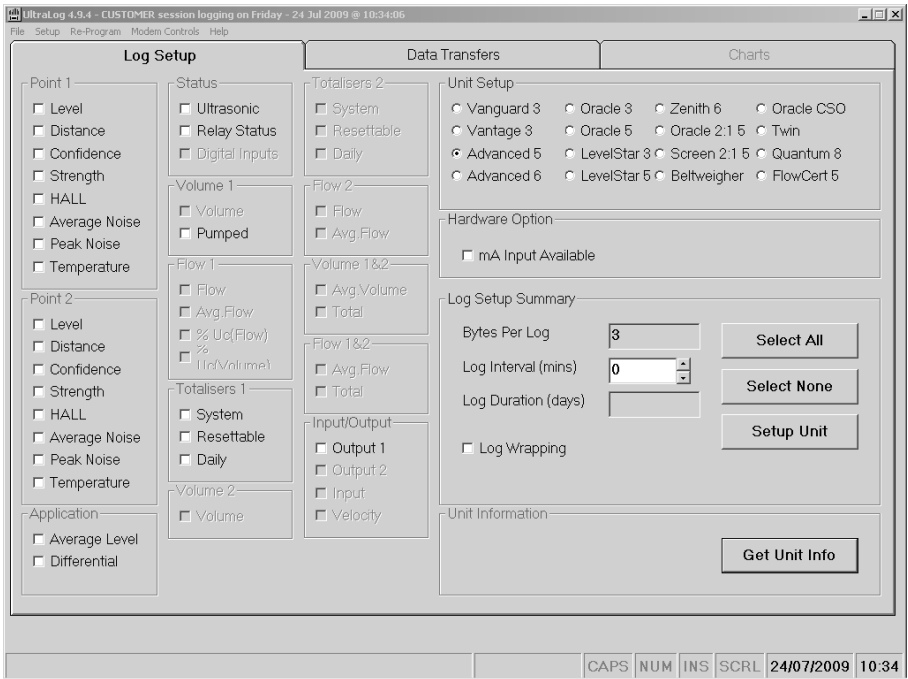
Your UltraLog program will run for 30 days until you register with Pulsar. To register, you will require your CD Serial Number (found on the back of the CD case) and the Software Code (displayed in the initial screen after starting up UltraLog), we will then provide you with an authorisation key to remove the evaluation limitation.

To obtain an authorisation key you can contact us by telephone on 0870 6039 112 or alternatively e-mail us at info@pulsar-pm.com You can also use the e-mail address support@pulsar-pm.com for any technical issues that you may have.

When you obtain your authorisation key enter it into the Authorisation window in the opening screen and press the Register now key, your program will then be validated.

When UltraLog has opened you will see a screen similar to the one shown below.

Data Logging Screen



The screen shown above would appear if an Ultra 5 was set to be a Pump Controller, the ticked circle in the unit set up window at the top right hand of the display above indicates the unit type, which is verified after the 'Get unit Info' button is pressed and the unit is interrogated. Any 'greyed out' parameters are not able to be logged.

The amount and type of parameters that are available to be logged vary with the unit type.

Communication Port Configuration

Once UltraLog is open click on 'Setup' and choose your Comms Port then press Save and Exit, alternatively press start searching, UltraLog will then find the comms port for you.



UltraLog will set up the comms port you will be using to the following configuration.

Baud Rate 19200, 8 (data bits), 1 (stop bit), N (no parity).

Security and Passwords

Your UltraLog will cease to function after 30 days unless it has been registered with Pulsar and you have received your unique authorisation code.

UltraLog is password protected in the same manner as the Pulsar *Ultra* series. The password '1997' is entered at the opening screen, and will give access to all the parameters to enable the programming of a Pulsar *Ultra* unit, fitted with an optional data logging board, to carry out data logging.

Dynamic Variables Available for Logging

Point 1	
Level	The measured value between the empty distance and the application surface
Distance	The measured value between the transducer face and the application surface
Confidence	An indication of the certainty of the instrument that it is measuring the correct echo
Strength	An indication of echo strength - units 0 – 100
H.A.L.L.	An indication of echo strength above the loss limit values
Average Noise	The average noise levels received by the transducer
Peak Noise	The peak noise levels received by the transducer
Temperature	The measured temperature calculated by the transducer

Point 2	Only applicable for units with two Transducers
Level	The measured value between the empty distance and the application surface
Distance	An indication of the certainty of the instrument that it is measuring the correct echo
Confidence	An indication of the certainty of the instrument that it is measuring the correct echo
Strength	An indication of echo strength - units 0 – 100
H.A.L.L.	An indication of echo strength above the loss limit values
Average Noise	The average noise levels received by the transducer
Peak Noise	The peak noise levels received by the transducer
Temperature	The measured temperature calculated by the transducer

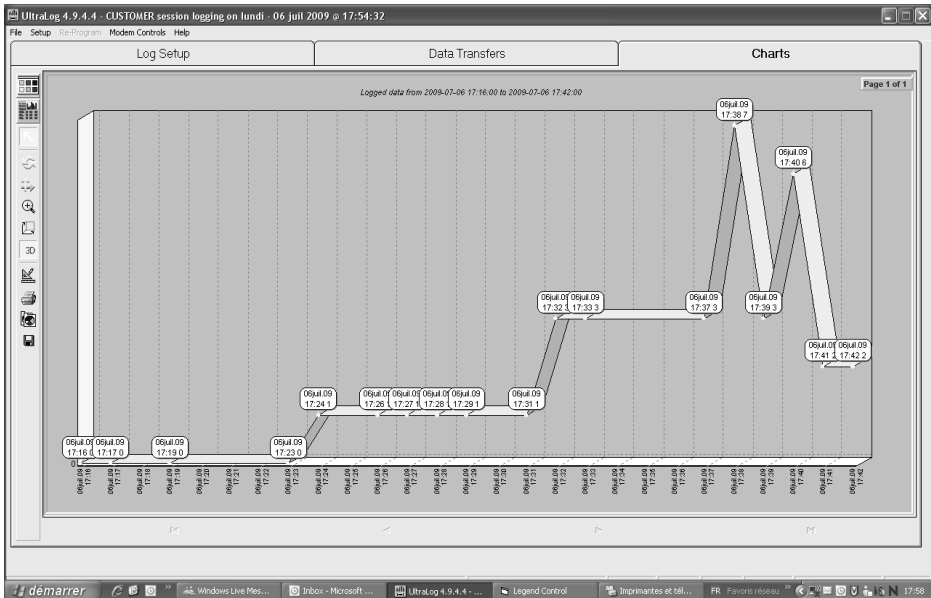
For a fuller explanation of the above parameters please refer to the DATEM, and SERVICE manuals.

Application	
Average Level	The calculated value for average level of two transducers measuring between the empty distance and the application surface
Differential	The calculated value of the Level under Transducer 1 minus the Level under transducer 2

Status	
Ultrasonic	The current operational status of the transducer
Relay Status	The relay status as a binary bitmap (see notes)
Digital Inputs	The digital input status as a binary bitmap (see notes)

Notes on Relay Status and Digital Input Status

The relay and digital input status are derived in Ultralog as a binary bitmap.



Digital Input or Relay Number	1	2	3	4	5	6	7
Resulting Binary Number	1	2	4	8	16	32	64

The log time interval in the above chart is 1 minute. The graph is sloped between points because a Digital Input has been switched on sometime during that minute. In the example below this indicates that during the period of time 17.23 to 17.24 Digital Input 1 was switched on.

Following this, sometime between 17.31 and 17.32 Digital Input 2 was also switched on. The combined binary bitmap is $1 + 2 = 3$ as indicated on the y axis, or the last figure in the data label graphic. Sometime between 17.37 and 17.38 Digital Input 3 was switched on, the new combined binary result being $1 + 2 + 4 = 7$. Digital Input 3 was then switched off returning the resultant binary count to 3, then, Digital Input 3 and Digital Input 2 are on together with Digital Input 1 off, making the binary count 6. Finally, Digital Input 3 and Digital Input 1 are both off leaving Digital Input 2 on producing a binary count of 2.

The same principle applies to the Relay Status.

Volume 1	
Volume	The calculated instantaneous volume
Pumped	The pumped volume throughput

Flow 1	
Flow	The calculated instantaneous flow
Average Flow	The average flow between two log periods

Totalisers 1	
System	The current value of the non resettable totaliser
Resettable	The current value of the resettable totaliser
Daily	The total over a 24 hr period

Volume 2	Only available with Ultra Twin
Volume	The calculated instantaneous volume

Totalisers 2	Only available with Ultra Twin
System	The current value of the non resettable totaliser
Resettable	The current value of the resettable totaliser
Daily	The total over a 24 hr period

Flow 2	Only available with Ultra Twin
Flow	The calculated instantaneous flow
Average Flow	The average flow between two log periods

Volume 1&2	Only available with Ultra Twin
Average Volume	The calculated average volume of both measurement points
Total	The calculated average total of Volume

Flow 1&2	Only available with Ultra Twin
Average Flow	The calculated average flow of both measurement points
Total	The calculated average total of Flow

Input/Output	
Output 1	mA output value of point one
Output 2	mA output value of point two
Input	mA input value
Velocity	Instantaneous calculated value of velocity (see below)

Important Information

The velocity value can only be logged in m/s if the unit is communicating with the speedy sensor via modbus, if the unit is calculating the velocity based on a mA input then only that input can be logged.

Drop Down Menus

The top menu bar contains a number of 'Drop Down Menus' the functions of each of these menus are explained below.

File

The **File** menu will give you the following two options:

Open Log File

This option will enable you to **open** and view a previously stored Log File.

Exit

This option, when selected, will **exit** out of the Ultralog software, disconnect from the Pulsar *Ultra* unit and shut down the UltraLog software.

Setup.

Selecting the **Setup** menu will open a small sub screen: See page 11.

Communications

This allows you to determine which comms port will be used to connect your PC to the Pulsar *Ultra* unit. Once selected, press 'Save' followed by 'Exit'. Alternatively press 'Start Searching' and the UltraLog software will then find the relative comms port to which the Pulsar *Ultra* unit is connected, and correctly set the required variables.

Re-Program

The Data Logger can be upgraded with new editions of software, if required, thereby benefiting from new and improved features, and should only be carried out by experienced service staff. All software upgrades are available from Pulsar and can be e-mailed as required. Once you press the Re-program icon read the instructions on the screen before attempting to upgrade your software. It should be noted that all previously stored data would be lost when re-programming the Data Logger with a software upgrade.

Modem Controls

The Data Logger can be used remotely to download data via a modem, This give the user the ability to access, download and store logged information remotely when a site is inaccessible.

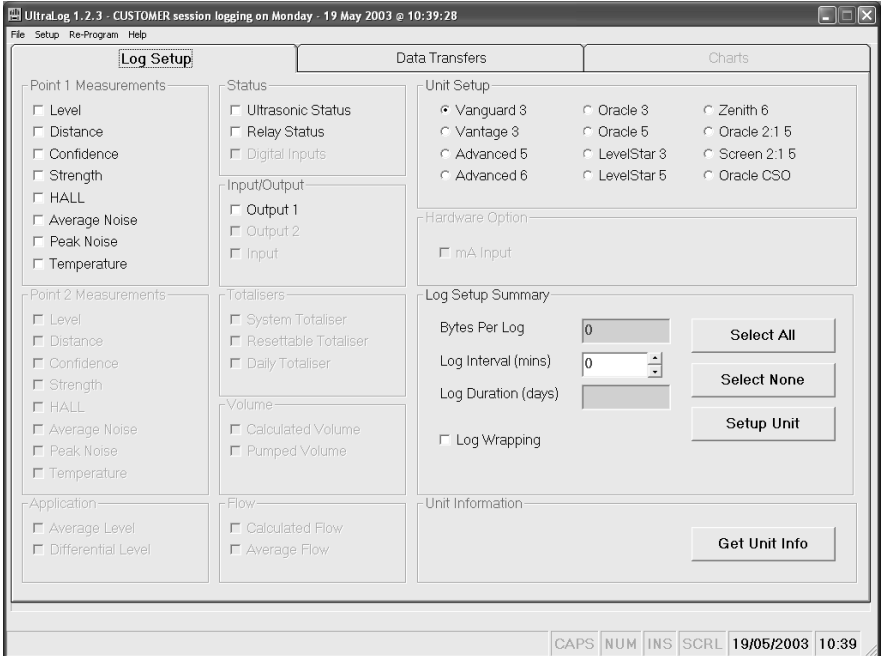


Help

Contact Pulsar for assistance.

Chapter 5 How to set up Logging

Log Setup Screen



The **Log Setup** menu is used to program the Pulsar *Ultra* series, fitted with an optional Data Logging board to log the required data.

Unit Setup

In the top right hand corner of the **Log Setup** screen you will find the **Unit Setup** window, when connected to a Pulsar *Ultra* unit, fitted with an optional data logging board, with UltraLog this window will identify the Pulsar *Ultra* unit type once the get unity info button has been pressed. Alternatively you can select the unit type, in order to setup the data logging program prior to connecting to the unit.

The left hand side of the **Log Setup** menu gives details of the all the variables that can be logged by the Pulsar *Ultra* series.

If a category is 'greyed' out it means that it is not available with the Pulsar *Ultra* unit currently connected to or selected.

Point 1 Measurements

This category details all of the **variables**, calculated by the Pulsar *Ultra* unit, that are available to be logged, to select an option simply 'click' the corresponding box, which will insert a 'tick' indicating it has been selected.

Point 2 Measurements

Only available on Pulsar *Ultra* units which utilise a second transducer to measure 'Average' or 'Differential'. The **variables** available are the same as for Point 1.

Application

Only available on Pulsar *Ultra* units which utilise a second transducer to measure 'Average' or 'Differential'. When selected on **Average** level will be calculated and logged for the selected application.

Status

Ultrasonic Status

Selecting this option allows you to continually log the status of the transducer, and will indicate occurrences such as Loss of Echo or transducer failure.

Relay Status

Selecting this option allows you to continually log the status of the relays, and will indicate occurrences such as Alarms and switching of Pumps etc.

Input/Output

This option allows the analogue input (where applicable), or output, to be continually logged, to select simply 'click' the corresponding box, which will insert a 'tick' indicating it has been selected.

Totalisers

Only available with units using **totaliser(s)** and when selected the **totaliser(s)** will be continually logged.

Volume

Only available on units capable of **volumetric conversion**, and when selected the appropriate **volume** will be continually logged.

Flow

Only available on units capable of calculating **flow** and when selected the **flow** will be continually logged or alternatively a calculated **average flow** can be logged.

Log Setup Summary

The bottom right hand side of the **Log Setup** menu is used to finalise the Log Setup and provides the controls to send the required program to the Pulsar *Ultra* unit.

Bytes Per Log

As you select or deselect a **variable** to be logged the number, in the box next to Bytes Per Log, will increment to provide the total number of bytes that will be logged at each **Log Interval**.

Log Interval

This is used to set the **time interval** at which the Pulsar *Ultra* unit is required to log the selected **variables**.

Log Duration

Once you have selected the **variables** to be logged and set the **Log Interval**, the total number of days of logging, which can be achieved by the Pulsar *Ultra* unit without loss of any data, will be calculated and will be shown, in the box next to **Log Duration**. It should be noted that once the data logger is full no further logging would take place unless **Log Wrapping** is selected.

Log Wrapping

By selecting Log Wrapping continuous logging can be used, once the data logger is full a section of the oldest data will be erased, on a first in first out basis, the remaining data will then be moved to make space for the new data. When using **Log Wrapping** it will reduce the maximum **Log Duration** period, the recalculated maximum period, which can be maintained, when wrapping is used, will be displayed under **the Log Wrapping** option.

Select All

When 'pressed', **all** of the **variables** available for **data logging** will be **selected** and **Bytes Per Log** and **Log Duration** will be updated accordingly.

Select None

When 'pressed', **all** of the **variables** that have been selected for **data logging** will be **deselected**.

Setup Unit

When 'pressed', the Pulsar *Ultra* unit will be **programmed** with all the relevant information to enable **data logging** according to the **variables** chosen and the selected **Log Interval**.

Get Unit Info

When 'pressed' the UltraLog software will connect to the Pulsar *Ultra* unit, and interrogate it to see if it is programmed for data logging and display the results in the **Log Setup** menu.

How to Set up Logging

Important Information

When you upload a **Log Setup** program to a Pulsar *Ultra* unit, utilising the data logging facility, any previous program and logged data will be lost.

Connect the serial lead between the PC and the Pulsar *Ultra* unit, as described in **Chapter 2 Installation and Connections**.

‘Press’ the **Get Unit Info** button and download any log information from the Pulsar *Ultra* unit, the Unit Setup window will indicate the unit type and all variables for that unit type will be made available.

Select the **variables** you wish to log.

Select the required **Log Interval** and ensure the **Log Duration** is sufficient for your requirements.

If required select **Log Wrapping** to enable continuous logging.

‘Press’ the **Setup Unit** button to program the Pulsar *Ultra* unit with all the relevant information. Confirm the Pulsar *Ultra* units **Date** and **Time**, as prompted.

Programming is now complete close the UltraLog software, disconnect the Pulsar *Ultra* unit from the PC and data logging will commence.

Important Information

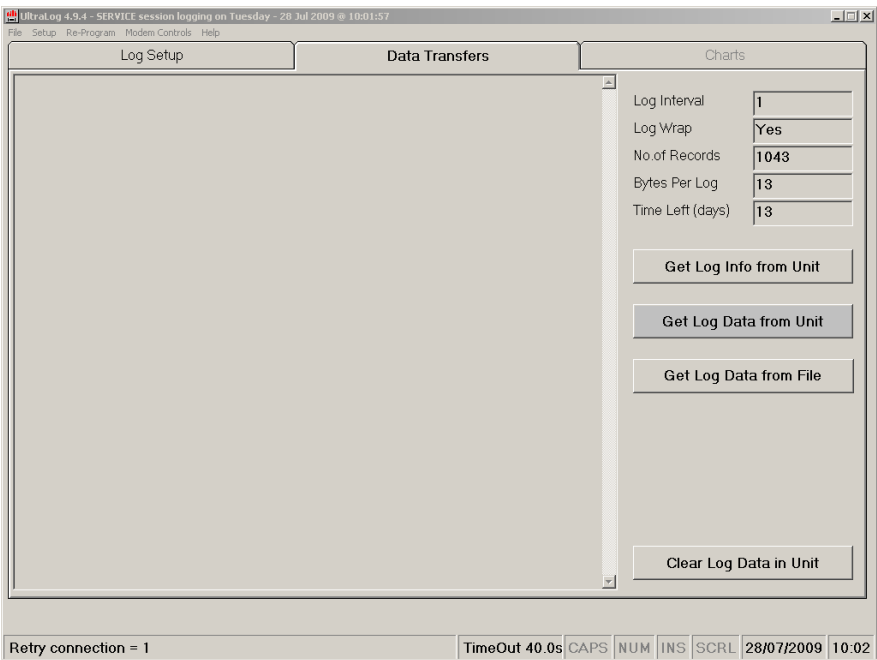
Data Logging will not commence until the serial lead is disconnected from the Pulsar *Ultra* units serial interface (RJ11 connector), when connected data logging will be suspended.

This page left blank intentionally

Chapter 6 How to Transfer Data

The **Data Transfer** menu is used to download and display Log Data stored in the Pulsar *Ultra* unit's data log.

Data Transfers (Screen)



Get Log Info from Unit

This button is used to get the **Log Information** from the Pulsar *Ultra* unit, which will be displayed in the Log Information boxes in the top right hand corner of the **Data Transfer Menu**.

Log Information

Log Interval

This will display the **time interval** to which the Pulsar *Ultra* unit has been programmed to log the selected **variables**.

Log Wrap

This will indicate if the Pulsar *Ultra* unit has been programmed for **Log Wrapping** or not.

No. Of Records

This will give the total **number of records** contained in the Pulsar *Ultra* unit's data logs. Each record indicates a **Log Interval**.

Bytes Per Log

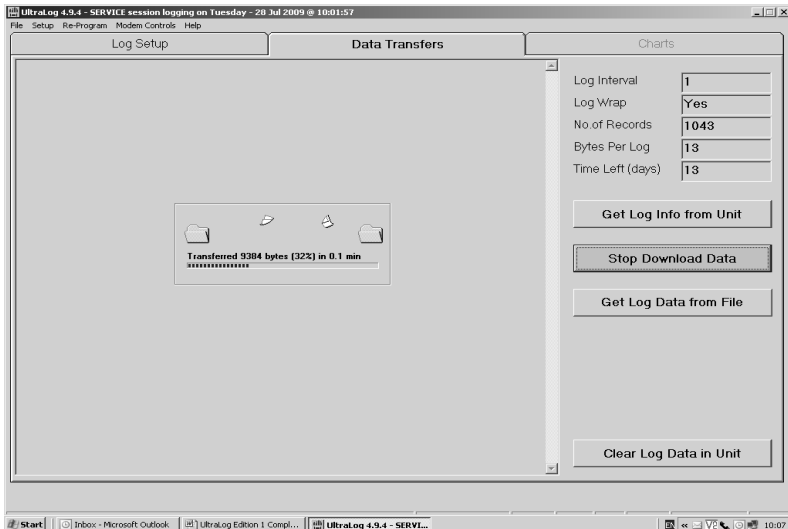
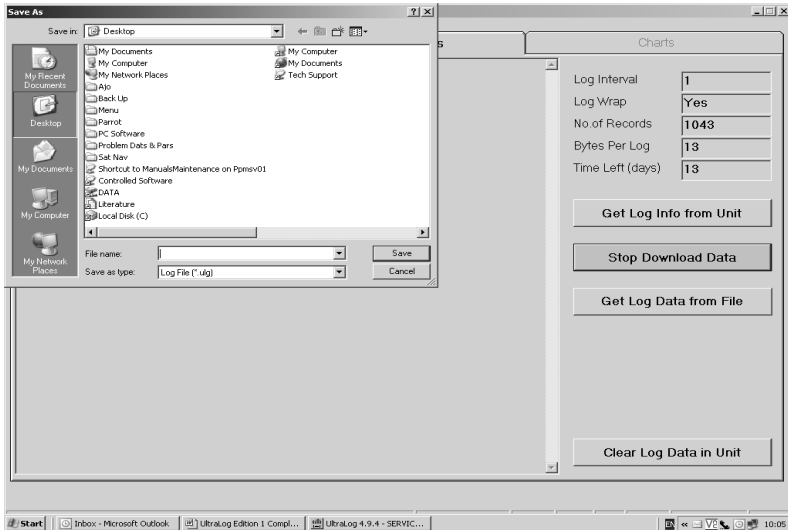
This gives details of the number of Bytes Per Log, as programmed in **Log Set**.

Time Left

This will indicate the remaining time left before the Pulsar *Ultra* unit's available log memory become full.

Get Log Data from Unit

Once the **Log Information** has been down loaded from the Pulsar *Ultra* unit, if the **Get Log Data from Unit** button is 'pressed' the UltraLog software will open a 'save' window give the file to be saved a name and location. The file will then be downloaded when save is pressed.



Get Log Data from File

When 'pressed' this will allow you to open and display data and charts for previously 'saved' data log files.

Clear Log Data in Unit

This button is used to **clear** all logged **data** stored in the Pulsar *Ultra* unit. When 'pressed' you will be asked to confirm that you wish to continue, on answering 'Yes' all logged data in the Pulsar *Ultra* unit will be erased.

How to Transfer Data

Connect the serial lead between the PC and the Pulsar *Ultra* unit, as described in **Chapter 2 Installation and Connections**.

'Press' the **Get Log Info from Unit** button and download the log information from the Pulsar *Ultra* unit.

'Press' the **Get Log Data from Unit** button and download the data logs from the Pulsar *Ultra* unit. Before commencing the download of data a 'Save As' window will appear, prompting you for a file name in order to save the data in a file, if you do not wish to the 'save' the file 'press' Cancel and the download will be completed without 'saving'. The UltraLog software will automatically import the data into the appropriate chart, and on completing the download of the data this chart will be displayed automatically so that it may be viewed.

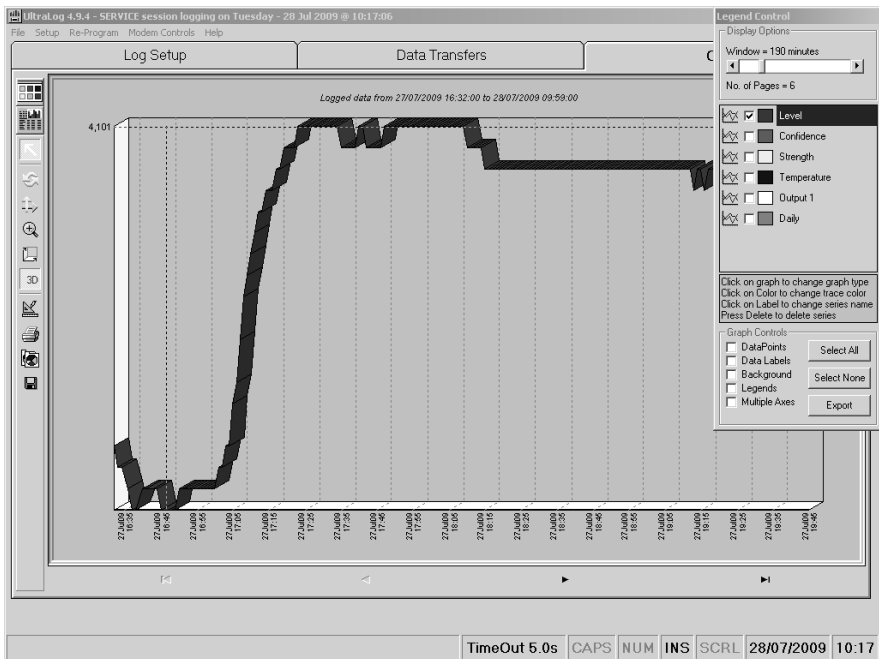
Reminder

Data Logging will not resume until the serial lead is disconnected from the Pulsar *Ultra* unit's serial interface (RJ11 connector).

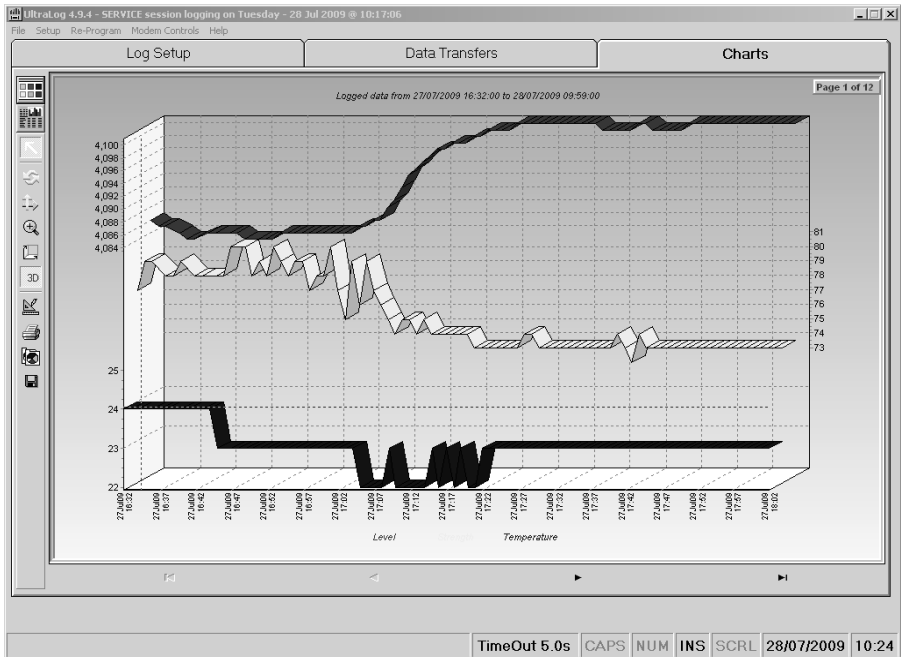
Chapter 7 Viewing and Editing Charts

Charts Screen

The chart screen will automatically open up when a log file is opened or downloaded and it will look similar to the screen below, with the legend control window open.



The Charts menu is used to display the logged data obtained from the Pulsar *Ultra* unit. The charts can be edited and manipulated in order to display the information as required. Multiple axis can be used and the window time frame can be altered as seen below.



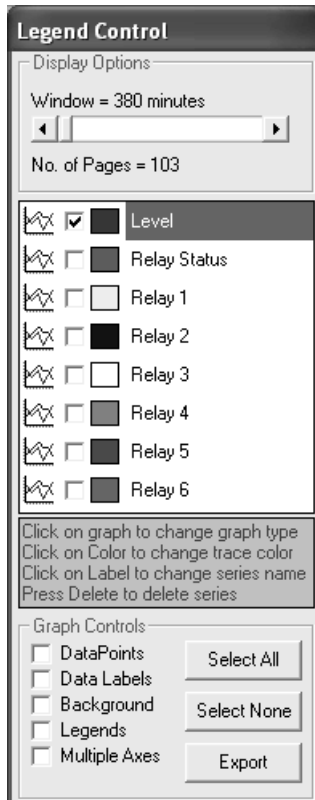
Control Icons

There are a number of icons which running down the left hand side of the chart window, starting from the top and working down each are described in turn.

Toggle chart Legend Control



Toggles the **Legend Control** window **ON** and **OFF**.



The **Legend Control** is used to **edit** and **modify** the data displayed in the current **chart** and can be toggled **On** and **Off** by pressing the top icon of the line of icons which run down the left hand side of the Chart window.

Display Options

The size of the chart window can be changed, relative to time, by moving the slider backwards and forwards in order to increase or decrease the detail to be viewed.

You can select and de-select which series of data should be displayed in the chart by checking or clearing the relative series box.

Changes to the type of graph, series names and colour of the graph can be made by clicking on the appropriate icon of the series to be modified.

Graph Controls

Data Points

Selecting **Data Points** will add data points to the chart indicating the start of each **Log Interval**.

Data Labels

If selected, **Data Labels** will be added to the chart giving details of **time** and **date** of each logged reading.

Background

Allows you to toggle the chart **Background** colour from **dark** to **light**.

Legends

When selected the **legend** for each **series** will appear at the bottom of the chart window in the colour it appears in the chart.

Multiple Axes

If the chart contains data that have different axes values, for example level and temperature, by selecting Multiple Axes then both traces will be scaled so that they can be viewed and interpreted easily.

Control Buttons

Select All

When 'pressed' all **series** in **display options** will be selected and displayed

Select None

When 'pressed' all **series** in **display options** will be de-selected and no data will be displayed.

Export

If it is required to save the logged data to a spreadsheet then 'press' the **Export** button and you will be prompted for a file name and the data will be stored as a Comma Separated Variable (*.csv) file.

Generate Report



Report Generator

Report Descriptions

Company Name: Pulsar Process Measurement Ltd

Company Address: Sandy's Road, Malvern, Worcestershire, WR14 1JJ, England

Compiled By: Dave Green

Site Descriptions

Site Number: 12345

Site Description: Malvern STW

Remarks: Outfall Flow Measurement

Daily Report Settings

Trend Data: Flow

From Date: 08/10/2007

Daily Total Report:

To Date: 11/10/2007

Report Data: System



Daily Report: Use Max-Min

Flow Unit: litres / sec

Totaliser Unit: cubic metre

Date Format: dd/mm/yyyy

Log starts @ 08/10/2007 13:17:00
Log stops @ 11/10/2007 09:03:00

The report generator can be used to generate a report similar to the one below.

Print Preview

Pulsar Process Measurement Ltd
Sandy's Road, Malvern, Worcestershire, WR14 1JJ, England

Compiled By : Dave Green on 13/08/2009 @ 08:55
Log File Name : C:\Documents and Settings\vcraigh.PULSAR.000\Desktop\test log3.ulg
Machine Name : SUPPDR-1

Reporting **Flow** for period from **08/10/2007** to **11/10/2007**
Site Number : 12345
Site Description : Malvern STW
Remarks : Outfall Flow Measurement
Daily Report Method : **Use Max-Min Value of System**
Flow Unit : **litres/sec**
Totaliser Unit : **cubic metre**

Date	Mean	Min	At	Max	At	Report
08/10/2007	6.2	2.0	14:30	6.5	14:33	240.0
09/10/2007	226.5	6.5	00:00	840.1	12:17	15437.0
10/10/2007	327.4	5.2	14:45	636.0	12:45	27906.0
11/10/2007	11.1	7.2	03:01	672.7	09:01	94.0

Report Summary
Daily Average = 10919.3 cubic metre
Period Total = 43677.0 cubic metre
Max Daily Report = 27906.0 cubic metre @ 10/10/2007
Min Daily Report = 94.0 cubic metre @ 11/10/2007

This report can then be printed off or filed for the customers records.

Normal



If displayed, closes the '**Legend Control**' window and displays the chart only.

Rotate



When pressed and the cursor is on the graph hold the left mouse button down and you can rotate the graph.

Move



After 'pressing' the **Move** button place the cursor in the graph window, hold the left mouse button down and you can move the graph position within the chart window.

Zoom



When the **Zoom** button is 'pressed' and the cursor placed in the graph window, hold the left mouse button down and you can Zoom in and out of the graph by moving the mouse backwards and forwards.

Depth



When **3D** is toggled **ON** if the **Depth** button is 'pressed' place the cursor in the graph window, hold the left mouse button down and you can **increase** or **decrease** the depth of the **3D** effect.

3D



Toggles the **3D** effect **ON** and **OFF**.

Edit



When 'pressed' this will bring the **Chart Editor** window up which will allow you to **edit, add, delete** and **change** the **chart, series** and **titles** as you require.

Print



When 'pressed' this option will open a print preview window of the current chart, which you can then modify to suit your requirements before printing.

Copy



When 'pressed' a copy of the current chart will be pasted to the clipboard, from there it can be pasted into a document such as word for recording, viewing or reporting purposes.

Save



On 'pressing the **Save** icon the **Save As** window will open and allow you to 'save' the current displayed chart to a location of your choice.

Chapter 8 Troubleshooting

This section describes some problem symptoms, with suggestions as to what to do.

Symptom	What to Do
The program will not install correctly.	Check that your computer is running Windows 9x or higher.
The program will not open.	Close down all other Windows applications that you may be running. UltraLog needs up to 65% of your resources to be able to run. To check this go to your Start menu click Settings then System then click the Performance tab.
The registration period has ended.	Contact the distributor of your software with your software code (see page 7).
The program and unit will not communicate.	<p>Check the Pulsar <i>Ultra</i> unit is switched on and the correct voltage applied.</p> <p>Check the cable connecting your PC to the Pulsar <i>Ultra</i> unit is installed correctly.</p> <p>Check that the comms port has been set correctly, (see page 8 for details).</p>