



Version 3.304 Released
 Version 3.401 Tests of Joules

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Introduction

The EDL software was originally designed for the SE400 extended data logger, and has been extended to become a general viewer for all data converted to the EDL format, and today includes a section capable of logging data using the SEA portable flowmeter.

Inherent shortcomings.

As the original design was for the SE400 only positive flows are shown, the main settings refers to EDL, when communications port is set in the setup menu it does not apply to the mini logger that has its setting in its own section etc.

Although the EDL software is very flexible it cannot correct data accordingly all data displayed is only as good as the capturing device.

EDL data from SE400 is within tolerances set out in the SE400 handbook
EDL data from the mini logger is within tolerances set out in the mini logger handbook



EDL

Graphing

To enter the Graphing screen select the following menu options :

Options -> Graphing

Or select the Graphing button





File Menu

File -> Open : This option allows you to open a previously saved LOG file. When a file is opened it will automatically show the graphs for Flow Rate and Mask Pressure.

File -> Print : This option will print the screen display to the currently selected printer.

File -> Setup Printer : This option lets you set up the desired printer for use.

File -> Info : This option displays the sampling rate for Flow Rate, Mask Pressure and Filter Pressure used in the currently open LOG file.

File -> Exit : This option closes the Graphing screen and returns to the start screen.



Control Box

Graphical Control

Displayed Graphs : The graphs for Mask Pressure, Flow Data and Filter Pressure can be turned on and off by checking the Mask Pressure, Flow Data and Filter Pressure check boxes.

Start Time : This specifies the time origin of the graph to be displayed.

Time Span : This specifies the time span of the graph to be displayed.

Time in Seconds: This allows small time sections to be displayed like single breaths, should be carefully used, select the wanted window then tick seconds and adjust to wanted section, is known to occasionally play up when returning to minutes.

Peak Volume Control

Show Volume Calculator : Checking this box displays the volume calculations at the top of the graphical screen.

Show Volume Bars : This option allows the different regions of the volume calculation to be shaded for easy identification.

Upper Bar : This specifies the flow rate for the upper bar used in volume calculations.

Lower Bar : This specifies the flow rate for the lower bar used in volume calculations.



Calculator Method

Peak Flow Volume :

This method is used to calculate the volume of air that passes through the filters when the flow rate exceeds a certain level. Use the upper bar (Green) to set the specified flow rate. Use the lower bar (Pink) to set the zero line. Adjusting the zero line is useful for removing the portion of the interactive flow that is caused by the system, ie the portion not used by the wearer.

Volume Calculations (Ltrs)						
<input checked="" type="radio"/> Peak Flow Volume	Total User Volume	41.6	User Volume Above	10.0 = 24 %	Total Filter Volume	41.6
<input type="radio"/> PAPR Volume			User Volume Below	31.6 = 76 %	System Volume	0.0 = 0 %

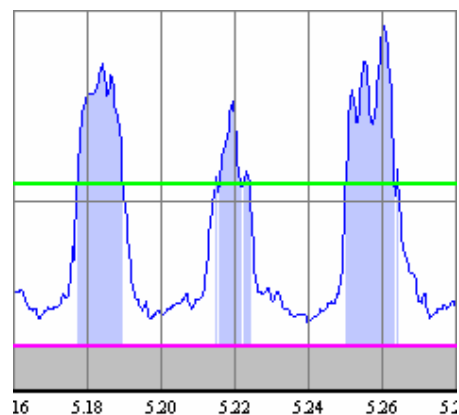
Total Filter Volume : This is the total volume shown on the screen. This is equal to the sum of the system volume and the total user volume.

System Volume : This is the volume of air used by the system. This is represented by the grey shaded area below the lower line. This is also displayed as a percentage of total filter volume.

Total User Volume : This is volume of air used by the wearer of the RP. This is total volume above the lower line.

User Volume Above : This shows the volume of air used by the wearer above the specified flow rate. This is also displayed as a percentage of total user volume. This volume is represented by the blue shaded section on the graph.

User Volume Below : This shows the volume of air used by the wearer below the specified flow rate. This is also displayed as a percentage of total user volume.





PAPR Volume

This method is used to calculate the volume of air that passes through the filters when the flow rate exceeds a certain level. Use the upper bar (Green) to set the specified flow rate. Use the lower bar (Pink) to set the zero line. Adjusting the zero line is useful for removing the portion of the interactive flow that is caused by the system, ie the portion not used by the wearer.

Volume Calculations (Ltrs)						
<input checked="" type="radio"/> Peak Flow Volume	Total User Volume	41.6	User Volume Above	10.0 = 24 %	Total Filter Volume	41.6
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User Volume Above : This shows the volume of air used by the wearer above the specified flow rate. This is also displayed as a percentage of total user volume. This volume is represented by the blue shaded section on the graph.

User Volume Below : This shows the volume of air used by the wearer below the specified flow rate. This is also displayed as a percentage of total user volume.

Helpful information

Note: all active BARS can be selected, by pointing the mouse pointer to and clicking the left mouse button, then moved up or down as required, and then deselected by clicking left mouse button



Breath Counter

Constant PP

Is the level set as the triggering point where a breath is deemed to start.

Sample Count > Constant PP

Is the number of times (1/50 of a second) the data has to exceed the value to count, else is deemed to be noise

Inhale %	30.03	Exhale %	69.77	Breath Count	16
Joules Used		8.12			

The Display at the bottom of the screen is:

The percentage of inhalation and exhalation in time, for the window display

The number of breaths, for the window display

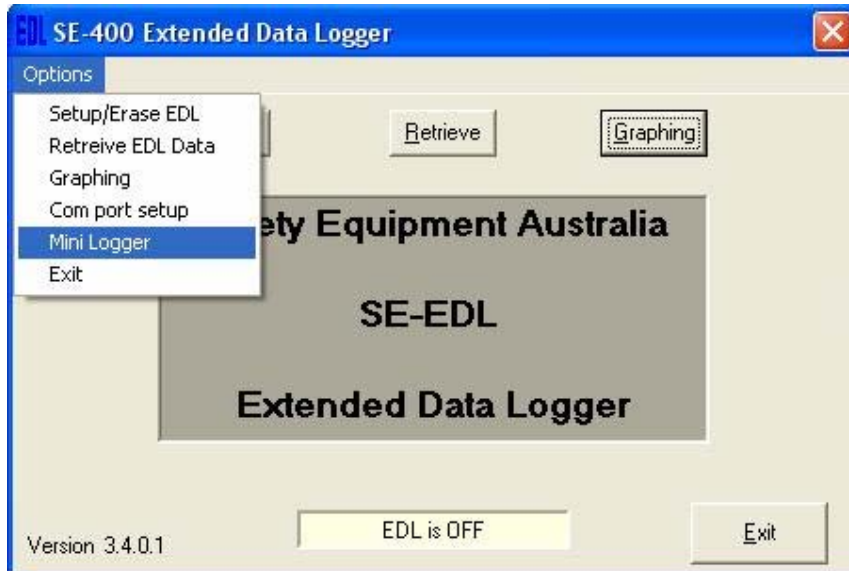
Joules Used is not applicable for SE400 data collection and is only correct when data is collected separately.

The figure shown is the total energy generated by the SE400, if efficiency of the SE400 was 100% then this is equal to battery consumption

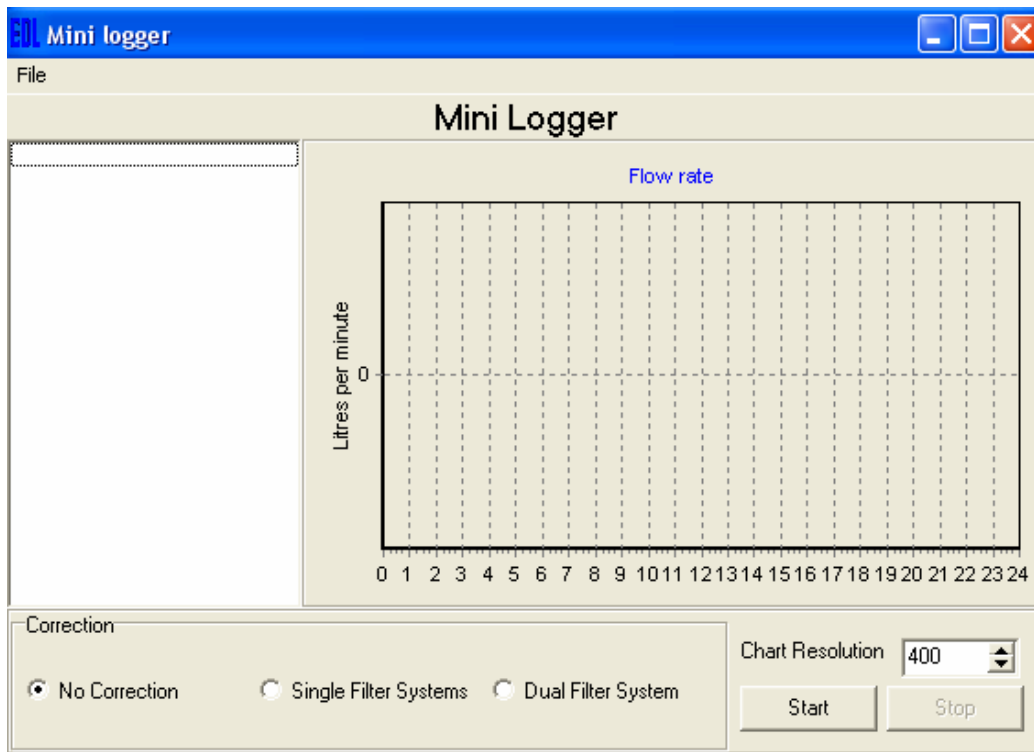


Mini Logger

The mini logger is accessed through the menu



The mini logger is an addition to allow data to be displayed and captured from the portable flow meter.





Correction

Single Filter System (SR100) is selected when measuring through one filter.

Dual Filter System (SE400) is selected when measuring through one filter in a two filter balanced system.

No correction is currently **not used**.

Start button

When started for the first time the mini logger will ask for Communications port used, this has no impact on the communications port selected in EDL setup.

Chart Resolution

The live chart resolution is dynamically changing upwards only, hence the resolution stays with the largest signal measured.

For best resolution on the display the level should not excide the maximum wanted if previous readings has been large stop and start the log to get the scale wanted on the live monitor

Saving of captured Data

File/Save

The data saved is in the correct format to be viewed in the EDL section.

Note: every start of the mini logger erases the previously not saved data.

Calibration

The calibration is different for each of the several types of the mini logger and the information from the mini logger hand book should be used.

