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SMGetDSD

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Abstract

Instructions for use Version 1.0
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Table of Contents

Background

It is important that vibrator parameters be set correctly. As some of these are entered at the vibrator during setup, Sercel allow us to check remotely via a GetDSD.

The result is a text file containing entered and measured parameters.

Whilst this can (and usually is) checked visually, it is easy to miss things, especially on a large crew with many vibrators.

SMGetDSD allows you to define a setup template and check against it, minimising the risk of missing incorrect values.

Currently it assumes all vibrators on the crew are the same type, with the same parameters. This is usually the case. A future version may allow for mixed types and parameters.

Cautions

Some entries in the GetDSD file have no specified tolerances, and may vary due to operating conditions or even ground conditions.

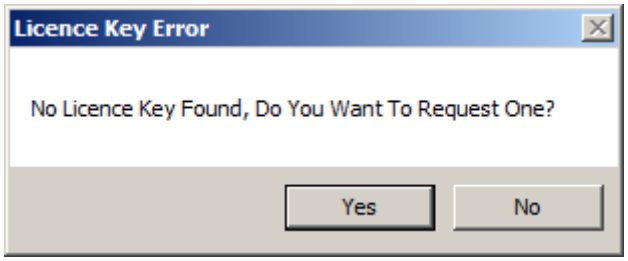
Whilst I believe the results are true and correct, you the user are solely responsible for the correct interpretation of results and for any losses incurred in using the program.

Installation

All files should be placed in a single folder of your choice. Under Windows 7/8/10 make sure it is a folder that can be written to by the application. This is usually not a problem, but some corporate preventers of IT place limits on users.

A licence key is required.

On first run, you will be notified that there is no Key file found:



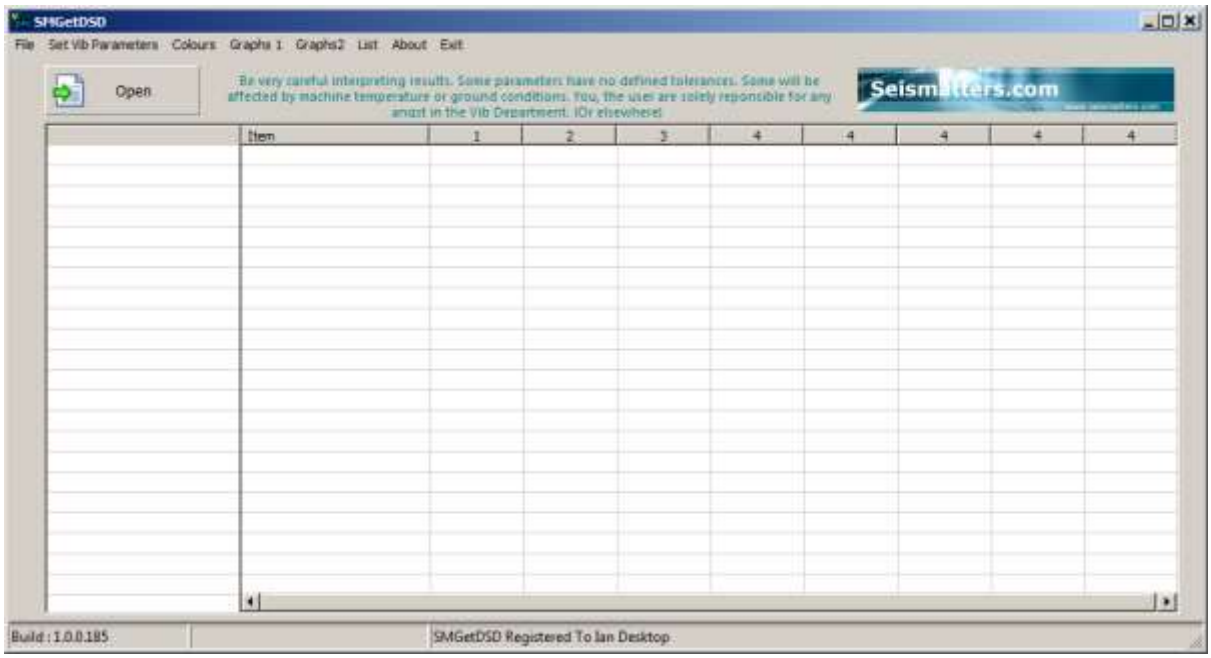
Follow the instructions to generate an .REQ file that you then send to me. (This file is generated in the same folder as the EXE.) If I consider you a worthy user, I will provide you with a key file, which you place the same folder as the EXE.

Note: In the event of a system upgrade (OS) it is possible that the Key file will be reported as invalid.

In this case, delete the files SMGetDSD.SMR and SM_Registration.REQ, start the program and generate a new REQ file which you send to me.

Using the Program

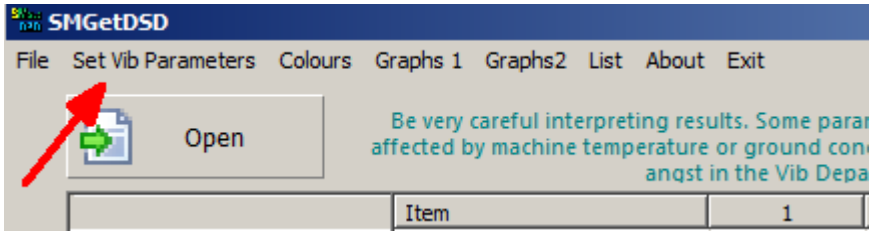
After receiving your key file, you are ready to go.



On starting the program

Setting Parameters

The first thing you need to do is set the parameters for your operation.

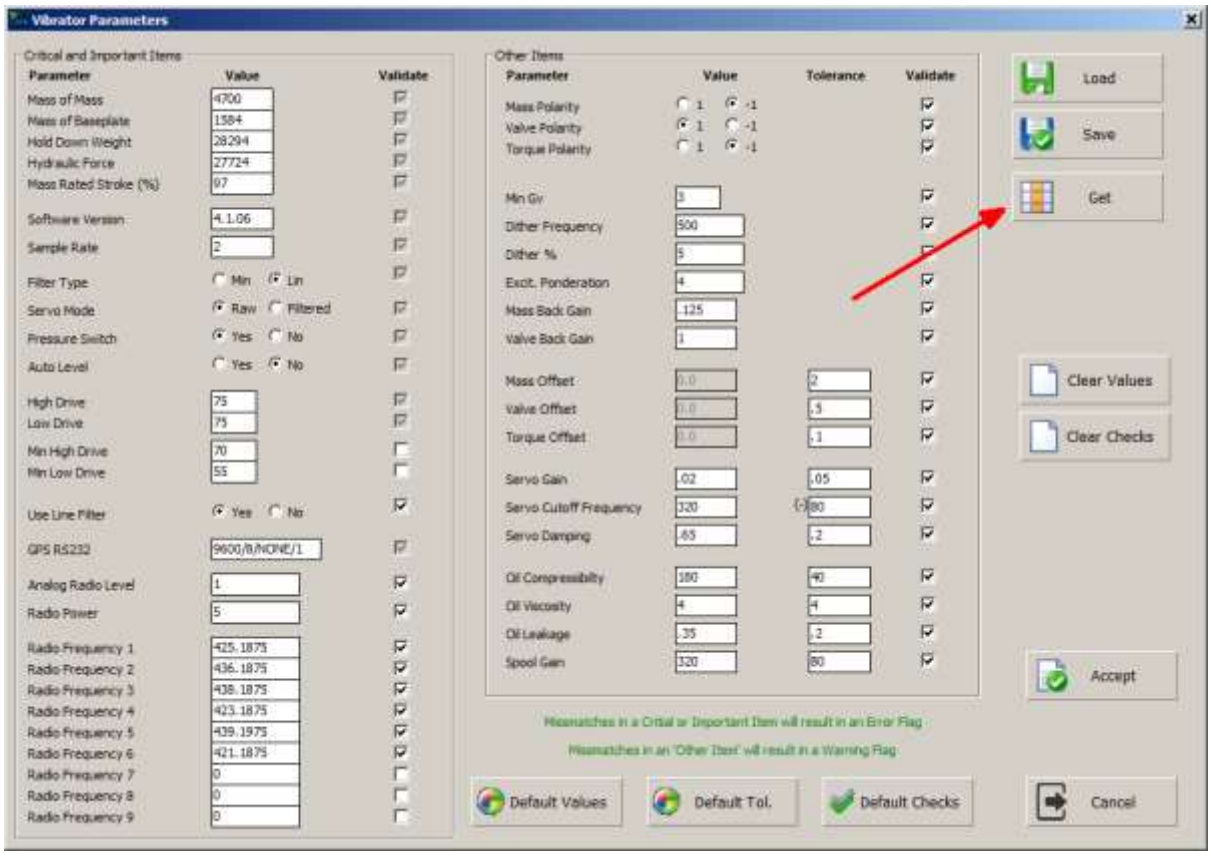


Click Set Vib Parameters to bring up the setup dialog.

This is quite intimidating at first, but easy enough to use

The entries on the left under ‘Critical and Important Items’ should be known. The entries under ‘Other Items’ might be less obvious.

You can examine a GetDSD file and enter appropriate values or you can use the ‘Get’ function.



Click Get and open a recent GetDSD file. All value field will be filled from the **last** column in the file.

This will serve as a starting point for you, and you can fine tune the values to suit your specific operation.

Tolerances

Tolerances are arbitrary. They will depend on many factors –

- Vibrator Type
- Operating conditions and temperatures
- Ground conditions

You will need to adjust them to suit your specific operation. And remember that a file entry that is out of the tolerance specified does not necessarily mean there is a problem! There can be operational reasons for differing values – maybe the ID was done first thing in the morning when the machine was cold for example.

Out of tolerance entries are considered **Warnings**, not **Errors**.

It is worth letting the vib department know, but they may not be all that interested.

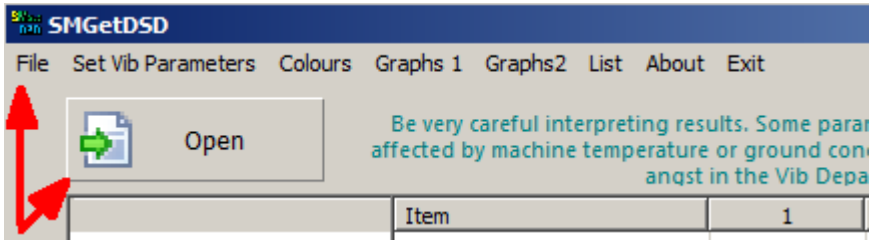
Load/Save

You can save and load parameter sets using the appropriate buttons

Defaults

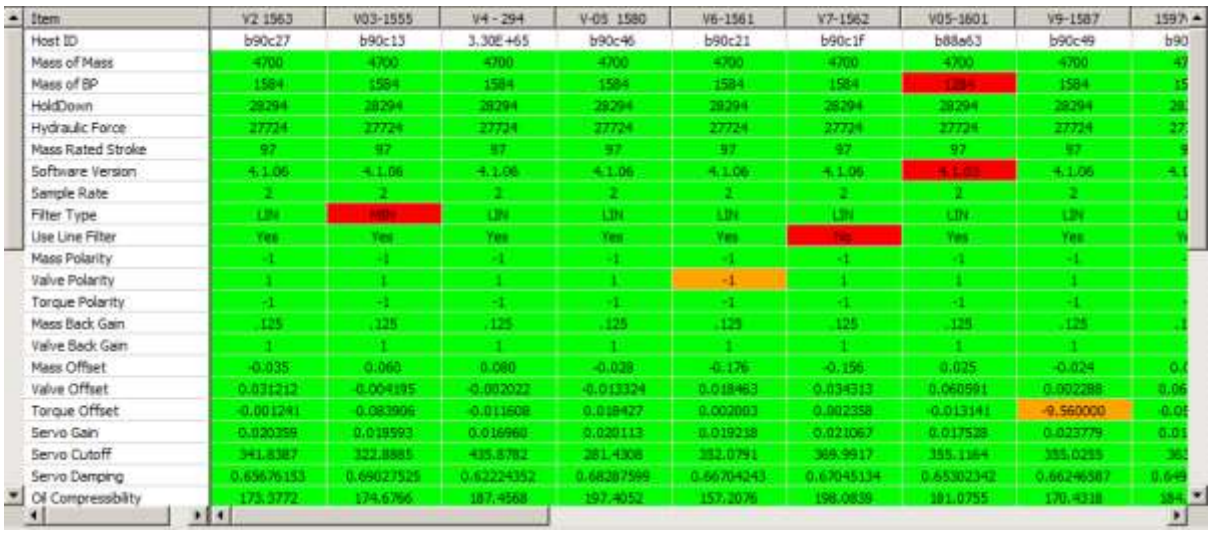
The Default buttons set values appropriate for Nomad 65

Loading Data



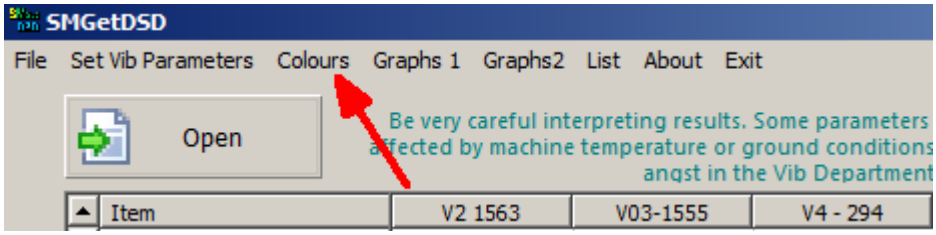
To examine a GetDSD file, click Open or File as indicated. They do the same thing.

Navigate to your desired file and select it. It will be validated and displayed.

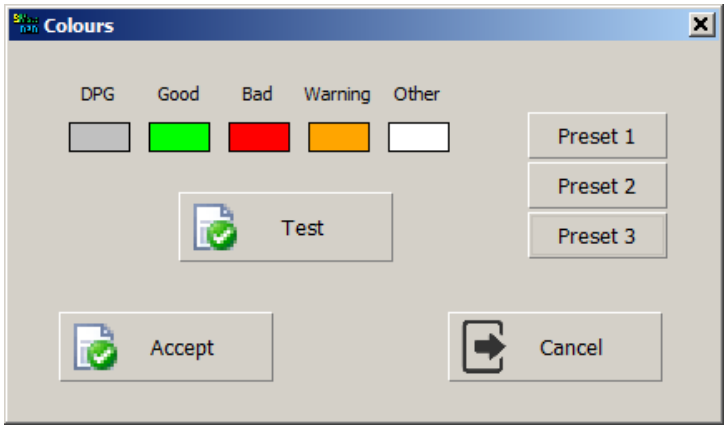


Here some demo results showing Errors in Red and Warnings in Orange.

Colours

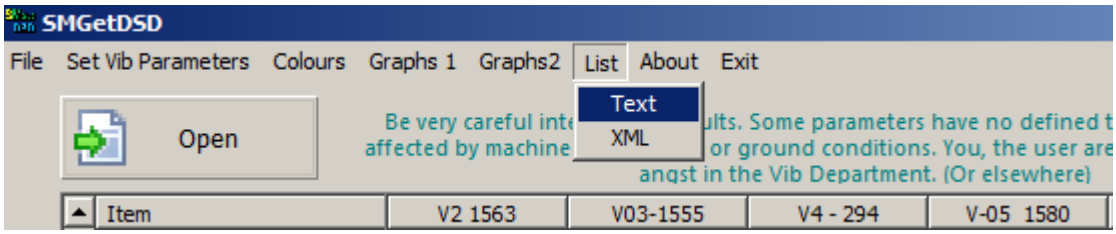


The colour scheme can be adjusted as you see fit. Click on Colours as indicated.



Colour Dialog

Listing Results



Results can be output as brief text summary or as an XML file that can be opened directly by Excel.

Text results look like this:

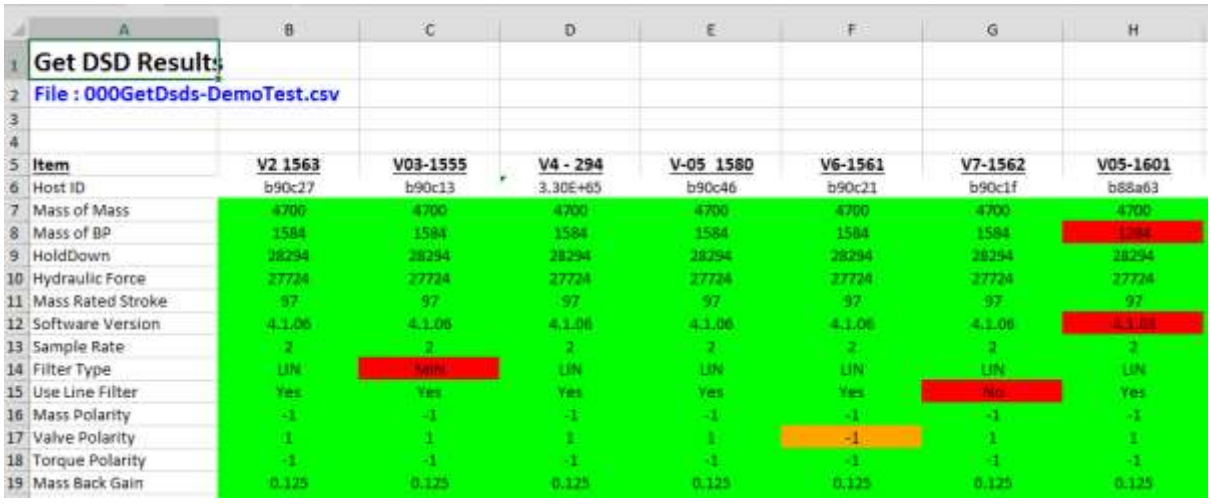
```
GetDSD Summary
--------------

File : 000GetDsds-DemoTest.csv

Vibrator              Errors                Warnings
-------------------------------------------------------------
V2 1563               None                  None
-------------------------------------------------------------
V03-1555              Filter Type
-------------------------------------------------------------
V4 - 294              None                  None
-------------------------------------------------------------
V-05  1580            Servo Mode
-------------------------------------------------------------
V6-1561                                     Valve Polarity
                                            Radio Power
-------------------------------------------------------------
```

It is something that can be quickly printed and given to the Vib Mechs.

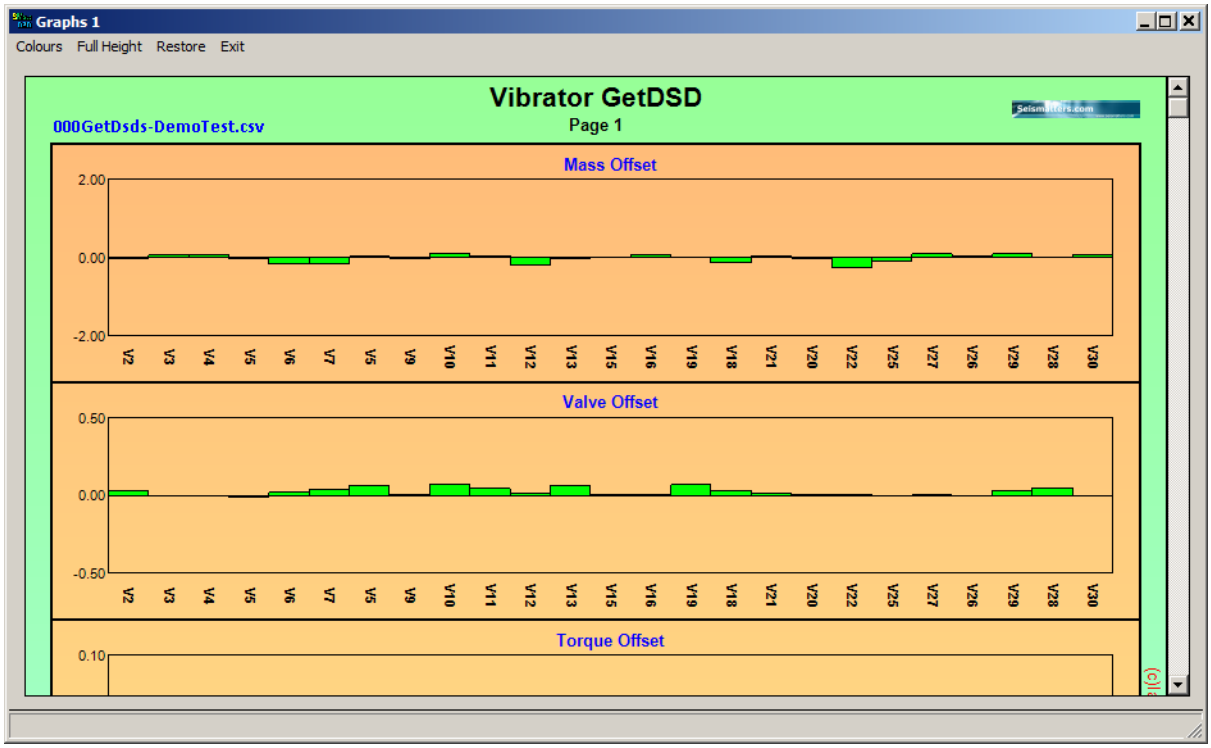
The XML file will honour the chosen colour scheme when opened in Excel



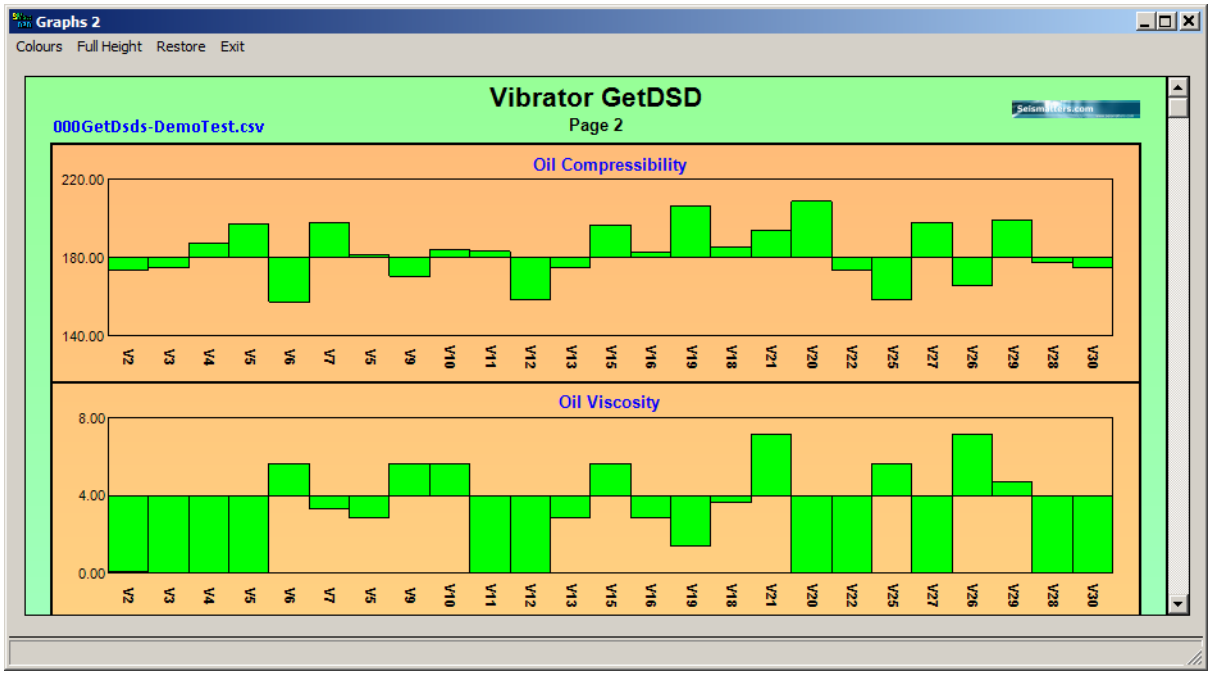
	A	B	C	D	E	F	G	H
1	Get DSD Results							
2	File : 000GetDsds-DemoTest.csv							
3								
4								
5	Item	V2 1563	V03-1555	V4 - 294	V-05 1580	V6-1561	V7-1562	V05-1601
6	Host ID	b90c27	b90c13	3.30E+65	b90c46	b90c21	b90c1f	b88a63
7	Mass of Mass	4700	4700	4700	4700	4700	4700	4700
8	Mass of BP	1584	1584	1584	1584	1584	1584	1584
9	HoldDown	28294	28294	28294	28294	28294	28294	28294
10	Hydraulic Force	27724	27724	27724	27724	27724	27724	27724
11	Mass Rated Stroke	97	97	97	97	97	97	97
12	Software Version	4.1.06	4.1.06	4.1.06	4.1.06	4.1.06	4.1.06	4.1.04
13	Sample Rate	2	2	2	2	2	2	2
14	Filter Type	LIN	MIN	LIN	LIN	LIN	LIN	LIN
15	Use Line Filter	Yes	Yes	Yes	Yes	Yes	No	Yes
16	Mass Polarity	-1	-1	-1	-1	-1	-1	-1
17	Valve Polarity	1	1	1	1	-1	1	1
18	Torque Polarity	-1	-1	-1	-1	-1	-1	-1
19	Mass Back Gain	0.125	0.125	0.125	0.125	0.125	0.125	0.125

Graphs

Two sets of graphs are available. They provide plots of measured values only, as there is little point in displaying plots of things like Mass or Baseplate weight, as they should all be the same.

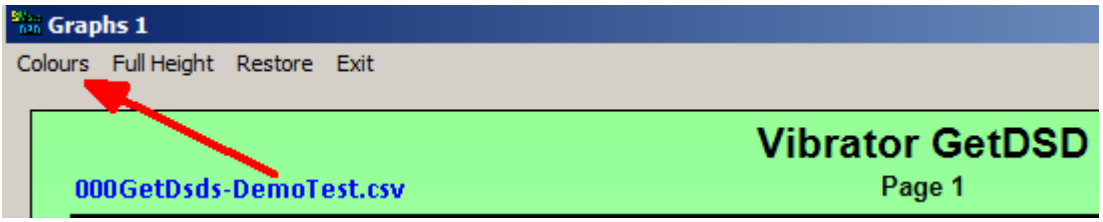


- Mass offset
- Valve Offset
- Torque offset
- Servo Gain
- Servo Cutoff
- Servo Damping

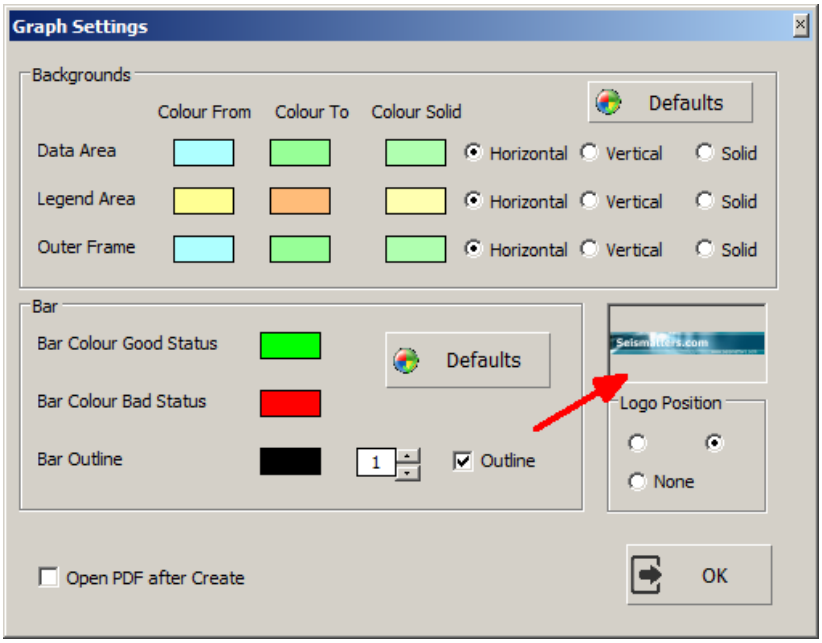


- Oil compressibility
- Oil viscosity
- Oil leakage
- Spool gain
- ID result 1
- ID result 2

Colours



Graph colours can be adjusted as you see fit.

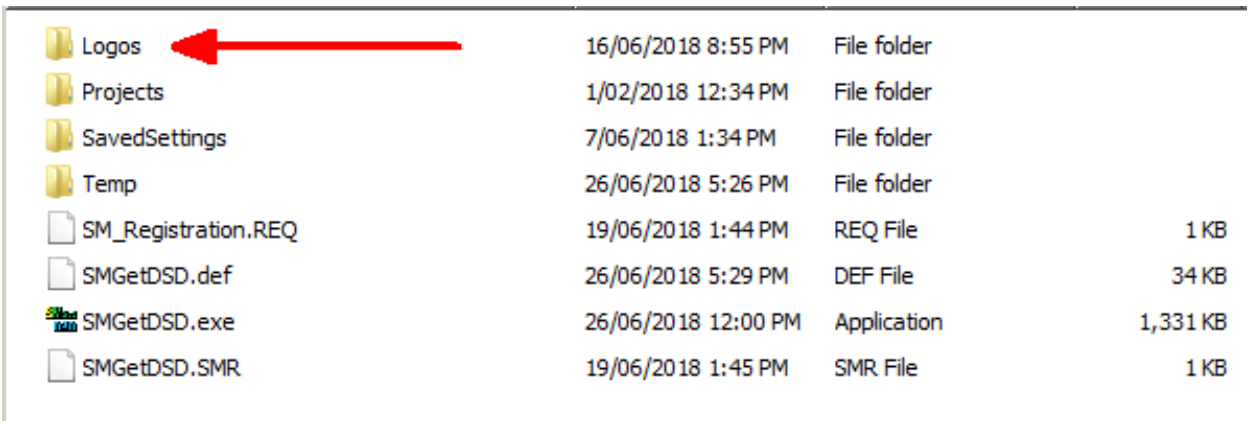


Changes are reflected immediately in the graph display.

The colours are common to both sets of graphs. IE you cannot have Graph 1 colours different to Graph 2 colours.

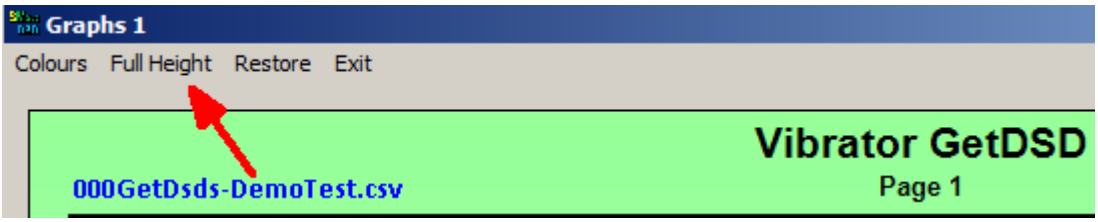
Logos

You can display a logo of your choice if you desire. Click on the panel indicated to select your logo file. Logo files must reside in Logos Folder in the same directory as the application



You may create your own logo if you wish. Logos can be JPG, PNG, BMP or ICO files and should be kept small – They will be displayed at a maximum of 100 x 50 pixels, so there is no point using large images. Any that are larger than 100x50 will be resized when displayed, which may result in loss of detail.

Full Height and Restore



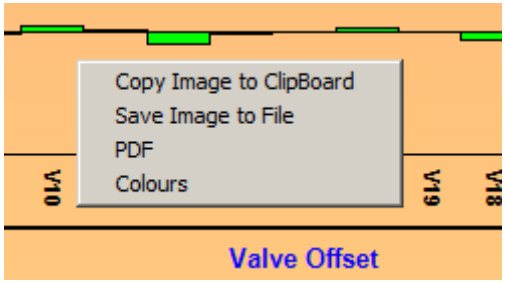
The Graph dialogs are resizable and can be maximised if desired. But with a large screen it is often the case that the display will look better if shown at full screen height, but not full width.

Clicking on Full Height will keep the currently defined width, but make use of the full display height.

Restore will restore the window to its starting size.

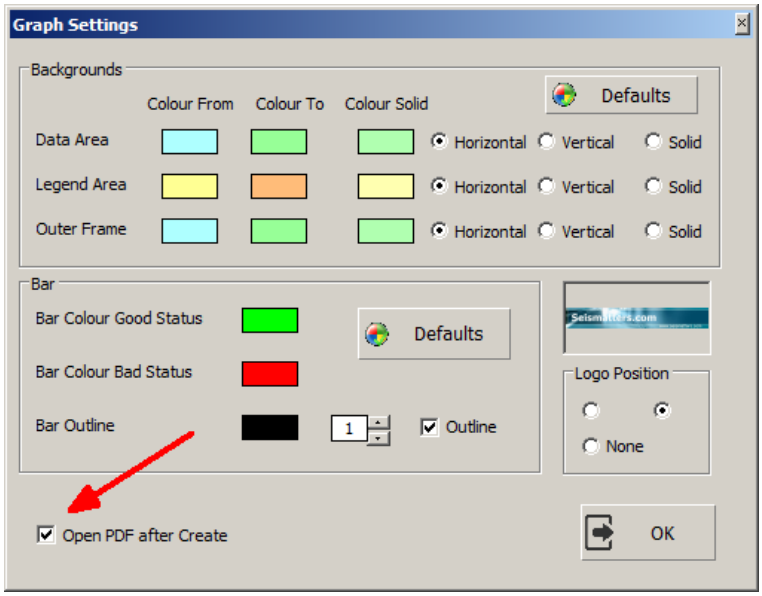
Saving and Copying Graphs

Right click on the image and a menu will appear like this:



Select your desired option.

Note with PDF output, it is best to keep the default width. This should scale the display to fit nicely on a page. Play with it to see the effect different widths have.



PDF Files will be automatically opened if the Option is selected in the Colours dialog.

Change Log

Build 1.0.0.186 26-June-2018

First release

To Do