# Seismatters.com

## SMGetDSD

Open	Bit white it	agena es Barrago	g (zisilti, Some sa contattiones, Fase ti	ABRACTOR BARRY FOR	defined to brancy reproduction for any	or. Some will be a yanget to the Vib	Retted by reaction Department (Or	ŧ.	Seism	atters con	
( lbert	12 1983	V03-1555	V4-294	V-05 1380	VG-1901	17-1952	V05-1601	V9-1587	1897/6-10	V 11-921	V13-1992
Host 10	190:27	690ci3	3-30E+65	590c+6	\$90c21	690cs#	1099463	b90c#9	b90c59	801455	590c68
Mass of Mass	4200	1700	4000	4030	4/00	4700	4740	-4700	4000		-6000
Here of SP	1254	1584	1254	1284	1554	1594	1214	2584	1584	1584	1584
HoldDown	28294	28294	38294	20,214	38394	28294	28254	38794	38294	20204	38294
Hydraulic Force	27724	HIRE	27724	29724	27724	29724	20724	27724	27724	27784	2772+
Mess Rated Stroke	- 82				- 20		-117	0.0	87		
Software Version	4.1.00	4.1.00	41.00	4.1.06	4,1.06	4.3.05	A COLOR	4.1.06	4.1,00	4.1.00	4.1.08
Sample Rate	2		2	1	4	21	2	the second second	7	2	
Filter Type	1.01	100	1294	1.21	1214	1.01	L3N	1411	1314	100	529
Use Line Filter	Tes	them.	740	THE	Yes	100	786	Tex	Tree 1	THE	744
Hees Polanity	- 4	d			-4	-		- 4		4	
Valve Polarity	14	1	4	1	-1	1	- 4	1	1		
Torque Polerity	4	4		4		4	- 4	- 40	4		12
Hass Back Gain	.125	121	128	121	1.00	126	.428	125	128	121	125
Valve Bock Gain	1.0		1000	and the second second		4	1	1.10	11		
Plass Offset	0.038	0.040	0.00	10.000	4.176	-6.286	8.029	10.004	10.087	3.040	1000
Valve Offeet	0.001212	0.004285	-0.002022	0.013304	0.039465	0.034513	0.000571	5.903268	0.0094935	0.04467	COMMENCE
Torque Offset	-0.001244	-0.063800	-6-01.0008	0.030427	10.0000000	0.002068	0.013145	4.360030	-0.052245	0.022629	0.000000
Servo Gan	0.000399	0.039493	6.0.18990	8.420113	0.039238	0.021067	0.017525	0.025779	8.009250	8.020711	0.015466
Servo Cutoff	541.8387	202.8895	415.8782	281.4908	392,0791	300.9017	305.1384	355.0355	303.27	411.0612	100.7884
Serve Deeping	0.00003123	0.88027525	8.47774352	8.48287559	0.06704040	0.07040134	0.45363342	20.66346537	6.6400 3876	8.47396363	D.ATMITTICK
OII Compressibility	173.3072	176-6766	182.4568	87.4052	187,2076	196.0638	181.1755	175-4238	184-3803	183-26-99	1005-681
Oil Viscosity	0.000082	0-001133	8.0013983	8.002083	1.030000	3-110008	2,839990	3.650000	5.450000	1.001111	0.001131
Ollasiage	0.394096	D.TURINO	0.003700	11.453100	0.0012001	0.531394	0.478254	D.478254	0.438400	0.637672	0.758691
Spool Gain	231.6398	348.3133	253.6206	313.3064	275.4646	341.324	343.4676	208.6446	305,3944	298.2187	218.5799
Excitation Ponderation						4	4	4		4	4
Men Gu		1	1	1	-8	5	- 1	2	3	+	
Serve Plock	Rate:	2.00	Rep.	States in succession.	Ren	Refer	Rate:	240	Set	Ren	Ran
Auto Level	140	144	140	100	10	194	140		146	a des	144
High Drive	15	15		12	11		78	- 74	75	10	25
Low Drive	75	- B)			73		78		荷		75
Pressure Switch	100	165	1000	1998	Ves.	Test 1	Ves	100	Ves.	100	and the second
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Radio Power	- A.	and the second			States and States in the local division of the local division of the local division of the local division of the			- B. Con-	400		A
Rado F1	425.1875	425, 1875 .	425.3875	425.3575	425.1675	425.1875	425.3875	425-3875	445.4875	425.0075	425.1875
•10 10	(a)				and the second second						

## SMGETDSD

Abstract Instructions for use Version 1.0 June 2018

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## 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.

Open Open	Ba very careful interpr affected by machine ten	reting insults. Some pain operature or ground cor angust in the Vib Dep	inditions. Too, th artment. IOr else	defined toleran e usei are soleh ewheres	reponsible fo	sei	smiller	s.com	
	tien	1	2	3	4	4	4	4	4
			-						
			_						
	41								

On starting the program

#### Setting Parameters

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

<sup>88</sup> 00 S	MGetDSD			
File	Set Vib Parameters	Colours	Graphs 1 Graphs2 List About	Exit
/	Open		Be very careful interpreting res affected by machine temperature angst	ults. Some parar or ground con in the Vib Depa
			Item	1

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.

Vibrator Parameters							
Oritical and Important Stems			Other Items				II man
Parameter	Value	Validate	Parameter	Value	Tolerance	Validate	Load
Mass of Mass	4700	R	Marine Profession	C1 6.4		17	
twee of Baseplate	1584	F	Value Enlanty	G1 C-1		e l	THE REPORT
laid Dawn Weight	28294	F	Times of Balanta	CI GA		6	Save
tych suite Force	27724	P	(orden is position			10	
ass Rated Stroke (%)	97	F	11/12/07	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			MnGv	2		- M	Get
oftware Versen	4.1.06		Dither Prequency	500			Re-
erçile Rate	2	17	Other No.	5		-	
her Time	C Ma (Fin	P	Forth Readeration				
ster (ype		20	ERDC. Ponderadors	-	/		
erva Made	(* Raw ( Filtered	15	Mass Back Gain	125		P	
ressure Switch	( Yes ( No	P	Valve Back Gain	1 1		12	
uto Level	C Yes (* No	F			- 102	3	1998
			Mass Offset	0.0	2	R	Clear Values
igh Drive	75	Æ	Valve Offset	0.0	.5	5	
aw Drive	75	F				-	C market market
In High Drive	70	<b>F</b>	torque ortset		61		Cear Checks
In Low Drive	55	<b>F</b>	anima and 1	[m]	Eas.		
		1	Serve Gain		1.02		
se Line Filter	(F Yes (C No	×	Servo Cutoff Frequency	350	(5)80	×	
	V Province and the second second	100	Servo Damping	-65	.2	17	
PS R5232	9600/8/WONE/1	14					
nalog Radio Level	1	P	Of Compressibility	180	40	R	
	E.		Of Vecosity	4	6	9	
DUR FUNCT	12		Olivadaaa	1	1	5	
ado Frequency 1	425.1875	R	Ce ceverage	-35			
ado Frequency 2	436.1875	P	Spool Gam	320	180	Y	Arrent.
adio Frequency 3	438.1875	9					Lo Pacept
ado Frequency 4	423.1875	P	(Nacional Control of C			Steers .	
ido frequency 5	439.1975	9	PRESNATCHES PLAT	onair in Important Them's	ve result in an En	ar read -	
adio Frequency 6	421.1875	P	Weamatches	ILMI 'OBW Item' will rem	it is a Warning Fla	ag:	
edio Prequency 7	0	E.	15-			-11	194-19-19-
adio Frequency 8	0	F	Default Values	P Default Tol.	Def	ault Checks	Cancel
adio Frequency 9	0	E.	Contract Contractor				

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. <u>And remember that a file entry that is</u> <u>out of the tolerance specified does not necessarily mean there is a problem!</u> 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

<sup>88</sup> 00 S	MGetDSD			
File	Set Vib Parameters	Colours	Graphs 1 Graphs2 List Abou	t Exit
	Spen Open		Be very careful interpreting re affected by machine temperatur angs	sults. Some parar e or ground con t in the Vib Depa
			Item	1

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.

٠	Item	V2 1553	V03-1555	V4-294	V-05 1580	V6-1561	¥7-1962	V05-1601	V9-1587	15974 +
	Host ID	b90c27	b90c13	3,30E+65	b90c46	b90c21	b90c1f	b88a63	b90c49	690
	Mass of Mass	4700	4700	4700	4700	+700	4700	4700	4700	47
	Mass of BP	1584	\$584	1584	1584	1584	1584	1005	1584	15
	HoldDown	29294	28294	29294	29294	29294	28294	28294	28294	29
	Hydraulic Force	27724	27724	27724	27724	27724	27724	27724	27724	27
	Mass Rated Stroke	97	97	87	97	97	\$7	97		
	Software Version	4.1.06	-4.1.06	4.1.06	4:1.06	4.1.06	4.1.05	4.1.02	+1.06	- 44
	Sample Rate	2	2	2	2	2	2	2	2	
	Filter Type	(19)	And And A Course	LIN	LIN	1311	LIN	UIN	LIN	<b>1</b>
	Use Line Filter	Ye6	Yes	Yes	Yes	Ves	145	Yes	Yes	
1	Mass Polarity	-1		4	-4	-4	4		-4	
	Valve Polarity	4	1	4	1.	-4	4	4	4	
	Torque Polarity	-1		-4	4	-1	4	-4	4.5	1000
	Mass Back Gain	.125	.325	,125	.125	.125	.125	.125	.125	1
	Valve Back Gain	1	1	1	1	1	1	1	1	
	Mass Offset	-0.035	0.060	0.080	-0.028	-0.176	-0.155	0.025	-0.024	.0.6
	Valve Offset	0.031212	-0.004195	-0.002022	-0.013324	0.018463	0.034513	0.060591	0.002288	0.06
	Torque Offset	-0.001291	0.083906	0.011608	0.018427	0.002003	0.002358	-0.013141	-9.560000	0.05
	Servo Gaini	0.020359	0.019593	0.016960	0.020113	0.019238	0.021067	0.017528	0-023779	0.01
	Servo Cutoff	341.8387	322.8885	435.8782	281,4306	252.0791	369.9917	355-1164	335,0255	362
	Servo Damping	0.65676153	0.69027525	0.62224352	0.68387599	0.66704243	0.67045134	0.65302342	0.66246587	0.649
٠	Of Compressibility	175.3772	174.6766	187.4568	197,4052	157,2076	198.0839	101.0755	170.4338	384 *
	4 00 00 0	3 4								•

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

#### Colours

an S	MGetDSD							
File	Set Vib Parameters	Colours G	raphs 1	Graphs2	List	About	Exit	
	Open 🛃		Be very c fected by	areful into y machine	erpret temp	ing resu erature angst i	lts. So or gro n the \	ome parameters und conditions Vib Department
	▲ Item		V2 :	1563	VC	)3-1555		V4 - 294

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

Colours	×
DPG Good Bad Warning Other	
	Preset 1
	Preset 2
👩 Test	Preset 3
Accept	Cancel

#### Colour Dialog

List	ing Results									
an S	MGetDSD									
File	Set Vib Parameter	s Colours G	Graphs 1	Graphs2	List	About	Ex	it		
	Open	a	Be very c ffected by	areful int y machine	T ( XI	ext ML	ults. or g	Some parameters round conditions	have no d . You, the	lefined t user are
	▲ Item		V2 :	1563	V	angst 03-1555	in th	ve Vib Department V4 - 294	t. (Or elsev V-05 1	vhere) L580

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

4	A	8	c	D	E	Ŧ	G	н
1	Get DSD Result	4						
2	File : 000GetDsds-l	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	124
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	4.1.00	4.1.00	4.1.06	41.64
13	Sample Rate	2	2	2	2	2	2	2
14	Filter Type	LINE	MIN	LIN	LIN	LIN	UN	LIN
15	Use Line Filter	Yes	Yes	Ves	Ves	Yes	Nite	Yes
16	Mass Polarity	-1	-4	-1	-4	1	-1	-1
17	Valve Polarity		4	1	1	-1	1	1
18	Torque Polarity	-1	-1	-1	4	4	4	-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 viscosity
- Oil leakage ٠
- ID result 1 •

- Spool gain •
- ID result 2

Colours	
Staphs 1	
Colours Full Height Restore Exit	
	Vibrator GetDSD
000GetDsds-DemoTest.csv	Page 1

Graph colours can be adjusted as you see fit.

Graph Settings	×
Backgrounds	0
Colour From Colour To Colour Solid	🧒 Defaults
Data Area 🛛 🚺 🗭 Horizontal 🤇	🔍 Vertical 🔍 Solid
Legend Area 🛛 🕜 Horizontal 🤇	🔍 Vertical 🔍 Solid
Outer Frame Generation Outer Frame	Vertical O Solid
Bar	
Bar Colour Good Status 🔗 Defaults	Seismutic is.com
Bar Colour Bad Status	Logo Position
Bar Outline	0 0
	C None
Open PDF after Create	🛃 ок

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

	퉬 Logos 🛛 🚽	16/06/2018 8:55 PM	File folder	
	\mu Projects	1/02/2018 12:34 PM	File folder	
	SavedSettings	7/06/2018 1:34 PM	File folder	
	🐌 Temp	26/06/2018 5:26 PM	File folder	
	SM_Registration.REQ	19/06/2018 1:44 PM	REQ File	1 KB
	SMGetDSD.def	26/06/2018 5:29 PM	DEF File	34 KB
	SMGetDSD.exe	26/06/2018 12:00 PM	Application	1,331 KB
	SMGetDSD.SMR	19/06/2018 1:45 PM	SMR File	1 KB

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.



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.

6	ranh Cottings							×
	irapii settings							<u> </u>
	Backgrounds							1
		Colour From	Colour To	Colour Soli	d	📀 Def	aults	
	Data Area				<ul> <li>Horizontal</li> </ul>	O Vertical	O Solid	
	Legend Area				<ul> <li>Horizontal</li> </ul>	O Vertical	C Solid	
	Outer Frame				Horizontal	O Vertical	C Solid	
ľ	Bar					1		1
	Bar Colour Good Status			ت 🌍	Defaults			
	Bar Colour Bad Status					Logo Position		
				1 I I Outline		0	۲	
						C Nor	ne	
	Open PDF	after Create				•	ОК	

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