

VibdataPro

Professional Vibration Analysis Software

User Manual

Version 1.30

For Use with the Following Range of AVI Vibration Meters

HAAVI – AVIO16T Tri Axial Vibration Meter HAAVI – AVIO16S Single Axis Vibration Meter

www.avinstruments.co.uk

Thank you for buying AVI software to compliment your AVI vibration meter. I am sure you will find the software and the service to be of the highest quality but if not, then please feel free to write to me personally and I will ensure that your needs are dealt with immediately.

This manual is designed to show you the operation of the goods you have purchased and a very brief insight into vibration sources.

If you would like to know more about any of our other products and services then please visit www.avinstruments.co.uk or telephone us on +44(0)1767 627004.

Richard Tyler

Managing Director

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Copyright

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Minimum System Requirements

- Pentium 4 1.5 GHz or Athlon XP 1500+ processor or higher
- 200MB Free hard disk space
- 256MB Ram
- Windows XP SP3, Windows Vista SP2, Windows 7
 - Minimum operating system requirements also apply

HAAVI - All Models

One free USB port

Contacting AVI Ltd

This manual contains complete operating instructions for the AVI software VibdataPro, read it carefully and you will quickly become familiar with its features and operation.

If you do encounter problems with the operation of your software please feel free to contact customer support with your enquiry on: -

Telephone: +44 (0)1767 627004	
Website: www.avinstruments.co.uk	
Email: sales@avi.f2s.co.uk	

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Chapter 1

Installing VibdataPro

The installation of VibdataPro requires full administrative privileges on a PC running Windows XP SP3, Windows Vista SP2 or Windows 7 to prevent installation issues. Please seek advice from your IT manager if required.

Unplug any vibration meter device.

If you have downloaded VibdataPro double click the saved file named **VibdataProSetup.exe** to start the installation.

Alternatively if you have a VibdataPro installation CD, insert the CD into your CD or DVD ROM drive. The CD should auto run the setup program after a few seconds. If this does not happen then click the **START** button and select **RUN**.

At the prompt type: -

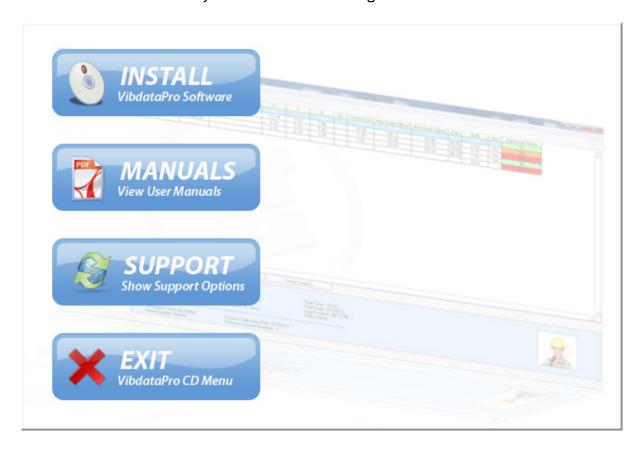
D:\vibdataprosetup.exe

(Where "D" is the designated letter for your CD or DVD ROM drive)

On systems running Vista or Windows 7 a screen similar to the one below may initially be shown, click **Run** to continue and start the installation.



The VibdataPro menu system will run showing the screen below: -

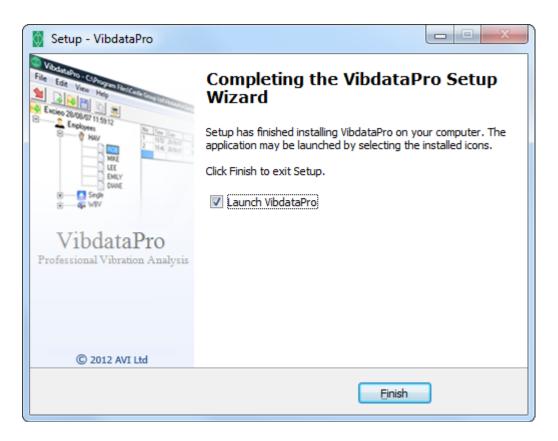


Click on **INSTALL VibdataPro Software** to begin the installation of VibdataPro and the following screen will be shown:-



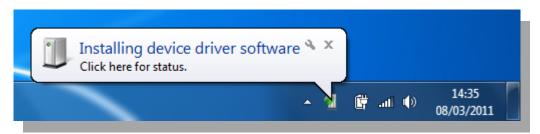
Follow the on screen instructions carefully to install your software correctly.

During the installation of VibdataPro the USB device drivers for your vibration meter will be automatically installed



Click Finish to complete the installation.

Your vibration meter may now be attached to a spare USB port on your laptop or desktop. The first time either are attached windows will automatically configure the devices for use: -



When complete you will be shown a message similar to the one below: -



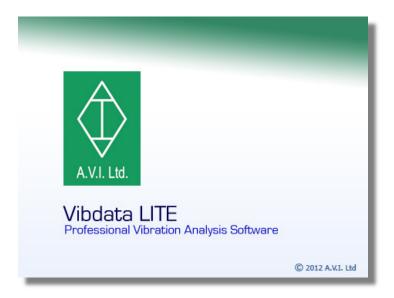
Click on **EXIT VibdataPro CD Menu** to exit the menu system.

Chapter 2

Vibdata LITE

AVI instruments are supplied with a free version of VibdataPro which has limited functionality.

Every time the software is opened, it will operate with limited functionality in LITE mode until the software has been unlocked. See **Registering** for further details.



This manual describes the functions that are available in the registered version of the software.

Functionality

In Vibdata LITE the following viewing screens are either unavailable or will display Not available in LITE mode: -

- > Exposure Calculator
- ➤ Merge / Combine
- Adding Images
- > Trend Analysis
- > Add New Record

Registering

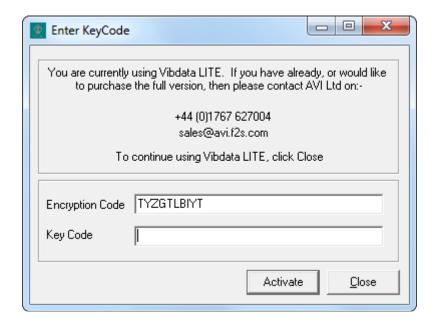
Vibdata LITE can easily be unlocked by entering a valid Unlock Key Code which can be purchased at any time.

If or when you have purchased VibdataPro you can unlock the software using the 3 Step Procedure below.

Please note that the Encryption Code provided in Step 1 is randomly generated, therefore if the software is removed and installed either on the same PC or another PC you will need to repeat all the steps outlined below.

Step 1

Copy the Encryption Code from the 'Enter KeyCode' screen. This displays each time VibdataPro LITE starts, or alternatively it can be opened by selecting 'Help', 'Licensing...' from the toolbar menu.



Step 2

Copy and Paste the Encryption Code into an email along with your AVI vibration meter instrument serial number.

Please send the email to sales@avi.f2s.co.uk

Alternatively please contact AVI on 01767 627004

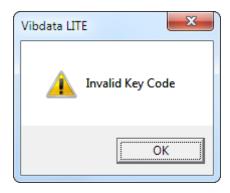
Step 3

Customer details will be validated and a valid Key Code will be issued by either email or telephone.

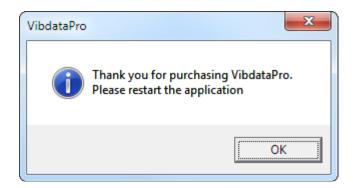
Enter the issued Key Code in the blank Key Code cell and press 'Activate'.

All Unlock Key Codes must be entered in UPPER CASE.

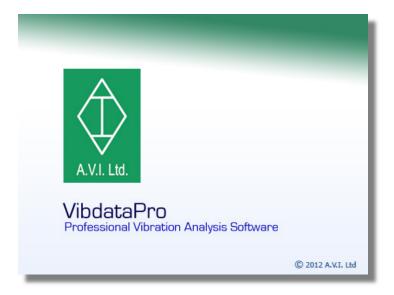
If the entry is not valid then the following will be displayed: -



If a valid Unlock Key Code is entered the following will be displayed. Please click '**OK**' and then restart VibdataPro for the Unlock Key Code to take effect.



Your software is now registered and each time you start the software it will open with no restrictions.



Chapter 3

Connectivity

Downloading recorded data from your vibration meter into VibdataPro is only possible if you are using the correct cables and the required device drivers are correctly installed during installation of the software.

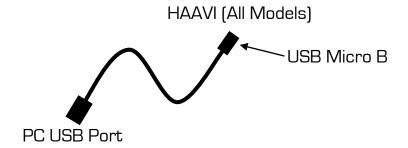
HAAVI Instruments (All Models)

To download recorded data from your HAAVI instrument into VibdataPro requires a spare USB port on your desktop or laptop and the installation of the supplied USB device driver which is automatically installed during the installation of VibdataPro please see **Installing VibdataPro**, **Chapter 1** for more information.

Regardless of your operating system the USB device driver **MUST** be installed to allow communication between your HAAVI instrument and your PC.

If the incorrect device driver or no device driver is installed then your instrument will not download.

Ensure your instrument is powered **OFF** and then connect the supplied USB cable as shown below: -



Switch your HAAVI instrument **ON** and then the instrument is ready for downloading data into VibdataPro.

Chapter 4

Getting Started

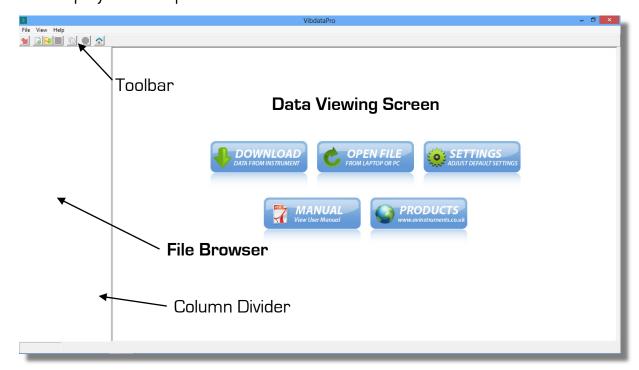
VibdataPro can be run using either of the two options below: -

- 1. Double click on the desktop icon or single click on the quick launch icon, both of which are named **VibdataPro**. Note these shortcuts are only available if selected during the installation process. Quick launch on Windows 7 will need to be turned on, alternatively simply pin the desktop icon to the taskbar.
- 2. Click the 'START' button and select 'All Programs', choose the folder 'VibdataPro' and finally select the application 'VibdataPro'.

Please be aware that VibdataPro is generic software for all models of AVI vibration meters. Some display parameters may not be available for your specific instrument.

Opening Home Screen

The display area is split into two sections.



The left hand column named the 'File Browser' will display details of any file opened within VibdataPro.

The right hand area named the 'Data Viewing Screen' displays downloaded data and instrument information relevant to the recording.

The Home Screen also contains quick access buttons to useful features of VibdataPro.

The File Browser or Viewing Screen can be resized horizontally by grabbing and moving the column divider.

At the top left of the screen is the Toolbar which gives quick access to the commonly used functions within VibdataPro.

Toolbar Options

The following toolbar options are available (some options listed below require an active file to be open): -

File Menu

Download	Download data from an instrument	
New	Create a new blank folder	
Open	Open a saved file	
Save	Save the current data to a file	
Save As	Save the current data to a new file	
	specifying a new name	
Close	Close the active data file	
Close All	Close all the open data files	
Print	Print current view	
Exit	Close the application	

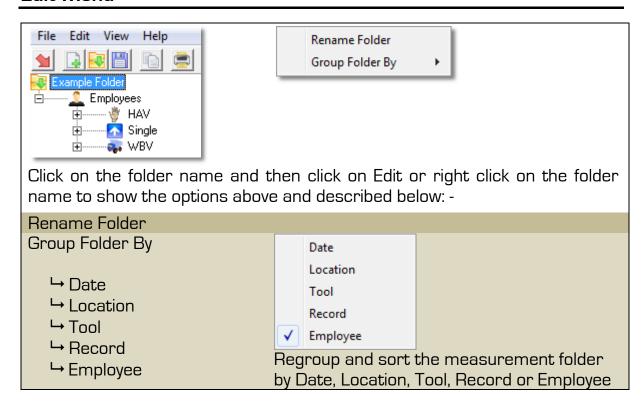
View Menu

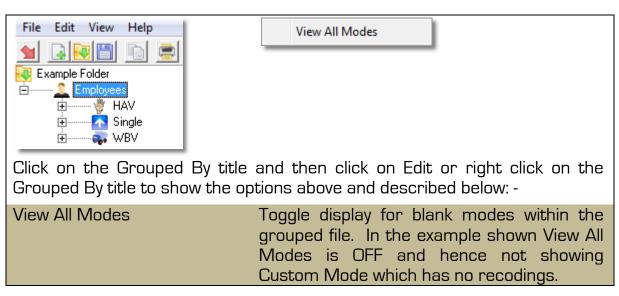
Toolbar	Toggle toolbar on / off
Settings	Open the Options window for VibdataPro
	settings and user preferences

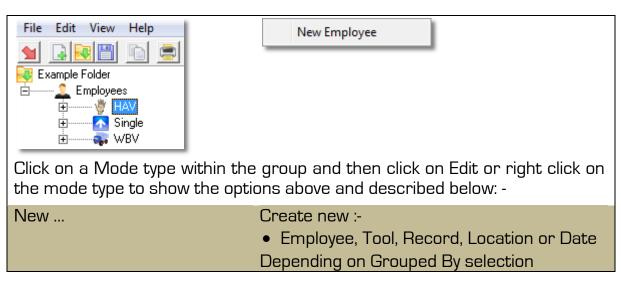
Help Menu

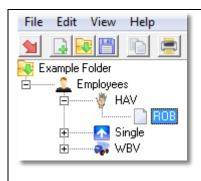
VibdataPro Help	View the help file
AVI Homepage	Opens AVI's Website in a browser window
About VibdataPro	Display the current software version

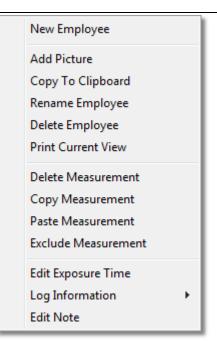
Edit Menu











Click on a recording and then click on Edit or right click on the recording to show the options above and described below: -

New	Create new :-Employee, Tool, Record, Location or Date	
Add District	Depending on Grouped By selection	
Add Picture	Add a picture to file	
Copy To Clipboard	Rename either: -	
Rename		
	Employee, Tool, Record or Location	
	Depending on Grouped By selection	
	It is not possible to rename by Date	
Delete	Delete Individual selection of either: -	
	Employee, Tool, Record, Location or Date	
	Depending on Grouped By selection	
Print Current View	Print current view	
Delete Measurement	Delete selected indivdual measurement	
Copy Measurement	Copy selected measurement	
Paste Measurement	Paste selected measurement into group	
Exclude Measurement	Exclude / Include selected measurement	
Include Measurement	from calculations.	
Edit Exposure Time	Enter a new Exposure Time	
Log Information	Edit	
	Copy to Clipboard	
→ Edit	Edit Log Information such as Tool, Employee	
→ Copy To Clipboard	Copy all Log Information to the clipboard	
Edit Note	Add a Note description to the measurement	

Toolbar Buttons



From left to right, the buttons perform faster access to the following common actions: -

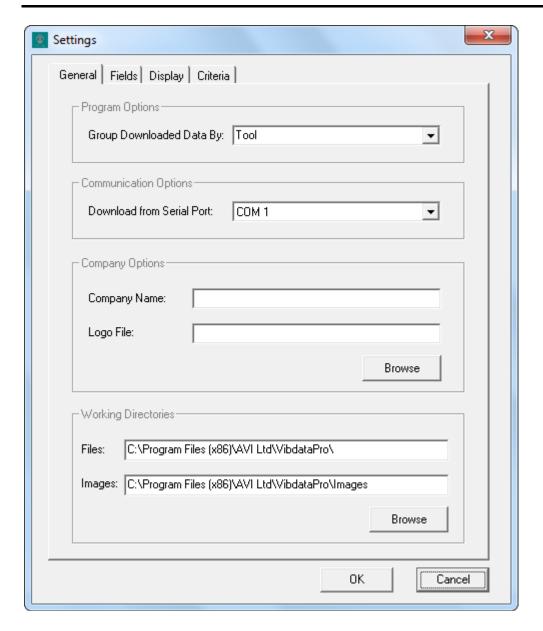
- Download data from an instrument
- Create a new blank folder
- Open a saved file
- Save selected data to a file
- Copy current view data to clipboard
- Print current view
- ♠ Home Screen

User Preferences and VibdataPro Settings

To change user preferences and settings within VibdataPro, select 'Settings' from the 'View' menu.

Some settings may require a restart of VibdataPro to take effect.

General Tab



Program Options

Group Downloaded Data By:

Select how downloaded data will be grouped. The available grouping methods are by: -

Employee, Tool (Default), Record, Location, Date

Data can be regrouped at any time if required after it has been downloaded.

Communication Options

Download From Serial Port:

This is an automated process between your PC and VibdataPro and therefore should not require changing; however the setting can be made manually if required by selecting which COM port has been assigned to your meter by your operating system.

Company Options

Company Name:

Enter your company name here.

Logo File:

Browse to the location of your company logo image file which is used when printing documents.

The image size is 170(W) * 57(H) pixels and must be in the .bmp or .wmf format.

Working Directories

Files:

Point to the folder where you wish to open and save your data.

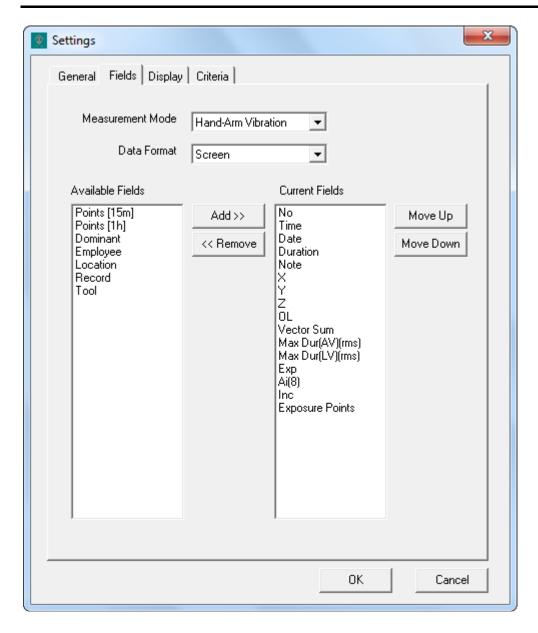
Images:

Point to the folder where you wish to open image files from.

Note that image files are $100(W) \, * \, 100(H)$ pixels and must be in either of the following formats: -

- .jpg
- .bmp
- .gif
- .png

Fields Tab



Use the Fields tab to select which information is: -

- Displayed on screen
- Copied to the Clipboard
- Printed

Each measurement mode can be set independently using the drop down box labelled **Measurement Mode**. The available modes are: -

Hand-Arm Vibration	HARM mode settings	
Whole Body Vibration	e Body Vibration WBV mode settings	
Single Axis	ngle Axis Single Axis mode settings	
Custom	Custom mode settings	
VDV	Specific settings for Vibration Dose Value	

Each mode can also be set independently for data displayed on your screen, data copied to the clipboard or which data is printed.

Use the drop down box labelled **Data Format** to select any of the following options: -

Screen	Select for parameters displayed on screen
Clipboard	Select for parameters copied to clipboard
Print	Select for parameters to be printed

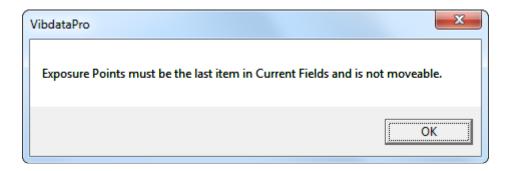
Parameters in the Current Fields list will be displayed, copied or printed.

Highlight items under **Available Fields** and click on https://doi.org//

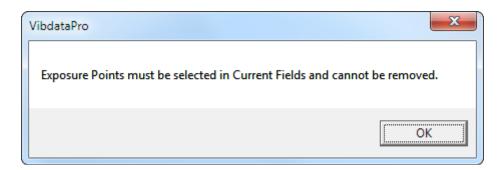
To remove parameters, highlight the item and click on << Remove

To change the order in which the parameters are displayed, copied or printed, highlight a parameter in the **Current Fields** list and then use the **Move Up** or **Move Down** buttons to move the selected item up or down the list.

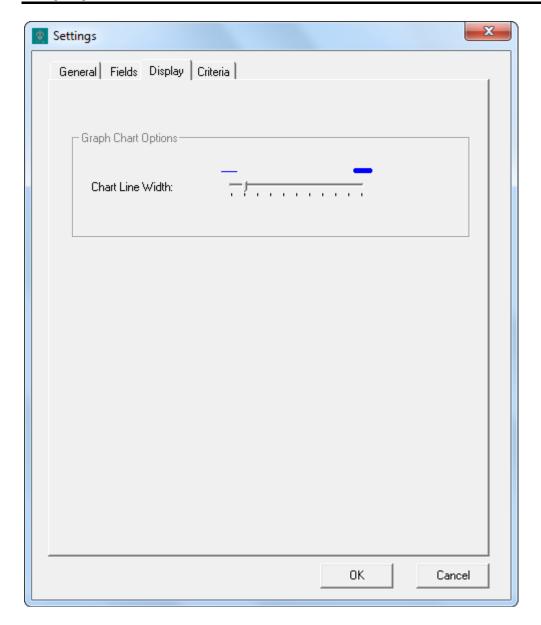
If **Exposure Points** have been added to the **Current Fields** list then this parameter must always be the last item in the list. Attempts to move the item will display the following message: -



Attempts to remove the item will display the following message: -



Display Tab

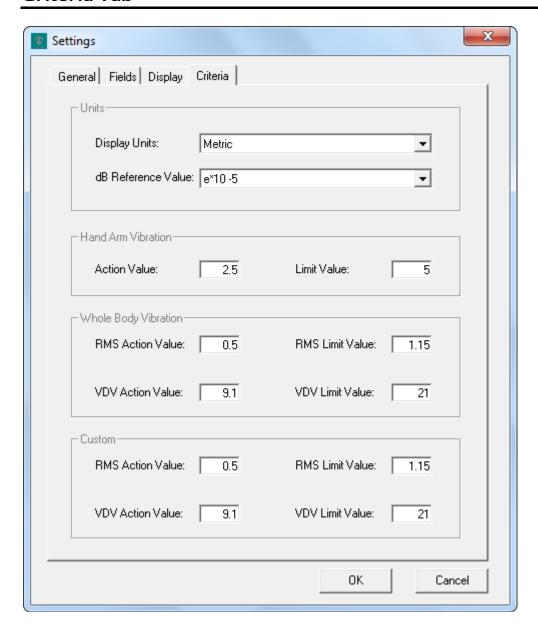


Display Options

Chart Line Width:

Move the slider to determine the line width used for graphing.

Criteria Tab



Use the Criteria tab to change the Action and Limit values as required.

In the UK, The Control of Vibration at Work Regulations 2005 stipulates the following Action and Limit Values: -

Vibration Type	Action Value (m/s²)	Limit Value (m/s²)
Hand Arm	2.5	5.0

Chapter 5

Downloading, Opening and Saving Data

Downloading Data

Please ensure the required drivers have been installed during installation, see **Chapters 1 and 2** for more information.

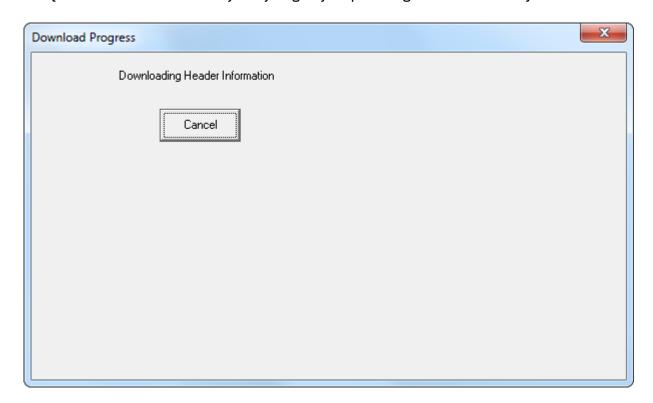
Downloading data from your instrument is achieved by connecting your instrument to your PC or laptop via the supplied USB cable.

To download the data from your AVI vibration meter, follow the procedure below: -

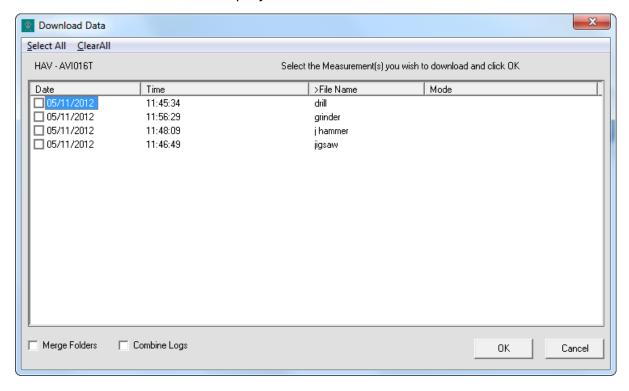
- 1. Ensure that the vibration meter is turned **OFF** and then connect the USB cable to the PC.
- 2. Turn the vibration meter **ON** and wait until the unit reaches the measuring display screen.
- 3. Select '**Download**' from the File menu or click on the Download icon **1** and VibdataPro will attempt communication with your HAAVI Meter.

Once an instrument is identified the header information for the available measurements will be downloaded.

(Note that screens may vary slightly depending on instrument)

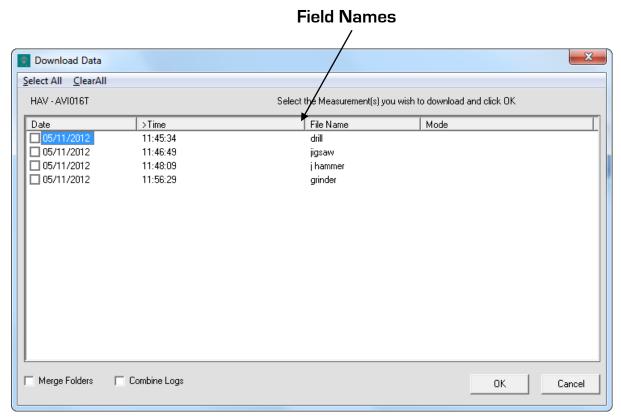


4. Once the header information is downloaded the list of available measurements will be displayed.

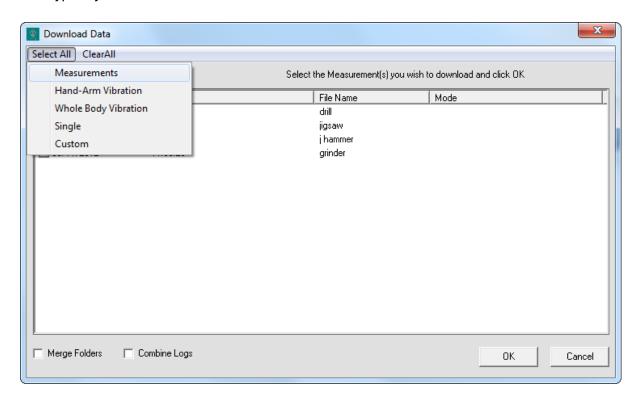


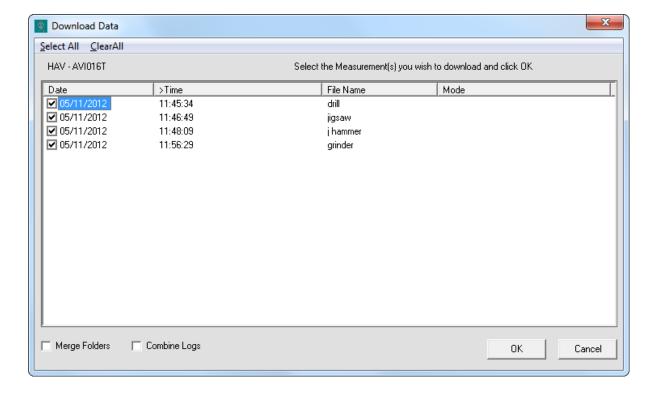
Available measurements can be sorted by clicking on the field name. Sorted fields are identified by having the symbol '>' at the left of the field name. Reverse the order by clicking on the field name again.

The image above sorts the fields by File Name and the image below is sorting by Time.



5. Select which measurements are required by clicking in individual tick boxes or by selecting 'Select All' and then choosing which measurement types you wish to download.

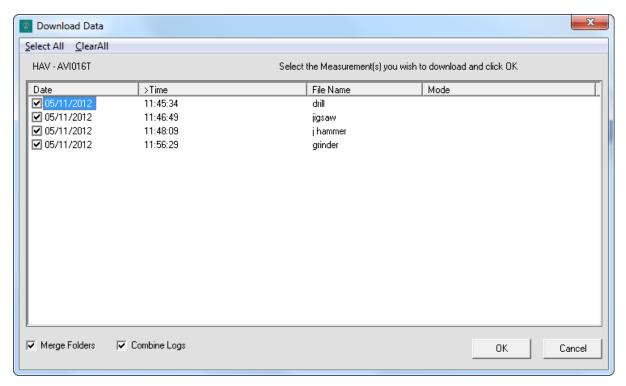




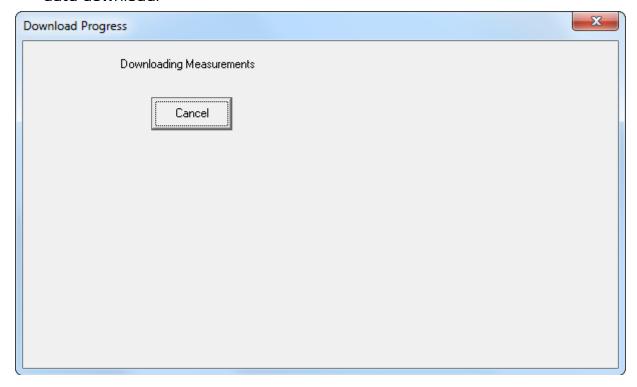
If required select Merge Folder and / or Combine Logs using the tick boxes.

Selecting **Merge Folders** will place the data to be downloaded into the active folder that is open in VibdataPro. If no folder exists or if this option is not selected then the data will be downloaded into a new folder.

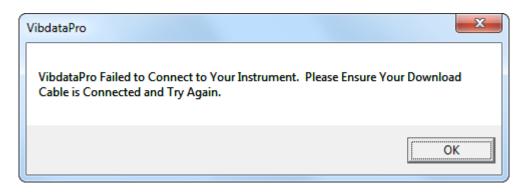
Selecting **Combine Logs** will combine each measurement of the same name and of the same type into one measurement.

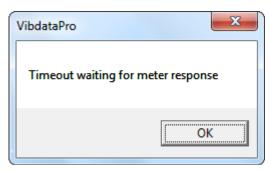


7. Once all preferences have been selected, press the **OK** button to start the data download.



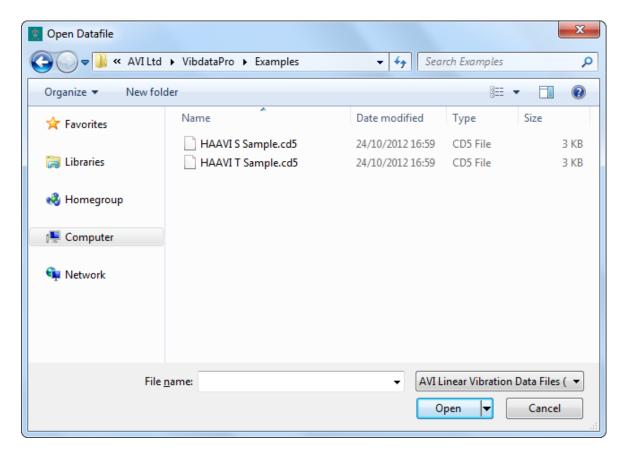
If a response from your instrument is not received or the procedure cancelled then you will be shown one of the following error messages. If this occurs please see 'Chapter 3, Connectivity' for instructions on connecting your instrument.





Opening Data

To open a saved data file choose 'File', 'Open' or click the Open File 💽 icon.

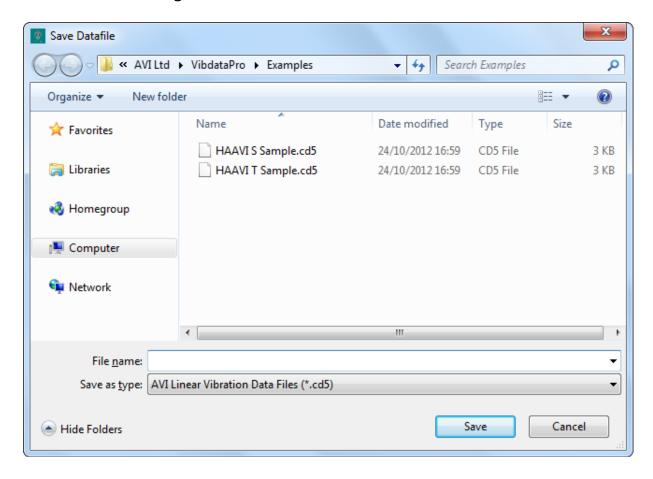


The initial default location for file storage is found under **Working Directories** from the **General tab** of **Settings**, this location can be changed if required, however VibdataPro remembers the last folder location used enabling fast folder access.

To open the selected file double click on it or highlight it by a single click of the mouse button and then click on the '**Open**' button.

Saving Data

To save data to a log file choose 'File', 'Save As' or click the Save 🛗 icon.



The initial default location for file storage is found under **Working Directories** from the **General tab** of **Settings**, this location can be changed if required, however VibdataPro remembers the last folder location used enabling fast folder access.

Enter a file name and then click on the 'Save' button.

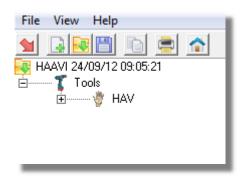
Once a file name has been specified quick saves are possible using the Save icon or 'File', 'Save'. To specify a new name, where required, use 'File', 'Save As' again.

File Browser

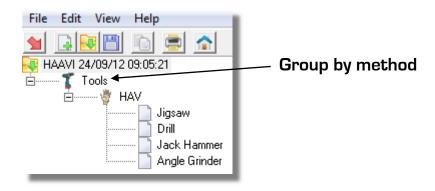
The File Browser is located at the left hand side of the screen. It is used to select which information is displayed in the Data Viewing screen.

The example below describes how to use File Browser: -

i. Open or download a file.

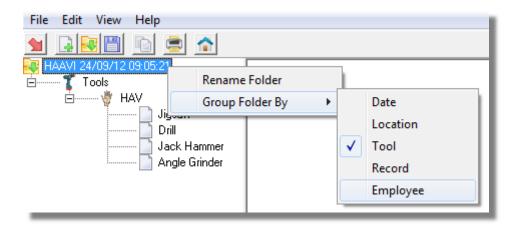


ii. Click on the '+' to the left of the vibration type icon to display the downloaded or saved file information.

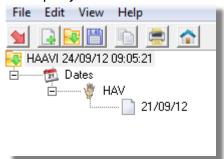


Click on the file you wish to view which will then appear in the Data Viewing Screen. By default all files are grouped by Tools, this can be changed under Settings.

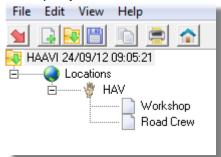
To regroup an open file, right click on the folder name and choose 'Group Folder By': -



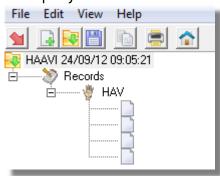
Group By Date:-



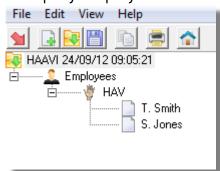
Group By Location:-



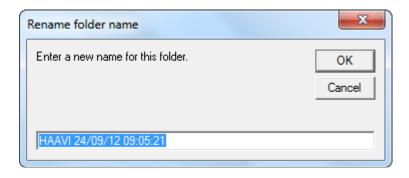
Group By Record:-



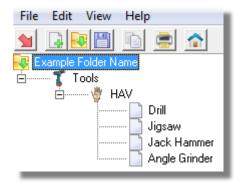
Group By Employee:-



It is also possible to rename folder names by right clicking on the folder name and selecting 'Rename Folder'.



Enter the new name and press Ok. The renamed folder will be now be displayed: -

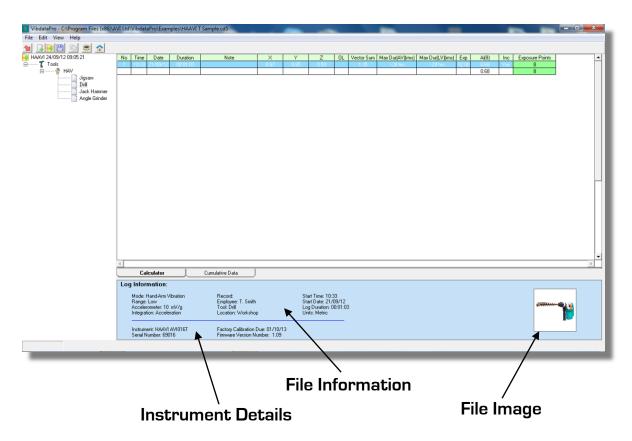


Chapter 6

Using VibdataPro

Data Viewing Screen

The Data Viewing Screen is the main area at the right hand side of the screen which shows the recorded data for the chosen file in the tree view.



Depending on the type of file open you will have the following selectable tab buttons at the bottom of the viewing screen: -

- Calculator
- Cumulative Data
- Trend Analysis

Click these to change the display in the data viewing screen.

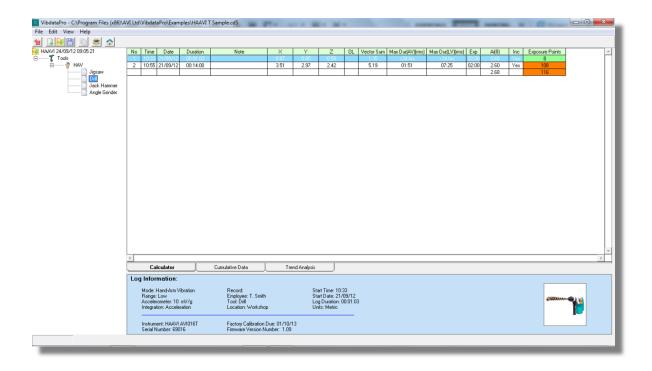
Calculator

The **Calculator** tab displays the calculated variables selected under '**Options**', '**Fields**' for the recording selected and is always available for any recording.

It is also possible to drag and combine recordings of the same mode and unit into the calculator screen. The overall combined A(8) and Exposure Points are then calculated on each recording that is in the calculator screen.

To drag and combine files place the mouse cursor over the relevant file in the Calculator View and hold down the left mouse button. The cursor changes to a Hand. Drag the Hand to a new file or folder and then release the mouse button.

Where multiple entries exist, click on the entry to highlight it. The relevant instrument details, file image and file information will be shown. The data for the selected file will also be shown when viewing different screens in the data viewing area.

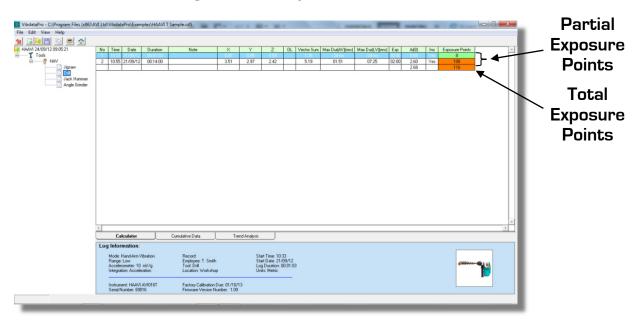


Exposure Points

The vibration exposure point system is based on the UK's Health & Safety Executive's system where vibration magnitude and exposure time are given in exposure points rather than ms².

Partial exposure points of merged recordings are added together to produce a total points exposure for a working day.

Partial points are displayed by default, Points(1hr) and Points(15m) will need selecting in order to be displayed, copied or printed. See **User Preferences** and **VibdataPro Settings** under **Chapter 4** for more information.



Vibration exposure points are only available for Hand Arm recordings with Metric units.

Each recording and the total exposure points are colour coded using the following criteria: -

Hand Arm

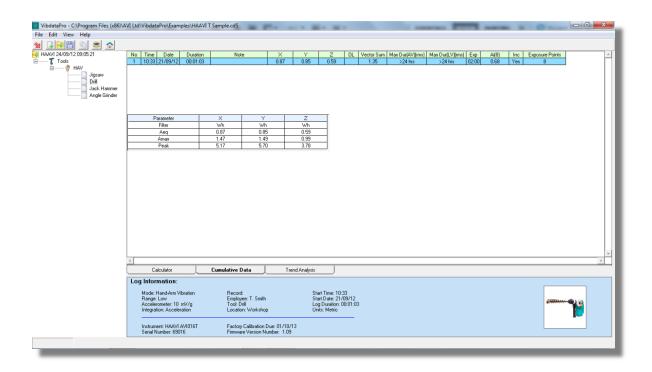
>0 & <100	GREEN
>=100 & <400	ORANGE
>= 400	RED

Cumulative Data

To view cumulative data use the **Cumulative Data** tab.

The cumulative data is a single overall figure calculated or measured over the measurement period for each available axis.

Individual data for recordings that have been combined can be viewed but are selected at the calculator screen. The information from the **Calculator** screen for the selected log is displayed at the top of the **Cumulative Data** screen to easily identify which recording is selected.

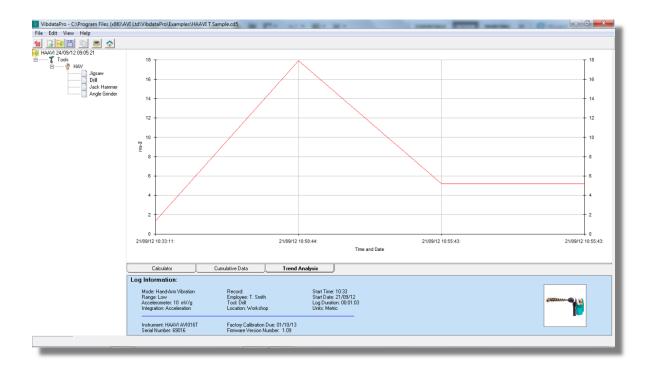


Trend Analysis

Combined **Single Axis** or **Hand Arm** recordings allow a **Trend Analysis** tab to become available.

Use this tab to plot graphically the cumulative average for each individual recording within the combined set.

The plot is graphed in the order the list is displayed in the **Calculator** screen and is extremely useful for machine monitoring.



Chapter 7

Customer Support

Warranty and After Sales Service

In the event of a fault or problem occurring with your software during the warranty period, the software should be returned to AVI Ltd in its original packaging or to an authorized agent. Please enclose a clear description of the fault or symptom.

Details of the warranty cover are available from AVI Ltd or an authorized agent.

Should you have any queries regarding the use of the software or wish to suggest future improvements or additions then please feel free to contact technical support on sales@avi.f2s.co.uk

For warranty return to: -

The Service Department

AVI Ltd 27 Sand Lane Northill Bedfordshire England SG18 9AD

Telephone: +44 (0)1767 627004 Email: sales@avi.f2s.co.uk

Web: www.avinstruments.co.uk

During the one year warranty period of your software, upgrades or bug fixes will be issued free of charge whenever they become available.

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Any documentation supplied with your product is subject to change without notice.

Software Details

For your records and for future correspondence with AVI Ltd regarding your instrument, please complete the following details: -

Software Version
Serial Number
Purchase Date