

dBdata4W Vibration

Software User Manual

Analysis software for the Castle Group Ltd range of vibration meters

GA2000 General Purpose Vibration Meter
GA2001 Tri-Axial Hand Arm Vibration Meter



Thank you for buying a Castle product, I am sure you will find both the goods 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 acoustics itself. If you would like to become a competent person in the eyes of the law, then you may like to know more about our Competent persons training course for the Noise at Work Regulations.

It is my intention for Castle Group Ltd to provide a complete range of Noise and Vibration products and Services of the highest standard. If you would like to know more about any of our other products and services then please complete the reply paid card in this manual and return it to us for prompt action or telephone on +44(0)1723 584250.

Simon Bull

A handwritten signature in black ink, appearing to be 'Simon Bull', written over a circular scribble.

Sales and Marketing Director

CONTENTS

Title	Page
Recommended Requirement	4
Installation	4
Running The Software	4
Opening Screen	5
Location Tree	5
Setting User Preferences	6
File Menu	6
Edit Menu	6
View Menu	6
Help Menu	6
Toolbar	6
Copying Data To The Clipboard	7
Acquiring Data	7
Viewing Location Data	8
Viewing Employee Data	8
Editing Employee Data	9
Transferring Data Between Employees	9
Viewing Octave Snapshots	10
Merge Two Data Files	10
Troubleshooting	11

Recommended Requirements

Pentium Processor or 100% compatible
10MB Free disk space (not including data files)
32MB Ram

One 9-pin RS232 Serial Communications Port.
An adapter may be used in case of a PC having a 25-pin RS232 serial port
An USB-Serial may be required for PCs without a RS232 serial port (Available from Castle Group Ltd)

Windows 95, Windows 98, Windows ME, Windows 2000 or Windows XP

Installation

For use on a PC running Windows NT, 2000 or XP administrative privileges are required for all initial installations of Castle Group Ltd software. If a user does not have such privileges then an installation will not run fully. Should a user not be familiar with such requirements then they should speak to their IT Department or PC vendor.

An error given that a file cannot be found during installation of any dBdata indicates that the user does not have required administrative privileges to install the software. In this instance the user should speak with their IT department or PC vendor.

In order to fully complete installation restart the PC after initially installing the software, then log back in as an Administrator, and run the software once to ensure correct and full installation.

To install the dBdata4W Noise program insert the CD into your CD or DVD ROM drive.

The CD should autorun the setup program, however, should it not click the START button and select RUN.

At the prompt type D:\SETUP.EXE. (Where "D" is the designated letter for your CD-ROM drive.

Then follow the on screen instructions.

Once the installation is complete, restart you computer before you commence running the program.

Running The Software

Once the installation of the software is complete, the program shortcuts are stored (by default) in a folder entitled 'Castle Group Software'.

Click the START button and select programs.

Then select 'Castle Group Software'.

Click on the icon called dBdata4W Vibration

Opening Screen

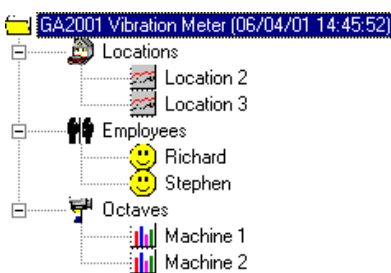


The display area is split into two sections.

- The left hand column will display details of any file opened into dBdata4W Vibration, the log locations, employees and octave used when storing data with the vibration meter.
- The right hand box will show the data from the selected log, employee or octave either in tabular or graphical form.

The toolbar gives quick access to the commonly used functions.

Location Tree



The tree shows each location, employee and octave downloaded from an instrument. Instrument details are shown at the top of the tree. To expand or collapse a branch of each tree either click on the + or - that appears or double-click on the words **Locations**, **Employees** or **Octaves**. To view a specific Locations, Employee or Octave click once on a particular selection, e.g. clicking on Machine 1 would show the Machine 1 Octave in the right hand screen.

To change the label associated with each location, employee or octave click on the required name to be altered then click on it again. The current label will be highlighted, allowing text to be typed in order to change the label.

Setting User Preferences

Company Name	Enter your company's name if required
Logo File	Set a company logo on printouts. This should be an image file measuring 226x74 pixels
Display Option	Use either 2D or 3D display for graphs
Chart Line Width	Alters the width of the line used in graphs (where applicable)
Default Datafile Directory	Use the Browse function to select the default location of dBdata4W Vibration data files
Communications Options	Select the COM Port (Serial Port number) which is being used to acquire data from a GA2000 or GA2001

File Menu

Acquire	Upload data from a GA2000 or GA2001
Open...	Open a previously saved data file
Merge	Merge 2 data files
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 current data file
Print	Print the currently selected log, employee or octave
Exit	Leave dBdata4W Vibration

Edit Menu

Copy to Clipboard	Copy the selected log, employee or octave data to the Windows clipboard for use in another programme
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View Menu

Toolbar	Toggles the toolbar on and off
User Preferences	Open the preference box

Help Menu

Contents	Open the Help file contents
Search for Help On...	Open the Help file search facility
Connect to Castle Website	Opens Castle's Website in a browser window
About dBdata4 Windows	Shows the current version and Castle contact details

Toolbar

From left to right, the buttons perform the following actions:

Acquire	Upload data from a GA2000 or GA2001
Open...	Open a previously saved data file
Save	Save the current data to a file
Print	Print the currently selected log, employee or octave
Copy to Clipboard	Copy the selected log, employee or octave data to the Windows clipboard for use in another programme

Copying Data To The Clipboard

The table data from Locations, Employees and Octaves can be copied into the Windows clipboard and subsequently pasted into another program (e.g. Microsoft Excel).

To do this,

- Select the Location, Employee or Octave to be copied
- Move the mouse pointer over the data table and press the right mouse button
- Select **Copy To Clipboard** from the menu
- Switch to the program you wish to copy the data to
- Use the Paste function in the required program to paste data

When copying data to a spreadsheet program (e.g. MS Excel) select the desired starting cell the data is to be copied into before pasting the data.

Graphs can also be copied into other applications. This is done in the same way as table data though the graph itself must be displayed first.

When copying graphs between applications it may be necessary to use the **Paste Special** option (commonly found in Microsoft Word or Excel) and selecting **Bitmap** from the menu that appears.

Acquiring Data

Clicking on the Acquire button from the toolbar or opening the File menu and selecting Acquire will bring up the data acquire box.

The first box to appear will be a reminder to ensure that the GA2000 or GA2001 is connected to the PC via the cable supplied with the software. Also, ensure that the correct RS232 COM port has been selected in the User Preferences.

Click OK when ready to proceed.

The instrument's type (either GA2000 or GA2001) will be shown along with it's serial number.

The download options allow the user to select which Locations and Employees data are to be downloaded. Each Location and Employee has a tick box beside it and can be selected by clicking on the required Location or Employee.

Any octave data can also be downloaded by clicking on the **Download Octave Data** tickbox.

Once each Location, Employee and octave data has been selected, as required, click on the OK button. The data will then be downloaded.

Viewing Location Data

Selecting a location from the data tree will, by default, show the table view of the location selected.

The data is shows each logged value, the date and time it was taken, the filter settings and measurement used.

To view the data in a graphical form move the mouse pointer over the table click the right mouse button and select **Show as Chart** from the menu that appears.

A note can be created to associate with each location. This is shown when displaying a graph and included on any printouts of that particular location. To edit a note move the mouse pointer over the data, click the right mouse button and select **Edit Note** from the menu.

Viewing Employee Data

Selecting an Employee from the data tree shows a table of values stored for that employee.

The data shown in each column is:

No.	Measurement number for each employee recording
Date	Date the recording was taken
Time	Time the recording was taken
Note	User notes for the measurement
X (ms ⁻²)	The value from the X axis
Y (ms ⁻²)	The value from the Y axis
Z (ms ⁻²)	The value from the Z axis
XYZ	The sum of squares calculation
OL	Shows if any axis overloaded during the measurement process
Max Dur	Maximum duration allowed for the particular measurement
Exp	Exposure time for the measurement
A(8)	Vibration dose value for the measurement
Inc	Include in final calculation

At the end of each table is an A(8) value. This is the total A(8) value for all the measurements for the employee selected.

This value is calculated for all the measurements which include **Yes** in the include column. To exclude a measurement move the mouse pointer over the desired measurement and press the left mouse button to select the measurement then the right mouse button. Select **Exclude Measurement** from the menu that appears.

A measurement can be included again by performing the same operation and selecting Include Measurement.

Editing Employee Data

The Note, Exposure Time and A(8) criterion level (used to calculate Max Duration) can be altered when viewing employee data.

To Edit a note:

Move the mouse pointer over the data measurement to be altered and press the left mouse button to select the measurement then the right mouse button. From the menu that appears select **Edit Note**.

Type the desired text in the box and click **OK** to confirm the changes.

To Edit Exposure Time:

Move the mouse pointer over the data measurement to be altered and press the left mouse button to select the measurement then the right mouse button. From the menu that appears select **Edit Exposure Time**.

Type the desired time in the box and click **OK** to confirm the changes.

To Edit A(8) Criterion:

Move the mouse pointer over the data measurement to be altered and press the left mouse button to select the measurement then the right mouse button. From the menu that appears select **Edit A(8) Criterion Level**.

Type the desired value in the box and click **OK** to confirm the changes.

Transferring Data Between Employees

It is possible to transfer measurements between two different employees.

To do this

- Move the mouse pointer over the required measurement and press the left mouse button to select the measurement then the right mouse button.
- Select **Copy Measurement** from the menu that appears.
- From the Employee Tree select a different Employee
- Move the mouse pointer over the measurements for the 2nd employee click the right mouse button and select **Paste Measurement** from the menu.

The copied measurement will appear at the bottom of the list of current measurements and the Total A(8) level will be recalculated to reflect the additional measurement.

Viewing Octave Snapshots

Selecting an octave from the Data Tree will bring up a graphical representation of the required octave data.

Details, information and numerical figures are shown at the base of each graph.

Comparing Two Octave Snapshots

Two different octave snapshots can be compared against each other. To do this:

- Select the 1st required octave snapshot from the Data Tree
- Move the mouse pointer over the graph and press the right mouse button
- Select **Compare With Snapshot** from the menu
- Click OK on the box that comes up
- Double click on the 2nd required octave snapshot

Merge Two Data Files

Two or more data files can be merged together. To do this:

- Open the first data file required
- Click on the **File Menu** and select **Merge**
- Open the second data file required
- Repeat steps 2 and 3 as required

Each opened data file is then shown in the tree menu. To save the merged files click on the **File Menu** then select **Save** or **Save As...**

Troubleshooting

Checking COM Port Settings

When using the USB-Serial Adapter it may not be apparent which COM port to use for downloading data from an instrument.

To check which COM Port to use, bring up the System Properties for the PC. Do this by clicking on START – SETTINGS – CONTROL PANEL – SYSTEM

Select the Device Manager (in Win2000/XP select Hardware then Device Manager).

Click on the + next to "Ports (COM & LPT)" This will list out the available COM ports set up on the PC.

Where a required COM Port is listed as COM Port 5 or greater (particularly if a USB-Serial converter is being used) this can be altered in Windows 2000/XP by bringing up the COM Port properties (double click on the COM Port listed in the Device Manager list), select the PORT SETTINGS tab and click on the "Advanced" button. Select a new COM Port number from the drop down box and click on "OK" to return.

After Sales Service

In the event of a fault or problem occurring during software should be returned to Castle Group Ltd, in its original packaging, or to an authorised agent.

Please enclose a clear description of the fault or symptom.

Should you have any queries regarding the use of the software or wish to suggest future improvements or additions then please contact:

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