ShockWatch® g-View User Manual

SpotSee®

ShockWatch® g-View User Manual – Contents

ShockWatch® g-View User Manual – Contents

ShockWatch® g-View User Manual

Introduction

Congratulations on your purchase of the new g-View product. This training manual has been designed to provide useful information for all levels of users from complete beginners' to regular users of the g-View product.
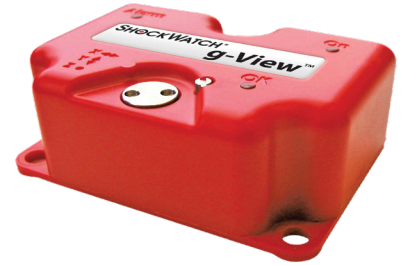
Declaration of Conformity

This g-View product is in compliance with the essential requirements and other relevant provisions of directives, ESTI EN 301 489, EN 61326, FCC Rules CFR47 Parts 15 and RTCA/DO160D. Copies of all of these Declarations of Conformity are available upon request.

Product Introduction

The new g-View product has been completely designed from the ground up, building on the vast knowledge gained from over 25 years within the shock and vibration instrumentation market. This new range of products will add a new lower specification range of impact monitoring devices to the existing portfolio offered by ShockWatch, Inc.

The g-View is a small low cost tri-axial shock recorder. To meet the cost criteria the enclosure has been made with a custom plastic mold. The g-View is powered by 1 - AA Alkaline cell, which will be field changeable. The accelerometers are based on field proven piezo based technology. All data recorded during any journey will be recorded in non-volatile memory.

The LED indicator on the unit will indicate if a threshold has been breached on any axis. It is possible to program a unique threshold for each axis. The downloadable report will give a table against the internal real time clock of when these breaches occurred, for the 100 most significant events on each axis, and will record the specific peak g value recorded. Additionally the product will record the temperature for each event.

If power is interrupted at any time, the software will record this interruption. When the power comes back on the clock will resume from where it stopped, events will still be recorded in chronological order. When the trip record is downloaded to the g-View PC software, Time breaks and events with potential corrupted time stamps will be highlighted.

Feature Summary:

• Built in temperature sensor
• Adjustable alarm thresholds, with individual set points per axis
• Temperature recording for every event

Identifying Current Hardware/Software Versions

Please note this manual applies to g-View software version 1.1.0.0 and is to be used in conjunction with all new g-View units.

SpotSee®

ShockWatch® g-View User Manual

Getting Started

The first section of this training manual is intended to introduce new users of the g-View system to the product and software and to ensure that you are familiar with the impact monitor and accessories.

g-View Kit & Software Installation

New users of the g-View will be required to purchase a kit in order to get all of the necessary iButton communication accessories and software licenses to correctly operate their g-View. Removing the product from its protective packaging and opening your kit will display the following items:

1 - g-View
1 - USB Drive (Containing software and user manual)
1 - Quick Start User Manual
1 - iButton Set (download setup and clock)
1 - iButton USB Connection BUS and Cable
1 - AA Alkaline Battery

In the unlikely event that any of the above items are missing, please immediately contact your ShockWatch Regional Sales Manager or local distributor to arrange for a replacement.

After verifying that you have received everything with your kit you will need to get the software installed onto your PC. Please note that many I.T. systems are setup to prevent individual users from installing software on their own machines or you may have restricted rights. Therefore, it is essential that you consult with your I.T. Department to ensure you have sufficient rights to install the software. Please note that the g-View software has been designed to run on a standard PC under Windows 10, Windows XP, Vista or 7, all of which require you to have administration rights to install the software.

Inside the communication kit you will find the USB drive and the Quick Start User Manual, which will also have instructions to assist with the installation of software and getting you up and running with your new g-View kit.
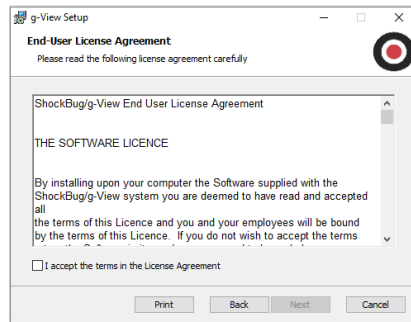
Insert the USB drive into your PC. The setup menu should automatically run within a few seconds and present you with a license acceptance screen.
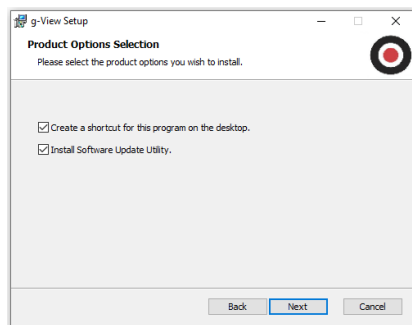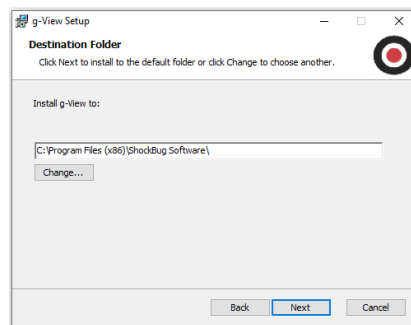
ShockWatch® g-View User Manual

1
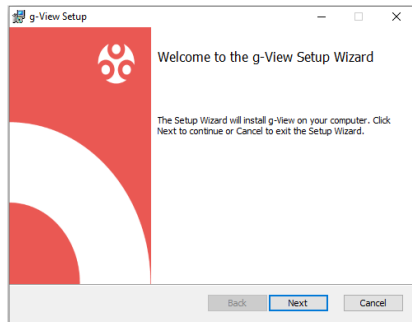
2

The Setup Wizard will guide you through the installation process. wDefault settings for installation should be used whenever possible.
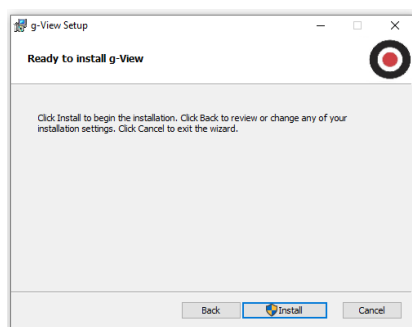
3

4

If for any reason the setup program doesn't t automatically run then go to the startmenu and in Run, enter V:\shocklogsetup.exe (where V:\ is the USB driver on the PC) and open the program from here.

5

6
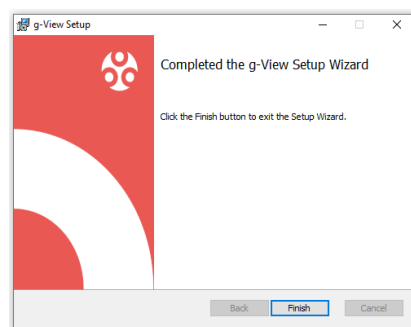
Battery

The g-View requires 1-AA size 1.5V alkaline battery installed. It is highly recommended that, wherever possible, batteries are changed prior to every long journey.

Hints and Tips:
- The capacity of an alkaline battery drops dramatically when exposed to temperatures below 10°C
- If you accidentally install the battery with the wrong polarity, the g-View will not be damaged; however the life of the battery may have been severally affected.

ShockWatch® g-View User Manual

Installing the Batteries

- The battery compartment is located on the underside of the g-View unit.
- Remove the four securing screws and lift the battery cover off.
- Ensure the orientation of the battery is correct and insert the battery into the g-View unit.
- Replace the battery cover and insert the 4 screws. Care should be taken when screwing down the lid ensuring they are tightened evenly in a diagonal rotation and tightened to 25cNm Torque (hand tight).

iButton Communications

iButtons are used to setup the g-View and to download journey data.

In order to use the iButtons to communicate with your g-View unit(s), you must install an iButton adaptor by following these instructions:

To install the iButton Adaptor

1. Make sure the g-View software is installed on the computer, as described in Getting Started above.
2. Plug the iButton adaptor into a USB port on the computer.
3. Your operating system will automatically install the required iButton adaptor drivers, follow any on screen instructions.

Starting the Program

To start the g-View, click the g-View icon found in the Start menu, in Programs / g-View.

The main dialog will be displayed:
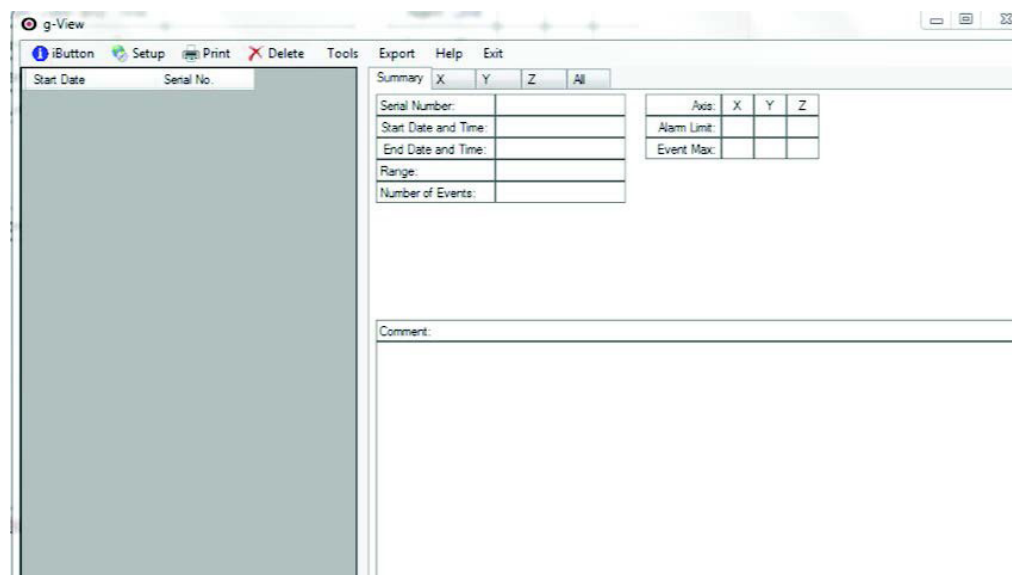
Use the menu items to access various options, as described later in this document.

ShockWatch® g-View User Manual

Getting Started Tutorial

g-View Application

If you have not already started the g-View application, start the application following the instructions in Starting the Program (above); the main dialog, (shown below), will then be displayed.
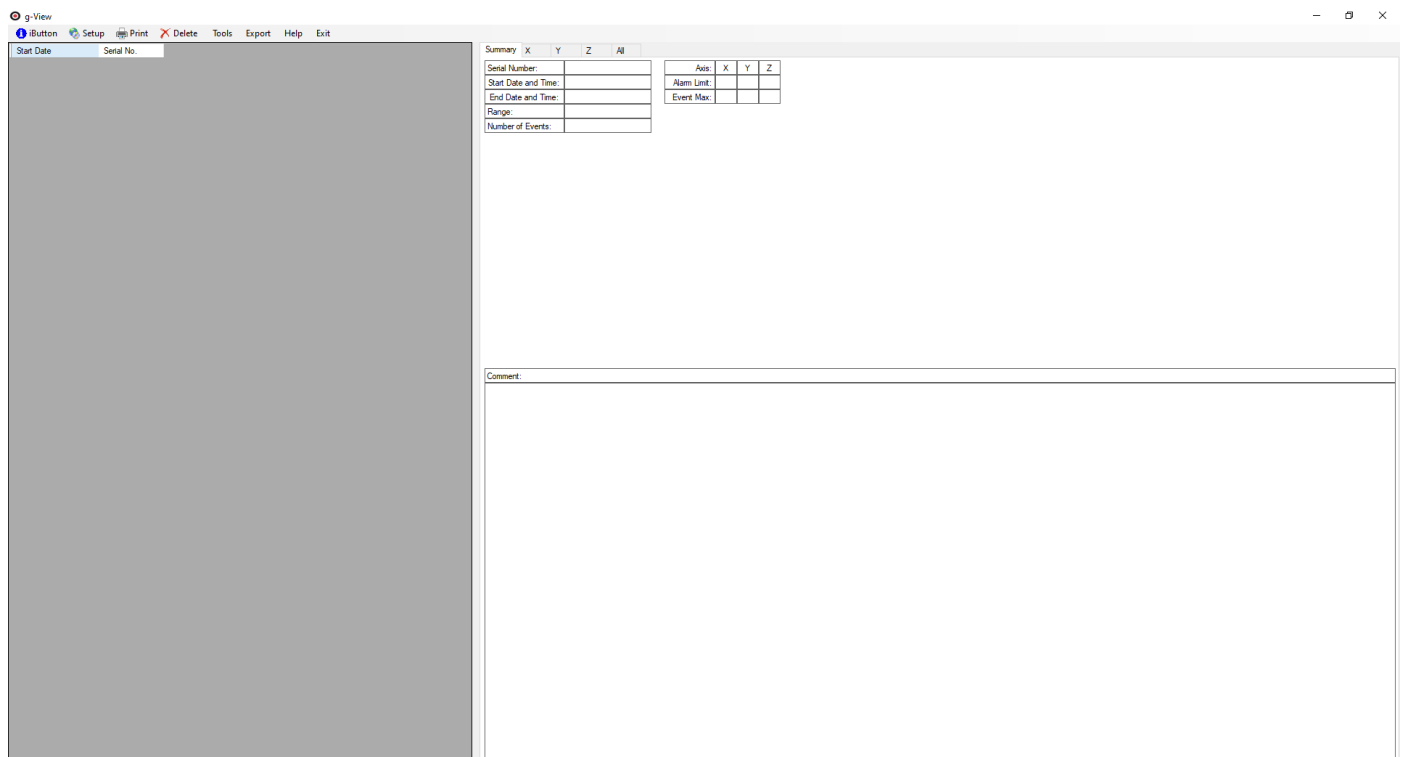
Setup

To program the g-View with a journey Setup, you first need to create a Setup file and program it into a Setup iButton. The iButton can then be used to load the Setup into your g-View unit. To create a new setup file, Click **Setup** on the menu strip, then click **New** on the sub menu; the Setup dialog will now be displayed:

The Setup dialog is described in more detail later in this manual in the g-View Setup section. You then have to set the three Alarm Thresholds by using the arrows to scroll up or down. When you have selected the desired Alarm Thresholds click the Save button to save the Setup as a new file.

SpotSee
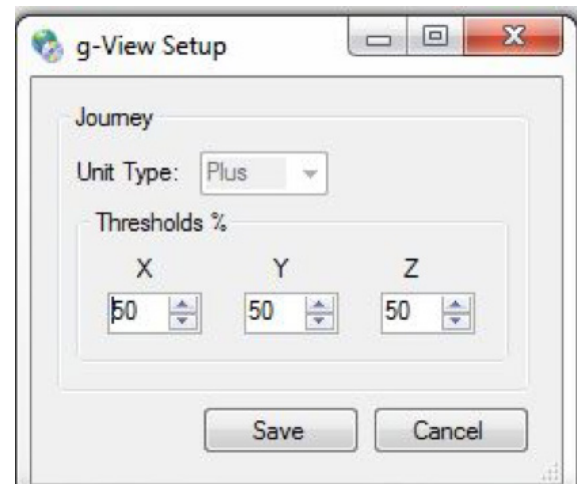
Getting Started Tutorial

iButton

In order to get your new set up to the g-View, you need to program both the Clock and Setup iButtons, so that they can be used to transfer settings to the g-View unit. To do this you will need plug the iButton Adaptor into your PC and have the drivers already installed as described in the **Starting the Program** section earlier in this manual.

Click **iButton** on the menu strip, to display the iButton Interface dialog, and insert a Clock iButton (BLACK key) into the adaptor.

The iButton Interface dialog is described in more detail later in the manual under the iButton interface section.

Please note that the iButton type (in this case Clock) is automatically detected by the software.
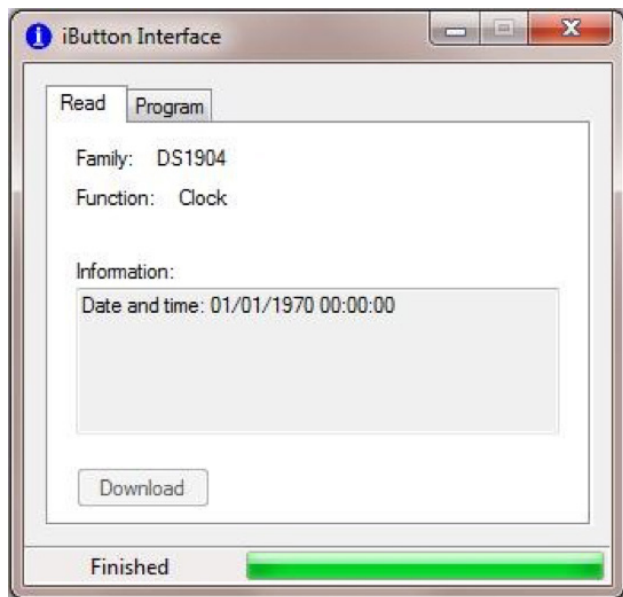
Click on the **Program** tab, to show the programming options for this iButton device.
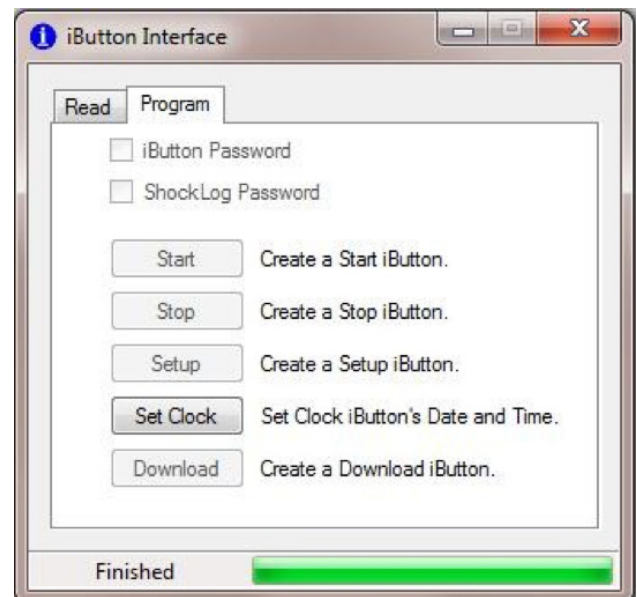
Click **Set Clock** to program the current date and time, as per your computers clock, into the Clock iButton.

SpotSee®

Getting Started Tutorial

Next remove the Clock iButton from the adaptor; and replace it with a Setup iButton (GREEN key), if this is a new device then a message will be displayed on screen, asking you to confirm that the iButton is a new device:

Click **Yes**. The iButton family will now be detected, but as this is a new device, the Function will show as Invalid - this is normal. Again click on the **Program** tab, to show the programming options for the iButton device.
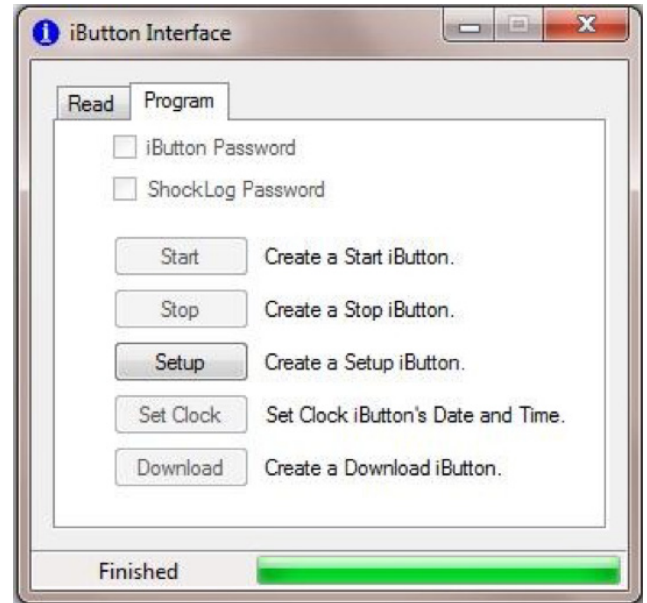
Click **Setup** and an open file dialog will be displayed.
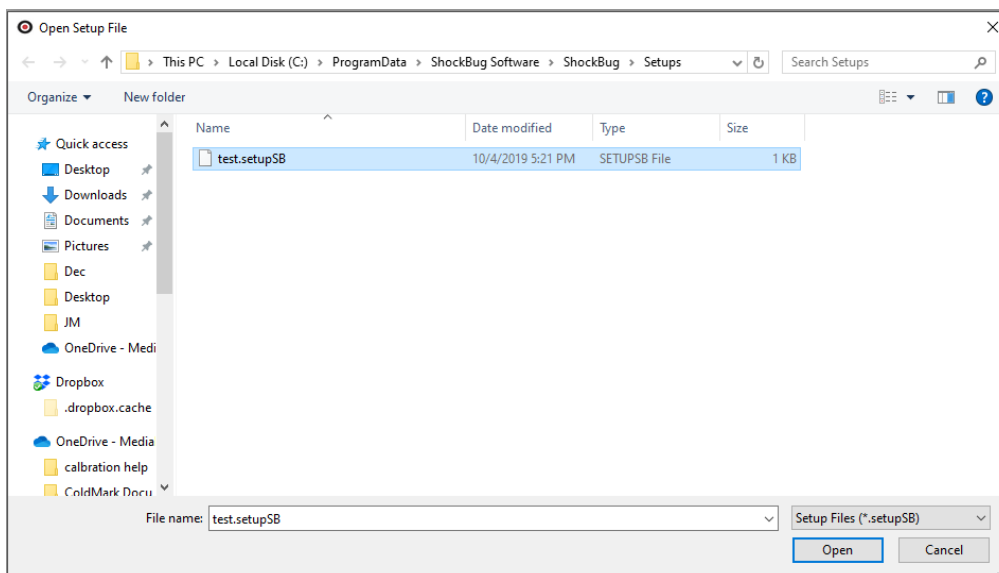
Select the required Setup, and click **Open** and the Setup file will be programmed into the iButton.

Getting Started Tutorial

If you click the Read tab, the iButton will be interrogated, and the Function will now show as Setup.

Remove the Setup iButton from the adaptor; and replace it with a Download iButton, if this is also a new device then the new device message will be displayed, again click **Yes**.
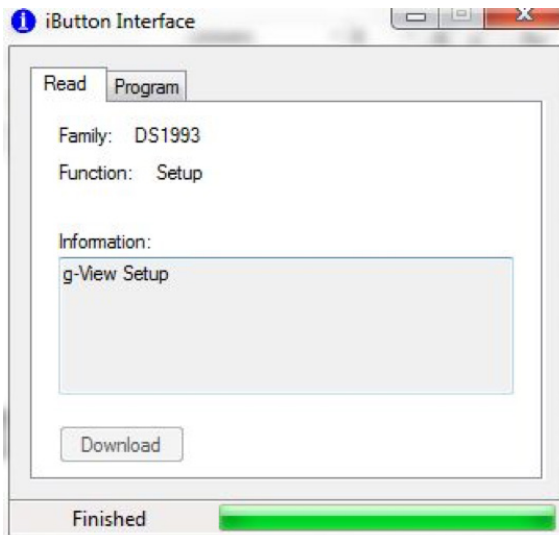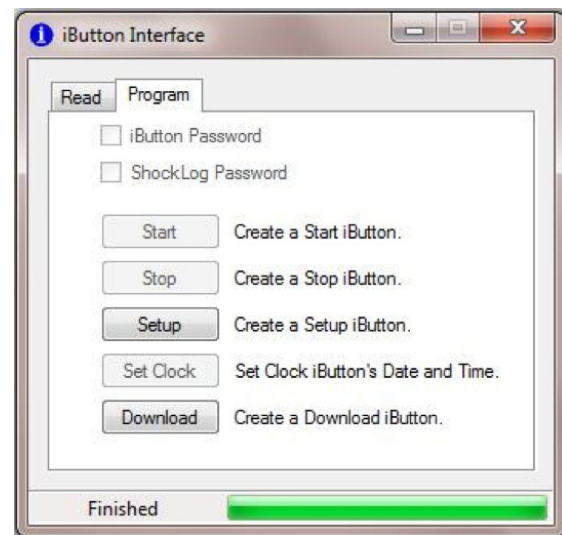

Remove the Setup iButton from the adaptor; and replace it with a Download iButton, if this is also a new device then the new device message will be displayed, again click **Yes**.

As before, click on the **Program** tab, to show the programming options for this iButton device.

Click Download to create / clear the **Download** iButton.

NOTE: You must clear the Download iButton every time you wish to use it to read data from a g-View unit.

Preparing the g-View Unit

Before a g-View unit can be used to monitor a journey, it needs to be powered with an AA battery cell, the clock set and a Setup needs to be programmed into the g-View unit using the iButtons programmed earlier in this manual.

AA Battery

To fit the battery remove the four Phillips screws securing the battery cover to the base of the g-View unit; insert a new AA battery, (Alkaline), ensure the correct orientation; replace the battery cover and screws.

The green On LED will now illuminate for approximately 40 Seconds, after which it will flash to indicate normal operation.

Configuration

Apply the Clock iButton, programmed above, to the iButton contacts on the g-View unit; after a few seconds, the On LED will illuminate, to indicate that the g-View has detected the iButton; and a few seconds later the OK LED will illuminate, to indicate that the date and time has been updated in the g-View unit.

SpotSee®

Next apply the Setup iButton to the g-View unit; again the On LED will illuminate; followed a few seconds later by the OK LED, to indicate that the Setup has been transferred from the iButton to the g-View.

The g-View unit is now ready to monitor your journey.

If at this stage you are testing the g-View operation prior to real use; try dropping the g-View unit onto a mouse mat a few times to simulate journey shocks, try to drop it on all sides to pick up all of the 3 axis. Note: You should only have to drop the unit from about 2 – 4 cm height to trigger the alarm. Now download and view the data following the instructions below.

Downloading Journey Data

To download the Journey data from the g-View, apply a cleared Download iButton (RED key) to the iButton contacts on the g-View unit; after a few seconds, the On LED will illuminate, to indicate that the g-View has detected the iButton, and the g-View will start downloading data to the iButton; if a lot of Events have been recorded by the g-View, this can take some time; once the data has been downloaded to the iButton, the OK LED will illuminate.

Remove the Download iButton from the g-View unit, and insert it into the USB iButton adaptor; start the g-View application, and open the iButton Interface dialog, as described above.
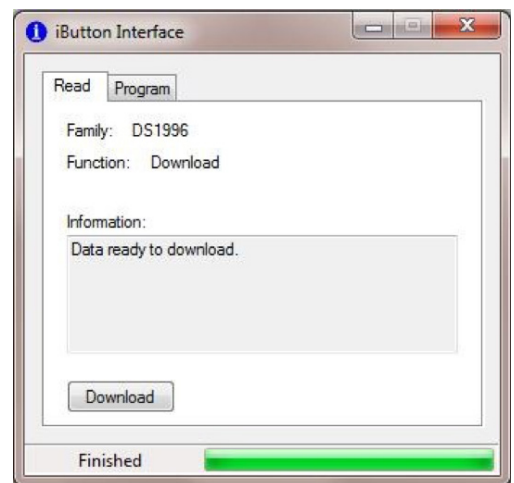
Click **Download** to start downloading the Journey data from the iButton. When the Journey data has been read from the Download iButton, you will be asked to enter an optional User Comment:

Enter any comment you wish to add to the downloaded data in the text box and then click OK to continue.

The Journey data will be saved to file; a new record added to the journey records grid for the downloaded data; and the Journey data loaded into g-View Journey Data Tabs

To clear the data within the g-View unit it is necessary to reapply a Setup iButton that will clear all of the memory within the g-View and prepare it for another journey. If you do not clear the data the g-View will continue to record until its memory is full.

ShockWatch® g-View User Manual

Overview of Software Screens

When you first open the g-View software you will be presented with the main screen seen on the right. The software screen breaks down into two main sections with the **"Grid View"** with a list of journey files on the left hand side and the **"Tabbed View"** on the right hand side displaying a summary of the current selected journey file. In addition along the top of the screen, users are presented with a selection of additional options including:

- iButton
- Setup
- Print
- Delete
- Tools
- Export
- Help
- Exit

We will be looking at all of these screens and options throughout this section, providing users with a detailed overview of the g-View software.
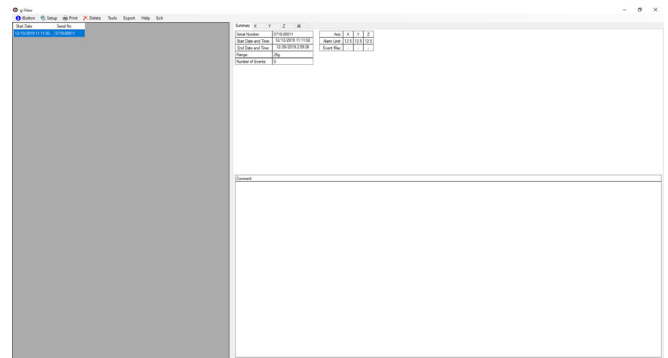

Grid View

This screen view provides access to all the data files available to the software and provides the user with the journey start date and the g-View serial number that recorded each journey.

When a file is selected, the journey data will be displayed in the tabbed view summary screen on the right hand side.

To select different files, simply double click on the desired journey file or right hand click on the desired file and select "load" from the menu.

Additionally, this screen view provides users with the ability to sort the journey files by the columns of data, i.e. by Start Date or Serial Number.

To sort by either of these columns, double click on the column header and the data will sort in ascending or descending order.

SpotSee®
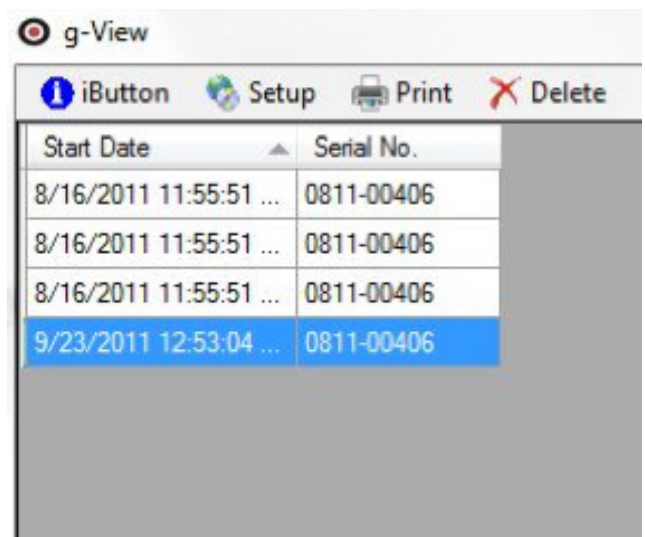
Tabbed View

The Tabbed view displays the journey file data for any selected journey. When you first open a new journey file the user is presented with the summary screen providing an overview of the journey.

The Table on the left hand side provides the following Data:

- Serial Number of the g-View
- Start Date and Time of the Journey
- End Date and Time of the Journey
- Range – g Range of the g-View unit
- Number of Events recorded on the Journey
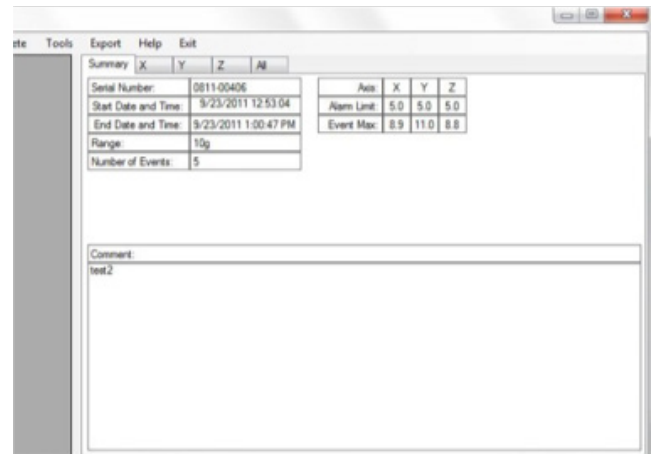
The table on the right hand side provides details of the alarm threshold setting per axis and the number of events seen per axis.

The Comment box at the bottom displays any free text added when the journey file was downloaded from the iButton.

Along the top of the screen the user is presented with a series of tabs (X, Y, Z and All). To be taken to the Event view, click one of these tabs and the user will be presented with all of the event data associated with the selected axis or for all the axes, if All is selected.

Within the Event view, the user will be presented with the following information:

Date/Time of Event	Event Number
Temperature	X Axis g value
Y Axis g value	Z Axis g value

When selecting the All tab, users will be presented with all of the Events recorded during the journey. If however, a user selects any of the individual axis tabs, then they will only be presented with the Events associated with that axis. However, all the same information will be displayed and it is possible that any individual event could appear on more than one of the tabs as it breached more than one of the axis thresholds in a single event.
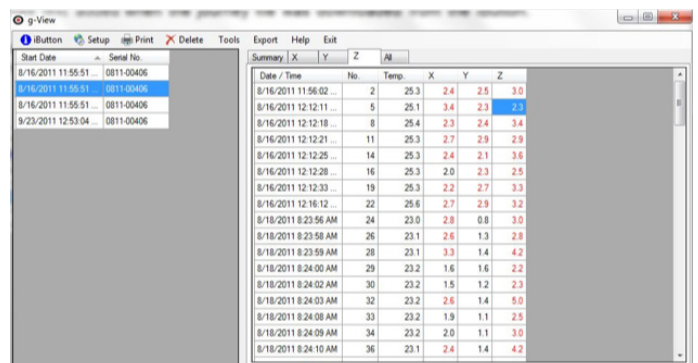
When any Event value exceeds the impact threshold limit entered in Setup for the journey they are shown in red; and where values have reached or exceeded the g-View units recording limits, defined by the products range, the Event data is underlined as well as in red.

In an Event where a problem has been be detected with g-View units internal clock, such as the battery being removed and replaced during a Journey, then the Event's date and time value will be shown in red.

Sorting Data

Within these Event tabs it is possible to sort all of the data by any of the column headers. By simply double clicking on any of the column headers and the data will sort into descending order and by double clicking again the data is changed into ascending order. This feature is available on all columns in all of the Event tabs.

iButton

Clicking on the iButton tab the user will be presented with a new window. From this window the user is able to communicate with the various iButtons they will need in the operation of their g-View product via the iButton adaptor cable. The window is split into two tabs 'Read' and 'Program' and the following section will explain the functions of both tabs:

Read

This tab is the first one that will be presented to the user when opening the iButton window. It shows information about the currently connected iButton. Additionally there is a Download iButton button, which allows for the downloading of data from a download button and will only become active upon the insertion of a download iButton with data recorded.

The read screen presents information relating to the attached iButton showing the 'Family', 'Function', 'Information' and the status at the bottom of the screen.

Family – displays type of iButton connected.

- 'Device not present' - will be displayed when no iButtons are connected
- 'DS 1904' – represents the Clock iButton
- 'DS 1993' – represents the Setup iButton
- 'DS 1996' – represents the Download iButton

Function – displays the function of the iButton currently connected.

- Invalid will be displayed for a new iButton that needs programming
- Clock, Setup or Download will be displayed for the programmed units

Information – provides additional information from the attached iButton.

- 'Date and time: DD/MM/YYY HH:MM:SS'
- 'g-View setup'
- 'No data to download' – shown when download iButton is empty
- 'Data ready to download' – shown when download iButton is full

Status message/bar (shown at the bottom of the window) – provides additional information about the operation of the iButton connected:

- 'No Adaptor' – will be displayed when the iButton adaptor is not plugged into the Computer.
- 'Device not present' – will be displayed when the iButton adaptor is plugged in but no iButton has been connected to it.
- 'Active' – will be displayed while the system is communicating to the iButton along with the green bar working across.
- 'Finished' – will be displayed when an activity has been completed.
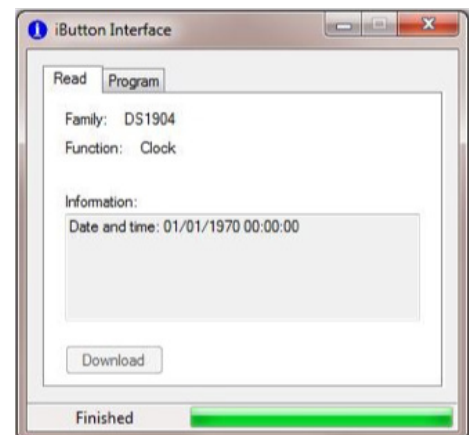
Download – When a Download iButton with g-View data is plugged into the iButton adaptor, this button becomes available and is used to download the data from the iButton into the g-View program.

After reading the iButton data, the g-View application will ask you to enter any required user comment for the journey.

Program

The Program tab allows users to program the different iButton types and settings.

When you have an iButton connected to the iButton adaptor, this window will highlight the different type of program the iButton can be programmed to be.

Setup (Green) – Clicking on this button will open a new file open window and will automatically take you to the default directory for the g-View setup files. Select the required set up file and click open to save the setup file to the iButton.

Set Clock (Black) – Clicking on this button will program the iButton with the same date and time as the PC.

Download (Red) – Clicking on this button will clear any old data within the download iButton and set its check flags ready for a new download.

NOTE: Once programmed, the Clock and Setup iButtons can be reused time and time again. However, Download iButtons must be cleared using this button after every use, otherwise the g-View unit will not download journey data into the iButton when presented.

Sequence of Use

The iButtons on the g-View can only be used in a specific sequence in order to protect data. The clock and setup iButtons can only be used on a g-View after a download iButton has been used. Once a g-View has started recording a new clock setting or setup cannot be sent to it until the unit has had its data downloaded. However, once the download has been taken, if the unit then continues to record it is possible to interrupt with a cloak or setup iButton and user should be aware that data could be lost under these conditions.

Setup

Clicking onto the Setup button the user will be presented with a short menu allowing the user to create a new setup file or open an existing file. Upon selecting "New" the system will open up a new window in which the user is able to create new setups for the g-View.
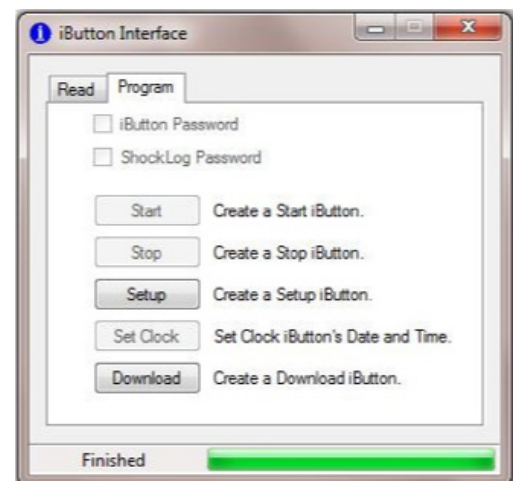
New Setup

Journey – This is where users need to enter their required journey settings.

Unit Type

Factory set. Set aside for future product development.

Thresholds

The g-View is available in two different g ranges: 10g and 25g. The threshold settings are based on a percentage of the g-View range. For example on a 10g range a 50% threshold would represent an event threshold of 5g.

X, Y, Z

Use the individual up/down counters to set the required Threshold for each axis.It should be noted that you are only allowed to set the Event threshold between 20% and 90%, i.e. on a 10g range the lowest threshold setting would be 2g and the highest 9g.

Save

Save the Setup to file and exit the dialog; a Save File dialog will be presented, allowing you to select the Setup filename.

Cancel

Close the dialog without saving the Setup.

Open Existing Setup

Selecting "Open" from the menu will present the user with the Windows® File Open view with the default setups directory selected. Users will be presented with a selection of setup files that have been previously saved. By double clicking on any of the files, the file will be opened into the g-View setup window and can be edited like a new file as described above.

Print

The print option allows users to print the currently shown Journey record. Selecting the print option will bring up your standard printer window allowing you to select different printers or print to another document such as Windows Notes or Adobe. Once you have selected the appropriate printer the program will print a report setting out the Summary data and details of all events that have been recorded within the selected journey file.
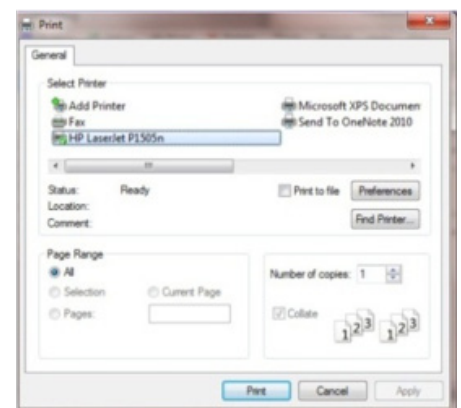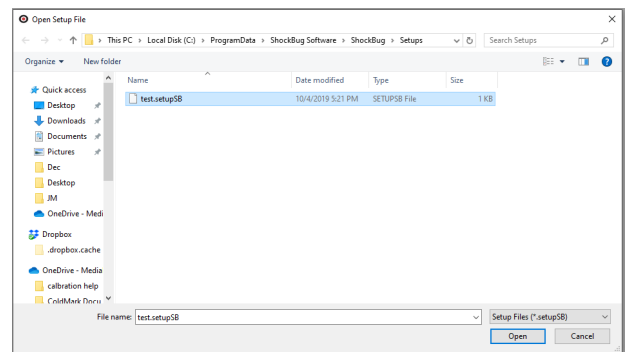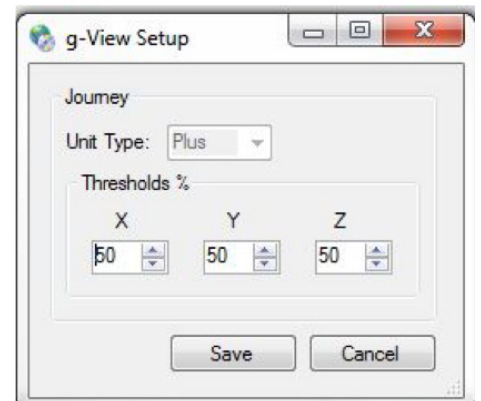
Delete

The Delete button allows users to permanently delete a journey record from the file directory. It should be noted that if the user accepts the deletion by clicking 'Yes' on the warning window, the g-View journey file will be lost and is not recoverable. If the user is unsure, they should select No and leave the journey file where it is.
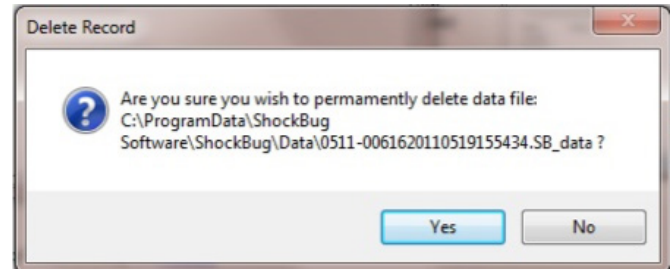

Tools

Selecting the Tools button opens a new sub menu with 'Folders' and 'Export Separator' options.

Folders

NOTE: Changes to the data paths should not be necessary for most users and it is not generally recommended.

Clicking on this option will bring up a new window that displays the current data paths for XML, Setup Files and Data Files and will allow users to change if required.
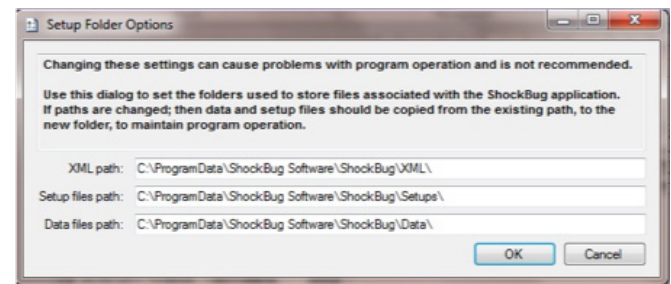
XML Path

Displays / Sets the path used to hold the application XML files.

Setup Files Path

Display / Sets the path used to hold g-View Setup files.

Data Files Path

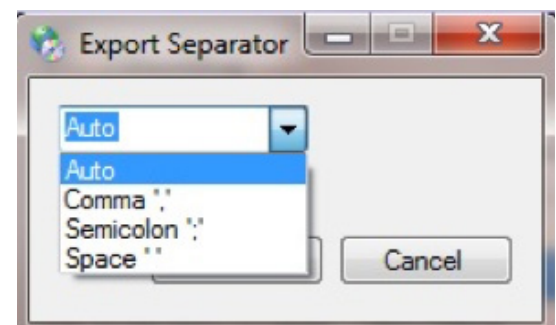Display / Sets the path used to hold g-View journey data files.

OK

Accept any changes and close the dialog.

Cancel

Close the dialog, abandoning any changes made.

Export Separator

This option allows users to change the Export Separator to be used when exporting data from journey files. This feature will be explained in the "Export" section below.

SpotSee®

ShockWatch® g-View User Manual

Export

The Export function allows users to export the currently loaded journey records data to a CSV file. By utilizing the Export Separator tool, users are allowed to select the preferred data separator for their requirements.

To Export a journey files data, double click on the required journey file so that the summary information is displayed in the Tab view. Then click on the Export button and you will be presented with standard Windows Save window:

From this window, users are able to select the required directory for saving the CSV file.

Users need to enter the file name required and select the file type to be recorded, which will generally be CSV.

Once this information has been entered, click on the Save button and the data will be exported to this new file and the software will return to the g-View Tab view.

The exported file can be opened in various applications such as Excel and the data can be converted to graphical formats for reporting purposes.
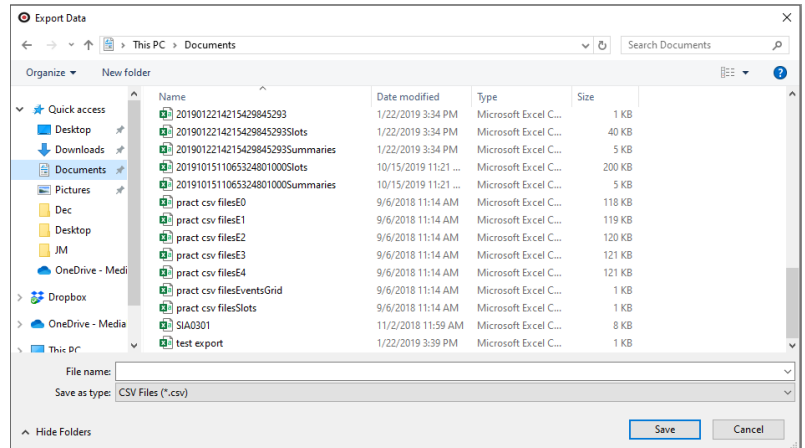
Help

Selecting the Help button opens a new sub menu with 'Help' and 'About' options and these are explained below:

Help – Clicking on the Help button opens all of the built in Help files.

From within the help files users are able to work through tutorials and find details about various functions within the g-View software.

About – Shows the g-View application AboutBox.

Exit – Exit the g-View application.