



ShockLog 248/298 Impact Recorders Quick Start Guide

Installing the ShockLog software

1. Insert USB stick.
2. Open folder to view files.
3. Click on ShocklogSetup application file in the Install folder to start installation process.

Continue to download the Microsoft .NET Framework and Access Database Engine if prompted to do so. Once the appropriate components have been downloaded, the ShockLog Setup Wizard will begin. Advance through the screens until a 'Completed the ShockLog Setup Wizard' window appears. Click 'Finish' to complete the installation.

Enter Software Licence Key (found on the Software Licence Key document in the Install folder) along with your name and company in the dialog box (licence key begins with SW and contains zeros – Figure 1). Click on OK.

- Ensure the rubber seal is correctly positioned, replace the battery cover and insert the 4 screws. Tighten the screws evenly in a diagonal rotation to 25cNm Torque.

Installing the Batteries

- The battery compartment is located on the underside of the ShockLog unit
- Remove the 4 securing screws and lift the battery cover clear
- Ensure the orientation of the batteries is correct and insert batteries into the ShockLog unit

Software & Initial Layout System

The ShockLog user interface has a variety of 'dockable' windows that allow the user to view information of interest. Refer to the ShockLog Manual for detailed information regarding the positioning of the dockable windows (Figure 2).

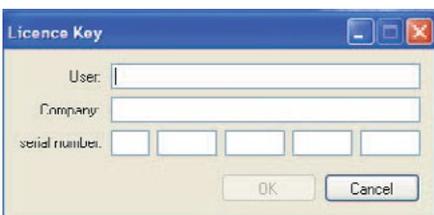


Figure 1

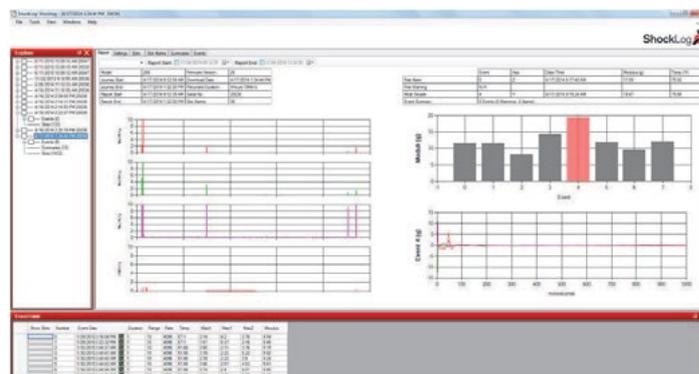


Figure 2



For demonstration purposes, a number of files are included in the database installed with the ShockLog software.

These files are shown in the Explorer and Record Table windows. Click on one of the available files and the Summary Report will be displayed in the File Viewer.

Notice the tabs along the top of the File Viewer (Report, Settings, Slots, Slot Alarms, Summaries, and Events). These tabs link to more detailed information relating to the open file record. More information regarding these tabs can be found in the ShockLog User Manual.

Connecting the ShockLog to your PC

The USB communication port is located on the right side of the ShockLog. It is secured behind a threaded, protective cap that serves as the IP67 seal for the USB port (Figure 3). To access the USB port, carefully unscrew the protective cap and expose the USB connector. Connect the USB cable to the ShockLog and then connect the other end to the PC USB port.



Figure 3

Communications Window

In order to communicate with the ShockLog unit and to monitor the current status, open an additional dockable window called 'Communications' (Figure 4). From the 'View' menu at the top of the screen, select 'Communications'. The information displayed from an attached ShockLog will be: model of ShockLog connected, serial number, events (number of recorded alarms and warnings), date/time (per the unit's clock), range (G range set in the unit), version (firmware), state (running or stopped), slot alarms (number of alarms the unit has experienced during the period), memory status indicators (inform you when memory is nearly full or full), connection (USB or serial), and protocol (communications protocol being used by the attached unit).

Buttons are available to perform the following tasks:

Download – enables you to download a file from the ShockLog

Start – when a ShockLog is in a stopped state, this button will start the unit

Send Setup – allows the user to send a new setup to the unit

Set Clock – allows the user to reset the unit's clock to match the PC's clock

Stop – when a ShockLog is in a running state, this button will stop the unit

Read Setup – provides the user with the ability to read the unit's current setup information

Setup Passwords/Security Log – specialty functions. See the user manual for details



Figure 4



Creating or Modifying a Setup File

Select Model or File

To create, view, or modify a setup file go to the 'View' menu at the top of the screen and select 'Setup'. A new window will appear listing the available ShockLog models (Figure 5).

After selecting a ShockLog model, to open an existing file, select the ShockLog model of interest and click the 'Load File' button. A list of available setup files related to the selected model will be shown. Highlight the desired file and click on 'Open'. Similarly, to create a new setup file, click on 'New Setup' after selecting a model. The 'Current File' button allows you to interrogate a connected ShockLog to determine what setup has been loaded into the unit.

Setup

When the appropriate ShockLog model has been selected or the desired setup file has been opened, a new window will

appear. The Setup window has a series of tabs that guide the user through the available options for the selected ShockLog model.

Firmware Options

The first tab in the Setup screen is 'Firmware Options' (Figure 6). This section defines what factory or peripheral accessories are being used with the selected ShockLog. If the options are grayed out and selected, they are default options and cannot be changed. If they are grayed out without being selected, the options are not available for the selected ShockLog.

Standard Options

gRMS (Vibration) – Users have the option to record the gRMS values within the time slot graphs, allowing users to see the vibration levels throughout a given time slot period.

Factory Options

- External RH/T – Relates to the ShockLog 298, 248 and 208 with the factory optional Temperature and Humidity sensor added
- External RH (RD317 only) – Relates to the Legacy RD317 Micro ShockLog with the factory optional Temperature and Humidity sensor added
- Internal Tilt/Roll – Relates to the ShockLog 298 with the factory optional sensor added to detect tilt & roll
- GPS Module – Refers to ShockLog 298 with optional GPS module to record GPS coordinates of an impact and coordinates when a time slot summary is made
- RF Communications – Relates to the ShockLog 298 with the factory optional ZigBee radio module being added to transmit data files wirelessly in a stationary environment

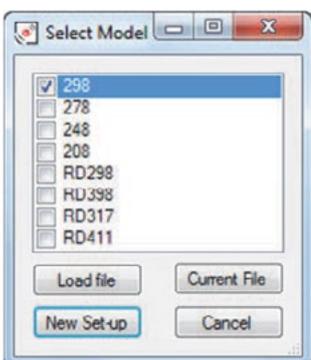


Figure 5

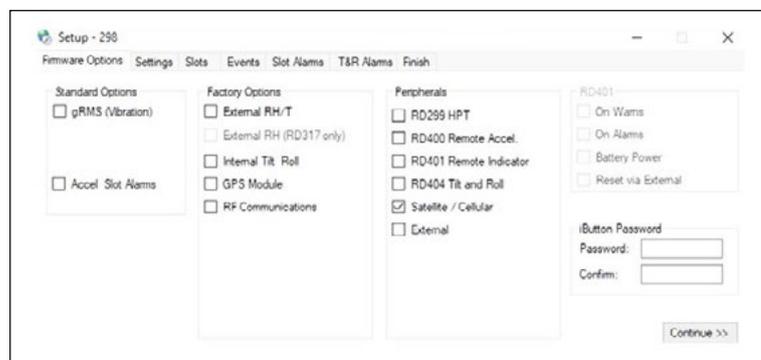


Figure 6



Peripherals

Optional accessories may be added to the ShockLog setup. Click the box for any options that will be utilized with the ShockLog, then click 'Continue'.

RD401

These settings are available for a customized legacy solution from ShockWatch. They are not supported by the ShockLog 298, 248, or 208.

iButton Password

Users are able to create password protection in the iButton system. See the Manual for more details.

Settings

Setup Name

For a new setup the word 'default' will be in this field (Figure 7). Change this name before proceeding.

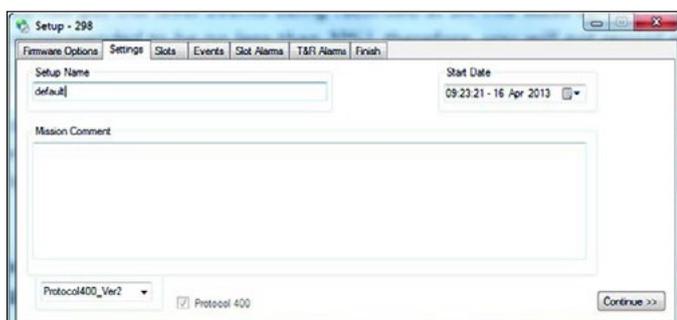


Figure 7

Start Date

If desired, the ShockLog unit can be set to begin monitoring at a future date/ time, click on the right hand arrow to bring up a calendar selector and select the desired date and set the start time as required.

Mission Comment

Add notes to the setup file. These comments will be displayed in the Settings tab of the File Viewer when a file is downloaded and viewed.

Protocol

Protocol 400 is the only available setting at this time.

Slots

Slot Contents

Parameters in the Slot Contents screen define the parameters to be recorded in the Slots Graphs. Select the parameters of interest by clicking the appropriate boxes.

Journey Duration

Select the expected journey length, and the ShockLog will automatically optimize the slot and summary intervals settings (Figure 8).

Slot Interval

Defines how often a time slot will be recorded. The window below the Slot Interval setting will show how long the time slot graph will run based on the setting.

Summary Interval

Allows the user to set the time between each summary period. Summaries provide an overview of what was recorded by the ShockLog in a given period of time known as the summary interval.

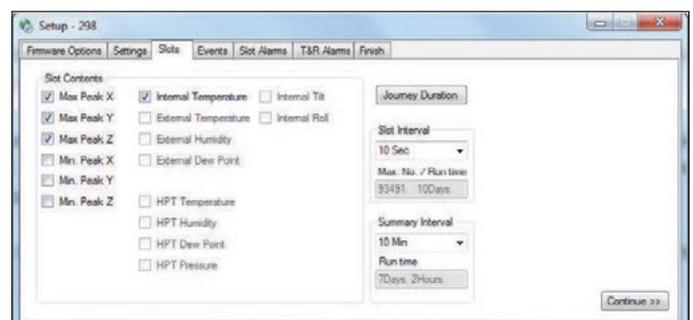


Figure 8



Events

The Record section allows users to specify the resolution / memory to be allocated to each event (Figure 9).

Length

The more bytes allocated to an event, the more points the event graph will display. The peak of an event will not be lost when data is compressed as the ShockLog always keeps the max & min samples of each compressed data section.

Max Time

The maximum length of any recorded event. In general, this setting is only used in a test environment, as most impact events are less than 1 second in duration. See the Manual for additional details.

Ordered Data

Record events in an uncompressed format and display the full 4096 samples per second.

Thresholds

Determines when the ShockLog wakes up, the levels at which a warning or alarm is created, and the dropout level of the event.

Range

As a rule of thumb, the larger and heavier the object, the fewer g's are needed to damage the object. Therefore, the 1G, 3G, and 10G ranges are generally used for large objects (e.g. something weighing tons). The 30G, 100G and 200G ranges are used for lighter shipments. The ShockLog 298 has the ability to record in velocity; this will automatically occur if a range in cm/s is selected.

Hardware Filters

Used to reduce the number of unwanted higher frequency events where it is known that this type of event will not cause damage to the object being monitored. Please contact ShockWatch or your local distributor to assist with selecting the correct filter.

Filter Selection Guidelines:
(Not absolutes):

250Hz - Optimised for equipment weighing up to 10,000 lbs

120Hz - Optimised for equipment weighing 10,000 to 25,000 lbs

90Hz - Optimised for equipment weighing 25,000 to 50,000 lbs

40Hz - Optimised for equipment weighing 50,000 to 100,000 lbs

10Hz - Optimised for equipment weighing over 100,000 lbs

Options

Basic - default setting. Warning and alarm levels can be adjusted by the user. Wake and dropout levels are set automatically based on the warning level

Link XYZ - all of the axes operate off of the same thresholds

Multiple - different thresholds for each axis

Timed Events - records a detailed event at the end of every summary period; independent of thresholds being breached

Wake - the level at which the ShockLog will wake up and begin recording

Warn and Alarm - warning and alarm event levels

Dropout - level at which the ShockLog will stop recording

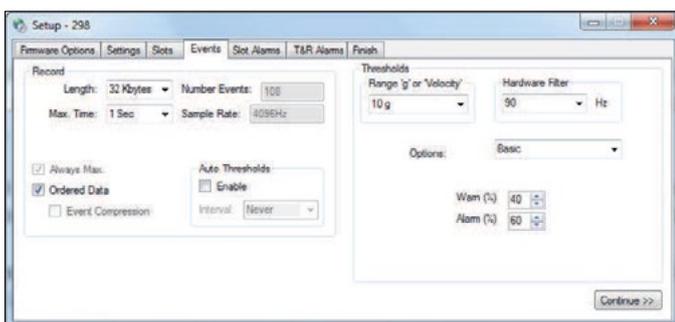


Figure 9



Slot Alarms

gRMS (Vibration)

gRMS alarms allow ShockLog 298 users to set slot alarms for gRMS data. In the setup window, users must select the gRMS option (Firmware Options) for this measurement to be available (Figure 10).

Acceleration (ShockLog 208 Only)

Triggers an alarm if an impact within a time slot exceeds the thresholds set.

Environment

Allows users to set various low and high thresholds for temperature, humidity, dew point and pressure depending on the sensors being used with the ShockLog.

T&R Alarms

Used when a Tilt & Roll accelerometer is attached to the 298 ShockLog (Figure 11).

Finish

Provides a summary of the settings and provides an opportunity to save the setup file and send it to the ShockLog.

Saving a Setup File

After a setup has been defined, it must be saved before it can be sent to a ShockLog. Click the disk save icon to save the file (Figure 12).

Sending a Setup to the ShockLog

Once the setup has been created and saved, it can be sent to the ShockLog. Connect the ShockLog via the USB cable to the PC and click the play icon.

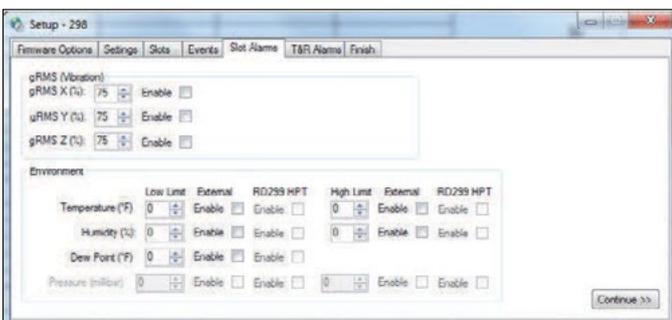


Figure 10

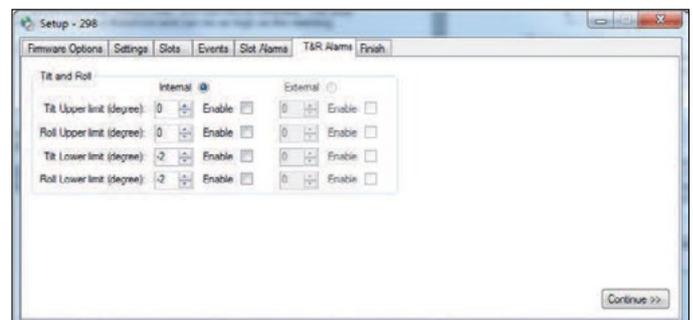


Figure 11



Monitoring & Downloading a ShockLog

With the Communications Window open and a ShockLog attached to the PC, the information boxes will automatically update with information live from the ShockLog. Download the ShockLog from the Communications Window with the 'Download' button.

Recorded data can be reviewed following the downloading process by selecting the file from the Explorer Table.

Status LEDs

All ShockLog units have three status LEDs that display the unit's condition:

1. iButton (298, 248, 208)

- Single color LED (red)
- Illuminated when a valid iButton is inserted
- Used in conjunction with the SLOT ALARM LED, which flashes green when the iButton command is accepted

2. Slot Alarm (298, 248, 208)

- Tri-color LED (green, amber & red)
- Flashes every 10 seconds when in Waiting State, or every 5 seconds when in Running State
- Condition
 - No slot alarms
 - Flashes green
 - One or more slot alarms
 - Flashes red

3. Event Alarm (298, 248)

- Tri-color LED (green, amber & red)
- Flashes every 10 seconds when in Waiting State, or every 5 seconds when in Running State
- Condition
 - No events
 - Flashes green
 - Warning event(s) recorded (with no Alarm events)
 - Flashes amber
 - Alarm event recorded
 - Flashes red

For ShockLog units with firmware v27 and above, All LED's flash red every 10 seconds when the unit is in the Stopped state.

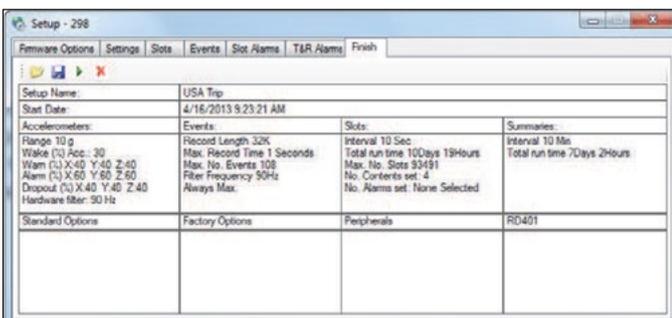


Figure 12