MADGETECH
WE BUILD DATA LOGGERS

Shock101

Description	Shock101
Channels	Shock (3 axes)
Accelerometer Type	MEMS Semiconductor
Acceleration Range	
Acceleration Resolution	*See Table Below
Calibrated Accuracy	
Frequency Response	0 Hz to approx. 400 Hz
Sample Rate	512 Hz
Reading Rate	64 Hz to 5 minutes
Memory	349,525/axis
Required Interface Package	IFC200
Baud Rate	115,200
Typical Battery Life	7 days
Operating Environment	-20 °C to +60 °C, 0 %RH to 95 %RH (non-condensing)
Material	Anodized aluminum
Dimensions	3.5 in x 4.4 in x 1.0 in (89 mm x 112 mm x 26 mm)
Weight	12 oz (340 g)
Approvals	CE
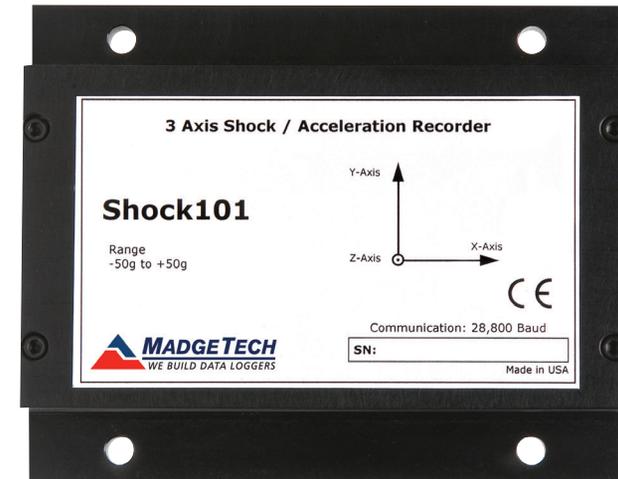
*Shock101 Acceleration Range, Resolution and Accuracy

Range (g)	±5	±50	±100	±250
Accuracy (g)	±0.2	±1	±2	±4
Resolution (g)	0.01	0.05	0.1	0.2

Battery Warning

WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, DISASSEMBLE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 60 °C (140 °F).

Specifications subject to change.
See MadgeTech's terms and conditions at www.madgetech.com

Shock101-5
Tri-axial ±5g, Shock Data Logger

Shock101-50
Tri-axial ±50g, Shock Data Logger

Shock101-100
Tri-axial ±100g, Shock Data Logger

Shock101-250
Tri-axial ±250g, Shock Data Logger

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visit our website at www.madgetech.com.

Product Notes

Reading Intervals

The Shock101 samples at 512 Hz and at the user specified reading rate, the device writes the peak values (g-force) to memory.

For Example:

Sampled Data: Recorded Data:
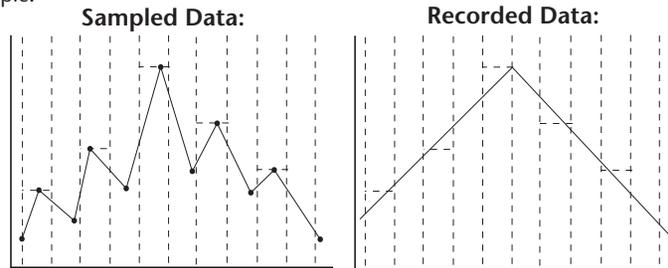
Axis Orientation

When the Shock101 is laying flat with the label facing up, the x-axis reads left to right on a horizontal plane, and will read ~0 g's when still. The y-axis reads top to bottom on a horizontal plane and will read ~0 g's when still. The z-axis reads perpendicular to the other two axis's, and will read around ~1 g's when still.

Y-Axis

Z-Axis   X-Axis
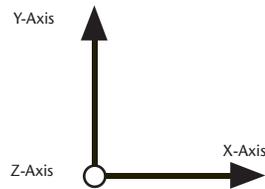
Installation Guide

Installing the Interface cable

- IFC200

  Insert the device into a USB port. The drivers will install automatically.

Installing the software

Software can also be downloaded from the MadgeTech website at the following link: www.madgetech.com/software-download. Double click the zipped download file and follow the steps to finsh downloading

Device Operation

Connecting and Starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- For most applications, select "**Custom Start**" from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click "**Start**". ("*Quick Start*" applies the most recent custom start options, "*Batch Start*" is used for managing multiple loggers at once, "*Real Time Start*" stores the dataset as it records while connected to the logger.)
- The status of the device will change to "**Running**", "**Waiting to Start**" or "**Waiting to**

Manual Start", depending upon your start method.
- Disconnect the data logger from the interface cable and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading data from a data logger

- Connect the logger to the interface cable.
- Highlight the data logger in the Connected Devices list. Click "**Stop**" on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click "**Download**". You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

Device Maintenance

Battery Replacement

Materials:

3/32" HEX Driver (Allen Key)

Replacement Battery (U9VL-J)

- Remove the cover from the device by unscrewing the four screws.
- Remove the battery from its compartment and unsnap it from the connector.
- Snap the new battery into the terminals and verify it is secure.
- Replace the cover taking care not to pinch the wires. Screw the enclosure back together securely.

Note: Be sure not to over tighten the screws or strip the threads.

Recalibration

The Shock101 standard calibration is performed at 0 g on the x-axis, 0 g on the y-axis and 1 g on the z-axis.

Prices and specifications subject to change. See MadgeTech's terms and conditions at www.madgetech.com
*To send the devices back, visit www.madgetech.com, select **Services** then **RMA Process**.*