Product User Guide

QuadVoltV2 and OctVoltV2

QuadVoltV2
4-Channel Voltage Data Logger

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CHANNELS
− 1 + − 2 + − 3 + − 4 +

Voltage Range:
(-3.2 to +3.2) V DC

OctVoltV2
8-Channel Voltage Data Logger

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CHANNELS
− 5 + − 6 + − 7 + − 8 +
− 1 + − 2 + − 3 + − 4 +

Voltage Range:
(-3.2 to +3.2) V DC

QuadVoltV2-160mV
4-Channel ±160 mV Low Level DC Voltage Data Logger

QuadVoltV2-3.2V
4-Channel ±3.2 V Low Level DC Voltage Data Logger

QuadVolt-32V
4-Channel -8 V to 32 V Low Level DC Voltage Data Logger

OctVolt-160mV
8-Channel ±160 mV Low Level DC Voltage Data Logger

OctVolt-3.2V
8-Channel ±3.2 V Low Level DC Voltage Data Logger

OctVolt-32V
8-Channel -8 V to 32 V Low Level DC Voltage Data Logger

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Quick Start Steps

Product Operation

1. Insert the Software USB Stick in an open USB port. If the autorun does not appear, locate the drive on the computer and double click on **Autorun.exe**. Follow the instructions provided in the Wizard. Install the MadgeTech 4 Software (version 4.2.12.0 or later) and USB Drivers onto a Windows PC (Windows XP SP3 or later).

2. Launch the MadgeTech 4 Software.

3. The IFC200 interface comes with a USB cable. Plug one end of the cable into an available USB port on the PC and plug the opposite end of the cable into the communication port on the IFC200. The drivers will install automatically.

4. 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.

5. 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.

6. To download data, 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.
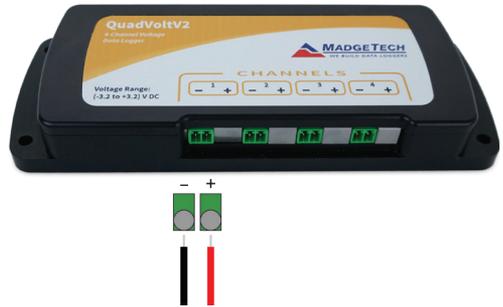
Additional Features and Operation

Wiring the Data Logger

QuadVoltV2 and OctVoltV2 Single Ended Wiring (3.2 V and 32 V)
Two-position removable screw terminal connections; accepts 2-wire configurations.

Warning: Note the polarity instructions. Do not attach wires to the wrong terminals.

QuadVoltV2 and OctVoltV2 Differential Wiring (±160 mV)
Three-position removable screw terminal connections; accepts 3-wire configurations.

Warning: Note the polarity instructions. Do not attach wires to the wrong terminals.
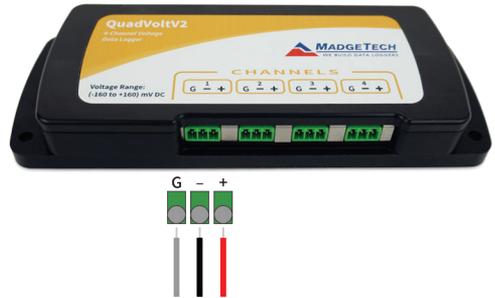
Manual Start

Click the **Custom Start** button on the Device panel, or right-click on the device and hover on the start selection, then chose custom start. Apply the options desired and select **Start**. Once armed through the software, to activate the Manual Start, hold the recessed push button, adjacent to the interface cable plug, down for 10 seconds. To see the change in the status, hit **Refresh Devices** within the software.

Additional Features and Operation (cont'd)

Set Password
To password protect the device so that others cannot start, stop or reset the device;
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the Information Group, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. On the **General Tab**, click **Set Password**.
4. Enter and confirm the password in the box that appears, then select **OK**.

Channel Naming
Up to a 10-character channel name can be programmed into the data logger for each channel. This ability helps to rename a channel in a report to distinguish it from other similarly named channels.
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the Information Group, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. In the **Channels** panel, find the channel desired, then select "Use custom name."
4. This will prompt a space to type in a name.
5. Select **OK**, then there will be a prompt to reset the device, select **yes**.

Product Maintenance

Battery Replacement
Materials: 3/32" HEX Driver (Allen Key) and Replacement Battery (U9VL-J)
- Remove the cover from the device by unscrewing the two 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
Recalibration is recommended annually.

Additional Services:
Custom calibration and verification point options available, please call for pricing.

Call for custom calibration options to accommodate specific application needs.
Prices and specifications subject to change. See MadgeTech's terms and conditions at madgetech.com
To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process by visiting madgetech.com.

QuadVoltV2 and OctVoltV2
General Specifications

Description	QuadVoltV2	OctVoltV2
Voltage Range	*See Table Below	
Voltage Resolution		
Voltage Accuracy		
Memory (all 4 or 8 channels enabled)	349,184 Readings per channel	174,592 Readings per channel
Reading Rate	4 Hz up to 1 reading every 24 hours	
LED Indicator	**Primary LED (Green)** Blink (15 seconds) = Logging Blink (5 seconds) = Delay Start On key-press **Secondary LED (Red)** Blinks (5 Seconds) = Battery or Memory Low	
Channels	4	8
Required Interface Package	IFC200	
Baud Rate	115,200	
Typical Battery Life	1 year	
Operating Environment	-40 °C to +60 °C, 0 %RH to 95 %RH (non–condensing)	
Material	Anodized aluminum	
Dimensions	2.7 in x 7.2 in x 1.0 in (69 mm x 184 mm x 26 mm)	2.7 in x 7.2 in x 1.3 in (69 mm x 184 mm x 32 mm)
Weight	15 oz (420 g)	17 oz (490 g)

*QuadVoltV2 & OctVoltV2 Range, Resolution and Calibrated Accuracy

Nominal Range	±160 mV	±3.2 V	-8 V to +32 V
Measurement Range (VDC)	±160 mV	±3.2 V	-2 V to +32 V
Accuracy	±0.01 %FSR	±0.05 %FSR	±0.05 %FSR
Resolution (mV)	0.15 µV	0.004 mV	0.004 mV
Common Mode Input Range	0 to 2.5 V	0 to 2.5 V	0 to 2.5 V

Battery Warning

Troubleshooting Tips

Why is the data logger not appearing in the software?

If the QuadVoltV2 or OctVoltV2 doesn't appear in the Connected Devices panel, or an error message is received while using either device, try the following:

- Check that the IFC200 is properly connected. For more information, see Troubleshooting Interface Cable problems (below).
- Ensure that the battery is not discharged. For best voltage accuracy, use a voltage meter connected to the battery of the device. If possible, try switching the battery with a new 9V lithium.
- Ensure that no other MadgeTech software (such as **MadgeTech 2**) is running in the background.
- Ensure that the **Connected Devices** panel is large enough to display devices. This can be verified by positioning the cursor on the edge of the Connected Devices panel until the resize cursor appears, then dragging the edge of the panel to resize it. The screen layout may also be reset in the options menu by selecting **File**, **Options**, and scrolling to the bottom.

Troubleshooting Interface Cable problems

Check that the software properly recognizes the connected IFC200 interface cable.

If either data logger is not appearing in the **Connected Devices** list, it may be that the IFC200 is not properly connected.

1. In the software, click the **File** button, then click **Options**.
2. In the **Options** window, click **Communications**.
3. The **Detected Interfaces** box will list all of the available communication interfaces. If the IFC200 is listed here, then the software has correctly recognized and is ready to use it.

Check that Windows recognizes the connected IFC200 interface cable.

If the software does not recognize the IFC200, there may be a problem with Windows or the USB drivers.

1. In Windows, click **Start**, right-click **Computer** and choose **Properties** or press **Windows+Break** as a keyboard shortcut.
2. Click **Device Manager** in the left hand column.
3. Double click **Universal Serial Bus Controllers**.
4. Look for an entry for **Data logger Interface**.
5. If the entry is present, and there are no warning messages or icons, then windows has correctly recognized the connected IFC200.
6. If the entry is not present, or has an exclamation point icon next to it, the USB drivers may need to be installed. These are available on the software flash drive included with the IFC200, and on the MadgeTech website.

Ensure that the USB end of the IFC200 is securely connected to the computer.

1. Locate the USB-A plug of the IFC200.
2. If the interface cable is connected to the PC, unplug it. Wait ten seconds.
3. Reconnect the cable to the PC.
4. Check to make sure that the red LED is lit, indicating a successful connection.

Still need help?
For more troubleshooting tips and information, refer to the built in help section of the MadgeTech 4 software, visit our Knowledge Base online at **madgetech.com/kbase** or contact us for customer support at (603) 456-2011.