

**Victron Global Remote**  
VGR



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# 1 Introduction

## 1.1 Introduction to Victron Energy

Victron Energy has established an international reputation as a leading designer and manufacturer of energy systems. Our R&D department is the driving force behind this reputation. It is continually seeking new ways of incorporating the latest technology in our products. Each step forward results in value-added technical and economical features.

## 1.2 Introduction to Victron Remote Management

### ***Victron Remote Management (VRM)***

Victron Remote Management is the name of a system which consists of a modem and a monitoring website.

To get a preview: please go to [www.victronenergy.com](http://www.victronenergy.com), and login at "Victron Remote Management" via the Login menu on the upper right of the page.

Username: [demo@victronenergy.com](mailto:demo@victronenergy.com)

Password: vrmdemo

### ***Victron Global Remote (VGR)***

The Victron Global Remote is a GSM/GPRS modem with two serial connections. It has one connection for a VE.Bus unit/system. This connection needs a MK2 which is supplied with the VGR. The other connection is to connect a BMV-602 Battery Monitor. To connect it to a BMV-602 you will also need the BMV-602 Datalink. The BMV-602 Datalink is an accessory of the BMV-602 which needs to be purchased separately.

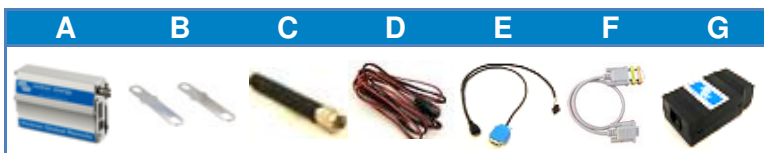
The Victron Global Remote can also be used as a standalone unit, without connecting it to the monitoring website. See Chapter 3 for more information.

## 2 Hardware installation

### 2.1 Package contents

The package in which the VGR is delivered should contain the following items:

- (A) 1x GSM modem
- (B) 2x Mounting bridle for (A)
- (C) 1x GSM antenna
- (D) 1x Battery cable with inline fuse
- (E) 1x Y cable (16-way plug to male DB9 + 12-way socket)
- (F) 1x Male DB15 to female DB9 cable including gender changer and null modem add-on
- (G) 1x MK2 interface
- (H) 1x Manual



In addition, you will also require:

- 1x SIM with PIN-security disabled.

Depending on the features you wish to use, you may also require:

- One or more installed VE.Bus devices
- 1x BMV-602 with data cable

## 2.2 Installation instructions

### 2.2.1 Mounting the modem

Before mounting the modem, write down the serial number in the provided space on the back of this manual; it will be required later. The serial number is the 15-digit number underneath the barcode, located on the underside of the modem.

### 2.2.2 Inserting the SIM

- 1) With the SIM oriented as shown on the right, push the SIM into the SIM slot on the modem (A), until it clicks.
- 2) Slide the SIM lock to the right.



### 2.2.3 Removing the SIM

- 1) Slide the SIM lock to the left.
- 2) Push the SIM into the slot until it clicks.
- 3) Release the SIM and it will be partially ejected from the SIM slot.
- 4) Remove the SIM from the slot.

### 2.2.4 Connecting to a VE.Bus system

- 1) Connect the 16-way plug of the Y cable (E) to the socket on the modem (A).
- 2) Connect the male DB9 plug of (E) to the female DB9 socket of the MK2 (G).
- 3) Connect the RJ45 socket of (G) to your VE.Bus system.

### 2.2.5 Connecting to a BMV-602

- 1) Connect the male DB15 plug of (F) to the modem (A).
- 2) Connect the other side of (F) to the female DB9 plug of the BMV-602 data cable.
- 3) Connect the other end of the BMV-602 data cable to the BMV-602.

## 3 Using the Victron Global Remote

The VGR has two modes of use; SMS and Web. The SMS mode is used to configure the VGR, and to receive status information about the connected devices. Web mode allows the VGR to send detailed information to a website, so that a full status history can be maintained.

Both SMS mode and Web mode can be used simultaneously. The SMS mode is always available. The Web mode on the other hand, is optional; and requires a correctly configured Internet connection.

### 3.1 SMS mode

SMS mode is used by sending commands from a mobile phone, or other compatible devices, using the SMS (Short Message Service) system. For information on how to send an SMS, refer to the manual of your SMS equipment.

An SMS command is a word which informs the VGR what action to take. Some SMS commands have optional parameters. To specify a parameter, type a space after the command, and then the parameter. Some parameters have optional or required arguments. To specify an argument, type a space after the parameter, and then the argument value.

When the VGR receives a command, it will reply with an appropriate message.

Note: Commands are not case sensitive, so it does not matter which combination of upper or lower case letters are used. However, some parameters (such as passwords) may be.

Multiple commands can be specified in a single message. Multiple parameters can be specified for a single command.

Refer to chapter 3.1.2 for a complete overview of the supported SMS commands and their parameters.

In addition to sending information on request, the VGR can be configured to automatically send out an alert when certain events occur.

### *3.1.1 Examples*

To request the status of the VE.Bus system, send the command:

```
vebus
```

The VGR will then reply with the status of the VE.Bus system.

To request the status of the GPRS Internet connection, send the command:

```
gprs
```

The VGR will then reply with the status of the GPRS Internet connection.

The GPRS command also allows you to specify parameters for additional actions. To configure and turn on a standard GPRS connection using a username and password, send the following message:

```
gprs user internet pass internet apn gprs.example.com on
```

To change the logging period, the command “log” is required. Along with the parameter “period”, and a value indicating the desired period. To set the logging period to 1 hour, send the following command:

```
log period 60
```

### 3.1.2 SMS command overview

Command	Parameter	Argument	Description
vebus			Requests information about the VE.Bus system.
battery			Requests information about the battery.
info			Requests information about both the VE.Bus system, and the battery.
gsm			Requests information about the GSM network connection, including the signal strength.
gprs			Requests the GPRS Internet connection status.
gprs	on		Enables the GPRS Internet connection.
gprs	off		Disables the GPRS internet connection.
gprs	user	<username>	Sets the username for the GPRS Internet connection.
gprs	pass	<password>	Sets the password for the GPRS Internet connection.
gprs	apn	<APN>	Sets the APN for the GPRS Internet connection.
network			Requests information about the GSM and GPRS connections.
log			Requests the current logging period for web mode.
log	period	<period>	Sets the logging period for web mode (in

			minutes).
alert			Requests the current alert configuration.
alert	on		Enables alerts, and sets the alert number to the number of the device that sent the message.
alert	off		Disables alerts.
Version			Requests the software version of the VGR.

### 3.2 Web mode

When web mode is enabled, the VGR will periodically log data to the Internet so that it can be reviewed later. To view this data, go to <http://vrm.victronenergy.com> and create an account. Once you have logged in, click on the “Add a site link” on the left, enter the serial number of your VGR in the box provided, then click on the “Add site button”.

Tip: You can add multiple devices under the same account.

Note: Make sure you type the serial number correctly. If you make a mistake, you will not be able to see the data from your device.

Your device will now be listed at the top left of the page. You will probably want to change the device description to something more meaningful.

Click on the device description in the top left to view the data for that device.

Note: You must configure the GPRS Internet connection before you will be able to see any data.

## 4 Configuring the VGR

All configuration is performed by sending commands to the VGR via SMS.

### 4.1 SMS Alerts

To enable SMS alerts, send the following command from the number which should receive the alerts:

```
alert on
```

Note: If alerts were previously configured to be sent to another number, that number will no longer receive alerts.

To disable SMS alerts, send the command:

```
alert off
```

### 4.2 GPRS Internet connection

In order to use web mode, the GPRS internet connection must be configured. To do this, you need the user name, password and APN for your SIM. This information can be obtained from your SIM provider.

The GPRS connection can be configured and enabled with a single SMS by combining the commands. For example, to configure and enable a connection with the username and password internet, and APN gprs.example.com, send the following message:

```
gprs user internet pass internet apn gprs.example.com on
```

After sending the settings, you will receive one or more replies indicating the status of the connection.

Note: Although the SMS commands are not case sensitive, the values for the username and password may be. Ensure that you use the same capitalisation as specified by your SIM provider.

### 4.3 Log period

When the GPRS Internet connection is enabled, the VGR will periodically log data to the Internet. By default logs are sent every 15 minutes, as well as whenever an alarm occurs or clears. Under normal circumstances, this will require less than 1.5MB of data transfer per month.

To increase the amount of information available on the web site, the time between logs can be reduced. This will however increase the data usage, which could lead to higher charges by your network provider.

The time between logs can alternatively be increased in order to reduce data usage.

Note: The log period is specified in minutes.

Note: Periodic logging can be disabled by setting the log period to 0.

#### 4.3.1 Examples

Set the log period to 5 minutes:

```
log period 5
```

Disable periodic logging:

```
log period 0
```

Note: Even with periodic logging disabled, data will still be logged for any alarms that occur. To disable logging completely, the GPRS Internet connection must be switched off (*gprs off*).

## 5 Troubleshooting

### 5.1 LED Codes (LED on Modem)

LED Indication	Explanation
Off	No power to the modem
Steady on	Modem is powered but not connected to the GSM network
Blinking slowly	Connected to the network, and idle
Blinking rapidly	Connected to the network, call in progress

### 5.2 Common problems

**Problem:** The modem will not connect to the GSM network

**Possible causes:**

- PIN security is still on sim card. Check this by putting the sim card in a normal phone and turn it on. When turning the phone on, it should **not** ask for a pin code, not even 0000. Solution: turn the security off.

- No network reception, try moving the modem around or use a different antenna. Try powering the modem at a location where you have full reception on a normal GSM phone. You can test this without the Multi or BMV-602 connected.

- SIM slot on modem is not correctly closed: make sure that you close the black slide over the sim.

**Problem:** The modem will not connect to GPRS (SMS works correctly).

**Possible causes:**

- GPRS parameters are not configured (correctly). Solution: configure the modem by using the 'gprs' sms command. See paragraph 4.2.

- GPRS functionality is not enabled on the sim card. First, try using GPRS on a normal cell phone with this sim card. Most networks will be able to auto configure your phone. If GPRS works on the phone it should also work on the modem (when using the correct settings). If GPRS does not work: please contact your network operator to enable GPRS communication.

**Problem:** I get a sms saying “Warning MK2 version [version number] not supported”.

**Cause:** The minimal MK2 version required is 1130125. Please use the MK2 that was supplied to with unit or connect it to the latest version of VEConfigure.

**Problem:** I get a sms saying “Warning target version [version number] not supported”.

**Cause:** The minimal version of the VE.Bus device connected has to be 19xx111

**Problem:** The VE.Bus device (Multi/Inverter/Quattro) switches off when I connect it to the MK2.

**Cause:** The MK2 needs to have the two jumpers removed. Please note: these jumpers are already removed on the MK2 supplied with the Victron Global Remote.

## 6 Specifications

<b>Victron Global Remote</b>	
Power supply voltage range	5.5 to 32VDC
Current draw (max)	0.48A @ 5.5VDC
Operating temp. range	-30C – 75C
<b>ENCLOSURE</b>	
Measurements Global Remote	73 x 54.5 x 25.5
Weight Global Remote	89 grams
<b>GSM / GPRS</b>	
GPRS Data usage	To be defined



# Victron Energy Blue Power

Distributor:

Serial number:

Version : 04

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