Integration Note

Manufacturer:	Victron Inverter
Model Number(s):	Victron Inverters with Cerbo GX, Color Control GX, Ekrano GX or other GX devices
Core Module Version:	**8.8.**
Driver Developer:	**Paul Cammidge Computer Consulting cc**
Document Revision Date:	25 August 2023

Overview & Supported Features

The ELAN system can effectively communicate with Victron Inverters through the Cerbo GX, Color Control GX, Ekrano GX, or any other GX device with the help of this driver. It has undergone rigorous testing on 5kW and 8kW Victron inverters and is likely to be compatible with all Victron inverters.

This driver is installed under "Sense Inputs" under "Input/Output". The following information is available from the inverter:

- Grid Power
- Battery State-of-Charge (SoC)
- Solar Power
- Generator Power
- Grid Voltage
- Battery Power
- Power Consumption

All readings are obtained from the GX device. Values reflected on the driver should correspond to the values displayed on your touchscreen and VRM.

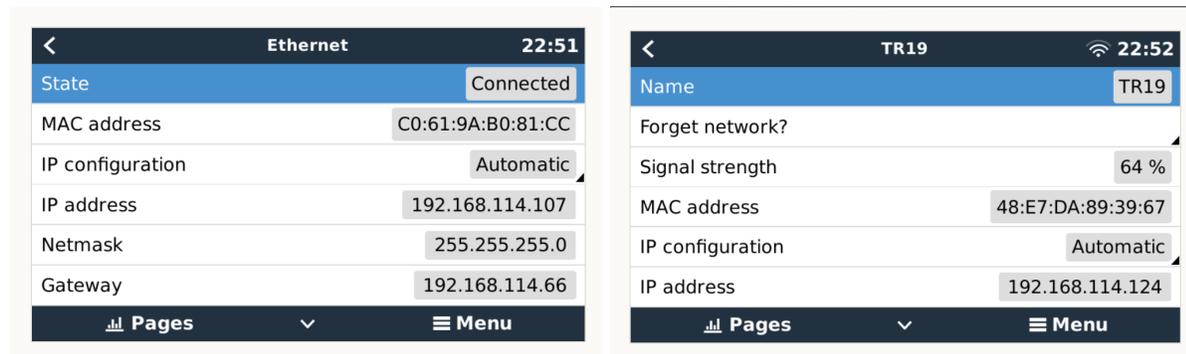| Any feature not explicitly noted as supported should be assumed to be unsupported. |
|---|

CONNECTION TO YOUR INVERTER:

Your ELAN controller will communicate with your Victron inverter via your network.

Ethernet or WiFi

Nice/ELAN System Controller

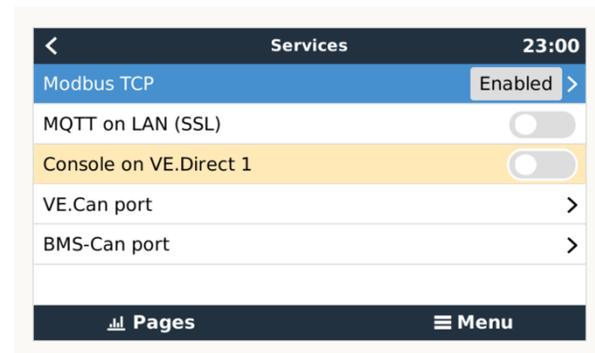Color Control GX or Cerbo GX

CONFIGURING YOUR INVERTER

The Victron driver connects to your Color Control GX or Cerbo GX using IP. The IP address of the Victron device will be required. The IP address can be obtained directly from the touch screen.

From the home screen, select "Settings -> Ethernet" or "Settings -> WIFI" to obtain the IP address from your Victron device. An active internet connection is not required for this driver to work.

‹	Ethernet	22:51
State		Connected
MAC address		C0:61:9A:B0:81:CC
IP configuration		Automatic
IP address		192.168.114.107
Netmask		255.255.255.0
Gateway		192.168.114.66
⚊ Pages	⌄	☰ Menu

‹	TR19	🛜 22:52
Name		TR19
Forget network?		
Signal strength		64 %
MAC address		48:E7:DA:89:39:67
IP configuration		Automatic
IP address		192.168.114.124
⚊ Pages	⌄	☰ Menu

Modbus TCP must be enabled on your Victron device. This can be done from the touch screen. Modbus TCP must not be allowed on public or insecure networks!

To enable Modbus TCP, select "Settings -> Services" and enable Modbus TCP.

‹	Services	23:00
Modbus TCP		Enabled ›
MQTT on LAN (SSL)		⬤
Console on VE.Direct 1		⬤
VE.Can port		›
BMS-Can port		›
⚊ Pages		☰ Menu

INSTALLATION PROCESS

It is recommended that you follow the below installation process to ensure you are running the latest version of the driver.

1. Download the latest version of the driver from Drivercentral.
2. Under Input/Output in Configurator, right-click Sense Inputs and select Add New Input Controller.
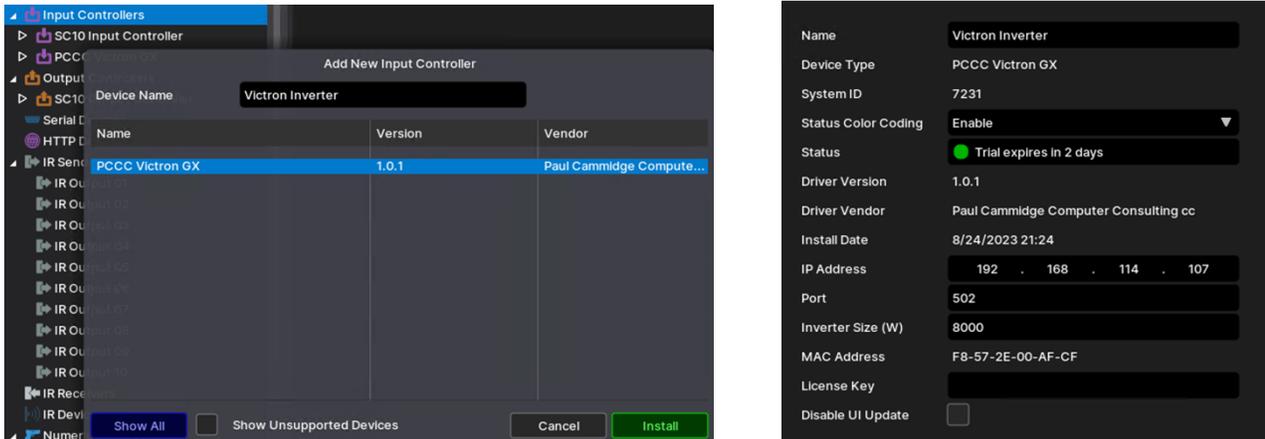

3. Select the driver and click OK.
4. Update the IP address to reflect the IP address of your inverter. The port should always be 502.

NUMERIC INPUTS

The following table shows the numeric inputs available from the driver, together with their Device ID. The input name may be changed, but the ID must remain the same.

| Input	ID
Grid Power	0
Consumption	1
Battery State-of-Charge	2
Solar Power	3
Generator	5
Battery Power	6
Active Input	7
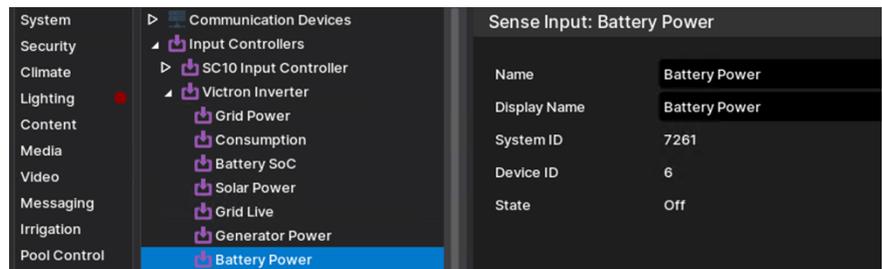
Most numeric inputs are updated every 2 minutes or when the data changes by more than 50W—state-of-Charge updates when it changes by more than 1%.

The "Active Input" can be used to create a trigger showing which input is active. The value is provided as a numeric input to allow greater flexibility. The value may be:
- 0: AC Input 1 is active
- 1: AC Input 2 is active
- 240: Disconnected

GRID STATE

The grid state can be displayed on an Input Toggle Indicator. The toggle indicator must be linked to "Your inverter: Grid Live".
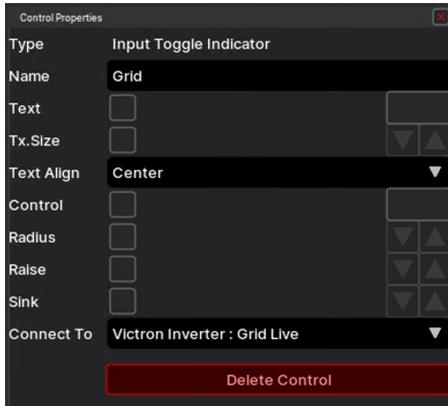
CREATING BAR GAUGES

Bar Gauges can be created on any home page. When making a bar gauge, there are two different values that can be linked to each reading. Select the parameter preceded by the inverter name.
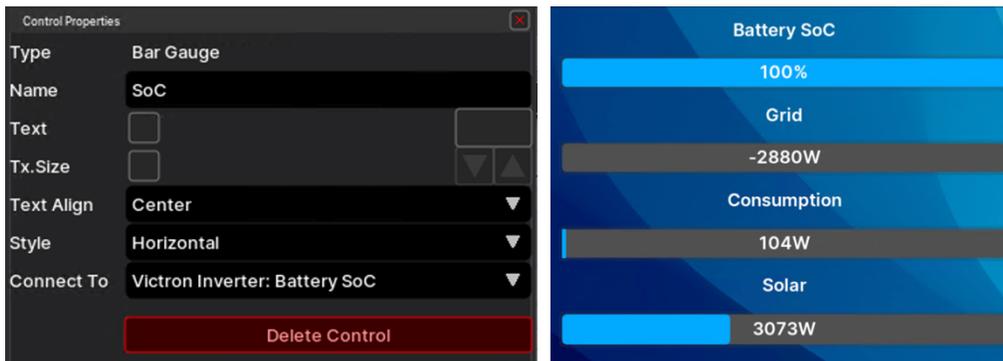

Notes:
- Bar Gauge data updates every 10 seconds.
- Vertical bar gauges will not display the values. The value may be added as feedback text above the gauge.
- The scale on the bar gauge is determined by the inverter size specified in the Configurator. You may change this value in the Configurator without affecting anything besides the bar gauges.

HISTORICAL GRAPHS

Historical data can be displayed on graphs.

To create a graph, select "Graph Objects" on the "Input/Output" tab. Right-click and select "Add New Graph Object".
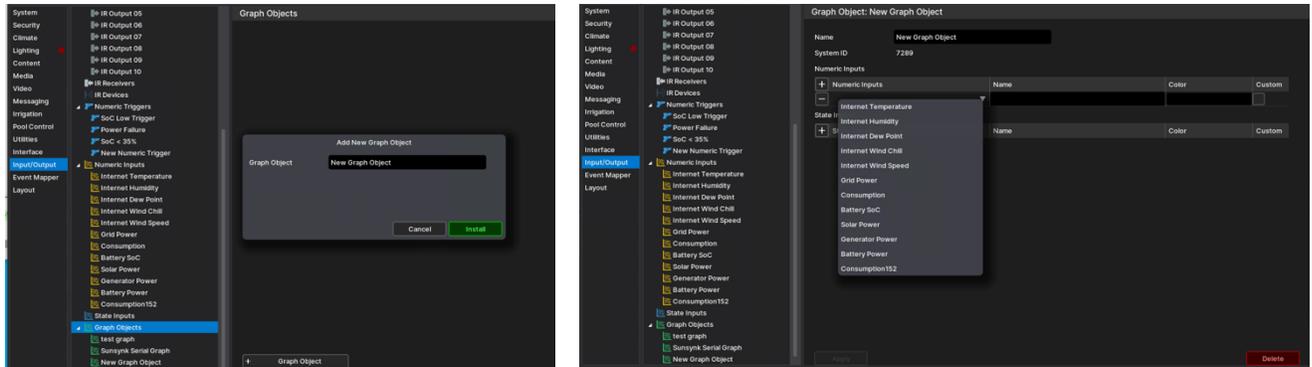
Add the inputs by clicking on the "+ Numeric Inputs" and selecting the inputs required.

States can be displayed below the graph. One example might be to indicate the state of the Grid. To create a state, create a "Numeric Trigger" in the "Input/Output" tab. Right-click and "Add New Graph Object".
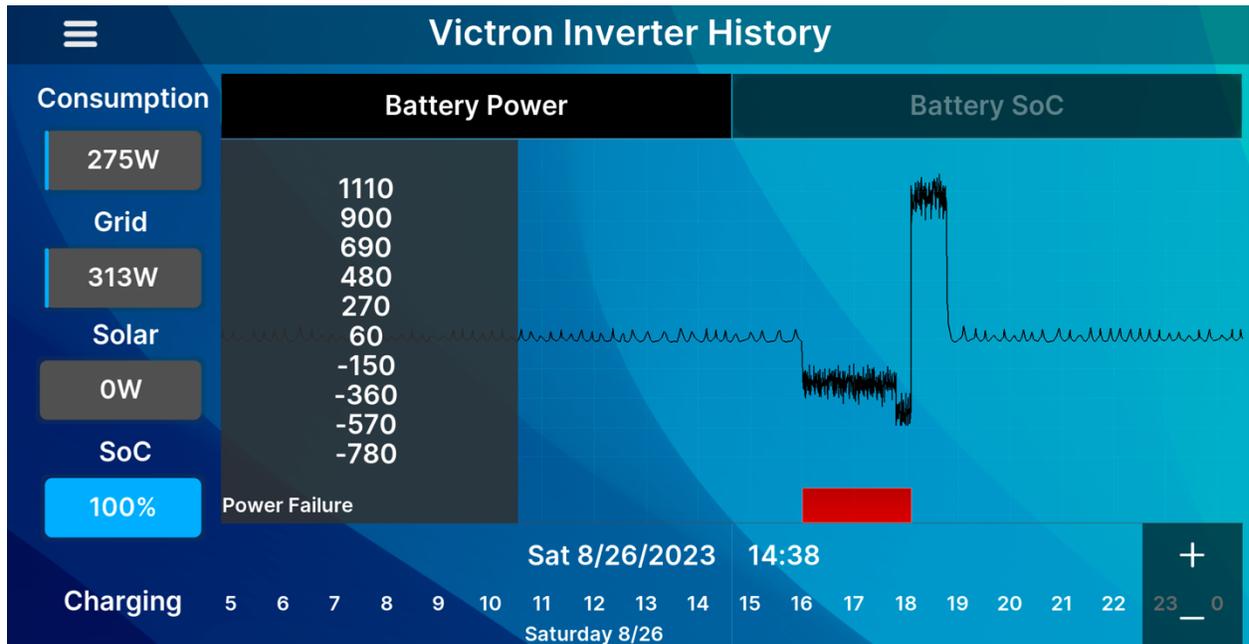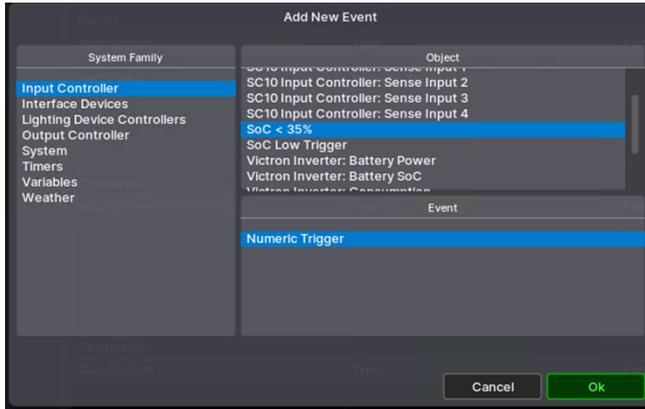
TRIGGERING EVENTS

Events can be triggered based on your inverter data. Some examples would be:
- Switch off your geyser when the Battery state-of-charge drops below 35%.
- Switch off your lights when the generator is running.

Triggering an event consists of 2 steps:

1. Right-click "Numeric Triggers" in the "Input/Output" tab. Select "Add New Numeric Trigger". Give the trigger a meaningful name. Select the value and the level at which to trigger.
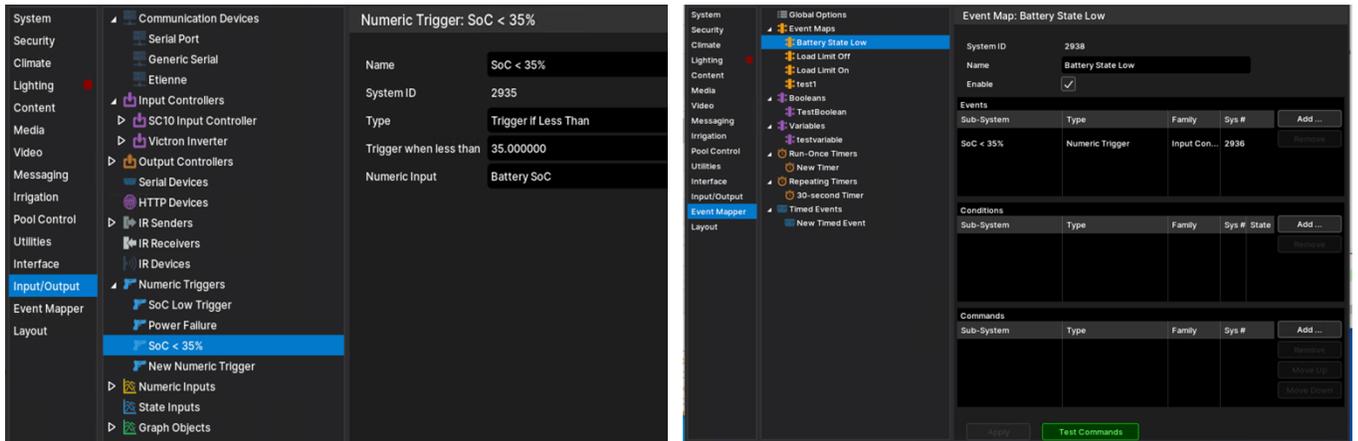
2. Create an event map on the "Event Mapper" tab. Right-click on "Event Maps" and "Add New Event Map". Give the event map a meaningful name. In the "Events" section, add your trigger from the "Inputs" section. Select "Numeric Trigger" and "Ok".
3. Select the action to take in the "Commands" section.

Triggers can also be added as states on historical graphs.

COMMON PROBLEMS

1. Graphs do not render correctly prior to version 8.8. This is a known problem that has been fixed in 8.8.

NICE/ELAN DEVELOPER PARTNER INFORMATION

This driver was written and supported by: Paul Cammidge Computer Consulting cc (PCCC).

Disclaimer

Paul Cammidge Computer Consulting cc drivers are created to the highest standard and developed with industry-leading practices, including bench and real-world field testing.

Paul Cammidge Computer Consulting cc advises that dealers take advantage of our free show room driver to thoroughly test and familiarize themselves with our drivers and their capabilities before installing them on a customer site.

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