



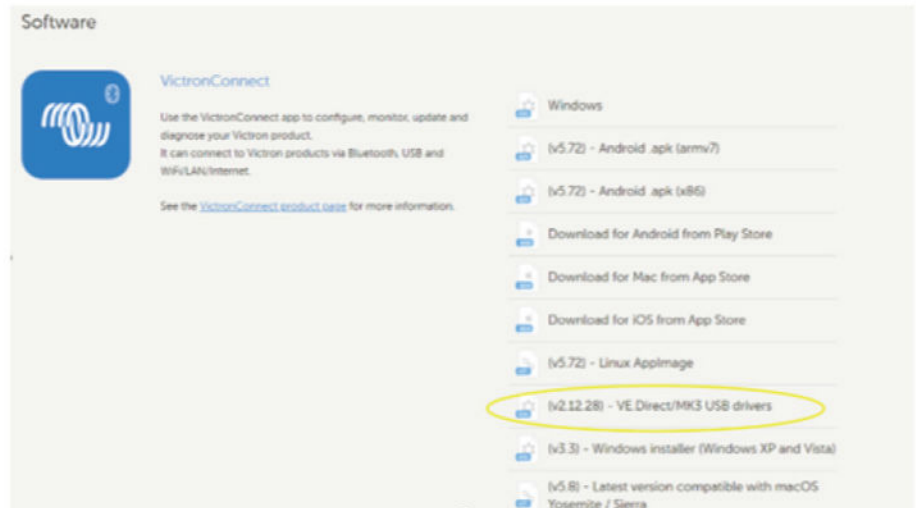
VICTRON INVERTER PROGRAMMING

The following steps will explain the process to connect and program a Victron Multiplus inverter/charger. This document will also outline the suggested settings for Battle Born Batteries lithium charge profile.



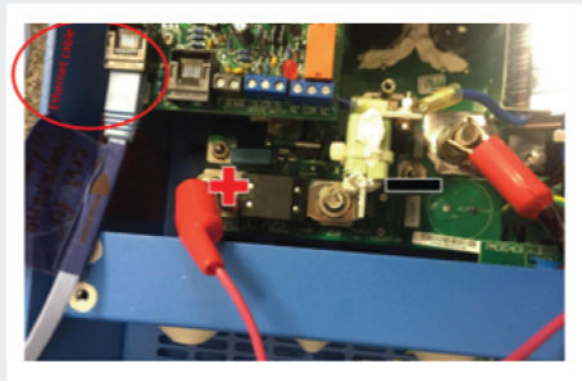
REQUIRED ITEMS

- Victron MK3 to USB programming cable
- Cat 6 cable
- Victron Multiplus inverter (unit will need DC power for programming)
- Computer
- Victron Connect or VE.Configuration software downloaded onto computer (free download from <https://www.victronenergy.com/support-and-downloads/software> or from the Mac, Google or Windows store). If you are using a PC computer you may need to download and install a driver on your computer. The driver can also be found on Victron's site, highlighted below.



PREPARING YOUR INVERTER FOR PROGRAMMING

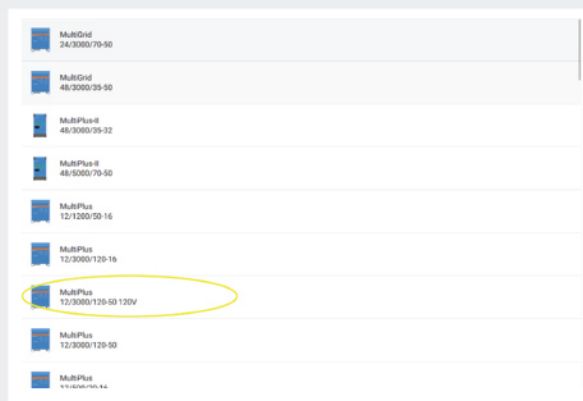
1. Make sure you've downloaded the Victron software onto your computer. Our preference is the Victron Connect software because it can be used on either a PC or Mac computer. Once downloaded open the program.
2. With the inverter turned into the OFF position, connect the Cat 6 communication wire to the inverter in either available port. Make sure no other cat 6 wires are connected to the inverter.



PREPARING YOUR INVERTER FOR PROGRAMMING CONTINUED

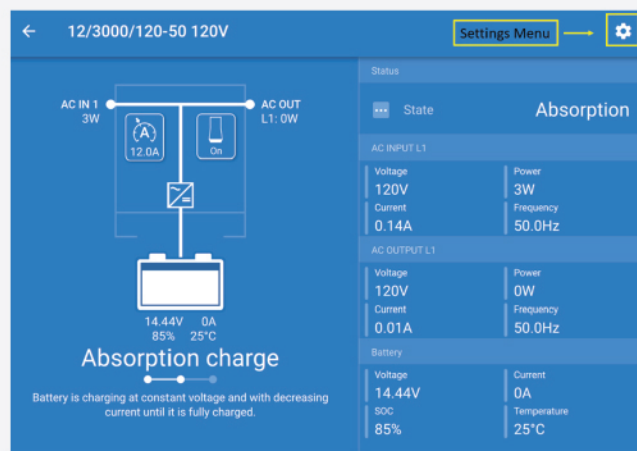
- Turn the inverter into the ON position and connect the cat 6 wire to the MK3 to USB. At this time the USB can be connected to the computer.

- Find the inverter in the Device List on Victron Connect.

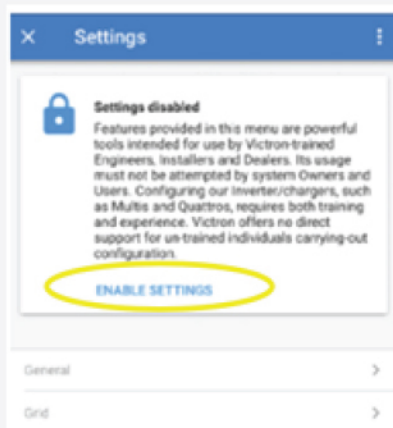


VIEWING AND PROGRAMMING YOUR MULTIPLUS INVERTER

- Turn the inverter into the ON position and connect the cat 6 wire to the MK3 to USB. At this time the USB can be connected to the computer.

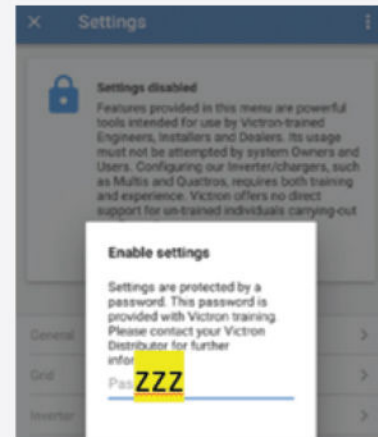


- Now that you've entered the settings menu you will be prompted to Enable Settings. Click the Enable Settings option.

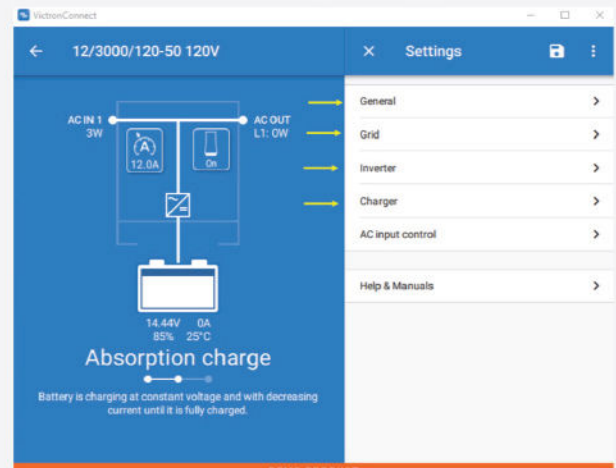


VIEWING AND PROGRAMMING YOUR MULTIPLUS INVERTER CONTINUED

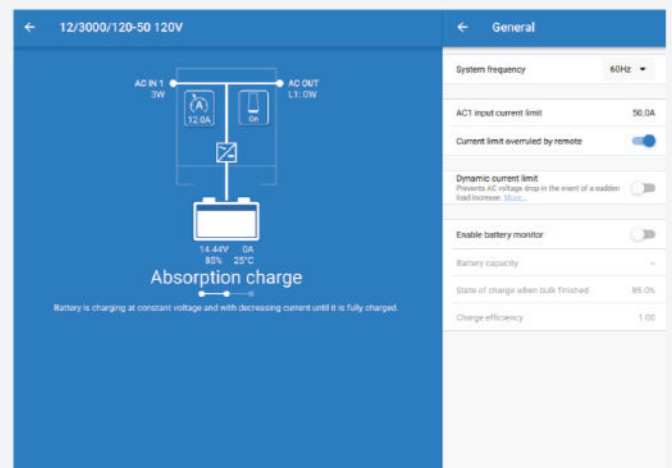
- The settings menu is password protected. The default password is zzz.



- You now have access and the ability to change settings. There are 4 sections that we will check and adjust settings if needed: General, Grid, Inverter and Charger.



- The General settings should be set as:



VIEWING AND PROGRAMMING YOUR MULTIPLUS INVERTER CONTINUED

6. The Grid settings should be set as:

12/3000/120-50 120V

Grid

Accept wide input frequency range (45-65Hz)
When enabled all AC input frequency between 45-65 Hz is accepted as valid.

UPS function
Fault transfer when the inverter/generator stops. [Click here to be directed with generator.](#)

AC low voltage disconnect
AC input will be deactivated when voltage drops below this level.

AC low voltage connect
Voltage at which the AC input will be activated after a disconnection by low AC voltage.

AC high voltage connect
Voltage at which the AC input will be activated after a disconnection by high AC voltage.

AC high voltage disconnect
AC input will be deactivated when voltage rises above this level.

Country / grid code standard
This setting is not supported in VictronConnect yet, use VEGConfigure to configure it.

7. The Inverter settings should be set as:

12/3000/120-50 120V

Inverter

Inverter output voltage 120V

Ground relay

DC input low-shutdown
Inverter will switch off when the DC voltage drops below this level.

DC input low restart
Voltage at which the inverter will restart after a shutdown by low DC voltage.

DC input low pre-alarm
Level at which the low battery pre-alarm indication starts.

Low SOC shut-down Disabled

AES
Saves battery energy when there is no (or very low) load connected to the inverter. [Click here to learn more.](#)

Start AES when load lower than 30W

Stop AES when load higher than 60W

AES type
[Click here to learn more.](#) Search mode

PowerAssist
If the load exceeds the AC input current limit, use the inverter to assist. [Click here to learn more.](#)

Assist current boost factor
Factor applied to AC input current limit when needed. [Click here to learn more.](#)

8. The Charger settings should be set as:

Weak AC input
Should be checked in cases where problems during charge arise. [Read more...](#)

Stop after excessive bulk
Safety setting. [Read more...](#)

12/3000/120-50 120V

Charger

Enable charger

Charge current 120A

Absorption voltage 14.40V

Float voltage 13.60V

Repeated absorption interval
The charger will enter repeated absorption mode at the specified interval to "refresh" the battery.

Repeated absorption time 1.00h

Absorption time 2h

Low temperature cut-off Disabled

Charge curve
[Click here to learn more.](#) Fixed

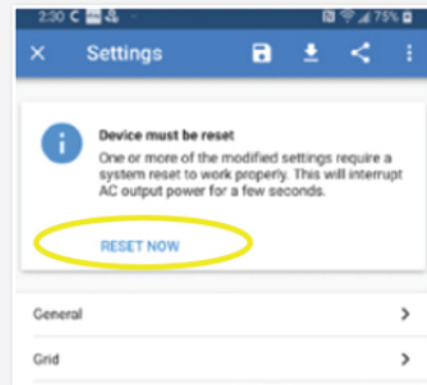
Lithium batteries
[Click here to learn more.](#)

Storage mode
When is fully charged keeps the battery at reduced constant voltage to limit gassing and corrosion.

Use equalization
Traction batteries require regular additional charging.

VIEWING AND PROGRAMMING YOUR MULTIPLUS INVERTER CONTINUED

9. Once all settings have been updated you will be prompted to proceed with a device reset. Once you select the reset the inverter will make a few small, clicking noises and the programming will be complete.



10. At this time, you can disconnect the cat 6 cable from the inverter. Programming is complete.