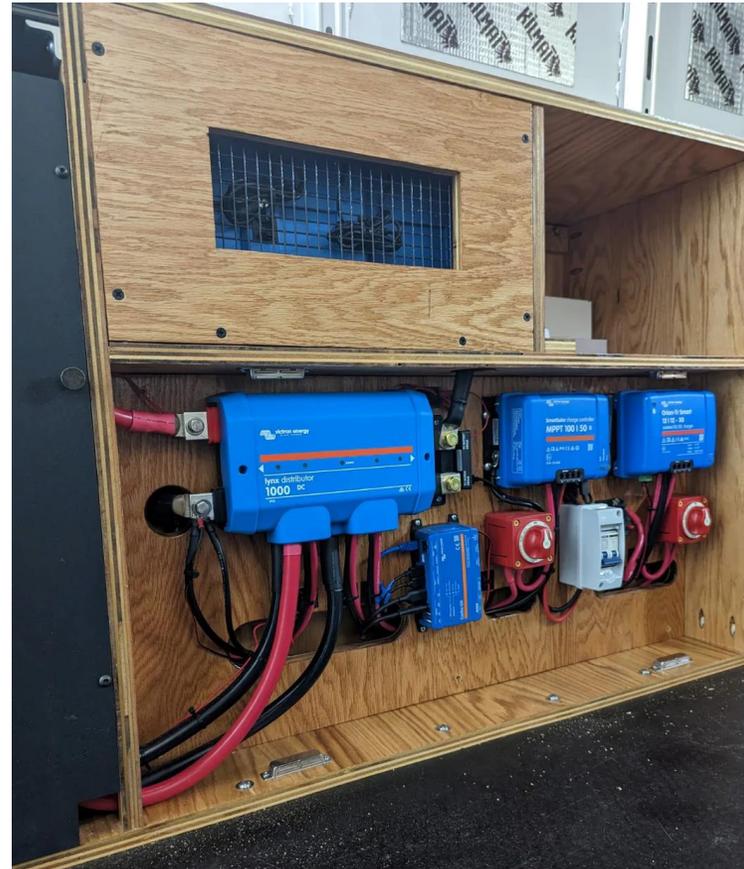# Victron 120V Multiplus Programming

Note of Caution

- This is a generic setup for LiFePo4 batteries operating a 120V Multiplus. Your system may require adjustments based on your specific system requirements and batteries.

- It is possible to cause major issues and potentially destroy your equipment if you fail to do this properly. You should not venture down this path unless you're confident you have the skills to do so.

Multiplus Generic Programming via Victron Connect

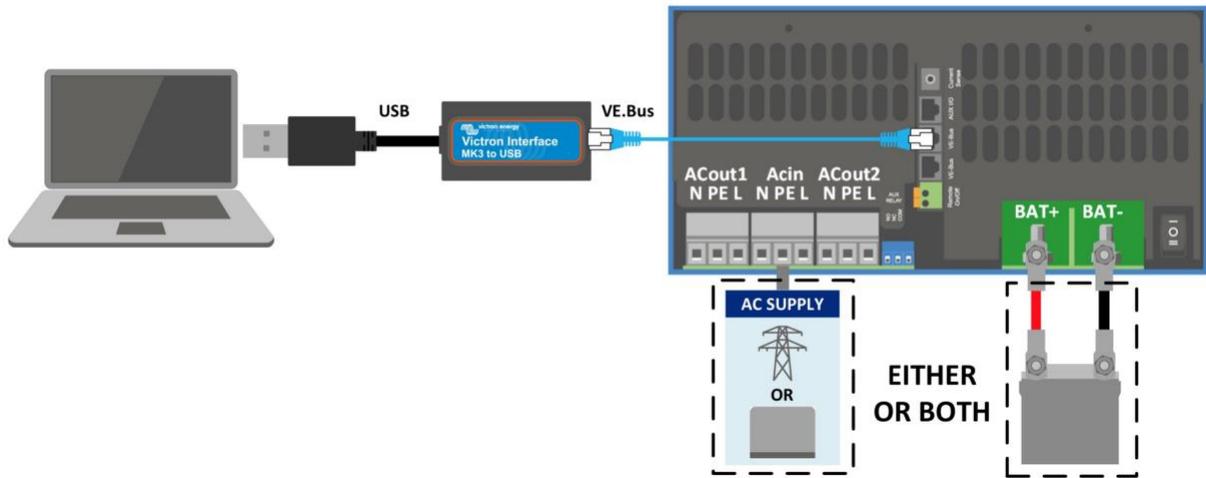Step 1: Buy a Victron MK3 USB adapter and RJ45 cable

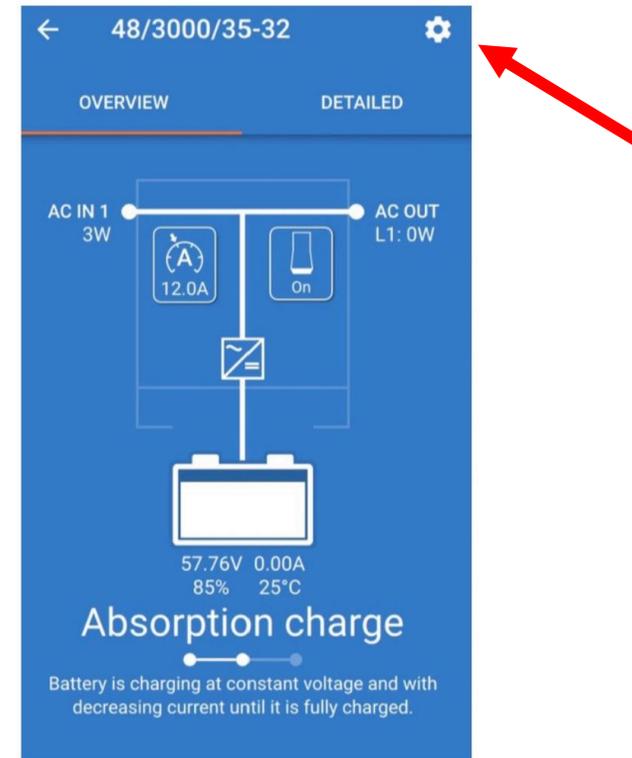Step 2: Build out a legit electrical system

Multiplus Generic Programming via Victron Connect

Step 3: Connect the MK3 to your inverter / charger VE Bus port and your laptop. Then power on your inverter.
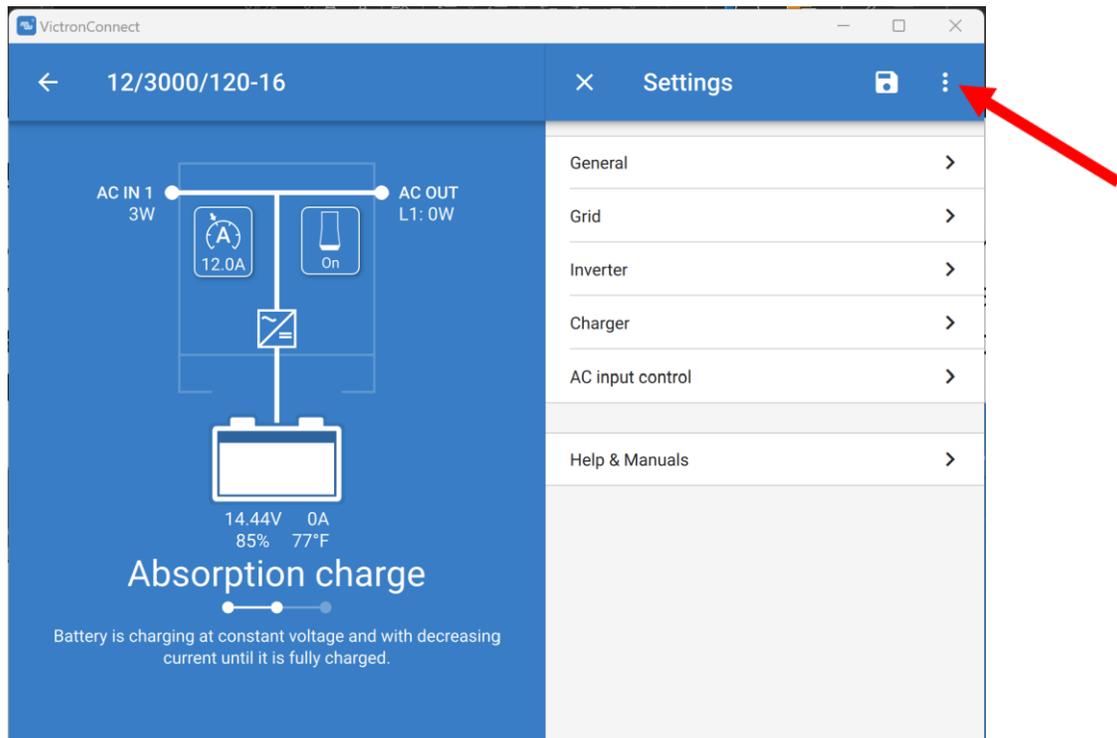
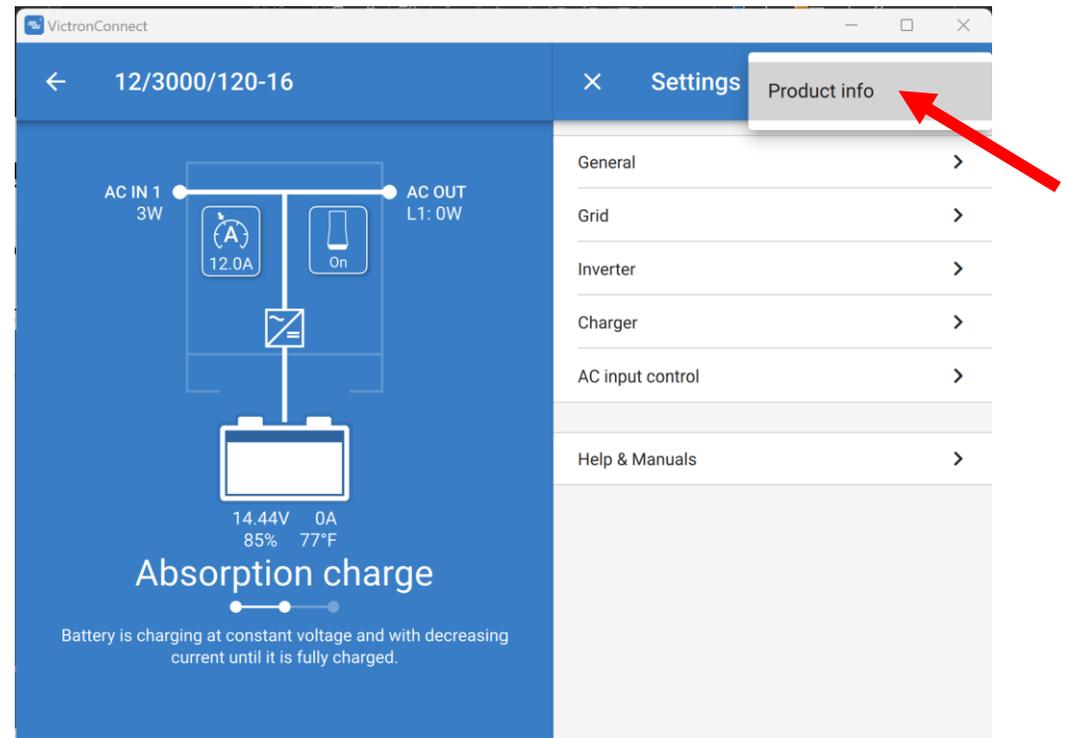Step 4: Open Victron Connect on your laptop and click the settings icon

Multiplus Programming via Victron Connect

Step 5: Click the 3 dots, if you're prompted for a password to enable settings it is zzz.

Step 6: Click 'Product Info' and ensure the firmware is up to date.

Multiplus Generic Programming via Victron Connect

Step 7: Click 'General' and match the settings here. If you're using Victron batteries controlled by a Victron BMS you may want to enable the battery monitor feature.

System frequency	60Hz ▾
AC1 input current limit	30.0A
Current limit overruled by remote	⬤

Dynamic current limit Prevents AC voltage drop in the event of a sudden load increase. More...	○
External current sensor connected	○

Enable battery monitor	○
Battery capacity	0Ah
State of charge when bulk finished	85.0%
Charge efficiency	1.00

Step 8: Click 'Grid' and match the settings here.

Accept wide input frequency range (45-65Hz) When enabled all AC input frequency between 45-65 Hz is accepted as valid	⬤
UPS function Fast transfer when the mains/generator stops. Might need to be disabled with generators.	⬤

AC low voltage disconnect AC input will be deactivated when voltage drops below this level	90V
AC low voltage connect Voltage at which the AC input will be activated after a disconnection by low AC voltage	97V

AC high voltage connect Voltage at which the AC input will be activated after a disconnection by high AC voltage	135V
AC high voltage disconnect AC input will be deactivated when voltage rises above this level	140V

Country / grid code standard This setting is not supported in VictronConnect yet, use VEConfigure to configure it.	None ▾

Multiplus Generic Programming via Victron Connect

Step 8: Click 'Inverter' and match the settings here.

Inverter output voltage	120V
Ground relay More info...	⬤ (on)
DC input low-shutdown Inverter will switch off when the DC voltage drops below this level	11.60V
DC input low restart Voltage at which the inverter will restart after a shutdown by low DC voltage	12.40V
DC input low pre-alarm Level at which the low battery pre-alarm indication starts	12.20V
Low SOC shut-down	Disabled
AES Saves battery energy when there is no (or very low) load connected to the inverter. More...	⬤ (off)
Start AES when load lower than	72W
Stop AES when load higher than	120W
AES type AES types description.	Modified sine wave ▼
PowerAssist If the load exceeds the AC-input current limit, use the inverter to assist. More...	⬤ (on)
Assist current boost factor Factor applied to AC input current limit when needed assist current is unknown. More...	2.0

Step 9: Click 'Charger' and match the settings here.

Enable charger	⬤ (on)
Charge current	50A
Absorption voltage	14.40V
Float voltage	13.60V
Repeated absorption interval The charger will enter in repeated absorption mode at the specified interval to "refresh" the battery.	7.00d
Repeated absorption time	1.00h
Absorption time	1h
Low temperature cut-off	Disabled
Charge curve Charge curves description.	Fixed ▼
Lithium batteries Click here to know the effect of enabling or disabling Lithium battery mode	⬤ (on)
Storage mode When is fully charged keeps the battery at reduced constant voltage to limit gassing and corrosion.	⬤ (off)
Use equalization Traction batteries require regular additional charging. Read more....	⬤ (off)
Weak AC input Should be checked in cases where problems during charge arise. Read more...	⬤ (off)
Stop after excessive bulk Safety setting. Read more...	⬤ (off)

Multiplus Generic Programming via Victron Connect

Step 10: Click 'AC Input Control' and match the settings here.

Conditional AC input connection	⬤○
Load condition	
AC input connect based on load	○⬤
Connect when load is higher than	2550W
Delay before connection	Disabled
Disconnect when load is lower than	637W
Delay before disconnection	Disabled
Battery conditions	
Connect when SOC drops below	Disabled
Connect when battery voltage drops below	Disabled
Delay before connection	Disabled
Disconnect AC input on	Battery voltage ▼
Disconnect when voltage is higher than	16.00V
Delay before disconnection	Disabled