Victron MultiPlus and MPPTs Setting with Sunwoda Battery

VEConfigure Settings

This section presumes familiarity with VEConfigure software.

1.1 General tab

- Check the “Enable battery monitor” function
- Set the battery capacity to the total capacity of the battery: eg 100Ah times the number of battery modules.
- The other parameters (“State of charge when bulk finished” and “Charge efficiency”) can be left to their default setting: They are ignored for a Sunwoda Energy installation.

1.2 Charge Settings、

Charger tab

VEConfigure Charge Parameter	**Setting**
Battery type	Lithium
Charge curve	Fixed
Absorption voltage	54.7V
Float voltage	54.2V
Absorption time	1 Hr

Note: make sure to double check the float voltage after completing Assistants, and if necessary set it back to 54.20 V.

Note For off-grid use: ignore the 'bms assistant required' warning.

1.3 Inverter Settings

In the Inverter tab of VEConfigure

VEConfigure Inverter Parameter	**Setting**
DC input low shut-down	47V
DC input low restart	51V

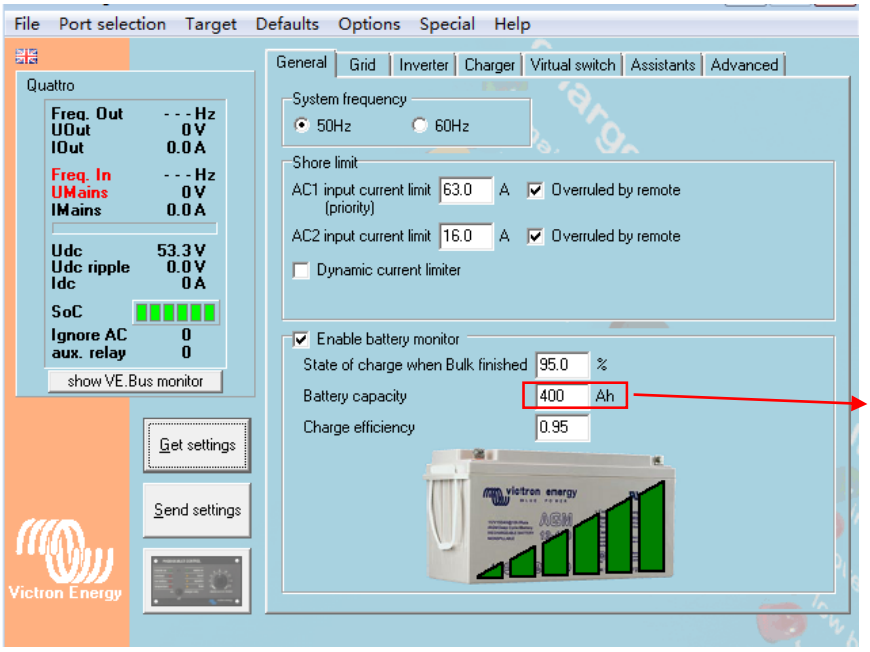
VEConfigure Inverter Parameter	Setting
DC input low pre-alarm*	51V

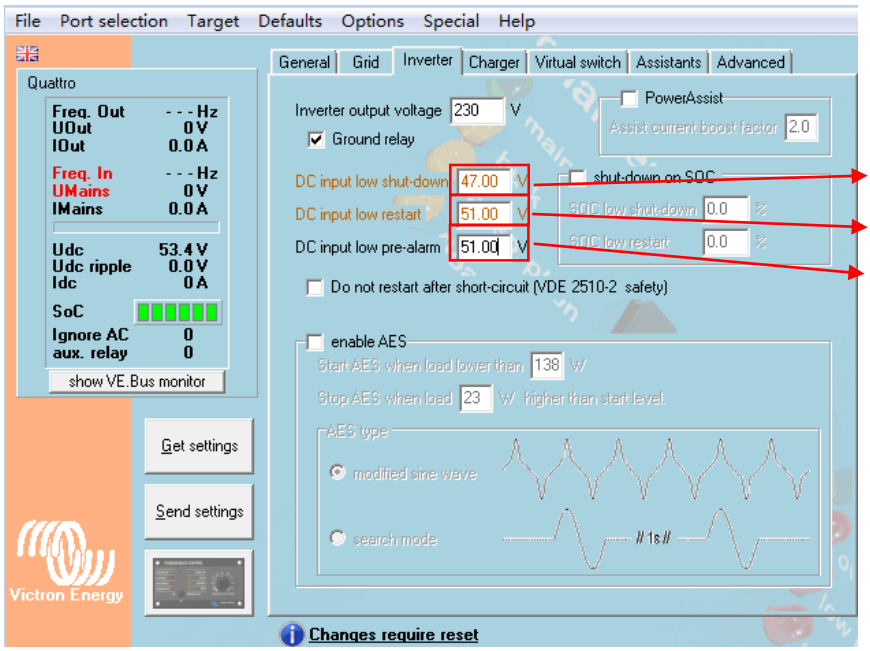
* The pre-alarm setting is dependent on your preference and on site specific requirements. You may wish for this to be activated earlier in an off grid situation to allow time to start a backup generator.

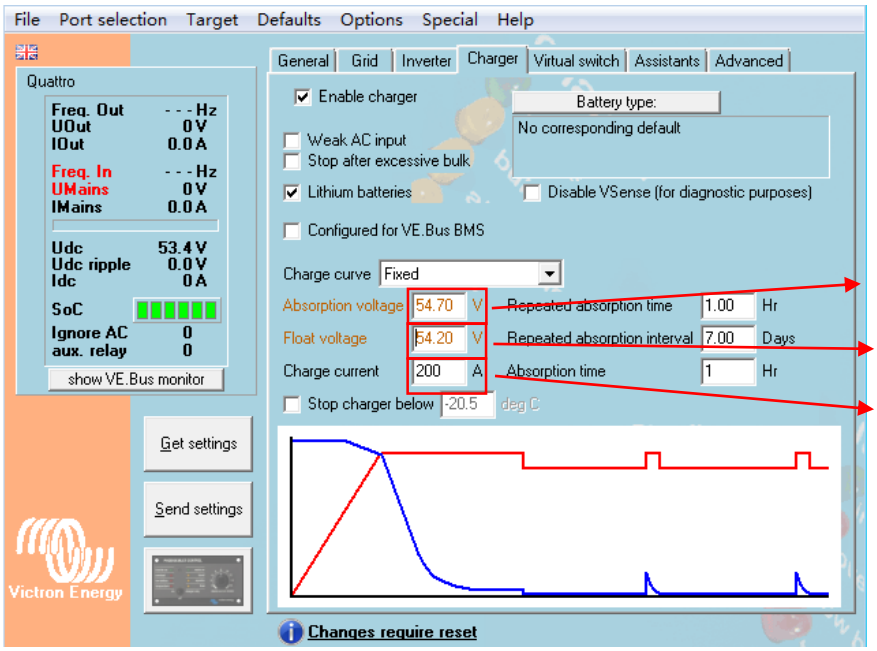
1.4 ESS System Settings

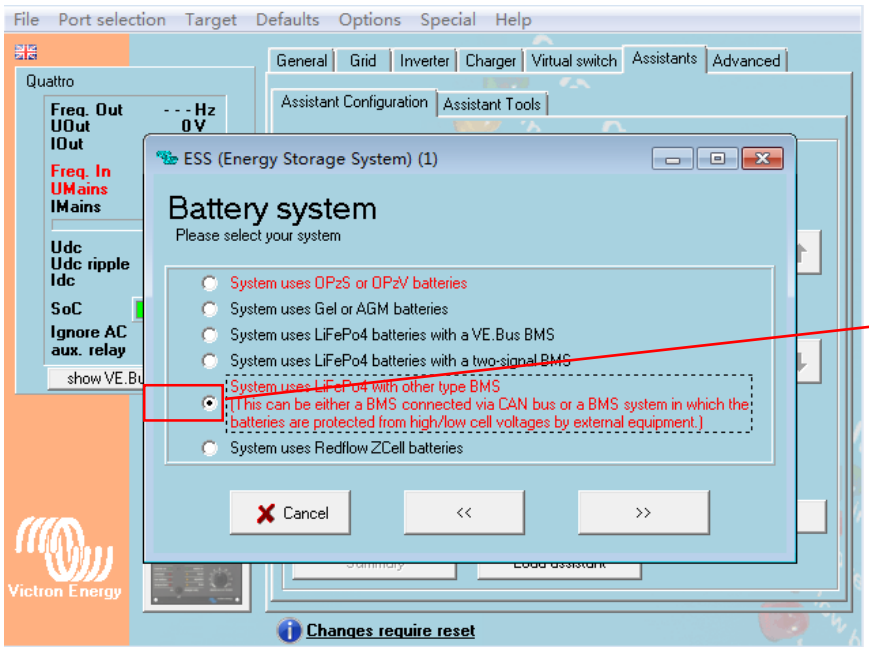
If you are using the battery as part of a grid connected ESS system, please review the ESS Quickstart guide and Design and Installation Manual.

The settings that are specific to the Sunwoda Energy battery in the VEConfigure ESS Assistant are below:

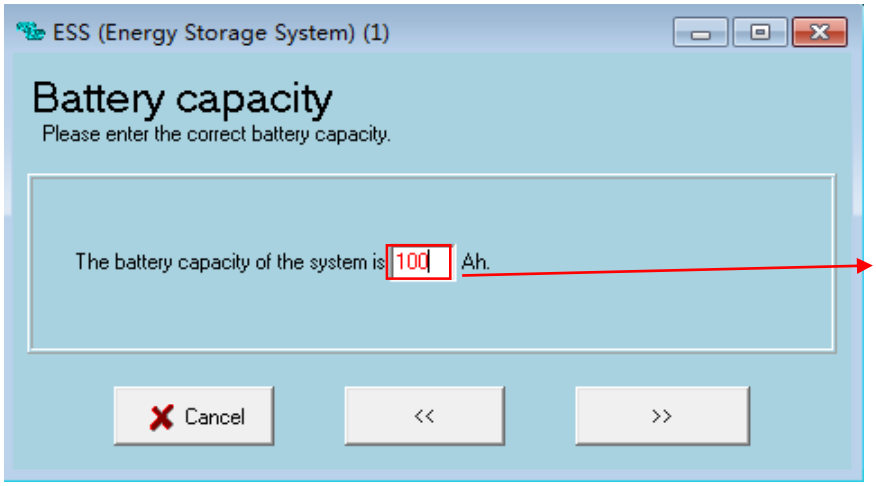



File Port selection Target Defaults Options Special Help
Quattro
Freq. Out - - - Hz
UOut 0 V
IOut 0.0 A
Freq. In - - - Hz
UMains 0 V
IMains 0.0 A
Udc 53.4 V
Udc ripple 0.0 V
Idc 0 A
SoC
Ignore AC 0
aux. relay 0
show VE.Bus monitor
Get settings
Send settings
Victron Energy
General Grid Inverter Charger Virtual switch Assistants Advanced
Inverter output voltage 230 V
Ground relay
PowerAssist
Assist current boost factor 2.0
DC input low shut-down 47.00 V
DC input low restart 51.00 V
DC input low pre-alarm 51.00 V
shut-down on SOC
SOC low shut-down 0.0 %
SOC low restart 0.0 %
Do not restart after short-circuit (VDE 2510-2 safety)
enable AES
Start AES when load lower than 138 W
Stop AES when load 23 W higher than start level.
AES type
modified sine wave
search mode
Changes require reset
47V
51V
51V

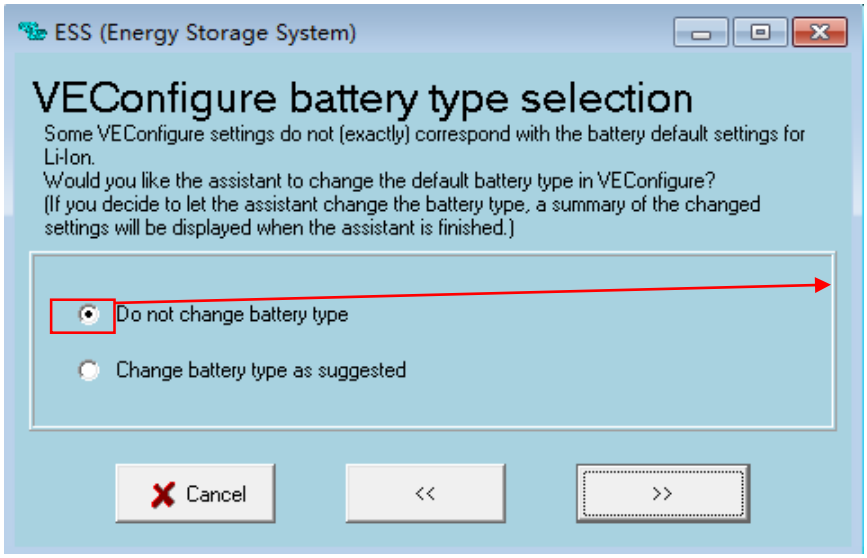

File Port selection Target Defaults Options Special Help
Quattro
Freq. Out - - - Hz
UOut 0 V
IOut 0.0 A
Freq. In - - - Hz
UMains 0 V
IMains 0.0 A
Udc 53.4 V
Udc ripple 0.0 V
Idc 0 A
SoC
Ignore AC 0
aux. relay 0
show VE.Bus monitor
Get settings
Send settings
Victron Energy
General Grid Inverter Charger Virtual switch Assistants Advanced
Enable charger
Battery type:
No corresponding default
Weak AC input
Stop after excessive bulk
Lithium batteries
Disable VSense (for diagnostic purposes)
Configured for VE.Bus BMS
Charge curve Fixed
Absorption voltage 54.70 V
Float voltage 54.20 V
Charge current 200 A
Repeated absorption time 1.00 Hr
Repeated absorption interval 7.00 Days
Absorption time 1 Hr
Stop charger below -20.5 deg C
Changes require reset
54.7V
54.2V
Value= Rated charge current *
Battery number



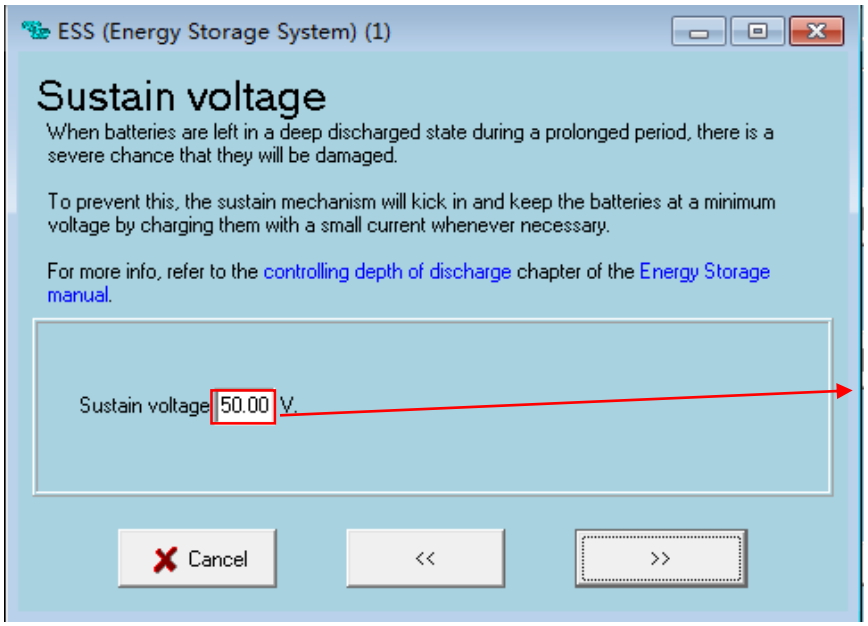
Enable

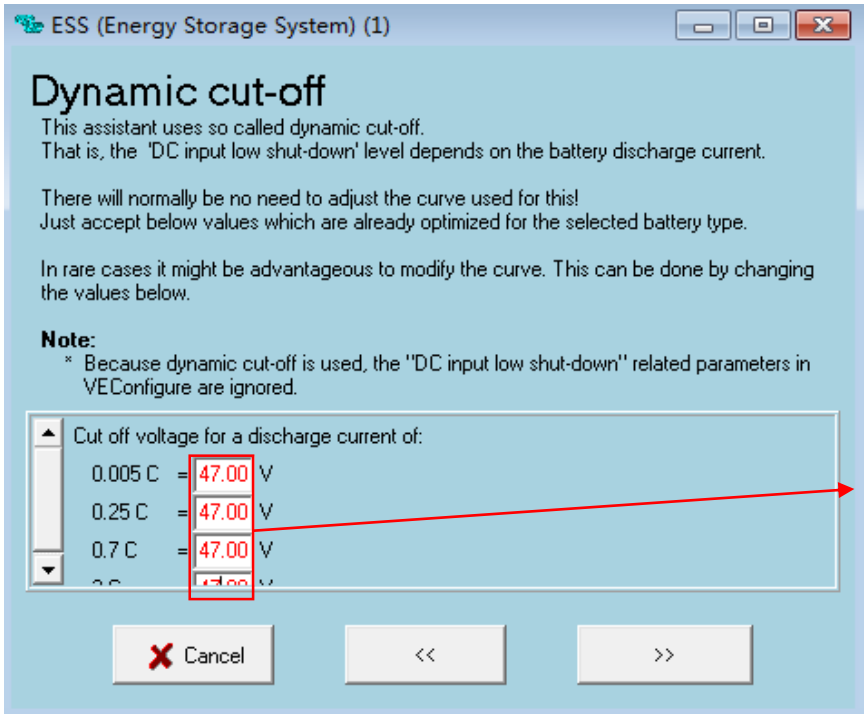


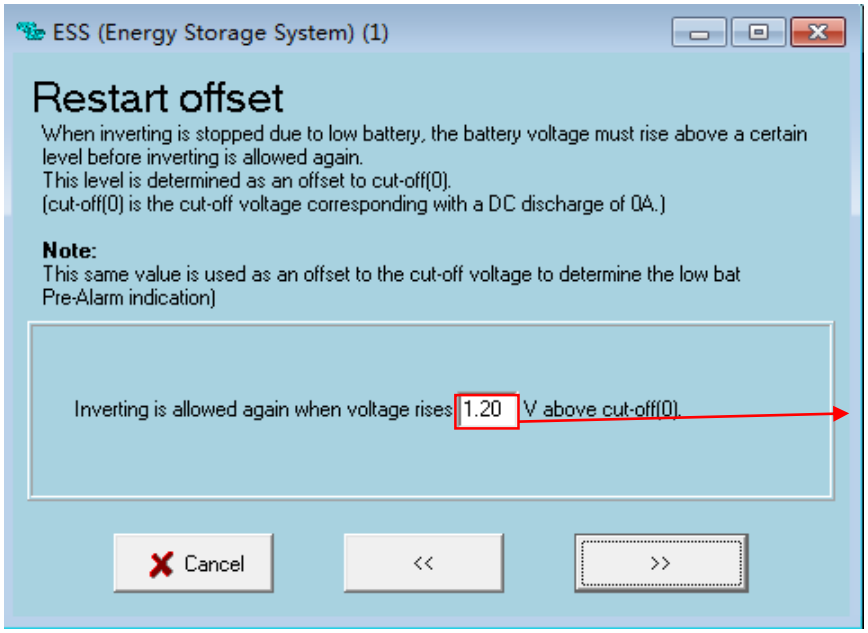
Value=100Ah * Battery number



Enable


ESS (Energy Storage System) (1)
Sustain voltage
When batteries are left in a deep discharged state during a prolonged period, there is a severe chance that they will be damaged.
To prevent this, the sustain mechanism will kick in and keep the batteries at a minimum voltage by charging them with a small current whenever necessary.
For more info, refer to the controlling depth of discharge chapter of the Energy Storage manual.
Sustain voltage 50.00 V
Cancel
<<
>>
50V


ESS (Energy Storage System) (1)
Dynamic cut-off
This assistant uses so called dynamic cut-off.
That is, the 'DC input low shut-down' level depends on the battery discharge current.
There will normally be no need to adjust the curve used for this!
Just accept below values which are already optimized for the selected battery type.
In rare cases it might be advantageous to modify the curve. This can be done by changing the values below.
Note:
* Because dynamic cut-off is used, the "DC input low shut-down" related parameters in VEConfigure are ignored.
Cut off voltage for a discharge current of:
0.005 C = 47.00 V
0.25 C = 47.00 V
0.7 C = 47.00 V
Cancel
<<
>>
47V



VE.Direct MPPT Settings

In normal operation the MPPT charge characteristics are governed by the GX device via DVCC, with instructions from the connected Sunwoda Energy battery.

Use Victron Connect for Solar Charger configuration.The settings below are a precautionary measure only:

MPPT Parameter	**Setting**
Battery voltage.	48V
Absorption voltage	54.7V