Solar and wind priority

NOTE: this is a new feature that is being rolled out in steps, and currently in beta. We'll be testing this over the summer period; and once stable announce it officially.

Status in details:

1. VE.Bus Firmware, implement float-only feature - done per version 26/27xx506; which is included in VictronConnect V5.92beta1
2. VEConfigure, add float-only config option - Included in VEConfigure Version 90.04,236(Beta)
3. VictronConnect, add float-only setting & add user control to override it in case a full charge from shore is needed - Included in VictronConnect V5.92beta1
4. Venus OS Normal GUI, add user control to override it in case a full charge from shore is needed. - Included in Venus OS v3.10~17
5. Venus OS HTML5 GUI, add user control to override it in case a full charge from shore is needed - pending.
6. VRM Dashboard controls, same - pending.

1. Feature description

In VEConfigure, there is a new setting, “limit internal charger to prioritize other energy sources”.

Enabling that will make the inverter/charger use mains/shore power to charge up to the configured float voltage only. Instead of up to the, higher, configured absorption voltage.

This charges the battery enough to prevent premature ageing, while at the same time leaving the rest of the charge up to renewable sources, such as wind or solar.

When after seven days the battery still isn’t fully charged, the inverter/charger will complete one charge cycle. These seven days are configurable, it is the repeated absorption interval setting.

The intended application is boats, campers, and so forth that want their solar charger to take care of most of charging when connected to shore power; both while traveling but also when back home. For systems with a Quattro, the charge-to-float will only be applied to AC-in-2, the input where we recommend to wire shore. When charging from AC-in-1, recommended to wire the generator, it will make for a full charge. This AC input selection is not configurable. To prioritize solar over charging from the generator, look at options to start the generator early.

When using a DMC, closing the generator select input (terminals of screw connector on backside) will force a full charge also.

2. Config instructions

Step 1 - Firmware update of inverter/charger

WARNING: updating the firmware of this product range is strongly advised to be carried out by trained personnel only. Doing the update will cause all settings to be reset to their default: we therefor advise

to save the settings before updating and after updating reinstall the configuration.

Update VE.Bus firmware to 506 or higher:

- Install the VictronConnect beta version V5.92beta1 or later, available here, and use that to update the firmware of the Multis or Quattro.

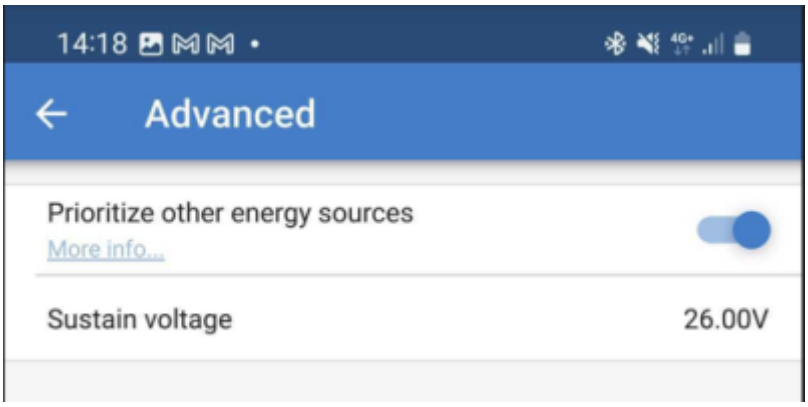
For now, VictronConnect beta is the only source for the new 506 firmware, therefor the firmware update through VRM option is not possible at the moment.

- To update locally, using an MK3-USB adapter, use VictronConnect. Full instructions.
- ~~To do that remotely, over the internet, see~~ the Remote VE.Bus firmware update instructions~~.~~

Step 2 - Enable the mode

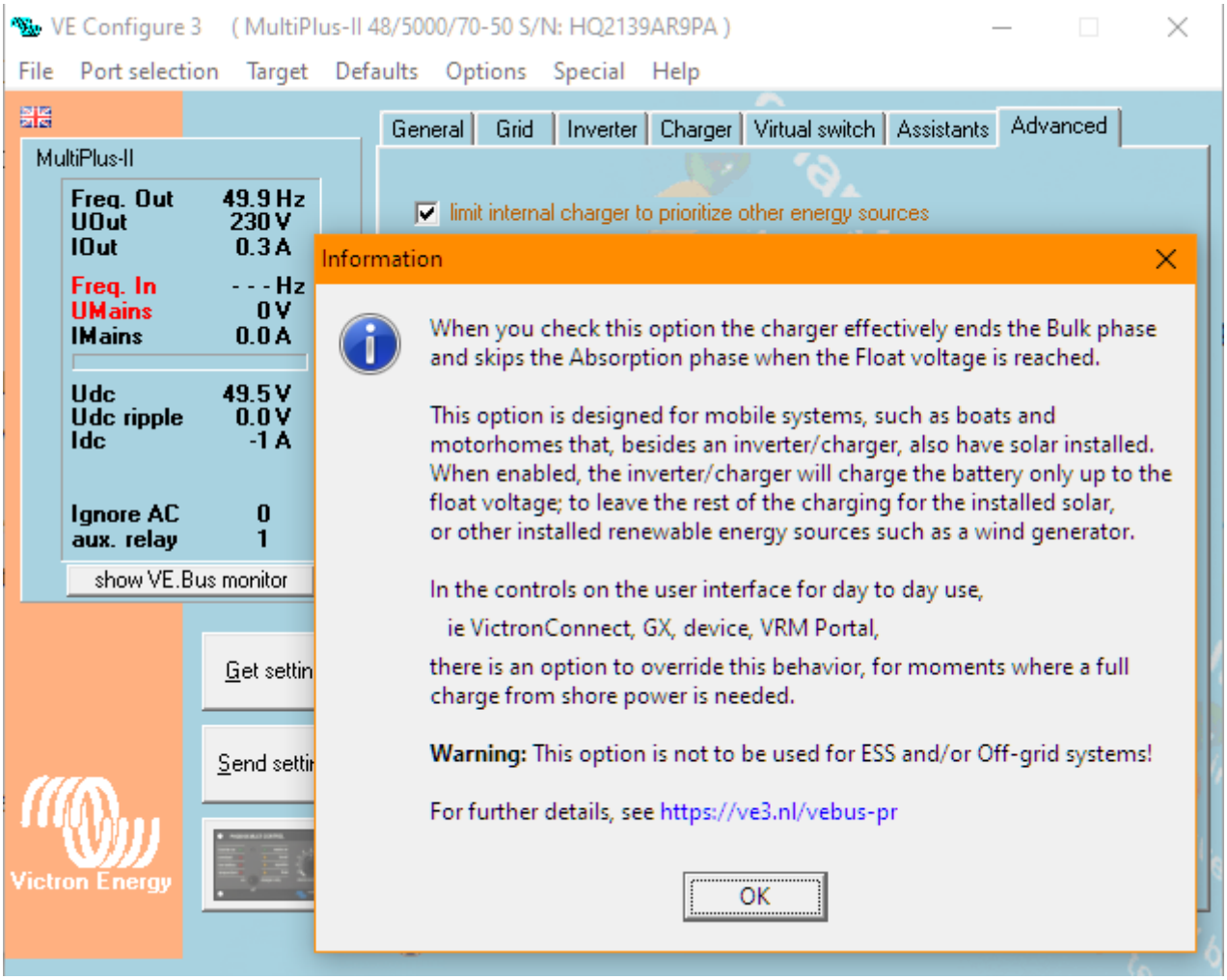
VictronConnect

The setting is available in VictronConnect in the advanced tab of the settings:



VeConfigure

The setting is enabled in VEConfigure, on the advanced tab:



These are the recommended sustain voltages:

System voltage	LiFePO4	Lead (AGM, Gel)
12V	13.0V	Float minus 0.2V
24V	26.0V	Float minus 0.3V
48V	52.0V	Float minus 0.4V

For Lithium, setting Sustain to 13.0V, which equals 3.25V per cell, makes the system maintain a minimum state of charge of approximately 30%.

For Lead ... ?

Step 3 - Check further settings

- if the Storage setting is enabled, then after 12 hours of float, the system will go to storage

- repeated absorption interval, defaults to seven days.

3. User instructions

DRAFT.

Here have an explanation, and screenshots of where the override settings are. Its important for boat builders and installers to have content that is targeted to (non-technical) end users on how to use this feature.

4. Alternative: disconnect from shore automatically

Mostly applicable for larger systems, where the size of the installed inverter is sufficient to power all the loads, there is an alternative solution.

By using the “Conditonal AC input control” / “Ignore AC input” feature, the Multi or Quattro can be configured to remain disconnected from the shore connection completely. This is described in detail in this blogpost on Panbo.com

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https://www.victronenergy.com/live/ - **Victron Energy**

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