

Virtual switch - Generator start/stop

This document explains how to make a MultiPlus, Quattro, or other VE.Bus enabled inverter/charger, automatically start and stop a generator, by configuring the Virtual Switch option in VEConfigure. This is one of the available options to automatically start and stop a generator. See the [Automatic Generator start/stop](#) document for an overview of all options.

More general information about using a generator in combination with Victron is available [here](#).

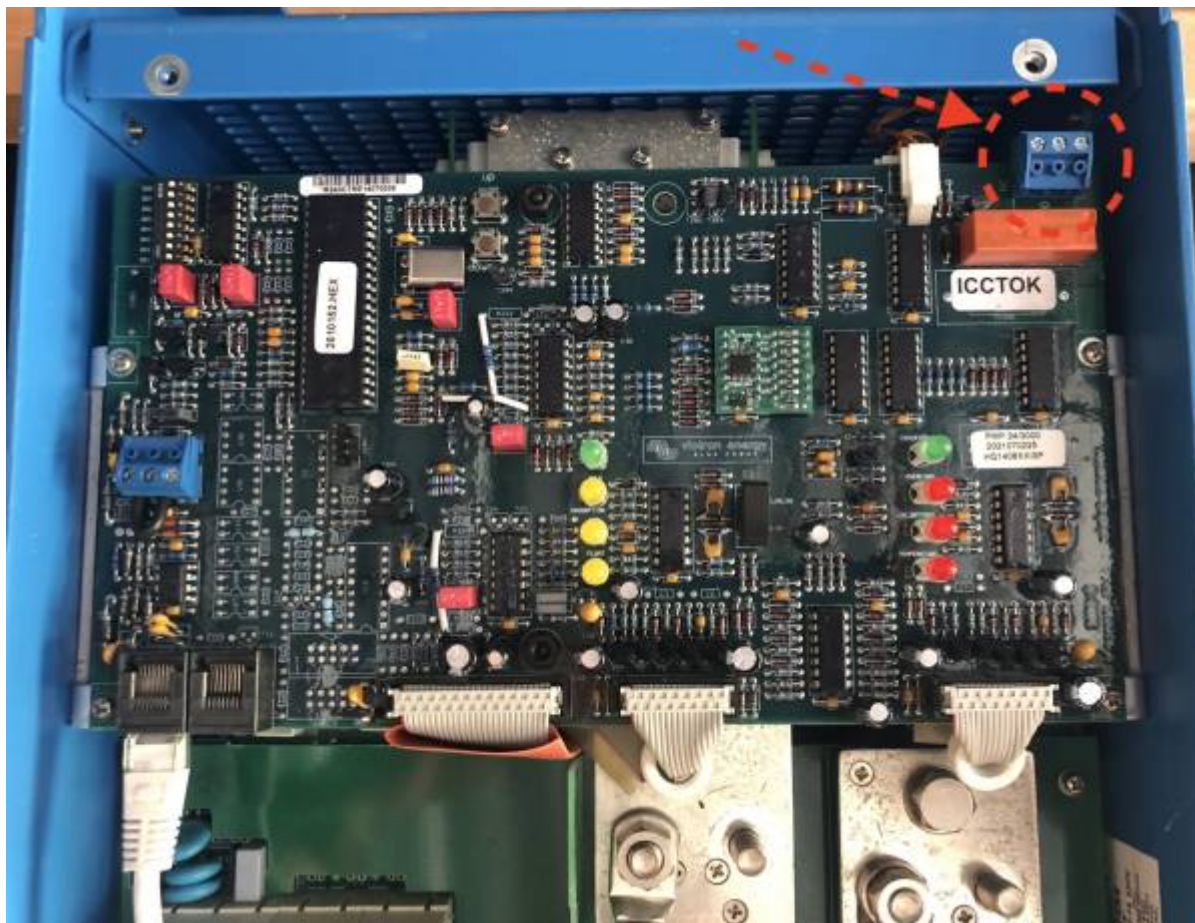
1. Wiring

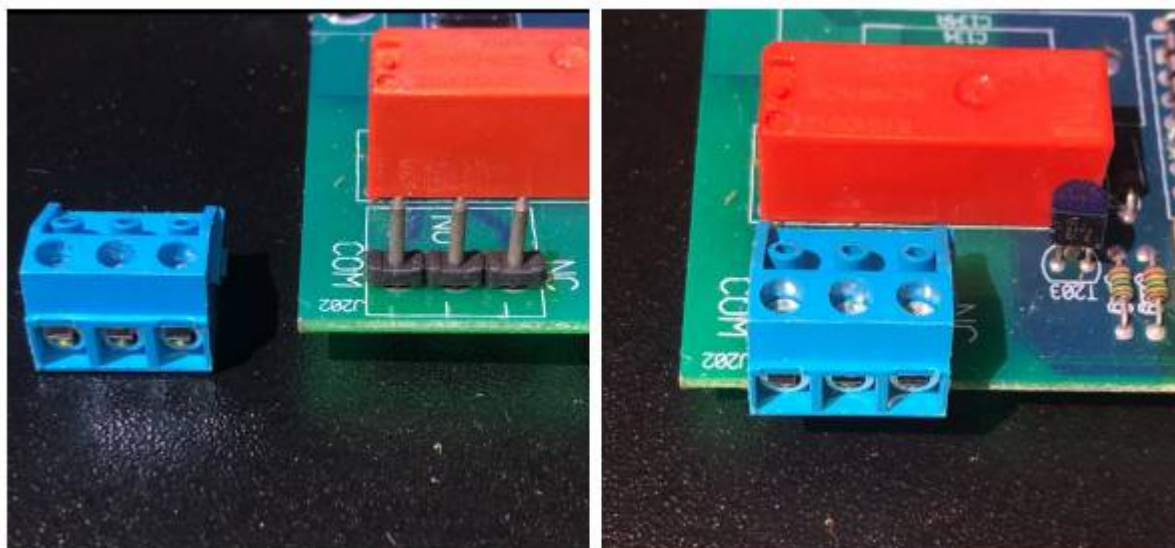
The relay and connector block that needs to be wired to the generator control input is named the Alarm relay; in the various manuals.

1.1 MultiPlus and Quattro models of 3000VA and above

Be aware that this relay block is detachable. You can pull the block off, removing it from the board. This makes it easier to wire connections, and then push it back on.

Note that there are three contacts; left to right: Normally Closed (NC) , Normally Open (NO), Common (COM).





1.2 MultiPlus-II models

The contact order for MultiPlus-II is left to right: NO, NC, COM.



1.3 MultiPlus 500VA to 1600VA models

On our Multi 500, 800, 1200 and coming 1600, the order from left to right is COM, NC, NO. Contact is



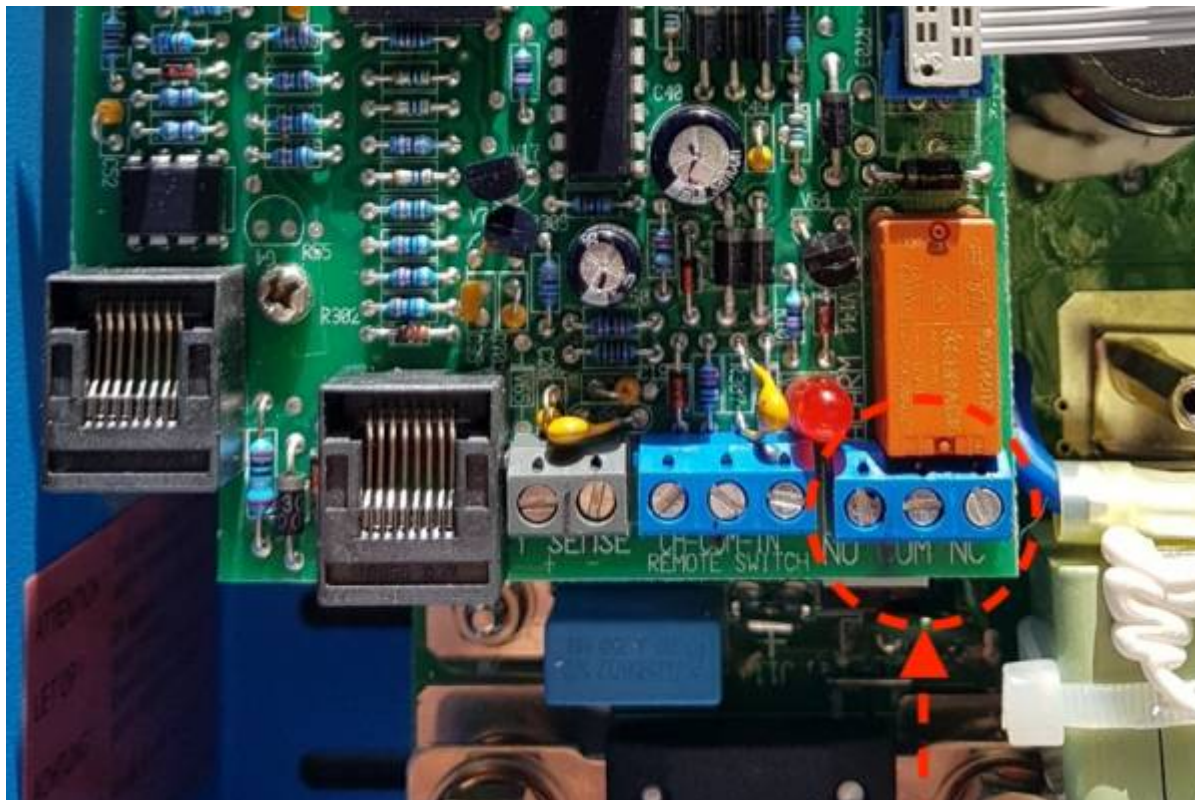
here:

1.4 MultiPlus Compact models

This relay block is also removable (by pulling) for easier wiring.

Contact order is NO, COM, NC

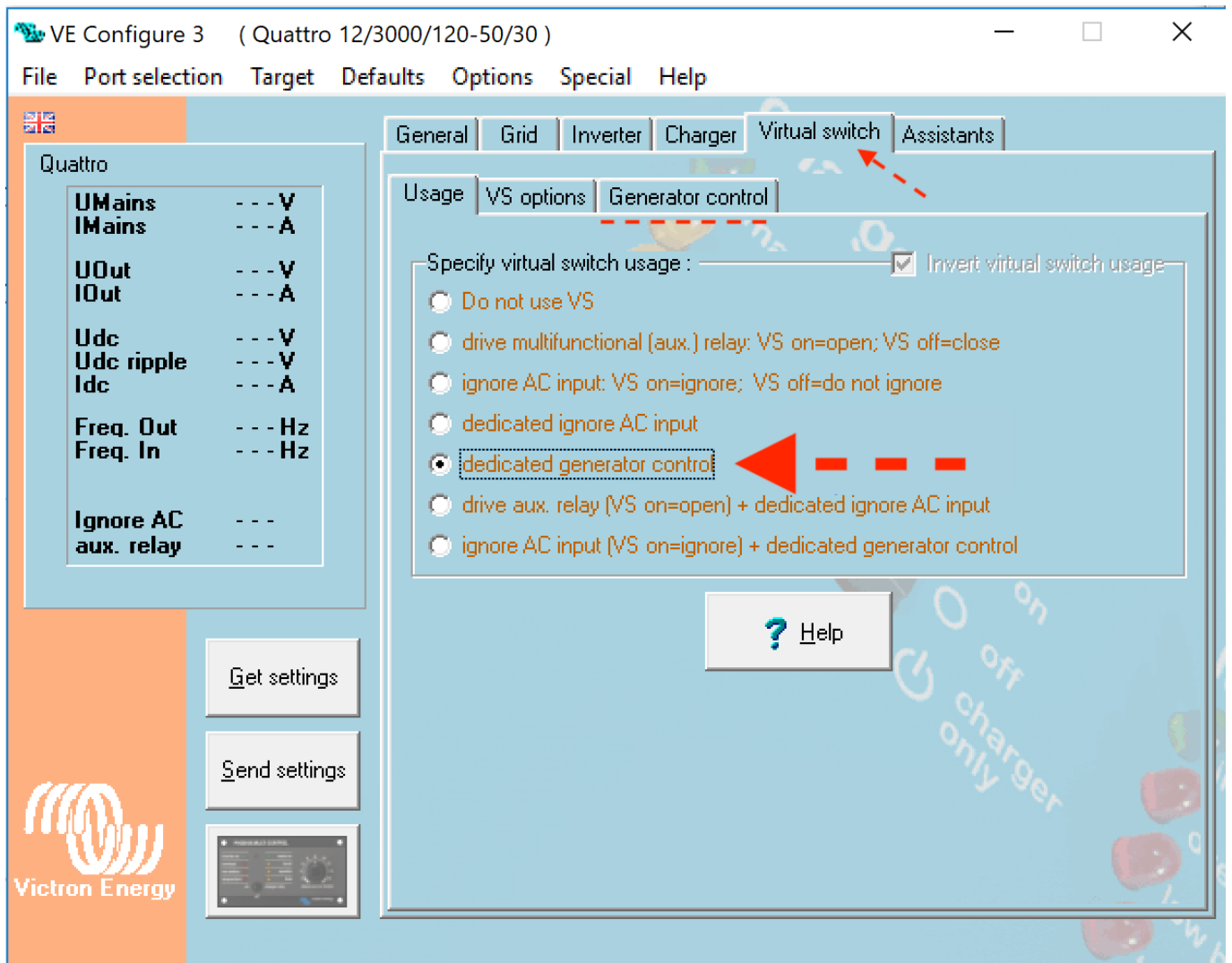




2. Configuration

2.1 Enable the feature

Open VEConfigure, navigate to the Virtual Switch, and there select 'dedicated generator control'.



2.2 Configure the feature

Note that below are just example values; configure them to match the type of batteries and rest of system.

The 'stop generator when AC2 available' feature is for Quattros; used in a backup system with generator. Wire the generator to AC-in 1; and mains to AC-in 2. With that box checked; the system will automatically stop the generator once mains is available again.

The screenshot shows the 'VE Configure 3' software window for a 'Quattro 12/3000/120-50/30' system. The 'Virtual switch' tab is active, and the 'Generator control' sub-tab is selected. The interface is divided into several sections:

- Left Panel:** A list of system parameters with their units: UMains (V), IMains (A), UOut (V), IOut (A), Udc (V), Udc ripple (V), Idc (A), Freq. Out (Hz), Freq. In (Hz), Ignore AC (checkbox), and aux. relay (checkbox).
- Buttons:** 'Get settings' and 'Send settings' buttons are located below the parameter list.
- Usage/VS options/Generator control:** This section contains the main configuration for generator start/stop conditions.
 - Load conditions:** Start generator when load higher than: 2548 W for 30 seconds. Stop generator when load lower than: 637 W for 2 minutes.
 - Battery conditions:** Start generator when Udc lower than: 11.75 V for 20 seconds, or when state of charge lower than: 50.0%. Stop generator when Udc higher than: 14.00 V for 30 minutes.
 - Checkboxes:** 'stop generator when AC2 available' and 'invert driving of auxiliary relay (i.e. generator starts when relay NOT driven)'. Both are currently unchecked.

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