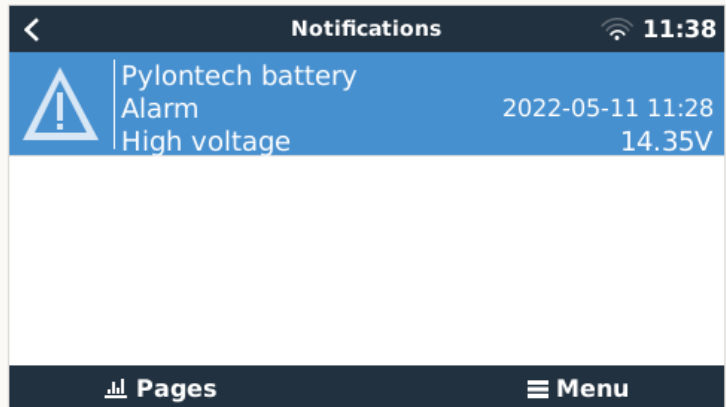


## 1. SUMMARY

Some Pylontech batteries RT12100G31 will trigger a high-voltage alarm when connected to a Victron GX device (Venus, Color Control or Cerbo) through the CAN bus.

This scenario may happen under normal condition of operation every time the battery is fully charged.

The GX device may display the message “Pylontech Battery – High voltage Alarm” followed by an audible alarm.



Not all the RT12100G31 batteries experience this issue: it affects only units with a firmware version v1.4 or older.

## 2. CAUSE

The cause of this issue is a CAN communication incompatibility between Pylontech and Victron. At the end of every charging cycle, the RT12100G31 battery will report the normal fully-charged state by sending a specific message onto the CAN bus. However, that message is misinterpreted by the Victron GX device as a faulty condition and, therefore, it will trigger the high-voltage alarm.

## 3. SOLUTION

There are multiple options:

1. Send the RT12100G31 in for firmware upgrade to any MI branch. This procedure will be free of charge as it is covered by warranty.
2. If you are using a Victron charger (Smart Phoenix, Skylla) or charger/inverter (Multiplus, Quattro) with VE.Bus, VE.Direct or VE.CAN interface, change the settings of the Victron GX device as explained in the section “*Limiting charging voltage on DVCC*” below.
3. If you are using a Victron Smart charger without VE.Bus, VE.Direct or VE.CAN interface such as Blue Smart IP22/IP65/IP67, change the settings of the charger as explained in the section “*Setting Absorption voltage on VictronConnect*” below.
4. If you are using a Victron non-smart charger without VE.Bus, VE.Direct or VE.CAN interface such as the Centaur or Phoenix, change the absorption voltage of the charger to **14.1V-14.2V**. Please refer to the charger original user manual for changing the setting.

## 4. RELATED CHANGES IN PRODUCTION AND STOCK

All Pylontech RT12100G31 batteries purchased from MI from the date 13/05/2022 onwards have the latest released firmware, and therefore, your system does not require the changes in configuration previously described.

The firmware of the RT12100G31 battery can always be checked by clicking Pylontech battery -> Device -> Firmware Version on the Victron GX display. If the firmware version is v1.5 or higher, the battery does not require upgrade.

## 5. APPENDIX – VICTRON SETTING INSTRUCTIONS

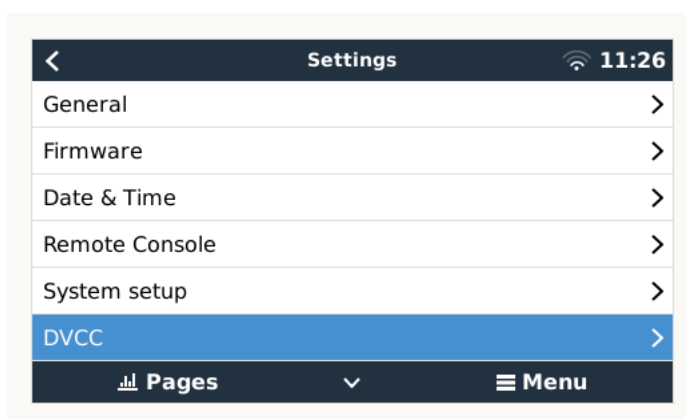
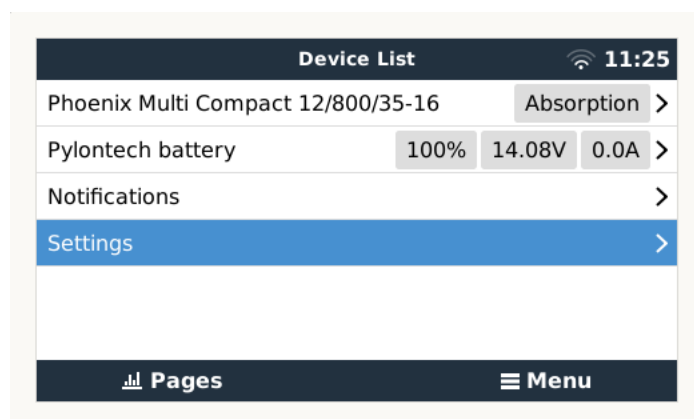
These instructions are provided to help customers to change the settings of their Victron device/s when using the Pylontech RT12100G31 battery only. By no means, follow these procedures if either your battery is a different brand/model, or the RT12100G31 battery has got an up-to-date firmware.

When in doubt, please contact the Engineering Department of MI for assistance.

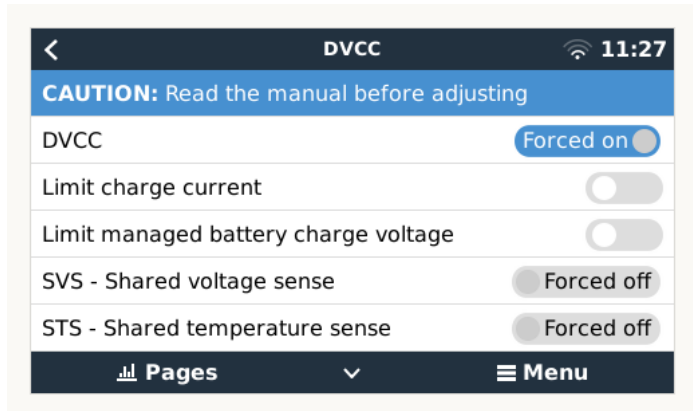
### A. LIMITING CHARGING VOLTAGE ON DVCC

Note: Follow these steps on the GX display (Color Control / GX Touch) or on the Remote Console of VRM.

Step 1: Go to Settings -> DVCC

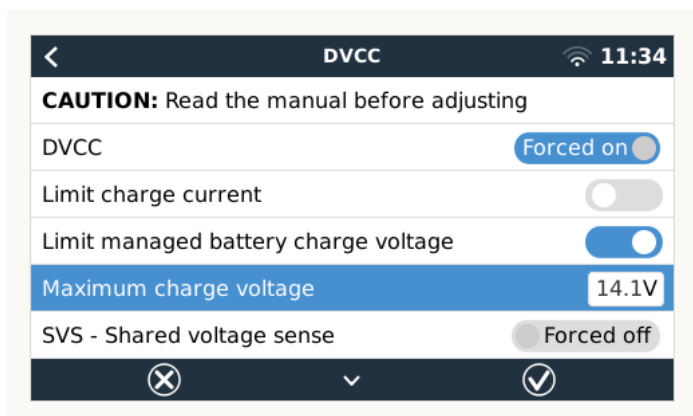


Step 2: Make sure the DVCC setting is “Forced On”.

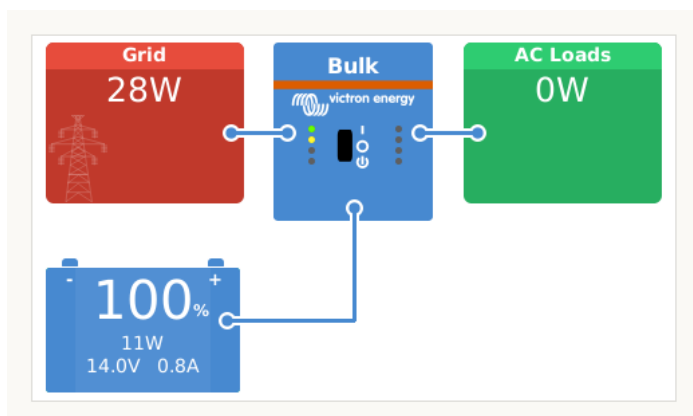


If the label “Forced On” is not displayed, it indicates that the Victron GX device needs a firmware update. Please refer to the following link: [How to update a GX device](#).

Step 3: Enable “Limit managed battery charge voltage” and set up the “Maximum charge voltage” to **14.1V**.



Step 4: Press Enter (central button) to execute the changes and go back to the home page.



The new configuration in the DVCC settings has proven to fix the High-voltage Alarm issue without compromising the safety and reliability of the system.

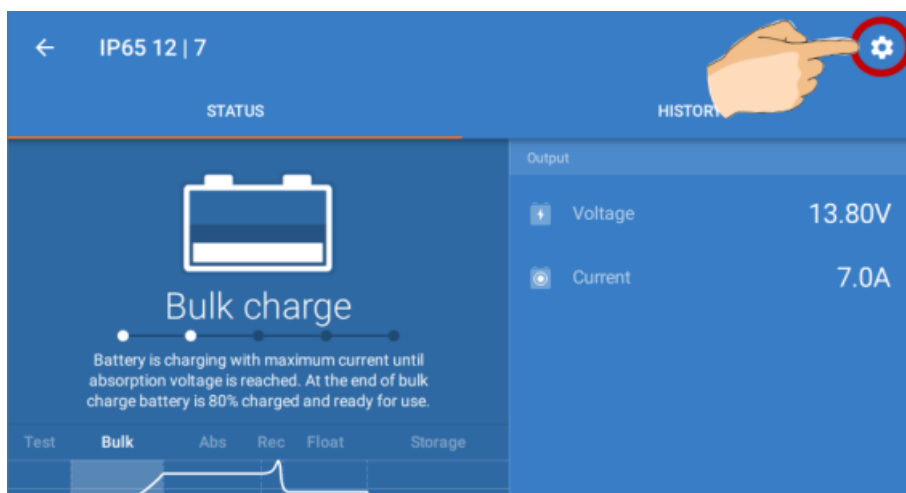
## B. SETTING ABSORPTION VOLTAGE ON VICTRONCONNECT

Note: Follow these steps on the charger settings of VictronConnect (Bluetooth App).

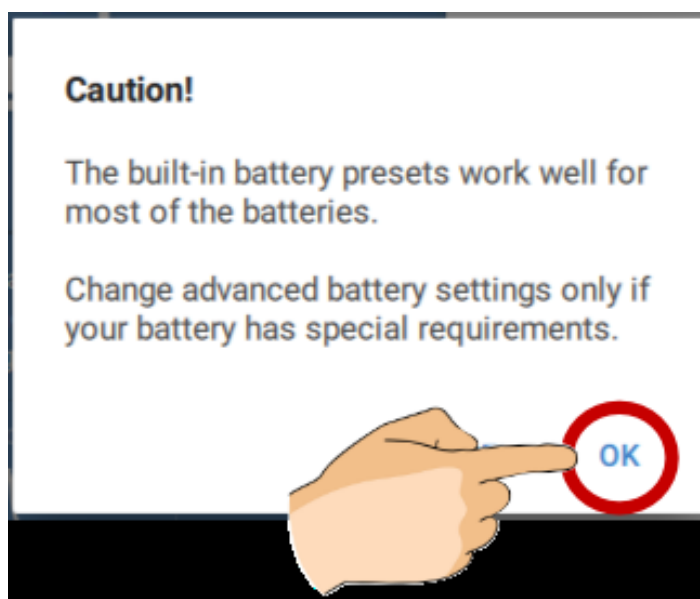
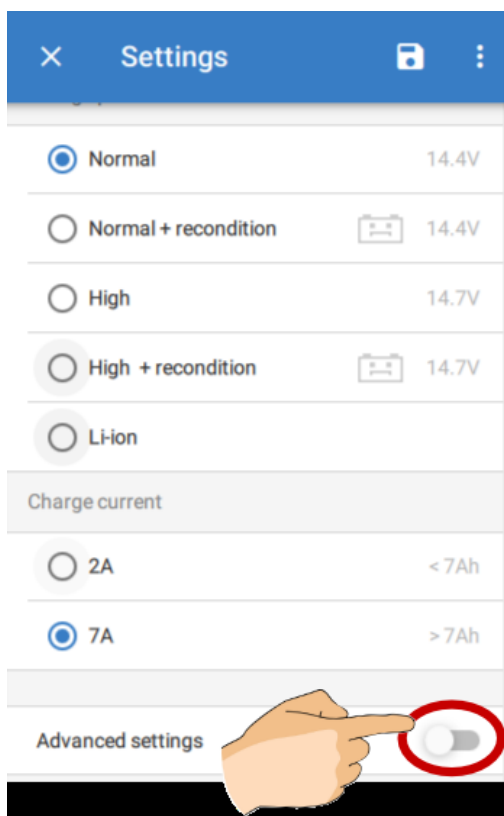
Step 1: Make sure the charger is ON and within Bluetooth range of the phone/laptop with VictronConnect App already installed.

Step 2: Open VictronConnect App and select the charger in the Device List.

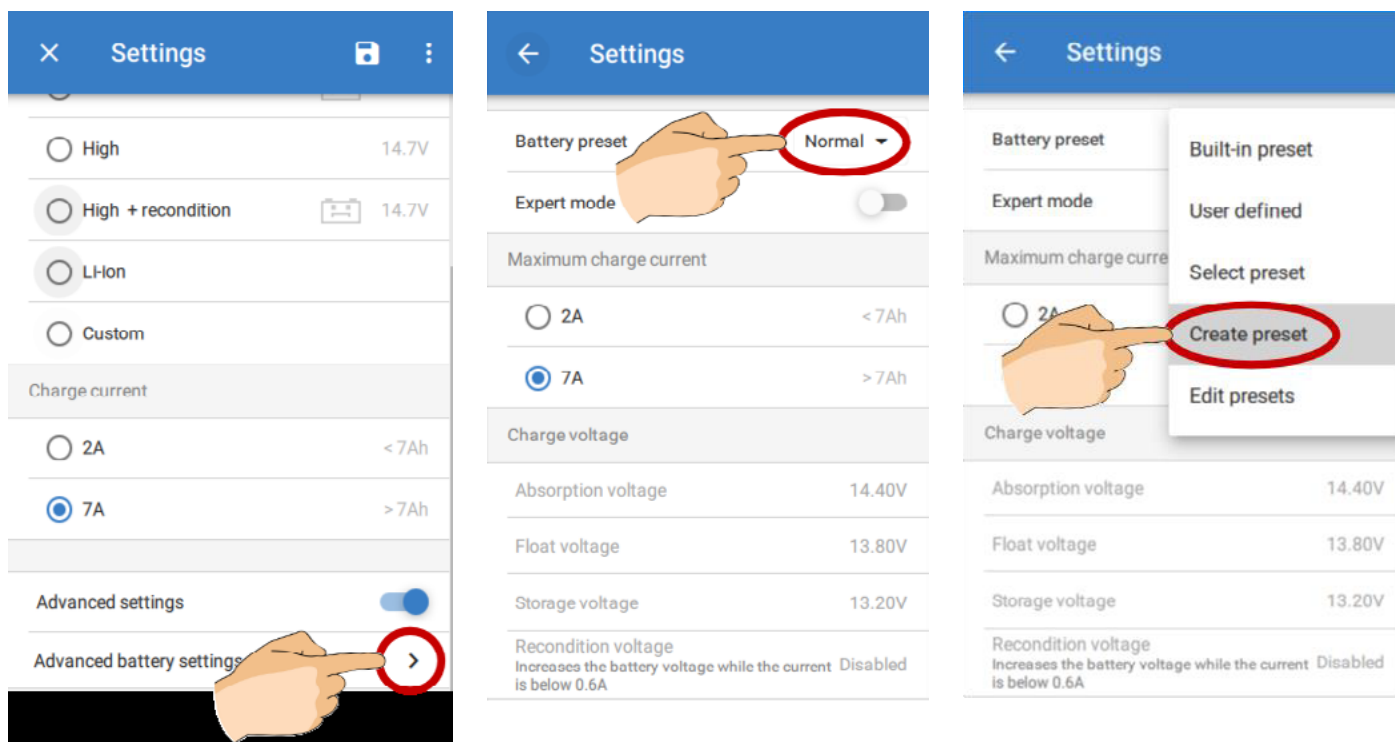
Step 3: Go into Settings by clicking the “Cob” icon.



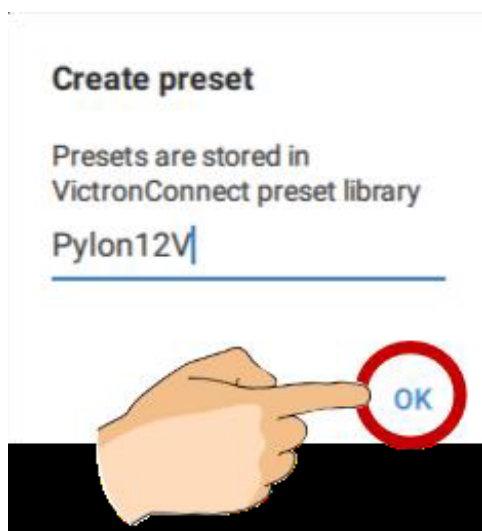
Step 4: Enable the “Advanced settings” and accept the shown caution message.



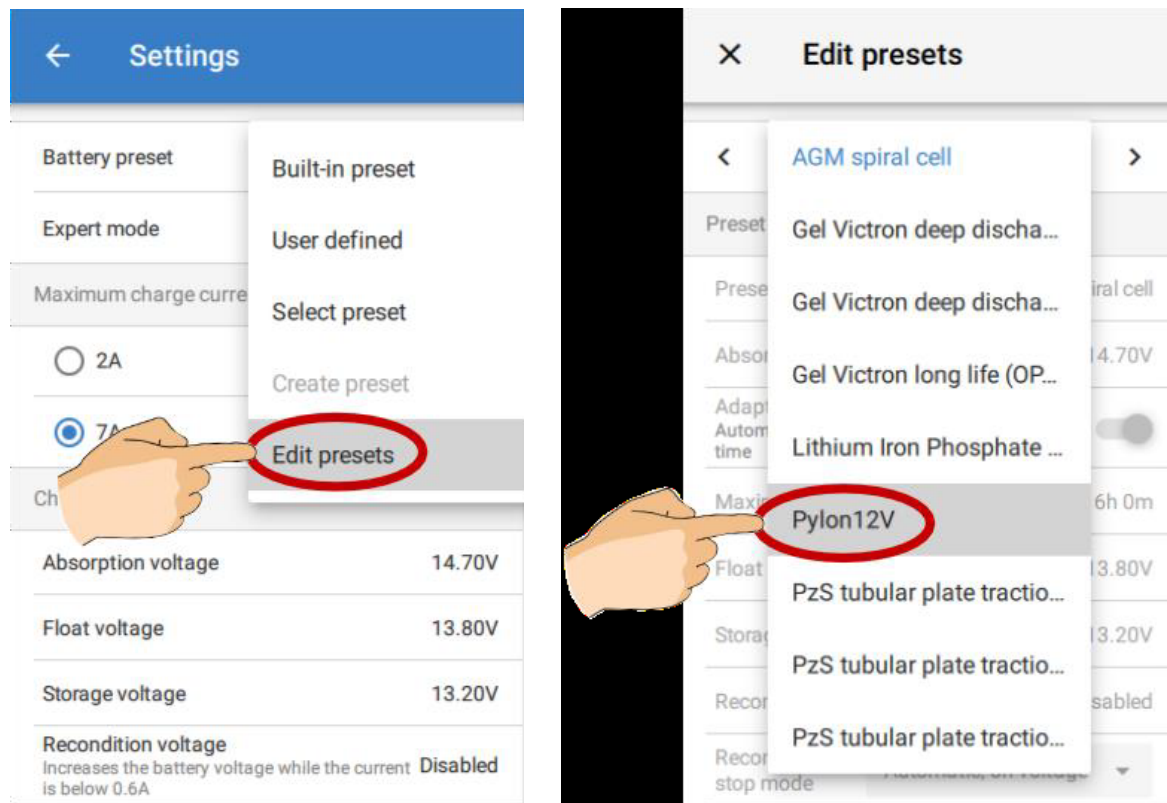
Step 5: Go into “Advanced battery settings”, then “Battery preset” and “Create preset”.



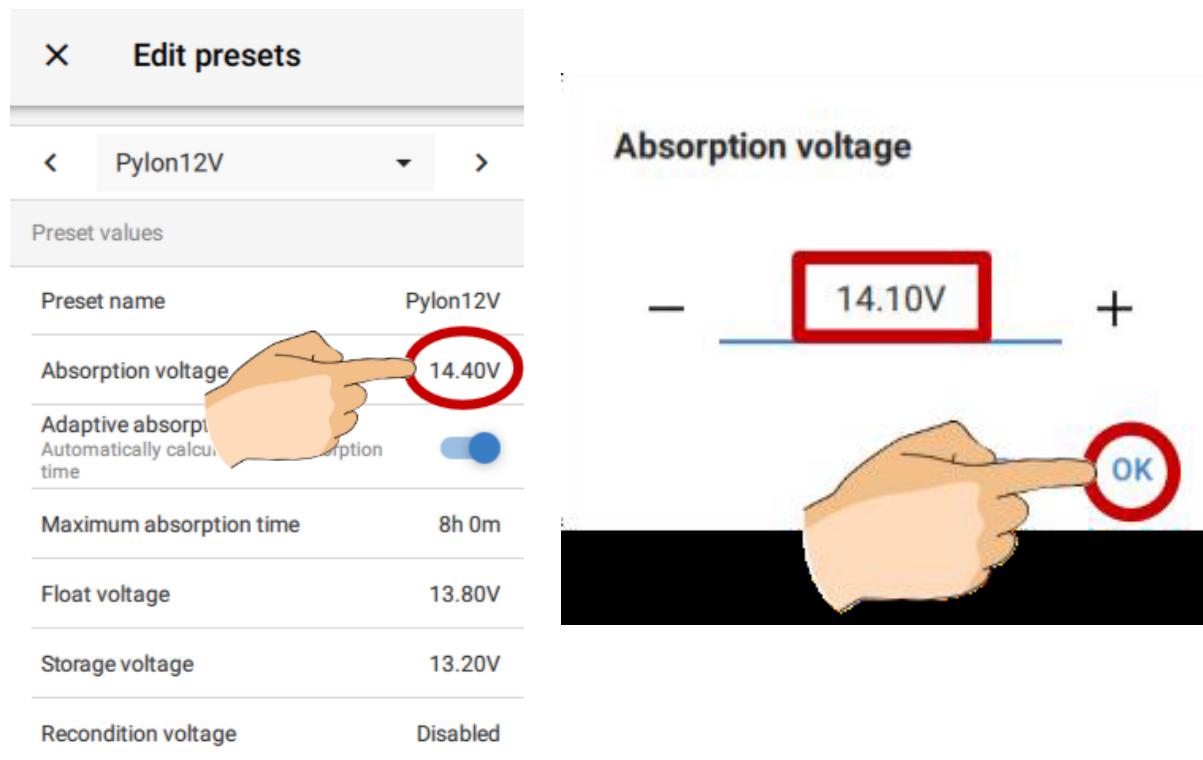
Step 6: Type a Preset's name that refers to the battery settings. The following one is just an example. Then click “OK”.



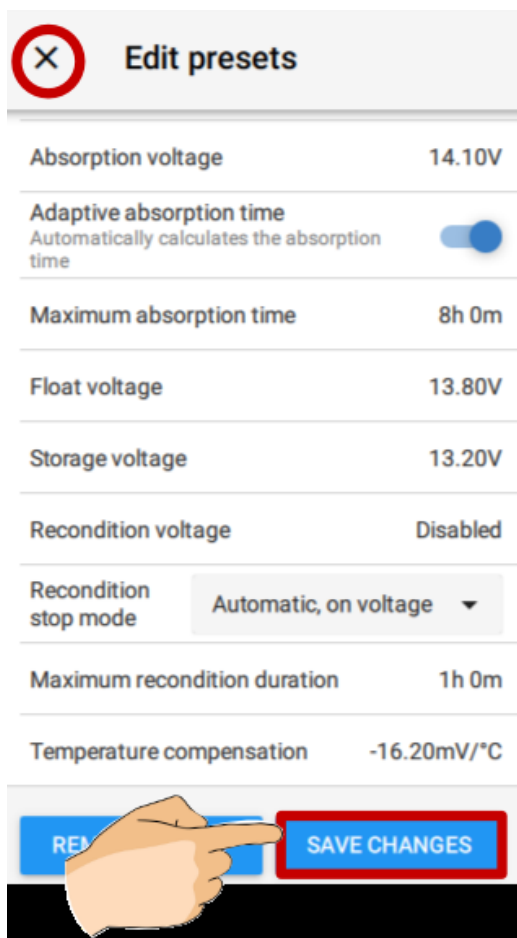
Step 7: Go again into “Battery preset” and then “Edit preset”. Select from the list of presets the one just created for the battery.



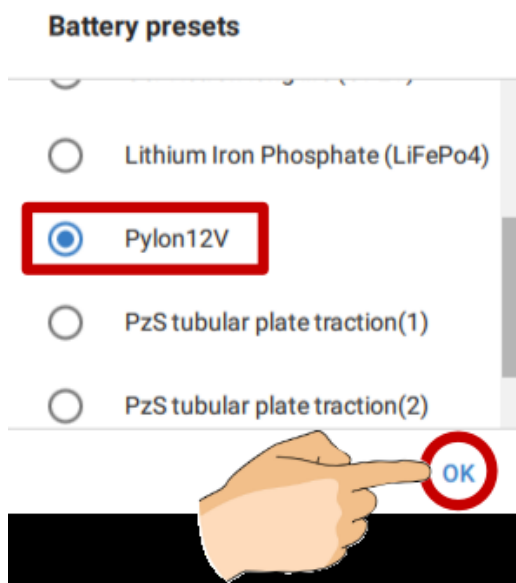
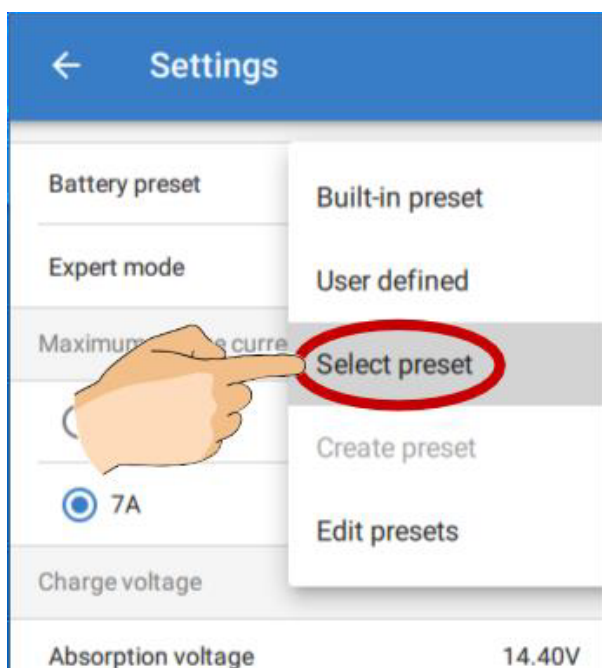
Step 8: Set the “Absorption voltage” down to **14.1V**. Then click “OK”.



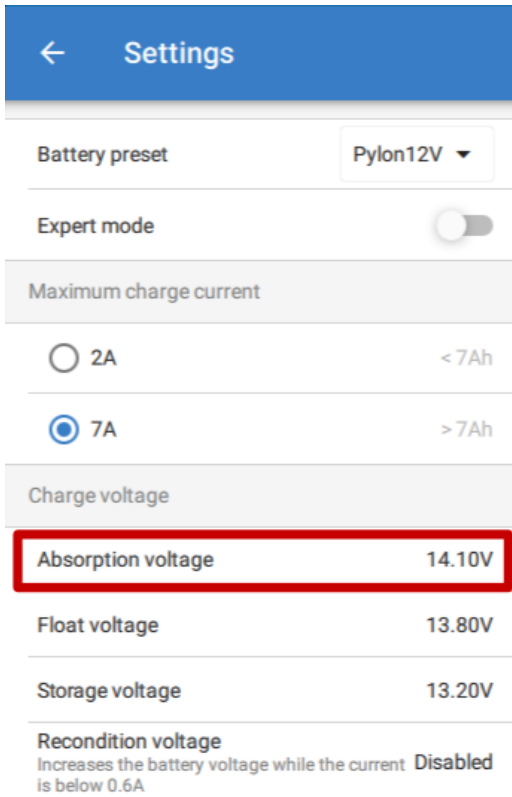
Step 9: Click “Save Changes” and then Exit (X).



Step 10: Once again, go into “Battery Preset”, and then “Select Preset”. Select from the list the preset created for the battery and then click “OK”.



Step 11: Finally, check that the Absorption voltage has been modified to 14.1V and then exit the settings.



The screenshot shows the 'Settings' screen in the VictronConnect app. The 'Absorption voltage' is set to 14.10V, which is highlighted with a red box. Other settings include Battery preset (Pylon12V), Expert mode (disabled), Maximum charge current (7A), Float voltage (13.80V), Storage voltage (13.20V), and Recondition voltage (Disabled).

Setting	Value
Battery preset	Pylon12V
Expert mode	Disabled
Maximum charge current	7A (> 7Ah)
Charge voltage	
Absorption voltage	14.10V
Float voltage	13.80V
Storage voltage	13.20V
Recondition voltage	Disabled

This change in the Absorption Voltage of the charger through VictronConnect has proven to eliminate the High-voltage Alarm without reducing the performance of the Pylontech battery.