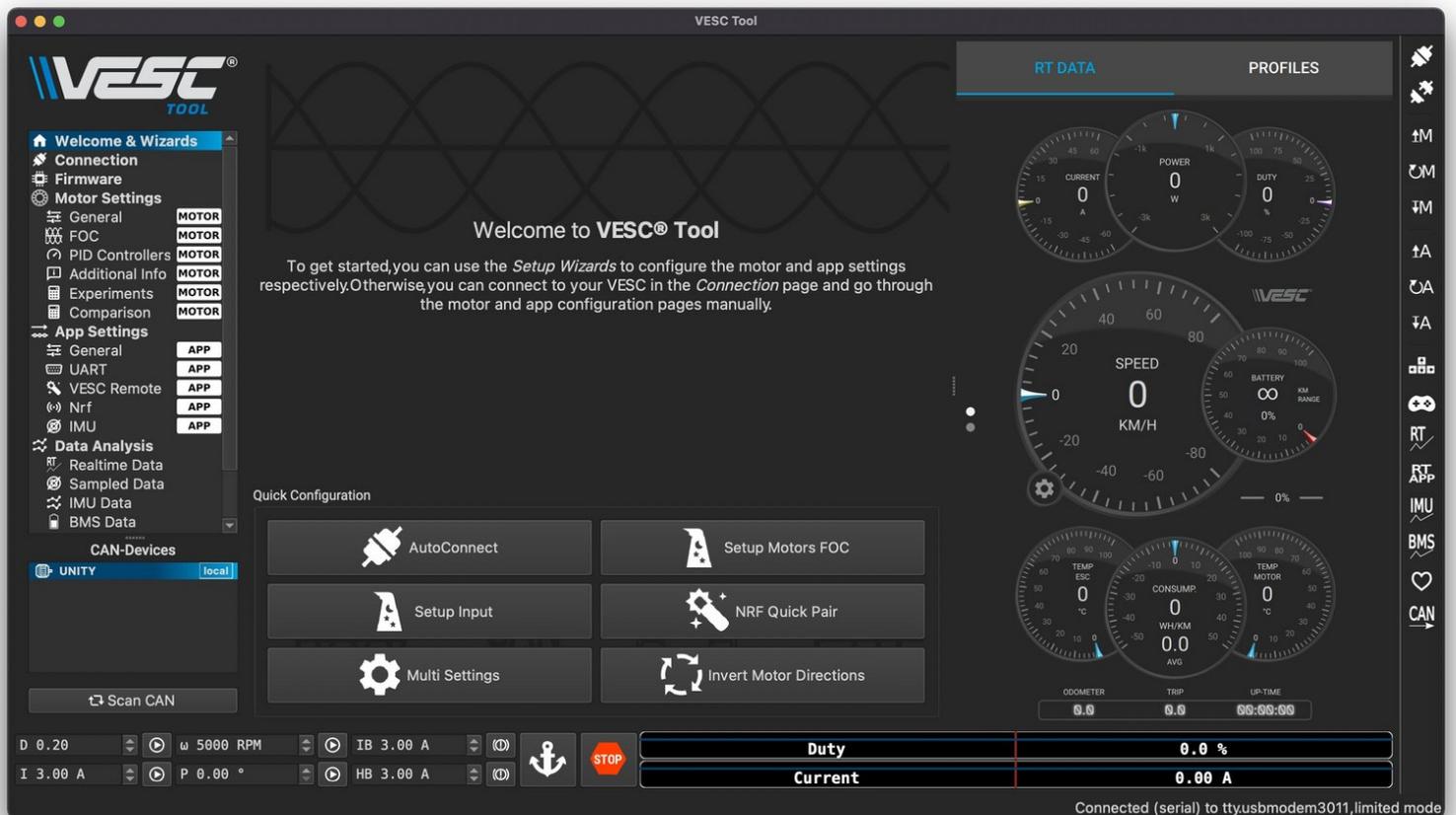


# buildkitboards

## How to update the firmware and program the Xenith

How to update the firmware and program the Xenith

Written By: Jared Ebersole

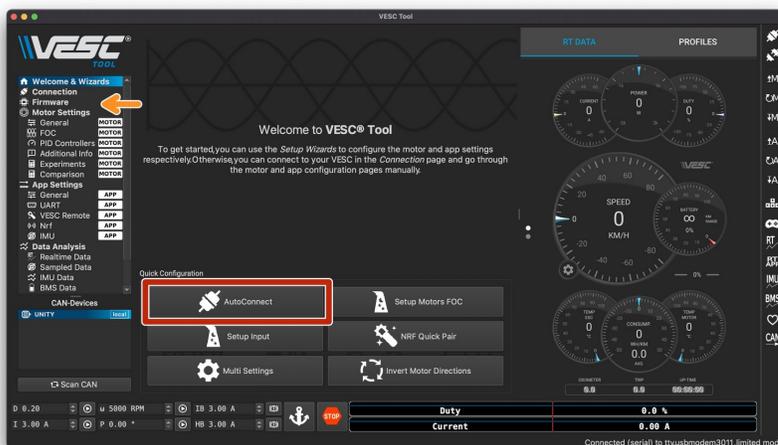


## Step 1 — How to update the firmware and program the Xenith



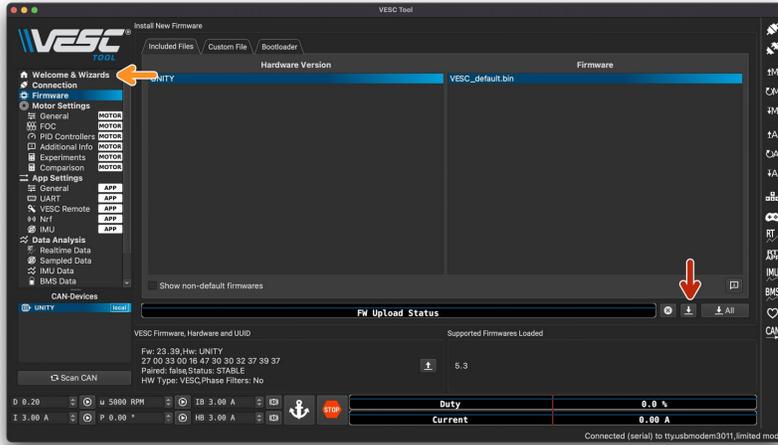
- Download the VESC Tool from here: <https://vesc-project.com/node/17>
- Open the VESC Tool application on your computer
- Plug the included USB cable into your computer and the Xenith. Turn the Xenith on.
  - Some cheap USB cables do not have data wires inside. Make sure to use the provided cable if you end up not being able to connect to the Xenith in the next step

## Step 2



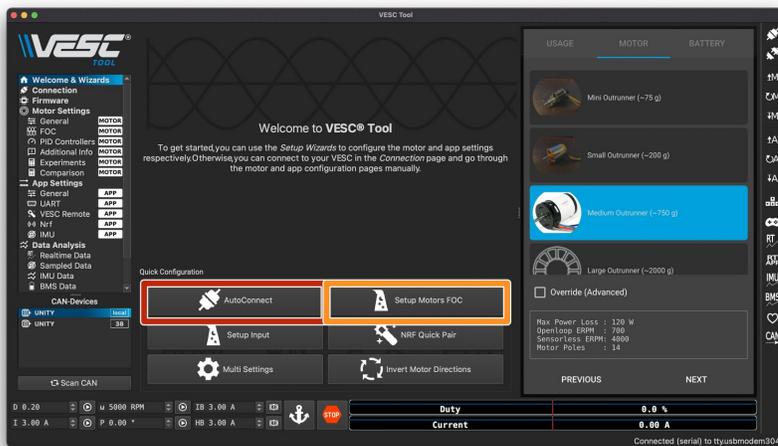
- Click the auto connect button located on the Welcome and Wizards page
  - If you get a popup about the firmware not being compatible, click ok
- In left column, click the Firmware tab

## Step 3



- Click download button (DO NOT CLICK DOWNLOAD ALL)
- Click yes on the confirmation box (if the erase times out, just click okay, it is a bug)
- When the update is complete, click the Welcome & Wizards tab in left column

## Step 4



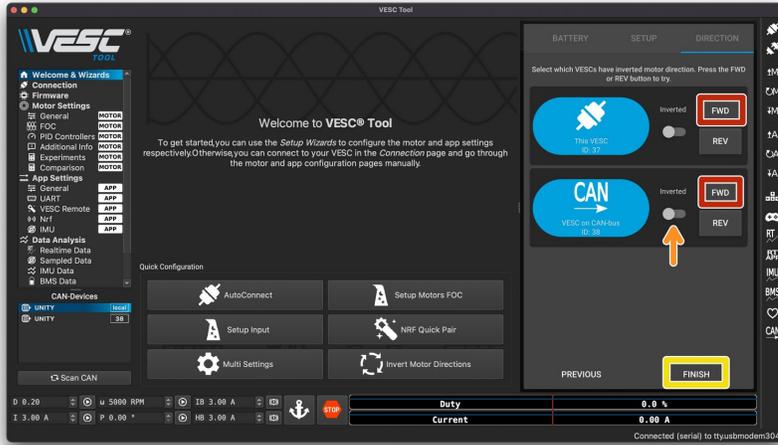
- Click auto connect
- Click set up motors FOC
- Click no on load default parameters
- Select E-Skate, click next in the bottom right corner
- Select Medium Outrunner, click next
- Click yes on pop up, click next, click okay on the next popup

## Step 5



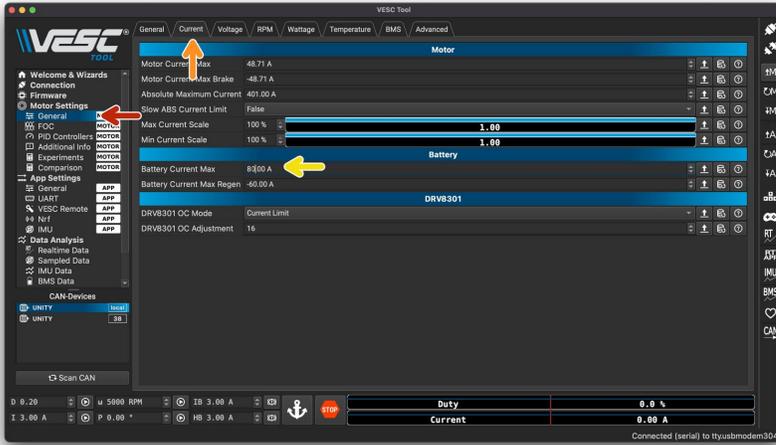
- Click Run Detection (will be located in the same spot as the next button)
- **Before** clicking ok on the popup, make sure that the wheels can spin freely. This test will make a loud noise with the motors and then spin them. So make sure the board is upside down and nothing is blocking the wheels from turning
- Click okay on pop up, wait for the motor detection to finish

## Step 6



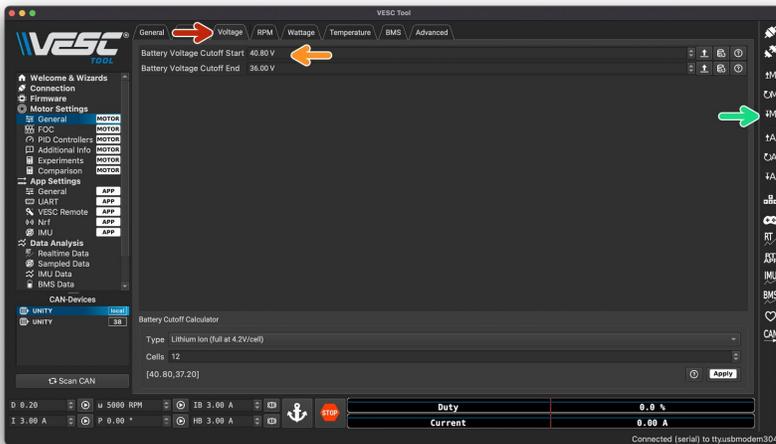
- Once the motor values populate, click Okay (bottom right corner)
- Select forward on both motors to see if they are spinning in the the forward direction. If you place a finger on top of the motor and then select forward, your finger should be pushed towards the truck. If it gets pushed towards the rear of the board, you need to reverse the motor direction
- If the motor is spinning the wrong way, select the inverted box next to the FWD button on the respective motor. It will likely be the bottom motor.
- Click finish

## Step 7



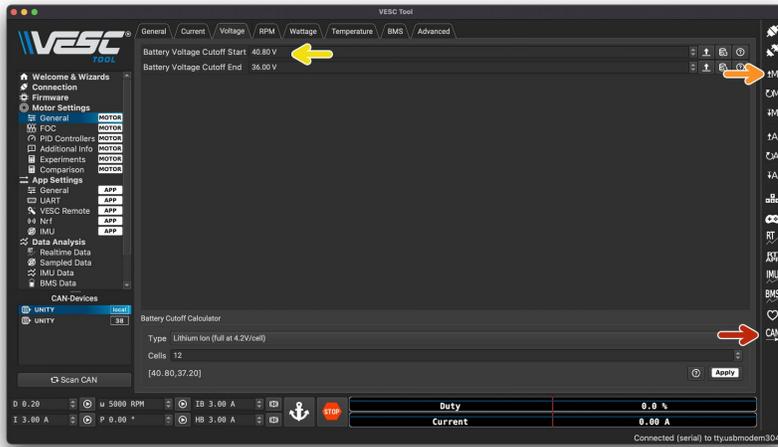
- In left column, click General
- In the top bar, select Current
- If you have a 12s5p Duo Type R, change Battery Current Max to **80**
- If you have a 10s3p Duo or Tayto, change Battery Current Max to **60**

## Step 8



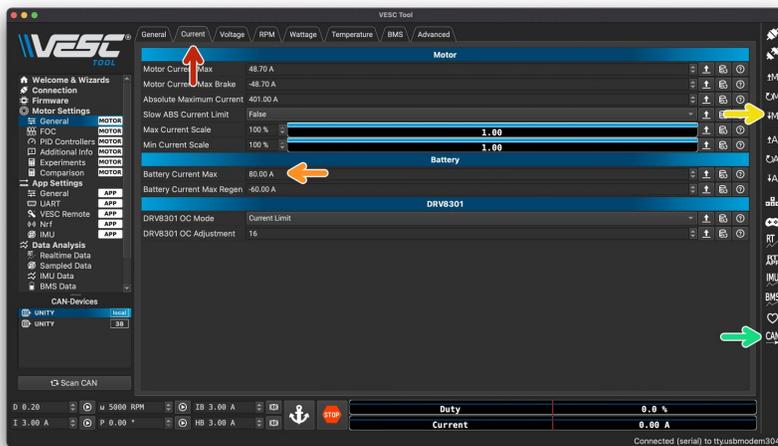
- In the top bar, select Voltage
- If you have a 12s5p Duo Type R, change the Start Value = **40.8** and End Value = **36.0**
- If you have a 10s3p Duo, or Tayto, change the Start Value = **31.0** and End Value = **28.0**
- In right column, select down arrow M  
↓

## Step 9



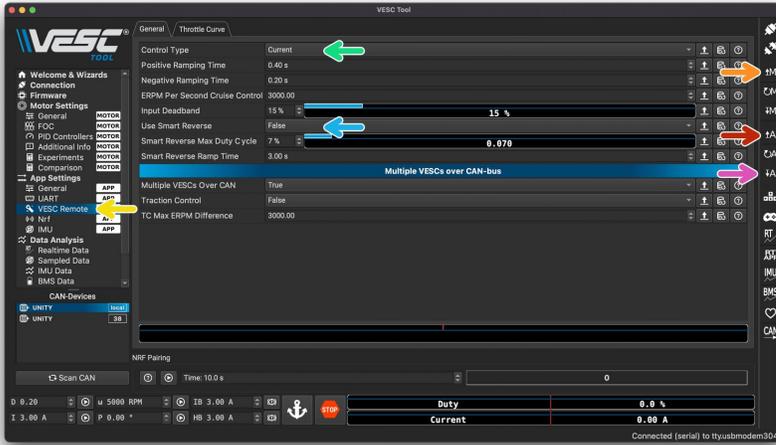
- In right column, select CAN. It will stay highlighted when selected
- i You are now communicating with the other side of the ESC (for the second motor), so the values will reset to default.
- In right column, select up arrow M
- In the Voltage tab, make sure that the values in step 31 are the same

## Step 10



- In the top row, select Current
- If you have a 12s5p Duo Type R, change Battery Current Max to **80**
- If you have a 10s3p Duo or Tayto, change Battery Current Max to **60**
- In right column, select down arrow M  
↓
- In right column, click CAN (this will unselect CAN)

## Step 11



- In right column, select up arrow A ↑
- In right column, select up arrow M ↑
- In left column, select VESC Remote
- Change control type to **Current**
- Change Use Smart Reverse to **False**
- In right column, select down arrow A ↓

## Step 12



⚠ If you are using a Voyager remote, you will need to change a setting on the remote to make sure the data is read properly. In the board parameter section, set Xenith FW23.46 to **DISABLE**