



FCORE

User guide

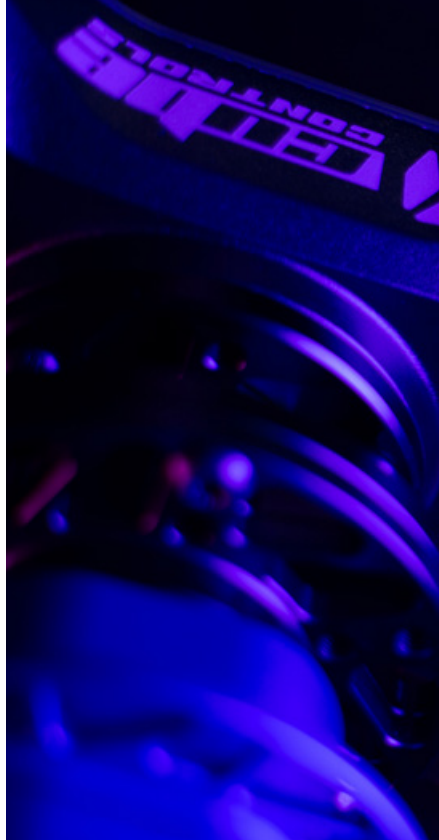
Before you start please read the manual carefully before you use the steering wheel.

Any modifications, tampering, changes or unauthorized uses of the product will void the warranty.

The steering wheel has no waterproof feature, please keep it away from water, rain, moisture and other items containing liquid such as vape, cups etc.

This wheel is designed for simulation purposes only.

Disconnect the USB cable from both sides if you will not use the product for a long time.





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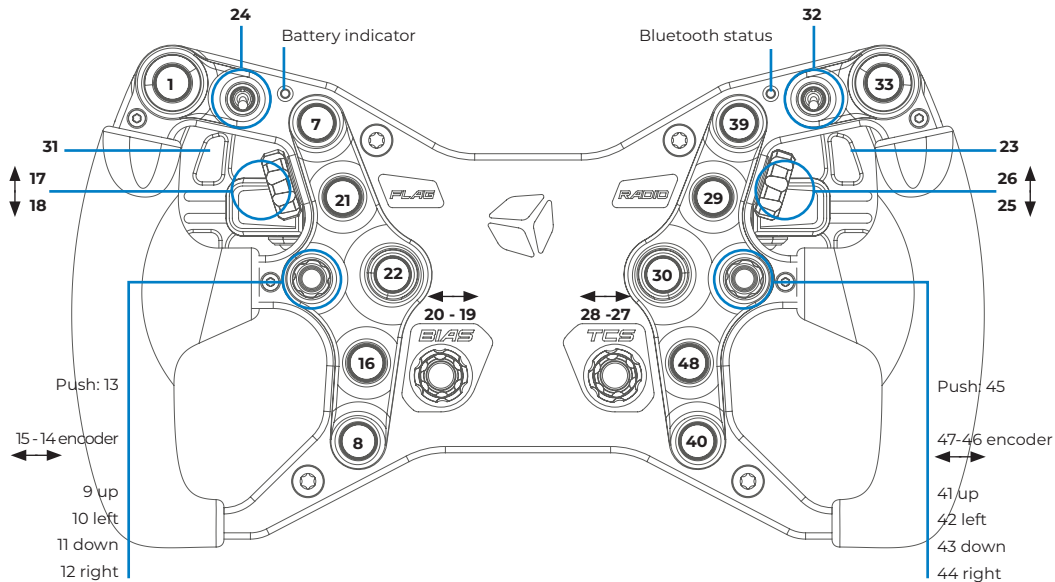
3. USEFUL TIPS

What you will find in the box

- ❏ F-CORE Steering Wheel
- ❏ Q-CONN USB Cable
- ❏ 1x F-CORE Stickers Sheet
- ❏ Declaration of Conformity Booklet
- ❏ Tool Bag containing:
 - ❏ Torx Screwdriver (red)
 - ❏ Philips Screwdriver (black)
 - ❏ TX10 Allen key
 - ❏ TX25 Allen key
 - ❏ Nylon Tweezers
 - ❏ 3x M5x10 hex bolts
 - ❏ 3x M5x16 hex bolts
 - ❏ 3x M5x10 button TORX
 - ❏ 3x M5 nut

1. INTRODUCING THE HARDWARE

1.1 Interface



The **POV** switches/funky switches/joysticks directions (up, down, left, right) are meant to work only if a “clicky” sound feedback occurs. Therefore there’s no risk to press the direction and accidentally enable the centre click button.

Toggles **24** and **32** work this way: once the toggle has been activated the respective led will turn on, when the toggle has been flipped off it turns the led off. In the ON status the respective button is not seen as always pressed, it only activates the button for a few ms when flipped on or off. Toggles are useful for on/off features like headlights, wipers, ABS/TC etc. Make sure the toggle LEDs are synced correctly: e.g. if you activate one option without being in the sim, it will work in reverse once you are into the simulator.

IMPORTANT: Remember that on the Windows USB Game Device page, half the buttons will not engage. This is caused by the Windows’ Graphic Interface inability to see more than 32 Buttons and not a problem with the Steering Wheel itself!

1.2 Steering wheel installation

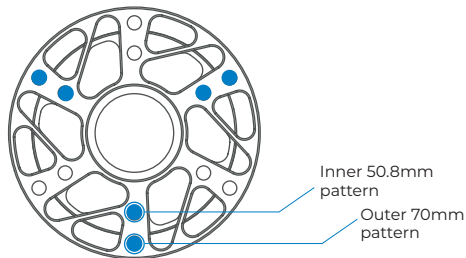
Our F-CORE is natively compatible with every wheelbase or adapter that has a 50.8mm bolt pattern. 70mm compatibility is obtained thanks to our Universal Hub, hubs from different manufacturers or different adapters for 50/70 compatibility!

MOUNTING A UNIVERSAL HUB

If you specifically chose our Universal Hub for compatibility and you purchased it separately, do not worry: mounting it is the easiest thing in the world.

You will need to use the three M5x8 black bolts to tighten the hub in three positions (use the TX25 key that you were supplied with) and you're good to go. You will then be able to mount the wheel to whatever QR or wheelbase of your choice.

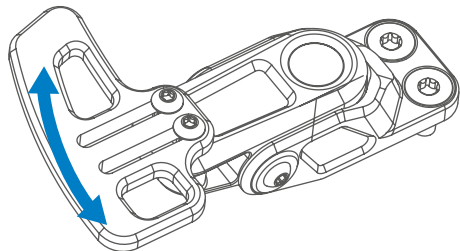
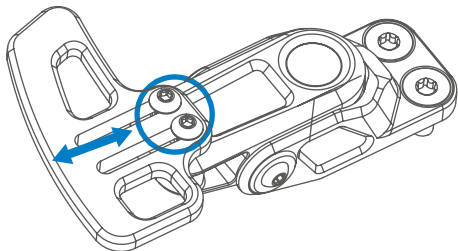
In the image, you can see highlighted in blue the M5x0.8 metric holes. In grey, 5,5mm through holes. Both of them are available in 70mm or 50.8mm bolt patterns. Through holes are rotated by 180, so flipping your adapter to match the wheel hub may be needed.



1.3 New F-CORE Shifter Paddles

The new CORE Shifter Paddles can be easily adjusted to better suit your hand size and driving preferences. **NOTE: TX10 drive included in the Tools Bag.**

Length and Reach can be adjusted by slightly loosening the two screws highlighted in the picture, and sliding the carbon paddle forward/backwards, or rotating it upwards/downwards.

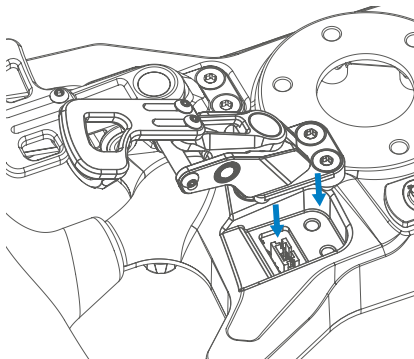


1.4 Clutch Paddles Mounting and Adjustment

If you have purchased the clutches separately, you will now need to mount them on the back of the wheel: do not worry, as you can easily mount them yourself!

To do so, you will simply need to use an **M4** key to free the covers that you will find on the backplate. Inside, you will see a white connector to which you will need to connect the clutch paddle. You can then insert the extra cable inside the backplate and tighten the extra paddles using the same screws you removed at the start.

Then you can adjust the clutches to be more comfortable, exactly as your shifter paddles. Also the spring resistance can be adjusted by turning the screw by using the provided **TX10 Allen Key** (smallest L-shaped silver key) as indicated in the picture below:

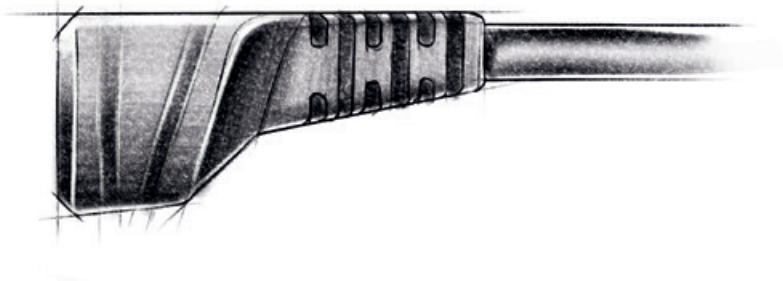


❖ 1.5 USB/BLE Connection

The F-CORE has our standard connection method, with two new main features:

- ❖ A dual-mode that allows you to use the steering wheel via **USB** connection or through **Bluetooth** connection to the PC.
- ❖ The **Q-CONN** - our proprietary magnetic connector for a fast and easy connection.

On both connection methods, the device is seen by Windows as having the same interface, so the re-mapping of controls in-game is not needed when using it via BLE or wired USB.



SWITCHING BETWEEN BLE AND USB MODES:

- Press and hold button 22 and turn on the steering wheel via the dedicated On/Off button on the backside of the wheel.
- Turning off the steering wheel and repeating the procedure will allow you to toggle between the two different connection modes.
- The device will always boot up to the latest connection method used.

WHEN IN BLE MODE:

- The top right LED should flash in blue. This means the wheel is in discovery mode or waiting to connect.
- Open the Bluetooth devices on your PC and click “add device”.
- Click on the “Bluetooth” option and wait for the device to show up in the device list.
- Select the device and wait for the pairing to end. The LED should flash quickly when pairing and stay fixed once pairing is completed.

Once paired, each time the device is turned on with BLE mode selected it will automatically connect to the PC. The operating range is usually around 10 meters but will be reduced if obstructions are present between the device and the PC.

WHEN IN WIRED USB MODE:

- ❏ Make sure you are in the correct connection mode (top right BLE status led OFF)
- ❏ Just plug the Q-CONN connector on the back of the device.
- ❏ Turn on the steering wheel with the On/Off button on the back of the device.
- ❏ The operative system should immediately recognize the device and reproduce the standard USB connection sound.

1.6 Tips for an Optimal BLE Connection

On the first connection you might experience some BLE Connection problems. That is most probably caused by specific settings on your system!

First of all, we always suggest using an external dongle. Do not use your PC Bluetooth connection, as it is not enough to guarantee the proper data flow.

If you're still experiencing issue, then you can try:

1. Deleting the device on the Windows BT Page and then pair it again.
2. Try using a USB extension to put the dongle as near to the wheel as you can: even if it is just one meter away that can sometimes create some issues.
3. Check if the dongle is on a USB 3.0 port: rarely that can create interference on Bluetooth frequencies.
4. Disabling onboard wifi and Bluetooth on the motherboard. Even if you previously disabled them in the device manager this couldn't hurt.
5. Set all Bluetooth devices/dongles/etc to not allow Windows to turn them off to save power (there are a bunch in Device Manager).
6. On Windows Services make sure the BT is activated and running correctly.
7. Turn off all other BT devices you have around.
8. Turn off Wireless internet and use a cabled connection instead.

❖ 1.7 Battery Charging

As soon as the Q-CONN cable is connected, the device will automatically start the battery charging process if needed.

Battery status led legend:

- ❖ Green means the battery is fully charged.
- ❖ Flashing yellow means the battery is at 5% capacity or less and needs charging.
- ❖ Red means the battery is being charged.

Charging on the fly while in BLE mode is possible and the connection will be used only to charge the battery without affecting the BLE communication. This is useful if the battery is low during a race!

A full battery charge should take around 2 to 4 hours depending on the connection used. USB 3.0 ports or powered hubs are recommended as they allow the device to draw more power to charge the battery.

Battery life will last approximately 50/60h. Battery level in % is also available from the Bluetooth device list in the Windows “Bluetooth and other devices” page and also on the Device page of the CubeSet App.

There can be a difference between the percentage shown on the Windows page and the CubeSet App: in this case, keep in mind that the value on the Cube Set app is the correct one.

2. NAVIGATING THE SOFTWARE

❖ 2.1 Introduction

The CubeSet app is here and you can download it from our website.

Now, thanks to our proprietary software you can configure your Steering Wheel in every little detail and most of all you can update your wheel firmware with new content that we release continuously.

The CubeSet App is compatible with the new line only: the older Formula and GT models are not compatible with the new software.

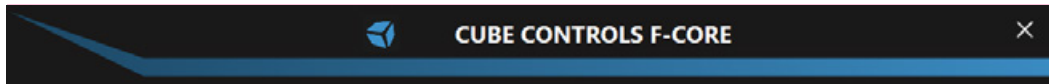
We have many plans for the future so do not worry: many features will be added to your CubeSet App!

IMPORTANT: With every major change in the Software we also release a new updated version of this manual. Please make sure you're consulting the correct version for your Software/Firmware.

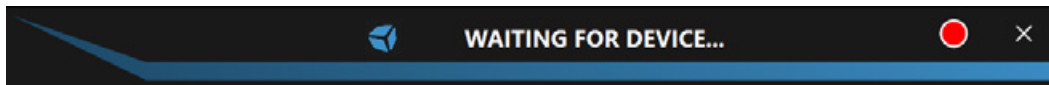
STARTING THE CUBESET APP

Once the steering wheel is connected, powered on with the On/Off button and recognized by the PC (see the USB/BLE Connection section of this guide), you can then start the CUBESET APP.

If the wheel is successfully recognized by the CUBESET APP, this is what you will see at the top of the window:



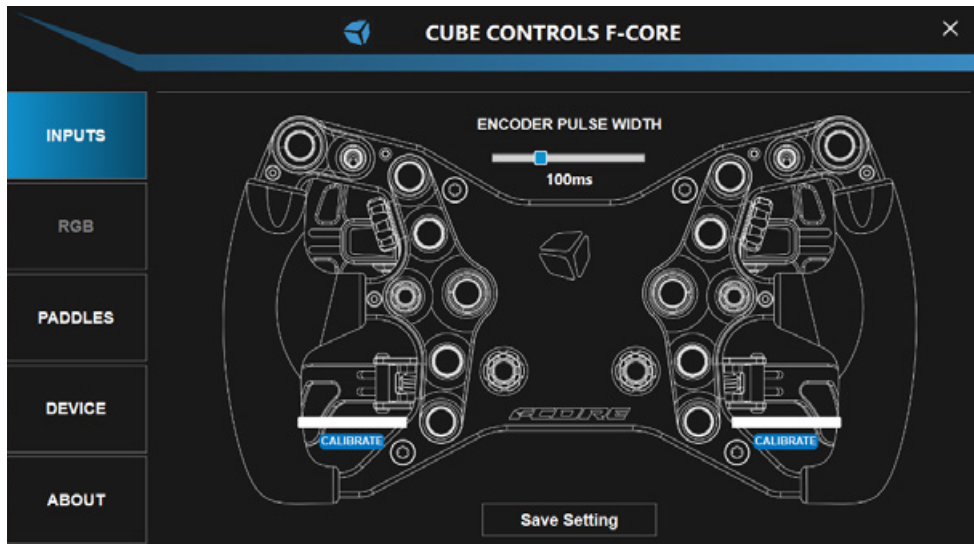
If the wheel is not connected to the PC or not successfully recognized, this is what you will see at the top of the window:



If the wheel is connected to the PC, you can finally start configuring your steering wheel!

IMPORTANT: Having the F-CORE no RGB LEDs, the RGB section of the app will be not accessible and highlighted in grey.

2.2 Inputs



On the INPUTS page, you can check the correct functionality of every button and encoder present in your wheel, modify the Encoder Pulse Width and calibrate the Clutches (if present).

CHECKING THE BUTTONS

Nothing is easier than that: every button press or encoder rotation on the Steering Wheel will consequently light up the corresponding button/encoder showing their correct input number.

ENCODER PULSE WIDTH

With this slider, you will be able to set a value between 40ms and 240ms for your Encoder Pulse Width! The higher the value, the longer the pulse, ensuring the inputs are recognized by every system/simulator. The lower the value, the shorter the pulse, ensuring the quickest reaction for high-end systems/simulators.

CLUTCHES CALIBRATION

After the mounting but before using the analogue clutch paddles it is necessary to calibrate them, or else they might not be recognized correctly by the system/simulator.

IMPORTANT: Before calibration make sure the Clutches are set as **Enabled** and the Bite Point is **Disabled** on the Paddles page.

The process is simple: when connecting the steering wheel for the first time the clutches could be not correctly recognized in their full course when pressed.



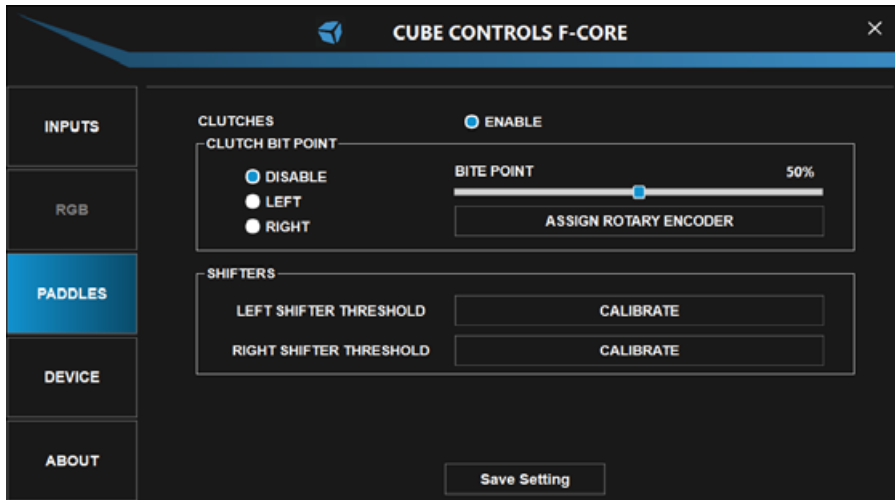
In this case, clicking on “CALIBRATE” will make the RAW values of the clutch appear. Pressing now the clutch full-course will make the system set the correct minimum and maximum values.



After that, simply click “SAVE”. Now the Clutch is correctly calibrated!

IMPORTANT: Remember to click **SAVE SETTINGS** after the calibration.

2.4 Paddles



On the PADDLES page, you have the CLUTCHES section and the SHIFTERS section. In the CLUTCHES section, you can enable/disable the clutches and the Bite Point. For the Bite Point, you will also be able to select the Slave Clutch to be the Left or the Right one and then limit the percentage for it- and also bind it to an encoder of the wheel to modify the bite point on the fly! In the SHIFTERS section, you will be able to Calibrate automatically the shifters to ensure full compatibility!

CLUTCHES SECTION

Once you calibrate the Clutches on the Inputs page, it is time to set the Bite Point! By default, the maximum value of the Slave Clutch can be adjusted with the respective slider. Therefore, if the clutch slider is set in the middle of its travel when fully depressing the left clutch paddle, its value will go from the minimum to half of the maximum value. On the other side, the Master Clutch will instead always work in a range from min to max travel, no matter how the clutch slider is set. This system allows the user to mimic the launch control system used in F1 cars until 2015 when it was possible to set the Clutch Bite Point.

Finding the correct Clutch Bite Point setting

In a practice session, set the clutch slider at around 50% of its travel, fully depress both clutch paddles, engage first gear, reach the optimal engine RPM, and release the right clutch paddle.

As the car starts gaining speed, release the left clutch paddle and shift gears as normal. If you notice that the clutch starts slipping too much, you will need to decrease the left clutch paddle max value. If you notice that the engine drops quickly in RPM, then you will need to increase the clutch slippage by increasing the slider value.

This value is typically different for each car and different track conditions.

By default, the Master Clutch is the right one and as such will always operate from min to max value. It is possible to swap the Master Clutch and select the left one, and it is also possible to set

the analogue paddles to be separate instead of combined.

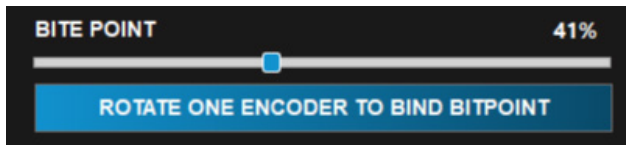
This way the Launch Control will be no longer available and this is a valuable feature, especially for users with leg impairments since it allows them to be set as Throttle and Brake directly on the Steering Wheel.

IMPORTANT: After each value modification, remember to press the SAVE SETTINGS button.

Setting the Bite Point on the fly

Now it is also possible to modify the Bite Point on the fly, without going back to the CubeSet app in the middle of your driving session!

To do so, you will need to set an encoder of your steering wheel for this function. Nothing easier! First of all click the button under the Bite Point slider, to start the process. Then you will be prompted to rotate an encoder to bind the bitepoint.



IMPORTANT: Every change is sent from wheel to software in real time, so you will need to keep the app open at all times when using the wheel to make sure the data flow is not interrupted.

SHIFTERS SECTION

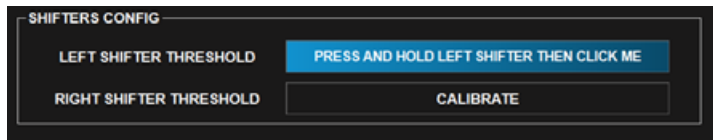
After the first use, you may notice some missing or double shifts. This is caused by different systems incompatibilities that may diminish or increase the input duration, making the shifting incorrectly recognized. Because of this, you will need to directly intervene and calibrate the

value for the two shifters separately to reach the perfect shifting. Do not worry, as this process is really easy!

First of all, you will need to click the CALIBRATE button as shown in the image below.



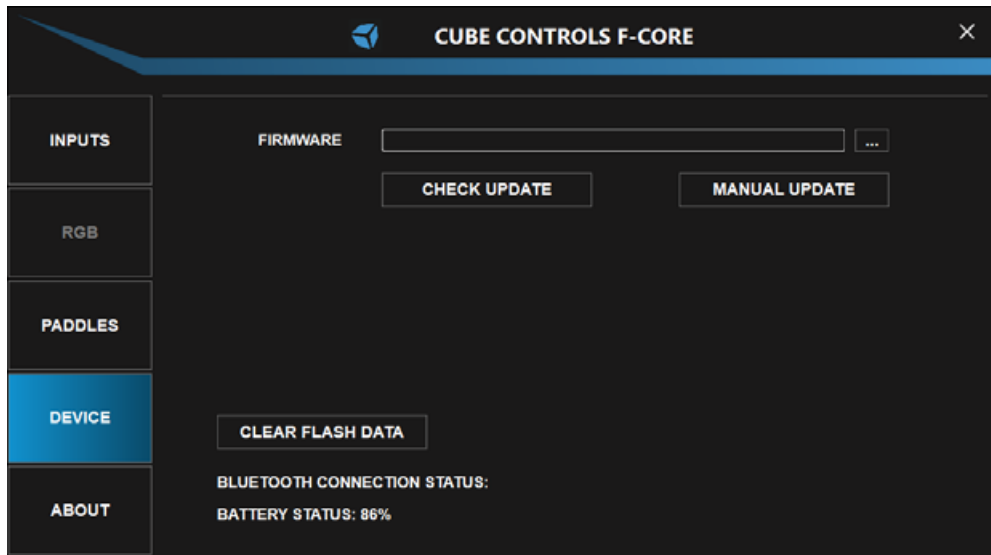
The **CALIBRATE** button will be replaced by the message “**press and hold the left shifter then click me**”.



Following the instructions press and hold the corresponding shifter and then click the button. The shifter paddle is now perfectly functional! Repeat on the other one and you will be good to go.

IMPORTANT: Remember to click **SAVE SETTINGS** after the calibration.

2.5 Device



On the DEVICE page, you can update your steering wheel's Firmware, Factory Reset your wheel and also check your Battery Status (only when on BLE connection).

UPDATING THE FIRMWARE

When updating the firmware you have two choices: you can check online for updates (CHECK UPDATE) or, if you already have downloaded the new firmware update on your PC, you can select it and upload it manually (MANUAL UPDATE).

CLEAR FLASH DATA

If you need for whatever reason to do a Factory Reset of your steering wheel, you can now use this button and clear everything in its memory with just a click!

BATTERY STATUS

When connected via BLE, here you will find the remaining percentage of your steering wheel's battery. When connected via USB, you will see USB.

IMPORTANT: There might be differences between the percentage shown on the Device page and the Windows Bluetooth Device page. Do not worry, this is caused by some Windows' difficulties in seeing the accurate battery percentage and you can believe what you see in the App.

2.6 About



On the ABOUT page, you can find additional information like the Firmware version your steering wheel is on or the CubeSet App version.

3. USEFUL TIPS

Each wheel comes with a full sheet of stickers and a set of plastic tweezers useful to install them to your liking. Before applying the sticker make sure the surface it's clean.

Try to install the USB coiled cable by wrapping it loosely on your FFB motor shaft/adapter in such a way that it will not suffer any strain even when doing full opposite steering rotations.

Make sure your rig is grounded correctly.

Each wheel comes with an auxiliary USB connector that comes out from the main hub.

This will be used with our Cube Controls QRX quick-release kit.



www.cubecontrols.com