

UBCO Service Kit (2x2-A, 2x2-B)

NOTICE: This service kit relates to the 2017 2x2-A and 2x2-B Production Bikes and provides the ability to troubleshoot and diagnose any drive train faults. This does not include the battery or general electric system. It also provides the ability to update the controller maps for each drive on the bike.

Required:

1. Windows PC. (Not currently available on a MAC).
 2. Ubco Service Application downloaded and installed.
 3. Ubco USB Cable provided in this pack.
 4. Driver for the USB Cable downloaded and installed.
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IMPORTANT NOTE:

- There are two controllers in the bike, one for each drive (Front and Rear).
 - The cable connects directly to each controller.
 - The Front and the Rear Controllers have different Maps which are provided.
 - You will need to test and verify the front and rear before you do the update (procedure described in this instruction).
 - **Loading the wrong map to the wrong drive will have a detrimental effect on the customer experience so care needs to be taken to put the right map on the right drive.**
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2x2- A & 2x2-B

There are two sets of updates which relate to 2x2-A and 2x2-B (which are the first four elements of the serial number). The front and rear controllers have different maps so each map needs to be applied to each controller correctly (see the instructions in your pack which is being sent out).

There are minor development differences between these two bikes which mean the updates have a variation below.

The 2x2-A Map Updates include:

- a) Better throttle response.
- b) Recalibrated temperature monitoring.
- c) Increased acceleration
- d) Increased mid-range torque
- e) Increase top end speed
- f) Improved efficiency at high speeds.

The 2x2-B Map Updates include:

- a) Better throttle response.
- b) Recalibrated temperature monitoring.
- c) Increased acceleration
- d) Increased mid-range torque
- e) Increase top end speed
- f) Improved efficiency at high speeds.
- g) *Instant torque from both motors at start up.*

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Visit the service help page.

All files and instructions are available online at <http://www.ubcobikes.com/service-app/help/>

Download the Controller Map Files

- Download the controller map files and extract them from their zip folder:
http://www.ubcobikes.com/wp-content/uploads/2017/07/UBCO_2x2_Map_Updates_210717.zip

Installing the UBCO Service app to a Windows PC.

- Download the **UBCO Service App** files supplied by UBCO file and save into a folder on your computer.
 - Service Application: <http://www.ubcobikes.com/wp-content/uploads/2017/06/UBCO-Service-App-Setup.zip>
- Run the Setup File. You should now have the UBCO App set up with an Icon on your desk top. Test open the application.

Installing the USB cable driver.

Download the **UBCO Cable Setup** file supplied by UBCO, extract the file from the zip folder and run the file. This driver is for UBCO USB cable.

- USB Cable Driver: http://www.ubcobikes.com/wp-content/uploads/2017/06/UBCO_Cable_Setup.zip

Connecting to your UBCO bike.

To connect the other end of the cable to your bike you will need to remove the battery and find the programming plugs on the bike. These are located at the bottom of the front console under the battery.

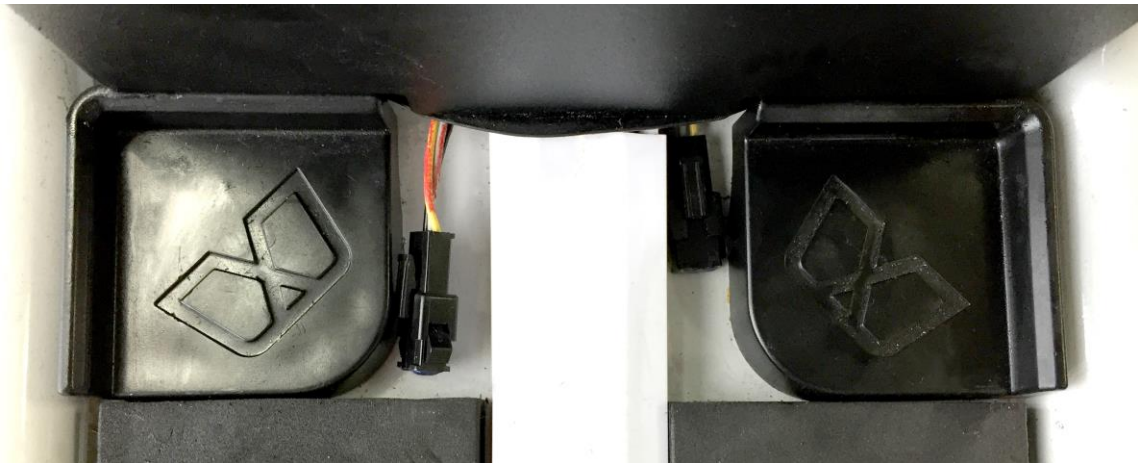


Figure 1 Remove the battery and find the controller cables either side of the conduit.



Figure 2 Remove the caps from the plugs and set aside.



Figure 3 Slide the plugs to the side of the bike as above.



Figure 4 Replace the battery ensuring the cables are accessible as illustrated.



Figure 5 Plug USB cable into the controller cable.

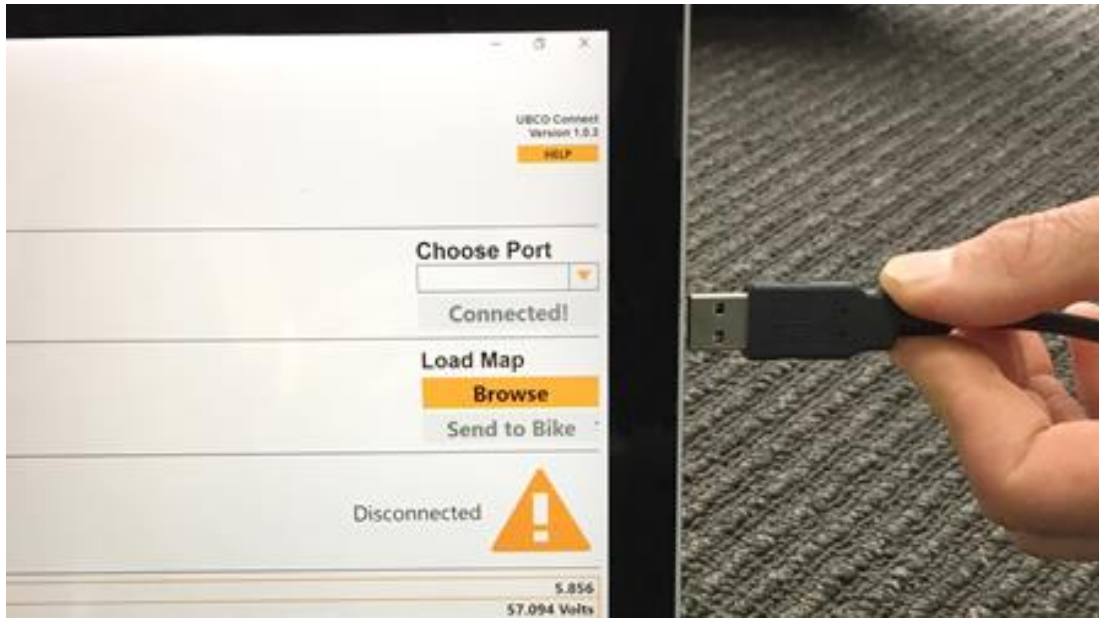


Figure 6 Plug USB Cable into PC

Checking connection and identifying the wheel.

The steps to connect your bike and ensure you are connected to the right drive is outlined below.

- Plug the USB cable to either of the cables exiting the console into your USB port on your PC.
- Turn the bike key to RUN to ensure the drive has power.
- To be sure that the bike is connected to the App and supplying data by checking that the live fields in the app are populated.
- **To ensure you are plugged into the correct motor port on the bike:** rotate the desired wheel by hand and watch for the vehicle speed to change. If there is no change in vehicle speed, try rotating the other wheel. *The vehicle speed should change; this is the wheel you are plugged into.*

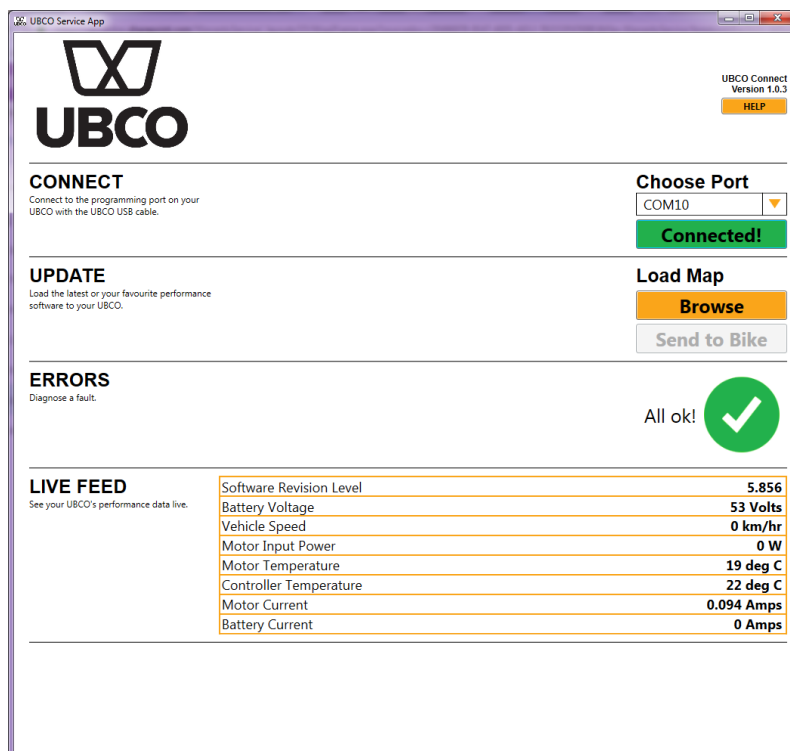


Figure 7 Service App connection screen.

Loading a new map.

Once your bike is connected and you are sure of the wheel chosen, click on the Browse button and locate the new map from your computer. Make sure you choose the front or rear map depending on the wheel.

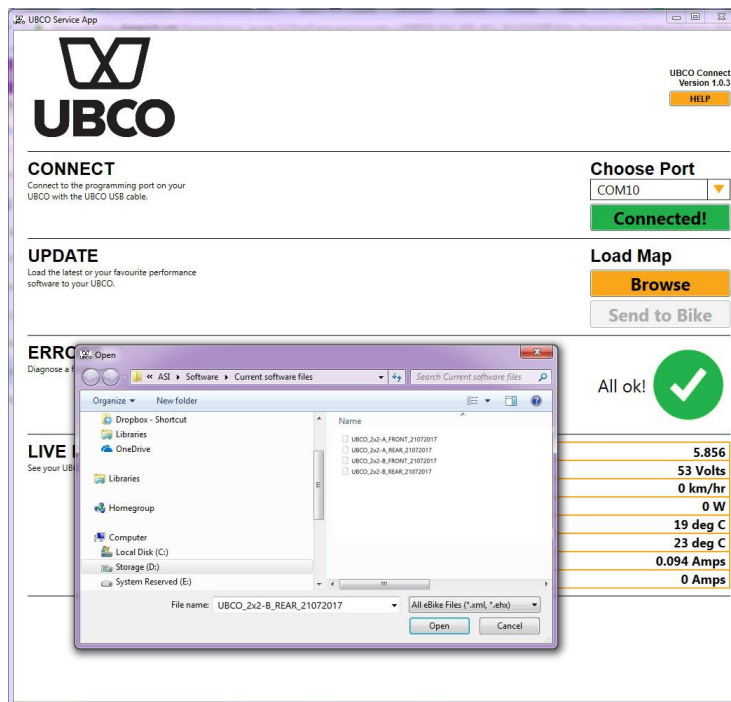


Figure 8 Loading a new map

The name will come up next to the send to bike button. Click on the Send to Bike button and click yes when prompted.

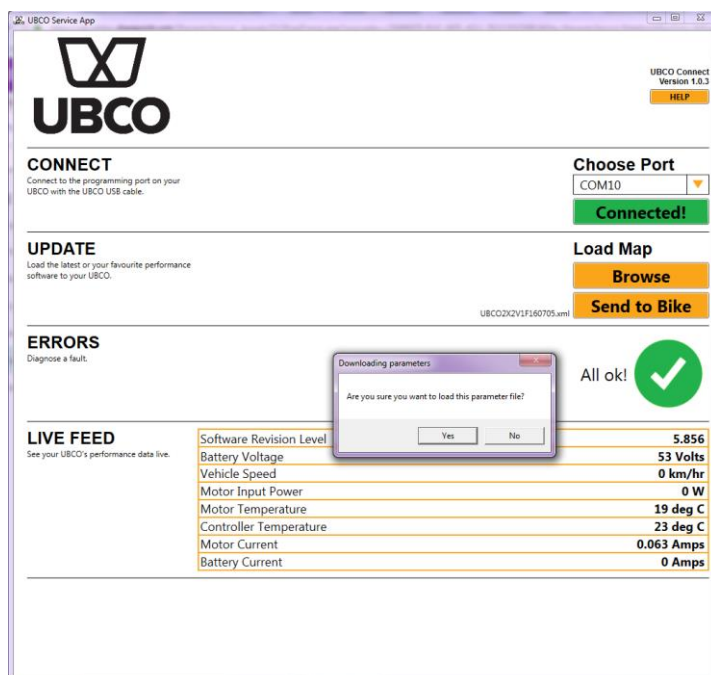


Figure 9 Sending new map to bike

Once the map is successfully uploaded to the bike, the Send to Bike button will change to Updated.

Error code box.

- When the bike has an issue, you can connect the service App to view the bikes error codes.

- Connect the bike to the appropriate wheel as shown above. If there is a detectable fault, it will show with a basic description in the Errors box.

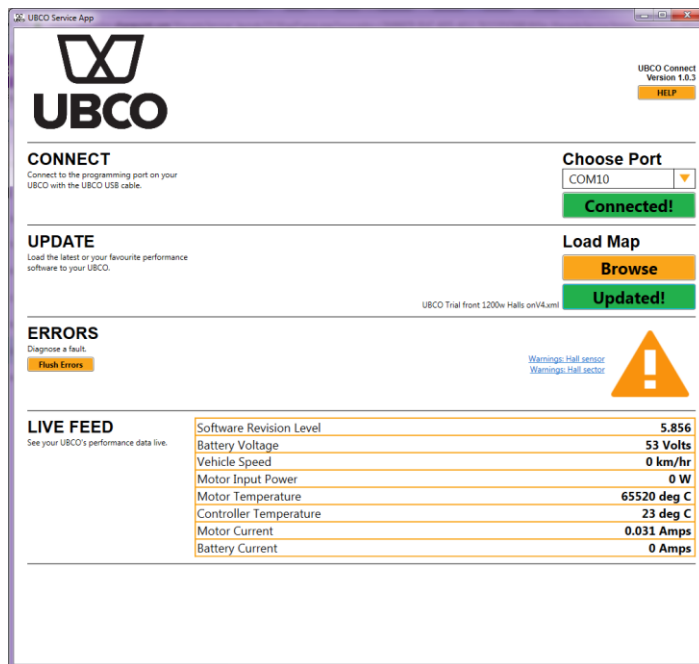


Figure 10 Error code box

- Clicking on the errors description will take you to the Errors information page on the UBCO website for further information.
- If you have attempted to fix the issue, clicking Flush Errors button will reset the error and test the system again.

Live feed box.

Use the information in the live feed box to help diagnose issues.

- **Software Version:** Relates to controller firmware release.
- **Battery Voltage:** Full charge voltage 58.8v flat 41.0v, normally 48v-55v.
- **Vehicle Speed:** Wheel speed in kmph
- **Motor Input Power:** Power to the motor in Watts. Hold brakes to get full reading.
- **Motor Temperature:** Temperature in °C of motor coils.
- **Motor Current:** Amount of current in amps going to the motors.
- **Battery Current:** Amount of current in amps coming from the battery to that motor controller.

Disconnecting from your UBCO bike.

To complete the update, unplug the cable, remove the battery and replace the caps.



Figure 11 Replace end plugs into cable connector.

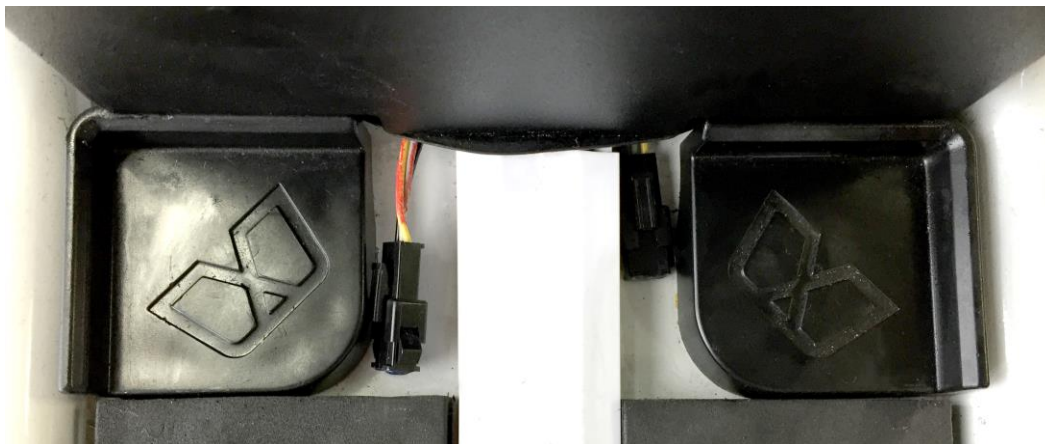


Figure 12 Put cables back beside conduit at centre.

To Finish:

- Replace the battery
- Connect the battery plug
- Replace battery retention clip (Essential).