



Fitting Guide for the Woosh 85TS Kit

Important: For your own safety and those around you, you must read this manual before attempting to fit this kit. You must also ensure that you fit the kit in strict accordance with the instructions in this manual.

Before you start the installation of your kit, please read the following:

This kit is intended to be fitted by someone who is competent and experienced at fitting electric kits to bikes. If you are not experienced and/or lack the necessary tools to complete any of the procedures in this manual, you should seek the advice of a professional who can fit the kit for you. If necessary, call us on [01702 684444](tel:01702684444) or email us at support@wooshbikes.co.uk and we will try and put you in touch with someone in your area that has the necessary expertise to properly fit your kit. You will of course need to pay for the technician to install your kit, these costs are not covered by Woosh Bikes.

Warranty Terms:

If your kit is fitted by a professional installer, it will be covered by our standard one year warranty, which means that in the event of a failure, you would first need to have the person that installed your kit confirm the issue and likely cause, then you (or the installer) would need to contact us and provide us with the details of the fault. If the issue cannot be resolved over the phone or via email, then you would need to return the faulty part to us at your expense. We will then repair or replace the faulty part and send it back to you at our expense. If the kit was not fitted by a professional and/or the failure that has occurred is due to poor/incorrect installation, or the kit has been used improperly, the warranty will be voided.

What's in the Box

Ensure that you have all the parts listed below before going any further, if there are any missing parts, contact us on 01702 684444.

The motor kit comprises of a motor wheel with hub motor, a downtube battery cradle (with integral controller), a battery, a charger, wiring loom, and a VLCD10 display.

The thumb-throttle and brake levers/sensors shown are optional. The loom pictured below will be different and will only have a single connector at both ends if the "display-only" version of the kit has been supplied.

The battery, charger, and motor wheel, are not shown in the picture below, but will of course come with the kit. Ensure that you have all the parts before starting the installation.

Standard 85TS kit



85TS kit with thumb-throttle & brake-levers



Downtube Battery

A space of approximately 38cm by 10cm is required for the battery, this includes an extra couple of cm that the battery needs to be slid when removing it from the battery cradle.

The downtube battery-cradles have three mounting points, and due to the weight of the batteries, ideally all three mounting points should be used.

The downtube batteries are designed to be mounted to the existing bottle bosses on the downtube, but normally there is only two of them, and so we supply riv-nuts with the kits so that you can provide the extra fixing point. If your existing bolt holes are not in a suitable position for mounting the battery cradle, an adjustable adapter can be purchased which will secure to the two existing bosses, and will provide the necessary mounting points for the battery cradle.



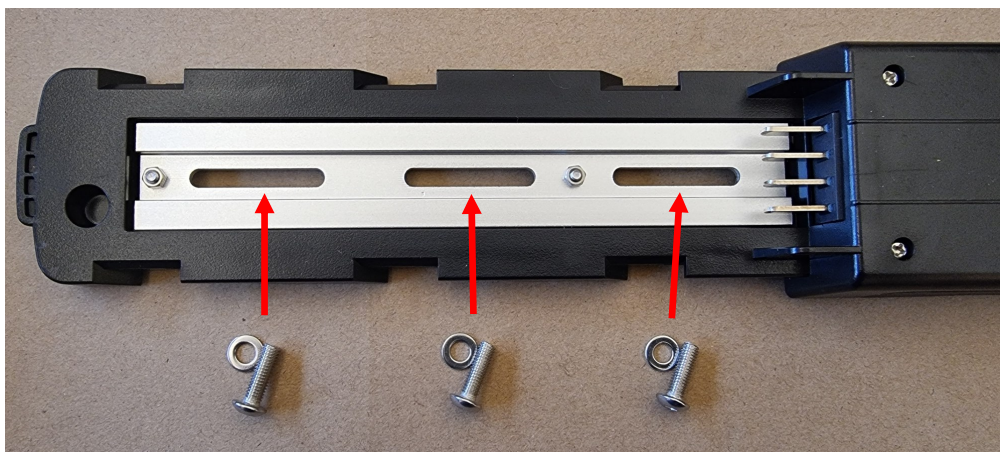
The adaptor is bolted to the frame at the desired position on the downtube (it comes with the bolts), and then the battery cradle is attached to the adaptor. If you don't get the position quite right the first time, you can simply loosen the bolts and slide the adaptor along the downtube in either direction as required.

This adaptor is available on www.amazon.co.uk— search for “B08ZXQR58C” Eventually this product may be discontinued or not found using the above search term. If this is the case, contact us and we will find a suitable alternative for you. These are currently around £25

If you plan to use the riv-nuts, when you have marked out where you are going to drill the holes, but before you have actually drilled them, place the battery on the cradle, and hold it in position, and make sure that the bottom end of the battery will be clear of the downtube, and that the battery is not obstructing anything else. You will need to use a 7mm drill-bit.

Once you have the cradle installed, be sure to remove the battery from the cradle before continuing with the rest of the installation.

If you inadvertently short out the battery terminals on the cradle while installing the kit, you may see a spark, this is just the residual voltage in the controller discharging, this would not normally cause any issues with the kit, but might make you jump!



Motor wheel

Transfer your existing tyre, tube, cassette and rotor if applicable, over to the new wheel.

If you have disc brakes, loosen the two calliper bolts before fitting the wheel to the bike. This will allow you to more easily drop the wheel in place. Don't forget to align the calliper and re-tighten the bolts.

When dropping the wheel in place, ensure that the orientation is such that the cable is pointing towards the centre of the bike, as shown below.

If installing a rotor, peel off the white cover to reveal the bolt holes.

**** ONLY USE THE SUPPLIED ROTOR BOLTS. DO NOT USE ROTOR BOLTS EXCEEDING 9mm IN LENGTH ****

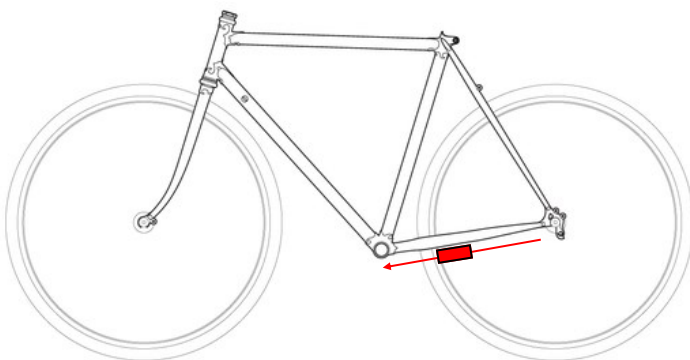


Please note that the bike is upside down in the picture shown above, and shows the motor cable secured along the chain stay, and heading towards the centre of the bike.

The wheel will come with the nuts and washers in place on the axle. You can re-arrange the order of these if necessary to get the wheel/rotor to align correctly.

The motor cable should be run along the chain-stay towards the centre of the bike, cable-tied in position, and join with the matching cable coming from the controller/battery cradle. **There are arrows on the connectors, these need to be aligned** correctly before pushing the connectors fully/firmly together. Make sure that the larger 'outer' connector is pushed all the way up to the line on the smaller/inner connector.

Ensure that the motor-cable is tied out of the way of the rotor.



Handlebar Components

This kit come in two versions:

1. A display-only option, meaning that the loom has single connector that goes only to the display.
2. An option which includes brake sensors and a thumb-throttle, as well as the display. The loom for the thumb-throttle/brake-sensors option has a cable that has four connectors at the handlebar end, for the aforementioned components.

The display is normally mounted on the left side (to the right of the brake lever mounting). If you have a gear shifter on the right side of your handlebars, the display will need to be fitted to the right of the shifter.

If you are fitting the thumb-throttle, you **MUST** fit brake levers/sensors. The throttle is universal and can be fitted to either side.

There are 3 types of brake sensors:

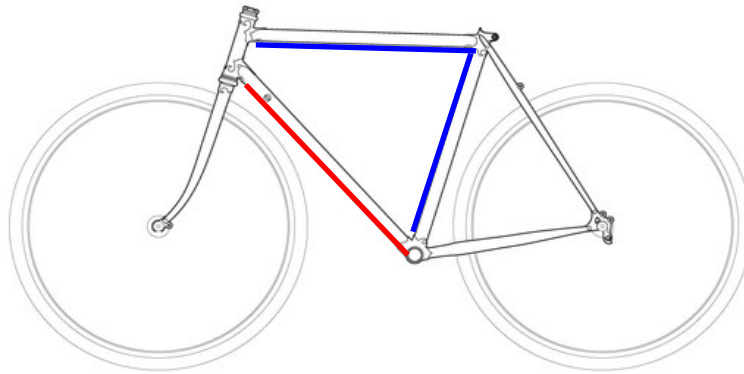
1. Replacement levers (for cabled brakes)
2. Inline sensors (for cabled brakes)
3. Hydraulic sensors (for hydraulic brakes)



The hydraulic sensors are shown below. When the lever is pulled, the magnet moves away from the sensor and the cut-out is activated.



The next step is to run the loom (for the LCD, and throttle/brake cut-outs if applicable) from the controller/cradle to the handlebars. The cables can be routed in whichever way suits best, ideally leaving the least amount of slack. Two such routes are indicated below.



Ensure that there is enough play in the cables so that they do not get stretched or pulled as the handlebars are rotated.

The connectors are colour coded and should be mated with the matching colours on the loom. There are arrows on each connector which must be lined up before pushing the connectors together.



If there is too much slack in the cables, they will need to be secured in such a way that they are not hanging loosely and/or in a position where they may get caught/snagged on any other parts.

If you have the kit that comes without the throttle/brake-sensors, there will be just a single green connector for the display.

There are just two leads coming from the controller/cradle:



The VLCD10 Display



With the battery in place and switched on, press (and hold) the middle button on the display to switch it on.

The display always starts up in the lowest level of assistance. To adjust the level of assistance use the up/down buttons to choose from the 1 to 5 levels available.

Walk-mode: hold the minus button to activate the walk-mode. The motor will stop when the button is released.

With the display already powered up, tap the middle button access the other features of the display (use the plus and minus buttons to navigate through the menus, and use the middle button to select the highlighted option. For quick overview of the menu system, see the YouTube video at the link below:

www.youtube.com/watch?v=whpB7CMdrHg

There are three main headings: “**INFORMATION**”, “**BATTERY INFO**” and “**FUNCTION**”.

INFORMATION has headings that show distance/speed information: **TRIP**—total distance covered on the current trip, **ODO**—the total distance covered since new, **TIME**—the amount of time that has passed since the display was switched on, **MAX**—shows the maximum speed achieved on the current journey, **AVG**—shows the average speed of the current journey. Pressing the up or down button in this section will show the software version.

BATTERY INFO gives a more accurate representation of the remaining battery capacity, as well as other information about the battery. Some entries may be blank or zero if the feature is not supported. Use the up and down buttons to navigate through the various headings.

FUNCTION is where the configuration of kit is managed. The settings in this section will be pre-configured by Woosh, and ideally should not be altered. **If these settings are changed post-sale in a way that makes the bike illegal on UK roads, Woosh cannot accept any responsibility for this. Changing these settings may also invalidate your warranty.**

Battery care:

Some care is needed to ensure that the battery performs at its best and lasts as long as possible. As batteries age, the achievable range will gradually decrease. Follow the instructions below to ensure your battery performs as well as possible for as long as possible.

Try and use the range of the battery i.e. avoid charging it after every single journey if those journeys are just a few miles.

Do NOT charge the battery in the extremely cold.

If the battery is not in regular use i.e. over the winter, try and store the battery at around 50% to 60% full.

General battery care:

Do not attempt to open the outer casing of the battery.

Do not attempt to repair the battery.

Do not immerse the battery in water.

Keep the battery away from children.

Do not drop, pierce or otherwise damage the battery.

Ensure the battery is not exposed to temperatures above 55 degrees Celsius or extreme humidity.

Do not use the battery in an environment where the temperature is below -5 or greater than 55 degrees Celsius.

During winter months, the achievable range may be less than in the summer months. This is not unusual for e-bike batteries.

Charging:

Plug the charger into the socket on the side of the battery, then plug the other end into the mains socket and switch it on. While the battery is charging, the LED on the charger will glow RED, when charging is complete, the LED will go GREEN. If the charger is on but not attached to the battery, the LED will also be GREEN.



These chargers do run quite hot, this is normal. When charging is nearly complete, the charger will cool down, and when the battery is full, as mentioned above, the LED will turn green.

The battery shown above may be slightly different to what you have received with your kit, but the instructions will still be applicable.

Troubleshooting tips

The motor does not start/kick-in: This could indicate that the connector(s) on the motor cable is/are not fully mated. Check the connection(s) and push the connectors fully/firmly together.

Another possibility is that (if fitted) one of the brake levers/sensors is engaged (or one of the levers has not sprung back fully to the rest-position), if this is the case, it would be accompanied with "Error 5" showing on the display. If it is not obvious which lever is the problem, you can unplug them one at a time to identify which one is causing the problem.

There is no speed information shown on the display: The connection(s) in the cable going to the motor may not be fully mated.

Thumb-throttle not working: Assuming the connector is properly mated (no yellow plastic showing), check the connector to see if any of the pins are bent or there is any other visible issue.

Woosh Support:

Support for kits is provided primarily via email. If you have an issue, send us an email with a description of the issue you have, and pictures (and/or a video) of the issue if it's something that can be shown/demonstrated.

Mon to Fri, emails are usually responded to the same day, but during busy periods, may take a little longer.

Support is limited at the weekend and holiday periods i.e. Christmas and bank holidays. Emails received over the weekend or during holiday periods may not be read and replied to until the next *working* day.

Email: support@wooshbikes.co.uk