

E-bike Conversion Kit Assembly Instructions

Easy Step by Step installation:

- 1. Unscrew the existing front wheel or rear wheel on your bike**
- 2. Screw on the Wheel that comes with the kit**
- 3. Attach the Throttle and Brake Puller**
- 4. Fasten the Motor Controller**
- 5. Done!**

The following tools will be required for installation:

- Adjustable wrench**
- Pliers and/or side cutters**
- Philips Screwdriver**
- Flat screwdriver**
- Hex key set.**

Mounting and Assembly



Place the bike upside down with the seat and handle bars resting on the ground. (Use plastic or paper to keep the seat and handlebars from touching the ground and getting dirty.)

Unclamp the front break cable so the break pads can be spread apart and loosen or remove the axle nuts and remove the front wheel.



Place the hub motor axles into the hanger slots where the front axle was secured. If the slots are too narrow to accept the axle flats then file both sides of each slot until the axle flats can easily, but snugly, slide into the slots. Take care to file each side of each hanger slot equally and evenly, flat and straight and to remove the minimal required material. (*See the warning below.*)

Warning: Once inserted and seated in the hanger slots the axle must be locked and unable to rotate in the slot.



Washer depressions or protrusions on the slot faces used to help secure the old wheel may prevent the nut from sitting flatly against the surface of the slots. A flat surface is mandatory and any depressions or protrusions must be filled or bridged (not filed away) on both sides of the hub. On the wired side of the hub a “U” shaped washer must be used. You can fabricate one by removing a 1/4 or 1/3 section from a regular washer having an inside diameter equal to the width of the axle between the flats with a thickness slightly greater than the depth of the depression or height of the protrusion. If you possess sufficient electrical skill you can cut and splice the hub motor wires at the connector end so uncut washers can slide over the wire first and then the axle. Skill in splicing, soldering and *covering each splice with heat shrink tubing* is required and may void the warranty if not done right. In some cases only cut washers can be used to compensate for depression size or protrusion location.

A 2/3 washer is used here to compensate for both the protrusions and the washer depression. Place enough washers on the axle inside the forks so the forks do not touch the hub or to match the existing width between the forks.



Adjusting the gears

The rear wheel is supplied with a five gear sprocket. If your bike has seven or more gears than this it is a relatively simple matter to adjust the rear gears to suit. There are two screws on the rear derailleur arm. These control the limits of the arms travel between the top and bottom gears. By adjusting these the correct range can be obtained.

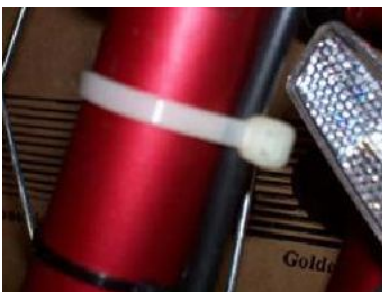


Wiring



Familiarize yourself with the wiring from the controller. Notice there is one wire that does not have a corresponding connection. This wire goes to the optional *pedelec* sensor which is not required in the USA.

Begin the wiring by leaving enough slack in the cable between the axle and the first cable tie so the wheel can be removed from the fork far enough to allow an inner tube to be slid between the fork and the axle on the opposite side.



Use cable ties to secure the sensor and power cable to the fork.



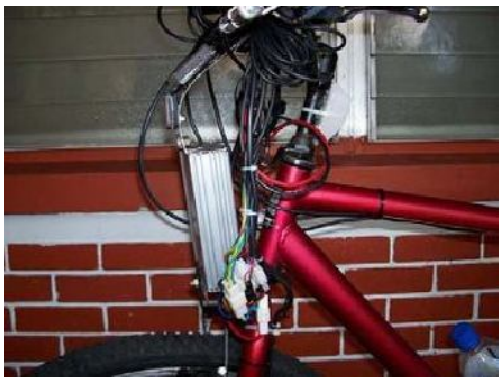
Enclosure for lead acid batteries made from plastic tool box and fitted with connector.

Battery type and enclosure are optional but the enclosure and connections should be water tight and kept away from any liquid.

Here the controller and battery box are shown mounted on the rear basket carrier.



The controller may also be mounted on the front fork.



Warning: Please ensure that all wires are well connected. Controller failure can result when wires accidentally disconnect under load. In particular the three power wires leading to the motor should be firmly coupled so that they cannot be pulled apart by hand.

Install the twist throttle on the right handlebar and electric brakes on one or both handlebars. The electric brakes cut off power to the motor when the handbrakes are applied