Watch our installation video at Electric-Bike-Kit.com/install

**BATTERY CHARGING**

FOR LONG-TERM BATTERY STORAGE, CHARGE BATTERY TO FULL MONTHLY

1) Plug battery into charger and then plug charger into wall socket.
2) Turn battery switch ON (red plastic showing on switch).
3) When charge is complete, turn OFF the battery switch, and disconnect all plugs.

Charger light indicator colors for 36v Ranger battery:
- Red: Charging
- Solid Green: Fully charged/Standby

*Note: Charger may become warm to the touch during charging. This is typical. It is recommended that you keep it out of direct contact with combustible materials.

**Helpful tip:** For longest battery life, top off the battery to 100% after each ride. Once fully charged, unplug from the charger. Do not leave on charger for more than 12 hours.

**TROUBLESHOOTING (More Info at the Electric-Bike-Kit.com Info Page)**

- **My forks contact the motor:** Insert no more than one additional thin washer between the motor and tab washer (see the axle hardware diagram on the next page). Ensure that the tab washers still lock into place on the axle.
- **My fork “dropout notches” are too small for the motor axle:** File the dropout notch on your forks by 0.5mm.
- **Battery not charging:** Turn battery switch ON to charge.
- **Motor is making a “Clunk... clunk... clunk” sound, turns very slowly, or is not turning on:** Repeat battery charging instructions. If problem persists, please contact our Technical Support team at (206) 682-7520 from 9am to 3pm PST Monday-Friday, or support@ukko.io. We will repair or replace any defective components under warranty at no additional cost.

**THROTTLE INSTALLATION**

1. Remove handlebar grip.
   - Some grips have locking bolts on the end of the handlebar.
   - If resistance is too great, you can heat the grip with a hairdryer.
   - Grips may be cut off of the bar, but will need to be replaced.
2. Loosen brake/shifter and slide off of handlebar.
   - Usually there is only one bolt located on the backside or underside of the handlebar.
   - Cables do not need to be disengaged to remove the brake lever.
3. Slide throttle on before replacing brake lever.
   - Make sure that the throttle lever is in your preferred orientation.
   - Tighten the bolt on the underside of the throttle with a 3mm hex wrench.
4. Replace brake lever and handlebar grip.
   - Tighten down the brake lever in its original position.
   - Slide grip back into place.
   - If resistance is substantial, heating the grip with a hair dryer can ease installation.
**HUB MOTOR INSTALLATION**

**Proper hardware order**

1. Axle
2. Thin Washer
3. Tab Washer
4. Thick Washer
5. Wide Washer
6. Axle Nut

The “tab” on washer #2 faces out from the motor, and down toward the motor cable.

**Image orientation: looking forward from behind forks**

**Right side of bike**

**Left side of bike**

- Steel bicycle fork is recommended with hubmotor.
- Remove your front wheel, set Hill Topper motorized wheel in its place.
- From riding position, the motor cable should emerge from the RIGHT side of the motor (the same side as your chain).
- Ensure that the axle hardware is in the correct order.
- Make sure that the wheel can turn without rubbing or grinding on the forks or brakes.
- Additional washers may be used if necessary to accommodate your specific fork shape and size.

**IMPORTANT:** Incorrect tab washer installation can cause serious damage to the motor cable!

**Merge Fork**

**INSERT FORK**

**GREAT**

- Use a wrench to tighten bolts to 28 foot-pounds.
- Make sure your tire is inflated and your brakes are adjusted, and you’re ready to go!

The motor cable will emerge from just below the end of the fork (which is called the “dropout”), when installed correctly. If installed incorrectly, it could interfere with your spokes or damage your cable. Before you ride or run your kit, double-check that the cable is in the correct orientation.

**BATTERY MOUNTING SUGGESTIONS**