



SUMMIT

INSTALLATION GUIDE



HILLTOPPER

ELECTRIC BIKE COMPANY

WELCOME TO YOUR HILLTOPPER SUMMIT ELECTRIC BIKE KIT -

Congratulations on the purchase of your Hilltopper Summit 48V electric bike kit. And welcome to the Hilltopper community of electric bike enthusiasts.

The Summit is our most advanced kit so we have created a step-by-step guide to help you install your kit. The install should take around an hour depending on your mechanical skills and enthusiasm. You can also take your bike and kit to a local bike shop to have them install your kit. Install fees will vary with different shops.

When you finish your install, double check that all the bolts are tightend, connections secured, wheel rolls freely, and battery is charged. Start off slowly at first to get used to the assist. **AND THEN HAVE FUN!**

PARTS AND PIECES -

WHEEL W/ HUB MOTOR, TIRE, TUBE, AND HARDWARE

BATTERY, KEYS AND MOUNTING HARDWARE

LCD DISPLAY WITH KEYPAD

VARIABLE SPEED THROTTLE

THROTTLE / LED DISPLAY CABLE (CONNECTS THROTTLE AND DISPLAY TO THE BATTERY)

MOTOR CABLE (CONNECTS JUST THE MOTOR TO THE BATTERY)

FRONT LIGHT, WIRES, AND MOUNTING HARDWARE

REAR LIGHT, WIRES, AND MOUNTING HARDWARE

PEDAL ASSIST SENSOR (PAS)

PAS EXTENSION CABLE

2-PIECE MAGNET WHEEL & ALUMINIUM LOCK RING

TORQUE ARM W/ HARDWARE

DISC BRAKE/ROTOR SCREWS ("DISC BRAKE USE ONLY")

CHARGER

ZIP TIES

INSTALLATION GUIDE

IMPORTANT: BATTERY SHIPS IN SEPARATE BOX

LET'S GET STARTED



INSTALLING THE HUB MOTOR WHEEL

Please refer to FIG 1 on the following page for installing your new Hilltopper HUB MOTOR WHEEL.

Please orient FIG 1 to your installation position. Installation positions include bike upside down with handlebars and seat resting on the ground, on a bike rack, or standing with the wheels on the ground. FIG 1 image orientation is looking forward while seated on bike saddle forks pointing towards the ground.

The best way to orient FIG 1 is to always use the DRIVE SIDE. This is the side with the chain.

STEP 1: Loosen your brakes and remove your bike's front wheel.

DISC BRAKES: If your wheel has disc brakes

A. Remove the disc brake rotor from your wheel. Make sure you put a plastic spacer in between the brake pads to keep them from locking shut.

B. The HUB MOTOR WHEEL is disc brake compatible.

C. Align the disc brake rotor with the holes on the MOTOR.

D. Attach the rotor to the MOTOR using the disc screws provided.

NOTE: Your brake may need some adjusting after you have installed your SUMMIT kit to avoid rubbing.

STEP 2: Slide the **THIN WASHER** over the axle on both side of the MOTOR.

STEP 3: Slide the **TAB WASHER** over the axle on both sides of the MOTOR.

NOTE: Ensure that the MOTOR CABLE is on the DRIVE SIDE of the bike and that the **TAB WASHER** is properly installed.

A. The "TAB" on the **WASHER** faces out from the MOTOR, and down towards the MOTOR CABLE.

B. The MOTOR CABLE should be below the axle and **TAB WASHER**, when the bike is standing with the wheels on the ground.

IMPORTANT - INCORRECT TAB WASHER INSTALLATION CAN CAUSE SERIOUS DAMAGE TO THE MOTOR CABLE.

STEP 4: Set your HUB MOTOR WHEEL in place with the MOTOR CABLE on the DRIVE SIDE. Ensure that the fork notches rest securely on the **TAB WASHER** tabs.

Make sure the wheel can turn properly without rubbing or grinding on the fork or brakes.

NOTE: Remove plastic spacer from disc brakes before setting wheel in place.

STEP 5: INSTALL THE **DRIVE SIDE** HARDWARE

A. Slide the **THICK WASHER** over the axle.

B: Slide the **TORQUE ARM** assembly over the axle with the upper plate of the **TORQUE ARM** up towards the fork.

C: Screw the **AXLE NUT** onto the end of the axle. DO NOT TIGHTEN.

STEP 6: INSTALL THE **NON-DRIVE SIDE** HARDWARE

A: Slide the **THICK WASHER** over the axle.

B: Slide the **BIG WASHER** over the axle.

C: Screw the **AXLE NUT** onto the end of the axle. DO NOT TIGHTEN.

STEP 7: Finger tighten each **AXLE NUT**.

STEP 8: With the Bike right side up, push down from the handle bars to ensure the wheel is fully seated in place. Then use a wrench to fully tighten the nuts. (Recommended 38Nm).

STEP 9: SECURE THE TORQUE ARM

A: Align the upper plate of the **TORQUE ARM** with your fork and tighten the nut/bolt.

B: Slide the provided hose clamp through the slot in the top of the **TORQUE ARM** and wrap it around the fork leg. Tighten the hose clamp.

STEP 10: Tighten brakes and make sure the HUB MOTOR WHEEL spins freely.

FIG. 1

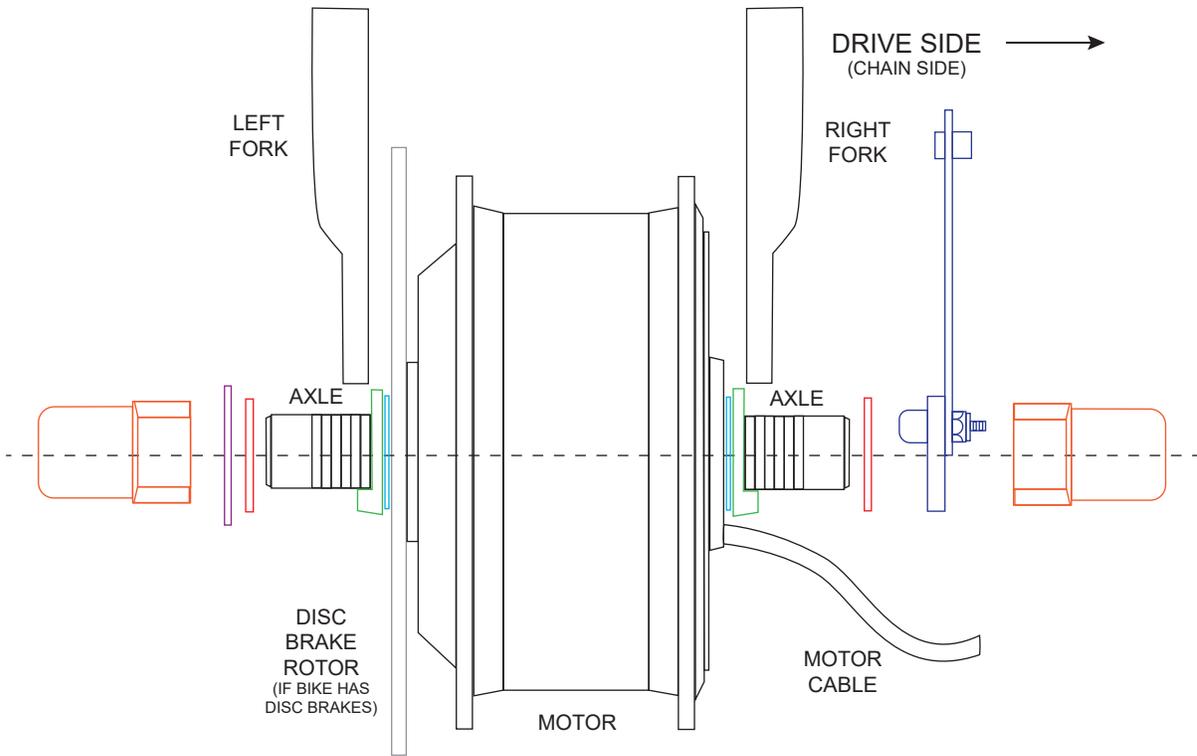
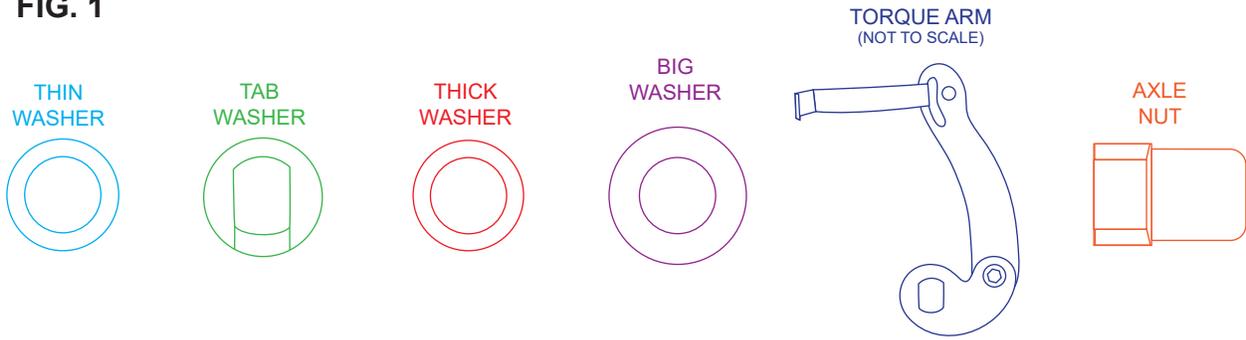
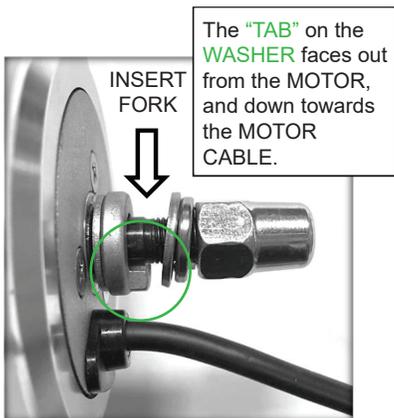
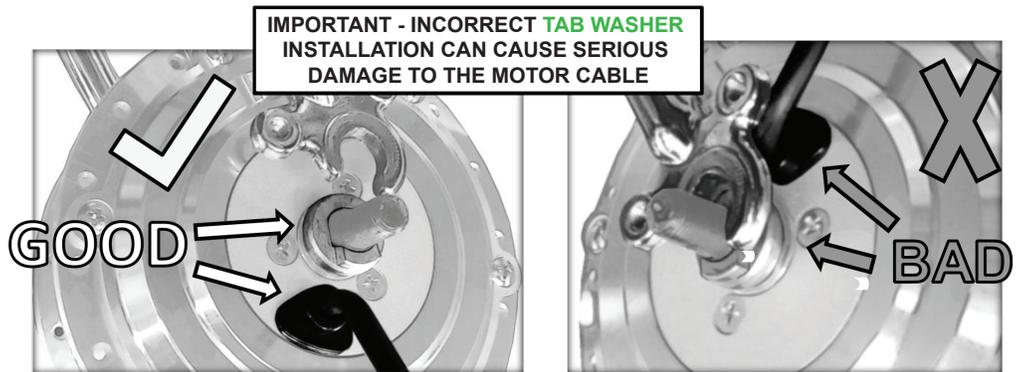


IMAGE ORIENTATION
LOOKING FORWARD WHILE SEATED ON BIKE SADDLE
FORKS POINTING TOWARDS THE GROUND



THIS IMAGE IS TO ILLUSTRATE TAB PLACEMENT ONLY AND DOES NOT SHOW THE TORQUE ARM



CORRECT - Cable opposite dropout and near TAB

INCORRECT - Cable crushed under fork

INSTALLING THE BATTERY:

The BATTERY can be mounted to either your bike's "water bottle mount" on the downtube of the frame. See FIG. B

NOTE: On the frame is the easiest and generally considered ideal placement but if your bike does not have a place to mount on the frame then a front or rear bike rack will work.

CAUTION: The BATTERY must be firmly attached. Any damage to the battery due to insufficient mounting will not be covered under warranty.

STEP 1: Use the key to remove the BATTERY from its MOUNTING BRACKET. See FIG. A

A: Insert Key and turn counter-clockwise.

B: Hold the Key IN THE turned POSITION while firmly pulling on the battery.

STEP 2: Install the MOUNTING BRACKET on the frame or carrier and use the provided hardware to install. See FIG. B or FIG. C

STEP 3: Insert the BATTERY on to the BATTERY MOUNT once it is installed and secured.

STEP 4: Confirm that the BATTERY is secure before riding.

FIG. A

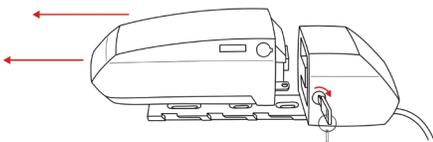


FIG. B

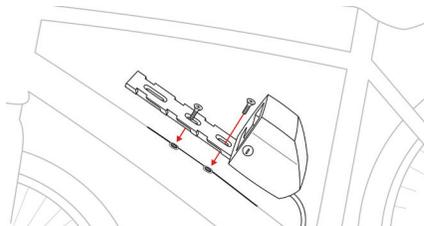
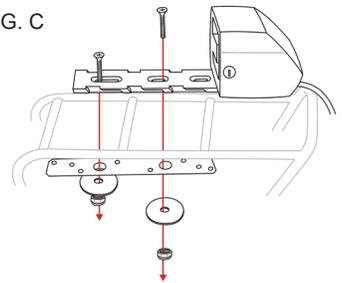


FIG. C



INSTALLING THE PEDAL ASSIST SENSOR (PAS) and MAGNET WHEEL:

The PAS and MAGNET WHEEL are optional. You can still use the VARIABLE SPEED THROTTLE to activate the motor.

STEP 1: On the NON-DRIVE SIDE (no chain) of your bike place the PAS at the bottom of the SEAT TUBE (right above the cranks and pedals).

A: Make sure the red LED is pointed up and the "target" logo is pointed down.

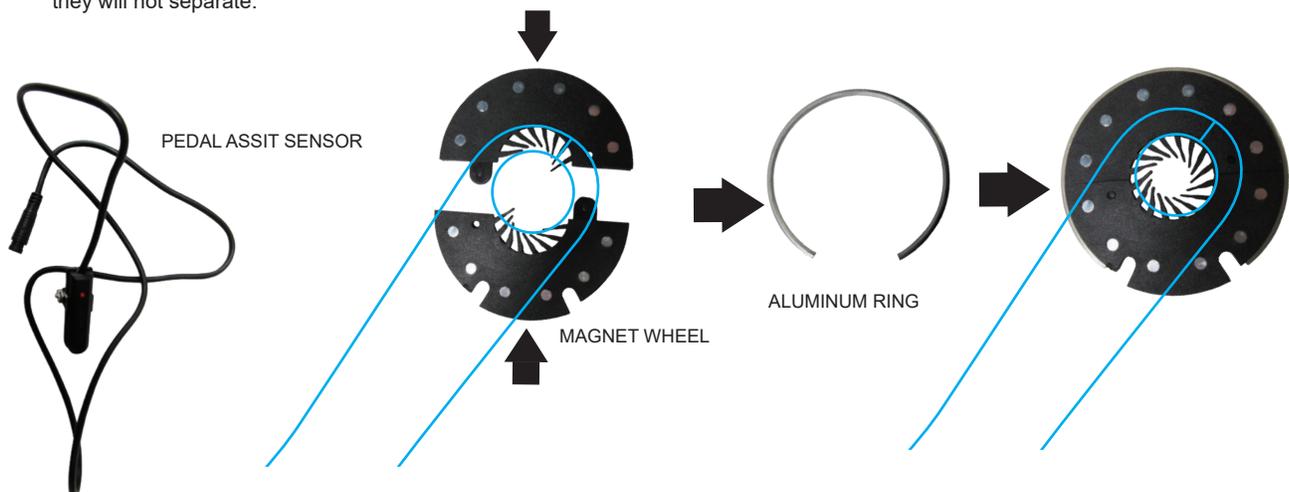
B: Use the provided zip-ties to attach the PAS tightly to the tube.

STEP 2: The MAGNET WHEEL is made up of two pieces. They will both have a smooth side and ridge side.

A. Place each on either side of the spindle behind the NON-DRIVE SIDE crank with smooth side facing inward towards the PAS.

B. Close to the sensor and snap together.

STEP 3: The aluminium ring should stretch and snap into place over/around the two halves of the MAGNET WHEEL to ensure they will not separate.



INSTALLING THE LCD SCREEN KEYPAD AND VARIABLE MOTOR THROTTLE

We recommend putting the LCD SCREEN KEYPAD on the LEFT side of the handlebars and the VARIABLE MOTOR THROTTLE on the RIGHT. Placing them between the handlebar grip and the brake/shifter levers.

NOTE: You may set up your placement differently depending on your preference and bike set up.

INSTALLING LCD SCREEN PAD -

STEP 1: Remove handlebar grips.

NOTE: Some grips have locking bolts on the end of the handlebar. If resistance is too great, you can heat the grip with a hair-dryer. Grips may be cut off of the bar, but will need to be replaced.

NOTE: If you wish to install your LCD SCREEN KEYPAD and/or VARIABLE MOTOR THROTTLE on the inside (closer to the stem) of the brake/shifter lever you will need to slide the brake/shifter level off the handlebars

Loosen brake/shifter and slide off of handlebar.

Usually there is only one bolt for each located on the backside or underside of the handlebar.

Cables do not need to be disengaged to remove the brake or shifter levers.

STEP 2: Slide LCD SCREEN KEYPAD onto the handlebars making sure the + and - are on the outside and the POWER BUTTON is pointing towards the stem.

NOTE: The LCD SCREEN KEYPAD will be attached to the LCD SCREEN. Make sure that the LCD SCREEN KEYPAD position allows for the LCD SCREEN to be positioned correctly according to the instructions below.

STEP 3: Partially tighten the the provided bolt on the underside of the clamp with a 2.5mm hex wrench.

NOTE: Keep it a little loose till grips are replaced for ajustability.

INSTALLING VARIABLE MOTOR THROTTLE -

Repeat **STEPS 2** and **3** for the VARIABLE MOTOR THROTTLE

STEP 4: Slide grips back into place remembering to lock them if they have locking bolts.

NOTE: If you have removed the brake / shifter lever make sure slide those on before the grips.

STEP 5: After everything is in place and where you want it TIGHTEN each part to avoid any movement once the bike is in use



INSTALLING THE LCD SCREEN:

The LCD SCREEN is installed in the center of the handlebars, over the stem.

STEP 1: Carefully spread the two circular clamps on the LCD SCREEN assembly so that they can be placed over the handlebars on each side of the stem.

NOTE: Depending on the diameter of your handle bars, you may need to use the provided rubber gaskets to ensure a tight fit.

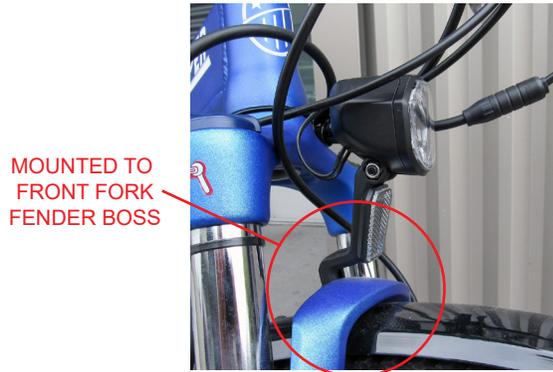
STEP 2: Rotate the LCD SCREEN to your preferred orientation. The screws on either side of the LCD SCREEN can be used to adjust it's angle.

STEP 3: Once the LCD SCREEN has been adjusted, install the provided bolts into the loops around the handlebars and tighten.

INSTALLING THE LIGHTS:

The LIGHTS come with universal mounting hardware. This allows you the opportunity to mount them wherever is best for your bike setup.

NOTE: Just remember when installing your LIGHTS that you need to make sure the LIGHT cables reach the battery.



MOUNTED TO
FRONT FORK
FENDER BOSS

FRONT LIGHT MOUNTING SAMPLE



MOUNTED TO
REAR RACK

REAR LIGHT MOUNTING SAMPLE

CONNECTING THE CABLES:

The Summit 48V BATTERY has 5 cable connections.

You will also be provided with five (5) cables and extension cables. These will be used to connect the VARIABLE SPEED THROTTLE, LCD SCREEN/KEYPAD, HUB MOTOR, PAS and FRONT AND REAR LIGHTS to the battery.

IMPORTANT:

Be mindful of the arrows on each plug. Align arrows before inserting plugs together. Poor installation may result in damaged pins and bad connectivity.

STEP 1: The THROTTLE / LCD SCREEN cable connects the BATTERY to the VARIABLE SPEED THROTTLE and LCD SCREEN/KEYPAD.

A: The green 5-pin plug connects to the LCD SCREEN/KEYPAD.

B: The yellow 3-pin plug connects to the VARIABLE SPEED THROTTLE.

STEP 2: The large cable connects the BATTERY directly to the MOTOR.

A. Connect one end of this cable to the BATTERY, and the other to the MOTOR.

STEP 3: Connect the PEDAL ASSIST SENSOR cable to the BATTERY.

NOTE: We supply you with an extension cable for the PAS if needed.

STEP 4: Connect the front and rear lights.

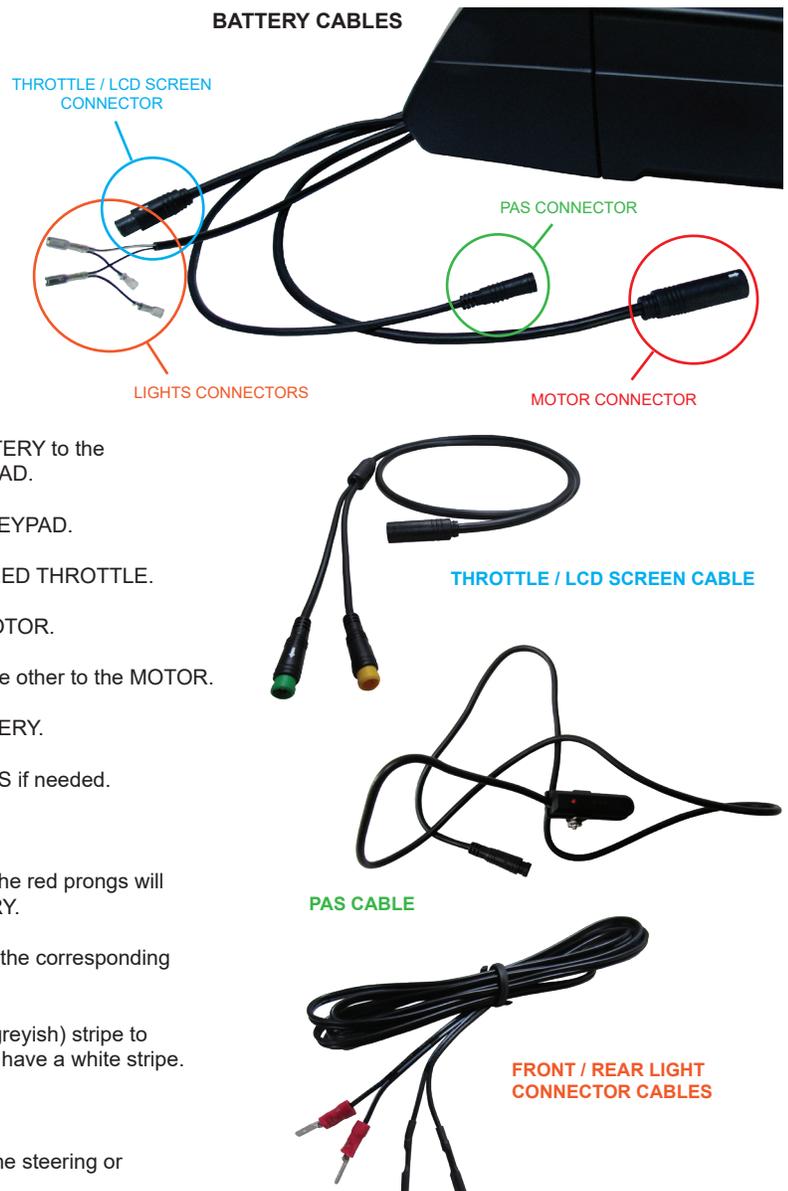
A: Each LIGHT will have a wires attached. The end with the red prongs will connect to the LIGHT CONNECTORS on the BATTERY.

B: Insert the LIGHT wire with the white (greyish) stripe to the corresponding BATTERY connector that has a white stripe.

C: Insert the LIGHT wire that does NOT have the white (greyish) stripe to the corresponding BATTERY connector that does NOT have a white stripe.

STEP 5: Secure all your cables with zip ties.

NOTE: Make sure that the cables not interfere with the steering or hinder the performance of the bike.



USING YOUR SUMMIT

Using your new kit is simple. Follow the steps below to get to know your new Summit!

NOTE: You will need to charge your new Hilltopper battery before using it for the first time.

- A. Plug your charger into the wall socket and wait for the light to turn GREEN.
- B. Plug the charger into the battery. The light will turn RED and stay RED while charging.
- C. When the light turns GREEN your battery is fully charged.

TURNING ON THE KIT -

- A. To turn on your Hilltopper start at the battery. Press the POWER BUTTON near the lock to see the LEDs light up. (The LEDs will turn off after a few seconds, this is normal.)
- B. After waking the battery press and hold the power button on the LCD SCREEN KEYPAD until the LCD SCREEN lights up.
- C. To turn off the kit, simply press and hold the power button on the LCD SCREEN KEYPAD until the LCD SCREEN turns off. Don't worry about the power button on the battery, it will go into a "hibernation" mode after a few minutes if the LCD SCREEN is not on.



ASSIST LEVELS -

When you power on the whole system you will see a big "0" at the bottom of the screen. This is the level of assist you are set to. At zero there is no PEDAL ASSIST (PAS) and the VARIABLE SPEED THROTTLE will not activate the motor.

There are five levels of assist.

Use the + and - buttons to adjust the level of power allowed to the motor. The higher the number, the more power available.

NOTE: Higher levels of assist will consume more energy and give less mileage per charge.



ACTIVATE THE LIGHTS -

Press and hold the button with the light icon.

This will turn on the front and rear lights as well as activate a "night mode" that will dim the LCD Screen when you are in low light.

Press and hold the button again to turn the lights off and brighten up the screen.



INFORMATION -

Press the "i" button to cycle through different information shown at the bottom of the screen.

(Trip, ODO, Max speed, Avg. speed, Range, Calories, Time)



THROTTLE vs PAS -

This kit offers both a VARIABLE SPEED THROTTLE and PAS assist levels to suit how you ride. Start riding and pick an assist level. You will notice right away that when you pedal the PAS will send power to the motor to help you out.

Alternatively you can set your assist level and simply use the throttle to pull you along.

NOTE: How you ride is up to you, but we always encourage pedaling. Not only does this allow you a little exercise, but you will also get the most out of your battery. The more you pedal the more mileage you will get per charge!

Assumption of Risk, Release of Liability, Indemnity, and Hold Harmless Agreement

By purchasing these Products, I understand and agree to the following:

- (1) Bicycling and related activities are hazardous and injuries are common and ordinary occurrences during these activities. I agree to assume all risks of death or injury to any part of the user's body while using the Products.
- (2) Clean Republic SODO LLC, formerly doing business as Clean Republic and now doing business as Hilltopper, is not responsible for modifications made by me to my bicycle such as fork filing or any modifications made to the Products.
- (3) Non-steel and/or non-rigid forks (aluminum, suspension, etc.) are weaker than rigid steel forks. Clean Republic SODO LLC, formerly doing business as Clean Republic and now doing business as Hilltopper, recommends installation of the Products on rigid steel forks, unless a non-steel fork model is specifically supplied or certified by Hilltopper, although non-steel and/or non-rigid forks are acceptable for use. I agree to assume all risks if I choose installation on non-steel and/or non-rigid forks despite Hilltopper's recommendation.
- (4) Clean Republic SODO LLC, formerly doing business as Clean Republic and now doing business as Hilltopper, recommends tightening the axle nuts with a force of not less than 28 foot-pounds.
- (5) Installing the Products on my bicycle adds additional forces to the bicycle frame and may change handling characteristics. Well-adjusted, well-functioning brakes are key to safely using the Products and operating any bicycle. I understand and agree that I will have my bicycle's brakes inspected by a bicycle repair shop after installation of the Products.
- (6) To the fullest extent allowed by law, I agree to forever release and hold harmless Clean Republic SODO LLC, formerly doing business as Clean Republic and now doing business as Hilltopper, and its owners, agents, employees, and affiliates from any and all responsibility or legal liability for any injuries, damages or death to any user of any equipment and the Products listed in this form, whether resulting from negligence or any other cause. I further agree that I will defend and indemnify them if any claim or action is pursued for any injuries, damages or death relating to bicycling or any related activities involving the use of this equipment and the Products.
- (7) I accept the Products herein "as is" and with no warranties, express or implied, beyond those stated in this agreement and in the manufacturer's written limited warranty, if any.
- (8) I understand how the Products work and have received instruction and satisfactory answers to any questions regarding the use and function of the Products. If this is new equipment, I acknowledge receipt of the manufacturer's written instructions. If at any time the Products do not seem to be working properly, I will stop using it immediately and contact their support department to return it for inspection and possible repair or adjustment.
- (9) If the Products are to be used by someone other than me, I certify that I am acting as agent of the user and that I will provide this form and all pertinent warnings and information to the user.
- (10) This document is a legally binding contract which supersedes any other agreements by and between the parties, and which constitutes the final and entire agreement regarding the services and the Products. This agreement is intended to provide a comprehensive release of all legal liability which is binding upon and for the benefit of all parties, their heirs, agents, and assigns, but is not intended to assert any claims or defenses that are prohibited by law. If any part of this agreement is held to be invalid or unenforceable, the remainder will be given full force and effect. This agreement will be interpreted, construed, and governed by and under Washington State law. Exclusive venue and jurisdiction over the parties and the subject matter to this agreement will be in the Superior Court of Washington in King County.



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