



For Additional Information Visit:

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E-BikeKit™

Electric Bicycle

Conversion Kit System



OWNER'S MANUAL and INSTALLATION GUIDE

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The E-BikeKit™ Electric Bike Conversion Kit System offers the ultimate electric bicycle conversion solution.

This complete conversion system has everything you need "out of the box" to convert your conventional bike into a high-quality electric bike.



The E-BikeKit electric bicycle motor kit is supplied as a set of do-it-yourself parts for the user to install on their bicycle. Because this kit is installed, maintained and operated by the purchaser, E-BikeKit LLC disclaims any responsibility for injury, damage or other consequences arising from the use of this product. Each installation will be different and therefore it is the responsibility of the purchaser to determine the best way to install the kit on their particular bicycle. The following instructions should be considered as general guidelines only - your installation will be slightly different.

If you do not have the mechanical ability to correctly and safely install this kit, you should obtain the services of a professional bicycle shop or other qualified technician. Installation and use of this kit will create a vehicle that has exposed moving parts, electrical connections and high powered batteries.

Any or all of these components can be dangerous.

Federal Law mandates that no person under the age of 16 shall operate a motorized bicycle. Always wear a helmet, ride responsibly and observe all Federal, State and Local laws.

Federal Electric Bicycle Law
HR 727



SECTION 1. CONSUMER PRODUCT SAFETY ACT.

The Consumer product Safety Act (15 U.S.C. 2051 et seq) is amended by added at the end of the following:

LOW-SPEED ELECTRIC BICYCLES

SEC. 38. (a) Notwithstanding any other provision of law, low-speed electric bicycles are consumer products within the meaning of section 3(a)(1) and shall be subject to the Commission regulations published at section 1500.18(a)(12) and part 1512 of title 16, Code of Federal Regulations.

(b) For the purpose of this section, the term 'low-speed electric bicycle' means a two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph.

(c) To further protect the safety of consumers who ride low-speed electric bicycles, the Commission may promulgate new or amended requirements applicable to such vehicles as necessary and appropriate.

(d) This section shall supersede any State law or requirement with respect to low-speed electric bicycles to the extent that such State law or requirement is more stringent than the Federal law or requirements referred to in subsection (a).

"We recommend you laminate this sheet and keep with you when riding"

Disclaimer

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Each installation will be different and therefore it is the responsibility of the purchaser to determine the best way to install the kit on their particular bicycle. The provided instructions should be considered as general guidelines only - every electric bike conversion will be slightly different. If you do not have the mechanical ability to correctly and safely install this electric bicycle kit, you should obtain the services of a professional bicycle shop or other qualified technician. Installation and use of this e-bike conversion kit will create an electric motor vehicle that has exposed moving parts, electrical connections and high powered batteries. Any or all of these components can be dangerous! Federal Law mandates that no person under the age of 16 shall operate a motorized bicycle. Always wear a helmet, ride responsibly and observe all Federal, State and Local laws.

Warranty Claims

Those parts and/or products which are determined by E-BikeKit to be defective and to qualify for warranty replacement will be provided at no charge, only after a valid warranty claim is processed by E-BikeKit Customer Service Department. Warranty claims must be made by the original purchaser by contacting the E-BikeKit Customer Service Call Center (1.866.882.3245) within the warranty period (stated above). Shipping & Handling fees will apply to all orders placed for warranty parts and/or products and will be invoiced to the customer/warranty claimant at the time said parts and/or products are shipped from E-BikeKit.

E-BikeKit, at its sole discretion, has the option of replacing with a new part, or factory re-certified part. The Limited Warranty stated herein is in lieu of and expressly excludes all other warranties not expressly set forth herein, whether expressed or implied by law or otherwise, including, but not limited to, any warranties for merchantability and/or fitness for any particular purpose. E-BikeKit shall in no event be liable or responsible for incidental or consequential losses, damages or expenses in connection with their products. The liability of E-BikeKit hereunder is expressly limited to the replacement of goods complying with this warranty or at the sole discretion of E-BikeKit to the repayment of an amount equivalent to the purchase price of the product in question.

Kit Box Contents:

Includes:

- 1 x Hand-Built Wheel w/ Disc Hub Motor
- 1 x 36/48V 20A Brushless Motor Controller
- 2 x Throttles (1 Thumb & 1 Split-Twist)
- 2 x E-Brake Handles (left & right)
- 1 x Extension Wire – Motor
- 1 x Extension Wire - Throttle/E-Brakes
- 1 x Owner's Manual

Note: Installation Videos are available online at www.e-bikekit.com

Included Accessories:

- 1 x Universal Torque Arm - Stainless Steel (not included w/ rear geared)
- 1 x 7-Speed Freewheel (rears only)
- 15 x Plastic Zip Ties
- 2 x C-Washers - Stainless Steel (fronts only)
- 1 x Battery Wire Harness
- 1 x 3mm Allen wrench for installing throttle

SLA (Sealed Lead Acid) Battery Box Contents:

Includes:

- Rechargeable Sealed Lead Acid Battery Pack in Convenient Electric Bicycle Battery Bag—2 Amp Charger included (sometimes included in the kit box)
- Range: 12-34 Miles (greater ranges available with larger capacity battery packs)
 - Charging Time: 2Amp Charger = 2Amps per Hour (Example: 9ah battery = 9/2 = 4.5 hours)
 - Cycle Life: 250+ (charge - discharge cycles before nominal capacity falls below 80%)

Step by Step Installation Guide

A full step by step video installation guide is posted online at: <http://e-bikekit.com>

A few KEY POINTS before you get started:

- Which way to insert the wheel - The disc brake side (the side with the 6 bolts in it to secure a disc brake rotor) should face the left with the bike forward and upright (you sitting in the seat looking down).
- The Universal Torque Arm should go on the side of the axle without the wire. Not included with rear wheel 350w geared motor kits.
- C-Washers are only included with front wheels and only used if you have recessed quick-release dropouts (where the axle enters the forks). If you don't have quick-release forks then you do not use them.

Step 1 - Make Sure Your Bike is Suitable for Conversion

The E-BikeKit electric bike conversion system is universal and can be used to convert most conventional bicycles. However, there are a few criteria which must be met first.

- Your front forks or rear dropouts need to be wide enough to accept the hub motor. Front forks **MUST** be at least 100mm at the dropouts (where the axle fits into the forks). Rear conversions require 135mm of space between the rear dropouts (this is standard for most bicycles). **You may need to use a file to remove the paint from the inside of the dropouts (where the axle enters the fork or frame).**

Front wheel conversions **MUST** use a Universal Torque Arm & C-Washer (when appropriate with certain alloy or quick release forks). Using the "C-Washers" (for indented quick release forks only) and a Universal Torque Arm ensures a safe to install of the front wheels on "non-steel" & quick release forks.

Please Note: The rear motor axles are 12mm diameter and machined 10mm on the flats. Depending on the forks, a small amount of filing may be required to make the dropout slot wide enough to fit the 10mm axle width.

any battery larger than 60 nominal volts will void the warranty for your controller.

Water Damage to the Battery/Improperly Caring for the Battery - The battery warranty does not include damage from power surges, use of improper charger, improper maintenance or other such misuse, or normal wear. E-BikeKit battery packs are water resistant and fine in the rain but should **NEVER** be submerged in liquid.

* Batteries need to be stored fully charged and kept in a cool dry environment. They should be charged immediately after every use and never stored for long periods of time empty or without maintenance charging.

Warranties are limited to replacement of parts and/or products determined by E-BikeKit, at its sole discretion, to be defective. In cases where multiple components are missing, you may be redirected to the retailer for assistance.

E-BikeKit Limited Warranty does not cover or apply to the following: Normal wear and tear; any damage, failure and/or loss caused by accident, shipping, misuse, neglect, abuse and/or failure to follow instructions or warnings as stated on the product or in the applicable owner's manual or other printed materials provided with the product; damage, failure and/or loss caused by the use of the product for stunt riding, ramp jumping, competition, off-road use, acrobatics, trick riding or other similar activities, or use in any other manner for which such products were not specifically designed.

This warranty does not apply to any products or components, mechanical and/or electrical, which have in any way been altered from their original configuration by any person. E-BikeKit will not be liable and/or responsible for any damage, failure or loss caused by any unauthorized service or use of unauthorized parts.

Rentals, Commercial Use & Non- Authorized or 3rd Party Sellers:

The E-BikeKit Limited Warranty does not cover or apply to any E-BikeKit product used for rental or commercial purposes unless the specific product is designated, labeled or marketed by E-BikeKit as acceptable for rental or commercial use. All products used for rentals are warranted across the board for a period of 90 days.

The E-BikeKit Limited Warranty does not cover or apply to any E-BikeKit product sold by a non-authorized reseller or retailer.

The E-BikeKit Limited Warranty does not cover or apply to any replacement, maintenance or accessory parts not sold directly by E-BikeKit to the original retail purchaser.

feel for your new e-bike. Tricycles can be especially tricky to ride at higher speeds. Take the time to learn your new e-bike and how it handles now that it is motorized. Ride for a few miles and then stop to check everything over again. Be 100% sure that the wheel is secure and that nothing has come loose. You should inspect your e-bike and the system components regularly to ensure all connections are secure, especially the controller and battery connectors.

Limited Warranty

E-BikeKit products are warranted to the original retail purchaser when purchased directly from an authorized E-BikeKit dealer or from the E-BikeKit online store (<http://www.e-bikekit.com/shop/>), to be complete and free from defects in materials and workmanship. All E-BikeKit product warranties are effective from the date of purchase by the end user provided the product is purchased in NEW condition.

Hub Motors and Parts Warranty

Hub Motors - 2 Years (up to 48 volt use)

SLA (Sealed Lead Acid) Battery Packs - 6 Months

Kit, Parts & Battery Chargers - 6 Months

NOTE: Damaged caused by water, dropping or any collision is NOT covered

Sealed Lead Acid Battery Packs are warranted for a period of 1 year from the date of purchase depending on the battery purchased. A pack will be deemed defective if it fails to deliver 80% of nominal capacity within 6 months of purchase when discharged at 1.5C with a static resistive load following full charge with an approved charger.

What is Not Covered by the E-BikeKit Warranty

"Spin Out" - Spinning out the axles inside of your dropouts - We are unable to be there when the kit is installed so it is up to you to understand the high torque involved at the dropouts and install them correctly. If your dropouts are not correctly suited to fit the axle then you should not install the kit on those forks. Get new forks, file the forks to the axle fit "flush" or contact us to return the kit. We will not refund or replace a motor that has been "spun out".

"Over Voltage" - Connecting a larger battery larger than 60 nominal volts can damage the controller, wires and/or connectors. Damaging any kit component or motor by connecting the wrong battery type is not covered under our warranty. The E-BikeKit controller will work with any 36 volt or 48 volt(60v nominal) battery pack. Using the controller with

You should always use a Universal Torque Arm for front wheel conversions (rears optional)

For more information and instructional videos regarding torque arm installation search Youtube for "e-bikekit, torque arm". Torque arms are included with every E-BikeKit. Torque arms provide increased support at the axle and are used to prevent the axle from ever "spinning out" inside the dropouts. Torque arms are optional for rear direct-drive conversions and not necessary for rear conversions using the 350w geared motor (not included with rear geared kits).

Step 2 - Transfer Your Tire and Tube & Install the Hub Motor Wheel

You will need to transfer you're existing tire and inner tube or a new tire and inner tube to the E-BikeKit wheel. Next you will insert the E-BikeKit wheel into the forks (fronts) or rear of the frame. You may need to use a file to remove the paint from the inside of the dropouts (where the axle enters the fork or frame). After ensuring the axle is flush inside the dropouts you can secure the rim in place. If you have quick release forks with an indented space on your front forks you MUST use the supplied "c-washers" to fill the indented space so that all the hardware is flush. Make sure you secure the bolts tightly and use the supplied universal torque arm to keep the motor from spinning within the fork.

BE CAREFUL: If you apply power and the axle is not secured tightly, the motor will try to turn inside the dropouts, permanently damaging the wires connecting the motor. This is called "spinout" and is not covered under warranty.

Inflate the tire, secure the brakes and flip the bike back over. Re-install and adjust the brakes. The new rim and old rim are likely not 100% the same, so adjust the brake pads so that they engage the rim with full contact. Adjust the cable for enough free-play to keep the brake pads off the wheel during rotation. Electric bikes require more attention and care to brakes since you will normally be riding at higher speeds. Inspect your brakes and brake pads regularly for wear and tear.

Step 3 - Install the Throttle & Brake Handles

Next remove the grips from the handle bars to replace the brake handles (optional use) and install the throttle. The E-BikeKit includes both left and right brake handles. You will need to connect your existing caliper brake inner-wires to the E-BikeKit™ brake handles.

After installing the brake handles, install the throttle. Both throttle types (split-twist & thumb) are included. Which throttle you use will be decided

by how you change gears and your personal preference. Simply slide the throttle onto your right side handlebar and tighten in place with the provided 3 mm hex wrench.

Next, connect the throttle and e-brakes (if using them) to the “accessory wire”. **Important: You should hear two audible clicks when the throttle is inserted fully and properly into the connector.** The accessory wire will then plug into the accessory extension wire and that will plug into the controller (typically mounted near the rear of the bike).

Step 4 - Securing the SLA Battery Pack / Charging the SLA Battery

How you do this will depend on the battery you are using. The E-BikeKit electric bike conversion kit system will work with any 36v or 48v e-bike battery pack. The E-BikeKit SLA battery comes in a canvas bag and is secured to a standard rear rack using 4 Velcro straps located on the four corners of the bag. Simply wrap each of the straps around the rack, pull tight and secure them using the Velcro.

Note: The SLA batteries from E-BikeKit™ have two wires; one braided black and red wire in the bag for charging and one black wire exiting the front of the bag for discharge (connects to the controller box). BOTH charge and discharge wires can be used interchangeably. These two wires lead to the same battery terminals. The wires are different for convenience only. Two wires allows for easy charging without having to disconnect the battery from the controller box while charging.

IMPORTANT: Be sure the controller is turned OFF when charging or storing the bike with the battery connected to the controller box. If left on the controller will drain the battery and could result in damage to the battery.

Charge your battery using the supplied SLA charger. Simply connect the red and black connectors from the charger to the red and black connectors on the braided wire inside the battery bag. The connection should always be red to red and black to black. You should charge your SLA battery immediately after every use and store it full whenever possible. Never store an SLA battery in a discharged state and always remember to charge you battery at least once every 30 days when storing for long periods of time.

The charger will have a **RED light during charging** and be **GREEN when fully charged. The charger will get warm during charging (this is normal).** You can leave the charger plugged in for short periods of time (24hrs); this will not harm the battery. However, **do NOT leave the charger connected to the battery after the battery is full charged.**

Step 5 - Mount the Controller

The controller can be mounted anywhere on the bike. Typically the controller is mounted near the rack or seat post using zip ties. The controller can also be neatly tucked inside the SLA canvas bag if the battery pack is small enough to allow for it.

Step 6 - Run the Wiring

For a clean install, route all of the wires toward the back of the bike and secure the wires with the supplied zip ties. Make sure you have full range of motion with the handlebars when tying back the wires and leave some slack at each zip tie. Wires can be run back and excess wire can be stored in the SLA battery bag.

Step 7 - Connect the Electronics

In the front of the bike from the handlebars running to the back of the bike you will begin with the wires for the throttle and e-brakes connecting to the accessory wire (3-1 w/ headphone jacks), the accessory wire will connect to the accessory extension wire (usually running the length of the bike) and then to the controller (typically mounted near the rear of the bike and close to the battery pack). The other extension wire (thicker) is for the motor. This will connect from the motor and also connect to the controller. These are the only two wires that will run the length of the bike. The third wire on the controller the power wire (2 prong) and connects to the battery. If using the SLA battery you will find a mating connector on the battery pack. If using your own battery you can use the supplied battery wire harness to convert the wires coming from your battery pack to connect to the E-BikeKit controller battery wire.

When all connections are correctly and securely attached, plug your battery into the controller. **There is an on/off toggle switch on the back of the controller. The switch must be in the ON position to operate the system.** You may leave the system connected without concern for draining the battery as long as the toggle on/off switch is in the OFF position.

Step 8 - Make Final Adjustments & Enjoy

Make sure the brakes are adjusted, the wheel is secure and everything is functioning as expected. With the controller on/off in the on position try engaging the throttle to test the system with the hub motor wheel lifted off the ground. If anything is not working properly call customer service for help.

Now you're ready to ride. Be careful and take it slow until you get the