E-bike conversion kit – User Manual

English – Version 1.02

Table of Contents

Parts list

This image/list is not exhaustive and does not include all the supplied parts. There will be minor changes to the products as they are improved continuously.

*Additional parts not in the product image:

1. Throttle (thumb throttle/twist throttle)
2. Pedal sensor assembly
3. Rear carrier for battery pack(if equipped)

1. Introduction

- Please read this manual in its entirety before using your converted bike or allowing anyone else to ride your bike.
- Some illustrations may vary slightly from the actual product.
- All features, components are not included with all kits/models.
- If any parts are not described in this manual, look for separate instructions supplied with the parts or contact us for support.
- THIS MANUAL IS NOT INTENDED AS A DETAILED SERVICE/REPAIR MANUAL. DO NOT DISASSEMBLE, MODIFY OR REPLACE ELECTRICAL PARTS.
- If you have any concerns, questions, or suggestions about your electric bike, please contact us at support@greenAmp.in .

Thank you for choosing greenAmp.

2. General Introduction

Before using this product, fully understand the controls and safety issues. Riders must demonstrate the capability and skill to handle the vehicle and operate its controls to avoid falls or collisions.

Obey all traffic regulations, signs, and signals.

The battery packs and the bike undergo high electrical and mechanical loads. Different components can wear at different rates and fail as they reach their end of life. Look out for dis-colouration, cracks, unusual vibration and noises and over-heating of electrical components. Contact greenAmp for further assistance and replacement parts.

Never retrofit our battery packs with third-party components, Serious damage and injuries can result from use of unauthorized parts

Competitive events, trick riding, riding on severe or off-road/uphill terrain, riding in severe climates, riding with heavy loads, commercial activities and other types of non-standard use can dramatically shorten the life of the frame, batteries, motors, and other components. Any one or a combination of these conditions may result in an unpredictable failure. Also, such usage can subject the battery pack to high vibrations and shocks and poses a significant safety risk.

3. Document Revisions

Date	Version Number	Document Changes
30-04-2022	1.01	*Initial release*
24-05-2022	1.02	Corrections, improved safety instructions, contents update.

4. Obtaining Documentation and Information

4.1 Internet

The latest version of the documentation is available at the following address: https://www.greenamp.in/downloads-manuals-instrctions.

4.2 Ordering Documentation

Documentation, user instructions and technical information can be ordered by contacting us via email at support@greenamp.in.

5. Documentation feedback

If you are reading greenAmp product documentation on the internet, any comments can be submitted on the support website. Comments can also be sent to support@greenamp.in.

We appreciate your comments.

6. Conventions used in this manual

The following style conventions are used in this document:

ALL CAPS

- Instructions that are required to be followed for safe operation of the product.
- Safety warnings.
- Important notices.

Italics

- Additional suggestions/notes.
- Captions and notes on diagrams.

7. Explanation of safety warnings

WARNING !

WARNING indicates a hazardous situation which, if not avoided, could result in serious injury.

CAUTION !

CAUTION indicates a situation in which instructions are not followed could result in extensive damage or complete failure of the product.

IMPORTANT

IMPORTANT indicates important information related to the correct and safe operation of the product.

WARNING !

8. LI-ION BATTERY SAFETY

- Only an adult who has read and understood the safety warnings should handle and charge or recharge the battery.

- All large lithium batteries are a potential fire risk and should be charged in a safe place.

- DO NOT leave the battery charging over-night or unsupervised for long periods of time.

- Liquids on the battery may cause fire or electric shock. Always keep all liquids away from the battery and keep the battery dry.

- The e-bike kit is designed to be resistant to small water splashes and very light rain. The e-bike pack is NOT waterproof. DO NOT use or store the e-bike in heavy rain or deep stagnant water. Entry of water into the electronic components can cause short-circuits and cause seriously damage and injury.

- Keep battery away from excessive heat or open flames. Avoid direct exposure to direct rays from the sun.

- Wait for the battery pack to cool down to room temperature before charging.

- DO NOT touch the battery terminals. Never short-circuit the discharge terminals of the battery. A short circuit will damage the battery and could cause a fire resulting in severe injury death, and/or property damage. When handling the battery, be aware of

any conductive objects that may short the battery terminals such as coins, nails, etc.

- DO NOT use this battery with any other vehicle or appliance.

- The battery will get warm to the touch when charging, or during heavy riding, which is normal; however, if you smell or see any smoke – turn the battery and the charger off and unplug anything attached to the battery. Quickly place the battery in an isolated area away from heat and sunlight to deal with potential fires. Get away from the battery pack. Keep a fire extinguisher ready if necessary. DO NOT use the battery again and contact greenAmp for support.

- Never disassemble the battery or open the battery case. There is a significant risk of electric shock and damage to the battery.

- Protect the battery from materials that may contaminate the charge port or the output port, such as dirt and sand. DO NOT to touch/clean/poke the batter terminals. Doing so may create a short, causing the fuse to trip or other damage including fire.

- Never subject the battery to intense physical shock or severe vibrations. Never crush or puncture the battery. A punctured or crushed battery could catch fire causing a fire or explosion with could lead to serious injury, death and/or property damage. DO NOT use battery pack that has been exposed to such conditions. Contact greenAmp for further support.

- High-capacity lithium-ion battery pack such as these are not permitted on airplanes and on many other transport systems. Check local laws and procedures.

- Please contact greenAmp to dispose and recycle used packs. DO NOT throw in the garbage.

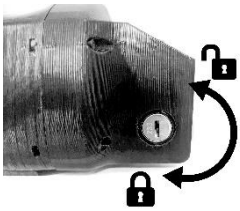
- Damaged batteries can release harmful chemicals and gasses. Contact or exposure to them may cause serious injury. If contact or exposure occurs immediately seek medical attention. If exposure occurs on skin or eyes wash with cool running water and seek medical attention.

- Batteries should not be disposed in regular garbage/recycling systems. Battery cells can be punctured or damaged and cause fires/explosions and chemical exposures and cause harm further down the garbage disposal system.

- Battery waste is harmful to the environment, and it is best to refurbish/reuse or recycle. Contact greenAmp for recycling and replacements.

9. Attaching and detaching the battery pack

Use the supplied key to lock and unlock the battery pack.

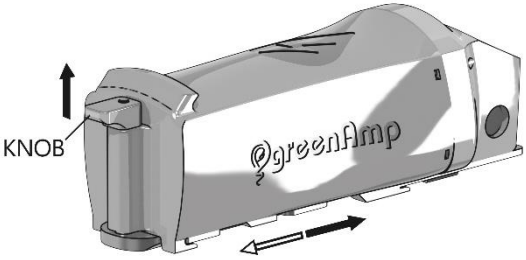


9.1 To detach

Pull the locking knob to unlatch the battery pack and pull along the length of the battery pack to detach the battery pack. *The battery pack will require sufficient force to detach. This is to ensure a strong connection.*

9.2 To attach

1. Align the lugs on the battery pack, pull the knob and push the battery pack along its length to connect the battery pack.



2. The knob should latch when let go if the pack is fully inserted.

CAUTION !

LOCK THE BATTERY PACK WITH THE SUPPLIED KEY IMMEDIATELY AFTER ATTACHING THE BATTERY.

Video Reference

https://www.greenamp.in/downloads-manuals-instrctions

10. Charging

WARNING !

DO NOT CHARGE THE BATTERY PACK ATTACHED TO THE BICYCLE. INADVERTDANT USE OF THE E-BIKE WHEN CONNECTED TO THE CHARGER CAUSE DAMAGE AND INJURY.

Supplied battery charger

XLR port on the charger

XLR charging port on the battery pack

1. Use the supplied charging adapter to charge the battery pack.
2. Plug the charger to 240V 50Hz outlet *(Regular wall plug in India).*
3. Open the XLR charging port on the battery pack. Connect the charger to the charging port and turn on the outlet.
4. The indicator on the battery charger turns green once charging is complete to 100%.
   It is best practice charge and discharge battery fully between 20% to 80% to extend its usable life.
5. The of Charge level indicator shows the approximate State-Of-Charge of the battery pack in percentage.
   The charge level may become less accurate over-time depending upon battery health and usage.
6. Once the charging is done turn off the power and unplug the charger and the XLR port from the battery pack.

Video Reference

https://www.greenamp.in/downloads-manuals-instrctions

11. Before riding:

IMPORTANT

- ENSURE THE BATTERY PACK IS FULLY INSERTED AND LOCKED WITH THE SUPPLIED KEY. THE LOCK IS ESSENTIAL TO THE PREVENT THE DETATCHEMENT OF THE BATTERY PACK DURING THE RIDE.

- ENSURE ALL THE CABLES OF THE ELECTRICAL SYSTEM ARE FULLY CONNECTED AND DO NOT HAVE ANY DAMAGE.

- DO NOT OPERATE THE PEDALS OR THROTTLE WHEN YOU ARE NOT MOUNTED ON THE E-BIKE. THERE IS SIGNIFICANT RISK OF LOOSING CONTROL OF THE E-BIKE.

- Ensure adequate charge level in the battery pack for the planned ride.

- Inspect all the components fastened correctly and none of them are loose. Also ensure no cables are loose or interfering with moving parts.

- Ensure the tires are in good condition and filled as recommended by the manufacturer. *Adequate air in the tire is required for the best range.*

- E-bikes ride different from either motorbikes or bicycles. E-bike accelerates faster than bicycles. Be mindful and aware when riding in crowded areas or on uneven/wet surfaces.

- Ensure the brakes work properly and get accustomed to the brakes and electric powered riding (pedal assist and throttle) in a private and safe place.

12. Riding

12.1 LED indicator controller:

1. Press the shown power button toggle to turn on the e-bike.
Very low SOC on the battery pack can prevent the e-bike from turning on. Follow the procedures to charge the battery pack.

2. Both pedal-assist and throttle control are activated.

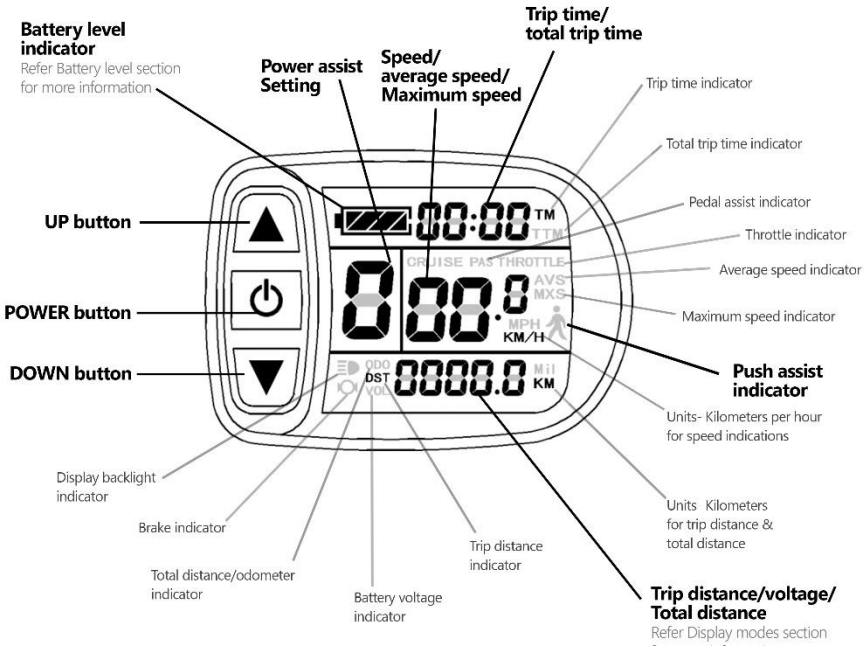
3. Twist the throttle or start pedaling slowly to accelerate and start riding. (If equipped with thumb throttle press the throttle lever to accelerate)
Use of pedal-assist is recommended for best range.

4. Apply the brakes to slow the e-bike. THE MOTOR POWER WILL CUT OFF WHEN THE BRAKES ARE ENGAGED.

5. Press the power button to toggle the e-bike OFF.

MOTOR POWER WILL CUT-OFF AT SPEEDS GREATER THAN 25 KM/H.

12.2 LCD-Display (If equipped)



ON/OFF

Press and hold the “Power button” to turn on the e-bike and enter normal operational mode.

When the power assist setting is 1-5 twist the throttle or start pedaling slowly to accelerate and start riding. (If equipped with thumb throttle press the throttle lever to accelerate). *(Check power assist setting section for more information)*

Press and hold the “Power button” to turn off the e-bike.

The bike automatically shuts off after five minutes of no operation.

Display Modes

The display has 3 display modes. Press the POWER button to cycle through the display modes.

Display mode 1: This is the default mode. This mode displays the following:

1. Batter capacity
2. Trip time
3. Power Assist setting
4. Current speed
5. Trip distance
6. Brake indicator
7. Display backlight indicator
8. CRUISE function indicator
9. Power assist indicator
10. Throttle indicator

Display mode 2: Press the POWER button to cycle to this display mode from display mode 1. It shows the following information.

1. Total trip time
2. Total distance travelled
3. Average speed

Display mode 3: Press the POWER button to cycle to this display mode 2. It shows the following information.

1. Maximum speed
2. Battery voltage- *This can be used to diagnose battery pack issues.*

The display cycles back to display mode 1 after five seconds.

Battery indicator

Battery frame flashes
Indicates low voltage.
(i.e., Battery fully discharged)

Power assist setting

Use the UP and DOWN button to change the level of power assist. Setting 1 to 5 increases the assistance level from minimum to maximum. When the power assist setting is zero there is no power output from the motor. *Lower assist settings provide maximum range.*

Backlight

Press and hold the UP button to turn on the display backlight. Press and hold the UP button again to turn it off.

Power assist push

When the bike is rolling at a speed less than 6 km/hr. Press and hold the DOWN button to get an assist from the motor. The motor will assist up to a sped of 6kmhr. Release the button to stop the assist function. *Only use the function when pushing up steep inclines, and do not use for pushing the bike on flat surface as 6km/hr is quite fast for walking and the there is a risk of losing control over your bike.*

Fault indication

The display may indicate fault codes when it detects faults with the system. You will not be able to operate the e-bike. Remove the battery pack and contact greenAmp support.

13. Cleaning and maintenance

DO NOT PRESSURE WASH OR WASH THE BIKE WITH RUNNING WATER. Use a slightly damp cloth to wipe all the components. Ensure no water gets into the batter terminals and other electronic components like the throttle, pedal sensor.

Dirt and debris may accumulate on the pedal sensor. Clean with a soft cloth or soft cleaning brush.

Use high quality lubricants to lubricate the chain rollers, mechanical cables(only), pedals etc.

Contact greenAmp for re-tuning, maintenance, and technical recommendations.

14. Troubleshooting

The following guide can be used to troubleshoot common problems. However, if the problem persists contact greenAmp.

14.1 Battery pack doesn't charge fully/loses charge too quickly

- Some of the cells in the battery pack may have disconnected/failed. Do not use the battery pack. Please contact greeAmp for repairs/replacement. USING THE BATTERY PACK IN THIS CONDITION CAN BE DANGEROUS.

14.2 E-bike doesn't turn ON

- Ensure the battery is fully charged and inserted fully.
- Ensure all the electrical cables are connected and none are damaged.
- Look for damage to the battery connectors. Contact us for further support and repair. DO NOT PROBE OR ATTEMPT TO REPAIR THE SAME.

14.3 E-bike turns ON but does not accelerate (pedal assist and throttle)

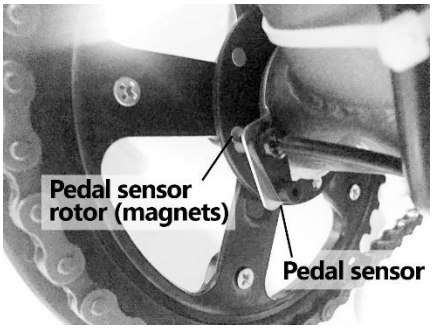
- Ensure the brake levers are not pressed. The e-bike motor does not output power when it detects that the brake lever is pressed.
- Very low SOC on the battery pack can reduce the current from the battery pack. Charge the battery pack to resolve the issue. If problem persists, do NOT use the battery pack and contact greenamp support

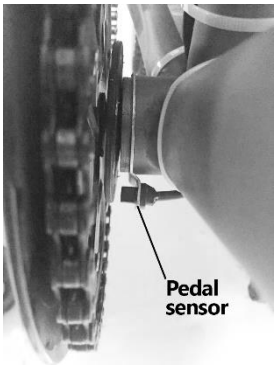
14.4 E-bike turns ON but turns OFF as when it is accelerated (pedal assist and throttle)

- Very low SOC can trigger low voltage protection. Charge the battery pack to resolve

14.5 Pedal assist does not work properly

- Check whether the pedal assist sensor is not damaged and installed correctly on the crankset as shown.

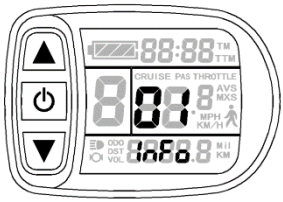




- Check whether the pedal assist sensor is devoid of debris and dust. *(pedal sensor rotor magnets may attract metallic dust/debris)*
- Check whether the sensor and sensor cable are connected properly and not damaged.

14.6 Fault indication on display

- The display may indicate error codes when it detects faults with the system. You will not be able to operate the e-bike.
- Remove the battery pack and contact greenAmp support.



Error Code Display