

# User Guide & Installation

**ECOXPOWER** by ECOXGEAR

model no.: GDI-EGPRO100

## ECOXPOWER by ECOXGEAR Features & Functions

The ECOXPOWER combines a front Ultra Bright LED White Headlight, 2 rear LED Red Lights, a built-in internal Rechargeable Battery, and Power Jack & Cable Connections to power and recharge the lighting system for your bicycle & to charge your SmartPhone or GPS device.

The ECOXPOWER is designed to fit & attach to the front wheel hub of your bicycle and to power the built-in battery, lighting system and devices connected to the unit's Charging Power Jack. The ECOXPOWER uses your pedal power to drive the dynamo-charge system. As the front wheel on your bicycle turns, the ECOXPOWER's clutch engages between the tire's spokes and the gear box drives the Generator to provide power to the lighting system, the rechargeable battery and the power jack.

The headlight can be turned ON/OFF from the handlebar mounted wired remote control on your bicycle. The water resistant touch screen case mounts on your bicycle's handlebars to hold your SmartPhone or GPS device and position the device for use with the USB converter cable for charging.

**Safety Advisory & Warnings** Follow all instructions. Ensure front tire, brake & all cables/ties/cords & accessories are securely fastened & function properly after installation.

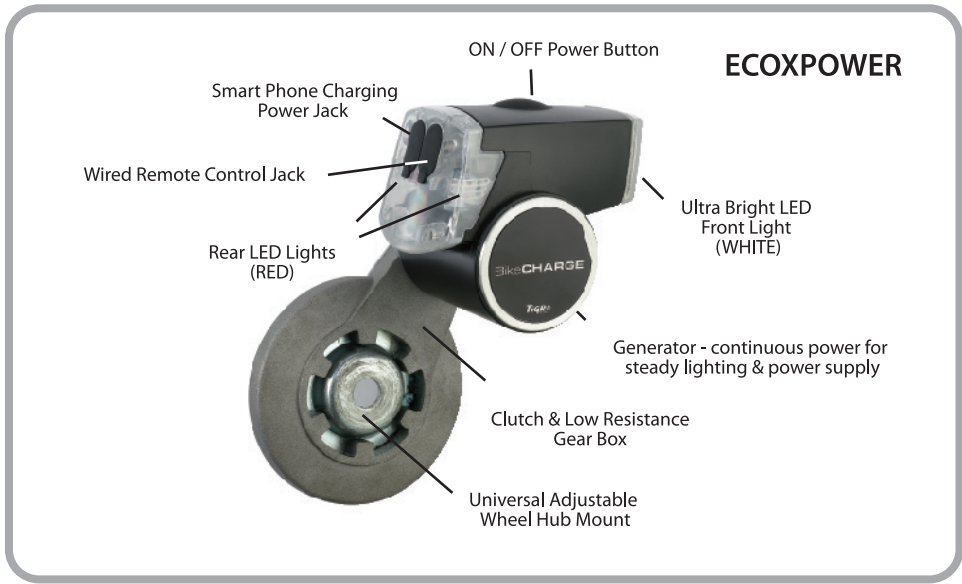
**WARNING** This product may contain chemicals listed in Proposition 65 ([http://www.oehha.ca.gov/prop65/prop65\\_list/Newlist.html](http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html)) that may be known to cause cancer, birth defects or other reproductive harm

**CAUTION:** Do not open any covers & do not repair yourself. Qualified personnel must carry out repair work.

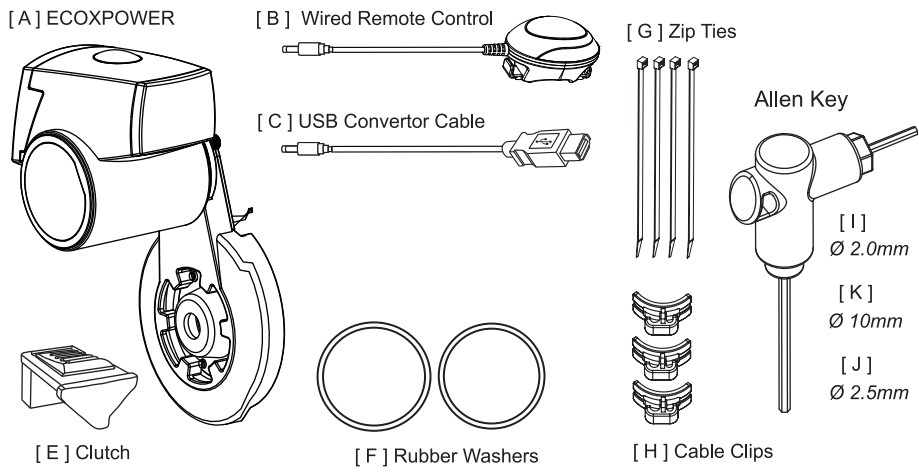
## Electrical Specifications & Suggested Use

- Battery C: Lithium-ion
- Battery Capacity: 700mAh
- Battery Life: approx. 500 charge cycles
- Time required to fully charge battery: approx. 1.5 hrs of riding (estimated speed of 12 miles /20 km per hr on a 26" wheel)
- Power Output: DC5.0V 500mA (max.)
- Power Out Jack Type: 2.5mm DC Jack, convertible to USB port with USB converter cable (included)
- Front Light: 1W 80 LUX White LED
- Rear Light: 2 x S/B Red LED
- Built-in Battery lighting time without riding: approx. 1.5 hours of a fully charged battery
- Lights ON/OFF: by pressing ON/OFF switch on the unit or Remote Control unit
- Power Output at DC Jack: charge begins once riding speed reaches approx. 3 miles /5km per hr (on a 26" wheel) & the built-in battery is charged
- For Maximum Battery Life do the following:
  - > When using for the first time, fully charge the battery for 3-4 hours at riding speeds above 12 miles /20km per hr before using the lights or power out jack for charging devices
  - > Avoid using lights and power out jack simultaneously
  - > Avoid using power out jack when riding at low speeds
  - > Turn OFF lights when not riding





# ECOXPOWER Parts & Installation

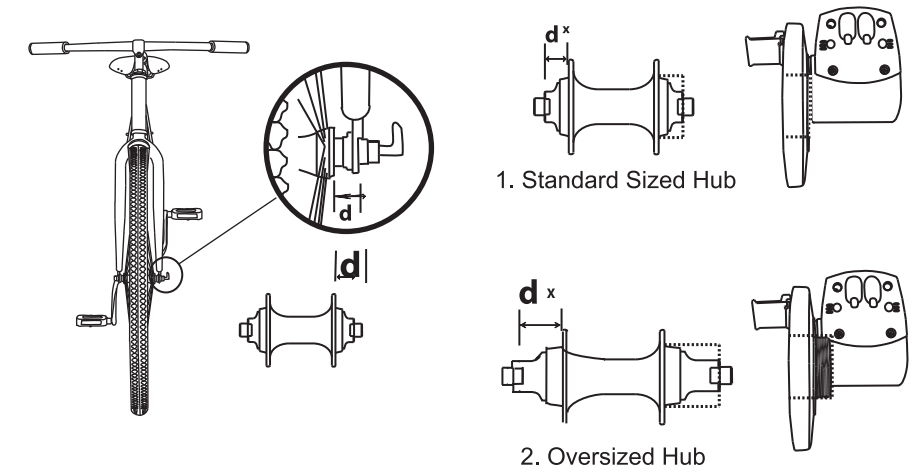


ECOXPOWER Parts

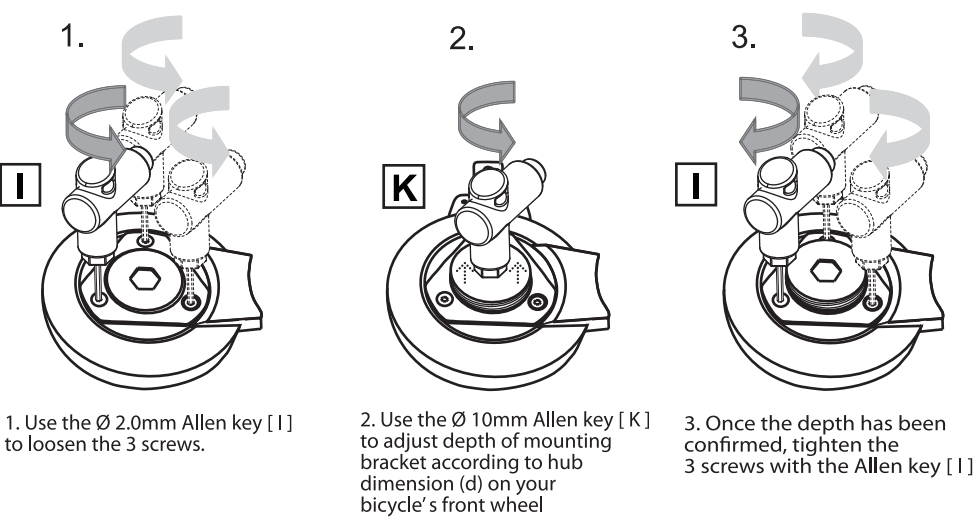


The ECOXPOWER is designed to be installed on the front bike wheel hub that use a nut & bolt attachment or that use a Quick Release System. The ECOXPOWER should attach without adjustment. However, should you have an Oversized Hub on your wheel, you may have to refer to Section [2.] below to make the required adjustment on the Universal Mount.

## Section [1.] Check the Front Wheel's Hub Dimensions (d)



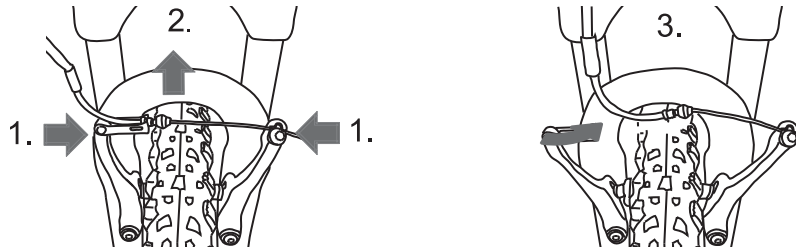
## Section [2.] IF required, adjust the Mounting Bracket as follows to fit the hub on your wheel:



### Section [3.]

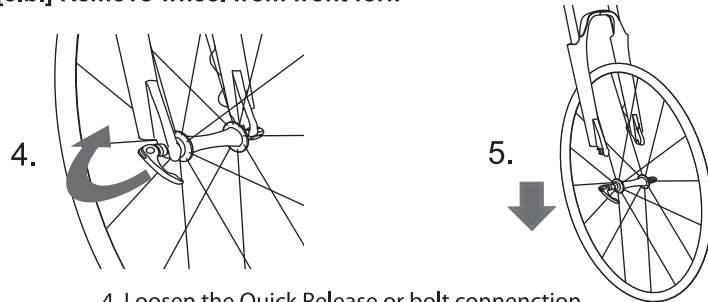
#### Install the ECOXPOWER [ A ] on Front Wheel with a Quick Release or Bolt

##### [3.a.] Loosen the Brake Cable (IF using cantilever brake / V-brake)



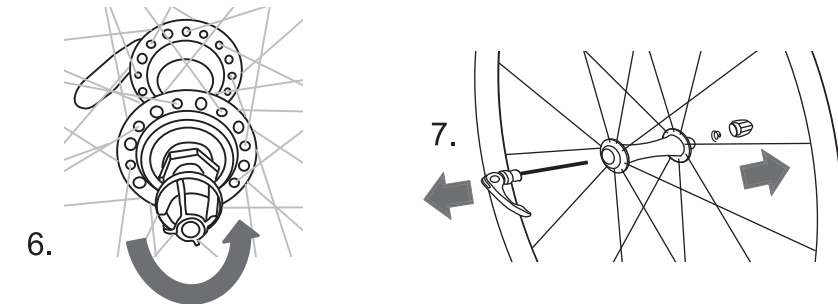
1. Push the brake arms towards the wheel center.
2. IF required, release the brake cable to open brake arms.
3. Detach the brake cable to release the wheel from the brake holder.

##### [3.b.] Remove wheel from front fork



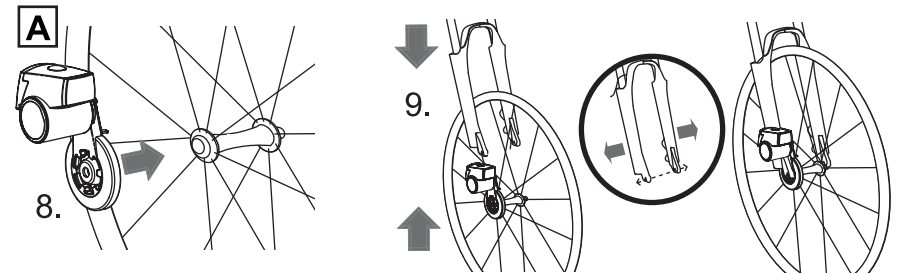
4. Loosen the Quick Release or bolt connection.
5. Remove wheel from front forks.

##### [3.c.] In the case of a Quick Release system, remove the shaft from wheel hub



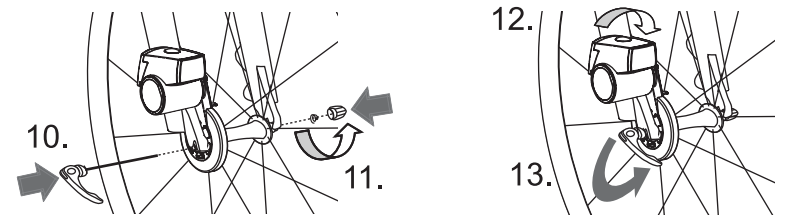
6. Loosen the nut on the Quick Release.
7. Remove the shaft from the wheel hub

##### [3.d.] Insert ECOXPOWER (A) between front fork and wheel hub, tighten securely



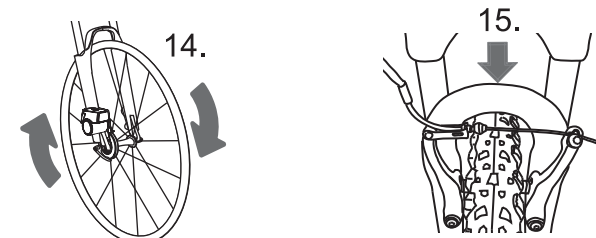
8. Place the ECOXPOWER [ A ] on right hand side of wheel hub.
9. Return the wheel to the front fork with the ECOXPOWER placed between fork and hub. Pull fork apart slightly for extra width if required.

##### [3.e.] In the case of the Quick Release insert shaft into the wheel hub and tighten



10. Insert shaft into the wheel hub.
11. Tighten the nut /acorn nut.
12. Rotate ECOXPOWER to desired position.
13. Tighten the Quick Release or bolt connection.

#### Section [4.] Check the Wheel & Brake are securely fastened



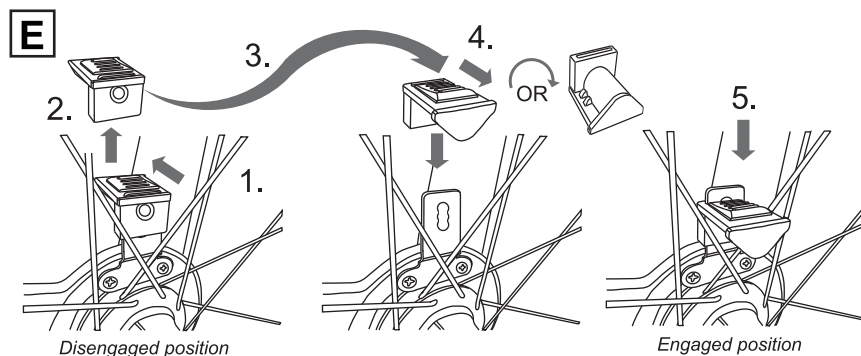
14. Spin the wheel to ensure wheel turns smoothly.
15. Restore brake to its original state. Check to ensure brake & wheel function properly.



- i. Ensure ALL parts of the Quick Release (eg. springs) are installed.
- ii. Ensure Front wheel is securely attached after installation.
- iii. Ensure the front brake functions normally after installation.

## Section [5.] Install the Clutch

Once the ECOXPOWER is installed on the hub the Clutch must be positioned between 2 spokes to drive the gearbox and in turn the dynamo-generator as the wheel turns. Adjust the Clutch for best fit as follows:

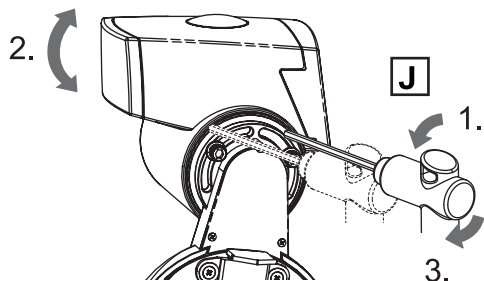


STEP 1. Pull the sliding switch to release Clutch.  
STEP 2. Pull the Clutch from Mounting Plate.  
STEP 3. Rotate Clutch 180°.  
STEP 4. Pull the sliding switch.

STEP 5. Insert the Clutch into place on the mounting plate so that the clutch fits well between 2 spokes. Turn the clutch upside to allow for best fit as may be required.

## Section [6.] Adjust the Beam Angle for the Headlight

The beam angle on the ECOXPOWER headlight can be adjusted on the swivel plate as follows:



STEP 1. Use the Ø 2.5mm Allen key [ J ] to loosen the 2 screws.

STEP 2. Position & rotate the headlight into the desired angle.

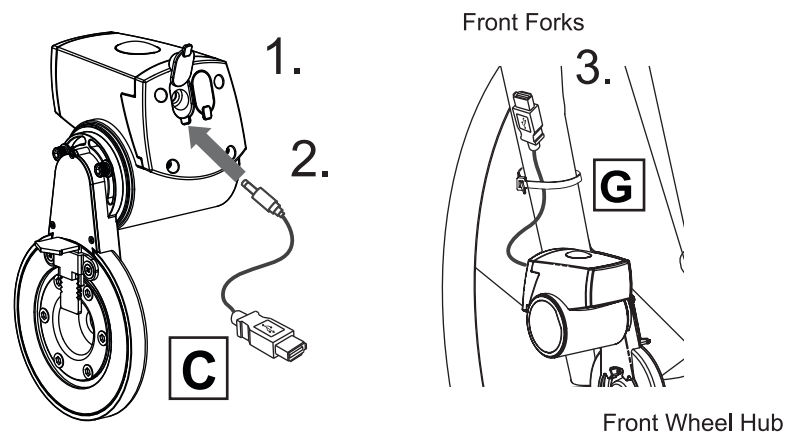
STEP 3. Use the Ø 2.5mm Allen key [ J ] to tighten the 2 screws and secure the position of the headlight.

## Section [7.]

### Connect USB Converter Cable & Remote Control

[7.a.] Connect the to your SmartPhone or GPS device.

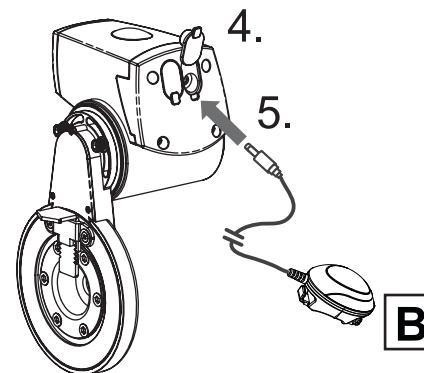
NOTE: The USB cable from your Smartphone or GPS is required to connect to the USB



STEP 1. Open the left rubber cap.

STEP 2. Insert the USB converter cable [ C ].

STEP 3. Attach the cable to the bike's front forks with the zip ties [ G ].



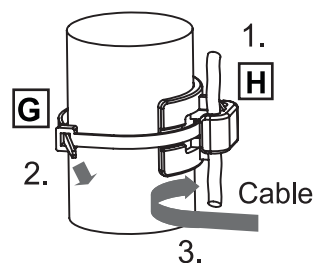
STEP 4. Open the right rubber cap.

STEP 5. Insert plug of Remote Control unit [ B ].

STEP 6. Attached cables on bike with zip ties [ G ] & cable clips [ H ].

[7.b.] →

### [7.b.] Attach Cables on Bike Forks /Bars with Zip Ties & Cable Clips

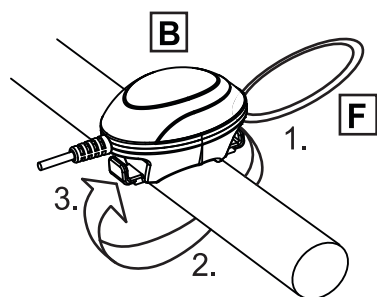


STEP 1. Insert zip tie [ G ] into hole of cable clip [ H ] and wrap the ties around bike bar.

STEP 2. Move to a desirable location and tighten zip tie [ G ] and cable into position.

STEP 3. Insert the cable into the hook to attach the cable

### [7.c.] Mount the Remote Control on your Bicycle's Handlebars



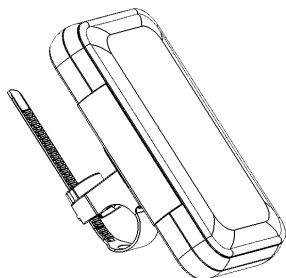
STEP 1. Attach the rubber washer [ F ] on the hook at one end.

STEP 2. Pull rubber washer [ F ] and wrap it around bottom of the bike grip or handlebar.

STEP 3. Attach the rubber washer [ F ] on the hook on the opposite side of the unit to fasten the Remote [ B ] in place.

## Section [8] Mount the Protective Case for your Smartphone or GPS

### [8.a.] Mount the Weather Resistant Touch Screen Case on your Bicycle's Handlebars



STEP 1. Wrap the case holder strap around the handlebar & align the case attachment on the strap to face upward.

STEP 2. Run the end of the strap into the slot and fasten the strap to the handlebar using the allen key to turn the screw to tighten the strap around the handlebar.

STEP 3. Attach the Case to the connection point on the case holder strap.

### [8.b.] Connect the Charging Cable thru the Weather Resistant Touch Screen Case & Connect the Cables to your Smartphone or GPS to the Cables

## Limited Manufacturer's Warranty

Your ECOXPOWER is supported by a limited warranty that covers defects in materials and/or workmanship for 1 year from original purchase date from an authorized franchisee or dealer. This warranty does not apply to any product which may have been abused, neglected, modified or used for a purpose other than the intended manufactured purpose. The warranty is valid only for the original owner who purchases the unit from an authorized dealer. Warranty protection is not valid for products transferred. Grace Digital reserves the right to replace any out-of-stock or discontinued product with a comparable product. Discontinued product may not be available for warranty replacement. This warranty does not imply any acceptance by ECOXGEAR, retailers or agents for consequential loss or damage and specifically excludes fair wear and tear, accident, misuse of its unauthorized modification. Any content or items are NOT covered by the limited manufacturer's warranty.

This warranty is applicable in the United States only and does not in any way limit the customer's legal rights. Claims and enquiries under the warranty for Grace products purchased outside the USA should be addressed to the local importers or distributors. Please retain all original packaging materials for possible future use. It is suggested that you complete purchase details now and keep this information in a safe place for future reference. Grace Digital provides their dealers, distributors, and retailers with a 1 year warranty.

- The warranty stated herein is the only warranty applicable to this product. All other warranties, expressed implied are hereby disclaimed and are limited by the written limited warranties contained herein. Except as or provided herein, the manufacturer shall have no liability or responsibility to a customer or any other person or entity with respect to any liability, loss or damage caused directly or indirectly by use or performance of the product or arising out of any breach of this warranty, including, but not limited to, any damages resulting in inconvenience, loss of time, data, property, or profit or any indirect, special, incidental, or consequential damages, even if the manufacturer has been advised of the possibility of such damages.

- In the event of a product defect during the warranty period, return of the product and your sales receipt as proof of purchase date for your unit is required and shall, at the discretions of the manufacturer, result in: (a) correction of the defect by repair without charge for parts and labor; (b) replacement with the same or similar design; or (c) refund for the purchase price if purchased directly from Grace Digital and returned within 30 days of purchase. All replaced parts and products, and products, on which a refund may be made, become the property of the manufacturer. New or reconditioned parts/ products should be warranted for the remainder of the original warranty period.

- The warranty does not cover:

- (a) damage or failure caused by or attributed to acts of God, abuse, accident, misuse, improper installation or improper maintenance, alteration, lightning or excessive voltage or current;
- (b) any repairs other than those provided by an authorized ECOXPOWER service facility;
- (c) consumables such as fuses or batteries;
- (d) cosmetic damage;
- (e) transportation, shipping or insurance costs;
- (f) costs of product removal, installation, set-up, service adjustment or re-installation.

- Customers are responsible for any shipping costs related to product return, repair and/or refund.
- Warranty terms may be revised without notification at the discretion of the manufacturer.

## Customer Service & Support

For additional product & warranty information regarding your product please visit us at: [www.ecoxgear.com](http://www.ecoxgear.com) or contact us at: <http://www.gracesupport.com>

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