# PRODUCT SPECIFICATIONS & RIDING INSTRUCTIONS for ECO-ROVER, LLC ("Ecorover")

# 1. Technical parameters

Max cruise speed: 10 m/h (15 Km/h)

Min turning radius: 0°

Net weight: 40 lbs (18.5 Kg)

Distance (after single charging): 12.5 m (20 Km) Charging time: 2-3.5 h (3 hours for a complete charge)

Charging voltage: 110V-240V, 50-60 hertz

Charging consumption: 0,4 Kw/hr Max load: 220.5 lbs (100 Kg)
Max climb capability: 15 degree
Battery: 48v 40ah lithium
Lifetime of battery: 3-5 years
Custom warranty: 6 m to 1 year

Other warranty: 1 year or 1,242.7 m (2.000 Km)

Full lifetime: 21,747 m (35.000 Km)

Power: 2x1.300 Watts

Received CE & ROHS & FCC certifications

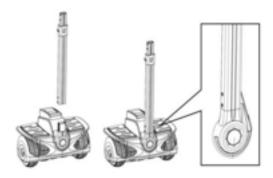
## 2. How to Install EcoRover

• List of spare parts

All the parts that need to be included in the package as follow. If any of them are missing, please call us or email at info@eco-rover.com

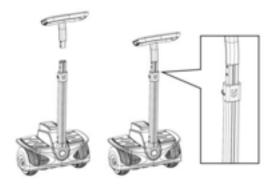
- Car body
- Handlebar grip
- Handlebar stem
- 1 charger
- Tool and screws bag (which contains of erecting tools and 10 screws)
- Two remote kevs
- User's manual
- Warranty card
- cd with teaching videos

# 2.1. Installing EcoRover

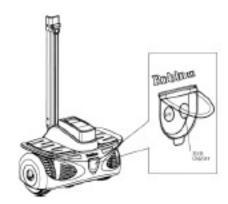


i) Put the handlebar stem into the adapter and tighten it up with 4pcs of screws as follows.

NOTE: if EcoRover is equipped with quick release (optional), insert the handlebar stem into the locking component, and fix it using the clip of the locking component.



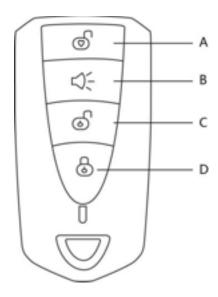
ii) Put the handlebar grip into the adapter of the handlebar stem and tighten it up with 4pcs of Ecorover screws as follows.



iii) Behind in the back (bottom), lift the cover and press white button to turn the transporter on.

**Important:** Any time you conduct any unit installation or maintenance, please make sure that the power is off.

• Remote control of Ecorover transporter is long-distance equipment.



## • Button A:

Beginner mode: pressing this button so you can enter into the beginner model which speed limit within 4.3 m per hour (7km per hour). If you don't use it for more than 10 minutes, then Ecorover will shut down automatically.

#### Button B:

Warning & locking mode: pressing the button so Ecorover itself can keep locked and send notice with bumming and vibrating while someone else is attempt to move it. If you want to unlock it, just press it again. However, if you kept the Ecorover in state of bumming within 24hours, it will turn off automatically.

#### Button C:

Normal mode: you have to turn off the beginner mode when you want a normal mode. Turn off the power and then turn it on so you can enter into the second mode with speed limit within 9.7 m per hour (15km per hour).

#### Button D:

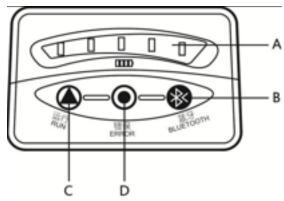
Shutdown: press the button to power off Ecorover.

# • **Buttons A + C**:

Press button A and C within 5seconds can enter into the model of self-checking. In the state of self-checking, you will hear the bumming sound and all five lights keep flickering. The system of Ecorover itself will conduct a series of self-checking, in the mean while, the wheels will turn on automatically in a slow speed. If there is no problem after the self-checking, the system will recover to the normal mode. Otherwise, warning sound of beeping will come from the buzzer and it will turn off automatically. Under this condition, we recommend to contact us or send Ecorover to us.

## 4. Display board

The display board of Ecorover is on the top of the battery, which display the charge while you ride.



- **A**: Performance of Electric Display board. When Ecorover is fully charged, all five lights will keep brightening. Five lights mean Ecorover is fully charged, four means there is 60-80% power left. Under the charging mode, five lights will flicker one by one, when Ecorover run out off battery, all of the lights will be flickering at the same time.
- **B**: indicator light of Bluetooth.
- **C**: Green light: when the green light keep shining, means it is in the opening mode, which means the system is under a normal state; otherwise, it will turn off indicating that there is something wrong with the system.
- **D**: Red light Error: when the indicator light turned red, that means is something wrong with the system, you should seek help from Ecorover's distributor.

#### 5. Learn how Ecorover works:

• Before you ride Ecorover, you will need to be aware of safety matters. It's very important for you to understand all safety issues mentioned in the user's manual.

## **5.1 Start Ecorover:**

 If this is your first time to start Ecorover or after a period of inactivity, please lift the handle in the back and press the white button of Ecorover.
 The second time, you can turn on and off Ecorover by using wireless key or remote control directly.

# 5.2 Safe parking:

- When there is an incorrect operation or the power consumption reaches the minimum quantity within normal riding, the system will then generate a secure parking information, meanwhile Ecorover will have a high-frequency vibration, then Ecorover can automatically slow to a stop.
  - i) **Warning:** if the battery power reaches the minimum limit and the user continued to ride Ecorover, it can't keep the equilibrium because of power shortages, it is very unsafe, the user is likely to be injured.
  - ii) Warning: If the battery power reaches the minimum limit and the user continues to ride Ecorover, the battery life and its capacity will be affected

## 6. How to Ride Ecorover

## • Step 1: Starting Ecorover:

On the back, lift the small cover and press the white button to start Ecorover, you will see the indicator lighting. If the light is flashing indicates the start is normal.

## • Step 2: Pre-commissioning on the Ecorover:

There are 4 sensors under the pads, which detect the weight of the user if is on or not. The tilt relation between the Ecorover and the user will create two situations:

- i) If Ecorover tilts more: when the user puts one foot on the pad, Ecorover will shake to tell user the tilt angle is too large, **Please don't get on Ecorover**.
- ii) If Ecorover tilts less or none: when the user puts one foot on Ecorover's pad will automatically balance to the vertical posture after the sensors sense the user. The buzzer gives out "drip" sound, which indicates that the system has entered the manned work mode.

# • Step 3: Get on Ecorover and control it going forward and backward:

- i) First, grab one handle and tilt Ecorover to the extension of your arm,
- ii) *Second,* gently put one foot on Ecorover (same side of your arm, example, right arm and right foot),
- iii) Third grab the second handle,
- iv) Fourth get on Ecorover (put second foot on).

The user/driver should keep the balance of the body gravity when standing on Ecorover, which makes Ecorover motionless. Lean your body gently forward or backward to make Ecorover going forward or backward; Please, remember that you body amplitude is not too big.

## • Step 4: Turn left or right with Ecorover:

Lean the handlebar to the left or to the right to make Ecorover turn left or right.

#### Step 5: Get off Ecorover

Keep Ecorover motionless and balanced before getting off from it.

- i) First, one foot down,
- ii) Second, wait a second or two and pull the second foot down.

As soon as Ecorover's sensors not weight on it, it will turn off itself.

# 7. Battery instructions of Ecorover

This part describe how to get Ecorover charging at home or work place, how to take good care of the battery, needed precautions and specifications of battery.

#### 7.1 Zero power

Please stop riding Ecorover when all lights are shut down (off). At that point, the system will gradually slow down, within 7 seconds Ecorover will shut down automatically. If you insist the riding, you may fall from Ecorover, get injured and you will damage the battery. You should stop using Ecorover under any of these conditions listed below:

- The battery is broken.
- Peculiar smell came out from Ecorover or it's over-heat.
- Only expert authorized technicians can fix or maintain the battery.
- Never touch the leaking material that came from Ecorover.
- Keep the battery away from children and animals.

- Do not touch the battery in case of any injuries.
- Make sure that the power line is off from Ecorover before riding it and never do anything with Ecorover while it is charging (plug to electric power).
- The battery contains toxic substances inside, NEVER attempt or try to open it or unclench it with any equipment
- Never put any other material into the battery

# 7.2 Procedures of charging

- Lift the cover in the back of Ecorover where you will find the charging port
- Make sure that the charging port is dry
- Plunge one side into the charging port of Ecorover and the other side into the electric power source.
- If the lights keep shining one by one in the display board, it means it's under normal condition. Otherwise, please double check the connection and outlet.
- Ecorover is fully charged when the red lights and the green light are shining at the same time. At that point, please stop charging, because if you leave it plug too long it might affect the service life of the battery.
- Battery charging or storage for very long time will cause damage to the battery and will have an impact on the usage of it.
- We suggested the time of charging of Ecorover should be three hours once at a time.
- During charge and all the times, keep the battery in dried and clean environment.
- Never put the plug into the charging port if you find it wet

## 7.3 Conditions related to overhead or too slow in temperature of the battery

- In order to keep the high efficiency operation of the battery, please ensure that the temperature of the battery remaining within certain ranges specified in the instructions.
- In case of battery overheat during the ride, the system will going to make a safety warning.
- Please maintain the battery in an area with the right and suggested temperature before charging or during charging. The battery efficiency will be best when the temperature is near recommended degrees; otherwise, it might lengthen the charging time.

## 7.4 Specification of the battery

Battery type: Lithium battery Charging time: 3 to 3.5 hours

Voltage: 48 V Weight: 3.4kg

Beginning volume: 40mA Size: 165 x 145 x 85 (mm)

Operating temperature:  $-15^{\circ} \sim 50^{\circ}$ Charging temperature:  $-15^{\circ} \sim 50^{\circ}$ Storage ( $-20^{\circ} \sim 25^{\circ}$ ): 12 months Storage relative humidity:  $5\% \sim 95\%$ 

# 7.5 Precautions of battery transportation

• Lithium battery is considered to be toxic material by most countries, make sure that you are lawfully permitted before you transport it to any other places.

If you intend to transport the battery by flight or any other types of shipping, please contact with the local authorized agent for inquiries information about transportation of hazard material.

# **Check Riding Safety Instructions**

Anytime you ride Ecorover, it may cause some accidents such as losing control, collision and falling down. In order to avoid accidents, you must read the user's manual instructions carefully. Please make sure Ecorover is in good condition, and use it after you have read all the content of user manual.

- When you ride Ecorover, please make sure you follow the safety guidelines such as wearing helmet, kneepad, elbow-pad.
- The use of personal transporter is regulated by the laws of each country.
- Please don't let children under the aged of 15 or pregnant women to ride Ecorover.
- Please don't ride Ecorover after drinking or having drugs.
- Please don't ride Ecorover with goods, you can lose control, balance and/or cause personal damage.
- Please comply with the state and the local traffic regulations when you ride Ecorover.
- Please be alerted about your surroundings, maintain good vision will help you ride Ecorover in a more safely way.
- If you clench the handlebar tightly, relax your legs, and bend your knees slightly, can help you keep balance when you go through bump ground.
- For a comfortable posture, you should adjust the handlebar to your high and center your feet on the pads.
- Please wear suitable sports clothes to ride Ecorover, which will help you to better deal with emergency matters.
- Ecorover can only transport one person at a time, please don't try to transport two or more persons on it.
- The user has to move within a safety speed limit. Be ready to stop Ecorover at any time.
- If someone gets hurt while riding Ecorover, please wait for the right personnel to handle the issues.
- When you are riding Ecorover in groups, please keep certain distance to avoid collision.
- When you ride Ecorover, please remember that you will be 21 centimeters higher than your normal high, make sure you keep your head a little bit down when getting through any door.
- When you turn, please be aware of your body balance to avoid falling down from Ecorover, due to gravity shift or fast speed.
- When you ride Ecorover, please do not do other things, such as phone call, listen music or any other activities, which can endanger your ride, it is unsafe.
- Please do not ride Ecorover backward at a high speed.
- When you ride Ecorover, please don't let hands off from the handlebar; this action automatically will make Ecorover going forward for some distance.
- Generally, we recommend that only teenagers 16 years old or older can ride Ecorover.
- The transporter is not designed, tested, or proved to be medical treatment equipment. Therefore, all users must be capable to ride Ecorover themselves.
- Don't ride Ecorover in the dark or places without enough light.
- Please avoid riding Ecorover on any obstacle or slick ground, which may cause to fall down.
- Please avoid riding Ecorover on snow, iced surfaces or wet and slippery floor, etc.
- Please avoid riding Ecorover on surface full of sporadic objects like twigs, garbage or small stone.
- Please avoid riding Ecorover in narrow or places with obstacles.
- Please ride Ecorover under a suitable environment. If you need to get permission from others, please make sure you've done that before you ride.
- Please don't start or stop Ecorover suddenly.