Thank you for choosing Group Vertical!

Roverboard Self-balancing Scooters
Product Brochure
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Enjoy your new self-balancing scooter!

1. **Overview**

**About the User Manual**

This manual includes safety and warning information for every user to review to allow them to drive the self-balancing scooter safely. Please take the time to review every part of the manual in order to familiarize yourself with the correct operation of the unit, warnings and troubleshooting so that you may have a great riding experience!

• This scooter is a self-balancing electric vehicle with two wheels.

• Before riding, please read this Product Manual carefully and be aware of the security warnings and precautions.

• This product manual will help you understand, use and maintain your two-wheel self-balancing scooter quickly.

• In order to avoid danger caused by collisions, falls and loss of control please learn how to drive the self-balancing scooter safely and exercise caution.

• Group Vertical and authorized dealers cannot be held liable for injury or damage resulting from riding this self-balancing scooter.

• Users ride at their own risk.

• You can learn the driving skills needed by reading this product manual and researching & watching videos online.

• This manual includes operating instructions and precautions, users must read it carefully and follow the instructions as written.

• **The user is responsible for consequences resulting from improper use or violating warnings expressly written and contained within this manual.**
Driving Risks

This self-balancing scooter is for personal transport only. Operating the scooter without proper review of the manual may result in injury to the driver.

Jumping on or off, driving too fast for conditions or failure to operate the self-balancing scooter in any other way not outlined in this manual, may result in injury or even death. In order to minimize the risk, ensure you read the manual carefully.

Preparation before Operation

Before operating the scooter, please check the battery charge, referring to the details in section titled “Battery Maintenance”.
2. Product Introduction

Description of the Self-Balancing Scooter

This self-balancing scooter is a high-tech electric personal transportation device which, based on dynamic balance principles, can be controlled forward, backward and standing still. The advantages of our self-balancing scooter are: easy operation, flexible control, low carbon output, environmental protection and suitable for various surfaces. The self-balancing scooter can be used for travel for leisure, scenic tours, security patrol and other applications normally travelled via foot. When you stand on the self-balancing scooter, by shifting your weight forward or backward on the foot pads, the unit will automatically assist in maintaining balance. To turn you will slow down and shift the weight in your feet to determine the direction to turn.

Description of Parts

This self-balancing scooter uses gyroscope and acceleration sensors to intelligently control balance depending on a center of gravity. It also uses servo-control systems to drive the motor accurately.

A built-in inertia dynamic stabilization system maintains the direction of forward and backward, however, it cannot guarantee the stability of left and right. When you drive a self-balancing scooter, please shift your weight in order to overcome the centrifugal force and improve the stability while turning.

There are four sensors under the foot pads. When the user steps on the self-balancing scooter, it will automatically adjust to balance. You must ensure that you are stepping on the rubber foot pads – please don’t step on the unit outside of the rubber pads.

Note: Do not place items on the rubber foot pads while not in operation – this will make the unit unable to switch off and increase the probability of collision and potential injury to nearby people or damage to the self-balancing scooter itself.
The display board is located in the middle of the self-balancing scooter. It displays information regarding the self-balancing scooter.

- **Battery Display:** When **GREEN**, this battery shaped LED light indicates the self-balancing scooter is fully charged. When **RED/ORANGE**, the battery is on low charge, please recharge. Note: If the battery LED is blinking red/orange and the unit is beeping, it means the unit will soon shut off due to the battery being too low for operation.

- **Running Display:** When stepping on the foot pads, the running LED will light up **GREEN** which means that the system is running. When the unit has an error, the running LED light will turn **RED.**
3. **Safe Operation of the Self-Balancing Scooter**

We strongly recommend that you read all of the information in this manual prior to riding the self-balancing scooter for the first time in order to familiarize yourself with important safety information such as speed limits, vibration alerts and safety shutdown, etc. Be sure to check the wheels for damage, proper inflation of the tires (if applicable) or for any parts that may be loose before driving. If there are any abnormal situations, please contact us for information.

When the self-balancing scooter exceeds the max speed due to sloping terrain, it will alert the rider to slow down by beeping and the red sensor LED light will begin to flash on and off.

Riders should wear a helmet, wrist guards, knee pads and elbow pads, especially beginners. Mouth guards are also recommended as protection against in the event one should fall off of the scooter.

This unit should be operated on a smooth, dry surfaces well away from traffic or obstacles that may cause a collision and/or injury to the rider.

Check the unit over carefully before each use. If there are any cracked, loose or broken parts, the unit should not be used until it is repaired.

**Operating Limits**

<table>
<thead>
<tr>
<th>WHEEL BASE</th>
<th>6.5”</th>
<th>8.0”</th>
<th>10.0”</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>220 lbs.</td>
<td>265 lbs.</td>
<td>265 lbs.</td>
</tr>
<tr>
<td>DISTANCE</td>
<td>10-12 miles</td>
<td>10-12 miles</td>
<td>10-12 miles</td>
</tr>
<tr>
<td>MAX SPEED</td>
<td>8 mph</td>
<td>8 mph</td>
<td>10 mph</td>
</tr>
</tbody>
</table>

**WARNING**: Operation by individuals over the maximum weight on any of the units could lead to injury to the driver or malfunction of the scooter.
Safety Tips

- This self-balancing scooter is for personal entertainment use only.
- It is prohibited for use on roads and highways.
- Do not allow children to drive it unsupervised. It is also not recommended for the elderly, pregnant women or anyone with physical handicaps that make operation difficult.
- Do not drive after drinking alcohol or using drugs of any type.
- Do not attempt to carry items when you are driving it.
- Operators must comply with any and all local traffic laws, including giving way to pedestrians.
- Please be alert to your surroundings while riding the scooter.
- Make sure the feet are always centered on the rubber pads to ensure even weight distribution and proper balance for directional changes.
- Please wear suitable sports apparel when riding the self-balancing scooter to provide adequate protection in the event of a fall or collision.
- Self-balancing scooters are only to be driven by one person. Do not attempt to drive the unit with two or more people.
- Drivers and their belongings should not exceed the maximum load limit of 220 lbs (100 kg), or it may lead to functional damage of the scooter which may result in injury to the rider. In addition, the driver should not weigh less than 44 lbs (20 kg), as this will result in the self-balancing scooter being unable to operate, especially downhill where the driver may not be able to reduce speed or stop safely.
- Keep the operating speed within a safe range as indicated in the section “Operating Limits”
● When you drive the self-balancing scooter alongside other scooter users, please keep a safe operating distance between each other to avoid collisions.

● Please keep in mind that while riding, your height has increased 4” (10 cm) so you must use caution when passing through doors or other passageways with limited height.

● Do not allow distractions when driving a self-balancing scooter; such as answering your phone, listening to music with earbuds or headphones, or engaging in any other activities that may divert your attention from the road ahead or your surroundings.

● Do not attempt to drive on wet floors, slippery roads in snow or rain, or turn at high speeds.

● Do not attempt to drive in poorly lit areas.

● Do not attempt to drive over obstacles such as twigs, litter, small stones, etc.

● Avoid driving in narrow spaces.

● Avoid driving on a steep slopes.

● Avoid driving around flammable gas, steam, liquids, dust, or fibers which could ignite and result in fire or explosion.
4. How to Operate the Self-Balancing Scooter

Overview

This is an easy to use self-balancing board that uses slight movements of the feet and body forward or backward to manipulate the boards movements.

Events that will Signal Audible Alerts

• Protection mode, alarm indicator will light up, buzzer will sound.
• Unit is forward or backward more than 35°, unit will turn off.

WARNINGS

• Never attempt to stand on the self-balancing scooter when powered off as this could lead to injury to the rider or damage to the scooter.
• Never attempt to jump on or off of the self-balancing scooter as this will result in injury to the rider.
• Never attempt to turn the self-balancing scooter at a high speed or on uneven terrain or slopes.

How to get on the self-balancing scooter

Step 1: Turn self-balancing scooter on using the button located next to the charging port on the back or underside of the unit depending on the model you have.

Step 2: Once unit is on and the lights of the board are facing forward, stand behind the scooter and place your left foot on the rubber foot pads on the scooter. This will engage the automatic balancing system.

Step 3: After the left foot engages the automatic balancing system, step onto the unit with your right foot.
How to get off the self-balancing scooter

Step 1: Bring the self-balancing scooter to a complete stop.

Step 2: Slowly take the right foot off of the scooter and place it on the ground. This will engage the automatic balancing system.

Step 3: Take the left foot off of the scooter and place it on the ground.

How to move around on the self-balancing scooter

Forward movement: Increase the pressure on the foot pads with the front of your feet or lean body slightly forward.

Backward movement: Increase the pressure on the foot pads with the heal of your feet or lean body slightly backward.

Turn movement: Increase pressure on the front of your foot in the direction you would like to turn (right foot for right turn, left foot for left turn). Keep the opposite foot pressure consistent front to back or increase the opposite foot pressure slightly backward for a sharper turn.

Slow down or Stop: While moving forward, increase the foot pressure on the foot pads with the back of your feet or lean slightly backward to slow down or stop. If moving backward, lean slightly forward to slow down or stop.
Visual Representation of How to Operate the Self-Balancing Scooter

Instructions

Step 01

Step 02

Right foot forward to turn left
Left foot forward to turn right

Step 03

Step 04

backward
forward
5. How to Use the Bluetooth Feature & Remote Control Fob (Bluetooth models only)

- **Overview**
  Scooter models that are equipped with Bluetooth capability can be paired with Bluetooth enabled devices to broadcast music through the unit’s built-in speakers. Bluetooth enabled scooters will also come with a remote control fob. This fob may be used to control a few functions of your scooter from a distance of approximately 15 feet (5 meters). Please note that the range of the fob is negatively affected as the battery slowly discharges during use.

- **How to pair the scooter with a Bluetooth enabled device**
  To pair your Bluetooth enabled scooter with another Bluetooth enabled device, turn on the scooter and wait until the voice indicates the scooter is ready to be paired. Next, turn on the device you wish to pair the scooter with. When the scooter is shown in the available devices to pair with, choose it to pair the devices.

- **How to Lock & Unlock the scooter using the Remote Control Fob**
  Please note that the scooter will automatically lock when left on and not in use for approximately 10 minutes. When the scooter is locked, it is **NOT** turned off – it is merely disabled for use.

  **Lock:** To lock the scooter to prevent unauthorized use, press the button on the fob that looks like the picture below. This will lock the unit from use but will **NOT** turn off the scooter (although it will appear to be off).

  ![Lock Icon]

  **Unlock:** Press the button on the fob (that looks like the picture below) once to unlock the scooter.

  ![Unlock Icon]
6. Battery Maintenance

Overview
You must stop driving if the battery indicator displays low power or it may affect battery lifetime and lead to dangerous riding conditions. The battery indicator LED will indicate the following:

- Battery is fully charged (Green)
- Battery voltage is low (flashing Orange/beeping).
- Battery is discharged (solid orange).

Discontinue charging the battery immediately if any of the following occur:

- Battery emits an odor or is overheating
- Leaks any material

Other Battery Precautions:

- Keep the battery away from children and animals.
- Disconnect the battery charger before riding the scooter.
- The battery contains dangerous substances, do not attempt to open the battery or insert anything into the battery or charging port.
- Only use chargers specifically designed for batteries contained within the self-balancing electric scooter.
How to charge the self-balancing electric scooter:

Note: The best charge temperature is 32°F – 104°F (0°C~40°C). Temperatures outside of these parameters will result in an improperly charged battery.

Step 1: Locate the power button (on the back or underneath the unit next to the charging port) to turn the power on.

Battery light will appear red on top of the self-balancing scooter indicating low battery.
Step 2: Once the power is on, locate the charging port. Plug the charger into a standard outlet then plug the other end of the charger into the self-balancing scooter (the red light on the charger indicates the self-balancing scooter is not charged). Once fully charged, the light on the charger will change from red to green. When the indicator light on the charger changes from red to green, the scooter is fully charged. Estimated charge time is 90 minutes to 2 hours for a full charge.

Step 3: Once the unit is fully charged, disconnect the charger from the self-balancing scooter. The battery light on top of self-balancing scooter will be green indicating battery is charged.
Note: Leaving the self-balancing scooter on the charger for an extended period of time could affect the life span of the battery.

**WARNING:** Leaving the scooter on the charger for longer than 4 hours at a time could cause the battery to overheat and damage the scooter or in some cases cause a fire.

**Description of Battery**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PARAMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery</td>
<td>Lithium Battery</td>
</tr>
<tr>
<td>Charging</td>
<td>2~3h</td>
</tr>
<tr>
<td>Voltage</td>
<td>36V</td>
</tr>
<tr>
<td>Initial Capacity</td>
<td>2~4Ah</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-15°C~50°C</td>
</tr>
<tr>
<td>Charging Temperature</td>
<td>0°C~40°C</td>
</tr>
<tr>
<td>Storage Time(-20°C~25°C)</td>
<td>12months</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>5%~95%</td>
</tr>
</tbody>
</table>
7. **Cleaning & Storage of the Self-Balancing Scooter**

**Cleaning**
- Disconnect the charger and turn off the self-balancing scooter.
- Wipe the cover.
- Avoid spraying or immersing the scooter in water or other liquids for cleaning. If water or other liquids seep into the unit, it will cause permanent damage to the internal electronics.

**Storage**
- Fully charge your battery before storing.
- If you store the self-balancing scooter for more than one month, please remove the battery and charge it at least every three months.
- Do not charge the unit if the storage ambient temperature is below 32°F (0°C). You can bring the unit into a warm environment (above 50°F or 10°C) for charging.
- To prevent dust, you can cover the self-balancing scooter or purchase a carrying bag to store the unit in.
- Store the self-balancing scooter indoors in a dry and suitable environment. If you do not intend to use it for a long time, do not connect the charger.
- Users who disassemble this self-balancing scooter without permission will void and warranty issued upon purchase.
8. **Troubleshooting**

**Resetting the Unit**
If the unit becomes unusable and is not in need of charging, you may need to reset it.
1. Turn the unit on.
2. Hold the power button down until the lights on the unit flash steady (30 seconds – 1 minute).
3. Turn the unit off.
4. Turn the unit back on again.
9. **Technical Specifications**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Weight</td>
<td>22 lbs / 10 kg</td>
</tr>
<tr>
<td>Load</td>
<td>44-220 lbs / 20-100 kg</td>
</tr>
<tr>
<td>Maximum speed limit</td>
<td>6 mph / 10 kmh</td>
</tr>
<tr>
<td>Range</td>
<td>9-12 miles / 15-20 km</td>
</tr>
<tr>
<td>Max climbing limit</td>
<td>15°</td>
</tr>
<tr>
<td>Minimums turning radius</td>
<td>0°</td>
</tr>
<tr>
<td>Battery</td>
<td>Lithium-ion</td>
</tr>
<tr>
<td>Power requirement</td>
<td>AC100-240v/50-60 HZ</td>
</tr>
<tr>
<td>Dimensions</td>
<td>23x7x7 inches / 584x186x178mm</td>
</tr>
<tr>
<td>Ground clearance</td>
<td>1” / 30 mm</td>
</tr>
<tr>
<td>Platform height</td>
<td>4” / 110 mm</td>
</tr>
<tr>
<td>Tire</td>
<td>Non-pneumatic hollow tire</td>
</tr>
<tr>
<td>Battery capacity</td>
<td>4.4AH</td>
</tr>
<tr>
<td>Battery voltage</td>
<td>36V</td>
</tr>
</tbody>
</table>
For replacement parts or accessories, please visit our website:

www.GroupVertical.com