



**Health, Mobility and Adventure**



**The future is now...**

## The packaging includes:

- Trotter MAGWheel ..... One Board
- Charger ..... One Piece

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## I. Introduction to the Product

The Trotter MAGWheel (Magnetic and Gyroscopic Wheel) is a high-tech product for mobility and adventure. Using a gyroscopic control principle, this self-balancing electric board gives a riding experience similar to snowboarding, skateboarding and surfing. Lean-and-go technology eliminates corded controllers, allowing control of the board by leaning/shifting weight. You can move forward or backwards, spin, turn/carve, control acceleration, deceleration and braking and other movements simply and intuitively. It can take about 20 to 30 minutes to get the hang of the balance and controls. Don't give up! It is also suggested to begin learning on packed dirt or pavement if possible (with protective pads and helmet!) instead of grass, as the grass will take more torque and can make it difficult when learning the board's balance. Once learned, the movements become super intuitive, and you will never want to walk again!

The Trotter MAGWheel is an environmentally-friendly, green electric vehicle! Not only is it fun to ride but it can also be used as transportation for commutes, errands and outings! Any A/C outlet can be used to charge your board and refill your battery!

## II. Safety Information

The product is a self-balancing electric personal mobility vehicle. Any electric mobility vehicle has a safety risk, so does Trotter MAGWheel. Riding Trotter may be dangerous. PLEASE read the Manual carefully and fully understand all instructions. AS A CUSTOMER/RIDER YOU ARE AWARE OF THE RISKS, DANGERS AND HAZARDS ASSOCIATED WITH RIDING THE TROTTER MAGWHEEL AND YOU ACCEPT AND FULLY ASSUME ALL SUCH RISKS, DANGERS AND HAZARDS AND THE POSSIBILITY OF PERSONAL OR THIRD- PARTY INJURY, DEATH, PROPERTY DAMAGE OR LOSS RESULTING THEREFROM.

The laws & rules regarding the use of electric personal mobility vehicles vary between states/territories. Customers must review these laws before purchasing the Trotter MAGWheel and abide by their local by-laws and use it responsibly. Ride with caution and safety equipment (including helmets and protective gear) should always be worn when using the Trotter.

All sports come with some level of inherent risk. Operating electric vehicles of any kind in an unsafe manner increases those risks. Be sure to read and understand the safety precautions of this product in detail, as well as any local ordinances.

### III. Important Guidelines

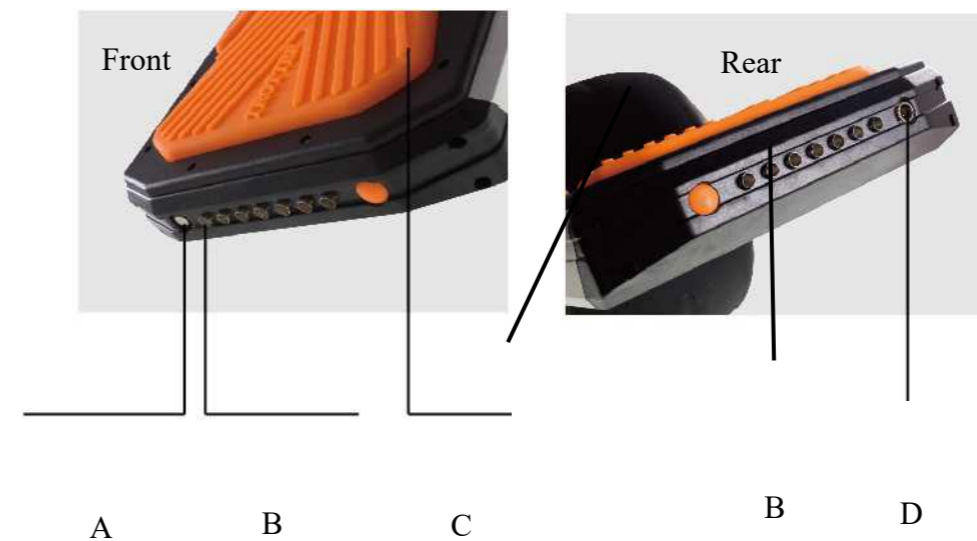
1. Read the manual carefully before riding the Trotter.
2. Know and strictly follow the local traffic laws to ride.
3. Every time before riding, check the board to ensure there are no loose or damaged parts.
4. Do not ride under influence of any alcohol or drugs before/when riding.
5. Protect yourself. It is suggested to wear a helmet, gloves/wristguards, elbow pads, knee pads and other safety protection gear **at all times** when riding.
6. It is dangerous to ride on the road, especially in high-traffic areas! Avoid pedestrians and others at all times.
7. Be careful with sudden acceleration or deceleration and please keep within controllable and safe speed range.
8. Stay relaxed during the ride, slightly bend your knees

and elbows, and keep your head centered above the wheel.

9. Straightening your legs/knees while on the board will help achieve balance for beginners.
10. Do not ride it in severe weather or bad road conditions;
11. The board is not recommended for inclines of more than 20°.
12. Children between 12-16 years of age must ride the MAGWheel with close adult supervision. Use good judgement in who should ride, as there is always a risk of injury.
13. Pregnant women, alcoholics and people with a mental health condition are strictly prohibited from riding Trotter MAGWheel.
14. Do not allow others to ride your MAGWheel unless they have read and understood the Manual carefully.

### IV. Main Components

- Main functional components are as shown in this figure:



- A. Power Switch
- B. LED Lights/Indicator
- C. Sensor Pads
- D. Charging Port

## V. Lighting and Battery Indication

7 bi-colour LED lights with high brightness are installed respectively on both ends of the Trotter MAGWheel. Not only do they light your way, but they also help indicate your battery level! When the Trotter starts, the red lights on both sides flicker simultaneously, and the buzzer will chirp 3 times. While riding, the 7 LED lights on the forward side turn white light and those on the rear side turns red light. When changing direction, the colour of lights on both sides automatically changes, retaining white at the front and red at the rear. During night riding, the effective lighting distance of white light is about 15m and the effective warning distance of red light is about 20m.

**Lower Battery indication:** When the battery power reaches about 25%, the front and back lights are red and flickers and the buzzer will give an alarm once every 15s. When the power is lower than 10%, the front and back lights both change to red, and the buzzer will beep continuously.



## VI. Speed-limiting Protection

- To provide a fun and safe ride, the Trotter MAGWheel is programmed to the maximum speed limit of 20km/h.
- As you approach top speed, the MAGWheel will begin beeping increasingly faster. At top speed, it will make a continuous beep. If you do not slow down in this situation, the board can no longer speed up to keep your nose raised, and a nosedive is possible.
- In addition to the audible warning, the board will begin to raise its nose as you approach top speed. This is the board telling you to pay attention! Remember to keep your head centered above the wheel, and use your hips and ankles to control the board.



Note: when the speed is close to the upper limit, please do not lean forward to accelerate to avoid damage by falling down (aka the dreaded “nosedive”)

## VII. Side tilt Protection

When the board tilts sideways exceeding 45° (for example, if the MAGWheel tumbles down), the control system will start the side tilt protection: The motor will stop running immediately to prevent damage to people, property and the board itself caused by the high-speed revolution of the motor. After starting the side tilt protection, the buzzer goes off continuously until the board is righted, or the Trotter power supply will automatically turn off 10s after giving an alarm.

Keep the Trotter in an upright position to release the tilt protection mode. Turn the power on in case the power is turned off and start riding.



Note: Even with heavy carving and spinning, the board does not tilt over 45, and there is no danger of accidental shutoff.

## VIII. Charging

Do not keep the Trotter under the sun or temperature above 40-degrees C while charging. Do not charge when the Trotter is wet.

The Trotter MAGWheel is equipped with a high-power charger. Normally, complete charging from 10%-100% takes about 120 minutes for the standard 4.4ah /5.2 ah battery. The upgraded 10.5ah battery may take 4-5 hours to fully charge. To help maintain battery range and life, it is recommended to charge fully before riding, and not to drain the battery below 10%

If your MAGWheel stops working when it was been struck violently - don't worry. This is the board's protection system at work. For safety reasons, turn off the board for 10 minutes, then charge it for 1 minute. This should reset the feature. If not, you may also reset the gyro by holding the board horizontally and pressing the power button for 15 seconds.



When the indicator on the charger is **red**, it indicates that it is charging

When the indicator on the charger is **green**, it indicates that charging has completed and it is in cell balancing mode. This helps maintain the life of your battery, and it is recommended to charge 24-72 hours straight once a month or so.

## IX. Dustproof/Waterproof Rating

The dustproof/waterproof rating of the Trotter MAGWheel is IP56. It can generally resist water from shallow puddles (1 inch or so), and can be used in the light rain for a short time; however, being a technical electric vehicle with moving parts and intricate circuitry, there is always a possibility for water ingress under the right conditions. Submersion or long exposure to moisture may cause damage to electronic parts of the board.

## X. Preparations before Riding

At all times when riding, **ESPECIALLY while learning**, please wear safety gear, including a helmet, knee pads, elbow pads, and wrist guards. Personal injury may result from falls even with safety gear, but wearing it will protect you in most situations. Even professional riders fall from time to time! We want you to be able to ride thousands of miles injury-free, so proper safety habits are key.

## XI. How to Control Balance

When both the front and back sensor pads are activated, the board will begin to level itself. **The key to balancing is to KEEP YOUR HEAD CENTERED ABOVE THE WHEEL AT ALL TIMES.** Allow the board to level by keeping your back leg straight and your front leg bent. Gently extend your front foot as the board levels. By applying pressure to the left or right in the direction you would like to go, the Trotter MAGWheel will respond to your actions, speeding up, slowing down or changing direction. Control is all in the hips and ankles. Keep your knees slightly stiff (yes, counterintuitive to boardsports, we know).



## XII. Starting/Riding

### 1. Turn on the Power Supply

Put the Trotter MAGWheel on the ground; press the power supply switch located on the front side of the board. The front and back red LED lights will flash and beep 3 times, indicating that it is ready to go.

### 2. Getting on the Board

- It helps to use a wall or other tall solid object to learn your balance while starting. You can also find a friend to stand beside you and help hold your hands. Step onto the back footpad (the rear LEDs will light up). **Center your head above the wheel!**
- Rest your other foot on the tire, and adjust your back foot until it is solidly on the pad, with your toes and heels equal distance from the edges.
- Place your front foot on the front sensor pad. This will activate the board, causing it to level itself. Don't fight it! Allow the board to level itself, even rolling slightly forward, by keeping your back knee straight and your front knee bent, slowly extending it until it is straight and the board is level. Keeping your legs almost completely straight, knees locked in the beginning will help maintain balance.

### 3. Riding

- Practice makes perfect! Most of the control of the board is done with the hips and ankles, with the knees fairly stiff until you get more comfortable with the balance. Always try to keep your head directly above the wheel, keeping your weight centered. Angling your feet towards your toes or heels will turn the board. With practice, you can literally spin in place!

- Pushing down with your front foot will cause the board to accelerate forward relative to the pressure. Pushing down with your rear foot will cause the board to decelerate and/or change direction.

### 4. Getting off the Board

The Trotter MAGWheel has several ways to dismount:

- **Toe Release:** Completely stop the board and stay level, as shown in Figure (1); Slide your front toe off the front of the rubber pad as shown in Figure (2) and lift your heel completely away from the silica gel pad; this will release the front sensor, deactivating the board.
- **Slam Release:** While moving slowly forward, use your momentum to lean back and drop the tail to the ground, simultaneously lifting your front foot off the board. In simple words, just jump off.
- **Tilt Release:** Completely stop the trotter and stay levelled nose to tail. Allow the board to tilt sideways, as shown in Figure (3) or (4), with both feet tilting to the front or to the back at the same time. Once deactivated, step or slide to the ground. You can also just jump off the board.





## XIII. Maintenance

### 1. Storage

Do not place your Trotter MAGWheel in extreme damp/humidity, heat or cold. It is suggested to drain the battery to 50%-60% if stored for long periods.

### 2. Routine Checks

Every so often – especially after hard riding – check the rubber sensor pads, plastic trim pieces, bottom plates and axle mounts for dirt, debris and loose screws. **Make sure you are using the proper size bits to prevent stripping.**

### 3. Tire Replacement

The Trotter MAGWheel uses a top-grade tubeless tire. When the tire needs to be maintained or changed due to normal wear or damage, disconnect the power supply first; remove all 8 large allen screws from each side of the tire/motor; separate the motor and main control panel connectors and take out the motor wiring harness. The nose trim piece will need to be removed as well. During the process, please pay attention to the connecting wiring harness in the pedal and do not pull hard.

**Note: After completing the maintenance, the power supply terminals may spark when being reconnected; this is a normal phenomenon and you needn't be scared.**

## XIV. Technical Parameter

Item	Specifications	Parameter contents	Instruction
Performance	Maximum speed	20km/h	
	Driving mileage	Up to 25km	Depending on the rider's weight, road condition and the environmental temperature
	Maximum climbing angle	About 20°	
	Power of battery	4.4 ah / 5.2 ah / 10.5 ah (optional)	The fender boasts the function of balance
	Temperature suitable for riding	Minus 10 'C -40 'C	
	Storage temperature	Minus 30 C - 70 C	
	Maximum load	120kg	
	Charger voltage	AC 220V 50-60HZ	
Appearance and weight	Charging time	2 hours	
	Overall dimensions	741x259x280mm	
	The distance between the pedal and ground	174.5mm	
	Tire dimensions	φ 280mm (11.5inch tubeless go-kart vacuum tire)	
Protection measures	Body weight of the vehicle	13.9kg	
	Side tilt protection	Both are 45°on the left and right	The motor will stop rotating while exceeding 45°
	Speed-limiting protection	Start when it is more than 15 km/h	The front end of the pedal rises to prevent further acceleration.
Information indication	Low battery indication	The red light flickers when about 25% of the battery power is left	The buzzer beeps once every 15 seconds
	Battery indicator	The red light starts when about 10% of the battery power is left	The front end of the pedal begins to rise
		The red indicators on both sides flicker	The battery power is less than 25%
	Voice reminder	Beep	Continuous beeps during the low electric quantity protection
Blew		Blew while tilting to the side	
Attachment	Standard	Charger	

## **XV. Warranty**

Trotter MAGWheel is covered under a limited 12 months warranty.

Limits of warranty:

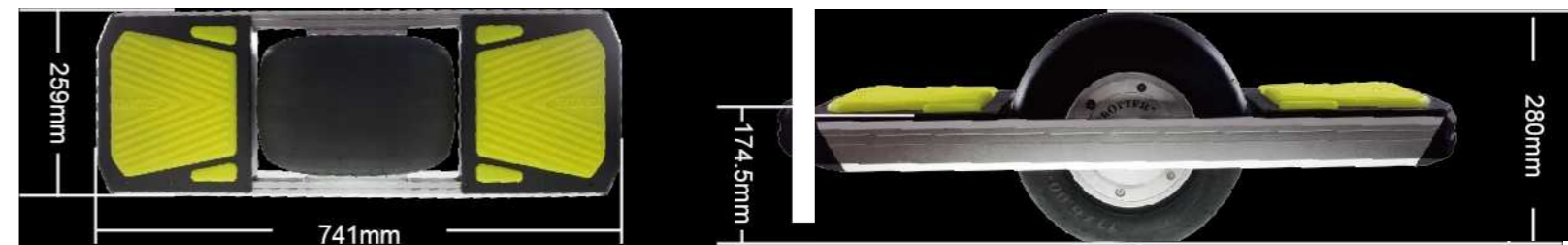
- 12 months warranty for the frame & motor.
- 12 months warranty for battery (covers malfunction, but does not cover deterioration of performance).
- 6 months for electrical components and tyre.
- Other components are considered consumables and are not covered by warranty.
- The warranty is for parts replacement only and does not include labour or shipping costs associated with the repair.

The warranty will be null and void if:

- damage to the Trotter was due to exceeding the manufacturer's recommended maximum load limits.
- water damage, physical damage, incorrect charging or use of charger other than provided by Moov8 for the Trotter.
- charging/soring the battery at temperatures outside the stated limits.
- damage by man-made causes or accidents.
- any modification or change in the product or dissembled or repaired by an unqualified mechanic.



TROTTER



Jade red

orange

Lemon yellow

Sapphire blue