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MAGIC WHEEL

Quick Guide

This manual includes safety usage instructions. Please ensure this manual is read and understood before you use the product. The package contains: MagicWheel, charger, extension air-pump tube, user manual, learning guide, warranty card, and verification certificate.

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1 About MagicWheel

MagicWheel is the latest high-tech means of transport adopting aerospace attitude control theory, fuzzy algorithm, and gyroscope system to achieve balance by forward and backward leaning. Users can control the vehicle to go forward, accelerate, decelerate, brake or others, by inclining forward or leaning backwards. The left and right balance is similar to technique of riding a bicycle-achieved through slightly slanting left or right.

MagicWheel features as a green product that can be easily carried around on a bus or subway, making it a helpful tool in commuting.

Safety

There are risks to riding or driving every vehicle. MagicWheel is no exception. Please ensure this manual is read and understood beforehand, and do pay extra attention when riding.

Important

1. Do not make rapid acceleration or deceleration or over incline forward or lean backwards.
2. Do not use MagicWheel if there are and risks in accidental falls. Safety first.

Attention

1. Please wear helmet, gloves, elbow/knee pads or other protection garments.
2. Do not ride MagicWheel on busy roads or crowded streets.
3. Do not ride MagicWheel on rough or bumpy surfaces, such as muddy or pebbled roads.
4. Do not ride MagicWheel on wet, slippery surfaces, especially snowy roads.
5. Do not ride MagicWheel on slopes slanting more than 15° angle.
6. Do not allow children under 12 to use MagicWheel.
7. Do not ride MagicWheel in bleak winter conditions.

Other sudden unpredictable risks may occur during use, please ride with care. MagicWheel will not be responsible for any injuries caused by misuse of the product.

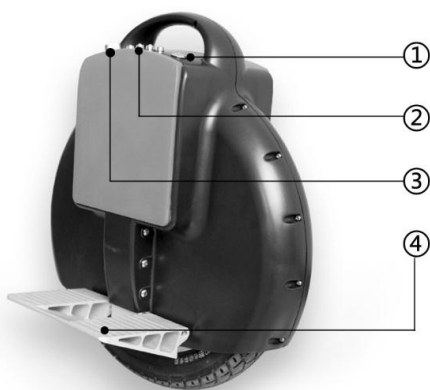
Specifications				
Item	Specification	Parameter	Details	
Performance	Highest Speed	About 18 km/hr		
	Range	About 20 Km	May vary depending on rider's weight, road condition and temperature.	
	Safe climbing angle	About 15°	60kg riders up to 18°	
	Battery	132WH Lithium	Protection circuit with equilibrium function	
	Temperature	-10°C~40°C	Best at 10°C~30°C	
	Capacity	120kg		
	Charger Voltage	AC 220V 50~60Hz		
	Charging time	About 60 mins	80% charged in 45 mins	
Appearance	Size	Height 450mm	Largest width 160mm;smallest width 70mm	
		Length 395mm	Largest width 160mm;smallest width 70mm	
Appearance weight	Distance of treadle from ground	Height 450mm	Largest width 160mm;smallest width 70mm	
		Length 395mm	Largest width 160mm;smallest width 70mm	
		112mm	When dismounted	
Safety measures	Tire size	φ360mm		
		Car body	9.8kg	Without training wheel
			Without training wheel	
Alert	Slanting protection	Average 45°left and right	Machine will deactivate when exceed 45° angle	
		Speed limit protection	Turned on at 10 km/h	Front part of treadle will rise to prevent further acceleration
		Low power protection	Turned on when power below 10%	Front part of treadle will descend, speed will decrease until it fully stops
Attach ments	Power and error	Power LED indicator	Illuminates when on, flickers when protection activate	
		Alert sound	Beep	Beep at power on; continual beep when power level is low
		Alert sound	Long buzz	Long buzz at side tilts
Accessories	Standard	Charger		
		Training wheel, car		
Accessories	Other	charger, backpack		
		charger, backpack		



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4 Usage

1. See diagram for reference

- ① Power
- ② Battery level
- ③ Charger
- ④ Treadle (Foldable)

2. Starting MagicWheel

Please MagicWheel vertically on the ground and turn on power. Power and Battery Level LED will illuminate and buzzer will beep, then the vehicle is ready to use.

If MagicWheel tilts either forward or backward or backwards after power is switched on, then wait until it reverts to upright position before riding.

3. Battery level

A four-bar LED indicator is used to indicate battery level. All four will light up when power level is more than 85% and will go off one by one as the level decreases. Please check power before usage to ensure there is enough power for the return trip. You may want to charge it every time after use.

When power level is lower than 10%, all four lights will flicker and the buzzer will sound off. The front part of the treadle will power itself to force you to decelerate and eventually stop. Please do not restart when this occurs to avoid any accidents.

Sustained range will decrease during winter. This is because the battery performance decreases quickly in cold conditions. In -15°C, for example, battery performance is only about half in comparison to that in room temperature.

4. Speed control

To prevent injuries caused by speed, MagicWheel comes with a speed control design. When speed exceeds 10km/h, the front part of the treadle will rise slowly; when the speed exceeds 16km/h, the treadle will rise to a 10° angle, to prevent you from inclining forward to further accelerate. As the speed decreases, the angle of the treadle will also lower itself.

NOTE: When the speed is about to reach its limit, please do not incline forward anymore to force acceleration to prevent injuries.

5. Side-tilting protection

When MagicWheel tilts sideways more than a 45° angle, for example when MagicWheel falls, the control system will activate side-tilt protection. The machine will stop running immediately to prevent injuries.

The buzzer will sound off a long buzz and the LED will flicker when this is activated.

To deactivate this, turn the power off, then restart.

6. Charging

Plug in the power source after inserting the charger plug, or else the charger will not activate. This can also prevent potential risks, to ensure a safer charger. MagicWheel provides a high-power charger. During normal conditions, only 45mins is needed to be fully charged, 30mins allows 80% charged. The red light on the charger indicates charging, green indicates charging complete. If not in urgent need, please wait until charging complete before unplugging, because after charging, the protection circuit will perform power flow equilibrium.

7. Water resistance

The water resistance level of MagicWheel is IP 56, allowing it to pass through water of no deeper than 10mm. It can be used in light rain, but do not steep the vehicle in water or take long rides in heavy rain.

5 Maintenance

1. Storage

Please store MagicWheel in a dry place. If left unused, recharge the battery every two months to maintain longevity of the battery.

2. Inflation

Use the extension inflation tube to inflate the tire. Without the tube, you will not be able to pump air into the wheel.

3. Changing tires

To repair or change the inner or outer tires, open the side of the cover without the indicator lights. First, unscrew the 14 screws on the sides, then the six at the center. Now the side cover can be opened. Give care when disassembling the connecting terminal. No not force disconnection.

NOTE:

A: Plugging to power source after maintenance may cause sparks. This is normal. Do not panic.

B: Do not open the side with the lights or the aluminum panel. Opening any part other than instructed in this manual will forfeit your warranty rights.

5 Repair

Please keep the warranty and proof of purchase (i.e., receipt).

Limited warranty:

1. 1 year for vehicle, except battery or other consumables
2. 6 months for battery; 1 month for inner and outer tires.

The warranty will not be covered under the following conditions:

1. Malfunction due to misuse
2. Malfunction caused by unauthorized modifications, disassembling, or repair
3. Accidental damage or malfunction due to unsuitable storage
4. Unmatched warranty/proof of purchase and product
5. Surface damages
6. Disassembling parts unspecified by this manual.
7. Damage or malfunction caused by long rides in the rain or soaking in water.

