

# User's Manual



Thank you for choosing and buying balance scooter.

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

Before riding, please read the product Manual carefully, and learn Security warning and precautions.

Product Manual can help you understand, use and maintain Balance scooter quickly.

This manual applies to balance scooter self-balancing scooter that produce by

## NOTE:

In order to avoid dangers that caused by collisions, falls and loss of control, please learn how to drive safely.

You can learn drive skills by product manual.

This manual has informed all operating instructions and precautions, users must read it carefully and follow the instructions. The users are responsible for all the consequences that caused by violating warning contents or prompt operations. Balance scooter cannot be held liable.

## 1. The document overview

### 1.1 Description

Describe safety and warning information ensure every user can drive balance scooter.  
Introduce every part of balance scooter Manual warning and caution help you enjoy it.  
This Manual only for balance scooter.

### **1.2 Driving Risk**

Balance scooter is for personal transporter, Technology and production process have strict test for every Balance scooter. Driving don not according manual, may cause any danger.

Warning!

Falling, out of control, collision in any place, including fail to obey balance scooter manual, may cause injury even death. In order to minimize the risk of driving, insure you must read balance scooter manual.

### **1.3 Preparation before Driving**

Before driving, please check level of battery, using details check fifth chapter. Fail to obey balance scooter Manual, may cause injury.

### **1.4 Related Instructions**

Instruction below adapt to all balance scooter manual. Please give special attention to related warning and note.



**WARNING** Warning: Any improper action will bring dangers on your personal safety.

**NOTE:** Notes : Users should pay attention to the matters and the relevant usage.

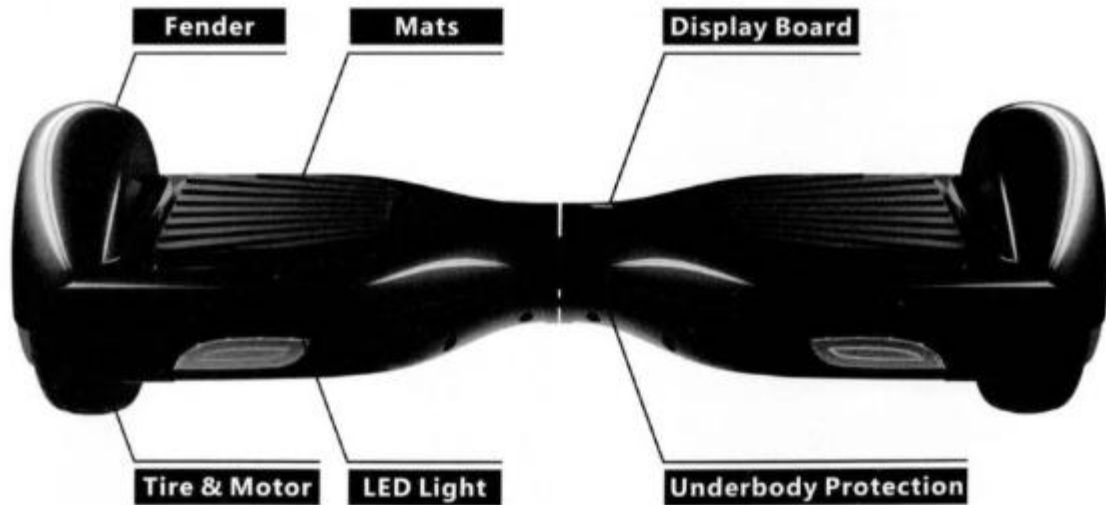
## **2.Product Introduction**

## **2.1 Description of balance scooter**

Balance scooter is a high-tech electric car, which based on dynamic balance principle can control forward, backward, and stop. Easy Operation, flexible control low carbon, green environmental protection and suitable for the road are balance scooter advantages. Balance scooter is widely used in leisure walking, scenic tours, security patrol and other fields



## **2.2 Description of parts**

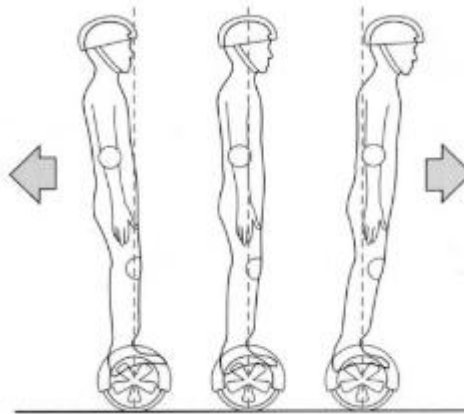


### 2.3 Working Principles

Balance scooter uses gyroscope and acceleration sensor to control balance intelligently depend on center of gravity. Balance scooter also use servo-control system to drive motor accurately. It likes a human body, when you stand on

the balance scooter, body forward or backward, power plant will control the wheels forward or backward movement to keep balance. When you turn, need to slow down and move body left or right.

Built-in inertia dynamic stabilization system can keep the direction of front and back, however, it cannot guarantee the stability of left and right. When you drive balance scooter, please shift your weight in order to overcome the centrifugal force and improve the turning of security.



### 3. Information Display Device

#### 3.1 Mat Sensor

There are four sensors under the mat, when the user steps on balance scooter mats, it will automatically adjust to

the balance mode.

Driving balance scooter, you must ensure that you are stepping on the feet mats, trample floor mat, please don't step part besides of the mats.

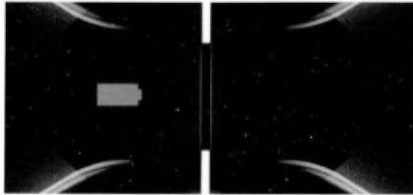
Please do not put items on the mats, which will make balance scooter switch unable to turn off, and increase the probability of collision to cause the injury of people or damage to balance scooter.

### **3.2 Display Board**

Display board is located in the middle of the balance scooter. It is for display the running information of balance scooter

**Battery Display:** This green LED light up indicates the balance scooter is fully charged, red LED light up indicates the power down to 20%, when LED light become red, please recharge it.

**Running LED:** When the operator triggers the foot switches, the running LED will be lighten up, which means that the system enters the running state; when the system have error operation, running LED light will turn to red.



## **4. Safe-using of balance scooter**

### **About safe-using**

We hope every user can drive balance scooter safely and enjoy the fun. You can recall the memories of learning how to ride a bicycle, drive a car, ski or use other similar means of transportation; all these experiences can be applied to

our products.

Please follow the related content in “product manual”. We strongly recommend that you should read the “product manual” carefully before riding at the first time. Checking whether tires are damaged, parts are loose before driving. If there is any abnormal situation, please contact local dealer for repair.

Please carefully read the “product manual”, that will help you to get a lot of important safety information such as speed limits, vibration alert and safety shutdown, etc.

Do not make any use of balance scooter to endanger the safety of persons or property.

Do not modify the parts of balance scooter randomly, it will affect the performance of balance scooter even cause serious injury.



**WARNING – Risk of Fire – No User Serviceable Parts”**

**AVERTISSEMENT - Risque d’incendie - Aucune des pièces ne peut être réparée par l’utilisateur**

Devices are not intended for use at elevations greater than 2000 m above sea level;

Prolonged Exposure to UV Rays, Rain and the Elements May Damage the Enclosure Materials, Store Indoors When Not in Use

#### **4.1 User’s Weight Limit**

The following two points are the reason of weight limit.

1. Ensure the safety of user.
2. Reduce the damage due to overload.

Maximum Load: 100kg.



Minimum Load: 20kg.



WARNING! Over weight may make you in a danger of tumble.

#### **4.2 Maximum Range**

There are a lot of factors that will affect drive distance, such as:

Landform: A smooth, flat surface will increase the driving distance, on the contrary , it will reduce the distance.

Weight: The weight of the driver can affect driving distance.

Ambient temperature: Please ride and store balance scooter under recommended temperature, which will increase driving distance ; on the contrary, it will reduce the distance.

Maintenance: Reasonable battery charging and maintenance will increase the distance.

Speed and Driving Style: Maintain a moderate speed will increase distance, on the contrary, frequent start, stop, acceleration and deceleration will reduce the distance.

#### **4.3 Speed Limit**

Balance scooter maximum speed is 12 km/h.

Balance scooter can keep the use in balance within the specified speed. If the speed exceeds the specified speed;

Balance scooter will take the initiative to tilt the driver so as to make the speed in a safe range.

Balance scooter.

## 5. Learn driving

It is important to learn and remember the related security matters and notes before driving balance scooter.

### 5.1 Operation Procedure

Step1: Start balance scooter

Open the charger port of vehicle, press the power button.

Step2: Prepare driving

1. Put balance scooter on the flat ground.
2. Put one foot on pad that will trigger pedal switch to run indicator light, after the system enters the self-balancing , then put the other foot on the pad.

3. Step3: Control balance scooter

After standing up successfully, keeping the balance of the center of gravity can maintain balance scooter stationary state. Small forward or backward through body, remember that do not moves large extent.

NOTE: If user stands balance scooter, platform is not at the level state, the buzzer will alarm and warning indicator will light up.

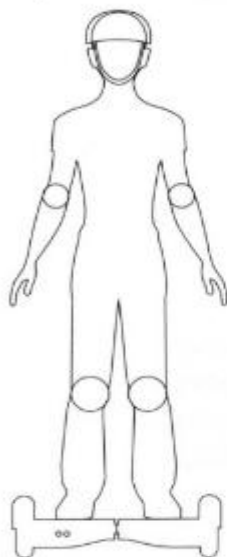
At that time the system cannot enter self-balancing status, users are forbidden to operate balance scooter.

Step 4: Control Turning

Learn your body , balance scooter will turn to the left; rightward, it will turn to the right.

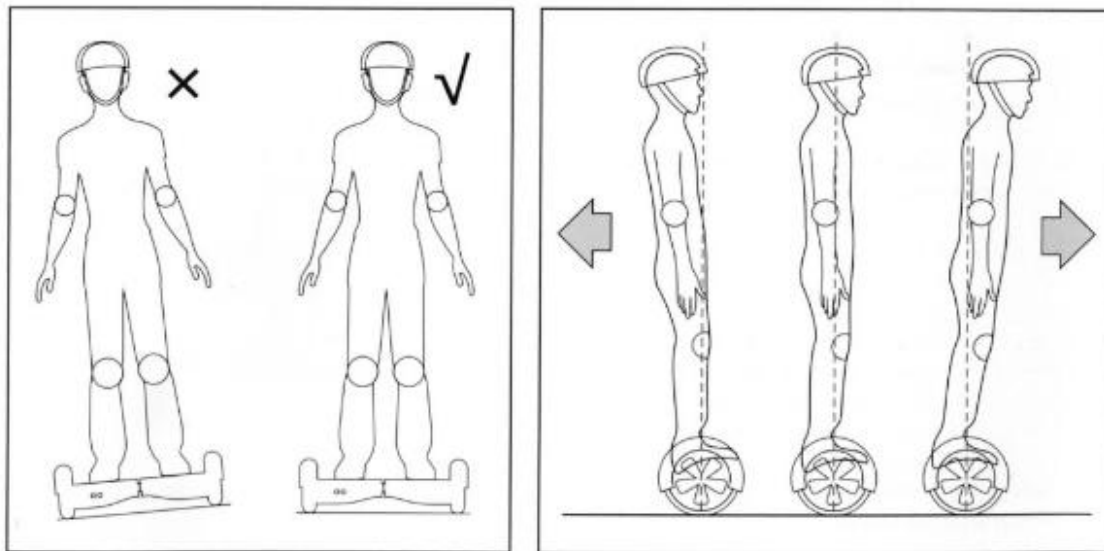
Step 5: Get off

Keep balance scooter balance, get one foot down , then other foot left mat quickly.



**The right foot forward turn left**

**The left foot forward turn right**



### Driving Schematic



**WARNING!** Do not turn sharply in the case of high speed to avoid dangerous situations.

Do not drive and turn round quickly on slopes, it may cause dangerous issues.

Do not drive on a rainy day when road is water.

## 5.2 Protection Function

During operation, if there is a system error or illegal operations, balance scooter will prompt drivers in different ways.

When you get on the vehicle, the surface forward or backward more than 10degrees.

Battery voltage is too low.

In charging

Riding process, the following is forbidden in uphill

Over-speed.

Battery is shortage.

System enters protection mode , alarm indicator will be lighted up , buzzer will alarm.

Tire blocked, balance scooter will halt after 2 seconds.

Battery voltage is insufficient below protection, balance scooter will engine off after 15 seconds.

Sustained high discharge current performance (such as long time drive at long steep slope), balance scooter will rock, so, must stop drive.



## **WARNING!**

When balance scooter engine off, system will halt, press battery Display to unlock .Do not continue driving balance scooter when the battery is exhausted or the system issues the stop information , it may lead you in trouble . Continue driving under low power will affect battery life.

### **5.3 Practice Driving**

Learn how to ride balance scooter in an open field until you can get on , off the vehicle , forward and backward ,turn and stop easily.

Dress in casual clothes and flat shoes.

You can drive balance scooter in outdoor space until you can easy control . Get on , forward, backward, turning, get off.

Drive in flat ground.

You can drive balance scooter in different terrain, please slow down in an unfamiliar terrain.

Balance scooter is design to be a personal transporter drive in flat ground , if you drive in different terrain , please slow down in an unfamiliar terrain.

If you can not skilled at driving balance scooter , please avoid driving it in crowded place. When you go through a door , please make sure balance scooter can pass normally.

## **6.Safe Driving**

This section provides some safety knowledge and cautionary statements, letting you learn about the safety precautions before using the balance scooter

To ensure that you can safely drive balance scooter, please be sure to read product manuals and comply with the relevant safety instructions. Please note all the safety warning and safety cautions that are mentioned in the product manuals, which can make drive balance scooter safer and get more pleasure.

### **NOTE:**

At any using the balance scooter, it may cause injury due to loss of control, collision and falling down .To avoid injuring, you must carefully read the user manual and driver the balance scooter referring to the manual description. Please make sure to use products in good condition and carefully read and well-known all users materials provided be our company before using the product.

When you are driving balance scooter, make sure to take all the safety measures, such as: wear a helmet, knee pads, elbow pads and other protective gear.

Balance scooter is only used for personal entertainment use.

It is prohibited to use on motorway.

When driving balance scooter, please comply with local traffic laws, give way to pedestrians.

Please be alert to things in front or far away from you, keeping good vision will help you drive balance scooter safer.

Hands clench the handle, legs relax, knees slightly bent, which would help you keep balance when you encounter uneven ground.

Make sure the feet are always riding on the pads.

Please wear suitable sports apparel to drive BALANCE SCOOTER, so that you can deal with emergencies better.

BALANCE SCOOTER can only be driven by one person, it cannot be driven by two or more people.

Users and their belongings should not exceed the maximum load (100kg), or it would make users more easily to fall or get injured during the course of driving, and even cause BALANCE SCOOTER functional damage. In addition, the driver should not be less than 20kg, which will cause drive cannot operate BALANCE SCOOTER, especially on the downhill the driver can't reduce or stop safely.

Ensure the speed within a safety range.

If accident happens, please stay in place and wait for relevant department to deal with events.

When you drive balance scooter along with other users, please keep a certain distance between each other to avoid a collision.

You should always keep in mind your height has increased 10 centimeters, be carefully when you pass doors.

When turning, please keep balance.

The personal transport is not in order to design, test, or relevant proof way to become medical equipment. Therefore, the user must use it without external force to help balance scooter.



**WARNING!**

Do not allow children, the elderly, pregnant women drive it.



Do not drive after drinking or using drugs.

Do not carry items when you are driving it.

Do not distract when driving balance scooter, such as answer the phone, listen to music, or engage in any other activities.

Do not allow to drive on slippery road in rainy day, reverse turning with a high-speed and long range high-speed.

Do not drive in a dark place.

Avoid driving in impediment and smooth surface, such as: snow, ice, and slippery floor.

Do not drive in road with obstacles, such as twigs, litter or small stones, etc.

Avoid driving in narrow space.

Avoid driving on a steep slope.

Avoid driving unsafe place, including inflammable gas, steam, liquid, dust, fiber which could cause fire and explosion accidents.

## 7. Usage of Battery

This section mainly describe the charging method of balance scooter, how to maintain the battery, some security issues, and battery specifications. For users' safety and the maximum extent of prolonging the battery life and improve battery performance, please follow the following operations using the battery.

### 7.1 Battery Power

You must stop driving if balance scooter displays low power, or it may affect lifetime and cause dangerous problems. Don't use the battery if the following occurs.

Emit odor or overheat.

Don't touch any leaking materials.

Children and animals are forbidden to touch battery.

The charger must be taken out before installing or driving or it may cause danger.

Battery contains dangerous substances, do not open the battery, do not insert anything into the battery.

Please use the charger provided by balance scooter.

Don't charge the battery that has over discharged. It should be abandoned for safety.

Balance scooter battery should be used obey local law.

## **7.2 Charging process**

Ensure charging port is dry.

Open the charging port.

Plug the charging cable into the balance scooter, make sure green indicate light up, then connect the cable with the power supply(100v-240v; 50, 60 HZ)

The red light indicates that it begins to charge, otherwise check whether the cable is connected.

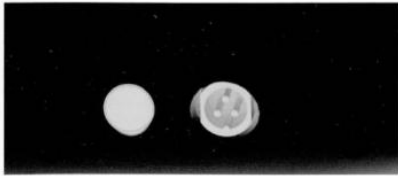
When the indicator light from red to green, it indicates that power is fully charged. At this time, please stop charging, over-charging will affect lifetime.

Use local standard plug.

Charge and store battery as suggested, otherwise it will damage the battery. The charging time is about 3-5 hours.

Keep the charged environment clean and dry.

Charger Model HLT-180-4202000, manufactured by SHENZHEN HYLETON TECHNOLOGY CO LTD; I/P: 100-240V~, 50/60Hz, 2A; O/P: 42VDC, 2A



### 7.3 Temperature

The best charge temperature is  $0^{\circ}\text{C}$ – $40^{\circ}\text{C}$ . Over cold and over heat will not completely full of battery.

### 7.4 Description of Battery

Contents	Parameters
Battery	Lithium Battery
Charging time	3-5h
Voltage	36v
Initial Capacity	4.0AH
Working Temperature	$-15^{\circ}\text{C}$ – $40^{\circ}\text{C}$
Charging Temperature	$0^{\circ}\text{C}$ – $40^{\circ}\text{C}$

Storage Time(-20℃-25℃)	12 months
Storage Humidity	5%-95%

## 7.5 Shipping Notes



**WARNING!!**

Lithium battery is dangerous articles. Shipping lithium should be allowed by local law.

**NOTE:**

Please contact balance scooter or our authorized agent, and then balance scooter can be send to you according to your requirement.

## 8. Shipping and Maintenance

Balance scooter requires the user to do routine maintenance.

This chapter describes maintenance steps and important operating tips.

Before you perform the following operations, ensure the power and charging cable is Disconnected. If the power or the battery is charging, the operation is not allowed.

### 8.1 Clean Balance scooter

Disconnect the charger and turn off balance scooter

Wipe the cover

NOTE:

Avoid using water or other liquids on the balance scooter for cleaning. If water or other liquids seep into the car, it will cause permanent damage to the internal electronics.

### 8.2 Store Balance scooter

Fully charge your battery before storing.

If you store balance scooter more than one month, please remove the battery and charge it at least every three month.

If the storage ambient temperature is below 0 ° C, please do not charge, You can bring the vehicle into a warm environment (above 10 ° C) for charging.

To prevent dust coming, you can cover balance scooter.

Store balance scooter indoors, a dry and suitable temperature. If you do not use it for a long time, please do not

connect the power.

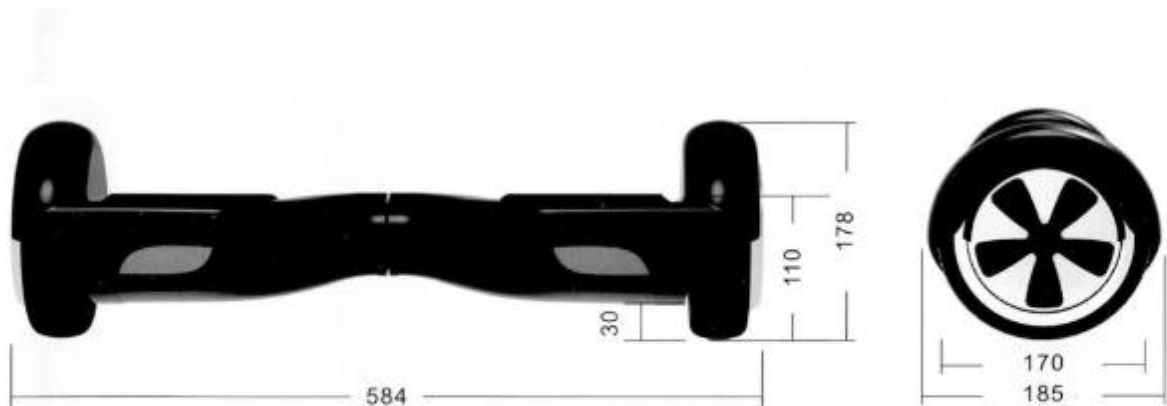


WARNING!

Users who disassemble balance scooter without permission will regard as giving up the right of warranty.

## 9. BALANCE SCOOTER Parameters

Units of measurement: mm



Parameter		
Style	Parameter	Remark
Net weight	10kg	
Load	20-100kg	Include rider and belongings
Maximum speed limit	12 km/h	



Range	15-20km	Terrain, riding style and payload may effect range
Max climbing limit	15	Load different effect climbing limit
Minimum turning radius	0	
Battery	Lithium- ion	
Power requirement	AC100-240V/50-60Hz	Applied to the global
Dimensions	584*186*178 mm	
Ground Clearance	30 mm	
Platform height	110 mm	
Tire	Non-pneumatic hollow tire	
Battery capacity	4.0AH	
Battery voltage	36v	

## 10. Packing List

### Balance scooter List

No	Product Name	Quantity
1	Car body	1

2	Charger	1
3	Remote controller	1
4	Product Manual	1
5	Warranty Card	1
6	Certificate of Approval	1

Please make sure the packaging is intact, any questions please contact us as soon as possible.

## 11. Handle Fault

Balance scooter has self-examination function, such as sensors, the system static current, system dynamic current, motor speed fluctuation, etc. You can contact our service department to solve problems.



**WARNING:** Changes or modifications to this unit not expressly approved by Yongkang Longyin Industry and Trade Co., Ltd. Could void the user's authority to operate the equipment.

## CUSTOMER SERVICE CONTACT INFORMATION

Need help? Visit our web site for replacement parts, product support, a list of authorized service centers in the US and contact information at [www.zjlongyin.com](http://www.zjlongyin.com) and email to [sales@zjlongyin.com](mailto:sales@zjlongyin.com).

## **CONTAINS LITHIUM ION BATTERY PACK. BATTERIES MUST BE RECYCLED. US COMPLIANT.**

Disposal: Your RP600B uses a lithium ion battery pack which must be recycled or disposed of in an environmentally safe manner. Do not dispose of a battery pack in a fire. The battery pack may explode or leak. Do not dispose of a battery pack in your regular household trash is prohibited by law in most areas. Return exhausted batteries to a federal or state approved lithium ion battery recycle.

### Charger

The charger supplied with the electric scooter should be regularly examined for damage to the cord, plug, enclosure and other parts. In the event of such damage, the product must not be charged until it has been repaired or replaced.

To reduce the risky of injury, use ONLY with the charger supplied with this product or a replacement specified by Razor.

### Wheels

Wheels and drive system are subject to normal wear and tear. It is the responsibility of the user to periodically inspect wheels for excess wear.

### Replacement Parts

For the complete selection of replacement parts visit [www.zjlongyin.com](http://www.zjlongyin.com)