

# S-series

# Airwheel

[www.airwheel.net](http://www.airwheel.net)

MARS ROVER User Manual

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**Airwheel Intelligent Pioneer**  
[www.airwheel.net](http://www.airwheel.net)



## About Airwheel

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Established in 2004, Airwheel Technology was originated by a group of pioneers with the idea to reshape the world with cutting edge technology. With global expectations, the U.S. based enterprise created its infrastructure with Research and Development (R&D) Centers within Los Angeles, Beijing, and Changzhou. In addition, a concentration for excellence and progression lead to a Marketing Center in Beijing and a Manufacturing Plant with roots in Changzhou. As the leader in the global portable intelligent transport industry, Airwheel has been dedicated to finding logical means to extend fun through mobility throughout the world.

### **Our Success, Built by Our Customers**

Airwheel has strived through customer feedback, opinions and ideas to find ways of sharing its resourceful achievements through its products across the world. It is Airwheel's unyielding aim to satisfy and exceed customer's expectations. We believe in passing down trust and innovation to each and every customer beyond challenges. This drives us to produce the best and highest quality products that are genuine and reliable in every sense.

### **Our Concept, Originated From the Nature and Innovation**

The brand name "Airwheel" consists of two elements: "Air" and "Wheel". The word "Air" implies the environment – a living space. The word "Wheel" symbolizes the spirit of constant progression and endless vitality of life. Airwheel is an adventurer of science and technology and a pilgrim of design, concept, and innovation. With an understanding of "Eco-friendly Innovation", Airwheel has always considered the balance between science & technology and nature. It has been an extensive goal to consider the relationship through every part of product design, R&D, manufacturing, and sales. Our idea is to bring intelligent transport products to consumers that are safe for them as well as the environment.

### **Our Design, Inspired by Interactions and Experience**

Focusing on safety through the product development process, Airwheel is broadly identified with producing products that are concise in size and user friendly by design. With comfortability in mind, Airwheel shares its care with understanding its customer's interactions and experiences with its products. Through such measures, Airwheel makes every effort toward continuous improvement with heavy consideration of customer's opinions and relations. The results – a product based on consumer expectations.

### **Our Advantage, Contributed by Cooperation and Service**

As the leader in the global portable intelligent transport industry, Airwheel has built long-term partnerships with such tech titans as Sony, Panasonic, Google, and Qualcomm. With strong relationships and premium business partners, Airwheel has shared in win-win scenarios in creating reliable, high-quality products with guaranteed customer-based experiences and results. Airwheel has seen advantages in capital and global strategy and will continue to provide customers with complete and interactive services through continuous integration and cooperation.

# User Manual Information

This User Manual includes safety usage instructions. Please read this User Manual and understand its contents in its entirety before attempting to operate the Airwheel Vehicle. Product is subject to change in features and appearance without notice.

## Packing Details

the Airwheel ( S3/S3T/S3+/S3S/S5 )	1 unit	hexagon wrench	2 pcs
control shaft, foldable control shaft (Optional)	1 pcs	battery charger	1 unit
remote key	2 pcs	user manual	1 pcs
warranty card	1 pcs	quality certificate	1 pcs



# Table of Contents

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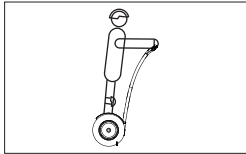
About Airwheel-----	I
User Manual Information-----	II
Table of Contents-----	01
1 Introduction-----	03
2 Installation-----	04
2.1 Check Packing Contents-----	05
2.2 Preparation-----	05
2.3 Assembly of the Handlebar and Control Shaft-----	06
2.4 Installing the Battery Pack-----	08
3 Safety-----	09
3.1 Safety and Riding Guidelines-----	11
3.2 Safety Measures-----	12
3.3 Warning Situations-----	13
4 Learning Instructions (Overview)-----	14
4.1 Before Getting Started-----	14
4.2 Learning Tips-----	15
4.3 To Go Forward and Backward-----	16
4.4 Stopping and Braking-----	17
4.5 Making Turns-----	18
4.6 Getting Off-----	19
4.7 Important Note-----	20

5	Getting Started-----	21
	5.1 Components-----	21
	5.2 Getting Started-----	21
	5.3 Kick Stand-----	22
	5.4 Remote Key-----	23
6	Maintenance-----	24
	6.1 Cleaning and Storage-----	24
	6.2 Screws-----	25
	6.3 Tire Pressure-----	25
	6.4 Transportation and Storage-----	25
7	Specifications-----	26
8	Airwheel Breakdown-----	27
	8.1 Visual Diagrams-----	27
	8.2 Installing The LED Lights (S5 model only)-----	35
	8.3 How To Fold The Control Shaft (S5 model only)-----	35
	8.4 Charging The Battery-----	36
	8.5 Range and Load-----	37
	8.6 FAQ-----	38
	8.7 Road Test-----	39
9	Limited Warranty-----	40
	9.1 Contact Us-----	42

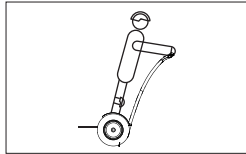
# 1. Introduction

Airwheel is the state-of-the-art means for mobility transportation with technology adopted from the aerospace industry. With an in-depth understanding of attitude control theory, software algorithm, and gyroscope systems, Airwheel has incorporated these theories and systems to develop the S-series vehicles. Riders can balance by leaning forward and backward to control the vehicle as it accelerates, decelerates, and brakes. Turning on the S-series vehicle is controlled by the presence of the handlebar and the vertically ascending shaft. The lateral movement of the handlebar will cause the differential of rotational speed on both wheels. For instance, the rotational speed of the right wheel will be faster than the left wheel when the shaft is swung to the left allowing the vehicle to turn left. The rotational speed of the left wheel will be faster than the right wheel when the shaft is swung to the right allowing the vehicle to turn right..

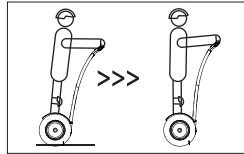
The Airwheel S-series is our greenest and lightest mobility vehicle which can be easily carried onto buses or subways to make daily commutes more convenient.



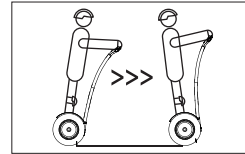
Forward



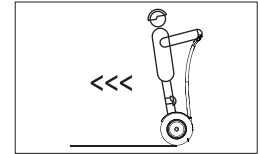
Accelerate



Decelerate



Stop / Brake

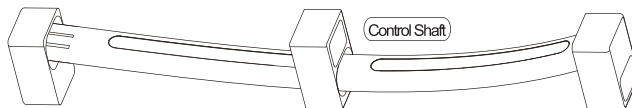
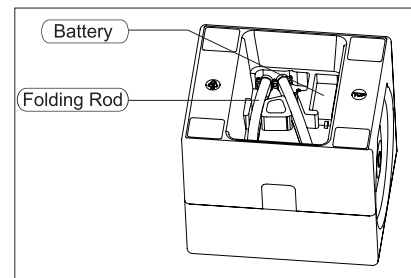
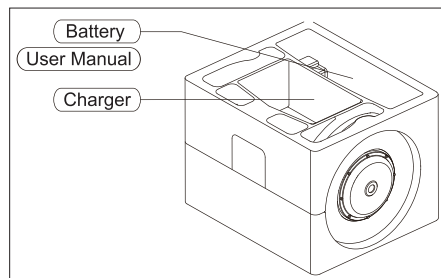
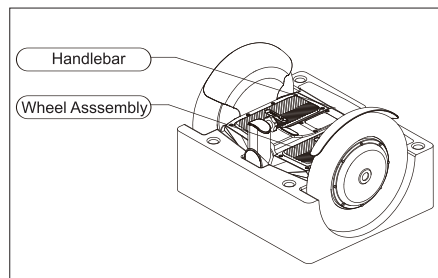


Backward

## 2. Installation

### 2.1 Check Packing Contents

Open the packing box(s) and carefully/cautiously remove the Handlebar, Control Shaft, and Foot Platform. When removing the Foot Platform, please keep it in the upright position. Removing the Foot Platform from the box may require two adults. Grab hold of the front and rear of the Foot Platform when lifting. Do not lift by the dirt covers. Inspect these items to make sure they have no damages.





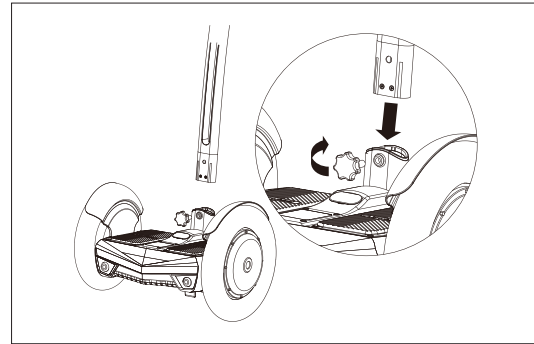
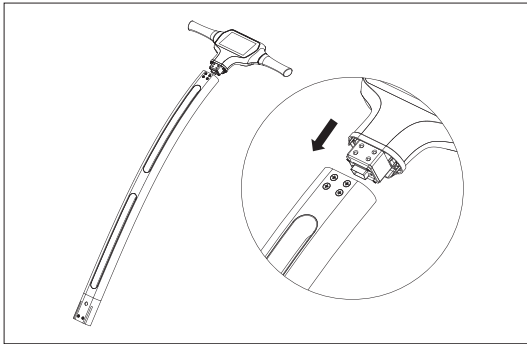
**When unpacking the Wheel Assembly/Foot Platform, please have two adults available to lift the unit out of the packaging. When lifting, always do so by getting a firm grip on the front and rear of the unit. Do not lift using the Dirt/Mud Cover.**

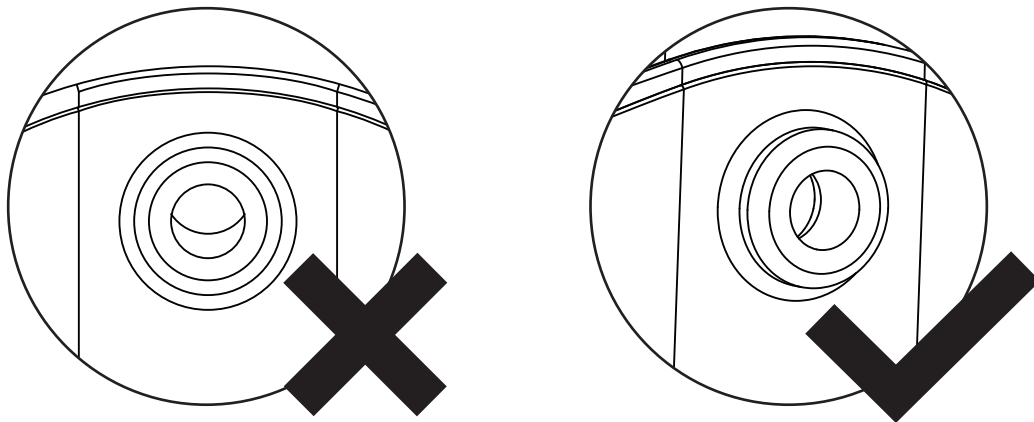
## 2.2 Preparation

Before assembly, please locate the included (2) different size Allen Wrenches. It is recommended to hold onto these Allen Wrenches even after the assembly process is completed.

## 2.3 Assembly of the Handlebar and Control Shaft

Whether you have the S3 series or the S5 series, you will need to assemble the Control Shaft to the Foot Platform. Remove the Handlebar and Control Shaft from the box and inspect it to make sure it has no damages. Then proceed to inserting the Handlebar into the slot on the Control Shaft as seen below. You will need to secure the Handlebar to the Control Shaft using the provided screws. You will use (4) screws on one side and (2) screws on the other side. Make sure the holes line up properly on the Handlebar and Control Shaft before inserting the screws. Next, locate the Fastening Knob. If it is already screwed into the Foot Platform, remove it by turning it counterclockwise. Then insert the Control Shaft into the slot on the Foot Platform as seen below. Make sure when inserting the Control Shaft into the Foot Platform that the display panel (Human-Machine Interface HMI) on the Handlebar is facing the Foot Platform as you will be viewing this when riding the Airwheel Vehicle. You can now secure the Control Shaft to the Foot Platform using the Fastening Knob. Make sure the holes line up on the Foot Platform and Control Shaft before inserting the Fastening Knob. Once inserted, the Fastening Knob will need to be turned clockwise in order to tighten. Tighten enough so that it is snug. Do not overtighten.

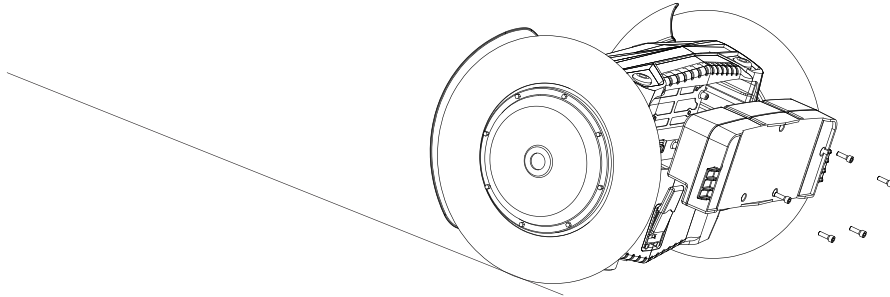




**Unfasten the fixing knob before installing or removing the control shaft, then insert the control shaft vertically into the base on the wheel assembly and fasten the fixing knob. Make sure to install the control shaft as shown ticked above (line the inner hole with the outer hole). An overly tightened fixing knob will cause a fixed connection. On the other hand, a loosened fixing knob may cause dangerous detachment.**

## 2.4 Installing the Battery Pack

The battery pack supplied with the unit is a SONY US18650V3/2250mAh. It will need to be installed at the underside of the Foot Platform. Locate the (5) M6\*20 hex screws and corresponding Allen Wrench. Then lean the Foot Platform down flat so that you can place the Battery Pack into place making sure the holes line up with the Battery Pack and the Foot Platform. When leaning the Foot Platform down flat, you can place a blanket or cardboard to protect the Airwheel Vehicle from getting scratched or damaged. Use the (5) screws to secure the Battery Pack into place. Use the Allen Wrench to turn the screws clockwise in order to tighten them. See the diagram below. Once you have installed the Battery Pack, stand the unit up vertically and press the Master Power. Button on the Foot Platform. Once you hear a voice from the unit, then you know the Battery Pack was installed properly.



**Lay flat the unit and install the battery case onto it, then fasten the screws.**



**Use a soft cloth or foam chunks to protect the unit against scratches when it's laid flat. Make sure the battery case is well connected and screws are fastened. Erect the unit vertically and try to power it on and off to check if the indication panel is working properly.**



## 3. Safety

When riding the Airwheel Vehicle, you must do so with caution. There are risks associated when riding any mobility vehicle. Airwheel is no exception. Please fully read this User Manual and understand its contents in its entirety before attempting to operate the Airwheel Vehicle. The vehicle should be operated by an adult. When operated by a minor, it must be under adult supervision.

### Important Note:

1. Do not accelerate, decelerate, or speed abruptly. Engaging in such movement while leaning forward or backward can result in injury and is strictly prohibited. In addition, do not overly lean forward or backward as this too can result in injury and is strictly prohibited.
2. When the power level indicators show only two bars left, riding is not recommended as the battery needs to be charged. Riding the Airwheel Vehicle with two or less bars can result in the vehicle not responding properly due to insufficient battery power. You will need to charge the battery as soon as possible.
3. When riding the Airwheel Vehicle, always do so cautiously and per the instructions in the User Manual.

### Attention:

- 1) Users of the Airwheel Vehicle must wear a helmet and elbow/knee pads when operating and riding the Airwheel Vehicle. Additional safety gear such as gloves and eye protection would add additional protection.
- 2) Do not ride the Airwheel Vehicle on unlevelled, bumpy, or rough surfaces. The Airwheel Vehicle must be ridden on a hard surface such as asphalt or concrete. Do not ride on muddy, flooded, or gravel roads.
- 3) Do not ride the Airwheel Vehicle on wet, slippery, or icy surfaces.
- 4) Do not ride on slopes greater than 15% (incline/decline).
- 5) The Airwheel Vehicle is not for use by children under the age of 15 or those aged above 60 years. For those riders under 18 years of age, they need to be under adult supervision when operating or riding the Airwheel Vehicle.

- 6) Do not operate the Airwheel Vehicle when intoxicated. Do not operate when taking drugs or medication that can alter your mental state.
- 7) Persons with high blood pressure, cardiac-cerebral vascular related diseases, or other high risk mental/physical conditions must not operate or ride the Airwheel Vehicle.
- 8) Do not operate the Airwheel Vehicle in excessive low or high weather temperatures.
- 9) Do not ride the Airwheel Vehicle rain or snow.
- 10) When riding on surfaces with a slight slope, do so cautiously and slowly.
- 11) If you feel any discomfort or suffer from any physical condition that will affect your riding the Airwheel Vehicle safely, do not operate or ride the Airwheel Vehicle.



**When riding the Airwheel Vehicle for the first time, cautiously practice at slow speeds until you become comfortable with the unit. To be an effective rider, you will need to learn gradually the controlling skills in order to operate the Airwheel Vehicle properly. Not understanding the Airwheel Vehicle , how it works, or improper usage can result in injury to the rider and others. Airwheel and its representatives will not be responsible for improper operation or improper riding of the Airwheel Vehicle or irresponsible usage.**

## 3.1 Safety and Riding Guidelines

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1. You must understand your local laws and regulations of your city/state when operating a mobility vehicle. Always be courteous and cautious when operating or riding the Airwheel Vehicle around others. Take precaution to avoid accidents and collisions.
2. Ride the Airwheel at safe and proper speeds. Maintain control of the Airwheel Vehicle at all times. Always keep a safe distance from pedestrians and other vehicles when operating or riding the Airwheel Vehicle. Always be prepared to stop.
3. Respect pedestrians and avoid startling pedestrians when operating or riding the Airwheel Vehicle. When approaching anyone from behind, do so by announcing yourself and slowing down to a walking speed when passing. When passing, do so on the left hand side. When approaching anyone from the front, slow down and pass on the right side.
4. Always keep a safe distance from other individuals and other mobility vehicles. Avoid any obstacles that would place you in danger. Never ride side-by-side with other Airwheel Vehicle riders. Again, always keep a safe distance.
5. Only ride the Airwheel Vehicle when there is sufficient lighting. Riding in low light can obstruct safe visibility to operate the Airwheel Vehicle properly. Always ride cautiously and safely.
6. Relax your body when riding. Bend the knees and elbow slightly and concentrate your eyesight in front of you.
7. Understand that riding backward can be dangerous. When riding backward, do so slowly and cautiously to avoid striking any person or object.



**Lean forward slightly to accelerate. Do not lunge your body forward/backward suddenly or abruptly as you can lose control of the Airwheel Vehicle and become injured by falling off. Always take precaution when operating and riding the Airwheel Vehicle.**

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## 3.2 Safety Measures

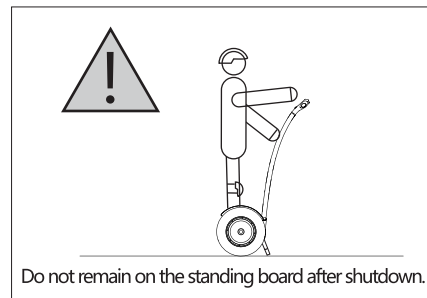
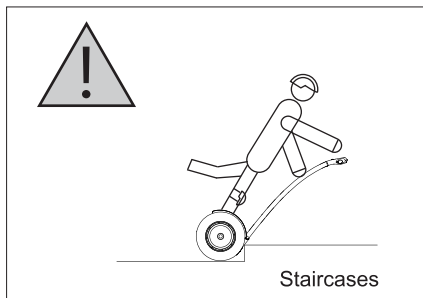
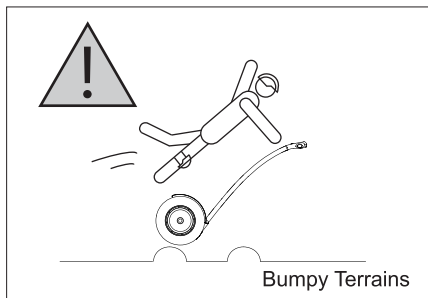
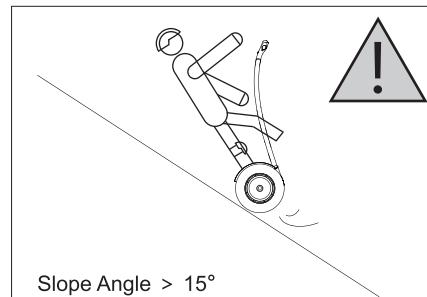
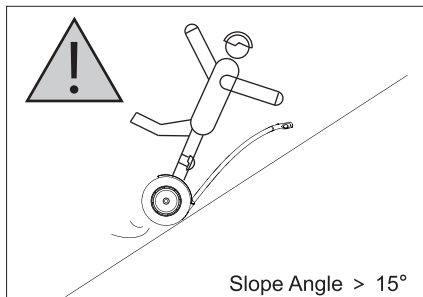
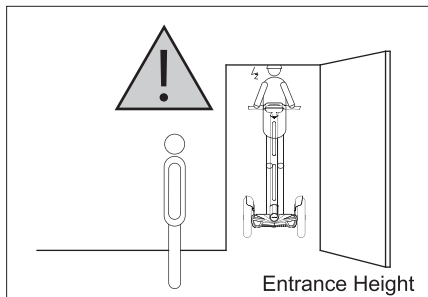
**Please read through this manual and make sure it is fully understood.**

1. Before each use of the Airwheel Vehicle, always inspect the unit carefully for any loose wires or damaged parts.
2. Do not allow others to operate or ride the Airwheel Vehicle unless they have fully read and understand the contents of this User Manual.
3. Please wear appropriate safety gear which could include a helmet, elbow/knee pads, safety eyewear, and or gloves when operating and riding the Airwheel Vehicle. Make sure the safety gear is comfortable and fits properly for protection.
4. Do not ride the Airwheel Vehicle when your health, mental or physical state is compromised. Do not operate or ride the Airwheel Vehicle when you have taken medication or drugs, are intoxicated, or your mental/physical state is altered.
5. When the Airwheel Vehicle has alerted you that the battery is low, you will need to stop riding the Airwheel Vehicle immediately. You will need to charge the battery before operating or riding the vehicle again. When the Airwheel Vehicle has alerted you that you are riding too fast, you will need to slow down immediately.
6. When you have concluded operating or riding the Airwheel Vehicle, you will need to power the unit OFF by pressing the Master Power Button on the Foot Platform.
7. Never place your fingers in between the Foot Platform and the tires to avoid your fingers from getting caught or injured.



**Never steer the Airwheel Vehicle with your body leaning against the Control Shaft. Steering with your body leaning against the Control Shaft can lead to an accident and possible injuries. Always keep about a 4 inch distance from your body to the Control Shaft/ Handlebar.**

### 3.3 Warning Situations

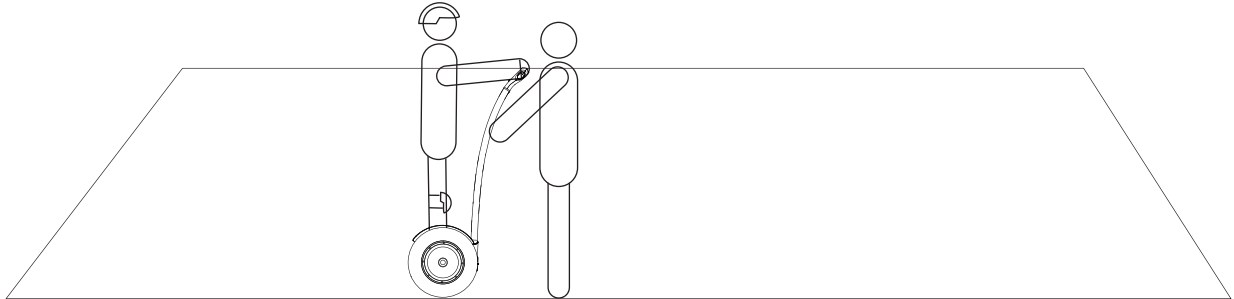


# 4. Learning Instructions (Overview)

Section 4 will give you an overview only. You will not actually ride the Airwheel Vehicle in this section.

## 4.1 Before Getting Started

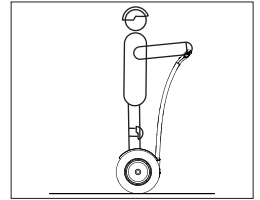
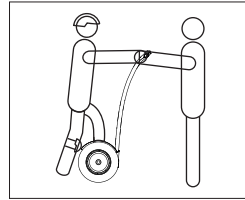
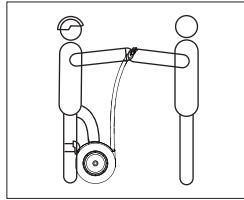
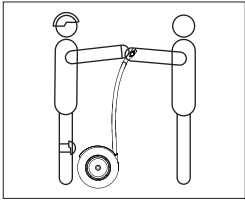
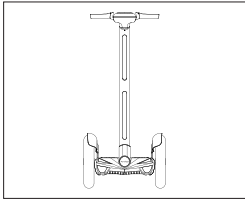
This section will provide an overview only. You will need to read through Section 5 before riding the Airwheel Vehicle. When operating or riding the Airwheel Vehicle, make sure you are wearing comfortable clothing and sneakers. For your protection and safety, you need to wear a helmet and elbow/knee pads. Eyeware and gloves can also be worn. Make sure your body is agile, not stiff and rigid. Keep in mind that you do not need to be an athlete to operate the unit, but some athletic skills may assist in your riding the Airwheel Vehicle. To start, find an open area in which you can practice operating and riding the Airwheel Vehicle. Make sure the area is free from obstacles and bumpy/rough terrain.



## 4.2 Learning Tips

Learning how to ride the Airwheel Vehicle is much easier than you may think. It would actually be easier than learning how to ride a bike. It should take you less than five minutes to get the hang of it. Please note that you will need an adult partner when first learning how to ride the Airwheel Vehicle. Your partner will need to stand in front of the Airwheel Vehicle and hold the handlebar with both hands to help you balance on the Airwheel Vehicle. Do not stand on the Foot Platform until after the Master Power Button on the Foot Platform and the "A" button on the Remote have been pressed.

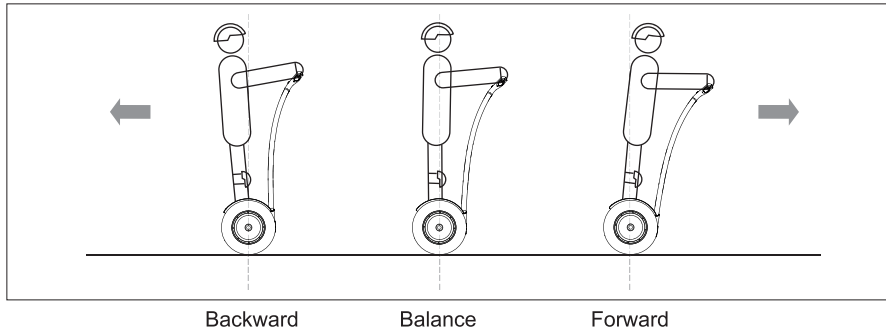
- The partner will need to hold onto the Handlebar with two hands.
- The rider will then step up onto the Foot Platform of the Airwheel Vehicle with one foot first.
- The rider will shift his/her center-of-gravity on the Foot Platform when placing the second foot up onto the Foot Platform. (Imagine going upstairs)
- It is important for the rider to keep calm and stay relaxed while looking forward as seen below.
- Do not move the Handlebar laterally. (Imagine yourself standing on flat ground)



**It is very important that the rider remains calm and relaxed. The more relaxed you are, the easier it will be to keep balanced. Beginners can stand upright on the Foot Platform while the adult partner keeps the Airwheel Vehicle balanced by holding onto the Handlebar. Once you feel comfortable with the Airwheel Vehicle, you can proceed to the next section.**

## 4.3 To Go Forward and Backward

To go forward, you will need to lean forward slightly and push the handlebar gradually forward. To go backward, you will need to lean slightly backward and pull the handlebar gradually backward. When you begin riding, you will need to steer at a slow speed until you become more comfortable with steering, acceleration, deceleration, and stopping. To return to the idle position, you will need to place the handlebar back to the upright position. When riding the Airwheel Vehicle, always be aware of your surroundings to avoid collisions with other obstacles.



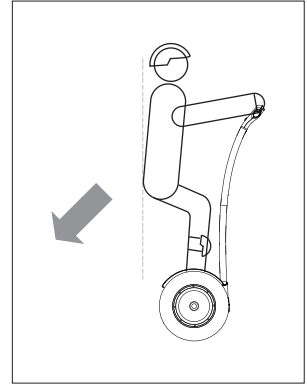
**When first learning how to ride the Airwheel Vehicle, you must steer cautiously and accelerate and decelerate gradually. Please avoid controlling the Airwheel Vehicle in a jerking manner. In additional, please avoid drastic shaking in the forward and backward directions and avoid any abrupt shifting of your center-of-gravity which could result in injury.**



## 4.4 Stopping and Braking

You will stop the Airwheel Vehicle by shifting your center-of-gravity to the opposite direction in which you are traveling:

1. When the Airwheel Vehicle is in motion, you will need to gradually move the back of your hips as if you were about to sit down in order to bring the Airwheel Vehicle to a stop.
2. When the Airwheel Vehicle comes to a full stop, shift your center-of-gravity to the center of the Airwheel Vehicle in order to balance. If you continue to lean forward or backward, the Airwheel Vehicle will move accordingly.
3. To practice, you can choose a spot on the ground and practice balancing at that spot.



Standard Brake Manner



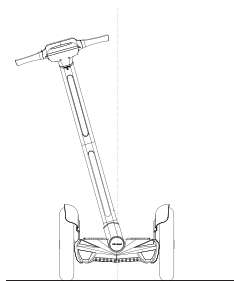
**Always stop the Airwheel Vehicle in a gradual and mild manner. Avoid abrupt stopping/braking. Shift your center-of-gravity gradually to the opposite direction in which you are traveling. On average, it typically would take a distance of approximately 4 meters (13.1 feet) to stop from top speed on an asphalt surface. As a result, this needs to be taken into consideration when decelerating to avoid any collisions. Do not use the Airwheel Vehicle on slippery or wet surfaces as this could result in injury.**

## 4.5 Making Turns

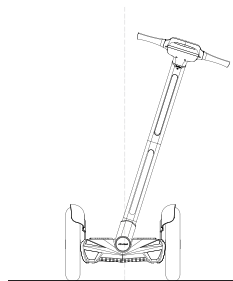
The Airwheel Vehicle turns according to the movement of the Handlebar and Control Shaft. By pushing the Handlebar left or right, the Airwheel Vehicle will turn accordingly.

1. You will want to practice turning. You can do so by moving the Handlebar gradually towards the direction you wish to turn to. The Airwheel Vehicle will continue to turn that direction until you restore the Handlebar to the upright vertical position.
2. When you proceed to riding the Airwheel Vehicle after reading through Section 5, you will be able to turn while in motion. Once you have gotten the hang of the Airwheel Vehicle, you can proceed on the Airwheel Vehicle by moving forward slowly and practicing your turning. You can keep your knees slightly bent and prepare to lean toward your turning direction in accordance with the Control Shaft.

Turn Right



Turn Left



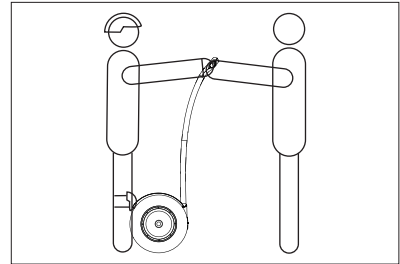
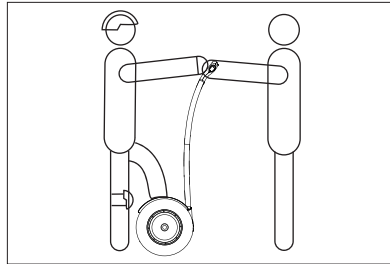
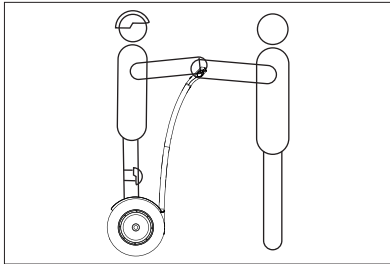
**Please note that sharp turns are dangerous. Sharp turns will cause you to lose control of the Airwheel Vehicle. When turning, you must decelerate and only make turns at slow speeds. This will allow you to maintain balance when turning.**

## 4.6 Getting Off

Getting off of the Airwheel Vehicle, when it is stopped, is very similar to stepping down from stairs. You can practice with your partner as he/she holds the Handlebar with two hands while you get off of the unit.

### **Instructions:**

1. It is important that you hold onto the Handlebar as you step off of the Airwheel Vehicle. Step off with one foot first, control your center-of-gravity, and then remove your second foot from the Airwheel Vehicle. Do not let go of the Handlebar. Avoid moving the Handlebar as you exit the unit.
2. Once you have taken both feet off of the unit, are still holding onto the Handlebar, and the Handlebar is in the upright vertical position – you can press the “A” button on the remote to turn the unit OFF. This will stop the unit from moving. Please note that you will need to turn OFF the Master Power Button on the Foot Platform when you are finished riding the unit or the unit will continue to drain power.





**Avoid shifting the Handlebar when exiting the Airwheel Vehicle. Movement of the Handlebar will cause the unit to move and turn while you are no longer on the unit. Make sure to press the “A” button on the remote as soon as you exit the Airwheel Vehicle. Do not overly tighten your grip on the Handlebar before pressing the “A” button as this is not recommended. It could lead to the Airwheel Vehicle moving out of control. Be very cautious and practice getting off of the Airwheel Vehicle.**

## 4.7 Important Note



### ATTENTION

1. To operate and ride the Airwheel Vehicle for the first time, you must have an adult partner. It is highly recommended that riders under the age of 18 or over the age of 45 should have a partner whenever riding or operating the Airwheel Vehicle.
2. Always monitor your power level and check your tires before riding the Airwheel Vehicle.
3. Always control your balance when in motion. Do not accelerate unless you are balanced on the unit.

# 5. Getting Started

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## 5.1 Components

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( See Page 27-34 )

1. Handlebar
2. Human-Machine Interface (HMI)
3. Motor
4. Control Shaft
5. Foot Platform (Silica Gel)

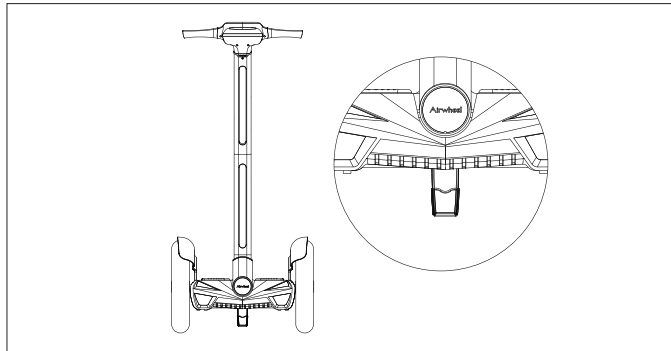
## 5.2 Getting Started

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1. To get started, you first must adjust the Control Shaft to the upright position and make sure the Handlebar is parallel to the Foot Platform so that the Airwheel Vehicle is balanced.
2. Locate the rubber cap that covers the Master Power Button on the Foot Platform. Press the Master Power Button. Within several seconds, you will hear a voice giving instructions to “ride carefully” and that the “bluetooth device is ready to pair” .
3. Have your partner stand in front of the Airwheel vehicle and hold the Handlebar with two hands making sure that the Handlebar is in the upright position and parallel with the Foot Platform. Press the “A” button on the Remote and the display panel (Human-Machine interface HMI) will illuminate. You can now put one foot up and onto the Foot Platform. Once you have put one foot up and onto the Foot Platform, you will hear a beep letting you know the unit is ready. Balancing your center-of-gravity, you can now place your second foot up and onto the Foot Platform. Your partner will help you to keep balanced as the unit is now in the gyro-balance setting. Cautiously and carefully allow the Airwheel Vehicle to move forward slowly as you lean slightly towards the Control Shaft. Practice moving forward and backward slowly as you get the hang of it.
4. It is very important that the Airwheel Vehicle remains in balance. You cannot step up and onto the Foot Platform if the Control Shaft is not balanced in the upright position. You cannot step up and onto the Foot Platform if the Foot Platform is not balanced horizontally. Make sure the Airwheel Vehicle is in the proper gyro-balanced position before getting up and onto the Foot Platform.

## 5.3 Kick Stand

When riding the Airwheel Vehicle, always remember to put the Kick Stand back to its non-standing. If you ride with the Kick Stand down, the Kick Stand will break as a result as it will hit objects on the ground. The Kick Stand is used only when the Airwheel Vehicle is parked. When the Airwheel Vehicle is not in use, it is strongly recommended to power the unit OFF at the Master Power Button on the Foot Platform to conserve the battery.



**Always release the kick stand when the unit is off. To prevent misuse of Airwheel by others, we strongly suggest you power off the unit when you're not around. In addition, do not get on and steer Airwheel when the kick stand is released, otherwise the kick stand can be damaged and may cause accidents.**

## 5.4 Remote Key

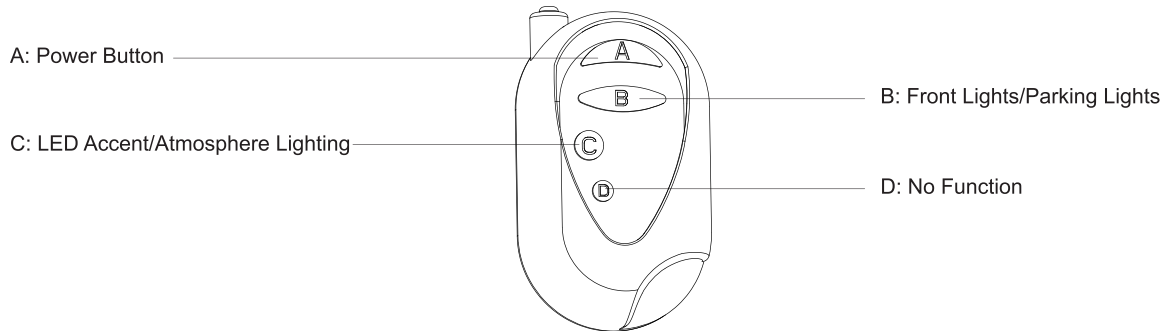
The Remote Key can transmit up to approximately 32 feet (10 meters) away from the Airwheel Vehicle. The functions of the buttons on the Remote Key are as follows:

"A" : Power Button – The Power Button will allow you to ride the Airwheel Vehicle once the Master Power Button has been pressed and both feet are on the Foot Platform. If pressed a second time after the user has removed both feet from the Foot Platform, the Power Button will deactivate the movement of the wheel motors.

"B" : Front Lights/Parking Lights – The Front Lights/Parking Lights Button will turn the Front Lights/Parking Lights ON and OFF when pressed.

"C" : LED Accent/Atmosphere Lighting (S3 model) – The Accent Lighting Button will turn ON and OFF the lights on the Control Shaft.

"D" : No Function.



# 6. Maintenance

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## 6.1 Cleaning and Storage

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- Make sure the rubber cover is secure over the Master Power Button and Charging Port before cleaning.
- You can wipe down the Airwheel Vehicle periodically to keep it clean.
- Use a soft damp towel and mild soap to clean the unit. You can use some rubbing alcohol to remove marks that the soap will not remove.
- Use a wet towel to clean the tires and fenders. Make sure to dry the Airwheel Vehicle to avoid rusting.
- Store the Airwheel Vehicle in a dry and cool place indoors when not in use. Do not store and expose the Airwheel Vehicle to direct sunlight or freezing outdoor temperatures as this will lead to accelerated aging of the product.



**When storing the Airwheel Vehicle, make sure to power the unit OFF at the Master Power Button on the Foot Platform. Make sure the rubber cover is secure over the Master Power Button and Charging Port. Do not spray the Airwheel Vehicle down using a gardening hose as this could potentially short-circuit the unit as water may leak to the internal circuits. Never submerge the Airwheel Vehicle in water.**



## **6.2 Screws**

Always inspect the Airwheel Vehicle before each ride. Use the provided Allen Wrench tool to make sure the screws remain tight, especially the screws on the Wheel Hub, Control Shaft, Battery Case, Dirt Cover, Foot Platform, and Display Housing (Human-Machine Interface HMI).

## **6.3 Tire Pressure**

Generally, the tire pressure should range between 28 – 31 psi (2 – 2.2 kg/cm<sup>2</sup>). High tire pressure at 31 psi will contribute to smaller friction force and longer battery range. Lower tire pressure at 28 psi will contribute to a smoother ride.

## **6.4 Transportation and Storage**

The Airwheel Vehicle is recommended to be lifted by two adults. When lifting the Airwheel Vehicle, always hold the Airwheel Vehicle with one adult grabbing hold at the front part of the unit and another adult grabbing hold at the battery case on the underside at the rear of the unit.

When storing the Airwheel Vehicle, make sure to power the unit OFF at the Master Power Button on the Foot Platform. If storing the Airwheel Vehicle in a car trunk, make sure to remove the Control Shaft first. If the Control Shaft can fold, please fold before entering the unit into the car trunk. It will take two adults to lift the unit up and into the car trunk. Always use caution when lifting the Airwheel Vehicle.

# 7. Specifications

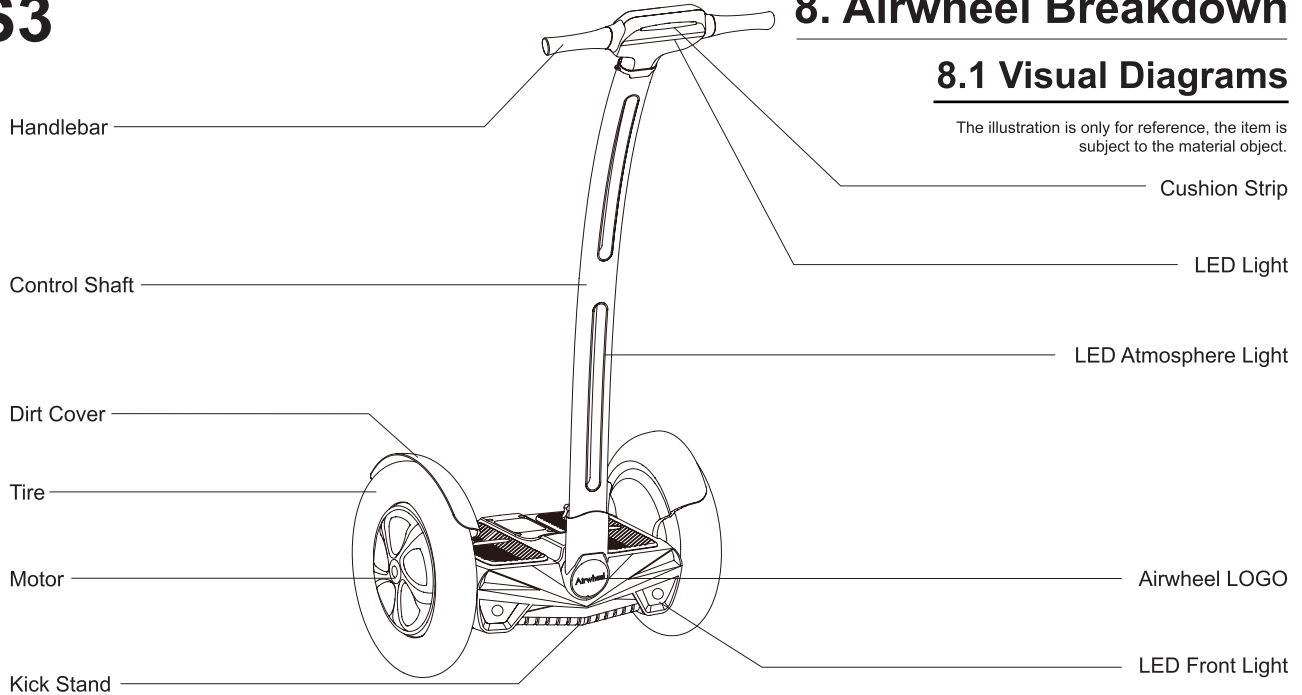
Specifications	Parameters	Details
Motion of the Control Shaft	Horizontal	
Weight	S3/S3T/S3+: 22.4kg , S5: 35kg	Standard Accessory
Max. Speed	About 18km/h	Speeding alert activates at 12km/h
Max. Climbing Angle	About 15°	Riders weighing 60kg get up to 18°
Battery Capacity	520Wh/680Wh	Protection board with SOC equalization
Working Temperature	-10°C ~40°C	Best at 10° ~30° C
Max. Load	120kg	
Charge Voltage	AC220V 50~60Hz	Optional: 110V/110V-240V
Charge Time	520Wh: about 180min	
	680Wh: about 240min	
Size	Height:1280mm , Length: 613mm , Width: 587mm	S3/S3T/S3+
	Height:1330mm , Length: 660mm , Width: 650mm	S5
Tire Size	S3/S3T/S3+: 14 inches , S5: 16 inches	
Platform Height	S3/S3T/S3+: 223mm , S5: 274mm	
Chassis Height	S3/S3T/S3+: 93mm , S5: 144mm	

# S3

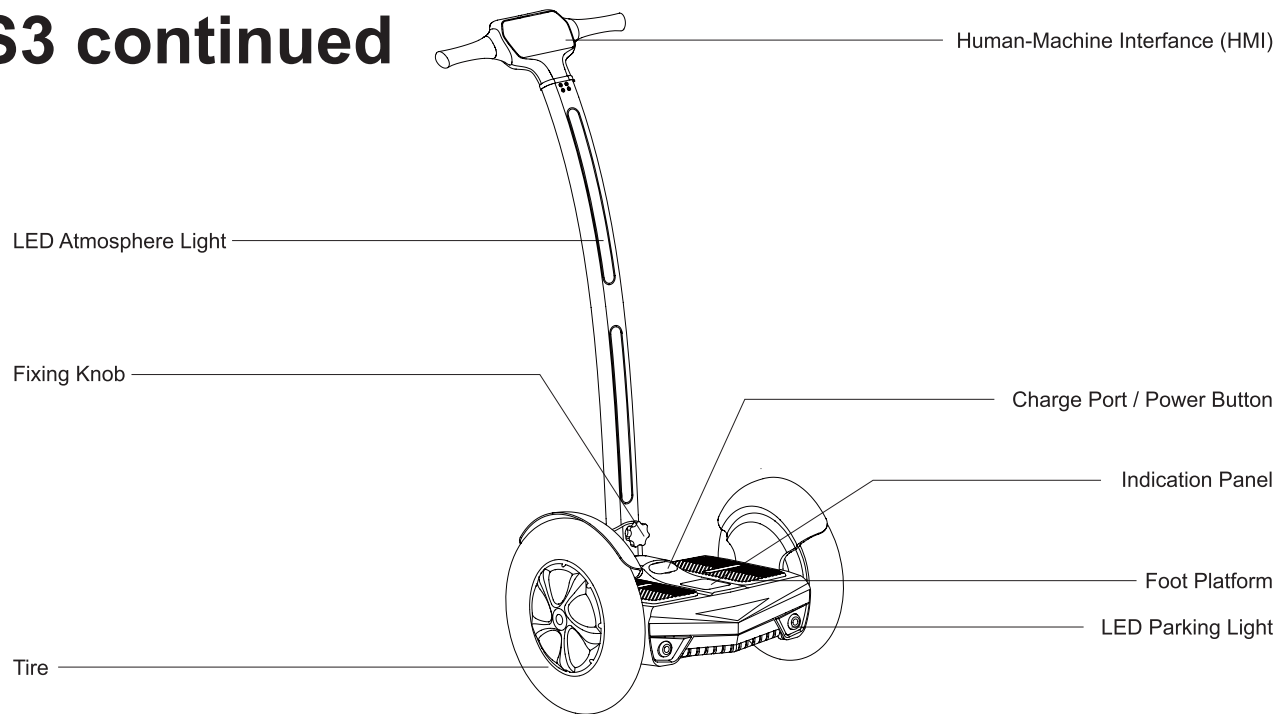
## 8. Airwheel Breakdown

### 8.1 Visual Diagrams

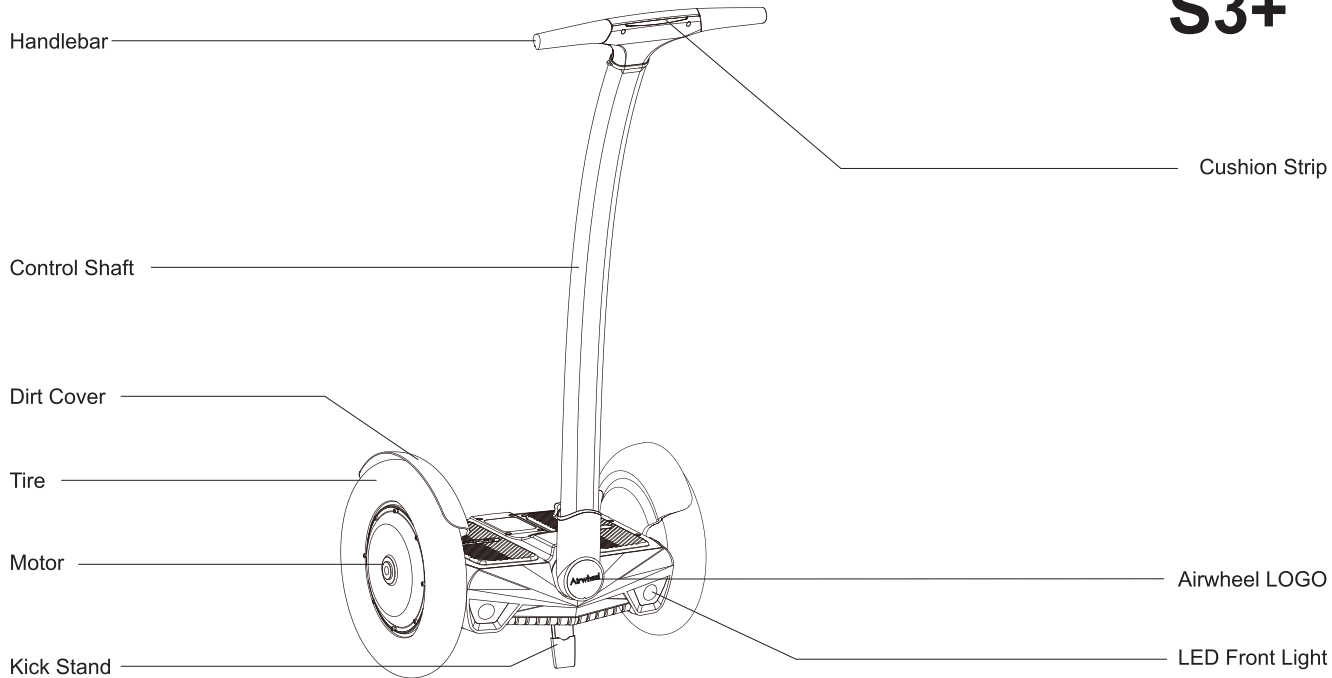
The illustration is only for reference, the item is subject to the material object.



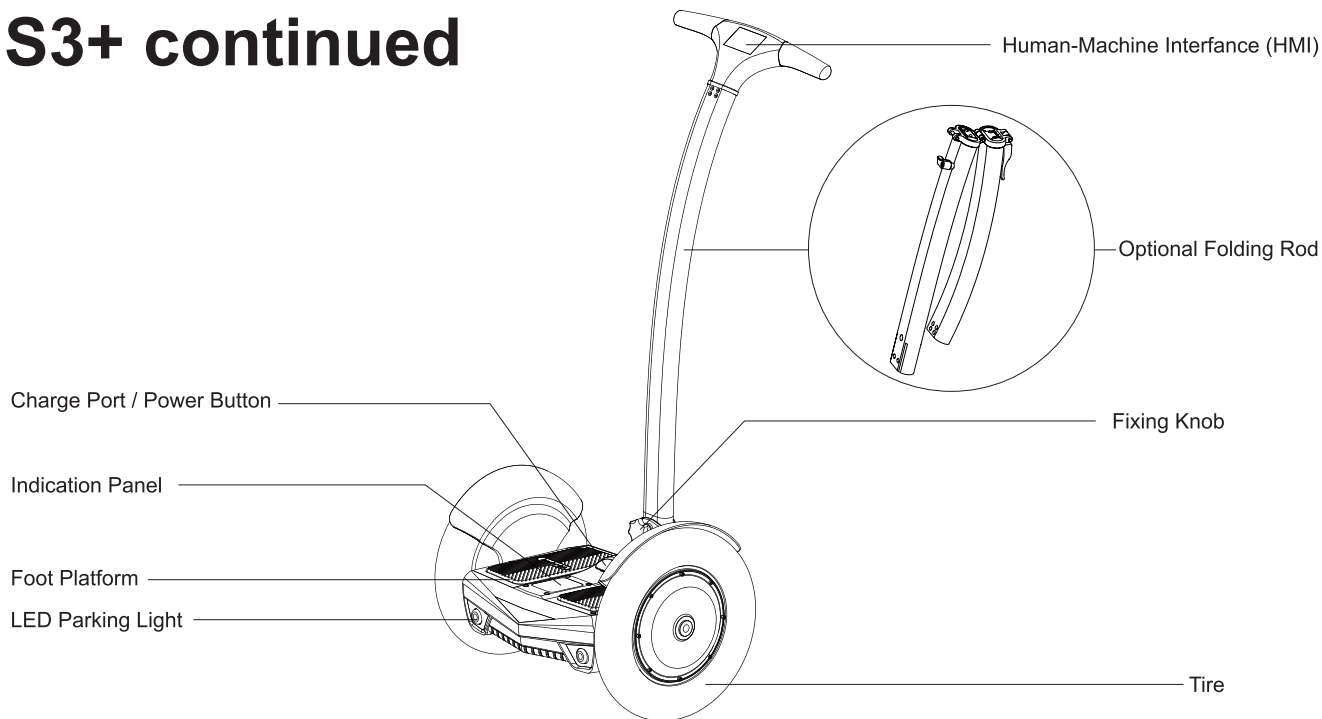
# S3 continued



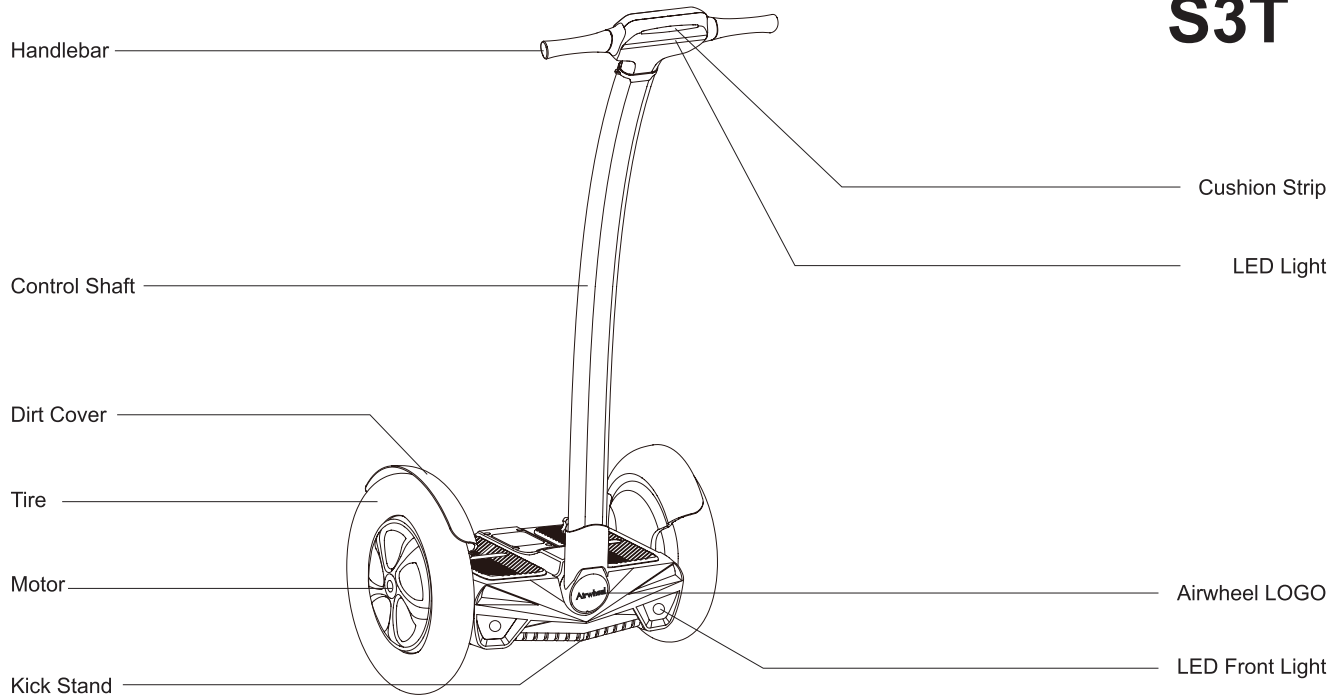
# S3+



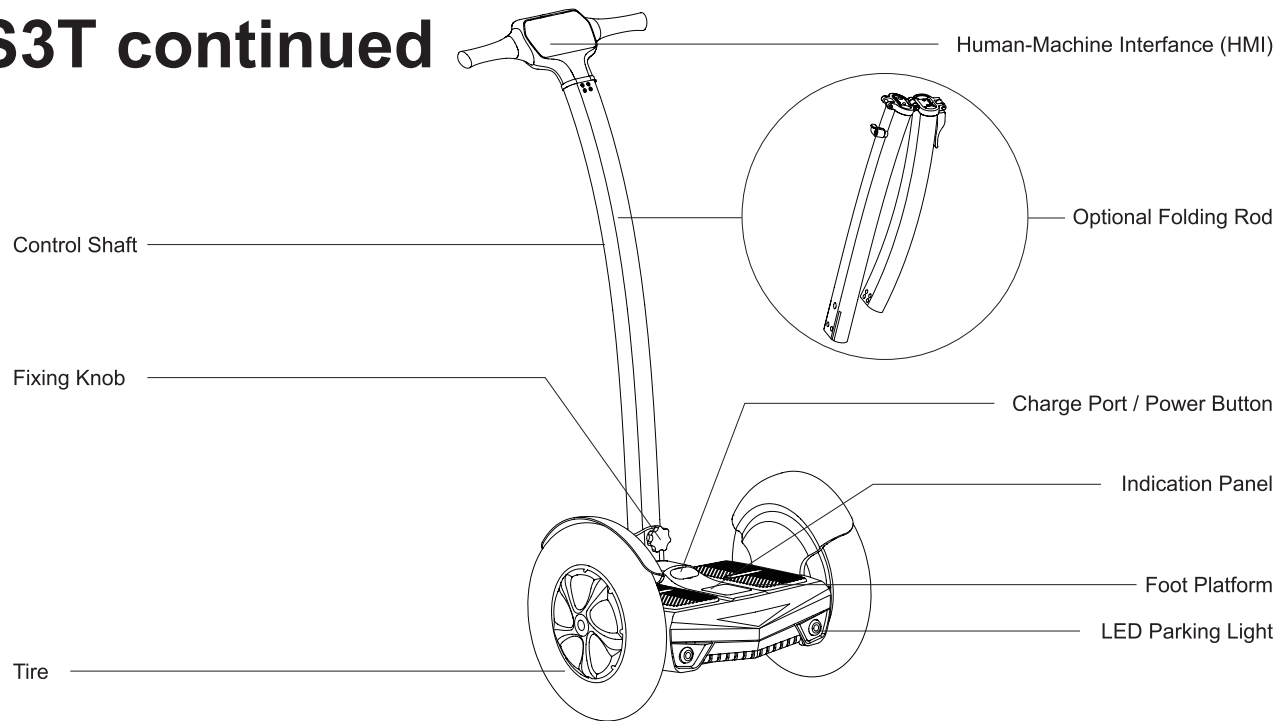
# S3+ continued



# S3T

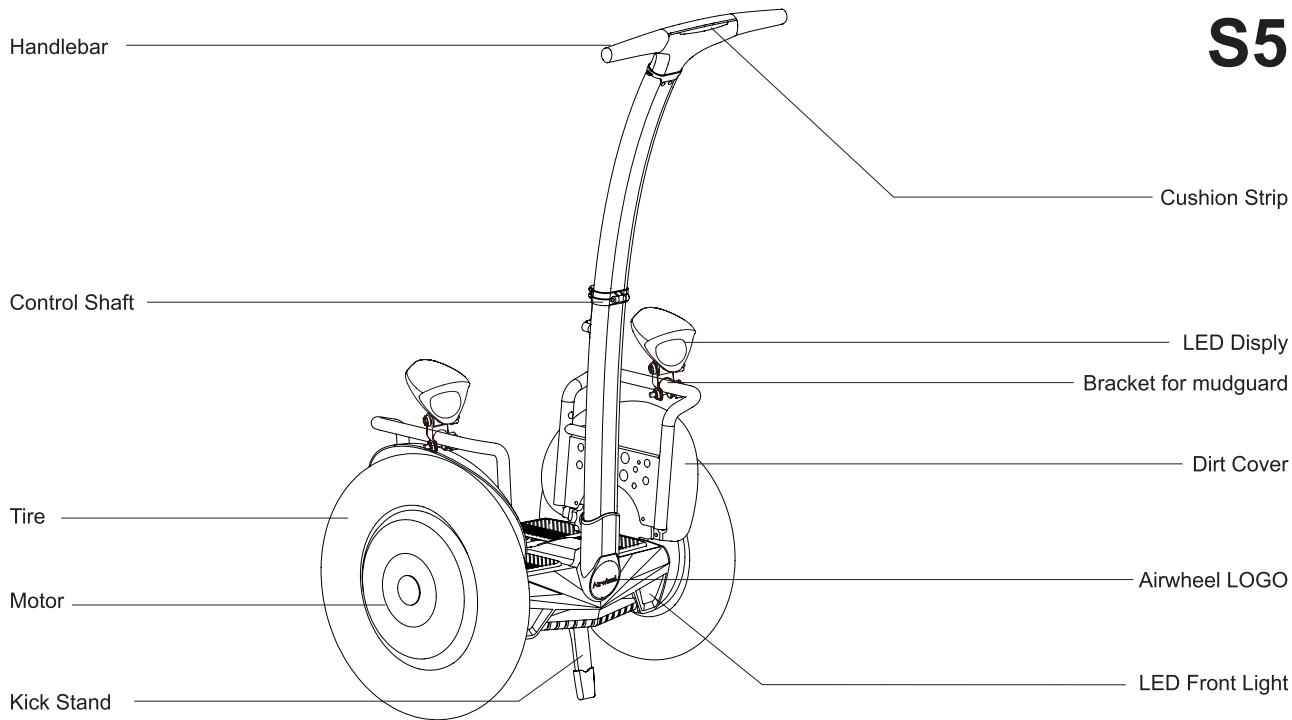


# S3T continued

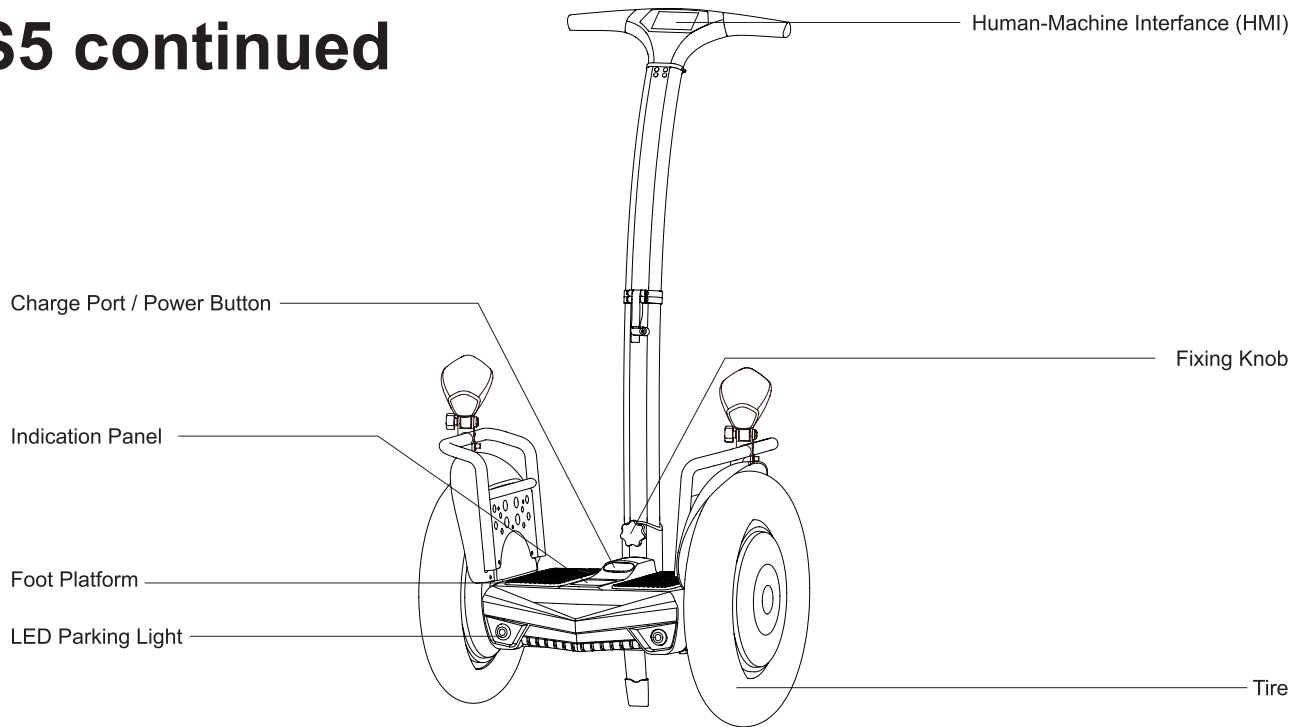




# S5

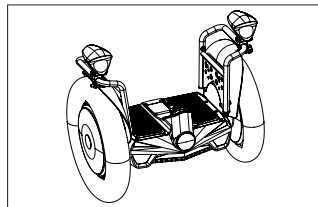
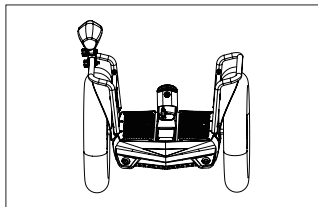
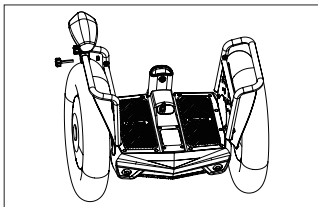
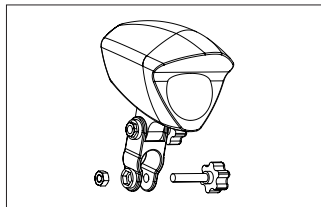


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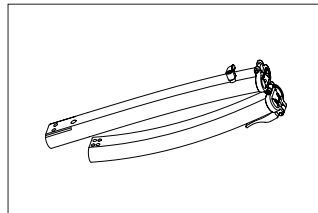
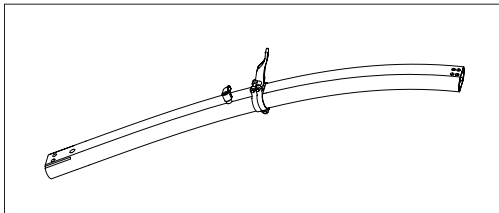
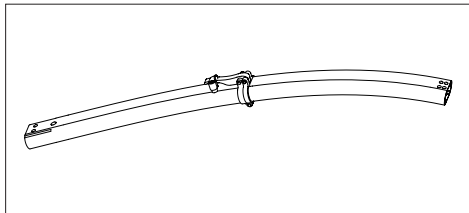
## 8.2 Installing The LED Lights (S5 model only)

1. First, loosen the screw and knob beneath the LED Light.
2. Next, mount the LED Light to the fender bar.
3. Then, tighten the screw knob in order to attach the LED Light to the fender bar. Do not over tighten.
4. Similarly assemble another LED Display.



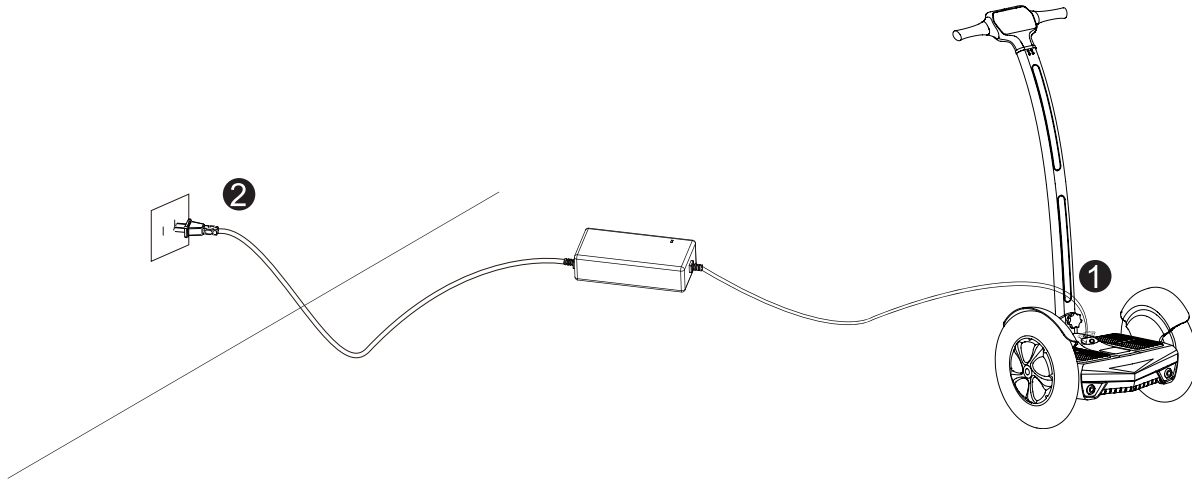
## 8.3 How To Fold The Control Shaft (S5 model only)

1. Remove the folding Control Shaft from the Foot Platform. This would require you to remove the Fixing Knob.
2. Unlock the buckle on the Control Shaft.
3. Fold the Control Shaft.



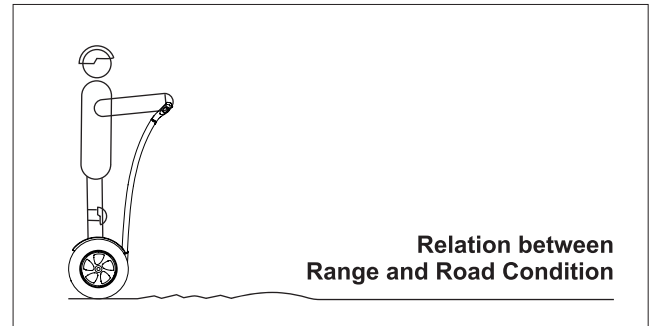
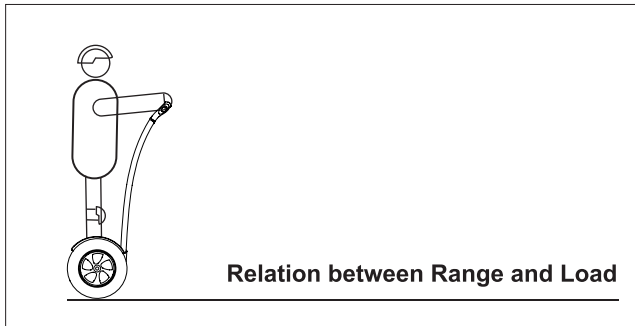
## 8.4 Charging The Battery

When charging the Airwheel Vehicle, turn OFF the Master Power Button on the Foot Platform. Next, connect the charging cord to the charging unit (black box) and then plug it into the wall receptacle. You should see a green LED light on the charging unit. Now you can connect the charging connector to the Foot Platform (under the rubber cover). The LED light on the charging unit will change to red. Once the charging process is completed, the LED light will return to green.



## 8.5 Range and Load

Similar to the relationship of fuel consumption and cargo load, the range of the Airwheel Vehicle per charge is related to the rider's body weight and speed. For example, let's say the rider's body weight is approximately 60 kg (133 lbs) and he/she rides on a smooth surface at a constant speed of approximately 7 km/h (4.4 m/hr). The approximate range would be 45 km to 50 km (27 miles to 31 miles). Please note that the range will drop by 1.5 km to 2 km (.93 mile to 1.24 miles) for each increase in weight by 10 kg (22 lbs). In addition, the range is always affected by the rider's weight, road condition, and outdoor temperature.



## **8.6 FAQ**

Q: How do I set up my Airwheel Vehicle?

A: Please refer to Section 2 – Installation.

Q: How do I charge my Airwheel Vehicle?

A: Please charge the Airwheel Vehicle using the provided charger. Please follow the instructions in Section 8.4.

Q: Is it normal for my Airwheel Vehicle to tilt backward?

A: It is normal if the battery is running low. It is recommended to charge the battery immediately before continuing to ride.

A: It is also normal if the Airwheel Vehicle is moving at high speed. The rider will need to shift the center-of-gravity to prevent further acceleration.

Q: Can I modify the Airwheel Vehicle to increase the speed?

A: No. The current speed is as fast as the Airwheel Vehicle will go to ensure the rider' s safety during usage.

Q: How do I set up my Airwheel Vehicle?

A: Please refer to Section 2 – Installation.

Q: How do I charge my Airwheel Vehicle?

A: Please charge the Airwheel Vehicle using the provided charger. Please follow the instructions in Section 8.4.

Q: Is it normal for my Airwheel Vehicle to tilt backward?

A: It is normal if the battery is running low. It is recommended to charge the battery immediately before continuing to ride.

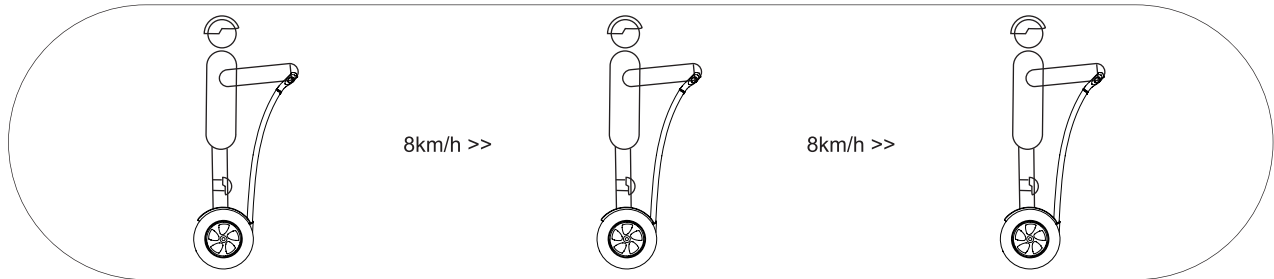
A: It is also normal if the Airwheel Vehicle is moving at high speed. The rider will need to shift the center- of-gravity to prevent further acceleration.

Q: Can I modify the Airwheel Vehicle to increase the speed?

A: No. The current speed is as fast as the Airwheel Vehicle will go to ensure the rider' s safety during usage.

## 8.7 Road Test

Airwheel's battery range is closely related to ambient temperature, weight, riding manner and battery discharge capacity. Test condition: environment temperature: 30°C ; tester's weight: 60kg; test venue: indoor stadium. The tester riders Airwheel at a constant speed of 8km/h using standard riding manner without any tricks. Test result: 10% battery capacity remained when test finished. However in practice, lithium battery will conduct a discharge restriction for user's safety and battery life expectancy, which will reserve 30% battery capacity.



## 9. Limited Warranty

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**Please retain the warranty and proof-of-purchase receipt. The Limited Warranty terms are for non-artificial damages only. This warranty is not transferable.**

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**Year Limited Warranty:** Airwheel/Golden Designs, Inc. warranties the Airwheel Vehicle and its electronics against defects in material and workmanship for a period of 1 year from the original date of purchase (does not apply to wearing parts and battery components). Any damage due to exposure to outdoor elements such as rain, snow, sun, wind or extreme temperatures will not be covered by this warranty. **Any damages as a result of modifications made to the Airwheel Vehicle or its components will void this warranty.**

**30-Day Limited Warranty on Wearing Parts:** Airwheel/Golden Designs, Inc. warranties the Airwheel Vehicle and any wearing/moving parts such as bearings, casings, and tires against defects in material and workmanship for a period of 30 days from the original date of purchase.

**180-Day Limited Warranty on Battery and Charger:** Airwheel/Golden Designs, Inc. warranties the Airwheel Vehicle and Battery & Charger against defects in material and workmanship for a period of 180 days from the original date of purchase.



## **Warranty Limitations**

This warranty does not apply if the unit has been subject to negligence, alteration, modification, misuse, abuse, repairs by non-Golden Designs, Inc. authorized personnel, inappropriate installations, or any case beyond the control of Airwheel/Golden Designs, Inc. invalidating this warranty including but are not limited to:

1. Accidental damages or malfunction due to improper storage/usage
2. Operating/Riding the Airwheel Vehicle on wet, icy, or slippery surfaces
3. Lost or misplaced warranty documents
4. Normal wear and tear
5. Cosmetic damages such as scratches or dings caused from normal wear and tear
6. Use of product not in accordance with the User Manual

### **Disclaimers**

Airwheel/Golden Designs, Inc. shall not be liable for loss of use of the Airwheel Vehicle or other secondary or incidental or consequential costs, expense or damages arising directly or indirectly out of the use or inability to use the product. Any implied warranty shall have duration equal of the applicable warranty stated above. Under no circumstances shall Airwheel/Golden Designs, Inc. or any of its representatives be held liable for injury to any person or damage to any property, however arising. Specifications are subject to change without notice or obligation.

### **Legal Remedies**

This limited warranty gives you specific legal rights. You may have other rights, which may vary from state to state.

### **Customer Service**

For customer service, contact your authorized dealer. If you need additional information or assistance, please email Golden Designs, Inc. at [info@goldendesignsinc.com](mailto:info@goldendesignsinc.com) or call (909) 212- 5555.

## **9.1 Contact Us**

Please contact us as per the following info for any inquiries regarding riding, maintenance and safety issues or any problems and failure during your usage. We'll be glad to offer you prompt assistance. Scan the official QR code on the back cover with your smart phone and get linked to our official website to learn more about Airwheel's latest updates and new products.

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## **After-sales Info**

Please visit our official website for the address of the service center and other related information.

Manufactured by: Changzhou Airwheel Technology Co.,Ltd.

Authorized by: Airwheel Technology Holding (USA) Co.,Ltd.

Address: Fl.9 Zhongchuang Building, No.396 Tongjiang Rd (M), Xinbei District, Changzhou, Jiangsu

E-mail: [after-sale@airwheel.net](mailto:after-sale@airwheel.net)

Website: [www.airwheel.net](http://www.airwheel.net)



Airwheel Technology Holding (USA) Co.,Ltd.  
E-mail: [after-sale@airwheel.net](mailto:after-sale@airwheel.net)  
Website: [www.airwheel.net](http://www.airwheel.net)