



User manual

King Song Electric Unicycle



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WARNING

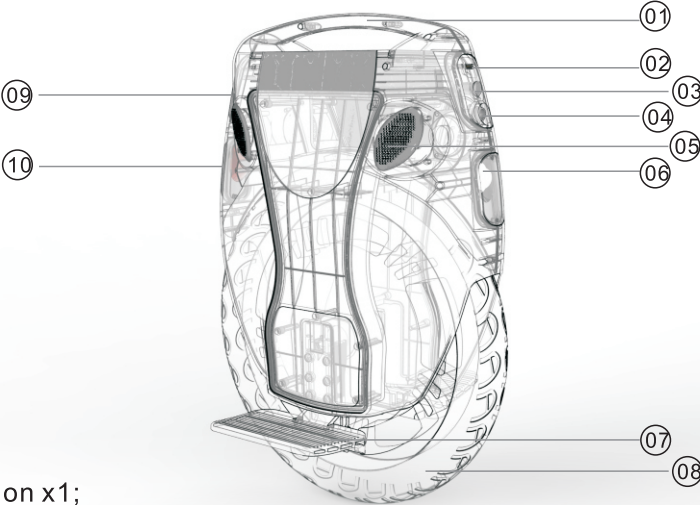
The EUC designed for out-door sports and auxiliary transportation, PLEASE RIDE UNDER LOCAL LAW&RISTRICTION.SAFETY IS ALWAYS THE FIRST!PLEASE RIDE SAFELY,YOU ARE AT YOUR OWN RISK OF ANY DANGER OR INJURY WHICH MAY OCCUR DURING RIDDING OR PRACTICE WITH THIS DEVICE.

Thanks for purchasing KingSong Self-balancing Electric Unicycle(EUC). The user manual below is a quick and convenient guide of safety & item functions/features to end user.We could not ensure all types of situation&emergency are covered. Therefore, we STRONGLY remind you to read this guide very carefully,and ride with attention to ensure your safety .

1.Product details

1.1Diagram:

- 1.Trolley bar
- 2.USB port
- 3. Power on/off button
- 4.Charging port
- 5.HIFI-speaker
- 6.Illuminating light
- 7.Pedal
- 8.Tire
- 9. Battery display board
- 10. Braking light




1.2 Product Packag

Electric Unicycle x 1 ;Cushion x1;
Charger x 1; User manual x 1

1.3 Specifications

Specifications		
ModelNo.	KS-18A	KS-18S
Topspeed	40 km/h	40km/h
Mileage	680Wh60-70km 840Wh70-80km 1360Wh120-130km 1680Wh150-160km	680Wh60-70km 840Wh70-80km 1360Wh120-130km 1680Wh150-160km
Climbing	AngleAround 30 degree	
Temperature	-10℃ /+60℃	
Maxium upload	100~150Kg	
Charger VoltageInput	AC 80~240 V , Output DC 67.2V、 2A	

Charging time	680Wh around 5.5h 840Wh around 7h 1360Wh around 11h 1680Wh around 14h	680Wh around 5.5h 840Wh around 7h 1360Wh around 11h 1680Wh around 14h
Rated power	1200W	1500W
Wheel Size	465 x190 x 680mm	465 x 190 x 680mm
Distance from ground	130mm	130mm
Tire Size	18" Φ480mm	18" Φ480mm
Net weight	19kg-22.3kg	19-22.3kg
Standard Accessory	Cushion x1; Charger x1; User manual x 1	
Photo		

1.4 Main functions

- 1.Light sensor: Detecting light intensity,Lights on when it is dark, otherwise, it keeps off.
- 2.BT/ Speaker: Data BT makes users can access to riding information in app like mileage etc; Audio BT is activated automatically when power on, you can enjoy music during riding.
- 3.USB port :Portable electrics can be charged by this USB.
- 4.Power display: 10 pcs high-light LED for battery power on the side shell.
- 5.Over side lean protection: When the lean angle of wheel exceeds 45, motor will stop running and will recovery automatically when back it vertically.
- 6.Buzzer and voice prompt: To ensure safety, there will have voice prompt to alert rider: over-voltage, over-power, low battery etc. Voice prompt can be shut off through app, but buzzer beeps can't be.
- 7.Tilt-back protection: When over-speed, low-battery, high temperature, the pedal will tilt back to prevent further acceleration.

2.Safety

As an out-door sports and auxiliary transportation device,serious injury may occur any time during ridding,PLEASE BE CAUTIOUS ALL THE TIME,LEARN AND PRACTISE STEP BY STEP BEFORE YOU REGULARLY RIDE IT,READ THE INSTRUCTIONS THOROUGHLY AND CARFULLY to control the risk.

2.1 Important

1. Do not make rapid acceleration or deceleration or over incline forward or lean backwards.
2. Do not use The EUC if there are any risks in accidental falls..
3. When there is alarm of over power, over voltage, low battery, please decelerate at once.

Please keep in mind deeply: Most of accidents are caused by rapid acceleration or deceleration, so please operate EUC properly to protect both the device and rider.

2.2 Attention:

1. Please wear helmet, gloves, elbow/knee pads or other protection garments.
2. Please check the device before every ride, to make sure no parts are loose or damaged.
3. When there is crowded pedestrians, please slow down to match their walking speed.
4. When carry the device, please make sure the power is off.
5. Do not put your fingers around the tire, to avoid injuries caused by the tire running.
6. Do not ride on highways or any other prohibited places.

- 7.Do not ride on rough or bumpy surfaces, such as muddy or pebbled roads.
8. Do not ride on wet, slippery surfaces, especially snowy roads.
9. Any person under 12 is STRICTLY PROHIBITED to use the EUC.
- 10.Do not ride in bleak winter conditions.
- 11 Countermarch riding is dangerous. Try to avoid countermarch unless safety guaranteed.

Other sudden unpredictable risks may occur during use, please ride with care. King Song electric unicycle will not be responsible for any injuries caused by improper operations of the device.

3.Main Features

- 3.1. Automatic light sensor.
- 3.2. 10 levels high-light RGB for battery power display .
- 3.3. Front illuminating & Rear Braking Lights
- 3.4. BT HiFi- Speaker: Activate the BT function of the electric unicycle, search available BT on your mobile phone, find and match the BT named “ King Song”, then you can play music freely after connected successfully
- 3.5. APP.
- 3.5.1 App Download.

For Android apk: Please access to our official website: www.kingsong.com, android apk can be download in App download section under “ Support” list.

For IOS app: Please download from apple store, “ kingsong-New” is the exact one.



3.6. Basic Information

Users can check all the detailed information on APP like temperature, mileage, speed, voltage and so on, which will help you get a better idea of the electric unicycle's running status.

3.7. Riding Mode

Riding mode refers to the ration mode during start-off and breaking. Under play mode, the pedal will keep still when starting off or breaking. While, under learning mode, the pedal will slant alonging with the gravity center, that is, leaning forward for starting off, leaning backward for braking. The main difference of the two modes lies on : learning mode is suitable for long distance travel, which provide a more comfortable riding experience, relieve the leg's fatigue. Play mode is more flexible, can satisfy the group who wants to perform skills like aerial jumping, also it can avoid pedal scraping when climbing or down steep hills. You can select the corresponding riding mode in the “ Cycling mode setting” menu.

Theorectially, learning mode is more power saving than aggressive mode.

3.8. Calibration alignment

Firstly, Switch on the EUC and keep it stand still, connect your mobile phone with the EUC, back to the " Basic Function" Menu, Select " Level Calibration", you will hear continual beeping. Then place the unicycle vertically on the ground, restart it, the calibration is done if you hear long beeping after 5 times continual beeping. If another 5 times continual beeping followings, it indicates calibration failed.

4.Precautions and preparation

4.1 Precautions

4.1.1. Use the auxiliary belt to ensure safety driving especially at the learning level. As beginners, can use the auxiliary belt to prevent the unicycle from scraping (Tie the belt to the handle of the EUC, step one foot on the pedal, adjust the belt to a proper length. once losing the balance & have to jump off from the unicycle, you can drag the EUC with the belt to protect it from sudden fall & broken.

4.1.2.How to control the balance

The self-balancing EUC achieves balancing by versus of the gyroscope. Rider leaning forward, the unicycle will accelerate; oppositely leaning forward, the unicycle will decelerate to keep the balance between the driver and the device itself. Like riding bicycle, you have to keep left or right balancing by your body and the riding speed. Do not ride on slippery or bumpy surfaces, friction between the tire and the ground is essential to keep the balance.

4.2.Practice

Find a proper ground : please don't ride in the highway or anywhere there are a lot of cars and peoples, should not ride on the bumpy, gravel roads.

Warm up your body and be equipped with helmets, elbow, knee supporters if needed.

Check the battery level, shake the unicycle to avoid potential unsafe factors like looseness, abnormal sound, push the unicycle by hand to check whether it exists frictions between the tire and body shell.

Find a friend to assist you if needed.

Tie the auxiliary belt to the handle, adjust it to a proper length.

Please don't speed up and reduce suddenly in order to keep good maintenance. Don't lean too much and too fast to avoid sudden speed up & down, even rider's injury. Speeding is STRICTLY prohibited. In case of falling, give the priority to rider's body safety.

Refer to the following driving steps to start learning.

4.3 How to use

4.3.1 Start the unicycle

Grasp the handle with one hand, place the unicycle vertically on the ground, and unfold the two treadles. If the unicycle tilts either forward or backwards after power is switched on, then wait until it reverts to upright position before riding.

Press the power key to turn on the unicycle, the battery level will illuminate and buzzer will beep, then the vehicle is ready to use.

We suggest that you push the unicycle forward and backward to get an idea of the intensity of acceleration and deceleration.

4.3.2 Try to stand on the unicycle

Stand on the center of the treadle with your preferred foot, so that you can lean your gravity center to the foot.

Stand up, use the foot on the treadle to control the forward and backward balancing, and lean your shank on the rubber plate tightly.

Gradually lean your gravity center to the foot on the treadle, a triangle support is required with your shank, foot and the balancing unicycle, otherwise it's very difficult to transfer the gravity center to the unicycle. If you failed to transfer the gravity center, further riding is not suggested.

4.3.3 Go forward

For novice, like riding bicycle, transfer your gravity center to the unicycle, tread the pedal forward slightly, meanwhile, kick the other foot backward slightly, the unicycle will go forward, try to keep balance during riding, and gradually put the other foot on the treadle. For intermediate learner, pay more attention to the following two points: keep at a certain speed, control the speed through leaning forward and backward. Try to extend the riding distance by repeated exercises.

4.3.4 Turning

Beginner tends to rotate the upper torso to turn, to improve the efficiency, we suggest you to make it by adjusting the tilt of treadles.

5.Battery and Recharging

5.1 Temperature effect on battery

Battery power will vary with the temperature, mileage per charge will have slight difference under different temperature, following table is just for your reference.

Temperature (°C)	-20	-10	0	10	20	30	40	50
174Wh using ratio	40%	60%	80%	90%	95%	100%	105%	110%
Mileage/Charge (Km)	8	12	16	18	19	20	21	22

5.2 Charging

The device has a built-in lithium battery, No extra battery installation is required, just charge the device when it indicates“ low battery”.

Plug in the power source after inserting the charger plug, this can prevent potential risk to ensure a safer charger .

When the red lights turn into green, indicating the charging is completed.

If not in urgent need, please wait until charging complete before unplugging, because after

charging, the protection circuit will perform flow equilibrium.

Battery level: RGB indicator is used to indicate battery level, will go off one by one with the level decreases. Please check power level before use to ensure there is enough power for the return trip.

Battery level of KS-18A and KS-18S is shown in 10 levels .10 levels RGB indicators will be flickering when only 5% power left .Battery indicators will lighten fully when above 85% power and and will go out one by one according to power.

6. Care and Maintenance

6.1 Conservation

Don't place the unicycle in a wet condition.

If left unused for long time,recharge the battery at least once a month to avoid the battery exhausted and maintain longevity of the battery. Meanwhile, the battery can't be dismantled arbitrarily, in case of changing, pls contact us, we will provide you with professional services.

Please clean the unicycle with wet cloths and detergent, gasoline, solvent or any other chemical reagent are forbade.

Use the inflation tube to inflate the tire. Without the tube, you will not be able to pump air into the wheel.The rated tire pressure is:2.5Pa.

6.2 Change tire

Allen driver and cross screwdriver are require to change tire.

Unscrew all the screws on the body shell with cross screwdriver, 7 screws each side.

There are 6 screws on each side under the treadles, unscrew the six hex socket screws on the opposite side of the charger slot, pls notice that never unscrew the hex socket screws on the side of the charger slot.

After unscrewing the screws, rotate the shell body until you can dismantle the tire freely, avoid pulling out the electric cables around the handle area.

After repairing, install the body shell and fix all the screws.

7.Warranty

7.1.Limited warranty:

Manufacturer, Shenzhen King Song Intelligence Technology Co., Ltd warrants the EUC by following limits.

Motor,Mother board for 1 year since the item departure from factory.

Battery package for half a year since the item departure from factory.

7.2.Exclusion from warrenty:

Above limited warrenty DOES not include failure,damage or lose not caused item's defectives(i.e warrenty only covers manufacurer defectives,Does not cover any damage, unauthorized modification,improper operation, disassembly etc).

7.3.Aftersale service:

All the aftersale service,please contact your local dealer,distributor for assistant.

Shenzhen King Song Intelligence Technology Co., Ltd

www.kingsong.com

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