



KS-16X
User T anual



KINGSONG Official

1 Introduction

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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.**

www.kingsong.com

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 .

Product Package:

Electric Unicycle x 1

Charger x 1

User manual x 1

2 Product details

2.1 Diagram KS16X



1. Dual USB Port
2. Headlight
3. RGB Led
4. Power Button
5. Light sensor
6. Outer Shell
7. Tirev
8. Trolley Handle
9. Dual Charger Port
10. Woofer
11. PU Foam
12. Mud flap
13. Brake light
14. Pedal
15. Full-frequency Horn

2.2 Specifications

Product performance	
Model	KS-16X
Factory speed	20 km/h
Top speed per construction	0~200km: 40km/h / exceed 200km: decode to 50km/h (Default speed beep setting: 1st at 18km/h, 2nd at 19km/h, Pedal tilt back at 20km/h)
Mileage	1288Wh 110~130km / 1554Wh, 140-160km
Climbing	~35°
Temperature	-10°C/+60°C
Maximum upload	120 Kg
Charger Voltage	AC 80~240 V , Output DC 84V 1.5A/2.5A

Charging time	1.5A 1288Wh about 11.5h/1554 about 14h (Using two chargers will reduce half time) 2.5A 1288Wh about 7h/1554 about 8.4h (Using two chargers will reduce half time)
Rated power	2200W
Wheel Size	590 x 415 x 180mm
Distance from ground	160mm
Tire Size	16' *3 inch
Net weight	24.3kg
Standard Accessory	Charger x1 ; User manuel x 1

2.3 Main functions

- Light sensor: Detecting light intensity, Lights on when it is dark, otherwise, it keeps off.
- 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.
- Integrated trolley bar: wheels can be pushed to move rather than lift up with this integrated trolley bar, make the wheel easier to be carried on.
- USB port : Portable electrics can be charged by this USB.
- RGB light: Shinning during riding, indicates the battery level while it is on and stop.
- Over side lean protection: When the lean angle of wheel exceeds 45, motor will stop running and will recovery automatically when back it vertically.
- 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.
- Tilt-back protection: When over-speed, low-battery, high temperature, the pedal will tilt back to prevent further acceleration.

3 Safety

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

3.1 Important

- Do not make rapid acceleration or deceleration or over incline forward or lean backwards.
- Do not use The EUC if there are any risks in accidental falls...
- 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.

3.2 Attention:

- Please wear helmet, gloves, elbow/knee pads or other protection garments.
- Please check the device before every ride, to make sure no parts are loose or damaged.
- When there is crowded pedestrians, please slow down to match their walking speed.
- When carry the device, please make sure the power is off.
- Do not put your fingers around the tire, to avoid injuries caused by the tire running.
- Do not ride on highways or any other prohibited places.
- Do not ride on rough or bumpy surfaces, such as muddy or pebbled roads.
- Do not ride on wet, slippery surfaces, especially snowy roads.
- Any person under 12 is STRICTLY PROHIBITED to use the EUC.
- Do not ride in bleak winter conditions.
- 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 improperly operations of the device.

4 Main Features

- Integrated trolley bar
- Automatic light sensor.
- Colorful RGB light
- Front illuminating & Rear Braking Lights
- 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

4.1 APP Download

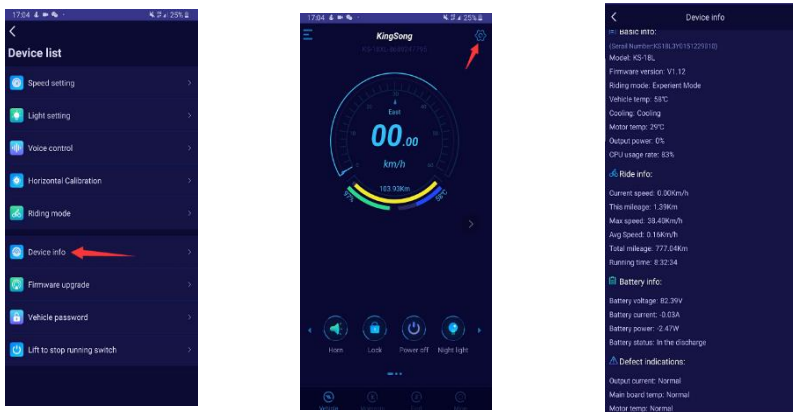
- **For Android apk:** Please access to our official website: www.kingsong.com, android apk can be download in App download section under “Support” list.
- **For IOS app:** Please download from apple store, “kingsong-New” is the exact one.

How to unlock King Song Electric unicycle (every new EUC need to be unlocked)

1. Download the APP and register, if you already register, please go to step 2
2. Connect the wheel with the APP
3. After connected successfully, you will hear two beeps, Click ‘Unlock’ key to unlock the wheel, then you can enjoy your wheel.
4. If you don’t have smart, ask you retail to do it for you

4.2 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.

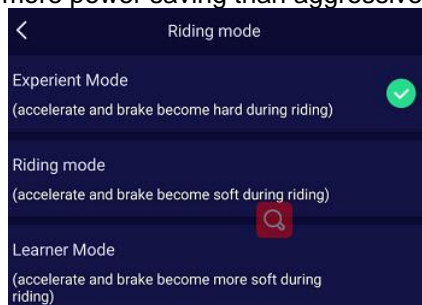


4.3 Riding Mode

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 a longing 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. Theoretically, learning mode is more power saving than aggressive mode.



4.4 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.

5 Precautions and preparation

5.1 Precautions

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.

5.2 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 must 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

5.3 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, shack 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.

5.4 How to use

4. 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.

5. Try to stand on the unicycle

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

6. 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.

5.5 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.

6 Battery and Recharging

6.1 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

6.2 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-16B/S and KS-18L is shown in 9 levels, corresponding battery levels are shown as following:

Niveau RVB	9	8	7	6	5	4	3	2	1
Voltage	>64V	>62V	>60V	>59V	>58V	>56V	>54V	>52V	Clignotement

Battery level of KS14D shown in 7 levels, corresponding battery levels are shown as following:

Niveau RVB	7	6	5	4	3	2	1
Voltage	>64V	>62V	>59V	>57V	>54V	>52V	>50V

7 Safety Notice

You must wear helmets and protective body gear when driving

Riding to vehicle roads and crowded residence communities is forbidden. Prohibit from riding in the pond over 2cm. Carrying children or many people riding the at the same time is banned. You can't ride on stairs or escalators. please keep low speed of 3-10 km/h or stop when encountering speed bump, elevator threshold, pot hole. It is a sport entertainment tool rather than vehicle. But when you drive it into the public area, it has vehicle attribute, so it also has safety risk like other vehicles.

Driving according to the reminder of the user manual strictly will protect you and other's safety largely. You should understand that once driving into public roads or other public areas, you might be face with the risk caused by motoring offences/ improper operations of other people or vehicles, even if you operate as the user manual totally just like walking or riding bikes may be harmed by other vehicles. As all of vehicles, the speed is faster, the braking distance will be longer. Emergency braking on the smooth surface may result in losing balance even tumbling because of wheel slip.

So keeping alert, proper speed, keeping rational safety distance with other people and vehicles during driving, which is very important. Please keep alert and low speed before driving into unfamiliar terrain. Please respect the right of way when driving. Avoiding scaring pedestrians, especially kids. Remind them and decelerate when passing behind the pedestrians. Possibly passing from the left of Pedestrians (applicable to the countries of vehicles keeping to the right). when facing with pedestrians, keeping to ride at right and decelerating.

Driving in the countries and areas without national standard and rules related with unicycle, you must abide strictly by user manual's safety requirements according to drivers. To the losses in property and human, accidents, legal disputes and other every adverse event of resulting adverse event caused by the behaviors of violating user manual's reminder. We don't take any direct responsibility and joint liability.

To avoid hurt, please don't borrow to people who don't know how to use it. Please teach him/her and let them know



they need wear helmets and protective body gear when driving if you borrow it to your friends. Please check it and make sure everything okay before riding. If you find obvious abnormal conditions like spare parts loosening, battery life reducing obviously or excessive wear, strange sounds, etc. Please stop riding immediately and contact our customer service to get professional advice about product maintenance and service.

8 Care and Maintenance

8.1 Storage and Cleaning

If stain comes up on the surface of the unicycle, wiping with a soft wet cloth. If there is stubborn stains, you can wipe firstly with a soft cloth smeared toothpaste. Then clean with a wet cloth.

Reminder: Don't clean it with alcohol, gas, kerosene and other corrosive and volatile chemical solvent, or else it will badly damage appearance and internal structure of vehicles, spray washing by pressure water guns is forbidden.

Please keep it power off, unplug the charging cable and clog charging rubber cover, otherwise, you may get an electric shock or it may result serious problems because of flooding water.

Store it in dry and shady place when you don't use it, try not to place it at outside for a long time. Outdoor environmental of sunlight exposure, overheating, undercooling will accelerate the ageing of appearance and wheels and reduce and life time of batteries.

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

Air pressure in tires: 2.5!('`VUf

8.2 Lubrication

Parts that fold on the machine must be lubricated every 3 months.



8.3 Maintenance of Batteries

Please don't leave batteries in the environment of over 50°C or under -20°C (for example. please don't leave batter pack in the car of sun exposure), prohibiting put batteries into fire, otherwise it may cause risk of batteries invalidation, overheating even fire. Please reference batteries nameplate under the vehicles to know the other maintenance considerations of batteries.

Avoid charging after power consistently drained, try to charge early and often. It can extend batteries life highly, In addition, using at normal temperatures, batteries can exert higher endurance distance and performance. If using under 0°C, batteries' life and performance will reduce. Such as under 20°C, endurance distance may just half or lower than half compared with normal temperature, After increasing temperature, batteries' endurance distance will resume.

Fully charged will run out of stored power after 90-120 days in standby mode. The stored power will be ran out of after 20-50 days in standby mode if it is not fully charged. If you don't charge the unicycle in time, It may cause damage to batteries for excessive discharge, and this damage is unrecoverable. The damage caused by without charging for a long time will not charge any more, and it can't be repaired for free(Notes : non-professional forbid disassembly battery, it may cause serious safety accidents owing to electric shock or short circuit.

8.4 Repairs

Vehicles can only be repaired with original spare parts from the license supplier or seller. Open up, dissemble or modification on the vehicle with none-license or none original part will invalid the warranty.

Change tire

All driver and cross screwdriver are required 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 the screws.

Change fuse

All driver and cross screwdriver are required to change tire

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

There is 4 screw to unscrew so you can open the top cover, then you will see the fuse, if it is blown, then unconnect both battery, change the fuse and connect the battery. You can try to start on the product.

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

Download firmware

The application can propose to download a new firmware. You can do it, please be careful when downloading it. If any problem arrived during downloading it won't be covered under the warranty.

9 Warranty

9.1 Limited warranty

Importator High'tems warrants the EUC by following limits.

2 years for personal person, 6 months for company, we warrant only product we imported, to request warranty; you should have the invoice made by your retailer.

9.2 Exclusion from warranty

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

9.3 Aftersales service

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

10 Caution

- This appliance can be used by children aged from 14 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- The appliance is only to be used with the power supply unit provided with the appliance.
- Do not charge overnight or when you are not able to observe the board.
- Charge and store in an open dry area away from combustibles (meaning items that can catch fire).



- Do not charge directly after riding. Let the device cool for an hour before charging.
- If giving to someone for the holidays, leave it in its partially charged state. Do not take it out of the package to bring it to a full charge and then wrap it back up. Often, the product comes partially charged. Leave it in that state until it is ready to be used.
- Do not ride near vehicular traffic.
- It is important to wear safety gear when using this device, a skateboard helmet, and knee and elbow pads and wrist guards for protection from falls.