

# **KS-S18 User Manual**



# CAUTIONS

Electric unicycle is designed for the outdoors and short distance personal transport.

**SAFETY IS THE NUMBER ONE PRIORITY!**  
**PLEASE RIDE UNDER LOCAL LAW!**

The user manual below is a quick and convenient guide of safety & item functions/features to end user. We can't 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.

Riding like all outdoor activities comes with it's risks. You risk serious danger and injury if you fall, collide or lose of control when riding, please ride with caution and at your own risk.

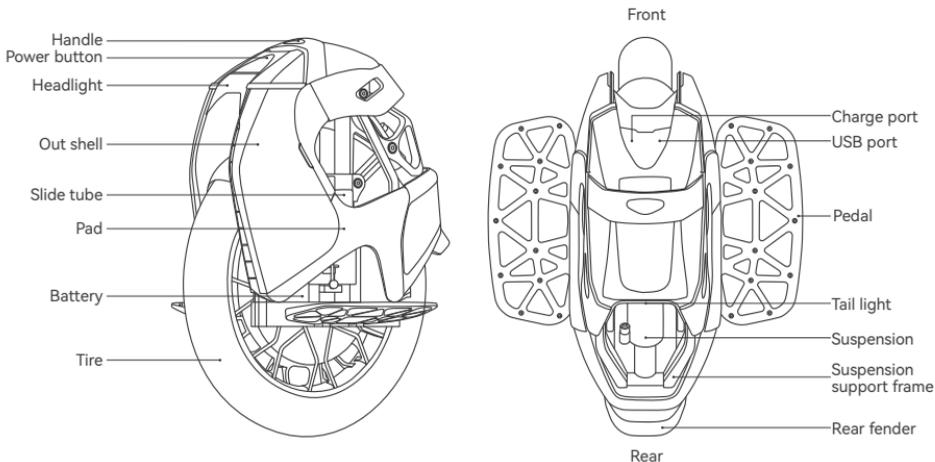
Thanks you for purchasing King Song smart electric unicycle!

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# 1. Product Details

## 1.1 Diagram: KS-S18



## Accessories

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Pump



Charging Adapter



User Manual

## 1.2 Specifications

Model No.	KS-S18
Rated power	2200W
Peak power	5000W
Max speed	Full speed unlocked after 10km. Max speed of 50km/h (Factory alarm settings: 18km/h first level alarm, 19km/h second level alarm, 20km/h third level alarm and warp plate).
Grade-ability	Around 35°
Battery	Rated Power: DC 72V Top Charging Voltage: DC 84V Rated Capacity: 1110Wh Smart BMS with balance and protect overshoot / over discharge / over-current / short circuit / overheating function, support monitoring the battery conditions via KingSong APP
Mileage	Around 100kms
Max load	120kg
Adapter specs	Input AC 100~240V / Output DC 84V 2.5A
Charging time	Around 6hrs

Working temperature	-10°C / +60°C
Color	White / Rubber black
Dimension & Weight	
Suspension	200-57 Air suspension
Suspension travel	Using a variable lever the wheel has dampening travel distance of 100mm, which is transferred to the rear spring suspension with a travel distance of 57mm.
Headlight	2*5w light high beam with 2*4w short beam
Pedal size	274*135mm
Pedal height	210-110mm
Tire size	18*3.0 inch
Product size	530(L)*220(W)*557(H)mm
Package size	630(L)*300(W)*715(H)mm
Weight	Around 25kg
Port	Charge port, USB port, Power button, light sensor port.

Protective Measures	
Lift sensor	Lift sensor accurately senses and determines when wheel is lifted off the ground to stop tire rotation.
Roll protection	45° left and right side. ( Motor stalls when over 45° ) Place the machine vertically on the ground will restart automatically, no need to restart manually.
Speed limit protection	Beep alarm or voice alarm when exceed limit speed.
Low battery protection	Low battery protection activated on 30% battery, speed will decreases linearly; when the battery is lower than 5%, voice alarm for charge, when battery at 0%, the front part of the pedal will rise to decelerate until full stop.
Higher temperature protection	When the motherboard reaches 80°C it will result tilt-back. When the motor reaches 120°C it will result in tilt-back.
Motherboard waterproof protection	The motherboard is treated with sealant, greatly enhancing the waterproof performance.
Pedals Anti-slip Protection	Uniform force on the pedals with raised small columns which is more effective than traditional sand sticking to protect anti-skid, greatly improving safety performance and riding experience.

Power Pad	The pad are ergonomically designed to use the safe foams, which is moderate, easy to accelerate and decelerate and also better to protect the body.
Alarm & Features	
Switch On/Off	Short press power key: turn on Long press: hear a click then turn off
Battery Indicate	Tail light shows battery level when EUC power on at rest.
Hardware Features	
Main Board	The motherboard is designed with a 4 layer structure, allowing for better stability performance. 12 large individual TO-247 imported MOS to sufficiently support the 2200W motor. MOS is attached to the aluminum body frame of the wheel for better heat dissipation.
Bluetooth	Bluetooth 4.0. stronger compatibility and allowing strong stable data transmission.
USB Output	Quick charge 3.0
Front Light	2*5w light high beam with 2*4w short beam. Double the strength of the 16x, providing excellent illumination at night.

Taillight	Red brake light at the tail and steering light are integrated.
Temperature System	Temperature of the motherboard and motor is continually monitored to ensure rider safety.
Handle	Aluminum constructed handle designed for ergonomic pushing of the wheel or lifting of the wheel.
Motor	Higher power 2200w motor that provides a maximum torque of 140N.m providing fast acceleration.
Battery	Using 21700 batteries, the S18 is designed with two independent batteries, the battery protection board adopts a new battery management system, real-time monitoring of battery cell safety.
Suspension System	Unique X shaped suspension system. Pro level suspension provides the ultimate support and shock absorption.
Protection Pad	With the dual functions of acceleration pad and protection pad, the acceleration and deceleration during riding are more stable and safer.
Package	
Standard accessories	1*Charger, 1*User manual, 1*Pump, 1*QC certificate

## 2. Safety Instructions

- S18 is an entertainment product, Which is different from motor vehicles driving on the road. Before mastering riding skills, you need to practice. Kingsong is not responsible for any injuries or damage caused by a rider's inexperience or failure to follow the instructions in this document.
- Please understand that you can reduce the risk by following all the instructions and warnings in this manual, but you cannot eliminate all the risks. Remember that whenever you ride the S18 you risk injury or death from loss of control, collisions, and falls. When entering into public spaces always comply with the local laws and regulations. As with other vehicles, faster speeds require longer braking distance. Sudden braking on smooth surfaces could lead to wheel slip, loss of balance, or falls. Be cautious and always keep a safe distance between you and other people or vehicles when riding. Be alert and slow down when entering unfamiliar areas.
- Respect pedestrians by always yielding the right of way. Pass on the left whenever possible. Avoid startling pedestrians. When approaching from behind, announce yourself and slow

down to walking speed when passing.

- In places without laws and regulations governing selfbalancing electric vehicles, comply with the safety guidelines outlined in this manual. Kingsong is not responsible for any property damage, personal injury/death, accidents, or legal disputes caused by violations of the safety instructions.

- Make sure each new rider wears a helmet and other protective gear.

- Before each ride check for loose fasteners, damaged components, and low tire pressure. If the S18 makes abnormal sounds or signals an alarm, immediately stop riding. Contact your dealer/distributor for service.

- Always wear a helmet when riding. Use an approved bicycle or skateboard helmet that fits properly with the chin strap in place, and provides protection for the back of your head.

- Do not attempt your first ride in any area where you might encounter children, pedestrians, pets, vehicles, bicycles, or other obstacles and potential hazards.

- Use caution when riding in new environments.
  
- To reduce risk of injury, you must read and follow all “WARNING” notices in this document. Do not ride at an unsafe speed. Under no circumstance should you ride on roads with motor vehicles. Always follow these safety instructions:
  - A) The following people should not ride S18:
    - i. Anyone under 18 years old or above 50 years old.
    - ii. Anyone under the influence of alcohol or drugs.
    - iii. Anyone who suffers from disease that puts them at risk if they engage in strenuous physical activity.
    - iv. Anyone who has problems with balance or with motor skills that would interfere with their ability to maintain balance.
  
  - B) Comply with local laws and regulations when riding this product. Do not ride where prohibited by local laws.
  
  - C) To ride safely, you must be able to clearly see what is in front of you and you must be clearly visible to others.

- D) Do not ride in the snow, in the rain, or on roads which are wet, muddy, icy, or that are slippery for any reason. Do not ride over obstacles (sand, loose gravel, or sticks). Doing so could result in a loss of balance or traction and could cause a fall.
- E) Do not accelerate or decelerate suddenly. Do not accelerate when the S18 tilts back or sounds an alarm. Do not attempt to override the speed limiter.
- F) While the Kingsong App is useful, do not allow the App to distract you while you are riding. Always pay attention to your surroundings.
- Never restart and ride your S18 after it has indicated an empty battery condition or powered off due to low battery. Your S18 may not have enough power to keep you balanced, especially if you demand a lot of power at once. If you restart and continue riding, you risk falling. Also, you risk damaging your batteries, resulting in reduced battery life and capacity.
  - Do not insert the power cord if the charge port is wet.

- Use a surge protector when charging to help protect your S18 from damage due to power surges and voltage spikes. Do not use a charger from any other product.
- Always shut down your S18 and unplug the AC Power Cord before performing any maintenance.
- Do not modify your S18. Modifications to your S18 could interfere with the operation of the S18, could result in serious injury and/or damage, and could void the Limited Warranty.

### 3. APP

- For Android apk: Please download from Google play, 'kingsong' is the exact one.
- For IOS app: Please download from apple store, 'kingsong' is the exact one.



KingSong APP(Android)



KingSong APP(IOS)

## **4. Learn to Ride**

### **4.1 Precautions**

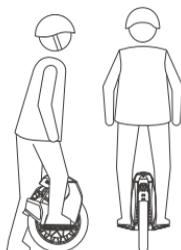
- Please find a surface to practice on.
- Warm up your body and ensure you're wearing safety gear such as helmets, knee pads, elbow pads and wrist guards.
- Ensure the wheel's battery level.
- Check the unicycle for imperfections such as any looseness, abnormal sound. We also highly suggest pushing the unicycle by ahnd to see if there's any friction between tire and the case of the wheel.
- Please do not accelerate or decelerate rapidly, please also try to avoid over leaning or leaning too fast to prevent rider injury.

### **4.2 Start Learning to Ride**

- Like riding a bicycle or unicycle, it takes a certain skill level to ride Kingsong S18. For different customers, it may take 2-20 hours to ride well.



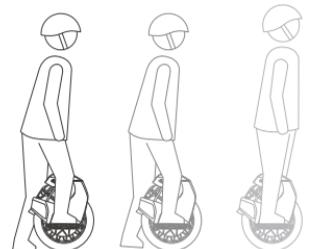
01. Get used to the way Kingsong S18: step on one pedal, then swing your leg back and forth to feel the controls.



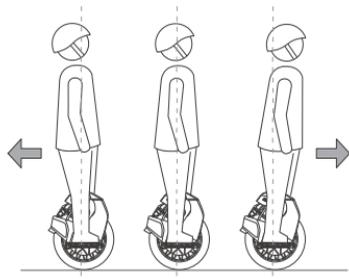
02. Using a friend, wall, or handrail: put both feet on Kingsong S18 and practice riding slowly forward and backward.



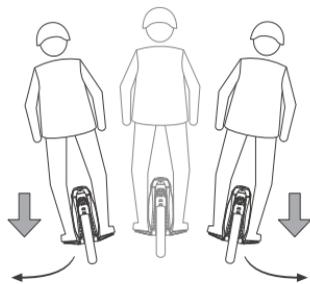
03. With one foot on a pedal, slowly lean forward. Push off with your other foot and glide for 1-2 seconds.



04. After you are able to comfortably glide for a few seconds, try gliding for 10-20 ft (3-5 m) with both feet on the pedals.



05. Practice travelling forward and backward by controlling your body's center of gravity. The further you lean, the faster you go.



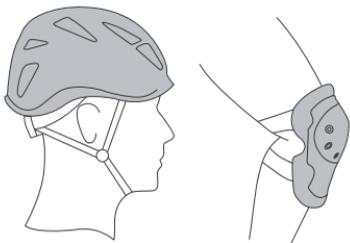
06. Turn by pressing harder on one pedal than the other, and by shifting your weight slightly.



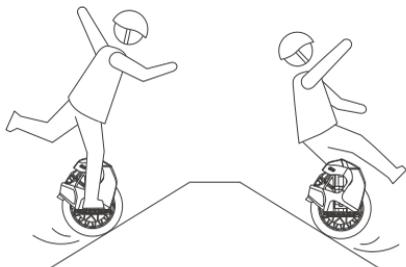
07. To get off: come to a stop by centering your weight, then step off Kingsong S18 with one foot.

## 5. Warning

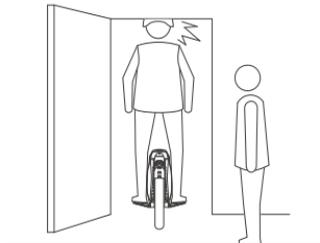
- You must read and understand the Warning Instructions section of this manual before attempting to ride the S18.



- Always wear a helmet and protective clothing when riding.



- Use caution when riding on slopes. Avoid riding on steep slopes.



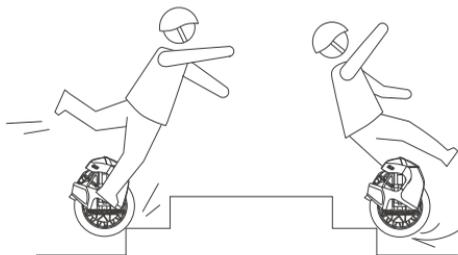
- Watch your head when passing through doorways.



- Use caution when riding over any changes in terrain.



- Do not ride on limited traction surfaces.



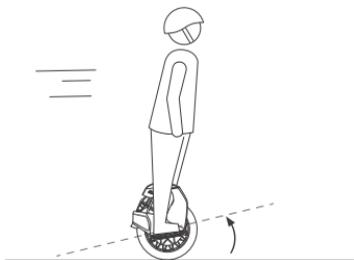
- Do not ride over holes, curbs, steps, or other obstacles.



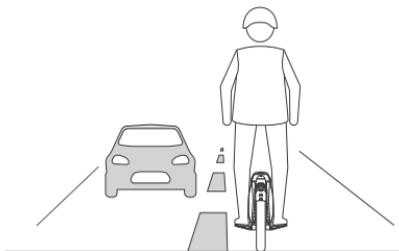
- Do not rock back and forth or shift your weight abruptly.



- Do not ride double or carry any passengers.



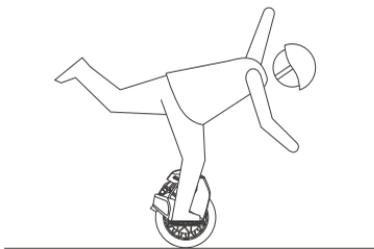
- Do not accelerate when the Kingsong S18 tilts back or sounds an alarm.



- Do not ride on public roads, motorways, or highways.



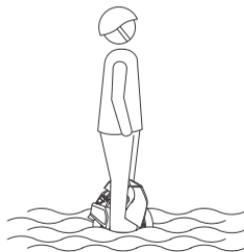
- Do not exceed the speed limit of 50km/h.



- Do not ride with single leg on the pedal



- Maintain contact with the ground at all times. Do not jump or attempt stunts.

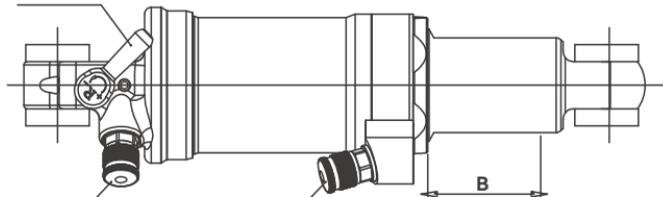


- Do not get wet. Do not ride through puddles or other bodies of water.

## 6. Suspension

### 6.1 Spring Suspension Description

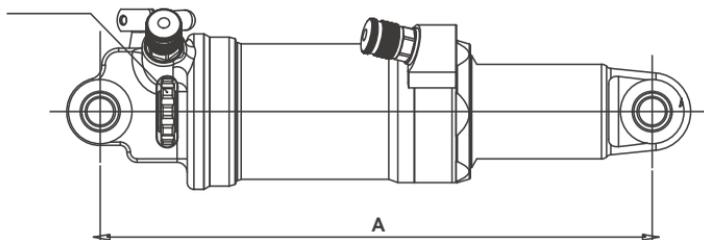
Compression adjustment(Blue)



Main air chamber  
valve

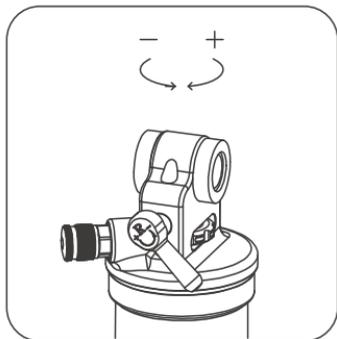
Negative air  
chamber valve

## Rebound adjustment(Red)



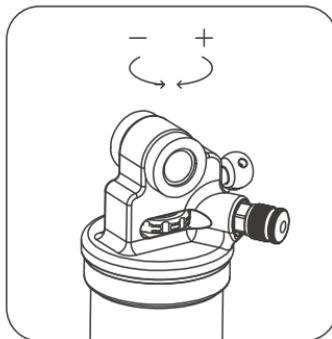
### ! Compression Adjuster

- + direction rotation, lock-out
- direction rotation, open up



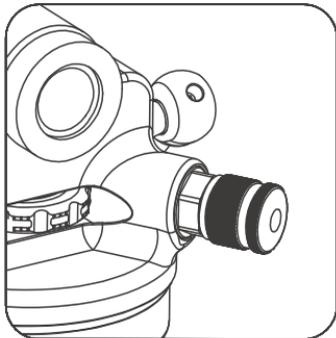
### ! Rebound adjustment knob

- + direction rotation, increase damper(slow)
- direction rotation, decrease damper(fast)



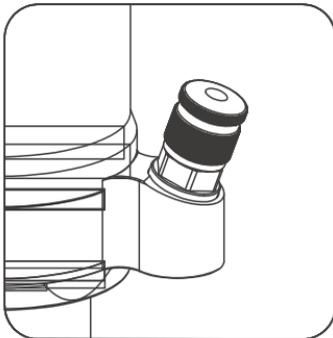
**! Main air chamber**

Supply air pressure according to pressure meter



**! Negative air chamber**

Supply air pressure according to pressure meter



## WARNING

- Improper set up of the suspension can lead to breaking it and it's nearby components. Suspension travel should not exceed 80%.
- Please form the habit of checking your blue O ring, the position of the ring can suggest what settings you should adjust to and the limits of the current setting. The correct adjustment of the suspension depends on the ride style and terrain. Wrongful adjustments of the suspension system can cause discomfort and damage to the suspension system.

## **HOW TO PUMP SUSPENSION SYSTEM:**

1. Release air in both positive and negative chambers.
2. Push down on the wheel to expose the suspension system.
3. Place brick into position; in between the pedal and sliders.
4. Inflate positive and negative chambers according to chart located.
5. Sit on top of the wheel to remove the brick.

## **BLUE DIAL ADJUSTMENT:**

- Compression adjustment can be switched from open to closed using the lockout switch.
- We suggest keeping the suspension system open.
- We only suggest closing suspension system for smooth terrain or special circumstances.

## **RED REBOUND ADJUSTMENT:**

- Multistage rebound dampening adjustment, which allows fine tuning of the sensitivity of the suspension system.
- Lower adjustment (open/anticlockwise) allows you to absorb many small bumps, slow dampening (closed/clockwise).
- allows shock absorption of big jumps or bumps.

Rider Weight		65kg	75kg	85kg	95kg	105kg
City Riding	Recommended Vertical Drop Range(cm)	5-20	5-20	5-20	5-20	5-20
	Upper Chamber (psi)	160-190	170-200	180-210	190-220	190-220
	Lower Chamber (psi)	50-150	60-150	70-150	80-150	80-150
	Recommended Red Rebound Adjustment	15-30 turns from Closed (clockwise).				
Offroad	Recommended Vertical Drop Range(cm)	20-50	20-50	20-50	20-50	20-50
	Upper Chamber (psi)	210-250	220-260	230-270	240-280	250-290
	Lower Chamber (psi)	80-150	90-160	80-150	70-130	60-110
	Recommended Red Rebound Adjustment	8-22 turns from Closed (clockwise).				
Extreme	Recommended Vertical Drop Range(cm)	50-120	50-100	50-80	50-60	50-
	Upper Chamber (psi)	250-300	260-300	270-300	280-300	X
	Lower Chamber (psi)	100-180	100-160	70-120	60-100	X
	Recommended Red Rebound Adjustment	0-15 turns from Closed (clockwise).				X

## 7. Maintenance

### 7.1 Cleaning

#### **WARNING**

- Make sure the S18 is powered OFF, the charge cable is unplugged, and the silicone cap on the charge port is tightly sealed before cleaning; otherwise you may expose yourself to electric shock or damage the electronic components. Do not wash your S18 with a power washer or high pressure hose.
- Wipe your S18 clean with a soft, wet cloth. For stubborn stains, use a toothbrush and toothpaste.

#### **NOTE**

- Do not wash your S18 with alcohol, gasoline, acetone, or other corrosive/volatile solvents. These substances may damage the appearance and internal structure of your S18.

#### **Storing**

- Store the vehicle in a cool, dry place. Do not store it outdoors for extended periods of time. exposure to excessive sunlight or temperature extremes (both hot and cold) may affect the vehicle's appearance, battery life, and tires.

## 7.2 Battery Maintenance

### WARNING

- Do not attempt to disassemble the battery.
- Do not allow the battery to get colder than  $-20^{\circ}\text{C}$  or hotter than  $50^{\circ}\text{C}$ , e.g. in a car. Do not expose the battery to fire. Do not discard or destroy the battery. Refer to your local laws and regulations regarding battery recycling and/or disposal.
- To extend the battery's life, charge it frequently and avoid draining the battery completely. At  $30^{\circ}\text{C}$  the battery range and performance is at its best; whereas at temperatures below  $0^{\circ}\text{C}$  range and performance are decreased. Typically, at  $-20^{\circ}\text{C}$  range can be half that of the same battery at room temperature. Battery range will recover when temperature rises.

Temperature( $^{\circ}\text{C}$ )	-20	-10	0	10	20	30	40	50
Range	40%	60%	80%	90%	95%	100%	105%	110%

### NOTE

A fully-charged S18 can be stored for about 120 to 180 days before requiring charging. Completely draining the battery may cause permanent damage to the battery. Electronics

inside the battery record the charge-discharge condition of the battery; damage caused by over-discharge or under-discharge will not be covered by the Limited Warranty.

## **8. Warranty**

For warranty policy, please consult with the point of purchase or email to the manufacturer's service team:

**[support@szkingsong.com](mailto:support@szkingsong.com)**

Again, we appreciate your purchasing of Kingsong products.







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