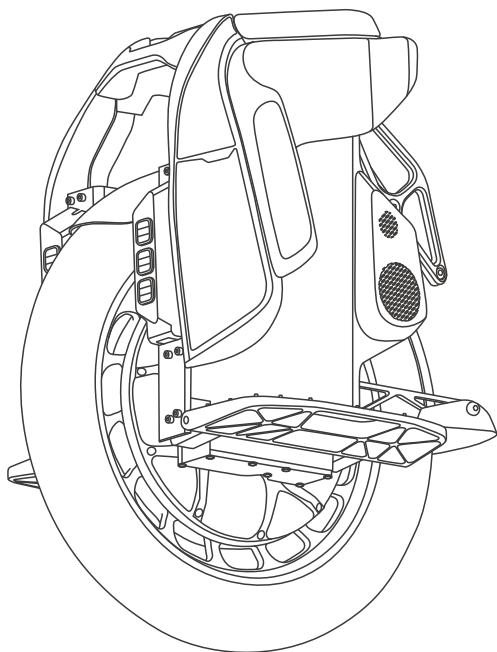




KS-S19
KS-S19 Pro
User
Manual

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.

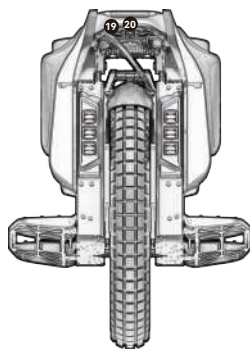
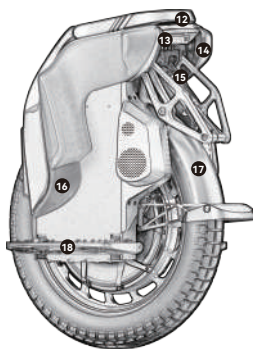
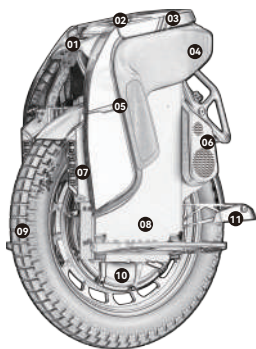
Thanks you for purchasing King Song smart electric unicycle!

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1. Product Details

1.1 Diagram: KS-S19/KS-S19 Pro



- 1. Front Handle
- 2. Display
- 3. Trolley
- 4. Pad
- 5. RGB Light
- 6. Speaker
- 7. Front Light
- 8. Battery

- 9. Tire
- 10. Motor
- 11. Foot Stand
- 12. Taillight
- 13. USB Port
- 14. Taillight
- 15. Suspension
- 16. Front Protection Pad

- 17. Mud Flap
- 18. Pedal
- 19. Charger Port
- 20. Power Button

1.2 Specifications

Model No	KS-S19	KS-S19 Pro
Rated Power	3500W	
Peak Power	6500W	
Max Speed	Full speed unlocked after 5km. Max speed of 60km/h (Factory alarm settings: 18km/h first level alarm, 19km/h second level alarm, 20km/h third level alarm and tilt back).	
Gradeability	Around 40°	
Battery	Rated Power: DC 88.8V Top Charging Voltage: DC 100.8V Rated Capacity: 1776Wh 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 150kms	
Max Load	120kg	
Adapter Specs	Input AC 100~240V / Output DC 100.8V 5A	
Charging Time	Around 4-5hrs	

Working Temperature	-10°C / +60°C
Color	Orange black
Dimension & Weight	
Suspension	DNM RCP 2S Spring Suspension / DNM AOY 36RC Air Suspension
Suspension Travel	Using a variable lever the wheel has dampening travel distance of 90mm, which is transferred to the rear air suspension with a travel distance of 56mm.
Headlight	5W*6
Pedal Size	277*130mm
Pedal Height	190-128mm
Tire Size	18*3.0 inch
Product Size	540(L)*320(W)*790(H)mm
Package Size	667(L)*362(W)*818(H)mm
Weight	Around 33kg
Port	Five-core 16mm aviation head charging port *2; Power button; Light sensor;

	USB port *2 (USB-A&Type-C), output power USB-A output 15W, Type-C output 20W.
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	Over speed buzzer alarm or speech broadcast + pedal tilt back
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 140°C it will result in tilt back.
Motherboard Waterproof Protection	The U-shaped groove between the motherboard base and the upper cover is connected with a silicone sealing ring, which greatly enhances the waterproof performance and provides safe

	waterproof protection for the motherboard base
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
Foot Stand	Add foot stand, easy to open and close, no worry about crash the wheel when stop it
Power Pad	The pads adopts ergonomic design and soft foam self-crust forming, moderate hardness, increase the acceleration and deceleration experience, better protect the body.
Alarm & Features	
Power On/Off	Short press power key: turn on Long press: hear a click then turn off
Battery Indicate	Led shows battery level when EUC power on at rest
Speed Indicate	LED dot matrix screen displays speed in riding mode
Hardware Features	
Main Board	The whole board adopts 4 layer board structure design, the whole machine works more stable.12pcs imported MOS in TO-247 large package provide a strong guarantee for 3500W motor. MOS tube is directly fitted

	on the magnesium alloy main board seat, and the bottom of the magnesium alloy main board seat is directly connected with the body, which can dissipate heat quickly, providing a strong guarantee for fast and stable operation.
Music system	1. The system comes with Bluetooth music, which can be connected to the EUC through the mobile phone to play music. Bluetooth 5.0 technology provides better sound quality for playing music. 2. The use of independent stereo sound design, (configuration of 15W tweeter +20W bass unit) *2, plus a unique guide hole, make the bass much richer, treble much transparent. 3. Plug USB disk plays music on USB-A.
USB output	1* Type-C Fast Charge +1 USB-A (plug gable USB drive to play music)
Charging	It provides two charging ports that can be plugged into two chargers for quick charging of the device
RGB lights	Almost the whole body covered with a total of 178 RGB lights.The light pulsates with the music spectrum, showing a variety of light effects, making the euc more cool.
Front Light	One set of left and right lights, a total of 6 pcs 5W lights. The integrated RGB daily lights, can adjust the color, and the brightness according to the speed automatically. The two lights can be adjusted the angle separately to ensure the good lighting at night.

Taillight	Integrated rear red brake light and turn signal light.
Display	16*16 dot matrix display. Power, speed, fault code, spectrum display and other information all in one.
Temperature control system	Motherboard, motor, battery temperature real-time monitoring to ensure the good security of users.
Trolley	Portable independent U - shaped pull rod design.
Motor	High 3500W hollow shaft motor is used to provide a strong sense of acceleration for riders.
Battery	21700 5000mA cell, vehicle distribution design of two groups of independent batteries, battery protection board using a new BMS battery management system, real-time monitoring of cell safety, aluminum body and battery box integrated design, more reasonable design, safer use.
Suspension system	Unique X-shaped connecting rod damping structure, adopting the unique lever structure of racing class to achieve strong support and soft linear damping experience.
Pad	Front and rear acceleration and deceleration pads, foot pads.
Package	
Standard Accessories	S19*1, Pad*2, Charger*1, Manual*1, Seat Cushion*1 QC certificate*1

2. Safety Instructions

- S19 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 S19 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 S19 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 S19:
 - 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 S19 tilt 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 S19 after it has indicated an empty battery condition or powered off due to low battery. Your S19 Promay 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 S19 from damage due to power surges and voltage spikes. Do not use a charger from any other product.

- Always shut down your S19 and unplug the AC Power Cord before performing any maintenance.
- Do not modify your S19. Modifications to your S19 could interfere with the operation of the S19, could result in serious injury or damage, and could void the Limited Warranty.

3. APP

- Android APP: Please download from Google play, ‘kingsong’ is the exact one.
- IOS APP: Please download from apple store, ‘kingsong’ is the exact one.
- Mini program: Scan on WeChat and use the mini program.



Android



IOS



Wechat Mini Program

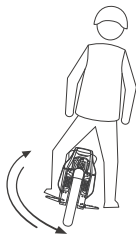
4. Learn to Ride

4.1 Precautions

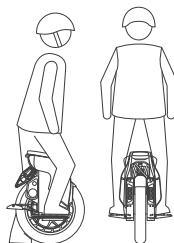
- Please find a surface to practice on.
- Warm up your body and ensure you're wearing safety gear such as helmets, knee pads, elbow pads and wrist guards.
- Ensure the wheel's battery level.
- Check the unicycle for imperfections such as any looseness, abnormal sound. We also highly suggest pushing the 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 S19 For different customers, it may take 2-20 hours to ride well.



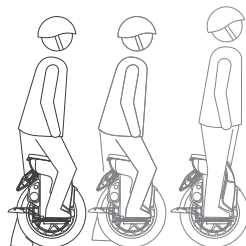
01. Get used to the way Kingsong S19: step on one pedal, then swing your leg back and forth to feel the controls.



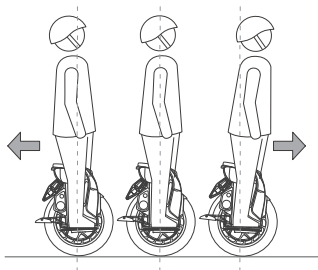
02. Using a friend, wall, or handrail: put both feet on Kingsong S19 Pro and practice riding slowly forward and backward.



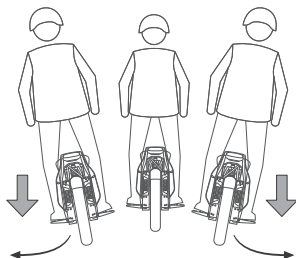
03. With one foot on a pedal, slowly lean forward. Push off with your other foot and glide for 1-2 seconds.



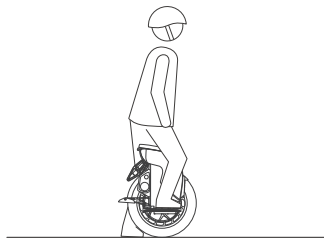
04. After you are able to comfortably glide for a few seconds, try gliding for 10-20 ft (3-5 m) with both feet on the pedals.



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



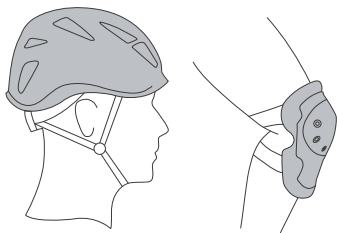
06. Turn by pressing harder on one pedal than the other, and by shifting your weight slightly.



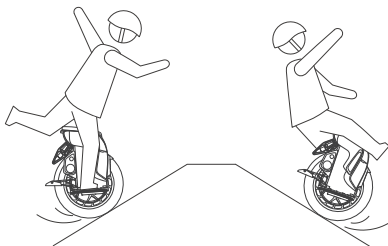
07. To get off: come to a stop by centering your weight, then step off Kingsong S19 with one foot.

5. Warning

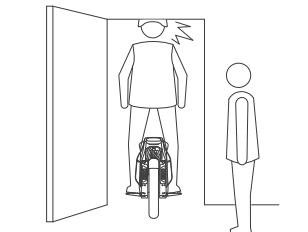
- You must read and understand the Warning Instructions section of this manual before attempting to ride the S19.



- Always wear a helmet and protective clothing when riding.



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



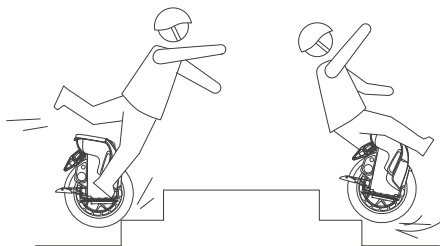
- Watch your head when passing through doorways.



- Use caution when riding over any changes in terrain.



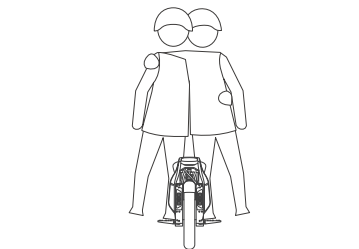
- Do not ride on limited traction surfaces.



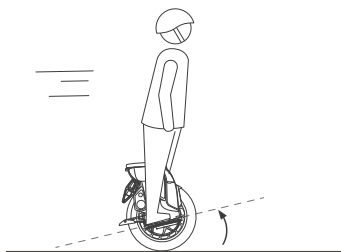
- Do not ride over holes, curbs, steps, or other obstacles.



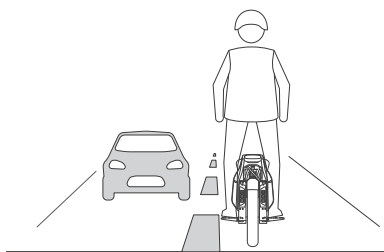
- Do not rock back and forth or shift your weight abruptly.



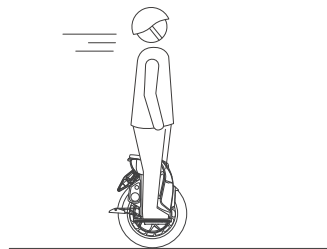
- Do not ride double or carry any passengers.



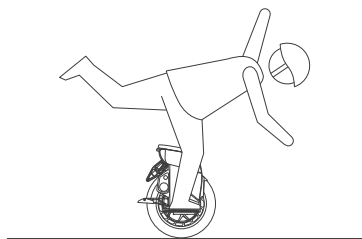
- Do not accelerate when the Kingsong S19 tilts back or sounds an alarm.



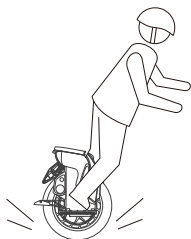
- Do not ride on public roads, motorways, or highways.



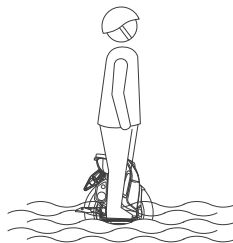
- Do not exceed the speed limit of 60km/h.



- Do not ride with single leg on the pedal



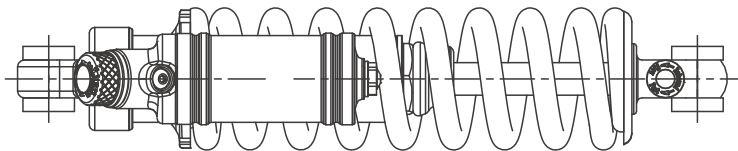
- Maintain contact with the ground at all times. Do not jump or attempt stunts.



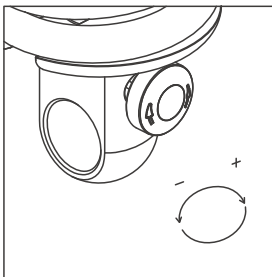
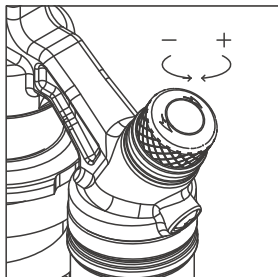
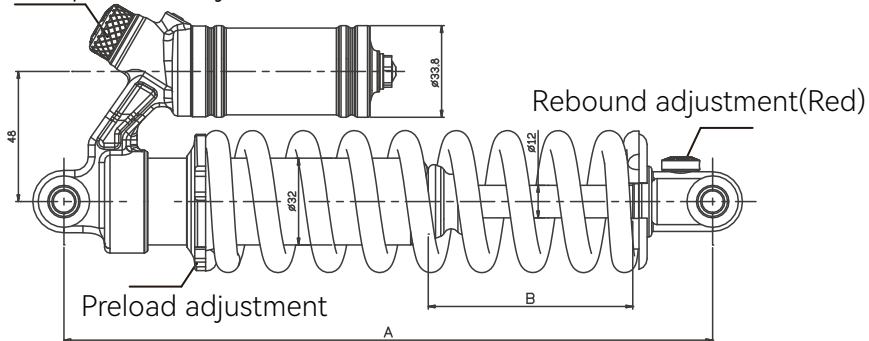
- Do not get wet. Do not ride through puddles or other bodies of water.

6. Suspension

6.1 Spring Suspension Description(DNM RCP 2S)



Compression adjustment(Blue)



specification

specification	
A Total Length	B Route
200±2	56±2

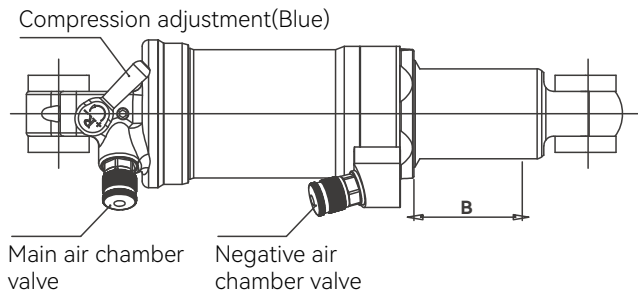
! **Compression adjustment**

- + direction rotation, pressure increase
- direction rotation, pressure decrease

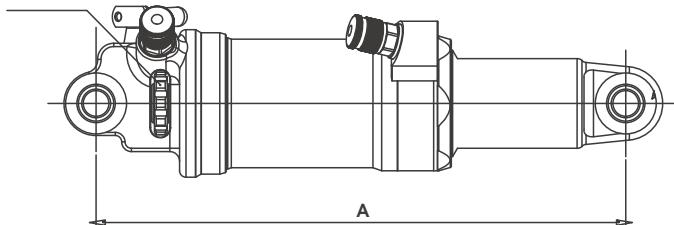
! **Rebound adjustment**

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

6.2 Air Suspension Description(DNM AOY 36RC)

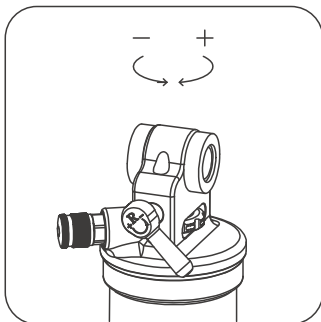


Rebound adjustment(Red)



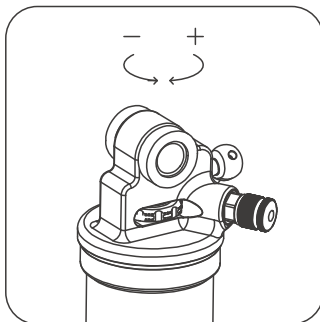
! Compression Adjuster

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



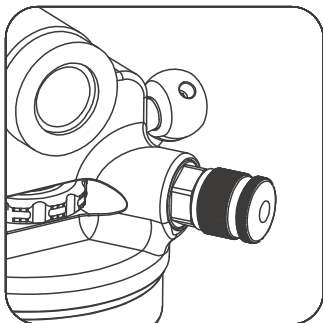
! Rebound adjustment knob

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



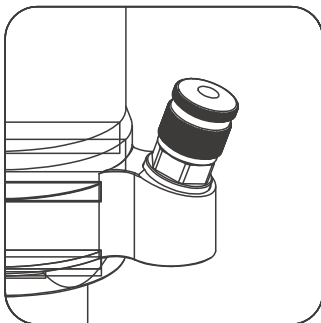
! Main air chamber

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. Inflate positive and negative chambers according to chart located.

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).				

7. Maintenance

7.1 Cleaning

WARNING

- Make sure the S19 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 S19 with a power washer or high pressure hose.
- Wipe your S19 clean with a soft, wet cloth. For stubborn stains, use a toothbrush and toothpaste.

NOTE

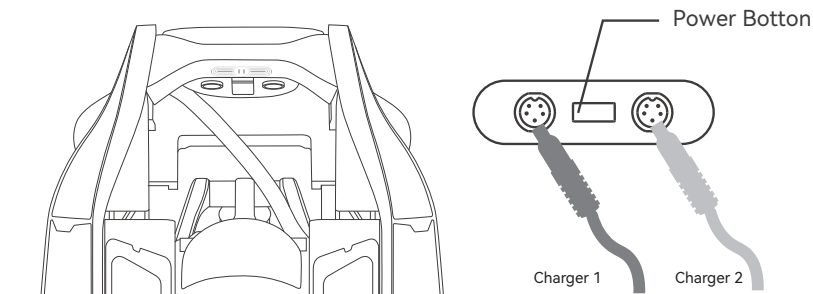
- Do not wash your S19 with alcohol, gasoline, acetone, or other corrosive/volatile solvents. These substances may damage the appearance and internal structure of your S19.

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.

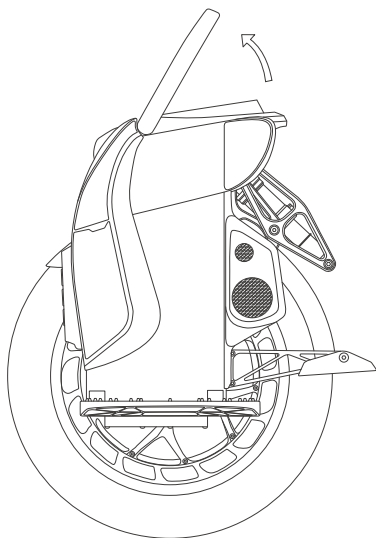
7.2 Charging

- The original charger is DC 100.8V/5A. The indicator of the charger is red/green, mean on-charging/charging completed. With two chargers working together, the charging time will be 50% cut off.

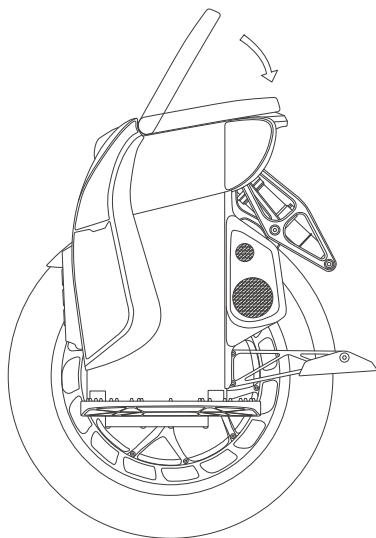


7.3 Trolley Handle

- Slowly rotate the handle forward from the tail to deploy it; When the Trolley handle is not in use, slowly rotate it back to close.



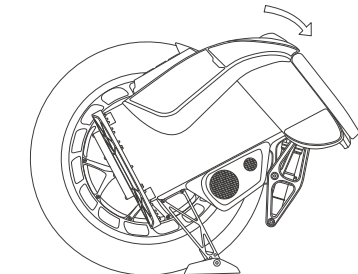
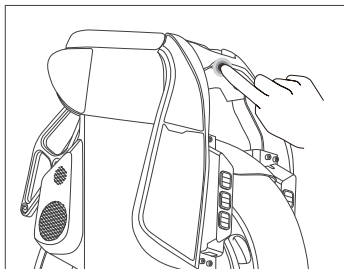
Put up



Put down

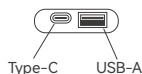
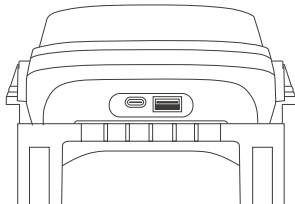
7.4 Foot stand

- When the speed of the unicycle drops to zero, touch the bottom of the front hand with one hand, so that the unicycle loses its self-balancing power, and slowly park the unicycle.



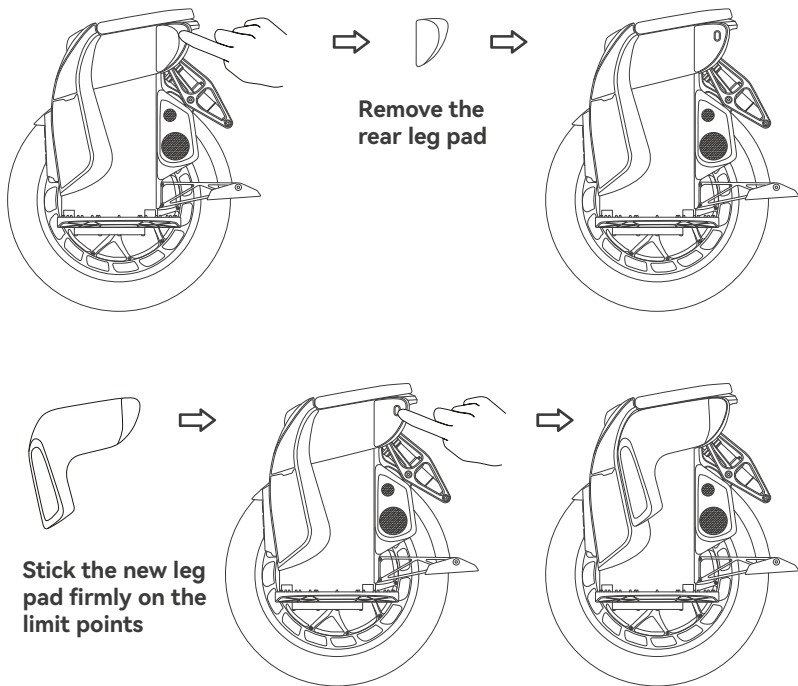
7.5 USB

- The USB port could be used for power output and music playing(USB-A).



7.6 Pad

- Slowly remove the rear leg pad, align the new leg pad with the limit points on the EUC, stick the new leg pad firmly.



7.7 Battery Maintenance

WARNING

- Do not attempt to disassemble the battery.
- Do not allow the battery to get colder than -20°C or hotter than 50°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°C the battery range and performance is at its best; whereas at temperatures below 0°C range and performance are decreased. Typically, at -20°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
Range	40%	60%	80%	90%	95%	100%

NOTE

A fully-charged S19 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

Again, we appreciate your purchasing of Kingsong products.

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.



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