



# electronicworks

## Operating Manual

**Foldable Electric Scooter**

**Model number :LG-ES1201**

**ElectronicWorks AiE-3**



**ATTENTION:** Please read and observe the safety regulations before using the electric scooter for the first time put into operation.



**WARNING: To reduce the risk of injury, user must read instruction manual**

**WARNING:** Prolonged Exposure to UV rays, rain and the elements may Damage the Enclosure Materials. Store Indoors When Not in Use.

**WARNING:** Risk of Fire, No User Serviceable Parts.



**ALWAYS** wear a helmet when riding your Electric Scooter.



**MAKE SURE** your scooter has a full battery before taking it out to ride.



**ALWAYS** be aware of local road laws and follow them.



**DO NOT** ride the scooter under the influence of drugs or alcohol



**ALWAYS** respect pedestrians.

Charge: 0~40°C

Operation: -5~40°C

Charger Manufacturer: COMING DATA CO.,LTD.

Model: CP4215

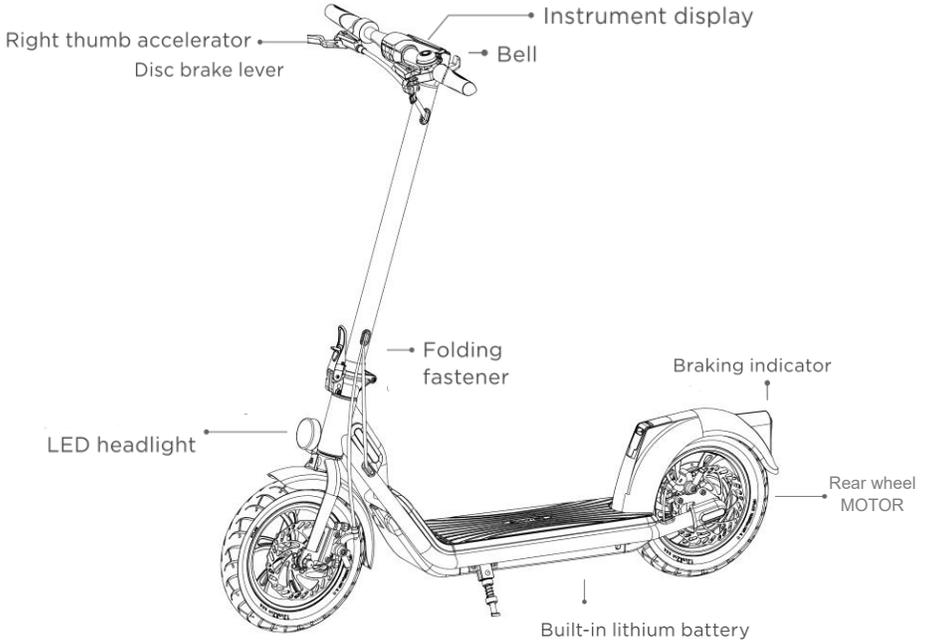
Input : 100-240VAC 50/60Hz,3A

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# 1.Introduction to functions



\*The accessories and additional items which are not approved by the manufacturer shall not be used.

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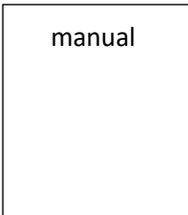
## 2.Product & Accessories

**Declaration of Conformity** : This is vehicle is a personal electric scooter with pure electric propulsion, meet the requirement EU CE standard EN17128. and UKCA for United Kingdom .

Body



Accessories  
Manual



L-Tools



Power adapter



Please carefully check whether the items in the packing box are complete and intact.

**And please keep the printed instructions for further**

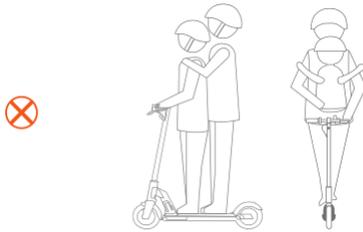
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## reference and to be read

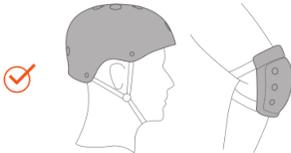
### 3.Safety instructions

Note : Before using this product, please carefully read the following important safety information.

1. This electric scooter can be used by one adult only.



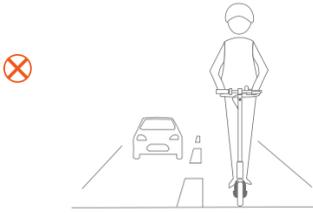
2.Wear safety helmet and other protective equipment while using this product



3.Never ride this product in an unsafe or illegal place.

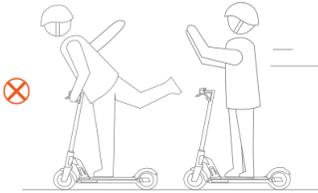


4.Please practice in an open area (not on lanes) first and use this product until you are skilled in operating.

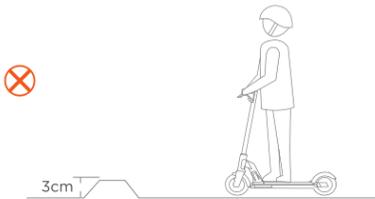


5. Do not make any dangerous actions or ride with one hand only.

Keep your feet on the scooter.



6. Avoid obstacle jumps and anticipate and adapt your trajectory and speed to those of a pedestrian before crossing these obstacles. Meanwhile get out of the vehicle when these obstacles become dangerous due to their shape, height or slippage. Do not try to directly pass steps are higher than 3cm.



7. For your safety, please control the speed to be less than 25km/hr. Avoid using it at nights as much as possible.

If you use this product at night, turn on the headlight and control the speed to 15km/h or less.



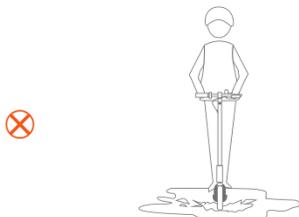
8. Do not use this product at temperature below  $-5^{\circ}\text{C}$ .



9. In the event of bumps or poor road conditions, please use this scooter slowly or get off the scooter and push it forward.



10. Do not use this product on an oily or icy surface.



11. To avoid damage caused by water to its electrical parts, do not immerse this product at a depth of more than 4cm in water.



12. Avoid using this product as much as possible in bad weather such as rain, snow and wind, to prevent unnecessary damage caused by insignificant factors.



13. Use this product in accordance with relevant instructions in this manual. Do not use this product beyond the allowable load range.



14. Avoid using or keeping this product at high or extremely low temperatures or keeping this product together With flammables.



15. The scooter is a special riding product. Please ride it on smooth roads without pits.



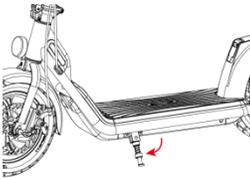
16. Do not load anything to the handlebar which will affect the stability of

the vehicle.



17. 1. Engage the kickstand when the vehicle is not in use.
2. Flip up the kickstand before use; 3. Do not park the vehicle on the slope.

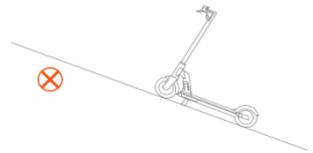
1.



2.



3.



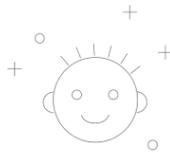
18. The minimum height of the user is 1.4m, while the maximum height is no more than 2.2m; The maximum age of the user is 60 years old, while the minimum age is no less than 13 years old.



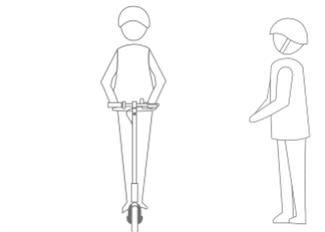
19. Braking performance and friction between the tire and road deteriorates in wet conditions, so it is harder to control the speed and easier to lose control. Slow down and brake early when it is raining, the extension distance in wet weather is about 7 meters. please keep enough space with front road users .



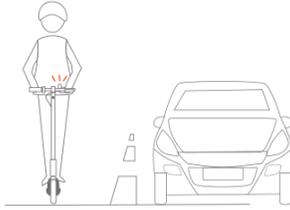
20.WARNING Keep plastic covering away from children to avoid suffocation.



21.The user shall take the time to learn the basics of the practice to avoid any serious accident that can take place in the first month.



22.Notify your presence when approaching a pedestrian or cyclist when you are not seen or heard.Avoid high traffic areas or overcrowded areas.



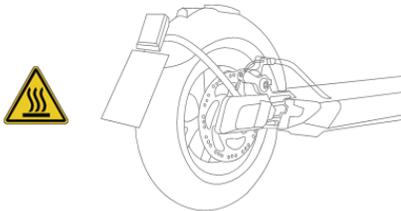
23. Cross the protected passages while walking. In all cases, take care of yourself and others.



24. Do not divert the use of the vehicle, this vehicle is not intended for acrobatic use.



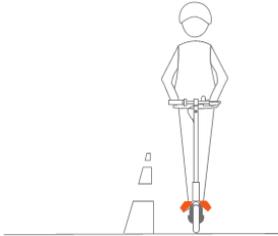
25. **Caution**, the brake may become hot while in use. Do not touch the break disc after use.



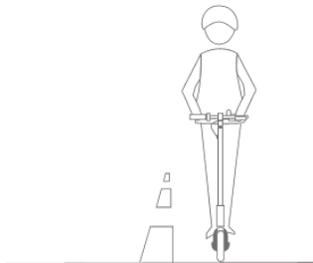
26. Eliminate any sharp edges caused while using. Do not modify or transform the vehicle, including the steering tube and sleeve, stem, folding mechanism and rear brake.



27. The user has the obligation to always wear shoes when riding.



28. In any case, anticipate your trajectory and your speed while respecting the code of the road, the code of the sidewalk and the most vulnerable. Please check the limits of use in accordance with local regulations should be observed during riding of product.



29 . Traffic in the city has many obstacles to cross such as curbs or steps ,it is recommended to avoid obstacle jumps .it is important to anticipate and adapt your trajectory and speed to those of a pedestrian before crossing these obstacles ,it is also recommended to get out of the vehicle when these obstacles become dangerous due their shape ,height of or slippage ..

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## 4.Scooter assembly

1.Unfold the scooter and open the kickstand.



2.Loosen the 4 screws, put the handle into the fixing seat, and tighten the 4 screws.(As shown by the red arrow in the figure below)



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Note: The handle must be installed to the middle position and confirm that the installation is secure.

3. After installation, check the power button, wires, brakes, etc. Turn on the machine after confirming that the brake is normal.

## 5. Unfolding steps



Position when folded



Press down on the hook holder, and then release the hook.



Push the pole until this point.



Pull the trigger back onto the pole.



**Check whether the trigger hook and the pole hook are in place.**

## 6.Folding steps



1. Raise the trigger.
  2. Hold the trigger and release the trigger out.
- As shown in the figure, action one and action two.



**Caution:** Hold the pole by another hand all the time!



After disassembly as shown



Then put the hook into the fixing seat hole.

## 7.Steps to open the battery compartment



Battery compartment lock position



Insert a #4mm diameter wrench into the screw head. Turn the wrench counterclockwise.

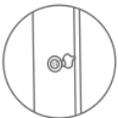


Use your hand to hold the arrow position and lift the foot pedal upward.

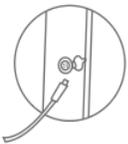


Locked: Put the pedal on and press it flat, insert the wrench into the screw head, and then turn it clockwise until it is locked.

## 8.Charging



Remove the rubber protective cover of the charging port.



Connect the charger.



After charging, push the rubber protective cover back in.

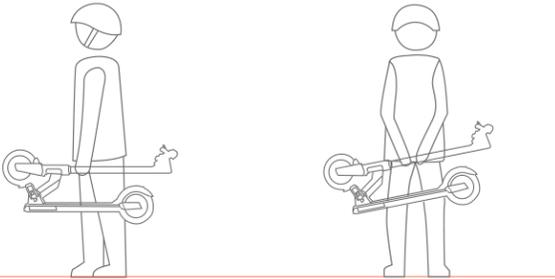
1.Remove the rubber protective cover and insert the charger connector into the charging port of the body.

2.Insert the power plug of the charger into the power socket.

3.When the charger indicator is red, it indicates that the battery is being charged.When the charger indicator turns green, it indicates that the battery has been fully

- 
- charged.
4. Requirement to power-off the vehicle during charging, or into a certain non-operational mode.
  5. Please Charge the scooter outdoor to avoid any risk .

## 9.Transportation



After folding, you can carry the scooter with one or two hands

## 10.Basic operations

A--Power Button

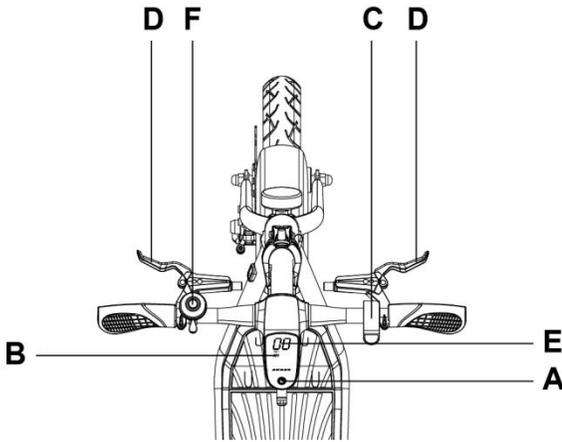
D--Brake Lever

B--Gear Indicator

E--Instrument Display

C--Speed Control

F--Bell



## 11. Operating instructions

### Power button

Press and hold the power button for 2s to turn on the scooter and to turn off the scooter.

### Gear setup

Press the power button once to switch the gear. The gear can be set to ECO(max.5 km/h), The pedestrian mode). D(max.12 km/h), and S(max. 20 km/h).

### Speed control

The accelerator will not take effect until the scooter slides at a speed of 3km/h or above. Press the right thumb accelerator to control the speed.

### Brake control

Hold the left brake lever to brake. The greater the holding force, the greater the braking force. The indicator will be lit under the condition of left and right braking.

### LED headlight ON/OFF button

Double click the ON/OFF button to turn on or turn off the headlight.

### Tire pressure

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Before riding, please make sure the tire pressure is no less than 2.8Bar. Otherwise, the mileage will decrease each time. The tire pressure may also be under the standard value, if the scooter is unused for a long time. (This is applicable for the scooters equipped with pneumatic tires.)

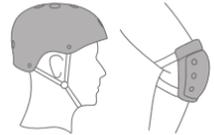
### **Noise emission**

The A-weighted emission sound pressure level of the vehicle in operation is less than 70 dB(A)

## **12. Riding instructions**

### **Preparation for riding**

1. Select an appropriate riding place..Our scooter intended surface is flat ,clean,dry ,level .please keep the distance with other road users 10m at least .
2. Unfold the scooter according to the unfolding instructions and wear protective equipment,such as hand/wrist,knee,head and elbow protection.and the user must always wear shoes .



3.It is necessary to check that the steering system is correctly adjusted, that all connection elements (such as a folding system) are correctly tightened and not broken, and that the brakes and wheels are in good condition.

- 4.The User should check the limits of use in accordance with the local regulations (e.g.use in pedestrian areas ,on-road).

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## Riding

1. Press the power button to turn on the scooter
2. Put one foot on the foot board and the other foot on the ground.
3. Make the scooter body slide forwards to 3km/h and gently press the right thumb accelerator. The scooter will slowly run forwards. When the scooter is running steadily, put the other foot onto the footboard. The larger holding angle of the right thumb accelerator, the higher the speed.

Note: For the riding safety, LG-ES1201 has a non-zero start mode.

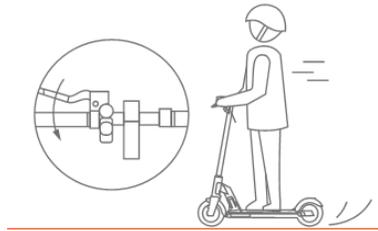
The accelerator cannot be enabled until the body slides forwards for a certain distance.



## Stop

1. Under normal circumstances, if you hold the left and right brake lever, the motor will be immediately powered off and subject to braking the greater the holding force, the greater the braking force.

2. **Warning** : In wet weather ,the breaking system can stop the vehicle in about 7 meters as extension breaking distance .please leave enough space with front same direction road users .



## 13. Battery and charger

Each LG-ES1201 electric scooter is equipped with a dedicated lithium battery and smart charger. Both the scooter and its accessories have product identification numbers. It is forbidden to use the chargers of other brands. The chargers provided by the company must not be used for other purposes. The company is not responsible for the resultant damage to the battery or charger.

### Battery

The lithium battery provided by the company can be recharged for at least 800 times, and more than 1,000 times under normal circumstances. Please charge full battery for the first time before using it. The battery can

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be charged at any time and there is no any damage to charge it frequently. Meanwhile, please don't forget to charge it per 3 months if you don't use it for a long term.

## Charger

The dedicated charger provided by the company has a function of charging protection. When the battery is 100% charged, the charger will be powered off automatically. The charging time is about 5-6 hours. Damage to the battery arising from water, collision and other abnormal factors is excluded from the warranty policy.

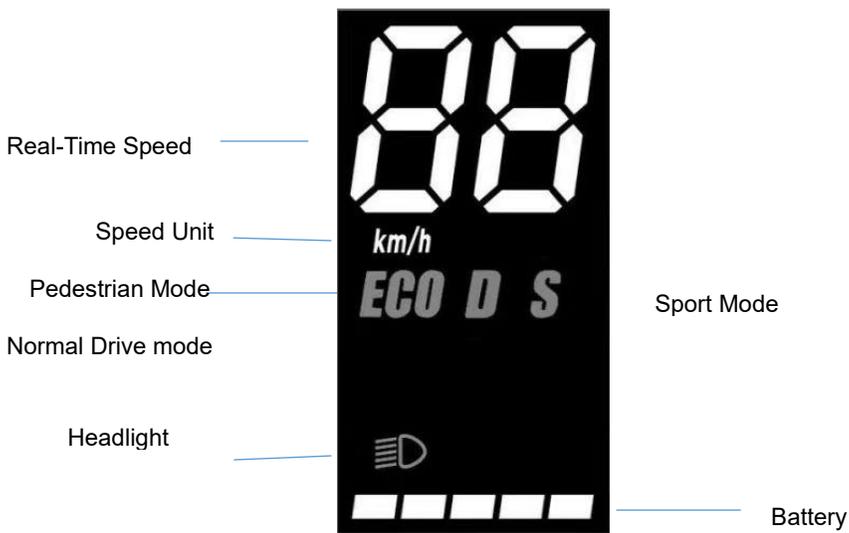
## Charging instructions

1. Open the rubber and insert the plug into the hole.
2. Insert another plug of the charger into the electric outlet.
3. When the indicator lamp is red it shows the battery being charged. When the lamp turns green, the battery is finished charging.
4. Please shut down and keep away from water before charging.
5. Only use the specified charger for charging.
6. **Warning: Please be careful not to get electric shock.**

## Kinetic energy recovery

Press the brake in the running process to enable the kinetic energy recovery system and convert part of kinetic energy into electrical energy to be stored and used. The kinetic energy recovery system can enhance the experience of emergency braking. At the same time the recovered kinetic energy can help increase the endurance. Changes in the power are displayed simultaneously.

## 14. LED Display



TO START : Long press the instrument ON/OFF,  
 HEAD LIGHT : When power on under mode of Eco. The head light is on  
 But when transfer to mode of D and S ,the head light is off. If you wanna  
 use the head light please Double-click ON/OFF to turn on the headlights.  
 RIDE : Click ON/OFF to switch operation mode.  
 RIDE CYCLE : ECO→D→S→ECO

**IF FAULT INDICATOR FLASHES PLEASE CHECK THE BELOW POINTS**

Fault	Code	Solutions
Signal fault	E0	Reason: Signal between display and controller no data

		Please check if the cable between this two parts get loose,re-plug and power on .	
Thumb accelerator failure	E2	Check whether the thumb accelerator is stuck.	If the thumb accelerator is stuck, release it.
			connecting cable between the accelerator and instrument for a short or open circuit
			In the case of an open or short circuit, replace the connecting cable. Replace the thumb accelerator.
MOS fault or over current fault	E4	First ,at high speed (flat roads),the maximum limiting current cannot exceed 16A , second ,when the speed is very low ,especially when climbing the current of over current protection is related to the current vehicle speed ,when a mos or motor is detected causing a current abnormality ,an error e4 is reported	
Hall failure	E5	Motor hall failure ,or short cable etc	
Stall protection	E6	When the scooter is overloaded ,or when the current is too large when climbing ,the motor stops rotating ,and the system can detect this phenomenon and stop the output of the motor to protect it .	
Less voltage	E7	When the battery voltage drops to 86% of the rated value (36v battery drops to 31v ) the controller stops driving the output ,thus preventing damage from excessive discharge of the lithium battery ,the controller automatically detects the under voltage condition to determine whether to enter the under voltage mode ,the controller stops driving the output and locks the status to report error E7 . restart the controller and the battery voltage exceeds the under voltage	
Over voltage protection	E8	When the controller breaks the moment ,the motor will generate a large back EMF in order to protect the controller ,when the rated voltage of the lithium battery 1.4 times (greater than 0V ) stop braking action ,and report the error code E8	
Over heat protection	E9	When the scooter is over loaded or the current is too large or the resistance is too large when climbing ,and it continues to maintain this state ,causing the controller to over heat ,the system can detect this phenomenon and stop the output of the motor ..to protect ti .	

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## 15.Maintenance ,Routine inspection & Cleaning

### Lubrication



For maintenance, add a small amount of white grease or lubricant to the folded part once every six months. Check the scooter once every three months for screw loosening. Tighten the loose screw.

### Battery



When you get the electric scooter for the first time, please fully charge the battery before using the scooter. The battery can be charged at any time to ensure the power supply. It will not be damaged during charging. When not in use, the battery needs to be charged once every three months.

\* Laboratory data

### Storage and daily maintenance



Avoid leaving scooter under direct sunlight or in severely humid places for a long time.

Keep the scooter clean.

Regularly check the tightening of the various bolted elements, in particular the wheel axles, the folding system, the steering system and the brake shaft.,please follow the below list to do daily maintenance.

Item	Daily maintenance
Folding fastener	Check if it has any defects or can not lock tightly .
Steering system	Check if there is any loosen
Break system	Check if that can stop as usual .
Bolt system	Check if has any missed bolt
Wheel Axles	Check if has any defeats .
Tire	Please check tire if has any broken or flat tire happens
Power	Keep fully charged before next driving .

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## Cleaning Recommendations



If you see stains on the scooter's body, wipe them off with a damp cloth. If the stains won't scrub off, put on some toothpaste, and brush them with a toothbrush, then wipe them off with a damp cloth.

Do not clean the scooter with alcohol gasoline, kerosene or other corrosive and volatile chemical solvents to prevent dire damage. Do not wash the scooter with a high-pressure water spray. During cleaning, make sure that the scooters turned off, the charging cable is unplugged, and the rubber flap is closed as water leakage may result in electric shock or other major problems.

## Routine Inspection



1. Before riding, please confirm the folding mechanism is locked.
2. Please check whether the tires are badly worn. Please contact the local authorized dealer if they need to be replaced.
3. Please check whether the tire pressure is at the standard value. If the tire pressure is too low, please inflate the tires immediately.
4. Please check whether the wear condition of the brake pad affects the use of the brake system. If so, please contact the local authorized dealer /importer (the details listed on head of manual ) to deal with the problem.
5. The screws used in this product are self-tightened screws, please note that the effect may be gone after several times of tightening.
6. To avoid any damages related to intensive use and to recommend periodic inspection of the frame .fork ,brake .cable,brake pads.wheels.etc

## 16.Common problems and solutions

If this product fails, try the following solutions

1. The display is black

Cause: This product is subject to long-time exposure to sunlight.

Solution Keep this product in the shade for some time to recover.

2. The displayed value is inconsistent with the actual value

Cause: Parameters are set improperly or lost

Solution: Press and hold the power button to turn off this product and then press it again to restart the scooter.

3. The displayed value is dim

Cause: The battery is in poor contact or exhausted

Solution: Turn off the power supply and then turn it on again. If this

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problem still occurs, contact the manufacturer or dealer.

4.If this product does not work properly, perform the following check.

a. Check whether the power supply is turned on.

b. Check the power of the battery via the display.

c. Check whether the left brake lever and right brake lever are in their original positions.

d. Check whether all jacks and connecting holes are connected accurately.

If the aforesaid steps are finished but the product is still not working properly, contact the manufacturer or dealer or importer (please see head of manual contact telephone .

5.The screw connecting the handlebar and vertical rod is loose

Cause: The lock screw of the handlebar and vertical rod is loose.

Solution: This lock screw is a spare screw that is loose by default during delivery. It does not affect the normal operation of the product. The user can tighten this lock screw as required.



As shown in the figure

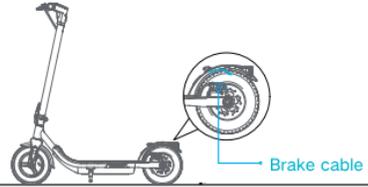
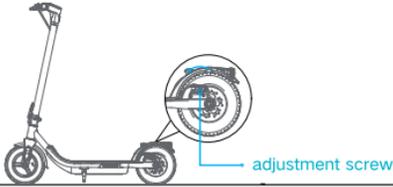
The mechanical vibrations transmitted by the Electric Scooter are less than  $25\text{m/s}^2$  The uncertainty of measurement is  $1.5\text{m/s}^2$ .

6.Braking Distance 2.5m

The braking distance of this product is measured under the conditions of 75kg loading,  $24^\circ\text{C}$  temperature 55%-65% humidity, 2.9 bar Tyre pressure and asphalt pavement.

7. Adjust the disc brake and refill the tire .  
 Here below is the way of adjusting the disc brake . if want to replace disc brake or brake pads or other related parts please kindly contact the dealer or the importer listed ahead of manual .  
 Refill the tire as below photo.

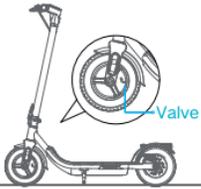
### Adjust Disc Brake



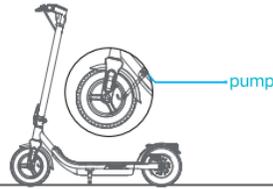
Brake is too tight: Use a 5mm Allen wrench to loosen the adjustment screw counterclockwise, return the brake cable, and then tighten the adjustment screw.

Brake is too loose: Use a 5mm Allen wrench to loosen the adjustment screw counterclockwise, pull the brake cable outward, and then tighten the adjustment screw

### Refill the Tires



1、Unscrew the tire valve cap.



2、Connect a pump to inflate

## 17.Parameter configuration

Parameter	Product name	Electric Scooter
	Model	LG-ES1201 Scooter

Size	L*W*H	122x55x116 cm
	Packing	123x24x59 cm
Weight	Net weight	19.58 kg
Status	Maximum load capacity	100 kg
	Height Maximum and Minimum of user	140cm~220cm
	Age of user recommended	18-50 years old
Main parameters	<b>Maximum speed in different gear</b>	<b>Eco : 5/km/ h D: 12/km/h S:20Km/h</b>
	Full-battery endurance	35-40km(depending on the environment, angle, speed, endurance driving habits and other factors)
	Maximum slope	15%
	Tire	12-inch pneumatic tire (Tire pressure range; 2.8-3.0Bar)
	Shock absorption system	Air tire shock absorption
	Dust proof and waterproof rating	IPX4
	Brake system	Both front and rear disc brake
	LED display	Speed, gear and power
	Lighting system	LED high-brightness headlight and tail light
	Motor power	400W
Charging parameters	Adapter Rated input voltage	100V-240VAC 50/60Hz
	Lithium battery	36V-13Ah
	Charging time	6-7h

## 18.Product warranty information

### Product warranty information

Type	Warranty items	Warranty period
Controller	Controller assembly and intermediate instrument board	One year
Lithium battery	Lithium battery pack and protective board	One year
Body	Frame assembly, hub motor, head body, rear hub, brake assembly, folding assembly, vertical rod, front fork, rotary part of front fork rod, control bus, and brake cable	One year
Accessories	Charger, brake lever, and thumb accelerator	Six months

Tips: Consumables such as the inner and outer tires, headlight assembly, instrument cover, handlebar cover, fender, rear taillight, decorative cover, kickstand, charger port holder, rubber protective cover and accompanying tool kit are not covered in the warranty policy.

**WARNING! As with any mechanical component, a vehicle is subject to high stresses and wear. The various materials and components may react differently to wear or fatigue. If the expected service life for a component has been exceeded, it may break suddenly, therefore risking causing injuries to the user. Cracks, scratches and discoloration in the areas subject to high stresses indicate that the component has exceeded its service life and should be replaced.**

Recommendation: Do not make any modifications that are not mentioned in the manufacturer's instructions.

## 19.Warranty card

While purchasing the product, please clearly fill out the following information, and make this card stamped with the vendor's seal, in order to guarantee your legitimate rights and interests.

User information	Name		Email	
	Address			
	Tel		Postcode	
Product	Product		Sales date	

information	name			
	Product model		Invoice number	
Vendor information	Name		Tel	
	Address		Postcode	
Notes: (1) This form should be stamped by the vendor. (2) The maintenance record should be subjected to the maintenance certificate issued by the authorized service agency. and kept properly after you have applied for services.				

\*Get closer to your seller so he can refer you to an appropriate training organization.

\*Please contact your local dealer for customer services.: