



doohan technology

# iLark

Please read this User's Guide carefully and do not use the vehicle until you have fully understood the performance of the vehicle.◦

Please keep the User's Guide in a safe place.

## User's Manual

Dear electric scooter (iLark) users, for the safety of you and others, and to ensure that the electric scooter (iLark) performance is excellent and stable, please read the instruction manual of this product before use.

## **1. Instructions for use**

- Do not use an electric scooter until you have read the instructions carefully to understand the performance of the electric scooter; do not lend to people who do not operate the electric scooter;
  
- Before using the electric scooter, check whether the fasteners of the

handlebar, saddle, saddle tube and wheel are tightened, and the locking mechanism of the folding mechanism is locked. Pay attention to the safety line of the saddle tube; check whether the brake is effective;

- Please observe the city traffic regulations and do not bring people; slow rain and snow and slippery roads should slow down and increase the braking distance when braking to ensure safety.

- Do not disassemble and disassemble parts by yourself. The company is not responsible for the losses caused. If you need to replace the parts, our special maintenance department can provide spare parts catalogue and spare parts. If you have any questions, please consult the after-sales service.

## 2. The main technical parameters

Measurement			
Length (mm)	1133	Width (mm)	513
Height (mm)	1082	Wheelbase (mm)	800
Front wheels distance (mm)	405		

## Main performance

Net weight (kg)	28 (Batteries not included)	Capacity (person)	1
Front and rear axis assignment (kg)	Front16/Rear12(Batteries not included)	Max Loading capacity (kg)	75
Max design speed (km/h)	25	Rated voltage (V)	48
Climbing ability	$\leq 7^\circ$		
Brake distance	(Speed	Dry	$\leq 15$

25km/h) (m)	road	
Brake distance (Speed16km/h) (m)	Wet road	$\leq 19$
Standard power consumption (KWh/100km(25km/h))	1.4/1.9	
Frame		
Rear shock	Sleeve, oil damping	
Front tire	60/80-8	
Rear Tire	75/65-8	
Front Tire pressure	250 $\pm$ 10	

(Kpa)	
Rear Tire Pressure (Kpa)	$300 \pm 10$
Front wheel (alloy)	MT1.50-8
Rear Motor	MT1.85-8
Front brake	/
Rear brake	Disk
Ground Clearance (mm)	83
Seat Height (mm)	585-807
Maximum roll angle ( $^{\circ}$ )	$\leq 31$
Max Turning Angle ( $^{\circ}$ )	$\leq 33$
Turning radius (m)	2.50

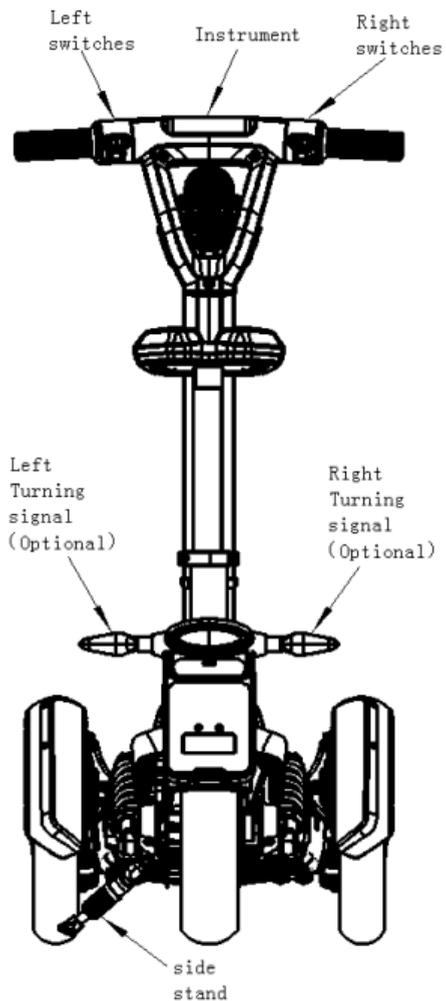
Maximum distance between the front two wheels height (mm)	170
<b>Battery System</b>	
Battery type	18650 Ternary lithium battery
Voltage (V)	48
Capacity (AH)	15
	10
Charging Input Voltage (V)	AC 220 or 110(optional)

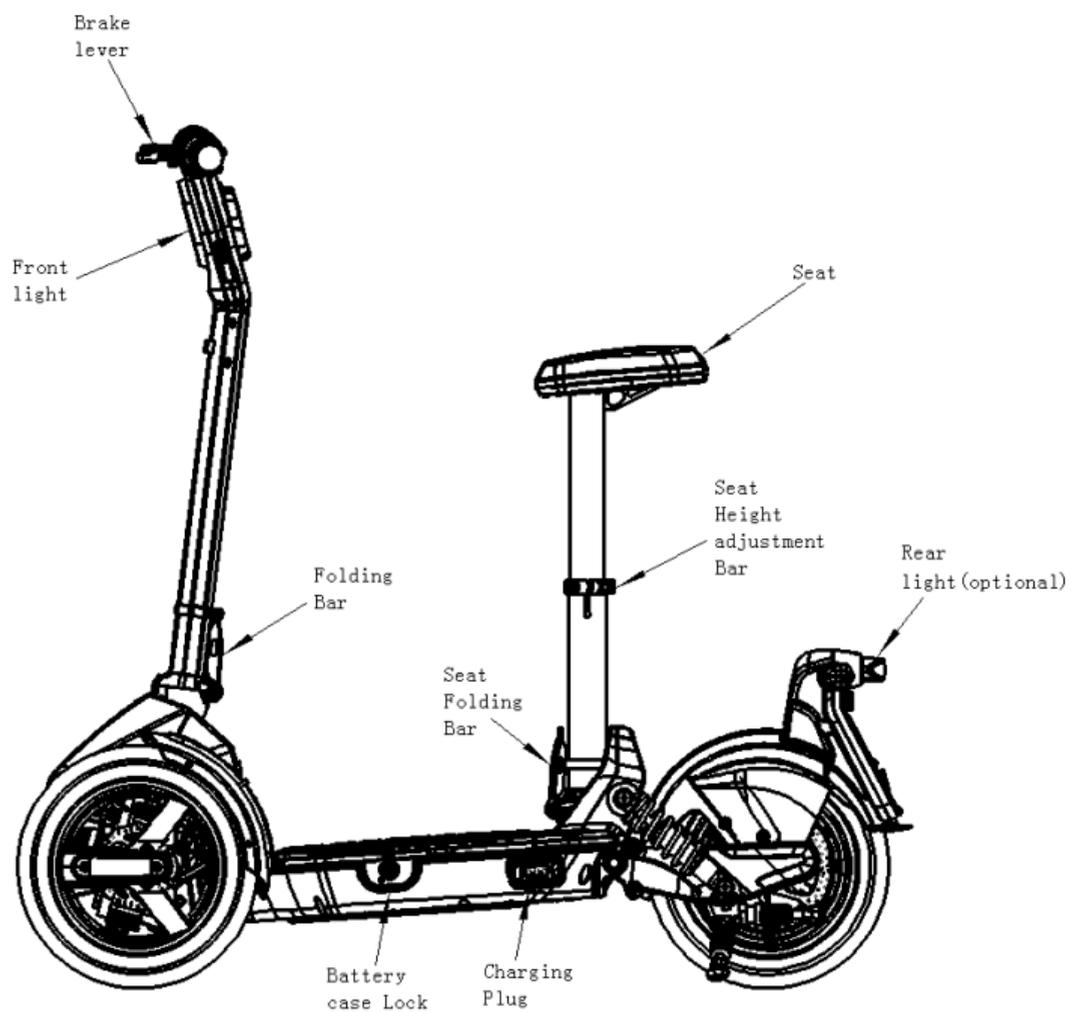
Charging Output Voltage (V)		54.6
Rated Charging Current (A)		3
Standard Charging Time (H)		6
		4
Max Range (KM)	15AH	35
	10AH	25
Battery W.t. (Kg)	15AH	$4.2 \pm 0.2$
	10AH	$3.2 \pm 0.2$
charge and discharge		500

(times)		
Battery operating ambient temperature range (°C)	-20 to 60	
Battery storage ambient temperature range (°C)	1 month	-20~60
	3 months	-20~45
	12 months	-20~20
The Charging ambient temperature (°C)	0~45	
Battery protection system	Undervoltage protection, short	

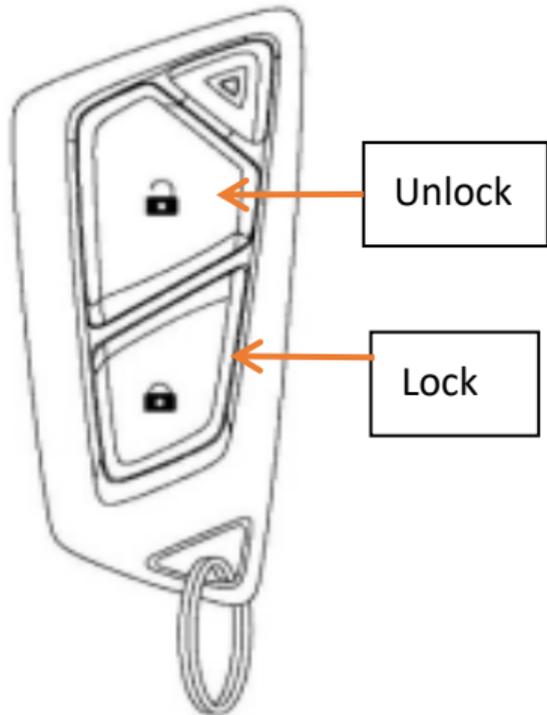
	circuit protection, temperature protection, overcharge protection, overcurrent protection, battery balance protection
Others	
Instrument	LCD instrument
Fuse specification (A)	3A、 20A
Front light	12V LED
Starting way	Remote/APP

### 3. Component description





## 4. Remotor and APP



1 Unlock button (remote control): Press the unlock button twice in succession, the whole vehicle is powered on, the unlocking is successful, and the unlock button is pressed again, the whole vehicle is turned off.

2 unlock (APP): press the unlock. button, voice prompt “The vehicle has been unlocked”, the whole vehicle is powered on and the unlocking is successful.

1 Lock button (remote control): When you are driving, press the unlock button to turn off the power of the vehicle, press the lock button again, and the vehicle enters the anti-theft mode.

2 lock button (APP): When you are driving, press the Lock key, the voice prompts "The vehicle is locked", the whole vehicle power is turned off and enters the anti-theft mode.

## 5.Folding mechanism

### Direction riser folding

Step 1: Move the 1 direction riser folding wrench hoop up in the figure.

Step 2: Pull the 2 direction riser folding wrench down in the figure.

It can be folded down as shown in the picture.

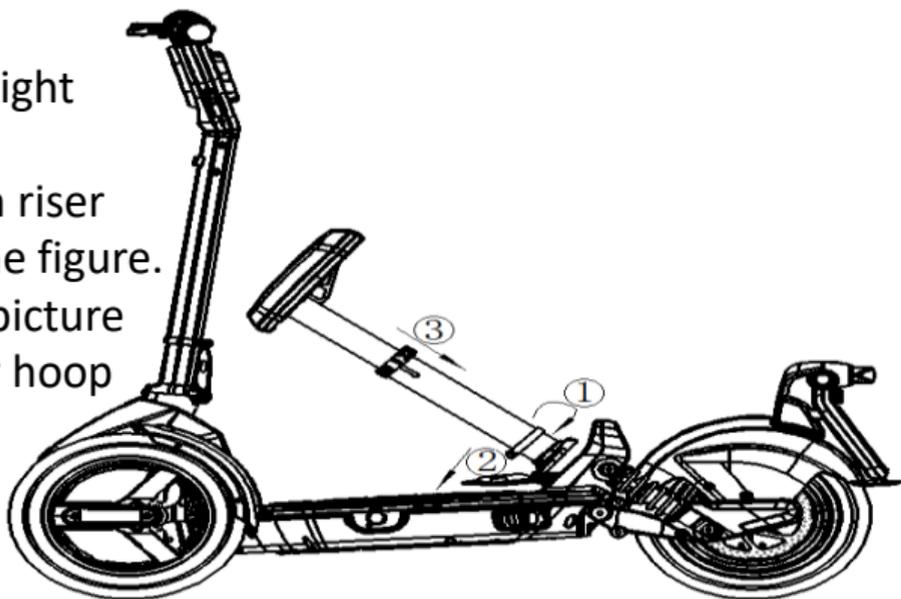


## Seat riser folding

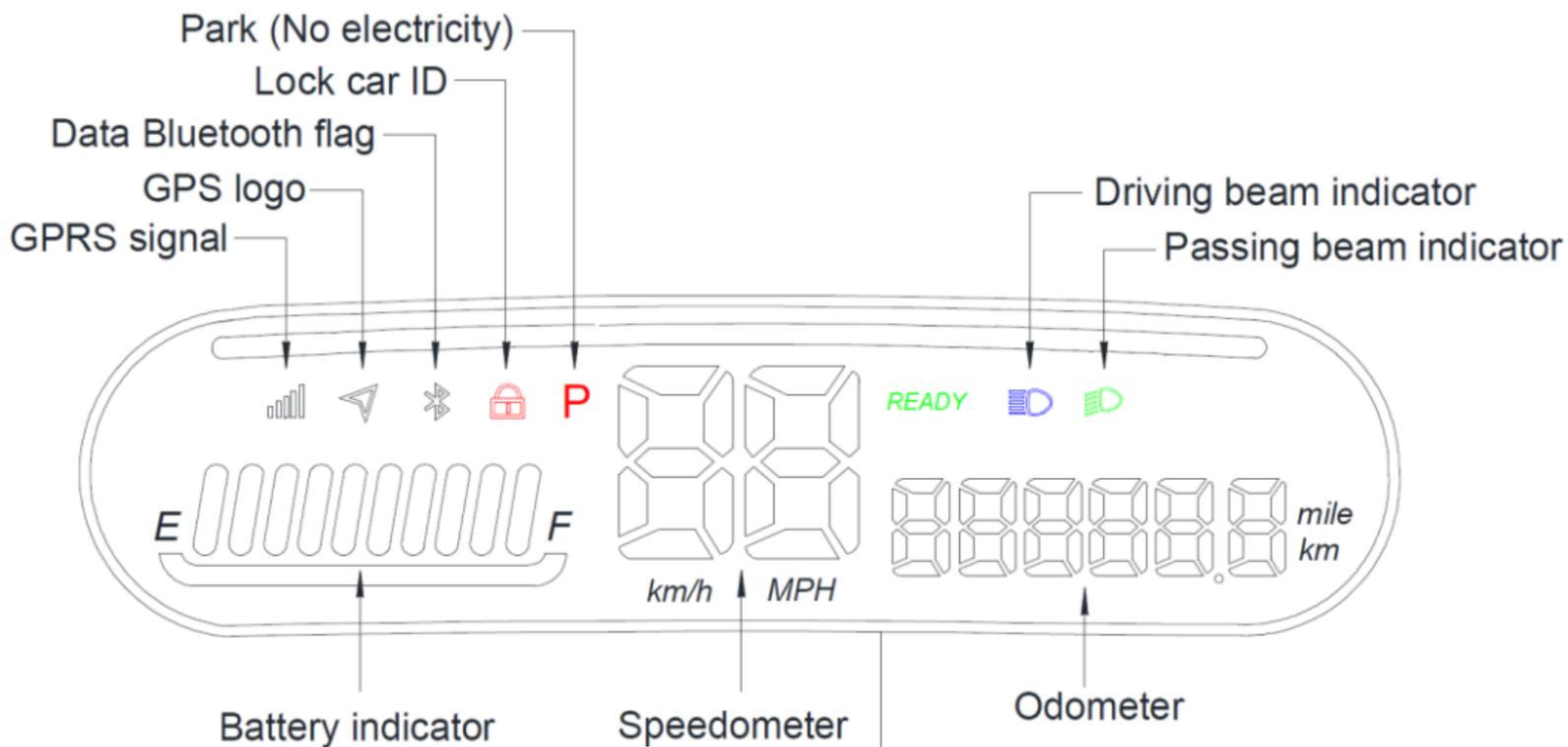
Step 1: Rotate the seat riser clamp hoop to the right in the figure.

Step 2: Pull the 2 direction riser folding wrench down in the figure.

It can be as shown in the picture Figure 3 seat cushion riser hoop assembly open the seat to adjust up and down.



## 6. Dashboard and combination switch



## Fault code definition:

Fault code	Definition	cause of issue	In case of failure, please contact our after-sales service department in time
02	Under voltage protection	Battery is too low	
05	HALL protection	Motor and controller Hall plug loose or component damage	
07	Phase loss protection	Controller MOSS tube is broken	
14	Turn fault	The switch is not returned or the plug is loose	

## Left combination switch:

1 turn signal switch:

When dialing "←", the left turn light is on;

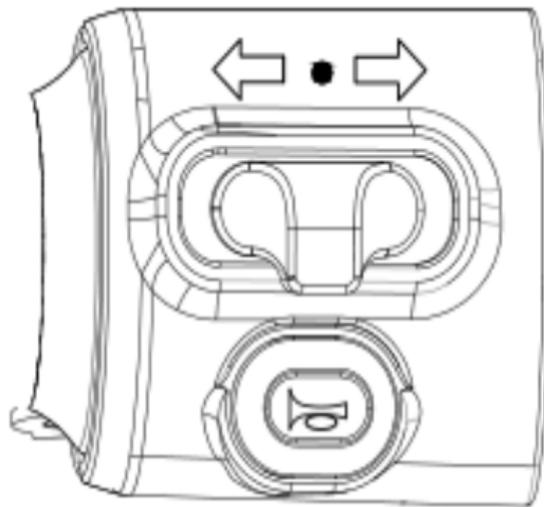
When dialing "→", the right turn light is on;

\*Note: Models with left and right turn signals are not installed

This switch function is invalid.

2 horn switch button:

When the switch button  is pressed, the horn whistle Alert other vehicles.



## Rightcombination switch:

① Headlight dimmer switch:

Press the “ ” button, high beam

Press the “ ” button, low beam.

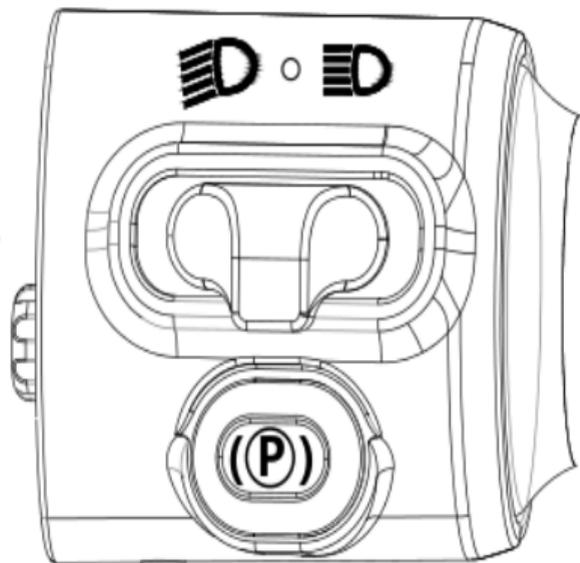
When the button is in the “ ” position, the running light is on

\* Note: The basic version have no high beam function

② Start & Stop Key:

After the vehicle is powered on, you need to press the **(P)** button.

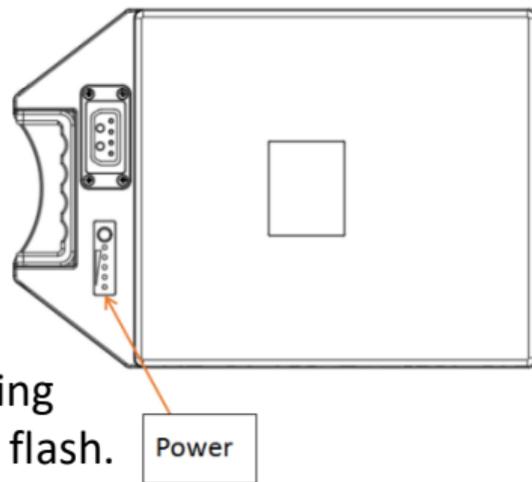
The “P” symbol on the meter disappears and the vehicle can drive normally.



## 7. Battery

### Battery indicator

In the charging state, the flashing indicator light shows the current level; after the charging is full, all the indicators are on and no longer flash.



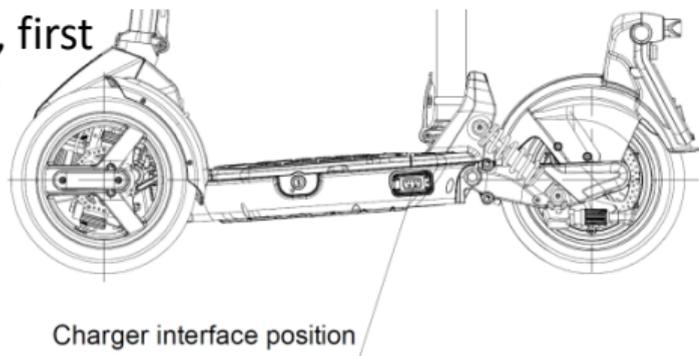
In the non-charged state, press the battery display button:

- The indicator light shows the battery level, and a green light indicates 25% power.
- The indicator light is red, indicating low battery

- All indicators are always on, indicating battery failure, please call after service
- Please use the corresponding battery capacity according to the model standard configuration. ◦

## Vehicle charging mode

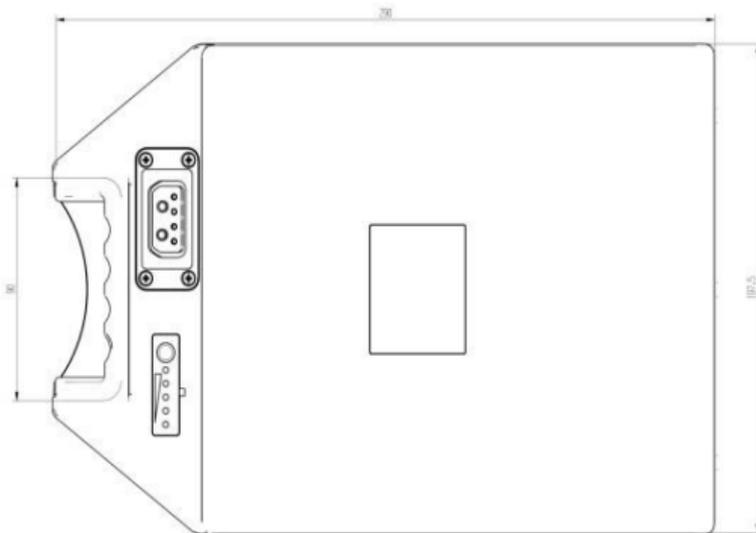
- Open the body charging interface, first plug the charging plug into the body charging interface



- Plug the charger's input plug into the room, and the charger indicator will turn from green to red to start charging.
- When the charger indicator turns from red to green, charging is completed.
- The key switch can be turned on while charging, and the meter will display the current battery level.

## External charging mode

- Lift the battery out of the body and handle it with care.
- Plug the charging plug into the battery charging port for external charging



## Battery use environment

- Use the battery at an ambient temperature of  $-10^{\circ}$  C to  $45^{\circ}$  C.
- Avoid battery water, beverages, and corrosive liquids.
- Avoid placing the battery near heat, open flames, flammable or explosive gases, or liquids.
- Avoid metal foreign objects entering the battery box.  
If the battery has odor, heat or deformation, stop using it immediately, keep away from the battery and contact the after-sales。

### \*Warning

The above may cause the battery to leak, heat, smoke, fire or

explode.

## **Battery charging environment**

- Charge the battery at an ambient temperature of  $0^{\circ}\text{C} \sim 35^{\circ}\text{C}$ .
- Do not charge more than 8 hours. Overcharging will shorten the battery life.
- When charging, it is strictly forbidden to cover other items on the charger and battery box for ventilation and heat dissipation.

- Do not disassemble the charger yourself. If it needs to be replaced, please go to our special maintenance department for replacement.
- ※note:
- 1 The battery is not a user-serviceable part. If there is a malfunction, please contact the after-sales department for repairing the service. Disassembling the battery by yourself may cause leakage, heat, smoke, fire or explosion.
- 2 The ambient temperature is below 0° C. The charging function is

turned off. Please charge the battery in an environment above 0° C.

- 3 Using a non-original charger may cause the battery to leak, heat, smoke, fire or explode.
- 4 If the battery is not fully charged after charging for more than 10 hours, please stop charging and contact the after-sales department to repair.
- 5 To maximize battery life, keep battery power between 20% and 80%, if possible. When operating normally, please operate the throttle handle slowly.
- 6 Do not store the battery in an environment above 40° C, otherwise it will cause irreversible capacity degradation of the

battery.

- 7 Under low temperature conditions, lithium battery capacity will have different degrees of decline, the specific reference level is:  $-10^{\circ}\text{C}$  available capacity is 70%,  $0^{\circ}\text{C}$  is 85%,  $25^{\circ}\text{C}$  is 100%.
- 8 battery is the most suitable storage capacity is 50%. Long-term storage of less than 10% or more than 90% will cause irreversible capacity decay of the battery. If you store the battery for a long time, please keep the battery at  $-10^{\circ}\text{C} \sim 30^{\circ}\text{C}$ , and perform a complete charge-discharge cycle every 1 month to minimize the storage

attenuation of the battery.

- 9 Avoid storing the battery in a location where there is a risk of falling. Dropping may result in uncontrolled damage inside the battery and may cause leakage, heat, smoke, fire or explosion.

## **8. Troubleshooting**

Common fault reference disposal method
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Trouble phenomenon	Trouble cause	Solutions
Turn on the power, the vehicle has no power output	<ol style="list-style-type: none"> <li>1. The battery plug is not plugged in</li> <li>2. Battery is dead</li> <li>3. Battery damage</li> <li>4. Fuse blown</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge the battery</li> <li>2. Replacement battery</li> <li>3. Replace the fuse</li> </ol>
Turn on the power, turn the speed control, the motor does not start	<ol style="list-style-type: none"> <li>1, Battery voltage is too low</li> <li>2. Holding the brake lever halfway, causing the power off switch to start</li> <li>3. Unstarted vehicle</li> </ol>	<ol style="list-style-type: none"> <li>1, Charge the battery</li> <li>2. Do not hold the brakes with both hands when starting</li> <li>3. Reset reset</li> <li>4. According to the</li> </ol>

	<p>4. Accelerated turn without reset</p> <p>5. The instrument fault indicator flashes.</p>	<p>APP fault code prompt processing</p>
<p>Slow driving speed or short running distance</p>	<p>1. battery is low</p> <p>2. Insufficient tire pressure</p> <p>3. Frequent brake start, overload</p> <p>4. Battery aging or normal attenuation</p> <p>5. The ambient temperature is too</p>	<p>1. Charging or charger damage</p> <p>2. Check tire pressure before each use</p> <p>3. Develop good driving habits</p> <p>4. Replacement battery</p>

	low, and the battery capacity is reduced and discharged.	5. Belong to normal
The battery is not charged	The charger plug is in poor contact with the battery socket. The charger is damaged.	Check if the plug is loose. Replace the charger.
Stopping while riding	battery is dead	charging the battery

The meter displays the fault code

Enter the smart smart housekeeper APP, query the fault prompt, understand the cause of the fault, or go to the repair point for professional maintenance.

## **9. Maintenance and repair**

In order to extend the life of the electric scooter (iLark) so that it can travel safely and comfortably, please check and maintain the vehicle regularly. Regular inspections should also be carried out in the event of a long-term cessation of use of the vehicle.

Daily inspection and adjustment

Before starting driving every day, you should conduct a routine

inspection of the electric scooter (iLark). You must not neglect the importance of these inspections. Be sure to complete all the following inspections before driving to ensure that the smart locomotive performance is good and achieved. The effect of safe driving.

Inspection component	Inspection focus
Handle bar	1 smooth 2 turn flexible 3 no axial sway and loose
Brake system	Brake handle has a stroke of 10-20mm

Tire	1 normal tire pressure 2 degree of wear 3 no cracks or wounds
the amount of electricity	enough to travel the planned distance
Lights	high beam, low beam
Horn	Check if the speaker works normally

## Regular maintenance

Please take the first maintenance after purchasing a vehicle for one month or 500km, and then carry out comprehensive inspection and maintenance every six months or 3000km to our special maintenance department to keep your vehicle in the best safety state and ensure the rider. And the safety of the vehicle.

Regular maintenance inspection items			
General safety and performanc	Brake	Structural inspection	the wheel Bearing
	lights		Shock absorbers
	Horn		Folding mechanism

e checks	Electric parts		Turning bearing
	Fuse	Important parts	Battery
	Tires		Main cable
Structural inspection	lubricating		Controller

## **10. Vehicle storage**

Short-term storage:

- 1) Store the vehicle in a flat and stable position; store it in a well-ventilated, dry place;
- 2) Store the battery when it is charged to 50% to ensure the battery life;
- 3) Try to avoid the sun and rain of the vehicle, and reduce the damage or aging of parts;
- 4) When using it for a long time, please fully charge the battery;

5) When the vehicle with the battery is stored in a safe place such as indoors, exhibition halls, warehouses, etc., or when transported by a freight vehicle for short-distance transportation, please pull out the battery plug after closing and removing the key to prevent potential electrical troubles.

Long-term storage:

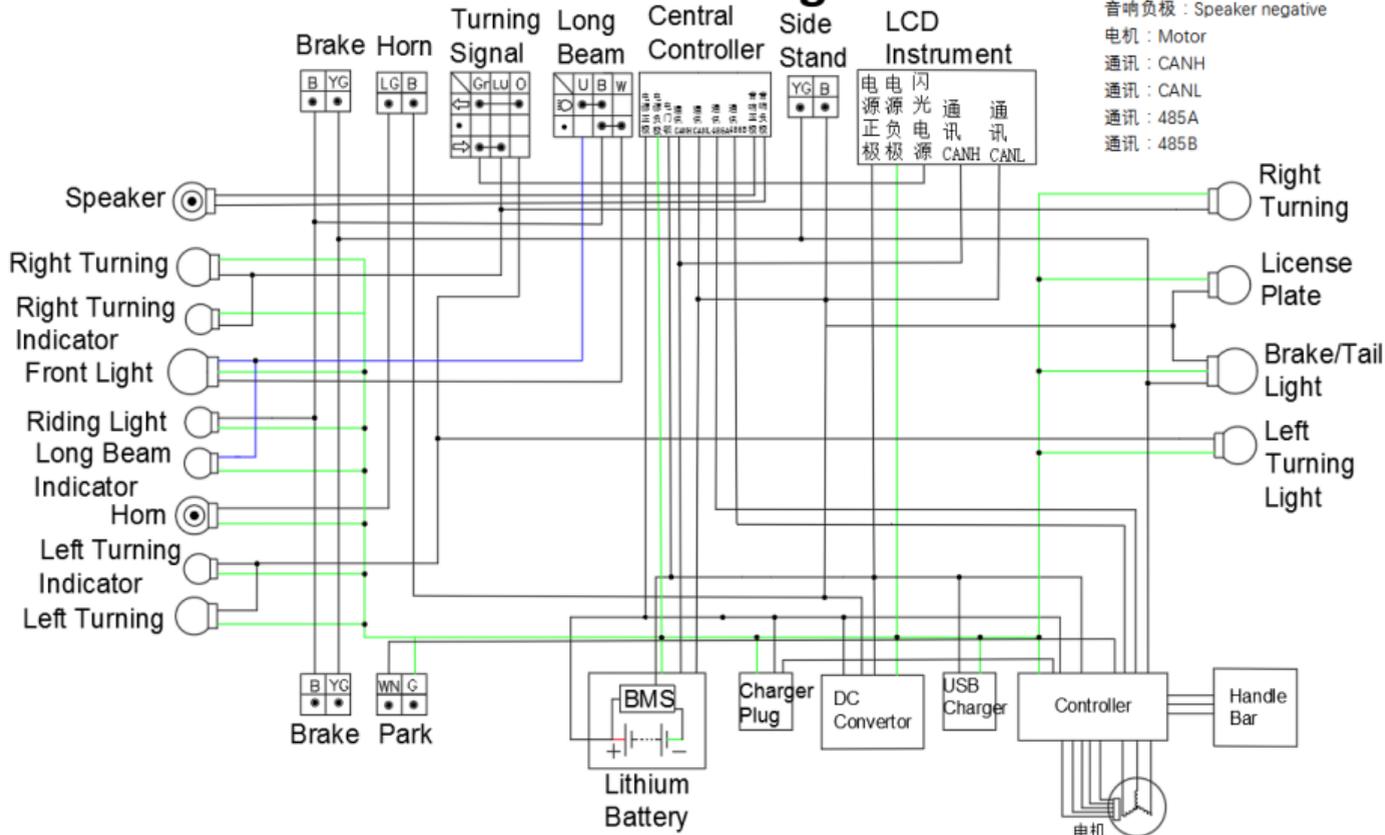
1) When storing for a long time, please pull out the battery plug after disconnecting and removing the key, and disconnect the battery power supply circuit to prevent the battery from over-discharging;

2) When storing for a long time, please perform a complete charge and discharge cycle every two months, and store the battery when it is charged to 50% to ensure the battery life;

3) When using it for long-term storage, please fully charge the battery;

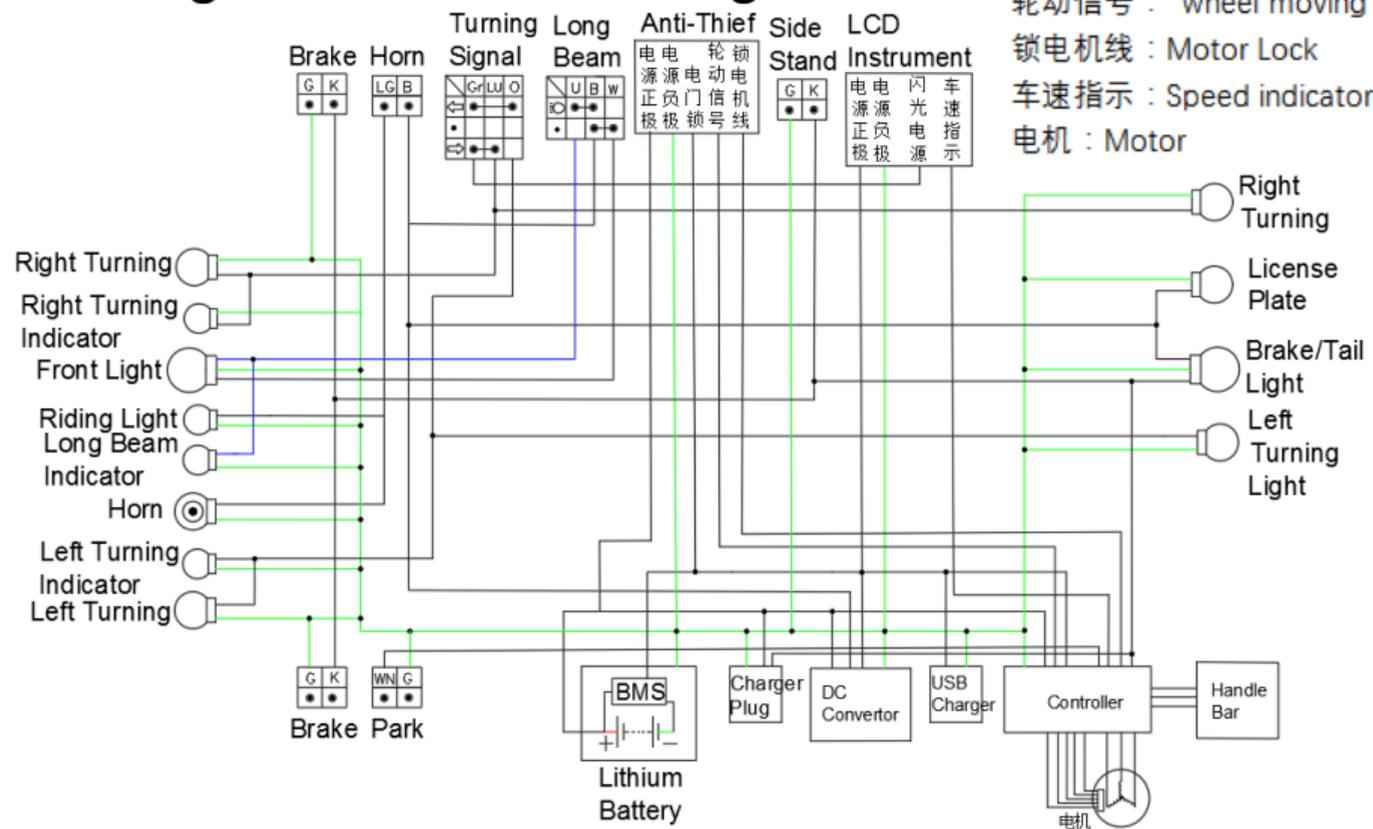
4) Before Riding, please check if there is no abnormality in each part and then ride on the road. If there is any abnormality, please return it to the dealer for maintenance or overhaul.

# 11. DOT basic version Circuit Diagram:



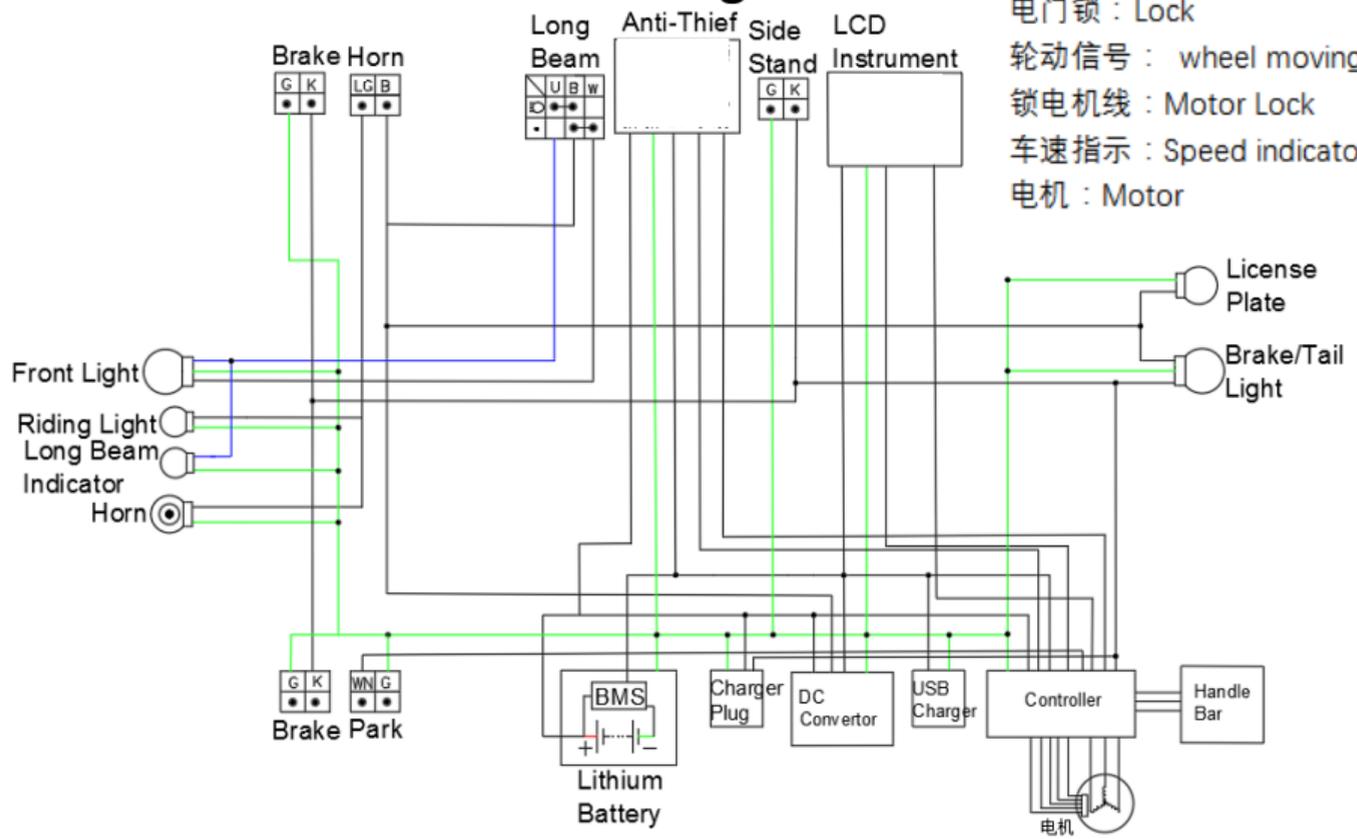
# DOT higher version Circuit Diagram:

- 电源正极 positive electrode
- 电源负极 : negative electrode
- 电门锁 : Lock
- 轮动信号 : wheel moving signal
- 锁电机线 : Motor Lock
- 车速指示 : Speed indicator
- 电机 : Motor

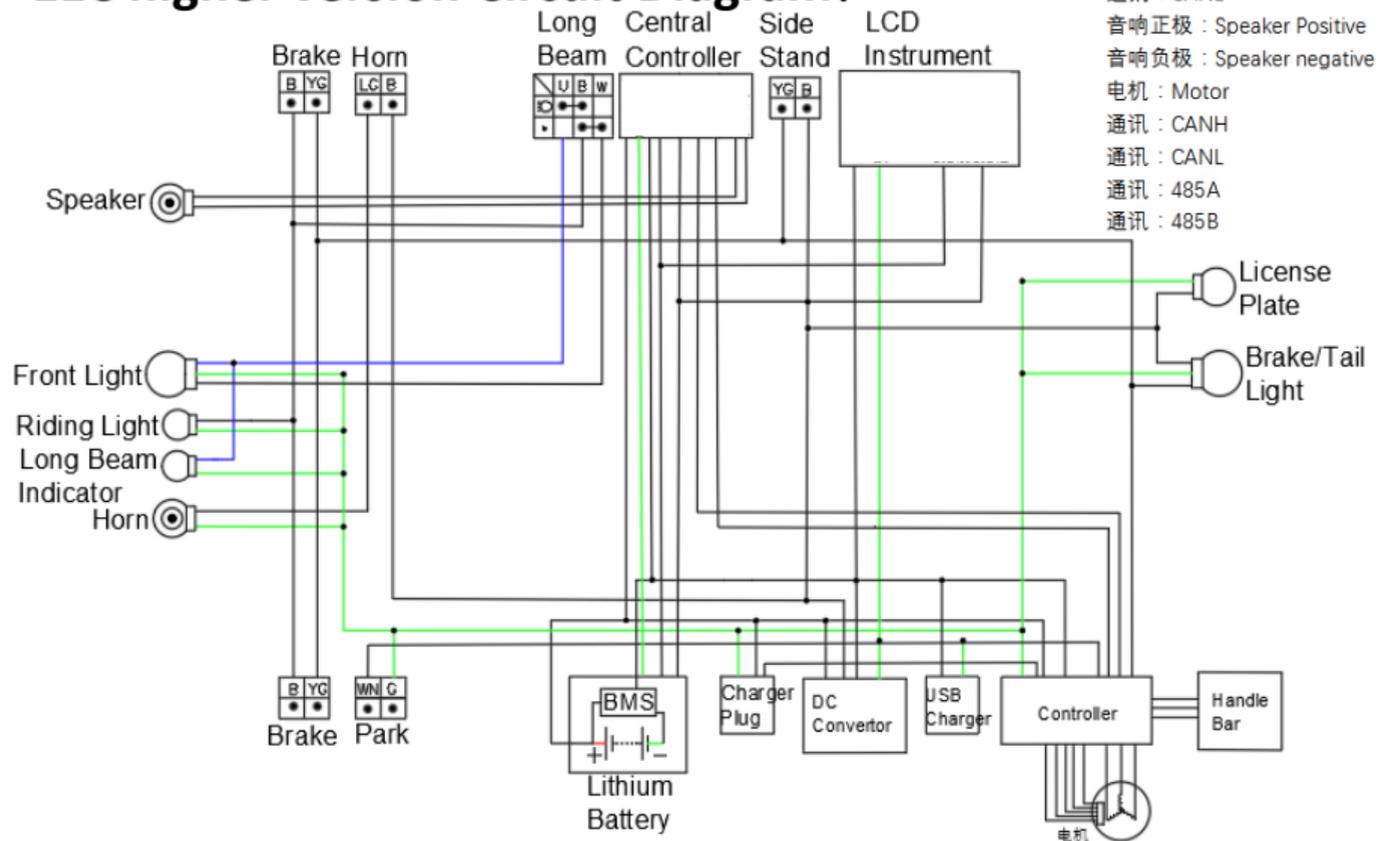


# EEC middle version Circuit Diagram:

- 电源正极 positive electrode
- 电源负极 : negative electrode
- 电门锁 : Lock
- 轮动信号 : wheel moving signal
- 锁电机线 : Motor Lock
- 车速指示 : Speed indicator
- 电机 : Motor

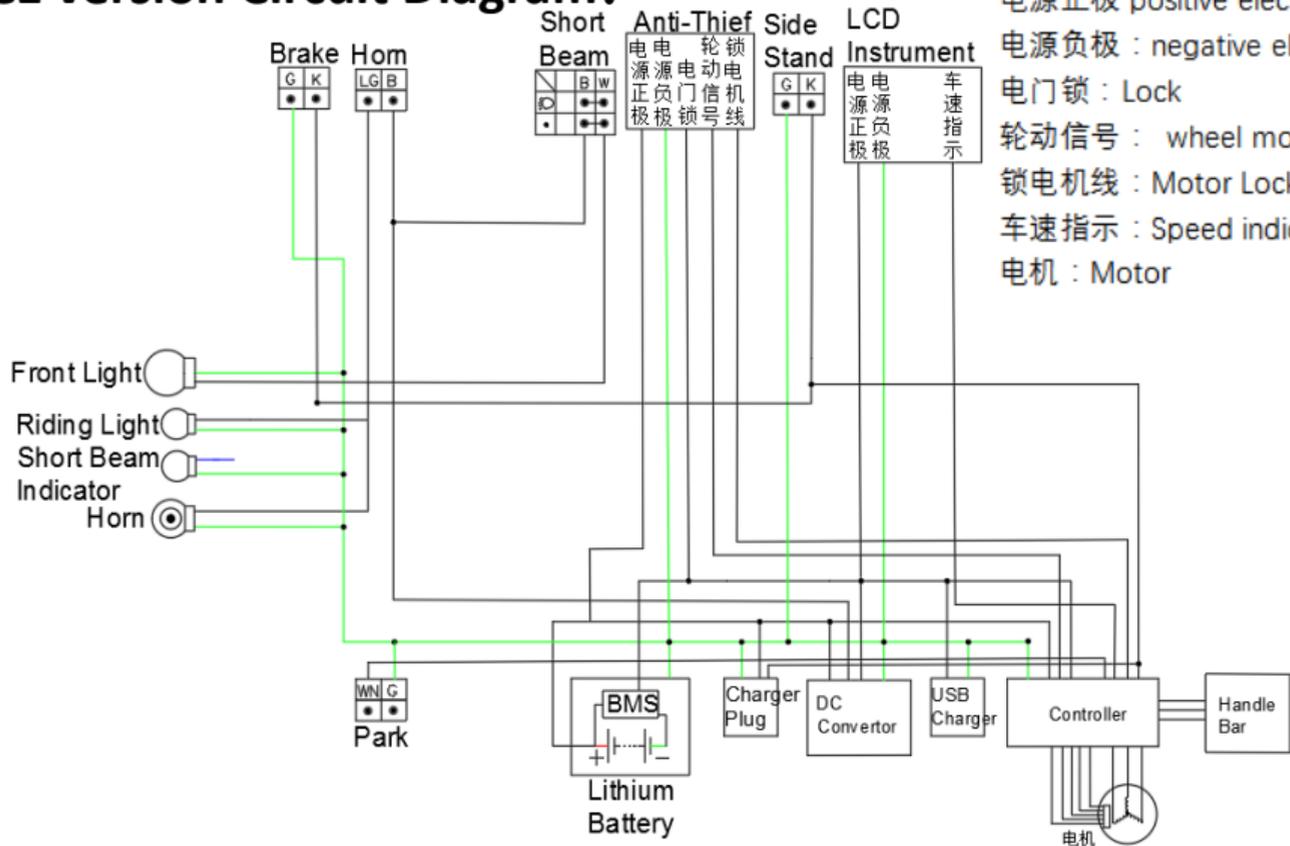


# EEC higher version Circuit Diagram:



- 电源正极 : positive electrode
- 电源负极 : negative electrode
- 闪光电源 : Flash power
- 通讯 : CANH
- 通讯 : CANL
- 音响正极 : Speaker Positive
- 音响负极 : Speaker negative
- 电机 : Motor
- 通讯 : CANH
- 通讯 : CANL
- 通讯 : 485A
- 通讯 : 485B

# CE version Circuit Diagram:



- 电源正极 positive electrode
- 电源负极 : negative electrode
- 电门锁 : Lock
- 轮动信号 : wheel moving signal
- 锁电机线 : Motor Lock
- 车速指示 : Speed indicator
- 电机 : Motor



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