



# PRODUCT MANUAL

**ROVORON 57**



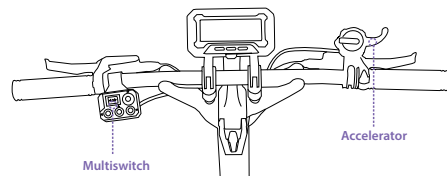
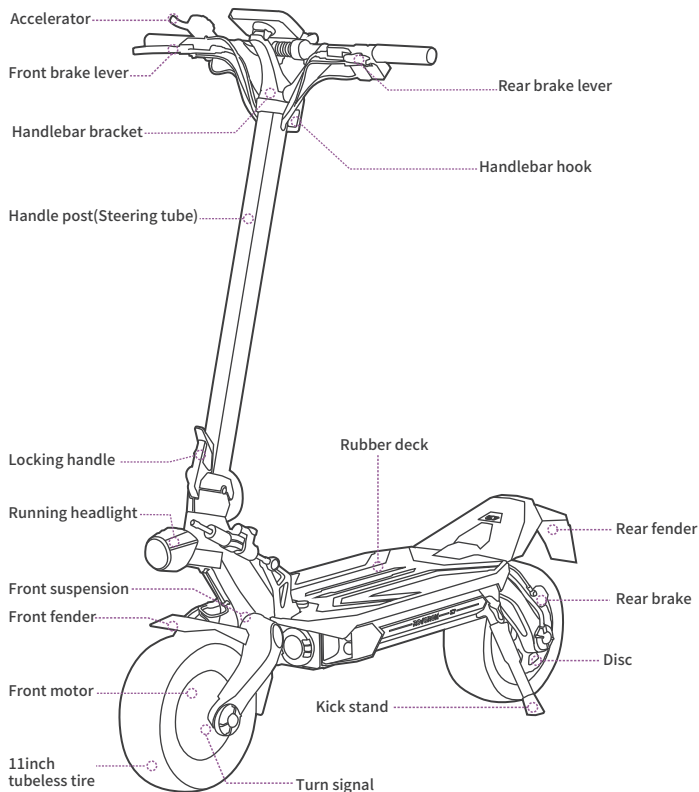


The pictures shown are for illustration purposes only.  
Actual product may vary.





## Diagram And Functions



| Name                                                                                                      | Function                          | Operation method                                                                                                      |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <br>Headlight button     | Turn on/off headlight             | Press the light button, turn on/off the headlight.                                                                    |
| <br>Turn Signal Button   | Turn on/off the left/right signal | Press the left/right side of the Turn Signal Button, the left/right turn signal will keep blinking.                   |
| <br>Horn Button          | Turn on the horn                  | Press the Horn Button, the scooter will beep once.                                                                    |
| <br>Ambient Light Button | Turn on/off ambient light         | Press the Ambient Light Button, turn on/off both sides of ambient light.                                              |
| <br>Warning Light Button | Turn on the warning light         | Press the Warning Light Button, the left&right signals will keep blinking until press the Warning Light Button again. |
| <br>Accelerator          | Speed up                          | Pull the throttle to accelerate.                                                                                      |



## Specifications

|                | Item                            | Parameter                                                                            |
|----------------|---------------------------------|--------------------------------------------------------------------------------------|
| <b>Product</b> | Model                           | ROVORON S7                                                                           |
| <b>Battery</b> | Battery Capacity                | 84V37.1Ah SAMSUNG                                                                    |
|                | Range                           | Around 140km                                                                         |
|                | Charging Ambient Temperature    | 0 to 40°C (Battery temperature exceeds 55°C, BMS start protection program.)          |
|                | Battery Management System       | Over-heating, short circuit, over-current, over-discharge and over-charge protection |
| <b>Rider</b>   | Max. load                       | 120kg                                                                                |
|                | Recommended Age                 | 16-60 years old                                                                      |
|                | Required Height                 | 3'11" -6'6" (120-200 cm)                                                             |
| <b>Display</b> | Type                            | EY4 display (Minimotors APP available)                                               |
| <b>Motor</b>   | Motor Type                      | Brushless DC Hub motor                                                               |
|                | Nominal Power                   | 2500W*2                                                                              |
| <b>Machine</b> | Net Weight                      | Around 49.7kg                                                                        |
|                | Max. Slope                      | Around 76% (Around 37°)                                                              |
|                | Drive System                    | Dual-drive                                                                           |
|                | Speed                           | 25km/h                                                                               |
|                | Length × Width × Height         | 1265 × 650 × 1370mm                                                                  |
|                | Folded: Length × Width × Height | 1265 × 318 × 637mm                                                                   |
|                | Wheelbase                       | Approx. 930mm                                                                        |
|                | Ground Clearance                | Approx. 190mm                                                                        |
|                | Traversable Terrain             | Asphalt/flat pavement; obstacles < 5 cm; gaps < 5 cm                                 |
|                | Operating Temperature           | -5 to 45°C                                                                           |
|                | Storage Temperature             | -20 to 50°C                                                                          |

|            |                     |                                                                                                       |
|------------|---------------------|-------------------------------------------------------------------------------------------------------|
| Brake      | Machine Brake       | 4-piston nutt hydraulic brake                                                                         |
|            | Electric Brake      | ABS&EBS (Indicating the battery temperature exceeds 55°C,BMS start protection program,ABS/EBS fails.) |
| Charger    | Input Voltage       | 100-120V/200-240V~                                                                                    |
|            | Max. Output Voltage | DC95.4V±1V/4A±0.5A                                                                                    |
| Tire       | Type                | 11 inch tubeless tire                                                                                 |
|            | Tire Pressure       | 50 psi                                                                                                |
|            | Material            | Rubber                                                                                                |
| Suspension | Type                | Front and rear adjustable cartridge(patent)                                                           |
|            | Optional            | *Change the thickness of the gasket to obtain different shock absorption effects.                     |

\*Disclaimer: this is not a legal opinion or legal advice. The information provided herein (including in the App) is for your convenience and information purpose only. It is not intended to cover every piece of law and/or regulation that may be applicable to this product. Minimotors Rovoron explicitly hereby disclaims any and all warranty and/or representation, express or implied, related to completeness, accuracy, up-to-date of such information. Minimotors Rovoron reserves the right but not obligation to correct, implement and/or update the information. You shall use the information at your own risk. It is your sole responsibility to learn and understand any and all the law and/or regulation, requirements, prohibition, restriction and/or limitation imposed by either law, government authority, court, private party or the others that may apply to your use of this product.

\*Theoretical Range: tested while riding with a full battery, 75 kg load, 25°C, at the speed of 25 km/h on average on pavement.

\*Typical Range: tested while riding with a full battery, 75 kg load, 25°C, at the speed of 50 km/h on average on pavement. (Some of the factors that affect range include speed, number of starts and stops, ambient temperature, etc.)

\*Max.Speed: tested while riding with a full battery, 75kg load, 25°C, straight road on flat road with no wind. (Some environmental factors can affect max speed, uneven roads, crooked roads, temperature, wind, etc.)

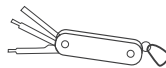


## Packing List

### Accessories



Battery charger x1

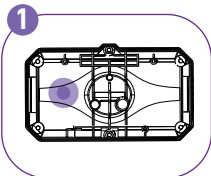


Multitool x 1

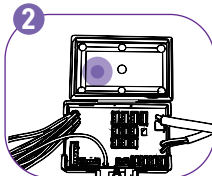


Manual

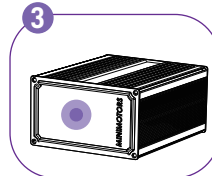
### \*Water ingress label location



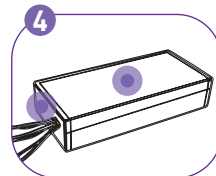
1. EY4 Instrument  
Lower Cover



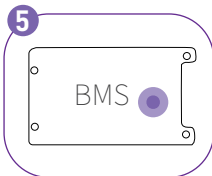
2. LED contrller board



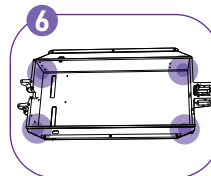
3. Controller housing



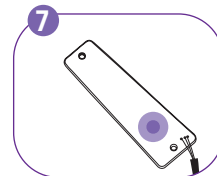
4. Battery epoxy board  
& cable outlet position



5. BMS

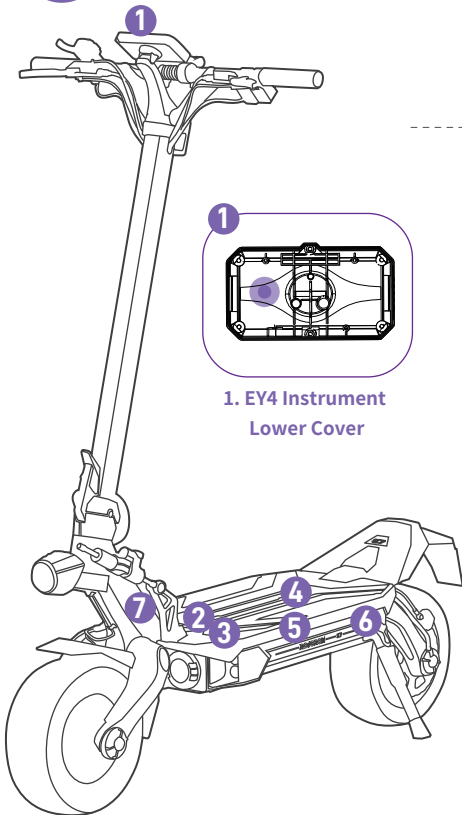


6. Four corners inside the  
battery box



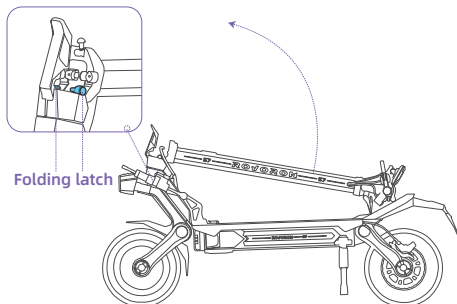
7. Headset LED light

**\*If the water ingress indicator label on the equipment changes color, it indicates a malfunction caused by water ingress. Such malfunctions are not covered under warranty.**

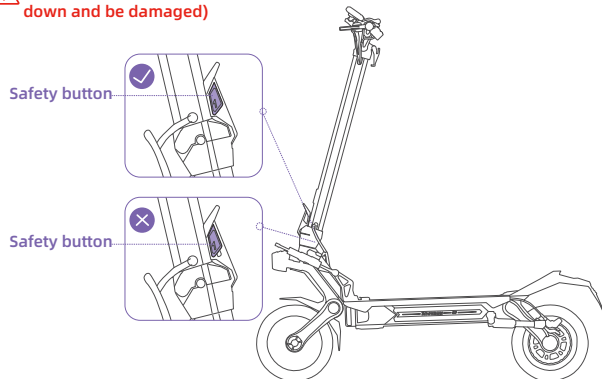




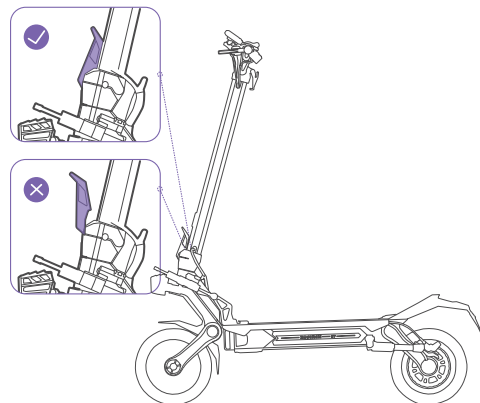
## Assembly



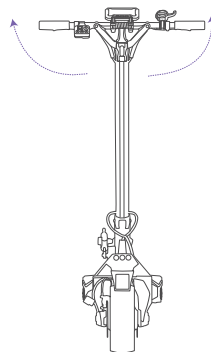
- ① Raise the steering tube and make sure the folding latch gets into the button correctly.  
 (Carefully, if the folding latch gets into the button incorrectly, the steering tube will fall down and be damaged)



- ③ Check the status of the safety button and make sure it is back to position.



- ② Press down the locking handle firmly to make sure the folding mechanism is tightened.



- ④ Place the locking slide up to the safety line and lock it so that it is firmly fixed with the QR lever. Always check for looseness during use.

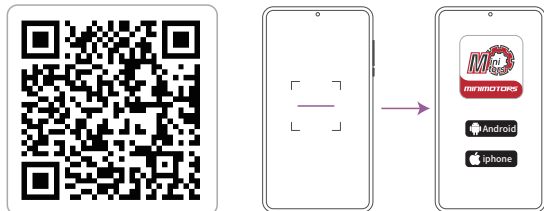




## Bluetooth Connection

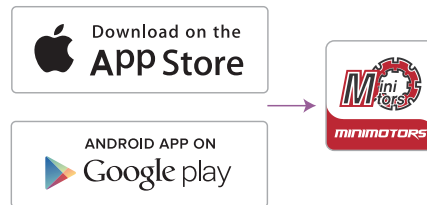
### APP Download Guide

#### Method 1



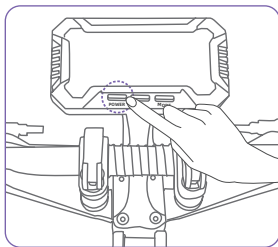
1. Scan the QR code to download the APP.
2. Choose the mobile phone system that suits you to install, and register / log in.

#### Method 2

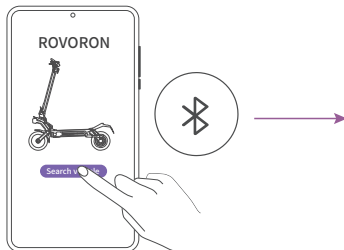


1. Search "minimotors" in the application and download it, and register / log in.

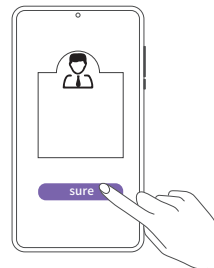
### Pair the Bluetooth on the APP



Power on the scooter.



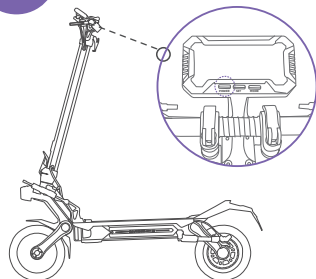
Click "Search vehicle" and pair with your scooter. \* The scooter is connected to the minimotors app when the Bluetooth symbol lights up.



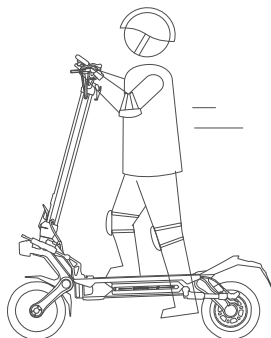
Select "bind as owner".  
(No one else can connect, only people authorized by you are allowed to connect. Authorizations are created on the app.)



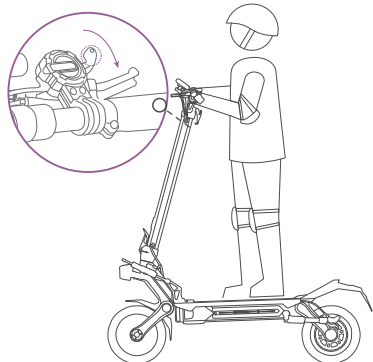
## How to Ride



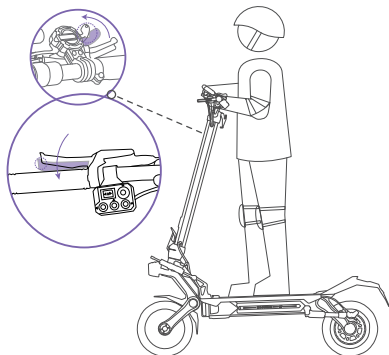
1. Power on the scooter and choose the speed mode. \* Please choose the speed mode before riding! Note: Speed mode can be choose via the Minimotors APP.



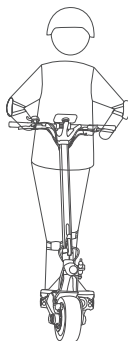
2. Stand on the footboard with one foot and push off with the other foot to start gliding. \* Make sure you have disabled SAFE mode. (SAFE mode setting via Minimotors APP. Deactivate safe mode by squeezing brake lever.)



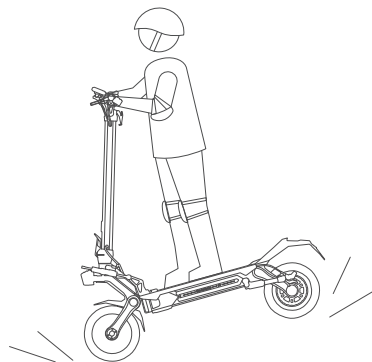
3. Put both feet on the footboard and stand stably. Pull the throttle to speed up.



4. Slow down by releasing the throttle and squeezing brake levers.



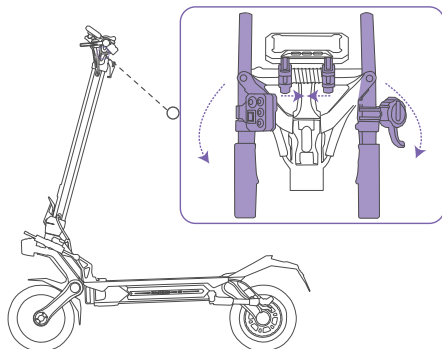
5. To turn, shift your body and turn the handlebar slightly.  
\* Please watch out for road conditions, sufficient turning space is required.



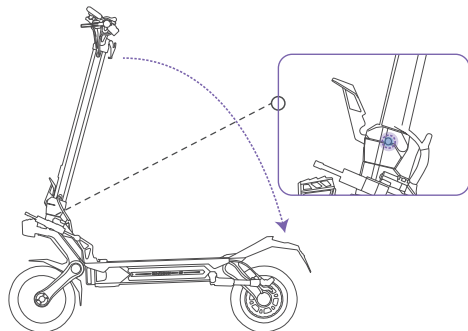
When hard braking, serious danger or injury may occur. Maintain a moderate speed and look out for potential hazards.



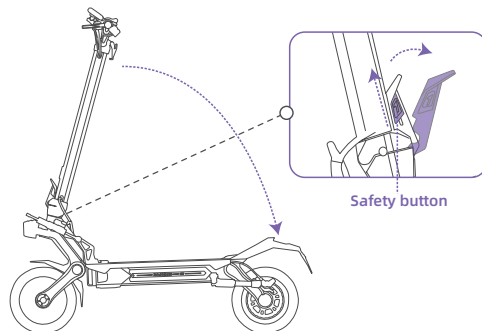
## Folding



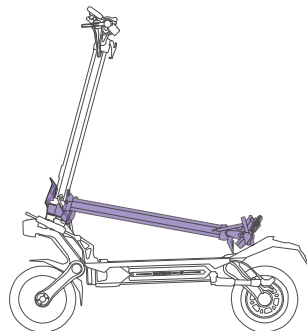
Slide the folding handle lock out of position and inward. Fold the handlebars.



Press the both folding latches, and then fold the steering tube. ⚠ (When pressing the safety latch, you must hold the steering tube with your hand to prevent falling down and hitting.)



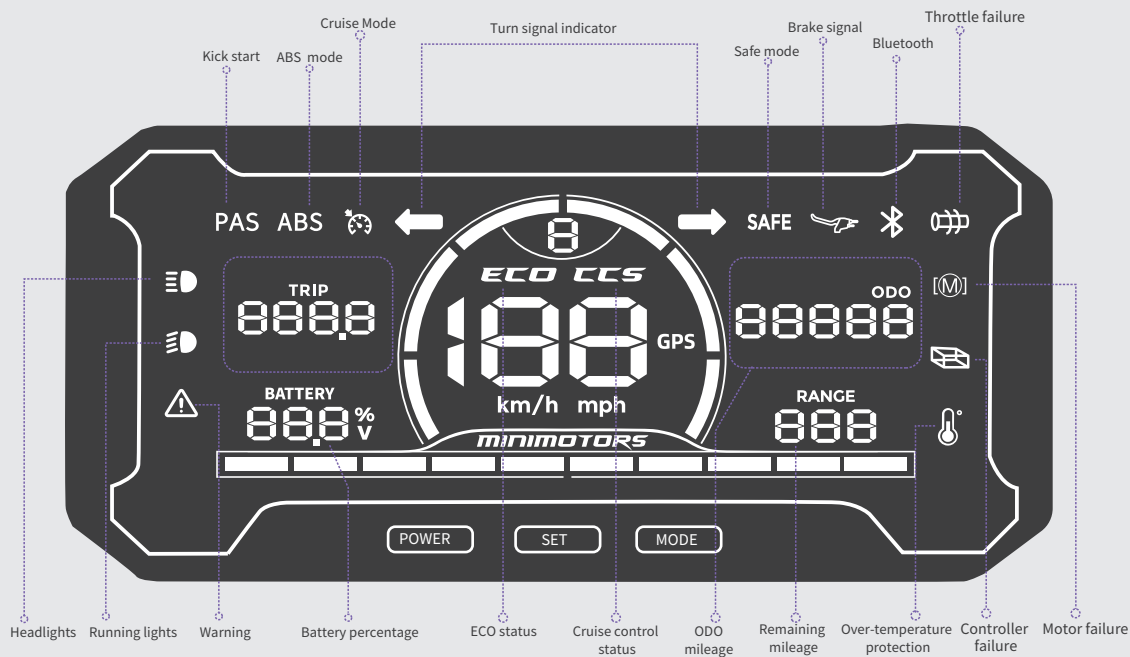
Slide the safety button up and open the locking handle.



Lock the handlebar hook to the footrest.  
⚠ (Ensure that lock the handlebar when lift scooter)



## Dashboard





## Dashboard

| Symbol | Name                  | Meaning                                                                                                                                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | Power Button          | 1.Press and hold the Power button to turn on/off the scooter.<br>2.Press the button to adjust the speed gear.                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | Set Button            | 1.Press and hold the Set button to enter/exit ECO mode.<br>2.Press the button to switch battery voltage/percent indication.                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | Mode Button           | 1.Press and hold the Mode button to enter/exit the mode setting,and automatically return to the main interface after 30s.<br>2.Press the the Mode button to switch ODO/time indication.(Time defaults) |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | Battery Unit          | The symbol displays the remaining battery power in battery bar.                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | Running light         | The symbol indicates that running light turns on.                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | Headlight             | The symbol indicates that the headlight turns on.                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PAS    | PAS                   | Kick start,scooter cannot be directly accelerated to start.(Default OFF)                                                                                                                               | Set in P1. When PAS turns on, PAS symbol will appear in the LCD screen.                                                                                                                                                                                                                                                                                                                                                                          |
|        | Starting Effect       | Powerfully start and gently start selection.                                                                                                                                                           | Set in P2."0" means the most powerfully start,it will have a strong impact.<br>"1" means 0.5s gentler start,"2" means 1s gentler start, and so on.<br>"5" means the gentlest start. The default is 2,1s gentler start.                                                                                                                                                                                                                           |
| EBS    | EBS                   | EBS strength selection.                                                                                                                                                                                | Set in P3. 0-5 strengths can be selected, 0 is the weakest, no EBS function, and 5 is the strongest. The default is 1.                                                                                                                                                                                                                                                                                                                           |
| ABS    | ABS                   | ABS function control.                                                                                                                                                                                  | Set in P4. 0 means function off and 1 means function on. The default is 0.                                                                                                                                                                                                                                                                                                                                                                       |
|        | Drive Mode            | Select driving mode according to road conditions.                                                                                                                                                      | Set in P5. "Battery save",scooter works with 50% of the maximum torque. "Comfort",scooter works with 75% of the maximum torque. "Climbing", scooter works with max torque. Climbing Mode is selected by default. (Kind Reminder: If you ride continuously for a long time in Climbing Mode,the temperature of the motor will rise quickly and easy to trigger ECO.)                                                                              |
|        | Speed Limit           | System speed control.(Percentage of max speed)                                                                                                                                                         | Set in P6.The parameter is adjustable from 5% to 100%, and the default is 100%.                                                                                                                                                                                                                                                                                                                                                                  |
|        | Protection (Password) | Password protection.<br>(You need to enter the correct password to drive.)                                                                                                                             | Set in P7. Press the SET button to switch ON/OFF, and click the POWER button to confirm. If it is switched from OFF to ON, you need to enter the original password. If the original password is entered incorrectly, the setting is unsuccessful(The initial password is 0000).<br>Note: If the user has turned on the protection and the app is certified as the owner, when the owner approaches the scooter,it can be unlocked automatically. |

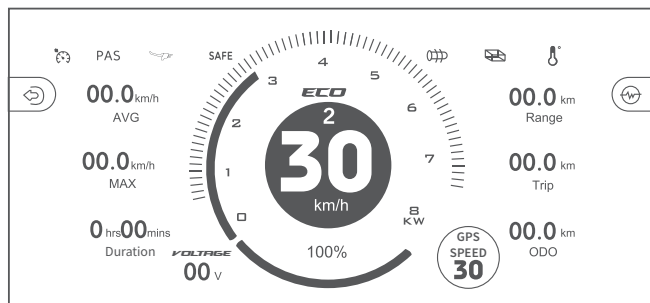


## Dashboard

| Symbol | Name            | Meaning                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------|-----------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | Change Password | Reset a password.                                                               | Set in P8. Press the POWER to change the password. When the display shows 1, enter the initial password, press the POWER to confirm. And when the display shows 2, please enter the new password, and press the POWER to confirm. At this moment, the display will show 3, please enter the new password again and press the POWER. Then the Password is changed successfully.<br>Note: The owner can connect to the APP directly without entering the password to unlock the scooter and reset the password on the mobile. |
| SAFE   | Safe Mode       | Prevent the scooter from starting when the accelerator is accidentally touched. | Set in P9. When the scooter is turned on and stays in the static state for N seconds (no operation, no speed), it will switch to the safe mode automatically. In SAFE mode, this symbol will appear on the screen. (N seconds ranges from 0 to 300 seconds. 0 seconds means SAFE mode is not enabled.)                                                                                                                                                                                                                      |
|        | CCS             | Drive at a constant speed without stepping on the accelerator or brake.         | Set in P10. Turn on/off the cruise control mode. Default OFF. (The scooter maintains a fixed speed for more than 8s, speed cruise work automatically)                                                                                                                                                                                                                                                                                                                                                                       |
|        | Prevent BMS CUT | When battery capacity less than 20%, scooter enters ECO mode automatically.     | Set in P11. Turn on/off Prevent BMS CUT mode. The default is off. When scooter enter the ECO in this mode, the ECO can not be manually closed; if you want to manually close the ECO in the current mode, you need to close the Prevent BMS CUT mode first.                                                                                                                                                                                                                                                                 |
|        | Auto Power-off  | Auto shutdown when the EY4 is not operated.                                     | Set in P12. Automatic shutdown time Settings adjustable range from 1-30 minutes. The default is 5 mins.<br>Note: When the scooter has no operation and no speed, the timing starts.                                                                                                                                                                                                                                                                                                                                         |
|        | LCD Brightness  | Adjust the LCD backlight brightness.                                            | Set in P13. Adjust from 0 to 5, the default is 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|        | Imperial/Metric | Speed unit selection.                                                           | Set in P14. "0" means metric, it is km/h; "1" means imperial, it is mp/h. The default is 0.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|        | Wheel Diameter  | Wheel diameter of the scooter.                                                  | Different scooters have different default diameters. They are set at the factory. Any modification is forbidden.                                                                                                                                                                                                                                                                                                                                                                                                            |
|        | Battery Voltage | Voltage of the scooter.                                                         | Different scooters have different default voltages. They are set at the factory. Any modification is forbidden.                                                                                                                                                                                                                                                                                                                                                                                                             |
|        | Pole Pairs      | Motor pole pair number of the scooter.                                          | Different scooters have different motor pole pair numbers. They are set at the factory. Any modification is forbidden.                                                                                                                                                                                                                                                                                                                                                                                                      |



## Common Failures and Solutions



The new system for the EY3 screen LCD only displays the service symbol  when the scooter breaks down. In this case, you need to check the APP to view the specific error code. The APP will display the following four error symbols. When there is a fault, please contact after-sales service or an authorized dealer.

| Error Symbol                                                                      | Possible causes             | Solution                                                    |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------|
|  | Throttle failure            | Please contact after-sales service or an authorized dealer. |
|  | Motor failure               | Please contact after-sales service or an authorized dealer. |
|  | Controller failure          | Please contact after-sales service or an authorized dealer. |
|  | Over-temperature protection | Please try to apply heat dissipation for the scooter.       |

## Trademark And Copyrights

Rovoron is the trademarks of Zhejiang Dualtron Escooter Co. Ltd.; Android is the trademark of Google Inc., App Store is a service mark of Apple Inc. The respective owners reserve the rights of their trademarks and copyrights, etc. referred to in this manual.

We have attempted to include descriptions and instructions for all the functions of the scooter at the time of printing.

However, due to constant improvement of product features and changes of design, your scooter may differ slightly from the one shown in this document. Scan the QR Code on the cover of this manual, or visit the [www.rovoren.com](http://www.rovoren.com) to download the latest electronic version. Please note that there are multiple models with different functions, and some of the functions mentioned herein may not be applicable to your unit. The manufacturer reserves the right to change the design and functionality of the scooter product and document without prior notice.

Zhejiang Dualtron Escooter Co. Ltd. All rights reserved.

(※The minimotors App can support scooter with built-in Bluetooth)



## Safety instructions



1. Scooters are not a means of transportation and are prohibited from riding on public transport roads. Please abide by local laws, regulations and policies when riding.
2. Scooter is an entertainment product. You need to master the riding skills through practice. Dualtron will not be liable for any damage caused by inexperience of riders or failure to use this product according to this manual.
3. In order to reduce the risk of injury, please read and follow all the **"CAUTION"** and  **"WARNING"** in this manual. Do not exceed the speed limit. In any case don't drive on the road where there are motor vehicles.
4. Following the tips and warnings in this manual can reduce risks, but not eliminate all risks. Please remember that you may be at risk of injury or death due to loss of control, collision and fall when using the scooter. The scooter is only suitable for flat and hard roads, and it is recommended to use it in a relatively closed and open road environment. Do not pass through places with obstacles and protrusions. When entering a strange environment, keep alert and slow down.

## Riding Safety

1. Please do not accelerate or decelerate suddenly. When riding, please always hold the handlebars with both hands and stand on the pedals with both feet. Please do not drive at a speed exceeding the limit of the scooter, otherwise you may lose control, collide and fall.
2. In order to avoid distraction when riding a scooter, do not wear earphones, earplugs, make calls, take photos, take videos or do any activities unrelated to riding, so as to monitor the external environment well when riding.
3. For whatever reason, please do not ride the scooter under the conditions of snow, rain, wet, muddy and ice. When riding in rainy and snowy days, water may enter the scooter, leading to the risk of functional damage, fire and even explosion caused by the damp battery. Damages and losses caused by water ingress are not covered by the warranty.
4. This product is suitable for users aged between 16 and 60.
5. Riders should wear helmets, knee pads, elbow pads and other safety protective equipment. Please use a qualified bicycle or scooter helmet and tie the strap at a suitable position on your chin.
6. High heels, slippers and open toed shoes are prohibited. Long hair needs to be tied up to avoid accidents due to the fact that the hair blocks the sight and affects the normal riding.
7. Before riding the skateboard vehicle, please carefully check the vehicle body to ensure that there is no sign of looseness or damage in any part including wheels, brakes, screws, etc., and that the vehicle is in a proper waiting state.
8. Only use parts and accessories specified or approved by dualtron. Do not modify your scooter. The modification of the scooter may affect the operation of the scooter, resulting in serious damage and warranty invalidation.





## Warnings

01



### Be sure to wear safety equipment!

Always wear a helmet, elbow pads and knee pads when riding.

02



### Be careful of water!

This product and components are not waterproof. Don't let water get into the product and components.

03



### No acrobatics

DO NOT ride up and down stairs or jump over obstacles.

04



### No companion boarding

DO NOT carry any passengers

05



### Don't tune by yourself!

Do not open or tune the electric parts (battery, controller or motor system).

06



### Comply with local laws

Unlicensed, driving after drinking, loading cargo on the scooter is prohibited. (More than bike or bicycle license is required) Please comply with the Road Traffic Act and related laws and regulations according to the place of use.

07



### driving at low speed

Beginners who are not accustomed to use the product, seniors and others should avoid high speed mode driving and recommend low speed driving.

08



### Do not suddenly brake with front brake

If there is a risk of overturning, sudden deceleration should be done safely. Do not apply any unusual behaviors or artificial forces, such as stopping with your feet.

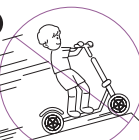
09



### Do not accelerate downhill

Slow down at downhill. When reducing the speed, to prevent brake overheat, use the brakes properly to reduce the heat on the disk with proper brake use.

10



### Do not drive on steep slopes

Each product has a different degree of acceptable climbing, do not ride excessively on mountain roads.

11



### Safety warning when lifting the product

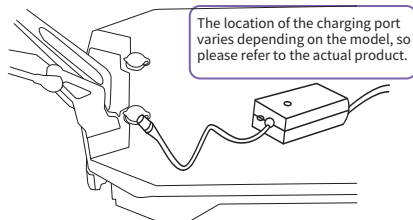
If the product is lifted by holding only the handle, there is a possibility that the product may be damaged due to deformation of the folding part due to load or movement of the product. When lifting the product, be sure to hold the product's body (footrest) with one hand and hold the handle with the other hand so that you do not get hurt in your back or knees.

### NOTE

- \*Kickstand must be deployed when the scooter is not in use.
- \*Any type of load attached to the handlebar will affect the vehicle's stability.
- \*The vehicle must be used by only one person at a time.
- \*Must keep plastic covers out of reach of children to prevent possible choking.
- \*Please avoid areas with heavy traffic and overcrowding.
- \*Please anticipate trajectory and speed to respect traffic rules and vulnerable road users.
- \*Please notify presence to other road users when not seen or heard.
- \*Please cross protected passages on foot
- \*Please remove sharp edges that may have formed on the scooter through use.
- \*Please contact the seller to get where to find a maintenance shop for your scooter.



## Charging



1. Open the charger port cap and connect it to the connector of the charger and connect it to the household outlet.
2. Charging status indicator (Red)Charging , (Green)Charging complete.
3. Be sure to close the charger port cap when driving or storing except when charging.
4. When connecting the connector to the charger port, there may be metallic sparks due to voltage difference, but this is normal.



\*Never connect charger to the household outletthe socket when not in use.

If the charger connected to the power socket but not to the scooter more than 1 min,charging protection function would be activated. The charger will remain green light and have no output. Need to unplug all the connectors of the charger and leave it for more than 3 minutes to remove the protection.

\* Failure of the charger and abnormal conditions can cause electric shock and fire.  
Learn the correct usage and prevent safety accidents in advance.

## Basic charging method



1. Manufacturers and sellers are not responsible for any problems arising from any disassembly, modification, or mixing with other chargers.



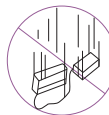
2. The charger is forbidden to be used in places subject to high humidity, heat, flammable materials, confined spaces, or where there is no ventilation such as in a car.



3. The charger is not waterproof. It is thoroughly controlled to prevent moisture from entering the charger.



4. Children and pets should not be allowed to approach the charger when they come into contact with them, as they may cause an electric shock.



5. If the charger lamp does not light, charger fall down, strong external shock, long time charge, or cable cover damage, discontinue use immediately and contact the service center.



6. Unplug the charger when you are away from the home for long periods.

7. Use only genuine charger.

8. Do not touch the plug for about 10 seconds after unplugging the charger. There is a risk of electric shock from instantaneous discharge.

9. Do not remove the terminal during charging. Otherwise you may charge the internal circuit of the charger and cause malfunction.

10. Do not operate the product during charging.

11. Charging terminals should be firmly contacted during charging and should not be used if terminals are corroded or damaged.

12. When disconnecting the charger from the product, it is safe to hold the terminal without holding the wire.

13. Be sure to keep the charger disconnected from the product after the charging is complete. The charger must be disconnected if it is not used for longer than a few days, as there is a risk of overcharging when charging more than the time indicated on the product specifications.



**NO INDOOR CHARGING!**

Lithium battery risk: Overheat & Fire Hazard.  
Charge only in WELL-VENTILATED AREAS.



## Safety precautions for Lithium battery

### Basic charging method

- 1) Care Lithium batteries should be protected from direct exposure to children and pets.
- 2) Performance 1. Lithium battery is affected by external temperature. In the winter, when the temperatures are low, the performance of the battery may be temporarily deteriorated and the mileage and power output is reduced.
2. Lithium battery has a characteristic that discharge performance is reduced by more than 15% when charging / discharging 300 times or more. If usage time is shortened due to long usage, it should be replaced with a genuine one through the nearest point.
- 3) Charging 1. Lithium battery should be used only with genuine battery and charger supplied from the manufacturer. Any problems caused by use of battery made by the manufacturer, mixed use, or using the charger are not covered by the manufacturer.
2. Charging the lithium battery with a non-genuine charger may cause malfunction or fire.
3. The lithium battery should be charged in a well-ventilated, dry place and around the charger in a place where there is no flammable material.
4. Lithium battery should be charged at 0 ~ 45°C and discharged within -10 ~ 60°C. The sub-battery must be charged at 0 to 50°C and discharged within -20 to 75°C. Charging or discharging at a temperature outside this range may cause malfunction, fire or explosion.
5. In case of moving from cold outside to warm indoor, please charge it after 1 ~ 2 hours. This is to prevent condensation from occurring inside the product due to the temperature difference.
- 4) Storage 1. Lithium batteries should be kept away from snow, rain and direct sunlight. Do not store or charge them in a trunk or hot room. Select a dry place and store at room temperature (10 ~ 20°C).
2. When storing for more than 3 months, charge the remaining battery level to 70 ~ 80% (do not store full charge).
- 5) Trouble symptom, safety 1. Lithium battery should be discontinued immediately if it is damaged or there is leakage of battery, sour odor, appearance deformation, etc. Please contact the place of purchase to get technical support and service.
2. If overheat, smoke, or ignition is detected in a product with lithium battery, immediately stop charging and use, move the product outdoors as soon as possible, and then use a fire extinguisher to extinguish flames. Do not spray water or immerse the product in any situation, which can lead to more danger.
3. Lithium battery pack has very high energy density, so if you charge the battery for a long time and there is a case of short-circuit, leakage, bad battery, etc., it can lead to ignition. Therefore, you should avoid charging for a long time without a person being present to avoid the risk of unexpected fire.
- 6) Misuse If the lithium battery is short-circuited, the polarity is changed, or if the battery is impacted, malfunction or fire may result. If you think that the battery has been impacted, you should stop charging and using it and visit the nearest service center for inspection.
- 7) Water inflow It should be controlled to prevent water inflow into the lithium battery. There is a risk of fire or electric shock if the charger is connected while moisture is present.
- 8) Caution Disconnect the battery from the main unit except when recharging and reinstalling. Do not use for any other purpose.
- 9) Disposal When disposing of the lithium battery, the battery should be separated from the product at the point of purchase or near the service center and the charge and discharge terminals are not short-circuited. Dispose of it as industrial waste.



Battery disassembly prohibited

Battery disassembly, modification, and repair are not covered under warranty.





## Maintenance and Care



### WARNING

Sun exposure and extreme temperature conditions (overheating and supercooling) will accelerate the aging of plastic parts and may lead to a decrease in battery life.

## Recommended Maintenance Schedule

For your riding safety, please be sure to maintain and check your scooter regularly. You are familiar with and understand the frequency, condition and place of use of your scooter, and are responsible for regular inspection of your scooter. If any abnormality is found, please stop using it immediately and go to the authorized outlet for inspection and maintenance in time. The following table is our recommended regular maintenance items and cycles.

| Item                  | Component              | Maintenance Method                                                                                                                                                                                                                  | Every 3 months | Every 6 months or every 310 miles (500 km) | After 1 year or the total mileage>1864 miles(3000km) |
|-----------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|------------------------------------------------------|
| Mainframe maintenance | Mainframe parts        | Use a soft, wet cloth to wipe the mainframe clean.                                                                                                                                                                                  | √              | √                                          | √                                                    |
|                       | Tire pressure          | Inflate tires to 32–38 psi. Note: Remember to screw the valve cap after inflating!                                                                                                                                                  | √              | √                                          | √                                                    |
|                       | Tire wear              | Check if the tires are cracked, deformed, or significantly worn.                                                                                                                                                                    |                | √                                          | √                                                    |
|                       | Screws on the stem top | Tighten the screws fixed with the handlebar and the stem.<br>The suggested torque is 6–8 N·m.                                                                                                                                       | √              | √                                          | √                                                    |
|                       |                        | Tighten the screw on the throttle. The suggested torque is 4–4.5 N·m.<br>Tighten the screws on the brake levers. The suggested torque is $8.5 \pm 0.5$ N·m.<br>Tighten the screws on the stem top. The suggested torque is 2.4 N·m. |                | √                                          | √                                                    |



## Maintenance and Care

| Item                  | Component                       | Maintenance Method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Every 3 months | Every 6 months or every 310 miles (500 km) | After 1 year or the total mileage > 1864 miles (3000 km) |
|-----------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|----------------------------------------------------------|
| Mainframe maintenance | Screws on the folding mechanism | Tighten the screws for folding mechanism. The suggested torque is $15 \pm 1 \text{ N} \cdot \text{m}$ . If the stem gets shaky when riding, tighten the screws on the folding mechanism when the scooter is in folded state.                                                                                                                                                                                                                                                                                                                                                                                |                | √                                          | √                                                        |
|                       | Brake disc assembly             | Tighten the screws on the brake disc assembly. The suggested torque is $8.5 \pm 0.5 \text{ N} \cdot \text{m}$ .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                | √                                          | √                                                        |
|                       | 3rd-gen replaceable suspension  | If the suspensions are not smooth or much harder when riding, add lubricant to suspension internal structure parts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |                                            | √                                                        |
| Function Inspection   | Hub motor                       | To accelerate and decelerate, check if the hub motor is stalled or has abnormal sounds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                | √                                          | √                                                        |
|                       | Rear wheel maintenance          | Check if the rear wheel is stalled or gets shaky, or the axis shaft is unbalanced.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                | √                                          | √                                                        |
|                       | Brake adjustment                | 1) Squeeze the brake levers, repeat 5 to 8 times, to enable the caliper fitted with the brake pads grabs the rotor.<br>2) Tighten the bolts on the caliper. The suggested torque is $8.5 \pm 0.5 \text{ N} \cdot \text{m}$ .<br>3) Release the brake levers, spin the wheels. If the brake pads make contact with the rotor, loosen the bolts on the caliper and repeat step 1.<br>4) The pushrod can be adjusted by a 2 mm wrench if necessary. Rotate the pushrod clockwise to increase the length between the brake lever and the handlebar. Rotate the pushrod counterclockwise to decrease the length. |                | √                                          | √                                                        |
|                       | Brake pads                      | The disc brake has the function of self-repairing. But when the brake pads are significantly worn, they need to be replaced.<br><br>If the brake levers feel spongy when you squeeze them and the rotor makes abnormal sounds, please stop riding immediately and replace them with the new brake pads.                                                                                                                                                                                                                                                                                                     | √              | √                                          | √                                                        |



## Maintenance and Care

| Item            | Component        | Maintenance Method                                                                                                                                                                                                          | Every 3 months | Every 6 months or every 310 miles (500 km) | After 1 year or the total mileage>1864 miles(3000km) |
|-----------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|------------------------------------------------------|
| Fault detection | Hydraulic brake  | If you experience poor brake performance, it's recommended to contact the after-sale service or an authorized dealer to replace the brake fluid (Mineral oil model: BK407).                                                 |                | √                                          | √                                                    |
|                 | Brake rotor      | Spin the wheels, the caliper should be aligned with the rotor and they shouldn't rub on the brake pads.<br>WARNING: DO NOT touch the disc brake after riding or braking Function because it can get hot.                    |                | √                                          | √                                                    |
|                 | Taillight        | Squeeze the brake levers, the taillight works normally.                                                                                                                                                                     |                | √                                          | √                                                    |
|                 | Headlight        | Check the headlight and see if it lights brightly.                                                                                                                                                                          |                | √                                          | √                                                    |
|                 | Dashboard        | Power on the scooter, the dashboard works properly.                                                                                                                                                                         |                | √                                          | √                                                    |
|                 | Horn             | Press the button, the sound is loud.                                                                                                                                                                                        |                | √                                          | √                                                    |
|                 | Throttle         | Twist the throttle and release it, checking for acceleration and deceleration.<br>Note: Release it, check if the throttle handle will back to the position.                                                                 |                | √                                          | √                                                    |
|                 | Fault detection  | After connecting with the Dualtron app:<br>1) Update the firmware to the latest version.<br>2) Check if the notification of the corresponding error code and possible causes will prompt when the scooter detects an error. |                | √                                          | √                                                    |
|                 | Charging         | Charge the scooter:<br>1) Check the charging indicator on the dashboard.<br>2) Check the LED indicator on the battery charger.<br>Charging: red, Fully charged: green.                                                      |                | √                                          | √                                                    |
|                 | Control switches | Press or rotate the left/right control switches 3 times without failure.                                                                                                                                                    |                | √                                          | √                                                    |
|                 | Turning          | Test with left turns and right turns .No resistance or lag when turning.                                                                                                                                                    |                | √                                          | √                                                    |



## Maintenance and Care

| Item             | Component               | Maintenance Method                                                                                                                                                                                                      | Every 3 months | Every 6 months or every 310 miles (500 km) | After 1 year or the total mileage>1864 miles(3000km) |
|------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|------------------------------------------------------|
| Important parts  | Battery assembly        | The battery need to be replaced when it is charged and discharged for 500 times or the total mileage is more than 6213 miles (10000 km).<br>Note: It is recommended to charge once every 60 days for long-term storage. |                |                                            |                                                      |
|                  | Controller              | It is required that original Dualtron parts shall be used for repairs and replacements.                                                                                                                                 |                |                                            | √                                                    |
|                  | Hub motor               |                                                                                                                                                                                                                         |                |                                            |                                                      |
| Functional parts | Rear wheel assembly     |                                                                                                                                                                                                                         |                |                                            |                                                      |
|                  | Throttle & Brake levers |                                                                                                                                                                                                                         |                |                                            |                                                      |
|                  | Front fork assembly     |                                                                                                                                                                                                                         |                |                                            |                                                      |
|                  | Folding mechanism       |                                                                                                                                                                                                                         |                |                                            |                                                      |
|                  | Brake rotor             |                                                                                                                                                                                                                         |                |                                            |                                                      |
|                  | Disc brake assembly     |                                                                                                                                                                                                                         |                |                                            |                                                      |
|                  | Dashboard               |                                                                                                                                                                                                                         |                |                                            |                                                      |



## Legal Statement

**IMPORTANT:** A user shall carefully read the entire User Manual and fully understand it (especially for the content related to warnings, caution statements, product operation and safety), and adhere to the foregoing instructions herein before using this scooter. A user shall always use his / her common sense and best judgment when using the product. An owner of this product shall not allow anyone and/or cause another person to use it unless that person is clearly informed of the foregoing warnings and agrees to comply with it.

1. Before using this product, riders must carefully read this manual to ensure the correct use of this product. If the rider cannot ride in full accordance with the instructions in this manual, please do not try to ride the scooter.

2. Please purchase insurance in time after purchasing the product, so as to minimize the use risk.

3. You have the obligation to know all the relevant laws and regulations on riding scooters in your area, and strictly abide by the applicable laws, regulations and policies when riding this product.

Do not ride scooters in areas prohibited by local laws. When riding in countries and regions where there are no relevant regulations on electric scooters, please strictly abide by the safety requirements for riders in this manual. Vinimotors Rovoron will not assume any responsibility for any property loss, personal injury / death, accident or legal dispute caused by the use behavior violating the safety tips in this manual.

4. When you receive this product, please immediately check whether the product and accessories are intact and complete. All components must be correctly installed in accordance with the instructions. Improper installation may lead to the risk of runaway, collision or falling.

5. Please avoid using non original batteries and accessories. It is forbidden to disassemble, crack and modify this product and components without authorization. Any damage and loss caused thereby will be borne by you.

6. The data and parameters of the scooter are different with different models, and are subject to change without notice.

Thank you again for your choice and trust in this product.