

# Intelligent Electric Folding Scooter

## User's Manual

Model:OPTIMUS



# Introduction

Dear customer:

## **Thank you for purchasing the Intelligent Electric Folding Scooter .**

Please read this manual thoroughly before using the scooter. If you can not understand the content well or need to get some help, please contact the dealer or call (866) 868-9694 .

This manual gives brief introduction to the operational approach of every part in the scooter, equipment specification and how to handle it when have accidents. Please find the description of the following mark in the manual: 「★」 in the drawing means important warning.

## **Detailed reading is required for the part with words as “warning ,attention and advice”**

- This manual includes: log sheet of the inspection and maintenance and warranty letter. Please place them in the scooter.
- If you transfer this scooter to another person, please also give the manual to the person.
- As the design changes, all the information and pictures in the manual are subject to the factory. We will make changes without any further notice. Thanks for customers' understanding and supporting.

Finally, we believe that the electric scooter is not only to bring you a permanent repair service, but also more convenience and wonderful life.

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# I. Safety Requirement

## ■ Before driving

- Please drive on the pavement; if you drive on the road without sidewalk, please drive on the outside.
- Please pay attention to traffic when there is no sidewalk in your front or have to drive in the driveway during your driving.
- Please do not cross the road.
- Please avoid driving in areas with heavy traffic.
- No drunk and fatigue driving.
- Do not drive at night .
- Please observe the traffic signs and local traffic laws and regulations.

## ■ Driving Ground

Electric scooter in normal driving conditions (such as cement floor consist of dry concrete or asphalt ) has the best stability.

- Can be used safely in parks and grasslands.
- Try to avoid driving on unconsolidated crushed stone, covered soil and gravel.
- If you can not judge the condition of the road, do not drive on it.
- Electric scooters can stride across the obstacles with certain height. That needs a lower speed, slowly passing the obstacle(as shown in figure).



Height of Surmountable Obstacle:40mm

**Warning: over the climbing angle and other requirements in this manual book is prohibited.**

■ **Safe Precaution Measure**

- Don't try to drive before you read and understand the manual.
- This scooter is designed to only one person. No any other passengers is allowed.
- Please switch off the power when the scooter is not in use.
- Please drive slowly when the road is rugged rock or soft ground.
- Please slow down when you turn the corner.
- Don't park your scooter on the slope when you drive on the slope.
- Please don't drive on the sharp slopes, please don't drive continuously for 300 meters slope which angle is above 9 degree. The control system will automatically cut off the power if it exceeds the limit of angle. The you need to shut down the power, restart it to drive again.
- When drive on the bottom of slope or just close to slope, rugged ground, no protected edge area ( the road side, door, stairs), please drive carefully.
- Any change of scooter's initial setting and modification is prohibited.
- Please drive carefully when you are in the busy street, market and shopping center. Drive on the unsafe and no permitted road is prohibited. Please inquiry the local government or state agencies about electric scooter traffic rules.
- Place the electric scooter as a seat on a moving vehicle is prohibited.
- This product is used with lithium-ion battery, no professional technicians is forbidden to disassemble the battery.

## ■ **Attention in use**

- Repair and modification

If the repair or modification is needed, please contact the store or agent.

- **Original parts**

Please use the original parts of former factory when the replacement is needed.

- **Environment protection**

Please don't abandon the scrapped scooter and battery. If necessary, please contact the dealer or agent.

## II. Description of each part



- |                      |                           |                                |                  |
|----------------------|---------------------------|--------------------------------|------------------|
| 1. Control Panel     | 2. Leather seat           | 3. Armrest                     | 4. Plastic cover |
| 5. PU Solid Wheel    | 6. Charging Socket        | 7. Footrest and Battery Holder |                  |
| 8. Decorative pieces | 9. Aluminum Steering post | 10. Basket                     |                  |

### ● Detailed diagram



- |               |                      |                              |
|---------------|----------------------|------------------------------|
| 1. Speed Nut  | 2. Battery indicator | 3. Horn Button               |
| 4. Key Switch | 5. USB interface     | 6. Directional control lever |



### III. Operating Instruction

- **Power Switch (Picture one)**

The power switch is located on the right side of the control panel on the handle.

Turn the power switch key clockwise for power on.

★Warning: If the power is turned off while the electric scooter is running, the electromagnetic braking system will be joint and the scooter will stop abruptly.



Picture One

- **Battery indicator(Picture Two)**

Turn on the power switch, battery indicator will display battery capacity, green indicates strong power, yellow indicates weak power, , red indicates low electric and shall be promptly charged.



Picture Two

- **Speed adjuster(Picture Two)**

Speed adjuster can adjust the speed with range 0.2Km/h ~8Km/h. Turn the knob to the left end to set the slowest speed . Turn the knob to the right end to set the fastest speed.

Speed adjuster



Picture three

- **Forward and Backward(Picture Three)**

Pull back the joystick by the right hand to make the scooter forward. Pull back the joystick by the left hand to make the scooter backward. When the scooter is back away, the horn will sound the alarm for noticing you.

Joystick will automatically stop at the "center" position after completely release, and the electromagnetic brake will stop the scooter automatically .

- **Horn Button**

Press the button to make a beep to prevent accidents and injuries, please use it in time.

- **Battery Holder**

Built-in 24V 6AH lithium-ion battery to supply strong power for the running and folding of the scooter.

- **Controller**

Controller is fixed under the seat of the rear frame to receive the signal from the handle control system to make the motor, brake and other systems work properly.

- **Brake Joystick**

Brake on and off can be done by switch 「hand walking」 and 「electric walking」 .

「electric walking」 : pull back the brake joystick (off) for electric walking

「hand walking」 :pull forward the brake joystick(on) for hand walking

- **Driving Parts**

The motor / driving parts is an electromechanical part that converts electric energy into the rear wheel drive energy.



Picture Four

**★Warning:**

Pull down The brake joystick during downhill is absolutely prohibited,that will cause the scooter entering hand walking state without any brake action.

## ■ Driving Techniques

### ● Start , Walking

1. Make sure the hand lever is pulled out and locked.
2. Turn the power switch key clockwise to the dead point first, then the power indicator light is on.
3. Check the remaining power of the battery with the display, charging when battery is low.
4. Adjust the speed controller to the desired speed.
5. Confirm the forward and backward state of the forward and backward joystick.
6. Confirm the safety of the surrounding environment and road conditions.
7. Slowly pull the speed up joystick from left to right to move forward and backward, and adjust the speed according to the advance degree of the speed up joystick.

#### ★Caution:

1. Please turn the power switch off when you get on or off the scooter.
2. Do not operate the speed up joystick with both hands at the same time.
3. Do not power off while driving, falling down will be caused by an emergency brake.
4. Please drive indoor at low speed.
5. Be careful when driving at places with many people and heavy traffic.
6. Please pay attention to crowd behind and other obstacles when reversing.

### ● Stop

1. When the speed up joystick returns to the original position 「center position」 , the brake will automatically release ,then the car will stop.

#### Caution:

The braking distance will vary depending on the driving conditions, if you want to stop, please do the braking in advance.

2. Turn the power switch key counterclockwise and the power indicator light goes out.

## IV. Battery and Charge Method

### ● Lithium ion Battery

This product uses by 24V 6AH high-performance lithium-ion battery, it needs to be fully charged for the first time.

#### ★Warning:

1. Do not disassemble the battery ,or may cause accidents and personal injury.
2. Warning: Do not drive on icy, slippery floors or saline-alkali soils as this may cause accidents and personal injury.

### ● Charger (Picture Five)

This product uses efficient charger-AC100-240V/DC24/2A. As shown in picture six.

### ● Charge Method (Picture Six)

The charging mode of the scooter is direct charging.

1. Turn off the power switch on the scooter.
2. Insert the microphone plug of the charger into the socket under the seat inthe scooter directly. As shown in picture seven.



Picture Five

3. Insert the charger's power plug into household power supply.
4. When charging by using household power, the red indicating light goes on.

The charging time will be different according to the battery status and temperature, generally 5-8 hours. The indicator light is orange during charging.

5. When the charge is complete, the charger automatically stops working and the indicator light changes from orange to green. Pull out the charger's input line first, and then pull the microphone plug of the charger out of the battery interface.



Picture Six

★ Caution: Please observe the following regulations to avoid accidents caused by abnormal charging.

★The battery shall only be charged with the charger provided by our company and make sure its full charged. Or will cause battery damage or can't be charged .



★Do not disassemble or modify the charger.

★Please charge the scooter under good venting place without direct sunlight.

## V . Adjustment of Folding and Unfolding

- Folding and Unfolding remote-controller (Picture Seven )

- Folding and unfolding of scooter (Picture Eight)

1. Take out the remote controller .
2. Keep pressing “  ”until the scooter is Completely folded.  
Keep pressing “  ”until the scooter is fully Unfolded.



Picture Seven



Picture Eight

★Caution:

Please make sure there is no object or debris in and under the scooter when folding.

### ● Handrail Width Adjustment (Picture Nine)

Handrail width can be adjusted inward and outward.

1. Release the under handrail to lock knob.
2. Move inward or outward to the desired position, and then lock the handle.
3. Internal and external adjustment of the handrail range from 450mm-550mm.
4. Uplift the handrail for your convenience of getting on and off the scooter.

### ● Handle telescopic adjustment

Push aside the locking lever of the handle outward to the lowest position and lock the handle.

### ● Folding and unfolding action

1. Turn power off.
2. Push forward or backward with holding the handle.



Picture Nine

Manually  
fold/unfold button



Folding Mode Switching

The scooter can also be folded and unfolded manually by using the switch found at the back on the shroud under the seat. The scooter can also be folded and unfolded manually by using the switch found at the back on the shroud under the seat.

- With the switch in the double bar position the scooter will fold/open manually with the button on the right side of scooter.
  - With the switch in the single bar position the scooter will fold/open using the remote.
  - When the switch is in the “O” position the scooter will not fold or unfold.
- ★It is recommended the switch is left in the “O” position at all times to prevent accidental folding and unfolding.

## VI. Inspection and Maintenance

### ■ Routine Inspection

Before driving, please make sure that the following items have being inspected, if unusual situation is discovered, please use it after the inspection carried out by yourself or the store/agent.

Inspection item	Inspection content
Handle	Is it loose? Circle from left and right normally ? Normal scalability ?
Speed adjuster	Does it rotate normally? Can you adjust the speed normally?
The forward and backward of directional control	Can it be operated forward and backward movement well and stop at neutral position?
Brake lever	Can it be switched for manual and electric control function ?
Battery indicator	Are the light bars for battery indication works well ? Is the battery full charged?

#### ★Caution:

when you consider there is some mechanical problem, please go to the dealer or agent for the inspection and maintenance.

- **Battery maintenance**

This product uses high performance lithium-ion battery, please charge the battery in time each time after using the scooter. Please don't over discharge the battery.

**★Caution:**

Caution: charge the battery every two month without using the scooter for a long time.

1. Check all wire insulation regularly and the fasten status of the wire attachment joints.
2. Keep all electronic components away from wet, otherwise it must be completely dried before use again.
3. Please use the soft cloth to clean the dirt on the scooter body, do not clean the . scooter body with water directly



## VII. Trouble Shooting

The controller contains the procedure of identifying the trouble spot and trouble clearing. when the errors and problems are detected by the diagnostic program, the LED on the control panel will shine and the fault warning buzzer will alarm at the same time. The fault display LED will keep flashing in form of fault indication code 1 until fault exclusion. For example: fault code "2-9", the user can try to solve the problem according to the following methods , if the problem persists, please consult that with us or our agent .



Fault display LED

Flash 's number of times	Trouble description	Possible cause
1	Low battery voltage or battery connection problem	Check the battery connection, if there is no problem with the connection, try charging the battery
2	Problems with motor connection	Check all connections between motor and controller
7	Forward and backward controlling lever failure	Before turning on the power of the scooter, make sure the controlling lever is in the neutral position
9	Brake Lever failure	Check the connection of the brake lever and the motor to ensure that the controller is connected securely

## VIII. Technical Parameters

Item	Parameters
Dimensions(length*width*height)	1050x550x870mm
Packing Dimensions (length*width*height)	480x550x790mm
Weight	29KG
Front wheel	2*7"PU wheel
Back wheel	2*8"PU wheel
Speed	0-6km( Adjustable)
Endurance	20km
Spanning ability	40mm
Driving and braking mode	Back-wheel drive, electromagnetic brake
Load capacity	120kg
Height from the ground	50mm
Seat off-ground height	560mm
Minimum radius of gyration	1200mm
Maximum gradeability	$6^{\circ} \pm 1^{\circ}$
Controller	PG45A
Motor	180W
Charger	DC24V/2AAC100-240V
Battery	24V 6AH lithium battery ( two batteries )
Color	red,blue,yellow, silver,black,pink

- **Scope of Warranty Description**

The agent is responsible for repairing or replacing the component when there is quality problem caused by manufacture under normal use.

- **No warranty for the damage caused by the following conditions**

1. Failure to use and maintain in accordance with the correct operation method in the instructions.
2. Do not use the spare parts produced by regular manufacturers.
3. Spare parts damage caused by accidents.
4. Consumables parts such as tires, bearings and etc are not covered by warranty.
5. Modify the scooter settings without permission.
6. Typhoons, floods, earthquake and other natural disasters.



Intelligent Electric Scooter  
OPTIMUS Product  
Warranty Card

User Name:	ID card No:
Address:	Phone Number:
Product Name: OPTIMUS	Scooter Number:
Purchasing date:	
Warranty Period:	
Name of the agent:	
Phone Number:	

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