



# OWNER'S MANUAL

## MOBILITY SCOOTER

Model: W3431Q





## X. INDICATIONS FOR USE

It is a motor driven, indoor and outdoor transportation vehicle with the intended use to provide mobility to a disabled or elderly person limited to a seated position.



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## I. INTRODUCTION

Read and follow all instructions, warnings, and notes in this manual before attempting to operate your **mobility**scooter for the first time.

If there is any information in this manual which you do not understand or you require additional assistance for setup or operation, please contact your authorized provider.

Your safety to operation of this product depends upon whether you completely follow the instructions, cautions and warnings in this manual. We are not liable for any damage and/or injuries resulting from individual unsafe operation or failure to follow the instructions, cautions and warnings in this manual.

These symbols below in this manual are used to identify warnings, notices and operation instructions. All of them are very important to your safety. It is strongly recommended to read and understand them completely and carefully.



**WARNING .**  
**Failure to heed the warnings in the manual may result in personal injury.**

**CAUTION .**  
**Failure to heed the cautions in the manual may result in damage to the power scooter.**

The mobility scooters combine the modern technology with contemporary styles, and are divided into two models as to their structure : integral and separated. Especially, the latter has a structure for quick assembly and disassembly that is convenient to be stored or placed at the trunk of your vehicle while traveling. We are certain that the design features, excellent performance and trouble-free operation of this product will ensure your daily life more convenient.

For your safety, please ensure that you read carefully and follow strictly all instructions, warnings, and notes in this manual before attempting to operate your mobility scooter for the first time. These items are recommended for your benefit. Your understanding is important for your safety to operate this scooter.

Once you master how to operate and maintain your mobility scooter, it is sure that this product will give you years of trouble-free service and enjoyment..

The model of this produce is W3431, where the character 'W' indicates the outdoor scooter, the first digital '3' the code for our products, the second digital '4' the number of the wheels, and the last '3' the sorted number for this model.

We appreciate your questions, comments, and suggestions about this mobility scooter, especially its performance of safety and reliability, and the service from your authorized provider.



## IX. WARRANTY

All of design and production processes of the products are managed in accordance with ISO 9001 to guarantee their quality.

Warranty service will be performed by the authorized provider in cooperation with the after-service department.

### WARRANTY INCLUDING

1. Five years warranty on the front and the rear main frames from the date of purchase.
2. One-year warranty on the following parts from the date of purchase :
  - Electric control system and the control lever.
  - Motor/gearbox assembly.
  - Charger.
3. Six-month limited warranty on batteries from the date of purchase.

### OUT OF THE WARRANTY

- ABS Shroud worn out.
- Tires.
- Upholstery and seat.
- Damage caused due to abuse misoperation, accident and negligence.
- Damage caused due to improper operation, maintenance and storage.
- business or other non-normal use.

**Legal Manufacturer:** Zhejiang Innuovo Rehabilitation Devices Co.,Ltd.

**Address:** No. 196 Industrial Avenue, Hengdian Town, Dongyang City,  
Zhejiang Province, China

**Manufacturer Tel:** 400-1005758

**Manufacturer FAX:** 0579-89327232



## VIII. Safety



**WARNING!**  
If unintended motion occurs due to EMI/RFI, please immediately turn your scooter off and contact your authorized provider. We are not liable for any damage and/or injuries due to failure to do so.

### 7. TRANSFER ONTO OR OFF SCOOTER

To avoid an injury, the following safety precautions are useful for you while you attempt to transfer on or off your scooter.

- Remove the key from the key switch, see VI. OPERATION.
- Ensure your scooter is not in manual freewheel mode.
- Flip up or move away the armrests.
- Reduce the distance between you and your scooter or an object you are transferring onto.
- Turn the front wheels forward to improve your scooter's stability during transfer.



**WARNING!**  
Before transferring, position yourself as far back as possible in the scooter seat to prevent the scooter from tipping and causing injury.



**WARNING!**  
Avoid putting all of your weight on the armrests. Failure to do so may cause your scooter to tip, resulting in your injury.



**WARNING!**  
Avoid putting all of your weight on the footplate. Such use may cause your scooter to tip, resulting in your injury.

### 8. Inclement Weather Precautions



**WARNING!**  
Do not operate your scooter on slippery roads with ice or snow. Failure to do so may cause you injury and affect the performances of your scooter.

**WARNING!**  
Do not expose your scooter to any type of moisture at any time (rain, snow, mist or wash). Such exposure will damage your scooter. Never operate your scooter if it has been exposed to moisture until it has been dried thoroughly.



## II. STRUCTURE AND PERFORMANCE

This scooter mainly consists of four parts: front body, rear body, chair and batteries.







### 1. TILLER CONTROL

( see figure 2)

- a. Key switch
- b. Speed adjustment knob
- c. Power indicator
- d. Horn button
- e. Control lever
- f. Tiller

### 2. CHARGING AND ELECTRIC CONTROL SYSTEM

- a. 3-pin charger socket
- b. Overload protector

### 3. SEAT UNIT

( refer to the section IV. COMFORT ADJUSTMENTS)

- a. Seatback
- b. Backrest
- c. Armrests
- d. Seat lock lever

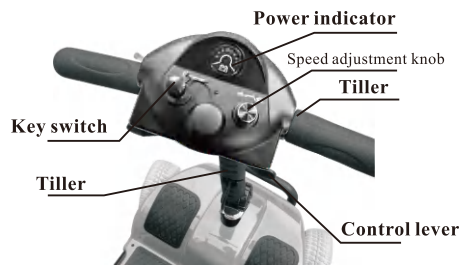


Fig. 2

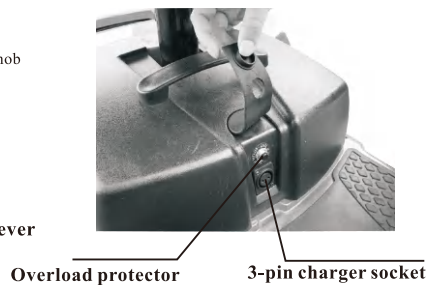


Fig. 3



### 4. OUTDOOR DRIVING SURFACES

You scooter is designed to provide optimum stability under normal driving conditions-dry, level surfaces composed of concrete, blacktop, asphalt, or hard dirt. But you should avoid driving on the following roads:

- Surface that you feel unsure about or soft pavement.
- Tall grass that can become tangled in the running gear.
- Loosely packed gravel and sand beach.

### 5. MANUAL FREEWHEEL MODE

Your scooter is equipped with a manual freewheel lever that allows the scooter to be manually pushed by your attendant. For more information, see VI.OPERATION.

#### WARNING!

**Do not use your scooter in manual freewheel mode without an attendant present.**

**Failure to do so may cause personal injury.**

#### WARNING!

**Do not attempt to place your scooter in manual freewheel mode while seated on it. Personal injury may result. Please ask an attendant for assistance if necessary.**

#### WARNING!

**Do not place your scooter in manual freewheel mode while on an incline. The scooter could roll uncontrollably down by its own, causing personal injury.**



### 6. ELECTROMAGNETIC INTERFERENCE

Electrical devices may be affected by Electromagnetic Interference (EMI) or Radio Frequency Interference (RFI) that are produced by radio waves from radio stations, TV stations and other radio transmitters. Like any electrical devices, your scooter may be affected by EMI/RFI, especially when your scooter is driven in the interference influence range of these radio transmitters. In this case your scooter may be out of order due to their interferences.



## VIII. Safety

### 1. PRE-RIDE SAFETY CHECK

- Check all electrical connections. Make sure they are tight and not corroded.
- Check all connections to the battery box. Make sure they are secured properly.
- Check the brakes. Make sure they are sensitive and reliable.
- Check the battery charge. See VI Operation.

### 2. WEIGHT LIMITATIONS

Your scooter is rated for a 75 kg weight capacity and is limited to a 100 kg maximum weight limit.



#### WARNING!

Exceeding the weight limit voids your warranty and may result in personal injury and damage to your scooter.

### 3. INCLINE INFORMATION



#### WARNING!

When climbing an incline, do not zigzag or drive at an angle up the face of the incline. Drive your scooter straight up the incline. This greatly reduces the possibility of a tip or a fall. Always exercise extreme caution when negotiating an incline.



#### WARNING!

Don't driving up or down a potentially hazardous incline (Areas covered with snow, ice, cut grass, or wet leaves etc.).



#### WARNING!

Never drive down an incline backward. This could cause personal injury.

The maximum safe slope of an incline is of 8° for your scooter. If a slope is less than this angle, it is safety for your scooter whenever climb or descent.



#### WARNING!

Any attempt to climb or descent a slope steeper than 8° may have your scooter unstable and cause it to tip, resulting in personal injury and/or damage to your scooter.



## II. STRUCTURE AND PERFORMANCE

Table 1 SPECIFICATIONS

Overall Size (L × W × H)	1030 mm×500mm× 840 mm
Seat height	520 mm
Seat width	400 mm
Seat depth	350 mm
Armrest height	210 mm
Backrest height	330 mm
Battery weight	9.5 kg
Scooter Weight	42kg
Maximum Speed	≤ 6 km/h
Braking Distance	≤ 1500 mm On the Flat
Minimum Turning Radius	≤ 1400 ± 300mm
Weight Capacity	100kg
Theoretical Range	≥ 20 km
Static Stability	≥ 9°
Dynamic Stability	≥ 6°
Motor	24V/180W
Batteries	12 V/12AH×2
Maximum Output Current of Controller	45 A
Maximum Output Current of Charger	2 A
Front Wheel	Inflate-Free tires, Outside diameter of 192 mm
Rear Wheel	Inflate-Free tires, Outside diameter of 192 mm



### III. ASSEMBLY

For convenience of transportation and reduction of possible damages, the batteries and the seat unit are separately packaged. So you need assemble them onto the main frame of your scooter.

#### OPENING THE PACKING BOX

Open the packing box of your new scooter, and take off all protective liner, and then take the scooter that has folded out from the box.

#### ADJUSTING ANGLE OF TILLER

- Loose the lock-nut (see fig.4 )
- Lift the tiller up until a proper angle for yourself
- Tighten the lock-nuts to fix the tiller.

#### ASSEMBLE THE SEAT SUPPORT

- Insert the seat support into the seat tube located on the rear body (see fig.5)
- Align the bolt hole
- Insert the bolt into the hole



Fig. 4



Fig. 5



### VII. MAINTENANCE

#### GENERAL GUIDELINES

- Avoid knocking or bumping the tiller console and consoles.
- Avoid prolonged exposure of your scooter to extreme conditions, such as overheat, cold or moisture.
- Keep the tiller console clean.
- Check all connectors to ensure that they are tight and secured properly.
- Check all electrical connectors including the charger's connectors. Make sure they are all tight and are not corroded. Batteries must sit flat in the battery tray with the battery terminals facing each other backward.
- When you finished daily usage, please pull out the key to reduce unnecessary consumption of the power.
- This product has the power saving facility, when you stop using it up to 20 minutes, the power will shut off automatically. When need drive again, please re-plug the key.
- The body shroud has been sprayed with a clear sealant coating, and you can apply a light coat of car wax to help it retain its high-gloss appearance.
- All wheel bearings are pre-lubricated and sealed. They require no subsequent lubrication.

For keeping your scooter in a better condition, it should be checked before using. It is suggested that your scooter should be checked once per week and half a year as the following table 2.

#### CLEANING METHOD

Wipe with clean and soft paper or cloth.

Do not need to wash with water, do not wipe with corrosive liquid.

Table 2 CHECK LIST

Check Items	At any time	Weekly	Monthly	Six monthly
All parts			⊙	
Turning, Driving, Devices etc.		⊙		
Brakes	⊙			
Connections		⊙		
Battery Charge	⊙			
Tire wear			⊙	
Motors				⊙
Console devices		⊙		
Cleanliness	⊙			



**CAUTION!**



1. When your scooter is in free-wheel mode, the brake system is disengaged, and the functions of the control lever are inhibited by the control system. Meanwhile, the horn sounds while the power is on.
2. Never use your scooter in free-wheel mode without your attachment. Failure to do so may cause personal injury.
3. Never put your scooter in free-wheel mode on any incline. Failure to do so may cause personal injury.

**WARNING!**



When scooter is in drive mode, the manual free-wheel lever must be in backward position ,i.e. in drive mode, so as to guarantee the brake system to work normally. Disallow to push the lever to forward position in movement. Failure to do so may cause personal injury or damage to your scooter.

**5. 3-PIN CHARGER SOCKET (see fig. 3)**

This socket is used to connect the charger. When the batteries are charged, this socket makes your scooter out of work.



**WARNING!**

A wrong connection may cause damages to the charger, connectors and electronics.



**Battery assembly**

Put the batteries into the battery tray ( fig. 6 ) . Note that the electrode terminals on the batteries should be aligned with that on the rear body. Then, a battery platen on the rear body is turned by 90° to suppress the battery box, and then firmly tighten a knob on the platen ( fig. 7 )

**NOTICE**

1. Check and clean the electrodes and remove any foreign bodies on them that may cause poor electrical contact.
2. Incorrect placement of the batteries may cause the scooter unusable.

**Seat assembly**

1. Put the seat onto the seat post ( fig. 8 ).
2. Unlock the seat lock level, adjust the seat toward the front and the lock level will automatically lock the seat.
3. Assemble the left/right armrests respectively into the square tubes below the seat ( see fig. 15 ).
4. Adjust the seat width between the armrests suitable for you, tighten the knob.

**Basket assembly**

1. Remove the two screws in the tiller ( fig. 9 ).
2. Assemble the basket holder onto the tiller.
3. Assemble the basket into the holder.

Notice: the basket belongs to an optional accessory, and the customers who need it should make an additional order.



Fig. 6



Fig. 7



Fig.8



Fig. 9





## IV. DISASSEMBLY

The content of this section is suitable to a scooter with separated structure. This product is designed so that it can be easily disassembled without tools for storage and transportation. You can disassemble the scooter into four parts, i.e. the front body, the rear body, the seat and the batteries (fig. 10), or it can be quickly assembled in turn.

### DISASSEMBLY PROCEDURES

1. Turn off power, lift the seat lock level up under the seat to unlock the seat.
2. Lift the seat up and remove it (fig.8).
3. Lift the battery box up and remove it (fig.6).
4. Loosen a nut on the battery connector and pull it out (fig. 11).
5. Lift the latch hook up by pulling its nylon cord to unlock the front and rear bodies of the scooter(fig.12).
6. Lift up their junction between the front and rear bodies to release the latch hook (fig.13).
7. Loosen the knob on the lower end of the tiller, and put the tiller down (fig.4).

### ASSEMBLY PROCEDURES

To assemble the scooter, reverse the procedures described above.

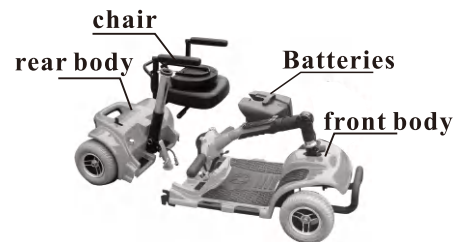


Fig. 10



Fig. 11



Fig.12



Fig. 13



## VI OPERATION

### Horn Button (see fig. 2)

This button activates a warning horn.

### Headlight Button (see fig. 2)

This button activates headlights.

### 3. OFF-BOARD CHARGER (see fig. 3)

Open the hasp on the battery box, you can find a 3-pin charger socket. Through it you can use the off-board charger to charge your scooter's batteries. See Charging Batteries in this section.

### Overload Protector (see fig. 3)

The overload protector is a safety device. When the overload occurs, this protector automatically trips to protect the motor and other electric devices.

When the protector trips, your scooter will be powered down immediately. And then you should wait a minute at least before you can press the button on the protector, which is under the cover at rear body of scooter, to resume it. After that you can power up again and drive normally.

### 4. MANUAL FREE-WHEEL LEVER

There is a free-wheel lever at the low right of the seat, shown as fig.16. Whenever you do not want to move your scooter by motor, you can put it in free-wheel mode.

- Push forward on the manual free-wheel lever to disengage the drive motor and switch to the free-wheel mode.
- Pull backward on the manual free-wheel lever to engage the drive motor and switch to the drive mode.



Fig. 16



## VI OPERATION

- Push the control lever forward to disengage the brakes and make the scooter start moving backward. Conversely, the scooter starts moving forward if pulling the lever backward.
- The larger the angle the lever is pushed, the faster the speed of your scooter.
- When you release the lever completely, it automatically returns to the primary position, i.e. the stop position, and engages your scooter's brakes to slow the scooter until it comes to completely stop.



### WARNING!

**If your scooter occurs unintended motion, please release the throttle control lever immediately. The scooter will automatically come to stop unless this lever is out of order.**

### Speed Adjustment Knob (see fig. 2)

This knob allows you to preset and limit your scooter's top speed. The maximum forward speed is 6 km/h and the maximum reverse speed 3.5 km/h.



### CAUTION!

**Before you are master of operating, please preset this speed adjustment knob to the lowest position.**

### Battery Condition Indicator (see fig. 2)

- When your scooter is powered up, this indicator shows the remaining capacity of the batteries by 3 color ranges on it: red, yellow and green.
- When pointing to green, it indicates that the batteries are fully charged.
- When pointing to yellow, it indicates that the batteries remain half of capacity, and they need to be recharged.
- When pointing to red, it indicates that the batteries have been fully discharged, and they need to be recharged immediately.



## V. COMFORT ADJUSTMENTS



### WARNING!

**Pull out the power key before adjustment, never do it when driving.**

### SEAT HEIGHT

- Pull up the seating fixing bar to release the seat.
- Pull up the seat (fig. 8) .
- Remove the latch by pulling the latch-ring outward (see fig. 5) .
- Adjusting the seat height.
- Reload the latch.
- Reset the seat.

### SEAT ROTATION

- Pull up the seat lock lever to release the seat.
- Rotate the seat to your desired direction (see fig. 14) .
- Release the seat lock lever, then it will lock the seat automatically.

### ARMREST WIDTH

- Find the fixing screws on the armrest adjusting frame (see fig. 15) .
- Release the screws.
- Move the armrests outward or inward according to your favorite width.
- Refasten the screws.

### TILLER ANGLE ADJUSTMENT

- Loosen the lock knob on the lower end of the tiller (see fig. 4) .
- Adjust the tiller back and forth according to your favorite angle.
- Fasten the knob.



Figure 14



Figure 15



### 1. CHARGING BATTERIES

The battery charger is important to the batteries. This off-board charger can charge your scooter's batteries safely, quickly and easily.



**WARNING!**  
Your scooter's batteries must be charged with the off-board battery charger supplied by us. Do not use any automotive-type battery charger.

#### Charging Batteries with the Off-board Charger

You can charge your scooter in its entirety.

- Position your scooter near to a standard wall outlet.
- Lift the cover on the batteries box.
- Ensure the scooter is off power.
- Plug the output connector of the off-board charger into the 3-pin charger socket of the scooter.
- Plug the input connector of the off-board charger into the wall outlet.
- The red light on the charger turns on that indicates charging on.
- When charging is nearly finished, the green light turns on. You should continue to charge the batteries for one or two hours.
- It is recommended that your batteries are charged for 10 to 12 hours.
- When the batteries are fully charged, unplug the input connector of the charger from the wall outlet and then its output connector from the 3-pin charger socket of the scooter.
- The batteries can also be charged off-scooter.

#### New Battery's Usage

To break-in new batteries for maximum efficiency, please follow the notes here below:

1. Fully charge any new battery prior to its initial use. This brings the battery up to about 90% of its peak performance level.
2. Operate your scooter throughout house and yard. Move slowly at first, and do not stay too far until you can skillfully driving your scooter and know how to control the driving distance from the battery condition indicator.
3. Give the batteries another full charge of 10 to 12 hours and operate your scooter again. The batteries will now perform at over 90% of their potential.
4. After four or five charging cycles, the batteries will top off at 100% charge and last for an extended period.

If the batteries of your scooter need to be replaced, please purchase the deep-cycle batteries refer to the follow specifications :



type	deep-cycle lead acid batteries or Gel-Cell batteries
size	152×99×96mm
voltage	12V
capacity	12Ah

### 2. TILLER CONSOLE

The tiller console houses all of the controls required for driving your scooter, including the key switch, the speed adjustment knob, control lever, battery condition indicator, horn button and headlight button. With all of controls on the console you can control various motions of your scooter.

#### Key Switch (see fig. 2)

- Plug the key into the key switch.
- The light on the battery indicator illuminates.
- The light is off when the key is plugged out.



**WARNING!**  
Do not use the key switch to stop your scooter unless an urgent event has happened.  
**WARNING!**  
If your scooter has stopped for a long period, power down it to prevent unintended motion.

#### Throttle Control Lever (see fig. 2)

This lever, which locates on the left side of the tiller console, allows you to control the forward or reverse speeds of your scooter up to the maximum speed you preset with the speed adjustment knob.