

OPTIMUM

Electric Wheelchair Manual

Introduction • Use • Maintenance • Warranty



Preface

Dear users, thank you for choosing Kangni Smart electric wheelchair. We hope it will bring convenience and mobility to your life and work.

Before using the electric wheelchair for the first time, please read and abide by all the instructions and tips in this manual to keep the product in good condition and prolong its service life. To exclude any damages, please be familiar with the function characteristics and operation modes of the wheelchair. If you have any questions about the instructions, please contact our customer service.

Updated Information

The last update time of this manual: May, 2020

- Please read this manual carefully before using the wheelchair.
- Please follow the safety instructions to avoid any injuries and product damages.
- Please use the product correctly and safely under the guidance of customer service.
- Please keep this manual properly for reference.
- For any further questions about the instructions, please consult customer service.

Notes: Please pay special attention to the following:

- **Users must use the product correctly according to the manual under the guidance of the authorized person.**
- **Please be specific noted that not all of the options described in the instructions are installed on your product.**
- **The product has been configured according to the needs of the user before delivery, and only the authorized personnel can change the settings.**
(We recommend that you regularly check the product settings to ensure that the product is in optimal state for a long time, and the settings for growing children and adolescents should be revised every six months.)
- **The manufacturer reserves the right to make technical changes to the functions in the manual.**

Feedback

If you find any safety or reliability issues or other suggestions during use, please let us know and we will continue to make improvements. Our contact information is as following:

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Function configuration table

Note: 1. Check the matching items according to the configuration table before reading, not all of them are installed on your product;

2. For more information about the use of function features, please refer to the "use" section.

Note: Caster safety lock function is only available on models with 8-inch caster .

Content	Icon	Name	Description
Function		Adjustable pedal length	Pedal length can be self-adjusting
		Adjustable pedal angle	Power pedal angle adjustment.
		Adjustable backrest	Power adjustment of the angle between the backrest and the seat surface.
		Manual seat rotation	Front and rear drive mode switch by rotation operation.
		Front led lights	Provides lighting when use in dark environments.
		Caster safety lock	Improves the ability to drive in complex road conditions by locking the universal wheel.

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1. Product introduction

Kmini is a high-end electric wheelchair developed by Kangni Smart. This product is committed to expanding the living space of the disabled people and groups having difficulty in walking. On the basis of the common electric wheelchair functions, caster safety lock, backrest adjustment and seat rotation functions are added, in order to improve the autonomous living ability of disabled people and groups having difficulty in walking to a greater extent.

Scope of application: mobility for walking inconvenience, disability or incomplete walking ability (excluding obesity) people.

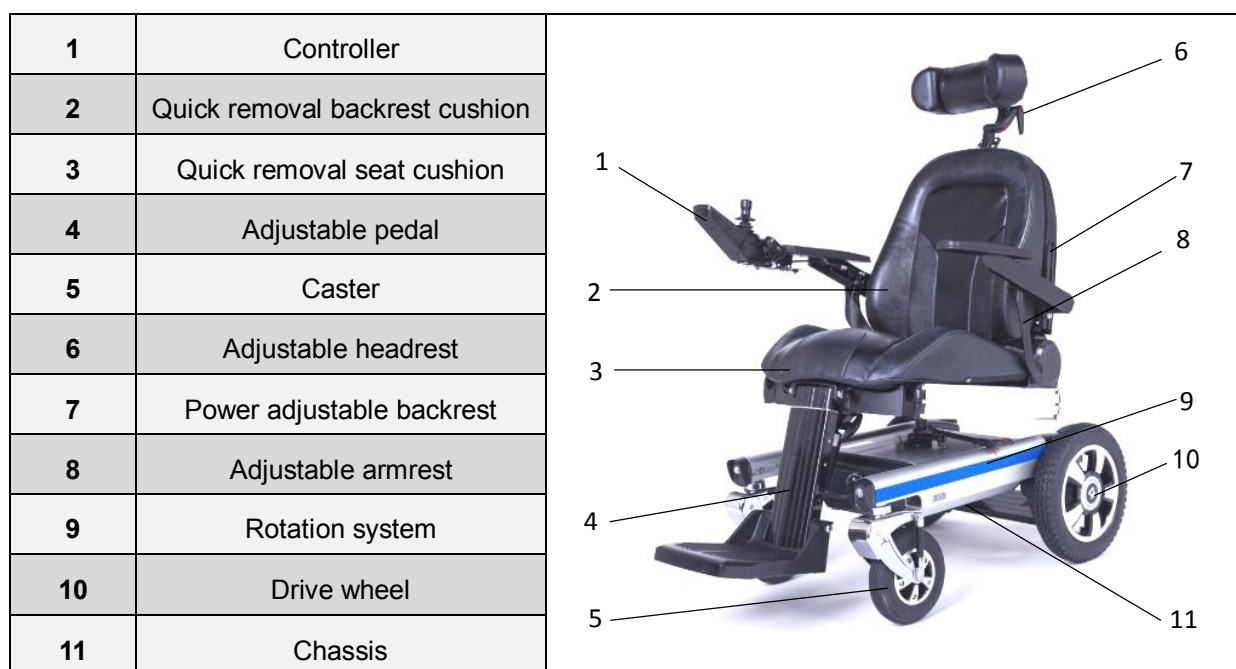
1.1 The electric wheelchair profile



This wheelchair has been inspected and qualified in factory before delivery , and has been finished complete debugging and operation.

The electric wheelchair is mainly composed of chassis, armrests, seat(including rotating system), wheels, footrest, motor (left and right drive motors, backrest adjustment motor, pedal motor), battery, charger and electronic control system.

1.2 The electric wheelchair overview



1.3 Safety

1.3.1 Warning symbols description

Warning symbols: Attention! Before using or selling this electric wheelchair, users, dealers or sales person must read this manual carefully and comply with the relevant provisions in this manual, especially the contents of "warning" and "prohibition".	
NOTICE	NOTICE! • The best operation instructions in general.
CAUTION	CAUTION! • Safety tips, if ignored, it may cause damages to the control system and the wheelchair.
 WARNING	WARNING! • Safety tips, if ignored, it may result in body injuries.

1.3.2 General safety instructions

Warning! Improper operation of the product: Extrusion, overturn and collision may be caused by users' errors in operation.	
 WARNING	• Products can only be used by authorized users. • Users must use the product correctly and safely in accordance with this manual under the guidance of the authorized personnel or sellers. • Sellers must also use the product in accordance with this manual under the guidance of the authorized personnel. • Please read the instructions in the manual completely. • Please do not use this product when you are fatigue or effected by drinking alcohol or taking drugs. • Users with mental health problems, including users who temporarily or permanently lose attention and judgement, must not use this product in road traffic. • You must obey road traffic regulations when driving in road traffic.

Warning! Violation of use requirements: Extrusion, overturning, collision may be caused by users' improper operations.	
 WARNING	• This wheelchair is only used for its original design. • Only one person can be seated on the wheelchair at any time.

Warning! Overload: If the wheelchair is overturned because of overload, it may cause serious injuries and product damages.	
 WARNING	• Do not exceed maximum load capacity (see nameplate and "technical data" section). • Please note that some options and add-ons will change the load capacity of the wheelchair.

Warning! Exceed service life: Serious damages may be caused by failure to comply with product technical requirements.	
	• The use of products that exceed the specified life expectancy may lead to increased risk. (see "Product Life") • If the product service life is reached, please consult after-sales service.

Notice! Extreme temperature: Extreme temperature may cause damages to the product.	
NOTICE	• Do not expose the product to any extreme temperature (e.g. direct sunlight, extreme cold).

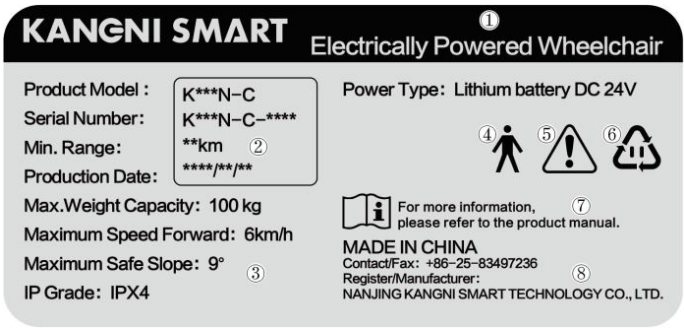
Notice! The use under the incorrect environmental conditions: Product may be damaged due to too high or too low temperature.	
NOTICE	• This product is only suitable for the use in the temperature range of -25 °C to 50 °C (-13°F to 122 °F).

1.4 Electromagnetic Interference

Notice! Stay away from mobile devices with electromagnetic radiation: May cause product damages or collision with people or objects due to interference with control signals.	
NOTICE	• Although conforming to all applicable EMC directives and standards, products may be may be interfered by other electronic devices (e.g., department store EAS systems). If this happens, move the product out of the interference range. • People who install pacemakers should avoid approaching the magnetic field. This product belongs to electrical equipment and contains magnetic field. It is recommended that people who install pacemakers should not use this electric wheelchair. • Turn off all mobile devices while driving because the driving characteristics of the product are affected by electromagnetic fields. • Turn off the control unit when not needed, as the product may generate electromagnetic fields that may interfere with other devices. The product has been tested in accordance with EMC rules. • Other types of handheld devices, such as radiotelephones, laptops, AM / FM radios, televisions, CD players and tape players, as well as small appliances, such as electric razors and hairdryers, are unlikely to cause EMI problems in electric wheelchairs.

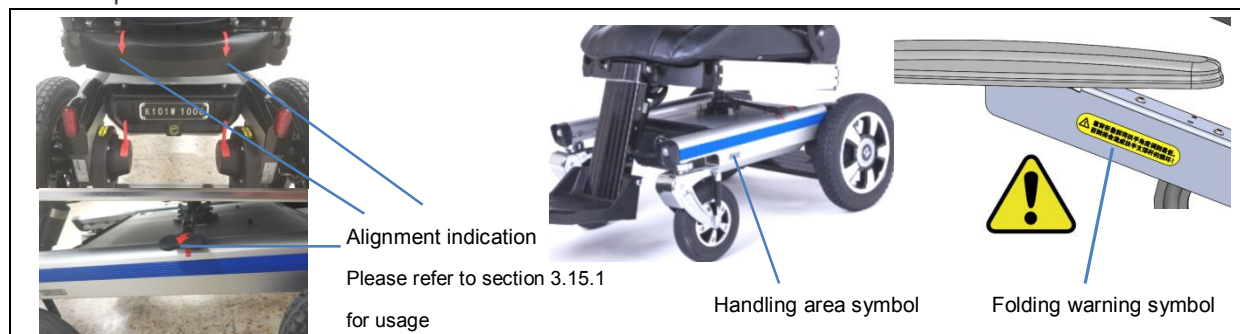
1.5 Wheelchair name plate and warning symbols

1.5.1 Wheelchair Name Plate

1	Product Name	 KANGNI SMART Electrically Powered Wheelchair Product Model : K***N-C Serial Number: K***N-C-**** Min. Range: **km Production Date: *****/**/** Power Type: Lithium battery DC 24V Max.Weight Capacity: 100 kg Maximum Speed Forward: 6km/h Maximum Safe Slope: 9° IP Grade: IPX4 For more information, please refer to the product manual. MADE IN CHINA Contact/Fax: +86-25-83497236 Register/Manufacturer: NANJING KANGNI SMART TECHNOLOGY CO., LTD.  The nameplate is located under the seat The side of the upper surface of a chassis
2	Product model, serial number, mileage and production date	
3	Main technical parameters of the product	
4	Product classification	
5	Warning mark	
6	Battery environmental label	
7	Please read the instructions before using this product.	
8	Manufacturer info/address	

1.5.2 Indication and warning Symbols

When using the wheelchair, users should pay attention to the following notes when found symbol pictures in different parts of the wheelchair:



1.6 Delivery

1.6.1 Delivery content

The electric wheelchair is usually assembled accordingly to meet the requirements of the user.

The scope of delivery includes:	
1	• Kmini electric wheelchair
2	• Selected accessories
3	• Charger
4	• Wheelchair instruction manual
5	• Tool kit
6	• Qualified certificate
7	• Packing list

1.6.2 Optional accessories

A variety of accessories can be selected to meet the personalized needs of users. The complete accessories are listed in the packing list.

About use: Please refer to the "Accessories Manual" for details on the use of accessories.

1.6.3 Storage

Charge the battery before storage. If you do not use it for a long time, you should charge it every two months. Avoid storage under freezing and overheating conditions, the suitable storage temperature is $-40^{\circ}\text{C} \sim 65^{\circ}\text{C}$, relative humidity $20\% \leq 90\%$, in non-corrosive gas, well ventilated indoor space.

Caution! Improper operation of long-term storage: Product damages due to improper storage.	
CAUTION	• Rotate the wheels weekly to prevent flat tread. • For long term storage, please ensure that the wheels do not touch the ground directly. • The electric wheelchair should be stored in a dry place, away from damp, corrosive environment, avoid rust of components and damage of electronic components. Please disconnect the main switch of the battery when storing. • Avoid parking outdoors. Direct exposure to sunlight/UV radiation will make the tires age faster. It may cause the tread to harden and the corners to come out of the tread. • When the electric wheelchairs with PU tires are parked for a long time, the tires may become deformed (partially flat). When driving, this deformation will disappear by itself over time.

1.7 Preparations before use

1.7.1 Safety instructions

Warning! Improper handling of packaging materials: Asphyxiation risk due to neglect of supervision.	
 WARNING	• Packaging materials must be kept out of the reach of children. • Packaging materials must not be discarded at will.

Warning! Self-modification settings: Unauthorized modification of product settings may result in users' injuries.	
 WARNING	• Do not modify the product settings set by authorized personnel. • If there is any problem with the setting, please contact after-sale service.

Caution! Screw not tightened: Due to assembly error, it may cause damage, overturn and fall.	
CAUTION	• Retighten the mounting screws and nuts after all adjustments or readjustments authorized by the manufacturer have been completed. (Note the specific torque settings that may be listed)

Caution!

Uncontrolled movement of components during product adjustment: Damage, extrusion and deformation may be caused due to non-compliance with maintenance and repair instructions.

CAUTION

- Make sure that body parts, such as hands or head, are never put in danger areas.
- Complete the adjustment with the assistance of others.

1.7.2 Initial operation

The electric wheelchair is fully assembled and ready to use before delivery from factory, but initial operations may be required before use.

The following initial operations may be required:

1	• Keep the battery switch on.
2	• Controller shutdown status: Adjust pedal length, seat belt length, armrest position, controller position, headrest position, refer to the "use" section for details.
3	• Controller boot status: Adjust backrest angle, footrest angle, controller parameter settings, etc., refer to the "use" section for details.
4	• Place the seat cushion and backrest cushion.
5	• Install optional accessories. (For details of the installation method, please refer to the manual of the optional accessories)
6	• Charge the battery.

Warning!

Improper operation of the product: Extrusion, overturn and collision may be caused by users' errors in operation.



- This product is not suitable for people who lack the ability to judge the driving environment.
- The product can only be used by one person at any time.
- This product is used only for its original design purposes.

1.7.3 Push your electric wheelchair

When there is a failure, the battery is disconnected or not installed, you can turn it off, operate the freewheel mode to the open position, and push the electric wheelchair.

Notice!

Improper operation of the product: Extrusion, overturn and collision may be caused by users' errors in operation.

NOTICE

- Manual mode can only be used in case of wheelchair failure, shutdown or battery depletion.
- When the electric wheelchair is pushed on the slope, the caregiver must provide sufficient braking force.

Warning!

Violation of operation requirements: Extrusion, overturning, collision may be caused by improper operation of the user.

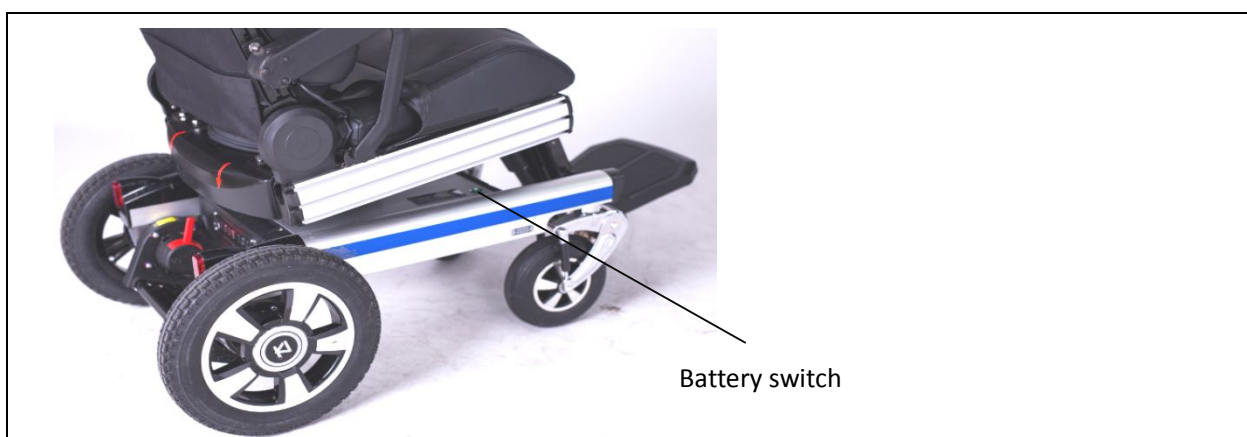


- Do not turn off or de-energize the wheelchair on the ramp or in the case of sliding danger.
- Only authorized personnel trained by the manufacturer can repair the brakes. Unauthorized disassembly and repair are prohibited.
- Check to make sure the brake works properly every time before you drive.
- Make sure the brakes are closed each time when the electric wheelchair is parked.
- When the brakes are opened, the whole wheelchair will lack the braking capacity. The brakes can only be unlocked with the presence of the nursing staff.

1.7.4 Battery switch

When the electric wheelchair is first in use, press the battery switch and the power indicator light will be on. When the electric wheelchair needs to be transported or stored, please turn off the controller, then flip the battery switch, the power indicator will be slowly darken until it is off.

The battery switch is located in the right position of the chassis under the seat.



1.7.5 Armrest position adjustment

The wheelchair is with armrest angle adjustment function and the user can adjust the angle and length of the armrests according to the actual situation (refer to the use adjustment section in 2.3.3).

1.7.6 Controller position adjustment

The controller bracket has the function of angle adjustment. The user can adjust the position of the controller according to the actual situation, to move smoothly in narrow space.(refer to section in 2.3.5 for more details)

1.7.7 Pedal position adjustment

Pedal angle adjustment: refer to Section 2.2.2. Pedal length adjustment: refer to Section 2.3.4.

1.7.8 Seatbelt length adjustment

This electric wheelchair is equipped with safety belt. When used by special groups or in the special circumstances, caregivers are not allowed to leave, and make sure that user fasten the seatbelt correctly.

Warning!

Improper operation of the product: Extrusion, overturn and collision may be caused by users' errors in operation.



- **Seatbelt is an important part of seat safety solution. Do not modify the installation location and basic settings set by authorized personnel.**
- **If there is a problem with these adjustments (such as inappropriate sitting posture), please consult customer service immediately.**
- **If you find signs of discomfort or fear when using this product, please consult customer service immediately.**
- **Check the basic settings of seatbelt on a regular basis. Adjustments may need to be made as a result of user growth or changes in the course of disease treatment.**

1.7.9 Transfer

Transfer refers to the user moving from another location (such as bed, sofa, etc.) to the electric wheelchair or from the electric wheelchair to another location. Transfer requires high level of physical activity. When you can't complete the transfer by yourself, you should do it with the help of others.

To avoid injury, please complete the following operations before transferring:

- (1) **Turn off the controller switch.**
- (2) **Fold back the armrest.**
- (3) **Turn the pedal up.**
- (4) **Minimize the distance between the wheelchair and the position to be transferred (e.g. bed, sofa, etc.) as much as possible.**

Warning!

Improper operation of the product: Extrusion, overturn and collision may be caused by users' errors in operation.



- **When you are practicing transfer by yourself, there must be a caregiver next to you.**
- **Avoid placing your entire body weight on the armrest of the electric wheelchair, which may cause it to roll over or cause personal injury.**
- **The controller and controller bracket of the electric wheelchair are not load-bearing parts. They cannot be used as the stress points when transferring, otherwise these parts will be damaged, resulting in product damage and personal injury.**
- **Do not stand on the pedal in case the electric wheelchair turns over and falls.**

1.8 Product classification

The equipment and its application parts shall be classified with the marks and/or identification marks specified in IEC 60601-1:2015+A1:2012 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance. This includes:

1. Classification by type of protective shock:

The power adapter of the electric wheelchair is the internal powered equipment.

2. Classification according to the degree of protection against electric shock:

Type B application section.

3. According to the protection degree of the liquid intake specified in IEC 60529:1989+A1:1999+A2:2013

Degrees of protection provided by enclosures (IP Code):

IPX4(in accordance with IEC 60601-1:2015+A1:2012 Medical electrical equipment - Part 1: General

requirements for basic safety and essential performance regulations).

4. Classification by degree of safety when using flammable anesthetic gas mixed with air or nitrous oxide:

Don't use the equipment in the presence of flammable anesthetic gas mixed with air or with oxygen or argon oxide.

5. Classification by operation mode:

Continuous operation.

2. Instructions for the use of the electric wheelchair

2.1 Controller

The main functions of the electric wheelchair are controlled by the controller and multi-function panel.

• Display: Display the status, information, menu, etc. of the wheelchair.	
• USB interface: Used for charging mobile electronic devices	
• Joystick: Used to operate driving or select menu.	
• Controller keys: The basic function keys for wheelchair control and parameter adjustment.	
• Multi-function control panel: To achieve special functions of one-key control.	

Notice!

NOTICE	• When operating the joystick, please move it in a gentle way and avoid excessive force, so as not to damage the controller.
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Caution!

CAUTION	• Electromagnetic interference may cause uncontrolled driving. • The risk of falling, toppling and colliding with people or nearby objects should be avoided as far as possible. • Turn off the controller when getting on or off the wheelchair to avoid accidental driving. • Please note that the controller assembly can't bear the full body weight, therefore it is not intended for getting on and off the wheelchair. • If there is a communication problem in the control unit bus system, the system will trigger an emergency stop to prevent any uncontrolled functions. • Please note that after each emergency stop, you must turn on the electric wheelchair control unit again. • If the drive function is still not available after the control unit is turned on again, please activate the push mode by releasing the brakes or contact customer service.
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2.1.1 Controller buttons

• Confirmation button: Used to enter the menu or confirm	 Controller Buttons
• Return button: Short press for return operation; long press 2s under the main interface to trigger SOS.	
• Power button: For on/off. 1. Power on: In the state of power off, press the power button to power on. 2. Power off: long press the power button for 2 seconds to start the shutdown program.	
• Controller buttons: Basic function keys for the wheelchair control and parameter adjustment.	
• Speed increase: 8 gears electronic speed regulation, to increase speed limit.	
• Speed reduction: 8 gears electronic speed regulation, to reduce speed limit.	

2.1.2 Display screen

The display interface of the wheelchair controller includes mode display, speed limit display, power display, loudspeaker status and so on.



Loudspeaker status

Display the working status of the loudspeaker.

When the speaker icon appears on the status bar, the voice is turned on and the system operates normally, there will be a prompt sound(prompt sound is not available in English version)

When there is no speaker icon on the status bar, the voice is off or semi-on.

•Voice off: Turn off all sounds except horn and SOS.	 Voice on
• Voice semi on: Turn on status prompt sound, fault prompt sound, turn off operation sound.	 Voice off or semi on

The speed limit display

The speed limit pointer indicates the maximum speed gear of the current wheelchair.

The wheelchairs have nine gears: 0-8. The higher the gear is, the faster the maximum speed that wheelchair can achieve. The lowest position on the left is 0, when the speed limit pointer is in this position, you will not be able to drive the wheelchair. The lowest position on the right is 8, and when the speed limit pointer is in this position, you can drive the wheelchair to its maximum speed.

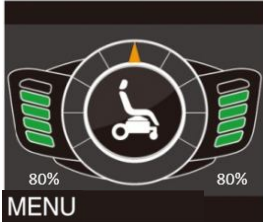
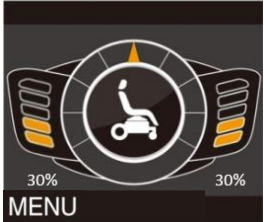
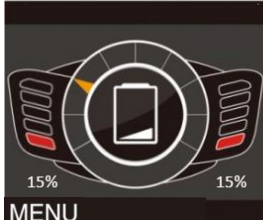
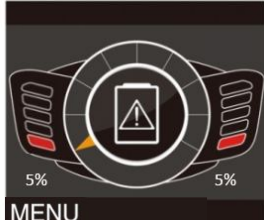
The maximum speed gear can be adjusted by the speed increase / speed reduction button.

Notice!	
NOTICE	• Under certain function mode, the system will limit the maximum speed gear. • Check to ensure that the brakes work properly every time before you drive. • Ensure that the product and its safety functions are in a safe and normal state before each use.

Battery power display

Display the percentage of remaining power in order to give you an idea of the remaining amount of battery power. Similar to the car's fuel meter, it is not completely accurate, but it helps you avoid running out of battery power.

This wheelchair standard pack is equipped with 1 pc battery, the battery display for standard pack only shows one side battery power, the other side of the remaining power will be displayed 0% and the icon is gray.

• When the power is between 50% and 100%, the bar is green.	 80% 80% MENU 50%~100%	 30% 30% MENU 20%~50%
• When the power is between 20% and 50%, the bar is yellow, indicating that the power consumption is more than half.		
• When the power is between 10% and 20%, the bar is red and the center icon shows that the power is too low.	 15% 15% MENU 10%~20%	 5% 5% MENU ≤10%
• When the power is less than 10%, the bar is red and not allowed to move. The center icon shows that the battery has run out, and automatically powered off after a few minutes.		

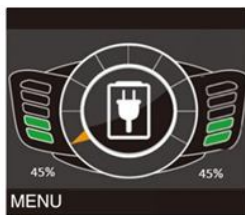
Warning!



- If the battery power is in a red state, it is strictly prohibited to use the electric driving function. You can turn the wheelchair off to push it manually and charge it as soon as possible. Failure to comply with this condition may expose the user to unsafe conditions, such as road center, ramps, etc. The manufacturer shall not be liable for any loss resulting from failure to comply with this condition.

Charging tips

Color LCD screen is used to display the current charging status. When the charger is plugged in for charging, the LCD screen displays a charging sign and a voice prompt "connected", at the same time, the electric wheelchair is forbidden to drive. Unplug the charger there is voice prompt "disconnected".(No voice prompt for English version)



Charger Connection

NOTICE!

Charging Mistake: Due to the improper operation, charging is not completed or charging is not full.



- This charger is not a onboard charger, only for indoor use!

Fault display

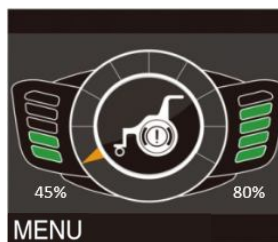
According to the self-check of the controller and the rest of the electric control system of the electric wheelchair, the problem will be prompted when the fault occurs, and the fault code will be displayed on the upper left corner of the LCD screen. Here are some common failure icons:

• Left wheel fault:
Unable to communicate with driver, or left motor malfunction.

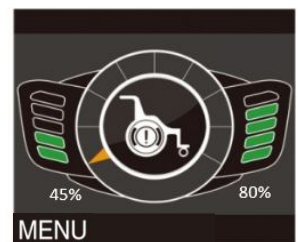
• Right wheel fault:
Unable to communicate with driver, or right motor malfunction.

• Joystick fault:
The joystick is in an abnormal state.

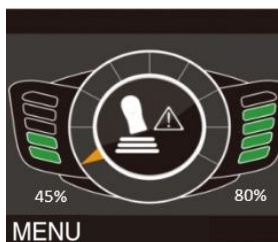
• Other faults:
This icon indicates abnormal communication or failure of seat drive or chassis drive.



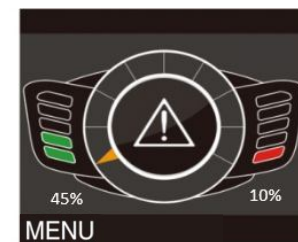
Left wheel fault



Right wheel fault



Joystick fault



Other faults

Warning!



WARNING

- If any failure, defect or other danger that may cause personal injury is detected, the wheelchair must be stopped using immediately.
- If uncontrolled movement of the wheelchair occurs due to failure, please contact customer service.
- When the joystick fault appears, it shall first confirm whether the joystick is in the middle when starting up. If not, fault can be cleared after returning the joystick to the middle; If the joystick is in the middle when starting up, please do not operate the wheelchair, turn off the wheelchair and stop using, contact customer service immediately.
- The malfunction damages one or more functions of the electric wheelchair. Before the fault is solved, the electric wheelchair and its function can't be fully operated.
- The electric wheelchair can only be repaired by the authorized personnel trained by the manufacturer. The function and operation safety of the electric wheelchair must be verified on a regular basis.
- Avoid product damage due to improper maintenance.

Setting the menu

Press "confirm" from the main interface to enter the setting interface, under which the electric wheelchair can be simply set. The corresponding setting options can be selected by moving the joystick up and down, and the selected options can be configured by moving the joystick left and right. After the configuration is completed, press "confirm" to make the configuration effective.

• Language settings:

When selecting the "language settings" option, you can select the menu language by swiping the joystick left and right. Currently, the supported languages are simplified Chinese and English.

•Voice Settings:

When selecting the "voice settings" option, you can select whether or not to turn on the voice prompt by swiping the joystick left and right. There are three options for voice settings: on, half-on, and off.

On: Turn on all voice prompts.

Semi-on: Turn off button and joystick operation voice.

Off: Turn off all voice prompts except loudspeakers and SOS.

• Sport Mode: This function is to adjust the motion control curve of the wheelchair.

When the Sport Mode option is selected, you can select your preferred driving mode by swiping the joystick left and right.

Currently there are three modes to choose from: soft(SOF), normal(NOR), power(POW).

Soft Mode: The movement of the wheelchair is gentle.

Normal Mode: The wheelchair move response is between soft and strong modes, which suits most people's driving

Language	EN
Sound	ON
SportMode	NOR
Backlight	BRI
Connect	EVE
OK	BACK

Sound	ON
SportMode	NOR
Backlight	BRI
Connect	EVE
About	>>
OK	BACK

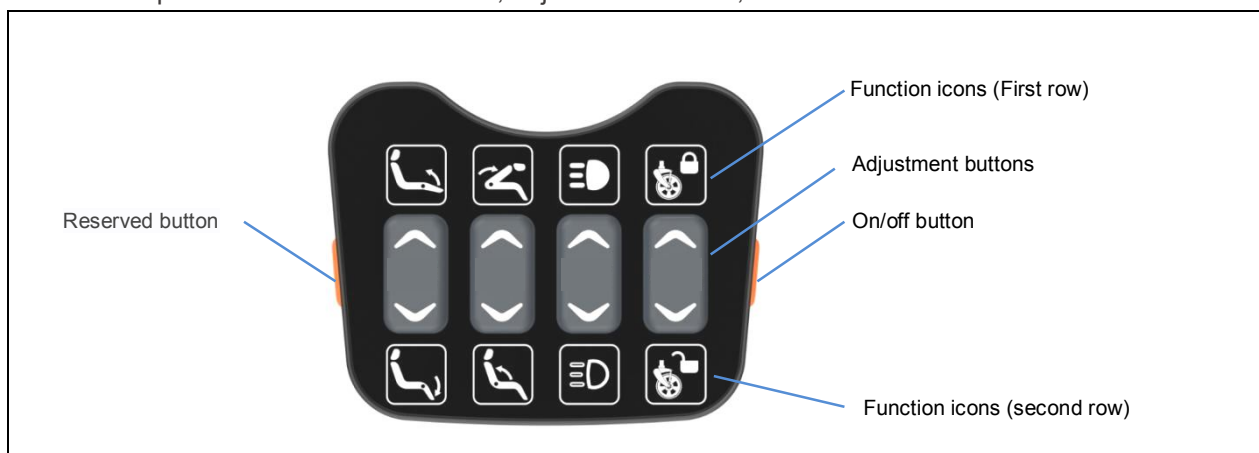
Setting the menu

preferences. Power Mode: The wheelchair move response is more rapid.	
•Backlight brightness: This function is to adjust the backlight brightness of LCD screen. There are three options: glow(GLO), soft(SOF) and bright(BRI).	
• Connection confirmation: This is used to set the connection mode between controller and auxiliary controller. There are two modes: single time and every time connection. Single time: When the auxiliary controller is connected for the first time, the controller needs to confirm whether it is connected or not. After the connection is successful, the connection confirmation can be avoided next time. Every time: Each time, auxiliary controller connection needs to be confirmed on the controller.	
•About: When the "about" option is selected, you can view the controller serial number, registration information and current version by moving the joystick to the right.	

2.1.3 Multi-function control panel

The multi-function control panel (hereinafter referred to as the control panel) is used to complete the one-key control of special functions. Special functions include: pedal adjustment , backrest adjustment, front Led lights on/off control and caster safety lock/unlock control.

The control panel includes function icons, adjustment buttons, on/off button and reserved button.



On/Off Button

On/off button can control panel on or off. When the control panel is off, the wheelchair can be maintained in the current state and prevent misoperation; when the wheelchair needs to be adjusted, the control panel can be active again by on/off button.

Notice!	
NOTICE	• When adjustment is not required, keep the on/off button in off status to avoid misoperation.

Function Icons

There are 8 functional icons, corresponding to 4 special functions. For details, please refer to "2.2 Function operation". It can adjust the corresponding function by operating the relevant buttons and the function icon can be lit up accordingly.

Adjustment buttons

The adjustment buttons are used for variable adjustment of the corresponding functions, and its operation can be divided into dotted trigger type and self-locking type.

Dotted trigger type means that when the button is pressed, start to perform the action, and when the it is released, stop the action. It mainly includes pedal adjustment and backrest adjustment.

The self-locking refers to turn on the function after pressing the up button, and the function is off after pressing down again, including front led lights on/off and casters safety lock/unlock control.

Notice!	
NOTICE	•The maximum locking time of caster safety lock is 10 min. If the duration is longer than 10 min, it will be unlocked automatically.

2.2 Functional operation introduction

Before using the electric wheelchair, the following steps are required:

1. Check that all parts have been adjusted to the proper position and that the electrical connection is good;
2. Press the controller power switch to make the controller screen lit up;
3. The controller starts the self-test program;
4. The self-test program passes and enters the user interface (main interface).

Notice!	
NOTICE	• During the startup process, the controller will conduct self-check; Please do not operate buttons and joystick during this period. • Please operate the multi-function panel while the wheelchair is in static status. • For the first time, it is recommended to drive in soft mode at a low speed (adjust the speed below 4 gears) to avoid accidents due to unfamiliar operation.

2.2.1 Drive function

The speed and direction of the wheelchair are controlled by the joystick.

• To move forward, push the joystick straight ahead.	
•To reverse, push the joystick straight backward.	
• To turn left, push the joystick left.	
• To turn right, push the joystick right.	
•The bigger angle you push the joystick, the faster the wheelchair drives.	
•Under the main interface, press the "speed plus" to increase the speed limit, press "speed minus" to reduce the speed limit.	

Warning!



- In the power mode, the left and right handles of free wheel device should be in drive mode before driving the wheelchair. Otherwise, the display will prompt "40, 400, 440" code in the upper left corner of the display, and the wheelchair cannot move.
- When the free wheel device is not working, the whole wheelchair will lack the braking capacity. The free wheel device can only be unlocked with the presence of the nursing staff.
- If the user is unable to release the brake by himself, the operator may assist in relieving the brake.
- When the wheelchair is moving on the slope, make sure the free wheel device is working properly and that a caregiver is present.
- Make sure the free wheel device should be in drive mode when the electric wheelchair is parked.
- Only authorized personnel trained by the manufacturer can repair and adjust the brake. The wrong setting may cause the braking capacity to decline.

2.2.2 Pedal adjustment function

Adjust the angle between the footrest and the seat surface.

• Step 1 Turn on the control panel
Click on/off button to turn on the control panel. If the control panel is on, ignore this step.

• Step 2 Function selection
Find pedal adjustment icon.



• Step 3 Function adjustment
Long press  button, pedal up icon is lit up from blue to white, pedal is lifted up slowly;
Long press  button, pedal down icon is lit up from blue to white, pedal is put down slowly.

• Step 4 Shut down the control panel
If no other functional adjustments are required, shut down the control panel to prevent misoperation.

Pedal up icon

Function buttons

Pedal down icon



Pedal put down



Pedal lift up

Warning!



WARNING

- When driving in the rear drive mode (casters in front), the pedal must be lifted up to avoid interference with casters during turning.
- When flipping the pedal up or down, make sure the limbs are not in the danger zone to avoid the risk of entrapment.
- When the pedal is lifted up, it can not bear the whole body weight. The user can not stand on the pedal directly.

Notice!

NOTICE

- The pedal can be flipped up to facilitate the user to get on and off the wheelchair in front.
- The pedal length can be adjusted adaptively.

2.2.3 Backrest adjustment function

Adjust the angle between the backrest and the seat surface ,so that the user can find a more comfortable angle.

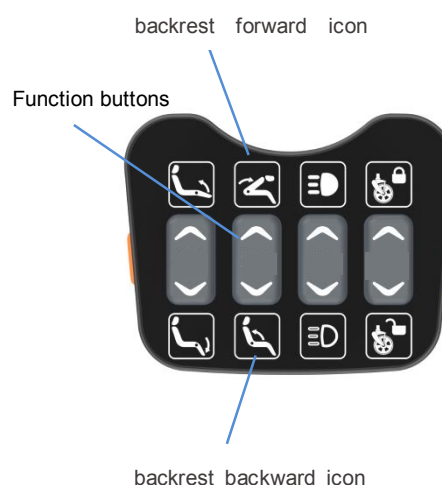
- Step 1 Turn on the control panel
Click on/off button to turn on the control panel. If the control panel is on, ignore this step.

- Step 2 Function selection
Find backrest adjustment icon.



- Step 3 Function adjustment
Long press  button, backrest forward icon is lit up from blue to white, adjust backrest forward;
Long press  button, backrest backward icon is lit up from blue to white, adjust backrest backward.

- Step 4 Shut down the control panel
If no other functional adjustments are required, shut down the control panel to prevent misoperation.



Backrest forward



Backrest backward

Notice!

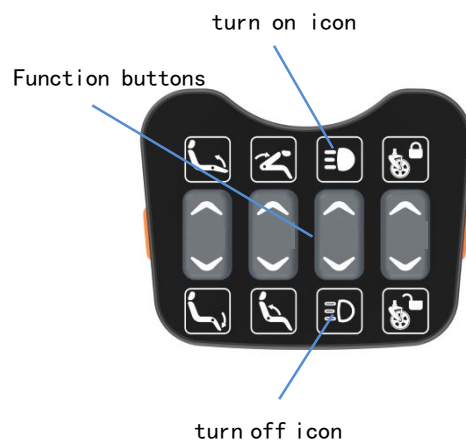
NOTICE

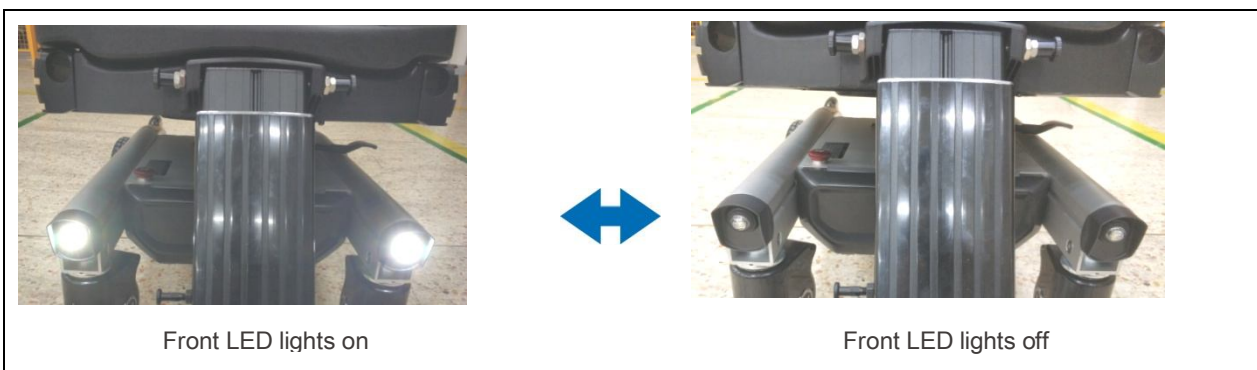
- When the backrest is adjusted to the maximum angle, the user may not be able to get up if he or she weighs more.
- When adjusting the backrest forward or backward, make sure the limbs are not in the danger area to avoid the risk of entrapment injury, and release the key in time after reaching the limited position.
- There will be some certain friction with the body when using power backrest adjustment, at this time, the sitting posture can be adjusted to relieve the friction.
- The backrest can be adjusted forward to the lowest position for folding purpose, which is convenient for transportation. (It needs to remove seat cushion and backrest cushion, and adjust the armrest to the lowest angle for folding, refer to Section 3.15.1 for more details).
- The adjustment process needs to ensure that the armrests are stuck in the gear position to prevent damage.
- Do not adjust the backrest frequently to avoid motor overheat protection. If the controller is reported to the backrest adjustment limit, actually there is still space to adjust for backrest, please adjust the backrest after a few minutes later. (Suggested no more than 2 times backward and forward for each adjustment)

2.2.4 Front LED lights

Front LED lights are used to provide lighting when driving in dark environments.

- Step 1 Turn on the control panel
Click on/off button to turn on the control panel. If the control panel is on, ignore this step.
- Step 2 Function selection
Find Led lights function icon.
- Step 3 Function adjustment
Press  button, led light icon is lit up in white, the front led lights are on;
Press  button, led light icon goes out, the front led lights are off;
- Step 4 Shut down the control panel
If no other functional adjustments are required, shut down the control panel to prevent misoperation.





2.2.5 Caster safety lock function

By locking the casters, the casters are free to swing with the wheelchair at a small angle. It can keep the wheelchair driving in the stable direction in the sand, bumps, slopes and other complex road conditions. In the case of crossing barrier and gaps, it can avoid the casters stuck or fall into the gaps. It enhances the safety of driving through the complex traffic conditions. This function is only available on outdoor models.

• Step 1 Turn on the control panel Click on/off button to turn on the control panel. If the control panel is on, ignore this step.	
• Step 2 Function selection Find safety lock adjustment icon.	
• Step 3 Function adjustment Method 1: Press button, safety lock icon is lit up in white, casters are locked; Press button, safety lock icon goes out, casters are unlocked. Method 2: Click the button on the joystick once to lock the casters; Press again to unlock the casters.	
• Step 4 Shut down the control panel If no other functional adjustments are required, shut down the control panel to prevent misoperation.	

Notice!	
NOTICE	• The safety lock will disable the turning function. If you need to turn, please unlock the safety lock in advance. • The safety lock function will disable the turning function. Do not active the safety lock function during driving at the speed over 4 gear. • When you unlock the casters safety lock, there is a certain probability of failure to turn, please drive straight for a distance of wheelchair length or swing the joystick from right to left for 2 seconds to unlock. The maximum lock time of safety lock is 10min. If the time duration is longer than 10min, the safety lock function will be unlocked automatically.

2.2.6 Manual seat rotation function

The front drive mode and rear drive mode can be switched by seat operation. Pull the rotation handle up, the seat can be rotated 180° after being unlock. When the seat rotates 180°, the wheelchair is changed into front drive mode. (Front drive mode has a stronger ability to cross barriers)

- Step 1

Raise the footrest to the highest position to avoid interference between footrest and chassis parts during rotation.

- Step 2

Pull the rotation handle upward to unlock.

- Step 3

Method 1:

Rotate the seat with the help of external force. Release the rotation handle after the seat is turned away from the original position. Continue to rotate the seat to the locked position.

Method 2:

When the drive wheel is at the back of your body, push the joystick backward, and release the rotation handle after the seat is turned away from the original position. However, during this process, the joystick remains backward until the seat is turned to the locked position.

When the drive wheel is in front of your body, push the joystick forward and release the rotation handle after the seat is turned away from the original position, but keep the joystick forward until the seat is turned to the locked position.

When using Method 2, if the rotation doesn't succeed, please continue to complete the rotation with the help of external force.

Method 2 is with certain skills, needs to practice more times to operate successfully.



Rotation handle



Seat rotation 180°



Rear drive mode



Front drive mode

Warning!

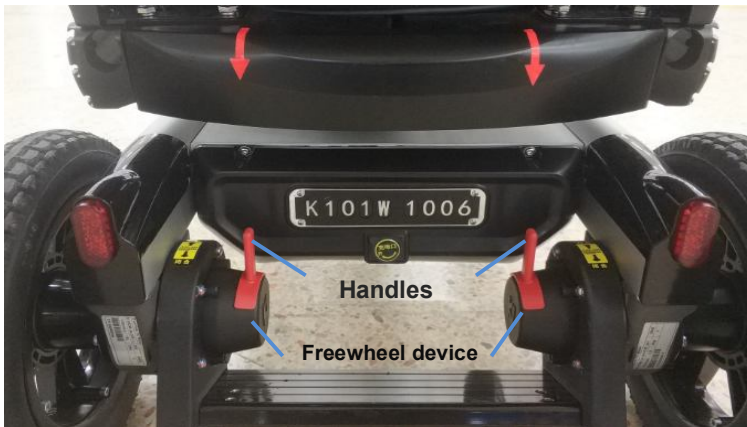


- Please do not use rotation function on slopes.
- Please do not use rotation function when the footrest hasn't been raised to the highest position.
- Do not shake the seat violently or move the body out of the wheelchair when the seat is being rotation.
- When rotating, make sure there are no obstacles around the wheelchair that affect the rotation.
- It is forbidden to force the body parts such as hands, feet or other objects into the protective cover, so as to avoid the entrapment injuries and damages to the wheelchair.

2.3 Adjustment during use

2.3.1 Freewheel device

Freewheel device is the safety component of the power-off braking system of the electric wheelchair.



Freewheel warning mark

Instructions

- When the wheelchair is power on, the handles of both the left and right brakes should be in the Drive mode position, then the wheelchair can be driven; Otherwise, the voice will prompt "abnormal brake"(for English menu, there is no voice prompt, but wheelchair fault will be shown on the screen) , and the wheelchair can't be driven.
- In the power mode, whether the handles of the free wheel device are in the position of free wheel mode or drive mode, the free wheel device will always be in the braking state (it cannot be pushed manually).
- After normal driving and shutdown, the free wheel device handle is in drive mode, and the free wheel device is in the braking state.
- After the wheelchair is turned off or powered off, it will enter manual mode. Push the free wheel device handles to the position of free wheel mode, and then the wheelchair can be directly pushed. Push the free wheel device handles to drive mode, and the free wheel device will brake, so that the wheelchair cannot be pushed.

Notice!

NOTICE

- Manual mode can only be used in case of wheelchair failure, shutdown or battery depletion.
- If the user is unable to operate the free wheel device handles by himself, it can be done with the help of a caregiver.
- When the electric wheelchair is pushed on the slopes, the caregiver must provide sufficient braking force.

Warning!



WARNING

- Do not power off the wheelchair or turn off the battery switch on the ramp or on the condition of sliding danger.
- Only authorized personnel trained by the manufacturer can repair the brakes. Unauthorized disassembly and repair are prohibited.
- Check to make sure the left and right handles of free wheel device should be in drive mode before driving the wheelchair.
- When the free wheel device is not working, the whole wheelchair will lack the braking capacity. The free wheel device can only be unlocked with the presence of the nursing staff.

2.3.2 Push your electric wheelchair

When there is a failure, the battery is disconnected or the battery is not installed, you can turn it off, operate the brake handles to the Freewheel mode position, and push the electric wheelchair.

Notice!

NOTICE

- Manual mode can only be used in case of wheelchair failure, shutdown or battery depletion.
- When the electric wheelchair is pushed on a slope, the caregiver must provide the required braking force.

Warning!



WARNING

- Do not power off the wheelchair or turn off the battery switch on the ramp or on the condition of sliding danger.
- Only authorized personnel trained by the manufacturer can repair the brakes. Unauthorized disassembly and repair are prohibited.
- Check to make sure the left and right handles of free wheel device should be in drive mode before driving the wheelchair.
- When the free wheel device is not working, the whole wheelchair will lack the braking capacity. The free wheel device can only be unlocked with the presence of the nursing staff.

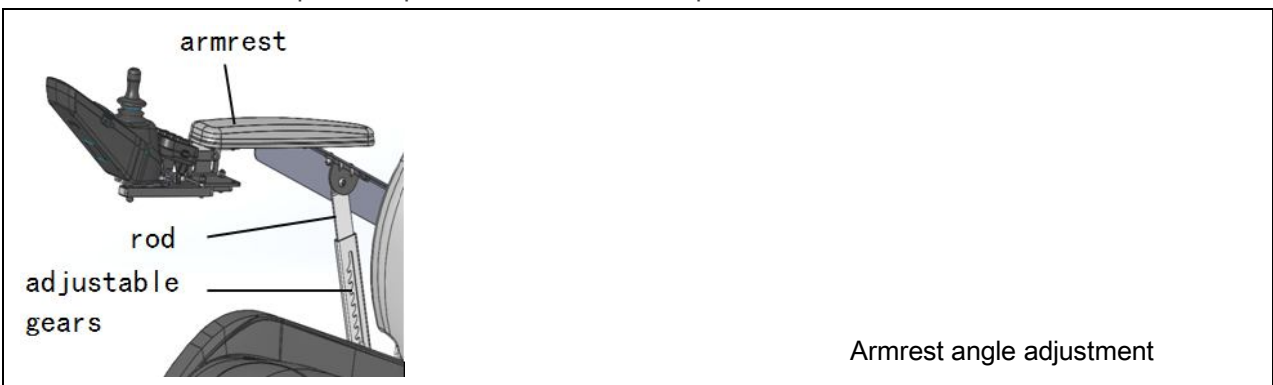
2.3.3 Armrest position adjustment

Armrest angle is adjustable; user can adjust the angle and length of armrests according to the actual situation.

Armrest angle adjustment

There are several gears for armrest angles adjustment.

- ①Adjust the backrest Angle to more than 90° to ensure that the tie rod can be adjusted to the highest point;
- ②When you need to get on and off from the side, just pull up the handrail;
- ③When putting down the armrest at the top, the armrest will automatically fall into the lowest gear. If the user needs to change to the high-grade position, he/she only needs to pull up the armrest with his/her hand to fall into the gear from the lowest to the highest.
- ④To return to the lower position, pull the handrail to the top and then lower it.



Armrest length adjustment

The length of the armrest is adjustable with multiple gears. When the length needs to be adjusted, pull up the armrests to make sure the bottom of the armrests can be observed. Take out the tool kit in the packing of the wheelchair, select the appropriate wrench, unscrew the 4 screws shown in the picture, adjust to the appropriate length and tighten the screws.



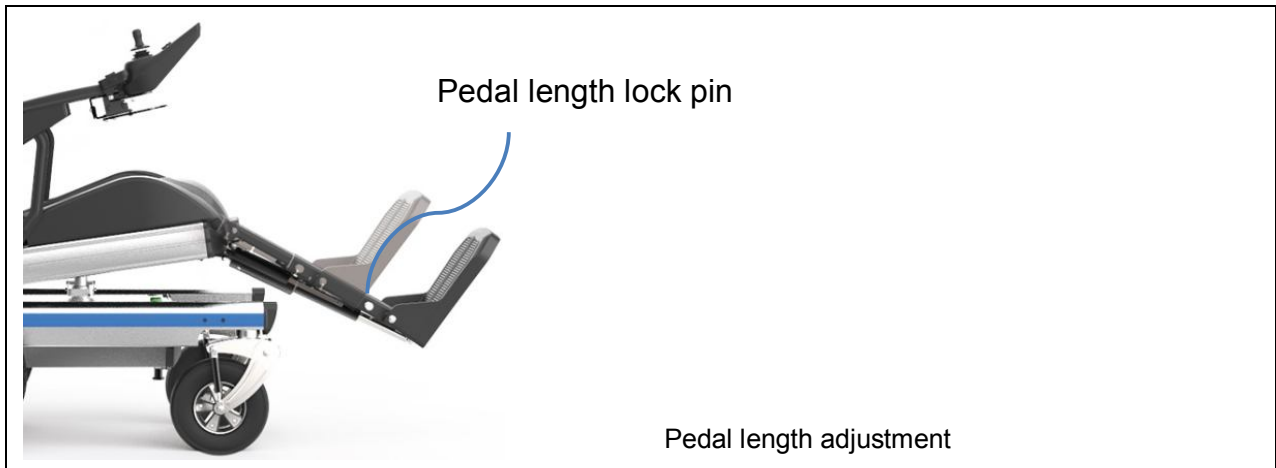
Notice!

NOTICE

- After adjusting the angle of the armrest, make sure that the armrest supporting plate falls into the gear.
- Armrests only provide necessary support for the user's arms and controller. It is forbidden to sit on the armrests.
- After adjusting the length of the handrail, the screws should be tightened to prevent them from falling off during use.

2.3.4 Pedal length adjustment

Pull the pedal length lock pin outward, at this time the length of the pedal can be adjusted. Users of different heights can reset the pedal lock pin to lock the length of the pedal after adjusting to a comfortable position.

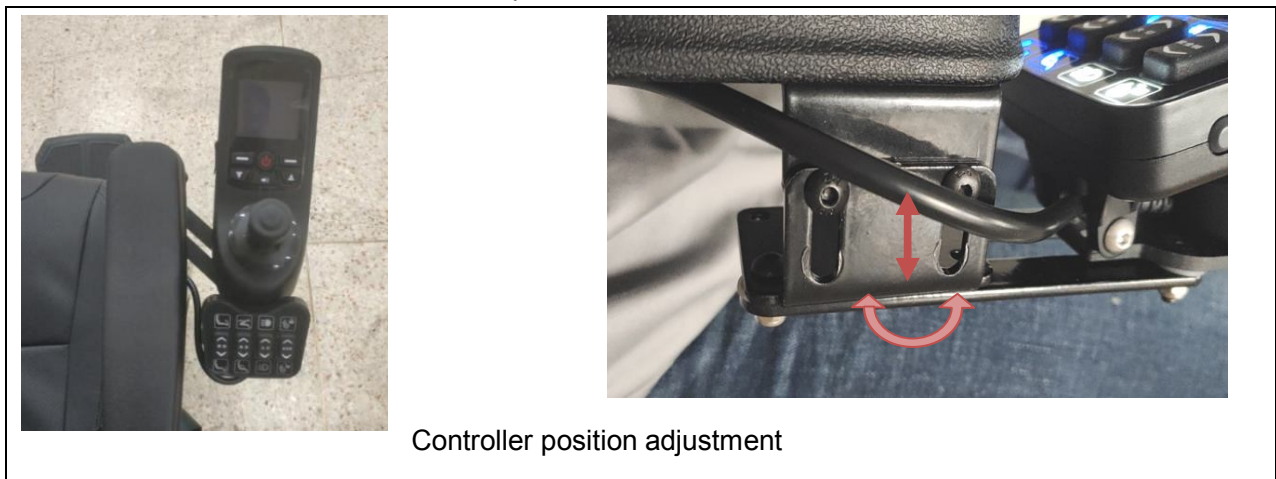


2.3.5 Controller position adjustment

The controller bracket is swing away style, the user can adjust the position of the controller according to the actual situation, make it possible to move in the narrow space.

The controller is installed on the right armrest by default and can be swing to the left. It can be installed on the left armrest or adjusted to swing to right according to user's requirement.

The angle and height of the controller bracket is adjustable. The user can adjust the position of the controller with tool kit to reach the most comfortable position.



2.3.6 Headrest adjustment

Users can adjust the height and tilt angle of the headrest to the comfortable position according to different height or requirements.

There are multiple adjustment joints on the headrest. First, you need to install the headrest into the backrest slot by "Z" hand screws (This step can be ignored if the headrest has been installed already). At this time, you can adjust the left and right positions and the height of the headrest, and then adjust the tilt and front and back angles of the headrest by "7" hand screws.



Notice!	
NOTICE	• When the handle of the "7" hand screw cannot rotate due to block, just press the red button to turn the handle to the proper position and continue to rotate.

2.3.7 Speed adjustment

The triangle buttons in front of the left and right of the joystick is the speed control button (8 gears). The user can adjust and determine the speed limit according to their own conditions.

The bigger angle the joystick is pulled, the faster the speed is (in the current speed limit) and vice versa. Brakes are active when the joystick returns to the middle position.

Notice!	
NOTICE	• First, practice using the wheelchair on the horizontal and open ground. • Beginners should always drive at a low speed. • Keep low speed while turning. • Uncontrolled driving may occur on the uneven ground. Therefore, the speed must always be adjusted according to the ground conditions. • Backward driving should be limited to maneuvering or short distances on the flat ground. • If uncontrolled movement of the wheelchair occurs due to failure, please contact customer service.

2.3.8 Battery charging

High-performance lithium battery is used in the wheelchair. The battery charging port of the wheelchair is in the middle position of the rear part of the wheelchair. Plug in the charger to charge.

When charging, connect the charger to charging port first, then connect the charger input plug to the household 220V power supply. To ensure sufficient charging, please turn off the main battery switch when charging. When the charger light turns green from red, the battery is almost full. After the display shows fully charged, it can continue floating charging for 1-2 hours.(For more details, please refer to charger manual)



Charging port

Notice!

NOTICE

- The charger for the wheelchair is automatic, so it will stop automatically when battery is fully charged.
- Charging should be avoided as far as possible in direct sunlight or high temperature environment.
- If the battery is unusually hot, stop charging immediately and contact customer service.
- No matter how much power is left, it is recommended to charge after each use.
- During charging, the charger may stop charging due to the influence of power grid fluctuation and static electricity. After the power grid returns to normal or static electricity is eliminated, the charger will resume charging automatically.
- Battery charger is only used within specified temperature and humidity limits.
- Avoid battery deep discharge. The manufacturer shall not be liable for damages caused by deep discharge.
- If the electric wheelchair is not in use for a long time, please charge the battery once a week.
- Place the battery and charger on a horizontal surface.

Warning!



- Paste the above warning slogan around the charging port to remind users to use the charging port correctly. Cover the waterproof cover timely after charging to prevent water from causing the charging port unable to use normally.
- It is strictly forbidden to short circuit the charging port / battery positive and negative electrodes.
- Do not switch to other batteries, it must use the battery provided by the manufacturer. The battery of the electric wheelchair should not be used for other purposes.
- When the battery is charged, pay attention to heat dissipation, please stay away from children and flammable and explosive items.
- Please use the special charger for the electric wheelchair to charge, and do not use other chargers.
- Please carefully check the charger cable and connector whether there is any damage before each use.
- Please do not disassemble the charger, if the charger does not work, please contact customer service.
- The charger should not be used outdoor, only for indoor use. Children should be supervised to ensure that they do not play with the charger.
- It is strictly prohibited to use the charger in inflammable and explosive environment with poor ventilation, high temperature and high humidity.
- It is forbidden to use the electric wheelchair while charging.
- If the battery is found to be hot, smelly, discolored, deformed or otherwise abnormal during charging or storage, it should not be used.
- It is strictly forbidden to disassemble the battery privately, replace the battery or modify the installation location of the battery can only be carried out by authorized personnel trained by the manufacturer.
- Avoid dust, dirt and moisture.

3. Safety and precautions for use

3.1 Loading capacity limit

The maximum load bearing capacity of this electric wheelchair is 100KG.

Notice!

NOTICE

- The electric wheelchair has the maximum load-bearing capacity, and if the load capacity is exceeded, it may cause injury or property loss to the user, In this case, the manufacturer shall not assume any liability.
- The wheelchair can only be used by trained users.
- Note that some options and add-ons will change the load capacity of the wheelchair.

Warning!



- The electric wheelchair is for one person use only at any time.
- This wheelchair is used for its original design only.

3.2 Tires

The tires of the electric wheelchair are non pneumatic, and there is no risk of tire explosion, but if any foreign body penetrated into the tires, we suggest you clean it in time, so as not to affect the stability and safety of driving.

Caution!	
CAUTION	• The initial use of the non-pneumatic rubber wheels is slightly non-round, and the left and right jolts are normal. After driving for 1 to 2 hours, the wheelchair will be able to run smoothly. • Make sure the tires have adequate tread depth. When the tread depth is less than 1 mm, the tire must be replaced. • Tires should be replaced regularly, regardless of tire wear. • If the electric wheelchair has not been moved for several days, the surface in contact with the wheel may have a permanent color change. Therefore, appropriate mats should be used for long periods of parking.

3.3 Slopes

Slopes are common road conditions, so when driving the electric wheelchair, be skilled and comply with the following rules:

- (1) It is suggested that the maximum slope for the electric wheelchair driving is 9 ° for outdoor models and 3° for indoor models.
- (2) Be sure to check the drive mode when driving uphill and downhill, only front drive mode is allowed for downhill (drive wheel in front), only rear drive mode is allowed for uphill (drive wheel in back).
- (3) Users must identify the risks of the slopes in advance when driving uphill and downhill, and raise the pedal height to avoid collision.
- (4) When driving on the slopes, the braking distance is larger than the horizontal road surface. Please pay attention and be especially careful.
- (5) Avoid turning on large slopes.
- (6) Avoid emergency stopping or starting on slopes.
- (7) When driving uphill, please keep the electric wheelchair moving forward at a uniform speed. If you must stop, please start slowly again and then accelerate carefully.
- (8) When driving downhill, slow down the electric wheelchair and keep it straight ahead to avoid sharp turns. If you feel that the downward speed is faster than expected, slow down to ensure a safe and controlled downhill.
- (9) When the electric wheelchair is turned off, do not park it on the slope (no matter how steep the slope is).
- (10) When driving the wheelchair uphill or downhill, do not drive in the "Z" shape or oblique direction. The electric wheelchair must drive in a straight line uphill and downhill, so as to avoid the wheelchair overturning or falling to a great extent. Drive with extreme caution when driving on a slope.
- (11) It is important to avoid driving on slopes where slopes are covered with snow, ice, frost, deciduous or muddy, in which case the electric wheelchair may slip and cause accidents.
- (12) Please don't drive backwards on the slope. This may cause the electric wheelchair to turn over.

Caution!	
CAUTION	• First of all, make sure that your electric wheelchair power is not less than 50%, and the communication connections of all lines are normal. Do not turn off the power while driving on the slopes • When your wheelchair climbs more than 9° on slopes, the risk of injury increases! • To safely drive uphill or downhill, the speed must be reduced according to the slope (for example, select speed gear 1). • It is necessary to ensure that the controller and motor are not overloaded. Therefore, the continuous climbing ability depends on the overall weight (wheelchair weight, user's weight and payload) as well as the user's ground conditions, external temperature, battery voltage and driving style. In some cases, the ability to climb continuously can be significantly lower than the specified value.

3.4 Turn

When turning, you should pay attention to the turning speed, turning angle, road condition and other information to prevent the wheelchair from tilting. Situations that may cause the wheelchair turning to overturn include, but are not limited to:

excessive turning speed, excessive turning angle, uneven road surface, inclined road surface, stepped pavement (such as higher than the next roadbed, sidewalk edge steps), and other sudden road changes, etc.

Warning!	
	• Don't turn at high speed. When you need to urgent turn, slow down and stabilize the center of gravity. • Do not shake your seat or move your body out of the wheelchair while turning. • Do not turn on very smooth surfaces (such as icy surfaces) or very rough surfaces (such as gravel). • Fasten your seat belt before turning. • Check to ensure that the brakes work properly every time before you drive.

3.5 Public place

Please obey the local traffic regulations.

Please do not drive the electric wheelchair in the middle of roads. When you drive in the middle of highway or city road, it may cause traffic jams and threaten personal safety.

Caution!	
CAUTION	• When using elevators or lift platform, make sure to turn off the electric wheelchair control unit. • Make sure the brakes are in the Drive mode. • Use only approved public transport that can transport the electric wheelchair. • When taking public transport, make sure you are firmly positioned. To do this, use the wheelchair area, wheelchair bracket and constraint system provided. Turn off the electric wheelchair before the vehicle starts moving.

Warning!

- Please fasten your seat belt on the public transportation.
- Wear bright colors or reflective clothing.

3.6 Outdoor driving

The outdoor drive of the electric wheelchair is suitable for hard and flat cement pavement, asphalt pavement.

- (1) Avoid uneven or too soft road surfaces.
- (2) Avoid driving on very deep lawns in case the wheels of the wheelchair caught by the grass.
- (3) Avoid driving on roads with scattered gravel.
- (4) Do not drive the electric wheelchair wading into water and avoid water ditches, puddles and unknown wading areas.
- (5) Do not drive the electric wheelchair too close to the rivers, lakes, beaches or other dangerous terrain (such as uncapped drains). Should avoid accidents caused by carelessness.
- (6) If you are not sure whether the road ahead is suitable for the electric wheelchair, then please do not drive.

Warning!

- You must slow down in the danger zone (For example, select speed gear 1).
- Avoid typical dangerous areas for outdoor driving include:
Narrow paths along waterways/slopes/cliffs (e.g., pier walls, dykes, etc.);
A narrow room or area;
A steep downhill (e.g. in a mountain area, facing a street);
Unpaved areas (e.g. on construction sites, intersections, train crossings);
An area covered with snow or ice.

3.7 Precautions against bad weather

- (1) In any event, in case of inclement weather, please avoid placing or using the electric wheelchair outdoors. If there is a sudden rain, snow, cold, heat and other bad weather when driving, please try to park your wheelchair in a place where there is a shelter.
- (2) Before storing, charging and driving, make sure that all parts of the electric wheelchair are dry.

Warning!

- Do not drive the electric wheelchair in rainy, snowy or foggy weather or on the smooth ground with ice or frost on the surface. Please place the electric wheelchair in a dry and clean place.
- Exposure to hot or cold weather for a long time may affect the surface characteristics of seat cushions and armrests of the wheelchair, and it may lead to skin allergy.
- When driving in hot, cold and sun-exposed weather, please drive the electric wheelchair carefully to avoid fatigue.

3.8 Obstacles

When encountering roadbed, steps, ridges and other obstacles, please drive carefully and make sure that the electric wheelchair is facing the obstacle vertically. Of course, it's the best choice if you can avoid these obstacles.

Methods of successfully crossing obstacles (obstacles under standard requirements):

- (1) Make sure the electric wheelchair is facing in a vertical way towards steps or obstacles.
- (2) Increase the speed appropriately before the front wheels contact the steps or obstacles.
- (3) Only after the rear wheels of the electric wheelchair pass the obstacles, it can drive normally.
- (4) If you are unable to determine whether you can cross the obstacle smoothly, please push the wheelchair through.

Warning!



- Avoid falling down from the steps.
- Do not lean against the wheelchair when crossing obstacles.
- Always approach the obstacle from the front vertically(ensure that the casters are in line with the obstacle).
- Always slow down to cross obstacles (for example, select speed gear 1).

3.9 Seat belt

The electric wheelchair is equipped with seat belt. When the wheelchair is used by special groups or under special circumstances, caregivers are not allowed to leave, and make sure that users fasten their seat belts correctly.

Warning!



- Seat belt is an important part of seat safety solutions. Do not modify the installation location and basic settings set by authorized personnel.
- If there is any problem with these adjustments (such as improper posture), contact customer service immediately.
- If you find signs of discomfort or fear when using this product, please consult customer service immediately.
- Check the basic seat-belt settings regularly. Adjustments may need to be made as a result of user growth or changes in the course of disease treatment.

3.10 Modification

It is strictly forbidden to modify any part of the electric wheelchair.

Warning!



- The manufacturer shall not be liable for any loss caused by unauthorized modification or alteration of the electric wheelchair.

3.11 Sitting posture

Please try not to sit sideways, recline or lean on one side of the electric wheelchair, and put your hands on the armrest and your feet on the pedals. If you can't sit in a normal position, please maintain a stable center of gravity.

Warning!



- When driving the electric wheelchair, don't reach for things, such as bending over to pick up things on the floor or reaching things up high. This kind of action may change your center of gravity and may cause the wheelchair to overturn.
- Avoid dressing in loose-fitting or long-style clothes, to prevent the cloth from being trapped in the wheels.
- It is strictly forbidden to touch the tires while driving.
- Please place the center of gravity as close as possible to the center of the seat surface when rotating, otherwise it may cause a rotation fault.

3.12 Transfer

Transfer refers to the user moving from another location (such as bed, sofa, etc.) to the electric wheelchair or from the electric wheelchair to another location. Transfer requires high level of physical activity. When you can't complete the transfer by yourself, you should do it with the help of others.

To avoid injury, please finish the following steps by you or your caregiver before transferring:

- (1) Turn off the controller power.
- (2) Fold back the armrest.
- (3) Turn the footrest up.
- (4) Minimize the distance between the electric chair and the position to be transferred (e.g. bed, sofa, etc.) as much as possible.

Warning!



- When you are practicing transfer by yourself, there must be a caregiver next to you.
- Avoid placing your entire body weight on the armrests of the electric wheelchair, which may cause it to roll over or cause personal injury.
- The controller and controller bracket of the electric wheelchair are not load-bearing parts. The controller and controller bracket cannot be used as the stress points when transferring, otherwise these parts will be damaged, resulting in product damage and personal injury.
- Do not stand on the pedals in case the electric wheelchair turns over and falls.

3.13 Taking medicine/feeling unwell

Do not use the electric wheelchair when taking some medicine or when you are physically ill, which may interfere with your driving. Please don't use the wheelchair under such conditions.

We sincerely advise you not to smoke in the electric wheelchair. If you decide to smoke, you must comply with the following safety guidelines:

- (1) Please do not throw away lighted cigarette butts at will.
- (2) Keep the burning cigarette away from the electric wheelchair
- (3) Please make sure the cigarette is completely extinguished before leaving.

Warning!



- This wheelchair can only be used by authorized users.
- As a user or caregiver, you must receive training in the use of the product from authorized personnel or the manufacturer.
- Please read the instructions in the manual completely.
- Please do not use the wheelchair when you are fatigued or effected by drinking alcohol or taking drugs.
- Users with mental health problems, including users who temporarily or permanently lose attention and judgment, must not use this product in road traffic.

3.14 Attention to electromagnetic compatibility

Electrical equipment may be affected by electromagnetic interference. These interferences may be caused by radio, television or other radio transmitters and mobile phones. If the wheelchair shows abnormal behavior due to electromagnetic interference, turn off the power immediately and contact your service agent.

Warning!



- Although conforming to all applicable EMC directives and standards, products may be may be interfered by other electronic devices. If this happens, move the product out of the interference range.
- People who install pacemakers should avoid approaching the magnetic field. This product belongs to electrical equipment and contains magnetic field. It is recommended that people who install pacemakers should not use this electric wheelchair.
- Turn off all mobile devices while driving because the driving characteristics of the product are affected by electromagnetic fields.
- Turn off the control unit when not needed, as the product may generate electromagnetic fields that may interfere with other devices. The product has been tested in accordance with EMC rules.
- Other types of handheld devices, such as radiotelephones, laptops, AM / FM radios, televisions, CD players and tape players, as well as small appliances, such as electric razors and hairdryers, are unlikely to cause EMI problems in electric wheelchairs.

3.15 Wheelchair disassembly and transit

3.15.1 Disassembly of the seat

For convenient transportation, the seat of wheelchair can be removed.



The chassis assembly



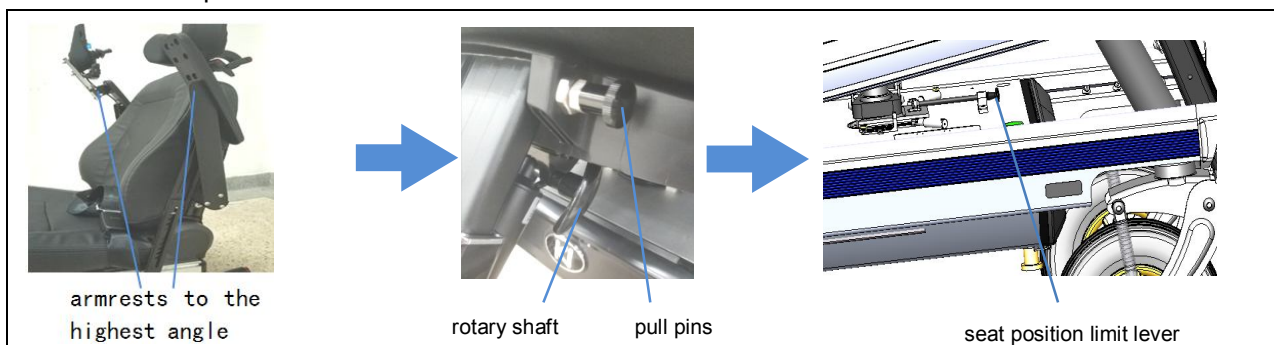
The seat assembly



The pedal assembly

Wheelchair disassembly

- Step 1: Separate the seat and backrest cushions from the wheelchair.
- Step 2: Press pedal down button lower the pedal angle as much as possible.
- **Step3: Adjust the armrests to the highest angle.**
- **Step 4: Keep the controller in a raised state, long press the backrest forward button on the control panel until the backrest is folded.**
- Step 5: Power off the wheelchair on the controller panel and turn off the battery switch.
- Step 6: Remove the pedal assembly: disconnect the connecting wires of the pedal motor at the front end under the seat bottom plate, pull the left and right pull pins connected between the pedal and the seat bottom plate respectively, pull the rotary shaft connected between the push rod motor and the seat bottom plate from the right side, and remove the pedal assembly.
- Step 7: Pull back the seat position limit lever. Grab the front and rear ends of the seat bottom plate with both hands and pull out the whole seat.



Warning!



- **When folding the backrest, the armrests must be adjusted to the highest angle to avoid the damage of the armrest supporting rod!**

Dimensions of each part after disassembly

Content	Size (mm)	
	Outdoor models	Indoor models
chassis assembly	80cm(L)*58cm(W)*30cm(H)	70cm(L)*58cm(W)*20cm(H)
seat assembly	58cm(W)*35(H)	58cm(W)*35(H)
pedal assembly	30cm(W)	30cm(W)

Installation of the seat

- **Step 1 Two hands respectively grasp the front and rear ends of the seat bottom plate, and aim the two red arrows behind the seat bottom plate at the brake handle. The red arrow on the rotation handle is aimed at the red arrow on the chassis side, so as to ensure that the rotating shaft under the seat can be smoothly inserted into the installation hole in the middle of the chassis and push the seat position limit lever to reset.**
- Step 2 Turn on the battery switch and power on the controller.
- Step 3 Press the backrest backward button to extend the backrest to the right angle.
- Step 4 Install the pedal assembly: insert the pull pins into the holes on both sides of the upper end of the pedal, put the push rod motor into the corresponding position on the bottom surface of the seat bottom plate,

insert the rotary shaft from the right side, and "click" means that it is in place. Insert the wire harness of the push rod motor into the seat wire harness.

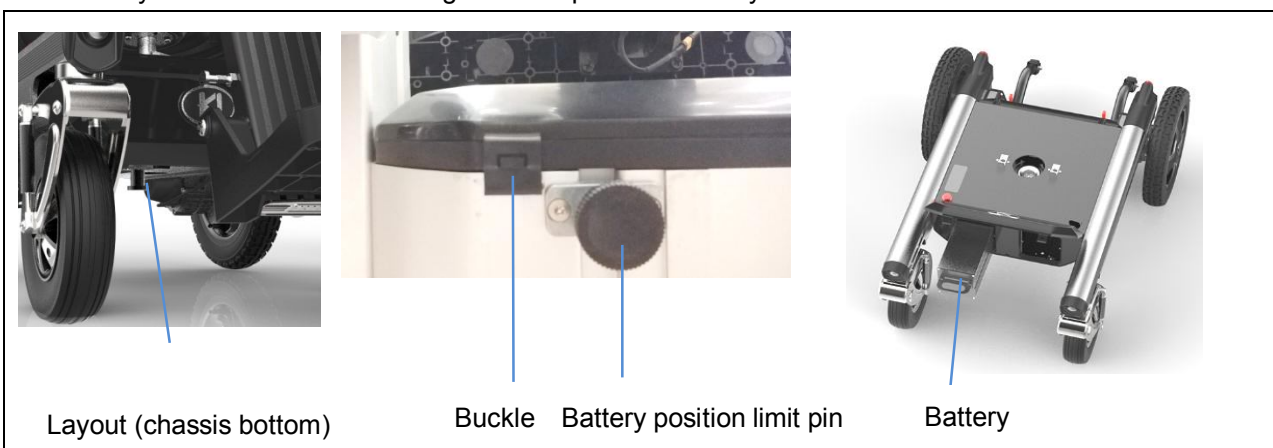
- Step 5 Stick the seat and backrest cushions with the seat plate respectively.
- Step 6 Align the plug on the seat plate with the socket.
- Step 7 Check whether the disassembled parts are installed correctly, power on the wheelchair after inspection, and check whether all functions are normal before use.

Notice!

NOTICE	• Please refer to the disassembly instruction video for details of the disassembly process of seat. • Seat disassembly must be operated by trained and authorized caregivers. • Please protect and fix the disassembled parts during transportation to avoid collision damages during transportation. • Please note that the seat is tilted back 8°. When installing the seat, please tilt the seat back a little so that it can be smoothly inserted into the chassis installation hole. • When removing the seat, please power off the wheelchair and turn off the battery switch.
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3.15.2 Disassembly of battery

The battery of the wheelchair is designed for rapid disassembly and installation.



Disassembly of battery

- Step 1 Press the pedal up button to raise the pedal angle as much as possible.
- Step 2 Power off the wheelchair on the controller panel and turn off the battery switch.
- Step 3 Open the front cover by opening the two buckles below the front cover plate (or pull the rotation handle and rotate the seat by 90° to make it easy for battery disassembly and installation).
- Step 4 Pull down and rotate the battery position limit pin so that the pin is retracted into pin body.
- Step 5 Hold the battery handle and pull out the battery.
- Step 6 Buckle up the two buckles of the front cover.

Installation of the battery

- Step 1 Open the front cover by opening the two buckles below the front cover plate.
- Step 2 Place the battery with the label side facing up into any battery compartment in the chassis.
- Step 3 Rotate the battery position limit pin to make the pin extend out of the pin body, so as to limit the battery position and prevent the battery from slipping out of the compartment.

- Step 4 Buckle up the two buckles of the front cover.
- Step 5 Press pedal down button to adjust the pedal to the appropriate angle.

Notice!

NOTICE	• Please refer to the instruction videos for details of process of battery installation and disassembly. • The battery switch must be turned off during battery disassembly and installation. • Make sure the battery position limit pin is extended out after battery is installed, to limit the battery position.
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3.15.3 Transit attentions

- (1) During the long-distance transportation, fold the backrest forward or disassemble it and flip back the footrest to minimize the shipping volume.
- (2) The wheelchair body and all parts must be fully fixed to avoid collision and extrusion.
- (3) It is strictly prohibited to use the wheelchairs as seats during transportation;
- (4) In the process of transportation and handling, it is forbidden to tread, hit, be exposed to the rain or roll.

Warning!

 WARNING	• When carrying the electric wheelchair, hold the chassis or the link arm of the front and rear wheel connection. Do not apply force directly to the seat bottom plate. • Always use the seat and constraint system of the vehicles to transport people with mobility difficulties. This is the only way to ensure the best protection for passengers in the event of an accident. • After putting the electric wheelchair into the vehicle, turn off the controller and fix it well • When wheelchair is transported by the vehicle, it is prohibited to sit in the wheelchair seat.
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4. Maintenance

The electric wheelchair is a mechanical and electrical intelligent equipment. In order to ensure normal operation, some necessary daily maintenance should be done.

This section will guide you on how to carry out daily maintenance. If you have any questions, please contact customer service.

Warning!

 WARNING	• The electric wheelchair can only be repaired by authorized personnel trained by the manufacturer. The functional and operational safety of the electric wheelchair must be verified, and the service must be performed at least once a year. • The maintenance of the electric wheelchair shall not be carried out when someone is sitting in or using it. • Check all functions of the electric wheelchair for obvious signs of damages at least once a month and make sure all screws are firmly connected. • If any faults, defects or other risks that may cause personal injury are detected, the use of the wheelchair must be stopped immediately. • In case of uncontrolled movement of the wheelchair due to malfunction, please contact
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	customer service. • Batteries shall not be disposed of as household waste. Please comply with the information printed on the battery by the manufacturer.
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4.1 Treatment of water or other liquids

Water or other liquids can cause corrosion of electrical components, resulting in electrical or mechanical failure of the electric wheelchair. Liquids that may be encountered during daily use include: water, drinks, body fluids, etc. When the electric wheelchair is in contact with water or other liquids, please handle as following instructions:

- (1) Wipe with a dry towel first.
- (2) Then place the electric wheelchair in a ventilated, dry place and make it to evaporate completely.
- (3) Check the joystick and brake functions before using the electric wheelchair again.
- (4) If you find any problems, please consult customer service. The electric wheelchair often comes in contact with liquids, such as sweat, body fluids, etc., so you should regularly check for corrosion and replace electronic components if corrosion occurs.

Warning!	
 WARNING	• Do not dry with a hot air dryer. Hot air can deform plastic parts. Seat cushion must be completely dry before use to prevent skin allergy or other personal injuries. • The electric wheelchair must be cleaned regularly, depending on how often it is used and how dirty it is. • Do not use any corrosive cleaners, solvents or hard brushes. • Please use a dry brush to clean seat and back trim and seat cushion. • Please use a damp plastic brush to clean the wheels and frame. • Please do not use high pressure cleaning machine to spray products.

4.2 Daily inspection

(1) Controller inspection: Turn off the controller, make sure the joystick is not bent and operates smoothly, whether it can be automatically reset after releasing the hand, and whether there is rupture of the dust-proof rubber cover. The joystick is a precision component, if there are any problems, do not try to repair it, please contact customer service.

(2) Check all lines: Make sure the connectors are tight, without damage and corrosion. The wires are not torn or loose.

(3) Check tires: Excessive wear and tire pattern full grinding will affect the stability and control performance, then the tire must be replaced.

(4) Keep the electric wheelchair clean, especially the dust cap of the joystick which is not allowed to enter with dust or foreign bodies.

(5) Check all screws and nuts whether they are loose or falling off.

(6) All bearings are sealed and pre-lubricated, no further lubricating oil is required.

4.3 Weekly inspection

(1) Check the connection reliability of the controller, driver and battery, and check whether there are any corrosions, damages and other unsafe factors.

(2) Check the electric wheelchair whether there are any loose parts and screws.

(3) Check whether the brakes work properly.

4.4 Product maintenance

- (1) The regular inspection of battery is usually carried out after two years of use.
- (2) The regular inspection of brakes is usually carried out after two years of use.
- (3) Regular maintenance of the rear wheel drive, generally the maintenance inspection is carried out after two years of use.

4.5 Clean and disinfection

Clean and disinfect the wheelchair with soft wet towels with mild cleaners and disinfectant.

Warning!	
 WARNING	• When using disinfectants and cleaners, make sure follow their safety instructions and use them in appropriate amounts. Prevent skin allergy or damage to seat surfaces or frame coatings. • Corrosive detergents can damage surfaces of plastic and metal parts and cause skin allergy. • Do not rinse with water or wash with water directly, only wipe with wet towels, to avoid the circuit and circuit board short circuit damage by water. • Before disinfection, clean seats and backrest pads, control panels and handrails. Only use colorless water-based disinfectant to wipe all parts of the product, please follow the instructions provided by the manufacturer.

4.6 Long term storage

- (1) The electric wheelchair should be stored in a dry place, away from humidity and corrosion environment, to avoid rust of components and damage of electronic components.
When storing, please press the battery switch to disconnect power.
- (2) Fully charge the battery before storage. If you do not use it for a long time, you should charge it with a charger every two months.
- (3) Avoid freezing and overheating. The appropriate storage temperature is -40°C~65°C, and the relative humidity is 20%~90%.Keep it in a well-ventilated room without corrosive gases.

5. Warranty instructions

5.1 For normal application, the household use as following:

- (1) The warranty period of the frame of the electric wheelchair is two years.
- (2) The warranty period of the motors is two years.
- (3) The warranty period of the battery is one year.
- (4) The warranty period of the charger is one year.
- (5) The warranty period of the charger is one year.
- (6) This warranty does not apply to components susceptible to wear such as tyres, seat covers, arm rests etc.

5.2 Ranges not covered by warranty

- (1) Out of warranty.
- (2) Damages caused by the use, maintenance and storage not in accordance with the manual instructions of this product.

- (3) Unauthorized repairs or modifications.
- (4) Unable to provide warranty card or purchase document.
- (5) Products without quality certification.
- (6) Damages cause by people.
- (7) Appearance damage is not covered by warranty.

Notice!	
NOTICE	• In order to maintain the ecological environment of the earth and avoid environmental pollution, in the event of damage to parts or replacement of batteries of the electric wheelchair, please dispose of waste according to the local laws and regulations or hand over the used products to customer service, and do not discard them at will. • Nanjing Kangni Smart Technology co., LTD. reserves the right to the final interpretation of all contents in this manual.

5.3 No modification agreement

After the delivery of the electric wheelchair, please do not carry out any modification, disassembly, alternation or addition of accessories without permission. Manufacturer shall not undertake warranty and related safety responsibilities for any products that have been modified by the users themselves.

5.4 Delivery notes

When you receive the electric wheelchair, please check whether the product is complete according to the packing list! If the product you receive is not complete, please contact customer service immediately.

5.5 Contact us

If you find any questions about security and reliability or other suggestions during use, please inform us and we will continue to improve. Our contact information is as follows:

Nanjing Kangni Smart Technology Co., Ltd.

Address: No.11 Hengjing Road, Qixia District, Nanjing, China

P.C.:210046

Tel: 0086-25-8349-7679

Mail: smart@kn-nanjing.com

Website: www.kangnismart.com

5.6 Legal declaration

1. The copyright of this manual belongs to Nanjing Kangni Smart Technology Co., LTD.
2. This manual is only for the buyers who purchase the electric wheelchair to read and use. It shall not be used for other purposes. Without permission, it shall not be extracted, copied, translated or used in commercial activities.
3. The electric wheelchair, together with the related technology and text description of the electric wheelchair, as set forth in the contents of this manual, is the intellectual property of Nanjing Kangni Smart Technology Co., LTD.. It is not allowed to copy and imitate without the permission of Kangni Smart.

6. Appendix

6.1 Performance parameters of the electric wheelchair

Content			Performance Indicators	
			K101W/K137N	K101N
Main structural parameters	Overall size	Total length (cm)	117	103
		otal width (cm)	58	58
		Total height (cm)	98	90
		Folding length (cm)	93	84
		Folding height (cm)	56	48
	Total weight (kg)		55	47
	The heaviest part (kg)		33	25
	Seat surface angle		8°	8°
	Effective seat depth (cm)		40	40
	Effective seat width (cm)		45	45
	Height of seat surface above ground (Seat rotation shaft /cm)		44	38
	Backrest angle		0~150°	0~150°
	Backrest height (cm)		55	55
	Footrest to seat distance (cm)		34/37/39/41/43/45	34/37/39/41/43/45
	Angle between legs and seat surface		102° ~172°	102° ~172°
	Armrest height (When the armrest is placed in the horizontal leve/cm)		28	28
	Caster diameter		8"	5"
	Rear wheel diameter		12"	8"
Main functional parameters	Maximum user weight capacity		100kg	100kg
	Maximum speed forward		≤6km/h	≤4.5km/h
	Braking performance	Horizontal road braking	1.5m	1m
		Max. safety ramp braking	3.6m (6°)	1.6m (3°)
	Slope parking performance		9°	6°
	Maximum safe slope		9°	6°
	Dynamic stability		9°	3°
	Height of obstacle crossing (cm)		4	2.5
	Width of gap crossing (cm)		10	10
	Slope climbing ability		9°	3°
	Minimum turning radius (cm)		≤80	≤80
	Theoretical drive range		20km	20km
	Battery rated capacity		15Ah/set	15Ah/ set

Note : 1. The above data does not include cushion and accessories;

2. The weight of the dummy used in the test of this wheelchair: 100kg;

3. The above data are nominal size, and there may be some errors due to factors such as parts processing, measurement method and reference. The size error is $\pm 3\text{cm}$, the weight error is $\pm 2\text{kg}$, and the angle error is $\pm 5^\circ$.

4. The actual range is related to the load weight, personal driving habits, battery usage period, charging habits and other factors.

5. Because the speed of the indoor wheelchair is slow, the power consumption speed will be faster than the outdoor model.

6. If the wheelchair is frequently used on slopes, uneven roads or crossing barriers, its drive range will be reduced.

6.2 The electric wheelchair safe operation parameters

The electric wheelchair safe operation parameters		
1	Rated voltage/frequency	100-240VAC 50/60Hz
2	Rated output voltage of the charger	DC24V
3	Input power	50-300VA
4	Operation mode	Continuous operation
5	Rated output current of the charger	2.0A

