

Preface :

Thank you for purchasing the electric wheelchair of HELPAL series. The electric wheelchair is an ultra portable electric wheelchair carefully developed and produced by Hubang company for the domestic market. It is low-carbon, environment-friendly, energy-efficient, lighter, more flexible and safe, and has been highly praised by the majority of users. Please read this manual carefully before use, so that you can better use the electric wheelchair and understand its functions, and carry out maintenance and service as required to ensure that the vehicle is always in good condition.

Range of application :

It is applicable to the disabled, the elderly and the weak who weigh no more than 100 kg. They are difficult to move, but they have sufficient ability or are taken care of by nurses. The wheelchair can move within a certain distance and cannot drive on the road.

Safety precautions :

- * Do not operate your electric wheelchairs until you have read and fully understand this manual;
- * Do not operate your electric wheelchair until the assembly and inspection are completed;
- * It is suggested that people with mental disorders, slow reaction and difficult operation should not use this electric wheelchair;
- * Do not get on or off the electric wheelchair when the power supply is on or the electric wheelchair is in manual state and there is no caregiver to fix the wheelchair;
- * Do not drive your electric wheelchair in violation of national and local traffic regulations;
- * Do not turn sharply when driving at high speed;
- * Do not park the electric wheelchair on a slope;
- * Do not turn or turn on a slope;
- * Do not use electric wheelchairs on gravel or soft ground;
- * Avoid driving on a slope with a slope greater than 8 degrees or climbing over obstacles greater than 4cm;
- * Do not disassemble or restructure the parts of the electric wheelchair without authorization or replace them with parts not manufactured by the company;

EMC warning statement :

- * The electric wheelchairs produced by the company meet the requirements of electromagnetic compatibility of YY0505 and GB/T 18029.21 standards;

- * The user shall install and use according to the EMC information provided in the attached documents;
- * Portable and mobile RF communication equipment may affect the performance of electric wheelchair. Avoid strong electromagnetic interference when using, such as close to mobile phones, microwave ovens, etc;
- * Please refer to the attachment for the guidance and manufacturer's statement;

Warning :

- * Except for cables sold by the manufacturer of the equipment or system as internal components of the equipment, use accessories other than those specified, Cables may result in increased emissions from equipment or systems or reduced immunity;
- * The equipment or system should not be used in proximity to or on top of other equipment, and if it must be used in proximity or on top of other equipment, it should be observed and verified to function properly in the configuration in which it is being used;



Warning signs should not be opened by non-professionals

IPX3

Level of penetration resistance



BF type applies partial tags



The environmental protection

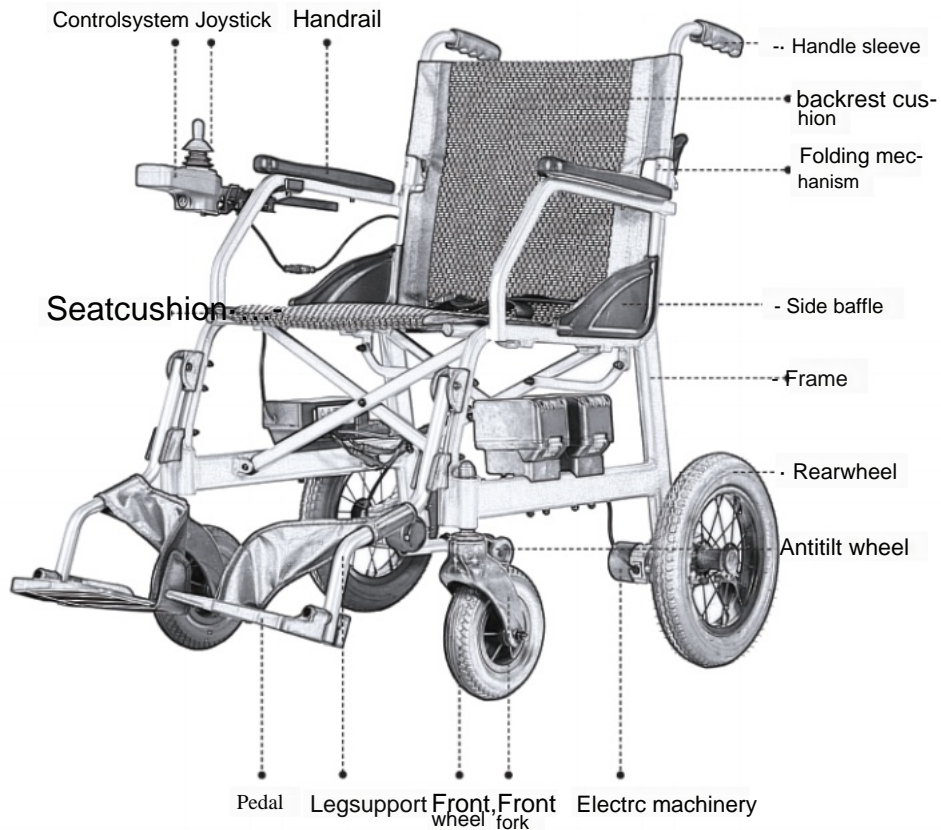


There is high voltage

Classification :

- * According to the management classification of medical devices, the electric wheelchairs belong to the ward nursing equipment and appliances (6856) management category for the second class;
- * Classification by anti electric shock type: internal power supply equipment;
- * Classification according to the degree of anti electric shock: BF type application part;
- * According to the liquid inlet protection grade, it is divided into: IPX3;
- * Classification by electric wheelchair: Electric outdoor wheelchair, suitable for outdoor medium distance driving;
- * Classification by operation mode: continuous operation;
- * Classification by number of users: equipment used by one person;

The overall graphic:



A performance configuration

Product type:outdoortype · Use ambient temperature:-25°--+50° Weight:100 kg

· Maximum speed:6km/h Full power range:20km In the slope performance:9°

Powersupply:24V*5.2AH·Motor power:200W*2 Climbingability:6°

· Minimum radius of rotation:1.2m Dynamicstability:6° Noise:<65DB

Climbing obstacle height:40mm ·Horizontal road braking sliding distance:1.5m

A structure parameters

Outerboxsize(mm):720x360x760

Seat width(mm):450

Weight(kg):13.4

· Rearwheel diameter(inch):12

Front wheel diameter(inch):7

A electrical parameters

Motorrated power(W):200WX2

Motorapproved vottageM:24

Batteryvoltage(V):24

Capacity(AH):5.2AH

Chargerinput M):220

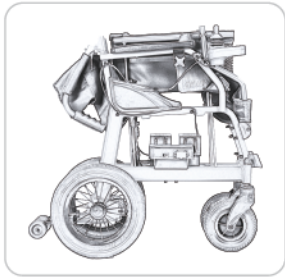
Chargingcurrent(A):3

Maximum output current ofthe controller(A):45

* The above parameters will vary depending on the passenger's weight, road conditions and battery use.

Expand the wheelchair :

- 1 Take the electric wheelchair out of the packing box and press down both sides of the seat with both hands until the cushion and cushion of the electric wheelchair are fully unfolded. (as shown in the figure)



The first step



The second step

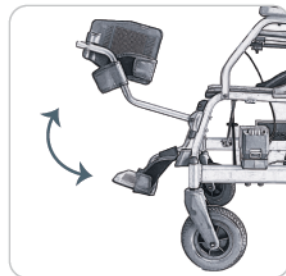


The third step

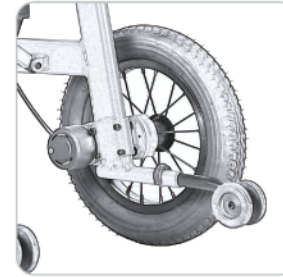


The fourth step

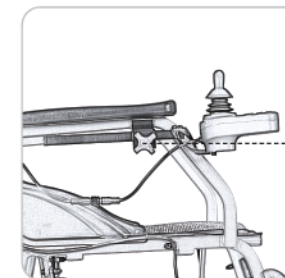
- 2 Installation and retraction of the leg support.
Installation: lower the leg support to the bottom, and then lower the foot pedal.
Folding: first fold the foot pedal, and then fold the leg support.



- 3 Installation and disassembly of anti roll wheels.
Installation: Align the anti roll wheel with the pipe hole and insert it into the lock hole, then use the fixing clip to insert it into the lock hole and fasten it.
Disassembly: First pull out the fixing clip upwards, and then pull out the anti roll wheel backwards. Anti roll wheels must be installed during use. (As shown in the figure)

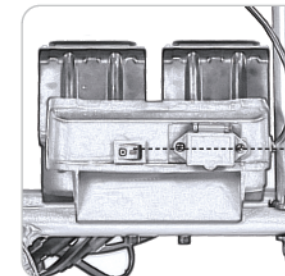


- 4 Insert the controller lever into the holder, adjust it to the right position, tighten the retaining nut, and insert the line into the line card.



The insertion point

- 5 When charging and using, please press the switch "-" ("-" is on and "O" is off).
If it is not used for a long time, please press the switch "O" and plug in the charging point every month. (the electric wheelchair battery shall not be stored in the battery loss)
There are two charging modes. The battery can be charged separately or in the wheelchair.

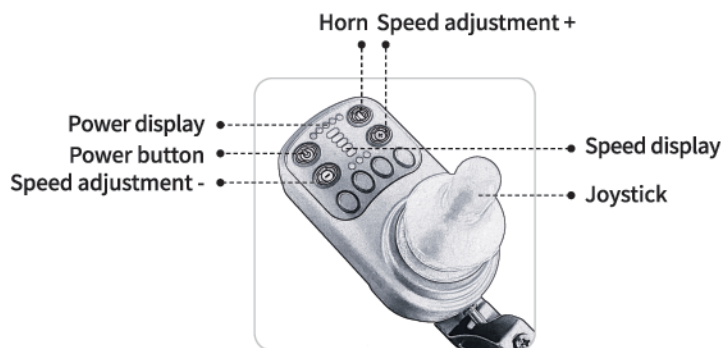


The main power switch

Directions for use :

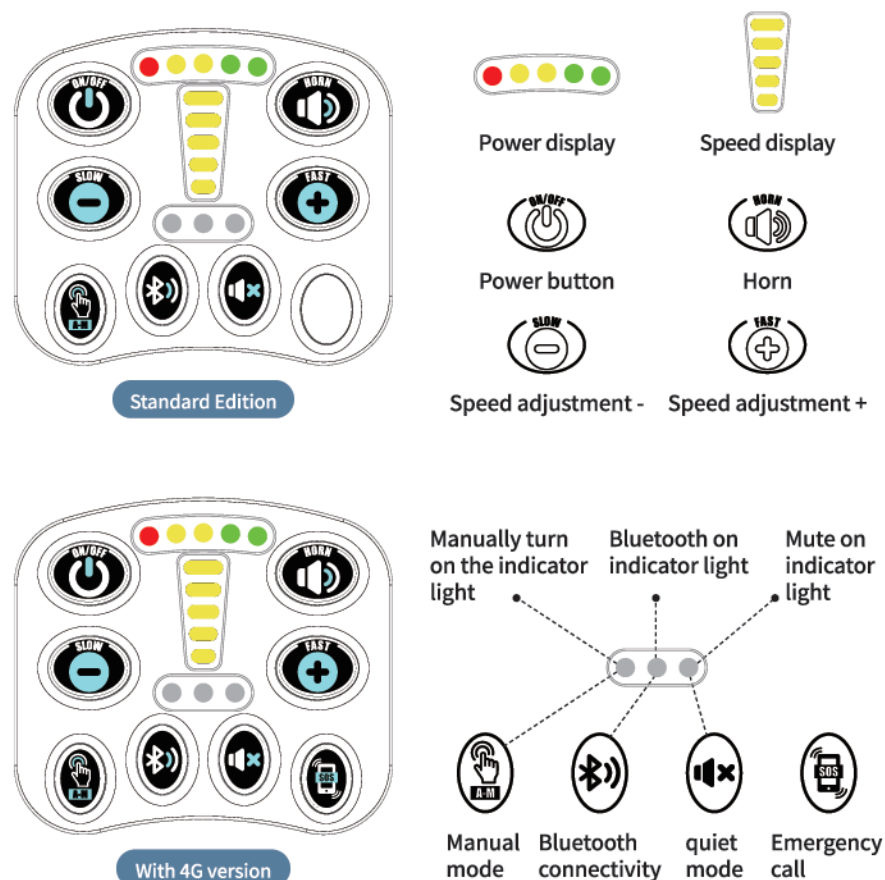
Before entering the electric wheelchair, the following conditions must be checked:
First drive the electric wheelchair to the required position and stop stably. When the electric wheelchair is stopped, turn off the control power supply.

- 1 First fold the pedal, sit in the electric wheelchair, and then put down the pedal.
Note: do not step on the pedal to get up and down the electric wheelchair, which may cause the electric wheelchair to overturn.
- 2 Please fasten your seat belt after you get into the electric wheelchair. Turn on the main switch and press the power button of the controller. The indicator light will light up (as shown in the figure). At this time, the control lever should be in the middle position. Push the control lever and the electric wheelchair will start driving.



- 3 The joystick can simultaneously control direction and speed, slowly pushing the joystick towards the desired direction of travel, and the electric wheelchair will then start driving.
- 4 To stop the electric wheelchair while it is in motion, simply release your hand and reposition the control lever to stop the vehicle, achieving a smooth parking.
- 5 If parking on a slope, simply release your hand and return the control lever to stop driving, achieving a smooth parking.
- 6 The speed adjustment button of the controller can adjust the speed of the electric wheelchair, and users should choose the maximum speed of the electric wheelchair based on their own physical and road conditions. Speed display: When starting, the default gear is one gear. If you need high power or speed, please adjust the speed by pressing the "+" button. The maximum of five speed display lights can be on. If you need low power or low speed, please adjust the speed to "-".

7 Instructions for using the button functions of the controller:



- 8 Electric wheelchairs are suitable for driving on flat roads. Driving on muddy, potholed, and uneven roads can cause damage to the rotating mechanism and control system of electric wheelchairs.
- 9 Before getting off the car, turn off the power to the controller first, then flip the foot pedal up before getting off the car.

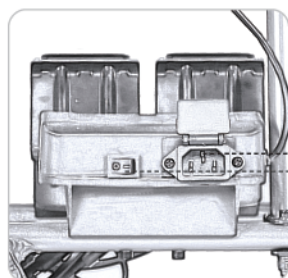
Charging instructions :

- 1 Turn on the power switch of the controller, the power indicator light in the front row will be on, and the full power will be 5 grid lights (1 red, 2 yellow and 2 green). If the power is more or less, their color will not change, but the number of lights will be changed. When in use, the lights will be turned off one by one. When the red light flash, the power is seriously lost. It is forbidden to continue to use and charge in time.

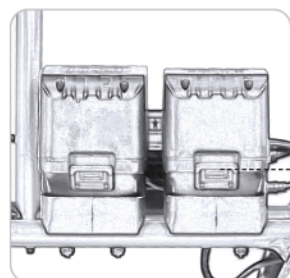


* When the red light on the battery indicator flashes, there is a serious power loss. It is prohibited to use and should be charged in a timely manner.

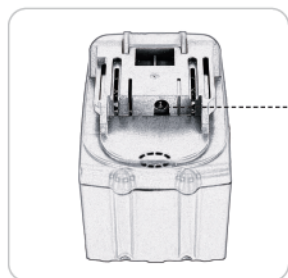
- 2 There are two charging modes. The battery can be charged separately or in the wheelchair. First turn off the controller switch, insert the charger plug into the battery charging port, and then insert the two-phase plug at the other end of the charger into the 220V power socket. You can also remove the battery separately and insert the charger plug into the battery charging port for charging;



The power sockets
The main power switch



The red button



The power sockets



- 3 Remove the battery, press the red button upward and pull the battery outward to remove the battery. When installing the battery, align the battery with the guide slot of the battery base, push it forward, hear a click, and the battery is fixed.
- 4 When the battery is not removed for direct charging, please press the main power switch "-" and the electric quantity display light of the controller flashes alternately, which is a normal phenomenon, and the wheelchair cannot be opened. The red light of the charger indicates that it is charging, and the green light of the charger indicates that it is fully charged. (if there is charging, please observe the color of the charger display light)
- 5 If the wheelchair is not used for a long time, press the "0" switch. If it is not used for a long time, the battery needs to be removed and inserted once a month. (the battery of electric wheelchair cannot be stored in battery loss)

9

Folding transportation :

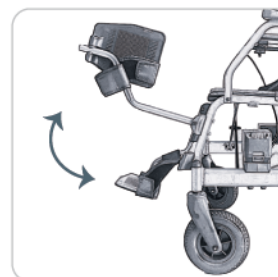
- 1 Stop the electric wheelchair
- 2 Fold the pedal, hold the middle of the seat cushion with both hands and pull it up
- 3 Folding leg support
- 4 Fold the backrest back
- 5 Folding complete



The first step



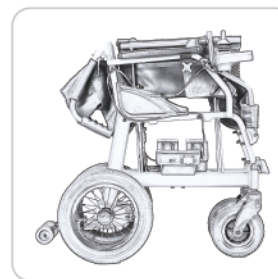
The second step



The third step



第四步



The fifth step

* The electric wheelchair shall be stored or transported in the environment of - 25 °C - 50 °C (the battery should be stored in the environment of 5 °C - 40 °C for a long time); The storage and transportation environment of wheelchair shall avoid damp, corrosive substances and violent mechanical impact.

10

Fault diagnosis and troubleshooting :

Most of the failures of electric wheelchairs are related to the battery. Check the battery condition before changing parts.

Fault:	The reason:	Elimination method:
(after pressing the power switch, the indicator light does not work)	Loose power plug	Stuck tightly
	Low battery	charging
Turn on the controls. The wheelchair won't go	The charger isn't unplugged	Unplug the charger
Unable to move or move irregularly	Controller or motor failure	Contact seller
Battery fails to charge	Charger failure	Contact seller
	The ac power supply is abnormal	Check electrical fish or transformers
	The battery failure	Change the batteries
No straight line in advance (universal controller only)	First turn on the power (light on) 1. Press the horn + shift button 3-40 times (or more) if it is skewed to the right. 2. Press the horn + shift button if the car is deflected to the left. 3. Press the shift up button + shift down button at the same time to restore the factory Settings.	

Product characteristics :

- * Classification by anti electric shock type: internal power supply equipment;
- * Classification according to the degree of anti electric shock: BF type application part;
- * According to the liquid inlet protection grade, it is divided into: IPX3;
- * Classified according to the safety degree when using flammable anesthetic gas mixed with air or flammable anesthetic gas mixed with oxygen or nitrous oxide: non AP / APG type;
- * Classification by operation mode: continuous operation;
- * Internal power supply voltage: d.c.24v;
- * There is no application part of protection against defibrillation discharge effect;
- * No signal output part;
- * Non permanently installed products;

The maintenance :

1 Maintenance

Note: Unplug the battery and cut off the power supply before maintenance work. If necessary, adjust and replace worn parts, please find a professional maintenance.

Check cycle:	daily	weekly	monthly	every 3 months	every 6 months
Battery	✓				
Power Connection		✓			
Tire Pressure			✓		
Hand Brakes			✓		
Battery Terminals				✓	
Cables				✓	
Frame Outer Surface				✓	
Lubrication Components				✓	
Cleaning Cushion					✓
Bearings					✓
Tyres					✓
Electromagnetic Brakes					✓

- 2 Chair cover and backrest: Please remove it and clean the chair cover and leather backrest with warm water and diluted soapy water, and avoid putting the electric wheel chair in a wet place.
- 3 General maintenance: do not use lubricant to maintain the wheelchair. Check the screws and screws regularly to see if they are firm and reliable.
- 4 Do not flush any parts of the wheelchair with water.

Maintenance contents and instructions :

- 1 Battery: mainly check the remaining battery power. If the battery life is over and the battery needs to be replaced, you can contact the supplier or buy batteries with the same specifications locally.
- 2 Tire pressure: it is recommended that 12*1.75 and 8*2 tires be inflated to 345kpa, and 12 1/2*2 1/4 wheelchairs to 240kpa.
- 3 Electrical appliances: check whether the connection is reliable (the connector has a service life, please do not unplug it easily if it is unnecessary), electrical parts and connecting wires, check whether there is any damage or damage, if there is, please contact the supplier or find a professional qualified personnel to deal with, do not try to repair by yourself.
- 4 Electromagnetic braking: When the main power is on and the electric wheelchair has power, the system automatically activates the electromagnetic braking mode throughout the entire process to prevent the electric wheelchair from moving during parking.
- 5 Electromagnetic braking: it is a driving brake. Inspection method for asphalt in split allow wheelchairs to maximum speed driving straight ahead, then loosen the controller joystick, make its automatic recovery in situ, measuring the distance from the release lever to stop, if the distance is larger than the original, is fallen, braking effect if the distance is more than 1.5 m, you should contact the supplier to repair.
- 6 Precautions for low temperature use: battery loss will occur when the ambient temperature is lower than zero. The lower the temperature, the more serious the power loss.

Limited warranty :

This quality assurance service is only valid for the original purchaser of this product.

Parts not manufactured by the company or parts added by the company after the purchase of complete vehicles are not included in the scope of this quality assurance service, and product damage caused by user's failure to operate, maintain or improper storage and transportation as required by this manual is not included in the scope of essential warranty service.

Warm prompt :

- 1 First of all, thank you for using Hubang electric wheelchair. Second, please pay attention to the following matters in daily use:
 - a) Please timely check and cut off the power if anything abnormal is found during charging.
 - b) avoid near the heat source or more than 50 ° environment using battery.
- 2 Do not disassemble or damage the battery. If the battery is seriously collided, please contact the manufacturer immediately. Do not continue to use it. Avoid children from touching the battery. Do not throw the battery into the fire.
- 3 Once the battery is immersed in water during use or storage, it must be immediately stopped and returned to the manufacturer for testing. It can be used normally only after there is no abnormality.
- 4 Precautions for battery use:
 - a) Please charge the battery in normal indoor environment.
 - b) Please charge the battery with a professional charger.
 - c) Do not charge the battery for more than 8 hours when using the supporting charger.
 - d) Be sure to keep away from flammable and explosive materials during charging and storage.
 - e) Someone should watch when charging.

Waste disposal :

- 1 When the battery is recycled or discarded, be sure to use tape to insulate part of the electrode. Contact with other metals will lead to battery heating, rupture or fire.
- 2 Please send the used batteries to the company's authorized maintenance service center or recycler, or dispose of them according to local regulations.

Electromagnetic interference :

The electromagnetic wave emitted by this product may interfere with the medical equipment of the hospital. Please be sure to comply with the regulations of the hospital when using in the hospital and other places.


Radio waves (radio, television, amateur radio transmitters, walkie talkies, mobile phones) affect electric wheelchairs. Following these warnings will reduce the loss of control or brake failure of the electric wheelchair and avoid possible serious personal injury or equipment damage.

- 1 Do not turn on handheld communication devices, such as medium and short-wave radios and mobile phones, while the motorized wheelchair is open;
- 2 Notice nearby transmitters, such as radio or television stations, and try to avoid them;
- 3 If the wheelchair is out of control or the controller fails, close the electric wheelchair as soon as possible;
- 4 Be aware of additions or modifications to attachments that may increase sensitivity to radio waves (note: it is not easy to assess their effects in electric wheelchairs);
- 5 Report to the wheelchair manufacturer if the wheelchairs are out of control or if the brakes are not working, and note if there is a radio source nearby.

Attachment :

Guidance and manufacturer's statement - electromagnetic emission		
Electric wheelchairs are intended to be used in the following specified electromagnetic environment, and the purchaser or user of the electric wheelchairs shall ensure that it is used in such electromagnetic environment:		
Launch Tests	conformance	Electromagnetic Environments-Guide
GB4824 RF emission	one group	Electric wheelchairs use RF energy only for their internal functions, so their RF emissions are low and may not interfere with nearby electronics.

Guidance and manufacturer's statement - electromagnetic immunity			
Electric wheelchairs are intended to be used in the following specified electromagnetic environment, and the purchaser or user of the electric wheelchairs shall ensure that it is used in such electromagnetic environment:			
Immunity test	IEC60601, GB/T18029.21 test level	In line with the level	Electromagnetic environment - guidelines
Electrostatic discharge (ESD) GB/T 18029.21 GB/T 17626.2	±6kV contact discharge ±8kV air discharge	±6kV contact discharge ±8kV air discharge	The floor should be wood, concrete or tile, and if it is covered with synthetic material, the relative humidity should be at least 30%.
Power frequency magnetic field (50/60hz) GB/T 18029.21 GB/T 17626.8	30 A/m	30 A/m 50/60 Hz	The power frequency magnetic field should have the horizontal characteristics of the power frequency magnetic field in a typical business or hospital environment.
Note: U _i means the ac network voltage before the test voltage is applied.			

Guidance and manufacturer's statement - electromagnetic immunity			
Electric wheelchairs are intended to be used in the following specified electromagnetic environments. Purchasers or users of NPL001, NPL002 and NPL003 electric wheelchairs should ensure that they are used in such electromagnetic environments:			
Immunity test	IEC60601, GB/T18029.21 test level	In line with the level	Electromagnetic environment - guidelines
The RF transmission GB/T 18029.21 GB/T 17626.6	3 Vrms 150 kHz to 80 MHz	Do not apply 3 V/m 20 V/m	Portable and multi-mobile RF communication equipment shall not be used closer to any part of the electric wheelchairs than the recommended isolation distance, including cables. The distance shall be calculated by a formula corresponding to the transmitter frequency. $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 80 MHz to 1.0 GHz $d = 0.2\sqrt{P}$ 26 MHz to 800 MHz $d = 0.4\sqrt{P}$ 800 MHz to 2.5 GHz Where, P is the maximum output rated power of the transmitter provided by the transmitter manufacturer, in watts (W); d is the recommended isolation distance, in meters (m). The field strength of a stationary RF transmitter is determined by surveying the electromagnetic field and should be lower than the coincidence level at each frequency range. Interference may occur near devices that mark the following conformance. 
RF radiation (charger) GB/T 18029.21 GB/T 17626.3	3 V/m 80 MHz to 1.0 GHz 20 V/m 26 MHz to 2.5 GHz		
RF radiation (wheelchairs) GB/T 18029.21 GB/T 17626.3			
<p>Note 1: at 80MHz and 800MHz frequencies, the higher frequency band formula is used.</p> <p>Note 2 these guidelines may not be appropriate for all situations where electromagnetic transmission is affected by absorption and reflection by buildings, objects and the human body.</p>			
<p>A. fixed transmitter field, such as wireless cellular/cordless phones and ground mobile radio base station, amateur radio, AM (amplitude modulation) and FM (frequency modulation) radio and television broadcasting, etc., the field intensity in theory are NPL001, NPL002, NPL003, electric wheelchair, field strength is higher than the place of the application of RF in line with the level, the electric wheelchair should be observed to verify their can run normally, if the observed abnormal performance of the supplementary measures may be required, such as directional or positioning of electric wheelchairs.</p> <p>B. In the whole frequency range of 150KHz-80MHz, the field intensity should be lower than 3V/m.</p>			

The recommended isolation distance between portable and mobile RF communication equipment and electric wheelchairs					
The electric wheelchair is intended for use in a controlled electromagnetic environment with radiated RF harassment. Depending on the maximum power output of the communication equipment, buyers or users of electric wheelchairs can prevent electromagnetic interference by maintaining the minimum distance between portable and mobile RF communication equipment (transmitters) and electric wheelchairs as recommended below.					
The rated maximum output power of the transmitter in / W	Isolation distance /m for different frequencies of the transmitter				
	150 kHz ~ 80 MHz $d = 1.2\sqrt{P}$	80 MHz ~ 800 MHz (The charger) $d = 1.2\sqrt{P}$	800 MHz ~ 1.0 GHz (The charger) $d = 2.3\sqrt{P}$	26 MHz ~ 800 MHz (wheelchair) $d = 0.2\sqrt{P}$	800 MHz ~ 2.5 GHz (wheelchair) $d = 0.4\sqrt{P}$
0.01	0.12	0.12	0.23	0.02	0.04
0.1	0.38	0.38	0.73	0.06	0.13
1	1.2	1.2	2.3	0.2	0.4
10	3.8	3.8	7.3	0.63	1.26
100	12	12	23	2	4
<p>For the maximum output rating of the transmitter not listed in the table above, it is recommended that the isolation distance d, in meters (m), be determined by the formula in the corresponding transmitter frequency column, where P is the maximum output rating in watts (W) provided by the transmitter manufacturer.</p> <p>Note 1: The formula for the higher frequency range is used at 80MHz and 800MHz frequencies.</p> <p>Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and emission from buildings, objects and the human body.</p>					