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## Preface :

Thank you for purchasing hubang brand HBLD2-B electric wheelchairs. The electric wheelchairs are the ultra-light electric wheelchairs carefully researched and developed by hubang company for the market, featuring low carbon, environmental protection, high efficiency and energy saving. The whole vehicle is lighter, more flexible and safe to operate, which has been well received by the majority of users. Please read this manual carefully before use, so that you can better use the electric wheelchair and understand its various functions, and according to the requirements of maintenance, to ensure that the car condition is always in good condition.

## Range of application :

Disabled persons and elderly infirm persons with mobility difficulties of less than 100KG, but with complete behavioral ability or nursing staff care, cannot drive on the road within a certain distance.

## Safety precautions :

- Do not operate your electric wheelchairs until you have read and fully understand this manual;
- Do not operate your wheelchairs until assembly and inspection is complete;
- It is suggested that people with mental abnormality, slow reaction and difficulty in handling should not use this electric wheelchair;
- Do not get on or off the motorized wheelchair when the power is on or the motorized wheelchair is in a manual state and there is no caregiver to fix the wheelchair;
- Do not drive your electric wheel-chair in violation of national and local traffic regulations;
- Do not make sharp turns at high speed;
- Do not park the electric wheel-chair car on the ramp;
- Never turn or turn on a slope;
- Do not use electric wheelchairs on sandy or soft ground;
- Avoid driving on slopes greater than 8 degrees or over obstacles greater than 4 cm;
- Do not disassemble or change parts of electric wheelchairs or replace parts not manufactured by the company without permission;

## 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 the emc information provided in the random file;
- Portable and mobile are RF communication equipment that may affect the performance of electric wheelchairs and avoid strong electromagnetic interference when used. Such as close to the phone, microwave oven, 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



There is high pressure



BF type applies partial tags



The environmental protection

**IPX3**

Level of penetration resistance

## 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;
- Classified by operation mode: continuous operation;
- According to the number of users: single use of equipment;
- Classification by anti-electric shock type: internal power supply;
- Classification according to the degree of anti-electric shock: BF application part;
- Classification according to the degree of protection against liquid injection: IP3X;
- According to the classification of electric wheelchair: outdoor electric wheelchair, suitable for outdoor medium distance driving;

## The overall graphic :



HBD2 -B schematic

## HBLD2-B performance configuration

- Product type: outdoor type
- Use ambient temperature: - 25°- + 50°
- Weight: 100 kg
- Maximum speed: ≤6km/h
- Full power range: 20km
- In the slope performance: 9°
- Power supply: 25.9V\*11AH
- Motor power: 150W\*2
- Climbing ability: ≥6°
- Horizontal road braking sliding distance: ≤1.5m
- Noise: < 65DB
- Minimum radius of rotation: ≤1.2m
- Dynamic stability: ≥6°
- Climbing obstacle height: ≥40mm

## HBLD2-B structure parameters

- Outer box size (mm) : 580X340X920
- Seat width (mm) : 440
- Weight (kg) : 16
- Rear wheel diameter (inch) : 12
- Front wheel diameter (inch) : 8

## HBLD2-B electrical parameters

- Motor rated power (W) : 150W X 2
- Motor approved voltage (V) : 24
- Battery voltage (V) : 25.9
- Capacity (AH) : 11
- Charger input (V) : 220
- Charging current (A) : 3
- Maximum output current of the controller (A) : 45

- The above parameters will vary according to the weight of the driver, road surface condition and battery usage.

## The method of open wheelchair :

- 1 Take the electric wheelchair out of the packing box, hold the handle with one hand, and press the front seat frame with the other hand downward until the seat and the back of the chair are 90°, until the lock lock is in place, so that the seat and the frame are integrated. Do not use the electric wheelchair before the lock lock connecting the seat and the frame is unlocked, the consequences arising therefrom shall be your own.



The first step

The second step

The third step

The fourth step

- 2 Install and store movable hanging feet. Installation: lower the hanging foot to the bottom. Put away: fold the seat cushion in half before putting away the feet.



Figure 1

- 3 Installation and disassembly of anti-tilting wheel. Installation: press the ball of anti-tilting wheel with finger and insert it into the pipe hole until it is sure that the ball is buckled. Disassembly: hold the marble with one hand, hold the tilting wheel with the other hand and pull it out backward. (see figure 2) Anti-tilting wheel must be installed when using.



Figure 2

- 4 Insert the controller lever into the fixing frame and insert the wire into the wire clip.



Figure 3

- 5 When in use, please press the "--" switch (" -- "means on," o "means off). If not used for a long time, please press the "o" switch. If not applicable for a long time, the battery must be removed and charged once a month. (electric wheelchair batteries should not be stored in the battery)



Figure 4

## Directions for use :

Before getting into an electric wheel-chair, check the following conditions:  
First, press down the manual brake, in the wheelchair brake state, turn off the control power.

- 1 Turn the pedal up and put the pedal down again when you are in the electric wheelchair.  
Caution: Do not use the pedals to get on or off the motorized wheel chair.  
This may cause the motorized wheel chair to tip over.

- 2 Please fasten your seat belt when you get into the electric wheelchair. Turn on the controller power button. The indicator light will light up (as shown in Figure 5). At this time, the joystick should be in the middle position. Push the joystick and the electric wheelchair will start running.



Figure 5

- 3 The joystick can control the direction and speed at the same time, slowly push the joystick to the driving direction, the electric wheelchair will start driving, increase the push range of the joystick and achieve acceleration, and vice versa, deceleration.
- 4 If you want to make the moving electric wheelchair stop, just release your hand, make the joystick reset, press the stationary brake, and realize a smooth parking.
- 5 When parking on the ramp, please use the lowest gear (first gear) when downhill, and the highest gear (third gear) when uphill, release the control handle, if the electromagnetic brake is not enough, you need to use the manual brake parking (press the manual brake parking on both sides at the same time).



Figure 6

- 6 The speed adjustment button of the controller can adjust the speed of the electric wheelchair. The user should choose the maximum speed of the electric wheelchair according to their own physical conditions and road conditions. Speed display: the default one gear when starting, if you need large power or high speed, please adjust "+" according to the speed, so that all three speed display lights will be on. If you need little power or low speed, please adjust "-" according to the speed.



Figure 7

- 7 When pushing the electric wheelchair by hand, first turn off the control handle, and then turn off the main power switch (press down 0), you can easily push the electric wheelchair. Main power switch, manual mode switch.

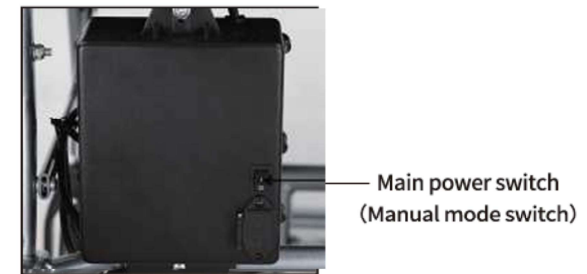


Figure 8

- 8 Electric wheelchairs are suitable for driving on flat roads. For muddy, potholed and uneven roads, the transmission mechanism and control system of electric wheelchairs will be damaged.
- 9 Before getting off the bus, first turn off the power of the controller, press down the standing brake, and then turn up the pedal before getting off the bus.

## Charging :

- 1 Turn on the power switch of the controller, and the electric quantity indicator light in the front row will light up. There will be 5 grids of lights (2 red, 1 yellow and 2 green) when the electric quantity is full. The lights will be off one by one when used. When the two red lights flash, serious power loss, prohibited to continue to use, timely charging.



Power display 1,2 lights flash, serious power loss, prohibited use, timely charging.

- 2 Remove the battery, insert the charger plug into the battery charging port, and insert the two boxes of plugs on the other end of the charger into the 220V power socket.



Charger port



Main power switch  
(anual mode switch)

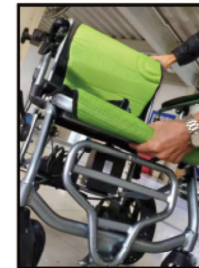
- 3 When charging, please take off the battery, press the red button of the battery up, and then the battery can be taken out. When installing the battery, aim the battery at the guide slot of the battery seat, and push it to hear a click, which means the battery is fixed.
- 4 If the wheelchair is not in use for a long time, please press the switch "O". If the wheelchair is not in use for a long time, the battery needs to be removed and charged once a month. (Do not allow the battery of the electric wheelchair to be stored in the loss of power)

## Folding transportation :

First, lift the armrest to the highest position, hold the lock rod under the front end of the seat with one hand and pull up, and hold the electric wheelchair driver with the other hand to push up the front end of the seat, fold the wheelchair, and pull up the pedal.



The first step



The second step



The third step



The fourth 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.

## Fault determination processing :

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
	Charger failure	Contact seller
	The ac power supply is abnormal	Check electrical fish or transformers
Battery fails to charge	The battery failure	Change the batteries
	First turn on the power (light on)	
No straight line in advance (universal controller only)	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 :

- By type of anti - shock classification: internal power supply equipment;
- Classification by degree of protection against electric shock: BF application part;
- According to the degree of protection into the classification: IPX3;
- Classification by degree of safety when used in flammable anaesthesia apparatus mixed with air or flammable anaesthesia gas mixed with oxygen or nitrous oxide: non-ao /APG type;
- Classification by operation mode: continuous operation;
- Internal power supply voltage: d.c.24V;
- No part of the application having a protective effect against defibrillation discharge;
- No signal output part;
- Non-permanent installation of 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 1/0\*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 Hand brake: it is used to prevent the electric wheelchair-car from moving after parking. It is not used as the brake when driving.
- 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 Lubrication and bearing: check for oil leakage or noise increase; if so, contact the supplier.

## 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. In case of serious battery impact, please contact the manufacturer immediately.
- 3 Once the battery is soaked in water during use or storage, it must be stopped and sent back to the manufacturer for testing before normal use.
- 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) Charge while being watched.

## 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 telephones) affect electric wheelchairs. Following these warnings will reduce the risk of loss of control or brake failure, which can lead to serious 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 In case of out-of-control wheelchairs or brake failure, shut down the electric wheelchairs 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	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 <sub>r</sub> 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	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.  $d = 1.2\sqrt{P}$
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	3 V/m  20 V/m	$d = 1.2\sqrt{P}$ 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).
RF radiation (wheelchairs) GB/T 18029.21 GB/T 17626.3			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.  
Note 1: at 80MHz and 800MHz frequencies, the higher frequency band formula is used. 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.			
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. B. In the whole frequency range of 150KHz-80MHz, the field intensity should be lower than 3V/m.			

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
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.					
Note 1: The formula for the higher frequency range is used at 80MHz and 800MHz frequencies. 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.					

## Internation wheelchair warranty card (customer retention) :

Warranty instructions:

- 1 (motor, controller, charger) warranty for one year, other parts are not covered by the warranty;
  - a) The battery will directly affect the service life of the battery and reduce the range with the number of charging or power loss.If you do not use electric wheelchair for a long time, you must charge it once a month.
  - b) Wheelchairs have different wear and tear on tires due to different road conditions.
- 2 The warranty card shall be provided during the warranty;
- 3 The following situations are not covered by the warranty:
  - a) No warranty card;
  - b) The product model recorded on the warranty card is inconsistent with the maintenance product model or has been altered;
  - c) Improper use of goods and other accidental and man-made damage;
  - d) If any non-technical personnel of our company change the product structure or do not use the original parts of our company for maintenance, the warranty period will be cancelled, and the company will not be responsible for the losses caused thereby;
  - e) Damage caused by unpredictable natural disasters;
  - f) Other damages not caused by quality problems.
- 4 For products that exceed the warranty period or are not within the warranty scope, the company will still provide you with maintenance services during the use period, but the company shall charge the accessory fees and appropriate on-site maintenance service fees according to the "retail accessory price list".
- 5 Due to the continuous improvement of the product, there may be some differences between the specific product and the description in the manual. These differences will not affect the structure and safety.

Sales unit information (please fill in by the dealer) Consumer information:

Name:	Name:
Address:	Address:
Contact number:	Contact number:
Zip code:	Zip code:

Product information:

Product model:  
Date of purchase:

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Name:	Name:
Address:	Address:
Contact number:	Contact number:
Zip code:	Zip code:

Product information:

Product model:  
Date of purchase:

### Maintenance record (customer retention) :

Maintenance record 1				
Send a date	Fault description	The cause of the problem	Submit the date	Maintenance man
Handling:				
Maintenance record 2				
Send a date	Fault description	The cause of the problem	Submit the date	Maintenance man
Handling:				
Maintenance record 3				
Send a date	Fault description	The cause of the problem	Submit the date	Maintenance man
Handling:				
Certificate of return and replacement:				

### Maintenance record (company retention) :

Maintenance record 1				
Send a date	Fault description	The cause of the problem	Submit the date	Maintenance man
Handling:				
Maintenance record 2				
Send a date	Fault description	The cause of the problem	Submit the date	Maintenance man
Handling:				
Maintenance record 3				
Send a date	Fault description	The cause of the problem	Submit the date	Maintenance man
Handling:				
Certificate of return and replacement:				