Electric Wheelchair User Manual

Table of Contents

Product Overview

Electric wheelchairs primarily consist of a wheelchair frame, controller, and motor, powered by a battery pack. They feature flexible, simple, and user-friendly operation. For patients with high-level paralysis or hemiplegia who retain single-hand mobility, operation can be achieved with just one hand. They are also suitable for elderly individuals with limited mobility, offering convenience in daily life.

Our company has developed multiple electric wheelchair models tailored to diverse usage environments and user requirements. All our wheelchairs utilize premium materials with specialized surface treatments, ensuring robust durability and long-lasting performance. Tires are crafted from high-quality, wear-resistant materials that are odor-free, delivering quiet and smooth mobility. The power systems are manufactured by renowned domestic enterprises, guaranteeing safety, reliability, and stable performance. Equipped with superior control systems for straightforward operation and backed by a global warranty, our products ensure customer comfort and peace of mind.

Wheelchair Structure

Electric Wheelchair Structural Diagram

Structure and Components: Consists of a drive wheel, idler wheel, wheel frame, seat cushion, backrest, battery, charger controller, and braking system.

Performance Overview

Performance Specifications for Electric Wheelchairs:

Project Content		Performance Specifications (Outdoor Type)
Maximum speed		⩽6. 0km/h
Braking performance		⩽1. 5m
Hill-holding capability		⩽9°
Static Stability	vertical	⩽9°
	lateral	⩽9°
Dynamic Stability	Uphill	⩽6°
	Downhill	⩽6°
Obstacle clearance height		⩽40mm
Ditch width		⩽100mm
Hill-climbing capability		⩽8°
Minimum turning radius		⩽1.2m
Maximum range per charge		⩽20km
power consumption （KW·h/100km）		⩽4.5
Operating Environment		-20℃~50℃

Product Application Scope

Type your text

Suitable as a means of transportation for individuals with mobility impairments and the elderly or frail.

Wheelchair Installation Method(1)

For shipping convenience, certain wheelchair models will be shipped disassembled. Upon arrival, customers must assemble them according to the instruction manual before normal use.

Wheelchair Installation:

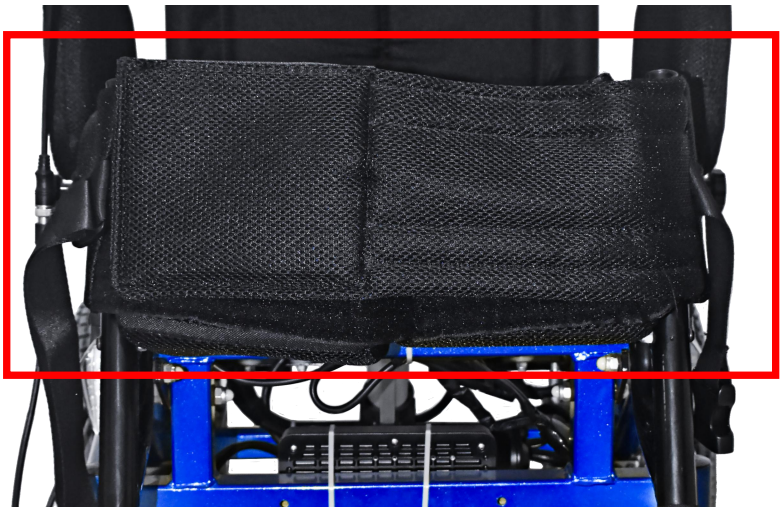
1.After inserting the armrests, backrest, and protective panels, secure them with the knobs (Fig. 1, Fig. 2). The armrests can be folded backward.

Figure 1

Figure 2

2.Install the kick plate and secure it with Velcro. (Fig. 3)

Figure 3

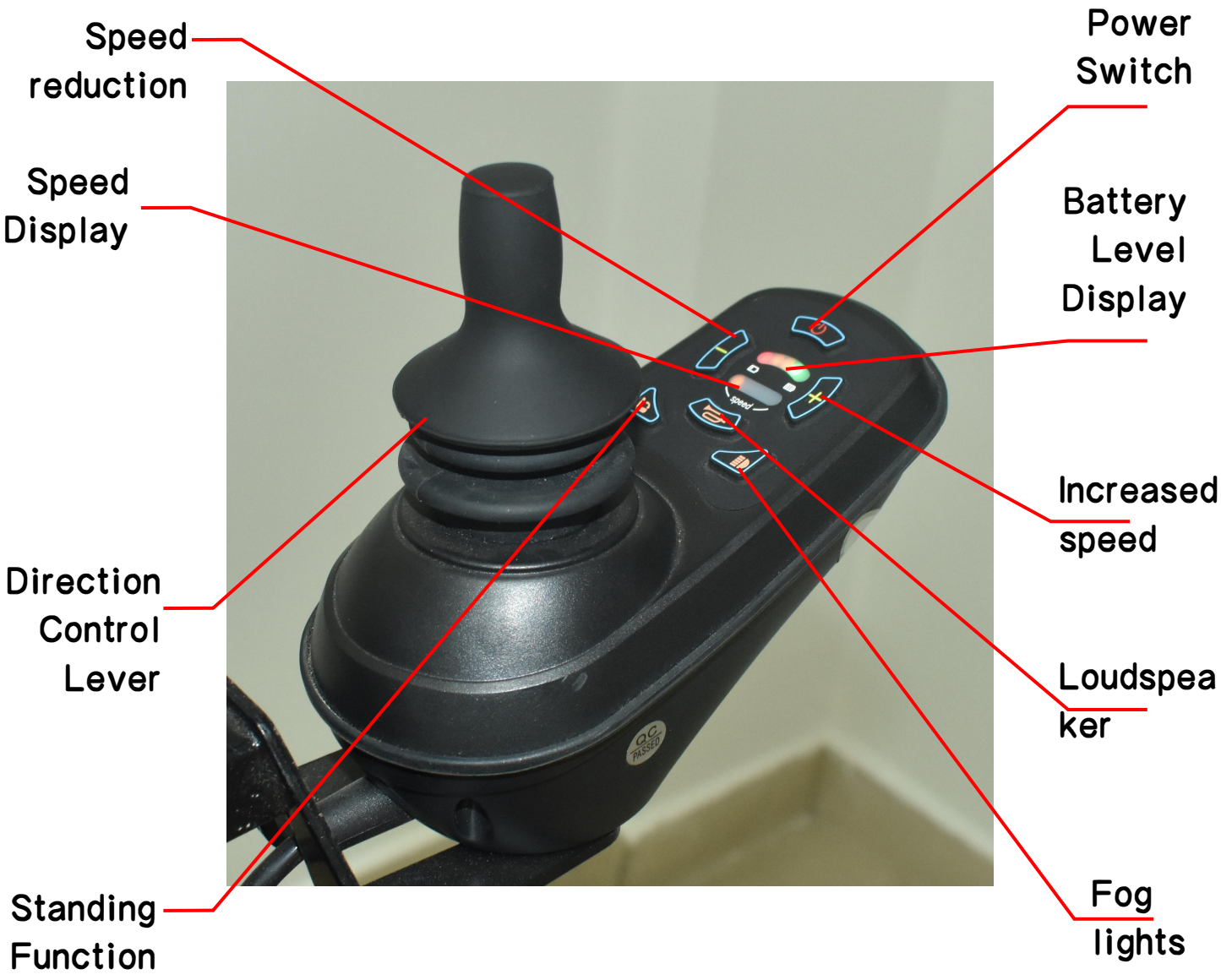


After completing the above installation steps, the wheelchair is ready for basic operation. To maximize battery performance, it is recommended to fully charge the battery using the charger before first use (see Battery User Manual for details).

How to Use an Electric Wheelchair (2)

1.Controller Button Function Guide

All wheelchair controllers are simple to use and offer stable performance. Different controllers are provided based on the specific wheelchair model.



Press the stand-up function button to use the directional control handle to stand up or lower yourself.

4.Unfasten the safety buckle and clip, then secure the leg. (Fig. 6)

Figure 6

4.Secure the chest strap and foot straps to prevent falls.

Speed Indicator Description: The wheelchair's speed status is indicated by the number of " speed indicator lights. " Each press of the speed increase button adds one light, accelerating the travel speed. Maximum speed <6 km/h.

Battery Level Indicator: When fully charged, all ten indicator lights illuminate in red, yellow, and green. When only the red light remains, this indicates critically low battery power. Immediately cease use and recharge the device before resuming operation.

Fault Indicator Light Explanation: When a fault occurs during controller startup or operation, the electronic control system automatically activates protection and alerts the user via flashing lights. At this point, turn off the power supply and resolve the fault before resuming use. Most fault causes can be referenced in the manual. PG Fault Troubleshooting Chart (For faults involving other brands, please contact the manufacturer)

Troubleshooting Guide (For issues with other brands, please contact the manufacturer)

Number of flashing lights	Cause of Failure	Solution
1	Poor power connection or low battery voltage	Check that the power cord is connected correctly; charge the battery.
2	Poor contact in the left motor circuit	Inspect the wiring connection between the controller and the left motor to ensure it is functioning properly.
3	Short circuit in the left motor circuit	The left motor has an internal short circuit and requires manufacturer repair.
4	Poor contact in the right motor circuit	Inspect the wiring connection between the controller and the right motor to ensure it is functioning properly.
5	Short circuit in the right motor circuit	The right motor has an internal short circuit and requires manufacturer repair.
6	Controller protective shutdown	The controller is affected by external signal inputs. Check whether the controller is connected.
7	Controller Joystick Malfunction	Return the control lever to the neutral position and turn the controller power back on.
8	Internal controller failure	Internal controller malfunction; requires manufacturer repair.
9	Left or right electric brake or its wiring malfunction	Electromagnetic brake circuit short circuit or open circuit
10	Battery voltage is too high	Check if the battery power source is incorrect.

2.Controller Operation

Before using the wheelchair, engage the clutch switch. Once engaged, the wheelchair cannot be manually pushed and can only move via motor power. (If battery power becomes insufficient during use, release the clutch switch to manually push the wheelchair to prevent battery damage.) Control the wheelchair's direction using the control handle. The motor's built-in electromagnetic braking system automatically engages when the control handle is not operated. For emergency stops, quickly swing the control handle in the opposite direction to bring the wheelchair to an immediate halt.

Disengaged (Off) State

Clutch (Engaged) State

The control handle directs the wheelchair's movement.

Battery Instructions and Precautions

1. The electric wheelchair utilizes a 12V 32AH (or 12V 20AH) sealed lead-acid battery with a remote control system, achieved by connecting two batteries in series.
2. Users should avoid operating the electric wheelchair outdoors in cold weather. During charging or discharging, the battery temperature must remain within the range of -10°C to 50°C.
3. When using the wheelchair, immediately cease operation upon the low-battery warning (indicated by three remaining red lights on the controller's ten-light battery gauge) to prevent excessive discharge that may impair battery performance. It is recommended to charge the battery after each use rather than waiting for the low-battery warning, as this significantly extends battery lifespan.
4. For extended storage periods, fully charge the battery first. Then disconnect the battery from the controller. Store it in a cool, dry indoor location, recharging it fully every 15 days. If storage exceeds three months, fully charge the battery before removal. This preserves battery performance and lifespan. Before next use, fully recharge the battery.
5. When replacing batteries, both batteries must be replaced simultaneously. Connect wires according to the diagram below, ensuring correct polarity. Do not reverse connections or cause short circuits.

1. The electric wheelchair utilizes a 12V 32AH (or 12V 20AH) sealed lead-acid battery with a remote control system, achieved by connecting two batteries in series.
2. Users should avoid operating the electric wheelchair outdoors in cold weather. During charging or discharging, the battery temperature must remain within the range of -10°C to 50°C.
3. When using the wheelchair, immediately cease operation upon the low-battery warning (indicated by three remaining red lights on the controller's ten-light battery gauge) to prevent excessive discharge that may impair battery performance. It is recommended to charge the battery after each use rather than waiting for the low-battery warning, as this significantly extends battery lifespan.
4. For extended storage, fully charge the battery first. Then disconnect the battery from the controller. Store it in a cool, dry indoor location, recharging it fully every 15 days. If storage exceeds three months, fully charge the battery before removal. This preserves battery performance and lifespan. Before next use, fully recharge the battery.
5. When replacing batteries, replace both batteries simultaneously. Connect wires according to the diagram below, ensuring correct polarity. Do not reverse connections or cause short circuits.
6. Do not disassemble the battery to prevent injury from battery acid. If acid splashes onto skin, immediately rinse with copious amounts of water and seek medical attention if necessary.
7. All electric wheelchair batteries are warranted for 7 months from the purchase date (based on the factory date). Free replacement is available at the point of purchase under the following conditions: 1) The battery fails to operate continuously for at least 1 hour on good road conditions after a full charge. 2) Non-user-caused damage to the battery casing, such as cracking or leakage. (Note: Batteries damaged due to failure to follow usage precautions will not be replaced or refunded. However, replacement batteries may be purchased.)

Precautions for Using Electric Wheelchairs

1. Electric wheelchairs are suitable for use in spacious indoor areas, garden paths, and well-maintained roads around residential areas. Avoid proximity to motor vehicles, deep pits, and bodies of water.
2. Prolonged use on bumpy or uneven surfaces and frequent stair climbing should be avoided to prevent impact damage to the frame.
3. Avoid prolonged use on steep inclines to prevent electrical circuit and motor overload, as well as excessive battery drain. Never remove the anti-tip wheels yourself to ensure the wheelchair does not tip backward during uphill travel.

4. When stopping during operation, simply return the control handle to its neutral position and the electric wheelchair will automatically brake. When stopping on an incline, the electric wheelchair will automatically engage the hill-hold brake.
5. After inflating the tires (applicable to electric wheelchairs with pneumatic tires), promptly unscrew the dedicated inflation connector to prevent air leakage. The spare mini air pump is suitable for emergency use.
6. Regularly inspect all connectors for secure connections and check fastening screws for looseness, adjusting as needed.
7. To fold the wheelchair, first disconnect the battery plug and remove the battery compartment.
8. When removing the controller, disconnect all associated plugs first. As a valuable component, the controller should be carefully disassembled and stored with care.
9. In case of malfunction, contact customer service or the manufacturer for troubleshooting guidance.

Explanation of Graphics, Symbols, Abbreviations, and Other Content Used on Medical Device Labels

	Attention! Consult the documentation.		Classification of Protective Procedures for Liquid Ingestion
	Category B Applications Section		Environmental Protection Label, indicating that waste disposal must comply with environmental protection regulations.

Maintenance and Care of Electric Wheelchairs

1. During transportation and storage, the product must be positioned correctly according to the arrow indicators on the outer packaging.
2. Avoid exposure to rain during transport. Turn the clutch lever to the side to engage the clutch in driving mode and prevent slippage. Secure with a rope if necessary.
3. During storage, avoid exposure to rain and do not place outdoors or in damp areas to prevent moisture damage to electrical components.
4. Storage conditions: (a) Ambient temperature: -30°C to +55°C; (b) Relative humidity: <80%; (c) Atmospheric pressure: 86 kPa to 106 kPa.
5. Storage method: Store packaged electric wheelchairs indoors in a clean, well-ventilated area free from corrosive gases. Avoid direct sunlight.

A.Safety Features

1. The forward, reverse, turning, acceleration, and deceleration speeds of the wheelchair can be preset. 2. Features current overload protection. 3. The electric wheelchair cannot be operated while charging.

B.Cleaning and Maintenance Instructions

1. Clean and wipe down the electric wheelchair regularly (at least once a month). 2. For frequently touched parts such as the seat, armrests, and controller, use a clean, slightly damp cloth for wiping (do not use organic solvents). 3. Do not directly spray water onto the electric wheelchair, as this may cause electrical short circuits or damage to its components.

C.Battery Inspection and Maintenance

If the electric wheelchair is not used for an extended period, please inspect the battery at least once a month for any deformation or cracks and charge it once. Use maintenance-free batteries that require no water refilling to avoid operational hassles. When not in use, charge the battery every 15 days.

D.Motor Inspection and Maintenance

Regularly inspect the connection between the motor and gearbox for oil leaks or loose screws, and pay attention to any unusual noises during operation. Periodically check the motor carbon brushes and replace them as needed.

E.Electromagnetic Brake Inspection and Maintenance

Operate the electric wheelchair to move forward, backward, and turn. Check whether the brake function is working properly. If you notice any abnormalities in braking distance or function, contact the manufacturer or dealer immediately for repairs.

F.Tire Inspection and Maintenance

Regularly inspect the tread depth of both front and rear tires for wear and check the tire surfaces for cracks. Replace tires as needed. Note: Tire wear is not covered under the electric wheelchair's warranty.

G.Environmental Protection Statement

To protect the Earth's ecological environment and prevent environmental pollution, when components of your electric wheelchair become damaged or when replacing the battery, please dispose of waste according to local laws and regulations or return the old unit to the manufacturer or dealer for proper handling. Do not discard it arbitrarily.

H.This manual does not provide circuit diagrams, parts lists, or similar documentation.

If you are unable to determine the cause of a product malfunction, please contact our company's after-sales service.

Product Electrical Characteristics

* Classified by type of electrical shock protection, internal power supply equipment.
* Classified by degree of protection against electric shock: Type B applied parts.
* Classified by ingress protection level: IPX4.
* Classification based on safety level when used with flammable anesthetic gases mixed with air or with oxygen or nitrous oxide: Non-AP/APG type,
* Classified by operating mode: Continuous operation.
* Internal power supply voltage: DC 24V
* No application components with protection against discharge effects.
* No signal output section.
* Non-permanent installation product.

△ Note:

Complies with the electromagnetic compatibility requirements specified in the YY0505-2012 standard. Users should install and operate the device in accordance with the electromagnetic compatibility information provided in the accompanying documentation. Portable and mobile RF communications equipment may affect performance; avoid strong electromagnetic interference during use, such as proximity to mobile phones, microwave ovens, etc. Refer to the appendix for detailed guidelines and manufacturer's statements.

△ Warning:

Equipment or systems should not be placed in close proximity to or stacked with other equipment. If proximity or stacking is unavoidable, verify that normal operation is maintained under the specific configuration. Class A equipment is intended for industrial environments. Due to conducted and radiated disturbances, ensuring electromagnetic compatibility in other environments may present potential difficulties.