

CASWE C20

Electric Wheelchair User Manual



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1. Preface

Thank you for purchasing our product. Before using the electric wheelchair for the first time, please be sure to read the user manual and follow the instructions carefully. If you have any questions or do not understand any part of the manual, please contact our authorized local distributor or after-sales service department.

The intended use of the electric wheelchair is for the transportation of individuals with mobility impairments and to assist with walking function compensation. Its common function is for mobility, allowing the user to move safely.

The electric wheelchair is powered by an independent battery, which is designated as part of the medical electrical equipment.

The following symbols are used to identify warnings and precautions. They appear throughout the user manual. Please be sure to read and follow them carefully.

 **Warning Failure to pay attention to the warnings in the manual may result in physical injury.**

 **Attention Failure to pay attention to the precautions in the manual may result in damage to the electric wheelchair. The illustrations in this manual are for reference only; please refer to the actual product during use.**

2. Warnings and Safety Instructions

 **Warning Failure to pay attention to the warnings in the manual may result in physical injury. Please strictly follow the following instructions.**

- Do not operate your electric wheelchair before reading and fully understanding this manual.
- Do not operate your electric wheelchair before assembly and inspection are completed.
- It is recommended that individuals with mental disorders, slow reflexes, or difficulty in operation do not use the electric wheelchair.
- Never get on or off the electric wheelchair when the controller is powered on or when the wheelchair is in manual mode without the assistance of the fixed wheelchair support.
- Do not use the electric wheelchair if the anti-tip wheels are not installed or are malfunctioning.
- Do not stand on the footrest to avoid tipping the electric wheelchair.
- First-time users should drive at low speeds to avoid accidents due to unfamiliar operation.
- Before turning, reduce the speed of the electric wheelchair to below 2 km/h.
- When going downhill, drive slowly in the lowest gear. When going uphill, drive cautiously, lean your body slightly forward, and go at low speeds. Do not turn or steer on slopes.
- During transport, users are strictly prohibited from riding in the electric wheelchair.

 **Attention Failure to pay attention to the precautions in the manual may result in damage to the electric wheelchair. Please strictly follow the instructions below.**

- Do not modify the device without the manufacturer's authorization.
- Never disassemble, modify the electric wheelchair, or replace parts with those not made by our company.
- Check that the wheel connections are secure and reliable.
- Operate the controller joystick gently, and avoid moving it back and forth rapidly.
- The controller is the core component of the vehicle; do not leave the electric wheelchair outdoors for long periods or drive it indoors when it's raining to prevent moisture damage.
- Our electric wheelchair is designed for indoor use and suitable for driving in courtyards.
- When the battery level reaches 10%, do not continue driving. Charge immediately to avoid being unable to return.
- Do not perform maintenance or servicing while using the electric wheelchair.
- Patients with mobility impairments should not perform maintenance or servicing on the device.
- If not used for a long time, the battery will discharge automatically. Therefore, when storing for a long period, please charge it every 3 months. Additionally, before using it again, make sure to charge it fully (about 8 hours to reach full capacity). Irregular charging when not in use will affect battery life, and even fully charging it before use may reduce battery capacity.
- The patient is the intended operator. Any part of the device that the patient may touch includes the seat, backrest, footrests, armrests, controller, etc.
- Battery replacement should be carried out by professional maintenance personnel. Self-replacement may lead to energy hazards.
- Warning: Do not modify this device. Unauthorized modifications may alter the wheelchair's performance and, in severe cases, pose a risk to life.
- Contraindications: None.
- If the wheelchair will not be used for an extended period, disconnect and remove the battery.
- Loss of power can result in unacceptable risks. The wheelchair must be connected to a suitable power source.
- The electric wheelchair is intended to obtain power from the charger, and the internal power supply is only used to power the electric wheelchair.
- Do not place the electric wheelchair in locations where disconnecting the device may be difficult.
- To avoid choking hazards caused by excessive cord length, regularly check if the soft power cord is loose. If loose, secure it promptly.
- Regularly check if small parts such as screws on the wheelchair are tightly secured to prevent loosening, absorption of water, or ingestion.
- During the actual service life, the assembly of the ME system must be evaluated according to the GB9706.1-2020 standard.

- If there is a change in the wheelchair's performance, stop using it.
- Do not touch the battery connection wires or the charger ports.
- In the following cases, inexperienced operators or parties should contact the manufacturer or the manufacturer's representative:
 - —If needed, seek assistance with the installation, use, or maintenance of the ME device or ME system;
 - —Report any abnormal operation or incidents.

3. Main Structure and Performance of the Product

3.1 The electric wheelchair consists of the frame, motor, controller, lithium battery, seat, wheels, armrests, and footrests. It can be operated by the user or caregiver, with one or more motors driving the chair and a seat support. The structural diagram is shown below. (See Figure 1)

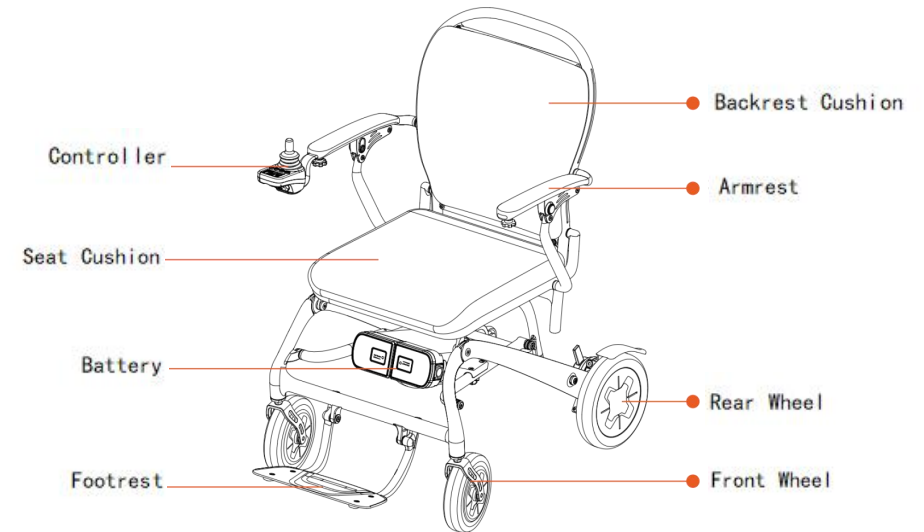


Figure 1

3.2 Structural Features

- Energy-efficient and high-performance motor, anti-tip device.
- Aluminum alloy frame, comfortable seat and back cushions, foldable armrests.
- Intelligent controller: power button, battery level indicator, omni-directional joystick, horn.
- Lithium battery configuration, strong endurance.
- Two working modes: fully electric drive mode and power-assisted push mode.

3.3 Product Application Range

- The electric wheelchairs produced by our company are designed for the transportation of individuals with mobility impairments and to assist with walking function compensation.
- Common functions: electric drive, forward and backward control, steering control, speed adjustment, folding and storage.
- Normal operating conditions: Ambient temperature range: +5°C to +40°C
- Relative humidity range: 15% to 90%
- Atmospheric pressure range: 70 kPa to 106 kPa

3.4 Electric Wheelchair Performance Specifications

Product Type: Indoor Model		Maximum Speed: ≤ 6 km/h
Driving and Braking Performance	Braking on flat surface: ≤ 1.0 m	Parking on Slope Performance: 6°
	Braking on maximum safe slope: ≤ 1.6 m (3°)	Static Stability: $\geq 6^\circ$
Dynamic Stability: $\geq 3^\circ$ (no tilt)		Obstacle-Crossing Height: ≥ 25 mm
Maximum Trench/Curb Width: 100 mm		Climbing Ability: $\geq 3^\circ$
Turning Diameter: ≤ 1800 mm		Driving Range: ≥ 10 km
Load Capacity: ≤ 136 kg		Seat Plane Angle: 4.6°
Front Position of Armrest Structure: $320 \text{ mm} \pm 10 \text{ mm}$		Internal Power Supply: DC $24\text{V} \pm 5\%$
Effective Seat Width: $450 \text{ mm} \pm 10 \text{ mm}$		Noise Level: < 65 dB
Overall Dimensions: $L950 \times W590 \times H950 \text{ mm} \pm 10 \text{ mm}$		Motor Power: $200\text{W} \times 2$
Angle Between Footrest and Seat Surface: 102°		Front Seat Surface Height: $510 \text{ mm} \pm 10 \text{ mm}$
Net Weight of the Wheelchair: 15.5 kg		Effective Seat Depth: $420 \text{ mm} \pm 10 \text{ mm}$
Weight of Heaviest Component: 12.9 kg		Distance from Footrest to Seat: $450 \text{ mm} \pm 10 \text{ mm}$
Backrest Angle: 10°		Backrest Height: $500 \text{ mm} \pm 10 \text{ mm}$
Ingress Protection Rating: IP22		
Folded Dimensions (Width / Length / Height): $L590 \times W740 \times H360 \text{ mm} \pm 10 \text{ mm}$		Battery: Lithium Battery DC 24V $10\text{Ah} \times 2$
Front Wheel Specification: 7 inches		Rear Wheel Specification: 8.5 inches
The above parameters may vary depending on the user's weight, operating environment, and battery usage.		
Type of Protection Against Electric Shock: Internally powered equipment / Degree of protection: BF applied part (does not operate while charging; during normal operation, considered internally powered equipment)		
Operating Mode Classification: Continuous operation / Electromagnetic compatibility group: Group 1, Class B		
Disclaimer: Our company reserves the right to make technical and appearance changes to this product without prior notice. We appreciate your understanding.		

4. Instructions for Use

Unpack the box, remove the electric wheelchair, footrest assembly, charger, and other items.

Check against the packing list to ensure nothing is missing or damaged.

4.1 Installation

4.1.1 Push the footrest outward by hand to its maximum limit. (See Figure 2)

4.1.2 Place the wheelchair on a flat surface. Hold the push handle with one hand and press the front edge of the seat outward with the other hand. The front wheels will tilt forward and touch the ground.

(See Figure 3)



Caution

Do not hold the seat tube with your hands to avoid pinching injuries when pressing down the seat cushion!

Tip: Before getting on the wheelchair, fold up both left and right footrests to make mounting and dismounting easier.

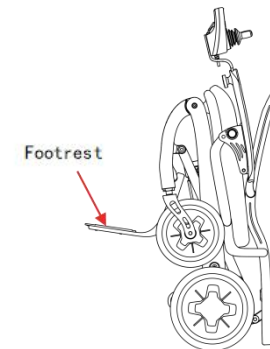


Figure 2

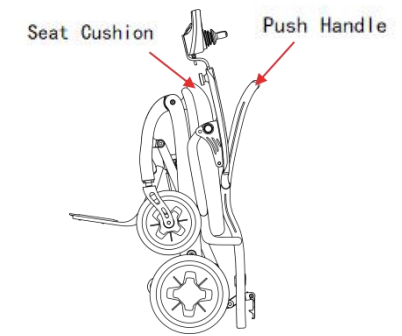
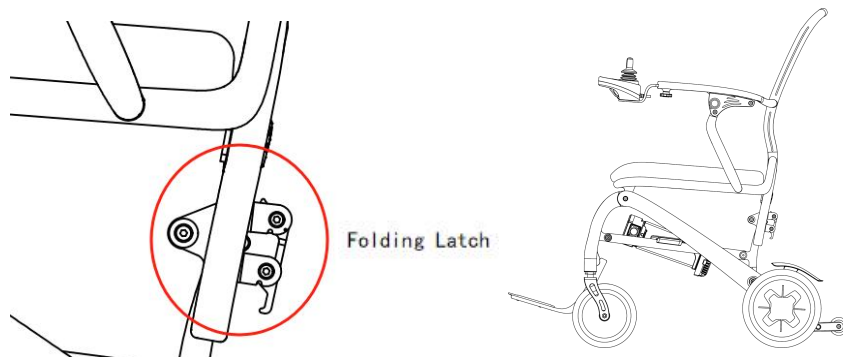


Figure 3

4.1.3 After unfolding the wheelchair, make sure the folding latch is securely locked (you should hear a “click”), otherwise the wheelchair may fold automatically, posing a risk to the user (See Figure 4).

Diagram of the unfolded wheelchair (See Figure 5).



4.1.4 Ba Figure 4 d Installation

Figure 5

Press the battery button with your finger and pull the battery outward to remove it. Align the battery with the slots in the battery compartment and push it in to install the battery. (See Figure 6)

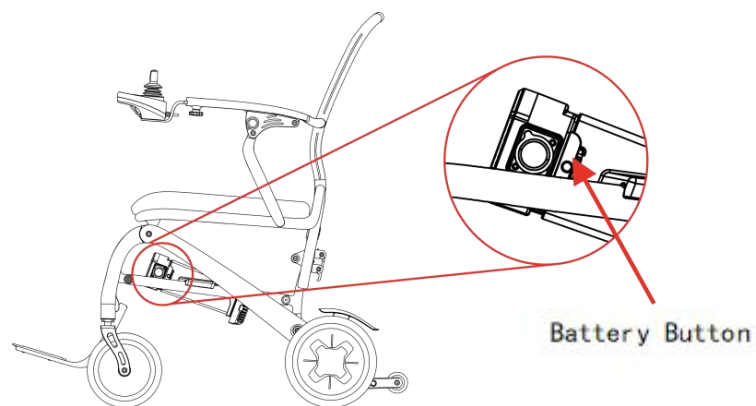


Figure 6

4.1.5 Controller Installation

Align the controller bracket spindle with the mounting hole on the right armrest tube and insert it (see Figure 7). Then, secure the controller to the armrest tube by tightening the knob at the lower part of the armrest (see Figure 8). By default, the controller is mounted on the right side. If you wish to install it on the left side, remove the controller mounting bracket from the right side and attach it to the left side (ensure the screw type matches). At the same time, transfer the corresponding connection cable to the left side and secure it with the Velcro strap.

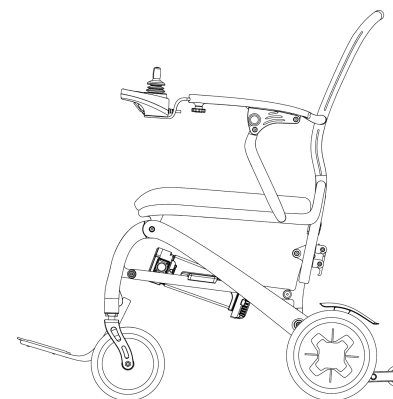


Figure 7

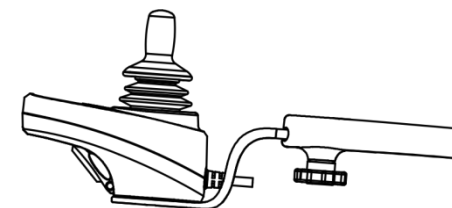


Figure 8

4.1.6 Controller Wiring

The controller is installed on the right side by default. (If you need to change the installation position, first remove the plastic mounting screws and reinstall on the left side.) Connect the control cable connector on the controller to the corresponding connector on the driver, and tighten the connecting nut. When connecting the connectors, make sure the grooves are aligned and that the black arrows on both sides correspond. Do not force the connectors together to avoid damage. (See Figures 9, 10, 11)



Figure 9



Figure 10

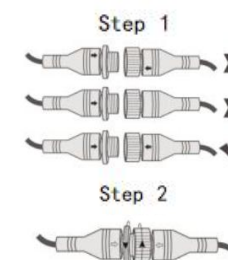


Figure 11

4.1.7 Battery Wiring

Connect the battery pack cable to the corresponding connector on the driver and tighten the nut. Make sure the grooves are aligned and that the black arrows on both connectors correspond. Do not force the connectors together to avoid damage.

The battery connector is located at the bottom rear side of the backrest. (See Figure 12)

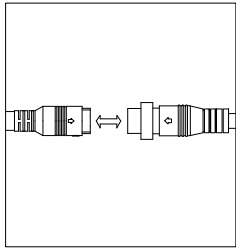


Figure 12

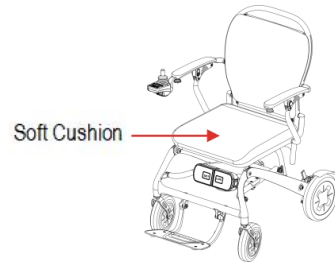


Figure 13

4.1.8 Optional Soft Cushion (See Figure 13)

4.2 Folding the Wheelchair

4.2.1 First, lift the folding latch. (See Figure 14)

4.2.2 Follow the steps for unfolding the wheelchair in reverse order to fold the wheelchair.

4.2.3 Note: The controller must be removed during folding to avoid damage.

4.2.4 Fully folded state. (See Figure 15)

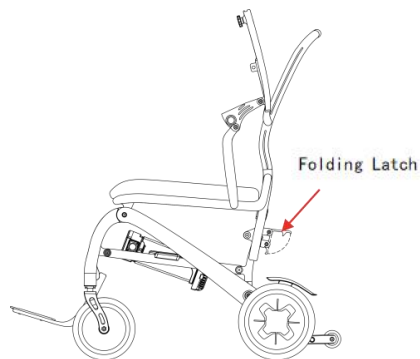


Figure 14

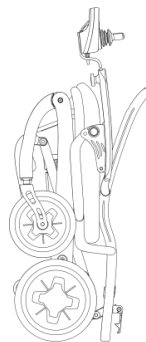


Figure 15

4.3 Operating the Electric Wheelchair

4.3.1 Controller Function Description: (See Figures 16 and 17)

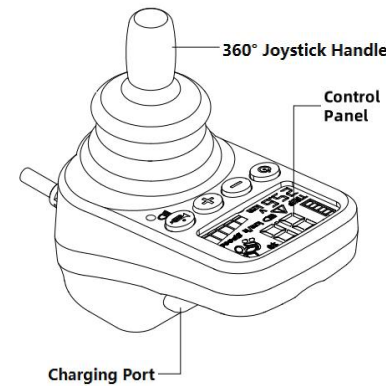


Figure 16

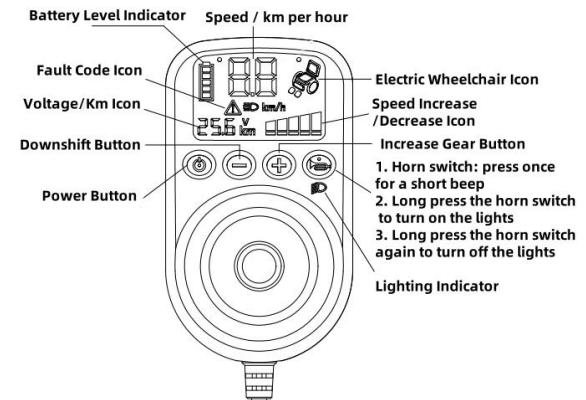


Figure 17

● Joystick: Pushing the joystick controls the wheelchair's direction and speed.

● Power Switch: Press the power switch; the wheelchair will turn on with a "beep." Press and hold for 3 seconds to turn off; a long beep confirms shutdown.

● Speed Limit Buttons: Speed Limit Decrease (-): Press to lower the maximum speed. Speed Limit Increase (+): Press to raise the maximum speed.

● Horn: Press to sound the horn; release to stop.

4.3.2 Controller Usage

(1) After the operator is seated, turn on the controller power switch. The wheelchair will power on with a beep. The system will implement a safe startup strategy. Please release the joystick when turning on the wheelchair, otherwise, a system error will be prompted, and the wheelchair will not start.

(2) The wheelchair's speed is controlled by the speed adjustment buttons on the controller, with five gear levels. It is recommended to start in low-speed mode. The speed setting cannot be changed during operation. First-time users should operate at low speeds to avoid accidents due to inexperience.

(3) Slowly move the joystick to start the wheelchair. Pushing the joystick forward makes the wheelchair move forward, moving it left turns the wheelchair left, right turns the wheelchair right, and pulling it backward makes the wheelchair reverse. After becoming familiar with the controls, the wheelchair will be easy to maneuver.

(4) To sound the horn, press the button with the horn symbol on the controller.

(5) When the battery is fully charged, all battery indicator bars will light up. When the battery is low, only one bar will light up, indicating insufficient battery power. Please charge promptly to maintain adequate battery levels.

(6) To turn off the wheelchair, press and hold the power switch. The wheelchair will turn off after a beep.

4.3.3 Switching Between Electric and Manual Operation

The electric wheelchair uses a brushless motor with an electromagnetic brake system. In electric mode, releasing the joystick stops the wheelchair, ensuring safe operation. The electric/manual switch label is located on the motor. When the switch is set to the "Electric" position, the wheelchair is in electric mode. When the switch is set to the "Manual" position, the wheelchair is in manual mode, allowing the wheelchair to be pushed manually. When using electric mode, make sure the switch is set to the "Electric" position before turning on the wheelchair. Otherwise, the controller will issue an error alarm.



Figure 18

4.4 Charger Usage

4.4.1 Only use the dedicated charger provided with the wheelchair to ensure safety. Insert the charger's three-pin metal plug into the controller's three-pin socket, ensuring the correct direction for inserting the charging plug. To make it more convenient for users, the battery pack can be removed and charged directly. (See Figures 19, 20, 21)

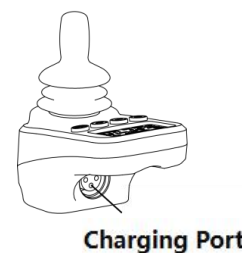


Figure 19

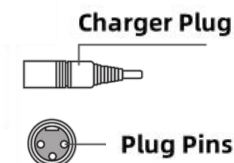


Figure 20

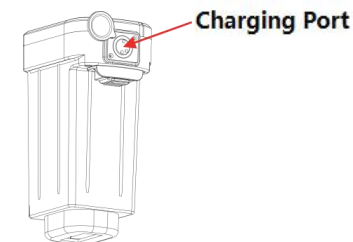


Figure 21

4.4.2 Insert the plug of the charger into a standard electrical outlet.

4.4.3 During the charging process, the indicator light on the charger will be orange. When the light turns green, it indicates that the battery is fully charged. After charging, unplug both the charger's power plug and the charging output plug, and store the charger in a safe place. If the wheelchair is not in use, turn off the controller to reduce power consumption. (Charging time depends on the remaining charge in the battery. For a new battery that is uncharged, it may take approximately 8-10 hours to fully charge for the first time.)

4.4.4 While the wheelchair is charging, it will not respond to any operation. Once the charger is unplugged and the controller power is turned back on, the wheelchair can be operated normally.

4.4.5 If the battery becomes ineffective, be sure to purchase a new battery as per the specifications and replace the old one. Since the old battery may cause environmental pollution, it must be handed over to a certified battery recycling service or returned to the dealer for proper disposal.

5. Product Transport and Storage Conditions and Methods

5.1 Transport

The product should be handled with care during transportation. It must not be thrown, rolled, or subjected to heavy pressure.

5.2 Storage

The product should be stored in a dry, well-ventilated area. It should be kept away from environments with high temperatures or rapid temperature changes. The product should also be kept separate from acidic, alkaline, or other chemically corrosive substances.

5.3 Transportation and Storage Environmental Limitations

- Ambient Temperature Range: -25°C ~ +55°C
- Relative Humidity Range: ≤ 90%

Atmospheric Pressure Range: 70 kPa ~ 106 kPa

6. Electromagnetic Compatibility (EMC) Statement

6.1 Electromagnetic Interference (EMI)

Electromagnetic interference comes from external electromagnetic wave energy (such as radio and TV transmitters, CB radio waves, garage door openers, cordless phones, etc.). EMI may affect the control system of the electric wheelchair. Some interference could cause brake failure, unintended movement, or loss of control over the direction. It may also cause permanent damage to the control system.

6.2 Classification of Electromagnetic Interference

- Handheld Shortwave Radio Transceivers: These devices have antennas and include radio waves in the urban band, walkie-talkies, mobile network systems, and signal transmission devices.
- Medium Wave Mobile Radio Transceivers: Typically installed on the exterior of buildings or vehicles. Examples include police, fire, tax, and ambulance radio transceivers.
- Large Wave Radio Transceivers: These are typically antennas installed on transmission towers, such as commercial radio and television transmission systems.

6.3 Prevention of Electromagnetic Interference

- Do not use handheld radio transceivers, such as mobile phones, radios, etc., while the wheelchair's power is on.
- If the electric wheelchair becomes uncontrollable or the brakes fail, please contact our company or the dealer.



Caution

- The electric wheelchair complies with the electromagnetic compatibility requirements specified

in the YY 9706.102, YY 9706.111, and GB/T 18029.21 standards.

- Users should install and operate the wheelchair according to the electromagnetic compatibility information provided in the accompanying documentation.
- Portable and mobile RF communication devices may affect the performance of the electric wheelchair. Avoid strong electromagnetic interference during use, such as being near mobile phones, microwave ovens, etc.

For guidelines and the manufacturer's statement, please refer to the attachment.



Warning

- The device or system should not be used close to or stacked with other devices. If it must be used in close proximity or stacked, verify that it can operate properly under the configuration used.
- Except for cables sold as spare parts for internal components by the device or system manufacturer, using accessories and cables not specified may increase emissions from the device or system or reduce its immunity to interference.
- During special diagnostics or treatments, mutual interference may cause measurement errors or even damage to the testing instruments.

Guidelines and Manufacturer's Statement – Electromagnetic Emissions		
The electric wheelchair is intended to be used in the following specified electromagnetic environment. The buyer or user of the electric wheelchair should ensure that it is used in this electromagnetic environment:		
Emission Test	Compliance	Electromagnetic Environment – Guidelines
GB4824 RF Emissions	Group 1	The electric wheelchair uses RF energy only for its internal functions. Therefore, its RF emissions are very low, and it is unlikely to interfere with nearby electronic devices.
GB4824 RF Emissions	Class B	The electric wheelchair is suitable for use in all facilities connected to a low-voltage public power supply for residential use.
GB17625.1 Harmonic Emissions	Class A	
GB17625.2 Voltage Fluctuations/Flicker Emissions	Compliant	

Guidelines and Manufacturer's Statement – Electromagnetic Immunity			
Immunity Test	IEC60601 Test Level	Compliant Level	Electromagnetic Environment–Guidelines
Electrostatic Discharge (ESD) GB/T 18029.21 GB/T 17626.2	±6 kV contact discharge ±8 kV air discharge	±6 kV contact discharge ±8 kV air discharge	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical Fast Transient/Burst GB/T 18029.21 GB/T 17626.4	±2kV on power supply lines ±1kV on input/output lines	±1kV on power supply lines	The mains power supply should be of the quality typically used in a commercial or hospital environment.
Surge GB/T 18029.21 GB/T 17626.5	±1 kV line-to-line ±2 kV line-to-earth	±0.5 kV line-to-line	The mains power supply should be of the quality typically used in a commercial or hospital environment.
Voltage Dips, Short Interruptions, and Voltage Variations on Power Input Lines GB/T 18029.21 GB/T 17626.11	0% UT for 1 cycle (100% voltage dip on UT) 70% UT for 25 cycles (30% voltage dip on UT) 0% UT for 5 seconds (100% voltage dip on UT)	0% UT for 0.5 cycle (>95% voltage dip on UT) 0% UT for 1 cycle (100% voltage dip on UT) 70% UT for 25 cycles (30% voltage dip on UT) 0% UT for 5 seconds (100% voltage dip on UT)	The mains power supply should be of the quality typically used in a commercial or hospital environment. If continuous operation is required during power interruptions, it is recommended that the electric wheelchair be powered by an uninterruptible power supply (UPS) or battery power.
Power Frequency Magnetic Fields (50/60Hz) GB/T 18029.21 GB/T 17626.8	3A/m	30A/m 50/60Hz	Power frequency magnetic fields should be at levels characteristic of a typical location in a commercial or hospital environment.
Note: UT refers to the AC mains voltage before applying the test voltage.			
Guidelines and Manufacturer's Statement – Electromagnetic Immunity			
The electric wheelchair is intended to be used in the following specified electromagnetic environment. The purchaser or user of the electric wheelchair should ensure that it is used in this electromagnetic environment:			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidelines

RF Conducted GB/T 18029.21 GB/T 17626.6	3 V(rms) 150 kHz~80 MHz	3V(rms)	Portable and mobile RF communications equipment should not be used closer to any part of the electric wheelchair, including cables, than the recommended separation distance. This distance should be calculated using the formula corresponding to the transmitter frequency. Recommended separation distance: $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P}$ $d = 2.3\sqrt{P}$ $d = 0.175\sqrt{P}$ $d = 0.35\sqrt{P}$
RF Radiated GB/T 18029.21 GB/T 17626.3	3V/m 80 MHz~2.5 GHz	3V/m 80 MHz~1 GHz (Charger) 20V/m 26 MHz~2.5 GHz (Wheelchair)	Where P is the maximum rated output power of the transmitter in watts (W), as specified by the transmitter manufacturer, and d is the recommended separation distance in meters (m). For fixed RF transmitters, the field strength should be determined by survey of the electromagnetic environment and should be below the compliance level in each frequency range. . Interference may occur in the vicinity of equipment marked with the following symbols. 
Note 1: For frequencies between 80 MHz and 800 MHz, use the formula for the higher frequency range. Note 2: These guidelines may not be applicable in all situations, as electromagnetic propagation is affected by absorption and reflection from buildings, objects, and the human body.			
a For fixed RF transmitters, such as wireless (cellular/cordless) phones and base stations for land mobile radios, amateur radio, AM and FM radio broadcast, and television broadcast, the field strength cannot be accurately predicted theoretically. To assess the electromagnetic environment of fixed RF transmitters, a survey of the electromagnetic field at the location of the electric wheelchair should be considered.			
If the measured field strength at the location of the electric wheelchair exceeds the RF compliance levels specified for the applications above, the electric wheelchair should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the electric wheelchair.			
b Across the entire frequency range of 150 kHz – 80 MHz, the field strength should be below 3 V/m.			

Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the Electric Wheelchair					
The electric wheelchair is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. Based on the maximum output power of the communications equipment, the purchaser or user of the electric wheelchair can use the recommended minimum separation distances below between portable and mobile RF communications equipment (transmitters) and the electric wheelchair to prevent electromagnetic interference.					
Maximum Rated Output Power of the Transmitter / W	Separation Distance for Different Transmitter Frequencies / m				
	150 kHz ~ 80 MHz— $d = 1.2\sqrt{P}$	80 MHz ~ 800 MHz (充电器) $d = 1.2\sqrt{P}$	800 MHz ~ 1.0 GHz (充电器) $d = 2.3\sqrt{P}$	26 MHz ~ 800 MHz (轮椅车) $d = 0.175\sqrt{P}$	800 MHz ~ 2.5 GHz (轮椅车) $d = 0.35\sqrt{P}$
0.01	0.12	0.12	0.23	0.018	0.04
0.1	0.38	0.38	0.73	0.055	0.11
1	1.2	1.2	2.3	0.175	0.35
10	3.8	3.8	7.3	0.553	1.1
100	12	12	23	1.75	3.5
For transmitters with maximum rated output power not listed in the table above, the recommended separation distance d, in meters (m), can be calculated using the formulas in the corresponding transmitter frequency column. Here, P is the maximum rated output power of the transmitter, in watts (W), as specified by the transmitter manufacturer. Note 1: For frequencies between 80 MHz and 800 MHz, use the formula for the higher frequency range. Note 2: These guidelines may not be applicable in all situations, as electromagnetic propagation is affected by absorption and reflection from buildings, objects, and the human body.					

7. Fault Diagnosis and Troubleshooting

Please read the above operating instructions and precautions carefully. The wheelchair has undergone rigorous product testing and has excellent quality.

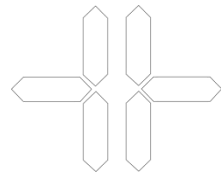
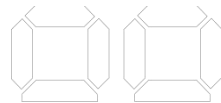
If error codes appear on the LCD display due to misuse, please refer to the following error code descriptions and follow the instructions for troubleshooting. For hardware issues, contact customer service promptly for repair.

● Fault Description and Solutions:

No.	Fault Code	Cause	Solution
1	1 beep E1	Battery voltage too low	Charge the battery for at least 30 minutes and try again.

2	2 beeps E2	Left motor cable disconnected or left motor faulty	Swap the left motor cable with the right motor cable, and connect the right cable to the left motor. If the beep persists, the controller may be faulty. Restart the wheelchair; if you hear 24 beeps, there is a motor or cable (loose connection) fault.
3	3 beeps E3	Left brake cable disconnected or left brake faulty	Swap the left motor cable with the right motor cable and connect the right cable to the left motor. If the 3-beep alarm persists, the controller may be faulty. Restart the wheelchair; if you hear 5 beeps, the brake (or clutch not engaged) is faulty.
4	4 beeps E4	Right motor cable disconnected or right motor faulty	Swap the right motor cable with the left motor cable and connect the left cable to the right motor. If the 4-beep alarm persists, the controller may be faulty. Restart the wheelchair; if 2 beeps occur, there is a motor or cable (loose connection) fault.
5	5 beeps E5	Right brake cable disconnected or right brake faulty	Swap the right motor cable with the left motor cable and connect the left cable to the right motor. If the 5-beep alarm persists, the controller may be faulty. Restart the wheelchair; if 3 beeps occur, the brake (or clutch not engaged) is faulty.
6	6 beeps E6	Joystick-controller communication error	Communication between the joystick and controller failed. Please contact the manufacturer.

7	8 beeps E8	Internal controller fault	Internal controller fault. Please contact the manufacturer for return and repair.
8	9 beeps E9	Left Hall sensor wire fault (for brushless controller)	Swap the left motor wire to the right motor and connect the right wire to the left motor. If the 9-beep alarm persists, the controller is faulty. After restarting, if there is a 10-beep alarm, the left motor Hall sensor wire or the motor itself is faulty.
9	10 beeps EV	Right Hall sensor wire fault (for brushless controller)	Swap the right motor wire to the left motor and connect the left wire to the right motor. If the 10-beep alarm persists, the controller is faulty. After restarting, if there is a 9-beep alarm, the right motor Hall sensor wire or the motor itself is faulty.
10	11 beeps EB	No voltage output from brake or brake short circuit	When gently pushing the joystick, the wheelchair does not move. The electromagnetic brake does not make a "click" sound, indicating that the controller's brake circuit may be damaged and no drive voltage is output, or the electromagnetic brake system is short-circuited. Try testing with a new motor to rule out the issue.
11		Alarm when powering on with the joystick not in the center position	When powering on, the joystick is not in the center position. Please return the joystick to the center. If the alarm persists after centering

	 Fault codes as shown in the figure.		the joystick, the joystick needs to be recalibrated. Please contact the manufacturer, or refer to the digital controller parameter adjustment manual to recalibrate the joystick yourself. (The user must operate the joystick 2 seconds after turning on the controller.)
12	 Fault codes as shown in the figure.	Three-lever model alarm after power-on without reset	->For the three-lever standing wheelchair model, after the push rods are installed, when you turn on the controller and select any of the three functions (leg lift, lying flat, standing), the controller may display the fault codes as shown in the figure. At this point, press and hold the reset button to reset the wheelchair, after which all three functions will operate normally.

8. Cleaning and Disinfection of the Product

Note: This product is not suitable for cleaning with jet washers, high-pressure, or steam cleaning. Do not pour water directly onto wheelchair components during cleaning.

Wheelchair Cleaning:

- 1、 To clean thoroughly and allow for inspection afterward, open the wheelchair before cleaning.
- 2、 Use a cloth dampened with a diluted neutral detergent, wring it out well, and wipe the wheelchair. Then, use a cloth dampened with clean water, wring it out, and wipe off any remaining detergent. Finally, dry with a dry cloth.
- 3、 Do not use volatile substances for cleaning, such as thinners, solvents, gasoline, etc., as these may cause discoloration or degradation of materials.

Wheelchair Disinfection:

- 1、 When using disinfectants, dilute them according to the following specified concentrations:

0.05-0.2%	Ammonium chloride disinfectant
0.05-0.2%	Chlorophenol disinfectant
0.05%	Dichlorophenyl biguanide solution
 - 2、 Depending on the disinfectant, metal components may corrode, or plastic parts may discolor, degrade, or crack. Therefore, please use only the recommended disinfectants above.
 - 3、 Confirm the ingredients of the disinfectant before use.
 - 4、 After disinfection, wipe off the disinfectant completely.
- Do not use ozone or autoclaves as disinfecting equipment.

9. Product Maintenance

Our company's electric wheelchairs are active, non-sterile, reusable devices and do not contain any chemical substances. The safety and effective service life of the wheelchair depend not only on the structural strength of the product itself but also on factors such as how the user operates the wheelchair, the environment in which it is used, the user's habits, and whether regular maintenance and servicing are performed.

To ensure the safe use of the wheelchair, regular safety inspections must be carried out. It is recommended to perform a comprehensive inspection every six months to confirm that all connection points are secure and that the wheelchair is operating properly.

Replacement of Wearable Parts (If you encounter difficulties in replacing parts, please contact the manufacturer for replacement):

- Warning: Replacing components may pose risks such as electric leakage, fluid leakage, explosion, or mechanical damage.

- Front Wheel Replacement: Use a wrench to loosen the screws and remove the front wheel. Install the new front wheel, tighten the screws, adjust the screw tension, and ensure the wheel rotates smoothly.
- Rear Wheel Replacement: Use a socket wrench to remove the rear wheel fixing screws. Replace with a new rear wheel or contact the manufacturer.
- Seat (Backrest) Replacement: Use a screwdriver to loosen the screws and remove the seat or backrest. Install the new seat/backrest and tighten the screws.
- Armrest Replacement: Use a wrench to loosen the screws and remove the armrest. Attach the new armrest and tighten the screws with the wrench.
- Battery: Regularly check the remaining battery capacity. If the battery has reached the end of its service life and needs replacement, contact the manufacturer to purchase a battery of the same specifications. Battery specifications are as follows:

Item	Battery Specifications
Rated Capacity	10Ah
Nominal Voltage	24V
Maximum Charging Voltage	29.4V
Charging Method	Constant Current, Constant Voltage
Operating Temperature	Charging: 0-45℃ Discharging: -25-55℃

- Wiring: Check all electrical components and connecting wires for damage or wear. If any issues are found, contact the manufacturer or a qualified professional. Do not attempt to repair them yourself.
- Frame: Wipe the frame surface with a soft cloth to keep it clean. Do not use lubricants to maintain the wheelchair. If any cracks appear on the frame, contact the manufacturer immediately.
- Controller Maintenance: Clean the controller and joystick using a cloth dampened with a neutral, diluted cleaning solution. Be careful when cleaning the joystick; do not use abrasive materials or alcohol-based cleaners. Protect the controller during transportation to prevent damage. Before inspection, make sure the controller is powered off. Check whether the joystick is deformed or damaged. Operate the joystick and ensure it returns to the center position when released. If any issues are detected, contact your dealer.
- Motor: Check for oil leaks or increased noise. If any abnormalities are observed, contact the supplier or manufacturer.
- Fasteners: Regularly check all screws and nuts on the wheelchair to ensure they are properly tightened. Address any loose parts promptly to ensure safe operation.
- Seat and Back Cushion: Clean the seat and backrest using warm water and diluted soap.

Avoid storing cushions in humid environments.

- **Electromagnetic Brake (Driving Brake):** To check the brake, drive the wheelchair in a straight line at maximum speed on a flat asphalt surface, then release the joystick to allow the wheelchair to stop automatically. Measure the distance from joystick release to full stop. If the stopping distance is longer than usual or exceeds 1 meter, contact the dealer or manufacturer for repair.
- **Fuse:** If the fuse needs to be replaced, please purchase one according to the following specifications:

Item	Specifications
Voltage	32V dc
Current	50A
Action Speed	0.5s
Dimensions	19×15×5 mm
Interrupting Capacity	1000A

Battery Use, Maintenance, and Care :

- Pay attention to the battery level indicators on the controller panel. If the green light is off, please charge the battery as soon as possible. If the red light is on, the battery is critically low and must be charged immediately to avoid excessively low voltage, which can reduce battery lifespan.
- The battery is clearly marked with positive (+) and negative (-) terminals and comes with secure connectors to ensure proper circuit connection. Non-professional personnel should not attempt to connect or modify the battery circuit.
- The battery is maintenance-free and does not require adding electrolyte in daily use. During charging, the battery temperature may rise, but it must not exceed 45°C. If it does, stop charging and resume only when the temperature drops below 35°C. If the wheelchair is left unused for a long time, recharge the battery at least once per month.
- The battery has a limited service life. After prolonged use, if the driving range after a full charge is noticeably lower than the rated range, replace the battery.
- Keep the battery clean and dry. Do not strike the battery with hard objects, and store it out of reach of children.
- Do not exceed 15% over 4.5 kWh/100 km.
- Avoid deep discharging the battery. Over-discharge can severely reduce battery life. When the controller's battery indicator shows only one LED, recharge immediately to prevent over-discharge.

- Battery leakage may pose a risk of fire or explosion. If the device will not be used for an extended period, remove the battery.

10. Names and Content of Hazardous Substances in the Product

Component	Hazardous Substances					
	Lead(Pb)	Mercury(Hg)	Cadmium(Cd)	Hexavalent Chromium(Cr VI)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Display screen	×	○	○	○	○	○
Circuit board assembly	×	○	○	○	○	○
Front and rear frame	○	○	○	○	○	○
Seat cushion	○	○	○	○	○	○
Tires	○	○	○	○	○	○
Metal structural parts	○	○	○	○	○	○
Plastic structural parts	○	○	○	○	○	○
Wires	○	○	○	○	○	○
Horn	○	○	○	○	○	○
Motor	×	○	○	○	○	○
Battery	○	○	○	○	○	○
Charger	×	○	○	○	○	○
Accessories	○	○	○	○	○	○
Brakes	×	○	○	○	○	○
Soft light strip	×	○	○	○	○	○
Shock absorber	×	○	○	○	○	○

This table is compiled in accordance with the provisions of SJ/T 11364.

○ : Indicates that the content of toxic or hazardous substances in all homogeneous materials of the component is below the limit requirements specified in GB/T 26572.

×: Indicates that the content of toxic or hazardous substances in at least one homogeneous material of the component exceeds the limit requirements specified in GB/T 26572.

注:

1. Circuit board assembly: Includes printed circuit boards and their components, electronic parts, solder joints, etc.
2. Depending on the product model, the purchased product may not contain all the components listed above.
3. The environmental protection service life of this product is 10 years. Some removable parts may have different environmental service lives, which are labeled individually on the corresponding parts.
4. The environmental protection service life of a product/component applies only under the usage conditions specified in the product manual.



Disposal of waste should be carried out in accordance with the relevant national environmental protection regulations.

11. After-Sales Service

Warranty Information:

The warranty period for this product is 5 years from the date of manufacture (the production date can be found on the inspection certificate and the product packaging).

If a non-human-caused quality issue occurs within one week of purchase, the company will provide full refund, replacement, or repair. If a non-human-caused quality issue occurs within one year of purchase under normal use and maintenance, the company will provide free repair. After one year from the date of purchase, users can contact the company's after-sales service department, offices, or authorized dealers with the invoice and warranty card. The company will provide replacement parts and repair services at a reasonable cost. If the user cannot provide an invoice, the warranty period will be determined based on the company's batch number or production date, with an additional one month considered.

Service life: 5 years (excluding easily worn parts).

● The warranty period for key components is as follows:

No.	Component	Warranty Period
1	Frame	5 years
2	Controller	1 year
3	Motor	1 year
4	Lithium Battery	1 year

The following situations are not covered by the warranty:

- Wear or puncture of the front or rear wheels, and damage to the seat/backrest cushions or armrests.
- Faults caused by unauthorized disassembly, repair, or modification of the product; damage resulting from improper use.
- Faults caused by accidental drops or impacts during use or transportation.
- Faults caused by incorrect operation that does not follow the instructions in the user manual.
- Damage caused by unforeseeable natural disasters (e.g., fire, earthquake, flood, etc.).

Electric Wheelchair Packing List

No.	Item Name	Quantity	Remarks
1	Electric Wheelchair	1	All tires are solid tires.
2	User Manual	1	
3	Warranty Card	1	User manual is printed together with the packaging.
4	Certificate of Conformity	1	Stickers/labels have been affixed on the wheelchair.
5	Tool Kit	1	
6	Charger	1	

If any related accessories are damaged, it is recommended to contact the manufacturer and return the product to the factory for repair or replacement.

Circuit diagram and component list

For circuit diagrams, component lists, annotations, calibration guidelines, or other technical documentation that may assist maintenance personnel in repairs, please consult the manufacturer.

12. Additional Instructions or Supplementary Notes

10.1 Wiring diagram of the electric wheelchair. (See Figure 22)

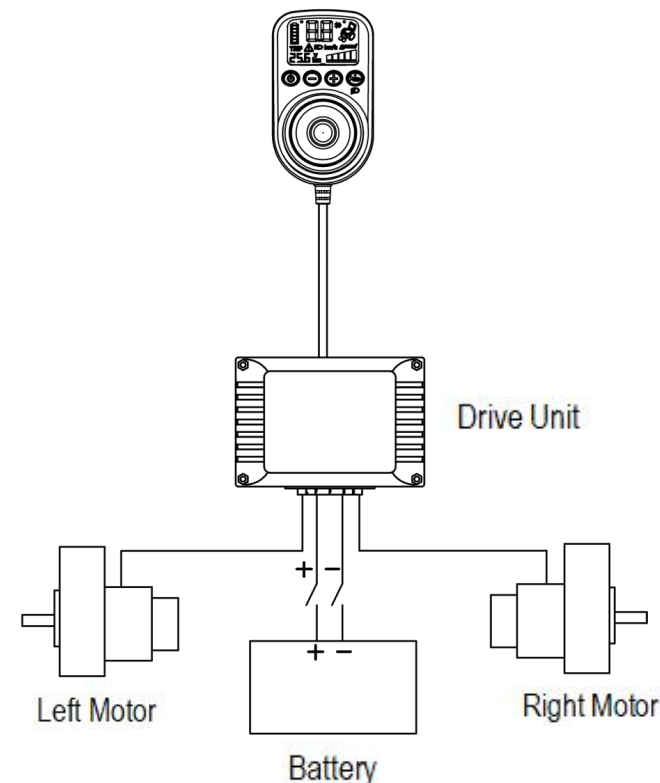
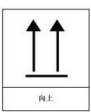
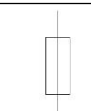


Figure 22

10.2 Meaning of Safety-Related Symbols in This Product

						
Keep Dry	Fragile	Type BF Applied Part	This Side Up	Caution! Refer to the Instruction Manual	Risk of Hand Pinching	Do Not Step On
					IP22	
Do Not Push	Do Not Sit	Do Not Insert Hands	Follow the Instruction Manual	Brake Engaged / Brake Released (Clutch Lock / Unlock)	Ingress Protection Rating (Dust & Water Protection Level)	Battery Must Not Be Disassembled by Non-Professionals
						
Fuse						

10.3 Battery and Controller Information

Battery

Rated Voltage: 24V

Capacity: 10Ah

 Warning: Do not open or disassemble the battery pack. Maintenance must only be carried out by authorized professional technicians. In the event of visible damage or malfunction, immediately disconnect the power supply and load. Remove the battery according to the methods described in this manual, and transport the battery in isolation, away from the place of use. Keep away from flammable gases, solvents, or vapors at all times. Avoid open flames or sparks. Do not incinerate the battery pack.

Charger

Operating Voltage: 100V/240V 50Hz/60Hz

Power: 72W

The power charger connected to the electric wheelchair complies with GB 9706.1-2020 and GB 9706.108-2020.

 Warning: This adapter is intended for use only with the electric wheelchair. Modification of the adapter is not permitted.

The adapter is suitable for use in the patient environment.

Other language versions. Video guidance.



Email: support@easwe.com