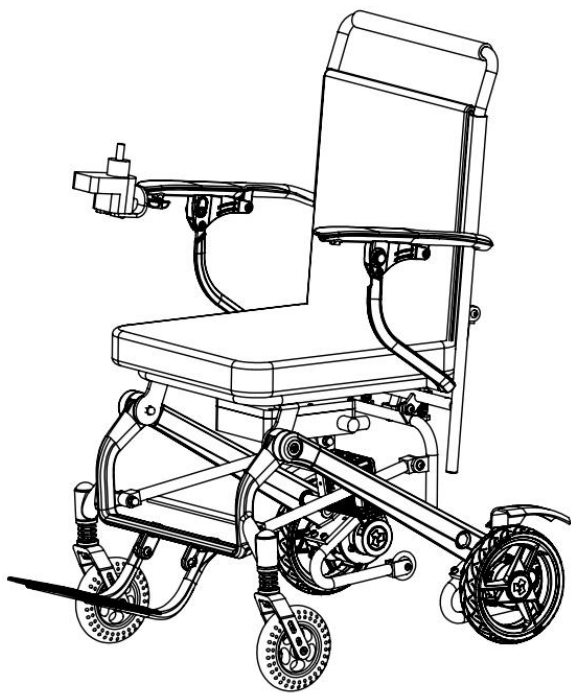




# CASWE

## C10 User Manual

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## **I. Preface**

Dear Customer,

Thank you for your love to Easwe company and purchasing Easwe electric wheelchair. The electric wheelchair carefully developed by Easwe is lightweight, energy-saving, efficient, flexible and safe, and has been well received by all users.

Before using it, please read this instruction carefully so that you can better understand the functions of the electric wheelchair, better control it, and carry out maintenance and repair as required to ensure that the wheelchair is in good condition.

If you have questions please contact us and we will be happy to answer them!

## **II. Product Precautions**

**!** Do not operate your electric wheelchair until you have read and fully understood this introduction.

**!** Do not operate your electric wheelchair until assembly and inspection work has been completed.

**!** This product must be used under the supervision of the caregiver.

**!** Please refer to the instructions to regulate the use of this product, such as due to the user or the caretaker of the operation is not appropriate, resulting in injury or death and property and economic loss, the user needs to bear all the responsibility.

**!** Never get on or off the electric wheelchair when the controller is switched on or when the electric wheelchair is in manual mode and there is no attendant to hold the electric wheelchair in place.

**!** The caretaker should not leave the wheelchair for care. If it causes injury or death and economic loss of property, the user has to bear all the responsibility.

**!** Do not tilt or lift the electric wheelchair to one side while using it normally.

**!** Do not stand on the pedals to avoid the rollover of electric wheelchair.

**!** Do not turn or steer on slopes.

**!** Do not have two people manoeuvring the electric wheelchair at the same time to prevent accidents.

! A moving electric wheelchair should be slowed down to less than 2km/h before steering.

! When going downhill, please drive slowly with the lowest gear; when going uphill, please drive cautiously, lean forward appropriately and pass at low speed.

! It is recommended that people with mental abnormality, slow reaction time and difficulty in operation should not use the electric wheelchair.

! Please check that the wheel connections are firm and reliable.

! Be gentle when pulling the controller lever and never pull back and forth quickly.

! The controller is the core component of the wheelchair. Do not park the electric wheelchair in the open air for a long time or drive the electric wheelchair outdoors when it is raining, and beware of moisture.

! Please confirm the wheelchair is in "electric" mode before switching on the controller power.

! In the process of wheelchair driving, please do not switch the automatic mode to "manual" mode ; if you need to use radio communication devices such as mobile phones or laptops in "electric" mode, please

switch off the power to the electric wheelchair controller first.

! The electric wheelchair is suitable for use on flat and low-sloping ground. Avoid driving on roads with a slope greater than  $6^{\circ}$  and across obstacles that are higher than 2.0 cm.

! It is strictly forbidden to pass through place with horizontal gaps such as sewers .

! Turn off the power switch on the battery box if the electric wheelchair will not be used for a long time.

! Our electric wheelchair can only be used in a spacious and dry environment.

! Do not disassemble or modify the electric wheelchair or replace it with parts that are not manufactured by the company.

! It is forbidden to drive on the road, otherwise it is easy to cause traffic accidents.

### **III. Product performance and structure**

#### **1. Scope of application**

The electric wheelchair produced by our company is suitable for the disabled and the elderly and infirm with mobility difficulties.

## 2. Product Composition

This product consists of frame, controller, motor, battery, pedal, armrest, front wheel, rear wheel

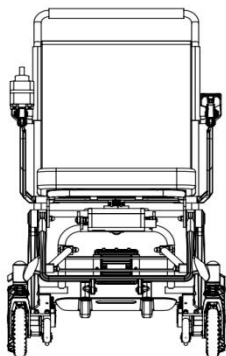


Figure 1 A schematic of the product structure

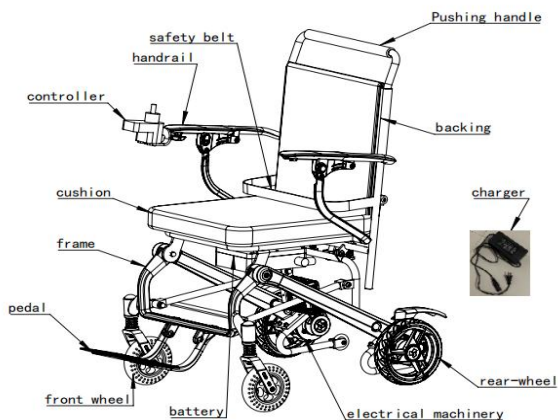


Figure 2 A schematic of the product structure

### 3. Structural features

- ▶ Energy-saving and efficient motors.
- ▶ Easy to mount and dismount folding frame.
- ▶ Intelligent controller: electric button, electric display, universal joystick, horn.
- ▶ Anti-tipping device.
- ▶ Two operating modes: Automatic mode and manual mode.

### 4. Technical parameters

|                                                                                                                                                                                      |                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Overall dimensions (L*W*H): 895mm*575mm*1000mm                                                                                                                                       |                                         |
| Folding Size (L*W*H): 855mm*575*370mm                                                                                                                                                |                                         |
| Product Type: Indoor Type                                                                                                                                                            | Maximum Speed: $\leq 6.0\text{km/h}$    |
| Ambient temperature: $-25^{\circ}\text{C}\sim+50^{\circ}\text{C}$                                                                                                                    | Load: $\leq 120\text{kg}$               |
| Maximum travelling distance on one charge: $\leq 24\text{km}$                                                                                                                        |                                         |
| Horizontal braking performance: $\leq 1.5\text{m}$                                                                                                                                   |                                         |
| Maximum safety slope brake: $\leq 3.6\text{m}(6^{\circ})$                                                                                                                            |                                         |
| Crossing height: $\geq 25\text{mm}$                                                                                                                                                  | Crossing width: 40mm                    |
| Climbing ability: $\geq 6^{\circ}$                                                                                                                                                   | Resident slope performance: $6^{\circ}$ |
| Static Stability: $\geq 9^{\circ}$                                                                                                                                                   | Dynamic Stability: $\geq 6$             |
| Minimum turning radius: 1.2m                                                                                                                                                         |                                         |
| The above parameters may vary depending on the weight of the rider, the usage environment and battery usage.                                                                         |                                         |
| Normal working conditions:<br>Ambient Temperature Range: $-25^{\circ}\text{C}\sim+50^{\circ}\text{C}$<br>Relative Humidity Range: 25%~95<br>Atmospheric pressure range: 86kPa~106kPa |                                         |
| Internal power supply: DC24V $\pm$ 5V Internal power supply unit                                                                                                                     |                                         |
| Electrical requirements: Type B application section Operation mode:<br>Continuous operation                                                                                          |                                         |
| Degree of protection against liquid ingress: IPX4                                                                                                                                    |                                         |
| Equipment that cannot be used in the presence of flammable anaesthetic gases mixed with air or flammable anaesthetic gases mixed with oxygen or nitrous oxide.                       |                                         |

## IV. Description of symbols

Symbols for safety requirements in this machine and their meanings

| Notation                                                                            | Hidden meaning                                                                                                                                                                                                          | Notation                                                                          | Hidden meaning                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------|
|    | Type B application section                                                                                                                                                                                              |  | Attention! Check the random file |
| IPX4                                                                                | Splash-proof, no harmful effects from splashing water in any direction                                                                                                                                                  |  | Fragile item                     |
|    | Try to improve oneself                                                                                                                                                                                                  |  | Be afraid of the rain            |
|    | Stacking layer limit                                                                                                                                                                                                    |  | No tumbling                      |
|    | The ① symbol indicates an obligation (something that must be observed). Specific mandatory contents are indicated by words or drawings in or near ①. The picture on the left shows "General Compulsions".               |                                                                                   |                                  |
|  | The symbol indicates a prohibition (something that is not allowed). Specific prohibitions are indicated by words or drawings in or near the text. The picture on the left shows "general prohibitions".                 |                                                                                   |                                  |
|  | Pollution Control Label for Electronic Information Products (Pollution Control Label for Electronic Information Products) has an environmental protection period of 10 years, and consumable products are not included. |                                                                                   |                                  |

## V. Assembly, commissioning, folding

► Open the box, take out the whole car and put it on the ground. Pull the backrest of the car with one hand, pull the frame with the other hand, and pull the frame back and forth to unfold the wheelchair car. After unfolding the wheelchair, go to the back of the vehicle to plug in the electric cord first. See Figure 3, Figure 4 and Figure 5.



Figure 3

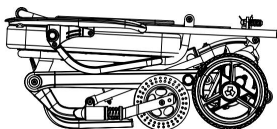


Figure 4

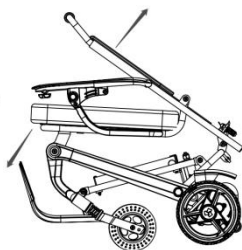


Figure 5

### ► Reversible armrests:

The front end of the armrest can be pulled upwards by pressing down on the armrest catch and separating the catch from the frame, see Figures 6 and 7.

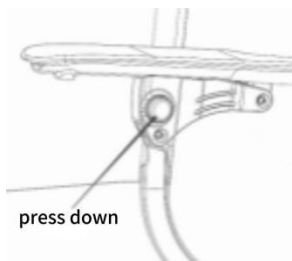


Figure 6

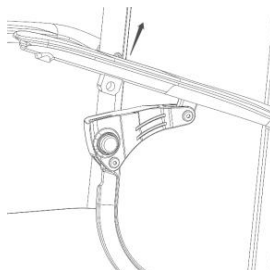


Figure 7

► Controller installation: sit on the power wheelchair, then loosen the plum bolt, insert the controller fixing rod into the frame tube and lock the plum bolt, see Figure 8. (If the controller is installed on the left hand side, the adjustment method is the same).

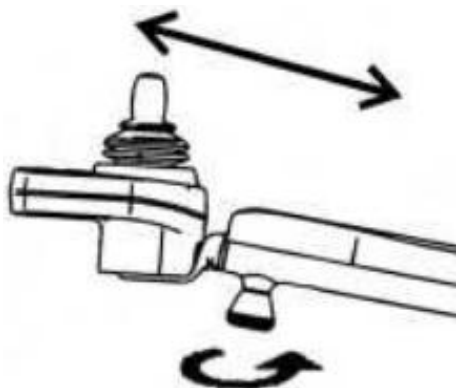


Figure 8

► Folding steps: (See Figure12, Figure13, Figure14)

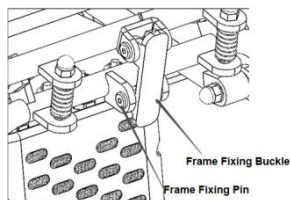


Figure12

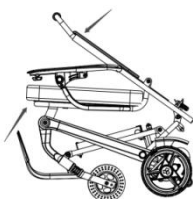


Figure13

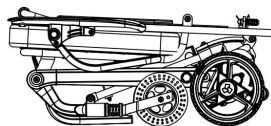
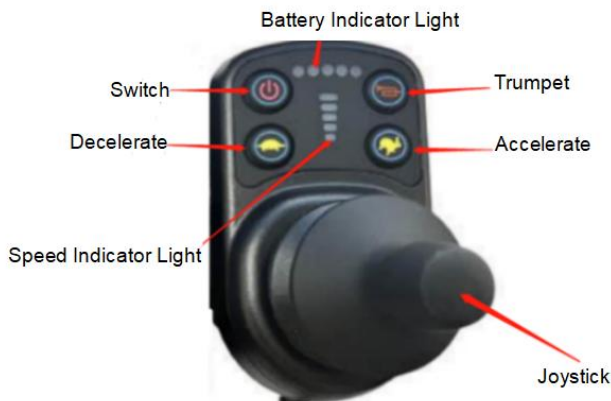


Figure14

## VI. Instructions for use

### 1.Controller Function



#### ► Joystick

The main function of the joystick is to control the direction and speed of the wheelchair. The direction in which the joystick is pushed away from the centre of the wheelchair is the same as the direction in which the wheelchair is travelling. The further the joystick is pushed away from the centre of the wheelchair, the faster the wheelchair travels. When the lever is

released, the brake will be applied automatically; do not push the lever hard when the wheelchair is stopped, but use it as gently as possible. Holding the joystick in your hand, you can control the electric wheelchair to move forward, backward, turn left and right, and release the joystick to return to the position automatically and the wheelchair will brake automatically.

### ► **Battery Indicator Light**

When the battery is fully charged, the LEDs have 3 yellow and 2 green. When the 2 green LED lights are on, it means that the battery is sufficient. When only the yellow LED light is on, it means that the battery is insufficient. Please charge it as soon as possible to ensure the normal use of the wheelchair.

### ► **Speed Indicator Light**

Displays the maximum speed setting for the wheelchair. There are five speed settings: 1 is the slowest and 5 is the fastest.

### ► **Trumpet Button**



Press this button. The horn sounds.

### ► **Acceleration Button**



Press this button to increase the speed setting value, each time it is pressed, the gear increases by one stop and does not change again when it reaches 5 stops.

## ► Decelerate Button

Pressing this button  reduces the speed setting value, each time it is pressed, the gear is reduced by one notch and does not change again when it reaches 1 notch.

## 2. Conversion between electric driving and manual push

Before driving the wheelchair, make sure that the motor is in the "electric" mode.

When the wheelchair is to be manually pushed without power, toggle the motor switch up for "manual" and down for "electric".

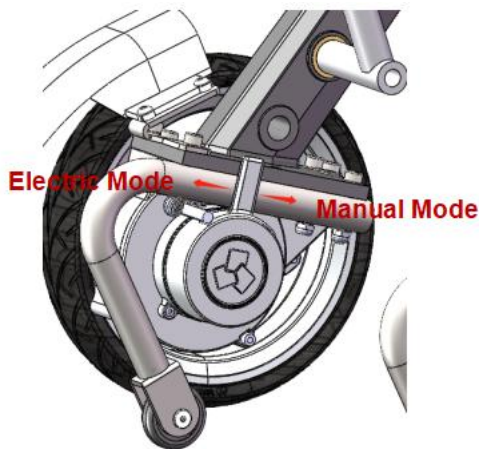


Figure 10

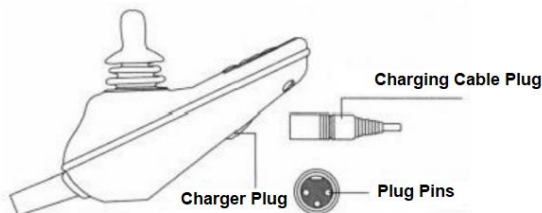
### 3. Charging instructions

It is recommended that customers choose to purchase the charger recommended by our company.

Li-ion battery charger output DC24V3A, the two are not to be confused with the use of chargers should be consistent with the GB/4706.18-2014 requirements.

Take note of

Plug the output of the charger into the lower slot of the controller, Figure 11.



Do not alter the circuit to ensure that it is correct.

Do not disconnect the battery circuit during charging to prevent burns or fire.

### 4. Normal driving steps

► Turn the hand-operated automatic device from the "Manual" mode to the "Electric" mode.

Take note of

It is not permitted to switch from "Electric" to "Manual" on ramps.

► Press the power button of the controller to check whether the electronic brake of the electric wheelchair

is effective, if the push does not go, it indicates that the electronic brake is effective, otherwise, you should contact the dealer or manufacturer.

► Flip the footrests upwards and sit in the electric wheelchair , then lower the footrests.

Take note of

Do not step on the pedals to get on or off the electric wheelchair trolley, as this may cause the electric wheelchair to tip over.

► After sitting in the electric wheelchair, turn on the electric button of the controller (gently press it for 1 second), the indicator light will come on, and the joystick should be in the middle position at this time. You need to concentrate on controlling the wheelchair, this is especially important for first time drivers. Always make sure the handbrake is in the 'unbraked' position before travelling; the joystick controls both direction and speed. Push the joystick slowly in the direction of travel and the electric wheelchair will start to move, increasing the amount of push on the joystick accelerates the wheelchair, and vice versa slows the wheelchair down.

► If you want the moving electric wheelchair trolley to stop, just let go of the lever to reset it and stop smoothly.

► The speed adjustment button on the controller regulates the speed of the electric wheelchair, and the user should choose the maximum speed of the electric wheelchair according to his/her physical condition and the road conditions.

► Electric wheelchair vehicles are suitable for travelling on flat surfaces. For travelling on muddy, potholed or uneven surfaces, the drive mechanism and control system of the electric wheelchair may be damaged.

## VII. Routine maintenance and upkeep

Take note of

Electric wheelchair needs regular maintenance.

► Adjustment and replacement of worn parts is strongly recommended; call a professional or contact the manufacturer.

| Inspection Cycle      | Everyday | Daily | Every Month | Every 3 Months | Every 6 Months |
|-----------------------|----------|-------|-------------|----------------|----------------|
| Battery level         | ✓        |       |             |                |                |
| Tyre wear             |          |       | ✓           |                |                |
| Cords                 |          |       | ✓           |                |                |
| Chassis               |          |       |             |                | ✓              |
| Controller Functions  | ✓        |       |             |                |                |
| Electrical Machinery  |          |       |             |                | ✓              |
| Fasteners             |          |       |             | ✓              |                |
| Seat and Back Cushion |          |       |             |                | ✓              |
| Cleanliness           |          | ✓     |             |                |                |

● Among them, the replacement of wearing parts is as follows (if there are difficulties in the replacement of

parts, please contact the manufacturer in time, by the factory)(commercial replacement).

Replacement of front wheel: Unscrew the screws with a spanner, remove the front wheel, install the new front wheel, lock the screws, adjust the screws, and make sure the front wheel rotates flexibly.

● Rear Wheel Replacement: Professional repair and replacement or contact the manufacturer.

Seat (back) cushion: Unscrew the screws with a screwdriver, remove the seat (back) cushion, put on the new seat (back) cushion, and lock the screws with a screwdriver.

● Replacement of armrest: Unscrew the screws with a spanner, remove the armrest, fasten the new armrest, and tighten the screws with a spanner.

► Battery: Mainly check the remaining battery electric. If the battery has reached the end of its life span and needs to be replaced, contact the supplier, manufacturer, or purchase a battery with the same specifications locally.

► Wires: electrical parts and connecting wires, check for damage or breakage, if so, contact the supplier or get a qualified professional to deal with it, do not try to repair it by yourself.

► Frames: the surface coating of the frame should be scrubbed with a soft cloth and kept clean frequently; the use of lubricants to maintain the wheelchair is prohibited. If you find the frame cracked, please contact the supplier.

► Maintenance of the controls: Clean the controls and joysticks with a cloth moistened with a neutral diluted detergent. Clean the joysticks carefully and never

use abrasive materials or alcohol-based cleaners. When transporting the wheelchair trolley, protect the controls from damage.

- ▶ **Motor:** Check for oil leaks or increased noise, if so contact the supplier or manufacturer.
- ▶ **Reliability maintenance of connecting parts:** Check frequently whether the screws and nuts on the body are in a tightened mode, and if there is any problem, please deal with it in time to ensure the safety of driving.
- ▶ **Seat cushion:** Wash the cover and backrest with lukewarm and diluted soapy water and avoid storing the wheelchair in a damp place.
- ▶ **Braking distance: travelling brake.** The method of checking is to let the wheelchair go forward in a straight line at the maximum speed on a flat asphalt road, then release the lever of the controller and let it return to the original position automatically, measure the distance from releasing the lever to stopping the wheelchair, if this distance is bigger than the original one, then the braking effect is reduced, if this distance is more than 1.5m, then you should contact the supplier or the manufacturer for repairing.
- ▶ **Maintenance and care of batteries:**

Pay attention to the electric indicator on the controller panel, if the green light is not on, please charge it as soon as possible; if the red light is on, the battery is seriously insufficient, and must be charged immediately to avoid low battery voltage, which will affect the service life of the battery.

- The battery is clearly marked with positive and negative terminals, and there is a secure connector to ensure the normal connection of the circuit, non-professionals should not connect the circuit.

The batteries are maintenance-free and do not require replenishment of liquid. During the charging process, the temperature of the battery will rise, but it is not allowed to exceed 45°C; if it exceeds 45°C, the charging should be stopped, and the charging can be continued only when the temperature drops to below 35°C. **If the wheelchair is not used for a long period of time, the battery should be recharged at least once a month.**

- The battery has a service life, after normal long time use, if you find that there is a significant difference between the driving mileage of the electric vehicle and the nominal mileage at the end of charging, please replace the battery.

- Do not use the battery at temperatures  $\geq 50^{\circ}\text{C}$  or temperatures  $\leq -20^{\circ}\text{C}$ .

- Keep the battery clean and dry, do not use hard objects to knock the battery, store the battery and keep it out of the reach of children.

- The electric switch on the battery compartment cuts off the battery electric and reduces the natural loss of battery electric.

- "Full mode", make it a habit to keep the battery in a full mode of charge, and depending on your usage, please recharge the battery in time to keep it in a "full mode of charge" for a long time.

- Replacement of batteries

When replacing the battery, replace the battery as follows:

1. Cut the cable ties that hold the wires in place and unplug the connector that connects the battery to the controller.

2. Remove the screw nut holding the battery in place and remove the battery.

3. Install a new battery, refit the removed screw nut, plug in the connector from the battery to the controller, and secure the wires with cable ties.

► Dispose of waste in accordance with national regulations on environmental protection.

**! Disconnect the power cord from the battery compartment during transport.**

## VIII. Transport and storage

### 1. Transport

During transport, the product should be upright and upward, no rain, no tumbling, careful and light, and limited to a height of 2 floors.

### 2. Storage

The product should be placed in a dry and ventilated place, and should be avoided to be placed in the environment of high temperature and rapid change of temperature; the product should be isolated from acid, alkali and other chemically corrosive substances.

### **3. Environmental constraints on transport and storage**

Ambient temperature range: -25°C~+50°C

Relative humidity range: 10 per cent to 100 percent

Atmospheric pressure range: 86kPa~106kPa

## **IX. Fault judgement and handling**

- ▶ When there is no electric signal after pressing the electric button on the controller, at this time, first confirm whether the battery is charged; if there is still no electric signal after charging and pressing the electric button on the controller, please contact the supplier or look for professionally qualified personnel to deal with it, and do not try to repair it by yourself.
- ▶ When a fault occurs, the controller will emit an alarm sound flash. Most electric wheelchair scooter failures are related to the battery, motor and controller.

| Serial Number | Fault Description                                                             | Cause Analysis and Troubleshooting                                                                                                                                                                               |
|---------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | Electric indicator does not light up when controller power button is pressed. | The battery is not connected correctly to the controller, check and reconnect correctly.                                                                                                                         |
|               |                                                                               | Battery voltage is too low, charge the battery and if it still does not light up, the battery may have reached the end of its life, replace the battery.                                                         |
|               |                                                                               | For controller problems, contact your distributor, the manufacturer, or aftermarket service.                                                                                                                     |
| 2             | Low battery voltage                                                           | The contact between the battery and the controller plug is not reliable, please plug it again.                                                                                                                   |
|               |                                                                               | The contact resistance of the wires between the batteries is large; if the contact resistance is not large, the contact surface may be oxidised or loose, remove the oxidised layer or install a good connector. |
|               |                                                                               | The battery voltage is too low, the battery has reached the end of its service life, please replace the battery.                                                                                                 |
| 3             | High battery voltage                                                          | The battery is charged too high, and at the end of charging, the voltage is not greater than 29.4V.                                                                                                              |
| 4             | Motor not working                                                             | The connection between the motor and the controller connector is not reliable, please reconnect it.                                                                                                              |
|               |                                                                               | If the motor is defective, contact the distributor, manufacturer or after-sales service.                                                                                                                         |

|   |                                                        |                                                                                                              |
|---|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 5 | Motor brake failure                                    | The motor connector is not plugged in reliably, please plug it in again.                                     |
|   |                                                        | The electric brake coil has been damaged.                                                                    |
| 6 | No indication of charging                              | The connection between the motor and the controller connector is not reliable, please reconnect it reliably. |
|   |                                                        | The battery has reached the end of its life or the charger is damaged, replace the battery or charger.       |
| 7 | Distance travelled after charging shortest (of routes) | The battery is not full, please recharge it.                                                                 |
|   |                                                        | Replace the battery as it nears the end of its useful life.                                                  |

## X. Description of electromagnetic

### Attention:

- The electric wheelchair trolley meets the requirements of YY0505 and GB/T 18029.21 standard on electromagnetic compatibility.
- Users should install and use the product in accordance with the EMC information provided in the supplied documentation.

Portable and mobile RF communication devices may affect the performance of the electric wheelchair trolley. Avoid strong electromagnetic interference when using the trolley, e.g. near mobile phones and microwave ovens.

- Basic performance of this product:
  1. Standby mode, electric wheelchair trolley does not move differently.
  2. Exercise mode, the electric wheelchair trolley works normally.
- Guidelines and manufacturer's declarations are detailed in the annex.

**! Warning:**

- Electric wheelchair vans should not be used in close proximity to or stacked on top of other equipment, and if they must be used in close proximity or stacked on top of each other, they should be observed and verified to function properly in the configuration in which they are used.

# Table 1 Guidelines and Manufacturer's Declarations - Electromagnetic Emissions

|                                                                                                                                                                                               |                |                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The powered wheelchair is intended to be used in the electromagnetic environment specified below and the purchaser or user should ensure that it is used in this electromagnetic environment. |                |                                                                                                                                                                                                |
| Launch test                                                                                                                                                                                   | conformance    | Electromagnetic Environment - Guidelines                                                                                                                                                       |
| radio-frequency emission<br>GB4824                                                                                                                                                            | Group 1        | A powered wheelchair vehicle uses RF energy only for its internal functions. As a result, it has very low RF emissions and little potential for interference with nearby electronic equipment. |
| radio-frequency emission<br>GB4824                                                                                                                                                            | Category B     | Electric wheelchairs are suitable for use in domestic households and in all facilities directly connected to the public low-voltage supply network of domestic households.                     |
| harmonic emission (physics)<br>GB17625.1                                                                                                                                                      | Not applicable |                                                                                                                                                                                                |
| Voltage fluctuations, scintillation emission<br>GB17625.2                                                                                                                                     | Not applicable |                                                                                                                                                                                                |

(corresponding to Table 201 in YY0505-2012)

## Table 2 Guidelines and Manufacturer's Declarations - Electromagnetic Immunity

| The electric wheelchair is expected to be used in the electromagnetic environment specified below, and the purchaser or user should ensure that it is used in this electromagnetic environment. |                                                                                                                                                                                                                                |                                              |                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunity test                                                                                                                                                                                   | IEC60601 Test level                                                                                                                                                                                                            | Meet the level                               | Electromagnetic Environment - A Guide                                                                                                                                          |
| Electrostatic discharge<br>GB/T17626.2                                                                                                                                                          | ±6kV contact discharge<br>±8kV air discharge                                                                                                                                                                                   | ±6kV contact discharge<br>±8kV air discharge | Floors should be wood, concrete or tile, and if floors are covered with synthetic material, the relative humidity should be at least 30%                                       |
| Electric fast transient Burst<br>GB/T17626.4                                                                                                                                                    | ±1kV to power line                                                                                                                                                                                                             | Not applicable                               | Not applicable                                                                                                                                                                 |
| Surge<br>GB/T17626.5                                                                                                                                                                            | ±1KV line to line<br>±1kV line to ground                                                                                                                                                                                       | Not applicable                               | Not applicable                                                                                                                                                                 |
| Power on the power input line pressure dip, short-term off and voltage changes<br>GB/T17626.11                                                                                                  | <5%U, continuous 0.5 weeks (on U <sub>i</sub> >95%dip)<br>40% U, continuous 5 weeks (on U <sub>i</sub> ,60% dip)<br>70% U, sustained 25 weeks (on U <sub>i</sub> ,30% dip)<br><5%U,continuous 5s (>95% dip on U <sub>i</sub> ) | Not applicable                               | Not applicable                                                                                                                                                                 |
| Power frequency magnetic field 50Hz<br>GB/T17626.8                                                                                                                                              | 30A/m                                                                                                                                                                                                                          | 30A/m                                        | The power frequency magnetic field should be characteristic of the power frequency magnetic field levels of a typical location in a typical commercial or hospital environment |
| Note 1: U <sub>i</sub> refers to the AC grid voltage before applying the test voltage                                                                                                           |                                                                                                                                                                                                                                |                                              |                                                                                                                                                                                |

(Corresponds to Table 202 in YY0505-2012)

# Table 3 Guidelines and Manufacturer's Declarations - Electromagnetic Immunity

| The powered wheelchair is intended to be used in the electromagnetic environment specified below and the purchaser or user should ensure that it is used in this electromagnetic environment. |                              |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunity Test                                                                                                                                                                                 | IEC60 601 test level         | Level          | Electromagnetic Environment I Guide                                                                                                                                                                                                                                                                                                                                                                                                              |
| RF conduction<br>GB/t17626.6<br>GB/t18029.21                                                                                                                                                  | 3V/m<br>150kHz<br>~<br>80MHz | Not applicable | Portable and mobile radio-frequency communication equipment should not be placed closer to any part of a powered wheelchair (including cables) than the recommended isolation distance, which should be calculated using a formula corresponding to the frequency of the transmitter. Recommended isolation distance = $1.2 \sqrt{P}$                                                                                                            |
| RF Radio Frequency Radiation (Charger)<br>GB/t17626.3<br>GB/t18029.21                                                                                                                         | 3V/m<br>80MHz<br>~1.0GHz     | Not applicable | $d = 1.2 \sqrt{P}$ 80MHz~800 MHz<br>$d = 2.3 \sqrt{P}$ 800MHz~1.0GHz<br>$d = 0.2 \sqrt{P}$ 26MHz~800 MHz<br>$d = 0.4 \sqrt{P}$ 800MHz~2.5GHz<br>Where: P - the maximum output power of the transmitter provided by the manufacturer of the transmitter, in watts (W) units<br><br>d - recommended isolation distance in meters (m)                                                                                                               |
| RF Radio Frequency Radiation (Wheelchair Vehicle)<br>GB/t17626.3<br>GB/t18029.21                                                                                                              | 20V/m<br>26MHz<br>~2.5GHz    | 20V/m          | The field strength of a fixed RF transmitter is determined by a survey of the electromagnetic field, which in each frequency range should be higher than the field strength of a fixed RF transmitter that meets the requirements for an electrical field. Low level. In equipment marked with the following symbols Interference may occur in the vicinity.  |

Note 1: At 80MHz and 800MHz frequencies, the formula for the higher band should be used.

Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and the human body.

a Fixed transmitters, such as base stations for wireless (cellular/cordless) telephones and terrestrial mobile radios, amateur radio, AM and FM radio broadcasting and television broadcasting, have field strengths that cannot be predicted with theoretical accuracy. In order to assess the electromagnetic environment of a fixed RF transmitter, a survey of the electromagnetic field should be considered. If the field strength of the site where the powered wheelchair vehicle is located is measured to be higher than the applicable RF compliance level described above, the powered wheelchair vehicle should be observed to verify proper operation. If abnormal performance is observed, additional measures may be necessary, such as reorientation or repositioning of the powered wheelchair.

b The field strength shall be less than 3 V/m over the entire frequency range of 150 kHz to 80 MHz.

(Corresponds to Table 204 in YY0505–2012)

**Table 4 Recommended isolation distances between portable and mobile RF communication equipment and this equipment**

| Power wheelchairs are intended to be used in electromagnetic environments where radio frequency (RF) emissions are controlled, and the purchaser or user of a power wheelchair can protect against electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the power wheelchair, based on the maximum rated output power of the communications equipment, as recommended below                                                                                                                                                                           |                                                                           |                                       |                                   |                                   |                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| Transmitter<br>Maximum<br>rated<br>output<br>power<br>W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Distance between different frequencies of the corresponding transmitter/m |                                       |                                   |                                   |                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 150kHz~<br>80MHz<br><br>d = 1.2, P                                        | 80MHz<br>~<br>800MHz<br><br>d=1.2 √ P | 800Hz~<br>1.0GHz<br><br>d=2.3 √ P | 26MHz~<br>800MHz<br><br>d=0.2 √ P | 800MHz~<br>2.5GHz<br><br>d=0.4 √ P |
| 0.01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Not applicable                                                            | Not applicable                        | Not applicable                    | 0.02                              | 0.04                               |
| 0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Not applicable                                                            | Not applicable                        | Not applicable                    | 0.06                              | 0.13                               |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Not applicable                                                            | Not applicable                        | Not applicable                    | 0.2                               | 0.4                                |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Not applicable                                                            | Not applicable                        | Not applicable                    | 0.63                              | 1.26                               |
| 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Not applicable                                                            | Not applicable                        | Not applicable                    | 2                                 | 4                                  |
| <p>For transmitters not listed in the above table, the recommended isolation distance d, in meters (m), can be determined using the formula in the column corresponding to the frequency of the transmitter, where P is the maximum rated output power of the transmitter in watts (W), as supplied by the transmitter manufacturer.</p> <p>Note 1: At the 80MHz and 800MHz frequency points, the formula for the higher band should be used.</p> <p>Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and the human body.</p> |                                                                           |                                       |                                   |                                   |                                    |

(corresponding to Table 206 in YY0505-2012)

## XI. After-sales service

### Warranty Notes:

Once you purchase with Easwe, you are covered by an 5-year warranty and lifetime after-sales service. Our 24/7 after-sales service is always available to answer any questions you may have during installation and use.

- The warranty period for the important parts thereof is as follows:

| Serial Number | Character Radical    | Warranty Time |
|---------------|----------------------|---------------|
| 1             | Chassis              | 5 years       |
| 2             | Controllers          | 1 year        |
| 3             | Electrical Machinery | 1 year        |
| 4             | li-ion battery       | 1 year        |

- The following are not covered by the warranty:

- ① fragile and consumable parts: back cushions, tyres, armrests;
- ② unauthorized disassembly, repair, transformation of the product and the failure;
- ③ in the use, handling the process of accidental fall and the failure;
- ④ improper use or other accidents and man-made damage;

- ⑤ not in accordance with the instructions of the correct method of operation and the cause of the failure;
- ⑥ unforeseen natural disasters (such as: fire, earthquake, flooding, etc.) caused by the damage;
- ⑦ No warranty card;
- ⑧ the product model recorded on the warranty card does not match the model of the repaired product or has been altered.

► The device number is displayed on the crossbar of each electric wheelchair vehicle.

Take note of

If there is a need for repair, we can provide circuit diagrams, component lists and information necessary for repair, and contact the manufacturer if there is any doubt about the circuit overhaul.

Other language versions. Video guidance.



Email: [support@easwe.com](mailto:support@easwe.com)