

Dash E-Fold Powerchair

Owner's Manual



Please read this owner's manual carefully before operating your E-Fold Powerchair and keep it for future reference. Rev.: V.01

Dear Customer:

Thank you for purchasing your E-Fold Powerchair.

Please read this owner's manual thoroughly before operating your E-fold Powerchair. If there is anything in this manual you do not understand, or if you require any additional assistance, please contact your local dealer.

This owner's manual specifies the ways to operate and assemble the E-fold Powerchair, and disposal solutions as well in case of accident. The symbols below identify warnings, mandatory actions, and prohibited actions. They can be found in the owner's manual and/or on the product. Make sure you understand all safety labels before operating the product.

「★」 indicates prohibited behaviors and actions. Please pay great attention to where there are warnings, attentions and suggestions.

★ This owner's manual includes: Inspection and maintenance record and a letter of warranty. Please keep them with your Powerchair.

★ In the event that you lend your Powerchair to someone else, please also give them this owner's manual.

★ With the change of design, all information and pictures in this owner's manual is subject to change. All information is correct at time of printing. Please understand and offer your kind support if there is any change without notice.

★ We believe the E-fold Powerchair will not only give you dependable operation and also enhance the quality of your life, but also making your life more convenient and independent.

CONTENTS

1. SAFETY.....	4
2. PARTS INTRODUCTION.....	6
3. SPECIFICATIONS.....	7
4. BATTERY AND BATTERY CHARGING...8	
5. ASSEMBLY AND OPERATION.....	10
6. TROUBLE SHOOTING.....	19
7. CARE AND MAINTENANCE.....	20
8. WARRANTY.....	22

1. SAFETY

■ Pre-ride safety notice

- Please drive on the pavement where possible. Otherwise, drive on the proper side of the road.
- Mind the traffic once there is no pavement ahead or you have to drive on the carriageway.
- Pay attention to pedestrians and vehicles when crossing the road.
- Do not drive in a heavy traffic area.
- Never operate your powerchair while you are under the influence of alcohol and fatigue.
- Do not drive at night.
- Please abide by the traffic signs for pedestrians.

■ Ground Condition

- Drive your powerchair under normal conditions (for example a dry concrete or asphalt pavement) to achieve the best stability and performance.
- Driving in a park or on short grass is allowed, however not advised after heavy rain fall.
- Try to avoid driving on the road with a loose covering.
- Do not drive on the road if the road condition is unclear for you.
- The E-Fold is capable of crossing obstacles with a certain height, at this time, do lower down the speed and pass the obstacle slowly.

Warning: Never exceed the incline limitation and other requirements that is specified in the owner's manual.

■ Safety Precaution

- Do not operating your E-Fold Powerchair before you have read and understand this owner's manual thoroughly.
- 1 person max for E-Fold Powerchair. Do not carry passengers when driving.
- Switch off the power if the powerchair is not in use.
- Make sure the seat is properly locked and fixed.
- Slow down when driving on a rugged road or soft ground.
- Lower the driving speed when turning around the corner.
- Do not attempt to drive your Powerchair on a steep incline. Never drive your Powerchair on an incliner more than 10° for 100m or above.

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- Be careful when getting to the bottom or approaching an incline, and driving on raised ground or unprotective borderland (such as side of the road, porch, stairs etc.)
 - Do not change initial setting and modify the Powerchair.
 - Drive carefully when getting through the busy streets and shopping centers. Never drive on unsafe areas or roads that are forbidden to pass. Please consult the local government or DVLA for traffic rules of powerchair.
 - To use the Powerchair as a seat for a mobile vehicle is prohibited. The powerchair is not crash tested.

★ Warning: Always protect the battery from freezing temperature. Never charge the frozen battery, which may damage the battery and result in human casualties.

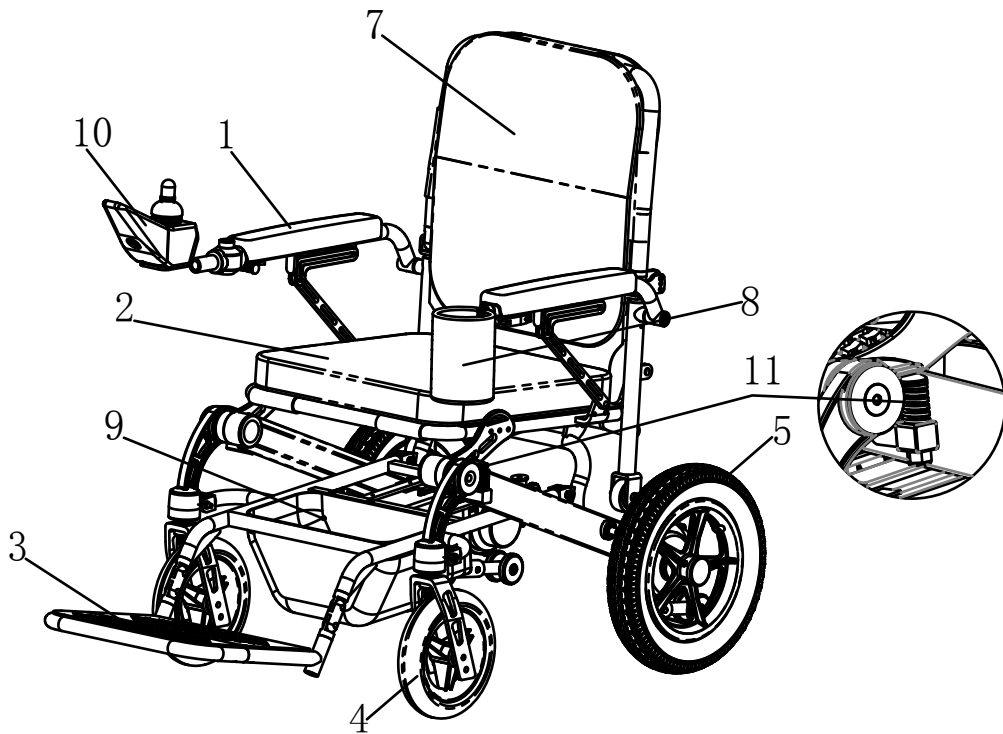
★ Do not operate your powerchair on icy, slippery or salted ground, as it may cause an accident and human casualties.

★ Warning: Automatic braking distance becomes longer if driving on a slippery ground when it rains or snows.

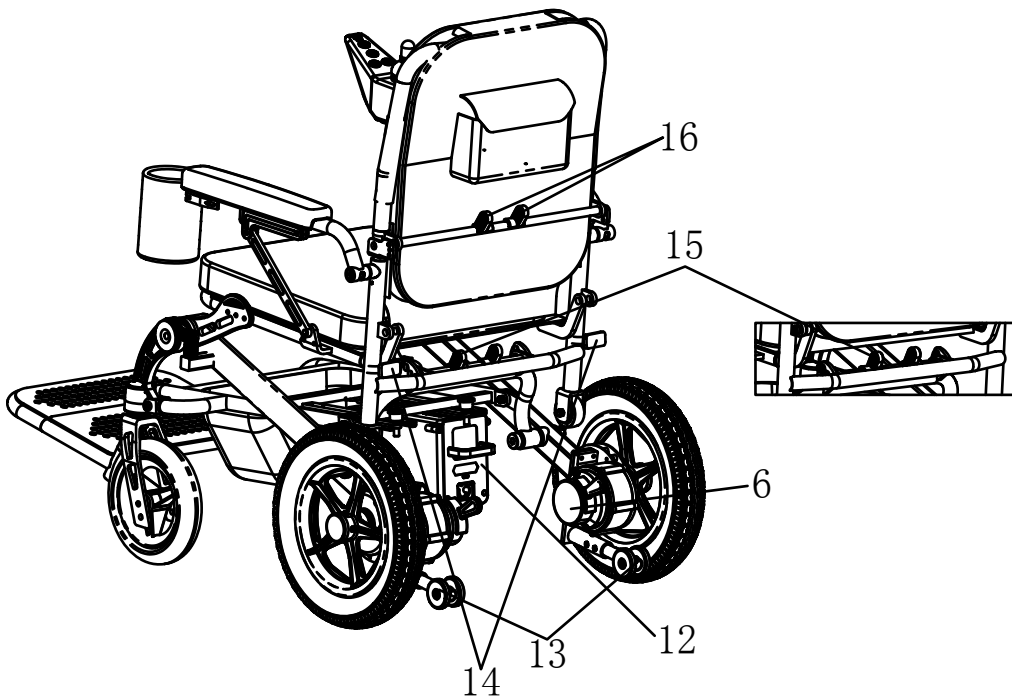
■ **Notice for use.**

- Maintenance and modification: If maintenance and modification is needed, please contact your local dealer.
- Original parts: Please only use E-Fold original parts when doing any replacements.
- Environment Protection: Never arbitrarily discard the scrapped vehicles and batteries. If needed, please contact your local dealer.

2.PARTS INTRODUCTION



1. Armrest
2. Cushion
3. Footrest
4. Front Wheel Assembly
5. Rear Wheel Assembly
6. Motor
7. Backrest
8. Cup Holder(optional)
9. Storage bag
10. Controller
11. Front Suspension
12. Battery box
13. Anti-tip wheel
14. Reflector
15. Folding and Locking Mechanism
16. Backrest adjustment button



3. SPECIFICATION

Model	Dash E-Fold
Size	Length:102cm(40.16inch) Width:56cm(22.05inch) Height:84.5cm(33.27inch)
Max Speed	4mph
Min. turning radius	92.5cm
Maximum Climbing Capacity	10°±1°
Drive system	2 gears, rear wheel drive 2*24Vdc*250W
Braking system	Intelligent brake system (joystick control)
Weight Capacity	125kg
Tyres	Rear wheel 2 x 12.5" Air PU, plastic hub (optional aluminum hub)
	Front wheel 2 x 6" solid PU, plastic hub (optional aluminum hub)
Battery	1 x 25.9V 10AH Lithium Battery (2 nd optional)
Charger	29.4V/2.0A
Controller	Micon controller
Total Weight (battery included)	26kg(57.32 lb) (24kg(52.91) without battery)
Braking distance	≤ 1.0m
Obstacle clearing capability	≥ 2.5cm
Spanning ability	10cm

4. Battery and Battery Charging

★ Attention: to avoid accidents caused by abnormal charging, please follow the following rules.

★ Use the designated charger only for this powerchair and make sure the battery is fully charged. If the designated charger is not used, charging failure or battery damage may happen.

★ Never disassemble or modify the charger.

★ Charge at where there is no sun exposure and in good ventilation.

● Battery

A lithium battery is used on this powerchair. Charge the battery 8-12 hours for initial use.

The Lithium battery is airline approved, (Please also check with your airline first)

● Charger

Charge the powerchair with the DC29.4V/2A charger provided.

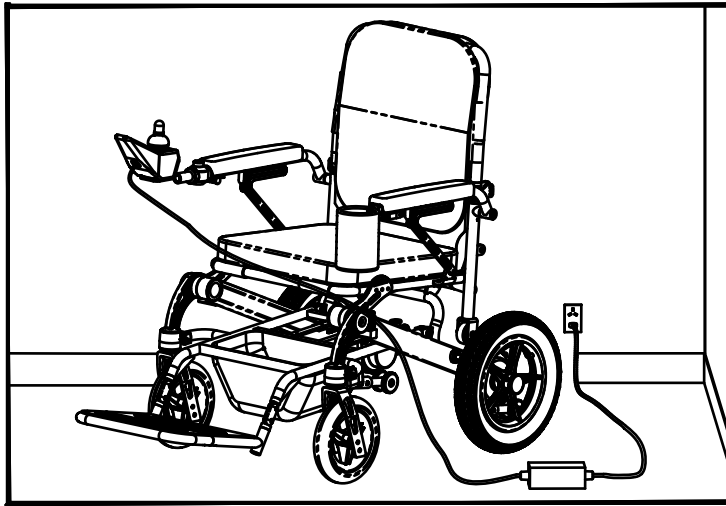
● Notice for lithium batteries.

1. Do not recharge the lithium battery after being fully charged.
2. Avoid a deep discharge, better to control the discharge depth between 30%-50%, no more than 80%.
3. In the event of no frequent use, do not repeatedly charge your battery, charge it once a month.
4. Charge a discharged battery as soon as possible, do not leave lithium batteries in a low state of charge for extended periods.
5. Keep the lithium battery away from fire, water and heat (45°C) and avoid violent vibration, crashes and positive and negative pole shorted.
6. Do not overcharge the lithium battery. Charging periods shall be no more than 20 hours.
7. Never arbitrarily discard the lithium battery, if needed, contact your dealer.

● Charging Method

1. Switch off the Powerchair.
2. Charge the battery by plugging the charger into the charging port on the controller handle (fig3.7 on the assembly and operations diagram below).
3. Plug the charger into the wall plug.
4. When charging starts, the red indicator light will come on. The charging period differs as per the status and temperature etc of the battery, normally it lasts 8-12 hours. After charging finishes, the indicator light turns to green and charging automatically interrupts.
5. Once the indicator light turns to green it indicates the charging is completed. At this time,

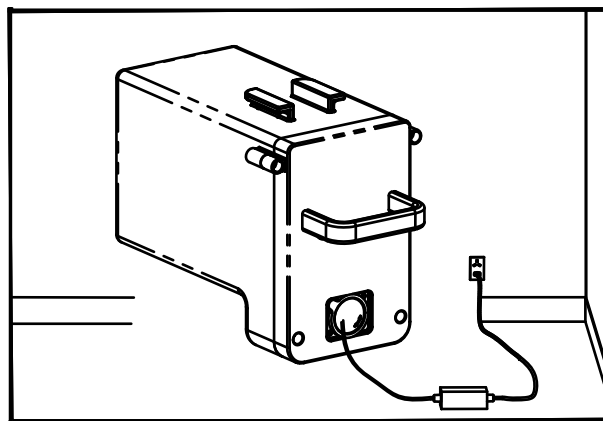
you can unplug from the wall, then unplug the microphone plug from the charging socket.



(Charging Modes I)

● Charging Method II

1. Switch off the Powerchair.
2. Remove the battery from the slot under the chassis and place on a sturdy surface.
3. Charge the battery by plugging the charger into the charging port on the battery box.
4. Plug the charger into the wall plug.
5. When charging starts, the red indicator light will come on. The charging period differs as per the status and temperature etc of the battery, normally it lasts 8-12 hours. After charging finishes, the indicate light turn to green and charging automatically interrupts.
6. Once the indicator light turns to green it indicates the charging is completed. At this time, you can unplug from the wall, then unplug the microphone plug from the charging socket.
7. If a second battery is in use, repeat the above instructions for the second battery. Replacing each battery as it is fully charged.



(Charging Modes II)

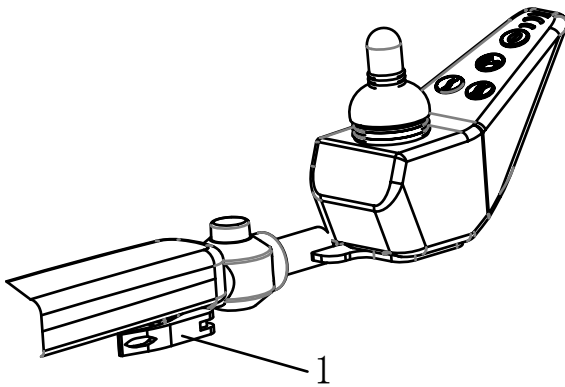
★Notice: It is better to charge the batteries for a further 2 hours after the indicate light becomes green, this will increase the battery's lifespan.

5.ASSEMBLY AND OPERATION

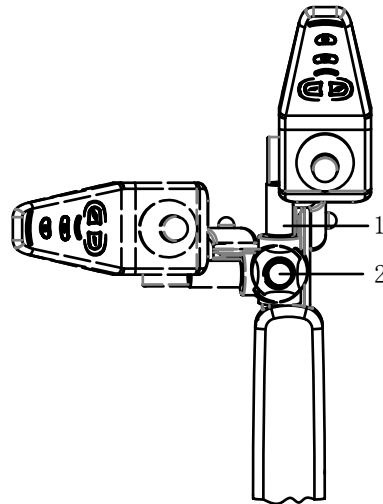
• Assembling the joystick

1. Put the fixing rod of the joystick into tube of right armrest (see image below), hold the locknut with left hand, rotating the quick release handle (1) clockwise, then press the quick release handle towards the arm rest to lock it properly. If operating with left hand is preferred, the joystick can be mounted on the left armrest in the same manor.

2. Press the button on the joint (2) to adjust the rotation angle of the joystick.

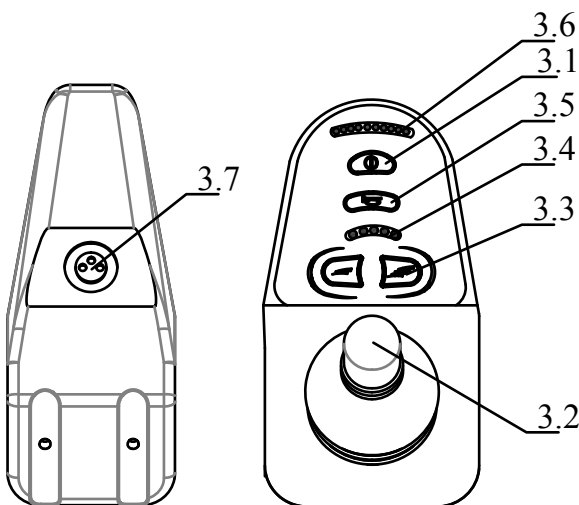


1.Locknut



1. Joint (optional) 2. Button

• Operation of Controller



3.1. Power button:

Power on and off the whole powerchair. Power system is activated once the power button is pressed and the system is turned off after pressing again.

3.2. Joystick:

Controls the powerchair to move forward, backward, turn left/ right, speed up and park. Push the joystick straight forward after turning power on, the power chair will move forward. The further you push the joystick, the faster the powerchair will travel.

Release the joystick gently and the power chair will slow down. When the joystick is back to the central position and released the powerchair shall stop and brakes will automatically be applied. Pull the joystick backward, the power chair will move backward, the further the joystick away from the center, the faster the powerchair will travel.

3.3. Speed control button

Press the increase speed control button sequentially to accelerate the powerchair. The speed button offers 5 discrete steps to speed up. Similarly, then press the reduce speed button sequentially to decelerate, also the speed button offers 5 discrete steps for speed reduction.

3.4. Speed indicator:

Press the increase speed control button and the speed indicator shall light up by 5 steps accordingly. Press the reduce speed control button and the speed indicator shall be lowered in the proper sequence.

3.5. Horn button:

Press the horn button when powered on, the beeper will buzz. Releasing the button, the buzz stops.

3.6. Battery gauge:

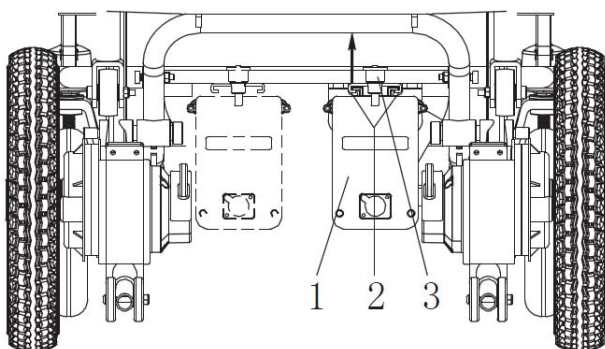
The battery gauge comprises of five different LEDs (1 x RED, 2 x AMBER, 2 x GREEN). Once 2 green LEDs are off, it is the right time to charge the battery to prolong it's lifetime. Once the red LED is on, this is the low battery warning. Operation on the Powerchair is prohibited at this time since continuous use on the powerchair will cause the battery to deep discharge and shorten the lifespan of battery. The accuracy of the five LEDs display will be reduced with the extension of battery usage period.

3.7. Charging port:

Locate on the backside of joystick, which is use for battery charging (see "charging mode I" for more details)


● Installation and operation of Battery Box


1. Hold the handle bar of battery box with one hand, then push it horizontally into the slot under the chassis until it reaches the end and connects with the its connector.
2. After it is well connected, secure the battery box with the knob to avoid movement of the battery box when driving.
3. If you want to remove the battery box, just lift the knob and then pull it out.




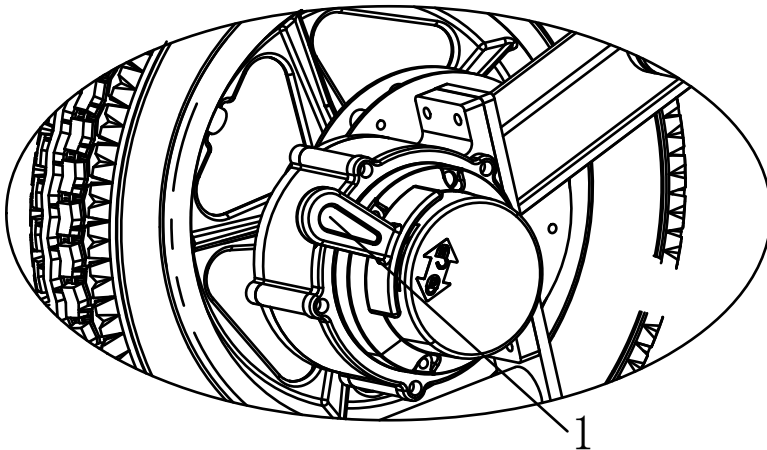
1. Battery box
2. Slot
3. Knob

●Operation of Electromagnetic Brake

Push the handle into the unlocked position  and the brake will disengage. The powerchair can then be pushed (no matter if the power is on or off)

Pull the handle to the locked position  and the brake will engage. The powerchair will now not be able to be pushed (no matter if the power is on or off). The powerchair can now only be moved using the joystick.

Warning: The powerchair cannot be moved while the brake handle is locked (the powerchair is braked). For user and powerchair's safety, the unlocked brake function  should not be used while going up and down slopes as there are no alternative brakes.



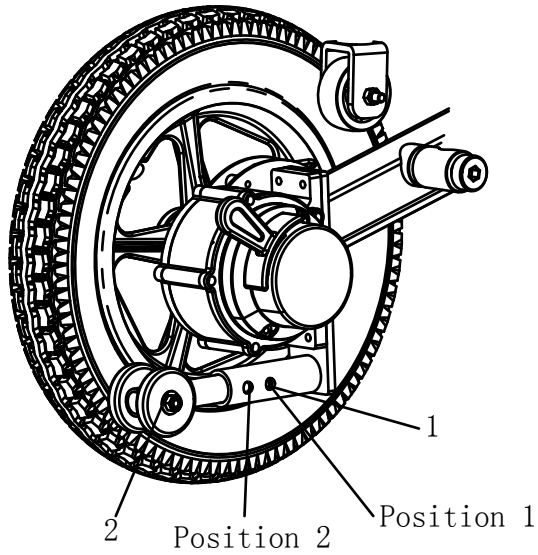
1.Brake handle

●Function and installation/disassembly of the anti-tip wheels.

The function of the anti-tip wheels are to prevent the powerchair from tipping backward while going uphill.

1. Insert the anti-tip wheels into their location on position 1 or 2 by squeezing the Metal shrapnel. The metal shrapnel is released into the location holes when in the correct position.

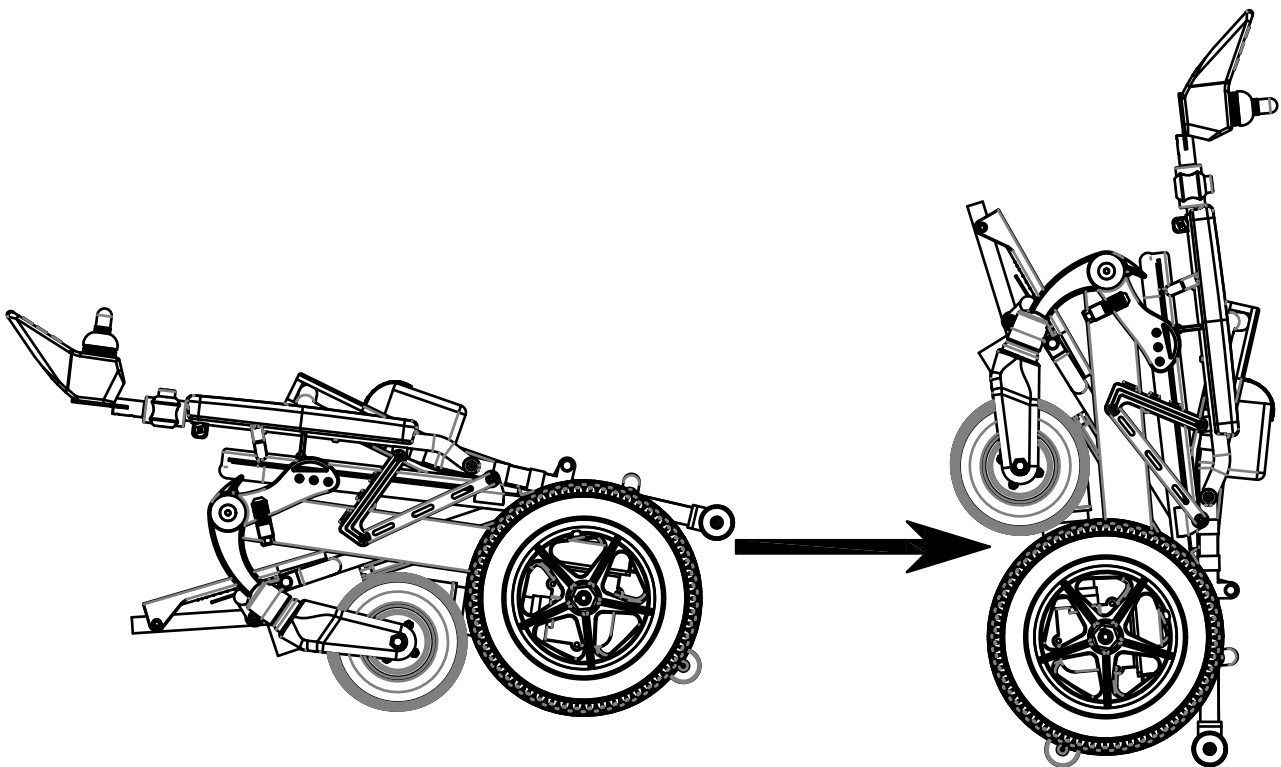
2. There are two positions available for the anti-tip wheels. The further the anti-tip wheels extend behind the power chair, the less the power chair will be able to tip backwards.



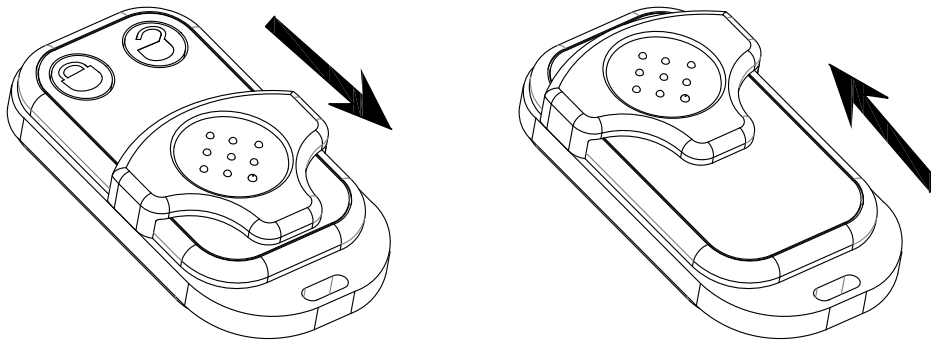
- 1. Metal shrapnel
- 2. Anti-tip wheel assembly

● **Folding and unfolding**

Hold down the open button (U) on the controller for unfolding the wheelchair and the fold button (D) for folding. Stand the powerchair upright and push it to move forward.



You can slide the slip cover over the buttons when the controller is not in use, so as to protect the buttons on the controller and avoid unnecessary damage by touching the key accidentally.

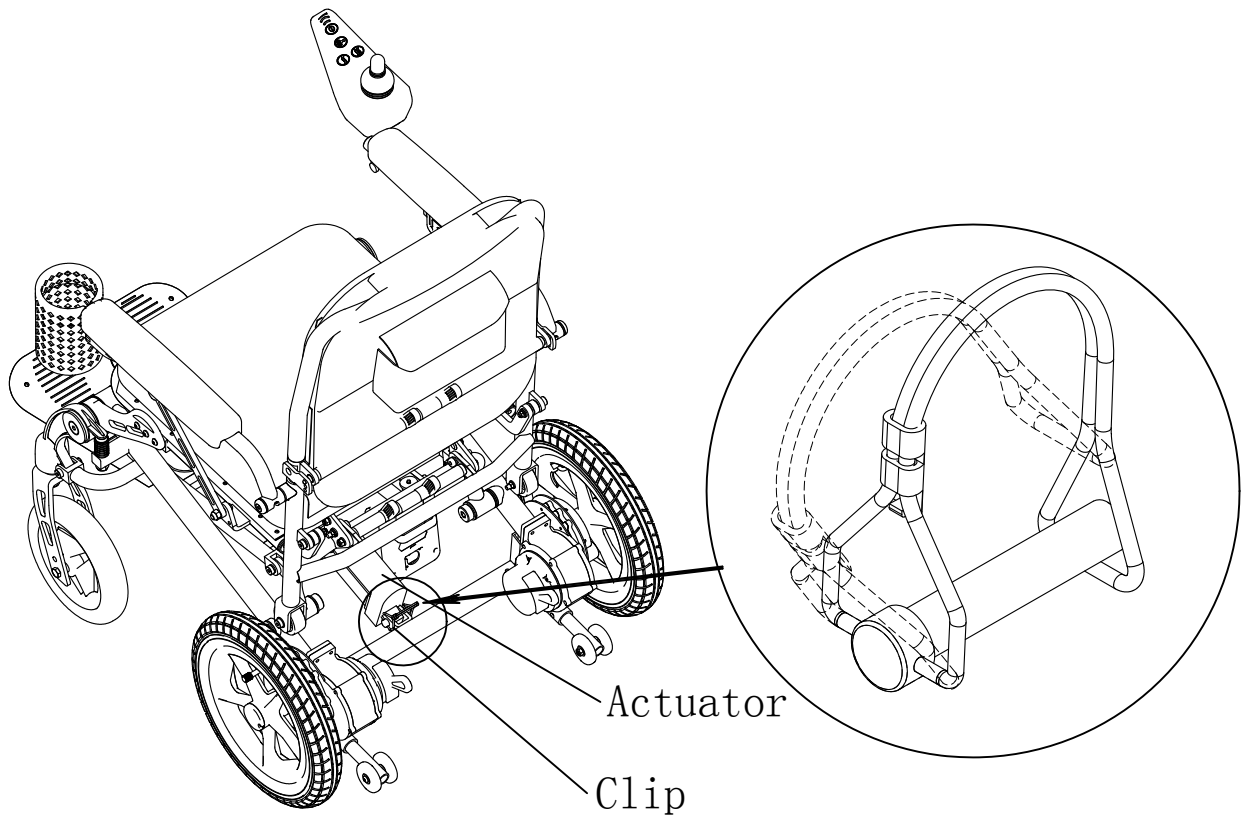


Replace the battery when the LED indicator on the controller is not bright enough and folding or unfolding the wheelchair becomes difficult. Specification of battery: 27A 12V.

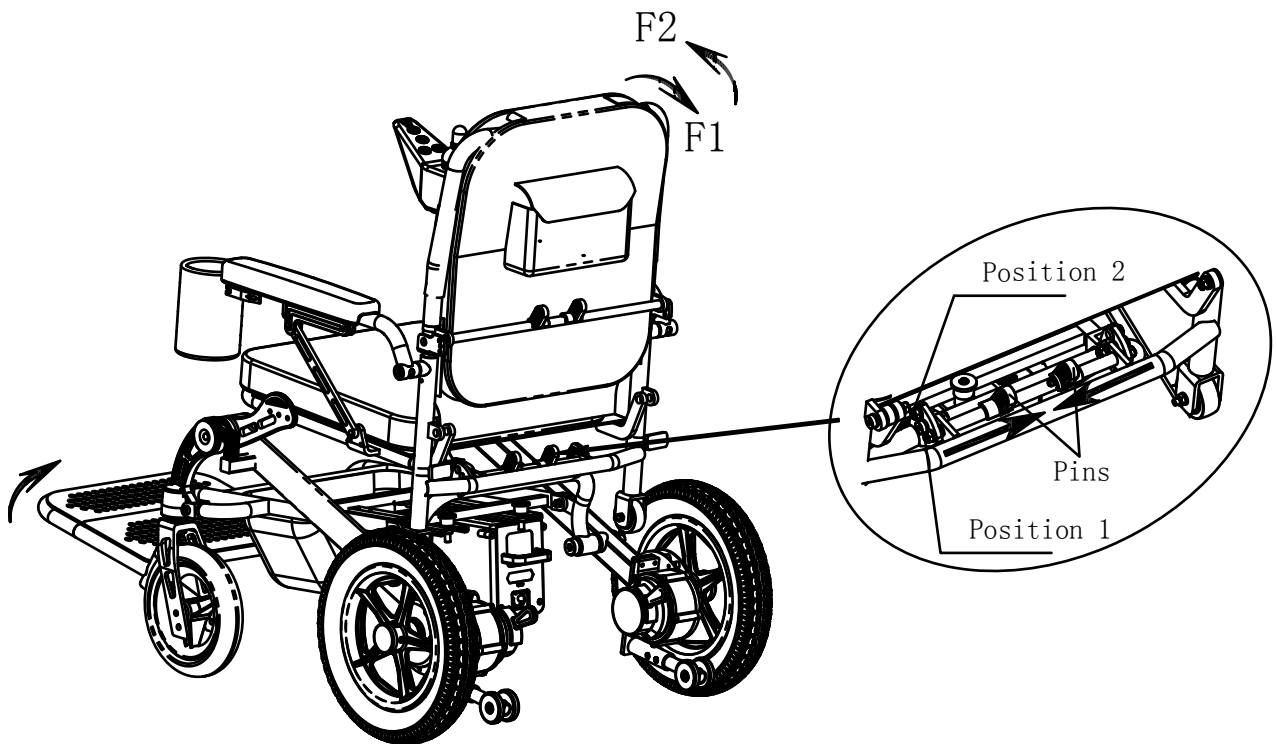
- **Manual folding and unfolding**

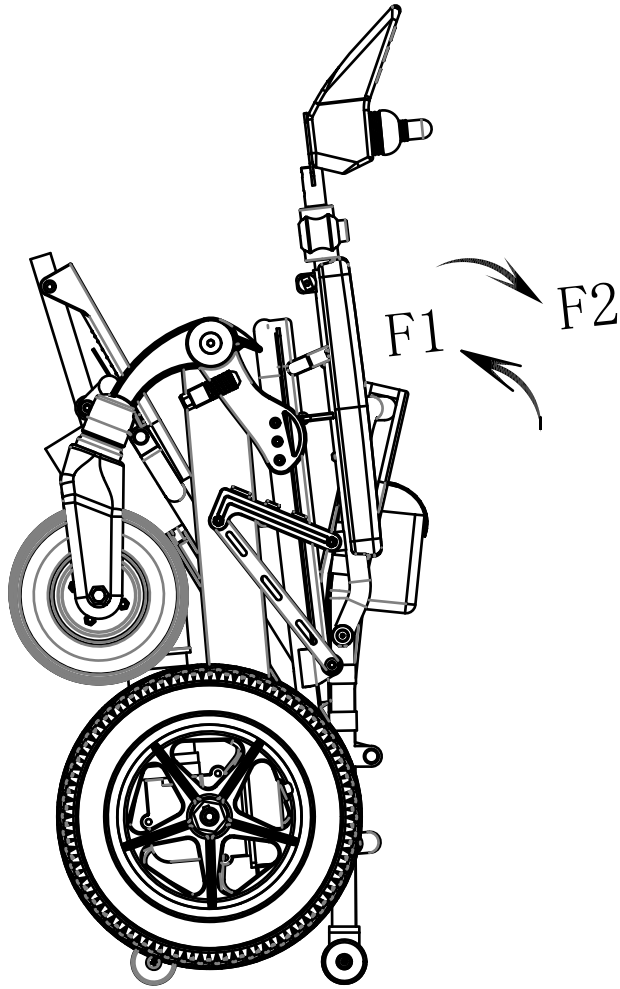
There is also a manual folding and unfolding function in case of emergency such as power fail or fault.

1. Just release the clip which is fixed on the actuator then remove the pin so that no connection with bar and actuator.



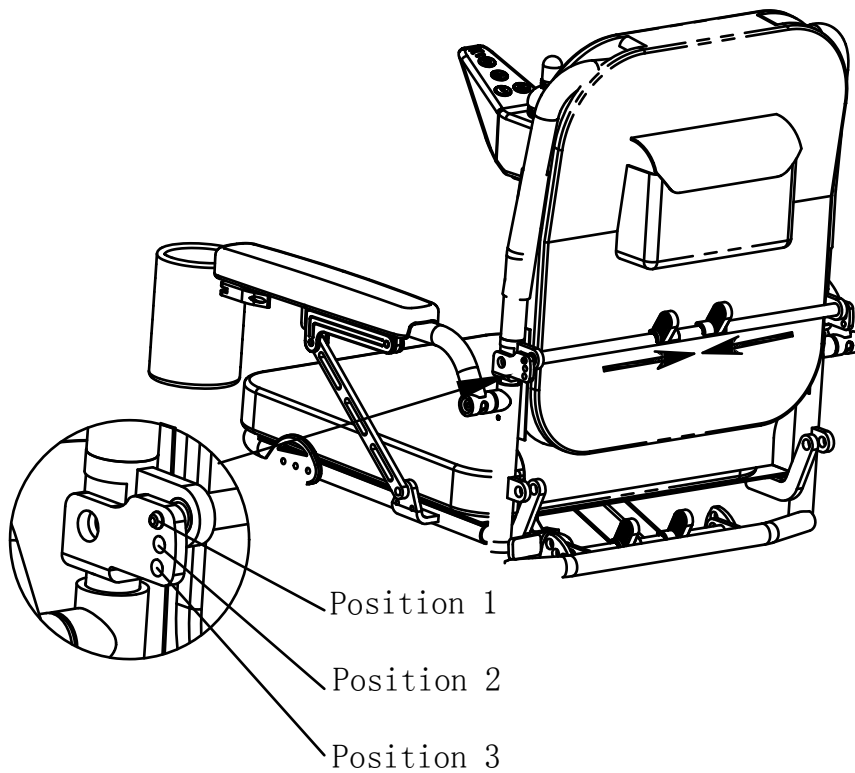
2. Pull the button to unreeve the pin (see the following image) and push forward the backrest to fold it at the sample, alternatively, pull backward the backrest to unfold it.





- **Backrest adjustment**

The backrest angle can be adjusted by the lever into three different positions, as below.



● Operation of Powerchair

1. Make sure the operator is well seated in the powerchair.
2. Switch on using the power button near the joystick until 5 LED's are shown on the power indicator.
3. Push the joystick slowly forwards until you hear the magnetic brakes disengage, the powerchair may start to move. In the same way, pushing the joystick slowly backwards or left and right, the powerchair shall move backwards and turn left/right.
4. Adjust the travelling speed according to road conditions and personal preference by pressing the acceleration and deceleration button.
5. Release the joystick and it will return back to the central position for parking purposes. You may hear the magnetic brake engage when parking properly.
6. Mind your surroundings when driving backwards. Push the joystick slowly in reverse until the controller beeps, then the powerchair will move backwards.

● Move, carry and storage the Powerchair

1. This powerchair is lightweight, making it suitable for travel use.
2. The whole powerchair can be put into a car boot after folding.
3. Anti-tipping wheels can be used when moving the powerchair.
4. Foldable and self-standing features are to conserve space.

Notes before operation:

1. Make sure you acquaint yourself with the local traffic laws and regulations.
2. Powerchairs are not motor vehicles. They are designed for elders and physical disabled. According to the traffic law, a driver's license is not required but you must abide by the same traffic laws and regulations as pedestrians.
 - A. You must know about traffic signs for pedestrians.
 - B. Never make a turn and cross the road that you are unsure of.
3. Please acquaint yourself with all functions of the powerchair before your first use. Practice where there are few people, but in good and safe road conditions. Practice how to move forwards, accelerate, decelerate, stop, move backward, go uphill, go downhill, make a turn etc.
4. If possible, please be accompanied by someone who knows the powerchair for your first ride to guarantee safety.
5. For your safety, never drive the powerchair under the influence of alcohol or fatigue.

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6. Ensure the operator has no illness or potential disease that may occur during use, making the user lose the ability to control the powerchair while driving.
 7. If taking medication, please check with your doctor whether the medicine will have an adverse effect on your safe operation of the powerchair.
 8. Check the condition of the powerchair. For example, whether the brake is working, the tyres are in good condition, each part is in right place after unfolding, and the battery is fully charged.
 9. Do not remove the anti-tipping wheels.
 10. Never modify the Powerchair without RHealthcare permission and authorization. This will void the warranty.

Warning:

1. Do not attempt to expose the electric system of your powerchair into a wet environment such as rain, snow, fog etc. Never rinse your powerchair, which may damage the electric system. If wet, please dry and use it only if no faults.
2. Never drive the powerchair in bad weather conditions, such as raining, snowing, foggy, strong wind, and temperature less than -20°C or higher than 40°C etc. To drive the powerchair in such condition may damage the electric system, resulting in failure of control.
3. Do not drive in the desert, on sand, mud, puddles or any icy, smooth and salty road. This may affect the performance of powerchair, causing an accident and physical injury.

EMI/RFI

Dash E-Fold Powerchair is certified with CE. However, all electrically powered vehicles including powerchairs are susceptible to EMI and RFI. This interference could result in abnormal, unintended movement of a powerchair. We advise you keep your powerchair far away from that high frequency equipment, emission and receiving devices. This powerchair can also produce electromagnetic interference to the other products, do not use several pieces of equipment or devices at the same time.

6. TROUBLE SHOOTING

Trouble shooting for Micon controller

The controller contains procedures for identifying problems and trouble shooting.

As soon as the diagnostic program detects problems or errors, 5 LED' s will become lit and rapidly flash on the battery gauge of the controller. The owner can try the following method to address the problem.

Beep Code	Possible Solution
1 Beep/ LED	The battery needs charging or there is a bad connection to the battery.
2 Beeps/ LEDs	The left-hand motor has a bad connection. Check the connections to the left-hand motor.
3 Beeps/ LEDs	The left-hand brake handle unlocked or faulty,reset the brake handle or check the connection. Contact your local dealer.
4 Beeps/ LEDs	The right-hand motor has a bad connection. Check the connections to the right-hand motor.
5 Beeps/ LEDs	The right-hand brake handle unlocked or faulty, reset the brake handle or check the connection. Contact your local dealer.
6 Beeps/ LEDs	Overcurrent protection.
7 Beeps/ LEDs	A joystick is fault. Make sure that the joystick is in the center position before switching ON the controller.
8 Beeps/ LEDs	A controller is fault. Make sure that all connections are secure.
9 Beeps/ LEDs	The brakes and controller have a bad connection. Check the brake and motor connections. Make sure the controller connections are secure.

If the problem persists, please contact us or your local dealer.

7.CARE AND MAINTENANCE

To ensure the performance of the powerchair and minimize the occurrence of failures so that you are able to have a safe and comfortable drive, we recommend performing the following checks.

Please pay attention to the following in daily use.

1. Read the contents of safety operation carefully and understand the meaning of each item.
2. The controller, just like the brain of a human being, is the key part of a powerchair. Do not attempt to disassemble, repair or modify the controller without permission. This may damage the controller and make the warranty invalid. Wipe the controller frequently with a dry, soft cloth. Never use the controller in high temperature or a wet environment.
3. Do not attempt to open, repair and modify the gear box, which may damage the gear and make the warranty invalid. Never overload and/or block the gear for a long time. You should attempt to clean the lead wire on motors either yourself or via a regular service. No water, water may leak into the motors when crossing a puddle more than 5cm.
4. Do not wipe any components (e.g.: shell etc) of powerchair with chemicals like gasoline. Wipe them with a clean, damp cloth. A neutral cleaner can be used if there is lots of dirt. Meanwhile, do inspections and maintenance for the powerchair at different periods.

Daily check:

1. Check whether the joystick is deformed or damaged.
2. Check if charging is needed by switching on the powerchair.
3. Check the brake function before driving.

Weekly check:

1. Switch off the controller before checking.
2. Check the thin rubber gaiter or boot, around the base of the joystick shaft, for damage or splitting. Check visually, do not handle the gaiter.
3. Wipe the powerchair with a clean, damp cloth. Do not wet the electric system.
4. Try to operate the joystick and make sure the joystick returns to the center when pushing and releasing it.

Monthly check:

1. Make sure the battery is in good condition, clean the battery connections if necessary.
2. Ensure every connector along the electric system is in good condition.
3. Check if the fasteners are loose.
4. Ensure the front and rear wheels are not shaking.
5. Check the joystick, make sure it can return to central after releasing the joystick.

Yearly Check:

Acquire a comprehensive and thorough inspection, (a service) by your dealer.

★ Notice: In the event a problem is found, or you think the powerchair is working abnormally. Contact us or your local dealer and gain an inspection and maintenance.

★ Notice: Charge the powerchair once every month once when not in use for long periods of time.

● Maintenance

1. Check regularly for wire condition and wire connectors connection of all cables.
2. Keep away from moisture for all electric components. Otherwise dry them thoroughly before using.
3. Get rid of dirt on the powerchair with a soft cloth, do not rinse the powerchair with water.

8. WARRANTY

• Warranty

From the manufacture date:

- (1) Main frame: 1 year repairing guarantee
- (2) Motors: 6 months free replacement and 1 year repairing guarantee
- (3) Charger and controller: 6 months free replacement and 1 year repairing guarantee.
- (4) Battery: free replacement if capacity of battery less than 60% of rated capacity within 6 months.
- (5) Other parts: 1 year repairing guarantee.
- (6) Wearing part like tyres and plastic parts: warranty is not provided.

In the event of any damages when using, please contact the distributor.

A paid service is recommended after 1 year.

• Warranty Exclusions

1. Damage cause by improper use and maintenance.
2. Parts damaged due to spare parts not coming from the original manufacturer.
3. Parts damaged by an accident.
4. Warranty is not provided for wearing part like tyres, plastic parts, bearings etc.
5. Never change the settings of the powerchair without permission.
6. Damages cause by force majeure like typhoon, flood, earthquake etc.