

User's Manual



D12



Culver Mobility

BE FREE

BE EASY

BE YOUR LIFE



The company reserves the right to make any change and improvement without prior notice.
It reserves and also the property of models and forbids their reproduction, even partial.

INTRODUCTION

Dear Users,

Thank you for choosing the D12 for your portable wheelchair transportation needs. It is important to read through this manual before operating your D12 Power Wheelchair to become familiar with its features as well as its limitations and safety information.

You will find the operation and care of your D12 Power Wheelchair simple and easy.

Disclaimer: Culver and partners cannot be held responsible for personal injury or property damage resulting from the unsafe or improper operation or maintenance of D12 wheel-chair.

As part of our ongoing product improvement initiative, we reserve the right to change specifications and design without notice. As a result, there may be minor differences between your D12 and accessories and the photos, illustration and instruction in this manual.

CULVER MOBILITY

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Recommendation

Please pay attention to “Warning” shown in the content of this user’s manual to protect you from any injury. Unable to follow “Notification” in this manual may result in damage the wheelchair.

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SPECIFICATIONS

Model	D12
Material	Aluminum alloy
Unfold Size	1005 * 650 * 950 mm
Fold Size	650 * 350 * 750 mm
Loading Capacity	150 kgs
Motor	250W * 2 pcs brushless motors
Battery	24V 7AH * 2 pcs lithium battery
Max Speed	6 MPH
Driving Range	28 km
Front Wheels	8" PU solid wheels
Rear Wheels	12.5" PU solid wheels
Climbing Slope	Max 12°
Charging Time	6-8 hours
Width of Armrest	600 mm
Seat Width	470 mm
Seat Depth	400 mm
Seat Height	Front 490 mm / Back 470 mm
Turning Radius	850 mm
Net Weight without Battery	23.5 kgs
Net Weight with two Batteries	28.0 kgs
Drive Model	Rear Drive
Braking System	Electromagnetic Brake



SPECIFICATION DIAGRAM



SAFE OPERATION

This is the most important section of manual; how to safely operate the D12 Wheelchair. Please review this section thoroughly.

◎ **General safety**

- A. Adjust the D12 Wheelchair to your personal comfort level as much as possible.
- B. Take your time to learn how the D12 Wheelchair works in a private space before you begin operating around others.
- C. Practice bending, reaching and transferring in and out of D12 Power Wheelchair.
- D. Always be aware of your surroundings.
- E. If you are not sure the D12 can surpass an obstacle, try to find another way around.
- F. Make sure that electronic components such as the control panel, battery charge, and other electronic controlled components avoid moisture. If these components encounter moisture, dry before use.
- G. The D12 Wheelchair seat is designed for comfort, not specifically for pressure relief; if you suffer from pressure sores, or if you are at risk that they will occur, please consult your doctor.

◎ **Before using your D12 Power Wheelchair**

- (1) Make sure the D12 Wheelchair is operating smoothly.
- (2) Check for any unusual noises, vibration, or a change in the ease of use; if you detect a problem, get in touch with our service department.
- (3) Failing to maintain your D12 Wheelchair could increase the risk of injury.

◎ **Getting into the D12 Power Wheelchair**

- (1) Before sitting, make sure the D12 is switched off, this will ensure the D10A will not move upon touching the joystick.
- (2) Make sure the footrest is down.
- (3) Once on board, make sure your feet are safely on the footrest.

◎ **Driving the D12 Power Wheelchair**

- (1) Be alert to the danger of motor vehicles on roads or in parking spaces.
- (2) At night or when it is hard to see, use reflective clothing and equipment.
- (3) The D12 is designed for use on firm, even surface such as concrete, asphalt or indoor floor.
- (4) Do not operate the D12 Power Wheelchair in sand, loose soil or over rough terrain, which could damage wheels, bearings, axles or motors, or loose fasteners.

SAFE OPERATION

© Getting out of the D12 Power Wheelchair

- (1) Make sure to bring the D12 Power Wheelchair to a complete stop.
- (2) Turn off the D12 Power Wheelchair to avoid accidentally opening the joystick and moving the wheelchair.
- (3) Raise the armrest so that you can conveniently exit the wheelchair.
- (4) Carefully and safely get out of the seat.

© Weight limited-Do not exceed or the warranty will be void

- (1) Never exceed a total weight of 150 kgs, total for the rider plus items carried.
- (2) Exceeding the weight limited is likely to damage the seat, frame or fasteners and may cause severe injury to you or others.

© When transporting the Fold Power Wheelchair D12

- (1) Never sit in the D12 Power Wheelchair while in a moving vehicle; an accident or sudden stop may cause you to be thrown from the wheelchair.
- (2) Never transport the D12 Power Wheelchair in the front seat of a vehicle as it may move and interfere with the driver.
- (3) Always secure the D12 Power Wheelchair so that it cannot roll or shift when being transported in a vehicle.
- (4) The D12 Power Wheelchair is NOT approved to be used with any tie down system, which is generally used to transport a seated user in a powered wheelchair in a motor vehicle.

PRECAUTIONS

CAUTION: OPERATE SAFELY

Do not operate the Fold Power Wheelchair D12 in water of any kind.

Do not operate the Fold Power Wheelchair D12 up or down staircase or escalators.

Do not operate the Fold Power Wheelchair D12 while on a moving vehicle such as a bus.

Do not lean your body to reach out of the D12, causing a balance issue.

Do not exceed the weight limited total of 120kg for rider plus any items.

Do turn off the Fold Power Wheelchair D12 when exiting the chair for safety.

Do practice driving the D12 Portable Electric Wheelchair in a private, enclosed area.

Please do not drive the wheelchair on public road and make sure have safety belt buckled before operation.

PRECAUTIONS

It is important to perform regular maintenance of your D12 Power Wheelchair for longevity and warranty eligibility. Even a little cleaning now and again will go a long way to keep your device looking and functioning like new.

Certified repair shops with trained professionals who specialize in electric wheelchairs and scooters will be qualified to perform the service and maintenance on your D12 Power Wheelchair.

We recommend you inspect your D12 Power Wheelchair two or three times per year in the following areas:

- (1) Frame: Tighten loose screws as necessary D12 Power Wheelchair.
- (2) Wheels: Make sure they rotate easily. Significant resistance may require new bearings.
- (3) Armrest: Look for excessive wear or if they are loose.

Replacement parts and more major maintenance issues should be done by a professional.

◎ Batteries

- (1) Batteries are special lithium batteries designed specifically for use in the D12 Power Wheelchair.
- (2) Read all battery instructions before attempting to change or charge batteries.
- (3) When you don't use the D12 wheelchair for long periods of time, please charge the battery every month to avoid the battery being damaged.

◎ Fasteners

Many of the screws, bolts and nuts on the D12 are special high-strength fasteners. Replacing these fasteners with non-approved parts may cause your D12 Power Wheelchair to result in faulty operation and may cause harm to you or other people, therefore:

- A. Use fasteners that have been supplied by Culver .
- B. Using the correct tools, tighten any fasteners that become loose as soon as possible.

◎ Change and Adjustments

Never use non-D12 Power Wheelchair parts or make changes unless authorized in writing by representative from our company. Doing so will void the warranty and may create a safety hazard.

INSTALL SETUP

Your D12 Power Wheelchair will arrive carefully packaged in a cardboard box.

1. Open the top of the box then turn the box on the side for easier pulling out the chair and contents.
2. Total components as bellow:

Chair, main assembly



Charger with power cables



Lithium battery * 2 pcs

Seat cushion



Safe belt



Tools



Battery direct charge transfer cable



Battery serial connection cable

3. To expand the D12 , grasp the push bar and pull up while holding down on the seat to expand the chair and complete the assembly:

Grasp push bar

Hold down seat to expand



INSTALL SETUP

4. Sit on the chair and Lean backwards to make sure the clip locker which located below the seat to the rear of the D12 , to lock the seat into place. This step is very important!!!



5. Install the controller into the open slot on the arm of the chair, on the right side (if user needed, can change to left side). tighten knob located under the armrest to secure the controller in place.

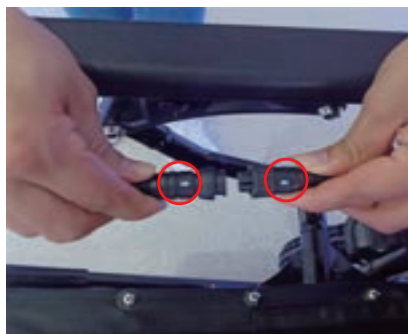


Slide joystick Controller into armrest



Secure joystick controller knob

6. Connect the controller wire harness to the CPU wire harness. Take care the line up the pins properly as arrow tip indicate, so that they do not get bent, broken or damaged.



Note Make sure connector pins “white arrow” to “white arrow” .

INSTALL SETUP

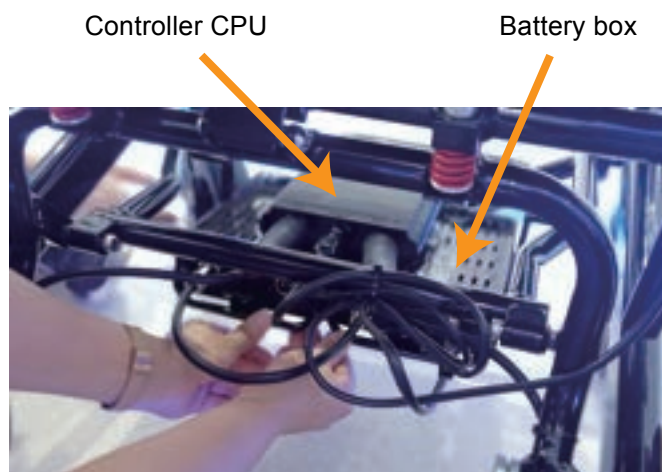
7. Connect the batteries, using battery serial connection cable to make two batteries in series line (or you can use two batteries individually, no need to connect batteries in series line.), tightening joints.



8. Connect batteries to the CPU which the wire comes from the wheelchair, and tightening joint .



9. Put two batteries into the batteries box which under the seat, make sure battery clip locked.



CONTROLLER

The D12 Power Wheelchair is equipped with a joystick style controller. Detail functions as shown:



© Controller and Driving Tips

1. Take some time in a safe, controlled environment to learn the operation of controller, the speed and the maneuverability of wheelchair.
2. When turning, reduce your speed, which will help you avoid any potential tilting or tipping of wheelchair.
3. Be sure to adjust the speed depending on your environment.
4. To slow down, slowly bring the joystick back toward the initial position.
5. To stop, just bring the joystick back to the initial position.
6. Use extra care when you drive the D12 in reverse. You may lose control or fall if one of rear wheels hits an object. When operating in reverse:
 - A. Operate the wheelchair slowly and at an even speed.
 - B. Stop often and check to make sure your path is clear of obstacles.

BASIC OPERATION

Before operating your D12 , be sure to read all safety information and precautions included in this manual. Operate only in the appropriate environment after you have practiced operation the wheelchair and know how to work the controller.

GET IN	Be certain that the power is OFF before sitting in the seat of Fold Power Wheelchair D12 , with no light on the controller, make sure the footrest is down before getting into the wheelchair.
POWER ON	Press the Power button, you will ear a beep and a light will indicate that power is on.
TURING &STEERING	Use the joystick style control to steer and turn left, right or go forward and backward.
STOPPING	Simply remove your hand from the joystick to stop.
POWER OFF	When stopping, it is advised that you power OFF the wheelchair to prevent accidents. Press the power button to turn off the wheelchair.
GET OUT	Make sure there is no light on the controller before getting off the wheelchair.

CHARGING BATTERIES

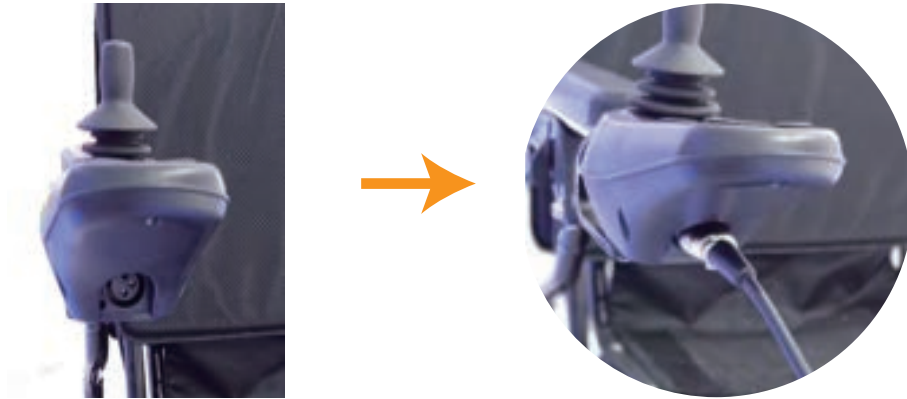
Your D12 wheelchair will arrive with full charged batteries, which should last about 18km under normal operation conditions. We recommend that you run the D12 until the batteries are completely dead the very first time in order to get the most out of the battery life.

◎ **First charging method**

Charge both batteries at the same time via controller charge port.

1. Turn the power off.
2. Plug in the charger to the controller port (see below), please notice connect the charger cable first, then turn the power on.

CHARGING BATTERIES



3. Allow your wheelchair to charge for 6-8 hours or when the light on the charger turns green, which means your batteries are full charged.
4. Should you require them, the lights and what they mean are located on the back of the charger.



© Secondary charging method:

You have the option of charging the batteries individually.

1. Turn off the main power.
2. Flip open the charger port protector on the front of battery.
3. Use the secondary charger pigtail to adapt the battery charger to plug into the battery directly.



CHARGING BATTERIES

© More information on the Fold Power Wheelchair D12 batteries...

1. The Fold Power Wheelchair comes with two charged 24V 7AH lithium batteries.
2. Charged the batteries for 3-4 hours for each battery.
3. Turn the main unit's power off while charging.
4. Do not leave children unsupervised near the power wheelchair while it is charging.
5. Do not attempt to open the battery housing.
6. Red means the power is on and the unit is charging; green means the unit is fully charged.
Note: this information is also located on the back of the charger.
7. When the battery is full charged, remove cable, then take out the DC charging connector and AC input power socket.
8. The average time taken to re-charge workable batteries will vary from 2 to 8 hours depending on the level of usage.
9. Do not charge more than 8 hours.
10. If you do not operate the D12 for two months, we recommend that you charge the battery for 6-8 hours before use.
11. Over current protection: this system is included on the wheelchair and will shut off the current from the batteries if triggered, thus shutting the motor down, which will ensure that the motor and battery do not experience and damage.
12. The life cycle of a lithium battery is measured in charging cycles with an average of 500 charge cycles.
13. Check the battery indicator light daily if you use the D12 Wheelchair frequently.
14. Do not use any battery chargers that have not been certified by Monarch Mobility.
15. If damaged, do not handle the battery without protective gloves and eyewear.
16. If the battery needs to be disposed of, locate the nearest hazardous materials disposal facility, and call them for instructions.
17. Before storing your D12 for long periods of time, take these steps to maintain the battery:
 - a. Full charge the battery before storing.
 - b. Remove the battery from the wheelchair.
 - c. Store the battery in a room temperature environment that is kept dry.
 - d. Avoid temperature extremes and do not allow the battery to freeze.
18. Do not attempt to charge your battery if it is frozen from extreme weather conditions, instead first allow it to thaw for several hours.

FREE WHEEL MODE

In order to have a care giver push the power wheelchair, it must be put in Free Wheel Mode. This mode disengages the drive mechanism to the wheels, making them free to push manually. We recommend that you turn off the power of wheelchair when in this mode, both for safety and to save battery power.

1. To put the D12 in Free Wheel Mode, come to a full stop and turn OFF the power on the controller.
2. Push down on the two red levers located on each rear wheel as shown:



Push down two red levers on each wheel.

TRANSPORTING D12

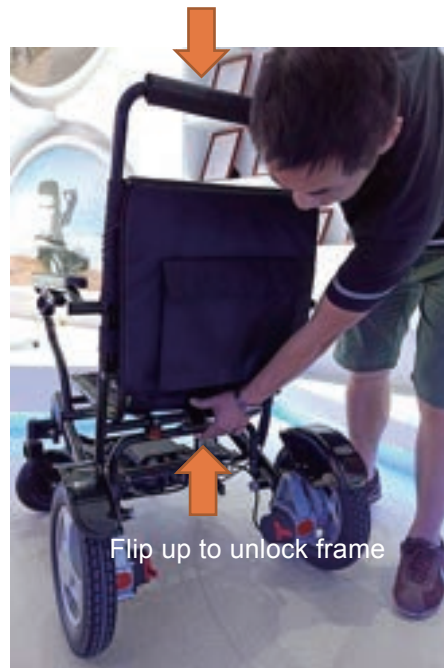
To transport your D12 Wheelchair, it is advised that you fold it up following the procedures below.

Note Never transport the power wheelchair in a tie up system (electric mode), as the D12 is not compatible with them. Never sit in the wheelchair and be transported in moving vehicle. Do not place the folded power wheelchair in the front seat with driver where it could move and slide.

1. Turn OFF the power from the controller.
2. Remove seat cushion.
3. Press down the backrest and flip the back safety latch down to unlock the frame.

TRANSPORTING D12

Press down the backrest



4. Fold the wheelchair.
5. When folded, the seat cross bar can be used to move the wheelchair easily.

Seat cross bar



TROUBLE SHOOTINGS

The following represents the most common questions asked about the Fold Power Wheelchair D12 with regard to every day use; check this helpful guide or the operator's manual for more information if you have a question about using your power wheelchair.

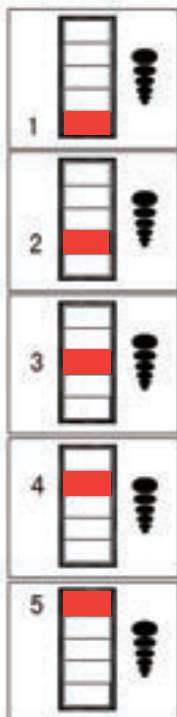
Question	Possible causes	Answer
Why is there No Power to the wheelchair ?	<ol style="list-style-type: none"> 1. Controller system power is not connected. 2. Controller system CPU and joystick are not connected. 3. Battery power is too low. 	<ol style="list-style-type: none"> 1. Connect the battery. 2. Ensure all connections between joystick, CPU and battery are securely tightened. 3. Charge the battery.
Why is the wheelchair noisy or vibrating when turning?	<ol style="list-style-type: none"> 1. Speed is set too low. 2. Motor is damaged. 	<ol style="list-style-type: none"> 1. Raise the speed. At low speeds, the motor may sound or feel strained. 2. Replace the motor.
Why can't I charge the battery?	<ol style="list-style-type: none"> 1. Charger light does not turn on. 2. Charger light is always green. 3. Charging time is stopped before full charge is complete. 	<ol style="list-style-type: none"> 1. Replace the charger. 2. Battery is not connected, or may need to be replaced. 3. Capacity of battery as decrease over time. This is normal.
Why can't I connect the controller?	<ol style="list-style-type: none"> 1. Connector pins (male) on the controller have become bent and misaligned with connector holes (female) on the CPU connector. 	<ol style="list-style-type: none"> 1. Using a small tool, carefully straighten the connector pins (male) on the controller to align with holes (female) on the CPU connector.

DIAGNOSTICS

Your controller has an indicator light that, during normal operation, is a steady GREEN. This light also functions as a diagnostic tool by flashing in patterns that indicate problems. It is important to pay attention to these diagnostics in case the power wheelchair must be put out of use for safety reasons until maintenance can be performed.

If the indicator light indicates a fault, turn off the power and then turn on power again. If the fault is not released after turning on power again, the indicator repeats this error message. Please refer to the fault information diagnosis table to help you find possible problems and corresponding solutions.

If the above method still does not help you troubleshoot, please contact your dealer. When communicating with the dealer, provide the specific problems in detail as much as possible.



1 red light flash indicates the pressure of battery is not full.

2 red lights flash indicates no signal of joystick.

3 red lights flash indicates the wheelchair is charging.

4 red lights flash indicates moving the joystick when turning on power. Or do not connect the motor wires.

5 red lights flash indicates the brake solenoid is not connected or damaged.



WARRANTY

The purchaser of this product is entitled to a limited warranty as offered by our company, and its affiliates on the following components and timeframes:

- ✘ Chair frame: 3 years
- ✘ Motors: 1 year
- ✘ Controller and CPU system: 1 year
- ✘ Battery: 6 months
- ✘ Wear parts: 3 months

Includes tires, seat and back rest, armrests, and support straps.

This warranty is valid for the replacement of dysfunctional parts only. Any parts under warranty will be replaced and shipped to your door. Any service and labor fees, if applicable, to replace parts under warranty must be paid by the user.

Due to its straightforward design, most parts can be easily exchanged by the end user without a professional service tech required. However, it is always recommended you seek professional help for maintenance and service, to make sure the work is done properly.

The warranty does not cover:

1. Products damaged by user negligence.
2. Products damaged accidentally.
3. Products damaged intentionally.
4. Products that have been subjected to negligence.
5. Products that have been subjected to abuse.
6. Products that have been improperly stored.
7. Products that have been improperly handled.
8. Products that have been improperly operated.
9. Products that have experienced general misuse.
10. Products that have been modified in an unauthorized, unapproved way.

Warranty is non-transferable and only valid for the original wheelchair purchaser.

WARRANTY CARD

CULVER MOBILITY
Warranty Registration Card

User Name		ID No.	
Address		Phone No.	
Model	D12	Product No.	

Purchasing Date	(Month) (Day) (Year)
Manufacturer	CULVER MOBILITY
Distributor	(Stamp or signature)
Distributor (Phone, Address)	

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