

ELECTRIC WHEELCHAIR

G01

User Manual



Preface

Please read the user manual carefully before taking the product into use.

- This manual contains operations, assembly methods, and simple faults solutions.
- This manual applies to our models: **G01**
- This manual contains wheelchair maintenance and self checking methods, please put it in proper place.
- Please provide this manual for reference when other people are going to use this wheelchair.
- The annotations and illustrations in this manual might be slightly different with the real parts due to quality improvement or changing design. Please in kind prevail.
- Contact with your dealer if there is any ambiguity or question.
- Improper use of any vehicle may lead to injury. Unsafe driving could harm yourselves and others.
- The electric wheelchair is intended to comfortably transport persons with walking difficulties or no walking abilities.
- This electric wheelchair is designed to transport 1 person only.

Symbols used in this manual



Warning symbol

Follow the instructions next to this symbol closely.

Not paying careful attention to these instructions could result in physical injury or damage to the wheelchair or the environment.

1 Product Introduction

1.1 Product Image



1.2 Product Information

Performance Parameters

Main technical data	G01		
Overall size	1140*640*935mm	Folded size	735*370*725mm
Seat size	450*430mm	N.W.	45kg
Height between seat and footplate	510/490/460mm	Height between footplate and ground	90/65/40mm
Armrest height	230mm	Backrest height	395mm
Max loading weight	100kg	Front wheel diameter	8 inch
Rear wheel diameter	12 inch	Battery (*2pcs)	12V 20AH
Motor (*2pcs)	250W	Battery charger	AC220±10% 50-60HZ
Controller	35A	Max driving distance	20km
Degree of protection	IPX3	Max safe slope	6°
Turning radium	≤1.2m	Static stability	9°
Reversing width	1.4m	Climbing angle	6°
Tire pressure	2Kgf/m ²	Obstacle climbing	40mm
Ground clearance	100mm		

Product Performance

This series of electric wheelchairs are powered by battery, driven by DC motor. Users control direction and adjust speed by joystick controller. It is suitable for application of low speed, good road condition and small slope.

Main Structure

This series of electric wheelchairs are mainly composed of two parts:

- 1) Frame Part: frame, wheel, footrest, armrest, backrest etc.
- 2) Electrical Part: controller, motor, battery.

Application Range

Our electric wheelchair is for disabled and elderly people (less than 100kg) using as walking vehicle, suitable for outdoor middle distance use. Do not run on the motorways.

2 Safety Instructions

2.1 Driving Notice

General Driving Cautions

- Please keep your hands on the armrest to control the wheelchair.
- Please practice in parks or other safe open places until you can use the wheelchair skillfully.
- Fully practice driving in a safe place, to master principle of moving forward, stopping and turning circles.
- Before driving to the road, please be accompanied by caregivers and confirm it is safe.
- Please strictly follow traffic rules of the pedestrian, do not regard yourself as vehicle driver.
- Please drive on the sidewalk and the zebra crossing. Do not drive on vehicle lane.
- Steadily drive, to avoid driving in 'Z' line or sharp turn.
- Please keep pressure of pneumatic tire properly, the abnormal tire pressure may cause unsteady driving or excessive lost of current.

Accompanied by Caregivers or Avoid Driving in These Conditions

- Drive in bad weather, such as rainy day, heavy fog, strong wind, snow, etc.

- In case of wheelchair is wet out, wipe the water immediately.
- Drive on the bad road condition, such as muddy, trail, sand road, gravel, etc.
- Drive on crowded road.
- Drive on no fence side ditch, pond, etc.
- Across the railway.
- When you have to across railway, pause at turnoff to confirm it is safe, and make sure that the tires will not be stuck by railway.
- The electric wheelchair is only for personal use, do not carry people or goods, and do not for a traction purposes.

Precautions for Uphill and Downhill

- Avoid driving on following places: steep hills, tilt places, high steps, channels etc.
- Avoid driving on steep slopes, the slope range should be less than 9 degrees. Please carefully operate the controller when drive on slopes.
- Keep moving forward during uphill or downhill.
- Slow down speed during downhill.
- Avoid driving sideways on the steep.
- Forbid driving on the stairs place and avoid crossing high steps.
- Avoid crossing wide ditches.
- During crossing ditches, keep 90° angle between tires and the ditches.



Do not set the wheelchair to manual mode during uphill and downhill.

When the wheelchair is malfunction at traffic crossing, please immediately ask passerby for help. And set wheelchair to manual mode, then push wheelchair to leave the scene, or user to get away from the site to a safe place immediately.

Precautions for the Caregivers

- Caregivers should confirm that the users' feet are on the footrests' proper position and ensure clothes do not attach to the wheels.
- Caregivers should push the wheelchair to move forward to keep safe on steep slope or long slope.

2.2 Other Notice

Repair and Reform

If the repair and modification is necessary, please contact your dealer. Do not modify by yourself, it may lead to accident or malfunction.

Protect Environment

In order to protect environment, do not casually discard the abandoned wheelchair and scrapped battery. Please contact your local dealer for replacement of new battery.

Keep the Storage Environment Dry

Do not storage wheelchair in damp condition, such as near-by bath room. If wheelchair got wet in the rain, wipe the water immediately.



Do not replace parts or material randomly.

Do not add weight randomly, in case to cause imbalance.

Do not use other vehicle to pull or push the wheelchair when somebody sits on the wheelchair or the wheelchair is in manual mode.

When there is abnormal sound, contact service immediately.

Service Lifetime

The service lifetime is 5 years from date of manufacture. User should do not overuse more than service lifetime in case of unpredictable accident.

Protection from Electromagnetic Interference

The wheelchair should away from strong magnetic fields and large inductive electrical equipment, such as radio station, TV station, underground radio station, cell phone transmitting radio station. Pay attention to that if there are sources of electromagnetic interference nearby, as far as away from those sources to avoid electromagnetic interference. The electric wheelchair should avoid electromagnetic interference

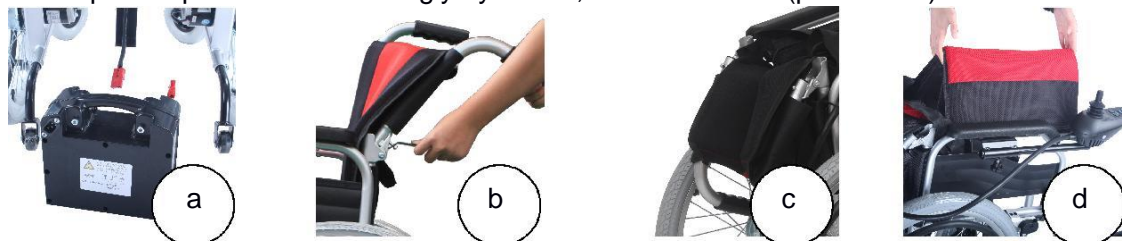
3 Adjustment of Wheelchair

Fold Wheelchair

First step: Take off the battery and unplug the red plug (picture 1-a);

Second step: Pull the joint switch backward, meanwhile back off the handle (picture 1-b and 1-c);

Third step: Lift up the cushion strongly by hands, fold wheelchair (picture 1-d).



Picture 1

Unfold Wheelchair

When the wheelchair is in a semi-stretched state, turn up both side handles to hear a click sound, and check there's no shaking.

Connect Wire Line

Connect the battery box's plug to controller's plug (picture 2).



Picture 2

Adjustment of Joystick

Adjust the controller to perfect position by screwing the nut counterclockwise (picture 3). Screw tight the nut when adjustment is done.



Picture 3

Assemble and Disassemble the Footrest

Install the footrest into the frame tube, and move from outside to medial to the fixed position; For disassemble, push the plastic part to outside then lift up footrest (picture 4).



Picture 4

Adjustment of Castor

Adjust castor angle by unscrew the nut (picture 5).



Picture 5



Picture 6

Use of Hand Parking Brakes

Push hard the manual brake forward to stop the rear wheel, then the wheelchair will stop moving. Release the handbrake, wheelchairs will be back to normal driving status. The users can select manual mode or power mode according to their needs (picture 6).

Switch between Manual Mode and Electric Mode

Manual mode: turn off power and brake the wheelchair first, pull the clutch (red part) out of the groove and spin 45°. (Picture 7-1)

Electric mode: spin the clutch (red part) and put it back to groove, lightly push the wheelchair to hear a click sound. (Picture 7-2)



Picture 7-1



Picture 7-2



When changing from manual mode to electric mode, please confirm both side clutches are inside the grooves. Any side clutch is not fully into groove, may cause danger of rollover. Do not make wheelchair into manual mode when user is driving on slopes.

4 Battery and Charger

4.1 Charger Requirements

The charger is used for battery charging. During electric wheelchair is charging, do not use it.

Charger Technical Data

Input voltage: AC 220V (100V) $\pm 10\%$ Output voltage: 24V/DC Output current: 4A

4.2 Usage of Charger

In order to charge the battery, connect the charger with power supply and battery box's plug. Do as following instructions to complete charging process:

Step 1: Make sure the charger groove is not blocked.

Step 2: Make sure the electric wheelchair is power off.

Step 3: Unplug the plugs which connect the battery box and controller.

Step 4: Connect the charger's output plug to the battery box's powerplug.

Step 5: Connect the charger's main plug to the power supply and the redlight will be alight. Fully charging needs 8 to 10 hours, do not overcharge more than 24 hours.

Step 6: As to prevent cut short battery life, please charge the battery at least once per month when the wheelchair is not being used.



Do not stop charging until charge process is finished. Repeat using the battery which is not fully charged will shorten the battery life, so the battery should be fully charged as much as possible. When battery is fully charged, the power indicator will turn to green. Do not stop charging before fully charged.

After finish charging, turn off the power supply, otherwise the battery will discharge slowly. Do not charge more than 24 hours. Over-charging is dangerous.



Users should follow the following rules to avoid charging dangers:

The electric wheelchair doesn't include the charger, please use national standard charger that the output voltage is 24V/DC 4A.

It should be well ventilated when charging. Do not expose the wheelchair to sunlight and humid environment.

The charging environment temperature range is from 10°C to 50°C. If it is out of the environment temperature range, the battery is unable to function well, and can easily make battery damaged. It's normal for the fan making a sound during charging. It is for cooling the charger, please do not worry about it.

Prevent liquid go into the charger during charging. And do not place charger on the flammable items, such as: fuel, footrest or seat cushion.

4.3 The Usage and Maintenance of Battery

Wrong operation of replacing battery may cause danger of explosion. Only the same or recommended type of battery is suitable for replacement. And please make sure the battery poles are correct. Key points for prolong the battery life: charge frequently, to keep battery power full. It's better to fully charge the battery if the wheelchair is not being used. If stop using for a long time, it's better to charge twice per month.



Please stay away from the flames when charging the battery. The flames may cause battery fire or explosion.

Charging makes hydrogen, do not smoke while charging.

Do not unplug the power supply when the socket or your hands are wet, it may cause electric shock.

In case of unpredictable accident will happen and hurt the user, do not use or sit on the electric wheelchair when charging.

5 System Diagnose

When the indicator LED lights are blinking, it means the wheelchair has abnormalities. The abnormalities may occur in following parts: motors, brakes, battery, wire connections, etc. Through the product's inner information consultation, the property of the abnormal condition can be detected by the diagnosis signal. The abnormal situation can be detected without other service tools.

Audio Signal Indication

Description of LED light	The meaning of LED light	Explanation & Solution
All LED lights are unlit with no sound	The power is off, wheelchair in standby or sleep mode. Power is poor contacted. Fuse is tripping or burned out.	
All LED lights are lit	The power is turned on, and self diagnose is passed, the electric wheelchair can work well.	Less LED lights lit, less battery power remaining.
The leftmost red LED light is lit	The battery power is extremely inadequate.	To charge immediately. Or battery is malfunction, and is not able to charge.
Two short beeps with five indicator lights blink twice	The left side motor is malfunction.	The left side motor is poor connected or the wire is disconnected.
Four short beeps with five indicator lights blink four times	The right side motor is malfunction.	The right side motor is poor connected or the wire is disconnected.

Six short beeps with five indicator lights blink six times	Controller is in over-current protection status.	Check the brakes, and check if the motor drive mechanism is stuck. Check the current by ammeter, if it is not excessive current, maybe the controller is malfunction.
Seven short beeps with five indicator lights blink seven times	Joystick is malfunction	Joystick doesn't reset, or the connector is loose.
Eight short beeps with five indicator lights blink eight times	Controller is malfunction.	Please consult your dealer for maintenance.
Nine short beeps with five indicator lights blink nine times	Controller is malfunction.	Please consult service center for maintenance.

6 Controller

6.1 Controller Panel



6.2 Controller Usage

Power Switch



Press this button, the battery power gauge lights will turn on from left to right. Press again, all the LED lights are off.



In some emergency, you can directly turn off power by press power button.

Sleep Mode

If the joystick has no operation more than 20 minutes, the power turn off automatically, and the system in the sleep mode, system will be woke up from sleep mode by press power button.

Speed adjustment

According to user's habits and the circumstances, the wheelchair driving speed is adjustable. Adjust speed by press decrease button or increase button.



Speed is divided into five sections, ranged by 20%, 40%, 60%, 80%, 100% of the max speed.

First gear of speed: 20% of the max speed.

Fifth gear of speed: 100% of the max speed.

Horn Button



Press the horn button, the horn will sounds until you release the button.

Battery Power Gauge



After turn on the power, the battery power gauge is working. The battery power gauge also shows the battery remaining power capacity.

As the picture shown, the battery power is full.

When there is only the red or yellow LED light lit, the battery should be charged. And for a long distance driving, the battery should be fully charged. If only the red LED light is lit, the battery power is extremely inadequate, users need to charge battery as soon as possible.

Use of joystick



The wheelchair moving direction is controlled by joystick. The moving extent of joystick also controls the moving speed.

Please turn on or turn off the power when the joystick is in the middle position.

Otherwise the controller will let out wrong operation signal.

Release the joystick to middle, this mistake will stop. If the mistake is still continuing, perhaps this

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part is malfunction, do not use it and contact with your dealer for maintenance.

7 Maintenance

Maintenance of wheelchair includes clean wheelchair, check wheel and battery, and charge battery. For further maintenance please contact with your dealer. Our suggestion is checking the wheelchair every half year, annually overhaul.

7.1 Clean and Battery Maintenance

Clean Wheelchair

Please clean the wheelchair regularly.

Clean the parts which are frequently touched with user's body (such as seat cushion, armrest, controller) by a clean and slight wet cloth. Do not use organic solvents to clean.

If it is a patient user, the wheelchair should be cleaned once per week. If the wheelchair is used by an infectious victim, it should be cleaned and disinfected by disinfectants.

Wheels

Check the tires' air pressure and their wear condition regularly. When the tire tread pattern depth reduce to 1mm, please replace new tire.

Battery

To make sure that the battery is fully charged frequently. In order to prolong battery life, we strongly recommend users do not to charge until battery run out of power totally.

7.2 Wheelchair Malfunction and Checking

When malfunctions happen during the wheelchair is working, please turn off the power before check.

Symptom: completely lose power, and all the LED lights on the controller panel are off.

Check Step:

Step 1: To check if the controller's plug is loose.

Step 2: To check if the connection of controller's plug and battery box is loose. Please reinsert the plug connector (hold the plug when pull out the plug. Do not pull the wire to avoid unnecessary damage to the wire line). After above checking, if the wheelchair is still not able to restore the power, or if users have any question for above checking, please connect with your dealer.



The controller has a diagnosing system to monitor the controller and motor. Any malfunction of these parts is indicated by the controller. For more details please kindly refer to chapter of audio signal indication.

7.3 Maintenance Checking

The following is a checking list, electric wheelchair should be ordinal checked according to our suggestion. When you get on or get off the wheelchair, some self checking is done automatically. For more your attention, we particularly list these self-checking items in A area.

	Before use, please check if following parts are correct:		
A area	1.Backrest 4.Footrest	2.Armrest 5.battery power	3.Controller position
	6.Clutch/adjusting lever for conversion between manual mode and electric mode		
	Check the following parts monthly, to avoid original parts loosening or wearing		
B area	1. Screws	2. Brakes	
	3.Clutch/adjusting lever for conversion between manual mode and electric mode		
	4. The front and rear wheels and their tread pattern depth		
	5.Connectors' of controller and charger		
C area	For safety, semiannual overall maintenance is needed.		

8 Others

Condition for Transport and Storage

During transport and storage, the electric wheelchair should be correctly placed as labeled indication.

- Transportation should be avoided moisture and sunlight and away from heat resource.
- In case of electric parts are damaged due to damp, please avoid storing the wheelchair in rain, outdoor and moisture.
- Storage condition:
 - Environment temperature $-40^{\circ}\text{C} \sim +55^{\circ}\text{C}$;
 - Relative humidity $\leq 80\%$;
 - Air Pressure $86\text{kPa} \sim 106\text{kPa}$.

Main Security Features

- Classified according to the type of protection electric shock: Internal power.
- Classified according to the type of protection against electric shock: Type B application.
- Classified according to the degree of inlet liquid protection: IPX3.
- Classified according to the safety of use in a flammable anesthetic mixture with air or gas mixed with oxygen or nitrous oxide flammable anesthetic gases occurs: Non AP/APG type.
- Classified according to operation mode: Continuous operation.
- Rating voltage: DC.24V.
- Have no protective effect on the application of defibrillator discharge section.
- No signal output or input part.
- Non-permanently installed equipment.

GVS Enterprises Pvt. Ltd

Plot No. 40, Ganga Parvathi Complex,

3rd Floor, Image Gardens Lane,

Madhapur, Hyderabad-81

Tel: 1-800-3000-2613

Email: info@medicalbulkbuy.com

Website: <https://medicalbulkbuy.com/>