

# User's Manual



FDB02



**JBH**<sup>®</sup>

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.

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## PREFACE

### **Dear Users,**

We thank you very much for your choice of JBH Medical.

The manual is to assist you operating and maintaining the scooter, please go through it with necessary information in mind prior to use the scooter. Any problem which is not cover in here or any confusion of the manual, feel free to communicate with your local dealers or distributors. Alternatively, you can direct contact with JBH Medical as follows:

The manual has the content of characteristics on main parts, key components, function of parts, safety requirements and instructions, battery instructions, point of attention, methods of coping urgent, and maintenance. Symbols are used for reminding matters need to care for, an understand of the manual fully is highly suggested.

This manual is written with current product information and product photo as the follow. It is for the purpose easier understanding for users. The scooter is under continuous improvement and innovation. We reserve the right improved products without notification, any new improvement please feel feel to contact with us any time.

We strongly believe that the scooter would bring you more convenient and reach the goal of free life to you.

## **JBH MEDICAL**

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### **Recommendation**















Pay a attention to "Warning" in the manual is to protect you from any injury.  
Unable to follow "Notification" in this manual may result in damage the scooter.

# LABEL OF THE SCOOTER

**Label of the scooter**



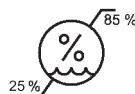
Symbols on the label represent the meaning as below:

	Manufacturer		Attention, see instruction for use
	Consult instructions for use		Product fulfill WEEE directive
	Date of manufacture		Serial number
	Batch number		Type BF applied part
	Use until year & month (Expiration date)		Water proof grade
	CE mark		UKCA mark
	=Radio frequency fields beyond this point may exceed FCC general public exposure limit		Medical device

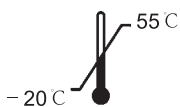
# SYMBOLS



Don't use when packing damaged



Humidity limitation



Temperature limitation



Store in clean & dry place protected from rain, snow, ice, salt and water.



Danger of explosion



Protect from heat and radioactive sources



Keep dry



Package Number



Equipotential



Foot Switch



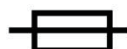
Switch



CF application part



PCTB



Fuse




Disposal and recycling  
Only authorized recycling companies can recycle parts of this mobility wheelchair



Volume control










**Power** 100~240VAC, 50~60 Hz

**Frequency** 500VA

**DC output** +29.4V  2.0A




# SECURITY GUIDANCE

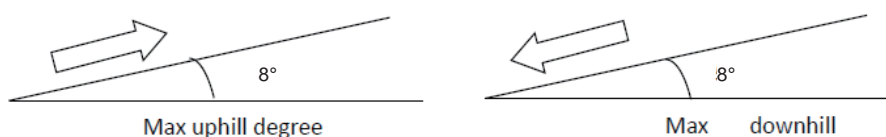
## Security Guidance

-  An authorized Dealer or qualified technician must perform the initial setup of this scooter and must perform all of the procedures in this manual.
-  This product is suitable for users with age between 18 to 75 years old.
-  Do not drive on public highway.
-  No over cross any gap which is over 100 mm in width.
-  Never try to overpass obstacle which is over 40 mm in height.
-  Scooter is suitable for both outdoor and indoor use, hospital, senior center, family or similar circumstances use only.
-  The suitable environment of using electric scooter:  
Temperature -10 ~ +50℃, Atmospheric Pressure 860 ~ 1060hPa, Humidity 10% ~ 93%.
-  Power Source Condition:  
Charging Voltage AC 220V 50Hz, Battery Voltage DC 24V 6Ah, Power of Motor ≥ 270W environmental conditions that might be harmful to the wheelchair (e.g. inclines greater than 9 degrees, rain, snow, ice, etc.), such as temperature and humidity.
-  Operate scooter after it is under unfolded condition and only allow one person on scooter all time.

## Weight Limitations

The scooter is tested with simulation of human model at 120 kgs load capacity. Your scooter is rated for a maximum weight capacity. Please refer to the product specifications table for this limit. Keep in mind that the maximum weight capacity includes the combined weight of the user and any accessories mounted to the scooter. Stay within the specified weight capacity of your scooter. Exceeding the weight capacity voids your warranty. We will not be held responsible for injuries and/or property damage resulting from failure to observe weight limitations.

-  **Warning !** We are not responsible for any damage and inquiry cause due to over weight.
-  **Warning !** Not to drive on dangerous slopes.
-  **Warning !** Not to drive backwards when going up and down a hill. Max grad ability is uphill 3°,downhill 5°



# SECURITY GUIDANCE

**Statement**

**Indications for use:**

**It is a motor driven, indoor and outdoor transportation vehicle with the intended use to provide mobility to a disabled or elderly person limited to a seated position.**

The Scooter (Models: FDB02) has a base with Aluminium alloy frame, two front wheels, two rear wheels, two anti-tip wheels, a seat, an adjustable steering column, a tiller console, an electric motor, an electromagnetic brake, 2 rechargeable Lithium-Ion Batteries with an off-board charger. The movement of the scooter is controlled by the rider who operates the throttle lever, speed control dial and handle on the tiller console. The device is installed with an electromagnetic brake that will engage automatically when the scooter is not in use and the brake cannot be used manually. The Scooter only can be operated on the flat road.



Please read the following statement.



Please, read this manual carefully and understand everything clearly before using the Electric wheelchair for the first time.



Please, do not use the scooter in any unclear cases, otherwise, the product may be damaged or people may get hurt. If you have questions, please contact us.



Please, pay attention to the warning and cautions in this manual. We are not responsible for any injury and damage caused by wrong use of this product and neglect of the warnings and cautions.



**Instructions:**



**Warning ! Improper use will cause death or serious injury ;**



**Notice ! Improper use will cause damage of scooter ;**



**Advise ! Comply with the manual to keep scooter in good condition.**



**Warning ! DO NOT make sharp turns at high speed or on inclines or reverse direction abruptly.**



**Warning ! DO NOT utilize brake release / freewheeling option on any incline without assistance to control motion.**



**MAJOR PARTS**



- |                                    |                                |                          |
|------------------------------------|--------------------------------|--------------------------|
| <b>A</b> Control Panel             | <b>H</b> Folding handrail      | <b>O</b> Lithium battery |
| <b>B</b> Adjustable Height Handle  | <b>I</b> Seat cushion          | <b>P</b> Charging port   |
| <b>C</b> Fastening Device          | <b>J</b> Backrest              | <b>Q</b> Electric Switch |
| <b>D</b> Gas spring tilting device | <b>K</b> Seat Supporting Frame | <b>R</b> Support Wheel   |
| <b>E</b> Plastic pedal             | <b>L</b> Decorative Cover      |                          |
| <b>F</b> Front wheel               | <b>M</b> Anti-tip Wheel        |                          |
| <b>G</b> Front frame               | <b>N</b> Rear Wheel            |                          |

## CONTENTS IN SCOOTER CARTON

Upon receipt of the scooter, please open carton packing and check if the followings are included:



**SPECIFICATION**

<b>Unfold Size</b>	38.5" x 19.3" x 31.5" (L 980 W 490 H 800 mm)
<b>Fold Size</b>	15.3" x 19.2" x 28.3" (L 390 W 490 H 720 mm)
<b>Front wheel</b>	6.5" x 2" (163 x 50 mm)
<b>Rear wheel</b>	7.5" x 2.15" (190 x 54 mm)
<b>Maximum speed</b>	3.7 mph (0-6 km)
<b>Gradient</b>	0~12°
<b>Turning Radius</b>	472.4" (1200 mm)
<b>Weight</b>	27.5 kgs without battery
<b>Brake System</b>	Intelligent, Regenerative and Electromagnetic
<b>Endurance Range</b>	20 km for single charging
<b>Drive system</b>	S-drive 45 A, PG
<b>Maximum Capacity Weight</b>	125 kgs
<b>Max load capacity</b>	120 kgs
<b>Seat Width</b>	17" (43 mm)
<b>Seat Height</b>	22" (56 mm) from ground
<b>Motor</b>	24 V 120 W
<b>Seat Height</b>	22" (56 mm) from ground
<b>Battery Charger</b>	24 V 2 A



# MAIN OPERATIONAL PARTS FUNCTION

## Handle Bar Set

The handle bar set including Control Panel ( with LCD display of battery Power, Driving Speed km/h, Total Driving Distance and climate-temperature, plus Key Switch, Speed Setting Knob and Horn.), Delta Handle, Directional Control Lever. The major operational functions are set.



## Control Panel



**Notice** Humidity of ambient environment significantly affect on the operational function main parts. Stay in low moisture surrounding before operating or during operating is strongly recommended.

## Power Switch

- a. Power is on after turn key switch turned clockwise, scooter is ready to go.
- b. Power is off if key is turned anti-clockwise, scooter cannot operated. Turn the power off through key if driving is terminated.

**Warning** Sudden immediately stop of scooter occurs when power is switched off during operation through eletromagnetic braking system control.



## Speed Controller



The adjustment of driving speed through speed control knob by finger range from 0 km/h to 6 km/h at your choice. Turn the knob to very left for speed like turtle while turn very right rabbit like speed.

**Warning** Always keep lower speed level during turning or backward for keeping safe.

**MAIN OPERATIONAL PARTS FUNCTION**

**LCD Display**

Battery Power, Voltage, Milage, Speed and Climate are shown on LCD screen while power is turned on.



**Direction Control Lever**



Forward and backward control is under Control Lever.

- a. Gently hold Delta handle with both hands.
- b. Scooter go forward by pulling lever on the right with fingers.
- c. Go backward by pulling lever on the left with fingers.
- d. Beep sound goes on during backward.
- e. The Control Lever automatically to center position while released and brake is on at the same moment.

**Horn**

Beep sound will be on by keeping pressing the horn button. Sound the horn in time under any necessary condition during driving.



**Telescopic Handle**

Pull up plastic clipper for adjusting to length of handle, push back the clipper at desired length.



## MAIN OPERATIONAL PARTS FUNCTION

### Controller

Located under rear cover which transfer the signal from control panel to motor, brake and hub.

**Notice** Keep controller under low moisture environment and make sure it is in dry condition before operation.

### Hand Brake Lever

Hand Brake on and off can be done by switching the lever for manual or electric control.

#### Electric Control Mode

Pull back the brake lever to

OFF for electric control

#### Manual Control Mode


Push forward the brake lever to

ON for manual control



### Remote Control



 Pause

 Fold

 Unfold





## THE FOLDING AND UNFOLDING



The scooter is designed with 3 ways of Folding and Unfolding for customers choices depending on preferences and circumstances. They are Automatic, Electric Switch and Manual for your choice, please go through the instruction of these 3 ways under here.

### Automatic Unfold and Fold

#### Automatic Fold

- A. Keep pressing  button of remote controller.
- B. Automatic fold will be completed by scooter itself.
- C. Release  button while scooter is completely folded.

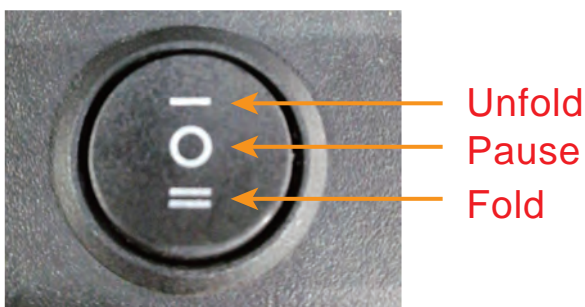
#### Automatic Unfold

- A. Keep pressing  button of remote controller.
- B. Automatic unfold of scooter will be done.
- C. Release  button after scooter is unfolded.



### Electric Switch Unfold and Fold

Through switch operation for Unfold and Fold. The location of this switch is on back of scooter.



**Note** Manual only version of scooter which do not equipped with remote and switch fold and unfold functions. Please always unfold and fold scooter manually.

## THE FOLDING AND UNFOLDING

### Manual Unfold and Fold

Manual operation of Fold and Unfold can only be operated while scooter was manual folded, manual operation can be done if scooter had been folded by Remote or Electric Switch operation. The manual operation steps is as following.

#### Warning

- A. Hands or any objects stay in joints of scooter during folding and unfolding cause damage.
- B. Do not directly try to fold and unfold scooter without opening the release lever.



## BATTERY AND CHARGING

The scooter is design for maintenance free with long usage of Lithium Ion Battery. It is suitable to be Charged with 24V 2A charger.

- Fully charge the battery more than 12 hours is good for battery usage. At least charge once in every 3 month.
- Charge battery to full level and take apart battery from scooter if not going to use your scooter for long period of time.

### Steps of charging battery :

1. Power off the scooter. Open the cover of charger cap, then insert the charger plug in charge port of scooter.



## BATTERY AND CHARGING



Close the ship style switch or key switch



Then open the rear charging socket and insert the plug



### Caution

**Do not charge continuously over 6 hours through charging port of controller to prevent over charging while two batteries are inserted. Never charge over 3 hours when it is only one battery.**

**Warning** Make sure charger plug is fully plug in the charging port of scooter.

2. Connect the A/C power plug of charger to House power source. Check the light on charger, orange color light means charging is in progress while green light shows power if full.
3. Turn off power charger when battery is fully charged. Disconnect AC power source before disconnect the DC charging plug.

**Warning** Disconnect AC power source after fully charge of battery will keep the life of Lithium Ion Battery longer.

4. Charger red light is off while power source and power of charger is on. Please check if the power connection is set properly.
5. Full charge time is around 3 hours duration.

### Charge battery directly

The battery can be charged directly with house poer source, simple connect the termial of battery with power source, charging can be started.



### Caution

**Keep charging time of single battery in 3 hours when it comes to off board charging to avoid over charging.**



### Caution

**Immediatly unplug charger from power source as soon as indicating light on charger turns green.**

## BATTERY AND CHARGING

### Some knowledge on how charger charge battery

Large input of current from charge to battery at low voltage level, small current given from charger when battery is close to full. Almost zero or little current given to battery, continuously charging would not cause over charge, however, it is suggested charge duration not over 8 hours. The battery will continuously be charged under charger connected situation.

### The indication of charger lights

Two LED lights are on charger, red stands for power connection, the other is charging status indication which shows charging with orange color and turns green on fully charged. Red light may continue after power source disconnection, there maybe something wrong. Normally red light will be off in a few seconds if disconnected to power source, it is normal for red light to snuff out while battery voltage is up to level.

### Other type of charger

The charger is designed for battery of the scooter. Strongly suggest do not use other type of charger from original manufacturer.

### Frequency of Charging

The frequency of charging is based on the following conditions

- A. All day long driving of scooter
- B. Occasional driving scooter

### Safe and reliable battery charging

- A. Do not charge continuously over 6 hours through charging port of controller to prevent over charging while two batteries are inserted. Never charge over 3 hours when it is only one battery.
- B. Keep charging time of single battery in 3 hours when it comes to off board charging to avoid over charging.
- C. Immediately unplug charger from power source as soon as indicating light on charger turns green.
- D. Charge scooter once a week when the use frequency is once in a week. Fully charge takes 6 hours.
- E. Keep battery at full power.

### How to reach maximum driving distance

- A. Make sure full charge before driving
- B. Keep away from go up hills, macadam and soft terrain.
- C. Carry necessities, reduce load of scooter.
- D. Drive smoothly without intermittent.

Suitable specification of battery

Lithium Ion battery with specification listed.

**Warning** Do not take apart battery on your own. No need to add water for the battery. Miss use of battery cause damage are excluded in warranty.

## BATTERY SAFETY AND LIFE GUIDE

### The reason of weak on new battery

The scooter use deep-cycle battery under special chemical technology that allow battery quick to be charged with longer time use after full charge. Battery along with scooter packing is charged full, however, the performance of initial power will be reduced in the process of transportation, such as temperature variation.

High temperature causes battery power loss while low temperature lead to longer charging hours. It takes a few days for adapting to ambient environment then turn to normal after transportation. It takes a few days for returning to stable performance after several charging and discharging cycles.

### Steps of improving battery performance

- A . Always charge to full when battery is new to ensure battery has 88% at least.
- B . Always charge battery to full after use and keep on driving scooter is safe and familiar locations. Stay low speed if you are first time user.
- C. Charge battery to full after second time driving, it will increase the battery reach 90% capacity performance.
- D . After 4~5 times of driving with full charging, the performance of scooter will reach 100% level.

### Ensure battery life

Full charge of battery keep good performance and life longer, while over charge and seldom charge of battery damage.

### Storage of scooter and Battery

Long time for not using scooter, please following the instruction for storage of scooter

- A. Charge full battery
- B. Disconnect battery
- C. Keep scooter under dry and suitable temperature
- D. Avoid dramatically temperature variation during storage

**Warning** Keep in warm condition a few days when battery get frozened

Long time storage of scooter is preferred lay a plate under foot rest panel for supporting and it will avoid stain on tires after long time pressure to the ground.

## INSTRUCTION OF OPERATION

### Before operating instruction

- A. Make sure battery is fully charged.
- B. Familiar with the route condition including crowd, animal and potential obstacles.
- C. Always keep away from uneven and sloppy terrain.
- D. Check if is fully inserted and the brake lever switch is pushed.
- E. Steering with both hands rest on handle bar.
- F. Sound the horn to check if it works.

### Driving

Upon driving the scooter, please follow the following steps:

- A. Unfold scooter fully.
- B. Check if the seat at right position and adjust tiller to comfortable position.
- C. Turn on power after making seat properly with hands on handle bar.
- D. Gently push directional control lever with right thumb.
- E. Brake release automatically and scooter move forward. Do not push control lever to much in a sudden for the speed would be rapidly pick up.
- F. Turn handle bar to left for turning left.
- G. Right turning of handle bar to make right turn.
- H. Scooter move straight forward by keeping handle in center position.
- I. Brake is automatically on when control level in center position and once scooter stop going.

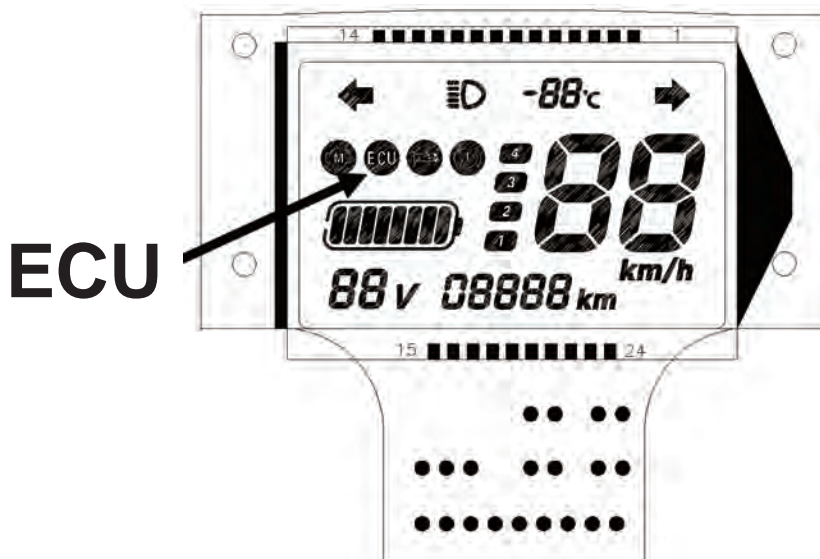
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- D. After 4~5 times of driving with full charging, the performance of scooter will reach 100% level.

### End of Driving

- A. Make sure scooter is fully stopped.
- B. Turn off Power with Key or turn the rocker switch to "O" position.
- C. Carefully get off the scooter.
- D. Fold scooter with 3 types of choice through Remote Controller, Electric Switch or by manual.

**TROUBLE SHOOTING AND MAINTENANCE**



The controller contains programs for identifying problem points and troubleshooting.

When the diagnostics detects problems and errors, the ECU on the LCD will illuminate. The fault display shows that the ECU shines continuously in the form of a flash until the fault is eliminated. Example: The number of flashes is “1-9” . Users can try to solve the problem as follows.

If the problem persists, please contact us or our agent.

Number of flashes	Fault description	Possible reason
1	Low battery voltage or battery connection problem	Check the battery connection. If there is no problem with the connection, try charging the battery.
2	There is a problem with the motor connection	Check all connections between the motor and the controller
7	Directional control lever failure	Before turning on the power of the scooter, make sure the directional control levers is in the parking position.
9	Brake lever failure	Check the connection between the brake lever and the motor to ensure that the controller is securely connected.

## TROUBLE SHOOTING AND MAINTENANCE

### **Insufficient capacity of battery or dropped on performance**

The decline issue of battery capacity or performance mostly can be sorted out as follows:

- A. Inspect whether key is fully inserted and at ON position.
- B. Make sure battery is fully charged.
- C. Increase the charging cycle and time while battery capacity is dropped.
- D. After going through above steps without any improvement, a capacity test on battery is required.

Though the scooter is designed service free, the followings have to be checked and maintained.

### **Connection of Battery**

- A. Check if there is any corrosion and connection is sound.
- B. Make sure battery is kept flat inside battery holder.
- C. Any damage occurred of connections must be repaired or change new parts.

### **Plastic Cover**

Never apply oil or chemical substances for cleaning plastic cover of scooter and wash scooter with water avoid damaging electric components.

### **Bearing, Motor and Transmission**

- A. These component were lubricated and sealed during manufacturing process, not require for further lubrication after purchasing.
- B. Always keep electric component in dry condition, especially control panel, battery charger and all electric components.
- C. Dry any components which get moist before driving the scooter.

**WARRANTY STATEMENT**



**JBH MEDICAL**  
**Warranty Registration Card**

<b>User Name</b>		<b>ID No.</b>	
<b>Address</b>		<b>Phone No.</b>	
<b>Model</b>	<b>FDB02</b>	<b>Product No.</b>	

<b>Purchasing Date</b>	(Month) (Day) (Year)
<b>Manufacturer</b>	<b>JBH MEDICAL</b>
<b>Distributor</b>	(Stamp or signature)
<b>Distributor</b> (Phone, Address)	

[www.jbhmedical.com](http://www.jbhmedical.com)

Manufacturer is responsible for any issue on material, manufacturing defect or design effect of the scooter while dealer will take care for maintenance and service.

**Warranty excludes:**

- A. Issues due to misuse and improper maintenance.
- B. Change components which is not from manufacturer
- C. Accident caused damages
- D. Consumption parts
- E. Alteration of original design
- F. Natural disaster resulted issues

The guarantee card must be handed over to the after-sales department of the manufacturer in 15 days after returned to the dealer.



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