Electric Scooter

INSTRUCTION MANUAL

> > > English 1

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PREFACE

Dear Users,

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 us.

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 condition, 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 to continuousl 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.

Recommendation

Please pay 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.

Contents

1. SYMBOL DEFINITION

	Warning Beware of potential hazard		Attention, see instruction for use
	Refer to instructions for use - Mandatory Failure to read the instructions for use could introduce a hazard		Refer to instructions for use - Recommended Failure to read the instructions for use could introduce a hazard
	Manufacturer		Product fulfill WEEE directive
	Date of manufacture	SN	Serial number
LOT	Batch number		Type BF applied part
	Use until year & month (Expiration date)		Type B applied part
IPX IP	Water proof grade	CE	CE mark
UK CA	UKCA mark	MD	Medical device
	=Radio frequency fields beyond this point may exceed FCC general public exposure limit		Importer
	Don’t use when packing damaged	85 % 25 %	Humidity limitation
55 C – 20 C	Temperature limitation		Store in clean & dry place protected from rain, snow, ice, salt and water.
	Avoid contacting with rain, snow, ice, salt and keeping in water, keep under clean and dry ambience.		Protect from heat and radioactive sources

	Danger of explosion		Package Number
	Keep dry		Foot Switch
	Equipotential		CF application part
	Switch		Fuse
	PCTB		Volume control
	Disposal and recycling only authorized recycling companies can recycle parts of this mobility scooter.		Do use cel phone, remote speakers, note book computer or other wireless ejecting device while oper ating the unit.
	Do not adapt battery which is with different capacity and wrong model number. Never combine use long time used battery with new battery at the same time, always change batteries in brand new condition.		Implication of flammable material. Do not expose under fire, fire sparkles and other heat sources conditions. Never trans port batteries along with torch easy explosive items or flammable materials.
	Keep away other metal related items or tools away from the negative and posi tive terminal end to avoid any short cut or electricity shock from happening.		Type 2 device
	Easy to be crashed, crashing spot		The product has passed electromagnetic test of 20 V/M.
	With potential explosion		Battery contains anti-corossion chemical substance.
Power	100～240VAC, 50～60 Hz	**Frequency**	500VA
DC output	+29.4V ⎓ 2.0A		

2. SECURITY GUIDANCE

1. The user must perform all of the procedures in this manual.
2. This product is suitable for users with age between 18 to 75 years old.
3. Do not drive on public highway.
4. No over cross any gap which is over 100 mm (3.94") in width.
5. Never try to overpass obstacle which is over 40 mm (1.57") in height.
6. Scooter is suitable for both outdoor and indoor use, hospital, senior center, family or similar circumstances use only.
7. The suitable environment of using electric scooter:
Temperature -10 ～ +50°C, Atmospheric Pressure 860 ～ 1060hPa, Humidity 10% ～ 93%.
8. Power Source Condition:
Charging Voltage AC (100-240)V ± 10%, 50 ± 1Hz, Battery Voltage DC 24V (+5%, -10%), Power of Motor ⩾270W environmental conditions that might be harmful to the scooter (e.g. inclines greater than 12 degrees, rain, snow, ice, etc.), such as temperature and humidity.
9. Operate scooter after it is under unfolded condition and only allow one person on scooter all time.

Weight limitations

1. The scooter is tested with simulation of human model at 120 kgs (265 lb) load capacity.
2. Your scooter is rated for a maximum weight capacity. Please refer to the prod uct specifications table for this limit. Keep in mind that the maximum weight ca pacity includes the combined weight of the user and any accessories mounted to the scooter. Stay within the specified weight capacity of your scooter. Ex ceeding the weight capacity voids your warranty. We will not be held responsi ble 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.
Not to drive on dangerous slopes.
Not to drive backwards when going up and down a hill. Max ability is uphill 8°.

Statement

Indications for use:
It is a motor driven, indoor and outdoor transportation vehicle with the intend ed use to provide mobility to a disabled or elderly person limited to a seated position.

The Scooter has a base with alumini um alloy frame, two front wheels, two rear wheels, a seat, an adjustable steering column, a tiller console, an electric motor, an electromagnetic brake,2 recharge able 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 automatical ly when the scooter is not in use and the brake cannot be used manually. The scooter only can be operated on the flat road.

1. Please read the following statement.
2. Please read this manual carefully and understand everything clearly before using the Scooter for the first time.

1. 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.
2. 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

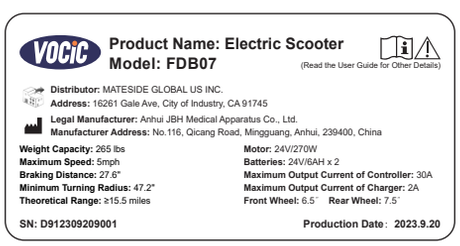
1. Improper use will cause death or serious injury.
2. Improper use will cause damage of scooter.
3. Comply with the manual to keep scooter in good condition.
4. DO NOT make sharp turns at high speed or on inclines or reverse direction abruptly.
5. DO NOT utilize brake release / freewheeling option on any incline without assistance to control motion.
6. To avoid danger of suffocation, keep all the plastic bag in the package away from babies and children. Do not use the plastic bag in cribs, beds, carriages or playpens. The plastic bag is not a toy.

3. PRODUCT RELATED EXPLANATION

Contraindications

Intended user, with visual weakness, intellectual impairment or neck disease, who is unable to observe environment on the back, should be operated by others. Anyone with paraplegia below the chest, osteoporosis or hypochondriasis is prohibited to use the product.

Label of the Scooter



4. MAJOR PARTS

5. SPECIFICATION

Model	FDB07
Material	Aluminium Alloy
Unfold Size (L * W * H) (mm/inch)	980 × 490 × 850 mm(38.6"×19.3"×33.5")
Fold Size (L * W * H) (mm/inch)	390 × 490 × 720 mm (15.4"×19.3"×28.3")
Loading Capacity	120 kgs (265 lb)
Motor	270W × 1 pcs brush motor
Battery	24V 6AH × 2 pcs lithium battery
Max Speed	8 km/h (5.0mph)
Driving Range	20 km (12.4 miles)
Front Wheels	165×50 mm (6.5"×2") PU solid wheels
Rear Wheels	190×54 mm (7.5"×2.1") PU solid wheels
Climbing Slope	Max 8°
Charging Time	6~8 hours
Armrest Spacing	460 ~ 520 mm (18.1"~20.5")
Seat Width	460 mm (18.1")
Seat Depth	400 mm (15.7")
Seat Height	530 mm (20.9")
Turning Radius	1200 mm (47.2")
Drive Model	Rear Drive
Braking System	Electromagnetic Brake
Net Weight	28.5 kgs (62.8 lb)
Gross Weight	38 kgs (83.7 lb)

6. SPECIFICATION DIAGRAM

7. CONTENTS IN SCOOTER CARTON

Components

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

Scooter

Armrests

Lithium battery

Charger

Power transfer connection

Remote control key

Tools

Safety belt

Users manual

8. 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 Driv ing Distance and climatetemperature, plus Key Switch, Speed Setting Knob and Horn.), Delta Handle, Directional Control Lever. The major operational functions are set. (Refer to photo 1).

Photo 1

Battery Power, Voltage, Milage, Speed and Temperature are shown on LCD screen while power is turned on. (Refer to photo 2).

Photo 2

Control Panel **LCD Dispay**

⚠ 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.

Photo 3

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 an ti-clockwise, scooter cannot operat ed. Turn the power off through key if drving is terminated.(Refer to photo 3).

⚠ 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. (Refer to photo 4).

Photo 4

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


Go Forward


Go Backward

Photo 5

Direction Control Lever

Forward and backward control is under Control Lever. (Refer to photo 5).

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 back ward. The Control

e. 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 con dition during driving. (Refer to photo 6).


Photo 6

Photo 7

Telescopic Handle

Pull up plastic clipper for ad justing to length of handle, push back the clipper at de sired length. (Refer to photo 7).

Controller

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

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. (Refer to photo 8).

Hand Brake Lever

Pull back the brake lever to OFF for electric control

Manual Control Mode

Push forward the brake lever to ON for manual control

Photo 8

Remote Control

Pause Fold Open

9. FOLDING AND OPEN

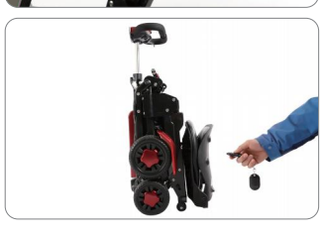
The scooter is designed with 2 ways of fold and open for customers choices de pending on preferences and circumstances. They are Automatic, Electric Switch and Manual for your choice, please go through the instruction of these 2 ways under here.

Automatic Open and Fold

Automatic Fold

1. Turn the key to the right for power on.
2. Fold up seat by pulling rod at back under the seat and lower down seat base.
3. Keep pressing button of remote controller. Automatic fold will be completed by scooter itself.



Automatic Open

1. Turn the key to the right for power on.
2. Keep pressing button of remote controller. Automatic unfold of scooter will be done.
3. Pull the rod at back under seat for extending up seat to right position.

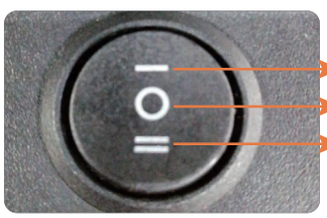



Electric Switch Unfold and Fold

Through switch operation for open and fold. The location of this switch is on back of scooter.

Automatic Fold / Open

1. Turn the key to the right for power on.
2. Pull rod at back the back under seat base to fold up seat assembly.
3. Touch section "—"or "＝" of switch button down at lower back of scooter till com pletly open or fold the scooter, then return the switch to " ○ " position.



10. 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.

1. Fully charge the battery is good for battery usage. At least charge once in every 3 month.
2. 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. (Refer to photo 9).
2. Open the cover of charger cap. (Refer to photo 10).
3. Insert the charger plug in charge port of scooter through the transfer cable.(Refer to photo 11).
4. 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.
5. Turn off power charger when battery is fully charged. Disconnect AC power source before disconnect the DC charging plug.

Photo 9

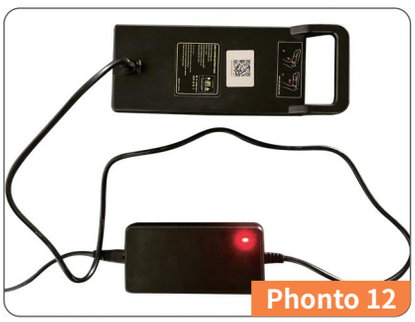
Photo 10


Photo 11

1. 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.
2. Make sure charger plug is fully plug in the charging port of scooter.
3. Disconnect AC power source after fully charge of battery will keep the life of Lith ium Ion Battery longer.

1. Charger red light is off while power source and power of charger is on. Please check if the power connection is set properly.
2. Charging Time: 2-3 hours if one battery charging. 6-8 hours if the dual battery on the scooter charging through the joystick.

Charge battery directly



Phonto 12

The battery can be charged directly with house power source, simple connect the termial of battery with power source, charging can be started. (Refer to photo 12).

1. Keep charging time of single battery in 3 hours when it comes to off board charging to avoid over charging.
2. Immediatly unplug charger from power source as soon as indicating light on charger turns green.

Important:

The frequency of charging is based on the following conditions

A. All day long driving of scooter

B. Occasional driving scooter

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.

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 continuous becharged 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 disconnec tion, there maybe something wrong. Normally red light will be off in a few sec onds if disconnected to power source, it is normal for red light to snuff out whille 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.

Safe and reliable battery charging

A. Do not charge continuously over 8 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. Immediatly 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.

Suitable specification of battery. Lithium Ion battery with specification listed.

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.

11. 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 tor returning to stable perofmance 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

A. Long time for not using scooter, please following the instruction for storage of scoot er.

B. Charge full battery.

C. Disconnect battery.

D. Keep scooter under dry and suitable temperature.

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 sup porting and it will avoid stain on tires after long time pressure to the ground.

12. 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.

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.

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.

13. WARRANTY

1. This warranty is valid from the date of exfactory and valid for the replacement of disfunctional 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.
2. Due to its straigtforward design, most parts can be easily exchanged by the end user without a professional service tech required. However, it is always recom mended you seek professional help for maintenance and service, to make sure the work is down properly.

Under warranty

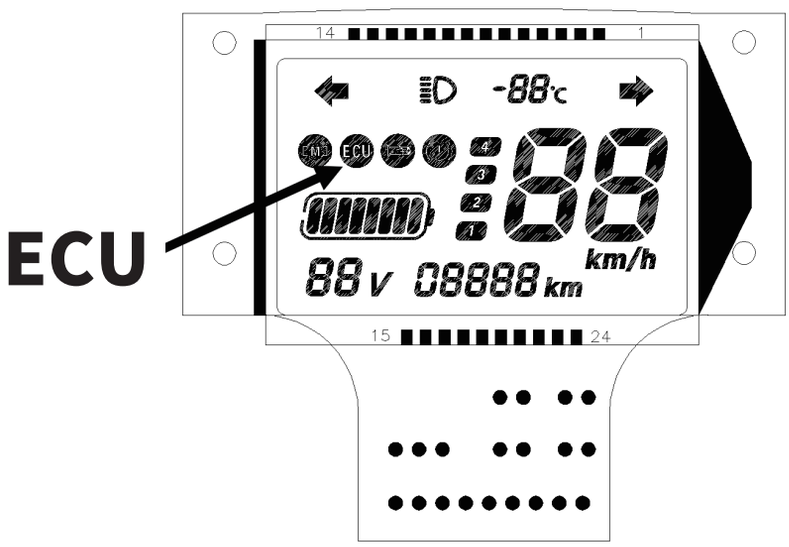
Chair frame	3 years	Motors	1 year
Controller and CPU system	1 year	Battery	6 months
Wear parts: Includes tires, seat and back rest, armrests, and support straps.			3 months

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 scooter purchaser.
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.

14. 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 illumi nate. 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 directonal control lvers 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.

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

These component were lubricated and sealed during manufacturing process, not require for further lubrication after purchasing.

A. Always keep electric component in dry condition, especially control panel, battery charger and all electric components.
B. Dry any components which get moist before driving the scooter.

The battery of electric scooter is an extremely important part, the battery life determines the service life of the scooter. Try to keep the battery saturated after each use, to develop such a habit, it is recommended to conduct a deep discharge every month! If you don't use a electric scooter for a long time, place it in a place to avoid bumps and pull out the battery to reduce discharge. It is also best not to overload in the process of use, which has direct harm to the battery, so it is not recom mended to overload and avoid directly affect ing the service life of the battery (refer to photo 13).

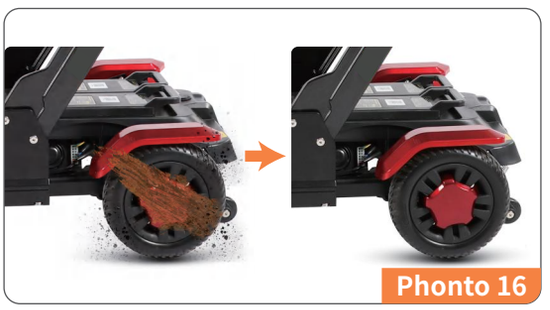
Phonto 13

Phonto 14

After the electric scooter is used for a period of time, it is necessary to check the screw loosening of the electric scooter to ensure the connection and operation between the parts and compo nents, and to avoid accidents (refer to photo 14).

After being wet by rain water. electric scoot er should be wiped with dry rag in time, es pecially the part containing electrical circuit, so that the electric scooter can keep dry and clean (refer to photo 15).

Phonto 15



Phonto 16

If the electric scooter is on the beach, gravel or wet road, if there is sand, mud or gravel on the tire, it should be cleaned in time to prevent some parts from rusting or the tire running badly, which will affect the beauty and driv ing comfort and safety (refer to photo 16).

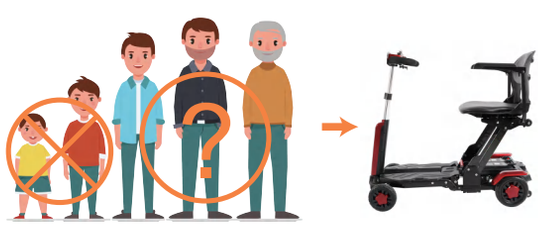
Electric scooter should avoid scratch ing seat leather and PU handrails and plastic ornaments with sharp objects, thus affecting the beauty of the whole vehicle (refer to photo 17).

Phonto 17

Phonto 18

Electric scooter should be placed in a place where the sun can not shine, please avoid sunlight, otherwise it is not only harmful to the battery, but also has a direct impact on the service life of plastic parts and stickers of electric scooter (refer to photo 18).

Electric scooter are relatively simple to operate, avoid driving by children or adults without ex perience in electric scooter. Driv ers should avoid unnecessary large-scale body movements or sleep on electric scooter, which may lead to accidental danger. In order to avoid this situation, it is best to unplug the power switch key when not in use. It also avoids the risk of theft (refer to photo 19).



Phonto 19

Mantainence tool

Simple tool kit is accompanied with scooter in scooter packing, while dry soft fabric and so on are handy and easy to get in the market are not included. The period of maintence is vary depending on the real use frequency and situation, there is no specific rule.

Maintenance frenquecy

1. Daily check

Turn off the controller, check the lever, make sure the lever is not bent and broken, and be sure to retiun to it when you release it. Check the nibber base of the lever for damage. Just check the base and do not repair it. If you have any questions, please contact your dealer.

2. Weekly check

Disconnect the controller coimector and charger comiector fiom the batteiy com paitment. check the connection and for corrosion. If necessary, please contact tlie dealer.

Make sure that all parts of the controller are tightly connected to the product, do not screw the screws too tiglitly.

Check the brakes. This inspection must be canied out on a level siuface and there must be enough open space aroiuid.

Check the brakes:

· Tum on the controller. After one second. check the batteiy indicator to make sure the batteiy is powered.

· Slowly push the lever forwaid to guide you to hear the "beep" of the brakes, and immediately release the lever. You must hear the brake operation sound after each lever is pushed for a few seconds.

· Repeat the operation tluee times to push the controller to the rear, left and riglit sides for inspection.

3. Monthly check

· Check the anti-roll wheel for excessive wear and replace the wheel if neces-sary.

· Check the wear of the front wheels and drive wheels. If maintenance is required. please contact your dealer.

· Check the front fork for wear and looseness, which may indicate that adjust-ment is needed or the bearing needs to be replaced. Please contact the dealer for repair, or replacement.

· Keep the product clean and do not leave debris, such as food, beverages, residues, etc.

4. Storage

This product should be stored in a cool and dry environment. Do not store it at the extreme temperature. If it cannot be stored under the above conditions, it may cause rusting of the scooter, and damage to the electrical system. Storage conditions: temperature: -40 ~ +65 degree C；Relative humidity: W80%；Atmo-spheric pressure: 86kPa ～106kPa.

15. ELECTROMAGNETIC INTERFERENCE & COMPATIBILITY

1. FDB07 electric scooter meets the electromagnetic compatibility requirements of IEC60601 standards.
2. The user shall install and use according to the EMC information provided in the attached documents.
3. The portable and mobile RF communication equipment may affect the performance of electric scooter and avoid strong electromagnetic interference when using, such as close to mobile phones, microwave ovens, etc.
4.The guide and the manufacturer's statement are detailed in the annex.

1. FDB07 electric scooter should not be used close to or stacked with other equip ment. If it must be used close to or stacked, it should be observed and verified that it can operate normally under the configuration used.

2. In addition to the cables sold by FDB07 electric scooter manufacturers as spare parts of internal components, the use of accessories and cables other than those specified may result in increased emission or reduced immunity of FDB07 elec tric scooter.

Project	Cablelength (m)	Whether or not shielded	Remark
POWER CORD	1.3	NO	/
CHARGER OUTPUT LINE	1.1	NO	/
EXTENSION CORD	0.12	NO	/

Guidelines and manufacturer's statement-Electromagnetic Emission		
FDB07 electric scooter is expected to be used in the electromagnetic environment specified below, and the buyer or user of the electric scooter vehicle shall ensure that it is used in this electromagnetic environment：		
Launch test	**Compliance**	**Electromagnetic environment-Guidelines**
IEC60601 RFlaunch	1	FDB07 electric scooter only uses RF energy for its internal functions. Therefore, its RF emission is very low and may not cause any interference to the nearby elec tronic equipment.
IEC60601 RFlaunch	B	FDB07 electric scooter is suitable for do mestic use and all facilities directly con nected to the public low-voltage power supply network for domestic use.
IEC60601 Harmonic emission	A	
IEC60601 Voltage fluctuation/ flicker emission	FIT	

Guidelines and manufacturer's statement-Electromagnetic Immunity

FDB07 electric scooter is expected to be used in the electromagnetic environment specified below, and the buyer or user of the electric scooter shall ensure that it is used in this electromagnetic environment.

Anti-interfernce measurement	IEC60601 Test Level	Coincidence level	Electromagnetic environment Guidelines
Electrostatic discharge (ESD) ISO7176 IEC60601	±6 kV Contact discharge ±8 kV Air discharge	±6 kV Contact discharge ±8 kV Air discharge	The floor should be wood, concrete or ceramic tile, and if the floor is covered with synthetic mate rials, the relative humidity should be at least 30%.
Electrical fast transient burst ISO7176 IEC60601	±2kV To the power cord	±2kV To the power cord	The power supply in the hospital or in the commercial environment should be of typical quality.
Surge ISO7176 IEC60601	±1 kV Differential-mode voltage ±2 kV Common mode voltage	±1 kV Differential-mode voltage	The power supply in the hospital or in the commercial environment should be of typical quality.
Voltage sag, short int errup tion and volt age variation on power in put line ISO7176 IEC60601	−0% UT, Last for 0.5 circuits (on UT,100% sag) −0% UT,Last for 1 circuit (on UT,100% sag) 70 % UT, Last for 25 circuits (on UT,30% sag) 0% UT,Last for 5 seconds (on UT ,100% sag)	−0% UT, Last for 0.5 circuits (on UT,100% sag) −0% UT,Last for 1 circuit (on UT,100% sag) 70 % UT, Last for 25 circuits (on UT,30% sag) 0% UT,Last for 5 seconds (on UT ,100% sag)	The power supply in the hospital or in the commercial environment should be of typical quality. If the users of elec tric scooter need continuous opera tion during power interruption, uninter ruptible power supply or battery power supply is rec ommended.
Power frequency magnetic field (50/60Hz) ISO7176 IEC60601	30 A/m	30 A/m	The power frequency magnetic field should have the horizontal charac teristics of power frequency magnetic field in typical com mercial or hospital environment.

Note: U_T refers to the AC network voltage before the test voltage is applied.

FDB07 electric scooter is expected to be used in the following specified electromag netic environment, and the purchasers or users of NPL001、NPL002、NPL003 elec tric scooters shall ensure that it is used in this electromagnetic environment：

Anti-interfernce measurement	IEC60601 Test Level	Coincidence level	Electromagnetic environment Guidelines
RFconduction ISO7176	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF commu nication equipment shall not be used closer to any part of the electric scooter, including cables, than the recommended isolation distance. The distance shall be calculated by the formula corre sponding to the transmitter frequency. Recommended isolation distance. $d= 1.2 \sqrt{P}$ 80 MHz to 800 MHz $d= 1.2 \sqrt{P}$ 800 MHz to 1.0GHz $d= 2.3 \sqrt{P}$ 26 MHz to 800 MHz $d= 0.2 \sqrt{P}$ 800 MHz to 2.5 GHz $d= 0.4 \sqrt{P}$ Where P is the maximum output rated power of the transmitter provided by the transmitter manu facturer, in watts (W), and d is the recommended isolation distance in meters (m). The field strength of the fixed RF transmitter is determined by sur veying the electromagnetic field A. in each frequency range, B should be lower than the coinci dence level. Interference may occur near equipment marked with the fol lowing symbols.
RF radiation (charger) ISO7176	3 V/m 80 MHz to 1.0 GHz	3 V/m	
RF radiation (scooter) ISO7176 IEC60601	20 V/m 26 MHz to 2.5 GHz	20 V/m	

Note 1: At the frequency of 80MHz and 800MHz, the formula of higher frequency band is adopted.

Note 2: These guidelines may not be suitable for all cases where electromagnetic propagation is affected by absorption and reflection of buildings, objects and human bodies.

a. If the fixed transmitting airport is strong, such as the base station of wireless (cellular/ cordless) telephone and ground mobile radio, amateur radio, am (amplitude modulation) and FM (frequency modulation) radio broadcast and television broadcast, and the field strength of the place where NPL001、NPL002、NPL003 electric scooters are located is higher than the RF coincidence level of the above application, then the electric scooter should be observed to verify It can operate normally. If abnormal performance is observed, supplementary measures may be necessary, such as reorientation or repositioning of the electric scooter.
b. The field strength should be less than 3 V/m in the whole frequency range of 150 kHz to 80 MHz.

Recommended separation distance between portable and mobile RF communica tion equipment and electric scooter.

FDB07 electric scooter is expected to be used in an electromagnetic environment where radiated RF disturbances are controlled. According to the maximum output power of communication equipment, the buyer or user of electric scooter can pre vent electromagnetic interference by maintaining the minimum distance between portable and mobile RF communication equipment (transmitter) and electric scooter.

Rated maximum output power of transmitter/W	**Isolation distance corresponding to different frequencies of transmitter/m**				
	150 kHz～80MHz $d=1.2\sqrt{P}$	**80MHz～800 MH (Charger)** $d=1.2\sqrt{P}$	**800 MHz～2.5 GHz (Charger)** $d=2.3\sqrt{P}$	**26MHz～800 MHz (Scooter)** $d=0.2\sqrt{P}$	**800 MHz～2.5 GHz (Scooter)** $d=0.4\sqrt{P}$
0.01	0.12	0.12	0.23	0.02	0.04
0.1	0.38	0.38	0.73	0.06	0.13
1	1.2	1.2	2.3	0.2	0.4
10	3.8	3.8	7.3	0.63	1.26
100	12	12	23	2	4

For the rated maximum output power of the transmitter not listed in the above table, the recommended isolation distance D, in meters (m), can be determined by the for mula in the corresponding transmitter frequency column, where P is the maximum output rated power of the transmitter provided by the transmitter manufacturer, in watt (W).

Note 1: At 80 MHz and 800 MHz frequencies, the formula for the higher frequency range is used.

Note 2: These guidelines may not be suitable for all cases where electromagnetic propagation is affected by absorption and reflection of buildings, objects and human bodies.

16. WARRANTY STATEMENT

Warranty Registration Card			
User Name		**ID No.**	
Address		**Phone No.**	
Model	**FDB07**	**Product No.**	

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

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 maintanence.
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.

Your Home
Rehabilitation Partner

CERTIFICATE

Product name: Electric Scooter

Itme Model：FDB07

SN: D912309209001

Date of manufacture:

Inspector：

Product inspection：

MATESIDE GLOBAL US INC.

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