

ELECTRIC WHEELCHAIR

User Manual



In kind prevail

Before using this product, read this manual carefully and save for future reference

Directory

Preface	1
1 Application Range	2
2 Product Information	2
2.1 Product Structure	2
2.2 Performance Parameters	2
3 Safety Instructions	3
3.1 Precaution before use	3
3.2 Precaution in use	3
3.3 Notes for escorts	4
4 Assembly, debugging and storage of wheelchair	4
5 Battery and Charger	5
5.1 Charger Requirements	5
5.2 Usage of Charger	6
5.3 The Usage and Maintenance of Battery	7
6 Wheelchair operation and control	7
6.1 Controller Panel	7
6.2 Controller Usage	7
6.3 Motor with electromagnetic brake	8
7 Maintenance	8
7.1 Clean and Battery Maintenance	8
7.2 Wheelchair Malfunction and Checking	9
7.3 Maintenance Checking	9
8 System Diagnose	9
9 Warranty issues	10
10 Others	11

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: F20
- ❖ 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.
- ❖ Please fill out the warranty card correctly

If the following symbols appear in this manual, please read them carefully

	Warning	Improper use may result in personal injury or serious injury
	Notice	Improper use will result in damage to the vehicle
	Suggestion	Follow the instructions of this manual to keep the vehicle in good condition

Hazardous substances list

Component	A toxic substance or element					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Printed circuit board component	×	○	×	○	×	○
Plastic	○	○	○	○	○	○
Metal shell	○	○	○	○	○	○
Cloth cover	○	○	○	○	○	○
Battery	○	○	○	○	○	○
Note: ○ Means that the content of the toxic substance in all the mean materials of the parts is below the limit requirements stipulated in the SJ/T11363-2006 standard × Means that the concentration of the toxic substance in at least one homogeneous material of the part exceeds the limit required by the SJ/T11363-2006 standard						

1 Application Range

It is suitable for people who only carry 1 person and The user Max Weight is 181kg or who are disabled or have no full walking ability. (Except for those who cannot judge the driving environment) Short-distance travel means of transportation cannot be driven on motor vehicle lanes.

2 Product Information

2.1 Product Structure

This product consists of front wheel, rear wheel, anti-tip wheel , frame, seat cushion, backrest, footrest, leg belt, handle, armrest, battery, motor, controller, handbrake, seat belt, folding backrest, etc.



2.2 Performance Parameters

Type	outdoor	Work temperature	-20℃~+45℃		
Max loading weight	400 lbs	Max driving speed	UP TO 3.73MPH		
Motor (*2pcs)	250W	Li-Battery	12V 12AH		
Max driving distance	16 Miles/24KM	Min turning radium	21"		
Battery charger	AC (110V) ±10% 50-60HZ	Charging time	4~8h		
Obstacle climbing	40mm	Static stability	8°		
Braking distance on horizontal road surface	≤1.5m	Max safe slope	8°		
EFUP	5 years	Climbing angle	6°		
Model	Overall size	Folded size	N. W. (12Ah/20Ah battery)	Front wheel diameter	Rear wheel diameter
NO.1	43"L X 25"W X 38"H	29"L X 14" W X 24" H	62lbs(including battery)	8 inch	12 inch

3 Safety Instructions



Notice

When operating the wheelchair, please follow the instructions in this manual to ensure the safety using of the product

3.1 Precaution before use

1. Please follow local traffic regulations and follow the points of caution in this manual to use your wheelchair properly.
2. Please do not stand on the pedals to get in and out of the wheelchair to avoid falling.
3. Please practice in parks or other safe open places until you can use the wheelchair skillfully.
4. Please make sure that the user is wearing the seat belt for safety.
5. Please check the condition of all parts.
6. Please check whether the battery capacity is sufficient.
7. Please keep pressure of pneumatic tire properly, the abnormal tire pressure may cause unsteady driving or excessive lost of current.
8. 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.

3.2 Precaution in use

1. Avoid driving on steep slopes, slopes, high steps, ditches, and avoid driving sideways or diagonally on steep slopes.
2. Accompanied by caregivers or Avoid Driving in Following Conditions
 - a. Drive in bad weather, such as rainy day, heavy fog, strong wind, snow, etc.
 - b. Drive on the bad road condition, such as muddy, trail, sand road, gravel, etc.
 - c. Drive on no fence side ditch, pond, etc.
3. Have to go up and down hills. Please make sure that there is at least 1 to 2 meters of flat road behind the ramp when going uphill. Please go at the lowest speed when going downhill.
4. Do not cross high steps or wide ditches. This vehicle can cross a 40mm high step and a 100mm wide ditch. When crossing a step or a wide ditch, the direction of travel must be at a 90 ° angle to the step.
5. If you choose to go downhill with your back to the side, make sure that there is a caregivers on site.
6. Do not use this product for handling or traction purposes.
7. Do not use mobile phones while driving, as it may affect your safety.
8. When stop using, please park in a safe place, and turn off the power.
9. The heavier the user is, the shorter the driving distance will be.
10. No standing or jumping on seat cushion and back cushion.
11. The circuit design of this product has taken the user's safety into consideration. It is strictly prohibited to modify the circuit without permission.
12. This product cannot be used as a motor vehicle.
13. Driving steps:
 - ① Fasten your seat belt after the driver gets on and sits down.
 - ② Turn on the switch button, and after 1 second, the LED power meter will be on or flash slowly.
 - ③ Slowly push the joystick forward with your hand, and the electric wheelchair can start to move forward. Similarly, pull or push the joystick backward/left/right, and the vehicle will back/turn left/right Turn driving.
 - ④ Adjust the speed and slow gear according to road conditions, surrounding conditions and personal preferences, and the speed/operation mode button can adjust the driving speed.
 - ⑤ When parking, release the joystick, the motor standing wave function will act and stop, and manual braking is required in emergency or when the power is turned off.

6) When moving back, pay attention to the surrounding conditions and slowly pull the joystick backward by hand.

 Warning	The user should not ride or use the wheelchair while in any motor vehicle as the user may be thrown from the wheelchair and injured in the event of an accident or emergency braking. When the user is in any motor vehicle, the user shall transfer from the wheelchair to the normal seat of the motor vehicle and secure the wheelchair securely in the vehicle.
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14. Protection from Electromagnetic Interference

The wheelchair should stay 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.

3.3 Notes for escorts

1. Please make sure that the user's feet are safely on the pedals, the safety belt is fastened, and the clothing does not come into contact with the wheels.
2. This wheelchair is equipped with slope stopping function. When you need to brake, please release the joystick or manual brakes.
3. Please do not brake too hard when going downhill, to avoid the user to slip out of the wheelchair.

 Notice	When adjusting the length and angle of the pedals, pay attention to leaving a gap with the ground and do not collide.
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4 Assembly, debugging and storage of wheelchair

4.1 Unpacking.

4.2 Quick installation: Place the car body flat on the ground, use both hands to balance the backrest tube (Fig. 1); until the car is fully opened (Fig. 2); then press the backrest with both hands to complete the locking; Check if the lock is fully locked (Fig. 3);



(Fig. 1)



(Fig.2)



(Fig. 3)

4.3 Install controller: Insert the rear end of the controller mounting plate into the controller fixing plate under the armrest tube of the two cars, adjust the controller to a suitable position, and tighten the knob (as shown in Fig. 3,4)



(Fig. 3)



(Fig. 4)

4.4 Install anti-roll wheel: Adjust the anti-roll wheel to a proper position. It will be better anti-roll function to adjust backward (As shown in Fig. 5,6)



(Fig. 5)



(Fig. 6)

4.5 Adjust backrest's height: adjust the height of the backrest tube to a suitable position, and tighten the backrest knob. (As shown in Fig. 7,8)



(Fig. 7)



(Fig. 8)



(Fig. 9)

4.7 Power connection: under the wheelchair seat cushion, insert the plug on the controller into the battery slot, and tighten the nut on the plug. (Fig. 9)

4.8 Quick folding: Loose the lock (Fig. 10), then one hand hold backrest, another hand pull the seat, fold it (Fig. 11).



(Fig. 10)



(Fig. 11)

4.9 Open the armrest: turn the armrest locking handle with one hand (Fig. 12), and flip the armrest with the other hand to open (Fig. 13); after the armrest is put down, turn and open the armrest locking handle to lock the armrest.



(Fig. 12)



(Fig. 13)



(Fig. 14)

4.10 Tie the safety belt: when you driving the vehicle, tie the safety belt. (Fig. 14)

5 Battery and Charger

5.1 Charger Requirements

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

Charger Technical Data

Input voltage: AC(110V) $\pm 10\%$ Output voltage: 24V/DC Output current: 2A/3A

5.2 Usage of Charger

5.2.1 Charging

1. When the battery indicator on the controller is orange.
2. If the battery is not used for a long time, charge it every 15 days to ensure that the battery is fully charged.
3. When the remaining battery power cannot reach the estimated travel distance.

5.2.2 Charging steps

In order to charge the battery, connect the charger with power supply and controller socket. 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: Make sure the battery and controller are connected.

Step 4: Connect the charger's output plug to the socket below the controller.

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

Step 6: As to keep the battery life from being shortened, please charge the battery at least once per month when the wheelchair is not being used.



 Warning	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.
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 Warning	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℃ to +45℃ . 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.
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5.3 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.

 Warning	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.
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6 Wheelchair operation and control

6.1 Controller Panel



(Fig. 16)

6.2 Controller Usage

Power on/off



Press this key to turn on the power, the controller system enters the startup state, and press this key again to turn off the power.

After each startup, wait 1.5 seconds to operate the joystick, as the controller have 1.5 seconds of self-check function after startup

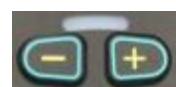
 Warning	In some emergency, you can directly turn off power by press power button.
 Notice	When the power is on, there is e-brake function with the vehicle. Release the joystick, wheelchair is in self-braking status. Turn off the power, after standing still for 10 seconds, the wheelchair e-brake function is off, then escort can push the vehicle manually.

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.

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.



Warning

Please turn on or turn off the power when the joystick is in the centre position. Otherwise the controller will let out wrong operation signal.

Release the joystick to centre position, this mistake will stop. If the mistake is still continuing, perhaps this part is malfunction, do not use it and contact with your dealer for maintenance.

6.3 Motor with electromagnetic brake

(ignore this item without electromagnetic brake function)

Before using the wheelchair, open the electromagnetic brake upwards. After the electromagnetic brake is opened upwards, the wheelchair will not be able to push the wheelchair to walk by hand, and can only be driven by the motor. (If the battery is low on the way, you need to turn off the electromagnetic brake and push it manually to avoid damage to the battery) . (Fig. 17)

Note: Turn the clutch switches to the manual gear, the controller will keep alarming and cannot start when controller is power on.



(Fig. 17)

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 set 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.

A area	Before use, please check if following parts are correct: 1.Backrest 2.Armrest 3.Controller position 4.Footrest 5.battery power 6.Clutch/adjusting lever for conversion between manual mode and electric mode
B area	Check the following parts monthly, to avoid original parts loosening or wearing 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 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
Power LED blink 1 time	Joystick problem	Check the Joystick
Power LED blink twice	The left motor is malfunction	The left motor is poor connected or the wire is disconnected.
Power LED lights blink thrice	The left magnetic brake is malfunction.	The left magnetic brake is poor connected or the wire is disconnected
Power LED lights blink four	The right motor is malfunction.	The right motor is poor connected or

times		the wire is disconnected.
Power LED lights blink five times	The right magnetic brake is malfunction.	The right magnetic brake is poor connected or the wire is disconnected
Power LED lights blink six times	controller is in over-current protection status.	Check if the motor drive mechanism is stuck. Check the current by ammeter, if it is not excessive current, maybe the controller is malfunction.
Power LED lights blink seven times	Joystick is malfunction	Joystick doesn't reset, or the connector is loose.
Red LED light blink	Battery undervoltage	Charge the battery
First of speed LED light blink	The left motor is malfunction	Replace the left motor
Fifth of speed LED light blink	The right motor is malfunction	Replace the right motor

9 Warranty issues

Warranty contents

We elaborately design this wheelchair for you. If there are improper materials or manufacturing, we provide free repair and lifetime maintenance according to the time and conditions in warranty cards.

Warranty does not cover in these conditions

Subjective impression, no function problems.

Usage and aging loss (coating and plating surface, nature fade of resins, etc).

Maintenance are not applicable when following happens

Don't regularly check our specified issues.

Improper or wrong maintenance.

Different operation with our manual or overload

Unauthorized modifications

External factor such as: soot, pharmaceuticals, bird droppings, acid rain, flying stone, metal powder, etc.

Natural disasters such as: typhoons, floods, fires, earthquakes etc.

The following fees are not covered

Replacement of consumables material such as tire, fuse, plastic parts, glass parts, lubricates etc.

Fees for Inspection, adjustment , add oil, cleaning , etc.

Fees for regularly check that specified by our factory.

Unauthorized modifications

Out authorized service centers maintain costs.

Customers pay attention following cautions

In order to make the warranty is valid, customers have obligation to follow below cautions:

Correctly testing and driving the power wheelchair as manual instructions.

Daily checking.

Implementing the check tips according to our suggestion.

Warranty acceptable

If warranty is needed, please take the power wheelchair and show the after sales service card to our service center for the warranty service. If the user can't provide the after sales service card the service is not provided.

Protect environment

In order to protect environment, every damaged or scraped part of power wheelchair should be backed to our factory disposed, do not threw randomly.

Warranty Application

The after sales service card is valid from stamped date.

Under normal operation conditions of this product: the body frame is guaranteed for three years, the electronic control system is guaranteed for one year, and the battery is six months.

Consumables (for example: seat back pads/tires/carbon brushes...)/improper operation and modified parts without consent are not included in the warranty scope.

10 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.

IMPORTANT

For damaged or defective product, questions, replacement parts or any other service support, please contact our customer service department by the below methods:

powet-service2024@outlook.com or support@kedom.com



+18183504468 or + 16266019736

pls text us if no answer!

Respond within 48 hours

contact us with your Amazon order Number in your email or text to get a quick response. please contact CUSTOMER SERVICE before returning.