

Feather

Featherweight Scooter - Lightest Electric Scooter 37 lbs. Owner's Manual



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Instructions before Use

- Please read this manual carefully before using the item and ensure all parts are in good condition.
- Please consciously obey traffic rules to ensure your safety and others.
- Please drive carefully and don't carry pillion for passengers.
- Do not disassemble the battery, motor, or controller by yourself.
- Please purchase the original parts from an authorized agent if you need replacements. The warranty card will not be valid if the product was modified or is not using genuine parts.
- For safety reasons, please do not give the electric scooter to children, pregnant women, or other people who are not suitable to use the electric scooter.

1.0 Safety Guidelines

WARNING! An authorized Provider or qualified technician must perform the initial setup of this scooter and must perform all of the procedures in this manual. The symbols below are used throughout this owner's manual and on the scooter to identify warnings and important information. It is very important for you to read them and understand them completely.

WARNING! Indicates a hazardous situation that could result in serious injury or death if it is not avoided.

CAUTION! Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.

IMPORTANT! Indicates a hazardous situation that could result in damage to property if it is not avoided.

USEFUL TIP! Recommendations and information for efficient, trouble-free use. Your scooter is a state-of-the-art life-enhancement device designed to increase mobility. We provide an extensive variety of products to best fit the individual needs of the scooter user. Please be aware that the final selection and purchasing decision regarding the type of scooter to be used is the responsibility of the scooter user who is capable of making such a decision and his/her health care professional (i.e., medical doctor, physical therapist, etc.).

The contents of this manual are based on the expectation that a mobility device expert has properly fitted the scooter to the user and has assisted the prescribing health care professional and/or the authorized provider in the instruction process for the use of the product.

There are certain situations, including some medical conditions, where the scooter user will need to practice operating the scooter in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a scooter user in various daily living activities.

As you begin using your scooter during daily activities you will probably encounter situations in which you will need some practice. Simply take your time and you will soon be in full and confident control as you maneuver through doorways, on and off elevators, up and down ramps, and over moderate terrain.

Additional general information can be found on the supplemental information sheets and booklets included in your Owner's Package. Please fully read and review the information, and keep it readily available for future reference.

2.0 PRE-RIDE SAFETY CHECK

Get to know the feel of your scooter and its capabilities. We recommend that you perform a safety check before each use to make sure your scooter operates smoothly and safely.

Perform the following inspections before using your Travel Scooter:

- Check the condition of the tires. Make sure they are not damaged or excessively worn.
- Check all electrical connections. Make sure they are tight and not corroded.
- Check all harness connections. Make sure they are secured properly.
- Check the battery condition meter to ensure the batteries are fully charged.
- Ensure the manual freewheel lever is in drive mode before sitting on the Travel Scooter.

If you discover a problem, contact your authorized Provider for assistance.

WARNING!

Never exceed the maximum permissible load – see 3.0 Specifications and never use the scooter to transport more than one person.

WARNING!

Never drive the scooter under the influence of medication or alcohol.

WARNING!

Never attempt to get onto or off your scooter without first removing the key from the key switch. This will prevent the scooter from moving if accidental throttle control lever contact is made.

WARNING!

Never drive the scooter with the tiller lock in the locked position.

3.0 SPECIFICATION

Weight Capacity	265 lbs.
Overall Size	40"x22"x36" (LxWxH)
Size after folding	37.5"x22"x18" (LxWxH)
Seat width	15"
Seat depth	14"
Front Wheel	6"x2" (plastic hub)
Rear Wheel	10"x2" (pneumatic tire ,one-piece hub)
MAX Speed	5 mph
Grade Ability	≤8°
Static stability	≥6°
Dynamic Stability	≥6°
Spanning Ability	≤60
Travel Range (Max)	7.5 Miles
Turning Radius (Min)	5.1 feet
Ground Clearance	3"
Weight(exclude battery)	37 lbs.
Brake system	Electromagnetic brake
Driving system	Rear wheel (differential) drive
Controller	PG
Battery	25.2V/10Ah(Lithium)

Motor power (VA)	120W Brushless motor
Charger	Automatic protective type charger(29.4V 2A)

WARNING! Never operate the scooter unless the tiller is raised, the teeth are fully engaged and the tiller adjustment bolt fully tightened and securely positioned.

Indicates the voltage of the batteries(13):

- Green – batteries are fully charged.
- Yellow – batteries are half full.
- Red – batteries need charging.
- Beeping sound continues – batteries need to charge. Please re-charge the batteries.

Key Switch(14)

This turns the power on and off your scooter.

- Insert the key into the key switch.
- Turn the key clockwise to turn on your scooter's power. The battery indicator will light up to indicate that the power is on.
- Turn the key counterclockwise to turn off your scooter's power. The battery indicator light will turn off to indicate the power is off.

Horn Button: (15)

This button activates a warning horn. Your scooter must be turned on for the horn to be operational. Do not hesitate to use the warning horn to prevent an accident or injury.

Throttle Control Lever – Forward/Back: (16)

This lever allows you to control the forward speed and the reverse speed of your scooter up to the maximum speed that you pre-set with the speed adjustment dial. Place your right hand on the right hand tiller handle and your left hand on the left hand tiller handle.

To move forward, use either of the following:

- Use your left thumb to push the left side of the throttle control lever.
- Use your right hand fingers to pull back on the right side of the throttle control lever.

To move backward, use either of the following:

- Use your right thumb to push the right side of the throttle control lever.
- Use your left hand fingers to pull back on the left side of the throttle control lever.

Release the lever and allow your scooter to come to a complete stop before pushing the other side of the lever to move in reverse. When the scooter is moving in reverse, the reverse beeper will sound. When the throttle is completely released, it automatically returns to the center “stop” position and engages your scooter’s brakes.

Speed Adjustment Dial(17)

This dial allows you to preselect and limit your Scooter’s top speed in the range of 0mph – 5mph:

- The image of the snail represents the slowest speed setting.
- The image of the hare represents the fastest speed setting.

5.0 OPERATING YOUR SCOOTER

5.1 STARTING

1. Make sure you are seated safely and properly on your scooter.
2. Turn the speed adjustment dial fully counterclockwise to the slowest setting.
3. Insert the key into the key switch.
4. Turn the key clockwise to the “On” position.
5. Place your hands on the hand grips:
 - i. Pull-on the left hand grip to steer your scooter to the left.
 - ii. Pull-on the right hand grip to steer your scooter to the right.
6. Move the tiller to the center position to drive straight ahead.
7. Slowly engage the throttle control lever to gently accelerate your scooter forward by either:
 - i. Use your left thumb to push the left side of the throttle control lever forward.
 - ii. Use your right hand fingers to pull back on the right side of the throttle control lever.

8. To stop releasing the throttle control lever to allow your scooter to stop gradually. The electronic brakes will automatically engage when your scooter comes to a stop.

5.2 STEERING

1. Place both hands on the handgrips of the tiller, turn the tiller to the right to travel right – never turn at high speeds as this will result in loss of control.
2. Turn the tiller to the left to turn left – never turn at high speeds as this will result in loss of control.
3. Make sure to maintain sufficient clearance when turning your scooter so that the rear wheels will be clear of any obstacles.
4. Show even greater caution when steering in reverse.

WARNING! Turning your scooter too sharply at high speed will cause loss of control and balance and will result in the scooter tipping over resulting in serious injury or death.

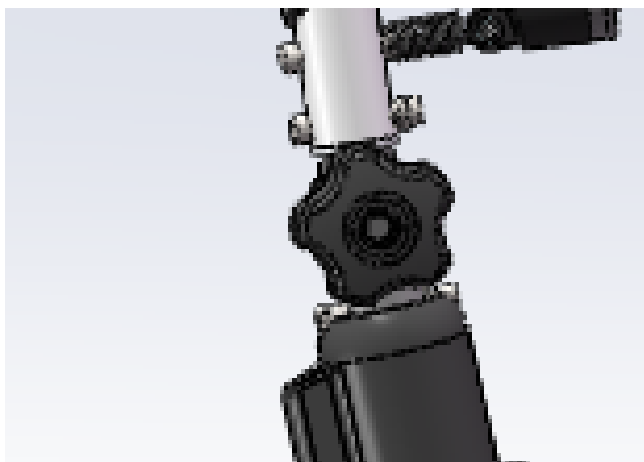
5.3 DRIVING ON INCLINES, HILLS, SLOPES, AND RAMPS

- When driving your scooter, never descend or climb a gradient that is greater than recommended – see 3.0 Specifications. Failure to do so could result in serious injury or death.
- When driving up a ramp, curb, or incline - lean forward to move the center of gravity of the scooter forward for maximum stability and safety.
- Drive with extreme caution when attempting to drive up or down any incline, access ramp, etc, always drive at a slow speed.
- Always drive straight up or straight down an incline, ramp, slope, etc.
- Never drive across (traverse) an incline, ramp, etc., in any direction – Driving across an incline, ramp, etc. could result in turning the scooter over resulting in serious injury or death.
- Try to keep your scooter moving when climbing or descending an incline. If you have to stop, restart and accelerate slowly and carefully.

5.4 Fold the Scooter

To fold the scooter pull out the fold knob as shown below, [Fig5.4.1] at the same time gently lower the seat back down into its folded position, Now with the seat folded, loosen off the tiller adjuster knob and gently lower the tiller into the folded position. [Fig 5.4.2] The tiller handles should be able to rest between the chassis as shown below. Re-tighten the

tiller knob to hold the tiller into position. This will then allow you to pull the scooter on its rear tip wheels as shown in 6.4 Storage and Travel.

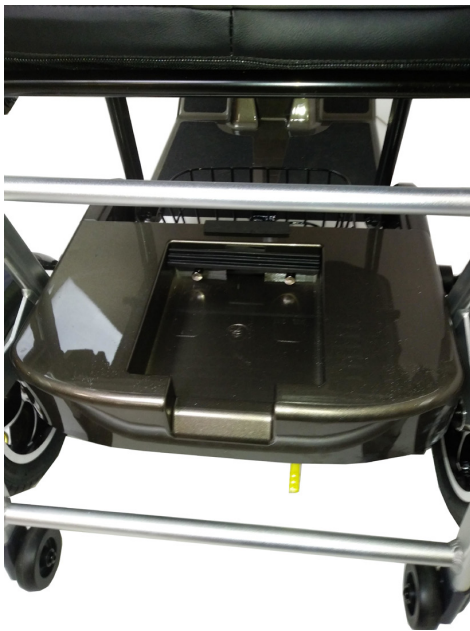


CAUTION! Lifting weight beyond your physical capability may result in physical injury. Ask for assistance when necessary while disassembling or assembling your scooter.

6.0 Operation - Fitting the Battery Box

6.1 Insert Battery Box

To insert the battery box, simply place it into position and push forwards as shown below, [Fig 6.1.0] gently lowering into position. Make sure the rubber protector flap remains on top of the battery box.



[Fig 6.1.0]



[Fig 6.2.0]

7.0 Remove Battery Box

To remove the battery box, push the box forwards against the sprung connectors and then lift up to release the box. [Fig 6.2.0]

8.0 Operation - Freewheel Lever

The Freewheel lever on the scooter is located on the rear section of the scooter. Before driving the scooter needs to be put into the drive position. The two positions are:

1. Drive position - is indicated by 'Closed' - pull the lever backward for this position.

[Fig 8.0.1]

2. Freewheel position - is indicated by 'Open' – push the lever forwards for this position.

[Fig 8.0.2]15



[Fig 8.0.1]



[Fig 8.0.2]



WARNING! Before placing your scooter into or taking it out of freewheel mode, remove the key from the key switch. Never sit on the scooter when it is in freewheel mode. Never put your scooter in freewheel mode on any incline.



WARNING! When your scooter is in freewheel mode, the braking system is disengaged.



WARNING! Disengage the drive motors only on a level surface.



WARNING! Ensure the key is removed from the key switch.



WARNING! Stand to the side of the scooter to engage or disengage freewheel mode. Never sit on a scooter to do this.



WARNING! After you have finished pushing your scooter, always return it to the drive mode to lock the brakes

9.0 Operation - Batteries and Charging

9.1 General Information and Instructions on Charging

Your Scooter requires a 1 x lithium battery that is sealed and maintenance free. The battery is recharged by the supplied off-board charging system.

- Fully charge your travel scooter's battery for at least 10 to 12 hours before using it for the first time. The new battery will be at its full capacity after having run through approx. 10-20 charging cycles (break-in period). This break-in period is necessary to fully activate the battery for maximum performance and longevity.
- Keep the battery fully charged to keep your scooter running smoothly. Charge the battery daily after every discharge even after partial discharge. Depending on the level of discharge, it can take up to 12 hours until the battery is fully charged again.
- If the battery indicator has reached the red LED range, charge the battery for 16 hours minimum, ignoring the charge complete display!
- Even if the scooter is unused for a long time, the battery should have a 24 hour charge once a week to make sure that it is fully charged.
- Do not cycle your battery at a low state of charge without regularly recharging it fully.
- Do not charge your battery under extreme temperatures. High temperatures above 30°C is not recommended for charging as well as low temperatures below 10°C.

- You cannot overcharge the battery when using the charger supplied with your vehicle, or a charger that has been approved by Feather Mobility.
- Protect your charger from sources of heat such as heaters and direct sunlight. If the battery charger overheats, the charging current will be reduced, and the charging process delayed.

9.2 Charging your Batteries - Warning



WARNING! Risk of explosion and electric shock if batteries are charged when incorrectly wired. Never attempt to open or disassemble the battery box. If the batteries do not appear to be working correctly, contact your authorized provider.



WARNING! Risk of explosion and destruction of batteries if the wrong battery charger is used. Only use the battery charger supplied with your vehicle or a charger that has been approved by Feather Mobility. Never charge 10 Ah batteries with a 5 Ah battery charger. Always use a 2 Ah battery charger.



WARNING! Do not use or store the battery near sources of heat such as a fire or heater.



WARNING! Never attempt to open or disassemble the charger. If the battery charger does not appear to be working correctly, contact your authorized provider.



WARNING! Risk of short circuit and electric shock if the battery charger has been damaged. Never use the charger if it has been dropped or damaged.



WARNING! Do not use the battery if it gives off an odor, generates heat, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.



WARNING! Risk of electric shock and damage to the battery charger if it gets wet. Always protect the battery charger from water and always charge in a dry environment.



WARNING! Risk of electric shock and damage to the batteries – Never attempt to recharge the batteries by attaching cables directly to the battery terminals.



WARNING! Risk of fire and electric shock if a damaged extension cable is used. Only use an extension cable if it is absolutely necessary. If you have to use an extension cable make sure it is in good condition.



WARNING! Risk of injury if using the scooter during charging. Do not attempt to recharge the batteries and operate the scooter at the same time. Do not sit in the scooter while charging the batteries.



WARNING! Chargers are selected precisely for particular applications and are specially matched to the type, size, and chemical formulation of specific batteries. For the safest and most efficient charging of your scooter's batteries, we recommend the use of the charger supplied as original equipment with your product only. Any charging method resulting in batteries being charged individually is especially prohibited.



WARNING! Never attempt to disassemble the battery from the battery box or refit the battery. Contact your authorized provider.



WARNING! If your battery charger has not been tested and approved for outdoor use, then do not expose it to adverse or extreme weather conditions. If the battery charger is exposed to adverse or extreme weather conditions, then it must be allowed to adjust to different environmental conditions before use indoors. Refer to the manual supplied with the battery charger for more information.



WARNING! Never use or store the battery where it is exposed to high temperatures. Leaving the battery in a car on a hot day or in an area of direct sunlight such as a window will reduce battery performance and shorten service life.

9.3 How to charge your batteries

- Make sure you read and understand the battery chargers user manual if supplied, as well as the safety notes on the charger.
- Turn off the scooter power and remove the key.
- Remove the battery box from the scooter.
- Slide away the cover of the charger outlet point either positioned on the front of the battery box (Fig9.3.1)



[Fig 9.3.1]

- Put the charger plug into the outlet point
- Do not switch on the battery charger until all the plugs are in the position
- The LED light on the battery charger will show amber while charging
- The LED light on the battery charger will show green when batteries are fully charged
- Turn off the mains power to the charger before removing the charger plug from the charging outlet.

10.0 EMI / RFI

The rapid development of electronics, especially in the area of communications, has saturated our environment with electromagnetic (radio) waves that are emitted by television transmitters, cellular phones, citizen's band radios (CB's), amateur radios (ham radios), wireless computer left, microwave transmitters, paging transmitters, etc. These electromagnetic (EM) waves are invisible and increase in strength the closer one gets to the source of transmission. When these energy waves act upon electrical devices and cause them to malfunction or to function in an erratic or uncontrolled manner, they are referred to as Electromagnetic Interference (EMI) or Radio Frequency Interference (RFI).

EMI / RFI and your scooter

All electrically powered vehicles, including scooters, are susceptible to Electromagnetic Interference / Radio Frequency Interference (EMI / RFI). This interference could result in abnormal, unintended movement of your scooter.

WARNING! Unintended movement or brake release can cause an accident or injury.

The FDA has determined that each make and model of a scooter can resist EMI / RFI to a certain level. The higher the level of resistance, the greater the degree of protection from EMI / RFI – measured in volts per meter (V/m). The FDA has also determined that current technology is capable of providing 20 V/m of resistance to interference. This product has been tested and has passed an immunity level of 20 V/m.

EMI / RFI recommendations

- Do not turn on or use hand-held personal electronic communication devices such as cellular phones, walkie-talkies, and CB radios while your scooter is turned on;
- Be aware of any nearby transmitters (radio, television, microwave, etc.) on your intended route and avoid operating your scooter close to any of those transmitters;
- Turn off the power if your scooter is going to be in a stationary position for any length of time;
- Be aware that adding accessories or components or modifying your scooter may make it more susceptible to EMI / RFI;

WARNING! Turn off your scooter as safely as possible if unintended or uncontrollable motion occurs or if unintended park brake release occurs.

11.0 DAILY CHECKING

Check the following items before driving. If you find anything abnormal, contact your scooter dealer for a further inspection before using it.

Item	Inspection Content
Handle bar	Is it tight? Can they be turned left or right smoothly?
Speed Dial	Can it be adjusted freely and function well?
Throttle Lever	Does the scooter move when the lever is engaged? Does the scooter stop when the lever is released completely?
Motor	Is there any abnormal noise from the motor? Does the electromagnetic brake work properly?
Battery Gauge	Does the gauge move to green when switched "ON"? Is the remaining power enough for your trip?
Horn Button	Does the horn work?
Seat	Is the seat on properly?

11.1 Regular Checking Record

To make sure your scooter is in good condition, go to your scooter dealer regularly.

11.2 Tires

The condition of the tires depends on how you drive and use your scooter.

Inspecting Tire Treads

Please check the tread depth regularly. Replace the tires when the tread depth is less than 0.5 mm.

12.0 Maintenance

Do not use water, oil, or other chemical solutions to clean your scooter. Be sure NOT to spray the scooter with the water as this can damage the electronic components.

Please clean the scooter by wiping it with either a dry or moist cloth.

Please take the scooter to authorized dealers for repairs and adjustments. Improper adjustments could lead to accidents and scooter malfunction.

13.0 Basic Troubleshooting

This table is only a guide to aid you in getting your scooter operating, should you have any problems. If you are unable to get your scooter operating, please contact your Scooter Dealer.

Sympton	Possible	Solution
Scooter does not move	1. Key switch is not "ON" 2. Main circuit breaker tripped 3. Brake release lever in 'Freewheel Mode' 4. Charger connected to outlet 5. Battery power low 6. Scooter shuts down to conserve battery 7. Controller error	1. Turn key switch to "ON" 2. Reset circuit breaker 3. Place lever in 'Drive Mode' 4. Disconnect charger 5. Recharge battery 6. Turn key switch "OFF", then "ON" 7. Check Power light for Flash Code (See 16.0 Flash Codes to get a solution)
Range less than expected	1. Charging too infrequently 2. Defective or worn out battery 3. Cold weather reduces battery life 4. Defective charger	5. Charge scooter more often 6. Load test batteries. If necessary replace. 7. Allow batteries to reach room temperature and then fully recharge 8. Contact your Scooter Dealer

14.0 Flash Codes

Scooter Controller Internal Diagnostics

The diagnostic flash codes for your scooter are designed to help you perform basic troubleshooting quickly and easily. A diagnostic flash code flashes from the Power light in the event one of the conditions listed below develops.

Flash Code	Flash Indication	Fault	Effect on the Scooter	Solution
1-5	* *****	Battery charge is too low or there is a bad connection.	Scooter stops driving	• Charge batteries. • Check all battery wiring connections. • Contact your service agent.
3-2	*** **	Brake error	Scooter stops driving	• Ensure the manual freewheel lever is in the drive position and restart the scooter. • There is a fault with the magnetic brake or wiring. • Contact your service agent.
1-2	* **	Throttle Pot error (open circuit)	Scooter stops driving	• The Throttle Pot or its wiring could be faulty. • The Speed Pot or its wiring could be faulty. • Contact your service agent.
2-5	** *****	Throttle Pot error (short circuit)	Scooter stops driving	• The Throttle Pot or its wiring could be faulty. • The Speed Pot or its wiring could be faulty. • Contact your service agent.
1-6	* *****	Throttle control lever not at centre position when switching on scooter	Scooter stops driving	• Put the throttle control lever in the central position, turn the power off and then turn on again. • Check that the charger is not connected.
1-3	* ***	Charge inhibited		• Check the charger and charging socket. • Contact your service agent.
1-4	* *****	Internal motor sensor error	Scooter stops driving	• Check the motor connections and current draw. • Contact your service agent.
2-4	** *****	Controller error	Scooter stops driving	• Check all wiring connections including main battery connections. • The controller needs replacing. • Contact your service agent.

17.0 Warranty

WARRANTY POLICY:

LIMITED WARRANTY.

17.1 Two-Year Limited Warranty

The main chassis frame is covered by a two-year warranty.

17.2 One-Year Limited Warranty

For one (1) year from the date of delivery, we will replace at our discretion to the original

purchaser, free of charge, any part or electronic component found upon examination

by an authorized representative of Feather Mobility to be faulty.

1. Electronic controllers
2. Transaxle
3. Motor & Brake: (electronic function ONLY).
4. Charger
5. Any other electrical sub-assembly

NOTE: If there is an increase in the noise level from the transaxle, the warranty does not apply. An increase in operational noise level usually occurs due to excessive strain on the scooter.

17.3 Batteries

Batteries are covered by a six (6) month warranty from the original manufacturer and a further six (6) month warranty at the discretion of Feather Mobility. Note: Gradual deterioration in performance due to batteries being left in a discharged state, left in cold conditions for long periods of time, or worn out through heavy use is not covered.

17.4 Warranty Exclusions

1. ABS plastic shrouds and footrest covers (wear items are not warranted).
2. Tires and Anti-tip Wheels (wear items are not warranted).
3. Upholstery and seating (wear items are not warranted).

4. Motor Brushes.
5. Brake Pads (wear items are not warranted).
6. Fuses.
7. Repairs and/or modifications made to any part of the scooter without specific and prior consent from Feather Mobility.
8. Circumstances beyond the control of Feather Mobility.
9. Exclusions also include components with damage caused by:
 - Contamination (rain, etc).
 - Abuse, misuse, accident, or negligence.
 - Commercial use, or use other than normal.
 - Improper operation, maintenance, or storage.

NOTE: Gradual deterioration in performance because the battery has been left in a discharged state, left in cold conditions for an extended period of time, or worn out through heavy use is not covered by the warranty.

17.5 Service Checks and Warranty Service

This warranty is extended only to the original purchaser. Your original receipt will be necessary as proof of purchase before any warranty performances are rendered. This warranty only covers failures due to defects in materials or workmanship that occur during normal use and does not cover damage that occurs in shipment or failures which are caused by products not supplied by the manufacturer or failures resulting from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, commercial use or by anyone other than an authorized dealer, or damage that is attributable to the acts of God.

The manufacturer reserves the right to alter without notice, any weights, measurements, or other technical data shown in this manual. All figures, measurements, and capacities shown in this manual are approximate and do not constitute specifications.