

TRANSIT USER MANUAL



Electrically powered scooter Class A (EN 12184)

Intend Use:

Maximum safe slope: 3° (Not intended for use outdoors)

The product is not intended for visually impaired people.

The drivers need to be mentally and physically suitable to drive the scooters.

The fingers need to work functionally.

The device can't be used by children until age of 12 without Parent or Professional approval.

The driving distance will be reduced if the power scooter is used frequently on slopes, rough ground or to climb kerbs.

This vehicle is suitable for land or air transportation. (Please check with your airline for approval before flying)



- ⇒ Don't operate your power scooter without completely reading and understanding this user manual!
- ⇒ Do not operate the scooter with depleted batteries, since the occupant could be stranded.
- ⇒ Please disconnect the battery cable (battery power) before transport/boarding



MyScooter.ca

15310-108 Ave. NW
Edmonton, AB T5P 1A2

Tel: **780.489.3694**

Mobile Showroom: **780.232.0550**

info@myscooter.ca

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SAFETY INSTRUCTIONS



Always use a seat belt, and keep your feet on the scooter at all times.



Never operate the scooter while you are under the influence of alcohol.



Never use mobile phones or radio transmitters such as walkie-talkies.



Make sure that there are no obstacles behind you while reserving your scooter.



Do not ride your scooter in traffic.



Do not make a sharp turn or a sudden stop while riding your scooter.



Do not attempt to climb kerbs greater than limitation shown in the specification



Do not remove your hands and legs from the scooter when driving.



Do not ride your scooter during snow in order to avoid accidents.



Do not allow unsupervised children to play near this equipment while the batteries are charging.

◆ Warning – Do not operate your scooter for the first time without completely reading and understanding this owner's handbook

1. Do not operate the scooter on the road. Obey all local pedestrian traffic rules and use the pavement. Be aware that it may be difficult for traffic to see you when you are seated on the scooter. Wait until your path is clear of traffic, and then proceed with extreme caution.
2. To prevent injury to yourself or others, always ensure that the power is switched off when getting on or off of the scooter.
3. Always check that the drive wheels are engaged (drive mode) before driving. Do not switch off the power when the scooter is still moving forward. This will bring the scooter to an extremely abrupt stop.
4. Do not use this product or any available optional equipment without first completely reading and understanding these instructions. If you are unable to understand the warnings, cautions or instructions, contact your dealer before attempting to use this equipment, otherwise injury or damage may occur.
5. 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 especially trained in assisting a scooter user in various daily living activities.
6. Do not attempt to lift or move the scooter by any of its removable parts including the armrests, seats or shrouds. Personal injury and damage to the scooter may result.
7. Never try to use your scooter beyond its limitations as described in this manual.
8. Please do not sit on your scooter while it is in a moving vehicle such as a car, bus or train.
9. Keep your hands away from the wheels (tyres) while driving scooters. Be aware that loose fitting clothing can become caught in the drive wheels.
10. Consult your physician if you are taking prescribed medication or if you have any certain physical limitations. Some medications and limitations may impair your ability to operate scooters in a safe manner. Consult with your physician if you are taking any medication that may affect your ability to operate your scooter safely.
11. Do not drive or sit on the scooter when in freewheel mode.
12. Do not remove the anti-tipper (if fitted)
13. Always switch off the scooter and charger before doing any work or using any tools on the scooter.
14. Do not attempt to lift or move your scooter by any of its removable parts, such as the armrests, seats, or shroud.
15. Do not climb a gradient at an angle. Always drive straight up a gradient, as this greatly reduces the risk of tipping or a fall. Do not climb a gradient steeper than 6°.
16. Do not drive backwards down any step, kerb or other obstacle. This may cause the scooter to tip or fall.
17. Always reduce your speed and maintain a stable centre of gravity when cornering sharply. Do not corner sharply when driving scooters at higher speeds.
18. Operating in rain, snow, salt, mist and on icy or slippery surfaces may have an adverse affect on the electrical system.
19. Beware the motor may be hot after use. Do not touch or access the motor directly until it has cooled down.
20. Never sit on your scooter when it is being used in connection with any type of lift or hoist. Your scooter is not designed with such use in mind and any damage or injury incurred from such use is not the responsibility of Drive.
21. Always ensure the scooter is fully folded out before sitting on the scooter. Do not fold up the scooter until you have fully exited the scooter, and the backrest on the scooter seat is folded down.

◆ Modifications

Your scooter has been designed to be as practical as possible. However, under no circumstances should you modify, add, remove, or disable any part or function of your scooter. Personal injury and damage to the scooter may result.

1. Do not modify your power scooter in any way not authorized by Drive. Do not use accessories if they have not been tested or approved for Drive products.
2. Get to know the feel of your power scooter and its capabilities. Drive recommends that you perform a safety check before each use to make sure your scooter operates safely.

◆ Inspections prior to using your power scooter:

1. Please check all electrical connections and make sure they are tight and not corroded.
2. Please check all harness connections and make sure they are secured properly.
3. Please check the brakes.

◆ Weight limitation.

1. Do not exceed the weight capacity stated in the Specification section. Exceeding the weight capacity voids your warranty. Drive will not be held responsible for injuries or property damage resulting from failure to observe weight limitations.
2. Do not carry passengers on scooters. Carrying passengers on your scooter may affect the centre of gravity, resulting in a tip or a fall.

◆ Temperature

1. Some of the parts of the scooter are susceptible to change in temperature. The controller can only operate in temperature that ranges between -25°C ~ 50°C (-13°F to 122°F).
2. At extreme low temperatures, the batteries may freeze, and your scooter may not be able to operate. In extreme high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components.

ELECTROMAGNETIC INTERFERENCE

The rapid development of electronics, especially in the area of communications, has saturated our environment with electromagnetic (EM) radio waves that are emitted by television, radio and communication signals. These EM wave are invisible and their strength increases as one approaches the source. All electrical conductors act as antennas to the EM signals and, to varying degrees, all power wheelchairs and scooters are susceptible to electromagnetic interference (EMI). The interference could result in abnormal, unintentional movement and/or erratic control of the vehicle. Power scooters may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, cellular phones and alarm systems. The interference (from radio wave sources) can cause the power scooter to release its brakes, move by itself or move in unintended directions. It can also permanently damage the powered scooter's control system. The intensity of the EM energy can be measured in volts per meter (V/m). Each powered scooter can resist EMI up to a certain intensity. This is called "immunity level". The higher the immunity level the greater the protection. At this time, current technology is capable of providing at least 20 V/m of immunity level, which would provide useful protection against common sources of radiated EMI.

Following the warnings listed below should reduce the chance of unintended brake release or powered scooter movement that could result in serious injury:

1. Do not turn on hand-held personal communication devices such as citizens band (CB) radios and cellular phones while the powered scooter is turned on.
2. Be aware of nearby transmitters such as radio or TV stations and try to avoid coming close to them.
3. If unintended movement or brake release occurs, turn the powered scooter off as soon as it is safe.

4. Be aware that adding accessories or components, or modifying the powered scooter, may make it more susceptible to interference from radio wave sources (Note: It is difficult to evaluate the effect on the overall immunity of the powered scooter).
5. Report all incidents of unintended movement or brake release to the powered scooter manufacturer, and note whether there is a radio wave source nearby.

TURN OFF YOUR POWERED SCOOTER AS SOON AS POSSIBLE IF YOU EXPERIENCE THE FOLLOWING:

- Unintentional scooter movements
- Unintended or uncontrollable direction.
- Unexpected brake release

The higher the immunity level the greater the protection. Your powered scooter has an immunity level of 20 V/m which should protect against common sources of EMI. Warning: The scooter itself can disturb the performance of the electromagnetic fields such as emitted by an alarm system.

TRANSPORTING THE SCOOTER

The scooter is suitable for transportation in the cargo hold of an aircraft.

The scooter should be folded up, the key removed and the battery disconnected. This will inhibit the scooter for operation.

The lithium battery used in the scooter is certified as safe for air transportation.

The scooter also comes with a storage hold all. The hold all features holes in the bottom for the scooter front wheel and anti-tip wheel to go through. This is to allow the scooter to be pushed even when in the hold all.

SPECIFICATION

Model	S21
Weight Limit	115kg (18 stone)
Overall Dimensions (L x W x H)	86 x 42 x 84cm 34" x 16½" x 33"
Folded Dimensions (L x W x H)	73 x 44 x 42cm 28¾" x 17½" x 16½"
Seat Dimensions (L x W x H)	32 x 40 x 38cm 12½" x 16" x 15"
Footplate Length	37cm 14½"
Wheelbase Length	63cm 25"
Turning Radius	78cm 31"
Ground Clearance	3.5cm 1.4"
Drive Wheel	200mm x 50mm (8" x 2") PU Tyre
Front Wheel	180mm x 40mm (7" x 1.6") PU Tyre
Rear Anti-Tip Castor	Standard
Maximum Speed	3.5 mph 6 kph
Maximum Range	6 miles 10 km
Stability	3° (Dynamic) 6° (Static)
Weight	19 kg (with battery) 17.5kg (without battery)
Charger Type	2A 110/240V Li-Ion Charger
Controller	50A Dynamic
Motor	180W 24V
Battery	Lithium-Ion Battery 24V 8.7 Ah

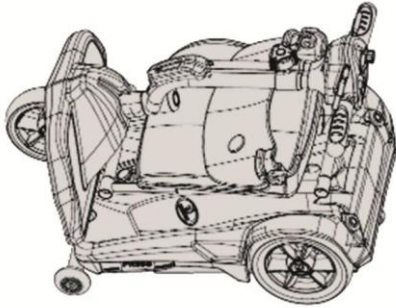
Note:

Maximum Range and Speed are based on optimal conditions. User weight, battery condition, temperature, terrain, gradient, weather conditions and driving style may all reduce the maximum range and speed.

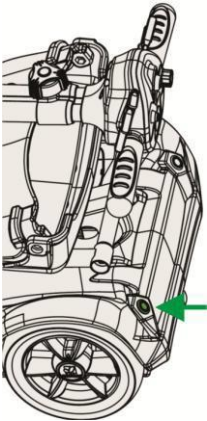
Manufacturers reserve the right to change specifications without prior notice. Specifications of the product purchased may differ from those stated.

FOLDING OUT THE SCOOTER

1. Position the scooter with rear wheels and anti-tip wheels on the ground (as shown below):



2. Insert the key in to the ignition of the scooter and switch the scooter on.



3. The green button (arrowed below) on the scooter should now be illuminated. Press this for 3 seconds then release the button and the scooter will automatically fold out.

Alternatively, press the green button on the remote.

(If case of emergency, press the red button on the rear of the scooter to stop the folding procedure. If this happens, remove the hazard and keep your finger on the green button until the scooter is fully folded out).

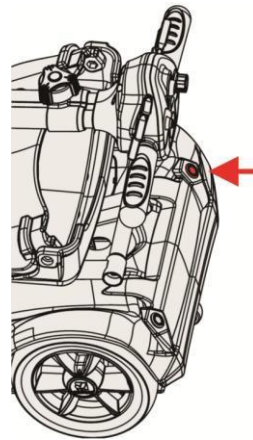
4. Switch off the scooter using the key and lift up the backrest

(highlighted in the diagram right)



FOLDING UP THE SCOOTER

1. The user should vacate the scooter.
2. Fold down the backrest of the seat (highlighted on the diagram below).



3. The red button (arrowed below) on the scooter should now be illuminated. Press this for 3 seconds then release the button and the scooter will automatically fold up.

Alternatively, press the red button on the remote.

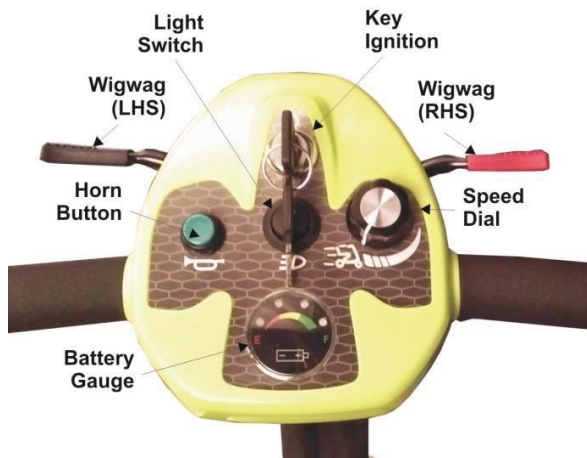
(If case of emergency, press the green button on the rear of the scooter to stop the folding procedure. If this happens, remove the hazard and keep your finger on the red button until the scooter is fully folded up).

4. Switch the scooter off using the ignition and remove the key.
5. Store the scooter in the holdall (if required).

The holdall features holes in the bottom for the scooter front wheel and anti-tip wheel to go through. This is to allow the scooter to be pushed even when in the holdall.

SCOOTER OPERATION

Control Panel



handle bars. Squeeze the left hand side of the wigwag paddle (BLACK) towards you and the scooter will move backwards, emitting an audible reversing alarm. To brake, release the wigwag paddle which will return to neutral and activate the electromagnetic brake automatically and bring the scooter to a prompt stop. The wigwag paddle allows you to control the speed of the scooter up to a maximum speed determined by the Speed Dial. The further the wigwag paddle is deflected, the faster the scooter will go (up to 3.5mph).



Warning

Do not operate both left and right hand sides of the wigwag simultaneously. You will not be able to control the scooter.

How To Operate Your Scooter

- **Key Ignition.** The key ignition acts as the power switch for the scooter. To switch the power on, turn the key clockwise and battery gauge should illuminate. To switch the power off, turn the key anticlockwise, after which the battery gauge should switch off and the key can be removed.



Do not turn the ignition off whilst driving as this will lead to an emergency stop and possible risk of damage or injury.

- **Speed Dial.** Turn the speed dial to determine the maximum speed of the scooter. Turn the dial clockwise to increase the speed setting and turn the dial anticlockwise to decrease the speed setting.



Do not adjust the speed dial whilst driving as this could result in loss of control. Do not set the highest speed whilst driving indoors.

- **Moving and Braking.** To move forward, squeeze the right hand side (RED) of the wigwag paddle with your hand towards you whilst holding the

- **Horn Button.** Press the horn button to sound the horn. Release the button to stop the horn. The horn is the green button located on the control panel.
- **Braking – Electromagnetic Brake.** Release the wigwag paddle completely, and the electromagnetic brake will be activated automatically and the scooter will stop.



When on a gradient, never set the vehicle to freewheel mode. The brakes will not be applied.

- **Light.** Press the light switch to turn on the headlight. Press the light switch again to turn the light off.

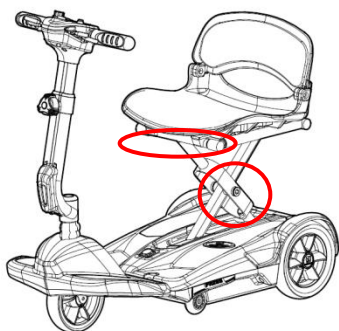
Note: the light will only operate if the scooter is switched on at the ignition.
- **Handlebar Height Adjustment.** Turn the large adjustment knob on the front of the tiller anticlockwise to release the handlebar. Slide the handlebar to the required position, then turn the knob clockwise to secure the handlebar in place.

- **Battery Gauge.** The battery gauge on the tiller console lights LEDs to show remaining power:
 Green (3 or 4 LEDs lit) - 40% - 100% capacity
 Yellow (2 LEDs lit) - draining charge (10% - 30%)
 Red (1 LED lit) - immediate recharge is necessary.



The remaining power indicated by the battery gauge will vary by the driving time incurred and how you drive. Repeated starting, stopping and climbing will consume power more quickly. The gauge is shown previously.

Please keep hands/fingers out of machinery during the folding/unfolding process.



The scooter is not for use as a seat in motor vehicle.

DRIVING ON THE ROAD

- **Starting and Driving**
 1. Make sure the scooter is fully folded out.
 2. Make sure the tiller has been secured properly.
 3. Switch the key ignition on.
 4. Check the battery gauge to check there is enough power for your journey. If you have any doubt about the remaining power, recharge the battery pack before use.
 5. Set the speed dial to a position you feel safe and comfortable with.
 6. Check the wigwag paddle and automatic brake work correctly.
 7. Before driving, check the environment around you is safe for you to drive.



Warning

Be careful whilst driving in heavy traffic or crowded areas. Whilst reversing the vehicle, be aware of people or objects behind you.

- **Stopping**
 1. Release the wigwag paddle completely. The vehicle will automatically brake and stop.
 2. Switch the scooter off at the key ignition and pull out the key.



Stopping distance will vary with speed so begin braking as early as possible. Always park on flat ground, switch off and remove the key before dismounting.

EMERGENCY CHARGING PROCEDURE

The scooter comes with an emergency charging cable. If the scooter is folded up and the battery is completely flat, then the standard charging socket can be difficult to access. In this instance, the emergency charging cable can be installed to allow the battery to be charged whilst the scooter is folded.

The emergency charging cable is shown below:



To install the charging cable, plug this in to the fly lead located at the front of the underside of the scooter (as shown below).



Install the cable, then proceed to charge the battery as described in the next section.

BATTERY CHARGING AND CARE

Step 1. Insert the charger in to the mains and switch the power on. Ensure the charger is not connected to the scooter, and one of the charger LEDs is lit green.

Step 2. Insert the round plug on the charger in to the charging socket of the scooter (arrowed below). The LED should change from green to red. The LED will change back from red to green when charging is complete.



The scooter should be left on charge until the battery is fully recharged. A full recharge takes around 5 hours. The status of the charge is shown by the LED lights on the charger, and is described below:

Status	Power LED	Status LED
Standby or Charging Complete	RED	GREEN
Charging in progress	RED	RED
Over current/voltage/ Temperature, or other fault status	RED	Flashing RED and GREEN



Ensure that the charger is removed from the mains and the scooter after charging. Failure to do this may flatten the battery. Do not remove the battery pack whilst the scooter is switched on.



Warning

1. Only use the charger supplied with the scooter. Using the wrong type of charger may cause damage. Never disassemble or modify the scooter.
2. Always charge the scooter in a well ventilated space. Avoid direct sunlight or contact with water and moisture.
3. Do not charge or operate the scooter in temperatures below +10°C or above 50°C. Do not expose the battery to these temperatures.
4. The charger is for indoor use only.



Suggestions

1. Do not disconnect the charger cord until charging is completed.
2. When fully charged the battery charger will still trickle charge the battery for optimum range.
3. Even when not in use, the scooter should be charged at least every week to ensure battery longevity.
4. Ambient temperature will effect charging time. Charging time will be longer in cold environments.
5. The battery carries a 1 year warranty which covers manufacturing defects only. It does not cover battery faults as result of not following the guidelines herein.

Battery Disconnection

It is recommended that the battery is disconnected if the scooter is not going to be used for a long period of time, or for certain methods of transportation.

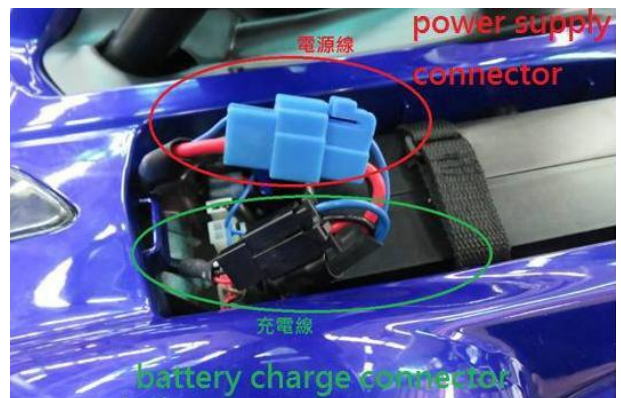
For air transportation the battery should be disconnected before transporting.

To disconnect the battery:

1. Remove the battery compartment cover by levering the cover up using the ignition key or similar as a lever.



2. Once the cover is removed, unplug the black connector shown below.



3. Reinstall the battery compartment cover to prevent dust and moisture getting in to the compartment.

CARE AND MAINTENANCE

Weekly Checking

Check the following items weekly or before driving. If you find anything abnormal contact your Authorized Dealer for further inspection or advice.

- Tiller. Ensure it is not loose and can turn smoothly
- Speed control dial. Ensure it adjusts freely.
- Wigwag paddle. Ensure scooter moves when lever is pressed, and stops when lever released.
- Motor. Check for any abnormal noise and electromagnetic brakes work correctly.
- Freewheel Lever. Ensure it works correctly.
- Seat. Ensure it swivels and locks easily.
- Tyres. Check tyre tread depth and for any signs of damage such as cracking.

Service Record

To ensure your scooter is correctly serviced take it to your authorized dealer for regular servicing. We recommend that scooters are serviced at least annually, and your dealer may charge a fee for this. A copy of the service record is at the back of this handbook.



Even if the scooter has not been used, it should still be serviced annually.

Battery and Tyres

- For information on the battery pack, please read the section on Battery Charging and Care.
- Tyres condition will be affected by how you drive the scooter and what terrain it is driven on.
- The Scooter comes with solid tires which are puncture proof, so there is no need to check tires pressure.

Cleaning

- The scooter should be cleaned periodically, especially if you tend to drive on sand, gravel or in other adverse environments.
- Use a soft, wrung dry cloth to keep your scooter clean and dust free. Use a damp cloth and mild detergent to clean the scooter.

Storage

- It is advised to store the scooter folded up and in its hold all. If the scooter is going to be stored for a long time, the battery should be fully charged and disconnected.



- ⇒ Store the scooter in environments which are free from direct sunlight and water or moisture
- ⇒ Don't use a hose pipe or splash water directly onto the scooter
- ⇒ Don't use petrol, solvents or vaporizing solutions as these may damage body panels. Do not use wax.
- ⇒ Ensure the charger is unplugged and the scooter switched off before cleaning the scooter

Moving About

1. Switch off the scooter using the ignition key and dismount from the scooter.
2. Lift the scooter by the chassis only.
3. For your safety ask for help if required. You will need two or more people when moving or lifting the scooter as a whole.



Never lift the scooter by the bumpers or body panels as this can cause injury or damage.

- visually inspect the tires tread. If less than 1mm (1/32"), please have your tires replaced by your local dealer.

- All upholstery can be washed with warm water and mild soap. Occasionally check the seat and back for sagging, cuts and tears. Replace if necessary. Do not store your scooter in damp or humid conditions as this will lead to mildew and rapid deterioration of the upholstery parts.
- All moving mechanisms will benefit from simple lubrication and inspection. Lubricate using petroleum jelly or light oil. Do not use too much oil, otherwise small drips could stain and damage carpets and furnishings etc. Always perform a general inspection of the tightness of all nuts and bolts.

ANNUAL SERVICE

We recommend the scooter is servicing by annually by your dealer or competent technician.

TROUBLESHOOTING

Symptom: Scooter will not switch on	
Problem: Battery not connected Circuit breaker has tripped	Remedy: Check batteries connected Push circuit breaker to reset
Symptom: Scooter will switch on but will not run	
Problem: Flat battery Charger plugged in Motor in freewheel mode	Remedy: Recharge battery Unplug charger from scooter Push down freewheel lever
Symptom: Scooter appears slow	
Problem: Flat battery Speed setting slow	Remedy: Recharge battery Turn up speed dial
Symptom: Tiller appears loose or will not swivel freely	
Problem: Tiller adjustment knob loose	Remedy: Tighten tiller adjustment knob

Symptom: Horn sounds involuntarily / automatically	
Problem: The scooter has diagnosed a fault	Remedy: Ensure the wigwag paddle is released and switch the scooter off and on. Recharge batteries if error persists.

The scooter comes with a Dynamic 50A controller which monitors the operation of the scooter. If a fault state occurs, then the left most LED on the battery gauge will flash in sequence. In the event of a fault state, count the number of flashes and refer to the table below:

No. of Flashes	Description	Meaning
1	Battery low	Recharge the batteries
2	Low battery fault	The batteries have run out. Recharge the batteries. Check the battery and associated wiring
3	High battery fault	Battery voltage is too high. Due to overcharging or steep descent. Reduce speed if travelling down a slope.
4	Time out or controller too hot	The scooter may have stalled. The scooter off and leave for a few minutes. Check motor is not faulty.
5	Park brake fault	Check the scooter is not in freewheel mode. Check park brake and wiring.
6	Drive inhibit	Out of neutral at power up and battery charge connected. Release wigwag paddle and remove charger. Wigwag may require recalibration.
7	Speed Pot Fault	Check speed pot and throttle pot are not faulty.
8	Motor voltage fault	Check the motor, connectors and wiring are not faulty
9	Other error	Check all connections and wiring. Possible controller fault.

AUTO-FOLDING SCOOTER QUICK SET UP GUIDE

Issued Jan 2016

For safety reasons, the auto-folding scooter is shipped with the Lithium battery disconnected.

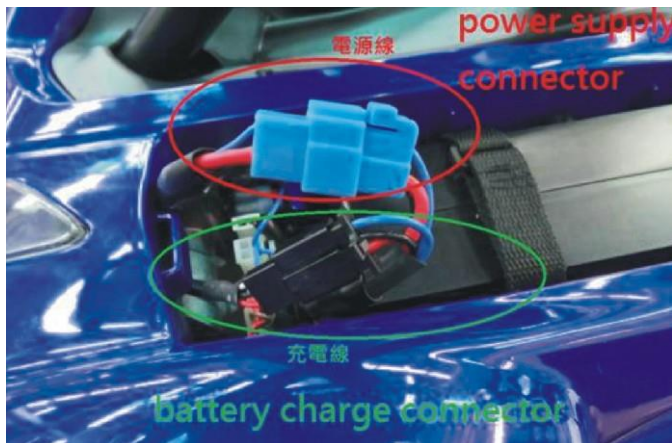


Step 1:
Place the scooter on the floor.
Connect the blue battery connectors together.
Press the green button to unfold.

There should be sufficient power in the battery to unfold the scooter. However, the battery has been stood and is completely flat refer to the Emergency Charging Procedure in the handbook.



Step 3:
Position the battery in to the battery compartment and secure with the velcro straps supplied (as shown above). Replace the compartment cover.



Step 2:
Once the scooter has fully unfolded, also connect the black battery charger connectors together.



Step 4:
Plug the charger in to the charging point (arrowed) and then plug the charger in to the mains then switch on the charger. Ensure the scooter is fully charged before use.

WARRANTY DECLARATION

Quality/ Warranty Declaration

Products are to be fit for purpose and of excellent quality and performance. For valid warranty claims Heartway will, at their discretion, replace/ repair/ refund items mutually agreed to be defective.

Heartway's Warranty as Following:

- Frame: Two-year limited warranty
- Controllers: One-and-a-half-year limited warranty
- Electronic Components and Charger: One-year limited warranty
- Warranty Exclusion. The following items are not covered by warranty.

✧ Motor brushes	✧ Wheel Tires	✧ Arm Pads
✧ Seat Cushion	✧ Fuses / Bulbs	✧ Tiller Cover
✧ Rear Shroud	✧ Front Shroud	✧ Batteries and consumable parts

Any damage or defect of any nature occurring from the misuse, abuse of the product, improper operation or improper storage is not to be covered. The warranty is to start from the date of arrival of our products.
Normally, the average lifespan of a scooter will last 5-year long. Heartway will be able to provide the spare-part support for five-year long after scooters purchased.
Note: If you encounter a damaged or cracked battery; please enclose it in a plastic bag and call the local authorized dealers immediately for instructions on disposal and recycling.

The manufacturer has provided BEO MedConsulting Berlin GmbH a declaration of conformity according to Annex VII of the MDD 93/42/EEC for its class I devices.



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