



# S110 Virgo Mobility Scooter

## User Manual

Please ensure that this user manual is read and understood before using the scooter.



Version 1 (2023)



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## Introduction

Thank you for your purchase of the Virgo (model S110) mobility scooter. Roma Medical Aids (RMA) strives to provide you with world class quality, design, reliability and service. This scooter incorporates the latest innovative designs and can be used in confined spaces both indoors and out, aiming to provide you with maximum comfort whilst also being as safe and efficient as possible.

## Intended Use

This scooter was carefully designed for indoor or outdoor use in pedestrian areas to assist a single individual with limited mobility weighing up to a maximum of 136kg (21st 5lb). The acute manoeuvrability of the scooter prohibits the use by persons who are severely physically impaired or those who have balance difficulties. Your supplier/healthcare professional will determine the suitability of the scooter for your intended use.



### Caution:

Persons with lower body amputations should not use this device unless evaluated with artificial limbs fitted, as stability may be compromised due to an irregular centre of gravity.

## Technical Specification

- According to Directive 93/42/EEC including amendments (effective in UK law through the Medical Devices Regulations 2002) and the European Medical Devices Regulation 2017/745, this mobility scooter is a Class 1 Medical Device.
- According to the UK Highway Code, this scooter is a Class 2 Invalid Carriage.

### General Specification

Battery charger	DC 29.4V 2A
Battery capacity	12V 12Ah
Power of motor	270W
Maximum user weight	136kg / 21st 5lb
Range per charge*	12km / 7.5miles
*Passenger weight, way of driving, terrain and ground conditions, temperatures, weather conditions, and battery condition can affect maximum range.	
Turning radius	1150mm / 45.3"
Maximum speed	6kmph / 4mph
Safe working angle/gradient	6° (10%)
Minimum braking distance at max. speed	1000mm at 6kmph/4mph

### Component Weights

Chassis (without battery)	34.5kg / 5st 6lb
Battery	8.5kg / 1st 5lb
Total/overall weight	43.5kg / 6st 12lb

### Dimensions

Total/maximum length	1050mm / 41.3"
Total/maximum width (at narrowest arms)	560mm / 22"
Height from floor to top of backrest	810mm / 31.9"
Total/maximum height (floor to top of top of mirrors)	1100mm / 43.3"
Height (floor to seat)	400mm / 15.7" - 450mm / 17.7"
Clearance (floor to lowest point)	65mm / 2.6"
Wheels (diameter x width)	203mm / 8" x 63.5mm / 2.5"
Seat width (excluding armrests)	430mm / 16.9"
Seat height (backrest height)	310mm / 12.2"
Seat depth	360mm / 14.2"
Basket	D 220mm / 8.7" x W 330mm / 13" x H 230mm / 9.1"

## Feature Guide (S110)



1	Tiller
2	Mirrors
3	Daytime running light (automatically on)
4	Detachable basket
5	Front bumper
6	Footwell
7	Non-marking wheels
8	Battery compartment

9	Adjustable height seat
10	Adjustable armrests
11	Fold down backrest
12	Rear reflectors
13	Anti-tipper wheels
14	Key insert hole
15	Forward/backwards levers
16	Handlebars

## Safety Advice

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Every care has been taken to ensure that your mobility scooter will give you a safe, reliable service provided you adhere to the advice given below and throughout the manual.



### Do:

- Read this manual carefully before using your scooter.
- Make sure that you are physically capable of operating the scooter, and for individuals with balance problems, practice getting on the scooter with the assistance of a qualified healthcare professional.
- Turn the power off (this will activate the brake) and remove the key when transferring to and from the scooter (this will ensure the power is off and the scooter cannot move under its own power).
- Always remove the key from the ignition while the scooter is not in use. This will prevent its use by untrained and unauthorised persons.
- Select a slow speed when going up or down gradients, around corners or over uneven ground.
- Slow down and take care when travelling across inclines and on rough or uneven ground.
- Reduce your speed when turning.
- Keep your feet in the footwell whilst driving.
- Make sure the tiller is properly adjusted and locked in position before use.
- Ensure the seat is locked in the 'forward' position before driving the scooter.
- Turn the power off when not in use.
- Follow the maintenance guide to ensure safe operation of the scooter.
- Keep the battery fully charged when storing and preferably recharged after each use.
- Follow the guidance and rules for pedestrians when travelling on the pavement.
- Only mount kerbs using a drop kerb.
- Check the battery charge level before operating the scooter to ensure there is sufficient charge for your planned journey.
- Charge the battery in a well-ventilated area, after every use.
- Ensure the scooter is serviced every 12 months by an authorised RMA service provider to ensure it remains in safe working order.



### Do not:

- Carry passengers.
- Travel on inclines exceeding 6°.
- Attempt inclines if the surface is slippery e.g., covered with oil, ice or water.
- Turn sharply at full speed.
- Exit or enter the scooter unless the power is switched off, brake is on and key removed.
- Switch off the power whilst driving – this will cause the scooter to stop abruptly.
- Attempt to drive over full kerbs. Doing so could cause your scooter to turn over, causing personal injury or damage to the scooter.
- Use the scooter if under the influence of alcohol or any medication that may affect your ability to drive the scooter safely.
- Lean against or pull forward on the tiller while mounting or dismounting the scooter.
- Use a mobile phone whilst driving the scooter.
- Attempt to negotiate steps or escalators.

- Attempt to tow any other devices.
- Tow the scooter with any other vehicle in the event of a breakdown. As damage to the braking system may occur.
- Exceed the stated maximum user weight limit.
- Operate the scooter or insert the key while charging.
- Connect any unauthorised devices to the battery or charging point as this could cause permanent damage to the scooter and void your warranty.
- Use parts or accessories other than those supplied by RMA.
- Use any other battery/charger other than those supplied by RMA.
- Travel through water or over very rough or soft terrain (mud, sand etc.) or through long grass and avoid cobbles if possible. The scooter is not designed for offroad use..
- Use the scooter in the rain or in wet conditions, including in damp bathrooms. Direct exposure to rain or dampness could cause the scooter to electrically malfunction.
- Lift the scooter by its seat, tiller, rear chassis cover, or any removable parts. Any of these could cause injury to the user or damage to the scooter.
- Suddenly shift your centre of gravity as this could cause the scooter to become unstable.
- Use an escalator to move the scooter between floors.
- Use the scooter as a seat in a motor vehicle. You should transfer to a bespoke vehicle seat when being transported in a vehicle.
- Operate without anti-tip wheels installed.
- Freewheel down hills. This will damage the motor and brake and void the warranty and is very dangerous.

## Operating The Scooter

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Before using the scooter for the first time, charge the battery fully. Details on this can be found in the battery section of this manual.

Select an area with plenty of space. Mount the scooter, either by lifting the arm and sliding onto the seat or rotate the seat outwards and then rotate the seat back to face the tiller when seated. Adjust the tiller, arms and seat to ensure that when seated in the scooter you are in a comfortable position and can easily and freely operate the controls. Adjustments are detailed further on in the manual.

### **Moving Off & Steering**

Turn the power on and check that your battery is fully charged. Set your speed settings to low. Pull the right-hand finger lever towards you and the scooter will move forward. The harder you pull the lever, the faster you will travel, but the maximum speed reached will depend on the speed level that has been selected on the speed dial. Releasing the lever, will automatically return it to the centre position, slowing the scooter to a stop and activating the electromagnetic brakes. There is a slight delay when the scooter decelerates; this allows the scooter to come to a smooth stop.

Steer the scooter by holding the tiller by the handlebars. Steering the scooter is light and easy. Pulling the right-hand side of the handlebars will aim the scooter to the right and pulling the left-hand side of the handlebars will aim the scooter to the left. The scooter will travel in the direction you aim it. Ensure when starting off you give a wide clearance when turning so that the rear wheels clear any obstacle that you are passing. When steering through limited spaces such as a doorway or when turning around, turn the tiller handles where you want to go and apply power gently. The scooter will turn very tightly but will still move with complete stability as long as the speed is not too high.

### **Reversing**

Before reversing, please ensure that the area behind is free from any hazard or obstruction. Adjust your speed dial to a low setting before reversing. Pull the left-hand finger lever towards you to move in a reverse direction. Steer wide of all corners and obstacles.



Caution:

Do not reverse down an incline without supervision.

### **Dismounting**

Before dismounting ensure that the key is removed. Exit the scooter in the reverse process as mounting it.



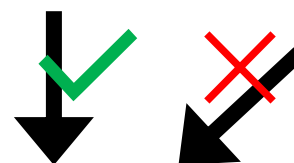
Caution:

Please ensure that care is taken when entering or leaving the scooter and that the tiller and footrest is not used for support.

### **Climbing Inclines**

When approaching an incline, do so directly and not at an angle, please see diagram. By following these instructions both front wheels will descend the kerb at the same time and the scooter will remain stable. When going down a ramp or slope keep the speed settings to slow. This will ensure there is a safe controlled descent.

Whenever possible avoid making turns on a incline.



Edge of drop kerb

## **Kerb Climbing**

We recommend that a suitable access point such as a dropped kerb or ramp be used at all times.



Caution:

Do not hit any kerb at speed and do not attempt to climb a dropped kerb if the anti-tipping castor wheels have been removed.

## **Kerb Descending**

Do not reverse down any kerbs, please use a ramp/dropped kerb in forward motion to descend.



Caution:

Never reverse down any kerb or ramp onto a main thoroughfare.

## **Reaching & Stretching**

Care must be taken when reaching and stretching for objects as this may affect scooter stability.

When attempting to reach for objects it is very important that the power is OFF.

Do not attempt to reach for objects on the floor by leaning forward or reaching between your knees.

Do not attempt to reach for high objects by moving to the front of the seat.

Do not attempt to reach for objects behind you by leaning over the back of the seat.

## **Product Stability**

The stability of your scooter is governed by several factors, the main factors are listed below.

Scooters are designed to allow the user flexibility of movement in restricted areas. Driving at maximum speed and attempting sharp turns can create a situation where the product becomes unstable. Therefore, it is essential that the user pays attention to the guidance set out in this manual.

The main factors affecting stability are:

- Maximum speed setting selected
- Seat height
- User movement
- User proportions (height and weight)
- User manoeuvres/movement of the scooter
- Gradients or slopes
- Ground condition

## **Weather & Outdoor Conditions**

Following the guidelines given in this manual your scooter will perform admirably over many surfaces but avoid grass, loose gravel and sand which could cause damage to the scooter.

During everyday use, do not use in rainy conditions, travel through puddles or over wet surfaces. Avoid use in areas where the scooter could become contaminated with sand or abrasive materials. Electrical components could become damaged if exposed to wet conditions.

During periods of sunny weather, it is possible that surfaces of your scooter may reach high temperatures (as with motor vehicles). Please take precautions if leaving the scooter in direct sunlight for any period of time. Seek shade or cover the seat and tiller/handlebars to keep any temperature increases to a minimum.



## Scooter Tiller Controls



<p><b>1.</b> Speed Dial</p>	<p>Turning this dial sets the maximum speed at which the scooter can travel. Turning the dial anti-clockwise decreases the speed and turning the dial clockwise increases the speed.</p>
<p><b>2.</b> Battery Gauge</p>	<p>This gauge gives you a guide of the amount of charge left in the battery. When all 8 lights are lit up, this means the battery is fully charged (F). Gradually the number of these lights lit up will decrease as battery charge decreases. When only red lights are showing, this means the battery charge is low and should be recharged as soon as possible. The gauge will give the truest reading when the scooter is in motion.</p>
<p><b>3.</b> Ignition (On/Off)</p>	<p>The key is inserted here. When the key is fully pushed in, the scooter will power up and show the battery charge. There is a slight delay before the finger lever controls can be operated, while the controller is checking the circuits. <b>Do not use the key to stop the scooter, except in an emergency.</b></p>
<p><b>4.</b> Forward Finger Lever</p>	<p>Pulling this right-hand lever towards you moves the scooter forward. Pushing this right-hand lever away from you reverses the scooter. Releasing the lever will slowly bring the scooter to a stop and the electromagnetic brake will be applied. The amount of pressure applied will determine the speed in which the scooter moves.</p>
<p><b>5.</b> Reverse Finger Lever</p>	<p>Pulling this left-hand lever towards you reverses the scooter. Pushing this left-hand lever away from you moves the scooter forward. Releasing the lever will slowly bring the scooter to a stop and the electromagnetic brake will be applied. The amount of pressure applied will determine the speed in which the scooter moves.</p>
<p><b>6.</b> Horn</p>	<p>Pressing this button operates your scooters horn. This should only be used to warn others of your presence and not as a rebuke of any form.</p>
<p><b>7.</b> Key</p>	<p>This key is a simple push in key that turns on the scooter when inserted into the hole labelled at point 3.</p>

## Adjustments

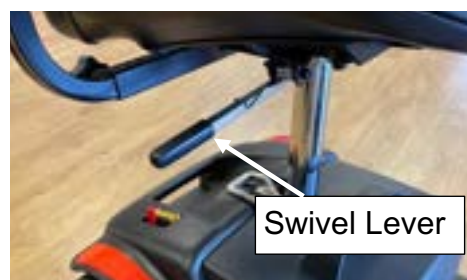
### Tiller Angle Adjustment

The tiller of your scooter allows you to adjust it to a comfortable driving position. At the bottom right-hand side of the scooter, you will find the angle adjustment hand wheel. To decide which position best fits your needs, loosen the hand wheel by turning it anti-clockwise and gently lower or raise the tiller. Once the desired angle is achieved tighten the wheel by rotating clockwise, securing the tiller in the desired position. Ensure the tiller is fully secure before using the scooter.



### Seat Swivel

The seat can be swivelled from the forward position to the sides for easy transfer to and from the scooter. To do this, pull up on the lever that is located under the right side of the seat. Whilst the lever is pulled up, the seat can be swivelled by rotating the seat in the desired direction. Releasing the lever will lock the seat in 45 degree intervals. Always ensure the seat is in a locked position before mounting or dis-mounting the scooter. The seat should always be locked facing forward whilst driving.



### Battery Removal

To remove the battery, pull upwards on the handle. The battery should lift away from the chassis. When replacing the battery, line up the battery with the recess and allow the battery to gently drop into place. Take care to not damage the connectors.



### Basket Removal

To remove the basket, just lift the basket upwards until it is free. Then replace it by lining it up with the slot and sliding it back on.

### Backrest Folding

To fold the backrest, when not sitting in the seat, push the backrest downwards towards the seat.

### Seat Removal & Height Adjustment

To remove the seat, fold down the back rest and lift the seat upwards away from the scooter, it should automatically detach. You may need to gently wiggle the seat to free it fully.

The height of the seat can be adjusted when the seat and the battery are removed. Remove the locking pin that secures the seat adaptor by pulling it out of the hole. The seat height can then be adjusted to different height hole settings by moving the seat pole in/out of the seat post. Insert the steel locking pin at the desired height hole.

Replace the seat in the reverse manner you removed it. Do not sit in the seat when adjusting the seat height and make sure the seat is properly refitted and the pin is correctly reinserted into the hole before using the scooter.



#### Caution:

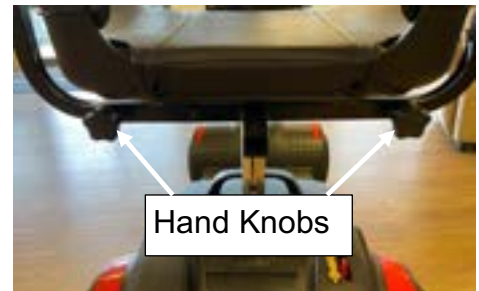


When the seat height is at its maximum height, the stability may be affected due to the higher centre of gravity.

Do not hang baggage or other objects on the back of the seat as this may also affect stability.

## Armrest Width Adjustment

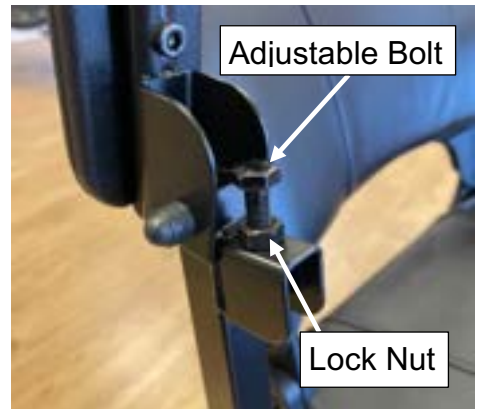
The width of the armrests can be adjusted to your needs. At the rear of the seat there are two hand knobs. Loosen the hand knobs and adjust the armrests by pushing them inwards or pulling them outwards and re-tighten the hand knobs when at the desired position. They can also be removed for transportation by completely pulling them out of the sockets. Replace by inserting them back into the tubes and retightening the hand knobs before using the scooter next.



## Flip-up Armrest Angle Adjustment

The armrests flip up to allow for easier transfers. Simply lift the armrest upwards when needing to move the armrest out of the way. When the armrest is flipped up, an adjustable bolt and lock nut can be accessed.

The angle of the armrest can be adjusted by undoing the lock nut and screwing the adjustable bolt in or out to increase or decrease the angle. When the arms are at the desired angle, the lock nut should then be tightened to lock the adjustment in place. The scooter is originally set with the armrests set parallel to the floor.



### Caution:

Do not use the scooter without the arms being fitted.

Ensure that the hand knobs are re-tightened to avoid them rattling loose and falling out.

Do not apply full body weight to the armrests for transferring. Lift the arm up out of the way to transfer to another seat.

## Brake Release / Freewheel Operation

When engaging the freewheel mode, the scooter should be turned off. The freewheel release lever is located above the back right wheel of the scooter. It is a red lever that runs parallel to the wheel. To disengage the motor, push the lever towards the front of the scooter (in the direction of the unlock icon). The scooter is now in freewheel mode and can be pushed. To re-engage the motor push the lever in the opposite direction, towards the back of the scooter (and the lock icon).



When in free wheel mode the scooter may be pushed on level ground at a walking pace. The scooter will 'auto-brake' if this speed is exceeded.



### Caution:

Never leave the scooter unattended whilst in freewheel mode as it will roll away down an incline. 'Freewheel' mode should only be used in an emergency to move the scooter due to power failure. Never move the scooter in this mode whilst it is occupied.

## Dismantling For Transportation Or Storage

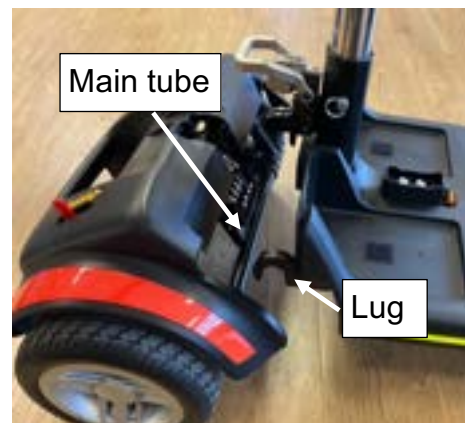
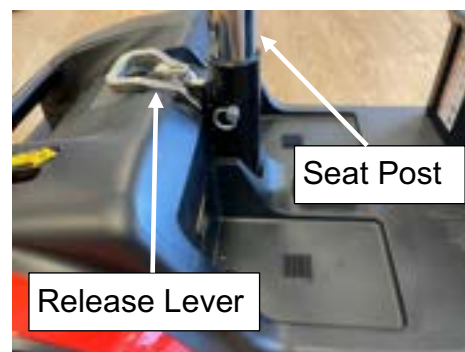
The scooter can be easily and quickly dismantled for easy transportation. Always remove the seat and battery pack (as detailed previously) before attempting to disassemble the scooter.

Lift the front part of the scooter by the seat post whilst pulling up on the release lever. The scooter will now be in two parts (plus the seat and battery pack).

To re-assemble, let the rear section of the scooter rest backwards on the anti-tipper wheels. Lift the front section by the seat post towards the rear section and locate the 'lugs' on each side of the chassis over the main tube of the rear section. The front can then be gently lowered into position. When lowered, push down on the seat post and you will hear the front and rear section click into place.

To ensure a secure connection is made pull up on the seat post to make sure the rear part is properly connected. Then replace the battery pack and seat.

When dismantled fully, the scooter will be in 5 pieces; tiller/main chassis, rear wheels, seat, battery and basket.



## Battery

Battery performance can be affected by temperature, weather conditions, terrain, condition of the battery, type of battery charger, the weight of the user, etc. The battery level indicator is only a guide and is most effective when the scooter is moving, only then is the true discharge level displayed. When the scooter is at rest, the battery level may indicate full when it might not be.

### Key points:

- Do not operate the scooter or insert the key whilst charging.
- Always remove the key from the scooter when the unit is not in use or before charging.
- Battery charging is recommended after each use.
- Always charge the battery in a well-ventilated indoor area.
- Do not get the charger wet or expose it to rain or water spray, it is for indoor use only.
- Wherever possible do not interrupt the charge cycle until the battery is fully charged. Continual interruption can permanently damage the battery.
- The charging plug must be removed from the scooter after charging and before driving.
- Always check the battery charge remaining before operating the scooter to ensure you have sufficient charge for your journey.
- You must still maintain charging the battery even if the scooter is not to be used for a prolonged period of time (2 to 3 weeks). Failure to do so could result in permanent damage and render the battery unusable.
- If the scooter is to be unused for extended periods, fully charge the battery beforehand. The battery should not be stored for prolonged periods in cold environments (do not leave it outside in a garage/shed over the winter period if not used) as this can cause permanent damage to the battery.
- An active user can use far more battery capacity in a day than inactive users may only use in a week but in both these instances the battery should be put on charge overnight.



Caution:

The scooter should be switched off and key removed when charging.

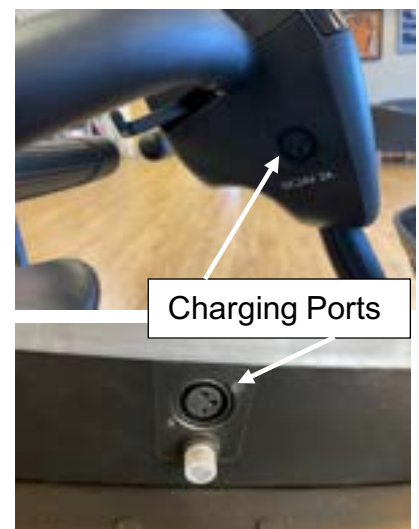
### Battery Charging

**Before using your scooter for the first time be sure to fully charge the batteries, this may take over 12 hours. This benefits battery efficiency and failure to do so, may be detrimental to the battery health in the long term.**

There are 2 charging ports on the scooter; one on the tiller (below the handlebar on the righthand side) and one on the front of the battery compartment (for off board charging).

To charge the batteries connect the 3-pin male plug lead into the 3-pin female battery-charging socket located on the tiller or battery compartment. Plug the A/C cord plug into the wall socket and the other end into the charger (2-pin).

Once the batteries are completely charged, unplug the A/C cord from the wall then unplug the 3-pin lead from the tiller.



## **Battery Charger**

The battery charger is an off board 2-Amp switch mode type (AC100-240VAC, DC29.4V-2A). The battery charger supplied is special to your scooter and may not be suitable for any other power mobility product. Use only the charger supplied with your scooter; other makes of chargers may permanently damage your scooter batteries and would void the warranty.



Caution:  
Only use the charger supplied with your scooter.

If the charging lead should get damaged, discontinue use immediately and seek a replacement from your supplier.

## **Battery**

The scooter has a 12V 12Ah, maintenance free, gel battery. It is fixed in a battery compartment below the seat.

The battery compartment should not be opened and if you think you have a battery problem, always seek advice from your mobility retailer.



Caution:  
Do not open the battery compartment. Always seek the advice of your mobility retailer should fuses or batteries need replacing. Failure to do so could result in damage to the batteries.

Battery cables must be securely fastened onto battery terminals by an authorised supplier before using the unit and secured inside the scooter rear cover.

The battery must be tied down correctly and securely with the straps supplied.

Always remove the key from the scooter when removing and installing the battery. Otherwise, injury and/or damage to the unit or surrounding property may occur.

## **Battery Disposing & Recycling**



Batteries must always be recycled correctly. Do not dispose of them with your domestic refuse.



For further information regarding your nearest recycling facility please contact your local authority.

## Maintenance

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The scooter has been designed to provide the user with a long, reliable life provided it is correctly maintained and regularly serviced by an authorised supplier. However, due to inevitable wear and tear and technological improvements, it is recommended by the MHRA (Medicines and Healthcare products Regulatory Agency) that the average useable life of this scooter is five years.

### Cleaning

The frame and seat of the scooter should be cleaned using a soft damp cloth and gentle detergent. Do not use abrasive cleaners or solvents, as this will damage the plastic components. Do not spray water (hose or pressure washer) onto the scooter as this may cause electrical damage.

### Storage & General Care

We recommend that the scooter is always stored in a dry environment such as in the home or garage to protect the chassis and other components from corrosion. Take care using tarpaulins and covers as these may create condensation during certain weather conditions that can be detrimental to the scooter. Do not leave the scooter outside during rainstorms. If the scooter is wet, wipe with a dry cloth to ensure there is no ingress of water into the internal components of the scooter.

### Routine Maintenance

Please ensure the scooter is serviced every 12 months by an RMA supplier to check it remains in safe working order. Failure to do so may cause catastrophic failure with possible user injury and damage to surrounding property. Regular servicing will ensure trouble free operation. Please note - heavy users of the scooter may require more frequent servicing.

Please check the following on a weekly basis:

- That the tyres are in good condition.
- That moving parts, pivots and frame fixings are not damaged or worn.
- That all hand knobs and levers are secure.

At six-month intervals you should lubricate the following parts with a light oil or similar lubricant:

- Seat pivot post.
- Seat release lever pinion.
- Wheel bearings.
- Axle of scooter.



**Caution:**

Do not use WD40 or other penetrating oil to lubricate parts.  
Do not lubricate the transaxle/gearbox.  
Contact your supplier in the event of any difficulties.



**Note:**

Should any part of your scooter need replacing or repairing please contact your local RMA supplier to undertake any maintenance.  
Failure to do this may void your warranty.

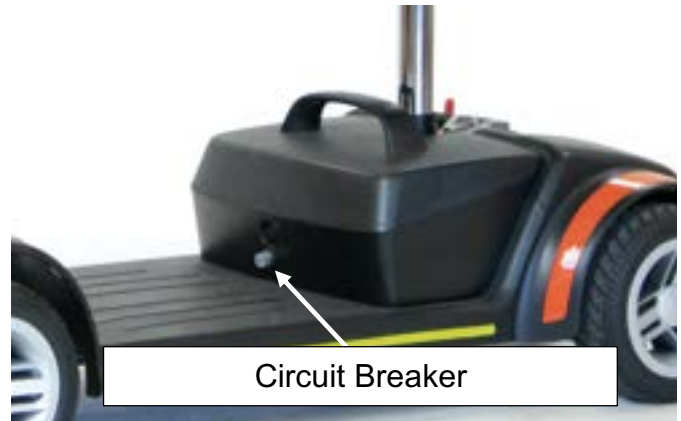
### Sleep Mode

If the control system is left on and not used for more than 15 minutes, it may automatically “go to sleep.” The scooter will beep after 15 minutes and although the scooter lights will remain on, the controls will not work. Simply remove and replace the key to reset the scooter.

## **Circuit Breaker**

Your scooter is fitted with the latest in electronic controls that are programmed to protect the electrical system from abnormal overloads. Fitted for extra protection is a circuit breaker, which is located under the seat at the back of the footwell by the battery compartment.

Should there be a situation where your scooter stops for no apparent reason, please check that the circuit breaker has not tripped. Simply press the button to reset the circuit breaker.



### **Note:**

Should the circuit breaker continue to trip, turn off the scooter immediately and consult your supplier.

## **Problem Checklist**

If your scooter fails to operate, please check the following:

- The unit is switched on.
- All plugs and connections are firmly fixed.
- Battery level shows full charge.
- Drive/Freewheeling lever is in the drive position.
- Circuit breaker has not tripped.

If the free wheel mode has been operated with the scooter switched on, the scooter will not operate until the ignition switch has been turned off and on again. If the scooter is switched on when freewheel mode is still engaged, the scooter will rapidly beep repeatedly. If turning off the freewheel device and restarting the scooter does not fix the problem, contact your supplier.

The acceleration/reverse finger lever(s) should not be engaged/pulled forward before the ignition is switched on. This operation will be prohibited and cause an intermittent beeping noise. To correct this, turn the ignition on and off and only touch the levers after waiting a few seconds after the ignition switch is turned on.

Please consult your RMA provider if your scooter does not run after checking these points.



## **Troubleshooting Error Codes**

The device can diagnose possible errors in the electrical system, which may prevent your scooter from operating. If an error has occurred, the battery symbol on the battery gauge will flash. If restarting the scooter does not clear the problem, the battery symbol will flash a number of times before a long pause. Count the number of flashes between pauses and refer to the table below for the possible faults and solutions associated with each error code. Some of these solutions you may be able to complete yourself but consult your local supplier with more complex problems.

<b>Error Code/ No. of Flashes</b>	<b>Possible Fault</b>	<b>Possible Solutions</b>
1	Low battery (The battery charge is low)	<ul style="list-style-type: none"> <li>Recharge the battery.</li> </ul>
2	Low battery fault (The battery has completely run out of charge)	<ul style="list-style-type: none"> <li>Recharge the battery.</li> <li>Check/fix battery wiring.</li> <li>Replace battery.</li> </ul>
3	High battery fault. (The battery voltage is too high. This may occur if overcharged and/or travelling down a long slope)	<ul style="list-style-type: none"> <li>If travelling down a slope, reduce your speed to minimise the amount of regenerative charging.</li> </ul>
4	Current limit time-out or controller too hot (The motor has been exceeding its maximum current rating for too long)	<ul style="list-style-type: none"> <li>The scooter may have stalled. Turn the controller off, leave for a few minutes and turn back on again. <ul style="list-style-type: none"> <li>The motor may be faulty. Check the motor and associated connections and wiring.</li> </ul> </li> </ul>
5	Electro-magnetic brake fault (Either a brake release switch is active or the brake is faulty)	<ul style="list-style-type: none"> <li>Check the brake and associated connections and wiring. Ensure any associated switches are in their correct positions.</li> </ul>
6	Drive Inhibit (Something is inhibiting the driving of the scooter; charger inhibit or the scooter is out of neutral at power up)	<ul style="list-style-type: none"> <li>Disconnect the battery charger.</li> <li>Ensure the throttle is in neutral when turning the controller on (the speed levers are not being held in).</li> <li>The throttle may require re-calibration.</li> </ul>
7	Speed Potentiometer Fault (The throttle, speed limit potentiometer, SRW or their associated wiring may be faulty)	<ul style="list-style-type: none"> <li>Check the throttle and speed potentiometer and associated connections and wiring.</li> </ul>
8	Motor Voltage Fault (The motor or its associated wiring is faulty)	<ul style="list-style-type: none"> <li>Check the motor and associated connections and wiring.</li> </ul>
9	Other error (The controller may have an internal fault)	<ul style="list-style-type: none"> <li>Check all connections &amp; wiring.</li> </ul>



**Note:**

If your scooter fails to operate after checking the above possible faults consult your local supplier immediately.

## Further Information

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### **General Use**

Take heed of the information given in this manual regarding safety and the maintenance of your scooter. If adhered to, your scooter should give you years of reliable mobility.

When the scooter has degraded to the point it is no longer suitable for safe use, please contact your supplier to dispose of the scooter. If any serious incident occurs in relation to your scooter, please inform your supplier or RMA immediately.

### **Health Factors**

Suitability for this product has been assessed on the user's current state of health. It is essential that the user regularly monitors their ability to use the scooter safely.

### **Safety Information Regarding Electromagnetic Interference (EMI)**

RMA scooters may be susceptible to electromagnetic interference (EMI), which is a kind of interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radio, and cellular phones. The interference (from radio wave sources) can cause the scooter to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the scooter's control system.

The sources of radiated EMI can be broadly classified into three types:

1. Hand-held portable transceivers (transmitters-receivers) with the antenna mounted directly on the transmitting unit e.g., citizens band (CB) radios, "walkie talkies", security, fire and police transceivers, cellular telephones, and other personal communication devices. (Some cellular telephones and similar devices transmit signals while they are ON, even when not being used).
2. Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle.
3. Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, and cassette players, and small appliances, such as electric shavers and hair dryers, as far as we know, are not likely to cause problems to the scooter.

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the scooter's control system while using these devices. This can affect scooter movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the scooter:

1. Do not operate hand-held transceivers (transmitters-receivers), such as citizens band (CB) radios, and exercise caution whilst using mobile phones around the scooter.
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 scooter OFF as soon as it is safe.
4. Be aware that adding accessories or components or modifying the scooter may make it more susceptible to EMI. (There is no easy way to evaluate the overall immunity of the scooter).
5. Report all incidents of unintended movement or braking to your RMA dealer and note whether there are sources of EMI nearby.

## **Driving In Pedestrian Areas**

When using the scooter in public areas, always follow the UK Highway Code or the necessary rules in your country.

When driving in pedestrian areas such as shopping precincts and busy pavement areas always respect other pedestrians and turn the maximum speed down so that the scooter travels at the walking pace of others around you. Remember the stopping distance of your scooter and always allow enough space to stop safely to avoid collisions with pedestrians or other objects.

There is no legal requirement, but you should consider taking out 3<sup>rd</sup> party insurance to cover any damage you may cause to someone else or to their property.

## **Highway Code & DVLA – UK Users**

According to the UK Highway Code, this scooter is a Class 2 Invalid Carriage because its maximum speed is 6kmph/4mph.

You do not need to have a driver's license to use this mobility scooter and you do not have to register the vehicle with the DVLA. This is because the scooter can legally only travel at a maximum speed of 4mph off road (on pavements, footpaths and in pedestrian areas) and the scooter must not be used on roads. If you need more information, please see the DVLA website or contact the DVLA.

There is no legal eyesight requirement to drive mobility scooters or powered wheelchairs, but you should be able to read a car's registration number from a distance of 12.3 metres (40 feet). You must check regularly that you can still do this as you may be liable if you have an accident and poor eyesight contributed to the cause.

All normal vehicle parking restrictions apply to mobility scooters and your scooter should not be left on a footpath or pedestrian area on its own if it gets in the way of other pedestrians, including wheelchair users and people with prams or pushchairs. Parking concessions provided under the Blue Badge scheme will apply to those scooters displaying a valid badge.

You should give pedestrians priority and show consideration for other pavement users, particularly those with a hearing or visual impairment who may not be aware that you are there.

You must always follow the rules of the Highway Code when using the scooter and when on the pavement you should follow the guidance and rules for pedestrians.

Please see the Highway Code on the UK government website ([www.gov.uk/highway-code](http://www.gov.uk/highway-code)) for full rules and regulations about mobility scooter use on public roads and pavements.

## Warnings

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- ⚠ Read this manual fully before operating the scooter.
- ⚠ Suitability for this product has been assessed on the user's current state of health. It is essential that the user regularly monitors their ability to use the scooter safely. Make sure that you are physically capable of operating the scooter, and for individuals with balance problems, practice getting on the scooter with the assistance of a qualified healthcare professional.
- ⚠ Persons with lower body amputations should not use this device unless evaluated with artificial limbs fitted, as stability may be compromised due to an irregular centre of gravity.
- ⚠ Do not use the scooter if under the influence of alcohol or any medication that may affect your ability to drive the scooter safely. Do not use a mobile phone whilst driving the scooter.
- ⚠ Do not exceed the weight limit of the scooter, carry passengers or tow any other devices.
- ⚠ The user should transfer to a bespoke vehicle seat whilst being transported in a vehicle.
- ⚠ When making adjustments to any part of the scooter, always make sure that bolt/pins are properly tightened or relocated before sitting in and using the scooter, especially the tiller. Also, ensure the seat is locked in the 'forward' position before driving and the armrests are fitted before use.
- ⚠ Do not lift the scooter by its seat, tiller, rear chassis cover, or any removable parts. Any of these could cause injury to the user or damage to the scooter.
- ⚠ Please take time to get accustomed to your new scooter before driving in heavily pedestrianised areas.
- ⚠ When travelling on a pavement, you must follow the guidance and rules for pedestrians. Give pedestrians priority and show consideration for other pavement users, particularly those with a hearing or visual impairment who may not be aware that you are there.
- ⚠ Do not switch off the power whilst driving as this will cause the scooter to stop abruptly.
- ⚠ Turn the scooter power off and always remove the key from the ignition while the scooter is not in use. This will prevent the scooter's use by untrained and unauthorised persons.
- ⚠ Always exit and enter the scooter when the brake is on, power is switched off and key removed (this ensures the scooter cannot move under its own power).
- ⚠ Do not lean against or pull forward on the tiller while mounting or dismounting the scooter, it should not be used for support.
- ⚠ Keep your feet in the footwell whilst driving.
- ⚠ Please make sure you are aware of the circumstances that can affect the scooters stability and how weather and outdoor conditions can affect your scooter.

- ⚠ Do not turn sharply when travelling at full speed or shift your centre of gravity suddenly as these things can cause the scooter to become unstable.
- ⚠ Care must be taken when reaching and stretching for objects as this may affect the stability of the scooter.
- ⚠ Be extremely careful around inclines; do not travel on inclines exceeding 6 degrees/10%, do not traverse across inclines or attempt inclines if the surface is slippery and do not reverse down an incline without supervision.
- ⚠ Select a slow speed when going up or down gradients, around corners or over rough or uneven ground. Do not attempt to negotiate steps or escalators or travel through water or over soft terrain.
- ⚠ Do not use the scooter in the rain, near a shower or in a damp bathroom. Direct exposure to rain or dampness could cause the scooter to electronically malfunction.
- ⚠ Do not travel through water or over very rough or soft terrain (mud, sand etc.) or through long grass and avoid cobbles if possible (if the scooter accidentally travels through deep water, please switch off the power to the scooter and consult with your authorised dealer for help right away).
- ⚠ Use dropped kerbs wherever possible and when using these; never reverse down a dropped kerb or ramp onto a main thoroughfare, do not hit the dropped kerb at speed and do not attempt to climb a dropped kerb if the anti-tipping castor wheels have been removed.
- ⚠ The scooter should be switched off and the key removed when charging. Do not operate the scooter or insert the key when charging.
- ⚠ Do not leave the charger plugged into to the charger port after the charge is complete.
- ⚠ Check the battery charge remaining before operating the scooter to ensure there is sufficient charge for your planned journey and try to charge the scooter after each use.
- ⚠ Wherever possible do not interrupt the charge cycle until the battery is fully charged. Continual interruption can permanently damage the battery. Always charge the battery in a well-ventilated indoor area.
- ⚠ If the scooter is to be unused for extended periods fully charge the battery before being left unused. You must still maintain charging the battery even if the scooter is not to be used for a prolonged period (2 to 3 weeks). Failure to do so could result in permanent damage and render the battery unusable.
- ⚠ The battery should not be stored for prolonged periods in cold environments (do not leave it outside in a garage/shed over the winter period if not used) as this can cause permanent damage to the batteries.
- ⚠ Only use the charger supplied with your scooter and do not connect any unauthorised devices to the battery as this could cause permanent damage and void your warranty.
- ⚠ If the charging lead should get damaged, discontinue use immediately and seek a replacement from your supplier.
- ⚠ Do not use parts or accessories that are not supplied by RMA.

- ⚠ Take heed of the Safety Information Regarding Electromagnetic Interference (EMI) and make sure you understand what can affect your scooter.
- ⚠ Follow the cleaning, storage and general care advice specified.
- ⚠ Never leave the scooter unattended whilst in freewheel mode as it will roll away down an incline. 'Freewheel' mode should only be used in an emergency to move the scooter due to power failure. Never move the scooter in this mode whilst it is occupied.
- ⚠ Do not use WD40 to lubricate parts. Do not lubricate the transaxle/gearbox.
- ⚠ Do not open the battery compartment. Always seek the advice of your mobility retailer should fuses or batteries need replacing. Failure to do so could result in damage to the batteries.
- ⚠ Your authorised supplier must securely fasten the battery cables onto the battery terminals before using the unit and must secure them inside the scooter rear cover. The battery must be tied down correctly and securely with the straps supplied. Always remove the key from the scooter when removing and installing the batteries.
- ⚠ Follow the maintenance guide to ensure safe operation of the scooter. Make sure the scooter is serviced every 12 months by an authorised RMA service provider to ensure it remains in safe working order.
- ⚠ If the scooter error codes fail to be corrected, the circuit breaker continues to trip, the scooter fails to operate or any part of the scooter needs fixing/replacing, please contact your RMA service provider for help.
- ⚠ Should any severe damage occur to any of the part of the scooter, contact your RMA supplier immediately for repairs or replacement parts. This is especially relevant for electrical components/wires and the tiller/controller.

## Warranty Terms & Conditions

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Please ensure that your purchase is registered, either by returning the warranty card enclosed in your product box to RMA or going to the RMA website and completing the online product registration section.

This is to certify that your RMA product is warranted for a period of 12 months from the date of original purchase. This warranty is not transferable.

This product is not intended to be used by individuals with physical limitations that could prevent the user from operating the product safely. RMA disclaims all responsibility for any personal injury or property damage, which may occur as a result of improper or unsafe use of its products.

These products are not intended to be used for hire or for commercial use.

### Warranty Conditions

1. Should a defect or operating fault arise within this period the supplier from where the product was originally purchased should be notified immediately. Failure to register the fault may invalidate the warranty. The supplier from where the product was purchased is responsible for any warranty repairs.
2. RMA warrants that if a fault occurs within this period due to faulty workmanship or materials that the product will be repaired (or replaced at the Company's discretion) free of charge.
3. RMA will not accept responsibility if the product has failed due to:
  - A. The product not being maintained in accordance with the manufacturer's recommendations.
  - B. The product becoming damaged due to neglect.
  - C. Accidental damage to the product.
  - D. Alterations to the product from the manufacturer's specification. This may include but is not limited to the addition of items such as trailers, carriers or electrical equipment.
  - E. The use of non-standard replacement parts.
4. Parts which are subjected to normal wear and tear, accidental damage, neglect or misuse are excluded from this warranty. Normal wear and tear parts include tyres, chassis covers, bulbs, seat coverings etc.
5. The warranty conditions apply to brand new products only and the warranty is not transferable.
6. Parts replaced during the warranty period will be covered for the remainder of the products warranty period.
7. Component parts replaced outside this period carry a six-month warranty (standard terms and conditions apply for this period).
8. The scooter is designed for use by an individual and not for commercial use as a hire vehicle.

Model: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Supplier Stamp

