

Rascal Powerchair Models P327 P327 XL / P327 SL

Owners Manual & Service Record



Model P327 SL





Model P327

Electric Mobility Euro Ltd offers the Rascal P327 Powerchair range for convenient indoor and outdoor use. These mid-wheel drive Powerchairs are highly manoeuvrable vehicles that provide a comfortable ride for people with disabilities who need a substantial Powerchair with a good range.

Provided that your Powerchair is maintained and operated in accordance with this manual it should last for many years, and provide you with freedom and independence.

Please read this manual thoroughly before using your Powerchair. If you have any doubts about warnings or instructions, ask your dealer for an explanation. If at any time you feel you may not be able to control the vehicle safely, do not drive, but consult your dealer for a solution.

If you think that your Powerchair may be damaged, do not drive it but contact your dealer for advice.

We suggest that you keep this manual in a safe place. It contains essential information on the operation of the Powerchair and also includes the maintenance records.

Notice

All Electric Mobility Vehicles are sold through authorised dealers. Make sure your dealer demonstrates all the features of the product prior to, or when, it is delivered.

Warning!

This manual contains important safety notices. Please take time to read and understand them. Ignoring them may endanger you or others.



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Dealer Information

**This is your contact number
for service and support**

Dealer Stamp

Telephone:

Email:

Product Model Number

Serial Number

Date of Purchase

Owner

For product information see serial number plate under the main chassis cover (ask your Dealer to confirm this information.)

**ELECTRIC
MOBILITY**

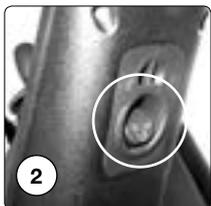
Manufacturer: Electric Mobility Euro Limited
Canal Way, Ilminster, Somerset TA19 9DL
Company Registration in England No. 2419231

Features and Layout

Photo shows the P327 Powerchair. See the specification for detailed weights and performance.

1. Joystick controller

2. Charging point



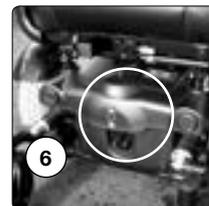
3. Footrest

4. Solid tyres on all four castors



5. Adjustable armrest

6. Freewheel levers



7. Pneumatic tyres on drive wheels

Safety Information

Read this manual thoroughly before driving or operating the vehicle. This handbook is applicable for all models.

If you have any doubt about the content of this manual please contact your dealer to resolve the problem. Please read this manual, and ensure your Powerchair is serviced regularly.



Within this manual there are important safety notices. They are clearly marked with the sign (left) Make sure that you understand all these notices. If you have any doubt, contact your dealer.



Book symbol: This symbol appears on the product. Please read this product manual before assembling or operating the Powerchair.



Pinchpoint symbol: Wherever you see this sign there is a nearby risk of injury owing to a pinch or crushing point.

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Intended use of the vehicle

The P327 Powerchair range is designed for use by adults with a disability (up to the maximum recommended weight – see Technical Specification sheet) who require a manoeuvrable, robust, comfortable Powerchair with a good range. Mid-wheel drive with pneumatic tyres makes the P327 Powerchair range most capable outdoors as well as highly manoeuvrable for use in tight spaces indoors.

The P327 Powerchairs are intended for use in the home, for use in shopping precincts and trips on smooth hard surfaces. Kerbs should be avoided, but the P327 Powerchairs can mount kerbs and small obstacles up to that specified in the Technical Specification.

Users could endanger themselves and others if they are not capable of driving their Powerchair safely. Dealers will advise on the most suitable vehicle from the Electric Mobility range, but it is up to users to ensure that they have the manual dexterity to drive the vehicle, adequate sight and hearing to perceive danger in time, and can at all times operate the Powerchair safely in the expected conditions. If in doubt we suggest you consult a healthcare professional or your nearest dealer for advice on the most suitable Powerchair for your particular condition. Users should also regularly assess their ability to operate their vehicle safely.

These Powerchairs have relatively small front and rear wheels for good manoeuvrability so they should not be used on uneven, potholed or rutted surfaces or slippery grassy areas.



Safety Information

General Warnings

Warning: The operation of Powerchairs can endanger the life of the driver or third parties. Any driver should always be fully capable of operating this vehicle safely.

Warning: Sitting for long periods may increase the chance of thromboses or pressure sores. Users prone to such conditions are advised to take medical advice.

Warning: These Powerchairs have been designed and tested for drivers up to the maximum user weight recorded in the Technical Specification. This weight should never be exceeded.

Warning: Do not exceed the specification; do not modify this Powerchair or use it other than as a Powerchair.

Warning: Passengers, even children, should never be carried.

Warning: Electromagnetic interference may affect the performance of this Powerchair:

- Do not operate devices such as CB radios or mobile phones while the vehicle is switched on.
- Avoid getting close to transmitter masts, such as television and radio stations.

If your vehicle ever starts to operate by itself switch it off and report this to your Dealer.

Warning: The operation of any Powerchair may affect sensitive electronic circuits such as alarm systems, garage door closing mechanisms, or automatic doors in shops.

Driving

Before you drive refer also to “Driving Your Vehicle” ...later in this manual

Warning: Freewheel device Before getting on the Powerchair, always check that both the freewheel levers are in the “Drive” Position on both the motors. When the levers are in the freewheel position there is no braking and the Powerchair could run down a slope and cause injury or even death.

NEVER SIT ON THE POWERCHAIR WHEN IN FREEWHEEL.

Warning: Transferring On and Off Do not attempt to get on or off your Powerchair unless it is switched off, at rest, and on a stable, level surface. Never get on or off on a hill.

Warning: Damage Before driving off check the Powerchair for damage, particularly that which might affect the controls, wheels and drive motors.

Warning: Footrest Before switching on your Powerchair, always put the footrest down and place your feet firmly on it. If you drive forward with your feet still on the ground, your feet could become trapped under the Powerchair and serious injury could result. When getting on or off your Powerchair we recommend putting the footrest in the vertical position.

Warning: Armrests Do not use armrests as a support when getting in or out of your Powerchair. Make sure they are secure before you start off otherwise you might fall out.

Warning: Seat Belt It is advisable to use your seatbelt whenever you use your vehicle.

Warning: Battery Charge Before driving off always check the battery indicator. If you are in any doubt, ensure all the batteries are fully charged before starting on a journey.



Warning: Castoring Be aware that, if you set off when the castors are not straight, the initial movement could be sideways.

Warning: Power Unless there is an emergency, do not switch the power off when moving. The Powerchair will stop very suddenly. Centre the joystick and your Powerchair will come to a controlled stop.

Warning: Slopes On steep slopes the Powerchair could topple over. Always try to avoid crossing a slope. If you have to cross a slope, take great care to avoid tipping. Never make sharp turns on slopes. Never drive on slippery or icy slopes. Never back down a slope as your Powerchair could tip over backwards. If you are not comfortable with the hill gradient, consider an alternative route. See Driving Your Vehicle – Hazards for more advice.

Warning: Kerbs You should try to avoid driving up or down kerbs as this may cause the Powerchair to topple. Use access ramps wherever possible. Ensure that the backrest is upright before tackling a slope or a kerb. Never attempt kerbs greater than that in the Technical Specification. If you have to climb or descend a low kerb, always tackle it straight on. Lean forward when climbing a kerb and back when descending a kerb. See Driving Your Vehicle – Hazards for more advice.

Warning: Speed Turning at maximum speed might cause the Powerchair to topple over. Always slow down for turns. Always slow down when amongst pedestrians and ensure you do not run into them.

Warning: Stopping If the Powerchair stops suddenly when turning, the Powerchair might topple. Take care when turning.

Warning: Leaning Over Do not lean sideways, as this could cause the Powerchair to topple.

Warning: Escalators Never drive this Powerchair onto an escalator as this could result in severe injury.

Warning: Driving in poor visibility Powerchairs are not easily seen. Consider wearing a high visibility jacket to warn others of your presence. Avoid driving in bad weather conditions.

Warning: Roads This Powerchair is not for use on roads, apart from crossing roads at designated places.

Warning: If the vehicle is left out in the sun, surfaces could become extremely hot. Always try to park the vehicle in the shade.

Warning: This Powerchair is not suitable for use as a seat for an occupant when in a motor vehicle.

Warning ! Entanglement Do not wear clothing or carry items on the Powerchair that could become entangled in wheels or other moving parts whilst operating the Powerchair - severe injury may result.

Warning ! Ambient Operating Temperature Range Do not use your Powerchair in temperatures outside the range stated in the specifications section of this manual. Driving in very hot or very cold conditions can make driving more hazardous.

Warning: Immersion Never enter large puddles or areas of water where the depth and/or current is unknown. Immersion or partial immersion of the Powerchair may damage it and could leave you stranded.

Warning: Punctures Should any of your tyres become punctured, stop riding the Powerchair and contact your dealer for assistance.



Controls - Joystick Assembly



Before driving your vehicle it is important to familiarise yourself with the controls. Do not attempt to drive the vehicle before reading the rest of this Handbook.

Description of controls

1. Battery Indicator: These lights show the level of charge in the batteries. When in the green lights show the batteries are fully charged. When in the yellow and red lights show the batteries need recharging and when only the red lights show the batteries urgently need recharging. Note: When the vehicle is climbing an incline or starting off, the level may drop momentarily; this is normal.

2. Ignition On Off Button: Switch the power on and off using the power button. Remember to switch off when not in use. Do not leave the ignition on when not in use, especially when charging the vehicle. Note that this switch can also be used to “lock” the Powerchair to prevent it being used, or stolen. (see unlocking and locking on page 10)

3. Maximum Speed Indicator: This shows what speed setting has been selected by the controls 5 and 6. The more lights that show, the higher the maximum speed. It is advisable to set the maximum

speed at the slowest setting until you are familiar with controlling your P327 Powerchair.

4. Horn: Press the button and the horn will sound. Release and the horn will cease.

5/6. Speed Controls: (tortoise and hare) These controls enable you to increase or decrease the top speed of your Powerchair. When the speed increase button hare (6) is pressed the maximum speed the Powerchair can achieve is increased; when the decrease button tortoise (5) is pressed the maximum achievable speed is reduced. The speed indicator shows a number of lamps to indicate the maximum speed set. Set the maximum speed to low until you are confident of driving your Powerchair safely. Do not adjust the speed when the vehicle is moving, but reset it when you are stationary. If you become alarmed at your speed, release the joystick and the vehicle will slow down immediately.

7. Joystick: The more you move the joystick forward, the faster you will go forwards. Move the joystick back and you will go back. Move the joystick to the right and you will turn to the right; move it to the left and you will turn left.

Charging Point: The charging point is situated beneath the joystick controller at the front. (Fig.1)



Controls - Seat Lift P327 SL only

Introduction

The seat lift version of this Powerchair (P327SL) offers an elevating seat function (Fig.2) to allow the user to reach higher when seated. This configuration of the Powerchair reduces the maximum user weight to 400 lbs (181.4kg / 28.5 stones). This reduction in maximum user weight is to safeguard the stability of the Powerchair when traveling in the elevated mode. The maximum speed will be reduced when the chair is in the elevated mode for safety reasons. Never attempt to modify the Powerchair or attempt to override the safety function.

Controlling the seat lift function:

Fig.3 shows the Powerchair controller / joystick unit. Controlling the basic driving functions is the same as the other versions of this Powerchair described earlier in this manual.

To adjust the seat height:

Press the button (1) in Fig.3 - this enters seat adjustment mode (button will illuminate) and the drive functions will be disabled. Now move the seat up or down by pushing the joystick control backwards or forwards. When the desired height is reached press button (1) again and drive will be enabled. Remember that you will not be able to drive at full speed until the seat is back at the lowest seat height.



Warning! NEVER attempt to get in or out of the Powerchair when the seat is in an elevated position. **NEVER** put body parts or other objects under the seat as this may damage the unit and or cause serious injury. The lifting scissors present a serious risk of pinching and or crushing. Always keep objects and body parts clear of the elevating mechanism during seat height adjustment. **NEVER** stand on the front footrest.



Controls - Driving Controls/Accelerator

Joystick control - To operate, turn on the ignition.

Firstly make sure your wrist is supported on the armrests. If it is not supported, a jolt may cause a movement of the joystick and an involuntary change in direction or speed. Find an open level area with no obstructions to practice controlling the vehicle until you are confident that you can drive safely. Note. The controls can be changed to the other arm for customers with a left-hand bias. Please contact your local dealer for information.

Going Forward or Backwards: Gently push the joystick away from you and your Powerchair will move forward, pull it backwards and it will move backwards. Release pressure on the stick and the vehicle will stop. The further you move the joystick the faster you will go.

Turning Left or Right: Push the joystick to the right and your Powerchair will move right, move the joystick to the left and the Powerchair will go left. Practice turning while in gentle forward motion to familiarise yourself with driving the vehicle.

Braking: Whenever the joystick is in the central position, the automatic brake will operate. Practice stopping on level ground to ensure that you know how quickly you can expect your Powerchair will come to a stop.

Sleep Mode: With the power on, if you do not operate the joystick for a while, then the controller will go into "sleep mode" to preserve the batteries. Any button press or joystick movement will re-activate the controller and you can then drive normally.

Joystick Disabling during Start-Up: To prevent sudden unexpected movements, the joystick is disabled during start-up. If the joystick is operated when the power button is pressed, the lamps will flash slowly. By centring the joystick this indication will stop and the joystick will operate normally.

Note: The controller has a diagnostic mode. The lamps will flash to indicate that the controller has detected an error or fault. If this happens refer to the diagnostic table at the back of this manual, unless it is simply the result of the joystick not being central at start up, which can be cleared as above.

Locking Your Vehicle for Security: To prevent unauthorised use the controller of your Powerchair can be locked.

To Lock

- With the power on, press and hold the power button for 4 seconds.
- The display will turn off immediately. After 2 seconds all LEDs will flash briefly and the horn will sound a short beep.
- The Powerchair will then turn off.

To Unlock

- While locked, press the power button to turn on.
- All LEDs will flash briefly, then perform a slow right-to-left countdown.
- Press the horn button twice before countdown is completed (approximately 10 seconds).
- The current state-of-charge will then be displayed and the controller may be operated normally.

If the user does not press the horn button twice before the countdown is complete, the horn will sound a short beep and the controller will turn itself off. The unlock sequence must be completed successfully before the controller will operate again normally.

Ask your dealer to demonstrate all these functions and make sure you can operate all the modes of the controller before you take your vehicle home.



Freewheel Device

When the vehicle is switched off the brakes are automatically engaged. This is called “Failsafe Braking”. Also, if the batteries are flat, the brakes are applied. There may be occasions where you may wish to move the vehicle without power. To do this there is a Freewheel Device fitted on each motor. The Freewheel device allows the vehicle to be pushed without power. To activate, first locate the levers on the end of each drive motor (Fig.4).

- Make sure the ignition is switched off.
- Move **both** the levers into the freewheel position. The vehicle can now be pushed in Freewheel. Note that if the levers are too stiff to move a small movement of the chair back or forward will make it easier to operate the levers. Get your dealer to show you.
- Move **both** the levers to engage drive. The vehicle is now braked. This is the normal operating position.

IF YOU ARE NOT COMPLETELY SURE OF THIS FEATURE CONTACT YOUR DEALER BEFORE OPERATING THE POWERCHAIR.

- Pull both levers **UP** to enable the vehicle to be moved without power. Braking is disabled. **NEVER** sit on the vehicle with the lever in this position.
- Push both levers **DOWN** This is the normal operating position. The brakes are enabled, and the vehicle can only operate with the lever in this position.



Brakes

There are 2 braking systems. The first works with the joystick. When the joystick is released the Powerchair will automatically brake. When the Powerchair stops the automatic brake will engage. This will stop the vehicle rolling forward or backward. When you start the brake will automatically disengage.

If the battery should go flat the brakes automatically engage. Note that even when freewheel is selected, a secondary braking system is applied automatically to limit the maximum speed. You may notice this system when moving the Powerchair in freewheel.

Warning! If the freewheel devices are in “freewheel” the braking is disabled. Never select the freewheel devices if the Powerchair is on a slope or could be pushed onto a slope. **Never** leave one motor in Drive and the other in Freewheel. You could damage your Powerchair or cause injury.



Armrest adjustment

If you need help with any of these adjustments ask your dealer to assist you.

Armrest Width Adjustment

If you require more room in the seat width loosen the armrest width adjustment using an Allen key as shown (Fig.5). Slide the armrests in or out to suit, and tighten up the Allen key, making sure that the armrests are equidistant from the centre of the seat and secure.



Armrest Height Adjustment

Loosen height adjustment knobs (One on each armrest - Fig.6), and raise or lower armrest so that it is at a comfortable height. It may be better to have someone else adjusting the armrest height while you are sitting in the chair and making sure the armrests are in a comfortable position before they are locked in place. Finally tighten the knobs and ensure that the armrests are secure.

Armrest Angle Adjustment

The armrest angle can be adjusted by flipping up the armrest, and loosening the nut near the pivot point. Then, using an Allen key turn the armrest adjustment screw clockwise to lower the end of the armrest or anticlockwise to raise it. Once satisfied, tighten the nut and lower the armrest.



Warning! Do **not** use the armrest as a support when getting in and out of your Powerchair – Armrests are not designed to fully support your weight.

Warning! Always check that the knobs are tight and the armrests are secure before driving the Powerchair.

Joystick Controller Adjustment

The joystick controller position can be adjusted by moving the joystick gently to the side and back. In addition the joystick controller can be moved forward and back loosening the grub screw with the allen key provided, and setting to your preferred

position. Always ensure the grub screw is secure and tight before using your Powerchair. Ask your dealer if you wish to have the joystick on the left hand armrest and they will make this change for you.

Seat Back Folding and Adjustment

The Seat Back can be folded down for transporting (Fig.7). The seat back angle can be adjusted for comfortable sitting. The maximum reclining angle is only for use when the chair is stationary, on a flat surface with the power off.



Warning! Always return the seat to the upright position before starting off. If the seat back is tilted too far back, the risk of tipping over backwards is increased, especially if travelling up ramps, kerbs or hills.



Headrest Adjustment

The headrest height can be adjusted by pressing in the tab on the left hand collar and sliding the headrest up or down. Make sure that the collars have engaged into the headrest groves once the adjustment has been made.

Seat Height Adjustment

You are advised to ask your dealer to set the seat height in the most comfortable driving position

Seat Removal

- **Disconnect the cable** from the joystick by pinching and pulling the grey grip. Remove the cable completely from the seat frame (Fig.8).
- **Lift the backrest angle lever** and tilt the backrest forward (Fig.9).
- **Unclip the set lock** and tilt the seat forward (Fig.10).
- **Take off the seat vertically** by unhooking from the front trapeze bar (Fig.11).



To adjust the seat height

- **Remove the four retaining pins** and adjust each of the two trapeze bars to the required height (Figs.12 &13).
- **Secure both front and rear bars** with the retaining pins (Fig.14).
- **Replace the seat** and ensure it is locked in position, reconnect the controller cable.



Footrest Adjustment

For comfort and to achieve correct posture, the footrest height and footrest angle can be adjusted. Please ask your dealer to make these adjustments to ensure your legs are in a comfortable position.

Transferring In And Out Of Your Powerchair

If you feel at all uncertain about getting in or out of your Powerchair get assistance.

Transferring into your Powerchair

- Make sure that your Powerchair is on a level surface, and it is not in Freewheel.
- To make sure the brakes are engaged try and push the Powerchair before getting in.
- Ensure that the controller is turned off before you try to get into your Powerchair
- We recommend moving the footplate to the vertical position.
- With your back to the chair, steady yourself with the armrests and lower yourself gently into the seat. Do not put undue weight on the armrests !

Getting out of your Powerchair

When getting out be sure that your Powerchair is on a level surface, is not in freewheel and the power is off before you try to get out. Position your feet either side of the footplate and raise the footplate to the vertical position before getting off. If you feel uncertain about getting out, get assistance.

Driving Your Vehicle

Warning! Whether or not this is your first mobility vehicle, please read these guidelines as all vehicles differ. Failure to do this may cause damage to you, a third party or the vehicle.



- 1. Before you set out,** do check the weather forecast. We suggest that you make sure you are wearing suitable clothing, whether your journey is long or short.
- 2. If you are taking medication** check with your doctor or physician that your ability to control the vehicle will not be impaired and do not drink alcohol and drive.
- 3. Only use the vehicle for the purpose its intended for.** Do not drive through water or on slippery surfaces; do not transport more than one person; do not tow other vehicles or carry excess weight.
- 4. Before sitting in your Powerchair,** check both the freewheel levers are not in the Freewheel position
- 5. Check the battery charger is disconnected.**
- 6. Check the backrest is upright**
- 7. Ensure your feet are securely on the footrest.**
- 8. Check you have adjusted the seat** as instructed in this manual – get comfortable and secure your seat belt.
- 9. Make sure the way ahead is clear.**
- 10. Switch on the power.** Check the battery level indicator is in the green area.
- 11. Speed Control.** Set the speed control to a low setting.
- 12. Gently push the joystick in the direction** you wish to go. The vehicle will now move off. The further you push the joystick the faster the vehicle will go.
- 13. To brake, return the joystick to the neutral position.** If you become unsure or feel unsafe release the joystick immediately.
- 14. As you get accustomed to the power** you can increase the speed.
- 15. Switch off when not in use.** To conserve your batteries and prevent the vehicle accidentally moving, always turn off the power when your Powerchair is not in use.

Driving Your Vehicle - Hazards

Before driving the Powerchair you should be aware that, under certain circumstances it could become unstable and tip over. Your Powerchair has been designed to operate on paved, even surfaces and should not be used on rough, rutted, soft or slippery terrain.

Getting on and off the Powerchair: When getting on make sure that the vehicle is on level ground, and not in freewheel mode. Ensure that the arm-rests are secure. When getting off, park on level, stable ground, and switch off the Powerchair before leaving your seat. Make sure you get off the vehicle in a safe area.

Seat Back Position: Always drive with the seat back in an upright position.

Kerbs and Obstacles: Always try to avoid kerbs and obstacles. Never ride up or down kerbs or obstructions higher than that in the Technical Specification Sheets. Use ramps wherever possible. Always tackle obstacles head on. Never drive or turn across a slope.

Hills & Slopes: Going Up Hill. Lean slightly forward when going up. Remember that the seat back should be in the upright position. Make sure you have enough speed to climb the slope. **Do not stop or turn the vehicle around.** If you have to turn while climbing an incline, keep going until you reach a level area. If you have to start on an incline, lean forward and apply power slowly – do not start and stop. If you are not comfortable about tackling a gradient, consider an alternative route. Note: Always check that the battery level is high; going up hill takes a lot of energy. If the level drops too low the vehicle will cut out leaving you stranded.

Hills & Slopes: Going Down Hill. Lean back in the seat when going down, Turn the speed control to low. If you are not comfortable about tackling a gradient, consider an alternative route.

Try to avoid crossing slopes – always try to drive straight up and down the slope NEVER BACK DOWN A SLOPE!

Turning: Always **slow down** before a turn; turning at speed can cause the Powerchair to topple. Look in the direction you are travelling – If there is a blind corner sound the horn.

Turning Circle: So you can judge the turning circle, practice manoeuvring your Powerchair. This is important to avoid tipping off kerbs, and when going into and out of lifts or entrances.

Bad Weather: If it is snowing or icy stay at home! Remember that ice, snow and slippery surfaces such as manhole covers, wet grass and drains could affect braking and steering. Use caution at all times.

Shower Rooms or Washing: Never take your Powerchair into a shower or steam room, and never hose it down. Its sensitive electronics could malfunction if they get wet or damp.

Tyres: Castor Wheels The Castor wheels have solid tyres that will not puncture. Should they become damaged they should be replaced by your dealer. Do not attempt to replace them yourself.

Tyres: Drive Wheels The Drive wheels have pneumatic tyres for better grip and ride comfort. Tyre pressures should be checked weekly or if a tyre looks deflated. See the Technical Specification for tyre pressures. Should they become damaged they should be replaced by your dealer. Do not attempt to replace them yourself. Should you require the drive wheels puncture proofed, ask your dealer.



Transporting Your Powerchair

Contact your dealer for advice on how best to transport your Powerchair in your vehicle. You may prefer to use ramps rather than lifting the components.



Warning! Dismantling the Powerchair involves lifting and handling heavy parts. Although your Powerchair can be dismantled, we suggest that you contact your dealer for advice on how best to transport your Powerchair in your particular vehicle. This may involve using ramps.

Warning! Pinching or Crushing. Be careful to avoid being pinched or having your hands crushed when lifting or handling parts. Wear gloves whenever possible.

Warning! This Powerchair is not suitable for use as a seat for an occupant in a motor vehicle.

After Using Ramps to Unload Your Powerchair

- Position the Powerchair on level, solid ground
- Check parts for any sign of damage.
- Select power on and ensure that the battery level indicator shows green. If not charge the Powerchair before use.
- Check the freewheel levers are in the “drive” position and not in the “freewheel” position
- Get on the Powerchair and test the operation of the joystick, speed control and on off switch before using the Powerchair to go anywhere. If there is any malfunction, check that the joystick connection has been correctly put together and locked. You are now ready to drive the Powerchair away.

Battery Charging



Warning! When charging batteries **NEVER** smoke, or charge batteries in a place where there are naked flames such as gas-fired heaters as, under exceptional circumstances, batteries may give off gases that could ignite and explode. Always make sure that battery box is not damaged.

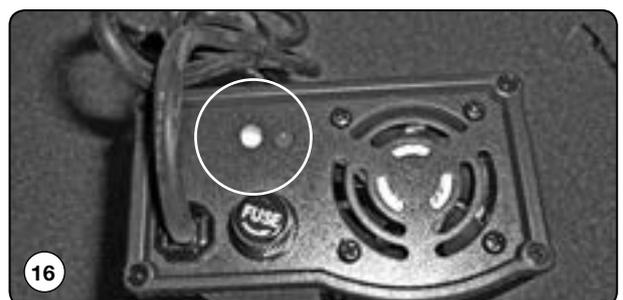
Warning! When charging batteries **NEVER** connect or disconnect the charger while it is still connected to the mains.

The charging socket is located below the front of the joystick assembly (Fig.15). With the charger disconnected from the mains, push the charger plug into the socket. When the vehicle is charged always remove the plug.

The battery charger has a red indicating lamp (Fig.16) When the charger is connected and switched on the lamp will show red. The second, charging, light shows;

- Yellow when charging
- Green shows full charge
- Off to indicate disconnect the charger

Always ensure the lamp goes out before switching off and disconnecting the charger at the mains. Note: the charger contains a fan and will emit a slight humming noise when in use.



Connection Instructions

- 1. Place you machine in an area that is dry and well ventilated.** Make sure a power point is nearby.
 - 2. Check the vehicle is switched off.**
 - 3. Check the mains switch is off.** Never connect or disconnect the charger with the mains on.
 - 4. Connect the charger plug in to socket as above.**
 - 5. Connect the mains plug and switch on at the mains.** Check the charger power light shows red.
 - 6. The second charger lamp shows yellow** and then changes to green when the battery is fully charged.
 - 7. Wait until the charging lamp goes out then,**
 - 8. Switch off the mains and remove the plug from the socket when fully charged.** Do not leave the charger plugged in with the power off. This will gradually discharge your battery.
-

Battery Care

The batteries are the lifeblood of your vehicle. Their characteristics can change depending on charging, temperature, usage and other factors. Listed below are guidelines to prolong battery life.

- After using your vehicle always charge it at the end of the day - even after a short journey.
- If you do not use your vehicle for a prolonged period, place it on charge once a week, overnight.
- Always use the correct charger with the correct batteries.
- If the batteries have been flat for a long time (about 2 months) it is recommended you contact your dealer before charging:
- Do not charge the vehicle in the open – it may rain and the battery charger is not waterproof.
- Keep the vehicle in a well-ventilated area and away from any naked flame.
- Do not part-charge the batteries. Allow the charger to complete its cycle for every battery fitted.

Batteries are expensive to replace – it is wise to look after them. Batteries are heavy – make sure you always lift them correctly.

Notice

Return your unserviceable batteries to your supplier or ensure they are disposed of in accordance with the environmental regulations applicable at the time.

Warning! If batteries are damaged or frozen they could heat up when charging and, in an extreme case, explode.



User Maintenance

It is important for safety that you carry out the following checks

Daily or Before Use

- Visually check the machine for damage.
- Visually check the tyres for damage.
- Check that the seat is secure.
- Check the armrests are secure and the knobs and levers are tight.
- The battery should be fully charged.
- Check the operation of the brakes and if you have any concerns, contact your dealer.
- Keep your vehicle clean by using a damp cloth and soapy water – **never** use a hose.

Important – Possible faults

As you get used to your vehicle you will get a feel for how it behaves. If something feels unusual, for instance the vehicle does not accelerate or brake smoothly; the vehicle tries to turn to one side, the brakes are not holding on a slope or the controller operates strangely, contact your dealer immediately and explain to the engineer exactly what the problem is.

Disposal

Contact your dealer for advice before you consider disposing of your Powerchair. They will be aware of the environmental regulations in force at the time and will assist you to meet the applicable environmental legislation.

Servicing and Maintenance

1. This vehicle is designed for minimum maintenance. However it is recommended that a competent engineer service the vehicle at least once a year. If the vehicle is used constantly we recommend a twice yearly maintenance.

2. Ensure the engineer stamps the Service Log (page 29) on completion for all servicing carried out on this vehicle. Keep all receipts for servicing and repairs with this handbook. This may add value when selling the vehicle.

3. When the vehicle is due for its service make sure you report any concerns you have, preferably when you book the service (See points to look out for below).

4. On completion of the service, always test the vehicle before the engineer leaves and make sure you are satisfied with the work carried out.

Points to look out for:

- Are there any strange noises from the wheels or does the frame creak?
 - Is the battery charging up correctly – is the “full” charge green light on after charging?
 - When turning, does the Powerchair respond equally to left and right movements of the joystick ?
 - Does the Powerchair stop smoothly when the joystick is centred ?
 - Does the Powerchair tend to pull to one side ?
 - Does the speed control work ?
 - Has anything come loose?
 - Are there noises or rattles that were not there before?
 - Are there any signs of damage, corrosion or cracking?
 - Does the seat-lift function smoothly?
-

Additional Safety Information

Carrying Weight on the Vehicle

Bags or Luggage: Never carry bags (unless they are an approved accessory) behind the seat as this could result in tipping over backwards. Only carry small bags on your lap and ensure it does not prevent you from controlling your vehicle.

Seat Arms: Do not carry or attach anything to the seat arms. Anything attached to the seat arms could affect stability, or interfere with the control of the vehicle.

Other Precautions

Joystick: Do not touch the joystick when getting in or out of your Powerchair; always make sure the Powerchair is switched off.

Modifications: Unauthorised modifications could result in injury or permanent damage. Such modifications will invalidate any guarantees.

Other Items: Only fit approved products or accessories.

Child Safety

This product is designed to be operated by adults. Children should not be allowed to tamper with the controls or play on the vehicle. Do not carry children as passengers. The product is designed for single person use only. Keep all packaging well away from children. They could be harmed.

Engineer's Checklist for Powerchairs

Obtain all comments from the customer on the condition and serviceability of the Powerchair and then complete an Initial diagnostic road test. Record all defects to be corrected. Now check, test and complete the following:

- Wheel bearings for wear and lubricate
- Operation of the joystick especially to detect if there is any asymmetrical operation of the motors
- The On/Off switch for correct functioning
- The speed indicator for correct indications
- The Speed Increase and Decrease buttons for correct operation
- Wear or damage to tyres or wheels
- Bodywork fixtures for damage, corrosion or cracking
- Levers and knobs securing armrests and joystick. Do they tighten and secure properly? Do they need replacing?
- Operation of Allen key armrest attachment. Are key drives worn? Do they tighten to secure the armrests? Replace as necessary
- Joystick play, correct operation and response and carry out any necessary adjustment/replacement
- Battery contacts & signs of corrosion
- Check all cables for damage, abrasion, corrosion and that screening is intact. Replace as necessary
- Seat mounting and catch for wear or damage
- Motor performance, undue noise and speed check
- Electromagnetic brake operation
- Freewheel operation on both motors independently
- Frame for damage or cracks
- General check for corrosion, repair or protect as necessary

- All operational controls work correctly
- Battery condition and charger operation
- Tighten all nuts & bolts
- Operation of the joystick in forward, reverse, turning, and stopping smoothly
- Correct all defects found and determine if the vehicle is roadworthy
- Final road test
- Clean vehicle/customer road test
- Check seat lift function, associated wiring and lubricate/repair as necessary
- Check and lubricate all main pivot bolts. Special attention should be paid to the lubrication of the lifting mechanism on the SL (seat-lift) version

Important Note for the Engineer

Enquire if the customer is satisfied with the product. Please report all points good or bad directly to: Electric Mobility 01460 258100. If you have any comments please include them.

Troubleshooting Guide

This table is a guide to fault finding. The fault may be a simple fix. If you have any doubts phone your dealer.

Symptom	Solution
<ul style="list-style-type: none">• Powerchair does not move. when power is switched on.	<ul style="list-style-type: none">• Batteries flat - check level.• Is the charger connected?• Is either Freewheel engaged?• Freewheel has been selected while power is on Ensure neither freewheel is selected; switch off and on
<ul style="list-style-type: none">• Vehicle pulls to one side.	<ul style="list-style-type: none">• Check for tyre damage or punctures.• Freewheel selected on one side• Motor failure - contact dealer.• Binding bearings – contact dealer
<ul style="list-style-type: none">• Vehicle behaves erratically when driven. or judders or cuts out ?	<ul style="list-style-type: none">• Possible electronic problems - contact dealer.
<ul style="list-style-type: none">• Short Range	<ul style="list-style-type: none">• Check tyres for damage and inflation.• Check batteries are fully charging.• Check vehicle moves easily in Freewheel

Remember, to save the batteries, the Powerchair controller has a sleep mode which is activated if the joystick is not moved for a period of time. Any button press should restore operation, but, if this does not work, switch the Powerchair off and then on again. Remember also that you may have inadvertently disabled the Powerchair, by locking it (see page 10 for unlocking instructions). Press the power on button, and then, press it again and your Powerchair should operate normally. If it does not, repeat this process. If the Powerchair still fails to function check table above or contact your dealer.

Your dealer is there to help you but they can only do this if you give them as much information as possible. Remember correct information will get the problem fixed quicker and may save you money. Phone the dealer and explain exactly what the problem is, recounting as much detail as possible including the indicated faults.

Diagnostic Table

Your Powerchair controller provides diagnostic information via a flashing spanner icon at the base of the controller. The number of flashes correspond to the fault as below:-

Flash Code	Description	Action
1	User Fault	Possible stall timeout or user error. Release the joystick to neutral and try again.
2	Battery Fault	Try charging the batteries, batteries may require replacing, check the batteries and cables.
3	Left Motor Fault	Check the left motor, connections and cabling.
4	Right Motor Fault	Check the right motor, connections and cabling.
5	Left Park Brake Fault	Check the left park brake, connections and cabling.
6	Right Park Brake Fault	Check the right park brake, connections and cabling.
7	Remote Fault	Check the communications bus connections and wiring. Replace the remote.
8	Power Module Fault	Check connections and wiring, replace power module.
9	Communications Fault	Check battery voltage is greater than 17V. Check bus cable. Replace the power module. Replace the remote.
10	Unknown Fault	Check all connections and wiring, consult a service agent.
11	Incompatible Remote	The remote is incompatible with the power module. Ensure the brand of the power module matches that of the remote.

Frequently Asked Questions

I want to transport my vehicle in a car.

There are various techniques. It depends on what type of vehicle you own and your physical capability. The usual way is to use specialist ramps which can be provided by your dealer. Make sure your dealer has demonstrated the easiest way of loading your Powerchair into your car. See "Transporting your Powerchair" - page 16.

Can I fit weatherproofing such as a canopy?

No, the Rascal Powerchairs are too small to have canopies as they can adversely affect stability and handling.

How long will my battery last ?

This is a difficult question as it depends on many factors. The life of a battery depends upon the number of cycles the battery goes through, the peak loads and on the conditions of use. Some general advice about battery care:

- Keep it charged, and do not let the battery run completely flat.
- Ensure all your battery is fully charged at the end of the charging cycle
- Batteries may not perform as well in very cold weather.
- Change your battery if you find it is not performing as well as new.

Care can prolong the life of the batteries but remember that, in time, all batteries will fail to perform to specification.

What range can I expect ?

The generally expected range shown in the Technical Specification sheet. However, range can be affected by many things such as:

- Temperature. Cold weather can reduce the output of the batteries.
- Type of terrain. Obviously climbing hills takes more energy than driving on the flat.
- Weight of the person.
- The condition and charge of the batteries.
- Faulty or old batteries or a faulty charger

Important Rule: Always use the correct charger with the correct batteries and ensure all batteries are charged before you start out.

How long should I keep my vehicle before I change it?

It is important that the vehicle you have suits your needs and abilities. Your Rascal Powerchair should serve you well for many years but change it if at any time you feel it no longer meets your needs. Consult your dealer on the condition of your vehicle and remember vehicles of any type become more expensive to maintain the older they get.

Additional Information

Owners Manual: Replacement copies are available from: Electric Mobility Euro Ltd. Canal Way, Ilminster, Somerset, TA19 9DL
Telephone: 01460 258100.

If you are visually impaired, please contact the Company to discuss your requirements. However, you should not drive a vehicle in a public place if you cannot see well enough to ensure your own, and others safety.

Important note on the BHTA Highway Code:

On page 3 of the Code under "Consider Investing in a mobile phone" Read the section of this manual under "Safety Information". If in doubt contact your dealer. For Information regarding other Electric Mobility products contact your dealer or log on to the Electric Mobility Website www.electricmobility.co.uk

Each vehicle comes with a copy of the BHTA Highway Code. Please make sure you read it. Telephone BHTA on 02077 022 141 for a new copy.

Technical Information Regarding EMI

Important Technical Information regarding

Electromagnetic Interference (EMI)

The intensity of interference from electromagnetic energy is measured in volts per meter (v/m), which refers to the strength of the electrical source (voltage) as it relates to the distance away from the object being considered (in meters). Resistance of a scooter/wheelchair to certain EMI intensity is commonly called its "immunity level". 20 volts/meter is a generally achievable and useful immunity level against interference from radio wave sources (the higher the immunity level, the greater protection).

Your scooter has been tested and found to meet the required immunity level from Electromagnetic Interference (20v/m): the recommended density of interference from electromagnetic energy.



Warning! Even with the immunity level of 20 volts/meter, certain precautions must be followed to ensure your scooter/wheelchair will not be affected by outside electromagnetic sources.

- Do not operate devices such as CB radios or mobile phones while the vehicle is switched on.
 - Avoid getting close to transmitter masts, such as television and radio masts.
 - Note you may experience interference when close to ambulance or fire stations.
- If your vehicle starts to operate by itself switch it off and report this to your Dealer.

Technical Specification - Rascal Powerchair P327

Powerchair type Class	Class A, B or C	Class B
Department of Transport Class	Class 1 2 or 3	Class 2
Overall dimensions fully assembled	length x width x height mm (in)	1120 (44.09) x 690 (27) x 1190 (46.85)
Overall dimensions seat folded	length x width x height mm (in)	1120 (44.09) x 690 (27) x 820 (32)
Maximum carrying capacity - not to be exceeded	kg (lb)	136 (300)
Mass (weight) including batteries	kg (lb)	105 (232)
Battery voltage and capacity	volts and ampere hours	12v x 55Ah x 2
Type of seat		Removable Captain seat (4 post fixing)
Mass (weight) of seat	kg (lb)	17.5 (39)
Seat width	mm (in)	470 (18.5) (Optional 520 (20.5))
Wheel size	front/rear mm (in)	152 (6) solid / 305 (12) pneumatic
Tyre pressure normal - drive wheels	p.s.i. (bar)	35 (2)
Tyre pressure maximum - not to be exceeded	p.s.i. (bar)	50 (3.5)
Maximum speed	km/h (m.p.h.)	6.4 (4)
Minimum braking distance from maximum speed	metres	1.6 (5.2)
Range on full charge and flat ground	km (miles)	Up to 32 (20)
The turn-around width	m (ft)	1.2 (4)
The maximum safe slope	degrees of slope	6° - Do not exceed the Powerchair may topple
The maximum climbing ability facing upwards	degrees of slope	6°
Ground clearance	mm (in)	50 (2.0)
Maximum obstacle climbing ability	mm (in)	50 (2.0)
Maximum safe descendable kerb height	mm (in)	50 (2.0)

Technical Specification - Rascal Powerchair P327 XL

Powerchair type Class	Class A, B or C	Class B
Department of Transport Class	Class 1 2 or 3	Class 2
Overall dimensions fully assembled	length x width x height mm (in)	1120 (44.09) x 690 (27) x 1190 (46.85)
Overall dimensions seat folded	length x width x height mm (in)	1120 (44.09) x 690 (27) x 820 (32)
Maximum carrying capacity - not to be exceeded	kg (lb)	204 (450)
Mass (weight) including batteries	kg (lb)	110 (243)
Battery voltage and capacity	volts and ampere hours	12v x 55Ah x 2
Type of seat		Removable Captain seat (4 post fixing)
Mass (weight) of seat	kg (lb)	18.9 (42)
Seat width	mm (in)	520 (20.5) (Optional 560 (22))
Wheel size	front/rear mm (in)	152 (6) solid / 305 (12) pneumatic
Tyre pressure normal - drive wheels	p.s.i. (bar)	35 (2)
Tyre pressure maximum - not to be exceeded	p.s.i. (bar)	50 (3.5)
Maximum speed	km/h (m.p.h.)	6.4 (4)
Minimum braking distance from maximum speed	metres	1.6 (5.2)
Range on full charge and flat ground	km (miles)	Up to 32 (20)
The turn-around width	m (ft)	1.2 (4)
The maximum safe slope	degrees of slope	6° - Do not exceed the Powerchair may topple
The maximum climbing ability facing upwards	degrees of slope	6°
Ground clearance	mm (in)	50 (2.0)
Maximum obstacle climbing ability	mm (in)	50 (2.0)
Maximum safe descendable kerb height	mm (in)	50 (2.0)

Technical Specification - Rascal Powerchair P327 SL

Powerchair type Class	Class A, B or C	Class B
Department of Transport Class	Class 1 2 or 3	Class 2
Overall dimensions fully assembled	length x width x height mm (in)	1120 (44.09) x 690 (27) x 1210 (47.6)
Max height when fully elevated	mm (in)	1470 (57.9)
Ground to seat height - lowest position	mm (in)	620 (24)
Ground to seat height - highest position	mm (in)	870 (34)
Maximum carrying capacity - not to be exceeded	kg (lb)	182 (400)
Mass (weight) including batteries	kg (lb)	123 (271)
Battery voltage and capacity	volts and ampere hours	12v x 55Ah x 2
Type of seat		Captain seat with scissor lift mechanism
Wheel size front/rear	mm (in)	152 (6) solid / 305 (12) pneumatic
Tyre pressure normal - drive wheels	p.s.i. (bar)	35 (2)
Tyre pressure maximum - not to be exceeded	p.s.i. (bar)	50 (3.5)
Maximum speed	km/h (m.p.h.)	6.4 (4)
Minimum braking distance from maximum speed	metres	1.6 (5.2)
Range on full charge and flat ground	km (miles)	Up to 32 (20)
The turn-around width	m (ft)	1.2 (4)
The maximum safe slope	degrees of slope	6° - Do not exceed the Powerchair may topple
The maximum climbing ability facing upwards	degrees of slope	6°
Ground clearance	mm (in)	50 (2.0)
Maximum obstacle climbing ability	mm (in)	50 (2.0)
Maximum safe descendable kerb height	mm (in)	50 (2.0)

Brochure Request

Do you have a friend or colleague that would be interested in an Electric Mobility product?
If so cut out this coupon and send it to the address shown on the back of the manual.

My Dealer's Company name is:

Please can I have a free no-obligation home demonstration.

Please send me a brochure of the range of products.

My friend's name is:

My friend's address is:

County:

Postcode:

My friend's telephone number is:

If you are visually impaired, please contact the Company to discuss your requirements. However, you should not drive a vehicle in a public place if you cannot see well enough to ensure your own, and others safety.

Postage will be paid by: Electric Mobility Euro Ltd., FREEPOST (SWBI 1045), Ilminster, Somerset, TA19 9ZA



**Electric Mobility Euro Ltd.,
FREEPOST (SWBI 1045),
Ilminster,
Somerset,
TA19 9ZA**

Service Log

Notice for the Service Engineer.

Please make sure this part is stamped and dated after each service.

Dealer stamp - 1st Service

Dealer stamp - 2nd Service

Dealer stamp - 3rd Service

Dealer stamp - 4th Service

Dealer stamp - 5th Service

Dealer stamp - 6th Service

Dealer stamp - 7th Service

Dealer stamp - 8th Service

Notes

Notes

Rascal Powerchair Models P327 P327 XL P327 SL

Manufactured by

