

ROVER WHEEL™



ROVER 16

User Manual

www.roverwheel.com


IMPORTANT CONSUMER INFORMATION

This manual contains important instructions that must be made available to the user of this product. Please do not remove this manual before delivery to the end user.

SUPPLIER: This manual must be included with this product.

USER: Before using this product, review this manual and save for future reference.

Distributed by Symmetric Designs Ltd.

 Manufactured in China

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Rover Wheel Products

ROVER 12

MT-01 / MT-02



ROVER 16

MT-03 / MT-04



FOLDING FRAME

MT-01/03/05



FIXED FRAME

MT-02/04/06



Introduction

ROVER WHEEL

Boldy go...

The Rover Wheel is designed for the intended purpose of providing mobility to wheelchair users for short distance trips.

Any serious incident that has occurred in relation to this device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

We want to hear your questions or comments about this manual and the safety and reliability of your product.

Please feel free to write, email or call us at the contact information below:

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NOTICE:

This manual for the Rover Wheel is intended to be an informational resource to provide an understanding of the product and its adjustments to users and caregivers. This manual should always be referenced in conjunction with a licensed clinician to ensure safe use by the user. The Rover Wheel user manual should be read and fully understood, prior to the installation, set-up, and use of this product.

Rover Wheel Features

Rover 16 Features

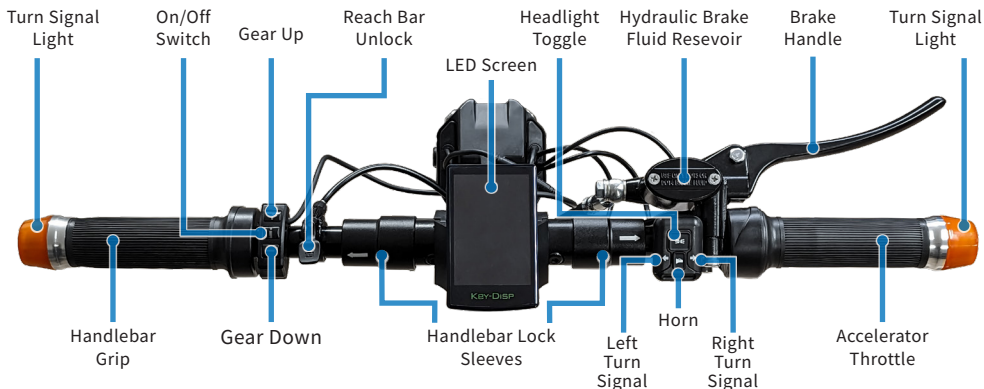
- Hydraulic Disc Brake System
- Handle Bars
- Headlight
- Speedometer
- Power Switch
- 16" Pneumatic Tire
- Support Stand
- Fender
- Motor
- Removable Battery
- Sliding Battery Lock
- Keyed Battery Lock
- Battery Charger
- Wheel Stand



LCD Screen



Controls



Specifications

- Brushless DC Motor (800W)
- 16" Pneumatic Tire
- Hydraulic Brakes
- 12AH Lithium-ion Battery (48V)
- Range up to 50-60 km (31-37 miles)
- Power On/Off switch
- Three Speed Control
- LCD Display
- Rover Wheel 16 Unit Weight: 21kg (46lbs)
- Weight Capacity: 120kg (264lbs)
- Portable 48V Charger (110V~240V AC Input)

Rover Wheel Delivery Check

- Make sure that the shipping box has not been damaged during transportation.
- If you see any external damage, do not open the box and immediately contact us at sales@symmetric-designs.com and the authorised dealer where the unit was purchased.
- If the shipping box is undamaged, remove all parts of the Rover Wheel from the cardboard protective boxes and check that everything is there based on the pictures below.

⚠ Do not remove the packaging material separating the two plates of the Docking Port (DP) until after finishing the installation.

- In case there are missing parts, stop further assembly and contact the authorised dealer or Symmetric Designs.
- Fasteners have been placed into bags and are attached to the corresponding parts for assembling.
- Check that no parts have any damage, deformation, or other defects.

⚠ Do not use damaged parts. In case of a damaged part(s), contact Symmetric Designs or any Rover Wheel authorized dealer in your area.



x1 Rover 16



x1 LCD Screen with Controls



x1 Charger



x4 Hex Keys



x2 Battery Keys



x1 Support Stand



x2 Wheelchair Clamps




x1 Spreader Bar



x1 Reach Bar

Safety Measures and Precautions

 Read this User Manual carefully and familiarize yourself with the Rover Wheel in an indoor environment prior to using the Rover Wheel outdoors. When ready, take your first drive in a non-crowded area. Always start driving slowly from Speed Mode 1.

IMPORTANT

Read this user manual prior to using the Rover Wheel power add-on.

- The use of the Rover Wheel by a person unfamiliar with this user manual may result in serious injury or death.
- It is recommended to use the wheelchair anti-tippers during the training period.
- Symmetric Designs is not responsible for any injuries or damages caused by using the Rover Wheel in contravention of:
 1. This user manual's instructions and recommendations.
 2. The direction of an authorised dealer.
 3. The technical limitations and recommendations of your wheelchair manufacturer.

MECHANICAL OPERATION

- To prevent accidental activation of the Rover Wheel, always completely turn the power OFF when parked, transferring from/to the wheelchair or loading/unloading.
- Power OFF the Rover Wheel BY KEY and take it out. Using the red button only to power OFF is not safe enough.
- Regularly check that all connection parts are fastened tightly and not damaged.
- Check the LCD battery status before driving to avoid depleting it while you are away from a recharging power source. Keep the battery charger with you if your planned trip might take you further than the unit's current range.
- When lifting, loading or unloading the Rover Wheel, do not put your hands between the support stand and the Power Unit to avoid injury.
- Do not insert any object in the charging port to avoid unit damage or personal injury.
- In case of any malfunction, turn the Rover Wheel OFF and take the key out, then contact your local dealer or Symmetric Designs for instructions.
- Any modification to the Rover Wheel will void the warranty and may compromise your safety.

Intended Usage Environment

The Rover Wheel is suitable for outdoor and indoor, hospital, nursing home and home, etc.

Temperature: $5\pm 2^{\circ}$ - $40\pm 2^{\circ}$;

Atmospheric pressure: $860\pm 2\%$ hPa - $1060\pm 2\%$ hPa;

Humidity: $10\pm 3\%$ - $80\pm 3\%$

Power Condition:

Charging voltage: AC $110\pm 2\%$ V - $240\pm 2\%$ V, $50\pm 1\%$ Hz;

Battery voltage: DC $36\pm 2\%$ V;

Motor power: ≥ 250 W;

WARNINGS

- Rover Wheel is intended for use by people with the necessary physical capabilities and healthy mental state to drive.
- The Rover Wheel should only be used by one driver at a time. Never use the Rover Wheel while carrying a child.
- The Rover Wheel is not to be driven in poor weather conditions such as strong snow or rain, on ice, or on slippery soil/mud.
- When driving up or downhill:
 1. Avoid stopping or making sharp turns as this may cause you to lose control and tip over.
 2. Lean forward towards the front wheel to improve traction when going uphill.
 3. Press the handle brakes continuously when going downhill to maintain a slow speed. Do not use the wheelchair brakes when going downhill as they may lock up.
- Do not drive over curbs higher than 5cm (2") with the Rover Wheel attached/connected to the wheelchair. To minimize the risk of tipping over, ensure you drive over obstacles perpendicularly so that both wheels of the wheelchair go over the obstacle at the same time. Ask for help whenever you are not sure you will be able to safely drive over any obstacle in your way.

Driving recommendations:

- Always start driving in 1st Speed Mode to maintain traction and reduce wear to tire treads.
- Reduce speed while making turns, and if possible, lean your body into the curve for better stability.
- Hold handlebars firmly with both hands while driving to maintain controlled steering and braking.
- Use ramps when available.
- Never drive the Rover Wheel up or down stairs, on uneven surfaces or on slopes of greater than 10 degrees.
- Adhere to local distracted driving laws. Always come to a complete stop and power off the Rover Wheel before using any mobile devices.
- Do not sit or stand on the Rover Wheel Adapter.
- Never operate the Rover Wheel in a drowsy or intoxicated state.

IMPORTANT

Always abide by local traffic rules, laws and regulations.

- Pay attention to your surroundings to avoid collisions with other vehicles or pedestrians.
- Maintain a safe distance from bicycles and pedestrians when riding.
- Stay under the recommended driving speeds when using the Rover Wheel:
 1. Limit your speed to 6 km/h (4mph) on the street, pavement and pedestrian areas.
 2. Limit your speed to 12 km/h (7mph) in bicycle lanes.

Rover Wheel Setup

Support Stand Installation

Connect the T-Bar Wheels to the top section of the Support Stand using 2 washers, and a nut on M5x16 screws. Then slide the top section (circled in red in Figure 1) into the mount block on the Rover Wheel, line up the holes, then use the included M5x16 screws to fasten the Support Stand to the Rover Wheel (shown in figure 2).

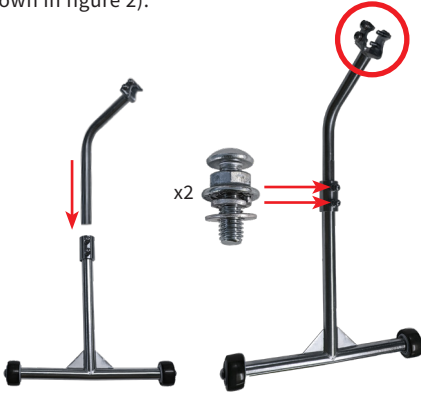


Fig. 1

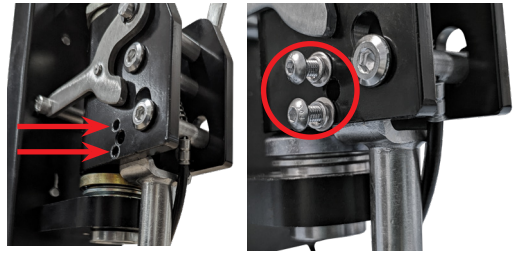


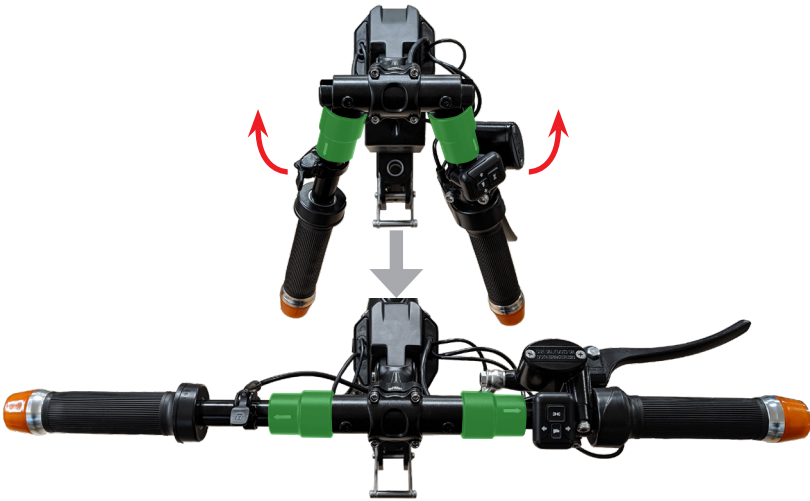
Fig. 2

Handlebar Setup

The Rover 12 and 16 feature folding Handlebars which help make transportation easier.

To set the handlebars into driving position: first clear any wiring from the hinge points, then pull the handles up to a horizontal position, the Handlebar Lock Sleeves should snap into position, locking the handlebars into the driving position.

■ Handlebar Lock Sleeves



To fold the handlebars: first slide the Handle Lock Sleeves away from the centre of the unit to unlock the handlebars, then rotate the handlebars into storage position

Brake Handle Adjustment

Use a 5mm hex key to loosen the two screws (circled in **red** in figure 3) on the front of the Brake Handle. Once these screws are loose, the Brake Handle should rotate freely.

Adjust the Brake Handle to the desired position.

Once the Brake Handle is in place, use the 5mm hex key to tighten the two screws (circled in **red** in figure 3).



Screen and Controls Adjustment

Rover 16 feature LCD screen which must be attached before operating the Rover Wheel. Follow these steps to install the LCD screen to the Rover Wheel Handlebars.

1. Position the LCD screen at the centre of the handlebars.
2. Close both clamps on either side of the centre pillar (shown in figure 3), use a 2.5mm Hex Key to tighten the screws until they engage the opposing side of the clamp.
3. Adjust LCD screen to the desired position for operation, then use a 2.5mm Hex Key to tighten the clamp screws until firmly in place.
4. Attach the control module clamp (shown in figure 4) to the left handle between the handle and reach bar disconnect switch, with the power button at the top (shown in figure 5).
5. Connect the LCD screen to the Rover by connecting the blue power cable (figure 6).

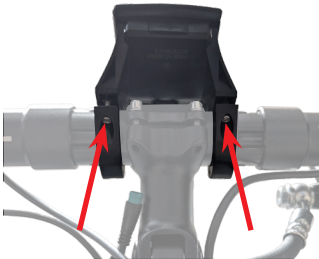


Fig. 3



Fig. 4

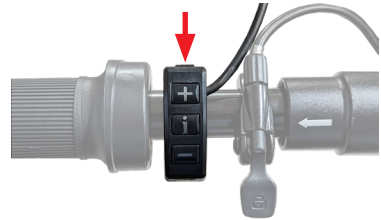


Fig. 5

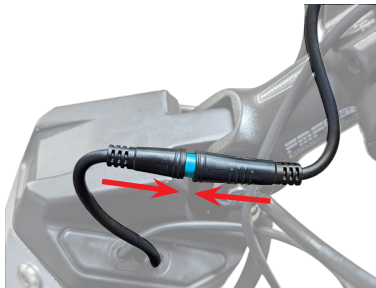
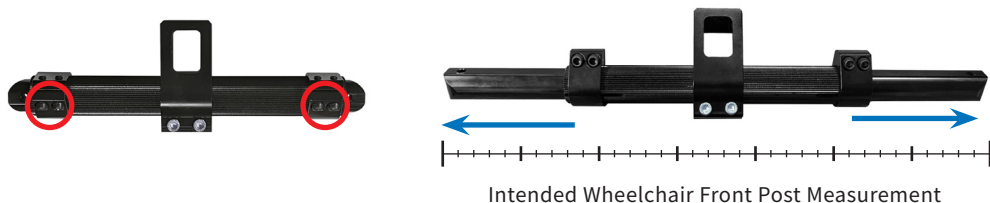


Fig. 6

Folding Frame Installation

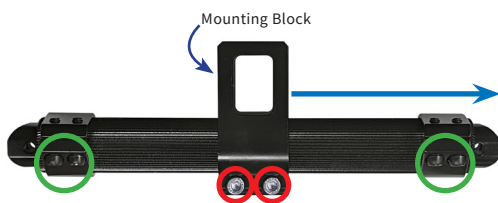
Folding Frame Installation

Use a 5mm Hex Key to loosen the screws in the clamps on the left and right arm of the spreader bar (circled in **red** below). Pull the clamp mounting bars out to the required width needed to reach both front posts of your wheelchair. Use a 5mm hex key to tighten the screws to hold the bars in place.



Folding Frame Angle Adjustment

Use a 5mm Hex Key to loosen the 2 screws on the Mounting Block (circled in **red** below), loosen the 2 screws fastening the side clamps (circled in **green** below), slide the side clamp off the bar, then slide the Mounting Block off the bar. Rotate the Mounting Block to the desired position, slide the Mounting Block back onto the bar, and tighten the screws.



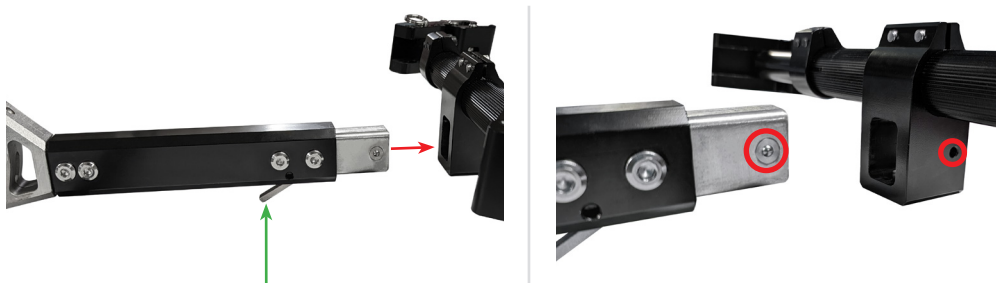
Mount Hardware Installation

Remove the Ringed Pins from the slots of the Clamps (circled in **red** below). Slide the Clamp onto spreader bar, choose from the 5 holes of the clamp and line them up with the Clamp Holes, this choice affects the height or distance of Spreader Bar from posts. Replace the Ringed Pins to lock the Mounting Clamps in place on the Spreader Bar.



Hook Bar Installation

Slide the Hook Bar into the Fixed/Folding Frame Mounting Block. The retractable steel bearings should slot into the holes in the side of the Mounting Block (circled in **red** below), and the release lever should facing the bottom.



Fixed Wheelchair Frame Installation

Clamping to Wheelchair Posts

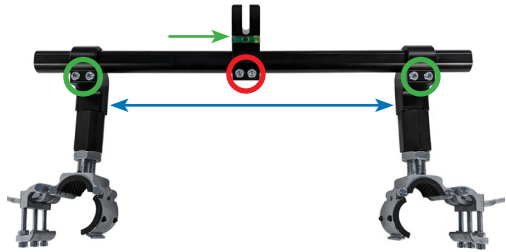
Loosen the clamps using the handles. Position the clamps to the desired position on the front of the wheelchair. The Hook Bar should be at the same height as the Latch Pin of the Rover Wheel.



Fixed Wheelchair Frame Adjustment

Use a 5mm Hex Key to loosen the 2 screws on the Mounting Hook Block (circled in **red** below), then slide the mount to the point of the spreader bar.

Loosen the 2 screws on each side clamp (circled in **green** below). Slide the side clamps to the required width (shown as **blue** arrow) required to attach to the front posts of your wheelchair. Attach to the front posts of your wheelchair. The top mounting hook should be approximately 30cm above the ground. Make sure to frames bar is level using the level (marked with **green** arrow below) when attaching the spreader bar.



Consider marking the location of the clamps on your wheelchairs posts to make setup easier for future use.

Connecting and Disconnecting Rover Wheel

Connecting Rover Wheel to Chair

Hold the handlebars with both hands, **tilt** the Rover Wheel down into position for the Latch Pin to **attach** to the Hook Bar.



Pull the Rover Wheel towards you until the Latch Pin **hooks** into the top of the Hook Bar.



When the Hook Bar is slotted into the Latch Pin, **push** the handlebars forward until the bottom Latch Pin **locks** into the Hook Bar.



Disconnecting Rover Wheel to Chair

To disconnect the Rover Wheel from the Hook Bar: Push the disconnect button (shown in figure 7) to unlock the bottom Hook Bar from the Rover.



Fig. 7

Pull the handlebars towards you until the Hook Bar is able to unhook from the Rover Wheel. Once the Hook Bar is disengaged, roll the Rover Wheel away from you until the Hook Bar is clear of the Rovers Wheels connection interface.



Note: If the lower hook bar will not release when pressing the disconnect button, you may need to release pressure by pushing the handlebars away from you.

Operation Instructions

⚠ Before operating/driving the Rover Wheel, please read carefully the **Safety Measures and Precautions** section of the Rover Wheel User Manual (page 6).

Powering On / Off

1. To turn the Rover Wheel ON, press and hold the button located on the top of the control module connected to the LCD screen (indicated with red arrow) for 3 seconds. The LCD display will show the status of the battery.
2. To turn the Rover Wheel OFF, press and hold power button again for 3 seconds, the LCD screen will turn off to indicate the unit is off.



⚠ Turn the Rover Wheel OFF during transport.

Driving

Always keep both your hands on the handlebar in order to maintain control.

1. Place both hands on the handlebars.
2. To start driving, twist the throttle on the right handlebar. Always start on Speed Mode 1 and slightly increase throttle twist to achieve desired speed in accordance to your surroundings, road and weather conditions.
3. To slow down and/or stop, release the throttle and squeeze the brake handles.
4. Keep track of your speed on the LCD display. Always follow local speed limits, traffic rules and regulations.

Cruise Control

Engaging: Turn the throttle until it stops, then release to engage Cruise Control which will maintain the top speed of the current "Speed Mode".

Disengaging: Turn accelerator, or pull the Brake Handle.

Safety Tips

- Drive in a safe and polite manner to avoid any collision with others.
- Adjust speed and distance with obstacles around you, and adjust driving based on surroundings and weather conditions.
- Slow down before changing direction and while turning to avoid falling and/or losing control.
- It is recommended to install reflectors and/or use the headlight on the Rover Wheel.
- Wearing bright colored clothing while riding at night or during poor visibility conditions can increase your visibility to other drivers or pedestrians.

⚠ Braking

To reduce speed or stop, pull on the brake lever located the left handlebar. Avoid sudden braking while turning to avoid loss of stability or control.



Charging Rover Wheel

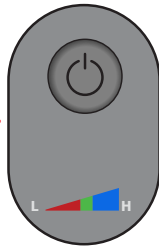
Charging the Rover Wheel

The current charge level of the battery of the Rover Wheel is displayed on the LCD screen (indicated with **red** arrow in picture). The battery level can also be checked while the Rover is powered off. Pressing the Battery Indicator button (located on the battery) will display a coloured LED. The colour of the LED indicates the battery charge level.

Note: Changes in terrain during a trip can reduce overall range, so it is recommended that you take some variance in range into account when planning your rides.



LCD Battery Charge Level Indicator



- Low
- Medium
- High



LCD Battery Charge Level Indicator

Charging the Battery

1. Turn the Rover Wheel OFF and remove the key.
2. Connect the charger to the charging port and the other end to a standard 120V outlet.

⚠ Important: To charge the Rover Wheel, use only the charger provided.

- A **red** light on the charger indicates that the Rover Wheel battery is charging.
- A **green** light indicates that the Rover Wheel battery is completely charged.

3. When charging is complete, disconnect the charger from the charging port.

⚠ The battery is integral to the function of Rover Wheel. Following Rover Wheel Maintenance recommendations will help ensure long-lasting service and durability.



Charge Port



48V Charger

Maintenance

Rover Wheel Maintenance

To ensure long-lasting service and to prolong the Rover Wheel lifespan, the following maintenance tasks and general precautions must be followed. It is strongly recommended to perform periodic maintenance and safety checks on the Rover Wheel by following these steps. Improper maintenance may cause failures which increases risk of injury and in some cases may invalidate the warranty.

Battery and Charging

1. **Avoid letting the battery discharge completely.** When the battery indicator located on the LCD indicates a low battery, charge the battery as soon as possible.
2. Only use the charger provided with the Rover Wheel.
3. Do not insert any metal or other objects into the charging port of the Rover Wheel, as this may cause unit damage and/or personal injury.
4. When not in use, the Rover Wheel should be kept in a dry environment at a room temperature in a range of 10°C to 25°C (50°F - 77°F). Using or storing the Rover Wheel outside of the recommended temperature ranges may shorten the battery life.
5. If your Rover Wheel is not going to be used for a long period of time, make sure it is still being fully charged every two months in order to avoid damage due to “deep discharge”.

Cleaning and Care

1. Ensure the Rover Wheel is completely powered OFF and the charger is unplugged before cleaning to prevent damage and the eliminate risk of electric shock.
2. The exterior frame and wheel can be cleaned using a soft cloth dipped in non-abrasive soap and water.
3. Do not use high pressure washers like a hose or water gun.
4. Never submerge the Rover Wheel under water.
5. Store the Rover Wheel indoors in dry conditions. Keeping the Rover Wheel in an outdoor environment in direct sunlight may cause the battery to overheat, the exterior finish to fade, or cause other damage or deterioration.
6. We recommend regularly performing maintenance on the Rover Wheel. Make sure fasteners are secure, check handlebar alignment, and keep the battery clean to keep your Rover Wheel safe and operating as intended. Please contact Symmetric Designs for any maintenance issues or problems you are unable to resolve with the provided instructions.
7. Do not disassemble the Rover Wheel's Power Unit. The device's internal structure is very precise and can be easily damaged unless handled by authorized service professionals. Symmetric Designs is not responsible for any personal injury or property damage caused by total or partial disassembly of the Rover Wheel's Power Unit.

Maintenance Schedule

Task	Frequency	Procedure
Exterior Clean	Monthly	With a cloth or sponge use soap and water to scrub dirty areas. Exercise caution around cables. We recommend you do not use a pressure washer to clean the unit.
Wheel Tread Check	Pre-Trip Inspection	Check wheel tread, and remove any rocks or debris stuck in the tread.
Brake Pad Wear Check	Every 5-6 Months	Test braking by squeezing the brake handle. For more comprehensive testing consult an authorised dealer or service provider.
Professional Inspection	Yearly	Have an authorised professional service provider perform a check on the Rover Wheel.
Replace Tires	When Necessary	Have an authorised professional service provider replace the Rover Wheel tires.
Check fastening screws	Weekly	Perform a visual inspection for damage to fasteners, wires, joints, LCD screen and handles. Ensure fasteners are tight.

Troubleshooting Guide

The Rover Wheel will not power ON:

- Make sure the key is turned to the ON position before pressing the red power button.
- Ensure that the battery pack is fully charged (charger should show a GREEN light).
- Ensure that the battery pack is properly and fully seated in the Rover Wheel frame.

The front wheel slips/spins in place:

- The front wheel is too far from your wheelchair. Adjust the Rover Wheel so that the front wheel is as close as possible to the footrest. The Power Unit should be nearly vertical when the Rover Wheel is attached to your wheelchair.
- Check the tire tread; replace if too worn out. Always start slow, in Speed Mode 1.

Warranty Terms and Conditions

Warranty Terms

- Unit warranty starts from the day of delivery unless specified otherwise.
- This warranty does not include shipping or transportation costs required for repairing the device.
- Symmetric Designs reserves the right to charge the owner for any costs incurred from defective parts due to damage to the Rover Wheel not covered by this warranty.
- When calling your service provider or Symmetric Designs with service or warranty issues, please provide the serial number (S/N) and date of purchase of your Rover Wheel.

Warranty Exclusions (excluding factory defects):

- Tires
- Brake Pads and Cables
- Handgrips
- Wear-and-tear from normal operation and use.



The warranty period for all structural parts is two (2) years, and one (1) year for the battery, motor, and electronics, beginning at the date of delivery. Replacements or repairs completed within the original warranty period by an authorized service provider will have an additional one-year warranty from the repair date.

Warranty Conditions

Symmetric Designs will not be responsible for any damage that may arise as a result of improper Rover Wheel usage or storage. The warranty may be invalidated if Symmetric Designs believes any of the following has taken place:

- The user has not followed the recommended Rover Wheel maintenance outlined in this manual.
- The internal structures of the Rover Wheel have been disassembled, installed or repaired by the user or an unauthorized third party.
- The Rover Wheel has been damaged as a result of accidents caused by disregarding the safety measures and precautions in this manual, such as speeding or driving over obstacles.
- The device has undergone any modifications or repairs that were not done by a registered service provider.
- The Rover Wheel has been damaged due to negligence or improper use.
- Any faults to the Rover Wheel that may have been caused by poor storage conditions.
- The device was damaged while undergoing transportation or improper handling.
- Any other faults not caused by the Rover Wheel's manufacturer own design or technology.

Warranty Claim Process

Contact your authorized dealer, or email Symmetric Designs directly, include a detailed description of the problem you are facing, and the serial number of your Rover Wheel. Please attach photos/videos of the problem to help our support team diagnose the issue.

Warranty Registration

Warranty Registration Form

Please fill out the information below.

Name: _____

Address: _____

City: _____

State / Province: _____

Zip / Postal Code: _____

Email: _____

Phone Number: _____

Rover Wheel S/N: _____

Vendor/Dealer: _____

Date of Purchase: _____

Keep a copy of this registration form for your records and send the completed form within 30 days of receipt of your Rover Wheel by mail, or email a picture of this page, or scanned copy to: sales@symmetric-designs.com

To submit your warranty registration online:

Scan the QR code below, or go to www.symmetric-designs.com/rover-warranty, fill out the warranty registration form, and submit it to Symmetric Designs Ltd.



Trip Log

Date	Battery Charge		Odometer Reading		Destination
	Start	End	Start	Finish	

Date	Battery Charge		Odometer Reading		Destination
	Start	End	Start	Finish	

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