



UPnRIDE Powered Wheelchair

User Guide

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Read the User Guide carefully before attempting to use your wheelchair.

Alterations in construction, electronics or other components without the written authorization of UPnRIDE Robotics will invalidate the warranty and product liability.

Dear UPnRIDE user,

The UPnRIDE™ stand-up power wheelchair is intended for medical purposes to provide mobility to persons restricted to a sitting position. The product changes people's position from Sitting to Standing and Standing to Sitting but also any position in between. The product provides indoor and outdoor mobility.

As an UPnRIDE customer, we invite you to join us in our ongoing efforts to improve the health and quality of life of people like yourself. Your feedback and suggestions are invaluable.

Sincerely,

Oren Tamari, CEO

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Note:

All specifications in this manual are subject to change without notice.

Important information about this User Guide

Before you begin using your UPnRIDE standup powered wheelchair (hereafter “wheelchair”, it is important that you read and understand the operating instructions and safety information contained in this user guide.

These operating instructions are intended to acquaint you with the functions and characteristics of this wheelchair and how you can use it in the best manner possible. The instructions also contain important safety and maintenance information, as well as a description of possible problems that can arise while and from using the wheelchair.

Always keep this guide handy with your wheelchair, since the need for important information can arise concerning its use, safety and maintenance.

It is also possible to obtain information about our products from our Internet page (www.UPnRIDE.com).

All information, pictures, illustrations and specifications are based upon the product information that was available at the time that this guide was released. Pictures and illustrations that are found in these operating instructions are representative examples and not intended to be exact depictions of the various parts of the wheelchair.

We reserve the right to make changes to the product without prior notice.

If you are visually impaired, this document can be viewed in PDF format at www.UPnRIDE.com or alternatively ordered in large text.

Limited Warranty

1. UPnRIDE Robotics Ltd. (the "Company") hereby warrants to the original purchaser of UPnRIDE 1.1 (the "Customer" and the "Product", respectively) that during the Warranty Period (as defined in Section 2 below), subject to normal wear and tear and the terms set forth herein, when used as intended and after training by the Company or authorized representative whereof, without unapproved modifications, following all Company's instructions and requirements and when fitted by or under the direct supervision of a certified/licensed practitioner who meets all Company's product-specific training requirements for the Product, the Product shall be free of defects in material or workmanship.
2. The "Warranty Period" as used herein (and except for the battery, as set forth in Section 7 below) shall mean the period commencing on the date of delivery of the Product to the Customer and terminating 24 (twenty four) months thereafter (the "Initial Period"), except for the battery in which the termination is 6 months; *provided however* that the Warranty Period shall promptly terminate if the Customer shall not have sent to the Company's local dealer (the "Dealer"), the details of which are indicated on the back of this page, for a free service check at 12 months from the date of purchase, or at any other time instructed by the Company. The Warranty Period may be extended for fee beyond the Initial Period for up to 5 years (i.e., by additional three years or less). The Customer is encouraged to contact the Dealer and receive a quote for such extended period.
3. If the Company finds the Product to be defective as a sole result of defects in material or workmanship - then, during the Warranty Period, upon receipt of due notice from the Customer and subject to the Customer's full performance of his/her obligations hereunder – the Company shall repair or replace the Product, or parts thereof, or refund part or all of the original purchase price thereof. The option to repair, replace or pay a refund shall be at the Company's sole discretion.
4. For goods or essential components manufactured by a third party and supplied by the Company in connection with the Product (if any), the Company's warranty is limited to the warranty provided by said third party.
5. The remedies hereby provided shall be the exclusive and sole remedies of the Customer.
6. This warranty shall only apply to the Customer and with regard to Product, and this warranty is not transferable without the prior written consent of the Company.
7. This warranty does not cover battery charger, straps and padding and the Company shall not be held liable for any of the following damages:
 - ;
 - 7.1. damages resulting from normal wear, damages caused, wholly or partially, due to abuse, operation beyond capacity, substitution of parts not approved by The Company, misuse, negligence, inadequate storage, installation, application and/or maintenance as recommended by the Company from time to time and/or unauthorized repairs or alterations of the Product and other reasons beyond the Company's control;
 - 7.2. damages caused by accident, natural disasters (such as fire, water damage, floods, lightning, etc.), force majeure, acts of war, sabotage or any unforeseen circumstances;
 - 7.3. damages caused during shipment (responsibility for safe delivery should be assumed by the freight carrier at the time of shipment and claims for such damages must be filed with the freight carrier or insurer); or
 - 7.4. indirect, incidental, consequential or any other damages of any nature arising out of use of the Product or inability to use it, including, *inter alia*, damages due to late delivery or non-delivery, damages to property, loss of profits, injury to goodwill, inconvenience, etc., and whether such damages are claimed to arise from breach of contract, in tort, the theory of product liability or otherwise; reservation is solely being made for the Company's statutory liability due to material breach of an essential contractual obligation, express representations, wrongful intent or product liability acts.
8. Any claim under this warranty must be made in writing and posted to the Dealer within thirty (30) days from the date of the discovery of the defective Product and/or parts, and it must reach the Dealer not later than thirty (30) days from the end of the Warranty Period. All defective Product and/or parts thereof must be retained until receiving further instructions from the Company. The Company may demand the shipment to its facilities, of the Product claimed to be defective for assessment and evaluation, prior to repairing, replacing or paying a refund.

9. **SUBJECT TO APPLICABLE LAW, WHICH MAY NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THIS WARRANTY CONSTITUTES THE EXCLUSIVE WARRANTY MADE BY THE COMPANY FOR THE PRODUCT AND IS IN LIEU OF ANY OTHER WARRANTIES, COMMITMENTS AND/OR AGREEMENTS, EXPRESS OR IMPLIED, MADE, OR ALLEGEDLY MADE, BY THE COMPANY OR ANY OF ITS EMPLOYEES, AGENTS, REPRESENTATIVES OR DEALERS, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED AND EXCLUDED BY THE COMPANY. IN NO EVENT SHALL THE COMPANY'S LIABILITY OF ANY KIND INCLUDE ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF THE COMPANY SHALL HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE.**
10. **Unless otherwise agreed in the Agreement, all matters relating to this warranty shall be exclusively governed by the laws of the State of Israel, regardless of any rules relating to the conflict of laws which may apply; and the competent courts in Tel Aviv, Israel shall have sole and exclusive jurisdiction with regard to any dispute related to this warranty.**

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1. Introduction

1.1. UPnRIDE™ Wheelchair

The UPnRIDE™ powered wheelchair enables most wheelchair users to be mobile in both standing and sitting positions, in most urban environments (indoor and outdoor).

In the sitting position, the wheelchair operates like a conventional motorized wheelchair with the additional benefit of an auto-balancing system that automatically maintains the balance of the user while driving on inclines.

The wheelchair can also raise the user up to a full upright position. Full upright posture not only enables a more active lifestyle and gives the user the ability to be at eye level with others who are standing, but also has the potential to improve some of the secondary medical conditions associated with the extreme sedentary lifestyle that paralysis imposes.

While in the upright position with the auto-balancing system on, the user remains stable while driving.

1.2. Purpose of this User Guide

The purpose of this user guide is to teach users and their primary caregivers how to safely and effectively operate the wheelchair.

The intended occupant should be capable, physically and cognitively, of operating a power wheelchair independently and weigh maximum 120Kg.

1.3. Spare Parts & Accessories

Spare parts and accessories must be ordered through your UPnRIDE dealer. The expected service life of this product is 5 years.

1.4. Technical support

In the event of technical problems, you should contact your UPnRIDE dealer.

Always state the seats serial number to ensure that the exact information is provided.

1.5. Scrapping

Contact your UPnRIDE dealer for information about scrapping agreements in force.

2. Safety

2.1. Safety Symbols

Throughout this guide the following labels are used to draw the reader's attention to items relating to safety and other important information:



Warning

A safety issue which if ignored could cause serious physical injury and/or irreparable property damage, including damage to the wheelchair.



Caution

A safety issue which if ignored could lead to property damage, including damage to the wheelchair that will invalidate the warranty.



System Limitations

A limitation of the wheelchair that affects certain actions or operations that the user might want to perform.



Note

An important item that is not related to safety, that the reader might otherwise overlook.

2.2. Main Power Switch

Each battery pack has its own main power switch and circuit breaker. Press Off to disengage the battery (when not using the wheelchair for more than one day); press on to reengage the battery.

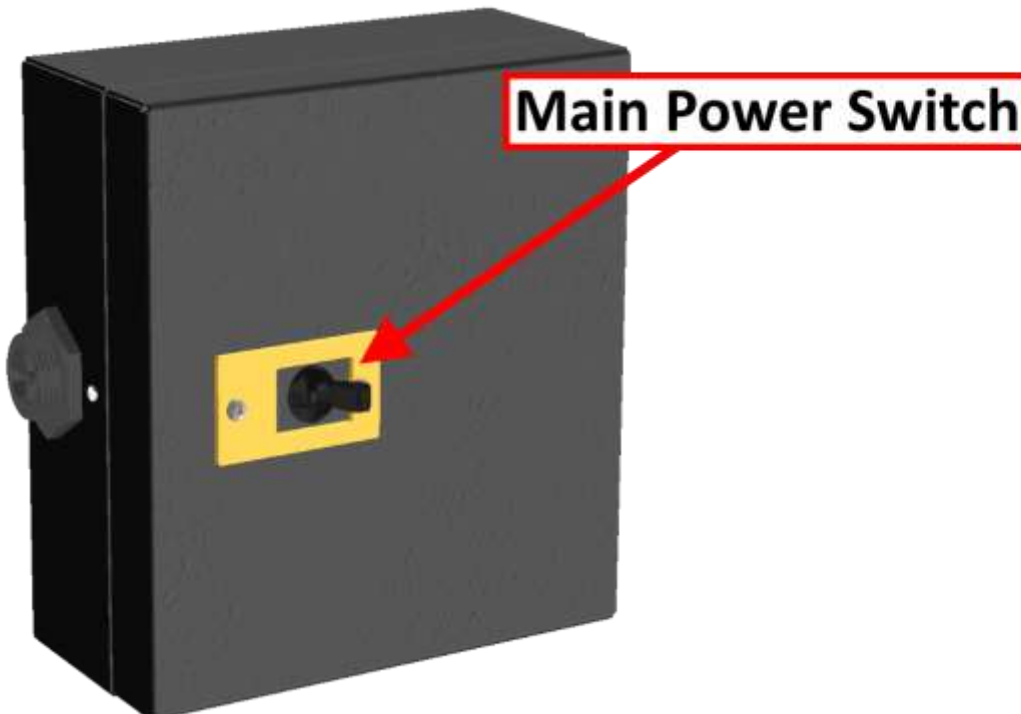


Figure 2-1: Main Switch

2.3. General



Warning

Consult your healthcare provider before changing the seat position or making any other adjustment. Some adjustments may reduce performance or safety, or may not be appropriate for your needs. Your wheelchair was configured specifically for your needs as prescribed by your healthcare provider.



Warning

Do not use the stand-up function for the first time without professional supervision. Practice using the stand-up function with assistance, until you are comfortable with it before using it on your own. Incorrect use may both injure the user and damage the wheelchair.

The wheelchair is a motorized vehicle and special care must be taken when using it. Incorrect use may both injure the user and damage the wheelchair. In order to reduce these risks, read and follow all safety instructions, operating instructions and warnings in this manual before operating your wheelchair.

UPnRIDE Robotics Ltd. is not responsible for personal injuries or property damage resulting from reckless or improper use of the wheelchair or from failure to follow the warnings, cautions and instructions in this user guide.

If the wheelchair is not performing as expected in any manner or if you suspect that something is wrong, shut down the wheelchair and get in touch with your service contact or UPnRIDE Robotics Ltd. for more information.

2.3.1. Before Operating the Wheelchair

- Check the following items to ensure that no damage occurred during shipping:
 - All parts are included in the delivery, including the operating instructions that are part of this document. If something is missing, contact your supplier or UPnRIDE Robotics Ltd. for more information as soon as possible.
 - No delivery-related or other damages have occurred to the wheelchair, seat and its accessories. If something has been damaged or in some other manner appears to be incorrect, contact your supplier or UPnRIDE Robotics Ltd. for more information as soon as possible.
- Fully charge the batteries.
- Check the condition of the tires.

2.3.2. Warnings and Precautions

2.3.2.1. Modifications



Warning

Do not attempt to dismantle, open, service, or modify the device, accessories, or charger. Doing so could present the risk of electric shock or other hazard.

Any evidence of any attempt to open and/or modify this device, including removal of any of the labels, will void the UPnRIDE Limited Warranty.



Warning

Do not make any unauthorized modifications to the wheelchair. All modifications to the wheelchair MUST be performed by a qualified service technician who has been authorized by UPnRIDE Robotics Ltd. to make the modifications.

Unauthorized modifications to the wheelchair may increase the risk of personal injury and property damage, including damage to the wheelchair. Modifications made by someone other than an authorized service technician will void the UPnRIDE limited warranty.



Warning

Adjustment of Seat Position

Adjusting seat dimensions (for fitting to user) may only be performed by an authorized service

provider. See the service manual for more information.

2.3.2.2. [Transport](#)



Warning

Transport

The wheelchair **MUST** be transported in or with transport solutions that have been approved by the Company for this purpose.

- Always obtain confirmation from the transporter that the vehicle is suitably designed, insured and equipped to transport a person in a wheelchair.
- Check that the wheelchair is properly secured and that the wheels are connected to the motor. Refer to section *6.10: Rolling Free of the Motor*. Failure to properly secure the wheelchair can cause serious injury to persons in the vehicle and serious damage to the vehicle.
- Do not carry passengers on the wheelchair. Doing so can lead to personal injury and damage to the wheelchair.
- The harness, foot straps, knee supports and hip belt are designed only to secure the user in the wheelchair. These are not meant to act as safety belts while sitting in the wheelchair in a van or other moving vehicle.

2.3.2.3. [Excessive Surface Temperatures](#)



Warning

- Avoid physical contact with any motor of the wheelchair. The motors are continuously in motion during use and can reach high temperatures. After use, the motors will cool down slowly. Physical contact may cause burns.
- Ensure that the wheelchair is not exposed to direct sunlight for extended periods of time. Certain parts of the wheelchair, such as the seat, the backrest and the armrests, can become hot if exposed to the sun for too long. This may cause burns or skin irritation.

2.3.2.4. *Transfer*



Warning

Transfer into and out of the wheelchair

Follow the instructions below whenever transferring a user into or out of the wheelchair. Failure to follow these instructions can result in personal injury or property damage, including damage to the wheelchair.

- Before transferring into or out of the wheelchair, make sure that the wheelchair is turned off. This means that: the controller is turned off, the automatic balancing system is off and that the wheels are engaged with the motor (that locks the wheels).
- Take every precaution to reduce the distance between the wheelchair and the user; overextending this distance can cause the user to overexert, lose balance, or fall.
- Transfer in the presence of or with the assistance of an attendant. Use caution when bending or reaching.
- Do not use the foot plate or armrests as supports when transferring into or out of the wheelchair. Excessive force may cause them to give way, resulting in personal injury or property damage, including damage to the wheelchair. The footplates and armrests are not designed for weight-bearing.
- Follow the specific advice of your doctor or therapist regarding how best to transfer in accordance with your health and everyday life.
- Use caution when bending or reaching.
- Never use the joystick as a handhold or point of support.

2.3.2.5. [Securing Straps](#)



Warning

Always wear harness and knee supports (and where relevant the hip belt, and/or foot straps) while in the wheelchair. Failure to wear these may lead to personal injury.

If signs of damage or wear appear, replace immediately through your UPnRIDE dealer.

2.3.2.6. [Passengers and Baggage](#)



Warning

Weight Limitations

Never allow users who exceed the maximum allowable user weight to operate the wheelchair. Excess weight can degrade maneuverability and stability, which may lead to personal injury and damage to the wheelchair. It can also void the warranty.

- The maximum user weight for the wheelchair is set forth in chapter 11: Specifications of the supplied User Guide.
- The maximum user weight includes the user and any personal effects.



Warning

Passengers

Do not transport passengers in the wheelchair, regardless of the age of the passenger.



Caution

Pulling and Hanging Objects

Do not use the wheelchair to pull any kind of objects and do not hang excessive weights on the backrest. Failure to heed this warning could lead to personal injury and property damage, including damage to the wheelchair.

2.3.2.7. [Operation - General](#)



Warning

Individuals with severe disabilities who require close attention in their daily life (such as cognitive impairment and ventilator assisted breathing), must be accompanied by a caregiver when they use the wheelchair.

**Warning**

Individuals who suffer from life-threatening illnesses (such as illnesses of the cardio-vascular system and respiratory difficulties) must consult a physician prior using the wheelchair.

**Warning**

Using the wheelchair requires healthy bone system. Potential users should consult with a physician prior using the wheelchair.

**Warning**

Individuals, who have physical difficulty fitting into the wheelchair (for example due to size or weight) should avoid using the wheelchair.

**Warning**

Individuals, who need a close attention in their daily life, or are not allowed crossing a road unattended, must not use the wheelchair without an appropriate adult guardian.

**Warning****Operation – Disengaging from the Motor**

Do not operate the wheelchair with the motor disengaged.

- Disengaging the wheelchair from the motor while on an incline could cause the wheelchair to roll on its own, causing injury and property damage, including damage to the wheelchair.
- The wheelchair is not designed to drive by being pushed manually by an assistant.
- The only time that you should disengage from the motor is for the purpose of moving the wheelchair when the user is **NOT** seated in the wheelchair. Once the wheelchair has been moved to the required location, immediately re-engage the wheelchair to the motor.

**Warning****Driving with Seat Lift/Seat Tilt/ Backrest Recline**

Make sure that nothing gets stuck between the chassis and the seat when the seat lift/seat tilt is operated. Driving with a foreign object stuck between the chassis and the seat while in one of these functions may lead to personal injury and/or damage to the wheelchair.

 **Warning****Alcohol and Medication**

Do not operate your wheelchair under the influence of alcohol.

- Consumption of alcohol may impair your ability to operate your wheelchair safely.
- Some physical limitations or use of medication, either prescribed or over-the-counter, may limit your ability to operate your wheelchair safely. Consult your physician about your physical limitations and medications.

 **Warning**

Keep body parts away from areas of the wheelchair that are marked with the Crush Hazard label shown below.

 **Warning**

Do not touch or access motorized parts while the position switches are in use. Failure to heed this warning can lead to personal injury.

 **Warning**

The user must be completely dressed while using the *UPnRIDE™* wheelchairs.

 **Caution**

Never leave the wheelchair in the standing position while not in use, with power off or when the battery is low. Failure to heed this warning could lead to property damage, including damage to the wheelchair.

 **Caution****Outside Operation**

Do not operate the wheelchair on roadways. Obey all local pedestrian rules and be aware that vehicle drivers may have difficulty seeing you.

 **Caution**

Dry off the wheelchair and all wheelchair parts once you are in a dry location. Failure to do so may damage the wheelchair

System Limitations

Driving range

The driving range stated in chapter 11: *Specification* represents the theoretical continuous driving range when testing the wheelchair according to ISO 7176-4. This test is performed under ideal conditions, on a horizontal plane. The actual driving ranges will vary depending on battery, tire selection and driving conditions. Driving frequently on slopes, rough ground or frequently climbing curbs can also reduce the driving range.

Warning

Emergency Stop

Do NOT use the power button to stop the wheelchair, except in an emergency. Using the power button to stop will cause the wheelchair to stop abruptly and may cause personal injury.

If the wheelchair begins to move in an unexpected manner, immediately release the joystick to stop the wheelchair from driving. If the wheelchair is in the upright (standing) position, return it to the sitting position, after you release the joystick, lower the wheelchair.

Warning

Turning

Do not make sharp turns or turn at high speeds. Sharp turns and turning at high speeds may cause the wheelchair to tip over and may result in personal injury.

The following actions increase the possibility of tipping:

- Turning at a high turning speed
- Making a sharp turn
- Driving on an uneven surface
- Making an abrupt change in direction
- Driving from an area of low traction, such as a lawn, to an area of high traction, such as a sidewalk

To protect against tipping, personal injury and property damage: reduce speed and reduce the sharpness of your turns. If the wheelchair is in the upright (standing) position, lower it to the sitting position.

2.3.2.8. [Operation – Standing/Sitting and Seat Adjustment](#)



Warning

Pinch Warning



Keep hands and fingers clear of all moving parts on the wheelchair. This is especially important when operating the stand-up and seat down features.

2.3.2.9. [Operation – Road Conditions](#)



Warning

Make sure that the position of the largest is high enough that it will not touch the ground during wheelchair use, especially in an incline.



Warning

Driving Over Curbs

Do not drive the wheelchair over any curbs or edges higher than indicated in chapter 11: Specification.

- When driving over a curb or similarly elevated surface, cross the surface at a 90° angle (perpendicular). Crossing such surfaces at any other angle may cause the wheelchair to tip over.
- Reduce speed when driving on uneven terrain or soft surfaces.
- Do not use the wheelchair on stairs or escalators. Always use an elevator.
- Do not drive the wheelchair on hazardous surfaces (such as steep slopes, uneven terrain or soft surfaces) in the standing mode.
- When feeling unsafe (for example when riding on a cobblestone road or similar surface) during usage, go back to sitting position or turn off the automatic balancing.
- Do not lift or move the wheelchair by any of its removable parts. Doing so could lead to personal injury and property damage, including damage to the wheelchair.



Warning

Do not drive the wheelchair on side slopes steeper than indicated in chapter 11: *Specification* if you can avoid it. There is a risk of tipping.

- Changing the seat from the default location changes the center of mass and increases the risk of tipping. Therefore, use the Seat Elevator, Sit to Stand and Seat Forward functions with extreme caution and at low speed.
- Avoid driving on ramps that do not have proper edge protection.



Warning

When driving over critical slopes, it is recommended that the user be in sitting position. When driving over critical slopes, the maximum speed of the wheelchair slows down.

It slows down to 75% of the max speed under the following circumstances:

- Slope is steeper than 7° while in the sitting position.

The wheelchair slows down to 50% of the maximum speed under the following circumstances:

- Slope is steeper than 11° while in the sitting position.
- Slope is steeper than 4° while in the standing position.

The wheelchair slows down to 25% of the maximum speed under the following circumstances:

- Slope is steeper than 7° while in the standing position

If the surface is too bumpy, consider turning-off the balancing system.

Note that when driving over critical slopes, it is recommended that the user be in sitting position.



Caution

Uphill

- Avoid sudden stops or starts.
- Stop by releasing the joystick rather than by turning the power off. Turning off power while the wheelchair is in motion will cause the wheelchair to stop suddenly.
- Be sure to keep all recommended positioning belts securely fastened at all times.
- Try to keep moving at a steady speed. Stopping and starting the wheelchair while moving up an incline makes the wheelchair more difficult to control.
- Do not drive up slopes with a gradient greater than indicated in chapter 11: *Specification*. There is a risk that the wheelchair will not maneuver safely.
- Do not drive up ramps that are not equipped with proper edge protection along the sides of the ramp to prevent the wheelchair from falling off the ramp.
- Do not drive up a hazardous incline, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven.
- Lean your body forward and avoid changing direction abruptly.
- Drive straight up the slope. Driving at an angle up an incline increases the risk of tipping or falling.
- Never attempt to traverse or make turns on a slope.
- Do not drive up a hazardous slope, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven.

 **Caution****Downhill**

- Avoid sudden stops or starts. Such a stop might cause a risk of destabilization of the wheelchair.
- Stop by releasing the joystick rather than by turning the power off. Turning off power while the wheelchair is in motion will cause the wheelchair to stop suddenly and risk destabilization.
- Select the slowest speed range, and proceed with caution.
- Driving downhill can shift the user's center of gravity forward, hence prefer moving in a sitting mode.
- If the wheelchair rolls faster than desired, stop the wheelchair by releasing the joystick and begin descending again at a slower speed.
- Be sure to keep all recommended positioning belts securely fastened at all times.
- Do not drive down slopes with a gradient greater than indicated in chapter 11: *Specification*. There is a risk that the wheelchair will not maneuver safely.
- Do not drive down ramps that are not equipped with proper edge protection along the sides of the ramp to prevent the wheelchair from falling off the ramp.
- Do not drive down a hazardous slope, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven.
- Lean your body backwards. It is also important to keep speed and direction under control.
- Drive straight down the slope. Avoid traverse movement or making turns on a slope.
- Do not drive down a hazardous slope, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven.

 **Caution****Uneven Surfaces**

Pay close attention and adjust the position of your seating system when driving on uneven surfaces, slopes or climbing obstacles. For example, confirm you have enough footplate clearance before climbing an obstacle.

 **Caution****Driving on a Loose/Soft Surface**

Make sure that the batteries are fully charged when driving on loose or soft surfaces, such as: gravel, sand or thick carpeting. When the wheelchair is set to its lowest speed and the batteries are not fully charged, these surfaces can limit navigability.

2.3.2.10. Maintenance



Warning

Maintenance and Service

Carry out only the service and maintenance which are stated in chapter 8: *Maintenance*. All other service and maintenance including programming of the control system must be performed by a qualified service technician authorized by UPnRIDE Robotics Ltd. Incorrect settings can result in unsafe operation of the wheelchair and can cause the wheelchair to become unstable or uncontrollable. Such modifications may also void the wheelchair's warranty.

- Do not use parts or accessories not authorized by UPnRIDE. Use of unapproved "aftermarket" accessories and parts may cause changes in the wheelchair, which may make the wheelchair unstable or uncontrollable. Use of unapproved accessories and parts may also void the warranty.
- Connecting any unapproved electrical or electronic devices to the wheelchair's electrical system can cause damage to the wheelchair and cause the wheelchair to become uncontrollable or drive erratically. Such use may also void the warranty.
- The wheelchair is heavy and contains many moving parts, which means that the risk of being caught between them (pinching) is always present.



Warning

Unexpected Wheelchair Behavior

If in any way the wheelchair is not behaving as expected or if you suspect that something is wrong: Stop driving as soon as possible, shut off the wheelchair and contact your service contact or UPnRIDE for more information.

- It is also most important that UPnRIDE be informed if the wheelchair and its accessories have been subjected to transport damages, damages during driving or damages due to another cause as soon as possible after the event.
- There is a risk that the wheelchair and its accessories may no longer be used in a safe and secure manner.



Warning

After a Collision

In the event of collision or impact with walls, doors, or other objects wheelchair, check that all parts of the wheelchair are undamaged before reusing the wheelchair. Not doing so may lead to personal injury.



Warning

The wheelchair must be empty while performing system homing. Failure to heed this warning can lead to serious bodily harm.

2.3.2.11. *Storage*



Warning

Storage

- Shut off the power to the wheelchair and its accessories when not being used.
- Store the wheelchair so that access for unauthorized individuals is avoided.
- Never store the wheelchair in a room in which condensation can arise (mist or dampness on the surfaces). For example, do not store in pool areas, laundry rooms, or similar rooms.
- If you are unsure as to how your wheelchair and its accessories should be properly stored, contact your supplier or UPnRIDE for more information.

2.3.2.12. *Environmental Conditions*



Warning

Moisture

Protect your wheelchair from exposure to any type of moisture, including rain, snow, or washing. Exposure to moisture can cause the wheelchair to short-circuit, catch fire and cause personal injury or property damage.

- Do not operate your wheelchair if it has been exposed to moisture until it has dried completely.
- If any of the shrouds or the joystick boot has cracks or tears, they must be replaced immediately. Failure to do so can allow moisture to enter the electronics and cause personal injury or property damage, including fire.



Warning

Icy or Slippery Conditions

Do not operate your wheelchair in icy or slippery conditions. These conditions can lower the performance and safety of your wheelchair and lead to accident, personal injury and property damage, including damage to the wheelchair.



Warning

Close Proximity to Oxygen

Extreme care should be exercised when using oxygen in close proximity to electric circuits and other combustible materials. Contact your oxygen supplier for instruction in use of oxygen.

 **Caution****Driving in Extreme Climate Conditions**

Avoid using the wheelchair outdoors during severe cold, heavy rain, thick snow or other adverse weather conditions. The wheelchair is designed to withstand most adverse weather conditions, however it is recommended that you minimize the risk of being caught in difficult situations.

2.3.2.13. Batteries **Warning****Charging the Batteries**

- Do not drive the wheelchair when the charger is connected.
- Use only the UPnRIDE charger that is supplied with the wheelchair.
- Always charge the wheelchair in a well-ventilated room.
- Do not charge in a bathroom or wet room.

 **Warning****Battery Disconnect**

Do not disconnect batteries or turn off the main power, except before air transport as described in section 9.2: *Air Transport*. Failure to observe this condition can result in burns or a fire hazard.

The Company accepts no liability for losses or harms of any kind arising from failure to comply with this condition.

 **Caution****Recycling the Batteries**

Dispose of used or broken batteries in an environmentally correct manner in accordance with locally applicable recycling directions.

3. UPnRIDE Overview

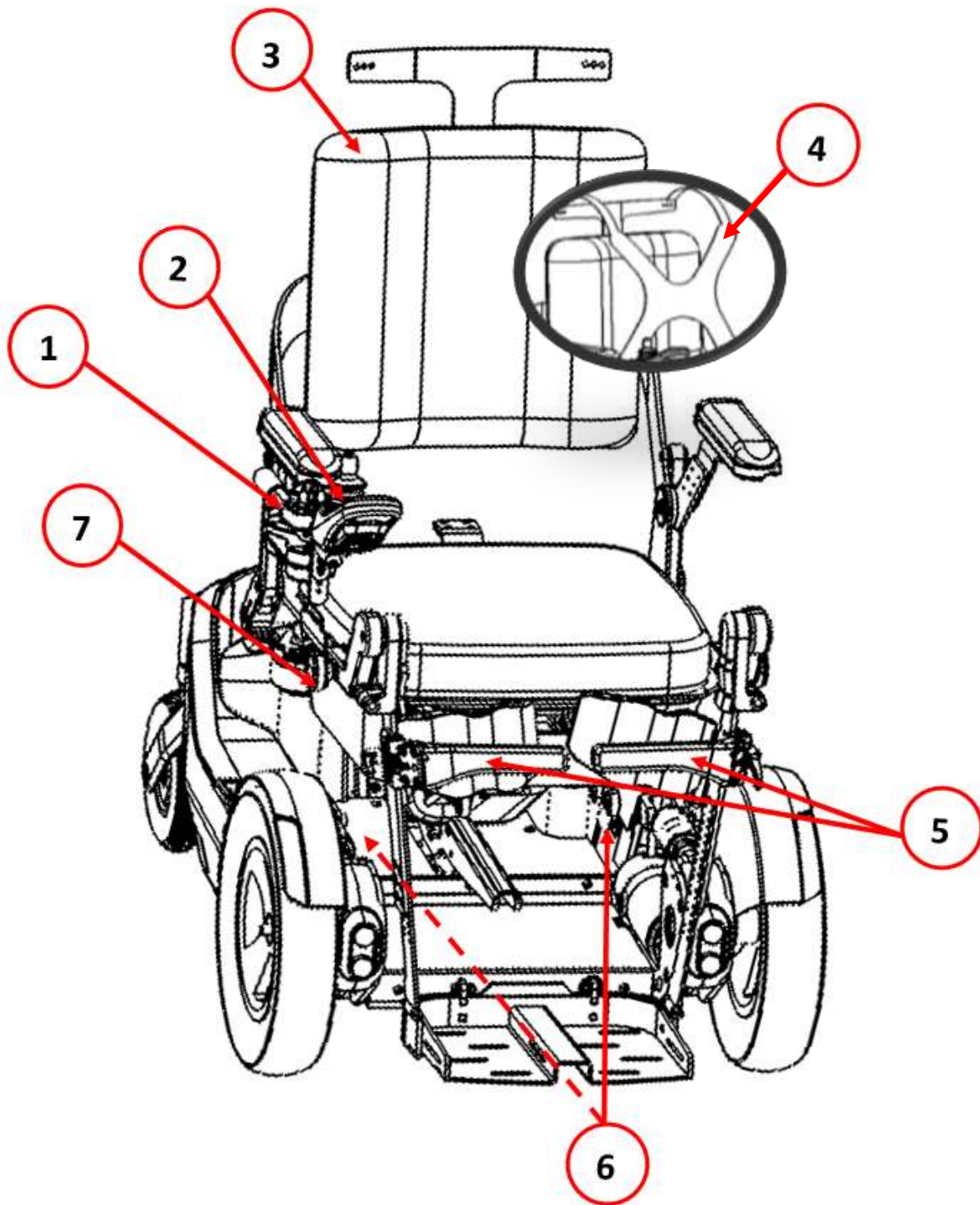


Figure 3-1: Overview of the Wheelchair

Table 3-1: Legend for the Overview of the Wheelchair

No.	Name	Description
1	Positioning switches	The wheelchair has eight position modes that are controlled by a toggle button switch and four positioning switches. Each positioning switch can control two different positioning functions, depending on the position of the toggle button.
2	Joystick & R-net Control Panel with LCD Display (Controller)	<p>The primary function of the joystick is to control the speed and direction of the wheelchair. The further you push the joystick from the center position the faster the wheelchair will move. When you release the joystick the brakes are automatically applied.</p> <p>The controller turns the wheelchair on and off. It also contains a number of controls such as driving profile and turn signals that are described in section 6.3 <i>R-net Control Panel with LCD Display</i>. The LCD display on the controller is described in detail in section 7 <i>R-net Control Panel Guide</i>.</p>
3	Back support	This supports the user's back.
4	Harness	This protects and supports the user. When in the upright position, it supports a large portion of the user's weight.
5	Knee supports	These protect and support the user. When in the upright position, they share support of the user's weight.
6	Main power switches	<p>The battery pack has its own main power switch that controls the main power supply to the wheelchair. The switch should be engaged in order for the wheelchair to operate properly. Refer to <i>Figure 2-1</i>.</p> <p>If the wheelchair has two battery packs, the switch on both batteries should be engaged. If one switch disengages, you should notify your UPnRIDE distributor immediately.</p>
7	Main power charging socket	This socket is for charging the battery that provides power to the wheelchair.

4. Charging the Battery

4.1. Warnings and Cautions



Warning

Charging the Batteries

- Connect the charger to the battery's charging socket (refer to section 4.4: *Charging the Battery*) prior connecting to the AC supply (wall socket). Do not drive the wheelchair when the charger is connected.
- Use only the charger supplied with the wheelchair.
- Always charge the wheelchair in a well-ventilated room.
- Do not charge in a bathroom or wet room.



Caution

Connection of Unauthorized Devices

Do not connect any unauthorized device to the controller sockets or the battery charging socket of the wheelchair. This will void the warranty.



Caution

Recycling the Batteries

Dispose of used or broken drive batteries in an environmentally correct manner in accordance with locally applicable recycling directions.



Caution

Operation While Battery is Low

Avoid operating the wheelchair if the battery is nearly discharged or at least shift to sitting position. Failure to comply with this condition may leave the user stranded in an unsafe position, such as in the middle of a road.

The Company accepts no liability for losses or harm of any kind arising from failure to comply with this condition.



Caution

Never leave the wheelchair in the standing position while not in use, with power off or when the battery is low. Failure to heed this warning could lead to property damage, including damage to the wheelchair.

4.2. Power Button



Warning

Do NOT use the power button to stop the wheelchair, except in an emergency. Using the power button to stop will cause the wheelchair to stop abruptly and may cause personal injury. It can also shorten the life of the wheelchair drive components.

The **Power** button applies power to the control system, which in turn supplies power to the motors.



Figure 4-1: Power On/Off Button

4.3. When to Charge the Batteries

If the battery indicator is red and flashes, then the battery has less than 19% charge and you should charge the batteries immediately.

If the battery indicator is red and lights steadily, then the battery is very low (20-29% charge) and you should charge the batteries as soon as possible.

If the battery indicator is yellow, then the battery is low (30-69% charge) and you should charge the batteries soon.

If the battery indicator is green, then the battery is fully charged (70-100% charge).

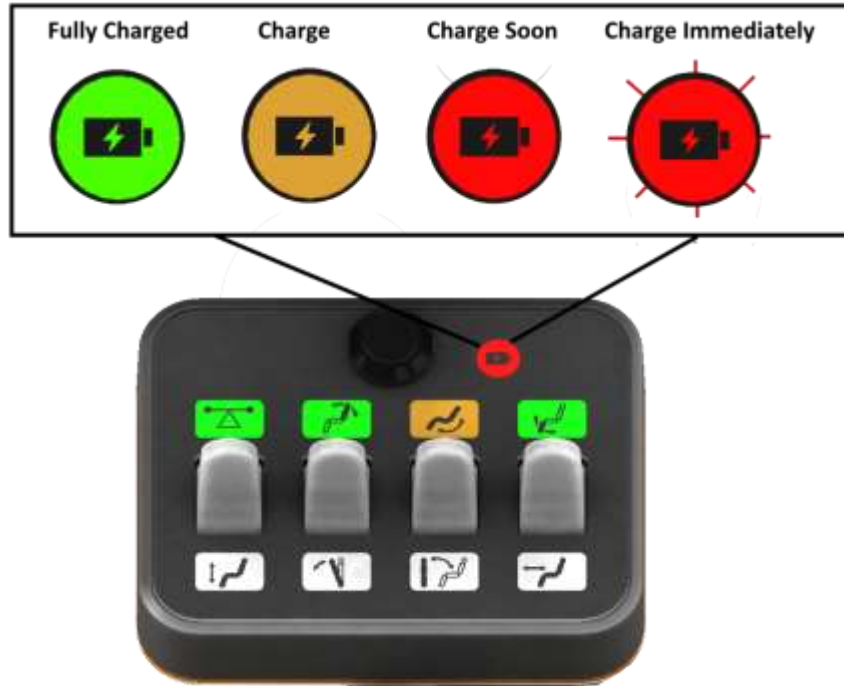


Figure 4-2: Battery Indicator

4.4. Charging the Battery



Warning

Battery Disconnect

Do not disconnect batteries. Failure to observe this condition could result in burns or a fire hazard.

UPnRIDE Robotics Ltd. accepts no liability for losses of any kind arising from failure to comply with this condition.



Warning

Charging the Batteries

- Always charge the wheelchair in a well-ventilated room.
- Do not charge in a bathroom or wet room.



Warning

Battery Charger

Use only the battery charger that has been supplied with your wheelchair. The use of incorrect chargers could damage the batteries, control system, the charger itself, or the entire wheelchair, or may result in parts overheating creating the potential for burns or even fire.

UPnRIDE Robotics Ltd. accepts no liability for losses of any kind if the charger is incompatible with the control system or any other part of the wheelchair.



System Limitation

You will not be able to drive the wheelchair when the charger is connected.

- Step 1 Place the charger on a flat surface in a cool, dry area protected from humidity, rain and other moisture.
- Step 2 Make sure that the main power switch of both battery packs is in the On position.
- Step 3 Press the **Power** button of the wheelchair controller to turn off the power. Refer to section 6.6: Powering On/Off.
- Step 4 Connect the cable from the charger to the socket on the right side of the wheelchair seat (1).

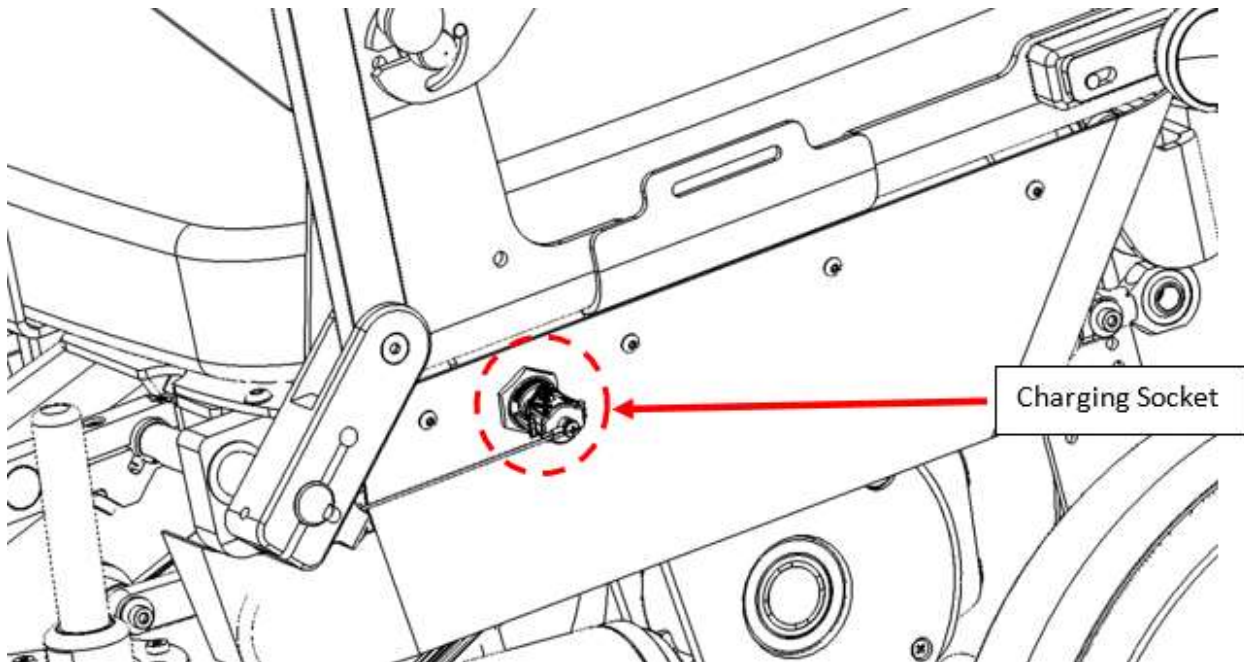


Figure 4-3: Charging Socket

- Step 5 Connect the charger to the power socket. The battery charges until complete. Charging automatically stops when charging is complete to prevent damage to the batteries.
- Step 6 When charging is complete, unplug the charger from the AC supply (wall socket).
- Step 7 Unplug the cable from the wheelchair's power socket.

5. Getting Seated

5.1. Warnings and Cautions



Warning

Do not use the harness, foot straps, hip belt or knee supports instead of a vehicle mounted seat belt or other restraint while inside a van or other motor vehicle. Failure to heed this warning will cause the user to be unprotected during an accident.

- The wheelchair harness, foot straps, hip belt or knee supports are designed only to secure the user in the wheelchair.
- The wheelchair harness, foot straps, hip belt or knee support are not meant to act as safety belts while sitting in the wheelchair in a van or other moving vehicle.



Warning

Always wear the harness, foot straps and knee supports (and hip belt where relevant) while in the wheelchair. Failure to wear these may lead to personal injury.

If signs of damage or wear appear, replace these immediately through your UPnRIDE dealer.



Warning

The user must be completely dressed while using the *UPnRIDE™* wheelchairs



Note

After charging, wait until the lights on the positioning switches light in sequence before turning the system on. The bottom row of lights will appear in the same color before turning off. Driving is not possible until all the lights are off.

5.2. Transferring into the Wheelchair



Figure 5-1: Transferring into a Wheelchair



Warning

Transfer into and out of the wheelchair

Follow the instructions below whenever transferring a user into or out of the wheelchair. Failure to follow these instructions can result in personal injury or property damage, including damage to the wheelchair.

- Before transferring into or out of the wheelchair, make sure that the wheelchair is turned off. This means that: the controller is turned off, the automatic balancing system is off and that the wheels are engaged with the motor (that locks the wheels).
- Take every precaution to reduce the distance between the wheelchair and the user; overextending this distance can cause the user to overexert, lose balance, or fall.
- Transfer in the presence of or with the assistance of an attendant. Use caution when bending or reaching.
- Do not use the foot plate or armrests as supports when transferring into or out of the wheelchair. Excessive force may cause them to give way, resulting in personal injury or property damage, including damage to the wheelchair. The footplates and armrests are not designed for weight-bearing.
- Follow the specific advice of your doctor or therapist regarding how best to transfer in accordance with your health and everyday life.
- Use caution when bending or reaching.
- Never use the joystick as a handhold or point of support.

- Step 1 Make sure the wheelchair is off.
- Step 2 Make sure that the motor is engaged to prevent movement of the powered wheels.
- Step 3 Transfer the user into the seat, according to therapist recommendations.
- Step 4 Lock the footrests down and rest the user's feet on them.
- Step 5 Fit the knee support.
- Step 6 Fit the chest strap or other suitable upper-body support.

5.3. Transferring Out of the Wheelchair

- Step 1 Make sure that the wheelchair is off.
- Step 2 Make sure that the motor is engaged to prevent movement of the powered wheels.
- Step 3 Remove the chest strap and swing away or remove the knee support.
- Step 4 Transfer the user out of the seat according to therapist recommendations (use the armrests for support if needed).

5.4. Sideways Transfer

- Step 1 Bring the wheelchair as close as possible to a chair, bed or any other objects you want to transfer to/from.
- Step 2 Make sure the wheelchair is off.
- Step 3 Make sure that the motor engaged to prevent movement of the powered wheels.
- Step 4 Swing back the armrest. Refer to section 5.4.1 *Swinging back the Armrest without the User Controls* or section Step 35.4.2 *Swinging back the Armrest that Holds the User Controls*.
- Step 5 Fold out the "Folding Knee".

⇒ Note

You can remove the armrest without the user controls instead of swinging it back.

- Step 6 Transfer the user according to therapist recommendations (use the armrests for support if needed).

5.4.1. Swinging back the Armrest without the User Controls

Step 1 Pull the armrest Indexing plunger.

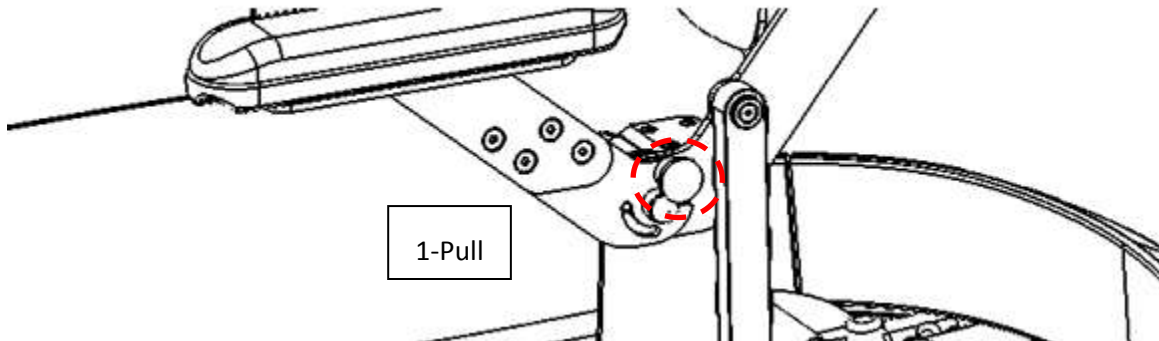


Figure 5-2: Pull the Armrest Indexing plunger

Step 2 Release the armrest by pulling it and swing the armrest. For the right armrest, swing it CCW. For the left armrest, swing it CW.

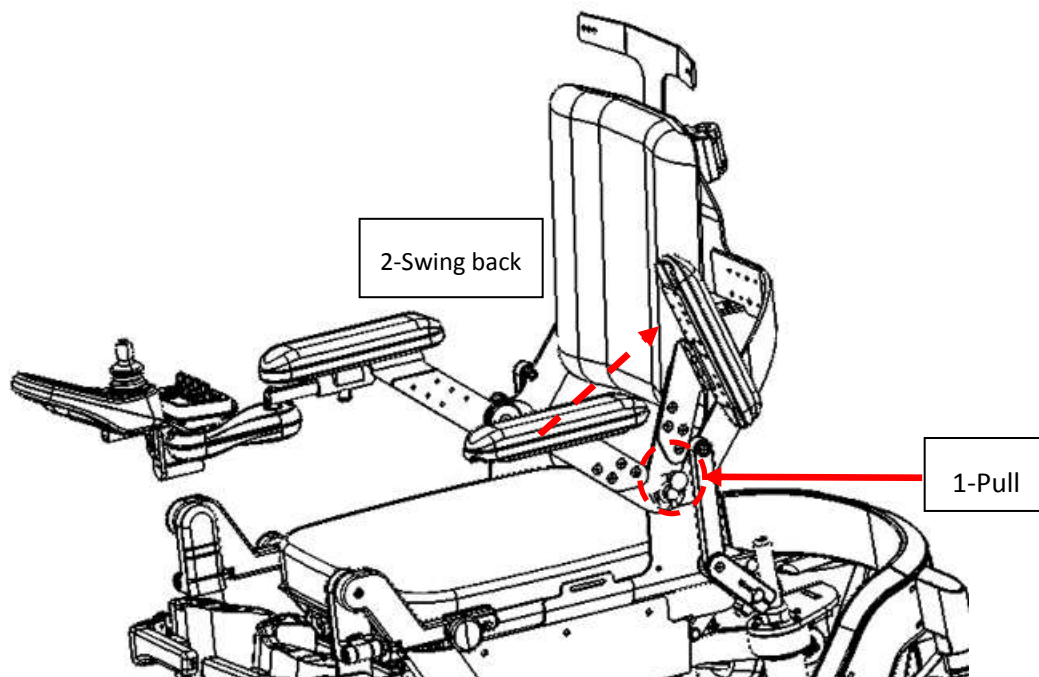


Figure 5-3: Armrest without the Controls in the Back Position

Step 3 After the user is sitting in the wheelchair, slide the armrest back into position.

5.4.2. Swinging back the Armrest that Holds the User Controls

Step 1 Pull the armrest Indexing plunger.

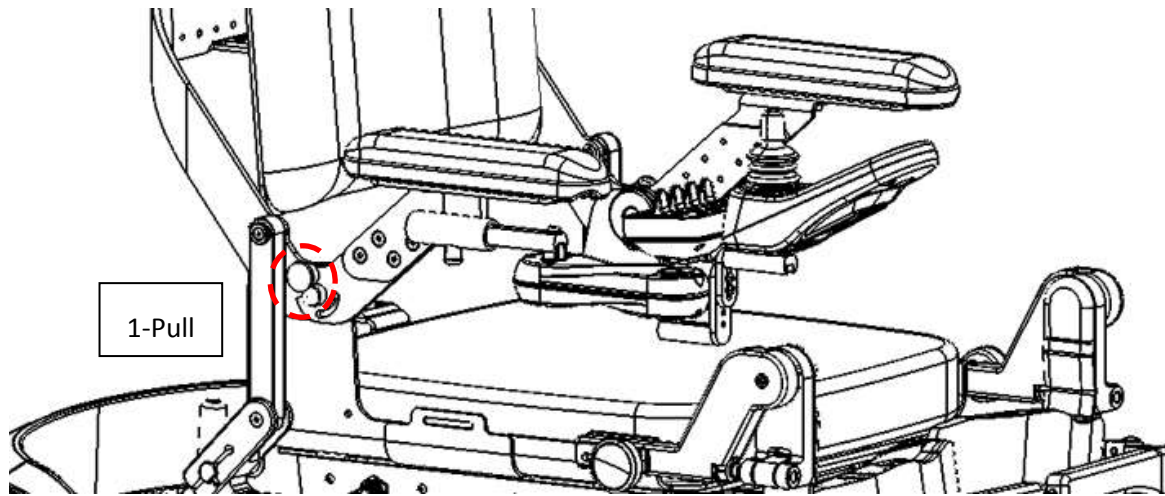


Figure 5-4: Pull the Armrest Indexing plunger

Step 2 Release the armrest by pulling it and swing the armrest. For the right armrest, swing it CCW. For the left armrest, swing it CW.

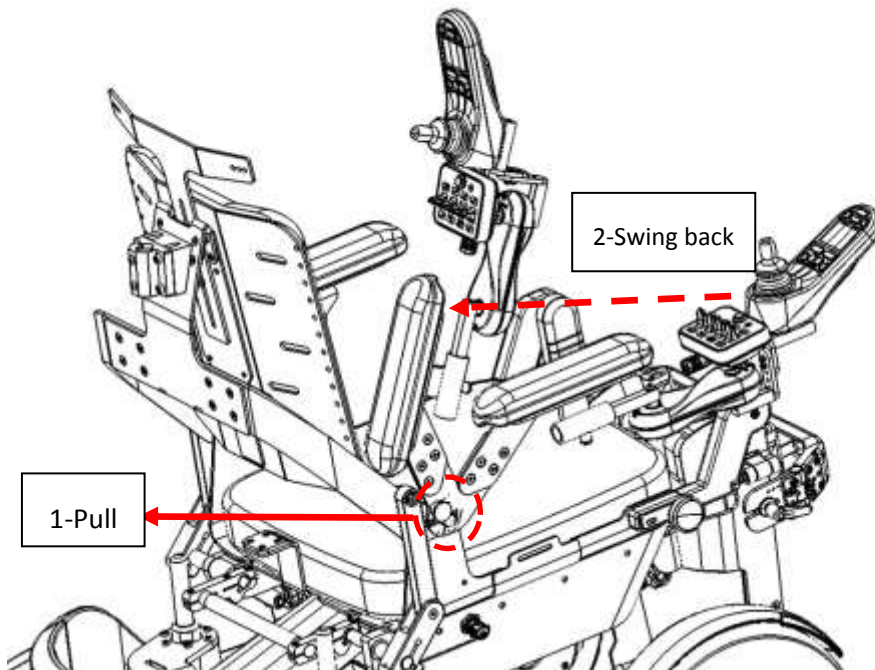


Figure 5-5: Armrest with the Controls in the Back Position

Step 3 After the user is sitting in the wheelchair, slide the armrest back into position.

5.4.3. Swinging out the Knee Supports

Step 1 Push the knee support forward with some strength and hold it.

Step 2 Slide the knee support lock forward to open the knee support.

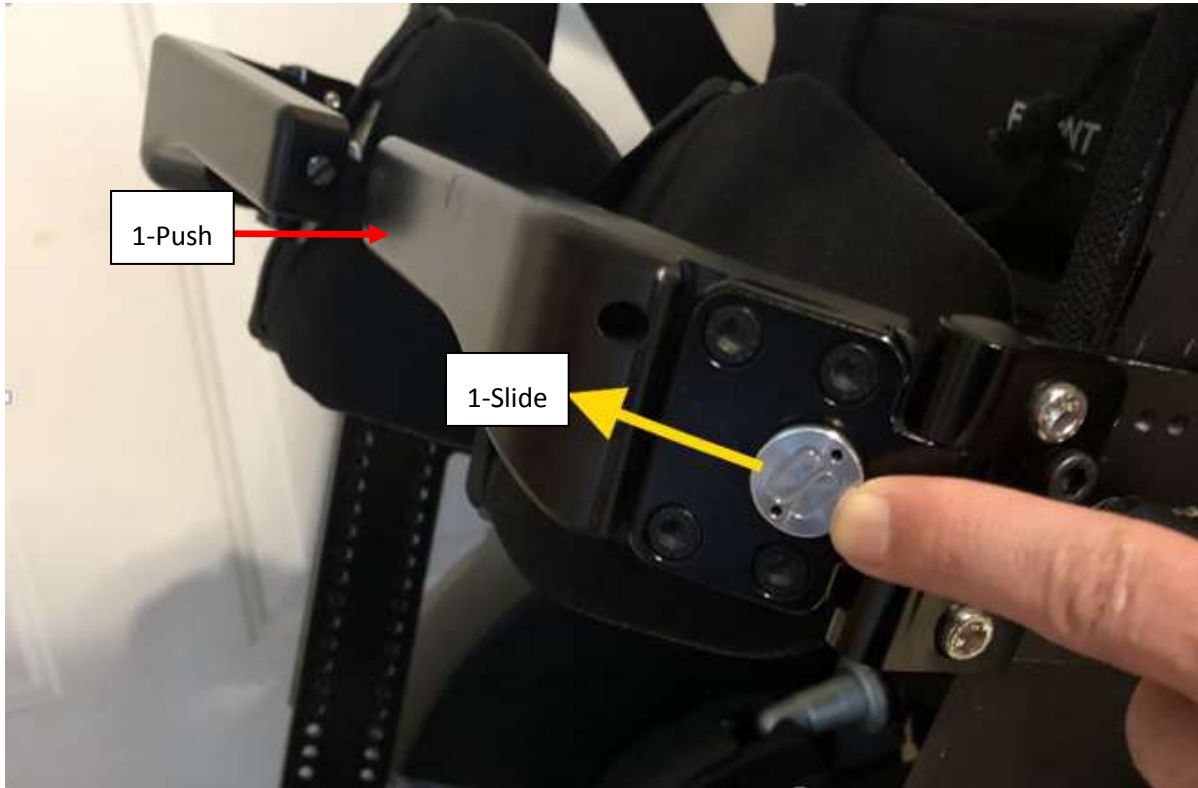


Figure 5-6: Unlock the knee rest

Step 3 Swing the knee support away.

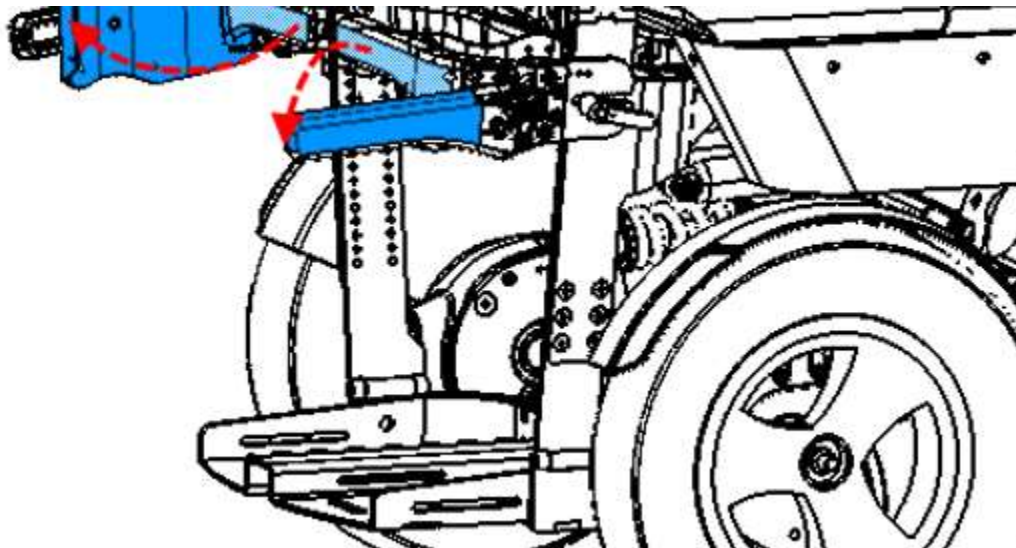


Figure 5-7: Swinging out the Knee Supports

Step 4 After the user is sitting in the wheelchair, swing the knee support back into position until it locks in place.

5.4.4. Removing and Reinstalling the Knee Supports

Step 1 Turn the knee support lock handle CCW.

Step 2 Release the knee support by pulling it away from the wheelchair.

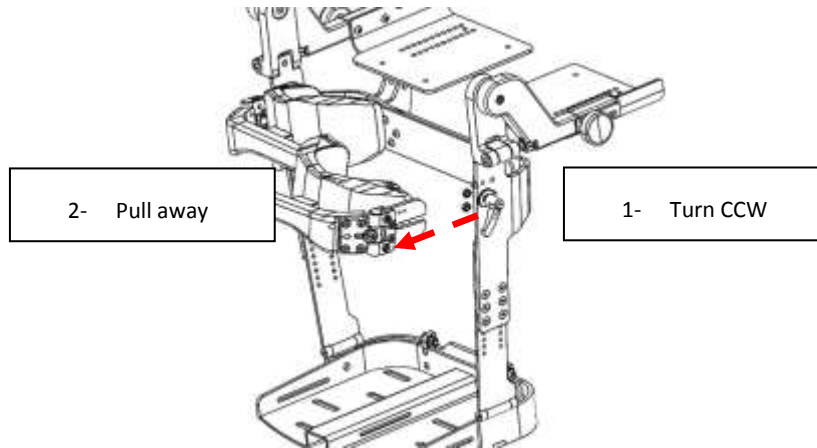


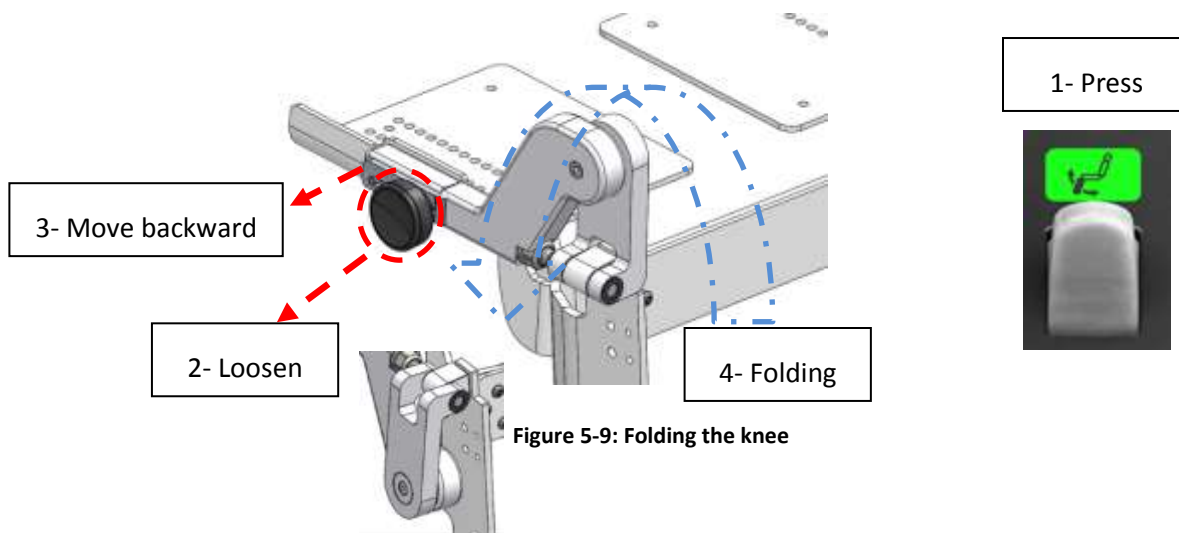
Figure 5-8: Removing the Knee Support

Step 3 After the user is sitting in the wheelchair, slide the knee support back into position and tighten the knee support lock handle.

Step 4 Pull the handle out and turn it to a convenient position.

5.4.5. Folding the “Knee” mechanism

- Step 1 Press down to lower the legrest, using the positioning switches (see 6.4 below).
- Step 2 Loosen the armrest attachment knob.
- Step 3 Move the metal plate backward.
- Step 4 Folding the Knee mechanism.



- Step 5 After the user is sitting in the wheelchair, folding the knee in the opposite way and slide the metal plate forward.
- Step 6 Tighten the attachment knob.

6. Operation

6.1. Controls Overview

The controls consist of a joy stick, an R-net control panel with an LCD display located in front of the joy stick, and positioning switches located in back of the joy stick.

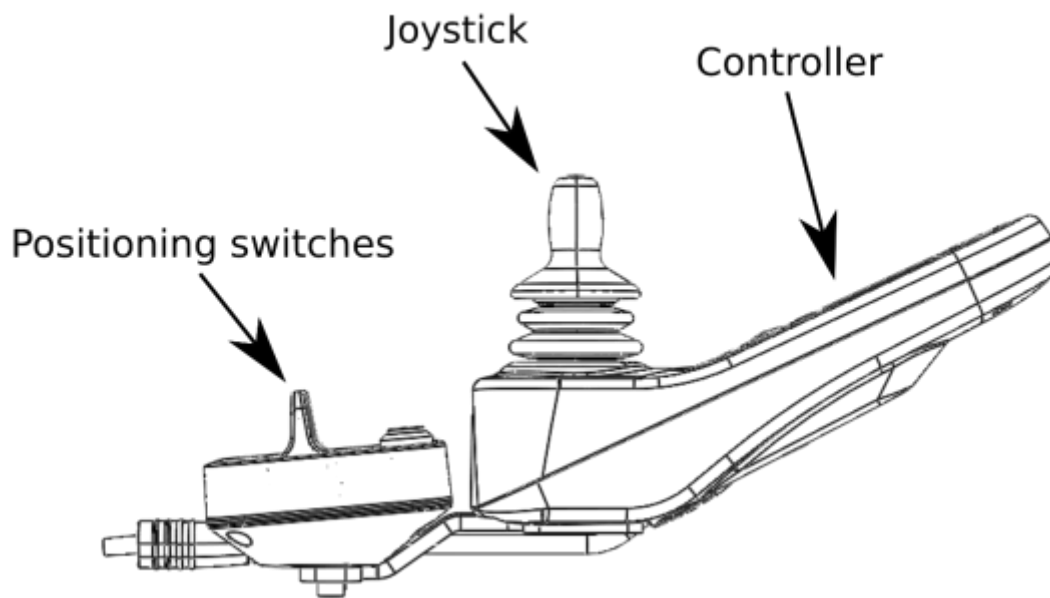


Figure 6-1: Joy Stick, Controller and Positioning Switches

6.2. Joystick

The primary function of the joystick is to control the speed and direction of the wheelchair.

The further you push the joystick from the center position the faster the wheelchair will move.

When you release the joystick, the brakes are automatically applied.

6.3. R-net Control Panel with LCD Display

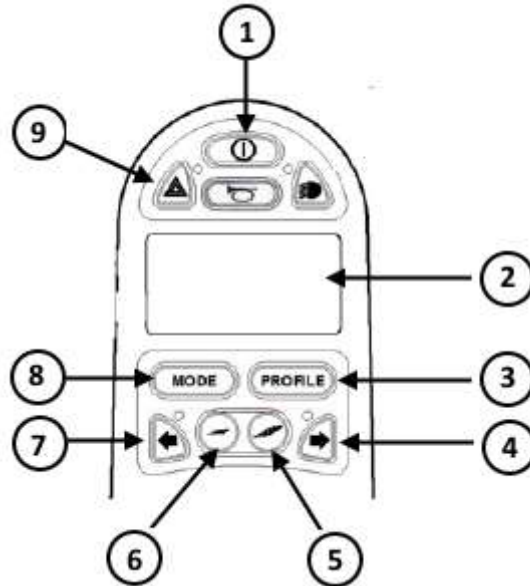



Figure 6-2: R-net Control Panel

Table 6-1: R-net Control Panel Legend

Component	Description
1	<p>Power</p> <p> Warning</p> <p>Do NOT use the power button to stop the wheelchair, except in an emergency. Using the power button to stop will cause the wheelchair to stop abruptly and may cause personal injury. It can also shorten the life of the wheelchair drive components.</p> <p>The Power button turns of the wheelchair.</p>
2	<p>LCD display</p> <p>This LCD display shows status information. Under normal circumstances it displays the following:</p> <ul style="list-style-type: none"> • Battery gauge • Speed • Current profile <p>Under certain conditions other information is displayed. Refer to chapter 7: <i>R-net Control Panel Guide</i> for details.</p>
3	<p>Profile</p> <p>Selection of indoor or outdoor speed level.</p>
4	<p>Right turn signal</p> <p>This button activates the right turn signal light.</p>
5	<p>Speed Increase</p> <p>This button increases the maximum speed setting.</p>
6	<p>Speed Decrease</p> <p>This button decreases the maximum speed setting.</p>
7	<p>Left turn signal</p> <p>This button activates the left turn signal light.</p>

	Component	Description
8	Mode	The Mode button lets the user navigate through the available operating modes.
9	Horn	Press this button to sound a beep.

6.4. Positioning Switches

Warning

Do not touch or access motorized parts while the position switches are in use. Failure to heed this warning can lead to personal injury.

The wheelchair has eight position modes that are controlled by a toggle button and four positioning switches. Each positioning switch can control two different positioning functions, depending on the position of the toggle switch. The active row of positioning switches lights up with an activity color. Green indicates that the function is active. Yellow indicates that the function is active, but with a limitation. Red indicates that there is an error with the positioning mechanism.

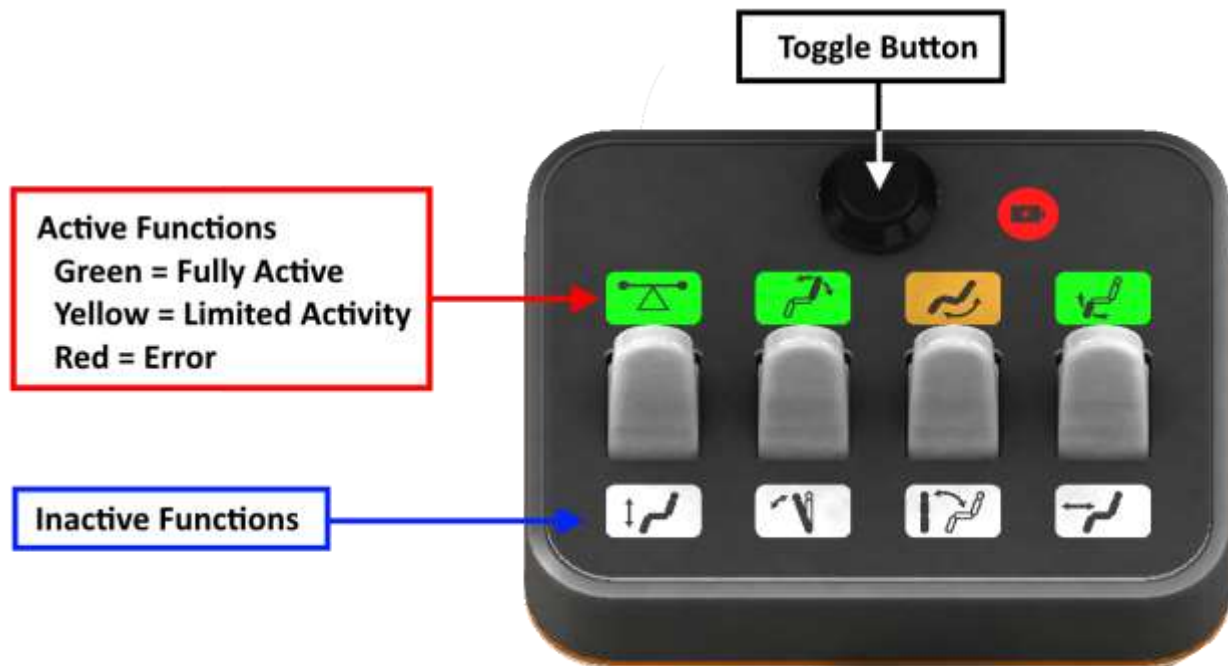


Figure 6-3: Positioning Switches

6.4.1. Toggle Button

Press the toggle button to change the set of functions for the positioning switches. The active row of functions lights. The function light is color coded to indicate whether the function is fully active (green), active with limited movement (yellow), or if there is an error with the positioning mechanism for that function:

6.4.2. Upper Row Functions

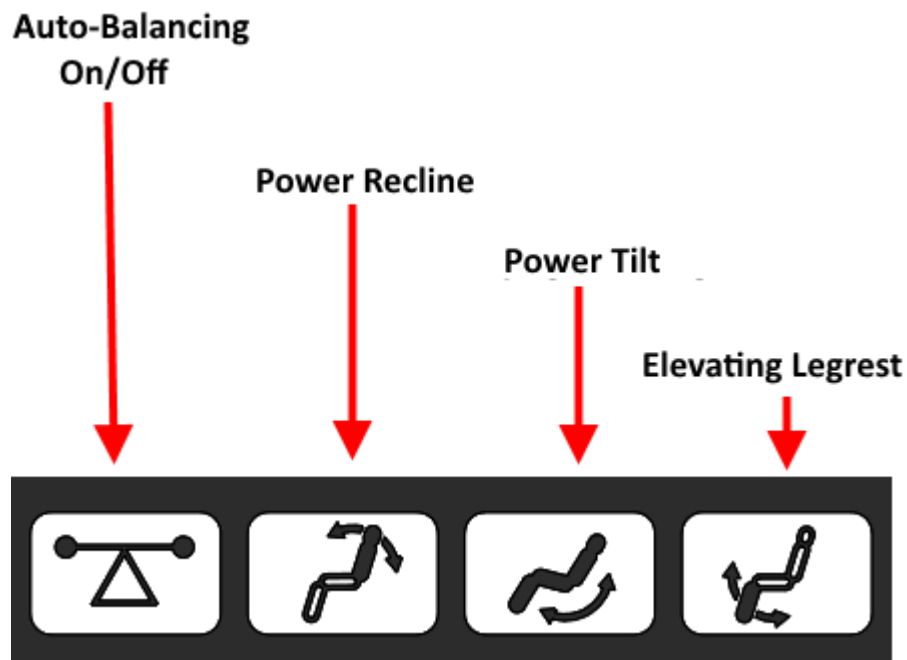


Figure 6-4: Positioning Functions - Toggle Up

6.4.2.1. Auto-Balancing On/Off

When activated, the user is kept substantially vertical on slopes when using the standing mode, or leveled in a sitting mode.

6.4.2.2. Recline

Press up to move the backrest forward (less recline). Press down to move the backrest backward (greater recline).

6.4.2.3. Tilt

Press up to tilt the seat forward. Press down to tilt the seat backward.

6.4.2.4. Elevating Legrest

Press up to lift the legrest. Press down to lower the legrest.

6.4.3. Lower Row Functions

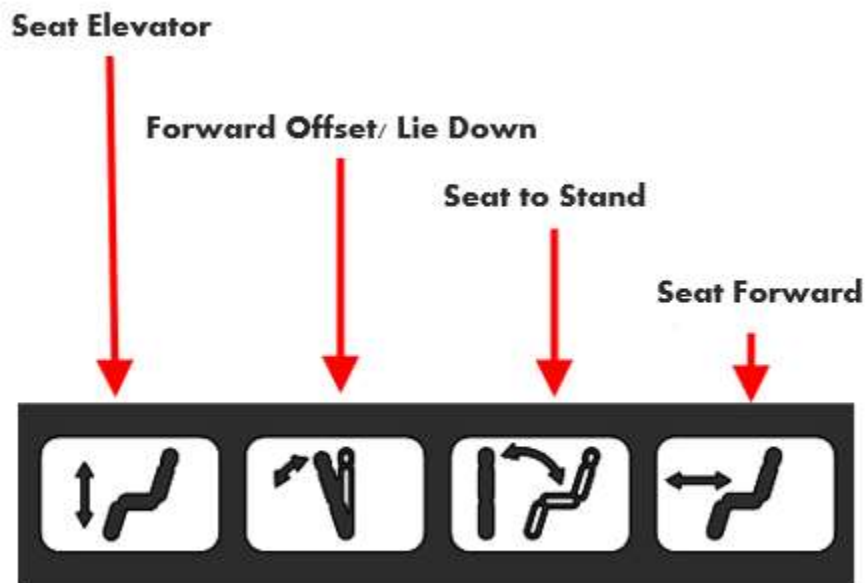


Figure 6-5: Positioning Functions - Toggle Down

6.4.3.1. *Seat Elevator*

Press up to move to raise the seat. Press down to lower the seat.

6.4.3.2. *Forward Offset /Lie Down*

This switch tilts the user forward or backward while the user is in the upright position.

Press the switch up to tilt the user forward. Press the switch down to tilt the user backward.

Continue press the switch down to lie down the user.

6.4.3.3. *Sit to Stand*

Press up to raise the wheelchair to the upright (standing) position. Press down to lower the wheelchair to the sitting position.

6.4.3.4. *Seat Forward*

Press up to move the seat forward. Press down to move the seat backward.

6.5. Swinging Away the Armrest that Holds the User Controls (Joystick and Positioning Switches)

Step 1 Move your wrist outwards to cause the armrest to swing away.

Step 2 Move your wrist toward your body to swing it back into the normal position.

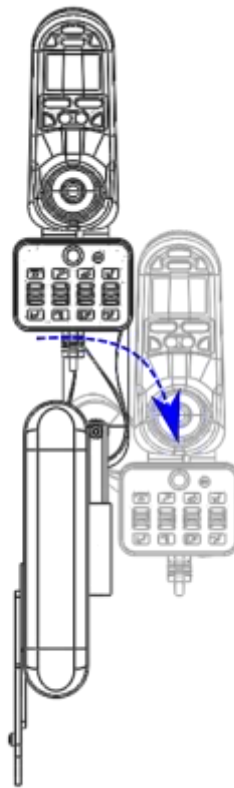


Figure 6-6: Swing Away Controller

6.6. Powering On/Off

Press the power button on the controller (1 in Figure 6-2) to power on or off the wheelchair.

6.7. Using the Stand-up Feature



Warning

Pinch Warning



Keep hands and fingers clear of all moving parts on the wheelchair. This is especially important when operating the stand-up and seat down features.

6.7.1. Before Rising to the Standing Position

- Make sure you are securely strapped into the seat and the knee supports are locked. Refer to chapter 5: *Getting Seated*.
- Make sure that the wheelchair is on a flat, level surface.
- Do not raise the wheelchair to an upright position when you are on or approaching a slope or near a change of slopes.

6.7.2. Rising to the Upright Position

Step 1 Press up and hold the Sitting/Standing switch. The wheelchair will rise to the upright position.



Figure 6-7: Sitting/Standing Switch - Push to Stand



System Limitation

When on a slope steeper than 7° while in the upright position, the wheelchair automatically slows down. This is independent of the auto-balancing system.

6.7.3. Lying Down Function for Emergency Situations

This function is not recommended for normal use and should only be used in an emergency.

6.7.3.1. Lying Down from Standing Position

- Step 1 Press down and hold the Forward Offset switch to quickly lower the wheelchair to the lying down position.



Figure 6-8: Forward Offset Switch - Pull to Lie Down in an Emergency

6.7.3.2. Returning the Wheelchair to the Standing Position for Future Use

- Step 1 Push up and hold the Power Recline switch to return the wheelchair to the standing position.



Figure 6-9: Power Recline and Seat Forward Switches – Alternate Between the Switches to Return from Lying Down

6.7.4. Lying Down from Sitting Position

- Step 1 Alternately pull down the Power Recline switch and push up the Seat Forward switch.



Figure 6-10: Power Recline and Seat Forward Switches - Alternate Between the Switches to Lie Down

6.7.5. Sitting from Standing Position

- Step 1 Make sure that the toggle switch is on its “down” state.
- Step 2 Press down and hold the Sitting/Standing switch to lower the wheelchair to the sitting position.



Figure 6-11: Sitting/Standing Switch - Pull to Sit

6.7.6. Explanation of Auto-Balancing

The user can turn on or off the auto-balancing at will. When starting to use the wheelchair (in the sitting position), the default mode of the auto-balancing is “off”. Once turned on, auto-balancing remains on until manually turned off or when power is shut down.



Figure 6-12: Auto-Balancing Switch - On

Refer to section 6.8: Driving for more information on how the auto-balancing system affects driving.

6.8. Driving



Warning

Make sure your feet are correctly and securely positioned on the foot plates before you operate the wheelchair. Use foot straps if needed. Failure to do so increases the risk of personal injury.



Warning

Always drive at a safe speed and on a surface that ensures your ability to handle the wheelchair safely. Failure to do so can lead to personal injury.



Warning

Do not use the joystick as a support. Fast turns and driving on uneven surfaces can interfere with your ability to handle the wheelchair safely. Failure to heed this warning can lead to personal injury.

If the wheelchair moves in a way that you do not want, **RELEASE THE JOYSTICK!** This will always interrupt the current movement.



Warning

- Proper edge protection.



Warning

When driving over critical slopes, it is recommended that the user be in sitting position. When driving over critical slopes, the maximum speed of the wheelchair slows down.

It slows down to 75% of the max speed under the following circumstances:

- Slope is steeper than 7° while in the sitting position.

The wheelchair slows down to 50% of the maximum speed under the following circumstances:

- Slope is steeper than 11° while in the sitting position.
- Slope is steeper than 4° while in the standing position.

The wheelchair slows down to 25% of the maximum speed under the following circumstances:

- Slope is steeper than 7° while in the standing position

If the surface is too bumpy, consider turning-off the balancing system.

Note that when driving over critical slopes, it is recommended that the user be in sitting position.



Caution

Prior to Driving

In some instances, including where certain medical conditions exist, users should practice operating the wheelchair under the supervision of an assistant who is familiar with the operation of the wheelchair and with the abilities and limitations of the user. Incorrect use may both injure the user and damage the wheelchair.

 **Caution**

Never drive at full speed in tight or narrow spaces or on angled and sloped surfaces. Use extra caution when driving the wheelchair on surfaces that have edges that could cause the wheelchair to steer in a different direction than desired. Failure to heed this caution can lead to damage to property, including the wheelchair.

 **Caution**

Do not take the first test drive on your own. The test drive is intended to establish how you and the wheelchair work together and you may need assistance. Before you begin:

- Make sure that the control panel is correctly fit and the joystick is in the neutral position (the middle position).
- Make sure that you have good support for the part of your hand that you use to handle the joystick with.

Step 1 Press the **Power** button on the control panel.

Step 2 Select a suitable driving profile with the Profile key.

Step 3 Move the joystick carefully to drive in the direction where you point the joystick.

Step 4 Push the joystick forward to increase the speed, and backward to decrease speed or reverse.

6.8.1. Getting Ready to Drive

- Step 1 Press the **Power** switch and wait until the drive screen completes its initializing process and the base screen appears.
- Step 2 Make sure that the Speed Setting is at a level that suits you.
- Step 3 Use the joystick to control the speed and direction of the wheelchair.

○ System Limitation

If you push the joystick before or just after you switch the control system on, the screen will flash the joystick displaced screen. You must release and center the joystick to resume normal operation. If you do not release the joystick within five seconds the wheelchair will not be able to move, even if you release the joystick and push it again. The screen will display the diagnostic screen at this time. You can reset this condition by switching the control system off and on again.



Figure 6-13: Joystick Displaced Icon

⇒ Note

If you do not push the joystick as you switch the wheelchair on and the diagnostic screen is displayed, this means that the wheelchair has detected a problem somewhere in the wheelchair's electrical system. Refer to *Figure 6-14*.

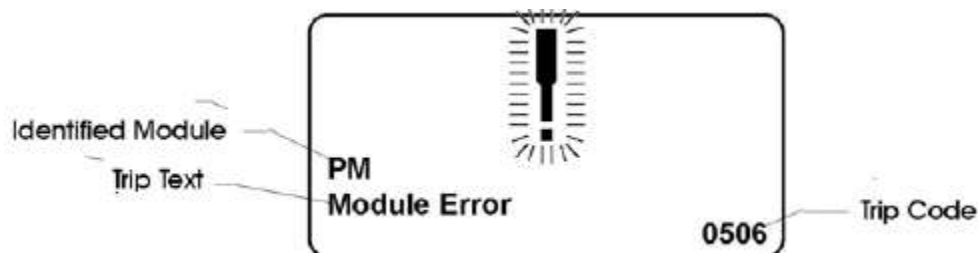


Figure 6-14: Diagnostic Screen

6.8.2. Driving Profiles

The wheelchair includes two different driving profiles:

- Indoor – limited speed profile
- Outdoor – higher speed range
- Obstacle – high power profile for driving over obstacles

6.8.2.1. Selecting a Profile

Press the Profile button on the Controller (3 in Figure 6-2) until the required profile is displayed on the display screen (2 in Figure 6-2).

6.8.2.2. Driving the wheelchair with the joystick

Step 4 Power on the wheelchair.

Step 1 Push the joystick in the desired direction. The wheelchair will move in the direction of the joystick.

Step 2 Push the joystick further in the same direction to increase the speed and backward to decrease speed or reverse.

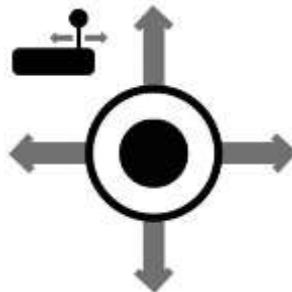


Figure 6-15: Using the Joystick

6.8.3. Driving in Wet Weather

Make sure to be in the sitting position when exposed to any type of moisture, including rain or snow. If you are in the upright position, lower the wheelchair to the sitting position and remain sitting until you reach a dry location.



Caution

Dry off the wheelchair and all wheelchair parts once you are in a dry location. Failure to do so may damage the wheelchair

6.8.4. Driving over Obstacles



Warning

Always drive over obstacles with extreme caution.

- Do not drive the wheelchair over obstacles higher than 5 cm, when driving forward. If you drive over higher edges, there is a higher risk of tipping and of damaging the wheelchair.
- Changing the seat from the default sitting or standing locations changes the center of mass and increases the risk of tipping. Therefore, use the Seat Elevator, Sit to Stand and Seat Forward functions with extreme caution and at low speed.
- The Seat Forward function should only be used indoors and only when driving at up to 25% of the maximum speed.
- Use the obstacle profile to drive over obstacles. This profile provides the additional power needed.



Figure 6-16: Driving over Obstacles

- Step 1 Change the system profile to **obstacle**.
- Step 2 Push the joystick forward until all wheels are over the obstacle.
- Step 3 Change the system profile back to **indoor** or **outdoor**.

6.8.5. Driving on Side Slopes



Warning

Do not drive the wheelchair on side slopes steeper than indicated in chapter 11: *Specification* if you can avoid it. There is a risk of tipping.

- Changing the seat from the default location changes the center of mass and increases the risk of tipping. Therefore, use the Seat Elevator, Sit to Stand and Seat Forward functions with extreme caution and at low speed.
- Avoid driving on ramps that do not have proper edge protection.



Warning

On steep slopes consider driving in a sitting position to avoid tipping.



Warning

Always drive on side slopes and hills at low speed and with great caution.

- On steep side slopes consider driving in a sitting position to avoid tipping.
- Avoid braking suddenly and sudden evasive maneuvers. Never drive so fast that you are unable to control the wheelchair safely without risks.
- Be extremely careful when driving on side slopes with an uneven surface (for example grass, gravel, sand, ice and snow).



System Limitation

The permitted driving angles for both sitting and standing positions are defined in chapter 11: *Specification*.

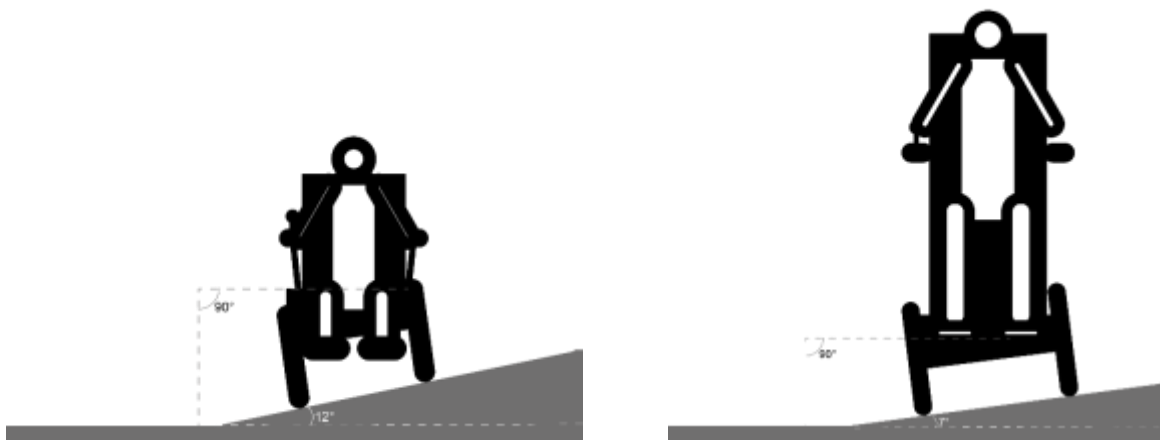


Figure 6-17: Driving on Side Slopes

6.8.6. Driving Downhill



Warning

Be extremely careful when driving downhill with an uneven surface (for example grass, gravel, sand, ice and snow).



Warning

On steep slopes consider driving in a sitting position to avoid tipping.



Warning

Do not drive downhill on a gradient greater than 12°. Dynamic stability according to ISO 7176-2 = 12°.

A raised seat changes the center of mass and increases the risk of tipping. Therefore, use these seat functions only on flat surfaces or mild slopes, and always drive with great caution and at low speed.

The stopping distance will often be increased when driving downhill.



Caution

- Turn on the auto-balancing.
- Avoid sudden stops or starts or U-turns.
- Stop by releasing the joystick rather than by turning the power off. Turning off power while the wheelchair is in motion will cause the wheelchair to stop suddenly and risk tipping.
- Select the slowest speed and proceed with caution.
- Driving downhill can shift the user's center of gravity forward.
- If the wheelchair rolls faster than desired, stop the wheelchair by releasing the joystick and continue descending at a slower speed.
- Be sure to keep all recommended positioning belts securely fastened at all times.
- Do not drive down slopes with a gradient greater than indicated in chapter 11: *Specification*. There is a risk that the wheelchair will not maneuver safely.
- If possible, lean your body backwards. It is also important to keep speed and direction under control.
- Drive straight down the slope. Never attempt to traverse or make turns on a slope.
- Do not drive down a hazardous slope, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven.
- Avoid driving on ramps that do not have proper edge protection.

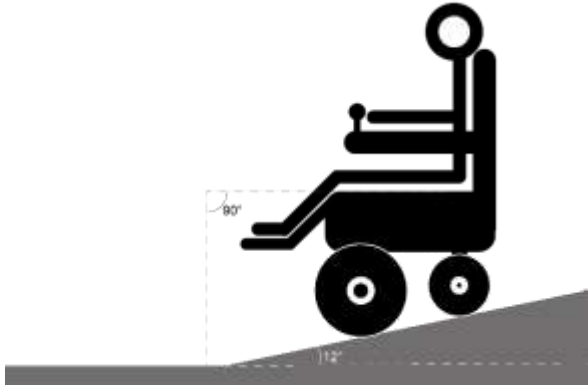


Figure 6-18: Driving Downhill (Sitting)

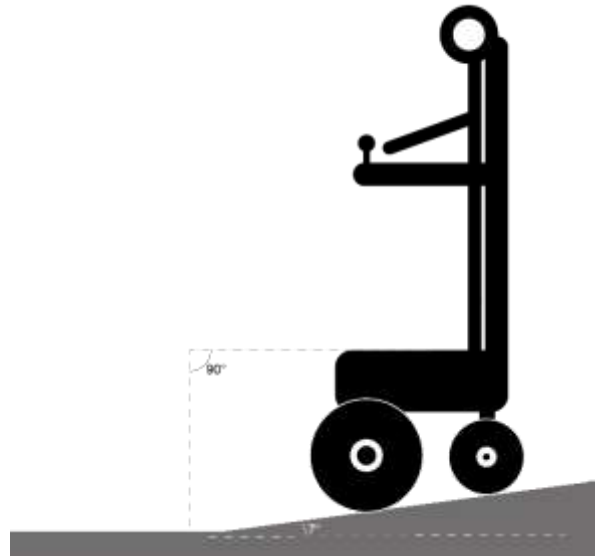


Figure 6-19: Driving Downhill (Upright)

6.8.7. Driving Uphill



Warning

Avoid U-turn when driving uphill.

Be extremely careful when driving Uphill with an uneven surface (for example grass, gravel, sand, ice and snow).



Warning

On steep slopes consider driving in a sitting position to avoid tipping.



Warning

Do not drive uphill on a gradient greater than 12°. Dynamic stability according to ISO 7176-2 = 12°.

A raised seat changes the center of gravity and increases the risk of tipping. Therefore, use these seat functions only on flat surfaces or mild slopes, and always drive with great caution and at low speed.



Caution

- Turn on the auto-balancing.
- Avoid sudden stops or starts.
- Stop by releasing the joystick rather than by turning the power off. Turning off power while the wheelchair is in motion will cause the wheelchair to stop suddenly.
- Be sure to keep all recommended positioning belts securely fastened at all times.
- Try to keep moving at a steady speed. Stopping and starting the wheelchair while moving up an incline makes the wheelchair more difficult to control.
- Do not drive up slopes with a gradient greater than indicated in chapter 11: *Specification*. There is a risk that the wheelchair will not maneuver safely.
- If possible, lean your body forward and avoid changing direction abruptly.
- Drive straight up the slope. Driving at an angle up an incline increases the risk of tipping or falling.
- Never attempt to traverse or make turns on a slope.
- Do not drive up a hazardous slope, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven.
- Avoid driving on ramps that do not have proper edge protection.

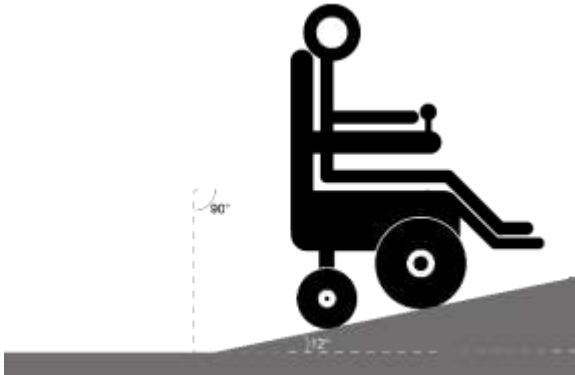


Figure 6-20: Driving Uphill (Sitting)

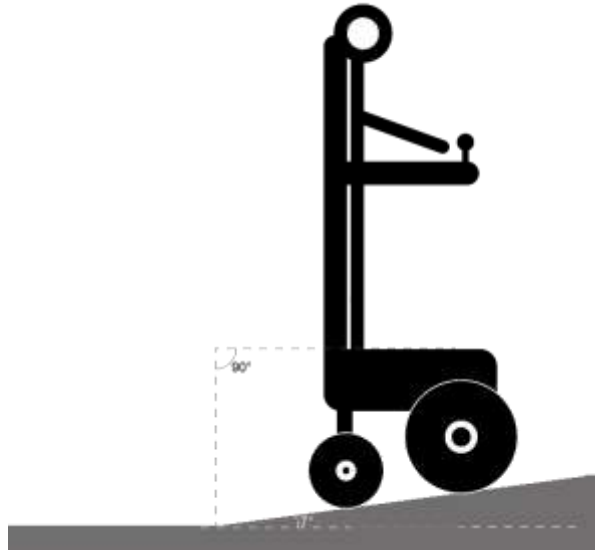


Figure 6-21: Driving Uphill (Upright)

6.8.8. Driving in Standing Position



Warning

Auto-balancing is recommended when using the wheelchair in the upright position. Auto-balancing is off by default and can be turned on manually.



System Limitation

When on a slope steeper than 7° while in the upright position, the wheelchair automatically slows down. This is independent of the auto-balancing system.



System Limitation

When in upright mode the speed of the wheelchair is limited. Refer to chapter 11: Specification for details.

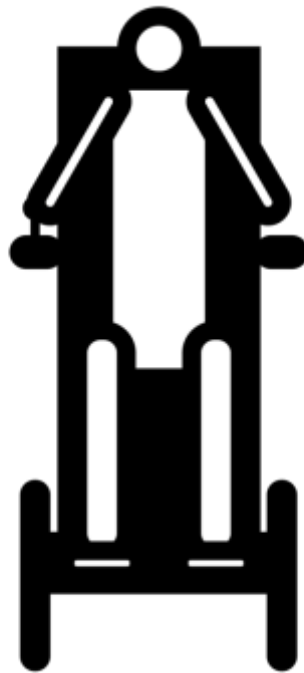


Figure 6-22: Driving in the Upright Position

6.9. Stopping



Warning

The locking mechanism is only effective on slopes of less than 10° in a sitting position.

The front wheels are locked when the controller joystick is in neutral (the middle position).

6.9.1. Normal Stopping

Release the joystick so that it returns to neutral (the middle position). The wheelchair will decelerate and stop.

6.9.2. Emergency Stop

Reverse the direction of the joystick control (passing through neutral). When the wheelchair stops, release the joystick to its neutral position (the middle position).

6.10. Rolling Free of the Motor



Warning

Never disengage the motor when the user is seated in the wheelchair, unless in emergency situations, such as, loss of power (exhausted battery) or any wheelchair malfunction that requires manual moving of the user.



Warning

Do not engage or disengage the wheels from the motor unless power to the wheelchair is off.

- To prevent the wheelchair from rolling away, ensure that the wheelchair is on a leveled surface before disengaging.
- Be aware that the wheelchair does not have brakes when the wheels are disengaged.
- Establish full control over the wheelchair before disengaging the wheels.
- Always re-engage the wheels when the wheelchair is off.



System Limitation

When the wheels are disengaged from the motor, the wheelchair will not drive.

The front wheels of wheelchair are normally connected to the motor and will only move by operating the motor from the controller.

The wheels can also be disengaged from the motor to enable the wheelchair to be pushed manually for transporting it.

6.10.1. Disengaging and Re-engaging the Wheels from the Motor

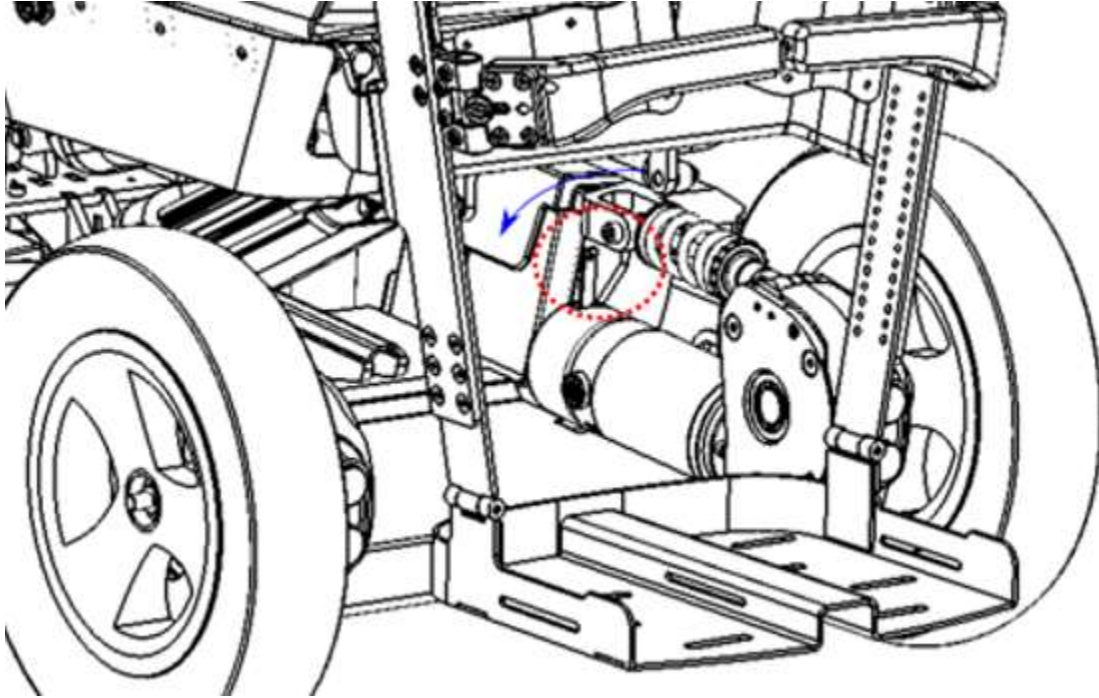


Figure 6-23: Lever to Disengage/Re-engage Wheels

7. R-net Control Panel Guide

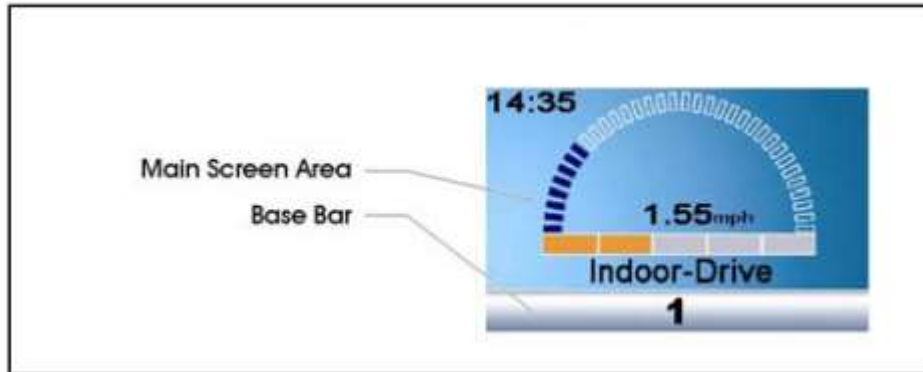







Figure 7-1: Sample Drive Screen

The LCD display shows the indicators described below.

Table 7-1: Drive Screen Indicators

Indicator Name	Example	Description
Speed Indicator		The current speed setting. The speed setting is adjusted using the Speed buttons.
Current Profile	1 Indoor-Drive	Displays the current operating profile.
Movement Limited		The wheelchair is being limited, for example by a raised seat.
Movement Disabled		The wheelchair is being inhibited from driving.
Control System Temperature		The control system has intentionally reduced its own power, in order to protect itself against heat damage.
Wait		The control system is changing between different states.

7.1. Error Screen Diagnostics

When an error occurs in the system:

- If the error affects movement of the wheelchair, control system safety circuits shut down movement of the wheelchair.

Caution

If the error occurs in a non-active module, driving is possible and the diagnostic screen appears intermittently.

- Diagnostic indicators are displayed on the controller screen.

The diagnostics indicators include:

- **Description (1)** – displays a brief description of the type of error.
- **Indicated module (2)** – displays the component of the control system where the error was detected (PM=Power Module, JSM=Joystick Module, ISM=Intelligent Seating/Lighting Module)
- **System error (3)** – the system has detected an error and may have shut down.
- **Error code (4)** – the number assigned by the system to this error event.

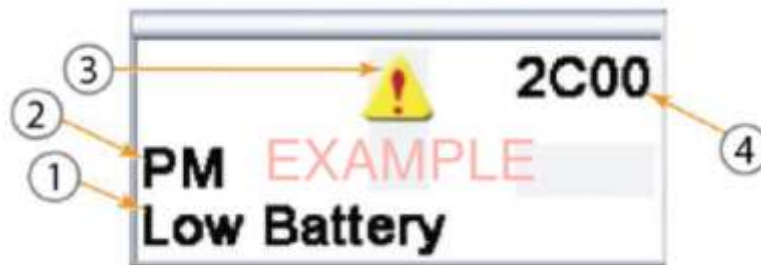


Figure 7-2: Diagnostic Indicators Appear on the Controller

8. Maintenance



Warning

Any modifications to the wheelchair and its systems may entail an increased risk of accidents or malfunctioning. Carefully follow the recommendations in this manual to prevent the risk of accidents in connection with driving.

All modifications to and interventions in the systems of the wheelchair must be performed by a qualified service technician. Always contact UPnRIDE Robotics Ltd. before performing any modifications.

To maintain the wheelchair in optimum working order, inspect, maintain and obtain service on a regular basis. You must also perform system homing once a week.

The wheelchair is subject to wear and tear between the moving parts due to the strains and stresses of typical use. Therefore, it is essential to know how to correctly use the wheelchair, and how to maintain it.

Preventive maintenance minimizes the risk of component failure. Proper maintenance promotes dependable operation and reduced risk of problems.

Consult your authorized UPnRIDE dealer regarding the recommended maintenance.

8.1. System Homing – Weekly



Warning

The wheelchair must be empty while performing system homing. Failure to heed this warning can lead to serious bodily harm.

Perform system homing at least once a week. During the homing operation, the Power Recline and Legrest Elevation functions will operate automatically.

- Step 1 Push up the Auto-Balancing switch, and while pushing it, also push in the Toggle button for 5 seconds.



Figure 8-1: System Homing – Switch Positions

- Step 2 Wait until the system homing operation is complete.

8.2. General Maintenance

Keep the wheelchair clean.

- Conduct a weekly inspection of your wheelchair and all its components.
- It is also recommended that it be serviced annually by an authorized UPnRIDE dealer. Call your authorized UPnRIDE service representative for an annual service checkup.

8.3. Care of the Controller

- Avoid knocking your control system and especially the joystick. Be careful not to strike obstacles with the control system or joystick when you drive.
- When transporting your wheelchair, make sure that the control system is well protected.
- Avoid damage to cables.
- Protect the controller from rain.

8.4. Cleaning



Caution

- **Do not rinse the wheelchair with a hose. Water can damage the electronics.**
- **Always shut off the wheelchair while it is being cleaned.**

With regular care and maintenance, the wheelchair will provide years of superior performance and satisfaction. To maintain the finish of your wheelchair, follow the cleaning procedures provided below.

The instructions for the care and maintenance of UPnRIDE Robotics Ltd. products are provided to you as a service. No warranty is implied since results may vary.

8.4.1. Vinyl Upholstery

- For regular cleaning, clean vinyl upholstery with a soft cloth or soft-bristled brush lathered with mild, nonabrasive soap and lukewarm water. Before the surface dries, wipe it with a clean, dry cloth to remove any residue. Repeat this procedure to remove stubborn dirt or stains.
- Ink spots can sometimes be removed by washing with soap and water and then wiping with isopropyl alcohol.
- Do not use any cleaning method that is not listed above. Other methods may cause immediate or long term damage to the vinyl.

8.4.2. System Accessories - Harness, Hip Belt, Back Support and Seat Cushion

Clean according to the manufacturer's instructions for each accessory. Manufacturer's cleaning instructions for the ordered accessories are supplied along with the accessories.



Caution:

Do not use acetone-based products to clean the UPnRIDE

- System surfaces that touch the body may be cleaned periodically using a dampened cloth with an alcohol-based disinfectant.
- Straps that are torn, worn, or contaminated should be discarded and replaced with new ones. Please contact UPnRIDE to perform this service.

8.4.3. Coated Metal

- For regular cleaning, wash coated metal surfaces with a soft cloth soaked in detergent and warm water. Rinse thoroughly and dry.
- Remove scuff marks from low-gloss coatings with pre-softened paste wax. Follow the manufacturer's instructions.

8.4.4. Plastic

For normal cleaning, wash plastic surfaces with a soft cloth soaked in mild detergent and warm water. Rinse thoroughly and dry with a soft cloth. Do not use solvents or abrasive household cleaners.

8.5. Battery Care

Refer to chapter 4: *Charging the Battery*.

8.6. Safety Inspection

8.6.1. Condition of the Tires

Regularly check and verify that the tires are in good condition (complete, will not slide on smooth terrain).

8.6.2. Securing Belts and Brackets Inspection

Regularly check the condition of the securing belts and knee supports for any excessive wear or damage. These include the harness, hip belt, foot straps, pads on knee supports and the mechanical parts of the knee supports.

If damage is found, contact your authorized UPnRIDE dealer before operating the wheelchair.

9. Transport and Storage

9.1. General Guidelines



Warning

The wheelchair **MUST** be transported in or with transport solutions that have been approved for this purpose.

- Always obtain confirmation from the transporter that the vehicle is suitably designed, insured and equipped to transport a person in a wheelchair.
- Check that the wheelchair is properly secured and that the wheels are connected to the motor. Refer to section 6.10: *Rolling Free of the Motor*. Failure to properly secure the wheelchair can cause injury to persons in the vehicle and damage to the vehicle.
- Do not carry passengers on the wheelchair. Doing so can lead to personal injury and damage to the wheelchair.
- The harness, foot straps, knee supports and hip belt are designed only to secure the user in the wheelchair. These are not meant to act as safety belts while sitting in the wheelchair in a van or other moving vehicle.



Warning

The wheelchair is not designed as a car seat and cannot offer the same degree of safety that is offered by standard car seats no matter how securely it has been fastened in the transporting vehicle.

When the wheelchair is transported with the user seated in it, secure the wheelchair with an approved attachment system suitable for the total weight of the wheelchair and user.

- UPnRIDE recommends that the wheelchair be equipped with a headrest and that this is used during transportation.
- During transportation, it is essential that you are secured with a three-point safety belt that is attached to the floor and a side of the vehicle.
- UPnRIDE positioning belts are designed to position the user only and not to protect you in the event of a motor vehicle accident. The positioning belts do not replace use of a vehicle mounted restraint.

The wheelchair must only be transported in a vehicle that is approved for this purpose.

After loading the wheelchair to the transport vehicle, verify that the wheelchair is properly secured and that the wheels are connected to the motor. Refer to section 6.10: *Rolling Free of the Motor*.

Secure the wheelchair according to the instructions of the manufacturer of the transporting vehicle restraint system. Always verify that the fastening points on the transport vehicle are firmly anchored.

9.2. Air Transport



Warning

Disable the batteries by using the main power switch on each battery.



Caution

Always contact the airline before the flight to ensure that the wheelchair will be able to be safely accommodated on the aircraft during the flight.



Note

The weight and dimensions of the wheelchair are found in chapter 11: *Specifications* are based on the standard configuration of the wheelchair. Wheelchairs that have had custom modifications or additional features may have different dimensions or weights. Measure the dimensions of your personal wheelchair whenever exact dimensions are critical or required.

Certain airlines may refuse to take lithium batteries on board.

The following is general advice for air transport:

For specific guidelines and regulations pertaining to transporting wheelchairs on aircraft in the United States refer to the Air Carrier Access Act at 49 USC § 41705 and accompanying regulations at 14 CFR Part 382.

For further guidelines pertaining to transporting powered wheelchairs and batteries refer to the Department of Transportation hazardous materials regulations (49 CFR Parts 171, 172, 173, 175).

To obtain more specific information regarding the relevant aircraft size and cargo space dimensions, always contact the airline prior to traveling or purchasing a ticket to make sure that your wheelchair can be accommodated.

When transporting your wheelchair by air, consider the following items:

- Disable the batteries by using the main power switch on both batteries before transport. After transport, you will need to engage both batteries before use.
- Preventing Damage
 - The electronic and other critical components of the wheelchair can be fragile and care must be taken to protect them from damage.
 - It is recommended to cover the control panel with soft, shock-absorbing material (foam plastic or similar).
 - Protect other fragile parts in a similar fashion.

9.3. System Storage

Store the wheelchair in temperature between – 40° and + 65° Celsius (between -40° and +149° Fahrenheit), and humidity under 90%.

To prevent rapid discharge of batteries, keep both batteries off. It is recommended to charge the batteries at least once every 2 months if the wheelchair is not used.

9.3.1. Short-term storage

To best maintain the battery charge, store the battery at a temperature higher than 5°C. Storage at under 5°C increases the risk of the battery losing charge and corroding.

10. Troubleshooting



Caution

Troubleshooting and fixing errors that are indicated on the controller screen must be performed by a qualified person. When in doubt, always contact an authorized UPnRIDE dealer.

UPnRIDE Robotics Ltd. Is not responsible for personal injuries or damage resulting from incorrect or wrongly performed repairs.

The troubleshooting guide below describes some possible problems that can arise when using the wheelchair and provides suggestions for solutions. This guide does not describe all the possible problems. Contact your service UPnRIDE dealer with any questions.

Table 10-1: Troubleshooting Guide

Problem	Possible Cause	Solution
Wheelchair does not start.	Batteries out of charge	Charge the batteries
	Cable connection to the controller is loose	Tighten the cable connection to the controller
	Main power switch on both battery packs is in the OFF position	Refer to section 10.2.1: <i>Resetting the Power Switch</i>
	Battery charger connected	Disconnect the battery charger from the wheelchair
Wheelchair does not drive	Wheel disengaged from the motor	Refer to section 6.10: <i>Rolling Free of the Motor</i>
Wheelchair stops while being driven	Cable connection to the controller is loose	Tighten the cable connection to the controller
	Battery pack switch was tripped	Refer to section 10.2.1: <i>Resetting the Power Switch</i>
Battery pack switch resets	Electro static discharge	Turn off and then on the main power switch on each battery pack. Refer to section 10.2.1 <i>Resetting the Power Switch.</i>
Position switches is off	Communication error with joystick and control unit	Switch off and On the joystick and control unit

10.1. System Error

If the controller emits a non-stop beeping sound and/or an automatic speed limitation takes effect, then the following actions should be taken:

- Drive to an even surface.
- If you are in standing position and the Sitting/Standing function is available, then return to the sitting position. The indication LED on the positioning switch is green when the Sitting/Standing function is available, and red when it is not available.
- Contact your service provider.

10.2. Safety Circuit Shutdown

Step 1 Press the **Power** button on the controller to turn off the control system for several minutes.

Step 2 Press the **Power** button again to turn on the control system.

Step 3 Try to drive the wheelchair.

Step 4 Shut down the wheelchair by putting the main power switch in the Off position on both battery packs. A battery pack is located on the floor of each side of the wheelchair. Its main power switch is located on the inner side.

Step 5 Power on the main power supply by putting the main power switch of both batteries in the On position.

Step 6 If the safety circuit of either battery is activated again (tripped), do not use the wheelchair.

Step 7 Write down the information shown on the display

Step 8 Shut down the wheelchair by putting the main power switch in the Off position on both battery packs.

Step 9 Contact your service provider.

 **Caution**

After contacting your service provider, do not use the wheelchair until the reason for shutting down the circuits has been dealt with and your UPnRIDE dealer confirms that it is safe to resume use of the wheelchair.

10.2.1. Resetting the Power Switch on the Battery Pack

 **Warning**

- A tripped main switch can indicate electrical faults.
- The main switches should only be operated by an assistant.
- The cause of one or both main switches being tripped should be carefully checked before the main switches are reset.
- If only one main switch is triggered, you should treat it as if both main switches were triggered.
- When in doubt, always contact an authorized UPnRIDE dealer.

Each battery pack has its own circuit breaker.

 **Caution**

Always shut off the power on the Controller before switching off the power of a battery pack.

Place the main power switch in the On position.

10.3. Servicing the Controller

 **CAUTION**

Any replacement work carried out without UPnRIDE's permission invalidates the control system's warranty. UPnRIDE accepts no liability for losses of any kind arising from unauthorized opening, adjustments or modifications to any component of the control system.

Excluding specific OEM (original equipment manufacturer) approved replacement parts, there are no serviceable parts in the control system. Therefore, a defective controller must be returned to your UPnRIDE dealer for repair or replacement.

11. Specifications



Note

Specifications that are currently being tested are marked “Under Test”

Table 11-1: Technical specifications

Specification	Value
Product name	UPnRIDE Powered Wheelchair
Wheelchair class	B
Device lifetime	5 years
Length (sitting position)	1190mm
Length (upright position)	1050mm
Width (side-to-side)	665mm
Height (sitting position)	1010mm
Height (upright position)	1640mm maximum
Pivot width	Sitting: 118cm, Standing 120cm
Reversing width	N/A
Required width of angled corridor	90 cm
Required doorway entry depth	137cm
Required corridor width	95cm
Minimum transport length	1100mm
Minimum transport width	700mm
Minimum transport height	1010mm
Weight, incl. batteries	170kg
Seat plane angle	4° minimum
Effective seat depth	450mm
Effective seat width	436mm

Specification	Value
Seat surface height at front edge	535mm – without the seat cushion
Back rest angle	adjustable
Leg to seat surface angle	adjustable
Drive wheel tire dimensions	300mm – not inflatable
Pivot wheel tire dimensions	190mm – not inflatable
Min. turning diameter	1640mm
Max. curb height	50 mm (sitting position) , 20mm (standing position)
Ability to negotiate obstacles (approach distant 50 cm)	5 cm
Min. ground clearance	5 cm
Hill-climbing ability	12° sitting, 7° standing
Safe slope	12° sitting, 7° standing
Sideways Slope Capability	12° sitting, 7° standing
Static stability downhill	12° sitting, 7° standing
Static stability uphill	12° sitting, 7° standing
Static stability sideways	12° sitting, 7° standing
Max. Speed forward	6km/h (sitting position), 4.5 km/h (standing position).
Max. User weight	120kg
Fire resistance	In accordance with EN 1021-2, ISO7176-16 or ISO 8191-2.
Maximal theoretical continuous driving distance range (according to ISO 7176-4)	36km minimum for two batteries (18 km minimum for one battery) Reduced distance due to elevation mechanism : 1.3km
Battery model number	TN6S9P-GA-01
Battery form factor	160 x 160 x 80 ± 1 mm (18650 cells)
Battery type	Li – NCA/NMC

Specification	Value
Number of cells in series and number of parallel strings	6 series 9 parallel
Battery rated voltage	21.6VDC
Battery capacity	1250Wh/59.4Ah for two batteries (625Wh/29.7Ah for one battery)
Battery life expectancy	300 cycles
Battery charging time	8h for two batteries (4h for one battery)
Battery circuit breaker (thermal + hydraulic) and BMS (battery management system)	Contains safety activation for: <ul style="list-style-type: none"> • Over charge • Over discharge • Over current CHG+DSG multiple layers. • Temperature (OT, UT for CHG and DSG) • Short circuit • Balancing



Figure 11-1: CE Label

Compliance of this wheelchair to annex I of the EU directive 93/42/EEC is confirmed by this CE label.

Caution

EMC Requirements

Radio wave sources may affect the UPnRIDE device.

Radio wave sources, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones, can affect powered wheelchairs.

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

- Make sure that the electromagnetic fields (for example from mobile telephones) in the area where you will operate the wheelchair will not affect the electronics of the wheelchair.
- Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them; if unintended movement or brake release occurs, turn
- The powered wheelchair OFF as soon as it is safe.
- Be aware that adding accessories or components, or modifying the UPnRIDE wheelchair, may make it more susceptible to interference from radio wave sources (Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair).
- Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio wave source nearby.



Important Information

- 20 volts per meter (V/m) is a generally achievable and useful immunity level against interference from radio wave sources.
- This product has an immunity level of 20 volts per meter (V/m) when tested with all the device's components.



System Limitation

When on a slope steeper than 7° while in the upright position, the wheelchair automatically slows down. This is independent of the auto-balancing system.

12. Disposal

The wheelchair should be disposed of according to local regulations.

13. Labels



Warning

Never remove a label from your wheelchair. If a label becomes difficult to read or falls off, new replacement labels may be ordered from UPnRIDE.

Make sure to familiarize yourself with all the labels on your wheelchair to become familiar with their meaning. These labels contain important information for safe and proper use.

13.1. Main Label

The label contains details for identification of the device and details for use. It is located on the floor of the wheelchair.

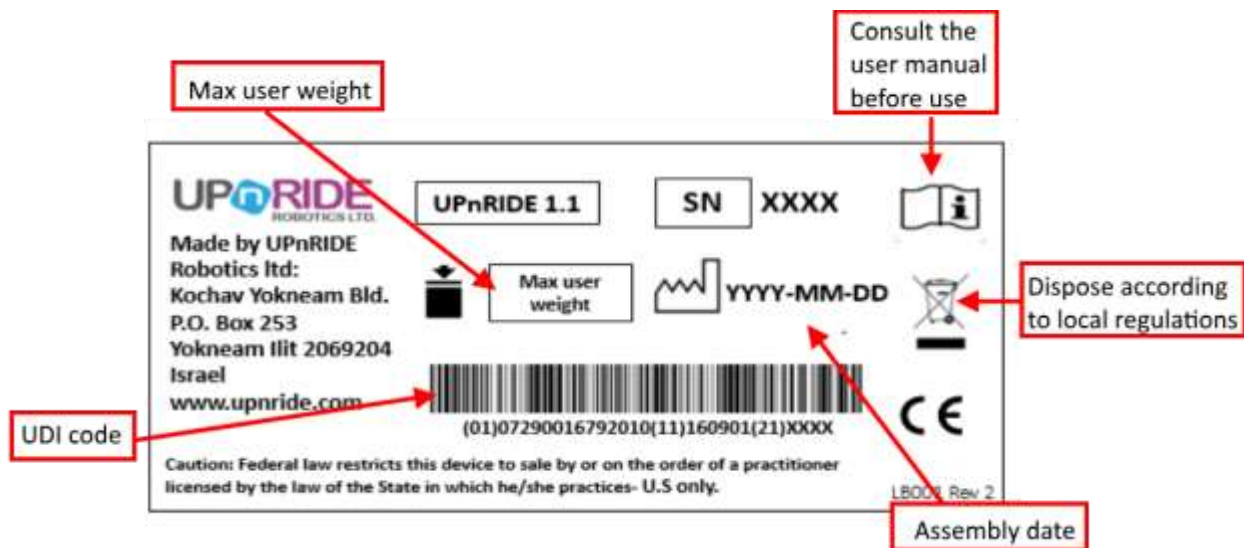


Figure 13-1: Main Label

13.2. EMC Warning Label

WARNING: Radio wave sources may affect the UPnRIDE device.
Radio wave sources, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones, can affect powered wheelchairs.

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

- Make sure that the electromagnetic fields (for example from mobile telephones) in the area where you will operate the wheelchair will not affect the electronics of the wheelchair.
- Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them; If unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe.
- Be aware that adding accessories or components, or modifying the UPnRIDE wheelchair, may make it more susceptible to interference from radio wave sources (Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair).
- Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio wave source nearby.

Important Information

- 20 volts per meter (V/m) is a generally achievable and useful immunity level against interference from radio wave sources.
- This product has an immunity level of 20 volts per meter (V/m) when tested with all the device's components.

Figure 13-2: EMC Warning label

13.3. Wheel Locks

The label shows the wheel lock (drive) and release (push) levers position. The description of the wheel locks function is found in section 6.10.1: *Disengaging and Re-engaging the Wheels from the Motor.*

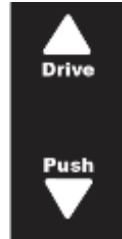


Figure 13-3: Wheel Locks Label

13.4. Main Power Switch on Each Battery Pack



Figure 13-4: Main Power Switch Label

13.5. Battery Charger

The label indicates the location of the charging port. The instructions for charging can be found in chapter 4: *Charging the Battery.*



Figure 13-5: Battery Charge Port Label

13.6. Crushing Hazard

The label indicates a Crushing Hazard - keep away from these areas while the wheelchair is on.



Figure 13-6: Avoid Getting Hands Caught Safety Warning Label

14. Glossary

Term	Definition	Synonyms
Battery pack	The battery unit that powers the wheelchair. There are two battery packs.	
Foot straps	Straps that secure the user's feet.	
Harness	Vest like straps that hold the user safely while in the upright position.	securing straps, center point harness
Hip belt	Optional straps	
Knee supports	Supports for knees while the user is in the wheelchair. These must be locked when in the upright position.	Knee blocks
Off	Power is turned off from the power button on the control panel. This is not the same as shut down, which is controlled by the power switch on each battery pack.	
Profile	Different speed level settings for use in sitting or upright (standing) positions.	
R-net control panel	Control panel located in front of the joystick	Controller, R-net control panel with LCD display
Shut down	The main power supply is turned off on each battery pack.	
Sleep mode		
Standing mode	Operation while the wheelchair is in the upright position	
Upright position	The wheelchair is raised to enable the user to almost stand up. The harness and the knee rest hold the user in this position.	standing position
Wheelchair	UPnRIDE powered wheelchair	powered wheelchair, powered mobility device

15. Specification sheets according to ISO 7176-15 Annex A

- Full name/address of manufacturer: **UPnRIDE Robotics Ltd.**
- Trade mark of the wheelchair: **UPnRIDE**
- Type/model name of the wheelchair: **1.1**
- Test dummy weight during tests: **120 kg**
- Maximum user weight: **120 kg**

15.1. Specification sheet according to ISO7176-15 Annex A










Standard	Item	Values
ISO 7176-5	Overall length with legrest	min = 1050mm max = 1190 mm
ISO 7176-5	Occupant mass group	II
ISO 7176-5	Effective seat width	436topsecret mm
ISO 7176-5	Stowage width	65cm
ISO 7176-5	Pivot width	Sitting: 118 cm Standing: 120 cm
ISO 7176-5	Overall width	min = 665 mm max = 665 mm
ISO 7176-5	Required width of angled corridor	90 cm
ISO 7176-5	Required doorway entry depth	137 cm
ISO 7176-5	Required corridor width for side opening	95 cm
ISO 7176-5	Total mass	170kg
ISO 7176-5	Mass of heaviest part	2kg
ISO 7176-1	Forward wheelchair tipping angle (Least stable sitting configuration: seat lifted up high, incline back support, legs support up. Most stable: seat lowered down, legs support down, recline back support to 66-64°. Standing configuration: upright standing).	12° (sitting position) 7°(standing position)
ISO 7176-1	Rearward wheelchair tipping angle (Least stable position: seat lifted up, recline the back support to 64-66°, legs support down. Most stable: seat lowered down, legs support up, back support inclined forward. Standing configuration: upright standing).	12° (sitting position) 7°(standing position)

Standard	Item	Values
ISO 7176-1	Wheelchair tipping angles, lateral orientation of least stability. (Least stable sitting configuration: seat lifted up. Most stable: seat lowered down. Standing configuration: upright standing).	12° (sitting position) 7°(standing position)
ISO 7176-4	Theoretical distance range (Energy consumption)	Two batteries: 36 km, 58 Ah. One battery: 18 km, 29 Ah.
ISO 7176-2	Rearward dynamic stability. (Least stable sitting configuration: seat lifted up and moved backward, recline back support to 65°, legs support down, Standing configuration: upright standing).	12° (sitting position) 7°(standing position)
ISO 7176-2	Forward dynamic stability. (Least stable sitting configuration: seat lifted up, back support upright, legs support up. Additional test performed in same configuration but the seat was lowered down. In this configuration angle of 12° was obtained. Standing configuration: upright standing).	10° (sitting position) 7°(standing position)
ISO 7176-2	Forward dynamic stability. (Medium stable sitting configuration: seat lowered down, back support upright, legs support up. Standing configuration: upright standing).	12° (sitting position) 7°(standing position)
ISO 7176-2	Lateral dynamic stability	12° (sitting position) 7°(standing position)
ISO 7176-2	Lateral dynamic stability while turning suddenly	Yes (the system passed the test, for both' sitting and standing position)
ISO 7176-2	Rearward dynamic stability while traversing step forward	50 mm (sitting and standing)
ISO 7176-2	Rearward dynamic stability while traversing step backward	50 mm (sitting and standing)
ISO 7176-2	Forward dynamic stability while traversing step forward up a step	50 mm (sitting and standing)
ISO 7176-2	Forward dynamic stability while traversing step forward down a step	50 mm (sitting and standing)
ISO 7176-2	Travelling forward at an oblique angle to a downward step	50 mm (sitting and standing)
ISO 7176-3	Parking brakes maximum slope while the wheelchair facing downhill	<25° (Sitting position) 13.1° (standing position)
ISO 7176-3	Parking brakes maximum slope while the wheelchair facing uphill	15° (Sitting position) 10.9° (standing position)

Standard	Item	Values
ISO 7176-3	Running brakes, minimum braking distance from maximum speed forward on horizontal surface, normal operation	1.3 [m] (Sitting position) 0.8 [m] (standing position)
ISO 7176-3	Running brakes, minimum braking distance from maximum speed forward on horizontal surface, reverse operation	0.8 [m] (Sitting position) 0.7 [m] (standing position)
ISO 7176-3	Running brakes, minimum braking distance from maximum speed forward on horizontal surface, emergency operation	0.5 [m] (Sitting position) 0.4 [m] (standing position)
ISO 7176-10	Maximum obstacle height that can be climbed and descended, reference operation (obstacle mode)	25 mm
ISO 7176-10	Maximum obstacle height that can be climbed and descended, manufacturer's recommended operation (obstacle mode, diagonal approach)	45 mm
ISO 7176-6	Maximum speed forwards (on horizontal)	6 km/hr. (sitting position) 4.5 km/hr. (standing position).
ISO 7176-6	Minimum braking distance from maximum speed	250 mm
ISO 7176-10	Seat plane angle dimension (1)	fixed = 4°
ISO 7176-7	Effective seat depth dimension (2)	min = 440 mm max = 540
ISO 7176-7	Effective seat width dimension (4)	fixed = 436 mm
ISO 7176-7	Seat surface height at front edge dimension (5)	Fixed = 535mm
ISO 7176-7	Backrest angle dimension (6)	min = 90 ° max = 135°
ISO 7176-7	Backrest height dimension (7)	fixed = 538mm
ISO 7176-7	Footrest to seat distance dimension (11)	min = 415mm max = 535mm
ISO 7176-7	Leg to seat surface angle dimension (15)	min = 180° max = 90°
ISO 7176-7	Armrest to seat distance dimension (16)	Max = 273mm Min=243mm
ISO 7176-7	Front location of armrest structure dimension (17)	min = 340mm max = 460mm

Standard	Item	Values
ISO 7176-5	Minimum turning radius	820 mm
ISO 7176-19:2022	Wheeled mobility devices for use as seats in motor vehicles	Pass

15.2. Labeling

Symbol	Meaning
	Company logo
	System model
	Serial Number
	Max/ user weight
	CE symbol
	Manufacturing date (YYYY-MM-DD)
	<p>Waste Electrical and Electronic Equipment (WEEE) Disposal</p> <p>This symbol indicates that waste electrical and electronic equipment must not be disposed of as unsorted municipal waste and must be collected separately.</p> <p>Contact an authorized representative for information concerning the decommissioning of your equipment.</p>
	Refer to instruction manual
	UDI barcode (GS1-128)