

Owner's Manual

**QUANTUM**  
**VIBE**



**QUANTUM**<sup>®</sup>  
**REHAB**

**INNOVATIVE REHAB SOLUTIONS**

A Division of Pride Mobility Products<sup>®</sup> Corp.

# SAFETY GUIDELINES

The symbols below are used throughout this owner's manual and on the power chair to identify warnings and important information. It is very important for you to read them and understand them completely.



**WARNING!** Failure to follow designated procedures can cause either personal injury, component damage or malfunction.



**MANDATORY!** These actions should be performed as specified. Failure to perform mandatory actions can cause injury to personnel and/or damage to equipment.



**PROHIBITED!** These actions should be prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause injury to personnel and/or damage to equipment.



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This owner’s manual is compiled from the latest specifications and product information available at the time of publication. We reserve the right to make changes as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased.

# I . I N T R O D U C T I O N

## SAFETY

WELCOME to Quantum Rehab, a division of Pride Mobility Products Corporation (Pride). The power chair you have purchased combines state-of-the-art components with **safety**, comfort and styling in mind. We are confident that these design features will provide you with the conveniences you expect during your daily activities. Once you understand how to **safely** operate and care for your power chair, it should give you years of trouble free operation and service.

**Read and follow** all instructions, warnings and notes in this manual before attempting to operate your power chair for the first time. In addition, your **safety** depends upon you, as well as your dealer, carer or healthcare professional in using good judgement.

If there is any information in this manual which you do not understand or if you require additional assistance for setup or operation, please contact your Quantum Rehab Specialist. **Failure to follow the instructions in this manual and those located on your power chair can lead to personal injury and/or damage to the power chair, including voiding the warranty.**

## PURCHASER'S AGREEMENT

By accepting delivery of this product, you promise that you will not change, alter or modify this product or remove or render inoperable or unsafe any guards, shields or other safety features of this product; fail, refuse or neglect to install any retrofit kits from time to time provided by Pride to enhance or preserve the safe use of this product.

## INFORMATION EXCHANGE

We want to hear your questions, comments and suggestions about this manual. We would also like to hear about the safety and reliability of your new power chair and about the service you received from your Quantum Rehab Specialist.

Please notify us of any change of address, so we can keep you apprised of important information about safety, new products and new options that can increase your ability to use and enjoy your power chair. Please feel free to contact us at the address below:

Pride Mobility Products Ltd.  
Unit 106, Heyford Park Camp Road  
Upper Heyford, Oxfordshire OX25 5HA

***NOTE: If you ever lose or misplace your product registration card or your copy of this manual, contact us and we will be glad to send you a new one immediately.***

## My Quantum Rehab Specialist:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

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

# II. SAFETY

## PRODUCT SAFETY SYMBOLS

The symbols below are used on your power chair to identify warnings, mandatory actions and prohibited actions. It is very important for you to read and understand them completely.



Pinch/Crush points created during assembly.



Corrosive chemicals contained in battery. Use only AGM or Gel-Cell batteries to reduce the risk of leakage or explosive conditions.



EMI-RFI This product has been tested and passed at an immunity level of 20 V/m.



Read and follow the information in the owner's manual.



Maximum seating weight.

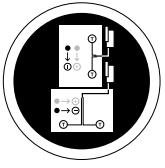


Unlocked and in freewheel mode.

Place unit on level ground and stand behind or to one side when changing from drive mode to freewheel mode or freewheel mode to drive mode.

Locked and in drive mode.

# II. SAFETY



Battery Configuration:  
T = Terminal Post  
Connect Red wire to T with +  
Connect Black wire to T with -



No step. No standing. Keep off!



Do not remove anti-tip wheels.



Do not use a cell phone, walkie/talkie, laptop or other radio transmitter while operating.



Avoid exposure to rain, snow, ice, salt, standing water, whenever possible. Maintain and store in a clean and dry condition.



Removal of grounding prong can create electrical hazard. If necessary, properly install an approved 3-prong adapter to an electrical outlet having 2-pronged plug access. Failure to heed could result in personal injury and/or property damage.



Prevent personal injury and equipment damage. Do not connect an extension lead to the AC/DC converter or the battery charger.

# II. SAFETY

## SAFETY



**MANDATORY!** Do not operate your new power chair for the first time without completely reading and understanding this owner's manual.

Your power chair is a state-of-the-art life-enhancement device designed to increase mobility. Pride provides an extensive variety of products to best fit the individual needs of the power chair user. Please be aware that the final selection and purchasing decision regarding the type of power chair to be used is the responsibility of the power chair user, who is capable of making such a decision, and his/her healthcare professional (i.e., medical doctor, physical therapist, etc.).

The contents of this manual are based on the expectation that a mobility device expert has properly fitted the power chair to the user and has assisted the prescribing healthcare professional and/or the Quantum Rehab Specialist in the instruction process for the use of the product.

There are certain situations, including some medical conditions, where the power chair user will need to practice operating the power chair in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a power chair user in various daily living activities.

As you begin using your power chair during daily activities, you will probably encounter situations in which you will need some practice. Simply take your time and you will soon be in full and confident control as you manoeuvre through doorways, on and off of lifts, up and down ramps and over moderate terrain.

Below are some precautions, tips and other safety considerations that will help the user become accustomed to operating the power chair safely.

### Modifications

Pride has designed and engineered your power chair to provide maximum mobility and utility. A wide range of accessories is available from your Quantum Rehab Specialist to further customise your power chair to better suit your needs and/or preferences. However, under no circumstances should you modify, add, remove or disable any feature, part or function of your power chair.



**WARNING!** Do not modify your power chair in any way not authorised by Pride. Unauthorised modifications may result in personal injury and/or damage to your power chair.

### Pre-Ride Safety Check

Get to know the feel of your power chair and its capabilities. Pride recommends that you perform a safety check before each use to make sure your power chair operates smoothly and safely.

Perform the following inspections prior to using your power chair:

- Check for proper tyre inflation. Maintain but do not exceed **2.4 bar (35 psi)** in each tyre (if equipped with pneumatic tyres).
- Check all electrical connections. Make sure they are tight and not corroded.
- Check all controller connections to the back of the power chair. Make sure they are secured properly.
- Check the brakes. See VII. "Care and Maintenance."
- Check battery charge. See V. "Batteries and Charging."

**NOTE:** *If you discover a problem, contact your Quantum Rehab Specialist for assistance.*

# II. SAFETY

## Weight Limitations

Your power chair is rated for a maximum weight capacity. Please refer to the specifications table for this limit.



WARNING! Exceeding the weight capacity voids your warranty and may result in personal injury and/or damage to your power chair. Pride will not be held responsible for injuries and/or property damage resulting from failure to observe weight limitations.

WARNING! Do not carry passengers on your power chair. Carrying passengers on your power chair may result in personal injury and/or property damage.

## Tyre Inflation

If your power chair is equipped with pneumatic tyres, you should check or have the air pressure checked regularly. Proper inflation pressures will prolong the life of your tyres and help ensure the smooth operation of your power chair.

WARNING! It is important that 2.4 bar (35 psi) tyre pressure be maintained in pneumatic tyres at all times. Do not underinflate or overinflate your tyres. Low pressure may result in loss of control, and overinflated tyres may burst. Failure to maintain 2.4 bar (35 psi) tyre pressure in pneumatic tyres at all times may result in tyre and/or wheel failure, causing serious personal injury and/or damage to your power chair.



WARNING! Inflate your power chair drive tyres from a regulated air source with an available pressure gauge. Inflating your tyres from an unregulated air source could overinflate them, resulting in a burst tyre and/or personal injury.

WARNING! When changing a tyre, remove only the centre lug nut, then remove the tyre. If any further disassembly is required, deflate the tyre completely or it may explode, possibly resulting in personal injury.

## Incline Information

More and more buildings have ramps with specified degrees of inclination, designed for easy and safe access. Some ramps may have turning switchbacks (180-degree turns) that require you to have good cornering skills on your power chair.

- Proceed with extreme caution as you approach the downgrade of a ramp or other incline.
- Take wide swings with your power chair's front wheels around any tight corners. If you do that, the power chair's rear wheels will follow a wide arc, not cut the corner short and not bump into or get hung up on any railing corners.
- When driving down a ramp, keep the power chair's speed adjustment set to the slowest speed setting to ensure a safely controlled descent. See VI. "Operation."
- Avoid sudden stops and starts.

When climbing an incline, try to keep your power chair moving. If you must stop, start up again slowly and then accelerate cautiously. When driving down an incline, set your power chair to the slowest speed setting and drive in the forward direction only. If your power chair starts to move down the incline faster than you anticipated or desired, allow it to come to a complete stop by releasing the joystick, then push the joystick forward slightly to ensure a safely controlled descent.

WARNING! When climbing an incline, do not zigzag or drive at an angle up the face of the incline. Drive your power chair straight up the incline. This greatly reduces the possibility of a tip or a fall. Always exercise extreme caution when negotiating an incline.



WARNING! You should not travel up or down a potentially hazardous incline (i.e., areas covered with snow, ice, cut grass or wet leaves).

WARNING! When on any sort of an incline or decline, never place the power chair in freewheel mode while seated on it or standing next to it. Doing so may result in personal injury and/or damage to your power chair.

WARNING! Never travel down an incline rearwards. This may result in personal injury.



# II. SAFETY

WARNING! Your power chair may be equipped with a reclining seatback. This feature is intended for use on a flat, level surface. Do not negotiate inclines with the seat in a reclined position as this may result in the power chair tipping over and causing personal injury and/or product damage.



WARNING! Even though your power chair is capable of climbing slopes greater than those illustrated in figure 1, do not, under any circumstances, exceed the incline guidelines or any other specifications presented in this manual. Doing so could cause instability in your power chair, resulting in personal injury and/or damage to your power chair.

Most handicap public access ramps are required to have a maximum slope of 10.5% (6°). Therefore, Pride recommends that the maximum slope of an incline you attempt to safely ascend or descend on your power chair does not exceed 10.5% (6°). See figure 1.



WARNING! Any attempt to climb or descend a slope steeper than 10.5% (6°) may put your power chair in an unstable position and cause it to tip, resulting in personal injury.

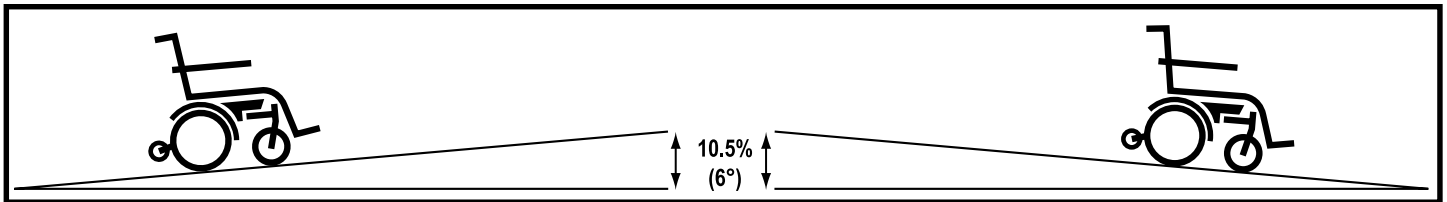


Figure 1. Maximum Safe Angle (Ascending and Descending)

## Braking Information

Your power chair is equipped with two powerful brake systems:

1. Regenerative — uses electricity to rapidly slow the vehicle when the joystick returns to the centre/stop position.
2. Disc Park Brake — activates mechanically after regenerative braking slows the vehicle to near stop, or when power is removed from the system for any reason.

## Cornering Information

While your power chair is equipped with castor wheels in front and anti-tip wheels in back, excessively high cornering speeds can still create the possibility of tipping. Factors which affect the possibility of tipping include, but are not limited to: cornering speed, steering angle (how sharply you are turning), uneven road surfaces, inclined road surfaces, riding from an area of low traction to an area of high traction (such as passing from a grassy area to a paved area – especially at high speed while turning) and abrupt directional changes. High cornering speeds are not recommended. If you feel that you may tip over in a corner, reduce your speed and steering angle (i.e., lessen the sharpness of the turn) to prevent your power chair from tipping.



WARNING! When cornering sharply, reduce your speed. This greatly reduces the possibility of a tip or fall. To avoid personal injury and/or property damage, always exercise common sense when cornering.

## Inclement Weather Precautions

Exposure of your power chair to inclement weather conditions should be avoided whenever possible. If suddenly caught up in rain, snow, severe cold or heat while operating your power chair proceed to shelter at the earliest opportunity. Thoroughly dry your power chair before storing, charging or operating your power chair.



WARNING! Operating in rain, snow, salt, mist/spray conditions and on icy/slippery surfaces can cause personal injury and/or damage to the power chair and electrical system. Maintain and store your power chair in a dry and clean condition.

# II. SAFETY

## Outdoor Driving Surfaces

Your power chair is designed to provide optimum stability under normal driving conditions—dry, level surfaces composed of concrete, blacktop or tarmac. However, Pride recognises that there will be times when you will encounter other surface types. For this reason, your power chair is designed to perform admirably on packed soil, grass and gravel. Feel free to use your power chair safely on lawns and in park areas.

- Reduce your power chair's speed when driving on uneven terrain and/or soft surfaces.
- Avoid tall grass that can entangle the running gear.
- Avoid loosely packed gravel and sand.
- If you feel unsure about a driving surface, avoid that surface.

## Freewheel Mode

Your power chair is equipped with two manual freewheel levers to allow for manual manoeuvrability by a trained attendant. For more information about how to place your power chair into and out of freewheel mode, see III. "Your Power Chair."

WARNING! Do not use your power chair in freewheel mode without an attendant present. Personal injury may result.



WARNING! Do not attempt to personally place your power chair in freewheel mode while seated on it. Personal injury may result. Ask an attendant for assistance if necessary.

WARNING! Do not place your power chair in freewheel mode while on an incline. The chair could roll uncontrollably on its own, causing personal injury.

## Stationary Obstacles (Steps, Kerbs, etc.)

Proceed with extreme caution when driving near raised surfaces, unprotected ledges and/or drop-offs (kerbs, porches, stairs, etc.). The correct method for approaching a kerb is illustrated in figure 2.

WARNING! Do not attempt to have your power chair climb or descend an obstacle that is higher than 10 cm (4 in.) unless you have the assistance of an attendant.



WARNING! If your power chair is equipped with a kerb climber, do not attempt to climb any kerb in excess of 10 cm (4 in.) in height. Do not approach kerbs at an angle; instead approach any kerb you intend to ascend or descend in the forward position.

WARNING! Do not attempt to have your power chair proceed rearward down any step, kerb or other obstacle. This may cause the power chair to tip and cause personal injury.

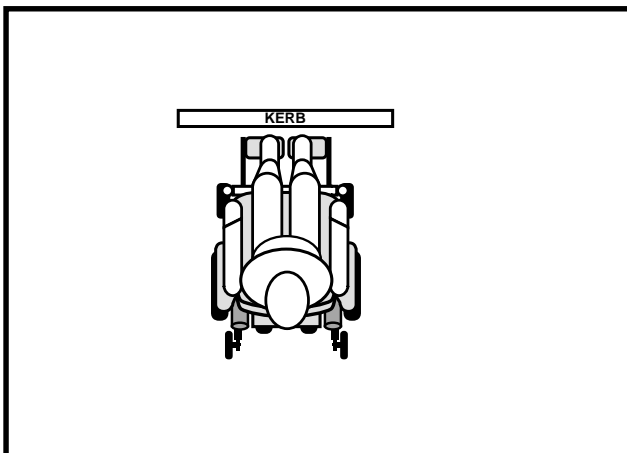


Figure 2. Correct Kerb Approach

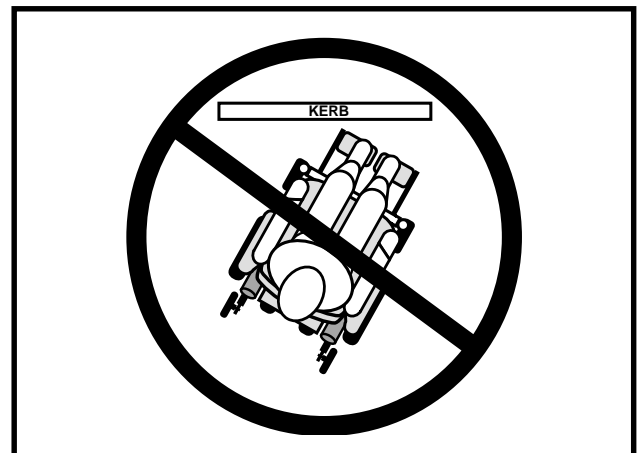


Figure 2a. Incorrect Kerb Approach

# II. SAFETY

## Public Streets and Roadways



WARNING! You should not operate your power chair on public streets and roadways. Be aware that it may be difficult for traffic to see you when you are seated on your power chair. Obey all local pedestrian traffic rules. Wait until your path is clear of traffic, and then proceed with extreme caution.

## Stairs and Escalators

Power chairs are not designed to travel up or down stairs or escalators. Always use a lift.



WARNING! Never use your power chair to negotiate steps or escalators. You may cause injury to yourself and to others and/or damage your power chair.

## Doors

- Determine if the door opens toward or away from you.
- Drive your power chair gently and slowly forward to push the door open. Or drive your power chair gently and slowly rearward to pull the door open.

## Lifts

Modern lifts have a door edge safety mechanism that, when pushed, reopens the lift door(s).

- If you are in the doorway of a lift when the door(s) begin to close, push on the rubber door edge or allow the rubber door edge to contact the power chair and the door will reopen.
- Use care that handbags, packages or power chair accessories do not become caught in lift doors.

## Lift/Elevation Products

If you will be traveling with your power chair, you may find it necessary to use a lift/elevation product to aid in transportation. Pride recommends that you closely review the instructions, specifications and safety information set forth by the manufacturer of the lift/elevation product before using that product.

## Motor Vehicle Transport

Currently, there are no standards approved for tie-down systems in a moving vehicle of any type to transport a person while seated in a power chair.



WARNING! Do not sit on your power chair while it is in a moving vehicle. Personal injury and/or property damage may result.

WARNING! Always be sure your power chair and its batteries are properly secured when it is being transported. Failure to do so may result in personal injury and/or damage to your power chair.

## Positioning Belts

Your Quantum Rehab Specialist, therapist(s) and other healthcare professionals are responsible for determining your requirement for a positioning belt in order to operate your power chair safely.



WARNING! If you require a positioning belt to safely operate your power chair, make sure it is fastened securely. Serious personal injury may result if you fall from the power chair.

WARNING! The positioning belt is not designed for use as a seat belt in a motor vehicle. Nor is your power chair suitable for use as a seat in any vehicle. Anyone traveling in a vehicle should be properly belted into seats approved by the vehicle manufacturer.

# II. SAFETY

## Transfers

Transferring onto and off of your power chair requires a good sense of balance. Always have an attendant or healthcare professional present while learning to properly transfer yourself. To eliminate the possibility of injury, Pride recommends that you or a trained attendant perform the following tasks before attempting a transfer:

- Turn off the power to the controller. See VI. “Operation.”
- Ensure your power chair is not in freewheel mode. See III. “Your Power Chair.”
- Turn both castor wheels toward the transfer destination to improve power chair stability during transfer. See figure 3.
- Make sure both armrests are flipped up or removed from your power chair.
- Move the foot rigging out of the way; this will help to keep your feet from getting caught on the foot rigging during the transfer.
- Reduce the distance between your power chair and the object you are transferring onto.



Figure 3. Transfers

WARNING! Before transferring, position yourself as far back as possible in the power chair seat to prevent the power chair from tipping forward during transfer and causing injury.



WARNING! Avoid using your armrests for weight bearing purposes. Such use may cause the power chair to tip and cause personal injury.

WARNING! Avoid putting all of your weight on the foot rigging. Such use may cause the power chair to tip and cause personal injury.

## Reaching and Bending

Never reach, lean or bend while driving your power chair. If it is absolutely necessary to reach, lean or bend while seated on your power chair, it is important to maintain a stable centre of gravity and keep the power chair from tipping. Pride recommends that the power chair user determine his/her personal limitations and practice bending and reaching in the presence of a qualified healthcare professional.

WARNING! Do not bend, lean or reach for objects if you have to pick them up from the floor by reaching down between your knees. Movements such as these may change your centre of gravity and the weight distribution of the power chair. This may cause your power chair to tip, possibly resulting in personal injury.



WARNING! Prevent personal injury! Keep your hands away from the tyres when driving. Be aware that loose fitting clothing can become caught in drive tyres.

## Batteries

In addition to following the warnings below, be sure to comply with all other battery handling information. For more information about your power chair’s batteries, see V. “Batteries and Charging.”

WARNING! Power chair batteries are heavy. See specifications table. If you are unable to lift that much weight, be sure to get help. Lifting beyond your capacity can result in personal injury.



WARNING! Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

WARNING! Always protect the batteries from freezing and never charge a frozen battery. Charging a frozen battery may result in personal injury and/or damage to the battery.

# II. SAFETY

## Battery Disposal and Recycling

If you encounter a damaged or cracked battery, immediately enclose it in a plastic bag and contact your Quantum Rehab Specialist for instructions on disposal. Your Quantum Rehab Specialist will also have the necessary information on battery recycling, which is our recommended course of action.

## Preventing Unintended Movement



**WARNING!** If you anticipate being seated in a stationary position for an extended period of time, turn off the power. This will prevent unexpected motion from inadvertent joystick contact. This will also eliminate the possibility of unintended chair movement from electromagnetic (EM) sources. Failure to do so may result in personal injury.

## Prescription Drugs/Physical Limitations

Users must exercise care and common sense when operating a power chair. This includes awareness of safety issues when taking prescribed or over-the-counter drugs or when the user has specific physical limitations.



**WARNING!** Consult your physician if you are taking prescribed or over-the-counter medication or if you have certain physical limitations. Some medications and limitations may impair your ability to operate your power chair in a safe manner.

## Alcohol

The power chair user must exercise care and common sense when operating his/her power chair. This includes awareness of safety issues while under the influence of alcohol.



**WARNING!** Do not operate your power chair while you are under the influence of alcohol, as this may impair your ability to operate your power chair in a safe manner.

## Removable Parts



**WARNING!** Do not attempt to lift or move a power chair by any of its removable parts. Personal injury and/or damage to the power chair may result.

## Electromagnetic and Radio Frequency Interference (EMI/RFI)



**WARNING!** Laboratory tests have shown that electromagnetic and radio frequency waves can have an adverse affect on the performance of electrically-powered mobility vehicles.

Electromagnetic and Radio Frequency Interference can come from sources such as cellular phones, mobile two-way radios (such as walkie-talkies), radio stations, TV stations, amateur radio (HAM) transmitters, wireless computer links, microwave signals, paging transmitters and medium-range mobile transceivers used by emergency vehicles. In some cases, these waves can cause unintended movement or damage to the control system. Every electrically-powered mobility vehicle has an immunity (or resistance) to EMI. The higher the immunity level, the greater the protection against EMI. This product has been tested and has passed at an immunity level of 20 V/m.



**WARNING!** Be aware that cell phones, two-way radios, laptops and other types of radio transmitters may cause unintended movement of your electrically-powered mobility vehicle due to EMI. Exercise caution when using any of these items while operating your mobility vehicle and avoid coming into close proximity of radio and TV stations.

## II. SAFETY



WARNING! The addition of accessories or components to the electrically-powered mobility vehicle can increase the susceptibility of the vehicle to EMI. Do not modify your power chair in any way not authorised by Pride.

WARNING! The electrically-powered mobility vehicle itself can disturb the performance of other electrical devices located nearby, such as alarm systems.

***NOTE: For further information on EMI/RFI, go to the Resource Center on [www.pridemobility.com](http://www.pridemobility.com). If unintended motion or brake release occurs, turn your power chair off as soon as it is safe to do so. Contact your Quantum Rehab Specialist to report the incident.***

# III. YOUR POWER CHAIR

## YOUR POWER CHAIR

Your power chair has two main assemblies: the seat and the power base. See figures 4 and 5. Typically, the seat assembly includes the armrests, seatback and seat base. The power base assembly includes two motor/brake assemblies, two drive wheels, two anti-tip wheels, two castor wheels, two batteries and wiring harnesses.



Figure 4. The Vibe

# III. YOUR POWER CHAIR

SPECIFICATIONS	
Suspension	Full suspension - Sport Trac
Drive Wheels	35.5 cm (14 in.) pneumatic, centre-mounted (35.5 cm (14 in.) solid wheels are optional)
Castor Wheels	23 cm (9 in.) pneumatic, front articulating (23 cm (9 in.) solid are optional)
Anti-tip Wheels	10 cm (4 in.) solid, rear-mounted
Maximum Speed*	Up to 6 km/h (4 mph)
Brakes	"Intelligent Braking" electronic regenerative, disc park brake
Ground Clearance	9.5 cm (3.75 in.)
Turning Radius	58 cm (23 in.) without foot riggings
Overall Size	Length: 90 cm (35.5 in.) without foot riggings Width: 63.5 cm (25 in.)
Seating Options	Euro Seat with Manual Recline (standard) Euro Seat with Power Recline (optional) Euro Seat with Power Tilt (optional) Cantilever Seat (optional)
Drivetrain	Two motor, rear-wheel drive
Batteries**	Two 12-volt 70 AH Group 24 batteries (Group 34 with Cantilever Seat option)
Range*	Up to 40 km (25 miles)
Battery Charger	12-amp, off-board
Electronics	50-amp PG Drives VSI Controller (standard) 70-amp PG Drives Remote Plus Controller (optional)
Weight Capacity	136 kg/21 Stone (300 lbs.)
Component Weights	Base: 41 kg (90.5 lbs.; with pneumatic drive wheels; batteries not included) Euro Seat: 22.5 kg (50 lbs.) Batteries: 24 kg each (53.5 lbs., Group 24); 19.5 kg each (43 lbs., Group 34, recommended)
Class of Use	B
Maximum Safe Slope	10.5% (6°)
Maximum Climbing Ability	10.5% (6°)
Maximum Obstacle Climbing Ability	10 cm (4 in.)

\*Depending on user weight, battery amp hour rating (AH) and terrain.

\*\*AGM or Gel-Cell type recommended.



# III. YOUR POWER CHAIR

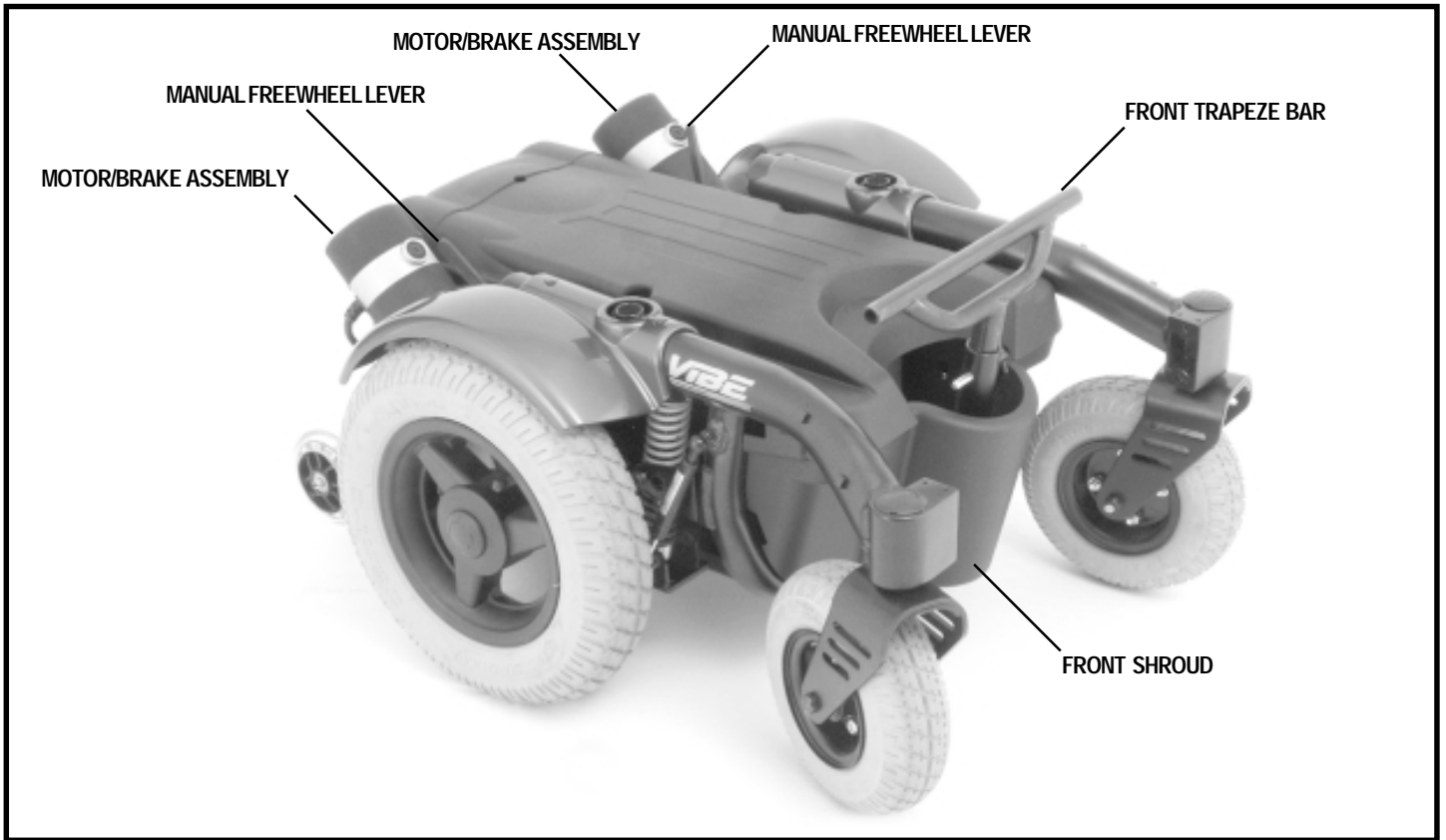


Figure 5. The Vibe Power Base

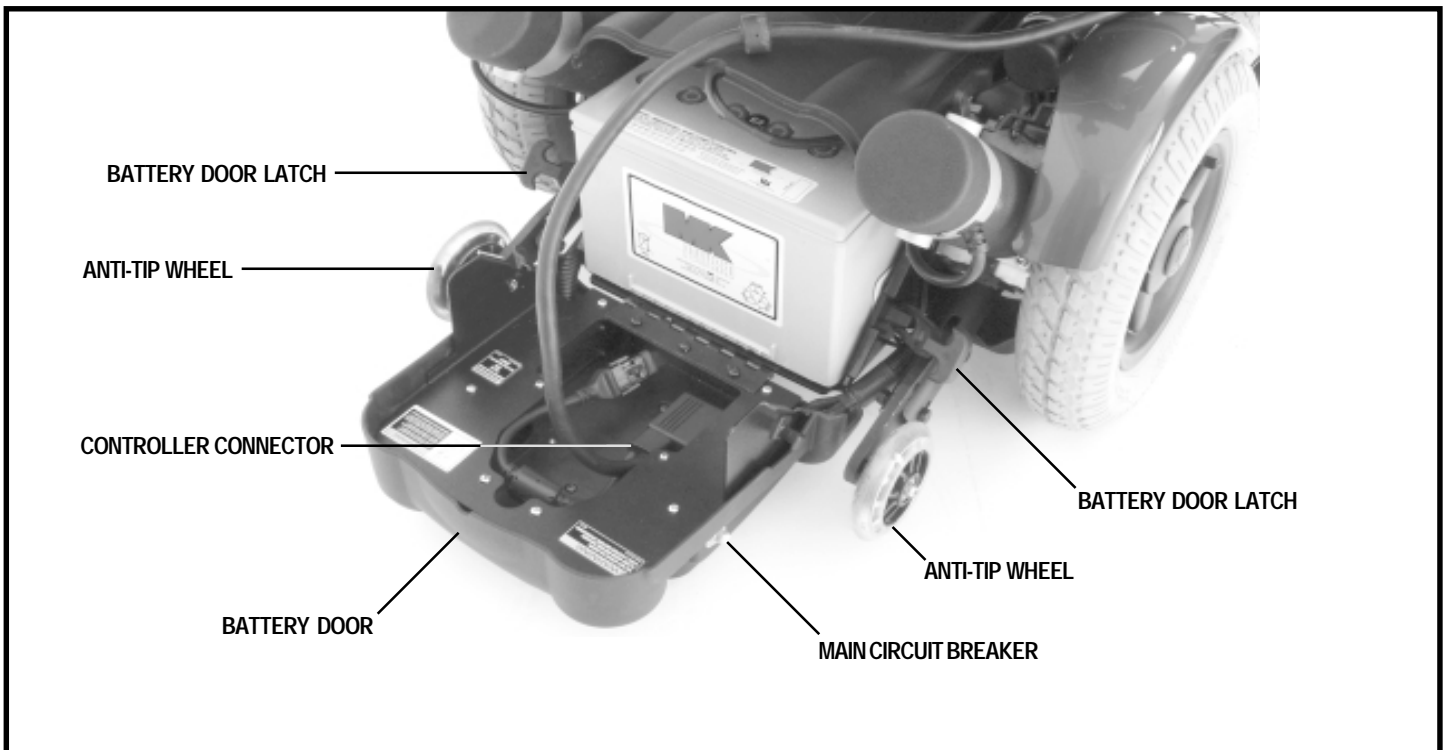


Figure 6. The Vibe Power Base (Rear View - Battery Door Down)

# III. YOUR POWER CHAIR

## Electrical Components

The electrical components are located on the battery door at the back of the power base. See figure 6.

**Main Circuit Breaker:** The main circuit breaker is a safety feature built into your power chair. When the batteries and the motors are heavily strained (e.g., from excessive loads), the main circuit breaker trips to prevent damage to the motors and the electronics. If the circuit trips, allow your power chair to “rest” for approximately one minute. Next, push in the circuit breaker button, turn on the controller and continue normal operation. If the main circuit breaker continues to trip repeatedly, contact your Quantum Rehab Specialist.

**Controller Connector:** This is where the controller connects to the power base. The VSI controller uses a large 9-pin connector. The Remote Plus uses a smaller, multi-pin communications cable connector (not shown).

## Sport-Trac Suspension

Your power chair is equipped with Sport-Trac Suspension (STS). STS is a suspension system designed to make your power chair traverse different types of terrain and obstacles while maintaining smooth operation. With STS, the spring-loaded drive wheels move in two directions—up for rolling over obstacles and down when encountering transitions.

As the drive wheels come in contact with an obstacle, they are drawn upward. At the same time, the rear anti-tip wheels work in opposition to the drive wheels to eliminate the possibility of the chair losing traction. This creates a safer, more secure ride.

STS also helps in day-to-day operating conditions. This unique suspension system helps to harness the motors’ torque to make smoother transitions in speed during acceleration or deceleration.

## Manual Freewheel Levers

For your convenience, your power chair is equipped with two manual freewheel levers mounted on the motors. See figures 7 and 8. These levers allow you to disengage the drive motors and manoeuvre the chair manually. You can manually push the power chair by the seatback or push the power base itself if the seat is removed.



**WARNING!** Do not use your power chair while the drive motors are disengaged unless you are in the presence of an attendant! Do not disengage the drive motors when your power chair is on an incline. The chair could roll down on its own, causing injury!

**WARNING!** It is important to remember that when your power chair is in freewheel mode, the braking system is disengaged.

# III. YOUR POWER CHAIR

## To operate the manual freewheel levers:

1. Pull the manual freewheel lever inward for freewheel mode (drive disengaged). See figure 7.
2. Push the manual freewheel lever outward for drive mode (drive engaged). See figure 8.

**NOTE:** *If the lever is difficult to move in either direction, rock your power chair back and forth slightly. The lever should then move to the desired position.*



Figure 7. Freewheel Mode (Drive Disengaged)



Figure 8. Drive Mode (Drive Engaged)

## Kerb Climber (Optional)

Your power chair may be equipped with a kerb climbing mechanism designed to work with your built-in suspension system to further stabilise your power chair when climbing kerbs or other obstacles. See figure 9. The kerb climber is bolted to the front of the power chair and is equipped with a spring-loaded foot that acts as a lever to lift the power chair over obstacles.

As the spring-loaded foot comes into contact with the kerb or obstacle, the momentum of the chair causes it to pivot downward, lifting the front castor wheels over the obstacle. Once the castors are clear, the drive wheels gain the leverage they need to manoeuvre over the obstacle. When the chair is once again on level ground and the spring-loaded foot no longer senses an obstacle, it will return to its normal position and will not drag or scrape the ground.

**NOTE:** *For more information regarding the kerb climber feature, please contact your Quantum Rehab Specialist.*

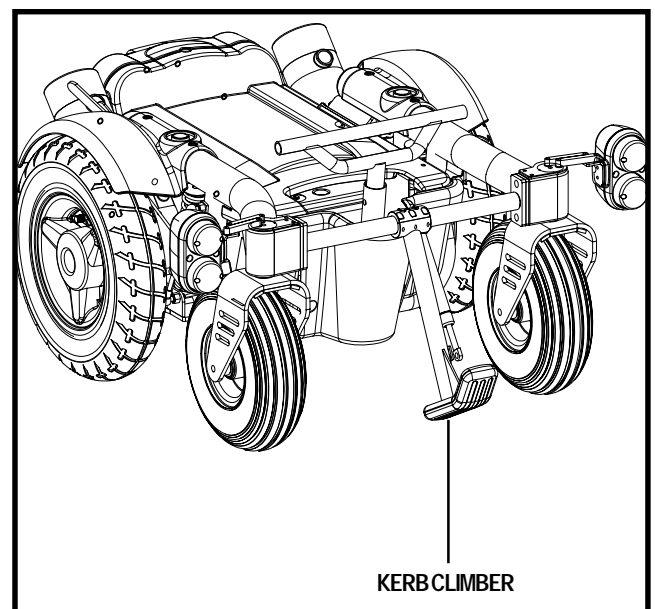


Figure 9. Vibe with Kerb Climber

# IV. COMFORT ADJUSTMENTS

## COMFORT ADJUSTMENTS

After becoming familiar with your power chair's operation, you may find the need to make some adjustments to increase your comfort, such as seatback recline angle, armrest position and controller position. If your power chair is equipped with power seating options, contact your Quantum Rehab Specialist.



**WARNING!** If your power chair was configured at your Quantum Rehab Specialist, please consult your healthcare professional before changing the seat position or making any other adjustment. Some adjustments may degrade your power chair's performance and safety by changing its centre of gravity.

**NOTE:** Any nylon insert lock nut removed during the disassembly or adjustment of the power chair must be replaced with a new nut. Nylon insert lock nuts should not be reused as it may cause damage to the nylon insert, resulting in a less secure fit. Replacement nylon insert lock nuts are available at local hardware stores or through your Quantum Rehab Specialist.

You may need the following to make comfort adjustments:

- metric/standard hex key set
- metric/standard socket set and ratchet
- adjustable spanner

### Manual Recline Seatback Adjustment

Your seat is equipped with a manual recline lever that allows you to adjust the seatback angle.

#### To adjust the seatback angle:

1. With your back pressed firmly against the seatback, squeeze the manual recline lever mounted to the armrest. See figure 10.
2. Set the seatback at the desired angle by leaning forward or back.
3. Release the manual recline lever when the seatback is at the desired angle.

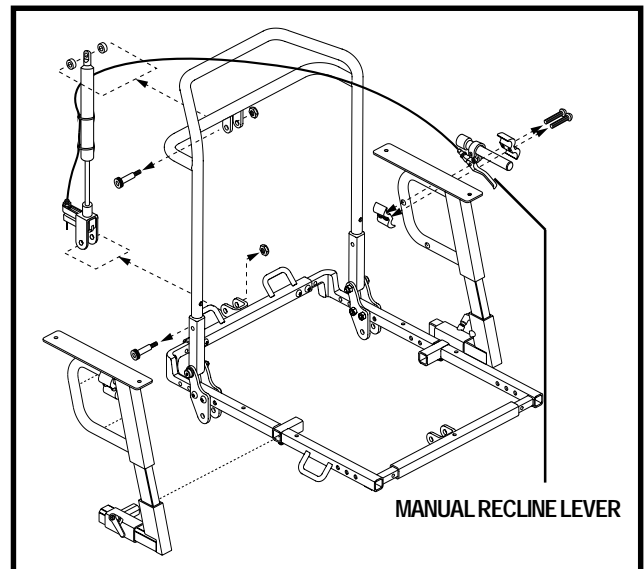


Figure 10. Manual Recline Seatback Adjustment

### Armrest Position Adjustment

The armrest position can be adjusted forward or back for operator comfort.

#### To adjust the armrest position:

1. Turn the armrest receiver lock anticlockwise to loosen. See figure 11.
2. Slide the armrest forward or back to the desired position.
3. Turn the armrest receiver lock clockwise to secure the armrest in the desired position.

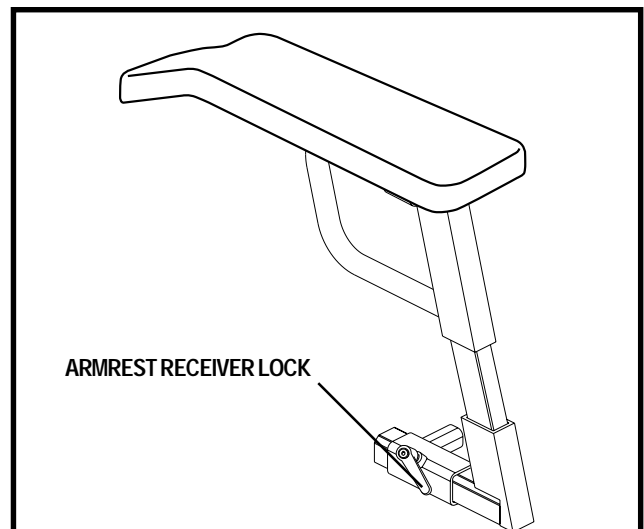


Figure 11. Armrest Position Adjustment

# IV. COMFORT ADJUSTMENTS

## Armrest Pad Position Adjustment

The armrest pad position can be adjusted forward or back an overall distance of 5 cm (2 in.) and left to right an overall distance of 2.5 cm (1 in.).

### To adjust the forward/back armrest pad position:

1. Remove each adjustment screw from the underside front and back of the armrest pad. See figure 12.
2. Move the pad forward or back to the desired position.
3. Align the adjustment holes in the armrest pad and the armrest pad receiver.
4. Reinstall the screws to secure the armrest pad.

### To adjust the left to right armrest pad position:

1. Remove each adjustment screw from the underside front and back of the armrest pad. See figure 12.
2. Move the pad left or right to the desired position.
3. Align the adjustment holes in the armrest pad and the armrest pad receiver.
4. Reinstall the screws to secure the armrest pad.

## Armrest Width Adjustment

### To adjust the armrest width:

1. Loosen the securement screw located on the bottom of the armrest receiver bracket. See figure 13.
2. Slide the armrest in or out to the desired position.
3. Tighten the screw to secure the armrest.

## Armrest Height Adjustment

You can adjust the armrest height to one of four positions in either 1.27 cm (0.5 in.) or 2.5 cm (1 in.) increments.

### To adjust the height in 1.27 cm (0.5 in.) increments:

1. Remove the height adjustment screw from the armrest. See figure 14.
2. Raise or lower the upper armrest.
3. Align the adjustment holes in the lower armrest with the bottom hole in the upper armrest.
4. Reinstall the screw to secure the armrest.

### To adjust the height in 2.5 cm (1 in.) increments:

1. Remove the height adjustment screw from the armrest. See figure 14.
2. Raise or lower the armrest.
3. Align the adjustment holes in the lower armrest with the top hole in the upper armrest.
4. Reinstall the screw to secure the armrest.

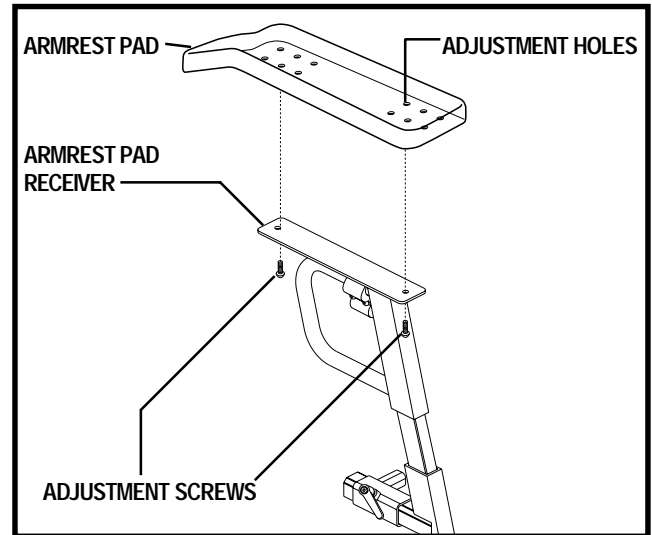


Figure 12. Armrest Pad Position Adjustment

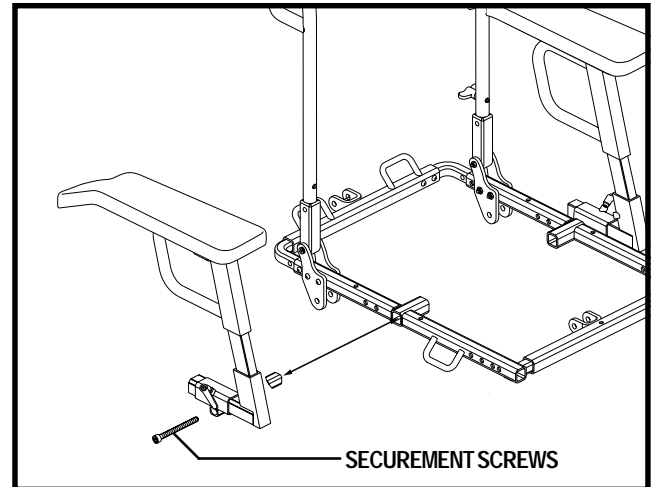


Figure 13. Armrest Width Adjustment

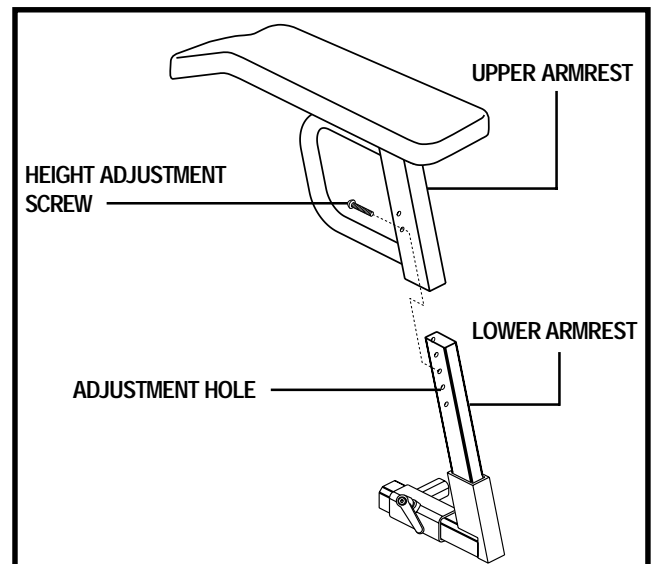


Figure 14. Armrest Height Adjustment

# IV. COMFORT ADJUSTMENTS

## Controller Position

You can position the controller for either left-hand or right-hand use.



**WARNING!** Do not place the controller cable so that it can be pinched in the seat frame or the power base frame.

### To change the controller position:

1. Turn off the power to the controller. See VI. “Operation.”
2. Open the battery door and unplug the controller connector from the back of the power base. See figure 6.
3. Cut the wire tie that attaches the controller cable to the armrest.
4. Loosen the button head screws on the figure 8 clamp assembly located on the armrest. See figure 15.
5. Slide the controller out of the loosened clamp assembly.
6. Loosen the button head screws on the clamp assembly on the other armrest.
7. Remove the manual recline lever assembly and insert it into the clamp assembly on the opposite armrest. See figure 10.
8. Tighten the button head screws to secure the manual recline lever assembly in the figure 8 clamp.
9. Insert the controller into the remaining open clamp assembly.
10. Tighten the button head screws to secure the controller in the figure 8 clamp.
11. Use wire ties to secure the controller cable and the manual recline lever cable to the armrests.
12. Plug in the controller and the charger inhibit connectors to the back of the power base and close the battery door.

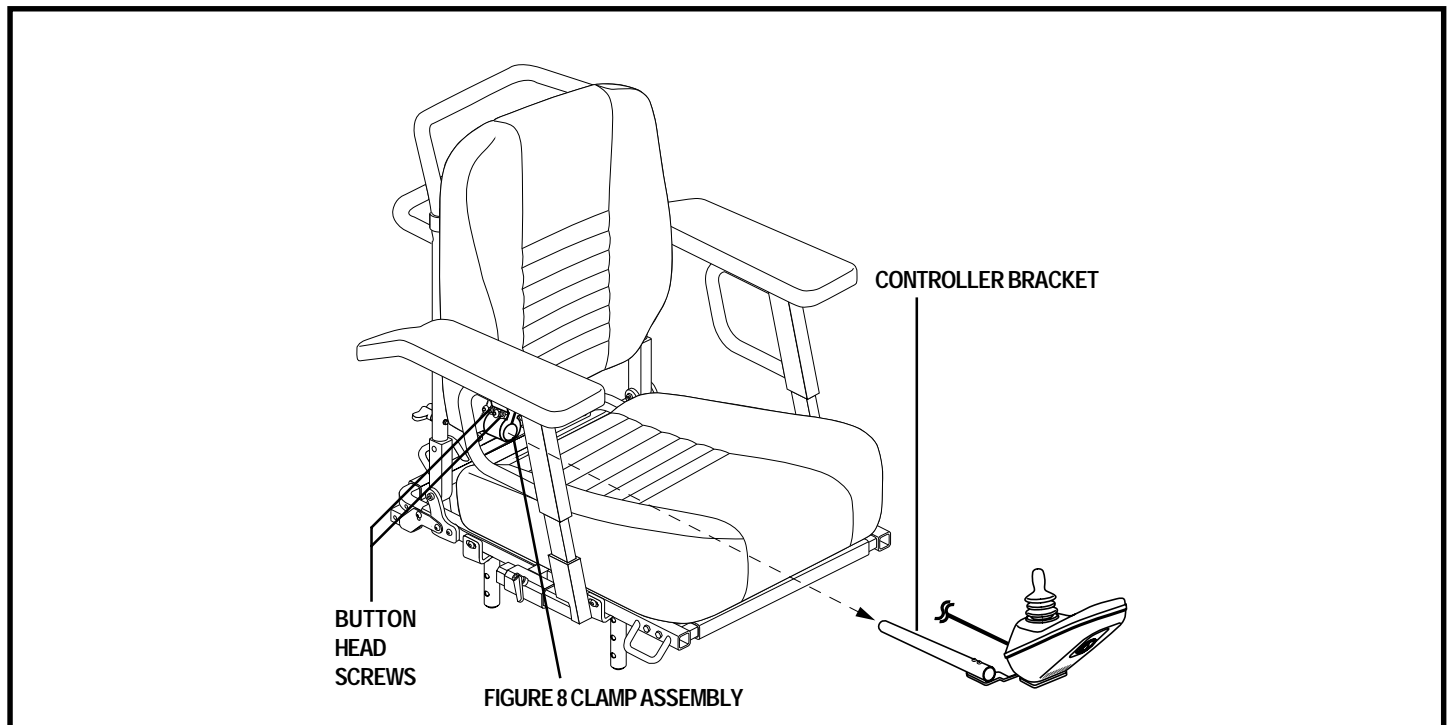


Figure 15. Controller Position

# IV. COMFORT ADJUSTMENTS

## Heavy Duty Drop-in Leg Rests

You can adjust the forward/back position, as well as the length of the heavy duty drop-in leg rests.

### To adjust the forward/back position:

1. Remove the adjustment bolts from the side rail. See figure 16.
2. Move the leg rest hanger in or out to the desired position.
3. Align the adjustment holes in the leg rest hanger with those in the side rail.
4. Reinstall the adjustment bolts to secure the leg rest hanger.

### To adjust the leg rest length:

1. Remove the adjustment screws from the leg rest extension. See figure 16.
2. Slide the leg rest up or down to the desired length.
3. Align the adjustment holes in the leg rest extension and reinstall the adjustment screws.

## Swing-away Footrests

Swing-away Footrests enable you to rotate the footrests to the side before you transfer onto or off of your power chair.

### To move the SFRs:

1. Push in the release lever. See figure 17.
2. Rotate the SFRs to the side.

### To adjust the SFR length:

1. Remove the adjustment screws from the side of the footrest extension. See figure 17.
2. Slide the footrest extension up or down to the desired length.
3. Align the adjustment holes and reinstall the adjustment screws to secure the footrest extensions.

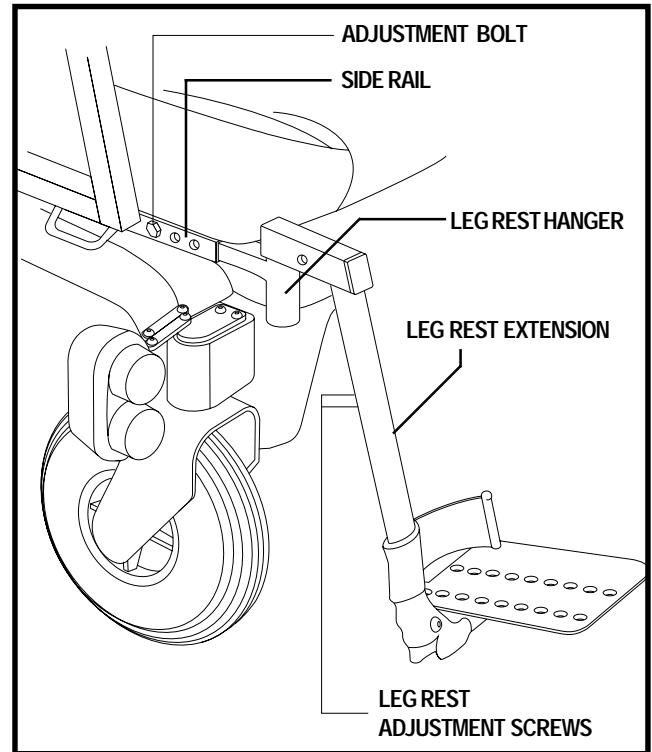


Figure 16. Heavy Duty Drop-in Leg Rests

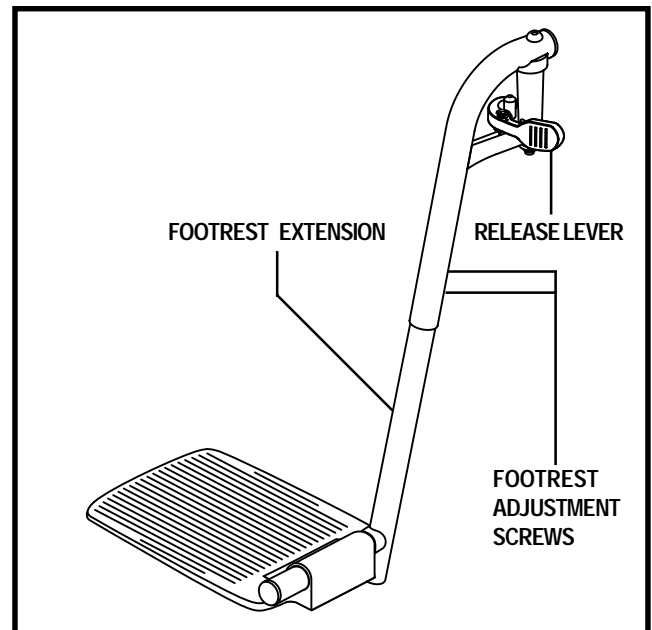


Figure 17. Swing-Away Footrests

# IV. COMFORT ADJUSTMENTS

## Multi-Axis Foot Plates

The multi-axis foot plate assembly can be installed on either a swing-away footrest or an elevating leg rest. The multi-axis foot plate has four adjustments: leg rest length (A), position (B), tilt (C) and angle (D). See figure 18.

### To change the leg rest length (A):

1. Remove the hardware.
2. Move the leg rest to the desired position.
3. Reinstall the hardware.

### To change the foot plate position (B):

1. Remove the hardware.
2. Move the foot plate to the desired position.
3. Reinstall the hardware.

### To change the foot plate tilt (C):

1. Loosen the hardware.
2. Tilt the foot plate to the desired position.
3. Tighten the hardware.

### To change the foot plate angle (D):

1. Turn the setscrew clockwise to decrease the angle.
2. Turn the setscrew anticlockwise to increase the angle.

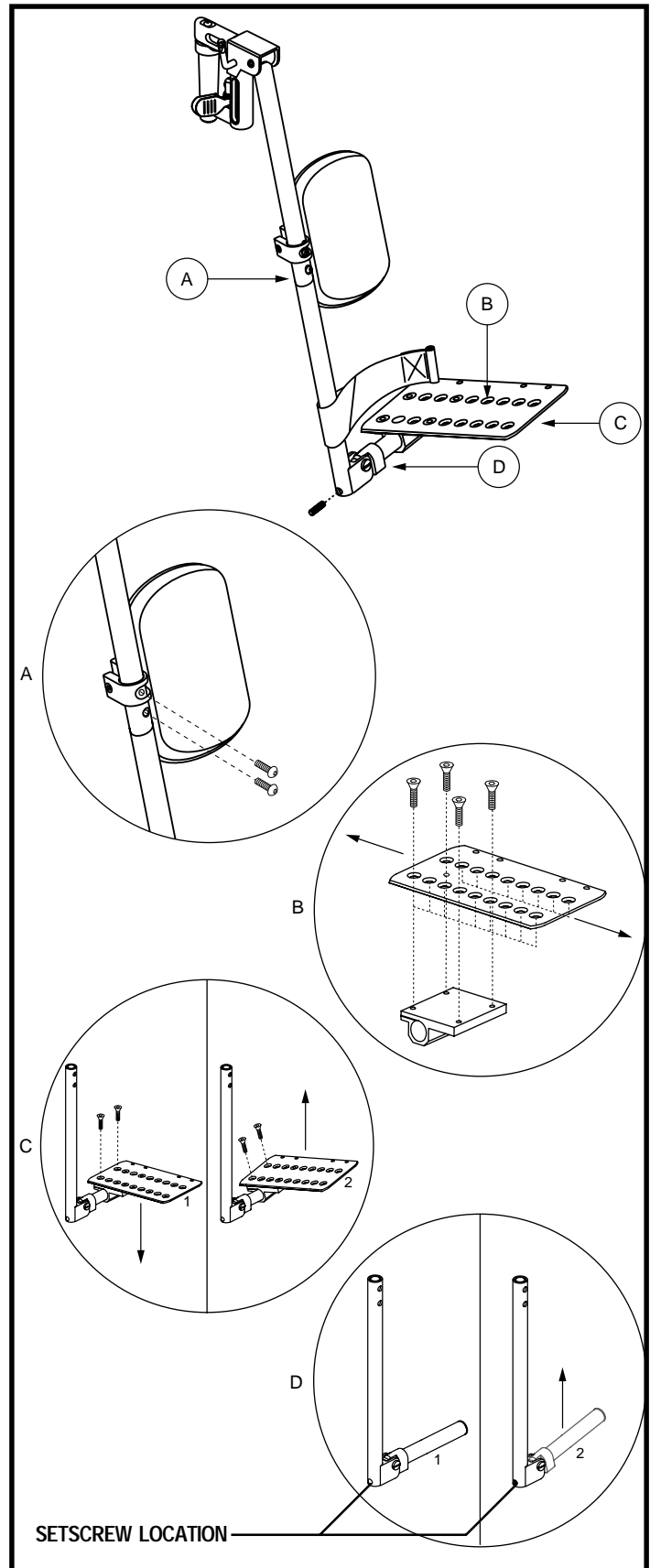


Figure 18. Multi-Axis Foot Plates



# IV. COMFORT ADJUSTMENTS

## Anti-Tip Wheels

The anti-tip wheels are designed to give your power chair increased stability on rough surfaces. The anti-tip wheels are preset at the factory for smooth surfaces or indoor use only. If you plan on using your power chair on rough surfaces, it may be necessary to adjust the anti-tip wheels to better suit your needs. The anti-tip wheels may need adjustment if either of the following occur:

- When accelerating, your power chair tips rearward excessively.
- The anti-tip wheels constantly rub the ground.

WARNING! Consult your Quantum Rehab Specialist before attempting to change the anti-tip wheel height! Changing the anti-tip wheel height affects handling under deceleration!



WARNING! The higher you raise the anti-tip wheels, the more you increase your power chair's tendency to tilt rearward when accelerating. You can compensate for this by having your Quantum Rehab Specialist make a small adjustment to the pre-programmed acceleration setting in the controller or by adjusting the seat assembly.

WARNING! The anti-tip wheels may cause trouble when ascending or descending a kerb if they are not adjusted correctly. Contact your Quantum Rehab Specialist for more information.

### To adjust the anti-tip wheels:

1. Loosen bolt A. See figure 19.
2. Remove bolt B.
3. Raise or lower the anti-tip wheel by 1.27 cm (0.5 in.) or 2.5 cm (1 in.) increments by aligning the appropriate adjustment holes. See figure 19.
4. Insert bolt B into the appropriate hole for the desired anti-tip height and tighten.
5. Tighten bolt A.
6. Raise or lower the other anti-tip wheel so that it is at the same height.



PROHIBITED! Do not remove the anti-tip wheels.

**NOTE:** Each drive tyre must have at least 2.4 bar (35 psi) in order for the anti-tip wheels to be properly adjusted. The user must also be seated in the power chair in order to properly adjust the anti-tip wheels.

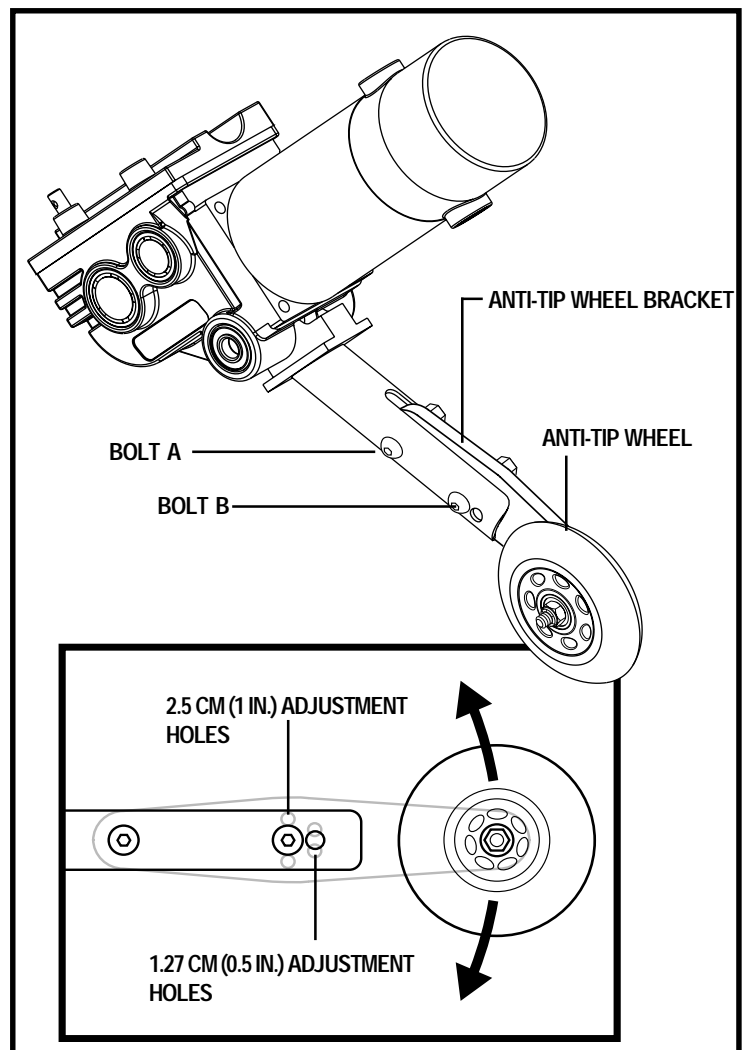


Figure 19. Anti-Tip Wheel Assembly

## IV. COMFORT ADJUSTMENTS



**Figure 20. Cantilever Seat**

### CANTILEVER SEAT OPTION

Your power chair may be equipped with an optional cantilever seat. See figure 20. The cantilever seat is equipped with a speed inhibit system that reduces your power chair's speed by one quarter when the seat is elevated more than 2.5-5 cm (1-2 in.). The cantilever seat provides 33 cm (13 in.) of lift, and raising the cantilever seat can change your centre of gravity. Always check to be sure the speed inhibit system is operating properly before using your power chair, and do not move around in your seat to any great extent when the seat is in a raised position.

The cantilever seat can enhance the capabilities of the power chair in the following ways:

- By raising the seat, your level of reach is extended to allow more freedom and independence in many environments.
- By raising your seat, you are closer to the eye level of standing persons. This provides better interaction.

For all the benefits your cantilever seat can provide you, there are limitations.



**WARNING!** Read and understand this owner's manual thoroughly before operating the power chair.

**WARNING!** Maintain recommended tyre pressure in the drive wheels and the castor wheels to ensure stability.

# IV. COMFORT ADJUSTMENTS

WARNING! The cantilever seat option is intended for use on a flat, level surface only. Never raise the seat from its lowest position on an inclined surface. Failure to heed this warning can result in the power chair tipping over and causing injury.



WARNING! Never raise the seat from its lowest position when operating your power chair on bumpy or uneven surfaces. Failure to heed this warning can result in the power chair tipping over and causing injury.

WARNING! Never raise the cantilever seat while your power chair is in freewheel mode.

WARNING! Always fasten the positioning belt when operating the cantilever seat.

## Cantilever Seat Operation

You can control the cantilever seat through either a toggle switch mounted to the armrest or through your joystick/controller. For information on how to raise and lower your cantilever seat through your controller, contact your Quantum Rehab Specialist.

### To operate the cantilever seat:

1. Bring your power chair to a complete stop.
2. Push the toggle switch forward to raise the seat. When you release the toggle, the seat will stop. Once the seat reaches its highest extension, the lift action stops; you should continue to hear and/or feel the lift motor running. This is because there is a clutch mechanism that allows the motor to continue running after the lift has reached its limit. This clutch works at both the top and bottom extensions of the lift.



WARNING! Do not allow the motor to run more than a few seconds after the mechanism reaches the top or bottom limit.

3. Pull the toggle switch rearward to return the seat to its lowest position. When returning to the lowest position, always be sure that the mechanism has reached its lowest limit.

## Presence Sensing System

The cantilever seat is equipped with a “Presence Sensing System” that enables the electronics to cut power to the seat whenever there is an obstruction between the seat and the power base. Sensors are located on the bottom of the seat rails and can detect objects that are placed between the seat rails and the power base. When the cantilever system stops because of an obstruction, you have to reset the joystick before you can move the seat.

### To reset the joystick:

1. Release the joystick to the neutral position.
2. Make sure the obstruction has cleared.
3. Use the joystick to move the seat.

# IV. COMFORT ADJUSTMENTS

## POSITIONING BELT

The positioning belt is designed to support the operator so that he/she does not slide down or forward in the seat, and it can be adjusted for operator comfort. The positioning belt is not designed for use as a restraining device.



**WARNING!** The positioning belt is not designed for use as a seat belt in a motor vehicle. Nor is your power chair suitable for use as a seat in any vehicle. Anyone traveling in a vehicle should be properly belted into seats approved by the vehicle manufacturer.

### To install the positioning belt:

You will need the following tools:

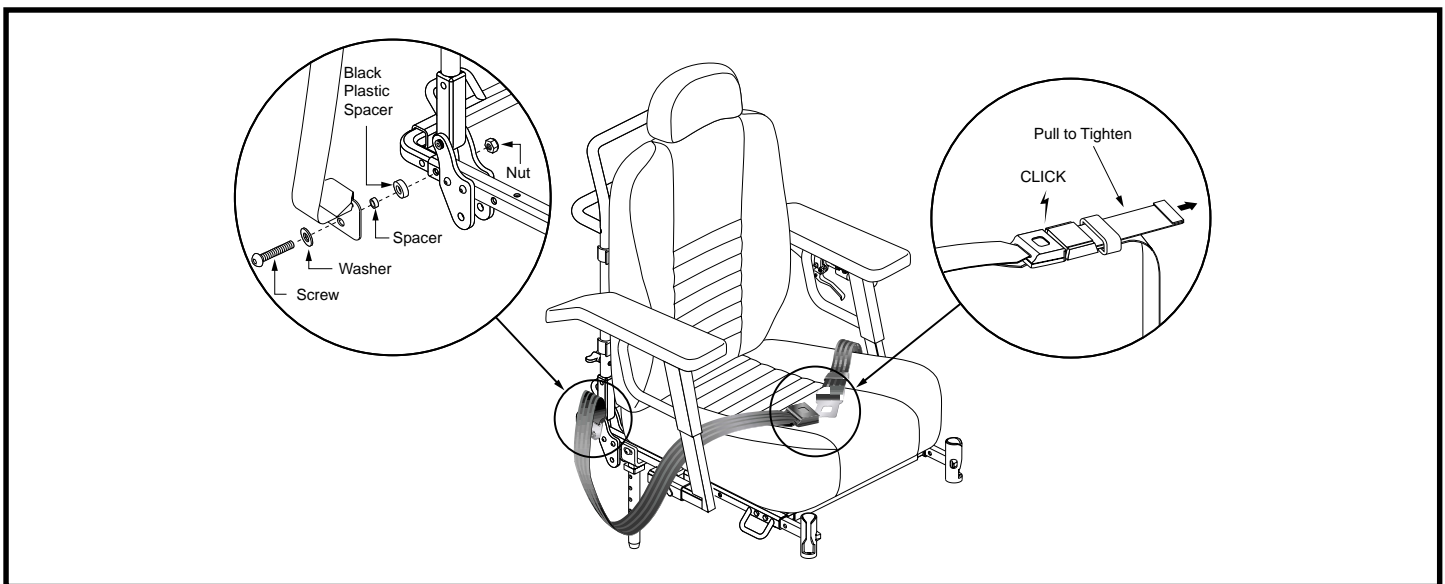
- metric/standard hex key set
- adjustable spanner

1. Insert the screw through the washer and the mounting tab at the end of the positioning belt. See figure 21.
2. Install the screw through the spacer and the large black plastic spacer, then insert the screw through the seat base rail at the rear of the seat.
3. Install the Nylock nut to the assembly, and then tighten the screw and nut using a hex key and an adjustable spanner.
4. Repeat steps 1-3 for the other side.

**NOTE:** If your power chair is equipped with an optional seating system, please refer to the user manual provided with the seat for instruction on positioning belt installation, or contact your *Quantum Rehab Specialist*.

### To adjust the positioning belt for operator comfort:

1. Once seated, insert the metal tab on one side of the belt into the plastic housing on the opposite side until you hear a click.
2. Pull the excess strap attached to the metal tab until it is secure, but not so tight as to cause discomfort.



**Figure 21. Positioning Belt Installation and Adjustment**

# V. BATTERIES AND CHARGING

## BATTERIES AND CHARGING

Your power chair uses two long-lasting, 12-volt, deep-cycle batteries. These batteries are sealed and maintenance free. Since they are sealed, there is no need to check the electrolyte (fluid) level. Deep-cycle batteries are designed to handle a longer and deeper discharge. Though they are similar in appearance to automotive batteries, they are not interchangeable. Automotive batteries are not designed to handle a long, deep discharge, and also are unsafe for use in power chairs.



WARNING! Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

### Charging the Batteries

The battery charger is essential in providing long life for the batteries. The battery charger is designed to optimise power chair performance by charging the batteries safely, quickly and easily. Your power chair uses an off-board charger to charge the batteries. The off-board charger is plugged into a socket on the front of your controller. See VI. “Operation.” Follow the directions supplied with the off-board charger.



WARNING! You must recharge the batteries with the supplied off-board charger. Do not use an automotive-type battery charger.



PROHIBITED! Removal of grounding prong can create electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access. Failure to heed could result in personal injury and/or property damage.



PROHIBITED! Never use an extension lead to plug in your battery charger. Plug the charger directly into a properly wired standard electrical outlet.

### Battery Break-in

#### To break in new batteries for maximum efficiency:

1. Fully recharge any new battery prior to its initial use. This brings the battery up to about 90% of its peak performance level.
2. Operate your power chair throughout the house and grounds. Move slowly at first, and do not travel too far until you become accustomed to the controls and break in the batteries.
3. Give the batteries another full charge of 8 to 14 hours and operate your power chair again. The batteries will now perform at over 90% of their potential.
4. After four or five charging cycles, the batteries will top off at 100% charge and last for an extended period.

## FREQUENTLY ASKED QUESTIONS (FAQS)

### How does the charger work?

The battery charger takes the standard electrical outlet AC (alternating current) voltage and converts it to 24 VDC (direct current). The batteries use direct current to run your power chair. When the battery voltage is low, the charger works harder to charge the battery. As the battery voltage approaches full charge, the charger doesn't work as hard to complete the charging cycle. When the battery is fully charged, the amperage from the charger is nearly at zero. This is how the charger maintains a charge but does not overcharge the battery. For more information, refer to the instruction manual supplied with the charger.

# V. BATTERIES AND CHARGING

## **Can I use a different battery charger?**

You should use the charger supplied with your power chair. It is the safest, most efficient tool to charge the batteries. We do not recommend using other types of chargers (e.g., an automotive battery charger).

***NOTE:** The charger will not operate after the batteries have been discharged to nearly zero voltage. If this happens, call your Quantum Rehab Specialist for assistance.*

## **How often must I charge the batteries?**

Many factors come into play when deciding how often to charge the batteries. You may use your power chair all day on a daily basis or you may not use it for weeks at a time.

### ■ **Daily Use**

If you use your power chair on a daily basis, charge the batteries as soon as you are finished using it for the day. Your power chair will be ready each morning to give you a full day's service. It is recommended that you charge the batteries 8 to 14 hours after daily use.

### ■ **Infrequent Use**

If you use your power chair infrequently (once a week or less), you should charge the batteries at least once per week for 12 to 14 hours.

***NOTE:** Keep your batteries fully charged and avoid deeply discharging your batteries. Do not charge the batteries for more than 24 hours at a charging cycle.*

## **How can I get maximum range or distance per charge?**

Rarely do you have an ideal driving situation such as smooth, flat, hard terrain with no wind, hills or curves. More often you are presented with hills, footpath cracks, uneven and loosely packed surfaces, curves and wind. All of these factors will affect the distance or running time per battery charge. Below are a few suggestions for obtaining the maximum range per charge:

- Always charge the batteries fully prior to your trip.
- Plan your trip in advance to avoid inclines if possible.
- Limit baggage weight to essential items.
- Try to maintain an even speed and avoid stop-and-go driving.

## **What type of batteries should I use?**

We recommend deep-cycle batteries that are sealed and maintenance free. Both AGM and Gel-Cell are deep-cycle batteries that are similar in performance. Refer to the specifications table for battery information when reordering deep-cycle batteries from your Quantum Rehab Specialist.



**WARNING!** Corrosive chemicals contained in batteries. Use only AGM or Gel-Cell batteries to reduce the risk of leakage or explosive conditions.

# V. BATTERIES AND CHARGING

## **Why do my new batteries seem weak?**

Deep-cycle batteries employ a much different chemical technology than that used in car batteries, nickel-cadmium (nicads) or in other common battery types. Deep-cycle batteries are specifically designed to provide power, drain down their charge and then accept a relatively quick recharge. AGM and Gel-Cell batteries should be charged as often as possible. They do not have a “memory” like nickel-cadmium batteries.

We work closely with our battery manufacturer to provide a battery that best suits your power chair’s specific demands. Fresh batteries arrive regularly at Pride and are shipped with a full charge. During shipping, the batteries encounter temperature extremes that may influence initial performance. Heat robs the charge from the battery, and cold slows the power available and extends the time needed to recharge the battery (just as with a car battery).

It might take a few days for the temperature of the battery to stabilise and adjust to its new ambient temperature. More importantly, it will take a few “charging cycles” (a partial drain— then a full recharge) to establish the critical chemical balance that is essential to the battery’s peak performance and long life. It will be well worth it to take the time to break in your battery properly.

## **How can I ensure maximum battery life?**

A fully charged deep-cycle battery will provide reliable performance and extended battery life. Keep the batteries fully charged whenever possible. Batteries that are regularly and deeply discharged, infrequently charged or stored without a full charge may be permanently damaged, causing unreliable power chair operation and limited battery life.

## **How should I store my power chair and its batteries?**

If you do not use your power chair regularly, we recommend maintaining battery vitality by charging the batteries at least once per week.

If you do not plan on using your power chair for an extended period, fully charge the batteries prior to storage. Disconnect the battery harnesses and store the power chair in a warm, dry environment. Avoid temperature extremes, such as freezing and excessively hot conditions, and never attempt to charge a frozen battery. A cold or frozen battery should be warmed for several days prior to recharging.

## **What about public transport?**

AGM and Gel-Cell batteries are designed for application in power chairs and other mobility vehicles, allowing safe transport on aircraft, buses and trains, as there is no danger of spillage or leakage. We suggest you contact the carrier’s ticket counter in advance to determine that carrier’s specific requirements.

## **What about shipping?**

If you wish to use a freight company to ship your power chair to your final destination, repack your power chair in the original shipping container and ship the batteries in separate boxes.

# VI. OPERATION

## CONTROLLER INFORMATION

The controller supplied with your power chair has been preprogrammed by the manufacturer to meet the needs of the end user. The program is set using either a personal computer with software provided by the controller manufacturer or with a hand-held programmer, also provided by the controller manufacturer.



**WARNING!** The controller program can affect speed, acceleration, deceleration and braking, but if programmed incorrectly or outside of the safe limits as determined by your healthcare professional, can create a dangerous situation. Only the power chair manufacturer, an authorised representative of the manufacturer or a trained service technician should program the controller.

## VSI CONTROLLER

The electronic controller is what you use to operate your power chair. It takes the battery voltage and sends it to the appropriate system. The electronic controller enables you to move the power chair, as well as monitor battery charge, electronic controller functions and the condition of your electrical system. Also, it may be used to control some optional systems such as power elevating seats and lights.

The VSI controller is an integral electronic controller. All of the electronics necessary to operate the power chair are contained in one module. See figure 22.

The VSI consists of:

1. joystick
2. keypad (see figure 23)
3. off-board charger/programming socket
4. actuator connector (optional)
5. controller connector

Typically, the VSI is mounted to one of the armrests and is connected to the motors and batteries on the power base.

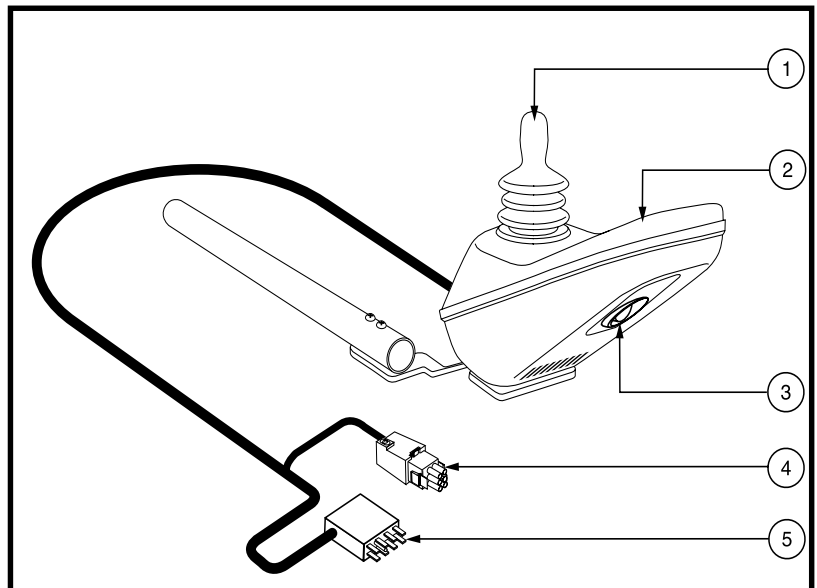


Figure 22. VSI Controller

## Joystick

The joystick controls the direction and speed of your power chair. When you move the joystick from the neutral (centre) position, the electromagnetic brakes release and allow your power chair to move. The farther you push the joystick from its neutral position, the faster your power chair moves. When you release the joystick and allow it to return to the neutral position, you engage the electromagnetic brakes. This causes your power chair to decelerate and come to a complete stop.



**WARNING!** If your power chair begins to move in an unexpected manner, immediately release the joystick. Unless the joystick is damaged, this action should stop your power chair.

## Keypad

The keypad is located in front of the joystick. It contains keys necessary to operate your power chair. See figure 23.



# VI. OPERATION

## On/Off Key

The on/off key turns the VSI on and off. See figure 23.



**WARNING!** Unless faced with an emergency situation, do not use the on/off key to stop the chair. This will cause the power chair to stop abruptly.

**WARNING!** Always turn the power off when you are stationary to prevent unexpected movement.

## Battery Condition Meter

The battery condition meter is located in front of the joystick. See figure 23. This is a 10-segment illuminated display that indicates that the VSI is powered on and also gives the battery status, the VSI status and the electrical system status.

- **Red, yellow and green lights lit:** Batteries charged; VSI and electrical system OK.
- **Red and yellow lights lit:** Charge batteries if possible; VSI and electrical system OK.
- **Red lights only lit or slow flash:** Charge batteries as soon as possible; VSI and electrical system OK.
- **Rapid flash of lights:** Indicates a fault in the VSI or the electrical system.
- **Ripple side to side of lights:** The joystick was not in the neutral position when the controller was turned on. If you get “ripple side to side of lights,” turn off the controller, allow the joystick to return to the neutral position, then turn on the controller.

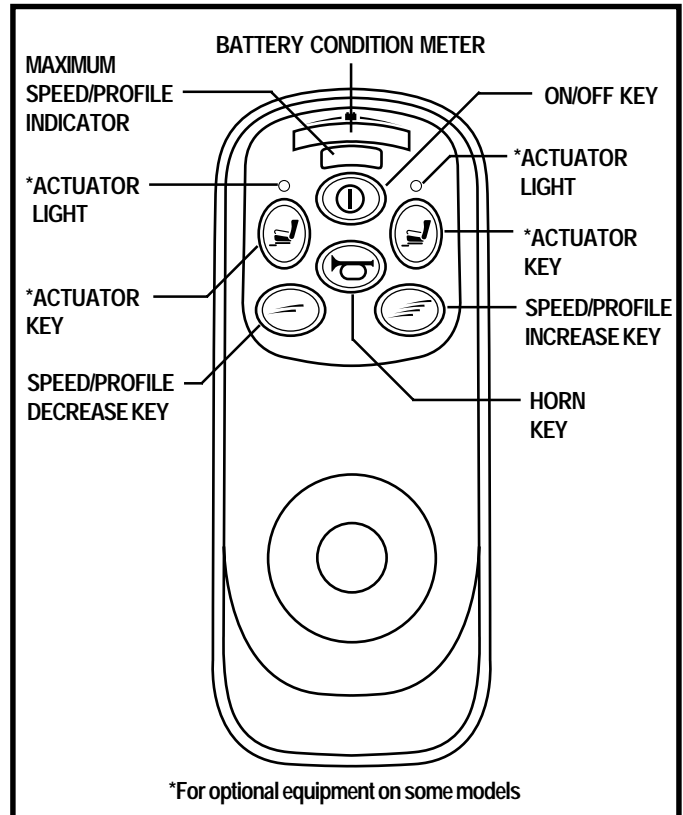


Figure 23. VSI Controller Keypad

**NOTE:** If you still get “ripple side to side of lights,” contact your *Quantum Rehab Specialist*.

**NOTE:** When the batteries approach a discharged state, the first red light will begin to slowly flash, reminding you the batteries need to be charged immediately!

## Speed/Profile Keys

There are two keys that control either the speed or the profile. See figure 23. This depends on how your VSI was programmed. Press the speed/profile increase key to increase the speed or change the profile. Press the speed/profile decrease key to decrease the speed or change the profile. The speed/profile setting is displayed on the maximum speed/profile indicator. If your power chair was programmed with a drive profile, contact your Quantum Rehab Specialist for more information.

**NOTE:** We recommend that the first few times you operate your power chair, you set the speed to the slowest setting until you become familiar with your new power chair.

# V I . O P E R A T I O N

## Actuator Keys and Actuator Lights (for optional equipment)

Actuator keys and actuator lights are used for optional equipment such as power elevating seats, power elevating leg rests and lighting systems. See figure 23. For specific operation of the actuator keys and actuator lights, contact your Quantum Rehab Specialist.



WARNING! Power chair users are required to use their lights when visibility is restricted—day or night. Failure to use the lighting system in periods of poor visibility may result in personal injury.

## Horn Key

The horn key activates the horn. See figure 23.

## Off-board Charger/Programming Socket

The off-board charger connects to the VSI through the 3-pin socket located on the front of the controller. See figure 22. The off-board charger current should not exceed 12 amps. Contact your Quantum Rehab Specialist for more information.



WARNING! Only chargers with Neutrik NC3MX plugs should be connected to the off-board charger/programming socket. See your Quantum Rehab Specialist for more information.

**NOTE:** *The socket may also be used for reprogramming the VSI. Contact your Quantum Rehab Specialist for more information.*

## Controller Connector

This connects the VSI to the power chair's batteries, motors and motor brakes. See figure 22.



WARNING! Failure to properly align the connectors can result in damage to the VSI, the charger and the connectors.

## Thermal Rollback

The VSI controller is equipped with a thermal rollback circuit. The circuit monitors the temperature of the controller, which roughly translates to motor temperature. In the event that the VSI controller becomes excessively hot (above 60° C/140° F), motor current (amperage) is reduced. For every degree above 60° C/140° F, the motor current limit is reduced by 0.55 amps until the VSI controller reaches 70° C/158° F, at which time the current output is reduced to zero. This reduces your power chair's "power," which could also reduce your power chair's speed, and allows the electrical components and motors to cool down. When the temperature returns to a safe level, your power chair resumes its normal operation.

## Trouble Codes

The VSI controller is designed with the user's safety as the prime consideration. It incorporates many sophisticated self-test features which search for potential problems at a rate of 100 times per second. If the VSI detects a problem either in its own circuits or in the power chair's electrical system, it may stop the power chair, depending on the severity of the problem. The VSI is designed to maximize the user's safety under all normal conditions. The following identifies the individual error codes. Error codes are displayed as a rapid flashing of the lights. If you get one of these error codes, contact your Quantum Rehab Specialist.

# VI. OPERATION

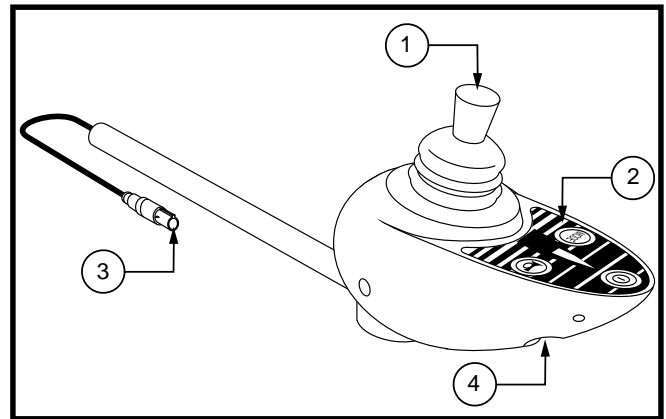
FLASHING LIGHTS	DIAGNOSIS/SOLUTION
1	The batteries need charging or there is a bad connection to the batteries. Check the connections to the batteries. If the connections are good, try charging the battery.
2	The left motor has a bad connection. Check the left motor connection.
3	The left motor has a short circuit to a battery connection. Contact your Quantum Rehab Specialist.
4	The right motor has a bad connection. Check the right motor connection.
5	The right motor has a short circuit to a battery connection. Contact your Quantum Rehab Specialist.
6	The power chair is being inhibited by the battery charger. Unplug the battery charger.
7	A joystick fault is indicated. Make sure that the joystick is in the neutral (centre) position before turning on the controller.
8	A controller fault is indicated. Make sure that all connections are secure.
9	The parking brakes have a bad connection. Check the parking brake and motor connections. Make sure the controller system connections are secure.
10	An excessive voltage has been applied to the controller system. This is usually caused by a poor battery connection. Check the battery connections.

## REMOTE PLUS CONTROLLER

The Remote Plus is a modular electronic control system. The electronics necessary to operate your power chair are contained in several modules located on different parts of your power chair.

The Remote Plus system consists of the following components:

- master remote
- communications cable(s)
- power module
- motor wiring harnesses
- battery wiring harnesses
- actuator lighting module (for optional equipment)



**Figure 24. Remote Plus Controller**

The master remote is located typically on the end of an armrest. The other components are located inside the power base.

## Remote Plus Master Remote

The Remote Plus master remote consists of the following (see figure 24):

1. joystick
2. keypad
3. controller communications cable
4. off-board charger/programming socket

# VI. OPERATION

## Joystick

The joystick controls the direction and speed of your power chair. When you move the joystick from the neutral (centre) position, the electromagnetic brakes release and allow your power chair to move. The farther you push the joystick from its neutral position, the faster your power chair moves. When you release the joystick and allow it to return to the neutral position, you engage the electromagnetic brakes. This causes your power chair to decelerate and come to a complete stop.



**WARNING!** If your power chair begins to move in an unexpected manner, immediately release the joystick. Unless the joystick is damaged, this action should stop your power chair.

## Keypad

The keypad is located directly in front of the joystick. See figure 25. It contains keys that you will use to control your power chair.

## On/Off Key

The on/off key turns the system power on and off.



**WARNING!** Unless faced with an emergency situation, do not use the on/off key to stop the chair. This will cause your power chair to stop abruptly.

**WARNING!** Always turn the power off when you are stationary to prevent unexpected movement.

## Mode Key

Press the mode key to change speed setting or to activate the power accessories. See “Speed Settings” or “Power Accessories.”

## Speed Setting Indicator

Indicates the selected speed setting.

## Power Accessory Indicator (for optional equipment)

Indicates the selected power accessory. This is for optional accessories only.

## Horn Key

The horn key activates the horn.

## Right/Left Turn Indicator Keys

The right/left turn indicator keys toggle either the left or right turn indicators. Press once to turn on and press again to turn off. You can also turn off the selected indicator by pressing the opposite indicator key or the hazard key.

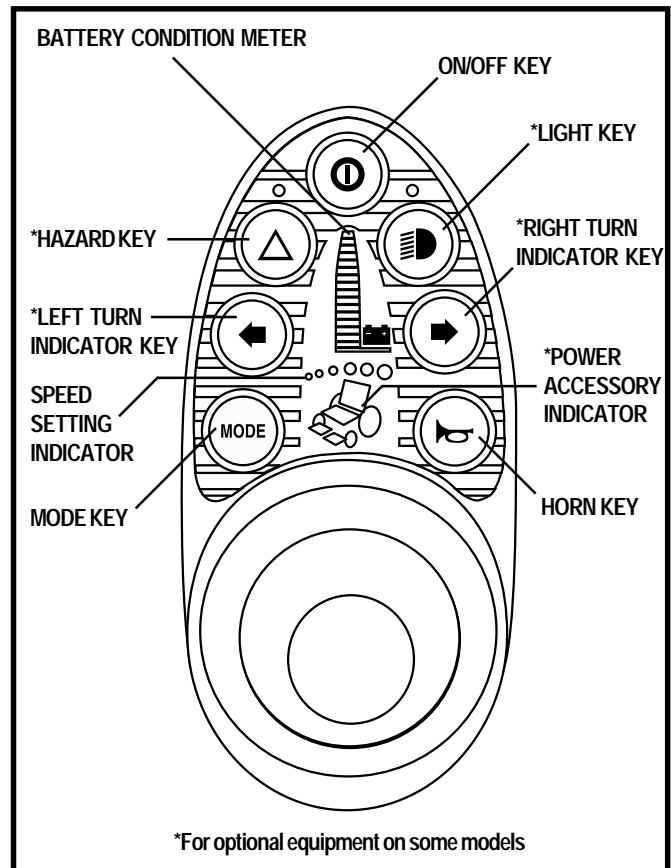


Figure 25. Remote Plus Keypad

# V I . O P E R A T I O N

## Light Key

The light key turns headlights/taillights on and off independent of other indicators.



**WARNING!** Power chair users are required to use their lights when visibility is restricted—day or night. Failure to use the lighting system in periods of poor visibility may result in personal injury.

## Hazard Key

The hazard key toggles both indicators at the same time. You can only cancel this by pressing the hazard key again.

## Battery Condition Meter

The battery condition meter is located in front of the joystick. This is a 10-segment illuminated display that indicates that the Remote Plus is powered on and also gives the status of the batteries, the controller and the power chair electrical system.

- **Red, yellow and green lights lit:** Batteries charged; controller and electrical system OK.
- **Red and yellow lights lit:** Charge batteries if possible; controller and electrical system OK.
- **Red lights only lit or slow flash:** Charge batteries as soon as possible; controller and electrical system OK.
- **Rapid flash of lights:** Indicates a fault in the controller or the electrical system.
- **Ripple up and down of lights:** The joystick was not in the neutral position when the controller was turned on. If you get “ripple up and down of lights,” turn off the controller, allow the joystick to return to the neutral position, then turn on the controller.

**NOTE:** *If you still get “ripple up and down of lights,” contact your Quantum Rehab Specialist.*

**NOTE:** *When the batteries approach a discharged state, the first red light will begin to slowly flash, reminding you the batteries need to be charged immediately!*

## Speed Settings

The Remote Plus speed settings range from 1 to 5. Typically, the slowest speed setting is 1 and the fastest speed setting is 5. The settings are indicated by the number of lights that are lit on the speed setting indicator.

**NOTE:** *The speed settings are preset at the factory. If your Quantum Rehab Specialist changes the order of these settings, please make note of these changes. Contact your Quantum Rehab Specialist for more information.*

### To select a speed setting:

1. Press the on/off key to power on the remote.
2. Press the mode key once.
3. To increase chair speed, push the joystick to the right. Each time you push the joystick, you will increase the speed setting.
4. To decrease chair speed, push the joystick to the left. Each time you push the joystick, you decrease the speed setting.
5. Once you select the desired speed setting, press the mode key once to keep the setting or push the joystick in the forward or reverse direction. The chair will resume operation at the selected speed.

**NOTE:** *We recommend that the first few times you operate your power chair, you have your speed on the slowest setting until you become familiar with your new power chair.*

# V I . O P E R A T I O N

## Power Accessories

If your power chair is equipped with power accessories such as a power seat or power elevating leg rests, you can operate them through the remote keypad. Contact your Quantum Rehab Specialist for information on how to operate these accessories.

## Off-board Charger/Programming Socket

The off-board charger connects to the Remote Plus through the 3-pin socket located on the front of the controller. See figure 24. The off-board charger current should not exceed 12 amps. Contact your Quantum Rehab Specialist for more information.



WARNING! Only chargers with Neutrik NC3MX plugs should be connected to the off-board charger/programming socket. See your Quantum Rehab Specialist for more information.

## Controller Communications Cable

The controller communications cable provides the joystick module with a connection to the power module. See figure 24.

## Power Module (Not Shown)

Typically, the power module is mounted to the power base. The power module provides a power interface for the joystick module. It routes the battery power to the motors and other powered accessories such as lights and power seats.

## Actuator Lighting Module (Not Shown)

The actuator lighting module is also located on the power base. The actuator lighting module provides a control and power interface between the power module, the lights and/or the power seat actuator.

## Sleep Mode

Sleep mode is a built-in circuit that automatically shuts off the main power if the joystick is not moved in any direction for approximately five minutes. The battery condition meter lights on the keypad indicate sleep mode by blinking once every five seconds. To restore power and continue, push the on/off key twice.

## Thermal Rollback

The thermal rollback circuit monitors the temperature of the motors, power module and remote. In the event that any of them become excessively hot (above 50° C/122° F), motor voltage is reduced. For every degree above 50° C/122° F, the voltage is reduced by 5 volts. This reduces your power chair's speed and allows the electrical components to cool down. When the temperature returns to a safe level, your power chair resumes its normal speed.

# V I . O P E R A T I O N

## Trouble Codes

In addition to indicating the current state of battery charge, the battery condition meter can also indicate possible problems with your power chair. The battery condition meter has ten lights. The lights provide information by the number of lights that are flashing. If any of the meter lights are flashing rapidly, the controller may be indicating a fault. For instance, if the first light is flashing rapidly, the battery voltage is nearly depleted. The following is a list of the possible errors signified by the rapidly flashing meter. When you get a trouble code, contact your Quantum Rehab Specialist.

Flashing Lights	Diagnosis	Solution
10	High Battery Voltage	Check batteries.
9	Solenoid Brake Fault	Check motor/brake wiring.
8	Possible Controller Fault	See Quantum Rehab Specialist.
7	Possible Joystick Fault	See Quantum Rehab Specialist.
6	Inhibit Active	Unplug charger. Check connectors.
5	Right Motor Wiring Fault	Check right motor wiring.
4	Right Motor Disconnected	Check right motor wiring.
3	Left Motor Wiring Fault	Check left motor wiring.
2	Left Motor Disconnected	Check left motor wiring.
1	Low Battery Voltage	Check batteries/battery wiring.

# VII. CARE AND MAINTENANCE

## CARE AND MAINTENANCE

Your power chair, like any motorised vehicle, requires routine maintenance checks. You can perform some of these checks, but others require assistance from a Quantum Rehab Specialist. Preventive maintenance is very important. If you follow the maintenance checks in this section as scheduled, you can help ensure that your power chair gives you years of trouble-free operation. If you have any doubt as to your power chair's care or operation, contact your Quantum Rehab Specialist.

### Exposure to Water/Dampness

Your power chair, like most electrical equipment, is susceptible to damage from the elements. Avoid damp areas of any kind.



WARNING! Direct exposure to water or dampness could cause your power chair to malfunction electronically and mechanically. Water can cause electrical components to corrode and the chair's frame to rust.

### Should your power chair come in contact with water:

1. Dry your power chair as thoroughly as possible with a towel.
2. Allow your power chair to sit in a warm, dry place for 12 hours to allow unseen water to evaporate.
3. Check the joystick operation and the brakes before using your power chair again.
4. If any inconsistencies are found, take your power chair to your Quantum Rehab Specialist.

### Temperature

- Some of the parts of your power chair are susceptible to extreme changes in temperature. Always keep your power chair between the temperatures of  $-7^{\circ}\text{C}/18^{\circ}\text{F}$  and  $50^{\circ}\text{C}/122^{\circ}\text{F}$ .
- In extremely cold temperatures the batteries may freeze. The specific temperature at which they freeze depends on a number of factors, such as battery charge, usage and composition of the batteries (e.g., AGM or Gel-Cell).
- Temperatures above  $50^{\circ}\text{C}/122^{\circ}\text{F}$  may cause your power chair to operate at a reduced speed. This reduced speed is a safety feature built into the controller that helps prevent damage to the motor and other electrical components. See VI. "Operation."



WARNING! Always protect batteries from freezing temperatures and never charge a frozen battery. This damages the battery and may cause personal injury. Attempting to charge a battery in freezing conditions does not prevent a battery from freezing.

### General Guidelines

- Avoid knocking or bumping the controller, especially the joystick.
- Avoid prolonged exposure of your power chair to extreme conditions, such as heat, cold or moisture.
- Keep the controller clean.
- Check all electronics connectors to ensure that they are all tight and secured properly.
- Make sure the drive tyres are inflated to **2.4 bar (35 psi)**.



WARNING! Overinflating tyres can cause them to explode and can result in personal injury.

WARNING! Do not use a high pressure hose to inflate your tyres.

- Use a rubber conditioner on the tyre sidewalls to help preserve them.



WARNING! Never use a rubber conditioner on the tread area of the tyres; doing so may make the tyres slippery and cause your power chair to skid.



# VII. CARE AND MAINTENANCE

- The body shroud has been sprayed with a clear sealant coating. You can apply a light coat of car wax to help it retain its high-gloss appearance.
- Check all battery connections. Make sure they are tight and are not corroded. Batteries must sit flat within the battery well, with the battery terminals facing inward, toward each other. Refer to the frame decal for the correct wiring layout.
- All wheel bearings are prelubricated and sealed. They require no subsequent lubrication.

## Daily Checks

- With the controller turned off, check the joystick. Make sure it is not bent or damaged and that it returns to the neutral position when you release it. Check the rubber boot around the base of the joystick for damage. Visually inspect the boot. Do not handle or try to repair it. See your Quantum Rehab Specialist if there is a problem.
- Visually inspect the controller harness. Make sure that it is not frayed, cut or has any wires exposed. See your Quantum Rehab Specialist if there is a problem with any harnesses.

## Weekly Checks

- Disconnect and inspect the controller from the back of the power base. Look for corrosion. Contact your Quantum Rehab Specialist if necessary.
- Ensure that all parts of the controller system are securely fastened to your power chair. Do not overtighten any screws.
- Check for proper tyre inflation. There should be **2.4 bar (35 psi)** in each tyre. If a tyre does not hold air, see a Quantum Rehab Specialist for replacement of the tube.
- Calibrate the joystick if a noticeable difference in performance is detected or if the joystick does not operate properly. To calibrate the joystick, power off the unit, place the joystick in the neutral position and power the unit back on. If a problem still exists with your joystick's performance, contact your Quantum Rehab Specialist.
- Check the brakes. This test should be carried out on a level surface with at least one metre (3 feet) of clearance around your power chair.

### To check the brakes:

1. Turn on the controller and turn down the speed level of your power chair.
2. After one second, check the battery condition meter. Make sure that it remains on.
3. Slowly push the joystick forward until you hear the electric brakes click. Immediately release the joystick. You must be able to hear each electric brake operating within a few seconds of joystick movement. Repeat this test three times, pushing the joystick rearwards, then left and then right.

## Monthly Checks

- Check that the anti-tip wheels do not rub the ground when you operate your power chair. Adjust them as necessary. See IV. "Comfort Adjustments."
- Check for extreme wear on the anti-tip wheels. Replace them as necessary.
- Check for drive tyre wear. See a Quantum Rehab Specialist for repair.
- Check the front castors for wear. Replace them as necessary.
- Check the front forks for damage or fluttering which indicates that they may need to be adjusted or have the bearings replaced. See a Quantum Rehab Specialist for repair.
- Keep your power chair clean and free of foreign material, such as mud, dirt, hair, food, drink, etc.

## Yearly Checks

Take your power chair to a Quantum Rehab Specialist for yearly maintenance. This helps ensure that your power chair is functioning properly and helps prevent future complications.

# VII. CARE AND MAINTENANCE

## Storage

Your power chair should be stored in a dry place, free from temperature extremes. When storing, disconnect the batteries from your power chair. See V. “Batteries and Charging.”



WARNING! If you fail to store the unit properly, the frame can rust and the electronics can be damaged.

## Cleaning Instructions



WARNING! Never hose off your power chair or place it in direct contact with water. Your power chair has a painted, ABS plastic body shroud that allows it to be easily wiped clean with a damp cloth.

WARNING! Never use any chemicals to clean a vinyl seat, as they may cause the seat to become slippery or dry out and crack. Use soapy water and dry the seat thoroughly.

## Wheel Replacement

If you have pneumatic tyres and you have a flat tyre, replace the tube. If your chair is equipped with a solid tyre insert, then you must replace the whole wheel assembly. Replacement tyres, tubes and wheel assemblies are readily available through your Quantum Rehab Specialist.



WARNING! To avoid possible injury, be sure that the controller's power is turned off and the power chair is not in freewheel mode before performing this procedure.

WARNING! Completely deflate the tyre before attempting repair.

### Follow these easy steps for a quick and safe repair for both pneumatic and solid tyres:

1. Turn off the power to the controller.
2. Set the power chair up on blocks.



WARNING! Power chair frame components can be heavy. Lifting beyond your physical ability to do so can result in personal injury. Seek assistance from an attendant before lifting frame components, or schedule repair at an authorised Quantum Rehab service facility.

3. If you are changing a pneumatic tyre, completely deflate it before removing the wheel.
4. Pry off the hub cap. See figure 26.
5. Use a socket spanner to remove the drive wheel nut and washer from the axle. See figure 26.
6. Pull the wheel off of the axle.
7. Remove the screws that fasten the two rim halves together. See figure 26a.
8. Remove the old tube (or solid insert) from the pneumatic tyre and replace it with a new tube (or solid insert).
9. Screw together the two rim halves.
10. Slide the wheel back onto the axle.
11. Reinstall the drive wheel nut and washer onto the axle and tighten.
12. Reinstall the hub cap.
13. Inflate the pneumatic tyre to **2.4 bar (35 psi)**.
14. Remove the power chair from the blocks.

# VII. CARE AND MAINTENANCE

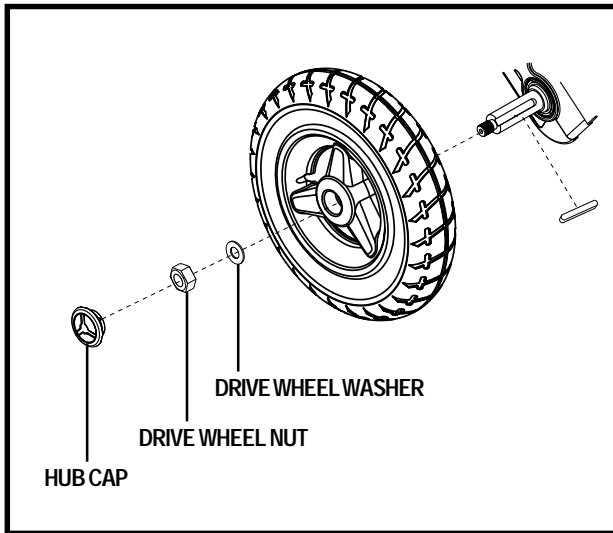


Figure 26. Wheel Removal

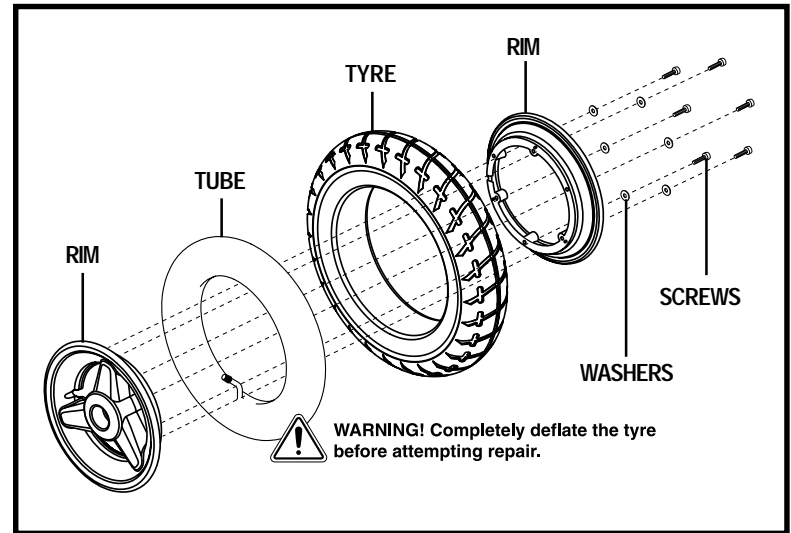


Figure 26a. Tyre Replacement

## BATTERY REPLACEMENT

A battery wiring diagram is printed on a decal located on the battery door. See figure 27. Refer to the specifications table in III. "Your Power Chair" for correct battery specifications.



WARNING! Battery posts, terminals and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hands after handling.

WARNING! Pride Power Chair batteries are heavy. See specifications table. If you are unable to lift that much weight, be sure to get help. Lifting beyond your capacity can result in personal injury.

### To replace the batteries:

1. Turn off the power to the controller.
2. Push the manual freewheel lever outward for drive mode.
3. Disconnect the battery door straps at the back of the power chair.
4. Remove or rotate the leg rests to the side.
5. Locate the battery quick disconnects on the frame and disconnect both of them. See figure 28.
6. Remove the batteries from the power base.
7. Disconnect the battery wiring harness from each battery.
8. Reinstall the battery wiring harness on each new battery. Make sure that you connect the red wire to the positive (+) battery terminal and the black wire to the negative (-) battery terminal.



WARNING! Make sure you tighten the fasteners so that the connections are secure.

9. Place the batteries back into the power base.
10. Connect the battery quick disconnects according to the battery wiring diagram label located on the frame.
11. Reinstall or rotate the leg rests back to position.
12. Reconnect the battery door straps.

# VII. CARE AND MAINTENANCE

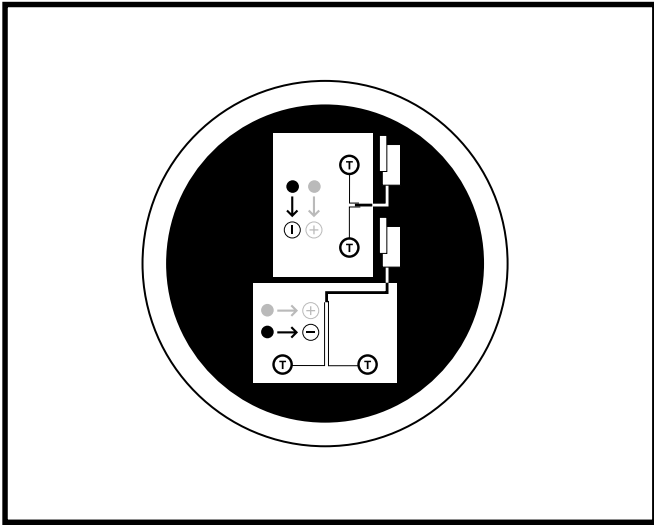


Figure 27. Battery Wiring Diagram

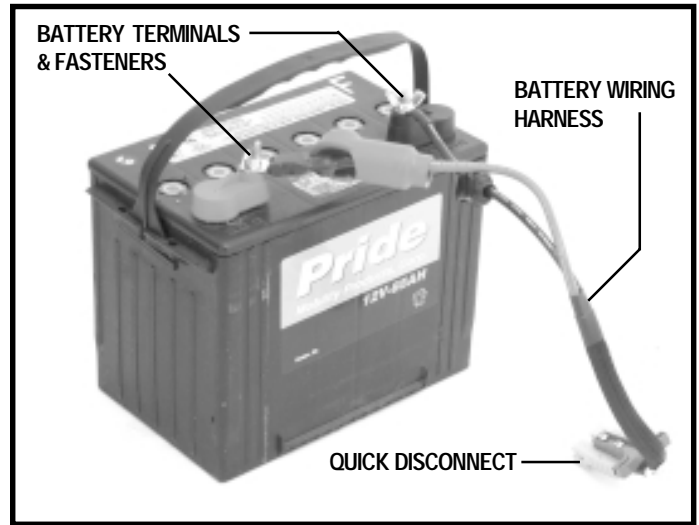


Figure 28. Battery and Harness

## WHEN TO SEE YOUR QUANTUM REHAB SPECIALIST FOR SERVICE

The following symptoms could indicate a serious problem with your power chair. If necessary, contact your Quantum Rehab Specialist. When calling, have the model number, serial number, nature of the problem and the trouble code if available.

- Motor noise
- Frayed harnesses
- Cracked or broken connectors
- Uneven wear on any of the tyres
- Powers up, but does not move
- Jerky motion
- Pulling to one side
- Bent or broken wheel assemblies
- Does not power up

## CORRECTIVE MAINTENANCE

If the battery condition meter does not light up when you turn on the power:

- Check the harness connections. Make sure they are tight.
- Check the circuit breaker. Reset it if necessary.
- Check the battery connections.

If the above conditions prove normal, you can load test the batteries with a battery load tester. These testers are available at automotive parts stores. Disconnect both batteries before load testing and follow the directions that come with the load tester. If either one of the batteries fails the load test, replace both of them. If your power chair still does not power up, contact your Quantum Rehab Specialist.

# V I I I . W A R R A N T Y

## LIFETIME WARRANTY

Structural frame components, including: platform, fork, seat post and frame welds.

## TWO-YEAR LIMITED WARRANTY

Drivetrain, including: motor and brake.

## EIGHTEEN-MONTHS LIMITED WARRANTY

Controllers: Any attempt to open or dismantle these parts will lead to this warranty being void.

## ONE-YEAR LIMITED WARRANTY

All electrical parts, including battery chargers, are covered for one year under warranty. Any attempt to open or dismantle these parts will lead to this warranty being void.

## BATTERIES

Batteries are covered by a twelve-month warranty from the original manufacturer.

## NOT COVERED UNDER WARRANTY

The following parts are classed as wear items, which may, under normal wear and tear, require replacing. These items are **not** therefore covered under warranty: tyres, positioning belts, bulbs, upholstery, plastic shrouds, motor brushes, fuses and batteries. Warranty will also be refused if damage is deemed to have been caused through misuse or accident for which Pride Mobility Products Ltd. cannot be deemed responsible.

***NOTE: Pride Mobility Products Ltd. provides parts only under warranty. Your Quantum Rehab Specialist is responsible for labour and service. Please contact your Quantum Rehab Specialist for information about these services and for any applicable charges.***

# NOTES

# QUANTUM VIBE

## Quality Control - Quantum Vibe



Thank you for making the Quantum Vibe your choice in power chairs.

We have thoroughly inspected your Quantum Vibe. The following check marks indicate that it has been tested, driven, and inspected.

**#1**  
In Quality

**Pride keeps a more detailed report on file at the factory.**

\_\_\_\_\_  
Date Inspected

\_\_\_\_\_  
Inspector

\* I NFMANU2320\*

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

**Pride**  
Mobility Products Ltd.