Mid-Wheel Powerchair

USER MANUAL

Model:

6Runner 10 (888WNLM)

Table of Contents

INTRODUCTION

Congratulations on insisting on the best. Shoprider Powerchairs are the ultimate combination of style and comfort. The 6Runner 10 features support easy maneuverability and smooth control for today's active lifestyle.

The innovative design of the 6Runner 10 includes articulating double frames that move in any direction. This intelligent feature keeps all 6 wheels on the ground at all times, even when driving on uneven terrain, hence the name 6Runner 10. Combine this with the programmable joystick controller, adjustable arm assemblies, flat-free tires, deluxe reclining captain seat, easy access to batteries and quick-change color shrouds for a complete powerchair package. We know that your 6Runner 10 Powerchair will provide many years of dignified independent mobility.

This manual contains important information regarding the safe use of your Shoprider Powerchair. Please read this manual carefully and thoroughly before using your Powerchair and make sure you understand all the instructions.

EMI WARNING

Electromagnetic Interference (EMI) from Radio Wave Sources

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

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

1. Hand-held portable transceivers (transmitters-receivers) with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkies", security, fire and police transceivers, cellular telephones and other personal communication devices

   NOTE: Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.
2. Medium-Range mobile transceivers, such as those used in police cars, fire trucks, ambulances and taxis. These usually have the antenna mounted on the outside of the vehicle.
3. Long-Range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

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

Power Chair Electromagnetic Interference (EMI)

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

WARNINGS

The following warnings listed below should reduce the chance of unintended brake release or Powerchair movement, which could result in serious injury.

1. Do not operate hand-held transceivers (transmitter-receivers), such as citizens band (CB) radios, or turn ON personal communication devices, such as cellular phones, while the Powerchair is turned ON.
2. Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them.
3. If unintended movement or brake release occurs, turn the Powerchair OFF as soon as it is safe.
4. Be aware that adding accessories or components, or modifying the Powerchair may make it more susceptible to EMI.

NOTE: There is no easy way to evaluate the overall immunity of the powered chair.

Report all incidents of unintended movement or brake to your Powerchair provider, and note whether there are sources of EMI nearby.

NOTE: The VR2 or Shark controller EMI rating is FDA Regulated and conforms to federal regulations.

Safety Instructions

Please use your Powerchair often and let it expand your horizons. The more mobility your Powerchair brings, the happier you will be! But, with all things, observing a few rules will ensure safe maneuvering. So please…

(1) **Do not** drive the Powerchair without reading this instruction manual.

(2) **Do not** use the joystick in an erratic manner when going up or down an incline.

(3) **Do not** carry passengers or exceed the maximum user weight (Table 3).

(4) **Do not** turn off the joystick controller by switching the On / Off Button when moving at speed. This will bring the electromagnetic brakes on immediately and could cause damage to the joystick controller.

(5) **Do not** drive over uneven or soft terrain.

(6) **Do not** attempt to drive over curbs greater than 1.5 inches in height. Doing so could cause your scooter to turn over, causing personal injury or damage to the scooter. For curbs less than 1.5 inches, always approach them at an angle of 90 degrees and at a low speed.

(7) **Do not** mount or dismount the Powerchair unless the electromagnetic brakes are engaged and the joystick controller is off.

(8) **Do not** operate the Powerchair if the unit is in freewheel mode.

(9) **Do not** use on the road, except when crossing between sidewalks.

(10) **Do not** sit on the Powerchair when in a vehicle, but transfer to a vehicle seat.

(11) **Do not** exceed any grade over 6 degrees (10%).

(12) **Always** stop fully before changing forward or reverse direction.

(13) **Always** engage a slow speed when going down gradients (move the joystick slowly towards center position to reduce the speed).

(14) **Always** approach and climb over curbs at slow speed.

(15) **Always** use the safety belt.

(16) **Always** keep feet on the footrest while driving.

(17) **Always** make sure the batteries are fully charged before setting out on a journey.

(18) **Always** make sure the Allen bolt, hex screws and nuts of the seat adaptor and seat post are securely tightened before driving the Powerchair.

(19) **Always** charge the Powerchair in a well ventilated area.

(20) Whenever a center bolt of the wheel assembly has been loosened, please replace with a specified new bolt from authorized providers and secure with a torque of 240 ± 5 kg-cm together with Loc-tite 271 adhesive (or equivalent).

(21) When proceeding up any incline, please move the seat to the most forward position or if you have the deluxe seat, make sure that it is in the 90 degree (upright) position.

(22) Do not adjust the programmer or modify the controller and cables without prior written approval from the manufacturer. Otherwise injury and/or damage to the Powerchair or surrounding property may occur.

(23) Do not modify any parts on the unit without manufacturer's written approval, or your warranty will be voided and you will be responsible for the modification.

(24) Charge the batteries before using and charge batteries daily after use.

(25) Battery cables must be securely fastened onto battery terminals by the authorized dealer before using the unit. Batteries must be tied down correctly and securely.

(26) Use caution and reduce speed when turning.

(27) Avoid using the powerchair in wet conditions.

(28) The chassis cover must be properly adjusted. The Velcro on the underside of the shroud should be aligned with the Velcro attached to the support brackets on the base of the unit. Make sure that the circuit breaker is properly aligned with the slot in the shroud to avoid any hindrance to the circuit breaker's operation and use.

(29) Do not use the powerchair as a seat in any vehicle.

Remember! Give consideration to pedestrians whenever using the Powerchair. You are a motorized pedestrian and must observe all rules and regulations of other pedestrians wherever possible.

Important Notes

The Shoprider Powerchair is designed to assist in your individual mobility needs. Any usage outside of the guidelines in this manual may result in damage to the chair or injury to the user or third party.

Please do not lift the wheelchair by the armrests.

Feature Guide (Fig. 1)

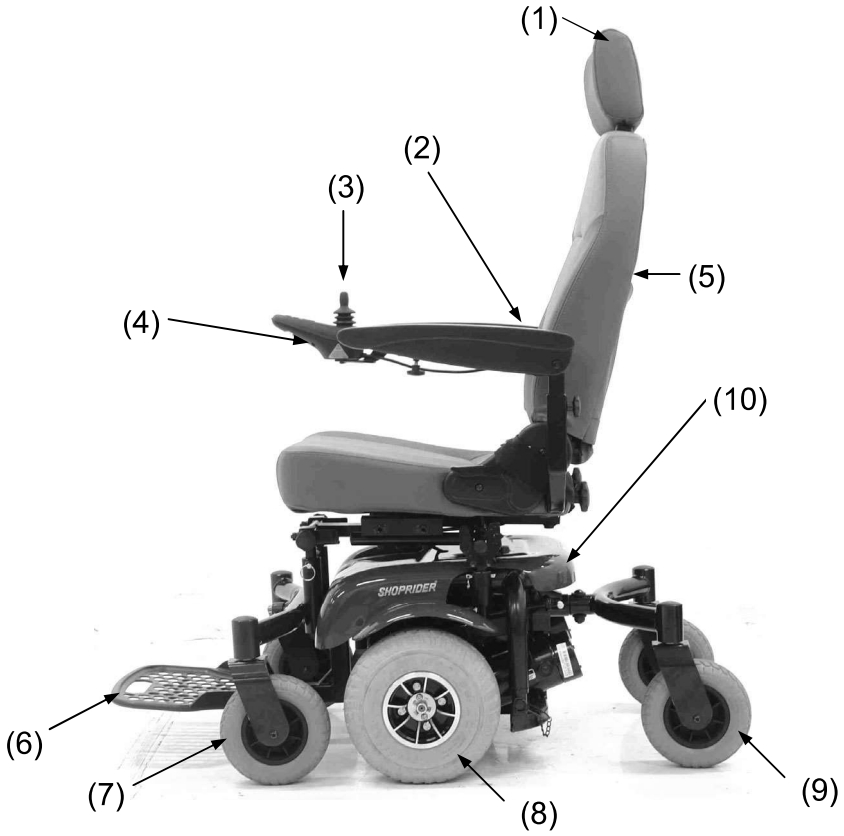


Fig. 1

(1) Headrest (adjustable with selected height)
(2) Armrest (adjustable with selected width, angle and height)
(Flips Up for Easy Sideways Transfer)
(3) VR2 or Shark Joystick (mounted onto the armrest) &
Main Controller (mounted onto the frame)
(4) Charging Port
(5) Deluxe Reclining Captain Seat
(6) Footrest
(7) Front Castor Assembly (7”)
(8) Main Drive Wheel (10”)
(9) Rear Castor Assembly (7”)
(10) Chassis Shroud

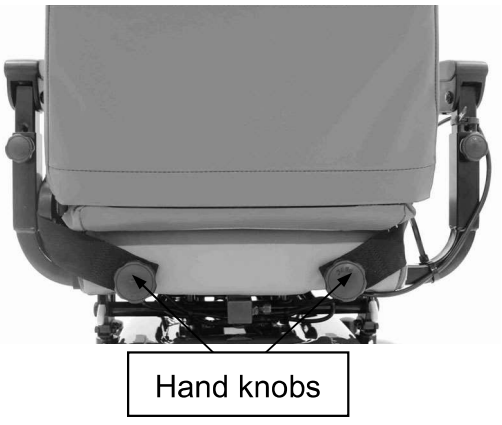
Getting to Know Your Shoprider Powerchair

The Seat and Arm Assemblies

The seat is built for comfort, style, and stability. Your seat comes with a reclining back for comfort. The flip-up arm-rests are especially built for easy side access for getting in and out of your 6Runner 10, with the greatest of ease. The arm-rests have a built in height adjustment knob, that adjusts the arm pad to a comfortable level for the driver. The seat is covered in a durable long lasting gray vinyl for comfort and style.

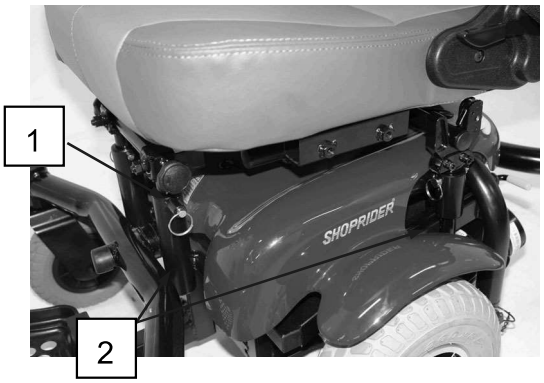
Armrest Width Adjustments

Beneath the rear of the seat there are two hand knobs, one on each side. Release the hand knob and slide each arm assembly outward. Re-tighten the hand knob when in the desired position.



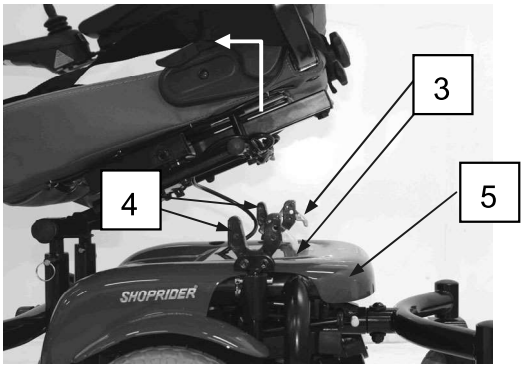
Seat Height Adjustment and Easy Battery Access

1. Tightening knob that allows for the seat to be removed if needed, if not, there is a pivot point that allows for the seat to move up and away from the base.



2. Adjustment pins that can be used to adjust the height of the seat to fit the user.

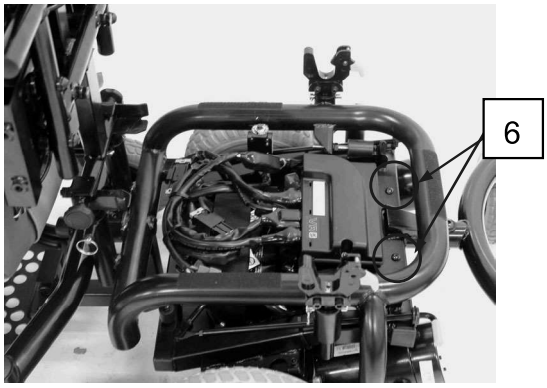
3. Release levers; allow for the rear of the seat to be lifted and moved away from the base for easy battery access, without removing entire seat.



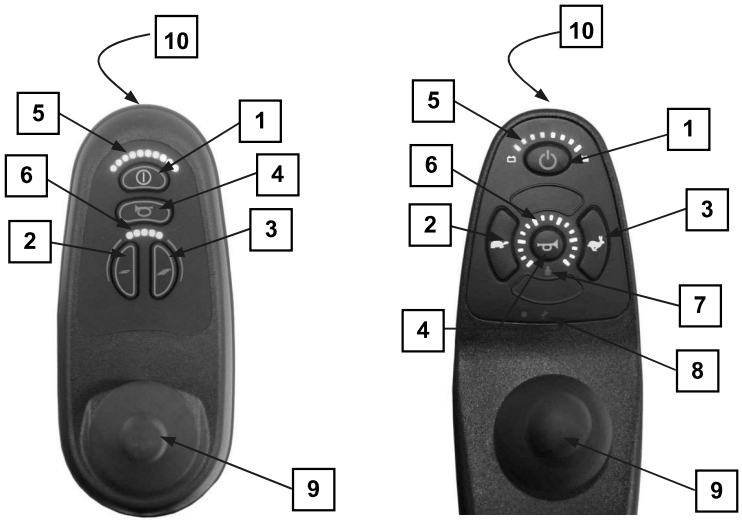
4. U-Hooks hold the seat in place.

5. Bottom shroud is easily popped off, to allow for battery access.

6. Philip screws that are used to fasten the mounting plate for main controller. Batteries can be easily accessed and changed after the removal of main controller assembly.



Joystick Controller (VR2 or Shark) Overview



On / Off Button (1)
This button turns the joystick controller (hereinafter referred to as VR2 or Shark joystick) on and off. Do not use this button to stop the Powerchair, except in an emergency.

Speed Decrease Button (2)
This button decreases the maximum speed.

Speed Increase Button (3)
This button increases the maximum speed.

Horn Button (4)
This button operates the Powerchair's horn.

Battery Gauge (5)
A. If VR2 Joystick installed: It's a 10-segment display to give the state of charge of the battery when VR2 joystick is switched on. Any fault in the Powerchair's electrical system is also indicated by this display. Refer to Table 1 for more details.
B. If Shark Joystick installed: It's a 8-segment display to give the state of charge of the battery when Shark joystick is switched on.

Maximum Speed Indicator (6)
This is a 5-segment display, which indicates the maximum speed setting selected.

Attendant Control LED (7) for Shark Joystick
When the Attendant Remote is activated, the ACU LED will light up and remain lit until the attendant switches back to user mode.

Service Indicator LED (8) for Shark Joystick
The amber Service Indicator LED is dedicated to displaying joystick Flash Codes. For a list of Flash Codes and what faults they indicate. Refer to Table 2 for more details.

Joystick (9)
This controls the speed and direction of the Powerchair. Push the joystick in the direction you want to go. The further you push it, the faster the speed will be. Releasing the joystick will automatically engage brakes and stop the Powerchair.

Charging Port (10) for Off-Board Charger
Only plug a Shoprider certified charger into this port. This port should not be used as a power supply for any other electrical devices. Disregarding this will void the warranty of the Powerchair.

Locking/Unlocking the Joystick

If the VR2 Joystick is installed:

****PLEASE NOTE****

LOCK MODE: The VR2 controller may be programmed to have a lock mode function enabled to prevent unauthorized use. The locking method is achieved through a sequence of key presses and joystick movements, as detailed below.

To lock Powerchair controller:

- While the controller is switched on, depress and hold the on/off button.
- After 1 second the controller will bleep. Now release the on/off button.
- Push the joystick forward until the controller bleeps.
- Push the joystick in reverse until the controller bleeps.
- Release the joystick, there will be a long bleep.
- The Powerchair controller is now locked.

To unlock the Powerchair controller:

- Use the on/off button to switch the controller on. The maximum speed/profile indicator will be rippling up and down.
- Push the joystick forward until the controller bleeps.
- Push the joystick in reverse until the controller bleeps.
- Release the joystick, there will be a long bleep.
- The Powerchair is now unlocked.

SLEEP MODE: If the controller is left on and not used for more than ten minutes, the controller will automatically “go to sleep”. This is recognized by a slow intermittent flash of the battery indicator lights. Simply turn the controller off and back on to reset.

Always leave the chair in drive mode. The freewheel option is there only to allow the chair to be pushed manually when the need arises (i.e., to store or push unit out of a tight space). Following the sticker picture put each lever in the direction of the person sitting down driving the chair.

Locking/Unlocking the Joystick

If the Shark Joystick is installed:

****PLEASE NOTE****

LOCK MODE: The Shark joystick can be locked to prevent unauthorized use. The locking method is achieved through a sequence of key presses and joystick movements, as detailed below.

To lock Powerchair controller:

- While the power is ON, press and hold the Power button for 4 seconds.
- This display will turn off immediately.
- After 4 seconds all LED's will flash briefly and the horn will sound a short beep.
- The Powerchair will then turn off.

To unlock the Powerchair controller:

- While the Shark joystick is locked, press the Power button to turn Shark joystick on.
- All LED's will flash briefly. The Battery Gauge LED's will perform a slow right-to-left chase.
- Press the Horn button twice before the countdown is completed (approximately 10 seconds).
- This current state-of-charge will then be displayed and Shark joystick may be operated normally.

SLEEP MODE: After a certain amount of time with no joystick movement, the joystick will automatically turn itself off. Sleep mode will not be entered while programming. When Wakeup style has been set to "Joystick and Button", pressing ANY button ONLY will bring the system out of sleep mode.

Always leave the chair in drive mode. The freewheel option is there only to allow the chair to be pushed manually when the need arises (i.e., to store or push unit out of a tight space). Following the sticker picture put each lever in the direction of the person sitting down driving the chair.

Drive/Freewheel Mechanism

The Powerchair will not function while the drive mechanism is disengaged (in freewheel).

Both left and right sides must be in drive mode for power chair to operate. Otherwise the Powerchair motors will spin, but the unit will not move, until both freewheel levers are engaged. Unit will spin in circles if only one side is in drive mode.

***** DO NOT PUT INTO DRIVE MODE WHILE MOTORS ARE SPINNING ******

The drive/freewheel levers are found toward the rear of the Powerchair (Fig. 2). The freewheel levers (with yellow end cap) will allow you to disengage the drive mechanism (When the levers are **pulled out** away from the unit) the Powerchair is in freewheel mode. *****NOTE***** the joystick controller will not work in Freewheel mode. When the levers are **pushed in** (towards the inside of the unit) the motors are engaged and the powerchair is in drive mode.

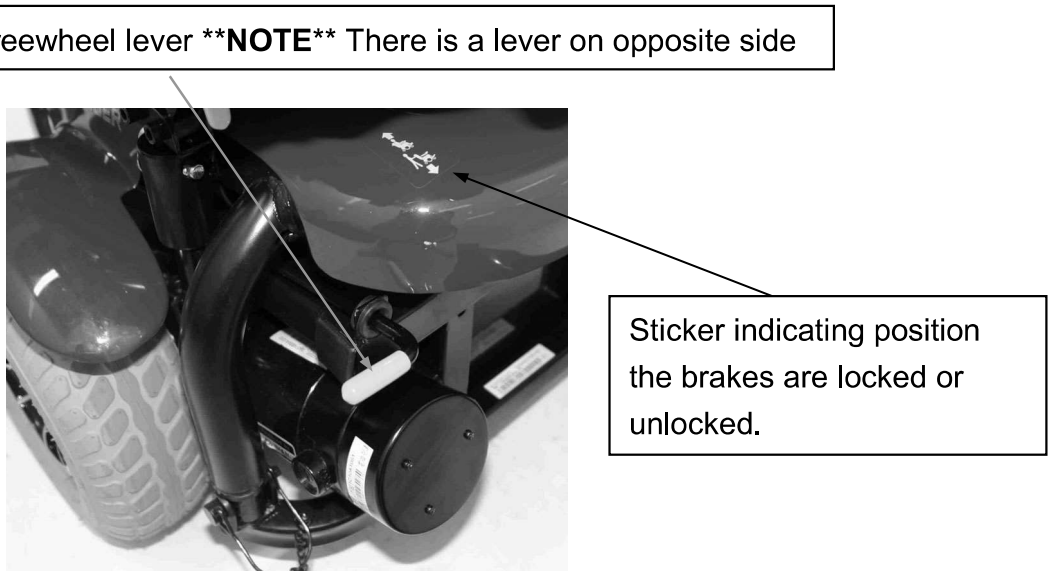


Fig. 2

Driving Your Shoprider Powerchair

Ramps, Slopes and Cambers

The indoor/outdoor Powerchair has the ability to negotiate ramps, slopes and cambers of a low to medium gradient. It is of the utmost importance that the following points are observed:

1. **Never** attempt to go up or down an incline which has a rough, wet or slippery surface (loose gravel, tree roots, wet grass, polished floor, etc.)
2. **Always** approach an incline head on, not at an angle
3. **Always** travel at a speed that you are comfortable with and that you feel in complete control
4. **Avoid** sudden or erratic action with the joystick
5. **Always** have the reclining seat in the most upright position when driving up an incline
6. When riding along in a straight line you may experience “veering to one side”. This is due to the natural camber in the construction of the pavement. To correct this you simply have to steer slightly against it, as you continue to move forward

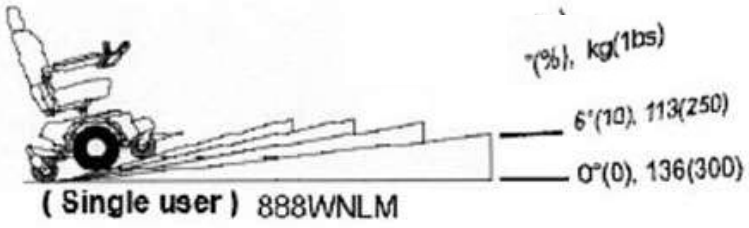


Fig.3

Caring for Your Shoprider 6Runner 10 Powerchair

First Time Use

Prior to using your Powerchair for the first time, you must charge the batteries fully (refer to Battery Charging Procedures). Charging may take up to 12 hours. Charging the batteries completely prior to first time use will benefit battery efficiency and battery life.

Tires

Since your tires are flat free tires, there is no need to ever worry about tire air-pressure. When tread is worn, it is highly recommended to replace tires.

General Maintenance and Lubrication

- Inspection for loose wheel bolts, seat and arm tightening bolts, castor nuts and other nuts and bolts is recommended on a regular basis.
- Most lubricated components on the Powerchair are designed to be maintenance free and are sealed. Therefore, lubrication is not required for these components. However, the driving wheel axles and seat post should always have a very light coat of multi-purpose grease. **NOTE** Never put grease or oil in the breather cap located on the top of each worm gear.

DO NOT USE TOO MUCH GREASE!

Drips may stain or damage carpets, furnishings, etc.

- It is recommended that the driving axles (inside the drive wheel assembly) and castor assemblies be checked and cleaned occasionally for hair and debris build-up, which will hinder the performance of the unit.
- Check the 6Runner 10's batteries on a regular basis. For extended battery life, it is highly recommended that the batteries be fully charged after each use. If the batteries are weak, severely discharged or old, a variety of problems may occur with the unit including charging problems, reduced speed, loss of range, loss of charge capacity and others. Please contact your provider for battery replacement and proper disposal. **Note:** Charging your batteries daily will enhance the life of your batteries. If the batteries are left unattended for extended periods of time, it is recommended that they be left in a fully charged state. Leaving your batteries in a discharged state, or not charging them regularly will diminish the life of your batteries and cause irreversible damage to your batteries.

Batteries & Battery Charging

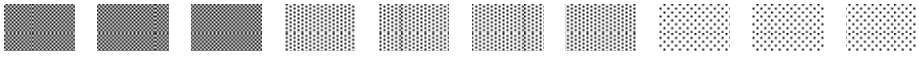
Batteries

The Powerchair is supplied with 2 x 35/36 Ah sealed lead acid, maintenance free batteries. These are located under the seat in the center of the Powerchair. For easy handling, Velcro or plastic carrying straps may be provided to assist in installation or removal of the batteries. The duration of the batteries can be affected by temperature, terrain and weight of the user. The Battery Gauge is a guide on the remaining charge in the batteries.

The active user will need to charge the batteries after using approximately more than 30% of battery capacity. As an inactive user, only using from once a week to every other day, the recharge point would be at 50% of discharge.

For VR2 Joystick

Red Bottom 3 Bars	**Amber Middle 4 Bars**	**Green Top 3 Bars**
Flashing. Danger, you must stop and recharge the batteries. Failure to do so may result in damage of	From 30% - 50% discharge. Batteries will need charging.	Full battery charge.



For Shark Joystick	The Battery Gauge is used to indicate power on and provides an estimate of the remaining battery capacity. Any green LEDs lit indicate well charged batteries. If only amber and red LEDs are lit, the batteries are moderately charged. Recharge before undertaking a long trip. If only red LEDs are lit, the batteries are running out of charge. Recharge as soon as possible

Battery Charging (Units Equipped With Off-Board Charger)

Familiarize yourself with the safety information below prior to using the battery charger.

Safety Information

1. Read the battery charger instructions in this manual and in the manual supplied with the charger prior to charging the batteries.
2. Do not remove the grounding prong from the plug. Removal of the grounding prong could result in an electrical hazard.
3. Only plug the charger into a 3-pronged electrical outlet, or an approved 3-pronged adapter for use with a 2 pronged electrical outlet.
4. Make sure that the wall outlet being used is not controlled by a wall switch that can be easily turned off.
5. Do not use an extension cord to plug in the charger.
6. Do not leave the charger plugged into the charger port if the charger is not charging the unit.
7. Use only the off-board charger supplied with this unit. Never use an automotive type battery charger. Contact your supplier if a replacement off-board charger is needed.
8. Inspect the battery charger, wiring and connections for damage prior to each use.
9. Do not open the battery charger case.
10. The battery charger is supplied with cooling slots. Do not insert objects through the slots.
11. Make sure that the charger is not in contact with inflammable materials at any time.
12. The off-board charger is for indoor use only.
13. Explosive gases may be generated while charging the batteries. Keep the power chair and battery charger away from sources of ignition such as flames or sparks and provide adequate ventilation when charging the batteries.
14. Do not allow children to play near the power chair while the batteries are charging. It is also recommended that the batteries not be charged while the power chair is occupied.

Charging Instructions

1. Connect the charger to the charging port at the front of the VR2 or Shark Joystick (item 10 in Page 11)
2. Plug the charger into the wall outlet.
3. The charging process will start automatically.

Charger Indication Lights

The indicator light on the charger gives advice as follows:
Red On or Flashing: Fault
Yellow On: While in charging
Yellow Flash: No battery connected or incorrect battery fitted
Green On: Fully charged (Batteries ready for use)
Please refer to the LED indicator description based on charging status of the charger.

Battery Information

1. Make sure to use two batteries of the exact same chemistry, amp hours, and capacity.
2. Fully recharge new batteries prior to initial use.
3. It is recommended that the batteries be charged for 8 to 14 hours after daily use.
4. If the power chair is used infrequently (Once a week or less) the batteries will need to be charged once a week for 12 to 14 hours.
5. Do not charge the batteries for more than 24 hours at a charging cycle.
6. Batteries that go below a minimum voltage due to not being charged will be unable to be re-charged.
7. If you do not plan on using your power chair for an extended period it is recommended that you fully charge the batteries and then disconnect the battery harness prior to storage. Store the power chair in a warm dry environment. Never store the batteries where extreme temperatures are possible. Never attempt to charge a frozen battery. A cold or frozen battery should be warmed for several days prior to charging.

Troubleshooting

If VR2 Joystick is installed:

The Self-Help Guide (Table 1) is intended to assist in the location of a fault that may occur in a certain part of the Powerchair.

If after checking the fault from the table below and the fault is still showing, do not use the Powerchair. Turn off the power and consult your provider immediately.

Table 1

BATTERY GAUGE	POSSIBLE FAULT
10 Bars flash	An excessive voltage has been applied to the control system. This is usually caused by a poor battery connection.
9 Bars flash	The parking brakes have a bad connection. Check the parking brake and motor connections.
8 Bars flash	A control system fault is indicated. Make sure that all connections are secure.
7 Bars flash	A joystick fault is indicated. Make sure that the joystick is in the center position before switching on the control system.
6 Bars flash	Battery charger connected.
5 Bars flash	Right-hand motor wiring fault.
4 Bars flash	Right-hand motor disconnected.
3 Bars flash	Left-hand motor wiring fault.
2 Bars flash	Left-hand motor disconnected.
1 Bar flashes	Low battery voltage.

Troubleshooting

If Shark Joystick is installed:

The Self-Help Guide (Table 2) is intended to assist in the location of a fault that may occur in a certain part of the Powerchair. Flash codes indicate the nature of an abnormal condition directly from the Shark joystick Information Gauge. Without the use of any servicing tools, the condition can be simply diagnosed.

If after checking out the fault from the table below and the fault is still showing, do not use the Powerchair. Turn off the power and consult your provider immediately.

Table 2

Flash Code	Description	
1	User Fault	Possible stall timeout or user error. Release the joystick to neutral and try again.
2	Battery Fault	Check the batteries and cabling. Try charging the batteries. Batteries may require replacing.
3	Left Motor Fault	Check the left motor connections and cabling.
4	Right Motor Fault	Check the right motor connections and cabling.
5	Left Park Brake Fault	Check the park brake connections and cabling.
6	Right Park Brake Fault	Check the park brake connections and cabling.
7	Shark Remote Fault	Check the Shark Communications Cable. Replace the Remote.
8	Shark Power Module Fault	Check the Shark joystick connections and wiring. Replace the Power Module.
9	Shark Communications Fault	Check for possible low battery. Check the Shark joystick connections and wiring. Check for worn motor brushes. Replace the Remote.
10	Unknown Fault	Check all connections and wiring. Consult a service agent.
11	Incompatible Remote	Wrong type of Remote connected.

Specifications

Table 3

ITEM	6Runner 10 888WNLM
Overall Dimensions: L[1] x W x H	42” x 23” x 46.4”
Total Weight of Unit With Seat and Batteries	176 Lbs. (w/ 35Ah batteries)
Maximum User Weight	300 Lbs.
Battery Capacity	12V – U1 (35/36Ah) x 2
Charger	Off Board, 5 amp
Maximum Speed	Approx 3.1-3.8 mph
Safe Climbing Angle, Maximum Single User Weight	Refer to figure 3
Range[2]	16.3-17.5 Miles
Turning Radius	21.5 Inches
Ground Clearance	2”
Output Power of Motor x2 (Reference Only)	0.78 hpx2

As a part of our ongoing product improvement initiative, Shoprider reserves the right to change specifications and design without prior notice. All specifications and dimensions are approximate.

[1]Includes the anti-tip wheel.

[2]The actual driving range varies with the factors shown below:

1. The weight of the user
2. Ground surface condition
3. Battery condition
4. Type of charger
5. Ambient temperature
6. Driving style
7. Terrain
8. After battery and mechanical moving parts have broken in

Proceed up any incline with seat in upright position