

RANGER WHEELCHAIRS

Power Wheelchair Owner's Manual



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Read Before Use

Selecting the Best Combination

A Ranger offers the user many different combinations of styles, accessories, and options to best fit each individual, the final selection should be made by you and your health care advisor in conjunction with the dealer and based on factors such as:

The level of your coordination, balance, and physical strength

The conditions and challenges you will encounter in your environment (your home, workplace, frequent destinations etc.)

The best combination for your comfort and safety while using the equipment

Refer to this Manual Frequently

Before you begin using this wheelchair, you – along with each person who will assist you – should carefully read this manual, making sure to follow all instructions, and become familiar with the contents to ensure proper use and easy reference for the future.

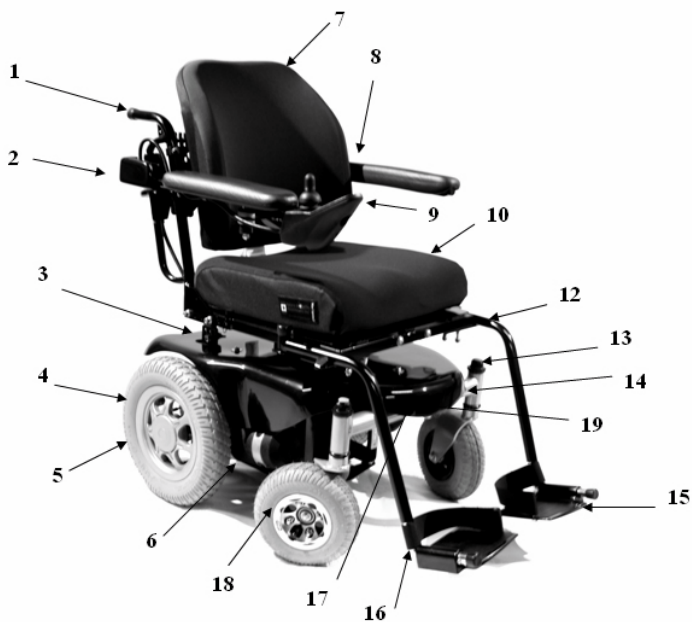
Dealer and Technician Warning

Do not operate or service this wheelchair without consulting this manual. If you do not understand the instructions or terms in the manual contact customer service for assistance.

In addition, many power wheelchairs have printed circuit boards which must be handled carefully in accordance with the instruction provided.

Power Wheelchair and Parts

1. Back Cane – Push Handle
2. Flip-Up Armrest
3. Rear Seat Pivot
4. Free-Wheel Lever (Behind Tire)
5. Drive Wheel
6. 700 Watt Motor
7. Backrest (Not from Ranger)
8. Armrest (Full-Length Pictured)
9. Swing-Away Joystick
10. Cushion (Not from Ranger)
11. Rehab Seat Frame
12. Swing Away Leg Rest
13. Articulating Front Beam
14. Streamline Caster Fork
15. Foot Plate (Pictured: Aluminum Plates with Heel Loops)
16. Foot Plate Adjustment Bolt
17. Passive Dampening System
18. Front Caster Wheel
19. Fuse (Under Shroud, Above Left Motor)



Basic Safety Precautions

Make sure to study and comply with all the instructions contained here. Failure to comply with these warnings may result in serious injury and/or damage to the equipment.

1. Prior to use, you should receive training from an authorized dealer and/or a health care advisor on safety and efficiency.
2. Take time to practice bending, reaching, and transferring while being supervised to familiarize yourself with the parameters of your new chair – remember to always turn off the power before any such activity.
3. Never try a new maneuver on your own until you have confidence you can complete it safely.
4. Survey and evaluate the areas where you will be using your wheelchair to ensure you know how to navigate them safely, and noting any hazards that need to be avoided.
5. It is recommended to always use slower speeds during normal use. Always check to make sure the chair is fully charged prior to use.
6. Always ensure that the wheels roll smoothly and that all parts are working properly prior to use. Noise, vibrations or changes in ease of driving may indicate loose fasteners or damage to the chair – contact an authorized dealer for service and repairs.
7. Never use a chair if the joystick does not return to neutral on it's own or if the joystick or boot is damaged in any way.

Here are our main areas of service:

Equipment Guidelines and Precautions

1. Do not exceed the published weight limit of 300 lbs. Please note the weight limit applies to the user and all items carried or loaded onto the chair, activities such as lifting weights or towing may damage the chair and void the warranty.
2. Unauthorized modification of the wheelchair or the use of non-Ranger parts may change the performance of the wheelchair and could represent a safety hazard as well as voiding the warranty.
3. Never travel in a vehicle or transport the chair while sitting in the chair

unless properly outfitted with an EZ Lock or equivalent system. Any seatbelt on the chair is not crash tested and may fail to prevent movement while in transit. Serious injury or death may result from failing to use authorized lock-down components.

4. Never transport this chair if unsecured in a cargo space.
5. Do not attach straps or tie downs to the wheels, as the chair may tip over resulting in serious injury and damage to the wheelchair.
6. Do not stand on the footplates during transfers.
7. Never lift the wheelchair by the armrests or any other detachable component.
8. If the chair is equipped with pneumatic tires, the air pressure in the tires should be checked frequently and air added when necessary in accordance with the specifications noted on the tires. Failure to do so will result in loss of performance and pose a safety hazard.

Warnings for the User

YOU ARE CONSIDERED A PEDESTRIAN. Do not attempt to operate the chair on streets or highways. When crossing the street make sure to make eye contact with motorists and always wait until you are confident it is safe to proceed.

If you are required to use the chair at night or when lighting is poor, use reflective tape on the chair or reflective clothing to ensure safe visibility.

Do not attempt to use the chair to traverse rough terrain. Do not use the chair on sandy, wet, oily, or icy surfaces.

DO NOT ATTEMPT any grade steeper than 12° without assistance.

Wheelchair Safety and Handling

Please make use of your Ranger often and let it expand your horizons. The more mobility your wheelchair brings you, the happier we will be! But, as with all things, observing a few rules will ensure safe motoring. So please:

Do not carry passengers.

Do not back up your wheelchair unless the speed is set to low speed. Never back up onto uneven inclines or surfaces.

Do not turn suddenly at full speed.

Do not ride your Ranger where you cannot safely or legally walk.

Do not ride your wheelchair over deep, soft terrain. (e.g. soft dirt, deep grass, loose gravel or sand) Do not drink alcoholic beverages and then ride.

Always approach curbs at a 90 degree angle. Do not stop with rear wheels butting up to the curb, then accelerate.

Always proceed carefully while riding, especially as you approach the downgrade of a ramp or hill, and while riding on uneven surfaces. When on a downgrade select lower speed setting.

Always strap down the wheelchair, then transfer to vehicle seat, fasten safety belt.

Please consult your physician or therapist if in doubt about your ability to operate a wheelchair.

Driving and Handling Instructions

Operating the Brake Release

Before powering on the wheelchair, ensure that both brake release levers are engaged in the 'DRIVE' position. To release the brakes so you can roll the wheelchair manually, move both brake release levers to the 'FREEWHEEL' position.



If the force required to move the brake lever exceeds 60N, apply forward pressure to the wheelchair to help release any potential gear binding. The lever should be able to move the in and out of freewheel with minimal force.

Basic Driving

Make sure you are properly seated on the wheelchair. Ensure that the Speed Control Dial is turned to slow.

Pull or push on the joystick, as described earlier. You will gently accelerate. Release the joystick and you will gently stop. Practice these two basic functions until you get used to them.

Steering the wheelchair is easy and logical. Just move your joystick in which ever direction and the wheelchair will follow. Just be sure to remember to give wide clearance when turning. Try to avoid making rapid turns, instead make an exaggerated wide arc around the obstacle.

If you must steer in a tight spot, such as entering a doorway or when turning around, stop, turn the speed dial to slow and gently move the joystick in the direction you wish to travel. After trying this several times you will gain confidence in the fact that the wheelchair will move gently, and with complete stability.

Backing up requires attention. Be sure your Speed Control Dial is turned to slow before you back up. Pull the joystick towards you and remember that the wheelchair will move in the direction you point the joystick. Practice is required here.

Going up and down ramps and hills is now simple. To stop, simply release your joystick. Because of the power of the wheelchair you are able to keep your speed control turned down low so that you have total control going up or down an incline, ramp or curb.

Dismounting

Stop the wheelchair in a nice flat location with enough room around for you to comfortably dismount. Turn the power off by depressing the on/off button. The light inside the button should go out. Now you are ready to dismount.

In Control through the Tight Spots

Chances are good that when you start really using your Ranger you will meet some obstacles that will require some practice to drive through smoothly.

Here are some common problems, with tips that will help you master them quickly. You will soon be in control through heavy doors, into and out of elevators, up and down ramps, up and over curbs, through grass, gravel, and upgrades with surprising ease by following these tips.

In Control In Elevators

To begin with, be aware that elevator doors have a safety mechanism. The door has a rubber protrusion. When you press the rubber, it moves into the door, and the door stops and then reopens. It will remain open for a few seconds, or for as long as you keep pressing.

So, if the door does hit the wheelchair, it is soft rubber that makes the contact, and then the door reopens. Unfortunately, some elevators are rather jerky and unpredictable. The strategy is the same for all of them. Keep the door from closing by keeping pressure on the rubber for as long as you need. This is easier than it sounds.

Approach the elevator button and press it. You can use a special button pushing wand to do this without getting up. Then line yourself up so that you can go through the door quickly and easily when it opens. If there is a choice of doors, and no indication which will open, position yourself so that you can go through either one. Going straight in, without turning, works best. If, however, it is a very short elevator, you may need to turn just a little as you go in. Be sure the back wheel is clear of the door's path. If it is not, the doors will not close.

When the door opens, gently back out. Back out slowly, avoiding the feet of those who may want to go into the elevator. Practice makes perfect. In a short time, elevators won't present a problem.

In Control On Ramps

More and more buildings have ramps or wheelchair access. Some have a switchback in the middle, and good cornering is required.

Always approach hills so that gravity is pulling you either forward or backward. Never let gravity pull you sideways, as this can be a stability problem. In other words, go straight up, or straight down, but do not turn on the hill, and do not steer toward one side or the other.

Going down the ramp, keep the dial set to "slow". This will keep you in a safely controlled descent. If you wish to stop completely, release the joystick. With a little practice, you'll always be in control.

In Control Over Curbs

Chances are good that when you start really using your Ranger you will meet some obstacles that will require some practice to drive through smoothly.

Most curbs have wheelchair access ramps at intersections. If there are none, and you can't find a driveway ramp either, you may be able to go over the curb, if it is small enough.

BUT BE CAREFUL. Going up or down a curb must be done **ONLY AT A DIRECT 90 DEGREE ANGLE**. Always approach the curb so that both back wheels go over at the same time, in the same way. Never go up or down hills on an angle. It can cause stability problems.

Going down a curb is simple, but must be done slowly to avoid a jarring thump. Slowly drive the front wheel over the curb. Use as little power as possible. Next, drive ahead so the back wheels are at the edge together. Going up a curb, turn your speed adjustment dial up to top speed. Start 2 or 3 feet back from the curb. Apply power gently, increasing as needed. Steer straight and go straight up. Be prepared to feel a bump as each tire reaches and climbs the curb.

In Control Over Grass, Gravel, and Grades

Rangers performs admirably in grass, gravel and on hills. **BUT YOU MUST NOT EXCEED THE PARAMETERS SET DOWN IN THIS MANUAL.** Please refer to the rules on page 1. Safety must come first. If you are unsure about a situation, avoid it.

Feel free to use your Ranger on lawns or in park areas. Avoid long, unkempt grass. Otherwise, just follow the rules.

Packed gravel, such as on driveways or roads, will present no problem. Loose, deep gravel should be avoided, as well as loosely packed sand.

Because of the power of your wheelchair, you are able to climb steep hills. But the maximum grade limit is 22%, or an incline of 22 inches to every 100 inches (shown below). The reason for this is to ensure proper stability. Remember, read and follow the **RULES** at the front of this manual.

Power Wheelchair Controls

PG Drives Technology Control Systems

Your wheelchair is equipped with a VR2 or R-net electronics control system made by PG Drives. The appendix at the end of this Owner's Manual contains the operation instructions for the system with which your wheelchair is equipped.

Transfers

It is potentially dangerous to attempt unaided transfers - exceptional balance and agility is required. To ensure safety during transfers complete the following steps first:

1. ALWAYS TURN OFF THE CHAIR USING THE POWER BUTTON ON THE JOYSTICK.
2. Work with your health care advisor to learn how to position your body for maximum support, and always have assistance until you can confidently complete the transfer process repeatedly.
3. Always engage the wheel locks by turning the chair off prior to transfer.
4. Ensure the tire pressure is appropriate and that the wheel locks engage the tires fully.
5. Move the chair as close to the surface you are transferring to (or from) as possible – employ a transfer board to bridge the distance if you can.
6. Rotate the front casters forward completely.
7. Make sure not to catch your legs or feet on the front frame or leg rest assembly.
8. Remove the armrests if they might interfere with the direction of the transfer.
9. Try to position yourself as far back into the chair as possible when transferring into the chair.

Maintenance

Tire Pressure

The rear tire pressure should be kept at 27 psi and the front tire pressure at 25 psi. We recommend a maintenance check up every 12 - 18 months.

If you have a back problem and the ride seems too bumpy, there are two things that you can do easily to smooth the ride:

1. Consult the tire pressure guide above and subtract three pounds (psi) from each indicated pressure.
2. A 2" foam cushion can work wonders. You can do this yourself or see us about a specially made upholstered orthopedic foam seat.

Circuit Breaker

If your wheelchair stops for no apparent reason, it is probably due to the circuit breakers on the batteries.

19 on the Diagram

On rare occasion, it happens that there is a temporary overload on the electric circuit. If this happens, the circuit breakers will pop out. It is merely a matter of pressing them back in, and you're going again. They are white buttons marked 30. Turn the power off, press the buttons, and turn the power on again. The circuit breakers can be found underneath the seat of your chair.

Care of Batteries

Rangers have two long lasting 12 volt batteries. They are sealed and are maintenance free. The charger is fully automatic. There is no danger of spillage. They will work or transport in any position.

Battery Charging

PLEASE, always follow the procedure in this sequence:

1. Turn the on/off button to the off position.
2. Plug the charger into the wall and leave the charger switch turned OFF.

3. The front of the black control box that houses the joystick, speed dial and on/off button has two outlets in it. Locate the plug that matches the plug on the line from your charger.
4. Take the matching plug (coming from the charger) in one hand. Push the plug in. It is now ready to charge.
5. Turn the charger switch to the ON position.
6. Be sure the on/off button is turned OFF when you are charging.
7. Leave the batteries charging for 10 to 14 hours. The charging meter will be pointing to zero when the batteries are fully charged or a green light will glow.
8. If you use your wheelchair at all during the day, put it back on charge when you stop using it. It is fully automatic, so will not overcharge, and your wheelchair will be ready to give you full service the next time you use it.

Disconnecting the Charger

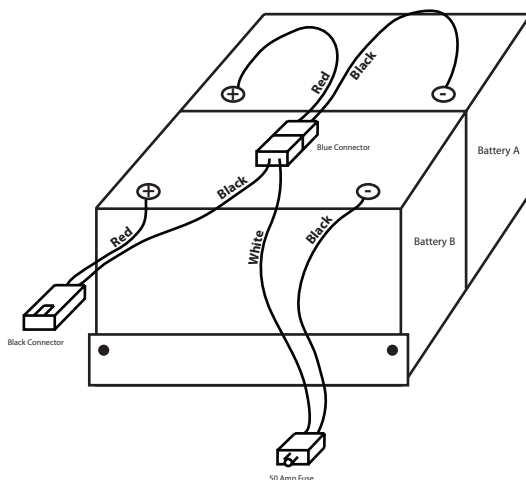
PLEASE, always follow this order of sequence:

1. Turn the power switch on the charger to the OFF position.
2. Unplug the charger from the wheelchair.

Points To Remember

1. NEVER connect or disconnect the battery charger while the switch is in the on position.
2. ALWAYS turn the on/off button to the OFF position to charge.

Installing Batteries



1. Connect 2-Wire Harness:
 - Positive (Red) to Battery A Positive
 - Negative (Black) to Battery A Negative
2. Connect Fuse and Black Connector Harness:
 - Positive (Red) to Battery B Positive
 - Negative (Black) to Battery B Negative

Removing Batteries

1. Remove the two 5/16" bolts on the rear suspension link bar using a 1/4" allen wrench then remove the bar.
2. Loosen the two top 5/16 bolts and two 5/16 nuts with a 1/2" wrench on the battery tray on the rear of the chair.
3. Grab the anti-tip wheels and slide the battery tray out from the base frame slowly watching the wiring harness.
4. Pull the 50 amp circuit breaker out, and then remove the wires from the 1/4" screw terminals with a 7/16" wrench.
5. Undo the battery hold down strap, and remove batteries one at a time.
6. Installation: follow steps in reverse order. Note above picture for battery and wiring harness orientation
7. Ensure the Red wires to positive (+) terminals and Black to negative (-) and terminal covers are completely over the bolts and terminals.

Maintain Performance

To keep the chair functioning as efficiently as possible pay attention to the following procedures and conditions for your routine:

Safety Checklist

The following items should be checked routinely to ensure optimal and safe performance of your wheelchair. If any of these things are not as outlined contact your dealer for service:

1. Wheelchair rolls straight – does not pull right or left.
2. Inspect frame for loose or missing hardware, as well as bent or damaged portions of the frame or cross braces.
3. Inspect the seat and back upholstery for rips or stretched mounting points.
4. Rear wheels should spin easily and with low vibrations and wobbles .
5. Front casters should spin freely and with no wobble.
6. Tires should be inflated to the pressure specified on the tire.
7. Free Wheel Levers should release the wheels entirely and when the chair is off and hold the wheels securely when the chair is turned off while in gear.

Cleaning

1. Clean the frame with mild soap every season, or after any exposure to muddy or oily surfaces.
2. Clean the areas around the axles and moving parts with a slightly damp cloth.
3. Hand wash removable seating elements and hang to dry. Wipe the seat upholstery with a damp cloth and a mild disinfectant cleaner.

Storage

1. Store the wheelchair in a clean, dry area preferably indoors.
2. Inspect the wheelchair fully if stored for longer than two weeks and have the

wheelchair fully serviced by your authorized dealer if stored for longer than three months.

Adjustments and Fitting

Seating

Your chair is equipped with a number of adjustable components that ensure proper fit, these adjustments may be made by yourself or your attendants as required – please ensure you have received training and instruction from your dealer and health care advisor prior to making any new changes.

A. Armrest Height

B. Foot Rest Height

Your footrests can be raised and lowered in relation to the seat to achieve a better fit. This should be done during set up by your authorized dealer. If they require changes, you should ensure your health care advisor is available to achieve the best seating posture for you.

1. Undo the bolts on the side of the Foot Rest Receiver
2. Make sure the inner sleeve is aligned properly.
3. Slide the footrest to the desired height in keeping with the available settings.
4. Reinsert and tighten the bolt at the new height.

NOTE: The bolts used for this function are specially selected and may not fit or work with standard tools. Damage to the chair will result from improper adjustments or tools being used.

Disclaimer

Ranger Wheelchairs Ltd. is not responsible for any damage or injury incurred due to improper or unsafe use of the wheelchair. Mechanical or electrical defects will be dealt with on a contingent liability basis. The part or parts will be replaced, but no responsibility for any damage or injury can be implied to Ranger Wheelchairs Ltd.

Limited Warranty

The Ranger Power Wheelchair is built with safety and comfort in mind. This warranty is to make it easy to enjoy new freedom and independence on your Ranger Power Chair.

Ranger Wheelchairs Ltd. warrants all Ranger Mobility products against defects in parts and workmanship for a period of two full years from the date of delivery. This includes all components which were installed at our factory. The Power Chair frame is warranted against structural fault for five years. This manufacturer's warranty covers replacement parts. Any alteration to the wheelchair voids the warranty.

Ranger Wheelchairs Ltd. further guarantees that your authorized dealer is prepared to provide SPEEDY SERVICE and repairs within and beyond the scope of this warranty. Pick-up and delivery to ANY AUTHORIZED DEALER is your responsibility, but your dealer will be happy to do this at a minimal cost. This warranty is not transferable because your Ranger Power Chair is assessed as being appropriate for your needs.

Enjoy the superior quality of your Ranger Power Chair. Dependability and service are the hallmarks of the Ranger Power Chair and the company that stands behind it.