

ROVI

ADVANCING MOBILITY.



X3 POWER WHEELCHAIR

USER MANUAL

DISCLAIMER

This power wheelchair is not intended to be used by individuals with physical limitations that could prevent the user from operating the power wheelchair safely. ROVI Mobility disclaims all responsibility for any personal injury or property damage that may occur as a result of improper or unsafe use of its products.

Warranty is only valid when genuine ROVI X₃ parts are used, All modifications on the power wheelchair, unless approved and authorized by Rovi Mobility, will automatically invalidate the warranties. Standard warranty does not extend to “wear and tear” items and parties other than the original user. Please refer to “Warranty,” in Section III for more information.

The following guidance is intended to assist you in the safe operation of this power wheelchair. If you should have any questions about the correct operation of your power wheelchair, please contact your authorized ROVI X₃ provider.

Make: ROVI X₃
Pihsiang Machinery Mfg. Co., LTD. Model # 888 WNLE

Provider Stamp

Serial No.: _____

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INTRODUCTION

This power wheelchair is designed for comfort, safety, stability, and maneuverability with smooth control for today's active lifestyle. The ROVI X3 helps you regain your mobility and independence.

The following innovations are included in the ROVI Mobility Series:

- Mid-wheel drive for maximum maneuverability
- 6-wheel design for ultimate stability
- Industry best overall width
- Active Ride Control (ARC) Suspension
- Programmable joystick controller
- Deluxe reclining captain seat (some units)
- Adjustable footplate and arm assemblies
- Flat-free tires
- Easy access batteries
- 8A off-board battery charger
- USB Charger Adapter

This manual contains important information to allow optimal use of the ROVI X3 and to ensure the safety of the user. Please read this manual carefully and thoroughly before using your power wheelchair and make sure you understand all the instructions. If you have any questions, please contact your provider or ROVI Mobility, see below:

ROVI Mobility
21184 S. Figueroa St.
Carson, Ca. 90745
Phone: 1.800.743.0772
Website: www.Rovimobility.com

For Customer or Technical Service:
Motion Concepts USA
700 Ensminger Rd. Suite 112
Tonawanda, NY 14150
Phone 1.888.433.6818
Website: www.motionconcepts.com

INTENDED USE

The intended use of the 888 WNLE powered wheelchair by Pihsiang Machinery Mfg. Co., LTD is to provide mobility solutions to individuals who are limited to a seated position.

PRESCRIPTION STATEMENT

 CAUTION: Federal law restricts this device to sale by or on the order of a practitioner licensed by the law of the state in which he/she practices.

The final decision on the type of power wheelchair to be used is the responsibility of the user and his or her healthcare professional (physician, physical therapist, etc.). ROVI Mobility is not responsible for the inappropriate selection of a power wheelchair model, its features, or improper fitting of the wheelchair.

POWER WHEELCHAIR SAFETY

Read carefully ALL safety tips to help ensure your safety while using the power wheelchair. Being safe in a wheelchair requires anticipating potential problems, using common sense, maintenance of equipment, and communicating with assistants.

SYMBOLS

Safety symbols and key words are used in this manual and apply to hazards or unsafe practices that could result in personal injury or property damage.

-  DANGER Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
-  WARNING Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
-  CAUTION Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage, minor injury, or both.

SETUP AND ADJUSTMENTS FOR SAFETY

For maximum safety, a qualified technician must perform the initial setup and all adjustments of this wheelchair. Incorrect settings could cause injury to the driver, wheelchair, bystanders, or surrounding property. After the wheelchair has been set-up/adjusted, check to make sure that the wheelchair performs to the specifications entered during the set-up procedure. If the wheelchair does not perform to specifications, re-enter set-up specifications. Repeat this procedure until the wheelchair performs to specifications.

OPERATOR SAFETY

There are many inherent dangers while operating a power wheelchair. Read carefully and observe all of the precautions below.

DANGER:

Cell phones are a vital necessity for your safety, and should be used in case of an emergency to call for help and to notify loved ones. However, warnings about driving while talking on cell phones also apply to power wheelchair operation. In addition to the distraction safety issue, you also have possible electromagnetic interference (EMI) that can disrupt the control system (see the EMI section for more information). Do not use a cell phone, walkie/talkie, laptop, or other radio transmitter while operating your wheelchair.

Lap belts are very important in a wheelchair. Never operate your wheelchair without first fastening the lap belt.

DO NOT sit on the power wheelchair when riding in a vehicle: instead, transfer to a vehicle seat.

DO NOT transfer onto or from the wheelchair unless the brakes are engaged and the controls are powered off.

DO NOT ride on streets, roads, or highways except for crossing walkways.

DO NOT attempt to move an occupied power wheelchair between floors using a stairway or escalator. Use an Elevator to move an occupied power wheelchair between floors.



WARNING:

DO NOT let children play on or operate your power wheelchair.

DO NOT operate the power wheelchair if the unit is in freewheel mode.

DO NOT use the joystick in an erratic manner when traveling up or down an incline.

DO NOT carry passengers or exceed the maximum weight limit.

DO NOT perform weight bearing exercises while in your powered wheelchair. Your powered wheelchair has NOT been designed or tested as a seat for any kind of weight training. Attempting to perform weight bearing exercises may exceed the weight limit of the powered wheelchair will void the warranty, and may cause serious injury.

DO NOT turn off the joystick controller when the power wheelchair is in motion. This will activate the electromagnetic brakes and could cause damage to the joystick controller.

DO NOT drive over uneven and soft terrain (soft dirt, loose gravel, deep grass).

DO NOT attempt to mount a curb height greater than 3”(80mm).

DO NOT exceed any grade over 8 degrees (14%)

ALWAYS stop fully before changing forward or reverse direction.

ALWAYS brake in an emergency by releasing the joystick.

ALWAYS use slow speed when going down gradients (move the joystick slowly toward center position to reduce the speed).

ALWAYS reduce your speed before turning sharply.

ALWAYS try to use a “dropped curb” or “curb cutout” whenever possible.

ALWAYS approach and climb over curbs at slow speed.

ALWAYS approach curbs and gradients at 90 degrees.

ALWAYS keep both feet on the footplate while driving.

ALWAYS make sure the batteries are fully charged before operating the power wheelchair.

ALWAYS charge the power wheelchair in a well-ventilated area.

 WARNING Continued:

ALWAYS power off the power wheelchair before performing non-weight bearing exercises. Failure to do so could result in injury.

ALWAYS check that the drive wheels are engaged and not in freewheel mode.

ALWAYS keep your power wheelchair maintained properly.

ALWAYS place the seatback in an upright position whenever negotiating an incline.

 CAUTION:

NEVER try to use your power wheelchair beyond its limitations as described in this manual.

NEVER operate the power wheelchair in the rain: the electronics are not waterproof and you could lose traction on slippery surfaces.

Tips:

Power wheelchairs can be very quiet--make sure others are aware of your presence.

Announce yourself at closed doors or blind corners to prevent a collision.

Avoid tipping - DO NOT place heavy loads on the back of your power wheelchair.

Avoid reaching out from the power wheelchair to pick up low objects.

DO NOT lift the power wheelchair by its armrests.

Keep loose items or lap covers away from the wheels.

Wear brightly colored clothes when you are outdoors.

Use optional headlights, reflector tape, and/or flashing taillights at night.

TRANSPORTATION SAFETY

Before transporting the power wheelchair, switch off the joystick controller and lock the brake. A power wheelchair must be tightly secured to the floor of a transportation vehicle before departing. Use the securement points at the front and at the back of the wheelchair as well as the anchoring points in the transportation vehicle. A trained and experienced driver must be present to perform the lifting and anchoring of the wheelchair and ensure owner and wheelchair safety.



DANGER

There are dangers present while using public or private transportation vehicles. Securement points are provided for unoccupied transport only.

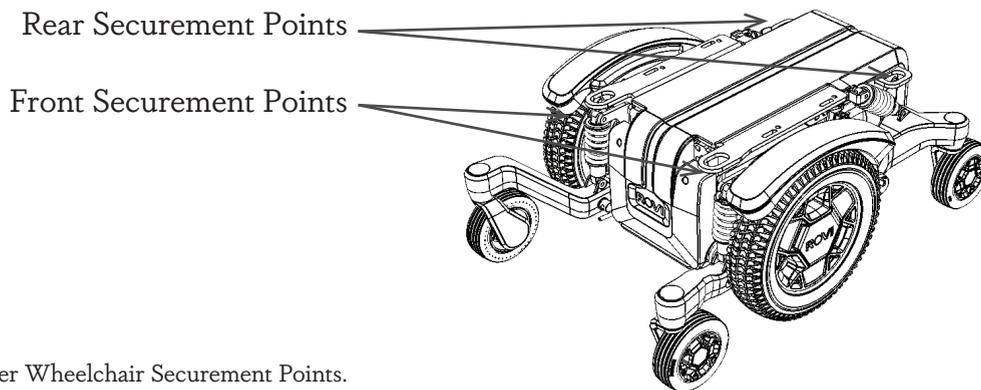


Figure 1 Power Wheelchair Securement Points.

ELECTROMAGNETIC INTERFERENCE (EMI)

CAUTION: It is very important that you thoroughly read this information regarding the possible effects of EMI on your power wheelchair.

Tests by the Food and Drug Administration (FDA) have determined that EMI can, under certain conditions, cause power wheelchairs and scooters to move unintentionally and/or erratically, or cause unintended release of the brakes. Stronger EMI sources can also permanently damage the power wheelchair's control system. The intensity of the interfering EM energy can be measured

in volts per meter (V/m). Each powered wheelchair can resist EMI up to a certain intensity, or “immunity level.” The higher the immunity level is, the greater the protection against EMI. At this time, current technology is capable of achieving at least a 20V/m immunity level, which would provide useful protection from the more common sources of radiated EMI.

 **WARNING** Although your power wheelchair has been tested to the current standard of 20V/m, care should be taken to avoid electromagnetic sources.

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.

 **CAUTION** 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, mobile devices, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances, such as electric shavers and hair dryers, are currently unlikely to cause problems to your power wheelchair.

EMI radiations from hand-held radio sources (transceivers) are of special concern because they can be brought close to the power wheelchair’s control system. As the transceiver nears the control system, EMI energy rapidly becomes more intense. This can be unintentional if someone is not aware of the hazard. Please observe the warnings listed below to prevent possible interference with the control system of the power wheelchair:

Note: Adding accessories and components or modifying the unit may change the susceptibility to EMI.

WARNING

DO NOT operate hand-held transceivers (transmitters and receivers), such as CB radios, or turn ON personal communication devices, such as cellular phones, while the power wheelchair is turned ON.

Report all incidents of unintended movement or braking on your power wheelchair to a ROVI X3 provider, and note whether there were sources of EMI nearby.

LABELS AND WARNINGS

Fig. 2. Securement Points: See “Transportation Safety” for more information.

Fig. 3. EMI-RFI: Notes that unit has passed FDA testing for 20-V/m performance.

Fig. 4. Data Label: Manufacturer, Contact Information, Weight Capacity, and Driving restrictions.

Fig. 5. Read your user manual and familiarize yourself with additional EMI information and warnings.

Fig. 6. Battery Connection Diagram: Illustrates battery orientation and information on circuit protection devices.

Fig. 7. Freewheel: drive mode = lever up; freewheel/push mode = lever down.

Fig. 8. Non-Spillable Battery Type



Figure 2



Figure 3

Model: 888WNLE(ROVI X3)	Max. Speed: 5.0mph/8kmh	Max. Slope : 9°
Manufacturer: Pihsiang Machinery Mfg.Co	Max. User Weight: 300lbs/136kg	Max. Recommended Slope: 8°
Country of Origin: Taiwan	Unit Weight (Unloaded): 175lbs/79.4kg	
Importer: Shoprider Mobility, Carson Ca	Website: WWW.ROVIMOBILITY.COM	
		N36-37

Figure 4



Figure 5

Figure 6

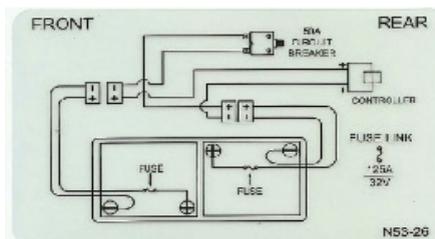


Figure 8



Figure 7



FEATURES AND ACCESSORIES



- (1) Armrest (adjustable, with selected width, length, angle, and height)
- (2) Joystick Controller
- (3) Charging Port
- (4) Seat Height Bracket
- (5) Footplate (adjustable, with selected length and height)
- (6) Caster (6 in.)
- (7) Middle Drive Wheel (with Flat-Free 14-in. Tire)
- (8) Chassis Shroud
- (9) Backrest (adjustable, with selected angle)
- (10) Headrest (adjustable, with selected height)

Figure 9 Feature Guide

DESCRIPTIONS

The Seat and Arm Assemblies

The power wheelchair seat is built for comfort, style, and stability. It may come equipped with a captain seat, which features a reclining back for comfort, flip-up armrests that provide easy side access for transferring onto and off of your ROVI X3, and a durable long lasting black/gray vinyl

seat cover. These optional armrests also have a built-in height adjustment knob that can be used to adjust the arm pad to a comfortable level for the driver (Item A - Figure 10).

Backrest Angle

The backrest can be adjusted from 94° to 118°.

This can be accomplished by pulling up on the backrest adjustment handle (Item B - Figure 10).

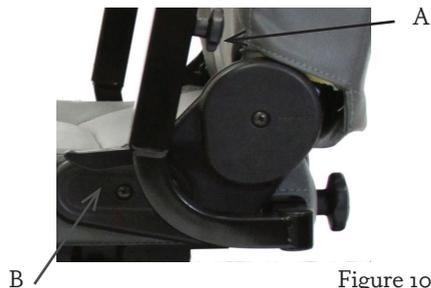


Figure 10

Adjustable Footplate

The length and height of the footplate can be adjusted to maximize your comfort and stability. To adjust the height of the footplate, loosen and remove the bolt (Item C - Figure 11), adjust to height and replace. To adjust the length of the footplate, loosen the allen bolt on both sides of the base (Item D - Figure 11), adjust the length, and tighten.

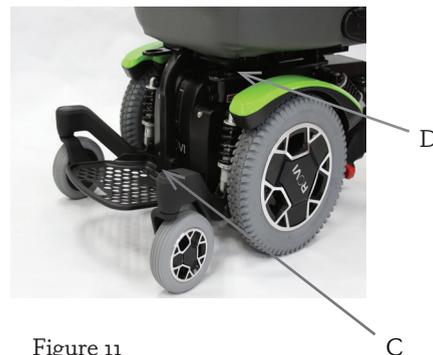


Figure 11

Front and Rear Battery Access

Refer to “Battery Access” - Maintenance Section for more information.

Seat Height Adjustment

⚠ CAUTION: The seat height should be adjusted by an authorized ROVI provider only.

Alternate Seating Options

The ROVI X3 can accommodate Complex Power Rehab Seating configurations that are available from Motion Concepts. For more information regarding Motion Concepts seating and positioning products, please visit www.motionconcepts.com.

JOYSTICK CONTROLLER OPTIONS



Figure 12

VR2 JOYSTICK CONTROLLER DESCRIPTIONS

The ROVI X3 Power Wheelchair comes with a VR2 Joystick, 4 Key Controller (Figure 12) as standard equipment. The joystick controller provides smooth control of speed and direction with 360 degrees of mobility for ease of operation. The joystick is spring-loaded and automatically returns to the upright (neutral position) when released. Push the joystick in a given direction to move the power wheelchair in that direction. The joystick has proportional drive control – the farther it is pushed from the neutral position, the faster the wheelchair moves. Maximum speed is limited by the speed adjustment buttons (increase and decrease). To slow the wheelchair to a STOP, simply release the joystick.

 **CAUTION** When learning to drive, select a slow speed and try to drive the wheelchair as slowly as possible by pushing the joystick forward-slightly.

WHEELCHAIR CONTROLLER FUNCTIONS

The following is a quick review of the major functions:

Turn the controller power button ON.

1. FORWARD – Push the joystick forward.
2. REVERSE – Pull the joystick back.
3. TURN RIGHT – Push the joystick to the right.
4. TURN LEFT – Push the joystick to the left.
5. STOP – Release the joystick.

VR2 JOYSTICK CONTROLLER

On-Off Button: Use this button to turn the joystick controller (hereinafter referred to as VR2) on and off. Do not use this button to stop the power wheelchair, except in an emergency.

(Item A-Figure 13)

Battery Gauge: This is a 10-segment display, located on the face of the VR2. It indicates if the VR2 is switched on and provides the state of charge of the battery. It also indicates any faults in the power wheelchair electrical system. Refer to Table 1 for more details.

(Item B-Figure 13)

Horn Button: Press this button to sound the warning horn (Item C-Figure 13).

Maximum Speed Indicator: This is a 5-segment display that indicates the maximum speed setting selected (Item D-Figure 12).

Speed Decrease Button: Press this button to decrease the maximum speed (Item E-Figure 13).

Speed Increase Button: Press this button to increase the maximum speed (Item F-Figure 13).

Joystick: The joystick (Item G-Figure 13) controls the speed and direction of the power wheelchair. Push the joystick in the direction you want to go. The farther you push the joystick from the neutral position, the faster the power wheelchair will travel. Releasing the joystick will automatically engage the brakes and stop the power wheelchair.

Note: The controller can be fitted to suit either right-or left-handed users. Please contact your provider for further assistance.

ACTUATOR CONTROL (OPTIONAL) (Item H-Figure 13)

If your ROVI X3 Power Wheelchair is equipped with optional power actuators, there will be two additional keys on the VR2 controller for actuator adjustment. The functions of these keys will differ depending on the number of actuators installed on the power wheelchair. The ROVI X3



Figure 13

equipped with a VR2 control system can support up to two actuator motors.

ONE ACTUATOR IS INSTALLED ON THE POWER WHEELCHAIR:

With the VR2 powered on, press either actuator button to activate actuator adjustment mode. The LED above each actuator button will light up.

Push the joystick forward or backward to adjust the actuator to the desired position.

Release the joystick to stop actuator adjustment.

Press either actuator button to return to drive mode. The LED above each actuator button will go out.

TWO ACTUATORS ARE INSTALLED ON THE POWER WHEELCHAIR:

With the VR2 powered on, press either the left or the right actuator button, depending on which actuator you wish to adjust. The LED above the selected actuator will light up.

Push the joystick forward or backward to adjust the actuator to the desired position.

Release the joystick to stop actuator adjustment.

Press the selected actuator button to return to drive mode. The LED above the actuator button will go out.

Note: If you wish to adjust the second actuator before returning to drive mode, press the other actuator button and repeat the steps 1 – 4 above.

CHARGING PORT/LIGHTING DESCRIPTIONS

See the Charging Port and Lighting Options sections under R-Net Joystick Controller.

R-NET JOYSTICK CONTROLLER DESCRIPTIONS



R-Net Joystick Options - Figure 14

The R-Net Joystick Controller is available as an optional control system for the ROVI X₃ power wheelchair. The R-Net consists of a 9-key control panel (A) and charging port. As an upgrade, the R-Net can also be equipped with a color LCD screen and a 10-key control panel (B).

R-NET CONTROL PANEL



On/Off Button: Use this button to turn the R-Net on and off. Do not use this button to stop the power wheelchair, except in an emergency.

Joystick: The joystick controls the speed and direction of the power wheelchair. Push the joystick in the direction you want to go. The farther you push the joystick from the neutral position, the faster the power wheelchair will travel. Releasing the joystick will automatically engage the brakes and stop the power wheelchair.



Horn Button: Press this button to sound the warning horn.



Maximum Speed/Profile Buttons: Use these buttons to increase/decrease the maximum speed or, depending on programming, the maximum drive profile.

Note: LCD models will have a separate profile select button.



Maximum Speed Indicator (9-key control panel): This is a 5-segment display that indicates the maximum speed or, depending on programming, the maximum drive profile.



Mode Button: Use this button to move through the available modes programmed into the control system.



Battery Voltage Indicator (9-key control panel): This is a 10-segment display that indicates the state of charge of the battery. It also indicates any faults in the power wheelchair electrical system.



Seat Indicator LED (9-key control panel only): If your power wheelchair is equipped with power seat options, this indicator will display the active seat function when in use.

CHARGING PORT (VR2/R-NET)

Use this port to charge the power wheelchair battery. This is the primary charging port for the ROVI X3 and should only be used with a qualified ROVI X3 charger certified by the original manufacturer of the power wheelchair. Do not use this port as a power supply for any other electrical devices other than the USB charger supplied by ROVI in the owner's package. Failure to follow these instructions will void the warranty of the power wheelchair.



R-NET LCD SCREEN (OPTIONAL)

The status of the control system can be understood by observing the various symbols and indicators displayed on the LCD screen. Some of these symbols and indicators will always display on the screen, while others will appear only under certain conditions.

Standard Symbols and Indicators

Battery Gauge: Provides the state of charge of the battery and alerts the user to battery status.

- Steady: No issues
- Flashing slowly: Charge the battery as soon as possible
- Stepping up: Charging in process; drive lockout active.

Speed Indicator: Displays the current maximum speed setting.

Note: The color LCD also has a multi-segment speedometer that displays the current actual speed of the power wheelchair.

Profile Number/Profile Name: Displays the currently selected drive profile number and drive profile name. Up to 5 drive profiles are available, depending on programming.

Clock: The color LCD can display the current time in either 12- or 24-hour display.

Other Symbols and Indicators:

In Focus: Alerts the user that a secondary control module currently has control of the power wheelchair (for use with secondary controls such as a dual attendant module).

Speed Limit: When steady, this symbol alerts the user that the speed of the power wheelchair is being limited because of an alternate system (e.g., a raised seat actuator). When flashing, this symbol alerts the user that the power wheelchair is under drive inhibit.

Latched: Displays when the control system is operating under a latched condition.

Restart: This symbol will flash when the control system needs to be restarted.

Fault: Alerts the user to a fault in the control system.

Motor Temperature: Alerts the user that the motors are overheating. The control system will automatically reduce the power to the motors to avoid heat damage in this instance.

Control System Temperature: Alerts the user that the control system is overheating. The control

system will automatically reduce power to avoid heat damage in this instance.

Timer: Alerts the user to a change in control system status.

E-Stop: Indicates that an emergency stop switch has been activated or disconnected (for use with optional equipment).

Bluetooth: Indicates that Bluetooth mode has been activated.

LIGHTING OPTION (VR2/R-NET)

*The ROVI X3 may be configured with the a lighting option for greater visibility.



Hazard Lights Button and LED: Press this button once to turn on the power wheelchair's hazard (indicator) lights. The LED next to the button will blink in time with the indicator lights. Press the button again to turn off the hazard lights. The LED will go out.



Lights Button and LED: Press this button to turn on the power wheelchair's lights. The lights button LED will light up to indicate that the lights are on. Press the button again to turn off the lights. The lights button LED will go out.



Left Indicator Button and LED: Press this button to turn on the left indicator light. The LED will blink in time with the indicator light. Press the button again to turn off the left indicator light. The LED will go out.



Right Indicator Button and LED: Press this button to turn on the right indicator light. The LED will blink in time with the indicator light. Press the button again to turn off the right indicator light. The LED will go out.

ATTENTION!

The power wheelchair controller may be programmed with a lock mode function to prevent unauthorized use. The locking method is achieved one of two ways, depending on the controller and programming.

To Lock the Power Wheelchair Controller Using the Control Panel (VR2 and R-Net)

With the controller powered on, press and hold the on/off button.

After 1 second the controller will beep. Release the on/off button.

Push the joystick forward until you hear a beep.

Push the joystick in reverse until you hear a beep.

Release the joystick. There will be a long beep.

The control system is now locked.

To Unlock the Power Wheelchair Controller Using the Control Panel (VR2 and R-Net)

Press the on/off button to power on the controller. The maximum speed indicator will be rippling up and down.

Push the joystick forward until you hear a beep.

Push the joystick in reverse until you hear a beep.

Release the joystick. There will be a long beep.

The control system is now unlocked.

To Lock the Power Wheelchair Controller Using a Key (R-Net only)

With the controller powered on, insert and remove the key from the charging port.

The control system is now locked.

To Unlock the Power Wheelchair Controller Using a Key (R-Net only)

Press the on/off button to power on the controller. The maximum speed indicator will be rippling up and down. Insert and remove the key from the charging port.

The control system is now unlocked.

Sleep Mode

If the control system is left on and not used for more than 10 minutes, it may automatically “go to sleep.” This is recognized by a slow intermittent flash of the battery gauge on the VR2 and R-Net and by a “ZZZ” symbol on the R-Net with LCD screen. Simply turn the control system off and back on to reset.

DRIVE/FREEWHEEL MODE

The drive/freewheel levers are found at the rear of the drive wheel on either side of the power wheelchair (Figure 15). These levers will allow you to disengage the electromagnetic brakes so that you can push the power wheelchair manually.

Make sure the VR2/R-Net is powered off. To place your power wheelchair into freewheel mode, push both drive/freewheel levers down. This will disengage the electromagnetic brakes. To return the power wheelchair to drive mode, pull both levers up. Press the on/off button to power on the VR2/R-Net. If the battery gauge is not flashing, proceed to drive your chair as normal. If the battery gauge is flashing, then double check that the drive/freewheel levers have been engaged fully in the up position.



Drive



Freewheel

Figure 15

MAIN CIRCUIT BREAKER

The main circuit breaker is a safety device that will trip to protect the motor and electronics when they are subjected to excessive loads. It is located at the rear (right side) of the unit and can be reset, should a trip occur.

If a circuit breaker trip occurs, allow the power wheelchair to rest for approximately 1 minute before depressing the circuit breaker button. Should frequent circuit breaker trips occur, please contact your ROVI X3 provider.

Preparing To Use Your Power Wheelchair

-  **CAUTION** The ROVI X3 is designed to assist with 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.

FIRST TIME USE

Before using your ROVI X3 power wheelchair for the first time, you must charge the batteries fully (refer to Battery Charging Instructions). It is recommended to charge your batteries for 12 hours. Charging the batteries completely prior to first time use will increase battery efficiency and battery life.

Before you operate your power wheelchair, check all systems

-  **WARNING** Proper training on safety, operation, and maintenance are essential and can potentially decrease the frequency of power wheelchair breakdowns and accidents.

- Tips**
- Inspect the ROVI X3, making sure it is clean and ready for use.
 - Keep loose items or lap covers away from the wheels.
 - Turn off the joystick controller when you have finished using the power wheelchair and immediately charge the battery.

ROVI X3 POWER WHEELCHAIR OPERATION

To safely handle the ROVI X3, pay close attention to your surroundings. Scan ahead and look for the best path to take. Are there obstacles in the path or is it smooth and level? If there are obstacles, how will you avoid them? Now is the time to put into use all that you have learned from your provider training and this ROVI X3 User Manual. It is important to practice these safety techniques until you are comfortable in maneuvering around frequently encountered obstacles.

RECOMMENDED DRIVING SURFACES

The ROVI X3 is intended to be operated on dry, level surfaces composed of concrete, asphalt, or

blacktop. Care should be taken on soft gravel, or dirt, and wet grass, please refer to additional warnings under “Wet/Slippery Surfaces”

 **CAUTION** Before you begin to venture outside or away from your home, practice and master the safety procedures and techniques involved in safe operation of your power wheelchair. Have an experienced assistant help you before attempting to operate the power wheelchair alone.

 **CAUTION** Keep your arms on or inside the armrests and feet on the footplate at all times during operation.

The handling and maneuverability characteristics of mid-wheel drive power wheelchairs are inherently different from rear- or front-wheel drive power wheelchairs. If you have used other types of wheelchairs, handling and maneuverability differences will be most noticeable when traveling over rough terrain or when negotiating ramps and slopes. To determine and establish your particular safety limits, practice use of this product on various sloping surfaces in the presence of a qualified attendant before attempting active use of this power wheelchair.

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

USING THE JOYSTICK CONTROLLER

Note: For more information, see the descriptions in the Joystick Controller Options section.

 **CAUTION** When learning to drive, select a slow speed and try to drive the wheelchair as slowly as possible by pushing the joystick forward only slightly.

WEIGHT LIMITATIONS

Your power wheelchair is rated for a maximum weight capacity. Please refer to the specifications table for this limit. Keep in mind that the maximum weight capacity includes the combined weight of the user and any accessories mounted to the power wheelchair.

-  **WARNING** Do not carry passengers on your power wheelchair. Carrying passengers may affect the center of gravity, resulting in a tip over or fall.

TRANSFERRING ONTO OR OFF THE POWER WHEELCHAIR

-  **WARNING** Always fasten the lap belt when operating your power wheelchair; the lap belt is there for safety and protection.

Before you transfer onto or off the power wheelchair, engage the drive/freewheel levers in drive mode and power the joystick controller off. It can be dangerous if you bump into the joystick when the power is on. When you are sitting or traveling in your wheelchair, always maintain your center of gravity. Use a positioning belt if there is one available. For maximum safety, practice your transfer onto and off of the wheelchair. All practice moves should be under the supervision of a trained assistant. Do not stand on the footplate. Ensure armrests and footplates have been moved out of the way before transferring onto or off the wheelchair.

RAMPS AND SLOPES

-  **WARNING** Always reduce your speed when driving down slopes to maintain stability and avoid hard braking. Move the joystick slowly toward the center position to reduce speed. If stopping is necessary, release the joystick and allow the power wheelchair to come to a full stop.

Ramps are designed for negotiating steps or other obstacles with a manual or power wheelchair. Inspect the ramp periodically for wear and loose or damaged parts and repair or replace if necessary. Properly designed ramps will have “edge protection” along each side to prevent the wheelchair from falling off the ramp. Make sure the ramp is secured in place and does NOT exceed any grade greater than 8° (14%). Approach a ramp or slope straight on – not at an angle.

-  **WARNING** If your power wheelchair is equipped with a reclining seatback, do not attempt to negotiate a steep grade with the back in a reclined position.

When driving down a ramp or slope, keep the chair's speed to the lowest setting to ensure controlled descent. If the power wheelchair starts to increase speed, release the joystick and the chair will slow down and stop. Then, push the joystick forward slightly to continue down the slope at a controlled speed.

-  **DANGER** While your power wheelchair has been tested and proven safe on slopes up to 9° (15.8%), ROVI Mobility recommends that you do not attempt to negotiate a slope greater than 8° (14%). Driving conditions may change quickly, and exceeding the maximum slope can place the power wheelchair in an unstable situation.

When climbing a ramp or incline, try to keep the power wheelchair moving. If you stop and start up again, you will lose momentum and it will be harder to start up again. Special care must be taken to avoid abrupt or sudden forward movement when you resume climbing a ramp or steep slope to avoid tipping the chair backwards.

-  **CAUTION** Avoid sudden or erratic action with the joystick when travelling up or down an incline.

CURBS AND SIDEWALKS

-  **CAUTION** DO NOT attempt to negotiate a curb with a height above 3in. (80mm). When approaching a sidewalk, look for a curb cutout or a driveway.

Wet/Slippery Surfaces

-  **WARNING** NEVER operate the power wheelchair in the rain. It is NOT safe. Drive wheels lose traction on wet ground or grass. The joystick controller and other power wheelchair electronics are NOT waterproof.

Lawns are often watered and they can be very slick. Also, the water runoff from sprinklers can make sidewalks, driveways and streets wet and slippery.

Public Streets and Roadways

 **DANGER** A public street or roadway is a very dangerous place for a power wheelchair.

Crosswalks

 **DANGER** Use special caution when crossing a busy street. Obey streetlights and proceed cautiously. Make sure traffic has stopped and that it is safe to proceed across the street.

Cornering Information

Even with front and rear caster wheels, excessive speed when cornering can cause the power wheelchair to lose control and tip over. Reduce your speed and steering angle to lessen the sharpness of the turn.

Stairs and Escalators

 **DANGER** Never use your power wheelchair to negotiate stairs or escalators.

Do not try to use escalators, because they pose a serious danger to a power wheelchair. If an elevator is available, you may safely enter and use it to reach upper or lower floors.

Power Wheelchair Stability

Do not operate the power wheelchair in any direction while leaning forward in the chair. If an object is to be picked up from the floor, the caster wheels must be positioned to support the chair. Drive past the object, and then reverse so that the front casters are in the forward position. This position will provide the power wheelchair with the greatest stability for this operation. Do not lean

out of the chair, because this will cause instability. Keep your arms on or inside the armrests and your feet on the footplate at all times.

Note: Proper use, handling, and maintenance of your power wheelchair are critical to your protection and to avoiding injury. Turn off the VR2/R-Net after you have finished using your power wheelchair and charge the battery.

MAINTENANCE

CARING FOR THE ROVI X3 POWER WHEELCHAIR

There are some maintenance procedures that can be performed by the user, if he/she is able. These procedures include equipment inspection, cleaning, and servicing of the power wheelchair. All other maintenance and repair must be performed by a provider with a trained and certified technician.

 **CAUTION** Please follow the procedures and precautions in this manual carefully. Failure to adhere to these instructions can result in equipment damage or personal injury.

 **CAUTION** During all work on the power wheelchair and electrical system, make sure the circuit breaker is disconnected (disconnect at least one battery connector).

Inspection

Inspect the power wheelchair on a regular basis, see the Maintenance Chart for periodic inspection criteria. Regular inspection can spot problems before they can cause breakdown or other dangerous issues.

 **CAUTION** Use only parts and accessories authorized by ROVI Mobility. Unapproved tires, batteries, and other equipment could make your wheelchair unstable or dangerous. Such use may also void the warranty on the wheelchair.

SEAT AND FRAME

Inspect the seat, armrests, cushions, lap belt, and footplate. Inspect the lap belt carefully - it is there for your safety. Make sure it is not fraying or damaged and that it is attached securely to the power-wheelchair frame. Inspect the buckle and make sure it locks securely.

Inspect the seat cushions for wear and replace them if necessary. Make sure that the seat is fastened securely to the frame. Look for missing fasteners or sharp edges on any seat hardware.

Check the footplate assembly and make sure there are no broken or missing parts. Make sure that your footplate is adjusted properly according to your requirements.

Wheels and Tires

The wheels and tires should be checked periodically for cracks and wear and replaced if necessary. The condition of the tires depends on how you drive and use your power wheelchair. Because your tires are flat-free tires, there is no need to worry about tire air pressure. Make sure the wheels have no “sideplay,” wobbling, or flutter when turning. Tighten loose wheel bolts and caster nuts on a regular basis.

Inspect caster assemblies for wear and proper tightness by spinning the wheel and observing for free movement or wobble of the wheel. Beware of caster flutter, side-to-side motion, which may occur at high speeds. If the casters flutter, replace them immediately.

Note: Make sure that all four casters are touching the ground appropriately.

It is recommended that the driving axles (inside the drive wheel assembly) and caster assemblies be checked and cleaned occasionally for debris buildup, which will hinder the performance of the unit.

Maintenance Chart

Use the following chart for periodic recommended inspection and adjustments of hardware and electrical parts and systems:

CHECK...	DAILY	WEEKLY	MONTHLY	QUARTERLY	ANNUALLY
Check batteries	✓				
Check tires for proper tread		✓			
Check plugs and connectors for proper connections		✓			
Check all moving parts for wear			✓		
Inspect all nuts, bolts, and fasteners for looseness or wear				✓	
Inspect upholstery for wear				✓	
Make sure Drive Lockout operates properly				✓	
Service by authorized supplier					✓

Cleaning

PLASTIC SHROUD COVER:

Clean the plastic shroud with mild, soapy water monthly or whenever dust or dirt accumulates on the shroud.

MOTORS:

Clean around the motor area weekly with a slightly damp (not wet) cloth.

Wipe off or blow away any dust or dirt on or around the motors.

Note: You do not need to grease or oil the power wheelchair mechanisms.

UPHOLSTERY:

Hand wash seat upholstery and armrests as needed with a soft, damp cloth and mild detergent.

Never use an abrasive cleanser or solvent-based cleaners, such as turpentine.

Air dry only. Heat from a dryer may damage fabric.

Note: Washing the fabric may decrease the fire retardant properties.

STORAGE TIPS

If you do not plan on using your power wheelchair for an extended period, it is recommended that you fully charge the batteries and then disconnect the battery harness before storage.

Store your power wheelchair in a clean, dry area to prevent corrosion.

Before using your power wheelchair, make sure it is in proper working order.

Inspect and service all items in the “Maintenance Chart.”

If you store the power wheelchair for more than 3 months, have it inspected by an authorized ROVI provider before use.

 **CAUTION** Never attempt to charge a frozen battery! A cold or frozen battery should be warmed for several days prior to charging.

LUBRICATION

Most lubricated components on this power wheelchair are designed to be maintenance free and are sealed. Therefore, lubrication IS NOT required for these components.

BATTERIES AND CHARGING

Before using your power wheelchair for the first-time, you must charge the batteries fully (refer to Battery Charging Instructions). Charging may take up to 12 hours. Charging the batteries completely prior to first time use will enhance battery efficiency and battery life.

BATTERY TYPE

The ROVI X₃ power wheelchair is designed to operate on two 12-volt, Group M₃₄: (47.5 Ah - C/5 Rating) gel-cell, maintenance-free, batteries. The two 12-volt batteries are wired in series to create

a 24-volt system. It is like having one large battery. Gel-cell batteries have many advantages over the wet-cell (automotive type) in that you never need to add water. They are sealed to avoid spills and corrosion problems. Using a sealed gel-type battery should allow you to travel on an airplane and other transportation without having to remove the batteries. Gell-cell deep-cycle batteries are designed to be discharged and recharged regularly.

Tips Always replace the batteries with two identical batteries of the same chemistry, amp-hours, and capacity as a set and at the same time. The X3 is designed to accept Group M34 batteries only. Larger battery types will not work on this power wheelchair.

 **CAUTION:** Only sealed non-spillable batteries that meet DOT CFR173.159 (d), IATA Packing Instructions 806, and IATA Provision A67 shall be installed in this wheelchair.

BATTERY CHARGING

 **WARNING** Use only the charger that came with your ROVI X3. Never use a battery charger made for car batteries.

Note: The ROVI X3 comes with an 8A charger only.

The average ROVI user will need to charge the batteries after using approximately 30% of the battery capacity. For extended battery life, it is highly recommended that these guidelines be followed. Keeping the batteries charged extends the life of the batteries.

Note: You cannot overcharge the batteries.

BATTERY ACCESS

It is easy to access the batteries of the ROVI X3. To remove the batteries for transport or service, simply remove the two thumbscrews located on both the front and rear battery doors. With the battery doors open, disconnect the battery harness from the power wheelchair.

CHARGER SAFETY

 **CAUTION** Never attempt to charge a frozen battery! A cold or frozen battery should be warmed for several days prior to charging.

Familiarize yourself with the safety information below before using the battery charger:

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 battery charger plug. Removal of the grounding prong could result in an electrical hazard.
3. Plug the charger into a 3-pronged electrical outlet only, or an approved 3-pronged adapter for use with a 2-pronged electrical outlet.
4. Make sure that the electrical outlet being used is not controlled by a wall switch that can be turned off easily.
5. Do not use an extension cord to plug in the charger.
6. Disconnect the charger from the power wheelchair when not charging the batteries.
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 before 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 flammable 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 wheelchair 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 wheelchair while the batteries are charging. Do Not charge the batteries while the power wheelchair is occupied.

BATTERY CHARGING INSTRUCTIONS

1. Verify the charger is the 24Vdc 8A charger supplied with the ROVI X3
2. Plug the charger into the electrical outlet; LEDs indicate when the charger is powered on.
3. Connect the charger to the charging port at the front of the VR2/R-Net joystick controller.
4. Observe the LEDs on the front of the charger for the following indications.

Charger Indicator Lights

1. Blinking Green: Power on; charger in stand-by mode
2. Steady Orange: Battery charging
3. Steady Green: Charging complete

Please refer to the LED indicator descriptions for the charging status on the charger.

Batteries that go below a minimum voltage, as a result of not being charged, will not be able to re-charge.

BATTERY/CHARGING TROUBLESHOOTING

Charger Diagnostics

If the charger indicator light goes to green within a few minutes after being plugged in and does not charge the batteries, then the batteries may be overdischarged and may require additional service or replacement. Contact your service provider for assistance.

If the charger indicator light goes immediately to green when plugged in to charge, the problem is likely a blown fuse, popped circuit breaker (push reset button), or similar malfunction. Contact your provider for assistance. If the charger does not come on at all when plugged in, check the charger fuse if applicable, then call your provider.

Controller Diagnostics

In the unlikely event that the ROVI X₃ power wheelchair begins to malfunction, the VR₂/R-Net will display one of several error codes to help diagnose the problem. Please see Table 1 for more information.

Note: If performing the applicable procedure from Table 1 does not clear the corresponding fault, DO NOT continue use of the power wheelchair. Turn off the power to the joystick controller and consult your service 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.

Specifications :

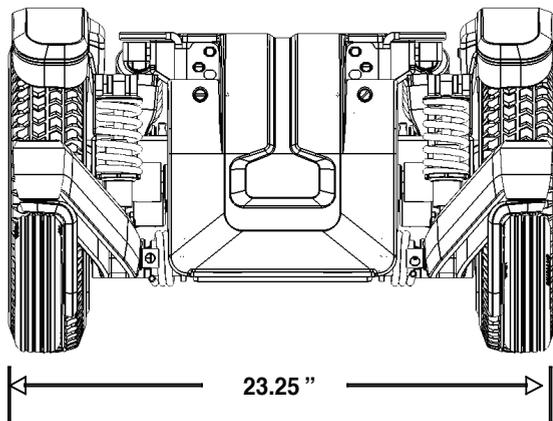
Description	X ₃ (888 WNLE)
Base Dimensions (L x W) ¹ : *w/o footrest	36.5 in. (927 mm) x 23.25 in (590.5 mm)
Ground Clearance:	2.8 in. (71.1 mm)
Obstacle Climbing:	3.14 in. (80 mm)
Max. Slope:	9° (15.8%)
Max. Recommended Slope:	8° (14%)
Turning Radius:	20 in. (508 mm)
Driving Range: ²	Up to 17.7 miles (28.6 km)
Batteries: Weight:	Group 34 (12vdc, 47.5 Ah - C/5, 60Ah - C/20) 39 lbs.
Weight Capacity:	300 lbs. (136 kg)
Base Weight (w/o Seat or Batteries):	175 lbs. (79.4 kg)
Max. Speed:	Up to 8 km/h (5 mph)
Motors:	4 Pole, 24 Vdc Motors
Controller:	PG Drives VR2 90 A/ R-NET 90 A
Drive Wheels:	14 in. (355.6 mm) Solid
Caster Wheels:	6 in. (152 mm) Solid

All specifications are subject to change without prior notice. ROVI reserves the right to make any changes to the unit we deem necessary. All specifications and dimensions are approximate:

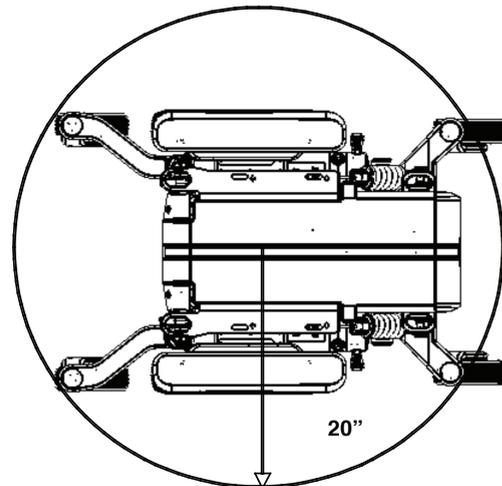
¹ Includes the front and rear casters.

² Actual driving range and speed may vary due to factors such as weight, type and grade of terrain, battery condition and charge level, type and condition of the drive wheels, and variations in the drive and control systems.

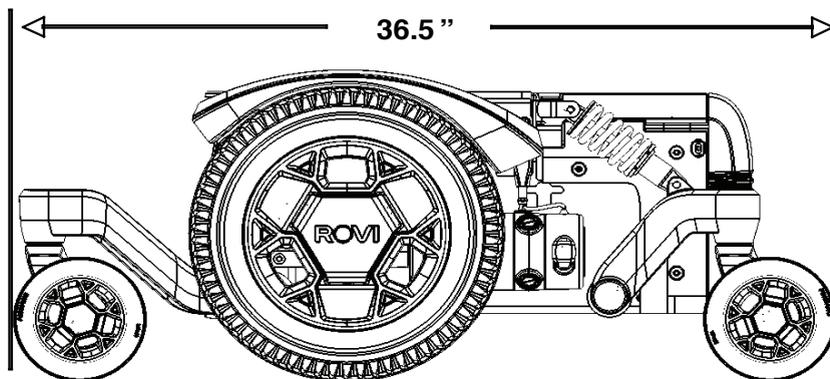
Unit Dimensions:



BASE WIDTH



TURNING RADIUS



BASE LENGTH

WARRANTY

FRAME: 5 YEARS / ELECTRONICS: 1 YEAR / DRIVETRAIN: 1 YEAR

Record Serial number here for future use - _____.

ROVI Mobility (“Distributor”) warrants its power wheelchairs (“products”) against certain defects in materials and workmanship from the date of purchase, subject to certain conditions and exclusions, as defined below. Please take the time to read the following terms and conditions under which the Distributor agrees to provide repair services.

1. Structural frame components including platform, fork, caster arms, and frame welds are warranted for five (5) years, to the original owner.
2. To present a claim, Customer shall deliver the defective part for exchange to an authorized ROVI provider from whom the product was purchased.
3. This warranty is for the replacement or repair, at the option of ROVI, of defective parts only and does not cover any labor charges including, but not limited to, charges incurred for shipping, handling, or the installation of replacement parts or additional fees, which may be imposed by the provider or service agent.
4. All warranty replacement parts are under warranty from the date of purchase of the original “product” and not from the date of part replacement.
5. The warranty covers the drivetrain (including the gearbox, motor, and brake).
6. This warranty is valid and enforceable only on “products” purchased in the United States and from an authorized ROVI provider.
7. This warranty is applicable only to the customer as an original purchaser of the “product” from an authorized ROVI provider and shall not apply to any subsequent purchaser, assignee, or other recipient of the powered wheelchair from customer.

8. No provider or other similar person has any authority to make any warranties or representations concerning ROVI Mobility products, or to extend this warranty beyond the express terms contained within. Distributor assumes no responsibility for any warranties beyond the express terms contained in the warranty. Customer releases and holds distributor harmless from any claims stemming from any unauthorized representations.

9. This warranty shall be void if the Customer modifies the “product” in any respect, including, but not limited to, the use of parts other than genuine ROVI parts.

10. This warranty does not apply unless the Registration Card is signed, completed, and returned within thirty days (30) from the date of purchase. Distributor reserves the right to dispose of the Registration Card once it is received.

11. Warranty exceptions:

A. Gearbox: In cases where there is an increase in the operational noise level, the warranty will not apply.

B. Motor: If damage occurs to commutator of motor as a result of not replacing motor brushes after heavy wear to brushes. Motor brushes are wear items, and will be warranted for one year.

C. Brake: Brake pads are wear items and will be warranted for one year.

D. Maintenance: Annual maintenance schedule must be followed as outlined in the User Manual Section III: Maintenance.

12. This warranty does not cover batteries or damage caused by battery leakage. The battery warranty is covered by the battery manufacturer. As part of the electronics, the battery charger is only covered for a period of one year from date of purchase of unit.

13. This warranty does not cover plastic shrouding or covers, seat upholstery, or arm pads as these components are considered wear items.

14. This warranty does not apply to any injury, loss, defect or malfunction of the “product,” or failure to function resulting from any failure to operate or maintain “product” in accordance with the directions contained in the user manual provided by ROVI; or any injury, loss, damage, defect or malfunction, or failure to function resulting from any accident, acts of God, alterations in the “product” by anyone other than the distributor, or misuse, unreasonable use, tampering, abuse, acts, omissions, failure, or negligence by anyone other than manufacturer.

15. Any implied warranty imposed by state consumer law is limited.
16. Customer represents and agrees that any claims, which it may assert against Distributor, shall be limited to those, which may be asserted under the foregoing warranty.
17. Distributor makes no warranty, either express or implied, including, but not limited to, any implied warranties of merchantability and fitness for a particular purpose. Distributor expressly disclaims all warranties.
18. Your exclusive remedy and Distributor's entire, collective liability in contract, tort or otherwise, under this Agreement is the repair of the defective system or components in accordance with this Agreement. If Distributor is unable to make such repair, your exclusive remedy and Distributor's entire liability will be the payment of actual damages not to exceed the charge paid by you. Under no circumstances will the Distributor be liable to you or any other person for any damages, including, without limitation, any indirect, incidental, special, or consequential damages. This agreement gives you specific legal rights and you may have other rights that vary from state to state. Some states do not allow the exclusion or limitation of (i) incidental or consequential damages or (ii) implied warranties, so the above exclusions may not apply.
19. No provider of Distributor and no person other than an officer of Distributor may extend this warranty, nor may they modify it in any respect. No modification or extension is effective unless it is in writing and signed by the President or Vice-President of the Distributor.

REPLACEMENT DOCUMENTS

The most current version of this owner's manual is available for download at www.rovimobility.com. Should you ever lose or misplace your owner's manual or any other supplemental information provided with your power wheelchair, please visit the website or contact ROVI for a replacement.

NOTES

NOTES

For Customer or Technical Service:
Motion Concepts USA
700 Ensminger Rd. Suite 112
Tonawanda, NY 14150
Phone 1.888.433.6818
Website: www.motionconcepts.com

ROVI X₃ Serial Numbers

ROVI Mobility
21184 S. Figueroa St.
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Phone: 1.800.743.0772
Website: www.Rovimobility.com