Owner's Manual for
Model ERC-29.5
Model ERC-39.5

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Safety Guidelines

Prior to using the EcoRover Chair, users and attendants must read and follow these guidelines and warnings. Failure to do so may result in a tip-over or loss of control causing injury to users or others.

DO NOT get in or out of the EcoRover Chair without the controls turned off.

DO NOT operate an EcoRover Chair without the seatbelt or the shoulder harness buckled-up.

DO NOT operate with more than one person on the EcoRover Chair.

DO NOT operate without knowing your surroundings. Be aware of the people and objects around you. Be especially careful of children, who tend to run without looking.

DO NOT navigate an EcoRover Chair on more than a 20-degree slope.

DO NOT attempt to ascend or descend stairs.

DO NOT attempt to go up or down curbs more than 4 inches high.

DO NOT navigate into more than eight inches of fresh water.

DO NOT stand or climb on the tracks or the back of an EcoRover Chair.

DO NOT put your hands or fingers on the tracks while driving.

DO NOT touch the motors. They get very hot.

DO NOT exceed the weight limit of 275 lbs. for model ERC-29.5
DO NOT exceed the weight limit of 400 lbs. for model ERC-39.5

DO NOT begin use of an EcoRover Chair without a full battery charge.

DO NOT ride on the EcoRover Chair when loading onto a trailer, vehicle, or carrier.

Safety Guidelines

Avoid Tipping Over ⚠ WARNING

Do not navigate an EcoRover Chair on more than a 20-degree slope.
This track chair can and will tip over in any direction if pushed beyond the limits stated in this section. The EcoRover Chair is equipped with an anti-tip system in the rear. The purpose of this safety feature is to give warning to the user that the EcoRover Chair has reached the safe incline limit. In this situation, the user should stop, and reverse direction by pulling back on the joystick to avoid tipping over.

Look Before Turning ⚠ WARNING

EcoRover has tremendous power and can cause property damage and/or serious injury to people. It also has a rigid anti-tip system that extends out 2 feet (24 inches) behind the driver. The anti-tip system will turn with the chair hitting what is within range behind the driver. Look to the rear before turning. Be aware of objects and people in proximity to the EcoRover Chair.

Avoid Unauthorized Modifications ⚠ WARNING

Do not use replacement parts that are not authorized by EcoRover Chairs. Do not make modifications that are not authorized by EcoRover Chairs. Doing so may cause a safety hazard and possible harm to the user or other people.

Safety Guidelines

Safely Tie-down the EcoRover Chair

⚠ WARNING

When transporting your EcoRover Chair, strap it down using the base frame or the track frame. Do not strap it down using any part of the seat frame. This may cause damage to the actuator. Be sure to strap down using two opposite sides down of the base frame or track frame. If you are not sure where to place your straps, you may contact EcoRover Chairs or an authorized dealer for advice.

Safely Tow the EcoRover Chair

⚠ WARNING

If for any reason your EcoRover stops working while you are using it, you can have someone take both motors out of gear being careful not to touch the canister part of the motor. They can be hot. Once they are out of gear, the EcoRover can be pulled by another EcoRover, an ATV or car by securing straps to the base frame of the EcoRover Chair. Do not attach the straps to the seat frame as this could damage the actuator. Do not pull the EcoRover more than 5 miles per hour as this could damage the gearboxes. Once you get your EcoRover Chairs to a safe place, contact EcoRover Chairs or an authorized dealer to schedule service.

Unplug the Charging Cord Prior to Use

⚠ WARNING

The EcoRover Chair will operate while the charging cord is plugged into the charger and into the electrical outlet. To avoid damage to the charger and/or the electrical outlet, make sure the charger cord is completely unplugged and properly stored prior to using the EcoRover Chair.

Safety Guidelines

Understand the Circuit Breaker WARNING

EcoRover Chairs come with a 90 AMP circuit breaker that protects the Curtis-Wright R-Net power module. If tripped, it will re-set automatically within a minute. If the circuit breaker trips a second time, the cause will need to be determined by a service technician and the circuit breaker will need to be replaced.

Some reasons for tripping the circuit breaker are 1) Over-current from the battery, 2) Short circuit of the wiring or 3) Overload through exceeding the weight limit, the tow capacity limits, the incline limits or a combination of these.

Understand the Fuses ⚠ WARNING

It is very unlikely that a fuse will be blown. But if this happens, replacement fuses can be sourced at most auto parts and hardware stores. The following components are protected by fuses.
1) Lights, 2) USB Port and 3) Tilt Control

Have a good Emergency Plan ⚠ WARNING

Every great outdoor adventure includes a good emergency plan. In the unlikely event that the EcoRover Chair fails in operation, or another emergency comes up, make sure you have communications with an emergency contact who knows your whereabouts.

Operating Instructions for EcoRover Chairs

"Read before operating your EcoRover."

Before sitting in your EcoRover, make sure the controls are **"OFF"** and nothing is being displayed on the joystick screen. The screen is blank.

Enter and sit comfortably in the seat, securely fasten yourself in with either the seatbelt or four-point shoulder harness.

Beginning your adventure. Turn EcoRover "ON" by a single tap on the green button, wait 2 seconds, and the setting will be displayed in the joystick screen.

Auto Shut off: As a safety feature, if your EcoRover is not engaged or moved for more than 20 minutes, the joystick will automatically shut off. If this happens, just tap the "green" power button on the joystick to turn EcoRover back "On".

Select speed: EcoRover has five speeds, one through five, with one being the lowest speed and 5 being highest. Speeds can be adjusted left or right using the bottom buttons on the face of the joystick. The left button has two orange horizontal lines and is used to slow down the speed. The right button has four orange horizontal lines and is used to turn up the speed. The window just above these buttons shows what speed you are at. The max speed is 3.5 miles per hour, walking pace. Speed setting all the way to the left is recommended for first time users.

First time users should set speed to "1". see above instructions for settings.

Battery level: Make sure battery is at 100% prior to starting your adventure. The indicator is on the left side of the joystick screen. Please be aware of your battery usage when traveling.

Operating Instructions for EcoRover Chairs

"Read before operating your EcoRover."

Tilt: EcoRover Chairs have a tilt switch located on the joystick mount. Push the tilt switch forward to tilt your seat forward or pull the switch backwards to tilt your seat back. When traveling up an inclined surface, tilt the chair forward, this will allow traveling up the incline. Tilt the chair back to travel down an inclined surface. **DO NOT** navigate an EcoRover Chair on more than a 20-degree slope.

Light Switch: EcoRover has an on/off light switch which is mounted on the joystick mount right above the tilt switch that turns the two LED headlights on that are mounted under the seat pan. If your EcoRover came without a light switch, press the button on the joystick that has a blue headlight icon to turn on and off your headlights.

Joystick: engages the motors for movement. The joystick is sensitive to touch, little force is needed to experience the full capabilities of EcoRover. The joystick controls direction by the driver leaning the joystick in the desired direction of travel. For movement, the joystick acts just like an accelerator pedal in a car. The less pressure on the joystick, the slower the EcoRover Chair will move. To "STOP" simply release or let go of the joystick. EcoRover will immediately stop, and an electronic brake will engage.

Rain: EcoRover Chairs can get rained on, no issues, but if there is lightning, seek shelter.

Push the joystick SLOWLY forward and begin your adventure!

Joystick, Control Buttons & Battery Gauges

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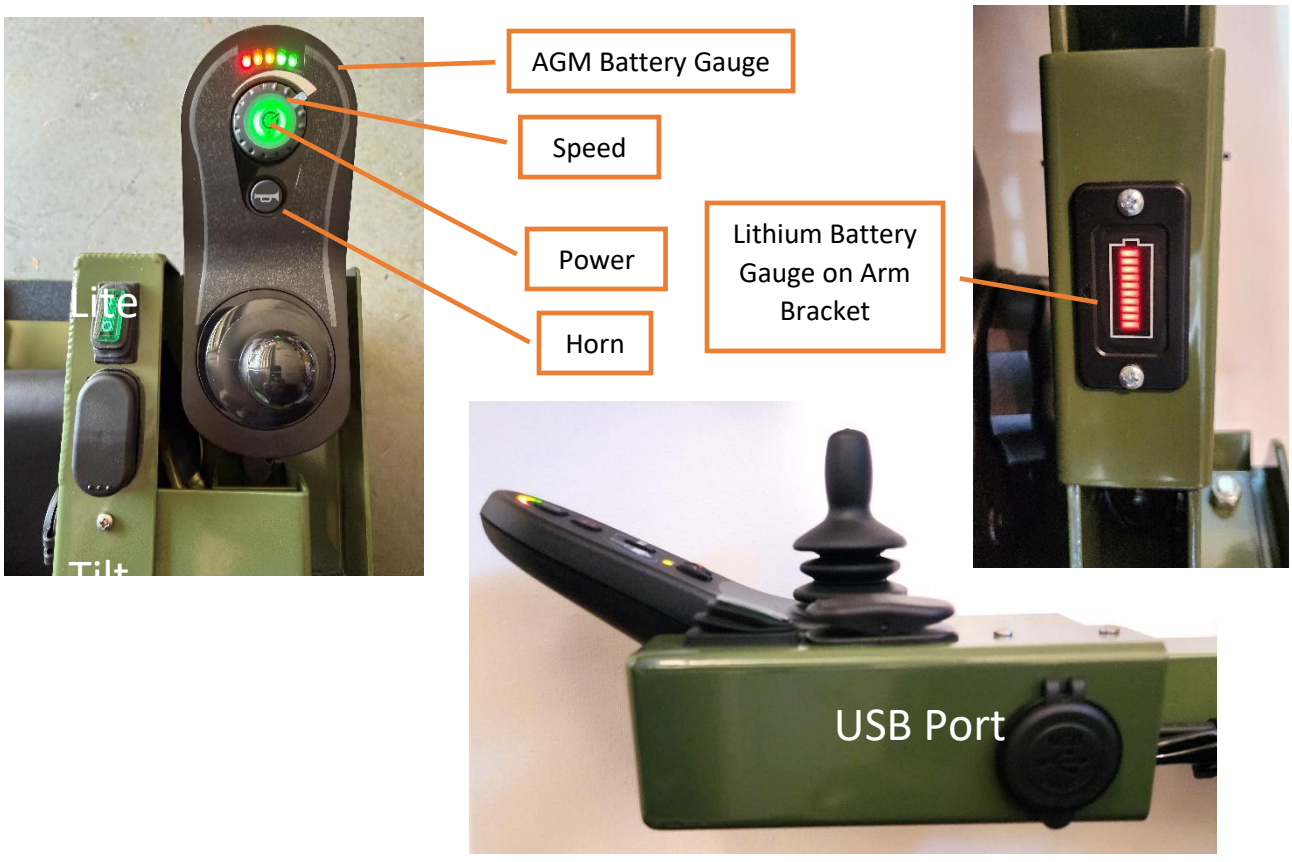
Joystick: This controls the speed and direction of the track chair. Push the joystick in the direction you wish to go. The further you push it, the faster the speed. Releasing the joystick stops the track chair and automatically applies the brakes.

Joystick Check: With the control system switched off, check that the joystick is not bent or damaged and that it returns to the center when you release it. If there is a problem do not use your track chair and call your customer service contact.

Operational Features: Power button, horn button, speed control buttons, light switch, tilt switch, and AGM battery level display. Mode is preset to outdoor use. The controls may be mounted on the left arm or right arm of the EcoRover Chair.



15.3 Status and error indication

15.3.1 Status indicator and flash codes

Figure 427: Power OFF

The status indicator is located underneath the remote module's power button. When the system is not powered up, the status indicator is not lit.

Figure 428: Power ON

When the system is powered up, and there are no faults with the system, the status indicator is lit green.

Figure 429: Bluetooth disabled

When the embedded Bluetooth is disabled, the status indicator pulses for a duration of six seconds after the user disables the functionality.

Figure 430: Fault indication

If, when powered up, there is a fault with the system, then the status indicator flashes red. The number of flashes indicates the type of error. This flash code is shown on the REM400/500's status bar as well.

The table below describes the error indication, and a few possible actions that can be taken to rectify the problem. The actions listed are not in any particular order and are suggestions only; the intention is that one of the suggestions may help you clear the problem. If in doubt, consult your supplier.

Table 104: Flash codes

Flash code	Error description	Possible action
1	Remote / joystick error	Check cables and connectors Replace remote module
2	Network or configuration error	Check cables and connectors Check Bluetooth pairing Reconfigure the system

Flash code	Error description	Possible action
		Recharge the battery Check charger Replace modules Contact supplier
3	Left motor error	Check cables and connectors Replace power module Check and/or replace left motor
4	Right motor error	Check cables and connectors Replace power module Check and/or replace right motor
5	Left park brake error	Check cables and connectors Check left park brake is released
6	Right park brake error	Check cables and connectors Check right park brake is released
7	Module error (other than remote module)	Check cables and connectors Check modules Replace LiNX Access Key Replace power module Recharge battery If the wheelchair stalled, reverse away or remove obstacles, or if the wheelchair was moved while turned off, cycle the power.

The error indicator may continue to flash after an error has been rectified. To clear the error indication, cycle the system's power.

For more information about the error, and what to do about it, open and view the logs within one of the LiNX Access tools (see *15.1 The LiNX Access iOS tool* and *15.2 The LiNX Access PC tool*).

15.3.2 OON indications

OON (**"Out Of Neutral"**) is a safety feature that prevents accidental operation of wheelchair functions (driving, seating etc.) when the system's primary input is in an out of neutral position.

For proportional joysticks, an out of neutral position is when the joystick is deflected such that it would normally produce demand in the system. For discrete (switch) joysticks, an out of neutral position is when the joystick is outside, or greater than, the switch threshold. For switches, out of neutral is when one or more switches are activated.

Joystick, Control Buttons & Battery Gauges

Thermal Rollback: The R-Net Controller is equipped with a thermal rollback circuit. This circuit monitors the temperature of the controller, which roughly translates to motor temperature. In the event the R-Net Controller becomes excessively hot, motor amperage is reduced. For every degree above normal temperature, the motor current limit is reduced proportionally. This reduces power which could also reduce track chair speed. Once the R-Net Controller reaches its temperature limit, the current output is reduced to zero and your trackchair will stop. This allows the electrical components and motors to cool down. When the temperature returns to a safe level, your trackchair will resume Its normal operation.

Trouble Shooting with Fault Codes: The R-Net Controller is designed with the user's safety as the number one priority. It incorporates many sophisticated self-test features which search for potential problems at a rate of 100 times per second. If the R-Net detects a problem either in its own circuits or in the track chairs' electrical system, it may stop the track chair, depending on the severity of the problem. The R-Net is designed to maximize the user's safety under all normal conditions. The following table identifies the individual fault codes. The fault codes are displayed as a rapid flashing of the lights. If you encounter one of these fault codes, try the solution if one is listed, then turn your track chair off and then on again. If the problem persists, contact a customer service representative.

# of Flashing Lights	Flashing Lights appear on the AGM Battery Level Display - Diagnosis and Solution
1	The batteries need charging or there is a bad connection to the batteries. Check the connections to the batteries. If connections are good, try charging batteries.
2	The left motor has a bad connection. Check the left motor connection.
3	The left motor has a short circuit to another connection. Contact a customer service representative.
4	The right motor has a bad connection. Check the right motor connection.
5	The right motor has a short circuit to another connection. Contact customer service representative.
6	The trackchair is being inhibited. Contact a customer service representative.
7	A joystick fault is indicated. Make sure the joystick knob is positioned in the center.
8	A controller system fault is indicated. Make sure all the connections are secure and the batteries are fully charged.
9	The parking brakes have a bad connection. Check the parking brake motor connections. Make sure the brake levers are in the correct position.
10	An excessive voltage has been applied to the controller. This is usually caused by a poor battery connection. Check the battery connections.

Charging for AGM Batteries
High quality, 100-240V AC Balance Charger

The charging program consists of 3 steps: constant current, constant voltage, and float charging. The chargers provide protection against overload, over-voltage, over-heating, short circuit, and reverse polarity connections.

SPECIFICATIONS:

DC Output	
Maximum DC output voltage	29.4 V
Maximum DC output current	15 A
Maximum DC output power	430 W
Nominal DC output current	15A @ 110 VAC, 15A @ 220 VAC
Battery type	Lead Acid
AC Input	
AC input voltage range	85-265 VAC
Nominal AC input voltage	100-240 VAC
Nominal AC input frequency	50 / 60 Hz
Maximum AC input current	8A
Nominal AC input current	6A
Power factor	>0.9
Mechanical	
Dimensions	18.2 x 10.5 x 6.5 cm (7.16 x 4.13 x 2.55")
Weight	4 lbs. （1.8 kg）
Cooling	Active cooling with fan
Environmental	
Enclosure	IP65
Humidity	5% — 95%
Operating temperature	-20℃ to 80℃ (-10°F to 176°F)，Derated at >60℃ (140℉)
Storage temperature	-40℃ to 85℃ (-40°F to 185°F)

Charging for AGM Batteries
High quality, 100-240V AC Balance Charger

LED LIGHT STATUS

LED	Charger Status
1. Yellow light blinks 2 times per second.	AC input is ready, battery is not connected yet.
2. Red light blinks 1 time per second.	Charging, battery power is below 80%.
3. Yellow light blinks 1 time per second.	Charging, battery power is between 80% and 90%.
4. Green light blinks 1 time per second.	Charging, battery power is between 90% and 100%.
5. Green light is still on.	Charging is complete.
6. Red light blinks 2 times, interval 1 second, 2 times again.	Charger temperature overheating alarm.
7. Red light blinks 3 times, interval 1 second, 3 times again.	Output over-current alarm.
8. Red light blinks 4 times, interval 1 second, 4 times again.	Output over-voltage alarm.
9. Red light blinks quickly.	Input power failure.
10. Red and green light blinking alternately.	The output is short-circuited, or the positive and negative poles of the battery are reversed.

If there is a problem with the charger, the fan will stop rotating and the LED indicator will blink red light to give an error warning. Please disconnect the charger from the wall socket.

WARNING AND SAFETY NOTES

Ensure the battery system has the properly rated voltage, amp hours and type for this charger.
Never leave the charger unattended when it is connected to its power supply.
The allowable AC input voltage is 100-240V AC. Never connect it to any other voltage.
Never place the charger and batteries connected to it on any form of flammable surface. Never operate the charger in the vicinity of inflammable material or gas.
Ensure that there is unrestricted airflow to and from the charger's cooling slots. Never place the charger on a carpet or similar surface.
Never operate this charger if it has received any physical damage, been dropped, or received a sharp blow.
Do not disconnect the DC charging cord while the charger is operating. This can cause arcing and/or explosion.
Never charge a frozen or non-rechargeable battery as they may explode, causing injury, death, property damage, and/or fire.
To reduce the risk of fire, do not use it near flammable materials or vapors. Always use the charger on a non-combustible surface (Metal, brick, concrete, etc.)
Take great care to maintain correct battery polarity to avoid shot circuits. There is information on charger to show wire color and polarity.

Charging for LifePo4 Batteries
High Quality, 100-240V AC Balance Charger

The charging program consists of 3 steps: constant current, constant voltage, and float charging. The chargers provide protection against overload, over-voltage, over-heating, short circuit, and reverse polarity connections.

SPECIFICATIONS:

DC Output	
Maximum DC output voltage	29.2 V
Maximum DC output current	25 A
Maximum DC output power	700 W
Nominal DC output current	25A @ 110 VAC, 25A @ 220 VAC
Battery type	12S LiFePO4 Battery
AC Input	
AC input voltage range	85-270 VAC
Nominal AC input voltage	100-240 VAC
Nominal AC input frequency	50 / 60 Hz
Maximum AC input current	8A
Nominal AC input current	6A
Power factor	>0.9
Mechanical	
Dimensions	18.2 x 10.5 x 6.5 cm (7.16 x 4.13 x 2.55")
Weight	4 lbs （1.8 kg）
Cooling	Active cooling with fan
Environmental	
Enclosure	IP65
Humidity	5% — 95%
Operating temperature	-20℃ to 80℃ (-10°F to 176°F)，Derated at >60℃ (140℉)
Storage temperature	-40℃ to 85℃ (-40°F to 185°F)

LED LIGHT STATUS:

LED	Charger Status
1. LED solid green.	The charger is ready to charge, or Charging is complete.
2. LED Green blinking.	The charger is charging.
3. Red light blinking quickly.	Input power failure.
4. LED Red and green blinking alternately.	The output is short-circuited, or the positive and negative poles of the battery are reversed.
5. Red light blinks 2 times, interval 1 second, then 2 times.	Charger temperature overheating alarm.
6. Red light blinks 3 times, interval 1 second, then 3 times.	Output over current alarm.
7. Red light blinks 4 times, interval 1 second, then 4 times.	Output over-voltage alarm.

If there is a problem with the charger, the fan will stop rotating and the LED indicator will blink red light to give an error warning. Please disconnect the charger from the wall socket.

WARNING AND SAFETY NOTES:

Ensure the battery system has the properly rated voltage, amp hours and type for this charger. Never leave the charger unattended when it is connected to its power supply. The allowable AC input voltage is 100-240V AC. Never connect it to any other voltage. Never place the charger and batteries connected to it on any form of flammable surface. Never operate the charger in the vicinity of inflammable material or gas. Ensure that there is unrestricted airflow to and from the charger's cooling slots. Never place the charger on a carpet or similar surface. Never operate this charger if it has received any physical damage, been dropped, or received a sharp blow. Do not disconnect the DC charging cord while the charger is operating. This can cause arcing and/or explosion. Never charge a frozen or non-rechargeable battery as they may explode, causing injury, death, property damage, and/or fire. To reduce the risk of fire, do not use it near flammable materials or vapors. Always use the charger on a non-combustible surface (Metal, brick, concrete, etc.) Take great care to maintain correct battery polarity to avoid shot circuit. There is information on charger to show wire color and polarity. Read the battery manufacturer's instructions and adhere to them strictly

Armrest Adjustments

You can adjust both the height of the armrests and the length by pulling out the two pins located at the back of the armrests. Just simply raise or lower the armrest to desired height or slide the armrest forward or backward to desired length then replace the two pins.

Footplate Adjustment

To adjust the height of the footplate, use a 9/16 wrench to remove the nuts and bolts on each side of the footplate and on the back of the footplate. Adjust footplate to desired height then replace the nuts and bolts on both sides and back of the footplate.

Seat Recline Adjustment

EcoRover Chairs come standard with reclining contoured seats. The headrest is adjustable for height and angle.

To recline the seat forward or backward, turn the wheels located at the base of the seat back.

Track Adjustments

The tracks are set at the time the EcoRover Chairs are built and require no adjustments. The only time you may need to loosen the track adjustment bolts is if you need to replace any idler wheels or if you need to replace the tracks, which rarely happens.

Cleaning, Storage, and Inspection

Cleaning:

If your EcoRover Chair is dry but has grass and leaves in and around the tracks, you may simply use a leaf blower to blow out the dirt, dry sand, and leaves. If your EcoRover is wet, muddy or has wet sand in and around the tracks, you can hose off the entire chair except for the joystick and the controller box attached under the seat frame. Simply cover them with a plastic bag before hosing down the track chair.

Storage:

Keep your EcoRover Chair stored in a clean, dry place, not out in the weather. **I**f you need to store your track chair outside, place a cover over it to keep it out of the weather. Always keep your EcoRover Chair plugged in when not in use. The smart charger will keep your batteries conditioned.

Inspection:

Look for pinched or frayed wires. If you find pinched or frayed wires, discontinue use, and call your customer support contact. If you live near salt water, look for corrosion on wire connections and battery connections. If any connections are corroded, discontinue use, and call your customer support contact.

Warranty

The warranty begins the day you receive your EcoRover Chair.

EcoRover Chairs Limited Warranty:

1 year against manufacturers defects in materials and workmanship for the following components:

-AGM Batteries
-Motors and Gearboxes
-Electronics including joystick, controller, and actuator

2 years against manufacturers defects in materials and workmanship for the following:

- Battery Charger

3 years against manufacturers defects in materials and workmanship for the following:

- Tracks

4 years against manufacturers defects in materials and workmanship for the following:

-Lithium Battery

5 years against manufacturers defects in materials and workmanship for the following:

-Frame

Limitations:

We will not Warrant the following:

-Upholstery, Pads, Hand Grips and Side Bags
-Damage from neglect, water, accidents, or misuse
-Products or components modified without EcoRovers' written consent.
-Damage from exceeding the weight limit

Specifications for EcoRover Chairs Model ERC-29.5

Overall Length	48.0 inches
Overall Width	29.5 inches
Overall Height	46.0 inches
Seat Height	22.0 inches
Seat Width	21.0 inches
Seat Depth	19.0 inches
Operating Weight	350 pounds
Average Speed	3.5 mph
Turning Radius	Zero
Ground Clearance	5.0 inches
Standard 12-volt batteries	Dual, sealed, deep cycle
Range depending on terrain	Up to 7 miles
Optional LiFePO4 Battery	24-volt 200ah
Range depending on terrain	Up to 14 miles
Charger	25-amp, waterproof
Dual Motors	24-volt gearmotors, 2hp
Controls	Curtiss-Wright control box and joystick
Weight Capacity	275 lbs.

Specifications for EcoRover Chairs Model ERC-39.5

Overall Length	48.0 inches
Overall Width	39.5 inches
Overall Height	46.0 inches
Seat Height	22.0 inches
Seat Width	21.0 inches
Seat Depth	19.0 inches
Operating Weight	375 pounds
Average Speed	3.5 mph
Turning Radius	Zero
Ground Clearance	5.0 inches
Standard 12-volt batteries	Dual, sealed, deep cycle
Range depending on terrain	Up to 7 miles
Optional LiFePO4 Battery	24-volt 200ah
Range depending on terrain	Up to 14 miles
Charger	25-amp, waterproof
Dual Motors	24-volt gearmotors, 2hp
Controls	Curtiss-Wright control box and joystick
Weight Capacity	400 lbs.