

HOVEROUND®

Personal Mobility Solutions

LX-5

Power Wheelchair



ATTENTION:



Please read the content
of your owner's manual
before operating your
power wheelchair.

OWNER'S MANUAL AND WARRANTY

D82015271 7/18

Special Notes

Signal words are used in this manual and apply to hazards or unsafe practices that could result in personal injury or property damage. Refer to the table below for definitions of the signal words.

SIGNAL WORD	DEFINITION
 WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates a hazardous situation that, if not avoided, may result in property damage.

In addition, some information is highlighted with the word “Note.” Notes usually contain information regarding troubleshooting the power wheelchair when an indicator or fault light appears.

Using the Hoveround® product safely depends upon your diligence in following the warnings, cautions, and instructions in this owner's manual. Hoveround is not responsible for injuries and/or damage resulting from any person's failure to follow the warnings, cautions, and instructions in this owner's manual. Hoveround is not responsible for injuries and/or property damage resulting from any person's failure to exercise good judgment and/or common sense.

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Specifications and equipment are subject to change without notice.

Dear LX-5 Owner,

Congratulations on your choice of the Hoveround® LX-5 to fulfill your personal mobility needs.

The LX-5 has the same innovation of design that is the hallmark of our company. It is compact yet very stable; attractive yet rugged; simple yet functional; gentle yet powerful; and above all, the LX-5 provides an outstanding level of maneuverability.

We believe that the LX-5 will afford you reliable, comfortable transportation for years to come. Should you have questions or concerns, our customer service personnel are a toll-free call away.

Welcome to our family, and thank you for choosing the LX-5.

Happy motoring.

A handwritten signature in black ink that reads "Tom Kruse". The signature is written in a cursive style with a large, stylized initial "T".

Thomas E. Kruse, President
Hoveround Corporation

Table Of Contents

Introduction	7
Service	7
General Warnings / Before You Use Your LX-5	8
Hoveround® LX-5 / Diagram	12
Hoveround LX-5 / Warning Labels	13
Chapter 1 Operating Instructions	15
Entering Your LX-5	15
Driving Your LX-5	16
Joystick Controller	18
Chapter 2 Batteries and Charging	20
Caring For Your Batteries	20
Battery Replacement	21
Charging Your Batteries	22
Chapter 3 Manual Brake Release Levers	25

Chapter 4	Seating	26
	Seat Belt Adjustment	27
	Arm Angle Adjustment	28
	Controller Position Adjustment	28
	Arm Width Adjustment	29
	Arm Height Adjustment	29
	Raising and Lowering Seat Height	30
	Footplate Angle Adjustment	31
	Seat Back Angle Adjustment	31
	Locking the Seat Back	32
Chapter 5	Options and Accessories	34
	Tie Down Bracket	34
	Swivel Seat	35
	Recline Back Seat	36
	Legrests	38
	Accessories	39
Chapter 6	Routine Maintenance	40
Chapter 7	Disassembling and Reassembling Your LX-5	43
	Removing and Replacing Your Controller	43
	Removing and Replacing the Seat	44
	Removing and Replacing Batteries	46
Chapter 8	Electromagnetic Interference (EMI)	47
Chapter 9	Appendices	50
	Appendix A Programmable Parameters	50
	Appendix B Fault Codes	51
	Appendix C Locking Feature	53
	Appendix D Specifications	54
	Appendix E Record of Service	55
	Limited Warranty	57

Hoveround® Corporation is a home medical equipment provider dedicated to serving people with mobility needs. Our reputation for service and our concern for our clients assures the highest standards of professionalism available.

At Hoveround we know that clients are happier and progress faster when they can convalesce in familiar home surroundings. Our goal is to be an active participant in making that a reality. Our staff consists of dedicated professionals who take exceptional pride in the products and services they provide. These include mobility specialists, factory trained technicians and skilled customer service personnel.

Whenever your mobility needs require special attention and equipment delivered with an extra measure of care and concern, you can count on Hoveround.

Service

Service is our commitment to our clients and their continued mobility is our priority. In the event that you need assistance with your Hoveround, our Service Representatives are just a phone call away.

Just call Hoveround Technical Support and Repair, toll free at 1-800-96-HOVER (1-800-964-6837).

General Warnings

Before You Use Your LX-5

Before You Use Your LX-5

The Hoveround® LX-5 is a battery-operated motor vehicle. The operation of the power wheelchair requires you to exercise caution and consideration for your personal safety and the safety of others around you. Never modify your wheelchair, and do not use accessories other than those developed for use specifically with your Hoveround LX-5 power wheelchair. Information about the design of ramps appropriate for wheelchair access for your home are contained in guidance from the Americans with Disabilities Act, which can be located at <http://www.accessboard.gov/adaag/html/adaag.htm>.

The lists below detail some important safety warnings. Please read this entire manual thoroughly, and follow all warnings and instructions to avoid serious injury or death. Call toll free 1-800-96-HOVER (1-800-964-6837) if you require further assistance. Your "Safety and Training video" illustrates many of the concepts in the manual. Keep your manual to refer to when needed.

WARNING

To avoid serious injury or death:

1. **Always** use the seat belt.
2. **Always** ensure that the power is **OFF** before getting into and out of the seat.
3. **Always** set the joystick/controller speed/response control to be consistent with the surrounding environment. In confined spaces and while learning to drive your power wheelchair, we recommend that the speed/response control be set to minimum.

WARNING

Stop using your power wheelchair immediately, and call for assistance if:

- Your power wheelchair is not working correctly.
- Your seat belt does not latch or stay latched.
- You are taking medications, drugs, or alcohol that affect your ability to safely drive.
- Your skin develops any redness, irritation, ulcers or other symptoms on your thighs, legs, feet or buttocks. Contact your physician immediately.
- Your medical condition changes in any way that prevents you from operating your power wheelchair safely.
- Your weight exceeds 300 pounds, the maximum weight capacity of your power wheelchair.

WARNING

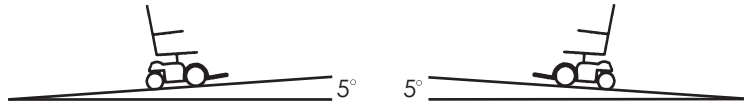
To avoid serious injury or fatality from **sudden unexpected movement of the chair or contact with moving parts and other objects:**

- Keep your hands, legs and feet away from moving wheels.
- Do not use your power wheelchair with bare feet.
- Do not wear loose clothing or jewelry. For example, a loose bathrobe sleeve or bracelet can accidentally get caught in wheels or catch and move the joystick causing the power wheelchair to move unexpectedly.
- Do not allow objects to hang from any part of your power wheelchair that could get tangled in the wheels.
- Do not hold objects such as leashes, shopping bags, purses, etc. that could get tangled in the wheels.
- Before getting in or out of your chair, press the power button to OFF and lock the seat swivel and return the seatback to the upright position.
- When seated in a stationary chair, press the power button to OFF.

WARNING

To reduce the chance of serious injury or death from tip-over, collision with obstacles and other people, loss of control, or falling from the power wheelchair, **drive in proper environments:**

- Do not drive across or sideways on a ramp or slope; go straight up or down.
- Do not attempt to drive on a slope in reverse.
- Avoid ramps and slopes that are too steep, such as those that exceed 5 degrees. For example, a 12-inch ruler with one end raised 1 inch will have a 5-degree slope (see the video for example).



- Avoid uneven or unstable surfaces such as potholes, broken pavement, grass, gravel, sand, wet leaves or cut grass.
- Never attempt to drive a power wheelchair off or up onto a curb, stairs higher than 1.5 inches, or an escalator.
- Avoid slippery surfaces such as ice, oily, polished, and/or treated surfaces.
- Secure or remove any loose rugs or carpets and remove obstacles from the travel paths in your home.
- Drive slowly over thresholds and when traveling from one type of surface to another.
- Do not operate the power wheelchair in conditions such as rain, standing water, sleet, slush or snow.
- Do not sit in your power wheelchair while riding in a motor vehicle, even if the chair is secured to the vehicle and you are using the chair's restraint.

WARNING

To avoid serious injury or death from being struck by a motor vehicle, when **driving your power wheelchair near traffic**:

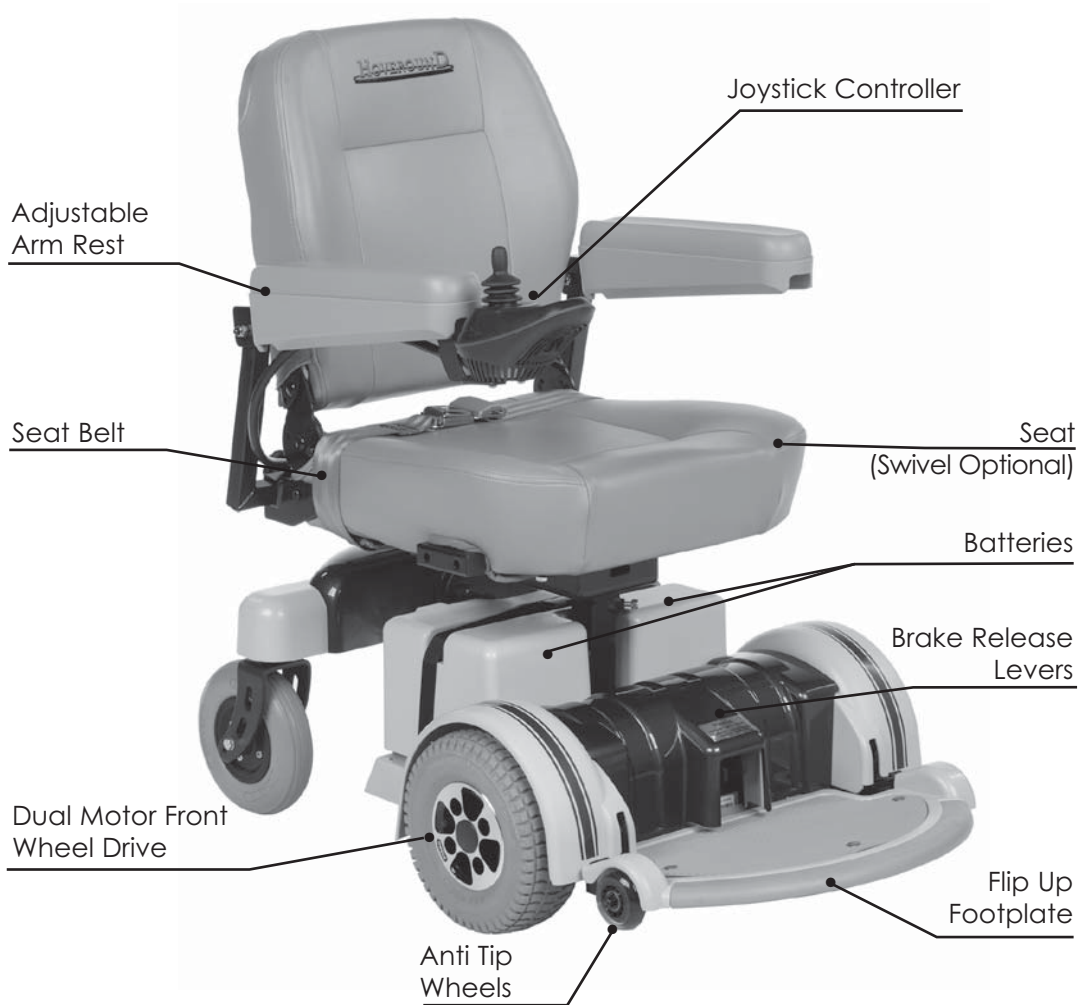
- Obey all local **pedestrian** traffic rules.
- Cross roads at locations where you are most visible to motor traffic, if possible at a light-controlled pedestrian crossing with handicapped cutouts.
- Cross the road by the most direct route.

WARNING

To reduce the chance of serious injury or death from tip-over, collision with obstacles, loss of control, or falling from the power wheelchair, **keep yourself properly positioned in the seat**:

- Keep your seat belt fastened.
- Drive with the seatback only in a fully upright, locked and forward facing position.
- Keep your back against the seatback, arms on the armrests, and your feet on the footplate.
- Do not reach over the back of the chair or lean excessively forward or sideways.
- Do not push, pull, or lean on the folding seat back if it has not been locked into place with the seat locking screw.
- Do not carry passengers or cargo.
- Do not stand on footplate. Do not put weight on footplate, armrest or controller while getting into or out of the power wheelchair.

Hoveround® LX-5 - Diagram



Hoveround® LX-5 - Warning Labels

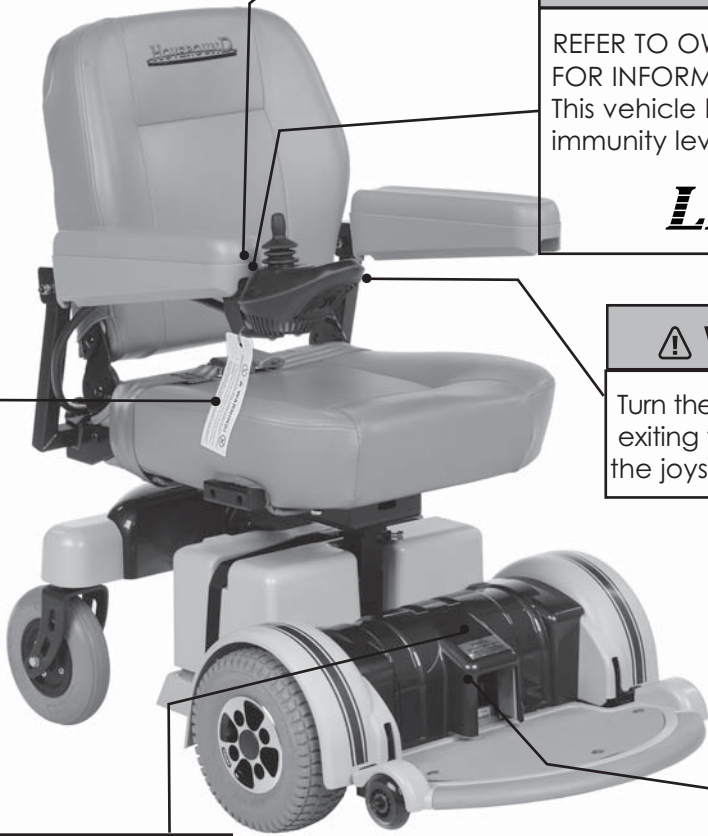
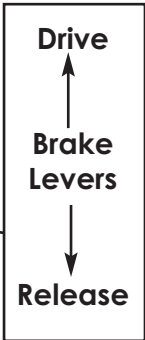
⚠ WARNING
For EMI warning label see page 14.

⚠ WARNING
Turn power off before exiting the seat or changing the joystick position.
WARNING: EMI Refer to owners manual.

⚠ WARNING
REFER TO OWNER'S MANUAL FOR INFORMATION
This vehicle has a tested immunity level of at least 20V/m.
LX-5

⚠ WARNING
Turn the power off before exiting the seat or changing the joystick position.

⚠ WARNING
Maximum Capacity 300LB
Read Owner's Manual before operating vehicle.





Warning: radio wave sources may affect powered wheelchairs control.

Radio wave source, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones, can affect powered wheelchairs. Following the warning listed below should reduce the chance of unintended brake release or powered wheelchair movement, which could result in serious injury.

1. Do not turn ON hand-held personal communication devices, such as citizen band (CB) radios and cellular phone, while the powered wheelchair is turned ON;
2. Be aware of nearby transmitter, such as radio or TV stations, and try to avoid coming close to them;
3. In unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe;



4. Be aware that adding accessories or components, or modifying the powered wheelchair, may make it more susceptible to interference from radio wave sources (Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair); and
5. Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio source nearby.

IMPORTANT EMI INFORMATION

1. 20 volts per meter (V/m) is a generally achievable and useful immunity level against interference from radio wave sources (as of May 1994) (the higher the level, the greater the protection);
2. **This product has an immunity level of 20 V/m** with no accessories connected to the device.

L10008757

EMI, Warning Label

WARNING

- Sudden change in motion, loss of control, or tip-over may cause a collision or fall from the seat and result in serious injury or death.
- Always make sure that the power is OFF before getting into or out of the seat.
- Always fasten seat belt to maintain proper positioning in the seat. Set speed/response control of joystick to minimum while learning to drive the power wheelchair.

Entering Your LX-5

1. Be sure the power is turned “OFF” before entering or exiting your Hoveround®. To locate the “ON/OFF” button on your joystick controller, see the section on joystick controller (page 18).
2. Flip up the footplate.



Footplate Down



Footplate Up

WARNING

Standing on the footplate increases the chances of a fall or tip-over of the chair and can result in serious injury or death. Be sure to secure footplate in upright position and place both feet firmly on ground when getting into or out of the seat.

3. Get into the seat using the transfer method recommended by your Health Care Professional.
4. Fasten the seat belt.
5. Ensure that the seat is in the forward facing position and the seat swivel is locked into place.
6. Move the footplate down and position your feet on the foot plate.

Driving Your LX-5 Power Wheelchair

WARNING

- Sudden change in motion, loss of control, or tip-over may cause a collision or fall from the seat and result in serious injury or death. Always make sure that the power is OFF before getting into or out of the seat.
- Always fasten seat belt to maintain proper positioning in the seat. Set speed/response control of joystick to minimum while learning to drive the power wheelchair.

WARNING


Driving with the seat-back reclined makes it difficult to see where you are going and increases the chance of serious injury or death from collision and tip-over. Do not attempt to drive this power wheelchair with seat-back reclined.

1. With the power turned OFF, hold the joystick and move it to determine the limits of movement. Observe that, when released, the joystick returns to center (neutral).
2. Allow plenty of space to test drive your power wheelchair.
3. With the joystick in the center position (neutral), turn chair power on. Check battery gauge for adequate battery capacity.
4. Set the Speed/Response Control to the lowest level.

WARNING

To avoid serious injury or death from a fall or collision, set speed/response control for the environment and your skill level. Set control to minimum if you are a less experienced driver or are in a confined space.

5. Gently move the joystick forward. A “click” will be heard as the controller releases the motor brakes and your power wheelchair will move slowly forward. Observe that if the joystick is released, the lever will return to center (neutral) and the power wheelchair will stop. Note that when the chair stops, another “click” will be heard as the brakes are engaged.
6. Move the joystick lever fully right. The chair will move in a circle to the right. Moving the lever fully left will cause the chair to circle to the left.


 **NOTE** *If the status indicator is flashing, the controller has sensed a fault condition. Refer to the fault code section of Appendix B (pages 51 - 52) to determine the cause of the fault. The power wheelchair will not respond to move commands if a fault condition is sensed.*

7. Gently move the joystick lever backward, and the chair will move slowly backward. Note that the backward movement is about half the speed of the forward movement.
8. If you move the joystick lever gently back and to the right, the chair will move backward to the left. If you move the joystick gently back and to the left, the chair will move backward to the right.
9. Learn the characteristics of your power wheelchair and the limits of your own driving ability before attempting to drive at higher speed settings.

WARNING

Driving on soft and/or uneven surfaces increases the chances of a collision or fall from the seat due to loss of control or tip-over and can result in serious injury or death. Avoid driving on these surfaces.

10. As your skill increases, you may want to increase the Speed/Response Control. For each increase of the Speed/Response Control, be sure you practice several stops until you get used to the new stopping distance.

 **NOTE** *If the joystick is not in the center position when the controller is turned on, a fault condition is indicated. Return the joystick to center. If the chair does not move, reset the control by turning the power off and then on.*

Joystick Controller

All the controls and indicators necessary to drive your LX-5 are located on the joystick controller. See Figure 1A.

1. **ON/OFF** - Press to turn the system on and off.
2. **System Status Indicator** – Steady illumination means all systems are functioning properly. A flashing display indicates an error is present or the controller is locked. Refer to Appendix B (pages 51 - 52) for error codes and troubleshooting information.
3. **Battery Gauge** – Shows how much battery charge is remaining. All lights lit means full charge. Recharge as often as possible.
4. **Joystick** – Controls speed and direction. The further you push, the faster you go. To prevent an error code, do not push the joystick at the same time you turn the power on.
5. **Speed/Response Indicator** – Indicates the currently selected speed by the number of lighted segments. When all lights are lit, you are at top speed.
6. **Speed Up** – Pressing the button increases speed.
7. **Speed Down** – Pressing the button decreases speed.
8. **Horn Button** – Press to make the horn sound.

Additional Features

Locking feature – Locks the controller. Refer to Appendix C (page 53) for operating instructions.

Sleep mode – Your chair will go off if left idle for 5 minutes. Push the ON/OFF button to restart.

Fast braking – The controller has a fast-brake system. To stop quickly move the joystick from the forward position to a full reverse position and release the joystick. This will cause the power wheelchair to stop more quickly.

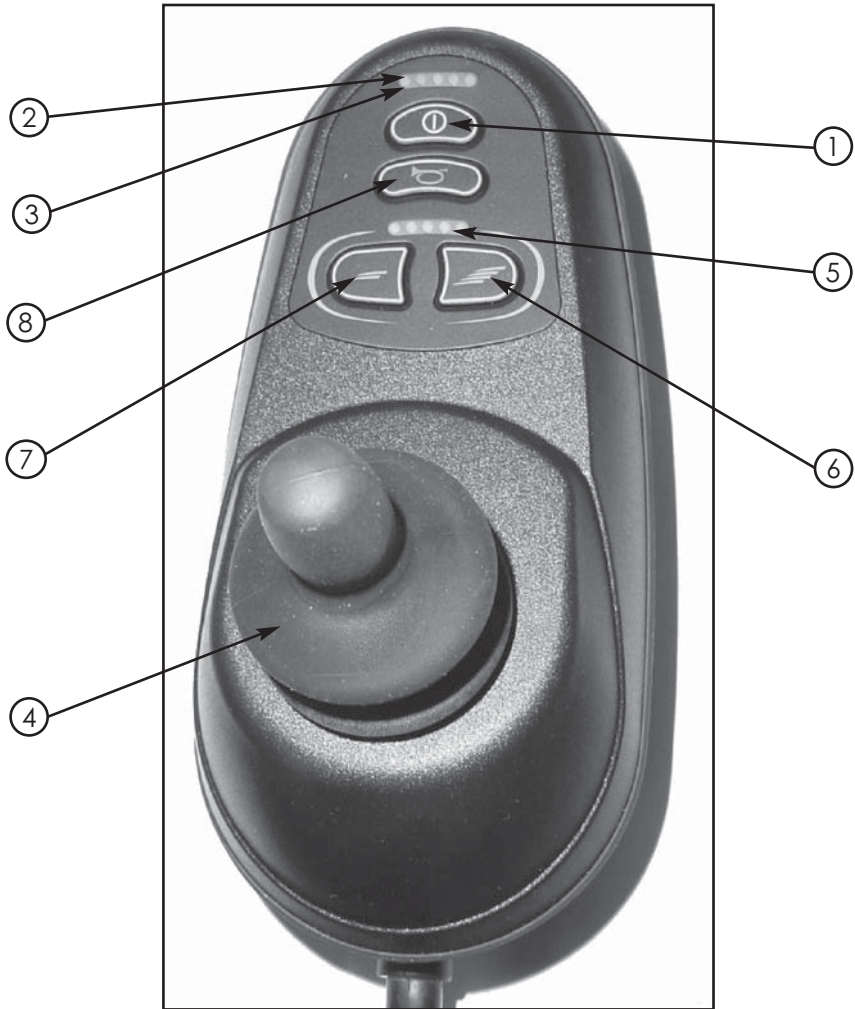


Figure 1A - new VSI Controller

Chapter 2

Batteries and Charging

Caring For Your Batteries

WARNING

- Completely read and follow all warnings about the batteries in this user instruction manual and any labels applied to the product. Failure to do so could result in fire, explosion, injury and/or death.
- Batteries contain sulfuric acid. Use extreme care when handling batteries. To prevent serious burn injury, use proper protective gear such as gloves and safety glasses when handling batteries.
- Battery posts contain lead. The battery contains corrosive chemicals and gases. ALWAYS wash your hands after handling any part of the battery.
- Batteries are heavy. Use proper lifting and handling practices to prevent dropping, pinching or lifting-related injuries.
- ALWAYS make sure the protective terminal covers are installed and all battery connections and screws are tight before using your power wheelchair.
- ALWAYS store batteries in an upright position.
- Batteries emit explosive gas – DO NOT smoke or have open flame around batteries. Operate your power wheelchair in well-ventilated areas only.
- When handling and/or working on batteries, do not allow metal objects such as tools, jewelry, trunk lids, and tool boxes to touch the battery terminals as it can cause explosive sparks or fire.
- NEVER attempt to open a sealed battery.
- NEVER use a battery that has been frozen or might have been frozen.

The LX-5 uses two sealed 12-volt batteries of the UI size.

The battery pair is connected into a series configuration to provide 24-volts of power.

The batteries supplied by Hoveround® are of the sealed-type that require no maintenance. These batteries are classified as "wet - non - spill" and may be transported by air, land or sea.

WARNING

- ALWAYS use batteries of the same type and capacity for this power wheelchair.
- Do not connect any devices, medical or otherwise, to the batteries or electrical system except those supplied by Hoveround.
- NEVER connect life support systems or auxiliary devices to your wheelchair battery. The electrical system may fail and cause severe injury and/or death.

CAUTION

- Do not leave the battery charger connected to a power source when not charging.
- Do not let your batteries run down.

Battery Replacement

When it becomes necessary to replace batteries, consult with Hoveround Technical Support 1-800-96-HOVER (1-800-964-6837). We will provide you with the replacement battery to ensure the proper operation of your power wheelchair.

WARNING

- ALWAYS refer to the supplied wiring diagram located on the base of your power wheelchair when installing the batteries.
- ALWAYS install and use the correct fuse as specified on the battery label. This will prevent battery and wire overload.
- ALWAYS dispose of batteries in accordance with EPA regulations.

Charging Your Batteries

Your power wheelchair is equipped with one of several different chargers. Please follow the operating instructions for the appropriate charger. The recharging time for the batteries will vary based on the amount of use the chair has had. It may take up to 8 hours for a full recharge.

We recommend an overnight charge after the day's use of your power wheelchair.

WARNING

- ALWAYS use the charger and connectors supplied with your Hoveround® power wheelchair.
- ALWAYS charge your power wheelchair in a well-ventilated area free of any sparks, high heat or open flame. Explosive gas is emitted during the charging process.
- ALWAYS use a grounded, 120-volt household power outlet.
- DO NOT use the charger outdoors or in areas unsheltered from the weather.
- DO NOT expose the charger to moisture such as rain, sleet or snow.
- DO NOT plug in battery charger within **10 feet** of an oxygen concentrator or oxygen cylinder.
- DO NOT plug the battery charger and oxygen concentrator into the same electrical outlet.
- DO NOT attempt to repair or open the charger.
- DO NOT connect the charger to a 240-volt power source.
- DO NOT use the charger if the cables or connectors are damaged. Cables and connectors can be damaged by:
 - Traveling over the cable or connectors.
 - Yanking the cable out of the wall outlet or chair.
 - Pinching the cable.
 - Handling sharp objects such as knives and/or scissors in close proximity to the cable or connectors.

⚠ WARNING

- DO NOT use extension cords to power the charger.
- DO NOT connect the charging cables directly to the battery.
- ONLY USE to charge AGM sealed lead acid batteries. Do not attempt to charge any other type of battery or any non-rechargeable type of battery.
- DO NOT attempt to use the charger as a DC power source for any electrical or other equipment.
- DO NOT attempt to charge a frozen battery.

1. Select a clean, dry, cool, well ventilated area to use the charger.
2. If your charger is equipped with an off button, ensure that the charger is in the OFF position, along with the joystick controller in the OFF position.
3. Connect the charger output cord into the charger port located on the front of the joystick controller. Refer to Figure 2A below. Align the three pins on the plug with the three holes on the port and push the plug in place. Make sure the plug is fully seated in the charger port. If it is not pushed all the way, the batteries will not charge or the plug may become hot.



Figure 2A - Charger Port, Typical Location

4. Plug the AC power cord into the back of the charger.
5. Plug the other end of the AC power cord into a 120-volt grounded household power outlet.
6. Follow the specific instructions for your charger. Charger instructions begin on page 23.
7. When the batteries are charged, and/or you are ready to use the chair:
 - A. If your charger is equipped with an off button, turn OFF the power switch on your charger.
 - B. Unplug the charger from the household power outlet.
 - C. Unplug the charger from the joystick controller.

If you have a:

Flying Power FY-4101 Charger

1. Switch the power on. A light will illuminate on the output side of the charger, indicating power is available. **If the light does not go on, please check to make sure the household power is working.**
2. If the light is red, the batteries are charging.
3. When the light is green, the batteries are charged.
4. If the batteries do not appear to be fully charged and the green light is on, check to make sure the charger has been properly plugged into the controller charging port and the batteries are connected.

UPG 24BC5000TF-1 AGM sealed lead acid Charger

1. Switch the power on. Two red lights will illuminate on the output side of the charger indicating the power is on, the charger is in the charge mode and the cable is fully plugged into the controller. If one red light and one green light are illuminated or if only one red light is on, check to make sure the charger is plugged fully into the controller. **If no lights are on, please check to make sure the household power is working.**
2. When two red lights are on, the batteries are being charged.
3. When one red and one green light is on AND the cord is fully plugged into the controller, the batteries are charged.

Chapter 3

Manual Brake Release Levers

On occasion it may be necessary to push your Hoveround® power wheelchair. Each motor has a manual brake release lever. Refer to the diagram on Page 12 and Figure 3A below to locate the manual release levers on your power wheelchair.

WARNING

- Always verify that the manual brake release levers are in the full “up” (engaged) position before getting into or out of the seat.
- Releasing the manual brakes (down position) allows power wheelchair to be pushed or roll on its own on a slope. Releasing the manual brakes when caregiver is not present or while on an incline increases the chance of a fall from the seat or a collision, and can result in serious injury or death.

The levers move downward to release the brake on the motor. When both manual brake release levers are released, and the power is turned OFF, the chair can be pushed. When only one manual brake release lever is released, your power wheelchair cannot be driven. An error code will appear when attempting to operate your power wheelchair when the brakes are released. Pull both manual brake release levers upward to re-engage the brakes.

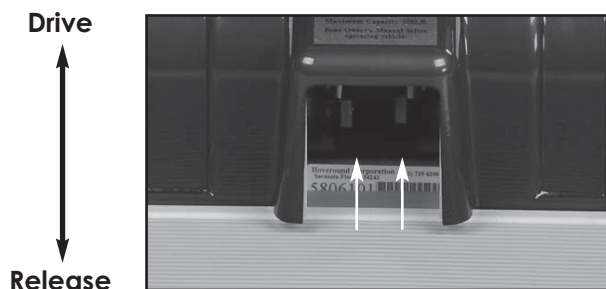


Figure 3A - Manual Brake Release Levers

Chapter 4

Seating

WARNING

- Unintentional or unexpected motion increases the chances of a collision or fall from the seat and can result in serious injury or death. Press the power button to OFF before making any adjustments to your power wheelchair.
- Driving with the seat-back reclined makes it difficult to see where you are going and increases the chance of serious injury or death from collision and tip-over. Do not attempt to drive this power wheelchair with seat-back reclined.

A good driving posture is necessary for both comfort and safety. You must have a clear line of sight ahead of your power wheelchair, a good view of the joystick/controller and comfortable hand access to the joystick and speed/response controller.

WARNING

- Inspect all areas of the skin in contact with power wheelchair daily. Discontinue use and contact physician at signs of skin irritation or discomfort.
- Do not use power wheelchair until evaluated and instructed to do so by a qualified clinician.
- Improper seating position can lead to skin lesions or ulcers. Individuals with diabetes or other neurological sensory deficits are at increased chance of injury due to prolonged sitting or improper positioning.

Seat Belt Adjustment

WARNING

- Always fasten seat belt to maintain proper positioning in the seat and avoid injury.
- Replace seat belt immediately at first signs of wear or improper latching.

To fasten the seat belt, push the metal tab into the buckle until it clicks. To release the seat belt, push the release button in the center of the buckle.

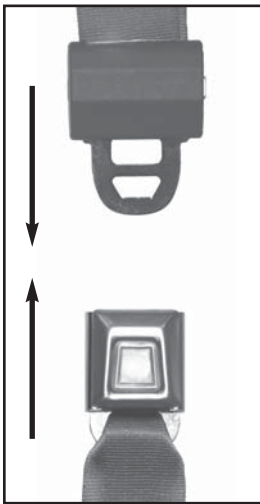


Figure 4A
Fasten Seat Belt



Figure 4B
Release Button

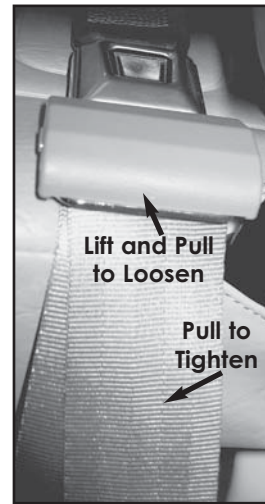


Figure 4C
Seat Belt
Tension Adjustment

To adjust the belt tension, lift the buckle to loosen or pull the strap to tighten the tension of the seat belt to a comfortable position.

Arm Angle Adjustments

The seat arms have angle adjustments to suit your driving and comfort requirements.

To adjust the arm angle on the seat arms, lift the arm and locate the adjustment bolt near the pivot point. Refer to Figure 4D below.

Use the supplied 1/4 inch hex wrench to make the adjustment. Turn the screw clockwise to lower the arm and counterclockwise to raise the arm.

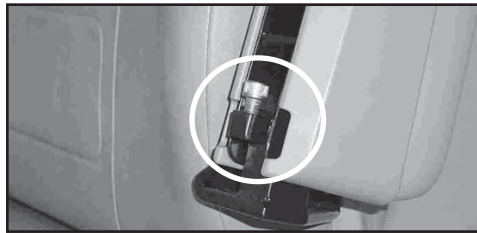


Figure 4D

Controller Position Adjustment

You can adjust the position of the controller by lifting the arm and loosening the socket head cap screw closest to the controller (Figure 4E, below).

Slide the controller bracket to a comfortable position and secure the screw. Make sure the screw is clear of the removal key opening (see Figure 7B, page 43) in the bracket before tightening.

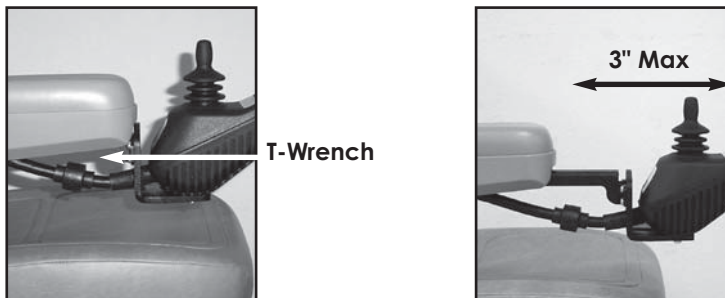


Figure 4E

Arm Width Adjustment

The standard seat has arm width adjustment (Figure 4F and 4G). To adjust the arm width:

1. Locate the two knobs and two set screws on the square tube at the rear of the seat.
2. Loosen the knobs and set screws.
3. Move the arms to a comfortable width. Make sure the tubes do not extend beyond the set screws.
4. Tighten the knobs and set screw.



Figure 4F

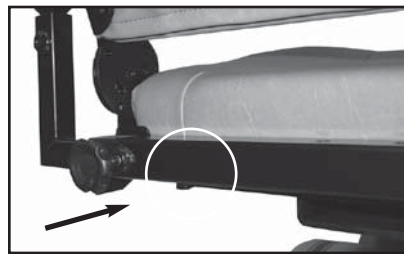


Figure 4G

Arm Height Adjustment

If arm height adjustment is required an arm raising or arm lowering kit is available (Figure 4H). To adjust the arm height:

1. Locate the set screw on the back of the arm tube upright.
2. Loosen the screw and adjust the arm to a comfortable height.
3. Tighten the screw.

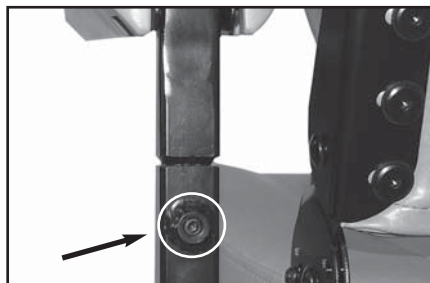


Figure 4H

Raising and Lowering Seat Height

To raise the seat from the factory delivered setting, a collar and lock pin are required (Figure 4J). If you need the collar and lock pin, contact Hoveround® Technical Support at 1-800-96-HOVER (1-800-964-6837).

1. Loosen the locking bolt on the corner of the seat post, using the 1/4 inch hex wrench supplied with the chair.
2. If your seat has removable arms, remove the Velcro strap at the rear of the seat to release the controller cable.
3. Remove the armrest, with controller, by loosening knob at the back of the seat. Set the armrest and controller gently to the side. Remove the seat from the base.
4. Install the collar and pin in the desired hole on the seat post. (Figure 4K)
5. Reinstall the seat on the base.
6. Tighten locking bolt with the 1/4 inch wrench.
7. Install armrest. Secure controller cable in the back with the Velcro strap. When securing controller cable make sure there is enough slack in the cable to avoid pinching the cable. (See Figure 4L)

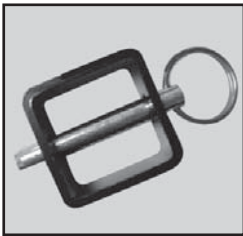


Figure 4J



Figure 4K



Figure 4L

Footplate Angle Adjustment

The footplate angle can be adjusted for comfort.

1. Raise the footplate and locate the adjustment bolts on the bottom of the footplate (Figure 4M).
2. Using the 1/4 inch hex wrench supplied with the chair, turn the screws on each side of the footplate. Turn left to increase the angle and right to decrease the angle.
3. Lower footplate. The bolt heads should come in contact with the stop (caster wheel bracket Figure 4 N)



Figure 4M



Figure 4N

If the footplate does not remain upright, the footplate tension requires adjustment. Contact Hoveround® Technical support at 1-800-96-HOVER (1-800-964-6837), immediately.

Seat Back Angle Adjustment

The seat back has fixed positions to select from (Figure 4P).
To change the back angle position:

1. Locate the screw and nut on the left hinge and right hinge.
2. Remove the screw and nut and place the back in the desired angle position. Make sure the holes in the outer hinge and inner hinge brackets line up for the desired angle.
3. Re-install the screws and nuts into the new location and tighten securely.

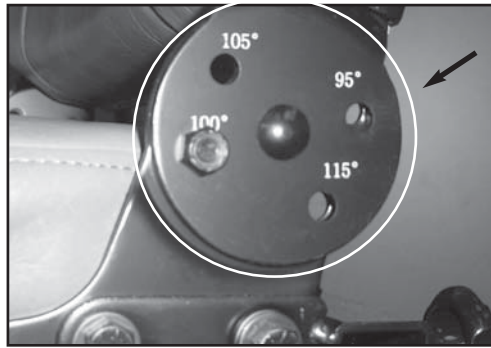


Figure 4P

⚠ WARNING

The seat back will fold forward when pushed from the rear or pulled from the front. Always use caution when pushing from the rear or leaning on the seat back as it may cause the user to fall resulting in serious injury or death. If the chair must be pushed from the back, push or pull on the arms or another solid surface.

Locking the Seat Back

The seat back will fold forward when pushed from the rear or pulled from the front (Figure 4Q). If you prefer to have the seat back locked into place and stationary; screws and a hex key have been provided with your Hoveround to lock the seat back.



Figure 4Q

1. Locate the holes on each side of the seat back frame above the angle adjustment hinge. (Figure 4R)
2. Insert the button head cap screws, one each side of the seat back. Tighten with the 5/32" hex key. (Figures 4S and 4T)



Figure 4R

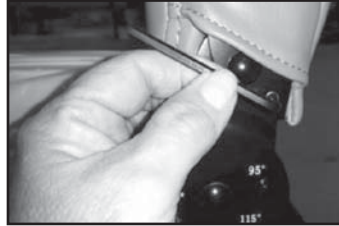


Figure 4S



Figure 4T

Chapter 5

Options and Accessories

To obtain information or pricing on accessories, contact HOVEROUND® CORPORATION at 800-96-HOVER (800-964-6837).

Optional Tie-Down Brackets

When transporting the LX-5 in a motor vehicle, your wheelchair must be adequately secured within the motor vehicle. Optional tie-down kit is available. Please contact Hoveround for additional information.

Optional tie-down kit is intended for the wheelchair security, it is not intended to secure the rider.

WARNING

To reduce chance of serious injury or death due to a fall from the seat, do not sit in your power wheelchair while riding in a motor vehicle even if the chair is secured to the vehicle and you are using the chair's restraint.

Swivel Seat (Optional)

The swivel seat permits the seat to pivot from the forward facing position through 90 degrees in either the left or right direction. The seat will lock in each of the forward, left and right facing positions. This feature is provided to make side transferring easier. The swivel release lever is mounted on the left side in the standard position, and can be changed to the right side by a Hoveround® Field Service Technician.

WARNING

The seat can rotate when not locked. To avoid a fall from the seat and serious injury or death, always make sure the seat is secure and locked before getting into or out of the power wheelchair or attempting to drive.

To unlock the seat and swivel 90 degrees in either direction:

1. Locate the swivel release lever positioned at the rear-left side under the seat, or front-right side under the seat if so equipped.
2. Release the seat by moving the lever horizontally back if left location, or horizontally forward if right location.
3. Keeping the lever in the release position, push with your arm or feet to cause the seat to pivot in the desired direction. Once the seat has moved away from the locked position, the lever can be released.

NOTICE

Do not use the swivel release lever to rotate the seat. Do not force the swivel release lever to the locked position while rotating the seat. Damage to the power wheelchair may result.

4. Continue to pivot the seat around to the desired direction. When the seat reaches a 90-degree position, the lever will lock into place to hold the seat in that position.

WARNING

Rapid rotation may cause seat to skip the locking position, increase the chances of a fall from the seat, and can result in serious injury or death. Rotate seat slowly.

Reclining Back Seat (Optional)

WARNING

Driving with the seatback reclined makes it difficult to see where you are going and increases the chance of serious injury or death from collision and tip-over. Do not attempt to drive this vehicle with seatback reclined.

The optional reclining seat will recline to nearly flat (83 degrees). See Figure 5A and 5B below:

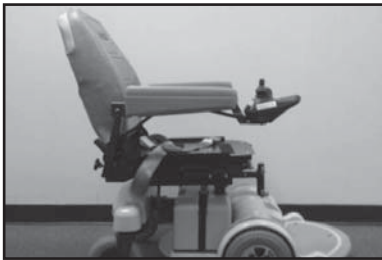


Figure 5A



Figure 5B

WARNING

- Never attempt to adjust the seatback without the assistance of a family member or caregiver as the seatback is spring-loaded and can drop backwards or spring forward as soon as the lever is released.

Seatback Adjustment for 17", 19" and 22" Reclining Back Seats

To recline the back, determine which type of seat lever you have. See Figures 5C and 5D below.

1. The seatback is spring loaded. Before attempting to adjust the reclining back angle, always have a family member or caregiver firmly hold the seatback in place **BEFORE** releasing the lever. **DO NOT** attempt to adjust the seatback without assistance as the seatback will move as soon as the lever is released.

2. **If your recline lever looks like FIGURE 5C** – PUSH DOWN on the lever to release the latch. With the assistance of a caregiver, position the seatback in a comfortable position. LIFT UP on the lever to lock the seatback in position.
3. **If your recline lever looks like FIGURE 5D** – PULL UP on the lever to release the latch. With the assistance of a caregiver, position the seatback in a comfortable position. PUSH DOWN on the lever to lock the seatback in position.

⚠ WARNING

- The seatback can drop backward when the “recline lever” is not locked.
- To avoid a fall from the seat, always make sure the “recline lever” is in the locked position before applying weight to the seatback or arms.

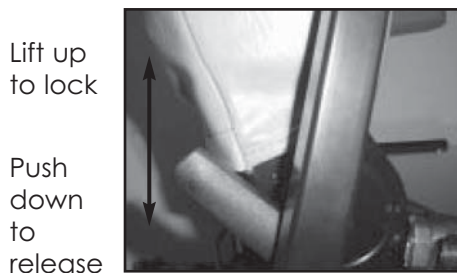


Figure 5C

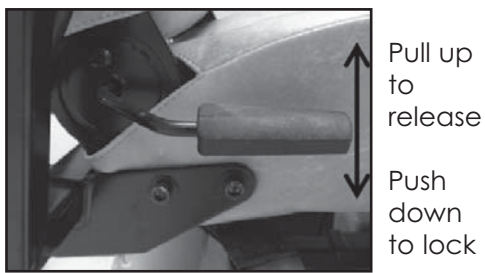


Figure 5D

Optional Legrests or Footrests

1. Install each leg/footrest on to the appropriate hanger bracket and swing into the forward facing position. If elevating legrests are installed, set the angle to the lowest possible position.
2. Fold down the foot plates. Your feet should comfortably rest on the plates without a tendency to lift your thighs from the seat cushion.
3. If length adjustment is necessary, loosen the bolt at the base of one of the footrest stems by two complete turns, (1/2 inch wrench required). Tap the head of the bolt to loosen the inner tube from the outer tube (See Figure 5E below).
4. Slide the lower (inner) tube within the upper (outer) tube to achieve the correct footrest length. Tighten the bolt.
5. Repeat (3) and (4) for other footrest.

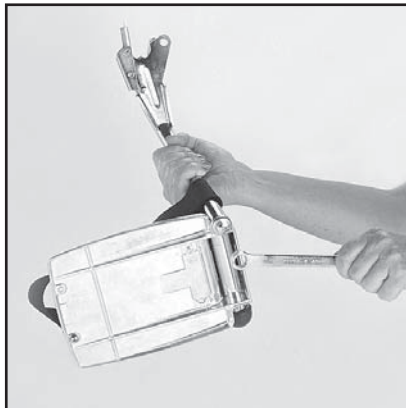


Figure 5E

Accessories



Cane Holder



Crutch Holder



Cup Holder



Elevating Legrests



Power Chair Lift



Oxygen (Round)



Oxygen (Square)



Step &
Threshold Ramps

Chapter 6

Routine Maintenance

Service and maintenance are very important to ensure the performance and the safe operation of your power wheelchair.

Service

Please contact Hoveround® Technical Support at 1-800-96-HOVER (1-800-964-6837) for any service or maintenance needs.

WARNING

Stop using your power wheelchair immediately, and call for assistance if:

- Your power wheelchair is not working correctly.
- Your seat belt does not latch or stay latched.

WARNING

- Safe and effective use of your power wheelchair is dependent on proper maintenance, including cleaning.
- Always perform the operator performance and maintenance checks that are detailed in the maintenance section of this manual.
- Do not perform any maintenance without first disconnecting the batteries.
- Do not modify your power wheelchair in any way. Modification or tampering will void the warranty and may cause the vehicle to malfunction and expose you to physical harm.


Owner Maintenance

Daily

- Check drive tires.
- Charge batteries (or as required).
- Check that the seat belt latches and does not show signs of wear.

Weekly

- Check tire treads and pressure. (Should be 45-50 psi.).
- Check that casters are free to pivot.
- Check that caster wheels rotate freely.
- Check manual brake releases. Release each brake separately to ensure that each disables the drive when released.
- Check that the rubber boot around joystick is intact.
- Check that all seat swivel screws are tight (if equipped).
- Check that the armrest bolts are tight.
- Check charger cords and connectors for loose connections, damaged cables or signs of electrical damage.
- Check that the seat swivel lock engages and holds (if equipped).
- Clean power wheelchair. (See page 42 for instructions.)

 **NOTE** *Motor operational noise is normal. Audible noise levels will normally increase as the power wheelchair ages.*

WARNING

A worn or improperly latching seat belt may not properly position you in the seat and can result in serious injury or death. Replace the seat belt at first signs of wear or improper latching.

Cleaning your LX-5

The LX-5 is designed to operate both inside and outside the home. To keep the vehicle clean:

- Seat** – Wipe with a damp cloth or towel, using a mild detergent or window cleaner.
- Tires** – Brush-off loose material with a dry bristle brush and wipe with a damp cloth or towel.
- Top Cover** – Vacuum or brush off dirt, then wipe with a damp cloth or towel, using a mild detergent.
- Controller** – Ensure that the power switch is off before attempting to clean this area. Food-type contaminants can be removed from around the joystick boot by carefully cleaning with a cotton swab, using a mild detergent. The controller body can be wiped with a damp cloth or towel, using a mild detergent.

NOTICE

Use only a damp cloth to clean. Never spray the chair with liquid. Doing so may damage it.

Controller Removal/Replacement

Removal

1. Check that vehicle power is OFF.
2. Lift the arm and loosen the socket head cap screw closest to the controller. Use the 1/4 inch hex wrench supplied with your chair (See Figure 7A, below).
3. Slide the controller bracket forward until it hits the key slot. (See Figure 7B, below). Remove bracket from arm and place on footrest or other safe location. Unlock cable from seat. (See Figures 7C, Page 44).



Figure 7A

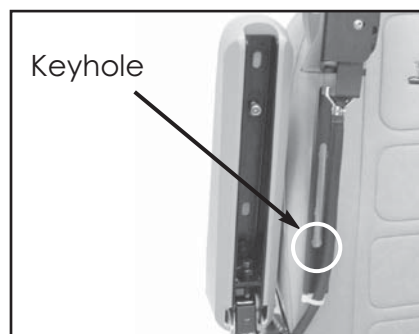


Figure 7B

Replacement

1. Loosen forward socket head cap screw.
2. Position key hole portion of bracket over screw and slide into place.
3. Position controller in a comfortable position and secure screw.
4. Fasten the controller cable on to the catch on the lower seat.

Seat Removal/Replacement

Removal

1. Remove controller.
2. Remove the controller cable from the seat base by releasing the Velcro strap at the rear of the seat.
3. Using the 1/4 inch hex wrench supplied with the vehicle, loosen the cap screw located at the top-front corner of the seat post. (See Figure 7c below).
4. Grasp the seat at the front and back and lift seat directly upward until it is free of the seat post.

CAUTION

The power wheelchair and its components are heavy. To avoid injury, do not attempt to lift beyond your capability.

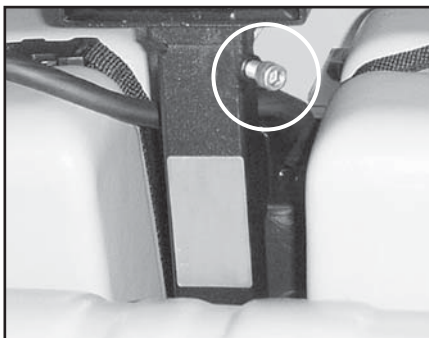


Figure 7C

Replacement

1. Grasp the seat at the front and back.
2. Align the male post of the seat bracket with the seat post and allow seat bracket to descend into the seat post.

3. Tighten the socket head cap screw at the top-front corner of the seat post with the 1/4 inch hex wrench that is supplied with the vehicle.
4. Reattach the controller cable to the seat by reinstalling the Velcro strap on the rear of the seat or into the clip at the side of the seat, depending on the type of seat. Position the cable to the minimum length to allow the arm to lift. Tighten the strap to keep the cable in position. To prevent cable damage, do not let the cable hang free or extend beyond the chair. Use care when driving to keep the cable from catching on objects.

 **WARNING**

The cable that joins the joystick to the battery box is a critical part of the vehicle. Ample cable is provided to allow for adjustments. There is a danger if this cable is not correctly routed. Do not allow the excess cable to extend beyond the width of the chair where it may become damaged.

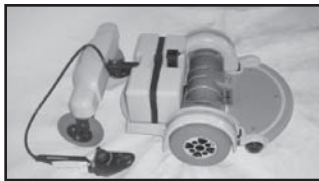
Battery Removal/Replacement LX-5 S/N 5900100+

⚠ WARNING

Turn the joystick off before attempting to remove the batteries. To prevent short circuit, fire or other hazards, prevent contact between the battery terminals and any surface that may cause a short, spark or other hazard.

Removal

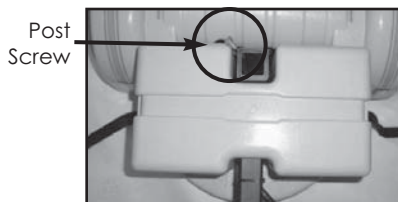
- 1.) Remove seat assembly from base.



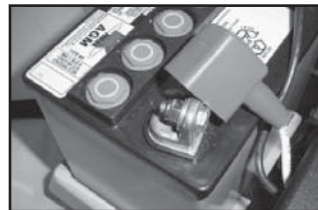
- 2.) Remove strap from battery cover.



- 3.) Carefully remove post screw and remove cover.

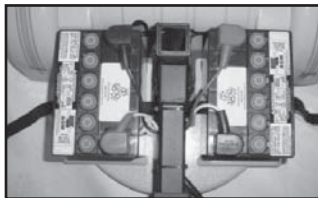


- 4.) Carefully remove one protective cap and disconnect each of the battery wires one at a time from each battery. Remove batteries.



⚠ WARNING

Remove the fuse from the holder to reduce possibility of shorting, before attempting to disconnect battery terminals.



Replacement

- 1.) Reverse the steps to install the batteries, making sure wires are connected properly, all hardware is tight, and battery boot covers are properly installed.



Chapter 8

Electromagnetic Interference (EMI)

Our environment is saturated with radio electromagnetic (EM) waves that originate from transmitters of television, radio and communication signals. The waves are invisible and their strength at any location is unknown but in general, the strength of a given EM wave increases as you move toward the transmitting source. All electrical conductors act as antennas to the EM signals. To varying degrees, all power wheelchairs and scooters are susceptible to electromagnetic interference. Abnormal operation in the form of unintentional movement and/or erratic control of the vehicle could result if the interference is such as to override the control system of the vehicle. The U.S. F.D.A. has suggested that the following statement be incorporated to the owner's manual for all power wheelchairs.

Electromagnetic Interference (EMI) From Radio Wave Sources.

Power wheelchairs and motorized scooters (in this text, both will be referred to as power wheelchairs) may be susceptible to electromagnetic interference (EMI) which is interfering EM emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios and cellular phones. The interference (from radio wave sources) can cause the power wheelchair to release its brakes, move by itself or move in unintended directions. It 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 power wheelchair can resist EMI up to a certain intensity. This is called its "immunity level".

The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. This LX-5 power wheelchair model, as shipped, without any further modification has a tested immunity level of at least 20 V/m. There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of the sources are obvious and easy to avoid. Others are not so obvious and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized.

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

1. Hand-held portable transceivers (transmitters-receivers) with the antennas mounted directly to the transmitting unit. Examples include: Citizen band (CB) radios, "walkie-talkie", security, fire, and police transceivers, cellular telephones and other personal communication devices. Note: some of the above transmit signals even when they are not being used for communication.
2. Medium range mobile transceivers, such as those used in police cars, fire trucks, ambulances and taxis. These usually have the antenna mounted to the outside of the vehicle; and
3. Long-range transmitters that have the antenna mounted upon a fixed tower.

 **NOTE** *Other types of hand-held devices, such as lap-top computers, AM/FM receivers, TV sets, CD and cassette players, and small appliances such as electric shavers and hair dryers, as far as we know, are not likely to cause problems to your power wheelchair.*

WARNING

Radio Wave sources may affect power wheelchair control.

Radio wave sources, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios and cellular phones, can affect power wheelchairs and motorized scooters (in this text, both will be called power wheelchairs). Following the warnings listed below should reduce the chance of unintended brake release or power wheelchair movement that could result in serious injury.

1. Do not turn on hand-held personal communication devices, such as citizens band (CB) radios and cellular phones, while the power wheelchair is turned ON.
2. Be aware of nearby transmitters, such as radio or TV stations and try to avoid coming close to them.
3. If unintended movement or brake release occurs, turn the power wheelchair OFF as soon as it is safe.
4. Be aware that adding accessories or components, or modifying the power wheelchair, may make it more susceptible to interference from radio wave sources. (Note: There is no easy way to evaluate their effect on the overall immunity of the power wheelchair); and
5. Report all incidents of unintended movement or brake release to the power wheelchair manufacturer, and note whether there is a radio wave source nearby.

Important Information

1. 20 volts per meter (V/m) is a generally achievable and useful immunity level against interference from radio wave sources (as of May 1994, the higher the level, the greater the protection).
2. The LX-5 wheelchair has an immunity level of at least 20 V/m.

Chapter 9

Appendices

Appendix A: Programmable Parameters

The controller used on your power wheelchair is programmable for basic functions. It requires a programmer to make changes. Any changes must be made by a qualified technician only.

The following chart indicates the standard program values of the factory settings. Any subsequent change of the programmed values should be recorded and saved for future reference.

Program Settings

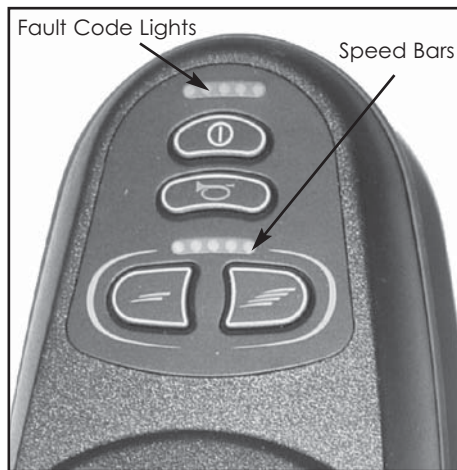
CONTROLLER	New VSI
Chair serial #	5900100+
Acceleration	30
Deceleration	50
Forward Speed Max	85
Forward Speed Min	30
Turn Speed Max	17
Turn Speed Min	17
Reverse Speed Max	55
Reverse Speed Min	35
Turn Acceleration	25
Turn Deceleration	65
Load Comp	125

Appendix B: Fault Codes

The microprocessor checks various features within the controller and will display any fault indication. The controller may prevent the chair from driving should a critical fault condition exist. Refer to the appropriate fault code section for the system used on your LX-5.

⚡ NOTE *When there is a fault please follow this procedure:*

- A. Switch off the control system.*
- B. Make sure that all connectors on the chair and the control system are connected securely. Make sure brake release levers are in the drive position.*
- C. Switch on the control system again and try to drive the chair. If the fault occurs again, switch off and do not try to use the chair. Contact Hoveround® Technical Support 1-800-96-HOVER (1-800-964-6837)*



new VSI Controller

New VSI Controller

- 1 flash:** The battery needs charging or there is a bad connection to the battery. Try charging the battery.
- 2 flashes:** The left hand motor has a bad connection.
- 3 flashes:** The left hand motor has a short circuit to a battery connection.
- 4 flashes:** The right hand motor has a bad connection.
- 5 flashes:** The right hand motor has a short circuit to a battery connection.
- 7 flashes:** A joystick fault is indicted. Make sure that the joystick is in the center position before switching on the controller.
- 8 flashes:** A controller fault is indicated.
- 9 flashes:** Problem with the brake circuit. Check that the manual release levers are in the drive position.
- 10 flashes:** An excessive voltage has been applied to the controller. This is usually caused by a poor battery connection.
- Speed Bar Cycling:** Controller locked.
- Speed Gauge Cycling:** Check if battery charger is still connected to controller or controller fault.

Appendix C: Locking Feature

Your LX-5 is equipped with a locking feature. Please refer to the appropriate instructions for the controller on your LX-5.

Lock Sequence System

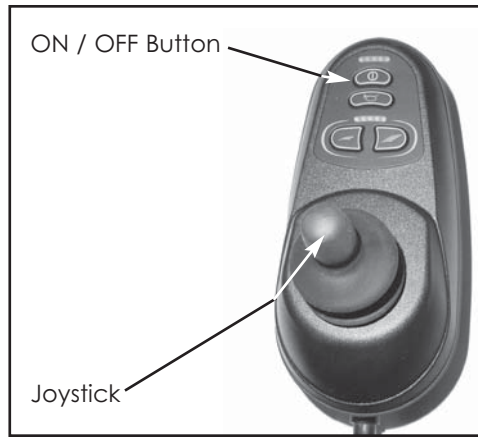


Figure 9A - new VSI Controller

1. Turn the controller on.
2. To lock the chair, depress and hold the ON/OFF button. After one second the controller will beep. Release the ON/OFF button. Move the joystick forward until the controller beeps. Move the joystick in reverse until the controller beeps. Release the joystick. There will be a long beep that indicates the controller is locked.
3. To unlock, turn the controller on. The speed/response indicator will be rippling up and down. Move the joystick forward until the controller beeps. Then move the joystick in reverse until the controller beeps. Release the joystick. There will be a long beep that indicates the controller is unlocked.

Appendix D: LX-5 Specifications

Performance

Maximum Speed*	4 mph
Range (per battery charge)*	12 miles
Capacity	300 lbs
Turning Radius	22.7"
Ground Clearance	2.5"
Maximum step climb	2"
Maximum grade climb	6° (5° ADA ramp recommended)

Dimensions and weight (with 20" seat in lowest position)

Length	38"
Overall Width	24"
Top of seat cushion to floor	20.5"
Seat height adjustment	0", 1.5", or 2.5" from lowest position
Total weight, with batteries	173 lbs
Base only	88 lbs
Base with batteries	123 lbs

Batteries

Two U-1 batteries, Sealed AGM

Tires and casters

Tire type and tread	Pneumatic, non-marking
Tire diameter and width	9" x 3.5"
Caster type and tread	Solid, non-marking
Caster diameter and width	8" x 2"

Seat	Standard		Reclining		
	18"	20"	17"	19"	22"
Width	18"	20"	17"	19"	22"
Depth	18"	18"	18"	18"	18"
Back height	19.5"	19.5"	20"	20"	20"
Cushion thickness	4.5"	4.5"	4.5"	4.5"	5.5"
Overall width with arms	21"	22.7"	22.7"	25"	27.7"
Seat belt length	60"	60"	60"	60"	90"
Recline lever position	Folds Forward		Right	Right	Dual

*Speed and range will vary with respect to terrain and weight of rider.
Note: Specifications and equipment subject to change without notice.

Limited Warranty

Hoveround® Corporation warrants the base frame of the LX-5 to be free from defects in materials and workmanship for a period of five (5) years from the date of purchase. Hoveround Corporation warrants all remaining components (excluding all upholstery, tires, tubes, foot mats, body plastic and batteries) to be free from defects in materials and workmanship for a period of one (1) year from the date of purchase. Hoveround Corporation warrants batteries to be free from defects in materials or workmanship for a period of six (6) months from the date of purchase. If, within such warranty period, any such product shall be proven to Hoveround's satisfaction to be defective, such product shall, at Hoveround's option, be repaired or replaced. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Hoveround's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service please contact your authorized Hoveround service center. In the event that you do not receive satisfactory warranty service, please write or call directly to Hoveround, provide the service center's name and address, and indicate the nature of the problem.

Please do not return products directly to Hoveround without our prior written consent.

Limitations and exclusions:

The foregoing warranty shall not apply to all upholstery, tires, tubes, foot mats and body plastic; normal wear and tear; or to products subjected to negligence; accidents; improper operation, maintenance or storage; commercial, institutional, or service use other than normal application; or to products damaged by reason of repairs or modifications made to any product without the specific written consent of Hoveround, or to products damaged by circumstances beyond Hoveround's control. All devices exhibit changes in operational noise levels due to aging. Therefore, the foregoing warranty shall not apply to any changes in operating noise or increased noise levels in any component including, but not limited to, motors and gearboxes. The warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. The warranty applies in the USA only and only within the geographic boundary of the Hoveround service network.

The foregoing warranty is exclusive and in lieu of all other express warranties, implied warranties, if any, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, and shall not extend beyond the duration of the express warranty provided herein. Hoveround shall not be liable for any consequential or incidental damages whatsoever.



Phone: 1-800-96-HOVER (1-800-964-6837)
Fax: 1-800-747-9252

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