



**PARTS & PRODUCTS, INC.**



# **LIBERTY 624<sub>MINI</sub>**

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## ***Owner's Manual***

For more information call toll-free today...

**1-888-972-9911**

or visit our on-line sales center at...

**[www.eaglepartsandproducts.com](http://www.eaglepartsandproducts.com)**

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## THE EAGLE PROMISE

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At Eagle Parts and Products we are committed to providing quality products and services. As a valued customer we welcome your questions, comments or suggestions about this manual, safety and reliability of your **LIBERTY™ 624 -MINI**, and the service received from your **LIBERTY™ 624-MINI** provider. Please feel free to write to us at the address below:

**EAGLE PARTS AND PRODUCTS INC**  
**1411 Marvin Griffin Road**  
**Augusta, GA 30906**

Please return your warranty card and let us know if you change your address so that we can keep you apprised of important information about safety, new products and options to increase your use and enjoyment of your **LIBERTY™ 624 MINI** powerchair.

**MODEL:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Purchase Date:** \_\_\_\_\_

**DEALER:** \_\_\_\_\_

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## WELCOME TO LIBERTY™ 624- MINI POWERCHAIR

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Thank you for purchasing your new **LIBERTY™ 624 MINI**-powerchair. The **LIBERTY™ 624 MINI** by Eagle Parts and Products utilizes a patent pending design coupled with advanced, state-of-the-art components and modern, attractive styling. We are certain the design, features and simple operation of your new **LIBERTY™ 624 MINI** will add convenience and benefits to your everyday life.

It is important that you read and understand all the instructions in this manual before attempting to operate the powerchair. They are written for your benefit and are essential for safe and proper operation. By carefully reading this manual and following the recommendations, you can ensure that your **LIBERTY™ 624 MINI** will perform to your expectations and give you years of trouble-free service and fulfillment.

This manual has been compiled from our latest specifications and product information at the time of publication. Eagle Parts and Products Inc reserves the right to make modifications and updates to any existing or previous models. Changes and improvements may cause slight variations in the illustration and explanation between this manual and your model.

Eagle Parts and Products Inc prohibits operating your **LIBERTY™ 624 MINI** powerchair after or while consuming alcoholic beverages as this may impair your ability to operate a motorized vehicle. If there is any doubt about your ability to operate the **LIBERTY™ 624 MINI** due to prescribed medication or a physical limitation, please consult your physician. Eagle Parts and Products Inc is not responsible for damage or injury incurred due to improper or unsafe use of the **LIBERTY™ 624 MINI**.

For more information concerning your **LIBERTY™ 624 MINI** please contact your LIBERTY dealer or write us at:

**Eagle Parts and Products Inc**  
**1411 Marvin Griffin Road**  
**Augusta, GA 30906**

**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.**

# LIBERTY™ 624 MINI POWER WHEELCHAIR OWNER'S MANUAL

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## THE LIBERTY™ 624 MINI SPECIFICATIONS

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|                                      |   |
|--------------------------------------|---|
| MODEL NUMBER .....                   | L-624M                                  |
| Height .....                         | 36"                                     |
| Length.....                          | 27"                                     |
| Width.....                           | 23"                                     |
| Turning Radius .....                 | Front-wheel-Drive 21"                   |
| .....                                | Rear--wheel-Drive 27"                   |
| Weight .....                         | Base--96lbs                             |
| .....                                | Seat-- 37lbs                            |
| .....                                | Battery.25 x 2. 50lbs                   |
| Total Weight .....                   | 183lbs                                  |
| Weight Capacity .....                | 300lbs                                  |
| Drive Wheels.....                    | Optional 10x3" Solid Insert             |
| .....                                | Standard 10x3" Pneumatic                |
| Casters--Front.....                  | Flat-Free... 8--Solid                   |
| JoystickStandard.Pilot-Integral      |   |
| .....                                | Optional.Pilot+Remote                   |
| Controller .....                     | Programmable                            |
| Range.....                           | 15--20. Miles Per Battery Charge        |
| Battery Charge.....                  | Standard - On Board                     |
| Batteries.....                       | (2) 12V U1 Sealed Lead Acid Or Gel Cell |
| Seat Dimensions.....                 | Width 18"                               |
| .....                                | Depth 16"                               |
| .....                                | Height 17"                              |
| High Back-Seat .....                 | OPTIONAL---.Height 19.5"                |
| High-Back-Seat w/Head-rest.....      | OPTIONAL-----Height 26.5"               |
| Foot- Plate .....                    | Standard - Height & Angle Adjustable    |
| Armrest.....                         | Standard -Adjustable Width & Height     |
| Front/Rear Ant-Tip-Wheels—5.5" ..... | Standard                                |
| Warranty-Limited .....               | Yes                                     |

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## **LIBERTY™ 624 MINI POWER WHEELCHAIR RECOMMENDED USE GUIDELINES**

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The LIBERTY™ 624 MINI is a life enhancement device designed to provide added mobility to a variety of individuals. There are, however, some unforeseen medical conditions that may necessitate certain individuals to have added assistance from an attendant. Prior to use of the LIBERTY™ 624 MINI, any common occurrences that can be foreseen (i.e., slopes, rough terrain, hills) should be practiced by the operator, attendant(s), and health care professional(s).

**Eagle Note:** Do not operate the LIBERTY™ 624 MINI without thoroughly reading this manual.

- Be certain the on/off switch is in the off position when not riding or getting on or off. This will eliminate the possibility of accidentally activating the joystick and possibly causing injury.
- Do not exceed the specifications in this manual or do not attempt to modify the LIBERTY™ 624 MINI in any way that is not authorized by Eagle Parts. Unauthorized modifications of the original design could cause the LIBERTY™ 624 MINI to become unsafe and personal injury can result. Any modifications not authorized by Eagle Parts may cause the powerchair to malfunction and will void the warranty. Contact your provider if you have any questions regarding this manual.
- Please keep your arms on the armrests and your feet on the footrest at all times while operating the LIBERTY™ 624 MINI to prevent hitting objects as you are riding.
- The LIBERTY™ 624 MINI is designed to carry a single person. Do not carry passengers under any circumstances or the powerchair will become unstable and possibly tip over. Personal injury may also result.
- Always go straight up or down a hill when driving on an incline. This will allow the front and rear wheels to climb up or go down together. This will reduce the possibility of the LIBERTY™ 624 MINI overturning.
- Use extreme caution when driving or operating on public or busy streets, in parking lots or shopping malls.
- Do not operate or store the LIBERTY™ 624 MINI where it could be exposed to the elements (rain, snow, mist and below freezing temperatures). This includes storage on an outside car/van lift. If attempting to operate the LIBERTY™ 624 MINI in the above conditions, possible damage could occur to the electrical system or loss of control could occur. Never attempt to drive an LIBERTY™ 624 MINI that has been exposed to moisture until it is dried thoroughly.
- Use caution when driving on a raised surface or near unprotected ledges or a drop off such as curbs, ramps, porches, or stairs.
- Disconnect the batteries if you will not be using the LIBERTY™ 624 MINI for an extended period of time.
- Check with your Physician or Pharmacist if you are taking any medication that may affect your ability to operate the LIBERTY™ 624 MINI. The powerchair is a motorized vehicle that requires

mental judgement and reflexes. If taking medication impairs your ability to operate the LIBERTY™ 624 MINI, an accident or personal injury may result.

- Do not drink alcoholic beverages while operating the LIBERTY™ 624 MINI.
- If your chair is equipped with pneumatic tires, be sure the tires are properly inflated to 30 psi. This will insure the LIBERTY™ 624 MINI is operating at its peak performance and will greatly improve your stability.

Eagle Note: **DO NOT EXCEED 35 PSI.**

- LIBERTY™ 624 MINI comes standard with pneumatic tires.
- Never, under any circumstances, use the LIBERTY™ 624 MINI as a seat in a motor vehicle. The LIBERTY™ 624 MINI is not an approved motor vehicle seat.
- If possible, avoid stopping on an incline. It is always best to stop on level, flat surfaces where there is no possibility of overturning or tipping the LIBERTY™ 624 MINI.
- Do not operate in icy or slippery conditions. This will increase the possibility of an accident and possible personal injury.
- Always protect the batteries from freezing temperatures and never charge a frozen battery. This will damage the battery and may cause personal injury. Attempting to charge a battery in freezing conditions will not prevent a battery from freezing
- Persons with disabilities, which limit their ability to remain upright without assistance, should consult with their Physician before attempting to operate the LIBERTY™ 624 MINI.

## **Tranfers**

Transferring to and from your LIBERTY™ 624 MINI requires a good sense of balance. Be sure to have proper assistance available while learning to safely transfer to and from your LIBERTY™ 624 MINI

To eliminate the possibility of injury to yourself and others Eagle Parts and Products ask that you verify the following before attempting to transfer.

1. The power must be turned OFF.
2. Make certain the LIBERTY™ 624 MINI is not in the freewheel position.
3. Angle the footrest to an up position. This will help to avoid your feet being tangled during the transfer.
4. Make sure the armrests are flipped up or removed from the powerchair.

**EAGLE WARNING: Avoid putting all of your weight on the footrest. If you fail to heed this warning, a tip or fall may occur.**

## **Motor Vehicles**

Your LIBERTY™ 624 MINI is **not** manufactured with the intent of providing proper restraint during motor vehicle transport.

1. Never allow anyone to sit in the LIBERTY™ 624 MINI in a moving vehicle.
2. Always be sure your LIBERTY™ 624 MINI is secured properly while being transported.

**EAGLE WARNING: Failure to adhere to the above warnings can result in serious injury.**

## **Weight Limitations**

Your LIBERTY™ 624 MINI is rated for a maximum weight of 300lbs. Exceeding the weight capacity will void your warranty and may result in personal injury.

## **Public Roads and Parking Lots**

When seated in your LIBERTY™ 624 MINI, it may be difficult for motorists to see you. To ensure safety, always assume you cannot be seen. Wait until your path is clear of traffic and proceed with extreme caution.

**Eagle Note: Many municipalities have laws against operating your powerchair on public roads. Be sure to check local laws before attempting to operate on a public road.**



## **Stairs and Escalators**

Powerchairs are not designed to travel up or down stairs and escalators. Always use an elevator. Trying to navigate steps or escalators can result in injury to you and others.

## **Steps and Curbs**

Your LIBERTY™ 624 MINI is designed to be used in wheelchair accessible locations. Never attempt to climb a step or curb more than 2 inches in height without assistance.

### **Inclines and Uneven Terrain**

When climbing hills, it is important to travel as straight up and down as possible. Traveling straight greatly reduces the possibility of tipping or falling. Always exercise extreme caution when navigating an incline.

Never travel up or down an incline that can be potentially hazardous, i.e., snow, ice or mowed grass.

When climbing a hill, try to keep the powerchair moving. If you must stop, start slowly and accelerate cautiously.

When descending an incline, keep your LIBERTY™ 624 MINI at a slow speed. If your LIBERTY™ 624 MINI starts to move faster than you anticipated do, allow the unit to come to a complete stop by releasing the joystick. Then guide the joystick forward slightly and continue your descent.

# **Electromagnetic Interference (EMI) From Radio Wave Sources**

## EMI-RFI

### RADIO WAVES MAY INTERFERE WITH THE CONTROL OF THE POWERCHAIR

This is to let you know that laboratory tests performed by the Food and Drug Administration (FDA) indicated that radio waves could cause unintended motion of powerchairs. Radio waves are a form of electromagnetic energy. When this energy unintentionally affects the operation of a device, it is called “electromagnetic interference” (EMI).

The following information summarizes what you need to know about EMI. You can use this information to minimize the risk that EMI will affect your LIBERTY™ 624 MINI.

- **Where do radio waves originate?**

Radio waves are emitted from the antennas of cellular phones, mobile two-way radios (like ones used in police, fire and emergency vehicles), hand-held two-way radios (like walkie-talkies), TV stations, radio stations, amateur radio (HAM) transmitters, wireless computer links, microwave sources and paging transmitters. Because electromagnetic (EM) energy is more intense closer to the transmitting antenna (source), the EM fields from two-way radios are of special concern.

- **If my powerchair is affected by EMI, what kind of motion should I expect?**

This is hard to predict. It would depend on a number of factors including the intensity of the radio waves, the construction of the powerchair, whether it is on level ground or on a slope or incline, and whether it is in motion or stationary. The motion can be erratic with the powerchair moving by itself or coming to a sudden stop. Further, it is possible for EMI to unexpectedly release the brakes on a powerchair or cause it to move in unintended directions. Some intense sources of EMI can even damage the control system of the powerchair.

- **Is there any way to definitely know whether radio waves are responsible for the unintended motion of my powerchair?**

Unfortunately, interference from radio wave sources may be difficult to recognize since the signals from these sources are invisible and may be intermittent. However, FDA recommends that you report all incidents of unintended motion or brake release to the powerchair manufacturer, and, if possible, make note whether there was a radio wave source nearby at the time of the incident.

- **Has anyone been injured from erratic unintended motion of powerchairs?**

FDA has reports of injuries that resulted from uncontrolled motion of powerchairs but it is not clear how many of these incidents were actually caused by radio wave interference.

- **Are all powerchairs susceptible to EMI?**

Each make and model differs in its ability to resist electromagnetic interference. Each has a particular level of “immunity” to interference measured in volts per meter (V/m). The higher the immunity levels the greater the protection. In other words, a powerchair with a high immunity level is less likely to be affected by an intense radio source than one with a low immunity level.

If you want to find out how well your powerchair is protected against EMI, you can contact the manufacturer and inquire about its immunity level.

### Commonly Asked Questions

- **What can I do to reduce the risk that my powered powerchair could be affected by EMI?**

Here are some precautions you can take:

1. Do not turn ON or used hand-held personal communication devices, such a cellular phones or citizens band (CB) while the powered LIBERTY™ 624 MINI is ON.
2. Be aware of nearby transmitters, such as TV stations or radio and hand-held or mobile two-way radios, and try to avoid coming close to them. For example, a powered LIBERTY™ 624 MINI with an immunity level of 20V/m should stay at least three feet from a hand-held, two-way radio and ten feet from a mobile two-way radio.
3. Be aware that adding accessories or components, or modifying the powered LIBERTY™ 624 MINI 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 LIBERTY™ 624 MINI.)

- **What should I do if my powered LIBERTY™ 624 MINI moves unexpectedly?**

If untended motion or brake release occurs, turn the **LIBERTY™ 624 MINI OFF** as soon as it is safe.

- **If my powered LIBERTY™ 624 MINI moves unexpectedly, where should I report this?**

You should report the incident to:

The manufacturer and/or distributor, and FDA’s MedWatch problem reporting program. Call 1-800-FDA-1088 and ask for Form 3500.

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# LIBERTY™ 624 MINI POWER WHEELCHAIR

## OPERATING INSTRUCTIONS

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You have already examined the safe use of the LIBERTY™ 624 MINI. You now need to understand the basic operation of the LIBERTY™ 624 MINI. These preferred methods are strongly recommended and very simple to follow. Please read this section in its entirety to ensure a full understanding of operating your LIBERTY™ 624 MINI.

**Step 1. Getting started:** To get started, press the on/off button. The battery condition meter will illuminate indicating the present charge of your battery.

**Step 2. Moving your powerchair:** Guide the joystick in the direction you wish to move the powerchair. The further you guide the joystick from the center, or neutral position, the faster the LIBERTY™ 624 MINI will move.

The LIBERTY™ 624 MINI is equipped with an adjustment knob or mode switch depending on which controller you have, that help you select the speed best suited to your requirements and environment.

- The **speed control knob** allows you to set the maximum speed of the LIBERTY™ 624 MINI to your specific needs. To increase the maximum speed, turn the knob clockwise. To decrease the maximum speed, turn the knob counterclockwise. (for pilot)

### OPTIONAL PILOT (+) PLUS - CONTROLLER

- The pilot + controller (opt) uses a mode switch for increasing or decreasing the speed. To activate, press the mode switch, time and speed mode lights will begin to flash. Next, push the joystick to the right or left depending if you want to increase or decrease the speed. NOTE: THE NUMBER LIGHTS. ONE LIGHT LIT- SLOWEST SPEED, FIVE LIGHTS LIT- FASTEST SPEED.

**Eagle Note:** We recommend that the first few times you operate your LIBERTY™ 624 MINI, you turn both the speed control and response control completely counterclockwise to allow you to become familiar with your new powerchair.

The LIBERTY™ 624 MINI will always come to a complete stop and the brake will engage when the LIBERTY™ 624 MINI joystick is released or moved to the neutral (center) position.

- **WARNING:** Never use the on/off button to stop the LIBERTY™ 624 MINI. This will cause the LIBERTY™ 624 MINI to stop immediately and possibly cause injury.

The LIBERTY™ 624 MINI is equipped with either an integral or remote power chair controller. These controllers are designed with the user safety as the primary consideration. It is equipped with various self-diagnostic features that are designed to search for potential problems at the rate of 100 times per second. If the controller detects a problem in the powerchair's electrical system, the powerchair may stop functioning, depending on the severity of the problem. The controller is designed to maximize user safety under normal operation conditions.

**This controller, however, cannot take into account circumstances that put the LIBERTY™ 624 MINI outside of its normal operating environment as described within this manual. It is very important that the users follow the precautions described within this manual.**



## **USE OF LIBERTY™ 624 MINI POWER WHEELCHAIR JOYSTICK**

### **Battery Gauge**

The battery gauge's main purpose is to indicate to the user the approximate amount of battery life left.

- \* Red, Yellow and Green indicate that batteries are fully charged.
- \* Red and Yellow indicates that you should charge your battery if possible.
- \* Red indicator indicates that you should charge your battery as soon as possible because low battery voltage may cause the powerchair to become inoperative.

Eagle Note: When the batteries begin to approach a discharged state, the meter will begin to slowly flash indicating that it is time to charge the batteries.

In addition to indicating the current state of battery charge, the individual lights on your joystick assembly can also indicate possible problems with the LIBERTY™ 624 MINI. A rapid flash of the battery condition meter signifies a problem. The meter has 10 individual bars. They are to provide information by the amount of bars that are flashing. For instance, the very first red bar flashing rapidly indicates the battery voltage is nearly depleted. The following is a list of the possible errors signified by the rapidly flashing meter.

## **BARS DIAGNOSIS SOLUTION**

|             |    |        |                                |                                |
|-------------|----|--------|--------------------------------|--------------------------------|
|             | 10 | Green  | High Battery Voltage           | Check Batteries                |
|             | 9  | Green  | Solenoid Brake Fault           | Check Motor/Brake Wiring       |
|             | 8  | Green  | Possible Controller Fault      | See Authorized Service Center  |
|             | 7  | Yellow | Possible Joystick Fault        | See Authorized Service Center  |
|             | 6  | Yellow | Inhibit Active                 | Unplug Charger/Check           |
| Connections |    |        |                                |                                |
|             | 5  | Yellow | Right Motor Wiring Fault Check | Right Motor Wiring             |
|             | 4  | Yellow | Right Motor Disconnected       | Check Right Motor Wiring       |
|             | 3  | Red    | Left Motor Wiring Fault        | Check Left Motor Wiring        |
|             | 2  | Red    | Left Motor Disconnected        | Check Left Motor Wiring        |
|             | 1  | Red    | Low Battery Voltage            | Check Batteries/Battery Wiring |

## **Freewheeling**

For convenience, your LIBERTY™ 624 MINI is equipped with two freewheel levers. These levers allow you to disengage the drive motors and maneuver the chair manually. Locate the 2 metal bars protruding from the frame cover and turn them toward the outside of the powerchair. To reengage the drive motors, turn the metal levers back to the forward position. If the lever is difficult to move in either direction, press the lever downward and roll the LIBERTY™ 624 MINI forward and backward slightly. The lever should then move to the desired position.

**Eagle Note:** It is important to remember that when the LIBERTY™ 624 MINI is in the freewheel position, the braking system is disengaged.

**WARNING:** Avoid placing the LIBERTY™ 624 MINI in freewheel on an incline as the unit could roll on its own causing injury.

## **Main Circuit Breaker**

The circuit breaker is located under the main body cover on the left rear side of the frame.

The main circuit breaker is a safety feature built into your LIBERTY™ 624 MINI. When the batteries and the motors are subjected to excessive loads, the main circuit breaker might trip to prevent damage to the motors and/or electronics. If this happens, allow the unit to rest for approximately one minute, to allow time for the automatic reset circuit breaker to reset. You may wish to charge the batteries more frequently and have an authorized service center or service station load test the batteries to determine how they operate under normal operation.

**Eagle Note: If the main circuit breaker continues to trip, you should return to your authorized LIBERTY™ 624 MINI dealer for service.**

## **Sleep Mode**

Your new LIBERTY™ 624 MINI is equipped with a Sleep Mode. This is a built-in circuit that will automatically shut off the main power if the joystick is not moved in any direction for approximately 5 minutes. To restore power, push the on/off power button twice.

## **Charger Compartment**

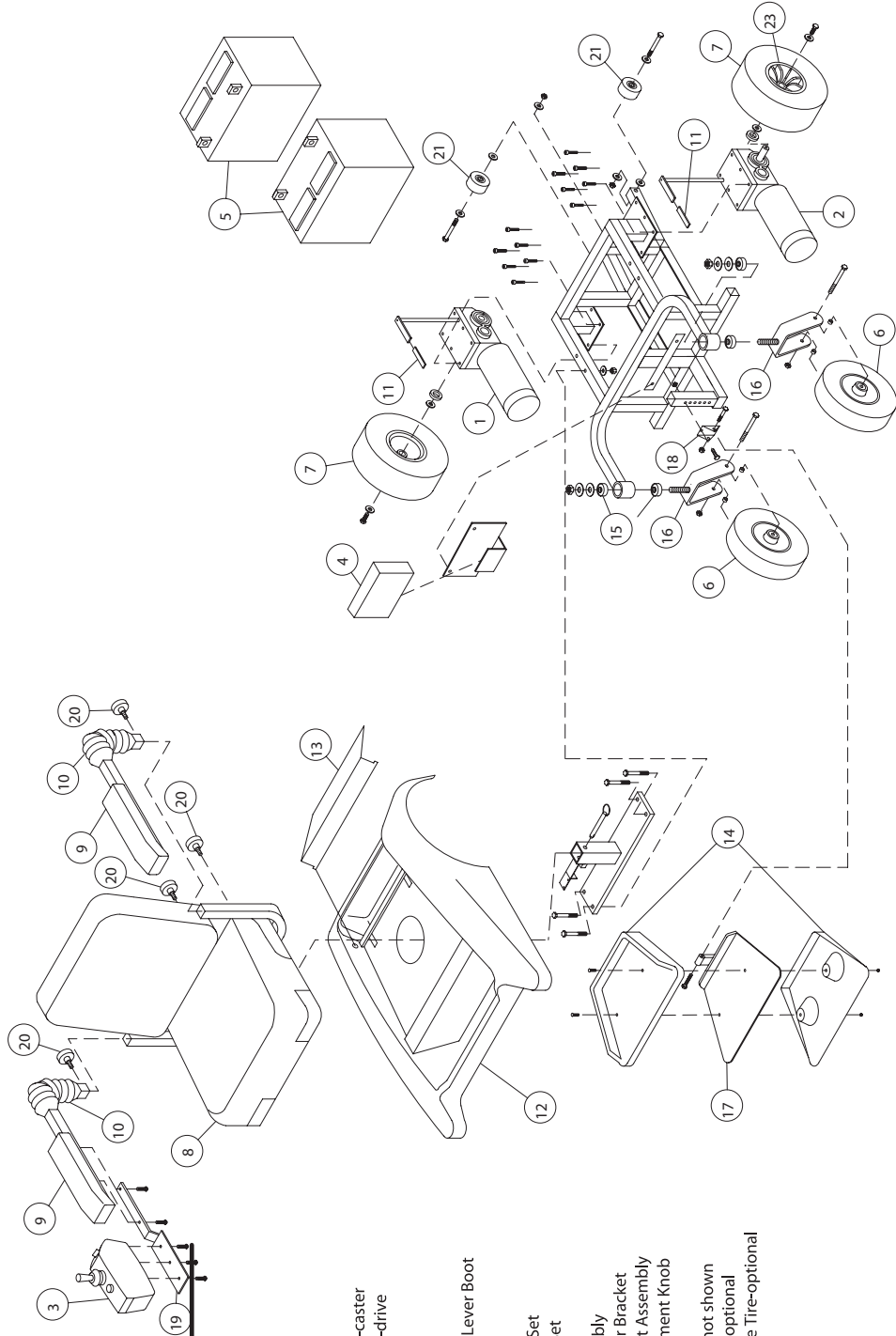
The charger compartment allows easy access to the charger cord needed to charge your batteries. There are two (2) items located in the charger compartment.

1. Charger Cord (On-Board Charger)  
This is your charger power cord. See battery-charging instructions beginning on page 18
2. Battery Wiring Diagram

## **Horn**

- Horn Operation – Remote LIBERTY™ 624 MINI, (Optional w/Pilot Plus Controller).

To engage the horn, depress the red button to the lower right of the joystick. Release the button to stop the horn from sounding.



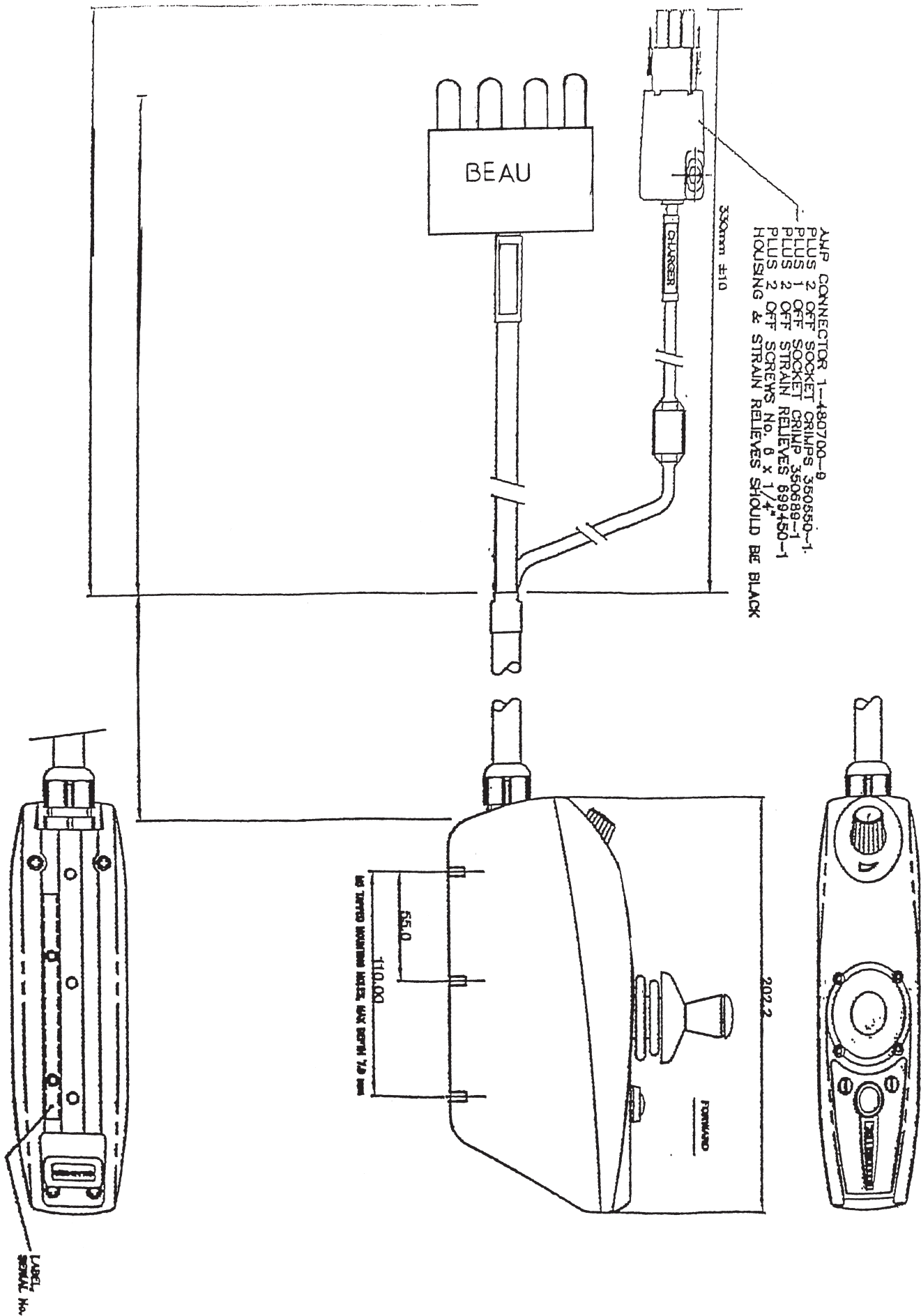
EAGLE PARTS & PRODUCTS, INC.

## Liberty 624-Mini

### PARTS LIST

| Part No. | Description                     |
|----------|---------------------------------|
| 1.       | Motor-right                     |
| 2.       | Motor-left                      |
| 3.       | Controller                      |
| 4.       | Charger                         |
| 5.       | Battery                         |
| 6.       | Tire/Wheel Assy.-caster         |
| 7.       | Tire/Wheel Assy.-drive          |
| 8.       | Seat                            |
| 9.       | Armrest Pad                     |
| 10.      | Bellows Armrest                 |
| 11.      | Disengagement Lever Boot        |
| 12.      | Body                            |
| 13.      | Trunk Lid                       |
| 14.      | Foot Rest Cover Set             |
| 15.      | Flange Bearing Set              |
| 16.      | Caster Assembly                 |
| 17.      | Foot Rest Assembly              |
| 18.      | Foot Rest Hanger Bracket        |
| 19.      | Controller Mount Assembly       |
| 20.      | Arm Rest Adjustment Knob        |
| 21.      | Anti-Tip Wheel                  |
| 22.      | Wiring Harness-not shown        |
| 23.      | Mag Wheel Half-optional         |
| *        | Foam Filled Drive Tire-optional |





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## LIBERTY™ 624 MINI BATTERIES AND BATTERY CHARGING

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Your batteries and battery charger are some of the most important parts of your LIBERTY™ 624 MINI. The battery charger is specifically designed to optimize the performance of your powerchair by charging the batteries as quickly as possible and extending their service life.

The battery charger connects to the standard wall outlet voltage of 120 VAC (alternating current) and converts it to 24 VDC (direct current). Direct current (or DC) is what your batteries deliver to operate your Liberty.

### Battery Charging Instructions

Your LIBERTY™ 624 MINI utilizes two long lasting 12-volt deep cycle batteries that are sealed and maintenance free. They are recharged by an on-board charging system located inside the charger compartment.

Follow these steps to safely charge your batteries.

**Step one:** Place your LIBERTY™ 624 MINI within reach of a standard wall outlet.

**Step two:** Make sure the controller power is in the OFF position.

**Step three:** Gently lift the charger compartment lid. Extend the charger power cord and plug into a wall outlet.

**Eagle Note:** The LIBERTY™ 624 MINI incorporates an inhibit function which disables the powerchair when the charger is plugged into a wall outlet. Your LIBERTY™ 624 MINI will not respond to operating commands while the charger is connected to the outlet.

Eagle Parts and Products supplies your LIBERTY™ 624 MINI with a state-of-the-art charger. Your charger uses two light indicators, with three colors, to simplify the charging process. When you plug in the cord you will notice a red light indicator letting you know the charger has power and a yellow light indicator letting you know the batteries are charging. When the yellow indicator turns green your battery is fully charged.

We recommend leaving your chair plugged in while not in use. You can not overcharge due to a built-in cut-off mechanism within the charger. Once the batteries have reached full charge your charger automatically shuts off.

## **EAGLE NOTE: GENERAL RECOMMENDATION---LET YOUR LIBERTY™ 624 MINI CHARGE OVERNIGHT.**

**Step four:** When fully charged, unplug the power cord, coil the cord, and place the cord back into the charger compartment. Replace the trunk lid. Wheelchair is ready to operate.

### **Answering your Battery Charger Questions**

#### **How does my charger work?**

When the battery voltage is low, as indicated by your battery level display on your controller, the charger recharges the voltage power to bring up the battery charge. As the battery voltage approaches full charge, the charger does not work as hard to complete the charging cycle. When the battery is fully charged, the yellow indicator light on the charger turns green.

#### **Can I use a different battery charger?**

Eagle parts and Products does not recommend using a different battery charger. For the most efficient and even charging of the batteries, we prefer simultaneous charging of both batteries by the supplied LIBERTY™ 624 MINI charger.

#### **How often must I charge the batteries?**

Many factors should be considered when deciding how often to charge the batteries. You may use your LIBERTY™ 624 MINI all day on a daily basis or you may not use it for several weeks. Driver and baggage weight, smooth or rough terrain, flat areas or inclines and speed are all considerations for determining how often to charge the batteries.

Keeping these factors in mind you should consider how often and for how long you should charge? The charger is designed to prevent overcharging of the batteries. This way the only problem you may encounter is not charging your batteries on a regular basis. It will not harm your batteries if you charge them everyday. By following these suggested guidelines your batteries will provide safe and reliable operation.

- 1. If you use your LIBERTY™ 624 MINI within a day:** Charge the powerchair as soon as you finish using it. The charger is fully automatic so it will not overcharge your batteries. Your powerchair will be ready each morning to give you a full day's service.
- 2. If you use your LIBERTY™ 624 MINI infrequently (once a week or less):** Charge the powerchair at least once per week for 12-14 hours. **Eagle reminder:** Keep your batteries fully charged and avoid deeply discharging your batteries.

#### **How can I get maximum range or distance per charge?**

On most occasions you will not have an ideal driving situation such as smooth, flat terrain with no wind, hills or curves. More often you are presented with hills, sidewalk cracks, uneven and loosely packed surfaces, curves and wind. All these factors will affect the distance or running time per battery charge. The following are a few suggestions for obtaining maximum range per charge:

1. Always charge your batteries fully prior to operating.
2. Maintain 30-35 lb. pressure in pneumatic wheels.
3. Plan your trip in advance to avoid inclines if possible.
4. Limit your baggage weight to the minimum.
5. Try to maintain an even speed and avoid stop and go driving.

### **What type of battery should I use?**

We recommend “deep cycle” batteries that are maintenance free and sealed, which eliminates the possibility of leakage. Both “Sealed Lead Acid” and “Gel Cell” are deep cycle batteries and similar in performance.

These are the specifications used to reorder the “deep cycle” batteries:

|           |   |
|-----------|---|
| Type:     | Deep Cycle (Sealed Lead Acid or Gel Cell) |
| Size:     | U1  |
| Voltage:  | 12V each                                  |
| Amperage: | 31 amp                                    |

### **Why do my new batteries seem weak?**

Deep cycle batteries use a much different chemical technology than those in car batteries, nickel-cadmium (Ni-Cads) or other common battery types. They are specifically designed to provide full power until deeply discharged, then accept a relatively quick recharge. Fresh batteries are shipped with a full charge. Extreme temperatures during shipping may influence their initial performance. Heat will diminish the charge from the battery, cold will slow the power available and extend the time needed to recharge (similar to a car battery).

It could take a few days for the temperature to stabilize and adjust to your room temperature. It will take a few “charging cycles” (a partial drain – then full recharge) to establish the critical chemical balance that is essential to the battery’s peak performance and long life.

If you take the time to break in your battery properly, it will ensure good performance and longevity of the batteries. Remember that how long your battery will provide service is often a reflection of the care it receives. This is our recommendation to break in your new batteries:

- Fully recharge any new battery prior to initial use. This will give your battery about 85% performance.
- Run your LIBERTY™ 624 MINI around the house and the yard.
- Give the batteries another full charge and run the LIBERTY™ 624 MINI again. The batteries will not perform over 90% of their potential.
- After 4-5 charging cycles, the batteries will stabilize at 100% charge and last for an extended period.

### **How can I insure maximum battery life?**

A fully charged, deep cycle battery will provide reliable performance and extended battery life, so whenever possible, keep your batteries fully charged.

**EAGLE CAUTION: Batteries that are regularly deeply discharged, infrequently charged, or stored without a full charge may be permanently damaged, causing unreliable operation and limited life.**

### **How should I store my powerchair and batteries?**

If you plan on not using your LIBERTY™ 624 MINI for an extended period, it is best to fully charge the batteries prior to storing. Disconnect the battery terminal and store the unit in a warm, dry environment. Avoid extreme temperatures, freezing conditions and never attempt to charge a frozen battery. A frozen battery should be warmed for several days prior to recharging.

### **What are my limits on public transportation?**

Sealed Lead Acid and Gel Cell batteries are designed for application in powerchairs and other mobility vehicles. They are FAA approved, allowing safe transportation on aircraft, buses, and trains, as there is no danger of spillage or leakage. We suggest you contact the ticket counter in advance to determine the carrier's specific requirements.

If you wish to ship the LIBERTY™ 624 MINI to your destination by a freight company, repack the LIBERTY™ 624 MINI in the original shipping container and ship your batteries in separate boxes. Only use Sealed Lead Acid or Gel Cell type batteries which are maintenance free. Do not use wet cell batteries in which the caps are removable.

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## **LIBERTY™ 624 MINI CARE AND MAINTENANCE**

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Your LIBERTY™ 624 MINI is designed to require a minimal amount of care and maintenance. As the owner of the LIBERTY™ 624 MINI you are responsible for the upkeep of your powerchair. If you have any doubt as to its care or operation, please return the powerchair to your dealer for inspection.

Eagle Parts and Products suggest the following care, maintenance, cleaning and storage ideas to ensure the very best performance out of your LIBERTY™ 624 MINI.

### **Daily Performance Review**

1. Turn the controller power OFF position.
2. Check the joystick for any visible damage.
3. Guide the joystick to each corner of the controller and release. If it does not return to the center, do not use the chair.
4. Inspect the body for any structural damage.
5. Completely charge the batteries.

### **Weekly Checks**

It is important that you test the electric brake on a weekly basis. To do this, follow these simple steps:

1. Place your LIBERTY™ 624 MINI on a flat surface with adequate room.
2. Turn the controller to the on position.
3. The battery gauge should illuminate within one second.
4. Push the joystick forward until the brakes release.
5. Release the joystick. The brakes should engage within a few seconds.
6. Repeat the above procedure in each direction, reverse, left and right.
7. Check all connectors to ensure proper connections and inspect for any visible damage.
8. Examine all cables for possible damage.
9. Inspect the rubber gaiter around the joystick base for damage.
10. Make sure all electronic components are securely attached to your chair.
11. Inspect tires for proper inflation, if they are pneumatic. This helps reduce excessive wear.

**NOTE: LIBERTY COMES STANDARD WITH SOLID TIRES.**

### **Monthly Checks**

In addition to the above, also inspect all hardware to ensure it is secure. Perform all operational tests and calibrations.

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## CLEANING RECOMMENDATIONS

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Never hose off your LIBERTY™ 624 MINI or place it in direct contact with water.

Your LIBERTY™ 624 MINI has a clear-coated plastic shroud that can be easily wiped clean with a damp cloth. Never use any chemicals to clean the vinyl seat as they may cause the seat to become slippery or brittle. Use soapy water and dry thoroughly.

To clean your LIBERTY™ 624 MINI follow these simple recommendations by Eagle Parts and Products Inc:

1. Use a clean damp cloth to wipe away any dirt or other substances from the clear-coated plastic shroud that surrounds your powerchair frame.
2. Use warm soapy water and a clean cloth to clean vinyl seat. Use a clean cloth to dry seat thoroughly.

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## GENERAL INSPECTIONS

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Always do a complete inspection on your chair if transporting and also after it has reached its destination. If your controller becomes contaminated with food or drink, clean with damp cloth and perform a complete check before operating.

The following areas require periodic inspection and/or care and maintenance:

1. **Tire Pressure:** Inflate the drive tires to 30 PSI. Do not exceed 35-PSI air pressure in any tire. (pneumatic tires only)
2. **Tire Condition and Tread Wear:** Use a rubber conditioner on the tires.
3. **Battery Terminal Connections:** Be sure the connections remain tight and are not corroded. Batteries must sit flat within the battery well area with the battery terminals facing inward toward each other. Refer to the frame decal for a visual guide.
4. **Wiring Harness:** Check for insulation damage, especially the battery charger cord. If this cord is damaged, it should be replaced prior to the next use.
5. **Plastic Cover:** The shroud has been sprayed with a clear sealant coating. It will retain its high gloss with a light application of car wax.
6. **Drive Wheel Bearings, Front Anti-tip Bearings, Rear Axle Bearings and Motor/Brake Assembly:** These are all pre-lubricated, sealed and require no subsequent lubrication.
7. **Motor Brushes:** The motor brushes are the two contacts located inside the motor assembly that supply power to the motor. They are designed to provide many hours of operation but if they become dirty with carbon deposits, the motor will run poorly or not at all. We recommend your authorized dealer inspect them every six months or sooner if your LIBERTY runs inadequately. If inspection determines excessive wear on the brushes, they must be replaced or motor damage will result. Eagle Note: Failure to do so could void the warranty.
8. **The Joystick and Electronic Controller Assemblies:** Be sure to keep these areas free from moisture. In the event these components are exposed to moisture, let them dry thoroughly before attempting to operate the powerchair.



## **NOTE: EAGLE-LIBERTY OPTIONAL (SOLID-FLAT-FREE TIRES)**

If you should encounter a flat tire on your LIBERTY™ 624 MINI please follow these easy steps for a safe repair:

1. Completely deflate the tire.
2. Use a 7/16-inch wrench to remove the screw from the center hub of the flat tire.
3. Pull the wheel off of the power base.
4. Remove the tire from the rim using tire tools only, never use screwdriver this can cause damage to the tire and rim.
5. Remove the old tube and/ or tire and replace with the new one.
6. Reinstall the tire with new tube back onto the rim.
7. Slide the wheel back onto the motor shaft. Apply thread lock compound to the screw and tighten securely.
8. Inflate the tire to 30-35 psi.

NOTE: Replacement tires and tubes are readily available at the dealership where your LIBERTY™ 624 MINI was purchased or any authorized LIBERTY™ 624 MINI dealer.

### **Battery Replacement**

The following are instructions to replace batteries if necessary. Refer to diagram on page. This diagram is also printed on a decal on the LIBERTY™ 624 MINI frame near the battery tray.

1. Turn the power OFF.
2. Remove the seat.
3. Remove the body.
4. Remove the battery cables from the battery terminals.
5. Remove old batteries from the battery tray.
6. Install new batteries into battery tray.
7. Reconnect the battery cables to the battery terminals, following the diagram on page.

## **Storing your LIBERTY™ 624 MINI POWER WHEELCHAIR**

You should store your LIBERTY™ 624 MINI in a dry, temperature controlled environment. Certain environmental conditions can affect the performance of your powerchair. Please be aware of the following extreme conditions and take precautions to avoid them.

Eagle Note: When storing, make certain the batteries are disconnected from the unit. See battery information for complete instructions.

Eagle Note: Failure to store the unit as suggested may cause rusting of the frame as well as damage to the powerchair electronics

Your LIBERTY™ 624 MINI is susceptible to damage from the elements. Try to avoid damp areas of any kind. Direct exposure to water in any form: rain, sleet or snow could cause the powerchair to malfunction electronically and mechanically. Water can cause electrical components to corrode and the frame to prematurely rust. Should your LIBERTY™ 624 MINI come in contact with water act quickly to take these steps:

1. Dry as much as possible.
2. Allow your LIBERTY™ 624 MINI to sit in a warm, dry place for 12 hours to allow remaining water to evaporate.
3. Perform all safety and operational tests as indicated on page before use.
4. If any inconsistencies are found, take your LIBERTY™ 624 MINI to an authorized Eagle Parts service center.

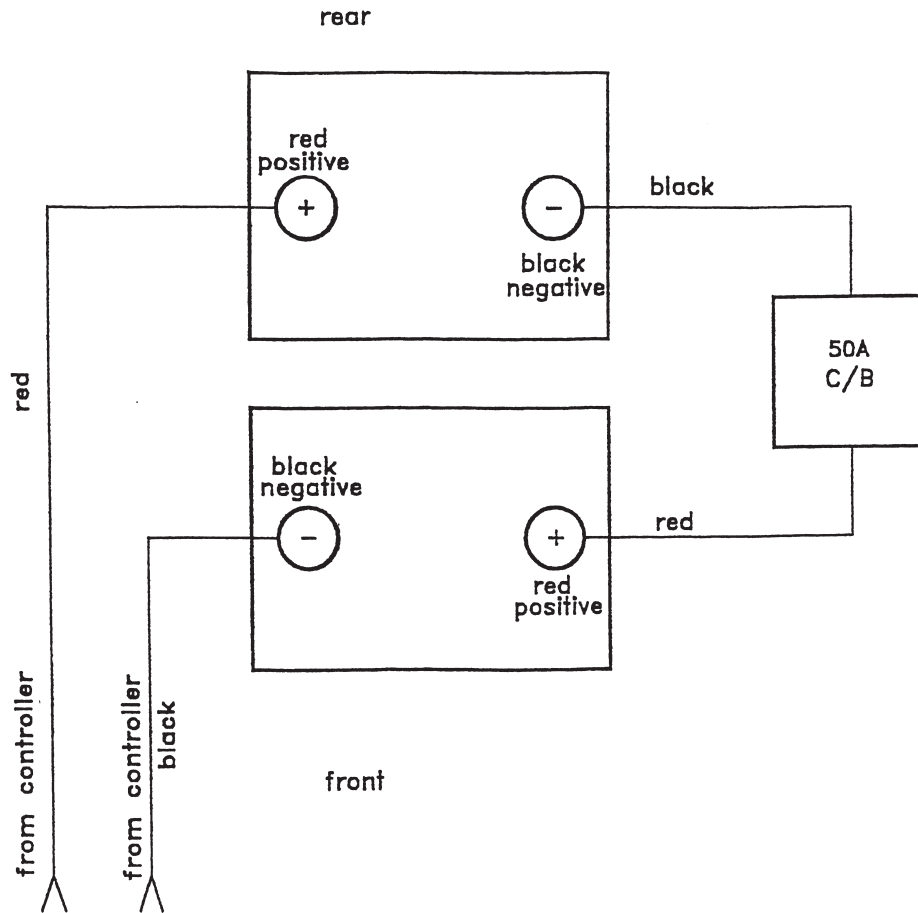
Some of the parts of your LIBERTY™ 624 MINI are susceptible to extreme changes in temperature. Possible reactions to extreme temperatures may be freezing of your batteries in very temperatures below 18 degrees Fahrenheit. (The specific temperature at which they will freeze depends on a number of factors such as battery charge, use, and composition of the batteries, e.g. sealed lead acid or gel cell). – or – reduced operating speed at temperatures above 122 degrees Fahrenheit.

If you are storing your LIBERTY™ 624 MINI for an extended period of time, you may want to block the unit up off the ground with boards under the frame. This will keep the tires off the ground and prevent the possibility of flat spots developing.

### **Thermal Rollback**

Your LIBERTY™ 624 MINI is equipped with a thermal rollback circuit. This circuit monitors the temperature of the motors and controller. In the event the motors or controller become excessively hot (above 122 degrees Fahrenheit), the controller will reduce the speed of your LIBERTY™ 624 MINI to about one-half of normal which will allow the components to cool down. When the temperature returns to a safe level, your LIBERTY™ 624 MINI will resume normal speed.

# BATTERY CONNECTION & CIRCUIT PROTECTION DIAGRAM



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## LIBERTY™ 624-MINI POWER WHEELCHAIR LIMITED - WARRANTY

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### **Limited warranty:**

1. Structural frame/Frame Welds----Lifetime-Limited
2. Electronics/Controller----12 Months
3. Motor/Trans-Axle----12 Months
4. Charger----12 Months

### **Warranty Exceptions:**

1. Trans-axle: In cases where there is an increase in the operational noise level, the warranty will not apply. (This usually occurs due to abusive and excessive strain on scooter.)
2. 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 not be warranted.

Battery Warranty is covered by the battery manufacturer. EAGLE PARTS AND PRODUCTS, INC. does not cover battery

### **One Year Limited Warranty:**

For one year from date of purchase, EAGLE PARTS AND PRODUCTS, INC. will repair or replace at our option to the original purchaser, free of charge, any part found upon examination by an authorized representative of EAGLE PARTS AND PRODUCTS, INC. to be defective in material and/or workmanship.

Warranty service can be performed only by an authorized dealer or by EAGLE PARTS AND PRODUCTS INC. Do not return faulty parts to EAGLE PARTS AND PRODUCTS, INC. WITHOUT PRIOR CONSENT AND A RETURN AUTHORIZATION NUMBER. All transportation costs and shipping damage incurred while submitting parts for repair or replacement are the responsibility of the original purchaser.

### **Warranty Exclusions:**

1. ABS plastic shrouds are a wear item and not warranted.
2. Batteries (battery manufacturer provides a 6 months limited warranty).
3. Damage caused by:
  - a. Abuse, misuse, accident or negligence.
  - b. Improper operation, maintenance or storage.
  - c. Other than normal use.
  - d. Repairs and/or modifications made to any part without specific consent from EAGLE PARTS AND PRODUCTS, INC.
  - e. Circumstances beyond the control of EAGLE PARTS AND PRODUCTS, INC.
4. Labor, service calls, shipping and other charges incurred for repair of the product unless specifically authorized by EAGLE PARTS AND PRODUCTS, INC.

### **OBVIOUS ABUSE TO ANY SCOOTER PART VOIDS ALL WARRANTY AGREEMENTS**

There is no other express warranty:

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from the date of purchase and to extent permitted by law. Any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may also have other rights which vary from state to state.

Any modification not approved by EAGLE PARTS AND PRODUCTS, INC. will void warranty.

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# LIBERTY™ 324, 424, 624, 324 MINI, 624 MINI & 624 RELIANCE WARRANTY REGISTRATION

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(Please type or print)

DATE PURCHASED: \_\_\_\_\_ SERIAL NO.: \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

DEALER NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

## OPTIONAL INFORMATION TO ASSIST US IN DEVELOPING FUTURE PRODUCTS

AGE: \_\_\_\_\_ WEIGHT: \_\_\_\_\_ HEIGHT: \_\_\_\_\_ SEX: \_\_\_\_\_

PHYSICAL LIMITATIONS – IF ANY: \_\_\_\_\_

\_\_\_\_\_

FAVORITE ACTIVITIES: \_\_\_\_\_

\_\_\_\_\_

FAVORITE **LIBERTY™** FEATURES: \_\_\_\_\_

\_\_\_\_\_

If you would like us to send information about the **LIBERTY™ PERSONAL MOBILITY VEHICLES** to someone you think will Benefit from it please fill in the following:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

MAIL TO ADDRESS ON BACK  
↓  
FOLD TOP TO HERE

**EAGLE PARTS AND PRODUCTS INC**  
1411 Marvin Griffin Road  
Augusta, GA 30906

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STAMP  
HERE**

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