

## **Owner's Manual**







Mega Motion, Inc. P.O. Box 275 Taylor, PA 18517-0275

www.mega-motion.com

## SAFETY GUIDELINES



WARNING! An authorized Mega Motion Provider or qualified technician must perform the initial setup of this scooter and must perform all of the procedures in this manual.

The symbols below are used throughout this owner's manual and on the scooter to identify warnings and important information. It is very important for you to read them and understand them completely.



WARNING! Indicates a potentially hazardous condition/situation. Failure to follow designated procedures can cause either personal injury, component damage or malfunction. On the product, this icon is represented as a black symbol on a yellow triangle with a black border.



MANDATORY! These actions should be performed as specified. Failure to perform mandatory actions can cause personal injury and/or equipment damage. On the product, this icon is represented as a white symbol on a blue dot.



**PROHIBITED!** These actions are prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause personal injury and/or equipment damage. On the product, this icon is represented as a black symbol with a red circle and a red slash.

### **Intended Use**

The intended use of the Mega Motion device is to provide mobility to persons limited to a seated position that have the capability of operating a powered scooter.

Please fill out the following information for quick reference:

Mega Motion Service Center:	
Address:	
Phone Number:	_
Purchase Date:	Serial Number:

NOTE: This owner's manual is compiled from the latest specifications and product information available at the time of publication. We reserve the right to make changes as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased.



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## I. INTRODUCTION

### SAFETY

Welcome to Mega Motion Inc. The product you have purchased combines state of the art components with **safety**, comfort, and styling in mind. We are confident the design features will provide you with the conveniences you expect during your daily activities. Understanding how to **safely** operate and care for this product should bring you years of trouble free operations and service.

**Read** and **follow** all instructions, warnings, and notes in this manual before attempting to operate this product for the first time. You must also read all instructions, warnings, and notes contained in any supplemental instructional booklets that accompanied your scooter before initial operation. In addition, your **safety** depends upon you, as well as your provider, caregiver, or healthcare professional in using good judgement.

If there is any information in this manual which you do not understand, or if you require additional assistance for setup or operation, please contact 1-800-MEGA-508. Failure to follow the instructions, warnings, and notes in this manual and those located on your Mega Motion product can result in personal injury or product damage and will void Mega Motion's product warranty.

### PURCHASER'S AGREEMENT

By accepting delivery of this product, you promise that you will not change, alter, or modify this product or remove or render inoperable or unsafe any guards, shields, or other safety features of this product; fail, refuse, or neglect to install any retrofit kits from time to time provided by Mega Motion to enhance or preserve the safe use of this product.

### SHIPPING AND DELIVERY

Before using your scooter, make sure your delivery is complete as some components may be individually packaged. If you do not receive a complete delivery, please contact Mega Motion immediately. Where damage has occurred during transport, either to the packaging or content, please contact the delivery company responsible.

### **INFORMATION EXCHANGE**

We want to hear your questions, comments, and suggestions about this manual. We would also like to hear about the safety and reliability of your new scooter, and about the service you received from Mega Motion. Please notify us of any change of address, so we can keep you apprised of important information about safety, new products, and new options that can increase your ability to use and enjoy your scooter. Please feel free to contact us at the address below:

Mega Motion Inc. P.O. Box 275 Taylor, PA 18517-0275

1-800-MEGA-508

*NOTE: If you ever lose or misplace your product registration card or your copy of this manual, contact us and we will be glad to send you a new one immediately.* 

### **PRODUCT SAFETY SYMBOLS**

The symbols below are used on the scooter to identify warnings, mandatory actions, and prohibited actions. It is very important for you to read and understand them completely.



Pinch/Crush points created during assembly.



Corrosive chemicals contained in battery.



EMI/RFI - This product has been tested and passed at an immunity level of 20 V/m.



**Explosive conditions exist!** 



Do not expose to heat sources such as open flame or sparks. Do not transport batteries with flammable or combustible items.



Fully charge batteries before operating.

Remove key from an unattended scooter.



Read and follow the information in the owner's manual.



Keep tools and other metal objects away from battery terminals. Contact with tools can cause electrical shock.



Maximum seating weight.



Unlocked and in freewheel mode.

Place unit on level ground and stand to one side when changing from drive mode to freewheel mode or freewheel mode to drive mode.

Locked and in drive mode.



Front-to-rear plug orientation.



Battery posts, terminals, and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hand after handling.



ead

Do not place the scooter in freewheel mode when on an incline or decline.



Not a brake.



Use only AGM or Gel-Cell batteries to reduce the risk of leakage or explosive conditions.



Do not remove anti-tip wheels.



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



Avoid exposure to rain, snow, ice, salt, or standing water whenever possible. Maintain and store in a clean and dry condition.



This scooter does not meet ISO 7176-19 requirements for transport of an occupied scooter in a motor vehicle.



Manufactured in.



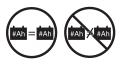
Removal of grounding prong can create electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access.



Do not connect an extension cord to the AC/DC converter or the battery charger.



Do not allow unsupervised children to play near the scooter while the batteries are charging.



Do not use batteries with different amp-hour (Ah) capacities. Do not mix old and new batteries. Always replace both batteries at the same time.



Keep your hands away from the tires when driving. Be aware that loose fitting clothing can become caught in drive tires.



Battery charger for indoor use only.







Indicate

Indicates electrical shock hazard.



Do not mix AGM or Gel-Cell batteries. Always use batteries of the same type and chemistry.



Indicates scooter attachment points.

### GENERAL



## MANDATORY! Do not operate your new scooter for the first time without completely reading and understanding this owner's manual.

Your scooter is a state-of-the-art life-enhancement device designed to increase mobility. Mega Motion provides an extensive variety of products to best fit the individual needs of the scooter user. Please be aware that the final selection and purchasing decision regarding the type of scooter to be used is the responsibility of the scooter user who is capable of making such a decision and his/her healthcare professional (i.e., medical doctor, physical therapist, etc.).

The contents of this manual are based on the expectation that a mobility device expert has properly fitted the scooter to the user and has assisted the prescribing healthcare professional and/or the authorized Mega Motion Provider in the instruction process for the use of the product.

There are certain situations, including some medical conditions, where the scooter user will need to practice operating the scooter in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a scooter user in various daily living activities.

As you begin using your scooter during daily activities, you will probably encounter situations in which you will need some practice. Simply take your time and you will soon be in full and confident control as you maneuver through doorways, on and off elevators, up and down ramps, and over moderate terrain.

Below are some precautions, tips, and other safety considerations that will help the user become accustomed to operating the scooter safely.

### MODIFICATIONS

Mega Motion has designed and engineered your scooter to provide maximum mobility and utility. A wide range of accessories is available from your authorized Mega Motion Provider to further customize your scooter to better suit your needs and/or preferences. However, under no circumstances should you modify, add, remove, or disable any feature, part, or function of your scooter.



WARNING! Do not modify your scooter in any way not authorized by Mega Motion. Do not use accessories if they have not been tested or approved for Mega Motion products.

### **REMOVABLE PARTS**



WARNING! Do not attempt to lift or move your scooter by any of its removable parts, including the armrests, seat, or shroud. Mega Motion recommends use of only solid, non-removable frame components such as scooter securement points or the front and rear frame weldments to lift or move your scooter.

**WARNING!** Lifting the scooter should be accomplished with no fewer than three people, one at the front and two at the rear of the unit.

### **PRE-RIDE SAFETY CHECK**

Get to know the feel of your scooter and its capabilities. Mega Motion recommends that you perform a safety check before each use to make sure your scooter operates smoothly and safely.

### Perform the following inspections prior to using your scooter:

- Check for proper tire inflation. Maintain but do not exceed the psi/bar/kPa air pressure rating indicated on each tire if equipped with pneumatic tires.
- Check all electrical connections. Make sure they are tight and not corroded.
- Check all harness connections. Make sure they are secured properly.
- Check the brakes.
- Check battery charge.

If you discover a problem, contact your authorized Mega Motion Provider for assistance.

### TIRE INFLATION

If your scooter is equipped with pneumatic tires, you should check or have the air pressure checked at least once a week. Proper inflation pressures will prolong the life of your tires and help ensure the smooth operation of your scooter.



WARNING! It is critically important that the psi/bar/kPa air pressure rating indicated on each tire be maintained in pneumatic tires at all times. Do not underinflate or overinflate your tires. Low pressure may result in loss of control, and overinflated tires may burst. Failure to maintain the psi/bar/kPa air pressure rating indicated on pneumatic tires at all times may result in tire and/or wheel failure.

WARNING! Inflate your scooter tires from a regulated air source with an available pressure gauge. Inflating your tires from an unregulated air source could overinflate them, resulting in a burst tire.

*NOTE:* If the tires on your scooter list the psi rating only, use the following conversion formulas to find the bar or kPa rating: bar = psi x 0.06895, kPa = psi x 6.89476

### WEIGHT LIMITATIONS

Your scooter is rated for a maximum weight capacity. Refer to the specifications table for information. Keep in mind that the maximum weight capacity includes the combined weight of the user and any accessories mounted to the scooter.



MANDATORY! Stay within the specified weight capacity for your scooter. Exceeding the weight capacity voids your warranty. Mega Motion will not be held responsible for injuries and/or property damage resulting from failure to observe weight limitations.



**WARNING!** Do not carry passengers on your scooter. Carrying passengers on your scooter may affect the center of gravity, resulting in a tip or a fall.

### **INCLINE INFORMATION**

More and more buildings have ramps with specified degrees of inclination, designed for easy and safe access. Some ramps may have turning switchbacks (180-degree turns) that require you to have good cornering skills on your scooter.

- Proceed with extreme caution as you approach the downgrade of a ramp or other incline.
- Take wide swings with your scooter around any tight corners. If you do that, the scooter's rear wheels will follow a wide arc, not cut the corner short, and not bump into or get hung up on any railing corners.
- When driving down a ramp, keep the scooter's speed adjustment set to the slowest speed setting to ensure a safely controlled descent.
- Avoid sudden stops and starts.

When climbing an incline, try to keep your scooter moving. If you must stop, start up again slowly, and then accelerate cautiously. When driving down an incline, do so by setting the speed adjustment dial to the slowest setting and driving in the forward direction only. If your scooter starts to move down the incline faster than you anticipated or desired, allow it to come to a complete stop by releasing the throttle control lever. Then push the throttle control lever forward slightly to ensure a safely controlled descent.



WARNING! When on any sort of an incline or decline, never place the scooter in freewheel mode especially while seated on it or standing next to it.

WARNING! When climbing an incline, do not zigzag or drive at an angle up the face of the incline. Drive your scooter straight up the incline. This greatly reduces the possibility of a tip or a fall. Always exercise extreme caution when negotiating an incline.



WARNING! Do not drive your scooter across the side of an incline or diagonally up or down an incline; do not stop, if possible, while driving up or down an incline.

**WARNING!** You should not travel up or down a potentially hazardous incline (i.e., areas covered with snow, ice, cut grass, or wet leaves).

WARNING! Even though your scooter is capable of climbing slopes greater than those listed in Specifications Appendix, do not, under any circumstances, exceed the incline guidelines or any other specifications. Doing so could cause instability in your scooter.

Handicap public access ramps are not subject to government regulation in all countries, and therefore do not necessarily share the same standard percent of slope. Other inclines may be natural or, if man-made, not designed specifically for scooters.

Tests were conducted with the scooter's seat in the highest position and adjusted rearward on the seat base to its farthest rearward position. Use the specification table information as a guideline. See Section "Appendix I - Specifications." Your scooter's ability to travel up inclines is affected by your weight, your scooter's speed, your angle of approach to the incline and your scooter setup.



WARNING! Any attempt to climb or descend a slope steeper than what is listed in the Specifications Appendix may put your scooter in an unstable position and cause it to tip.

WARNING! Never carry an oxygen tank weighing more than 13 lbs. (6 kg). Never fill the front or rear basket with contents exceeding 13 lbs. (6 kg).

When you approach an incline, it is best to lean forward. See figures 1 and 2. This shifts the center of gravity of you and your scooter toward the front of the scooter for improved stability.

NOTE: When negotiating ramps, if the throttle control lever is released while moving forward, the powered scooter may "roll back" approximately 3 feet (1 meter) before the brake engages. If the throttle control lever is released while moving in reverse, the powered scooter may "roll back" approximately 3 feet (1 meter) before the brake engages.





Figure 2. Increased Stability Driving Position

#### Figure 1. Normal Driving Position

### **CORNERING INFORMATION**

Excessively high cornering speeds can create the possibility of tipping. Factors which affect the possibility of tipping include, but are not limited to, cornering speed, steering angle (how sharply you are turning), uneven road surfaces, inclined road surfaces, riding from an area of low traction to an area of high traction (such as passing from a grassy area to a paved area – especially at high speed while turning), and abrupt directional changes. High cornering speeds are not recommended. If you feel that you may tip over in a corner, reduce your speed and steering angle (i.e., lessen the sharpness of the turn) to prevent your scooter from tipping.



WARNING! When cornering sharply, reduce your speed and maintain a stable center of gravity. When using your scooter at higher speeds, do not corner sharply. This greatly reduces the possibility of a tip or fall.

### **BRAKING INFORMATION**

Your scooter is equipped with these powerful brake systems:

- Regenerative: Uses electricity to rapidly slow the vehicle when the throttle control lever returns to the center/stop position.
- Disc Park Brake: Activates mechanically after regenerative braking slows the vehicle to near stop, or when power is removed from the system for any reason.

### **OUTDOOR DRIVING SURFACES**

Your scooter is designed to provide optimum stability under normal driving conditions—dry, level surfaces composed of concrete or asphalt. However, Mega Motion recognizes that there will be times when you will encounter other surface types. For this reason, your scooter is designed to perform admirably on packed soil, grass, and gravel. Feel free to use your scooter safely on lawns and in park areas.

- Avoid driving on uneven terrain and/or soft surfaces.
- Avoid tall grass that can become tangled in the running gear.
- Avoid loosely packed gravel and sand.
- Do not use your scooter in fresh or salt water.
- Do not use your scooter at the edge of a stream, lake, or ocean.
- If you feel unsure about a driving surface, avoid that surface.

### PUBLIC STREETS AND ROADWAYS



WARNING! You should not operate your scooter on public streets and roadways. Be aware that it may be difficult for traffic to see you when you are seated on your scooter. Obey all local pedestrian traffic rules. Wait until your path is clear of traffic, and then proceed with extreme caution.

### STATIONARY OBSTACLES (STEPS, CURBS, ETC.)

WARNING! Do not drive near raised surfaces, unprotected ledges, and/or drop-offs (curbs, porches, stairs, etc.).

WARNING! Do not attempt to have your scooter climb or descend an obstacle that is inordinately high.



WARNING! Do not attempt to have your scooter proceed backward down any step, curb, or other obstacle. This may cause the scooter to tip.

**WARNING!** Be sure your scooter is traveling perpendicular to any curb you may be required to ascend or descend. See figures 3 and 3A.

WARNING! Even though your scooter may be capable of handling greater obstacles, Mega Motion recommends that you do not attempt to negotiate a curb that has a height greater than 2 in. (5 cm). Doing so could cause instability in your scooter.

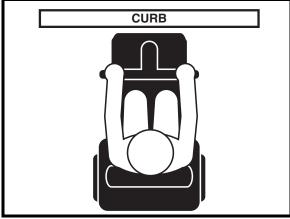






Figure 3A. Incorrect Curb Approach

### **INCLEMENT WEATHER PRECAUTIONS**

Exposure of your scooter to inclement weather conditions should be avoided whenever possible. If suddenly caught up in rain, snow, severe cold or heat while operating your scooter, proceed to shelter at the earliest opportunity. Thoroughly dry your scooter before storing, charging, or operating your scooter.



**PROHIBITED!** Operating in rain, snow, salt, mist/spray conditions, and on icy/slippery surfaces can cause damage to the scooter and electrical system. Maintain and store your scooter in a dry and clean condition.



WARNING! Prolonged exposure to hot or cold conditions may affect the temperature of upholstered and non-upholstered items on the scooter, possibly resulting in skin irritation. Exercise caution when using your scooter in extremely hot or cold conditions or when exposing your scooter to direct sunlight for prolonged periods of time.

### FREEWHEEL MODE

Your scooter is equipped with a manual freewheel lever that, when engaged, allows the scooter to be pushed. For more information about how to place your scooter into and out of freewheel mode, see III. "Your Scooter."

#### WARNING! When your scooter is in freewheel mode, the braking system is disengaged.

- Disengage the drive motors only on a level surface.
- Ensure the key is removed from the key switch.
- - Stand to the side of the scooter to engage or disengage freewheel mode. Never sit on a scooter to do this.
  - After you have finished pushing your scooter, always return it to the drive mode to lock the brakes.

An added feature built into the scooter is "**push-too-fast**" protection which safeguards the scooter against gaining excessive speed while in freewheel mode.

"Push-too-fast" operates differently depending on which of two conditions exists:

- If the key is switched "off" while in freewheel mode, the scooter's controller activates regenerative braking when the scooter is pushed faster than a maximum threshold which has been preprogrammed. In this case, the controller is acting as a speed governor.
- If the key is switched "on" while in freewheel mode, you will encounter considerable resistance at any speed. This prevents the scooter from gaining unwanted momentum should the manual freewheel lever inadvertently be released while driving the scooter.



## WARNING! Mega Motion recommends that you do not disconnect the batteries when the scooter is in freewheel mode as this may interfere with the function of the controller.

### **STAIRS AND ESCALATORS**

Scooters are not designed to travel up or down stairs or escalators. Always use an elevator.



### WARNING! Do not use your scooter to negotiate steps or escalators.

### Determine if the door opens toward or away from you.

- Use your hand to turn the knob or push the handle or push-bar.
- Drive your scooter gently and slowly forward to push the door open. Or drive your scooter gently and slowly backwards to pull the door open.

### **ELEVATORS**

Modern elevators have a door edge safety mechanism that, when pushed, reopens the door(s).

- If you are in the doorway of a elevator when the door(s) begin to close, push on the rubber door edge or allow the rubber door edge to contact the scooter and the door will reopen.
- Use care that pocketbooks, packages, or scooter accessories do not become caught in elevator doors.

# NOTE: If your scooter's turning radius is greater than 60 in. (152.4 cm), it may be difficult to maneuver in elevators and building entrances. Use caution when attempting to turn or maneuver your scooter in small spaces, and avoid areas that might pose a problem.

### LIFT/ELEVATION PRODUCTS

If you will be transporting your scooter during travel, you may find it necessary to use a vehicle-mounted lift system or elevation product to aid in transportation. Mega Motion recommends that you closely review the warnings, instructions, specifications, and safety information set forth by the manufacturer of the lift/ elevation product before using that product.

WARNING! Not all lift systems/elevation products are rated for use with an occupied mobility device. Mega Motion recommends that you do not remain seated in your scooter when it is being used in connection with any type of lift system/elevation product unless: That product is rated for occupied use by the manufacturer.



You are able to occupy your mobility device in strict conformity with the warnings, instructions, specifications, and safety guidelines set forth by the manufacturer.

WARNING! Always turn off the power to the unit when you are being transferred via an elevation product. Failure to do so may result in accidental throttle control lever contact, resulting in unintended movement and personal injury or product damage.

### BATTERIES

In addition to following the warnings below, be sure to comply with all other battery handling information.



MANDATORY! Battery posts, terminals, and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hands after handling.

**WARNING!** Scooter batteries are heavy. See specifications table. If you are unable to lift that much weight, be sure to get help. Use proper lifting techniques and avoid lifting beyond your capacity.



WARNING! Always protect the batteries from freezing and never charge a frozen battery. Charging a frozen battery may result in damage to the battery.

WARNING! Connect the battery harnesses in the proper manner. RED (+) cables must be connected to positive (+) battery terminals/posts. BLACK (-) cables must be connected to negative (-) battery terminals/posts. Protective caps should be installed over all battery terminals. REPLACE cables immediately if damaged.

### **BATTERY DISPOSAL AND RECYCLING**

If you encounter a damaged or cracked battery, immediately enclose it in a plastic bag and contact your local waste disposal agency or authorized Mega Motion Provider for instructions on disposal and battery recycling, which is our recommended course of action.

### PREVENTING UNINTENDED MOVEMENT



WARNING! If you anticipate being seated in a stationary position for an extended period of time, turn off the power. This will prevent unexpected motion from inadvertent throttle control lever contact.

### MOTOR VEHICLE TRANSPORT

Mega Motion recommends that you do not remain seated in your scooter while traveling in a motor vehicle. The scooter should be stowed in the trunk of a car or in the back of a truck or van with batteries removed and/or properly secured. In addition, all removable scooter parts, including the armrests, seat, and shroud should be removed and/or properly secured during motor vehicle transport.

WARNING! Although your scooter may be equipped with a positioning belt, this belt is not designed to provide proper restraint during motor vehicle transport. Anyone traveling in a motor vehicle should be properly secured in the motor vehicle seat with safety belts fastened securely.



WARNING! Do not sit on your scooter while it is in a moving vehicle.

WARNING! Always be sure your scooter and its batteries are properly secured when it is being transported. Batteries should be secured in an upright position and protective caps should be installed on the battery terminals. Batteries should not be transported with any flammable or combustible items.

### **GETTING ONTO AND OFF OF YOUR SCOOTER**

Getting onto and off of your scooter requires a good sense of balance. Please observe the following safety tips when getting onto and off of your scooter:

- Remove the key from the key switch.
- Ensure that your scooter is not in freewheel mode. See III. "Your Scooter."
- Make certain that the seat is fixed into place.
- Pivot the armrests up to make getting onto and off of the scooter easier.

**WARNING!** Position yourself as far back as possible in the scooter seat to prevent the scooter from tipping.



**WARNING!** Avoid putting all of your weight on the scooter armrests and do not use the armrests for weight bearing purposes, such as transfers. Such use may cause the scooter to tip, resulting in a fall from the scooter.

**WARNING!** Avoid putting all of your weight on the floorboard. Such use may cause the scooter to tip.

### **REACHING AND BENDING**

Avoid reaching or bending while driving your scooter. Bending forward creates the risk of accidental throttle control lever contact. Bending to the side while seated creates the risk of tipping. It is important to maintain a stable center of gravity and keep the scooter from tipping. Mega Motion recommends that the scooter user determine his/her personal limitations and practice bending and reaching in the presence of a qualified attendant.



WARNING! Do not bend, lean, or reach for objects if you have to pick them up from the scooter deck or from either side of the scooter. Movements such as these may change your center of gravity and the weight distribution of the scooter and cause your scooter to tip.



**PROHIBITED!** Keep your hands away from the tires when driving. Be aware that loose fitting clothing can become caught in drive tires.

### **POSITIONING BELTS**

Your authorized Mega Motion Provider, therapist(s), and other healthcare professionals are responsible for determining your requirement for a positioning belt in order to operate your scooter safely.



**WARNING!** If you require a positioning belt to safely operate your scooter, make sure it is fastened securely. Serious personal injury may result if you fall from the scooter.

### PRESCRIPTION DRUGS/PHYSICAL LIMITATIONS

The scooter user must exercise care and common sense when operating his/her scooter. This includes awareness of safety issues when taking prescribed or over-the-counter drugs or when the user has specific physical limitations.



**WARNING!** Consult your physician if you are taking prescribed or over-the-counter medication or if you have certain physical limitations. Some medications and limitations may impair your ability to operate your scooter in a safe manner.

### ALCOHOL/SMOKING

The scooter user must exercise care and common sense when operating his/her scooter. This includes awareness of safety issues while under the influence of alcohol or while smoking.

WARNING! Do not operate your scooter while you are under the influence of alcohol, as this may impair your ability to drive safely.



WARNING! Mega Motion strongly recommends that you do not smoke cigarettes while seated in your scooter, although the scooter has passed the necessary testing requirements for cigarette smoking. You must adhere to the following safety guidelines if you decide to smoke cigarettes while seated in your scooter.

- Do not leave lit cigarettes unattended.
- Keep ashtrays a safe distance from the seat cushions.
- Always make sure cigarettes are completely extinguished before disposal.

### FLAMMABILITY PRECAUTIONS

WARNING! Even though the plastics used on your scooter have been tested and have passed the applicable flammability standards, Mega Motion recommends that you do not expose your scooter to open flames.



**WARNING!** Replace worn or damaged upholstery immediately to reduce the risk of fire hazard.

**WARNING!** Be aware that washing of upholstered items may reduce the resistance to flammability of the fabric.

### ELECTROMAGNETIC AND RADIO FREQUENCY INTERFERENCE (EMI/RFI)



**WARNING!** Laboratory tests have shown that electromagnetic and radio frequency waves can have an adverse effect on the performance of electrically-powered mobility vehicles.

Electromagnetic and Radio Frequency Interference can come from sources such as cellular phones, mobile two-way radios (such as walkie-talkies), radio stations, TV stations, amateur radio (HAM) transmitters, wireless computer links, microwave signals, paging transmitters and medium-range mobile transceivers used by emergency vehicles. In some cases, these waves can cause unintended movement or damage to the control system. Every electrically-powered mobility vehicle has an immunity (or resistance) to EMI. The higher the immunity level, the greater the protection against EMI. This product has been tested and has passed at an immunity level of 20 V/M.



WARNING! Be aware that cell phones, two-way radios, laptops, and other types of radio transmitters may cause unintended movement of your electrically-powered mobility vehicle due to EMI. Exercise caution when using any of these items while operating your mobility vehicle and avoid coming into close proximity of radio and TV stations.



**WARNING!** The addition of accessories or components to the electrically-powered mobility vehicle can increase the susceptibility of the vehicle to EMI. Do not modify your scooter in any way not authorized by Mega Motion.

WARNING! The electrically-powered mobility vehicle itself can disturb the performance of other electrical devices located nearby, such as alarm systems.

*NOTE: If unintended motion or brake release occurs, turn your scooter off as soon as it is safe to do so. Call Mega Motion at 1-800-MEGA-508 to report the incident.* 

### TILLER CONSOLE

The tiller console houses all of the controls needed to drive your scooter, including the speed adjustment dial, throttle control lever, battery condition meter, lights switch, hazard lights switch and horn buttons. See figure 4.



**PROHIBITED!** Do not expose the tiller console to moisture. In the event that the tiller console does become exposed to moisture, do not attempt to operate your scooter until the tiller console has dried thoroughly.

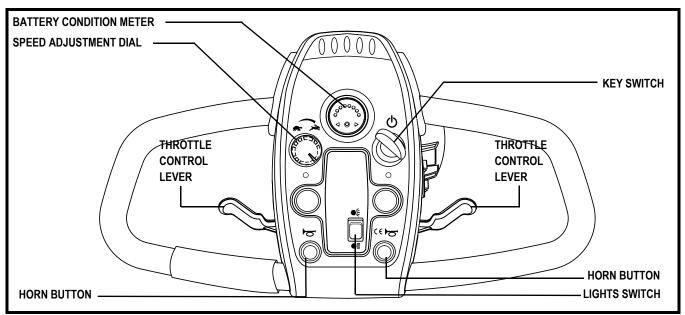


Figure 4. Tiller Console

### **Horn Buttons**

These buttons activate a warning horn. Your scooter must be powered up for the horn to be operational. Do not hesitate to use the warning horn when doing so may prevent accident or injury.

### **Key Switch**

- Insert the key into the key switch and turn it clockwise to power up (turn on) your scooter.
- Turn the key counterclockwise to power down (turn off) your scooter.



### WARNING! If the key is moved to the "off" position while your scooter is in motion, the electronic brakes will engage and your scooter will come to an abrupt stop!

### **Battery Condition Meter**

When the key is fully inserted and turned clockwise to power up your scooter, this meter indicates the approximate battery voltage strength. For further information on battery charging, see IV. "Batteries and Charging."

### **Lights Switch**

This switch controls your scooter's lights.

- Toggle the switch forward to turn on your scooter's front top light and running lights.
- Toggle the switch rearward to turn on all the scooters lights (upper and lower front and running lights).



## WARNING! Scooter users are required to use their lights when visibility is restricted—day or night.

### **Throttle Control Lever**

This lever allows you to control the forward speed and the reverse speed of your scooter up to the maximum speed you preset with the speed adjustment dial.

- To move **forward**, use your right thumb to push the right side of the throttle control lever.
- To move **rearward**, use your left thumb to push the left side of the throttle control lever.

Release the throttle control lever and allow your scooter to come to a complete stop before engaging the other side of the lever. When the throttle control lever is completely released, it automatically returns to the center "stop" position and engages your scooter's brakes.

### **Speed Adjustment Dial**

This dial allows you to preselect and limit your scooter's top speed.

- The image of the tortoise represents the slowest speed setting.
- The image of the hare represents the fastest speed setting.

### **Off-board Charger Port**

The off-board charger power cord plugs into this port when charging the batteries. See figure 5.

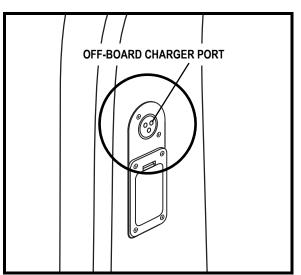


Figure 5. Off-board Charger Port

### **Tiller Console Fuses**

These fuses help protect your scooter's front lighting and key switch console systems from receiving an overload of electrical current. The fuses used in your scooter are the same type used in automobiles. **See figure 6**. See IX. "Care and Maintenance" for fuse replacement.

### **REAR COMPONENTS**

The batteries, the main circuit breaker (reset button), the manual freewheel lever, the anti-tip wheels, and the motor/transaxle assembly are located on the rear section of your scooter. **See figure 7**.

### Anti-Tip Wheels

The anti-tip wheels are an integral and important safety feature of your scooter. They are bolted to the frame at the rear of the scooter.

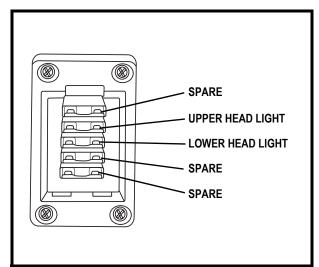


Figure 6. Tiller Console Fuses



## **PROHIBITED!** Do not remove the anti-tip wheels or modify your scooter in any way that is not authorized by Mega Motion.

WARNING! The anti-tip wheels may cause interference with the smooth transition of your scooter when ascending or descending a curb. Contact your authorized Mega Motion Provider for more information.

### Batteries

The batteries store the electrical energy that powers your scooter. See IV. "Batteries and Charging" for information on how to charge your scooter batteries.

### Motor/Transaxle Assembly

The motor/transaxle assembly is an electromechanical unit that converts electrical energy from your scooter's batteries into the controlled mechanical energy that drives the scooter's wheels.

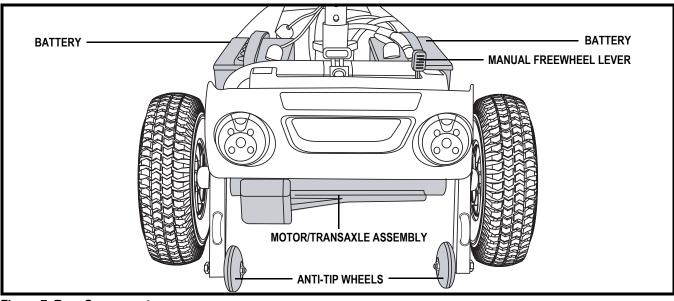


Figure 7. Rear Components

### Safety Flag Bracket (Optional)

An accessory bracket for installing an optional safety flag is mounted near each anti-tip wheel and also on the seatback hinge. To install the flag to the rear frame, use the smaller of the two supplied "L" shaped hex keys. To install the flag to the seat hinge, use the larger hex key. **See figure 8**.

### To install the flag:

- 1. Remove the cap from the top of the bracket.
- 2. Loosen the setscrew with the supplied "L" shaped hex key.
- 3. Insert the flag pole into the opening.
- 4. Tighten the setscrew to complete installation.

### **Manual Freewheel Lever**

Whenever you need or want to push your scooter for short distances, you can put it in freewheel mode.

- Remove the key from the key switch.
- Push forward on the manual freewheel lever to disable the drive system and the brake system.
- You may now push your scooter.
- Pull back on the manual freewheel lever to reengage the drive and the brake systems and take your scooter out of freewheel mode.

WARNING! When your scooter is in freewheel mode, the braking system is disengaged.

- Disengage the drive motors only on a level surface.
- Ensure the key is removed from the key switch.



- Stand to the side of the scooter to engage or disengage freewheel mode. Never sit on a scooter to do this.
- After you have finished pushing your scooter, always return it to the drive mode to lock the brakes.

NOTE: If the scooter is placed in freewheel mode (manual freewheel lever forward) while the key is in the "on" position, the scooter will not run until the manual freewheel lever is pushed backward and the key is turned to the "off" position, then back to the "on" position.

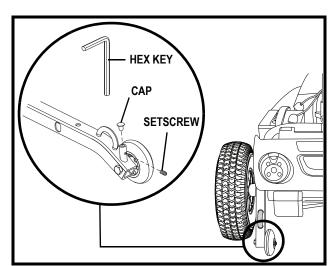


Figure 8. Safety Flag Bracket

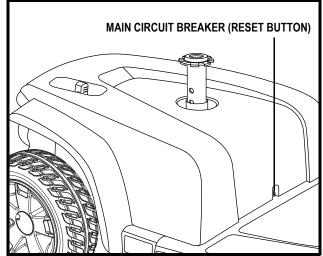


Figure 9. Main Circuit Breaker Reset Button

### Main Circuit Breaker (Reset Button)

When the voltage in the batteries becomes low or your scooter is heavily strained because of excessive loads, the main circuit breaker may trip to protect the motor and electronics from damage. When the breaker trips, the entire electrical system shuts down. See figure 9.

- The reset button pops out when the breaker trips.
- Allow a minute or so for the electronics to "rest."
- Push in the reset button to reset the breaker.
- If the breaker trips frequently, you may need to charge the batteries more often or have your authorized Mega Motion Provider perform a load test on the batteries.

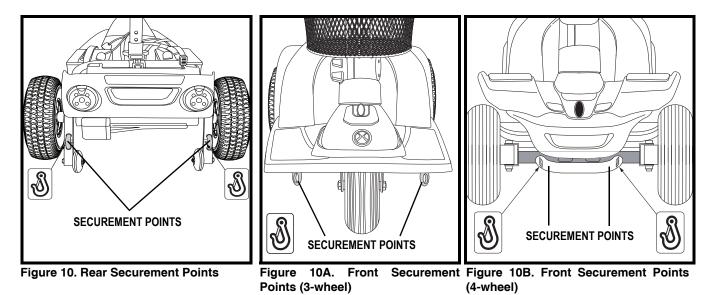
### SECUREMENT POINTS

Always secure the scooter in a forward-facing position in the vehicle. Attach the four tie-down straps to the designated securement points. **See figures 10, 10A, and 10B.** Tighten the straps to sufficiently remove all slack. Never attach tie-downs to adjustable, moving, or removable parts of the scooter such as armrests, shrouds, and wheels. These items should be removed. Position the anchor points for the rear tie-down straps directly behind the rear securement points on the scooter. The front tie-down straps should anchor to floor points that are spaced wider than the scooter to provide increased lateral stability.

#### WARNING! Do not leave the scooter in freewheel mode when securing it for transport.



WARNING! Ensure scooters are properly secured to the motor vehicle during transport. Scooters that are not properly secured can become a hazard to the user and to other vehicle passengers in the event of a crash, sudden stopping, or swerving, as the scooter could tip or slide out of place.



### **BATTERIES AND CHARGING**

Your scooter requires two long-lasting, 12-volt, deep-cycle batteries that are sealed and maintenance free. They are recharged by an off-board charging system.

- Charge your scooter's batteries fully prior to using it for the first time.
- Keep the batteries fully charged to keep your scooter running smoothly.

### **READING YOUR BATTERY VOLTAGE**

The battery condition meter on the tiller console indicates the approximate strength of your batteries using a color code. From right to left, green indicates fully charged batteries, yellow indicates a draining charge, and red indicates that an immediate recharge is necessary. **See figure 11**. To ensure the highest accuracy, the battery condition meter should be checked while operating your scooter at full speed on a dry, level surface.

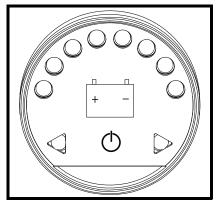


Figure 11. Battery Condition Meter

### **CHARGING YOUR BATTERIES**



**PROHIBITED!** Never use an extension cord to plug in your battery charger. Plug the charger directly into a properly wired standard electrical outlet.

**PROHIBITED!** Removal of the grounding prong can create an electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access.



**PROHIBITED!** Do not allow unsupervised children to play near the scooter while the batteries are charging. Mega Motion recommends that you do not charge the batteries while the scooter is occupied.



MANDATORY! Read the battery charging instructions in this manual and in the manual supplied with the battery charger before charging the batteries.



WARNING! Explosive gases may be generated while charging the batteries. Keep the scooter and the battery charger away from sources of ignition such as flames or sparks and provide adequate ventilation when charging the batteries.

**WARNING!** You must recharge your scooter's batteries with the supplied off-board charger. Do not use an automotive-type battery charger.

**WARNING!** Ensure that both ends of the charger power cord are clean and dry before plugging the charger power cord into the off-board charger port or the electrical outlet.

WARNING! Inspect the battery charger, wiring, and connectors for damage before each use. Contact your authorized Mega Motion Provider if damage is found.



**WARNING!** If the off-board battery charger is equipped with cooling slots, then do not attempt to insert objects through these slots.

WARNING! Be aware that the battery charger case may become hot during charging. Avoid skin contact and do no place on surfaces that may be affected by heat.

WARNING! If your off-board battery charger has not been tested and approved for outdoor use, then do not expose it to adverse or extreme weather conditions. If the battery charger is exposed to adverse or extreme weather conditions, then it must be allowed to adjust to the difference in environmental conditions before use indoors. Refer to the manual supplied with the battery charger for more information.

Follow these easy steps to charge your batteries safely:

- 1. Position your scooter close to a standard electrical outlet.
- 2. Remove the key from the key switch.
- 3. Make certain that the manual freewheel lever is in the drive (down) position.
- 4. Plug the 3-pin charger power cord into the offboard charger port. See figures 5 and 12.
- 5. Extend the charger power cord and plug it into the electrical outlet. We recommend that you charge the batteries for 8 to 14 hours.
- 6. When the batteries are fully charged, unplug the charger power cord from the electrical outlet and then from the off-board charger port.

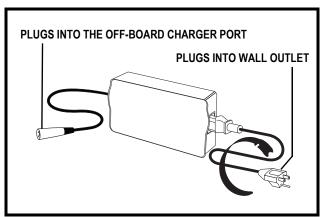


Figure 12. Off-board Charger

NOTE: The LED lights on the charger indicate different charger conditions at various times: charger power on, charging in progress, and charging complete. Refer to the manual supplied with the charger for a complete explanation of these indicators.

*NOTE:* There is a charger inhibit function on your scooter. The scooter will not run and the battery condition meter will not operate while the batteries are charging.

### FREQUENTLY ASKED QUESTIONS

### How does the charger work?

When your scooter's battery voltage is low, the charger works harder, sending more electrical current to the batteries to bring up their charge. As the batteries approach a full charge, the charger sends less and less electrical current. When the batteries are fully charged, the current sent from the charger is at nearly zero amperage. Therefore, when the charger is plugged in, it maintains the charge on your scooter's batteries, but does not overcharge them. Refer to the manual supplied with the battery charger for charging instructions.

### Can I use a different charger?

Chargers are selected precisely for particular applications and are especially matched to the type, size, and chemical formulation of specific batteries. For the safest and most efficient charging of your scooter's batteries, we recommend use of the charger supplied as original equipment with your Mega Motion product only. Any charging method resulting in batteries being charged individually is especially prohibited.

### What if my scooter's batteries won't charge?

- Ensure the red (+) and black (-) battery cables are connected properly to the battery terminals.
- Ensure both battery harnesses that extend from the batteries are plugged into their mating harness leading to the charger.
- Ensure both ends of the charger power cord are inserted fully.

### How often must I charge the batteries?

Two major factors must be considered when deciding how often to charge your scooter's batteries:

- All day scooter use on a daily basis.
- Infrequent or sporadic scooter use.

With these considerations in mind, you can determine how often and for how long you should charge your scooter's batteries. We designed the off-board charger so that it will not overcharge your scooter's batteries. However, you may encounter some problems if you do not charge your batteries often enough and if you do not charge them on a regular basis. Following the guidelines below will provide safe and reliable battery operation and charging.

- If you use your scooter daily, charge its batteries as soon as you finish using it for the day. Your scooter will be ready each morning. We recommend that you charge your scooter's batteries for 8 to 14 hours after daily use.
- If you use your scooter once a week or less, charge its batteries at least once a week for 12 to 14 hours at a time.
- Keep your scooter's batteries fully charged.
- Avoid deeply discharging your scooter's batteries.

### How can I ensure maximum battery life?

Fully charged deep-cycle batteries provide reliable performance and extended battery life. Keep your scooter's batteries fully charged whenever possible. Protect your scooter and batteries from extreme heat or cold. Batteries that are regularly and deeply discharged, infrequently charged, stored in extreme temperatures, or stored without a full charge may be permanently damaged, causing unreliable performance and limited service life.

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

Rarely will you have ideal driving conditions—smooth, flat, hard driving surfaces with no wind or curves. Often, you will face hills, pavement cracks, uneven and loosely packed surfaces, curves, and wind, all of which affect the distance or running time per battery charge. Below are a few suggestions for obtaining the maximum range per battery charge.

- Always fully charge your scooter's batteries prior to daily use.
- Maintain but do not exceed the psi/bar/kPa air pressure rating indicated on pneumatic tires.
- Plan your route ahead to avoid as many hills, cracked, broken or soft surfaces as possible.
- Limit your baggage weight to essential items.
- Try to maintain an even speed while your scooter is in motion.
- Avoid stop-and-go driving.

### What type and size of battery should I use?

We recommend deep-cycle batteries that are sealed and maintenance free. Both AGM and Gel-Cell are deep-cycle batteries that are similar in performance. Do not use wet-cell batteries, which have removable caps.



WARNING! Corrosive chemicals are contained in batteries. Use only AGM or Gel-Cell batteries to reduce the risk of leakage or explosive conditions.

NOTE: Sealed batteries are not serviceable. Do not remove the caps.

### How do I change a battery in my scooter?



MANDATORY! Battery posts, terminals, and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hands after handling.



WARNING! Always use two batteries of the exact same type, chemistry, and amp-hour (Ah) capacity. Refer to the specifications table in this manual and in the manual supplied with the battery charger for recommended type and capacities.

WARNING! Contact your authorized Mega Motion Provider if you have any questions regarding the batteries in your scooter.



WARNING! Do not replace the batteries while the scooter is occupied.

WARNING! Do not mix old and new batteries. Always replace both batteries at the same time.

**WARNING!** The batteries on your scooter should only be serviced or replaced by an authorized Mega Motion Provider or a qualified technician.



**PROHIBITED!** Keep tools and other metal objects away from battery terminals. Contact with tools can cause electrical shock.

#### You may need the following to change your batteries:

- Metric/standard socket set and ratchet
  - Adjustable wrench

To change the batteries in your scooter:



### WARNING! Do not lift beyond your physical capability. Ask for assistance when necessary while disassembling or assembling your scooter.

- 1. Remove the seat and rear shroud. See VII. "Disassembly and Assembly."
- 2. Disconnect the battery tie-down strap.
- 3. Disconnect the battery harnesses by pulling them straight up. See figure 13.
- 4. Disconnect the battery cables from the battery terminals.
- 5. Remove the old batteries.
- 6. Place a new battery in each battery well. Face the battery terminals toward the seat post.
- 7. Connect the red battery cable to the positive (+) battery terminal. See figure 13A.
- 8. Connect the black battery cable to the negative (-) battery terminal.
- 9. Ensure the battery terminals are covered with the tiller boots.

## *NOTE: See figure 13B for correct hardware placement for battery terminal connections.*

- 10. Reconnect the battery harnesses.
- 11. Reconnect the battery tie-down strap, making sure the strap is positioned over the frame release lever to ensure proper securement. See figure 13C.
- 12. Reinstall the rear shroud and seat.

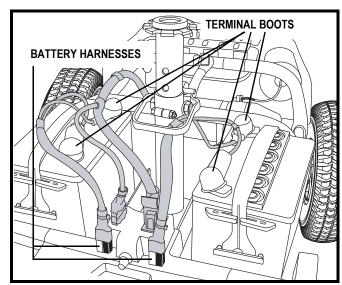


Figure 13. Battery Harnesses and Battery Cables

NOTE: If you encounter a damaged or cracked battery, immediately enclose it in a plastic bag and contact your local waste disposal agency or authorized Mega Motion Provider for instructions on disposal and battery recycling which is our recommended course of action.

### Why do my new batteries seem weak?

Deep-cycle batteries employ a different chemical technology than that used in car batteries, nickel-cadmium batteries (nicads), and other common battery types. Deep-cycle batteries are specifically designed to provide power, drain down their charge, and then accept a relatively quick recharge.

We work closely with our battery manufacturer to provide batteries that best suit your scooter's specific electrical demands. Fresh batteries are shipped fully charged to our customers. During shipping, the batteries may encounter temperature extremes that can influence their initial performance. Heat diminishes the charge on the battery; cold slows the available power and extends the time needed to recharge the battery.

It may take a few days for the temperature of your scooter's batteries to stabilize and adjust to their new room or ambient temperature. More importantly, it takes a few charging cycles (partial draining followed by full recharging) to establish the critical chemical balance that is essential to a deep-cycle battery's peak performance and long life.

## Follow these steps to properly break in your scooter's new batteries for maximum efficiency and service life:

- 1. Fully recharge any new battery prior to its initial use. This charging cycle brings the battery up to about 88% of its peak performance level.
- Operate your new scooter in familiar and safe areas. Drive slowly at first, and do not travel too far from your home or familiar surroundings until you have become accustomed to your scooter's controls and have properly broken in your scooter's batteries.
- 3. Fully recharge the batteries. They should be at over 90% of their peak performance level.
- 4. Operate your scooter again.
- 5. Fully recharge the batteries again.
- 6. After four or five charging cycles, the batteries are able to receive a charge of 100% of their peak performance level and are able to last for an extended period of time.

### What about public transportation?

If you intend to use public transportation with your scooter, you must contact the transportation provider in advance to determine their specific requirements.

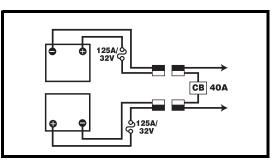


Figure 13A. Battery Cable Orientation

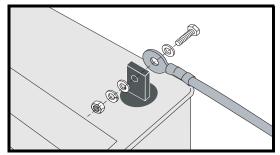


Figure 13B. Cable To Terminal Connection

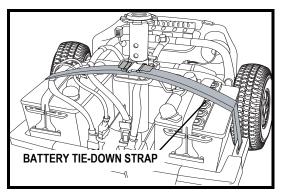


Figure 13C. Battery Tie-down Strap

## V. OPERATION

### **BEFORE GETTING ONTO YOUR SCOOTER**

- Have you fully charged the batteries? See IV. "Batteries and Charging."
- Is the manual freewheel lever in the drive (rearward) position? Never leave the manual freewheel lever pushed forward unless you are manually pushing your scooter.
- Is the tiller lock knob in the unlocked position? See VII. "Disassembly and Assembly."

### **GETTING ONTO YOUR SCOOTER**

1. Make certain that the key is removed from the key switch.



# WARNING! Never attempt to get onto or off of your scooter without first removing the key from the key switch. This will prevent the scooter from moving if accidental throttle control lever contact is made.

- 2. Stand at the side of your scooter.
- 3. Disengage the seat rotation lever and rotate the seat until it is facing you.
- 4. Make certain that the seat is fixed securely in position.
- 5. Position yourself comfortably and securely in the seat.
- 6. Disengage the seat rotation lever and rotate the seat until you are facing forward.
- 7. Make certain that the seat is fixed securely in position.
- 8. Make certain that your feet are safely on the floorboard.

### **PRE-RIDE ADJUSTMENTS AND CHECKS**

- Is the seat at the proper height? See VI. "Comfort Adjustments."
- Is the seat fixed securely in place?
- Is the tiller at a comfortable setting and locked securely in place? See VI. "Comfort Adjustments."
- Is the key fully inserted into the key switch and turned clockwise to the "on" position?
- Does the scooter's horn work properly?
- Is your proposed path clear of people, pets, and obstacles?
- Have you planned your route to avoid adverse terrain and as many inclines as possible?

### **OPERATING YOUR SCOOTER**

### **WARNING!** The following can adversely affect steering and stability while operating your scooter, resulting in loss of control or tipping:

- Holding onto or attaching a leash to walk your pet
- Carrying passengers (including pets)
- Hanging any article from the tiller
- Towing or being pushed by another motorized vehicle



WARNING! Higher Rollover Risk! Avoid abrupt maneuvers at excessive speed. It is recommended that you set the speed adjustment dial to the lowest setting until you become familiar with scooter controls and operation.

WARNING! Scooter braking distances are greater on an incline than on the horizontal.

WARNING! Keep both hands on the tiller and your feet on the floorboard at all times while operating your scooter. This driving position gives you the most control over your vehicle.

- Set the speed adjustment dial to your desired speed.
- Push or pull the appropriate side of the throttle control lever.

## V. OPERATION

- The electromechanical disc park brake automatically disengages and the scooter accelerates smoothly to the speed you preselected with the speed adjustment dial.
- Pull on the left handgrip to steer your scooter to the left.
- Pull on the right handgrip to steer your scooter to the right.
- Move the tiller to the center position to drive straight ahead.
- To stop, slowly release the throttle control lever. The electronic brakes will automatically engage, bringing your scooter to a stop.

## *NOTE:* Your scooter's reverse speed is slower than that of the forward speed you preset with the speed adjustment dial.

### **GETTING OFF YOUR SCOOTER**

- 1. Bring your scooter to a complete stop.
- 2. Remove the key from the key switch.
- 3. Disengage the seat rotation lever and rotate the seat until you are facing toward the side of your scooter.
- 4. Make certain that the seat is fixed securely in position.
- 5. Carefully and safely get out of the seat and stand to the side of your scooter.
- 6. You can leave the seat facing to the side to facilitate boarding your scooter next time.

### POWER DOWN TIMER FEATURE

Your scooter is equipped with an energy saving automatic power down timer feature designed to preserve your scooter's battery life. If you mistakenly leave the key in the key switch and in the "on" position but do not use your scooter for approximately 20 minutes, the scooter's controller shuts down automatically. Although the controller is shut down, power will still be supplied to the scooter's lighting system.

### If the power down timer feature takes effect, perform the following steps to resume normal operation.

- 1. Remove the key from the key switch.
- 2. Reinsert the key and power up your scooter.

### VI. COMFORT ADJUSTMENTS

### TILLER ANGLE ADJUSTMENT

Your scooter is equipped with an adjustable tiller.



WARNING! Remove the key from the key switch before adjusting the tiller or the seat. Never attempt to adjust the tiller or the seat while the scooter is in motion.

### To change the tiller angle:

- 1. Squeeze the tiller adjustment lever. See figure 14.
- 2. Move the tiller to a comfortable position.
- 3. Release the tiller adjustment lever to lock the tiller into place.

NOTE: In order to fully lower the tiller, you must first remove the seat. Remove the seat by pushing the seat rotation lever forward, slightly rotating the seat, then lifting the seat straight up.

### TILLER CONSOLE ANGLE ADJUSTMENT

The tiller console can be adjusted to different angles.

### To change the console angle:

- 1. Loosen the adjustment dial (turn counterclockwise) and move the tiller console up or down to a comfortable riding position. See figure 14.
- 2. Hold the console at that position and tighten (turn clockwise) the adjustment dial.

### ARMREST ANGLE ADJUSTMENT

The armrest angle of your scooter can be adjusted upward or downward by turning the adjustment dial. See figure 15.

NOTE: Pivot the armrests upward to make getting onto and off of your scooter easier.

### SEATBACK ADJUSTMENT



WARNING! Do not operate your scooter with the seatback in a reclined position.

**WARNING!** Always keep your back pressed firmly against the seatback while adjusting the angle.

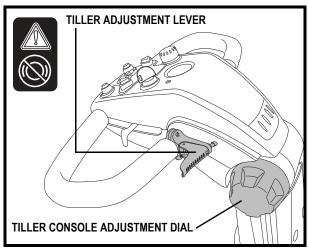


Figure 14. Tiller/Tiller Console Adjustment

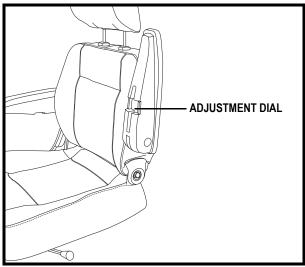


Figure 15. Armrest Angle Adjustment

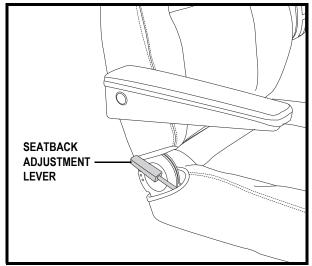


Figure 16. Seatback Adjustment

## **VI. COMFORT ADJUSTMENTS**

To adjust your scooter's reclining seat, perform these steps. See figure 16.

- 1. With your back pressed up against the seatback, lift up on the seatback adjustment lever and lean forward or backward to adjust the seatback angle.
- 2. Release the seatback adjustment lever once the seat is in a comfortable riding position.

### SEAT ROTATION ADJUSTMENT

The seat rotation lever will secure the seat into several positions.

- 1. Push forward on the seat rotation lever to disengage the seat. See figure 16A.
- 2. Rotate the seat to the desired position.
- 3. Release the lever to secure the seat into place.

### FRONT-TO-BACK SEAT ADJUSTMENT

You can reposition the seat forward or backward to adjust the distance between the seat and the tiller. See figure 16A.

- 1. Move the seat sliding lever outward.
- 2. While holding the lever out, slide the seat forward or backward.
- 3. Release the seat sliding lever once the seat is in the desired position.

### SEAT HEIGHT ADJUSTMENT

The seat can be repositioned to different heights. See figure 17.

- 1. Remove the seat and shroud from your scooter. See VII. "Disassembly and Assembly."
- 2. Loosen the seat height adjustment nut and remove it from the bolt. Remove the bolt and washers.
- 3. Loosen the clamp-action bolt.
- 4. Raise or lower the upper seat post to the desired seat height.
- 5. While holding the upper seat post at that height, match up the locating holes in the upper seat post with those of the lower seat post.
- 6. With one washer on the seat height adjustment bolt, insert it through the locating holes of both the upper and lower seat posts.
- 7. Reinstall the other washer and nut and tighten.

### *NOTE:* Ensure both washers have been reinstalled before fully tightening the seat height adjustment nut.

- 8. Tighten the clamp-action bolt.
- 9. Reinstall the rear shroud and the seat.

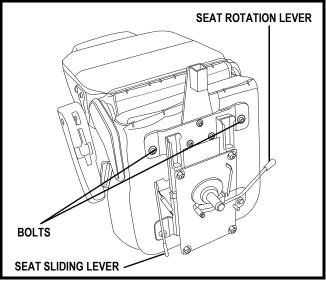


Figure 16A. Seat Adjustment Levers

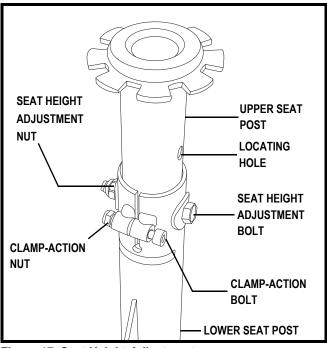


Figure 17. Seat Height Adjustment

## VI. COMFORT ADJUSTMENTS

### **MIRROR POSITION**

#### To install the mirror (see figure 18):

- 1. Determine a side to install the mirror and remove the rubber plug from the top of the tiller handle.
- 2. Insert the threaded end of the mirror holder into the opening and rotate it clockwise until snug.
- 3. If necessary, rotate the nut clockwise to secure the mirror in place.

#### To adjust the mirror:

- 1. Position yourself in a seated driving position facing forward.
- 2. Adjust the mirror left, right, up or down until you have a good line of sight behind you.

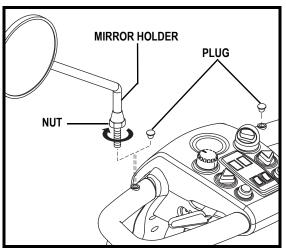


Figure 18. Mirror Installation

### **POSITIONING BELT (OPTIONAL)**

Your scooter seat may be equipped with an auto-type positioning belt that can be adjusted for operator comfort. **See figure 19**. The positioning belt is designed to help support the operator so that he/she does not slide down or forward in the seat. The positioning belt is not designed for use as a restraining device.



### WARNING! The positioning belt should be secured at all times. Never allow the positioning belt to hang or drag on the floor as it may become entangled.

### To install the positioning belt (if required):

- 1. Remove the seat from your scooter.
- 2. Place the seat upside down so that you can see the bottom of the seat base.
- 3. Remove the two bolts on the outermost part of the rear seat mounting strap. See figure 16A.
- 4. Insert the bolt through the appropriate end of the positioning belt and then through the seat mounting strap for each side of the scooter seat.
- 5. Tighten the bolts.

### To adjust the positioning belt for operator comfort:

- 1. Insert the metal tab on the right side of the belt into the plastic housing on the opposite strap until you hear a "click."
- 2. Pull the strap on the right side of the belt until it is secure, but not so tight as to cause discomfort.

### To release the positioning belt:

1. Press the push button mechanism on the plastic housing.

MANDATORY! Make sure the positioning belt is properly secured to the scooter and is adjusted for operator comfort.



MANDATORY! Inspect the positioning belt for loose or damaged parts before each use of the scooter. If you discover a problem, contact your authorized Mega Motion Provider for maintenance and repair.

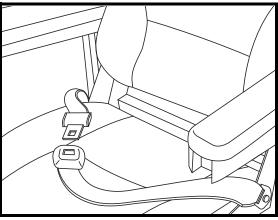


Figure 19. Positioning Belt

## VII. DISASSEMBLY AND ASSEMBLY

### DISASSEMBLY

You can disassemble the scooter into several pieces: the seat, the front section, the rear section, the rear shroud, the basket, and the batteries. See **figure 20**. No tools are required to disassemble or assemble your scooter, but keep in mind that the disassembled sections of the scooter take up more floor space than the assembled unit. Always disassemble or assemble your scooter on a level, dry surface with sufficient room for you to work and move around your scooter—about 2 meters (6 feet) in all directions. Remember that some scooter components are heavy and you may need assistance when lifting them.



WARNING! Do not lift beyond your physical capability. Ask for assistance when necessary while disassembling or assembling your scooter.

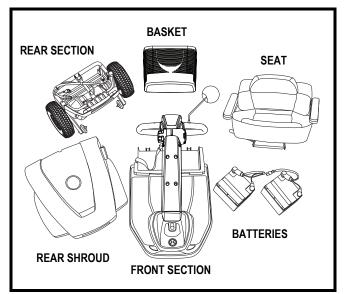
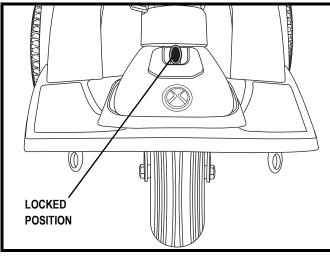


Figure 20. The Scooter Disassembled

- 1. Place the scooter in drive mode by engaging the freewheel lever.
- 2. Lock the tiller in the straight ahead position by pushing the tiller lock knob in and turning it clockwise 90°. See figure 21. The front wheel must face forward in order to lock the tiller.
- 3. Remove the seat by lifting it straight up and off of the scooter. If you encounter resistance when removing the seat, disengage the seat rotation lever and swivel the seat back and forth while lifting up on the seat.
- 4. Gently pull the rear shroud up and off of the rear section of the scooter.
- 5. Unplug the front-to-rear and rear lighting harnesses by squeezing the sides and pulling straight up.
- 6. Unplug both battery harnesses. Pull each harness straight up. See figure 23.



WARNING! Failure to unplug both battery harnesses, the front-to-rear harness, and rear lighting harness prior to separating the front and rear sections could result in permanent damage to the scooter.





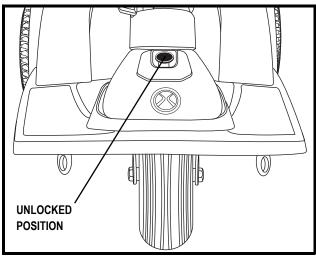


Figure 22. Tiller Lock Knob (Unlocked)

## VII. DISASSEMBLY AND ASSEMBLY

- 7. Unfasten the battery tie-down straps and remove the batteries from the battery wells.
- 8. Squeeze the tiller adjustment lever and lower the tiller to its lowest point. Adjust the tiller console if necessary.



WARNING! Failure to unplug both battery harnesses, the front-to-rear harness, and rear lighting harness prior to separating the front and rear sections could result in permanent damage to the scooter.

### **Frame Separation**

- 1. Lift up on the frame release lever. See figure 24.
- 2. Lift the front section up until the frame hooks of the front section separate from the rear section. See figure 24.

*NOTE: Stabilize the rear section with your free hand by holding onto the upper frame tube. See figure 25.* 

3. Slowly separate the two sections. See figure 25.

### ASSEMBLY

- 1. Position the front and rear sections of your scooter as shown in **figure 24**.
- 2. Use the frame release lever to lift the front section as you align the frame hooks of the front section with the lower frame tube of the rear section. See figure 24.
- 3. Once the frame hooks are over the lower frame tube, lower the front section completely. This will engage the frame lock.
- 4. Raise the tiller.
- 5. Reinstall both batteries and secure with the battery tie-down strap, making sure the strap is positioned over the frame release lever to ensure proper securement.
- 6. Connect the front-to-rear harness, rear lighting harness, and both battery harnesses. See figure 23.
- 7. Reinstall the rear shroud.
- 8. Reinstall the seat and rotate it into place.
- 9. Unlock the front wheel by turning the tiller lock knob 90° counterclockwise. See figure 22.



WARNING! After assembly, make absolutely certain the tiller lock knob is in the unlocked position before riding your scooter.

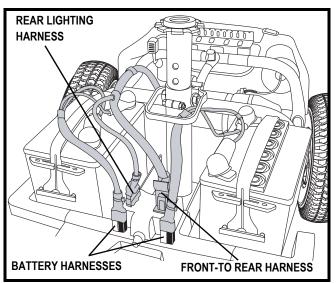


Figure 23. Harness Connections

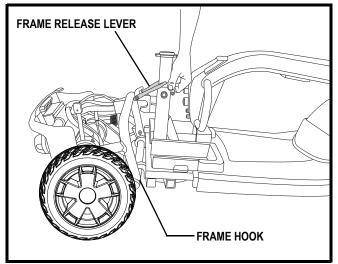


Figure 24. Frame Release

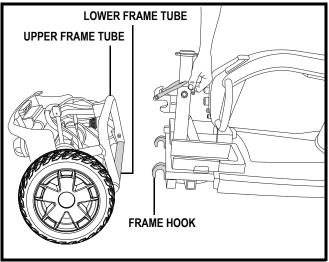


Figure 25. Frame Separation

## VIII. BASIC TROUBLESHOOTING

Any electromechanical device occasionally requires some troubleshooting. However, most of the problems that may arise can usually be solved with a bit of thought and common sense. Many of these problems occur because the batteries are not fully charged or because the batteries are worn down and can no longer hold a charge.

### **DIAGNOSTIC FAULT CODES**

The diagnostic fault codes for your scooter are designed to help you perform basic troubleshooting quickly and easily. The scooter will either display a diagnostic flash code or emit a beep code in the event one of the conditions listed below develops.

*NOTE:* Your scooter will not run unless the fault code condition is resolved and the scooter has been turned off, then turned back on.

FAULT CODE	CONDITION	SOLUTION
■ ■ (1,1)	Controller is hot; the scooter seems to be losing power.	Shut down your scooter for a minimum of several minutes to allow the controller to cool.
	Battery charge is low.	Charge batteries as soon as possible.
■ ■■ (1,2)	Throttle pot fault	Contact your authorized Mega Motion Provider for assistance.
■ ■■■ (1,3)	Speed pot fault	Contact your authorized Mega Motion Provider for assistance.
• ••••• (1,5)	Attempting to operate the scooter with the charger attached.	Turn the scooter key to the off position. Switch off the charger and remove the cord from the charger port, then restart your scooter.
	Throttle control lever not at center position at start up.	Return the throttle control lever to the center position, turn scooter off, and then back on.
■■■ ■■■ (3,4)	The manual freewheel lever may be in the freewheel (forward) position.	Turn the scooter key to the off position. Push the freewheel lever to the drive (backward) position, then restart your scooter.
■■■ ■■ (3,2)	A brake fault has occurred.	Contact your authorized Mega Motion Provider for assistance.

### What if all the systems on my scooter seem to be "dead"?

- Make certain that the key is in the "on" position.
- Check that the batteries are fully charged.
- Push in the main circuit breaker reset button. See III. "Your Scooter."
- Make certain that both battery harnesses and the front-to-rear harness are firmly connected. See VII. "Disassembly and Assembly."
- Be sure the power down timer feature has not been activated. See V. "Operation."

## VIII. BASIC TROUBLESHOOTING

### What if my scooter does not move when I engage the throttle control lever?

- When the manual freewheel lever is pushed forward, the brakes are disengaged and all power to the motor/transaxle assembly is cut.
- Pull back on the manual freewheel lever, turn the scooter off and then turn the scooter on to return to normal scooter operation.

#### What if the main circuit breaker repeatedly trips?

- Charge the scooter's batteries more frequently. See IV. "Batteries and Charging."
- If the problem continues, have both of your scooter's batteries load tested by your authorized Mega Motion Provider.
- If the main circuit breaker trips repeatedly, contact your authorized Mega Motion Provider for service.
- You may also perform the load test yourself. Battery load testers are available at most automotive parts stores. Follow the directions supplied with the load tester.
- See IV. "Batteries and Charging" or "Appendix I Specifications" for information about your scooter's battery type.

## What if the battery condition meter dips way down and the motor surges or hesitates when I engage the throttle control lever?

- Fully charge your scooter's batteries. See IV. "Batteries and Charging."
- Have your authorized Mega Motion Provider load test each battery.
- Or, see the previous troubleshooting question for load testing the batteries yourself.

If you experience any problems with your scooter that you are not able to solve, immediately contact your authorized Mega Motion Provider for information, maintenance, and service.

## IX. CARE AND MAINTENANCE

Your scooter requires a minimal amount of care and maintenance. If you do not feel confident in your ability to perform the maintenance listed below, you may schedule inspection and maintenance at your authorized Mega Motion Provider. The following areas require periodic inspection and/or care and maintenance.

### TIRE PRESSURE

■ If equipped with pneumatic tires, always maintain the psi/bar/kPa air pressure indicated on each tire.



WARNING! It is important that the psi/bar/kPa air pressure indicated on each tire be maintained in pneumatic tires at all times. Do not underinflate or overinflate your tires. Low pressure may result in loss of control, and overinflated tires may burst. Failure to maintain the psi/bar/kPa air pressure indicated on pneumatic tires at all times may result in tire and/or wheel failure.

Regularly inspect your scooter's tires for signs of wear.

### **EXTERIOR SURFACES**

Bumpers, tires, and trim can benefit from an occasional application of rubber or vinyl conditioner.



WARNING! Do not use a rubber or vinyl conditioner on the scooter's vinyl seat or tire tread, as this may cause them to become dangerously slippery.

### **CLEANING AND DISINFECTION**

- Use a damp cloth and mild, non-abrasive cleanser to clean the plastic and metal parts of your scooter. Avoid using products that may scratch the surface of your scooter.
- If necessary, clean your product with an approved disinfectant. Make sure the disinfectant is safe for use on your product before application.



WARNING! Follow all safety instructions for the proper use of the disinfectant and/or cleaning agent before applying it to your product. Failure to comply may result in skin irritation or premature deterioration of upholstery and/or scooter finishes.

### **BATTERY TERMINAL CONNECTIONS**

- Make certain that the terminal connections remain tight and uncorroded.
- The batteries must sit flat in the battery wells.

### WIRING HARNESSES

- Regularly check all wiring connections.
- Regularly check all wiring insulation, including the charger power cord, for wear or damage.
- Have your authorized Mega Motion Provider repair or replace any damaged connector, connection, or insulation that you find before using your scooter again.



**PROHIBITED!** Even though the scooter has passed the necessary testing requirements for ingress of liquids, you should keep electrical connections away from sources of dampness, including direct exposure to water or bodily fluids and incontinence. Check electrical components frequently for signs of corrosion and replace as necessary.



WARNING! Do not pull on electrical harnesses directly to detach them from the scooter. Always grasp the connector itself when disconnecting the harness to prevent wire damage.

### XI. CARE AND MAINTENANCE

### AXLE BEARINGS AND THE MOTOR/ TRANSAXLE ASSEMBLY

You do not need to lubricate these items, as they are all prelubricated and sealed.

### **MOTOR BRUSHES**

The motor brushes are housed inside of the motor transaxle/assembly. They should be inspected periodically for wear by your authorized Mega Motion Provider.

### WHEEL REPLACEMENT

If your scooter is equipped with pneumatic tires and you have a flat tire, you can have the tube replaced. If your scooter is equipped with a solid tire insert, either the solid insert or the entire wheel must be replaced depending on the model. Contact your authorized Mega Motion Provider for information regarding replacement wheels for your scooter.

> WARNING! Wheels on your scooter should only be serviced/replaced by an authorized Mega Motion Provider or qualified technician.

> WARNING! Completely deflate pneumatic tires before dismantling the rim or attempting repair.

WARNING! Be sure that the key is removed from the key switch and the scooter is not in freewheel mode before performing this procedure.

WARNING! When changing a tire, remove only the center lug nut, then remove the wheel. If any further disassembly is required, deflate the tire completely or it may explode.

## Follow these easy steps for a quick and safe repair of both pneumatic and solid tires:

- 1. Remove the key from the key switch.
- 2. Elevate the side of the scooter from which you are removing the tire. Place wooden blocks under the frame to elevate the scooter.
- 3. If you are changing a pneumatic tire, completely deflate it before removing the wheel.
- 4. Remove the drive wheel nut and washer from the axle. See figure 26.
- 5. Pull the wheel off the axle.
- 6. Remove the nuts and washers and separate the rim halves. See figure 27.
- 7. Remove the old tube from the pneumatic tire and replace it with a new tube or replace the entire assembly if it is a solid tire.
- 8. Reassemble the rim halves.
- 9. Slide the wheel back onto the axle. Make sure that the axle key is in the axle slot. See figure 26.

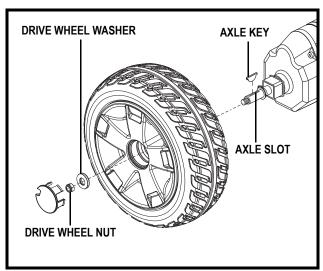


Figure 26. Solid Tire Wheel Removal

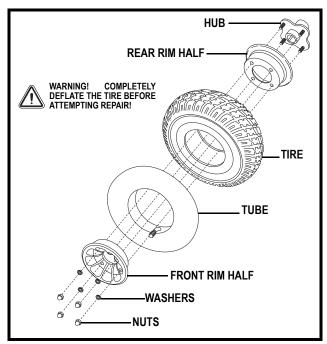


Figure 27. Drive Wheel Assembly

## IX. CARE AND MAINTENANCE



**WARNING!** Failure to ensure that the axle key is properly installed into the axle slot when mounting the wheel can result in electronic brake failure and/or product damage.

10. Reinstall the drive wheel nut and washer onto the axle and tighten.



### WARNING! Make sure both the nut and washer are reinstalled and tightened properly.

- 11. Inflate pneumatic tires to the psi/bar/kPa air pressure rating indicated on each tire.
- 12. Remove the blocks from beneath the scooter.

### CONSOLE, CHARGER, AND ELECTRONIC CONTROLLER MODULE

- Keep these areas away from moisture.
- Before operating your scooter, allow any of these areas to dry thoroughly if they have been exposed to moisture.

### **ABS PLASTIC SHROUDS**

- The front tiller shroud, front shroud, and the rear shroud are formed from durable ABS plastic and are coated with an advanced formula urethane paint.
- A light application of car wax will help the shrouds retain their high gloss.

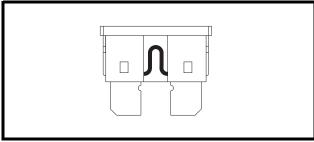
### FUSE REPLACEMENT

### To replace a fuse:

- 1. Remove the fuse by pulling it straight out of its slot.
- 2. Examine the fuse to be sure it is blown. See figures 28 and 29.
- 3. Insert a new fuse of the proper rating.



## WARNING! The replacement fuse must exactly match the rating of the fuse being replaced. Failure to use properly rated fuses may cause damage to the electrical system.



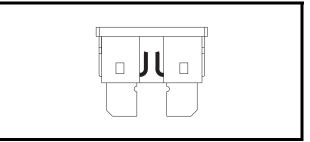


Figure 28. Working Fuse

#### Figure 29. Blown Fuse (Replace)

### NYLON LOCK NUT REPLACEMENT

Any nylon insert lock nut removed during the periodic maintenance, assembly, or disassembly of the scooter must be replaced with a new nut. Nylon insert lock nuts should not be reused as it may cause damage to the nylon insert, resulting in a less secure fit. Replacement nylon insert lock nuts are available at local hardware stores or through your authorized Mega Motion Provider.

### IX. CARE AND MAINTENANCE

### STORING YOUR SCOOTER

If you plan on not using your scooter for an extended period of time, it is best to:

- 1. Fully charge its batteries prior to storage.
- 2. Disconnect the batteries from the scooter.
- 3. Store your scooter in a warm, dry environment.
- 4. Avoid storing your scooter where it will be exposed to temperature extremes.



## **WARNING!** Always protect batteries from freezing temperatures and never charge a frozen battery. Charging a frozen battery can result in damage to the battery.

Batteries that are regularly and deeply discharged, infrequently charged, stored in extreme temperatures, or stored without a full charge may be permanently damaged, causing unreliable performance and limited service life. It is recommended that you charge the scooter batteries periodically throughout periods of prolonged storage to ensure proper performance.

You may wish to place several boards under the frame of your scooter to raise it off of the ground during periods of prolonged storage. This takes the weight off the tires and reduces the possibility of flat spots developing on the areas of the tires contacting the ground.

### **DISPOSAL OF YOUR SCOOTER**

Your scooter must be disposed of according to applicable local and national statutory regulations. Contact your local waste disposal agency or authorized Mega Motion Provider for information on proper disposal of packaging, metal frame components, plastic components, electronics, batteries, neoprene, silicone, and polyurethane materials.

## X. WARRANTY

### 90-DAY LIMITED WARRANTY

For 90 days from the date of purchase, Mega Motion will repair or replace at our option to the original purchaser, free of charge, any of the following parts found upon examination by an authorized representative of Mega Motion to be defective in material and/or workmanship:

Fork

Chargers

### Structural frame components, including:

- Main Frame
- Tiller Frame
- Rubber Components
- Bearings
- Seat Post **Bushings**

Harnesses

Plastic components except body

### Also, electronic assemblies including:

- Electronic Controllers
- Any other electrical subassembly

### SIX-MONTH WARRANTY

The battery is covered by a separate six-month warranty, provided by the battery manufacturer. The batteries are not warranted by Mega Motion.

### WARRANTY EXCLUSIONS

This warranty does not extend to those items which may require replacement due to normal wear and tear.

- ABS Plastic shrouds
- Motor brushes
- Upholstery and seating

Brake Pads

Solid Tires 

Fuses/Bulbs

- Circumstances beyond the control of Mega Motion
- Labor, service calls, shipping, and other charges incurred for repair of the product, unless specifically authorized, IN ADVANCE, by Mega Motion
- Repairs and/or modifications made to any part without specific consent from Mega Motion

Exclusions also include components with damage caused by:

- Contamination
- Abuse, misuse, accident, or negligence
- Battery fluid spillage or leakage
- Commercial use, or use other than normal
- Improper operation, maintenance, or storage
- Batteries not properly maintained by recommended charging and storage procedures.

### SERVICE CHECKS AND WARRANTY SERVICE

Warranty service must be performed by Mega Motion. Do not return faulty parts to Mega Motion without prior written authorization. All transportation costs and shipping damage incurred while submitting parts for repair or replacement are the responsibility of the purchaser. Please contact 1-800-MEGA-508 for information on the current cost associated with a service visit.

There is no other express warranty.

## X. WARRANTY

### **IMPLIED WARRANTIES**

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from the date of original purchase and to the 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 or limitation of incidental or consequential damages. So, the above limitation or exclusion may not apply to you.

## APPENDIX I - SPECIFICATIONS

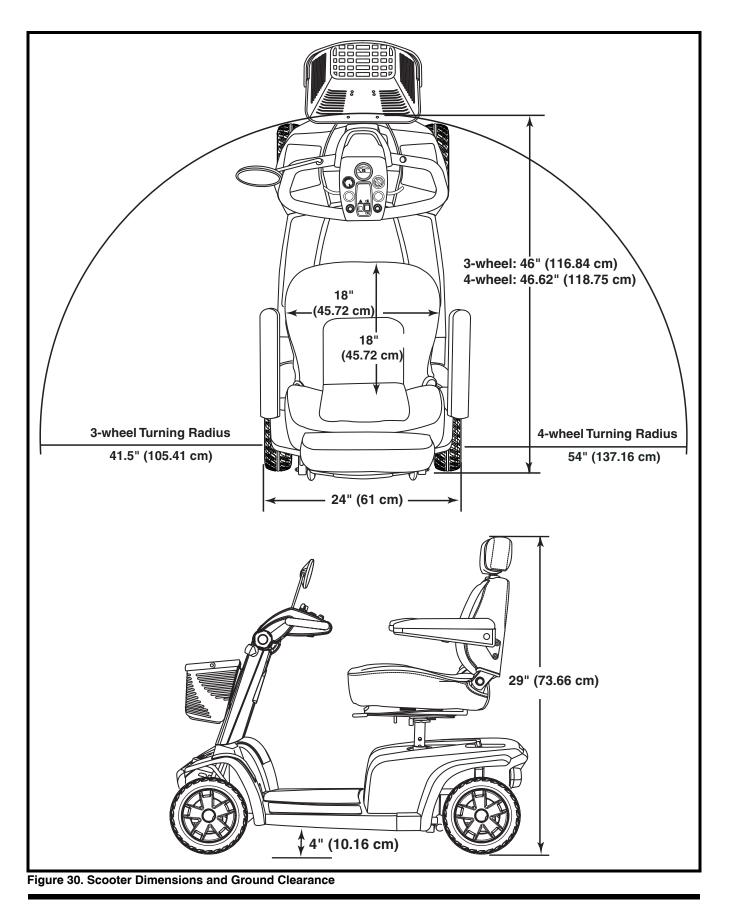
ENDEAVOR X SPECIFICATIONS				
Model Numbers	3-wheel: MM4001DX; 4-wheel: MM4401DX			
Maximum Allowable Incline	3-wheel: 5° (8.7%); 4-wheel: 6° (10.5%)			
Maximum Angle Capacity	10° (17.6%)			
Maximum Climbing Ability	2 in. (5 cm)			
Overall Length <sup>3</sup>	3-wheel: 46 in. (116.84 cm); 4-wheel: 46.62 in. (118.75 cm)			
Overall Width <sup>3</sup>	24 in. (61cm)			
Total Weight Without Batteries	3-wheel: 155 lbs. (70.3 kg); 4-wheel: 171.5 lbs. (77.8 kg)			
Heaviest Piece When Disassembled	Front section: 3-wheel: 59.5 lbs. (27 kg); 4-wheel: 69 lbs. (31.3 kg)			
Turning Radius <sup>3</sup>	3-wheel: 41.5 in. (105.41 cm); 4-wheel: 54 in. (137.16 cm)			
Speed (Maximum) <sup>1</sup>	Up to 5.7 mph (9.17 km/h)			
Range Per Charge <sup>1, 2</sup>	Up to 10.85 miles (17.5 km) with U-1 batteries			
Ground Clearance	4 in. (10.16 cm) at deck			
Weight Capacity	350 lbs. (158 kg)			
Standard Seating Type	CRS Deluxe Weight: 49 lbs. (22.2 kg) Material: Vinyl Dimensions: 18 in. (45.72 cm) width 18 in. (45.72 cm) depth			
Drive System	Rear-wheel drive, sealed transaxle, 24 volt DC motor			
Tires	Type: Solid Front: 3.5 in. x 10 in. (8.89 cm x 25.4 cm) Rear: 4 in. x 13 in. (10.16 cm x 25.4 cm)			
Battery Requirements <sup>4, 5</sup>	Two 12-volt, deep-cycle Size: U-1 (40 Ah optional) Weight: (U-1) 24.5 lbs. (11.11 kg) / (40Ah) 32.5 lbs. (14.75 kg)			
Battery Charger	Off-board			

<sup>1</sup> Varies with user weight, terrain type, battery amp-hour (Ah), battery charge, battery condition, and tire condition. This specification can be subject to a variance of +10%, -5%.

- <sup>2</sup> Tested in accordance with ANSI/RESNA, WC Vol 2, Section 4 & ISO 7176-4 standards. Results derived from theoretical calculation based on battery specifications and drive system performance. Test conducted at maximum weight capacity.
- <sup>3</sup> Due to manufacturing tolerances and continual product improvement, this specification can be subject to a variance of (+ or -) 3 %.
- <sup>4</sup> AGM or Gel-Cell type required. See IV. "Batteries and Charging."
- <sup>5</sup> Battery weight may vary based on battery manufacturer.

## *NOTE: This product conforms to all applicable ANSI-RESNA testing requirements and ISO 7176 series EN12184 standards. All specifications subject to change without notice.*

## **APPENDIX I - SPECIFICATIONS**



## NOTES



Mega Motion Inc. P.O. Box 275 Taylor, PA 18517-0275

1-800-MEGA-508

\* I NFMANU4333\*