



LTrike M10

OPERATION MANUAL

REV 1.4

Serial #

Congratulations on your purchase of the LTrike M10.

Please read this manual in its entirety in order to familiarize yourself with the operation and care of the M10.

NOTE:

This vehicle is not designed/recommended for persons who are confined to a wheelchair and/or cannot move their legs or stand and balance on their own.

PLEASE READ FOR YOUR SAFETY!

- This product is not a toy and is not recommended for use by persons younger than 12 years of age.
- Always turn off the power before getting on or off the seat for any reason.
- Apply the brakes when sitting down on the LTrike and when standing up from a sitting position. This will keep the LTrike from sliding out from under you (especially on slippery surfaces).
- The design is for use by one person only.
- Insure the seat is inserted into the mounts before use.
- **Never stand on the foot pegs.** They are for use only while sitting.
- As with bicycles, it is recommended to wear a helmet.
- Practice riding in a large, open area, free of vehicles, pedestrians and obstacles.
- Driving in very wet conditions is not recommended.
- Always slow down before turning.
- The *LTrike* should only be ridden on smooth, hard and flat surfaces. It is not designed for off-road or off-road-like conditions.
- Use common sense. Reckless driving can result in an accident!

The **LTrike** is designed for persons who have walking difficulties, but who are otherwise still fairly mobile, able to lift 25 lbs, load and unload and able to set it up or fold it together. Persons who are confined to a wheelchair and/or cannot move their legs or stand and balance on their own should not use the **LTrike**.

Electric vehicles with more than two wheels and for one person only are considered handicapped vehicles and you are permitted and entitled to use them wherever you would walk.

Before driving on public streets, check the law with your local authorities. The regulations for street use for such vehicles may differ from state to state.

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Battery Isolation Switch

The M10 is equipped with a keyed switch on the left hand (from the riders seat) side rail just below the shopping bag mount post.

This switch when off, completely isolates the battery from the electrical circuits in the LTrike. In other words, nothing will work. You cannot charge the M10, you cannot use the USB charging port, and the on-off button does nothing. In other words, there is no electricity available to the unit. There are two keys provided and they are located in the under seat bag.

The main purpose for this switch is to insure that the M10 is safe for air travel and complies with IATA 59-2.3.2.4 Wheelchairs/Mobility Aids with Lithium Batteries which states:

Lithium-ion battery powered wheelchairs or other similar mobility aids for use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg), subject to the following conditions:

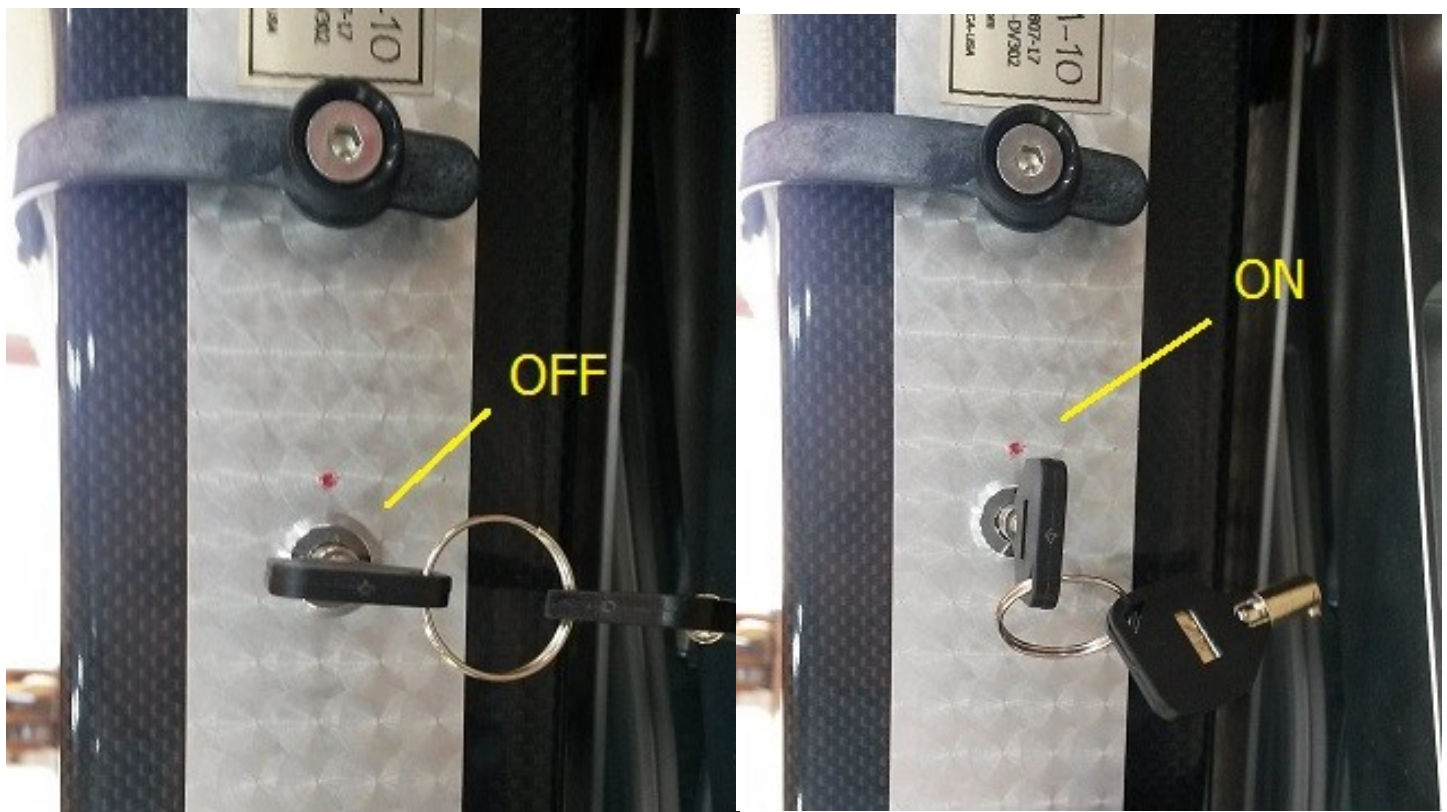
(a) the batteries must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3;

(b) the operator must verify:

1. the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;
2. the battery is securely attached to the wheelchair or mobility aid (see 9.3.14.5 and Figure 9.3.C);
3. electrical circuits have been inhibited.

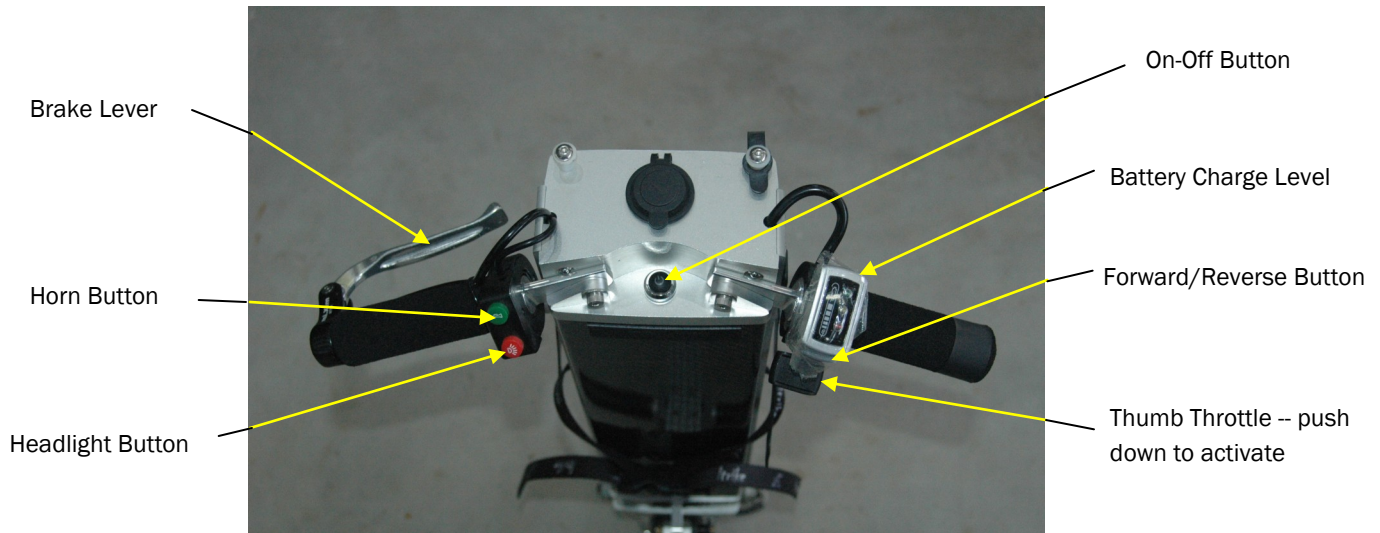
Please note that there is no watt hour limit for the battery installed in the device. There is a limit of 300w if the battery is removable. This does not apply to the M10 as the battery is not removable.

We recommend that the switch be left on all of the time unless you are about to board an aircraft.



Getting Started

Before turning on the power, clamp the brake lever with your left hand to steady the LTrike and sit down in driving position. Either with or without your feet on the footrests, always turn off power before leaving the seated position!



Press the ON-OFF button located on the center of the upper cross member. When the LTrike is on, the button lights up **blue**. A fully charged battery will cause all three lights on the throttle light to illuminate.

The direction of travel is selected with the push-button switch above the thumb throttle. Push in to select reverse, and push in again to release button outward to reselect forward.

Always actuate the throttle gently as acceleration is rapid. Avoid rapid opening of the throttle because it can cause the vehicle to jerk forward suddenly.

Take your time to get used to the operational characteristics of the LTrike and you will find that you can ride and maneuver it in the most confined and restricted areas. You can pretty much fit anywhere one can walk

PLEASE NOTE:

The LTrike requires some skill to operate safely. Before entering crowded areas for the first time, familiarize yourself with the operation of the vehicle in a large open area, free of vehicles, pedestrians and obstacles.

Throttle: To become accustomed to operation and response, push down the thumb throttle gently until you are very comfortable with the acceleration as the motor is quite powerful and will surprise you at first.

Whenever you are riding into confined spaces, like small elevators, approach them so that you can exit safely with a tight turn or in reverse.

Indoor use: In general you are permitted to use the LTrike inside of buildings such as airports, shopping malls, stores, theaters, etc. However, you are obligated to adjust your speed to that of the walking traffic. Do not ride on escalators!

Outdoor use: You may drive across short sections of grass or gravel surfaces as long as they are level and reasonably firm. Approach them with moderate speed. Depending on your weight, you may not be able to restart on these types of surfaces from a standstill. Also, keep in mind that prolonged riding under such conditions will quickly drain your battery.

The electric motor, wiring, and controls can be damaged if exposed excessively to water. Light rain is no problem. Avoid driving the LTrike in heavy rain or through puddles of water. If you cannot avoid puddles, cross them at extremely low speed in order to avoid splashing water

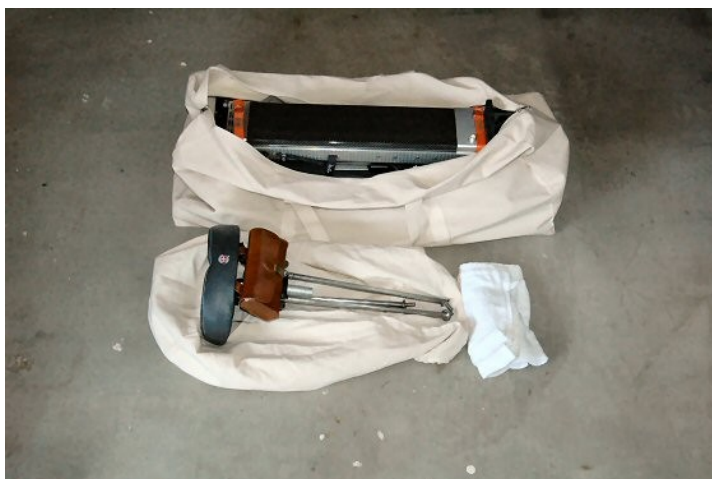
Taking your *l*trike M10 out of the carry bag and making it ready to ride



LTrike in its canvas carry bag.



Unzipped, showing seat bag and cleaning towel.



After removing the seat and cleaning towel, one can see the two tie downs.

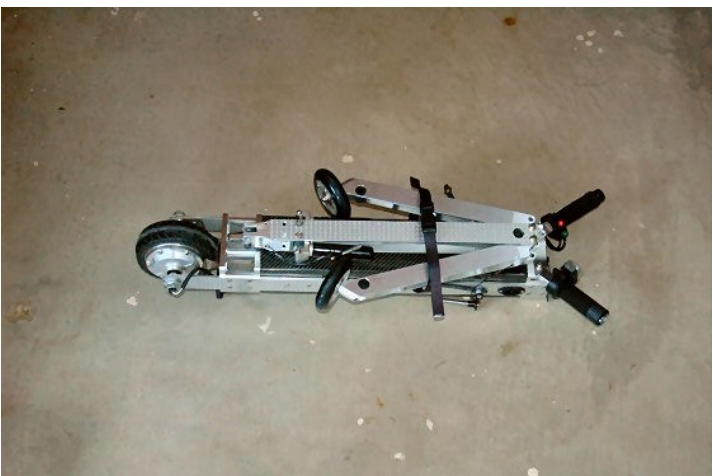
Taking your M10 out of the carry bag and making it ready to ride (cont.)



After undoing the tie downs, just lay them to either side of the opening.

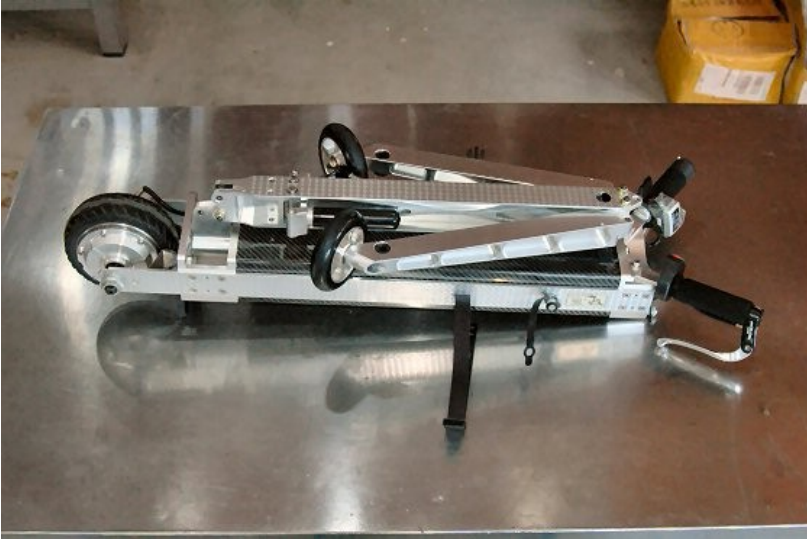


Lift the LTrike out and set it down on the ground or table where you are unpacking.

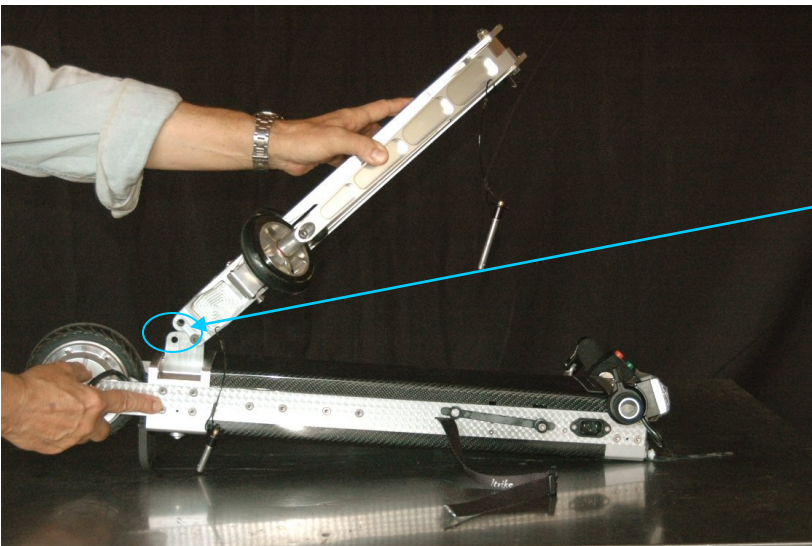


Now it is time to unfold the LTrike and install the seat.

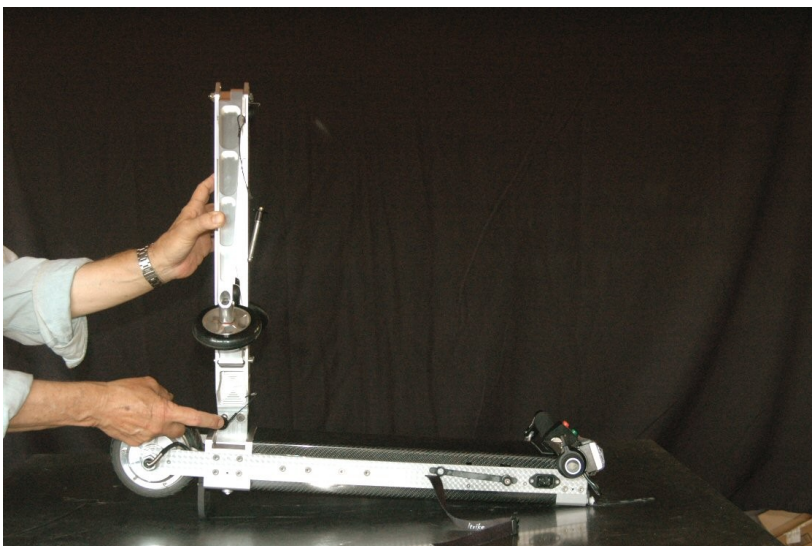
Taking your M10 out of the carry bag and making it ready to ride (cont.)



Release the snap latch on the straps and lay the straps to either side.



Lift up the main chassis rail and legs as shown until the lock-pin holes line up.



Once the holes are aligned, insert the aircraft locking pin into the hole. You will have to depress the button on the pin to allow it to slide in.
Note: Please push pin all the way in until it seats completely.

Taking your M10 out of the carry bag and making it ready to ride (cont.)



Now tip the whole unit up as shown until the main chassis touches the ground.



While holding the forward “tractor” section as shown, rotate the two trailing chassis legs aft, as pictured.

Note: This is very easy to do as you are dealing with a very light assembly and little muscle is required to perform this task.



Once the trailing chassis legs are rotated rearward completely, the locking-pin holes will align and you can then insert the aircraft locking pin into the hole.

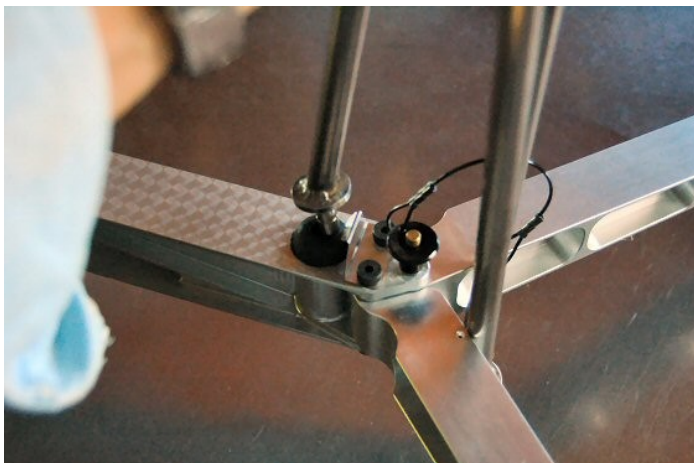
Taking your M10 out of the carry bag and making it ready to ride (cont.)



Insert the aircraft locking pin into the hole. You must push the locking button in to allow the pin to slide into the hole. Make sure that the pin seats completely.



Position the seat over the mounting area. You will be putting the forward leg into its mount first.

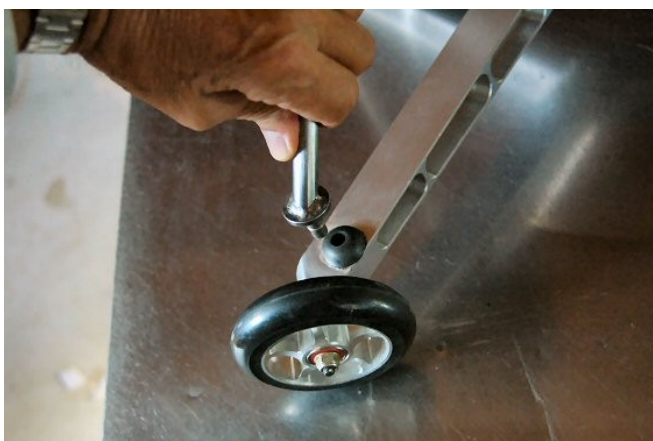


Insert front leg into the rubber grommet. Push in until the pin is fully seated. Notice that the flange will go past the locking clip and this will secure the leg from being inadvertently pulled out of the mount.

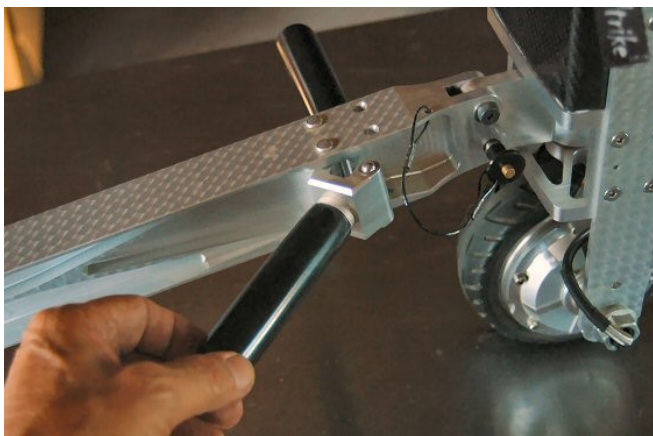
Taking your M10 out of the carry bag and making it ready to ride (cont.)



Insert left-rear seat leg into grommet and push down until it seats completely.



Insert right-rear seat leg into grommet and push down until it seats completely.



Pop out the foot pegs until they lock into the detents.



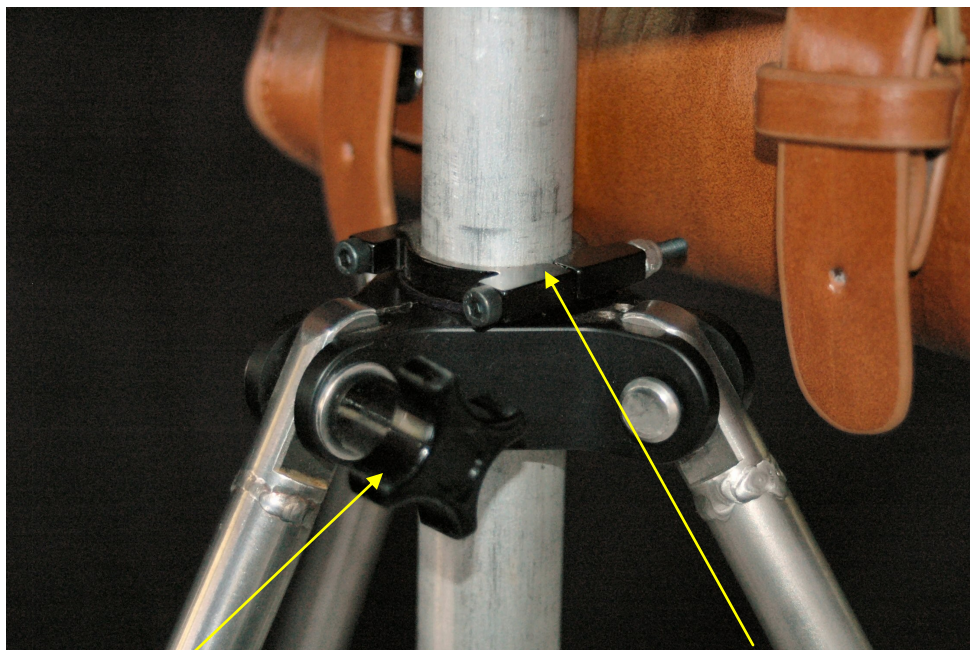
The LTrike M10 is now ready to ride.

Adjusting the seat height and fore/aft position

The LTrike comes with the seat pre-adjusted to fit a 5' 8' tall person but you may wish to alter the height and fore/aft location after riding and getting used to the seating position.



Seat and seat post showing the main clamp and the secondary height locking clamp.



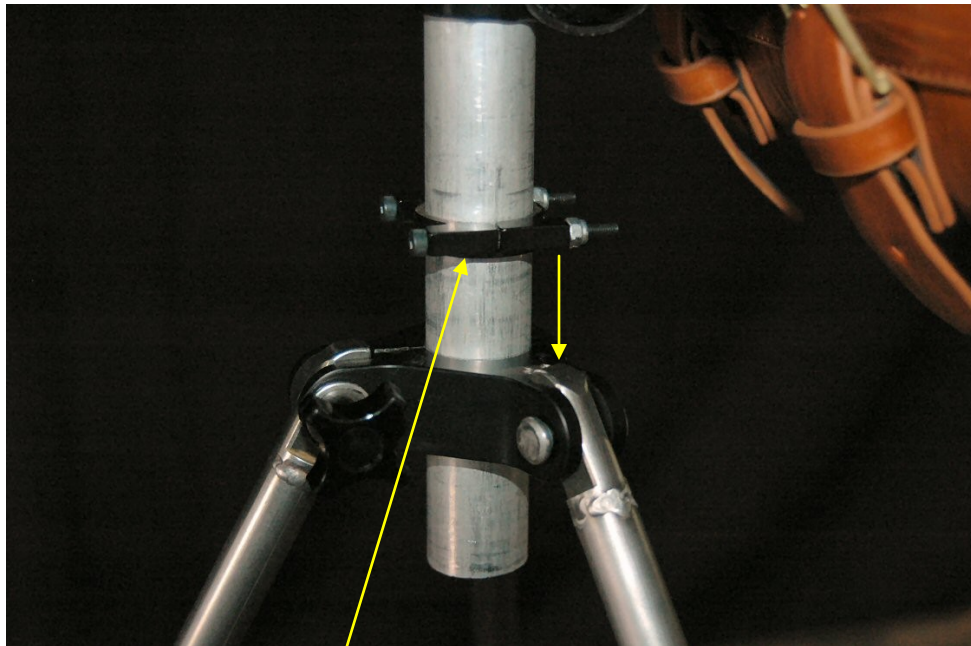
Main Clamp
This clamps the seat
tube into the tripod.

Secondary clamp
secures the height of the
seat along with main clamp.

Adjusting the seat height



To raise the seat height, first loosen the main tripod clamp by turning the knob anti-clockwise to loosen the clamp. Then raise the seat to the amount desired and tighten the clamp very firmly. Gently sit on the seat to ascertain if the position is to your liking.

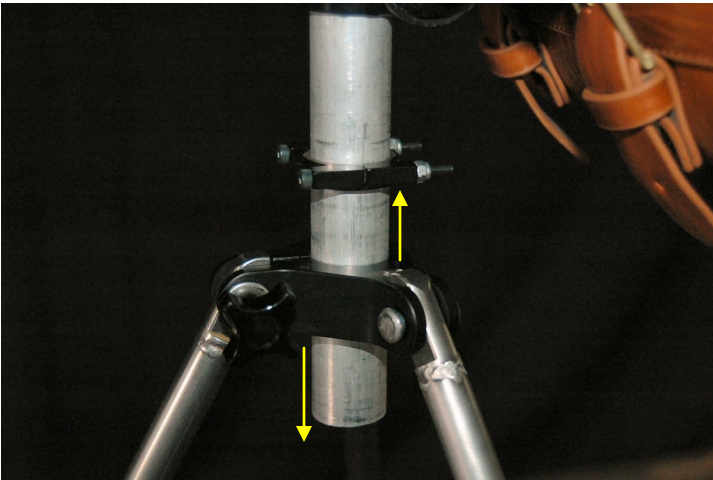


Now you must loosen the secondary clamp using the provided tools and slide it down until it contacts the top of the tripod clamp.

Adjusting the seat height



Now the tube-lock clamp must be tightened firmly against the top of the tripod clamp to lock the tube. This keeps the assembly from sliding down through the tripod clamp while riding.



To lower the seat you must loosen the tube-lock clamp using the provided tools and raise the clamp so the seat tube can move downward. Now you must loosen the main tripod clamp and slide the seat down until you reach the desired height.



Once you are happy with the height, you can now tighten the tube clamp as shown in the above photo and proceed to ride the LTrike.

Adjusting the fore/aft position of the seat

The most basic fore/aft adjustment is done by loosening the cross bolt and sliding the seat forward or backward on the rails. This will give you approximately 1/2 inch of variation from the seat post center position. Tools required are a 9/16 (14mm) wrench.



Adjusting the fore/aft position of the seat

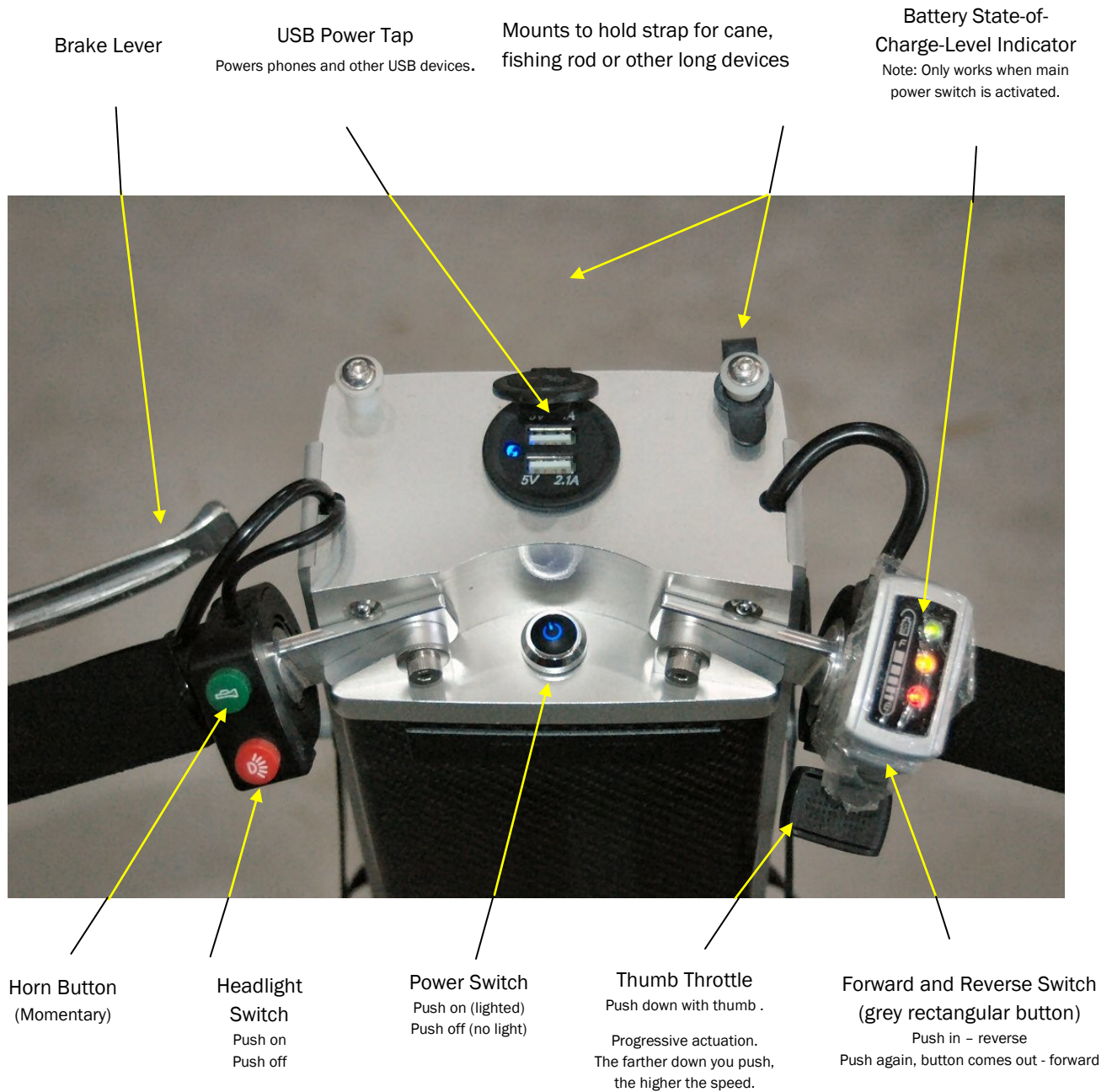
For a greater range of seat fore/aft adjustment (up to 2 inches) the seat clamp needs to be oriented either forward or rearward as shown in the below illustration. This is accomplished by removing the lock nuts and cross-bolt and rotating the clamp 180 degrees and reinstalling the cross-bolt and lock nuts as shown below. Tools required are a 9/16 (14mm) wrench. With the seat post location as shown below left, the seat location will accommodate a person 6' 2" tall. With the location as shown on the right below, the seat location will accommodate a person 4' 10" tall. (Note: the seat must also be raised or lowered to match the riders height.)



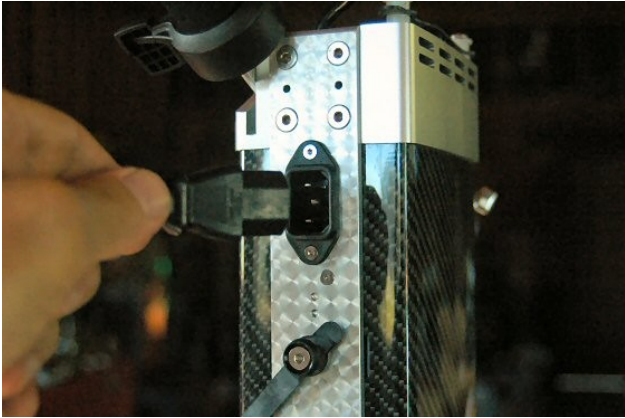
After you have the seat set to the position that you like it is very important to check the tightness of the cross-bolt as well as the altitude clamp and locking clamp as shown on page 14.

The *l*trike M10 Controls and Features

Amazingly simple to operate and use.



Charging the *Ltrike* M10



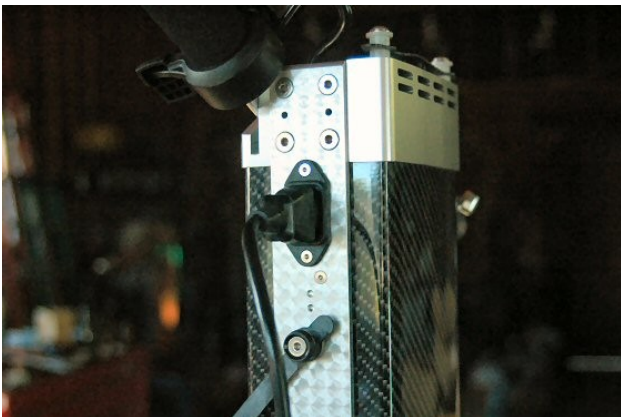
NOTE: BATTERY ISOLATION SWITCH MUST BE ON IN ORDER TO CHARGE THE LTRIKE M10

Insert supplied power cord into receptacle on right side of the LTrike M10.

Note: If you have left your power cord at home or in the car, you can use any NEMA 5-15P to IEC C13 cord. These are used for most models of desktop computers, HDTV, LED-lit monitor, ceiling-mounted projector, powered speakers, laser printers and many more standard devices.

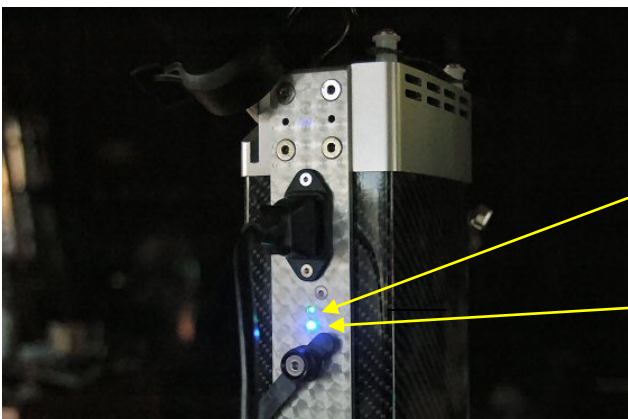


IMPORTANT: Do not use the power cord outdoors in the rain. The connection is not waterproof and there is danger of electric shock.



Make sure that power cord is fully seated in receptacle, and then plug other end into a 110-120V wall socket.

Note: There is a universal power adaptor included that will allow the LTrike to be charged virtually anywhere in the world. Please see adaptor instructions that are in the adaptor case. The LTrike can use 100-240 VAC supply.



Blue LED, when lit, indicates that unit is plugged in and charging.

Green LED, when lit, indicates that the battery is fully charged and can be unplugged.

If not lit, then further charging is required to reach full capacity.

State-of-Charge Indicator on Throttle Body

Note: The lights are only accurate when the unit is being ridden and the throttle is pushed down. It gives a false high reading otherwise.



Green LED ON = Fully charged to 70 % charge.



Orange LED ON = 70% charged to 40% charged.



Red LED ON Only— 40% charged to empty.

If you are out riding, we recommend that you stop riding the M10 and charge until at least the orange LED lights and then plug the unit in as soon as you get home and fully charge for at least 8 hours.

Due to the characteristics of Li-Ion batteries, when the state of charge gets very low, the built-in battery management system will cut off the battery pack and the LTrike cannot be ridden any further. This is to insure that the batteries are not harmed due to excessive discharge.

Using the Dual USB Device Charging Station

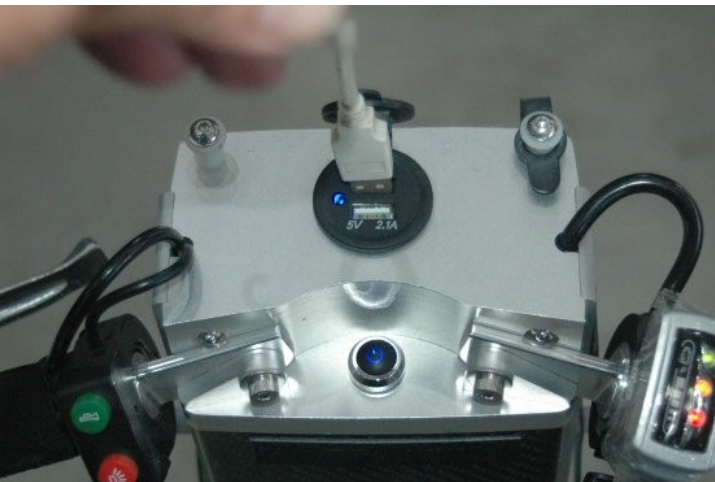
The station has a 5V 1 Amp port and a 5V 2.1 Amp port.
Please insure that your device is compatible with the amperage outputs.



Open the protective cap to expose the ports. You will notice that there are two ports. One 5V 1000 mA and one 5V 2100 mA. The 1000 mA port is used for phones and smaller devices. The 2100 mA port is used for tablets and most other large power-hungry devices.



You must turn the main power switch on to energize the station. A blue LED will light on the left-hand side of the station to indicate power is available to the ports.

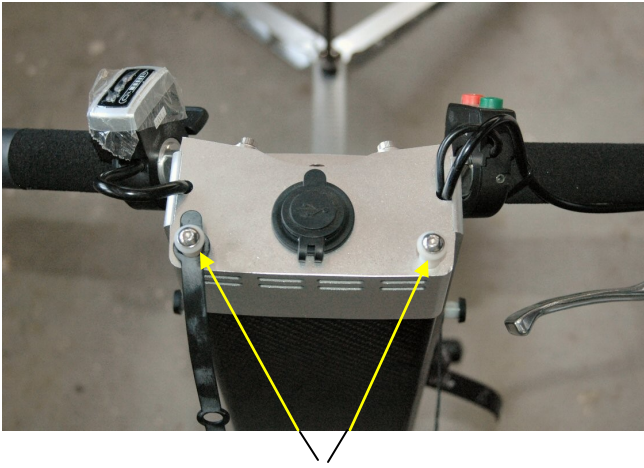


Plug your device's USB cable into the proper amperage port. The device will begin to charge.

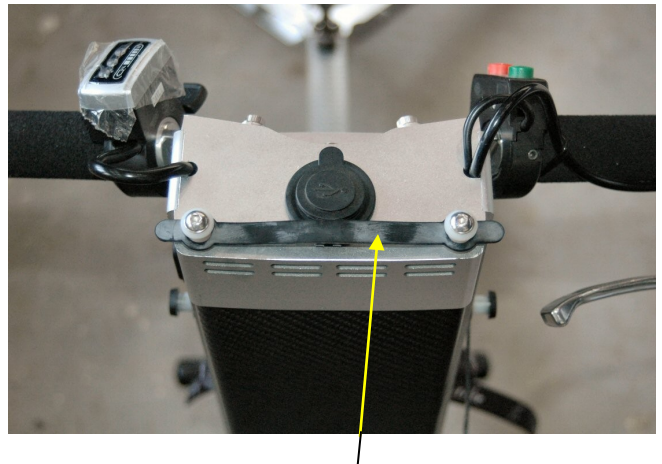
You can also now use a device that has a dead battery. You can run your device from the LTrike's Li-Ion 15.6 ah battery for many hours without depleting the charge and affecting your riding time.

It is very important when finished, to close the protective cap to keep the ports clean.

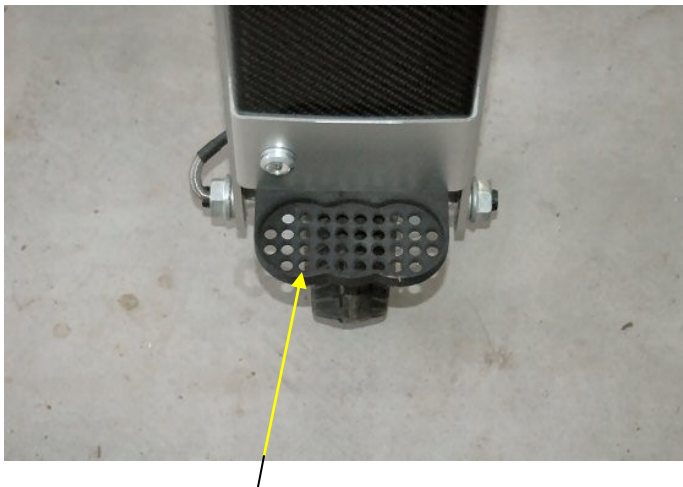
Using the Cane/Fishing-Rod Holder



The strap posts. These are used to anchor the ends of the natural rubber straps that hold the various devices in place.

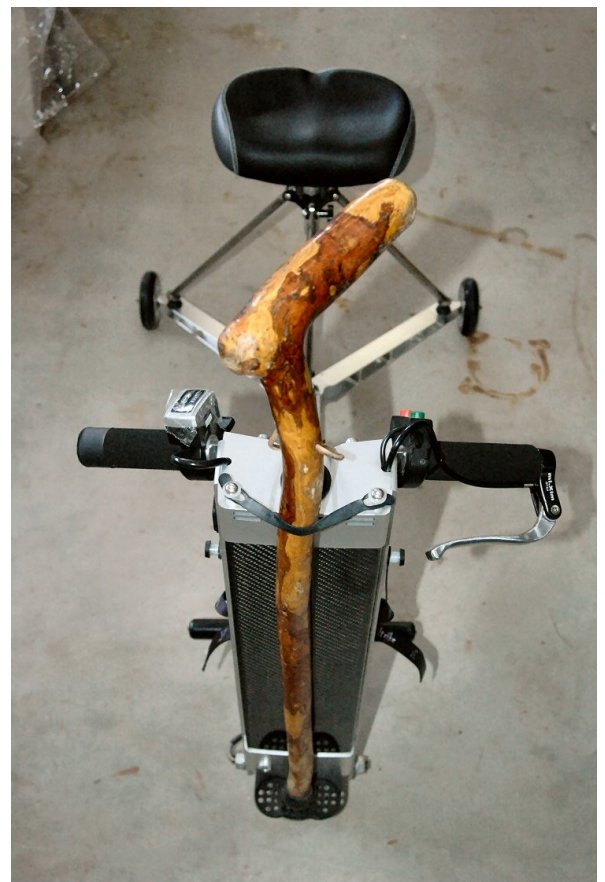


Strap installed on posts.

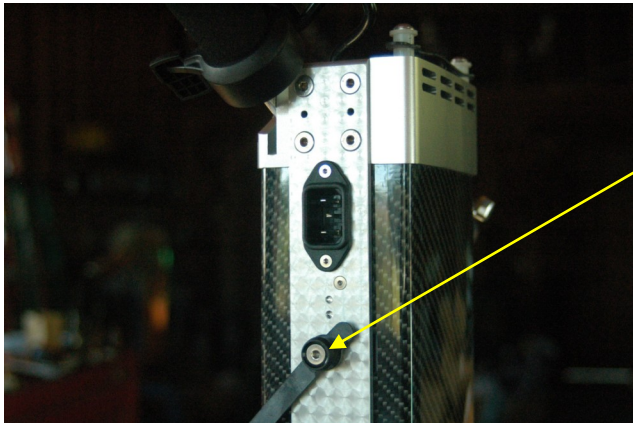


The lower base/support. Notice that it has various positions for items and will take two round items at once, such as a cane and a fishing rod. Or two fishing rods.

An example of mounting a cane on the M10 with the strap securing the cane.

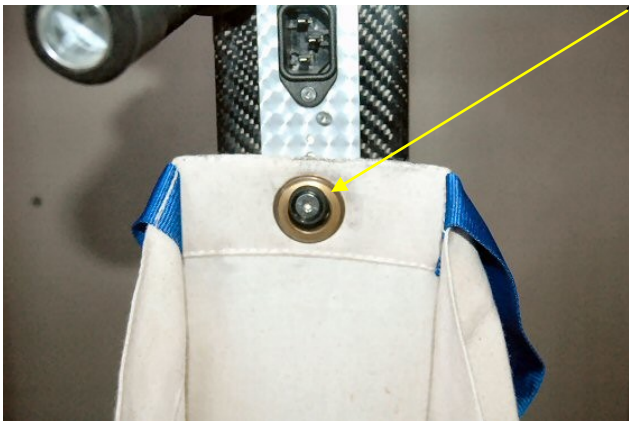


Mounting the Shopping Bags



Mounting post for shopping bags with rubber retainer strap. There is one on each side of the main housing.

Place the bag grommet over the post with bag opening facing out.. Make sure to put the inner carry handle behind the bag before mounting.



Place rubber retainer strap over post as shown. This will secure the bag while shopping and putting things in and out of the bag. To remove the bag, you will need to release the restraining strap from the mount post.



It is recommended that the outer bag handles be put over the top of the handle bars and the mount posts for the cane/fishing-rod holder as shown. Note: Be sure that the bag handle is not interfering with or pushing down on the thumb throttle.

Enjoy your shopping.

Maintenance

Maintaining the LTrike is very simple.

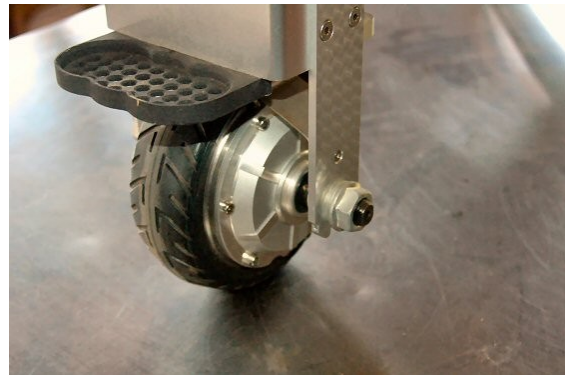
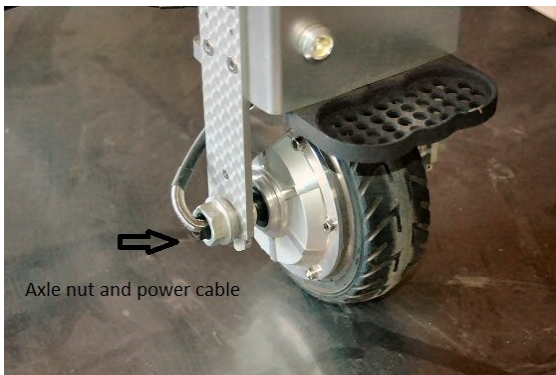
First thing: Keep it clean. We have provided a 100% cotton towel for wipe down. The carbon-fibre covers' high-gloss finish can be scratched if there is sand or grit present. We recommend using Windex for cleaning and a soft cloth. DO NOT use paper towels as they are very abrasive and will scratch and dull the finish. Windex also works well for wiping down the aluminum and stainless-steel components .

The tool kit included with your LTrike contains the necessary Allen wrench and open end wrench for your LTrike seat, and are kept in the under-seat pouch.

The LTrike's aircraft pip pins (the ones that you remove to fold the LTrike) may require occasional lubrication. We recommend dry silicone or Teflon spray.

Periodically check all of the Allen screws, nuts and bolts for tightness. These simple measures will improve reliability and safety.

The brakes can be adjusted by loosening the small cable clamps located just above the front wheel and then reducing the clearance between the brake arms and the wheel/tire to .040 (1mm) each side. We recommend that this be done by someone with mechanical experience. Bike shops can do this for you quite easily.



Front Axle Nuts (Wheel Motor)

Check the axle nut for tightness (11/16-inch standard open-end wrench). If this nut becomes loose, the motor axle will try to rotate, possibly twisting and damaging the mounting slots.

NOTE: There are retaining pins in the axle legs that will not allow the wheel motor to fall out of the mounts even in event of complete loss of the nuts.

IMPORTANT SAFETY INFORMATION FOR DRIVING THE *l*trike M10

We recommend that one not leave the power switch in the ON position when not properly seated.

It is essential that you understand the characteristics of a mobility trike. Typically, in order to maneuver in tight spaces or crowded areas, their width and length are close to that of a seated human body. This configuration provides reasonable safety on flat, level surfaces but is not entirely fool-proof on uneven, slanted or inclined surfaces. The center of gravity (hereafter referred to as C.G.) is relatively high and can shift considerably under such conditions. As a general rule, always shift your upper body toward the high side of the terrain.

To avoid critical and/or dangerous situations, please follow these guidelines.

Unlike two-wheeled vehicles, three-wheeled vehicles cannot be "leaned" into a curve. Therefore, it is essential to slow down to a reasonably low speed before turning. Even at slower speed, you may still feel some slight centrifugal force. Use extreme caution when turning on slanted or uneven surfaces! Occasionally, you may find yourself negotiating a curve or corner too fast and the inner rear wheel starts losing ground contact. If that happens, immediately shift your upper body into the curve and lessen the steering angle in order to restore weight on the lifting or airborne wheel.

The LTrike M10 was designed with one significant safety factor in mind. And that factor is your feet. Your feet are only 5 inches above the ground when you are on the LTrike. USE THEM. Put them down if you feel insecure in your balance or position on the seat or if you need to back up just a little bit, etc. Your feet will keep you from having accidents and make the riding experience much more enjoyable.

Remember when you were a little kid and rode your tricycle around? The judicial use of your feet kept you from falling over and kept your elbows/knees from being skinned.

Think like that kid when you ride. You will then enjoy the ride the way you used to.



Ramps and Inclines require special attention to avoid mishaps.

The following is a list of dos and don'ts.

- The C.G. on an incline (such as ramps) is shifted toward the rear, and in conjunction with some other events, tipping over backwards is possible, but can be easily avoided.
- Always shift your upper body toward the handlebar in order to move your C.G. forward.
- Always open the throttle slowly, even on level ground! The motor has high torque. Quickly opening the throttle, causing excessive acceleration, could cause you to slip out of the seat rearward.
- Avoid starting on an incline from a full stop. Approach a ramp with reasonable speed and utilize the vehicle's momentum.
- Approach an incline only if you are sure that you will reach the top without having to stop. If you are forced to stop along the way, restart by shifting your upper body forward and accelerating gently.
- When negotiating an incline, do not zigzag or drive at an angle up the face of the incline. Drive your scooter straight up. This will greatly reduce the possibility of tipping or falling.
- Never travel up or down a potentially hazardous incline (i.e., areas covered with ice, snow, wet leaves, gravel). Do not drive in snow and mud.
- When driving down a ramp, keep the throttle at idle and be ready to apply the brakes to ensure a safe, controlled descent.
- If you drive the vehicle down a long slope, apply brakes judiciously and under no circumstances allow it to gain more than walking speed. It is also a very good idea to put your feet down on the ground to help control your speed. Due to the extremely low rolling resistance, the LTrike may well start going too fast and you may not be able to stop quickly enough, or in the worst case – at all.

Speed bumps, lowered curbs and other slightly uneven conditions are generally no problem, but they should be taken at a reduced speed and in a direct frontal direction. Never approach them at a slant angle, and observe the same precautions as on inclines.

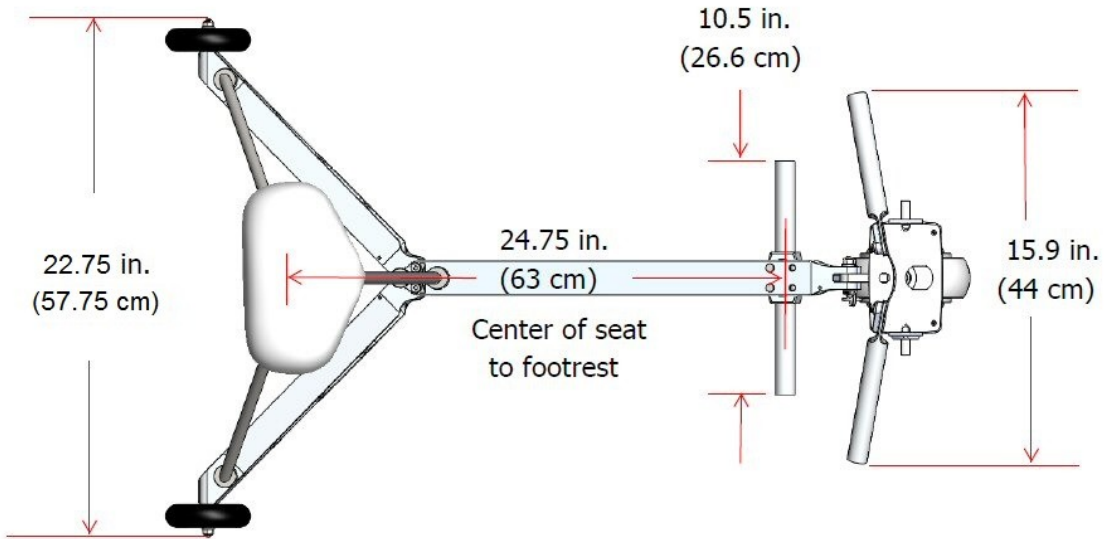
Keep in mind that the small wheels cannot roll over objects much higher than 1 inch (3 cm), and you may fall if you attempt to do so. Lower objects should be approached with moderate speed. If you are at a stop and one of the wheels is blocked by such an object, do not apply throttle, doing so will result in just stalling the motor. Just put your feet down and lift/move the LTrike and yourself over the obstruction

Doors: Doors can be a real nuisance, especially when they are spring-loaded. A good option is to ask a nearby person to hold the door open for you. If you are on your own, avoid any acrobatic actions like using your feet to hold doors open while passing through them. Instead, put your feet down and stand up and walk it through the door.

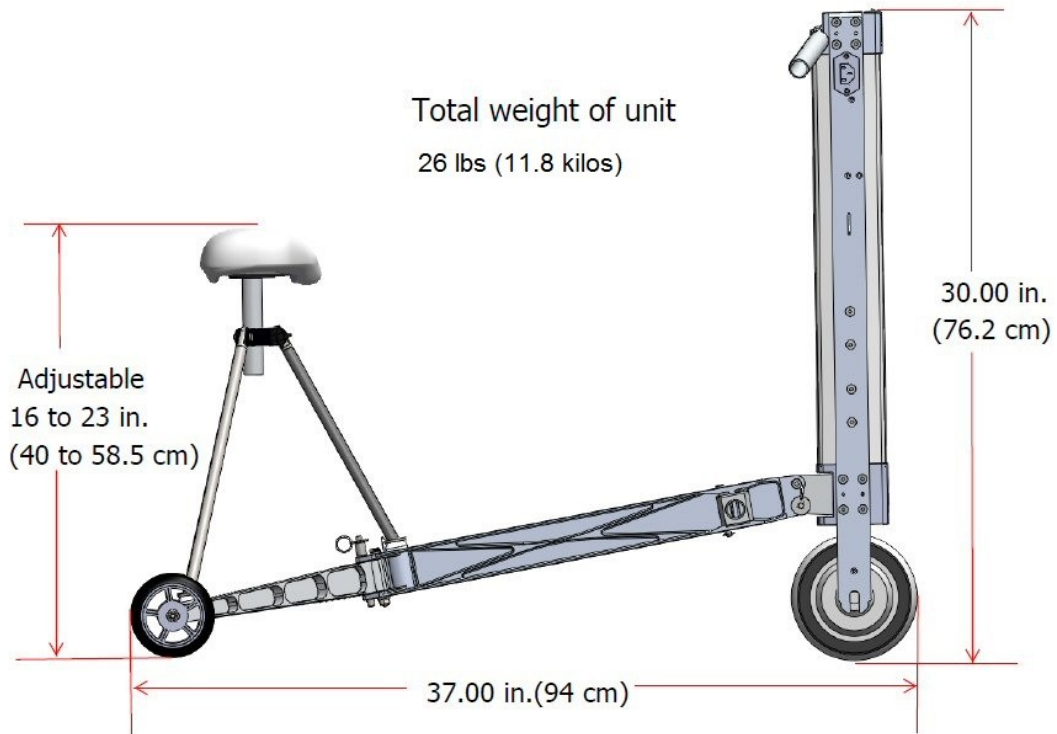
In summary, as with every other vehicle, use common sense. It is completely up to you to judge the drivability of a chosen terrain.

Reckless driving can result in an accident.

Specifications



Top View Basic Dimensions



Side View Basic Dimensions

Specifications (continued)

Weight	26 lbs / 11.8 kg (complete)
Maximum speed	4.5 mph (7km/h)
Distance per charge	15 km on level ground with a 200-lb rider, with few stops
* Speed and distance was measured by GPS with a fully charged vehicle battery and a 200 pound person on a paved level surface.	
* Keep in mind that uphill conditions as well as frequent stops and starts will reduce the distance per charge significantly.	
Design carrying capacity	225-lb rider + 15 lbs each shopping bag
Brake	Proprietary clamp type wheel brake on front wheel
Drive	Front-wheel, 24-volt, 250-amp, brushless DC wheel motor
Battery	Proprietary internal 15.6 AH Li-Ion w/BMS
Charger	Built-in 29.4-volt, 2.8-amp, 110/240 VAC 50/60 Hz



WARRANTY

Terms and Conditions of Warranty and Liability

All sales of products are final. LTRIKE © products cannot be returned unless the product qualifies for repair or replacement under the Limited Warranty, which is set forth below.

HEI/LTrike (the maker of this limited warranty and sometimes referred to as “we” or “us” or “our”) warrants to the original retail purchaser (sometimes referred to as “you”) of the LTRIKE © product that the product will be free from defects in material and workmanship for a period of two (2) years from the date of the first retail purchase of the product.

You must be able to demonstrate the purchase of the product, so please keep proof of purchase. You will be responsible for packaging and shipping the product to us, so please keep the original packaging during the warranty period. Email us for all warranty claims at info@ltrike.com. Be sure to include the proof of purchase and description of product defects.

We have the right to reasonably make all warranty claim decisions. If a claim is approved, the purchaser is responsible for proper packaging, adequate insurance and shipment of the product. The purchaser will be reimbursed for shipping charges after assessments and repairs have been made to the product.

Our warranty obligation is limited to repairing, or, at our discretion, replacing the defective part. This Limited Warranty does not cover normal wear and tear, tires, or cables, or any damage, failure or loss caused by improper assembly, maintenance, repair, storage or use of the product.

This warranty does not cover damages caused by alteration of parts, removal of parts, tampering, disassembling, or any installation of parts not manufactured or sold by LTrike ©.

This warranty does not cover damages caused by neglect or improper use. Improper use of an LTRIKE © includes: riding in sand, dirt, mud, unpaved surfaces; overloading, weather damage or any similar improper activity.

This Limited Warranty will be void if the product is ever used in a manner other than for recreation or transportation, or modified in any material way.

We are not liable for incidental or consequential loss or damage due directly or indirectly to the use of this product. We are not liable for any damages or injuries incurred from improper use of the product.

The LTRIKE © is made to be used under fair-weather conditions. We are not liable for damages or injuries resulting from riding in the rain, snow, or any harsh weather conditions.

The LTRIKE © is not a toy and is not made to be used by persons under 18 years of age.

We do not offer an extended warranty. This warranty only applies to products sold by HEI/LTrike directly or through an authorized agent and only to products sold through distribution channels authorized by us.

Important: The LTRIKE © vehicle is an "other power-driven mobility device" (OPDMD), that does require balance and physical strength to ride. (OPDMD is defined in the new ADA rules as "any mobility device powered by batteries, fuel, or other engines that is used by individuals with mobility disabilities for the purpose of locomotion, including golf carts, electronic personal-assistance mobility devices...such as the LTrike, or any mobility device designed to operate in areas without defined pedestrian routes, but that is not a wheelchair." NOTE: We do not recommend that the LTRIKE be used as a replacement for an electric mobility wheelchair or any other ADA mobility device.

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Notes:



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