



TWINTROLLER

OWNER'S MANUAL



F R E E D O M

ELECTRIC  MARINE

PO BOX 1824 ANGIER, NC 27592

(877) 882-0099

FREEDOMELECTRICMARINE.COM

TWIN TROLLER X10 OWNER'S MANUAL

VALUED CUSTOMER,

Freedom Electric Marine would like to thank you for choosing us for your boating needs. We strive to make sure that you will be completely satisfied with your purchase and will enjoy your Twin Troller for many years to come.

All Freedom Electric Marine boats feature the revolutionary, patented hands-free, in-hull propulsion and control system. The maneuverability of the Twin Troller X10 is unmatched in the small boat market. We're confident that once you have had the opportunity to use your Twin Troller, you'll never be satisfied with another boat.

We are constantly looking for ways to make an even better product! If at any time in the future you feel there is an item that would improve your boating experience, please provide us with your feedback. We always like hearing from our customers.

Again, thank you so very much for your purchase.
See you on the water!

Sincerely,
The FEM Team

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BOATING SAFETY

① **Personal Flotation Device** *The team at Freedom Electric Marine cares about your safety, so we recommend that at all times you wear the proper Personal Flotation Device (PFD) be worn by all occupants of the boat.*

① **Capacity** *Make sure your weight load, number of persons and horsepower rating are within the limits as shown on the US Coast Guard capacity plate. All Twin Troller boats meet US Coast Guard safety requirements.*

① **Other Safety Precautions** *The Twin Troller is not equipped for nighttime use. If you intend to use it during non daytime hours, make sure you have equipped your boat with the appropriate safety lighting. Your boat is equipped with 2 electric motors. You should never attempt to access the motors unless you have disconnected the power source and disconnected the foot pedal assembly. Always watch out for other boaters or hazards while on the water. The Twin Troller is not designed to be a swimming or diving platform.*

① **Freedom Electric Marine is not responsible for accidents due to misuse, modifications, or for using the boat in any manner other than its intended use.**

MANUFACTURERS LIMITED WARRANTY

Freedom Electric Marine will honor the warranty to the original owner of the Twin Troller X10. This warranty will apply for a period of 5 years on the HULL and 1 year on the pedal and motor assemblies for product failure associated with manufacturing and workmanship. This warranty does not apply to damage due to improper maintenance, improper storage, neglect, misuse, unapproved repairs, modifications, or damage caused in transit. Freedom Electric Marine will honor its warranty by either repairing or replacing the item in question. Freedom Electric Marine will make a determination of eligibility after an investigation of the condition of the item in question by an authorized representative. Freedom Electric Marine assumes no responsibility for loss of use of boat, loss of time, inconvenience or other damage including but not limited to, expense of returning boat or boat parts for service and expense of returning items back to the owner. Freedom Electric Marine reserves the right to change or improve the design of any boat without assuming any obligation to modify any boat previously manufactured.

WARRANTY & REGISTRATION

It is not necessary to register your boat with us. We have your purchase information on file. Please fill out the purchase information section on the last page of this manual for your records. For warranty questions or support, please contact the customer service department at **1-877-882-0099 Ext 3**.

BOAT SPECIFICATIONS & FEATURES

Length: 120" **Width:** 48" **Hull Weight:** Approximately 175 lbs.

Capacity: 560lbs including gear, battery, & Outboard motor **Max HP Rating:** 2HP



- Hull made of 'best in class' Polyethylene resin
- New Patented Hull Design
- Motors mounted inside the hull for shallow draft protection
- Hands free variable speed operation
- Fold down, premium padded seats for extreme comfort
- Seat rails offer adjustable seating that secures seats while hauling
- Molded-in battery compartment
- Dual Electric Motors for extreme maneuverability
- Motor covers protect electric motors from obstacles or obstructions
- Reel Holder and beverage holders on the gunwale. Reel Holders offer the ability for more rod storage
- Molded-in ruler to measure your catch
- 1" Drain Plug
- (2) Side Hull Drain Plugs

BOAT PREPARATION & SETUP

SEAT ASSEMBLY

Assembling the seats for your Twin Troller is a 2 step Process. First, you must attach the swivels to the seat supports (left image). Next you will attach the seat to the swivel (right image).

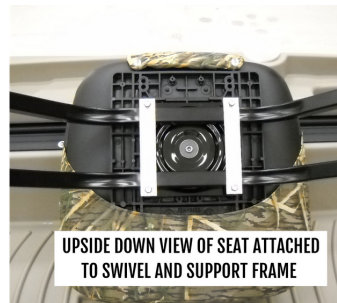
STEP 1 – INSTALL SEAT SWIVEL TO SEAT SUPPORT

Use the fastener kits and swivel plates that were provided with your boat. Each fastener Kit will consist of 4 rectangular plates, 8 carriage bolts, and 8 nuts.

To install, turn the swivel plate so the top and bottom are not aligned. Next, mount the swivel plate to the seat support using 2 plates, 4 carriage bolts, and 4 nuts. Insert 4 carriage bolts through the holes on either side of the swivel plate, then place on top of the seat frame. It may be necessary to slightly squeeze the seat frame support tubing together to install all 4 fasteners. Be aware of the top and bottom swivel position in relation to seat support. The seat support will bend away from the swivel top, where the seat is attached. Correct swivel position is necessary for correct mounting of seat. See the below diagrams for attaching your seat. *Please watch our Seat and Swivel Assembly YouTube video for visual instructions on how to properly align your swivel with your seat support.*



SWIVEL
SEAT PLATES,
NUTS, & BOLTS
SEAT SUPPORT



UPSIDE DOWN VIEW OF SEAT ATTACHED
TO SWIVEL AND SUPPORT FRAME

STEP 2 – INSTALL SEAT TO SEAT FRAME/SWIVEL

Place the seat on a flat surface in the upside down position. Turn swivel so the top and bottom are not aligned to expose holes on swivel for easy attachment to seat bottom. Use the 4 seat screws inside each seat box to attach the swivel plate to the seat.

Keep all fasteners checked regularly to make sure they remain tight and secure.

SEAT INSTALLATION

Attaching seat assemblies to your Twin Troller is an easy process. Place the completed seat assembly in the front area of the boat directly in front of the seat rails. Line up seat supports with each rail and slide seat into rails. It may be necessary to slightly bend the seat support frame to fit in the seat rails on the boat.

Important: Never add lubricant to seat rails. Seat rails are designed to fit snug enough to hold the seat in position allowing the ability to slide the seat along the rails only when needed.

Please see our Seat and Swivel Assembly YouTube video for visual instructions.

FOOT PEDAL ASSEMBLY

The foot pedal assembly and connecting wiring harnesses are the most important components of your Twin Troller X10. They are specifically designed for the X10 to provide years of trouble free operation. However, like all electronic components, care in operation, storage, and routine maintenance are important to ensure years of enjoyment from your boat.

In the floor of the boat you will find grooves in both the front and the rear to allow for multiple mounting locations for the foot pedal assembly. Place them in the desired location for your comfort. No assembly required. Once in place, attach the wiring harness plug from each side to the pedal control plug receptacle at the front of each pedal control box.



BOAT CONTROL AND STEERING

For most of our owners, normal operation will be to plug the wiring harness into its corresponding pedal control box; i.e. right wiring harness plug to right pedal control plug receptacle and left wiring harness plug to left pedal control plug receptacle. However, the controllers are identical and the motors can be plugged in to the opposite pedal control box without harm. This will cause the pedal control to operate the motor opposite that side, i.e. right wiring harness to left pedal control plug receptacle and left wiring harness to right pedal control plug receptacle. For some this is a more natural configuration and compares to how you would fly a plane.

FOOT PEDAL ASSEMBLY & WIRING HARNESS STORAGE

The foot pedal assembly can be easily removed and should be stored away from harsh outdoor conditions such as precipitation and direct sunlight. **The foot control assembly is water resistant, but should never be submerged in water.**

Wiring harnesses should be draped with plug ends hanging over the seat frame to ensure they do not sit in water or gather moisture which can lead to corrosion.

Although the foot control assembly is water resistant, they should be REMOVED AFTER EACH USE and stored in a clean, dry location. Failure to do so will VOID THE WARRANTY.

MAINTENANCE OF FOOT PEDAL ASSEMBLY AND WIRING HARNESES

Apply a light dielectric grease to each pedal control plug receptacle to avoid corrosion and assist with connectivity (available at hardware stores). Apply as needed. Both wiring harness and pedal control plug receptacles should be cleaned regularly using a standard electrical contact cleaning spray. This is especially true if you are storing your boat outside and /or around saltwater. THIS IS THE BEST MAINTENANCE PRACTICE YOU CAN DO TO ENSURE THE LONG TROUBLE FREE USE OF YOUR TWIN TROLLER.

ⓘ WARNING: Your Foot pedal assembly should NEVER be submerged in water. If this occurs, immediately remove them from the water. Do not attempt to use your foot pedal assembly before it has had at least 24 hours to dry. To do this, place them in a clean dry location and allow them to drain for at least 24 hours

12 VOLT MARINE DEEP CYCLE BATTERY

Your Twin Troller is a 12 Volt System and therefore requires the use of one 12 volt marine deep cycle battery. Under normal operating conditions the Twin Troller will provide 6-8 hours of operation on a fully charged 12 volt deep cycle battery (series 29 or 31). We highly recommend the use of a 'wet' lead cell battery vs. the more costly gel cell batteries. For extended life, you can connect 2 batteries together in a Parallel Configuration, maintaining the 12 volt system.

ⓘ WARNING: DO NOT run your boat using 2 batteries in a SERIES CONFIGURATION creating a 24 volt system. This WILL result in the failure of your pedal control boxes.

PLEASE NOTE: The battery box is a snug, tight fit into the molded battery compartment. Slight deformation of the box is normal.

MOTOR/POWER CONNECTION TO BATTERY

Place battery inside battery box. Place the battery box w/ battery in the molded compartment at the rear of the boat. There are 4 wires (2 for each motor) located at the rear of the boat. Connect the red wires to the positive terminal and the black wires to the negative terminal on the battery.

BOAT OPERATION

PRELAUNCH CHECKLIST

Personal Flotation Device (PFD): It is recommended that each person should wear the proper personal flotation device (PFD) when using the boat.

Capacity: Refer to the capacity plate for the total weight capacities and number of persons for the boat to make sure you are within the limits.

Drain Plugs: ALL (3) drain plugs should be properly installed prior to launching the boat. There is (1) drain plug inside the boat, near the molded battery compartment, and (2) hull drain plugs, (1) located on the outside of each hull pontoon.

Battery Connections: Make sure you have the battery properly connected prior to launching your boat.

Controller Connections: To ensure proper operation of your foot pedal assembly, the wiring harness plug and connector pin must be fully inserted and engaged into the foot pedal assembly. Failure to fully and properly insert the harness plug into the pedal control plug receptacle will result in poor connection and possible overheating and damage to the unit. Do not pull on the wiring harness. This could negatively impact the connections and result in overheating and failure of the unit.

Load Leveling: Your boat will perform better if it is sitting level on the water. You may need to redistribute the weight inside of your boat for it to sit level. See our YouTube video: Boat Leveling and Weight Distribution.

Entering the boat: When entering the boat, always step into the bottom of the boat and not onto the gunwales to prevent slipping or falling.

Boat Paddle: A boat paddle can be very helpful when beaching the boat, getting clear of underwater obstacles, and many other instances.

ELECTRIC MOTOR OPERATION

Your boat is equipped with 2 electric motors that are mounted inside the hull of the boat. Each motor is controlled by an individual pedal control box.

Removing obstructions from the motor guard: Both electric motors are protected with motor guards. If you come into contact with heavy vegetation or other debris when operating the boat, remove by applying full toe, then full heel pressure to assist clearing the guards of debris. Avoid areas of extreme vegetation and other debris when possible.

ⓘ WARNING: If you have to remove debris or vegetation from the motor guard or propellers when the boat is not in the water, make sure to disconnect the foot pedal assembly and battery first to prevent injury. NEVER place hands or any other body parts near the motors, propellers, or motor covers when the boat is in use or when the battery and foot pedal assembly is still connected.

FILLING THE TUNNEL HULLS

You must fill the 2 tunnel hulls before the boat will operate properly. This should only take 6-10 seconds. Move your boat off the shore and point it away from the shoreline. Apply full forward pressure to BOTH foot control pedals. You will see and hear the air bubbles coming from underneath the rear of the boat on each side. When both tunnels are full the boat will thrust forward and the air bubbles will cease. The tunnels will remain water filled until the boat is removed from the water.

BOAT STEERING

Your boat is steered by adjusting the thrust of the individual motors with the use of the hands-free foot pedal assembly. For most boat owners, the right side foot control pedal will control the right side motor and the left side foot control pedal will control the left side motor. Both foot control boxes are variable speed in both forward and reverse. Applying toe pressure to either foot control pedal will result in the corresponding motor to thrust forward. Applying heel pressure to either foot control pedal will result in a reverse thrust of the corresponding motor. The foot control pedals operate independently of each other to allow for full control of the boat.

POINT-TO-POINT OPERATION

When moving from one destination to another, the following 'steering' procedure should be followed.

- Bring the boat slowly up to speed, DO NOT quickly depress the foot control pedals forward as this will cause the boat to push to one side or the other.
- While coming up to speed, make slight adjustments on the controller to keep the boat moving straight forward. Once the boat is up to speed, you may need to continue making slight adjustments with the foot control pedals to avoid side to side drifting.

FORWARD MOTION

Apply forward pressure to both foot control pedals to move the boat forward. Changing the amount of pressure on one foot control pedal or the other will cause the boat to turn. Less pressure on the left foot control pedal will cause the boat to turn left and less pressure on the right foot control pedal will cause the boat to turn right.

REVERSE MOTION

Your Twin Troller operates the same in reverse as it does in forward motion except you'll be applying heel pressure instead of toe pressure.

FULL ROTATION

The Twin Troller X10 is capable of a true zero degree turning radius. No other small powered boat on the market has this capability. This feature is extremely helpful when fishing in tight areas, or just having some fun on the water.

To execute a zero degree turn, apply Forward pressure to one foot control pedal and backward pressure to the other foot control pedal. This action will cause the boat to turn in a 360 degree motion. Reverse the foot control actions to rotate the boat in the opposite direction. This is always a fun maneuver.

INSTALLING AN OUTBOARD MOTOR

Your boat comes equipped with an outboard motor mount. DO NOT Exceed the recommended horsepower as indicated on the capacity plate. Mount the motor in accordance with the instructions provided with the outboard motor. The boat is not designed to plane, but it will work smoothly with the correct horsepower motor and when loaded properly. ALWAYS watch out for obstacles in the water when using an outboard motor and secure with a safety chain or rope.

INSTALLING ELECTRONICS

Mounting Hardware, such as transducer mounts or other brackets, can be screwed directly into the hull. Use a sealant around the mounting hardware to ensure the hull remains watertight. Wires can be stored in the wire tray by removing the screws for the seat rails. Make sure you replace the seat rail when finished. Before installing the screws, apply a sealant to the holes, such as silicone, to prevent any leaks. On some units, it will be best to run your electronic wiring down inside the seating area to avoid interference with the power and transducer wiring. When installing electronics in this manner, use wiring clips to secure the wiring along the side of the seating area.

TRANSPORTING YOUR BOAT

Boats can be transported in the bed of most trucks and on many utility or boat trailers. Always make sure you strap the boat and the seats down securely to prevent it from sliding or bouncing out. If using a small truck, make sure the motor covers underneath the hull are not sitting on the fender well, or any other obstruction in the bed of the truck; this will prevent damage to the motor cover. For small trucks, adding items to the bed to assist in leveling out the boat can help, i.e. old tires. Again though, make sure to strap the boat and all items in your truck down appropriately.

BOAT REGISTRATION & NUMBERING

You will receive your manufacturer's Certificate of Origin in the mail (USPS). This article is required when registering your boat. You are required to fill out some areas of the certificate of origin when you receive the paperwork in the mail. Check with your local wildlife office or other state resource to understand the requirements and laws concerning your boat's registration. If applying numbers or decals to your boat, thoroughly clean the area to help ensure they adhere to the hull of your boat.

IMPORTANT NOTE: Some states require the Manufacturer's Certificate of Origin to be signed and/or notarized in order to register your boat or trailer. Check with your local registration office to inquire about these requirements before you go. If additional requirements exist, please send the document requiring attention along with an explanation and return address to the following address:

**Freedom Electric Marine
Attn: Frank Jones
8216 Plum Bush Court
Willow Spring, NC 27592**

Please contact Customer Service in this situation, so that we know to be expecting the documentation. It will aid in us getting the items returned back to you more quickly **877-882-0099 ext 3**.

MAINTENANCE

The Twin Troller X10 has very low maintenance costs. However, routine maintenance is very important to ensure years of trouble free enjoyment.

Foot Pedal Assembly and Wiring Harnesses

Apply a light dielectric grease to each pedal control plug receptacle to avoid corrosion and assist with connectivity (product available at your local hardware store). Apply this as needed.

Both wiring harnesses and pedal control plug receptacles should be cleaned on a regular basis using a standard electrical contact cleaner spray. This is especially true if you are storing your boat outside and/or around saltwater. This is the best maintenance practice you can do to ensure the long trouble free use of your Twin Troller X10.

Your Foot pedal assembly should NEVER be submerged in water. If this occurs, immediately remove them from the water. Do not attempt to use your foot pedal assembly before it has had at least 24 hours to dry. To do this, place them in a clean dry location and allow them to drain for at least 24 hours.

Motors

Motors may need to be accessed periodically to remove items such as fishing line from the propellers. **First, disconnect the wiring from the battery, and the wiring harnesses from the foot pedal assembly for safe access.** Second, to access the motors, remove the screws from the motor guards. The Propellers can be removed by securing the propeller blade and removing the nut and washer. When reinstalling a propeller, make sure the shear pin on the motor shaft is in alignment with the proper location on the propeller. When reinstalling motor guards, it is advised to use a small amount of sealant around the mounting screw holes.

Use in Saltwater

The Twin Troller works great in saltwater. As with all things used in and around saltwater, the Twin Troller should be rinsed well with freshwater after each use in this environment.

Boat Seats

Periodically clean with vinyl or fabric cleaner as needed.

Boat Hull

Periodically clean the hull with soap and water to keep it looking brand new. Stronger household cleaners such as 409 can also be used on tougher stains.

STORAGE

BOAT HULL & SEATS

When not in use, store your boat and seats away from harsh outdoor conditions, such as direct sunlight, precipitation, and wind. Use of a high quality boat cover is strongly recommended. Seats can be removed for situations where the boat cannot be stored in a flat position. NEVER store your boat where all the weight from the hull will be applied to the motor covers. Always remove the drain plug and disconnect the battery during the off-season storage of your boat.

FOOT PEDAL ASSEMBLY

The foot pedal assembly can be easily removed and should be stored away from harsh outdoor conditions such as precipitation and direct sunlight.

Although the control assemblies are water resistant, they should be REMOVED AFTER EACH USE and stored in a clean, dry location. Failure to do so will VOID THE WARRANTY.

TROUBLESHOOTING

Your Twin Troller X10 is designed and engineered for reliability. There may be times however where troubleshooting is required for proper operation. The following steps are listed in the order in which they should be followed to quickly identify any issue and minimize your time off the water.

MOTORS NOT RUNNING

- Make sure the battery is hooked up properly. There are 2 wires for each electric motor. They must be connected in the following manner: Red Wire to positive terminal and the black wire to negative terminal on the battery in order for the motor to run.
- Make sure your battery terminals are clean and free from corrosion. Disconnect your motor wires and clean if necessary.
- Check the wiring harness plugs and make sure they are fully engaged with the plug receptacles on the foot pedal assembly. They should be inserted until the connector pin clicks into place.
- Check the connections to the in-line circuit breakers to be certain they are clean and free of corrosion. Circuit breakers are located around 10" from the battery terminals on each wiring harness.
- Reset the in-line circuit breaker. This is done by pressing the small black reset button on the end of the circuit breaker, located on the motor cables, near the battery.
- If (1) motor is not running unplug the wiring harness from the control pedal for this motor and plug it in to the opposite foot controller. If the motor operates properly in the opposite controller, the motor is fine, and the problem is most likely in the original foot controller.
- Check the ends of both the wiring harnesses and pedal control plug receptacles for corrosion or damage. Clean if required. If the wiring harness or pedal control plug receptacle is damaged from corrosion, it/they may need to be replaced.

Call Freedom Electric Marine Customer Service if your motor is still not working. We will assist with additional troubleshooting. **877-882-0099 ext 3.**

MOTORS NOT RUNNING AT FULL SPEED

- Check the wiring harness to ensure it is fully inserted into the pedal control plug receptacle.
- Check your battery condition to make sure it is fully charged and capable of holding a charge.
- Unplug wiring harness from pedal control plug receptacle and clean with contact cleaner.
- You must exhaust all of the air from tunnel hulls before the boat will move efficiently in forward or reverse. (See boat operations for instructions)
- Make sure fishing line or other debris is not wrapped around the propeller or motor shaft. Remove debris from the propeller if present. To check for fishing line on the motor shaft behind the propeller, you will need to remove the motor guard and propeller. **REMINDER: Always disconnect the battery and foot pedal assembly before physically accessing the motors or the propellers.**

Call Freedom Electric Marine Customer Service if you need additional assistance.
877-882-0099 ext 3.

MISCELLANEOUS

- On rare occasions you may experience water getting inside the pontoon sections of the hull. If this should happen, remove the hull drain plugs located halfway down the outside of each pontoon and stand the boat on it's side. Once the majority of the water has drained from the hull, rock the boat back and forth to help direct any remaining amount of water to the drain area. Replace the plug and repeat this process for the other side of the boat. Once the hull is drained you should remove any mounting screws below the waterline, apply a small amount of sealant to the mounting holes and replace the screws.
- If your boat is not sitting level in the water, redistribute the weight inside of the boat. I.e. Gear and other accessories. See our YouTube video: Boat Leveling and Weight Distribution.
- If your boat is not running straight forward when both toes are fully pressed on the pedal assembly, please refer to the operation section of the manual.
- If you hear a vibration when the boat is in operation, check the motor guards to make sure they are not damaged and the guard is not touching the hull of the boat. If any part of a guard is touching the hull, bend it away from the hull. If a guard is damaged, contact us for a replacement part.
- If you have trouble getting your numbering or decals to stick to the hull, use alcohol or a strong household cleaner to clean the area prior to applying again. Using a hair dryer to heat up the area prior to application can help as well. Letters and numbering can also be painted on the hull.
- For issues associated with the accessories mounted to your boat (battery charger, depth finder, etc...) please refer to that item's owners manual for troubleshooting or contact information for that manufacturer.

Call Freedom Electric Marine Customer Service if you need additional assistance. 877-882-0099 ext 3.

For additional questions, troubleshooting tips, common service answers, and a digital version of this Twin Troller X10 Owner's Manual, please go to:
freedomelectricmarine.com/pages/maintenance

**THANKS FOR JOINING OUR TWIN TROLLER FAMILY.
ENJOY YOUR PURCHASE!**

PURCHASE INFORMATION

PLEASE FILL IN FOR YOUR FUTURE REFERENCE

TWIN TROLLER PURCHASE INFORMATION

DATE ON INVOICE: _____ INVOICE #: _____

PURCHASERS NAME(S) ON INVOICE: _____

HULL ID#: TTBB- _____

MODEL: _____ STANDARD _____ DELUXE

_____ ADVENTURE PACKAGE _____ OTHER

ACCESSORIES PURCHASED: _____ OUTBOARD MOTOR _____ TRAILER

_____ DOLLY _____ LIVE WELL _____ COVER _____ OTHER

ADDITIONAL ITEMS PURCHASED: _____



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