



OWNER'S MANUAL



F R E E D O M
ELECTRIC  MARINE

FREEDOM CALLS...

Valued Customer,

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

All Freedom Electric Marine boats feature the revolutionary, patented hands-free Twin Troller propulsion and control system, and/or dual toggle hand control unit. 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 in 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, a very special thanks to you 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 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 is within the limit as shown on the U.S. Coast Guard capacity plate. All Twin Troller Boats meet U.S. Coast Guard safety requirements.

① Other Safety Precautions

The Twin Troller is not equipped for night time use. If you intend to use it during non day time hours make sure you have equipped your boat with the appropriate safety lighting. Your boat is equipped with two electric motors. You should never attempt to access the motors unless you have disconnected the power source and disconnected the 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 can not be responsible for accidents due to misuse, modifications, or for using the boat in any manner other than it's intended use.

Manufacturer's Limited Warranty

Freedom Electric Marine will warrant to the original owner of the Twin Troller X10. This warranty will apply for a period of five years on the hull and one year on the pedal and motor assemblies for product failure associated with manufacturing and workmanship. This warranty does not apply to damages 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 determination of eligibility after an investigation of the condition of the boat by an authorized Representative. Freedom Electric Marine assumes no responsibility for loss of use of boat, loss of time, inconvenience or other damage or otherwise including, but not limited to, expense of returning boat/boat parts for service and expense of returning items back to 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 page 15 of this manual for your records. For warranty questions and support please contact our customer service department at 1-877-882-0099.

Boat Specifications and Features

Specifications: Length: 120" Capacity: 565 lbs.
Beam: 48" Max HP Rating: 2HP



- Hull made of "best in class" polyethylene resin
- New patented hull design
- Motors mounted inside the hull for shallow draft and protection
- Hands Free or Dual hand control variable speed operation
- Fold down double padded seats for extreme comfort
- Seat rails offer adjustable seating and secures seats when hauling
- Molded-In battery compartment
- Dual 36 lbs. thrust electric motors for extreme maneuverability
- Motor covers protect electric motors from obstacles or obstructions
- Reel holders 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

Boat Preparation & Set-up

Seat Assembly

Assembling the seats for your Twin Troller is a 2 step process. First you must attach the swivels to the seat supports (see diagram 1). Next, you will attach the seats to the swivel (see diagram 2).

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 four 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 four fasteners. Be aware of top and bottom swivel position in relation to seat support. The seat support will bend away from swivel top where seat is attached. Correct swivel position is necessary for correct mounting of seat in step 2. See diagram 1 for proper swivel position in relation to seat support.



Step 2 - Install seat to seat support/swivel.

Place seat on flat surface in the upside down position. Turn swivel so that top and bottom are not aligned to expose holes on swivel for easy attachment to seat bottom. Use the four 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 seat assembly in front area of boat directly in front of seat rails. Line up seat supports with each rail and slide seat onto rails. It may be necessary to slightly bend the seat support frame to fit the seat rails in the boat.

IMPORTANT: Never add lubrication to seat rails. Seat rails are designed to fit snug enough to hold seat position while allowing ability to slide seat along rails.



The Twin Troller X10 loves saltwater!
Rinse down after use and enjoy!



Boat Preparation & Set-up (cont'd)

Motor Controllers

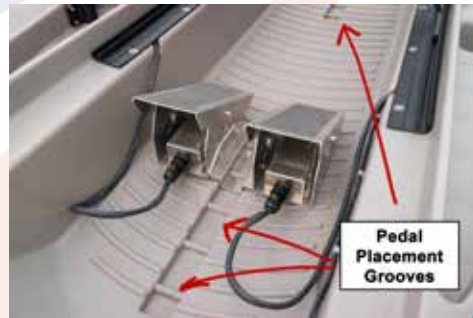
The motor controllers and connecting wiring harnesses are the most important components of your Twin Troller X10. They are specifically designed for the X10 to provide years of trouble free operation. However, like all electronic components care in operation, storage, and routine maintenance are important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

Installation

Foot pedals and dual hand controls come fully assembled when you purchase your boat.

Foot Pedals

In the floor of the boat you will find grooves in both the front and rear of the boat for multiple mounting locations for the pedal assembly. Place the pedal assembly in the desired location for your comfort. Once the assembly is in place, simply attach the cable assembly from each side to the receptacle at the front of each pedal.



Hand Controls

The hand controls have 2 different assembly boxes connected by flexible wiring. One box contains the variable controls and the other the thumb toggle switches. The unit containing the variable speed controller contains the connections for the wiring harnesses and can be placed anywhere in the boat once they are connected.



Motor Control

For most of our owners normal operation will be to plug the motor power harness in to it's corresponding control unit; ie, right-to-right and left-to-left. However the controllers are identical and the motors can be plugged in to the opposite side controller without harming the controls. This will cause the controller to operate the motor opposite that side and a few boat owners have discovered they prefer this configuration for operating their boat that is similar to flying an airplane.

Do not operate or test pedals for extended times with the motors out of water. This could cause the controller to fail due to overheating.

Controller/Wiring Harness Storage

The controller assembly can be easily removed and should be stored away from harsh outdoor conditions such as direct sunlight and precipitation. The controllers are water resistant but should never be submerged under water.

ALTHOUGH THE CONTROL ASSEMBLIES ARE HIGHLY WATER RESISTANCE, THEY SHOULD BE REMOVED AFTER EACH USE AND STORED IN A CLEAN DRY LOCATION. FAILURE TO DO SO WILL VOID THE CONTROLLER WARRANTY.

If you plan on storing your boat outside don't leave your control harnesses laying in the bottom of your boat where they can be exposed to possible collecting water. Hang the ends of the control wires over the side of the boat with the connectors facing downward to minimize their exposure to excessive water. You should do this even if you are using a cover for your boat.

Maintenance of Pedal/Hand Control Assembly and Cables

Apply a light dielectric grease to each controller connector to avoid corrosion and assist with connectivity (available at hardware store). Apply as needed. Both the wiring harness and controller connectors 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 salt water. **THIS IS THE BEST MAINTANANCE PRACTICE YOU CAN DO TO INSURE THE LONG TROUBLE FREE USE OF YOUR TWIN TROLLER.**



Controllers should NEVER be submerged in water. If this occurs promptly remove them from the water. DO NOT ATTEMPT TO USE YOUR CONTROLS BEFORE YOU HAVE ALLOWED THEM TO DRY FOR AT LEAST 24 HOURS. Place them in a dry, clean location and allow them to drain and dry 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 to 8 hours of operation on a fully charged 12 volt Series 29 Deep Cycle Marine battery. We highly recommend the use of "wet" Lead cell batteries vs. more costly gel-cell batteries. For extended life you can connect 2 batteries together in a **PARALLEL CONFIGURATION** maintaining a 12 volt system.

⚠ WARNING – Do not run your boat using 2 batteries in SERIES creating a 24 volt system. This will result in the failure of your controllers.

Motor/Power Connection to Battery

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

Boat Operation

① Pre-Launch Checklist

Personal Flotation Device - 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 total weight capacities and number of persons for the boat to make sure you are within the limits.

Drain Plug - The drain plug should be installed before launching the boat to prevent water from entering the boat.

Battery Connections - Make sure you have the battery properly connected before launching your boat.

Controller Connections - To ensure proper operation of your controller assembly, the cable assembly plug must be fully inserted in to the control boxes, and the securing pins are engaged.

- Failure to fully insert the harness plug into the control box will result in a poor connection and possible overheating and damage to the unit.
- Do NOT pull on the wiring harness!! This could negatively impact the wire connections and result in overheating and failure of the control unit.

Load Leveling – Your boat will perform better if it is sitting level on the water. You may need to evenly distribute the weight in your boat for it to sit level.

Entering the Boat - When entering the boat, always step into the bottom of the boat and not on the gunwales to prevent from slipping or falling.

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

Electric Motor Operation

Your boat is equipped with two electric motors that are mounted inside the hull of the boat. The motors are controlled by independent controllers. Removing Obstructions from the Motor. Both electric motors are protected by an aluminum cover. If you come into contact with heavy vegetation or other debris when in operation, remove by applying varying full toe and heel pressure to the side affected. This should clear the motor. Avoid areas of extreme vegetation or loose debris when possible.

WARNING: If you have to remove any debris from the motor guards or motor propellers when the boat is not in the water, make sure you disconnect the foot pedals and battery first to prevent any injury. Never place hands or any other body parts near the motors or motor covers when the boat is in use or when the battery or pedal assemblies are connected.

Filling the Tunnel Hulls

You must fill the 2 tunnel hulls before the boat will operate properly. This should only take 6 to 10 seconds. Move your boat off the shore and point it away from the shoreline. Apply full forward pressure to both controllers. (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 pedals or dual hand control assemblies. For most boat owners the right side controller will control the right motor and the left controller will control the left motor. Both controllers are variable speed in both forward and reverse. Applying toe or forward thumb pressure to either controller will cause the corresponding motor on that side to thrust forward while heel or backwards thumb pressure will result in a reverse thrust. The controllers operate independently allowing full control of the boat.

Point-to-point Operation

When moving from one destination to another the following “steering” procedures should be followed.

Bring the boat slowly up to speed – DO NOT quickly depress the controllers 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 on the controllers to prevent side-to-side drifting of the boat.

Forward Motion

Apply forward pressure to both controllers to move the boat forward. Changing the amount of pressure will cause the boat to turn. Less pressure on the left controller will cause the boat to turn left while less pressure on the right controller will cause the boat to turn right.

Reverse Motion

Your Twin Troller operates the same in reverse as in the forward motion except you will be applying heel/backwards thumb pressure

Full Rotation

The Twin Troller X10 is capable of a true zero degree turning radius!! No other powered recreational boat on the market has this capability, and is helpful when fishing in tight areas, or just having a little fun on the water. To execute a zero degree turn apply forward pressure to one controller and reverse pressure to the opposite controller which will cause the boat to turn in a 360 degree motion. Reverse the controllers to rotate the boat in the opposite direction. This is always a fun maneuver!



Installing an Outboard Engine

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 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 engine 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 rails 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 electronics wiring down the inside of the seating area to avoid interference between the power and transducer wiring. When installing your 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 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 a fender well, etc. to prevent any damage to the cover. Adding items to the bed of the truck to make the boat sit level (example - old tires), can help. Again, make sure the boat is properly strapped down and secure.

Boat Registration & Numbering

Your boat comes with a Manufacturer's Statement of Origin which is required when registering your boat. Check with your local Wildlife Commission or other State Resources to see what are the requirements and laws in your area concerning boat registration before use. If applying numbers or decals to your boat, thoroughly clean the area you wish to apply the items to help insure they adhere to the hull your boat.

Important Note

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

Freedom Electric Marine
PO Box 1824
Angier, NC 27501

Also, please call customer service to notify us of situation. We will get the documents back to you ASAP.

Maintenance

The Twin Troller X10 has very low maintenance costs. However, routine maintenance is VERY IMPORTANT to insure years of trouble free operation and enjoyment.

Pedal/Hand Control Assembly and Cables

Apply a light dielectric grease to each controller connector to avoid corrosion and assist with connectivity (available at hardware store). Apply as needed.

Both the wiring harness and controller connectors 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 salt water. **THIS IS THE BEST MAINTENANCE PRACTICE YOU CAN DO TO INSURE THE LONG TROUBLE FREE USE OF YOUR TWIN TROLLER.**

Controllers should NEVER be submerged in water. If this occurs promptly remove them from the water. DO NOT ATTEMPT TO USE YOUR CONTROLS BEFORE YOU HAVE ALLOWED THEM TO DRY FOR AT LEAST 24 HOURS. Place them in a dry, clean location and allow them to drain and dry for at least 24 hours!!!

Boat Seats- Periodically clean with vinyl or fabric cleaner as needed.

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

Motors - Motors may need to be accessed periodically to remove items such as fishing line from the propellers. To access the motors, remove the screws from the motor covers. The propellers can be removed by securing the propeller blade and removing the nut and washer. When re-installing a propeller, make sure the shear pin on the motor shaft is in alignment with the proper location on the propeller.

Important: Never attempt to access the motors when the boat is hooked up to a power supply or while the pedals are plugged in.

Storage

Boat Hull / Seats

When not in use, store your boat/seats away from harsh outdoor conditions such as direct sunlight, precipitation and wind. Use of a quality boat cover is strongly recommended. Seats can be removed for situations where the boat can not be stored flat. 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 off season storage of your boat.

Pedal/Hand Controller Assembly

The pedal assembly can be easily removed and should also be stored away from harsh outdoor conditions such as direct sunlight and precipitation. The pedals are water resistant but should never be submerged under water.

ALTHOUGH THE CONTROL ASSEMBLIES ARE HIGHLY WATER RESISTANCE, THEY SHOULD BE REMOVED AFTER EACH USE AND STORED IN A CLEAN DRY LOCATION. FAILURE TO DO SO WILL VOID THE CONTROLLER WARRANTY.

Troubleshooting

Your Twin Troller X10 is designed and engineered for reliability. There may be times however troubleshooting is required for proper operation. The following steps are listed in the order 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 black wire to negative terminal on the battery in order for the motor to run.
- Check to insure your battery terminals are clean and free from corrosion. Disconnect your motor wires and clean if required.
- Check the cable assembly plugs to insure they are fully engaged with the receptacles on the controller assembly. They should be inserted until the retaining pin clicks into place.
- Check to insure the connections to the in-line Circuit Breaker (Small box located about 10" from the battery terminals.) are clean and free of corrosion.
- Reset the in-line Circuit Breaker. This is done by pressing the small black reset button on the side of the circuit breaker located on motor cables near battery.
- Unplug the control harness from it's current controller and plug it in to the opposite controller. If the motor runs with the opposite controller the motor is fine but you may have a controller issue.
- Check condition of both ends of connectors for corrosion and damage. Clean if required. If damaged from corrosion is on the wiring harness, or controller, they may need to be replaced.

Call FEM customer service if motor is still not working. 877-882-0099

Motor Not Running Full Speed

- Check to insure wiring harness is fully inserted in to the controller.
- Check your battery condition to make sure it is fully charged and capable of holding a charge.
- Unplug harness and clean both harness and controller connectors with Contact Cleaner.
- You must exhaust all the air from the tunnel hulls before the boat will move efficiently in forward or reverse. (see Boat Operations for Instructions)
- Make sure fishing line or other debris are not wrapped around the prop or motor shaft. Remove prop debris if present. To check for fishing line on the motor shaft behind the prop you will need to remove the motor guard and prop.

Call FEM customer service if motor is still not working. 877-882-0099

Miscellaneous

- If your boat is not sitting level in the water, try to distribute the weight more evenly. There are multiple pedal assembly locations molded in the hull.
- If your boat is not running straight forward when both toes are fully pressed on the pedal assembly, refer to the boat operation section of this manual. No boat will run perfectly straight. Use the pedals to steer straight
- If you hear a vibration when the boat is in operation, check the motor covers to make sure they are not damaged and none of the rods are touching the hull of

the boat. If so, bend the rod away from the hull. If a rod is damaged, contact us for repair.

- If you have a problem getting any numbering or decals to stick to the hull, use alcohol or strong household cleaner to clean the area before applying. Use a hair dryer to heat up the area prior to installing will also help. Numbers / letters can also be painted on the hull.
- For issues associated with accessories mounted on your boat (depth finder, battery charger, etc.) please refer to that items owners manual that was supplied with the boat.

For troubleshooting tips, answers to common service questions, and videos go to:

<http://freedomelectricmarine.com/service>

For a digital version of this Twin Troller X10 Owner's Manual go to:

<http://freedomelectricmarine.com/ttmanual>

If you have additional questions, please contact customer service at 877-882-0099.

Twin Troller Hat

Want to be part of an ultra-exclusive group? You can't buy a Twin Troller hat. Here's how you get one. Submit a review, photos, or videos of you with your Twin Troller. It's that simple.



Go to:

<http://freedomelectricmarine.com/review>

Thanks again for your purchase and enjoy!

Twin Troller X10 Purchase Information

Date on Invoice:

Purchaser's Name on Invoice:

Invoice Number:

Hull ID Number:

Model/Package:

Standard Model Fisherman Deluxe Adventure Package Ultimate Package

Accessories Purchased:

Trailer Honda Outboard Live Well Cover Dolly





TWIN TROLLER

The World's Best Fishing Boat



FREEDOM

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FREEDOM CALLS...

PO Box 1824

Angier, NC 27504

Phone: 1-877-882-0099

<http://freedomelectricmarine.com>