

RIPTIDE ULTERRA[™]

BOW-MOUNT TROLLING MOTOR

Installation Instructions

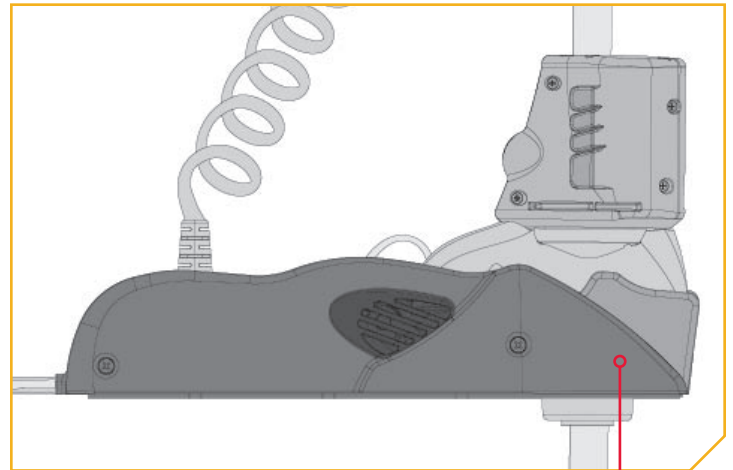
INTRODUCTION

THANK YOU

Thank you for choosing Minn Kota. We believe that you should spend more time fishing and less time positioning your boat. That's why we build the smartest, toughest, most intuitive trolling motors on the water. Every aspect of a Minn Kota trolling motor is thought out and rethought until it's good enough to bear our name. Countless hours of research and testing provide you the Minn Kota advantage that can truly take you "Anywhere. Anytime." We don't believe in shortcuts. We are Minn Kota. And we are never done helping you catch more fish.

SERIAL NUMBER

Your Minn Kota 11-character serial number is very important. It helps to determine the specific model and year of manufacture. When contacting Consumer Service or registering your product, you will need to know your product's serial number. We recommend that you write the serial number down so that you have it available for future reference.



NOTICE: The serial number on your Riptide Ulterra is located underneath the bracket.

SAFETY CONSIDERATIONS

Please thoroughly read the user manual. Follow all instructions and heed all safety and cautionary notices. Use of this motor is only permitted for persons that have read and understood these user instructions. Minors may use this motor only under adult supervision.

WARNING

You are responsible for the safe and prudent operation of your vessel. We have designed your Minn Kota product to be an accurate and reliable tool that will enhance boat operation and improve your ability to catch fish. This product does not relieve you from the responsibility for safe operation of your boat. You must avoid hazards to navigation and always maintain a permanent watch so you can respond to situations as they develop. You must always be prepared to regain manual control of your boat. Learn to operate your Minn Kota product in an area free from hazards and obstacles.

WARNING

Never run the motor out of the water, as this may result in injuries from the rotating propeller. The motor should be disconnected from the power source when it is not in use or is off the water. When connecting the power-supply cables of the motor to the battery, ensure that they are not kinked or subject to chafe and route them in such a way that persons cannot trip over them. Before using the motor make sure that the insulation of the power cables is not damaged. Disregarding these safety precautions may result in electric shorts of battery(s) and/or motor. Always disconnect motor from battery(s) before cleaning or checking the propeller. Avoid submerging the complete motor as water may enter the lower unit through control head and shaft. If the motor is used while water is present in the lower unit considerable damage to the motor can occur. This damage will not be covered by warranty.

WARNING

Take care that neither you nor other persons approach the turning propeller too closely, neither with body parts nor with objects. The motor is powerful and may endanger or injure you or others. While the motor is running watch out for persons swimming and for floating objects. Persons whose ability to run the motor or whose reactions are impaired by alcohol, drugs, medication, or other substances are not permitted to use this motor. This motor is not suitable for use in strong currents. The constant noise pressure level of the motor during use is less than 70dB(A). The overall vibration level does not exceed 2,5 m/sec².

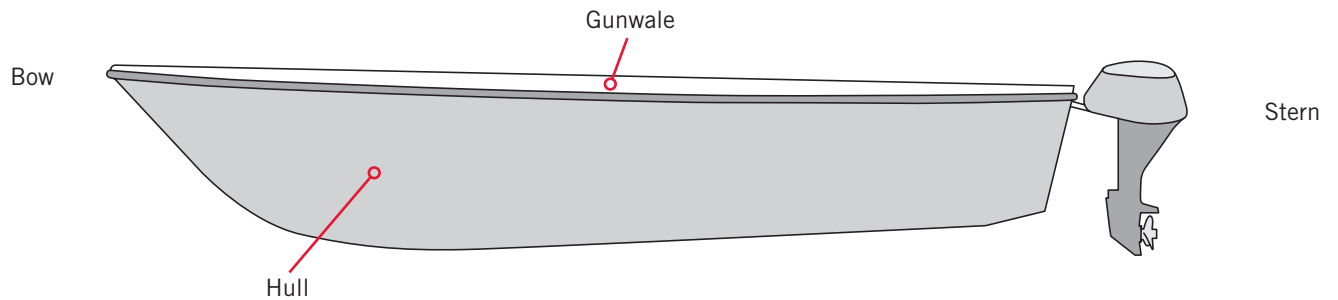
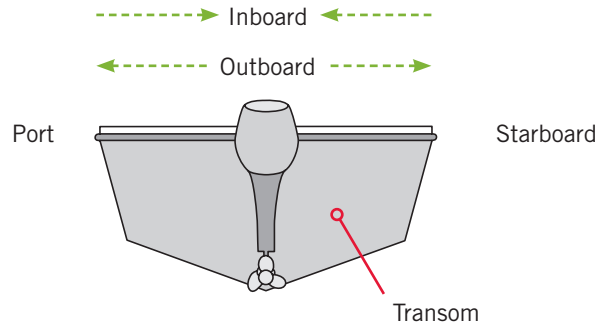
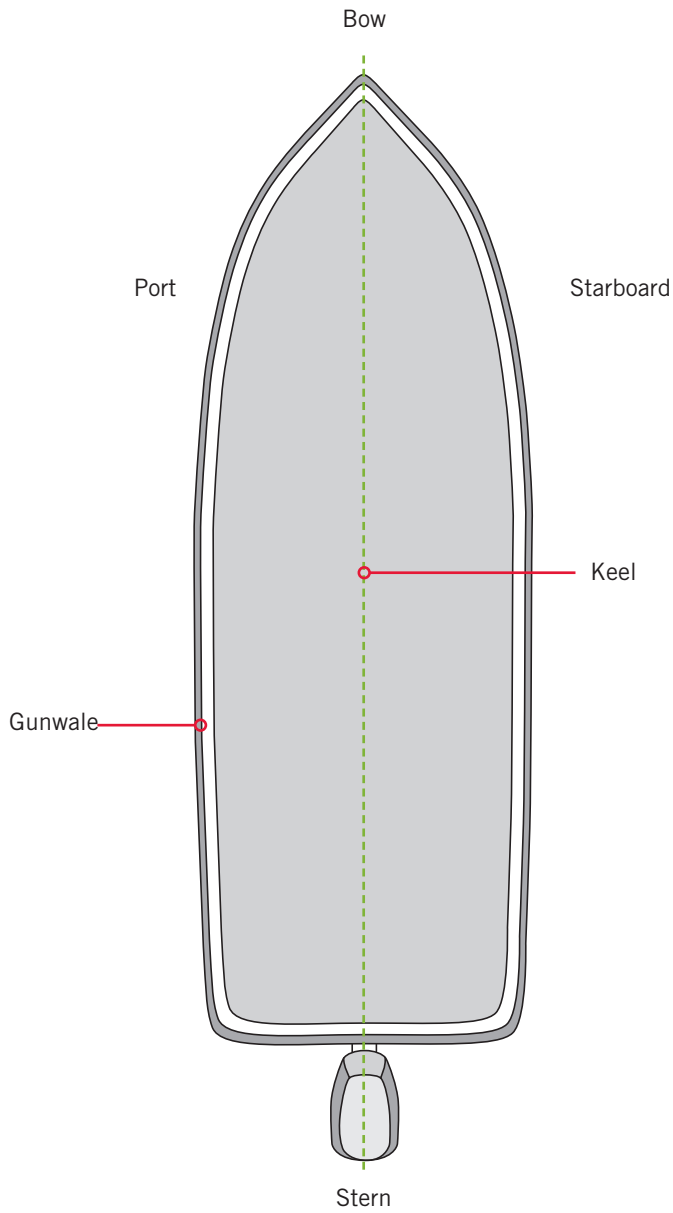
WARNING

When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts. In the event of unexpected operation, remove power leads from the battery.

WARNING

It is recommended to only use Johnson Outdoors approved accessories with your Minn Kota motor. Using non-approved accessories including to mount or control your motor may cause damage, unexpected motor operation and injury. Be sure to use the product and approved accessories, including remotes, safely and in the manner directed to avoid accidental or unexpected motor operation. Keep all factory installed parts in place including motor and accessory covers, enclosures and guards.

KNOW YOUR BOAT



INSTALLATION

INSTALLING THE RIPTIDE ULTERRA

Your new Riptide Ultrerra comes with everything you'll need to directly install it to the boat. This motor can be directly mounted to the boat or it may be coupled with a Minn Kota quick release bracket for ease of mounting and removal. For installation with a quick release bracket, refer to the installation instructions provided with the bracket. To install the motor directly to the boat, please follow the instructions provided in this manual.

INSTALLATION PARTS LIST

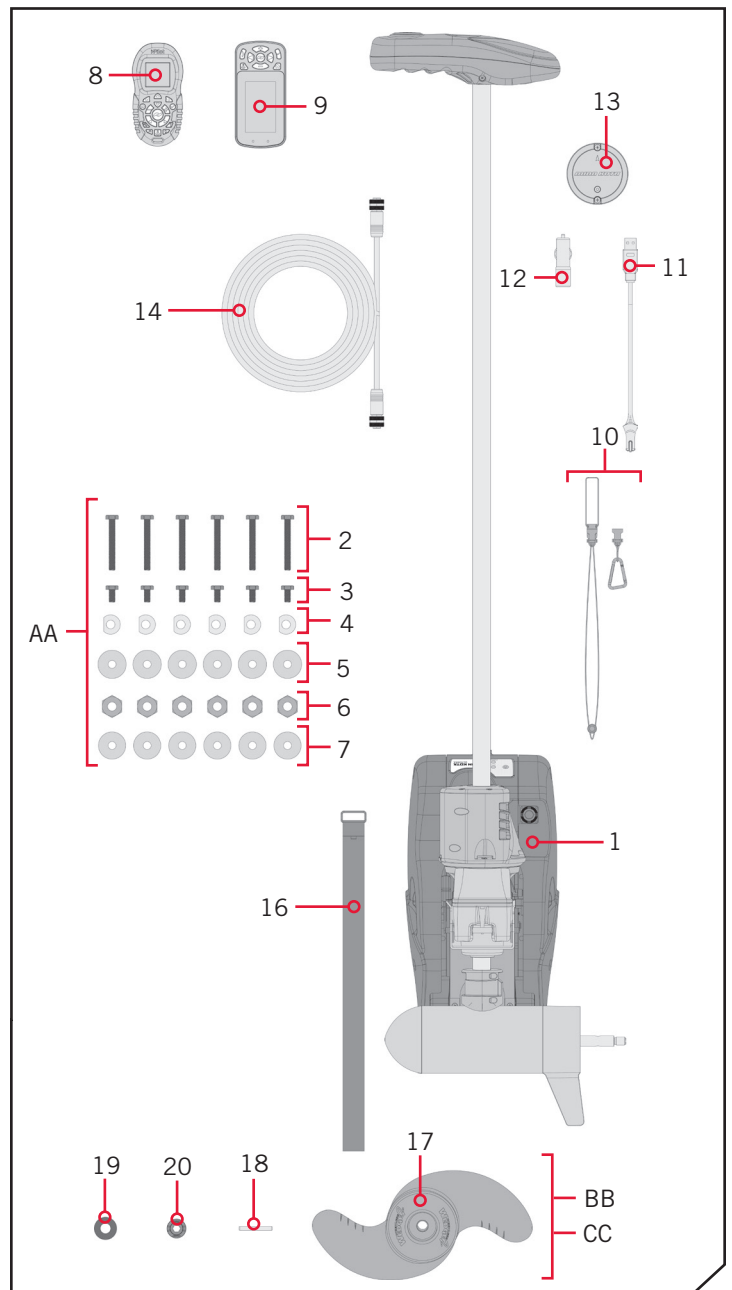
Item / Assembly	Part #	Description	Qty.
1	✘	MOTOR ASSEMBLY	1
AA Includes 2-7	2994917	BAG ASSY, ULTERRA MTG HARDWARE	1
2	2203430	SCREW-1/4-20 X 2.0 HHCS SS	6
3	2203431	SCREW-1/4-20 X 0.5 HHCS SS	6
4	2201725	WASHER-CLIPPED, 1/4", 1.00" OD	6
5	2261713	WASHER-1/4 FLAT 18-8 SS	6
6	2263103	NUT-1/4-20 NYLOCK SS	6
7	2301720	WASHER-MOUNTING - RUBBER	6
8	2994075 ◆	REMOTE ASSEMBLY, iPILOT	1
9	2994076 ●	REMOTE ASSEMBLY LINK TOUCHSCREEN	1
▲	2397101 ◆	MANUAL, QUICK REF., iPILOT 1.6	1
▲	2397103 ●	MANUAL-QUICK REF., iPILOT 3.0	1
10	2390800 ◆●	LANYARD, REMOTE W/ CARABEENER	1
11	2373241 ●	CABLE, USB REMOTE CHARGER LINK	1
12	2375901 ●	ADAPTER, USB DC POWER LINK	1
13	2996400 ◆●	HEADING SENSOR ASSEMBLY	1
14	490389-1 ●	CABLE, ETH (M12-M-M12-F, 30'	1
16	2203801	STRAP, HOLD DOWN	1
BB	1378132	80# THRUST PROP KIT	1
CC	1378160	112# THRUST PROP KIT	1
17	2341160	PROP-WW2 (4.5) w/ADP.RING	1
	2331160	PROP-WW2 (4") w/ADP.RING	1
18	2262658	PIN-DRIVE 1" X 3/16" S/S	1
19	2091701	WASHER-PROP (LARGE)	1
20	2093101	NUT-PROP, NYLOC, LG, MX101 3/8 SS	1
▲	2207114	MANUAL, INSTALL GUIDE, RT ULTERRA	1
▲	2394900	INSTRUCTIONS, HEADING SENSOR	1

▲ Not shown on Parts Diagram.

✘ This part is included in an assembly and cannot be ordered individually.

◆ Only available with models factory installed with i-Pilot.

● Only available with models factory installed with i-Pilot Link.



INSTALLING THE RIPTIDE ULTERRA

MOUNTING CONSIDERATIONS

It is recommended that the motor be mounted as close to the keel or centerline of the boat as possible. Make sure the area under the mounting location is clear to drill holes and install nuts and washers. Make sure the motor rest is positioned far enough beyond the edge of the boat. The motor must not encounter any obstructions as it is lowered into the water or raised into the boat when stowed and deployed. Consider a quick release or adapter bracket with the installation of your motor.

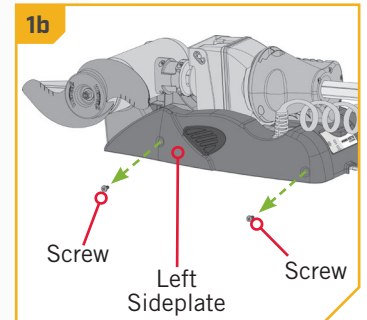
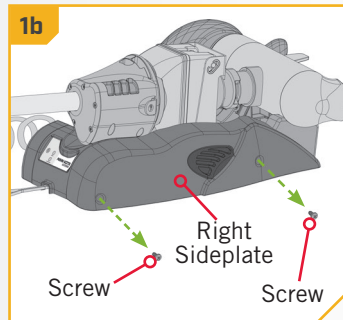
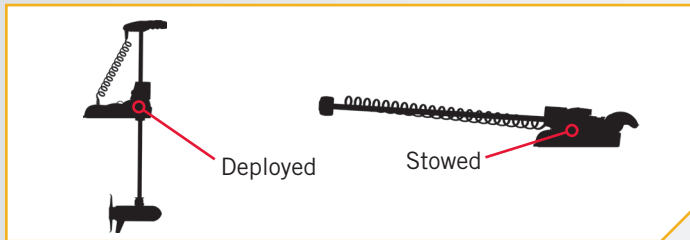
TOOLS AND RESOURCES REQUIRED

- #2 Phillips Screwdriver
- #3 Phillips Screwdriver
- Drill
- 9/32" Drill Bit
- A person to help with installation

INSTALLATION

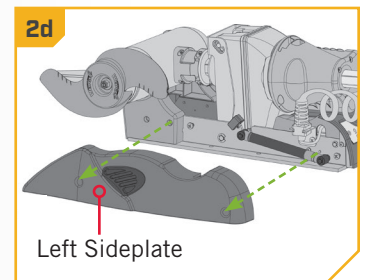
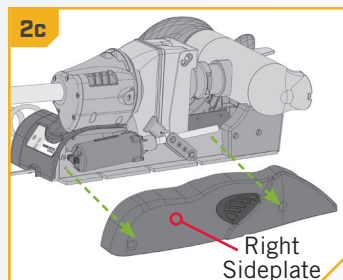
INSTALLING THE RIPTIDE ULTERRA

- Place the Motor on an elevated, level surface such as a workbench or the tailgate of a pickup. The motor, as removed from the box, should be in the stowed position.
 - Remove the four sideplate screws using a #3 or #2 Phillips screwdriver. Two of these screws will be located on each side of the Motor Mount.



NOTICE: This motor weighs approximately 70 lbs. We recommend having a second person help with the installation.

- Remove the Right Sideplate to access the Mounting Slots.
 - Remove the Left Sideplate to access the Mounting Holes.



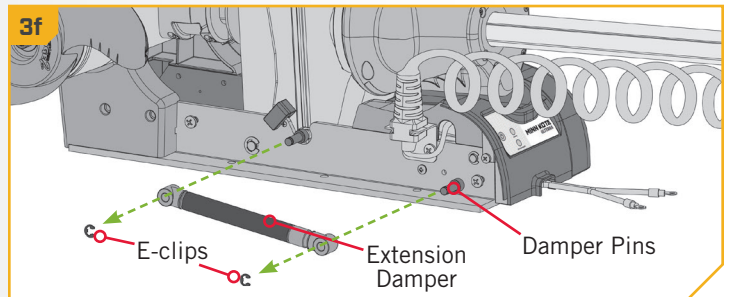
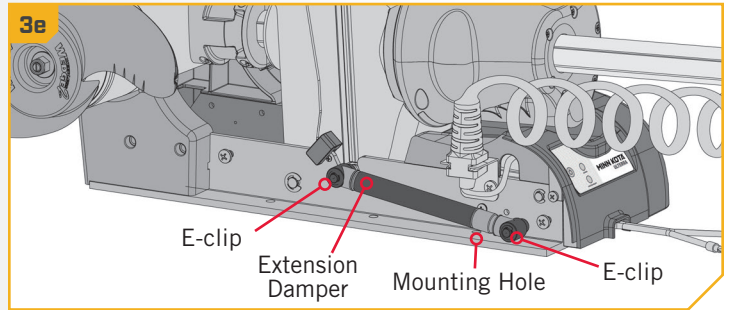
INSTALLING THE RIPTIDE ULTERRA

3

- e. Under the Left Sideplate, the Extension Damper obstructs access to the left front Mounting Hole.
- f. Using a small Screw Driver, remove the two 5/16" e-clips holding the Extension Damper in place. Once the e-clips are removed, slide the Extension Damper off the Damper Pins to expose the left rear Mounting Hole. Set the two e-clips and Extension Damper in a safe place so they are not misplaced before they are reassembled later in the installation.

WARNING

Do not deploy the motor until it is fully mounted to the boat. Illustrations are for reference only. Deploying your motor before it is mounted to the boat may cause injury.

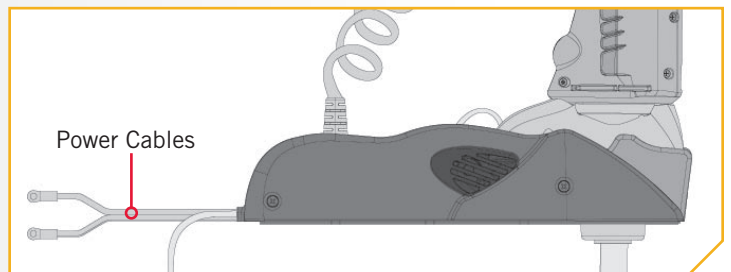


4

- g. Make sure the Power Cables from the battery are disconnected, or that the breaker, if equipped, is "off".

WARNING

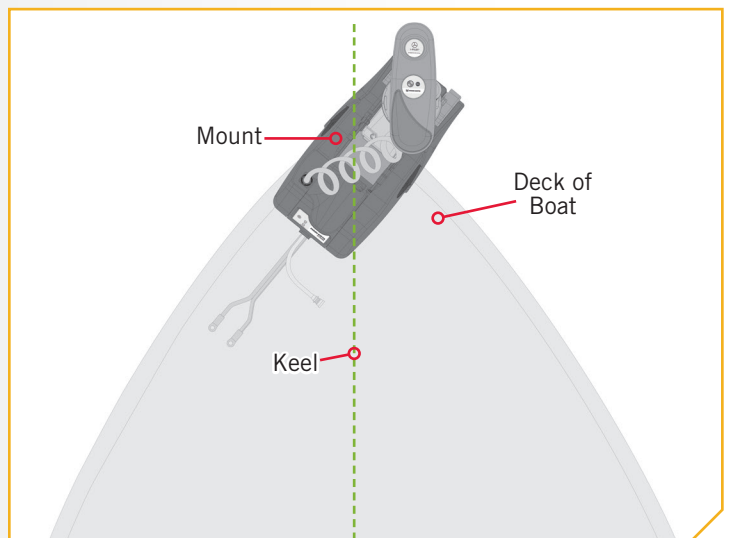
Make sure the motor is mounted on a level surface and is not connected to a power source.



5

- h. Place the motor on the bow of the boat. Place the motor as close to the centerline or keel of the boat as possible. The motor can be installed on either the Port or Starboard side of the boat based on personal preference. Reviewing the mounting considerations at the beginning of the installation section.

NOTICE: The Emergency Strap (Item #16) is used for Manually Stowing the Ulterra. The Emergency Strap is not secured during installation. Store it on your boat along with a #2 Philips screwdriver in the event that you would need to manually stow the motor. To learn how, please refer to the "Manually Stowing the Ulterra" section of the Owner's Manual.



INSTALLING THE RIPTIDE ULTERRA

6

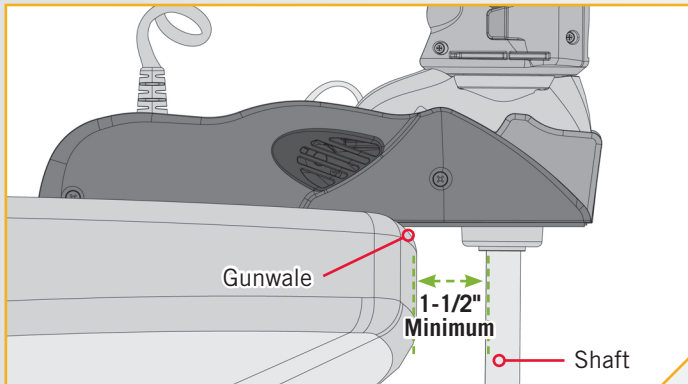
ITEM(S) NEEDED

 #7 x 6

WARNING

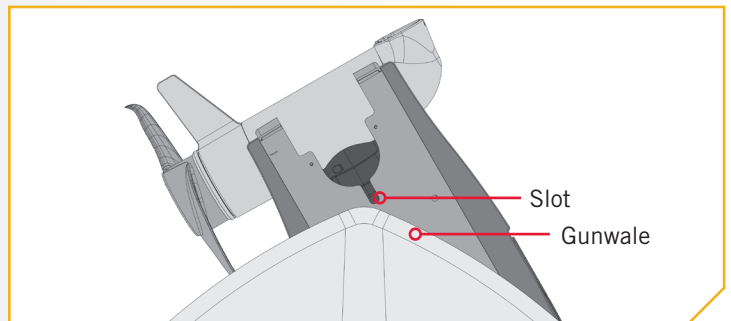
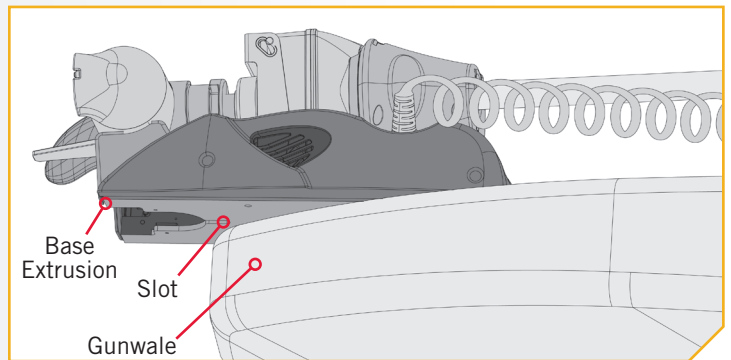
Do not deploy the motor until it is fully mounted to the boat. Illustrations are for reference only. Deploying your motor before it is mounted to the boat may cause injury.

- i. Make sure the slot on the underside of the Base Extrusion is aligned with the outermost part of the gunwale of the boat. This will ensure that the Shaft has a minimum clearance of 1-1/2" when it is deployed. The lower unit when stowed and deployed must not encounter any obstructions.
- j. Check to be sure that the Motor Mount is level. Use the Rubber Washers (Item #7) provided to create a level surface if necessary.



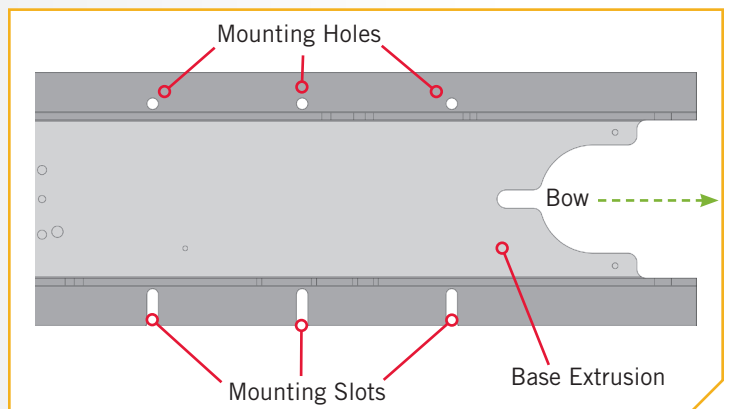
CAUTION

Failure to allow 1-1/2" of clearance of the Shaft when mounting may cause failures when the motor stows and deploys. Follow recommended mounting considerations to avoid obstructions when operating the motor.



7

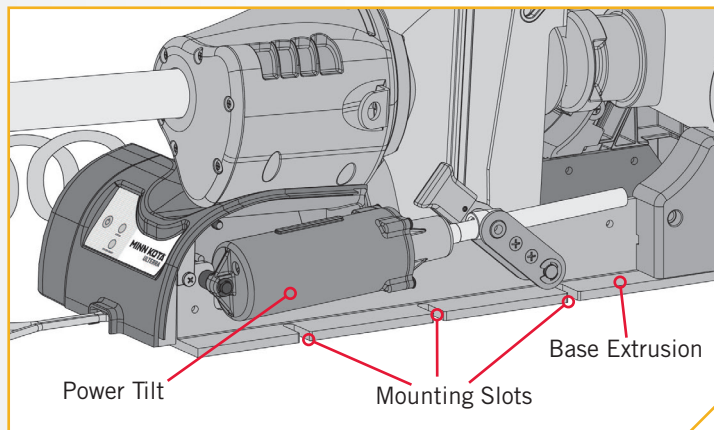
- k. It is recommended to mark at least 4 of the 6 holes in the Base Extrusion to have a minimum of two bolts on each side that are located the farthest apart. Ideal installation would allow for 6 bolts to be used, with a minimum of 4.
- l. Make sure the area under the mounting location is clear to drill holes and install nuts and washers. Drill through the marked holes using a 9/32" drill bit.



INSTALLING THE RIPTIDE ULTERRA

8

- m. Mount the motor to the boat using the provided hardware. Place the installation hardware for the side of the Motor where the Power Tilt is located first. This is the opposite side of the Base Extrusion from where the Extension Damper was removed. The base of the Motor where the Power Tilt is located has Mounting Slots and the side where the Extension Damper is located has Mounting Holes.



9

ITEM(S) NEEDED



#2 x 3



#5 x 3



#4 x 3



#6 x 3

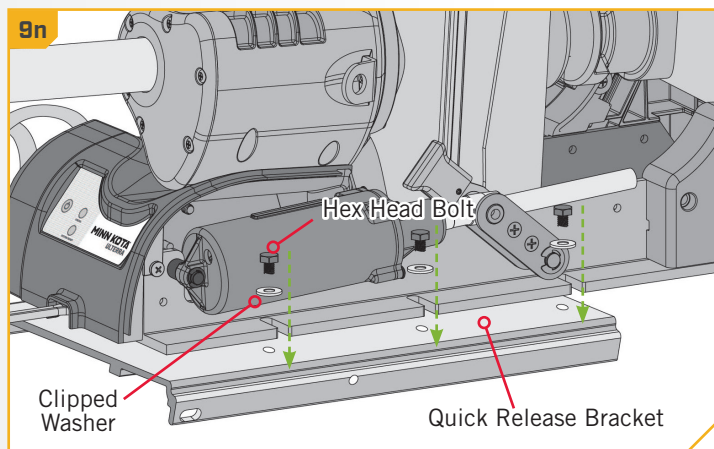


#3 x 3

NOTICE: To prevent seizing of the stainless steel hardware, do not use high speed installation tools. Wetting the screws or applying an anti-seize may help prevent seizing.

- n. **If installing with a Quick Release Bracket**, install the motor with the Hex Head Bolts (Item #3) and Clipped Washers (Item #4). Orientate the Clipped Washers so that the flat side of the washer is towards the Base Extrusion. The Bolt should pass through the Clipped Washer and into a Quick Release Bracket. Leave at least 1/4" space between the Hex Head Bolt and Clipped Washer in order to slide the Base Extrusion under the Clipped Washer and into place.

NOTICE: The Long Bolts, Flat Washers and Nylock Nut are not used when installing the Riptide Ultrerra with a Quick Release Bracket.



CAUTION

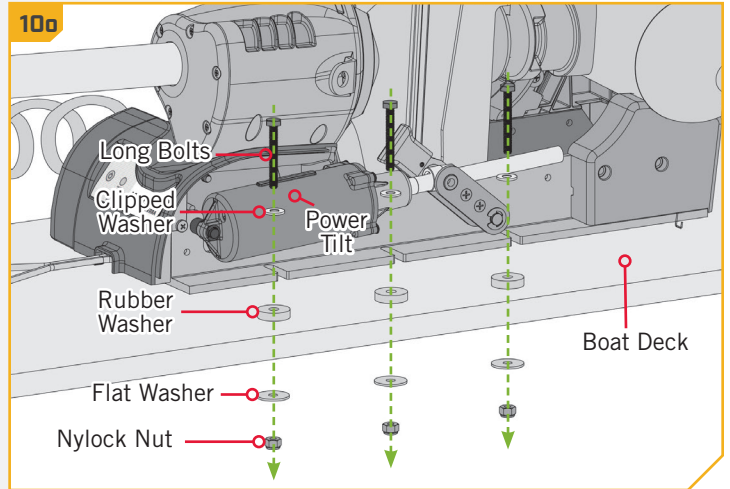
Use extra care to avoid pinching and damaging the sensor wires that run along side of the Base Extrusion when installing and tightening the motor mounting bolts.

INSTALLING THE RIPTIDE ULTERRA

10

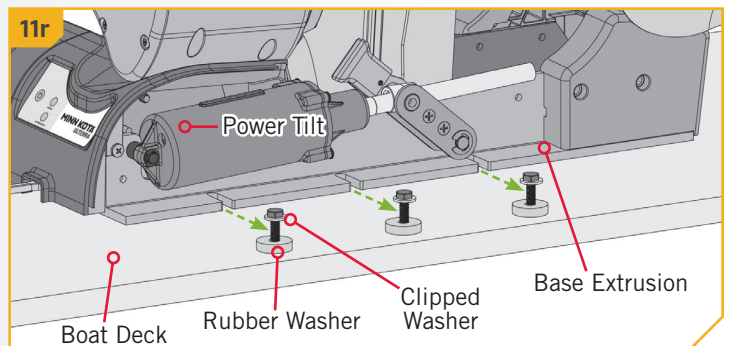
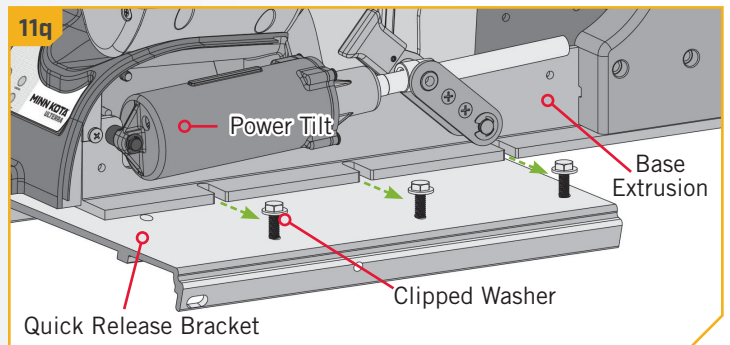
- o. **If installing directly to the boat deck**, install the motor with the Long Bolts (Item #2), Clipped Washer (Item #4), Flat Washer (Item #5) and Nylock Nut (Item #6). Orientate the Clipped Washers so that the flat side of the washer is towards the Base Extrusion. The Bolt should pass through the Clipped Washer, the Rubber Washer and then through the Boat Deck. The Bolt should be secured by first adding the Flat Washer (Item #5) to the Bolt and securing with a Nylock Nut (Item #6). Leave at least 1/4" space between the Hex Head Bolt and Clipped Washer and the deck of the boat. This will leave enough space to slide the Base Extrusion between the Clipped Washer and Rubber Washer and into place.

NOTICE: The Short Bolts are not used when installing the Riptide Ulterra directly to the boat.



11

- p. Slide the Base Extrusion into place under the Bolts that were just installed.
- q. **If installing with a Quick Release Bracket**, the Base Extrusion should slide between the Quick Release Bracket and the Clipped Washers. Hold the Clipped Washers up on the Hex Head Bolt, so the Clipped Washer will sit on top of the Base Extrusion.
- r. **If installing directly to the boat deck**, the Base Extrusion should slide between the Clipped Washer and the Rubber Washer. Hold the Clipped Washers up on the Long Bolt, so the Clipped Washer will sit on top of the Base Extrusion.



INSTALLING THE RIPTIDE ULTERRA

12

ITEM(S) NEEDED



#5 x 3



#2 x 3



#4 x 3



#6 x 3



#3 x 3

NOTICE: To prevent seizing of the stainless steel hardware, do not use high speed installation tools. Wetting the screws or applying an anti-seize may help prevent seizing.

- s. Place the hardware on the Damper side of the mount into the Mounting Holes to secure the Base Extrusion.
- t. **If installing with a Quick Release Bracket**, install the motor with the Hex Head Bolts (Item #3) and Clipped Washers (Item #4). Orientate the Clipped Washers so that the flat side of the washer is towards the Base Extrusion. The Bolt should pass through the Clipped Washer, Base Extrusion and into a Quick Release Bracket.

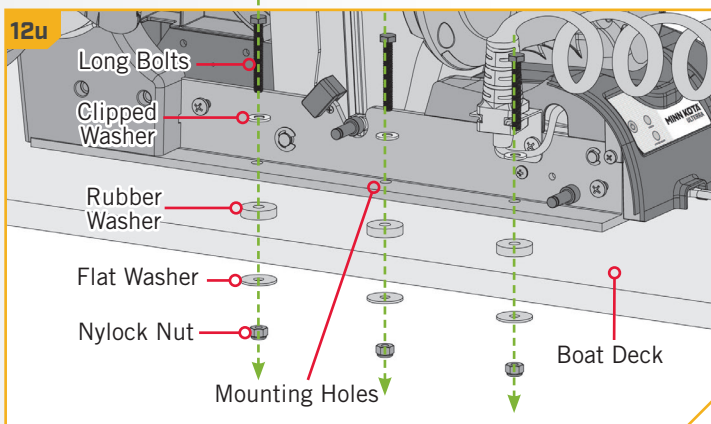
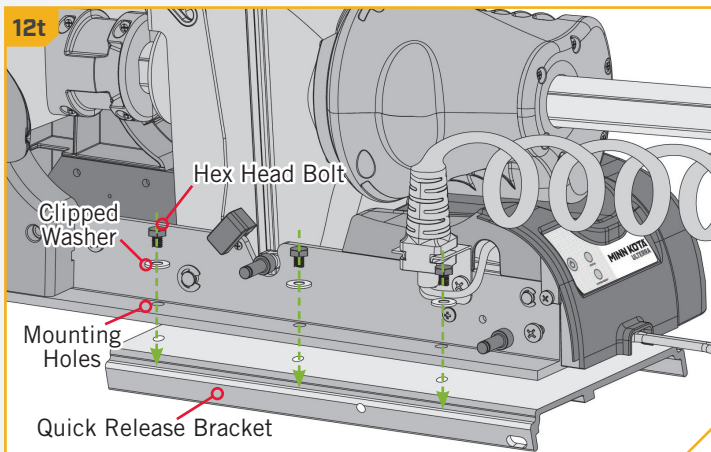
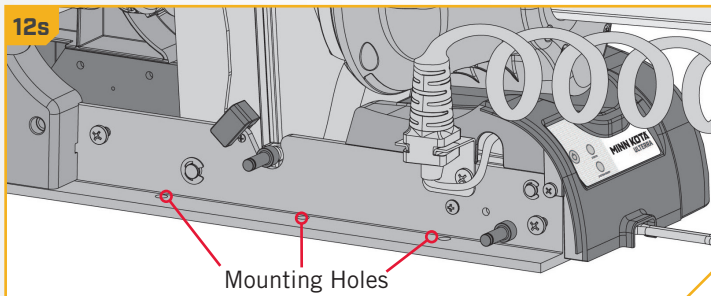
NOTICE: The Long Bolts, Flat Washers and Nylock Nut are not used when installing the Riptide Ultrerra with a Quick Release Bracket.

- u. **If installing directly to the boat deck**, install the motor with the Long Bolts (Item #2), Clipped Washer (Item #4), Flat Washer (Item #5) and Nylock Nut (Item #6). Orientate the Clipped Washers so that the flat side of the washer is towards the Base Extrusion. The Bolt should pass through the Clipped Washer, the Base Extrusion, the Rubber Washer and then through the Boat Deck. The Bolt should be secured by first adding the Flat Washer (Item #5) and then securing with a Nylock Nut (Item #6).

NOTICE: The Short Bolts are not used when installing the Riptide Ultrerra directly to the boat.

CAUTION

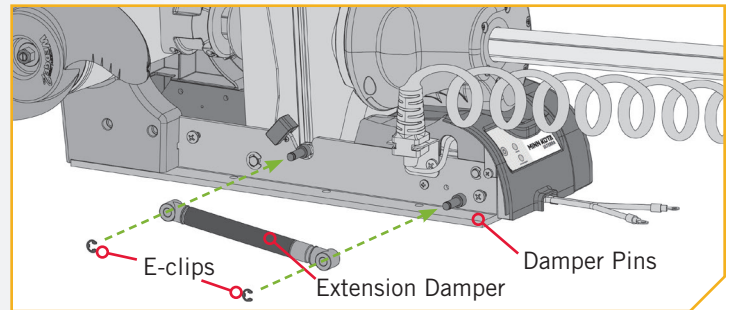
Use extra care to avoid pinching and damaging the sensor wires that run along side of the Base Extrusion when installing and tightening the motor mounting bolts.



INSTALLING THE RIPTIDE ULTERRA

13

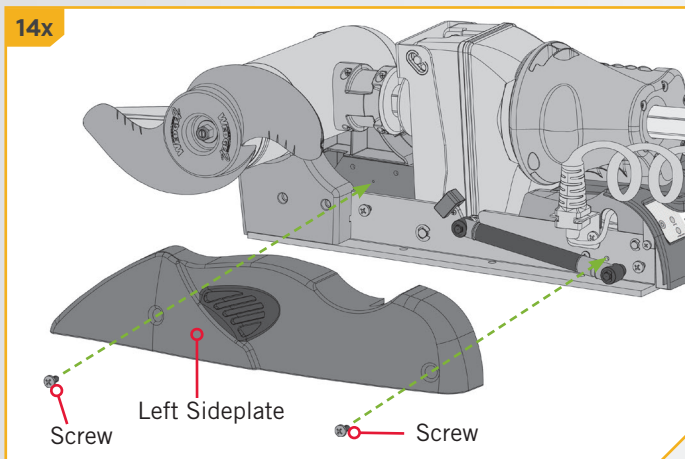
- v. At this point in the installation process the Motor should be secured to the deck of the boat, and the Motor can now be reassembled. The Extension Damper can be slid back in place on the Damper Pins. This should be done so the shaft on the Damper is pointing inboard. Reinstall the two 5/16" E-clips.



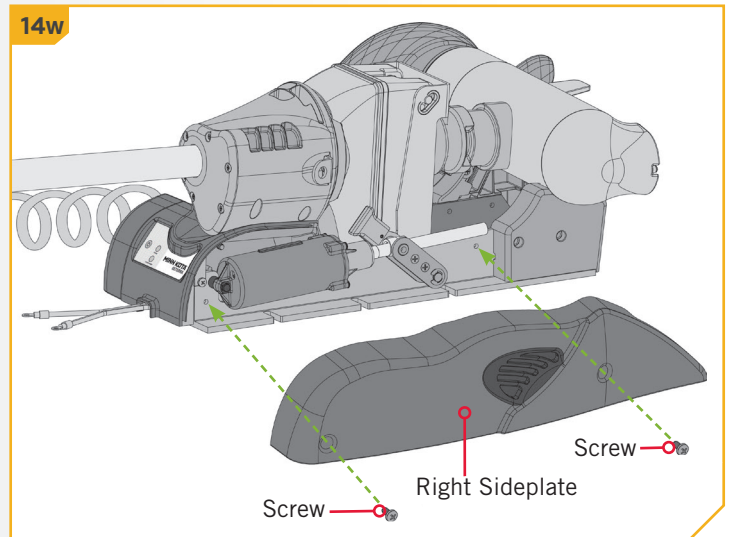
14

- w. Replace the Right Sideplate.
- x. Replace the Left Sideplate.
- y. Replace the four sideplate Screws using a #2 or #3 Phillips Screw Driver.

14x



14w



› Routing and Connecting i-Pilot Link Cables

Your trolling motor will be pre-installed with either i-Pilot or i-Pilot Link. To learn more about the GPS capabilities available with your i-Pilot or i-Pilot Link navigation system, please refer to the corresponding Owner's Manual by visiting minnkotamotors.com.

The i-Pilot Link features require a cable to be connected to an output device. This connection is present on the trolling motor below the Control Head, if installed. The i-Pilot system does not need an external wired connection. If a connecting cable is present, your motor is equipped with the i-Pilot Link system. If no connections are present, your motor may or may not be installed with i-Pilot. Please follow the Minn Kota recommendations on routing the cables to optimize mobility and maximize functionality.

NOTICE: The i-Pilot Link system needs an external wired connection. The i-Pilot system does not need an external wired connection.

The Ethernet cable for the i-Pilot Link system has an 8 pin connector. The i-Pilot Link system can be connected directly to the Humminbird or to the Humminbird Ethernet Switch (optional). If you purchase an Ethernet Switch, install it using the instructions included in the Ethernet Installation Guide. The Ethernet Extension Cable is optional for your installation. Depending on the shape of the Ethernet port on your Humminbird fish finder, an additional ethernet adapter cable (Ethernet Adapter Cable AS EC QDE #720074-1 for Helix fish finders) may be required for the installation. Refer to your fish finder operations manual or see the i-Pilot Link Compatibility Chart on our web site with a list of all compatible Humminbird Units and SC Cards.

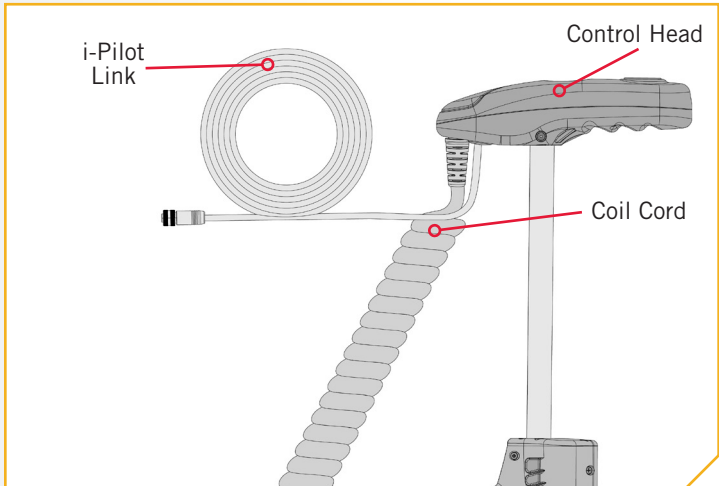
Use the following instructions to properly route and connect cables. Cables are shielded to minimize interference. To protect this shielding the cables should not be pulled tight against sharp angles or hard objects. If using cable ties, do not over-tighten. Any excess cable should be bundled in a loose loop of no less than 4" in diameter.

To minimize trolling motor interference, ensure that the fish finder and trolling motor are powered by separate batteries. Please refer to the Battery & Wiring Installation and Motor Wiring Diagram sections of this manual for correct rigging instructions.

- 1**
 - a. Begin with the motor in the deployed position.
 - b. Locate the i-Pilot Link cable, at the base of the Control Head.

⚠ CAUTION

Not following the recommended wire routing for the i-Pilot Link cable, if equipped, may cause damage to the product and void your product warranty. Route cables away from pinch points or other areas that may cause them to bend in sharp angles. Routing the cables in any way other than directed may cause damage to the cables by being pinched or severed.

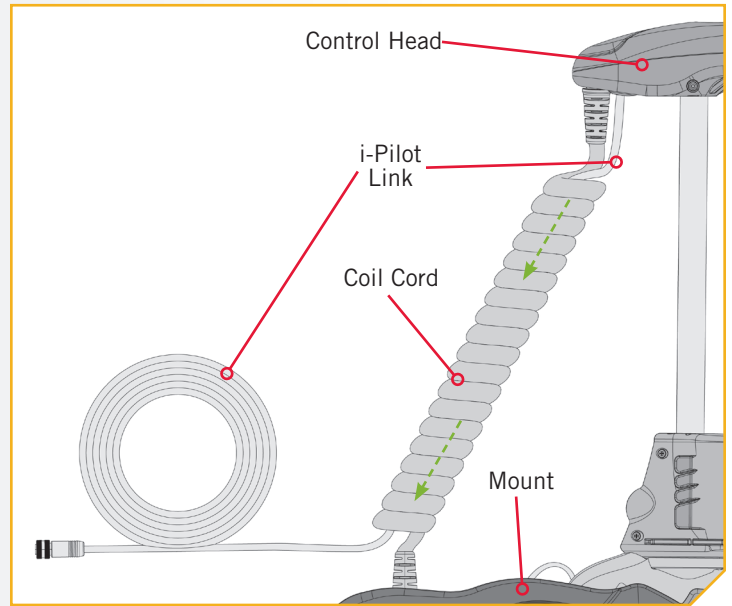


ROUTING i-PILOT LINK CABLES

2

- c. The i-Pilot Link cable should be fed all the way through the Coil Cord. They should exit the Coil Cord at the bottom of the Coil Cord, where it connects to the Motor Mount.

NOTICE: After the i-Pilot Link Cable exits the Coil Cord, it should be routed through an established routing system on the boat, in an area with minimal interference. Inspect the selected route carefully to ensure that there are no sharp edges, obstacles, or obstructions that may damage the cables.



3

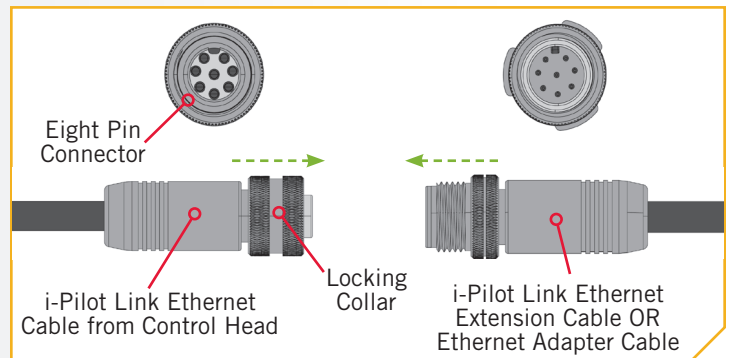
ITEM(S) NEEDED



- d. If necessary, to reach the installed fish finder, take the i-Pilot Link Ethernet Cable (Item #14) and attach it to the i-Pilot Link cable exiting the Control Head.

NOTICE: If any cables need to be routed, please follow the guidelines in the Routing Connection Cables section of these installation instructions.

- e. Install the i-Pilot Link Ethernet Cable directly into the Humminbird fish finder, or refer to your fish finder installation manual for complete installation instructions. If an Adapter Cable is needed (Ethernet Adapter Cable AS EC QDE for Helix fish finders), install it on the end of the i-Pilot Link Ethernet Cable and refer to your fish finder installation manual for complete installation instructions.






NOTICE: The connectors are keyed to prevent reversed installation.

› Installing the Prop

1

ITEM(S) NEEDED

-  #17 x 1
-  #19 x 1
-  #20 x 1
-  #18 x 1

⚠ CAUTION

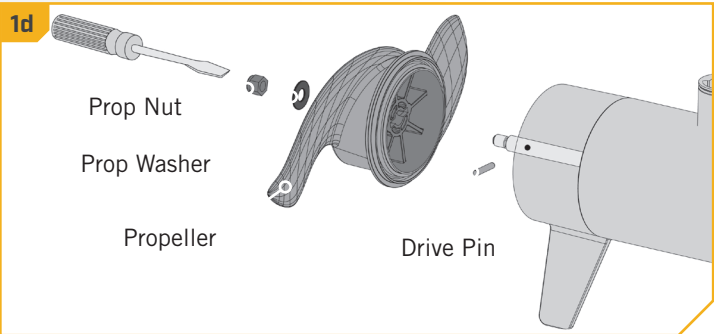
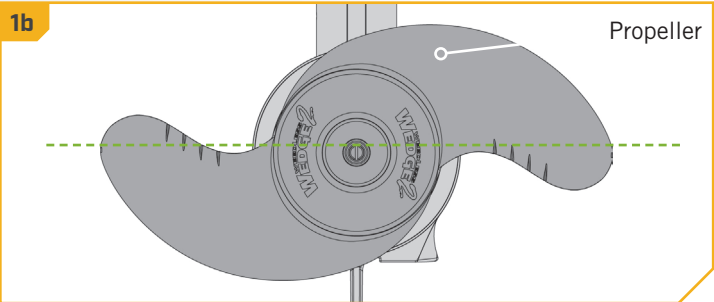
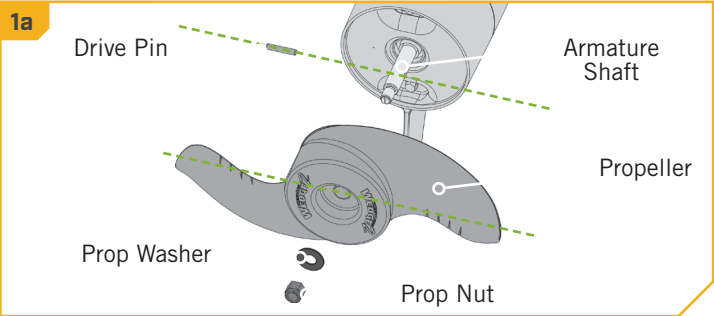
Disconnect the motor from the battery before beginning any prop work.

- a. Take the Drive Pin (Item #18) and slide it through the Hole in the Armature Shaft. Position the Drive Pin horizontal by grasping the Armature Shaft and rotating it with the Drive Pin in place.
- b. Align the Propeller (Item #17) so it is also horizontal and parallel with the Drive Pin. Slide the Propeller onto the Armature Shaft and Drive Pin until it is seated against the lower unit.
- c. Install the Prop Washer (Item #19) and the Prop Nut (Item #20) onto the end of the Armature Shaft.
- d. Holding the end of the Armature Shaft with a Flat Blade Screwdriver, tighten the Prop Nut with a 9/16" Open End Wrench.
- e. Tighten the Prop Nut 1/4 turn past snug to 25-35 in-lbs.

⚠ CAUTION

Do not over tighten as this can damage the prop.

NOTICE: Discard the shipping spacer, lock nut and shipping washer. These items corrode quickly and can ruin parts.






DEPLOYING THE MOTOR WITH i-PILOT

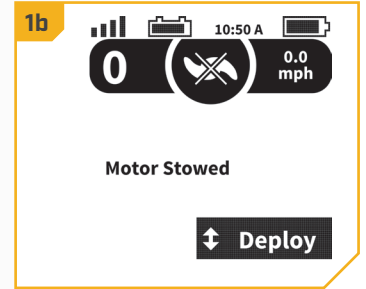
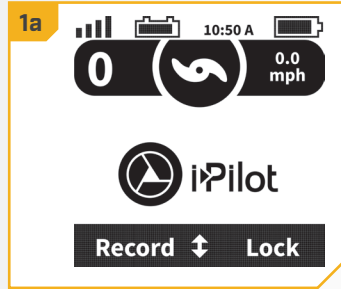
QUICK STOW & DEPLOY

› Deploying the Motor with i-Pilot


1

- Press the Home  button.
- Use the Menu Up  and Menu Down  buttons to find the Deploy menu at the bottom of the display screen.

NOTICE: The Deploy menu at the bottom of the display screen can only be found when the motor is stowed.





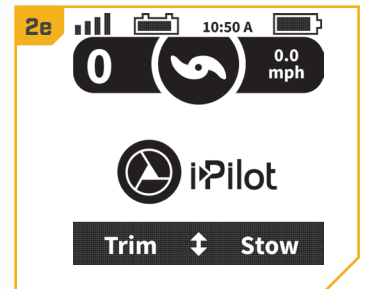
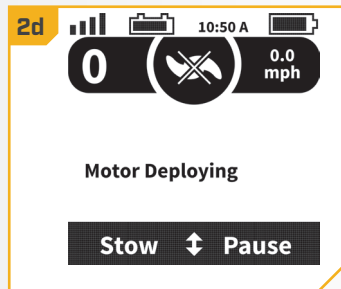
2

- Use the Right Softkey  to select the Deploy menu by double pressing it. Once selected the motor will automatically deploy.

WARNING




As soon as the Deploy menu is selected, the motor will automatically deploy. Be sure the motor is clear from obstructions and has a clear path of travel. The Prop is disabled while the motor is stowed and being deployed to prevent accidental contact with the rotating propeller.

- While the Motor is deploying, it is possible to stop the action. Use either the Left Softkey  to select the Stow menu or the Right Softkey  to select the Pause menu.
- If the Motor continues, it will complete the deploy process, normal motor operation will follow.

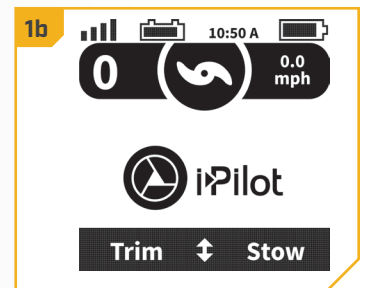
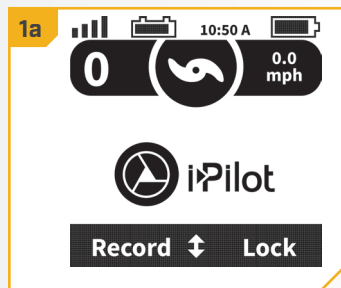


› Stowing the Motor with i-Pilot

1


- Press the Home  button.
- Use the Menu Up  and Menu Down  buttons to find the Stow menu at the bottom of the display screen.

NOTICE: The Stow menu at the bottom of the display screen can only be found when the motor is deployed.





DEPLOYING THE MOTOR WITH i-PILOT LINK

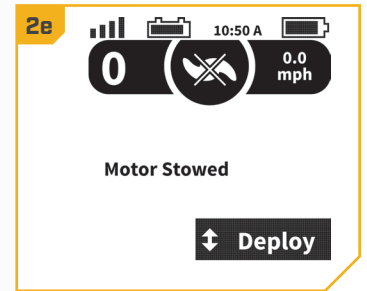
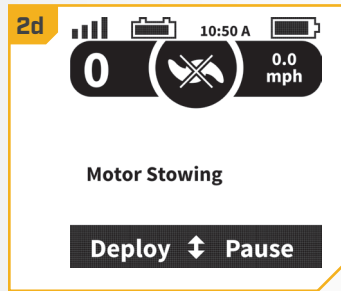
2

- c. Use the Right Softkey  to select the Stow menu. Once selected the motor will automatically stow.

WARNING






As soon as the Stow menu is selected, the motor will automatically stow. Be sure the motor is clear from obstructions and has a clear path of travel. The Prop is disabled while the motor is being stowed to prevent accidental contact with the rotating propeller.

- d. While the Motor is stowing, it is possible to stop the action. Use either the Left Softkey  to select the Deploy menu or the Right Softkey  to select the Pause menu.
- e. If the Motor continues, it will complete the Stow process and the Prop will be disabled.



› Deploying the Motor with i-Pilot Link

1



- a. Press the Home  button.
- b. Scroll through the Content Area using either your finger or the Screen Navigation  button to find the Ulterra  button.
- c. Select the Ulterra  button using either your finger or by pressing the Ok  button to open the Ulterra Menu.

NOTICE: The Ulterra button can only be found in the Content Area with the Home Control Buttons on i-Pilot Link systems on an Ulterra motor. Certain Home Screen Buttons may be locked out while the motor is stowed because those functions require the motor to be deployed to operate.





DEPLOYING THE MOTOR WITH i-PILOT LINK

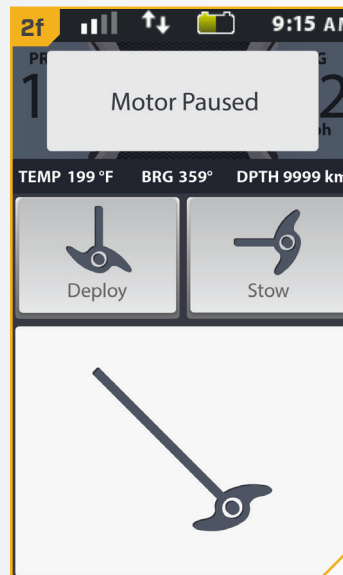
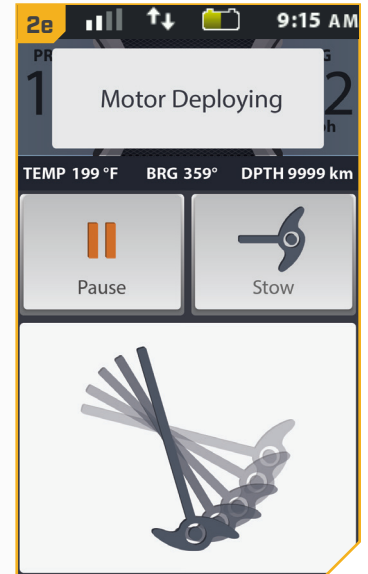
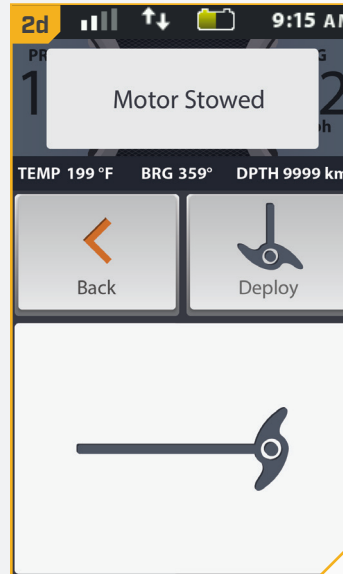
2

- d. Once in the Ulterra Menu, find the Deploy  button and select it. The Deploy  button requires a double press to engage.

WARNING

As soon as the Deploy button is selected, the motor will automatically deploy. Be sure the motor is clear from obstructions and has a clear path of travel. The Prop is disabled while the motor is stowed and being deployed to prevent accidental contact with the rotating propeller.






- e. The Ulterra motor will deploy. While the Motor is deploying, it is possible to pause the action. To pause the action, find the Pause  button and select it.
- f. To resume the Deploy action, select the Deploy  button.
- g. If the Motor continues, it will complete the deploy process and normal motor operation will follow.




STOWING THE MOTOR WITH i-PILOT LINK

› Stowing the Motor with i-Pilot Link


1


- Press the Home  button.
- Scroll through the Content Area using either your finger or the Screen Navigation  button to find the Ultrerra  button.
- Select the Ultrerra  button using either your finger or by pressing the Ok  button to open the Ultrerra Menu.

NOTICE: The Ultrerra  button can only be found in the Content Area with the Home Control Buttons on i-Pilot Link systems on an Ultrerra motor. The motor can only be stowed when it is currently deployed.





2

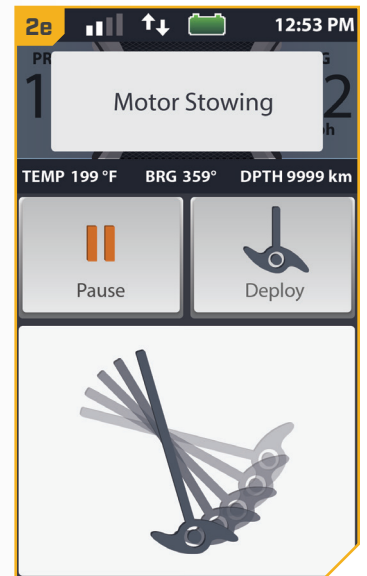
- Once in the Ultrerra Menu, find the Stow  button and select it.

NOTICE: The Stow  button can only be found when the motor is deployed.

WARNING

As soon as the Stow  button is selected, the motor will automatically stow. Be sure the motor is clear from obstructions and has a clear path of travel. The Prop is disabled while the motor is being stowed to prevent accidental contact with the rotating propeller.

- The Ultrerra motor will stow. While the Motor is stowing, it is possible to pause the action. To pause the action, find the Pause  button and select it.



BATTERY WIRING & INSTALLATION

BOAT RIGGING & PRODUCT INSTALLATION

For safety and compliance reasons, we recommend that you follow American Boat and Yacht Council (ABYC) standards when rigging your boat. Altering boat wiring should be completed by a qualified marine technician. The following specifications are for general guidelines only:

CAUTION

These guidelines apply to general rigging to support your Minn Kota motor. Powering multiple motors or additional electrical devices from the same power circuit may impact the recommended conductor gauge and circuit breaker size. If you are using wire longer than that provided with your unit, follow the conductor gauge and circuit breaker sizing table below. If your wire extension length is more than 25 feet, we recommend that you contact a qualified marine technician.

CAUTION

An over-current protection device (circuit breaker or fuse) must be used. Coast Guard requirements dictate that each ungrounded current-carrying conductor must be protected by a manually reset, trip-free circuit breaker or fuse. The type (voltage and current rating) of the fuse or circuit breaker must be sized accordingly to the trolling motor used. The table below gives recommended guidelines for circuit breaker sizing.

CONDUCTOR GAUGE AND CIRCUIT BREAKER SIZING TABLE

This conductor and circuit breaker sizing table is only valid for the following assumptions:

1. No more than 2 conductors are bundled together inside of a sheath or conduit outside of engine spaces.
2. Each conductor has 105° C temp rated insulation.
3. No more than 5% voltage drop allowed at full motor power based on published product power requirements.

Motor Thrust / Model	Max Amp Draw	Circuit Breaker	Wire Extension Length				
			5 feet	10 feet	15 feet	20 feet	25 feet
30 lb.	30	50 Amp @ 12 VDC	10 AWG	10 AWG	8 AWG	6 AWG	4 AWG
40 lb., 45 lb.	42		10 AWG	8 AWG	6 AWG	4 AWG	4 AWG
50 lb., 55 lb.	50	60 Amp @ 12 VDC	8 AWG	6 AWG	4 AWG	4 AWG	2 AWG
70 lb.	42	50 Amp @ 24 VDC	10 AWG	10 AWG	8 AWG	8 AWG	6 AWG
80 lb.	56	60 Amp @ 24 VDC	8 AWG	8 AWG	8 AWG	6 AWG	6 AWG
101 lb.	46	50 Amp @ 36 VDC	8 AWG	8 AWG	8 AWG	8 AWG	8 AWG
Engine Mount 101	50	60 Amp @ 36 VDC	8 AWG	8 AWG	8 AWG	8 AWG	8 AWG
112 lb.	52	60 Amp @ 36 VDC	8 AWG	8 AWG	8 AWG	8 AWG	8 AWG
Engine Mount 160	116	(2) x 60 Amp @ 24 VDC	6 AWG	6 AWG	4 AWG	2 AWG	2 AWG
E-Drive	40	50 Amp @ 48 VDC	10 AWG	10 AWG	10 AWG	10 AWG	10 AWG

NOTICE: Wire Extension Length refers to the distance from the batteries to the trolling motor leads. Consult website for available thrust options. Maximum Amp Draw values only occur intermittently during select conditions and should not be used as continuous amp load ratings.

Reference

United States Code of Federal Regulations: 33 CFR 183 – Boats and Associated Equipment ABYC E-11: AC and DC Electrical Systems on Boats

SELECTING THE CORRECT BATTERIES



SELECTING THE CORRECT BATTERIES

The motor will operate with any lead acid, deep cycle marine 12 volt battery/batteries. For best results, use a deep cycle, marine battery with at least a 105 amp-hour rating. Maintain battery at full charge. Proper care will ensure having battery power when you need it, and will significantly improve the battery life. Failure to recharge lead-acid batteries (within 12-24 hours) is the leading cause of premature battery failure. Use a multi-stage charger to avoid overcharging. We offer a wide selection of chargers to fit your charging needs. If you are using a crank battery to start a gasoline outboard, we recommend that you use a separate deep cycle marine battery/batteries for your Minn Kota trolling motor. Minn Kota trolling motors can run on Lithium Ion batteries. However, they are specifically designed to run on traditional lead acid batteries (flooded, AMG or GEL). Lithium Ion batteries maintain higher voltages for longer periods of time than lead acid. Therefore, running a Minn Kota trolling motor at speeds higher than 85% for a prolonged period could cause permanent damage to the motor.

 **WARNING**

Never connect the (+) and the (-) terminals of the same battery together. Take care that no metal object can fall onto the battery and short the terminals. This would immediately lead to a short and extreme fire danger.

 **CAUTION**

Refer to “Conductor Gauge and Circuit Breaker Sizing Table” in the previous section to find the appropriate circuit breaker or fuse for your motor. For motors requiring a 60-amp breaker, the Minn Kota MKR-19 60-amp circuit breaker is recommended.

 **CAUTION**

Please read the following information before connecting your motor to your batteries in order to avoid damaging your motor and/or voiding your warranty.

ADDITIONAL CONSIDERATIONS

› Using DC or Alternator Chargers

Your Minn Kota trolling motor may be designed with an internal bonding wire to reduce sonar interference. Most alternator charging systems do not account for this bonding wire, and connect the negative posts of the trolling motor batteries to the negative posts of the crank/starting battery. These external connections can damage connected electronics and the electrical system of your trolling motor, voiding your warranty. Review your charger’s manual carefully or consult the manufacturer prior to use to ensure your charger is compatible.

Minn Kota recommends using Minn Kota brand chargers to recharge the batteries connected to your Minn Kota trolling motor, as they have been engineered to work with motors that include a bonding wire.

› Additional Accessories Connected to Trolling Motor Batteries

Significant damage to your Minn Kota motor, your boat electronics, and your boat can occur if incorrect connections are made between your trolling motor batteries and other battery systems. Minn Kota recommends using an exclusive battery system for your trolling motor. Where possible, accessories should be connected to a separate battery system. Radios and sonar units should not be connected to any trolling motor battery systems as interference from the trolling motor is unavoidable. If connecting any additional accessories to any trolling motor battery system, or making connections between the trolling motor batteries and other battery systems on the boat, be sure to carefully observe the information below.



CONNECTING THE BATTERIES IN SERIES

The negative (-) connection must be connected to the negative terminal of the same battery that the trolling motor negative lead connects to. In the diagrams below this battery is labeled “Low Side” Battery. Connecting to any other trolling motor battery will input positive voltage into the “ground” of that accessory, which can cause excess corrosion. Any damage caused by incorrect connections between battery systems will not be covered under warranty.

› Automatic Jump Start Systems and Selector Switches

Automatic jump start systems and selector switches tie the negatives of the connected batteries together. Connecting these systems to the “High Side” Battery or “Middle” Battery in the diagrams below and will cause significant damage to your trolling motor and electronics. The only trolling motor battery that is safe to connect to one of these systems is the “Low Side” Battery.

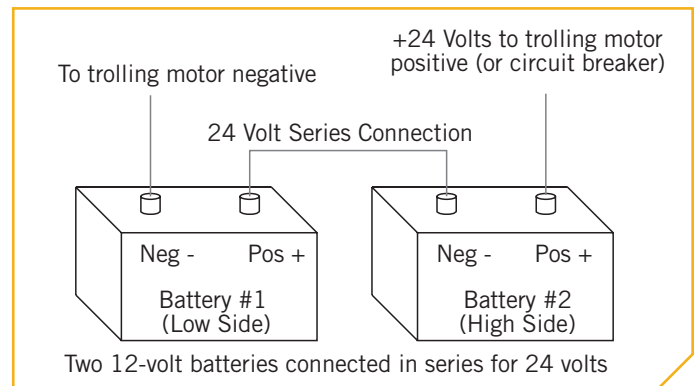
NOTICE: The internal bonding wire is equipped with a 3 amp fuse. Improper connections described above carrying in excess of 3 amps will blow this fuse and no further damage will be exhibited. If this occurs, RF interference from the trolling motor affecting sonar units and other electronics will be more significant. If the fuse is blown the wiring error should be found and addressed prior to replacing the fuse. The replacement fuse should be 3 amps or less. An intact fuse does not imply correct rigging; significant damage can be done by incorrect wiring without approaching 3 amps of current.

CONNECTING THE BATTERIES IN SERIES (IF REQUIRED FOR YOUR MOTOR)

› 24 Volt Systems

Two 12 volt batteries are required. The batteries must be wired in series, only as directed in wiring diagram, to provide 24 volts.

1. Make sure that the motor is switched off (speed selector on “0”).
2. Connect a connector cable to the positive (+) terminal of battery 1 and to the negative (-) terminal of battery 2.
3. Connect positive (+) red motor lead to positive (+) terminal on battery 2.
4. Connect negative (-) black motor lead to negative (-) terminal of battery 1.



WARNING

For safety reasons do not switch the motor on until the propeller is in the water. If installing a leadwire plug, observe proper polarity and follow instructions in your boat owner's manual.

WARNING

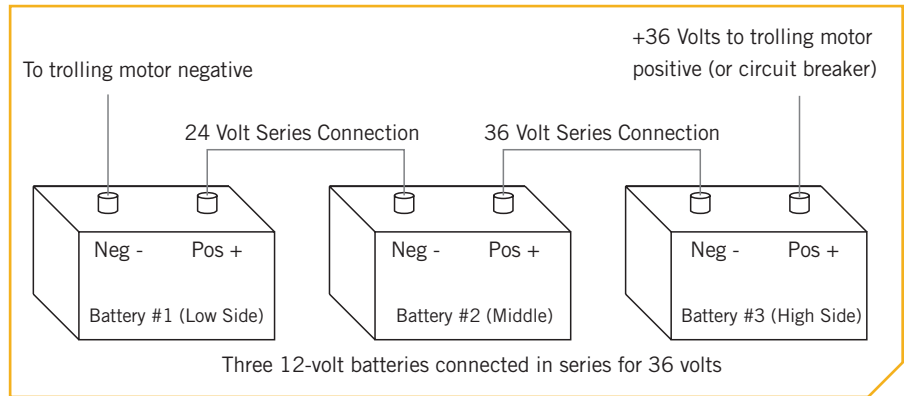
- For safety reasons, disconnect the motor from the battery or batteries when the motor is not in use or while the battery/batteries are being charged.
- Improper wiring of 24/36 volt systems could cause battery explosion.
- Keep leadwire wing nut connections tight and solid to battery terminals.
- Locate battery in a ventilated compartment.

CONNECTING THE BATTERIES IN SERIES

› 36 Volt Systems

Three 12 volt batteries are required. The batteries must be wired in series, only as directed in wiring diagram, to provide 36 volts.

1. Make sure that the motor is switched off (speed selector on “0”).
2. Connect a connector cable to the positive (+) terminal of battery 1 and to the negative (-) terminal of battery 2 and another connector cable from the positive (+) terminal of battery 2 to the negative (-) terminal of battery 3.
3. Connect positive (+) red motor lead to positive (+) terminal on battery 3.
4. Connect negative (-) black motor lead to negative (-) terminal of battery 1.



WARNING

For safety reasons do not switch the motor on until the propeller is in the water. If installing a leadwire plug, observe proper polarity and follow instructions in your boat owner's manual.

WARNING

- For safety reasons, disconnect the motor from the battery or batteries when the motor is not in use or while the battery/batteries are being charged.
- Improper wiring of 24/36 volt systems could cause battery explosion.
- Keep leadwire wing nut connections tight and solid to battery terminals.
- Locate battery in a ventilated compartment.

RECOMMENDED ACCESSORIES

› ON-BOARD & PORTABLE BATTERY CHARGERS

Stop buying new batteries and start taking care of the ones you've got. Many chargers can actually damage your battery over time – creating shorter run times and shorter overall life. Digitally controlled Minn Kota chargers are designed to provide the fastest charge that protect and extend battery life.



MK212PC



MK210D



MK110PD

› TALON SHALLOW WATER ANCHOR

Introducing the all-new, sleek redesigned Talon. Talon is the only shallow water anchor with up to 15' of anchoring depth, multiple anchoring modes, and control from the bow, transom, console, remote or mobile device.



BUILT-IN WORK LIGHT

Lets you tie lines and work from the transom any time of day — or night. Includes both white and blue LED lights with three brightness settings.



UP TO 15' DEEP

Control more water and catch more fish with the first 15' shallow water anchor.



MORE CONTROL OPTIONS

- Control Panel
- Wireless Remote
- Mobile App
- Wireless Foot Switch
- Humminbird® Connectivity
- i-Pilot® & i-Pilot Link™ Remote



BLUETOOTH® CONNECTIVITY

Lets you control Talon from your mobile device and easily update it. Also opens up communication to other control options.

› MINN KOTA ACCESSORIES

We offer a wide variety of trolling motor accessories, including:

- 60-Amp Circuit Breaker
- Mounting Brackets
- Stabilizer Kits
- Extension Handles
- Battery Connectors
- Battery Boxes
- Quick Connect Plugs

