



# TERROVA

**BOW-MOUNT TROLLING MOTOR**  
Owner's Manual

# INTRODUCTION

## THANK YOU

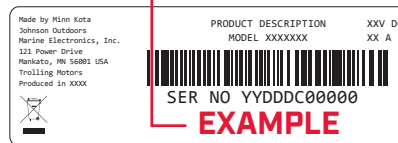
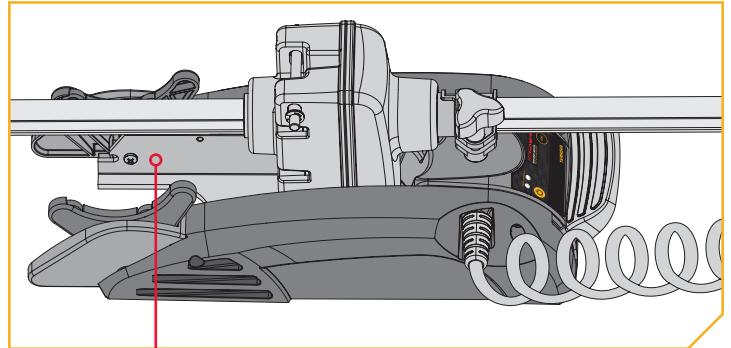
Thank you for choosing Minn Kota. We believe that you should spend more time fishing and less time positioning your boat. That's why we build the smartest, toughest, most intuitive trolling motors on the water. Every aspect of a Minn Kota trolling motor is thought out and rethought until it's good enough 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.

## REGISTRATION

Remember to keep your receipt and immediately register your trolling motor on our website at [minnkotamotors.com/register](http://minnkotamotors.com/register).

## 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. A duplicate copy of your serial number label has been included, which can also be entered into the One-Boat Network App for future reference.



**NOTICE:** The serial number on your Terrova is located inside the mount below the motor rests.

## MOTOR INFORMATION (For Consumer Reference Only)

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Store Where Purchased: \_\_\_\_\_

**NOTICE:** Do not return your Minn Kota motor to your retailer. Your retailer is not authorized to repair or replace this unit. You may obtain service by: calling Minn Kota at (800) 227-6433; returning your motor to the Minn Kota Factory Service Center; sending or taking your motor to any Minn Kota authorized service center. A list of authorized service centers is available on our website, at [minnkotamotors.com](http://minnkotamotors.com). Please include proof of purchase, serial number and purchase date for warranty service with any of the above options.

Made for iPhone® 11 and iPhone X

For updated iOS, Humminbird® and Minn Kota® compatibility, visit [minnkotamotors.com](http://minnkotamotors.com)



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# 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 who lack the 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/sec<sup>2</sup>.

## **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.



# WARRANTY

## WARRANTY ON MINN KOTA FRESHWATER TROLLING MOTORS

### Minn Kota Freshwater Trolling Motors - Limited Lifetime Warranty On Composite Shaft And Limited Two-Year Warranty On The Entire Product

Johnson Outdoors Marine Electronics, Inc. ("JOME") extends the following limited warranty to the original retail purchaser only. Warranty coverage is not transferable.

#### Minn Kota Limited Two-Year Warranty on the Entire Product

JOME warrants to the original retail purchaser only that the purchaser's new Minn Kota freshwater trolling motor will be materially free from defects in materials and workmanship appearing within two (2) years after the date of purchase. JOME will (at its option) either repair or replace, free of charge, any parts found by JOME to be defective during the term of this warranty. Such repair, or replacement shall be the sole and exclusive liability of JOME and the sole and exclusive remedy of the purchaser for breach of this warranty.

#### Minn Kota Limited Lifetime Warranty on the Composite Shaft

JOME warrants to the original retail purchaser only that the composite shaft of the purchaser's Minn Kota trolling motor will be materially free from defects in materials and workmanship appearing within the original purchaser's lifetime. JOME will provide a new composite shaft, free of charge, to replace any composite shaft found by JOME to be defective during the term of this warranty. Providing a new composite shaft shall be the sole and exclusive liability of JOME and the sole and exclusive remedy of the purchaser for breach of this warranty; and purchaser shall be responsible for installing, or for the cost of labor to install, any new composite shaft provided by JOME.

#### Exclusions and Limitations

This limited warranty does not apply to products that have been used in saltwater or brackish water, commercially or for rental purposes. This limited warranty does not cover normal wear and tear, blemishes that do not affect the operation of the product, or damage caused by accidents, abuse, alteration, modification, shipping damages, acts of God, negligence of the user or misuse, improper or insufficient care or maintenance. **DAMAGE CAUSED BY THE USE OF OTHER REPLACEMENT PARTS NOT MEETING THE DESIGN SPECIFICATIONS OF THE ORIGINAL PARTS WILL NOT BE COVERED BY THIS LIMITED WARRANTY.** The cost of normal maintenance or replacement parts which are not in breach of the limited warranty are the responsibility of the purchaser. Prior to using products, the purchaser shall determine the suitability of the products for the intended use and assumes all related risk and liability. Any assistance JOME provides to or procures for the purchaser outside the terms, limitations or exclusions of this limited warranty will not constitute a waiver of the terms, limitations or exclusions, nor will such assistance extend or revive the warranty. JOME will not reimburse the purchaser for any expenses incurred by the purchaser in repairing, correcting or replacing any defective products or parts, except those incurred with JOME's prior written permission. **JOME'S AGGREGATE LIABILITY WITH RESPECT TO COVERED PRODUCTS IS LIMITED TO AN AMOUNT EQUAL TO THE PURCHASER'S ORIGINAL PURCHASE PRICE PAID FOR SUCH PRODUCT.**

#### Minn Kota Service Information

To obtain warranty service in the U.S., the product believed to be defective, and proof of original purchase (including the date of purchase), must be presented to a Minn Kota Authorized Service Center. Go to [www.minnkotamotors.com/support/service-providers/locate](http://www.minnkotamotors.com/support/service-providers/locate) to find a Minn Kota Authorized Service Center. Any charges incurred for service calls, transportation or shipping/freight to/from the Minn Kota Authorized Service Center, labor to haul out, remove, re-install or re-rig products removed for warranty service, or any other similar items are the sole and exclusive responsibility of the purchaser. Products purchased outside of the U.S. must be returned prepaid with proof of purchase (including the date of purchase and serial number) to any Authorized Minn Kota Service Center in the country of purchase. To contact Minn Kota Customer Service go to [www.minnkotamotors.com/contact](http://www.minnkotamotors.com/contact). Products repaired or replaced will be warranted for the remainder of the original warranty period, or for 90 days from the date of repair or replacement, whichever is longer. For any product that is returned for warranty service that JOME finds to be not covered by or not in breach of this limited warranty, there will be a billing for services rendered at the prevailing labor rate of the applicable Minn Kota Authorized Service Center and for a minimum of at least one hour.

Service Provider  
Locator



Contact Customer  
Service

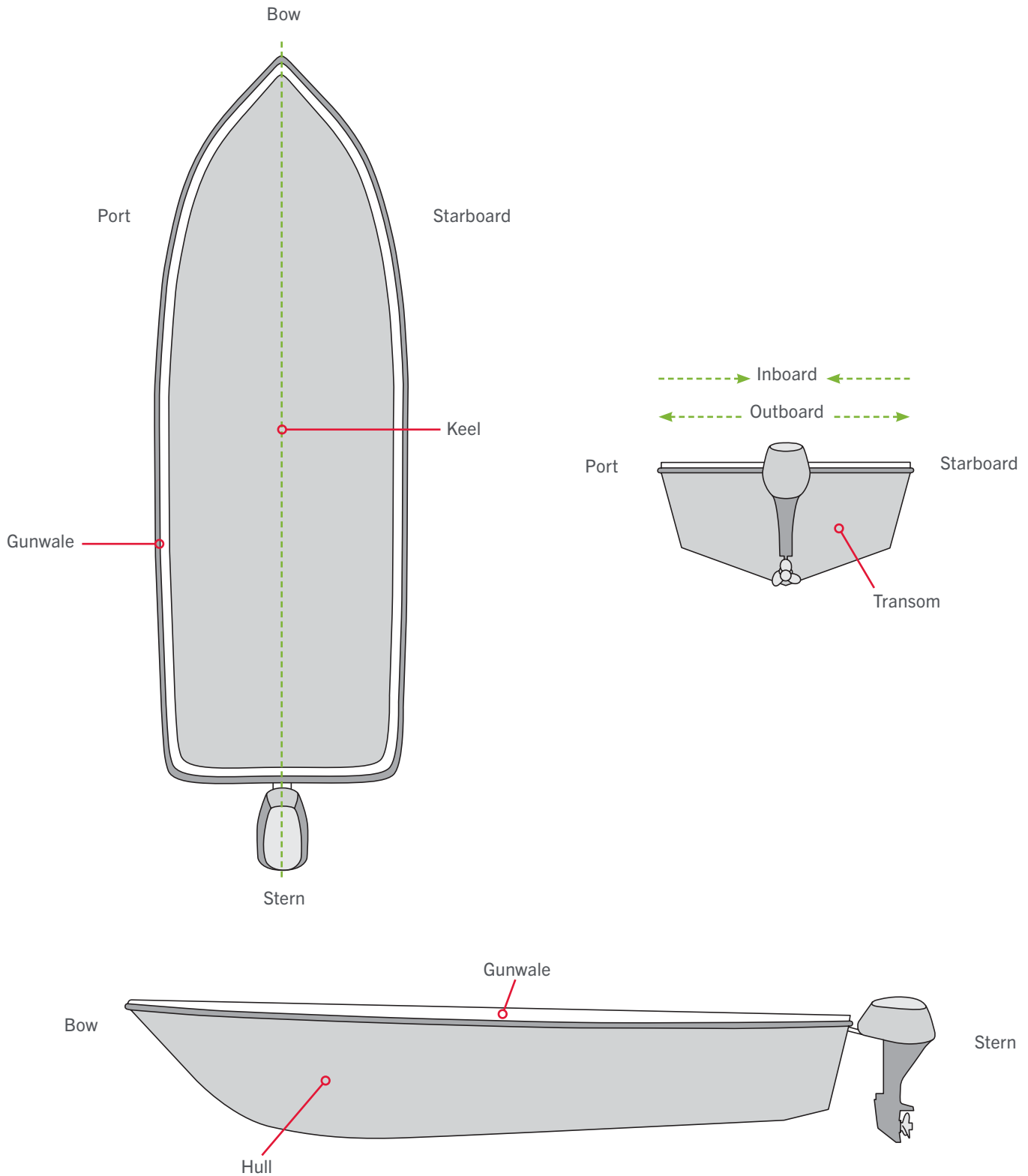


**NOTICE:** Do not return your Minn Kota product to your retailer. Your retailer is not authorized to repair or replace products.

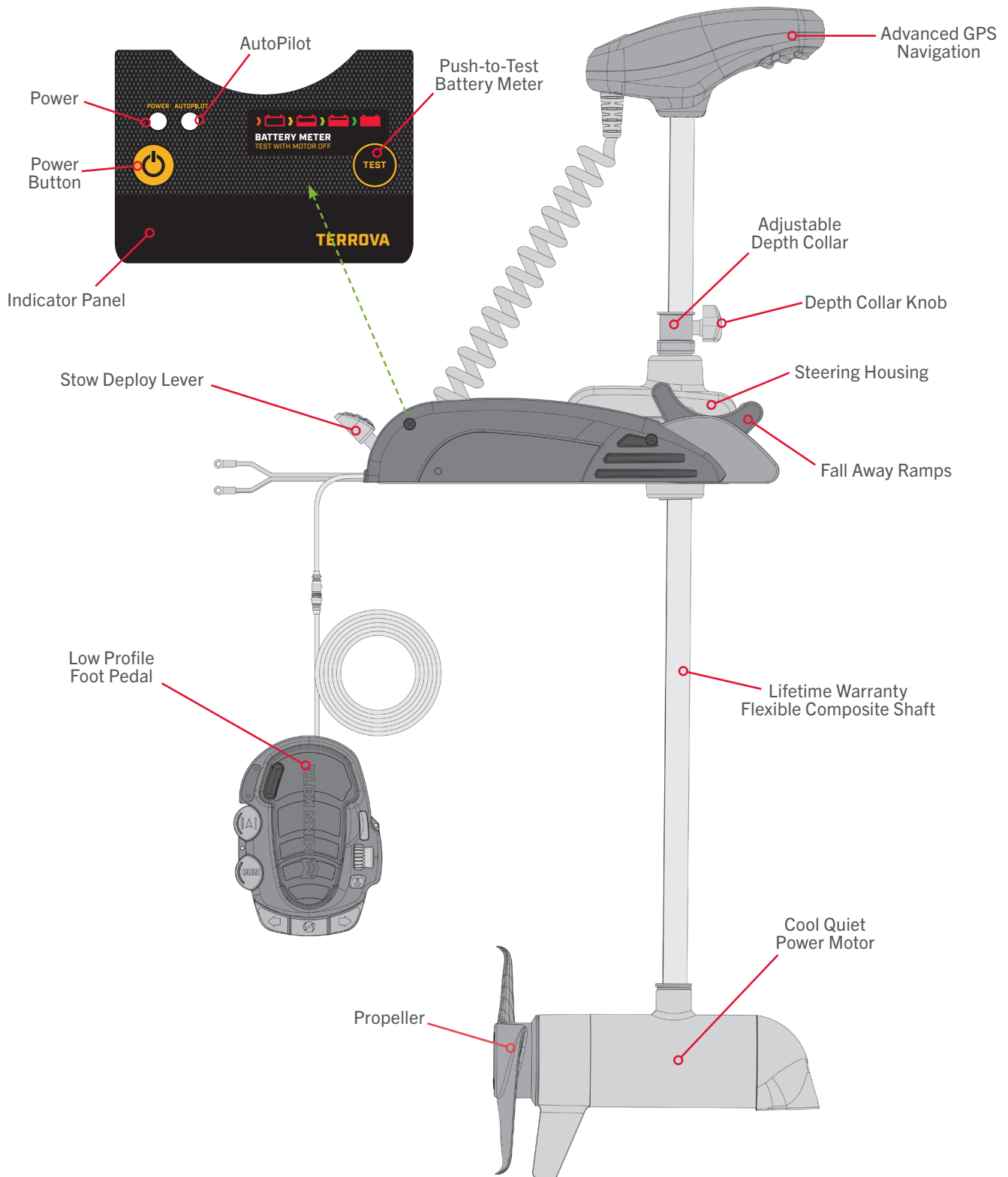
**NOTICE:** THERE ARE NO EXPRESS WARRANTIES OTHER THAN THESE LIMITED WARRANTIES. IN NO EVENT SHALL ANY IMPLIED WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, EXTEND BEYOND THE DURATION OF THE RELEVANT EXPRESS LIMITED WARRANTY. IN NO EVENT SHALL JOME BE LIABLE FOR PUNITIVE, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. Without limiting the foregoing, JOME assumes no responsibility for loss of use of product, loss of time, inconvenience or other damage.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

# KNOW YOUR BOAT



# FEATURES



**NOTICE:** Specifications subject to change without notice. This diagram is for reference only and may differ from your actual motor.



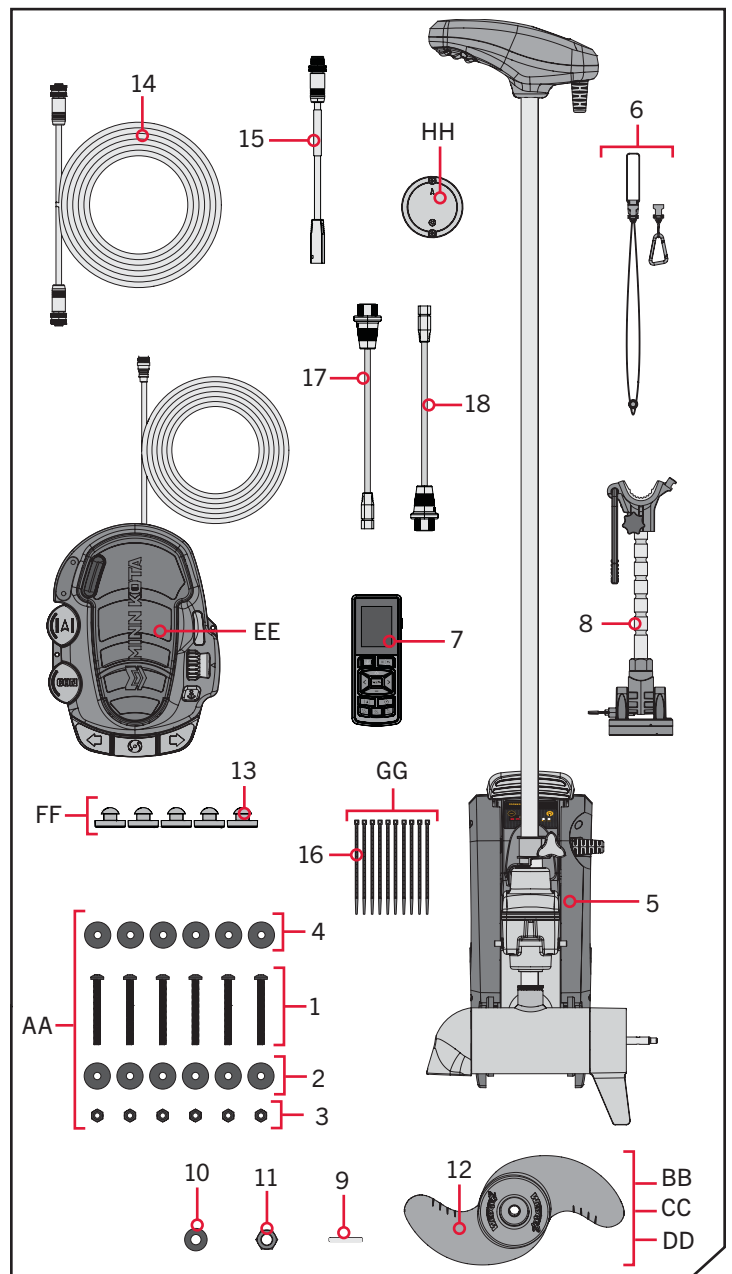
# INSTALLATION

## INSTALLING THE TERROVA

Your new Terrova comes with everything you'll need to directly install it to the boat. This motor can be directly mounted to the boat or 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. For compatible quick release mounting brackets and to locate your nearest dealer, visit [minnkotamotors.com](http://minnkotamotors.com). To install the motor directly to the boat, please follow the instructions provided in this manual. Please review the parts list, mounting considerations and tools needed for installation prior to getting started. For additional product support, please visit [minnkotamotors.com](http://minnkotamotors.com).

### INSTALLATION PARTS LIST

Item / Assembly	Part #	Description	Qty.
AA (Includes 1-4)	2994864	BAG ASSEMBLY - (BOLT, NUT, WASHERS)	1
1	2263462	SCREW-1/4-20 X 2" S/S PPH ADJT	6
2	2261713	WASHER-1/4 FLAT 18-8 SS	6
3	2263103	NUT-1/4-20 NYLOCK SS	6
4	2301720	WASHER-MOUNTING - RUBBER	6
5	✳	MOTOR ASSEMBLY	1
6	2390802	LANYARD w/CARABINER IP RMT U2	1
7	411690-1	TROLLING MOTOR REMOTE	1
8	2992371	STABILIZER, BWMT ES TM ASM *72**	1
BB (Includes 9-12)	1378170	PROP KIT 2091170 PWR PRP GENII *55LB*	1
CC (Includes 9-12)	1378132	PROP IND 2331160 WDLS WDG II *80LB*	1
DD (Includes 9-12)	1378160	PROP KIT 2341160 112# WW2 *112LB*	1
9	2262658	PIN-DRIVE 1" X 3/16" S/S *55LB*	1
	2092600	PIN-DRIVE 1.06" LG (SS) *80LB* *112LB*	1
10	2151726	WASHER-5/16 STD (S/S) *55LB*	1
	2091701	WASHER-PROP (LARGE) *80LB* *112LB*	1
11	2053101	NUT-PROP,NYLOC (MED) 5/16 SS *55LB*	1
	2093101	NUT-PROP,NYLOC,LG, 3/8 SS *80LB* *112LB*	1
12	2091170	PROP-PWR (3 5/8") REAMED *55LB*	1
	2331161	PROP-WW2 4" WELDED *80LB*	1
	2341161	PROP-WW2 4.5" WELDED *112LB*	1
EE	2994733	FT PEDAL ASM TRV 3 PM	1
FF (Includes 13)	2994859	BAG, ASY-TERROVA/V2, RUB BUMPERS	1
13	2325110	PAD, FOOT PEDAL	5
14	490384-4	CABLE, ETHERNET (M12-M12), 30'	1
15	490380-1	CABLE, ETHERNET PIGTAIL-700 HD	1
GG (Includes 16)	2996300	TIE WRAP ASM, 60"	1
16	2206300	TIE,WRAP, LOW PROFILE 4"	10
HH	2996400	HEADING SENSOR ASSEMBLY	1
17	2994961	BAG ASM, CABLE,ADPTR, 490537-2 *MKR-MI-1*	1
18	2994960	BAG ASM, CABLE,ADPTR, 490518-1 *MKR-MDI-2*	1
▲	2327134	MANUAL, TERROVA 3 PM	1
▲	2327136	MANUAL-INSTLL GUIDE T3 PM	1
▲	2297165	MANUAL-DISCLAIMER,DWNLOAD INFO	1
▲	2294950	INSTRUCTIONS,OBN & REMOTE PAIR	1
▲	2207131	STANDARD QS SETUP GUIDE	1
▲	2377179	INSTR.SHEET, MKA-60 STBLZR *72**	1
▲	2397110	MANUAL, iPILOT 4.0	1
▲	2397115	GUIDE-QCK REFERENCE IP 4.0	1



▲ Not shown on Parts Diagram.

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

# INSTALLING THE TERROVA

## MOUNTING CONSIDERATIONS

It is recommended that the motor be mounted as close to the 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. To view a list of accessories, please visit [minnkotamotors.com](http://minnkotamotors.com).



View accessories available for your trolling motor at [minnkotamotors.com](http://minnkotamotors.com).

## TOOLS AND RESOURCES REQUIRED

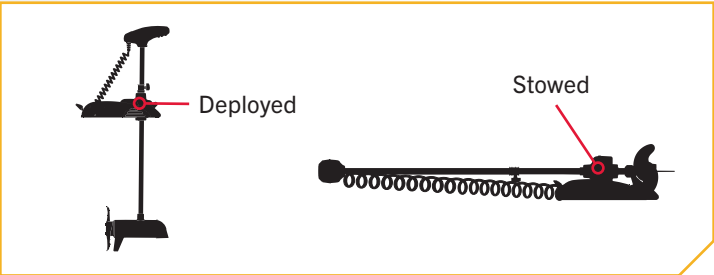
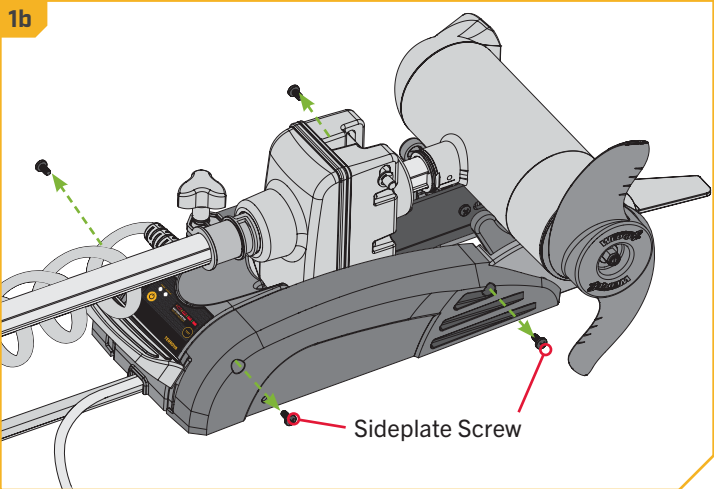
- #3 Phillips Screwdriver
- Drill
- 9/32" Drill Bit
- 7/16" Box/Open End Wrench
- 9/16" Box/Open End Wrench
- Pliers or Vice Grip
- A second person to help with the installation
- Flat-blade Screwdriver
- Awl or similar Marking Tool

## INSTALLATION

### INSTALLING THE TERROVA

- Place the mount 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 Phillips Screwdriver. Two of these screws will be located on each side of the mount.

**NOTICE:** This motor weighs approximately 65lbs. We recommend having a second person help with the installation.

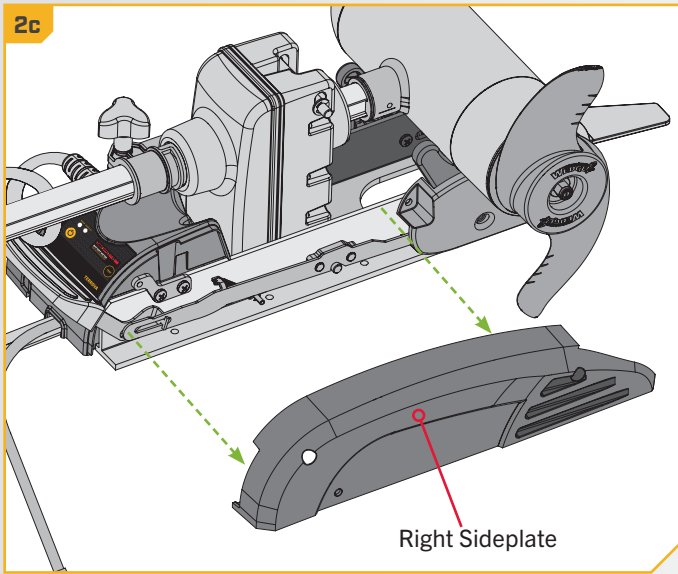


# INSTALLING THE TERROVA

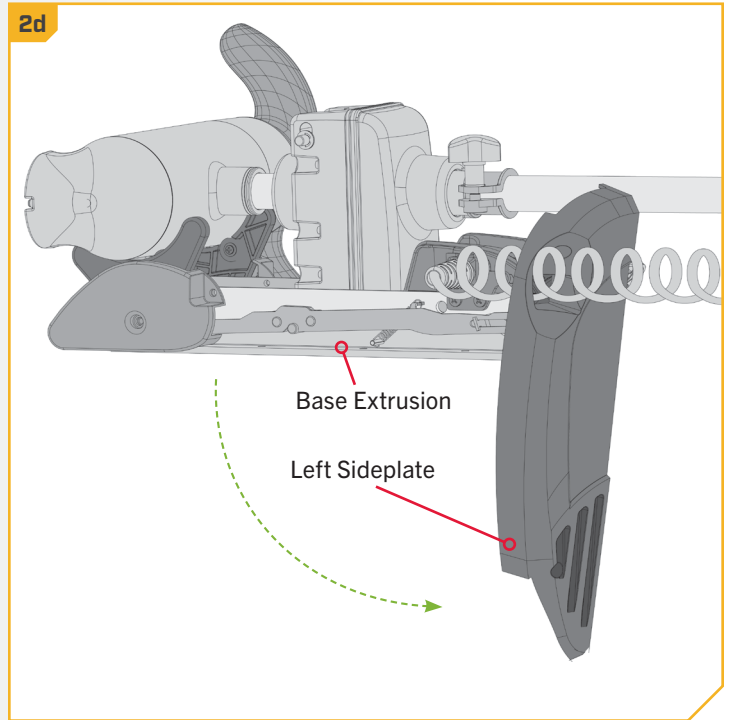
2

- c. Remove the Right Sideplate.
- d. Swing the Left Sideplate out and away from the Base Extrusion.

2c



2d



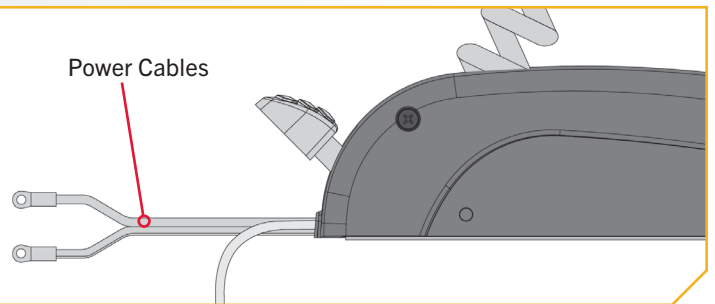
3

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



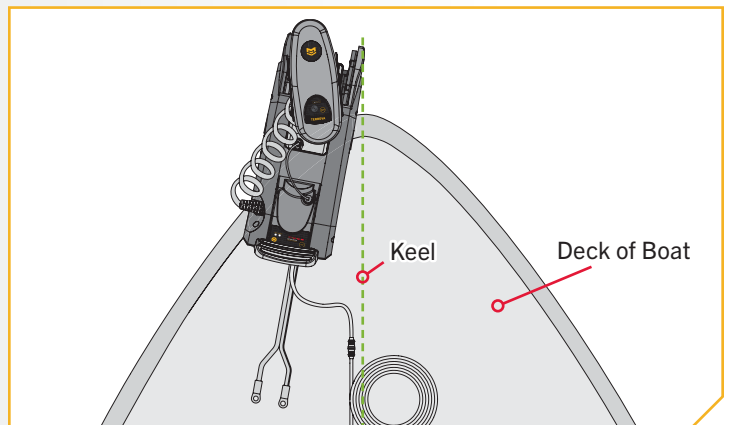
## WARNING

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



4

- f. Place the mount 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. Check placement with the motor in the stowed and deployed positions. Review the mounting considerations at the beginning of the installation.



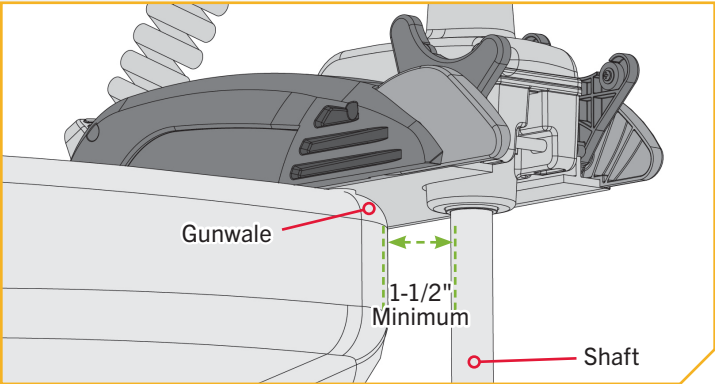


5

ITEM(S) NEEDED

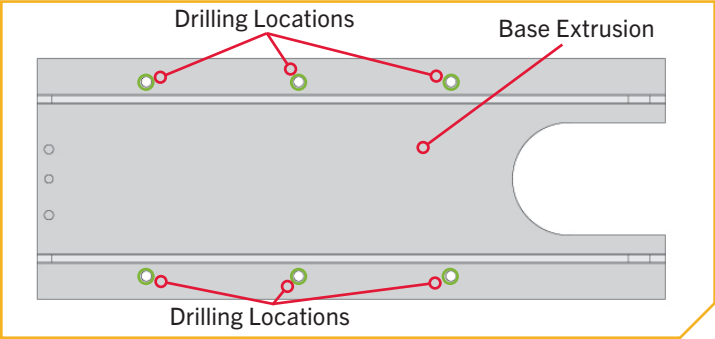
- #4 x 6

- g. When the motor is in the deployed position, make sure that the Shaft is 1-1/2" out past the Gunwale of the boat. The lower unit, when stowed and deployed must not encounter any obstructions.
- h. Check to be sure that the mount is level. Use the Rubber Washers (Item #4) provided to create a level surface if necessary.



6

- i. With an Awl or similar tool, mark all six mounting holes in the Base Extrusion.
- j. Drill through the deck of the boat using a 9/32" Drill Bit on the marked locations.



# INSTALLING THE TERROVA

7

## ITEM(S) NEEDED

● #2 x 6

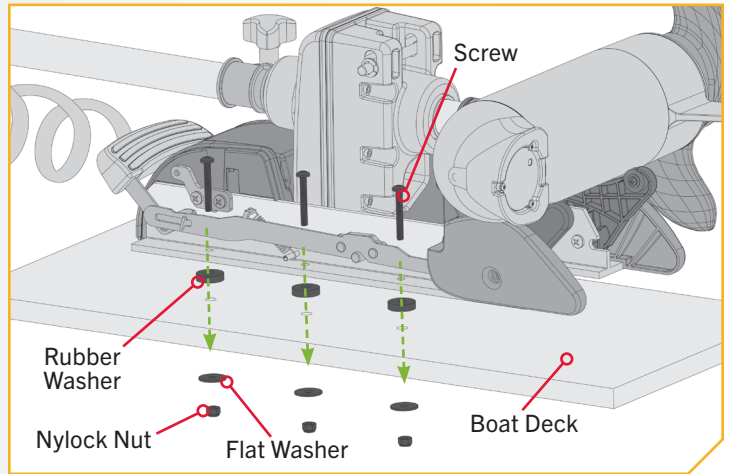
| #1 x 6

○ #3 x 6

● #4 x 6

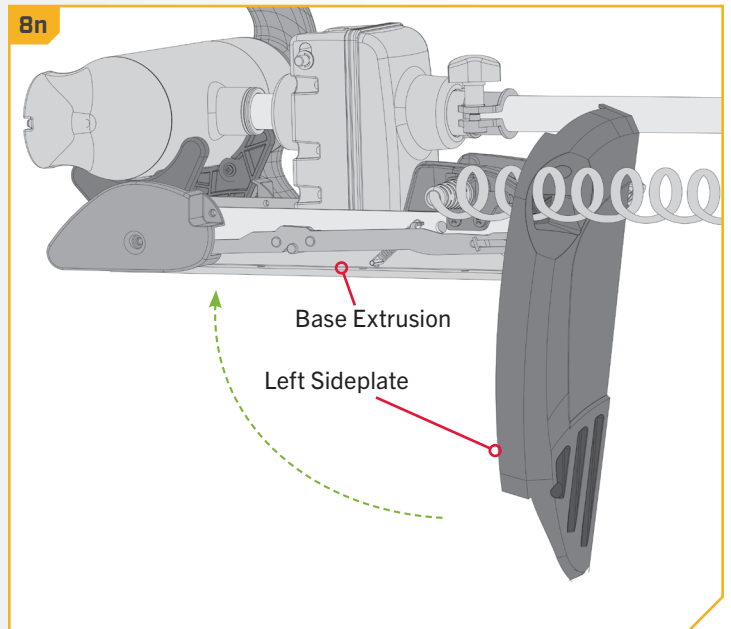
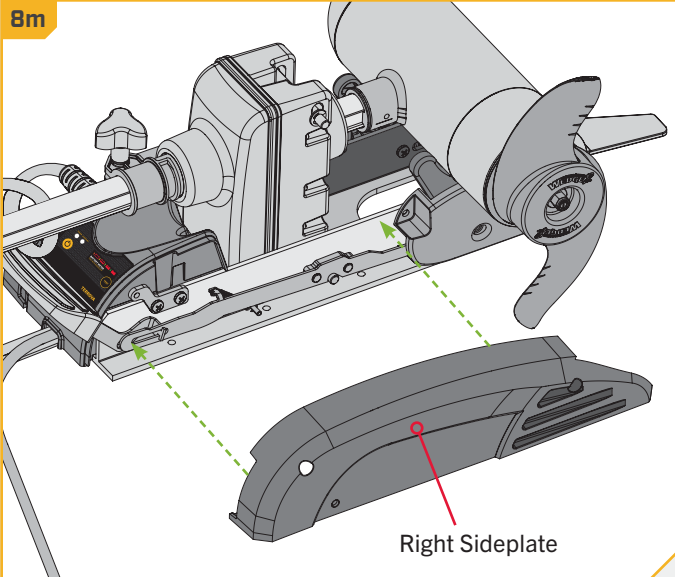
- k. Put a 1/4-20 x 2" (Item #1) Screw into each of the drilled locations. The Screw should pass through the Base Extrusion and the boat deck. If the Rubber Washers (Item #4) are used, they should sit between the Base Extrusion and boat deck. Make sure to secure the motor with screws on each side of the Base Extrusion.
- l. Place a Flat Washer (Item #2) and then a Nylock Nut (Item #3) at the end of each screw and secure with a 7/16" Box End Wrench. Make sure all hardware is secure.

**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.



8

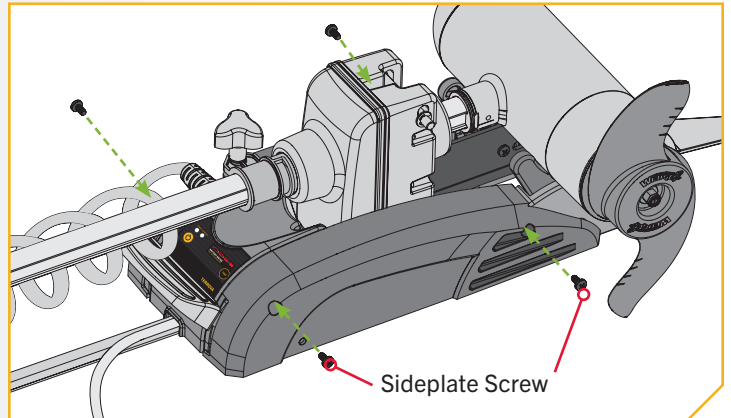
- m. Replace the Right Sideplate.
- n. Swing the Left Sideplate back into its correct position on the Base Extrusion.



## INSTALLING THE FOOT PEDAL

9

- o. Replace the four sideplate screws using a #3 Phillips Screwdriver. Two of these screws will be located on each side of the mount.



### Installing the Foot Pedal

1

#### ITEM(S) NEEDED

#13 x 5



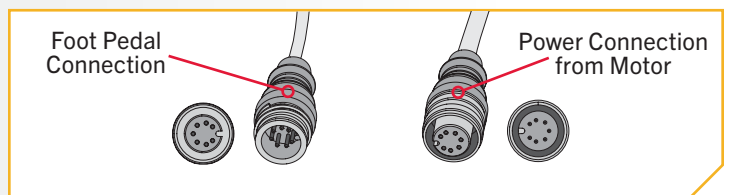
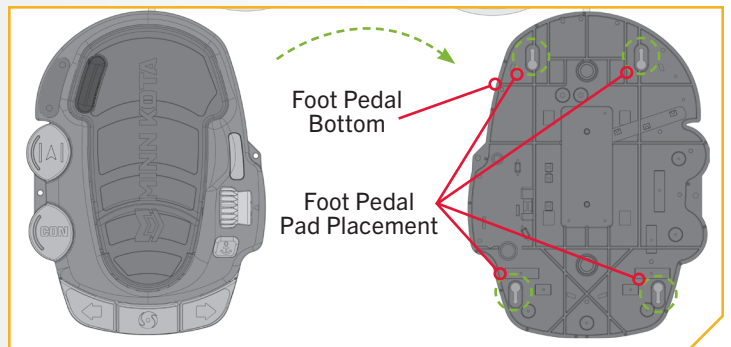
#EE x 1

- a. Take the Foot Pedal (Item #EE) and turn it over. Put a Foot Pedal Pad (Item #13) in each of the pad locations.

**NOTICE:** The pads are recommended when using the Foot Pedal on non-carpeted surfaces.

- b. Locate the 7-pin Foot Pedal Connection on the Foot Pedal and the Power Connection on the Motor. Align the pins of the Foot Pedal Connection to the matching socket end of the Power Connection. Firmly push the Plug together.

**NOTICE:** The connectors are keyed to prevent reversed installation.



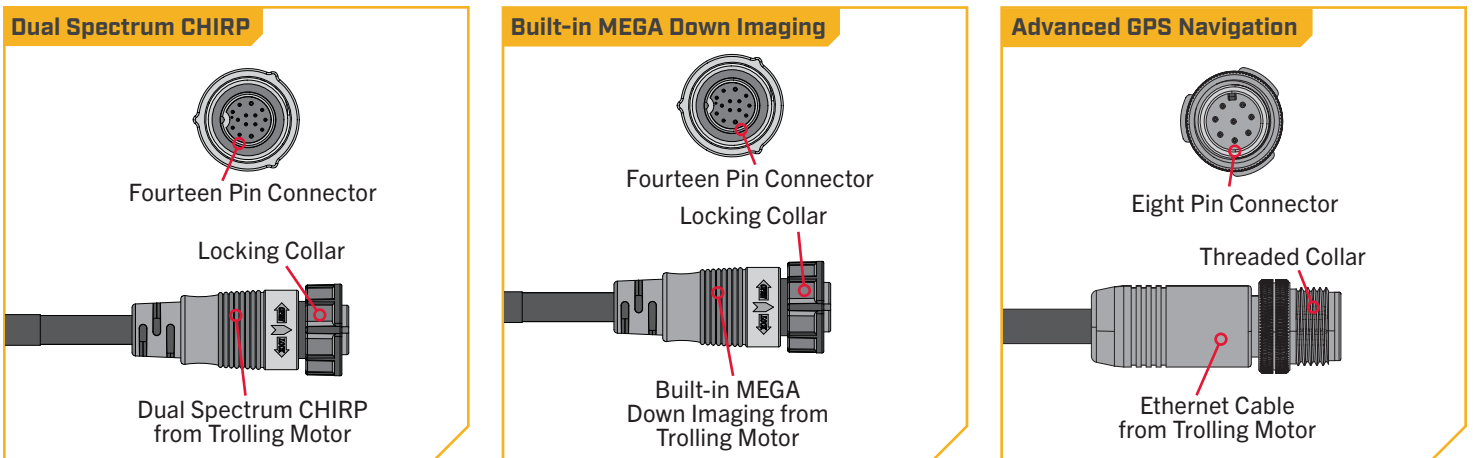


# IDENTIFYING TROLLING MOTOR FEATURES AND THEIR ASSOCIATED CABLES

## IDENTIFYING TROLLING MOTOR FEATURES AND THEIR ASSOCIATED CABLES

### Feature & Cable Identification

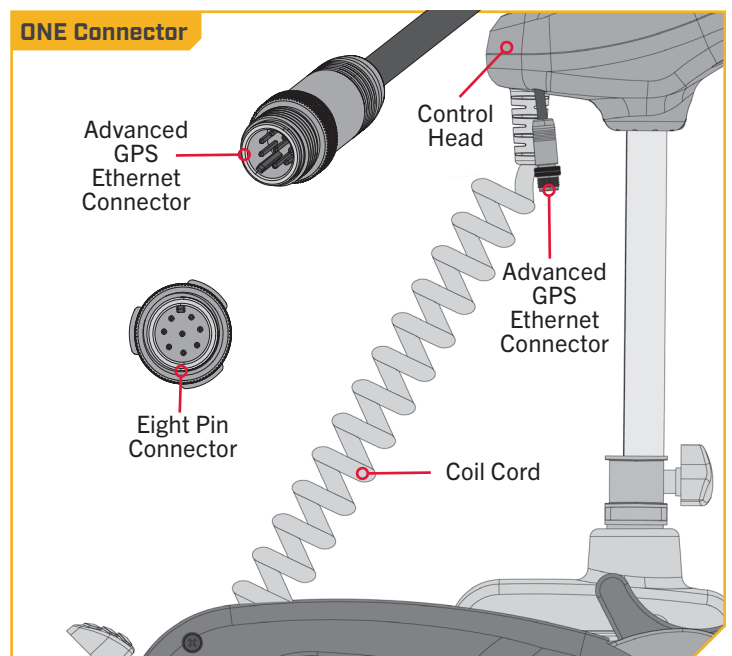
The Terrova is pre-installed with Advanced GPS Navigation - including the ability to connect via Ethernet to a Humminbird unit. It may also be installed with sonar, either Dual Spectrum CHIRP or Built-in MEGA Down Imaging. These features may be installed on their own or in combination with another feature. All of these features require Accessory Cables to be connected to an output device. The connectors are present on the trolling motor and have cables that exit below the Control Head or exit the Coil Cord at the base of the Mount. To better identify Accessory Cables present, refer to the diagrams that detail what the Dual Spectrum CHIRP, Built-in MEGA Down Imaging and Advanced GPS Navigation connectors look like.



### Identifying Connectors

If **ONE** connector is present below the Control Head, the trolling motor will be equipped with:

**Advanced GPS Navigation** - If Advanced GPS Navigation is pre-installed on your trolling motor, one Eight Pin Advanced GPS Ethernet Connector will exit the base of the Control Head and rest just below the Control Head next to the Coil Cord. If the Advanced GPS Navigation on the trolling motor will be used with a fish finder, an Ethernet Cable may be attached to the Advanced GPS Ethernet Connector below the Control Head. See the "Advanced GPS Navigation" section of this document for details on how to install the Advanced GPS Ethernet Connector to a Humminbird. If only one connector is present below the control Head, the motor is not equipped with sonar.

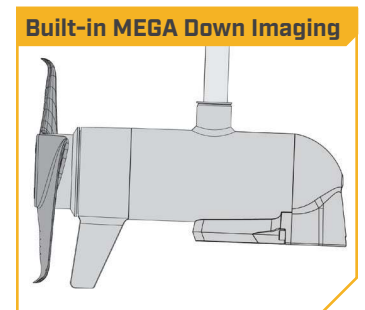
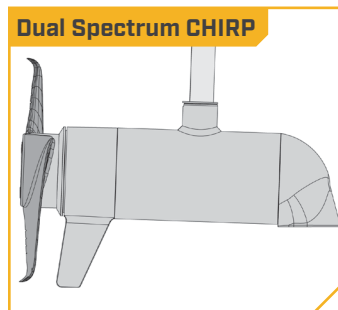
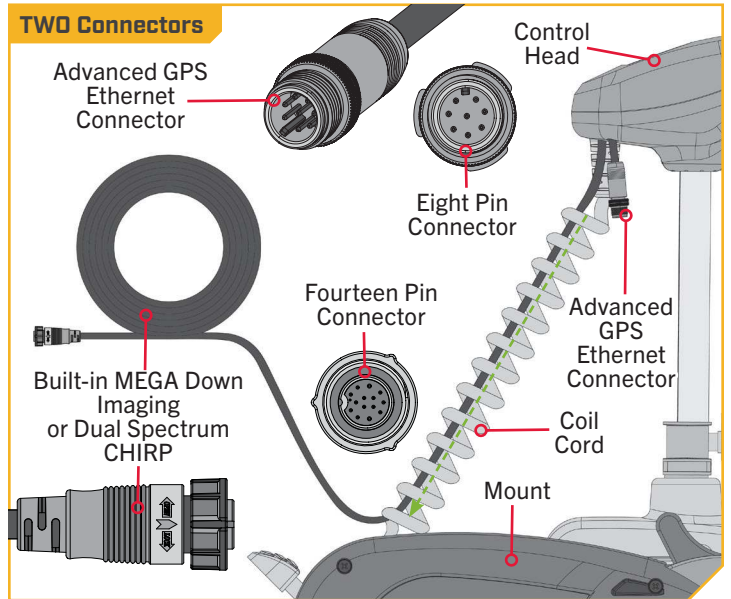


# CRITICAL CABLE ROUTING

If **TWO** connectors are present below the Control Head, the trolling motor will be equipped with:

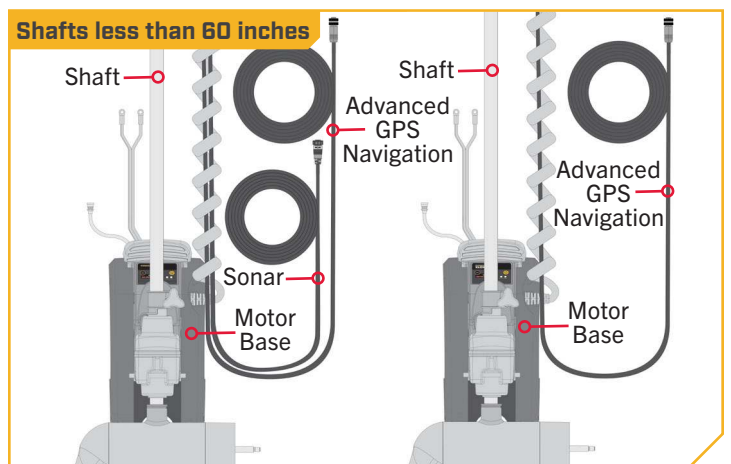
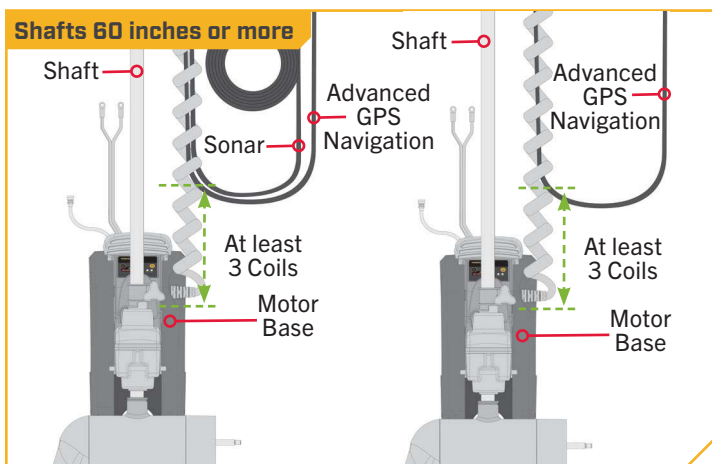
**Advanced GPS Navigation & Dual Spectrum CHIRP or Built-in MEGA Down Imaging** - If Advanced GPS Navigation is pre-installed on your trolling motor, one Eight Pin Advanced GPS Ethernet Connector will exit the base of the Control Head and rest just below the Control Head next to the Coil Cord. If the Advanced GPS Navigation on the trolling motor will be used with a fish finder, an Ethernet Cable may be attached to the Advanced GPS Ethernet Connector below the Control Head. See the “Advanced GPS Navigation” section of this document for details on how to install the Advanced GPS Ethernet Connector to a Humminbird.

If Dual Spectrum CHIRP or Built-in MEGA Down Imaging is pre-installed on your trolling motor, one Sonar Accessory Cable will exit the base of the Control Head and run down the center of the Coil Cord. The end of the Cable will have a Fourteen Pin Connector. Motors with Dual Spectrum CHIRP or Built-in MEGA Down Imaging will also have a transducer in the Lower Unit. The appearance of the transducer will vary depending on sonar type.



## › Critical Cable Routing

On motors with a shaft 60” or more, Accessory Cables (including Dual Spectrum CHIRP, Built-in MEGA Down Imaging and Advanced GPS Navigation) must exit the Coil Cord leaving **three or more** open coils between where the cables exit and the motor base, as assembled by the factory. Routing the Accessory Cables in any other manner will not allow the motor to stow properly. When identifying features and establishing connections, make sure to follow the critical cable routing.



# FEATURE & CABLE MANAGEMENT

## › Feature & Cable Management

### DUAL SPECTRUM CHIRP ›

Your trolling motor may be pre-installed with a transducer system featuring Humminbird's Dual Spectrum CHIRP. CHIRP stands for "Compressed High Intensity Radar Pulse". Dual Spectrum CHIRP is a 2D sonar transducer with a temperature sensor that is integrated into the lower unit of the trolling motor. Humminbird also utilizes a proprietary, best-in-class transducer designed and built to maximize fish detail, as well as coverage area. Dual Spectrum CHIRP scans the water for fish similar to the way the seek function on your truck's radio scans the airwaves for FM stations. By covering a wide range of frequencies, CHIRP produces more accurate, more detailed returns of fish, structure, and the bottom.

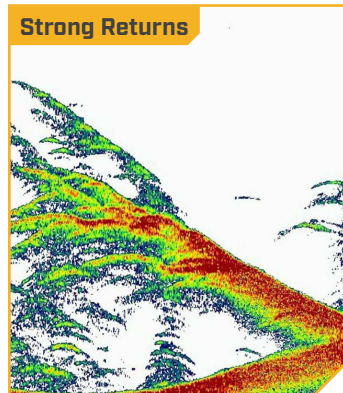
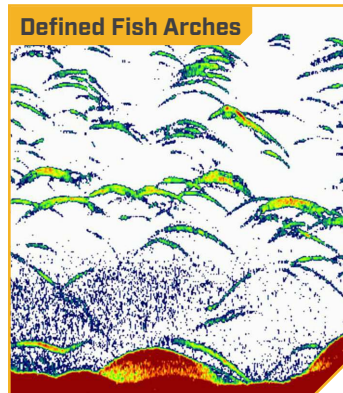
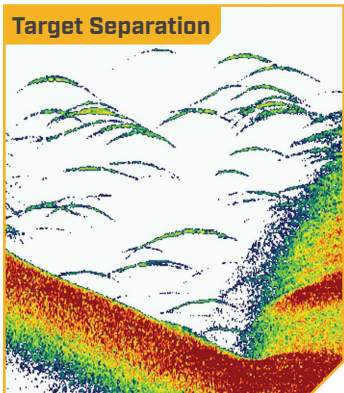
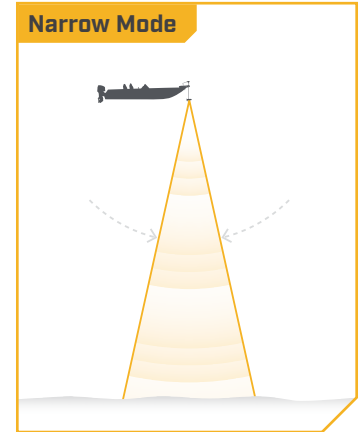
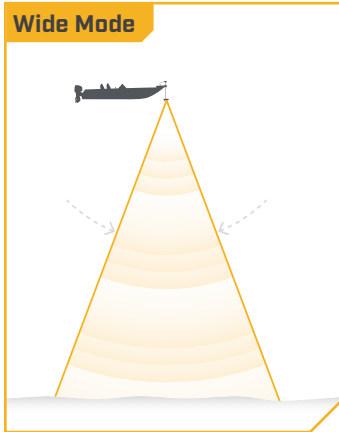
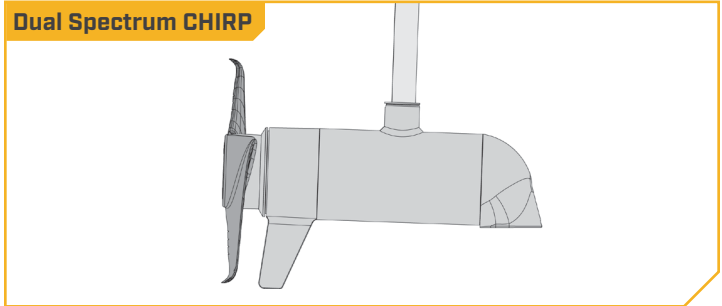
Humminbird's Dual Spectrum CHIRP gives you full spectrum capability, plus the power to select your own start and end frequencies by operating in two different modes. Wide Mode for maximum coverage and Narrow Mode for maximum detail. Wide mode allows you to search deep and wide. Is it used for watching your lure while vertical jigging, or gaining a more expansive view in shallow water. Narrow Mode is used to hone in on the small stuff that makes a big difference. Narrow Mode provides a precise perspective of the water below, helping you target individual fish, or identify fish hidden in structure and/or tight to the bottom.

Dual Spectrum CHIRP features:

**SUPERIOR TARGET SEPARATION** - Separating fish from their habitat is the name of the game. And now, you'll be able to tell the difference more easily between bait and game fish, and nearby structure and vegetation.

**CLEARLY DEFINED FISH ARCHES** - We've got bad news for your arch nemesis. Large game fish will show up on your screen as long, well-defined arches, for quick identification and accurate lure presentation.

**STRONG RETURNS WITHOUT NOISE** - Stop seeing things that aren't there. A high signal-to-noise ratio translates to better defined targets, less clutter and greater certainty that what you're looking at on-screen is legit.



The integrated design of the Dual Spectrum CHIRP transducer protects it in the lower unit of the trolling motor from underwater hazards and prevents tangles and damage to the transducer cables. In certain situations, air bubbles may adhere to the surface of the Dual Spectrum CHIRP transducer and affect the performance. If this happens, simply wipe the surface of the transducer with your finger.

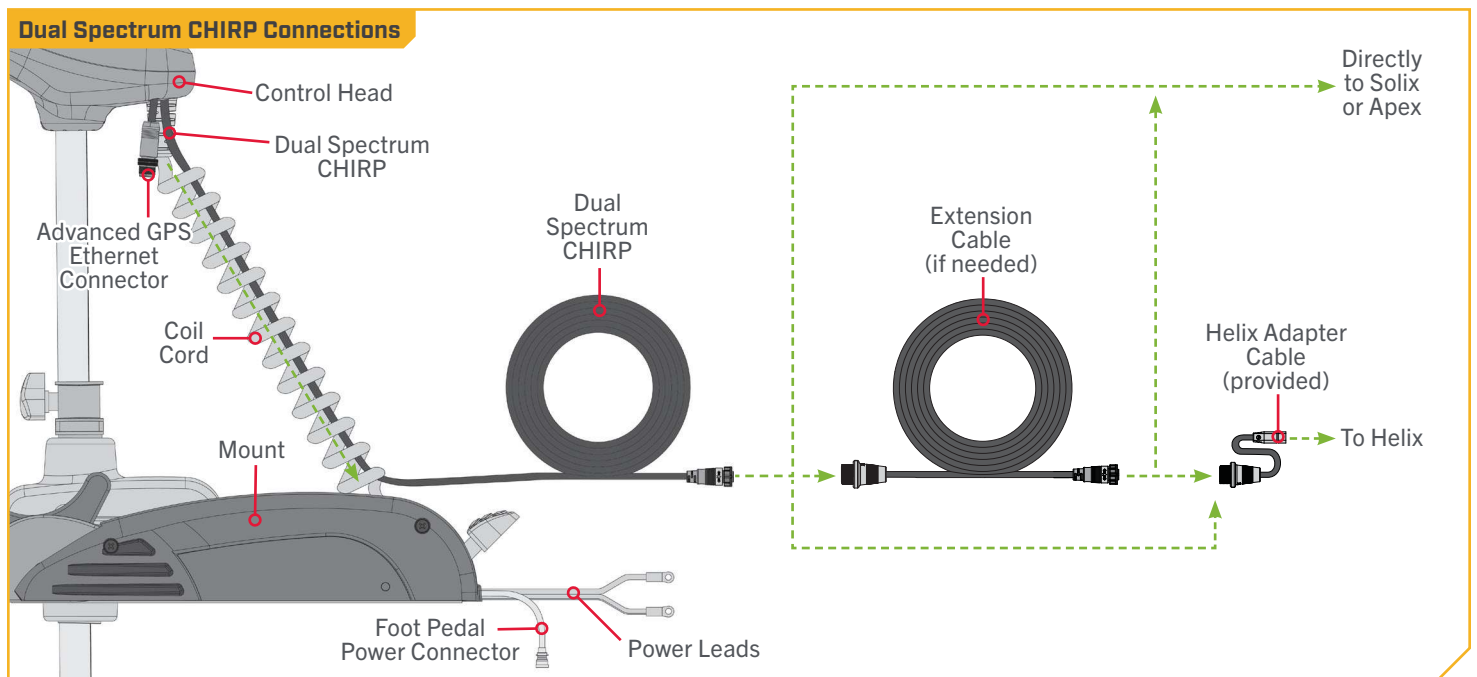
## › Considerations for Connecting and Routing Dual Spectrum CHIRP

If Dual Spectrum CHIRP is pre-installed on your trolling motor, one Dual Spectrum CHIRP accessory cable will exit the base of the Control Head and run down the center of the Coil Cord. Dual Spectrum CHIRP requires cables to be connected to an output device such as a Humminbird® fish finder. The Dual Spectrum CHIRP cable that exits the Coil Cord is "Apex and Solix Ready." Connecting the trolling motor equipped with a Dual Spectrum CHIRP transducer to a compatible fish finder gives you a 2D sonar view of what is happening directly below your trolling motor. To determine if your fish finder is compatible with Dual Spectrum CHIRP, please visit [minnkotamotors.com](http://minnkotamotors.com) to check compatibility. The Dual Spectrum CHIRP cable from the trolling motor may be plugged directly into a Solix or Apex, directly into an Extension Cable or directly into a Humminbird® Helix Adapter Cable.

**EXTENSION CABLES** - The Dual Spectrum CHIRP cable from the trolling motor may not be long enough to reach your fish finder. If the cable length does not reach the desired fish finder installation location, extension cables are available. A 10-foot extension cable ([EC M3 14W10 - 10' transducer extension cable - 720106-1](#)) and a 30-foot extension cable ([EC M3 14W30 - 30' transducer extension cable - 720106-2](#)) are available from [humminbird.com](http://humminbird.com). Both the 10-foot and 30-foot extension cables also come "Apex and Solix Ready." The Extension Cables may plug directly into a Solix or Apex or directly into a Helix Adapter Cable.

**HUMMINBIRD HELIX ADAPTER CABLES** - If connecting to a Humminbird® Helix fish finder, an adapter cable accessory is included that will allow the connection of any compatible Humminbird® Helix fish finder. The 490537-2 MKR-MI-1 is used on Helix 8, 9, 10, 12 and 15 G2N models and newer. The 490518-1 MKR-MDI-2 is used for Helix 7 G3, G4, G3N and G4N models. The Helix adapter cables will plug directly into the Helix fish finder.

**OTHER FISH FINDER ADAPTER CABLES** - If connecting to other fish finders on the market, check for compatibility or any required adapter cables online at [minnkotamotors.com](http://minnkotamotors.com).





# DUAL SPECTRUM CHIRP

All Dual Spectrum CHIRP Terrova motors are equipped with an internal bonding wire. Incorrect rigging will cause sonar interference and can damage your trolling motor, electronics, and other boat accessories. 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.

The Dual Spectrum CHIRP 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. The connection cable should be routed to the fish finder following Minn Kota recommendations on routing the cables to optimize mobility and maximize functionality. Follow the instructions below for completing all connections and then follow the instructions for "Securing Accessory Cables" to complete the output cable installation.

## CAUTION

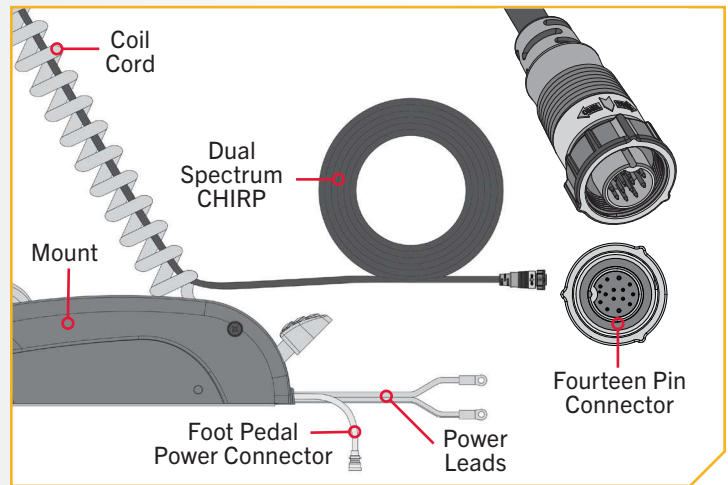
Failure to follow the recommended wire routing for installed features, if equipped, may cause damage to the product and void your product warranty. Route cables away from pinch points or other areas that may cause them to bend in sharp angles. Routing the cables in any way other than directed may cause damage to the cables by being pinched or severed. Do not over-tighten the cable ties as it may damage the wires.

1

**NOTICE:** Your fish finder should be turned off until this procedure is complete.

- a. Place the motor in the deployed position.
- b. Locate the Fourteen Pin Connector on the end of the Dual Spectrum CHIRP accessory cable. The cable will exit the base of the Control Head and run down the center of the Coil Cord.
- c. Determine if the Plug on the end of the Dual Spectrum CHIRP accessory cable will be attached directly to:

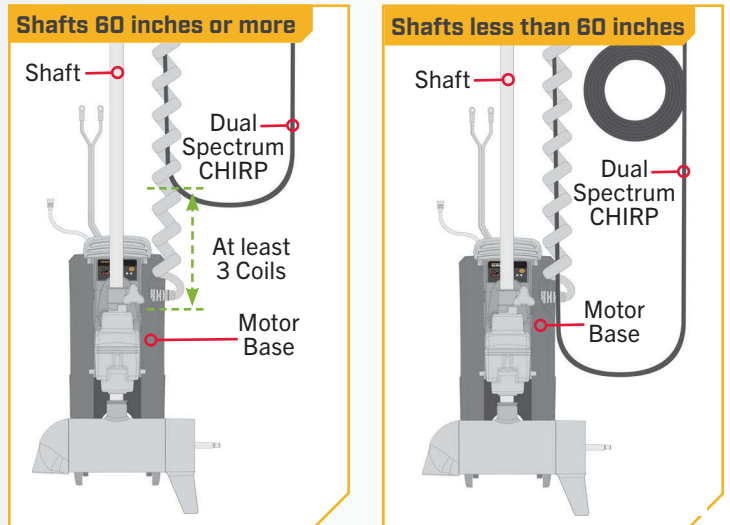
- 1) a Humminbird® Solix or Apex fish finder,
- 2) a Dual Spectrum CHIRP Extension Cable,
- 3) a Helix Adapter Cable or a compatible fish finder adapter cable.



**2**

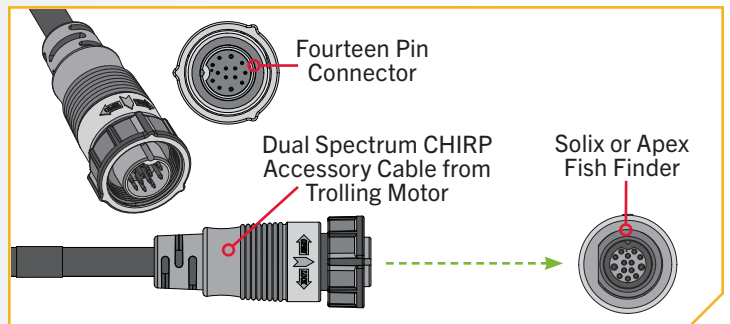
- d. Verify the length of your motor shaft to determine if Critical Cable Routing applies to your trolling motor. If the trolling motor shaft is 60 inches or more, adjust the Dual Spectrum CHIRP Cable to exit the Coil Cord three coils before the Motor Base. Review the “Critical Cable Routing” section of this document for more details.

**NOTICE: CRITICAL CABLE ROUTING.** On motors with a shaft 60" or more, accessory cables must exit the Coil Cord leaving three or more open coils between where the cables exit and the Motor Base, as assembled by the factory. Routing the cables in any other manner will not allow the motor to stow properly. Please see the “Critical Cable Routing” and “Securing Accessory Cables” sections of this document for details.



**3**

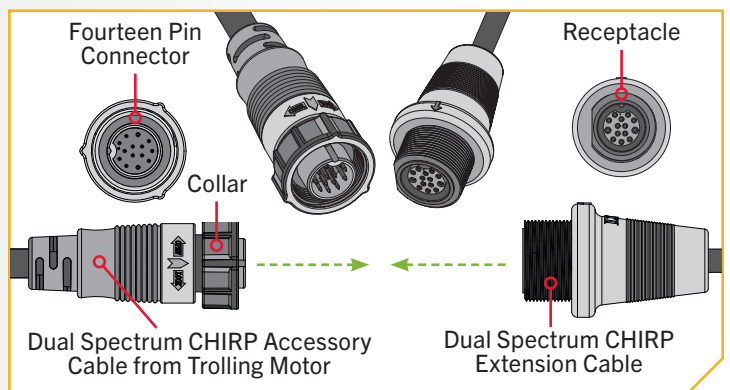
- e. If installing directly to a Solix or Apex, the connection will be flat on the back of the fish finder display.
- f. Align the pins on the Accessory Cable with the receptacle on the fish finder. Notice the keyed connectors. Tighten the Collar from the accessory cable to secure the connection. Once directly installed to the Solix or Apex, the connection is complete.



**4**

- g. If installing directly to a Dual Spectrum CHIRP Extension Cable, align the pins on the accessory cable with the receptacle on the extension cable. Notice the keyed connectors. Tighten the Collar from the accessory cable to secure the connection.
- h. If the Dual Spectrum CHIRP extension cable will be attached directly to a Humminbird® Solix or Apex, the connection will look exactly like the installation directly into a Humminbird Solix or Apex fish finder.

**NOTICE:** A 10-foot extension cable (EC M3 14W10 - 10' transducer extension cable - 720106-1) and a 30-foot extension cable (EC M3 14W30 - 30' transducer extension cable - 720106-2) are available from [humminbird.com](http://humminbird.com).



# BUILT-IN MEGA DOWN IMAGING

## 5

### ITEM(S) NEEDED



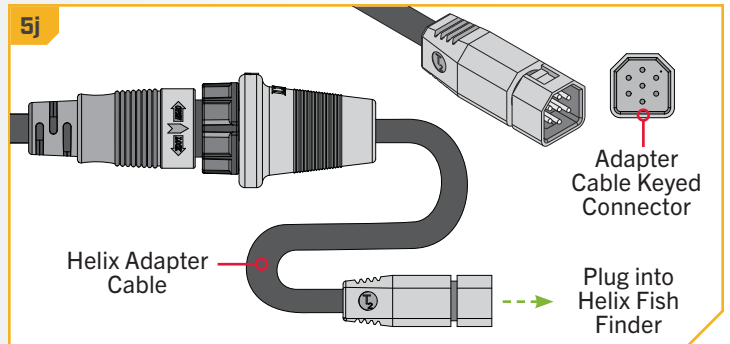
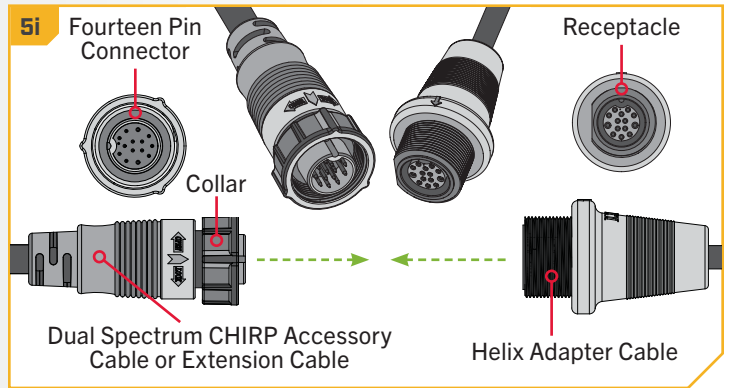
- i. If installing directly to a Helix Adapter Cable, align the pins on the accessory cable or extension cable with the receptacle on the Helix Adapter Cable (Item #17 or 18). Notice the keyed connectors. Tighten the Collar from the accessory cable or extension cable to secure the connection.

**NOTICE:** The 490537-2 MKR-MI-1 (Item #17) is a Helix Adapter Cable used on Helix 8, 9, 10, 12 and 15 G2N models and newer. The 490518-1 MKR-MDI-2 (Item #18) is a Helix Adapter Cable used for Helix 7 G3, G4, G3N and G4N models. Both cables are included.

- j. If the Helix Adapter Cable will be attached directly to a Humminbird® Helix, plug it in the Helix Adapter Cable Keyed Connection on the back of the fish finder.

**NOTICE:** If connecting to other fish finders on the market, check for compatibility or any required adapter cables online at [minnkotamotors.com](http://minnkotamotors.com).

- k. If your trolling motor has more than one external connector for an output device, complete the connection for that specific output and then follow the instructions for "Securing Accessory Cables" to complete the output cable installation.



**NOTICE:** If unsure of what features your trolling motor may be installed with that require connection to an output device, please review the "Identifying Trolling Motor Features And Their Associated Cables" section in this document.

## BUILT-IN MEGA DOWN IMAGING >

Built-in MEGA Down Imaging delivers nearly 3X the output of standard Side Imaging®, and takes fishfinding into the megahertz frequency for the very first time. It uses a razor-thin, high-frequency beam to create picture-like images of structure, vegetation and fish. With Humminbird MEGA imaging sonar built right into the trolling motor, you now have a crystal clear view of what's directly beneath the boat, without having to manage all of the cables that come with external transducers. The Built-in MEGA DI transducer is only available on new models equipped from the factory and cannot be added to an existing trolling motor.

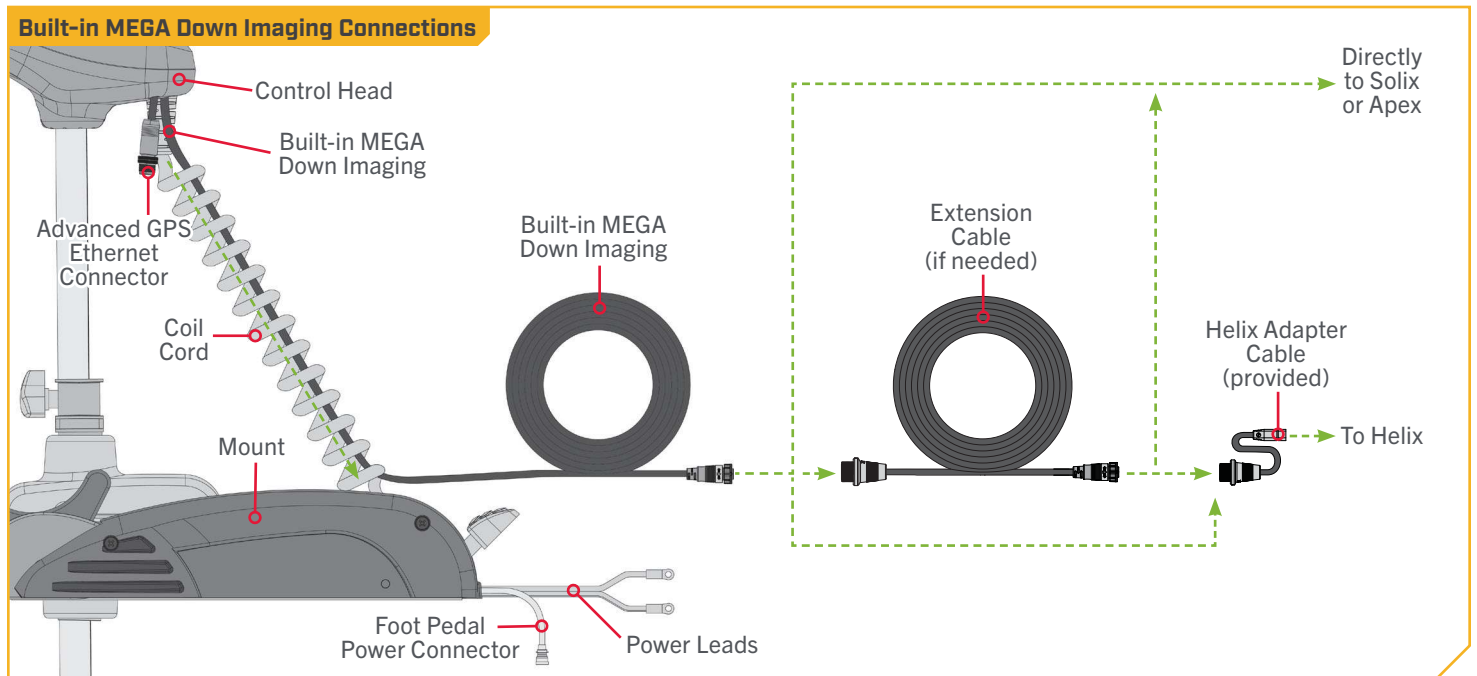
## › Considerations for Connecting and Routing Built-in MEGA Down Imaging

If Built-in MEGA Down Imaging is pre-installed on your trolling motor, one Built-in MEGA Down Imaging accessory cable will exit the base of the Control Head and run down the center of the Coil Cord. Built-in MEGA Down Imaging requires cables to be connected to an output device such as a Humminbird® fish finder. The Built-in MEGA Down Imaging cable that exits the Coil Cord is "Apex and Solix Ready". Connecting the trolling motor equipped with a Built-in MEGA Down Imaging transducer to a compatible fish finder gives you a 2D sonar view of what is happening directly below your trolling motor. To determine if your fish finder is compatible with Built-in MEGA Down Imaging, please visit [minnkotamotors.com](http://minnkotamotors.com) to check compatibility. The Built-in MEGA Down Imaging cable from the trolling motor may be plugged directly into a Solix or Apex, directly into an Extension Cable or directly into a Humminbird® Helix Adapter Cable.

**EXTENSION CABLES** - The Built-in MEGA Down Imaging cable from the trolling motor may not be long enough to reach your fish finder. If the cable length does not reach the desired fish finder installation location, extension cables are available. A 10-foot extension cable ([EC M3 14W10 - 10' transducer extension cable - 720106-1](#)) and a 30-foot extension cable ([EC M3 14W30 - 30' transducer extension cable - 720106-2](#)) are available from [humminbird.com](http://humminbird.com). Both the 10-foot and 30-foot extension cables also come "Apex and Solix Ready". The Extension Cables may plug directly into a Solix or Apex or directly into a Helix Adapter Cable.

**HUMMINBIRD HELIX ADAPTER CABLES** - If connecting to a Humminbird® Helix fish finder, an adapter cable accessory is included that will allow the connection of any compatible Humminbird® Helix fish finder. The 490537-2 MKR-MI-1 is used on Helix 8, 9, 10, 12 and 15 G2N models and newer. The 490518-1 MKR-MDI-2 is used for Helix 7 G3, G4, G3N and G4N models. The Helix adapter cables will plug directly into the Helix fish finder.

**OTHER FISH FINDER ADAPTER CABLES** - If connecting to other fish finders on the market, check for compatibility or any required adapter cables online at [minnkotamotors.com](http://minnkotamotors.com).





## BUILT-IN MEGA DOWN IMAGING

### CAUTION

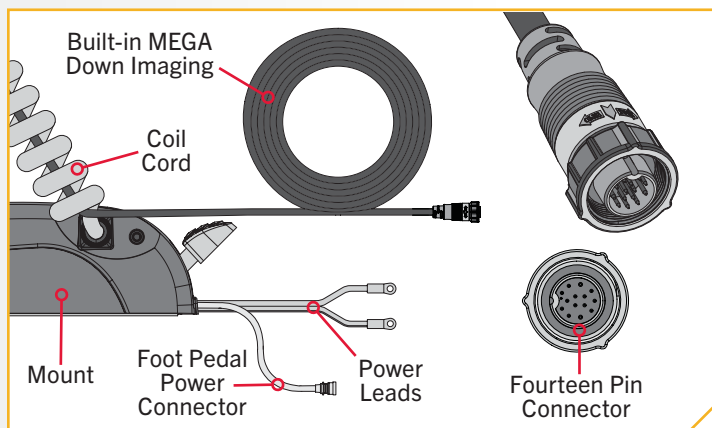
Failure to follow the recommended wire routing for installed features, if equipped, may cause damage to the product and void your product warranty. Route cables away from pinch points or other areas that may cause them to bend in sharp angles. Routing the cables in any way other than directed may cause damage to the cables by being pinched or severed. Do not over-tighten the cable ties as it may damage the wires.

**NOTICE:** You can only view Down Imaging with a MEGA DI or MEGA SI HELIX G2N, G3N or G4N Series model and a required adapter, or with any SOLIX or APEX Series model. The built-in transducer cannot supply MEGA Imaging to Humminbird models that do not already have the capability. If you have a G2/G2N, G3/G3N, G4/G4N HELIX that is not a MEGA SI or MEGA DI model, you will still get 2D Dual Spectrum CHIRP Sonar from the transducer. SOLIX G1 and HELIX G2 and G2N units need to be running the latest software update to view sonar from motors with Built-In MEGA Imaging. You can get the latest version of software for your fish finder on [humminbird.com](http://humminbird.com). Built-In MEGA Imaging is not supported by HELIX G1 models or other brands of fish finders.

### 1

**NOTICE:** Your fish finder should be turned off until this procedure is complete.

- a. Place the motor in the deployed position.
- b. Locate the Fourteen Pin Connector on the end of the Built-in MEGA Down Imaging accessory cable. The cable will exit the base of the Control Head and run down the center of the Coil Cord.
- c. Determine if the Plug on the end of the Built-in MEGA Down Imaging Cable accessory cable will be attached directly to:
  - 1) a Humminbird® Solix or Apex fish finder,
  - 2) a Built-in MEGA Down Imaging Extension Cable,
  - 3) a Helix Adapter Cable or a compatible fish finder adapter cable.

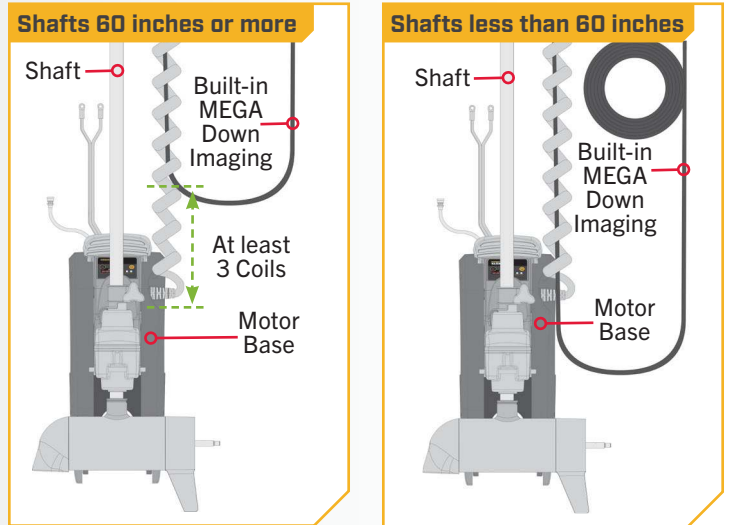


# BUILT-IN MEGA DOWN IMAGING

2

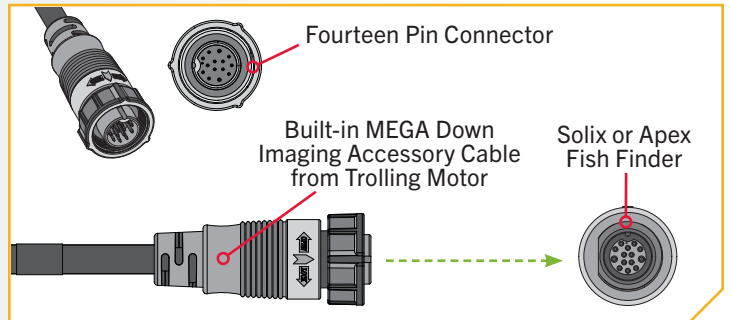
- d. Verify the length of your motor shaft to determine if Critical Cable Routing applies to your trolling motor. If the trolling motor shaft is 60 inches or more, adjust the Built-in MEGA Down Imaging Cable to exit the Coil Cord three coils before the Motor Base. Review the “Critical Cable Routing” section of this document for more details.

**NOTICE: CRITICAL CABLE ROUTING.** On motors with a shaft 60" or more, accessory cables must exit the Coil Cord leaving three or more open coils between where the cables exit and the motor base, as assembled by the factory. Routing the cables in any other manner will not allow the motor to stow properly. Please see the “Critical Cable Routing” and “Securing Accessory Cables” sections of this document for details.



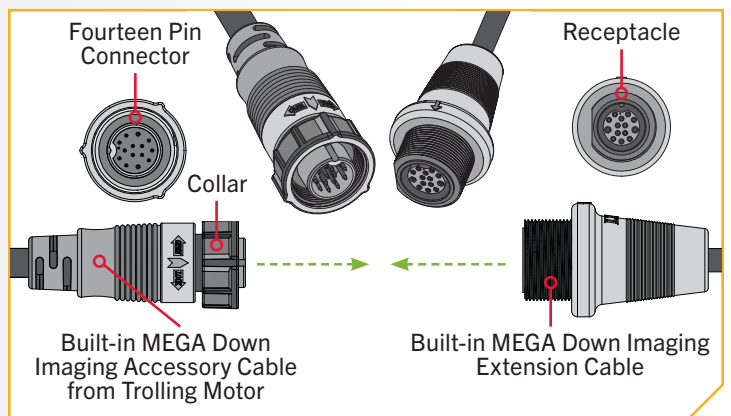
3

- e. If installing directly to a Solix or Apex, the connection will be flat on the back of the fish finder display.
- f. Align the pins on the Accessory Cable with the receptacle on the fish finder. Notice the keyed connections. Tighten the Collar from the accessory cable to secure the connection. Once directly installed to the Solix or Apex, the connection is complete.



4

- g. If installing directly to a Built-in MEGA Down Imaging Extension Cable, align the pins on the accessory cable with the receptacle on the extension cable. Notice the keyed connectors. Tighten the Collar from the accessory cable to secure the connection.
- h. If the Built-in MEGA Down Imaging Extension Cable will be attached directly to a Humminbird® Solix or Apex, the connection will look exactly like the installation directly into a Humminbird Solix or Apex fish finder.

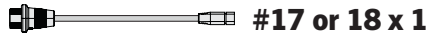


**NOTICE:** A 10-foot extension cable (EC M3 14W10 - 10' transducer extension cable - 720106-1) and a 30-foot extension cable (EC M3 14W30 - 30' transducer extension cable - 720106-2) are available from [humminbird.com](http://humminbird.com).

# BUILT-IN MEGA DOWN IMAGING

## 5

### ITEM(S) NEEDED



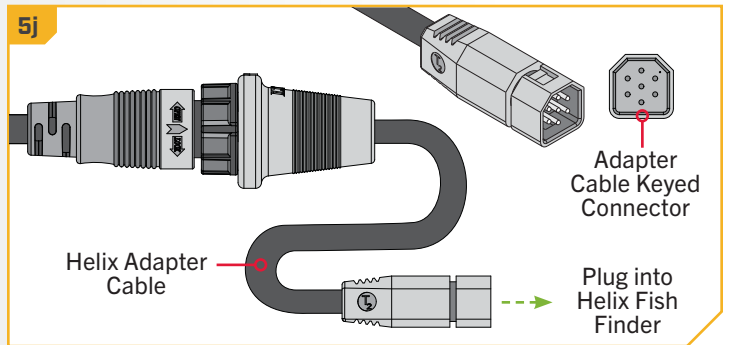
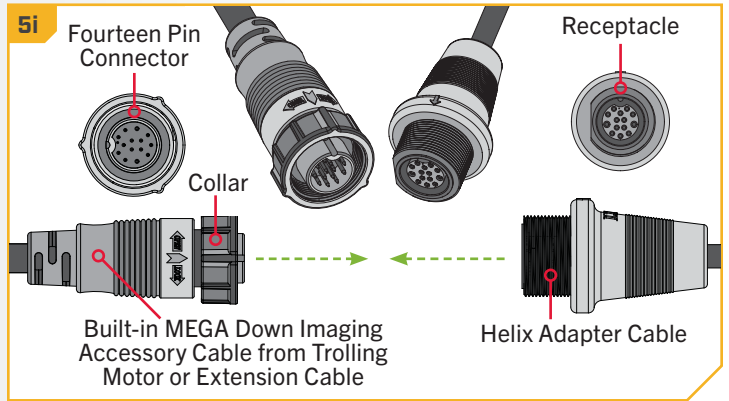
- i. If installing directly to a Helix Adapter Cable, align the pins on the accessory cable or extension cable with the receptacle on the Helix Adapter Cable (Item #17 or 18). Notice the keyed connectors. Tighten the Collar from the accessory cable or extension cable to secure the connection.

**NOTICE:** The 490537-2 MKR-MI-1 (Item #17) is a Helix Adapter Cable used on Helix 8, 9, 10, 12 and 15 G2N models and newer. The 490518-1 MKR-MDI-2 (Item #18) is a Helix Adapter Cable used for Helix 7 G3, G4, G3N and G4N models. Both cables are included.

- j. If the Helix Adapter Cable will be attached directly to a Humminbird® Helix, plug it in the Helix Adapter Cable Keyed Connection on the back of the fish finder.

**NOTICE:** If connecting to other fish finders on the market, check for compatibility or any required adapter cables online at [minnkotamotors.com](http://minnkotamotors.com).

- k. If your trolling motor has more than one external connector for an output device, complete the connection for that specific output and then follow the instructions for "Securing Accessory Cables" to complete the output cable installation.



**NOTICE:** If unsure of what features your trolling motor may be installed with that require connection to an output device, please review the "Identifying Trolling Motor Features And Their Associated Cables" section in this document.