



ULTERRA™ WITH i-PILOT® LINK™

BOW-MOUNT TROLLING MOTOR

OWNER'S MANUAL

CE MASTER USER MANUAL (FOR CE/C-TICK CERTIFIED MODELS)

Conforms to 89/336/EEC (EMC) under standards EN 55022A, EN 50082-2 since 1996 LN V9677264

THANK YOU

Thank you for purchasing the Minn Kota Ultrerra electric steer trolling motor. This motor provides the ultimate hands-free operation by giving the user automatic stow and deploy and power trim as well as all the other Minn Kota electric steer motor features that users have grown to love. The simplicity of use maximizes your time on the water and ensures you spend your time fishing. By following the instructions provided in this manual, you will learn how to properly install and operate your new Ultrerra for years of trouble-free use. We encourage you to read this manual thoroughly in order to maximize your product experience.

REMEMBER TO KEEP YOUR RECEIPT AND IMMEDIATELY REGISTER YOUR TROLLING MOTOR.

A registration card is enclosed or you can complete registration on our website at minnkotamotors.com.

NOTE: 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. Please include proof of purchase, serial number and purchase date for warranty service with any of the above options.

Please thoroughly read this user manual. Follow all instructions and heed all safety and cautionary notices below. 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.

ATTENTION: 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.

CAUTION: 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 2,5m/sec².

You are responsible for the safe and prudent operation of your vessel. We have designed Ultrerra 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 Ultrerra in an area free from hazards and obstacles.

LOCATING YOUR 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 in the space provided below so that you have it available for future reference.

The serial number on your Ultrerra is located inside the mount near the motor rests.



Model: _____

Serial Number: _____

Purchase Date: _____

Store Where Purchased: _____

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TWO-YEAR LIMITED WARRANTY

WARRANTY ON MINN KOTA i-PILOT® AND i-PILOT® LINK™ WIRELESS GPS TROLLING SYSTEM ACCESSORY

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 i-Pilot® or i-Pilot® Link™ Wireless GPS Trolling System Accessory 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.

EXCLUSIONS AND LIMITATIONS

This limited warranty does not apply to products that have been used 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.**

HOW TO OBTAIN WARRANTY SERVICE

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 Minn Kota's factory service center in Mankato, MN. Any charges incurred for service calls, transportation or shipping/freight to/from the factory, 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. Warranty service can be arranged by contacting the factory at 1-800-227-6433 or email service@minnkotamotors.com. **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 posted labor rate and for a minimum of at least one hour.**

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

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.

WARRANTY ON MINN KOTA FRESHWATER TROLLING MOTORS

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 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 & 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 or to Minn Kota's factory service center in Mankato, MN. Any charges incurred for service calls, transportation or shipping/freight to/from the Minn Kota Authorized Service Center or factory, 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. Warranty service can be arranged by contacting a Minn Kota Authorized Service Center or by contacting the factory at 1-800-227-6433 or email service@minnkotamotors.com. **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 posted labor rate and for a minimum of at least one hour.**

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

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.

HUMMINBIRD WARNINGS

HUMMINBIRD WARNINGS

WARNING! This device should not be used as a navigational aid to prevent collision, grounding, boat damage, or personal injury. When the boat is moving, water depth may change too quickly to allow time for you to react. Always operate the boat at very slow speeds if you suspect shallow water or submerged objects.

WARNING! The electronic chart in your Humminbird® unit is an aid to navigation designed to facilitate the use of authorized government charts, not to replace them. Only official government charts and notices to mariners contain all of the current information needed for the safety of navigation, and the captain is responsible for their prudent use.

WARNING! Humminbird® is not responsible for the loss of data files (waypoints, routes, tracks, groups, recordings, etc.) that may occur due to direct or indirect damage to the unit's hardware or software. It is important to back up your control head's data files periodically. Data files should also be saved to your PC before restoring the unit's defaults or updating the software. See your Humminbird® online account at humminbird.com and the Waypoint Management Guide on your Humminbird® Manual CD for details.

WARNING! Do not travel at high speed with the unit cover installed. Remove the unit cover before traveling at speeds above 20 mph.

WARNING! Disassembly and repair of this electronic unit should only be performed by authorized service personnel. Any modification of the serial number or attempt to repair the original equipment or accessories by unauthorized individuals will void the warranty.

WARNING! This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

ATTENTION INTERNATIONAL CUSTOMERS: Products sold in the U.S. are not intended for use in the international market. Humminbird® international units provide international features and are designed to meet country and regional regulations. Languages, maps, time zones, units of measurement, and warranty are examples of features that are customized for Humminbird® international units purchased through our authorized international distributors. To obtain a list of authorized international distributors, please visit our Website at humminbird.com or contact our Customer Resource Center at (334) 687-6613.

NOTE: The illustrations in this manual may not look the same as your product, but your unit will function in the same way.

NOTE: Some features discussed in this manual require a separate purchase, and some features are only available on international models. Every effort has been made to clearly identify those features. Please read the manual carefully in order to understand the full capabilities of your model.

NOTE: To purchase accessories for your control head, visit our Website at humminbird.com or contact our Customer Resource Center at 1-800-633-1468.

NOTE: The procedures and features described in this manual are subject to change without notice. This manual was written in English and may have been translated to another language. Humminbird® is not responsible for incorrect translations or discrepancies between documents.

NOTE: Product specifications and features are subject to change without notice.

NOTE: Humminbird® verifies maximum stated depth in saltwater conditions, however actual depth performance may vary due to transducer installation, water type, thermal layers, bottom composition and slope.

NOTE: The maximum number of iTracks, Spot-Locks, waypoints, routes, and tracks may vary due to the setup of your Waypoint Management directory. Groups and sub-groups also use storage, and the storage limit is influenced by the complexity of your Waypoint Management directory. See your Waypoint Management Guide for details.

TRADEMARKS

700 Series™, 800 Series™, 900 Series™, 1100 Series™, HumminbirdPC™, Humminbird®, LakeMaster®, ONIX®, Side Imaging®, and X-Press™ Menu are trademarked by or registered trademarks of Johnson Outdoors Marine Electronics, Inc.



FEATURES

MOTOR FEATURES

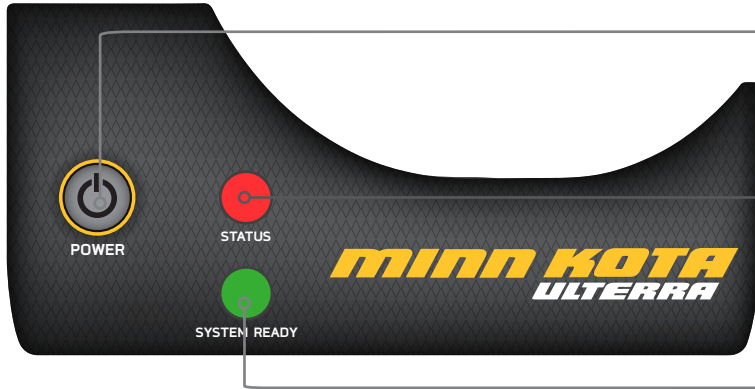


Specifications subject to change without notice.

*This diagram is for reference only and may differ from your actual motor.

FEATURES

CONTROL PANEL



Power Button: Press the power button to turn the motor on or off. Once power button is pressed, power will remain on for 1.5 hours in the absence of any button presses, when motor is stowed. Press and hold for two seconds to turn motor off.

Status (red LED): The motor is equipped with a status indicator. The indicator will flash when the motor is stowing or deploying and will be lit continuously when fully stowed and off when deployed while the power is on.

System Ready (green LED): The motor is equipped with a system ready indicator. The indicator light will be illuminated when the motor is connected to power and switched on.

i-PILOT LINK REMOTE

For complete details on this remote, refer to the Getting Started section of this manual.



FOOT PEDAL FEATURES



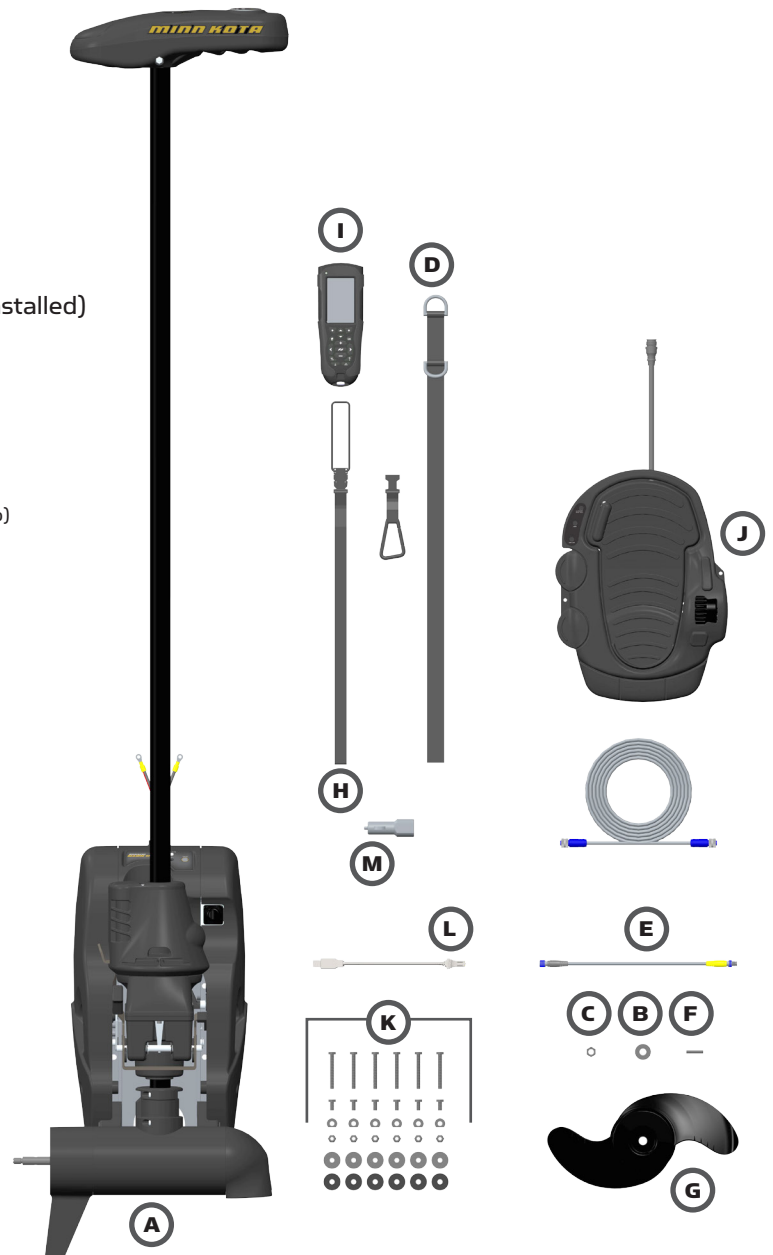
INSTALLATION

PARTS INCLUDED

Your new Ultrerra comes out of the box with everything you'll need for direct to boat mounting. This motor can be direct mounted to the boat or coupled with a Minn Kota quick release bracket for ease of mounting and removal. For compatible quick release mounting brackets and to locate your nearest dealer, visit minnkotamotors.com. Please review the parts list and tools needed for installation prior to getting started.

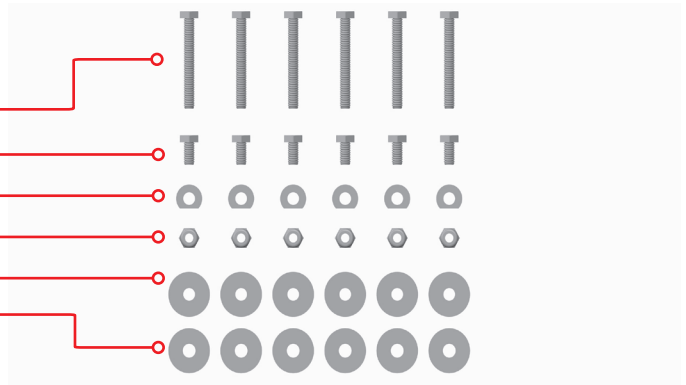
PARTS LIST

- A. (1) Ultrerra Trolling Motor
- B. (1) Washer, Prop
- C. (1) 3/8"-24 Locknut, Prop
- D. (1) Lower Unit Emergency Strap
- E. (1) Universal Sonar Extension Cable (Pre-Installed)
- F. (1) 3/16" x 1.00" Pin, Prop
- G. Weedless Wedge 2 Prop
- H. (1) i-Pilot Link Remote Lanyard
(includes lanyard rope with (1) loop clip and (1) carabiner clip)
- I. (1) i-Pilot Link Remote
- J. (1) Foot Pedal
- K. Mounting Hardware Bag
- L. USB Power Cable
- M. USB Power Adapter
- N. Manual CD (not pictured)
- O. Installation Guide (not pictured)



INSTALLATION

Parts Included:	
Description	Qty.
Screw, 1/4-20 x 2" HHCS SS	6
Screw, 1/4-20 x 0.5 HHCS SS	6
Washer-Clipped, 1/4", 1" OD	6
Nut, 1/4-20 Nylock SS	6
Washer, 1/4" Flat 18-8 SS	6
Washer-Mounting, Rubber	6

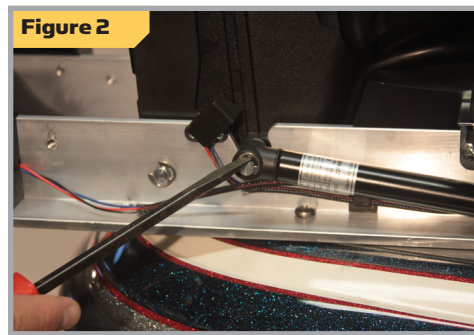


Tools and Resources Required:

- Drill
- 5/16" Drill Bit
- 7/16" Wrench
- 9/16" Wrench (for prop)
- Wire Ties (for cable routing)
- Phillips Screwdriver
- Flat Blade Screwdriver

Installation Instructions:

1. Remove the four sideplate screws. Remove sideplates to access the mounting holes. (Figure 1)



2. Remove the two 5/16" e-clips retaining the extension damper. Remove the extension damper to expose the front left mounting hole. (Figure 2)
3. Place the motor on the bow of the boat. It is recommended that the motor be mounted as close to the centerline of the boat as possible. Make sure the slot on the underside of the mounting base is aligned with the rubrail of the boat. This will ensure that the shaft has a minimum clearance of 1-1/2" when it is deployed. (Figure 3 & 4)



4. Once the motor is positioned, mark at minimum, four of the six holes that are located farthest apart (at least two on each side). 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 5/16" drill bit.

5. Mount the motor to the boat using the provided hardware. Install the hex head bolts and clipped washers on the right side of the motor as viewed from the boat interior. (Figure 5) Motor can then be slid into place utilizing the slots on the motor base plate. Clipped washer should be oriented with the flat portion against the mounting base. (Figure 6)

Figure 5

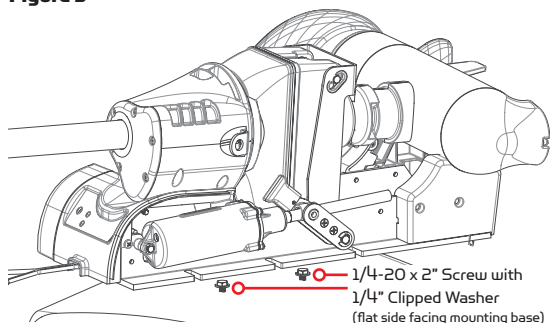
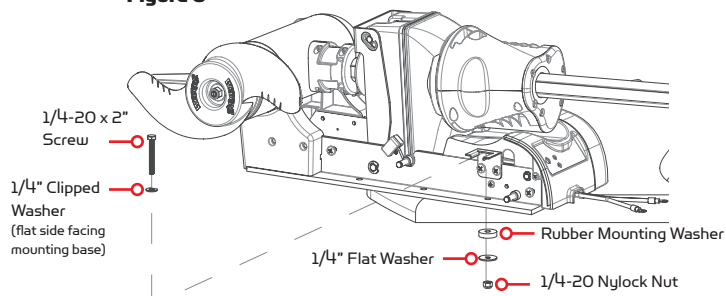


Figure 6



6. Reinstall the extension damper with the shaft facing toward the interior of the boat. Reinstall the e-clips. (Figure 7)



7. Replace the sideplates and sideplate screws by hand using a Phillips screwdriver. (Figure 8) **Note:** Do not use a power tool to install these screws.
8. Connect the motor to power and sonar cable to depth finder using the appropriate adapter cable (sold separately).

INSTALLATION

CONNECT THE i-PILOT LINK TO THE HUMMINBIRD FISHFINDER

The i-Pilot Link can be connected directly to the Humminbird Fishfinder or to the Humminbird Ethernet Switch (optional). If you purchase the Ethernet Switch, install it using the instructions in the Ethernet Accessory Guide.

WARNING: The power source must be turned off before you proceed with this installation.

NOTE: The Ethernet extension cable is optional for your installation. If you need to purchase additional extension cables, visit our Website at humminbird.com or call the Humminbird Customer Resource Center at 1-800-633-1468.

1. Locate the Ethernet cable on the i-Pilot Link.
2. If you are using the Ethernet extension cable for your installation, connect it to the Ethernet cable on the i-Pilot Link. The connectors are keyed to prevent reversed installation, so be careful not to force the connectors together. Hand-tighten the screw nut.

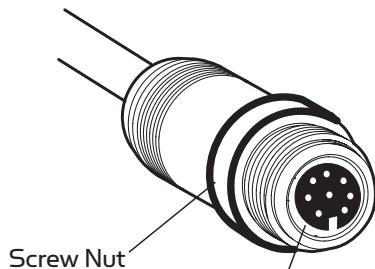
If you do not need the Ethernet extension cable for your installation, proceed to step 3.

3. Route the cable to the Humminbird Fishfinder (or the optional Ethernet Switch). Some units may require an additional ethernet adapter cable. Refer to your Fishfinder manual or see the i-Pilot Link Compatibility Chart on our Website at minnkotamotors.com.

NOTE: The cable 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.

NOTE: Hand-tighten screw to secure connection.


HAND-TIGHTENING THE SCREW NUT



The connectors are keyed to prevent reversed installation.

VERIFYING INSTALLATION ON THE HUMMINBIRD FISHFINDER

All equipment should be connected and powered before you turn on the Fishfinder. When the i-Pilot Link is detected, i-Pilot Link Connected will display briefly on the screen. You can also confirm the installation connections using the following instructions.

1. Press the  POWER/LIGHT key on the Fishfinder.
2. When the Title screen is displayed, press the MENU key to open the Start-Up Options Menu.
3. Use the 4-WAY Cursor Control key to select Normal, and press the RIGHT Cursor key.
4. Press and hold the VIEW key. Select System > Accessory Test. Confirm that i-Pilot Link is listed as connected. It may take a minute for the equipment to be detected.
5. Press and hold the VIEW key. Select System > GPS Diagnostic View. Confirm that External GPS is displayed and the Fix Type indicates Enhanced or 3D.



NOTE: A GPS Receiver is required to enable the navigation features on the Fishfinder. The Fishfinder uses the data from the GPS Receiver attached directly to it or selected from the Ethernet network.

NOTE: If the GPS Diagnostic View or Accessory Test is not displayed in the View Rotation, press the MENU key twice to open the Main Menu. Select the Views tab > GPS Diagnostic View or Accessory Test. Change the setting for each view to Visible.

Confirming that i-Pilot Link is Detected

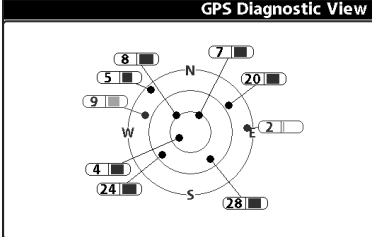
SYSTEM STATUS	
ACCESSORY TEST	
Aux. Temperature	UNCONNECTED
CannonLink	UNCONNECTED
GPS	CONNECTED
InterLink	UNCONNECTED
Speed	UNCONNECTED
Temperature	UNCONNECTED
WeatherSense	UNCONNECTED
XM Weather	UNCONNECTED
iPilot v.1.036	CONNECTED

Depth	m	N 34°36.849'	Speed	kph	COG	°t	VLT	V
197		W 084°37.909'	0.0	216	13.8			

GPS listed as connected

i-Pilot Link listed as connected

Confirming the GPS Fix Type

GPS Diagnostic View	
	
External GPS	
7/19/07	NORTH 25°53.999'
11:58:45 AM	WEST 080°07.648'
Depth	ft
Temp	°F
Speed	mph
Course	°t
VLT	V
36.4	74.3
5.6	277
11.7	

Fix Type	Enhanced
HDOP	1.00
Est Pos Error	17ft
Altitude	1083ft
Speed	5.6mph
Course	277°t
SD Card	43/120MB
SD Card	---

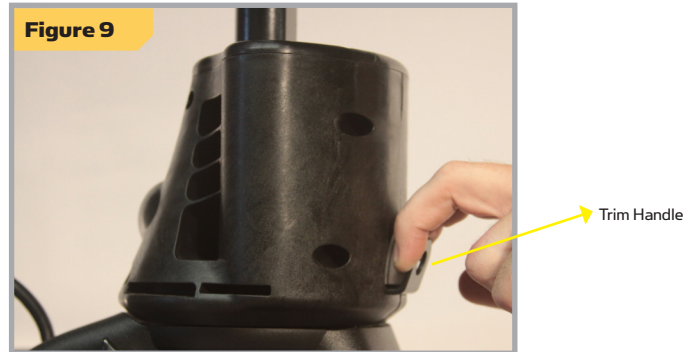
Fix Type should be 3D or Enhanced

INSTALLATION

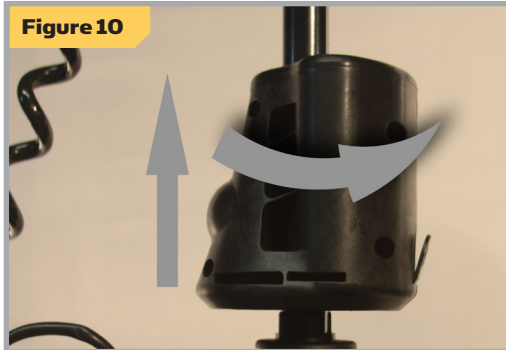
MOUNTING OPTIONS

The user has the option of stowing with the prop oriented in or out to accommodate different boat cover configurations. Follow the procedure below to change prop orientation.

1. Turn power on and deploy motor using the stow/deploy button on footpedal or remote (see the Manual Control section or Ulterra Functions for deploying instructions). **CAUTION:** When deploying, ensure the motor doesn't contact boat or trailer.
2. Turn the motor off.
3. Pull out manual trim release handle located on the side of trim housing. (Figure 9)



4. While holding trim release handle, lift up shaft/trim housing and rotate 180 degrees. (Figure 10)
5. Lower shaft and trim housing onto the steering housing. Seat trim housing by holding out manual trim release handle and orienting trim housing onto steering housing. (Figure 11)



6. Turn on power at the motor power button.
7. Stow the motor using the stow/deploy button on footpedal or remote. The lower unit will stow with the prop in the desired orientation. (Figure 12 & Figure 13)



WARNING: When raising/lowering motor or operating the tilt mechanism, keep fingers clear of all hinge and pivot points and all moving parts.

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.

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.

Reference:

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

CONDUCTOR GAUGE AND CIRCUIT BREAKER SIZING TABLE

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	6 AWG	4 AWG	4 AWG	2 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	2 AWG	2 AWG	2 AWG	2 AWG	2 AWG
E-Drive	40	50 Amp @ 48 VDC	10 AWG	10 AWG	10 AWG	10 AWG	10 AWG

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

1. No more than 3 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.

***Wire Extension Length refers to the distance from the batteries to the trolling motor leads.**

BATTERY WIRING & INSTALLATION

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 ampere 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.

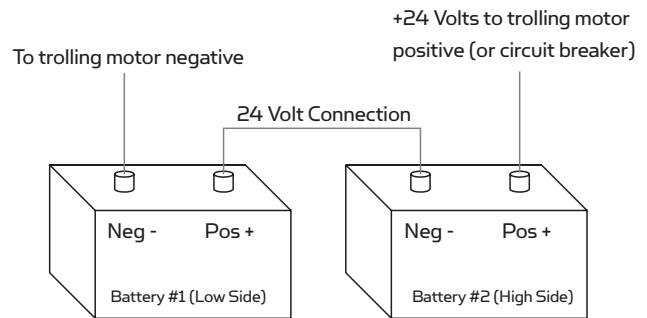
Advice Regarding Batteries:

- Never connect the (+) and the (-) terminals of the 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.
- It is highly recommended that a circuit breaker or fuse be used with this trolling motor. 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.

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

24 VOLT SYSTEMS:

1. Make sure that the motor is switched off (speed selector on “0”).
2. Two 12 volt batteries are required.
3. The batteries must be wired in series, only as directed in wiring diagram, to provide 24 volts.
 - a. Connect a connector cable to the positive (+) terminal of battery 1 and to the negative (-) terminal of battery 2.
 - b. Connect positive (+) red motor lead to positive (+) terminal on battery 2.
 - c. Connect negative (-) black motor lead to negative (-) terminal of battery 1.
4. 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. See wiring diagram on following pages.



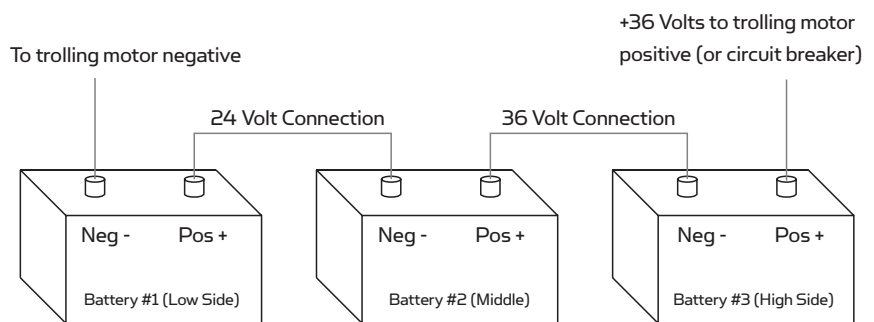
24 Volt Series Connection

CAUTION

- **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.**

36 VOLT SYSTEMS:

1. Make sure that the motor is switched off (speed selector on “0”).
2. Three 12 volt batteries are required.
3. The batteries must be wired in series, only as directed in wiring diagram, to provide 36 volts.
 - a. 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.
 - b. Connect positive (+) red motor lead to positive (+) terminal on battery 3.
 - c. Connect negative (-) black motor lead to negative (-) terminal of battery 1.
4. 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. See wiring diagram on following pages.



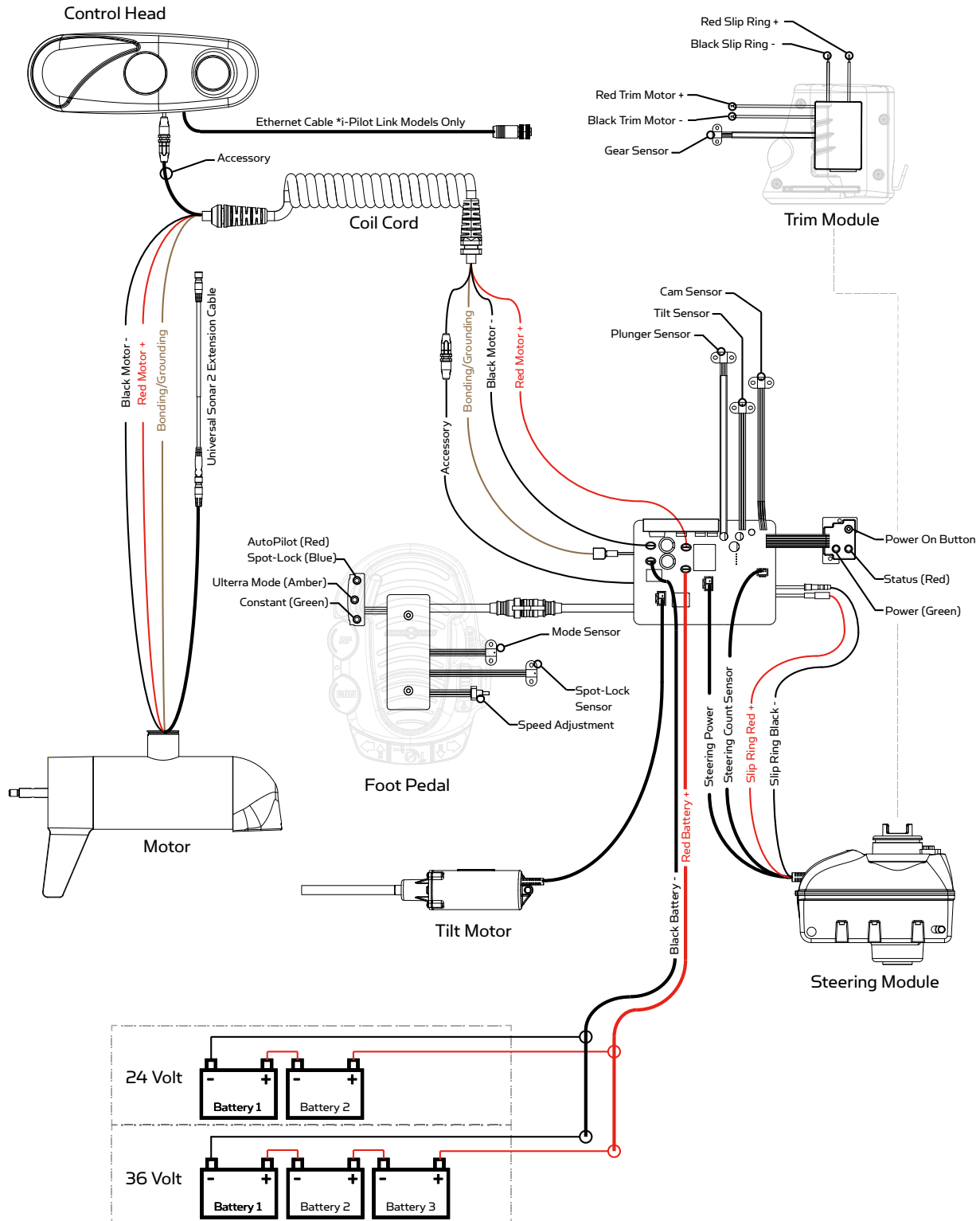
36 Volt Series Connection

CAUTION

- **Improper wiring of 24/36 volt systems could cause battery explosion!**
- **Keep leadwire wing nut connection tight and solid to battery terminals.**
- **Locate battery in a ventilated compartment.**
- **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.**

MOTOR WIRING DIAGRAM

NOTE: This is a universal, multi-voltage diagram. Double-check your motor's voltage for proper connections.
Over-Current Protection Devices not shown in this illustration.




GETTING STARTED

KNOWING YOUR REMOTE

LAYOUT

See Diagram to the right.

POWER

To turn the remote on, press the OK key. 

To turn the remote off, press and hold the OK key.


CONSTRUCTION

The remote is waterproof and floats in water.


RANGE

The range of the remote will be greatly reduced if it is used near or mounted to any metal object including aluminum or steel. It is also recommended that the front end of the remote not be obstructed during use.



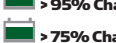


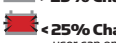

MOTOR BATTERY STATUS

The motor battery status graphic on the remote () will display trolling motor battery voltage. When the prop is on, the battery voltage will not display. The battery voltage meter will reappear once prop is off. This is to ensure that accurate battery charge information is communicated.


HEADER

 3:28 PM JUL 22


State-of-Charge indicators for the remote battery and trolling motor.

	> 95% Charge icon" data-bbox="515 255 585 275"/>
Charging Battery	> 95% Charge
	
Full Battery	> 75% Charge
	
Low Battery	> 50% Charge
	
	> 25% Charge
	
	< 25% Charge


user can only stow in this state

 **GPS Signal Strength**
Flashing indicates no GPS fix.

12:13 PM
OCT 18 **Time and Date**
This data is provided by the GPS.

 **Humminbird Connection**
Highlights when the i-Pilot controller is in communications with the Humminbird.
When there are no communications, the arrows turn gray.

DASHBOARD



Navigation Mode

Spot-Lock Paused

GPS Speed

Motor Speed

Spot-Lock

Cruise Control Target Speed

Following a Contour

Following a Route

Following a Waypoint

Recording an iTrack

When the red dot is shown, it indicates that Link is currently recording an iTrack.

Prop Status

The states of the prop icon are:

- Prop icon is not on = prop is disabled.
- On steady but not rotating = prop is enabled but the prop speed is zero.
- Rotating = prop is enabled and speed is greater than zero.
- Blinking = prop is disabled but Link is in a mode of navigation and the user is being reminded to enable the prop.
- Red X = motor is trimmed to the prop lockout region.


Cruise Control

When the icon is shown, the Cruise Control feature is enabled.


ULTERRA

From the Home screen, press  or  to access Ulterra functions. Any press of the home button will take you back to the Home screen.



DEPLOYING

Press  to deploy the motor.
You can stow or pause using the left/right soft keys.

STOWING

Press  to stow the motor.
You can deploy or pause using the left/right soft keys.

TRIMMING

While in the Ulterra menu screen, pressing  will trim the motor up and pressing  will trim the motor down.

KEYPAD

MENU CONTROL KEYS



Left Softkey & Right Softkey

These keys change function based on mode of operation and which screen is presently displayed. The Softkey Labels at the bottom of the LCD indicate their current function.



Menu Up & Menu Down

Used to navigate the menus and access the Ulterra functions.



Home

Pressing this key will always bring up the Home Screen.



OK

Press to accept menu selections.

Remote power:

- Press and release to turn the remote on.
- Press and hold for 3 seconds to turn the remote off.

MANUAL CONTROL KEYS



Speed Up



Steer Left



Speed Down



Steer Right



Prop On/Off

NAVIGATION KEYS



GO TO

Opens the list of iTracks, Spot-Locks and Waypoints that are within navigable range.

Also used to switch from the Home Screen to the Active Screen during i-Pilot navigation.



Spot-Lock

Press to enable Spot-Lock.

Press and hold to mark a Waypoint on the Humminbird (Spot-Lock will not engage).



Auto Pilot

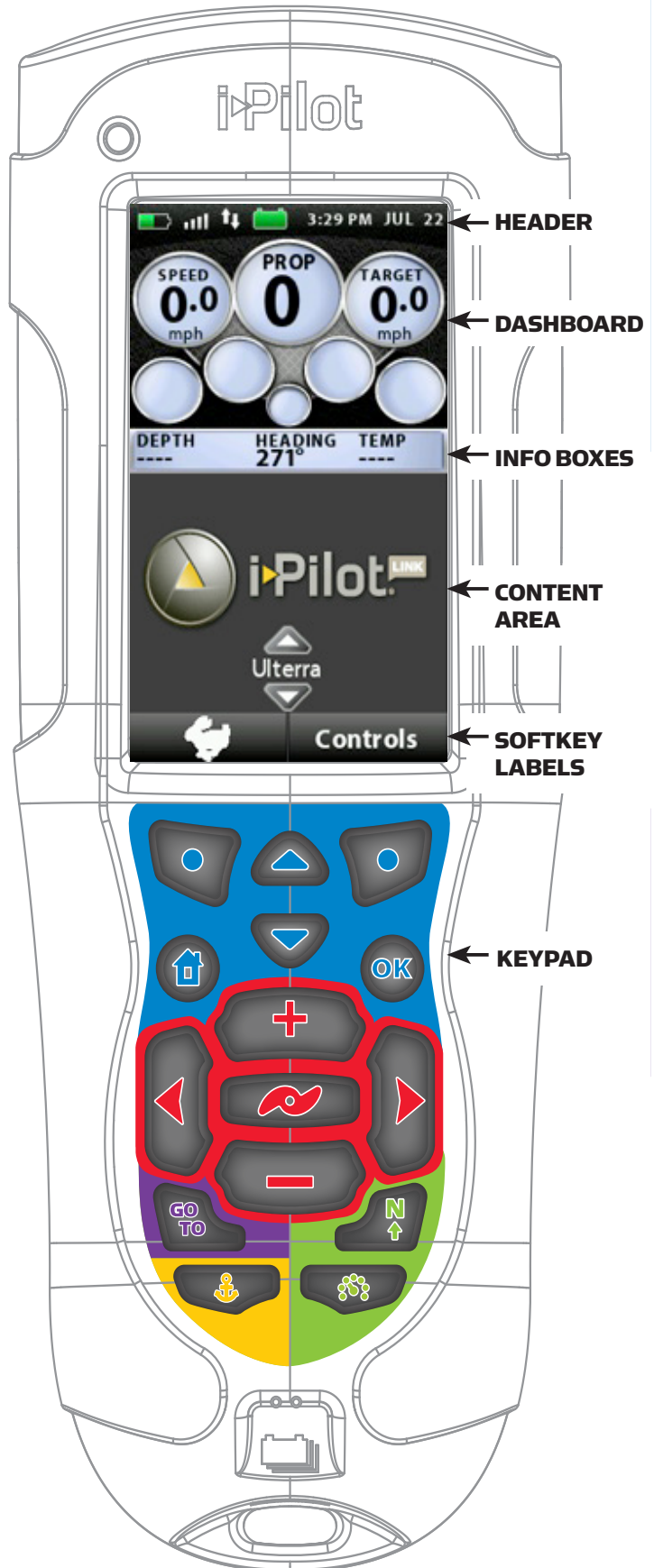
Press to enable AutoPilot or Advanced AutoPilot.

The default mode is selected through the Controls Menu on the remote.



Cruise Control

Press to bring up the Cruise Control Access screen. Target speed is adjusted using the + and - keys and accepted using the OK key.



CONTROLS MENU

To enter the Controls Menu, select Home > Controls Softkey



Controls Menu

CONTROLS > RESUME

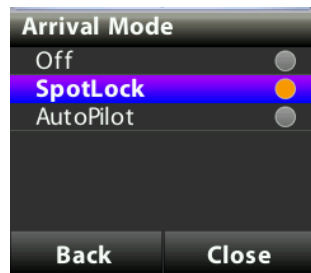
When navigation is paused (Spot-Locked), selecting Resume will restart the original navigation mode. Note that this selection is only available when navigation is currently paused.

CONTROLS > REVERSE

While navigating an iTrack or contour line, selecting Reverse will change the direction of travel. Note that this selection is only available while navigating these types of features.

CONTROLS > RECORD

Select Record to begin recording an iTrack. This selection is also used to return to the Record Active screen if a recording is in process and the user has brought up a different screen.



Controls > Arrival Mode

CONTROLS > ARRIVAL MODE

The selections on this menu are used to tell i-Pilot Link what to do when a destination is reached during certain types of navigation. Use the up/down arrow keys to select the setting and press the OK key to accept. Select the Back or Close softkey to save the setting and exit.

- a. This same configuration is accessible through the Humminbird.

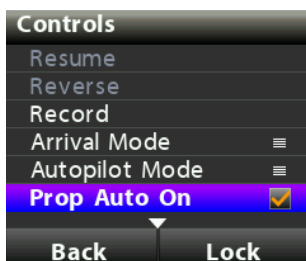


Controls > AutoPilot Mode

CONTROLS > AUTOPILOT MODE

From this menu the user configures which version of AutoPilot to use when AutoPilot is engaged. Use the up/down arrow keys to select the setting and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.

- a. This same configuration is accessible through the Humminbird.



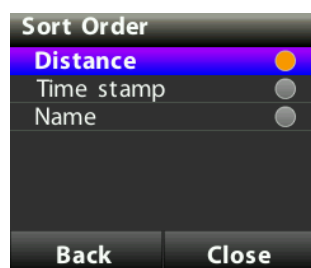
Controls > Prop Auto ON/OFF

CONTROLS > PROP AUTO ON/OFF

From this menu item the user can enable or disable Prop Auto On. Use the up/down arrow keys to select the setting and press the OK key to accept.

When this feature is enabled, the prop will automatically turn on when any of the following navigation modes are initially engaged: GoTo Waypoint, GoTo iTrack, AutoPilot, Follow the Contour and routes.

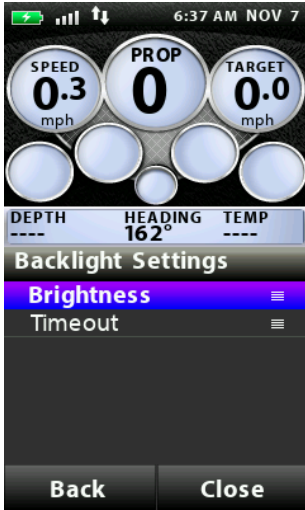
- a. This same configuration is accessible through the Humminbird.



Controls > Sort Order

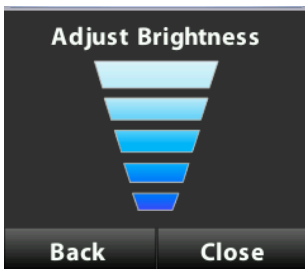
CONTROLS > SORT ORDER

The selections on this menu control the order in which navigational points appear on the GO TO screen. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close softkey to save the setting and exit.



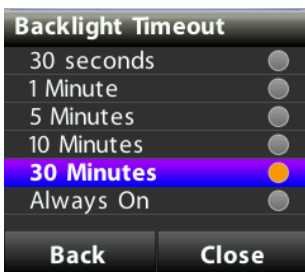
Backlight Menu

CONTROLS > BACKLIGHT SETTINGS:



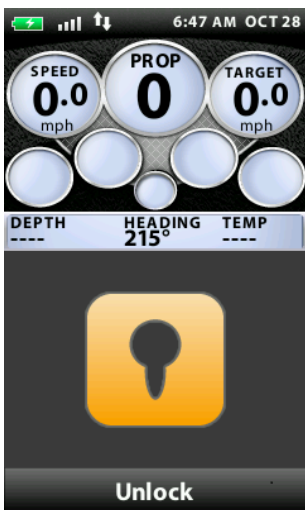
Backlight Settings > Brightness

This screen allows the user to manually control the brightness of the backlight. Use the up/down arrow keys to adjust. Select the Back or Close Softkey to save the setting and exit.



Backlight Settings > Timeout

The selections on this screen control how long the backlight will stay on after the last key press. Use the up/down arrow keys to select a new value and press the OK key to accept.



Keypad Lock

CONTROLS > KEYPAD LOCK:

To lock the keypad: From the Controls menu, press and hold the Lock Softkey.
To Unlock the keypad: Press and hold either Unlock Softkey.

GETTING STARTED

CONTROLS > CONFIGURATIONS

Configurations menu

Enter this menu by selecting Home > Controls Softkey > Configurations > OK

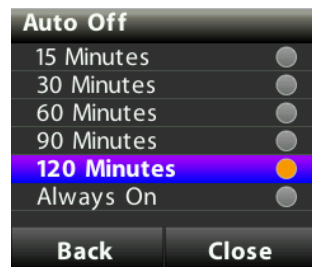
Configurations > Restore Softkey

This selection allows the user to reset the configurations on the remote to factory defaults.



Configurations > Auto Off

The selections on this menu control how long after the last key press the remote will automatically shut off. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.



Configurations > Audio Mode

This screen allows the user to select between the available audio modes. Refer to the Audio Modes section of the manual for further details.

Configurations > Language

From this menu, the user has the option of changing the language of the text that appears on the remote screen. Use the up/down arrow keys to select a new language and press the OK key to accept the setting and exit the menu. Or, select the Back or Close Softkey to exit without making changes.



Configuration > Language

Configurations > Time

From this menu, the user configures the following:

- a. 12-hour/24-hour: This controls the format that the time appears in on the screen header. Use the up/down arrow keys to select the desired format a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.
- b. Time Zone: Choosing this selection will bring up a list of time zones.
- c. Daylight Savings: This checkbox is used to configure the Link remote and controller to account for Daylight Savings Time. Highlight this checkbox and use the OK key to enable/disable the feature and select the Back or Close Softkey to exit the screen.



Configuration > Time



Configurations > Date

From this menu, the user configures the format that the date appears on GO TO screen on remote. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.



Configuration > Date



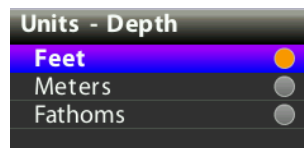
Configuration > Units

Configurations > Units

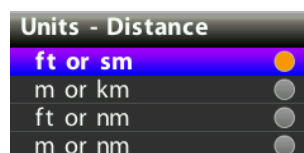
From this menu, the user configures the following:

A. DEPTH

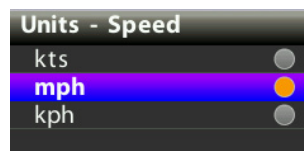
Choosing this selection will bring up a list of units to use when displaying depth. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.

**B. DISTANCE**

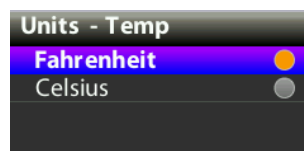
Choosing this selection will bring up a list of units to use when displaying distance. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.

**C. SPEED**

Choosing this selection will bring up a list of units to use when displaying speed. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.

**D. TEMPERATURE**

Choosing this selection will bring up a list of units to use when displaying temperature. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.

**CONTROLS > ABOUT**

Displays the current revisions of software for the remote and the controller

CONTROLS > LEARN

Used during the process of learning the remote to a controller (see details in the Knowing Your Controller section).

CONTROLS > UPDATE SOFTWARE

Used to check for and initiate software updates for the remote. See details in the Software Update section.

GETTING STARTED

REMOTE BATTERY

The i-Pilot Link remote contains a rechargeable battery. To charge the battery, plug the USB end into the included DC adapter and plug the other (two pronged) end into the charging port of the remote. The Charging Indicator will illuminate whenever an energized charging cable is connected.

The user also has the option of plugging the USB end of the charging cable into any USB type power source. The remote can be recharged while the remote is on or off.

Note: The USB end of the charging cable is not intended for prolonged exposure to saltwater environments.



KNOWING YOUR I-PILOT LINK CONTROLLER

CONSTRUCTION

The i-Pilot Link controller contains a very sensitive digital compass and is where all GPS satellite and i-Pilot Link remote signals are received. It is very important that the controller has a clear view of the sky in all directions and has a clear line of sight to the remote for optimum performance. All electronics within the controller enclosure are completely sealed.

REMOTE LEARNING

The i-Pilot Link remote is prelearned to the controller from the factory. The top of the controller has a single learn button to allow additional remotes to be added to the system. To learn additional remotes:

1. Power up the trolling motor.
2. Push and hold the learn button down. A steady audio tone will be heard while holding this button.
3. While holding the learn button on the controller, from the remote home screen select: Controls > Learn and press the OK key
4. If the learn process was successful, the controller will respond with four beeps. In addition, the Dashboard section of the remote will begin to display motor status information such as prop speed.

A remote can only be learned to one controller at a time.

A controller can have up to 4 remotes learned to it and actively communicating with it.



AUDIO MODES

The i-Pilot Link Controller also contains an internal speaker which can be programmed to work in two different audio modes. The speaker is programmed to operate in Audio Mode two from the factory. To select the different audio modes, from the Home screen go to: Settings > Configurations > Audio Mode. For an explanation of each audio mode and their sounds see the table below.

WHAT CONDITION CAUSES IT	AUDIO MODE	AUDIO PATTERN
Startup	Modes 1 and 2	4 Short beeps
Manual prop on	Mode 2	Single beep
Manual prop off	Mode 2	Double beep
Speed + (when less than max speed)	Mode 2	Single beep
Speed - (when greater than speed 0)	Mode 2	Single beep
High Speed Bypass enable	Mode 2	Single beep
High Speed Bypass disable	Mode 2	Double beep
Button press for any of these (enable or disable): REC, Pause, Track to Start, Track to End, AutoPilot, Cruise Control, Spot-Lock, Spot-Lock Recall	Mode 2	Single beep
Moving more than a quarter mile from the last track point while in Record Pause mode	Mode 2	Error
When GPS Signal Strength goes to no bars while in a GPS-based mode	Mode 2	Error
Attempting to enable a GPS feature when no signal strength bars are shown	Mode 2	Error
Attempting to replay a Track or recall a Spot-Lock location when the boat is beyond the minimum distance	Mode 2	Error
MOM button on the foot pedal is pressed and a remote button press attempts to override it	Mode 2	Error
End of track attained during track playback (in conjunction with cancelling mode and turning the prop off)	Mode 2	High-Low, High-Low, High-Low
Switch to Audio Mode 1	Modes 1 and 2	Single beep
Switch to Audio Mode 2	Modes 1 and 2	Double beep
Learn button is pressed	Modes 1 and 2	Steady tone
Learn successfully completed	Modes 1 and 2	3 longer beeps
Initiating a command that is not allowed in the prop lockout region	Mode 2	Error
Deploy	Mode 2	Double beep
Stow	Mode 2	Single beep
Initiating a command that is not allowed in the stow/deploy process	Mode 2	Error
Current Limit	Mode 2	High-Low

GETTING STARTED

POWER

The i-Pilot Link controller will turn on whenever the trolling motor has power connected and has been turned on. This is when the green system ready light is on.

ACCURACY


The accuracy and responsiveness with which i-Pilot Link controls your boat is highly dependent upon many variables. Just a few of these variables and their general effects on responsiveness and accuracy are given below so that the behavior of the system can be understood.

VARIABLE	EFFECT
Ratio of motor thrust to boat weight	Excessive thrust on a smaller boat can cause i-Pilot Link to overcorrect. Not enough thrust on a large boat can cause i-Pilot Link to respond slowly.
Wind	Excessive wind and/or current can reduce i-Pilot Link's positioning accuracy.
GPS signal strength	The greater number of GPS signal bars the greater the accuracy.
Trolling motor battery power level	A fully charged battery will give the best performance.

SYSTEM STARTUP

Once you have verified i-Pilot Link's installation it's time to start using it on the water. Follow these simple steps each time you power up your trolling motor for successful operation:

1. Connect trolling motor to power.
2. Deploy trolling motor into water.
3. Turn the remote on by pressing the OK key. Verify the Dashboard section of the screen shows all motor status information.

4. You are now able to use all manual functions:     and .

5. After i-Pilot Link has obtained a minimum GPS signal strength of one bar, all remaining functions will become available.

SOFTWARE UPDATES

Set up an online account at humminbird.com so that you will receive the latest Humminbird news and software updates for your Fishfinder. The i-Pilot Link remote and controller software are also updated through the Humminbird Fishfinder.

WARNING! Humminbird is not responsible for the loss of data files (waypoints, routes, tracks, groups, snapshots, recordings, etc.) that may occur due to direct or indirect damage to the unit's hardware or software. It is important to back up your Fishfinder's data files periodically. Data files should also be saved to your PC before restoring the unit's defaults or updating the software. See your Humminbird online account at humminbird.com and the Waypoint Management Guide.

Required Equipment

Personal computer with Internet access, a formatted SD memory card, a USB Memory Card Reader (AS CR), and an i-Pilot Link compatible Humminbird Fishfinder.


NOTE: To purchase equipment, visit our Website at humminbird.com or contact our Customer Resource Center at 1-800-633-1468.

1. Download the Software

1. Install a formatted SD memory card into the card reader connected to your PC.
2. Register your Fishfinder: Log on to humminbird.com. Click My Account. Set up a new account or log into your current account and add the i-Pilot Link to your My Equipment tab.
3. Download: From My Account\My Profile\My Equipment, click the file name of the latest software update (unit name [version #]) for your Fishfinder.
 - Read the instructions in the dialog box and click Download.
 - Follow the on-screen instructions to save the software files directly to the SD Card.
4. Repeat step 3 to download the i-Pilot Link controller and remote software files.

NOTE: The timing of software updates may vary, so there might not be 3 files required for download every time you visit your Humminbird online account.

2. Prepare the Equipment

1. Turn on the main power source.
2. Power on the trolling motor. If you have a Terrova or Riptide ST trolling motor, deploy it into the water.
3. Turn on the remote by pressing the OK key. Ensure the battery is well charged. If the battery charge is not sufficient, you will be prompted during the process to plug in the charger.
4. Turn on the Fishfinder by pressing the  POWER/LIGHT key, and follow the on-screen prompts to start Normal mode.
5. Press and hold the Fishfinder VIEW key. Select System > Accessory Test.
6. Confirm that i-Pilot Link is listed as connected. It may take a minute for the equipment to be detected. You will refer to this view throughout the update. Note the current software version number shown next to i-Pilot Link.

NOTE: If the Accessory Test View is not shown in the submenu, select the Main Menu > Views tab > Accessory Test > Visible.

GETTING STARTED

3. Update the Software

1. Install the SD card with the updated software files into the Fishfinder card slot.
2. **Fishfinder Update:** The Fishfinder will recognize the new software. Follow the dialog box instructions to confirm software installation.

i-Pilot Link Update: The software will be updated automatically. It may take up to two minutes for the software to be detected on the network, and the Fishfinder will display on-screen dialog boxes to indicate that the update is in progress.

NOTE: You may notice that the i-Pilot Link will disconnect and then reconnect during the software update. This is part of the update process.

3. When the i-Pilot Link software has been updated, the new software version number will be displayed on the Fishfinder Accessory Test View.
4. To finish updating the remote and controller, proceed to the next section.

4. Update the Remote

The new software for the remote is now loaded on the Link Controller. You must now go to the remote and initiate the download of the remote software to the remote itself.

1. From the remote Home screen, select: Controls Softkey > Update Software > OK.
2. From this screen, select the Update option.
3. A message saying “Software Updating” will appear along with a progress bar. After that, another message saying “Programming Flash” will appear along with a progress bar.
4. After the second progress bar finishes, the remote will automatically restart.

5. Update the Link Controller

1. Cycle power to the trolling motor to regain proper motor control.

i-PILOT LINK SETUP

i-PILOT LINK SETUP

FROM THE HUMMINBIRD:



Enable i-Pilot Link Navigation

To start i-Pilot Link navigation from the Fishfinder, the i-Pilot Navigation menu option must be turned on. When i-Pilot Navigation is turned on, the related i-Pilot Link menus will be added to the menu system. If i-Pilot Navigation is turned off, your Fishfinder will operate with its traditional Humminbird navigation features.

NOTE: When i-Pilot Navigation is turned on, navigation from other connected autopilots will be cancelled.

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > i-Pilot Navigation > On or Off. (Default = On)



Upload data from the i-Pilot Link

When Auto Upload Data is turned on, the Fishfinder copies the i-Pilot Link's saved iTracks and Spot-Locks. In this case, the Fishfinder and i-Pilot Link are synchronized, so if you delete a Spot-Lock or iTrack on the Fishfinder, it will be deleted on the i-Pilot Link. When Auto Upload Data is off, deleting an item on the Fishfinder will not affect the data stored on the i-Pilot Link and vice versa.

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > Auto Upload Data > On or Off. (Default = On)

NOTE: The maximum number of iTracks, Spot-Locks, waypoints, routes, and tracks may vary due to the setup of your Waypoint Management directory. Groups and sub-groups also use storage, and the storage limit is influenced by the complexity of your Waypoint Management directory. See Manage your i-Pilot Link Navigation Data for details.



Set the arrival mode

When you are navigating with the i-Pilot Link and reach the destination, set the Arrival Mode menu option to tell the system what to do next. The setting will determine if you will control the boat manually or transition to another type of i-Pilot Link navigation after the destination point is reached in a waypoint, route, or iTrack.

NOTE: The Arrival Mode menu setting does not apply to Spot-Lock or Follow the Contour.

Off returns the unit to manual mode after navigation is finished. You must be prepared to take manual control of the boat.

Spot-Lock creates a Spot-Lock and engages a Spot-Lock after navigation is finished.

AutoPilot continues navigation towards the set AutoPilot heading.

i-Pilot	
i-Pilot Navigation	On
Auto upload Data	On
Arrival Mode	Off
AutoPilot Mode	Advanced
AutoPilot Heading Line	On
i-Pilot Pre-Arrival Alarm	15m
i-Pilot Off Course Alarm	15m

From the Humminbird:

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > Arrival Mode.
3. Press the RIGHT or LEFT Cursor keys to select Off, Spot-Lock, or AutoPilot. (Default = Off)

From the remote:

1. From the Home screen, select the Controls Softkey > Arrival Mode > OK.
2. Use the up/down arrow keys to select a new value and press the OK key to accept. Select the Back or Close Softkey to save the setting and exit.



Set the i-Pilot Pre-Arrival Alarm

You can set the alarm to provide an alert when the boat is within the set distance to the destination point in a waypoint, route, or iTrack. For example, if i-Pilot Link is navigating an iTrack, and the Pre-Arrival Alarm is set to 100 feet, the alert will trigger when the boat is within 100 feet from the iTrack End Point.

CAUTION! When the alert sounds, be prepared that the i-Pilot Link will soon transition to the type of navigation set in the Arrival Mode menu option. In which case, you may need to take manual control of the boat.

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > i-Pilot Pre-Arrival Alarm.
3. Press the RIGHT or LEFT Cursor keys to adjust the setting. (Off to 300 ft, Off to 100 m; Default = Off)

NOTE: When i-Pilot Navigation is turned on, the Arrival Alarm in the Alarms tab is replaced by the Pre-Arrival Alarm, and the Off Course Alarm is replaced by the i-Pilot Off Course Alarm. See Enable i-Pilot Link Navigation for details.



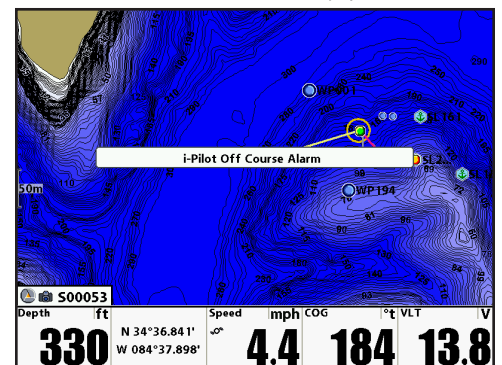
Set the i-Pilot Off Course Alarm

You can set how far the boat can move off course during i-Pilot Link navigation before an alarm is triggered. If the boat moves off course, an alert will display on the screen.

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > i-Pilot Off Course Alarm.
3. Press the RIGHT or LEFT Cursor keys to adjust the setting. (Off to 300 ft, Off to 100 m; Default = Off)

NOTE: When i-Pilot Navigation is turned on, the Arrival Alarm in the Alarms tab is replaced by the Pre-Arrival Alarm, and the Off Course Alarm is replaced by the i-Pilot Off Course Alarm. See Enable i-Pilot Link Navigation for details.

i-Pilot Off Course Alarm Displayed




MANUAL CONTROL

MANUAL CONTROL FUNCTIONALITY

This section describes all Manual Control functions of i-Pilot Link. A manual function is one in which the operator takes full control of the function such as manually steering the motor in a desired direction or manually adjusting the prop speed to the desired setting.



PROP ON/OFF

To turn the motor on or off press .



Refer to the Knowing your Remote section for details on the states of the prop icon.

MOTOR SPEED CONTROL



Increase Motor Speed

To increase the motor speed push  on the remote. Each push of  will increment the motor speed by 1/2 to a maximum of 10.

Decrease Motor Speed

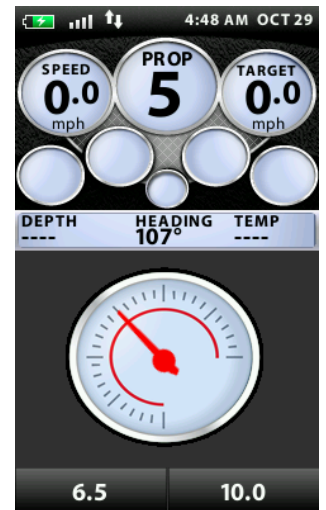
To decrease the motor speed push  on the remote. Each push of  will decrement the motor speed by 1/2 to a minimum of 0.

Preset Speeds

Pressing  or  will bring up the Speed Control screen. When this screen is active, the two Softkeys become presets for motor speed.


To recall a preset speed, bring up the Speed Control screen then press the Softkey for that speed.

To record a new preset speed, bring up the Speed Control screen, adjust the motor speed to the desired value then press and hold either Softkey until the label above the Softkey changes. The example to the right shows preset values of 6.5 and 10




MOTOR STEERING CONTROL

Steer Left

To steer the motor to the left press .

Steer right

To steer the motor to the right press .




If a steering key is held down for more than eight seconds, the steering will stop to prevent the coil cord from wrapping on the motor.

MANUAL CONTROL

HIGH SPEED BYPASS OPERATION



Engage


From the Home screen, pressing  will set the motor speed to maximum immediately. The rabbit icon  will change to the revert icon .



Disengage

There are a few ways to disengage the High Speed Bypass.

Pressing  (revert) will disengage the High Speed Bypass and send you back to your previous speed.


Pressing the  key will disengage the High Speed Bypass and lower your speed from the maximum speed.

NOTE: High Speed Bypass does not enable or disable the prop.

FISHFINDER OPERATIONS




START OR STOP THE PROPELLER

1. Press the  POWER/LIGHT key.
2. Select Prop > On or Off. To start the propeller spinning, select On. To stop the propeller, select Off.



ADJUST THE PROPELLER SPEED



The prop speed is established by the trolling motor, and the speed can be adjusted from the Fishfinder.

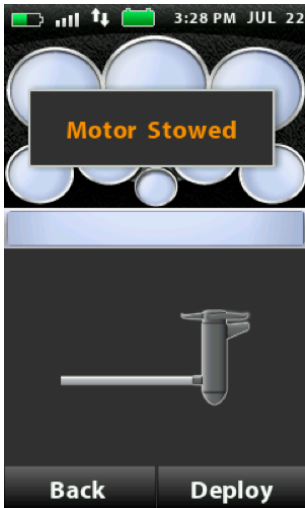
1. Press the  POWER/LIGHT key.
2. Select Prop Speed.
3. Press the RIGHT or LEFT Cursor keys to adjust the speed setting (0 to 10).

ULTERRA FUNCTIONS


ACCESSING ULTERRA FUNCTIONS USING THE MENU CONTROL KEYS





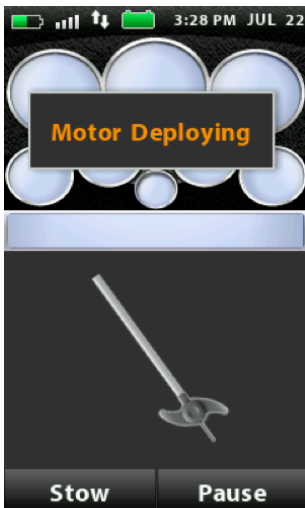
You can access the ultra functions (Stowing & Deploying, Trimming and High-Speed Bypass) from the home screen by pressing  or .

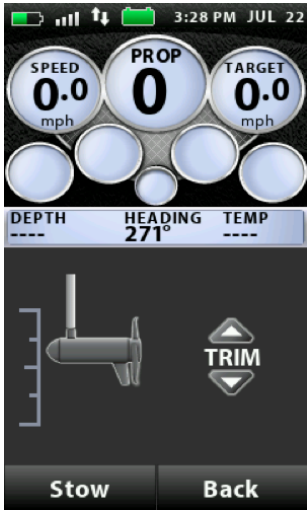


DEPLOYING THE MOTOR

From this screen, press  (the right softkey) to deploy the motor or press  (the left softkey) to go back to the Home screen.

NOTE: The deploy sequence can be stopped at any time pressing the left/right buttons. While the motor is deploying, you can press  to stow the motor or press  to pause the deploy sequence.







STOWING THE MOTOR

When the motor is fully deployed, you can press  to stow the motor or press  to return to the Home screen.

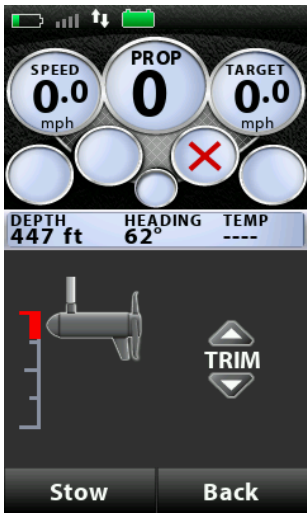
TRIMMING THE MOTOR

You can also trim the motor from this screen by pressing  or .

NOTE: Trim limits are in place to avoid damage to the unit. An upper trim limit is set 12" from the bottom of the motor mount to the center of the motor. A lower trim limit is set approximately 1.5" from the bottom of the control head to the trim housing.

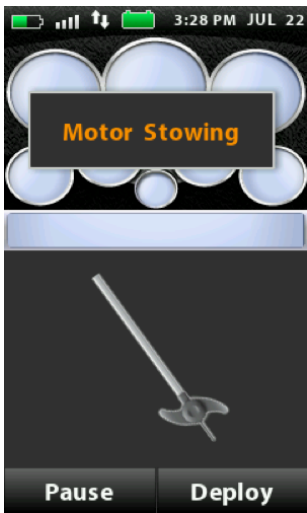




Trimming



NOTE: The prop will temporarily stop while trimming the motor and resume once trimming is stopped.

NOTE: A prop lockout region, defined as 17" from bottom of motor mount to center of motor, is used to eliminate the possibility of the motor contacting the boat hull. All functions with the exception of manual steer and track record are canceled upon trimming into this region.



While the motor is stowing, you can press  to pause the stowing motor or press  to initiate the deploy sequence

GPS MOTOR CONTROL

UNDERSTANDING HOW THE i-PILOT LINK SYSTEM WORKS

i-Pilot Link uses GPS satellite signals as well as digital compass data to know where it is, where it is heading and the direction the motor is pointing. Since i-Pilot Link depends on GPS satellite signals for navigation, a minimum GPS signal level of one bar is required in order for GPS navigation controls to be enabled. Best results are achieved when a GPS signal level of four bars can be obtained.

In simple terms, i-Pilot Link remembers and creates points to navigate your boat automatically. i-Pilot Link also uses a method of GPS navigation called arrival circles. These imaginary circles allow i-Pilot Link to understand when it has drifted away from a point and when it has arrived at a point. The size of the arrival circles vary depending on GPS signal strength, thus the greater the signal strength the smaller the arrival circles.

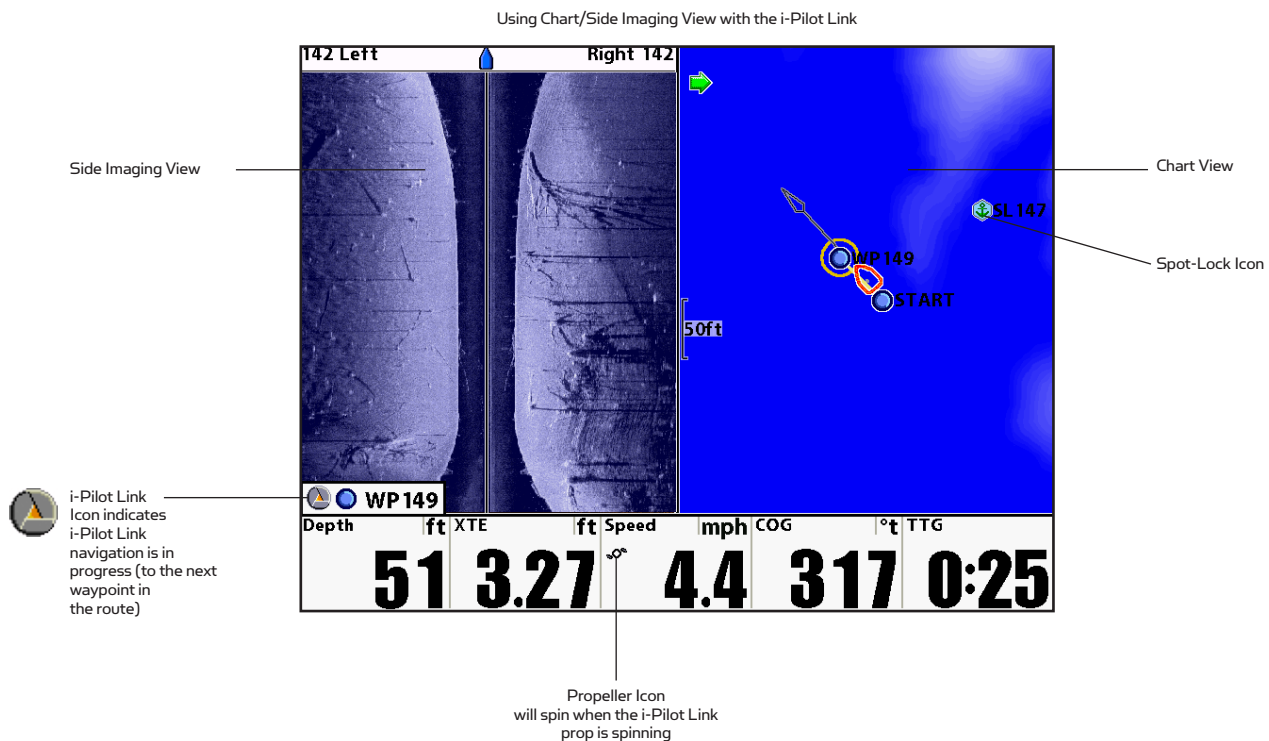
USING i-PILOT LINK WITH THE HUMMINBIRD FISHFINDER

The i-Pilot Link allows you to start navigation commands from the Humminbird Fishfinder and start navigation with the i-Pilot Link. The commands from the remote will also be displayed on the Fishfinder.

The i-Pilot Link features are displayed in Chart View and Bird's Eye View. The Fishfinder uses the data from the GPS Receiver attached directly to it or selected from the Ethernet network.

Some of the i-Pilot Link navigation functions may override traditional Humminbird navigation menu options. The alarms have also been adapted to the i-Pilot Link.

You will need the actions in this section throughout the manual.



FISHFINDER OPERATIONS



OPEN THE CHART VIEW

The i-Pilot Link features and Navigation X-Press menu options are displayed in the Chart View and Bird's Eye View. To see all available i-Pilot Link navigation features, use the Chart View.

1. Press and hold the VIEW key.
2. Select Chart > Chart View.



CANCEL I-PILOT LINK NAVIGATION

When i-Pilot Link navigation is in progress, whether with an iTrack, Spot-Lock, route, etc., you can cancel navigation at any time using the following instructions. When you cancel i-Pilot Link navigation, be prepared to take manual control of the boat.

1. During i-Pilot Link Navigation, press the MENU key once.
2. Select Cancel i-Pilot Navigation, and press the RIGHT Cursor key.

FROM THE REMOTE:

1. Go to the Navigation Active Screen by pressing the GO TO key.
2. Select the Cancel Softkey.



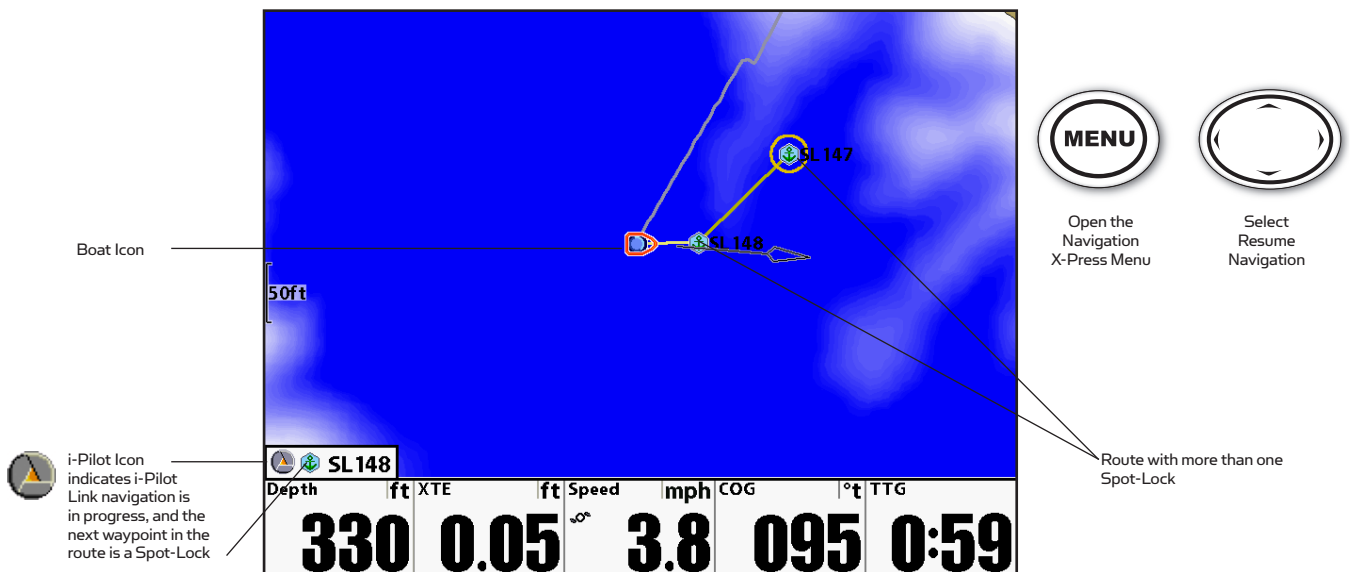
RESUME NAVIGATION

If the i-Pilot Link is navigating a route, iTrack, or contour, and it pauses on a Spot-Lock, you can resume navigation using the following instructions.

1. Navigation X-Press Menu: Press the MENU key.
2. Select Resume Navigation, and press the RIGHT Cursor key.

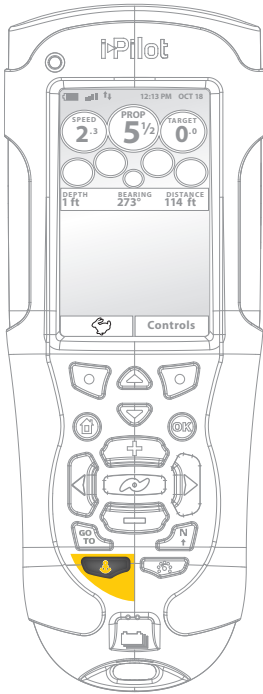
NOTE: You may need to turn on the prop to start traveling.
(see Manual Control: Start or Stop the Propeller).

Resuming Navigation on a Route from a Spot-Lock




SPOT-LOCK

HOW SPOT LOCK-WORKS




Spot-Lock uses a single point as a reference for the spot you want to stay on. Around the Spot-Lock location i-Pilot Link uses an arrival circle to determine prop speed and direction. If i-Pilot Link sees it is within the circle, it will adjust the motor speed to zero. If i-Pilot Link sees it is outside of the circle, it will control motor speed in an attempt to get the boat back into the circle.

You can save a combination of up to 2,750 Spot-Locks and Waypoints on your Humminbird or up to 16 on the Link Controller when operating without the Humminbird. Spot-Locks are saved with an alphanumeric name that can be edited on the Humminbird through the Navigation X-Press Menu or from the Waypoint Management dialog box.





Note: Link differentiates between a Spot-Lock and a Waypoint only by its icon. A Spot-Lock will have this icon: . Any Waypoint can be converted to a Spot-Lock by changing its icon to the Spot-Lock icon (see Manage your i-Pilot Link Navigation Data).

Spot-Lock can be operationally controlled with the i-Pilot Link remote or the Humminbird Fishfinder

ENGAGE SPOT-LOCK

1. Press  on the remote.
2. This newly created Spot-Lock location is temporary. To save the location for later use, press the Save Softkey on the Spot-Lock Active Screen.

DISENGAGE SPOT-LOCK

1. Press the Cancel Softkey on the Spot-Lock Active Screen OR any of the following keys:     or .

NOTE: If you start another mode of i-Pilot navigation, Spot-Lock will disengage automatically.

NAVIGATE TO A SAVED SPOT-LOCK

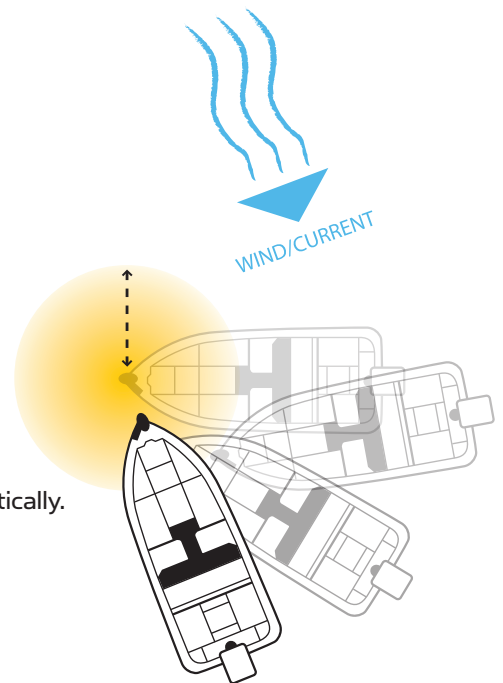
1. Manually navigate the boat to within a quarter mile of the saved Spot-Lock location.
2. Press the GO TO key.
3. Select the Spot-Lock from the list and press the OK key.

NOTE: Be prepared for boat movement as the prop will automatically be enabled and the prop speed will automatically adjust to move the boat to the Spot-Lock location.

SPOT-LOCK PAUSE

i-Pilot Link allows the user to temporarily engage Spot-Lock while navigating iTracks, Routes and LakeMaster Contour Lines.

1. To engage, press  on the remote.
2. To cancel Spot-Lock Pause and resume the previous navigation mode, select: Home screen > Controls Softkey > Resume > OK



FISHFINDER OPERATIONS



ENGAGE SPOT-LOCK AT THE BOAT POSITION

You can quickly Spot-Lock at the current boat position. This type of Spot-Lock is temporary, and unless you save it, the Spot-Lock will be deleted when you start a new mode of navigation.

1. Navigation X-Press Menu: Press the MENU key.
2. Select Spot-Lock at Vessel, and press the RIGHT Cursor key. Spot-Lock will start immediately.
3. Press the EXIT key until the Navigation X-Press Menu is closed.
4. Save (optional): Press the MENU key. Select Save Spot-Lock, and press the RIGHT Cursor key.

NOTE: The Save Spot-Lock menu option is available on the Navigation X-Press Menu when Spot-Lock is active.

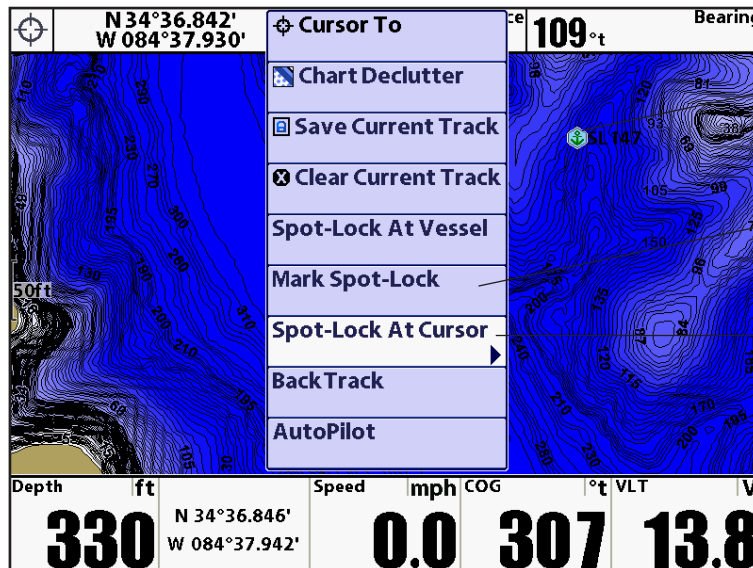


MARK A SPOT-LOCK AT THE CURSOR POSITION

You can use the cursor to mark a Spot-Lock location. The Spot-Lock will be saved automatically to the Fishfinder. This menu option marks the Spot-Lock, but it does not start navigation to the Spot-Lock. To start navigation, see Mark a Spot-Lock and Start Navigation.

1. Use the 4-WAY Cursor Control key to move the cursor to a position on the chart.
2. Navigation X-Press Menu: Press the MENU key.
3. Select Mark Spot-Lock, and press the RIGHT Cursor key.
4. Press the EXIT key until the Navigation X-Press Menu is closed.

Marking a Spot-Lock at the Cursor Position



Move the Cursor



Open the Navigation X-Press Menu



Select a Menu Option



MARK A SPOT-LOCK AND START NAVIGATION

You can mark a Spot-Lock at the cursor location and start navigation towards it automatically. When the boat reaches the point, it will Spot-Lock until you disengage it. This type of Spot-Lock is temporary.

1. Use the 4-WAY Cursor Control key to move the cursor to a position on the chart.
2. Navigation X-Press Menu: Press the MENU key.
3. Select Spot-Lock at Cursor, and press the RIGHT Cursor key. Navigation will start automatically.

When you save a Spot-Lock, it is saved with an alphanumeric name that starts with SL. The name can be edited from the Spot-Lock submenu or the Waypoint Management dialog box. If you change the Spot-Lock icon, the position will change to a waypoint.

 SpotLock SL147	Edit ▶
	Delete
	Target
	Grid



ENGAGE SPOT-LOCK AT A WAYPOINT POSITION

1. Use the 4-WAY Cursor Control key to move the cursor to a waypoint on the chart.
2. Navigation X-Press Menu: Press the MENU key.
3. Select the Waypoint name > Spot-Lock. If the waypoint is within a 1/4 mile, i-Pilot Link navigation will start towards the waypoint. When the boat arrives at the waypoint, Spot-Lock will start automatically.



NAVIGATE TO A SAVED SPOT-LOCK

If a saved Spot-Lock is within 1/4 mile of the boat position, you can start navigation towards it. Spot-Lock will start automatically when the boat reaches the destination Spot-Lock.

1. Use the 4-WAY Cursor Control key to select a Spot-Lock icon on the chart.
 2. Press the GO TO key.
- OR-
1. Without the active cursor, press the GO TO key.
 2. Select a Spot-Lock (SL) from the saved points list.
 3. Press the RIGHT Cursor key.



DISENGAGE SPOT-LOCK

You can disengage Spot-Lock navigation using the Cancel i-Pilot Navigation menu option. When you cancel i-Pilot Link navigation, be prepared to take manual control of the boat.

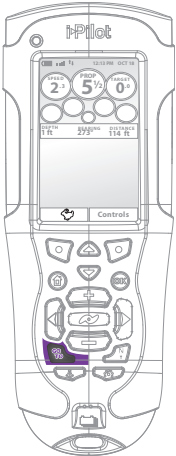
1. Navigation X-Press Menu: Press the MENU key.
2. Select Cancel i-Pilot Navigation, and press the RIGHT Cursor key.

NOTE: If you start another mode of i-Pilot Link navigation, the Spot-Lock will disengage automatically.

WAYPOINTS

HOW WAYPOINT NAVIGATION WORKS

Waypoints are stored positions that allow you to mark areas of interest or navigation points. Your Fishfinder can save a combination of up to 2,750 Waypoints and Spot-Locks.



MARK A WAYPOINT

1. To create a Waypoint at the boat's position, press and hold the Spot-Lock key. This Waypoint will be saved on the Humminbird.

NAVIGATE TO A SAVED WAYPOINT

1. Manually navigate the boat to within a quarter mile of the Waypoint location.
2. Press the GO TO key.
3. Select the Waypoint from the list and press the OK key.

DISENGAGE NAVIGATION TO A WAYPOINT

1. Press the Cancel Softkey on the GO TO Waypoint Active Screen OR press one of the steering keys.

NOTE: If you start another mode of i-Pilot Link navigation, Navigate to Waypoint will disengage automatically.

FISHFINDER OPERATIONS



MARK A WAYPOINT

1. Press the VIEW key until a Chart View is displayed on the screen.
2. A waypoint can be marked as follows:

To save the waypoint at the boat's position, press the MARK key.

To save a waypoint at the cursor position, use the 4-WAY Cursor Control key to move the cursor to a position on the Chart View. Then, press the MARK key.



NAVIGATE TO A SAVED WAYPOINT

If a saved waypoint is within 1/4 mile of the boat position, you can start i-Pilot Link navigation towards it.

1. From the Chart View, press the GO TO key.
2. Select a waypoint from the list, and press the RIGHT Cursor key.

-OR-

1. Use the 4-WAY Cursor Control key to select a waypoint or position on the chart.
2. Press the GO TO key.

If you've selected a waypoint, navigation will start automatically.

If you've selected a position, select Go To Position from the submenu, and press the RIGHT Cursor key.

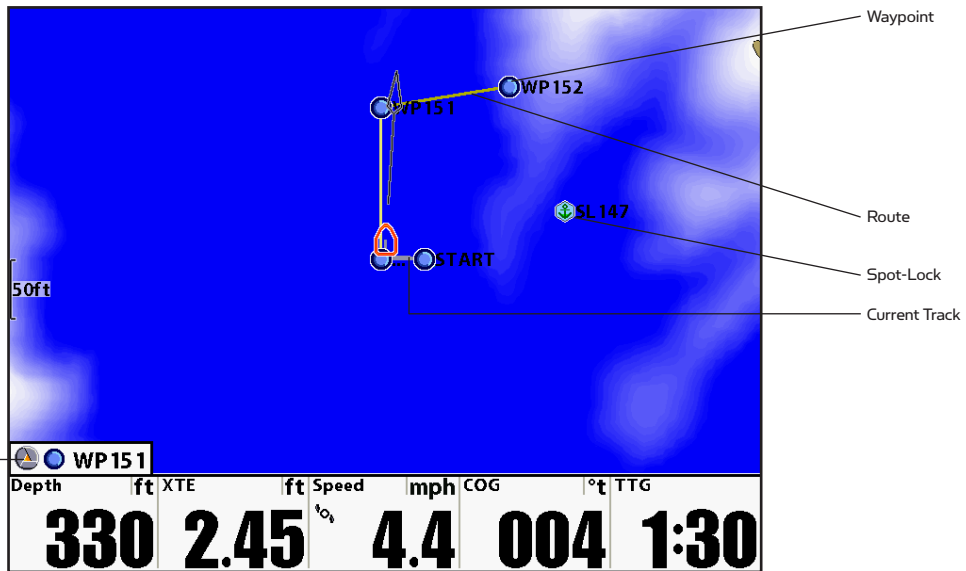


NAVIGATE TO THE MOST RECENTLY CREATED WAYPOINT

1. Navigation X-Press Menu: Press the MENU key.
2. Select the Waypoint name (WP), and press the RIGHT Cursor key to open the submenu.
3. Select Go To, and press the RIGHT Cursor key to start navigation.

NOTE: Waypoints are saved with an alphanumeric name that starts with WP. The name can be edited and managed in the Waypoint Management dialog box (see Manage your i-Pilot Link Navigation Data).

Chart View with Waypoints, Routes, and Tracks



i-Pilot Link Icon indicates i-Pilot Link navigation is in progress



Move the Cursor



Mark a Waypoint



Start Navigation



ENGAGE SPOT-LOCK AT A WAYPOINT POSITION

1. Use the 4-WAY Cursor Control key to move the cursor to a waypoint on the chart.
2. Navigation X-Press Menu: Press the MENU key.
3. Select the Waypoint name > Spot-Lock. If the waypoint is within a 1/4 mile, i-Pilot Link navigation will start towards the waypoint. When the boat arrives at the waypoint, Spot-Lock will start automatically.

Waypoint WP 150	Edit
	Delete
	Target
	Grid
	SpotLock ▶

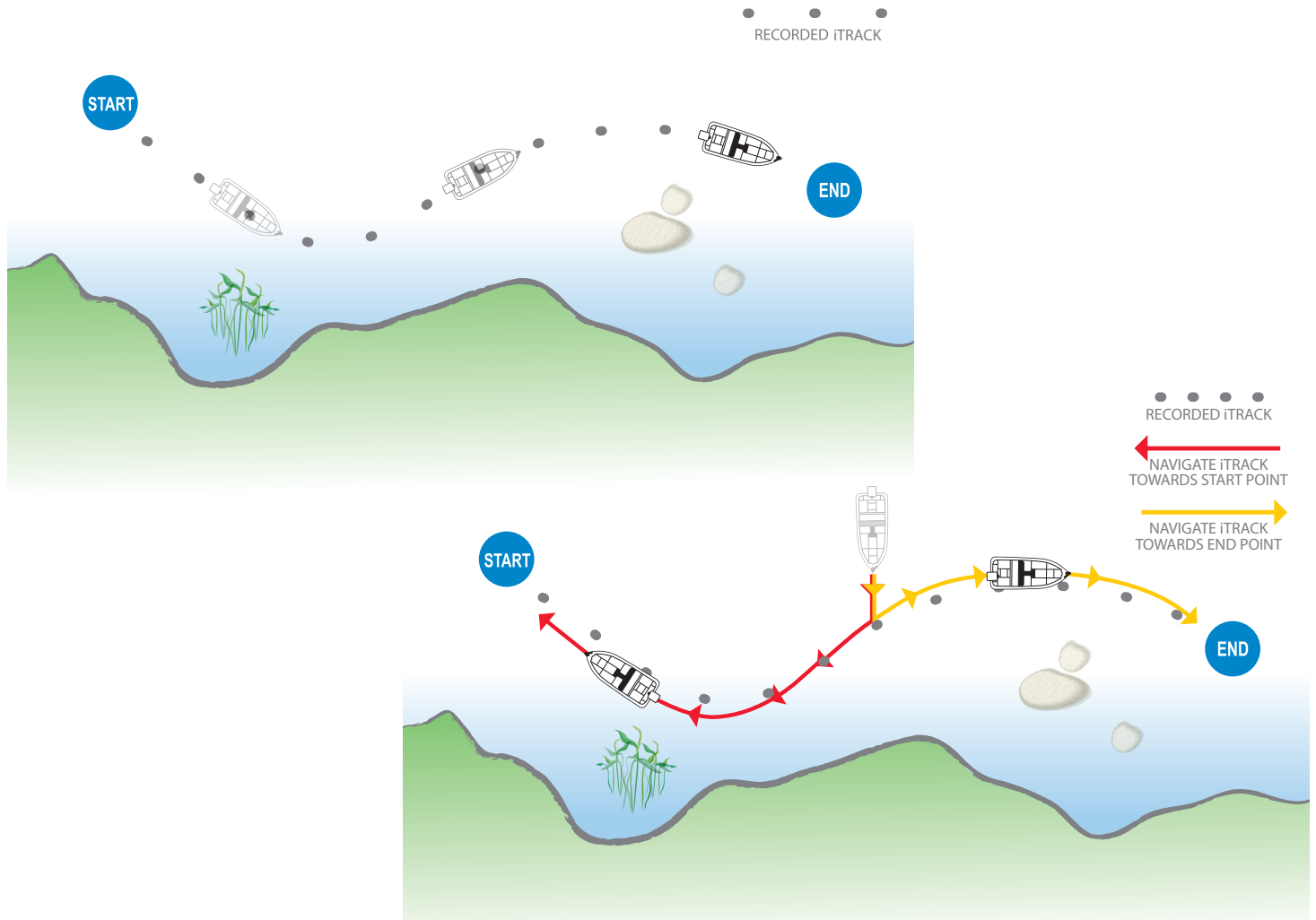
iTRACKS

HOW iTRACK RECORDING AND NAVIGATION WORK

When the recording of an iTrack is initiated, i-Pilot Link starts to record GPS position data in the form of track points. The distance between these points varies based on the speed of the boat and the GPS signal strength. The very first track point recorded is called the Start. The last point recorded is called the End. i-Pilot Link sees a recorded iTrack as a series of these track points. When Navigate to Start or Navigate to End is initiated, Link will navigate to the nearest track point. Once this nearest track point is reached, it will then follow the track points in sequence back to either the Start or End based on which mode was selected. Once the end or start track point is reached, Link automatically cancels the iTrack navigation. The user can choose to have Link transition to other modes by configuring the Arrival Mode.

iTracks can be recorded for a distance of up to 2 miles. You can save up to 50 iTracks on your Humminbird or up to 16 on the Link controller when operating without the Humminbird. iTracks are saved with an alphanumeric name that can be edited on the Humminbird through the Navigation X-Press Menu or from the Waypoint Management dialog box. You can also edit the iTrack appearance and whether or not it is visible on the Fishfinder Chart View.

During iTrack navigation, Link takes control over all steering functions; speed can be manually controlled or the Cruise Control function can also be used. The motor speed must be set high enough in order to stay on the iTrack given wind, current and other external forces.



REMOTE OPERATIONS



RECORDING AN iTRACK

1. To begin recording, select Home > Controls > Record > OK
2. To stop the recording, press the StopRec Softkey on the iTrack Active Screen.

-OR-

1. Select Home > Controls Softkey > Stop Record > OK
 - a. The user will then be prompted to Save or Discard the recorded iTrack.

NAVIGATE AN iTRACK

1. Manually navigate the boat to within a quarter mile of any point on the iTrack.
2. Press the GO TO key
3. Select the iTrack from the list and press either the ToStart or ToEnd Softkey to indicate the desired direction of travel and to initiate navigation.

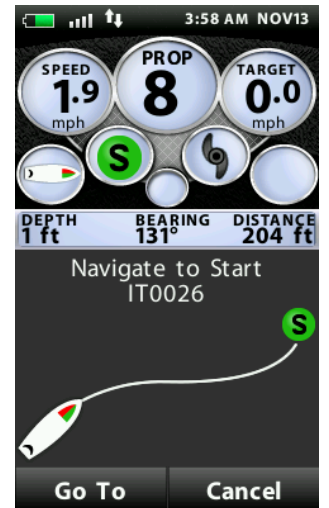
REVERSE DIRECTION

1. During navigation of an iTrack, the direction of travel (To End, To Start) can be reversed by pressing: Home > Controls > Reverse > OK

DISENGAGE iTRACK NAVIGATION

1. Press the Cancel Softkey on the Navigate iTrack Active Screen OR press one of the steering keys.

NOTE: If you start another mode of i-Pilot Link navigation, Navigate iTrack will disengage automatically. The exception is Spot-Lock which if this is engaged, iTrack navigation will be paused, not disengaged.

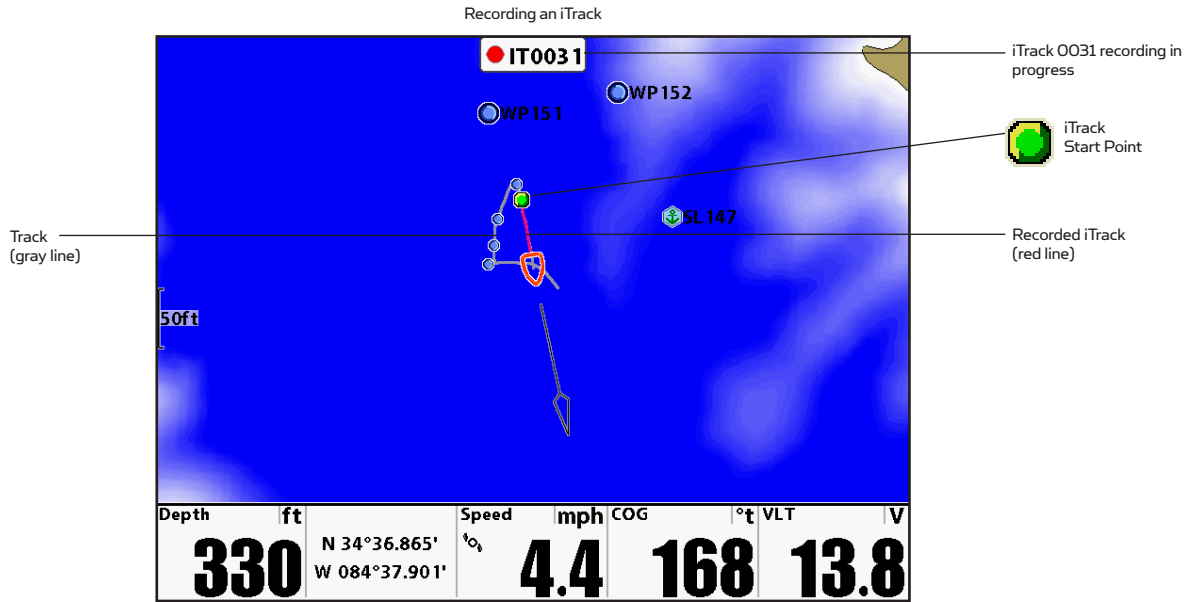


FISHFINDER OPERATIONS



RECORD AN ITRACK

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab.
3. Select Record iTrack, and press the RIGHT Cursor key.
4. Press the EXIT key until the menu system is closed. As you navigate, the iTrack Recording Icon will flash on the screen periodically to indicate that a recording is in progress.



STOP RECORDING

1. Press the MENU key.
2. Select Stop Recording iTrack, and press the RIGHT Cursor key. Follow the on-screen instructions to save or discard the iTrack.

NOTE: When you save an iTrack, it is saved with an alphanumeric name that starts with IT. The name can be edited from the Waypoint Management dialog box (see Manage your i-Pilot Link Navigation Data).



SELECT AND NAVIGATE A SAVED ITRACK

If a saved iTrack is within ¼ mile of the boat position, you can start navigation towards it. iTrack navigation will start towards the nearest point on the iTrack, and then it will navigate to the Start Point or End Point, depending on your selection. If you select Go To Position, the Fishfinder will mark a waypoint and start i-Pilot Link navigation towards it.

1. Use the 4-WAY Cursor Control key to select a Start Point icon, End Point icon, or a position on the iTrack.
2. Press the GO TO key.
3. Use the 4-WAY Cursor Control key to select one of the submenu actions:
 - To start navigation to the iTrack Start Point, select Navigate to Start.
 - To start navigation to the iTrack End Point, select Navigate to End.
 - To start navigation to a point within the iTrack, select Go To Position.

NOTE: When you select Go To Position, the i-Pilot Link will navigate to the cursor position, but it will not start navigation on the iTrack.



NAVIGATE A SAVED ITRACK FROM THE GO TO LIST

1. Press the GO TO key.
2. Select an iTrack Start or iTrack End from the Go To list. Press the RIGHT Cursor key.



REVERSE DIRECTION DURING ITRACK NAVIGATION

If you are navigating a saved iTrack, you can quickly change the navigation direction toward the Start Point or End Point. For example, if the i-Pilot Link is navigating to the Start Point, selecting Reverse Navigation will start i-Pilot Link navigation in the opposite direction, towards the End Point.

1. During iTrack navigation, press the MENU key once.
2. Select Reverse Navigation, and press the RIGHT Cursor key.



DELETE A SAVED ITRACK

1. Use the 4-WAY Cursor Control key to move the cursor to a Start Point or End Point on the iTrack.
2. Navigation X-Press Menu: Press the MENU key once.
3. Select the iTrack name, and press the RIGHT Cursor key.
4. Select Delete, and press the RIGHT Cursor key.

NOTE: You can also delete iTracks from the Waypoint Management dialog box (see Manage your i-Pilot Link Navigation Data).

Selecting a Saved iTrack from the Go To List

Go To List

Select Point to Go To

Sort By **Name**

- IT0031 to start
- IT0031 to end
- S00027
- S00029
- S00030
- S00039
- S00046
- S00049

Starts navigation to the nearest iTrack point and finishes at the Start Point

Starts navigation to the nearest iTrack point and finishes at the End Point

Depth	ft	Speed	mph	COG	°t	VLT	V
330		0.0		307		13.8	
N 34°36.846'		W 084°37.942'					

GOTO

Open the Go To List

Select a Saved iTrack

Navigating to the End Point

Track (gray line)

iTrack Start Point (the closest point on the iTrack)

Arrival Circle (see Set the Pre-Arrival Alarm)

iTrack End Point

iTrack

The yellow line indicates the projected course.

Crump Creek

IT0068

Depth	ft	Speed	mph	VMG	mph	VLT	V
202		4.4		1.5		13.8	
N 34°36.841'		W 084°37.898'					



HOW BACKTRACK WORKS

Traditional Humminbird tracks consist of detailed position history and are displayed as a breadcrumb trail of trackpoints. The Current Track shows the position history since the unit was powered up. You can clear the Current Track or save it at any time. The Current Track represents your actual path so far.

BackTrack allows you to navigate the Current Track as a recorded iTrack. When BackTrack is selected, the i-Pilot Link will mark a Start Point at the boat's current position, and it will create an iTrack on top of the Current Track, up to 2 miles.

BACKTRACK

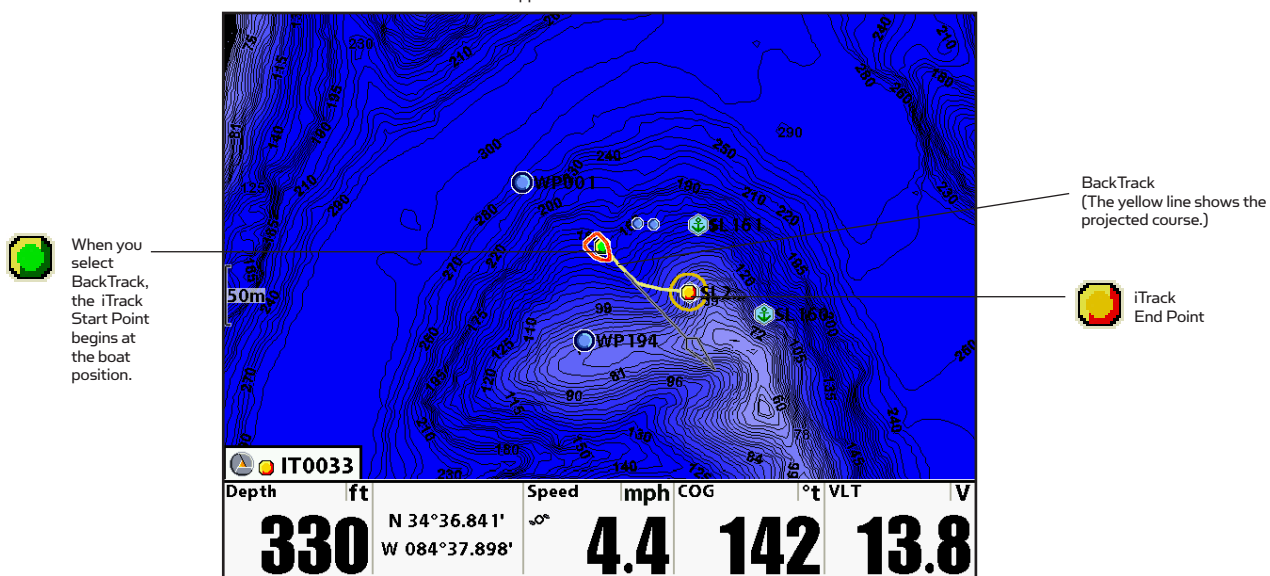
To use BackTrack, the Fishfinder must be actively tracking. Once BackTrack navigation starts, you can also use iTrack functions, including Reverse (see the iTracks section for more information).

NOTE: You can activate BackTrack on the Current Track. BackTrack is not available on saved Humminbird tracks.

1. Navigation X-Press Menu: Press the Menu key.
2. Select BackTrack, and press the RIGHT Cursor key.

NOTE: If BackTrack is not displayed in the Navigation X-Press Menu, select Main Menu > Current Track > Start Tracking. BackTrack is not available when Follow the Contour is active.

BackTrack Applies an iTrack to the Current Track



HOW FOLLOW THE CONTOUR WORKS

(CHART VIEW ONLY, i-PILOT COMPATIBLE HUMMINBIRD LAKEMASTER OR AUTOCHART SD CARD REQUIRED)

Follow the Contour allows you to navigate a contour on a LakeMaster chart. When you start i-Pilot Link navigation to Follow the Contour, all other types of navigation are stopped on the Fishfinder and the Ethernet network.

NOTE: When the i-Pilot Link is following the contour, the Current Track is not saved, and iTracks cannot be recorded.

NOTE: Initiation of Follow the Contour is done through the Humminbird.



SET UP FOLLOW THE CONTOUR

To use Follow the Contour, an i-Pilot compatible LakeMaster chart card must be installed, and the Contour Lines must be set to Visible.

1. Install a Humminbird LakeMaster or AutoChart map card into the SD card slot.
2. Main Menu: Press the MENU key twice.
3. Select the Chart tab > Contour Lines > Visible.
4. Press the EXIT key until the menu system is closed.
5. Press and hold the VIEW key.
6. Select Chart View, and press the RIGHT Cursor key.



START FOLLOW THE CONTOUR NAVIGATION

You can start i-Pilot Link navigation if the boat position is within 1/4 mile of the selected contour.

1. Use the 4-WAY Cursor Control key to move the cursor to a contour line.
2. Press the GO TO key.
3. Select Follow the Contour, and select a navigation direction from the submenu.

The navigation direction will be previewed in orange or blue on the Chart View. See the illustration Starting Follow the Contour Navigation.

NOTE: To quickly reverse the direction of Follow the Contour navigation, press the MENU key once, and select Reverse Navigation from the Navigation X-Press Menu.

Starting Follow the Contour Navigation

Submenu

Navigation Option 1 (orange)

Navigation Option 2 (blue)

Contour Offset 0ft

Navigation Option 1 (previewed in orange)

Cursor selecting a contour

Navigation Option 2 (previewed in blue)

Contour Line(s)

Boat Icon (idle)

Distance 61.52 ft

Bearing 277 °t

Depth 330 ft

Speed 0.0 mph

COG 185 °t

VLT 13.8 V

N 34°36.838'

W 084°37.898'



Move the Cursor



Open the Contour Submenu



Select a Menu Option

Following the Contour

Projected Course (displayed in yellow when Follow the Contour is active)

Boat Icon (navigating)

i-Pilot Link Icon indicates i-Pilot Link navigation is in progress

300 feet

Depth 330 ft

DIST 46.02 ft

Speed 4.4 mph

COG 271 °t

TTG ---

Propeller Icon will spin when the i-Pilot Link prop is spinning

FOLLOW THE CONTOUR



SET THE CONTOUR OFFSET

If you don't want to navigate on the contour line, you can set a distance from the contour so that navigation will be offset from the selected contour.

1. Use the 4-WAY Cursor Control key to move the cursor to a contour line.
2. Press the GO TO key.
3. Select Follow the Contour, and select Contour Offset from the submenu.
4. Press the RIGHT or LEFT Cursor keys to set the offset. (-300 to +300 feet [-91 to +91 m], where -300 = shallowest side of the contour and +300 feet = deepest side of the contour; Default = 0)
5. Press the UP or DOWN Cursor keys to select a navigation direction. The navigation direction will be previewed in orange or blue on the Chart View. See the illustration Starting Follow the Contour Navigation.



SET THE CONTOUR OFFSET DURING NAVIGATION

The Contour Offset can also be adjusted while Follow the Contour navigation is in progress.

1. During Follow the Contour navigation, press the MENU key once.
2. Select Contour Offset from the Navigation X-Press Menu.
3. Press the RIGHT or LEFT Cursor keys to set the offset. (-300 to +300 feet [-91 to +91 m], where -300 = shallowest side of the contour and +300 feet = deepest side of the contour; Default = 0)

NOTE: To remove the offset, set the Contour Offset setting to 0.

REMOTE OPERATIONS

REVERSE DIRECTION

1. During navigation of a contour, the direction of travel can be reversed by pressing: Home > Controls > Reverse > OK

DISENGAGE CONTOUR NAVIGATION

1. Press the Cancel Softkey on the Navigate Contour Active Screen OR press one of the steering keys.

NOTE: If you start another mode of i-Pilot Link navigation, Navigate Contour will disengage automatically. The exception is Spot-Lock which if this is engaged, Contour navigation will be paused, not disengaged.



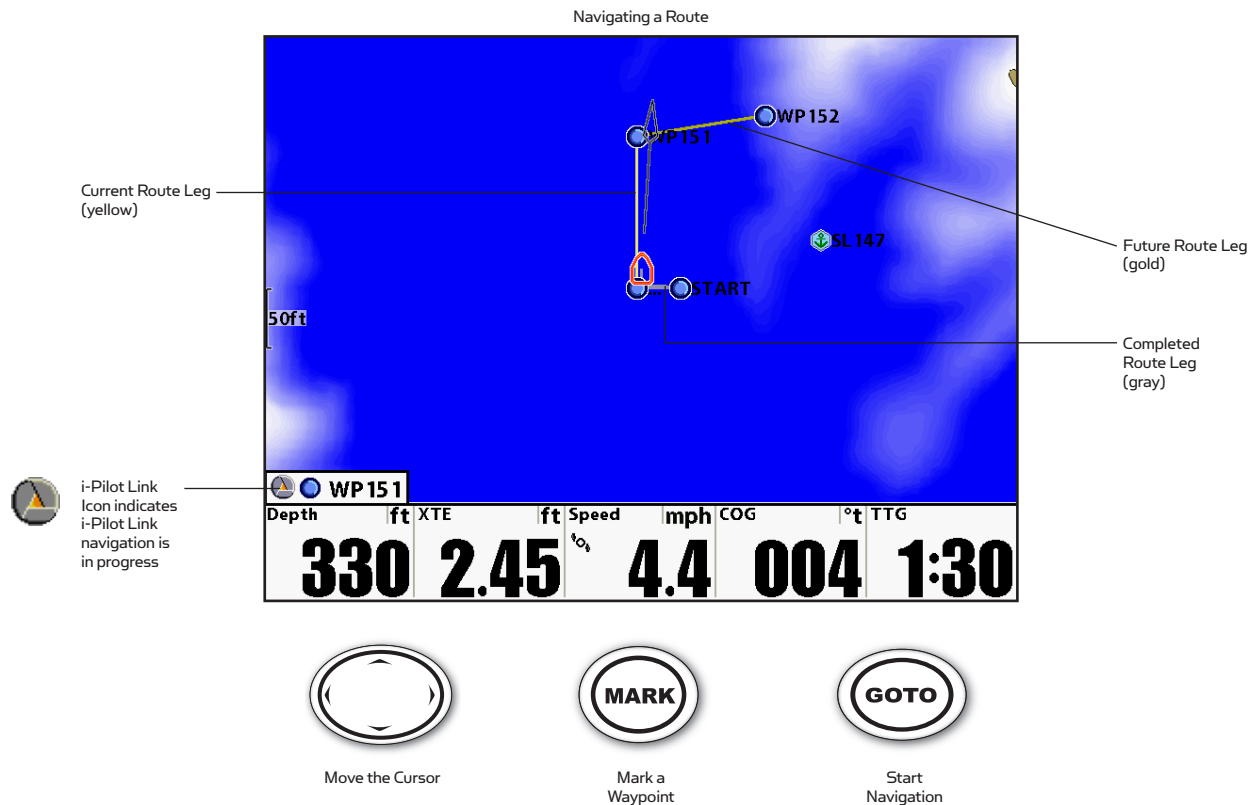
HOW ROUTE NAVIGATION WORKS

Routes link two or more waypoints together to create a path for navigation and are used in trip planning. Your Fishfinder can store up to 45 routes that can each contain up to 50 waypoints. A route represents your intended navigation and shows the shortest path from each waypoint to the next. As you travel a route, staying on the route line is the most efficient way to get to your destination, although you should always look out for obstacles not shown on the chart.

A Route Leg is the path between each waypoint in a route. The color of each route leg is displayed as follows:

- Completed Route Leg = Gray
- Current Route Leg = Yellow
- Future Route Leg = Gold

i-Pilot Link navigation can start on the route if the boat position is within 1/4 mile of the first waypoint in the route.



NOTE: When the i-Pilot Link is navigating and reaches a Spot-Lock, it will engage the Spot-Lock. To resume navigation on the route, select Resume Navigation from the Navigation X-Press Menu. See GPS Motor Control: Resume Navigation for more information.

FISHFINDER OPERATIONS



CREATE A ROUTE

1. In a Chart View, use the 4-WAY Cursor Control key to select a waypoint, Spot-Lock, or position on the chart.
2. Press the GO TO key.
3. To add more waypoints or Spot-Locks to the route, repeat steps 1 and 2.

NOTE: If the position you select is also a Contour Line, a submenu will open with related menu options. To add the position to the route, select Go To Position.



SAVE THE CURRENT ROUTE

1. While navigating in a Chart View, press the MENU key once.
2. Select Save Current Route. Press the RIGHT Cursor key and follow the on-screen prompts to confirm.



NAVIGATE A SAVED ROUTE

You can select a saved route from the Waypoint Management dialog box. The i-Pilot Link will navigate the route in forward or reverse, depending on your selection.

NOTE: For more information about the Waypoint Management dialog box, see Manage your i-Pilot Link Navigation Data or download the Humminbird Waypoint Management Guide from our Web site at humminbird.com.

1. Main Menu: Press the MENU key twice.
2. Select the Navigation tab > Waypoints, Routes, Tracks. Press the RIGHT Cursor key to open the Waypoint Management dialog box
3. Press the UP or DOWN Cursor keys to choose a route, and press the RIGHT Cursor key to open the submenu.
4. Select Travel > Forward or Reverse.

REMOTE OPERATIONS



NOTE: Initiation of Route navigation is done through the Humminbird.

DISENGAGE ROUTE NAVIGATION

1. Press the Cancel Softkey on the Navigate Route Active Screen OR press one of the steering keys.

NOTE: If you start another mode of i-Pilot navigation, Navigate Route will disengage automatically. The exception is Spot-Lock which if this is engaged, Route navigation will be paused, not disengaged.

AUTOPILOT

HOW AUTOPILOT WORKS

Two different versions of AutoPilot are available Advanced AutoPilot and Legacy AutoPilot. There are distinct differences between the two AutoPilots and how they control your boat.

ADVANCED AUTOPILOT

Advanced AutoPilot not only uses compass heading but also GPS signal data to correct for cross winds, current and other external forces to keep the boat on a straight line. When Advanced AutoPilot is turned on, it generates a set of GPS points in a straight track line in the heading direction. i-Pilot Link now navigates to each individual point on this track line. When the user steers to a new heading, a new track line of GPS points are laid down in the new heading direction.

LEGACY AUTOPILOT

Legacy AutoPilot uses an internal compass to provide heading lock. When Legacy AutoPilot is on, it keeps the motor pointed in the same compass direction. If a manual steering correction is made, Legacy AutoPilot locks onto the new compass heading to which the boat was steered. This method of heading tracking does not take into account external forces such as side winds or currents, which can allow side drift.

WHICH AUTOPILOT DO I USE AND WHEN?

With all the external variables, this question can be difficult to answer. Both AutoPilots have their benefits based on the type of fishing and bait presentation desired.

Advanced AutoPilot will keep the boat on a true straight path in most conditions. When very extreme conditions exists such as very strong winds or current, the trolling motor may not have enough power to control the boat smoothly. In these extreme cases it may be best to use Legacy AutoPilot and let the boat move with the wind or current if the motor is not powerful enough to overcome it.

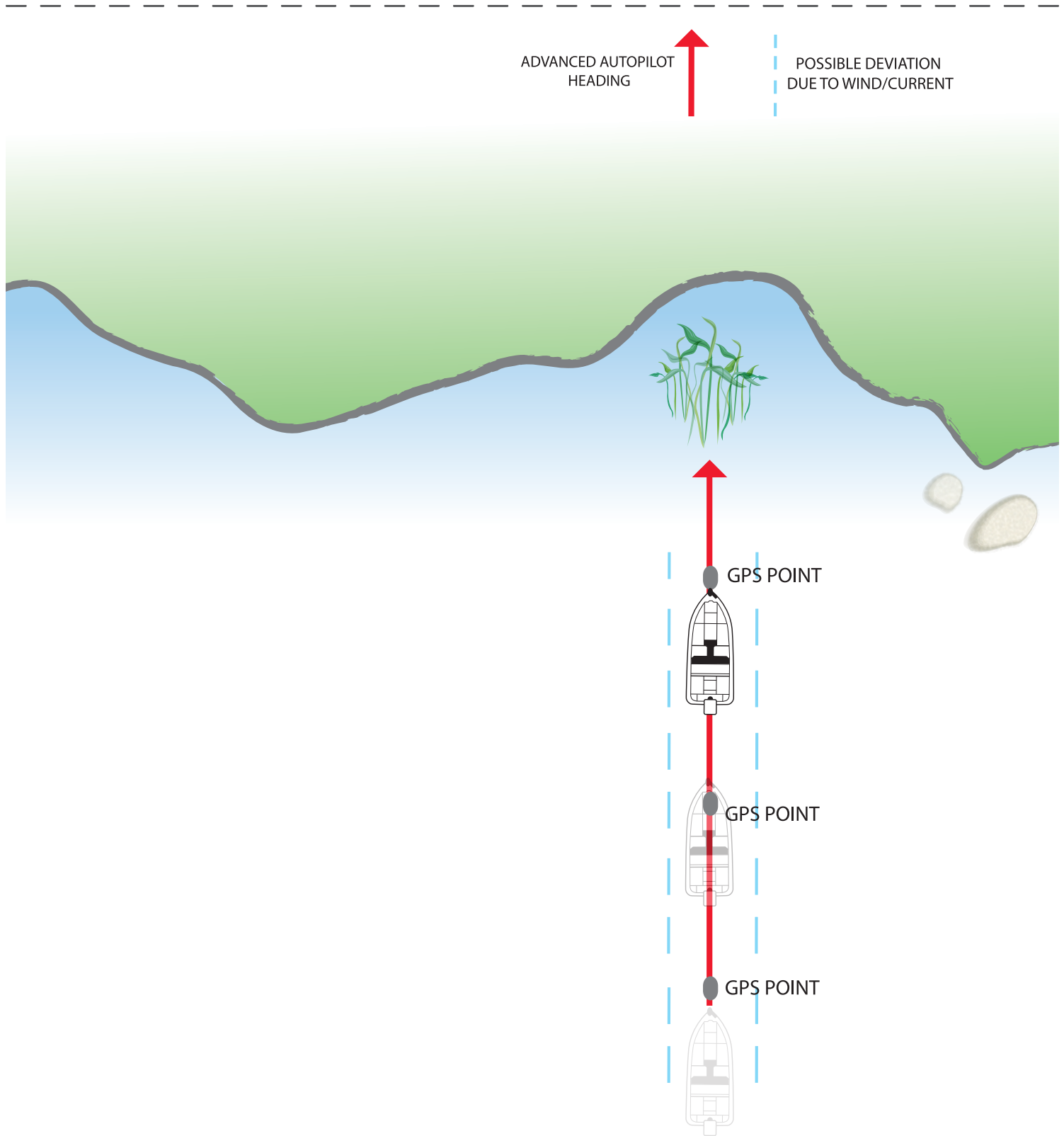
Legacy AutoPilot helps you maintain a constant heading but does not compensate for wind or currents.

Both Advanced AutoPilot and Legacy AutoPilot are valuable tools the fisherman can use for accurate and precise bait presentation. We highly recommend getting on the water and trying both Advanced AutoPilot and Legacy AutoPilot in various fishing situations and applications. With experimentation and time you will find which AutoPilot works best for you in a given situation.

USING AUTOPILOT WITH OTHER I-PILOT LINK FUNCTIONS

AutoPilot can be used in combination with Cruise Control and while recording an iTrack. If another mode of navigation that controls steering is enabled while AutoPilot is enabled, AutoPilot will disable automatically.

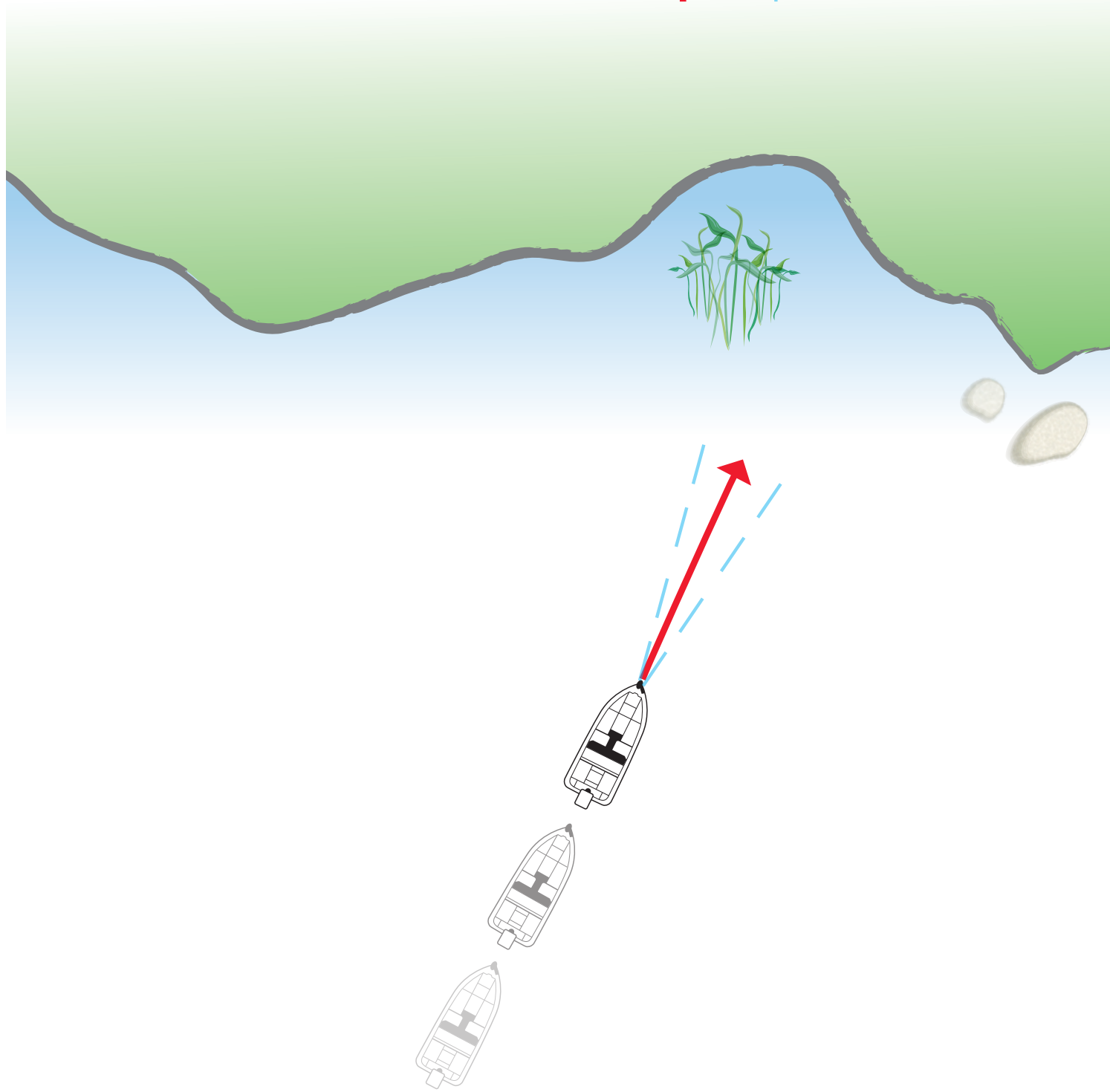
AUTOPILOT



LEGACY
AUTOPILOT
HEADING



POSSIBLE DEVIATION
DUE TO WIND/CURRENT



AUTOPILOT



SELECTING AUTOPILOT MODES

The user can choose between Advanced AutoPilot and Legacy AutoPilot either from the remote or from the Humminbird.

FROM THE REMOTE:

Home > Controls Softkey > AutoPilot Mode

ENGAGING AUTOPILOT

1. To engage AutoPilot, press the AutoPilot key .
2. To adjust the desired heading, use the steering keys  to point the motor in the new direction and Link will lock onto the new heading.

DISENGAGING AUTOPILOT

1. Press the AutoPilot key.

NOTE: If you start another mode of i-Pilot navigation, AutoPilot will disengage automatically.

FROM THE HUMMINBIRD:



SET THE AUTOPILOT MODE

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > AutoPilot Mode.
3. Press the RIGHT or LEFT Cursor keys to select Legacy or Advanced. (Default = Advanced)



The blue icon is displayed on the Chart View when Legacy AutoPilot Mode is active.



The yellow icon is displayed on the Chart View when Advanced AutoPilot Mode is active.



START AUTOPILOT TOWARDS THE CURSOR POSITION

Use the cursor to set the heading for AutoPilot navigation. i-Pilot Link will start navigation and maintain a constant heading towards the cursor position.

1. Use the 4-WAY Cursor Control key to move the cursor to a position on the chart.
2. Navigation X-Press Menu: Press the MENU key.
3. Select AutoPilot, and press the RIGHT Cursor key.




START AUTOPILOT BASED ON THE MOTOR'S HEADING

When you start AutoPilot navigation without an active cursor, the heading will be based on the trolling motor's heading. AutoPilot continues to navigate the boat in the same direction.

1. Navigation X-Press Menu: Press the MENU key.
2. Select AutoPilot, and press the RIGHT Cursor key.



ADJUST THE HEADING

1. Navigation X-Press Menu: Press the MENU key.
2. Select AutoPilot Adjust, and press the RIGHT Cursor key.
3. Adjust: Press the RIGHT or LEFT Cursor keys.
4. Confirm: Press the  CHECK/INFO key.

Adjusting the AutoPilot Heading

Adjust Direction
 ✓ Set New Heading

50ft

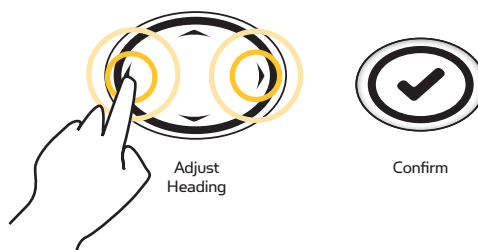
WP151 WP152 SL147

Adjustment Preview Line (purple)

The yellow AutoPilot icon indicates AutoPilot Mode is set to Advanced.

The AutoPilot Heading Line can be turned on or off.

Depth	ft	Speed	mph	COG	°t	VLT	V
330	N 34°36.904'	4.0	137	13.8			
	W 084°37.911'						



DISPLAY OR HIDE THE AUTOPILOT HEADING LINE

1. Main Menu: Press the MENU key twice.
2. Select the Accessories tab > i-Pilot > AutoPilot Heading Line.
3. Press the RIGHT or LEFT Cursor keys to select On or Off. (Default = On)

CANCEL AUTOPILOT NAVIGATION

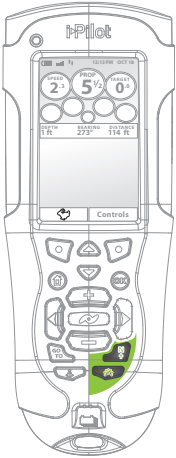
1. Navigation X-Press Menu: Press the MENU key.
2. Select Cancel Autopilot, and press the right cursor key.

HOW CRUISE CONTROL WORKS




i-Pilot Link's Cruise Control automatically sets the prop speed to maintain constant GPS speed. Because this controls only the prop speed, Cruise Control can be used in conjunction with AutoPilot and iTrack Record as well as with navigating iTracks, LakeMaster contour lines, routes, and waypoints.

Cruise Control is interfaced only through the remote.

Caution! When Cruise Control is engaged, the prop will automatically be enabled if it is not already enabled.








ENGAGE CRUISE CONTROL

1. Press  to bring up the Cruise Control panel.
2. Using  and , adjust the Target Speed and press OK to accept the Target Speed and engage Cruise Control.









DISENGAGE CRUISE CONTROL

1. Press  or  or  to bring up the Cruise Control panel.
2. Press the Cancel Softkey.

ADJUSTING TARGET SPEED WITH CRUISE CONTROL ENGAGED

1. Press  or  or  to bring up the Cruise Control panel.
2. Using  and , adjust the Target Speed and press OK to accept the Target Speed.

CRUISE CONTROL PRESET SPEED

1. Press  or  or  to bring up the Cruise Control panel.
2. Press the left-side Softkey to adjust the Target Speed to match the current preset value shown in the Softkey Label.
3. To adjust the preset value:
 - a. Press  or  or  to bring up the Cruise Control panel.
 - b. Using  and , adjust the Target Speed.
 - c. Press and hold the left Softkey until the Softkey Label changes to match the Target Speed value.

DATA MANAGEMENT



MANAGE YOUR i-PILOT LINK NAVIGATION DATA

You can edit iTracks and Spot-Locks in the Waypoint Management dialog box in the same way that you can edit other Humminbird navigation data. You can also create new iTracks and Spot-Locks, and you can start navigation to the selected item.

The features that are unique to i-Pilot Link are described in this section. To understand how to use the Waypoint Management dialog box, see your Waypoint Management Guide for details. Visit our Web site at humminbird.com to download the Waypoint Management Guide.



OPEN THE WAYPOINT MANAGEMENT DIALOG BOX

1. Main Menu: Press the MENU key twice.
2. Select the Navigation tab > Waypoints, Routes, Tracks.

Waypoint Management Dialog Box

Waypoints, Routes, Tracks

Sort By A to Z

Options

- IT0031
- RT001
- S00027
- S00029
- S00030
- S00039
- SL 147
- WP001
- WP001

Home

Default Group: Home

Name IT0031

Created 9:21:18 AM 08/24/12

Depth	ft	Speed	mph	COG	°t	VLT	V
330	N 34°36.846' W 084°37.942'	0.0	307	13.8			

Edit iTrack

Name IT0031

Visible

Style _____

Color

Save

7 iTrack Points
Created: 9:21:18 AM 08/24/12



EDIT AN ITRACK OR A SPOT-LOCK

1. Select a Spot-Lock or iTrack, and press the RIGHT Cursor key.
2. Select Edit from the submenu, and press the RIGHT Cursor key.
3. Use the 4-WAY Cursor Control key to move from field to field, and press the UP or DOWN Cursor keys to change the settings.

The available fields will be determined by the item you are editing.

Name: Press the RIGHT or LEFT Cursor keys to move from space to space, and press the UP or DOWN Cursor keys to set the letter or number. All upper and lower case letters are available, as well as digits 0-9 and some punctuation symbols.

Icon Category: Press the UP or DOWN Cursor keys to scroll through the available categories. Select All to view all available icons. (All, Geometry, Alerts, Supplies, Navigation, Recreation, Fish, Environment)

Icon: Press the UP or DOWN Cursor keys to scroll through the available icons used to represent the selected waypoint in Chart Views. The available icons are determined by the category selected in Icon Category.

Shared: Press the UP or DOWN Cursor keys to set the selected item to shared or locked on the Humminbird Ethernet Network.

Visible: Press the UP or DOWN Cursor keys to set the selected item to visible or hidden in the Chart Views.

Latitude/Longitude: Press the RIGHT or LEFT Cursor keys to move from space to space, and press the UP or DOWN Cursor keys to set the letter or number.

4. Select Save, and press the RIGHT Cursor key to confirm your changes.



CAUTION! If you change the Spot-Lock icon, it will change to a waypoint and lose its Spot-Lock capabilities. However, you can change a waypoint back to a Spot-Lock by changing the Waypoint icon to a Spot-Lock icon.

WARNING! Humminbird is not responsible for the loss of data files (waypoints, routes, tracks, groups, snapshots, recordings, etc.) that may occur due to direct or indirect damage to the unit's hardware or software. It is important to back up your Fishfinder's data files periodically. Data files should also be saved to your PC before restoring the unit's defaults or updating the software. See your Humminbird online account at humminbird.com and the Waypoint Management guide.



EXPORT TO THE I-PILOT

Saved iTracks, waypoints, and Spot-Locks can be exported to the i-Pilot. When they are exported, they are copied to the i-Pilot.

The exported data will overwrite the data on the i-Pilot.

1. Main Menu: Press the MENU key twice.
2. Select the Navigation tab > Waypoints, Routes, Tracks. Press the RIGHT Cursor key to open the Waypoint Management dialog box.
3. Select Options > Select Multiple and... > Export to i-Pilot.
4. Select Items: Press the UP or DOWN Cursor keys to scroll through the navigation data. Press the RIGHT Cursor key to select an item. Repeat as needed.
5. Confirm Export: When you are finished selecting items, press the EXIT key to select Export Selected to i-Pilot. Press the RIGHT Cursor key, and follow the on-screen instructions to confirm or cancel the export.

NOTE: To import and share navigation data between the i-Pilot and the Fishfinder, see i-Pilot Setup: Upload Data from the i-Pilot Link.



EXPORT TO AN SD CARD

Your saved iTracks and Spot-Locks should be backed up periodically along with your other navigation data (waypoints, routes, tracks). Export your navigation items to an unlocked, installed SD card, and they can also be managed in HumminbirdPC. See your Waypoint Management Guide for details.

NOTE: An SD Card must be purchased separately.

Export ALL Navigation Items

You can export all of your navigation items to an installed, unlocked SD card.

1. Main Menu: Press the MENU key twice.
2. Select the Navigation tab > Waypoints, Routes, Tracks. Press the RIGHT Cursor key to open the Waypoint Management dialog box.
3. Select Options > Select All and... > Export.
4. Follow the on-screen instructions to confirm or cancel the export.

Export Selected Navigation Items

You can also select specific navigation items and export them to an installed, unlocked SD Card.

1. Main Menu: Press the MENU key twice.
2. Select the Navigation tab > Waypoints, Routes, Tracks. Press the RIGHT Cursor key to open the Waypoint Management dialog box.
3. From a selected group directory in the Waypoint Management dialog box, select Options > Select Multiple and... > Export.
4. Select Items: Press the UP or DOWN Cursor keys to scroll through the navigation data. Press the RIGHT Cursor key to select an item. Repeat as needed.
5. Confirm Export: When you are finished selecting items, press the EXIT key to select Export Selected. Press the RIGHT Cursor key, and follow the on-screen instructions to confirm or cancel the export.

USING YOUR FOOTPEDAL

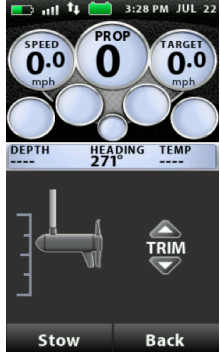
ULTERRA FUNCTIONS

Pressing the MODE button allows the use of the Ulterra specific functions. You can steer (heel/toe), trim or stow/deploy the motor while in Ulterra mode.



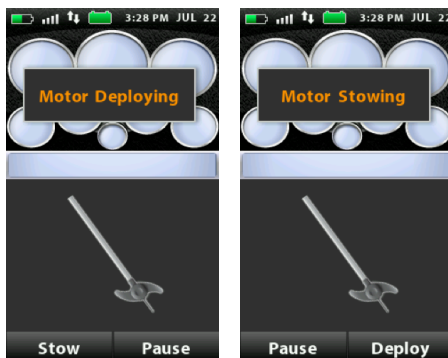
TRIM UP/DOWN

To trim up/down: Push the mode button until the center yellow LED is lit. Pressing the right button trims the motor down. Pressing the left button trims the motor up. You can trim your motor while in Ulterra mode only.



STOW/DEPLOY

To stow/deploy the motor: Push the mode button until the center yellow LED is lit. Pressing the center Prop button twice will deploy the motor. Pressing the center Prop button once will stow the motor. You can use the stow and deploy commands only while in Ulterra mode.



USING YOUR FOOTPEDAL

PROP ON

All Prop On functions can be used in Standard and Ulterra Mode.

NOTE: Prop button switches to Stow/Deploy in Ulterra Mode.

MOMENTARY BUTTON

To operate the motor in momentary mode: Pressing either of the two momentary buttons turns the propeller on at the foot pedal speed setting. Let up and the propeller stops. **Prop button will not work with the MODE button engaged.**

CONSTANT BUTTON

To operate the motor in continuous mode: Pressing the Mom/Con button toggles the motor between momentary and constant. When the motor is in constant the propeller will run continuously at the foot pedal speed setting without keeping your foot on the pedal. Even while in constant mode, however, the toe button on the heel/toe pedal is momentary. **Prop button will not work with the MODE button engaged.**



STEERING

LEFT/RIGHT TOE BUTTONS

To steer: With the mode button off, left and right steering control can be done with the Left/Right steering buttons. Holding the left or right steering button down steers left or right. Small steering changes of less than one degree can be made by quickly tapping the left and right steering buttons.

HEEL/TOE PEDAL

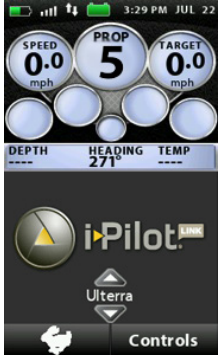
When the mode button on, place your foot in the center of the heel/toe pedal, rocking forward steers right. Rocking back steers left. The yellow MODE light will be illuminated.

NOTE: The steering system is designed to turn your motor 360 degrees. Be careful to avoid over-wrapping the coil cord around the trolling motor shaft.



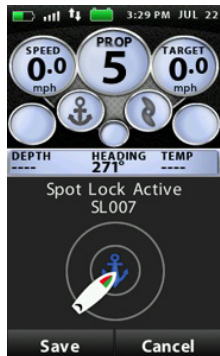
SPEED ADJUST

To adjust motor speed: Rotate the speed knob on the right side of the pedal to the desired speed setting. You can adjust the speed in Standard and Ulterra mode.



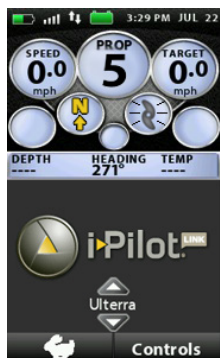
SPOT-LOCK

To initiate Spot-Lock: Pressing the Spot-Lock button initiates Spot-Lock and illuminates the blue indicator light on the foot pedal. When Spot-Lock is enabled, the user has the option of saving or discarding the Spot-Lock location. If saved, the next available Spot-Lock number will be utilized.



AUTOPILOT

Pressing the AP button toggles the AutoPilot On and Off. The red AutoPilot indicator light will be illuminated on the foot pedal. By default advanced AutoPilot is selected when AutoPilot is initiated from the foot pedal. AutoPilot can be used in both Standard and Ulterra mode.



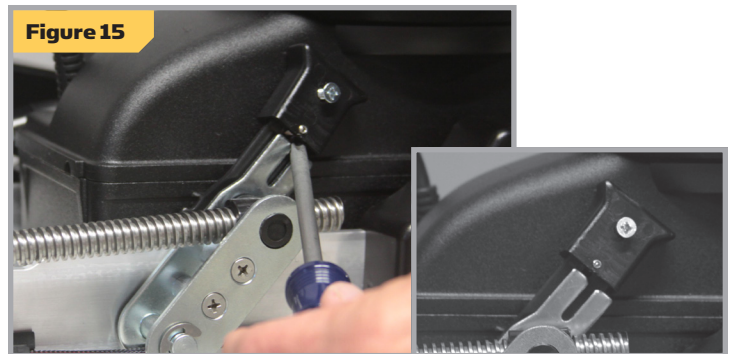
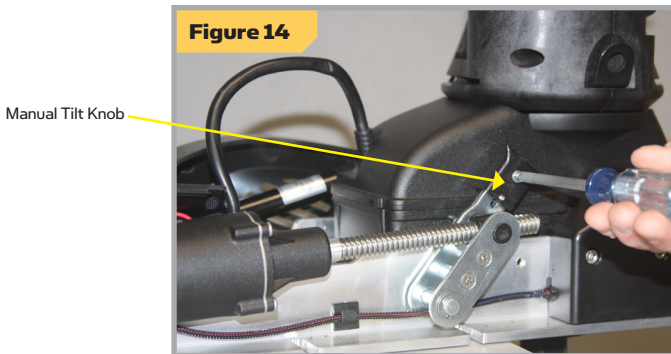
EMERGENCY STOW PROCEDURE

In the event of a power loss the following procedure shall be used to stow the motor for transport to a service center.

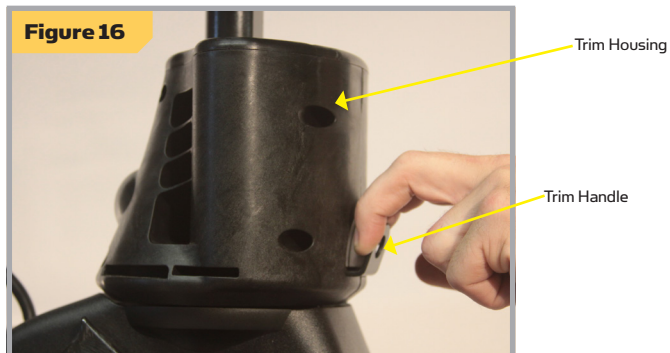
1. Remove right hand sideplate using a Phillips screwdriver. (Figure 13)



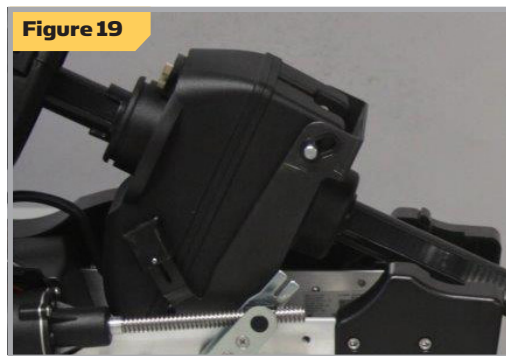
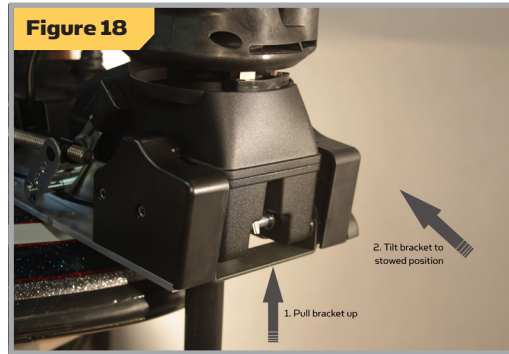
2. Using a Phillips screwdriver, loosen the screw on the manual tilt knob and then pry up with a flat blade screwdriver until it releases from the metal plates. (Figure 14 and Figure 15)



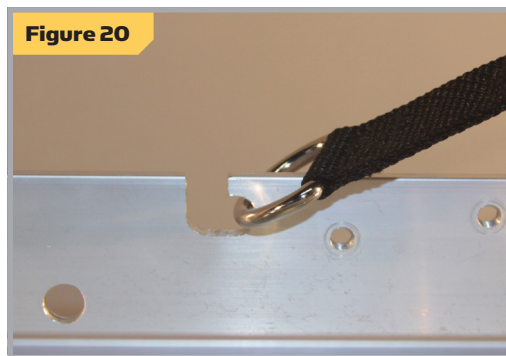
3. Pull manual trim handle out while lifting up on the trim housing until shaft and trim module can be pulled up by hand. (Figure 16)



4. While pulling up on the bracket to release the latch pin, rotate (Figure 17) and pull the lower unit onto the ramps. (Figure 18 & Figure 19)



5. Secure lower unit onto the ramps using the provided emergency strap. The d-ring on the emergency strap can be hooked into the base as shown (Figure 20). This feature is located on the left side of the motor as viewed from the boat interior. (Figure 21)



ADJUSTMENTS

ADJUSTING THE LIFT BELT

Periodically slack may appear in the main lift belt, and it may occasionally require small adjustments to maintain belt tension. Using a 1/8" allen wrench turn the socket head cap screw, located on the bottom of the control head, clockwise (see Figure 22) until belt is finger tight and you can force finger under belt.



SERVICE & MAINTENANCE

PROPELLER REPLACEMENT

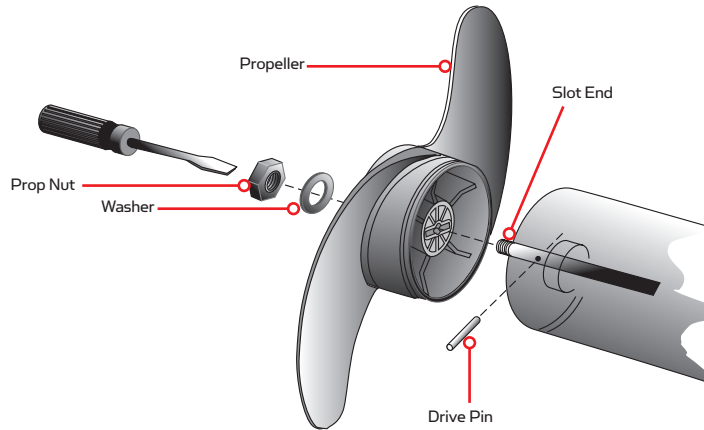
TOOLS AND RESOURCES REQUIRED:

- Box End Wrench
 - 1/2" for motors with 70 lbs thrust or lower.
 - 9/16" for motors with 80 lbs thrust or higher.
- Screwdriver (optional)

CAUTION:

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

NOTE: The propeller on your motor may differ from the one pictured.



1. Disconnect the motor from all sources of power prior to changing the propeller.
2. Hold the propeller and loosen the prop nut with pliers or a wrench.
3. Remove the prop nut and washer. If the drive pin is sheared or broken, you will need to hold the shaft stationary with a blade screwdriver pressed into the slot on the end of the shaft.
4. Turn the old prop to horizontal (as illustrated) and pull it straight off. If drive pin falls out, push it back in.
5. Align the new propeller with the drive pin.
6. Install the prop washer and prop nut.
7. Tighten the prop nut 1/4 turn past snug [25-35 inch lbs.] Do not over tighten as this can damage the prop.

GENERAL MAINTENANCE

1. After use, the entire motor should be rinsed with freshwater, then wiped down with a cloth dampened with an aqueous based silicone spray. This series of motors is not equipped for saltwater exposure.
2. The propeller must be inspected and cleaned from weeds and fishing line after every use. Fishing line and weeds can get behind the prop, damage the seals and allow water to enter the motor.
3. Verify the prop nut is secure each time the motor is used.
4. To prevent accidental damage during transportation or storage, disconnect the battery whenever the motor is off of the water. For prolonged storage, lightly coat all metal parts with an aqueous based silicone spray.
5. For maximum battery life recharge the battery(s) as soon as possible after use. For maximum motor performance restore battery to full charge prior to use.
6. Keep battery terminals clean with fine sandpaper or emery cloth.
7. The propeller is designed to provide weed free operation with very high efficiency. To maintain this top performance, the leading edge of the blades must be kept smooth. If they are rough or nicked from use, restore to smooth by sanding with fine sandpaper.

TROUBLESHOOTING

ULTERRA

1. Motor fails to run or lacks power:
 - Check battery connections for proper polarity.
 - Are batteries charged?
 - Make sure terminals and wires are clean and corrosion free. Use fine sandpaper or emery cloth to clean terminals.
 - Check circuit protection devices.
 - Check battery water level. Add water if needed.
2. Motor loses power after a short running time:
 - Check battery charge. If low, restore to full charge, or replace.
3. You experience prop vibration during normal operation:
 - Remove and rotate the prop 180°. See removal instructions in the Propeller Replacement Section. Replace prop if worn.
4. Experiencing interference with your fishfinder:
 - You may, in some applications, experience interference in your depth finder display. We recommend that you use a separate deep cycle marine battery for your trolling motor and that you power the depth finder from the starting/cranking battery.
5. Motor contacts an object while trimming causing a current limit (red status LED flashing):
 - Reverse the direction of trimming to clear motor from obstruction.
6. Motor contacts an object while stowing causing current limit (red status LED flashing):
 - Reverse the current cycle by pressing the stow/deploy button to clear from obstruction.
7. Motor fails to trim:
 - Check main lift belt tension per the Adjustments section.
8. Motor fails to stow or deploy:
 - Check for obstructions preventing the motor from deploying or stowing.
 - Ensure that manual tilt knob is engaged. See the Emergency Stow Procedure section for details.
 - Check charge state of trolling motor batteries. If trolling motor battery icon on remote is flashing, battery charge is too low for operation.
9. Prop will not turn on:
 - Ensure batteries are sufficiently charged.
 - For safety reasons there is a prop lock out region (approx. 15" from mounting base to lower unit centerline). Ensure that the lower unit is not in this region.

NOTE: If these problems persist or for all other inquiries, call our customer service number at (800) 227-6433. For motor repair, a listing of Authorized Service Centers in your area can be found at minnkotamotors.com.

i-PILOT LINK

GENERAL TROUBLESHOOTING

- Problem:** **The motor is making erratic steering corrections while in AutoPilot, Spot-Lock or Track to Start/End.**
Solution: Be sure to keep all ferrous metallic objects away from the i-Pilot Link controller as they will have an impact on the built-in compass. Such objects include: anchors, metal framework, etc.
- Problem:** **When a key on the remote is pressed the motor doesn't always respond.**
Solutions: Check the status of the battery charge icon on the remote. If low, connect the charger to the remote. Check for large obstructions between the remote and the motor.
- Solution:** If the Lock icon is present on the content area of the LCD, the keypad is locked. Press and hold one of the Softkeys to unlock the keypad.
- Problem:** **i-Pilot Link won't let me turn on certain features like: Advanced AutoPilot, Record, Track to Start/End or Spot-Lock.**
Solution: Verify that the GPS Signal Strength icon on the LCD shows at least one bar. If there are no bars, i-Pilot Link will not allow these GPS-based features to be enabled.
- Problem:** **There is a message on the remote screen showing "Motor not Found". Also, the keys on the remote are not controlling the motor.**
Solution: This message is due to the remote not having wireless communications with the Link controller. This could be due to the motor not being powered up or the remote not being learned to the controller.
- Solution:** Check power to the motor and learn the remote to the controller (see Remote Learning section).
- Problem:** **There is a message on the remote screen showing "Motor Error". Also, the keys on the remote are not controlling the motor.**
Solution: This error is generated when the Link controller loses communications with the Terrova (or ST) motor controller. This error will occur any time the software on the Link controller is updated. To clear the error, cycle power to the motor.

REMOTE

- Problem:** **I'm having a hard time seeing the content on the LCD screen.**
Solution: With the type of LCD used on the remote, it is able to utilize ambient light to enhance the visibility of the screen content. However, when in indirect or low light conditions, the backlight may be needed. Through the Backlight Settings Menu, you can adjust the intensity of the backlight along with the amount of time it stays on after a button press.
- Problem:** **I connected the charging cable but the charging indicator does not come on.**
Solution: Ensure the power (USB) end is receiving power from the AC adapter or the alternate power source you may be using such as the vehicle power port.
- Solution:** Look inside the charging port on the bottom end of the remote. You should clearly see two metallic contacts. Use an appropriate tool to clean out any debris that may have accumulated in the charging port.
- Solution:** The end of the remote that plugs into the remote includes two spring pins. Ensure the pins are clean and that when pushed in, they spring back out.

SPOT-LOCK

- Problem:** **The boat doesn't seem to keep close enough to the recorded Spot-Lock location.**
Solution: Verify the trolling motor batteries are sufficiently charged
- Solution:** Check for weeds on the prop.
- Solution:** In more extreme wind and current conditions, the boat will tend to stabilize a little ways down wind from the intended location. Relock the location the same distance upwind and expect that the boat will drift some in the downwind direction.

TROUBLESHOOTING

CRUISE CONTROL

Problem: **The GPS speed displayed on the remote is different than what my other GPS system shows.**

Solution: If you are using Cruise Control with Advanced AutoPilot or iTrack Navigation, i-Pilot Link calculates the actual speed in the intended direction of travel which may differ from your GPS reported speed.

Problem: **Cruise Control isn't holding the target speed close enough.**

Solution: Verify the trolling motor batteries are sufficiently charged.

AUTOPILOT

Problem: **When in Advanced AutoPilot in strong winds, there is quite a bit of back and forth movement in the boat.**

Solution: While Advanced AutoPilot will keep your boat on a true heading, it may be at the expense of the boat having to continuously move to get back on the correct course. In these extreme conditions you may be better off using Legacy AutoPilot and correcting for the wind manually.

Problem: **Under AutoPilot Mode, I have Advanced selected as the default mode. However, when I engage AutoPilot, it goes into Legacy AutoPilot instead of Advanced.**

Solution: If the GPS signal strength icon shown no bars, then Link will automatically engage Legacy AutoPilot regardless of the Mode selected. Wait for your GPS signal strength to reach at least one bar, then re-engage AutoPilot.

TRACK RECORD AND PLAYBACK

Problem: **While navigating an iTrack the propeller suddenly stopped.**

Solution: Verify you did not accidentally enable another automatic feature such as AutoPilot or Spot-Lock.

Solution: You may have the Arrival Mode set to OFF.

Problem: **While recording an iTrack, the recording suddenly stopped.**

Solution: You may have reached the two mile limit for recording an iTrack.

FOR FURTHER TROUBLESHOOTING AND REPAIR

We offer several options to help you troubleshoot and/or repair your product. Please read through the options listed below.

FREQUENTLY ASKED QUESTIONS

We have FAQs available on our website to help answer all of your Minn Kota questions. Visit minnkotamotors.com and click on "Frequently Asked Questions" to find an answer to your question.

CALL US (FOR U.S. AND CANADA)

Our consumer service representatives are available Monday – Friday between 7:00 a.m. – 4:30 p.m. CST at 800-227-6433. If you are calling to order parts, please have the 11-character serial number from your product, specific part numbers, and credit card information available. This will help expedite your call and allow us to provide you with the best consumer service possible. You can reference the parts list located in your manual to identify the specific part numbers.

EMAIL US

You can email our consumer service department with questions regarding your Minn Kota products. To email your question, visit minnkotamotors.com and click on "Support".

AUTHORIZED SERVICE CENTERS

Minn Kota has over 300 authorized service centers in the United States and Canada where you can purchase parts or get your products repaired. Please visit our Authorized Service Center page on our website to locate a service center in your area.

FREQUENTLY ASKED QUESTIONS

ULTERRA

Q: Is there a trolling motor battery meter on Ulterra?

A: Yes. The motor battery meter is displayed on the i-Pilot or i-Pilot Link remote control LCD screen. Battery meter is displayed when prop is off.

Q: Which quick release brackets are compatible with Ulterra

A: The following quick release brackets can be used with Ulterra: MKA-32, MKA-16-02, RTA 17 and RTA 21.

Q: Is there a manual Stow and Deploy procedure?

A: Yes. There is a manual method for stowing Ulterra. See the Emergency Stow Procedure section for instructions.

Q: When Ulterra is deployed, at what depth does the deploy stop?

A: Ulterra will always deploy to the most recent depth that was used.

Q: Are the Ulterra and Terrova foot pedals interchangeable?

A: No. The foot pedals are not interchangeable.

Q: If I engage Spot-Lock on the foot pedal, which Spot-Lock position on the remote is used?

A: i-Pilot: When Spot-Lock is activated from the foot pedal it will always utilize position "A" on the remote.

A: i-Pilot Link: When Spot-Lock is enabled from the foot pedal, the user has the option of saving or discarding the Spot-Lock location. If saved, the next available Spot-Lock number will be utilized.

Q: What is the "Mode" button on the foot pedal?

A: The Ulterra foot pedal is dual function. When it is in "Ulterra" mode, the yellow LED light will be illuminated. In this state the foot pedal toe buttons can be used to auto stow and deploy the motor and control trim. When it is in "steering" mode, the yellow LED will be off. In this state the foot pedal toe buttons can be used to control steering and prop on/off. In either state, the heel/toe pad can be used to control steering.

Q: Is there a way to clean weeds from the lower unit?

A: Yes. During the process of stowing, the stow cycle can be stopped by pressing the stow/deploy button as the motor begins to tilt back. The lower unit is easily accessible at this point to clear weeds. A second button press of the stow/deploy cycle will re-deploy the motor to its previous position.

Q: Can I stow the motor with the prop in or out?

A: Yes, the motor can be configured to stow with either the prop in or out. Follow the procedure outlined in the Installation Mounting Options section.

FREQUENTLY ASKED QUESTIONS

I-PILOT LINK

Q. Does i-Pilot Link record the speed I am traveling when recording a iTrack?

A. No. i-Pilot Link only records its location during track record. It is up to the user to set the desired speed manually or with Cruise Control.

Q. Why doesn't my GPS Signal Strength icon always show all four bars?

A. GPS signal strength is impacted by many influences including: i-Pilot Link controller having a clear view of the sky (especially to the southern sky), boat being located alongside a high bank and your geographic location.

Q. Is i-Pilot Link compatible with CoPilot?

A. No. None of the components between the two systems are compatible with each other.

Q. Does the remote float?

A. Yes.

Q. How long of an iTrack can I record?

A. Each individual can be up to two miles in length.

Q. Can I use multiple remotes with my i-Pilot Link?

A. Yes, you can use up to four remotes simultaneously. Remember to learn each new remote to the i-Pilot Link controller.

Q. Why does the LCD screen of the remote have dark blotches on it when I wear my sunglasses?

A. Polarized sunglasses can dramatically affect the way an LCD looks to the human eye.

Q. Where can I purchase additional remotes?

A. Your local Minn Kota retailer should carry additional remotes.

Q. If I turn off the remote, will i-Pilot Link continue to operate?

A. Yes. The i-Pilot Link Controller will continue in its current state of operation until the user makes a change either with the remote, Humminbird or foot pedal (Terrova only).

Q. Does i-Pilot Link help to keep the coil cord from wrapping around the motor shaft?

A. Yes and no. When in Spot-Lock, i-Pilot Link keeps track of how far it has rotated in either direction. If a new correction will cause the coil cord to wrap, it will rotate in the opposite direction in order to prevent the wrapping. In all other modes, it is up to the user to monitor the coil cord and to rotate the motor accordingly to avoid wrapping.

Q. Does my i-Pilot remote work with i-Pilot Link?

A. No

Q. Will i-Pilot Link control my motor without the Humminbird connected?

A. Yes. However, your storage for iTracks and Spot-Locks will be limited to what can be stored in the Link controller.

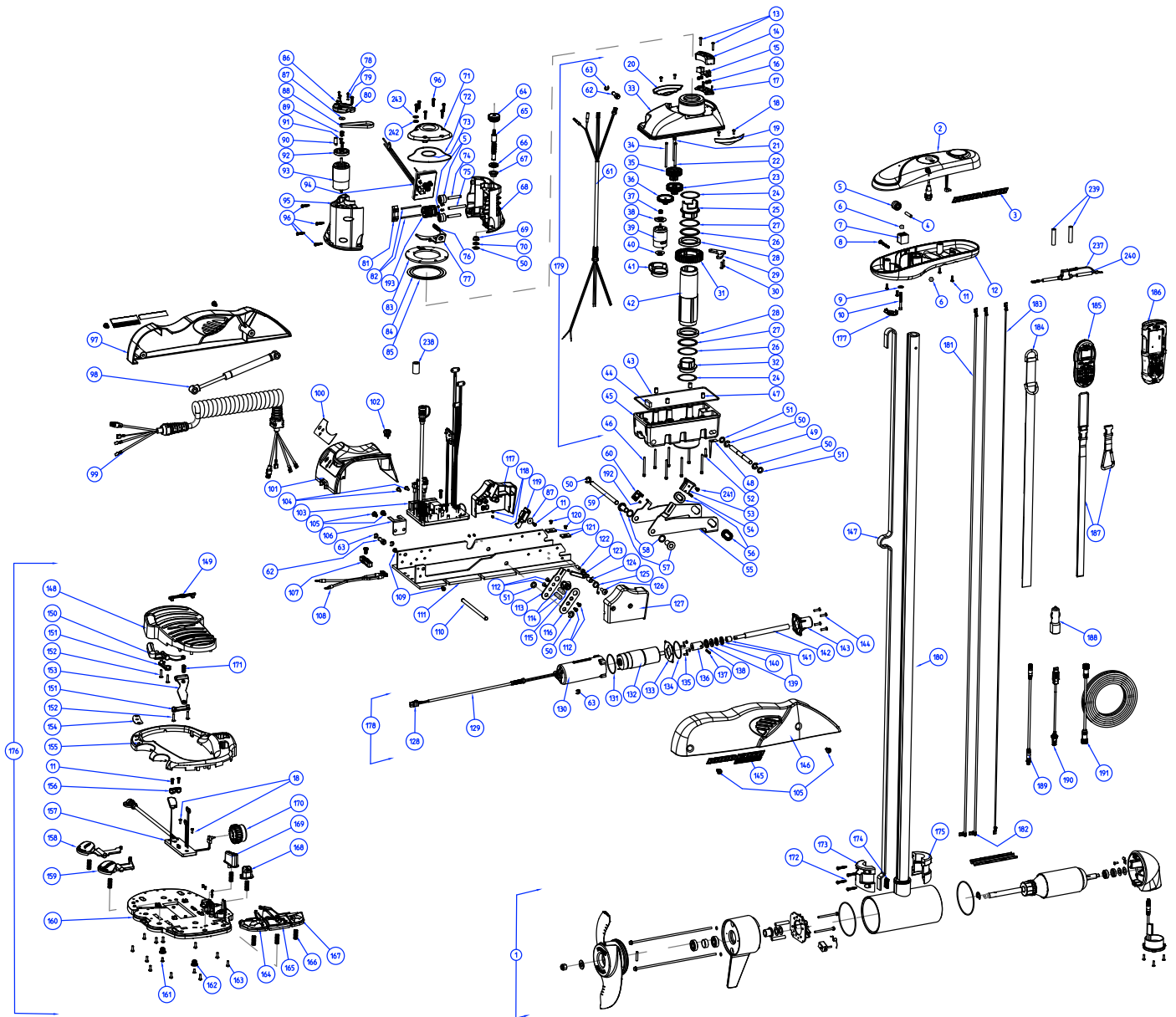
Q. When in Follow the Contour mode, my Humminbird stops recording the Current Track. Why is that?

A. This is to protect the proprietary mapping data contained in the LakeMaster chip.

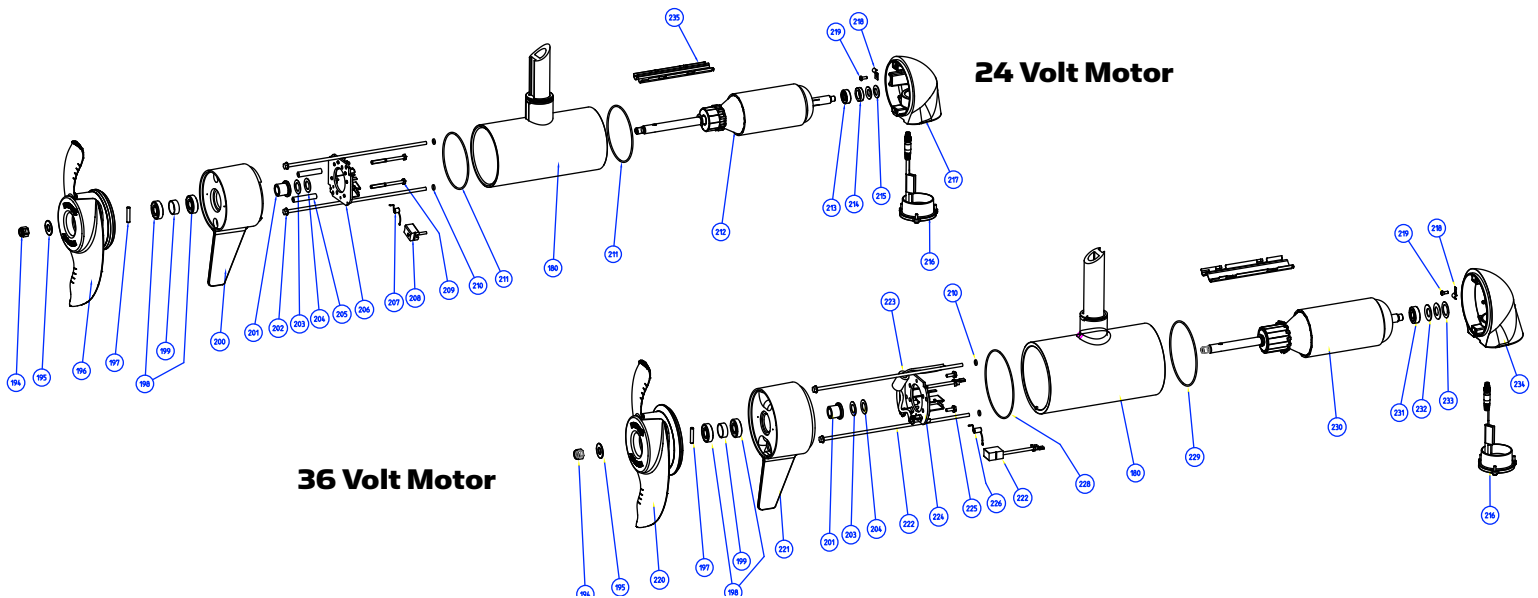
Q. Where is the navigational data such as iTracks, Spot-Locks, Waypoints and routes stored?

A. When connected to the Humminbird, this data is stored on the Humminbird. When not connected, newly created iTracks and Spot-Locks are stored in the Link controller.

PARTS DIAGRAM



PARTS DIAGRAM



PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	2777016	24 V MOTOR 45° FW
	1	2777015	24V MOTOR 60° FW
	1	2777086	36V MOTOR 45° FW
	1	2777085	36V MOTOR 60° FW
2	1	2990206	HEAD ASSY, FW, IPILOT 1.5
	1	2990208	HEAD ASSY, FW, IPILOT LINK
3	2	2205511	DECAL, CONTROL BOX SIDE
4	1	2202635	PIN-DOWEL, 1/4" OD SS
5	3	2202335	PULLEY, BELT, TOP
6	2	2333101	NUT-HEX #10-24
7	1	2202800	BLOCK, BELT
8	1	2332102	SCREW-#10-24 X 1-3/4
9	1	2201721	WASHER, #10 SAE, SS
10	1	2203411	SCREW-#10-24, SHCS, SS
11	6	2372100	SCREW, #8-18 X 5/8 THD
12	1	2202506	CONTROL BOX BOTTOM
13	2	2203406	SCREW, #6-32 X 0.75 PPH, SS
14	1	2202820	BLOCK-BRUSH, SLIPRING
15	2	2208207	BRUSH SHUNT ASSEMBLY
16	4	2202712	SPRING COMPRESSION, BRUSH
17	1	2202815	INSULATOR, BLOCK-BRUSH
18	6	2332103	SCREW-#6-20 X 3/8 THD, SS
19	1	2205905	RIGHT STEERING ADAPTER
20	1	2205900	LEFT STEERING ADAPTER
21	1	2302615	SHAFT-GEAR, INTERMED. CLUSTER
22	1	2302620	SHAFT-GEAR, THIRD CLUSTER
23	1	2302250	GEAR & PINION, DR. HSG, STAGE 3
24	2	2321704	WASHER-THRUST, STEERING
25	1	2201510	COLLAR-DRIVE, OUTPUT TUBE
26	2	2324608	O-RING, 224, PD PRO STEERING HOUSING
27	2	2321720	SHIM, O-RING
28	2	2327308	BEARING-BALL, SEALED, 6809-2R5
29	1	2201920	BRACKET-SENSOR, STEERING HSG
30	2	2303412	SCREW-#6-20 X 5/8 SELF TAP
31	1	2322200	GEAR-OUTPUT
32	1	2321510	COLLAR-DRIVE, BOTTOM
33	1	2206501	BLACK STEERING HSG COVER
34	1	2302610	SHAFT-GEAR, FIRST CLUSTER
35	1	2302255	GEAR & PINION, STAGE 4
36	1	2302245	GEAR & PINION, STAGE 2
37	1	2302240	GEAR & PINION, STAGE 1
38	1	2300265	CAP-MOTOR, PLASTIC
39	1	2327025	MOTOR-STEERING PD/AP 36V
	1	2327020	MOTOR-STEERING PD/AP 24V
40	1	2300260	CAP-SPACER, PLASTIC
41	1	2328610	CRADLE-MOTOR
42	1	2322030	TUBE-OUTPUT, MACHINED
43	1	2324604	O-RING, CASE SEAL
44	1	2308601	BREATHER FILTER, DR. HSG
45	1	2326506	STEERING HSG, BTM, BLK
46	7	2323408	SCREW-#8-32 X 2.0 SHCS SS
47	4	2302605	PIN-ROLL 5/16" X 1/2"
48	2	2322702	SPRING, LATCH PIN SS
49	1	2202625	PIN-LATCH
50	5	2263011	E-RING 3/8 DIA. SHAFT
51	3	2321702	WASHER-FLAT .375 NYLON
52	1	2323410	SCREW-#8-32 X .75 SHCS SS
53	1	2200100	KNOB, TILT RELEASE
54	1	2383463	SCREW-#6-32 X .625" SET SS
55	1	2201911	BRACKET, TILT, ZP
56	2	2207305	BUSHING, LATCH PIN
57	2	2207310	BUSHING, STRG HSG PIVOT
58	2	2201730	WASHER-FLAT, .56 ID NYLON
59	1	2202601	PIN-PIVOT, DRIVE HOUSING, SS
60	1	2778601	HOLDER, TILT, ZP
61	1	2200600	LEADWIRE, STEERING MTR, 8 COND.
62	2	2202902	STANDOFF, OIL DAMPENER
63	4	2263006	E-CLIP, 5/16
64	1	2202332	PULLEY, TRIM JACKSHAFT
65	1	2772310	WORM SHAFT ASSY W/ PULLEY

ITEM	QTY	PART NUMBER	DESCRIPTION
66	1	2200000	BEARING-THRUST, NEEDLE
67	1	2207300	BUSHING, TRIM, TOP
68	1	2206525	HOUSING-TRIM, GEAR SIDE
69	1	2207301	BUSHING, TRIM, BOTTOM
70	1	2201710	WASHER-THRUST, 3/8"
71	1	2206410	COVER, TRIM HOUSING
72	1	2204601	O-RING, TRIM HOUSING
73	1	2204600	O-RING, TRIM HSG COVER
74	2	2202610	PIN, BELT PULLEY
75	1	2202621	PIN, 2"X1/4"
76	1	2202701	SPRING, 5/16" OD, SS
77	1	2200901	HANDLE, TRIM HSG RELS, ZP
78	3	2053422	SCREW-M3-.5 X 10 PPH, ZP
79	3	2051710	LOCKWASHER-SPLIT, 3MM, ZP
80	1	2206400	PLATE, MOTOR
81	1	2202825	BLOCK, TUBE DRIVE
82	2	2202636	PIN-DOWEL, 1/8"
83	1	2208620	CARRIER, SLIPRING CONTACTS
84	1	2203011	CONTACT, SLIPRING SMALL
85	1	2203010	CONTACT, SLIPRING LARGE
86	1	2053420	SCREW-SET-#8-32 X 1/4" SS
87	1	2201722	WASHER-#6, .625 OD
88	1	2200810	BELT-TRIM
89	1	2202336	PULLEY, LIFT MOTOR, MACHINED
90	1	2058411	TENSIONER-BELT
91	2	2053424	SCREW-M4 X 10 PFH, ZP
92	1	2051915	PLATE-ADAPTER, LIFT MOTOR
93	1	2207800	MOTOR, TRIM
94	1	2204003	BOARD ASSY, WIRELESS TRIM
95	1	2206520	HOUSING-TRIM, MOTOR SIDE
96	11	3393481	SCREW, #10X.75 HI-LO, SS, PPH
97	1	2203905	SIDEPLATE, LEFT
98	1	2208800	DAMPER, HYBRID, 80#
	1	2208802	DAMPER, HYBRID, 112#
99	1	2991272	COIL CORD ASSY 54/60" U. SONAR
100	1	2205600	DECAL, B. METER/CON/PWR FW, BLK
101	1	2206510	HOUSING-CONTROL, BLACK
102	1	2202910	STRAIN RLF, HEYCO SR 6N3-4
103	1	2774080	MAIN CONTROL BOARD, 24V, 60°, N AMERICA
		2774081	MAIN CONTROL BOARD, 24V, 45°, N AMERICA
		2774082	MAIN CONTROL BOARD, 36V, 60°, N AMERICA
		2774083	MAIN CONTROL BOARD, 36V, 45°, N AMERICA
		2774084	MAIN CONTROL BOARD, 24V, 60°, EUROPE
		2774085	MAIN CONTROL BOARD, 24V, 45°, EUROPE
		2774086	MAIN CONTROL BOARD, 36V, 60°, EUROPE
		2774087	MAIN CONTROL BOARD, 36V, 45°, EUROPE
104	2	2323406	SCREW-#10-24 X .50 CRPH SS
105	7	2323404	SCREW-1/4-20 X 1/2" T-L ZP
106	1	2200821	CLIP-CORD, ZP
107	1	2321310	STRAIN RELIEF
108	1	2090651	LEADWIRE, 10 GA
109	2	2383447	SCREW-#10-32 X 3/8" PPH SS
110	1	2202606	PIN, ACTUATOR, ZP
111	1	2201901	BASE, MACHINED, FW
112	4	2203410	SCREW #10-32 X .5"
113	1	2204201	ARM-LIFT, INNER, ZP
114	2	2202901	STANDOFF, LIFT ARM
115	1	2203100	NUT, TILT MOTOR
116	1	2204206	ARM-LIFT, OUTER, ZP
117	1	2203916	RAMP-MOTOR, LEFT 80#
	1	2203915	RAMP-MOTOR, LEFT 112#
118	10	2373440	SCREW-#4-24 X 1/4 PHCR SS TY B
119	1	2773700	PLUNGER, RAMP
120	2	2203420	SCREW #10-24 X 5/16 PFH
121	2	2205105	PAD, STOP
122	1	2262632	PIN-SPRING 1/4" X 5/8" SS
123	1	2207900	CAM, PIN SENSOR
124	1	2201702	SPACER, PIN SENSOR
125	1	2042711	SPRING-TORSION, SS
126	1	9280710	HDW SCR 1/4 - 20 X 7/8 TRUSS PHIL

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
127	1	2203911	RAMP-MOTOR, RIGHT, 80#
		2203910	RAMP-MOTOR, RIGHT, 112#
128	1	2206550	HOUSING, CONNECTOR WPJ
129	1	2200601	LEADWIRE, TILT MOTOR
130	1	2206421	COVER, TILT ACTUATOR
131	1	2204610	O-RING, TILT, LARGE
132	1	2207810	MOTOR, STOW/DEPLOY
133	1	2201930	MOUNTING PLATE, TILT MOTOR
134	1	2204611	O-RING, TILT, SMALL
135	4	2203400	SCREW-M4 X 8, SS
136	1	2200830	COUPLER, STW/DPLY ACTUATOR
137	1	2202631	SPRING PIN, 5MM X 20MM
138	1	2204620	SEAL, TILT MOTOR
139	2	2201713	WASHER-THRUST, TILT MOTOR
140	1	2200005	BEARING-THRUST, TILT MOTOR
141	1	2201704	SPACER, SHAFT
142	1	2202315	SHAFT, STOW/DEPLOY, SS
143	1	2206425	COVER-NOSE, TILT ACTUATOR
144	4	2373483	SCREW-#8-18 X 5/8" PPH
145	2	2205510	DECAL, SIDEPLATE, FW
146	1	2203900	SIDEPLATE, RIGHT
147	1	2200818	BELT-LIFT 5MM HTD
148	1	2324400	PEDAL, HEEL/TOE FOOT PEDAL
149	1	2326710	PLUG, FOOT PEDAL
150	1	2323710	BUTTON, MOM LEFT, FT PEDAL
151	2	2321300	CLAMP-LEFT, FT PEDAL
152	4	2223430	SCREW-#8 X 3/4 PPH
153	1	2328600	FLEX FINGER, FOOT PEDAL
154	1	2205605	DECAL, 3 INDICATORS
155	1	2200200	COVER, HEEL TOE FOOT PEDAL
156	1	2322900	STRAIN RELIEF, FOOT PEDAL
157	1	2204008	PCB ASSY, FOOT PEDAL
158	1	2323725	BUTTON, AP, FT PEDAL
159	1	2323715	BUTTON, MOM/CON, FT PEDAL
160	1	2204500	BASE PLATE
161	2	2323420	SCREW, #8-18 3/8 PFH SS
162	2	2322706	SPRING-BARREL SS
163	11	2301310	SCREW, #8-18 X 1/2" SS
164	1	2203710	BUTTON, LFT STR W/ TRIM UP ARROW
165	1	2203715	BUTTON, MOMENTARY/STOW-DEPLOY
166	7	2322704	SPRING, LARGE SHORT SS
167	1	2203711	BUTTON, RGT STR W/ TRIM UP ARROW
168	1	2203720	BUTTON, SPOT LOCK
169	1	2203725	BUTTON, MODE
170	1	2320100	KNOB-SPEED, FOOT PEDAL
171	1	2322714	SPRING, MOM ASSIST SS
172	4	3393480	SCREW-#10 X 1.0" PPH HI-LO SS
173	1	2201505	COLLAR, BELT CLAMP
174	1	2200800	BELT-RACK, LOWER
175	1	2201500	COLLAR, CLAMP
176	1	2994740	FOOTPEDAL ASSEMBLY
177	1	2224700	PLUG INSERT (IPILOT)
		2224701	PLUG INSERT (IPILOT LINK)
178	1	2997813	TILT MOTOR ASSY
179	1	2996502	STEERING HOUSING ASSY
180	1	2777098	CTR HSG ASSY, CB, 80#, FW, W/TUBE, 45"
	1	2777099	CTR HSG ASSY, CB, 80#, FW, W/TUBE, 60"
	1	2777248	CTR HSG ASSY, CB, 112#, FW, W/TUBE, 45"
	1	2777249	CTR HSG ASSY, CB, 112#, FW, W/TUBE, 60"
181	1	640-118	LEADWIRE, RED, 80#, 45"
	1	640-132	LEADWIRE, RED, 112#, 45"
	1	640-126	LEADWIRE, RED, 80#, 60"
	1	640-135	LEADWIRE, RED, 112#, 60"
182	1	640-027	LEADWIRE, BLACK, 80#, 45"
	1	640-017	LEADWIRE, BLACK, 112#, 45"
	1	640-022	LEADWIRE, BLACK, 80#, 60"
	1	640-045	LEADWIRE, BLACK, 112#, 60"
183	1	640-315	GROUNDWIRE, BROWN, US2.0, 45"
	1	640-316	GROUNDWIRE, BROWN, US2.0, 60"
184	1	2203800	STRAP, EMERGENCY

ITEM	QTY	PART NUMBER	DESCRIPTION
185	1	2994171	REMOTE ASSY, IPILOT L15
186	1	2994180	REMOTE ASSY, IPILOT LINK *LINK ONLY*
187	1	2370817	LANYARD, REMOTE W/ CARABEENER
188	1	2375901	ADAPTER, USB DC POWER *LINK ONLY*
189	1	2211415	CABLE-EXTENSION, PD/AP 110"
190	1	2373241	CABLE, USB REMOTE CHARGER *LINK ONLY*
191	1	490389	CABLE, ETHERNET, 30' * LINK ONLY*
192	9	2378448	.187 X .125 MAGNET
194	1	2093101	NUT-PROP, NYLOCK, SS
195	1	2091701	WASHER-PROP
196	1	2331160	PROP-WW2, 80#
197	1	2262658	PIN-DRIVE 1" X 3/16" SS
198	2	880-025	SEAL
199	1	725-095	PAPER TUBE, SEAL
200	1	421-070	BRUSH END HSG, 80#
201	1	144-017	BEARING, FLANGE
202	2	830-095	THRU BOLT 12-24
203	1	990-052	WASHER, NYLATRON
204	1	990-051	WASHER-STEEL THRUST
205	2	973-025	SPACER, BRUSHPLATE
206	1	9-738-015	BRUSH PLATE ASSY, 4"
207	2	975-041	SPRING-TORSION
208	2	186-094	BRUSH 4"
209	2	830-027	SCREW-BRUSH PLATE 10-32
210	2	701-009	O-RING, THRU BOLTS
211	2	701-043	O-RING, END HOUSINGS
212	1	2-100-214	ARMATURE ASSEMBLY
213	1	140-010	BEARING - BALL
214	1	990-045	SPACER, THRUST
215	2	992-010	WASHER, SPRING BELLEVILLE
216	1	987-113	TRANSDUCER ASSY US 2.5, 80#, 45"
		987-114	TRANSDUCER ASSY US 2.5, 112#, 45"
		987-116	TRANSDUCER ASSY US 2.5, 80# & 112#, 60"
217	1	421-285	PLAIN END HOUSING MACHINED, SONAR
218	1	230038	CABLE CLAMP, STEEL
219	1	2302104	SCREW-#6 X 3/8
220	1	2341160	PROP-WW2, 112#
221	1	421-150	BRUSH END HSG, 112#
222	2	830-094	THRU BOLT 12-24
223	1	2307312	BEAD-FERRITE
224	1	9-738-011	BRUSH PLATE ASSY, 4.5"
225	2	2053410	SCREW-BRUSH PLATE, 10-32
226	2	975-045	SPRING-TORSION
227	2	188-095	BRUSH, 4.5" LU
228	1	701-107	O-RING, BRUSH END
229	1	701-098	O-RING, PLAIN END
230	1	2-100-245	ARMATURE ASSY.
231	1	140-014	BEARING - BALL
232	2	992-011	WASHER, SPRING BELLEVILLE
233	1	990-011	WASHER, 5HIM
234	1	421-245	PLAIN END HOUSING, ASSY
235	1	582-013	CLIP, RETAINING SHORT
236	1	582-016	CLIP-RETAINING, SONAR
237	1	2218200	FUSE HOLDER ASSY
238	1	2307313	FERRITE BEAD
239	2	2065400	WIRE INSULATOR-LGE 1-3/4, BLUE
240	2	2375400	SHRINK TUBE-1/4 OD X 1-3/4
241	1	2203407	SCREW, #6-32 X .5
242	6	3391732	SEALING WASHER
243	6	3394602	FLAT WASHER #8

PARTS LIST

SERVICE KITS

DESCRIPTION	PART NO.	ITEM NUMBER INCLUDED / QUANTITY
TRIM MOTOR ASSY	2777810	87 (1), 89 (1), 90 (1), 91 (2), 92(1), 93 (1)
TILT BRACKET ASSY	2774201	50 (1), 51 (1), 112 (4), 113 (1), 114 (2), 115 (1), 116 (1)
OUTPUT GEAR W/ MAGNETS	2772200	31 (1), 192 (4)
CAM W/ MAGNET AND SPRING PIN	2777900	122 (1), 123 (1), 192 (1)
PLUNGER W/ MAGNET	2773700	119 (1), 192 (1)
WORM GEAR W/ MAGNET	2772206	192 (1), 193 (2)
WORM SHAFT ASSY W/PULLEY	2772310	64 (1), 65 (1)
MAGNET HOLDER W/ MAGNET	2778601	60 (1), 192 (1)
RELEASE KNOB W/ SCREW	2770100	53 (1), 54 (1)
SENSOR WIRE W/ BUTT CONNECTORS	2880350	
SLIP RING AND CARRIER KIT	2883010	83 (1), 84 (1), 85 (1)
MOUNTING BAG	2994917	

COMPLIANCE STATEMENTS

ENVIRONMENTAL COMPLIANCE STATEMENT:

It is the intention of JOME to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

WEEE DIRECTIVE:

EU Directive 2002/96/EC "Waste of Electrical and Electronic Equipment Directive (WEEE)" impacts most distributors, sellers, and manufacturers of consumer electronics in the European Union. The WEEE Directive requires the producer of consumer electronics to take responsibility for the management of waste from their products to achieve environmentally responsible disposal during the product life cycle.

WEEE compliance may not be required in your location for electrical & electronic equipment (EEE), nor may it be required for EEE designed and intended as fixed or temporary installation in transportation vehicles such as automobiles, aircraft, and boats. In some European Union member states, these vehicles are considered outside of the scope of the Directive, and EEE for those applications can be considered excluded from the WEEE Directive requirement.

This symbol (WEEE wheelie bin) on product indicates the product must not be disposed of with other household refuse. It must be disposed of and collected for recycling and recovery of waste EEE. Johnson Outdoors Inc. will mark all EEE products in accordance with the WEEE Directive. It is our goal to comply in the collection, treatment, recovery, and environmentally sound disposal of those products; however, these requirements do vary within European Union member states. For more information about where you should dispose of your waste equipment for recycling and recovery and/or your European Union member state requirements, please contact your dealer or distributor from which your product was purchased.



DISPOSAL:

Minn Kota motors are not subject to the disposal regulations EAG-VO (electric devices directive) that implements the WEEE directive. Nevertheless never dispose of your Minn Kota motor in a garbage bin but at the proper place of collection of your local town council.

Never dispose of battery in a garbage bin. Comply with the disposal directions of the manufacturer or his representative and dispose of them at the proper place of collection of your local town council.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

FCC COMPLIANCE

This device complies with Part 15 of the FCC rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference that may be received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Johnson Outdoors Marine Electronics, Inc. could void the user's authority to operate this equipment.

This product meets the applicable Industry Canada technical specifications. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. **If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

TRANSMITTER MODEL: 2990206

- IC: 4397A-ULTERRAIP15
- FCC ID: T62-ULTERRAIP15

TRANSMITTER MODEL: 2990208

- IC: 4397A-ULTERRA20
- FCC ID: T62-ULTERRA20

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.



MK345PC



MK210D



MK110P

TALON SHALLOW WATER ANCHOR

Talon deploys faster, holds stronger and runs quieter than any other shallow water anchor. Available in depths up to 12' and bold color options, it boasts an arsenal of features and innovations that no other anchor can touch:



- Vertical, multi-stage deployment
- User-Selectable Anchoring Modes
- 2x Anchoring Force
- Fast Deploy
- Auto Up/Down

- Triple Debris shields*
- Built-In Wave Absorption
- Noise Dissipation
- Versatile Adjustments

*available on 10' and 12' models only

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

For a complete listing of Minn Kota accessories, visit minnkotamotors.com

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Minn Kota Consumer & Technical Service
Johnson Outdoors Marine Electronics, Inc.
PO Box 8129
Mankato, MN 56001

121 Power Drive
Mankato, MN 56001
Phone (800) 227-6433
Fax (800) 527-4464



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