ADVANCED GPS NAVIGATION for HELIX

Operations Guide

HUMMINBIRD®

SIMPLY. CLEARLY. BETTER.

THANK YOU!

Thank you for choosing Humminbird®, the #1 name in marine electronics. Humminbird has built its reputation by designing and manufacturing top quality, thoroughly reliable marine equipment. Your Humminbird is designed for trouble-free use in even the harshest marine environment. In the unlikely event that your Humminbird does require repairs, we offer an exclusive Service Policy. For complete details, see the separate warranty card included with your unit. We encourage you to read this operations manual carefully in order to get the full benefit from all the features and applications of your Humminbird product.

Contact Humminbird Technical Support through our Help Center at **https:// humminbird-help.johnsonoutdoors.com/hc/en-us**.

⚠ **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!** This device is granted for use in Mobile only configurations in which the antennas used for this transmitter must be installed to provide a separation distance of at least 8 inches (20 cm) from all person and not be co-located with any other transmitters except in accordance with FCC and Industry Canada multi-transmitter product procedures.

⚠ **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 fish finder's data files periodically. Data files should also be saved to your computer before restoring the fish finder defaults or updating the software. Visit our Web site at **humminbird.johnsonoutdoors.com** and download your Humminbird operations manual for details.

⚠ **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!** Do NOT leave the fish finder SD card slot cover open. The slot cover should always be closed to prevent water damage to the unit.

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

⚠ **WARNING!** You are responsible for the safe and prudent operation of your vessel. We have designed the Advanced GPS Navigation system 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.

⚠ **WARNING!** Take care that neither you nor other persons approach the turning propeller too closely, neither with body parts nor with objects. The motor is powerful and may endanger or injure you or others. While the motor is running, watch out for persons swimming and for floating objects. Persons whose ability to run the motor or whose reactions are impaired by alcohol, drugs, medication, or other substances are not permitted to use the motor. See your Minn Kota trolling motor owner's manual for details.

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

⚠ **WARNING!** Be sure to know how to power the motor on and off, and always be alert for unexpected motor movement, such as a turning propeller. Read this manual and your Minn Kota trolling motor owner's manual for details.

⚠ **WARNING!** Due to safety reasons, the Advanced GPS Navigation system will not engage a position farther than 1/4 mile away.

⚠ **CAUTION!** The Advanced GPS Navigation uses a magnetic compass to detect direction of travel. The compass can be adversely affected by magnets or large, ferrous metal objects near (within 24" of) the trolling motor control head. See your Minn Kota trolling motor owner's manual for details.

Obstructions on the propeller may cause excessive vibration of the motor head. This vibration can cause the compass to wander and erratic steering to occur. Clear the obstruction to return the motor and Advanced GPS Navigation system to normal operation. See your Minn Kota trolling motor owner's manual for details.

FCC NOTICE: 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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠ **CAUTION!** 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.

Class B Device (Broadcasting and communication equipment for home):

⚠ **CAUTION!** This equipment is home use (Class B) electromagnetic wave suitability equipment and to be used at home and it can be used in all areas.

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

📝 **NOTE:** To purchase accessories for your control head, visit our Web site at **humminbird.johnsonoutdoors.com** or contact Humminbird Technical Support 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.

ROHS STATEMENT: Product designed and intended as a fixed installation or part of a system in a vessel may be considered beyond the scope of Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

ENVIRONMENTAL COMPLIANCE STATEMENT: It is the intention of Johnson Outdoors Marine Electronics, Inc. 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 Marine Electronics, 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.

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INTRODUCTION

Overview

This revolutionary boat control system enables your Minn Kota trolling motor and your Humminbird fish finder to communicate with each other, delivering unprecedented levels of automatic navigation. Find, store, and revisit your most productive fishing spots and tracks, taking control of it all from either the Minn Kota Wireless Remote, the One-Boat Network App, or directly from your Humminbird fish finder. Add a Humminbird CoastMaster or LakeMaster Map Card or AutoChart ZeroLine Map Card, and unlock the ability to automatically follow depth contours for even higher levels of boat control. All with GPS accuracy so you spend less time positioning your boat and more time catching fish.

Advanced GPS Navigation is pre-installed on the trolling motor. The remote and GPS controller on the trolling motor make up the Advanced GPS Navigation system. The GPS controller is contained in the motor control head. It contains a very sensitive compass and is where all GPS satellite and remote signals are received.

Safety and Cautions while using Advanced GPS Navigation

In addition to this manual, it is important to thoroughly read your Minn Kota motor operation's manual. Follow all instructions and heed all safety and cautionary notices. Use of this product is only permitted for persons that have read and understood the user instructions.

⚠️ **WARNING!** You are responsible for the safe and prudent operation of your vessel. We have designed Advanced GPS Navigation 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 Advanced GPS Navigation system in an area free from hazards and obstacles.

Humminbird Fish Finder

This accessory manual describes the functionality that is added to your HELIX fish finder when it is connected to the Minn Kota trolling motor with Advanced GPS Navigation. For additional information about the Humminbird fish finder operations, see your fish finder operations manual. To download the manual from our Web site, go to **humminbird.johnsonoutdoors.com**.

INSTALLATION

Use the following instructions to connect your HELIX fish finder with an Advanced GPS Navigation system. Before proceeding with this installation, the HELIX and Minn Kota trolling motor should be installed. To download the installation guides, visit **minnkota. johnsonoutdoors.com** and **humminbird.johnsonoutdoors.com**.

1 | Purchase Ethernet Cables and Equipment

The Advanced GPS Navigation system connects to the Humminbird fish finder Ethernet port or the Humminbird Ethernet Switch. To purchase Ethernet switches, Ethernet cables, and extension cables, visit our Web site at **humminbird.johnsonoutdoors.com** (select Shop > Accessories > Cables).

Hardware	Ethernet Cables
HELIX Fish Finders	AS EC QDE (adapter cable) and AS EC Ethernet Cable (AS EC 10E, AS EC 20E, etc.)
Ethernet Switch (AS ETH 5PXG)	AS EC Ethernet Cable* (AS EC 10E, AS EC 20E, etc.) Various cable lengths are available. Visit our Web site at **humminbird.johnsonoutdoors.com** for details.

To plan the required cable length, it is important to consider the following:

- The cables will be routed from the trolling motor to the Humminbird fish finder (or Ethernet Switch).
- The cables 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.
- The cables will move with the trolling motor when it is deployed and retracted, so it is important to allow enough length for movement. **Check the Ulterra** when it is completely vertical, at its highest point (before trim) and at its lowest point.

2 | Confirm Installation of the Trolling Motor and Remote

1. Use your Minn Kota trolling motor operation's manual to confirm the trolling motor is correctly installed and mounted to the bow of the boat.
2. The boat and trolling motor must be located outside and have a direct view of the sky to obtain GPS satellite signals.
3. Verify that all obstructions are away from the propeller in all directions in both the stowed and deployed positions.
4. Connect power to the trolling motor.
5. Deploy the motor so the motor shaft is completely vertical.
6. The trolling motor will emit four short beeps on startup.
7. Turn off the power source.

Use the following instructions to connect the Advanced GPS Navigation System to the installed Humminbird fish finder. If you purchased the Humminbird Ethernet Switch, install it using the instructions in the included installation guide.

⚠️ **WARNING!** The power source must be turned off before you proceed with the installation.

1. Confirm that all power sources are turned off.

2. Follow the instructions in the trolling motor Owner's Manual to connect and route the Eight-Pin Advanced GPS Ethernet Connector to the Ethernet Cable. The exact location and routing instructions will vary depending on the motor model.

3. Connect the adapter cable (AS EC QDE) and extension cable to the Ethernet cable on the Advanced GPS Ethernet Connector from the trolling motor. **On round connectors,** hand-tighten the screw nut.

Eight Pin Connector

Receptacle

Advanced GPS Ethernet Connector from Trolling Motor
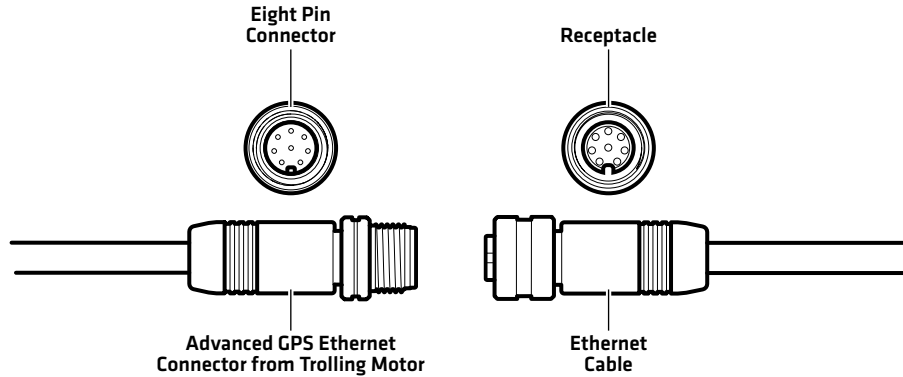
Ethernet Cable

4. Route the cable to the Humminbird fish finder or optional Ethernet Switch.

📝 **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.

5. **Ethernet Switch:** Connect the Ethernet Cable connector to an available Ethernet port. Hand-tighten the screw nut to secure the connection.

HELIX Control Head: Align the Receptacle on the Ethernet Cable with the Eight Pin Connector on the HELIX Adapter Cable provided. Notice the keyed connectors. Tighten the Collar from the Ethernet Cable to secure the connection.
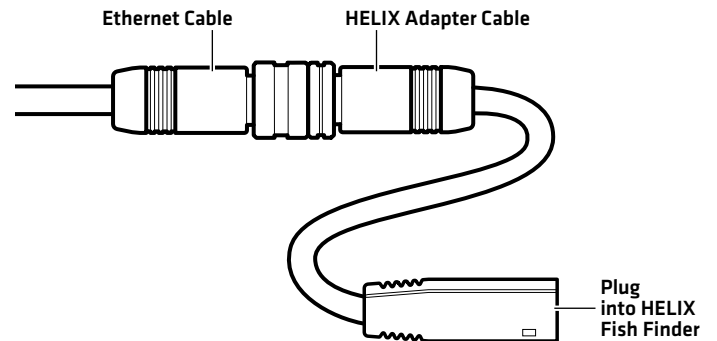
The HELIX Adapter Cable directly connects the Ethernet Cable to a HELIX fish finder. Locate the HELIX Adapter Cable Keyed Connector on the back of the fish finder. Plug the HELIX Adapter Cable into the back of the HELIX fish finder to complete the connection.

Ethernet Cable   **HELIX Adapter Cable**

Plug into HELIX Fish Finder

HELIX 7 Ports

Ethernet **Power** **COM (communications)** **Transducer**

Optional: Use a Y-cable to connect Transducer and Speed Sensor Accessory

HELIX 8, 9, 10, 12, 15 Cable Tray

Transducer **COM (communications)** **Power**

pin **Ethernet** **Temp/Speed** **pin**
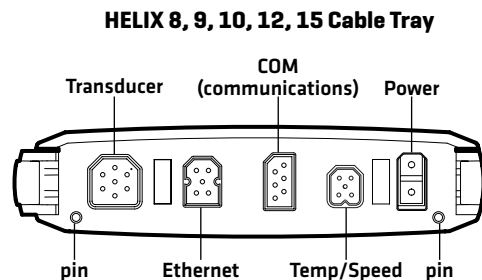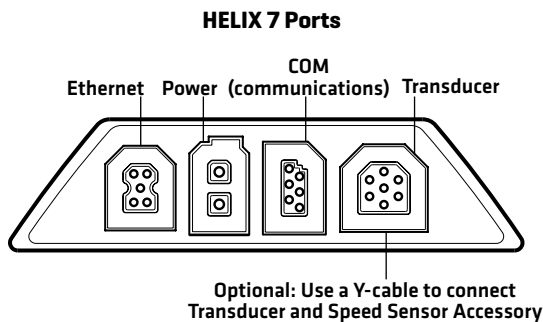
📝 **NOTE:** The ports are keyed to prevent reversed installation, so be careful not to force the connectors into the connector ports.

4 | Power on the Humminbird Fish Finder

After connecting the trolling motor to the HELIX fish finder, it is important to confirm the connection. All equipment should be connected and powered before you turn on the fish finder.

Power On

1. Turn on the power source and trolling motor.
2. Press the POWER key on the fish finder.
3. When the Title screen is displayed, press the MENU key.
4. Select Normal. Press the RIGHT Cursor key.

5 | Confirm Trolling Motor Connection

1. Press and hold the VIEW key.
2. Select System > Accessory Test.

    Confirm the Trolling Motor is listed as Connected. It may take up to one minute for the trolling motor to be detected.

    Unconnected: If it is listed as Unconnected, check the cable and power connections to confirm they are secure and powered on. Review the installation guide that was included with your trolling motor to confirm it is installed correctly.

Confirming Trolling Motor is Connected

Depth	Accessory Test	
▬▬▬	360 Imaging	**UNCONNECTED**
Temp.1	BT Raptor	**UNCONNECTED**
	GPS	**CONNECTED**
▬▬▬	MEGA 360 Imaging	**UNCONNECTED**
S 17.80604°	MEGA Live v1.140 S/N: 210825040072	**CONNECTED**
E 146.52866°	NMEA2K Gateway v1.030	**CONNECTED**
Time	Radar	**UNCONNECTED**
	Remote	**UNCONNECTED** — unconnected (not detected by the HELIX)
4:51 PM	Speed	**UNCONNECTED**
Speed |mph	Temperature	**UNCONNECTED**
0.0	Trolling Motor v1.351	**CONNECTED** — connected
VLT |v		
13.2		

NOTE: The menus for installed accessories are typically included in the Accessories tab in the Main Menu. See your accessory guide for details. For the latest list of accessories that are compatible with your fish finder, visit our Web site at **humminbird. johnsonoutdoors.com**.

Use the instructions in this section to confirm the HELIX has GPS reception. GPS is required to enable the navigation features on the fish finder.

1. Press and hold the VIEW key.

2. Select System > GPS Diagnostic View.

   Confirm GPS Fix Type is shown as Enhanced or 3D.

   Confirm that the latitude/longitude position readout is displayed.

   NOTE: To confirm the GPS signal on the trolling motor, see your Minn Kota trolling motor owner's manual.

Reviewing GPS Reception

active satellite signal strength (yellow)

GPS Diagnostic View

8	HDOP
7	1.00
5	
20	Est Pos Error
9	17ft
	Average CNO
2	33
4	Top 4
24	39
28	Speed
	5.6mph

monitored satellite signal strength (gray)

fix type shown as enhanced

| Fix Type | Enhanced |
| Source | Internal GPS |

latitude/longitude position

NORTH	50°41.147'
WEST	001°03.178'
Date	06/14/08
Time	12:27:04 PM

HDOP	1.00
Est Pos Error	17ft
Average CNO	33
Top 4	39
Speed	5.6mph
COG	000°t
SD Card	3.67/3.7GB
Chart Card	LkMasterFL

Update Software

Your Humminbird model may need a software update to work with the Advanced GPS Navigation System. We recommend that you read the following section completely before starting any software updates.

Humminbird Software: Advanced GPS Navigation requires the following software versions:

- **HELIX:** 1.35 or higher

Minn Kota Wireless Remote and Controller: The Advanced GPS Navigation system has separate software updates for the controller and remote. After the software is updated on the fish finder, you must go to the remote and initiate the download of the remote software to the remote itself. See your *Wireless Remote Owner's Manual* for details.

Preparation: We recommend that you read the following section completely before starting any software updates. The Humminbird fish finder will take approximately 10 minutes to update, and each Humminbird fish finder on the network must be updated individually. Accessories take approximately 3 minutes to update.

Supplies: In addition to your Humminbird equipment, you will need a computer with Internet access and a blank SD or microSD card (depending on your Humminbird model).

Technical Support: If you have any questions about the software update process, contact Technical Support through our Help Center at **https:// humminbird-help.johnsonoutdoors.com/hc/en-us**.

1 | Register Products

Register your Humminbird equipment so that you will receive the latest Humminbird news, including accessory compatibility and software update information.

1. Go to our Web site at **humminbird.johnsonoutdoors.com**. Select Support > Register Your Product.
2. Follow the on-screen prompts to register your products.

2 | Check the Current Software Version

It is helpful to review the software version number that is currently installed on the fish finder and each accessory.

1. Press and hold the VIEW key.
2. Select System > System Status.
3. Confirm the Software Version listed.

3 | Update Fish Finder Software

Update Your Fish Finder Software with an SD Card

You will need an SD or microSD card (depending on your fish finder model).

⚠️ **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 fish finder data files periodically. See your fish finder operations manual for more information.

1. Before the fish finder software is updated or restored to system defaults, export your navigation data and copy your screen snapshots to an SD or microSD card. See your fish finder operations manual for instructions.
2. Install a blank SD or microSD card into the computer card slot. If the card contains any previous software versions, delete them.
3. Go to **humminbird.johnsonoutdoors.com**, and click Support > Software Updates.
4. Click on your fish finder series and model. If prompted with a question about your network, select the appropriate answer. The available software update is listed as a download at the bottom of the page.
   - Read the notices and instructions, and select Download. Your download will begin automatically.
   - Open your computer's downloads folder, and confirm that the software file name matches your fish finder model.

- ▪ If the software file is a zipped folder, extract all files.

- ▪ Move the software file or extracted files from the downloads folder to the SD or microSD card.

5. Repeat step 4 to download the software updates posted to each product.

6. Power on your Humminbird fish finder. Start **Normal** mode.

7. Insert the SD or microSD card (with the software file) into the fish finder card slot.

8. Follow the on-screen prompts to update the fish finder software.

9. When the software update is complete, remove the SD or microSD card from the fish finder card slot.

10. **Restart:** If you don't have any other software updates to install, power off the fish finder, and restart it.

Update Software with the One-Boat Network App

You can use the One-boat Network App to download and push software updates directly to your Humminbird fish finder.

NOTE: It is important to install the latest software update on your fish finder to enable all One-Boat Network features. For the latest software update, visit our Web site at **humminbird.johnsonoutdoors.com**.

NOTE: You must first download the One-Boat Network App and pair your mobile device to your fish finder. See the ***One-Boat Network App Operations Guide*** for more information.

1. Open the One-Boat Network App on your mobile device.

2. From the Home screen, tap Network + Updates.

3. Under Humminbird Units, tap Download Update. The download progress is displayed on the screen.

   You can also tap the More Options icon (...) next to the device you want to update, and then tap Download Update.

   NOTE: Your update may take several minutes to download. You may close the app while you wait for the download to complete.

4. Once your download is complete, tap Transfer Software.

   You can also tap the More Options icon (...) again, and then tap Transfer Software or Delete Software.

5. Confirm the estimated transfer time.

6. Tap the radial button to select where to upload the software update (Internal Storage, SD Card 1 or SD Card 2).

   NOTE: You cannot download software updates to an SD or microSD card with CoastMaster or LakeMaster charts saved to it.

7. Tap Start Transfer (Apple iOS) or Transfer (Google Android).

   The upload progress is displayed under the selected unit in the One-Boat Network App and in the System Status view on the fish finder.

8. Follow the on-screen prompts on the fish finder to complete the software installation.

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4 | Update Accessory Software

If you have additional equipment connected to the network, update each product's software individually. Refer to the accessory operations manual for instructions.

Update Accessory Software with an SD Card

You will need an SD or microSD card (depending on your fish finder model).

1. Insert an SD or microSD card into the computer card slot. If the card contains any previous software versions, delete them.

2. Go to **humminbird.johnsonoutdoors.com**, and click Support > Software Updates.

3. Scroll down to Accessories and Mapping. Click on your accessory. The available software updates are listed as downloads at the bottom of the page.

   - ▪ Read the notices and instructions, and select Download. Your download will begin automatically.

   - ▪ Open your computer's downloads folder, and confirm that the software file name matches your accessory.

- If the software file is a zipped folder, extract all files.
  - Move the software file or extracted files from the downloads folder to the SD or microSD card.
4. Power on your Humminbird fish finder. Start Normal mode.
5. Confirm that your accessory is detected by your fish finder.
6. Insert the SD or microSD card (with the software file) into the fish finder card slot.
7. The software will be automatically detected. It may take a few minutes for the software to be detected on the network, and the fish finder will display a dialog box to indicate that the update is in progress.
8. When the software update is complete, remove the SD or microSD card from the fish finder card slot.
9. **Restart:** If you don't have any other software updates to install, power off the fish finder, and restart it.

Update Accessory Software with the One-Boat Network App

1. Open the One-Boat Network App on your mobile device.
2. Tap Network + Updates.
3. Tap Download Update next to the device you want to update. The download progress is displayed on the screen.
4. Tap Transfer Software next to the selected device once the download is complete.

Configure Advanced GPS Navigation with the HELIX

Use the instructions in this section to set up Advanced GPS Navigation on the HELIX fish finder.

1 | Open the Motor Settings Menu

Use the Motor Settings menu to enable motor navigation and configure the Advanced GPS Navigation.

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.

2. Select Minn Kota Motor Settings.

3. Press the RIGHT Cursor key.

2 | Enable Motor Navigation

To use Advanced GPS Navigation, the Motor Navigation menu must be turned on. When Motor Navigation is turned on, the related Motor menus will be added to the menu system. If Motor Navigation is turned off, the fish finder will operate with its traditional Humminbird navigation features.

> **NOTE:** If Advanced GPS is connected during navigation, navigation will automatically be canceled. See **Installation: Confirm Advanced GPS Installation and Connection on the Humminbird Fish Finder**.

Enable Motor Navigation

1. From the Motor Settings menu, select Motor Navigation.

   It may take a moment for the control head to detect the trolling motor and display the Motor Settings menu.

2. Select On.

Enabling Motor Navigation

Configuration
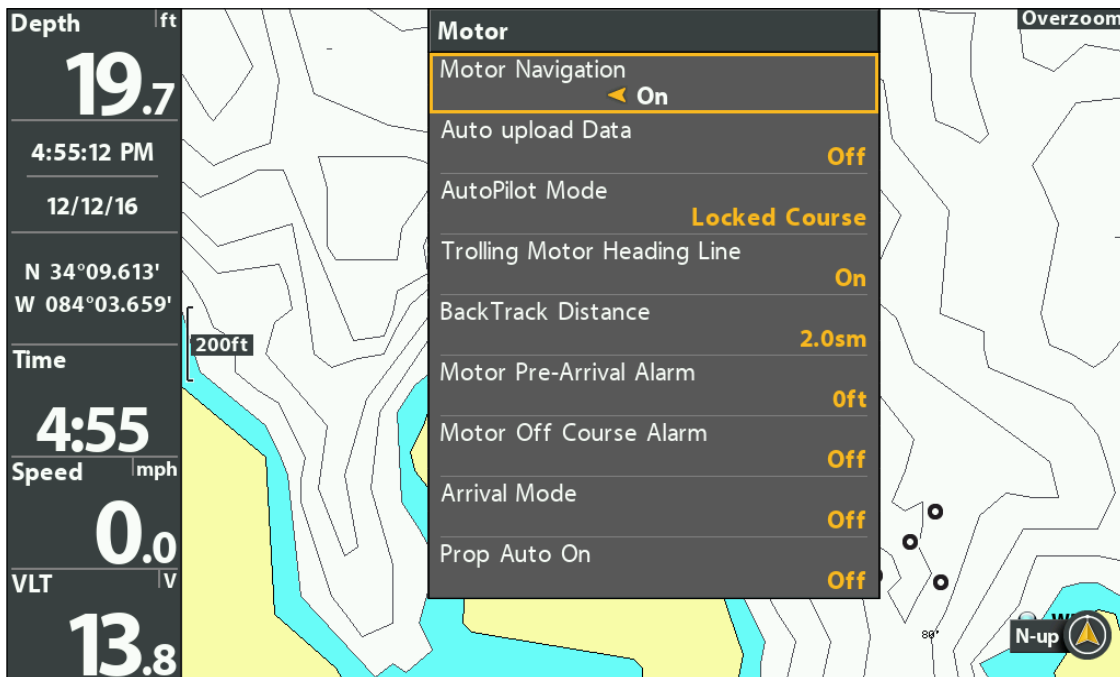
3 | Turn on Auto Upload Data

Turn on Auto Upload Data to upload saved iTracks and Spot-Locks from the trolling motor. When Auto Upload Data is turned on, saved iTracks and Spot-Locks from the trolling motor are transferred to the HELIX fish finder, and saved iTracks and Spot-Locks from the HELIX are transferred to the trolling motor. Data will be transferred when you power on the HELIX, as well as any time new data is created on the trolling motor or the HELIX fish finder.

Turn On Auto Upload Data

1. From the Motor Settings menu, select Auto Upload Data.
2. Select On.

NOTE: If there is not enough available memory space on the HELIX, an error message will display and data will not be transferred until more space is created on the HELIX fish finder.

NOTE: For more information about exporting navigation data, see *Manage your Advanced GPS Navigation Data*.

4 | Turn On/Off Prop Auto-On

When Prop Auto-On is turned on, the motor will start the selected navigation mode as soon as it is selected. The propeller will turn on at the current speed setting. If the Prop Auto-On menu is turned on, but the propeller is not turning, the speed might be set to 0. See *Propeller Controls* for more information.

When Prop Auto-On is turned off, you must start the propeller manually each time you select a motor navigation mode. However, this menu does not apply to Spot-Locks and Cruise Control. These navigation modes will turn on the propeller as soon as they are engaged, regardless of the Prop Auto-On setting.

WARNING! Spot-Locks and Cruise Control will turn on the propeller as soon as they are engaged, regardless of the Prop Auto-On setting.

Turn On/Off Prop Auto-On

1. From the Motor Settings Menu, select Prop Auto On.
2. Select On or Off.

WARNING! When Prop Auto-On is turned on, the propeller will turn on when navigation features are used. Navigation features include working with iTracks and AutoPilot. Be sure the prop is clear from obstructions and hazards when using navigation features.

5 | Set the Arrival Mode

When you are navigating with Advanced GPS Navigation 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 navigation after the destination point is reached.

The Arrival Mode setting affects iTracks, routes, waypoints, and Spot-Locks. It does not apply to Follow the Contour, Follow the Shoreline or Circle Mode.

Set the Arrival Mode

1. From the Motor Settings menu, select Arrival Mode.
2. Select one of the following menu options:

Motor Navigation Go To Menu Options	
Prop Off	Turns off the propeller and returns the motor to manual mode after navigation is finished. You must be prepared to take manual control of the boat. ⚠ **WARNING!** If AutoPilot is the current navigation mode, you must turn off the propeller separately. See ***Propeller Controls***.
Spot-Lock	Creates and engages a Spot-Lock after navigation is finished. See ***Spot-Locks*** for details.
AutoPilot	**If the cursor is inactive,** navigation begins in the direction of the boat's Course Over Ground (COG) setting. If COG is not available, the current Heading (Hdg) is used. **If the cursor is active,** navigation begins in the direction of the cursor's position using bearing data from the active cursor.
Auto Deploy Raptor/Talon	After the boat has completed navigation, the system will deploy the Raptor/Talon.

6 | Install a Map Card (optional)

Use a Humminbird map card to provide detailed maps, depth contours, etc. on the chart views. To use Follow the Contour or Follow the Shoreline, a compatible Humminbird LakeMaster, CoastMaster or AutoChart SD card must be installed and selected as the map source.

Compatible Map Cards: Humminbird CoastMaster, LakeMaster, LakeMaster PLUS, AutoChart ZeroLine, and ChartSelect. Visit **humminbird.johnsonoutdoors.com** for the latest list of compatible charts.

1. Install a compatible map card.

   See your fish finder operations guide for installation details.

2. If the fish finder does not select the map source automatically, select the Main Menu > Chart tab > Map Source.

    Select the installation location of the map card.

⚠ **WARNING!** Do not leave the SD slot cover open. The slot cover should always be closed to prevent water damage to the unit.

Select a Chart Preset (for Humminbird Chart Cards with Vx Technology)

Use Chart Presets to quickly alternate between settings. You can use the default Fishing or Navigation settings provided, or you can create a custom User preset with your preferences. The Fishing and Navigation presets are also fully customizable. You can restore each preset back to its default settings at any time.

1. **Main Menu:** Press the Menu key twice.
2. Select the HB Chart tab.
3. Select a Chart Preset.

📝 **QUICK TIP:** You can also change this setting by pressing the MENU key once to open the Chart X-Press Menu.

When you start your trip for the day, it is important to note if the water level is higher or lower than normal. For example, if the lake is down 5 feet, set the Water Level Offset setting to -5. The displayed numbers on the Contour Lines will adjust from the Water Level Offset setting, and the water level offset will be highlighted in brown to extend the land visually on the display.

NOTE: Humminbird must be installed and selected as the Chart Source to enable this feature.

1. **Main Menu:** Press the EXIT key twice to return to the main menu. Select the **HB Chart** tab.

   OR

   Press the MENU key twice. Select the HB Chart tab.

2. Select Water Level Offset.

3. Press the RIGHT or LEFT Cursor keys to adjust the setting.

   If the water level is higher than normal, set a (+) positive amount.

   If the water level is lower than normal, set a (-) negative amount.

   If the water level has not changed (normal), set Water Level Offset to (0) zero.

Water Level Offset (Set to 0 = Off)	Water Level Offset Adjusted to -4
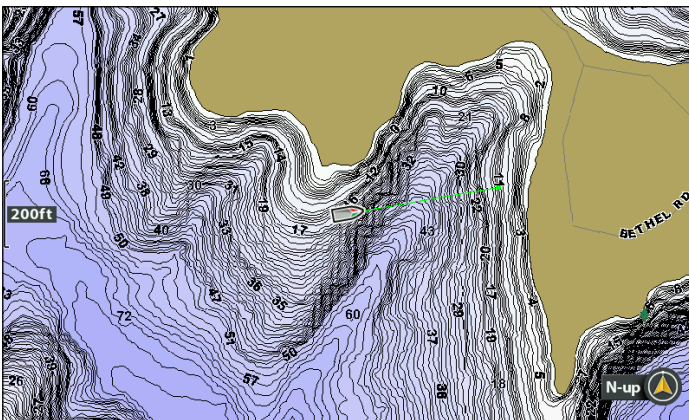
If the water is lower than normal, set the Water Level Offset to a negative number, and the land will extend visually on the map (as shown above). If the water is higher than normal, set the Water Level Offset to a (+) positive amount, and the water line will extend visually on the map.

NOTE: For additional Humminbird map card menus, see *Display Humminbird LakeMaster Contour Lines and Depth Ranges* in this manual. For additional features related to your Humminbird map card, visit our Web site at **humminbird.johnsonoutdoors.com** to download the accessory guide.

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8 | Complete Motor Setup and Calibration

Adjust Boat Scale

Trolling motor performance can be impacted by factors including, but not limited to, wind, water conditions, boat specifications, battery health, wiring, etc. Boat Scale provides a method of adjusting how the trolling motor will perform to account for these and other variables. The Minn Kota trolling motor comes from the factory with Boat Scale set to zero. This can be adjusted either up (+2) or down (-2) to increase or decrease the way the motor control software will apply power while using a navigation mode like Spot Lock.

An example of needing to reduce Boat Scale would be when the motor is over correcting or making many frequent adjustments while using Spot-Lock. In this case, try reducing Boat Scale -1 to reduce this behavior. If the behavior continues, reduce Boat

Scale to -2. The opposite of this would be while using Spot-Lock, the motor is drifting away from its target location frequently or is struggling to make corrections. In this case, try increasing Boat Scale to +1 to help improve the motor's accuracy. If the behavior continues, increase Boat Scale to +2.

1. From the Motor Settings Menu, select Setup and Calibration.
2. Select Boat Scale.
3. Press the RIGHT or LEFT Cursor keys to adjust the setting.

Set the Stow Orientation

The Park Position is a term used to describe the lower unit and Prop position when the motor is stowed. The factory default for the lower unit is for the Prop to face outboard (Prop Left) on a Port installation. Setting the Park Position allows the installation to be customized to fit boat positioning for either a Port or Starboard installation. Use the setting to configure the Prop left or right to accommodate fishing or trailering applications.

1. From the Motor Settings Menu, select Setup and Calibration.
2. Select Prop Stow Orientation.
3. Press the RIGHT or LEFT Cursor keys to select Prop Left or Prop Right.

Set the Keel Mount Offset*

The Keel Mount Offset adjusts the position of the motor in relation to the Keel. This function is only performed on QUEST series motors.

Minn Kota QUEST series trolling motors with a built-in Heading Sensor come from the factory with the Lower Unit parallel to the Mount. The position of the Lower Unit is referred to as the Keel Offset. When the Lower Unit is parallel to the Mount, the Keel Offset is zero degrees. In an ideal installation, the Lower Unit will be parallel to the Keel, however, the Mount is rarely installed to be perfectly in-line with the Keel, therefore the Lower Unit will not be parallel with the Keel. Nearly all installations will have some variation in mounting position to either the Port or Starboard side of the boat. The Keel Offset is specified with the Keel Mount Offset function. When setting the Keel Offset, any position towards the Port will record a Keel Offset with a negative angle. Any position towards Starboard will record a Keel Offset with a positive angle. Before adjusting the Keel Offset, complete all installation steps. This includes mounting the trolling motor to the boat and installing power and accessory cables.

1. From the Motor Settings Menu, select Setup and Calibration.
2. Select Keel Mount Offset.
3. Review all safety warnings. Select Start to begin the process.
4. Press the RIGHT or LEFT Cursor keys to point the motor forward and parallel to the Keel.
5. When satisfied with the placement, select Set.

Set the Stow Orientation
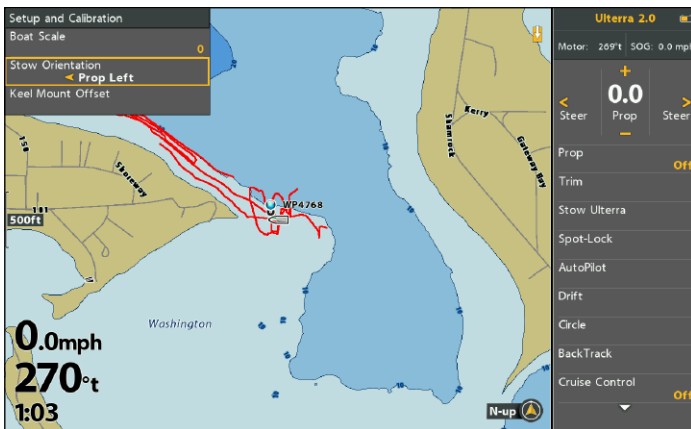
Adjust Keel Mount Offset
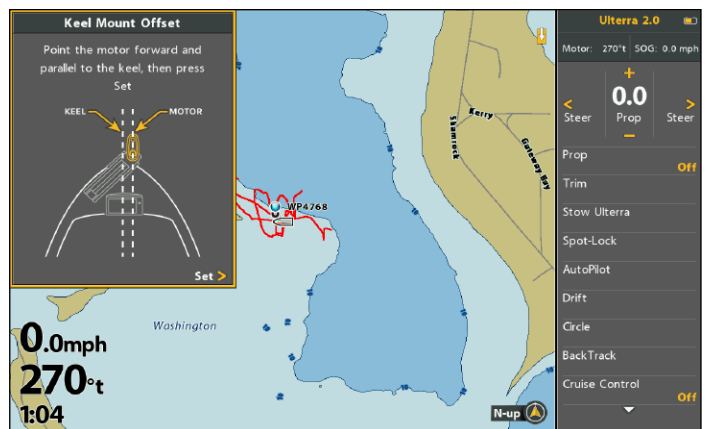
QUEST Series motors only.

Set the Heading Sensor Calibration

This function is only performed on motors with an external Heading Sensor. The process of calibrating the Heading Sensor must occur while your boat is on the water. Heading Sensor Calibration should always be performed after the trolling motor and Heading Sensor have been mounted, but before the Heading Sensor Offset is performed. The Heading Sensor must be connected to power and paired with the Control Head of the trolling motor before beginning this process. The calibration process requires the boat to be driven in two complete circles, so plan accordingly when preparing for this process.

1. From the Motor Settings Menu, select Setup and Calibration.
2. Select Calibrate Heading Sensor.
3. Review all safety warnings. Select Start to begin the process.
4. Drive the boat in two complete circles.
5. The progress of the boat around the circular path will show as a percentage completed for each circle while the boat navigates.
6. Once the two circles are complete, the screen will read "Calibration Successful. Please perform Sensor Offset."
7. Select Start Sensor Offset to begin or press Exit return to the home screen.

Set the Heading Offset

With the Heading Sensor calibrated, set the Heading Offset. Heading Offset is the difference between the angle of the Keel of the boat and the angle at which the Heading Sensor is mounted to the deck of the boat. During installation, the Heading Sensor was installed to be as parallel to the Keel of the boat as possible. If the boat and Heading Sensor are perfectly parallel and pointing in exactly the same direction, the Offset will be a perfect 0° degrees. Knowing that installations are never perfect, the Heading Offset can be set to compensate for the difference between the two.

1. From the Motor Settings Menu, select Setup and Calibration.
2. Select Offset Heading Sensor.
3. Review all safety warnings. Select Start to begin the process.
4. Press the RIGHT or LEFT Cursor keys to point the motor forward and parallel to the Keel.
5. When satisfied with the placement, select Set.

9 | Set Straight on Deploy*

Minn Kota recommends setting the Keel Offset when the position of the Lower Unit is parallel with the Keel. Save the Keel Offset before exploring the Straight on Deploy feature. Straight on Deploy uses the position recorded in Keel Offset to know where to position the Lower Unit to be parallel with the Keel. When Straight on Deploy is engaged, the trolling motor will deploy the motor and automatically rotate the Lower Unit to the position saved to memory in Keel Offset. By default, the Lower Unit will be parallel to the Keel when the Mount is parallel to the Keel. If the Keel Offset was programmed to another angle, the Straight on Deploy feature will correct the position to match the corrected angle when turned "on." If straight on deploy is turned "off," the trolling motor will not correct the position in any direction.

1. From the Motor Settings Menu, select Straight Ahead on Deploy.
2. Press the RIGHT Cursor key to turn this setting on or off.

10 | Customize Foot Pedal One-Boat Network Button*

Minn Kota QUEST trolling motors have a programmable One-Boat Network button on the foot pedal. You can customize the One-Boat Network button function from the HELIX.

1. From the Motor Settings Menu, select Motor Foot Pedal OBN Button.
2. Press the RIGHT or LEFT Cursor keys to select one of the following options: Set AutoPilot, Mark a Waypoint, or Deploy Shallow Water Anchor.

*QUEST Series motors only.

ADJUST MOTOR ALARMS

Use the instructions in this section to set the motor alarms. When an alarm is turned on, an alert will sound and/or display on the Humminbird fish finder to indicate the threshold has been met or exceeded. For more information about alarms or to set additional alarms, see your HELIX operations manual.

> **NOTE:** When Motor Navigation is turned on in the menu system, the Arrival Alarm in the Alarms menu is replaced by the Motor Pre-Arrival Alarm, and the Off Course (XTE) Alarm is replaced by the Motor Off Course (XTE) Alarm.

Adjust the Motor Pre-Arrival Alarm

The Motor **Pre-Arrival Alarm** provides an alert when the boat is within the set distance to the destination point in a waypoint, route, or iTrack. For example, if Advanced GPS Navigation 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, the Advanced GPS Navigation system will soon transition to the type of navigation set in the Arrival Mode menu option. Be prepared that you may need to take manual control of the boat. See *Configure Advanced GPS Navigation with the Fish Finder: Set the Arrival Mode*.

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Motor Settings. Press the RIGHT Cursor key.
3. Select Motor Pre-Arrival Alarm.
4. Press the RIGHT or LEFT Cursor keys to adjust the alarm threshold.

Arrival Circle

navigation in progress

boat icon
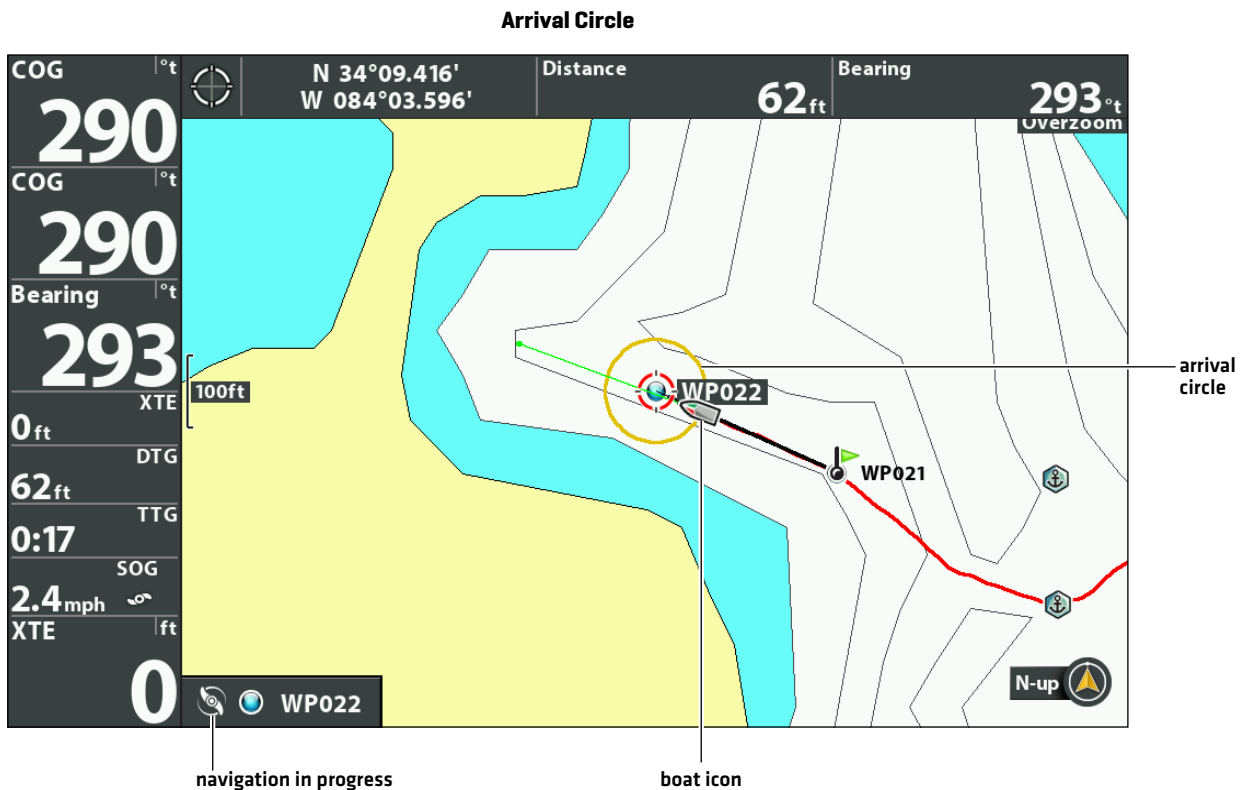
Adjust the Motor Off Course (XTE) Alarm

The Motor **Off Course (XTE) Alarm** provides an alert when the boat has traveled outside the selected route. You can set how far the boat is allowed to move off course before the alarm is triggered.

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Motor Settings. Press the RIGHT Cursor key.
3. Select Motor Off Course Alarm.
4. Press the RIGHT or LEFT Cursor keys to adjust the alarm threshold.

DISPLAY DIGITAL READOUT BOXES

To see digital readouts for navigation and motor status icons, set Digital Readouts to Boxes.

NOTE: When Digital Readouts is set to Off or Overlays, the motor status icons will be hidden. Icons for Spot-Lock, waypoints, etc. will continue to be shown on the Chart View.

Digital Readouts set to Boxes, Motor Status Icons Displayed

digital readout boxes

propeller On   navigation in progress
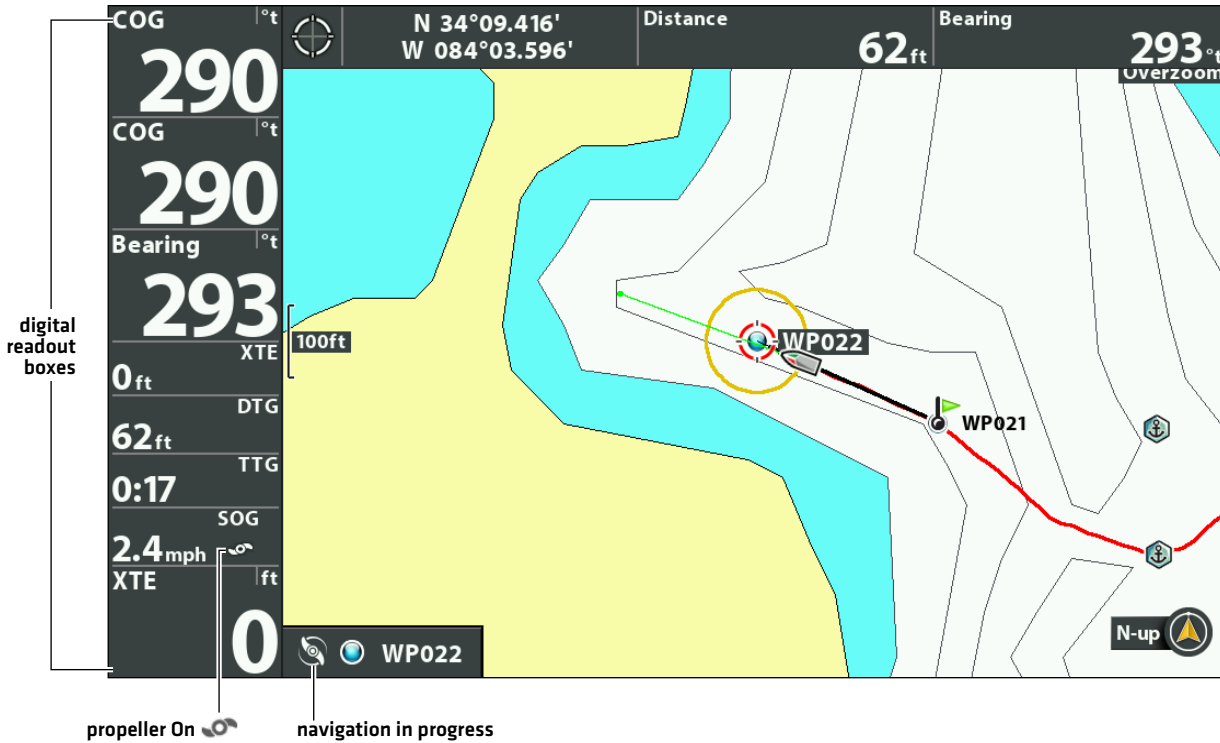
Show Motor Status Icons

When the Digital Readouts menu is set to Boxes, the motor status icons will display on the Chart View during navigation.

1. **Main Menu:** Press the MENU key twice. Select the Setup tab.
2. Select Digital Readouts.
3. Select Boxes.
4. Press the EXIT key repeatedly until the menu system is closed.

Label	Name	Description
Bearing	Bearing	The direction to a destination waypoint measured in degrees from north.
COG	Course Over Ground (Course)	The direction the boat is traveling measured in degrees from North. When the COG is equal to Bearing, the boat is said to be on course and will arrive at the destination in the most efficient manner.
DTG	Distance to Go (Distance)	The distance between the boat position and the next waypoint on the route.
ETA	Estimated Time of Arrival	The estimated time of arrival to the next waypoint on the route.
Position (#)	GPS	The latitude and longitude coordinates of the boat position based on the GPS receiver installation location.
Speed	Speed	Speed is the measurement of the boat's progress across a given distance based on the speed measurement provided by the GPS.
Triplog	Triplog	The elapsed time since the triplog was last reset, the distance traveled since last reset, and the average speed during timed interval. To reset the triplog, select the Main Menu > Settings tab > Triplog Reset.
TTG	Time to Go	The estimated time required to reach the next waypoint on the route. TTG is calculated using the SOG (Speed Over Ground) and DTG (Distance to Go).
XTE	Cross Track Error	The straight-line distance of the boat from the intended route. XTE measures how far the boat is off course.

Customize Digital Readouts

If you have Digital Readouts set to Boxes, you can select the data that will be displayed in each box. Use the **Select Readouts** or **Edit Data Boxes** menu to set your standard digital readouts. Use the **Select Nav Readouts** or **Edit Navigation Data Boxes** menu to set the digital readouts that will be displayed during navigation.

HELIX G3/G3N and older

1. **Main Menu (Custom User Mode):** Press the MENU key twice. Select the Setup tab.
2. Select Select Readouts or Select Nav Readouts. Press the RIGHT Cursor key.
3. Select a readout window (Readout 1, 2, 3, etc.).
4. Select a digital readout.

   Hide: To hide a readout window, select Off.

HELIX G4N

1. **Main Menu (Custom User Mode):** Press the MENU key twice. Select the Setup tab.
2. Select Edit Data Boxes or Edit Navigation Data Boxes. Press the RIGHT Cursor key.
3. Select a Data Box (Data Box 1, 2, 3, etc.).
4. Select a digital readout.

   Hide: To hide a data box, select Hide Data Box.

Display Contour Lines and Depth Ranges

When you install a CoastMaster Map Card, LakeMaster Map Card or LakeMaster PLUS Map Card, menu options are added to the menu system. You can display or hide contour lines, highlight shallow water, and highlight a depth range on the map.

> **NOTE:** A Humminbird CoastMaster or LakeMaster Map Card must be installed and selected as the map source to enable these features. For details and additional features related to your CoastMaster or LakeMaster Map Card, see your HELIX operations manual.

Adjusting the Humminbird Chart Card Display Settings
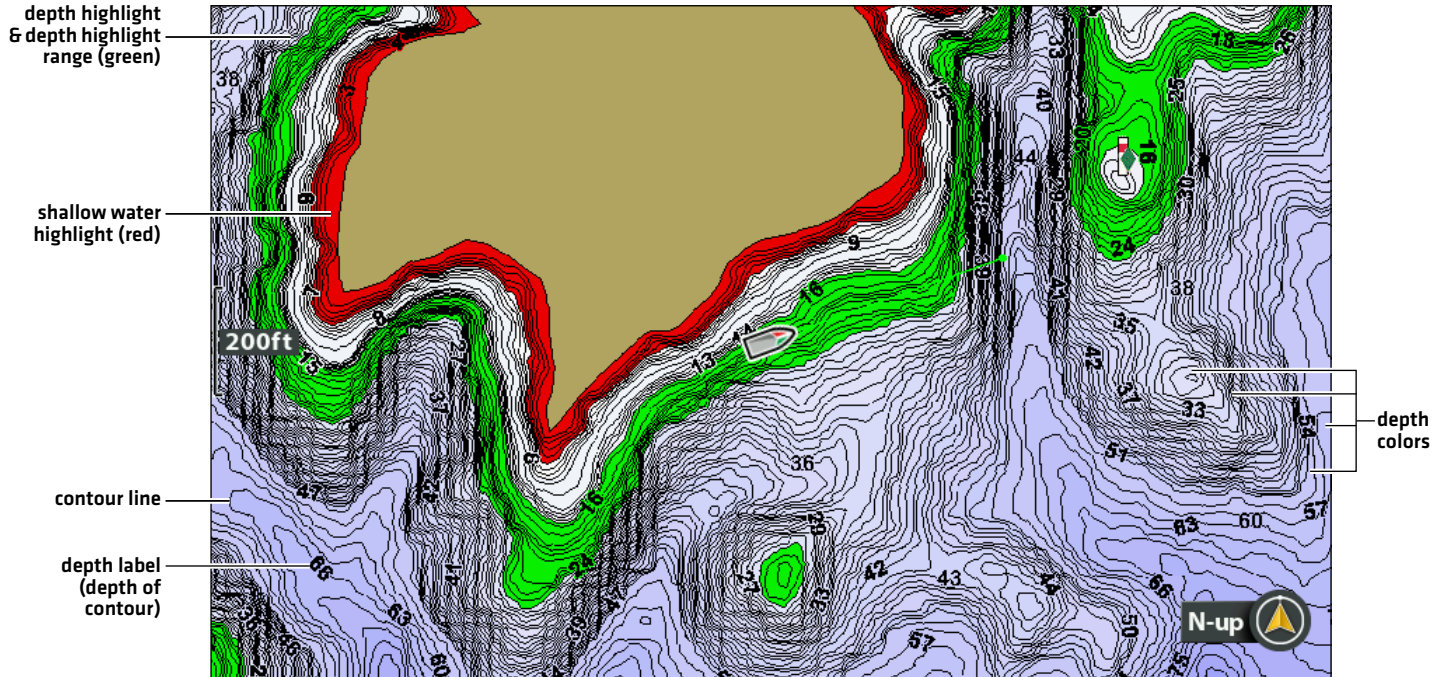
Show/Hide Contour Lines

Display or hide the water contour lines in the Chart View. This feature is also affected by the Water Level Offset setting. See *Select a Map Source: Set up Humminbird LakeMaster*.

Chart Cards with VX Technology

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select **Depth/Contours**.
3. From the **Depth/Contours** Menu, select **Contour Lines**.
4. Press the CHECK/INFO key or the RIGHT Cursor key to show or hide contour lines (check mark = visible, blank = hidden).

Legacy Chart Cards

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select **Contour Lines**.
3. Select Hidden or Visible.

Turn on Depth Colors

Set the depth shading in the Chart View to Off or Shaded.

Chart Cards with VX Technology

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select **Depth/Contours**.
3. From the **Depth/Contours** Menu, select **Depth Palettes**.
4. Press the CHECK/INFO key or the RIGHT Cursor key to show or hide depth colors (check mark = visible, blank = hidden).

Legacy Chart Cards

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select Depth Colors.
3. Press the RIGHT or LEFT Cursor keys to adjust the setting.

Highlight a Depth Range

Depth Highlight allows you to identify a depth in the Chart View. You can also adjust the range on each side of the depth using Depth Highlight Range. The depth range you set is highlighted in green on the chart.

For example, if you know a certain fish is holding at 18 to 20 feet, you can set the Depth Highlight to 19 feet and the Depth Highlight Range to +/- 1 foot. The view will show a green band from 18 to 20 feet.

Chart Cards with VX Technology

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select **Depth/Contours**.
3. From the **Depth/Contours** Menu, select **Palette Min Range**.
4. Press the RIGHT or LEFT Cursor key to adjust the setting.
5. Select **Palette Max Range**.
6. Press the RIGHT or LEFT Cursor key to adjust the setting.

Legacy Chart Cards

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select Depth Highlight.
3. Press the RIGHT or LEFT Cursor keys to select a depth.
4. To highlight the range on both sides of the selected depth, press the DOWN Cursor key. Select Depth Highlight Range.
5. Press the RIGHT or LEFT Cursor keys to select a range.

Highlight a Shallow Water Range

When the depth is equal to or less than the amount you set, it will be highlighted in red on the Chart View.

For example, if your boat has a draft of 3 feet, set the Shallow Water Highlight to 3 feet, and a red band from 0 to 3 feet will be shown on the map.

Chart Cards with VX Technology

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select **Depth Highlights**.
3. From the **Depth Highlights** Menu, select the first **Shallow Water Highlight** menu option.
4. Press the CHECK/INFO key or the RIGHT Cursor key to show or hide depth colors (check mark = visible, blank = hidden).
5. To adjust the highlight depth level, select the second **Shallow Water Highlight** menu option
6. Press the RIGHT or LEFT Cursor key to adjust the setting.

Legacy Chart Cards

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select Shallow Water Highlight.
3. Press the RIGHT or LEFT Cursor keys to select a depth.

Deploy or Stow the Trolling Motor

If you have an Ulterra, Ulterra QUEST or RT Instinct QUEST trolling motor installed, you can deploy or stow the motor using the the X-Press Remote on the HELIX fish finder.

⚠️ **WARNING!** Before you deploy or stow the motor, confirm the motor is clear from obstructions and has a clear path of travel. The propeller is disabled while the motor is being trimmed to prevent accidental contact with the rotating propeller.

Deploy the Motor

The first time you deploy the motor (after installation or after defaults have been reset), you will adjust the trim for operation. The control head will save the most-recent trim setting and apply it when the motor is deployed again.

⚠️ **WARNING!** As soon as Deploy Ulterra is selected, the motor will deploy automatically. Before you deploy or stow the motor, confirm the motor is clear from obstructions and has a clear path of travel. The propeller is disabled while the motor is being trimmed to prevent accidental contact with the rotating propeller.

1. Press the POWER key.
2. Select Deploy Ulterra. Press the RIGHT Cursor key.

   Trim Adjust (Installation only): Select Trim. Press the RIGHT or LEFT Cursor keys to adjust the trim.

   Pause: Select Pause Ulterra. Press the RIGHT Cursor key.

Stow the Motor

Use the following instructions to stow the trolling motor.

⚠️ **WARNING!** As soon as Stow is selected, the motor will stow automatically. Before you deploy or stow the motor, confirm the motor is clear from obstructions and has a clear path of travel. The propeller is disabled while the motor is being trimmed to prevent accidental contact with the rotating propeller.

1. Press the POWER key.
2. Select Stow Ulterra.
3. Press the RIGHT Cursor key.

Pause Deploying or Stowing

Use the following instructions to pause the trolling motor while it is being deployed or stowed.

1. Press the POWER key.
2. Select Pause Ulterra.
3. Press the RIGHT Cursor key.

   To resume deploying, see *Deploy the Motor*.

   To resume stowing, see *Stow the Motor*.

Adjust the Trim

Use the following instructions to adjust the trim. The Trim menu is available when the motor is deployed.

1. Press the POWER key.
2. Select Trim.
3. Press the RIGHT or LEFT Cursor keys to adjust the trim.

   The control head will save the most-recent trim setting and apply it when the motor is deployed again, even after power off.

ADVANCED GPS NAVIGATION OVERVIEW

Advanced GPS Navigation 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 Advanced GPS Navigation 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, Advanced GPS Navigation remembers and creates points to navigate your boat automatically. Advanced GPS Navigation also uses a method of GPS navigation called arrival circles. These imaginary circles allow Advanced GPS Navigation 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 the GPS signal strength, thus the greater the signal strength, the smaller the arrival circles.

Using Advanced GPS Navigation with the Humminbird Fish Finder

- With a connected Advanced GPS Navigation trolling motor, you can initiate navigation from the Humminbird fish finder or Wireless Remote, and the Advanced GPS Navigation system will automatically start navigating the boat. Commands initiated from the remote will also be displayed on the fish finder.

- The Advanced GPS Navigation features and menu options are displayed in the Chart View and Radar View, as well as the Chart and Radar multi-pane views. The following sections in this manual include instructions for the Chart View. The instructions will work the same for the Radar View, except for Follow the Contour and Follow the Shoreline navigation, which are not available in the Radar View.

- Depending on your model and network configuration, the Humminbird fish finder uses GPS data from the internal or external (networked) GPS receiver.

- Some of the Advanced GPS Navigation functions may override traditional Humminbird navigation menu options. Alarms have also been adapted to the Advanced GPS Navigation system.

- To use Follow the Contour or Follow the Shoreline, a Humminbird CoastMaster Map Card, LakeMaster Map Card, AutoChart ZeroLine Map Card, or AutoChart Live connection is required.

  NOTE: For the latest chart card compatibility information, visit our Web site at **humminbird.johnsonoutdoors.com**.

Open the Chart View

You can access the Advanced GPS Navigation menus in the Chart or Sonar Views. Use the following instructions to open a Chart View.

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

Navigation, Prop On

propeller On   navigation in progress
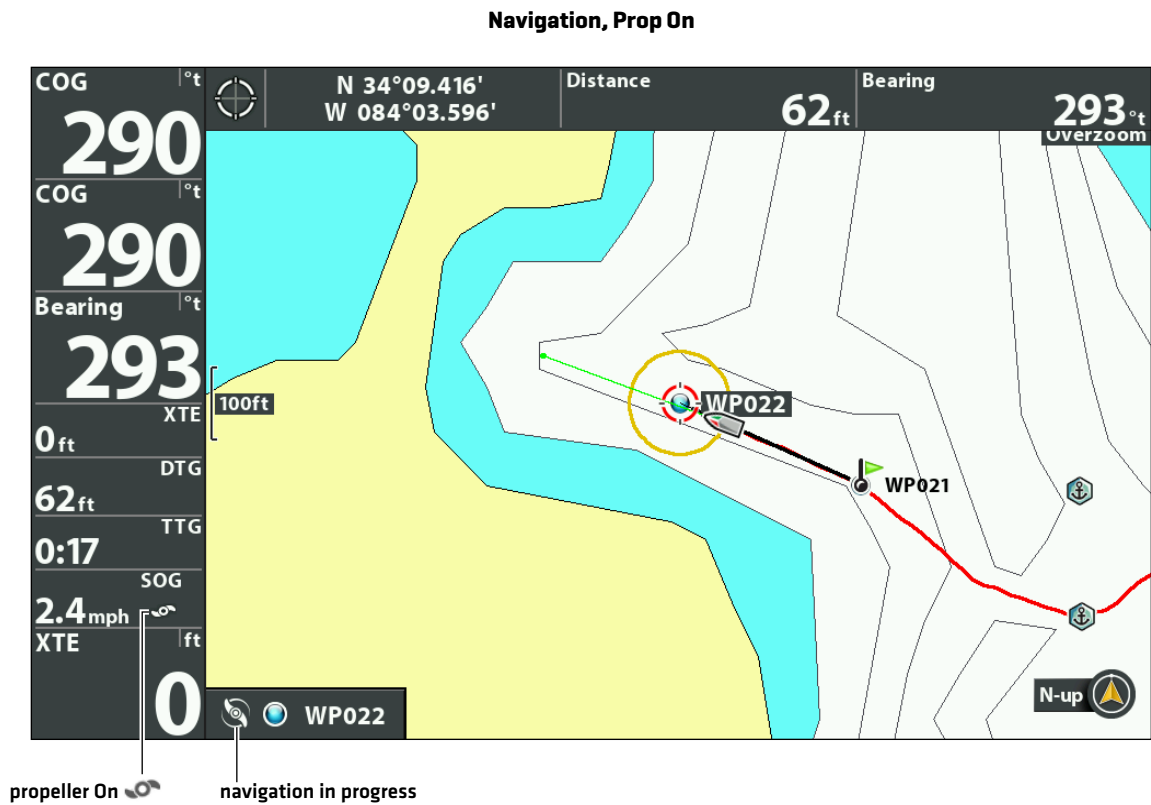
⊕ When the boat is stationary, it is drawn as a circle.

🔷 When the boat is in motion, it changes to a boat shape, pointed in the direction of motion.

Open the X-Press Remote

The menus for steering, propeller speed, propeller on/off, and cruise control are available on the X-Press Remote. The X-Press Remote can be accessed from any view.

This section is an overview. Each navigation mode is detailed throughout this manual. See *Propeller Controls* for more information.

1. Press the POWER key.

Opening the X-Press Remote (Chart View)

Open

Using the X-Press Remote

	+	
	🐇	
<		**>**
Steer	MAX	Steer
	−	

Prop	**On**
Cruise Control	**Off**
Sonar	**On**
Light	**5**
Background	**White**
Standby	

Select a Menu

EXIT
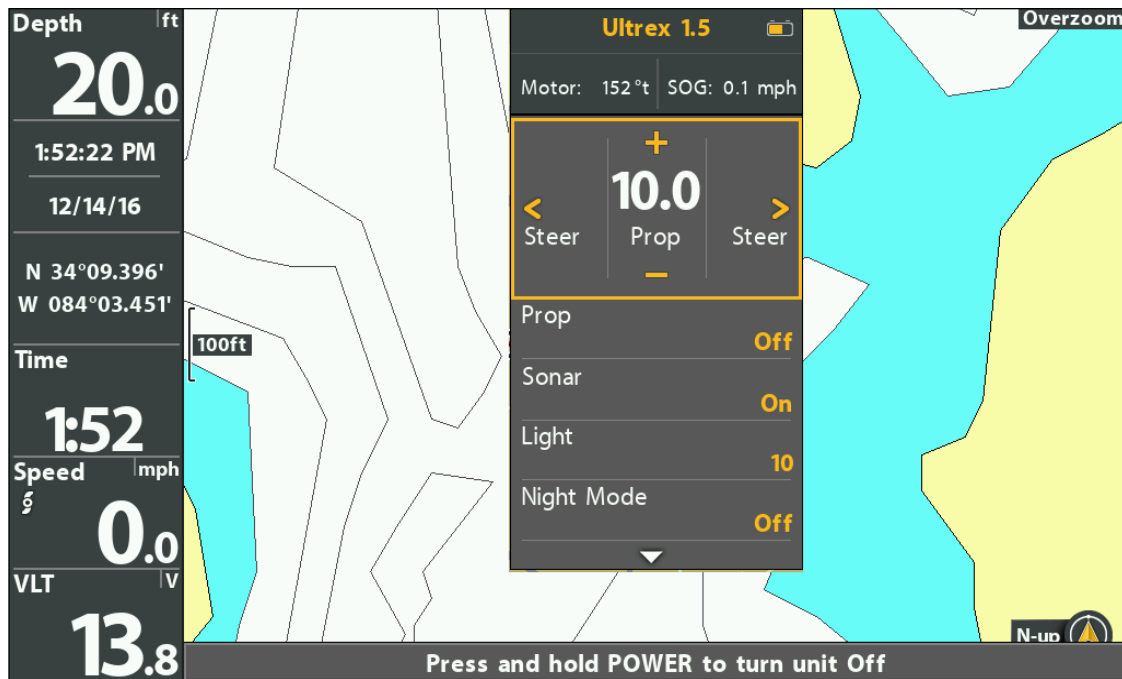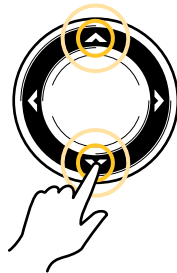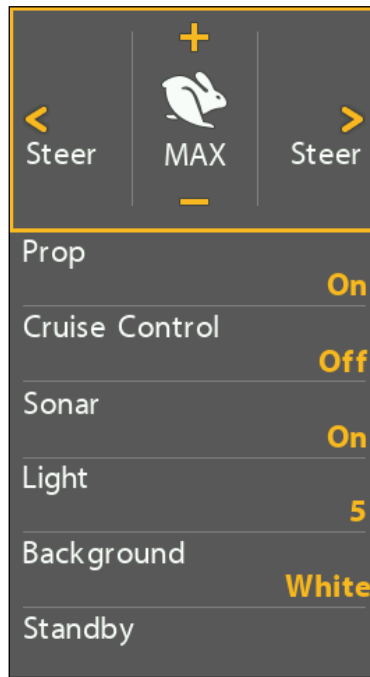
Jump
to the Top

Display the X-Press Remote Pane in Chart View

The X-Press Remote pane is available when a Chart View is displayed on-screen. The X-Press Remote pane is also available in Chart/Sonar Combo Views.

1. **Chart X-Press Menu:** With a Chart View displayed on-screen, press the MENU key once.

2. Select Trolling Motor Controls.

3. Select On.

4. Select Active Pane.

5. Select Right.

Selecting the X-Press Remote Pane
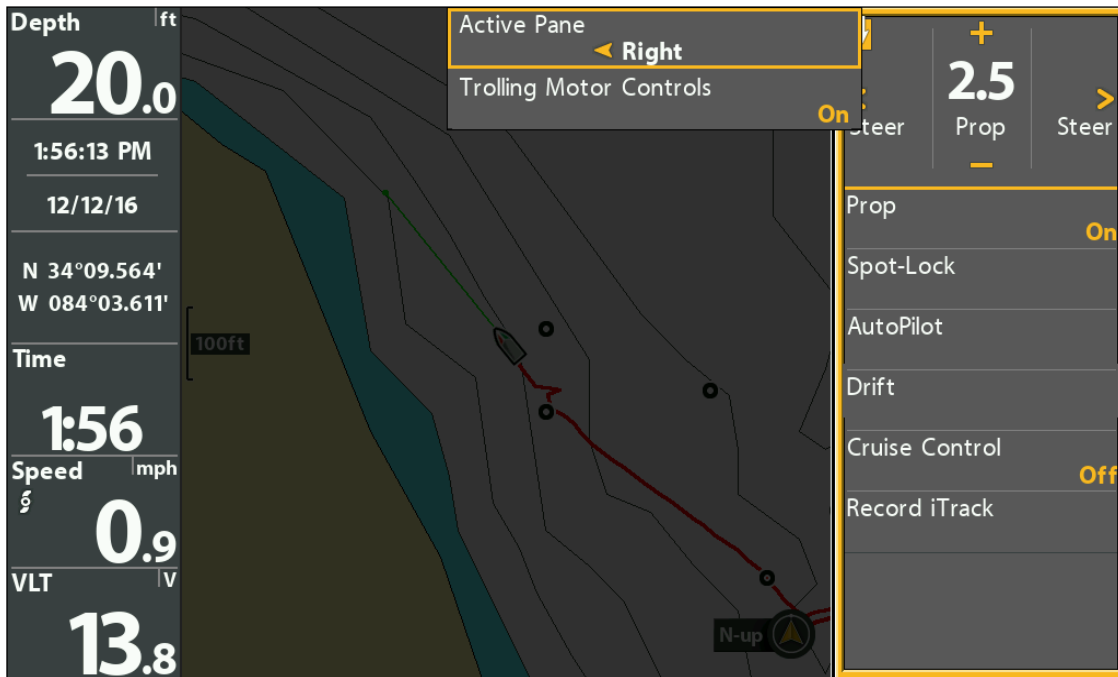
6. Press the EXIT key.

7. **Adjust menu settings:** Use the Cursor Control key to select a menu and change settings.

   See each related section of the manual for details.

8. **Switch to the Chart View Pane:** Press the MENU key once. Select Active Pane > Left.

   ⚠ **WARNING!** Beware of pressing the Cursor Control keys and moving the Advanced GPS Navigation system accidentally. Pressing the Cursor Control keys with the X-Press Remote pane Steer/Prop Menu selected will cancel the current navigation mode and switch the Advanced GPS Navigation system to manual control. To move the cursor on the Chart View, you must select Chart View as the Active Pane (Left).

Start Navigation

When Motor Navigation is selected as the navigation source, the Advanced GPS Navigation system becomes the steering source for navigating points, routes, iTracks, and contour lines. See *Configure Advanced GPS Navigation with the Fish Finder: Enable Navigation*.

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with each navigation mode. The propeller will automatically turn on when navigation modes are engaged, even if the engagement is accidental. A turning propeller can cause injury.

Open the Go To Menu

Use the **Go To menu** to select a motor navigation mode and start the Advanced GPS Navigation system. This section is an overview. Each navigation mode is detailed throughout this manual.

1. Press the GO TO key.
2. Select a navigation mode.

Motor Navigation Go To Menu Options	
Spot-Lock At Vessel	Select Spot-Lock to create and start navigation to a temporary Spot-Lock position, either at the boat's position or the cursor position. If you select Spot-Lock while navigating a route, BackTrack, iTrack, or contour, navigation will be paused on the Spot-Lock. See the *Spot-Lock* section for more information.
Follow the Contour (Chart View only)	Select Follow the Contour to start navigating the selected contour line. See the *Follow the Contour* section for compatible Map Card information and details. This feature is available in the Chart View only.
Follow the Shoreline (Chart View only)	Select Follow the Shoreline to start navigating the selected shoreline. See the *Follow the Shoreline* section for compatible Map Card information and details. This feature is available in the Chart View only.
AutoPilot	**If the cursor is inactive,** navigation begins in the direction of the boat's Course Over Ground (COG) setting. If COG is not available, the current Heading (Hdg) is used. **If the cursor is active,** navigation begins in the direction of the cursor's position using bearing data from the active cursor. See the *AutoPilot* section for details.
Drift	Select Drift Mode to keep the boat at a controlled target speed when following a desired straight-line course regardless of wind or current influence. See the *Drift Mode* section for details.
Circle	Select Circle Mode to set a point to navigate around. You can select clockwise or counterclockwise. See the *Circle Mode* section for details.
BackTrack	Select BackTrack to start navigating back through the Current Track, starting with the last recorded track point. The Current Track will be converted to a saved iTrack. While navigating BackTrack, the direction of navigation can be changed using the Reverse menu option. See the *BackTrack* section for details.
Nav Data	Select Nav Data to start navigation to a saved waypoint, route, Spot-Lock, iTrack, etc. See *Manage Your Advanced GPS Navigation Data* for details.

3. **If Prop Auto On is turned on,** the propeller will start navigation automatically.

   If Prop Auto On is turned off, turn on the propeller manually. Press the POWER key. Select Prop > On (For more information, see *Propeller Controls*).

4. When the destination is reached, the Advanced GPS Navigation system will enter the mode of navigation set in the Arrival Mode. See *Configure Advanced GPS Navigation with the Fish Finder: Set the Arrival Mode*.

Cancel Navigation (Disengage)

When navigation is in progress, whether with an iTrack, Spot-Lock, route, etc., you can cancel navigation at any time using the following instructions.

⚠️ **WARNING!** When you cancel navigation, be prepared to take manual control of the boat.

1. Press the GO TO key or the MENU key.
2. Select Cancel Navigation. Press the RIGHT Cursor key.

   If AutoPilot was engaged, turn off the propeller separately: Press the POWER key. Select Prop > Off.

Mark Navigation

Use the MARK menu to save a waypoint, save a Spot-Lock, or record an iTrack. This section is an overview. Each navigation mode is detailed throughout this manual.

1. Press the MARK key.
2. Select Waypoint, Spot-Lock, or Record iTrack.
3. Press the RIGHT Cursor key.

PROPELLER CONTROLS

A manual function is where the operator takes full control of the function, such as manually steering the motor or adjusting the propeller speed.

The propeller can be controlled from the X-Press Remote or the X-Press Remote pane in the Chart View. You can steer and increase or decrease speed from the X-Press Remote.

⚠ **WARNING!** If you use the X-Press Remote to steer, you are taking manual control, and the current navigation mode will be canceled (with the exception of recording an iTrack).

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with each navigation mode. The propeller will automatically turn on when navigation modes are engaged, even if the engagement is accidental. A turning propeller can cause injury.

Start or Stop the Propeller

The propeller must be started to start navigation with the Advanced GPS Navigation system. You can start the propeller manually each time you start navigation, or you can set the propeller to turn on automatically when navigation is initiated (see *Configure Advanced GPS Navigation with the Fish Finder: Turn on/off Prop Auto-On*).

⚠ **WARNING!** Spot-Locks and Cruise Control will turn on the propeller as soon as they are engaged, regardless of the Prop Auto-On setting.

Start or Stop the Propeller

Use the following instructions to start/stop the propeller manually using the X-Press Remote on the HELIX fish finder.

1. **Open the X-Press Remote:** Press the POWER key.
2. Select Prop.
3. Select On (start) or Off (stop).

Turning on the Propeller Manually

Propeller Controls
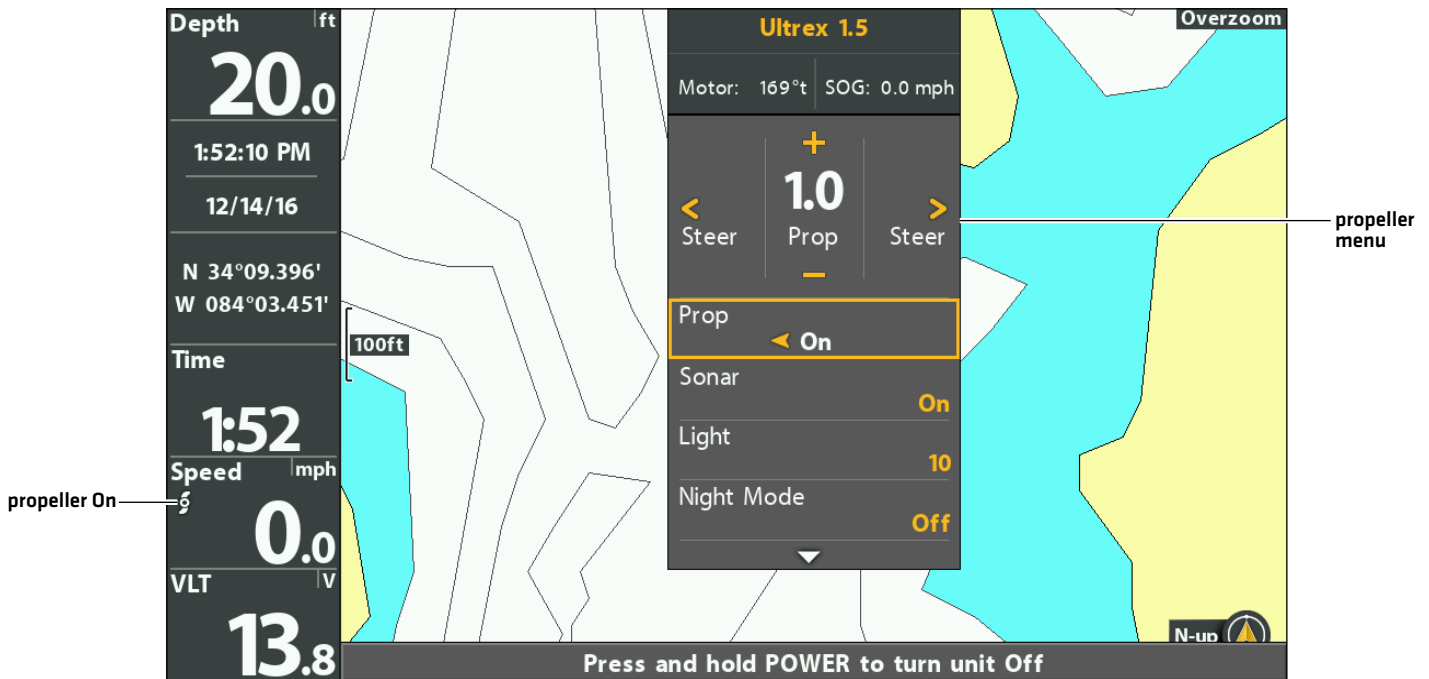
Steer

Use the following instructions to steer manually using the X-Press Remote on the HELIX fish finder.

⚠ **WARNING!** When you use the X-Press Remote to steer, you are taking manual control of the Advanced GPS Navigation system, and the current navigation mode will be canceled (with the exception of recording an iTrack).

1. **Open the X-Press Remote:** Press the POWER key.
2. Confirm the Steer/Prop Menu is selected.
3. Press the RIGHT or LEFT Cursor keys.

Steering with the X-Press Remote
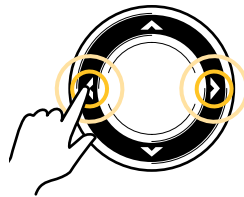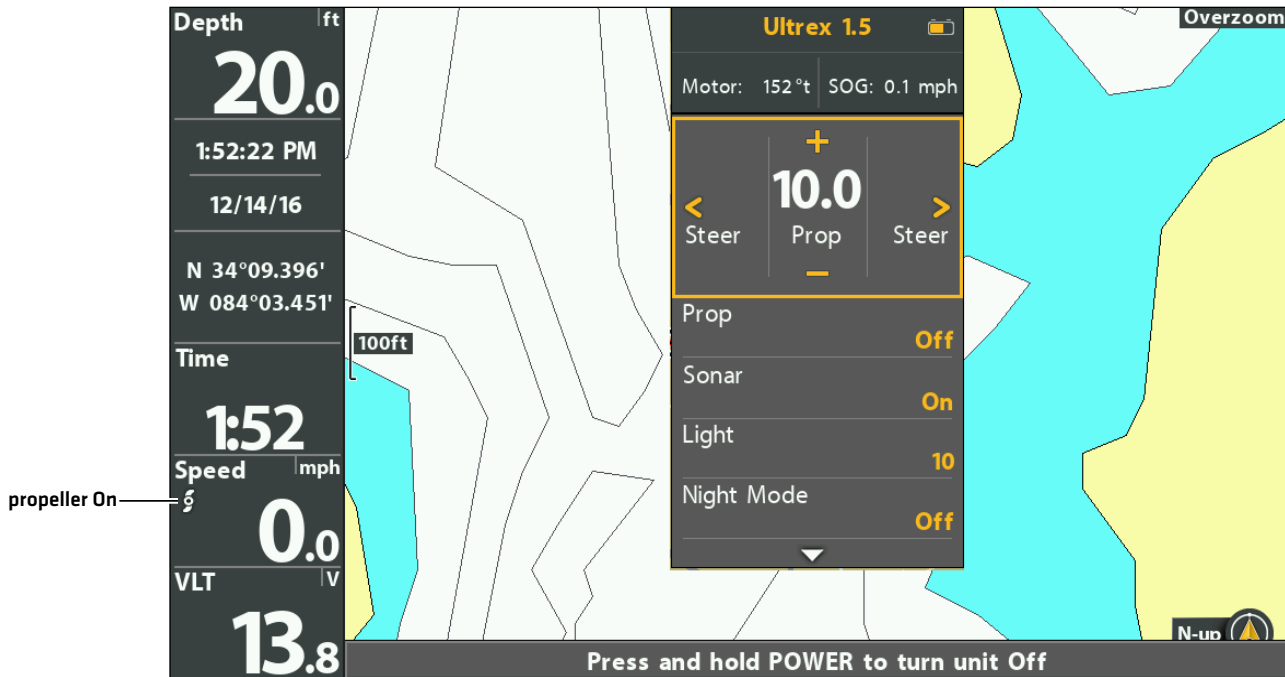
Steer

Increase or Decrease Speed

Use the following instructions to adjust the Advanced GPS Navigation trolling motor speed manually using the X-Press Remote on the HELIX fish finder. When the Steer/Prop Menu is selected, you can use the +/-ZOOM keys to adjust the speed.

1. **Open the X-Press Remote:** Press the POWER key.

2. Confirm the Steer/Prop Menu is selected.

3. **To increase the propeller speed,** press the + key.

   To decrease the propeller speed, press the – key.

Increasing/Decreasing the Prop Speed Manually
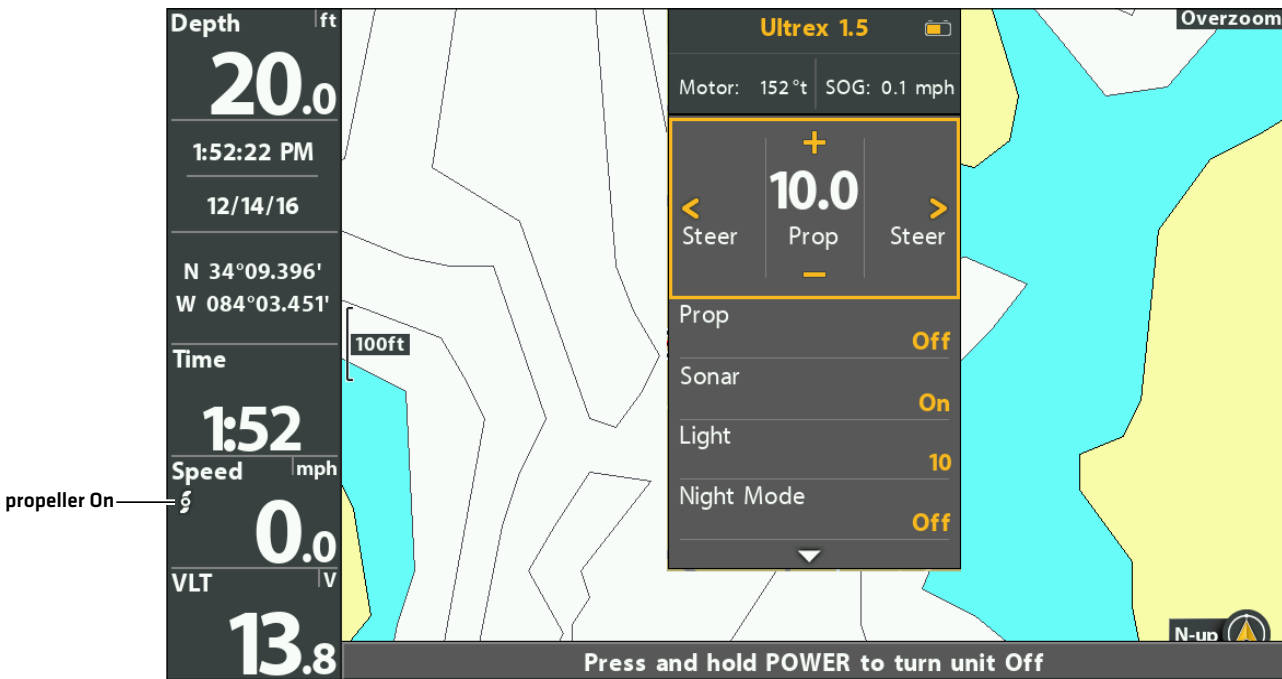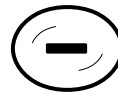
Increase Speed   **Decrease Speed**

Engage Max Speed

Use Max Speed to automatically set the propeller speed to 10.

⚠️ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with Max Speed. Max Speed will automatically increase the propeller speed to 10 even if the engagement is accidental. A turning propeller can cause injury.

Engage Max Speed

1. **Open the X-Press Remote:** Press the POWER key.
2. Confirm the Steer/Prop Menu is selected.
3. Press and hold the + key.

   To return to the previous speed, before Max Speed was engaged, press and hold the + key.

Engaging Max Speed

	+	
<	🐇	>
Steer	MAX	Steer
—		

Prop	On
Cruise Control	Off
Sonar	On
Light	5
Background	White
Standby	

➕
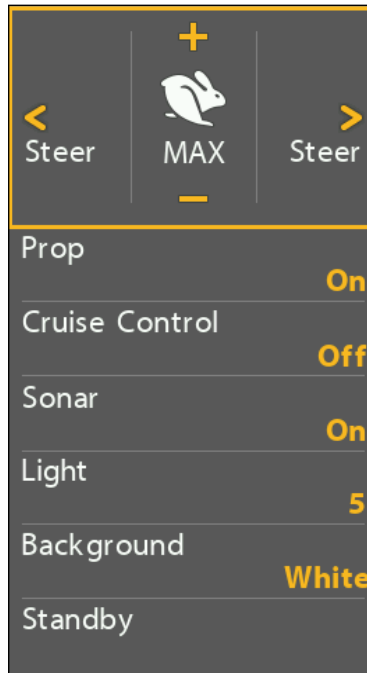
**Press and Hold to
Start Max Speed**

Disengage Max Speed

To exit Max Speed, decrease the propeller speed.

1. **Open the X-Press Remote:** Press the POWER key.
2. Confirm the Steer/Prop Menu is selected.
3. Press the – key repeatedly as needed.

CRUISE CONTROL

Cruise Control helps to compensate for the variations in external forces that affect the speed over ground and keeps the boat traveling at an even speed. When Cruise Control is engaged, the current speed over ground becomes the Target Speed. Cruise Control works to control the propeller speed to match the Speed Over Ground to the Target Speed.

⚠️ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with Cruise Control. The propeller will automatically turn on when Cruise Control is engaged, even if the engagement is accidental. A turning propeller can cause injury. **The propeller will turn on for Cruise Control regardless of the Prop Auto-On setting.**

Engage Cruise Control

Use Cruise Control to set the propeller to maintain a target speed.

1. Open the X-Press Remote on the Chart View pane.
2. Select Cruise Control.
3. Select On.
4. **To increase the target propeller speed,** press the + key.

   To decrease the target propeller speed, press the – key.

Increasing/Decreasing the Target Cruise Control Speed
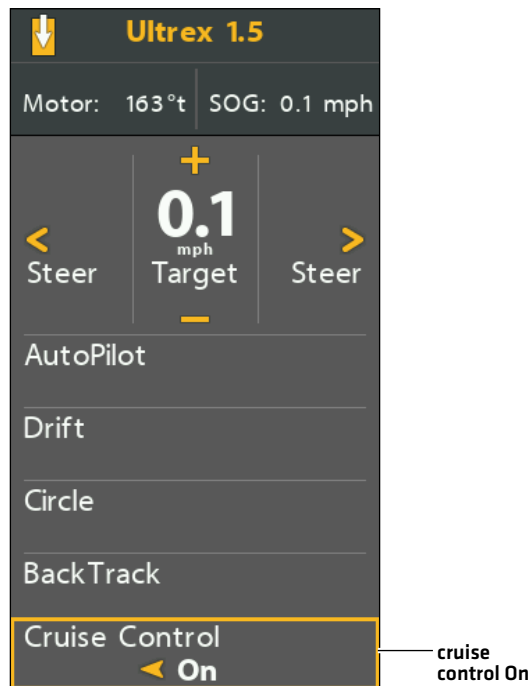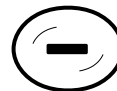
Increase Speed   Decrease Speed

Adjust Cruise Control Speed

1. **Open the X-Press Remote:** Press the POWER key.

2. Confirm the Steer/Prop Menu is selected.

3. **To increase the target propeller speed,** press the + key.

   To decrease the target propeller speed, press the – key.

Disengage Cruise Control

1. Open the X-Press Remote on the Chart View pane.

2. Select Cruise Control.

3. Select Off.

4. To cancel navigation, select Prop > Off.

Spot-Locks

Spot-Lock uses a single point as a reference for the spot you want to stay on. Around the Spot-Lock location, Advanced GPS Navigation uses an arrival circle to determine prop speed and direction. If the Advanced GPS Navigation system sees it is within the circle, it will adjust the motor speed to zero. If the Advanced GPS Navigation system sees it is outside of the circle, it will control motor speed in an attempt to get the boat back into the circle. If you select Spot-Lock while navigating a route, BackTrack, iTrack, or contour, navigation will be paused on the Spot-Lock.

Spot-Lock is based on the location of the motor, not the location or direction of the boat. Outside forces such as wind and current will cause the boat to move. Spot-Lock will navigate to maintain the motor on the Spot-Lock location regardless of the position of the boat.

⚠️ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with Spot-Locks. The propeller will automatically turn on when a Spot-Lock is engaged, even if the engagement is accidental. A turning propeller can cause injury. **The propeller will turn on for Spot-Locks regardless of the Prop Auto-On setting.**
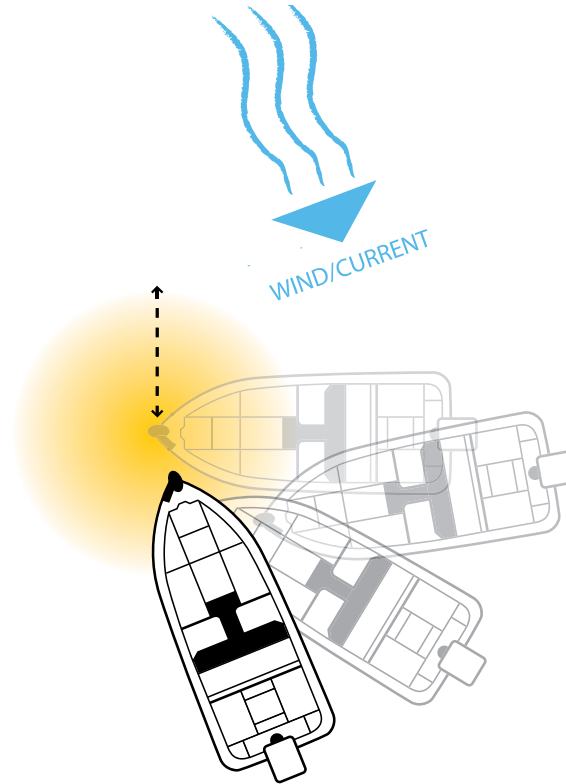

Storage: Spot-Locks are saved with an alphanumeric name that can be edited. You can save a combination of 2,750 Spot-Locks and waypoints on your HELIX fish finder. A waypoint can be converted to a Spot-Lock by changing its icon to the Spot-Lock icon (see *Manage your Advanced GPS Navigation Data*).

Mark and Save a Spot-Lock

Use the following instructions to mark a Spot-Lock at the boat position. The Spot-Lock will be saved, but navigation will not start. The Spot-Lock is saved to the Waypoint Management dialog box. You can edit the name, etc. See *Edit a Saved Spot-Lock* for more information.

Mark a Spot-Lock at the Boat Position

1. Press the MARK key.
2. Select Spot-Lock.
3. Press the RIGHT Cursor key.

Mark a Spot-Lock at the Cursor Position

1. Use the Cursor Control key to move the cursor to a position on the chart.
2. Press the MARK key.

3. Select Spot-Lock.

4. Press the RIGHT Cursor key.

Start Spot-Lock Navigation

You can quickly Spot-Lock at the current boat position or the cursor position, and start navigation towards it automatically. 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. To save a Spot-Lock, see *Mark and Save a Spot-Lock*.

Engage Spot-Lock at the Boat Position

1a. Press the GO TO key twice.

OR

1b. Press the GO TO key once.

2. Select Spot-Lock at Vessel. Press the RIGHT Cursor key.

⚠ **CAUTION!** 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 position. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Engaging Spot-Lock at the Boat Position
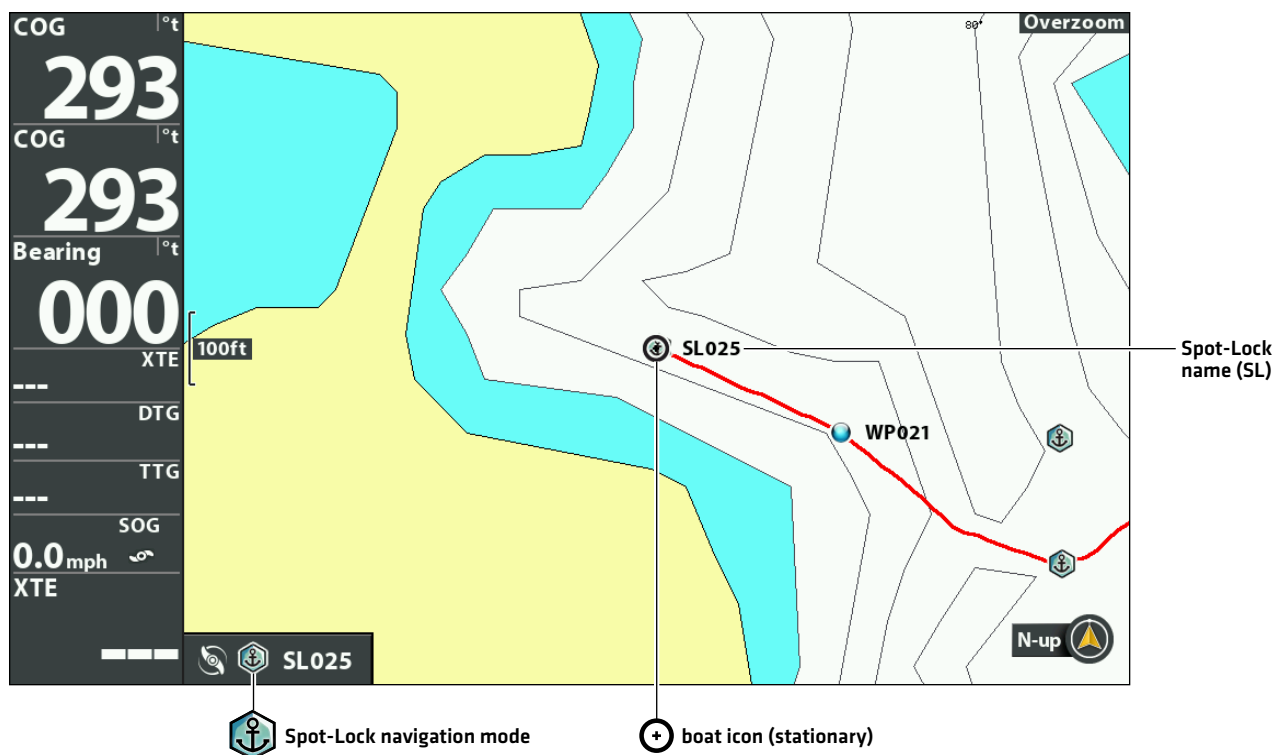
Press Twice to Spot-Lock at Vessel

Engage Spot-Lock at the Cursor Position

You can mark a Spot-Lock at a position within 1/4 mile from the boat. When the boat reaches the position, it will Spot-Lock until you cancel navigation. If the position is more than 1/4 mile away, it will be marked as a Spot-Lock, but navigation will not start.

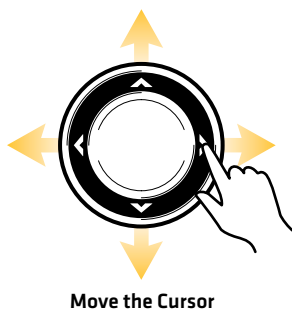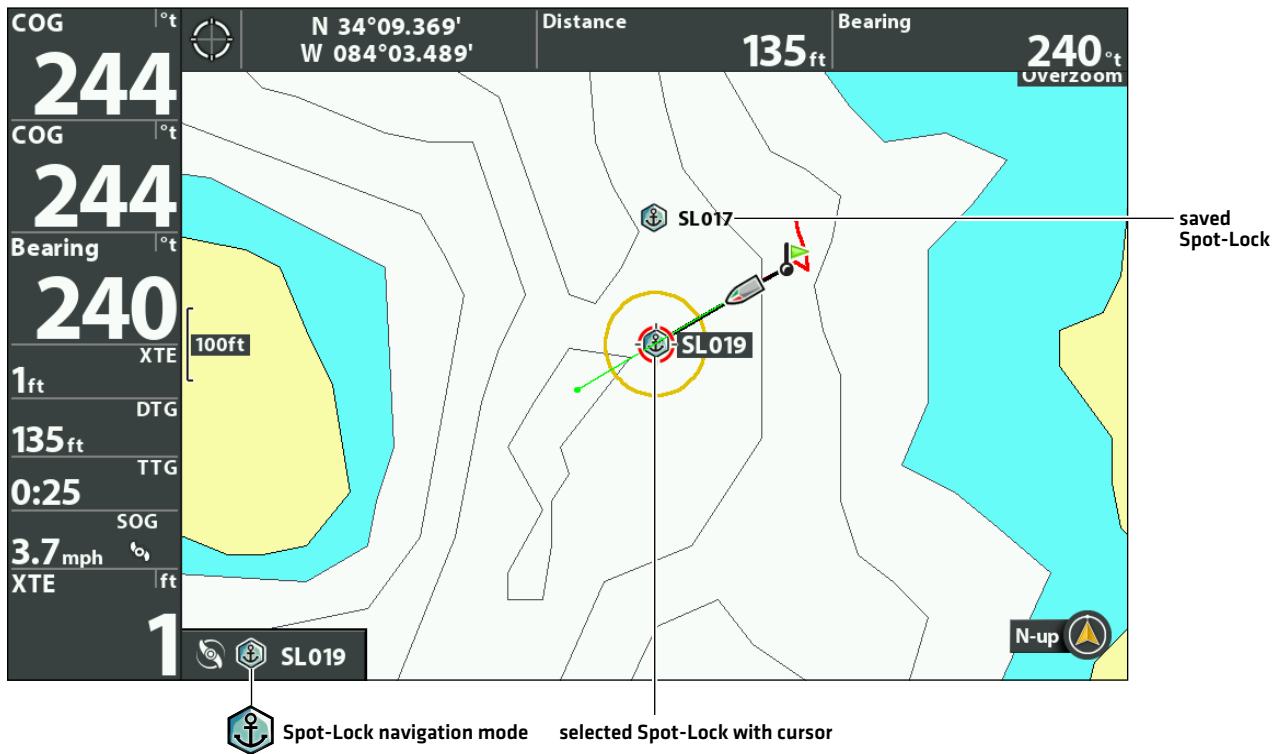1. Use the Cursor Control key to move the cursor to a position or waypoint on the Chart View.

2. Press the GO TO key.

3. Select Spot-Lock > At Cursor.

> ⚠️ **CAUTION!** 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 position. If the boat does not move, confirm the prop is turned on in the menu system (see **Propeller Controls**).

Navigating to a Spot-Lock at the Cursor Position

Move the Cursor

Open the
GO TO Menu

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 engage automatically when the boat reaches the destination Spot-Lock. See the illustration *Navigating to a Spot-Lock at the Cursor Position*.

1. Use the Cursor Control key to move the cursor to a saved Spot-Lock on the Chart View.
2. Press the GO TO key.
3. Select Go To Position.
4. Press the RIGHT Cursor key.

> ⚠ **CAUTION!** 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 position. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Engage Spot-Lock at a Waypoint Position

If a saved waypoint is within 1/4 mile of the boat position, you can navigate to it and engage Spot-Lock automatically. If the waypoint is more than 1/4 mile away, navigation will not start. To change a waypoint to a Spot-Lock, see the *Waypoints* section.

1. Use the Cursor Control key to select a waypoint on the Chart View.
2. Press the MENU key.
3. Select the Waypoint name (extended menu). Press the RIGHT Cursor key.
4. Select Spot-Lock.
5. Press the RIGHT Cursor key.

> ⚠ **CAUTION!** 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 position. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

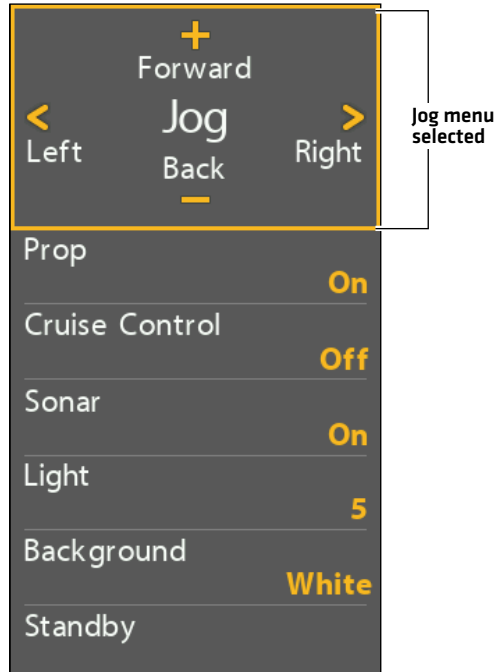**Engaging Spot-Lock at the Selected Waypoint**
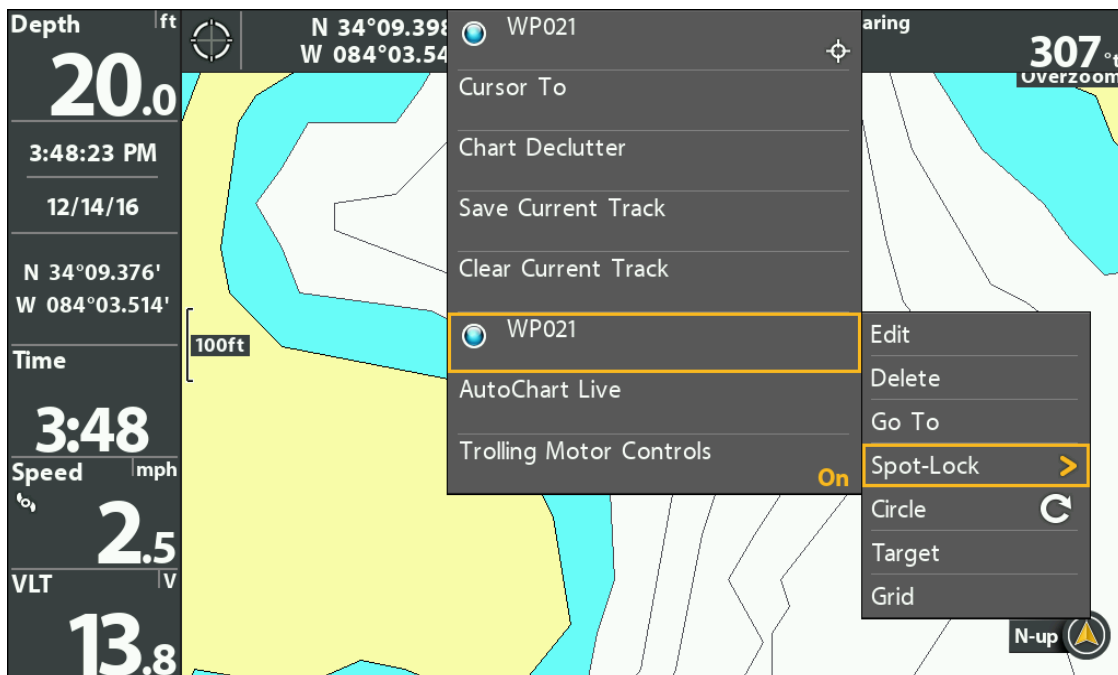
Jog Spot-Lock (Heading Sensor Required)

Use Jog while Spot-Lock is engaged to move 5 feet from the engaged Spot-Lock position. Spot-Lock Jog is only available with a heading sensor.

1. **Open the X-Press Remote:** Press the POWER KEY.

2. Select Jog.

3. Use the Cursor Control keys to set the Jog position.

⚠ **CAUTION!** 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 position. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Jogging the Spot-Lock Position

```
          +
       Forward
  <     Jog      >        Jog menu
 Left          Right      selected
        Back

Prop
                  On
Cruise Control
                  Off
Sonar
                  On
Light
                  5
Background
                  White
Standby
```

Move Spot-Lock
Position Forward

Move Spot-Lock
Position Back

OR
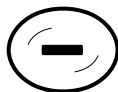
Move Spot-Lock
Position Left or Right

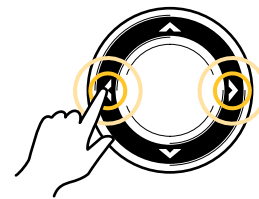**Engaging Spot-Lock at the Boat Position (Chart View with X-Press Remote Pane Displayed)**
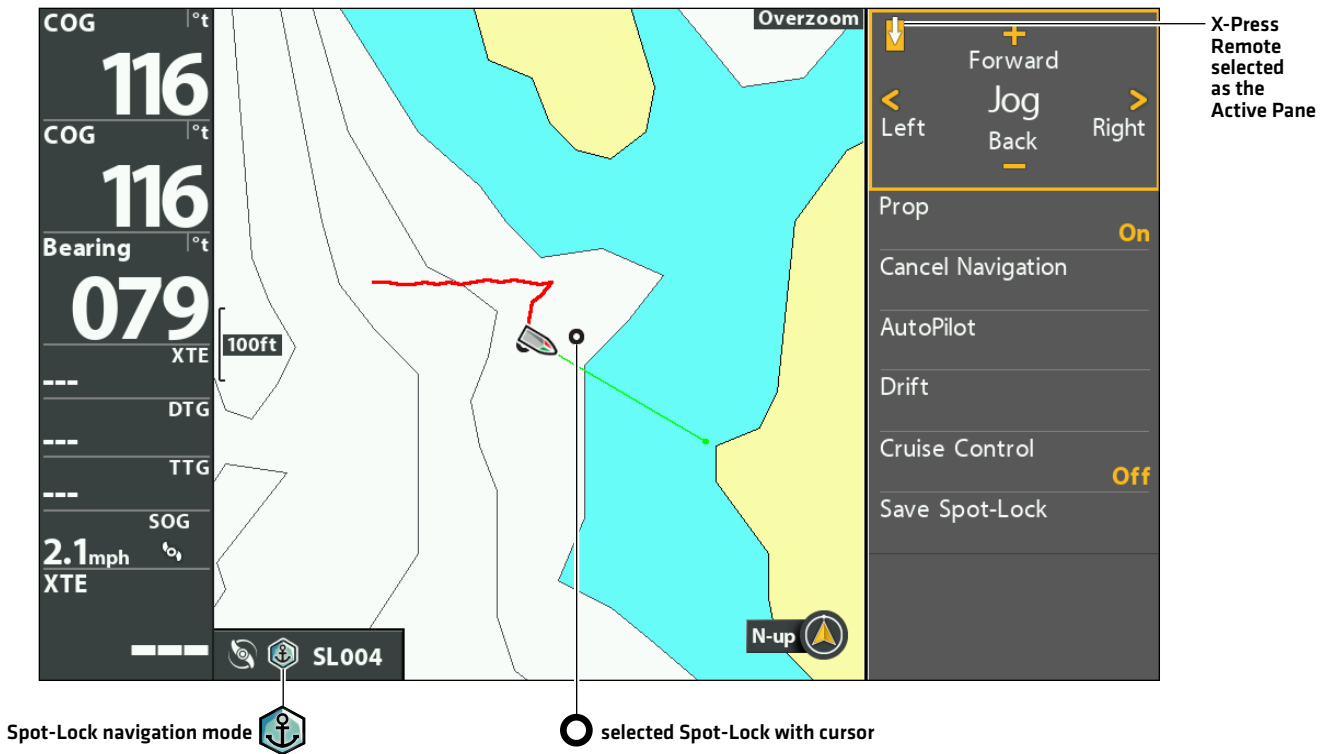
Spot-Lock navigation mode

selected Spot-Lock with cursor

X-Press Remote selected as the Active Pane

**Move Spot-Lock
Position Forward**

**Move Spot-Lock
Position Back**

OR
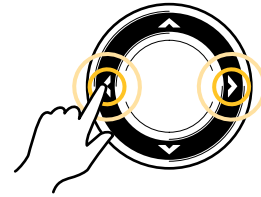
**Move Spot-Lock
Position Left or Right**

⚠️ **WARNING!** Beware of pressing the Cursor Control keys and moving the trolling motor accidentally. Pressing the Cursor Control keys with the Advanced GPS Navigation X-Press Remote pane Steer/Prop Menu selected will cancel the current navigation mode and switch the Advanced GPS Navigation system to manual control. To move the cursor on the Chart View, you must select Chart View as the Active Pane (Left).

Cancel Navigation (Disengage)

Cancel Navigation

1. Press the GO TO key.
2. Select Cancel Navigation.
3. Press the RIGHT Cursor key.

Delete a Saved Spot-Lock in the Chart View

Use the following instructions to select a Spot-Lock and delete it.

1. Use the Cursor Control key to move the cursor to a Spot-Lock on the Chart View.
2. Press the MENU key.
3. Select the Spot-Lock name from the X-Press Menu. Press the RIGHT Cursor key.
4. Select Delete. Press the RIGHT Cursor key.

> **NOTE:** You can also delete saved Spot-Locks from the Waypoint Management dialog box. See ***Manage your Advanced GPS Navigation Data*** for more information.

Edit a Saved Spot-Lock

When you save a Spot-Lock, it is saved with an alphanumeric name that starts with SL. The name can be edited from the Chart View or the Waypoint Management dialog box (see *Manage your Advanced GPS Navigation Data*).

1. Use the Cursor Control key to select a Spot-Lock on the Chart View.
2. Press the MENU key.
3. Select the Spot-Lock name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Use the Cursor Control key to edit the available fields.

Name	Select the file name, and press the RIGHT Cursor key. See the illustration *Changing the Spot-Lock Name*.
Icon Category	Select All to view all available icons. (All, Geometry, Alerts, Supplies, Navigation, Recreation, Fish, Environment)
Icon	**If you change the icon, the Spot-Lock will change to a waypoint.** The available icons are determined by the category selected in Icon Category.
Visibility	To show the Spot-Lock icon on the Chart View, select Visible. To hide it, select Hidden.
Latitude Longitude	To move from space to space, press the RIGHT or LEFT Cursor keys. To change the letter or number, press the UP or DOWN Cursor keys.

6. **Save:** Select Save. Press the RIGHT Cursor key.

Changing the Spot-Lock Name

Edit Waypoint Name

S L 0 1 7

Press ✓ to save
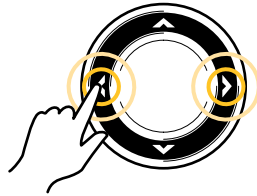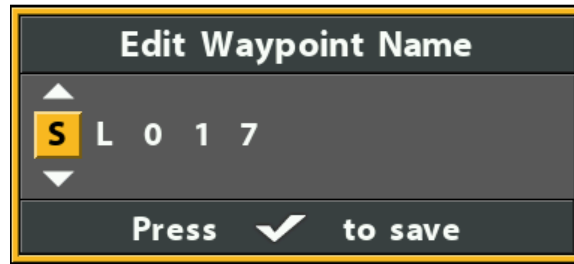
Move from Space to Space   Select a Letter, Number, or Symbol   Save

Convert a Spot-Lock to a Waypoint

A Spot-Lock can be edited from the Chart View or the Waypoint Management dialog box (see *Manage your Advanced GPS Navigation Data*). A Spot-Lock can be changed to a waypoint by changing the icon, or you can change a waypoint to a Spot-Lock by changing the icon to a Spot-Lock icon.

1. Use the Cursor Control key to select a Spot-Lock on the Chart View.
2. Press the MENU key.
3. Select the Spot-Lock name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Select Icon. Press the RIGHT or LEFT Cursor keys to scroll through the available options.
6. **Save:** Select Save. Press the RIGHT Cursor key.

Show/Hide a Spot-Lock

1. Use the Cursor Control key to select a Spot-Lock on the Chart View.
2. Press the MENU key.
3. Select the Spot-Lock name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Select Visibility.
6. Select Visible or Hidden.

DRIFT MODE

When Drift Mode is engaged, the Advanced GPS Navigation system maintains a desired straight line course and target speed even if the course direction is influenced by wind, current, or other outside influences. Simply point the motor in the intended navigation direction and press Drift Mode, then adjust to the desired target speed over ground (SOG). Drift Mode will take control to allow you to focus entirely on fishing whether it's casting a targeted area, trolling crankbaits or maintaining a slow and controlled drift over specific cover or structure, even when traveling with or across wind or current. Easily make fine adjustments to the target speed or the target course or reverse it completely on the fly at any time.
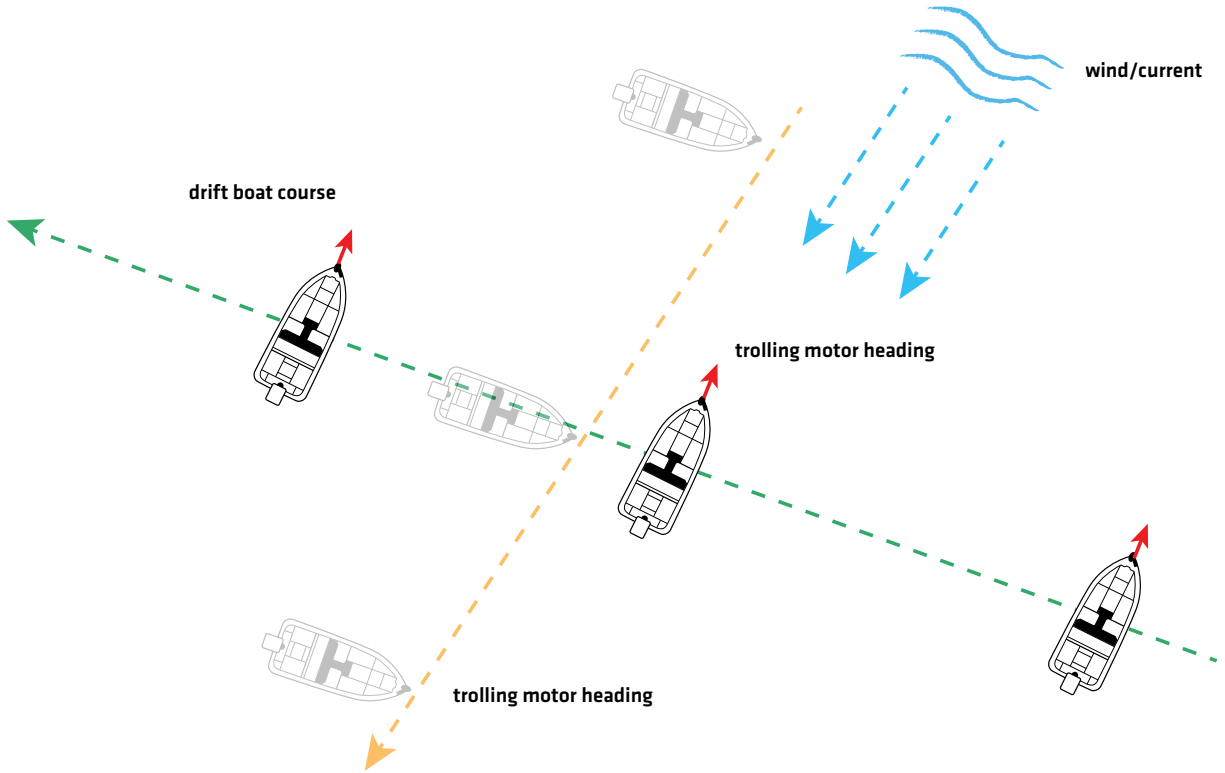
Engage Drift Mode

1. Press the GO TO key.
2. Select Drift. Press the RIGHT Cursor key.

OR

1. Open the X-Press Remote on the Chart View pane.
2. Select Drift. Press the RIGHT Cursor key.

Cancel Drift Mode

1. Press the GO TO key.
2. Select Cancel Navigation. Press the RIGHT Cursor key.

OR

1. Open the X-Press Remote on the Chart View pane.
2. Select Cancel Navigation. Press the RIGHT Cursor key.

Drift Mode Adjust Course - Angle

1. Press the GO TO key.
2. Select Adjust Course. Press the RIGHT Cursor key.
3. Use the LEFT and RIGHT Cursor keys to adjust the course in 5 degree increments.

OR

1. Open the X-Press Remote on the Chart View pane.
2. Select Adjust Course. Press the RIGHT Cursor key.
3. Use the LEFT and RIGHT Cursor keys to adjust the course in 5 degree increments.

Drift Mode Jog

1. Press the GO TO key.
2. Select Adjust Course. Press the RIGHT Cursor key.
3. Scroll down to Jog. Use the LEFT and RIGHT Cursor keys to jog in 5 feet increments.

OR

1. Open the X-Press Remote on the Chart View pane.
2. Select Adjust Course. Press the RIGHT Cursor key.
3. Scroll down to Jog. Use the LEFT and RIGHT Cursor keys to jog in 5 feet increments.
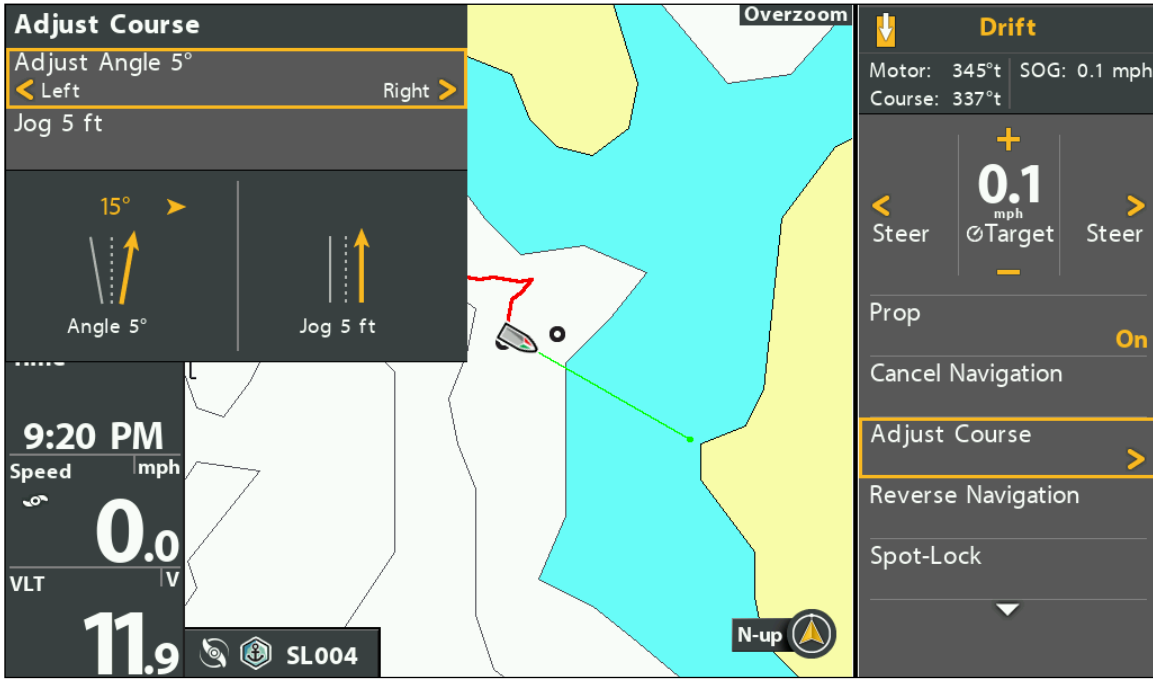
Reverse Drift Mode

1. Press the GO TO key.
2. Select Reverse Navigation. Press the RIGHT Cursor key.

OR

1. Open the X-Press Remote on the Chart View pane.
2. Select Reverse Navigation. Press the RIGHT Cursor key.

Drift Mode

Adjust Course
Adjust Angle 5°
< Left   Right >
Jog 5 ft

15° ➤
Angle 5°   Jog 5 ft

9:20 PM
Speed |mph
0.0
VLT |V
11.9   SL004

Overzoom

Drift
Motor: 345°t | SOG: 0.1 mph
Course: 337°t

+
0.1
mph
< Steer   ⊘Target   Steer >
−

Prop
On
Cancel Navigation
Adjust Course   >
Reverse Navigation
Spot-Lock

N-up

GO TO
MOB

**Open the
GO TO Menu**
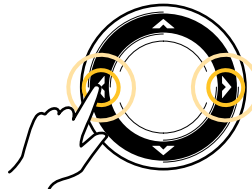
Adjust Course Left or Right

DODGE MODE

Dodge Mode allows you to temporarily suspend select forms of navigation while allowing you to manually control steering and prop speed to steer around an obstacle without canceling navigation, and then easily resume the previously suspended form of navigation. Dodge Mode is available during Drift Mode, GoTo Spot Lock, GoTo Waypoint, GoTo i-Track, GoTo Route, GoTo Waypoint, Circle Mode, Follow the Contour, and Follow the Shoreline. Dodge Mode will default to "on."
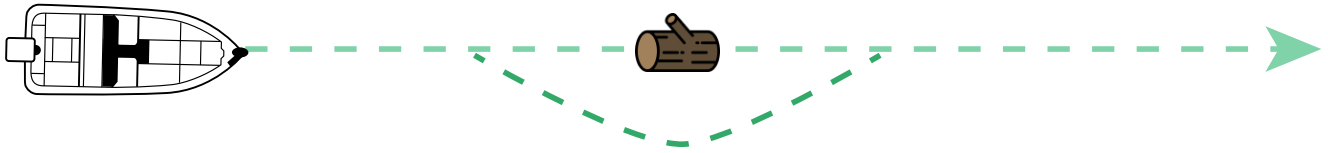
Turn Dodge Mode On/Off

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Motor Settings. Press the RIGHT Cursor key.
3. Select Dodge.
4. Select On or Off.

Engage and Disengage Dodge Mode

1. While actively navigating a course, press the RIGHT or LEFT Cursor keys to pause navigation and enter Dodge Mode.
2. Press the RIGHT or LEFT Cursor keys to steer around the obstruction.
3. To resume navigation, select Resume Navigation. Press the RIGHT Cursor key.

Dodge Mode
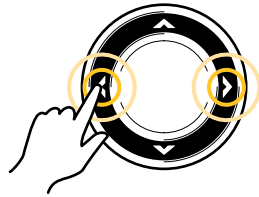
**Press Left or Right to
steer around obstruction**

WAYPOINTS

Waypoints are saved latitude/longitude positions. They mark a position of interest, such as your favorite fishing area, structure, or marker buoy. Waypoints work similar to Spot-Locks. When the trolling motor navigates waypoints, it takes control over all steering functions. Speed can be manually controlled or Cruise Control can be used. You can save a combination of 2,750 Spot-Locks and waypoints on your HELIX fish finder. For more information about waypoints, see the *HELIX Operations Manual*.

⚠️ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with waypoints. If Prop Auto-On is turned on, the propeller will automatically turn on when a waypoint is engaged, even if the engagement is accidental. A turning propeller can cause injury.

Mark a Waypoint

Waypoints can be marked at the vessel position or cursor position using the MARK key and Mark menu.

Mark a Waypoint at the Boat Position

1. Press the MARK key twice.

Mark a Waypoint at the Cursor Position

1. Use the Cursor Control key to move the cursor to a position on the chart.
2. Press the MARK key twice.

Marking a Waypoint at the Cursor Position

cursor position   distance to cursor position   bearing to cursor position

cursor digital readouts

N 34°15.332'
W 083°56.625'

0.24 sm   Distance

345 °t   Bearing
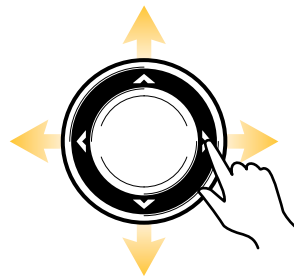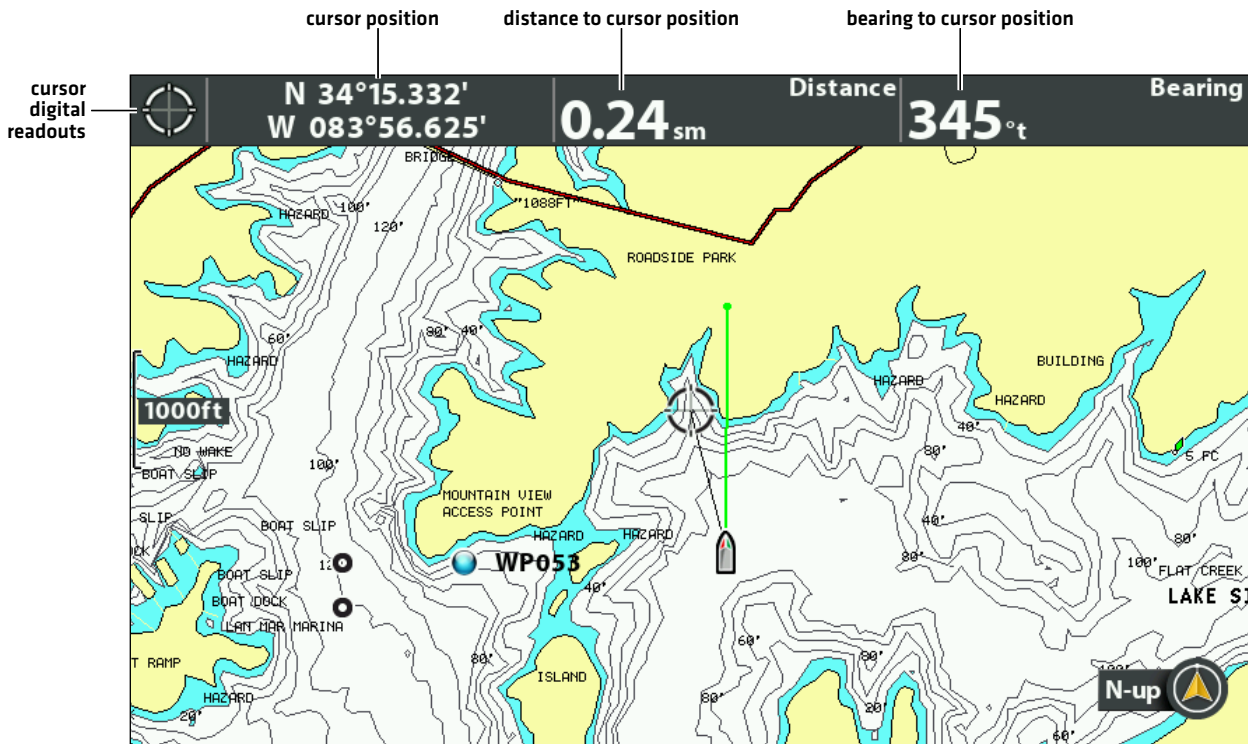
Move the Cursor
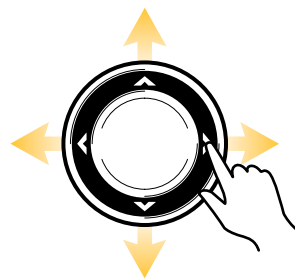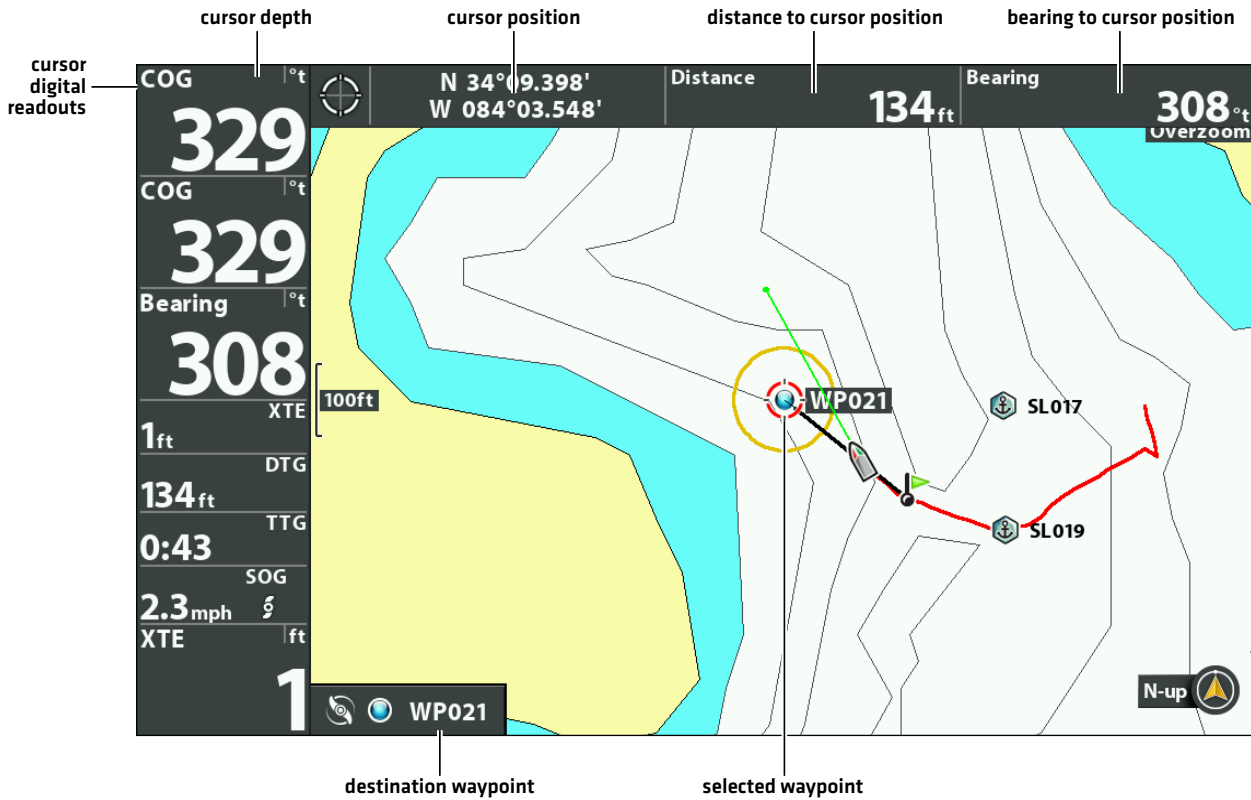
MARK

Press Twice to
Mark a Waypoint

Start Navigation to a Saved Waypoint or Position

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

1. Use the Cursor Control key to move the cursor to a waypoint or position on the chart.

2. Press the GO TO key twice.

⚠ **CAUTION!** 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 position. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).

Starting Navigation to the Cursor Position

cursor depth   cursor position   distance to cursor position   bearing to cursor position

cursor
digital — readouts

COG °t   N 34°09.398'   Distance   Bearing
329   W 084°03.548'   **134**ft   **308**°t
COG °t   Overzoom
329
Bearing °t
308
XTE   100ft   ⊙ WP021   🔗 SL017
1ft
DTG
134ft
TTG
0:43   🔗 SL019
SOG
2.3mph ∫
XTE ft
1   🚫 ⦿ WP021   N-up 🔺

destination waypoint   selected waypoint

Move the Cursor   Press Twice to
Start Navigation

GO TO
MOB

Waypoints   56

Cancel Navigation (Disengage)

1. Press the GO TO key.
2. Select Cancel Navigation.
3. Press the RIGHT Cursor key.

Delete a Saved Waypoint in the Chart View

Use the following instructions to select a waypoint and delete it.

1. Use the Cursor Control key to move the cursor to a waypoint on the Chart View.
2. Press the MENU key.
3. Select the waypoint name from the X-Press Menu. Press the RIGHT Cursor key.
4. Select Delete. Press the RIGHT Cursor key.

NOTE: You can also delete saved waypoints from the Waypoint Management dialog box. See *Manage your Advanced GPS Navigation Data* for more information.

Edit a Saved Waypoint

When you save a waypoint, it is saved with an alphanumeric name that starts with WP. The name can be edited from the Chart View or the Waypoint Management dialog box (see *Manage your Advanced GPS Navigation Data*).

1. Use the Cursor Control key to select a waypoint on the Chart View.
2. Press the MENU key.
3. Select the waypoint name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Use the Cursor Control key to edit the available fields.

Name	Select the file name, and press the RIGHT Cursor key. See the illustration *Changing the Waypoint Name*.
Icon Category	Select All to view all available icons. (All, Geometry, Alerts, Supplies, Navigation, Recreation, Fish, Environment)
Icon	The available icons are determined by the category selected in Icon Category.
Visibility	To show the waypoint icon on the Chart View, select Visible. To hide it, select Hidden.
Latitude Longitude	To move from space to space, press the RIGHT or LEFT Cursor keys. To change the letter or number, press the UP or DOWN Cursor keys.

6. **Save:** Select Save. Press the RIGHT Cursor key.

Changing the Waypoint Name

Edit Waypoint Name

▲
W P 0 0 5
▼

Press ✓ to save
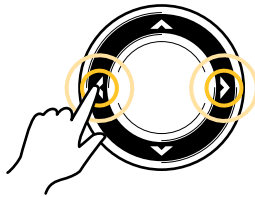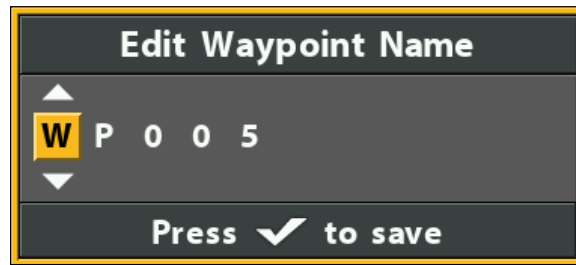
Move from Space to Space   Select a Letter, Number, or Symbol   Save

Convert a Waypoint to a Spot-Lock

A waypoint can be edited from the Chart View or the Waypoint Management dialog box [see *Manage your Advanced GPS Navigation Data*]. A Spot-Lock can be changed to a waypoint by changing the icon, or you can change a waypoint to a Spot-Lock by changing the icon to a Spot-Lock icon.

1. Use the Cursor Control key to select a waypoint on the Chart View.
2. Press the MENU key.
3. Select the waypoint name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Select Icon. Press the RIGHT or LEFT Cursor keys to select the Spot-Lock icon.
6. **Save:** Select Save. Press the RIGHT Cursor key.

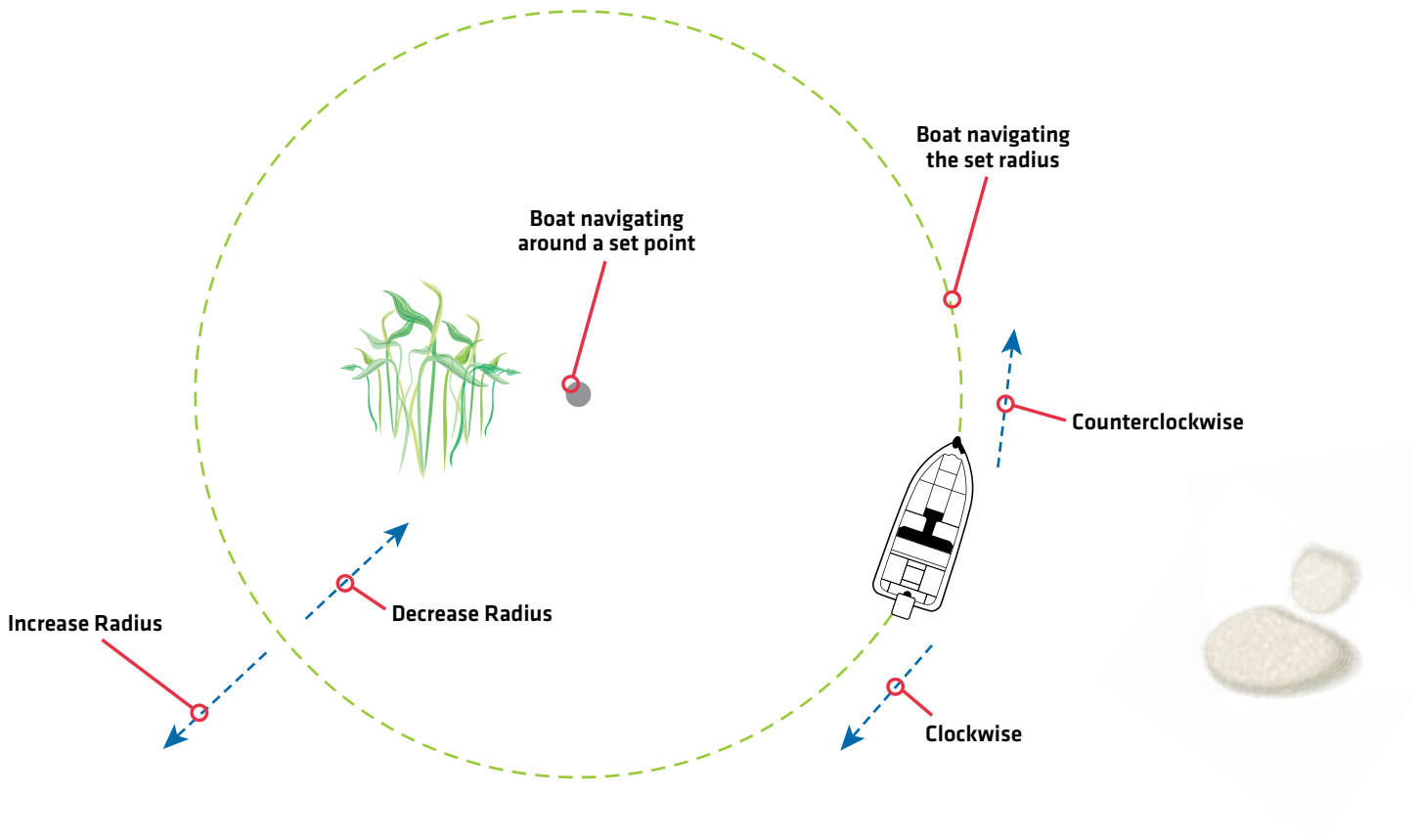**Changing a Waypoint to a Spot-Lock**
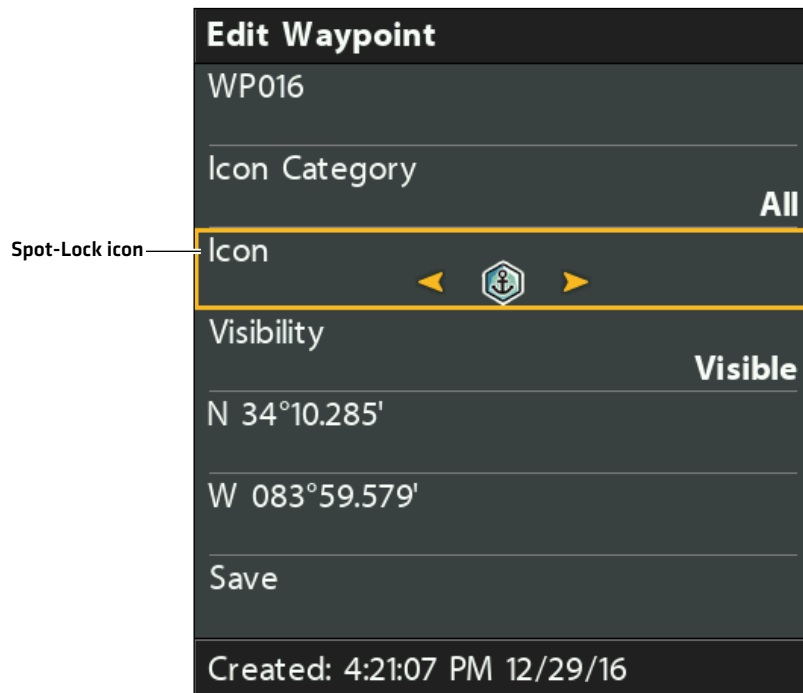
Show/Hide a Waypoint

1. Use the Cursor Control key to select a waypoint on the Chart View.
2. Press the MENU key.
3. Select the waypoint name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Select Visibility.
6. Select Visible or Hidden.

Circle Mode

Circle Mode allows you to navigate a set point in a circle, either clockwise or counterclockwise. You can also adjust the circle radius. Circle Mode cannot be activated from the Advanced GPS wireless remote, but the direction of travel and radius of the circle can be adjusted, and the function can be exited using the Advanced GPS wireless remote.

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with Circle Mode. If Prop Auto-On is turned on, the propeller will automatically turn on when Circle Mode is engaged, even if the engagement is accidental. A turning propeller can cause injury.

Boat navigating the set radius

Boat navigating around a set point

Counterclockwise

Increase Radius

Decrease Radius

Clockwise

Navigate in Circle Mode

You can start Circle Mode at the vessel position or the cursor position. During Circle Mode navigation, you can also use Cruise Control (see *Cruise Control*).

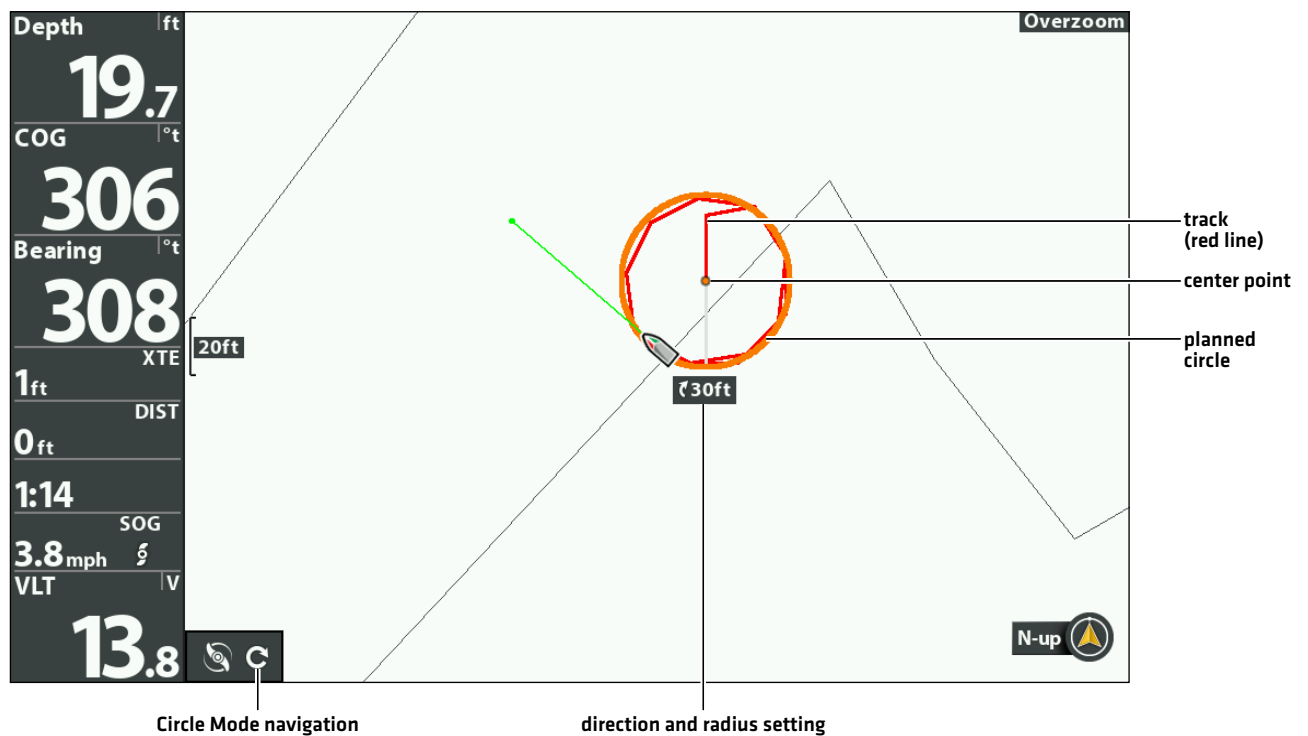### Start Circle Mode at the Vessel Position

1. Press the GO TO key.

2. Select Circle. Press the RIGHT Cursor key.

    Adjust the Radius (optional): Select Radius. Press the RIGHT or LEFT Cursor keys to adjust the setting.

3. Select Clockwise or Counterclockwise. Press the RIGHT Cursor key.

> ⚠ **CAUTION!** Be prepared for boat movement as the prop will automatically be enabled and the prop speed will automatically adjust to move the boat when Circle Mode is engaged. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Navigating in Circle Mode at the Boat Position

Circle Mode navigation   direction and radius setting

**Open the
GO TO Menu**

Start Circle Mode at the Cursor Position

The boat must be within 1/4 mile of the cursor position to begin Circle Mode navigation.

1. Use the Cursor Control key to move the cursor to a position on the chart.
2. Press the GO TO key.
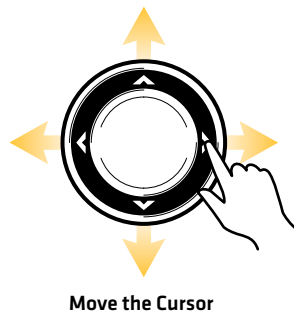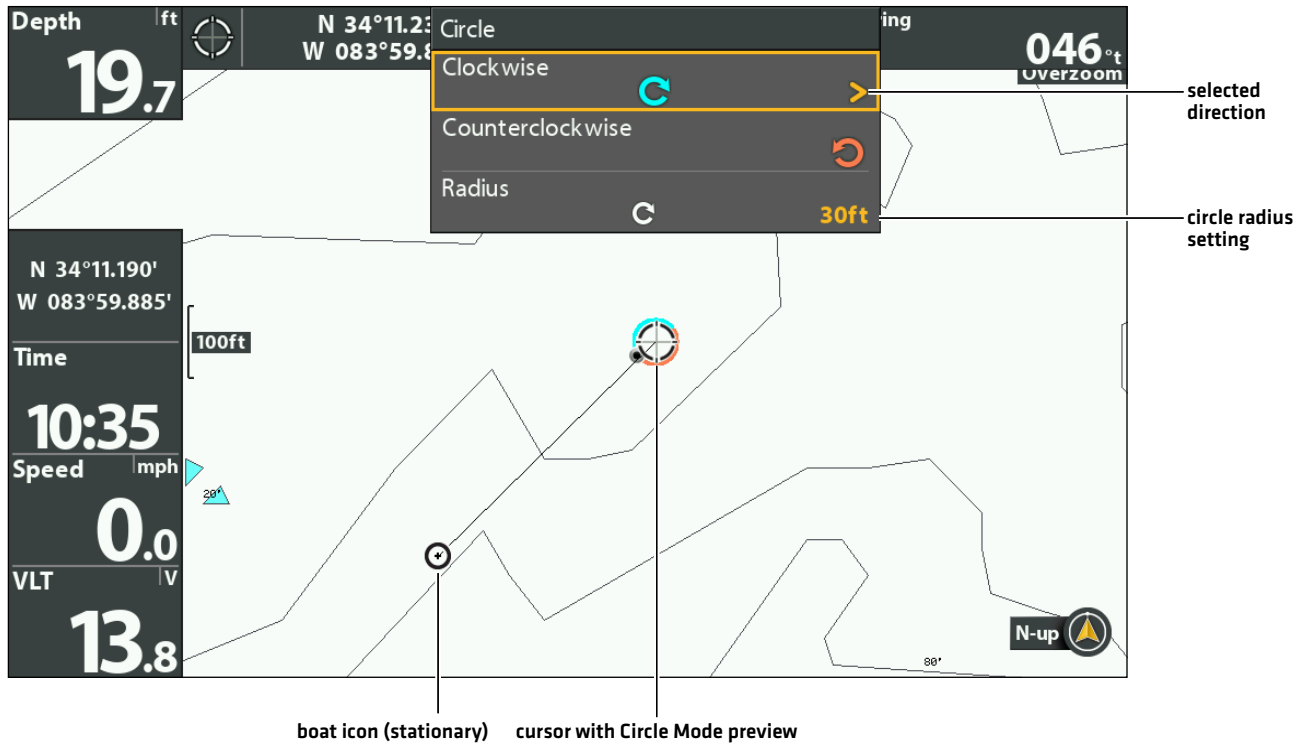3. Select Circle > At Cursor. Press the RIGHT Cursor key.

   Adjust the Radius (optional): Select Radius. Press the RIGHT or LEFT Cursor keys to adjust the setting.

4. Select Clockwise or Counterclockwise. Press the RIGHT Cursor key.

   ⚠ **CAUTION!** Be prepared for boat movement as the prop will automatically be enabled and the prop speed will automatically adjust to move the boat when Circle Mode is engaged. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Starting Circle Mode at the Cursor Position

boat icon (stationary)   cursor with Circle Mode preview

Move the Cursor

**Open the
GO TO Menu**

Adjust Circle Mode Settings

Reverse Direction during Circle Mode

1. During Circle Mode Navigation, press the GO TO key.

2. Select Reverse Navigation.

3. Press the RIGHT Cursor key.

   ⚠ **CAUTION!** Be prepared for boat movement as the prop will automatically be enabled and the prop speed will automatically adjust to move the boat when Circle Mode is engaged. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).

Adjust the Radius during Circle Mode

1. During Circle Mode Navigation, press the GO TO key.

2. Select Radius.

3. Press the RIGHT or LEFT Cursor keys to adjust the setting.

Cancel Navigation (Disengage)

Cancel Navigation

1. Press the GO TO key.

2. Select Cancel Navigation.

3. Press the RIGHT Cursor key.

iTRACKS

When the recording of an iTrack is initiated, Advanced GPS Navigation 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. Advanced GPS Navigation sees a recorded iTrack as a series of these track points.

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with iTracks. If Prop Auto On is turned on, the propeller will automatically turn on when an iTrack is engaged, even if the engagement is accidental. A turning propeller can cause injury.

During iTrack navigation, Advanced GPS Navigation takes control over all steering functions. You can control the speed manually or you can use Cruise Control. The motor speed must be set high enough in order to stay on the iTrack given wind, current, and other external forces.

🟢 **iTrack Start Point** - The very first track point recorded is called the Start Point.

🟡 **iTrack End Point** - The last point recorded is called the End Point.

Distance: iTracks can be recorded for a distance of up to 2 miles.

Storage: You can save up to 50 iTracks on the HELIX fish finder. iTracks are saved with an alphanumeric name that can be edited in Chart View or from the Waypoint Management dialog box. You can also edit the iTrack appearance and whether or not it is visible on the Chart View. See *Manage your Advanced GPS Navigation Data*.

RECORDED iTRACK

START

END
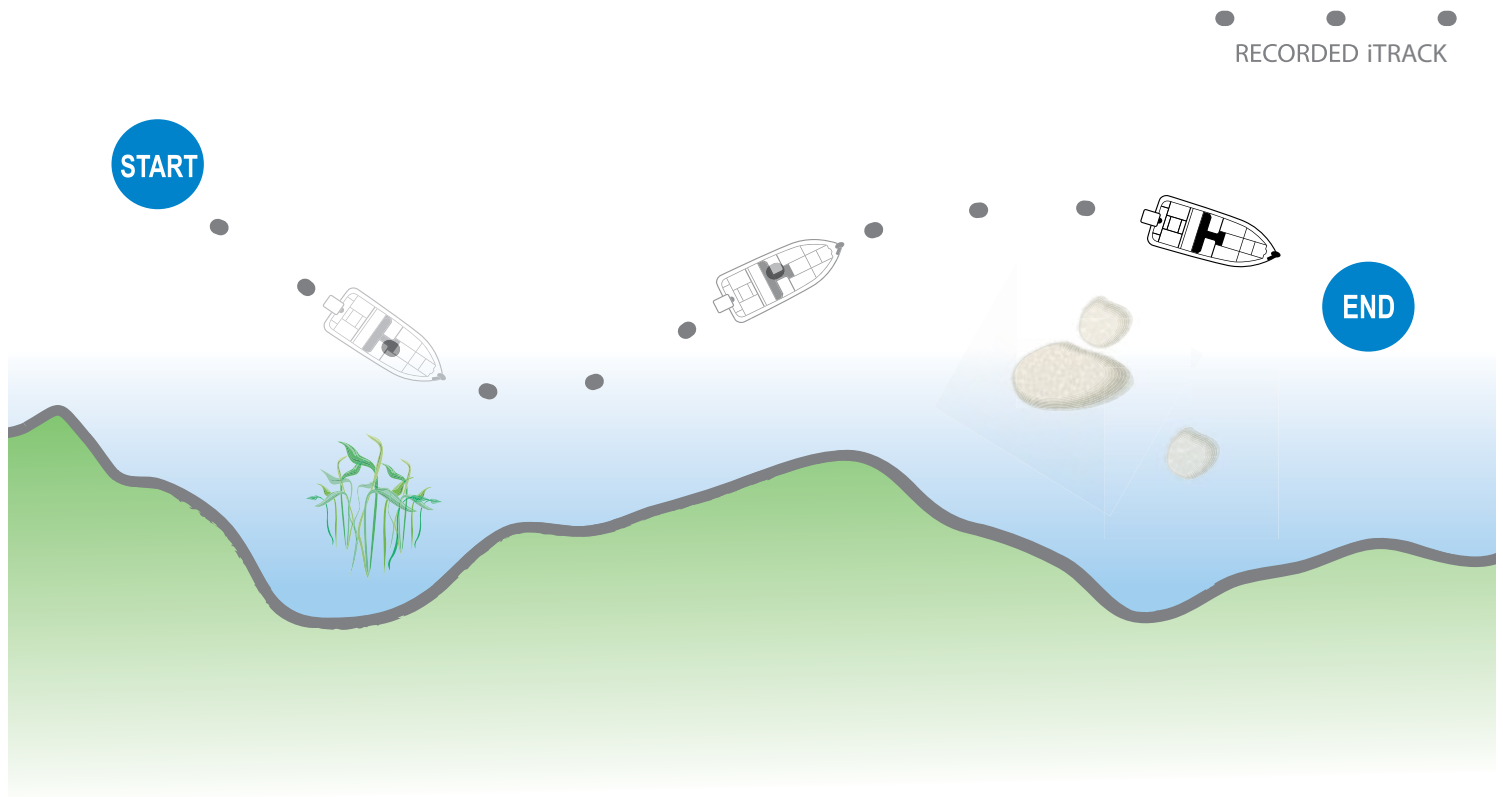
When **Navigate to Start** or **Navigate to End** is initiated, Advanced GPS will navigate to the nearest track point. Once this nearest track point is reached, it will then follow the track points in sequence back to either the **Start Point** or **End Point**, based on the selected mode. Once the end or start track point is reached, Advanced GPS automatically cancels the iTrack navigation. You can choose to have Advanced GPS Navigation transition to other modes by configuring the Arrival Mode (see *Configure Advanced GPS Navigation with the Fish Finder: Set the Arrival Mode*).

RECORDED iTRACK

NAVIGATE iTRACK TOWARDS START POINT

NAVIGATE iTRACK TOWARDS END POINT

START

END
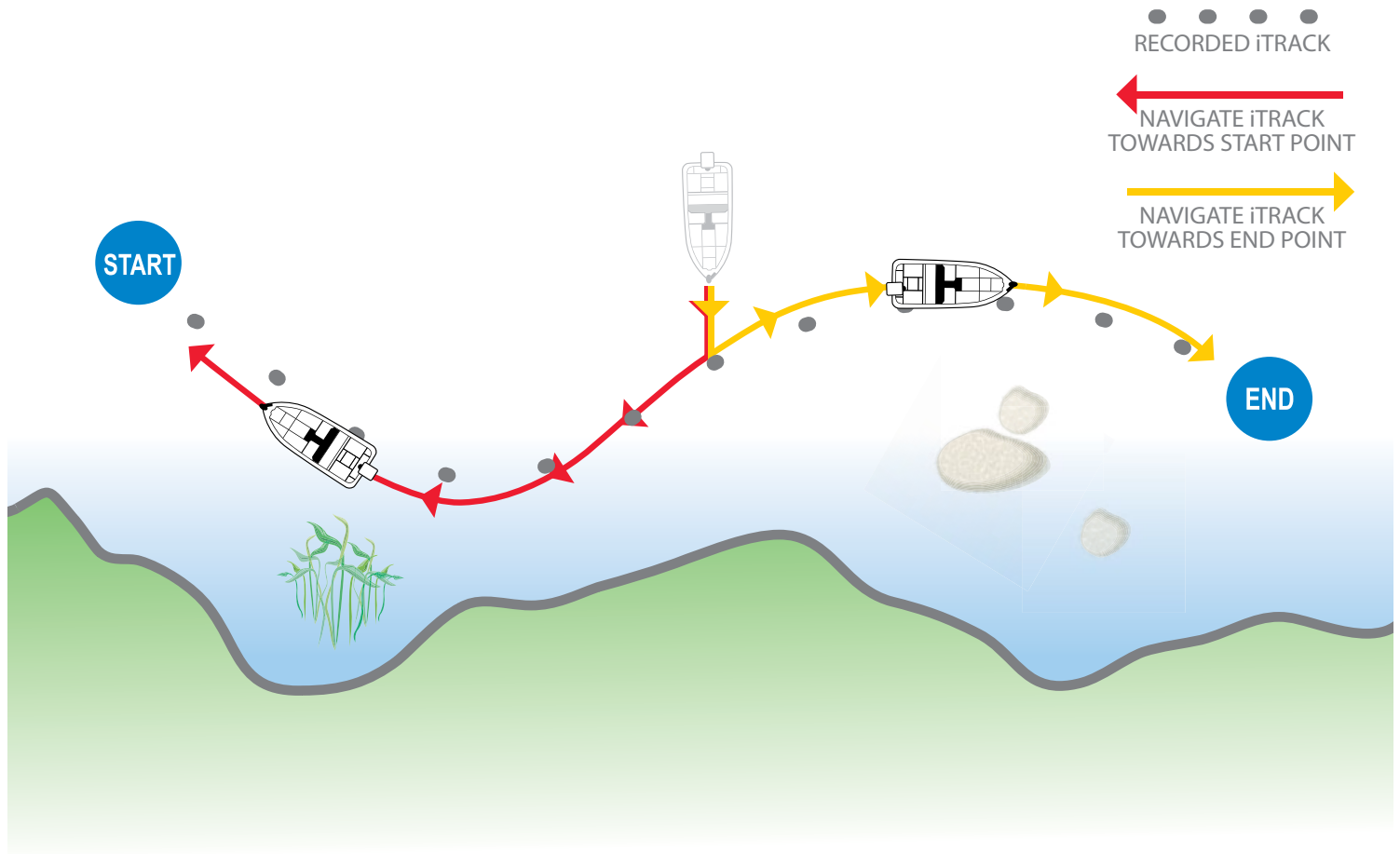
Record an iTrack

When Record iTrack is turned on, iTrack recording will begin from the current vessel position, and will automatically stop when a 2 mile distance is achieved. The boat must already be moving when iTrack recording is initiated.

Start Recording

1. Press the MARK key.
2. Select Record iTrack. Press the RIGHT Cursor key.

   Press the EXIT key until the menu system is closed.

Recording an iTrack
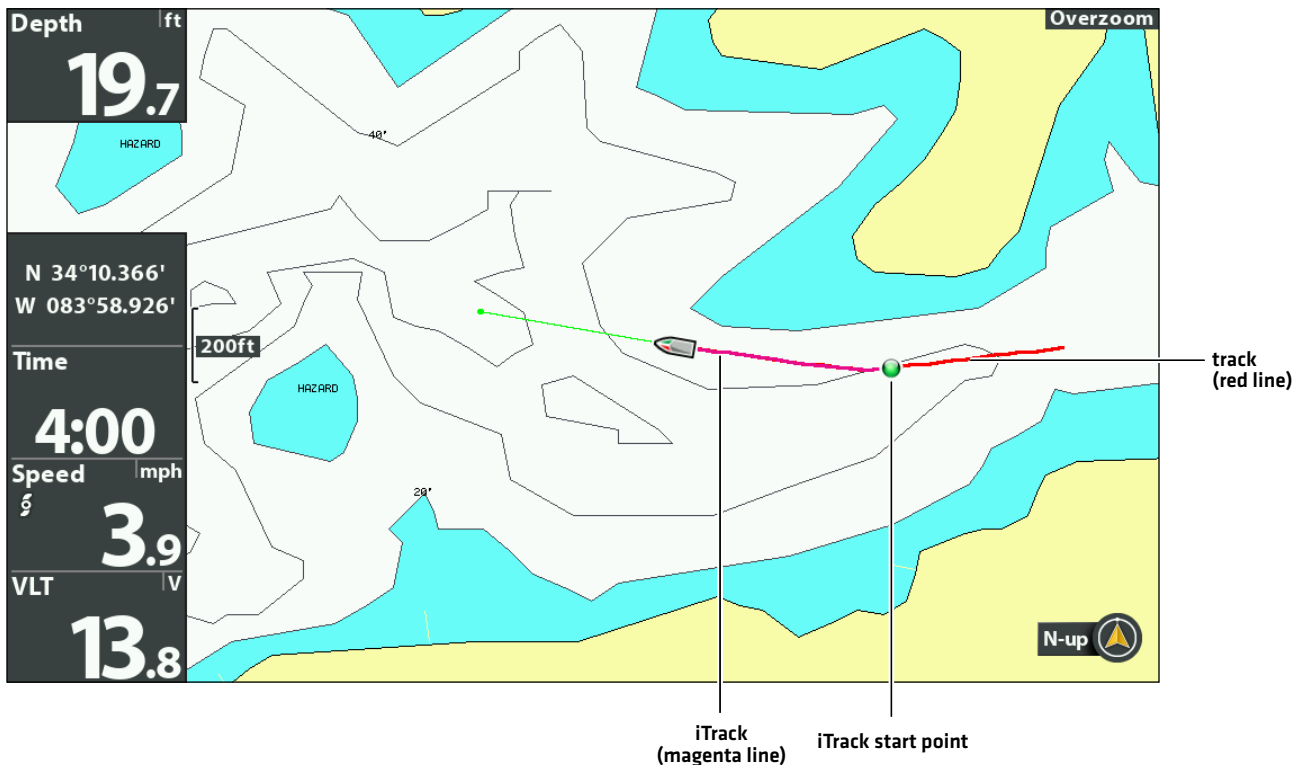
Open the MARK Menu

Stop Recording

1. Press the MARK key.
2. Select Stop Recording iTrack. Press the RIGHT Cursor key.
3. Follow the on-screen prompts to save or discard the iTrack.

Navigate a Saved iTrack

If a saved iTrack is within 1/4 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.

You can select a saved iTrack on the Chart View or the Go To menu. You can also start navigation to a saved iTrack from the Waypoint Management dialog box (see *Manage your Advanced GPS Navigation Data*).

If you start another mode of navigation, iTrack navigation will disengage automatically. The exception is Spot-Lock, which will pause the iTrack navigation.

Networked Fish Finders: To share an iTrack on the network or change the iTrack position, you must start navigating the iTrack on the fish finder you used to record it.

Navigate a Saved iTrack on the Chart View

1. Use the Cursor Control key to select a Start Point icon, an End Point icon, or a position on the iTrack.
2. Press the GO TO key.
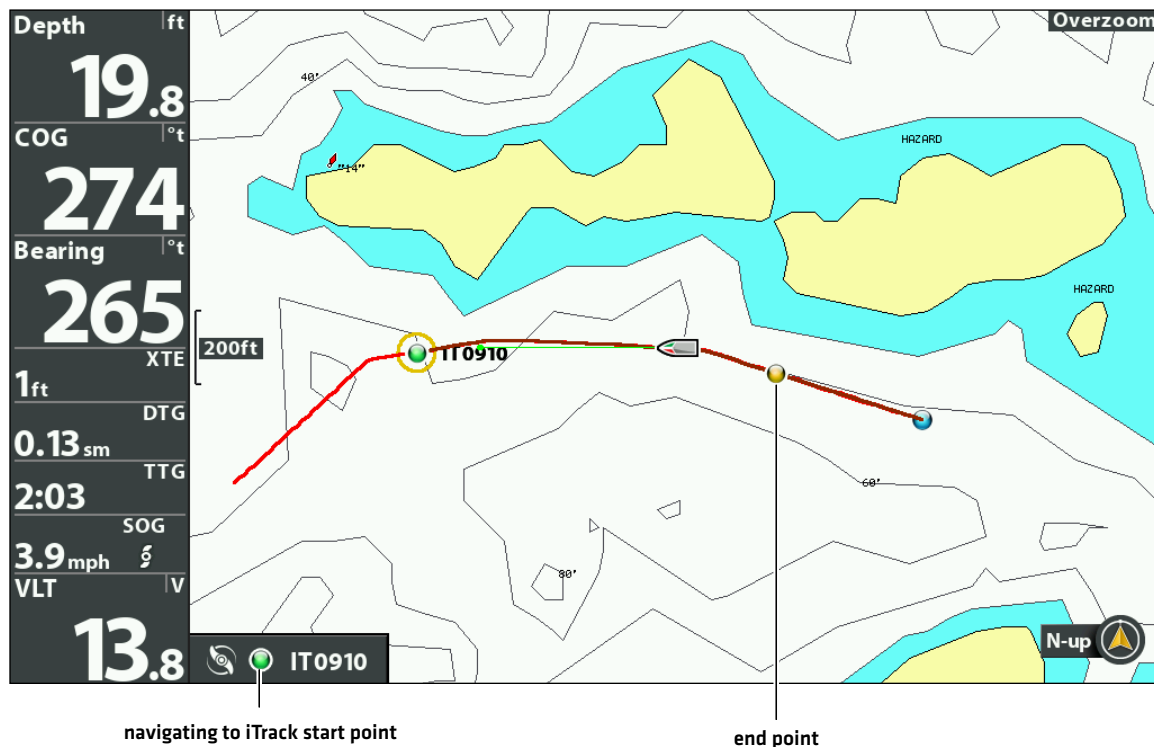3. Select one of the following, and press the RIGHT Cursor key.

   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 navigate to a point within the iTrack, select Go To Position. When you select Go To Position, the Advanced GPS will navigate to the cursor position, but it wil not start navigation on the iTrack.

   ⚠️ **CAUTION!** 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 iTrack position. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Navigating a Saved iTrack (Navigate to Start)

navigating to iTrack start point   end point

Navigate to a Saved iTrack from the Go To Menu

Use the following instructions to start iTrack navigation from any view.

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

> ⚠ **CAUTION!** 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 iTrack position. If the boat does not move, confirm the prop is turned on in the menu system (see **Propeller Controls**).

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 Advanced GPS is navigating to the Start Point, selecting Reverse will start navigation in the opposite direction, towards the End Point.

1. During navigation on a saved iTrack, press the GO TO key.
2. Select Reverse Navigation. Press the RIGHT Cursor key.

> ⚠ **CAUTION!** 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 iTrack position. If the boat does not move, confirm the prop is turned on in the menu system (see **Propeller Controls**).

Cancel Navigation (Disengage)

1. Press the GO TO key.
2. Select Cancel Navigation.
3. Press the RIGHT Cursor key.

Move a Saved iTrack

Use the following instructions to move the position of a saved iTrack on the Chart View.

> 📝 **NOTE:** If you have more than one networked fish finder installed, select the fish finder you used to record the iTrack.

1. Use the Cursor Control key to select a Start Point icon or End Point icon on the iTrack.
2. Press the MENU key.
3. Select the iTrack name. Press the RIGHT Cursor key.
4. Select Move. Press the RIGHT Cursor key.
5. Select Direction or Distance. Press the RIGHT or LEFT Cursor keys to adjust the setting.

   As you adjust the setting, an arrow is displayed on-screen to indicate the change.
6. Select Move iTrack. Press the RIGHT Cursor key.

Moving an iTrack to a New Position

cursor selecting end point   saved iTrack
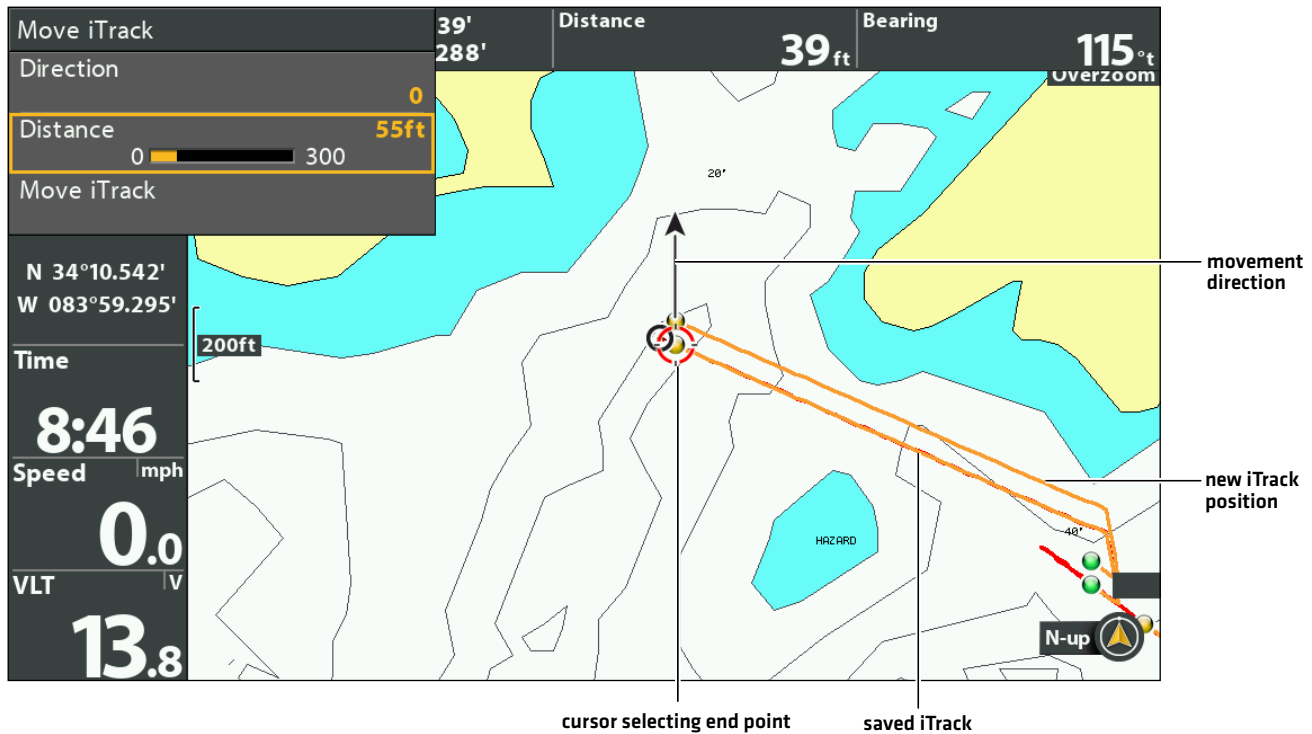
Delete a Saved iTrack

You can delete a saved iTrack in the Chart View or from the Waypoint Management dialog box (see *Manage your Advanced GPS Navigation Data*).

1. Use the Cursor Control key to select a Start Point icon or End Point icon on the iTrack.
2. Press the MENU key.
3. Select the iTrack name. Press the RIGHT Cursor key.
4. Select Delete. Press the RIGHT Cursor key.

Edit a Saved iTrack

When you save a iTrack, it is saved with an alphanumeric name that starts with IT. The name can be edited from the Chart View or the Waypoint Management dialog box (see **Manage your Advanced GPS Navigation Data**).

1. Use the Cursor Control key to select an iTrack Start point or End point in Chart View.
2. Press the MENU key.
3. Select the iTrack name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Use the Cursor Control key to edit the available fields.

Name	Select the file name, and press the RIGHT Cursor key.
Visibility	To show the iTrack on the Chart View, select Visible. To hide it, select Hidden.
Style	Select a line style.
Color	Select a color. The Color field is available if you've selected a solid line in the Style field.

6. **Save:** Select Save. Press the RIGHT Cursor key.

Show/Hide an iTrack

1. Use the Cursor Control key to select an iTrack Start point or End point in Chart View.
2. Press the MENU key.
3. Select the iTrack name. Press the RIGHT Cursor key.
4. Select Edit. Press the RIGHT Cursor key.
5. Select Visibility.
6. Select Visible or Hidden.

BACKTRACK

Traditional Humminbird tracks consist of a collection of track points that contain the boat's detailed position history at set intervals. The Current Track shows the position history since the HELIX fish finder was powered on. You can clear the Current Track or save it at any time. For more information about tracks, see your *HELIX Operations Manual*.

BackTrack starts navigation back through the Current Track. When BackTrack is selected, the Advanced GPS will mark a Start Point at the boat's current position and navigate to the last recorded track point. It will then create a saved iTrack on top of the Current Track (up to 2 miles).

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with iTracks. If Prop Auto On is turned on, the propeller will automatically turn on when an iTrack is engaged, even if the engagement is accidental. A turning propeller can cause injury.

📝 **NOTE:** You can activate BackTrack on the Current Track. BackTrack is not available on saved tracks or when Follow the Contour or Follow the Shoreline is active.

Adjust the BackTrack Distance

The control head allows you to BackTrack up to 2 miles. To adjust the distance, use the following instructions.

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Motor Settings. Press the RIGHT Cursor key.
3. Select BackTrack Distance.
4. Press the RIGHT or LEFT Cursor keys to adjust the setting.

Start BackTrack Navigation

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

1. Press the GO TO key.

2. Select BackTrack. Press the RIGHT Cursor key.

⚠ **CAUTION!** 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 iTrack position. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).
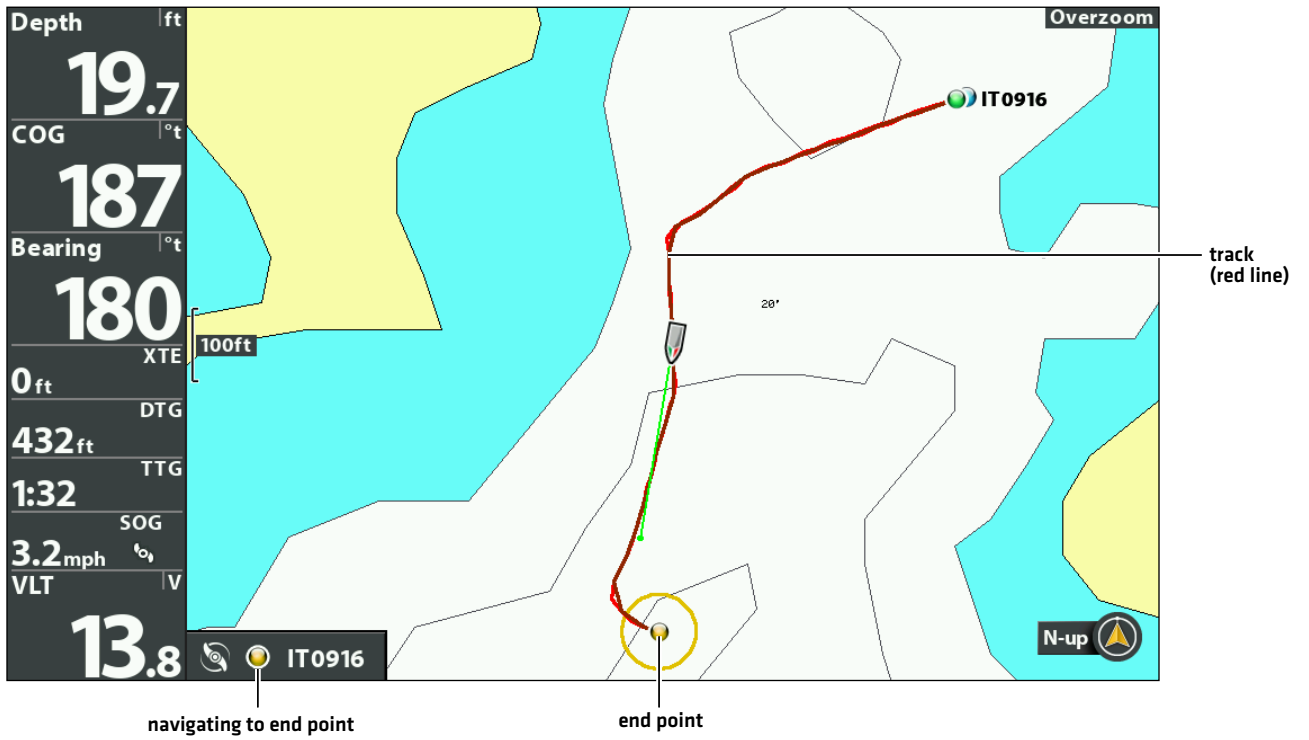
📝 **NOTE:** If BackTrack is not displayed in the Go To Menu, confirm tracking is enabled (Main Menu > Nav tab > Current Track > Start Tracking).

Cancel Navigation (Disengage)

1. Press the GO TO key.
2. Select Cancel Navigation.
3. Press the RIGHT Cursor key.

navigating to end point

end point

track
(red line)

Open the
GO TO Menu

Follow the Contour/Follow the Shoreline

Follow the Contour allows you to navigate a contour on the Chart View, and Follow the Shoreline allows you to navigate a shoreline on the Chart View. When you start navigation to Follow the Contour or Follow the Shorelien, all other types of navigation are stopped on the fish finder and the Ethernet network. AutoChart Live also allows you to follow depth contours, weed edges, and bottom hardness using Advanced GPS Navigation.

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with Follow the Contour or Follow the Shoreline. If Prop Auto-On is turned on, the propeller will automatically turn on when Follow the Contour or Follow the Shoreline is engaged, even if the engagement is accidental. A turning propeller can cause injury.

📝 **NOTE:** When Advanced GPS Navigation is following the contour/shoreline, the Current Track is not saved, and iTracks cannot be recorded.

Preparation

Use the following instructions to prepare the fish finder to Follow the Contour/Follow the Shoreline.

Install the Chart or Map Card

To use Follow the Contour/Follow the Shoreline, an compatible map card must be installed and selected as the chart source. If using an AutoChartPC Live Data connection, confirm the connection between your PC and HELIX fish finder.

Required: Compatible Humminbird CoastMaster Map Card, LakeMaster Map Card, LakeMaster PLUS Map Card, AutoChart ZeroLine Map Card, or AutoChart Live saved map. Visit **humminbird.johnsonoutdoors.com** for the latest list of compatible charts and accessory guides.

1. Install a compatible map card.

   See your HELIX operations guide for installation details.

2. If the HELIX does not select the map source automatically, select the Main Menu > Chart tab > Map Source.

   Select the installation location of the map card.

   ⚠ **WARNING!** Do not leave the SD slot cover open. The slot cover should always be closed to prevent water damage to the unit.

Set the Contour Lines to Visible

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select Contour Lines.
3. Select Visible.

Set the Water Level Offset

Before starting navigation, set the Water Level Offset setting to change the water level read by the HELIX fish finder. For example, if the lake is down 5 feet, set the Water Level Offset setting to -5. The displayed numbers on the Contour Lines will adjust from the Water Level Offset setting, and the water level offset will be highlighted in brown to extend the land visually on the display.

> **NOTE:** Humminbird must be selected as the chart source to enable this feature.

1. **Main Menu:** Press the MENU key twice. Select the HB Chart tab.
2. Select Water Level Offset.
3. Press the RIGHT or LEFT Cursor keys to adjust the setting.

   If the water level is higher than normal, set a (+) positive amount.

   If the water level is lower than normal, set a (-) negative amount.

   If the water level has not changed (normal), set Water Level Offset to (0) zero.

Water Level Offset (Set to 0 = Off)

Water Level Offset Adjusted to -4

If the water is lower than normal, set the Water Level Offset to a negative number, and the land will extend visually on the map (as shown above). If the water is higher than normal, set the Water Level Offset to a (+) positive amount, and the water line will extend visually on the map.

Follow the Contour/Shoreline

You can start navigation if the boat position is within 1/4 mile of the selected contour/shoreline.

> **NOTE:** If you cannot select a contour because it is displayed under AutoChart Live or Bottom Layer, see ***Follow Bottom Hardness or Vegetation: Hide layers***.

1. Use the Cursor Control key to select a position on a contour line or shoreline.
2. Press the GO TO key.
3. Select Follow the Contour/Follow the Shoreline. Press the RIGHT Cursor key.
4. Select a navigation direction from the submenu. Press the RIGHT Cursor key.

   The navigation direction is previewed in orange or blue on the Chart View.

> ⚠ **CAUTION!** 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 contour/shoreline. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).
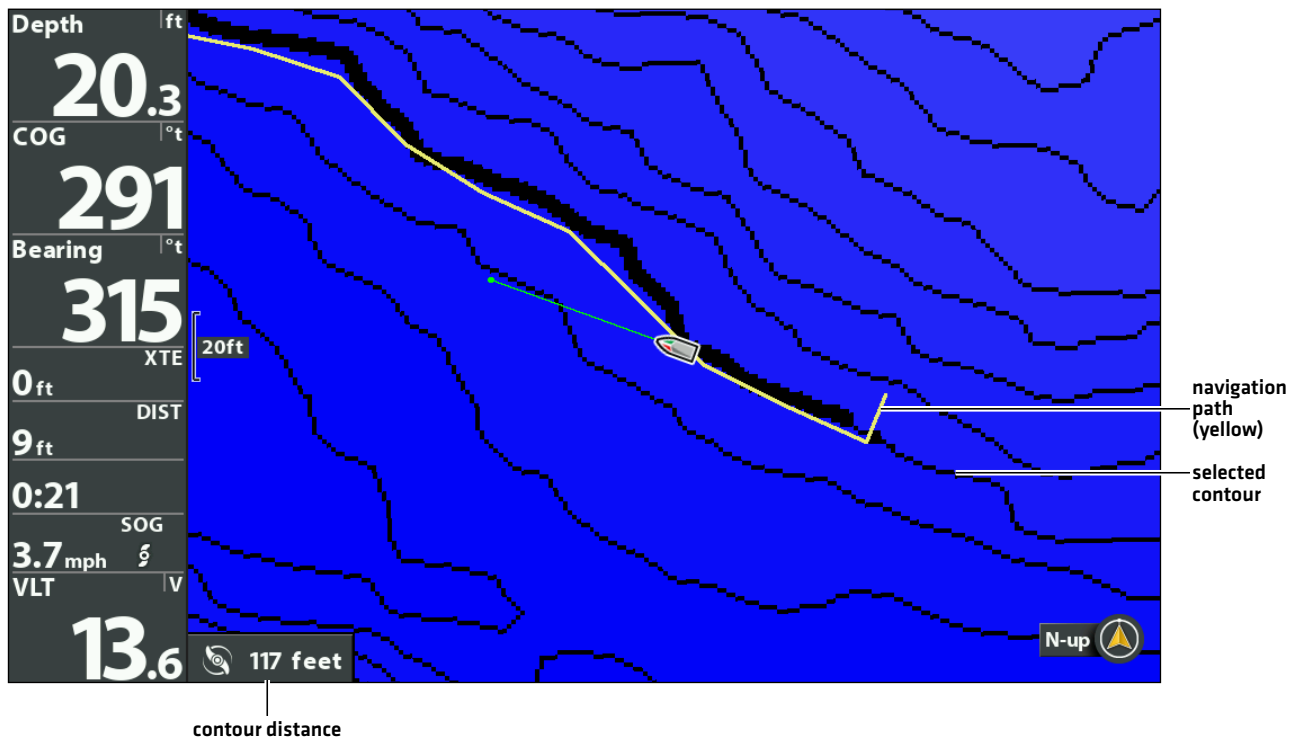
Selecting a Direction for Follow the Contour

direction preview   direction preview
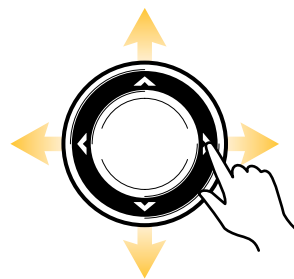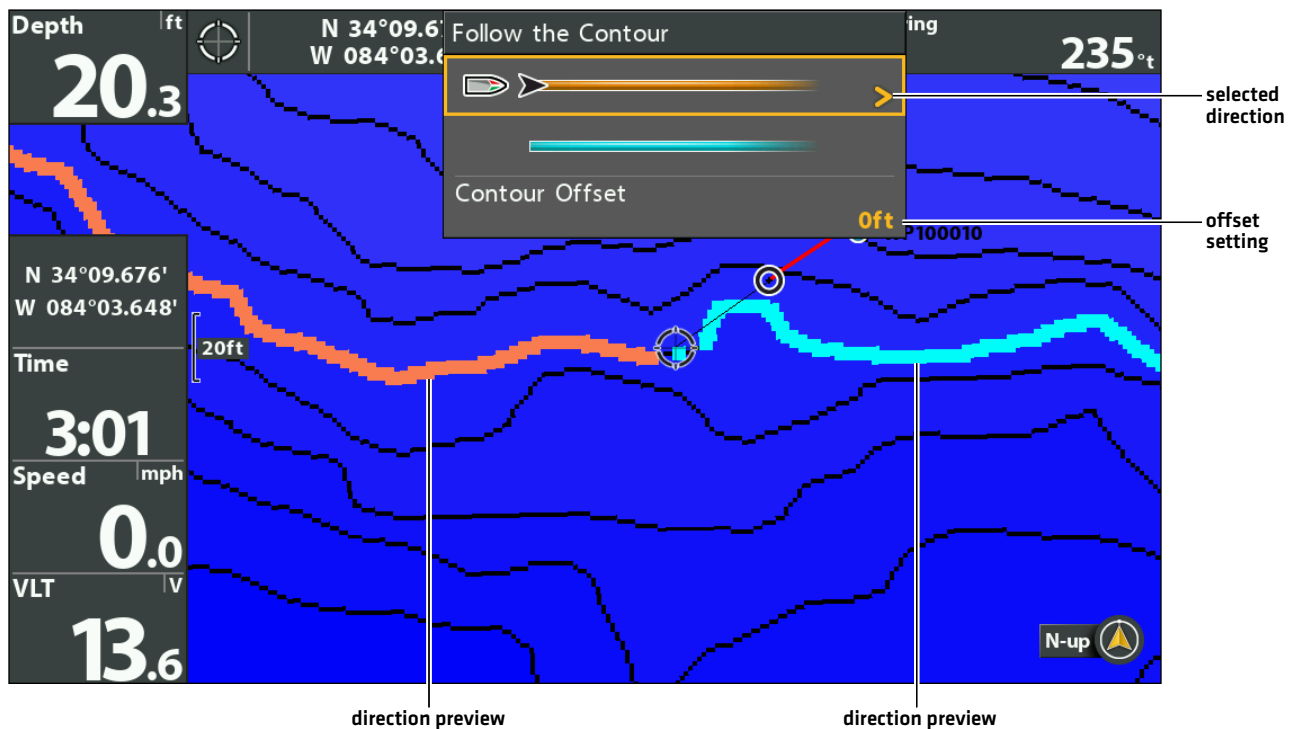
Select a Contour Line   Open the
                               GO TO Menu

navigation path (yellow)

selected contour

contour distance

Reverse Direction

1. During Follow the Contour/Shoreline Navigation, press the GO TO key.

2. Select Reverse Navigation. Press the RIGHT Cursor key.

⚠ **CAUTION!** 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 contour/shoreline. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Cancel Navigation (Disengage)

1. During Follow the Contour/Shoreline Navigation, press the GO TO key.

2. Select Cancel Navigation. Press the RIGHT Cursor key.

Follow an Offset Distance from a Contour

You can set Contour Offset to maintain a set distance from a contour line. Contour Offset is a distance setting only, and does not measure water depth. Input the Contour Offset based on your knowledge of the water depth in your current area.

If you have an AutoChart ZeroLine Map Card, and want to navigate along a bank or shoreline, use Contour Offset to maintain a safe distance from the shoreline.

⚠ **WARNING!** Contour Offset does NOT account for changes in water depth. It is important to be aware of depth variations in your current location and selected navigation route, and adjust the Contour Offset as needed.

1. Use the Cursor Control key to select a position on a contour line.
2. Press the GO TO key.
3. Select Follow the Contour. Press the RIGHT Cursor key.
4. Select Contour Offset.
5. Press the RIGHT or LEFT Cursor keys to set a distance from the contour line.

   To remove the offset, set Contour Offset to 0 (zero).
6. Select a navigation direction from the submenu. Press the RIGHT Cursor key.

   The navigation direction is previewed in orange or blue on the Chart View.

⚠ **CAUTION!** 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 contour. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).

Follow Bottom Hardness or Vegetation

If you have saved Bottom Layer data (with AutoChart Live) on your fish finder or installed an AutoChart ZeroLine map card, you can navigate the selected Bottom Hardness or Vegetation Layer. The selected starting point must be within 1/4 mile of the selected bottom layer.

Display Bottom Hardness or Vegetation

Use the following instructions to display the AutoChart Live bottom layer and type.

1. **Chart X-Press Menu:** With a Chart View displayed on-screen, press the MENU key once.
2. Select AutoChart Live. Press the RIGHT Cursor key.
3. Select AutoChart Live. Select Visible.
4. Select Bottom Layer. Select Visible.
5. Select Bottom Type.
6. Select Bottom Hardness or Vegetation.

Hide Layers

Use the following instructions to hide AutoChart Live Data and Bottom Layer data. You might need to hide these layers to select a contour.

1. **Chart X-Press Menu:** With a Chart View displayed on-screen, press the MENU key once.
2. Select AutoChart Live. Press the RIGHT Cursor key.
3. Select AutoChart Live. Select Hidden.
4. Select Bottom Layer. Select Hidden.

Follow Bottom Hardness

You can start navigation if the boat position is within 1/4 mile of the selected Bottom Hardness layer.

1. Use the Cursor Control key to select a position on the Bottom Hardness layer.

2. Press the GO TO key.

3. Select Follow Hardness. Press the RIGHT Cursor key.

4. Select a navigation direction from the submenu. Press the RIGHT Cursor key.

   The navigation direction is previewed in orange or blue on the Chart View.

   ⚠ **CAUTION!** 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 contour. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).

Follow Vegetation

You can start navigation if the boat position is within 1/4 mile of the selected Vegetation layer.

1. Use the Cursor Control key to select a position on the Vegetation layer.

2. Press the GO TO key.

3. Select Follow Hardness. Press the RIGHT Cursor key.

4. Select a navigation direction from the submenu. Press the RIGHT Cursor key.

   The navigation direction is previewed in orange or blue on the Chart View.

   ⚠ **CAUTION!** 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 contour. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).

Reverse Direction

1. During Follow Hardness or Follow Vegetation navigation, press the GO TO key.

2. Select Reverse Navigation. Press the RIGHT Cursor key.

   ⚠ **CAUTION!** 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 contour. If the boat does not move, confirm the prop is turned on in the menu system (see ***Propeller Controls***).

Cancel Navigation (Disengage)

1. During Follow Hardness or Follow Vegetation navigation, press the GO TO key.

2. Select Cancel Navigation. Press the RIGHT Cursor key.

ROUTES

Routes link two or more waypoints together to create a path for navigation. A route represents your intended navigation and shows the shortest path from each data point to the next. The distance between each waypoint is a route leg. You can save 47 routes (with 50 waypoints each) to the fish finder.

⚠️ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with routes. If Prop Auto On is turned on, the propeller will automatically turn on when a route is navigated, even if the engagement is accidental. A turning propeller can cause injury. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Create a Route and Start Navigation

Use the instructions in this section to connect waypoints and start navigation immediately.

1. Use the Cursor Control key to move the cursor to a waypoint or position on the chart.
2. Press the GO TO key twice.
3. Repeat steps 1 and 2 to add more waypoints to the route.

Creating and Navigating a Route

next waypoint in the route   route start point
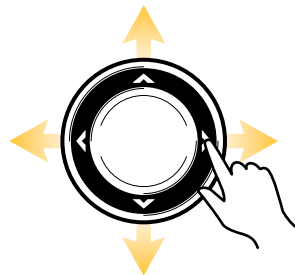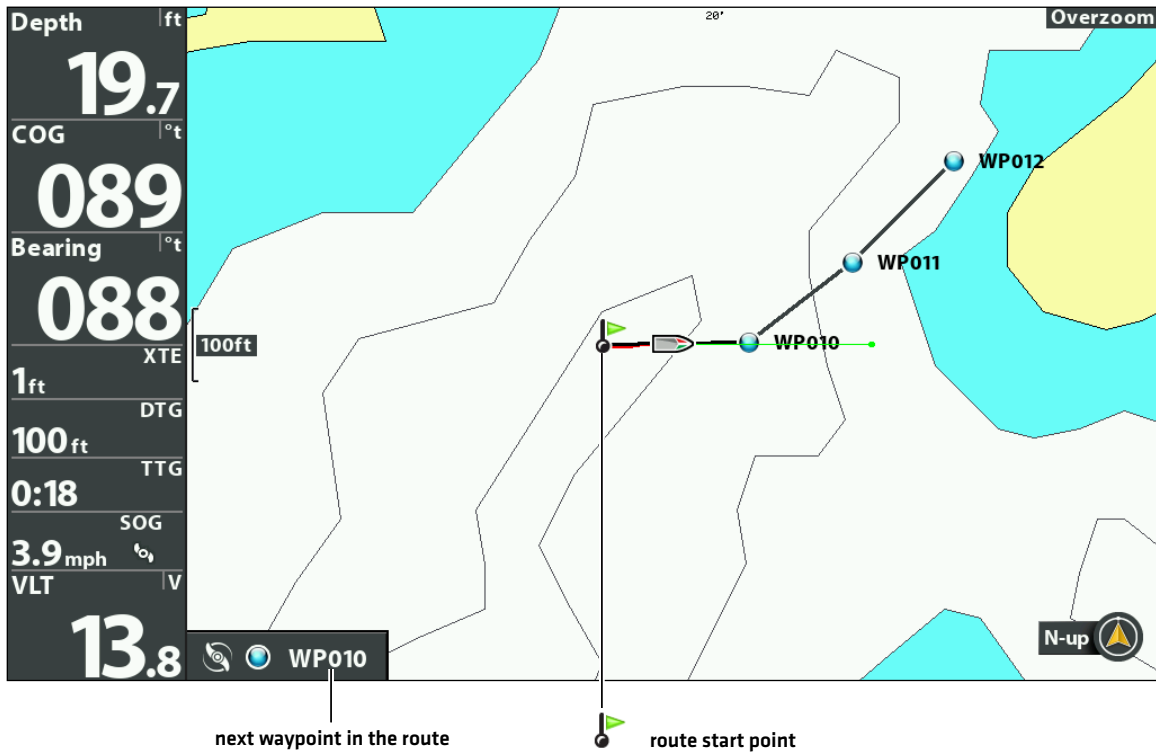
Move the Cursor   Press Twice to Start Navigation

Save the Current Route

A route must have at least two waypoints to be saved as a route.

1. **Chart X-Press Menu:** With a Chart View displayed on-screen, press the MENU key once.
2. Select Save Current Route. Press the RIGHT Cursor key.
3. Follow the on-screen prompts to save or discard the route.

Cancel Navigation (Disengage)

1. During navigation, press the GO TO key.
2. Select Cancel Navigation. Press the RIGHT Cursor key.

Start Navigation on a Saved Route

1. Use the Cursor Control key to move the cursor to a waypoint on a route.

   If you select the first waypoint in the route, the route will turn red.

   Networked Fish Finders: To start navigation on a shared route, select the fish finder you used to save it.
2. Press the GO TO key.
3. Select the route name. Press the RIGHT Cursor key.
4. Select a travel order.

Go To Point	Start navigation to the selected waypoint only.
Forward from Point	Start navigation to the selected waypoint and continue traveling the route forward from there.
Reverse from Point	Start navigation to the selected waypoint and travel the route in reverse from there.
Travel Forward	Start navigation to the first waypoint in the route and continue traveling the route forward from there.
Travel Reverse	Start navigation to the last waypoint in the route and travel the route in reverse from there.

Edit a Saved Route

When you save a route, it is saved with an alphanumeric name that starts with RT. The name can be edited from the Chart View or the Waypoint Management dialog box (see *Manage your Advanced GPS Navigation Data*).

1. Use the Cursor Control key to move the cursor to a waypoint on the route. Press the MENU key.

   OR

   If the route was saved recently, you don't have to select it first. Press the MENU key.

2. Select the route name. Press the RIGHT Cursor key.

3. Select Edit. Press the RIGHT Cursor key.

4. Use the Cursor Control key to change the route name.

   Visibility: Select Visible or Hidden.

5. **Save:** Select Save. Press the RIGHT Cursor key.

Show/Hide a Route

1. Use the Cursor Control key to move the cursor to a waypoint on the route. Press the MENU key.

   OR

   If the route was saved recently, you don't have to select it first. Press the MENU key.

2. Select the route name. Press the RIGHT Cursor key.

3. Select Edit. Press the RIGHT Cursor key.

4. Select Visibility.

5. Select Visible or Hidden.

6. **Save:** Select Save. Press the RIGHT Cursor key.

AUTOPILOT

When in AutoPilot, Advanced GPS Navigation keeps the trolling motor pointed in the direction you want to go. Each time the wind or water current moves the boat off course, AutoPilot senses the change and steers itself back to the original heading. The AutoPilot direction is set every time a steering change is made. AutoPilot will pull the bow of the boat around and correct automatically until the boat is moving in the direction you chose.

AutoPilot is available in Locked Course or Locked Heading mode. Both modes are valuable tools for accurate and precise bait presentation. We highly recommend trying both Locked Course AutoPilot and Locked Heading AutoPilot in various fishing situations and applications. With experimentation and time you will find which AutoPilot Mode works best for you in any given situation.

How to Determine When to Use Locked Course and When to Use Locked Heading

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.

- **Locked Course AutoPilot** will keep the boat on a true straight path in most conditions. When very extreme conditions exist, such as 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 Locked Heading AutoPilot and let the boat move with the wind or current if the motor is not powerful enough to overcome it.

- **Locked Heading AutoPilot** helps you maintain a constant heading, but does not compensate for winds or currents.

Locked Course AutoPilot

Locked Course AutoPilot not only uses compass heading but also GPS data to correct for cross winds, current and other external forces to keep the boat on the intended course. When Locked Course AutoPilot is turned on, it creates a course that it will follow. When you steer to a new heading, a new course is created. Locked Course AutoPilot will keep the boat on the course in most conditions. When very extreme conditions exist, 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 Locked Heading AutoPilot and let the boat move with the wind or current if the motor is not powerful enough to overcome it.

LOCKED COURSE AUTOPILOT

POSSIBLE DEVIATION DUE TO WIND/CURRENT

GPS POINT

GPS POINT

GPS POINT
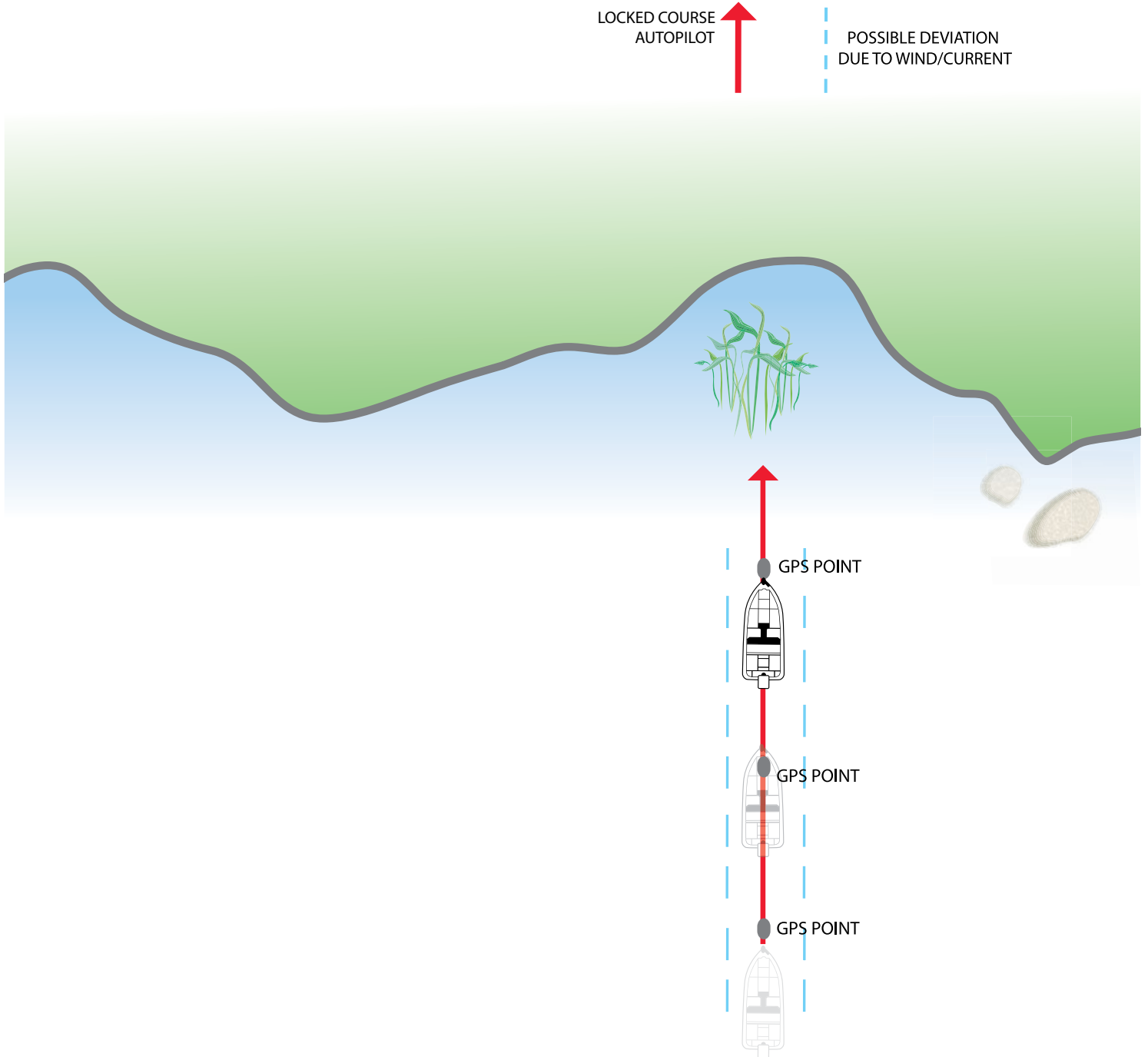
Locked Heading AutoPilot

Locked Heading AutoPilot uses an internal compass to provide heading lock. When Locked Heading AutoPilot is on, it keeps the motor pointed in the same compass direction. If a manual steering correction is made, Locked Heading 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.

LOCKED HEADING AUTOPILOT

POSSIBLE DEVIATION DUE TO WIND/CURRENT
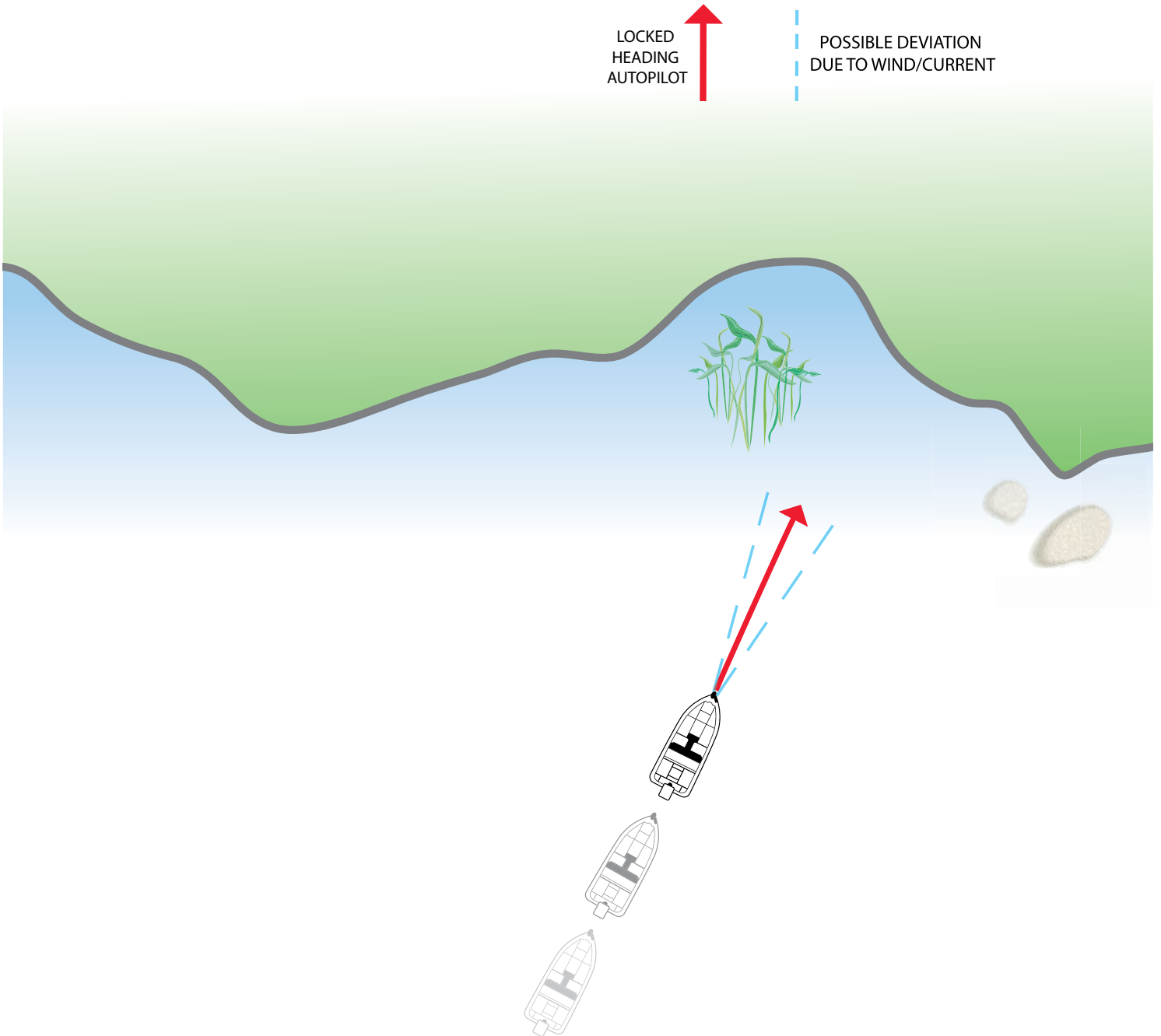
Using AutoPilot with Other Advanced GPS Functions

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 Overview

When a route is started from the fish finder, it will communicate with the autopilot to tell it which way to turn to get on course. The AutoPilot Navigation menu must be turned on to enable this feature on the Humminbird fish finder.

⚠ **WARNING!** It is the operator's responsibility to make prudent decisions regarding personal safety and the operation of the vessel. Do NOT leave the autopilot unattended while it is steering the vessel. Watch for obstacles and potential hazards at all times. Be prepared to respond to changing conditions and take manual control of the vessel as required.

⚠ **WARNING!** Do NOT use the autopilot where there may be shallow water, obstacles, or when manual navigation is required, especially in the following situations:

- while navigating or maneuvering in shallow waters or dangerous seabeds,
- while entering or exiting harbor, mooring, or setting sail,
- while traveling at high speed,
- in heavy traffic areas, near breakwaters, canals,
- or while encountering any potential obstacles.

⚠ **WARNING!** Watch for a turning propeller and be prepared for boat movement when working with AutoPilot. If Prop Auto On is turned on, the propeller will automatically turn on when AutoPilot is engaged, even if the engagement is accidental. A turning propeller can cause injury. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

⚠ **WARNING!** To cancel AutoPilot navigation, you must select Cancel Navigation and then turn the propeller off. The propeller does not automatically turn off when navigation is canceled. See *Cancel Navigation* and *Propeller Controls* for more details.

⚠ **CAUTION!** Advanced GPS Navigation uses a magnetic compass to detect direction of travel. The compass can be adversely affected by magnets or large, ferrous metal objects near (within 24" of) the trolling motor control head.

Obstructions on the propeller may cause excessive vibration of the motor head. This vibration can cause the compass to wander and erratic steering to occur. Clear the obstruction to return the motor to normal operation.

📝 **NOTE:** When AutoPilot is on and the trolling motor is pulled out of the water to the stow position, the steering motor will continue to run. Turn off AutoPilot to stop the motor. If AutoPilot is left on, the steering motor will shut off automatically after 8 seconds. The motor should not be stored in this condition for long periods as power is still being applied to all electronics. Always turn AutoPilot off and disconnect your motor from the battery when storing your motor.

Start AutoPilot Navigation

You can start AutoPilot navigation based on the motor heading or the cursor position.

⚠ **CAUTION!** 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 contour. If the boat does not move, confirm the prop is turned on in the menu system (see *Propeller Controls*).

Select the AutoPilot Mode

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Motor Settings. Press the RIGHT Cursor key.
3. Select AutoPilot Mode.
4. Select Locked Course or Locked Heading.

Start AutoPilot Based on the Motor's Heading

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

1. Press the GO TO key.
2. Select AutoPilot. Press the RIGHT Cursor key.

Start AutoPilot Towards the Cursor Position

Use the cursor to set the heading for AutoPilot navigation. Advanced GPS will start navigation and maintain a constant heading towards the cursor position.

1. Use the Cursor Control key to move the cursor to a position on the chart.
2. Press the GO TO key.
3. Select AutoPilot. Press the RIGHT Cursor key

AutoPilot Navigation to the Cursor Position

advanced AutoPilot mode   track (red line)
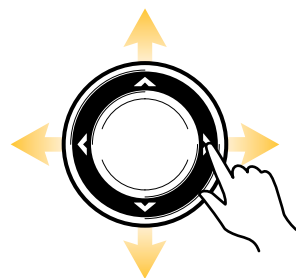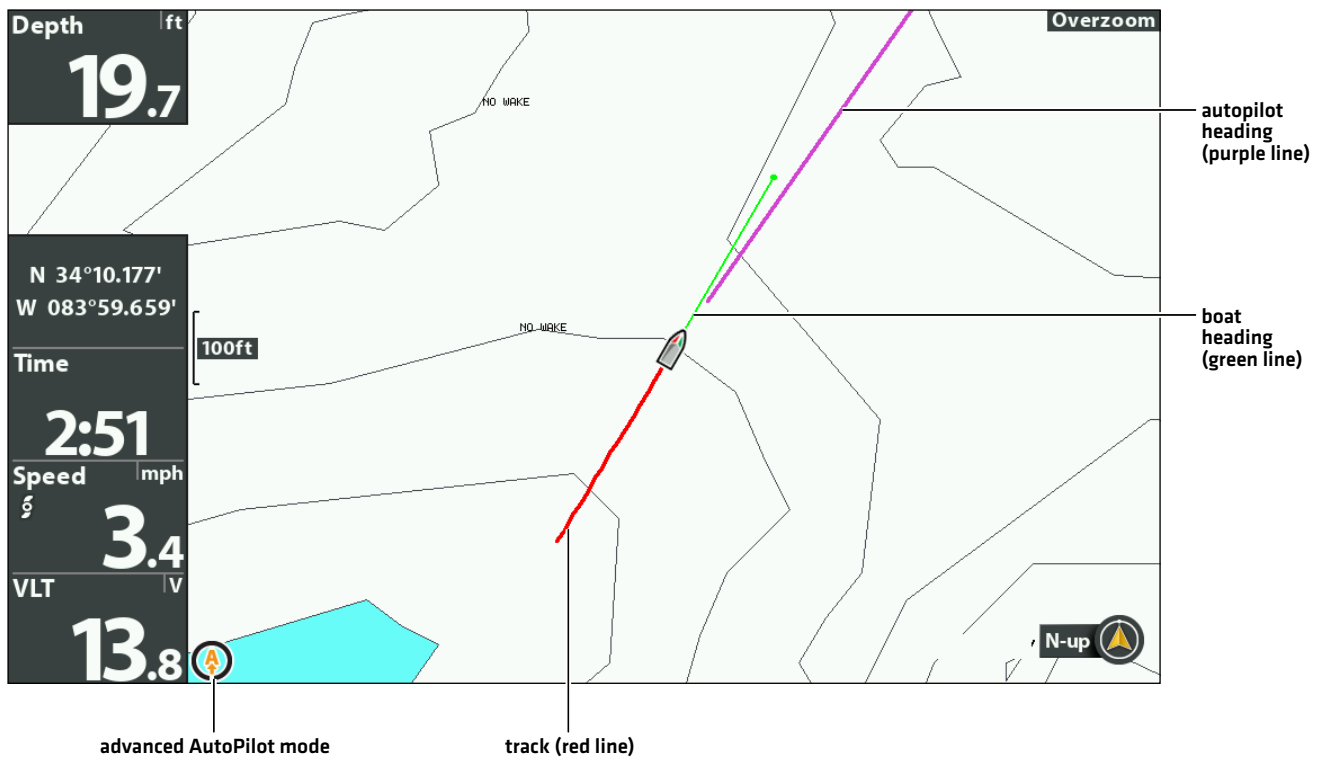
Move the Cursor   Open the
GO TO Menu

Adjust the Heading

Use the X-Press Remote to adjust the heading during AutoPilot navigation.

> ✏️ **NOTE:** After steering to a new direction, there is a short delay before the direction is locked in to allow the compass to stabilize. When broad speed changes are made, the motor heading may change slightly. This is normal.

> ⚠️ **CAUTION!** 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 contour. If the boat does not move, confirm the prop is turned on in the menu system (see **Propeller Controls**).

Adjust the AutoPilot Heading

1. Press the POWER key.
2. Confirm the Steer/Prop menu is selected.
3. Press the RIGHT or LEFT Cursor keys.

Changing the Heading
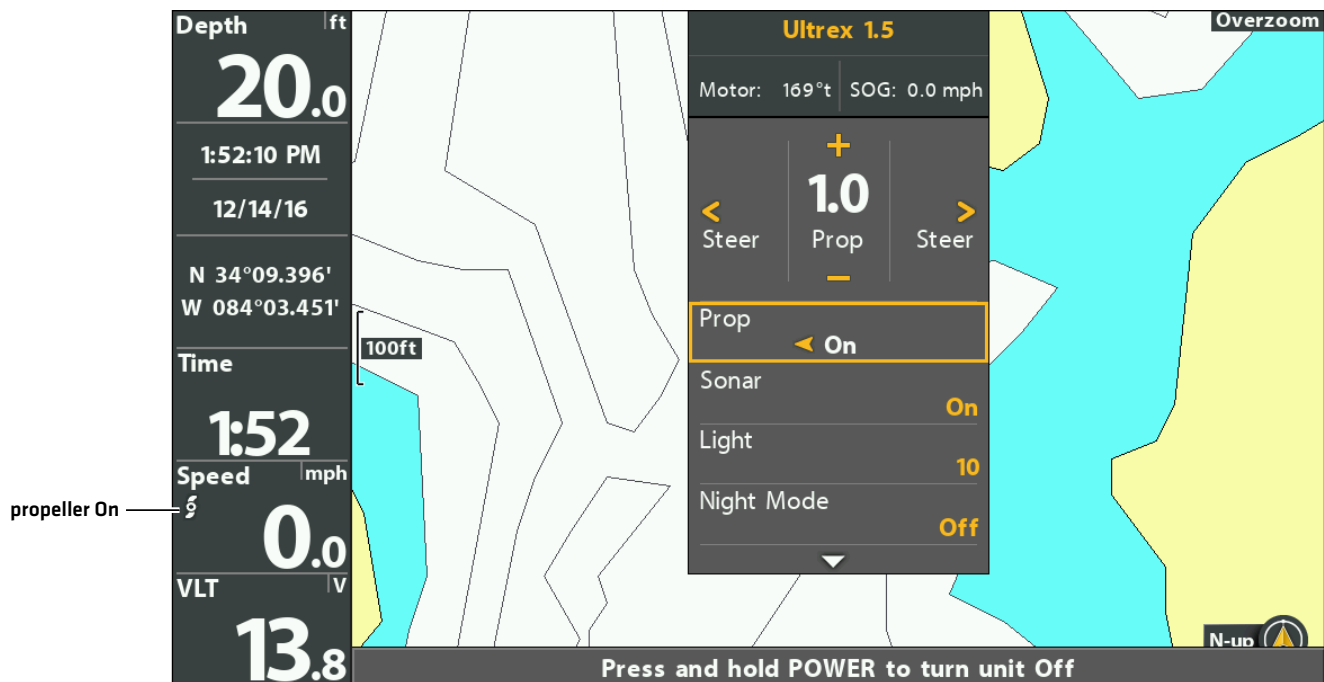
Open
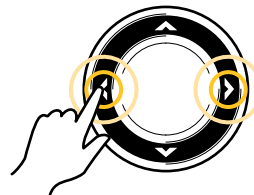
Steer

Show/Hide the AutoPilot Heading Line

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.

2. Select Motor Settings. Press the RIGHT Cursor key.

3. Select AutoPilot Heading Line.

4. Select On or Off.

Cancel Navigation

1. Press the GO TO key.

2. Select Cancel Navigation.

3. Press the RIGHT Cursor key.

4. Press the POWER key.

5. Select Prop > Off.

> ⚠ **WARNING!** To cancel AutoPilot navigation, you must select Cancel Navigation and then turn the propeller off. The propeller does not automatically turn off when navigation is canceled. See ***Propeller Controls*** for more details.

Manage Your Advanced GPS Navigation Data

You can edit iTracks and Spot-Locks using 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 Advanced GPS Navigation are described in this section. For more details about the Waypoint Management dialog box, see your *HELIX Operations Manual*.

Overview

Open the Waypoint Management Dialog Box

1. **Main Menu:** Press the MENU key twice. Select the Nav tab.
2. Select Waypoints, Routes, Tracks.
3. Press the RIGHT Cursor key.

Sort

You can sort your saved navigation data alphabetically or by newest/oldest date, distance, or icon.

1. Press the EXIT key.
2. Select Sort By.
3. Press the RIGHT or LEFT Cursor keys to select a sort setting.

Select a File

Use these instructions to select an individual waypoint, route, track, or group. Then, use the submenu to apply settings or actions to the selected file.

1. Press the DOWN or UP Cursor keys to select a saved waypoint, route, track, iTrack, Spot-Lock, or group.
2. **Open the Submenu:** Press the RIGHT Cursor key.

Selecting Files in the Waypoint Management Dialog Box (Waypoints, Routes, Tracks)

Waypoints, Routes, Tracks

Sort By

A to Z

Options

track — 12/29/16 4:20 PM

iTrack — IT0913

route — RT001

RT002

Spot-Lock (selected file) — SL019 >

waypoint — WP013

WP014

Home — selected group

Default Group: Home — information and instructions

selected file preview

0.5sm SL019

Name: SL019
Icon: ⚓
Icon Category: Navigation
Visibility: Visible
Latitude: N 34°10.321'
Longitude: W 083°59.528'
Created: 4:24:04 PM
12/29/16
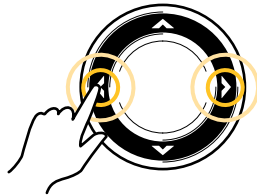
Scroll through the List
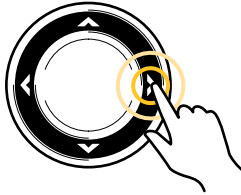
Open a Menu
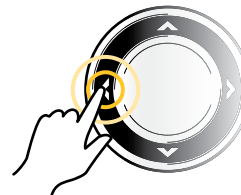
Go Back

Jump to the Top

The Options menu, and other important actions, are located at the top of the Waypoint Management dialog box. Use these instructions to quickly select Options or jump to the top.

1. Press the EXIT key.

Selecting Options (Jump to the Top)
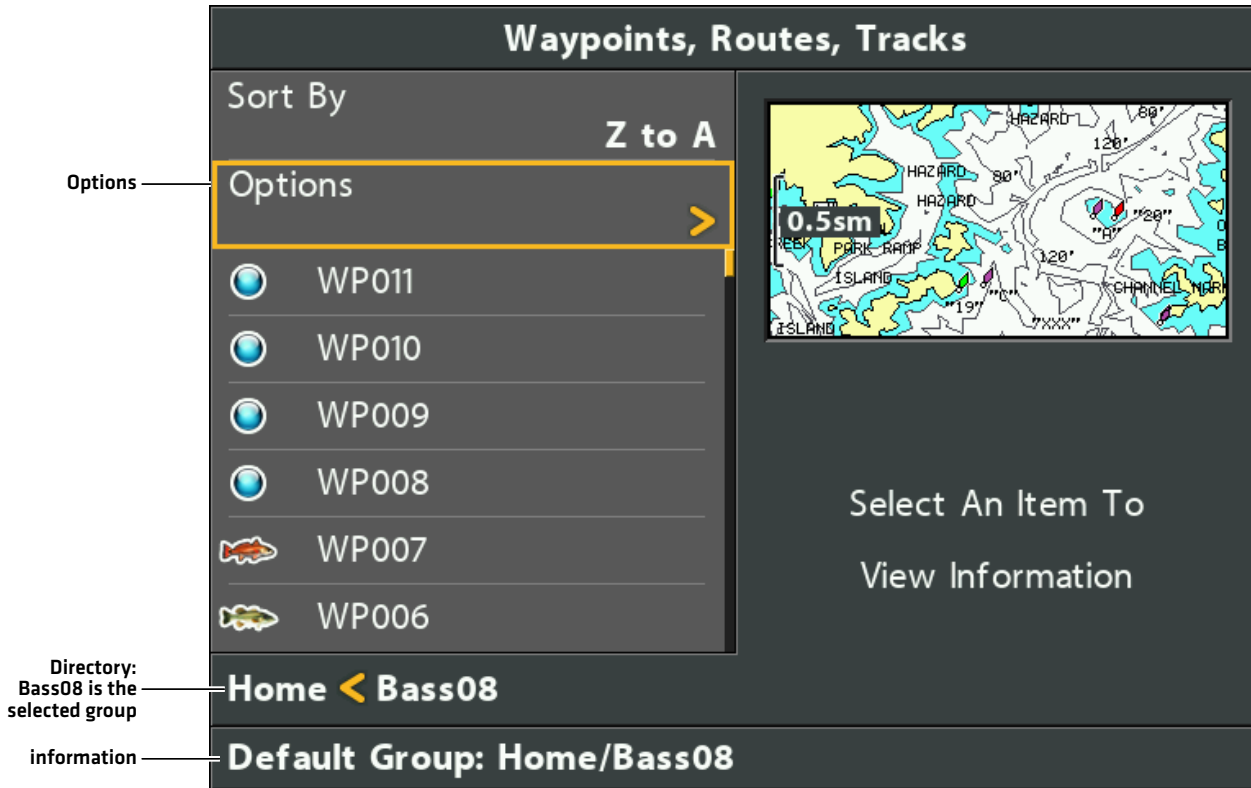
Jump to the Top
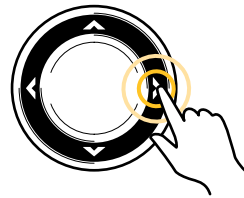
Open a Menu

Open the Spot-Lock Submenu

You can use the Waypoint Management dialog box to edit a saved Spot-Lock or start navigation modes. Also, see the *Spot-Lock* section for more information.

Open the Spot-Lock Submenu

1. Select a Spot-Lock from the Waypoint Management dialog box. Press the RIGHT Cursor key.
2. Select one of the following menu options:

Edit	Opens the Edit Spot-Lock menu.
Delete	Deletes the Spot-Lock. To remove the Spot-Lock from the group, choose Selected. To delete the Spot-Lock from all groups, choose All Instances.
Duplicate	Creates a copy of the Spot-Lock and adds it to a new group or route.
Save As	Creates a Spot-Lock (based on the selected Spot-Lock) and opens a menu so you can change the new Spot-Lock's name.
Move	Moves the Spot-Lock from the selected group to a different group.
Cursor To	Moves the cursor to the selected Spot-Lock in the Chart View.
Go To	Starts navigation to the selected Spot-Lock.
Spot-Lock	Starts Spot-Lock navigation at the selected Spot-Lock.
Circle	Starts Circle mode navigation around the selected Spot-Lock position. See the *Circle Mode* section for details.
Target	Displays a target on the selected Spot-Lock in the Chart View.
Grid	Displays a grid on the selected Spot-Lock in the Chart View.

Open the iTrack Submenu

You can use the Waypoint Management dialog box to edit a saved iTrack or start navigation modes. Also, see the *iTrack* section for more information.

Open the iTrack Submenu

1. Select an iTrack from the Waypoint Management dialog box. Press the RIGHT Cursor key.
2. Select one of the following menu options:

Edit	Opens the Edit iTrack menu.
Navigate to Start	Starts navigation to the iTrack start point.
Navigate to End	Starts navigation to the iTrack end point.
Delete	Deletes the iTrack. To remove the iTrack from the group, choose Selected. To delete the iTrack from all groups, choose All Instances.
Duplicate	Creates a copy of the iTrack and adds it to a new group or route.
Move	Moves the waypoint from the selected group to a different group (see the *iTracks* section for details).
Info	Displays latitude/longitude information, iTrack distance, creation date, and point information.

Export Nav Data

Use the following instructions to export your navigation data to an SD card or microSD card. To export saved iTracks and Spot-Locks to the trolling motor, see *Configure Advanced GPS with the Fish Finder: Turn on Auto Upload Data*.

⚠️ **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 computer before restoring the unit's defaults or updating the software. See your *HELIX Operations Manual* for details.

📝 **NOTE:** Do not leave the SD card slot cover open. The slot cover should always be closed to prevent water damage to the unit.

Export ALL Navigation Items

Export your navigation items to an unlocked, installed microSD or SD card (separate purchase required). See your *HELX Operations Manual* for compatibility details.

1. Install the SD card or microSD card according to the instructions in your *HELIX Operations Manual*.
2. Open the Waypoint Management dialog box.
3. Select Options > Select All and... > Export.
4. Follow the on-screen prompts to confirm or cancel the export.

Export Selected Navigation Items

You can also select individual navigation items and export them to an unlocked, installed microSD or SD card. See your *HELIX Operations Manual* for compatibility details.

1. Install the SD card or microSD card according to the instructions in your *HELIX Operations Manual*.
2. Open the Waypoint Management dialog box.
3. From a selected group, select Options > Select Multiple and... > Export.
4. **Select Items:** Press the UP or DOWN Cursor keys to scroll through the waypoints, routes, and tracks. Press the RIGHT Cursor key to select an item. Repeat as needed.
5. **Confirm Export:** Press the EXIT key to select Export Selected.

   Press the RIGHT Cursor key. Follow the on-screen prompts to confirm or cancel the export.
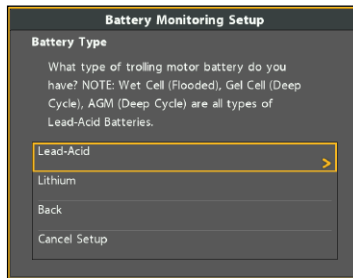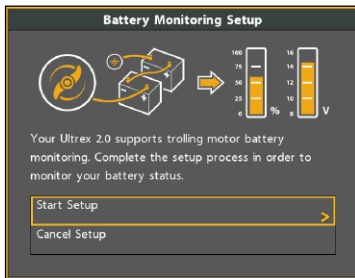
Battery Monitoring

Minn Kota QUEST Series trolling motors provide real-time battery and runtime readings on your HELIX fish finder.

Set Up Battery Monitoring

1. Open the X-Press Remote on the Chart View pane.

2. Select Battery Setup.

3. Press the RIGHT Cursor key to select Start Setup. Follow the prompts in the setup.

4. Select the type of trolling motor battery installed: Lead-Acid or Lithium.

5. Select the Battery Quantity: Two (24V System) or Three (36V System)

6. If Lead-Acid battery is selected, next select the type of Lead-Acid battery: Wet Cell (Flooded), Gel Cell (Deep Cycle), AGM (Deep Cycle) or Don't Know.

7. Select the Battery Capacity Type: Amp Hours, Two Discharge Rates, 20 Hour Rate or Don't Know.

8. Select the Battery Capacity.

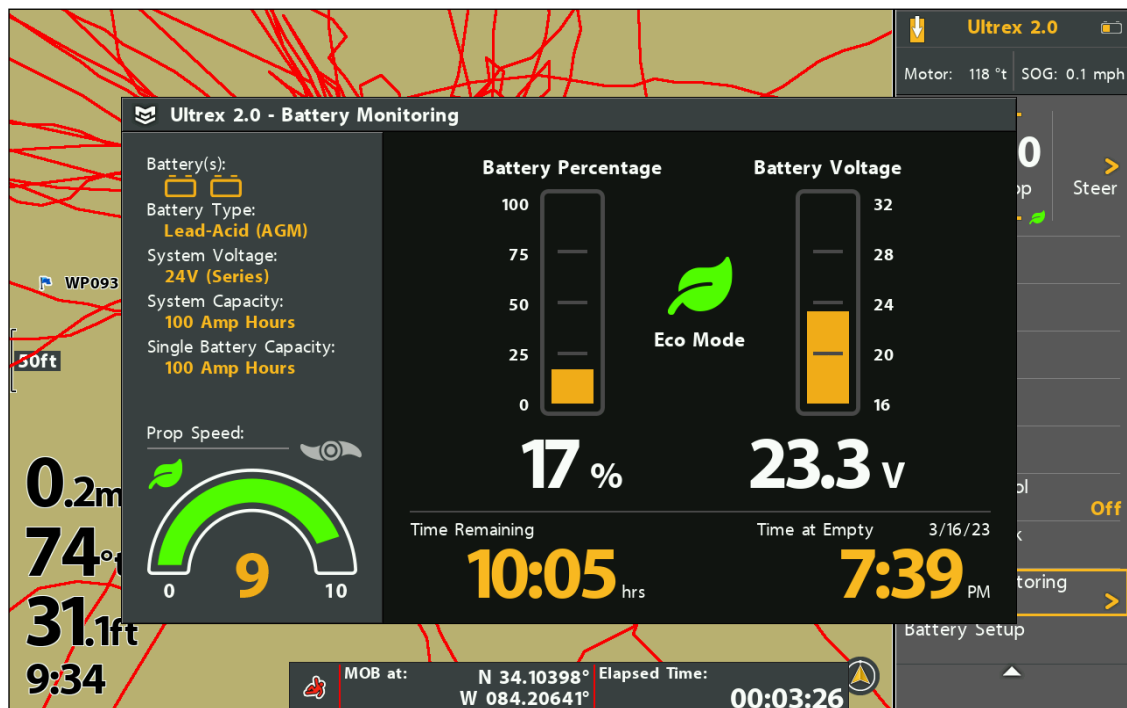9. Press the RIGHT Cursor key to complete and save the Battery Setup.

Battery Monitoring Setup
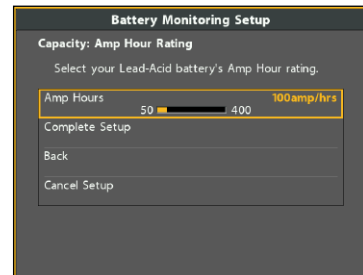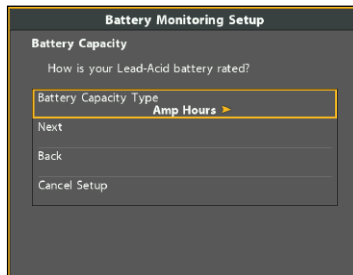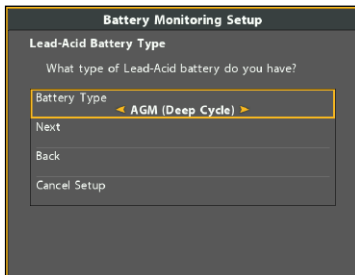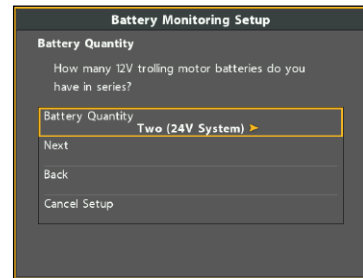
Open Battery Monitoring View

1. Open the X-Press Remote on the Chart View pane.
2. Select Battery Monitoring.
3. The Battery Monitoring screen will display over the Chart View.
4. Press EXIT to return to the Chart View.

Battery Monitoring View

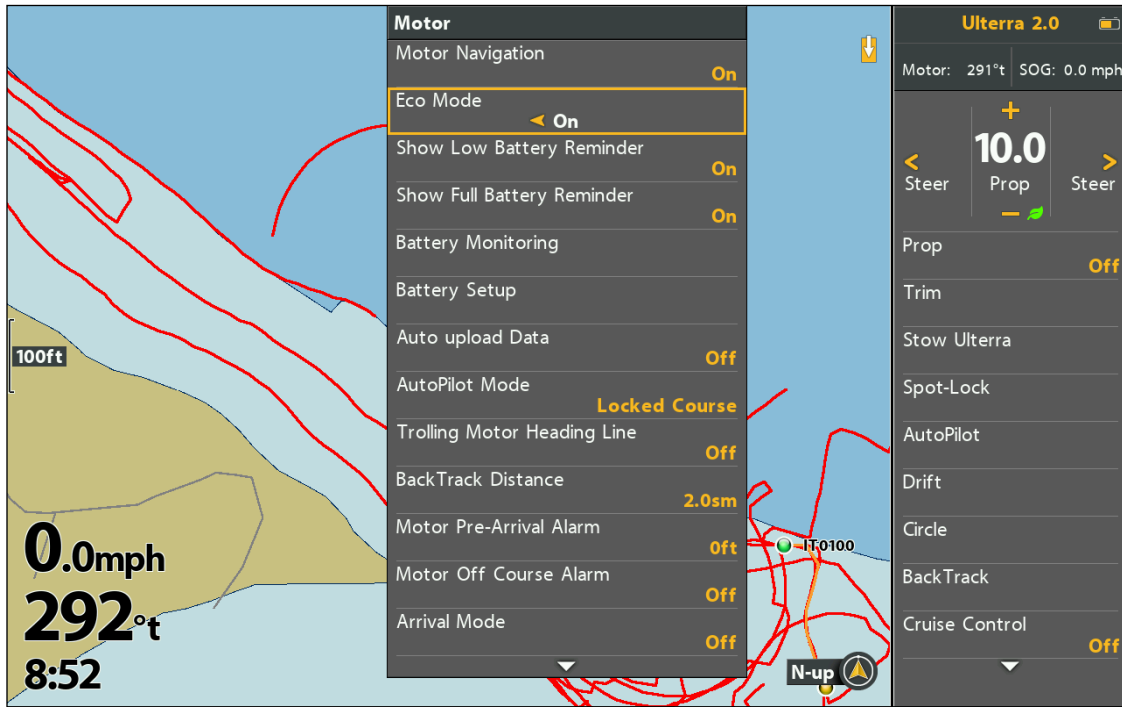## Eco Mode

Eco mode saves battery life by limiting thrust. This feature is only available on QUEST Series motors. Eco mode is turned off by default.

Turn Eco Mode On/Off

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Minn Kota Motor Settings.
3. Select Eco Mode. Press the RIGHT Cursor key to select On or Off.
4. When Eco Mode is turned On, the Eco Mode icon will display under the Prop Speed.

Turn Eco Mode Reminders On/Off

Battery Reminder notifications will prompt you to turn Eco Mode on when the battery is below 20 percent or turn Eco Mode off if the battery is above 80 percent. These reminders can be turned on or off from the Motor Settings menu.

1. **Main Menu:** Press the MENU key twice. Select the Accessories tab.
2. Select Minn Kota Motor Settings.
3. Select Show Low Battery Reminder. Press the RIGHT Cursor key to select On or Off.
4. Select Show Full Battery Reminder. Press the RIGHT Cursor key to select On or Off.
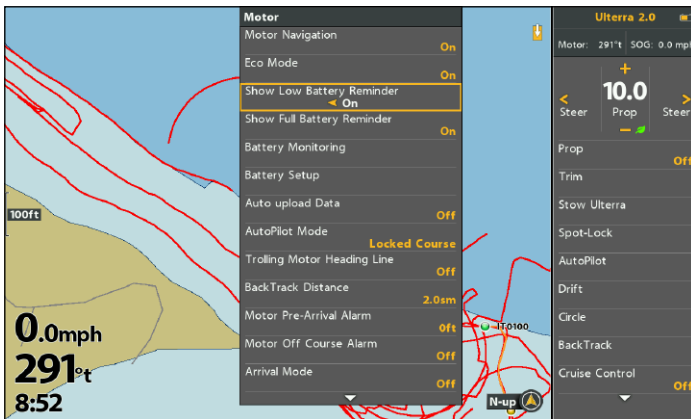
Low Battery Reminder	**Full Battery Reminder**
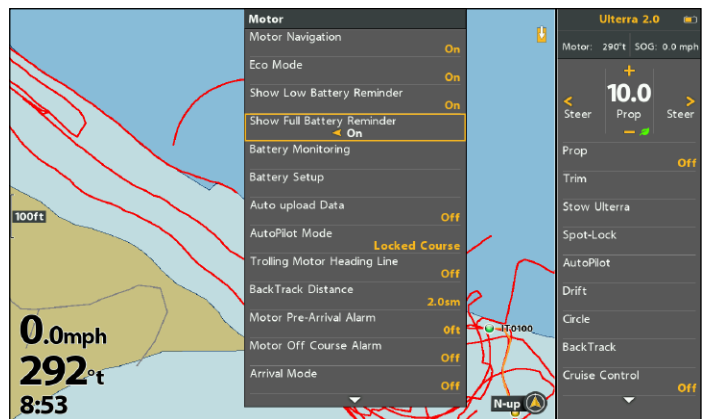
Contact Humminbird

Any questions relating to the product should be directed to our Help Center at **https://humminbird-help.johnsonoutdoors.com/hc/en-us** or in writing to the address below:

Humminbird Service Department
678 Humminbird Lane
Eufaula AL 36027 USA

Social Media Resources:

Facebook.com/HumminbirdElectronics

Twitter.com (@humminbirdfish)

Instagram.com/humminbirdfishing

YouTube.com/humminbirdtv