

Follow the instructions in this installation guide to gimbal mount the control head.

INSTALLATION PREPARATION

Read the instructions in this transducer guide completely to understand the mounting guidelines before starting the installation.

Visit our [Web site](#) for additional information and resources for transducer installations.

Supplies: In addition to the hardware supplied with your control head, you will need a powered hand drill and various drill bits, Phillips head screwdriver, flat head screwdriver, pencil, safety glasses and dust mask, marine-grade silicone sealant, dielectric grease [optional], extension cables [optional], Ethernet cables [optional], and accessory cables [optional]. Also, see **Connect Power** to determine the type of connection, fuse size, and additional equipment you will need for the installation.

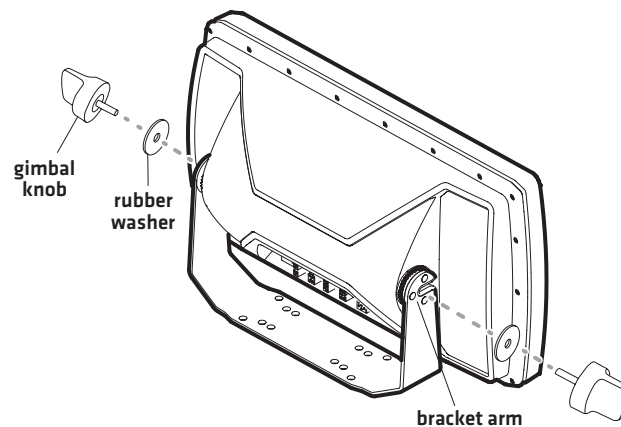
Accessories and Ethernet: Accessories and Ethernet equipment. The installation guides are available with the product, or they can be downloaded from our [Web site](#).


INSTALLATION OVERVIEW

1 | Plan the Mounting Location

1. Place 1 rubber washer onto each gimbal knob.
2. Install the gimbal knobs [with washers] into each side of the control head. Tighten the knobs just enough so you can slide the control head into the gimbal bracket arms.

Assembling the Control Head and Bracket



 **NOTE:** If you prefer to mount the control head overhead, flip the bracket to the top of the control head. The opening in the gimbal bracket arms must face the rear of the control head.

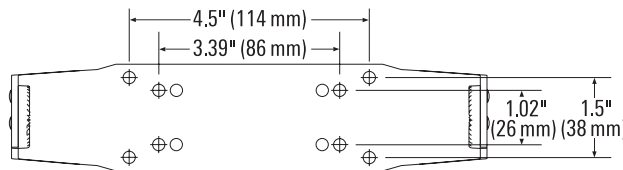
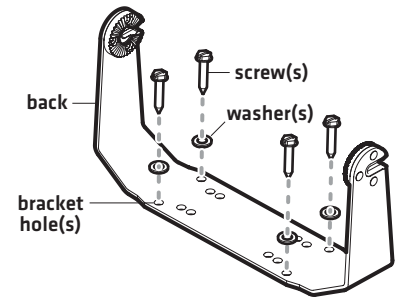
3. Place the assembled control head in various locations to determine the best mounting location with the following requirements:
 - a stable, protected surface to protect the control head from excessive wave shock, vibration, and water
 - sufficient space for the control head tilt range
 - visibility during operation, as well as easy installation and removal
 - access above and below the mounting surface to pass the cables through to the control head
 - space for the 1" [25 mm] cable hole located 2" to 4" [50 to 100 mm] behind the chosen mounting location
4. Test route all cables [transducer, power, Ethernet, accessories] to the control head mounting location. Leave enough cable length for installing the cable tray and for the control head tilt range.
5. After you have selected the mounting location, loosen the gimbal knobs and remove the control head from the gimbal bracket.

2 | Install the Gimbal Bracket

- Place the gimbal bracket in the chosen position on the mounting surface. Mark the four outer mounting screw locations using a pencil or center punch.

NOTE: The outer set of mounting holes is recommended. You may use the inside set of mounting holes if necessary. There may be additional, unused mounting holes on the gimbal bracket.

- Set the gimbal bracket aside. Drill the four mounting screw holes using a 5/32" [4 mm] drill bit.
- Cable Hole:** Mark and drill a 1" [25 mm] hole 2" to 4" [50 to 100 mm] behind the bracket. You will use this hole for routing the cables to the control head in another section.
- Place the bracket on the mounting surface aligned with the drilled holes. Fill the mounting holes with marine-grade silicone sealant.
- Place one flat washer onto each #10 x 1" wood screw. Insert the four screws with washers into the mounting holes [see the illustration *Installing the Gimbal Bracket*]. **Hand tighten only!**

Bracket Hole Pattern Measurements

Installing the Gimbal Bracket

3 | Connect Power

It is important to review the following information before you start the power installation:

- Cable Length:** A 6' [2 m] long power cable is included. You may shorten or lengthen the cable using 18 gauge multi-stranded copper wire. See the *Recommended Power Cable Extension Information* table for details.

Recommended Power Cable Extension Information

Extension Length	Wire Gauge
1 to 6 ft	18 AWG
6 to 12 ft	14 AWG
12 to 24 ft	12 AWG

Please consult a U.S. Coast Guard ABYC-approved wire gauge diagram or a certified NMEA Marine Electronics Installer.

- Power Supply:** The control head must be connected to a 12 VDC power supply using the fuse size shown in the Required Fuse Size table.

Required Fuse Size

Model	Fuse Size	Fuse Type
HELIX 8	4A	slow-blow or MDL equivalent
HELIX 9	4A	slow-blow or MDL equivalent
HELIX 10	4A	slow-blow or MDL equivalent
HELIX 12	5A	slow-blow or MDL equivalent
HELIX 15	6.25A	slow-blow or MDL equivalent

HELIX® SERIES CONTROL HEAD Installation Guide

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- **Fuse Panel or Battery:** The control head power cable can be connected to the electrical system of the boat at the fuse panel (usually located near the console), or directly to the battery. In order to minimize the potential for interference with other marine electronics, a separate power source (such as a second battery) may be necessary.

⚠ WARNING! Some boats have 24 or 36 Volt electric systems, but the control head **MUST** be connected to a 12 VDC power supply.

⚠ WARNING! Make sure that the power cable is disconnected from the control head at the beginning of this procedure.

⚠ WARNING! Humminbird® is not responsible for over-voltage or over-current failures. The control head must have adequate protection through the proper selection and installation of the fuse size shown in the **Required Fuse Size** table.

1. Confirm that the power cable is disconnected from the control head.
2. Connect the power cable wires to the fuse panel or battery as follows:

Fuse Terminal Connection: Use crimp-on type electrical connectors (not included) that match the terminal on the fuse panel. Attach the black wire to ground (-), and the red wire to positive (+) 12 VDC power. Install the required fuse (as shown in the **Required Fuse Size** table).

Battery Connection: Install an inline fuse holder (not included) and the required fuse (as shown in the **Required Fuse Size** table). Attach the black wire to ground (-), and the red wire to positive (+) 12 VDC power.

📄 NOTE: For multi-control head installations and troubleshooting information, download the Power Troubleshooting Guide from our Web site. Also, see the Operations Summary Guide to set the Low Battery Alarm and use Standby Mode to conserve power.

📄 NOTE: If you have a trolling motor, it is important to keep the control head power and trolling motor power as separate as possible.

4 | Route the Cables to the Control Head

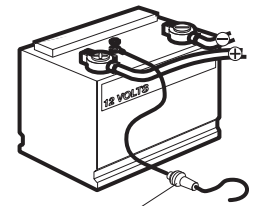
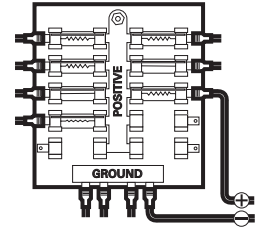
1. **Sonar:** Proceed to your transducer installation guide and follow the instructions to install the transducer.
2. **Accessories [optional]:** Install accessories using the guides provided with them.
3. **Ethernet [optional]:** Install Ethernet cables and hardware using the Ethernet Installation Guide.

📄 NOTE: The installation guides for Ethernet and optional-purchase accessories are available with your product, and they can be downloaded from our Web site.

4. Route all cables to the control head. Your boat may have a pre-existing wiring channel or conduit that you can follow. Route the cables as far as practical from the antenna cable of VHF radios or tachometer cables to reduce the possibility of interference.

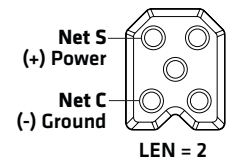
⚠ CAUTION! Do NOT mount the cables where the connectors could be submerged in water or flooded. If cables are installed in a splash-prone area, it may be helpful to apply dielectric grease to the inside of the connectors to prevent corrosion. Dielectric grease can be purchased separately from a general hardware or automotive store.

5. Pass the cables through the cable hole.

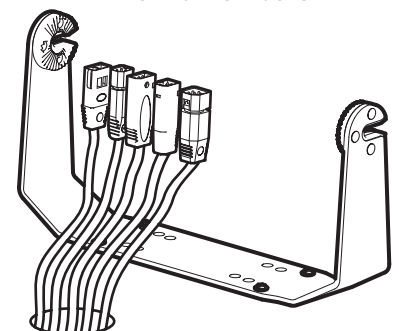


Inline Fuse Holder

NMEA 2000® Port [optional]



Routing the Cables Behind the Bracket

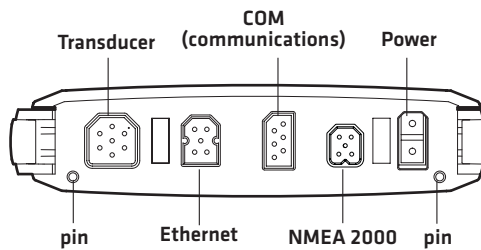
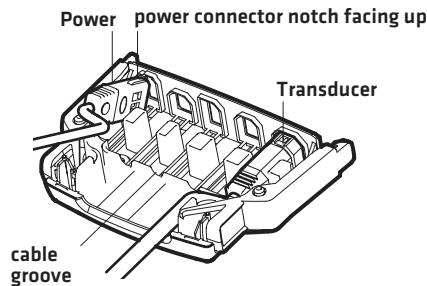


5 | Assemble the Cable Tray

The cable tray is an important part of the control head installation. It secures the cables and protects them from potential damage.

1. Use a Phillips head screwdriver to remove the screws from the bottom of the cable tray.
2. **Hold the cable tray together and turn it over**, so the Humminbird logo is facing up. Lift the cover and set it aside.
3. See the illustration *Locating the Cable Tray Slots*. Insert each cable connector into the correct slots in the tray.

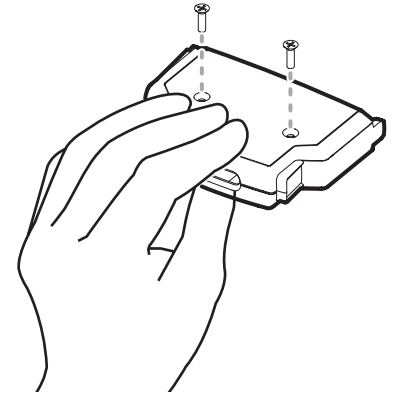
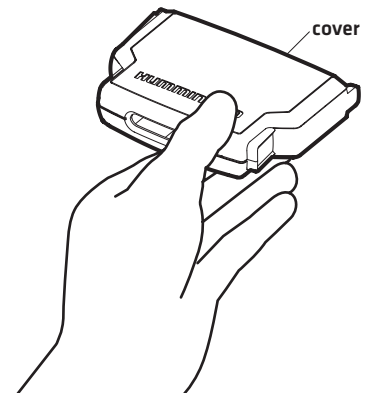
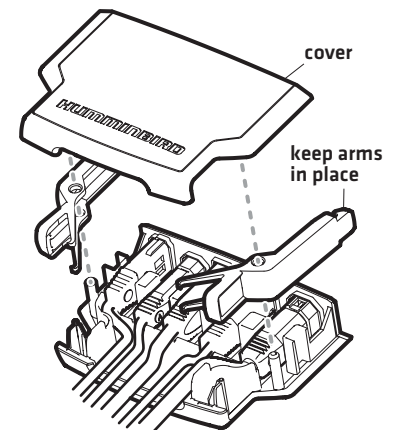
Each slot is shaped specifically for each connector, and insertion should be easy. Route the cables using the grooves in the tray.

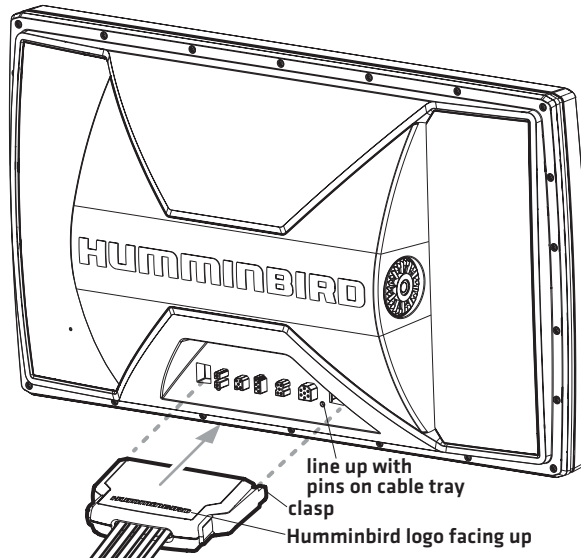
Locating the Cable Tray Slots

Inserting the Cable Connectors into the Cable Tray


CAUTION! It is important to place the connectors into the correct slots and right side up. See the illustration *Locating the Cable Tray Slots* for details.

4. Place the cover onto the tray. Hold the tray together and turn it over.
If the cable tray arms fall out, see the illustration *Assembling the Cable Tray* to put them back in place.
5. Install the screws in the holes on the bottom of the tray. **Hand tighten only**. See the illustration *Removing the Screws* to replace the screws. **Hand tighten only**.
6. Turn over the cable tray so the Humminbird logo is facing up.
Confirm the cables hang straight, and untwist them if necessary.
7. Line up the slots on the cable tray with the matching ports on the back of the control head. Line up the cable tray pins with the holes on the control head [see the illustration *Locating the Cable Tray Slots*].

With the Humminbird logo facing up, plug the cable tray into the back of the control head. The cable tray clasps should click into place. See the illustration *Connecting the Cable Tray to the Control Head*.

Removing the Screws

Turning over the Cable Tray

Assembling the Cable Tray


Connecting the Cable Tray to the Control Head


- Pull carefully on the cable tray to confirm the installation is secure. Make sure both clasps clicked into place in step 7.

6 | Secure the Control Head Installation

- Slide the control head into the bracket.
- Confirm there is enough cable slack to allow for the control head to pivot through its full tilt range and for connecting or disconnecting the cables.



NOTE: If there is excess cable that needs to be gathered at one location, dress the cable routed from both directions so that a single loop is left extending from the storage location. Doubling the cable up from this point, form the cable into a coil. Storing excess cable using this method can reduce electronic interference.

- Adjust the control head to the viewing angle you prefer. Hand tighten the gimbal knobs until the assembly is secured. **Hand tighten only!**

Remove the Cable Tray (Optional): Squeeze the sides of the cable tray until it releases.

7 | Test the System Installation

- Press the POWER key to turn on the control head.
- While the Title screen is shown on the display, press the MENU key.
- Press the DOWN Cursor key to choose **System Status**, and press the RIGHT Cursor key to select it.

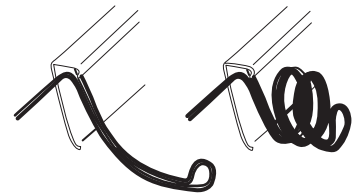
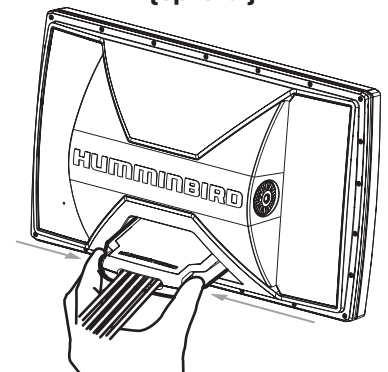



NOTE: If you wait too long, the system will automatically start whichever menu is highlighted, and you will have to start again.


- Accessories:** Press the VIEW key. Review the Accessory Test View to confirm accessories are listed as connected.
- GPS Reception:** Press the VIEW key. Review the GPS Diagnostic View and confirm that a **latitude/longitude position** is displayed and the **Fix Type** is listed as Enhanced or 3D.
- Power Off:** Press and hold the POWER key to power off the unit.
- Sonar Test:** Test and finalize the transducer installation using the instructions in the transducer installation guide. When the transducer test and installation are completed, your control head is ready for on-the-water operation. When you power on the control head, it will start Normal mode automatically if a functioning transducer is detected.




NOTE: For operations information, see the Operations Summary Guide included with your control head and the control head operations manual.

Storing Excess Cable

Removing the Cable Tray (Optional)


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

 **WARNING!** This 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.

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.

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 wheelee 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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HELIX[®] SERIES

Operations Summary Guide

SAFETY INFORMATION! You must read the *Important Information* *out your Humminbird® Product* insert (included with your control head)

before proceeding with this operations summary guide.

FEATURES: A transducer is required to enable sonar, and a GPS fix is required to enable navigation. Your control head may not have all the features described in this guide. Also, the illustrations may not look exactly like the screens on your control head, but your unit will operate in a similar way. See our Web site.

SD OR MICROSD CARDS: Your control head may be compatible with either an SD card or a microSD card. Please see your control head

operations manual for compatibility details.

OPERATIONS MANUALS: The complete operations manuals for your control head and accessories are available on our Web

site. Also, see *Manage your Humminbird: Use Manuals on your Device* for more information.

Table of Contents

Key Functions Overview	1
Menu Overview	2
Getting Started	4
Setting up the Control Head	5
Views	8
Sonar	13
Side Imaging	17
Down Imaging	23
Navigation	27
Manage your Humminbird	33
Contact Humminbird	36

KEY FUNCTIONS Overview



POWER/LIGHT key: Press once to power on the control head. During operation, press once to use Sonar, Light, Background, and Standby menus. Press and hold to power off the control head.



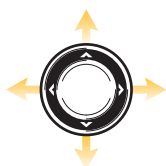
ZOOM In/Out keys: Press once to adjust the zoom range in Sonar Zoom View, the sensitivity in sonar views (Sonar, DI, SI), and the chart scale in Chart Views.

Active Cursor: Press once to zoom in or out of the active cursor area in Side Imaging® and Down Imaging® Views.



VIEW key: Press once to display the next view in the View Rotation (see *View Rotation Overview*).

Press and hold to open the Views X-Press Menu.



CURSOR CONTROL key: Press once OR press and hold any arrow on the key to freeze the display and move the active cursor in all Sonar and Chart Views.

Press any arrow on the key to browse the menu system, select a menu, and change or activate menu settings (see *Menu Overview*).



MENU key: Press once to open an X-Press Menu.

Press twice to open the Main Menu (see *Menu Overview*).



CHECK/INFO key: Press once to open the Chart Info submenu in Chart View.

Press once to switch frequencies in sonar views (if available).

Active Cursor: Press once to display chart information in Chart View.



MARK key: Press once to mark a waypoint at the boat's position.

Active Cursor: Press twice to mark a waypoint at the cursor position.

Press and hold to save a screen snapshot to the installed SD or microSD card.



GOTO/MOB key: Press once to display saved navigation data.

Active Cursor: Press twice to mark and start navigation towards a waypoint.

Man Overboard (MOB): Press and hold to activate Man Overboard. See your control head operations manual for more information about this feature.



EXIT key: Press once to close a menu, exit active cursor mode, or turn off an alarm. Press once to display the previous view in the view rotation (see *View Rotation Overview*).



VIEW SHORTCUT key: Press and hold to save a shortcut to the on-screen view.

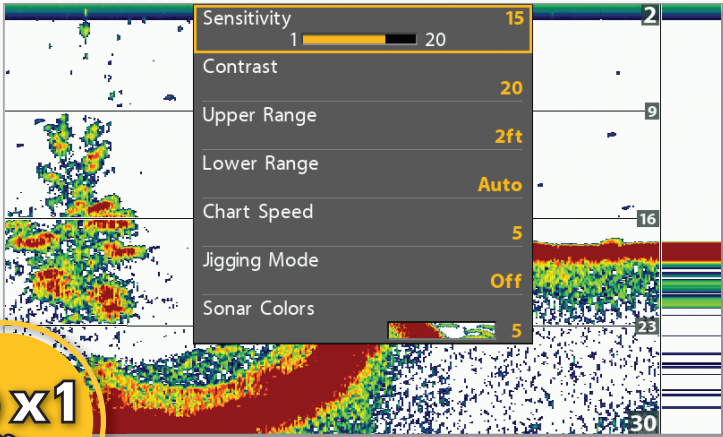
Press once to display the view saved to the key (see *View Rotation Overview*).

MENU Overview

► Open an X-Press Menu

X-Press Menus display menu options that are related to the view on the screen and the current operation mode (such as navigation).

Sonar X-Press Menu

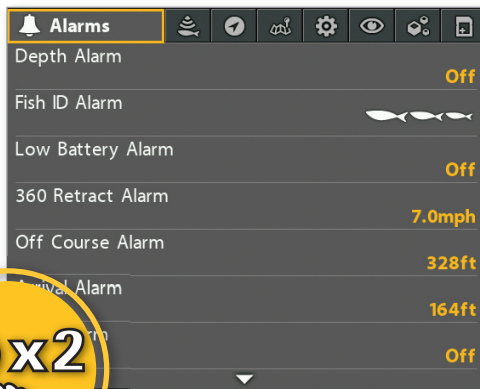


In this illustration, the Sonar X-Press Menu is displayed because the Sonar View is displayed on the screen.

► Open the Main Menu

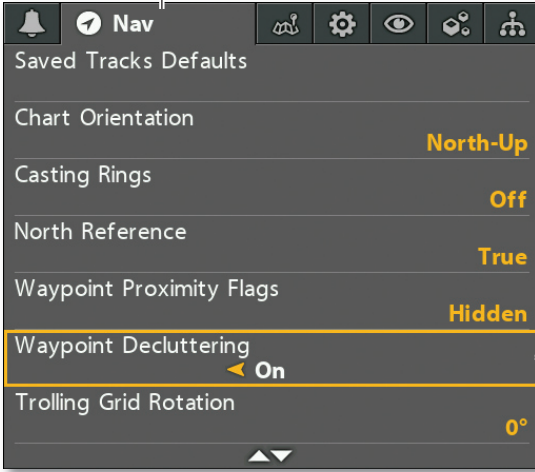
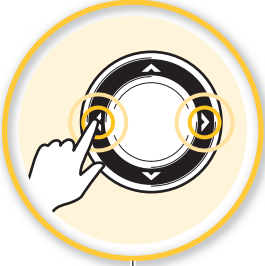
The Main Menu is divided into tabbed categories (Alarms, Sonar, Chart, etc.). The available tabs will vary by model. See your control head operations manual for more details.

Main Menu



▶ Select a Menu and Change the Setting

Select a Tab



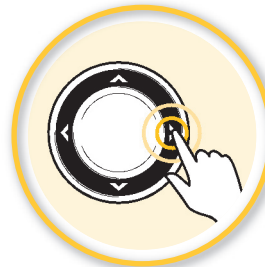
Select a Menu



Change a Menu Setting



Start an Action or Open a Submenu



Getting **STARTED**

▶ **Power On/Off**

ON: Press Once



OFF: Press and Hold



▶ **Select the Start-Up Mode**

Press the MENU key once while the control head is powering on.

On the Water: If a transducer is connected to the control head, **Normal** mode will be selected automatically. If a transducer is not connected, select Normal, and press the RIGHT Cursor key.

Review System Connections: Select **System Status** and then press the VIEW key until Accessory Test View is displayed on-screen. During Normal mode, open the Views X-Press Menu > System > Accessory Test.

Accessory Test View

Accessory Test	
360 Imaging	UNCONNECTED
GPS	CONNECTED
i-Pilot	UNCONNECTED
NMEA2K Gateway	CONNECTED
Radar	CONNECTED
Remote	UNCONNECTED
Remote Dongle	UNCONNECTED
Speed	UNCONNECTED
Temperature	UNCONNECTED

Review System Connections: If a connected accessory is shown as unconnected, confirm the cable or network connections.



NOTE: If the control head is on a network, see your accessory manual for more connection information.

SETTING UP the Control Head

Your control head settings should be changed based on the area you are fishing, water conditions, bottom, and weather conditions. It is also important to set up system alarms. Some of the menus in this section are provided in the Quick Setup Menu the first time you power on the unit.

▶ **Set the Menu System to Normal or Advanced**

Main Menu > Setup tab > User Mode

- Select **Normal** to see greater simplicity and fewer menu choices.
- Select **Advanced** to see all the menus available in the menu system.

▶ **Set the Language**

Main Menu > Setup tab > Language

The available languages are determined by your control head model.



WARNING! Do NOT enable Asian Mode if you do not require Asian languages. Before you select Asian Mode, contact Humminbird Technical Support for important information.

▶ **Set the Maximum Depth**

Main Menu (Advanced) > Sonar tab > Max Depth

Set the maximum depth of the body of water.

- Select **Auto** for the control head to acquire bottom readings as needed (within the capabilities of the unit).
- Select **the body of water depth** so the control head will not attempt to acquire sonar data below that depth, allowing more detail to be shown on the screen.



NOTE: Side Imaging units default to the Side Imaging range setting if the SI Range is set deeper than Max Depth. (Side Imaging X-Press Menu > SI Range)

▶ **Select the Water Type**

Main Menu (Advanced) > Sonar tab > Water Type

Water Type configures your unit for operation in fresh or salt water. In salt water, you can also choose the shallow or deep setting. Water Type affects the accuracy of deep water depth readings.

- **If the depth is more than 330 ft (100 m), select Salt (deep).**

▶ **Select an Accessory Transducer (optional)**

Main Menu > Sonar tab > Connected Transducer

The control head will automatically select the transducer that was included with your control head. If a compatible accessory transducer is connected to the control head, select it from the Connected Transducer menu, so the related menus and views are added to the system.

▶ **Select the Units of Measurement**

Main Menu > Setup tab > Units - Depth, Units - Distance, etc.
(G3/G3N and older models)

Main Menu > Data Sources tab > Units > Depth, Distance, etc.
(G4N models)

Select the units of measurement format for your control head.

▶ **Turn On/Off Sounds**

Main Menu > Setup tab > Sound Control

If you are using alarms, but don't want key sounds, it is important to select Alarms Only to receive an audio alert when an alarm is triggered.

▶ **Adjust the Backlight and Background**

Press the POWER/LIGHT key during operation.

- **Adjust the Backlight:** Select Light.
- **Change the Background:** Select Background.

▶ **Pair a Phone with the Control Head**

If you have a *Bluetooth*-supported control head, you can pair a phone with it using *Bluetooth* wireless technology.

- 1 Select the Main Menu > Accessories tab.
- 2 Select Phone Bluetooth > Connect New Phone. Press the RIGHT Cursor key.

Follow the on-screen prompts to start the pairing process.

- 3 When the phone name displays in the menu, select it. Press the RIGHT Cursor key.
- 4 When prompted, tap Pair on your phone.

In your phone Settings menu, turn on Show Notifications.

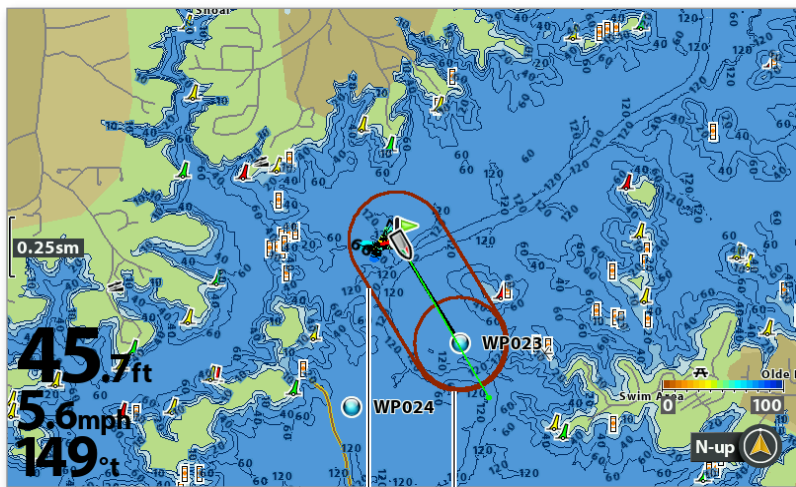
Set Alarms

Main Menu > Alarms tab

Sonar and Navigation alarms are described briefly here. See your control head operations manual for more details about the variety of alarm options.

When an alarm is turned on, an alert will sound or display on the control head to indicate the threshold (setting) has been exceeded. **When an alarm is triggered**, you can silence it by pressing any key on the control head.

Chart View Displaying Off Course Limits and Arrival Circle



Off Course Limits

If the boat travels beyond the set threshold, the alarm will be triggered.

Arrival Circle

When the boat reaches the arrival circle, the alarm will be triggered.

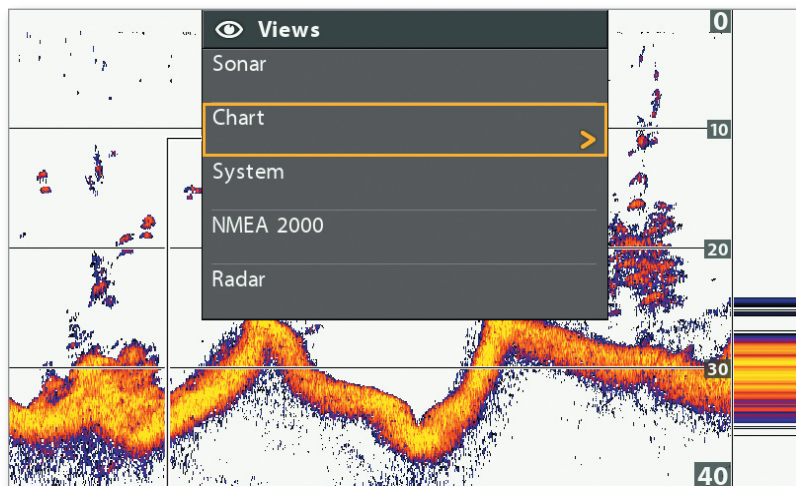
- **Depth Alarm** is triggered when the depth becomes equal to or less than the menu setting.
- **Low Battery Alarm** is triggered when the input battery voltage is equal to or less than the menu setting. The battery must be connected to the unit.
- **Off Course Alarm** sets how far the boat can move off course during navigation before an alarm will be triggered.
- **Arrival Alarm** sets how close the boat must be to the destination waypoint before the alarm will be triggered.
- **Drift Alarm** sets how far the boat can move from its anchored position outside the drift alarm perimeter before an alarm will be triggered.

VIEW ROTATION Overview

► Change the On-Screen View

Use the Views X-Press Menu to quickly display a view.

Views X-Press Menu



Select a view category, then select the view you want to display.



OR



Press and Hold to Open
the Views X-Press Menu

Next View:
Press Once

Previous View:
Press Once

► Save View Shortcuts

You can program the VIEW SHORTCUT keys to display a saved view immediately. You can save one view on each key.

SAVE: Press and Hold

- 1 With the view you want to save displayed on-screen, press and hold a VIEW SHORTCUT key for several seconds.



▶ Use Combo Views

X-Press Menu > Active Pane

X-Press Menu > Split Position

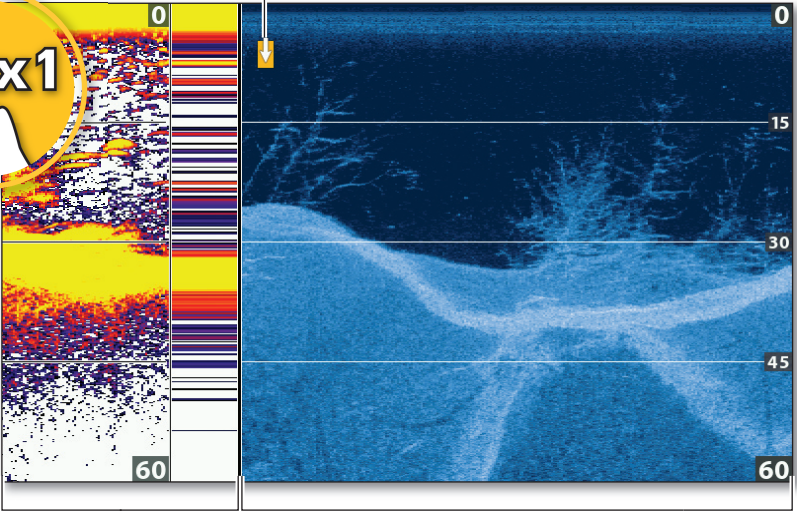
Combo Views display two views (or more) on the screen at the same time. To change the settings, select menus or actions, or change the size of either view, you must select the view as the Active Pane from the X-Press menu.

Sonar/Down Imaging Combo View

**Open the
X-Press Menu**



 indicates the selected pane (Active Pane)



Split Position
adjusts pane size

Split Position
adjusts pane size

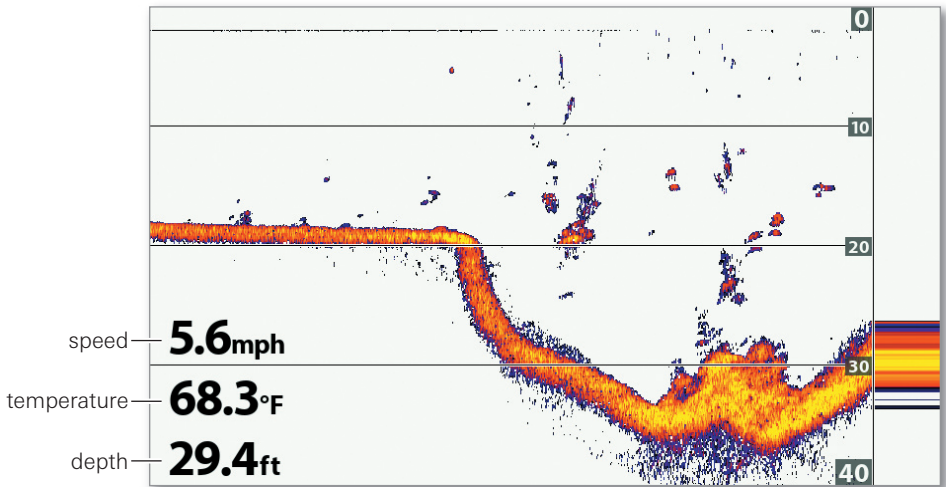
▶ Display Digital Readouts

Main Menu (Advanced) > Setup tab > Digital Readouts

Digital Readout data can be displayed on-screen as an overlay or in data boxes. The format and readouts you choose will be applied to all views.

- Select **Overlay** to display preset digital readouts as an overlay on the view.
- Select **Boxes** to display digital readouts in boxes on the view. You can select the readouts to be displayed in each box (see *Select Digital Readouts*).
- Select **Off** to hide the digital readouts.

Sonar View with Digital Readouts Set to Overlay



Select Digital Readouts

Main Menu (Advanced) > Setup tab > Select Readouts OR Edit Data Boxes

Main Menu (Advanced) > Setup tab > Select Nav Readouts OR Edit Navigation Data Boxes

If you have Digital Readouts set to Boxes, you can select the data that will be displayed in each box.

- Use the **Select Readouts** (G3/G3N and older models) or **Edit Data Boxes** (G4N models) menu to set your standard digital readouts.
- Use the **Select Nav Readouts** (G3/G3N and older models) or **Edit Navigation Data Boxes** (G4N models) menu to set the digital readouts that will be displayed during navigation.

Select Readouts Menu

The screenshot shows the 'Select Readouts' menu with the following data types assigned to each readout:

Readout	Data Type
Readout 1	Depth
Readout 2	Course
Readout 3	Position
Readout 4	Speed
Readout 5	Off

The background display shows a depth of 17.3 ft, a COG of 180 degrees, a position of N 50°41.191' W 001°03.718', and a speed of 5.6 mph. The chart also shows depth contours at 0, 7.5, 15, 22.5, and 30 feet.



Select a Readout Position



Select a Readout

Understand the Digital Readouts

See below for examples of digital readouts available in the Select Readouts and Select Nav Readouts menus. The available digital readouts are determined by the installed equipment and the selected sources on the network.

Bearing	The direction to a destination waypoint measured in degrees from north.
COG	Course Over Ground is 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.
Depth	The depth of the water from the transducer or digital depth sensor to the bottom. This measurement includes the depth offset setting.
DMG	Distance Made Good is the straight line distance actually traveled between the start position to the current boat position.
DTG	Distance To Go is the distance between the boat position and the next waypoint on the route.
ETA	Estimated Time of Arrival to the next waypoint on the route.
Position	The latitude and longitude coordinates of the boat position based on the GPS receiver installation location.
Speed	The measurement of the boat's progress across a given distance based on the speed measurement provided by the GPS.
Temp	The detected water temperature by the transducer's internal temperature probe or an accessory temperature sensor.
Timer	The digital readout for the timer set in the Alarms tab. See your control head operations manual for details.
Triplog	The elapsed time since the triplog was last reset, the distance traveled since last reset, and the average speed during timed interval.
TTG	Time To Go is the estimated time required to reach the next waypoint on the route.
Voltage	Power supplied to the control head.
Water Speed	The speed of water as it flows past the boat (optional-purchase speed wheel required).
XTE	Cross Track Error is the straight-line distance of the boat from the intended route. XTE measures how far the boat is off course.

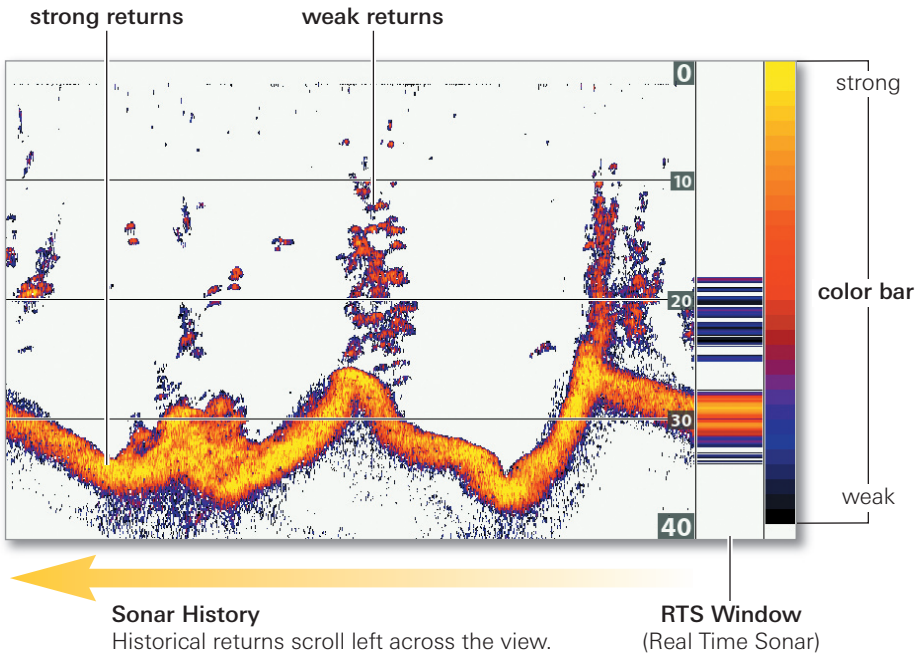
SONAR

Interpretation and Display Settings

You can use the settings included with your control head, or you can customize the Sonar display.

The Sonar View displays the return intensity based on the Sonar Colors and Bottom View menu settings. You can also choose to turn on/off fish symbols (Fish ID+™), change the 2D SwitchFire® mode, adjust sensitivity, and more.

Sonar View: Sonar Colors Palette 1



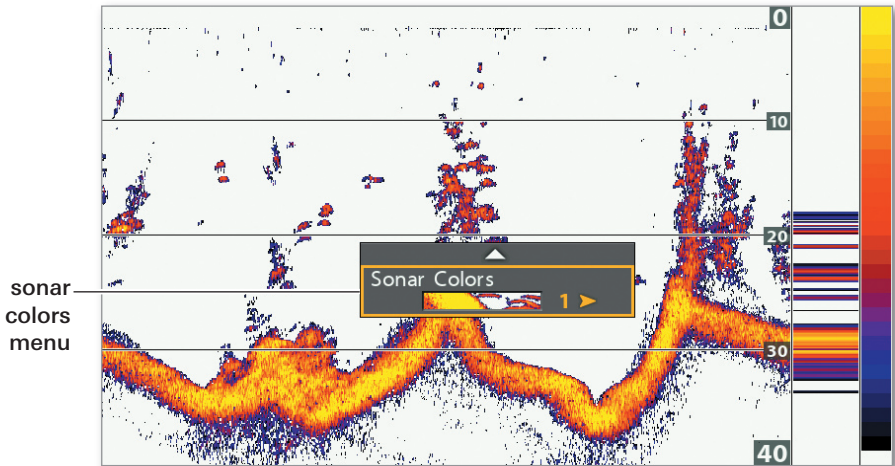
- **Weak Returns** could be vegetation or small fish.
- **Strong Returns** could be compacted sediment, rocks, tree limbs, or other structure.

Change the Color Palette

Sonar X-Press Menu > Sonar Colors

The palette you choose will be applied to the Sonar View, Sonar Zoom View, Split Sonar View, and Sonar Combo Views.

Changing the Color Palette in Sonar View

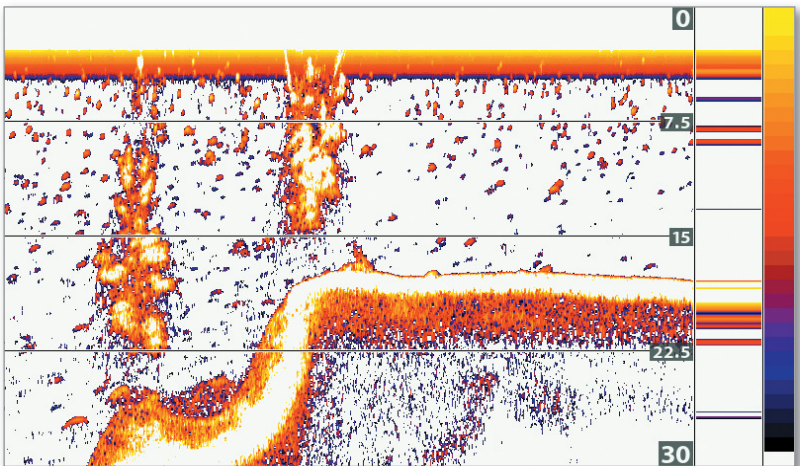


Select the Bottom View Display

Main Menu > Sonar tab > Bottom View

Select the method used to represent bottom and structure on the display.

Sonar View with Bottom View Set to WhiteLine



- **WhiteLine** highlights the strongest sonar returns in white.
- **Structure ID** represents the strongest returns as specified by the selected color palette.

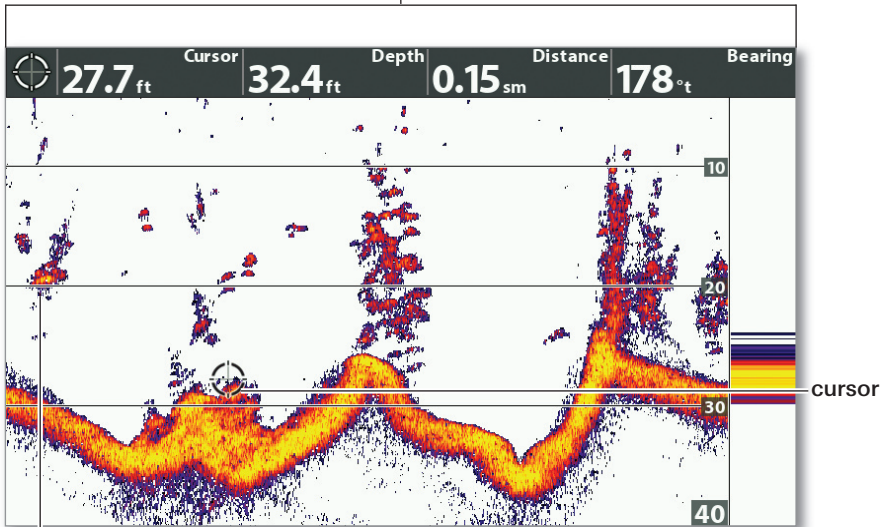
SONAR on the Go ▶▶▶

▶ Adjust Display Settings and Freeze the Display

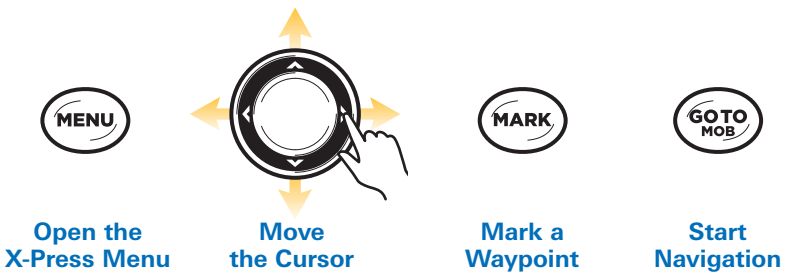
Use the Sonar X-Press Menu to see more detail on the view or filter the information you don't want to see. Move the cursor to freeze the display, review sonar history, and mark waypoints (GPS fix required).

Sonar View with Active Cursor

cursor digital readouts



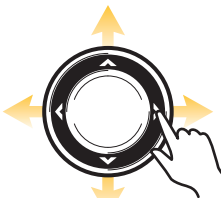
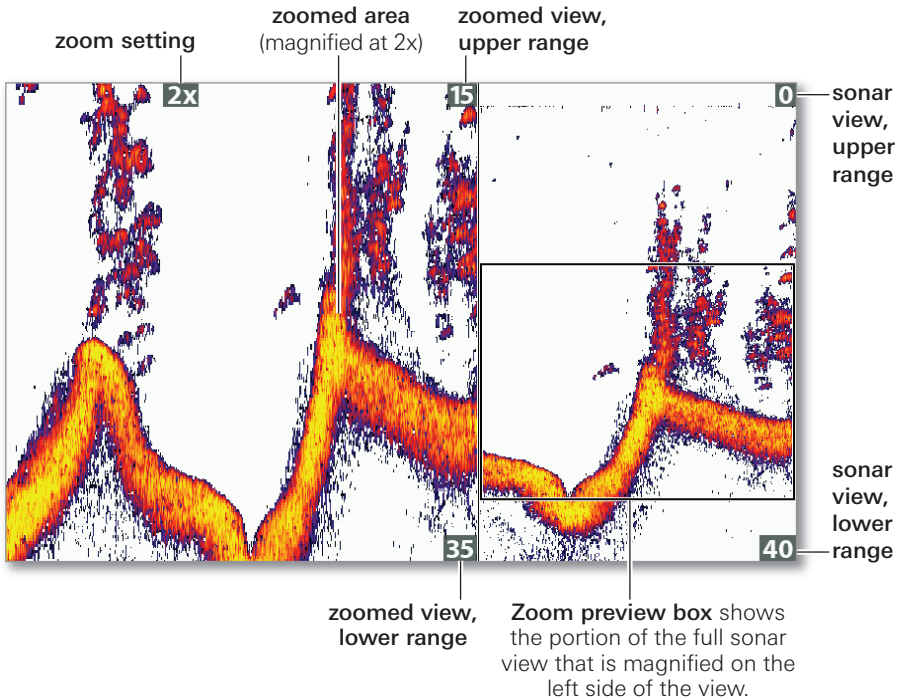
Sensitivity on the Sonar X-Press Menu can be adjusted to display more or less sonar returns on the screen.



Magnify Bottom Sonar Returns

Sonar Zoom View provides a magnified view of the bottom and structure. If the control head has GPS reception, you can also mark waypoints and start navigation.

Using the Sonar Zoom View



Move the Cursor



Zoom In



Zoom Out



Mark a Waypoint



Start Navigation



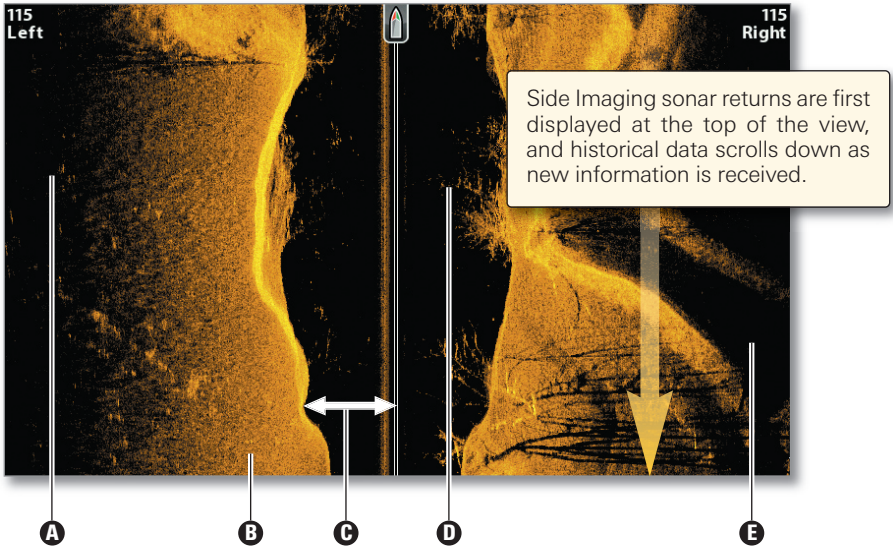
NOTE: If your unit does not have ZOOM keys, open the Sonar X-Press Menu (Advanced) > Zoom Level to adjust the magnification.

SIDE IMAGING

Interpreting the Display

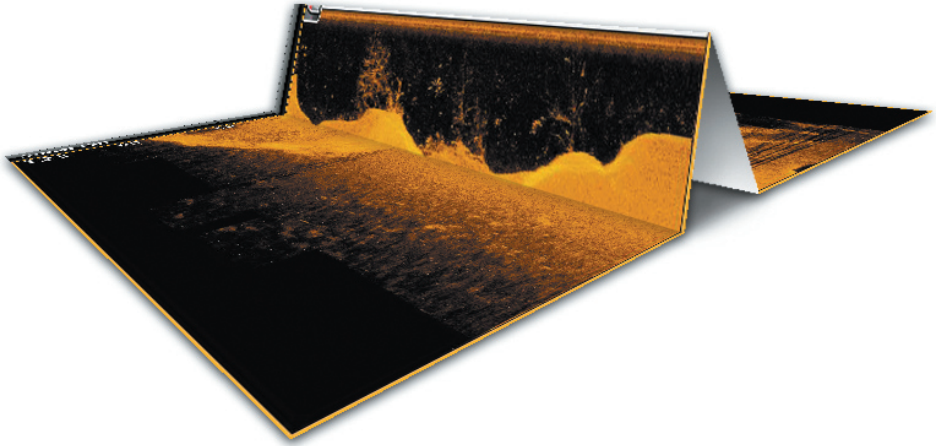
Side Imaging beams “illuminate” the bottom contour, structure, and fish. The side beam coverage is very thin from front to back, yet very wide from top to bottom. The bottom composition determines the intensity of the sonar return, and upward slopes that face the transducer reflect sonar better than downward slopes that face away from the transducer.

Interpreting the Side Imaging View



- A Shadows:** The longer the shadow, the taller the object. Fish also cast shadows, and their distance from the bottom can be interpreted by their shadow.
- B Light Shades** represent denser terrain (possibly compacted sediment, timber, rocks) or rising terrain.
- C Water Column** shows the relative depth of the water under the boat at any given time. Variations in the width of the water column show variations in the distance to the bottom as the boat passes over. See the illustrations *Interpreting the Side Imaging View*.
- D White Streaks or Clouds** may represent fish on the display.
- E Dark Shades** represent soft returns (possibly sand or mud) or descending terrain.

Interpreting the Side Imaging View



To visualize how Side Imaging works, the Side Imaging View illustration can be folded down the middle and then folded again at the lowest point of the water column. The raised area reveals the water column with its relative depth of the water under the boat. In the Side Imaging View, variations in the width of the water column show variations in the distance to the bottom as the boat passes over.

For Best Side Imaging Performance

- Boat speed: 2 to 6 mph
- Straight line navigation
- Minimum turning time and wave turbulence

See your control head operations manual for more information about the Side Imaging beams and how to interpret the Side Imaging display.

SIDE IMAGING Display Settings

You can use the default settings included with your control head, or you can customize the Side Imaging display.

► Change the Color Palette

[Side Imaging X-Press Menu > SI Colors](#)

Select the color palette to use for the Side Imaging Views.

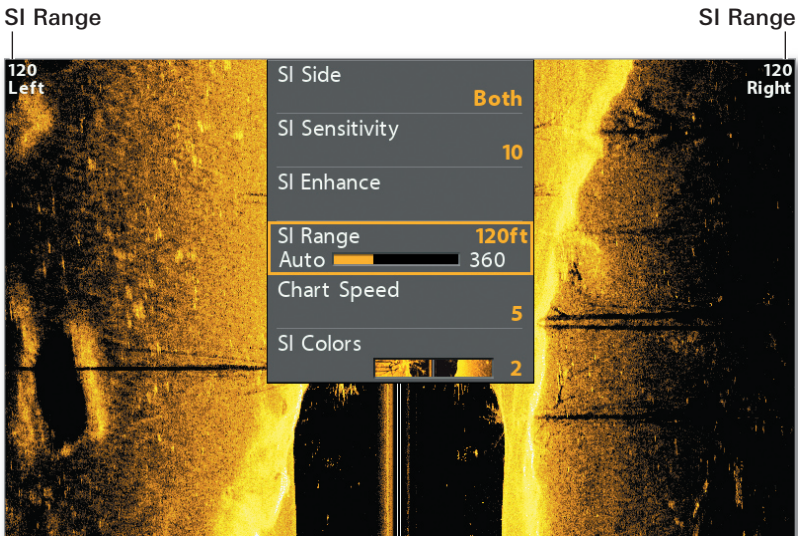
► Adjust the Side Imaging Range

[Side Imaging X-Press Menu > SI Range](#)

SI Range sets the deepest range that will be displayed by the Side Imaging View.

- **Auto:** The range will automatically adjust to follow the bottom.
- **Manual:** Select a low range setting to focus on a shorter distance of the water column and show greater detail on the screen. Select a higher range setting to view farther into the water and see an overview of details on the screen.

Adjusting the SI Range

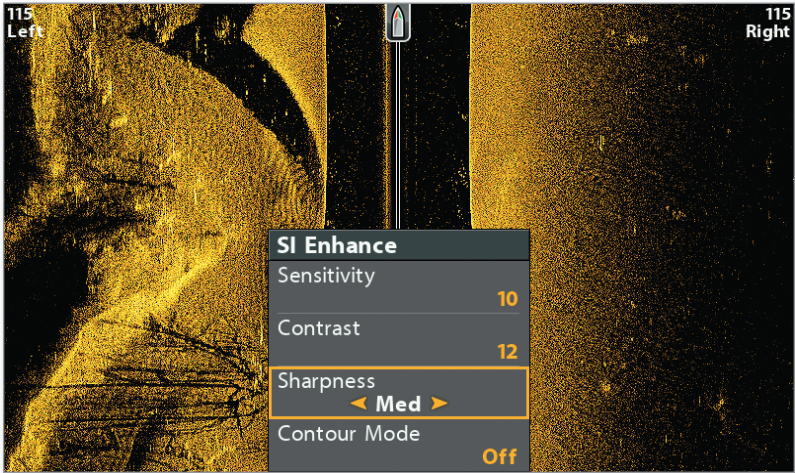


▶ Enhance the Side Imaging View

Side Imaging X-Press Menu > SI Enhance

The SI Enhance dialog box allows you to adjust your Side Imaging View in four categories: Sensitivity, Contrast, Sharpness, and Contour Mode.

SI Enhance Menu

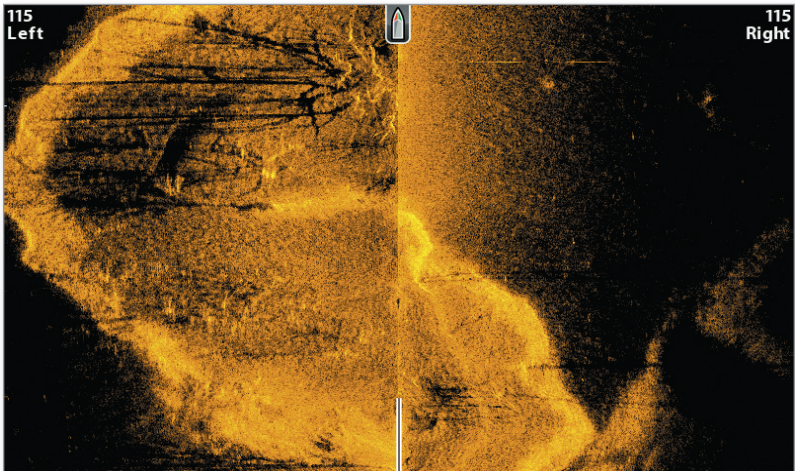


▶ Display or Hide the Water Column

Side Imaging X-Press Menu > SI Enhance > Contour Mode

Contour Mode controls how the water column is displayed in the Side Imaging View. The location of a target on the view is influenced by the Contour Mode setting.

Side Imaging View with Contour Mode On



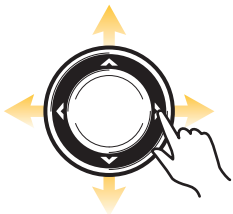
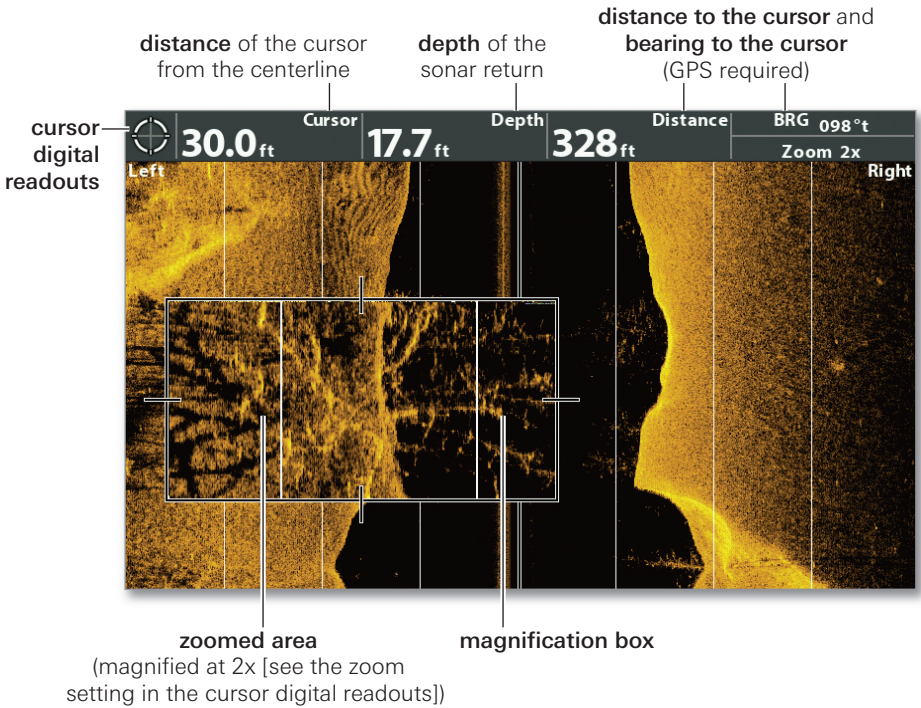
The water column is removed.

SIDE IMAGING on the Go ▶▶▶

▶ Freeze the Display and Magnify Selected Returns

Use the Cursor Control key to activate the cursor, freeze the display, and move the cursor over a sonar return.

Using ZOOM on the Side Imaging View



**Activate the Cursor
& Freeze the Display**



Zoom In



Zoom Out



**Mark a
Waypoint**




**Start
Navigation**

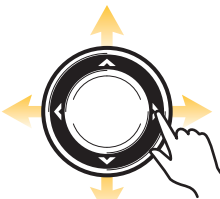
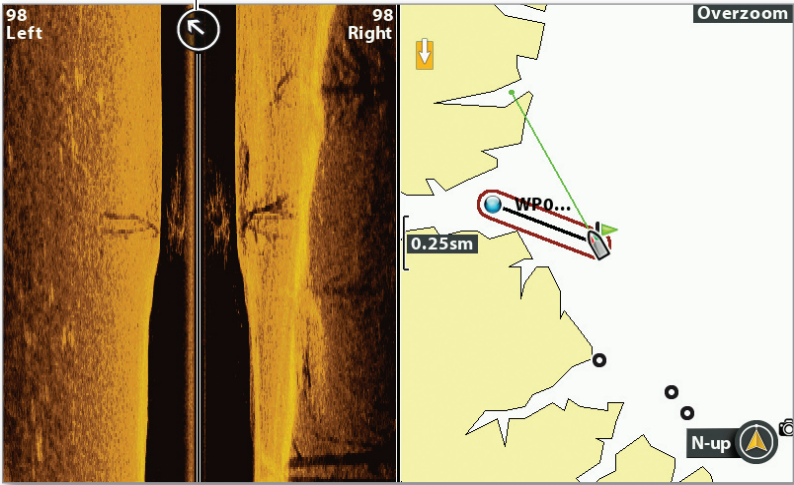
▶ Turn On SI Navigation

Main Menu > Nav tab > SI Navigation

SI Navigation controls how the boat icon is displayed in Side Imaging Views. **If SI Navigation is turned on**, an arrow icon indicates the direction the boat needs to turn to reach the next waypoint during navigation. **If SI Navigation is turned off**, the boat icon will not change during navigation.

Chart/Side Imaging Combo View with SI Navigation On (with built-in Contour XD)

 The **arrow** will point the direction that you need to steer your boat in order to reach the waypoint.



Move
the Cursor



Zoom In



Zoom Out



Mark a
Waypoint



Start
Navigation

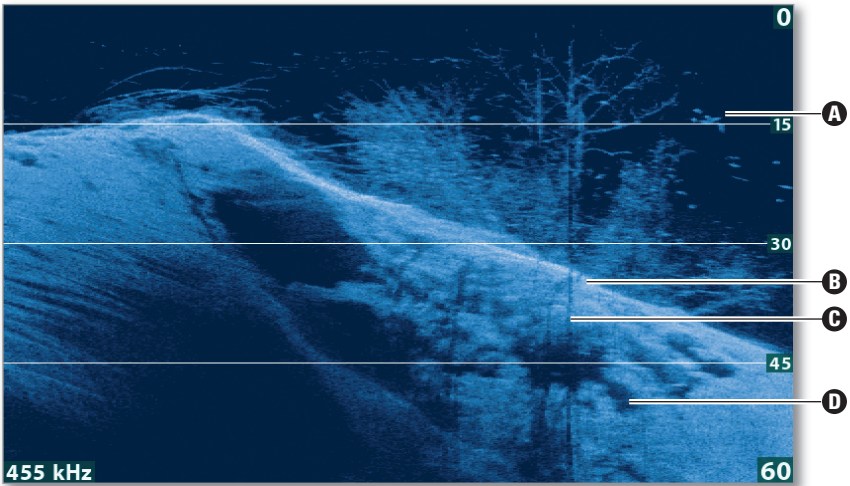
DOWN IMAGING

Interpreting the Display

Down Imaging beams “illuminate” the bottom contour, structure, and fish. The razor-thin, high-definition profiling beams produce the detailed sonar data that you see on the display.

Use the light and dark parts of the display to interpret the objects under your boat as follows:

Interpreting the Down Imaging View



Sonar History

Historical returns scroll left across the view.

- A White Streaks or Clouds** may represent fish on the display.
- B Light Shades** represent denser terrain (possibly compacted sediment, timber, rocks) or rising terrain.
- C Shadow**
- D Dark Shades** represent soft returns (possibly sand or mud) or descending terrain.

DOWN IMAGING Display Settings

▶ Change the Color Palette

[Down Imaging X-Press Menu > DI Colors](#)

Select the color palette to use for all Down Imaging Views.

▶ Display or Hide Depth Lines

[Main Menu \(Advanced\) > Sonar tab > Depth Lines](#)

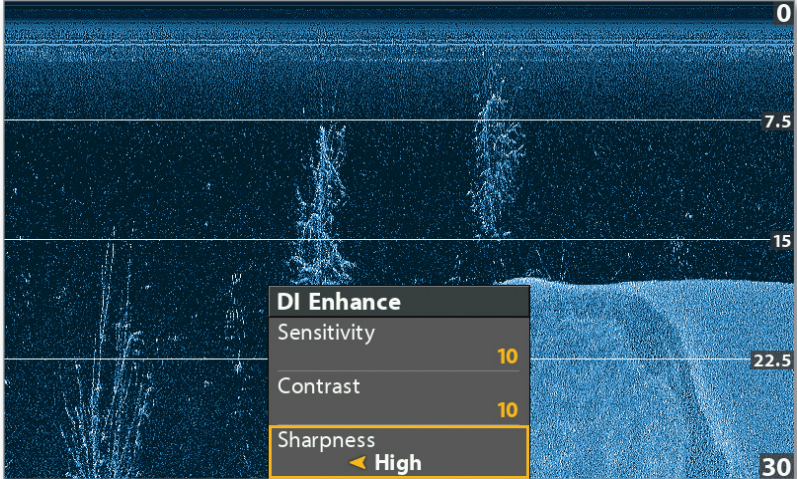
Turn Depth Lines On to display the incremental marks between the upper and lower depth range. Turning Depth Lines On will also affect the Sonar Views.

▶ Enhance the Down Imaging View

[Down Imaging X-Press Menu > DI Enhance](#)

The DI Enhance dialog box allows you to adjust your Down Imaging View in three categories: Sensitivity, Contrast, and Sharpness.

Down Imaging View



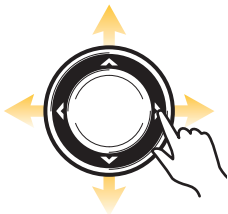
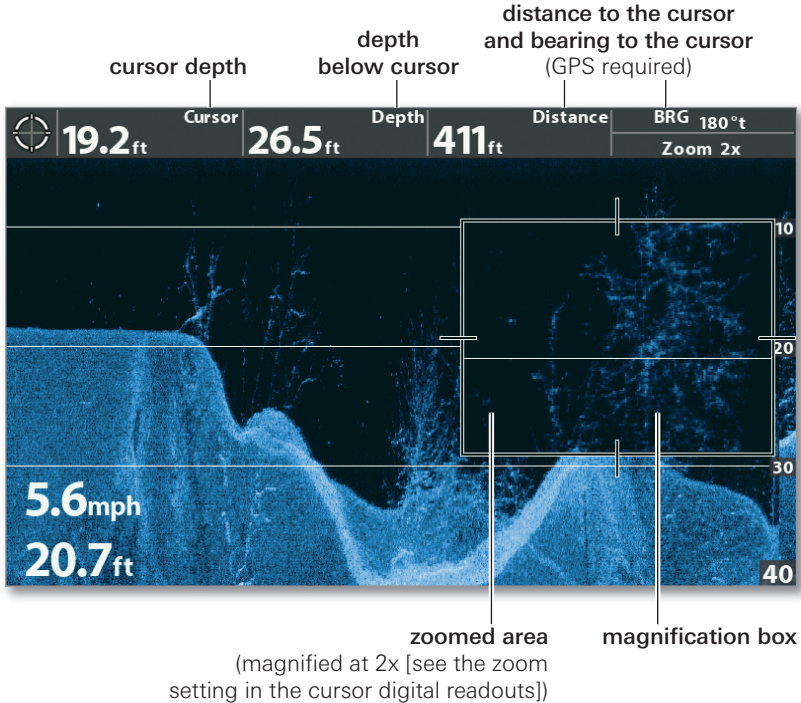
The Sharpness setting makes the sonar returns appear more defined.

DOWN IMAGING on the Go

Freeze the Display and Magnify Selected Returns

Use the Cursor Control key to activate the cursor, freeze the display, and move the cursor over a sonar return.

Using ZOOM on the Down Imaging View



Activate the Cursor & Freeze the Display



Zoom In



Zoom Out



Mark a Waypoint



Start Navigation



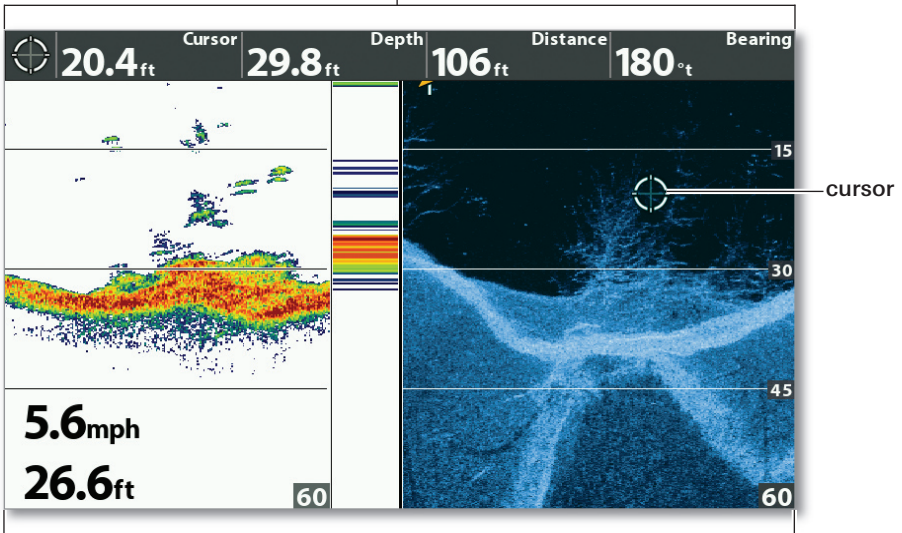
NOTE: If your unit does not have ZOOM keys, move the cursor, and open the Down Imaging X-Press Menu (Advanced) > DI Zoom to adjust the magnification.

Use the Down Imaging Combo Views

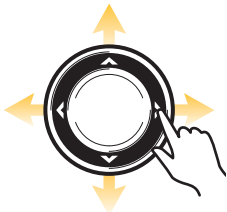
In the Down Imaging/Sonar Combo View, you can compare Down Imaging with traditional Sonar. Use the Cursor Control key to move the cursor over a sonar return, and the +ZOOM key to magnify the return.

Sonar/Down Imaging Combo View with Active Cursor

Cursor digital readouts show the cursor's depth and related position information (GPS required).



Use the Combo View to compare sonar returns.



**Activate and
Move the Cursor**



Zoom In



Zoom Out



**Mark a
Waypoint**



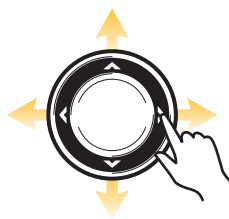
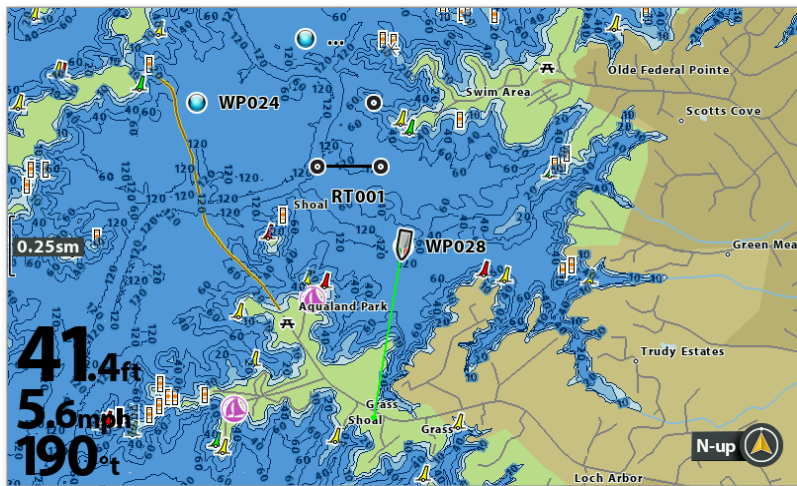
**Start
Navigation**

CHART Display Overview

HELIX GPS models allow you to mark waypoints, create routes, and start navigation. A GPS fix is required for all chart and navigation features.

You can also use the Waypoint Management dialog box to create new waypoints and routes from scratch, as well as manage your navigation data (see *Navigation: Waypoint Management Dialog Box*). See your control head operations manual for more information.

Chart View with Built-In Humminbird Basemap



Activate and
Move the Cursor



Zoom In



Zoom Out



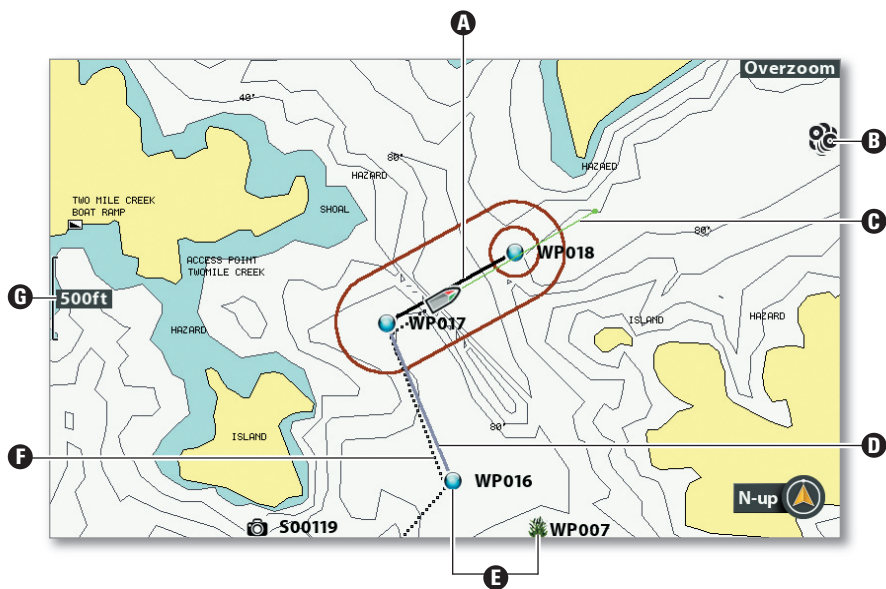
Mark a
Waypoint



Start
Navigation

Navigating a Route in Chart View

(with built-in Contour XD)



- A Current Route Leg (Black):** The projected path between each waypoint in a route.
- B Decluttered Waypoint Icons:** To see a Decluttered Waypoint at full size, use the Cursor Control key to move the cursor onto a decluttered waypoint icon.
- C Course Projection Line (Green):** The current direction the boat is traveling, measured in degrees from North.
- D Completed Route Leg (Light Gray):** The completed path of travel on the route.
- E Waypoint Icons:** Waypoints are saved positions that mark areas of interest or navigation points. To view more information about a waypoint, select it and press the CHECK/INFO key.
- F Track:** The Current Track shows the position history since the unit was powered up as a breadcrumb trail of trackpoints. You can clear the Current Track or save it at any time (see *Navigation: Chart on the Go*).
- G Map Scale**



When the boat is stationary, it is drawn as a circle.

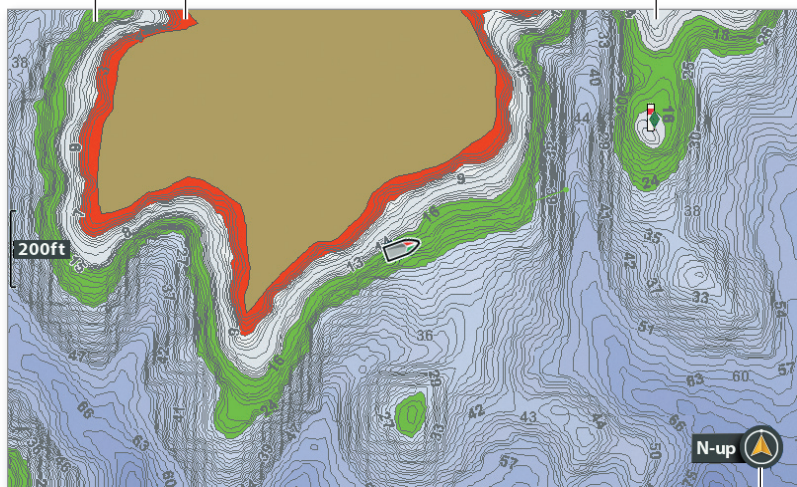


When the boat is in motion, it changes to a boat shape, pointed in the direction of motion (see *Set the Chart Orientation*).

CHART VIEW Display Settings

Chart View with Humminbird LakeMaster

Depth Highlights can be customized to show deep and shallow waters.



North-Up Indicator displays the Chart Orientation and will change as the orientation and data source change (currently set to North-Up).

▶ Add Maps to the Control Head

Main Menu > Chart tab > Map Source

In addition to the built-in maps, you can install a compatible Humminbird LakeMaster®, Humminbird CoastMaster™, Humminbird ChartSelect® (sr Navionics chart card for additional chart information). When you install an SD or microSD chart card in the card slot, the map source will change automatically. To change the map source manually, use the Map Source menu.

▶ Set the Chart Orientation

Main Menu > Chart tab > Chart Orientation

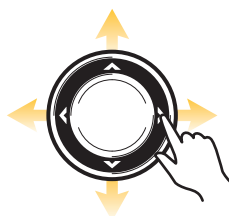
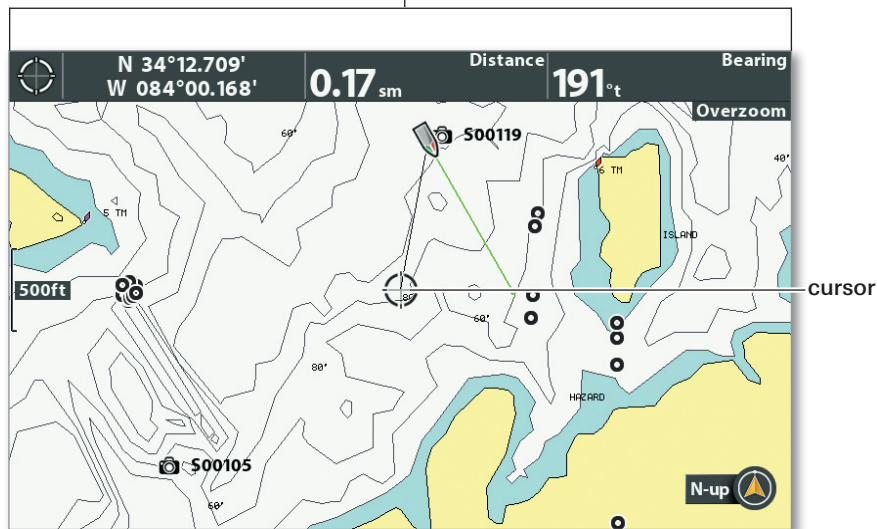
Chart Orientation allows you to select how the Chart Views are displayed. The North-Up Indicator works with this feature also (see the above illustration).

- **North-Up:** True North is shown at the top of the view. Objects located to the north of the boat are drawn above the boat.
- **Head-Up:** The boat's current heading points up, and the chart rotates around the boat icon so that it always points up on the view.
- **Course-Up:** During navigation, the projected course is shown at the top of the view. If not navigating, the last known projected course is shown.

CHART on the Go

Chart View with Active Cursor

cursor digital readouts



Activate and Move the Cursor



Zoom In



Zoom Out



Mark a Waypoint



Start Navigation

Mark a Man Overboard (MOB) Waypoint

Press and hold the GOTO/MOB key.

Press and Hold

As soon as you know that you have a man overboard (MOB), activate MOB navigation to maximize the chances for a successful rescue. The MOB waypoint indicates the point at which your man went overboard and the relation of the boat to that point. See your control head operations manual for details about this feature.

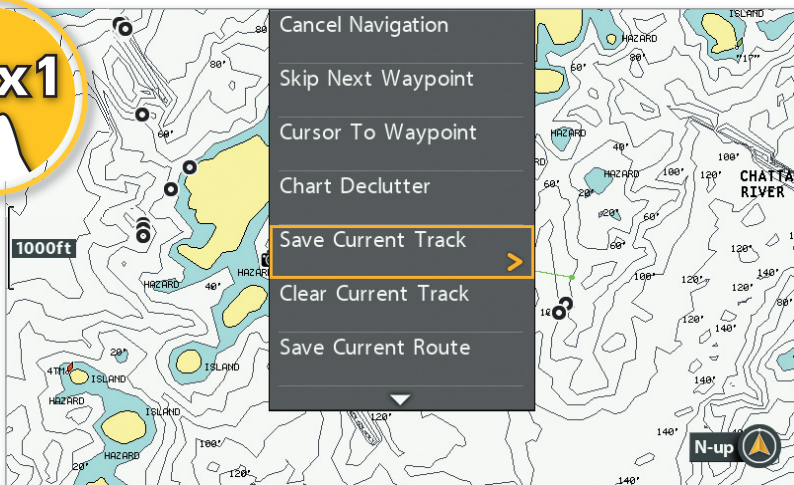


CHART X-Press Menu

Open X-Press Menu



Chart X-Press Menu



Use the **Chart X-Press Menu** to save the current track and route, as well as cancel navigation.

▶ **Save the Current Track**

Chart X-Press Menu > Save Current Track

It is important to save the current track before powering off the control head.

▶ **Save the Current Route**

Chart X-Press Menu > Save Current Route

▶ **Cancel Navigation**

Chart X-Press Menu > Cancel Navigation

▶ **Clear the Current Track**

Chart X-Press Menu > Clear Current Track

Waypoint Management Dialog Box

Route, track, and waypoint names, as well as other details, can be edited from the Waypoint Management dialog box. See your control head operations manual for more information.

Open the Waypoint Management Dialog Box:

[Main Menu](#) > [Nav tab](#) > [Waypoints, Routes, Tracks](#)

Waypoint Management Dialog Box

The screenshot shows the 'Waypoints, Routes, Tracks' dialog box. On the left, a list of waypoints is shown with 'WP007' selected. A bracket labeled 'saved navigation data' points to this list. The right side shows details for WP007, including its icon, category (Geometry), visibility (Visible), and coordinates. Below the dialog box, two diagrams illustrate touch gestures: 'Select' (a hand pointing at a circular menu) and 'Open/Close Submenu' (a hand pointing at a circular menu with a submenu icon).

Waypoints, Routes, Tracks	
Sort By	Z to A
Options	
WP007	>
WP006	
WP005	
RT002	
06/14/08 12:54 PM	
Home < Bass08	
Default Group: Home	

Name: WP007
Icon:
Icon Category: Geometry
Visibility: Visible
Latitude: N 34°13.001'
Longitude: W 084°00.434'
Created: 11:30:52 AM 06/14/08

▶ Edit a Waypoint

[Select a Saved Waypoint](#)

[Select Edit](#) > [Waypoint Name \(WP#\), Icon, Visibility, etc.](#)

Waypoint Name: Use the Cursor Control key to set the fields in the dialog box. Press the CHECK/INFO key to save.

▶ Create a New Waypoint

[Options](#) > [New](#) > [New Waypoint](#)

Use the Cursor Control key to set the fields in the dialog box.

▶ Start Navigation on a Saved Route

[Select a Saved Route](#)


[Select Travel](#) > [Forward OR Travel](#) > [Reverse](#)

▶ Edit the Track Name

[Select a Saved Track](#) > [Edit](#)

Use the Cursor Control key to set the fields in the dialog box.

MANAGE your Humminbird

 **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 control head's data files periodically. Data files should also be saved to your PC before restoring the unit's defaults or updating the software. See your control head operations manual.

▶ Register your Humminbird

Register your Humminbird product and sign up to receive the latest Humminbird news, including software updates and new product announcements.


- 1 Go to our Web site and click Support > Register Your Product.
- 2 Follow the on-screen instructions to register your Humminbird product.

▶ Use Manuals on your Device

Download Humminbird manuals to your mobile device or PC.

- 1 **Mobile:** Download the free Adobe Acrobat Reader app to your mobile device.
PC: Download the free Adobe Acrobat Reader software from your PC, and install it on your PC.
- 2 Go to our Web site and click Support > Manuals. 3 Select the PDF for your control head model or accessory, and save it to your device.
- 4 **Mobile:** Open the Adobe Acrobat Reader app. Open the Humminbird manual.
PC: Open Adobe Acrobat Reader. Open the Humminbird manual.

▶ Manage Navigation Data

 **WARNING!** DO NOT import navigation data from unknown sources into your Humminbird unit without first converting the data to the correct format using HumminbirdPC. Importing corrupted data can cause the unit to malfunction, which can result in lost navigation data.

- **Import and export navigation data on the control head** using an SD or microSD card. See your control head operations manual for complete details.

- **Use HumminbirdPC** to organize your waypoints, routes, tracks, and groups on your personal computer. Visit our Web site at to download the latest version of HumminbirdPC.

Conserve Power Used by the Control Head

- 1** Press the POWER/LIGHT key.
- 2 Start Standby Mode:** Select Standby. Press the RIGHT Cursor key.
Dim the Backlight: Select Light. Press the LEFT Cursor key repeatedly.
- 3 Turn off Standby Mode:** Press the POWER key.

Update the Control Head Software **(with an SD or microSD card)**

For complete details about the software update process, see your control head operations manual.

- 1** Insert a formatted SD card (or microSD card with adapter) into the slot on your PC.
- 2** Go to our Web site and click Support > Software Updates.
- 3 To update your control head software,** click the series name for your control head model (HELIX, SOLIX, etc.) under Fish Finders.
To update accessory software, click the product name under Accessories & Mapping.
- 4** Select your model number or product name.
- 5** Read the software description, requirements, and the instructions fully before proceeding with the software update.
- 6** Click **Download**.
- 7** Follow the on-screen prompts to save the software file to the SD or microSD card.
- 8** Power on the control head.
- 9** Install the SD or microSD card with the software file into the control head card slot. The control head will recognize the new software and run through a series of prompts to confirm the software installation.