



Matrix™
FISHING SYSTEM

**Matrix 55 and 65
Operations Manual**

531192-1_A



Thank You!

Thank you for choosing Humminbird®, America's #1 name in fishfinders. 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 - free of charge during the first year after purchase, and available at a reasonable rate after the one-year period. For complete details, see the separate warranty card included with your unit. We encourage you to read this operation manual carefully in order to get full benefit from all the features and applications of your Humminbird product.

Contact our Customer Resource Center at either 1-334-687-0503 or visit our website at www.humminbird.com.

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! 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. Handling and/or opening this unit may result in exposure to lead, in the form of solder.

Warning! This product contains lead, a chemical known to the state of California to cause cancer, birth defects and other reproductive harm.

Matrix™, Humminbird®, WeatherSense™, Selective Fish ID+™, WhiteLine®, RTS®, X-Press™ Menu, Fish ID+™, Structure ID®, TrueArch™, UltraBlack™, Angler Profile Presets™ are trademarked by or registered trademarks of Techsonic Industries, Inc.

© 2003. All rights reserved.

Table of Contents

How Sonar Works.....	1
DualBeamPlus™ Sonar	1
How GPS Works	1
Cartography	2
Multi-Media Card (MMC)	3
Getting Started.....	3
Powering Up the Unit - Start-Up Screen	5
Installation Confirmation.....	6
System Status - Start-Up Menu	7
PC Connect - Start-Up Menu.....	7
Introduction to Views	8
Sonar Views	8
Navigation Views	12
Viewing Cartography.....	15
Waypoints, Routes and Tracks	17
Save, Edit or Delete a Waypoint	17
Navigate to a Waypoint or Position.....	19
Add a Waypoint Target or Trolling Grid	19
Save, Edit or Delete a Route	20
Save or Clear a Current Track	21
Edit, Delete or Hide Saved Tracks	22
Introduction to Menus	23
Advanced User Mode	24
Sonar X-Press™ Menu	24
Sonar X-Press™ Menu - Advanced.....	25

Table of Contents

Page 2

Sonar Menu Tab	26
Sonar Menu Tab - Advanced	27
Navigation X-Press™ Menu	28
Navigation Menu Tab.....	29
Tracks Submenu	30
Waypoints Submenu	30
Routes Submenu	31
Navigation Menu Tab - Advanced.....	31
Alarms Menu Tab	32
Setup Menu Tab	34
Setup Menu Tab - Advanced	35
Setup Menu Tab - Advanced - International Units Only.....	36
Matrix Fishing System Accessories	37
Specifications.....	38
Contact Humminbird.....	40

How Sonar Works

Sonar technology is based on sound waves. The Matrix™ Fishing System uses sonar to locate and define structure, bottom contour and composition, as well as calibrate digital depth directly below the transducer.

Your Matrix unit sends a sound wave signal and determines distance by measuring the time between the transmission of the sound wave and when the sound wave is reflected off of an object; it then uses the reflected signal to interpret location, size, and composition of an object.

Sonar is very fast. A sound wave can travel from the surface to a depth of 240 ft (70 m) and back again in less than ¼ of a second. It is unlikely that your boat can "outrun" this sonar signal.

DualBeamPLUS™ Sonar



Your Matrix uses a dual frequency 200/83 kHz DualBeamPLUS™ sonar system with a wide (60°) area of coverage. DualBeamPLUS™ is optimized to show the greatest bottom definition with a narrow (20°) beam, and the fish and structure location with a wide (60°) beam. DualBeamPLUS™ is ideal for a wide range of conditions - from shallow to very deep water in both fresh and salt water.

Depth capability is affected by such factors as boat speed, wave action, bottom hardness, water conditions and transducer installation. All sonar units typically read to deeper depths in fresh water than in salt water. Your Matrix transducer also comes with a temperature sensor included!

How GPS Works

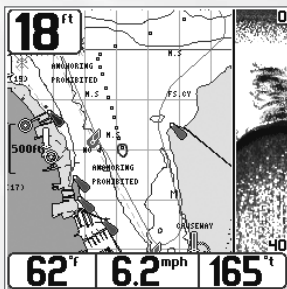
Your Matrix uses GPS (from a separate GPS receiver) and sonar capability to determine your position, display it on a grid, and provide detailed underwater information. The Global Positioning System (GPS) is a satellite navigation system designed and maintained by the U.S. Department of Defense. GPS was originally intended for military use; however, civilians may also take advantage of its highly accurate position capabilities, typically within +/- 10 meters, depending on your GPS receiver. This means that 95% of the time, the GPS receiver will read a location within 10 meters of your actual position. Your GPS Receiver also uses information from WAAS (the Wide Area Augmentation System), EGNOS (the European Geostationary Navigation Overlay Service), and MSAS (the MTSAT Satellite Augmentation System) satellites if they are available in your area.

GPS uses a constellation of 24 satellites that continually send radio signals to the earth. Your position is determined by receiving signals from up to 12 satellites and measuring the distance from the satellites to determine your present position.

Connecting the included GPS Receiver to your Matrix Fishing System allows you to combine easy-to-use FishingGPS™ chartplotter and navigation capabilities with advanced fishfinding. You'll enjoy the power of GPS to help you find those elusive fishing spots and guide you home! The following GPS functionality is currently supported by the Matrix when it is connected to the included GPS receiver:

- View current position
- View current track (breadcrumb trail)
- View precision speed and heading from your GPS receiver
- Save tracks, waypoints and routes
- Travel a route and navigate from one waypoint to the next.

Cartography



M65 Combo View Showing Detailed Map

Your Matrix supports new seamless Navionics® Gold Chart marine cartography and Navionics® HotMaps™ 2004 Gold for inland fishing, and includes a built-in World map. Land contours and chart details are displayed in various views.

NOTE: Your Matrix does not support Navionics® Classic Charts, only Navionics® Gold Charts and Navionics® HotMaps™ 2004 Gold Charts.

In addition, if you have a Matrix 65, your unit comes with a more detailed map of North America (Domestic models) or Europe and Southeast Asia, including Australia and New Zealand (International models).

Your Matrix uses the GPS Receiver to determine the position of the boat automatically, and uses the zoom level settings on a particular view to select the best chart to display. See **Viewing Cartography** for more information.

Multi-Media Card (MMC)



Inserting an MMC into the Card Slot

Your Matrix also has a multi-media card (MMC) slot that is used to insert optional-purchase cards containing additional detailed maps. If you insert an MMC that contains a better chart for a particular location, your Matrix will retrieve that chart and display it automatically. Use the illustration to locate the position of the MMC slot cover, and use a Phillips head screwdriver to remove the MMC slot cover, then insert the MMC into the slot. The label on the MMC should face toward the front of the unit. Press down on the card until it clicks into place.

Getting Started

Your Matrix user interface consists of a set of easy-to-use buttons that work with various on-screen views and menus to give you flexibility and control over your fishing experience. The following buttons are part of your Matrix user interface:



Power/Light - Momentarily press POWER to turn the unit on. While the unit is on, momentarily press POWER to access Light and Contrast menus. Press and hold POWER for 3 seconds to turn the unit off.



View - Press the VIEW key to advance to the next view. Repeatedly pressing VIEW cycles through all views available. Views can be hidden to optimize the system to your fishing requirements (see System Setup Menu - Advanced User Mode).



Info - Press the INFO key while in Chart or Combo View to display information about objects that are nearest to an active cursor. If there is no active cursor, a menu will be displayed that will present a list of objects from which you should choose to get specific information.



Menu - Press the MENU key once for the X-Press™ Menu. The X-Press™ menu allows you to access the settings that you change frequently without having to navigate through a menu system. Only the X-Press™ menu items associated with the current view are displayed. Either the Sonar or Navigation X-Press™ Menu will appear, depending on the view you are in.

Press the MENU key twice for the Main Menu System. The menu system is organized under tab headings to help you find a specific menu item quickly. In the main Menu, first use the 4-Way Cursor Control LEFT or RIGHT key to select a tab; then use the DOWN or UP key to select the menu item. The menu system is expandable; when you attach a supported accessory to the Matrix system, the Matrix menus may change to display new choices for those accessories that require menu access.

NOTE: *Instruction guides included with the accessory will detail accessory-specific features and functions.*



4-Way Cursor Control - Use the DOWN or UP arrow keys to select a menu item. Use the LEFT or RIGHT arrow keys to make a menu choice.

NOTE: *Menu choices are implemented and saved immediately - no further action is required.*

Zoom (+/-) - Press the - or + ZOOM keys while in any of the Chart Views or the Sonar Zoom View to change the scale of the view to appear closer or farther away.



Mark - Press the MARK key while in any view to mark the position of a waypoint, either at the current boat location, or, if the Cursor is active, at the current Cursor location.



GOTO - If the Cursor is active, pressing the GOTO key while in any view creates a waypoint and starts navigation towards that waypoint. If the Cursor is not active, pressing the GOTO key displays the list of waypoints, so that you can select the waypoint towards which you want to navigate.



Exit - The EXIT key has multiple functions, depending on the situation:

- If an alarm is sounding, pressing EXIT will cancel the alarm.
- If a menu tab is selected, pressing EXIT will exit the menu mode and return to the view.
- If a menu is active, pressing EXIT will return to the previous level in the menu system.
- If a cursor is active on the display, pressing EXIT will clear the cursor from the display.

Powering Up the Unit - Start-Up Screen

Turn on the Matrix unit by momentarily pressing the POWER key. The Start-Up screen is then displayed until the Matrix unit begins sonar operation. While the Start-Up screen is displayed, you may press the MENU key for the other options listed below. If no key is pressed, the Matrix will begin Normal or Simulator operation, depending on the presence or absence of a transducer. The following operating states are available:

- **Normal** – Use for on the water operation with transducer connected. The Matrix unit uses advanced transducer detection methods to determine if a transducer is connected. If a functioning transducer is connected, the unit will select the Normal operating state automatically and the unit can be used on the water.
- **Simulator** – Use to learn the features and functions of the Matrix unit. Simulates on the water operation. If a transducer is not connected or is damaged, the unit will select the Simulator state automatically at startup.

NOTE: *When operating in Simulator state with a transducer connected, Menu setting changes are saved to memory. If a transducer is not connected, changes will not be saved and Menu settings will revert to factory defaults every few minutes.*

- **System Status** – Use to view system connections and conduct a unit self-test. (See **Installation Confirmation** and **System Status - Start-Up Menu** for more information about using System Status)
- **PC Connect** – Use when upgrading Matrix internal software with a PC and PC Connect cable. (See **PC Connect - Start-Up Menu** for more information about using PC Connect)

Installation Confirmation

Refer to the Matrix Installation Guide for specific installation and cabling instructions for your Matrix unit and for the transducer. Refer to the GPS Installation Guide also included with your Matrix unit for specific installation and cabling instructions for your GPS Receiver. Once you have installed the Matrix, the transducer and the GPS Receiver, you should confirm that the GPS is installed correctly. Press POWER to turn on your Matrix unit. Immediately press the MENU button to display a screen list of Start-Up options. Use the 4-Way Cursor key to select System Status from the Start-Up menu.

Press the VIEW key until the System Status/Accessory Test View is displayed. This view displays the connection status for each accessory. If your GPS Receiver is connected properly and it is communicating with your Matrix unit, it will be shown as CONNECTED.

After the GPS Receiver is shown as CONNECTED, press the VIEW key again until the GPS Diagnostic View is displayed. The GPS Diagnostic View will display acquired satellites and their status, including signal strength. Your GPS Receiver will not provide valid signals until it acquires at least two satellites. Acquisition can take several minutes if this is the first use of your Receiver. This time lag also happens if you have moved a significant distance since the GPS Receiver was last used.

In Start-Up mode, the GPS Diagnostic View can be viewed as one of the available views if a GPS receiver is detected. It will not be available if the GPS receiver is not detected. In Normal mode, the GPS Diagnostic View is normally hidden, but can be viewed as an Advanced feature. To make this view visible, go to the Setup Tab, set the User Mode to Advanced, choose Select Views, and change the GPS Diagnostic View selection to Visible. After this, the GPS Diagnostic View will become part of the view rotation accessed through the VIEW key.

System Status - Start-Up Menu

When System Status is selected on the Start-Up menu, the Matrix displays a series of views to provide information about the unit. The following views are displayed in turn when you press the VIEW button:

- Self Test
- Accessory Test
- GPS Diagnostic View
- Sonar Test (RTS Sonar Diagnostic).

Self Test displays results from internal diagnostic self test, including unit serial number, software revision, total hours of operation and the input voltage from the power source.

Accessory Test lists the accessories connected to the system. Note that the speed accessory is only detected when the paddleswheel is moving.

GPS Diagnostic appears if the GPS Receiver is connected, and displays status information from the GPS Receiver. See Navigation Views for more information.

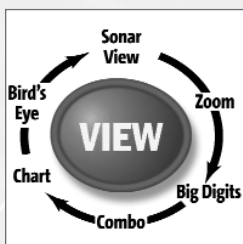
Sonar Test (RTS Sonar Diagnostic) displays unprocessed sonar returns on the display to confirm that sonar is working.

Exit System Status mode by powering the unit off.

PC Connect - Start-Up Menu

When you select PC Connect from the Start-Up Menu, the Matrix unit enters a communication mode and waits for a connection with a PC. Complete instructions are included with the PC Connect accessory (AS-PC). Exit PC Connect mode by powering the unit off.

Introduction to Views



View Button and Views Available

When the VIEW key is pressed, the Matrix display cycles through the available views. Any Matrix view can be hidden or displayed as part of the view rotation using Select View from the Advanced Setup Menu. See System Setup Menu - Advanced User Mode for details. Views are divided into two categories: Sonar Views and Navigation Views.

Sonar views:

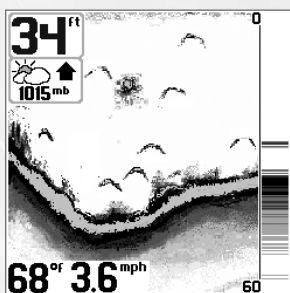
- Sonar View
- Zoom View
- Big Digits View

Navigation views:

- Combo View
- Chart View
- Bird's Eye View.

In addition, a GPS Diagnostic View is available for resolving problems with GPS satellite reception. In Normal mode, the GPS Diagnostic View is normally hidden, but can be viewed as an Advanced feature. To make this view visible, go to the Setup Tab, set the User Mode to Advanced, choose Select Views, and change the GPS Diagnostic View selection to Visible. After this, the GPS Diagnostic View will become part of the view rotation accessed through the VIEW key.

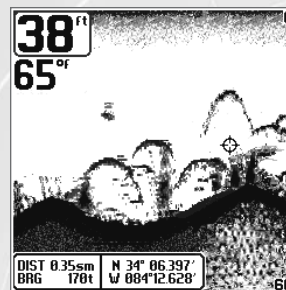
Sonar Views



Sonar View shown with optional Barometric Pressure Accessory.

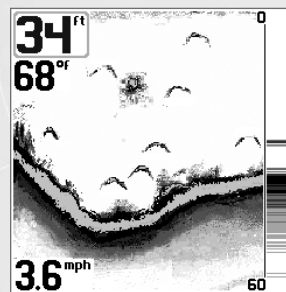
Sonar View presents a historical log of the stored sonar returns. The most recent sonar returns are charted on the right side of the window; as new information is received, the older information is moved across the display. A Digital Depth Readout is displayed in the upper left corner. A scale with Upper and Lower Depth Range readouts appears along the right edge of the Sonar View. The scale indicates the distance from the surface of the water to a depth range sufficient to show the bottom. Depth Range is automatically selected to keep the bottom visible on screen, although it can be manually-adjusted by the

user as well (see Sonar Settings - X-Press™ Menu). Up to five additional Digital Readouts display information from optional-purchase accessories such as Water Temperature, Trolling Speed, WeatherSense™ Barometric Pressure and more. These information boxes can be customized to show only the information desired (see Advanced User Mode - Select Readouts).



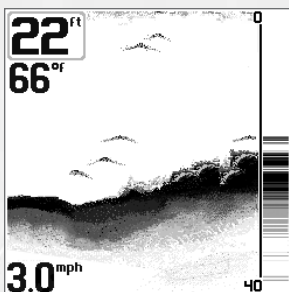
Sonar View with Active Cursor
(Sonar Saver Feature)

The **Sonar Saver** feature uses the active on screen cursor to mark the location of underwater structure while it's visible on the Sonar View.

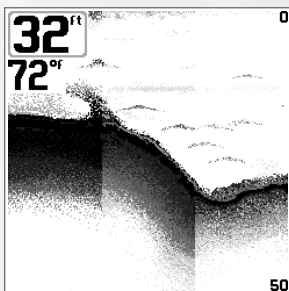


RTS® Window
Temp/Speed Accessory is optional.

A **Real Time Sonar (RTS®)** window appears on the right side of the display. The RTS® Window always updates at the fastest rate possible for depth conditions and shows only the returns from the bottom, structure and fish that are within the transducer beam. In the RTS® Window, sonar returns are shown in shades of gray. The most intense returns are shown as a solid black band that indicates the bottom. The thickness of the bottom band indicates bottom type. Hard bottoms appear thinner and mostly black; softer bottoms are thicker and may appear with many gray tones. Above the bottom band, less intense sonar returns shown as varying shades of gray indicate the sonar returns from fish or structure. The RTS® Window can be turned on or off (see Sonar Settings - Main Menu Sonar Tab).



Bottom Contour Profile with RTS® Window.
Temp/Speed Accessory is optional.



The Sensitivity can be adjusted to display
bottom contour and thermoclines.

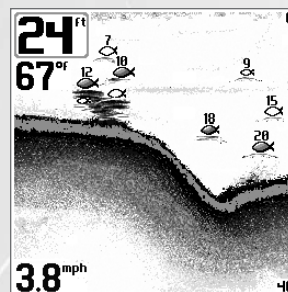


Transducer Cone and Fish Arches

As the boat moves, the Matrix unit charts the changes in depth on the display to create a profile of the **Bottom Contour**. The default presentation highlights the bottom profile with a Structure ID® feature and gray tones. From the appearance of the gray tones in the bottom contour, the type of bottom can be determined. A **Hard Bottom** such as compacted sediment or flat rock appears as a thinner dark line across the display. A **Soft Bottom** such as mud or sand appears as a thicker line that contains a transition from darker to lighter grays. **Rocky Bottoms** have a broken, random appearance. In shallower water, a **Second Sonar Return** may appear as a bottom contour below the main bottom at twice the depth.

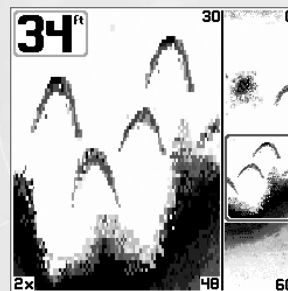
The second return occurs when the sonar signal bounces between the bottom and the surface of the water and back again. Experienced anglers use the appearance of the second return to determine bottom hardness. Hard bottoms will show a strong second return, while soft bottoms will show a very weak one or none at all. The Matrix unit is capable of revealing layers of water with different temperatures called **thermoclines**. Thermoclines appear at different depths and different times of the year. A thermocline typically appears as a continuous band of many gray levels moving across the display at the same depth.

Due to the transducer beam angle, the distance to a fish decreases as the fish moves into the beam, and then increases as it moves out again, creating a Fish Arch when this distance change is graphed on the display. Boat speed, chart speed, and the position of the fish within the sonar beam greatly affect the shape of the arch. For optimum fish arching, it is important to mount the transducer so that it is pointing straight down.



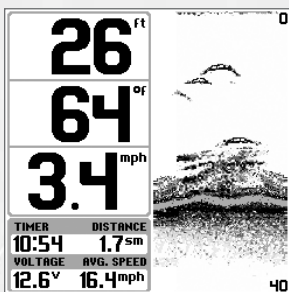
Display showing Fish Arches
Temp/Speed Accessory is optional.

The Matrix unit has an advanced **Selective Fish ID+™** option that analyzes the sonar return to determine if the sonar return may contain fish (see Sonar Settings - Main Menu Sonar Tab). When a target is detected, a **Fish ID+™** symbol appears on the display with the depth associated with it. The size of the symbol indicates the intensity of the sonar return. Targets detected in the narrow beam directly under the boat appear as Shaded Fish Symbols. Targets detected in the wide beam around the boat appear as Hollow Fish Symbols. The Matrix unit will clearly show schools of Bait Fish as "clouds" of different shapes and sizes, depending on the number of fish and boat speed.



83 kHz Sonar Zoom View shown
with Structure ID® on.

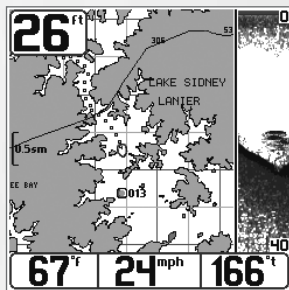
Sonar Zoom View increases the display resolution to separate sonar returns that are very close together, such as those caused by fish suspended close to the bottom or within structure. In Zoom View, the display is split to show a full range view on the right and the zoomed view on the left. As the depth changes, the zoomed view updates automatically to display a magnified image of the bottom. The Zoom Preview Box shows where the zoomed view is in relation to the full range view. The Zoom Level, or magnification, is displayed in the lower left corner and can be changed to suit conditions (see Sonar Settings - X-Press™ Menu). Upper and Lower Zoom Depth Range numbers indicate the depth of the water which is being viewed.



Big Digits View shown with Bottom View set to WhiteLine®

Big Digits View provides digital data in a large, easy-to-see format. Depth is always displayed. Readouts for temperature, speed and Triplog information are displayed if the appropriate accessory is connected to the system. The Triplog shows distance traveled, average speed, and time elapsed since the Triplog was last reset (see System Settings - Main Menu Setup Tab).

Navigation Views



Combo View

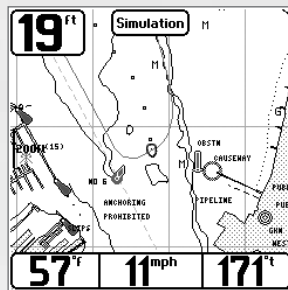


Chart View

Combo View - This view is displayed as a split screen, with Chart View on the left and Sonar View on the right side of the screen.

Chart View - This view shows the current track (also known as the position history or breadcrumb trail) showing where the boat has been, along with saved tracks, waypoints, and the current route (when navigating) overlaid on a chart.

View Orientation - Both Chart and Combo views allow you to choose the orientation of the view. When **North-Up orientation** is selected, True North is shown at the top of the display. In other words, objects located to the north of the boat are drawn above the boat. When **Course-Up orientation** is selected, the

direction of motion of the boat is shown at the top of the display. In other words, objects ahead of the boat are drawn above the boat. In both orientations, the view pans automatically, so that the boat is always centered on the display. When the boat is stationary, it is drawn as a circle. When the boat is in motion, it takes on a boat shape, pointed in the direction of motion (always Up in the Course-Up orientation).



Bird's Eye View



4-Way Cursor

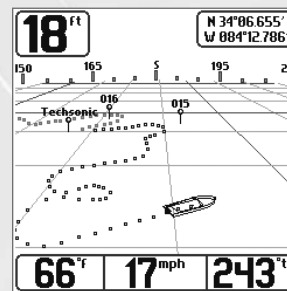


Exit Button

Bird's Eye View - This view shows a 3-D, perspective view of the track and the chart's land contour from a point above and behind the boat (the eye point). As the boat turns, the eye point moves to follow the boat.

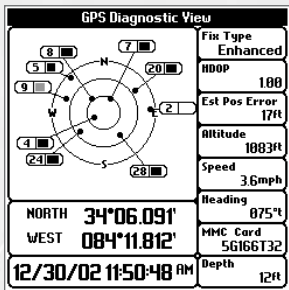
When you press the 4-Way Cursor key in the **Bird's Eye View**, the position of the eye point will shift. This allows you to move and turn the eye point so that you can look off to the sides, or even behind the boat. Pressing the Right or Left arrow keys on the 4-Way Cursor key turns the eye point right or left, while pressing the Up arrow key moves the eye point forward, and pressing the Down arrow key moves the eye point backward.

Pressing the EXIT key moves the eye point back to its original position.



Bird's Eye View after pressing Cursor

Both the Chart and Combo Views will show cartography, and the Bird's Eye View will show land contours from the cartography.



GPS Diagnostic View

GPS Diagnostic View shows a sky chart and numerical data from the GPS receiver. The sky chart shows the location of each visible GPS satellite with its satellite number and a signal strength bar. A dark grey bar indicates that the satellite is being used to determine your current position. A light grey bar indicates that the satellite is being monitored, but is not yet being used.

This view also reports the current position, local time and date, and other numeric information. The current GPS Fix Type is reported as No Fix, 2D Fix, 3D Fix, or Enhanced. An Enhanced fix has been augmented using information from WAAS, EGNOS, or MSAS. A 3D or Enhanced Fix is required for navigation. HDOP (the Horizontal Dilution of Precision) is a GPS system parameter which depends on the current satellite configuration. It is translated into Estimated Position Error, which gives an estimate of how far the reported position can be from your actual location. Depending on current conditions, the reported position is within the Estimated Position Error of your actual location with 68% probability.

In Normal mode, the GPS Diagnostic View is normally hidden, but can be viewed as an Advanced feature. To make this view visible, go to the Setup Tab, set the User Mode to Advanced, choose Select Views, and change the GPS Diagnostic View selection to Visible. After this, the GPS Diagnostic View will become part of the view rotation accessed through the VIEW key. See System Start-Up and Installation Confirmation for more information about how to use this view.

Viewing Cartography

In the Chart or Combo Views, there are several cartography-related functions that you can access using various keys.



Chart View with Cursor Present

Panning – Use the 4-Way Cursor keys to move the chart around on the display in the direction of the key being pressed. When you do this, a bullseye cursor is drawn at the center of the screen and is linked to the boat by a gray line, even if the boat is off the screen. At the same time, the temperature and speed boxes in the lower left corner are replaced with the distance and bearing from the boat to the cursor position and the latitude/longitude coordinates of the cursor.

Zooming - Use the Plus (+) key to Zoom In and the Minus (-) key to Zoom Out showing the cartography at different scales. The scale is indicated on the left side of the display. If you zoom in beyond the available chart data, the display will go into Overzoom mode whereby the last available chart data is amplified to reflect the scale selected.

Chart Info - Use the INFO key to get detailed information about the chart. If the cursor is active, you will see information about the chart objects located near the cursor. If the cursor is not active, the Chart Info menu will appear. You can select the nearest port, the nearest tide station, or the nearest current station to see information about any of these objects.

Nearest Port – The position and services information for the nearest port to your present position will be displayed. Press the EXIT key to remove the information box and the cursor bull's eye will be centered over the port position. The cursor information boxes at the bottom of the display will indicate the distance and bearing to the port from your present position.

Nearest Tide Station – Tide information for the nearest tide station to your present position will be displayed. This includes the position of the station, the date used for determining the tide information, and the times of the high and low tides for that date. A tide graph is also displayed showing the rise and fall of the tides for the 24

hour time period encompassing the date. You can change the date to look at tide information before or after the date displayed by pressing the LEFT or RIGHT cursor key respectively. Press the EXIT key to remove the information box and the cursor bull's eye will be centered over the tide station position. The cursor information boxes at the bottom of the display will indicate the distance and bearing to the tide station from your present position.

Nearest Current Station – Current information for the nearest current station to your present position will be displayed. This includes the position of the station, the date used for determining the current information, and the current changes. Two graphs are also presented that show the time, direction and flow speed of the current changes for the 24 hour time period encompassing the date. You can change the date to look at current information before or after the date displayed by pressing the LEFT or RIGHT cursor key respectively. Press the EXIT key to remove the information box and the cursor bull's eye will be centered over the current station position. The cursor information boxes at the bottom of the display will indicate the distance and bearing to the current station from your present position.

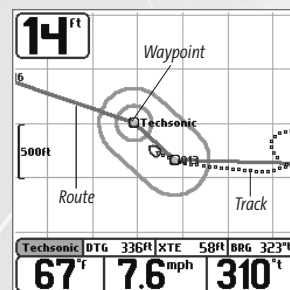
To display information about any of chart object icons, use the 4-Way Cursor key to place the bullseye over the icon, then press the INFO key. Use the UP and DOWN Cursor keys to scroll through the information displayed for the object.



Exit Button

Pressing the EXIT key removes the cursor from the screen.

Waypoints, Routes and Tracks



Waypoints, Routes and Tracks

Waypoints are stored positions that allow you to mark areas of interest or navigation points. Your Matrix can store up to 750 waypoints.

Routes link two or more waypoints together to create a path for navigation, and are used in trip planning. You can link individual waypoints together via menus or select them on-screen to create a route. A route represents your intended navigation and shows the shortest path from each waypoint to the next. As you travel a route, staying on the route line is the most efficient way to get to your destination. Your Matrix can store up to 20 routes that can each contain up to 20 waypoints.

Tracks consist of detailed position history, and are displayed as a breadcrumb trail of trackpoints. The Current Track shows the position history since the unit was powered up. You can clear the Current Track or save it at any time. Your Matrix can store up to 10 saved tracks, each containing 700 trackpoints. The current track represents your actual path so far.

Save, Edit, or Delete a Waypoint

Save your current position as a waypoint: On any view, press the MARK key to save the current position of the boat as a waypoint.

Save the cursor position as a waypoint: On the Combo or Track view, use the Cursor key to designate the position you want to save as a waypoint. Then press the MARK key to save the marked position as a waypoint.

Save a position from the sonar history: On the Sonar view, use the Cursor key to point to a feature in the sonar history (also called the Sonar Saver feature). Press the MARK key to create a waypoint at the location where that sonar reading was taken. The new waypoint will also record the depth at that location.

NOTE: When you save a waypoint by any of these methods, a numerical waypoint name is automatically assigned. You can edit the waypoint information later to give it a different name and select an icon to represent it (see Edit a Waypoint).

Display the Waypoints Submenu: From any view, press the MENU key twice to display the Main Menu System, then use the RIGHT Cursor key to select the Navigation tab. Select Waypoints and press the RIGHT Cursor key to display the Waypoints submenu.

Program a specific position as a waypoint: To create a waypoint that is NOT your current position, from the Waypoints submenu, select the Create option and press the RIGHT Cursor key. Use the Cursor keys to program a waypoint name, latitude, longitude, and icon before selecting Save.

Edit a waypoint: From the Waypoints submenu, select Edit and press the RIGHT Cursor key to display a list of saved waypoints. Select the waypoint you want to edit by pressing the RIGHT Cursor key. Use the RIGHT and LEFT Cursor keys to move from field to field, and the UP and DOWN Cursor keys to change values once you are in a field. In the Waypoint Name, Latitude and Longitude fields, the UP and DOWN Cursor keys change the letter or number. All upper and lower case letters are available, as well as digits 0-9 and some punctuation characters. In the Waypoint Icon field, the UP and DOWN Cursor keys change the icon used to represent the waypoint on the Combo and Chart Views. You can exit these fields with the LEFT and RIGHT Cursor keys or by pressing the EXIT key. Select Save and press the RIGHT Cursor key to save your changes.

To make it easier to select a waypoint, select **Sort By** and press the RIGHT or LEFT Cursor keys to select a sort order:

- Name shows the waypoints alphabetically
- Time shows the most recently-created waypoint first
- Distance shows the closest waypoint first.

Delete a waypoint: From the Waypoints submenu, select Delete and press the RIGHT Cursor key to display a list of waypoints. Select the waypoint you want to delete, then press the RIGHT Cursor key. You will be asked to confirm deletion before the waypoint is actually deleted.

Navigate to a Waypoint or Position

Navigate to the cursor position: From the **Combo** or **Track** view, use the Cursor key to select a position or waypoint to which you want to navigate. Press the GOTO key. Navigation will begin immediately.

Navigate to a specified waypoint: Press the GOTO key, then choose the waypoint to which you would like to navigate from the waypoint list and press the RIGHT Cursor key to select it.

From any view, you can also navigate to a waypoint using the GOTO key.

***NOTE:** By repeating the previous instructions, you can add more waypoints to create a longer route.*

Skipping a waypoint: From the Navigation X-Press™ menu, select Skip Next Waypoint and press the RIGHT Cursor key. If there is not another waypoint to skip to, navigation will be cancelled.

Cancel navigation: From the Navigation X-Press™ menu, select Cancel Navigation and press the RIGHT Cursor key. Canceling navigation removes the route and any waypoints created using the GOTO key.

Add a Waypoint Target or Trolling Grid

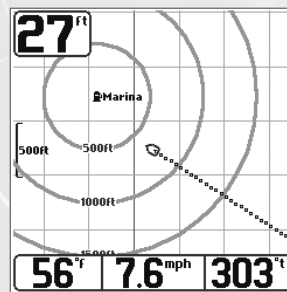


Chart View with Target

Add or Remove a Waypoint Target: From the Waypoints submenu, select Target and press the RIGHT Cursor key. A target consisting of concentric circles centered on the selected waypoint will appear on all of the navigation views; the target shows various distance ranges from the targeted waypoint. To remove the target, choose Remove Target from the Navigation X-Press™ menu.

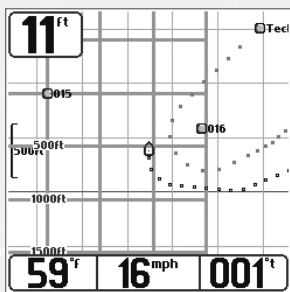


Chart View with Grid

Add or Remove a Trolling Grid: From the Waypoints submenu, select Grid and press the RIGHT Cursor key to add the grid to the selected waypoint. The trolling grid will appear on all of the navigation views, and can be used as a guide when trolling around a waypoint. The grid can be rotated to any desired heading using Grid Rotation from the Navigation Main menu. To remove the trolling grid, choose Remove Grid from the Navigation X-Press™ menu.

NOTE: Only one waypoint can have either a target or a grid at one time. If you apply a target or a grid to a new waypoint, the original waypoint will lose its target or grid.

NOTE: The spacing of the rings on the waypoint target and the spacing of the grid lines on the trolling grid is the same as the length of the scale bar on the left edge of the display. Zooming in or out will decrease or increase the spacing, respectively.

Save, Edit or Delete a Route

Save the current route: While you are navigating, the current route can be saved. From the Navigation X-Press™ menu, select Save Current Route and press the RIGHT Cursor key. Navigation will continue.

Display the Routes submenu: From any view, press the MENU key twice to display the Main Menu System, then use the RIGHT Cursor key to select the Navigation tab. Select Routes and press the RIGHT Cursor key to display the Routes submenu.

Create a route: From the Routes submenu, select Create and press the RIGHT Cursor key. A Route Edit screen will be displayed with an empty route. You can name the route, add waypoints to the route from the list of all waypoints, and order the waypoints in the route using the Cursor keys.

Edit a saved route: From the Routes submenu, select Edit and press the RIGHT Cursor key. A Route Edit screen will be displayed. Select the route you wish to edit and press the RIGHT Cursor key. Change or delete the waypoints used in the route.

Delete a saved route: From the Routes submenu, select Delete and press the RIGHT Cursor key. A Route Edit screen will be displayed. Select the route you wish to delete and press the RIGHT Cursor key. You will be asked to confirm your choice by pressing the RIGHT Cursor key again before the route is deleted.

Travel a saved route: From the Routes submenu, select Travel and press the RIGHT Cursor key. A list of saved routes will appear. Select the route you wish to travel and press the RIGHT Cursor key to make this route the current route and begin navigation.

Route Info: From the Routes submenu, select Info and press the RIGHT Cursor key. A list of saved routes will appear. Select the route for which you want information, and press the RIGHT Cursor key. The list of waypoints in the route will be shown, with the distance and bearing from each waypoint to the next, as well as the distance and bearing from the current position to the first waypoint in the route.

Save or Clear a Current Track

Save the current track: From the Navigation X-Press™ menu, select Save Current Track and press the RIGHT Cursor key. The track will remain on the display, but will change from black to gray. To remove the track completely from the display, see Edit, Delete or Hide Saved Tracks.

NOTE: When you save a track, a name is automatically assigned. The track name consists of a date/time stamp, but can be re-named later (see Edit a Saved Track).

Clear the current track: From the Navigation X-Press™ menu, select Clear Current Track and press the RIGHT Cursor key. The track will be removed from the display and discarded.

Edit, Delete or Hide Saved Tracks

Display the Tracks Submenu: From any view, press the MENU key twice to display the Main Menu System, then use the RIGHT Cursor key to select the Navigation tab. Select Tracks and press the RIGHT Cursor key to display the Tracks submenu.

Edit a saved track: From the Tracks submenu, select Edit and press the RIGHT Cursor key to display the list of saved tracks. Select the track you want to edit and press the RIGHT Cursor key. When the Edit Track dialog box appears, use the Cursor keys to move between fields. In the Track Name field, the UP and DOWN Cursor keys change the letter or number. All upper and lower case letters are available, as well as digits 0-9 and some punctuation characters. You can exit the Track Name field with the LEFT and RIGHT Cursor keys or by pressing the EXIT key. Select Save and press the RIGHT Cursor key to save your changes.

Delete a saved track: From the Tracks submenu, select Delete and press the RIGHT Cursor key to display the list of saved tracks. Select the track you want to delete and press the RIGHT Cursor key. You will be asked to confirm deletion before the track is actually deleted.

Hide or display a saved track: From the Tracks submenu, select Visibility and press the RIGHT Cursor key to display the list of saved tracks. Select the track you want to hide or display and use the Cursor keys to select Hidden or Visible. Press the EXIT key to return to the Tracks submenu.

Introduction to Menus

The menu system has levels of display which streamline the rich functionality of the Matrix into easy-to-use modules which can be customized to suit your preferences. The main components of the menu system are:

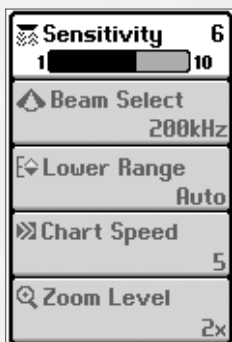
- **X-Press™ Menus** - Allows you to access the settings that you change frequently without having to navigate through the whole menu system. Only the X-Press™ menu items associated with the current view are displayed. Either the Sonar or Navigation X-Press™ Menu will appear, depending on the view you are in. Press the MENU key twice for the Main Menu System. Press the MENU key once to display the X-Press™ Menu.
- **Main Menu Tabs** - Less frequently-adjusted menus are grouped into the Main Menu System. The Main Menu system is organized under the following tab headings to help you find a specific menu item quickly: Alarms, Sonar, Navigation (if the GPS Receiver is attached), Setup, and Accessories. Press the MENU key twice for the Main Menu, then use the 4-Way Cursor LEFT or RIGHT key first to select a tab, then use the DOWN or UP key to select a specific menu item.
- **User Mode (Normal or Advanced)** - The Matrix menu system default to Normal user mode, but you can also change the mode to Advanced to view additional menu choices under most menu tabs. See Advanced User Mode for more information.
- **Expandability** - The menu system is expandable; when you attach a supported accessory to the Matrix system, the Matrix menus may change to display new choices for those accessories that require menu access.

Advanced User Mode

Present menu modes are available to suit your personal Angler Profile - whether you're a Normal User or Advanced User. These Angler Profile Presets™ provide an Advanced Mode for users who desire the highest level of control over the product, and Normal Mode for users who desire the greatest simplicity and fewest choices.

Choose the Setup Tab from the Main Menu system, choose User Mode, then change the mode to Advanced to access advanced features. A range of additional options will be displayed in the menu system. Any changes made while in Advanced Mode will remain in effect if the unit is returned to Normal Mode. For example, if you set specific views to be visible while in Advanced User Mode, and then return to Normal User Mode, those views will still be visible.

Sonar X-Press™ Menu



The **Sonar X-Press™** menu represents the settings most frequently-used to optimize the sonar performance of the Matrix unit. Press the MENU key once while in any of the Sonar Views to access the following Sonar X-Press™ menu items quickly when in Normal Mode:

Sensitivity provides advanced control over the sonar receiver. The Matrix unit optimizes Sensitivity based on depth and water conditions automatically; however, you also may change it manually to match your preferences or water conditions. Increasing the sensitivity shows more sonar returns from small bait fish and suspended debris in the water; however, the display may become too cluttered in some water conditions. When operating in very clear water or greater depths, increased sensitivity shows fainter returns that may be of interest. Decreasing the sensitivity eliminates the clutter from the display that is sometimes present in murky or muddy water. If Sensitivity is adjusted too low, the display may not show many sonar returns that could be fish.

Beam Select selects the sonar beam used in the Sonar Views. When 200 kHz is selected, the sonar returns and Fish ID+™ from the 200 kHz beam are displayed providing greater bottom detail (typically from 2 feet to 800 feet) at any boat speed. Using 83 kHz, the sonar returns and Fish ID+™ from the 83 kHz beam are displayed, providing greater depth capability and showing more targets in its wider beam. The 83 kHz beam is not recommended for use when the boat is traveling at greater than trolling speeds. When 200/83kHz is selected, the unit blends the sonar information from both beams together on the display to provide the best sonar image and Fish ID+™.

Lower Range adjusts the lower depth range to a specific depth for the Sonar and Big Digits Views. Automatic is the default setting. Selecting a specific setting locks the depth range into manual mode. Advanced anglers use both Upper and Lower Range together to view a specific depth range manually when looking for fish or bottom structure. The Upper Range menu choice is available when User Mode is set to Advanced (see Advanced User Mode). **M** will be displayed when you start manually adjusting the Lower Range to indicate that you're in Manual mode.

Chart Speed determines the speed at which the bottom information moves across the display, and consequently the amount of detail shown. A faster speed shows more information in the Sonar View and is preferred by most anglers; however, the bottom moves across the display quickly. The highest setting is an ultrafast mode that provides the highest chart speed possible by slowing down other system functions. A slower speed keeps the information on the display longer, but the bottom and fish detail becomes compressed and may be difficult to interpret. Regardless of the Chart Speed setting, the RTS® Window will update at the maximum rate possible for the depth conditions. Adjust Chart Speed to your personal preference.

Zoom Level sets the magnification level for the Sonar Zoom View.

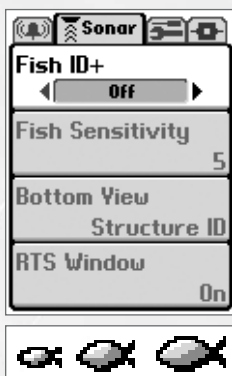
Sonar X-Press™ Menu - Advanced

Press the MENU key once while in any of the Sonar Views to access the following Sonar X-Press™ menu settings quickly when in Advanced Mode:

Upper Range adjusts the Upper Depth Range to a specific depth for the Sonar and Big Digits Views. (0 to 1190 feet, Default = 0)

83 kHz Sensitivity adjusts the sensitivity applied to the 83kHz beam to be higher or lower than the overall sensitivity setting. (-10 to +10, Default = 0)

Sonar Menu Tab



Press the MENU key twice to access the Main Menu System and then press the RIGHT Cursor key to select the Sonar tab, which contains the following menu choices when you are in Normal User Mode:

Fish ID+™ uses advanced signal processing to interpret sonar returns and display a Fish Symbol when very selective requirements are met. A number above the fish icon indicates the depth of the fish. Three different fish size icons show the intensity of the sonar return, and provide an indicator of relative fish size. When Fish ID+™ is turned off, the Matrix shows only the unprocessed sonar returns on the display. These returns will often result in "arches" forming on the display, indicating potential targets.

Fish Sensitivity adjusts the thresholds of the fish detection algorithms, thus enhancing your unit's ability to identify sonar returns as fish icons. Selecting a higher setting allows fainter returns to be displayed as fish icons and will increase the number of fish icons that appear on the display. This is useful for identifying smaller fish species or baitfish. Selecting a lower setting displays fewer fish icons from faint sonar returns. This is helpful when seeking larger species of fish.

Bottom View selects the method to display bottom and structure on the display. **Structure ID®** presents the graphical representation of the bottom and structure sonar returns using only grayscale to indicate the signal strength. **Whiteline®** highlights the strongest sonar returns from the bottom to make a distinctive outline of the bottom contour, structure and fish. **Bottom Black** displays all pixels below the bottom contour as black, regardless of signal strength.

RTS® Window turns the RTS® window on or off in the Sonar View.

Sonar Menu Tab - Advanced Mode

Press the MENU key twice to access the Main Menu System and then press the RIGHT Cursor key to select the Sonar tab, which contains the following additional menu choices when you are in Advanced User Mode:

Surface Clutter adjusts the filter that removes surface clutter noise caused by algae and aeration. The lower the setting, the less surface clutter will be displayed. (Low = 1, High = 10, Default = Low)

Noise Filter adjusts the sonar Noise Filter to limit interference from sources such as your boat engine, turbulence, or other sonar devices for best display performance. (Off, Low, Medium, High, Default = Low)

***NOTE:** The Off setting removes all filtering; Low, Medium and High settings add progressive filtering of the sonar returns. In some deep water situations, the High setting may actually hinder your unit's ability to find the bottom.*

Water Type configures unit for type of water conditions. (Salt, Fresh, Default = Fresh)

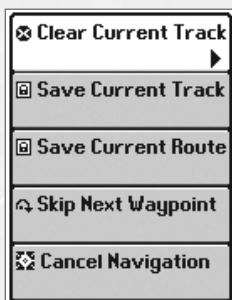
***NOTE:** In salt water, what would be considered a large fish might be 2 to 10 times bigger than a large fish in fresh water (depending on the type of fish you are seeking). The salt water setting allows for a greater range in fish size adjustment to account for this. Also, make sure that the Water Type is set accurately, especially in salt water, as this can affect the accuracy of deep water depth readings.*

Max Depth adjusts the maximum depth of unit operation. (Auto, 10 to 1200 feet, Default = Auto)

***NOTE:** The performance of your unit can be tuned to the maximum depth you will be fishing in by setting this menu choice. When a maximum depth is set, the unit will not attempt to acquire sonar data below that depth, thus increasing overall performance. When the Max Depth is set to Auto, the unit will acquire bottom readings as needed (within the capacity of the unit).*



Navigation X-Press™ Menu



Navigation X-Press™ Menu

The **Navigation X-Press™** menu represents the settings most frequently-used to optimize the navigation performance of the Matrix unit. Press the MENU key while in any of the navigation views to access the following Navigation X-Press™ Menu items displayed when you are in Normal User Mode.

Clear Current Track allows you to clear the current track being displayed and start a new track at the present position.

Save Current Track allows you to save the current track being displayed.

Save Current Route allows you to save the current route being displayed.

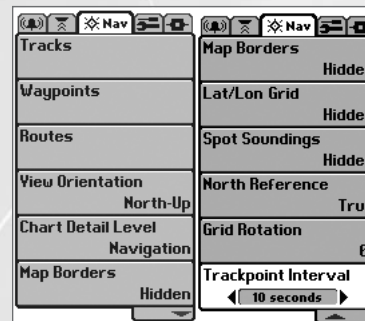
Skip Next Waypoint removes the next waypoint from the current route. This menu choice will only appear when you are currently navigating a route.

Cancel Navigation discards the current route and exits Navigation Mode. This menu choice will only appear when you are currently navigating a route.

Remove Target removes the waypoint target from all navigation views. This menu choice will only appear when a target has already been applied to a waypoint.

Remove Grid removes the trolling grid from all navigation views. This menu choice will only appear when a grid has already been applied to a waypoint.

Navigation Menu Tab



Navigation X-Press™ Menu

From any view, press the MENU key twice to access the Main Menu System, then press the RIGHT cursor key twice to select the Navigation tab, which contains the following menu choices when you are in Normal User Mode:

Tracks allows you to view the Tracks submenu. See Navigation Main Menu - Tracks Submenu.

Waypoints allows you to view the Waypoints submenu. See Navigation Main Menu - Waypoints Submenu.

Routes allows you to view the Routes submenu. See Navigation Main Menu - Routes Submenu.

View Orientation allows you to select whether the Combo and Track Views should be drawn North-Up or Course-Up. (North-Up, Course-Up, Default = North-Up)

NOTE: The View Orientation setting does not apply to the Bird's Eye View.

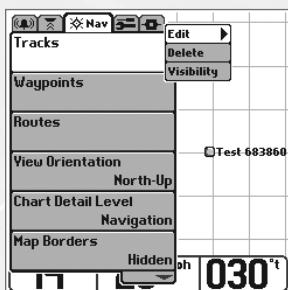
Chart Detail Level allows you to select how much chart detail you want displayed on the Navigation Views. Basic shows land areas, ports, obstructions and restricted areas. Navigation shows nav aids, landmarks, ferryways and navigation routes. Underwater shows depth contours, fishing areas, underwater wrecks, tides and currents. All shows roads, buildings, railways, and other notations. (Basic, Navigation, Underwater, All, Default = Navigation)

North Reference allows you to have bearings displayed with one of two orientations: True North or Magnetic North. (True North, Magnetic North, Default = True North)

Trackpoint Interval allows you to select the time period between trackpoints. The current track contains up to 700 trackpoints, so if the time period is longer, the track will extend back further in time, but be less detailed. (1 second, 5 seconds, 10 seconds, or 15 seconds, Default = 10 seconds)



Tracks Submenu



Tracks Submenu

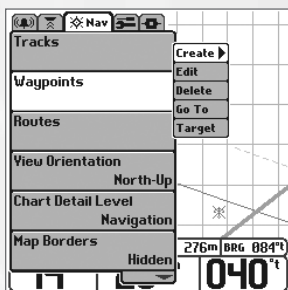
Select Tracks from the Navigation menu tab to display the Tracks Submenu, which contains the following menu choices:

Edit allows you to select a previously-saved track and edit its name.

Delete allows you to delete a track from a list of previously-saved tracks.

Visibility allows you to display or hide each saved track.

Waypoints Submenu



Waypoints Submenu

Select Waypoints from the Navigation menu tab to display the Waypoints Submenu, which contains the following menu choices:

Create allows you to create a new waypoint and edit it immediately. The current boat position will be used as the default, but you can set the coordinates to any valid position.

Edit allows you to choose from a list of previously-saved waypoints, then edit the Name, Position (Latitude and Longitude) and select the Icon that will be used to represent the waypoint in the Combo and Track Views.

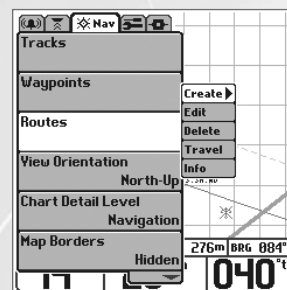
Delete allows you to delete a waypoint from the list of saved waypoints.

Go To allows you to select a waypoint and start navigation toward that waypoint, or add that waypoint to the end of the current route.

Target allows you to apply a target to a waypoint selected from the list of waypoints.

Grid allows you to apply a trolling grid to a waypoint selected from the list of waypoints.

Routes Submenu



Routes Submenu

Select Routes from the Navigation menu tab to display the Routes Submenu, which contains the following menu choices:

Create allows you to create a new, empty route and add waypoints to it immediately.

Edit allows you to select a previously-saved route and edit its name and the waypoints on it.

Delete allows you to delete a route from a list of previously-saved routes.

Travel allows you to select a previously-saved route to use as the current route; this menu setting also begins navigation on this route.

Info displays information about the route, including the distance and bearing from each waypoint to the next.

Navigation Menu Tab - Advanced

Press the MENU key twice to access the Main Menu System and then press the RIGHT Cursor key twice to select the Navigation tab, which contains the following additional menu choices when you are in Advanced User Mode:

Track Min Distance allows you to set a minimum distance of travel before a trackpoint is added to the track. (1 to 300 feet or 1 to 100 meters*, in increments of 1, and units are determined by the current Units-Distance setting, Default = 16 ft, 5 m)

***NOTE:** During slow travel or drift, setting both Trackpoint Interval and Track Min Distance to small values will allow you to increase the track resolution.*

****NOTE:** Metric units of measure are available on International models only.*

Map Datum allows you to change the map coordinate system used by the Matrix to match those of a paper map. (Default = WGS 84)

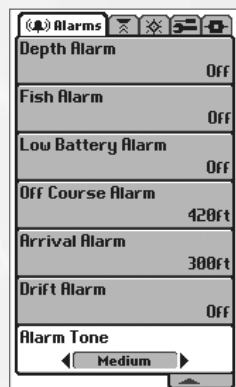
Map Borders allows you to display or hide map borders. (Hidden, Visible, Default = Hidden)

Lat/Lon Grid allows you to display or hide a grid showing latitude and longitude. (Hidden, Visible, Default = Hidden)

Spot Soundings allows you to display or hide spot soundings, which are depth measurements shown on the chart. (Hidden, Visible, Default = Hidden)

Grid Rotation allows you to set the orientation of the trolling grid in degrees, where a setting of 0° displays a standard North, South, East, West alignment. The Grid Rotation setting will be applied to all navigation views whenever the grid is turned on. (0° to 89°, in increments of 1°, Default = 0°)

Alarms Menu Tab



Alarm Menu showing Navigation Alarms

Various audible alarms can be triggered in the Matrix unit based on these menu settings. When an alarm is triggered, it can be silenced by pressing the EXIT key.

Additional navigation-specific menu choices appear under the Alarms menu tab in the Main Menu System when a functioning GPS receiver is attached to the Matrix unit.

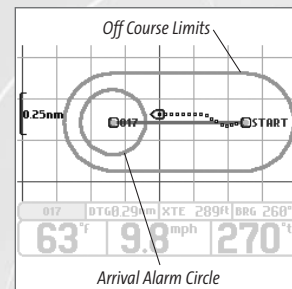
NOTE: When an alarm is triggered, you can silence it by pressing any key. Once you silence an Off Course or Drift alarm, it will not sound again as long as the boat remains outside the set alarm limits. These alarms will turn off automatically if the boat moves back inside the limit.

From any view, press the MENU key twice to access the Main Menu System, and to display the Alarms tab, which contains the following menu choices when you are in Normal User Mode:

Depth Alarm sounds when the digital depth becomes equal to or less than the menu setting.

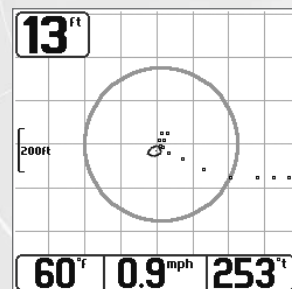
Fish Alarm sounds when the Fish ID+™ feature displays fish symbols that correspond to the menu setting.

Low Battery Alarm sounds when the input battery voltage is equal to or less than the menu setting.



Off Course Alarm allows you to set how far the boat is allowed to move off course before the Off Course Alarm will sound. This also changes the display size of the Off Course Alarm limits that surround two waypoints on a route. (Off, 30 to 3000 feet in increments of 30, 10 to 1000 meters* in increments of 10, Default = 300 ft, 100 m)

Arrival Alarm allows you to set how close the boat must be to the destination waypoint before the Arrival Alarm will sound. This also changes the display size of the Arrival Alarm circle that surrounds the destination waypoint. (Off, 30 to 3000 feet in increments of 30, 10 to 1000 meters* in increments of 10, Default = 150 ft, 50 m)

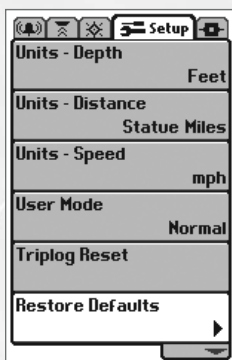


Drift Alarm allows you to set the size of a perimeter around the boat's anchored position; if the anchored boat drifts outside of that perimeter, the Drift Alarm will sound. This setting also changes the display size of the Drift Alarm perimeter that surrounds the boat's current position. (Off, 30 to 3000 feet in increments of 30, 10 to 1000 meters* in increments of 10, Default = Off).

***NOTE:** Metric units of measure are available on International models only.

Alarm Tone selects the pitch of the alarm sound to improve audibility. As the menu is adjusted a brief tone will be produced so that you can select the tone that you can hear best.

Setup Menu Tab



Setup Menu Tab

From any view, press the MENU key twice to access the Main Menu System, then press the RIGHT cursor key three times to select the Setup tab, which contains the following menu choices when in Normal Mode:

Units - Depth selects the units of measure for all depth-related readouts.

Units - Temp selects the units of measure for all temperature-related readouts. This menu is only visible if temperature is available. *International Models Only.*

Units - Distance selects the units of measure for all distance-related readouts.

Units - Speed selects the units of measure for all speed-related readouts.

User Mode displays additional Advanced Menus within the menu system when set to Advanced. When set to Normal (default setting,) only the basic menu options are shown. See Advanced User Mode section.

Triplog Reset resets the Triplog to zero.

Language selects the display language for menus. *International Models Only.*

Restore Defaults resets ALL menu settings to their factory defaults. Use this menu with caution!

Setup Menu Tab - Advanced

The Setup tab contains the following additional menu choices when you are in Advanced User Mode:

Select Views accesses submenus to hide or show individual views available on the Matrix unit. This includes new views added when new accessories are connected.

NOTE: Once a view has been made visible, it will remain as part of the view rotation when you use the VIEW button even after you return to Normal User Mode.

Select Readouts accesses submenus to hide or show individual digital readouts on the Sonar View. This includes readouts from supported accessories.

Depth Offset adjusts digital depth readout to indicate depth from the waterline or boat's keel. Enter a positive vertical measurement (+1, +2, +3 feet) from the transducer to the waterline to read the depth from the waterline. Enter a negative vertical measurement (-1, -2, -3 feet) from the transducer to keel to read the depth from the keel. (-10 feet to +10 feet, Default = 0)

Temperature Offset adjusts temperature readout by the amount entered to match other gauges. (-10 to +10, Default = 0)

Speed Calibration adjusts the speed readout by the percentage entered to match other gauges. (-20% to +20%, Default = 0)

Local Time Zone selects your time zone in reference to the time reported by the GPS receiver when Time + Date is selected as a Digital Readout on the Sonar View (see Select Readouts). (Default= EST [UTC-5] - Eastern Standard Time)

Daylight Savings Time adjusts the time display to account for local Daylight Savings Time. Selecting On adds one hour to the time display adjusted for your local time zone. Selecting Off leaves the time display as adjusted for your local time zone. (On, Off, Default = Off)

Position Format selects the format of the latitude and longitude position display. (dd.ddddd°, dd°mm.mmm', or dd°mm'ss", Default = dd°mm.mmm')

NMEA Output enables or disables NMEA 0183 depth sentence. (On, Off, Default = Off)

Setup Menu Tab - Advanced - International Units Only

The following menu choices only appear under the Setup menu tab in the Main Menu System of International Units when the User Mode is set to Advanced:

Time Format selects a 12 hour or 24 hour format for the time of day displayed when Time + Date is selected as a Digital Readout on the Sonar View (see Select Readouts). (12 hour, 24 hour, Default = 12 hour)

Date Format selects the format for the date display when Time + Date is selected as a Digital Readout on the Sonar View (see Select Readouts). (mm/dd/yy, dd.mm.yy or yy.mm.dd, Default = mm/dd/yy)

Matrix Fishing System Accessories

Your Matrix unit represents a revolutionary Fishing System that grows in capability with the addition of one or more optional-purchase accessories. Accessories customize the Matrix Fishing System to your needs and enable you to stay on the edge of new technology and to catch more fish. When an accessory is connected to the system, additional menus, readouts and views are added automatically to your Matrix menu system. Note that some accessories may require additional software to be loaded into the Matrix product. Accessories available today that are supported by your Matrix include:

Temperature/Speed: simply plugs into the Matrix unit and provides real time speed and temperature readouts, as well a valuable Triplog function.

***NOTE:** If an external Temperature/Speed (TS-W) or Temperature (TG-W) accessory is connected AND a transducer with temperature built in is connected at the same time, the TS-W or TG-W accessory will override the temperature which is built in to the transducer.*

WeatherSense™ Fishing Condition Monitor: simply plugs in to the Matrix unit and provides barometric pressure readout and trend data. Professional fishermen know that barometric pressure impacts fish behavior and they modify their tactics based on it. Now you can have access to barometric pressure data in real time, right on the boat.

PC Connect Cable: links the Matrix unit to a PC to access product software updates and new features from **www.humminbird.com**. This accessory requires the MSWindows-compatible HumminbirdPC™ software from our Website to communicate with the Matrix unit. If you have upgraded to GPS, you can easily enter, annotate and exchange fishing spots with friends and download them into your Matrix unit using this cable.

Be sure to check out our website **www.humminbird.com** for additional new and exciting accessories to grow your Matrix Fishing System!

**NMEA 0183 is a National Marine Electronics Association standard for data communication.*

Specifications

Depth Capability	1200 ft (400 m)
Power Output	500 Watts (RMS) 4000 Watts (Peak to Peak)
Operating Frequency	200 kHz and 83 kHz
Area of Coverage	60° @ -10 dB in 83 kHz 20° @ -10 dB in 200 kHz
Target Separation	2½ Inches (63.5 mm)
Power Requirement	10-20 VDC
LCD Matrix	240 V x 240 H
Transducer	XHS-9-20-T
Transducer Cable Length	20 ft (6 m)
Memory	750 Waypoints 20 Routes 10 Tracks
Built-in Maps	M55 - 32 nm Base Map M65 - 4 nm Detailed Map
GPS Receiver	12 Channel with WAAS, EGNOS and MSAS Capability

Product specifications and features are subject to change without notice.

Contact Humminbird

Contact the Humminbird Customer Resource Center
in any of the following ways:

By Telephone
(Monday - Friday 8:00 a.m. to 4:30 p.m. Central Standard Time):

334-687-0503

By e-mail
(typically we respond to your e-mail within three business days):

custserv@techsonic.com

For direct shipping, our address is:

Techsonic Industries, Inc.
Service Department
108 Maple Lane
Eufaula, AL 36027 USA

