Sonar technology is based on sound waves. The Matrix™ Fishing System uses sonar to locate and define structure, bottom location, and composition, as well as calculate depth of water 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 an object, it then uses the reflected signal to interpret the 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 return in less than a second. It is unlikely that your boat can “outrun” this sonar signal.

**How Sonar Works**

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**DualBeam PLUS Sonar**

Your Matrix 25 uses a dual frequency 200/83 kHz DualBeam PLUS sonar system with a wide (60°) area of coverage. DualBeam PLUS is optimized to show the greatest bottom definition with a narrow (20°) beam, and the fish and structure location with a wide (60°) beam.

DualBeam PLUS 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!

**Powering Up the Unit**

Turn on the Matrix unit by momentarily pressing the POWER key. A startup screen is then displayed until the unit begins sonar operation. While the startup screen is displayed, you may press the MENU key for the other options listed below. If no key is pressed within 5 seconds, 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 the water operation with transducer connected.
- **Simulator** - Use to learn the features and functions of the Matrix unit. Simulates on the water operation.
- **System Status** - Use to view system connections and a unit health status.
- **PC Connect** - Use when upgrading Matrix internal software with a PC and PC Connect cable.

The Matrix unit uses advanced transducer detection methods to determine if a transducer is connected. If the transducer is not connected or is damaged, the unit will select the Simulator state automatically at startup. If a functioning transducer is connected, the unit will select the Normal operation state automatically and the unit can be used on the water.

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

**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 operating 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.
Power/Light

Press and hold the POWER button 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 on the other side of this manual).

4-Way Menu Control

Use UP or DOWN to select a menu item. Use LEFT or RIGHT to make a menu choice.

Main Menu System

Press the MENU key twice for the Main Menu System. The system is organized under tab headings to help you find a specific menu item quickly. In the main menu, first use the 4-Way Menu Control LEFT or RIGHT key to select a tab, then use the UP or DOWN key to select the menu item. The menu system is expandable, so 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.

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.

Matrix Fishing System Advanced Accessories

Your Matrix unit represents a revolutionary Fishing System that grows in capability with the addition of one or more accessories. Accessories customize the Matrix Fishing System to your needs and enable you to stay on the edge of new technology and 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 unit include:

Temperature/Sensor: simply plugs into the Matrix unit and provides real time temperature and depth readings. As well, a valuable triplog function is included.

Note: If an external Temperature/Sensor (TS-18) or Temperature (TS-6) accessory is connected and a transducer with temperature built in is connected at the same time, the TS-18 or TS-6 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.

GPS Connection Cable: adds GPS capability to the Matrix unit by connecting a handheld or other NMEA® GPS-compatible device. GPS capability instantly turns your Matrix into a Combo-Trackplotter to show position, breadcrumb trail and waypoints on the big, easy-to-read screen, all with big, easy-to-use buttons. GPS capability turns any handheld into a second screen 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 (National Marine Electronics Association) is a standard for data communication.