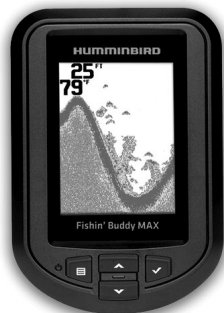
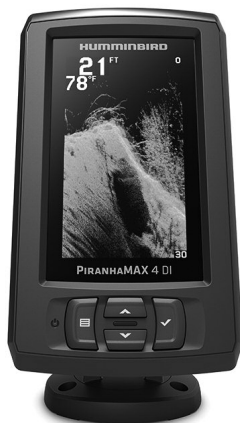
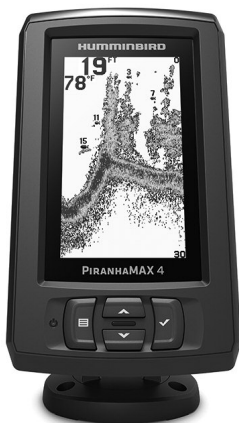


PiranhaMAX™ & Fishin' Buddy® MAX

532419-3_A



 **HUMMINBIRD**

Operations Manual

Thank You!

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

Contact Humminbird Customer Service at **1-800-633-1468** or visit our Web site at **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.*

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

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

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

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

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

ATTENTION INTERNATIONAL CUSTOMERS: *Products sold in the U.S. are not intended for use in the international market. Humminbird international units provide international features and are designed to meet country and regional regulations. Languages, maps, time zones, units of measurement, and warranty are examples of features that are customized for Humminbird international units purchased through our authorized international distributors.*

*To obtain a list of authorized international distributors, please visit our Web site at **humminbird.com** or contact Humminbird Customer Service at **(334) 687-6613**.*

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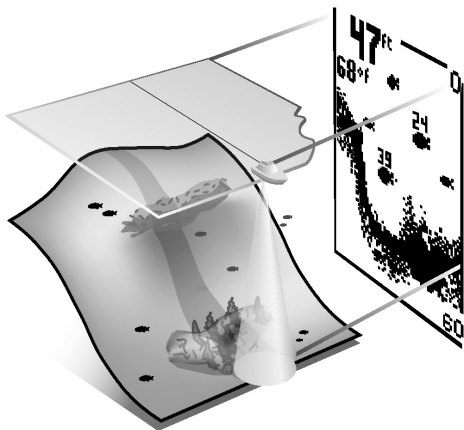
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Sonar Technology

The fishfinder automatically determines depth and makes adjustments to keep the bottom and fish visible on the display.

The fishfinder uses sonar technology to send sound waves from the transducer into the water. The returned "echoes" are plotted on the display and represent something that was detected by a sonar return at a particular time. As both the boat and the targets (fish) may be moving, the returns are only showing a particular segment of time when objects were detected, not exactly where those objects are in relation to other objects shown on the display.

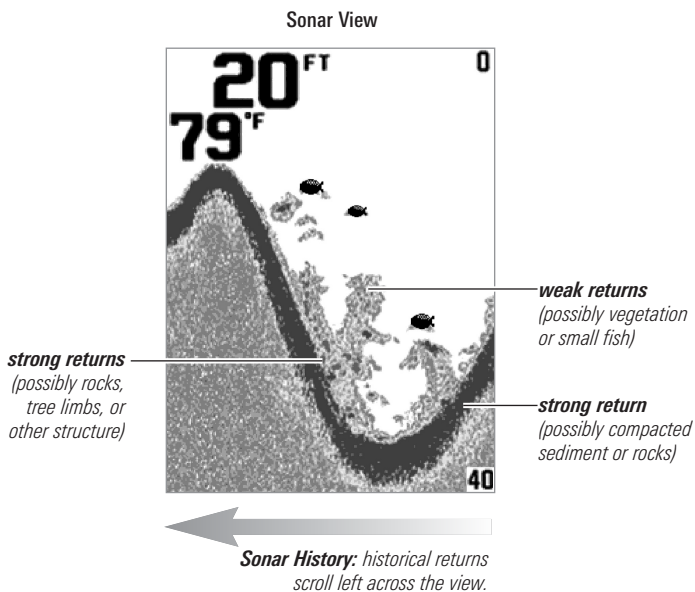


The returned sonar echoes are displayed on the screen. As a new echo is received, the historical data scrolls left across the view. Boat speed, wave action, bottom hardness, water conditions, and transducer installation can all affect depth capability.

Dual Beam Sonar

The Dual Beam sonar fishfinders use a 200/455 kHz dual beam sonar system with a 28° area of coverage. Dual Beam sonar is optimized to show the greatest bottom definition using a narrow (16°) beam yet can still indicate fish found in the wide (28°) beam when the Fish ID+ feature is turned on.

As the boat moves, the unit charts the changes in depth on the display to create a profile of the **Bottom Contour**. The Sonar View displays the sonar return intensity with a range of colors, where **red** indicates a strong return, **yellow** indicates a medium return, and **blue** indicates a weak return.

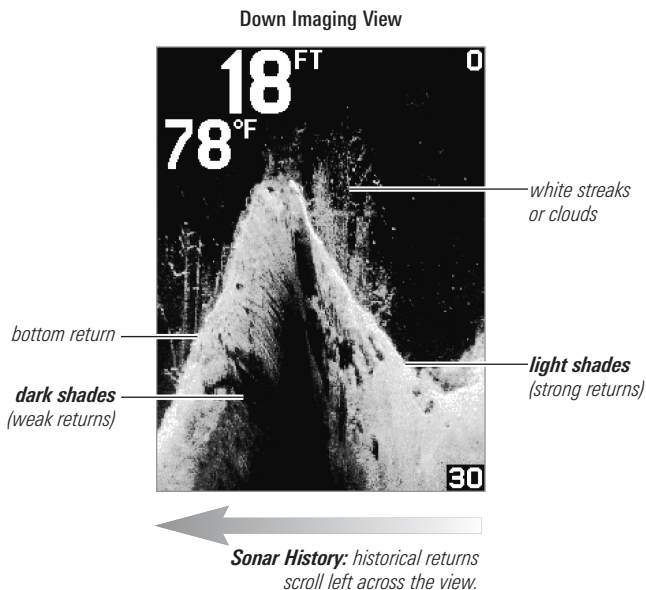


Strong returns often result from rocky or hard bottoms (compacted sediment, rocks, fallen trees), while **weaker returns** often result from soft bottoms (sand, mud), vegetation, and small fish.

Down Imaging Sonar

(Down Imaging models only)

In addition to Dual Beam sonar, the Down Imaging fishfinder uses Down Imaging sonar technology. The Down Imaging transducer scans the water with a razor-thin 75° beam (455 kHz) that is wide (side to side) and very thin (front to back).



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

- **Dark shades** represent soft returns (mud, sand) or descending terrain.
- **Light shades** represent denser terrain (timber, rocks) or rising terrain. A very hard bottom may appear as white on the display.
- **White Streaks** or **Clouds** may represent fish or vegetation on the display.
- **Shadows** are not caused by light but by the lack of a sonar return. Objects standing on the bottom cause a sonar shadow to appear on the display. The longer the shadow, the taller the object. Fish may also cast shadows.

Powering ON and OFF

Use the following instructions to turn on your control head.

Power on and Start Operation

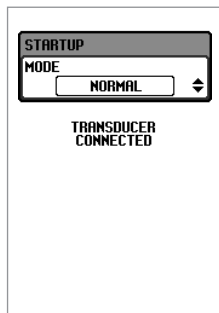
1. Press and hold the POWER/MENU key until the control head powers on.
2. Press the UP or DOWN Arrow key to select Normal.
3. Press the CHECK/ENTER key.

NOTE: See *The Control Head* and *Using the Menu System* for more information.



Notes about Starting Operation

- A transducer must be connected to the control head to enable Normal mode.
- International units powered on for the first time will first display Setup menu options such as Language, Units - Distance, Units - Speed, etc. for initial system setup (see *Setting up the Control Head*).
- If Simulator Mode is selected from the Start-up Menu and a transducer is plugged in, some menu setting changes will be saved in memory even after the unit is powered down. Menu setting changes will not be saved when a transducer is not connected.



Power Off

1. Press and hold the POWER/MENU key until the unit powers off.

The Control Head

Your unit interface is easy to use. A combination of keys and special features allows you to control what you see on the display.





POWER/MENU Key

The **POWER/MENU key** is used to power the control head on and off. It is also used to open and close the menu system.

- **Menus:** Press the POWER/MENU key in any view to open the X-Press Menu for that view. Each X-Press Menu provides frequently-used menu settings that correspond with the current view.
- **Menu Settings:** Press the POWER/MENU key to confirm a menu setting. The changes will be activated and saved immediately.
- **Close/Exit:** Press the POWER/MENU key to close a menu or return to the previous submenu in the menu system.

***NOTE:** See **Using the Menu System** for more information.*

***NOTE:** Each time the POWER/MENU key is pressed, the backlight momentarily illuminates for easy viewing at night. Adjust the LIGHT menu setting to keep the backlight on (see **X-Press Menu: Light**).*



UP and DOWN Arrow Keys

The **UP and DOWN Arrow Keys** have multiple functions, which depend on the view, menu, or situation.



- **Menu Selection:** Press the UP or DOWN Arrow keys to select a menu option.
- **Menu Settings:** Press the UP or DOWN Arrow keys to adjust a menu setting in an active menu.
- **Sensitivity:** Press the UP or DOWN Arrow keys to adjust the Sensitivity in Sonar View and Down Imaging View.



CHECK/ENTER Key

The **CHECK/ENTER Key** has multiple functions, which depend on the view, menu, or situation.

- **Menu Activation:** Press the CHECK/ENTER key after selecting a menu option to activate the menu or open a submenu.

*NOTE: See **Using the Menu System** for more information.*

- **Menu Settings:** Press the CHECK/ENTER key to confirm a menu setting. The changes will be activated and saved immediately.

Using the Menu System

Review the instructions below to understand how to use the menu system.



1. Open the Menu System

Press the POWER/MENU key.



2. Select a Menu Option

Press the UP or DOWN Arrow key to select a menu option.

NOTE: Available menu options are determined by the on-screen view. See **Changing the On-Screen View** for more information.

The menu name will be highlighted, indicating the menu is active, but the menu option is inactive.

Inactive Menu Option

When the menu option is gray, the menu option is inactive.

SONAR	◄
CHART SPEED	5

When the menu name is white, the menu is currently selected.



3. Activate a Menu Option and Adjust Settings

Activate a Menu Option: Press the CHECK/ENTER key to activate the selected menu option.

The menu option will be highlighted, indicating the menu option is active and changes can be made to the menu setting.

Active Menu Option

When the menu option is white, the menu option is active.

SONAR	
CHART SPEED	5
1	5

When the menu name is gray, the menu is currently inactive.

Adjust a Menu Setting: After a menu is selected, press the UP or DOWN Arrow keys to adjust the menu setting.

Confirm: Press the CHECK/ENTER key or the POWER/MENU key to confirm the selection. Menu settings are saved and removed from the screen automatically after several seconds.

Open a Submenu: Press the CHECK/ENTER key to open a submenu. From the opened submenu, repeat steps 2 and 3 to make a menu selection.



4. Close a Menu

Press the POWER/MENU key until the menu system is closed.

In Normal operating mode, most menu settings will be saved when the unit is turned off. Some menu settings, such as Light, Depth Range, and Zoom will return to their default settings after the unit is powered off. In Simulator mode, menu setting changes will not be saved if a transducer is not connected.

Setting up the Control Head

(Setup Menu)

Use the Setup Menu to customize the settings of your unit.

Down Imaging View Settings: If you have a Down Imaging model, set the Contrast and Palette for the Down Imaging Display.

Sonar View Settings: Set how fish are displayed on-screen (Fish ID+) and the Bottom View.

Control Head Settings: Set the units of measurement, language (international units only), and more.

Alarms: See the *Setting Alarms* section for information.

Open the Setup Menu

1. Press the POWER/MENU key.
2. Press the UP or DOWN Arrow key to select SETUP, and press the CHECK/ENTER key.

Open the Units Submenu

1. Press the POWER/MENU key.
2. Press the UP or DOWN Arrow key to select SETUP, and press the CHECK/ENTER key.
3. Select UNITS, and press the CHECK/ENTER key.

Menu options are determined by your Humminbird model and the selected view. See the following pages for menu descriptions. Also, see *Using the Menu System* and *Changing the On-Screen View* for more information.



Contrast

(Down Imaging View only)

Settings: 1 to 10; Default = 5, Setting Saved in Memory

Contrast accents the light and dark parts of the sonar data to provide greater definition.

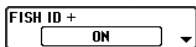


Palette

(Down Imaging View only)

Settings: Amber1, Amber2, Blue, Brown; Default = Amber 1, Setting Saved in Memory

Palette allows you to select which color palette you would like to use for the Down Imaging view.



Fish ID+

(Sonar View only)

Settings: On, Off; Default = On, Setting Saved in Memory

Fish ID+ uses advanced signal processing to interpret sonar returns and will display a Fish Symbol when very selective requirements are met. To turn on fish symbols, select On. A select number of possible fish returns will be displayed with their associated depth. To turn off fish symbols so that only raw sonar returns are displayed on the view, select Off.



Raw Sonar,
Fish ID+ Off



200/455 kHz
Fish ID+ On

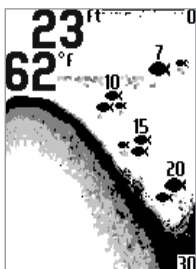
When Fish ID+ is turned on, returns from the 200 kHz beam and the 455 kHz beam are shown with shaded fish symbols. Three different fish size icons represent the intensity of the sonar return and provide an indicator of relative fish size.

Bottom View

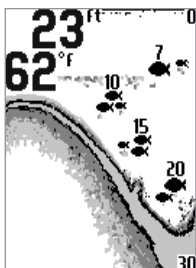
(Sonar View only)

Settings: Structure ID, WhiteLine; Default = Structure ID, Setting Saved in Memory

Bottom View selects the method used to represent the bottom and structure on the display.



Structure ID represents weak returns as light pixels and strong returns as dark pixels. This has the benefit of ensuring that strong returns will be clearly visible on the display.



WhiteLine highlights the strongest sonar returns in white resulting in a distinctive outline. This has the benefit of clearly defining the bottom on the display.



Reset

Settings: Select CONFIRM and press the CHECK/ENTER key to activate.

Use this menu choice with caution!

Reset restores ALL menu settings to their factory defaults.

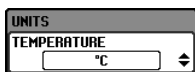


Language

(International Models only)

Settings Vary; Default = English, Setting Saved in Memory

Language selects the display language for menus.

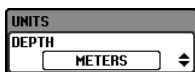


Units - Temperature

(International Models only, Units submenu)

Settings: °C (Celsius), °F (Fahrenheit); Default = °C (Celsius), Setting Saved in Memory

Units - Temperature selects the units of measure for all temperature-related readouts.



Units - Depth

(International Models only, Units submenu)

Settings: Feet, Meters, Fathoms; Default = Meters, Setting Saved in Memory

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

Setting Alarms

Alarms are based on the limits you set for a device, such as battery voltage, depth, and more. Set the alarms that apply to your unit installation and configuration.

Set an Alarm

1. Press the POWER/MENU key.
2. Select SETUP and press the CHECK/ENTER key.
3. Select ALARMS and press the CHECK/ENTER key.
4. Select an alarm and press the CHECK/ENTER key to activate the menu.
5. Press the UP or DOWN Arrow key to select an alarm setting.
6. Press the POWER/MENU key or the CHECK/ENTER key to confirm the selection.
7. **Close:** Press the POWER/MENU key until the menu system is closed.

Turn off an Alarm

1. Open the Alarms Menu.
2. Select the Alarm.
3. Press the DOWN Arrow key until Off is selected.

Alarm Name	Description	Range
Mute	Mute controls the audible sound made when an alarm is triggered.	On, Off Default = Off
Battery	Battery Alarm sounds when the input battery voltage is equal to or less than the menu setting.	Off, 8.5V to 13.5V Default = Off
Fish	Fish Alarm sounds when the fishfinder detects fish that correspond to the alarms setting. Sonar View only.	Off, All, Large/Medium, Large Default = Off
Depth	Depth Alarm sounds when the depth is equal to or less than the alarm setting.	Off, 3 to 99 feet or 1 to 30 meters* Default = Off

*International models only.

Changing the On-Screen View

The sonar information from your fishfinder is displayed on the screen in a variety of easy-to-read views. When you press the POWER/MENU key, you can access the menu options for the on-screen view.

Display a View

1. Press the POWER/MENU key.
2. Press the UP or DOWN Arrow key to select VIEW, and press the CHECK/ENTER key.
3. Select a view, and press the CHECK/ENTER key.

Open the X-Press Menu

1. With a View displayed on-screen, press the POWER/MENU key once.
See *Opening the X-Press Menu* for more information.

Status View

Status View displays current data, including the unit model number, serial number, and battery status.

Status View

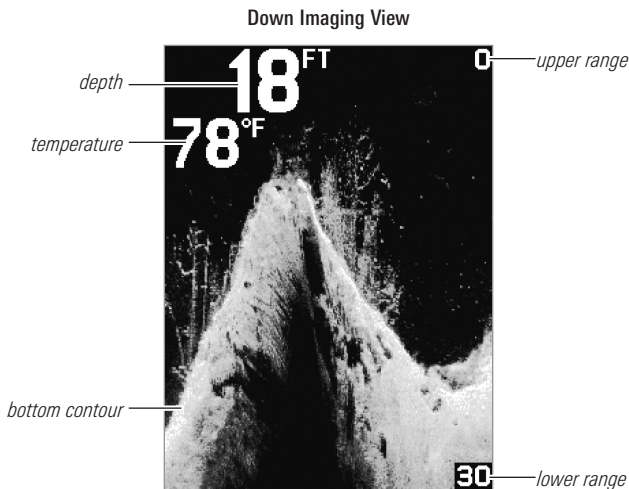
STATUS	
MODEL	PMAX197DI
SERIAL	96385990205
BATTERY	13.2v

Down Imaging View

(Down Imaging Models only)

Down Imaging View uses the razor-thin profiling beams to produce the detailed sonar data that you see on the display. See *Sonar Technology: Down Imaging Sonar* and *Opening the X-Press Menu* for more information.

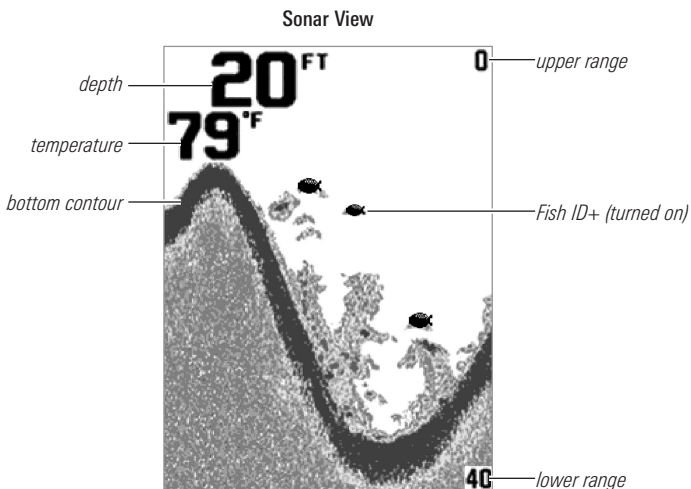
- **Upper and Lower Depth Range numbers** can adjust automatically or you can adjust the depth range to focus the view on a particular depth.
- **Sensitivity:** Press the UP or DOWN Arrow keys to adjust the Sensitivity.
- **Zoom:** The Zoom Level, or magnification, will be displayed on the screen. Use the Zoom menu option to adjust the zoom level.
- **X-Press Menu:** To access related Down Imaging and Setup menu options, see *Opening the X-Press Menu*.



Sonar View

Sonar View presents a historical log of sonar returns. The most recent sonar returns are charted on the right side of the display. As new information is received, the historical information scrolls left across the display. See **Sonar Technology: Dual Beam Sonar** for more information.

- **Upper and Lower Depth Range numbers** can adjust automatically or you can adjust the depth range to focus the view on a particular depth.
- **Sensitivity:** Press the UP or DOWN Arrow keys to adjust the Sensitivity.
- **Zoom:** The Zoom Level, or magnification, will be displayed on the screen. Use the Zoom menu option to adjust the zoom level.
- **X-Press Menu:** To access related Sonar and Setup menu options, see *Opening the X-Press Menu*.



Opening the X-Press Menu

The **X-Press Menu** provides menu options for the on-screen view.

Customize the Display: Set the range of data displayed on the view, and adjust the sensitivity, zoom level, chart display speed, and more.

Open the Setup Menu: Set the Down Imaging View contrast and palette, set the Sonar View filter and Fish ID+, or set the units of measurement for the control head. See *Setting up the Control Head* for details.

Set Alarms: Open the Alarms submenu to set alarms, such as Depth and Fish ID. See the *Setting Alarms* section for information.

Open the X-Press Menu

1. Press the POWER/MENU key once.

To change a menu that is available with “Down Imaging View only” or “Sonar View only,” display the view on-screen before you press the POWER/MENU key. See *Changing the On-Screen View* for details.



View

Settings: Sonar, Down Imaging (Down Imaging models only), Status

View selects a view to be displayed on the screen. See *Changing the On-Screen View* for more information.



Depth Range

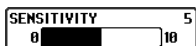
Settings: Auto, 15 ft to 600 ft (Sonar View only), 15 ft to 320 ft (Down Imaging View only); International Models: 5 m to 184 m (Sonar View only), 5 m to 98 m (Down Imaging View only); Default = Auto (Sonar View), Manual 30 ft (Down Imaging View)

Depth Range sets the deepest depth range that will be displayed by the unit.

Auto: When in automatic, the lower range will be adjusted by the unit to follow the bottom.

Manual: You can adjust the Depth Range to lock the unit on a particular depth.

NOTE: In manual operation, if the depth is greater than the depth range setting, the bottom will not be visible on the display. Select AUTO to return to automatic operation.



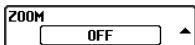
Sensitivity

Settings: 0 to 10; Default = 5, Setting Saved in Memory

Sensitivity controls how much detail is shown on the display.

Increasing the sensitivity shows more sonar returns from small baitfish and suspended debris in the water; however, the display may become too cluttered. When operating in very clear water or greater depths, increased sensitivity shows weaker 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.



Zoom

Settings: Off, Auto, Manual Ranges; Default = Off

Zoom provides a magnified view of the bottom and structure.

Auto: Select Auto to magnify the area around the bottom in order to reveal fish and structure close to the bottom that may not be visible during normal operation. When ZOOM is set to Auto, the upper and lower Depth Ranges are automatically adjusted to keep the area above and below the bottom on the display. Select Off to return to normal operation.

Manual: There is also a series of manual ranges which can be selected. The manual depth ranges are determined by the present depth conditions.

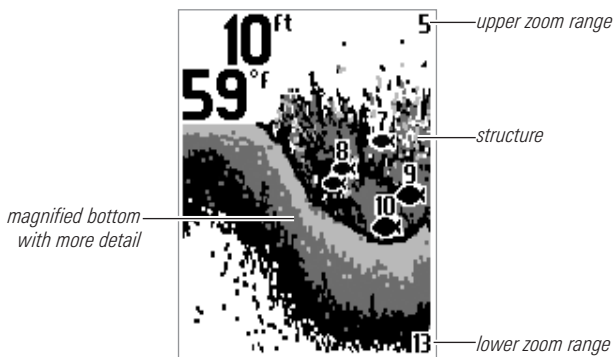
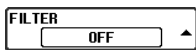


Chart Speed

Settings: 1 to 5, where 1 = Slow, 5 = Fast; Default = 5, Setting Saved in Memory

Chart Speed determines the speed at which the sonar information moves across the display, and consequently the amount of detail shown.

A **faster** speed shows more information and is preferred by most anglers; however, the sonar information moves across the display quickly. A **slower** speed keeps the information on the display longer, but the bottom and fish details become compressed and may be difficult to interpret.

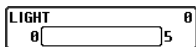


Filter

(Sonar View only)

Settings: On, Off; Default = Off, Setting Saved in Memory

Filter adjusts the sonar filter to limit interference on the display from sources such as your boat engine, turbulence, or other sonar devices.



Light

Settings: 0 to 5; Default = 0

Light adjusts the brightness of the display. Use a higher backlight setting for night fishing.

NOTE: Continuous backlight operation will significantly decrease the battery life for Fishin' Buddy MAX units and PiranhaMAX Portables.

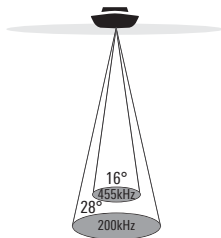


Beam Select

(Sonar View only)

Settings: 200 kHz, 455 kHz; Default = 200 kHz

Beam Select sets which sonar returns from the transducer will be displayed on the screen. The available beam frequencies are determined by your model.



❖ 28 Degree Total Coverage

- When set to 200 kHz, only the returns from the 200 kHz (28°) wide beam will be displayed in the Sonar View.
- When set to 455 kHz, only the returns from the 455 kHz (16°) narrow beam will be displayed in the Sonar View.

Maintenance

Your Humminbird fishfinder is designed to provide years of trouble free operation with very little maintenance. Use the following procedures to ensure your Humminbird continues to deliver top performance.

Control Head Maintenance

It is important to consider the following precautions when using your Humminbird control head:

- **Chemicals**, such as those found in bug spray and sunscreen, may cause permanent damage to the control head screen. Such damage is not covered by the warranty.
- **NEVER leave the control head in a closed car or trunk.** The high temperatures generated in hot weather can damage the electronics.

Use the following information to keep the control head and screen clean.

- **Screen:** To clean the control head screen, use a mild soap (such as a non-abrasive liquid hand soap) and warm water. Wipe the screen dry with a soft cloth. Be careful to avoid scratching the screen. If water spots remain, use a solution of water and vinegar.

***WARNING!** Do not use a chemical glass cleaner on the screen. Chemicals in the solution may cause cracking in the lens of the unit.*

***NOTE:** Do not wipe the screen while dirt or grease is on the screen.*

- **Control Head:** If the control head comes into contact with salt spray, wipe the affected surfaces with a cloth dampened with fresh water.

Transducer Maintenance

Use the following information to maintain the transducer operation.

- **If your boat remains in the water for long periods of time**, algae and other marine growth can reduce the effectiveness of the transducer. Periodically clean the face of the transducer with a mild, marine-safe and plastic-safe soap or solution.

NOTE: To clean the transducer, you may need to pivot the transducer up in the bracket.

- **If your boat remains out of the water for a long period of time**, it may take some time to wet the transducer when it is returned to the water. Small air bubbles can climb to the surface of the transducer and interfere with proper operation. These bubbles dissipate with time, or you can wipe the face of the transducer with your fingers after the transducer is in the water.

PiranhaMAX Portable Case Maintenance

- **If the portable case comes into contact with salt spray**, wipe the affected surfaces with a lint-free cloth, then apply a commercially available anti-corrosive treatment to all exposed electrical contacts.
- **If the portable case bag becomes dirty**, clean the bag with mild soap, water, and a soft rag or brush and then hang it up to dry.

How to Remove Water from the PiranhaMAX Portable Case

Open the front zipper and pull the case down to allow water to exit the case. If needed, remove the case from the plastic base and air-dry it. Follow the recommended maintenance procedures for salt spray exposure if needed.

Troubleshooting

Do not attempt to repair the fishfinder yourself. There are no user-serviceable parts inside, and special tools and techniques are required for assembly to ensure the waterproof integrity of the housing. Repairs should be performed only by authorized Humminbird technicians.

Many requests for repair received by Humminbird involve units that do not actually need repair. These units are returned “no problem found.” If you have a problem with your fishfinder, use the following troubleshooting guide before calling Humminbird Customer Service or sending your unit in for repair.

PiranhaMAX Troubleshooting

1. Nothing happens when I turn on the unit.

Check the power cable connection at both ends. Be sure the cable is connected correctly to a reliable power source — red lead to positive, black lead to negative or ground. Ensure the power available is between 10 and 20 VDC. If the unit is wired through a fuse panel, ensure the panel is powered. Often accessory fuse panels are controlled by a separate switch or the ignition switch.

Also, often a fuse can appear to be good when it is not. Check the fuse with a tester or replace it with a fuse known to be good.

Check the power connection to the PiranhaMAX. It is possible to force the power cable connector into the cable holder incorrectly. If the connector is reversed, the unit will not work. Examine the contacts on the back of the unit to ensure there is no corrosion.

2. There is no transducer detected.

The PiranhaMAX has the ability to detect and identify that a transducer is connected. When powering on, if a message indicates “transducer not connected”, make sure that an appropriate transducer connector is plugged into the unit. In addition, inspect the transducer cable from end to end for breaks, kinks, or cuts in the outer casing of the cable. Also make sure that the transducer is fully submerged in water. If the transducer is connected to the unit through a switch, temporarily connect it directly to the unit and try again. If none of these actions identifies an obvious problem, the transducer itself is probably at fault. Be sure to include the transducer if returning the unit for repair.

3. There is no bottom reading visible on the display.

If the loss of bottom information occurs only at high boat speeds, the transducer needs adjusting — see your PiranhaMAX Installation Guide for details. Also, in very deep water, it may be necessary to increase the sensitivity setting manually to maintain a graphic depiction of the bottom. If you are using a transducer switch to connect two transducers to the PiranhaMAX, make sure that the switch is in the correct position to connect a

transducer that is in the water. (If a trolling motor transducer is selected and the trolling motor is out of the water, no sonar information appears.) If none of these actions solves the problem, inspect the transducer cable from end to end for breaks, kinks, or cuts in the outer casing of the cable. If the transducer is connected to the unit through a switch, temporarily connect it directly to the unit and try again. If none of these actions identifies an obvious problem, the transducer itself may be at fault. Be sure to include the transducer if returning the unit for repair.

4. When in very shallow water, I get gaps in the bottom reading and inconsistent digital depth indication.

The PiranhaMAX will work reliably in water 3 feet (90 cm) or deeper. Remember that the depth is measured from the transducer, not from the surface of the water.

5. The unit comes on before I press the POWER-MENU key, and it won't turn off.

Check the transducer cable — if the outer jacket of the cable has been cut and the cable is in contact with bare metal, you will need to repair the cut with electrical tape. If there is no problem with the cable, disconnect the transducer from the unit and see if the problem is corrected, to confirm the source of the problem.

6. I get gaps in the reading at high speeds.

Your transducer needs adjusting. If the transducer is transom-mounted, there are two adjustments available to you: height and running angle. Make small adjustments and run the boat at high speeds to determine the effect. It may take several tries to optimize high-speed operation. This can also be a result of air or turbulence in the transducer location caused by rivets, ribs, etc.

7. My unit loses power at high speeds.

Your PiranhaMAX has over-voltage protection that turns the unit off when input voltage exceeds 20 VDC. Some outboard motors do not effectively regulate the power output of the engine's alternator and can produce voltage in excess of 20 Volts when running at high RPMs.

8. The display begins to fade out. Images are not as sharp as normal.

Check the input voltage. The PiranhaMAX will not operate on input voltages below 10 VDC.

9. The display shows many black dots at high speeds and high sensitivity settings.

You are seeing noise or interference caused by one of several sources. Noise can be caused by electronic devices. Turn off any nearby electronics and see if the problem goes away. Noise can also be caused by the engine. If engine noise is causing the interference, the problem will intensify at higher RPMs. Increase the engine speed with the boat stationary to isolate this cause. Propeller cavitation can also appear as noise on the display. If the transducer is mounted too close to the propeller, the turbulence generated can interfere with the sonar signal. Make sure that the transducer is mounted at least 15" (380 mm) from the propeller.

Fishin' Buddy MAX Troubleshooting

1. Nothing happens when I turn the unit on.

Check the power connection to the Fishin' Buddy MAX. It is possible to force the power cable connector into the cable holder incorrectly. If the connector is reversed, the unit will not work. Examine the contacts on the back of the unit to ensure there is no corrosion. Check the unit's batteries. Replace the batteries, if necessary.

2. There is no transducer detected.

The Fishin' Buddy MAX has the ability to detect and identify that a transducer is connected. When powering on, if a message indicates "transducer not connected", make sure that an appropriate transducer connector is plugged into the unit. In addition, inspect the transducer for breaks, kinks, or cuts in the outer casing of the cable. Also, make sure that the transducer is fully submerged in water. If none of these actions identifies an obvious problem, the transducer itself is probably at fault. Be sure to include the transducer if returning the unit for repair.

3. There is no bottom reading visible on the display.

In deep water, it may be necessary to increase the sensitivity setting manually to maintain a graphic depiction of the bottom. The batteries may also need to be replaced. If none of these actions identifies an obvious problem, the transducer itself may be at fault. Be sure to include the transducer if returning the unit for repair.

4. When in very shallow water, I get gaps in the bottom reading and inconsistent digital depth indication.

The Fishin' Buddy MAX will work reliably in water 3 feet (90 cm) or deeper. Remember that the depth is measured from the transducer, not from the surface of the water.

5. The display begins to fade out. Images are not as sharp as normal.

Check the batteries. Replace the batteries, if necessary.

6. The display shows many black dots.

You are seeing noise or interference caused by one of several sources. Noise can be caused by electronic devices. Turn off any nearby electronics and see if the problem goes away. Noise can also be caused by the engine. If engine noise is causing the interference, the problem will intensify at higher RPMs. Increase the engine speed with the boat stationary to isolate this cause. Propeller cavitation can also appear as noise on the display. If the transducer is mounted too close to the propeller, the turbulence generated can interfere with the sonar signal. Make sure that the transducer is mounted at least 15" (380 mm) from the propeller.

Dual Beam Fishfinder Specifications

Depth Capability	600 ft (183 m)
Power Output	300 Watts (RMS) 2400 Watts (PTP)
Operating Frequency	200 kHz and 455 kHz Dual Beam
Area of Coverage	28° @ -10 dB in 200 kHz 16° @ -10 dB in 455 kHz
Power Requirement	10 to 20 VDC
Current Draw	Fishin' Buddy MAX: 170 mA PiranhaMAX: 180 mA
LCD Matrix	Fishin' Buddy MAX: 320 V x 240 H PiranhaMAX: 480 V x 272 H
Transducer	XNT-9-28-T (includes built-in temperature probe)
Transducer Cable Length	20 ft (6 m)

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

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

Down Imaging Fishfinder Specifications

Depth Capability Down Imaging Sonar: 320 ft (98 m)
Dual Beam Sonar: 600 ft (183 m)

Power Output 300 Watts (RMS)
2400 Watts (PTP)

Operating Frequency Down Imaging Sonar: 455 kHz
Dual Beam Sonar: 200 kHz and 455 kHz

Area of Coverage Down Imaging Sonar: 75° @ -10 dB in 455 kHz
Dual Beam Sonar: 28° @ -10 dB in 200 kHz
16° @ -10 dB in 455 kHz

Power Requirement 10 to 20 VDC

Current Draw 180 mA

LCD Matrix Fishin' Buddy MAX: 320 V x 240 H
PiranhaMAX: 480 V x 272 H

Transducer XNT-9-DI-T (includes built-in temperature probe)

Transducer Cable Length 20 ft (6 m)

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

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

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 wheeled 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.

Contact Humminbird

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