DownVision™

Color gain sets the lower limit for the strongest echo shade. All echoes with a signal strength above this value are displayed in the lightest shade. Those with a weaker value are divided equally between the remaining shades.

- Setting a low value produces a wide band for the darkest shade, but a small signal band for the other shades.
- Setting a high value gives a wide band for the lightest shade, but a small signal band for the other shades.

Color gain modes

There are two color gain modes:

- **Auto** — In Auto mode the color gain setting is automatically adjusted to suit current conditions. Any adjustments made apply to all fishfinder windows.
- **Manual** — You can set the color gain manually, between a value of 0% to 100%.

Selecting the view for color gain adjustments

To select a view to apply color gain adjustments to follow the steps below.

From the fishfinder application:

1. Select **Menu.**
2. Select **Sensitivity Settings.**
3. Select **Color Gain.**
4. Select **Adjust.**
5. Select **Sonar**, **DownVision** or **Both.**

Adjusting the fishfinder color gain

From the fishfinder application:

1. Select **Menu.**
2. Select **Sensitivity settings.**
3. Select **Color Gain.**

   The color gain slider bar control is displayed.
4. Adjust the control to the required value.
5. Select **Back** to confirm setting and close slider bar, or
6. Select **Auto** to enable automatic color gain.

The new values remain set even when you switch off the display and are applied to all fishfinder windows.

Noise Filter

The Noise Filter reduces the amount of clutter displayed onscreen by varying the gain throughout the column of water. This function is useful for reducing the appearance of 'noise'.

The Noise Filter can be set to automatic or adjusted manually:

- **Automatic** — In Auto mode the Noise Filter is set to 20%.
- **Manual** — You can adjust the Noise Filter manually, between a value of 0% to 100%.
  - A low value decreases the depth at which the filter is applied.
  - A high value increases the depth at which the filter is applied.

The new values remain set even when you switch off the display.

Adjusting the Noise Filter

From the Fishfinder application:

1. Select **Menu.**
2. Select **Sensitivity Settings.**
3. Select **Noise Filter.**
4. With a splitscreen view displayed, select **Adjust.**
5. Select **Sonar**, **DownVision** or **Both.**
6. Select **Noise Filter.**

   The Noise filter slider bar control is displayed.
7. Adjust the Noise Filter to the required value, or
8. Select the **Auto** check box to switch to Auto mode.

   A tick is displayed in the **Auto** check box to signify auto is enabled.

Note: The Noise filter can also be adjusted by selecting the onscreen Noise Filter control.

Fishfinder color threshold

The color threshold setting determines the signal strength below which targets are not shown. Sonar uses different colors to determine signal strengths whilst DownVision uses monochrome shading.

For example a low setting would result in only the strongest colors (Sonar) or lightest shades (DownVision™) targets being displayed.

Adjusting the fishfinder color threshold

From the fishfinder application:

1. Select **Menu.**
2. Select **Sensitivity Settings.**
3. Select **Color Threshold.**

   Selecting color threshold displays the numeric adjust control.
4. Adjust the color threshold to the required setting.
5. Select **Ok** to confirm setting and close the numeric adjust control.

Fishfinder presentation options

The **Presentation** menu gives you access to features and functions which provide additional on-screen functionality.

Presentation options include:

Sounder set-up menu options

This section describes the settings you can change using the sounder set up menu: (**Menu→ Set-up→ Sounder Set-up**). The set up menu contains settings that are likely to be changed infrequently.

Menu Item	Description	Options
Internal Sounder	Switch the built in sonar on and off, for use when you have more than one multifunction display with internal sonar. **Note:** This option is only available on multifunction displays that have a built-in sonar module. **Note:** Must be set to Off if an external sonar is connected.	• On • Off
Ping Rate Limit	Provides a speed limiter; it is useful to adjust the ping rate to suit local conditions. For example, the ping rate may be too fast when there is a hard bottom in shallow water. The internal sonar reverts to 26 pings per second when the sonar module is powered off. **Note:** Ping rate limit is disabled if Ping rate is set to hyper in the presentation menu.	• Internal sonar: 5 — 50 pings per second • CHIRP sonar: 5 — 80 pings per second
Ping Enable	The sonar ping is normally enabled. It can be disabled. This is useful when other equipment is being tested, or if someone is diving beneath the boat. This setting reverts to Enabled when the sonar module is powered off.	• On • Off
Interference rejection	Removes spikes caused by other fishfinder-equipped vessels. **Note:** Interference rejection will be disabled in Hyper Ping mode	• Auto • Low • Medium • High
2nd Echo IR	Adjusts the ping rate in small increments, according to the 2nd echo level. This results in better sensitivity of the image. **Note:** 2nd Echo IR will be disabled in Hyper Ping mode	• Off • Low • High

Menu Item	Description	Options
Target Depth ID	Controls whether the depth of identified targets are displayed. The level of targets displayed is directly linked to the level of Fish Alarm sensitivity. **Note:** Target depth IDs are not shown in the DownVision view	• On • Off
Depth Lines	Controls whether horizontal lines indicating depth are displayed.	• On • Off
White Line	When set to On, this option displays a white line along the contour of the seabed. This helps to distinguish objects close to the bottom. **Note:** The White line is not shown in the DownVision view	• On • Off

Menu Item	Description	Options
Bottom Fill	When set to On, this option displays a solid color fill for the seabed. **Note:** Bottom fill is not shown in the DownVision view	• On • Off
Sonar colors	Various color palettes are available to suit different conditions and your personal preference.	• Classic Blue • Classic Black • Classic White • Sunburst • Greyscale • Inverse Greyscale • Copper • Night Vision
DVision Colors	Various color palettes are available to suit different conditions and your personal preference.	• Copper • Inv. Copper • Slate Grey • Inv. Slate Grey
Scroll Speed	Specify the fishfinder scroll speed.	• 10% — 100%

Menu Item	Description	Options
Gain controls	Controls whether or not the onscreen Gain and Noise Filter controls are displayed.	• Show (default) • Hide
Databoxes Set-up	Allows you to set up and display/hide up to 2 databoxes in the bottom left corner of the screen: • Databox 1 • Select Data • Databox 2 • Select Data	**Databox 1** • On • Off **Select Data** Allows selection of a data type by category. **Databox 2** • On • Off **Select Data** Allows selection of a data type by category.

Depth and distance with the fishfinder

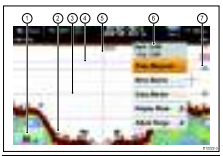
The fishfinder display provides a number of features to help you determine depths and distances. These features are illustrated and described in more detail below:

Menu Item	Description
Sonar reset	Restore all settings on the sonar module to factory default. When performing a sonar Reset, it is normal to briefly lose connection with the sonar module.
Trip Counter Reset	Resets the Trip Counter of the sonar module

Transducer set-up menu options

The **Transducer Set-up** menu should be used when setting up your multifunction display for the first time or when installing a depth transducer.

Menu Item	Description	Options
Transducer	Select the appropriate transducer type from those displayed. Some transducers may be detected by the system automatically.	Options available are dependent on the sonar module connected.
Speed Transducer	Select the appropriate speed transducer from those available. This option is only available if you are not using a combined Depth/Speed or Depth/Speed/Temperature transducer.	Options available are dependent on the sonar module connected.
Depth Offset	Offset represents the depth of the transducer relative to: • Waterline = 0.0 ft and above. • Keel = 0.1 ft and below.	• –9.8 to +9.8 feet — or equivalent units
Speed Offset	Offset applied to the speed log.	• 0 to 100%
Temperature Offset	Offset applied to the temperature transducer value.	• –9.9 to +9.9 °F — or equivalent units



Item	Description
1	**Depth reading** — current depth of seabed.
2	**Depth Target ID** — depths are displayed against recognized targets. The sensitivity of these IDs is directly linked to the Fish Alarm sensitivity; the greater the fish alarm sensitivity, the greater the number of labelled returns.
3	**Depth lines** — horizontal dashed lines drawn at regular intervals to indicate the depth from the surface.
4	**Horizontal VRM marker** — indicates the depth of the target.
5	**Vertical VRM marker** — indicates the distance behind your vessel.
6	**Cursor Depth** — this is the depth of the cursor position. **Cursor Range** — this is the range from your vessel to the cursor position.
7	**Depth markers** — these numbers indicate depth.

Measuring depth and distance with VRM

You can use a Variable Range Marker (VRM) to determine an object's depth and distance behind your vessel. These markers consist of a horizontal (depth) line and a vertical (distance) line, each of which are labelled with the appropriate measurement.

From the fishfinder application:

1. Select **Menu**
2. Select **Scroll** so that Pause is highlighted (This may make it easier to position the marker).

   Selecting Scroll will switch the scroll between Pause and Resume.
3. Open the **fishfinder context menu.**
4. Select **Place Marker.**
5. Select the location you want to place the marker.

Note: Once placed you can move the marker by selecting **Move Marker** from the fishfinder context menu.

Fishfinder marker context menu

The fishfinder marker includes a context menu which provides marker information and menu items.

The context menu provides data for the position of the marker:

- Depth
- Range

The context menu also provides the following menu items:

- **Place Waypoint**
- **Move Marker**
- **Erase Marker**
- **Display Mode**
- **Adjust Range**

Accessing the context menu

You can access the context menu by following the steps below.

1. Non-touchscreen and HybridTouch displays:
   i. Selecting a location, object or target on-screen and pressing the **Ok** button.
2. HybridTouch and Touch only displays:
   i. Selecting an object or target on-screen.
   ii. Selecting and holding on a location on-screen.

Fishfinder scrolling

The fishfinder image scrolls from right to left. You can pause the scrolling or adjust the scroll speed, to ease placing of waypoints or VRMs onscreen.

Scroll speed

You can adjust the speed at which the fishfinder image scrolls. A faster speed provides more detail which may be useful when you are looking for fish. If you select a slower speed the information remains on the display for longer.

Scroll pause

You can pause the display to see a 'snapshot' of the fishfinder image. When the image is paused scrolling stops but the depth indication continues to be updated.

Fishfinder Transducer Calibration

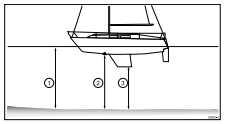
Your fishfinder transducer must be calibrated correctly to achieve accurate depth readings.

The multifunction display receives the image from a sonar module which processes sonar signals from a transducer mounted in the water. If the transducer is equipped with a speed paddle wheel and temperature-sensing thermistor, the sonar module calculates speed and temperature. To ensure accurate readings, it may be necessary to calibrate the transducer(s) by applying offsets to depth, speed and temperature. As these settings are held in the sonar module and relate to the transducer, they are applied system-wide.

Depth Offset

Depths are measured from the transducer to the sea bed, but you can apply an offset value to the depth data, so that the displayed depth reading represents the depth to the sea bed from either the keel or the waterline.

Before attempting to set a waterline or keel offset, find out the vertical separation between the transducer and either the waterline or the bottom of the keel on your vessel, as appropriate. Then set the appropriate depth offset value.



1	Waterline offset
2	Transducer / Zero offset
3	Keel offset

If an offset is not applied, displayed depth readings represent the distance from the transducer to the sea bed.

Setting the depth offset

From the fishfinder application:

1. Select **Menu.**
2. Select **Set-up.**
3. Select **Transducer Set-up.**
4. Select **Depth Offset.**

   The depth offset numeric adjust control is displayed.
5. Adjust the offset to the required value.

Setting the speed offset

From the fishfinder application:

1. Select **Menu.**
2. Select **Set-up.**
3. Select **Transducer Set-up.**
4. Select **Speed Offset.**

   The speed offset numeric adjust control is displayed.
5. Adjust the offset to the required value.

Setting the Temperature offset

1. Select **Menu.**
2. Select **Set-up.**
3. Select **Transducer Set-up.**
4. Select **Temperature Offset.**

   The temperature offset numeric adjust control is displayed.
5. Adjust the offset to the required value.

Fishfinder alarms

The display can be configured to provide a number of fishfinder alarms.

The following fishfinder alarms can be set when a sonar module is detected, or when the simulator is on:

- **Fish** — alarm sounds when a target meets the specified sensitivity level and, is within the depth limits (if enabled).
- **Fishfinder Deep** — alarm sounds when the sonar module detects that the depth is greater than the deep limit.
- **Fishfinder Shallow** — alarm sounds when the sonar module detects that the depth is less than the shallow limit.

Setting up fish alarms

From the Alarms menu **homescreen→ Set-up→ Alarms**:

1. Select **Fish.**

   The Fish alarms menu is displayed.
2. Select **Fish** so that On is highlighted.
3. Select **Fish Sensitivity.**

   The fish sensitivity numeric adjust control is displayed.
4. Adjust the fish sensitivity to the require value.

   The greater the fish alarm sensitivity, the greater the number of target image depths displayed.
5. Select **Fish Depth Limits** so that **On** is highlighted.

   The shallow and deep fish limit settings will be activated in the menu.
6. Select **Shallow Fish Limit.**

   The shallow fish limit numeric adjust control is displayed.
7. Adjust the value to the require setting.
8. Select **Ok** to confirm the new value and close the numeric adjust control.
9. Select **Deep Fish Limit.**

   The deep fish limit numeric adjust control is displayed.
10. Adjust the value to the require setting.
11. Select **Ok** to confirm the new value and close the numeric adjust control.

Setting up fishfinder deep alarm

From the Alarms menu **homescreen→ Set-up→ Alarms**:

Adjusting the fishfinder scrolling speed

From the fishfinder application:

1. Select **Menu.**
2. Select **Presentation.**
3. Select **Scroll Speed.**

   The Scroll speed numeric adjust control is displayed.
4. Adjust the value to the required setting.
5. Select **Ok** to confirm and close the numeric adjust control.

Pausing the fishfinder scrolling image

From the fishfinder application:

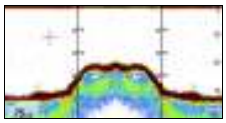
1. Select **Menu.**
2. Select **Scroll** so that Pause is highlighted.

   Selecting Scroll will switch between Scroll Pause/Resume.

Fishfinder waypoints

Placing a waypoint on the fishfinder display enables you to mark a position so that you can return to it later.

When a waypoint is placed, its details are added to the waypoint list and a vertical line labelled WPT is displayed on-screen. The waypoints can then be navigated to using the chart application.



Placing a waypoint using the WPT button or icon

From the fishfinder application:

1. Select **WPT.**

   The waypoint menu is displayed.
2. Whilst the waypoint menu is open:
   - Select **WPT** again to place a waypoint at your vessels position, or
   - Select the appropriate option: Place Waypoint At Vessel, Place Waypoint At Cursor or Place Waypoint At Lat/lon.

Placing a Waypoint using the context menu

You can place a waypoint in the fishfinder application using the context menu.

1. Open the **fishfinder context menu.**
2. Select **Place Waypoint.**

   The Waypoint is placed at the cursors location and a confirmation pop-up is displayed.
3. Select **Ok** to confirm waypoint placement, or
4. Select **Edit** to edit the new waypoints details.

1. Select **Fishfinder Deep.**
2. Select Deep so that On is highlighted.

   Selecting Deep will switch between On and Off.
3. Select **Deep Limit.**

   The deep limit numeric adjust control is displayed.
4. Adjust the setting to the required value.
5. Select **Ok** to confirm the new value and close the numeric adjust control.

Note: The Deep Limit cannot be set to less than the Shallow Limit.

Setting up fishfinder shallow alarm

From the Alarms menu **homescreen→ Set-up→ Alarms**:

1. Select **Fishfinder Shallow.**
2. Select Shallow so that On is highlighted.

   Selecting Shallow will switch between On and Off.
3. Select **Shallow Limit.**

   The shallow limit numeric adjust control is displayed.
4. Adjust the setting to the required value.
5. Select **Ok** to confirm the new value and close the numeric adjust control.

Note: The Shallow Limit cannot be set to greater than the Deep Limit.

Resetting the sonar

The reset function restores the unit to its factory default values.

Note: Performing a factory reset will clear speed and temperature calibration settings and the depth offset.

1. Using a compatible Raymarine multifunction display go to the Fishfinder application page.
2. Select **Menu** from the side menu.
3. Select **Set-up.**
4. Select **Sounder Set-up.**
5. Select **Sonar reset.**
6. Select **Yes** to confirm.

The unit will now be reset to factory default settings.