

echo[™] 200, 300, and 500 Series Owner's Manual



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Introduction

△ WARNING

See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

Registering Your Device

Help us better support you by completing our online registration today.

- Go to http://my.garmin.com.
- Keep the original sales receipt, or a photocopy, in a safe place.

Contacting Garmin Product Support

- Go to www.garmin.com/support and click Contact Support for in-country support information.
- In the USA, call (913) 397.8200 or (800) 800.1020.
- In the UK, call 0808 2380000.
- In Europe, call +44 (0) 870.8501241.

Manual Conventions

In this manual, the term "select" is used to describe these actions.

- Highlighting a menu item and pressing ENTER.
- Pressing a key, such as ENTER or MENU.

When you are instructed to select menu items, small arrows may appear in the text. They indicate that you should highlight a series of items using \blacktriangle and \blacktriangledown , and select **ENTER** after each item. For example, for "select **MENU** > **Pause/Rewind Sonar**," select **MENU**, and then select \blacktriangle or \blacktriangledown until **Pause/Rewind Sonar** is highlighted, and then select **ENTER**.

Entering Numerical Values

You can enter numerical values when setting alarms or setting an offset.

- 1 Select ▲ and to select the first numerical value.
- 2 Select) or ENTER to advance to the next digit.
- **3** Repeat steps 1 and 2 to adjust all numerical values.

Getting Started

Keys



MENU	Displays or hides a list of options.		
ENTER	ENTER Selects a menu item.		
~~	Scrolls through options or changes settings.		
()	Selects page options.		
<u></u>	Turns the device on or off and adjusts the backlight.		

Turning on the Device Automatically

You can set the device to turn on automatically when the power is applied. Otherwise, you must select \circlearrowleft .

Select MENU > Setup > System > Auto Power > On.

Adjusting the Backlight

- 1 Select MENU > Setup > System > Backlight.

Adjusting the Color Scheme

For the echo 300 and 500 series devices, you can set the color scheme for all sonar screens.

- 1 Select MENU > Setup > Sonar Setup > Color Scheme.
- 2 Select a color scheme.

Setting the Color Mode

For the echo 300 and 500 series devices, you can set the sonar screen color mode for day or night use.

- 1 Select MENU > Setup > System > Color Mode.
- 2 Select Day or Night.

Selecting the Transducer Type

Before you can select the transducer type, you must know what kind of transducer you have.

You may need to set the transducer type to make the sonar function properly.

- 1 From a sonar view, select MENU > Setup > Sonar Setup > Transducer Type.
- 2 Select an option:
 - If you have a 200/77 kHz, dual-beam transducer, select Dual Beam.
 - If you have a 200/50 kHz dual-frequency transducer, select Dual Frequency.
 - If you have a DownVü transducer, select **DownVü**.
 - If you have another type of transducer, select it from the list.

Adjusting the Contrast

NOTE: This feature is not available on all models.

- 1 Select MENU > Setup > System > Contrast.

TIP: Hold \blacktriangle or \blacktriangledown to make large adjustments quickly.

3 Select ENTER.

Setting the Beeper

You can set when the device makes sounds.

- 1 Select MENU > Setup > System > Beeper.
- **2** Select an option:
 - To have the device beep when you select an item and when an alarm is triggered, select **On**.
 - To have the device beep only when alarms are triggered, select Alarms Only.

Menu Timeout

When a menu is open for 15 seconds and no selections are made, the menu closes and the previous screen is displayed.

Using Quick Adjust

After $\bar{\text{adjusting}}$ a setting and returning to a page, you can quickly return to the setting options.

Select ▲ or ✔.

Introduction

Pages

You can view sonar information in different formats using the Pages menu.

Selecting a Page

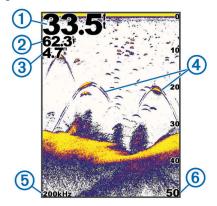
- 1 Select MENU > Pages.
- Select a page.

TIP: For the echo 200 and 500 series devices, you can access the pages menu quickly by selecting **〈** or **〉** from any screen.

Full Screen Page

You can see a full-view graph of sonar readings from a transducer on the full screen page.

From the pages menu, select Traditional or DownVü.

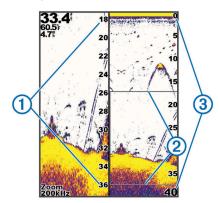


- 1 Bottom depth
- 2 Water temperature
- Water speed (When a water-speed capable transducer is connected)
- 4 Suspended targets
- 5 Transducer frequency
- 6 Screen depth as the screen scrolls from right to left

Split Zoom Page

On the split zoom page, you can see a full-view graph of sonar readings on the right side of the screen, and a magnified portion of that graph on the left side of the screen.

Select MENU > Pages > Split Zoom



Zoomed depth scale		Zoomed depth scale
	2	Zoom window
	3	Depth range

Increasing the Width of the Zoom Screen

You can increase the width of the magnified portion of the split zoom page.

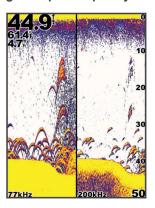
From the split zoom page, select **MENU** > **Setup** > **Sonar Setup** > **Split Size** > **Large**.

Split Frequency Page

You can view two frequencies from the split frequency page.

NOTE: You must have a dual-beam transducer or a dual-frequency transducer to use the split frequency page.

Select MENU > Pages > Split Frequency.



Log Page Settings

Select MENU > Pages > Log.

Depth: Shows a graphic log of depth readings over time.

Depth Log Duration: Sets the time scale of the depth log. Increasing the duration shows depth variations over a longer period of time. Decreasing the duration shows more details over a shorter period of time.

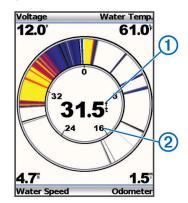
Scale: sets the scale of the depth range. Increasing the depthrange scale shows more variations in depth. Decreasing the depth-range scale shows more detail in the variation. Auto adjusts the depth range to show all log values within the selected duration.

Temperature: Shows a graphic log of water temperature readings over time. Increasing the temperature-range scale shows more variations in temperature. Decreasing the temperature-range scale shows more detail within the variations. **Auto** adjusts the display to show all log values within the selected duration.

Flasher Page

The flasher page shows sonar information on a circular depth scale, indicating what is beneath your boat. It is organized as a ring that starts at the top and progresses clockwise. Depth is indicated by the scale inside the ring. Sonar information flashes on the ring when it is received at the depth indicated. The colors indicate different strengths of the sonar return.

Select MENU > Pages > Flasher.



1	Depth at your present location
2	Depth scale

Numbers Page

You can view numeric information instead of a graphic from the numbers page.

Select MENU > Pages > Numbers.

Resetting the Odometer

Before you can reset the odometer, you must connect the device to a speed-wheel transducer.

From the Numbers page, select **MENU** > **Reset Odometer**.

Sonar

The full screen page, the split zoom page, the split frequency page, and the flasher page are visual representations of the area beneath your boat. You can customize these sonar views.

NOTE: Not all devices have these features.

DownVü Sonar View

NOTE: Not all models support DownVü sonar technology and transducers.

NOTE: To receive DownVü scanning sonar, you need a compatible chartplotter or fishfinder and a compatible transducer.

DownVü high-frequency sonar provides a clearer picture below the boat, providing a more detailed representation of structures the boat is passing over.

Traditional transducers emit a conical beam. The DownVü scanning sonar technology emits a narrow beam, similar to the shape of the beam in a copying machine. This beam provides a clearer, picture-like image of what is beneath the boat.

Sonar Frequencies

NOTE: The frequencies available depend on the transducer being used.

Adjusting the frequency helps adapt the sonar for your particular goals and the present depth of the water.

Higher frequencies use narrow beam widths, and are better for high-speed operation and rough sea conditions. Bottom definition and thermocline definition can be better when using a higher frequency.

Lower frequencies use wider beam widths, which cover a larger area and can let the fisherman see more targets, but could also generate more surface noise and reduce bottom signal continuity during rough sea conditions. Wider beam widths generate larger arches for fish target returns, making them ideal for locating fish. Wider beam widths also perform better in deep water, because the lower frequency has better deep water penetration. They can be used to search for structures such as brush piles.

Viewing two frequencies concurrently using the split frequency view, allows you to see deeper with the lower frequency return and at the same time see more detail from the higher frequency return.

Selecting a Frequency

- 1 Select MENU.
- 2 Select Frequency or FREQ.
- 3 Select a frequency.

Adjusting the Range of the Depth Scale

You can adjust the range of the depth scale that appears on the right side of the screen. Automatic ranging keeps the bottom

within the lower third of the sonar screen, and can be useful for tracking the bottom where there are slow or moderate terrain changes.

When the depth changes dramatically, like a drop off or cliff, manually adjusting the range allows a view of a specified depth range. The bottom is shown on the screen as long as the bottom is anywhere within the manual range established.

- 1 Select MENU > Range.
- 2 Select an option.
 - To allow the device to adjust the range automatically based on the depth, select Auto.
 - To increase or decrease the range manually, select Manual, and select ▲ or ▼.

NOTE: Setting the range on one page applies that setting to all pages.

Adjusting the Zoom

You can adjust the zoom manually by specifying the span and a fixed starting depth. For example, when the depth is 15 meters and a starting depth of 5 meters, the device displays a magnified area from 5 meters deep to 20 meters deep.

You also can allow the device to adjust the zoom automatically by specifying a span. The device calculates the zoom area from the bottom of the water. For example, if you select a span of 10 meters, the device displays an magnified area from the bottom of the water to 10 meters above the bottom.

- 1 Select MENU > Zoom.
- 2 Select Manual Zoom or Auto Zoom.
- 3 Select Span and select ▲ or ↓ to increase or decrease the magnification of the magnified area.
- 4 If necessary, select **Depth** to adjust the zoomed window up or down.

NOTE: The zoomed window tracks the bottom in auto mode only.

Locking the Screen to the Water Bottom

You can lock the screen to the water bottom. For example, if you select a span of 20 meters, the device shows an area from the water bottom to 20 meters above the bottom. The span appears on the right side.

- 1 From a sonar view, select **MENU** > **Zoom** > **Bottom Lock**.
- 2 Select a span.

Pausing the Sonar Screen

From a sonar view, select MENU > Pause/Rewind Sonar or MENU > Pause Sonar.

Opening the Sonar History

NOTE: Not all devices have this feature.

- 1 From a sonar view, select MENU > Pause/Rewind Sonar.
- 2 Select (or) to adjust the vertical line.

Setting the Sonar Scroll Speed

You can set the rate at which the sonar scrolls from right to left. A higher scroll speed shows more detail, especially while moving or trolling. A lower scroll speed displays sonar information on the screen longer.

- 1 Select MENU > Setup > Sonar Setup > Scroll Speed.
- 2 Select a scroll speed.

NOTE: Setting the scroll speed on one page applies that setting to all the pages.

Sonar 3

Showing and Adjusting the Depth Line

You can show and adjust a horizontal line on a sonar screen. The depth of the line is indicated on the right side of the screen.

NOTE: Showing a depth line on one page displays the depth line on all the pages.

- 1 Select MENU > Depth Line > On.
- 2 Select (or).

Configuring the Appearance of Suspended Targets

NOTE: Configuring the appearance of suspended targets on one page applies that setting to all pages.

NOTE: This feature is not available on all transducers.

e K	Shows suspended targets as symbols.		
21 C	Shows suspended targets as symbols with target depth information.		
	Shows suspended targets as symbols with background sonar information.		
21	Shows suspended targets as symbols with background sonar information and target depth information.		

- 1 From a sonar view, select MENU > Setup > Sonar Setup > Fish Symbols.
- 2 Select an option.

Turning on the A-Scope

The a-scope is a vertical flasher along the right side of the full-screen sonar view. This feature expands the most recently received sonar data so that it is easier to see. It can also be helpful for detecting fish that are close to the bottom.

NOTE: This feature is not available on all transducers.

From the full screen page, select **MENU** > **Setup** > **Sonar Setup** > **A-Scope** > **On**.



2 Diameter of the sonar cone at the present depth

Sonar Gain and Noise Settings

You can adjust the amount of gain and noise on a sonar screen.

The gain setting controls the sensitivity of the sonar receiver to compensate for water depth and water clarity. Increasing the gain shows more detail, and decreasing the gain reduces screen clutter.

NOTE: Setting the gain on one page applies the setting to all the pages.

Setting the Gain Manually

- 1 Select MENU > Gain > Manual.
- 2 Select \(\times\) until you begin to see noise in the water portion of the screen.
- 3 Select to decrease the gain slightly.

Setting the Gain Automatically

NOTE: To set the gain on the split frequency page, you must set each frequency separately.

- 1 Select MENU > Gain.
- 2 Select an option:
 - To display higher-sensitivity, weaker sonar returns with more noise automatically, select Auto-High.
 - To display medium-sensitivity sonar returns with moderate noise automatically, select Auto-Med.
 - To display lower-sensitivity sonar returns with less noise automatically, select Auto-Low.

Setting Noise Rejection

You can decrease the appearance of weak sonar returns by increasing noise rejection.

NOTE: Setting noise rejection on one page applies that setting to all pages.

NOTE: To set noise rejection on the split frequency page, you must set each frequency separately.

- 1 Select MENU > Setup > Sonar Setup > Noise Reject.
- 2 Set the level of noise rejection.

Hiding Surface Noise

You can hide or display the sonar returns near the surface of the water. Hiding surface noise helps reduce screen clutter.

NOTE: Setting the surface noise to show or hide on one page applies that setting to all pages.

Select MENU > Setup > Sonar Setup > Surface Noise > Hide.

Adjusting the Contrast

You can control the range and intensity of colors by adjusting the brightness and contrast for DownVü transducers.

Contrast controls the range of colors between high intensity targets and low intensity noise. A high contrast setting displays a greater difference in coloring between noise and targets. A low contrast setting has more mid-tone colors.

- 1 Select MENU > Contrast.
- 2 Use the slider to increase or decrease the contrast.

Adjusting the Color Intensity

Brightness controls the intensity of the coloring. A higher brightness value makes targets easier to see by using higher intensity coloring. A lower brightness value hides background noise by using lower intensity coloring.

- 1 Select MENU > Brightness
- 2 Select a manual value or select an option:
 - To display higher-sensitivity, weaker sonar returns with more noise automatically, select **Auto-High**.
 - To display medium-sensitivity sonar returns with moderate noise automatically, select Auto-Med.
 - To display lower-sensitivity sonar returns with less noise automatically, select Auto-Low.

Alarms

Select MENU > Setup > Alarms.

Battery: Sounds when the battery reaches a specified low voltage.

Deep Water: Sounds when the water depth is deeper than the specified depth.

Drift: Sounds when depth variations at your present location exceed the specified depth.

Fish: Sounds when the device detects a suspended target.

Sonar Sonar

- access sets the alarm to sound when fish of all sizes are detected.
- sets the alarm to sound only when medium or large fish are detected.
- sets the alarm to sound only when large fish are detected

Shallow Water: Sounds when the water depth is shallower than the specified depth.

Water Temperature: Sounds when the water temperature varies more than ± 2 °F (± 1.1 °C). Alarm settings are saved when the device is turned off.

NOTE: You must connect the device to a temperature-capable transducer to use this alarm.

Sonar Numbers Settings

You can adjust which numbers are displayed on the full screen page, the split zoom page, and the split frequency page. You can also adjust the size of the numbers.

Select MENU > Setup > Sonar Numbers.

Battery: Displays the battery voltage. **Number Size**: Sets the number size. **Odometer**: Displays the odometer.

NOTE: The device must be connected to a water-speed

wheel transducer to display the odometer.

Water Speed: Displays the water speed.

NOTE: The device must be connected to a speed-wheel

transducer to show the water speed.

Water Temperature: Displays the water temperature.

NOTE: The device must be connected to a temperature transducer to show the water temperature.

System Settings

Select MENU > Setup > System.

Language: Sets the on-screen language.

System Information: Allows you to view software information.

System Unit Settings

Select MENU > Setup > Units.

Depth: Sets the depth units to feet (ft), meters (m), or fathoms (ftm).

Distance: Sets the distance units.

Temperature: Sets the temperature units to Fahrenheit (°F) or Celsius (°C).

NOTE: You must have a temperature-reading transducer connected to display the temperature.

Water Speed: Sets the water speed units.

NOTE: You must have a water-speed transducer connected to display the water speed.

Restoring the Factory Default Settings

NOTE: This deletes all settings information you have entered.

- 1 Select MENU > Setup > System > System Information > Factory Settings.
- 2 Select an option.

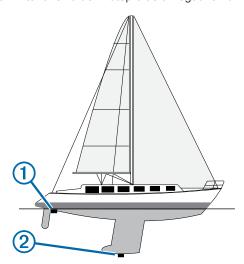
Calibration

Setting the Keel Offset

You can enter a keel offset to compensate for the surface reading for the depth of a keel, making it possible to measure

depth from the bottom of the keel instead of from the transducer location.

- 1 Select an option, based on the location of the transducer:
 - If the transducer is installed at the water line ①, measure
 the distance from the transducer to the keel of the boat.
 Enter this value in step 3 as a positive number.
 - If the transducer is installed at the bottom of the keel ②, measure the distance from the transducer to the water line. Enter this value in step 3 as a negative number.



- 2 Select MENU > Setup > Calibration > Keel Offset.
- 3 Use the arrow keys to enter the keel offset measured in step

Setting the Water Temperature Offset

You can set the temperature offset to compensate for the temperature reading from a temperature-capable sensor.

- 1 Measure the water temperature using the temperaturecapable transducer that is connected to the device.
- 2 Measure the water temperature using a different thermometer or temperature sensor that is known to be accurate.
- **3** Subtract the water temperature measured in step 1 from the water temperature measured in step 2.
 - This is the temperature offset. Enter this value in step 6 as a positive number if the sensor connected to the device measures the water temperature as being colder than it actually is. Enter this value in step 6 as a negative number if the sensor connected to the device measures the water temperature as being warmer than it actually is.
- 4 Select MENU > Setup > Calibration > Temperature Offset.
- 5 Use the arrow keys to enter water temperature offset measured in step 3.

Calibrating the Water Speed Sensor

- 1 Select MENU > Setup > Calibration > Calibrate Water Speed.
- 2 Follow the on-screen instructions.

NOTE: You must enter the top speed as measured by an external source, such as a GPS device. Do not enter the water speed value from a connected speed-wheel transducer.

Calibration

Appendix

Specifications

Specification	Model	Measurement
Temperature Range	echo 101 and 151	From 5° to 131°F (from -15° to 55°C)
	echo 201, 301, and 500 series	From 5° to 131°F (from -15° to 55°C)
Compass Safe Distance	echo 101 and 151	10 in. (250 mm)
	echo 201 and 301	10 in. (250 mm)
	echo 500 series	15.75 in. (400 mm)
Power Source	echo 101	From 10 to 20 V
Voltage Range	echo 201, 301, and 500 series	From 10 to 28 V
Rated Current	All models	1 A
Fuse	All models	AGC/3AG - 3.0 A
Freshwater Depth*	echo 151	1600 ft (488 m) @ 77 kHz
	echo 201, 201dv, 301, and 301dv	1750 ft. (533 m) @ 77 kHz
	echo 500 and 500dv series	2300 ft. (701 m) @ 77 kHz

^{*}Depth capacity is dependent on water salinity, bottom type, and other water conditions.

Cleaning the Outer Casing

NOTICE

Avoid chemical cleaners and solvents that can damage plastic components.

- 1 Clean the outer casing of the device (not the screen) using a cloth dampened with a mild detergent solution.
- 2 Wipe the device dry.

Cleaning the Screen

NOTICE

Cleaners containing ammonia will harm the anti-reflective coating.

The device is coated with a special anti-reflective coating which is very sensitive to skin oils, waxes, and abrasive cleaners.

- 1 Apply an eyeglass lens cleaner specified as safe for antireflective coatings to the cloth.
- **2** Gently wipe the screen with a soft, clean, lint-free cloth.

Software License Agreement

BY USING THE DEVICE, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

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S Appendix

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W

water

www.garmin.com/support



