



BC202 User manual



BC202 Intelligent Sonar Fish Finder User Manual

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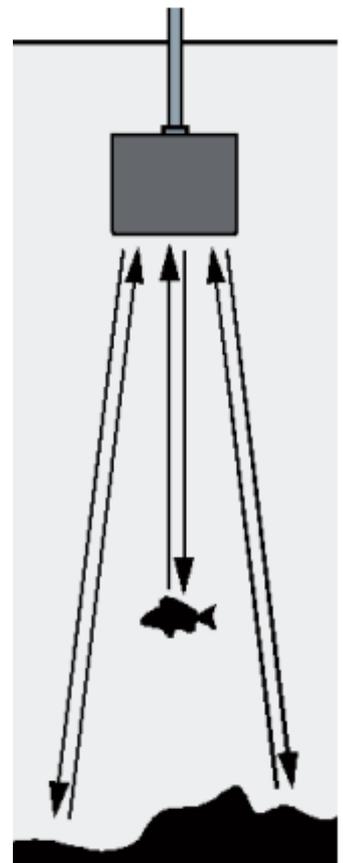
Overview

BC202 intelligent sonar fish finder is a directional research and development, suitable for its matching fishing boats high precision and sensitive detection of river, river, lake, sea and other water environment. This fish finder can also provide with the depth of the bottom, bottom contours, water temperature, density of fish or the depth of fish and other parameters for your reference.

How Does Sonar Work

Sonar technology is based on sound waves.

The system uses sonar to locate and define the structure, bottom contour and composition, as well as depth directly below the transducer. The transducer 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, then it uses the reflected signal to interpret location, size, and composition of an object.



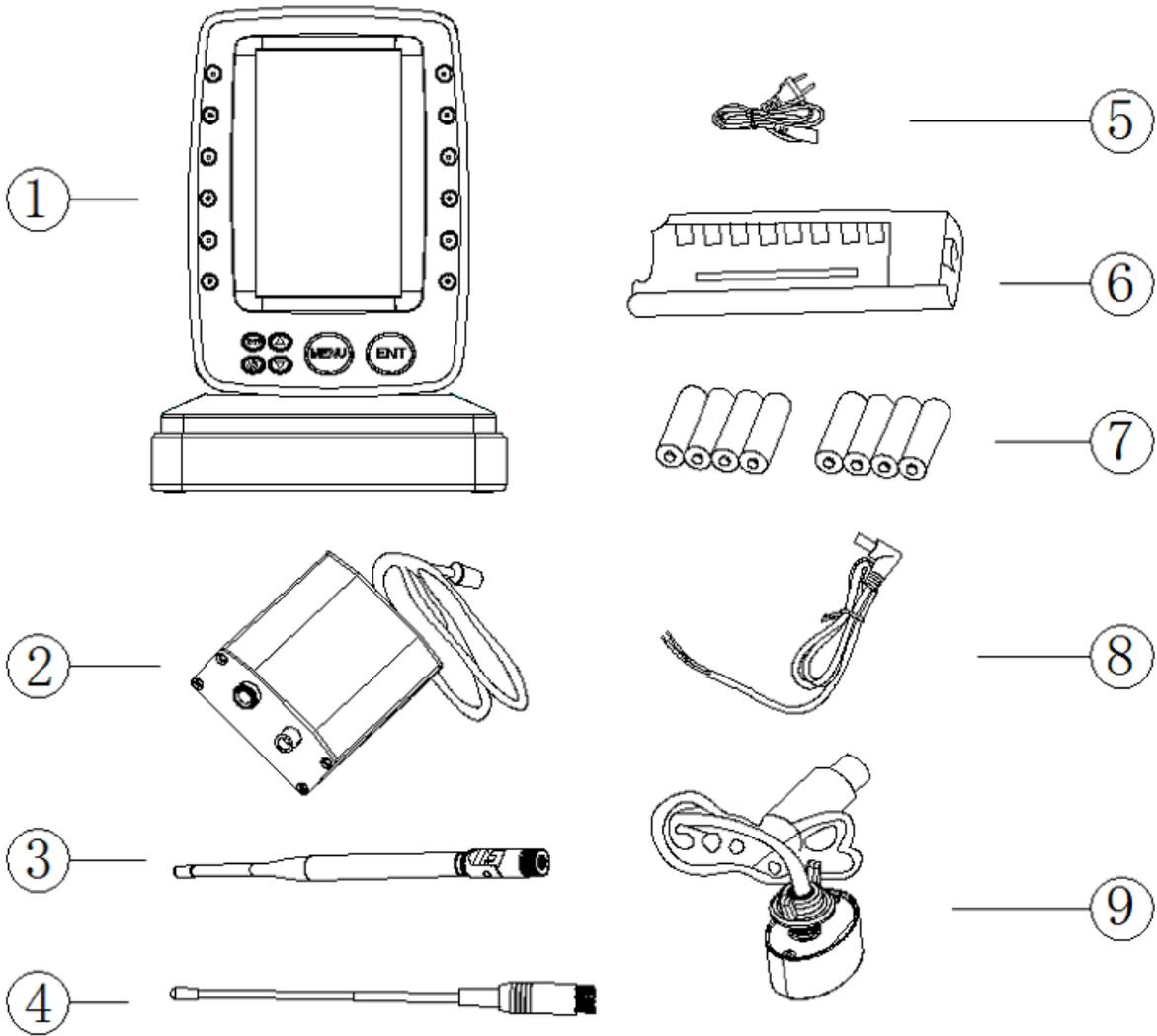
Product Specification

Content	Receiver	Transmitter
Display Type:	4.3 "LCD display	/
Resolution:	480*272	/
Back lighting:	White	/
Power:	3.6W	5.4W
Main body waterproof:	IP4	/
Sonar Frequency:	200KHZ & 83KHZ	
Depth Range Max:	0.6-73M±0.1M	
Depth Range Min:	0.6 M	
Operating temperature:	-20-70°C	
Operating voltage:	10.8-18V	
Radio frequency:	433.92MHz	
Radio Range Max:	500 meters in open area	

Product Functions

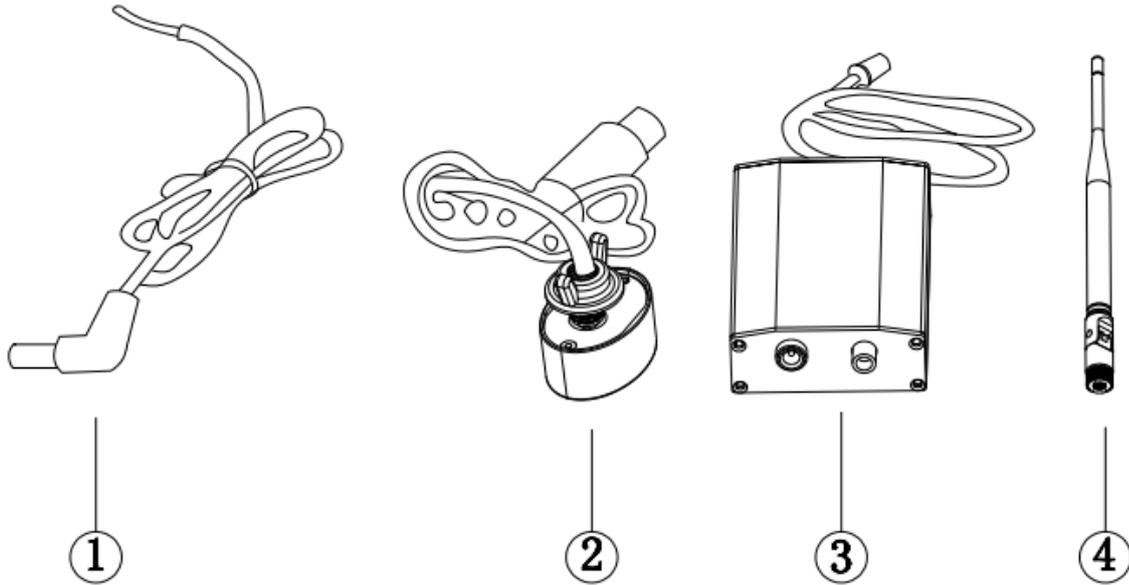
Water bottom profile and water temperature display	<input checked="" type="checkbox"/>
Big/small fish identification and fish depth indicator	<input checked="" type="checkbox"/>
Fish situation and depth alarm	<input checked="" type="checkbox"/>
Kell offset	<input checked="" type="checkbox"/>
Zoom in on display of bottom tracking	<input checked="" type="checkbox"/>
Kell offset setting	<input checked="" type="checkbox"/>
Automatic depth range	<input checked="" type="checkbox"/>
Noise Rejection	<input checked="" type="checkbox"/>
100-level sensitivity setting	<input checked="" type="checkbox"/>
Automatic and manual selection of depth range	<input checked="" type="checkbox"/>
Auto zoom and quick manual zoom	<input checked="" type="checkbox"/>
Measurement unit can be set to meters or feet	<input checked="" type="checkbox"/>
User selectable sonar chart mode	<input checked="" type="checkbox"/>

Product List



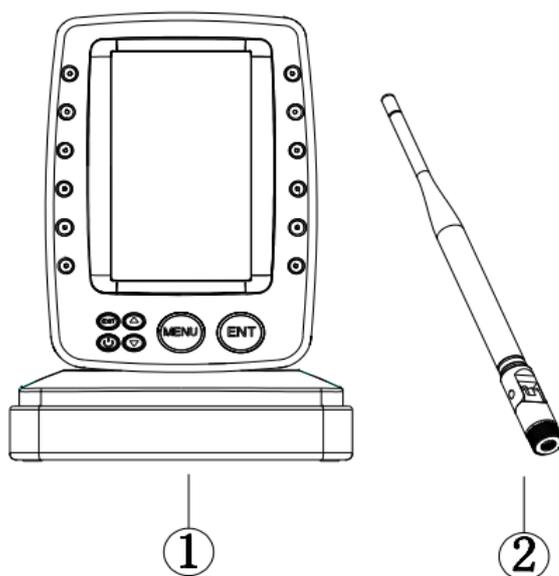
1. Receiver
2. Transmitter
3. Receiver antenna
4. Transmitter antenna
5. Transmitter Power Cable
6. Battery Charger
7. Rechargeable Battery (8 pcs)
8. Charger Power Cable
9. Sonar Transducer

- Transmitter List



1. Transmitter power Cable
2. Transmitter
3. Sonar Transducer
4. Transmitter Antenna

- Receiver List



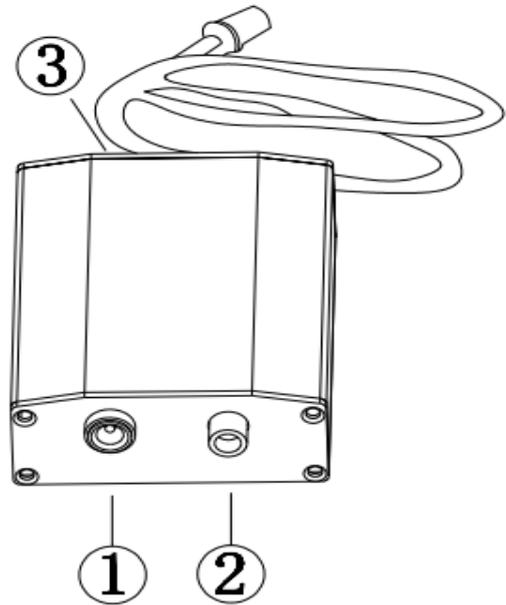
1. Receiver
2. Receiving antenna

- Transmitter port

1. Power port

2. Snor transducer port

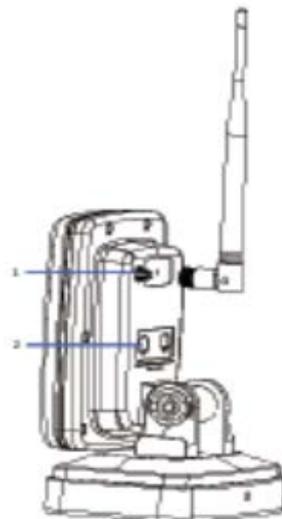
3. Antenna



- Receiver port

1. Antenna pedestal

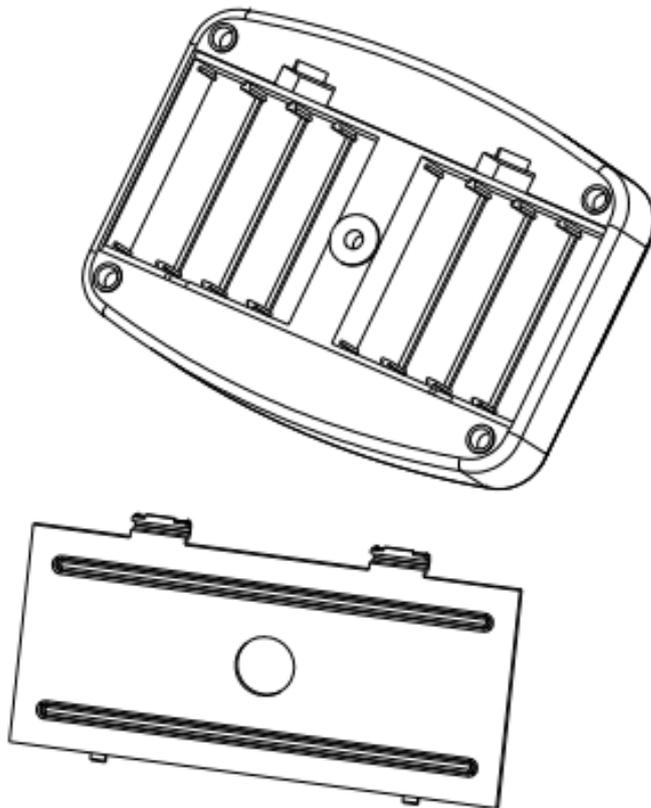
2. Receiver power input



Power supply mode

- Receiver power supply mode

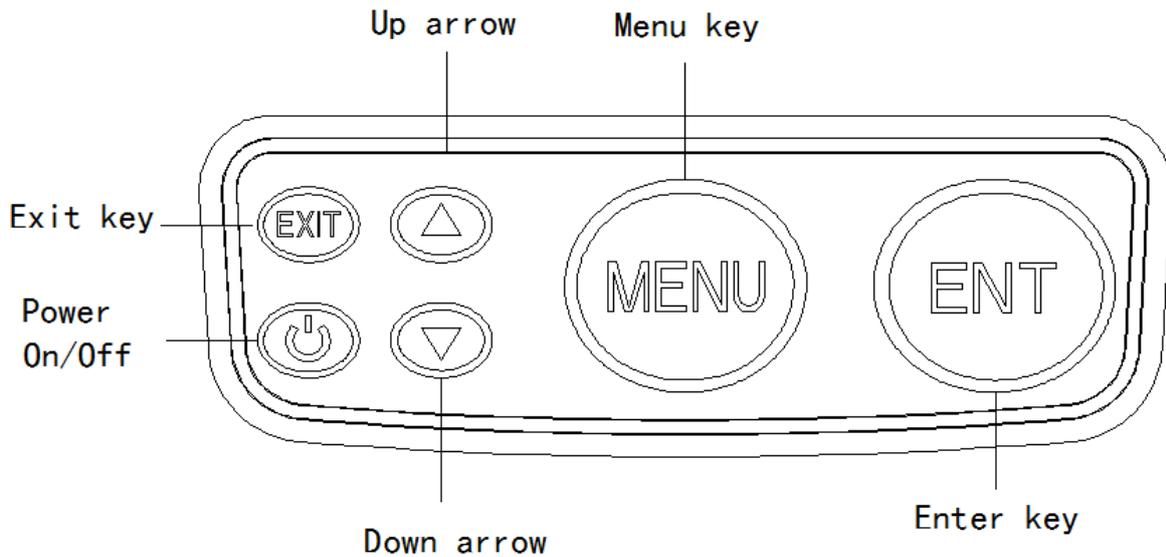
Use 8 pcs AA batteries, put 8 pcs AA batteries into the battery box.

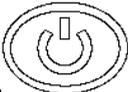


- Transmitter power supply mode

The Transmitter is powered by 12V external power supply, and the Transmitter Power Cable is connected to the 12V battery on the boat.

Key functions



- Power On/off 

Starting up: In the off state, press and hold the Power On / Off key for 3 seconds and the screen will display "Loading", then the system automatically enters the mode and sets values which were set up before last normal shutdown.

Shutdown: In the on state, press and hold the Power On / Off key for 3 seconds, the screen will display "Shutdown".

Stop Chart: When the unit is working, press the Power Key to stop the screen chart on the screen, and press the key again to restore the screen chart.

Save settings: Long press the Power on / off Key for 3 seconds to turn off the device normally. The system will automatically save the data settings in your current menu.

Warm tip: ***When the product is incorrectly installed or exceeds the detection range, the depth value will display "0.0", and it will automatically shutdown after 5 minutes.

- Menu Key 

In the power on mode, press the menu key and the menu will appear on the screen.

There are 3 tabs in the menu system:

Sonar", "Setup" and "Advance". You can press the Menu Key to switch between different menu tabs.

In menu components, user can use the up and down arrow keys to select the menu to be modified, select the menu item and press **enter** key, and then use the up and down arrow keys to modify the setting value. Once the setting value appears on the screen, the system immediately performs the operation according to the new setting value.

- Exit Key 

When accessing the menu or sonar signal amplification, press the EXIT key, the system returns to the detection mode.

Sonar frequency conversion: When the unit starts working, you can press the EXIT key to switch between different frequencies. There are 200KHZ single frequency, 83khz single frequency.

- Enter / Zoom Key 

When the device is working, press the Enter key once to magnify the sonar view displayed on the current screen display (2x) Press it again, and screen will return to the normal display status.

Choose Menu Item: In menu components, after selecting the Menu Item that needs to be adjusted, press the ENT Enter key to select this menu item, and then use the up/ down arrow keys to modify the setting value.

Automatic power off feature: The display will shut off automatically when the depth display reads "---" continuously for 5 minutes

- Up / Down Arrow Keys



When pressing the menu key to enter the menu, with the up / down arrow keys user can move up and down to select the options that setting value need to be modified.

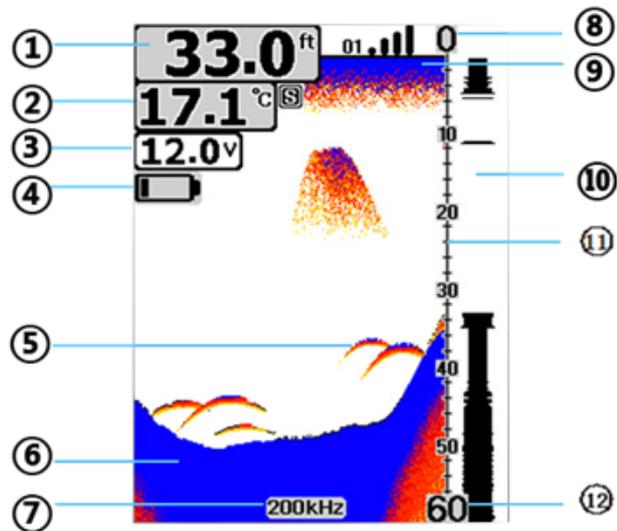
After selecting the menu item that needs to be modified, press ENT key, and the menu item will turn red. Then press the up arrow key, it will select the left option, press the down arrow key and it will select the right option. When there are multiple options in the submenu, press the up and down arrow keys successively to select the options that need to modify the setting value.

When the sonar signal is manually zoomed in, you can move the zoom preview box up and down to select the position you want to zoom in on.

When the depth cursor is turned on, press the up and down keys to move the depth cursor up and down.

Screen Display Description

1. Water Depth
2. Water Temperature
3. Receiver Battery voltage
4. Battery level indication
5. Fish Icon
6. Bottom Contour
7. Sonar Frequency
8. Upper Limit of Depth Range
9. Water surface
10. Real-time single
11. Depth Scale
12. Lower Limit



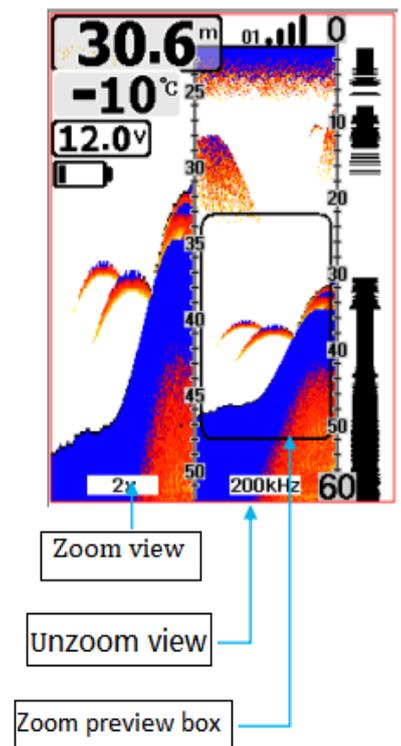
- Current Signal Chart (Real-time Signal RTS)

The current signal chart box is to display the strength of the latest echo in horizontal lines at the far right of the display screen. The wider the horizontal line indicates the stronger the signal, and the depth of the echo refers to the depth scale.

- Sonar Signal Zoom View (200KHZ or 83KHZ)

In the 200KHZ or 83KHZ single-frequency Zoom View, the screen view is automatically split into left and right. The unzoomed view is displayed on the right side of the screen, and the zoomed view is displayed on the left side of the screen.

In the Sonar Zoom View, on the unzoomed display screen on the right, there will be a zoomed preview box. The contents of zoomed preview box will be displayed on the left side screen after zoomed in(2x). When zooming in automatically, the Zoom Preview Box will track the bottom and moves up and down as the bottom gets higher and lower. When zooming in manually, the Zoom Preview Box will move up and down as the user presses the up and down keys.



- Manual Zoom



When the depth range is set to manual, press the ENT key to magnify the sonar view displayed on the screen. Press the up and down key to manually move up and down the Zoom Preview Box.

- Auto Zoom



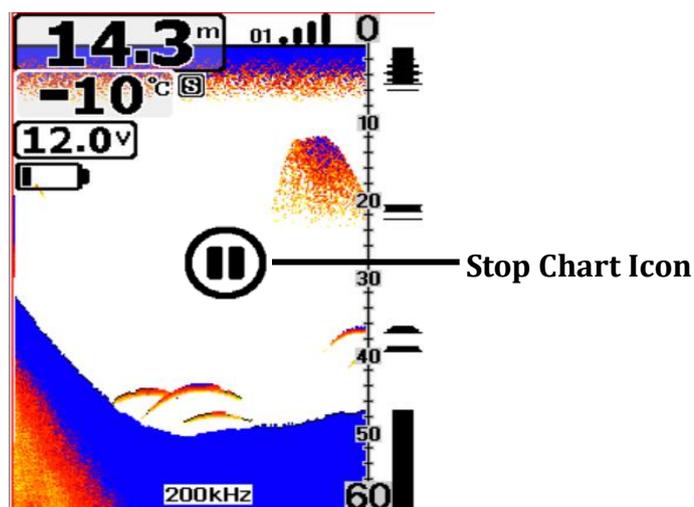
When the depth range is set to automatic, if press the ENT key, the system will automatically adjust the position of the Zoom Preview Box based on the underwater depth reading. At this point, you cannot manually adjust the position of the zoom preview box.

There are 3 tabs in the menu system:

"Sonar", "Setup" and "Advanced". You can press the Menu Key to switch between different menu tabs.

- Stop Chart

When the unit starts working, you can press the Power Key to stop the screen chart in the main screen, then press the Power Key again and the screen chart will be recovered.



Function Menu Settings

- Menu Components

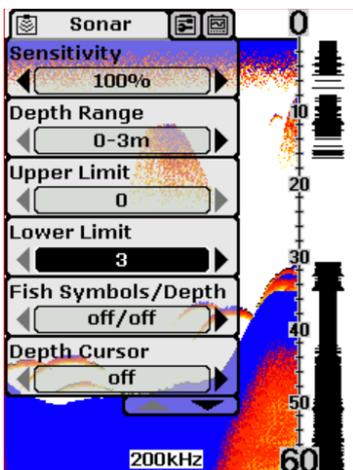
The Menu Key is used to access the menu system.

When you press the Menu Key once, the menu system immediately appears on the display.

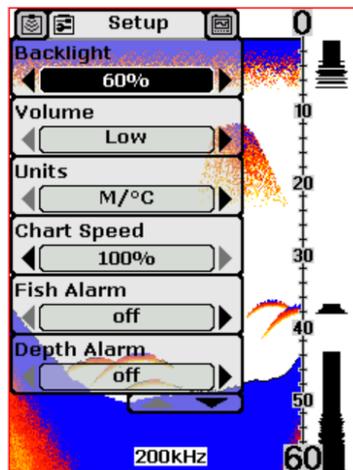
The menu system has 3 tabs:

“Sonar”, “Setup” and “Advance”. You can press the Menu Key to switch between different menu tabs.

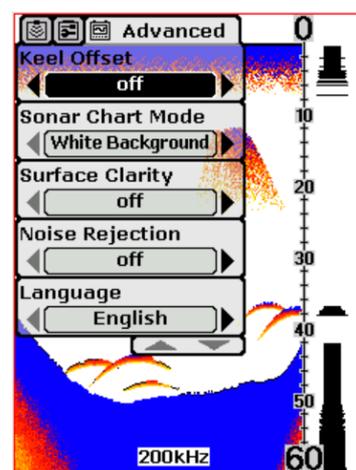
Sonar menu



Setup menu



Advanced menu



In each menu tab use the lower or Upper Key to select a specific menu item, and use the Left or Right Key to change a menu setting, then press the Esc Key to return to the top to close menu system.

- Sonar Menu Components Settings

- Sensitivity



Settings: “Auto”, “1%” to “100%”

Sensitivity controls the unit’s ability to pick up echoes. If you want to see more details, try increasing the sensitivity, a little at a time.

Press the menu key to select "sonar" menu to enter the sensitivity sub-menu. Optional settings: "1%" to "100%" or "Auto".

Users can filter the sonar echo signals by adjusting the sensitivity until the signal information they need is displayed on the screen. If you want to see more details, try increasing the sensitivity, a little at a time. At high sensitivity value, a lot of underwater noise will also be displayed on the screen. If you don't want to see these underwater noises, you can reduce the sensitivity value to filter them. When the sensitivity is set to "Auto", the system will automatically set the sensitivity value according to different depths of water, so that the users do not need to manually adjust the sensitivity

There are 1%~100% sensitivity levels in the menu for users to choose.

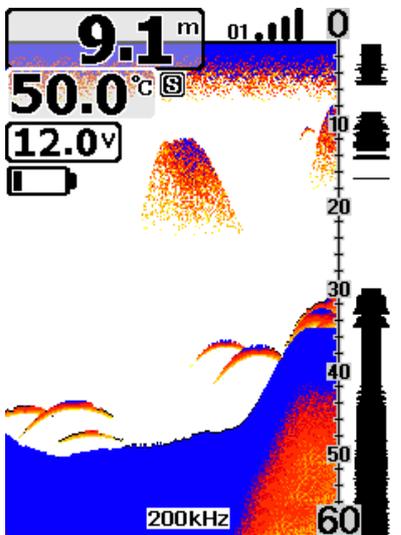
Sonar fish finder is a device that can emit ultrasonic waves and analyze reflected waves. When the fish finder emits sound waves in the water, all objects whether they are large, small, soft or hard, will generate a reflection wave. Larger or harder objects sometimes generate multiple reflection waves. So it needs a "sieve" filters out unnecessary information. The sensitivity here is the "sieve pore" of the "sieve". The higher the sensitivity, the "smaller" the "sieve pore".

Increasing the sensitivity is equivalent to reducing the "sieve pore", so there will be more stuffs left on the "sieve" (the information displayed on the screen), which may cause the information displayed on the screen to be cluttered.

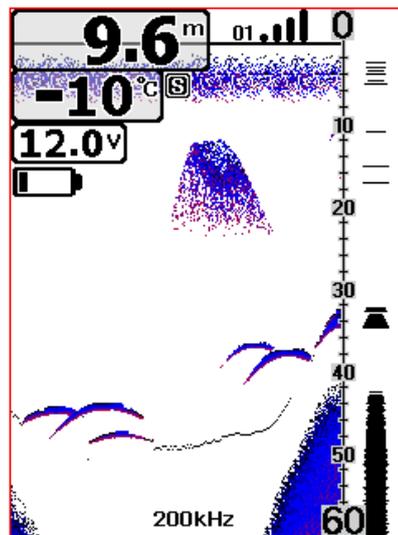
Decreasing the sensitivity is equivalent to increasing the "sieve pore", so there will be less stuffs left on the "sieve" (the information displayed on the screen), and the system will filter out some information to make the display screen more concise. But be aware that what you filter out may be also important information.

Therefore, it is important to choose the appropriate sensitivity value and the depth range. In general, we recommend that you increase the sensitivity when the water is deep or clear. You can reduce the sensitivity when there are more impurities or turbidity water or there is in shallower water to reduce some false detection results.

When there are many fish, you can also use this function to distinguish big and small fish. Decrease the sensitivity, the "sieve pore" will be enlarged, then the objects with weak reflection waves will be filtered out, and the rest are relatively large fish.



Higher sensitivity



Low sensitivity

o Depth Range



Select "Auto" to have the unit automatically select the Depth Range, the bottom signal is automatically placed in the lower half of the screen.

Select specific value to lock the depth range to a specific setting.

Press the menu key to select "sonar" menu to select the depth range option by the up and down keys. Press the ENT key and then press up and down keys to select Settings: "0-9ft" to "0-240ft", "Auto" ("0-3m" to "0-80m", "Auto"). There are 8 setting values in this menu.

When the depth unit is set to "FT" (feet), the 8 setting values are: "0-9FT", "0-15FT", "0-30FT", "0-60FT", "0-90FT", "0-120FT", "0-240FT", "Auto".

When the depth unit is set to "M"(meter), the 8 setting values are: "0-3m", "0-5m", "0-10m", "0-20m", "0-30m", "0-40m", "0-80m" "Auto".

When the depth range is set to a fixed value, the screen adjusts to the corresponding display range according to the setting value. content beyond the setting range will no longer be displayed.

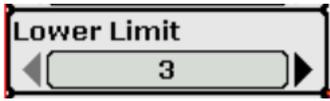
Please Note:

In manual operation, if the depth is greater than the depth range setting, the bottom will not be visible on the screen. You can select "Auto" to return to automatic operation.

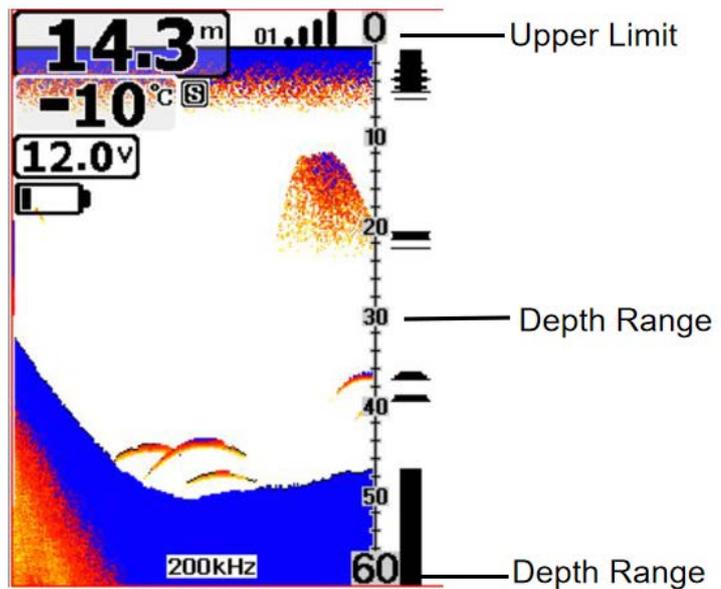
○ Upper and Lower Limit



Settings: "0ft" to "231ft"
("0m" to "70m")



Settings: "9ft" to "240ft"
("3m" to "80m")



Changing the upper and lower limits gives you far greater control over the depth range. This feature lets you "zoom in" the display in almost unlimited combinations.

○ Fish Symbols & Depth

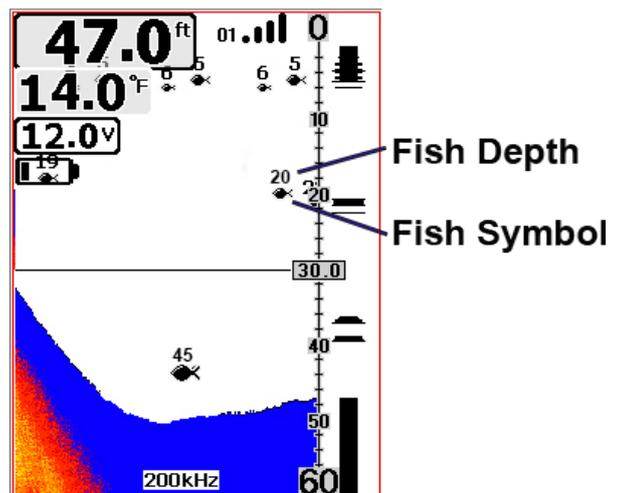


Settings: "On/On", "On/Off", "Off/Off"

"On/On": shows both the fish symbol and the depth of the fish

"On/off": shows only the Fish Symbols and not the depth of the fish.

"off/off": sign and the depth of the fish are all not displayed.



When the Fish Symbols and the display of fish depth are set as "on", the system will analyze the echo signal and display different sizes Fish Symbols according to the strength of the echo signal and then displayed the corresponding depth value above the Fish Symbols.

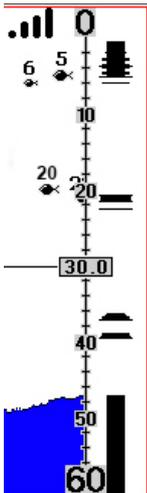
This product is a very powerful echo signal analysis system. Part of the water noise, surface clutter and temperature variable layer can be removed by menu setting, and then the rest of the signal information corresponding to display as Fish Symbols. However, the system is also limited, and some situations cannot be recognized, such as deadwood floating in water, air bubbles, garbage, etc., may also be shown as fish symbols.

The sonar system is not an underwater video system. It cannot visually display fish and other floating objects, such as water plants, deadwood, air bubbles, garbage, etc. The user needs to judge by the reflected sonar signal.

Please Note:

The sonar's microcomputer is sophisticated, but it can be fooled. It can't distinguish between fish and other suspended objects such as trotlines, submerged floats, air bubbles, etc.

o Depth Cursor



Settings: "On", "Off"

The depth cursor consists of a horizontal line with a digital depth box on the right side. The numbers inside the box show the depth of the cursor.

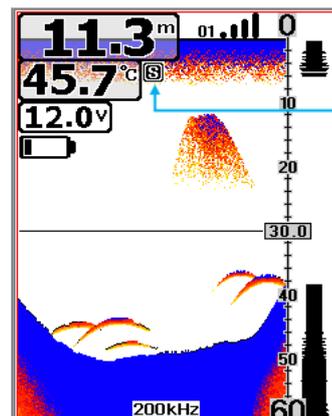
You can move the cursor to any location on the screen, letting you pinpoint the depth of a target.

o Simulator



Settings: "On", "Off"

The Simulator is a very powerful tool that simulates on the water operation. Use the Simulator to learn how to use your fish finder before taking your boat on the water. The Simulator Indicator will be visible on screen when Simulator is set to "On".



Simulator Indicator

- Setup Menu Components Settings

- Backlight



Optional settings: “10%” to “100%”

User can switch the Front light or adjust the brightness as needed.

When the screen backlight is set to turn on, (10%~100%), the background light will always be on, which will consume a lot of power and reduce the battery life. So you better use this feature only in low light.

The screen of this fish finder is clear viewing in direct sunlight, so the backlight can be turned off when used outdoors during the day.

- Volume



Settings: “High”, “Medium”, “Low”

Volume setting allows you to adjust the Alarm Volume so that you can select the tone that you can hear best.

- Units



Settings: “ft/°C”, “ft/F”, “m/°C”, “m/F”

- Chart Speed

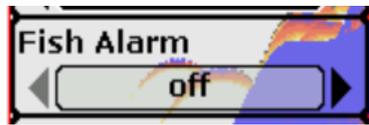


Settings: “10%” to “100%”

The chart speed is the rate echoes scroll across the screen. User can adjust the chart speed as needed.

It is recommended that the chart speed should be set to the maximum so that the reflected wave information can be updated in a timely manner.

○ Fish Alarm



Select "Off" for no fish alarm. Or select one of the following symbols to set the alarm.

1. Large Fish Only



2. Large / Medium Fish Only



3. All Fish



○ Depth Alarm



Settings: "Off", "1ft" to "99ft" ("1m" to "30m")

The Depth Alarms make a sound and the Depth Alarm Indicator will blink when the bottom signal goes shallower than the Depth Alarm's setting.



The Depth Alarm function is specially designed for Marine users. Users can set this function according to actual needs.

○ Battery Alarm



Settings: "Off", "4.3V" to "5.8V"

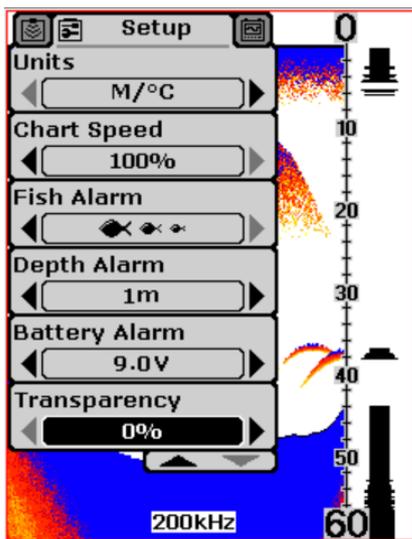
Battery Alarm makes sounds and the Battery Voltage Readout will blink when the input battery voltage is equal to or less than the menu setting.

- Transparency

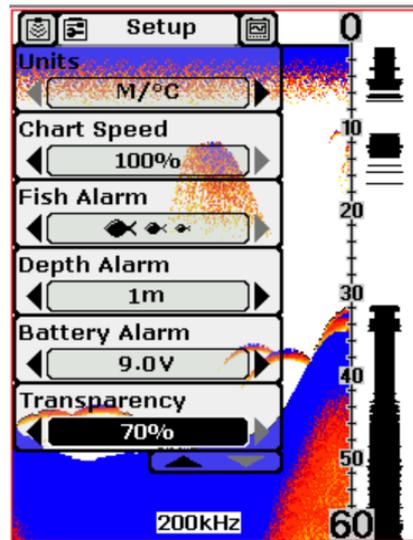


Settings: “0%” to “70%”

Transparency setting allows you to change the transparency of the dialog boxes so you can see through the dialog box.



Transparency 0%



Transparency 70%

- Advanced Menu

Settings

- Keel Offset

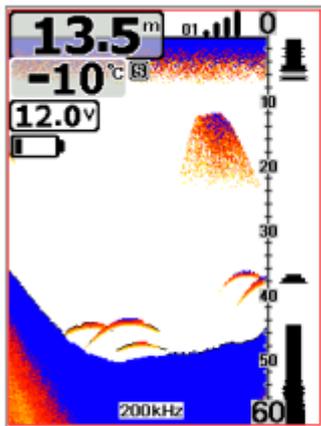


Settings: “Off”, “9ft” to “+9ft” (“-3m” to “+3m”)

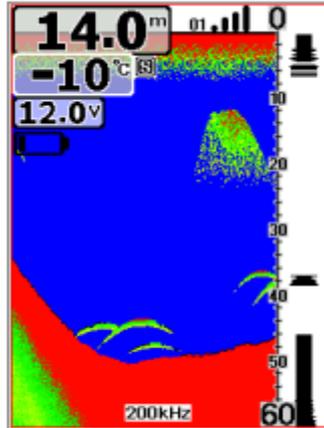
Keel Offset will adjust the digital depth readout to indicate depth from the waterline or boat's keel.

Enter a positive vertical measurement from the transducer to the waterline to read the depth from the waterline. Enter a negative vertical measurement from the transducer to keel to read the depth from the keel.

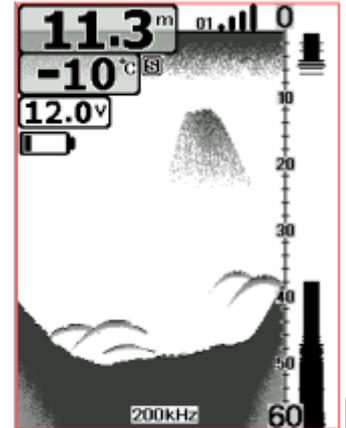
○ Sonar Chart Mode



White Background



Blue Background



Gray Scale

Settings: "White Background", "Blue Background", "Gray Scale"

You can change the Sonar Chart Mode to suit your viewing preferences.

○ Surface Clarity



Settings: "Off", "High", "Medium", "Low"

Surface Clarity adjusts the filter that removes surface clutter noise caused by algae and aeration. The lower the setting, the more surface clutter will be displayed.

○ Noise Rejection



Settings: "Off", "High", "Medium", "Low"

The Noise Rejection system built into the sonar unit that constantly evaluates the effects of boat speed, water conditions and interference. This automatic feature gives you the best display possible under most conditions.

If you have high noise levels, try using the "High" setting. However, if you are having trouble with noise, we suggest that you take steps to find the

interference source and fix it, rather than continually using the unit on the high setting

- Language

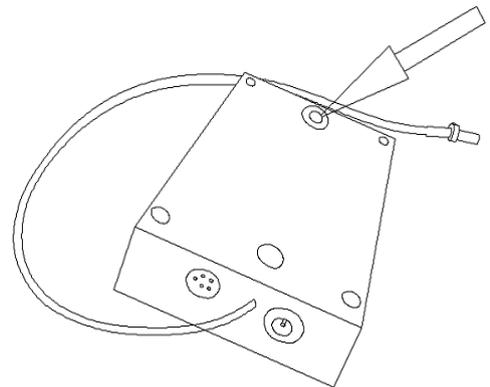


Language selects the display language for menus. There are the following languages available: English, Russian, French, Japanese, Finnish, Polish, German, Italian, Spanish, Dutch, Korean, Swedish, Greek, Danish.

Important Note (Reset Code)

In order to avoid the interference from the other wireless fish finder or the receiver (main unit) doesn't receive transmitter (transducer) signal, you can reset the code between the receiver and transmitter yourself according to steps below:

1. **Receiver:** please make sure the receiver must be powered off, press the Zoom key  first, then press the power key  at the same time, and then the display becomes black right away (Black mesh in the middle area of the display), after this you can continue doing the following steps.



2. **Transmitter:** then check the transmitter, you will see a green button on the transmitter (see the picture) keep pressing the green button, then connect the power supply to the transmitter. After this, the receiver will be powered off automatically.

In this condition, you can release your hand from the green button and disconnect power supply from the transmitter. The product can be used normally when you restart the machine after doing these steps above. If the display of the receiver still stays black (Black mesh in the middle area of the display), it means the reset of the code failed, then you need to redo it once again according to the steps above. The channel number will increase one by one after you succeeded to reset code each time.