

Technical characteristics of echo sounder «PRAKTIK 6M»

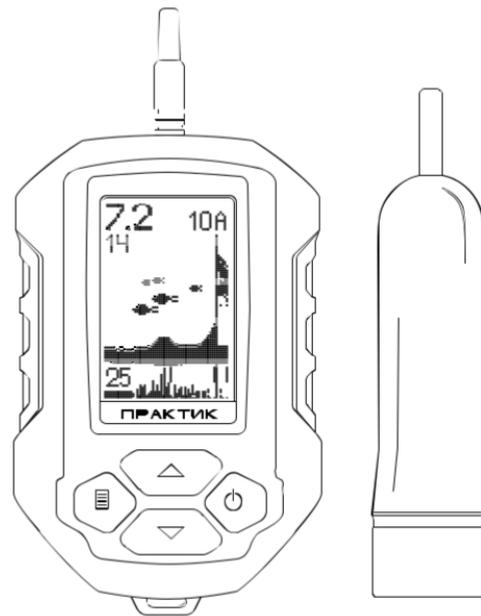
Echo depth ranging	from 0,5 to 25 meters
Number of beams	1 beam (40°)
Operating temperature	from -20 to +60°C
Weight	225 grams
Dimensions of the electronic unit	107x70x28 mm
Display	graphic, 128x64 pixels
Cable length	2 meters
Electric feed	1 AA battery
Detection of fish figures and its size	yes
Sound and fish identification	yes
Echo displaying of the depth, bottom relief and ground density	yes
7 modes of display information	FISH ID, Pro, Flasher, Depth gauge Shallow water, Demo, Info
Sensitivity adjustment	yes
Deaf zone adjustment	adjustable from 1 to 5 meters
Winter/summer mode	yes
Echo sounder bottom spot diameter	yes
Echo sounder air test	yes
Display backlit	yes
Battery indicator	yes

TY 4312-0012-84736284-12



PRAKTIK 6M

ECHO SOUNDER



User's manual

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INTRODUCTION

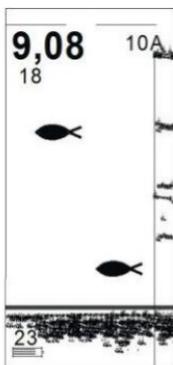
Praktik sonars are designed to measure the depth of a water reservoir and search for promising fishing spots.

The principle of Praktik sonars operation is based on the emission of ultrasound waves into the water by a transducer and the subsequent reception of echo pulses reflected from the bottom or other objects. The probe beam is a cone, the top of which is a sensor, usually located just below the water surface, and the base is the bottom. When an ultrasound wave encounters an obstacle in its path, then part of it is reflected and returned back to the transducer, and the receiver screen displays information about the presence of an object.

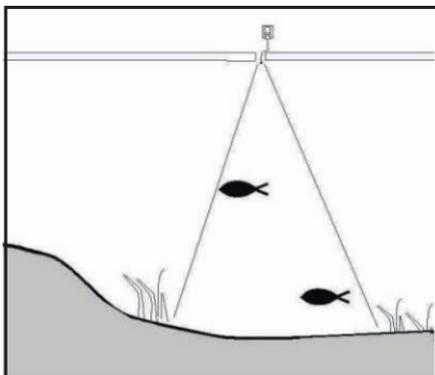
The figures on the right show typical pictures on the sonar screen and the information on the water reservoir in summer and winter corresponding to these pictures.

It is very important to understand that the sonar does not display a three-dimensional representation of the water column on the screen, but only its projection onto a vertical plane passing through the middle of the sounding cone. This creates the illusion that all objects detected by the beam are located under the sensor.

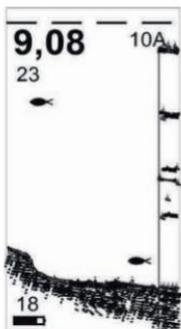
The principle of modern fishing consists not so much in finding fish, but in determining the traditional habitats of fish. The main thing is to get an understanding of the reservoir and the presence of fish in it. The role of the sonar in solving this problem can hardly be underestimated. However, to fully understand the picture displayed by it, you need to gain some experience.



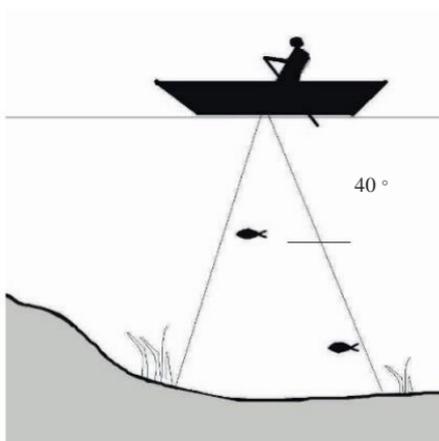
Screen displayed in winter



Water reservoir in winter



Screen displayed in summer

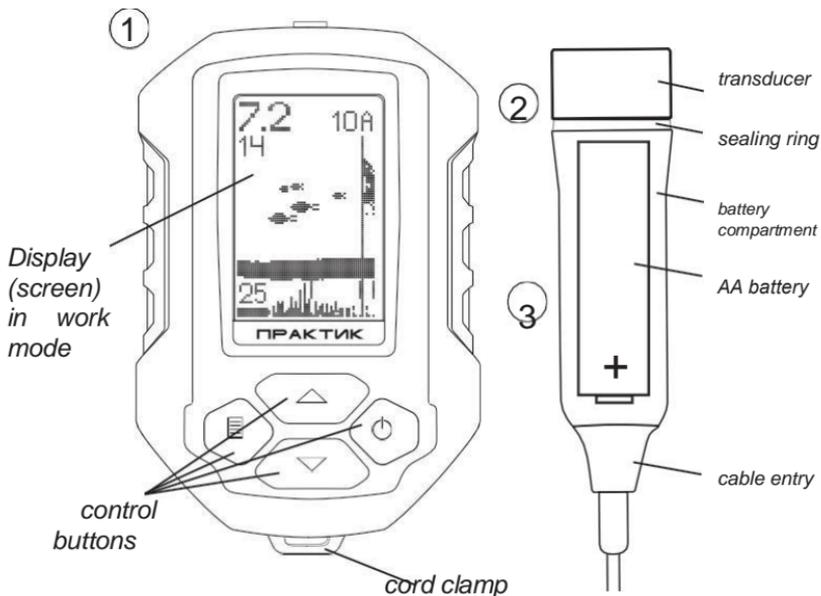


Water reservoir in summer

INTRODUCTION TO SONAR

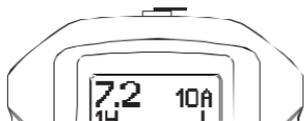
The Praktik 6 sonar consists of two units:

- electronic receiver unit (1);
- transducer (2) with battery compartment (3).



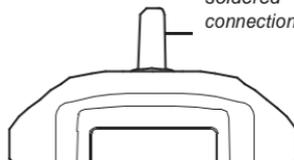
Praktik 6M

sealed connector



Praktik 6S

soldered connection



Receiver unit

The case of the receiver unit is durable and anti-vandal. The level of tightness complies with IP 67. Elastic inserts around the perimeter of the case protect the electronic component of the sonar against shock, vibration and rough handling (including at low temperatures).

Transducer and battery compartment

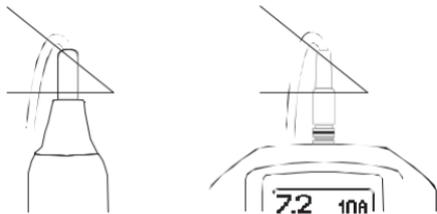
Transducer design is frost-resistant and airtight (IP 68). The sensor is screwed clockwise into the battery compartment. The silicone ring on the sensor is used to seal the joint between the sensor and the battery compartment. For reliable sealing, the sensor must be tightened with force. When installing an AA battery, the polarity must be observed (see the figure on the left).

IMPORTANT!

- It is advisable to install the battery at home in a warm place. This will prevent condensation in the battery compartment. Be careful when replacing battery near a water reservoir. Protect the sensor from shock and drowning.

- In winter fishing conditions, the sensor must be lowered into the water below the ice level to avoid the appearance of false signals reflected from the vertical walls of the hole.
- To save battery life, it is not recommended to leave the battery compartment with the transducer sensor in the cold for a long time: during operation, it must be completely immersed in water, the temperature of which is always positive, and when not used, in a warm place under clothing.
- For correct depth measurement, the sensor must be placed vertically in the water. It should be remembered that the distance to the bottom (depth) and other objects is measured not relative to the water surface, but relative to the sensor.
- To prevent the sonar from drowning in the pond, we recommend using the Praktik float (attached to a cable) and/or Unibox (see www.rusonar.ru, Accessories section).

ATTENTION! Do not bend the cable too much near the connector and battery compartment, as shown in the figure below. Sooner or later this will damage the internal conductors of the cable. In this case, you will need to replace the connector or the entire kit (connector+cable+battery compartment).



Sonar Control

The sonar is controlled by 4 buttons.



Enabling/disabling sonar

Switch it on by holding the right button for a short time .

Switch it off by holding the right button for a long time .

Open/close MENU

Open the MENU in work mode by holding the right button for a short time . Navigate through the MENU by pressing buttons up  and down .

Activate/deactivate selected menu item by pressing left button .

Exit the MENU by pressing the right button .

Enabling/disabling screen backlight

Enabling/disabling the backlight in work mode by holding the left button  for a long time.

Sensitivity adjustment

To increase sensitivity level in work mode, hold the up button for a long time.



To decrease sensitivity level in work mode, hold the down button for a long time.



Screen scaling up/down

To increase the depth scale in work mode, press the up button



To decrease the depth scale in work mode, press the down button. **Switching ZOOM window on/off**



To switch the ZOOM window on/off in work mode, press the left button  .

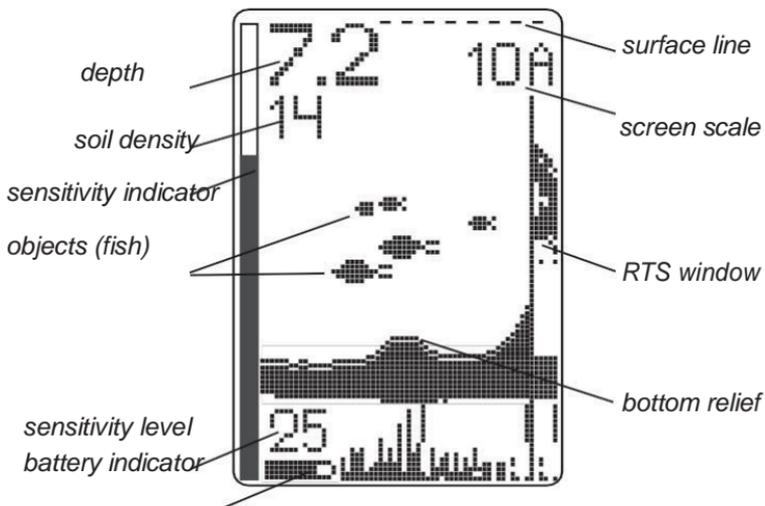
To increase the bottom layer from 1 to 5 meters – press the up button in ZOOM mode. 

To decrease the bottom layer from 1 to 5 meters – press the down button in ZOOM mode. 

Sonar reset

1. Switch off the sonar.
2. Press and hold the left button, and then, without releasing the left button, press the right button once. “OK” appears on the display. Factory settings have been reset.

Sonar screen



Water surface line is displayed as a moving dotted line.

Numerical value of depth is updated four times per second with an accuracy of ± 5 cm for depths up to 10 meters and ± 10 cm for depths from 10 to 25 meters.

Soil density conditionally shows the power of the reflected echo from the bottom and can vary from 0 to 22 units. The larger the number, the higher the soil density (the harder the bottom) and vice versa. With the same reflectivity of the bottom, the density value will decrease as the depth increases, since the signal weakens.

Screen scale (depth scale) is how many meters of depth is shown on the sonar screen. The letter "A" next to the number means automatic scale selection; the letter "M" is manual scale (more details in the Scale section, p. 22)

Sensitivity indicator – the vertical bar visually displays a rough value of sensitivity, and the number above the battery symbol indicates the exact sensitivity level (in digits). Sensitivity can be adjusted in the range from 0 to 28 units. The default value is 10 units. The bar is displayed on the screen only in work mode when the sensitivity adjustment is turned on.

RTS window is the area of the screen (in FISH ID mode), in which all registered echoes from the bottom and other objects are displayed without any processing. Processed information is displayed in the main area of the screen. (bottom line, bottom structures, and fish symbols).

Battery indicator shows the current battery capacity. The battery condition can be estimated more precisely in the "Info" mode, where the battery voltage is indicated in volts. The maximum battery voltage at which the sonar can fully operate is 0.85 V.

SONAR OPERATION

General work procedure:

1. Unscrew the sensor from the battery compartment (counterclockwise). Insert a battery into the battery compartment observing the polarity (the plus sign on the battery should be at the bottom of the battery compartment). Replace the sensor by turning clockwise. To seal it, just tighten the sensor by hand.
2. Press the right button . Praktik 6 screen saver will appear on the screen, and the screen backlight will turn on for a couple of seconds. After a few seconds, the device will go into operating mode.

ATTENTION! After installing the battery, it is recommended that you reset the device so that the factory settings are set in the device:

Scale	Auto zoom mode
Sensitivity level	10 units
Manual screen scale	7 meters
Screen view	Fish ID mode and RTS window
Sound and fish identification	on
ZOOM	2 meters
Deaf zone	0.5 meters
Winter/summer mode	Summer

3. Using the cable, lower the sensor into water. In winter, it is advisable to lower the sensor below the ice edge to prevent excessive cooling of the battery, as well as to avoid the appearance of false signals reflected from the vertical walls of the hole. After the sensor contacts the water, microbubbles may appear on its sensitive surface, which can strongly disperse the recorded signals and thereby reduce sensitivity and distort the true picture. Bubbles must be removed by dipping the sensor in water several times, or wiping the surface of the sensor.
4. If the sensor is stationary, then the bottom of the screen will be displayed as a straight line.
5. If the sensor is mounted on a moving boat, the bottom topography and bottom structures under the boat will be drawn on the screen. If fish and other objects swim through the beam cone, marks will appear on the screen at the appropriate depth.
6. If there are too many signals in the RTS window, reduce the sensitivity.
7. If the sonar has been operating for more than 4 hours, and during this time none of the buttons have been pressed, the sonar will automatically turn off.

! ***ATTENTION! Do not leave the battery in the battery compartment for a long time, as even in the off state, the sonar consumes battery power. In this case, power consumption is little to none, but gas is still released, and excessive pressure inside the battery compartment can damage it..***

SONAR SETUP MENU

Use MENU to control the work modes and fine-tune the sonar.

1-1	1-2	1-3
Menu	Menu	M e n u
Fish ID	Zoom Usual	Sound On Display
Scale Auto	Conditions Summer	Usual
NOF 3	Depth 0.5 m	

After entering the MENU, the first menu item – MODES – appears on the screen. To move to the next menu item, click the “up” or “down” buttons. To enter the desired MENU item, press the left button and then use the “up” or “down” buttons to select a parameter/value. To save the selected parameter/value, press the left button again. Exit the MENU by pressing the right button, or it closes automatically after 15 seconds. After that, the work mode screen will appear.

MENU:

- **MODES** (Fish ID, Pro, Flasher, Depth gauge, Shallow water, Demo, Info);
- **SCALE** (manual and automatic);
- **NOF** (1, 2, 3, 4, 5, 6);
- **ZOOM WINDOW** (regular, wide, narrow);
- **CONDITIONS** (summer, winter);
- **DEAF ZONE** (0.2, 0.5, 1.0, 1.5, 2.0);
- **SOUND** (on/off);
- **DISPLAY** (regular, +/-180 degrees).

The settings made in the MENU are saved when you switch to another mode, as well as when you turn off the sonar or replace the battery.

When replacing the battery, is the sonar is **NOT SWITCHED OFF**, user settings are **not saved!** With such manipulations with the battery, all settings will return to the factory default settings (reset).

INFORMATION DISPLAY MODES

This MENU item allows you to select the best mode for displaying information on the screen.

- **FISH ID** – mode for detecting fish (displays fish outlines)
- **Pro** – professional mode (raw information)
- **Flasher** – for monitoring the tackle and the fish approaching it
- **Depth gauge** – accurate depth and spot measurement at the bottom
- **Shallow water** – shallow water mode
- **Demo** – mode for outdoor work

- **Info** – information about the device

FISH ID

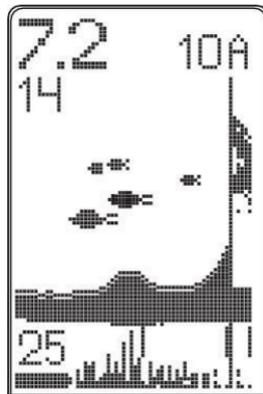
The mode of processed information, in which the sonar identifies objects such as fish and, when detected, displays the corresponding icons.

In this mode, display is divided into two unequal parts. In the main window (left), the processed data (bottom, bottom structures, fish symbols) are displayed, and in the right (RTS window) – all information received by the sonar without any processing (the so-called "raw data"). In the RTS window, you can observe echoes from all objects in the beam area. For example, a vertically falling load (feeder) will be clearly visible in the RTS window, but it will not be defined as a fish, and there will be no fish outline on the screen.

Fish is defined not as a biological object, but as an object with a body density (scale, skeleton, bones, swimming bladder) different from the density of water. Accordingly, the stronger the signal, the larger the fish the sonar will show.

In FISH ID mode, three fish sizes can be displayed on screen.

The fish recognition algorithm incorporated in the Praktik sonars is based on measuring the nature of the movement of an object caught in the beam. If the nature of this object's movement satisfies the algorithm criteria, then the fish outline appears on the screen.



For this reason, not all objects are considered a fish, but only those satisfying certain conditions, due to which the sonar can sometimes “miss” real fish or, on the contrary, take another object for it (for example, tackle).

Note that air bubbles from the boat’s motor or water swirls can also be mistaken for fish by the sonar because of their high reflectivity and motion.

For correct fish identification, a correctly set sensitivity level is of great importance.

With an increased level of sensitivity, especially in summer, when the sonar can even register flowering water, thermoclines, or suspended particles during boat sail, it is likely that these heterogeneities may appear on the screen in the form of fish symbols. Shoals of fish juveniles can also cause large fish outlines to appear on the screen. Decreasing the sensitivity will allow you to filter out these "interfering" factors. It is impossible to give specific recommendations on setting the sensitivity level, since the conditions of various water bodies differ significantly.

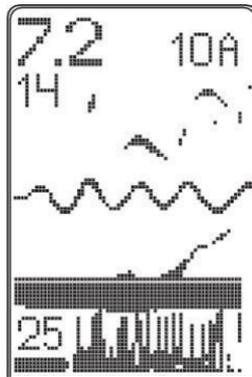
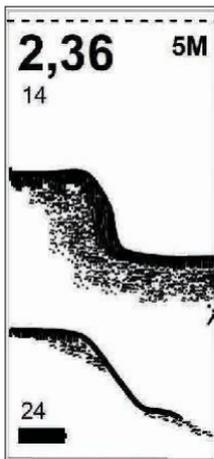
Displaying information on the screen

The fish contours that appear next to the RTS window (on the left side of the screen) are the fish that are currently located in the beam cone area. Further, these contours move from right to left on the screen. With a frequency of 4 Hz per second, the picture moves to the left, and this data is already referred to as the “history.” For example, if the fish symbol is in the middle of the screen, it means that the fish was in the beam 10 seconds ago.

Pro (professional mode)

In Pro mode or raw information display mode, the entire screen is used for demonstrating raw data. The sonar does not try to recognize fish, but shows all the reflected signals that it was able to register. This mode is most useful for experienced fishermen, because it allows them to see their tackle under water, detect thermoclines, algae and other objects, and better understand the structure of the water column.

All objects in this mode are displayed with stripes, arcs, and pixels.



The picture on the screen will depend on the sensitivity level.

For example, if you want to watch the moving of your tackle on the sonar screen, you need to lower the mormyshka (other tackle) into the hole to an average depth or closer to the bottom and increase the sensitivity until the signal from the tackle appears on the screen.

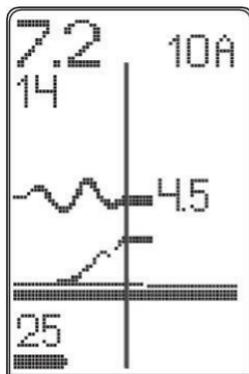
In Pro mode, you can often see information lying "below" the bottom on the screen. For example, at shallow depth and maximum sensitivity, not only the "second" bottom may appear (as shown on the left), but also the "third" one. This picture occurs when a signal is reflected several times from the bottom and the water surface (the so-called signal re-reflection) when setting the scale to more than twice the bottom depth.

In the above figure, a scale of 5M is selected with a bottom depth of 2.36 m.

Flasher

Flasher mode is designed to monitor objects in real time. This mode will be ineffective at shallow depths (2-3 meters), but working in deep water will allow to observe real pictures of the bait movement and, most importantly, the fish's reaction to these actions.

In Flasher mode, the screen is divided into two equal parts. On the left is the "history" window, which displays unprocessed signals (like in Pro mode), observed by the sonar. The Flasher is on the other half of the screen: each time the screen is refreshed (4 times per second), it draws wide strips of marks of all detected objects, including the bottom. Next to the mark about the largest detected object, its depth is displayed. The figure below shows how the position of the balancer, which is currently at a depth of 3.4 meters, has changed.



The largest object is not digitized over its entire depth, but only starting from 1.5 meters from the surface or the deaf zone value. This measure was taken to reduce the influence of near-surface signals.

Due to the large bandwidth, signal marks are more noticeable than regular echoes in Pro modes, and the increased sampling frequency allows to display information nearly in real time.

To fine-tune the operation of this mode, select the sensitivity. To do this, we recommend lowering the balancer (or other gear) halfway or closer to the bottom and select the sensitivity so that your tackle is confidently visible on the screen.

Flasher mode is recommended for winter fishing, as in summer, there will be more disturbing factors when working from a boat.

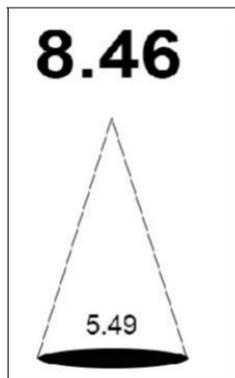
Depth Gauge

The Depth Gauge mode is intended not only for accurate depth measurement, but also for displaying the diameter of the sonar beam spot at the bottom (“trace” of the sonar). In this mode, sounding and signal processing are significantly different from measuring depth in other sonar modes. Depth measurement is especially

accurately performed in difficult conditions, such as shallow water and overgrown ponds. No fish or other information on the water column is displayed in Depth Gauge mode.

The sensitivity, depth scale and other parameters of the device are selected automatically depending on the conditions in the water body. Deaf zone is always set to 0.5 m.

The diameter of the sonar spot at the bottom is measured in meters below the base of the cone.



*Screen view
in Depth Gauge mode*

Shallow Water (SW)

The SW mode is designed to work at shallow depths (2 meters or less). In this mode, the power of acoustic signals is significantly reduced, which helps to avoid reflected signals and obtain more reliable and understandable information on the display. Sensitivity adjustment will also work.

The device can measure depth at depths greater than 2 meters, but in this case, high sensitivity cannot be achieved.

! ***ATTENTION! In SW mode, there is no fish identification! The sonar works as in Pro mode. By default, in SW mode, deaf zone is set to 0.5 m.***

Demo

The Demo mode designed to test the performance of sonar in the air, without immersing it in a water reservoir.

1. Turn on the sonar, go to the MENU, select Demo in the Modes section, and activate it.
2. Hold it by the cable (!) above the battery compartment for 20-30 cm so that the sensor is strictly vertical to the floor. Then raise the sensor at a distance of 0.5-1.0 m from the solid surface (floor). When it stops swinging, an even strip of "bottom" will be drawn on the screen; the indicator will show the exact distance from the sensor to the floor in centimeters. When slowly lowering or raising the sensor, the "depth" will change.

In Demo mode, the fish identification mechanism does not work, and there are no fish symbols on the screen.

The device is considered operable if, as described above, it is possible to confidently record the distance between the sensor and the floor of 1.3-1.5 meters or more. If no depth is recorded to these distances (zeros on the screen), then the device has poor sensitivity (electronics or sensor problem). We recommend contacting the service center for advice or restoration of the device's working conditions.

The signal reflected from a carpet and other hairy surface is too weak, so the device will not be able to "see" such a surface. In addition, tests should be carried out at a sufficiently large distance from powerful electrical appliances (computers, televisions, etc.), since they can create significant electromagnetic interference.

Info

If you switch to this mode, the following information will be displayed on the screen of the device: model, firmware version, processor temperature, battery voltage in volts, sonar manufacturer contacts.

SCALE

The scale shows how many meters of depth fits on the sonar screen.

In the MENU, you can select automatic or manual scaling mode.

ПРАКТИК

6 Pro 2

V 2.0

Бат 1.24 В

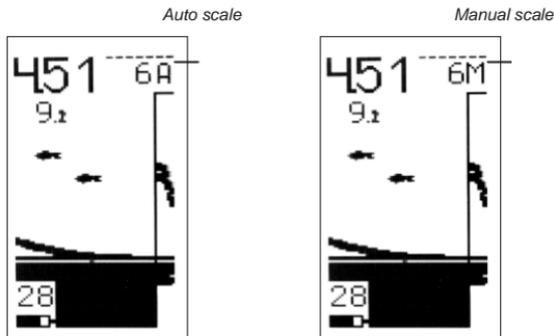
21°C

rusonar.ru
84955141173

*Screen view
in Info mode*

Automatic and manual screen scaling modes are determined by the presence of the letters "A" or "M" in the upper right corner of the display next to the scale indicator.

Automatic scaling mode (Auto) allows the device to independently determine the scale when changing the depth of the reservoir. When you move in a boat (for example), the device will automatically switch to the desired depth scale, accompanied by a double beep, and separate portions of the image with different scales by a vertical dash.



In this case, the bottom line will always be at the bottom of the screen.

In **manual scaling** in work mode, the depth scale can be increased or decreased by the up and down buttons. If you set the depth value manually, the sonar will not change the scale, even if the bottom line drops below the screen border. This mode is useful if the water is dirty and contains a large number of air bubbles, algae, and large sedentary fish swimming significantly closer to the surface than the bottom.

In such conditions, false switching of the device to an incorrect, inappropriate scale is possible (this happens when garbage or fish is taken for the bottom).

NOF (Noise and Object Filter)

The correct application of this parameter allows to get a more decipherable picture for a given place on the sonar screen. Six NOF values are available for selection, from 1 to 6. The higher the NOF value, the less sensitive the device. That is, at high NOF values, the smallest objects will not be displayed on the screen; their echo signals will be jammed. Conversely, the lower the NOF, the smaller objects will be displayed. The default NOF value is 3.

In this case, at each NOF level, gain can be adjusted using the sensitivity scale. Combining sensitivity adjustment (from 0 to 28 units) and NOF (from 1 to 6 units), you can always achieve the desired image on the screen.

Using the NOF adjustment, you can also select the desired width of objects in the ZOOM window. With NOF=1, objects are displayed with wide lines, with NOF=5 or 6, objects are displayed with narrow lines or not displayed at all in the ZOOM window.

ZOOM WINDOW

The ZOOM mode is intended for a detailed examination of the bottom layer, or rather, objects located in this layer.

To enable ZOOM, press the left button in work mode.

When ZOOM is turned on, the screen is divided by a vertical line into two equal parts. The bottom area is displayed on the right side, and the usual processed or “raw” (depending on the selected display mode) information is displayed on the left along the entire route from the surface to the bottom.

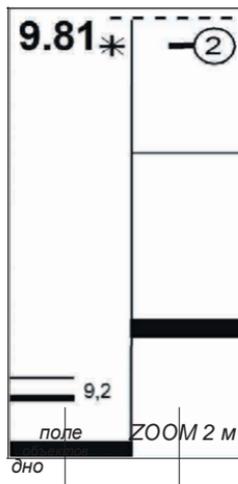
When the ZOOM mode is on, a magnifying glass icon with a number in the middle appears in the upper right corner of the screen (instead of scale value). The digits in the magnifying glass icon indicate the height of the ZOOM window. You can increase and decrease this value with the up and down buttons (1, 2, 3, 4 or 5 m).

To change the ZOOM window width, select one of the values in MENU in the ZOOM window section: normal, wide, or narrow.

There are differences between the ZOOM function in WINTER and SUMMER modes.

In summer, when you move on a boat, the scale switches when the depth changes; various bottom structures are displayed; the ZOOM window can be filled with bottom objects by half, or even more. For this reason, it will be problematic to get useful information on the sonar screen.

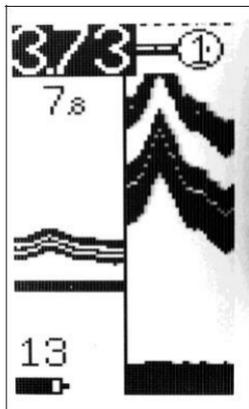
In winter, the ZOOM mode is more in demand in a hole in stable conditions. The bottom of the screen corresponds to the bottom line, “frozen” at a depth, at which ZOOM was turned on.



If you lower the sensor in the hole a little deeper, the bottom line in the ZOOM window will rise. This allows a more detailed examination of the bottom region.

IMPORTANT! When moving to another hole (different depth), press the left button twice to turn ZOOM on again for a different depth.

The ZOOM mode is useful when working at great depths from 8-10 meters, because at such depths, it's not easy to see what is near the bottom due to the low resolution of the screen. For example, at a depth of 20 meters, an object with a size of 15 cm will be displayed on the screen with one pixel, and in the ZOOM window (1 meter), the same object will be drawn with 30 pixels.



SUMMER/WINTER CONDITIONS

Operation of the sonar in the summer and winter periods differs not only in temperature conditions, but also in the water body conditions. In summer, water becomes overgrown, there are a lot of micro suspensions and thermoclines in the water column, and in winter, the hole and ice accumulations of micro bubbles and debris influence the operation of the sonar. Depending on the water temperature, the propagation speed of acoustic signals in water also changes. For ease of use, it is possible to choose winter or summer modes of operation, in which the developers take these seasonal features into account. If the winter mode is selected, the depth values will be displayed in a black rectangle (a hallmark of the WINTER mode).

DEAF ZONE

This parameter causes the device to ignore any objects located in the upper layer of water. There are fixed values: 0.2, 0.5, 1.0, 1.5 and 2.0 m.

The dead zone adjustment allows to cut off unwanted echoes in the surface layer. Depending on the deaf zone value, the sonar will not register echo signals in this area. For example, in summer, when water becomes overgrown, the echo from the microflora surface can even exceed the signal from the bottom; in such a situation, the sonar will not be able to correctly provide information about the depth and objects in the water column. In winter, air bubbles that accumulate under the ice can be a problem.

When is it recommended to change the deaf zone value?

- If the depth reading is unstable, values less than 1 m are often displayed, although the depth is actually more than 1 m.

It is necessary to increase the deaf zone by one step (for example, from 0.2 to 0.5 or from 0.5 to 1.0).

- If it is necessary to observe the tackle at a great depth (15-25 m). In this case, in order to clearly display the tackle movement on the screen, it is necessary to increase the sensitivity, but this will lead to the formation of interference from ice.

Therefore, the deaf zone value should be increased.

- When working in the Flasher mode at depths greater than 5-7 m, it is recommended to set the deaf zone to 1.0, 1.5, or 2.0 m.

If the set value of the deaf zone in low tide exceeds the actual depth of the reservoir, the device will not be able to determine the true bottom, because the signal reflected from it will be ignored, and the signal will be reflected from the real bottom. For example, if the deaf zone is set at 1.5 m, and the

reservoir depth at 1.4 m, the depth of 2.8 m will be displayed on the sonar screen. Therefore, it is necessary to reduce the deaf zone by one step, i.e. set it at 1.0 m.

SOUND

This MENU item allows you to turn off the sound altogether, turn on the notification of switching the scale and/or the appearance of detected fish on the screen.

The notification of fish detention is relevant only in the FISH ID mode. When the device detects a fish and draws a corresponding icon, it will emit a sound signal.

In the Pro, SW, Flasher, and Depth Gauge modes, there is no fish detention notification.

DISPLAY

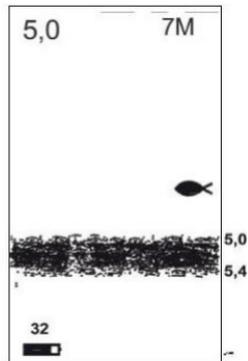
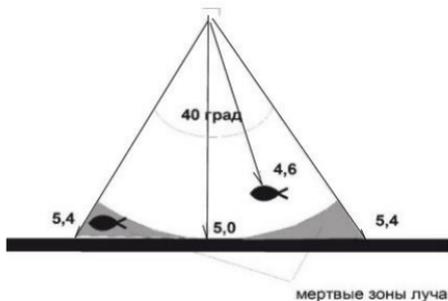
If necessary, the sonar screen can be rotated 180 degrees. This is relevant when, for convenience, you need the cable connector to be located at the bottom of the sonar, and not at the top.

GENERAL RECOMMENDATIONS

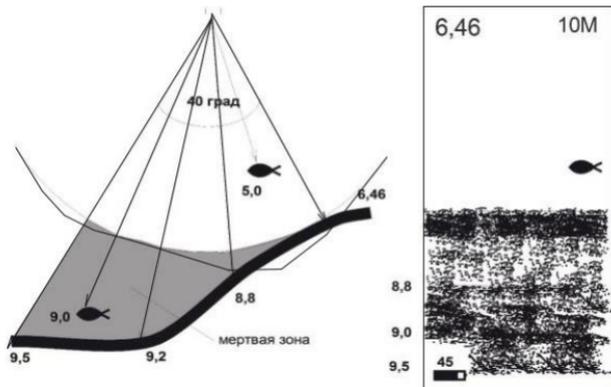
-
- The figures given in the description are simplified and intended to facilitate understanding of the sonar operation. In fact, the number of objects captured in the beam depends on the nature of the reservoir, season, weather conditions, and other factors.
-
- If maximum sensitivity is set, but the sonar starts to show zeros instead of depth, and the bottom of the screen looks like a thin dashed line or is completely absent, this means that for a given spot of the reservoir, the power and sensitivity of the device are not enough. Such a situation arises very rarely, usually at depths close to the limit (20–25 m), and with a very muddy bottom having a weak reflectivity.
-
- Often, the device can take it for a large fish giving a more powerful signal. A characteristic feature of this case is an abrupt decrease in depth by several measurements with its subsequent return to the original value. In Depth Gauge mode, the sonar selects the optimal power and gain mode. If you need only accurate depth measurements, and information about other objects is of little interest, then we recommend working in this mode.
-
- It is strongly recommended that you do not use cheap salt batteries, but use alkaline batteries instead: one such fresh battery is usually enough for several fishing trips. When working in extreme cold, it is better to use lithium AA batteries. The use of suitable storage batteries is possible, but it should be remembered that the voltage of even a fully charged storage battery is less than that of a regular battery, and other things being equal, it will last for less time.

In addition, some storage batteries may be more sensitive to frost.

- If you are sure that the fish is in the beam cone, but there are no fish contours on the sonar screen (in Fish ID mode), then there may be several reasons: if objects are observed in the RTS window and there are no fish outlines, then it is possible that they are not fish, or the fish's movements do not meet the criteria of the algorithm stored in the sonar's memory (it is better to switch to Pro mode). If there are no objects in the RTS window, you need to increase the sensitivity until they appear. If this does not help, it is most likely that the fish is near the bottom, and the sonar does not see the fish because of the nature of the bottom and bottom structures, or the fish is in the "dead zone" of the beam (not to be confused with the deaf zone!).



The beam's "dead zones" can be very large if you are on slopes or shelf breaks.



- In rubber and metal boats (without a double bottom), you can use the device directly through the bottom of the boat. To do this, pour some water into the boat (to create a reliable acoustic contact) and press the sensor to the bottom.
- Depth measurement through ice is possible on the first ice when it is homogeneous, without air bubbles and frozen snow. In this case, it is necessary to ensure reliable acoustic contact between the sensor and the ice (pour water on the ice or melt a small spot of ice under the sensor with a lighter).
- When the sensor is immersed deeply under water (about a meter or deeper), it is possible to register signals reflected from the surface of the water, and not from the bottom.

- In winter, it is better to replace the battery at home in the warmth so that frosty or humid air does not enter the battery compartment, causing condensation. This will not affect the operation of the device, but will accelerate the discharge of the battery. In winter, it is nice to have some silicone grease between the O-ring and the battery housing.
- With prolonged exposure to frost (-15, -20 °C and below), the sonar screen can “slow down” or display an image with low contrast. In this case, the device needs to be warmed, for example, by placing it under the clothes for a while.
- Soil density of the bottom displayed in relative units under the depth value provides additional information about the bottom and bottom structures. If these readings change all the time, then there is an inhomogeneous bottom surface with developed near-bottom structures under the sonar. If the values are stable, then the bottom is most likely flat and uniform. The larger the number of soil density at a constant depth, the harder the bottom.
- Automatic scale mode is preferable for use in motion, since it eliminates the need for manual intervention when the bottom line leaves the screen. In winter, when a fishing spot is found and a hole is selected, it is recommended to manually set the scale to a depth slightly greater than the bottom depth: this will improve the stability of the device.
- At shallow depths (from 0 to 2 m) or if there is a large number of long algae, the sonar may show depth incorrectly. In this case, we recommend switching to SW or Depth Gauge mode. Thus, the stability and accuracy of readings will improve significantly.

- It is useless to try to measure the depth in a small container, for example, in a bath or bucket. For correct operation, the device requires a large volume of water, since the sensor signal is not narrowly targeted and will be reflected many times not only from the bottom, but also from the walls of the vessel.
- In summer, do not leave the sonar in direct sunlight for a long time, as its liquid crystal display may lose its efficiency.
- Do not bend the cable too much near the connector and battery compartment. Sooner or later this will damage the internal conductors of the cable. In this case, you will need to replace the connector or the entire kit (connector+cable+battery compartment).

Due to the continuous improvement of the device design and its operation algorithms, slight differences in the parameters of your sonar from those specified in this manual are possible.

POSSIBLE MALFUNCTIONS AND TROUBLESHOOTING

Malfunction: *the sonar shows zero depth.*

Additional attribute: the device turns on and off normally with the right button.

Cause	Solution
Insufficient sensitivity	Increase sensitivity
Sensor loosely screwed into the battery housing	Screw on the sensor more tightly (manually, without tools)
Signal cable break	Contact an authorized service center

Malfunction: *image on the screen blinks and/or freezes, or the device itself turns on and off.*

Additional attribute: the battery icon shows its low charge.

Cause	Solution
Low battery	Replace the battery. If it does not help, contact the service center

Malfunction: depth readings may be two or three times different than the actual depth.

Additional attribute: two bottom contours are visible on the screen (the manual scaling bar should be large).

Cause	Solution
- Shallow depth; - Incorrect deaf zone and sensitivity	Set the deaf zone to 0.5 m or 0.2 m and reduce the sensitivity level to 1-2 units

Malfunction: the screen is “noisy”, there are too many objects.

Additional attribute: depth readings randomly changing.

Cause	Solution
- Sensitivity set too high; - "Littered" pond (a lot of suspended matter, garbage, fry, etc.)	1. Reduce sensitivity. 2. Increase the deaf zone. 3. Increase NOF by 1-2 units.

Malfunction: zero depth readings. No bottom line at all scales.

Additional attribute: fish outlines and depths sometimes appear.

Cause	Solution
<p>Depth under the sensor more than 25 m or heavily silted bottom.</p> <p>The depth value is the distance to the fish that have swum close enough to the sensor.</p>	<p>Move the sonar to a more suitable location (with shallower depths corresponding to its capabilities)</p>

Malfunction: chaotic depth readings on screen.

Additional attribute: bottom line disappears.

Cause	Solution
<ul style="list-style-type: none"> - The sensor is not completely immersed in water; - Bubbles have stuck to the sensitive area of the sensor 	<p>The sensor must be completely immersed in water and its surface should be free of air bubbles.</p>

Malfunction: drops of water appear in the battery compartment.

Additional attribute: screen image may be unstable.

Cause	Solution
<ul style="list-style-type: none"> - The sensor is loosened; - The battery was installed in the cold, which led to the formation of condensate 	<p>Dry the battery compartment. Install the battery in a warm room. Lubricate the silicone ring with silicone gel or petroleum jelly. Screw the sensor firmly into the battery housing.</p>

Malfunction: the sonar does not detect fish in Fish ID mode.

Additional attribute: there are no signals in the RTS window.

Cause	Solution
- low sensitivity; - bottom structures do not allow sonar to register fish	Increase sensitivity until signals appear in the RTS window.

Additional attribute: there are echo signals in the RTS window.

- other objects, not fish, are visible in the RTS window; - the fish is stationary or the nature of its movement does not meet the identification criteria	This is not a malfunction. It is recommended to work in Pro mode.
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WARRANTY

Warranty period is 12 months.

Service life is 5 years.

The warranty period of the goods, as well as their service life is calculated from the date of the goods are sold to the buyer. If it is impossible to establish the day of sale (the seller did not issue a warranty card and/or sales receipt), this term is calculated from the date of production of the goods (Art. 19 item 2 Law on Consumer Protection of 07.02.1992 No.2300-1 (as edited on 18.04.2018)).

Warranty obligations for the acquired sonar are fulfilled only provided that:

- the sonar is used in accordance with this Instruction;
- warranty card that was filled at the time of sale is presented (specifying the model, serial number of the device, date of sale, stamp of the supplier and trade organization).

Warranty obligations ARE NOT FULFILLED in case of:

- violation of the rules of operation of the device;
- mechanical damage (breaks and failure of cable insulation, cracks in the case, chips and cracks on the sensor, etc.), as well as damage to electrical contacts, connections, connectors;
- thermal damage to the device or its components;
- signs of self-repair or maintenance at unauthorized service centers (broken internal seal of the case, no serial number, etc.).

During the period of the official manufacturer's warranty, product service is carried out in authorized service centers, the addresses of which are indicated on the websites www.rusonar.ru/service/centers/ (section "Service and repair – Service centers") and www.praktik-service.ru.

Main service center in Zelenograd:

31 Zavodskaya Street, Build. 1, Zelenograd, Moscow 124365, Praktik-NZ LLC

Tel.: 8 (916) 863-45-06

E-mail: service@rusonar.ru

PRAKTIK-NZ LLC CONTACTS

Praktik-NZ LLC

Address: 31 Zavodskaya Street, Build. 1, Zelenograd, Moscow 124365, Tel./fax: (495) 514-11-73, 8 (910) 421-16-16

E-mail : praktik@rusonar.ru

Website: www.rusonar.ru

CONTENTS OF DELIVERY

- Praktik 6 sonar - 1 pc.;
- AA battery - 1 pc.;
- User's manual - 1 pc.



ПРАКТИК

WARRANTY CARD

Quality claims are not accepted and warranty service is not provided without presenting this coupon or if it is incorrectly filled.

Sonar model Praktik 6

Serial number _____

Date of issue _____

Seller name _____

Date of sale _____

seller's
seal

SERVICE NOTE

Date of repair _____

Date of issue from repair _____

Repairs _____

Expert name _____

service
center seal