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INTRODUCTION

Congratulations on your purchase of the Bottom Line[®] FISHIN' BUDDY 2255! You now own one of the world's most portable fishfinders, with completely self-contained electronics and the unique fish-finding advantage of Bottom Line's patented Sidefinder[®] Technology. Using the Buddy is easy and fun. Just attach the C-clamp mount to your favorite boat, canoe, dinghy or even to a dock and start fishing. The Buddy is an ideal tool for ice fishing and float-tubing as well.

What You Should Have

- ✓ Display unit with extendable transducer.
- ✓ Battery handle.
- ✓ Mounting clamp bracket.
- ✓ Users manual and warranty card.

GETTING STARTED

The Buddy is easy to use:

- 1. Install fresh batteries.
- 2. Attach the mounting bracket to a stable surface.
- 3. Extend the shaft and slide the Buddy into the bracket.

Then press the power button and start fishing!

How to Install the Batteries

The Buddy requires three alkaline "C" size batteries (not included) for operation. For easiest battery installation, lay the Buddy down on a flat surface, with the open battery-compartment handle facing upward as shown in Figure 1. Place the batteries in the battery holder with their (+) terminals *all toward the red wire.* Then, place the battery holder in the compartment and turn the handle into the face clockwise just enough to compress the o-ring.

- Caution: If the o-ring supplied with the handle is not present and seated properly, the handle may come loose during use.
- This blinking symbol at the top of the screen indicates low batteries. When the batteries are fully spent, the Buddy will turn itself off.



Figure 1. Buddy with battery holder and handle

Caution: Always remove discharged batteries promptly and all batteries before periods of storage to prevent potential damage due to battery acid leakage. Failure to do so may void your warranty.

How to Attach the Mounting Bracket

The Buddy unit should be mounted where it will be most visible and accessible. There are two ways to attach the Buddy mounting bracket; the built in c-clamp or the four permanent mounting slots in the base (see Figure 2). The mounting slots accept $\frac{1}{4}$ " screws or bolts (not included). When considering a spot to mount your Buddy, keep in mind these tips:

- The Buddy's transducer (see Figure 7 on page 12) will not work when it is not in the water.
- Turbulent water or water filled with air bubbles can cause interference or prevent the transducer from operating.



Figure 2. Buddy mounting bracket

The c-clamp is the most versatile and portable way to mount the Buddy to your boat. Loosen the c-clamp by turning it counter-clockwise and then place the bracket around the gunnel or transom, resting it on the top surface (or as far down as possible). Then, tighten the c-clamp by hand.

Caution: Do not over-tighten the c-clamp or permanent damage may occur. If the mounting bracket is not stable after tightening by hand, try repositioning the bracket.

How to Extend the Shaft

Once the bracket is in place, slide the Buddy shaft through the bracket and observe how deep the end of the shaft rests in the water. For proper operation, the transducer at end of the shaft must be at least 8 inches below the water surface. To extend the shaft, turn the collett (see Figure 1) until the inner shaft slides freely. Extend to the required length and then retighten the collett. Then, use the pivot adjustment knob to set the shaft vertical and true.

- Note: The inner shaft will come completely out, allowing you to turn the transducer 180°. Be sure that the Sidefinder beam (see Figure 7) is pointed in the direction that you are looking for fish with the Sidefinder feature.
- Note: Make sure that there are no air bubbles on or around the transducer when it is in the water. You can remove the air bubbles by rubbing your hand on the plastic. Periodically clean the transducer with soap and water to remove oil build-up. Oil and debris will reduce the sensitivity and may inhibit transducer operation altogether.
- Caution: Over-extension of the shaft may cause excessive pressure on the mounting bracket if the boat is moving. Remove the Buddy from the bracket before driving the boat.

Start fishing!

The Fishin' Buddy is designed to run automatically with just a press of the power button. To get the most out of your Buddy, read the next section on functions and features.

BUDDY FUNCTIONS AND FEATURES

The best way to get familiar with your Buddy is to power-up in demo mode and start pressing buttons. You won't hurt anything by doing so, but you may lose or mess-up some settings. Don't worry. Your Buddy has a reset feature that restores everything back to factory settings.

POWER button

- **POWER ON:** *press and release* the **POWER** key
- **DEMO MODE (at power on):** *press and hold* the **POWER** key.
- **POWER OFF:** *press and hold* the **POWER** key until the display goes blank.
- Note: The Buddy remembers your previous settings every time you power it on again.

MENU button

The Menu button is used to set and adjust all of the Buddy's features. When you press this button, a menu will be displayed at the bottom of the screen. To get to more feature menus, keep pressing the menu button. If you go past the last feature, the menu will be removed from the screen.

When a menu is displayed, press the \uparrow and \checkmark buttons to change the setting. Then, press the \Rightarrow button to accept the new setting, or press the \Leftarrow button to escape with no changes. Pressing the \Leftarrow or \Rightarrow button also removes the menu from the screen.

A[™] Tip: When no menu is displayed, press and hold the ↑ or ↓ button to freeze the graph.

CONTRAST – Contrast is the darkness or lightness of the display. Both your viewing angle and the ambient temperature affect the contrast.

Operation: Press the Menu button until **CONTRAST** appears. Use the \uparrow and \checkmark buttons to adjust the contrast, then press \rightarrow to clear the menu.

- Caution: Facing the screen toward the sun for extended periods may cause the display to reach its upper temperature limit and become black. If this occurs and you cannot adjust it lighter, *immediately* cover the screen or turn it away from the sun.
- LIGHT The Buddy has an adjustable display backlight. To conserve battery life, you should use the backlight only when it is really needed.

Operation: Press the Menu button until LIGHT appears. Use the \uparrow and \checkmark buttons to adjust the light, then press the \rightarrow button to clear the menu.

This blinking symbol in the upper-left corner of the display will remind you that the light is on.

FISH ALARM – The bottom fish alarm chimes and displays fish symbols for echoes that are likely to be from fish (see Figure 3). The depth of the fish symbol is also shown if there is room on the display. Three sizes of symbols are used to indicate the relative signal strength of the echo, with the largest representing the strongest echo (for more information, see 'How Your Buddy Works' on page 10).

Operation: Press the Menu button until **FISH ALARM** appears. Use the \uparrow and \checkmark buttons to choose the fish size (no fish means the alarm is off), then press the \Rightarrow button to clear the menu.

These symbols at the top of the screen indicate what strengths you have chosen for the fish alarm.

Whenever the bottom fish alarm is on, the Sidefinder fish alarm is on too, and chimes when the symbols appear in the cone.

- **Note:** A timer function prevents the alarm from chiming too often.
- **GAIN** The gain control sets the graph's overall sensitivity to echoes. Generally, higher gain means that more fish and structure are shown. Lowering the gain may help reduce interference caused by trolling motors and other sources of noise.

Operation: Press the Menu button until **GAIN** appears. Use the \uparrow and \checkmark buttons to set the gain, then press the \rightarrow button to clear the menu.

- Tip: Use as much gain or as little gain as you want, but remember that the bottom depth readout may not work under all settings.
- **SURFACE** The surface clutter control is used to reduce interference at the top of the graph that can be caused by wind chop and other air churned into the water. Turn the surface clutter control on if this interference becomes so severe that the Buddy interprets it as the bottom reading.

Operation: Press the Menu button until **SURFACE** appears. Use the \uparrow and \checkmark buttons to turn it on or off, then press the \rightarrow button to clear the menu.

- Note: Turning on the surface clutter control may inhibit shallow-water bottom readings.
- **BOTTOM RANGE –** The bottom range control allows you to set how deep the bottom graph will display. The bottom range is displayed in the upper-right and lower-right corners of the graph (see Figure 3).

In automatic mode, the Buddy sets the graph range to graph from the water surface down to just below the bottom.

■ This symbol in the upper-right corner of the display indicates automatic range mode.

You may want to set the range manually if the bottom reading becomes unreliable or if you are only interested in seeing the top portion of the water. In this case, the $\mathbf{\hat{H}}$ symbol will disappear indicating that you set the range yourself.

In bottom-tracking mode, the Buddy sets the range to graph the 10ft (3m) of water just above the bottom. This zoomed-in graph is useful for determining bottom features and for marking fish lying close to the bottom.

E This symbol in the upper-right corner of the display indicates bottom-tracking mode.

Operation: Press the Menu button until **BOTTOM RANGE** appears. *Press and release* the \uparrow or \checkmark button to select automatic or bottom-tracking mode, or *press and hold* \uparrow or \checkmark to set a manual range, then press the \rightarrow button to clear the menu.

SIDE RANGE – The Sidefinder range control allows you to set how far to the side the Buddy will display fish. If you are casting, you'll probably want to choose a close range to get the maximum detail in the cone. The Sidefinder range is displayed in the upper-left corner of the display (when the Sidefinder feature is on, see Figure 3).

Operation: Press the Menu button until **SIDE RANGE** appears. Use the \uparrow and \checkmark buttons to set the range, then press the \rightarrow button to clear the menu.

SIDE FILTER - The Sidefinder filter is used to reduce false markings from submerged objects like pier poles and submerged branches. The filter is best used around docks and other shoreline structures where false markings might occur. In most situations, and especially in open water, the best performance is obtained with the filter turned off. For more information, see page 12.

Operation: Press the Menu button until **SIDE FILTER** appears. Use the \uparrow and \checkmark buttons to turn the filter on or off, then press the \rightarrow button to clear the menu.

- This symbol in the upper-right corner of the display indicates that the Sidefinder filter is on.
- **Note:** The Sidefinder will show fewer fish with the filter on.

UNITS - The Buddy can display in either U.S. or metric units for both distance and temperature.

Operation: Press the Menu button until **UNITS** appears. Use the \uparrow and \checkmark buttons to choose either U.S. or metric, then press \rightarrow to clear the menu.

RESET – This feature resets most menu settings back to the factory defaults. Try using reset when the Buddy does not appear to be working properly and you are not sure if the problem is in the settings.

Operation: Press the Menu button until **RESET** appears. Use the \uparrow or \checkmark button to reset the settings, then press the \rightarrow button to clear the menu.

SCREENS – The screen menu selects between the four displays (see below).

Operation: Press the Menu button until **SCREENS** appears. Use the \uparrow or \checkmark button to select the screen you want, then press \rightarrow to clear the menu.

Buddy Screens

The Buddy can display the Bottom graph, Bottom & Sidefinder (Figure 3), Directional Sidefinder (Figure 4) or Compass & Status (Figure 5).



Figure 3. Display with Bottom Graph & Sidefinder

Directional Sidefinder®

This screen allows you to keep track of fish around you in *all* the directions that you may have previously scanned. The cone always points in the direction of scanning and therefore shows fish directly in front of you. Turning the BUDDY *while fish are present in the cone* will move them outside the cone and cause them to stay on for the next 30 seconds.

The number in the upper-left corner is the Sidefinder range. The scanning direction indicated at the top center of the screen is the direction the BUDDY is facing.



Figure 4. Directional Sidefinder

Compass & Status

This screen displays the compass needle and direction, plus water temperature, bottom depth and battery voltage.

- ➡ Note: The direction indicated is that relative to the *magnetic North*. The offset from true North varies depending on your locality.
- ➡ Note: The compass is most accurate when the shaft remains vertical.
- ➡ Caution: Never use the Buddy compass as your sole means of navigation.



Figure 5. Compass & Status

How Your Buddy Works

The Buddy uses active SONAR, short for Sound Navigation and Ranging, to locate and identify objects in the water. The transducer at the end of the shaft (see Figure 7) sends out short bursts of ultrasonic sound waves into the water and then listens for echoes to come back from objects and the bottom. The further away the object or bottom is, the longer it takes the echo to return.

These ultrasonic waves "illuminate" the water, forming a beam that is strongest in the direction that the transducer is pointed (see Figure 6). Weaker side-lobes split off from the main beam and with enough gain can be used for finding fish as well. You can calculate the approximate diameter of the main beam on the bottom as the depth divided by five.



Figure 6. Bottom SONAR beam (cross-section)

Reading the Bottom Graph

The bottom graph is created by drawing all of the echoes from a single burst in a vertical column on the display, with the echoes from deepest objects drawn lowest on the display. After all the echoes from the burst are drawn, the graph is shifted to the left and the process is repeated (see Figure 3).

Bottom Graph – Greyscale

The 2255 display uses grey shades to generally indicate the size or density of objects in the bottom graph (see Figure 3). Small fish and sparse weeds are displayed with the lightest grey shade, whereas a hard bottom is displayed in black. In fact, it is the *strength* of the echo that determines the darkness of the image. This can be very useful when you want to know more about the areas you fish. For instance, a bottom displayed as a thick grey line over a dark black line usually indicates weeds and a soft, murky bottom. A thick black bottom with little grey on top usually indicates a clear hard bottom of sand or hard clay.

Note: The size of the object does not always correlate directly with the strength of the signal.

Bottom Graph - Fish

To view the natural echoes from fish and other objects in the water, turn the fish alarm symbols off (see page 6). Many fishermen have heard that an arch is a good way of determining fish, but other objects you troll across may also produce arches.

A better way of determining fish is to watch for subtle patterns on the graph. Solid horizontal lines across the screen are often fish hovering under the transducer. These lines may go up and down suggesting some movement if they are fish. Scattered clusters of pixels are often baitfish. Groups of diagonal lines are often bubbles rising steadily up from the bottom. As you get more familiar with the Buddy and the water that you fish in, you will pick out many other patterns as well.

Finding Fish with the Sidefinder®

The Buddy uses Bottom Line's patented Sidefinder technology to scan where you cast and, with good accuracy, determine which echoes are from fish and which are from other objects. Fish that are startled by your boat and move away would not be seen with a conventional depthfinder. Sidefinder® technology can provide up to a 60 times improvement in fish finding coverage in shallow water.



Figure 7. Buddy transducer at end of shaft

The Sidefinder SONAR beam comes out from the flat side of the transducer housing at the bottom of the shaft (see Figure 7). When searching for fish, make sure the flat side points toward the area of your search. Since the screen moves with the transducer, the Sidefinder cone displayed on the screen points in the direction that you are looking.

Sidefinder - Viewing the Shoreline

Each shoreline has its own unique characteristics. The Buddy can see all the way up to the shore when the drop-off is sharp or if there are ledges (see Figure 8). When the slope of the bottom is gentle, the Buddy will not see all the way to the shoreline. The Buddy can normally detect spawning fish that build beds near the shoreline. Direct experience with each shoreline will teach you the Buddy's capabilities.



Figure 8. Sidefinder coverage near steep and mild shorelines

Sidefinder - Weeds and Other Obstructions

The best way to understand how your Buddy "sees" is to imagine that the transducer is a flashlight and the water is clear. If you are trying to "see" into weeds, the ability of your flashlight beam to penetrate depends on the thickness of the weeds. If the weeds are thin, your flashlight beam will penetrate further. If you are trying to see past an underwater rise to view

the shoreline, it is a question of how high the rise is. You can "see" the shore if you can shine your flashlight beam above the rise and illuminate the shore in the background.

Sidefinder - False Markings

Occasionally, the Buddy may falsely mark objects other than fish. This can occur with air bubble streams from nearby boat or air filled swim ladders. This can also occur when the Buddy is aimed at a cement or rock wall due to a double reflection effect. The Buddy is designed to eliminate false readings, especially with the filter on. Due to the strength of the signal, it is possible to fool and thus, get an occasional false reading if the unit is working from a stationary, non-moving boat or a pier. The Sidefinder filter allows the Buddy to be much more selective in marking fish. Use the filter around docks and other structures in the water. The Buddy will display fewer fish with the filter on.

Sidefinder - Interpreting the Display

- CONE The transducer cone graph on the screen represents the area and the direction in which the Buddy is searching for fish (see Figure 3 and Figure 4).
- FISH The symbols displayed in the cone shows where the Buddy has marked fish. Although a fish may quickly move out of the transducer beam, all fish symbols are displayed for at least five seconds. The symbol does not indicate the size of the fish.
- DISTANCE TO CLOSEST FISH The big digits at the bottom of the cone indicates the distance to the closest fish. If no fish are found, no digits are displayed. As with the fish symbol, when a fish is marked, the big digits remain on the display for at least five seconds.

ICE FISHING

The Buddy is ideal for ice fishing. Simply install the bracket on a long flat piece of wood, then mount the Buddy on one end of the wood piece and place your tackle box (or some other weight) on the opposite end to ensure stability. Be careful not to get water between the mounting clamp and the main unit because these two pieces could freeze together.

You may also purchase the Buddy Ice Fishing Bracket #01-9063.

Note: In cold weather, the Buddy's lights may be used to help warm the LCD display, at the expense of shorter battery life. The brightest setting generates the most heat.

SPECIFICATIONS

Unit dimensions shaft extended	51" x 6.5" x 8"
Unit dimensions shaft not extended	34" x 6.5" x 8"
Total weight	5lbs
Display viewing area	3.3" x 2.4"
Display pixel matrix	160Vx80H
Bottom depth range	Up to 240 feet
Sidefinder range	Up to 120 feet
Transducer frequency (bottom & side)	455KHz
Transducer cone angle (bottom & side)	9 degrees
Power requirement	3 alkaline "C" cell batteries
Battery life (night-light off)	Up to 40 hours

Computrol, Inc. reserves the right to change specification without notice.

- Notice: The bottom depth range specified above is under best conditions. No guarantee of maximum depth capability is made due to the unlimited types of waters in which the Buddy is used.
- Caution: Facing the screen toward the sun for extended periods may cause the display to reach its upper temperature limit and turn black. If this occurs and you cannot adjust it lighter (see CONTRAST Menu on page 5), *immediately* cover the screen or turn it away from the sun.
- ▲ Caution: Do not clean the acrylic lens protecting the display with ammonia or alcohol-based cleaners.
- **←** Caution: The Buddy may not operate properly if the outside temperature is below 14°F (-10°C) or exposure to the sun or other heat sources causes the case to reach 140°F (60°C). Permanent damage will occur to the liquid crystal display if stored or used where the temperature is below -4°F (-20°C) or exposure to the sun or other heat sources causes the case to reach 158°F (+70°C). This type of damage is *not* covered by the warranty.

ACCESSORIES AND REPLACEMENT PARTS

BOTTOM LINE offers a full line of replacement parts and accessories, including the Buddy Ice Fishing Bracket #01-9063 and Buddy Float Tube Strap #01-9058. These items should be available where you purchased your Buddy. If the dealer does not carry an item you want, ask to have it ordered for you.

IF YOU ARE HAVING PROBLEMS

If you are having problems with the operation of your Buddy, please try the suggestions in this section. Should all other remedies fail, please try using the reset settings feature (see page 8).

Problem: Unit won't turn on or won't stay on.

- Check the battery installation (see page 2).
- Make sure that *all three* "C" alkaline batteries are still good.
- Low batteries may not have enough voltage to run the night-light.
- Make sure that the unit is operating within the temperature limits listed on page 14.

Problem: Unit beeps but the screen stays blank or black.

- The screen may be black and just too hot to work at all. In this case immediately cover the screen or turn it away from the sun.
- The contrast may require adjustment. First, make sure the Buddy is off (remove the batteries if you need to), then press the *POWER* button followed by the *MENU* button, and then use the ↑ and ↓ buttons to adjust the contrast.

Problem: Unit does not pass self-test.

- Make sure that *all three* "C" alkaline batteries are still good.
- If the test fails repeatedly, call our customer service number listed in the warranty on page 18.

Problem: No bottom is found.

• Make sure the transducer is at least 8" deep in the water and in an area where no bubbles or turbulence are present (see page 4).

- With your hand, rub the face of the transducer (see Figure 7) and clear off any air bubbles or debris.
- The bottom may be less than 1.5' deep, or the bottom may be deeper than the Buddy can display.

Problem: No fish are displayed in the bottom graph.

- When looking for fish on the bottom graph in shallow water, remember that the bottom transducer beam covers a very small area when compared to the side transducer beam (see page 10).
- The gain may be too low. Try turning the gain up (see page 6)

Problem: No fish are displayed in the Sidefinder.

- Make sure the Sidefinder filter is off (see page 5), unless you are fishing structure that appears to be generating false fish readings.
- You may be in water that is too shallow for the Sidefinder to operate properly (see page 12).

Problem: The bottom graph is speckled with too many marks.

- Some engine ignition systems may interfere with the Buddy's operation. Confirm this by turning the engine on and off. If necessary, move the Buddy away from the engine or turn the gain down (see page 6)
- Some pulse-width-modulated trolling motors may interfere with the Buddy's operation. Confirm this by changing the trolling motor's speed or by turning it on and off. Try moving the Buddy away from the trolling motor or turn the gain down (see page 6).

Problem: The bottom depth number is locked onto the surface.

• Severe interference caused by wind chop and air churned into the water can sometimes fool the Buddy into giving a false bottom depth reading. Try turning on the surface clutter control (see page 6).

Problem: The bottom depth number is locked onto a 2nd bottom.

• A strong second bottom can sometimes fool the Buddy into giving a false depth reading. Try pulling the transducer out of the water for a few seconds, and then put it back. If the condition persists, try lowering the gain (see page 6) and, if needed, manually set the range (see page 6).

BOTTOM LINE WARRANTY AND SERVICE POLICY

Bottom Line warrants that if the accompanying product (see exclusions below) proves to be defective in material or workmanship within one (1) year from the date of original retail purchase, Bottom Line will, at Bottom Line's option, either repair or replace same without charge (but no cash refunds will be made). This limited warranty may be enforced only by the first consumer user; all subsequent purchasers acquire the product "as is" without any benefit of this limited warranty.

Exclusions

This warranty does not apply in the following circumstances:

- When the product has been serviced or repaired by anyone other than Bottom Line or an Authorized Bottom Line Service Center.
- When the product has been connected, installed, combined, altered, adjusted or handled in a manner other than according to the instructions furnished with the product.
- When any serial number has been effaced, altered, or removed.
- When any defect, problem, loss, or damage has resulted from any accident, misuse, negligence, carelessness, or from any failure to provide reasonable and necessary maintenance in accordance with the instructions of your owner's manual.

We reserve the right to make changes or improvements in our products from time to time without incurring the obligation to install such improvements or changes on equipment or items previously manufactured.

Limitation of Implied Warranties And Exclusion of Certain Damages

We disclaim liability for incidental and consequential damages, for breach of any express of implied warranty, including any implied warranty of merchantability, with respect to this product. This writing constitutes the entire agreement of the parties with respect to the subject matter hereof; no waiver or amendment shall be valid unless in writing signed by Company. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Non-Warranty Repairs

Bottom Line products for which the warranty does not apply, due to any of the above exclusions or warranty period expiration, will be repaired for a charge. All such repairs carry a 90 Day Limited Warranty, subject to the exclusions and limitations stated above.

To Enforce Warranty or to Obtain Repairs After Warranty

Please contact us at (208) 846-9000, and we will either instruct you to return the product to the Company or, if outside the United States, refer you to an Authorized Service Center (this limited warranty is not enforceable outside of the U.S.). You must at your expense, including postage, shipping charges, insurance costs and other expenses, deliver, mail or ship product, together with proof of purchase, to the Company, or if outside the United states, to an Authorized Service Center. Please do not return the product to the company without our prior authorization (see manual for details). However, if the necessary repairs are covered by the warranty, we will pay the return shipping charges to any destination within the United States.

Serial #	
Date of Purchase	
Store Where Purchased	
A [™] Note: Keep your l records.	Proof of Purchase and/or sales receipt for your
Return Address:	Computrol, Inc. 499 East Corporate Drive Meridian, Idaho 83642-3510 TEL (208) 846-9000 FAX (208) 887-2000 www.bottomlinefishfinders.com

www.cannondownriggers.com