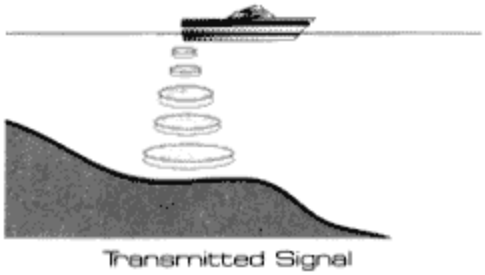
Operations Manual

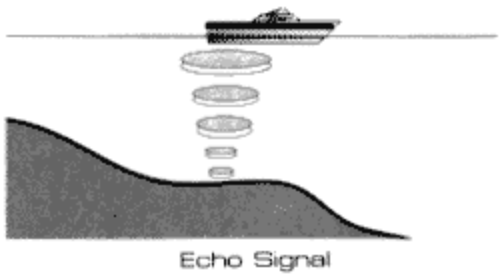
HUMMINBIRD

LCR100

HOW THE LCR-100 WORKS

There are two main components to your LCR 100 installation: The transducer, which was installed beneath your boat, and the LCR 100 unit, mounted either in-dash or on a gimbal bracket. The transducer and LCR 100 communicate by means of a cable, and are powered by your boat's 12-volt DC battery.





The transducer and LCR 100 use the basic principles of sonar to reveal objects beneath the water's surface. The LCR 100 continuously sends electronic signals to the transducer, which converts them to ultrasonic signals that it aims toward the bottom. Each signal travels downward until it strikes an object or the bottom, then immediately echoes back to the transducer. As the transducer receives these signals, it converts them back to electronic signals for display on the LCR 100 screen.

The LCR 100 uses the returned signals to display a detailed underwater image, and constantly updates the display as you travel across the water. The display informs you of the current depth and reveals individual fish, schools of fish, their location, and bottom details.

Easy-to-use controls on the LCR 100 allow you to set the depth range, adjust display speed and sensitivity, enable a fish alarm and bottom alarm, and display a "zoom" window of still more detailed information.

THE HUMMINBIRD ADVANTAGE

The LCR 100 incorporates the best of available technologies, and offers advantages you won't find in other depth sounders.

The liquid crystal display (LCD) offers sharp viewing even in bright, direct sunlight, and is continuously lit for nighttime operation. Advanced LCD "super-twist" technology built into the LCR 100 offers a wider viewing angle and higher contrast than ordinary LCD screens.

(You will notice that the display can be seen better at certain angles. If your LCR 100 was installed with the gimbal bracket mounting option, you can adjust the viewing angle for optimum viewing. Note that some polarized glasses can affect your view by causing a rainbow or prism to appear; if so, tilt the unit slightly.)

Though it includes sophisticated electronics, the LCR 100 is tough enough to take the pounding punishment of rough seas or a race

across the lake. Completely waterproof - even saltwater-proof - your LCR 100 will provide you with many years of thoroughly reliable operation.

USING THE BUILT-IN SIMULATOR

The LCR 100 includes a built-in simulator that helps you learn to use your new equipment. The simulator displays a typical underwater scene, and lets you practice with the controls.

The unit must be turned off before you start the simulator. To activate it, press down and hold the POWER button until a chirping sound begins. Release the button, and the built-in simulator begins displaying a typical LCR 100 reading.

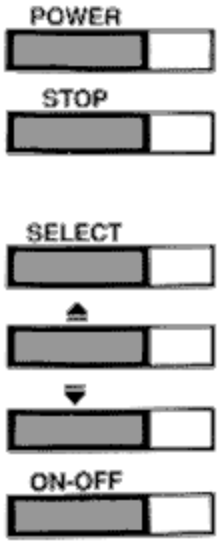
Actual View

LCR-100 Display

You can use the simulator to learn the functions explained in the following pages, just as if you were getting actual on-the-water readings (but note that "Sensitivity" is disabled). To turn off the simulator, turn off the unit by pressing the POWER button again.

Of course, the best way to learn the LCR 100 is with actual use, especially in familiar waters. If you know what's below and see it on-screen, you'll quickly become an LCR 100 expert.

OPERATING THE LCR-100



The LCR 100 offers several functions that you can adjust with the front panel buttons. (Note that to select something with a button, you must press it fully so that you hear a "chirp" sound.)

You can get acquainted with these features by actual operation, or when using the simulator.

POWER: Press this once to turn the LCR 100 on. Pressing it again turns the LCR 100 off. (Any adjustments you make with other front panel buttons are retained, even when the unit is turned off.) When the unit is off, keeping POWER pressed for about 2 seconds starts the built-in simulator.

STOP: Press this to "freeze" the display so you can study it. Press it again to restart the display movement.

SELECT: This button is used to access the following functions for further adjustment:

Sensitivity/Units
Bottom Alarm
Fish Alarm
Zoom
Bottom Lock
Display Speed
Depth Range

To adjust any of these, press SELECT until the function you want appears. Each function's display tells you how to use the arrow buttons and ONOFF for adjustment; These functions should be apparent, but when first learning, you may want to refer to the following instructions.

After you adjust any function, the display returns to its full- screen reading.

NOTE: The last function you select remains "active" - that is, you can adjust it without having to press SELECT again. You can use this to simplify operations.

For example, if the bottom alarm was the last function used, you can readjust the alarm by pressing one of the arrow buttons. Or if you often use Zoom, you can select it once, then switch it on and off by simply pressing ON-OFF.

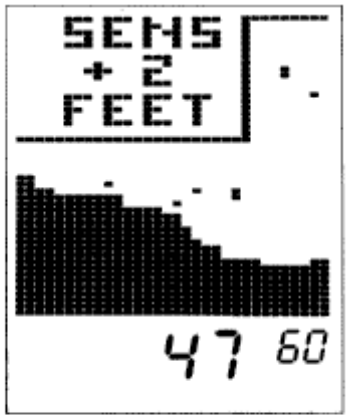
The following pages describe each function, in order of appearance as you first press SELECT.

1. Selecting Sensitivity/Units;
Factory setting: +0/FEET

The Sensitivity/Units function has two uses: It lets you adjust LCR 100 sensitivity and control whether depth measurement is in feet or meters.

The LCR 100 automatically increases or decreases its sensitivity setting when water conditions change (as when the bottom is stirred up). If you want to manually adjust Sensitivity, select SENS and press the Up or Down arrow button to adjust the automatic setting within a "+5" to "-5" range. For example, if you set it at "+2," Sensitivity remains 2 settings higher than the normal automatic setting.

Pressing the ON-OFF button when the SENS menu is displayed switches the unit of depth measurement between feet and meters.

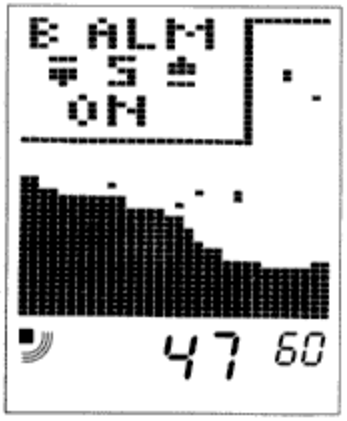


▲ ▼ Sensitivity Setting
ON-OFF Feet or Meters

2. Enabling Bottom Alarm;
Factory .setting: OFF

The Bottom Alarm lets you specify the minimum depth you want to maintain. To use it, select B ALM; then, press the ON-OFF button to activate the alarm, and the Up or Down arrow key to adjust the depth at which the alarm will sound. An alarm symbol is displayed when this function is on.

When Bottom Alarm is on, you'll hear a continuous chirping sound when the bottom is shallower than you defined. This is very handy for alerting you to shallow water or helping you to maintain position over structure.

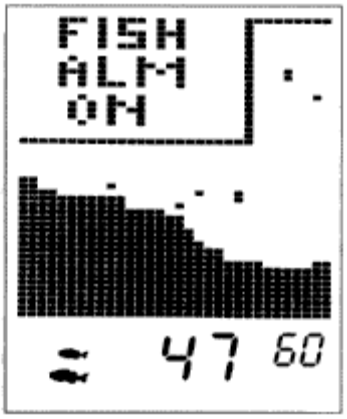


▲ ▼ Adjusts Alarm Depth
ON-OFF Enables Alarm

3. Enabling Fish Alarm;
Factory setting: OFF

The Fish Alarm alerts you with a chirping sound whenever the LCR 100 detects fish (or another object not attached to the bottom). To activate it, select FISH ALM and press the ON-OFF button. A fish symbol reminds you that the alarm is on.

The fish alarm is especially helpful in identifying targets near the bottom or structure that might not be apparent unless the zoom or bottom lock mode is selected.



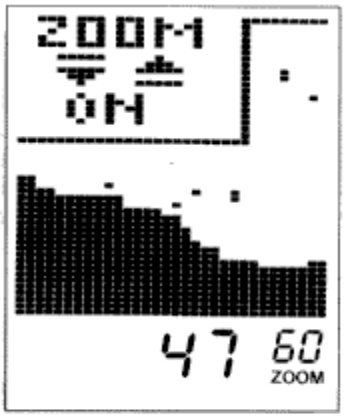
ON-OFF Enables Alarm

4. Using Zoom;
Factory setting: OFF

Zoom provides an up-close view. To activate it, select Zoom and press ON-OFF: The Zoom view initially begins at the surface; pressing the Up or Down arrow adjusts Zoom depth. The range of the display is shown when Zoom is on.

The Zoom range depends on the current Depth Range: 7 1/2' in the 15' and 30' Depth Ranges, 15' in the 60' and 120' Depth Ranges, and 30' in the 180' to 600' Depth Ranges. (Metric display: 3m in the 6m and 9m ranges, 5m in the 15m and 30m ranges, and l0m in the 45m to 185m ranges.)

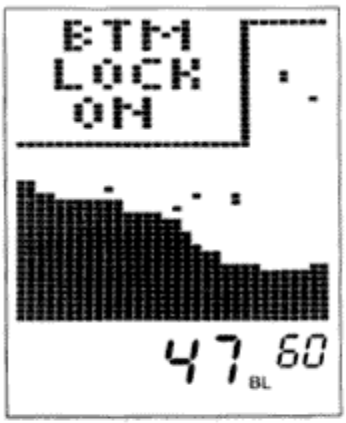
Remember: If Zoom is the last function selected, you can use the arrow buttons to adjust the Zoom depth or ON-OFF to switch Zoom on and off without having to press SELECT first. The word zoom will be shown on the display when the zoom function is enabled.



▲ ▼ Selects Zoom Depth
ON-OFF Enables Zoom

5. Using Bottom-Lock;
Factory setting: OFF

Bottom-Lock provides an up-close view like Zoom, except that in this case the zoomed view automatically moves up or down to stay on the bottom. To use this feature. select BTM LOCK and press ON-OFF. The range of the display is shown when Bottom-Lock is on.



This is an ideal feature for finding structure or locating fish near the bottom.

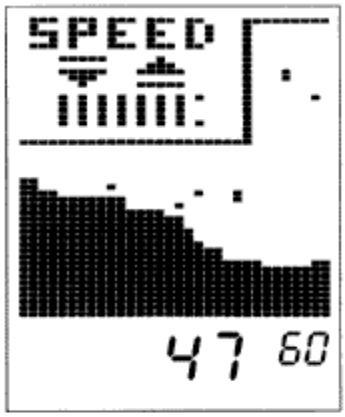
Remember: If Bottom-Lock is the last function selected, you can use the ON-OFF button to switch Bottom-Lock on and off without having to press SELECT first.

ON-OFF Enables Bottom Lock

6. Setting Display Speed;
Factory setting: One level below maximum

The LCR 100 display is "updated" (advances across the screen) as you move through the water. The speed at which the display is updated depends on the Display Speed setting. To adjust it, select SPEED, and press the Up arrow for a faster setting or the Down arrow for a slower setting.

In general, higher Display Speed settings provide faster updates, while slower Display Speeds provide more detailed information.



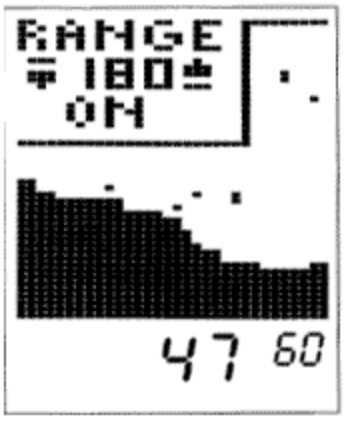
▲ ▼ Adjusts Speed

7. Setting Depth Range;
Factory setting: ON (Automatic)

When you turn the LCR 100 on, it finds the bottom, sets the ideal Depth Range, and automatically adjusts the Depth Range (to as much as 480'/150m) as the depth changes. In this "Auto Depth Range" mode, the bottom is blacked-in for easy-to-understand readings.

If you prefer, you can turn Auto Depth Range off. Select RANGE, press ON-OFF, and adjust the Depth Range with the Up or Down arrow key. You can set Depth Range up to 600'/185m.

In this "Manual Depth Range" mode, the bottom is not blacked in. This lets you see a "second return," which is preferred by some fishermen because the width of the second echo can indicate bottom hardness.



▲ | ▼ Selects Depth Range
ON-OFF Enables Auto Range

MAINTENANCE AND TROUBLESHOOTING

Your Humminbird LCR 100 is designed to give you years of trouble-free operation with virtually no maintenance. Follow the simple procedures below to ensure that your LCR 100 continues to deliver top performance:

If the unit comes in contact with spray, simply wipe the affected surfaces with a cloth dampened in fresh water.

When cleaning the LCD screen, use a chamois and non-abrasive cleaner such as Windex ®. Do not wipe while dirt or grit is on the screen. Be careful to avoid scratching the screen.

The transducer face may become dirty from storage or contact with marina environment oil. Oil will cause the face to lose the water contact it needs to maintain efficient operation. Simply clean the face with liquid detergent.

If your boat is out of the water for a long time, it may take a while for the transducer to become thoroughly "wetted" when returned to the water. Also, the turbulence of re-entry may cause air bubbles to form on the transducer face. The bubbles will quickly disappear, or can be removed by rubbing the transducer with the fingers while the transducer is in the water.

Never leave the LCR 100 in a closed car or trunk, especially in extreme temperatures.

Do not attempt to repair the LCR 100 yourself. Repairs should be performed only by authorized Humminbird technicians.
Many requests for repair received by Humminbird involve units that do not actually need repair. If you have trouble with your LCR 100, consult the following troubleshooting guide before contacting Humminbird.

1. Nothing happens when I turn the unit on.

Check your power cable connection and fuse. Be sure the power cable is properly connected to the battery - red lead to the positive (+) terminal, black lead to the negative (-) terminal.

2. There's no bottom reading on the display when I press the "power" button.

Check the transducer cable connection on the back of the unit. Make sure the transducer is not sitting above the water.

3. When in very shallow water, I get gaps in the bottom reading, or the depth scale automatically changes to a deeper range.

This is normal in water depths of one foot or less, because the automatic range control can't lock onto the bottom in water that shallow.

4. The unit comes on before I press the "power" button, and won't turn off when I press the "power" button.

Check your transducer cable - if the outer insulating jacket has been cut and the cable is touching metal, you need to repair it with electrical tape.

5. 1 get gaps in the bottom reading at high speeds.

Your transducer is probably mounted too high, allowing air and bubbles under the face. See the dealer who installed the LCR 100.

6. The display shows many black dots at high speeds and high sensitivity.

The transducer is mounted too close to the propeller and is being affected by air bubbles from the prop. Ask the dealer who installed the LCR 100 to move the transducer away from the propeller.

7. The bottom reading disappears during a hard turn.

This is normal, as the transducer comes out of the water in a hard turn, and will correct itself.

8. The screen begins to fade out. Images on the screen are not as sharp and clear as normal.

Check your battery to see that it's fully charged; the LCR 100 will not operate properly on less than I 1 volts.
The best products in the industry are backed by the best service policy in the industry. Even though you'll probably never need to take advantage of our incredible service guarantee, it's good to know that we back our units this well. We do it because you deserve the best.

One-Year Full Warranty

First-year repairs on your unit will be made absolutely FREE (physical damage not included). The customer is responsible for shipment to the factory.

Lintited Service Charge

After the warranty period, a limited maximum service charge is the most you will pay for each repair (physical damage and missing parts not included).

Factory-Trained Technicians

All repair work is performed by factory-trained technicians to meet exacting factory specifications.

Strictest Factory Testing

Factory-serviced units go through the same rigorous qualitycontrol inspections and full burn-in as new units.

This service policy is valid in the United States and applies only to Humminbird units returned to our factory in Eufaula, Alabama. We reserve the right to deem any product unserviceable when replacement parts are no longer reasonably available or are impossible to obtain. This service policy is subject to change without notice.

At Humminbird, our goal is to serve our customers with only the highest level of quality, in our products and in our service.

If for any reason your HUMMINBIRD LCR 100 fails to operate within one year of date of purchase, TECHSONIC INDUSTRIES, INC. will repair it at no charge except for the following items:

1. You will be charged for any lost parts. 2. You will be charged for repair of any physical damage. 3. Transportation charges will be the responsibility of the purchaser.

THIS IS A FULL WARRANTY AS DEFINED BY THE FEDERAL WARRANTY ACT, EFFECTIVE JULY 4, 1975.
Operating Frequency: 200 KHz

Power Requirement: 12 volts

Power Cable Length: 48"

Transducer (standard): XHS-6-16

Transducer Cone Angle: 16 degrees

Depth Ranges:Feet: 0 to 15, 30, 60, 120, 180, 240, 360, or 480 (plus 0-600 in manual) Meters: 0 to 6, 9, 15, 30, 45, 75, 105, or 150 (plus 0-185 in manual)

Zoom Ranges:Feet: 7 1/2, 15, 30 Meters: 3, 5, 10

Unit Construction: high-impact

polycarbonate housing

Unit Dimensions: 6"W x 4 3/4"H x 2"D (15.2cmW x 12.1cmH x 5.1cmD)

Display: super-twist liquid crystal

Viewing Area: 2 7/16"W x 2 5/8"H (6.3cmW x 6.6cmH)

Matrix Configuration: 32 x 46 pixels

If you have any questions, call our I ; Customer Service Hotline:

throughout the U.S. and Canada
Monday-Friday, $; L- a.m. to 5:00 p.m. Central Time

If, after reading the "Troubleshooting Tips", you determine your Humminbird LCR-100 depth finder needs

factory service, please attach a note to the unit describing the problem and send it to us.

Refer to "Humminbird's Guaranteed Service Policy" at the end of this manual.

All units out of warranty will be returned C.O.D.

If you are including a check, please attach it to the unit.

Techsonic Industries, Inc.
Service Department
Three Humminbird Lane
Eufaula, Alabama 36027