

# LC-8 Owner's Manual

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Founded in 1965, Vexilar, Inc. has a long history of bringing revolutionary technology to the sport fishing industry. Just some of the Vexilar firsts include: the first liquid crystal display, the first fish alarm, the first three color display, and the first CRT and straight line paper graphs, for the sport fisherman.

## GENERAL DESCRIPTION

The LC-8 is a compact and lightweight liquid crystal depth sounder. It indicates depth, shows changes in bottom content, and conditions. It can also discriminate between large underwater targets, such as fish, and smaller targets such as bait fish and plankton.

The unit transmits bursts of high frequency pulses, which are converted from electrical to mechanical energy by the transducer. These "sound" pulses radiate from the transducer downward and are reflected back up to the transducer where the energy is converted back to electrical signals. The LC-8 then processes these signals and displays them.



The graphic display is accomplished by activating individual or groups of pixels, or dots, on the LCD. The first vertical column of pixels, on the right edge of the display, shows the most current information. This column is then moved to the next place, to the left, as soon as a new column is ready. This process is repeated continually to make up the graphic display. Thus what you see on the display is a brief history of what

the boat just went over. The LC-8 displays the depth as an easy to read number in the lower corner of the display

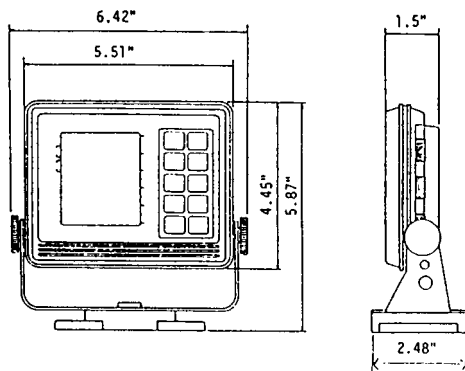
The LC-8 has many functions that can be controlled by the user. Once you set the unit the way you want it, all of your settings are saved in memory, so that when the unit is used again no reprogramming is needed.

# SPECIFICATIONS

* Operating Voltage	8.5 - 15 Volts (12 Volts Nominal)
* Current Draw:	50mA or 100 mA with Backlight On
* Power Output:	400 Watts (Peak to Peak)
* Frequency:	200 Khz
* Resolution:	64 x 64 Pixels
* Sounding Rate:	400/Min.
* Display Size:	2" x 2 1/4"
* Dimensions:	5.9"H x 6.4"W x 2.5"D
* Weight:	0.6 Lb.

## Depth Ranges:

0-5', 0-10', 0-15', 0-20', 0-30', 0-40', 0-60', 0-80', 0-120', 0-160',  
0-240', 0-320', and 0-400'. (Meter units are selectable from the menu.)

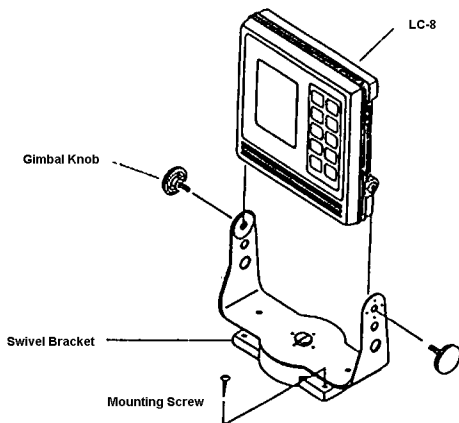


# INSTALLATION

To make the LC-8 work, you must provide the unit with power and mount the transducer in an appropriate location.

## UNIT INSTALLATION

Find a convenient place to mount the unit. This may include a boat seat, deck, dash, or a portable case. Make sure that there is plenty of room for the unit to tilt and swivel freely without the cables binding behind the unit. Once you have found a spot, securely attach the bracket to the mounting surface.



## POWER CONNECTION

Plug the round 3 pin connector into the back of the unit. Find the closest source of 12 volts and run the cord to it. Keep the cord away from sharp metal edges and avoid tight places where the cord may get crushed. Connect the white wire to positive and the black wire to negative or ground. If the cord provided is not long enough, more can be added. Use 18 gauge wire minimum. It is recommended that the 1 amp in-line fuse be placed in the positive line as close to the power source as possible to protect against any shorts in the wiring.

# TRANSDUCER INSTALLATION

## Transom Mounted

The LC-8 transducer can be mounted on the transom of the boat. The shape will allow a clear depth reading at any boat speed. Locate a spot similar to the one in figure E. Keep in mind that you need clear water flow across the face of the transducer to insure a clear reading at all speeds. Stay away from rivets, ribs, or strakes that would be just in front of the transducer. They will disturb the water and scramble the reading. Attach the mounting

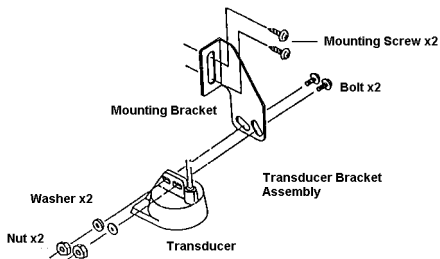
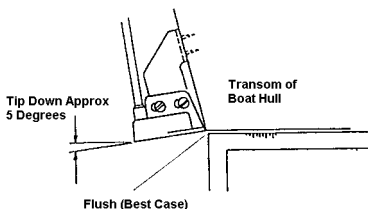


Fig. E

ing bracket to the transducer and hold it up to the boat where you are planning to mount it (see figure E). Mark the first hole on the transom, or mounting plate, so that when the bottom of the transducer is flush with the bottom of the boat the hole is located at the bottom of the bracket slot. This gives you room to "fine tune" the position of the transducer and optimize your reading after you've put the boat in the water. Drill out the hole and tighten the bracket down securely. Be sure to seal any holes drilled into the transom with silicone to prevent water from leaking into the boat. Once you have verified that the unit reads at all boat speed, drill out the second hole and install the second mounting screw. Run the transducer cord up to the unit taking the same care as you did when you ran the power cord. Plug the transducer connector into the back of the unit and screw the retaining ring down tight.

## **In-Hull Mounting**

This method, gluing the transducer to the hull, gets the same results as if you were mounting the transducer externally, only there are no holes to drill in the boat and there is no transducer on the transom to get damaged by impact.

Finding the best location for the transducer before mounting is critical. Choose a flat smooth spot near the center of the bilge and near the back of the boat. It is a good idea to make a "test run" before you permanently install the transducer to make sure that you can indeed get a reading through your hull, and when the boat is on plane. Put about a half inch of water in the bilge and hold the transducer in the intended location. Move the transducer around until you get the best reading. Mark the spot.

To install the transducer clean the spot of mud and oil. Using an epoxy or silicone glue make a puddle, about the same size as the transducer, on the hull. Place the transducer in the glue. Press it down firmly, gently twisting it back and forth, making sure that there are no air bubbles in the glue between the transducer and the hull. **Let the glue dry completely before turning the unit on.**

Run the transducer cord up to the unit taking the same care as you did when you ran the power cord. Plug the transducer connector into the back of the unit and screw the retaining ring down tight.

## **PORTABLE MOUNTING**

An optional suction cup bracket can be used to temporarily attach a transducer to the transom or side of the boat. The cup should be placed in a location where it will not be torn off when the boat goes high speed. It is a good idea to tie on a safety rope in case the cup does let go. An arm can also be used to hold the transducer. Simply attach the transducer to the end of the arm using cable ties or tape. Plug the transducer connector into the back of the unit and screw the retaining ring down tight.

# OPERATION

This figure shows the main controls of the LC-8



## DEPTH CONTROL

The two buttons at the top of the control panel set the depth range when the unit is in Manual Depth Mode. Pressing the SHALLOW button changes the range to the next shallowest range. Pressing the DEEP button changes the range to the next deeper range.

## GAIN CONTROL

While in Manual Gain Mode, pressing the DEC button decreases the gain one step. Pressing the INC button increases the gain one step. There are 8 steps of Gain control. Different conditions will require different gain settings. Deeper water will require higher gain than shallow water. A weedy bottom will demand a lower gain setting than a clean bottom. Keep the gain level low. Too much gain can "wash out" the targets that you want to see. Generally, it is a good idea to set the gain at an appropriate level and leave it there. Only change the gain level if the water depth or conditions change.

## **ZOOM**

ZOOM displays only the bottom half of the water depth. This doubles the display resolution making it much easier to see targets near or on the bottom. Pressing the ZOOM button once puts the LC-8 in ZOOM mode. Pressing it again will go back to the normal view.

## **SWEEP**

SWEEP controls how fast the information moves across the display. There are 4 steps of sweep speed. The sweep speed should roughly match the boat speed to get the most accurate reading.

## **FREEZE/RESUME**

The FREEZE button stops the display so that you can examine it before it moves off of the screen. Pressing it again will RESUME the display back to the original speed.

## **MENU**

Pressing the MENU button opens the first menu page. Pressing it again will go to menu page two, and pressing it again will go to page three. Pressing the MENU button when you are on page three, the last menu page, will send you back to page one. On each page you will see a list of Submenus. Each item will be explained in the next section. To resume to normal operation press the RESUME button.

## **ON/OFF**

Simply turns the LC-8 ON and OFF. When you turn the LC-8 off all of your menu and control settings will be saved in memory so that when you turn it on again the unit will operate the same way as it did when you last turned it off.

## **MENU SETTINGS**

When you are in the MENU mode, the control panel buttons act as input keys. You no longer read the descriptions, in white. Instead,

you read the blue numbers. For instance the SHALLOW button is the 1 key and the DEC button is the 2 key in Menu Mode.

## **MENU PAGE 1**

### **1 - AUTO - R**

Press the 1 key to enter the Automatic Range Submenu. In this submenu, pressing the 2 key puts the LC-8 into Automatic Range Mode. In this mode the unit changes the range setting for you when the depth of the water changes. Pressing the 2 key puts the unit into the Manual Range Mode. The unit will not change range settings until you press the SHALLOW or DEEP button on the control panel. The factory default setting is ON.

### **2 - AUTO - G**

Press the 2 key to enter the Automatic Gain Submenu. In this submenu, pressing the 2 or 3 key puts the LC-8 into Automatic Gain Mode. The 2 selection tends to keep the gain on the higher side and the 3 selection will keep it on the lower side. The factory default setting is ON<High>. In shallow or weedy water it is recommended that the <LOW> setting be used. Pressing the 1 key takes the unit out of Automatic Gain Mode. No changes will take place unless you use the control panel.

### **3 - LIGHT**

Press the 3 key to enter the Backlight Submenu. Press the 2 key to turn the backlight on, for night use. Press the 1 key to turn the backlight off.

### **4 - BOTT-ALM**

Press the 4 key to enter the Bottom Alarm Submenu. Press the 2 key to activate the Bottom Alarm. The current setting is displayed at the bottom of the screen. This setting can be decreased by pressing the

4 key. As you press the key the displayed setting will change. Press the key until it is set to where you want it. The minimum is 3 feet. Press the 5 key to increase the setting. There is no maximum limit. Press the 1 key to turn the Bottom Alarm off. The default is OFF.

## **5 - FISH-ALM**

Press the 5 key to enter the Fish Alarm Submenu. Press the 2 or 3 key to turn the Fish Alarm on. When the 2<HIGH> selection is chosen the alarm will sound on all fish targets that the LC-8 sees. When the 3<LOW> selection is chosen it will only sound on larger fish targets. Press the 1 key to turn the Fish Alarm off. The default is OFF.

## **6 - CONTRAST**

Press the 6 key to enter the Contrast Adjust Submenu. Press the 4 key to decrease the display contrast or press the 5 key to increase the display contrast.

## **MENU PAGE 2**

### **1 - C-ECHO**

Press the 1 key to enter the Clean Echo Submenu. Clean Echo helps reduce noise and interference from other nearby depthfinders running on the same frequency. Press the 2 key to turn Clean Echo on and the 1 key to turn it off. The default setting is ON.

### **2 - C-LINE**

Press the 5 key to enter the Clean Line Submenu. Clean Line is similar to the White or Gray Line feature. It helps you discriminate fish from the bottom. With this feature off, the bottom is solid black and fish that are on or near the bottom will be difficult to determine. With the Clean Line feature on, the bottom will be "cleaned out" and these fish will be much more visible. Press the 3 key to turn the feature on to the <LOW> setting. This is the default. Press the 2 key to

set the feature to the <HIGH> setting. Press the 1 key to turn the feature off.

### **3 - A-MODE**

Press the 3 key to enter the A-Mode Submenu. A-Mode gives you a vertical representation of the depth. Everything displayed is happening right now. Press the 2 key to select the normal A-Mode setting. This is a "split screen" display. The vertical display will be at the right side and the left side will continue to show the normal graphical representation of the bottom. Press the 3 key to activate the Wide setting. A-Mode will now cover the entire display. This is the recommended setting for vertical jigging or ice fishing. Press the 1 key to turn the A-Mode off. This is the default.

### **4 - DIGITAL**

Press the 4 key to enter the Digital Depth Size Submenu. Press the 2 key to make the digital depth display show large numbers. Press the 1 key to display them in normal size.

### **5 - DEPTH**

Press the 5 key to enter the Depth Range Submenu. Press the 1 key to activate the SHALLOW setting. The maximum range of the LC-8 will be 120 feet. Press the 2 key to activate the DEEP setting. The maximum range will now be 400 feet. The default is SHALLOW.

### **6 - UNIT**

Press the 6 key to enter the Unit Selection Submenu. Press the 1 key to use feet or the 2 key to use meters. The default is FEET.

## **MENU PAGE 3**

### **1 - SIMULATE**

Press the 1 key to enter the Simulator Submenu. The simulator

allows you to test all of the control panel and menu functions without having to be on the water. It displays a short program of what you may see when you are actually out on the water. Press the 2 key to activate the simulator and the 1 key to deactivate it.

## **2 - OFFSET**

Press the 2 key to enter the Keel Offset Submenu. The feature allows you to compensate for the depth that the transducer is under the surface of the water. For example, if your transducer sits a foot below the surface when your boat is in the water than you would set the Keel Offset to 1 foot. This foot will be added to the displayed water depth. The depth that is displayed will now be accurate.

## **3 - RESET**

Press the 5 key to enter the System Reset Submenu. Press the 2 key to erase all of your settings and return to the factory default settings.

## **HIGH SPEED OPERATION**

The LC-8 can read depths at almost any boat speed. Due to the limited speed of the display, the displayed bottom may be some distance behind you, depending on how fast the boat is traveling. Here high speed is defined as any speed at or above the planning speed of the boat. Once the boat starts to plane out, turbulence will develop behind the transom. If your transducer is poorly mounted, the unit will lose the bottom at a certain boat speed. This is due to all of the air bubbles in the turbulent water. Readjustment of the transducer mounting should solve this problem.

## **ICE FISHING**

The stable platform of ice lets you concentrate on your bait and the fish around it. The bottom becomes less important because it never changes. The only movement on the display is of your bait and fish.

Unlike open water use, the direction in which the transducer is pointed is very critical. You want your bait to be located in the dead center of the cone sound, directly under the transducer. This way you can see very small baits at low gain settings and also see fish come in from all sides. If you are not using the Ice-Ducer system, the transducer must be attached to an adjustable arm so that it can be manually pointed directly at the bait. Sometimes it helps to attach a bubble level to the transducer so that you know when it's straight.

After your system is properly set up, adjust the gain until you see your bait. You may need to readjust the gain control to keep the bait in view. This is due to the changing condition and position of your bait. If you are using a swimming bait or a lure that darts to the side as it's jigged, you will see the signal change as the bait moves. Sometimes it may even disappear if the bait goes out of the cone of sound.

# **MAINTENANCE**

## **PERMANENT MOUNT**

With permanent mount applications, the power cord is left connected to the source, the transducer is not easily removed, and the gimbal bracket is screwed to the seat, deck, or dash. Under these conditions maintenance is very simple because nothing changes once the unit is installed. Because of this, though, problems can sneak up on you if you're not careful.

Power connections need constant checking. Corrosion can develop and cause intermittent or loss of operation. Connections made to battery posts need extra attention because of the battery acid.

The transducer should be checked for scratches and cracks which can reduce the units sensitivity. Cuts or breaks in the cord should be repaired as soon as possible so corrosion doesn't attack the wire. Periodically clean the face of the transducer with a mild detergent. An oily film can develop which will cause weak readings.

## **PORTABLE MAINTENANCE**

In portable applications the unit is generally mounted to a carrying case and the transducer is frequently removed, as is the power. These conditions can cause more wear and tear than a permanently mounted unit.

In addition to the previously mentioned maintenance items, be sure to check for broken or pulled wires, loose screws or hardware, and, above all, battery condition.

## Trouble Shooting Chart

Symptom	Possible Cause
Unit will not turn on.	Check for proper battery polarity and that you have a fully charged, working battery.
Unit is turned on, but there is no display.	Battery voltage may be too low. The unit will show no display if the voltage is below 8.5 volts.
Unit runs well for a short time, then the unit quits.	Bad battery. Voltage may be good when checked, but may fall as it is loaded.
Unit runs and shows display light, but does not read depth.	Transducer is not plugged in, not in contact with the water.
Unit works, but needs high gain to see bottom or targets.	Transducer is not aimed correctly or needs to be cleaned.
Unit works, but has too many lines on the display. Can't tell what is what.	Gain is set too high or, if gain is on minimum, you may have a bad transducer.
Unit works well when sitting still or at slow trolling speeds, but loses reading when the boat speeds up.	Improper transducer type, installation, or adjustment. There is a loss of clear water flow across the face of the transducer when the boat reaches a certain speed.
Unit works, but shows noise when the engine is started or the electric trolling motor is turned on.	Improper ground or missing ground in electrical system. Defective engine or trolling motor.
Unit does not save settings in memory. Does not sound normal beeps when turned on.	Internal lithium battery is dead. Replace with new. Common number is CR2032.

## **Service and Support**

If you find that you need help, feel free to contact us. Please have ready the model number and, if possible, the serial number of your product. Be sure to read the Trouble Shooting sections first.

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