Edge LC-507 Operation Manual

Contents

vexilar®

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 Edge 507 is like having two depth sounders in one. The features are designed to give the angler the best sonar for any situation. The split screen dual frequency design allows you to compare one view with the other to help you gain much more information about what is below.

The dual frequency feature gives an you incredible advantage. The Low frequency, 107 kHz, beam provides a wide cone with allot of sensitivity. This allows you to see fish, as true arcs, as they pass under the boat. Also, it allows you to see breaks and structure off to the sides of you. The high frequency beam, 400 kHz, is an excellent compliment. It gives you a precise narrow beam for locating fish and sharp edges of structure that are directly under the boat. Using

these two beams together will allow you to locate fish, identify bottom conditions, and even control your boat better. Imagine following a weed line using the Edge. Simply keep the weeds within the wide beam, but outside the narrow beam.

The Edge is very easy to use. All of the important control features are right on the front panel. Range, gain, auto / manual, and clean line controls are only one button away. There are even separate controls for each screen.With three feature presets you can quickly add or change any of the features to meet the new conditions. Imagine fishing with preset #1, with all features set for slow trolling along a sharp break. Then you decide to move to a new spot. Hit the preset button to move you to the next feature setup, #2, that you have programmed for high speed operation (super fast sweep and higher gain). Now, down the lake you have found something interesting. Move to the next feature setup, #3, that you have programmed for intense structure and fish finding (slower sweep speed, multiple echo view, fish alarm, and hard bottom alarm). Want your original settings back? Hit the preset button to get you back to setup #1 again. Internal memory backup insures that all feature selection will be saved when the unit is shut off or disconnected from power.

The incredible features of the Edge are brought to life by a beautifully detailed LCD. The 320 x 240 multi level pixel display is near paper graph standards. Visibility on the brightest days and the darkest nights is unbelievable. The contrast control is right on the front panel.

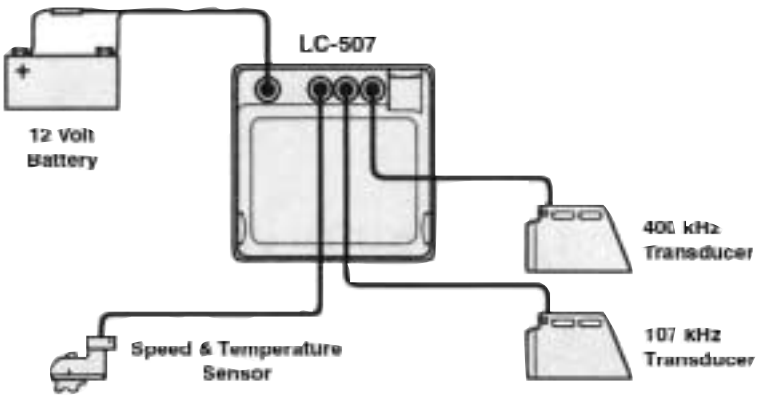
In addition to the innovative features, the Edge is a very high quality device. It comes with the best warranty and product support in the industry. With 2 year warranty coverage and quality service and support you are sure to get the most out of the Edge. Got a question or concern? One phone call is all it takes to quickly talk to a technician who can help with anything you should need.

SPECIFICATIONS

- Operating Voltage: 10 - 16 Volts (12 Volts Nominal)
- Current Draw: 500mA (800 mA w/Backlight On)
- Power Output: 1600 Watts (Peak to Peak) 200 Watts (RMS)
- Frequency: 107 Khz & 400 Khz
- Beam Angle: 38˚ & 10˚
- Resolution: 320 x 240 Pixels
- Sounding Rate: 1800/Min. Maximum
- Display Size: 5” x 3 1/2"
- Dimensions: 9.2"H x 8.9"W x 3"D
- Weight: 3.1 Lbs. (Unit Only)

- Depth Ranges:
  0-5', 0-10', 0-12’, 0-15', 0-20', 0-25’, 0-30', 0-35’, 0-40', 0-50', 0-60', 0-70’, 0-80’, 0-100’, 0-120', 0-150', 0-200'

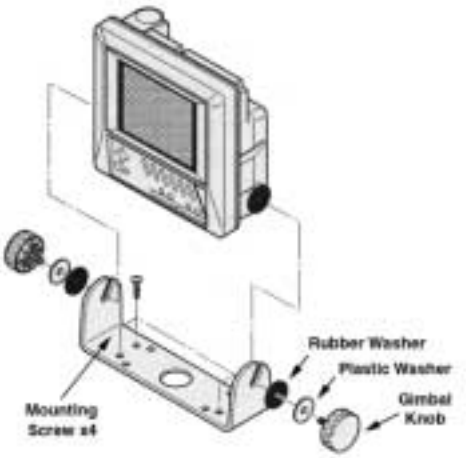
LC-507 CONNECTIONS



INSTALLATION

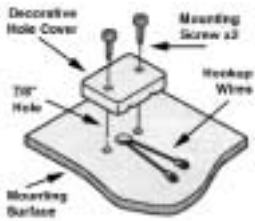
You will need to find a place to mount the LC-507 that will make it easy to view and reach. You must provide the unit with power and mount the transducer and sensor assembly in an effective location.

MOUNTING THE UNIT



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 freely without the cables binding or stretching behind the unit. Once you have found the spot, remove the unit from the gimbal bracket and securely attach the bracket to the mounting surface. The screws provided are for wood/carpet or dash mounting applications. An optional removable swivel bracket is available. See page 32.

Note - A Decorative Wire Cover has been included to help make your rigging job look good. Use this to cover up the large hole you'll need to drill to fit the connector through.



CONNECTING THE POWER

Plug the 2 pin connector into the back of the unit. Find the closest source of 12 volts and route 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. If the cord provided is not long enough, more can be added. Use 18 gauge wire minimum. Install the included 2 amp inline fuse, placed in the positive line, as close to the power source as possible, to protect against shorts in the wiring.

MOUNTING THE TRANSDUCERS

Before you mount the transducers, you need to decide which method is best for you and your boat. Your options are transom mounted, in-hull mounted, trolling motor mounted, or portable.

TRANSOM MOUNTING

Locate the transducers, and bracket hardware. Each transducer has a mounting bracket assembly which includes;

2 Angle Brackets
4 Bracket Screws
4 Washers
4 Nuts
4 Mounting Screws

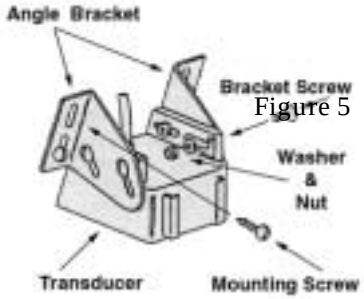


Figure 5

Figure 5

Attach the bracket to the transducer as shown in Figure 5. The flanges of the bracket normally point outward, away from the transducer. If mounting space is tight, you can reverse the angle brackets and face the flanges inward.

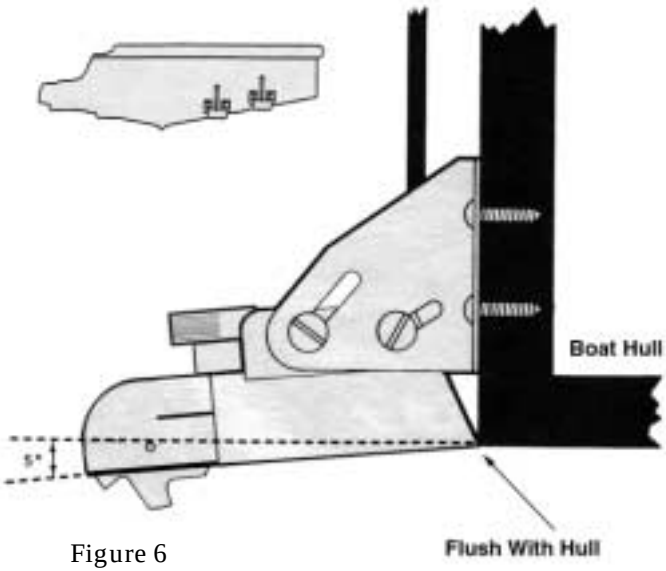


Figure 6

Locate a spot for each transducer similar to the one in figure 6. Keep in mind that you need clear water flow across the face of the transducers to insure a clear reading at all speeds. Stay away from rivets, ribs, or strakes that would be

just in front of the transducers. They will disturb the water and scramble the reading. The 107 kHz transducer is more susceptible to this effect than the 400 kHz transducer, so it is a good idea to place it closer to the center of the transom.

FOR EACH TRANSDUCER, FOLLOW THESE INSTRUCTIONS TO OBTAIN A PROPER INSTALLATION.

After you attach the mounting bracket to the transducer, hold it up to the boat where you are planning to mount it (see figure 6). Mark the four holes on the transom, or mounting plate, so that when the bottom of the transducer is flush with the bottom of the boat the holes are located at the bottom of the bracket slots. This gives you room to "fine tune" the position of the transducer and optimize your reading after you've put the boat back in the water. Drill out the holes and install the transducer bracket assembly. Tighten the screws down securely. Be sure to seal any holes drilled into the transom with silicone to prevent water from leaking into the boat.

Route the transducer cord up to the unit taking the same care as you did when you routed the power cord. Make sure that the cord is restrained and not allowed to flop around in the wind. This can cause stress on the wire inside the cable, and possible breakage. Plug the transducer connector into the back of the unit and screw the retaining ring down tight.

After you have put the boat back in the water confirm that you can maintain a bottom reading at all boat speeds. If not, loosen the bracket screws and tilt the transducer some more. Keep the front edge flush with the boat, but drop the back edge down a little more. If changing this angle several times does not clear up the reading, loosen the mounting screws and slide the transducer down, slightly. Repeat these adjustments until you get a clear reading. Make sure that all mounting screws are tight. Finally, fill any gap between the transducer and the hull with silicone to prevent a rooster tail from shooting up behind the boat.

ATTACHING THE SENSOR ASSEMBLY

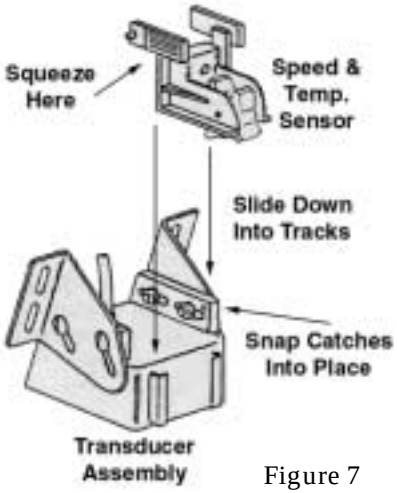


Figure 7

The speed and temperature sensor assembly attaches to either transducer as shown. Pinch, or squeeze, together the tabs at the top of the sensor and slide the assembly down into the tracks on the back of the transducer. Push it down until it stops, and then, push the tabs back, outward, until the catches snap into the holes on the transducer.

CAUTION - It is a good idea to restrain the speed wheel from spinning freely while trailering the boat. Damage may result because there is no water to lubricate the wheel bearings. A rubber band works good for this.

IN-HULL MOUNTING

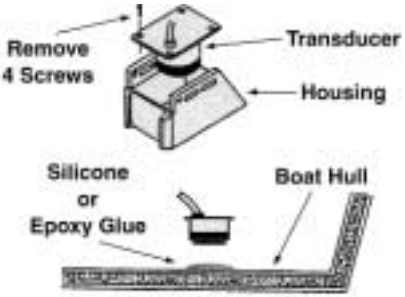


Figure 8

Finding the best location for the transducers 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 each transducer. This makes 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 transducers in the intended location. Move the transducers around until you get the best reading. Mark the spot.

Remove each transducer from its housing as shown in figure 8. To install, clean the spot of mud and oil. Using an epoxy or silicone glue, make a puddle about the same diameter 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.

TROLLING MOTOR MOUNTING

Install the bracket assembly onto the transducers. Set the two transducers down on a flat surface, back to back. Install the bracket assembly as shown in figure 9. Use the two included large cable ties to attach the transducer to the electric trolling motors lower unit. Using the slots in the transducer bracket, run the ties through them and around the motors lower unit. Locate the transducers on the bottom of the lower unit as in figure 10. Locate the 107 kHz towards the front of the motor. This transducer is more susceptible to noise, so keep it further away from the propeller

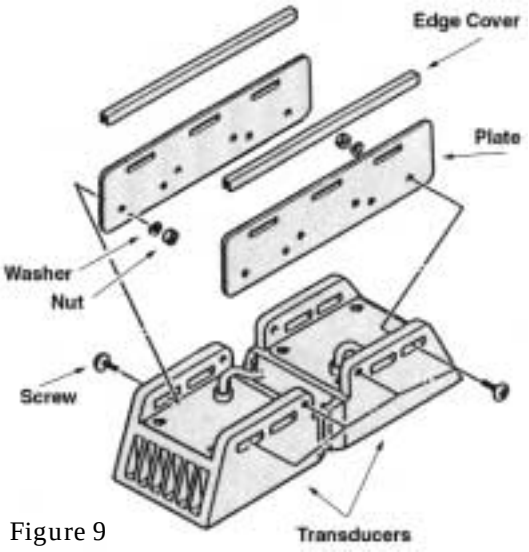


Figure 9

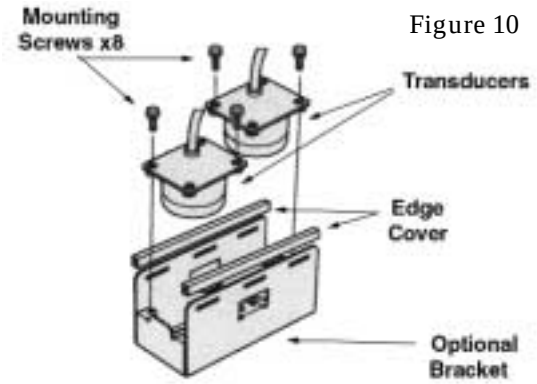
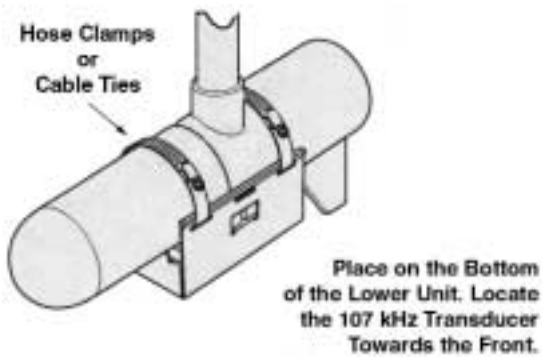


Figure 10



Run the cables up the shaft using smaller cable ties to hold it in position. Make sure that the cables will not be damaged by the movement of the trolling motor. Plug the transducer connectors into the back of the unit and tighten the retaining rings.

There is an optional one piece mounting bracket, part #TMB003. This bracket is more compact and durable than the standard.

SENSOR MOUNTING

If you mount the transducers inside the hull of the boat or on an electric trolling motor (described on page 8) you will need to use the provided sensor mounting bracket, instead of the transducer, to mount the speed and temperature sensor.

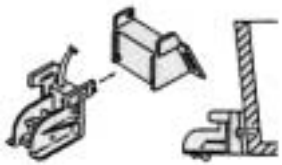


Figure 11

Snap the sensor assembly into the mounting bracket as shown in figure 11. Hold the assembly up to the boat at the bottom of the transom. Stay away from rivets, ribs, or strakes that would be just in front of the sensor, as they can affect your speed reading. Mark the two holes on the transom, or mounting plate, so that when the bottom of the sensor is flush with the bottom of the boat the holes are located at the bottom of the bracket slots. The bottom of the speed wheel should be below the transom line.

Locate the two mounting screws and drill the appropriate sized holes in the transom. Install the sensor assembly and tighten it down securely. Don't forget to seal the holes with silicone to prevent leakage.

CAUTION - It is a good idea to restrain the speed wheel from spinning freely while trailering the boat. Damage may result because there is no water to lubricate the wheel bearings. A rubber band works good for this.

PORTABLE MOUNTING

An optional suction cup bracket can be used to temporarily attach the transducers 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. The optional BK0507 suction cup mounting bracket works well for this application.

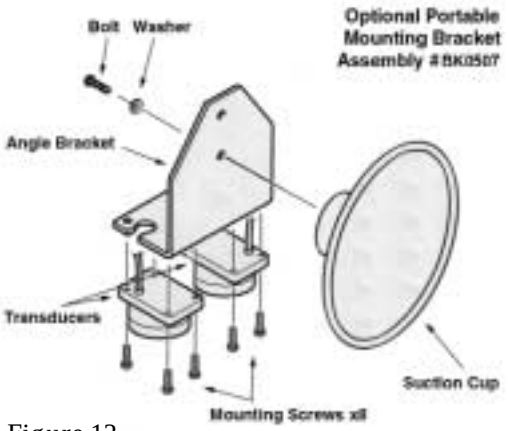


Figure 12

OPERATION

The LC-507 is a sophisticated depth sounder, yet very easy to operate. All of the main sonar controls are right on the front panel. There are even seperate controls for each beam. Figure 13 shows the control panel of the unit.

Figure 13

TURNING THE UNIT ON

Once the unit is connected to power you can turn it on. Press the ON / OFF button. You will hear a series of short beeps before the display shows up. To turn the unit off, press this button again. All of your feature and menu settings will automatically be saved in memory. When you turn the unit on again, these settings will be restored.

USING THE BUILT-IN SIMULATOR

When learning the operation of the unit, it may be helpful to activate the internal simulator. This will play a short program, on the display, that will simulate a real world situation. You can experiment with all of the panel controls and menu functions and see the results on the display.

To turn the simulator on, first make sure the unit is off. Now, press the ON / OFF button and hold it in. You will hear the normal series of beeps, followed by up to three more sets of beeps, about three seconds later. Release the button after the last beep and the simulator will start. There are three different programs. Each time you start the simulator, a different program will start.

ENTERING THE MENU

To enter the menu, press the MENU button. You will now be on menu page 1. Press the MENU button again to get to page 2. Press it a third time to get to page 3, the final menu page. To exit the menu, press the MENU button a forth time. You can also press any of the sonar control buttons (C-Line, Gain, or Range) to close the menu.

ADJUSTING THE DISPLAY CONTRAST

While in the normal display mode, press the UP and DOWN arrows to change the display contrast. Pressing the UP arrow will increase the contrast and make the display darker. Pressing the DOWN arrow will decrease the contrast and make the display lighter.

CHANGING THE MODE

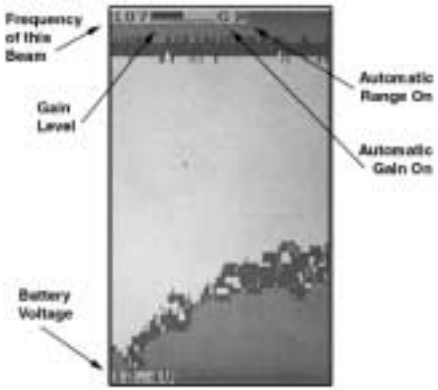
There are three memory modes in which you can store three different control and feature setups. The number at the bottom right corner of the display indicates which mode you are in. When the unit is first turned on, the mode should be set to 1. Pressing the LEFT or RIGHT button will move you through the modes. If the current mode is 1, and you press the RIGHT arrow button, the mode will change to 2. Press it again to move to mode 3. Pressing the RIGHT arrow button, again, will move you back to mode 1.

How each of these modes are setup is entirely up to you. Instead of having to change several control and menu functions, you simply move to the next mode, which you have previously set up. There is more information regarding the Mode feature in the section “Typical Indications” starting on page 20.

ADJUSTING THE DEPTH RANGE

You can adjust the depth range independently for each beam. You can also use the Automatic Range feature to let the LC-507 do it for you. The current depth is displayed in the lower left corner of the display. There is also a depth scale displayed on the right side of each beam display which indicates the current Range setting for that beam.

To change the depth range push the up or down arrows. Up changes to the next shallower range. Down changes to the next deeper range. Hold the button in to move through the ranges quickly. Press the A button below the Range control to activate or deactivate the Automatic Range feature. When Auto Range is on, an R will be displayed at the top of the screen.



Range is simply how deep the unit will read. Usually, you want the unit to read the depth down to the bottom, but there are times when you may want to see multiple echoes, which are deeper than the bottom.

ADJUSTING THE GAIN

There are separate Gain controls for each beam. Gain controls how much of the sonar signal you see on the display. With too low of a Gain setting, you will miss some things. With the Gain set too high, you will see to much. It is recommended that you use the Automatic Gain Control feature, unless you have a specific reason not to. To activate the Automatic Gain Control feature, press the A button below the Gain control arrows. The letter G will displayed at the top of the display indicating that the feature is on. Press this A button once again to deactivate the feature. To manually change the Gain level, simply press the up arrow to increase the level and the down arrow to decrease the level. The Gain level is indicated in a bar graph at the top of the display.

ADJUSTING THE C-LINE

C-LINE or Clean Line, affects the way the bottom and fish are displayed. Clean Line will "clean out" harder targets. To increase the level of C-LINE, press the up arrow. To decrease the level, press the down arrow. There is no display indicator to tell you the level of C-LINE, but the changes will be apparent in the display of the bottom and targets.

The level of C-LINE is, largely, a matter of taste. However there is a basic rule to follow. The C-LINE should clean out the bottom signal, but not the fish. To get to this point, first set the C-LINE to its minimum level. Press and hold the C-LINE down arrow. The unit will beep once for each change in C-LINE level. Reduce the level until the unit sounds a high pitched beep, indicating no more adjustment is available. The bottom signal should now be all black. Now, increase the level until the bottom signal cleans out, similar to figure 22. You can increase the level more, if you wish, but do not turn it up so high that you lose the black line indicating the leading edge of the bottom.

The idea is that you find the level of Clean Line appropriate for the depth and type of bottom you are over. A properly adjusted Clean Line will make fish identification, near or on the bottom, very easy. It also will make it easy to spot a harder area of the bottom. In figure 22 you can see the difference between a properly set C-LINE and one that is set too low Notice how much easier it is to distinguish the fish that are close to the bottom when the Clean Line is adjusted properly. If the Clean Line is set too low the fish tend to merge with the bottom and become invisible. If the Clean Line is set too high you can get the same results.

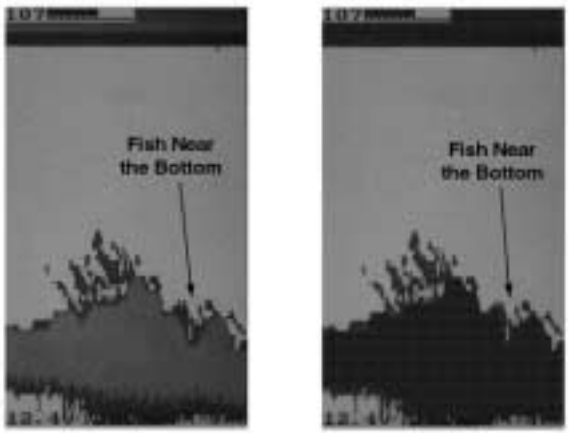


Figure 22

MENU FUNCTIONS

To enter the menu, press the MENU button. You will now be on menu page 1. Press the MENU button again to get to page 2. Press it a third time to get to page 3, the final menu page. To exit the menu, press the MENU button a forth time. Or, press any of the sonar control buttons (C-Line, Gain, or Range).

To navigate in the menu, press the UP or DOWN arrows (CONTRAST) to change lines and the LEFT and RIGHT arrows (MODE) to change the item.

MENU 1

THE BACK-LIGHT

The Back-light will illuminate the display in low light conditions. There are three levels of brightness. To turn on or adjust the Back-light, press the menu button once. The Back-light item is the only one on this page. Press the left or right arrow to change the setting. You can choose from OFF, DARK, MEDIUM, and BRIGHT.

Note - If you are using the LC-507 with a small portable battery, use the Back-light sparingly. It increases the current draw of the unit, reducing your running time on the battery.

MENU 2

Within Menu page 2 are two boxes which contain the selection items for each side of the display ,Right and Left. This page will effect only on the currently selected mode. To change these settings for a different mode, exit the menu, change to the desired mode, then re-enter the Menu to make your changes.

RIGHT

This item determines the frequency of the Right, or full screen, display. Use the left and right arrows to change the frequency between 107 kHz and 400 kHz.

ADJUSTING THE SWEEP SPEED

Sweep speed is how fast the display moves across the screen. Generally, you want the Sweep speed to, roughly, match the speed of your boat. Press the down arrow to move you down to the Sweep item. Press the left or right arrows to change the setting. There are six different Sweep speeds, ranging from SLOW to FAST, and SUPERFAST. This highest sweep speed setting allows you to see depth and structure changes while the boat is moving at a high rate of speed.

A-RNG-MODE

This mode determines how the Automatic Range Control works. There are three settings to choose from. 1ST, 2ND, and 3RD. The 1ST setting tells the Automatic Range Control to make sure that the first echo, the bottom, remains in view at all times. 2ND insures that the range will be adjusted so that the second echo of the bottom can appear on the screen. Finally, 3RD allows the third echo of the bottom to be displayed.

A-RNG-MODE does not insure that the second and third echoes will be visible, only that the range will be adjusted so that they can fit on the screen if the sonar sees them. The type of bottom and the Gain level will determine if the echoes appear.

To change the A-RNG-MODE setting, press the Down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the setting.

A-GAIN-LEVEL

This item works with the Automatic Gain Control feature. There are five levels. The Automatic Gain Control, if selected, will adjust the level of gain according to the conditions. A-GAIN-LEVEL simply tells Auto Gain to keep the gain on the low side, in the middle, or on the high side of automatic gain level.

To change the A-GAIN-LEVEL setting, press the Down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the setting.

A-MODE

A-Mode gives an instantaneous, vertical, representation of the depth below. It gives you the ability to recognize bottom changes and targets before they scroll onto the normal display. It shows as a narrow band just to the right of the scrolling display. There is an A-MODE for each beam.

To activate the A-MODE, press the down arrow to move to the item. Press the Right arrow button to turn the feature ON. Press the Left arrow to turn the feature OFF.

USING THE FISH ALARM

The Fish Alarm will sound a series of short beeps when the LC-507 determines that there is a fish within the beam. Any target that is separated from the bottom signal could sound the Fish Alarm. Obviously, not all of these targets will be fish. The level at which the alarm sounds is controlled by the Gain. If you find that the alarm is sounding more than it should, reduce the gain level.

To activate the feature, press the Down arrow to move down to Fish Alarm item. Press the Right arrow to turn the feature ON and the Left arrow to turn it OFF.

LEFT

To select the frequency of the Left display, press the Down arrow to move to the item. Then, press the Left or Right arrow buttons to change the selection. A selection of N / A will cause the Right display to cover the full screen.

Note - SWEEP, A-RNG-MODE, A-GAIN-MODE, and A-MODE work the same way for the Left beam as they do for the Right

HARD-BTM-ALM

The Hard Bottom Alarm will sound a series of long beeps when the third echo of the bottom is visible on the Left display. **Important** - If Auto Range is on, the A-RNG-MODE feature must be set to 2ND or 3RD for the Hard Bottom Alarm to work.

MENU 3

Menu page 3 controls features that affect all modes, no matter which one is currently selected.

SUPER RANGE

Super Range controls the way the display appears when the depth range changes. When Super Range is OFF, and the range changes, you will see the point at which the range changed on the display. This point will scroll across the screen until it disappears at the far left side. When Super Range is ON, there will be no visible point at which the depth changed. Super Range adjusts the entire display to the new range.

To activate the Super Range feature, press the Right arrow button. To deactivate it, press the Left arrow button. It is best to turn this feature ON, unless you have a specific reason to have it OFF.

DEPTH

The Depth feature controls how the digital depth number appears at the bottom of the display. Your choices are OFF, SMALL, or LARGE. OFF means no digital depth or voltage numbers. SMALL displays the standard size digital depth. LARGE makes the digital depth appear larger and easier to read.

To change the Depth setting, press the down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the setting.

DEPTH-UNIT

This feature lets you choose between Meters and Feet for depth measurement. Press the Down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the unit of measure.

TEMP-UNIT

This feature lets you choose between Celsius and Fahrenheit. Press the Down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the unit of measure. A temperature reading will appear on the screen whenever there is a temperature probe plugged in.

TEMP-CALIB

This feature allows you to calibrate the temperature reading, if necessary. Press the down arrow button to move down to the feature. Then, press the Right or Left button to increase or decrease the current value, indicated at the bottom of the menu screen.

SPEED

This turns the speed indicator on and off. Press the down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the setting.

SPEED-UNIT

This feature lets you choose between Miles Per Hour, Kilometers Per Hour, and Knots. Press the Down arrow button to move down to the item. Then, press the Left or Right arrow buttons to change the unit of measure.

SPEED-PULSE

This feature allows you to calibrate the speed reading, if necessary. See the Trouble Shooting guide.

VOLT-CALIB

This feature allows you to calibrate the voltage reading, if necessary.

SYSTEM-RESET

System Reset will revert all setting back to the factory originals.

TYPICAL INDICATIONS

The LC-507 can display fish, bait fish, weeds, as well as distinguish the differences between a hard bottom and a softer bottom. In the real world, there is no such thing as a typical indication. What you see on the display is a representation of the water you are fishing, given the current settings of the unit. The Range, Gain, Clean Line, and all other settings will affect the way your display will appear in your situation.

FINDING BOTTOM

Once you have turned on the LC-507, in automatic range mode, you must allow it time to find the bottom. This can take from just a short moment to more than a minute, depending on the depth and conditions. If you are operating in manual range mode, you will need to adjust the range to find the bottom. As soon as the digital depth appears, the graphical representation of the bottom will start to move across the screen.

IDENTIFYING BOTTOM TYPES

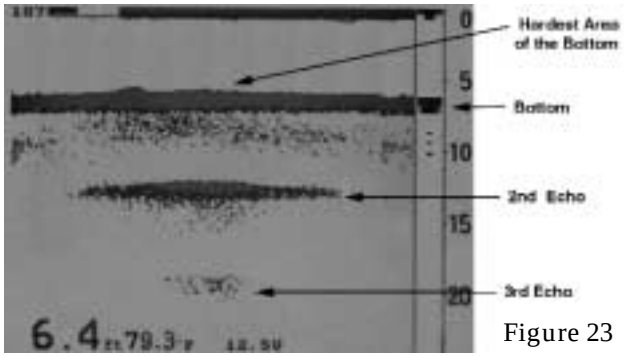


Figure 23

Figure 23 shows what you may see when moving over a harder area of the bottom. The harder the bottom is the better the signal is reflected from it. The result on the display is an increase in the number and strength of the multiple echoes of the bottom. In order to view these changes, the range must be set deep enough to see these multiple echoes. If the Automatic Range Control is active, you must have the A-RNG-MODE feature, in the menu, set to 2nd or 3rd. This will insure that the range will be adjusted so the multiple echoes can be seen. Although these echoes can be seen on either beam, the 107 kHz beam will work better than the 400 kHz beam.

SEEING STRUCTURE

Here, structure is defined as anything from a drop-off to a rock pile or weed bed. The comparison of the two beams gives you the ability to see structure like never before. The narrow 400 kHz cone allows you to see sharp breaks and individual items, such as rocks or stumps. The wider 107 kHz cone will show you these same things further away from your boat, but with less detail. Notice, in figure 24, as the boat moves over the drop-off the 400 kHz beam shows the slope precisely. The 107 kHz beam, on the other hand, shows a much different signal. The slope appears to more gradual and the bottom is much thicker. This is due to the wider cone covering more area. Notice the extra line coming down next to the bottom. This is another part of the slope that is off to the side.

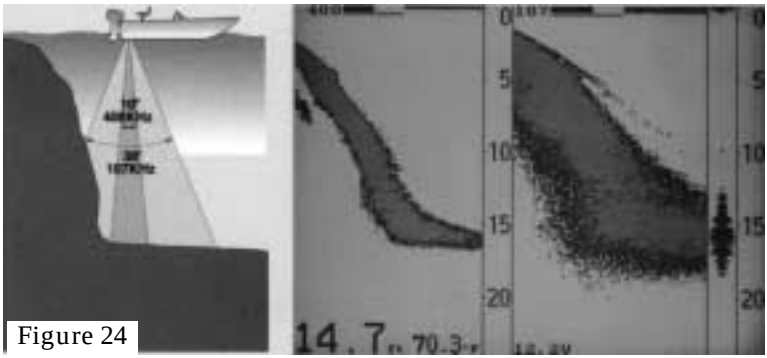


Figure 24

Figure 25 shows a boat passing over a deeper hole. Notice how the narrow cone draws the hole very well, but the wide 107 kHz cone seems to smooth it out. If there are fish in the hole you are more likely to be able to see them with the narrower cone. However, if the fish are hanging on the edge of the hole, the 107 kHz beam may see them better.

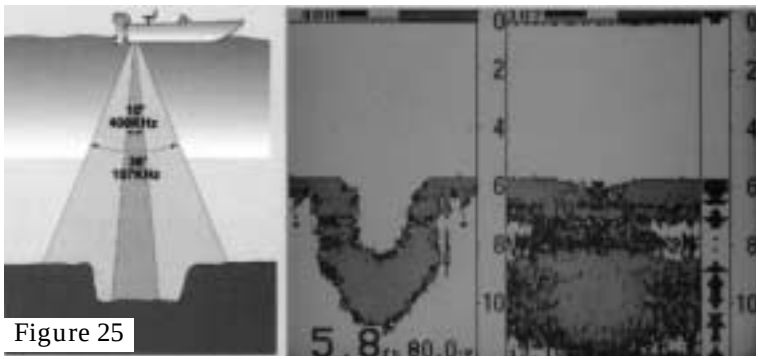


Figure 25

SEEING FISH

Although the LC-507 does not use any type of fish identification symbols on the display, it can be very easy to spot fish. Fish passing through the 107 kHz cone will appear as an arc, or partial arc. Fish on the 400 kHz beam can also be displayed as arcs, but will most likely, appear more like irregular blocks. Here is how it works. The 107 kHz beam has a lot of power and a very wide cone angle. When the fish appears at the edge of the cone it is far away from the transducer. The display begins to draw the target on the screen. As the fish gets closer to the center of the cone the target appears to get shallower, or closer, and the unit draws the target line getting shallower. When the fish passes to the other side of the cone it appears to get deeper, or farther away. The unit now draws the line going deeper, until it is no longer visible. The result is an arc drawn on the display. If the fish passes on the edge of the cone you will only see a partial arc. The principal is the same for the other beam, but because of the smaller cone angle, full arcs are much less likely to be seen. Fish within this beam will be much closer to you than they may be with the wider 107 kHz beam. They ,also, are more likely to be further away from the bottom. This is due to the "Dead Zone" effect of the wider cone.

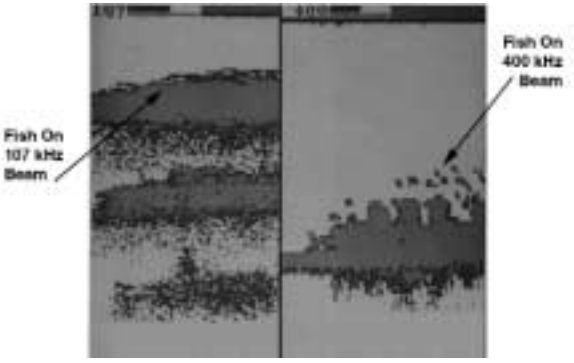


Figure 26

The Clean Line feature, when set to the proper level, can also help you identify fish from floating debris. If the target appears cleaned out, you can assume it's something significant, like a fish. In heavy weeds this can be more difficult to see.

DEAD ZONE

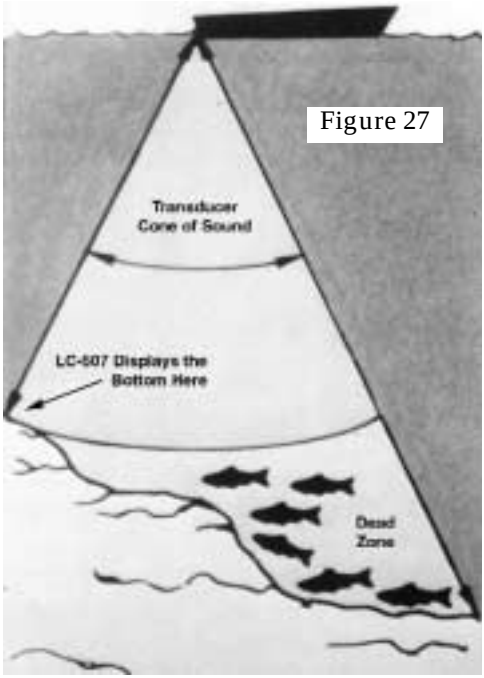


Figure 27

Dead Zone is the area within the transducers cone that is blind to you. The wider 107 kHz beam will have a much larger dead zone than the narrow 400 kHz beam. The LC-507 will mark bottom as the nearest distance it sees. If you are fishing over a slope, it may see the high side of the slope, at the edge of the cone, and mark that as bottom. The fish that are hanging on the bottom in the center of the cone will be invisible to you because they are actually within the bottom signal on your depth finder. A narrower beam angle will reduce this effect.

The Clean Line feature can, also, allow you to see inside the dead zone. If it is properly adjusted, you can see fish arcs within the "cleaned out" section of the bottom. The further down into the bottom signal they appear, the farther away from the boat they are.

SURFACE CLUTTER

The line of information going across the top of the display represents the surface of the water. This line can get quite wide, at times, due to surface clutter. Tiny marine life, such as algae or plankton, can be responsible for this. Choppy or rough waters can also be a cause as tiny air bubbles are forced down under the surface. Surface clutter has little effect on the performance of the unit. It can, however, make things difficult to see in shallow water. The 107 kHz beam will be more likely to display this clutter than the 400 kHz beam.

HIGH SPEED OPERATION

The LC-507 can read depths at almost any boat speed. Due to the limited speed of the LCD display, the displayed bottom may be some distance behind you, depending on how fast the boat is traveling and the currently selected Sweep Speed. Use the A-Mode feature to help you with high speed readings. Here, high speed is defined as any speed at or above the speed at which the boat planes out.

The LC-507 has a Super Fast Sweep Speed setting. This maximum Sweep Speed should be used when the boat is traveling at higher speeds. The faster sounding rate will greatly help in the identification of fish and structure under the high speed conditions.

Once the boat starts to plane, 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. In general, you will have better high speed readings with the 400 kHz beam than you will with the 107 kHz beam.

SHALLOW WATER OPERATION

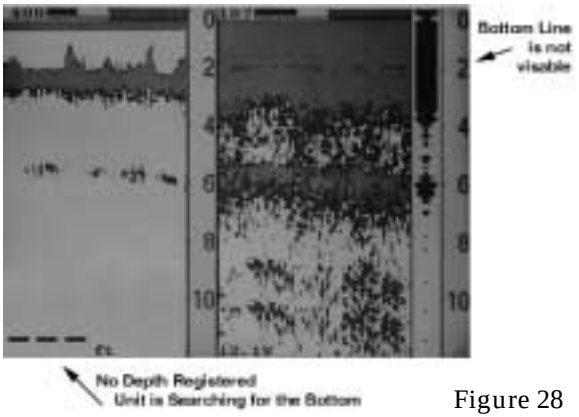


Figure 28

When the LC-507 is in the automatic range and gain modes, it automatically senses the bottom depth and tries to keep the best view at all times. Although the display may not show it, the LC-507 is monitoring basic sonar signals, such as the bottoms second echo and various target's signal strengths. This way it can maintain the optimum gain level, automatically, for you.

In very shallow water (less than 3 feet) the unit can get "over-

welmed". In this condition the unit will show erroneous information. The graphic display will become mostly black and the digital numbers on the display will read no depth or depths that are much deeper than reality. These depths are actually multiple echoes of the real bottom. **It is important to use caution when navigating in shallow waters. Use common sense. Don't rely solely on your depth sounder.**

It often helps to turn off the automatic features and manually change the range to the 5 or 10 foot range. Also, turn the gain level down to the minimum. If the digital depth reading doesn't seem right, it is probably a multiple of the correct depth. Use the graphic display as a better reference.

USING THE MODE FEATURE

There are three memory modes in which you can store three different control and feature setups. The point of the Mode feature is to allow you to quickly change several menu and control panel items at one time. To make this feature work for you, you will need to go into each mode and program the settings you want.

If you are new to the operation of the LC-507, it is recommended that you program each mode as described below. This should be a good “starting point”. It will also help you get accustomed to the use of the Mode feature, as well as, the effect of the menu features. When programmed these new mode settings will give the following results.

Mode 1 - Basic settings to give the best view of the bottom on both beams.

Mode 2 - Modifies settings to look at multiple bottom echoes. Hard Bottom Alarm and Fish Alarm are on.

Mode 3 - Modifies settings to give good results for high speed operation, 400 kHz at full screen.

Keep in mind that your final settings will, most likely, differ from these, given your application and conditions.

Turn the LC-507 on and change the mode to number 1, if necessary. The mode number is displayed at the far lower right corner of the screen. Now, press the menu button. The first menu page will appear. Press the Menu button again to get to the second page. The darkened box indicates the item you are currently adjusting. The activated selection will be indicated by an open box around it. Modify the settings to match the following.

RIGHT:	**107 400**
SWEEP:	**S · · · F SF**
A-RNG-MODE:	**1ST 2ND 3RD**
A-GAIN-LEVEL:	**L · M · H**
A-MODE:	**OFF ON**
FISH-ALARM:	**OFF ON**
LEFT:	**107 400 N/A**
SWEEP:	**S · · · F SF**
A-RNG-MODE:	**1ST 2ND 3RD**
A-GAIN-LEVEL:	**L · M · H**
A-MODE:	**OFF ON**
HARD-BTM-ALM:	**OFF ON**

For now, make sure that the Automatic Range and Automatic Gain Controls are activated on all three Modes. Also, once on the water, you will need to adjust the Clean Line for each Mode.

Now, press the Menu button two more times to exit. Change to Mode 2 and then go back to Menu page 2.

RIGHT:	**107 400**
SWEEP:	**S · · · F SF**
A-RNG-MODE:	**1ST 2ND 3RD**
A-GAIN-LEVEL:	**L M H**
A-MODE:	**OFF ON**
FISH-ALARM:	**OFF ON**
LEFT:	**107 400 N/A**
SWEEP:	**S · · · F SF**
A-RNG-MODE:	**1ST 2ND 3RD**
A-GAIN-LEVEL:	**L M H**
A-MODE:	**OFF ON**
HARD-BTM-ALM:	**OFF ON**

Remember, when using the Hard Bottom Alarm the A-RNG-MODE feature must be set to 2ND or 3RD.

When using the Fish Alarm, use the A-GAIN-LEVEL feature to control the size of the fish that the alarm sounds on. With a higher gain setting the alarm will sound on smaller fish. The A-GAIN-LEVEL will have the same type of an effect on the Hard Bottom Alarm as well.

Finally, press the Menu button two more times to exit. Change to Mode 3 and then go back to Menu page 2.

RIGHT:	**107 <u>400</u>**
SWEEP:	**S · · · F <u>SF</u>**
A-RNG-MODE:	**<u>1ST</u> 2ND 3RD**
A-GAIN-LEVEL:	**L · M · <u>H</u>**
A-MODE:	**<u>OFF</u> ON**
FISH-ALARM:	**<u>OFF</u> ON**
LEFT:	**107 400 <u>N/A</u>**
SWEEP:	**S · · · F SF**
A-RNG-MODE:	**1ST 2ND 3RD**
A-GAIN-LEVEL:	**L M H**
A-MODE:	**OFF ON**
HARD-BTM-ALM:	**OFF ON**

When N/A is selected for the Left beam, any selections for this beam will have no affect on the LC-507s operation.

You can use the built-in simulator to see the effects of these settings. After you have used the LC-507 on the water, and you feel more comfortable with it, change these settings to better match your application, conditions and preferences.

MAINTENANCE

Maintenance for the LC-507 is very simple. There, simply, is not that much to maintain. Because of this, problems can sneak up on you if you're not careful.

The unit should be removed whenever the boat is parked to guard against theft. Don't store it in a place that may fill with water.

Power connections need constant checking. Corrosion can develop and cause intermittent or loss of operation. Spray the power connector and battery terminals with silicone to prevent this. Remove the connections before you put the boat away for storage.

The transducers 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. Clean the face of the unit with a mild soap. Don't submerge the unit when cleaning.

TROUBLE SHOOTING

Symptom	Possible Cause
Unit will not turn on.	Check for proper battery polarity and that you have fully charged, working batteries.
Unit is turned on, but there is no display.	Contrast is adjusted too low. Increase contrast.
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 or 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.	Many air bubbles or very small targets in the water. Electrical noise from another device.
Unit works well when sitting still or at slow trolling speeds, but loses reading when the boat speeds up.	Improper transducer 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.
Temperature does not show or is not accurate.	Temp sensor is not plugged in or is not in the water.
Speed indicated does not show or is not accurate.	Speed is not turned on in menu. SPEED-PULSE feature needs calibrating (contact customer service)

If this trouble shooting guide does not help, please contact our customer service department. Contact information is on page 33.

OTHER VEXILAR PRODUCTS

THE 107 PRO

The 107 Pro is loaded with advanced features that help even veteran anglers zero in on structure and game fish. The low frequency 107 KHz output generates power to spare and a wide, 38º, cone angle.

The Boundary Waters LC-10

Powered by eight AA batteries, the compact, ultra lightweight Boundary Waters LC-10 is perfect for canoes, portages, or fly-ins. It has great performance and plenty of friendly features.

The FL-8SLT Color Flasher

The FL-8SLT is a compact and light-weight flasher designed for serious anglers. Besides indicating depth, the unit also shows changes in bottom content and conditions. It has three display colors. Red indicates a strong signal and green indicates a weak signal. Orange is a medium signal.

104 DEPTHERM

The fishing odds are on your side when you use Deptherm. It tells you quickly and accurately what temperatures are below your boat and it also tells you the temperature at a specific depth. If your Deptherm indicates that the water temp is wrong for the species you're after, you can quickly move.

PORTA CASE

The unique Vexilar Flasher Porta Case holds your FL-8SLT, 107 Pro, or other manufacturer's sonar or GPS. It has space for your transducer, a rechargeable battery, and the Vexilar Battery Status Indicator. Just set it down on the ice or boat seat, position the transducer and turn on your unit. The round base is just the right size to fit down inside a standard 5 gallon bucket.

12 VOLT SEALED LEAD ACID BATTERY WITH BATTERY CHARGER

This battery was designed for sportsmen on the go, with rugged construction and design features that make it ideal for summer and winter use. With a near "bulletproof" charger, this system packs enough power to run your equipment for hours, and for years to come.

CHARGE GUARD

The Charge Guard is a foolproof way to get the right charge into your deep cycle and cranking batteries. Just connect the Charge Guard to your battery, hook up your battery charger, and walk away. It works with most battery chargers and gives your battery the correct charge every time by automatically stopping the charge when the battery is full.

BATTERY STATUS INDICATOR

The Vexilar Battery Status Indicator works with all 12 volt batteries and can be permanently mounted or used as a portable unit. It monitors your battery constantly as it is discharging and charging. Battery charge status is indicated with a highly visible red LED light.

LC-507 REPLACEMENT PARTS

If you need additional or replacement parts for your LC-507 you can order them from your dealer or directly from the factory.

TB0071 107 kHz Transducer Assembly, 3 Pin

TB0072 400 kHz Transducer Assembly, 3 Pin

TBH001 Transducer Housing Only

PC0002 Power Cord Assembly, 2 Pin, w/Fuse

TP0002 Temperature Probe, 8 Pin

ST0002 Speed and Temp Probe, 8 Pin

STB001 Bracket for ST0002

HSB003 Transom Mount Transducer Bracket Assembly

TMB002 Electric Trolling Motor Transducer Bracket, 2 Piece

TMB003 Electric Trolling Motor Transducer Bracket, 1 Piece

STB001 Sensor Mounting Bracket

GB0003 Gimbal Bracket

GBK003 Gimbal Knobs, 2 Knobs with Washers

SM0001 Swivel Mount Platform for All Models

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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