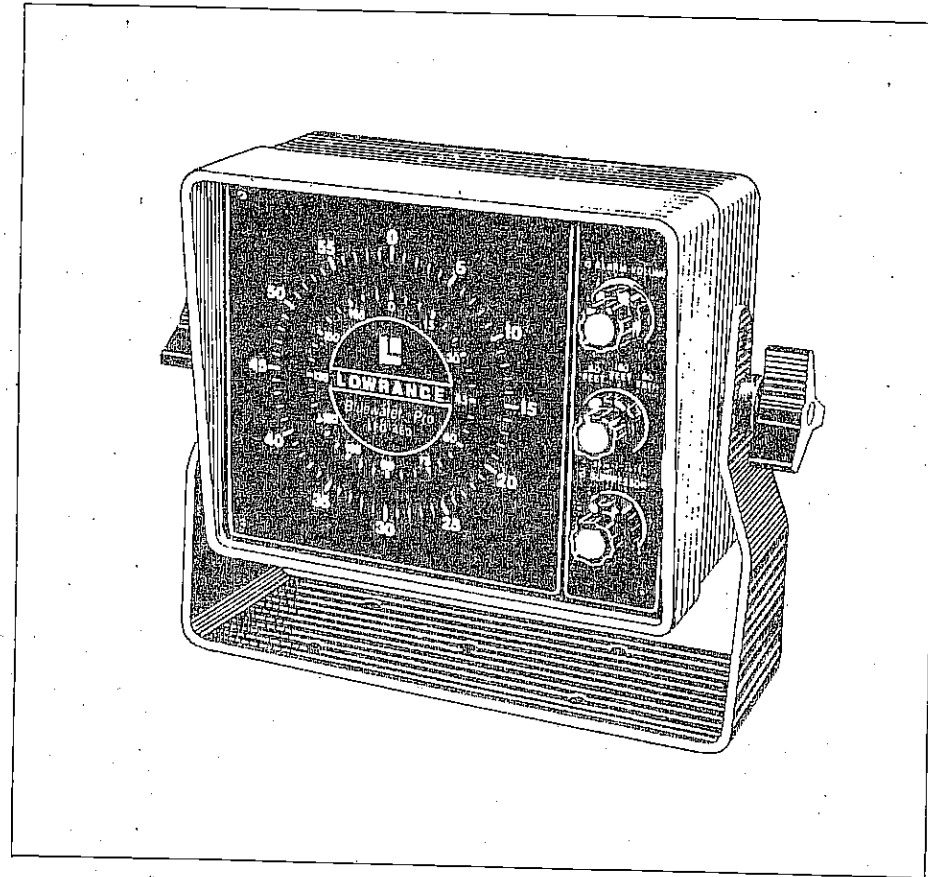


INSTALLATION AND OPERATION MANUAL

BLUEWATER PRO

MODEL LFG 460

DEPTH SOUNDER



L [®] **LOWRANCE ELECTRONICS, INC.**
12000 E. SKELLY DR., TULSA, OKLA. 74128

SPECIFICATIONS

LFG-460

Dimensions	8 $\frac{3}{8}$ "H, x 9 $\frac{7}{8}$ "W x 5 $\frac{1}{16}$ "D
Weight	4 lbs.
Dial	Outer: 0 to 60 ft. and 0 to 60 fathoms Inner: 0' to 180 ft
Voltage	12 vdc
Current Drain	(60' & 180' range) 240 ma (60 fathoms range) 240 ma
Frequency	192 KHZ
Pulse Width (adjustable)	(60' & 180' range) 200 — 1000 us (60 fathoms range) 500 — 1300 us
Pulse Repetition	60 ft.: 40 pps 180 ft.: 13.3 pps
Output Power	60' range: 45 watts typical p-p (5.6 watts RMS) 180' range: 200 watts typical p-p (25 watts RMS) 60 fathom range: 200 watts typical (25 watts RMS)

HOW TO OBTAIN SERVICE

Please Follow the Instructions Carefully

Write to Lowrance Electronics, Inc. or Authorized Service Center for return authorization and shipping instructions.

In your letter please **DETAIL THE PROBLEM** you are experiencing and our service department may be able to save you the inconvenience of returning your unit.

If it is determined that your unit must be returned, full shipping instructions will be sent to you.

Our service department will service your unit and return it to you as quickly as time will permit.

SCHEMATIC DIAGRAM AND PARTS LIST

Should you desire a Schematic Diagram and Parts List for your Lowrance LOCATOR, send \$1.00 to Customer Service Mgr., Lowrance Electronics, Inc., 12000 East Skelly Drive, Tulsa, Oklahoma 74128. Be sure and give us the Model Number and Serial Number of your LOCATOR.

INDICATOR INSTALLATION

Mounting

The depth sounder can be mounted in any convenient location which has a flat surface. The adjustable yoke permits mounting on either a bottom or an overhead supporting surface.

If the unit is to be located in the vicinity of a magnetic compass, run it in position temporarily to make sure it does not affect compass readings. If compass heading changes, choose an alternate position.

Note: The unit must be running when you make this test. Four holes in the base of the yoke allow either wood screw or bolt mounting.

POWER CONNECTION

12-volt DC power for the LFG-460 is supplied from the boat's 12-volt electrical system. Power connections should be run directly to the battery terminals. Do not pick up power from some other accessory because this may cause electrical interference in the unit.

A 3-ampere fuse should be located in the + (positive) connecting lead as close to the battery as possible. The positive conductor in the power cable is the center conductor. The unit can be used with either positive or negative ground systems.

The unit is protected from accidental polarity reversal and no damage will result if battery connections are wrong. (However, the unit will not work.)

If the power cable is too long, cut off the excess. Do not coil it up because this may cause electrical noise pick-up. If the cable isn't long enough, use ordinary #18 lamp cord available at any hardware store. Splices should be soldered. If this can't be done, use twist-type solderless connectors. Simply twisting of splices may result in intermittent power connections which can cause interference. Tape all splices with plastic tape.

TRANSDUCER SELECTION

Six transducer models are available for use with the LFG-460. Any unit can be used interchangeably with any other unit. No retuning of the indicator is needed, regardless of which transducer is used.

Models and applications are:

1. Pod, Model LTT-160 for thru-hull sounding or troll motor mount.
2. High-speed plastic, Model LHT-100 for transom mounting or thru-hull sounding.
3. High-speed bronze, Model LHT-325 for transom mounting or for thru-the-hull mounting.
4. Extended-shank bronze, Model LTT-201 for bottom mounting on larger craft.
5. Narrow cone angle pod, Model LTT-158 for thru hull sounding and best deep water performance.

6. Narrow cone angle extended shank bronze, Model LHT-108 for transom or thru hull mounting on larger craft and best deep water performance.

OPERATION OF THE LFG-460

Sensitivity and "ON"- "OFF" Knob:

The "ON"- "OFF" sensitivity knob is the small, bottom knob. It operates in a manner similar to the volume control on a radio. Turning the knob clockwise will turn the unit on, and turning the knob back the full counterclockwise position will turn the unit off. Turning the knob in a continued clockwise manner will increase the receiver sensitivity and weaker echos from deeper water can and will be observed on the dial.

After mounting the transducer, turn the unit on by turning the sensitivity knob clockwise. You will see the constant surface signal at zero. Before long you will see another signal — at ten feet if the water is ten feet deep. The signal indicates the bottom. It, too, should always show.

Continue turning the sensitivity control toward the right and you will see a second bottom signal at double the depth of the first, or 20 feet. The sound waves have hit bottom, bounced back, hit the surface of the water, then bounced down and up again. Over a firm bottom you can increase the sensitivity until the dial shows three or four bottom signals at multiples of the true depth.

The sensitivity is adjustable and you should always set it to return a steady bottom signal — nearly as bright as the zero signal — regardless of depth. Turn the knob counterclockwise when you begin to get the double signal; clockwise when the bottom signal begins to fade.

To show fish, the sensitivity control should be set to show a strong, bright bottom signal.

RANGE CONTROL

The range control (center knob) is used to select either the 0-60' range, the 0-180' range or the 0-60 fathoms (360 ft.) range as marked on the panel.

With the knob in the 60' position, the range should be read on the outside 0-60' scale on the faceplate. In the 180' position, range should be read on the inside 0-180' scale of the faceplate. With the knob in the 60 fathom position, range should be read on the outside dial. (1 fathom is equal to 6 feet.)

SUPPRESSOR CONTROL

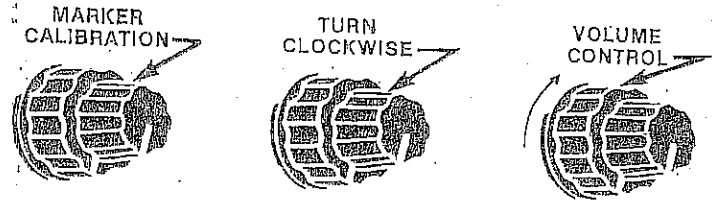
The suppressor control is the large, bottom knob which can be used to cut down or eliminate false flashes on the dial. These false flashes can be caused by ignition interference from the boat's motor or by air bubbles near the transducer.

Turning the knob clockwise increases the amount of suppression.

Always try to use as little suppression as possible. This is because as you increase suppression, you cut down the resolution. Resolution is the ability of the unit to show separate signals for objects (such as fish) close together. Increasing suppression does not cut down *sensitivity* of the unit.

DEPTH ALARM CONTROL

The intent of the depth alarm is to provide the operator a means of establishing a pre-determined depth to the monitor. The depth alarm calibration setting can be selected and properly displayed on either 60', 180' or 60 fathom range.



With the range switch in the proper position (either 0-60', 0-180' or 60 fathoms), pull the small marker calibration knob to "ON" position. As the knob is rotated clockwise, a second signal will begin to circle the dial in a clockwise direction. By continuing to rotate the marker knob, the signal alarm can be set at any depth between 4 ft. and 50 ft. on the 60' scale, between 9 ft. and 150 ft. on the 180' scale and between 9 ft. and 200 ft. on the 60 fathom scale.

Note: Once the unit has been calibrated, the marker knob can be pushed to "OFF" position so that the calibration signal will not interfere with other signals such as bottom, brush, fish, etc.

Once the depth alarm has been set, any fish or suspended material located between the surface and the pre-determined depth setting will sound the alarm.

In order to operate properly, the marker settings must be made between the zero position and the bottom signal registered on the dial. If the marker is set deeper than the lake bottom shows on the sonar, the audible alarm will sound continuously.

The alarm sensitivity is established by the system design and is not intended to operate on false targets such as small bubbles.

ALARM VOLUME CONTROL

The alarm volume control is the larger knob and is operated by turning clockwise to increase volume. This feature permits the operator to devote attention to the operation of the boat and/or fishing. When the alarm sounds, the depth of bottom or fish can be noted by simply looking at the dial.

The alarm can also be used as an alert for shallow water.