

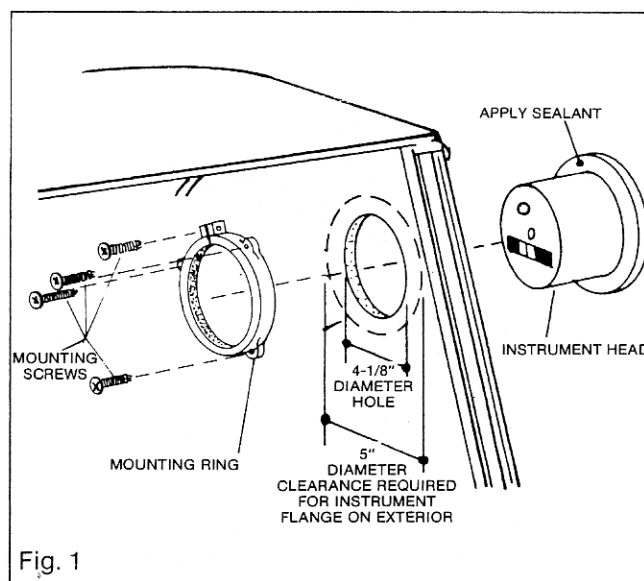
LDC INSTALLATION INSTRUCTIONS

The MOOR, LDC liquid crystal depth sounder is a precision electronic instrument which will accurately indicate the depth of water below your boat from 3' to 200' in 1/10' increments. An adjustable alarm feature visually alerts you of shallow water conditions. Please take a few minutes to read the following instructions and you will be assured of long and trouble-free service. Locate the serial number on the instrument housing and record for future reference. Note: the series number on the box is not the complete serial number. Be sure to fill out and return the enclosed warranty card for your LDC.

Serial No. _____

A. INSTRUMENT HEAD INSTALLATION (See Figure 1)

1. Select a flat, smooth area on the bulkhead where the instrument can be easily seen. Check for adequate clearance behind the panel.
2. Cut a 4-1/8" diameter hole in the bulkhead at the selected location.
3. Check instrument fit to assure that unit will seat evenly. If necessary, enlarge the hole slightly using a file.
4. Apply sealing compound (ie: "Boat-Life" caulk) to the backside of the bezel, and insert the unit into the hole in an upright position.
5. Place the mounting ring over the back of the unit. Use one self-tapping screw to lock the ring to the case close to the bulkhead, and use the other three screws to snug the unit to the bulkhead.



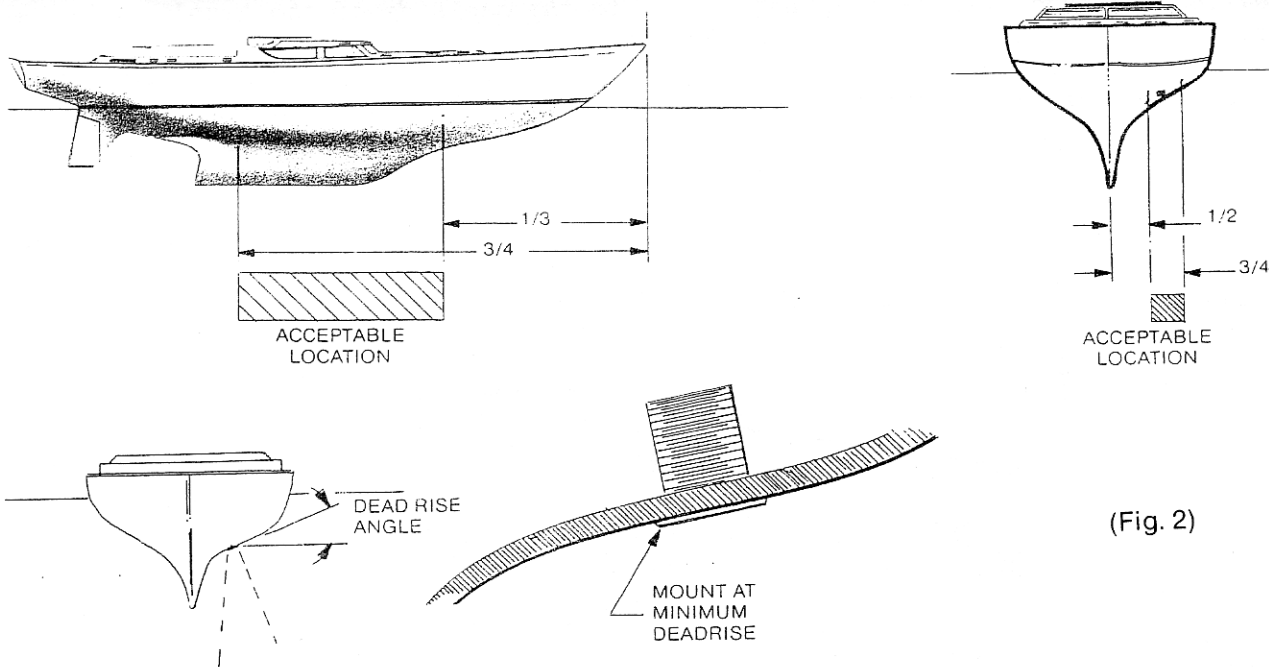
B. TRANSDUCER LOCATION (See Figure 2)

IMPORTANT INSTALLATION ITEM!

CAREFULLY READ THIS SECTION PRIOR TO INSTALLATION OF TRANSDUCER. IMPROPER INSTALLATION CAN SEVERELY AFFECT OPERATION AND EFFICIENCY OF UNIT!

The mounting location of the thru hull transducer is very important, and should be located at such a position that turbulent water will not pass over the radiating surface and where it will always be immersed in solid water when the vessel is underway. This point will be between 1/3 to 3/4 of the length from the bow approximately 1/2 to 3/4 of the way from the keel to the turn of the bilge or the chine. Since the thru-hull fitting is designed to be mounted flush against the hull without fairing or leveling blocks, the mounting location must be at a minimum deadrise angle. This position is normally at maximum beam amidship where the deadrise angle is no more than 15 degrees. Make sure the transducer beam angle will not be affected by the keel by mounting the transducer at least 2 to 3 feet from the keel depending on the depth of the keel. Study the hull when your boat is out of the water and ready for transducer installation. Rule out areas behind bottom fittings and shaft struts on inboards. If there is bottom paint on the hull, look carefully for areas where turbulence has eaten away the paint, and stay away from those areas. Pinpoint the area you select, so you can study it from inside the bilge. From inside the hull, check over the installation area from the standpoint of accessibility, maintenance, etc. If it still looks good, proceed to the section on thru-hull installation. A long stem permanent mount transducer is available for installations where deadrise angle is too severe for flush mounting and fairing blocks are required.

NOTE: "WATER BOX" OR IN HULL INSTALLATIONS ARE NOT RECOMMENDED. MOOR WILL NOT GUARANTEE THAT THE MODEL LDC WILL OPERATE TO ITS SPECIFICATIONS IF INSTALLED WITHIN THE HULL OF A BOAT.

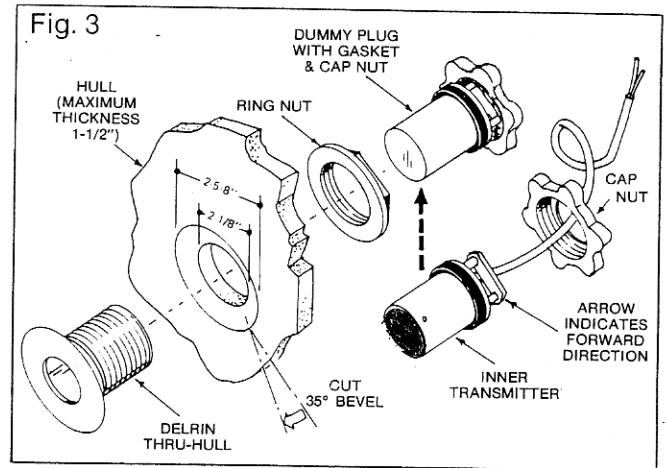


(Fig. 2)

C. THRU HULL INSTALLATION (See Figure 3)

1. Scribe a 2-5/8" diameter circle at the location selected.
2. Drill a 1/8" pilot hole thru the hull at the center FROM THE INSIDE. Check the

- hole carefully from the outside. (It's easy to patch over a small hole, so don't proceed if your calculations went wrong.)
3. Cut a 2-1/8" hole thru the hull from the OUTSIDE using the pilot hole as the center.
 4. Using a file, chamfer an angle of 35 degrees from the 2-5/8" scribe mark to match the angle of the thru-hull. Try the thru-hull frequently while chamfering until you achieve a flush fit with the outside of the hull. After completing the hole, clean the area with solvent on a clean rag to remove fiberglass dust, dirt and any grease.
 5. Check that the inside of the hull at the hole is square to the thru-hull so that the ring nut will seat evenly. It is recommended to shim the inside surface to provide an even seat.
 6. Seat the thru-hull using a high grade marine bedding compound such as "Boat-Life" caulk and tighten the ring nut securely. (Silicone sealants are not recommended for a good seal.) **DO NOT OVERTIGHTEN THE NUT: LET THE COMPOUND DO THE SEALING.** To overtighten may cause the joint to leak.



D. TRANSDUCER INSTALLATION (See Figure 3)

1. Coat the rubber gasket lightly with Vaseline or other water-resistant type grease.
2. Place top nut over the wire and handle.
3. Insert the transducer into the thru-hull.
4. Tighten down the top nut finger tight, allowing the gasket to do the sealing. **DO NOT OVERTIGHTEN THE NUT.**
5. Route the transducer cable to the instrument location away from other electrical wires and equipment to keep extraneous interference to a minimum. Protect the cable from heat, oil, gasoline, rough surfaces and sharp objects. The cable is 25' long and should not be shortened. Coil the excess cable and stow it if not needed.
6. Immediately before launching your vessel, thoroughly wipe the face of the transducer with a detergent type liquid soap. This speeds up the amount of time required for the transducer to establish good contact with the water. If this procedure is not followed it may take several days for the complete "wetting" to occur, resulting in reduced performance of the instrument during that time.

E. DUMMY PLUG INSTALLATION (See Figure 3)

The flush-mounted transducer offers the advantage of being able to remove the transducer for cleaning while the boat is afloat. Have the dummy plug ready with the gasket coated with a light coat of Vaseline or other water-resistant grease. Unthread the top nut, withdraw the transducer, and quickly insert the dummy plug. Secure the plug with its top nut. **DO NOT OVERTIGHTEN.**

F. INSTRUMENT WIRING CAUTION: DO ALL WIRING WITH POWER DISCONNECTED

1. Locate the 4' red and black power leads from the back of the instrument.
2. Connect the black lead to the negative (GND) terminal of the battery or electrical circuit of the boat.
3. Connect the red lead to the positive (+12VDC) terminal of the battery or electrical circuit of the boat thru a 1/4 amp slow blow fuse. An on/off switch should be installed in this line.

4. Plug the transducer cable into the transducer jack on the back of the instrument.
5. Apply power to the circuit and the LDC will accurately display the depth of water below the transducer. Note: If the boat is out of the water the display will show blinking zeros indicating "no echo"

Night Light:

A night light is included with the instrument. To use this feature connect the white wire from the back of the instrument to +12VDC via a separate switch or the boats lighting circuit.

Alarm Warning Buzzer:

Mount buzzer firmly on a rigid surface using round head screws with a diameter smaller than the buzzer mounting holes. Oversize screws will stress the case and cause poor performance. Connect the red buzzer lead to the positive (+12VDC) line supplying power to the instrument itself. Connect the black buzzer lead to the thin orange wire from the back of the instrument. DO NOT connect the black buzzer lead directly to ground as this will cause the buzzer to sound continuously.

G. OPERATION

When installation is completed, the LDC will read accurately from 3 feet to over 200 feet in 1/10 ft. increments, depending on bottom conditions. The LDC is equipped with a variable alarm feature, which can be set from approximately 3 ft. to 15 ft. The alarm adjust is the white shaft located near the top of the instrument back slightly left of center. To adjust the alarm insert a screwdriver which will fit snugly into the shaft and rotate. Note: The shaft will only turn about one full rotation and should not be forced beyond the stops. The minimum alarm setting corresponds to full counter clockwise rotation, and the maximum to full clockwise. Whenever the water depth is less than the alarm setting, the helmsman is warned of the condition by a flashing three bars on the liquid crystal display and the sounding of the buzzer. A good method for setting the alarm is to anchor the vessel in the depth of water you wish to be alarmed of. Starting with maximum alarm (full clockwise) slowly turn the alarm adjust counter clockwise until the alarm just sounds.

H. CALIBRATION

The LDC was calibrated and tested before leaving the factory. Should re-calibration become necessary, we recommend return of the instrument to the factory.

I. GENERAL CAUTIONS

2. Should the LDC fail to work properly, check power wiring and voltage, transducer connections, and transducer condition. A fouled transducer may reduce the performance of the unit and should be cleaned as required. The transducer eye should not be painted over with bottom paint.

J. SERVICE NEEDED?

Should your instrument become inoperative or if you believe there is a problem with the initial installation, please return the unit to the factory for quick prompt service to:

Moor Electronics, Inc.
Service Department
95 Dorothy Street
Buffalo, NY 14206
(716) 821-5304 Phone
(716) 821-5306 Fax

Include return address, description of problem, and transducer. With warranty repairs, proof of purchase is required. Please enclose proof of purchase date, and \$5.00 to cover the cost of shipping and handling. With non-warranty repairs will be advised of the cost upon our inspection. Payment may be by Master Card, Visa, check or C.O.D.