

LBS-1

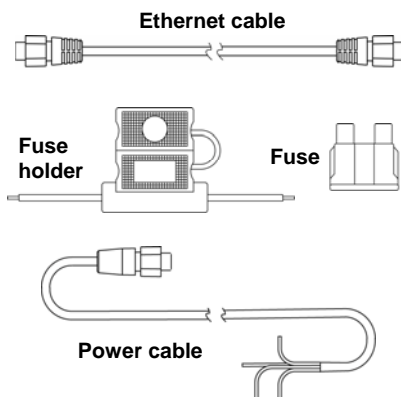
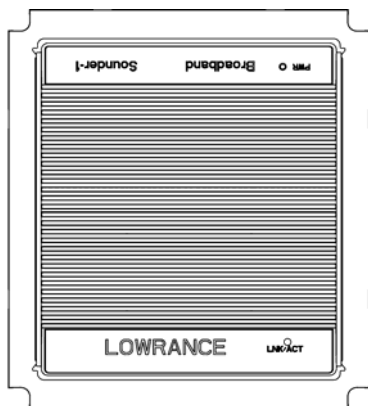
(Lowrance Broadband Sounder)

Installation Instructions

The LBS-1 is a digital sonar optimizer designed to enhance sonar echo clarity. The broadband sounder was created to deliver the most striking underwater definition possible, with digitally-purified marking, including separation of fish, structure, thermoclines and bottom detail while minimizing surface and turbulent water clutter.

This document explains how to connect the LBS-1 to a *compatible* Lowrance display unit. The broadband sounder connects directly between the transducer and display unit. Read the following instructions carefully before attempting to install the LBS-1.

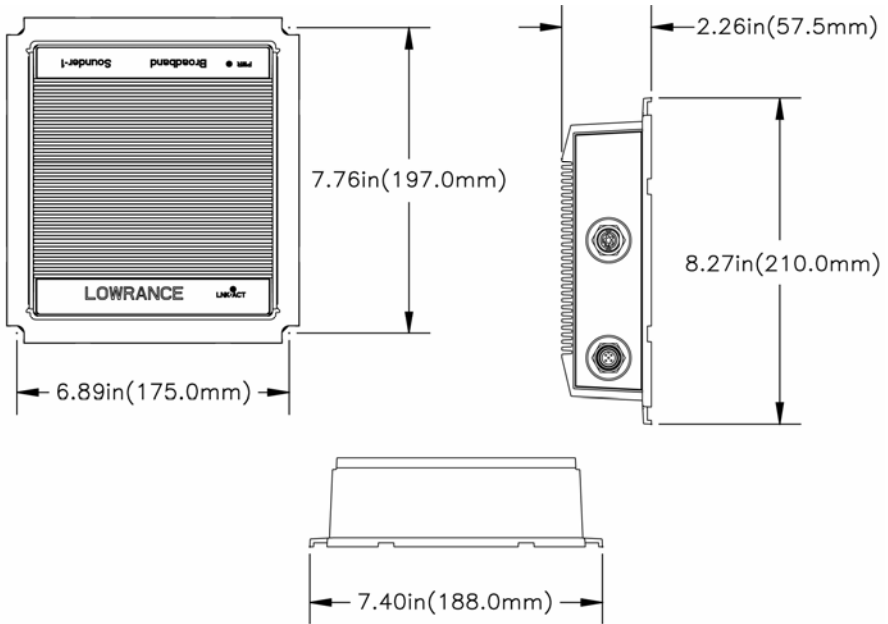
Included Components



Included with the LBS-1:

- Six-foot (five pin) Ethernet cable. The Ethernet cable connects the LBS-1 to the display unit.
- Six-foot (four pin) power cable. This cable has a connector plug at one end for connecting to the LBS-1 and 4 wires (red, black, yellow and blue) on the other end for connecting to the power supply.
- Fuse and fuse holder. The fuse holder connects to the red power cable wire between the power source and broadband sounder.

Unit Dimensions

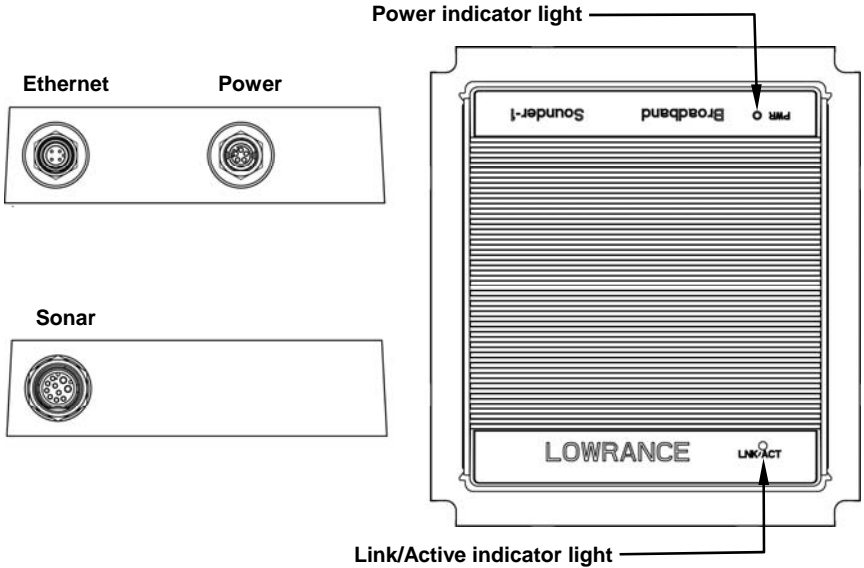


Unit Connections and Indicator Lights

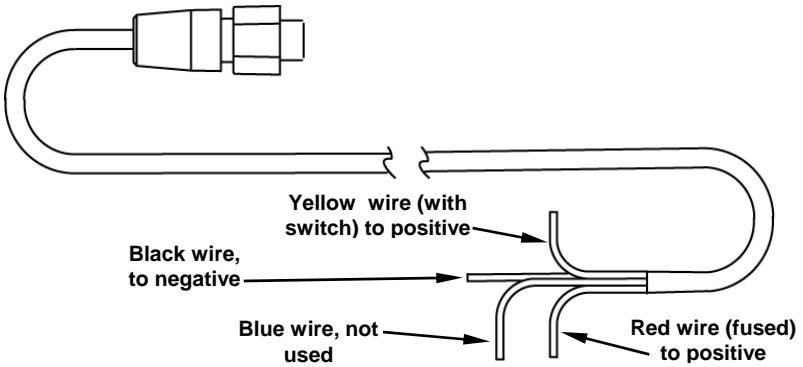
The LBS-1 has an Ethernet (ETH) and Power connector on one end and a Sonar connector on the opposite end. You will need to attach the power cable, Ethernet cable and a transducer to the broadband sounder. The transducer is not included. Screws to secure the LBS-1 are also not included. All cable runs should be secured, protected from physical damage and exposure to heat. Avoid sharp bends in cables and cable runs through bilges, doorways, moving parts, hot objects or live wells.

Power and Link Active indicator lights

The Power (PWR) and Link/Active (LNK/ACT) indicator lights are located on top of the broadband sounder. The LNK/ACT indicator light will remain solid green until communication between the display unit and broadband sounder begins, then it will start to blink. The PWR indicator light will turn red to indicate the LBS-1 is receiving power but not active. The PWR indicator light turns green to indicate the LBS-1 is powered on and active. If the PWR indicator light is not red or green, it may mean the unit is not receiving power from the power source. Check the power cord between the LBS-1 and battery.



Power Cable



It is *recommended* that the LBS-1 power cable be connected to a separate power source other than the one starting the engine. Doing so will prevent voltage drop. Voltage drop will not harm the unit but it can cause the unit to reset. If the LBS-1 resets, some information could be lost and it may change the operation mode of the unit.

Mounting the Broadband Sounder

The LBS-1 is waterproof to IPX-7 and is designed to work with all 5" (or larger) Lowrance 2007 (and later) color display units. The display unit *must be* equipped with a 5-pin yellow Ethernet connector.

⚠ NOTE

All 2007 and later display units will require a free software upgrade to operate with the LBS-1. Go to www.lowrance.com for the software upgrade. Select the Downloads option from the Lowrance website. The Downloads screen will appear. Select Product Updates. The Product Software Updates screen will appear. Scroll through the Product list and select your unit to download the software update.

Before installing the LBS-1, consider location and cable runs necessary to connect the broadband sounder to the display unit and power source. The broadband sounder should be mounted where it will be protected from physical damage and excessive vibration. Also, mount the LBS-1 where it will be protected from rain, salt spray, direct sunlight and in an area that is well ventilated. Do not mount the broadband sounder in an engine compartment where gas fumes can reach it or on the main console.

⚠ NOTE

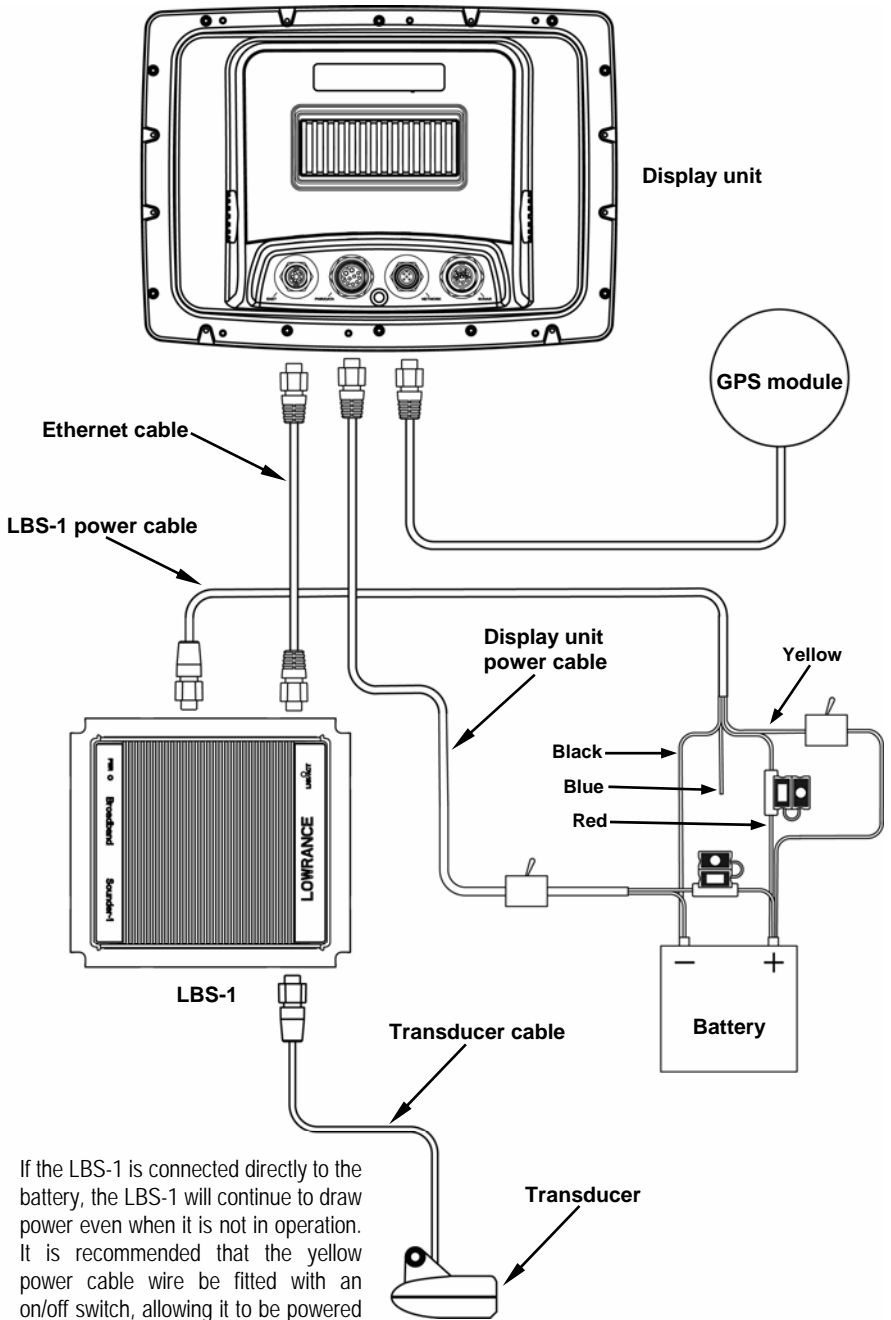
Connecting the LBS-1 between two or more display units requires an optional NEP-1 (Navico Expansion Port). To purchase the NEP-1 contact your local Lowrance dealer.

The LBS-1 conforms to the appropriate Electromagnetic Compatibility (EMC) standards but proper installation is required to get the best use and performance from this product.

When installing the broadband sounder, certain factors that could affect its operation should be considered. Ensure *maximum* separation as possible between different electrical equipment, including the LBS-1. It is recommended that whenever possible:

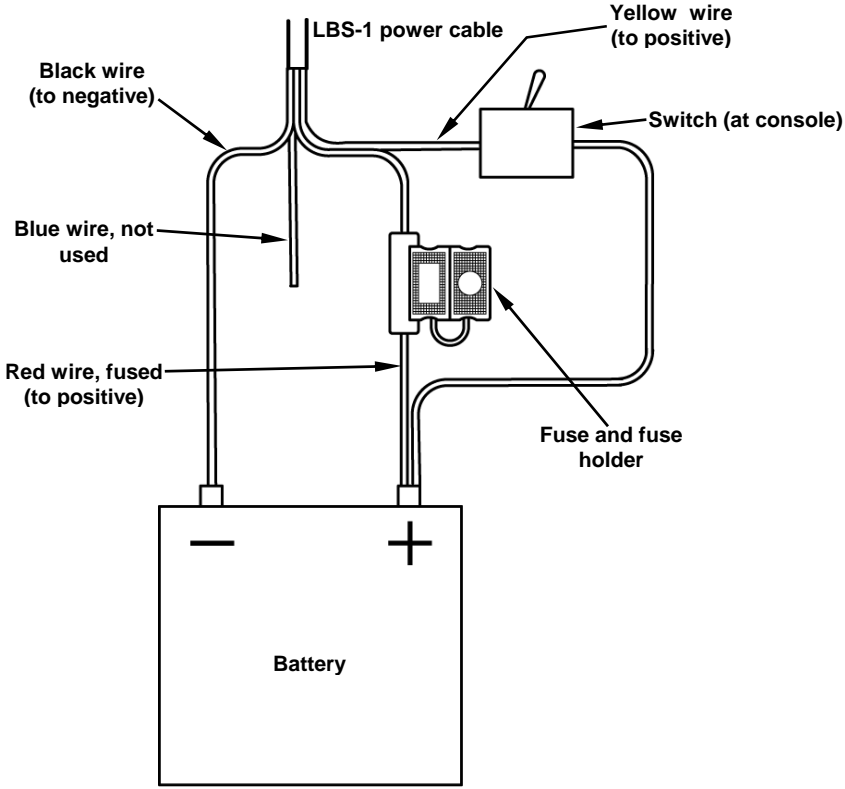
- The broadband sounder is at least 5 feet (1.5 m) from any equipment transmitting radio signals, including VHF radios, cables or antennas.
- The broadband sounder is more than 7 feet (2 m) from the path of any radar beam.
- Lowrance specified cables are used.

The following diagram shows how the LBS-1 connects to a display unit and power source. Notice that in this example the yellow wire for the LBS-1 power cable has a switch (not included) allowing the broadband sounder to be powered on or off. Check with a local electrical supply store to purchase a switch. **Lowrance does not sell switches.**



If the LBS-1 is connected directly to the battery, the LBS-1 will continue to draw power even when it is not in operation. It is recommended that the yellow power cable wire be fitted with an on/off switch, allowing it to be powered off when not in use.

The following diagram shows the LBS-1 power cable connected to a power source.



CAUTION

If the LBS-1 is connected directly to the boat's battery, the broadband sounder will continue to draw power even when it is not in operation. It is recommended that the yellow power cable be fitted with an on/off switch, allowing it to be powered off when not in use.

The LBS-1 is designed for use on a DC power system rated from 9 to 32 volts. Power should be fed directly to the broadband sounder via its own dedicated power cable and protected using the provided fuse and fuse holder on the red (positive) wire.

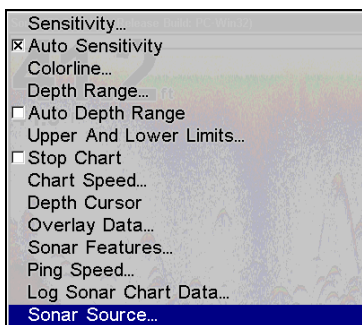
This system is not intended for use on a "positive" ground vessel. The LBS-1 contains high voltages and specialized parts; the operator should never remove the broadband sounder's cover or attempt to service the device.

⚠ WARNING

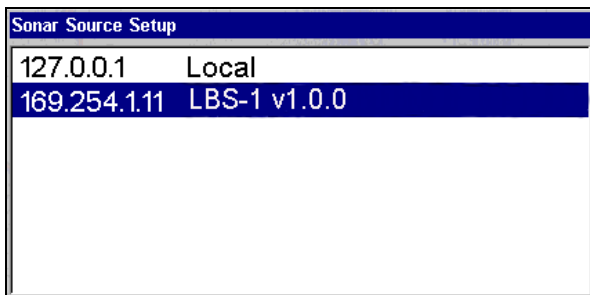
Removing the transducer cable from the broadband sounder while the unit is powered on can cause sparks. Remove the transducer cable only after the LBS-1 has been disconnected from its power source.

Display Unit Operation with Broadband Sounder

If you are not familiar with your units display menus, consult the product manual provided with the display unit. When the LBS-1 is properly connected, and both the display unit and broadband sounder are powered on, a new menu option appears at the bottom of the Sonar menu. The new Sonar menu option will read "Sonar Source", as shown in the following image.



Sonar source will need to be selected. Scroll down, highlight Sonar Source, and press the **ENT** key. The Sonar Source Setup menu will appear, as shown in the following image.



Highlight LBS-1 from the Sonar Source Setup menu, as shown in the previous image. Press either the **ENT** or **EXIT** key. The sonar source should now be selected and the LBS-1 and display unit working properly.

Accessories

- Skimmer® transducer and transducer cable
- Navico Expansion Port (NEP-1)

Product Specifications

Voltage input..... 9v to 32v DC
Output power..... 250 Watts RMS; 2,000 Watts (peak-to-peak)
Sonar Frequency.....50 kHz, 83 kHz, 200 kHz
Communication.....Ethernet 10/100

Physical:

Size: (HWD) 2.3"x 8.3"x7.4" (57.62x210.17x188.17 mm)
Weight: 1.82 lbs. (.82 kg)
Case: waterproof to IPX-7
Temp Range: -20°C to 167° F (-28° to 75° C)

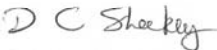
DECLARATION OF CONFORMITY

The following product has been tested in accordance with the requirements of the Electromagnetic Compatibility Directive 2004/108/EC (repealing 89/336/EC) and found to comply in all respects with the requirements of this Directive.

Product:	Lowrance Broadband Sounder-1
Applicable Standard(s): (including Title)	IEC 60945 (Fourth Edition 2002-08) Maritime Navigation and Radiocommunication Systems – General Requirements – Methods of Testing and Required Test Results. (EMC only: sections 9 & 10)
Test Report No.:	Professional Testing (EMI) Inc: Project 08033-10

Signed on behalf of Navico UK Ltd, Unit 4: Ocivan Way, Margate, CT9 4NN, United Kingdom

as Authorised Representative of Lowrance Electronics, 12000 E. Skelly Drive, Tulsa, OK 74128, USA.

Signed:	
Name:	David Sheekey
Title:	Product Specialist
Date:	14 th January 2008

* Simrad and Lowrance are brand names of Navico Norway AS of Lysaker, Norway

NAVICO
FULL ONE-YEAR LOWRANCE WARRANTY

"We," "our," or "us" refers to NAVICO, the manufacturer of this product. "You" or "your" refers to the first person who purchases this product as a consumer item for personal, family or household use.

We warrant this product against defects or malfunctions in materials and workmanship, and against failure to conform to this product's written specifications, all for one (1) year from the date of original purchase by you. WE MAKE NO OTHER EXPRESS WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER CONCERNING THIS PRODUCT. Your remedies under this warranty will be available so long as you can show in a reasonable manner that any defect or malfunction in materials or workmanship, or any non-conformity with the product's written specifications, occurred within one year from the date of your original purchase, which must be substantiated by a dated sales receipt or sales slip. Any such defect, malfunction, or non-conformity which occurs within one year from your original purchase date will either be repaired without charge or be replaced with a new product identical or reasonably equivalent to this product, at our option, within a reasonable time after our receipt of the product. If such defect, malfunction, or non-conformity remains after a reasonable number of attempts to repair by us, you may elect to obtain without charge a replacement of the product or a refund for the product. THIS REPAIR, OR REPLACEMENT OR REFUND (AS JUST DESCRIBED) IS THE EXCLUSIVE REMEDY AVAILABLE TO YOU AGAINST US FOR ANY DEFECT, MALFUNCTION, OR NON-CONFORMITY CONCERNING THE PRODUCT OR FOR ANY LOSS OR DAMAGE RESULTING FROM ANY OTHER CAUSE WHATSOEVER. WE WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO ANYONE FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR OTHER INDIRECT DAMAGE OF ANY KIND.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty does NOT apply in the following circumstances: (1) when the product has been serviced or repaired by anyone other than us; (2) when the product has been connected, installed, combined, altered, adjusted, or handled in a manner other than according to the instructions furnished with the product; (3) when any serial number has been effaced, altered, or removed; or (4) when any defect, problem, loss, or damage has resulted from any accident, misuse, negligence, or carelessness, or from any failure to provide reasonable and necessary maintenance in accordance with the instructions of the owner's manual for the product.

We reserve the right to make changes or improvements in our products from time to time without incurring the obligation to install such improvements or changes on equipment or items previously manufactured.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

REMINDER: You must retain the sales slip or sales receipt proving the date of your original purchase in case warranty service is ever required.

NAVICO
12000 E. SKELLY DRIVE, TULSA, OK 74128
(800) 324-1356

How to obtain service in the USA:

We back your investment in quality products with quick, expert service and genuine Lowrance parts. If you're in the United States and you have technical, return or repair questions, please contact the Customer Service Department. Before any product can be returned, you must call customer service to determine if a return is necessary. Many times, customer service can resolve your problem over the phone without sending your product to the factory. To call us, use the following toll-free number:

800-324-1356

8 a.m. to 5 p.m. Central Standard Time, M-F

Lowrance may find it necessary to change or end our shipping policies, regulations, and special offers at any time. We reserve the right to do so without notice.

How to obtain service in Canada:

If you're in Canada and you have technical, return or repair questions, please contact the Factory Customer Service Department. Before any product can be returned, you must call customer service to determine if a return is necessary. Many times, customer service can resolve your problem over the phone without sending your product to the factory. To call us, use the following toll-free number:

800-661-3983

905-629-1614 (not toll-free)

8 a.m. to 5 p.m. Eastern Standard Time, M-F

To obtain service outside Canada and the USA:

If you have technical, return or repair questions, contact the dealer in the country where you purchased your unit. To locate a dealer near you, visit our web site, www.lowrance.com and look for the Dealer Locator.

Shipping Information

If it becomes necessary to send a product for repair or replacement, you must first receive a return authorization number from Customer Service. Products shipped without a return authorization will not be accepted. When shipping, we recommend you do the following:

1. Please do not ship knobs or mounting brackets with gimbal units.
2. If your unit saves sonar logs or GPS data files to memory cards, make sure you have saved the data to a memory card and that the card has been removed from the unit, otherwise your data will be lost.
3. If you are sending a check for repair, please place your check in an envelope and tape it to the unit.
4. For proper testing, include a brief note with the product describing the problem. Be sure to include your name, return shipping address and a daytime telephone number. An e-mail address is optional but useful.
5. Pack the unit in a suitable size box with packing material to prevent any damage during shipping.
6. Write the Return Authorization (RA) number on the outside of the box underneath your return address.
7. For your security, you may want to insure the package through your shipping courier. Lowrance does not assume responsibility for goods lost or damaged in transit.

Accessory Ordering Information

To order Lowrance accessories, please contact:

1) Your local marine dealer or consumer electronics store. Most quality dealers that handle marine electronic equipment or other consumer electronics should be able to assist you with these items.

To locate a Lowrance dealer near you, visit our web site, www.lowrance.com and look for the Dealer Locator. Or, you can consult your telephone directory for listings.

2) U.S. customers: LEI Extras Inc., PO Box 129, Catoosa, OK 74015-0129. Call 1-800-324-0045 or visit our web site www.lei-extras.com.

3) Canadian customers can write:

Lowrance/Eagle Canada, 919 Matheson Blvd. E. Mississauga, Ontario L4W2R7 or fax 905-629-3118.

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