

LOWRANCE®



Mark 5x, Mark 5x Pro & Elite 5x sonar
Installation & Operation manual

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Mark and Elite Series Installation

This document covers the installation of the transducer and display unit installation, which includes connecting the unit to power and installing the unit on the bracket mount.



NOTE: Make sure you read all the installation instructions before drilling holes in your vessel. Check the transducer cable and power wires to make sure they will reach the desired mounting location for the display unit. If they will not reach, you either will have to select a different mounting location for the display unit, or extend the transducer cable and /or power wires.

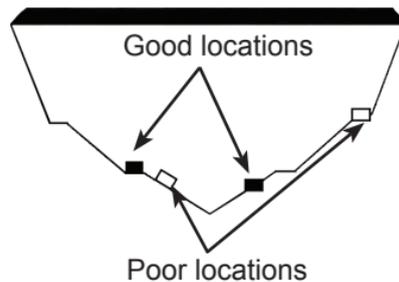
Transducer Installation

One piece bracket (Recommended Tools and Supplies — not included)	
Drill	Marine grade above-or-below waterline sealant
1" (25mm) or 5/8" (15mm) drill bit	Marine grade epoxy (Shoot-thru-hull install only)
#29 (0.136") (3mm) drill bit	Zip ties (trolling motor mount)
Phillips (Slotted-head) screwdriver	TMB-S bracket kit (Skimmer trolling motor mount)

A. Select a transducer location

To function properly the Skimmer transducer must be in the water at all times and in a location that has a smooth flow of water when the boat is moving.

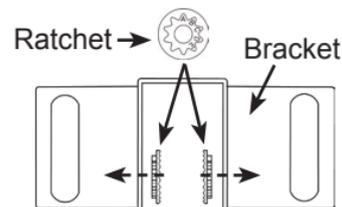
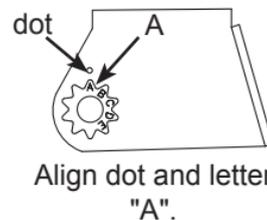
If the transducer is not placed in a smooth flow of water, interference caused by bubbles and turbulence may cause the product to not perform properly. The unit also could lose bottom signal when the boat is on plane. **Install transducer at least 1' (.3m) away from the engine's lower unit.**



B. Aligning Ratchets on Transducer bracket

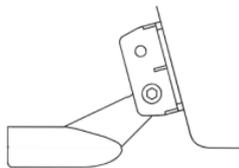
You will use the ratchets to ensure the transducer is installed parallel to the ground.

1. Insert the ratchets in the bracket with the letter "A" aligned with the dot stamped on the outside of the transducer bracket.
2. Slide the transducer into the bracket and temporarily slide the bolt through the transducer bracket.



Installation

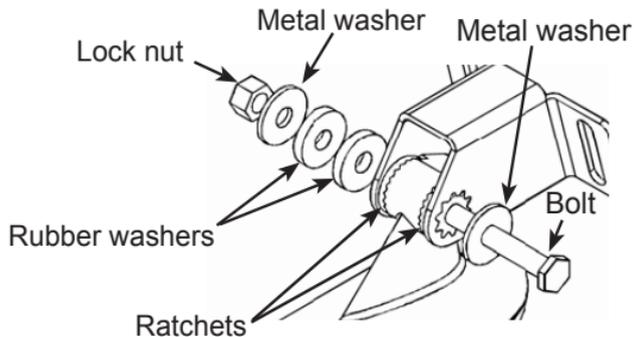
3. Hold the transducer assembly against the transom. Look at the transducer from the side. If it is parallel to the ground, then the “A” position is correct.
4. If the transducer can not be adjusted so its face is parallel to the ground, remove the transducer and ratchets from the bracket. Reinsert the ratchets into the bracket, this time with the letter “B” aligned with the dot stamped in the bracket. Reassemble the transducer and bracket and place it against the transom.
5. Check to see if the transducer will adjust so its face is parallel with the ground. Repeat this process until the transducer can be adjusted so its face is parallel with the ground.



Place the transducer and bracket against the transom.

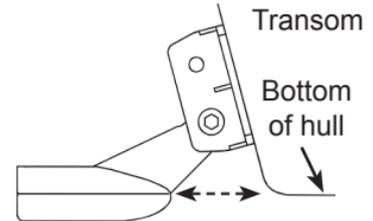
C. Assembling the bracket

After determining the correct position for the ratchets, loosely assemble the transducer and bracket assembly.

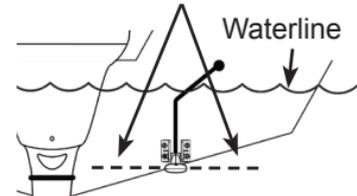


D. Attaching Transducer to Transom

1. Adjust the transducer so its face is parallel with the ground and its center line is even with the bottom of the boat hull.
2. Hold the transducer and bracket assembly against the transom. When the transducer and bracket are properly aligned mark its position on the hull.
3. Drill the mounting holes for the transducer bracket. Use a #29 bit (for the #10 screws).



The transducer centerline must be even with the boat hull. Its face should be parallel to the ground.

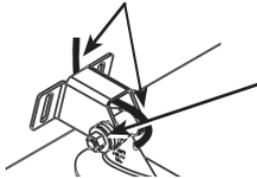


Routing cables

When mounting your transducer, make sure to leave some slack in the cable near the transducer.

Run cable over the bolt and through the bracket.

If you need to drill a hole in the transom to pass the connector through, the hole size will depend on the connector on the end of the transducer's cable.



Do not overtighten the lock nut; otherwise the transducer will not be able to kick up if it strikes an object

Installation

E. Make a test run

After the transducer is installed make a test run to ensure the transducer is installed properly. Use the slots in the transducer mounting bracket to loosen the screws and slide the transducer up or down, if adjustments are necessary.

Shoot-thru-hull Skimmer & Pod transducer installation

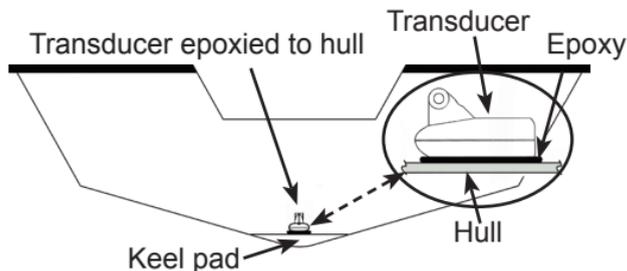
Before attempting any installation on boats with flotation material sandwiched within the hull, consult the boat manufacturer.



WARNING: Do not remove material from the inner hull. Careless grinding on the hull could damage hull integrity. Contact the boat dealer or manufacturer to confirm hull specifications.

In a shoot-thru-hull installation the transducer is epoxied to the inside of the boat hull.

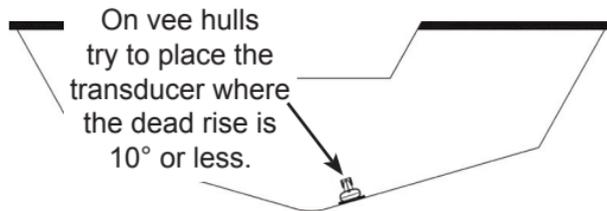
A transducer can not shoot through wood or metal hulls. Wood and metal hulls require either a transom mount or thru-hull installation.



For shoot-thru-hull applications many boat hulls have a flat keel pad that offers a good transducer mounting surface.

Make sure the Skimmer transducer is oriented so the nose of the transducer is facing the bow (front) of the boat. If the transducer has a built in temp sensor, it will only show the temperature of the hull, not the water temp.

Before you epoxy the transducer to the hull, make sure the area is clean, dry and free of oil or grease.



The surface of the hull must be flat so the entire transducer face is in contact with the hull. Also, make sure the cable is long enough to reach the sonar unit.

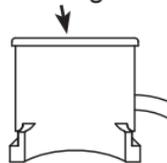
To use shoot-thru-hull installation:

1. Sand the inside surface of the hull, where the transducer is to be epoxied, and the face of the transducer. Sand the hull until it is smooth to the touch. The sanded area should be about 1-1/2 times the diameter of the transducer.
2. After sanding, clean the hull and the face of the transducer with an alcohol wipe to remove any dust.

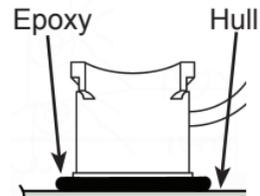
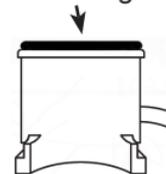
Installation

3. Apply a thin layer of epoxy (about 1/16" or 1.5 mm) on the face of the transducer and the sanded area on the hull. **Be careful when mounting a transducer inside a boat hull. Once epoxied into position, the transducer can not be removed.**
4. Press the transducer into the epoxy, turning it to force out any air bubbles from under the transducer face. **Make sure there are no air pockets in the epoxy layers.**
5. Stop pressing when it bottoms out on the hull. Apply pressure to hold the transducer in place while the epoxy sets. Be careful not to move the transducer while the epoxy is setting. Allow the epoxy to set before moving the boat.
6. When finished, the face of the transducer should be parallel with the hull with a minimum amount of epoxy between the hull and transducer.

Sand transducer face and mounting location



Apply epoxy to transducer face and mounting location.

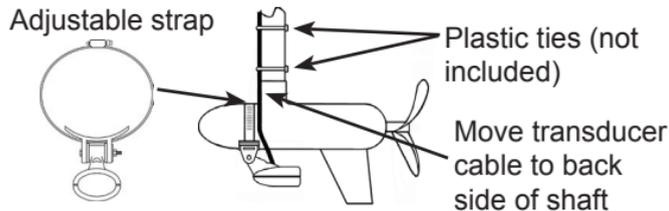


Epoxy transducer to hull.

Trolling motor Skimmer and Pod Installation

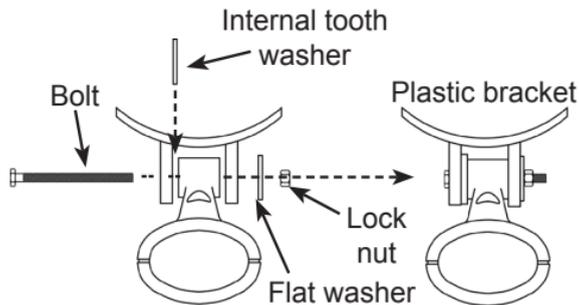
The TMB-S trolling motor bracket (Part No. 51-45) is an *optional* accessory and is available through LEI Extras at www.lei-extras.com. The TMB-S bracket is used to attach a one-piece bracket skimmer transducer to a trolling motor.

The Pod transducer does not need a TMB-S trolling motor bracket to be installed on a trolling motor. It only needs a hose clamp (adjustable strap).



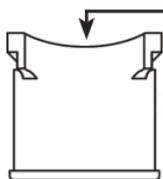
Installing transducer on trolling motor:

- Using the components supplied with the TMB-S bracket attach the skimmer transducer to the bracket as shown in the diagram.
- Slide the adjustable strap (hose clamp) through the plastic bracket on the skimmer transducer or through the Pod transducer slots and then slip the strap around the trolling motor.



Installation

3. Position the transducer so its face is pointing straight down when the trolling motor is in the water.
4. Tighten the adjustable strap securely to the trolling motor. Make sure there is enough slack in the transducer cable for the trolling motor to turn freely.



The top of the Pod transducer is curved to fit the contour of the trolling motor, so you do not need a TMB-S mounting bracket.

Mounting display unit

Before mounting the display unit mount, make sure there is nothing in the area that will obstruct the display unit when it is installed on the bracket.

To install bracket mount:

1. Place the bracket on the desired mounting surface and mark the four mounting holes. If you want to run the unit's cables up through the mounting surface, make a mark in the center of the bracket mounting surface.
2. Drill pilot holes for the four mounting holes. If desired, use a 1-inch (25mm) bit to drill the center cabling hole in the mounting surface.

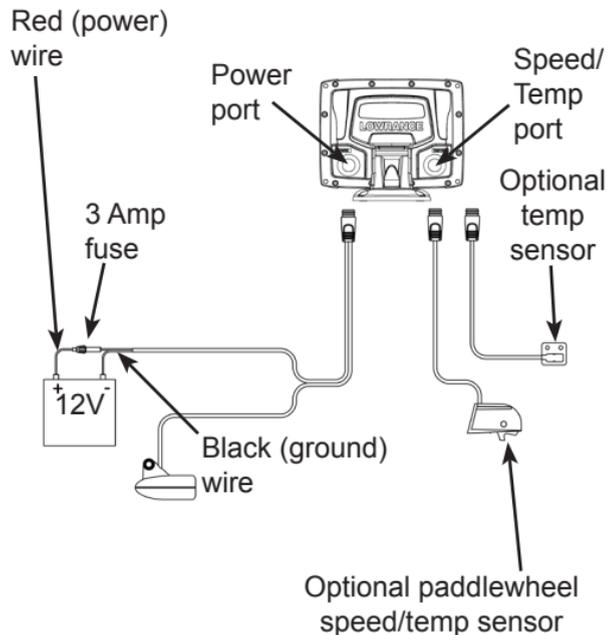
3. If you are running the cables up through the mounting surface, push the cables through the mounting surface and then pull them through the cabling hole in the center of the bracket.
4. Align the mounting bracket with the four mounting holes and use the supplied screws to fasten it to the mounting surface.
5. Connect the display unit to the bracket mount.



Connecting display unit to bracket.

Connecting to Power

1. Connect the black wire to a ground.
2. Attach a 3 Amp fuse to the end of the power wire and then connect the fuse to the positive (+) terminal on the battery. (Use 18 gauge wire to extend the power or ground wires.)
3. Connect the Power cable to the Power port on the back of the display unit.



PAGES: Opens pages menu; allows you to select a page to view

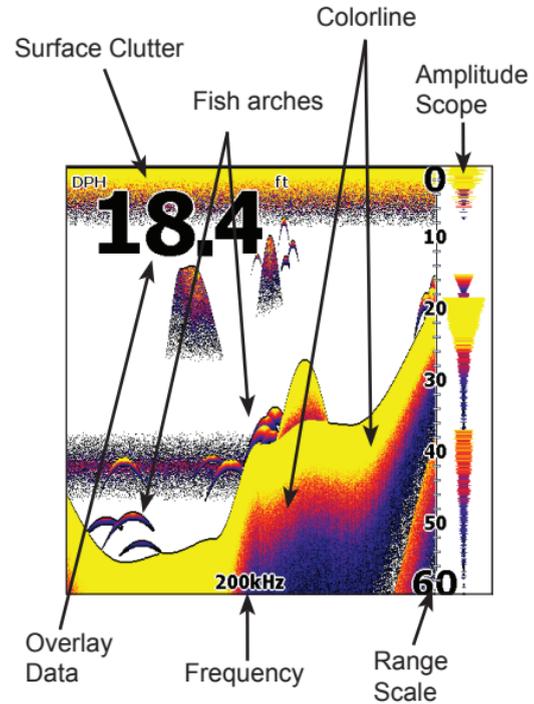
ZOOM Keys: used to zoom in/zoom out

KEYPAD: controls cursor & selects items on menus

MENU: Opens settings, context and page menus

ENTER: finalizes menu selections

LIGHT/POWER: controls backlight level and turns unit on/off

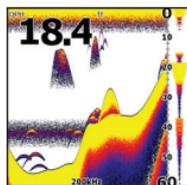


Basic Operation

Getting Started	
Turn unit on/off	To turn on/off the unit, press and hold the LIGHT/POWER key for three seconds.
Adjusting the backlight	Press the LIGHT/POWER key, select <i>Brightness</i> and press the keypad left/right.
Muting Audio	Select <i>Mute Audio</i> from the System menu and press ENTER .

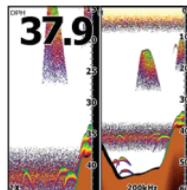
Pages

This unit has four page screens: Sonar, Split Zoom, Split Frequency and Split Flasher.



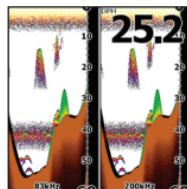
Sonar

Displays the water column moving from right to left on your unit's screen.



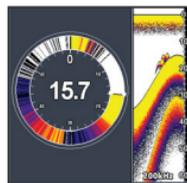
Split Zoom

Displays a 2X zoom in the left panel with the sonar view in the right panel.



Split Frequency

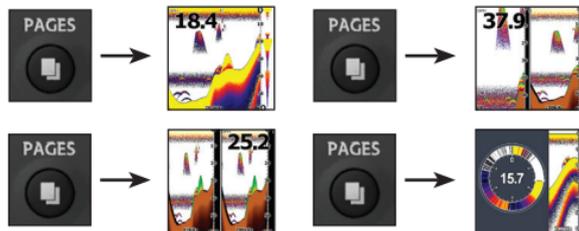
Displays 83 kHz frequency in the left panel and 200kHz view in the right panel.
(*Mark 5x Pro and Elite 5x*)



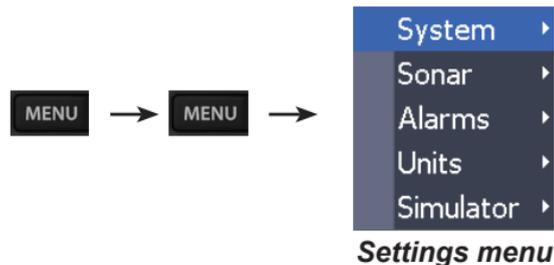
Split Flasher

Displays a sonar flasher in the left panel with the sonar view in the right panel.

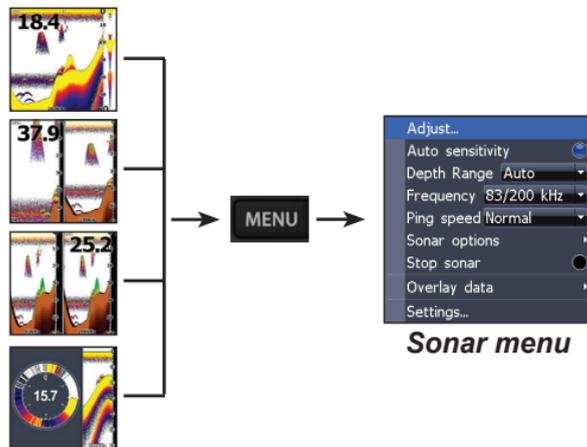
Accessing Pages



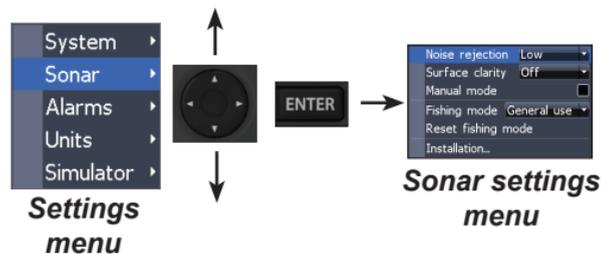
Accessing Settings menu



Accessing Sonar menu



Selecting Menu items



Basic Operation

Working with menus

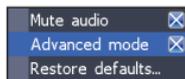
Scrollbars

Select the scrollbar and press the keypad left (decrease) or right (increase).



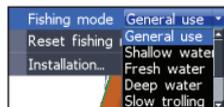
On/Off features

Select an on/off menu item and press **ENTER**.



Dropdown menus

Press the keypad up/down to select the desired item and press **ENTER**.



Entering text

Switches letters to uppercase/lowercase

Switches keyboard between Alpha and Qwerty layout



To input text:

1. Select the desired character and press **ENTER**.
2. Repeat Step 1 for each character.
3. When text entry is completed, highlight **OK** and press **ENTER**.

Exiting menus

If a screen or menu has an exit option (Close, Return to screen, Exit dialog) highlight the exit option and press **ENTER** to exit.

If there is no exit option press the **MENU** key repeatedly to close all menus.



Selecting a Fishing Mode

Fishing modes are preset packages of sonar settings geared to specific fishing conditions.



NOTE: Use Shallow Water mode when fishing in less than 100 feet of water; otherwise your unit may not track bottom properly.

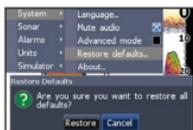
Fishing Mode Options

General Use	Bottom brown/blue background; 50% ping speed
Shallow Water	Bottom brown/white background; best suited for depths less than 100 feet
Fresh Water	Bottom brown/white background; 50% ping speed
Deep Water	Deep Blue; 50% ping speed
Slow Trolling	Bottom brown/white background; 50% ping speed
Fast Trolling	Bottom brown/white background; slightly lower chart speed
Clear Water	Bottom brown/white background; 50% ping speed
Brackish Water	Bottom brown/blue background; higher ASP; slightly lower chart speed

Basic Operation

Restoring Defaults

Resets unit options and settings to defaults.



*Elite 5x
backlight menu*



*Mark series
backlight menu*

Standby mode

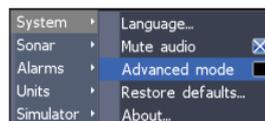
Lowers power consumption by putting the unit into a sleep mode and turning off sonar. Press any key to resume normal operation.



WARNING: Leaving the unit in Standby with the boat turned off will drain the battery.

Advanced Mode

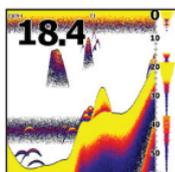
Enables advanced features and settings.



Advanced Mode features	
Custom range	Enables Upper and Lower Limits
Sensitivity	Enables manual control of sensitivity
Colorline	Enables manual control of colorline
Surface Clarity	Enables manual control of surface clarity
Ping Rate	Enables manual control of ping rate
Alarms	Enables Arrival, Off Course and Anchor alarms
Units	Enables units for Distance, Speed, Depth, Temperature and Bearings

Using your Sonar

This section has instructions for viewing sonar history and making adjustments to the sonar menu.

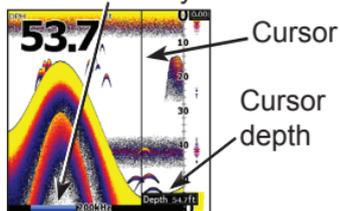


Viewing Sonar History

(Mark 5X Pro & Elite 5x only)

You can review your sonar history by pressing the keypad to the left until the screen starts to move in reverse.

Blue sonar history bar

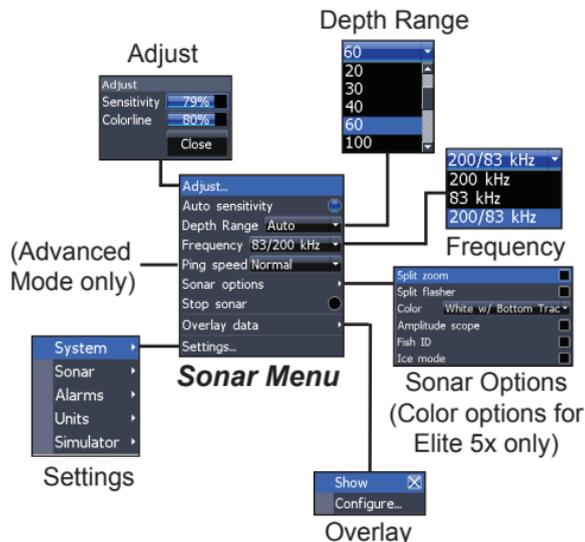


Move the blue sonar history bar all the way to the right to resume normal sonar scrolling.

Press **MENU** and select *Exit cursor mode* to remove the cursor from the screen.

Sonar menu

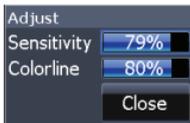
The sonar menu has options and settings that affect the appearance of the display.



Sonar Operation

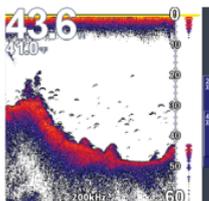
Adjust

Used to make adjustments to Sensitivity and Colorline. Colorline can only be adjusted when the unit is in advanced mode.

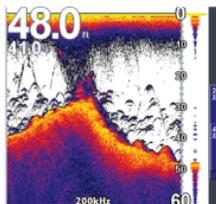


Sensitivity

Controls the level of detail shown on the display. Too much detail will clutter the screen. Conversely, desired echoes may not be displayed if Sensitivity is set too low.



Sensitivity set to 65 percent.

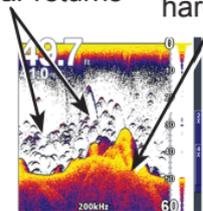


Sensitivity set to 85 percent.

Colorline (Advanced mode only)

Separates strong sonar echoes from weak sonar echoes. That makes it easier to distinguish fish or structure from the bottom.

Reddish-blue soft sonar returns Wide yellow hard sonar return



Elite 5x only

Mark series units have a monochrome display, so wide bands of gray indicate a hard sonar return, while softer returns are shown as dark, narrow lines.

Auto Sensitivity

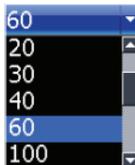
Keeps sensitivity at a level that works well under most conditions.



NOTE: You can make minor changes to sensitivity with Auto Sensitivity turned on. You will have to turn it off to make significant adjustments.

Depth Range

Selects the section of the water column — from surface to bottom — shown on the display.



Custom Range — Upper/Lower Limits

Used to select the upper depth and lower depth of a desired portion of the water column, allowing you to select a range that does not include the water



surface. Upper and lower limits must be at least 6.5 feet (2m) apart.

Frequency (Mark 5x Pro & Elite 5x)

Allows you to select the transducer frequency used by the unit. This unit supports two frequencies: 200kHz and 83kHz.

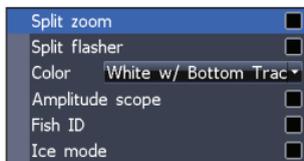
Ping Speed (Advanced Mode)

Ping Speed controls the rate the transducer uses to send sonar waves into the water.

Sonar Options menu

Provides access to sonar display settings and configuration options.

Sonar Operation



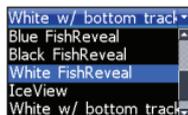
Sonar options menu

Split Zoom and Split Flasher

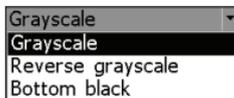
Switches the sonar display from full screen sonar to a split screen view. See Basic Operation section for more information on Split Zoom and Split Flasher pages.

Color

Allows you to change the look of the display using palettes with varying degrees of color and brightness.



**Elite 5x
color menu**



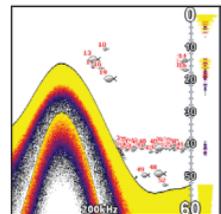
**Mark 5x & 5x Pro
color menu**

Amplitude Scope

Allows you to see the amplitude of real-time echoes before they appear on the display.

Fish ID

Displays fish echoes as fish symbols instead of arches. Fish ID is not as effective a fish finding method as the default fish arch setting.



Stop Sonar

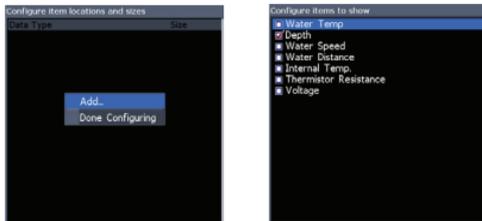
Pauses the sonar chart, allowing you to get a closer look at sonar echoes.

Overlay Data

Used to display selected data on the Sonar screen.

To select overlay data:

1. Press **MENU**, select *Overlay data* and press **ENTER**.
2. Select *Configure* and press **ENTER**.
3. Press *Menu* and select *Add*. Press **ENTER**.



4. Select a the desired overlay data type and press **ENTER**.

5. Press **MENU** and select *Return to overlay*.
6. Press **MENU**, select *Done Configuring* and press **ENTER**.

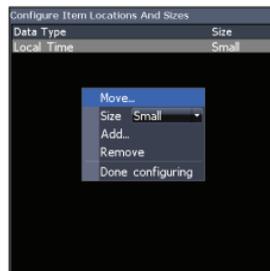
Show

Shows/hides the Overlay data display on the sonar screen.

Customizing Overlay Data

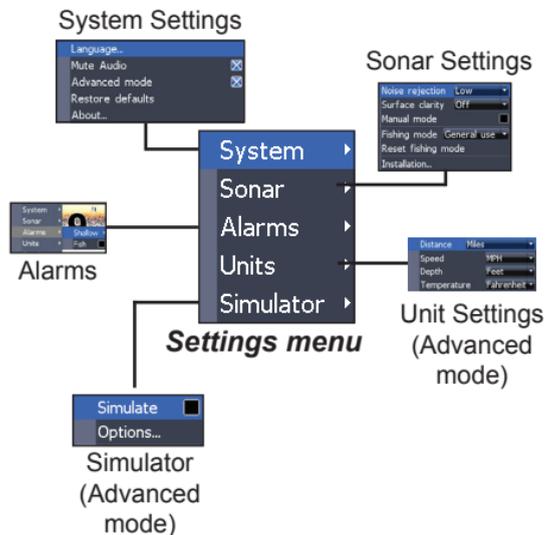
Overlay Data size can be resized, moved or removed from the display from the Overlay data menu.

Press **MENU** from the Overlay Data screen to make adjustments to overlay data.



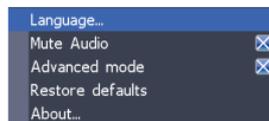
Settings Menu

Used to make adjustments to your unit's configuration options and settings.



System

Adjusts unit settings like language, mute audio and advanced mode.



Language

Selects the language used on menus and text boxes.



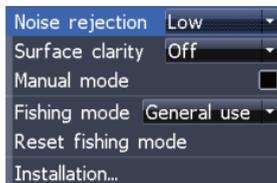
NOTE: *Mute Audio, Advanced mode and Restore defaults are covered in the Basic Operation section.*

About

Displays software information about this unit.

Sonar

Controls Sonar options and display settings like Noise Rejection, Surface and Fishing Mode.



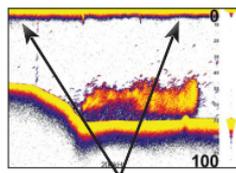
Sonar Settings

Noise Rejection

Noise Rejection counteracts sonar signal interference by reducing onscreen clutter.

Surface Clarity (Advanced Mode only)

Surface Clarity reduces surface clutter by decreasing the sensitivity of the receiver near the surface.



Surface Clutter

Manual Mode

In this mode, the unit sends sonar signals only to the depth range you select, instead of automatically searching for the bottom. That makes it easier to focus on suspended fish.

Fishing Mode

Fishing Mode is covered in Basic Operation section.

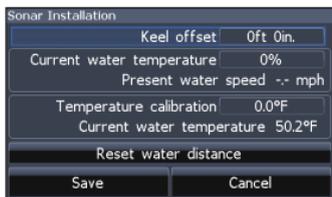
Reset Fishing Mode

Switches Fishing Mode to the default General use setting.

Installation

Accesses the Installation menu, where adjustments can be made to Keel Offset, Water Speed and Temp calibration settings.

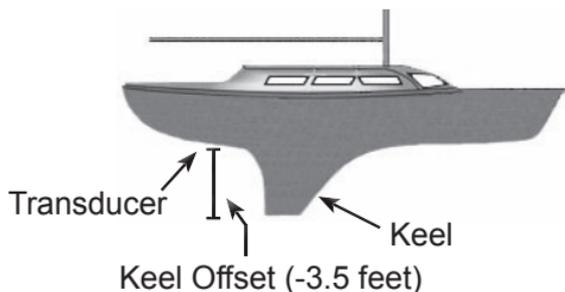
Settings



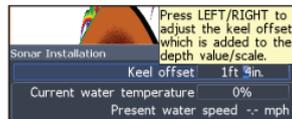
Installation menu

Keel Offset

All transducers measure water depth from the transducer to the bottom. As a result, water depth readings do not account for the distance from the transducer to the keel or from the transducer to the water surface.



Before setting keel offset, measure the distance from the transducer to the lowest part of the keel. If the keel is 3.5 feet below the transducer, it will be input as -3.5 feet.



Temperature calibration

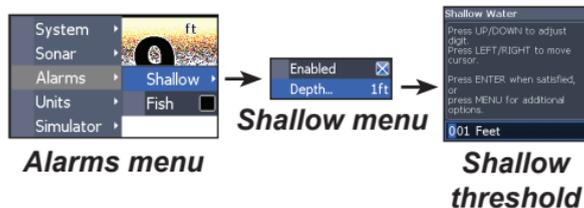
Calibrates data from a temp sensor with data from another temperature source, to ensure accuracy of temperature data.

Reset water distance

Resets water distance value to zero.

Alarms

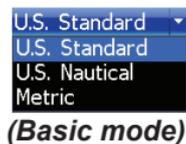
Enables alarms and allows you to set alarm thresholds for the Shallow alarm and Fish Alarm.



- Shallow alarm sounds a tone when your vessel enters water shallower than the selected Shallow alarm threshold.
- Fish alarm sounds a tone when a fish symbol appears on the display. Fish alarm will only work with Fish ID turned on.

Units

Allows you to select the unit of measure for Distance, Speed, Depth and Temperature, when the unit is in Advanced mode.



Simulator

Used to simulate sonar activity.



Specifications

General	
Case size	5.4" H (134mm) x 6.8" W (174mm); 6" H (152mm) with bracket
Display	Mark: (5" diagonal) High-contrast film Supertwist LCD; 16-level grayscale definition; 480x480 monochrome Elite: (5" diagonal) Enhanced Solar MAX™ 480x480 color
Backlight	Mark: White LED Elite: Cold cathode fluorescent lamp (11 levels)
Power	
Transmit power	Mark 5x: 1600W PTP 200W RMS Mark 5x Pro: 2400W PTP; 300 RMS Elite 5x: 4000 PTP; 500W RMS
Power requirement	10 to 18 Volts DC
Voltage input	10 to 17V
Current drain	Typical: .25A
Fuse type	3 amp automotive (not supplied)

Sonar	
Max depth	Mark 5x: 800ft (244m) Mark 5x Pro/Elite 5x: 1000ft (305m)
Target separation	1.5"
Transducer frequency	Mark 5x: 200kHz Mark 5x Pro/Elite 5x: 83/200kHz
Max speed	70mph
Transducer	Skimmer with built in temp sensor
Transducer cable	20 feet (6m)

Limited Warranty

Subject to the terms, conditions and limitations set forth in the Navico Limited Warranty (hereinafter, the "Warranty"), Navico warrants that its products, when properly used and installed will be free from defects in material and workmanship for a period of:

Lowrance, Eagle & Northstar Explorer, excluding Lowrance HDS: Twelve (12) months

Peripheral devices for all Navico brands including, but not limited to, transducers, fuel and wind sensors, cables: Twelve (12) months

Northstar (excluding Explorer), Simrad, B&G, Lowrance HDS systems and Yellow Ethernet connected products, excluding all peripheral devices for all brands: Twenty-four (24) months

from the date of first purchase (the "Warranty Period").

For the purpose of this Warranty, "date of first purchase" means the date that the product was purchased by the first retail customer; or in the case of a product installed on a new vessel by a Certified/Approved Navico Boatbuilder, the date that such vessel was purchased by the first retail customer.

Navico will, at its sole discretion, repair or replace with new or refurbished parts or product, or equivalent product, any proven defective products or components returned to Navico, or its approved agent during the Warranty Period in accordance with the terms, conditions and limitations set forth below.

Such repairs or replacement will be the sole remedy of the customer under this Warranty. Repaired or replaced product will be warranted for the balance of the original product's Warranty Period.

Standard Warranty Service

To obtain your remedy under this Warranty:

1. Contact Navico or your local Navico Certified/Approved dealer or Dis-

tributor to confirm your product's warranty status and obtain a Return Material Authorization number. A list of Navico Certified/Approved dealers is available at www.navico.com or through your original Navico dealer of purchase.

2. Upon authorization securely pack the product, along with a valid proof of purchase (indicating the product purchased, serial number, place and date of first purchase), and any other information Navico requests, such as a copy of any Return Material Authorization form you may receive. Ship the product and other required items to the address specified by the Navico Certified/Approved dealer contacted.

You must pay for shipping and any insurance to get the product to the Navico Service Centre. You assume all risk of loss and/or damage to the product until it arrives at the Navico Service Centre. Navico will pay for shipping of the returned product to your nominated address, within the jurisdiction of your first purchase. Shipping mode and carrier is at Navico's discretion; the customer must request, and pay for, any variation.

Navico will not be responsible for the loss of or alteration of any user data and settings stored in the product. You should back up or otherwise preserve all data before sending the product to Navico.

Limitations and Exclusions

In addition to other limitations and exclusions set forth herein, Navico is not responsible for, and this Warranty does not cover:

- products where the serial number has been altered, mutilated or removed;
- failures due to abuse, misuse, overvoltage, accident, unauthorized alteration or repair, improper installation (whether or not by a Navico Certified/Approved dealer or service agent), shipping damage, alterations, corrosion and normal wear and tear;
- costs associated with routine system checkouts, calibration, alignment, sea-trials or commissioning;

- costs associated with hauling, dockage, or vessel transportation for the replacement of transducers;
- consumable items, whether repaired or replaced including, but not limited to the following: fuses, batteries, bulbs, bearings, motor brushes, drive-belts, magnetrons, paddlewheels, paddlewheel bearings, paddlewheel blades and paddlewheel shafts;

costs associated with software updates, where the product is not faulty;

- differences in material, coloring or size that may exist between actual products and the pictures or descriptions of such;
- replacement of missing components from the package of any product not purchased from an authorized Navico dealer or agent.

The product, including any associated electronics charts, is an aid to navigation designed to facilitate the use of authorized government charts, not to replace them. Navico has made commercially reasonable efforts to ensure the accuracy of data contained in the product, but errors and omissions are inevitable. The vessel operator is responsible for cross-checking the product against other sources of navigation data. Navico recommends having back up navigation tools available in the event that the product becomes inoperable.

Other Conditions

This Warranty is fully transferable only to persons located within the jurisdiction where the product was first purchased from a Navico certified dealer or Navico Boatbuilder and installed and providing an original proof of purchase is provided to Navico or to a Navico-Certified/Approved service agent. For this purpose and the foregoing herein, all states within the US and Canada shall be treated as a single jurisdiction and it is intended, subject to any other conditions stated herein, that this Warranty may be transferred and this product may be sold, distributed and used, within the US and Canada.

SUBJECT TO THE ABOVE, THIS PRODUCT IS INTENDED FOR SALE, DISTRIBUTION AND USE ONLY WITHIN THE JURISDICTION OF THE

NAVICO CERTIFIED DEALER OR NAVICO BOATBUILDER FROM WHICH IT WAS FIRST PURCHASED AND IN WHICH IT WAS INSTALLED AND NOT ANY OTHER COUNTRY OR JURISDICTION. This product will not function or perform as intended and will not be of merchantable, satisfactory or acceptable quality if sold, distributed, transported or used outside the jurisdiction of the Navico certified dealer or Navico Boatbuilder from which it was first purchased and in which it was installed (unless upgraded by Navico at the customer's cost) and, to the maximum extent permitted by applicable law, (i) all representations, warranties, conditions, guarantees and other terms (whether express or implied) are excluded and (ii) Navico and its affiliates assume no responsibility whatsoever and are not liable in any way for this product or its repair, replacement, servicing, upgrading or modification.

To the extent consistent with local and regional law, the foregoing Warranty is Navico's sole warranty.

There are no express warranties other than those listed and described above, and no warranties whether express or implied, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose, shall apply after the express warranty periods stated above, and no other express warranty or guarantee given by any person, firm or corporation with respect to this product shall be binding on Navico. Navico shall not be liable for loss of revenue or profits, failure to realize savings or other benefits, or any other special, incidental or consequential damages caused by the use, misuse or inability to use this product. Recovery amounts of any kind against Navico shall not be greater than the purchase price of the product sold by Navico and causing the alleged damage. Without limiting the foregoing, purchaser assumes all risk and liability for loss, damage or injury to purchaser and purchaser's property and to others and their property arising out of the use, misuse or inability to use this product sold by Navico.

Navico reserves the right to make changes or improvements from time to time without incurring the obligation to install such improvements or changes on equipment previously manufactured.

This Warranty gives you specific legal rights; your rights may vary from jurisdiction to jurisdiction.

This Warranty supersedes and replaces all previous Warranties.

Cut along this line

Worldwide Warranty Registration Form (To register this product online, go to www.lowrance.com and select Register Product.)

Serial number _____

Name _____

Email _____ Phone () _____

Address _____

Date of purchase _____ Place of purchase _____

Model name _____

Warranty Registration Questionnaire

Boat Brand: _____

Boat Type (check one): Aluminum bass Aluminum deep V/Walleye Fiberglass bass boat
 Canoe/Kayak Center console Deck Fish-n-ski Flats Jon
 Pontoon Runabout Sail None/Dock/Ice fishing

Motor Brand: _____

Number of Gas Motors (check one): 1 2 3 4

Engine Horsepower (check one): 9-15 16-25 26-50 51-75 76-125
 126-175 176-225 226-250 250 +

Gas Motor Type (check one): Outboard Inboard Sterndrive Jetdrive Other

Boat Length (feet): 17 17-20 21-25 26-30 31-35 36-40
 41-45 46-50 51 +

Water Type (check one): Fresh Salt Brackish All of the above.

Age (check one): 0-25 26-35 36-45 46-55 56-65 66 +

How often do you use your boat (check one): Two times a week. Once a week.
 Two or three times a week. Once a month. Less than once a month.

Have you purchased a Lowrance or Eagle product before? Yes No

How often do you purchase electronics for your boat or for fishing? Every year
 Two years Three years Longer Never purchased before.

You can register this product online at www.lowrance.com or by mailing this form to:

In U.S.: Navico Inc., PO Box 129, Catoosa, OK 74015-0129

In Canada: Navico Inc., 919 Matheson Blvd East, Mississauga, ONT. L4W 2R7

In Europe, Middle East & Africa: Navico Logistics Europe BV, Donker Duyvisweg 56, 3316
BM Dordrecht, The Netherlands

In Australia & Asia Pacific: Navico Australia, PO Box 4121, Lane Cove NSW 1595, Australia.

How to Obtain Service... ...in the USA:

Contact the Factory Customer Service Department. Call toll-free:

800-324-1356

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

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

...in Canada:

Contact the Factory Customer Service Department. Call toll-free:

800-661-3983

905-629-1614 (not toll-free)

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

...outside Canada and the USA:

Contact the dealer in the country where you purchased your unit.

Accessory Ordering Information

LEI Extras™, Inc. is the accessory source for sonar and GPS products manufactured by Lowrance Electronics. To order Lowrance accessories, please contact:

- 1) Your local marine dealer or consumer electronics store. To locate a Lowrance dealer, visit the web site, www.lowrance.com, and look for the Dealer Locator; or, consult your telephone directory for listings.
- 2) U.S. customers visit our web site www.lei-extras.com.
- 3) Canadian customers: Lowrance Canada, 919 Matheson Blvd. E. Mississauga, Ontario L4W2R7 or fax 905-629-3118.

Call toll free in Canada, 800-661-3983, or dial 905 629-1614 (not toll free), 8 a.m. to 5 p.m. (EST) M-F.

Visit our website:

www.lowrance.com



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