

# StructureScan Installation



## Accessories

If you received this manual with a StructureScan accessory, you will notice that some information in the document does not apply to the accessory. This manual has installation instructions for your accessory, and accessory pack content tables on the back cover.

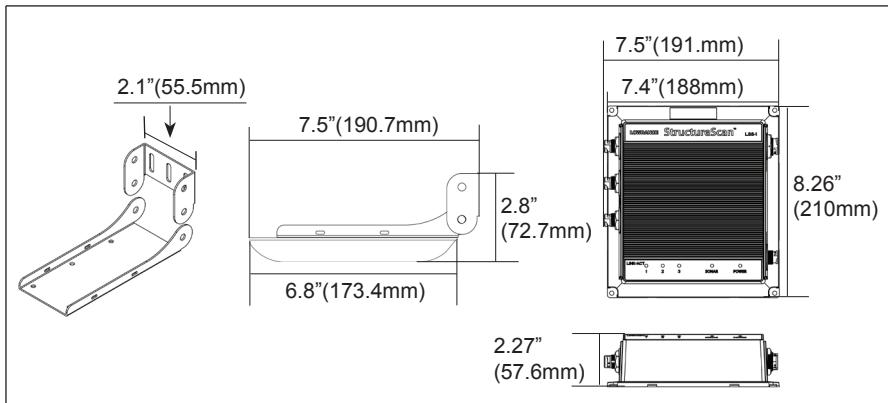
## Contents

Your StructureScan box is packed with the LSS-1 black box, a Power cable, fuse and fuse holder, StructureScan transducer, mounting bracket, 15 foot (4.5m) ethernet cable and a hardware kit. The transducer has a 20 foot (6m) cable attached.



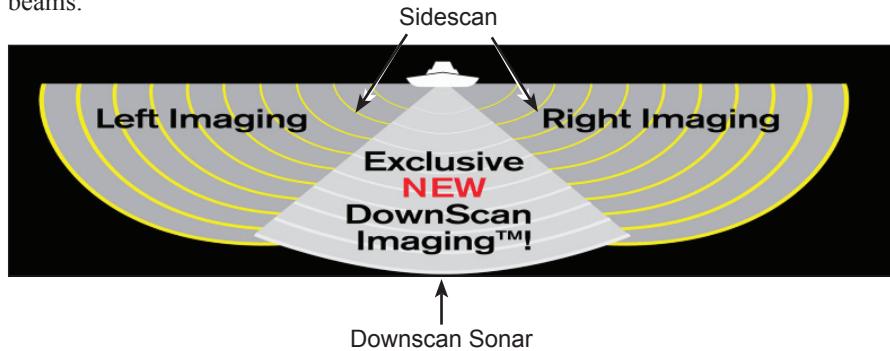
***LSS-1 module, ethernet cable, StructureScan transducer, transducer mounting bracket and power cable.***

<b>Hardware Mounting Kit (Included)</b>	
	Transom mount screws (2)
	Transducer attachment lock nuts (6)
	Bracket Assembly bolts (2)
	LSS-1 Mounting screws (4)
	Bracket Assembly washers (4)
	Closed end crimp connector (1)
	Bracket Assembly nuts (2)
	Zip ties (2)
	Transducer attachment screws (6)
<b>Required Tools and Supplies (Not Included)</b>	
Drill	Phillips (slotted-head) screwdriver
Drill bits	Marine grade above- or below-waterline sealant



## Installation

When mounting the StructureScan transducer, make sure the there is nothing around the mounting location that could interfere with the StructureScan transducer sonar beams.

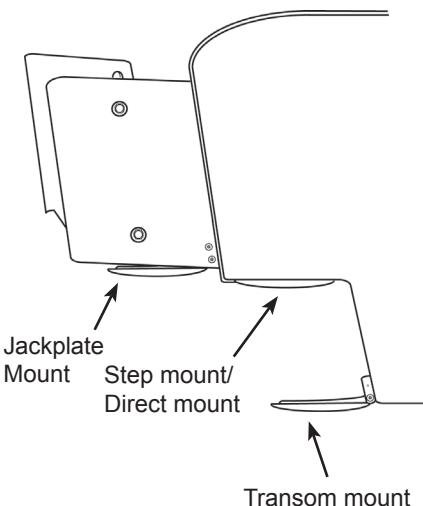


## Mounting Options

The StructureScan transducer can be mounted on the transom, jackplate, step, trolling motor or directly to your boat's hull.

When mounting it directly to the hull, you must purchase a high-quality, marine grade above- or below-waterline sealant/adhesive compound.

Use the following table to determine which mounting option is best suited to your boat/installation preferences.



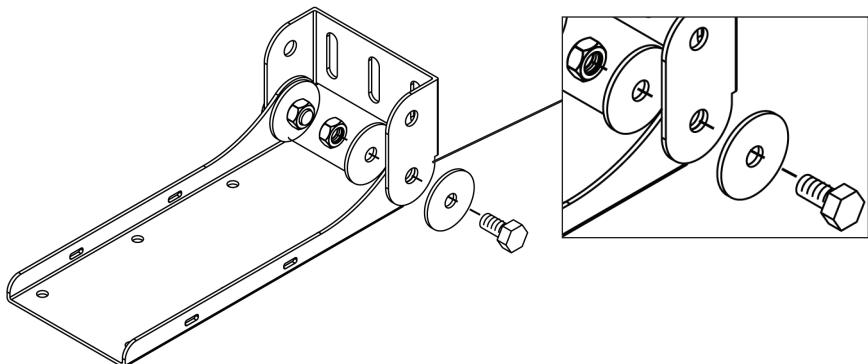
## StructureScan Transducer Mounts

<p>Transom Mount (Page 6)</p>	<ul style="list-style-type: none"> <li>• Keeps transducer in the water when the boat is on plane, allowing you to track bottom at high speeds</li> <li>• Transducer angle can be adjusted so it is parallel with the water</li> <li>• Transducer more likely to collide with obstructions in the water and adds drag to the boat</li> </ul>
<p>Jackplate Mount (Page 7)</p>	<ul style="list-style-type: none"> <li>• Transducer is not in the water when boat is on plane; protects transducer and prevents drag from transducer</li> <li>• Transducer angle can be adjusted so it is parallel with the water</li> <li>• Allows you to mount transducer without drilling holes in your boat</li> <li>• Does not track bottom when boat is on plane</li> </ul>
<p>Step Mount (Page 8)</p>	<ul style="list-style-type: none"> <li>• Transducer is not in the water when boat is on plane; protects transducer and prevents drag from transducer</li> <li>• Transducer angle can be adjusted so it is parallel with the water</li> <li>• Does not track bottom when boat is on plane</li> </ul>
<p>Direct Mount/Step (Page 9)</p>	<ul style="list-style-type: none"> <li>• Transducer is not in the water when boat is on plane</li> <li>• Protects transducer and prevents drag from transducer</li> <li>• Transducer angle can not be adjusted so it is parallel with the water</li> <li>• Does not track bottom when boat is on plane</li> </ul>
<p>Trolling Motor Mount (Sold separately) (Page 10)</p>	<ul style="list-style-type: none"> <li>• Allows you to scan areas by moving trolling motor left/right</li> <li>• Can only be used when trolling motor is in the water</li> <li>• Rotating trolling motor quickly will impact sonar images</li> </ul>

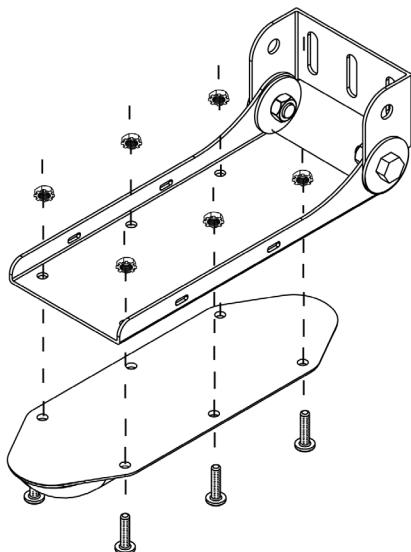
## Bracket and Transducer assembly

The StructureScan bracket comes with four washers, two bolts and two nuts.

If you plan to mount the StructureScan transducer directly to the step (Step Mount) or on the trolling motor, you do not need to assemble the bracket.



*Assembling StructureScan transducer bracket*



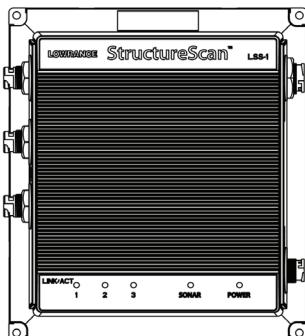
*Attaching StructureScan transducer to bracket*

## Mounting the LSS-1

The LSS-1 can be mounted under the dash, in the rod locker or in the battery compartment. Select a mounting location that will protect the LSS-1 from standing water.

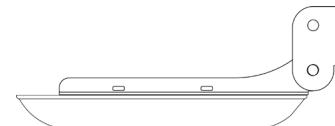
### ***To mount the LSS-1:***

1. Make sure the transducer cable is long enough to connect to the LSS-1 from the desired transducer mounting location. If the 20' transducer cable is not long enough, a 10' extension cable is available (part number: 000-00099-006).
2. Place the LSS-1 into the desired mounting location where the connectors will be easily accessible.
3. Use a pencil to mark the LSS-1 mounting holes.
4. Drill the pilot holes.
5. Use the supplied No. 8 self-tapping screws to mount the LSS-1 to the location.



## Transducer angle

After mounting the StructureScan transducer, make sure the transducer is adjusted so it will be parallel with the waterline when moving at trolling speed.



## Downscan Overlay

The StructureScan transducer should be installed within approximately 1 foot of the broadband sounder transducer to get optimum performance from the Downscan Overlay feature.

It is recommended you turn off Downscan Overlay when using your trolling motor as the sonar source, unless the StructureScan transducer and broadband sounder transducer both are installed on the trolling motor.

Downscan overlay performance could be degraded if the StructureScan transducer is too far away from the broadband sounder transducer installed on the trolling motor.

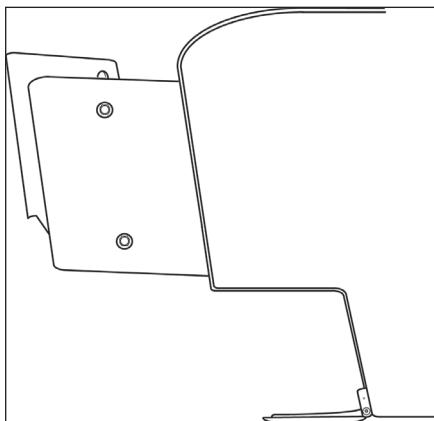
## Transom Mount

The StructureScan transducer can be mounted just like a skimmer transducer, where it is in the water when you are on plane or can be mounted so it is only in the water, when you are moving at trolling speed.

Transom Mount Supplies (not included)	
1/8" Drill bit (Transom mount pilot holes)	Marine grade above- or below-waterline sealant
Transom Mount (Aluminum Hull) Supplies (not included)	
M4 Machine Screws	Marine grade above- or below-waterline sealant
Starboard (prevents corrosion between bracket and aluminum hull)	

### To Mount StructureScan on Transom:

1. Choose a transducer location and then route the transducer cable to the location where the LSS-1 will be installed.
2. Place the transducer bracket against the transom and then align the bottom of the transducer with the bottom of boat. Use a pencil to mark the pilot holes through the slots in the transducer bracket.
3. Drill the pilot holes into the boat's transom.
4. Apply a high-grade above- or below-waterline sealant to the pilot holes.
5. Align the bracket slots over the pilot holes and fasten the bracket to the transom using your drill and the supplied screws.
6. To make adjustments to transducer position, loosen the screws and slide bracket up or down.
7. Connect the transducer cable to the LSS-1 sonar port.



*StructureScan transducer mounted on transom.*



**CAUTION:** *If you have an aluminum boat, install a piece of marine starboard between the stainless steel StructureScan transducer bracket and the transom to prevent corrosion.*

## Jackplate Mount

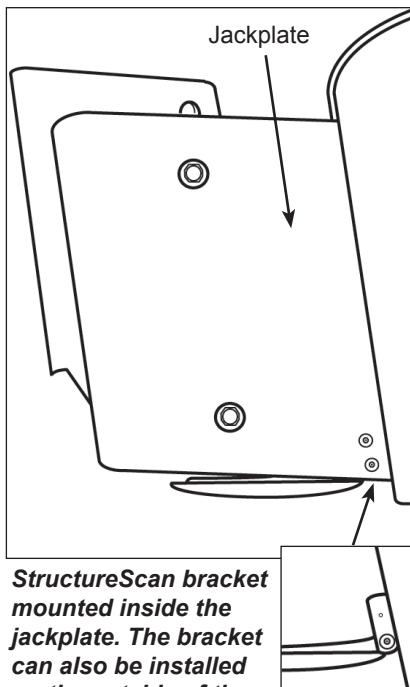
You can mount the StructureScan transducer inside or outside of the jackplate by drilling through the jackplate, then inserting bolts though hinge hole in the side of the bracket mount into the jackplate.

### Jackplate Mount Supplies (not included)

M6 or 1/4" Drill bit (Jackplate Mount) pilot holes	1/4" (M6) jackplate mount bolts
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### To Mount StructureScan on Jackplate:

1. Choose a transducer location on the inside or outside of the jackplate.
2. Adjust the jackplate up and down to make sure the transducer will not obstruct jackplate movement.
3. Make sure nothing blocks the sonar beam on either side of the StructureScan transducer.
4. Route the transducer cable to the location where the LSS-1 will be installed.
5. Move the transducer bracket into the desired position and then use a pencil to mark the holes through the hinge hole and hole in the bracket mount on the side of the bracket.
6. Using a M6 or equivalent drill bit, drill the holes into the jackplate.
7. Slide the bracket inside the jackplate and align the bracket holes with holes you drilled in the jackplate.
8. Slide M6 bolts with washers into each hole on the side of jackplate.
9. Guide the bolts through the StructureScan bracket holes.
10. Place a washer over the end of the bolts and tighten the nuts.
11. Connect the transducer cable to the LSS-1 sonar port.



**StructureScan bracket mounted inside the jackplate. The bracket can also be installed on the outside of the jackplate.**

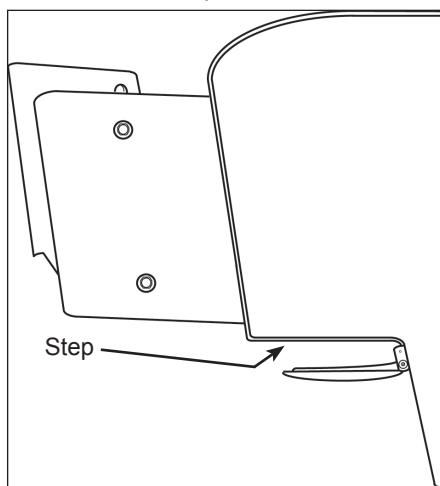
## Step Mount

Mounting the StructureScan transducer under the step not only protects the transducer from hitting objects in the water, but does not cause any drag on your boat when it is on plane.

Step Mount Supplies (not included)	
1/8" Drill bit (Transom mount pilot holes)	Marine grade above- or below-waterline sealant

### ***To use Step Mount:***

1. Choose a transducer location.
2. Route the transducer cable to the location where the LSS-1 will be installed.
3. Move the transducer bracket into the desired position and then use a pencil to mark the pilot holes through the slots in the bracket.
4. Drill the pilot holes.
5. Apply a high-grade above- or below-waterline sealant to the pilot holes.
6. Align the bracket slots over the pilot holes and fasten the bracket to the transom using your drill and the supplied screws.
7. To make adjustments to transducer position, loosen the screws and slide bracket up or down.
8. Connect the transducer cable to the LSS-1 sonar port.



***StructureScan transducer mounted under the step.***

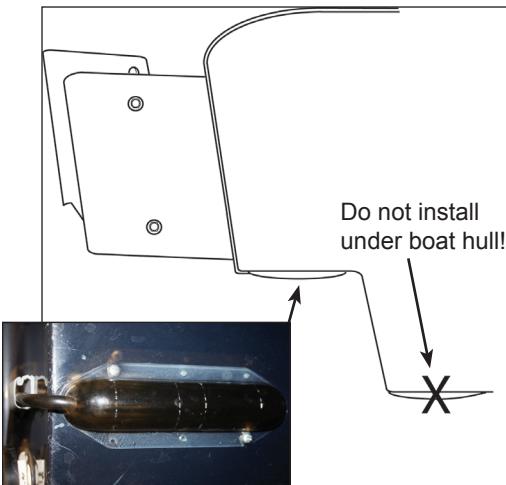
## Direct/Step Mount (No Bracket)

When using the direct mount installation shown below, you **MUST** turn on the Flip Left/Right feature. Refer to your Operation manual for more information.

Direct Step Mount Supplies (not included)	
3/32 Drill bit (Direct/Step mount pilot holes)	Marine grade above- or below-waterline sealant

### To use Direct Mount:

1. Make sure the boat's step is the same length or longer than the StructureScan transducer.
2. After selecting a mounting location, route the transducer cable to the location where the LSS-1 will be installed.
3. Hold the transducer in the desired position and then use a pencil to mark pilot holes through the mounting holes on the transducer.
4. Drill the pilot holes.
5. Apply a high-grade above- or below-waterline sealant to the pilot holes.
6. Align the transducer mounting holes over the pilot holes and mount the transducer to the step using self-tapping metal screws (not supplied). *Do NOT overtighten the screws; otherwise you could strip out the fiberglass pilot holes or crack the mounting holes on the StructureScan transducer.*
7. Connect the transducer cable to the LSS-1 and then turn on the Flip Left/Right feature in your display unit.



**NOTE:** When using a Direct Step Mount, you must turn on the Flip Left/Right feature in your display unit to ensure what is shown on the left/right side on your display, corresponds with what is on the left/right side of your boat.

## Trolling Motor/Towfish Mount

The StructureScan transducer can be mounted on a trolling motor or towfish with the purchase of a trolling motor mount accessory kit.

<b>Trolling Motor Mount (sold separately — p/n: 000-00099-004)</b>	
Trolling motor bracket	Hose Clamps (2)
No 8. Transducer attachment screws (6)	Zip ties (4)

### ***To mount transducer on trolling motor or towfish:***

1. Make sure the transducer cable can be routed to the LSS-1.
2. Place the trolling motor bracket into a desired position on the trolling motor or towfish.
3. Route each bracket clamp around the trolling motor or towfish and through the slots on the other end of the bracket.
4. Use a screwdriver to tighten the clamps until each bracket is mounted securely.
5. Align the holes on the transducer with the holes on the bracket.
6. Use the supplied transducer mounting screws to attach the transducer to the bracket.
7. Use zip ties to secure the transducer cable and then connect the cable to the LSS-1 sonar port.
8. If necessary, turn on the Flip Left/Right feature in your display unit. Refer to your StructureScan Operation manual for more information.



***Trolling motor mount.***



***Towfish mount.***



***NOTE:*** When mounting the trolling motor, you must turn on the Flip Left/Right feature in your display unit to ensure what is shown on the left/right side on your display, corresponds with what is on the left/right side of your boat.

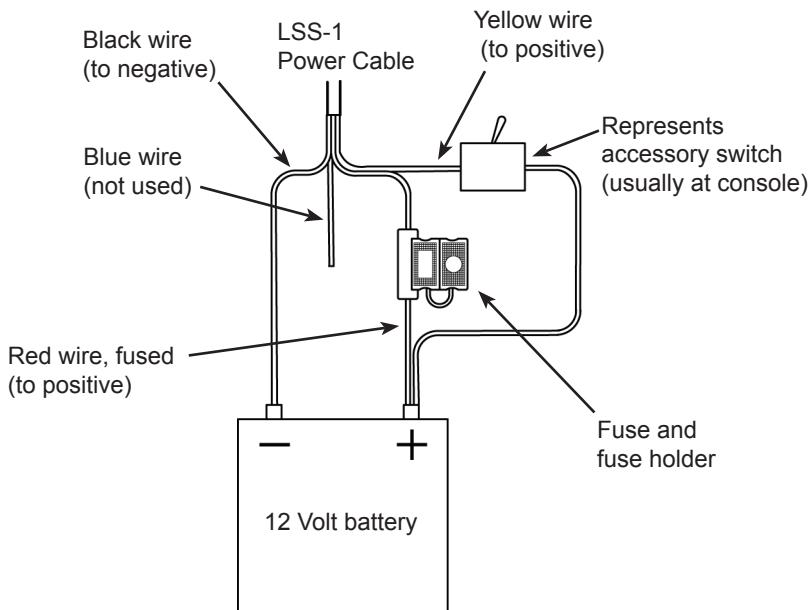
## Powering the LSS-1

The LSS-1 power cable has four wires; red (+), black (-), yellow and blue. The red wire is the positive and the black wire is the ground. The yellow wire can be connected to an open accessory switch at the boat's console, to the yellow wire on your HDS power cable, or directly to the battery. *The blue wire will not be used. Cut it flush and cover the end with a wire nut or electrical tape.*

If you connect the yellow wire to the yellow wire on your HDS unit, StructureScan will be turned on/off when the HDS unit is turned on/off. Refer to the Power/Data cable wiring diagram in your HDS Installation manual for more information.



**NOTE:** *If you connect the yellow wire directly to the battery, you MUST disconnect the battery when your boat is not in use; otherwise StructureScan will drain the battery.*



**LSS-1 Power Cable connections**

## Connecting LSS-1 to display unit/ethernet network

The LSS-1 has three ethernet ports allowing you to connect it to up to three HDS units. It can also be connected to an ethernet hub, like the NEP-1.

The LSS-1 comes with a 15 feet ethernet cable, but cable lengths of 6, 15, 25 and 50 feet may be purchased separately.

**StructureScan LSS-1 Module (000-00099-002)**

LSS-1 mounting screws (4)	Closed-end crimp connector
Fuse and fuse holder	

**StructureScan Trolling Motor Bracket (000-00099-004)**

Trolling motor bracket hose clamps (2)	Zip ties (4)
No. 8 transducer attachment screws (6)	

**StructureScan Skimmer Bracket (000-00099-005)**

Transom mount screws (2)	Bracket assembly nuts (2)
Transducer attachment lock nuts (6)	Transducer attachment screws (6)
Bracket assembly bolts (2)	Zip ties (2)
Bracket assembly washers (4)	

**StructureScan Skimmer Transducer (000-00099-007)**

Transom mount screws (2)	Bracket assembly nuts (2)
Transducer attachment lock nuts (6)	Transducer attachment screws (6)
Bracket assembly bolts (2)	Zip ties (2)
Bracket assembly washers (4)	

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