

Choosing the Right Transducer

There are three main considerations when selecting a transducer.

- Transducer mounting style
- Type of boat and its hull material
- Application or expectation for the transducer

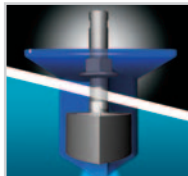
Transducer Mounting Style

Transducers are typically mounted in one of three ways: through the hull, inside the hull, or on the transom.

Through the Hull

The transducers in this mounting style fall into two categories. There are “flush” thru-hull sensors that sit flush or nearly flush with the boat hull. They are recommended for smaller boats with a minimum deadrise angle. And they are often installed on sailing vessels because they produce minimal drag.

External thru-hull transducers extend beyond the hull's surface and usually require a fairing to aim the sound beam vertically. They are right for larger un-trailerred vessels. When external mounts are installed with a High-Performance Fairing, the transducer face is flush with the surface of the fairing and parallel to the waterline, resulting in a truly vertical beam, putting maximum energy on the target. This installation, when mounted in “clean water,” forward of propellers and running gear, produces the most effective signal return, since nothing on the vessel interferes with the transducer's active face.



Inside the Hull

An in-hull transducer is installed inside a boat hull against the bottom and sends its signal through the hull. Some people prefer this mounting style, because it is not necessary to drill through the vessel. A unit cannot be damaged when a boat is trailered, the transducer is not exposed to marine growth, and there is no drag. Additionally, a transducer can be installed and serviced while the vessel is in the water. Most in-hull transducers are mounted inside a liquid filled tank that is first epoxied in place. As long as the water flow below the transducer is “clean”, it will give great high-speed performance.



On the Transom

Transom-mounts are attached to the back (transom) of a boat hull. Trailerred boats typically use this mounting style, since it is out of the way of the rollers. Some people prefer a transom-mount, because it is easy to install and remove a unit—especially if a kick-up bracket is used. Kick-up brackets move a transducer out of the way to prevent damage from floating debris when a boat is underway. Also, they protect the transducer when a boat is trailerred, or when it is kept in the water for a long period of time. A transom-mount installation gives better performance than an in-hull at boat speeds below 30 knots.



Type of Boat and its Hull Material

The type of boat and the material used to make the hull must be taken into consideration when selecting the transducer mounting style. Each has its limitations.

Thru-Hull/External Mount

Thru-hull transducers will work with any engine type: inboard, outboard, or I/O. And these transducers are right for power and sailboats alike. There are thru-hull units for every hull material.

Thru-hull units are not recommended in two situations.

- Plastic thru-hull housings cannot be used in a wooden boat. Wood swells as it absorbs water, so it may crack the housing.
- Bronze thru-hull housings cannot be used in aluminum boats. The interaction between the aluminum and the bronze, especially in the presence of salt water, will eat away the aluminum hull and/or the bronze housing.



In-Hull Mount

In-hull transducers will work with any engine type: inboard, outboard, and I/O. These transducers perform well on both power and sailboats.

Thick aluminum hulls are not recommended for in-hull installations, because there is too much signal loss transmitting through the metal. In addition, this installation will not work on wooden boats

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or cored fiberglass hulls (foam, balsa wood, or plywood layers sandwiched between an inner and an outer skin). These materials contain air bubbles that reflect and scatter sound pulses before they reach the water.

Some in-hull transducers, such as the P79, can be used on small aluminum-hull boats up to 6.7 m (22') with a hull thickness of 0.38 mm (0.150") or less. In these installations, the transducer face is epoxied directly to the hull.



P79

Transom Mount

Transom-mount transducers can be used with any hull material. However, they will not work on a vessel with an inboard engine due to the turbulence forward of the sensor. And because of excessive heeling, transom-mounts are not recommended for sailboats.

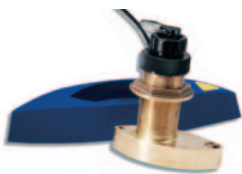


P58

Application or Expectation for the Transducer

Recreational Fishing

If the application is recreational fishing, a 600 W transducer will do the job. These transducers have enough power to read bottom in over 305 m (1,000') of water and have 50 kHz and 200 kHz dual-frequency capability. Typically matched with small to mid-size fishfinders, a 600 W transducer is perfect for bottom fishing, marking bait, and marking game fish.



B744V

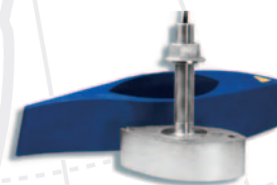


P66

Tournament Sport Fishing

A 1 kW to 2 kW transducer is a must for tournament sport fishing. These powerhouses will give the user a crystal clear screen on medium to large fishfinders. The multiple elements that make up the transducer can distinguish schools of fish as closely-spaced individual targets and can distinguish fish close to the bottom. These transducers are so precise; fish are no longer concealed by their surroundings.

Many of the 1 kW and 2 kW transducers have Airmar's exclusive Broadband Ceramic Technology. The 200 kHz element produces the highest resolution available today without sacrificing sensitivity.



SS260



R199

Commercial Fishing

These transducers are available in frequencies from 24 kHz to 200 kHz and power from 1 kW to 4 kW. Units feature high-efficiency designs producing superior fishfinding and clear and distinct images of both the bottom and closely-spaced fish.



R99

Recreational Fishing



Tournament Sport Fishing



Commercial Fishing

