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M00-10109-00 0608

MARINE PRODUCT SELECTION GUIDE TRANSDUCERS, INSTRUMENTS AND SENSORS





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Transom-Mount Transducers In-Hull Mount Transducers Flush Thru-Hull Transducers External Thru-Hull Mount Transducers Trolling Motor Mount Transducers / Water, Speed and Temperature Sensors Extension Cables / Garmin Marine Instrument Garmin Marine Sensors / Garmin Intelliducers

CHOOSING THE RIGHT TRANSDUCER AND MOUNTING STYLES

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-trailered 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.



Through the Hull

Inside the Hull

An in-hull transducer is installed inside the bilge of a boat hull and sends & receives its signal through the hull. Some people prefer this mounting style, because it is not necessary to drill through the hull. 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. However, not all hull types (cored hulls, steel hulls, etc.) are suitable for in-hull transducer installation. In-hull transducers are recommended only for solid fiberglass hulls.

On the Transom

Transom-mounts are attached to the back (transom) of a boat hull. Trailered 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 trailered, or when it is kept in the water for a long period of time.



Inside the Hull



On the Transom

TRANSOM MOUNT TRANSDUCERS



Beam Width: 50 kHz—19° 200 kHz—6°

Accomodates transom angles of 3° to 21°

• Depth Range: 50 kHz—610m (2,000')

200 kHz—180m (600')

 Depth and Temperature 50/200 kHz 1.000 Watts 12 m (39') Cable Broadband transom-mount

200 kHz

IN-HULL MOUNT TRANSDUCERS

50/200 kHz

- No holes to drill and no hull protrusions on solid fiberglass hulls up to 25.4 (1") thick and aluminum hulls under 0.38 mm (0.150") thick
- · Recommended for planning hull power boats, trailered boats, rigid inflatable boats
- Beam Width: 50 kHz—45° 200 kHz—12°
- Depth Range: 50 kHz—244m to 366m (800' to 1200') 200 kHz—122m to 213m (400' to 700')
- Adjustable for deadrise angles up to 22°

50/200 kHz

- Deadrise angles up to 25° Broadband Ceramic Technology: Provides better image detail and resolution
 Distinguishes individual fish targets and fish tight to the bottom • Top performing 1kW broadband in-hull • Beam Width: 50 kHz—19° 200 kHz—6°
 - Depth Range: 50 kHz—549m to 762m (1800' to 2500') 200 kHz—213m to 305m (700' to 1000')

50/200 kHz

• The ultimate 2kW performance transducers • Beam Width: 50 kHz-8° x 17° 200 kHz-5° for the professional sportfisherman Depth Range: 50 kHz—762m to 1219m (2500' to 4000') 200 kHz—244m to 366m · For use with sportfishing and commercial fishing boats 11 m (35') and up (800' to 1200') Broadband Ceramic Technology: • For use with GSD22 and GPSMAP 5x5s Provides better image detail and resolu Distinguishes individual fish targets and fish tight • Deadrise angles up to 25°

FLUSH THRU-HULL TRANSDUCERS

• Thru-Hull, Plastic Housing

• Depth only - 010-10119-00

• Thru-Hull, Bronze Housing

• Depth only: 010-10107-00

Depth and Temperature - 010-10218-00

Depth and Temperature - 010-10217-00

010-10119-00 / 010-10218-00



• 375 Watts • 12 m (39') Cable

• 200 kHz

010-10107-00 / 010-10217-00



- 200 kHz 375 Watts • 12 m (39') Cable
- 010-10194-00 / 010-10194-01

010-10182-00 / 010-10182-01

- Thru-Hull, Plastic Housing • Depth only: 010-10194-00
- Depth and Temperature 010-10194-01 50/200 kHz
- 600 Watts
- 12 m (39') Cable

AIRMAR[®] B117

AIRMAR® B22

AIRMAR[®] P319



- Depth and Temperature 010-10182-01 • 50/200 kHz
- 600 Watts
- 12 m (39') Cable

010-10982-00 / 010-10982-01

- Thru-Hull, Bronze Housing
- Depth and Temperature 50/200 kHz
- 600 Watts
 - 20° Tilt: 010-10982-00 12° Tilt: 010-10982-01
 - 12 m (39') Cable

- AIRMAR® P19
 - Low-profile design leaves no protrusions below your hull and allows for excellent performance at cruising speeds
 - For use with cruising boats and sailboats under 12.2 m (40')
 - Beam Width: 200 kHz—12°
 - Depth Range: 200 kHz—up to 213m (up to

• Low-profile design leaves no protrusions

· For use with cruising boats and sailboats

· Low-profile design has no effect on your

Beam Width: 50 kHz—45° 200 kHz—12°

Low-profile design has no effect on your

• For use on fiberglass and wood hulls with

boats running performance

boats running performance

0° to 12° of deadrise

performance at cruising speeds

below your hull and allows for excellent

700')

under 12.2 m (40')

Beam Width: 200 kHz—12°

200 kHz

- with 0° to 12° of deadrise
- Depth Range: 50 kHz—244m to 366m (800' to 1200') 200kHz—122m to 213m
- (400' to 700')
- For use on fiberglass and metal hulls with

50/200 kHz

50/200 kHz

• Depth Range: 50 kHz-244m to 366m (800' to 1200') 200kHz—122m to 213m (400' to 700')

- 0° to 8° of deadrise • See B60 for 600 Watt high-performance option and B164 for 1KW option.
- Beam Width: 50 kHz—45° 200 kHz—12°

AIRMAR[®] B60 Tilted Element

- Fixed Tilted Element[™] compensates for hull deadrise aiming the beam straight down resulting in strong echo returns and accurate depth readings
- For use on fiberglass and wood hulls
- 50/200 kHz 12° tilt accommodates 8° to 15° hull
- deadrise 20° tilt accommodates 16° to 24° hull deadrise
- Beam Width: 50 kHz—45° 200 kHz—12°
- Depth Range: 50 kHz—244m to 366m (800' to 1200') 200kHz-122m to 213m (400' to 700')

010-11010-00 / 010-11010-01

Thru-Hull, Bronze Housing Vducer

• Depth and Temperature • 50/200 kHz • 1.000 Watts

• 20° Tilt: 010-11010-00 12° Tilt: 010-11010-01

• 12 m (39') Cable

EXTERNAL THRU-HULL MOUNT TRANSDUCERS

010-10983-00			° B45
	 Narrow Stem Thru-Hull, Bronze Fairing is included. Depth and Temperature 50/200 kHz 600 Watts 12 m (39') Cable 	Housing.	 Requires only a For use on fiber to 28° of deadri Beam Width: 50 Depth Range: 5 (800' to 1200') 2 (400' to 700')
010-10183-02 /	010-10193-02	AIRMAR®	[°] B744V/VL
	 Thru-Hull, Bronze Housing Fairing is included Depth, Speed, and Temperature 50/200 kHz 		 B744V - 010-101 B744VL (long std 12 m (39') Cable Three sensors in Designed for us
	• 600 Watts		boat types—pov
010-10703-00	• 600 Watts	AIRMAR®	boat types—pov
010-10703-00	 600 Watts Thru-Hull, Bronze Housing. Fairing included Depth and Temperature 50/200 kHz 1,000 Watts 12 m (39') Cable 		boat types—pov
010-10703-00	 Thru-Hull, Bronze Housing. Fairing included Depth and Temperature 50/200 kHz 1,000 Watts 12 m (39') Cable 		 boat types—pox B258 Elliptical beam of increasing your For use with spo fishingboats 11 and wood hulls. GPSMAP 5x5s ui Economical 1 KV Deadrise angles

• 010-10641-00 is compatible only with GSD22

1,000 Watts



- For use on fiberglass and wood hulls

- Depth Range: 200 kHz—up to 213m (up to 700')

to 12° of deadrise

200 kHz • For use on fiberglass and metal hulls with 0°

AIRMAR[®] B164 Tilted Element

- Fixed Tilted Element[™] compensates for hull deadrise aiming the beam straight down resulting in strong echo returns and accurate depth readings
- For use with center console and sportfishing boats up to 7.6 m (25') and up with wood and fiberglass hulls
- 12° tilt accommodates 8° to 15° hull deadrise 20° tilt accommodates 16° to 24° hull deadrise
- Beam Width: 50 kHz—22° x 20° 200 kHz—6° x 6°
- Depth Range: 50 kHz—366m to 549m (1200' to 1800') 200kHz—152m to 244m (500' to 800')
- For use with GSD22 and GPSMAP 5x5s

50/200 kHz

50/200 kHz

22mm hole

- glass and wood hulls with up ise
-) kHz—45° 200 kHz—12°
- 50 kHz—244m to 366m 200kHz—122m to 213m

50/200 kHz

- 183-02 tem) - 010-10193-02
- n one
- se on all fiberglass and wood wer and sail
- Beam Width: 50 kHz—45° 200 kHz—12°
- Depth Range: 50 kHz—244m to 366m (800' to 1200') 200kHz—122m to 213m (400' to 700')
- Deadrise angles up to 28°

50/200 kHz

- covers more bottom area thus catch
- ortfishing and commercial m (35') and up with fiberglass . For use with GSD22 and nits

- s up to 25°

- Beam Width: 50 kHz—15° x 21° 200 kHz—3° x 5°
- Depth Range: 50 kHz—457m to 671m (1500' to 2200') 200kHz-213m to 305m (700' to 1000')

50/200 kHz

- Deadrise angles up to 22°
- Broadband Ceramic Technology:
- Provides better image detail and resolution
 Distinguishes individual fish targets and fish tight to the bottom
- Beam Width: 50 kHz—19° 200 kHz—6°
- Depth Range: 50 kHz—549m to 762m (1800' to 2500') 200kHz-213m to 305m (700' to 1000')

W solution

-)-10640-00
- d 200 kHz ceramics
- 1 kW broadband transducer gives you crystal clear imaging at all depths
- For use with sportfishing and commercial fishing boats 11 m (35') and up with fiberglass and wood hulls

010-11140-00

010-10642-00

R99

- Thru-Hull stainless housing, Fairing is included
- Depth and Temperature
- 50/200 kHz
- 1,000 Watts
- 12 m (39') Cable

AIRMAR® R99

AIRMAR® SS270W

hull types.

- Thru-Hull • Depth and Temperature 50 kHz and 200 kHz
- 2,000 Watts
- 12 m (39') Cable
- Separate 50 and 200 kHz broadband ceramics • The ultimate 2kW performance transducers
 - for the professional sportfisherman • For use with sportfishing and commercial fishing boats 11 m (35') and up

• Deadrise angles up to 28°

 Broadband Ceramic Technology: · Provides better image detail and resolut Distinguishes individual fish targets and fish tight to the bottom

• Separate 50 and 200kHz ceramics. Identical

• For use with sportfishing and commercial

fishing boats 11 m (35') and up with all

• Beam Width: 50 kHz—25° 200 kHz—25°

beam widths at 50kHz and 200kHz.

50/200 kHz • Beam Width: 50 kHz-8° x 17° 200 kHz-5°

50/200 kHz

• Depth Range: 50 kHz—762m to 1219m (2500' to 4000') 200kHz-244m to 366m (800' to 1200')

• Only 1Kw wide beam 200 kHz transducer

(1350' to 2000') 200kHz—101m to 183m

• Depth Range: 50 kHz—411m to 610m

• For use only with GSD22 and

(330' to 600')

GPSMAP 5x5s units

• For use with GSD22 and GPSMAP 5x5s

• Deadrise angles up to 25°

TROLLING MOTOR MOUNT TRANSDUCER

010-10200-00

AIRMAR[®] P72 Trolling Motor Mount

- Trolling Motor Mount
- Depth and Temperature
- 200 kHz
- 300 Watts
 - 4.6 m (15') Cable: 010-10200-00

200 kHz

- For use with small boats under 6 m (20')
- Beam Width: 200 kHz—15°
- Depth Range: 200 kHz—up to 183m (up to 600')

WATER SPEED AND TEMPERATURE SENSORS



EXTENSION CABLES

010-10715-00 010-10716-00 3m (10') Transducer Extension Cable 6m (20') Transducer Extension Cable

GARMIN MARINE INSTRUMENTS

GMI® 10

010-00687-00





Garmin marine instruments, "Your data your way." In the past, most standard marine instruments were single-function units – with each remote sensor having a dedicated display. Now, with the new multifunction Garmin GMI™ 10 instrument displays, mariners can do and see more with less. Our digital design gives installers the flexibility to customize and streamline installation configurations – using fewer instruments to display sensor data from multiple inputs. The GMI 10 makes it easy to monitor navigation, heading and environmental data – everything from basic depth, speed, winds and water temperatures to detailed GPS readouts, fuel flows, engine data, RPMs, trip odometer, user alarms and more. Featuring big, bright 3.5-inch QVGA screens in a sleek 4-inch flush-mount bezel, the system offers great flexibility and compatibility with Garmin and non-Garmin sensors, including both NMEA 2000 and NMEA 0183 formats. Garmin's new line of intelligent transducers or others that use the NMEA 2000 or NMEA 0183 formats

GARMIN MARINE SENSORS

010-00671-00

GFS10 GASOLINE FUEL SENSOR

- Installs in your boat's fuel line with 3/8" (9.5mm) hose fittings
- Fuel resistant plastic housing
- Fuel flow and fuel level
- Measures flow rates up to 50 gal./hr. (190 L/hr)
- 7.6m (25') power/fuel level cable, 1.8m (6') NMEA 2000 drop cable
- Fuel Level sensing when connected to an existing analog fuel gauge or resistive fuel tank sender
- NMEA 2000 or Garmin CANet Gasoline engines only

GPS 17x HVS / GPS17x NMEA 2000

010-00694-00 / 010-10694-10



- High sensitivity 12-channel GPS reciever/antenna
- · Pole, flush, or under deck mount plastic housing
- NMEA 0183 010-00694-00 and NMEA 2000 -010-00694-10

GARMIN[®] INTELLIDUCERS[™]

010-00701-00 / 010-00701-01 010-00702-00 / 010-00702-01

NMEA 2000[®] Version

- Thru-hull Intelliducer
- 160kHz, 150W
- Depth Range: 275 m (up to 900')
- NMEA2000, 0-12°: 010-00701-00 NMEA2000, 13-24° 010-00701-01
- 6 m (20') NMEA2000 cable
- Depth and Temperature

Garmin[®] Thru Hull Intelliducers

Garmin[®] Transom-Mount Intelliducers

- NMEA 0183[®] Version
- Thru-hull Intelliducer
- 160kHz, 150W
- Beam Width: 17.5°
- Depth Range: 275 m (up to 900')
- NMEA0183, 0-12°: 010-00702-00 NMEA0183, 13-24° 010-00702-01
- 9 m (30') cable with no connector
- · Depth and Temperature

010-00703-00 / 010-00704-00



- NMEA 2000[®] Version Transom-Mount Intelliducer
- 160kHz, 150W
- Beam Width: 17.5°
- Depth Range: 275 m (up to 900')
- NMEA2000: 010-00703-00
- 6 m (20') NMEA2000 cable
- Depth and Temperature

NMEA 0183[®] Version

- Transom-Mount Intelliducer
- 160kHz, 150W
- Beam Width: 17.5°
- Depth Range: 275 m (up to 900')
- NMEA0183: 010-00704-00
- 9 m (30') cable with no connector
- Depth and Temperature

AIRMAR[®] SMART[™] SENSORS

010-11105-00 / 010-11105-01

AIRMAR[®] DT800 Smart[™] Sensor Tilted Element[™]



NMEA 2000[®] Version

- Thru-Hull, Smart[™] Sensor, plastic housing
- Broadband ceramic, 235 kHz, 100 W power
- Beam Width: 11°
- Depth Range: 183m (up to 600')
- Depth and Temperature: 010-11105-00—Fixed 20° tilt 010-11105-01—Fixed 12° tilt
- 6 m (20') Devicenet cable
- For use on fiberglass and metal hulls. 12° tilt accomodates 8° to 15° deadrise. 20° tilt accomodates 16° to 24° deadrise

010-11051-00 / 010-11051-10

NMEA 2000[®] Version

- Thru-Hull, Smart[™] Sensor: 010-11051-00. plastic housing
- 235 kHz, 100 W power
- Beam Width: 10° x 44°
- Depth Range: 100 m (up to 330')
- Depth, Speed, and Temperature: 010-11051-00
- 6 m (20') Devicenet cable

010-11050-00 / 010-11050-10 / 010-11050-20

NMEA 2000[®] Version

- Transom-Mount Smart[™] Sensor: 010-11051-00
- 235 kHz, 100 W power
- Beam Width: 11°
- Depth Range: 152m (up to 500')
- Depth, Speed, and Temperature: 010-11050-00
- Depth and Temperature: 010-11050-20
- 6 m (20') Devicenet cable
- Accomodates transom angles of 0° to 20°



• For use on fiberglass and metal hulls with up to 22° deadrise

• Beam Width: 17.5°



160kHz

160kHz

235 kHz

Tilted / Angled



The ceramic element is tilted inside the housing, which compensates for your boats deadrise. This aims the beam straight toward the bottom, resulting in stronger echo returns and more accurate depth readings.

AIRMAR[®] DST800 Smart[™] Sensor



NMEA 0183[®] Version

- Thru-Hull, Smart[™] Sensor: 010-11051-10, Plastic Housing
- 235 kHz, 60 W power
- Beam Width: 10° x 44°
- Depth Range: 70 m (up to 230')
- Depth, Speed, and Temperature: 010-11051-10
- 10 m (33') cable with no connector
- · For use on fiberglass and metal hulls with up to 22° deadrise

AIRMAR[®] P39 Smart[™] Sensor

235 kHz

NMEA 0183[®] Version

- Transom-Mount Smart[™] Sensor: 010-11050-10
- 235 kHz, 60 W power
- Beam Width: 11°
- Depth Range: 100 m (up to 330')
- Depth, Speed, and Temperature: 010-11050-10
- 10 m (33') cable with no connector
- Accomodates transom angles of 0° to 20°



This image shows the depth and beamwidth differences between a single-element, 600 W transducer and a multiple-element, high-performance 1 kW transducer.

XDUCER ID[™] FEATURE

Transducer ID allows echosounders to query the connected transducer gathering important operating characteristics. With this data, the echosounder and transducer function as a precisely-tuned system. A Transducer ID enabled sensor contains an embedded microcontroller that communicates with the connected echosounder via a single conductor in the transducer cable. The principal data transmitted is intended to identify the type and configuration of the transducer. Then the echosounder can alter its parameters of operation to optimize performance and to protect the transducer from overdrive. The Transducer ID feature also provides important information to installers and technicians such as serial number and housing style. Listed below is a summary of the information that the Transducer ID feature can provide to future fishfinders.

- Part number
- Housing style
- Serial number
- Ceramic element configuration
- Date of manufacture
- Acoustic window
- Impedance matching configuration
- Nominal frequency(s)
- Best transmit frequency(s)
- Power rating
- Beam pattern

BROADBAND TRANSDUCER TECHNOLOGY

Affordable Broadband Transducers are an enabling technology that provides better fish detection today and will lead to dramatic advances in echosounder performance in the future.

Broadband Transducers enhance fish detection and give better definition; it is far easier to distinguish among individual fish and between fish and the bottom.

The superior results are achieved by using a new ceramic material. It lets transducers operate over a range of frequencies while maintaining sensitivity. These Broadband Transducers are, by definition, low-Q devices. In other words, they exhibit very low ringing. There is little variation from transducer to transducer. Additionally, Broadband Transducers are relatively immune to the effects of aging, so their frequency range remains stable over time.



