

## Placement Guidelines

**CAUTION:** Do not mount in line with or near water intake or discharge openings or behind strakes, fittings, or hull irregularities that will disturb the water flow.

**CAUTION:** Do not mount in line with trailer rollers or bunks that may damage the transducer's face.

### Choose a Location

- Where the hull is flat or nearly flat, so the transducer beam will be aimed straight down.
- In a cool well-ventilated area away from the engine to avoid overheating.
- Where the transducer will be in contact with the water at all times.
- Where the water flowing under the hull is smoothest with a minimum of bubbles and turbulence (especially at high speeds). Do not mount the transducer near water intake or discharge openings; or behind strakes, fittings, or hull irregularities.
- Where the transducer beam will not be blocked by the keel or propeller shaft(s).
- Away from interference caused by power and radiation sources such as: the propeller(s) and shaft(s), other machinery, other echosounders, and other cables. The lower the noise level, the higher the echosounder gain setting that can be used.
- Where there is working space inside the vessel.

### Bolts

- Choose bolts with 3/8"-16 UNC threads.
- Tighten the bolts using a torque wrench with a force not exceeding 85 in.-lb. Do not over tighten.

### Cable Routing & Connecting

**CAUTION:** If the transducer came with a connector, do not remove it to ease cable routing. If the cable must be cut and spliced, use Airmar's splash-proof Junction Box No. 33-035 and follow the instructions provided. Removing the water-proof connector or cutting the cable, except when using water-tight junction box, will void the transducer warranty.

1. Route the cable to the echosounder being careful not to tear the cable jacket when passing it through the bulkhead(s) and other parts of the boat. Use grommet(s) to prevent chafing. To reduce electrical interference, separate the transducer cable from other electrical wiring and the engine(s). Coil any excess cable and secure it in place with cable ties to prevent damage.
2. Refer to your echosounder owner's manual to connect the transducer to the instrument.

## Checking for Leaks

When the boat is placed in the water, **immediately** check around the transducer for leaks. Note that very small leaks may not be readily observed. Do not leave the boat in the water for more than 3 hours before checking it again. If a leak is observed, repeat the installation procedures **immediately**.

## Maintenance, Parts, & Replacement

### Anti-fouling Paint

Surfaces exposed to salt water must be coated with anti-fouling paint. Use *water-based* anti-fouling paint only. Never use ketone based anti-fouling paint, since ketones can attack many plastics possibly damaging the transducer. Apply anti-fouling paint every 6 months or at the beginning of each boating season.

### Cleaning

Aquatic growth can accumulate rapidly on the transducer's surface, reducing its performance within weeks. Clean the surface with a Scotch-Brite® scour pad and mild household detergent, being careful to *avoid making scratches*. If the fouling is severe, lightly wet sand it with fine grade wet/dry paper.

### Transducer Replacement & Parts

The information needed to order a replacement Airmar transducer is printed on the cable tag. Do not remove this tag. When ordering, specify the part number, date, and frequency in kHz. For convenient reference, record this information near the top of page one.

Obtain parts from your instrument manufacturer or marine dealer.

Gemeco (USA)	Tel: 803-693-0777 Fax: 803-693-0477 email: sales@gemeco.com
Airmar EMEA (Europe, Middle East, Africa)	Tel: +33.(0)2.23.52.06.48 Fax: +33.(0)2.23.52.06.49 email: sales@airmar-emea.com

# OWNER'S GUIDE & INSTALLATION INSTRUCTIONS

## Pocket/Keel Mount Depth Transducer

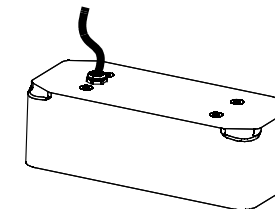
with Temperature Sensor

Models: CM599LH, CM599LM, CM599LHW,  
PM111LH, PM111LM, PM111LHW, PM411LWM

U.S. Patent No. 7,369,45; 8,582,393. UK Patent No. 2 414 077

Record the information found on the cable tag for future reference.

Part No. \_\_\_\_\_ Date \_\_\_\_\_ Frequency \_\_\_\_\_ kHz



**WARNING: The transducer must be professionally installed using accepted practices. The pocket must be strong and watertight to reduce the risk of property damage, personal injury, and/or death.**

**Follow the precautions below for optimal product performance and to reduce the risk of property damage, personal injury, and/or death.**

**WARNING:** Always wear safety goggles and a dust mask when installing.

**WARNING:** Immediately check for leaks when the boat is placed in the water. Do not leave the boat unchecked for more than three hours. Even a small leak may allow considerable water to accumulate.

**CAUTION:** Do not install in the engine compartment or other hot place. The transducer may fail if it overheats.

**CAUTION:** Always operate the transducer in water. Operating in air will allow the transducer to overheat resulting in failure.

**CAUTION:** The transducer must be flush with the bottom of the hull for good performance.

**CAUTION:** Never pull, carry, or hold the transducer by the cable. This may sever internal connections.

**CAUTION:** Never strike the transducer.

**CAUTION:** Never use solvents. Cleaners, fuel, sealants, paint, and other products may contain solvents that can damage plastic parts, especially the transducer's face.

**IMPORTANT:** Please read the instructions completely before proceeding with the installation. These instructions supersede any other instructions in your instrument manual if they differ.

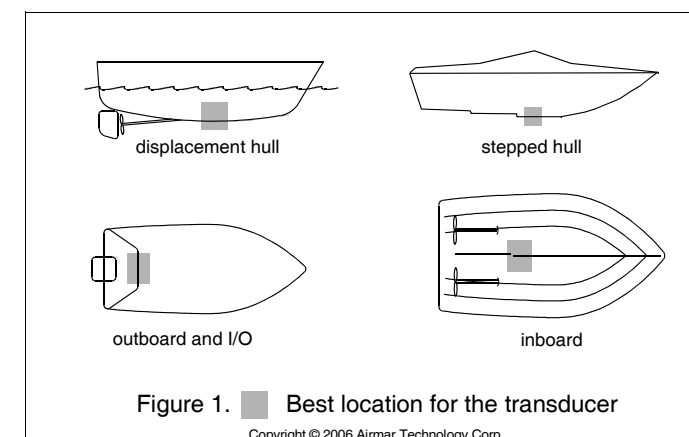
## Applications

- Recommended for fiberglass hulls
- Recommended for high-speed boats

## Mounting Location

*Hull Types* (see Figure 1)

- **Displacement hull powerboats**—Locate amidships near the centerline. The starboard side of the hull where the propeller blades are moving downward is preferred.
- **Planing hull powerboats**—Mount well aft, on or near the centerline, and *well inboard of the first set of lifting strakes* to ensure that the transducer will be in contact with the water at high speeds. The starboard side of the hull where the propeller blades are moving downward is preferred.  
**Outboard and I/O**—Mount just forward of the engine(s).  
**Inboard**—Mount well ahead of the propeller(s) and shaft(s).  
**Stepped hull**—Mount just ahead of the first step.



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•www.airmar.com

4X R1.00

**CM599LH, CM599LM, CM599LHW  
PM111LH, PM111LM, PM111LHW, PM411LWM**

**IMPORTANT:** Some printers and printer settings can alter the size of the template.

Verify the template's size before cutting.  
Place the transducer on the template to be sure it is the *exact* size. If necessary, redraw the template.

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