OWNER'S GUIDE & INSTALLATION INSTRUCTIONS

NMEA 2000® Network
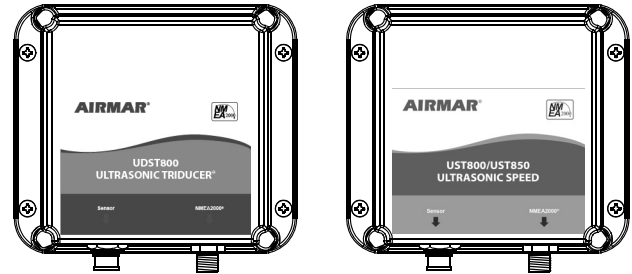
Ultrasonic Processor

for Models: **UDST800, UST800, UST850**

Patent http://www.airmar.com/patent.html

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

Part No._____Date_____

Applications

Connect to an NMEA 2000 network.

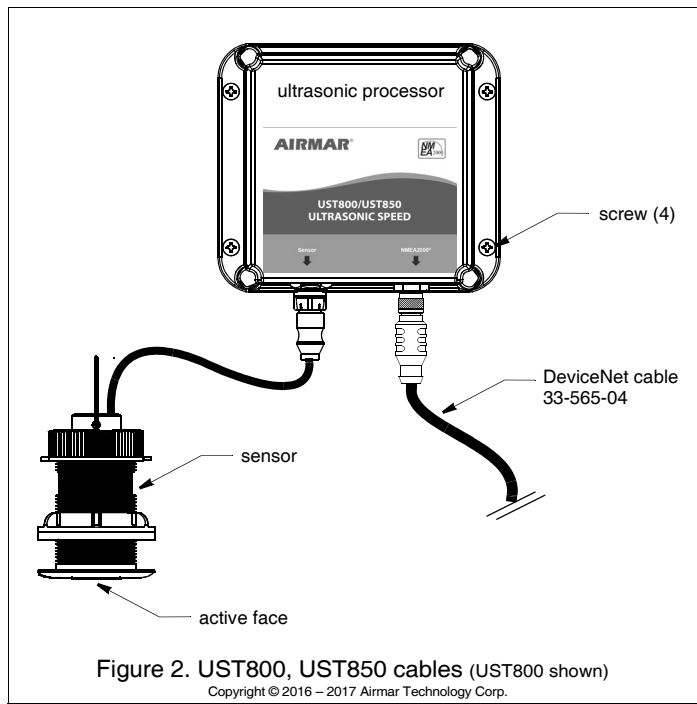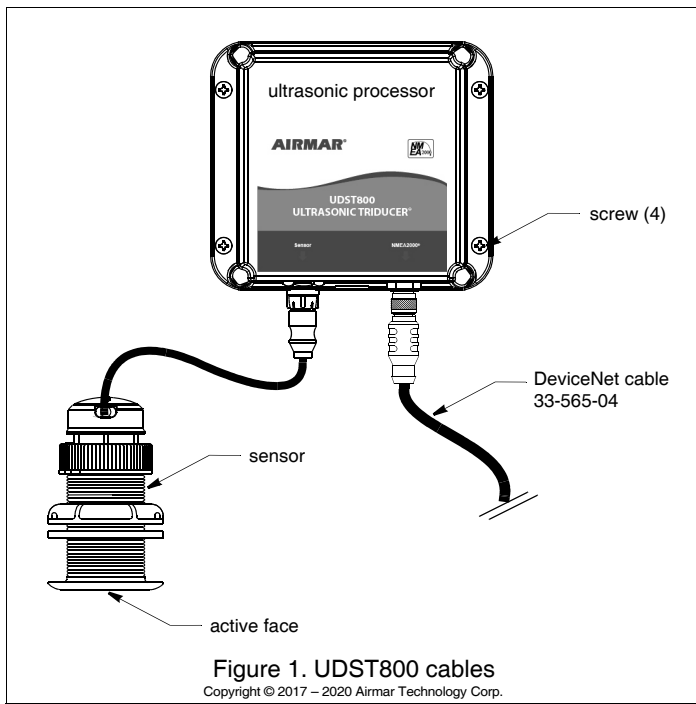## Installation

Locating the Ultrasonic Processor

CAUTION: If the processor will be mounted on a vertical surface, face the connectors downward to avoid water seeping into the box.

1. Select a convenient, *dry*, mounting location for the water-resistant Ultrasonic Processor a minimum of 1 m (3') from other cables and electronic equipment.

2. Hold the processor at the selected location and mark the position of the four screw holes with a pencil.

3. At the marked locations, drill a 3 mm or 1/8" hole to a depth of 10 mm (3/8").

4. Fasten the processor to the selected mounting surface, using the screws supplied.

Routing the Cables & Connecting

CAUTION: Do not remove connectors 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 supplied. Removing the waterproof connector or cutting the cable, except when using a watertight junction box, will void the sensor's warranty.

1. Route the cables to the Ultrasonic Processor. Be careful not to tear the cable jacket when passing it through the bulkhead(s) and other parts of the boat. Use grommets to prevent chafing. To reduce electrical interference, separate the sensor cable from other electrical wiring and the engine. *Do not fasten the cables in place at this time.*

2. Connect the cables to the Ultrasonic Processor (Figure 1 or 2).

3. Fasten all the cables in place. Coil any excess cable and secure it with cable-ties to prevent damage.

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 glasses, a dust mask, and ear protection when installing.

WARNING: The power must be OFF before proceeding.

WARNING: The power supply voltage must be 9 – 16 VDC.

WARNING: A safe installation requires a 0.5 amp fast-blow fuse or circuit breaker.

CAUTION: To reduce electrical interference from other electrical wiring and any on-board equipment with strong magnetic fields such as radar equipment, radio transmitters, boat engines, generators, etc., separate the Ultrasonic Processor and cables by at least 1 m (3').

CAUTION: Never use solvents. Cleaner, fuel, sealant, paint, and other products may contain solvents that can damage plastic parts.

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

Tools & Materials

Safety glasses
Dust mask
Ear protection
Pencil
Electric drill
Drill bit   3 mm *or* 1/8"
Phillips screwdriver
Grommet(s) (some installations)
Cable ties

Figure 1. UDST800 cables
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Figure 2. UST800, UST850 cables (UST800 shown)
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Operation

Apply power to the Ultrasonic Processor.

Troubleshooting

No Readings

- Is the ultrasonic insert installed in the housing and connected to the Ultrasonic Processor?

- Is power being supplied to the Ultrasonic Processor? The power must be within the correct voltage range. At a voltage lower than 9 VDC, performance is degraded and the unit will shut down.

- Is the ultrasonic *insert* oriented with the arrow on the top pointing forward toward the bow? If the insert cannot be seated in the housing with the arrow pointing forward, check that the arrow on the flange of the housing is pointing forward. If this is not the case, the housing needs to be reinstalled with the proper orientation.

Inaccurate Speed Readings

- If the ultrasonic speed sensor is 'ON' when the boat is stationary, you may see a speed readout of a fraction of a knot because of water movement under the hull.

- If the speed reading is consistently the same percentage higher or lower than the true speed, the speed function within the instrument needs to be re-calibrated. Follow the instructions in your instrument owner's manual.

Inaccurate Depth Readings or Speed Readings Above 10 knots

- The sensor is installed in turbulent water. The cause may be water intake or discharge openings, strakes, fittings, hull irregularities upstream of the sensor, or the shape of the hull in that area. The sensor must be reinstalled in another location.

- The ultrasonic insert is covered with aquatic growth. Clean the active face of the sensor with a dull putty knife, being careful to avoid scratching the surface (Figure 1 or 2). If fouling is severe, lightly wet sand the active face with fine grade (#320) wet/dry paper.

- Aerated water is flowing under the sensor because the boat is designed to pull air under the hull. The sensor will not work on this type of boat.

Replacement Parts

The information needed to order a replacement part is printed on the unit and cable tags. Do not remove tags. When ordering, specify the part number and date. For convenient reference, record this information on the top of page one.

Obtain parts from your instrument manufacturer or marine dealer.

Gemeco

USA
Tel: 803-693-0777
email: sales@gemeco.com

Airmar EMEA

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