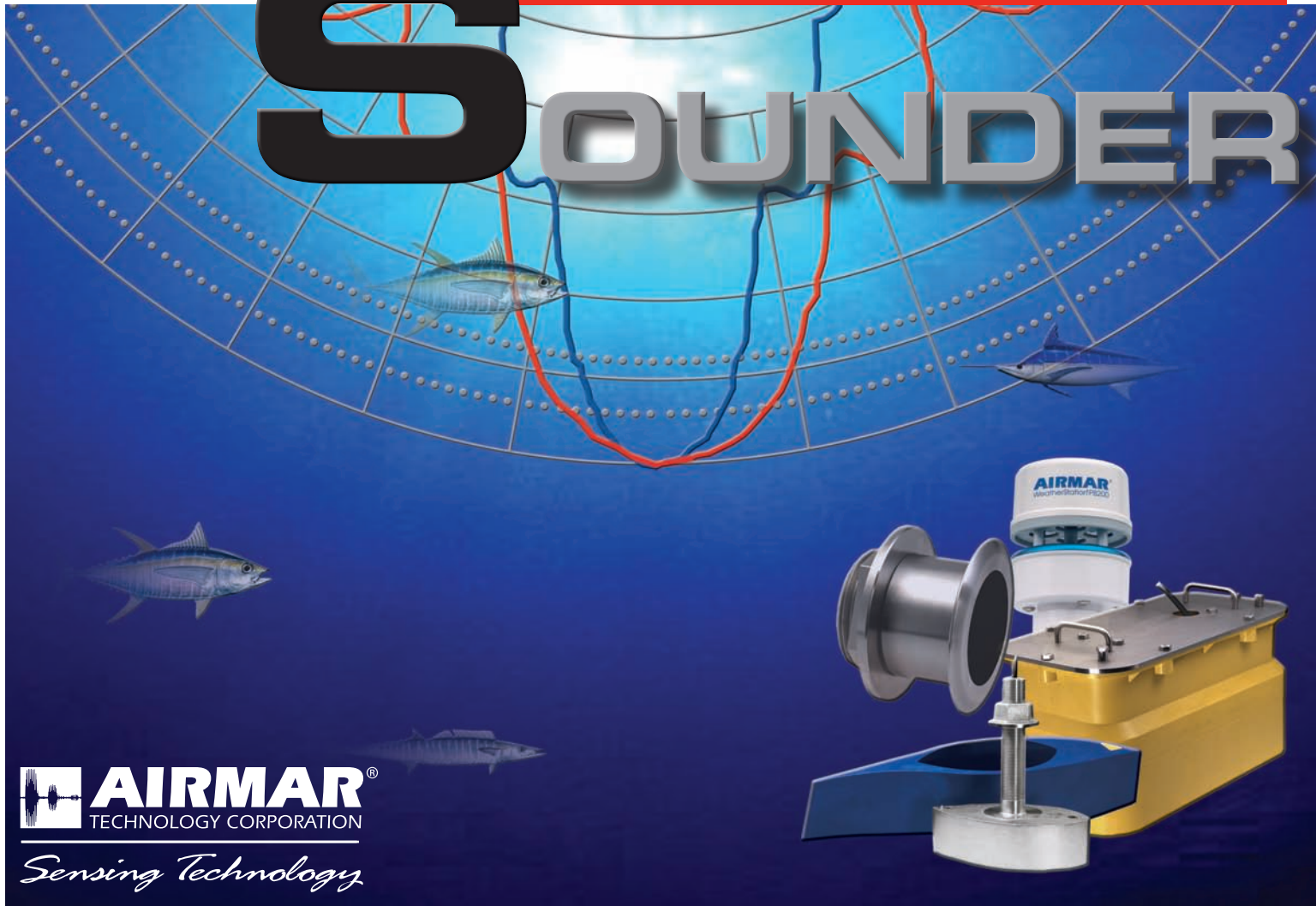


The **S**OUNDER



Welcome

The Sounder is Airmar's quarterly newsletter that presents our latest innovative products, offers hands-on installation tips, explains our quality features, and acquaints OEMs, installers, and the press with our company's resources.

Winter 2011 Features

- New Broadband / CHIRP Transducers
- New NMEA 2000® Sensors
- Easy NMEA 0183 PC Connections

If you know someone who would like to receive this informative newsletter, or if you would like to unsubscribe, please e-mail mreedenaer@airmar.com.

Broadband Transducers for Next-Generation CHIRP & Spread Spectrum Fishfinders

Our new-for 2011 Broadband / CHIRP Transducers continuously operate across a range of frequencies, rather than at the traditional dedicated frequencies of 50 kHz or 200 kHz. When transmitting at dedicated frequencies, targets that are smaller than the 50 kHz or 200 kHz sound wave may be undetected and therefore not shown on the fishfinder display. With CHIRP, the transmitted signal covers a wide band of frequencies, providing significant improvements in the ability to detect all targets in the water column. More bottom and water column area is covered as the beamwidth constantly changes from narrow to wide while the transducer is "chirped" across the specified band. It is proven that some fish species return better signals at specific frequencies, which makes CHIRP systems the

optimal choice for fishfinding. Additional benefits include 25 to 50 times more energy on targets, enhanced detail and resolution, precise location (within inches) of fish in the water column or tight to the seabed, no noise interference, and extreme deep-water sounding below 10,000 ft.

Depending on the model, these transducers contain a low-frequency ceramic array capable of running at either 28 to 60 kHz or 42 to 65 kHz. To complement the deep-water detection, either a high-frequency or medium-frequency broadband ceramic is also included. The high-frequency ceramics operate in the 130 to 210 kHz band.

The medium-frequency ceramics cover the 85 to 135 kHz band, which has historically been used in commercial fishing, especially 88 and 107 kHz—due to certain fish species being better detected at these frequencies.

This band has rarely been used in the sport fishing market, until now. Medium-frequency benefits include the ability to sound deeper than the high-frequency, along with better target resolution than the low-frequency. All low and high-frequency broadband transducers will carry an “LH” suffix after the model name while the low and medium-frequency transducers will carry an “LM” suffix after the model name.

The **R209LH**, thru-hull transducer has 25-internal, broadband ceramic elements. The low-frequency can be chirped from 28 to 60 kHz while the high-frequency can be chirped from 130 to 210 kHz. Beamwidths range from 11° to 17° on the low-frequency band and 5° to 7° on the high-frequency band. This transducer is optionally available as **R209LM**, low and medium-frequency (80 to 130 kHz).

The **B265LH**, thru-hull transducer has 8-internal, broadband ceramic elements. The low-frequency can be chirped from 42 to 65 kHz while the high-frequency chirps from 130 to 210 kHz. Beamwidths range from 18° to 25° on the low-frequency band and 6° to 10° on the high-frequency band. This transducer is optionally available as **B265LM**, low and medium-frequency (85 to 135 kHz).

Both units include a high-precision water-temperature sensor for accurate sea-surface temperature readings—critical to fishing success when tournament angling or making a living on the water. Both transducers also come with a High-Performance Fairing for crystal clear bottom imaging at vessel speeds over 30 knots.

The transducers detailed above are also available in various mounting styles to accommodate any vessel size and type. The in-hull R299LH / LM (25 ceramic elements—available Spring 2011) and M265LH / LM (8-ceramic elements—available Summer 2011) can install in the bilge of a solid fiberglass boat without drilling any hole in the hull. The commercial / keel-mount CM299LH / LM (25-ceramic elements—available Spring 2011) and CM265LH / LM (8-ceramic elements—available Spring 2011) can mount in a commercial fishing vessel's transducer tank. The transom-mount TM265LH / LM (8-ceramic elements—available Spring 2011) is best suited for smaller outboard and I/O powered vessels. All of these transducers have similar performance specifications to the R209 and B265 models detailed above.



B265LH, B265LM



R209LH, R209LM

Three New NMEA 2000® Sensors

The HT200 High-Precision Temperature Sensor instantaneously responds to water-temperature changes with the highest accuracy. This gives sport and commercial fishermen yet another advantage, as even small temperature breaks, less than a degree, tend to concentrate baitfish and gamefish. The 1 in. (25 mm) exposed bronze button on the sensor face and the fast-response thermistor updates temperature readings two times per second with $\pm 0.125^{\circ}\text{C}$ / $\pm 0.225^{\circ}\text{F}$ accuracy. Temperature data with resolution to the hundredth of a degree (0.01°) can be output to a fishfinder, chart-plotter, computer, or any digital display on an NMEA 2000 network. The HT200 is sold with a choice of rugged housings—plastic, bronze, or stainless steel—to accommodate any vessel type or hull material. The self-closing valve inside the housing reduces water-flow into the vessel when the temperature insert is removed for cleaning. These low-profile housings do not affect hull performance and will read accurately at high speeds. Also the HT200 can retrofit into an existing 2 in. (51 mm) Airmar housing that might already be installed with a ST650 or ST850 paddlewheel speed and temperature sensor.

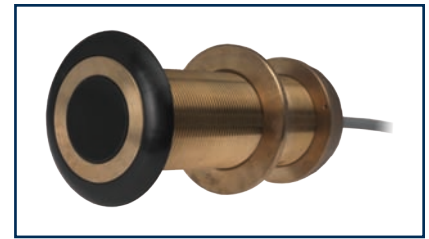


HT200

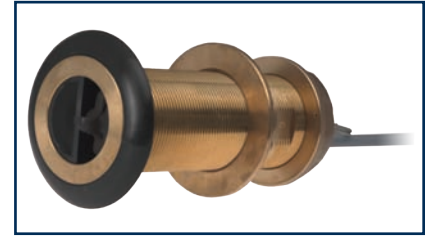
The DT800L & DST800L Long-Stem Transducers are designed for vessels with a thick hull or sailing vessels with a steep deadrise. The longer length [7 in. (175 mm)] assures more shaft clearance. The DT800L Depth & Temperature model has a broadband ceramic element and urethane face which delivers depth readings down to 600 ft. (180 m), as well as accurate shallow-water readings in as little as 1.5 ft. (0.5 m).

The DST800L Depth, Speed, & Temperature model includes a paddlewheel for accurate speed-through-water readings, and delivers depth readings down to 330 ft. (100 m). The included High-Performance Fairing on both models vertically orients the sound beam for strong return echoes. Both models can also be installed without a fairing as a low-profile mount by using a plastic flange adaptor, similar to mounting the popular DT800 & DST800 Smart Sensors. Both installations allow these transducers to track bottom at speeds over 30 knots (34 MPH). Both the DT800L and the DST800L operate at a frequency of 235 kHz, so they can run simultaneously with other Airmar 50/200 kHz transducers with no interference.

The ST850 / ST800 Speed & Temperature Sensors compliment the new B122 transducer and the popular, NMEA 2000, DT800, Tilted Element™ Transducer. The ST850 and ST800 bring speed-through-water along with temperature information to any NMEA 2000 display. Paddlewheel speed is especially important for all sailing vessels, from recreational to racing, as precise water movement along the hull can help show how tides and currents are affecting the boat's movement. These units are sold with a choice of rugged housings—plastic, bronze or stainless steel—to accommodate any vessel type or hull material. The low-profile housings mount nearly flush to the hull, resulting in virtually no drag and accurate readings at all vessel speeds. The self-closing valve inside the housing reduces water-flow into the vessel when the paddlewheel insert is removed for cleaning. The ST850 can retrofit into an existing 2 in. (51 mm) Airmar housing that might already be installed with an ST650 or ST850 analog paddlewheel sensor. The ST800 can fit into Raymarine®-style ST600 or ST800 speed and temperature housings.



DT800L



DST800L



ST850, ST800

NMEA 0183 Smart™ Sensors—Easy PC Connection!

The diagram below shows how easily you can connect any Airmar NMEA 0183 Smart Sensor to your PC with a DB9 connection. This is perfect for bringing depth, speed, and temperature data into your navigation software suite.

