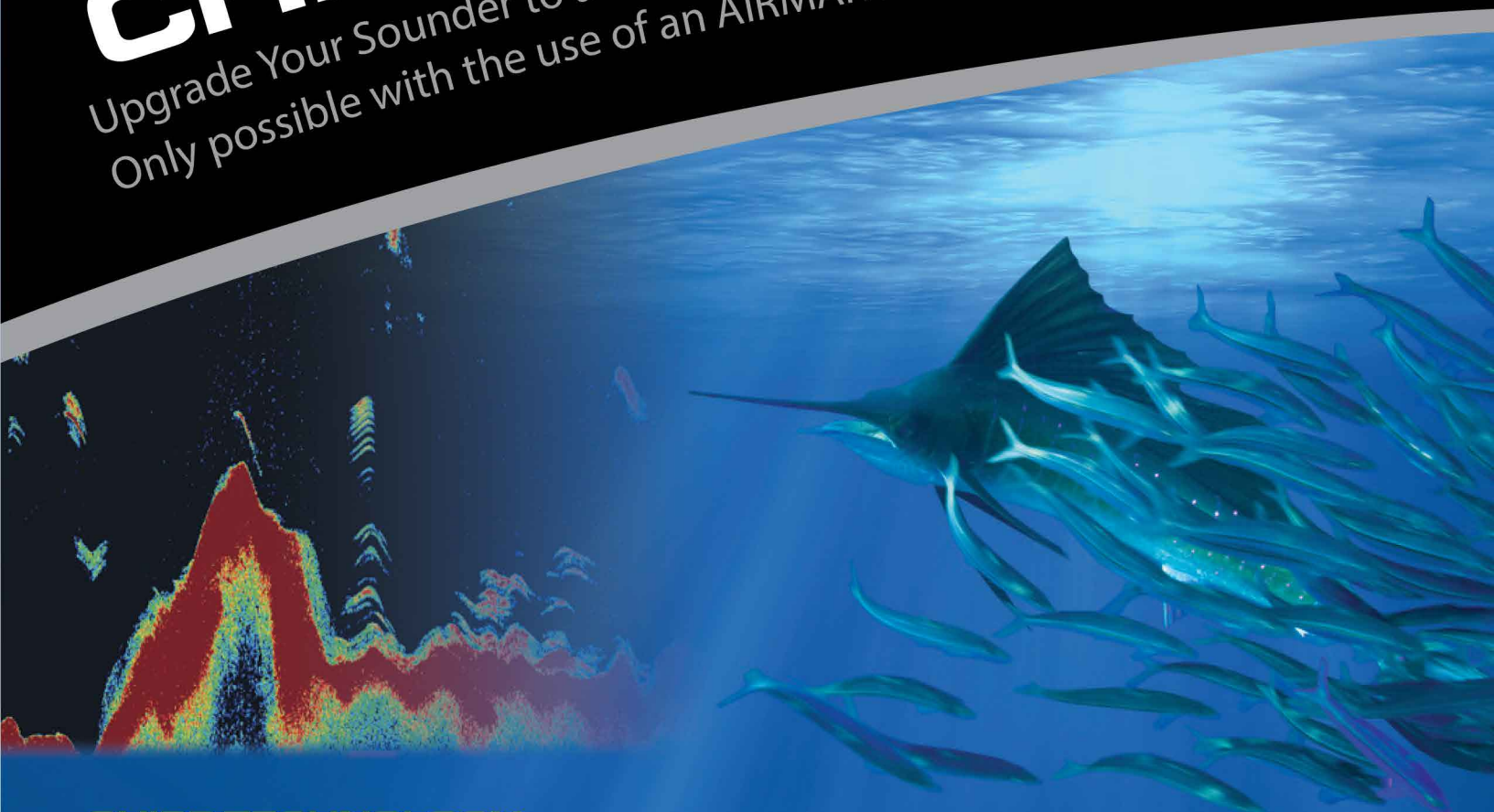


CHIRP

Upgrade Your Sounder to a Serious Fishfinding Machine!
Only possible with the use of an AIRMAR broadband transducer.



CHIRP TECHNOLOGY

- 5 to 10 times greater detail and resolution
- 10 to 1,000 times more energy on targets
- Accuracy down to 3,000 m (10,000')
- Precise separation between baitfish and game fish
- Superior performance in noisy environments
- Improved bottom tracking at high boat speeds

**DEEPER.
BROADER.
CLEARER.**

GAME CHANGING TECHNOLOGY.

 **AIRMAR®**
TECHNOLOGY CORPORATION
Sensing Technology



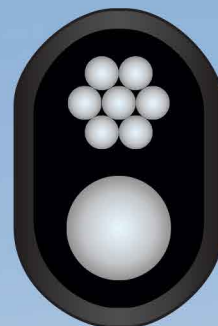
In-Hull

Screen shot courtesy of Simrad®.

CORE**In-Hull****M265LH** (Low & High-Frequency)

MSRP
\$1,595.00

- Depth only
- Low—CHIRPS from 42 kHz to 65 kHz
25° to 16° port-starboard beamwidth
- High—CHIRPS from 130 kHz to 210 kHz 10° to 6° beamwidth
- 103 kHz of total bandwidth from one transducer
- Covers popular fishing frequencies of 50 and 200 kHz plus everything else in the bandwidth
- Fishing Profile: Recreational and commercial inshore and offshore fishing (deep-water canyon and sea-mount tracking)
- Plastic / Urethane transducer housing
- Hull Type: Solid fiberglass only



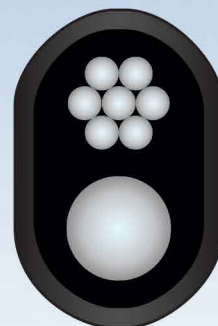
8-Internal
Broadband Ceramic
Assemblies



MSRP
\$1,780.00

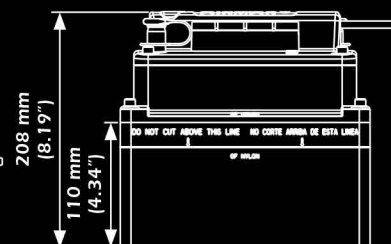
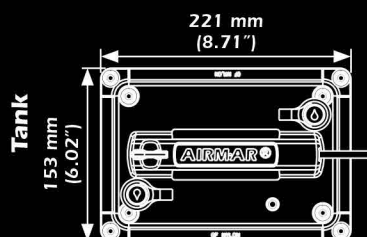
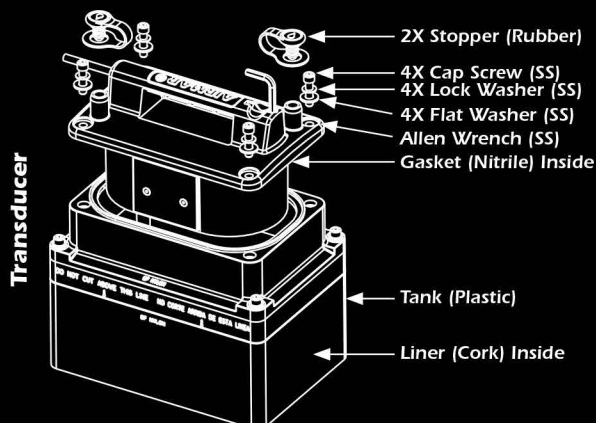
M265LM (Low & Medium-Frequency)

- Depth only
- Low—CHIRPS from 42 kHz to 65 kHz
25° to 16° port-starboard beamwidth
- Medium—CHIRPS from 85 kHz to 135 kHz 16° to 11° beamwidth
- 73 kHz of total bandwidth from one transducer
- Covers popular fishing frequencies of 50, 88, and 107 kHz plus everything else in the bandwidth
- Fishing Profile: Recreational and commercial inshore and offshore fishing (deep-water canyon and sea-mount tracking)
- Plastic / Urethane transducer housing
- Hull Type: Solid fiberglass only



8-Internal
Broadband Ceramic
Assemblies

Medium-frequency benefits include the ability to sound deeper than the high-frequency, along with better target resolution than the low-frequency.

DIMENSIONS

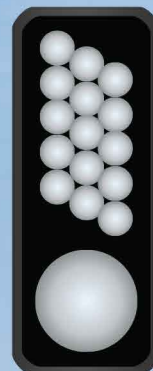


MSRP
\$3,580.00

HARD-CORE

R111LH (Low & High-Frequency)

- Depth & fast-response water-temperature sensor
- Low—CHIRPS from 38 kHz to 75 kHz
19° to 10° port-starboard beamwidth (11° to 5° fore-aft)
- High—CHIRPS from 130 kHz to 210 kHz 8° to 4° beamwidth
- 117 kHz of total bandwidth from one transducer
- Covers popular fishing frequencies of 38, 50, and 200 kHz plus everything else in the bandwidth
- Fishing Profile: Recreational and commercial inshore and offshore fishing (deep-water canyon and sea-mount tracking)
- Urethane transducer housing
- Hull Type: Solid fiberglass only



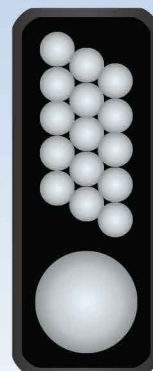
16-Internal
Broadband Ceramic
Assemblies



MSRP
\$3,825.00

R111LM (Low & Medium-Frequency)

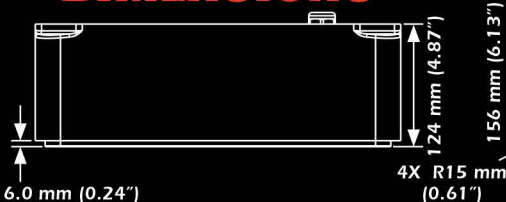
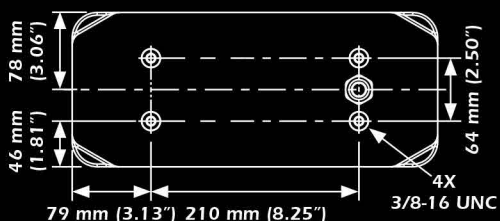
- Depth & fast-response water-temperature sensor
- Low—CHIRPS from 38 kHz to 75 kHz
19° to 10° port-starboard beamwidth (11° to 5° fore-aft)
- Medium—CHIRPS from 80 kHz to 130 kHz 13° to 8° beamwidth
- 87 kHz of total bandwidth from one transducer
- Covers popular fishing frequencies of 38, 50, 88, and 107 kHz plus everything else in the bandwidth
- Fishing Profile: Recreational and commercial inshore and offshore fishing (deep-water canyon and sea-mount tracking)
- Urethane transducer housing
- Hull Type: Solid fiberglass only



16-Internal
Broadband Ceramic
Assemblies

Medium-frequency benefits include the ability to sound deeper than the high-frequency, along with better target resolution than the low-frequency.

DIMENSIONS



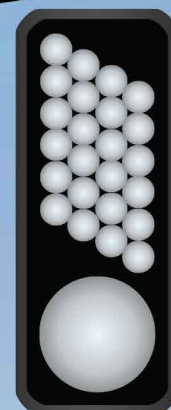


MSRP
\$4,500.00

ELITE

R599LH (Low & High-Frequency)

- Depth only
- Low—CHIRPS from 28 kHz to 60 kHz
23° to 9° port-starboard beamwidth (11° to 5° fore-aft)
- High—CHIRPS from 130 kHz to 210 kHz 8° to 4° beamwidth
- 112 kHz of total bandwidth from one transducer
- Covers popular fishing frequencies of 28, 38, 50, and 200 kHz plus everything else in the bandwidth
- Fishing Profile: Recreational and commercial inshore and offshore fishing (deep-water canyon and sea-mount tracking)
- Epoxy transducer housing
- Hull Type: Solid fiberglass only



25-Internal
Broadband Ceramic
Assemblies



MSRP
\$4,695.00

R599LM (Low & Medium-Frequency)

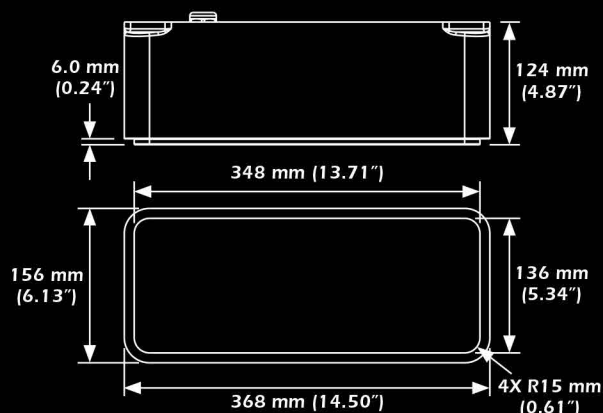
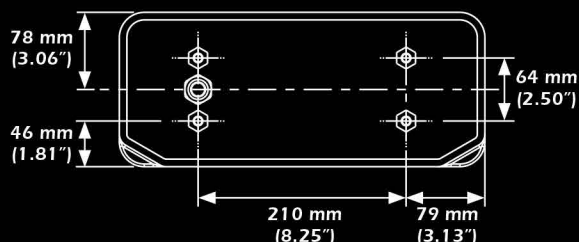
- Depth only
- Low—CHIRPS from 28 kHz to 60 kHz
23° to 9° port-starboard beamwidth (11° to 5° fore-aft)
- Medium—CHIRPS from 80 kHz to 130 kHz
13° to 8° beamwidth
- 82 kHz of total bandwidth from one transducer
- Covers popular fishing frequencies of 28, 38, 50, 88, and 107 kHz plus everything else in the bandwidth
- Fishing Profile: Recreational and commercial inshore and offshore fishing (deep-water canyon and sea-mount tracking)
- Epoxy transducer housing
- Hull Type: Solid fiberglass only



25-Internal
Broadband Ceramic
Assemblies

Medium-frequency benefits include the ability to sound deeper than the high-frequency, along with better target resolution than the low-frequency.

DIMENSIONS



Broadband / CHIRP Transducers

When Your Living Depends on Finding Fish...

Rely on Airmar's new broadband transducers for the ultimate fishing mission. Whether you're a commercial fisherman, charter captain, or tournament angler, there's a new game in town! CHIRP transducers enable bottom detection down to 3,000 m (10,000') with 5 to 10 times greater detail and resolution so precise it's possible to distinguish between individual baitfish, game fish, and underwater structures. One transducer delivers up to 117 kHz of total bandwidth in just one installation, saving customers time and money.

Airmar...it's what's under your boat.

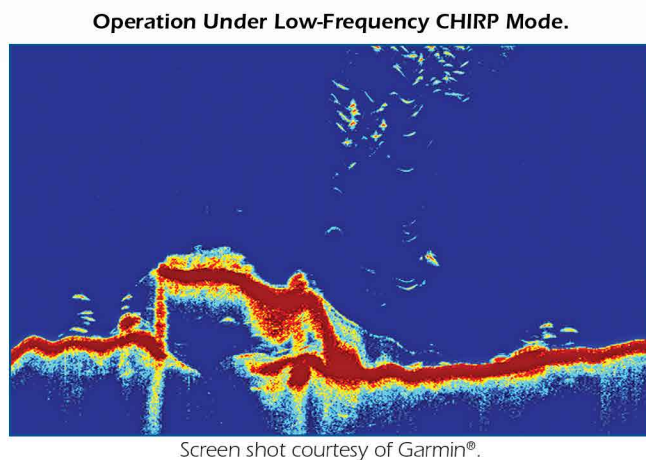
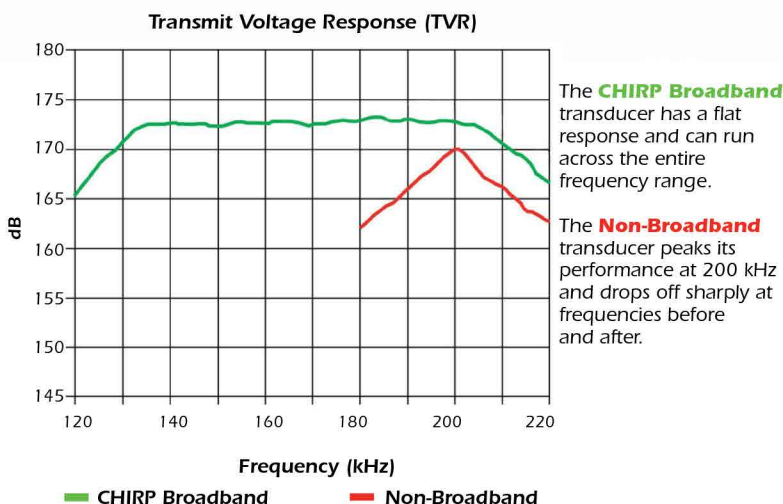
The CHIRP Difference

Traditional marine fishfinders operate at discrete frequencies such as 50 kHz and 200 kHz, use relatively short-duration transmit pulses, and use narrowband sonar transducers. In contrast, CHIRP (compressed high-intensity radar pulse) uses a precise sweep pattern of many frequencies within a long-duration transmit pulse from a broadband transducer, so the equivalent sound energy transmitted into the water is 10 to 1,000 times greater than a conventional marine fishfinder. The echo energy returning to the transducer, superior to that generated by a conventional transducer, is then processed by the fishfinder's DSP (digital signal processing) computer and displayed in ultra-sharp detail on the display. The combination of CHIRP, a broadband transducer, and the fishfinder's DSP, results in dramatically better fish and bottom detection, superior depth capability, and significantly better performance at speed.

Does YOUR Fishfinder CHIRP?

Only CHIRP/Spread Spectrum sounders using Airmar broadband transducers can operate as a CHIRP fishfinder system. When Airmar's new transducer is paired with a broadband fishfinder the result is 5 to 10 times greater sensitivity and performance than current fishfinder technology. Packed with exclusive technology like Transducer ID® and newly engineered piezoceramic elements, Airmar transducers are über sensitive and designed to automatically sweep frequency bands from 28 kHz to 210 kHz with no tuning necessary. As a result, all targets detected in the entire bandwidth will be seen on the display rather than only what is identified in traditional frequencies at 50 kHz and 200 kHz.

Airmar's complete line of twenty-four (24) CHIRP transducers are available in seven (7) different mounting options to accommodate almost any hull design. CHIRP transducers are available at Gemeco Marine Accessories www.gemeco.com and Airmar EMEA www.airmar.com/emea. Visit www.AIRMAR.com for a list of CHIRP-ready transducers.



Technical Information

Advantages of In-Hull Transducers

No holes drilled in hull, unit can be installed while vessel is in water, no drag, ideal for trailered boats.

An in-hull transducer is installed inside the boat hull and sends its signal through the hull. Some people prefer this mounting style because it is not necessary to drill through the vessel's hull. The transducer cannot be damaged by debris, hauling or trailering. 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. Airmar's in-hull transducers are mounted inside a liquid filled tank that is first adhered in place. As long as the water flow below the transducer is "clean", it will give great high-speed performance. In-hull transducers installed over solid fiberglass, will work with any engine type: inboard, outboard, and I/O.

In-Hull transducers will not work with cored fiberglass, wood, or metal hulls due to excessive signal loss. See *Guide to Transducer Technology* to compare In-Hull, Thru-Hull, Pocket / Keel-Mount, and Transom-Mount options. www.airmar.com

Unique Transducer ID®

Airmar's Transducer ID feature measures and stores the operating parameters for each transducer. This enables the fishfinder to automatically configure itself to the transducer being used. The embedded microcontroller continuously monitors ceramic operating temperatures inside the transducer, enabling closed loop control of power output. The transducer's profile can be presented on the display showing beamwidth coverage as a function of frequency. Stored data also assists with troubleshooting, warranty or any required information about the transducer.

Quality "Q" Value

Q is a measure of bandwidth and the rise and fall times of target echoes. Airmar Q values range from 1.6 to 30, depending on the model. Competitive transducers have an average Q of 25 to 30. The lower the "Q" number, the less ringing in the transducer and the better the performance—improved individual fish separation along with bottom imaging in rapidly changing water depths such as ledges and offshore canyons.

All Airmar CHIRP transducers have a Q of 3 or less.

Model	Q / Bandwidth		Roundtrip Sensitivity*	
	LF	HF	LF	HF
P79 (baseline)**	21 / 2.4 kHz	36 / 5.5 kHz	1 times	1 times
M260**	9 / 6 kHz	8 / 25 kHz	250 times	50 times
M265	2.2 / 23 kHz	2 / 80 kHz	1,000 times	120 times
R111	1.6 / 37 kHz	2 / 80 kHz	4,100 times	225 times
R599	1.6 / 37 kHz	2 / 80 kHz	6,100 times	240 times

*All roundtrip sensitivity data is based on the Figure of Merit (FOM) and the transducer bandwidth relative to the P79 model.

**Commonly used non-CHIRP transducers..

***Transmission loss through the hull is not included in the calculation.

See *Theory of Operation* for a complete understanding of transducer terminology and operation. www.airmar.com



www.airmar.com

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InHullCHIRP_BR_rD 02/04/14

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