The Benefits of AIRMAR’s Chirp-ready Transducers

- One broadband transducer covers up to 117 kHz of bandwidth – greater opportunities to detect fish in the water column
- Superior resolution – precise separation between baitfish and gamefish represented on the display with crisp images
- Enhanced bottom fishing – resolve targets close to the bottom or near structure/wrecks
- Amazing detail – recognize haloclines and thermoclines
- Improved signal to noise ratio – find fish and track bottom at high boat speeds

Benefits of Pocket Mount Transducers

A popular choice for boat builders, pocket mount transducers are installed within a small custom pocket in your vessel’s hull or keel, flush to the surface. Though retrofit installation is possible, these transducers are most commonly used in vessels with a suitable pre-cut pocket.

Advantages:

- All the benefits of a thru-hull without the need for a high-performance fairing
- Can accommodate any deadrise angle based on pocket construction
- Can be used with all propulsion types
- Reliable, accurate sonar performance with less drag than thru-hull transducers
Selecting the best frequency for your specific application is very important. The good news is that once you know what frequency will work best for the type of fishing you do, there’s an AIRMAR transducer designed to maximize the performance of your sounder.

AIRMAR Chirp transducers are available in various frequency combinations:

- **Dual Band:**
  - Low/High (LH)
  - Low/Medium (LM)
  - Low/High Wide (LHW)
  - Low Wide/Medium (LWM)

- **Single Band:**
  - Low
  - Medium
  - High
  - High Wide

**Low Frequency = Greater Depth (ex. 42-65 kHz)**
- Sound waves will not present as clear a picture of the bottom on the display, but will sound down in very deep areas where high frequency sound waves cannot reach
- Provides greater depth range, wider beamwidth, and ultimately more coverage under the boat
- Chirp signal processing technology used with AIRMAR broadband, Chirp-ready transducers provides more detail at greater depths and is less susceptible to noise
- Great for operating at high boat speeds

**High Frequency = Greater Detail (ex. 130-210 kHz)**
- More sensitive to small targets and will send back detailed information which will display as crisp, high-resolution images on the echosounder screen
- Best for shallower water and popular with anglers fishing at depths less than 1500 feet

**Medium Frequency = The Best of Both Worlds (ex. 80-130 kHz)**
- Provides the ability to sound deeper than the high frequency, along with better resolution than the low frequency
- Wider beam than the high frequency, achieving more coverage under the boat and greater opportunity to find fish
- Clear images at higher boat speeds

---

**Why does frequency matter?**

**Low Frequency = Greater Depth (ex. 42-65 kHz)**
- Sound waves will not present as clear a picture of the bottom on the display, but will sound down in very deep areas where high frequency sound waves cannot reach
- Provides greater depth range, wider beamwidth, and ultimately more coverage under the boat
- Chirp signal processing technology used with AIRMAR broadband, Chirp-ready transducers provides more detail at greater depths and is less susceptible to noise
- Great for operating at high boat speeds

**High Frequency = Greater Detail (ex. 130-210 kHz)**
- More sensitive to small targets and will send back detailed information which will display as crisp, high-resolution images on the echosounder screen
- Best for shallower water and popular with anglers fishing at depths less than 1500 feet

**Medium Frequency = The Best of Both Worlds (ex. 80-130 kHz)**
- Provides the ability to sound deeper than the high frequency, along with better resolution than the low frequency
- Wider beam than the high frequency, achieving more coverage under the boat and greater opportunity to find fish
- Clear images at higher boat speeds
Pocket/Keel Mount

1 kW

Features:
- Depth & fast-response water-temperature sensor
- Hull Type: Fiberglass and metal stepped, planing or displacement hull types
- Hull Deadrise: Can accommodate any deadrise angle
- Engine Type: Can be used with all propulsion types

PM265LH
Low & High Frequency
- Low—42 kHz to 65 kHz
  25° to 16° beamwidth
  Maximum depth 3000 ft
- High—130 kHz to 210 kHz
  10° to 6° beamwidth
  Maximum depth 1000 ft
- 103 kHz of total bandwidth from one transducer

PM265LM
Low & Medium Frequency
- Low—42 kHz to 65 kHz
  25° to 16° beamwidth
  Maximum depth 3000 ft
- Medium—85 kHz to 135 kHz
  16° to 11° beamwidth
  Maximum depth 1500 ft
- 73 kHz of total bandwidth from one transducer

PM275LHW
Low & High Wide Frequency
- Low—42 kHz to 65 kHz
  25° to 16° beamwidth
  Maximum depth 3000 ft
- High—150 kHz to 250 kHz
  25° constant beamwidth
  Maximum depth 500 ft
- 123 kHz of total bandwidth from one transducer

Bottom Coverage
Relative to Frequency and Depth

<table>
<thead>
<tr>
<th>Depth</th>
<th>PM265LH 130 kHz-210 kHz</th>
<th>PM265LM 85 kHz-135 kHz</th>
<th>PM275LHW 150 kHz-250 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 ft</td>
<td>10 ft</td>
<td>16 ft</td>
<td>24 ft</td>
</tr>
<tr>
<td>100 ft</td>
<td>20 ft</td>
<td>28 ft</td>
<td>46 ft</td>
</tr>
<tr>
<td>300 ft</td>
<td>58 ft</td>
<td>84 ft</td>
<td>132 ft</td>
</tr>
<tr>
<td>600 ft</td>
<td>104 ft</td>
<td>168 ft</td>
<td>266 ft</td>
</tr>
<tr>
<td>1000 ft</td>
<td>Too Deep</td>
<td>282 ft</td>
<td>Too Deep</td>
</tr>
</tbody>
</table>

This chart compares the high and medium ceramic elements inside the transducer, showing the difference in bottom coverage under the boat.

The low frequency in each of these transducer models is the same (42 kHz-65 kHz). The maximum depth range sounds to 3,000 ft.
Pocket/Keel Mount
2 kW

Features:
• Depth & fast-response water-temperature sensor
• Hull Type: Fiberglass and metal stepped, planing or displacement hull types
• Hull Deadrise: Can accommodate any deadrise angle
• Engine Type: Can be used with all propulsion types

PM111LH
Low & **High Frequency**
• Low—38 kHz to 75 kHz
  19° to 10° port/star
  10° to 5° fore-aft beam
  Max. depth 6000 ft
• High—130 kHz to 210 kHz
  8° to 4° beamwidth
  Max. depth 1500 ft
• 117 kHz of total bandwidth from one transducer

PM111LM
Low & **Medium Frequency**
• Low—38 kHz to 75 kHz
  19° to 10° port/star
  10° to 5° fore-aft beam
  Max. depth 6000 ft
• Medium—80 kHz to 130 kHz
  13° to 8° beam
  Max. depth 3000 ft
• 87 kHz of total bandwidth from one transducer

PM111LHW
Low & **High Wide Frequency**
• Low—38 kHz to 75 kHz
  19° to 10° port/star
  10° to 5° fore-aft beam
  Max. depth 6000 ft
• High—150 kHz to 250 kHz
  25° constant beam
  Max. depth 500 ft
• 137 kHz of total bandwidth from one transducer

PM411LWM
Low & **Medium Frequency**
• Low—40 kHz to 60 kHz
  40° constant beam
  Max. depth 4000 ft
• Medium—80 kHz to 130 kHz
  13° to 8° beam
  Max. depth 3000 ft
• 70 kHz of total bandwidth from one transducer

**Bottom Coverage Relative to Frequency and Depth**

<table>
<thead>
<tr>
<th>Depth</th>
<th>PM111LH 130 kHz-210 kHz</th>
<th>PM111LM 80 kHz-130 kHz</th>
<th>PM111LHW 150 kHz-250 kHz</th>
<th>PM411LWM 40 kHz-60 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 ft</td>
<td>6 ft</td>
<td>12 ft</td>
<td>22 ft</td>
<td>36 ft</td>
</tr>
<tr>
<td>100 ft</td>
<td>14 ft</td>
<td>22 ft</td>
<td>46 ft</td>
<td>70 ft</td>
</tr>
<tr>
<td>300 ft</td>
<td>42 ft</td>
<td>68 ft</td>
<td>134 ft</td>
<td>220 ft</td>
</tr>
<tr>
<td>600 ft</td>
<td>84 ft</td>
<td>136 ft</td>
<td>266 ft</td>
<td>438 ft</td>
</tr>
<tr>
<td>1000 ft</td>
<td>140 ft</td>
<td>228 ft</td>
<td>Too Deep</td>
<td>730 ft</td>
</tr>
<tr>
<td>1500 ft</td>
<td>210 ft</td>
<td>342 ft</td>
<td>Too Deep</td>
<td>1090 ft</td>
</tr>
<tr>
<td>2000 ft</td>
<td>Too Deep</td>
<td>456 ft</td>
<td>Too Deep</td>
<td>1456 ft</td>
</tr>
</tbody>
</table>

This chart compares the high and medium ceramic elements inside the transducer, showing the difference in bottom coverage under the boat.

Low frequency in each of these transducer models is the same (38-75 kHz) except the PM411LWM. This low frequency can range to 4,000 ft.
Pocket/Keel Mount
2-3 kW

Features:
- Depth & fast-response water-temperature sensor
- Hull Type: Fiberglass and metal stepped, planing or displacement hull types
- Hull Deadrise: Can accommodate any deadrise angle
- Engine Type: Can be used with all propulsion types

### CM599LH
**Low & High Frequency**
- Low—28 kHz to 60 kHz
  - 23° to 9° port-starboard
  - 11° to 5° fore-aft beamwidth
  - Maximum depth 10000 ft
- High—130 kHz to 210 kHz
  - 8° to 4° beamwidth
  - Maximum depth 1500 ft
- 112 kHz of total bandwidth from one transducer

### CM599LM
**Low & Medium Frequency**
- Low—28 kHz to 60 kHz
  - 23° to 9° port-starboard
  - 11° to 5° fore-aft beamwidth
  - Maximum depth 10000 ft
- Medium—80 kHz to 130 kHz
  - 13° to 8° beamwidth
  - Maximum depth 3000 ft
- 82 kHz of total bandwidth from one transducer

### CM599LHW
**Low & High Wide Frequency**
- Low—28 kHz to 60 kHz
  - 23° to 9° port-starboard
  - 11° to 5° fore-aft beamwidth
  - Maximum depth 10000 ft
- High—150 kHz to 250 kHz
  - 25° constant beamwidth
  - Maximum depth 500 ft
- 132 kHz of total bandwidth from one transducer

**Bottom Coverage Relative to Frequency and Depth**

<table>
<thead>
<tr>
<th>Depth</th>
<th>CM599LH 130 kHz-210 kHz</th>
<th>CM599LM 80 kHz-130 kHz</th>
<th>CM599LHW 150 kHz-250 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 ft</td>
<td>6 ft</td>
<td>12 ft</td>
<td>22 ft</td>
</tr>
<tr>
<td>100 ft</td>
<td>14 ft</td>
<td>22 ft</td>
<td>42 ft</td>
</tr>
<tr>
<td>300 ft</td>
<td>42 ft</td>
<td>70 ft</td>
<td>134 ft</td>
</tr>
<tr>
<td>600 ft</td>
<td>84 ft</td>
<td>136 ft</td>
<td>264 ft</td>
</tr>
<tr>
<td>1000 ft</td>
<td>140 ft</td>
<td>228 ft</td>
<td>Too Deep</td>
</tr>
<tr>
<td>1500 ft</td>
<td>Too Deep</td>
<td>342 ft</td>
<td>Too Deep</td>
</tr>
<tr>
<td>2000 ft</td>
<td>Too Deep</td>
<td>456 ft</td>
<td>Too Deep</td>
</tr>
</tbody>
</table>

This chart compares the high and medium ceramic elements inside the transducer, showing the difference in bottom coverage under the boat.

Low frequency in each of these transducer models is the same (28 kHz - 60 kHz). The maximum depth range sounds to 10,000 ft.
The Chirp Advantage

Traditional sounders operate at only two discrete frequencies – typically 50 kHz and 200 kHz. This results in limited depth range, resolution, and ultimately what targets can be detected in the water column.

In contrast, AIRMAR’s game-changing Chirp-ready transducers provide over 70+ kHz of bandwidth. Transmitting over a wide frequency band results in a greater opportunity to detect what is in the water column. As a result, all targets detected in the entire bandwidth will be seen on the display—even those fish holding close to the bottom—ultimately improving target detection, detail, and range resolution.

Most Chirp transducers vary their beam width as they sweep through their frequency range (low, medium, and high). At the lowest frequency the beam is the widest and it narrows as the frequency increases.

AIRMAR’s new wide beam Chirp transducers are the exception to this rule and have a fixed beam width of either 25° or 40° across the frequency band. This translates into even more coverage under the boat, revealing more fish in the water column than ever before.

Additional Mounting Options

Choosing your mounting option depends on the design of the hull as well as the material it’s manufactured with, the boats intended use, and the desired level of performance.

Need Help Choosing the Right Transducer?

Download the free, award-winning iNstall app! It’s a great tool that takes the guesswork out of selecting the right transducer for your application. Based on frequency, mounting, housing, and cable options, iNstall will reveal the available option(s) and give you instant access to their specifications. Designed for iPhone, iPad and iPod smart phones and tablets running iOS 6.1 and newer.