

MODEL 540 SPLIT-BEAM TRANSDUCERS



HTI *Model 540 Split-Beam Transducers* are available in a variety of frequencies and beam widths. These low noise, preamplified transducers are suitable for applications ranging from mobile surveys in the open ocean, to lakes, to fixed deployments in rivers or at hydropower dams. Both conical-beam and elliptical-beam transducers are available, and all *Model 540 Transducers* operate with any HTI *Model 240-series Split-Beam System*.

Transducers are supplied with detailed calibration information, including transmit and receive sensitivity, beam patterns and phase angle stiffness plots and parameters. Available frequencies include 38 kHz, 60 kHz, 120 kHz, 200 kHz, and 420 kHz. Also available are *Model 510 Single-Beam Transducers* in the same frequencies, plus 1 MHz. Several beam width and side lobe combinations are available.

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- Transducer Preamps:** All HTI transducers are preamplified to maximize signal-to-noise ratios.
- Side Lobes:** Standard side lobes are typically -16 dB to -18 dB down (on-way). Side lobes to 30 dB down are available on request.
- Transducer Housings:** Anodized aluminum standard, bronze optional.
- Transducer Max Depth:** 50 m (160 ft) standard. Flange mount housings available for depths up to 1000 m (3280 ft).
- Transducer Cables:** Twisted shielded pairs for the transmitter and preamplified transducer signals. Additional conductors supply power and control signals to the transducer. Cable jacket is 0.06-0.09 inch thick, extruded polyurethane which is waterproof and resistant to abrasion.
- Transd. Cable Lengths:** 9-305 m (30-1000 ft) standard. Lengths > 305 m (> 1000 ft) optional.

Multi-Frequency System: The Model 244 Multi-Frequency Split-Beam System samples up to 6 frequencies and 16 transducers in any combination of frequencies and beam widths listed below.

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| Frequency | HTI Model No. | Beam Width ^a | Side Lobes ^b |
|------------|---------------|-------------------------|-------------------------|
| Split-Beam | | | |
| 38 kHz | 541FS-38 | 7° conical (1000 m) | -16 dB |
| 43 kHz | 541FS-43 | 7° conical (1000 m) | -16 dB |
| 120 kHz | 540FS-120 | 3° conical (1000 m) | -16 dB |
| | 541FS-120 | 6° conical (1000 m) | -16 dB |
| | 541S-120 | 6° conical | -16 dB |
| | 543F-120 | 10° conical | -16 dB |
| | 544S-120 | 15° conical | -16 dB |
| | 549A-120 | 1.5°x8° elliptical | -18 x-18 dB |
| | 545L-120 | 3°x10° elliptical | -18 x-18 dB |
| | 547L-120 | 6°x10° elliptical | -18 x-18 dB |
| 200 kHz | 540FS-200 | 3° conical (1000 m) | -17 dB |
| | 541S-200 | 6° conical | -17 dB |
| | 542S-200 | 8° conical | -17 dB |
| | 543S-200 | 10° conical | -17 dB |
| | 544S-200 | 15° conical | -18 dB |
| | 548NL-200 | 2°x6° elliptical | -18 x-18 dB |
| | 548L-200 | 2°x10° elliptical | -18 x-18 dB |
| | 545L-200 | 3°x10° elliptical | -18 x-18 dB |
| | 546L-200 | 4°x10° elliptical | -18 x-18 dB |
| | 547L-200 | 6°x10° elliptical | -18 x-18 dB |
| 420 kHz | 540FS-420 | 3° conical (1000 m) | -16 dB |
| | 541S-420 | 6° conical | -16 dB |
| | 543S-420 | 10° conical | -16 dB |
| | 544S-420 | 15° conical | -16 dB |
| | 545L-420 | 3°x10° elliptical | -18 x-18 dB |
| | 546L-420 | 4°x10° elliptical | -18 x-18 dB |
| | Single-Beam | | |
| 38-420 kHz | Contact HTI | | |
| 1 MHz | 511FS-1000 | 3° conical (1000 m) | -16 dB |

a Nominal beam width at -3 dB down (one-way).

b Highest side-lobe from peak amplitude (one-way).

NOTE: Specifications subject to change without notice.

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