



Model Number	C57 / C57X	C57RS / C57XRS	C305 / C305X	C75 / C75X
Linear Frequency Range ( $\pm 3$ dB) [kHz]	0.015 – 45	0.015 – 50 & 124 – 250+	0.012–1200 / 0.012–250+	0.010 – 170
Useable Frequency Range (+3/-12dB) [kHz]	0.008 – 100	0.008 – 77 & 96 – 250+	0.005–2000+ / 0.005–250+	0.003 – 250
Transducer Sensitivity [dB, re 1V/ $\mu$ Pa]	-187	-200	-198	-200
Preamplifier Gain [dB]	20 / 33	20 / 33	20 / 33	20 / 33
Effective Sensitivity* [dB, re 1V/ $\mu$ Pa]	-167 / -154	-180 / -167	-178 / -165	-180 / -167
SPL Equiv. Noise at 1kHz [dB, re 1 $\mu$ Pa/ $\sqrt$ Hz]	46 ( <i>Sea State Zero</i> )	61	$\approx$ 63	51
Power Requirement [Vdc]	5 to 32	5 to 32	5 to 32	5 to 32
RMS Overload Acoustic Pressure [dB, re 1 $\mu$ Pa]	171 to 188 / 158 to 175	184 to 201 / 171 to 188	182 to 199 / 169 to 186	184 to 201 / 171 to 188
Maximum Operating Depth [m]	370	920	920	920
Operating Temperature Range [°C]	-40 to 60	-40 to 60	-40 to 60	-40 to 85
Output Impedance [ $\Omega$ ]	10	10	10	10
Dimensions [mm]	116L x 25 dia.	116L x 25 dia.	110L x 38W x (25 to 11)T	92L x (25 to 18) dia.
Integral Connector <sup>‡</sup>	Subconn MCBH3MSS	Subconn MCBH3MSS	Subconn MCBH3MSS	Subconn MCBH3MSS

\* Add preamplifier gain to transducer sensitivity to get effective hydrophone sensitivity. <sup>‡</sup> Connectors are rated to a depth of 7000m; see below for mating connector and cables. Calibrated spot sensitivity measurements and full frequency response measurements can be performed for an additional fee.

**Directionality:**

The C305 is very directional at high frequencies (e.g., 15° solid angle at 200 kHz, -3dB). This is also true of the C57, but its directionality will be focused in a plane rather than in a dipole pattern. All hydrophones are omnidirectional below 10kHz. The C75 is omnidirectional.

**Battery/Connector Box:**

Battery boxes are rated NEMA-4X water resistant. Signal connection is through a water-tight, BNC connector with gold center contact. The hydrophones are powered by one 9V battery (not included).

Standard Signal Output	Female BNC connector
Battery Life [hours]	>20
Box Dimensions [mm]	110 long x 90 wide x 50 high

**Cable & Mating Connector\*:**

Connector molded to 15m of cable	Connector molded to 50m of cable	
Connector molded to 30m of cable	Connector molded to custom length	Please inquire

**Additional Options:**

- Adapter Cables and Connectors
- 500Hz Inline High-Pass Filter Module
- 170kHz Isolation Transformer
- Hydrophone Protection Cage
- Hydrophone Sensitivity Measurement

**Selected Accessories (many more items available):**

- Zoom H1n 24-bit/96kHz Flash Recorder
- TASCAM US-366 24-bit/192kHz USB Interface
- Zoom H4n Pro 24-bit/96kHz 4-Ch Digital Recorder.
- TASCAM DR-100mkIII 24-bit/192kHz Recorder
- Zoom F8n 24-bit/192kHz 8-Ch Digital Recorder

Hydrophones *not in stock* will ship within 8 weeks of the receipt of payment. Add 4 weeks to delivery time for custom orders. Acceptable payment includes: check or money order made out in US funds and drawn on a US bank; VISA, MasterCard, Discover or American Express cards; or money wire transfers. There is an added fee for foreign wire transfers. Qualifying nonprofit organizations may receive discounts.

All hydrophones carry a 90-day limited warranty. Extended warranties are available. Units will either be repaired or replaced at the discretion of Cetacean Research Technology. Misuse or damage to the connectors or cable voids the warranty.

Prices are for *advance payment only* and subject to change without notice. **All sales are final.**



Model Number	CR1A	CR2	CR3
Linear Frequency Range ( $\pm 3$ dB) [kHz]	0.00016 <sup>†</sup> – 48	0.0019 <sup>†</sup> – 28	0.0004 <sup>†</sup> – 180
Useable Frequency Range (+3/-12dB) [kHz]	0.00005 <sup>†</sup> – 68	0.0005 <sup>†</sup> – 60	0.0001 <sup>†</sup> – 240
Sensitivity [dB, re 1V/ $\mu$ Pa]	-199 <sup>‡</sup>	-214	-207 <sup>‡</sup>
SPL Equiv. Noise at 1kHz [dB, re 1 $\mu$ Pa/ $\sqrt$ Hz]	38 (< <i>Sea State Zero</i> )	68	54
Maximum Operating Depth [m]	500	370	980
Operating Temperature Range [°C]	-25 to 60 <sup>‡</sup>	-40 to 70	-40 to 90 <sup>‡</sup>
Capacitance [nF]	12	0.82	6.7
Dimensions [mm]	85L x 32 dia.	56L x 14 dia.	50L x 18 dia.
Coaxial Cable Length [m]	15	10	15
Directionality	Omni below 10kHz	Omni below 10kHz	Omnidirectional

<sup>†</sup> Requires a preamplifier with 100M $\Omega$  input impedance, such as VP1000. If a preamplifier with 330k $\Omega$  input impedance is used, such as the USB Dual Pre, then the low frequency -3dB point will be increased by a factor of 300 (e.g. 48Hz instead of 0.16Hz for the CR1A). <sup>‡</sup> Hydrophone is spot calibrated at the factory; calibration is guaranteed between -5C and 30C. Calibrated frequency response measurements can be performed for an additional fee.

### Additional Options and Selected Accessories (many more items available):

Terminate cable with 1/4" or BNC connector  
Additional cable length  
ART *USB Dual Pre* Preamp with USB  
Grace Digital *EcoBoulder+* Waterproof Speaker

Reson *VP1000* Preamplifier  
Reson *VP2000mk2* Preamplifier  
Pioneer Hill *SpectraDAQ-200*  
Pioneer Hill *SpectraPLUS-SC* software

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