



## Certificate of Calibration

Ocean Sonics, Ltd.

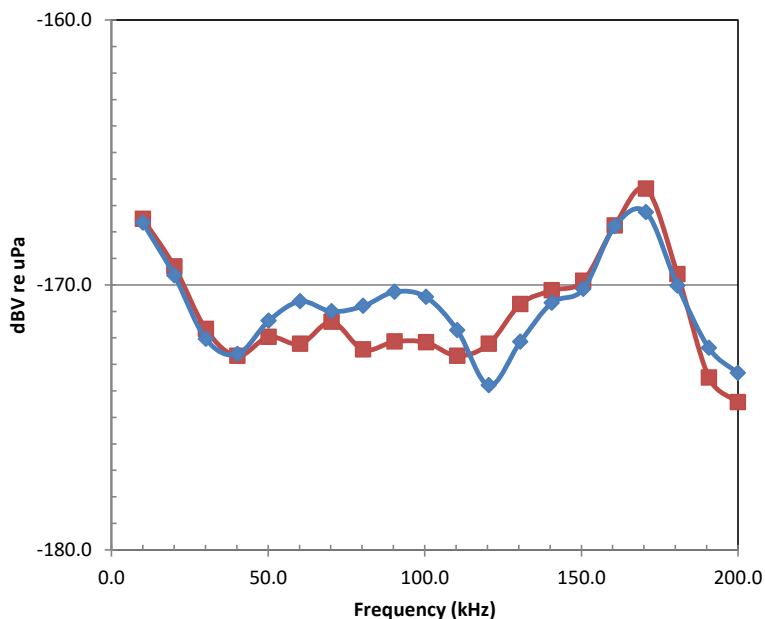
Calibration Certificate Number: **C4262**

Test Result: 10 kHz to 100 kHz:  $-170.1 \pm 2.6$   
10 kHz to 200 kHz:  $-170.4 \pm 4.0$

Model Number SB35-ETH  
Serial Number 1249  
Manufacture Date 11-Oct-2017  
Measurement Date 30-Oct-2017  
Certificate Date 30-Oct-2017  
Sensitivity @ 26 Hz -168.5 dB re V / uPa  
Case Type Titanium  
Element Manufacturer GeoSpectrum  
Element Model M24HF  
Element Serial 626  
Preamp Model 04-300435-01  
Calibrated By S.MacLean  
Work Order Number W1591  
Test Type RX Sensitivity  
Test Procedure Complex RMS  
Test Location Tank #2, 1 m  
Water Temperature 17 °C

Projector Manufacturer Ocean Sonics  
Projector Model TH2-SER-4F  
Projector Serial 2210  
Measurement Distance 1 m  
Output Level 126.1 dB re uPa @ 1 m  
Tone Burst 100.0 us / 300 ms  
Reference Manufacturer Ocean Sonics  
Reference Model RB9-ETH  
Reference Serial 1492  
Primary Calibration 22-Dec-2015  
Preamp Manufacturer Ocean Sonics  
Preamp Model 04-300434-01  
Preamp Serial 473  
Preamp Gain 36 dB  
ADC Manufacturer Ocean Sonics  
ADC Model Number 04-300423-01  
ADC Serial Number 473

Receive Sensitivity



Frequency	Sensitivity [dBV re uPa]	
kHz	0 deg	90 deg
10.0	-167.5	-167.7
20.1	-169.3	-169.6
30.1	-171.7	-172.0
40.2	-172.7	-172.6
50.2	-172.0	-171.4
60.2	-172.2	-170.6
70.3	-171.4	-171.0
80.3	-172.4	-170.8
90.4	-172.1	-170.3
100.4	-172.2	-170.5
110.4	-172.7	-171.7
120.5	-172.2	-173.8
130.5	-170.7	-172.2
140.5	-170.2	-170.7
150.6	-169.8	-170.2
160.6	-167.8	-167.8
170.7	-166.4	-167.3
180.7	-169.6	-170.0
190.7	-173.5	-172.4
200.0	-174.4	-173.3