



## Certificate of Calibration

Ocean Sonics, Ltd.

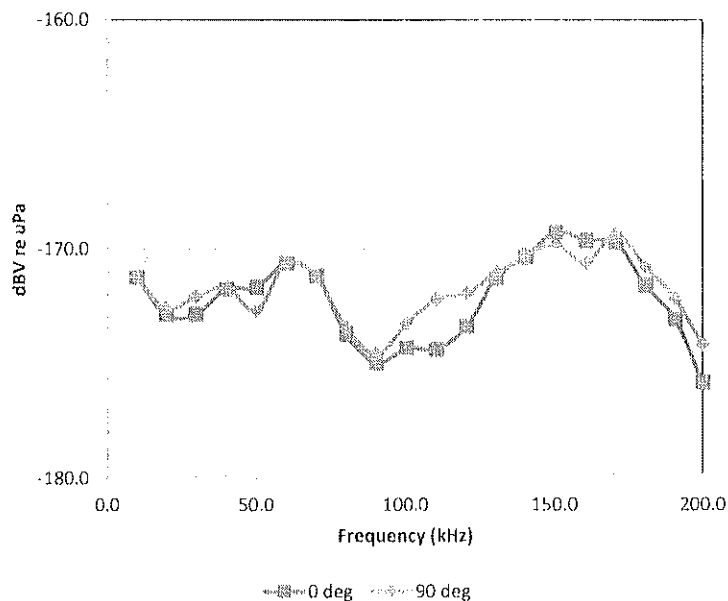
Calibration Certificate Number: **C7085**

Test Result: 10 kHz to 100 kHz:  $-172.8 \pm 2.2$   
10 kHz to 200 kHz:  $-172.6 \pm 3.3$

Model Number SB35-ETH  
Serial Number 1362  
Manufacture Date 7-Sep-2018  
Measurement Date 8-Mar-2023  
Certificate Date 8-Mar-2023  
Sensitivity @ 26 Hz  $-170.5 \text{ dB re V / uPa}$   
Case Type Titanium  
Element Manufacturer GeoSpectrum  
Element Model M24HF  
Element Serial F000365  
Preamp Model 04-300435-09  
Calibrated By D.Lee  
Work Order Number W45-135  
Test Type RX Sensitivity  
Test Procedure Complex RMS  
Test Location Tank #3, 1 m  
Water Temperature  $16^\circ\text{C}$

Projector Manufacturer Ocean Sonics  
Projector Model TH2-SER-4F  
Projector Serial 2225  
Measurement Distance 1 m  
Output Level  $129.7 \text{ dB re uPa @ 1 m}$   
Tone Burst  $100.0 \text{ us / 300 ms}$   
Reference Manufacturer Ocean Sonics  
Reference Model RB9-ETH  
Reference Serial 2080  
Primary Calibration 20-Jan-2020  
Preamp Manufacturer Ocean Sonics  
Preamp Model 04-300449-01  
Preamp Serial M58  
Preamp Gain 36 dB  
ADC Manufacturer Ocean Sonics  
ADC Model Number 04-300426-01  
ADC Serial Number M59

Receive Sensitivity



Frequency kHz	Sensitivity [dBV re uPa]	
	0 deg	90 deg
10.0	-171.2	-171.2
20.1	-172.9	-172.6
30.1	-172.9	-172.1
40.2	-171.7	-171.7
50.2	-171.7	-172.7
60.2	-170.6	-170.6
70.3	-171.2	-171.2
80.3	-173.8	-173.5
90.4	-175.0	-174.6
100.4	-174.3	-173.3
110.4	-174.4	-172.2
120.5	-173.4	-171.9
130.5	-171.3	-171.0
140.5	-170.4	-170.3
150.6	-169.3	-169.8
160.6	-169.6	-170.6
170.7	-169.8	-169.4
180.7	-171.6	-170.8
190.7	-173.1	-172.2
200.0	-175.9	-174.2