

Psychometric functions for the spotted seal (Amak) under water

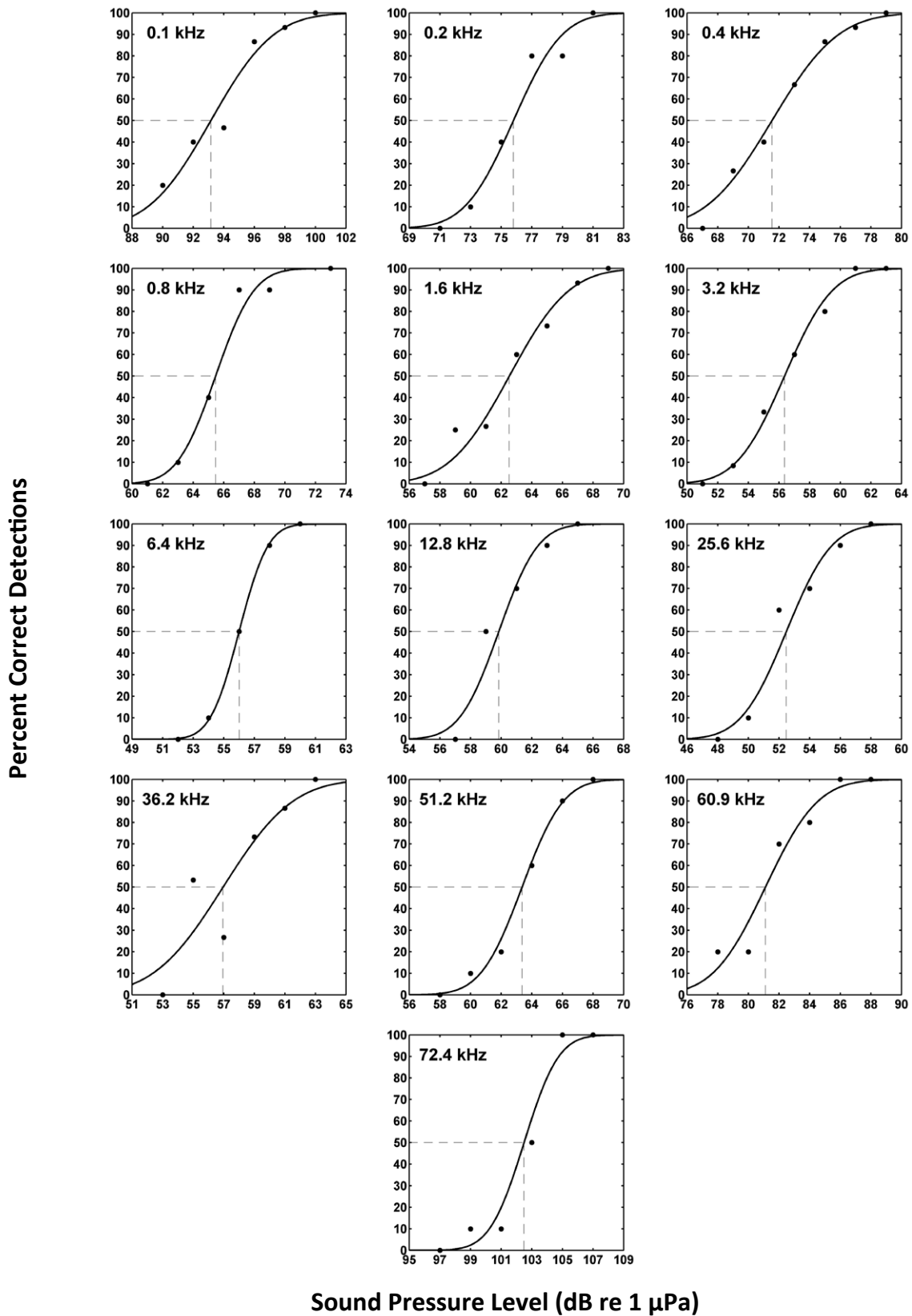


Fig. S1. The psychometric function obtained at each frequency underwater for the spotted seal Amak. On all plots, the x-axis represents sound pressure level in dB re. 1 μ Pa while the y-axis shows percent correct detection on signal-present trials. Probit analysis was used to fit these psychometric functions to the proportion of correct detections at each stimulus level presented during MCS testing. Threshold, defined as the 50% correct detection probability and indicated on these plots by the dashed lines, was determined using an inverse prediction (not shown).

Psychometric functions for the spotted seal (Tunu) under water

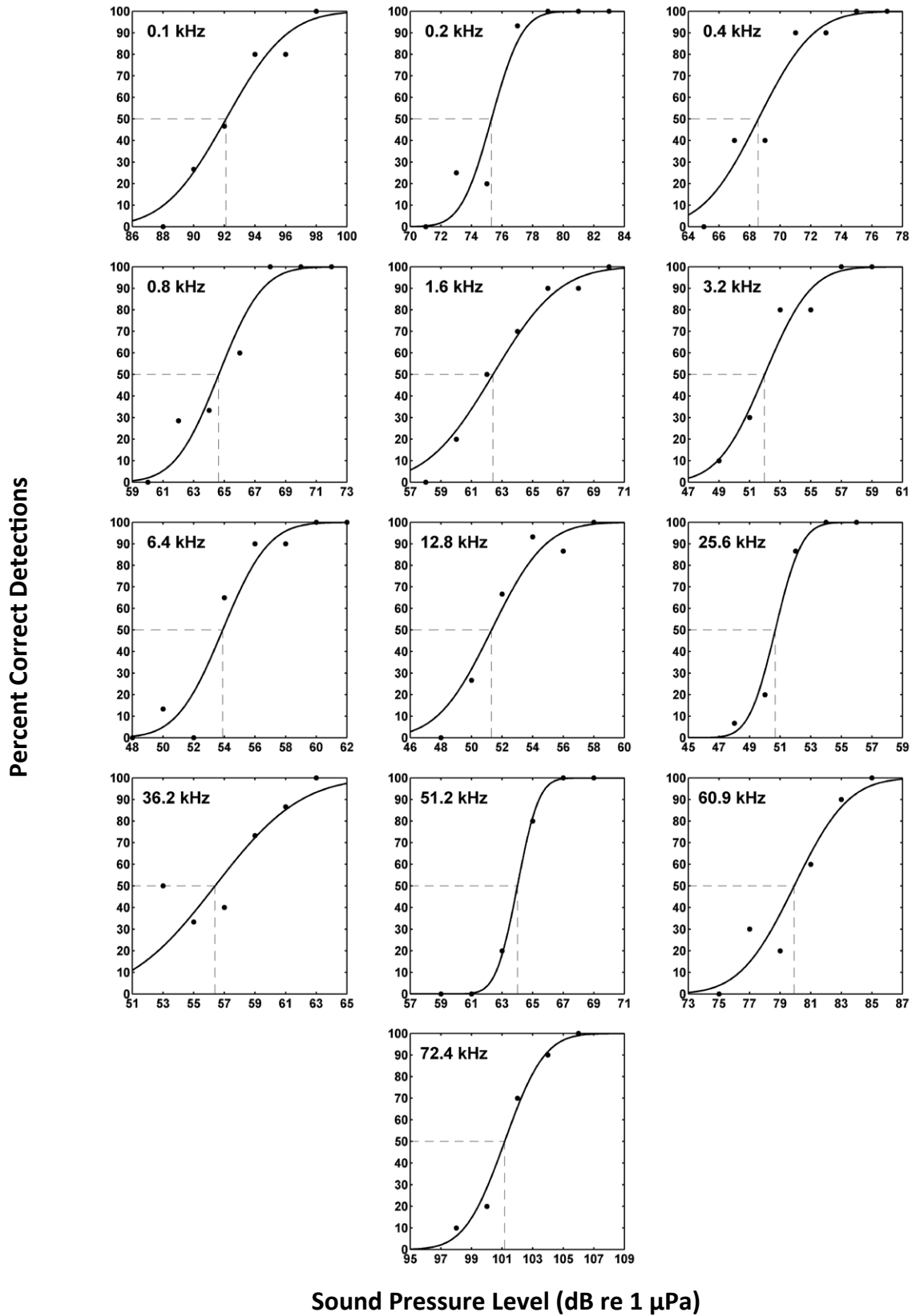


Fig. S2. The psychometric function obtained at each frequency underwater for the spotted seal Tunu. On all plots, the x-axis represents sound pressure level in dB re. 1 μ Pa while the y-axis shows percent correct detection on signal-present trials. Probit analysis was used to fit these psychometric functions to the proportion of correct detections at each stimulus level presented during MCS testing. Threshold, defined as the 50% correct detection probability and indicated on these plots by the dashed lines, was determined using an inverse prediction (not shown).

Psychometric functions for the spotted seal (Amak) in air

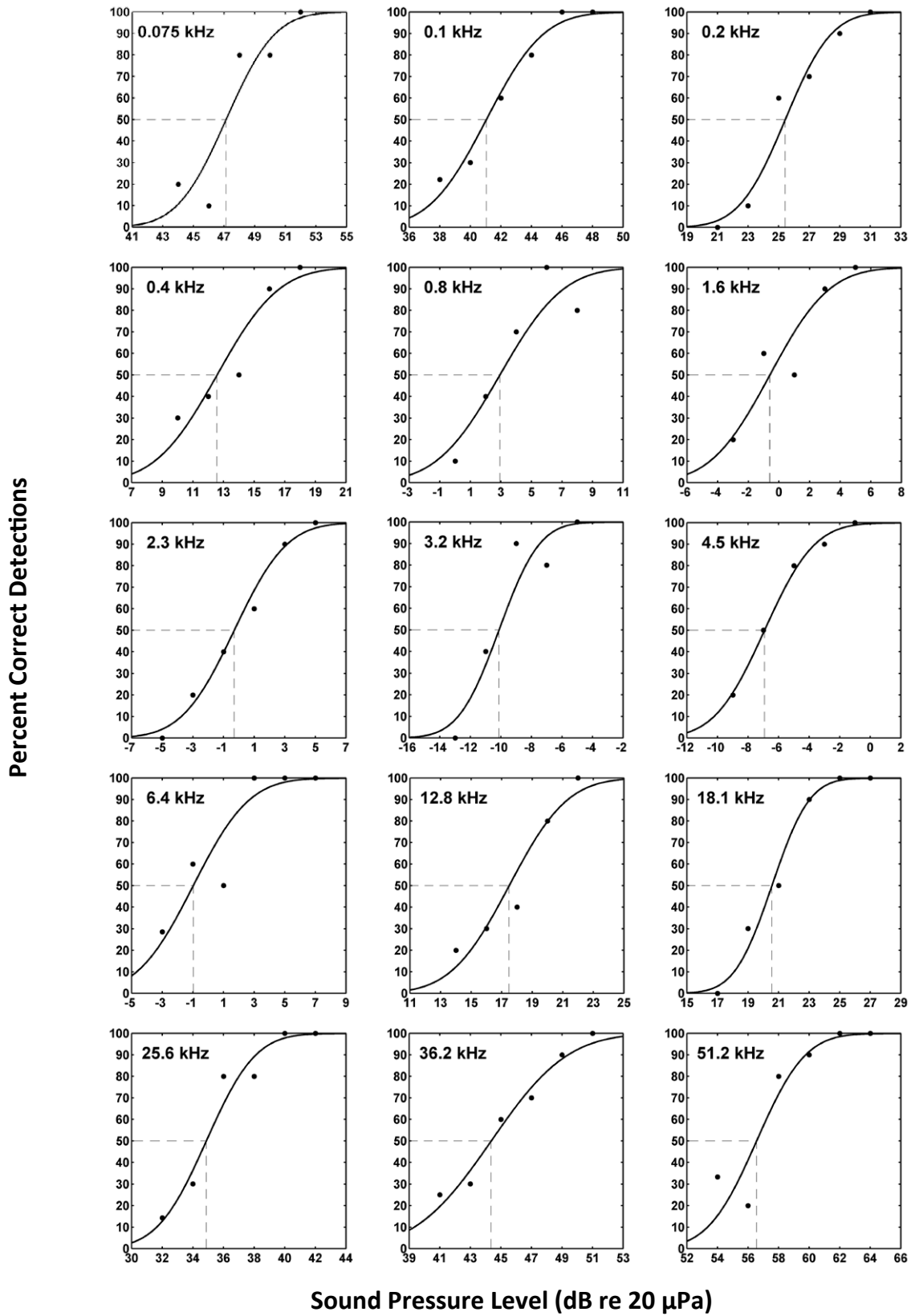


Fig. S3. The psychometric function obtained at each frequency in air for the spotted seal Amak. On all plots, the x-axis represents sound pressure level in dB re. 20 μ Pa while the y-axis shows percent correct detection on signal-present trials. Probit analysis was used to fit these psychometric functions to the proportion of correct detections at each stimulus level presented during MCS testing. Threshold, defined as the 50% correct detection probability and indicated on these plots by the dashed lines, was determined using an inverse prediction (not shown).

Psychometric functions for the spotted seal (Tunu) in air

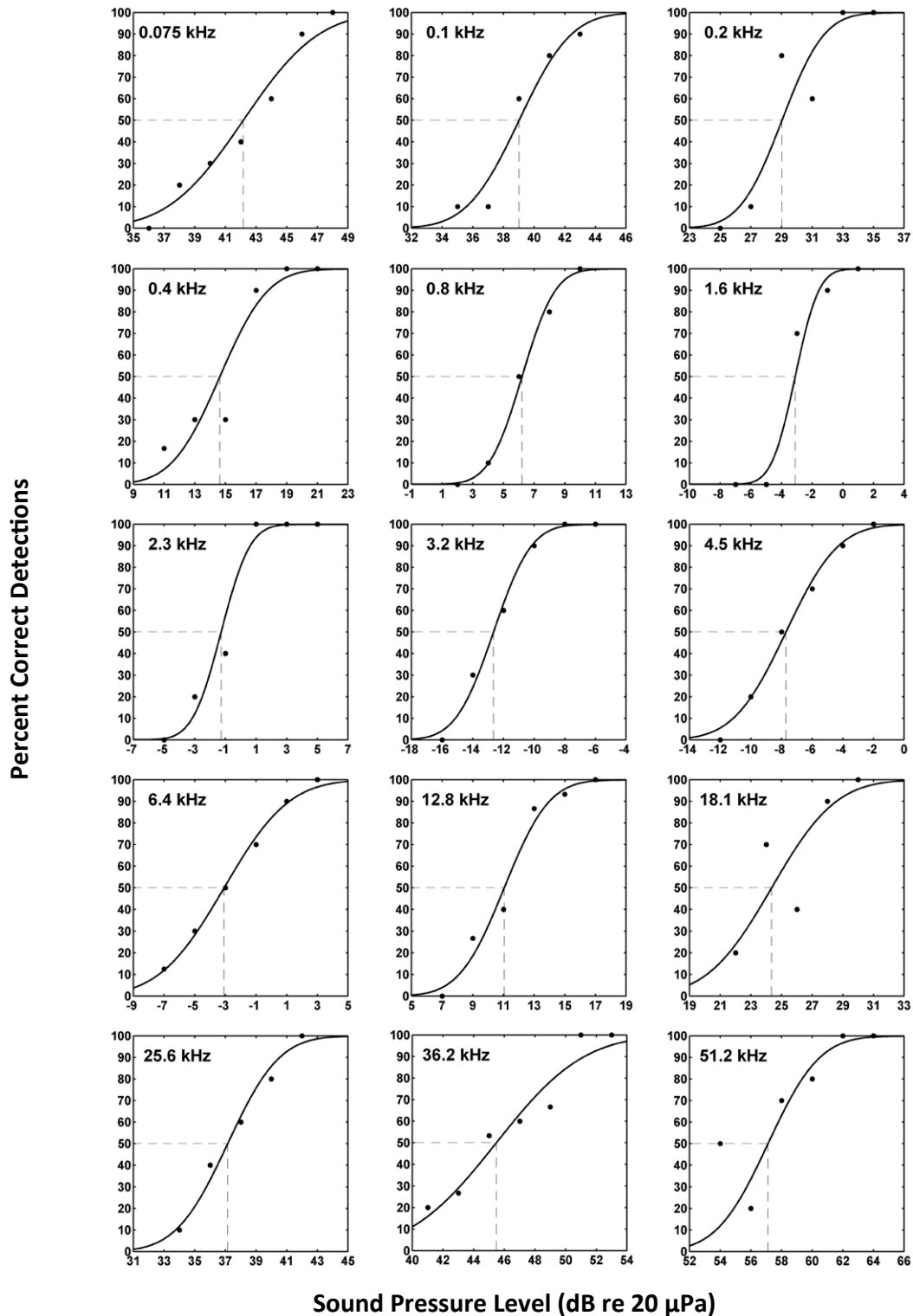


Fig. S4. The psychometric function obtained at each frequency in air for the spotted seal Tunu. On all plots, the x-axis represents sound pressure level in dB re. 20 μ Pa while the y-axis shows percent correct detection on signal-present trials. Probit analysis was used to fit these psychometric functions to the proportion of correct detections at each stimulus level presented during MCS testing. Threshold, defined as the 50% correct detection probability and indicated on these plots by the dashed lines, was determined using an inverse prediction (not shown). ¹A 2:1 reinforcement ratio was used for Amak at 72.4 kHz underwater. Amak exhibited a conservative response bias at this frequency (0% false alarm rate for five sessions with a 70:30 signal to catch ratio) until the reinforcement ratio was adjusted. ²This amplifier was used for underwater audiogram testing at 6.4 kHz and below, and for the masking experiment at all frequencies. ³At the two highest frequencies underwater – 12.8 and 25.6 kHz – variability in spectral density levels was ± 9 and ± 7 dB, respectively. This resulted from narrowband peaks or troughs in the noise that were unable to be filtered. The primary 1/3-octave band criterion was met for both frequencies.