Appendix

Please find the details regarding the DIN testing procedure:

Stimulus

- Structure: A carrier phrase ("The digits...") followed by three digits
- Timing: The digits are separated by silent gaps of 180-250 ms duration (varied randomly)
- Included digits: 0-9 are included
- Digit exemplars: 6 exemplars of each digit are included
- Talker: Female British
- Digit selection: Digits are selected at random, with the constraint that a digit cannot be repeated within a trial
- Exemplar selection: Exemplars are selected at random
- Masker: Speech-spectrum-shaped Gaussian noise
- Frequency content: Spans 120 to 8000 Hz (so that the upper-frequency limit of listeners' headphones/earphones does not introduce unwanted variability)

Presentation level

- Approach: Total stimulus level (target + masker) is held constant throughout the experiment
- The rationale for the above approach: Ensures that stimuli do not become uncomfortably loud and reduce the risk of the target falling below the threshold of audibility
- Calibration method: At the start of the experiment, the listener is presented with a "loud" and a "quiet" calibration phrase, separated in RMS by 25 dB. They adjust their volume control until the "quiet" phrase is clear, and the "loud" phrase is not uncomfortably loud.
- Stimulus presentation level: 5 dB below the level of the "loud" calibration phrase

Basic adaptive procedure

- Scoring criterion: 2/3 or 3/3 digits must be entered correctly for a trial to count as correct
• Stepping rule: 2-down 1-up (i.e., two correct trials in a row causes a step down in SNR, one incorrect trial causes a step up in SNR)

• Starting SNR: 2 dB

• Block 1 (practice)
  • Reversals: 2
  • Step size: 6 dB
  • Block 2 (real)
  • Number of phases: 2 ("initial" and "measurement")
  • Reversals in the initial phase: 2
  • Step size in the initial phase: 6 dB
  • Reversals in measurement phase: 6
  • Step size in measurement phase: 2 dB
  • Threshold calculation: Mean of SNRs at final 6 reversals

Listener feedback

• Post-trial feedback: Feedback displayed on the correctness of the response to each trial

• Difficulty level: Information displayed on current and past "difficulty level" (a linear transform of SNR) to preserve interest and motivation

• End-of-block feedback: Feedback displayed on the lowest SNR at which the listener scored 2/3 or 3/3 correct