

Sarah Sullivan's band-pass filtered noise stimuli that vary in central frequency

Brief Description: 25 narrow-band noise bursts varying in center frequency

Stimuli Creation: The stimuli consisted of twenty-five narrow-band noise bursts varying in center frequency from 1000 to 1360 Hz (increasing by 15 Hz steps). Each sample had a bandwidth of 200 Hz and was 100 ms in length. The stimuli were created in Cool Edit Pro, version 2 (2002) with a sampling rate of 22.05 KHz and 16-bit resolution. A sample of white noise 300 ms in length was first created and filtered using a sixth-order bandpass Butterworth filter. A 100-ms section was removed and modified to have a 5-ms linear rise-fall envelope (note: The 100 ms samples were spliced out of larger filtered samples to avoid interactions between filtering and noise burst onset and offset.).

Correction: When analyzing pilot data for one of my experiments, I noticed odd responses for stimulus 1195 Hz (it was consistently categorized as a high-frequency category stimulus, more so than its neighboring stimuli). A frequency analysis revealed that stimulus 1195 had a frequency value relatively higher than stimulus 1210 Hz. It is possible that the noise sample used to create this particular stimulus was flawed in some way. I re-made stimulus 1195 Hz following the above directions and used "Group Waveform Normalize" in Adobe Audition to re-set the "Loud" level for the stimulus to a value of 15.8, which roughly matches the other stimuli. The new/revised version of stimulus 1195 Hz is the one which I have included here.