**NOTES on chin CMR stimuli generation**

*To document versions used in LSA chinch code for training/testing.*

*June 3 2020*

* Starting chins on training with CMR stimuli.
  + They have been running SAM detection (pure tone vs SAM tone) in background noise, so we need to convert them:
    - from a tone (and noise) being in both std and sig, and task is to ID presence of modulation
    - to a noise being present in both std and sig, and the tone only being present in sig (to be detected)
  + This can be done in a simple case (REF only), with a clearly detectable tone.
    - Setting up:
      * 4-kHz tone to be detected
      * 1000-Hz BW noise, centered at 4 kHz
        + 1000 Hz is ~an ERB for chins based on Q10 values from ANFs
        + Modulated at 10 Hz
        + Spectrum level of No=30 dBSPL/Hz

OVERALL LEVEL is No + 10\*log10(1000) = 60 dB SPL

When we add two more bands (to increase noise level by x3), we will add 10\*log10(3) = ~5 dB, so that will make OAL noise level ~65 dB SPL, which is fine and leave some head room if we need to go louder (we have run SAMIN conditions with 77 dB OAL noise, and that is pretty loud for them over and over).

Tone level = 70 dB SPL is what they are used to, and will be clearly detectable

* + - * THIS IS testing condition: CMR1
        + REF file names to use for initial training:

CMR1\_REF\_sig

CMR1\_REF\_std

* + - * + Make new stim # 890 to just be basic no param storage.
* Using simple file names for now for simplicity, will expand later as conditions expand