

Initial Concepts for Attentive Qualitative Listening

- Pitch – an auditory sensation in which a listener assigns musical tones to notes or relative positions on a musical scale based primarily on the frequency of vibration. Frequency is the measurable number of a sound cycles per second (or hertz). Pitch is the auditory attribute of sound waves that allows human perceivers to order it on a scale from low to high. (It takes a human mind to map the internal quality of pitch.) Pitch is generally determined by how quickly the sound wave is making the air vibrate. That is, “high” pitch means very rapid oscillation, and “low” pitch corresponds to slower oscillation.
- Loudness – is the assigning of a sound on a scale of “quiet” to “loud.” Like pitch and frequency, there is the physical strength of amplitude (or pressure level in decibels), and the psychological or perceptual experience of loudness or volume. Loudness can be affected by parameters other than sound pressure, including frequency, bandwidth and duration.
- Timbre – the quality of a musical note, tone, or sound that distinguishes different sources such as voices, string instruments, wind instruments, and percussion instruments, even when they have the same pitch and volume. 5 simple attributes of timbre:
 1. Range – its place on a continuum of tone (or identifiable pitch) to noise.
 2. Time envelope – the rise, duration, and decay (or ADSR—attack, decay, sustain, release).
 3. Prefix – the initial phase or onset of a sound that is different than the lasting or sustained vibration of the sound.
 4. Vibrato – frequency modulation, or oscillating changes in pitch.
 5. Tremolo – amplitude modulation or oscillating changes in volume.

Synonyms (tone quality, color, texture)

- Intensity – is the quality of being (in)tense or a feeling of force, power, or potency. In physics this can be a measurable property of an electro-magnetic field, brightness of light, or the amplitude or velocity of a sound wave. An amplifier boosts a signal, for example, making it louder but in some cases also more intense. Like the other qualities mentioned here, this can be a measurable vibration and an affective perception. (In other words, something can be loud without necessarily being intense or producing tension in the listener.)
- Resonance – the quality of being deep, full, and reverberating. It is the tendency of an object or environment (like a room) to more easily vibrate at a frequency that matches one of its own natural frequencies of vibration and vibrate less strongly at other frequencies. In effect, it is amplifying or reiterating and extending vibrations that match its own ability to vibrate and filters out all frequencies other than its resonance. This creates a sustained “ringing” or repetition of the original tone or frequency.