

Tonal Harmony

an introduction

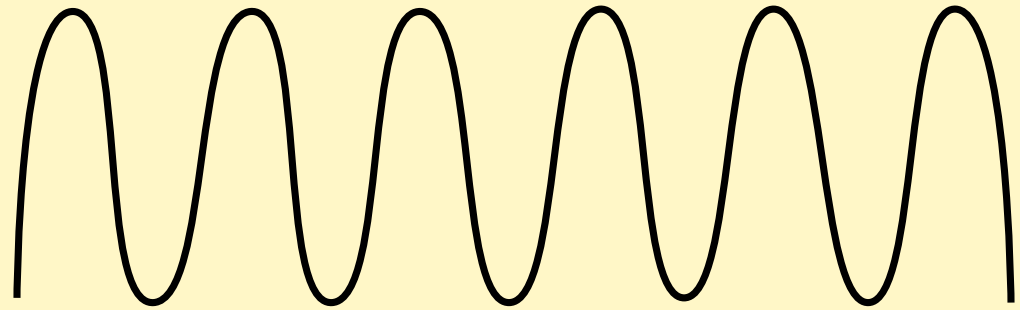
TONAL HARMONY is a set of musical principles and frameworks based on the physical properties of sound.

REVIEW:

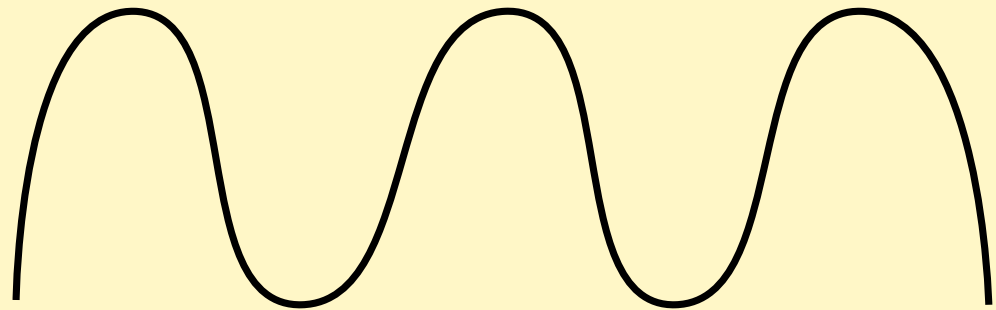
HARMONIC PARTIALS (“overtones”) are the spectra of naturally occurring Hz’s at integer multiples above a fundamental Hz.

Harmonic Partial

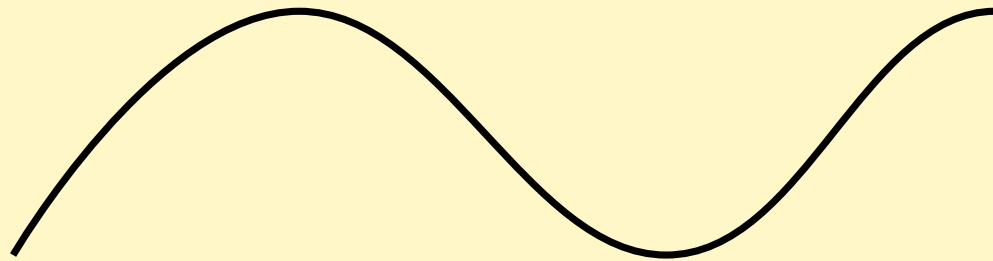
P3 - 786 Hz



P2 - 524 Hz



P1 - 262 Hz

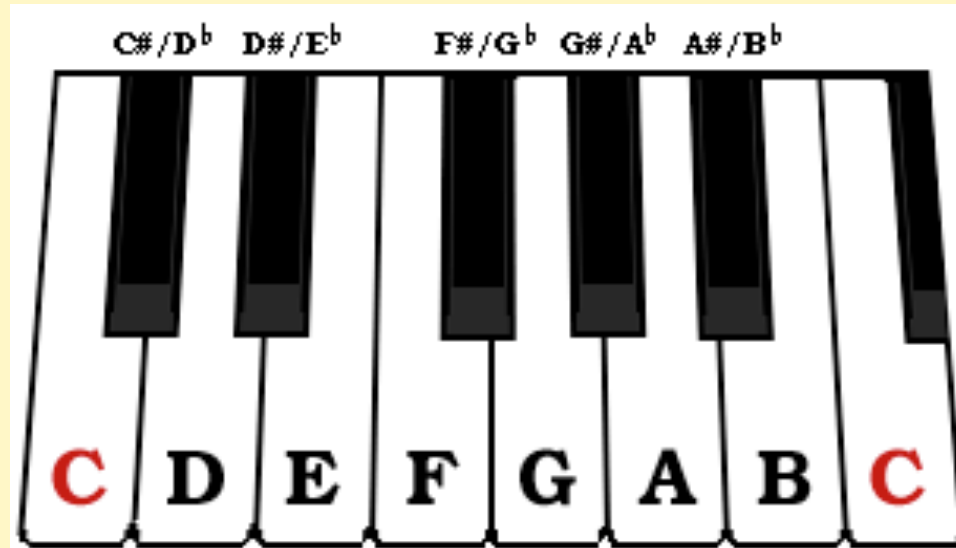


← "interval"

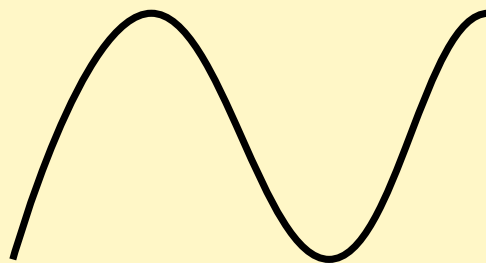


← "octave" consists of two pitches whose frequencies are in the ratio of 1:2

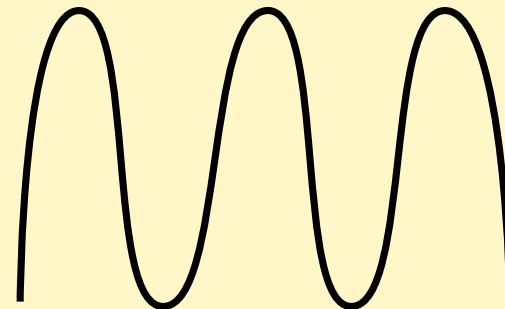
Intervals



P1 - 262 Hz

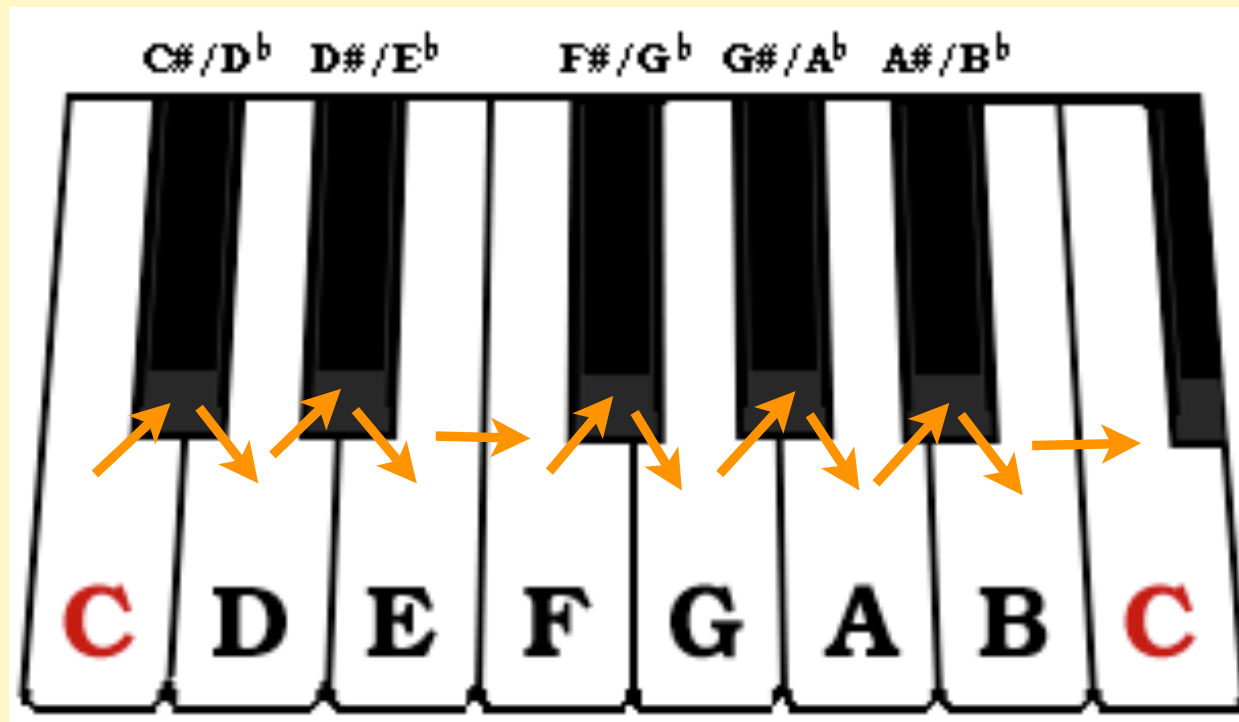


P2 - 524 Hz



“octave” consists of two pitches whose frequencies are in the ratio of 1:2

Intervals



“the octave” is divided into twelve equal tempered intervals called “half steps.”

Dissonance vs. Consonance

CONSONANT intervals are considered pleasing to the ear.

DISSONANT intervals are considered “not pleasing” to the ear. Unsettling....

Natural Harmonic Partial Series

P5 - 1310 Hz → E6

P4 - 1048 Hz → C6

P3 - 786 Hz → G5

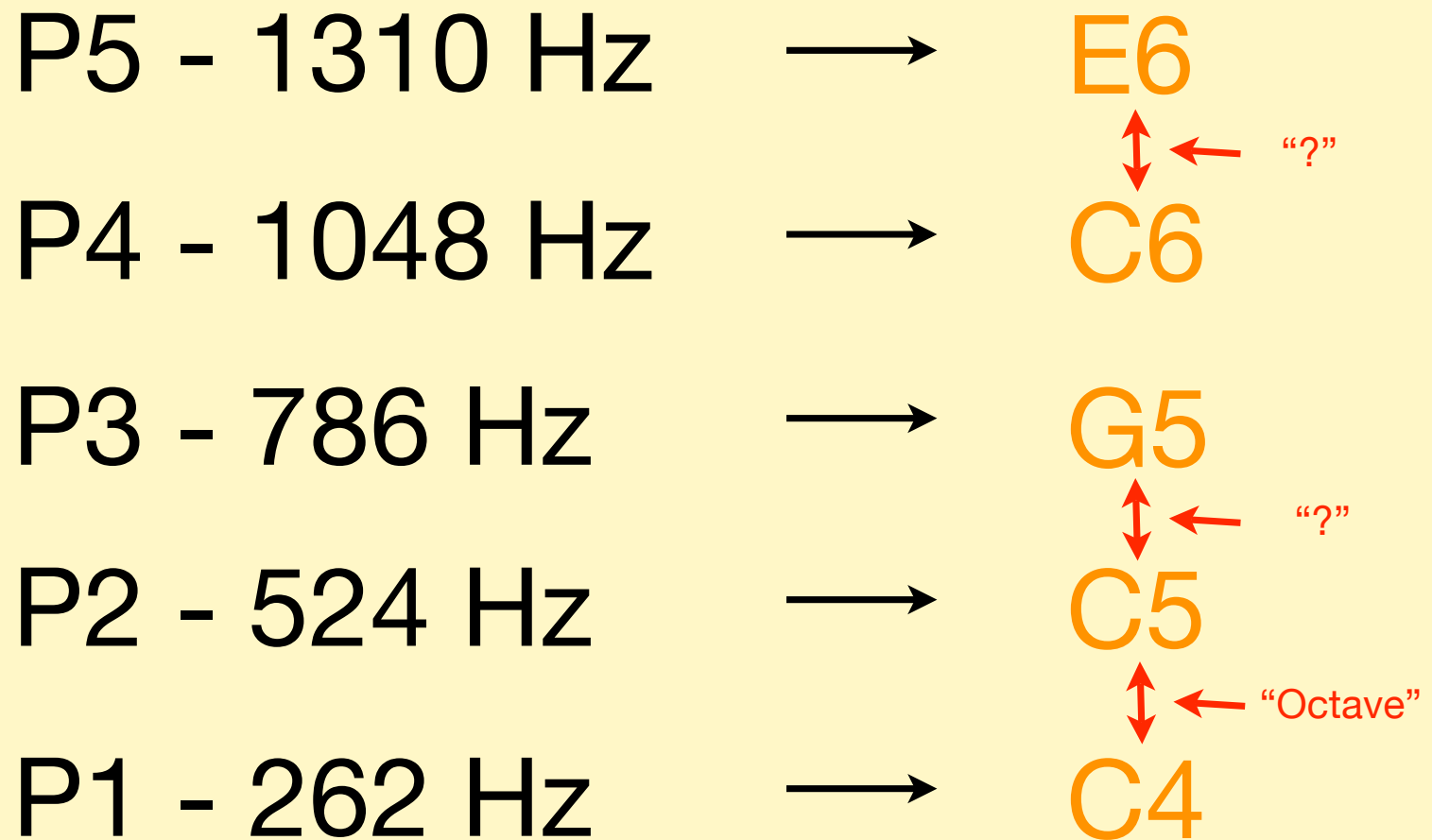
P2 - 524 Hz → C5

P1 - 262 Hz → C4

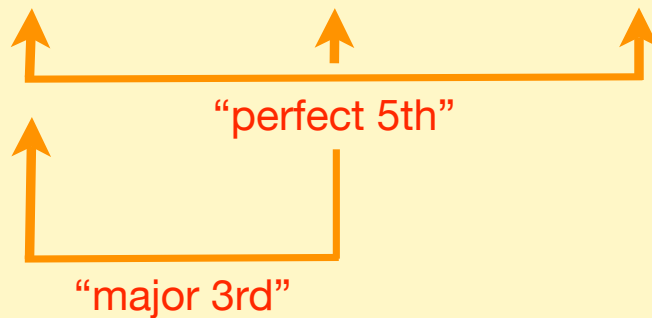
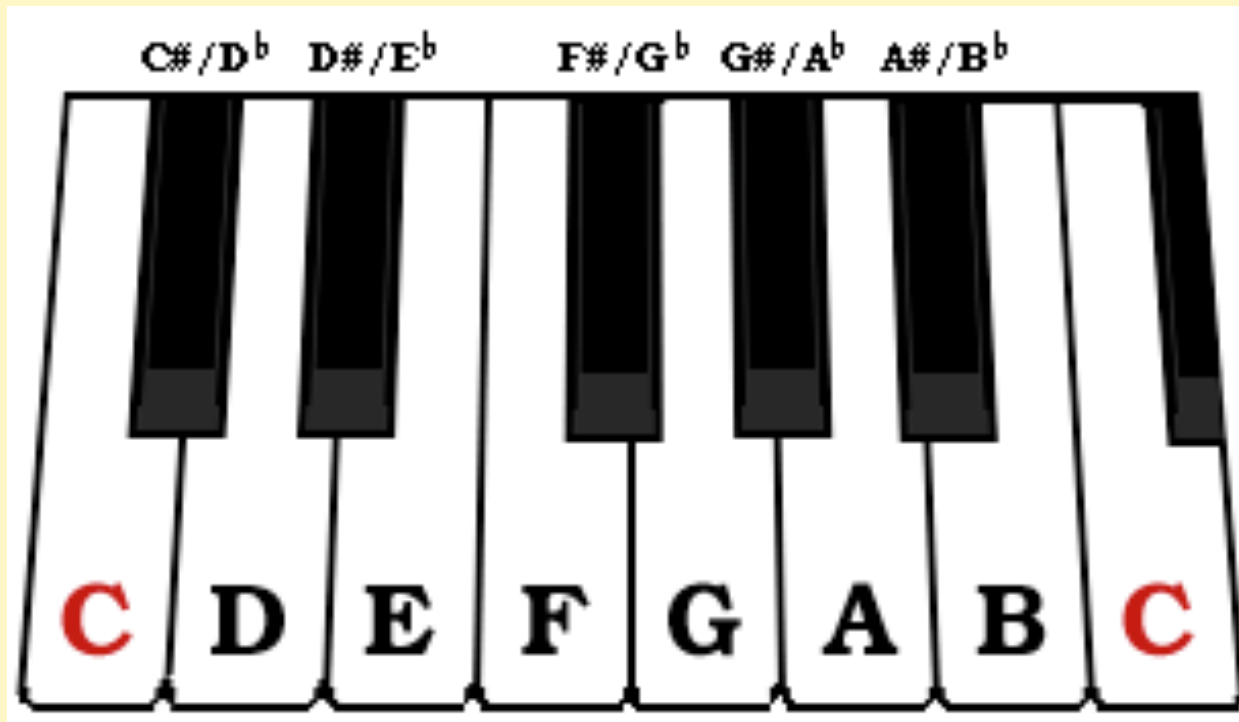
Natural Harmonic Partial Series

Demonstration...

Natural Harmonic Partial Series

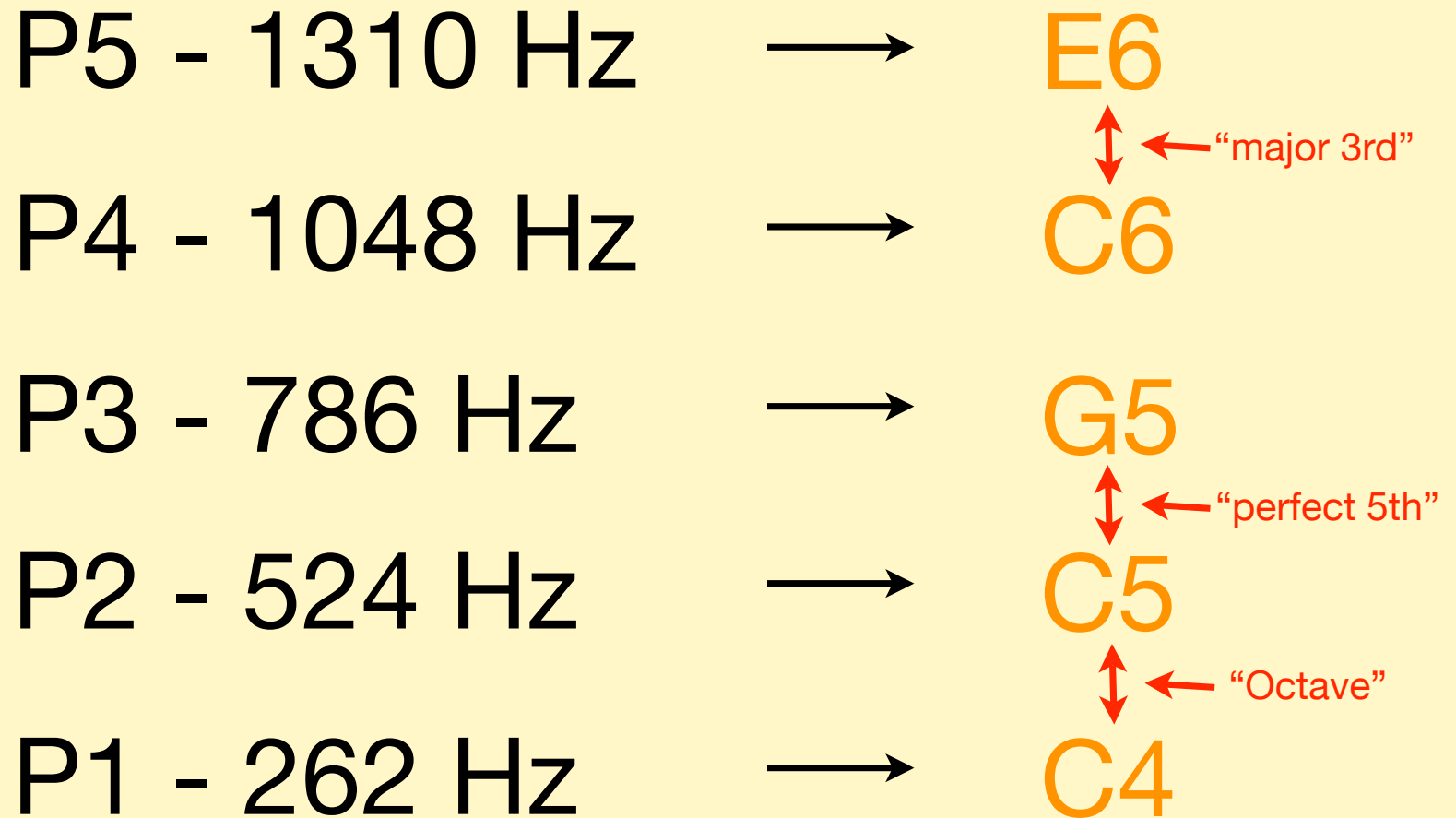


Intervals



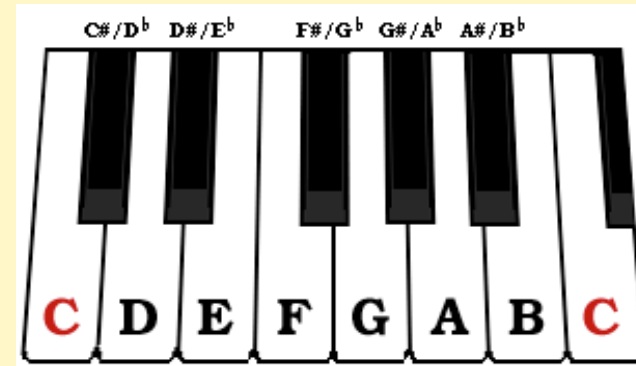
* The perfect 5th and major 3rd are considered to be the most consonant of intervals.

Natural Harmonic Partial Series



Intervals

implied by natural
harmonic partials



“octave”

consists of two pitches whose frequencies are in the ratio of 1:2, separated by 12 half steps

“perfect 5th”

consists of two pitches separated by 7 half steps

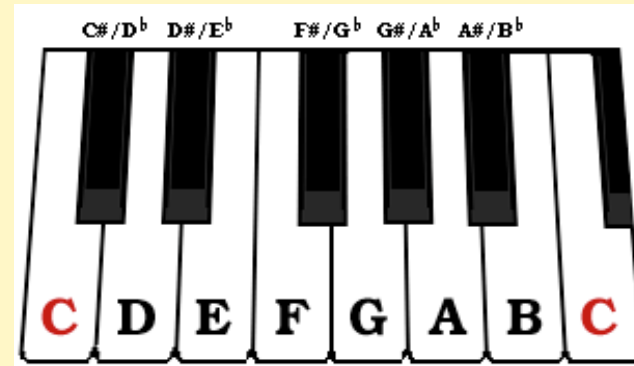
“major 3rd”

consists of two pitches separated by 4 half steps

* all these considered consonant intervals.

Intervals

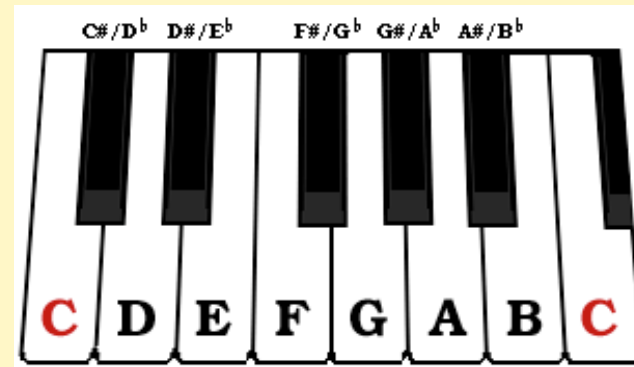
implied by natural
harmonic partials



octave
+
perfect 5th
+
major 3rd
= “Major Triad”

Intervals

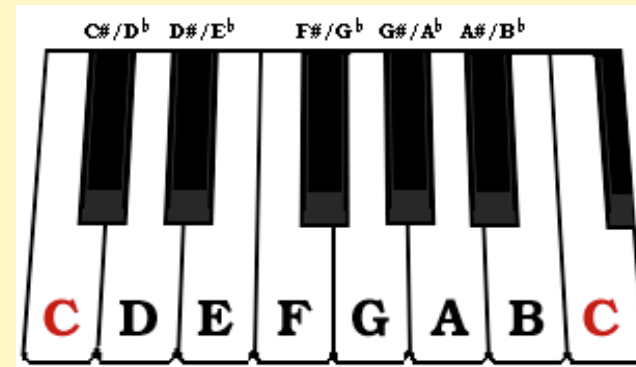
implied by natural
harmonic partials



Demonstration...

Intervals

implied by natural
harmonic partials



“HARMONY”

the layering of multiple pitch intervals to create pitch clusters otherwise known as “chords”

“HARMONIC
PROGRESSION”

transitions to and from various chord types

“MELODY”

a sequence of pitch intervals

Harmony

Dissonant vs. Consonant

“**TONAL**” **HARMONY** uses chord structures and melodies with consonant intervals.

“**ATONAL**” **HARMONY** uses chord structures and melodies with less consonant intervals.

Harmony

Dissonant vs. Consonant

Demonstration...