Physics of Musical Sound

Intervals and Tunings
Read Chapter 9
Lab Friday
(also homework)

Intervals < 1 octave

- 1 semitone—minor second
- 2 semitones—major second
- 3 semitones—minor third
- 4 semitones—major third
- 5 semitones—perfect fourth
- 6 semitones—augmented fourth/dim. Fifth
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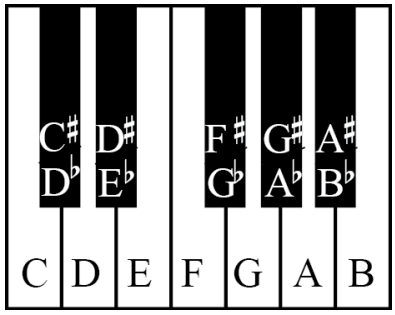
Intervals

- The Octave
  - Melodic-how close to 2
  - Harmonic-second order beats
- Interval—how many white notes or unqualified note names (inclusive)
  - eg. second C+D, D+E, E+F, F+G, etc.
  - eg. fourth C+F, G+C,

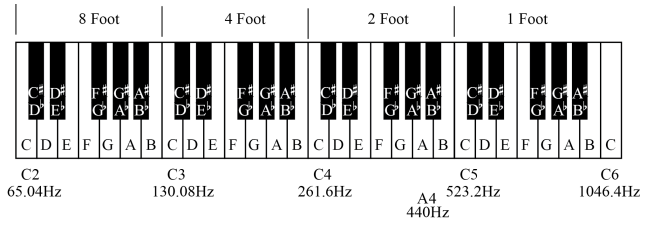
Intervals < 1 octave

- 7 semitones—perfect fifth
- 8 semitones—minor sixth
- 9 semitones—major sixth
- 10 semitones—minor seventh
- 11 semitones—major seventh

Keyboard layout 1



More Keyboard



Consonance/Dissonance

- Consonant—pleasing, stable, smooth
- Dissonant—harsher, unstable, driving
- Simpler ratios->more consonant
  - Is a continuum
  - In gen. outside critical band more consonant, inside less
  - Somewhat dependent on overall pitch because critical bands are wider at low frequency