

# It's not *just* Intonation!

## (It's balance too)

Pure harmonic intervals follow the natural tendencies of the natural overtone series. Both frequency and amplitude must be taken into consideration in order to create maximum resonance. For every multiple of the fundamental frequency, the amplitude must be cut in half (i.e. half the loudness). The following chart illustrates a basic plan for tuning an ensemble using these principles. Arrows refer to what the player must do to a note that is "in tune" according to equal temperament.

### Volume for Balance— a good rule of thumb!

As you ascend the pyramid, the volume needs to be half that of the previous chord function. For example, to balance a Dominant 7th chord, the 7th needs to be half as loud as the 3rd, which is half as loud as the 5th, which is half as loud as the root.

In addition to balance between chord functions, balance must also be maintained **within** each chord function (see pyramid in the root section). For example, out of all the voices that are playing the 5th, the bass voices must be the most present, followed by the tenors, altos, and sopranos respectively. This balance is essential for a great ensemble sound.

