

## Tuning Panel

**The Tuning Panel** contains controls for tuning a Key or changing its representation. Controls in the Tuning Panel are applied to the last key played.

In the center is a **Tuning Slider**. The unit of change for the slider is selected and displayed with the "pop-up" list below it. The value of the key during tuning is shown in the panel's display, in the box above the slider. The Representation used for this display is chosen with the "pop-up" list below it. One can, for example, use the slider to tune a key in frequency, while viewing the result in cents. Tuning may also be achieved by entering values in the display field by

hand.

You can change the representation of a Key or an entire window by choosing the desired representation style in the pop-up list below the display, and choosing **Set** for a single Key, or **All** for the window.

The **Selection** box contains buttons that effect the Selection of the current keyboard. Multiple keys may be selected at one time. This is useful for listening to chords, or examining relationships within a subset of a tuning. With multiple keys selected, the **Compare** button will show their relationship in the chosen representation. **Play** will play the chord described by the selection. **Reference**

will make the last Key played the Reference Key for the window. The **Reference** Key is no different than other keys except that it acts as base in relative tuning representations. Any key can be made the **Reference** by using this button.

## Representation Style Formats

Tunings may be entered in the Tuning Panel textfield display field. The tunings must be entered in the correct format. The formats for the different representation styles are given below.

Pitch   pitchLetter[sharp or flat]octave.

For example:

ef4   E flat above middle C

gs3   Gsharp below middle C

bs8   B sharp five octaves above middle C

Hertz and Cents are represented in decimal numbers.

Cents are rounded to the nearest integer.

## Ratios Numerator/Denominator

For example,

$3/2$  Just perfect fifth

$5/4$  Just major 3rd

## Interval

uni unison

m2 minor second

M2 Major second

m3	minor third
M3	Major third
P4	Perfect fourth
aug4	augmented fourth
P5	Perfect fifth
m6	minor sixth
M6	Major sixth
m7	minor seventh
M7	Major seventh
oct	octave
m9	minor ninth

...

MIDI Key	MIDI KeyNumber assignment Same format as Pitch.
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User Label	An arbitrary label
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For example,  
Do, Re, Mi, Fa  
Ding, Dong, Deng, Dung, Dang

