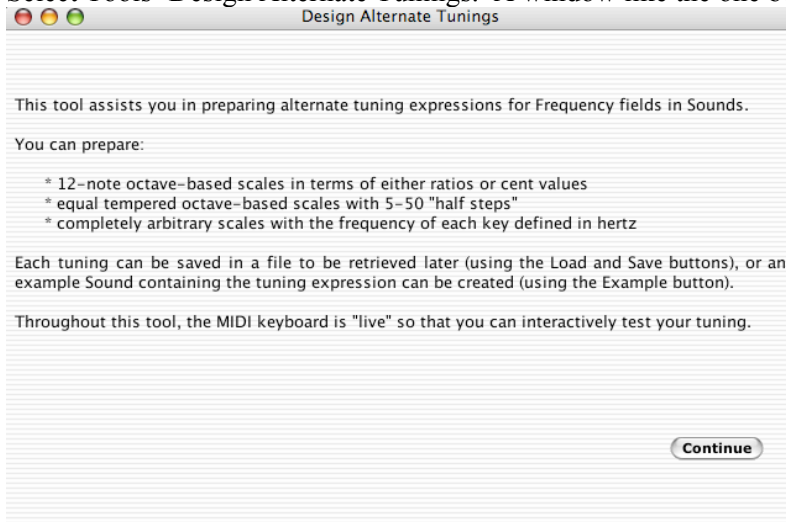


# COMPOSITION: ELECTRONIC MEDIA II

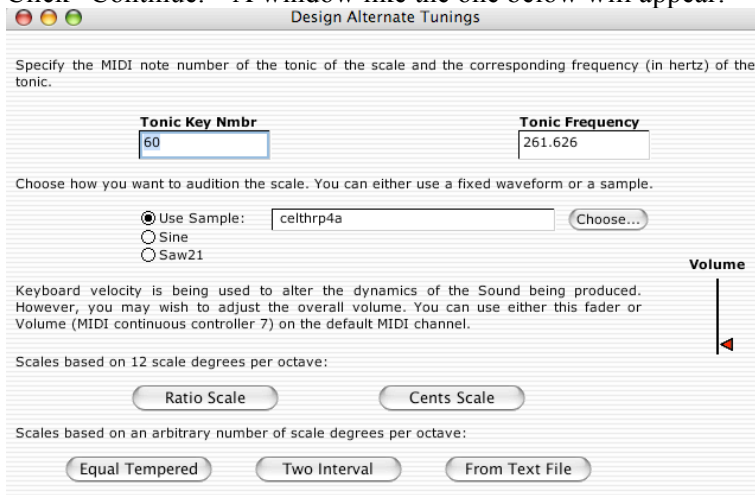
Feb. 8, 2006

## Tuning Tool in Kyma

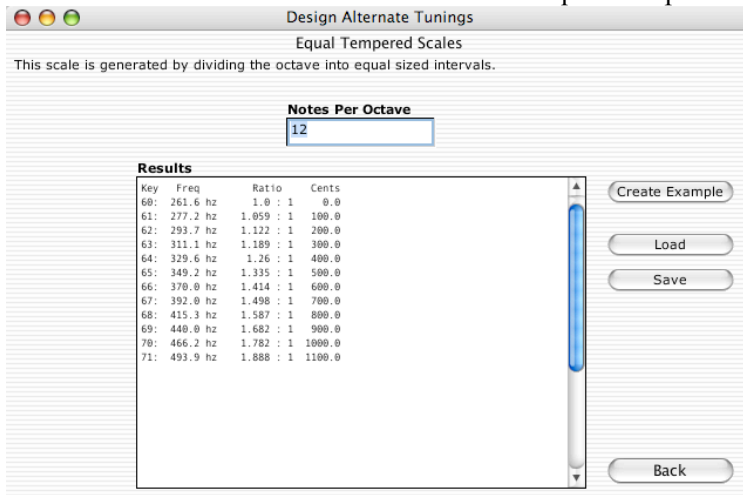
1. Launch Kyma.
2. Select Tools>Design Alternate Tunings. A window like the one below will appear.



- a. Click "Continue." A window like the one below will appear:



- b. Set the values to those shown above. Click "Equal Tempered." A window like the one below will appear:



- c. Compare these numbers with those in the table in the previous handout.

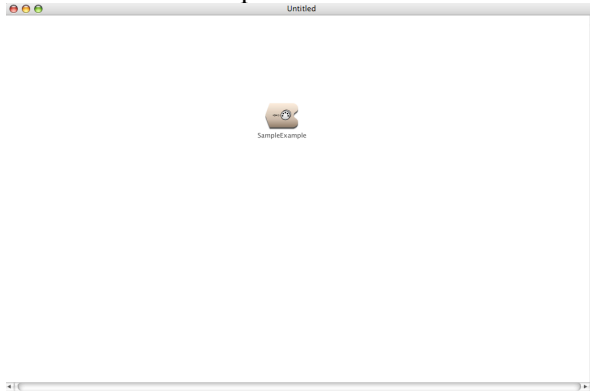
- d. In the box “Notes per octave” type 19, then hit enter. A window like the one below will appear:

The screenshot shows a software window titled "Design Alternate Tunings" with a subtitle "Equal Tempered Scales". Below the subtitle, it states "This scale is generated by dividing the octave into equal sized intervals." A text input field labeled "Notes Per Octave" contains the number "19". Below this is a "Results" section containing a table with four columns: "Key", "Freq", "Ratio", and "Cents". The table lists 19 notes, each with its corresponding MIDI key number, frequency in Hz, ratio to the base frequency, and cents deviation. To the right of the table are four buttons: "Create Example", "Load", "Save", and "Back".

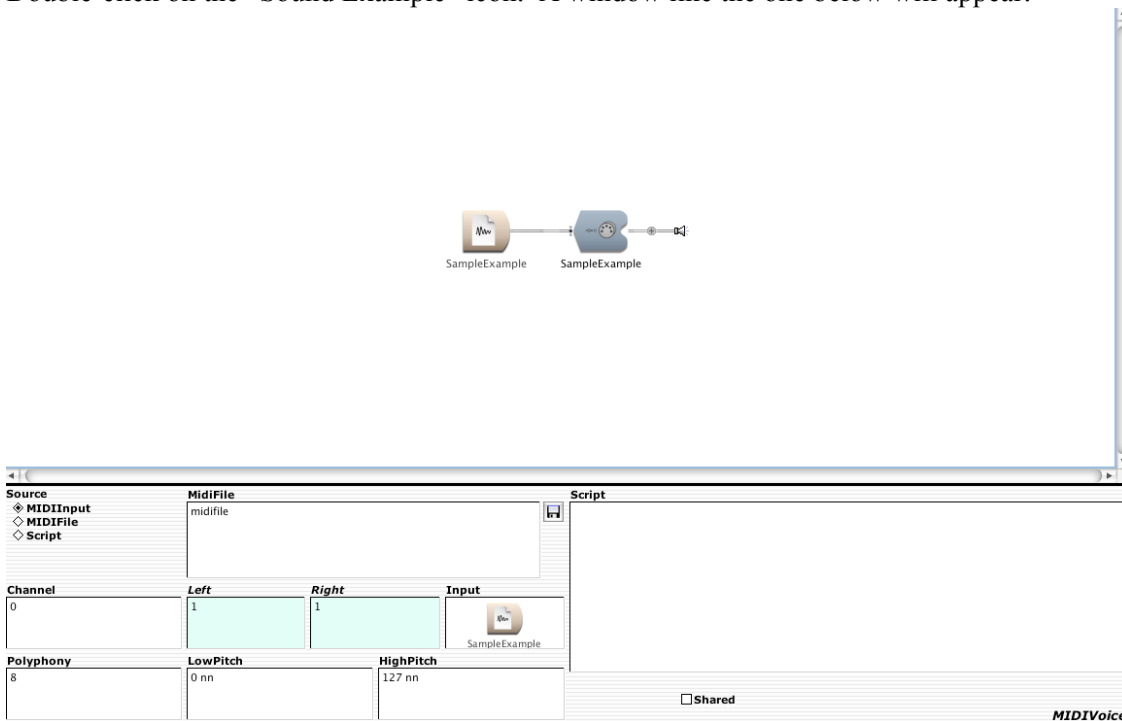
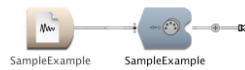
Key	Freq	Ratio	Cents
60:	261.6 hz	1.0 : 1	0.0
61:	271.3 hz	1.037 : 1	63.2
62:	281.4 hz	1.076 : 1	126.3
63:	291.9 hz	1.116 : 1	189.5
64:	302.7 hz	1.157 : 1	252.6
65:	314.0 hz	1.2 : 1	315.8
66:	325.6 hz	1.245 : 1	378.9
67:	337.7 hz	1.291 : 1	442.1
68:	350.3 hz	1.339 : 1	505.3
69:	363.3 hz	1.389 : 1	568.4
70:	376.8 hz	1.44 : 1	631.6
71:	390.8 hz	1.494 : 1	694.7
72:	405.3 hz	1.549 : 1	757.9
73:	420.4 hz	1.607 : 1	821.1
74:	436.0 hz	1.667 : 1	884.2
75:	452.2 hz	1.728 : 1	947.4
76:	469.0 hz	1.793 : 1	1010.0
77:	486.4 hz	1.859 : 1	1074.0
78:	504.5 hz	1.928 : 1	1137.0

- e. This is a 19-note equal-tempered scale. Notice that the new frequencies are mapped onto the MIDI Keynumbers.

2. To play the example from a live MIDI keyboard, do the following:
  - a. Make sure that the Fatar keyboard is turn on and plugged in to the Capybara.
  - b. Press “Create Example.” A window like the one below will appear:

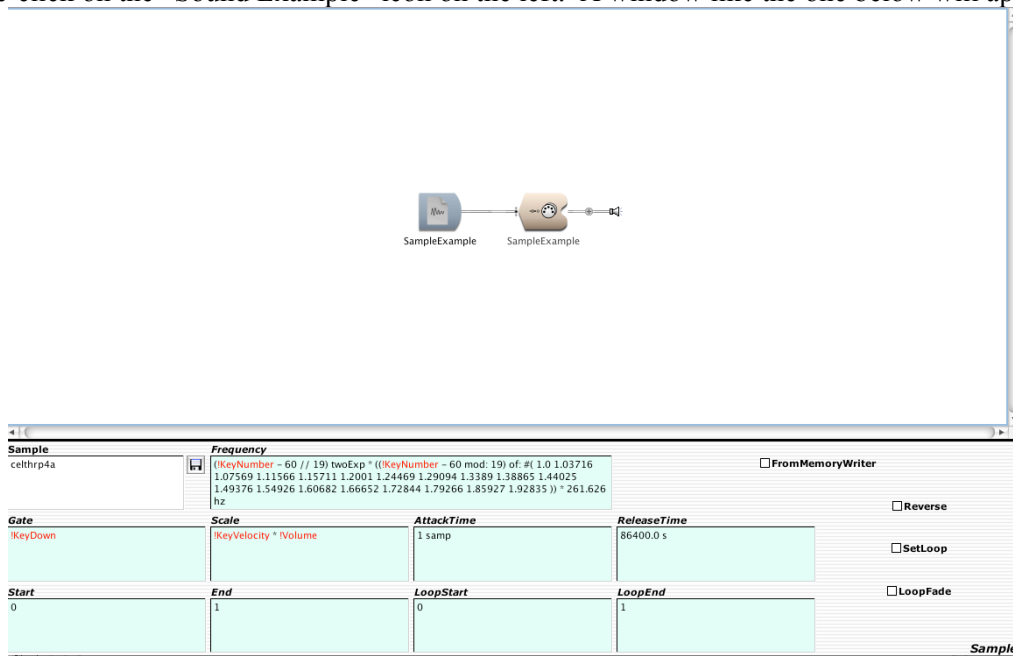


- c. Double-click on the “Sound Example” icon. A window like the one below will appear:



- d. Set the values to those shown above. Note that MIDIInput is selected. For experimentation later, try a MIDI file.

e. Double-click on the “Sound Example” icon on the left. A window like the one below will appear:



f. Wow, look at that. Note that you can copy the tuning info from the Frequency field and paste it into any other frequency field in Kyma, which will then play in 19-note equal-tempered tuning.

3. Compile from the “Sound Example” icon on the right and start playing.