

# Twenty chords for Daniel Blitz

composed by Alex Ness,  
for the Daniel Blitz Clavichord Project

## Program note

This piece grew out of my fascination with the tuning systems developed by Renaissance composers such as [Guillaume Costeley](#), [Nicola Vicentino](#), and [Fabio Colonna](#).

Each of these twenty chords decays completely, allowing the listener to appreciate the piquancy of the harmonies, as well as the delicacy of the clavichord.

## Bio

I live in San Francisco, where I tutor for a living and make art for pleasure. I'm interested in a broad range of musical genres and styles, including Renaissance microtonal music, North Indian classical music, and experimental music in its many guises. I enjoy collaborating with friends and strangers.

## Performance notes

### Tuning and notation

- Please refer to the attached charts for tuning instructions. I can provide sound files of the individual frequencies upon request.
- Notes without an accidental are always natural.
- Notated accidentals reflect the underlying tuning scheme: for example, B $\sharp$  is tuned flatter than C $\natural$ .
- The same keyboard key in different octaves may be tuned to different pitches, but never to a pitch that's not enharmonically related to that key. For example, the black key between D and E is tuned in some octaves as D $\sharp$  and in others as E $\flat$ , but never as C $\sharp$ .

## Tempo

The clavichordist should let each chord should decay completely before playing the subsequent chord. I recommend counting breaths (three or four breaths per chord) to keep the pacing even and relaxed.

# Twenty chords for Daniel Blitz

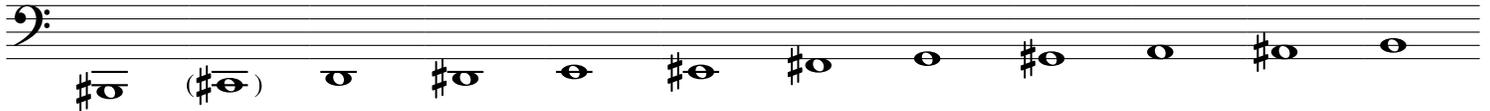
19 equal temperament tuning chart,  
for use with an electronic tuner

Alex Ness

N.B. Parenthesized notes aren't played in the piece,  
but I've included them in the chart for reference.

## C2–B2 octave

Hz: 63.5 68.3 73.5 76.2 82.0 85.0 91.5 98.4 102.0 109.8 113.8 122.4



## C3–B3 octave

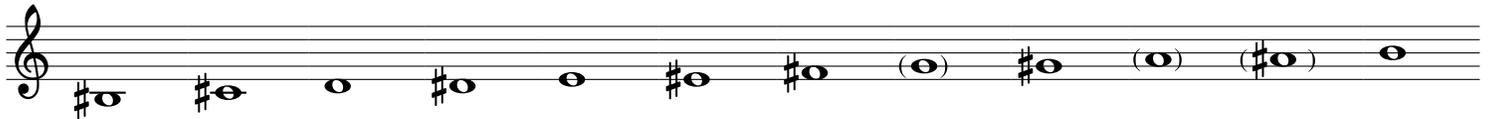
13 131.7 141.7 146.9 158.0 163.9 176.3 189.7 196.7 211.6 219.5 236.1 244.9



## C4–B4 octave

(same tuning as C2–B2, transposed up 2 octaves)

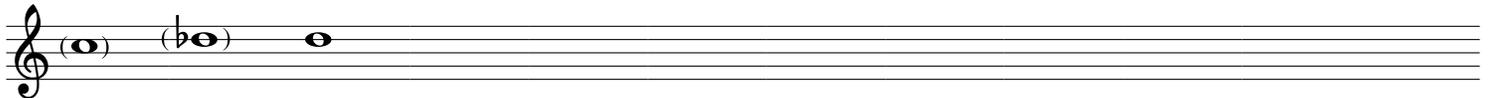
25 254.0 273.2 293.9 304.8 327.9 340.1 365.8 393.5 408.1 439 455.3 489.8



## C5–B5 octave

(same tuning as C3–B3, transposed up 2 octaves)

37 526.8 566.7 587.8



# Twenty chords for Daniel Blitz

19 equal temperament tuning instructions,  
for tuning by ear

Alex Ness

In this tuning system, each whole step (which is smaller than usual)  
is divided into three equal parts, and each half step  
(which is larger than usual) is divided into two equal parts,  
giving 19 equal parts per octave total:

Clavichord

The musical notation for the Clavichord consists of three staves. The top staff is a single melodic line with 19 notes, each marked with a sharp or flat sign. The middle and bottom staves are grouped together with a brace on the left, representing the left and right hands of the clavichord. The middle staff contains 19 notes, with some notes grouped in parentheses and some marked with a flat sign. The bottom staff contains 19 notes, with some notes marked with a flat sign. The notes are distributed across the staves to illustrate the 19 equal parts per octave.

In this system, major thirds are almost perfect,  
so you can use them to tune by ear:

20

The musical notation for the Clavichord consists of three staves. The top staff is a single melodic line with 19 notes, each marked with a sharp or flat sign. The middle and bottom staves are grouped together with a brace on the left, representing the left and right hands of the clavichord. The middle staff contains 19 notes, with some notes grouped in parentheses and some marked with a flat sign. The bottom staff contains 19 notes, with some notes marked with a flat sign. The notes are distributed across the staves to illustrate the major thirds used for tuning by ear.

# Twenty chords for Daniel Blitz

for clavichord in 19 equal temperament

Alex Ness

The first system of musical notation consists of two staves. The upper staff is in bass clef and the lower staff is in bass clef. The key signature is one flat (B-flat). The system contains ten measures of music, each featuring a chord. The chords are: 1. B-flat major (B-flat, D, F), 2. B major (B, D, F-sharp), 3. B minor (B, D-flat, F), 4. B major (B, D, F-sharp), 5. B major (B, D, F-sharp), 6. B major (B, D, F-sharp), 7. B major (B, D, F-sharp), 8. B major (B, D, F-sharp), 9. B major (B, D, F-sharp), 10. B major (B, D, F-sharp).

The second system of musical notation consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature is one flat (B-flat). The system contains ten measures of music, each featuring a chord. The chords are: 1. B-flat major (B-flat, D, F), 2. B major (B, D, F-sharp), 3. B major (B, D, F-sharp), 4. B major (B, D, F-sharp), 5. B major (B, D, F-sharp), 6. B major (B, D, F-sharp), 7. B major (B, D, F-sharp), 8. B major (B, D, F-sharp), 9. B major (B, D, F-sharp), 10. B major (B, D, F-sharp).