
 Zeta-20 JI tuning
 An offshoot of Kraig Grady's Centaur
 and Rod Poole's 17-note tuning
 Primes 2-3-7-11-13

Keyboard mapping with BRILLO

(Basically Regularized Interval Locations Logically Organized -- more or less)
 With inspiration from Fr. Scipione Stella and Fabio Colonna
 Note reduplication of 1/1, 9/8, 4/3, and 3/2 on both manuals

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| C* | C#* | D* | Eb* | E* | F* | F#* | G* | G#* | A* | Bb* | B* | C* |
| 91/88 | 9/8 | 7/6 | 11/9 | 4/3 | 11/8 | 3/2 | 14/9 | 27/16 | 7/4 | 11/6 | 2/1 | 91/44 |
| 58 | 204 | 267 | 347 | 498 | 551 | 702 | 765 | 906 | 969 | 1049 | 1200 | 1258 |
| 99:91 | 28:27 | 22:21 | 12:11 | 33:32 | 12:11 | 28:27 | 243:224 | 91:88 | 22:21 | 12:11 | 91:88 | |
| 146 | 63 | 81 | 151 | 53 | 151 | 63 | 141 | 58 | 81 | 151 | 58 | |

| | | | | | | | | | | | | |
|-------|-------|--------|-------|-------|-------|-------|-------|---------|-------|-------|-------|------|
| C | C# | D | Eb | E | F | F# | G | G# | A | Bb | B | C |
| 1/1 | 13/12 | 9/8 | 13/11 | 14/11 | 4/3 | 13/9 | 3/2 | 13/8 | 22/13 | 16/9 | 21/11 | 2/1 |
| 0 | 139 | 204 | 289 | 418 | 498 | 637 | 702 | 841 | 911 | 996 | 1119 | 1200 |
| 13:12 | 27:26 | 104:99 | 12:11 | 22:21 | 13:12 | 27:26 | 13:12 | 176:169 | 91:88 | 12:11 | 22:21 | |
| 139 | 65 | 85 | 151 | 81 | 139 | 65 | 139 | 70 | 58 | 151 | 81 | |

 Chains of fifths and Zalzalian or middle thirds

Dashed lines --- show pure fifths (3/2)

Dotted lines ... show "virtually tempered" fifths (176/117 or 182/121)

Note option of either 22/13 (A) or 27/16 (G#*)

| | | | | | | | | | | | | |
|---------|-----------|--------------|-----------|-----------|--------------|-------------|----------|-----------|---------|--|--|--|
| 702.0 | 702.0 | 706.9 | 702.0 | 702.0 | 706.7 | 706.9 | 702.0 | 702.0 | | | | |
| 3:2 | 3:2 | 176:117 | 3:2 | 3:2 | 182:121 | 176:117 | 3:2 | 3:2 | | | | |
| 13/9 | --- 13/12 | --- 13/8 ... | 11/9 | --- 11/6 | --- 11/8 ... | 91/88 | ... 14/9 | ----- 7/6 | --- 7/4 | | | |
| 636.6 | 138.6 | 840.5 | 347.4 | 1049.4 | 551.3 | 58.0 | 764.9 | 266.9 | 968.8 | | | |
| | | | | | | | | | | | | |
| 11:9 | 39:32 | 39:32 | 11:9 | 11:9 | 11:9 | 364:297 | 11:9 | 11:9 | | | | |
| 347.4 | 342.5 | 342.5 | 347.4 | 347.4 | 347.4 | 352.2 | 347.4 | 347.4 | | | | |
| | | | | | | | | | | | | |
| 13/11 | ... 16/9 | ----- 4/3 | ----- 1/1 | ----- 3/2 | --- 9/8 | ----- 27/16 | | | | | | |
| 289.2 | 996.1 | 498.0 | 0.0 | 702.0 | 203.9 | 905.9 | | | | | | |
| 176:117 | 3:2 | 3:2 | 3:2 | 3:2 | 3:2 | 3:2 | | | | | | |
| 706.9 | 702.0 | 702.0 | 702.0 | 702.0 | 702.0 | 702.0 | | | | | | |

There are, in this view, two chains of fifths:

At 13/11-21/11, 8 fifths all within 5 cents of just (using 9/8-22/13-14/11)

At 13/9-7/4, 9 fifths all within 5 cents of just in theory -- or 5.9 cents in 1024-ed2

We can also look at the system as similar to George Secor's tuning (in a tempered form) which he recalls using within his 17-note well-temperament (17-WT) in 1978, see his "The 17-note Puzzle -- And the Neo-medieval Key That Unlocks It," Xenharmonikon 18 (Spring, 2006), pp. 55-80 at 71, available at <<http://www.anaphoria.com/Secor17puzzle.pdf>>. In a JI form, Secor's tuning is as follows:

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--|
| 13/12 | 4/3 | 13/8 | 1/1 | 11/9 | 3/2 | 11/6 | |
| 138.6 | 498.0 | 840.5 | 0.0 | 347.4 | 702.0 | 1049.4 | |
| 16:13 | 39:32 | 16:13 | 11:9 | 27:22 | 11:9 | | |
| 359.5 | 342.5 | 359.5 | 347.4 | 354.5 | 347.4 | | |

Erv Wilson's Rast/Bayyati Matrix based on al-Farabi's Zalzalian thirds of 27/22 and 11/9 <<http://www.anaphoria.com/RAST.PDF>>, and Jacques Dudon's Mohajira tunings based on various JI or tempered ratios (e.g. 1/1-13/12-59/48-4/3-3/2, or 48:52:59:64:72, see Scala archive, dudon_mohajira_r.scl), are two other examples of this kind of technique with chains of Zalzalian thirds, a form of Dudon's entrelacs or an "interlacing" of two chains of fifths.