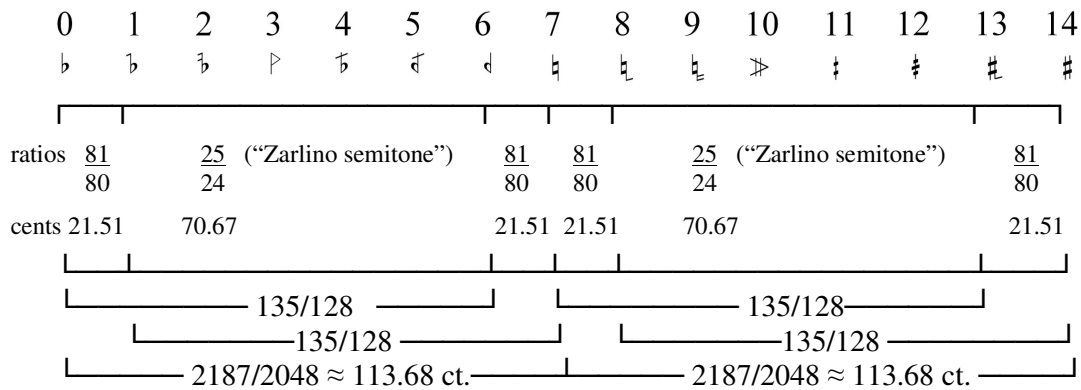


## Julien Jalâl Ed-Dine Weiss: Prototypes 1-8 (1990)

### Assymetrical Division of the Pythagorean *Apotome*

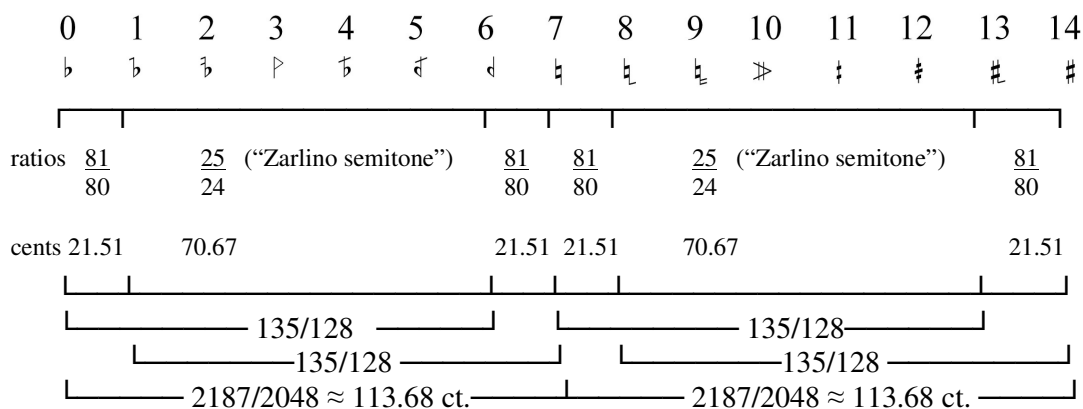


### Available Pitch Content per Octave in Relationship to C Natural.

|                     |                                 |                               |                                  |                              |                               |                               |                                |                               |                                   |                                 |                                     |                                    |                                     |                                   |                                     |  |
|---------------------|---------------------------------|-------------------------------|----------------------------------|------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|-----------------------------------|---------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|--|
| <b>basic module</b> | $\frac{81}{80}$<br>21.51c       | $\frac{49}{48}$<br>35.70c     | $\frac{1053}{1024}$<br>48.35c    | $\frac{729}{704}$<br>60.41c  | $\frac{2673}{2560}$<br>74.78c | $\frac{135}{128}$<br>92.18c   | $\frac{2187}{2048}$<br>113.69c |                               |                                   |                                 |                                     |                                    |                                     |                                   |                                     |  |
| <b>DO</b>           |                                 |                               |                                  |                              |                               |                               | 1<br>1<br>0                    | $\frac{81}{80}$<br>21.51c     | $\frac{49}{48}$<br>35.70c         | $\frac{1053}{1024}$<br>48.35c   | $\frac{729}{704}$<br>60.41c         | $\frac{2673}{2560}$<br>74.78c      | $\frac{135}{128}$<br>92.18c         | $\frac{2187}{2048}$<br>113.69c    |                                     |  |
|                     | 0                               | 1                             | 2                                | 3                            | 4                             | 5                             | 6                              | 7                             | 8                                 | 9                               | 10                                  | 11                                 | 12                                  | 13                                | 14                                  |  |
|                     | b                               | ḅ                            | ḃ                               | ▷                            | ♭                             | ♮                             | ♯                              | ♮                             | ♮                                 | ♮                               | ♮                                   | ♮                                  | ♮                                   | ♮                                 | ♮                                   |  |
| <b>RE</b>           | $\frac{256}{243}$<br>90.22c     | $\frac{16}{15}$<br>111.73c    | $\frac{784}{729}$<br>125.92c     | $\frac{13}{12}$<br>138.57c   | $\frac{12}{11}$<br>150.63c    | $\frac{11}{10}$<br>165.00c    | $\frac{10}{9}$<br>182.40c      | $\frac{9}{8}$<br>203.91c      | $\frac{729}{640}$<br>225.41c      | $\frac{147}{128}$<br>239.60c    | $\frac{9477}{8192}$<br>252.26c      | $\frac{6561}{5632}$<br>264.32c     | $\frac{24057}{20480}$<br>278.68c    | $\frac{1215}{1024}$<br>296.09c    | $\frac{19683}{16367}$<br>319.39c    |  |
| <b>MI</b>           | $\frac{32}{27}$<br>294.14c      | $\frac{6}{5}$<br>315.64c      | $\frac{98}{81}$<br>329.83c       | $\frac{39}{32}$<br>342.48c   | $\frac{27}{22}$<br>354.55c    | $\frac{99}{80}$<br>368.91c    | $\frac{5}{4}$<br>386.31c       | $\frac{81}{64}$<br>407.82c    | $\frac{6561}{5120}$<br>429.32c    | $\frac{1323}{1024}$<br>443.52c  | $\frac{85293}{65536}$<br>456.17c    | $\frac{59049}{45056}$<br>468.23c   | $\frac{216513}{163840}$<br>482.59c  | $\frac{10935}{8192}$<br>500c      | $\frac{177147}{131072}$<br>521.51c  |  |
| <b>FA</b>           | $\frac{8192}{6561}$<br>384.36c  | $\frac{512}{405}$<br>405.87c  | $\frac{25088}{19683}$<br>420.06c | $\frac{104}{81}$<br>432.71c  | $\frac{128}{99}$<br>444.77c   | $\frac{176}{135}$<br>459.13c  | $\frac{320}{243}$<br>476.54c   | $\frac{4}{3}$<br>498.05c      | $\frac{27}{20}$<br>519.55c        | $\frac{49}{36}$<br>533.74c      | $\frac{351}{256}$<br>546.39c        | $\frac{243}{176}$<br>558.46c       | $\frac{891}{640}$<br>572.82c        | $\frac{45}{32}$<br>590.22c        | $\frac{729}{512}$<br>611.73c        |  |
| <b>SOL</b>          | $\frac{1024}{729}$<br>588.27c   | $\frac{64}{45}$<br>609.78c    | $\frac{3136}{2187}$<br>623.97c   | $\frac{13}{9}$<br>636.62c    | $\frac{48}{36}$<br>648.69c    | $\frac{22}{15}$<br>663.05c    | $\frac{40}{27}$<br>680.45c     | $\frac{3}{2}$<br>701.96c      | $\frac{243}{160}$<br>723.46c      | $\frac{147}{96}$<br>737.65c     | $\frac{3159}{2048}$<br>750.30c      | $\frac{2187}{1408}$<br>762.37c     | $\frac{8019}{5120}$<br>776.73c      | $\frac{405}{256}$<br>794.13c      | $\frac{6561}{4096}$<br>815.64c      |  |
| <b>LA</b>           | $\frac{128}{81}$<br>792.18c     | $\frac{8}{5}$<br>813.69c      | $\frac{392}{243}$<br>827.88c     | $\frac{13}{8}$<br>840.52c    | $\frac{18}{11}$<br>852.59c    | $\frac{33}{20}$<br>866.96c    | $\frac{5}{3}$<br>884.36c       | $\frac{27}{16}$<br>905.87c    | $\frac{2187}{1280}$<br>927.37c    | $\frac{441}{256}$<br>941.56c    | $\frac{28431}{16384}$<br>954.21c    | $\frac{19683}{11284}$<br>963.21c   | $\frac{72171}{40960}$<br>980.64c    | $\frac{3645}{2048}$<br>998.04c    | $\frac{59049}{32768}$<br>1019.55c   |  |
| <b>SI</b>           | $\frac{16}{9}$<br>996.09c       | $\frac{9}{5}$<br>1017.6c      | $\frac{49}{27}$<br>1031.79c      | $\frac{117}{64}$<br>1044.44c | $\frac{81}{44}$<br>1056.5c    | $\frac{297}{160}$<br>1070.87c | $\frac{15}{8}$<br>1088.27c     | $\frac{243}{128}$<br>1109.78c | $\frac{19683}{10240}$<br>1131.28c | $\frac{3969}{2048}$<br>1145.47c | $\frac{255879}{131079}$<br>1158.03c | $\frac{177147}{90112}$<br>1170.19c | $\frac{649539}{327680}$<br>1184.55c | $\frac{32805}{16384}$<br>1201.95c | $\frac{531441}{262144}$<br>1223.46c |  |
| <b>DO</b>           | $\frac{4096}{2187}$<br>1086.31c | $\frac{256}{135}$<br>1107.82c | $\frac{5120}{2673}$<br>1122.01c  | $\frac{52}{27}$<br>1134.66c  | $\frac{64}{33}$<br>1146.73c   | $\frac{88}{45}$<br>1161.09c   | $\frac{160}{81}$<br>1178.49c   | $\frac{2}{1}$<br>1200c        | $\frac{81}{40}$<br>1221.51c       | $\frac{49}{24}$<br>1235.70c     | $\frac{1053}{512}$<br>1248.35c      | $\frac{729}{352}$<br>1260.41c      | $\frac{2673}{1280}$<br>1274.78c     | $\frac{135}{64}$<br>1292.18c      | $\frac{2187}{1024}$<br>1313.69c     |  |

## Julien Jalâl Ed-Dine Weiss: Prototype 9 (2007)

### Assymetrical Division of the Pythagorean Apotome.



### Available Pitch Content per Octave in Relationship to C Natural.

| basic module | $\frac{81}{80}$<br>21.51c       | $\frac{1701}{1664}$<br>38.07c | $\frac{33}{32}$<br>53.27c     | $\frac{27}{26}$<br>65.34c       | $\frac{243}{232}$<br>80.2c       | $\frac{135}{128}$<br>92.18c   | $\frac{2187}{2048}$<br>113.69c |                               |                                   |                                     |                                 |                                  |                                     |                                   |                                     |
|--------------|---------------------------------|-------------------------------|-------------------------------|---------------------------------|----------------------------------|-------------------------------|--------------------------------|-------------------------------|-----------------------------------|-------------------------------------|---------------------------------|----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
| <b>DO</b>    |                                 |                               |                               |                                 |                                  |                               |                                | $\frac{1}{1}$<br>0            | $\frac{81}{80}$<br>21.51c         | $\frac{1701}{1664}$<br>38.07c       | $\frac{33}{32}$<br>53.27c       | $\frac{27}{26}$<br>65.34c        | $\frac{243}{232}$<br>80.2c          | $\frac{135}{128}$<br>92.18c       | $\frac{2187}{2048}$<br>113.69c      |
|              | 0                               | 1                             | 2                             | 3                               | 4                                | 5                             | 6                              | 7                             | 8                                 | 9                                   | 10                              | 11                               | 12                                  | 13                                | 14                                  |
|              | b                               | ḅ                            | ḃ                            | ▷                               | ♭                                | ♮                             | ♯                              | ♮                             | ♮                                 | ♮                                   | ♮                               | ♮                                | ♮                                   | ♮                                 | ♮                                   |
| <b>RE</b>    | $\frac{256}{243}$<br>90.22c     | $\frac{16}{15}$<br>111.73c    | $\frac{14}{13}$<br>128.29c    | $\frac{88}{81}$<br>143.49c      | $\frac{128}{117}$<br>155.56c     | $\frac{119}{108}$<br>167.92c  | $\frac{10}{9}$<br>182.40c      | $\frac{9}{8}$<br>203.91c      | $\frac{729}{640}$<br>225.41c      | $\frac{15309}{13312}$<br>241.98c    | $\frac{297}{256}$<br>257.18c    | $\frac{243}{208}$<br>269.25c     | $\frac{9639}{8192}$<br>281.60c      | $\frac{1215}{1024}$<br>296.09c    | $\frac{19683}{16367}$<br>319.39c    |
| <b>MI</b>    | $\frac{32}{27}$<br>294.14c      | $\frac{6}{5}$<br>315.64c      | $\frac{63}{52}$<br>332.21c    | $\frac{11}{9}$<br>347.41c       | $\frac{16}{13}$<br>359.47c       | $\frac{119}{96}$<br>371.83c   | $\frac{5}{4}$<br>386.31c       | $\frac{81}{64}$<br>407.82c    | $\frac{6561}{5120}$<br>429.32c    | $\frac{137781}{106496}$<br>445.89c  | $\frac{2673}{2048}$<br>461.09c  | $\frac{2187}{1664}$<br>473.16c   | $\frac{86751}{65536}$<br>485.51c    | $\frac{10935}{8192}$<br>500c      | $\frac{177147}{131072}$<br>521.51c  |
| <b>FA</b>    | $\frac{8192}{6561}$<br>384.36c  | $\frac{512}{405}$<br>405.87c  | $\frac{448}{351}$<br>422.43c  | $\frac{2816}{2187}$<br>437.63c  | $\frac{4096}{3159}$<br>449.7c    | $\frac{952}{729}$<br>462.05c  | $\frac{320}{243}$<br>476.54c   | $\frac{4}{3}$<br>498.05c      | $\frac{27}{20}$<br>519.55c        | $\frac{567}{416}$<br>536.12c        | $\frac{11}{8}$<br>551.32c       | $\frac{18}{13}$<br>563.38c       | $\frac{357}{256}$<br>575.74c        | $\frac{45}{32}$<br>590.22c        | $\frac{729}{512}$<br>611.73c        |
| <b>SOL</b>   | $\frac{1024}{729}$<br>588.27c   | $\frac{64}{45}$<br>609.78c    | $\frac{56}{39}$<br>626.34c    | $\frac{352}{243}$<br>641.54c    | $\frac{512}{351}$<br>653.61c     | $\frac{119}{81}$<br>665.96c   | $\frac{40}{27}$<br>680.45c     | $\frac{3}{2}$<br>701.96c      | $\frac{243}{160}$<br>723.46c      | $\frac{5103}{3328}$<br>740.03c      | $\frac{99}{64}$<br>755.23c      | $\frac{2187}{1404}$<br>767.29c   | $\frac{3213}{2048}$<br>779.65c      | $\frac{405}{256}$<br>794.13c      | $\frac{6561}{4096}$<br>815.64c      |
| <b>LA</b>    | $\frac{128}{81}$<br>792.18c     | $\frac{8}{5}$<br>813.69c      | $\frac{21}{13}$<br>830.25c    | $\frac{44}{27}$<br>845.45c      | $\frac{64}{39}$<br>857.52c       | $\frac{119}{72}$<br>869.87c   | $\frac{5}{3}$<br>884.36c       | $\frac{27}{16}$<br>905.87c    | $\frac{2187}{1280}$<br>927.37c    | $\frac{45927}{26624}$<br>943.94c    | $\frac{891}{512}$<br>959.14c    | $\frac{19683}{11232}$<br>971.20c | $\frac{28917}{16384}$<br>983.56c    | $\frac{3645}{2048}$<br>998.04c    | $\frac{59049}{32768}$<br>1019.55c   |
| <b>SI</b>    | $\frac{16}{9}$<br>996.09c       | $\frac{9}{5}$<br>1017.6c      | $\frac{189}{104}$<br>1034.16c | $\frac{11}{6}$<br>1049.36c      | $\frac{24}{13}$<br>1061.43c      | $\frac{119}{64}$<br>1073.78c  | $\frac{15}{8}$<br>1088.27c     | $\frac{243}{128}$<br>1109.78c | $\frac{19683}{10240}$<br>1131.28c | $\frac{413343}{212992}$<br>1147.85c | $\frac{8019}{4096}$<br>1163.05c | $\frac{6561}{3328}$<br>1175.11c  | $\frac{260253}{131072}$<br>1187.46c | $\frac{32805}{16384}$<br>1201.95c | $\frac{531441}{262144}$<br>1223.46c |
| <b>DO</b>    | $\frac{4096}{2187}$<br>1086.31c | $\frac{256}{135}$<br>1107.82c | $\frac{672}{351}$<br>1124.39c | $\frac{4224}{2187}$<br>1139.59c | $\frac{12288}{6318}$<br>1151.65c | $\frac{476}{243}$<br>1164.01c | $\frac{160}{81}$<br>1178.49c   | $\frac{2}{1}$<br>1200c        | $\frac{81}{40}$<br>1221.51c       | $\frac{1701}{832}$<br>1238.07c      | $\frac{33}{16}$<br>1253.27c     | $\frac{27}{13}$<br>1265.34c      | $\frac{243}{116}$<br>1280.2c        | $\frac{135}{64}$<br>1292.18c      | $\frac{2187}{1024}$<br>1313.69c     |