

Essential information on the two best well-temperaments  
**A** Thomas Young's #1 (1799) and **B** Antonio Valloti (1697-1780):

\* Table 1: Deviation of Pitch from the norm of standard 12-Equal-Temperament for each note of the scale:

Pitch	C	G	D	A	E	B	F#	Db	Ab	Eb	Bb	F
<b>A</b> c	0	-1.961	-3.922	-5.882	-7.843	-7.843	-7.843	-5.882	-3.922	-1.961	0	0
s	0	-1	-2	-3	-4	-4	-4	-3	-2	-1	0	0
<b>B</b> c	0	-1.961	-3.922	-5.882	-7.843	-9.804	-7.843	-5.882	-3.922	-1.961	0	+1.961
s	0	-1	-2	-3	-4	-5	-4	-3	-2	-1	0	+1

Deviation is measured sharp (+) or flat (-) using two relevant 'yardsticks': Cents (c), derived from 1200-E.T. (Most modern tuning devices are calibrated in cents); and Schismas (s), a much more 'transparent' measure, consistent with baroque science. One schisma is one UNIT of TEMPERAMENT - the amount applied to achieve the musical Fifth of equal temperament. 'C' is reference pitch; hence it always has '0' deviation.

\* Table 2: Deviation of the consonant intervals from the norms of Just Intonation, measured in schismas:

	C	G	D	A	E	B	F#	Db	Ab	Eb	Bb	F
<b>A</b>												
5th	-2	-2	-2	-2	-1	-1	0	0	0	0	-1	-1
M3rd	+3	+4	+5	+7	+9	+10	+11	+10	+9	+7	+5	+4
m3rd	-9	-7	-6	-5	-5	-6	-7	-9	-10	-11	-11	-10
<b>B</b>												
5th	-2	-2	-2	-2	-2	0	0	0	0	0	0	-2
M3rd	+3	+3	+5	+7	+9	+11	+11	+11	+9	+7	+5	+3
m3rd	-9	-7	-5	-5	-5	-5	-7	-9	-11	-11	-11	-11
Equal-Temperament												
5th	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
M3rd	+7	+7	+7	+7	+7	+7	+7	+7	+7	+7	+7	+7
m3rd	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8

How to read this chart: Looking at the upper left corner, the chart indicates that the interval of a musical fifth built upward from C (i.e. C-G) is flat of Just (ratio 3:2) by two schismas. Directly below that, the interval of a major third built upwards from C (i.e. C-E) is sharp of Just (ratio 5:4) by three schismas. The third line shows deviation from the Just minor third (ratio 6:5). For the deviations of the interval inversions, simply exchange the direction sign. For example, the musical Fourth G-C is altered sharp by two schismas, and this is derived from the alteration of the Fifth C-G. The upper two lines read together show the character of the major triad built on that pitch; the first and third line together - the minor triad. The table for 12-E.T. is included for comparison. The chart shows the perfect balance and 'orderly' progression between the 'good' keys and the 'bad' keys - the 'coloration' of each key.