

**J.S. Bach WTC Tuning Script: 1/18thPC Interpretation
Interval Beat Rates @A=415 in Beats per Second and Beats per Minute**

c	c#	d	d#	e	f	f#	g	g#	a	a#	b	c ¹	c ¹ #	d ¹	d ¹ #	e ¹	f ¹	f ¹ #	g ¹
-0.84/50								+1.68/100				-1.68/100							
		-0.30/18					+1.18/71												
		-0.94/56					+1.88/113												
		-0.33/20					+0.66/40												
		0					0												
+1.12/67			-1.12/67					+2.24/134											
		0					0				0								
		+1.25/75					-1.25/75				+2.51/151								
		+0.44/26					-0.44/26												
+2.10/126		+1.40/84					-1.40/84												
		+6.69					0				0								
		+5.50					0				0								
-6.96		+5.28					+5.25				+12.78		+10.57						
		-9.70					+9.11				+8.54		+4.20						
		-4.68					+2.8/168				+10.60		+13.38						
		-9.59					+8.92				+6.25		+11.00						
		-5.25					-8.75				-13.38		-19.41						
		-10.77					-13.66				-11.00		-9.37						
		-10.60					-7.01				-13.92		-19.18						

F -120 C -120 G -120 D -120 A -120 E 0 B 0 F# 0 C# -40 G# -40 D# -40 A# 0 F

Frequencies

c	123.799
c#	131.012
d	138.646
d#	147.167
e	155.274
f	165.438
f#	174.683
g	185.279
g#	196.370
a	207.500
a#	220.583
b	232.911*
c ¹	247.598
c ¹ #	262.025
d ¹	277.292
d ¹ #	294.333
e ¹	310.548
f ¹ 3	330.877
f ¹ #	349.366
g ¹	370.559

*same freq. as in ET

Useful beat ratios

<u>One to One</u>
(d# - g) = (e - g)**
<u>One to Two</u>
1 (e - a) = 2 (f - a)
<u>Two to Three</u>
2 (e - a) = 3 (c - e)
2 (f - c ¹) = 3 (g - c ¹)
2 (c - g) = 3 (d - g)
2 (g - d ¹) = 3 (a - d ¹)
2 (d - a) = 3 (e - a)
2 (c# - g#) = 3 (d# - g#)

A simple tuning series (from c to c¹)

a	from a ¹ @ 415
e	(e - a) @ 1.40/84
b	pure from e
f#	pure from B
c# & c¹#	pure from f#
d	2 (d - a) = 3 (e - a)
d¹	pure from d
g	2 (g - d ¹) = 3 (a - d ¹)
c	2 (e - a) = 3 (c - e)
OR	2 (c - g) = 3 (d - g)
c¹	pure from c
f	1 (f - a) = 2 (e - a)
OR	2 (f - c ¹) = 3 (g - c ¹)
a#	pure from f
g#	c# - g# barely beating
Test	(e - g#) slightly > (g# - c ¹)
d#	g# - d# barely beating
Test	(d# - g) = (e - g) or (g - b)**

**equal within 0.10 beats per second

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J.S. Bach WTC Tuning Script: "Bach-Lehman" 1/12thPC Interpretation

Interval Beat Rates @A=415 in Beats per Second and Beats per Minute

c	c#	d	d#	e	f	f#	g	g#	a	a#	b	c ¹	c ¹ #	d ¹	d ¹ #	e ¹	f ¹	f ¹ #	g ¹
-0.84/50								+1.68/100			-1.68/100								
		-0.44/26				+0.89/53													
		-0.94/56				+1.88/113													
		-0.50/30				+1.00/60													
		0				0													
+1.12/67			-1.12/67					+2.24/134											
0			0					0											
+1.25/75			-1.25/75					+2.51/151											
+0.66/40			-0.66/40																
+2.10/126		+1.40/84				-1.40/84													
+6.69		-0.75/45				+0.75/45													
+5.50		0				0													
-7.51		+5.84				-5.25				+11.90		+11.67							
-9.70		+8.82				+8.91				+4.20									
		-4.68		+2.8/168		+10.60				+13.38									
		-8.92		+7.93		+7.49				+11.00									
		5.25		-10.00		-11.89		-19.41		-10.49									
		-11.15		-13.23		-11.00		-9.37											
		-10.60		-7.01		-15.02		-17.85											

F -120 C -120 G -120 D -120 A -120 E 0 B 0 F# 0 C# -60 G# -60 D# -60 A# +60 F

Frequencies

c	123.799
c#	131.012
d	138.646
d#	147.056
e	155.274
f	165.438
f#	174.683
g	185.279
g#	196.297
a	207.500
a#	220.336
b	232.911*
c ¹	247.598
c ¹ #	262.025
d ¹	277.292
d ¹ #	294.113
e ¹	310.548
f ¹	330.877
f ¹ #	349.366
g ¹	370.559

*same freq. as in ET

Useful beat ratios

<u>One to One</u>
(e - g#) = (g# - c ¹)**
<u>One to Two</u>
1 (e - a) = 2 (f - a)
<u>Two to Three</u>
2 (e - a) = 3 (c - e)
2 (f - c ¹) = 3 (g - c ¹)
2 (c - g) = 3 (d - g)
2 (g - d ¹) = 3 (a - d ¹)
2 (d - a) = 3 (e - a)
2 (c# - g#) = 3 (d# - g#)
2 (d# - a#) = 3 (f - a#)
2 (a# - f ¹) = 3 (c ¹ - f ¹)

**equal within 0.10 beats per second

A simple tuning series (from c to d¹)

a	from a ¹ @ 415
e	(e - a) @ 1.40/84
b	pure from e
f#	pure from B
c# & c¹#	pure from f#
d	2 (d - a) = 3 (e - a)
d¹	pure from d
g	2 (g - d ¹) = 3 (a - d ¹)
c	2 (e - a) = 3 (c - e)
OR	2 (c - g) = 3 (d - g)
c¹	pure from c
f	2 (f - a) = 1 (e - a)
OR	2 (f - c ¹) = 3 (g - c ¹)
a#	1 (d - g) = 3 (d - a#)
g#	(e - g#) = (g# - c ¹)
d#	(g - d ¹ #) = (b - d ¹ #)

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**J.S. Bach WTC Tuning Script: 1/18thPC Interpretation
Interval Beat Rates @A=440 in Beats per Second and Beats per Minute**

c	c#	d	d#	e	f	f#	g	g#	a	a#	b	c ¹	c ¹ #	d ¹	d ¹ #	e ¹	f ¹	f ¹ #	g ¹
-0.89/53								+1.78/107				-1.78/107							
		-0.31/19					+0.62/38												
		-0.99/59					+1.99/119												
		-0.35/21					+0.71/42												
		0					0												
+1.19/71			-1.19/71					+2.37/142											
		0					0				0								
		+1.33/80					-1.33/80				+2.66/160								
		+0.47/28					-0.47/28												
+2.23/134		+1.49/89					-1.49/89												
		+7.10					0				0								
		+5.83					0				0								
-7.38		+5.60					+5.56				+13.56		+11.20						
		-10.29		+9.67			+9.05			+4.46									
		-4.97		+2.98/179			+11.24			+14.19									
		-10.17		+9.47			+6.62			+11.67									
		-5.56		-9.28		-14.19		-20.58		-11.12									
		-11.43		-14.50		-11.67		-9.93											
		-11.24		-7.43		-14.76		-20.34											

F -120 C -120 G -120 D -120 A -120 E 0 B 0 F# 0 C# -40 G# -40 D# -40 A# 0 F

Frequencies

c	131.257
c#	138.905
d	146.996
d#	156.033
e	164.628
f	175.405
f#	185.206
g	196.441
g#	208.201
a	220.00
a#	233.873
b	246.942*
c ¹	262.513
c ¹ #	277.809
d ¹	293.997
d ¹ #	312.066
e ¹	329.256
f ¹ 3	350.809
f ¹ #	370.412
g ¹	392.882

*same freq. as in ET

Some useful beat ratios

<u>One to One</u>
(d# - g) = (e - g)**
<u>One to Two</u>
1 (e - a) = 2 (f - a)
<u>Two to Three</u>
2 (e - a) = 3 (c - e)
2 (f - c ¹) = 3 (g - c ¹)
2 (c - g) = 3 (d - g)
2 (g - d ¹) = 3 (a - d ¹)
2 (d - a) = 3 (e - a)
2 (c# - g#) = 3 (d# - g#)

A simple tuning series (from c to d¹)

a	from a ¹ @ 440
e	(e - a) @ 1.49/89
b	pure from e
f#	pure from B
c# & c¹#	pure from f#
d	(d - a) = 2/3 (e - a)
d¹	pure from d
g	2 (g - d ¹) = 3 (a - d ¹)
c	2 (e - a) = 3 (c - e)
OR	2 (c - g) = 3 (d - g)
c¹	pure from c
f	1 (f - a) = 2 (e - a)
OR	2 (f - c ¹) = 3 (g - c ¹)
a#	pure from f
g#	c# - g# barely beating
Test	(e - g#) slightly > (g# - c ¹)
d#	g# - d# barely beating
Test	(d# - g) = (e - g) or (g - b)**

**equal within 0.10 beats per second

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Interval Beat Rates @A=440 in Beats per Second and Beats per Minute

c	c#	d	d#	e	f	f#	g	g#	a	a#	b	c ¹	c ¹ #	d ¹	d ¹ #	e ¹	f ¹	f ¹ #	g ¹
				-0.89/53				+1.78/107				-1.78/107							
		-0.47/28				+0.94/56													
		-0.99/59				+1.99/119													
		-0.53/32				+1.06/64													
		0				0													
				+1.19/71				-1.19/71				+2.37/142							
		0				0													
		+1.33/80				-1.33/80				+2.66/160									
		+0.70/42				-0.70/42													
		+2.23/134				+1.49/89				-1.49/89									
		+7.10				-0.79/47				+0.79/47									
		+5.83				0				0									
		-7.96				+6.19				-5.56				+12.61		+12.37			
		-10.29				+9.35				+9.44				+4.46					
		-4.97				+2.98/179				+11.24				+14.19					
		-9.46				+8.40				+7.94				+11.67					
		5.56				-10.60				-12.61				-20.58		-11.12			
		-11.82				-14.02				-11.67				-9.93					
		-11.24				-7.43				-15.93				-18.92					

F -120 C -120 G -120 D -120 A -120 E 0 B 0 F# 0 C# -60 G# -60 D# -60 A# +60 F

Frequencies

c	131.257
c#	138.905
d	146.996
d#	155.915
e	164.628
f	175.405
f#	185.206
g	196.441
g#	208.122
a	220.000
a#	233.609
b	246.942*
c ¹	262.513
c ¹ #	277.809
d ¹	293.997
d ¹ #	311.830
e ¹	329.256
f ¹	350.809
f ¹ #	370.412
g ¹	392.882

*same freq. as in ET

Some useful beat ratios

<u>One to One</u>
(e - g#) = (g# - c ¹)**
<u>One to Two</u>
1 (e - a) = 2 (f - a)
<u>One to Three</u>
2 (e - a) = 3 (c - e)
1 (d - g) = 3 (d - a#)
<u>Two to Three</u>
2 (a# - f ¹) = 3 (c ¹ - f ¹)
2 (f - c ¹) = 3 (g - c ¹)
2 (c - g) = 3 (d - g)
2 (g - d ¹) = 3 (a - d ¹)
2 (d - a) = 3 (e - a)
2 (c# - g#) = 3 (d# - g#)
2 (d# - a#) = 3 (f - a#)

**equal within 0.10 beats per second

A simple tuning series (from c to d¹)

a	from a ¹ @ 440
e	(e - a) @ 1.49/89
b	pure from e
f#	pure from B
c# & c¹#	pure from f#
d	2 (d - a) = 3 (e - a)
d¹	pure from d
g	2 (g - d ¹) = 3 (a - d ¹)
c	2 (e - a) = 3 (c - e)
OR	2 (c - g) = 3 (d - g)
c¹	pure from c
f	1 (f - a) = 2 (e - a)
OR	2 (f - c ¹) = 3 (g - c ¹)
a#	1 (d - g) = 3 (d - a#)
OR	2 (a# - f ¹) = 3 (c ¹ - f ¹)
d#	(g - d ¹ #) = (b - d ¹ #)
g#	(e - g#) = (g# - c ¹)

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