









































technical information for the bells

Bell Number	Bell Type	Ratio	Frequency	Pitch	Pitch variation	Second Frequency	Third frequency	Midi-map	Midi note
1	Harmonic	1	73	D2	0			C0	24
2	Harmonic	3/2	110	A2	+2			C#0	25
3	Harmonic	1	147	D3	0			D0	26
4	Harmonic	9/8	165	E3	+3.9			D#0	27
5	Harmonic	5/4	183	F#3	-13.7			E0	28
6	Harmonic	3/2	220	A3	+2			F0	29
7	Harmonic	7/4	257	C3	-31.2			F#0	30
8	3 tone	1, 4/3, 5/3	293	D4, G4, B4	0, -2, -15.6	391	489	G0	31
9	2 tone	1, 8/5	293	D4, A#4	0, +13.7	469		G#0	32
10	2 tone	1, 7/4	293	D4, C5	0, -31.2	513		A0	33
11	2 tone	1, 9/5	293	D4, C5	0, +17.6	528		A#0	34
12	2 tone	1, 6/5	293	D4, F5	0, +15.6	704		B0	35
13	2 tone	1, 5/4	293	D4, F#5	0, -13.7	733		C1	36
14	2 tone	1, 7/5	293	D4, G#5	0, -17.5	821		C#1	37
15	Harmonic	1	293	D4	0			D1	38
16	Harmonic	9/8	330	E4	+3.9			D#1	39
17	Harmonic	6/5	352	F4	+15.6			E1	40
18	Harmonic	5/4	367	F#4	-13.7			F1	41
19	Harmonic	4/3	391	G4	-2			F#1	42
20	Harmonic	7/5	410	G#4	-17.5			G1	43
21	Harmonic	3/2	440	A4	+2			G#1	44
22	Harmonic	8/5	469	A#4	+13.7			A1	45
23	Harmonic	5/3	489	B4	-15.6			A#1	46
24	Harmonic	7/4	513	C4	-31.2			B1	47
25	Harmonic	9/5	528	C4	+17.6			C2	48
26	Harmonic	15/8	550	C#4	-11.7			C#2	49
27	Harmonic	1	586	D5	0			D2	50
28	Harmonic	9/8	660	E5	+3.9			D#2	51
29	Harmonic	6/5	704	F4	+15.6			E2	52
30	Harmonic	5/4	733	F#5	-13.7			F2	53
31	Harmonic	4/3	782	G5	-2			F#2	54
32	Harmonic	7/5	821	G#5	-17.5			G2	55
33	Harmonic	3/2	880	A5	+2			G#2	56
34	Harmonic	8/5	938	A#5	+13.7			A2	57
35	Harmonic	5/3	977	B5	-15.6			A#2	58
36	Harmonic	7/4	1026	C5	-31.2			B2	59
37	Harmonic	9/5	1056	C5	+17.6			C3	60
38	Harmonic	15/8	1100	C#5	-11.7			C#3	61
39	Harmonic	1	1173	D6	0			D3	62




















federation bells

technical information for the bells

 01 harmonic  pitch D2 freq 73	 02 harmonic  pitch A2 var +2 freq 110	 03 harmonic  pitch D3 freq 147	 04 harmonic  pitch E3 var +3.9 freq 165
 05 harmonic  pitch F#3 var -13.7 freq 183	 06 harmonic  pitch A3 var +2 freq 220	 07 harmonic  pitch C3 var -31.2 freq 257	 08 3 tone  pitch D4 G4 B4 var -2 -15.6 freq 293 391 489
 09 2 tone  pitch D4 A#4 var +13.7 freq 293 469	 10 2 tone  pitch D4 C5 var -31.2 freq 293 513	 11 2 tone  pitch D4 C5 var +126 freq 293 528	 12 2 tone  pitch D4 F5 var +15.6 freq 293 704
 13 2 tone  pitch D4 F#5 var -13.7 freq 293 733	 14 2 tone  pitch D4 G#5 var +125 freq 293 821	 15 harmonic  pitch D4 freq 293	 16 harmonic  pitch E4 var +3.9 freq 330
 17 harmonic  pitch F5 var +15.6 freq 352	 18 harmonic  pitch F#4 var -13.7 freq 367	 19 harmonic  pitch G4 var -2 freq 391	 20 harmonic  pitch G#4 var -12.5 freq 410

federation bells

technical information for the bells

 <p>21 harmonic</p> <table border="1"><tr><td>pitch</td><td>A4</td></tr><tr><td>var</td><td>+2</td></tr><tr><td>freq</td><td>440</td></tr></table>	pitch	A4	var	+2	freq	440	 <p>22 harmonic</p> <table border="1"><tr><td>pitch</td><td>A#4</td></tr><tr><td>var</td><td>+13.7</td></tr><tr><td>freq</td><td>469</td></tr></table>	pitch	A#4	var	+13.7	freq	469	 <p>23 harmonic</p> <table border="1"><tr><td>pitch</td><td>B4</td></tr><tr><td>var</td><td>-15.6</td></tr><tr><td>freq</td><td>489</td></tr></table>	pitch	B4	var	-15.6	freq	489	 <p>24 harmonic</p> <table border="1"><tr><td>pitch</td><td>C4</td></tr><tr><td>var</td><td>+12.6</td></tr><tr><td>freq</td><td>528</td></tr></table>	pitch	C4	var	+12.6	freq	528
pitch	A4																										
var	+2																										
freq	440																										
pitch	A#4																										
var	+13.7																										
freq	469																										
pitch	B4																										
var	-15.6																										
freq	489																										
pitch	C4																										
var	+12.6																										
freq	528																										
 <p>25 harmonic</p> <table border="1"><tr><td>pitch</td><td>C4</td></tr><tr><td>var</td><td>+12.6</td></tr><tr><td>freq</td><td>528</td></tr></table>	pitch	C4	var	+12.6	freq	528	 <p>26 harmonic</p> <table border="1"><tr><td>pitch</td><td>C#4</td></tr><tr><td>var</td><td>-11.7</td></tr><tr><td>freq</td><td>550</td></tr></table>	pitch	C#4	var	-11.7	freq	550	 <p>27 harmonic</p> <table border="1"><tr><td>pitch</td><td>D5</td></tr><tr><td>freq</td><td>586</td></tr></table>	pitch	D5	freq	586	 <p>28 harmonic</p> <table border="1"><tr><td>pitch</td><td>E5</td></tr><tr><td>var</td><td>+3.9</td></tr><tr><td>freq</td><td>660</td></tr></table>	pitch	E5	var	+3.9	freq	660		
pitch	C4																										
var	+12.6																										
freq	528																										
pitch	C#4																										
var	-11.7																										
freq	550																										
pitch	D5																										
freq	586																										
pitch	E5																										
var	+3.9																										
freq	660																										
 <p>29 harmonic</p> <table border="1"><tr><td>pitch</td><td>F5</td></tr><tr><td>var</td><td>+15.6</td></tr><tr><td>freq</td><td>704</td></tr></table>	pitch	F5	var	+15.6	freq	704	 <p>30 harmonic</p> <table border="1"><tr><td>pitch</td><td>F#5</td></tr><tr><td>var</td><td>-13.7</td></tr><tr><td>freq</td><td>733</td></tr></table>	pitch	F#5	var	-13.7	freq	733	 <p>31 harmonic</p> <table border="1"><tr><td>pitch</td><td>G5</td></tr><tr><td>var</td><td>-2</td></tr><tr><td>freq</td><td>782</td></tr></table>	pitch	G5	var	-2	freq	782	 <p>32 harmonic</p> <table border="1"><tr><td>pitch</td><td>G#5</td></tr><tr><td>var</td><td>-17.5</td></tr><tr><td>freq</td><td>821</td></tr></table>	pitch	G#5	var	-17.5	freq	821
pitch	F5																										
var	+15.6																										
freq	704																										
pitch	F#5																										
var	-13.7																										
freq	733																										
pitch	G5																										
var	-2																										
freq	782																										
pitch	G#5																										
var	-17.5																										
freq	821																										
 <p>33 harmonic</p> <table border="1"><tr><td>pitch</td><td>A5</td></tr><tr><td>var</td><td>+2</td></tr><tr><td>freq</td><td>880</td></tr></table>	pitch	A5	var	+2	freq	880	 <p>34 harmonic</p> <table border="1"><tr><td>pitch</td><td>A#5</td></tr><tr><td>var</td><td>+13.7</td></tr><tr><td>freq</td><td>938</td></tr></table>	pitch	A#5	var	+13.7	freq	938	 <p>35 harmonic</p> <table border="1"><tr><td>pitch</td><td>B5</td></tr><tr><td>var</td><td>-15.6</td></tr><tr><td>freq</td><td>977</td></tr></table>	pitch	B5	var	-15.6	freq	977	 <p>36 harmonic</p> <table border="1"><tr><td>pitch</td><td>C5</td></tr><tr><td>var</td><td>-31.2</td></tr><tr><td>freq</td><td>1026</td></tr></table>	pitch	C5	var	-31.2	freq	1026
pitch	A5																										
var	+2																										
freq	880																										
pitch	A#5																										
var	+13.7																										
freq	938																										
pitch	B5																										
var	-15.6																										
freq	977																										
pitch	C5																										
var	-31.2																										
freq	1026																										
 <p>37 harmonic</p> <table border="1"><tr><td>pitch</td><td>C5</td></tr><tr><td>var</td><td>+12.6</td></tr><tr><td>freq</td><td>1056</td></tr></table>	pitch	C5	var	+12.6	freq	1056	 <p>38 harmonic</p> <table border="1"><tr><td>pitch</td><td>C#5</td></tr><tr><td>var</td><td>-11.7</td></tr><tr><td>freq</td><td>1100</td></tr></table>	pitch	C#5	var	-11.7	freq	1100	 <p>39 harmonic</p> <table border="1"><tr><td>pitch</td><td>D6</td></tr><tr><td>freq</td><td>1173</td></tr></table>	pitch	D6	freq	1173									
pitch	C5																										
var	+12.6																										
freq	1056																										
pitch	C#5																										
var	-11.7																										
freq	1100																										
pitch	D6																										
freq	1173																										