

Physics of Music - Notes

Frequencies for equal-tempered scale, A₄ = 440 Hz

Other tuning choices, A₄ =

[432](#) [434](#) [436](#) [438](#) 440 [442](#) [444](#) [446](#)

Speed of Sound = 345 m/s = 1130 ft/s = 770 miles/hr

[More about Speed of Sound](#)

("Middle C" is C₄)

Note	Frequency (Hz)	Wavelength (cm)
C ₀	16.35	2109.89
C [#] ₀ /D ^b ₀	17.32	1991.47
D ₀	18.35	1879.69
D [#] ₀ /E ^b ₀	19.45	1774.20
E ₀	20.60	1674.62
F ₀	21.83	1580.63
F [#] ₀ /G ^b ₀	23.12	1491.91
G ₀	24.50	1408.18
G [#] ₀ /A ^b ₀	25.96	1329.14
A ₀	27.50	1254.55
A [#] ₀ /B ^b ₀	29.14	1184.13
B ₀	30.87	1117.67
C ₁	32.70	1054.94
C [#] ₁ /D ^b ₁	34.65	995.73
D ₁	36.71	939.85

D [#] ₁ /E ^b ₁	38.89	887.10
E ₁	41.20	837.31
F ₁	43.65	790.31
F [#] ₁ /G ^b ₁	46.25	745.96
G ₁	49.00	704.09
G [#] ₁ /A ^b ₁	51.91	664.57
A ₁	55.00	627.27
A [#] ₁ /B ^b ₁	58.27	592.07
B ₁	61.74	558.84
C ₂	65.41	527.47
C [#] ₂ /D ^b ₂	69.30	497.87
D ₂	73.42	469.92
D [#] ₂ /E ^b ₂	77.78	443.55
E ₂	82.41	418.65
F ₂	87.31	395.16
F [#] ₂ /G ^b ₂	92.50	372.98
G ₂	98.00	352.04
G [#] ₂ /A ^b ₂	103.83	332.29
A ₂	110.00	313.64
A [#] ₂ /B ^b ₂	116.54	296.03
B ₂	123.47	279.42
C ₃	130.81	263.74
C [#] ₃ /D ^b ₃	138.59	248.93
D ₃	146.83	234.96
D [#] ₃ /E ^b ₃	155.56	221.77
E ₃	164.81	209.33
F ₃	174.61	197.58

$F^{\#}_3/G^b_3$	185.00	186.49
G_3	196.00	176.02
$G^{\#}_3/A^b_3$	207.65	166.14
A_3	220.00	156.82
$A^{\#}_3/B^b_3$	233.08	148.02
B_3	246.94	139.71
C_4	261.63	131.87
$C^{\#}_4/D^b_4$	277.18	124.47
D_4	293.66	117.48
$D^{\#}_4/E^b_4$	311.13	110.89
E_4	329.63	104.66
F_4	349.23	98.79
$F^{\#}_4/G^b_4$	369.99	93.24
G_4	392.00	88.01
$G^{\#}_4/A^b_4$	415.30	83.07
A_4	440.00	78.41
$A^{\#}_4/B^b_4$	466.16	74.01
B_4	493.88	69.85
C_5	523.25	65.93
$C^{\#}_5/D^b_5$	554.37	62.23
D_5	587.33	58.74
$D^{\#}_5/E^b_5$	622.25	55.44
E_5	659.25	52.33
F_5	698.46	49.39
$F^{\#}_5/G^b_5$	739.99	46.62
G_5	783.99	44.01
$G^{\#}_5/A^b_5$	830.61	41.54

A ₅	880.00	39.20
A [#] ₅ /B ^b ₅	932.33	37.00
B ₅	987.77	34.93
C ₆	1046.50	32.97
C [#] ₆ /D ^b ₆	1108.73	31.12
D ₆	1174.66	29.37
D [#] ₆ /E ^b ₆	1244.51	27.72
E ₆	1318.51	26.17
F ₆	1396.91	24.70
F [#] ₆ /G ^b ₆	1479.98	23.31
G ₆	1567.98	22.00
G [#] ₆ /A ^b ₆	1661.22	20.77
A ₆	1760.00	19.60
A [#] ₆ /B ^b ₆	1864.66	18.50
B ₆	1975.53	17.46
C ₇	2093.00	16.48
C [#] ₇ /D ^b ₇	2217.46	15.56
D ₇	2349.32	14.69
D [#] ₇ /E ^b ₇	2489.02	13.86
E ₇	2637.02	13.08
F ₇	2793.83	12.35
F [#] ₇ /G ^b ₇	2959.96	11.66
G ₇	3135.96	11.00
G [#] ₇ /A ^b ₇	3322.44	10.38
A ₇	3520.00	9.80
A [#] ₇ /B ^b ₇	3729.31	9.25
B ₇	3951.07	8.73

C ₈	4186.01	8.24
C [#] ₈ /D ^b ₈	4434.92	7.78
D ₈	4698.63	7.34
D [#] ₈ /E ^b ₈	4978.03	6.93
E ₈	5274.04	6.54
F ₈	5587.65	6.17
F [#] ₈ /G ^b ₈	5919.91	5.83
G ₈	6271.93	5.50
G [#] ₈ /A ^b ₈	6644.88	5.19
A ₈	7040.00	4.90
A [#] ₈ /B ^b ₈	7458.62	4.63
B ₈	7902.13	4.37

(To convert lengths in cm to inches, divide by 2.54)

[More information on the equal tempered scale](#)

[Equations used for this table](#)

Questions/Comments to: suits@mtu.edu

There are no pop-ups or ads of any kind on these pages. If you are seeing them, they are being added by a third party without the consent of the author.

[To Physics of Music Notes](#)

[To MTU Physics Home](#)

[Copyright Info](#)