

BYTES, NOTES, FREQUENCIES, and PITCHES

| Binary | Note # | Note | Frequency | Binary | Note # | Note | Frequency | Binary | Note # | Note | Frequency | Binary | Note # | Note | Frequency |
|----------|--------|------|-----------|----------|-------------|------|-----------|----------|--------|------|-----------|----------|--------|------|-----------|
| 00000000 | 0 | C-2 | 8.176 | 00101000 | 40 | E1 | 82.407 | 01010000 | 80 | G#4 | 830.609 | 01111000 | 120 | C8 | 8,372.02 |
| 00000001 | 1 | C#-2 | 8.662 | 00101001 | 41 | F1 | 87.30717 | 01010001 | 81 | A4 | 880 | 01111001 | 121 | C#8 | 8,869.84 |
| 00000010 | 2 | D-2 | 9.177 | 00101010 | 42 | F#1 | 92.49872 | 01010010 | 82 | A#4 | 932.327 | 01111010 | 122 | D8 | 9,397.27 |
| 00000011 | 3 | D#-2 | 9.723 | 00101011 | 43 | G1 | 97.99898 | 01010011 | 83 | B4 | 987.766 | 01111011 | 123 | D#8 | 9,956.06 |
| 00000100 | 4 | E-2 | 10.301 | 00101100 | 44 | G#1 | 103.8263 | 01010100 | 84 | C5 | 1046.5 | 01111100 | 124 | E8 | 10,548.08 |
| 00000101 | 5 | F-2 | 10.913 | 00101101 | 45 | A1 | 110.0001 | 01010101 | 85 | C#5 | 1108.73 | 01111101 | 125 | F8 | 11,175.30 |
| 00000110 | 6 | F#-2 | 11.562 | 00101110 | 46 | A#1 | 116.5411 | 01010110 | 86 | D5 | 1174.66 | 01111110 | 126 | F#8 | 11,839.82 |
| 00000111 | 7 | G-2 | 12.25 | 00101111 | 47 | B1 | 123.471 | 01010111 | 87 | D#5 | 1244.51 | 01111111 | 127 | G8 | 12,543.85 |
| 00001000 | 8 | G#-2 | 12.978 | 00110000 | 48 | C2 | 130.8129 | 01011000 | 88 | E5 | 1318.51 | | | | |
| 00001001 | 9 | A-2 | 13.75 | 00110001 | 49 | C#2 | 138.5915 | 01011001 | 89 | F5 | 1396.91 | | | | |
| 00001010 | 10 | A#-2 | 14.568 | 00110010 | 50 | D2 | 146.8325 | 01011010 | 90 | F#5 | 1479.98 | | | | |
| 00001011 | 11 | B-2 | 15.434 | 00110011 | 51 | D#2 | 155.5636 | 01011011 | 91 | G5 | 1567.98 | | | | |
| 00001100 | 12 | C-1 | 16.3517 | 00110100 | 52 | E2 | 164.8139 | 01011100 | 92 | G#5 | 1661.22 | | | | |
| 00001101 | 13 | C#-1 | 17.3241 | 00110101 | 53 | F2 | 174.6143 | 01011101 | 93 | A5 | 1760 | | | | |
| 00001110 | 14 | D-1 | 18.3542 | 00110110 | 54 | F#2 | 184.9974 | 01011110 | 94 | A#5 | 1864.65 | | | | |
| 00001111 | 15 | D#-1 | 19.4456 | 00110111 | 55 | G2 | 195.9979 | 01011111 | 95 | B5 | 1975.53 | | | | |
| 00010000 | 16 | E-1 | 20.6019 | 00111000 | 56 | G#2 | 207.6525 | 01100000 | 96 | C6 | 2093 | | | | |
| 00010001 | 17 | F-1 | 21.8269 | 00111001 | 57 | A2 | 220.0002 | 01100001 | 97 | C#6 | 2217.46 | | | | |
| 00010010 | 18 | F#-1 | 23.1248 | 00111010 | 58 | A#2 | 233.0821 | 01100010 | 98 | D6 | 2349.32 | | | | |
| 00010011 | 19 | G-1 | 24.4998 | 00111011 | 59 | B2 | 246.9418 | 01100011 | 99 | D#6 | 2489.02 | | | | |
| 00010100 | 20 | G#-1 | 25.9567 | 00111100 | 60 (middle) | C3 | 261.6258 | 01100100 | 100 | E6 | 2637.02 | | | | |
| 00010101 | 21 | A-1 | 27.5001 | 00111101 | 61 | C#3 | 277.1828 | 01100101 | 101 | F6 | 2793.83 | | | | |
| 00010110 | 22 | A#-1 | 29.1353 | 00111110 | 62 | D3 | 293.665 | 01100110 | 102 | F#6 | 2959.95 | | | | |
| 00010111 | 23 | B-1 | 30.8678 | 00111111 | 63 | D#3 | 311.1272 | 01100111 | 103 | G6 | 3135.96 | | | | |
| 00011000 | 24 | C | 32.7033 | 01000000 | 64 | E3 | 329.6278 | 01101000 | 104 | G#6 | 3322.44 | | | | |
| 00011001 | 25 | C# | 34.6479 | 01000001 | 65 | F3 | 349.2284 | 01101001 | 105 | A6 | 3520 | | | | |
| 00011010 | 26 | D | 36.7082 | 01000010 | 66 | F#3 | 369.9946 | 01101010 | 106 | A#6 | 3729.31 | | | | |
| 00011011 | 27 | D# | 38.8909 | 01000011 | 67 | G3 | 391.9956 | 01101011 | 107 | B6 | 3951.07 | | | | |
| 00011100 | 28 | E | 41.2035 | 01000100 | 68 | G#3 | 415.3049 | 01101100 | 108 | C7 | 4186.01 | | | | |
| 00011101 | 29 | F | 43.6535 | 01000101 | 69 | A3 | 440.0002 | 01101101 | 109 | C#7 | 4434.92 | | | | |
| 00011110 | 30 | F# | 46.2493 | 01000110 | 70 | A#3 | 466.164 | 01101110 | 110 | D7 | 4698.64 | | | | |
| 00011111 | 31 | G | 48.9994 | 01000111 | 71 | B3 | 493.8835 | 01101111 | 111 | D#7 | 4978.03 | | | | |
| 00100000 | 32 | G# | 51.913 | 01001000 | 72 | C4 | 523.2513 | 01110000 | 112 | E7 | 5274.04 | | | | |
| 00100001 | 33 | A | 55 | 01001001 | 73 | C#4 | 554.3655 | 01110001 | 113 | F7 | 5587.65 | | | | |
| 00100010 | 34 | A# | 58.27 | 01001010 | 74 | D4 | 587.3297 | 01110010 | 114 | F#7 | 5919.91 | | | | |
| 00100011 | 35 | B | 61.7352 | 01001011 | 75 | D#4 | 622.2541 | 01110011 | 115 | G7 | 6271.93 | | | | |
| 00100100 | 36 | C1 | 65.4065 | 01001100 | 76 | E4 | 659.2553 | 01110100 | 116 | G#7 | 6644.88 | | | | |
| 00100101 | 37 | C#1 | 69.2961 | 01001101 | 77 | F4 | 698.4566 | 01110101 | 117 | A7 | 7040 | | | | |
| 00100110 | 38 | D1 | 73.417 | 01001110 | 78 | F#4 | 739.989 | 01110110 | 118 | A#7 | 7458.62 | | | | |
| 00100111 | 39 | D#1 | 77.783 | 01001111 | 79 | G4 | 783.991 | 01110111 | 119 | B7 | 7902.13 | | | | |

Finding note# on a keyboard
Find note numbers by remembering that middle C is #60. Then count up or down.

keyboard note ranges
A piano has 88 keys. Notice that MIDI allows notes above and below the notes of a piano. (some manufacturers differ in ranges)
88 note range = 21 through 108
76 note range = 29 through 103
61 note range = 36 through 96
49 note range = 36 through 84