

# Double Bass Natural Harmonics

This document lists the natural harmonics that are possible (up to the 11th partial) on each string of the 4-string double bass with C-extension. Pitches and fingerings are notated in 24-tone equal temperament with quarter tones. The sounding pitch is rounded to the nearest quarter tone, with the actual pitch given as a deviation in cents. The fingering, likewise, is given as the nearest quarter-tone, with the actual fingering given as a deviation in cents.

All of the pitches and fingerings given here are theoretical. Some fingerings may be very difficult to find, and the player may need to experiment with the different options. Also, some fingerings (particularly the lowest ones) may produce additional noise in the sound. It is recommended to use the highest fingering if you want a clear tone (incidentally, the highest fingering is identical to the sounding pitch).

C Extension

Sounding Pitch (8vb)

Fingered Node

2nd partial

3rd partial (+2c)

4th partial

5th partial (-14c)

+0c

+2c

+2c

-2c

+0c

-14c

-16c

-14c

-14c

6th partial (+2c)

7th partial (+19c)

+16c

+2c

+17c

-17c

+19c

+17c

+19c

+19c

8th partial

9th partial (+4c)

-19c

+14c

-2c

+4c

-15c

+19c

+4c

+4c

+4c

10th partial (-14c)

11th partial (+1c)

-18c

+17c

-16c

-14c

+15c

-3c

+1c

-18c

-1c

+15c

+1c

-1c

+1c

+1c

## E String

2nd partial      3rd partial (+2c)      4th partial      5th partial (-14c)      6th partial (+2c)

+0c      +2c      +2c      -2c      +0c      -14c      -16c      -14c      -14c      +16c      +2c

7th partial (+19c)      8th partial      9th partial (+4c)

+17c      -17c      +19c      +17c      +19c      +19c      -19c      +14c      -2c      +4c      -15c      +19c      +4c      +4c      +4c

10th partial (-14c)      11th partial (+1c)

-18c      +17c      -16c      -14c      +15c      -3c      +1c      -18c      -1c      +15c      +1c      -1c      +1c      +1c

## A String

2nd partial      3rd partial (+2c)      4th partial      5th partial (-14c)      6th partial (+2c)

+0c      +2c      +2c      -2c      +0c      -14c      -16c      -14c      -14c      +16c      +2c

7th partial (+19c)      8th partial      9th partial (+4c)

+17c      -17c      +19c      +17c      +19c      +19c      -19c      +14c      -2c      +4c      -15c      +19c      +4c      +4c      +4c

10th partial (-14c) 11th partial (+1c)

-18c +17c -16c -14c +15c -3c +1c -18c -1c +15c +1c -1c +1c +1c

D String

2nd partial 3rd partial (+2c) 4th partial 5th partial (-14c) 6th partial (+2c)

+0c +2c +2c -2c +0c -14c -16c -14c -14c +16c +2c

7th partial (+19c) 8th partial 9th partial (+4c)

+17c -17c +19c +17c +19c +19c -19c +14c -2c +4c -15c +19c +4c +4c +4c

10th partial (-14c) 11th partial (+1c)

-18c +17c -16c -14c +15c -3c +1c -18c -1c +15c +1c -1c +1c +1c

G String

2nd partial 3rd partial (+2c) 4th partial 5th partial (-14c) 6th partial (+2c)

+0c +2c +2c -2c +0c -14c -16c -14c -14c +16c +2c

8va ▮

7th partial (+19c)

8va ▮

8th partial

8va ▮

9th partial (+4c)

8va ▮

+17c -17c +19c +17c +19c +19c -19c +14c -2c +4c -15c +19c +4c +4c +4c

8va ▮

10th partial (-14c)

8va ▮

11th partial (+1c)

8va ▮

-18c +17c -16c -14c +15c -3c +1c -18c -1c +15c +1c -1c +1c +1c