

# Random Partial Version 3.1 (I-II th harmonic)

For Double Bass Quartet and Piano

Durata approx. 15 minutes

Håkon Thelin, 2021

This work explores the sonic differences between harmonic partials (just intonation) on the double bass and the well-tempered piano. The material consists of 44 different partials on the double bass, 11 on each string, which are combined with the piano's unison harmonious tones, sometimes creating pulsating interference tones of various intensity. The partials have been randomly chosen by a computer program until all partials are used.

Tunings:

Bass 1: G-Eflat-A-F

Bass 2: Aflat-D-Bflat-E

Bass 3: G-Dflat-A-Eflat

Bass 4: Gflat-D-Aflat-E

Tune the open strings with the piano's unison tones.

Random number series:

39, 13, 27, 9, 18, 21, 29, 14, 4, 3, 35, 28, 4, 8, 12, 1, 5, 7, 15, 28, 4, 20, 10, 12, 2, 39, 36, 17,  
29, 11, 24, 23, 42, 43, 12, 3, 1, 2, 29, 4, 20, 21, 26, 6, 33, 31, 5, 19, 41, 25, 17, 19, 15, 27, 6,  
18, 36, 4, 21, 40, 26, 14, 33, 25, 19, 9, 21, 9, 7, 15, 24, 10, 43, 25, 35, 37, 41, 17, 27, 28, 17,  
26, 29, 35, 2, 3, 33, 27, 42, 8, 15, 24, 16, 1, 1, 9, 22, 37, 18, 34, 33, 31, 6, 10, 3, 5, 41, 28, 34,  
20, 13, 2, 27, 27, 35, 13, 33, 20, 4, 10, 20, 28, 4, 12, 40, 12, 3, 20, 42, 29, 35, 10, 28, 15, 1, 16,  
35, 19, 18, 38, 41, 6, 4, 6, 44, 33, 27, 3, 26, 10, 40, 25, 21, 15, 18, 12, 29, 13, 17, 38, 26, 9, 30,  
1, 34, 44, 21, 38, 15, 30, 2, 32

String 1:

Partials I-II correspond with numbers 1-11

String 2:

Partials I-II correspond with numbers 12-22

String 3:

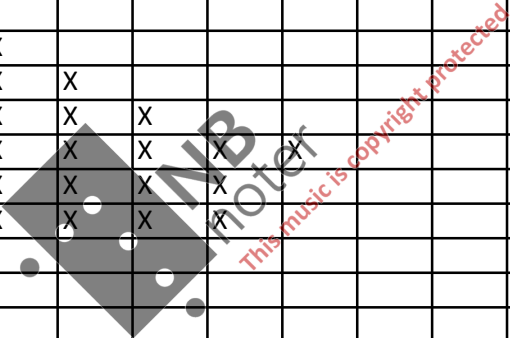
Partials I-II correspond with numbers 23-33

String 4:

Partials I-II correspond with numbers 34-44

**Number series: Appearances in piece:**

1	X	X	X	X	X	X					
2	X	X	X	X	X						
3	X	X	X	X	X	X					
4	X	X	X	X	X	X	X	X			
5	X	X	X								
6	X	X	X	X	X						
7	X	X									
8	X	X									
9	X	X	X	X	X						
10	X	X	X	X	X	X					
11	X										
12	X	X	X	X	X	X					
13	X	X	X	X							
14	X	X									
15	X	X	X	X	X	X	X				
16	X	X									
17	X	X	X	X	X						
18	X	X	X	X	X						
19	X	X	X	X							
20	X	X	X	X	X	X					
21	X	X	X	X	X						
22	X	X									
23	X										
24	X	X	X								
25	X	X	X	X							
26	X	X	X	X	X						
27	X	X	X	X	X	X					
28	X	X	X	X	X	X					
29	X	X	X	X	X	X					
30	X	X									
31	X	X									
32	X										
33	X	X	X	X	X	X					
34	X	X	X								
35	X	X	X	X	X	X					
36	X	X									
37	X	X									
38	X	X	X								
39	X	X									
40	X	X	X								
41	X	X	X	X							
42	X	X	X								
43	X	X									
44	X	X									



# Random Partial (I-IIth harmonic)

Version 3.1, Double bass Quartet and Piano

♩=54

Håkon Thelin, 2021

Contrabass 1  
Tuning: G-Eflat-A-F

Contrabass 2  
Tuning: Aflat-D-Bflat-E

Contrabass 3  
Tuning: G-Dflat-A-Eflat

Contrabass 4  
Tuning: Gflat-D-Aflat-E

Piano

Measures 1-10. Tempo: ♩=54. Key signature: one flat. Time signature: 4/4.

*ped.* Keep pedal depressed throughout the piece

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

Measures 11-20. Tempo: ♩=54. Key signature: one flat. Time signature: 4/4.

22

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

Chord symbols: +4, II/9, -14, I/10, II/1, IV/6, +2, IV/3, +2, I/2, III/7, -31, -49, I/11, III/2, II/6, III/1.

Detailed description: This system contains measures 22 through 32. It features four contrabassoon staves (Cb. 1-4) and a piano (Pno.) staff. The music is written in treble clef for the first three contrabassoon parts and bass clef for the fourth. The piano part is in a grand staff. Chord symbols are placed above or below the notes. Fingerings are indicated by numbers 1-4. A watermark for 'NB noter' is visible in the center.

33

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

Chord symbols: +4, IV/9, -14, IV/10, II/1, I/3, I/1, I/2, -31, III/7, I/4, II/9, -14, II/10, III/4.

Detailed description: This system contains measures 33 through 42. It features four contrabassoon staves (Cb. 1-4) and a piano (Pno.) staff. The music is written in treble clef for the first two contrabassoon parts and bass clef for the last two. The piano part is in a grand staff. Chord symbols are placed above or below the notes. Fingerings are indicated by numbers 1-4. A watermark for 'NB noter' is visible in the center.

44

-49

3

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

III/11

IV/8

II/4

III/9

-14

III/3

+2

III/5

I/6

I/5

II/6

II/8

II/8

55

+2

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

IV/3

III/4

II/8

I/4

-14

II/3

-49

I/6

-31

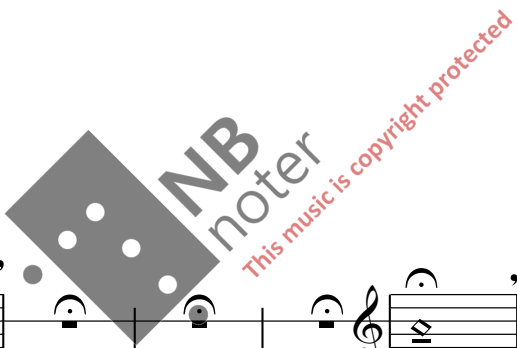
II/10

III/11

II/7

IV/7

III/3



66

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

-31

-14

+4

I/7

I/9

II/10

I/9

II/4

III/2

I/10

IV/10

III/3

IV/2

IV/4

77

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

+2

IV/8

II/6

III/5

III/6

II/6

III/4

III/7

IV/2

I/2

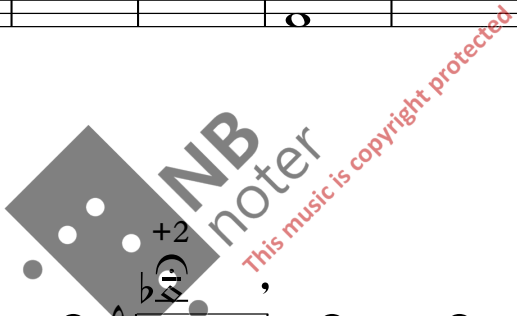
I/3

III/11

-14

-31

-49



88

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

IV/9

I/8

II/4

III/5

III/2

I/9

+4

-14

-14

-49

5

99

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

III/11

III/9

II/7

I/1

III/6

I/3

I/5

IV/8

III/6

IV/1

+4

+2

-31

-49

+2

-14

-14

+2

|||

110

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

+4

II/9

III/5

III/5

II/9

II/2

IV/2

I/2

II/2

I/4

I/10

-14

-14

-49

121

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

+4

II/9

III/6

I/4

II/1

IV/7

II/1

I/3

II/9

IV/9

III/7

IV/2

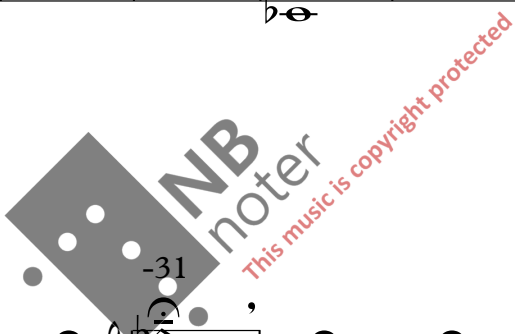
+2

+2

+4

-31

-31





132

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

III/6

IV/2

IV/8

II/4

II/8

I/6

I/10

II/5

IV/5

+2

-14

-31

143

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

IV/11

III/4

II/10

III/11

I/10

I/4

III/5

I/6

I/3

IV/7

III/3

-49

-14

-31

+2



154

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

III/7

III/4

II/4

-31

II/2

+2

I/9

II/7

II/6

-14

III/8

II/1

IV/5

164

Cb. 1

Cb. 2

Cb. 3

Cb. 4

Pno.

IV/1

-49

II/4

Contrabass

IV/11

-14

III/8

II/10

I/2

-14

I/1

IV/5

III/10

