

# **Random Partials (1-7th harmonic) Version I**

Durata approx. 12.30 minutes, dedicated to Erik Carlson

Håkon Thelin, 2021

This work explores the sonic differences between harmonic partials (just intonation) on the violin and the well-tempered piano. The material consists of 28 different partials on the violin, 7 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.

Violin tuning (from low to high): Eflat-C-Fsharp-D

The four open strings are tuned in perfect correspondence with the unison note on the piano.

Random number series:

27, 7, 6, 11, 12, 16, 14, 13, 18, 25, 19, 10, 27, 15, 28, 4, 21, 19, 3, 14, 23, 23, 21, 25, 8, 10, 1, 3, 7, 3, 18, 21, 14, 21, 27, 1, 14, 12, 2, 1, 26, 25, 17, 1, 6, 4, 9, 16, 26, 5, 18, 26, 26, 11, 3, 2, 24, 11, 14, 21, 7, 12, 9, 19, 7, 7, 3, 5, 3, 11, 3, 23, 23, 26, 19, 27, 26, 24, 12, 27, 17, 20, 12, 4, 20, 3, 12, 2, 7, 23, 17, 17, 25, 9, 14, 16, 17, 3, 4, 5, 14, 27, 15, 8, 8, 25, 5, 2, 14, 2, 9, 22

String 1 (D):

Partials 1-7 correspond with numbers 1-7



String 2 (Fsharp):

Partials 1-7 correspond with numbers 8-14

String 3 (C):

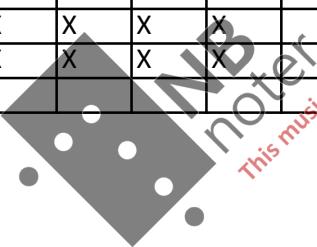
Partials 1-7 correspond with numbers 15-21

String 4 (Eflat):

Partials 1-7 correspond with numbers 22-28

**Number series: Appearances in piece:**

1	X	X	X	X						
2	X	X	X	X	X	X				
3	X	X	X	X	X	X	X	X	X	
4	X	X	X	X						
5	X	X	X	X						
6	X	X								
7	X	X	X	X	X	X				
8	X	X	X							
9	X	X	X	X						
10	X	X								
11	X	X	X	X						
12	X	X	X	X	X	X	X			
13	X									
14	X	X	X	X	X	X	X	X		
15	X	X								
16	X	X	X							
17	X	X	X	X	X					
18	X	X	X							
19	X	X	X	X						
20	X	X								
21	X	X	X	X	X					
22	X									
23	X	X	X	X	X					
24	X	X								
25	X	X	X	X	X					
26	X	X	X	X	X	X				
27	X	X	X	X	X	X	X			
28	X									



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# Random Partials (I-7th harmonic)

Tuning:  
Eflat-C-Fsharp-D

Version I, for violin and piano

Håkon Thelin, 2021  
Dedicated to Erik Carlson

$\text{♩} = 54$

Vln.

Pno.

*Led.* depressed throughout the piece

10

IV/4 III/5 II/3 IV/6 III/1 IV/7 I/4 III/7 III/5 I/3

20

II/7 IV/2 IV/2 III/7 IV/4 II/1 II/3 I/1 I/3 I/7

2

30

*8va* - 1      -31      -31      -31      +2  
 $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$ ,  
I/3      III/4      III/7      II/7      III/7      IV/6      I/1      II/7      II/5      I/2

*8va* - 1      C $\#$       C $\#$

$\text{C}_{\phi}$ ,       $\text{C}_{\phi}$

-

-

-

-

-

-

-

-

40

*8va* - 1      +2  
 $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$   
I/1      IV/5      IV/4      III/3      I/1      I/6      I/4      II/2      III/2      IV/5

*8va* - 1       $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$

*8va* - 1       $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$

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-

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-

-

-

-

50

*8va* - 1      -14      -14      -14      -14      +2  
 $\text{C}_{\phi}$ ,       $\text{C}_{\phi}$   
I/5      III/4      IV/5      IV/5      II/4      I/3      I/2      IV/3      II/4      II/7

*8va* - 1      C $\#$       C $\#$

$\text{C}_{\phi}$ ,       $\text{C}_{\phi}$

-

-

-

-

-

-

-

-

60

-31 C.Φ 8va -31 C.Φ 14 C.Φ 8va -31 C.Φ 8va -31 C.Φ 8va +2 C.Φ 14 C.Φ 8va +2 C.Φ 3 C.Φ  
III/7 I/7 II/5 II/2 III/5 I/7 I/7 I/3 I/5 I/3

70

II/4 I/3 IV/2 IV/2 IV/5 III/5 IV/6 IV/5 IV/3 II/5  
C.Φ 8va +2 C.Φ C.Φ -14 C.Φ +2 C.Φ -14 C.Φ +2 C.Φ +2 C.Φ -14 C.Φ +2 C.Φ

80

IV/6 III/3 III/6 II/5 I/4 III/6 I/3 II/5 I/2 I/7  
C.Φ +2 C.Φ +2 C.Φ -14 C.Φ +2 C.Φ +2 C.Φ +2 C.Φ -14 C.Φ +2 C.Φ -31 C.Φ 8va  
C.Φ C.Φ C.Φ C.Φ C.Φ C.Φ C.Φ C.Φ C.Φ C.Φ

90

-31

IV/2    III/3    III/3    IV/4    II/2    II/7    III/2    III/3    I/3    I/4

-31

100

-31

I/5    II/7    IV/6    III/1    II/1    II/1    IV/4

-31

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-31

I/5    I/2    II/7    I/2    II/2    IV/1

-31