

Håkon Thelin

Sterbendes Hertz

Double bass and sine tones



PERFORMANCE INSTRUCTIONS

Tuning of the bass

From high to low with frequencies:

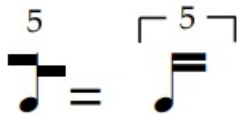
G2 (98Hz) - D2 (73Hz) - A1 (55Hz) - F1 (44Hz)

Throughout the piece, the open strings of the double bass are slowly tuned up or down according to the ascending or descending sine tones. The tuning in the end of the piece (G \sharp -D-A-E) mirrors the opening tuning.

Spectral phase difference bowing

A specific *flautando* bowing, played in the notated rhythm. It gives the impression of hearing two consecutive attacks for each stroke, potentially bringing out the harmonic spectrum.

Notation:



I-IV

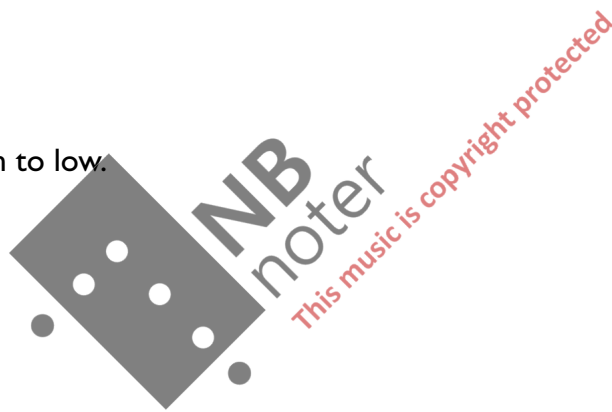
String indication from high to low.

S.P.

Sul Ponticello

M.S.T.

Molto Sul Tasto



Supported by Komponistenes Vederlagsfond/The Composers' Remuneration Fund

Sterbendes Hertz

Håkon Thelin, 2021

♩=60

Sine tones 294Hz

Sine tones 147Hz

Sine tones 73Hz 294Hz

Arco Spectral phase difference bowing
Repeat 5x

S.P. → M.S.T., from the middle of the string → Extr. sul pont

Contrabass

sfz. > *mp* 5 5 5 5 5 5 5

I=294Hz *l.v.* *fff*

II=294Hz *l.v.* *fff*

D2=73Hz

294Hz

288Hz

147Hz

144Hz

73Hz

294Hz

72Hz

288Hz

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

Cb.

l.v. *fff* *l.v.* *fff* *sfz.* > *mp* 5 5 5 5 5 5 5 *l.v.* *fff*

I=294Hz

II=288Hz

Gradually detune the string to D2=72Hz

294Hz

284Hz

147Hz

142Hz

73Hz

71Hz

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

Cb.

l.v. *fff* *l.v.* *fff* *l.v.* *fff* *l.v.* *fff* *sfz.* > *mp* 5 5 5 5 5 5 5

Gradually detune the string to D2=71Hz

29

294Hz
282Hz
I=294Hz
II=282Hz
l.v.
fff

40

294Hz
280Hz
147Hz
140Hz
73Hz
70Hz
Repeat 5x
S.P. -> M.S.T. Extr. sul pont
I=294Hz
II=277Hz
l.v.
fff
sfz. > mp
Gradually detune the string to D2=70Hz

294Hz
276Hz
147Hz
138Hz
73Hz
69Hz
Repeat 5x
S.P. -> M.S.T. Extr. sul pont
I=294Hz
II=277Hz
l.v.
fff
sfz. > mp
Gradually detune the string to C#2=69Hz

58

l.v.
fff

66

276Hz

138Hz

69Hz

277Hz

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

5 5 5 5 5 5 5

II=277Hz

III=277Hz

l.v.

fff

fff

fff

sfz. > *mp*

277Hz

272Hz

220Hz

216Hz

110Hz

108Hz

55Hz

277Hz

272Hz

54Hz

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

5 5 5 5 5 5 5

II=277Hz

III=272Hz

l.v.

fff

fff

sfz. > *mp*

AI=55Hz Gradually detune the string to AI=54Hz

84

l.v.

fff

fff

fff

fff

92

277Hz
267Hz
220Hz
212Hz
110Hz
106Hz
55Hz
53Hz

277Hz
267Hz

Repeat 5x
S.P. → M.S.T. + 5 5 5 5 5 5 Extr. sul pont

Cb. *sfz.* > *mp* *fff* *fff* *fff*

Gradually detune the string to A1=53Hz

II=277Hz
III=267Hz

l.v. *l.v.* *l.v.*

277Hz
262Hz
220Hz
208Hz
110Hz
104Hz
55Hz
52Hz

277Hz
262Hz

Repeat 5x
S.P. → M.S.T. + 5 5 5 5 5 5 Extr. sul pont

Cb. *fff* *fff* *sfz.* > *mp* *fff*

Gradually detune the string to G#1=52Hz

II=277Hz
III=262Hz

l.v. *l.v.* *l.v.*

262Hz
208Hz
104Hz
52Hz

Cb. *fff* *fff* *fff* *fff* *sfz.* > *mp*

S.P. → M.S.T. + 5 5 5

G#1=52Hz

119

Repeat 5x
 Extr. sul pont

III=262Hz *l.v.* *fff*

IV=262Hz *fff*

IV
 S.P. → M.S.T. → Extr. sul pont

III=262Hz *l.v.* *fff*

IV=257Hz *fff*

FI=44Hz Gradually detune the string to FI=43Hz

S.P. → M.S.T. → Extr. sul pont

III=262Hz *l.v.* *fff*

IV=252Hz *fff*

FI=42Hz Gradually detune the string to FI=42Hz

147

262Hz

252Hz

Cb.

III=262Hz

l.v.

IV=252Hz

fff

157

262Hz

247Hz

176Hz

164Hz

88Hz

82Hz

44Hz

Cb.

41Hz

S.P. → M.S.T. → Extr. sul pont

+ 5 5 5 5 5 5 5 5

Repeat 5x

262Hz

247Hz

III=262Hz

IV=247Hz

l.v.

sfz. > mp

fff

fff

fff

Gradually detune the string to E1=41Hz

164Hz

82Hz

41Hz

Cb.

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

+ 5 5 5 5 5 5 5 5

l.v.

fff

fff

sfz. > mp

E1=41Hz

173

78Hz

41Hz

Pizz.

Pizz. ord. r.h.

Sempre l.v. I II Sim.

f

184

392Hz

Cb.

370Hz
(r.h.)
III IV

197

123Hz

Cb.

104Hz
I II

211

587Hz

Cb.

554Hz
III IV

224

261Hz

Cb.

82Hz
r.h. r.h.
I II

237

784Hz

Cb.

698Hz
III IV

251

311Hz

Cb.

208Hz

264

Musical staff for measures 264-277, featuring a series of tied notes in a 4/4 time signature.

Cb. Musical staff for measures 264-277, featuring a series of tied notes in a 4/4 time signature.



278

Musical staff for measures 278-287, including frequency labels: 208Hz, 104Hz, 52Hz, and 208Hz.

Cb. Musical staff for measures 278-287, including performance instructions: *sfz.* > *mp*, *fff*, *l.v.*, and *fff*. Includes a diagram for fingerings: *S.P. → M.S.T. → Extr. sul pont* with notes *+ 5 5 5 5 5 5 5 5*.



Musical staff for measures 288-293, including frequency labels: 212Hz, 208Hz, 106Hz, 104Hz, 53Hz, and 52Hz.

Cb. Musical staff for measures 288-293, including performance instructions: *fff*, *fff*, *sfz.* > *mp*, and *Gradually tune the string up to G#=53Hz*. Includes a diagram for fingerings: *S.P. → M.S.T. → Extr. sul pont* with notes *+ 5 5 5 5 5 5 5 5*.



294

Musical staff for measures 294-303, including frequency labels: 212Hz, 208Hz, III=212Hz, and II=208Hz.

Cb. Musical staff for measures 294-303, including performance instructions: *fff*, *fff*, *fff*, and *fff*.

216Hz
208Hz
108Hz
104Hz
54Hz
52Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont

l.v. fff sfz. > mp fff fff

Gradually tune the string up to G#=54Hz

III=216Hz
II=208Hz

l.v. fff fff fff

220Hz
208Hz
110Hz
104Hz
55Hz
52Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont

sfz. > mp fff fff fff

Gradually tune the string up to A=55Hz

III=220Hz
II=208Hz

494Hz
220Hz
110Hz
55Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont

l.v. fff fff sfz. > mp fff

Gradually tune the string up to A=55Hz

I=494Hz
II=494Hz

334

334

Cb.

fff *l.v.* *fff* *l.v.* *fff* *l.v.* *fff*



343

343

499Hz

494Hz

396Hz

198Hz

392Hz

196Hz

99Hz

98Hz

499Hz

494Hz

I=499Hz

II=494Hz

Cb.

sfz.>mp *fff* *l.v.* *fff* *l.v.* *fff*

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

G=98Hz Gradually tune the string up to G=99Hz



504Hz

494Hz

400Hz

392Hz

200Hz

196Hz

100Hz

98Hz

504Hz

494Hz

I=504Hz

II=494Hz

Cb.

sfz.>mp *fff* *l.v.* *fff* *l.v.* *fff*

Repeat 5x

S.P. → M.S.T. → Extr. sul pont

Gradually tune the string up to G=100Hz

509Hz
494Hz
404Hz
392Hz
202Hz
196Hz
101Hz
98Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
+
sfz. > mp

Gradually tune the string up to G=101Hz

Cb. *l.v.* *fff* *fff* *fff* *fff*

361 362 363 364 365 366 367 368 369 370

509Hz
494Hz
I=509Hz
II=494Hz

Cb. *l.v.* *fff* *fff* *fff* *fff* *fff*

371 372 373 374 375 376 377 378 379 380 381

514Hz
494Hz
408Hz
392Hz
204Hz
196Hz
102Hz
98Hz
514Hz
494Hz
I=514Hz
II=494Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
+
sfz. > mp

Gradually tune the string up to G=102Hz

Cb. *l.v.* *fff* *fff* *fff*

382 383 384 385 386 387 388 389 390 391

519Hz
494Hz
412Hz
392Hz
206Hz
196Hz
103Hz

519Hz

494Hz
I=519Hz

98Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont

l.v. fff

sfz. > mp

l.v. fff

II=494Hz

Gradually tune the string up to G=103Hz

523Hz
494Hz
416Hz
392Hz
208Hz
196Hz
104Hz

98Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont

l.v. fff

sfz. > mp

l.v. fff

Gradually tune the string up to G#=104Hz

410

523Hz
494Hz
I=523Hz

l.v. fff

II=494Hz

277Hz
416Hz
208Hz
104Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
l.v.
fff
sfz. > mp
G#=104Hz

277Hz
280Hz
276Hz
140Hz
138Hz
70Hz
69Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
l.v.
fff
sfz. > mp
C#=69Hz Gradually tune the string up to C#=70Hz

437
281Hz
277Hz
II=281Hz
III=277Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
l.v.
fff
fff

447
284Hz
276Hz
142Hz
138Hz
71Hz
285Hz
277Hz
69Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
sfz. > mp
Gradually tune the string up to C#=71Hz
l.v.
fff
fff

288Hz
276Hz
144Hz
138Hz
72Hz

289Hz
277Hz

Repeat 5x
S.P. → M.S.T. → Extr. sul pont
+ 5 5 5 5 5 5 5 5

l.v. *fff* l.v. *fff* *sfz.* > *mp* *fff*

Gradually tune the string up to C#=72Hz
II=289Hz
III=277Hz

292Hz
276Hz
146Hz
138Hz
73Hz

69Hz

S.P. → M.S.T. →
+ 5 5 5

l.v. *fff* l.v. *fff* l.v. *fff* l.v. *fff* *sfz.* > *mp*

474

294Hz
277Hz

Repeat 5x
→ Extr. sul pont

II=294Hz
III=277Hz

l.v. *fff* l.v. *fff* l.v. *fff*

Gradually tune the string up to D=73Hz

294Hz
147Hz
73Hz

Repeat 5x

S.P. → M.S.T., from the middle of the string → Extr. sul pont

Cb.

l.v.
fff

l.v.
fff

sfz. > *mp*

D2=73Hz

5 5 5 5 5 5 5 5

