::: full score :::

Panopticon

for 12 periphonically spatialized clarinets

Louis GOLDFORD (2013)

"Morals reformed - health preserved - industry invigorated - instruction diffused - public burthens lightened - Economy seated, as it were, upon a rock - the gordian knot of the Poor-Laws are not cut, but untied - all by a simple idea in Architecture!"

-Jeremy Bentham, 1780

Panopticon was written for Auer Hall, at Indiana University, resulting from countless recitals I heard in that space, including recitals of electronic music on which my own works for multichannel sound were performed. I began to wonder how simulating the three-dimensional compositional procedures common to electronic music might sound using acoustic instruments instead of loudspeakers.

Scored for twelve clarinets, the positions of the instruments and conductor loosely resemble Bentham's panopticon. Here, the individual clarinetists are analogous to the inmates of a prison, the conductor functioning as the watchman in the tower; keeping a close eye on everybody despite that the inmates will never see their guardian or know exactly when they're being watched. Michel Foucault posits this arrangement as the panoptic society in which we live; the ideal modernization of punishment, prison itself being only one in a large network of sovereign institutions — schools, factories, hospitals — that conditions its citizens, This renders the panoptic society according to its classic "visual surveillance" terms, but an extension of this principle is offered when considering other forms, such as sonic surveillance.

The philosopher/musicologist Peter Szendy explores this possibility in *Sur écoute. Esthétique de l'espionnage* (2007) in which he traces the lineage of auditory surveillance across history, through spy movies. In an acoustic panopticon such as this arrangement of clarinets and conductor, not a single instrumentalist knows where the conductor's ears are focused at any given moment — if they're being "watched" or not. But, "Dissymmetry is always reversible," Szendy warns us. This "panacousticon" offers "infinite points of exteriority," where listeners can tap each other, and where there is no longer a single point of control or authority. Surveillance in the acoustic domain is, therefore, a dangerous game.

The pitch material for *Panopticon* is mostly drawn from the analysis of bass clarinet multiphonics. The opening presents one multiphonic analysis cast as a series of pulses whose polyrhythmic ratios are proportional to its frequency ratios, a technique inspired by the music of Yan Maresz. This texture is interrupted by another multiphonic and ensuing sonorities based on its analysis. These sonorities follow one another throughout the piece as new rhythmic elements are interspersed throughout the texture. Sudden, invasive memories of Iraqi *jurjina* and Bulgarian *kopanitsa* rhythms evoke the clarinet's rich and varied history as integral to these genres.

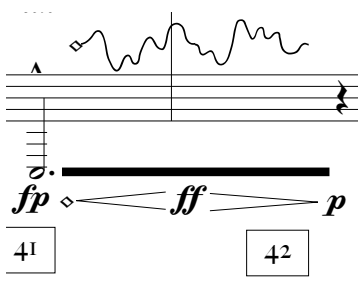
Louis Goldford
October 2013
Bloomington

performance notes

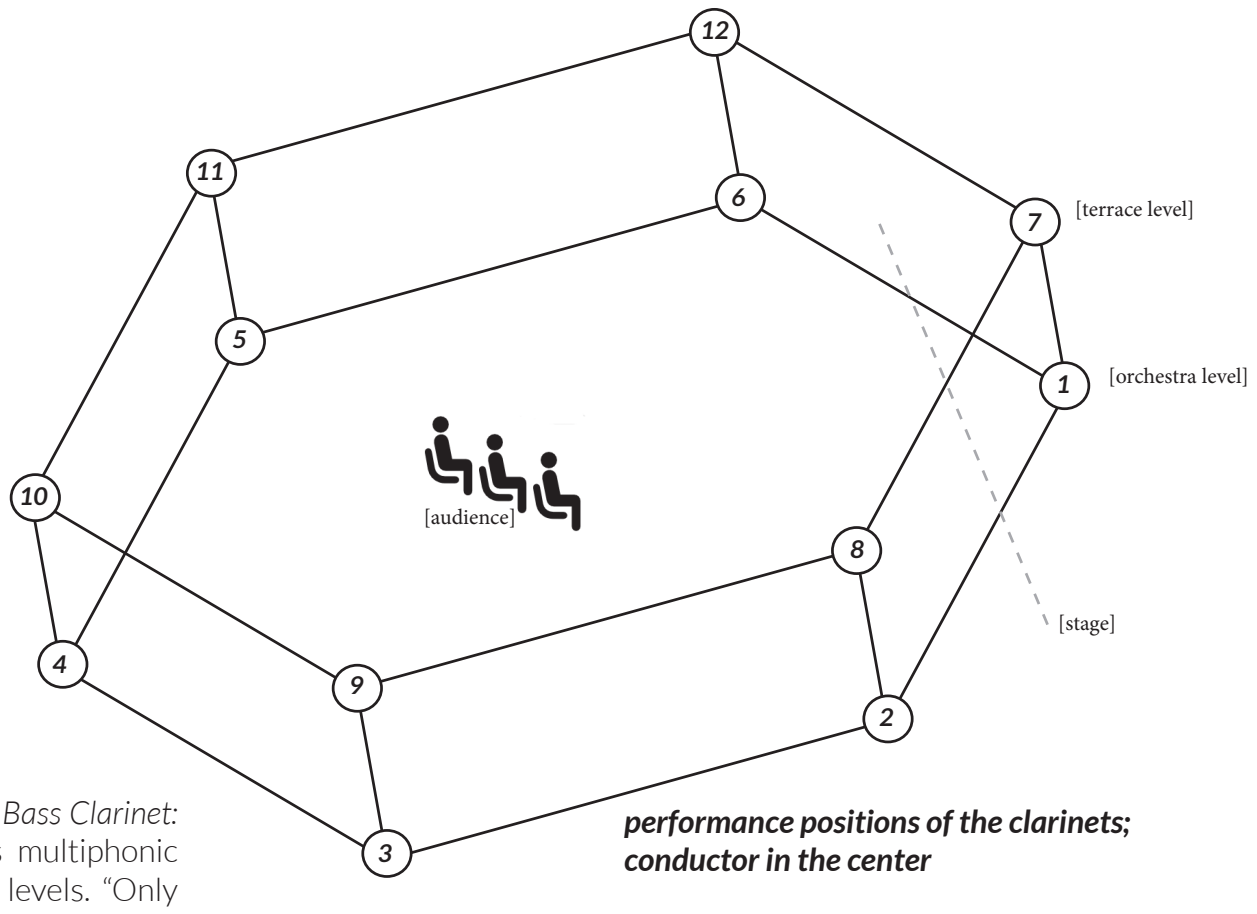
♯ *quartertone sharp*

♭ *quartertone flat*

Bass clarinet multiphonic #96

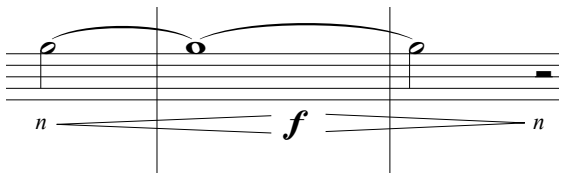


No. 96 from Harry Sparnaay's *The Bass Clarinet: A Personal History* (pg. 154). This multiphonic should be playable at all dynamic levels. "Only embochure. The higher the harmonics, the more the lower jaw should move towards the base of the reed." Best executed as a dynamic fade if possible, otherwise, light rearticulations of the tongue may help gradually move in and out of the mulitiphonic .



performance positions of the clarinets; conductor in the center

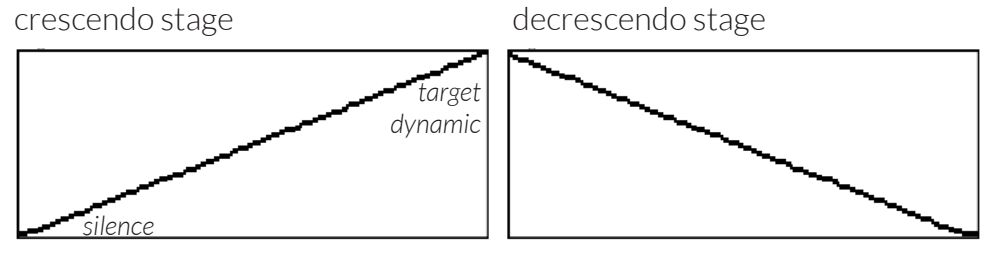
A note about dynamic fades



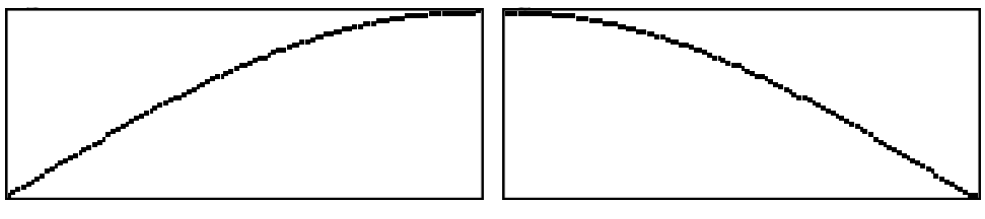
Fades from *niente* (*n*) are meant to imitate *equal-power panning* curves used in multi-channel sound. For this, it is crucial that performers are careful about dynamic levels and about rates of growth and decay in volume; which must must be non-linear.

In the example above, the target dynamic is *forte*, but often the target dynamic is much softer: *piano* or *pianissimo*. Therefore, more degredations of loudness between *niente* and *pianissimo* must be available to the performer, and must be spaced carefully across the hairpin crescendos & decrescendo indiciations.

To create realistic panning, these fades (from silence to a target dynamic and vise versa) must be non-linear, as described below:

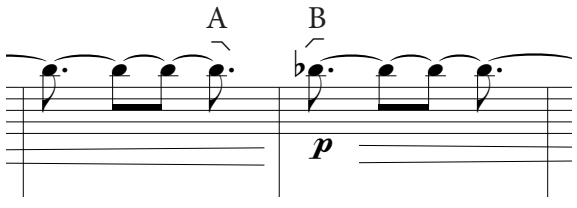


Our normal attempt to make fades linear.



Fades should be executed closer to this rate of growth & decay, with reasonable accuracy but NOT by a laborous attempt to approximate sin & cosine curves.

These curves mimic our normal perception of loudness and are more closely tied with how we may actually execute hairpins. Therefore, performers are asked to be somewhat sensitive to these rates of crescendo but not overly concerned with them. More important is to resist the attempt to linearize the crescendos as in the upper-most pair of swells.



Articulations without the tongue:

A.) imperceptible release;
B.) imperceptible attack.

For the opening section, mm. 1 - 41, rehearsal materials are avaiable from the composer (ljgoldford@gmail.com). These include click-track MIDI mockups to aid in practicing the irregular polyrhythmic subdivisions in each part. It is strongly advised that perfomers work with these materials prior to ensemble practice.

DURATION: ca. 6'30"

YOU GUESSED IT!
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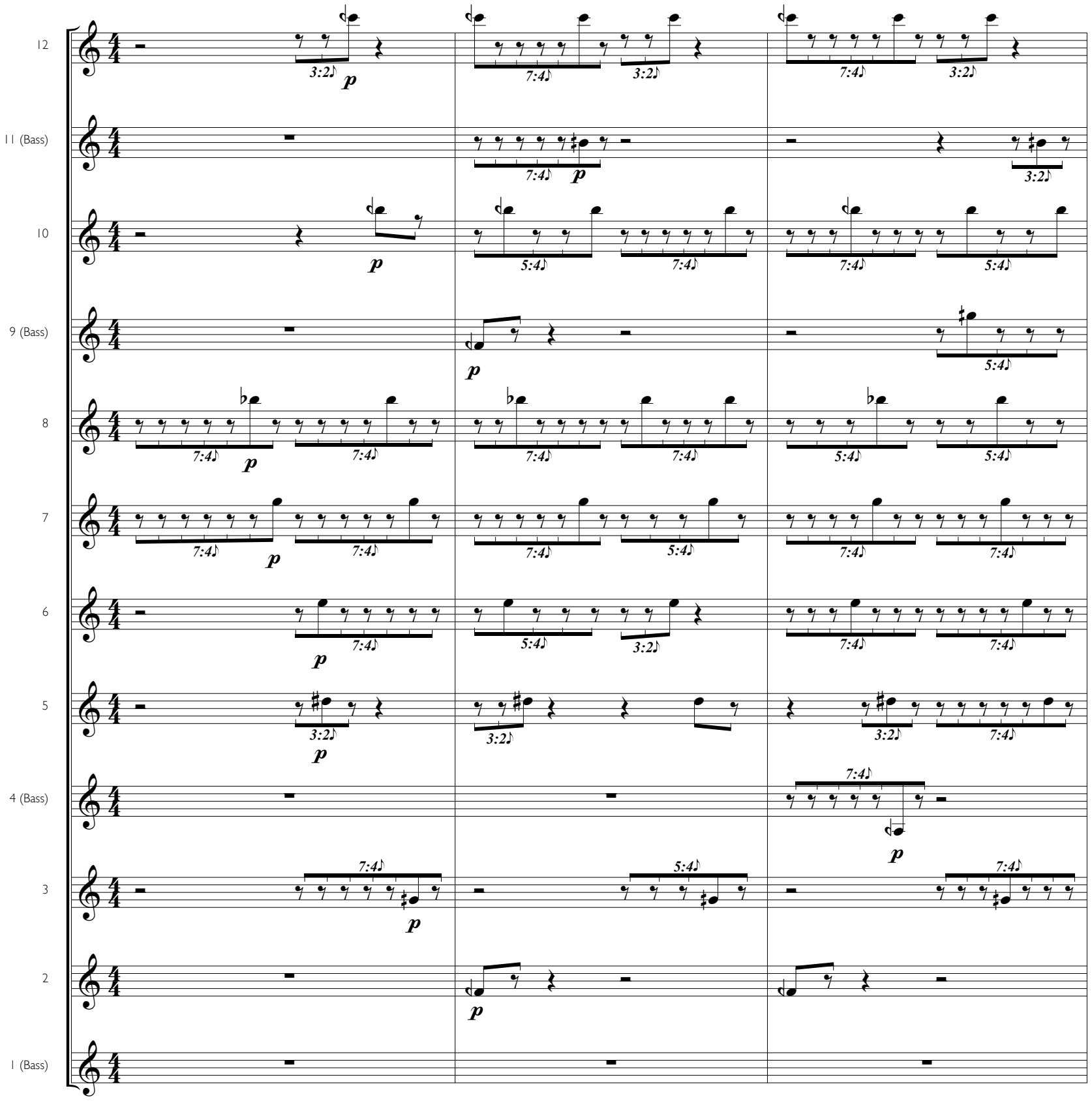
Score in B♭

Panopticon

*for 12 periphonically spatialized clarinets**

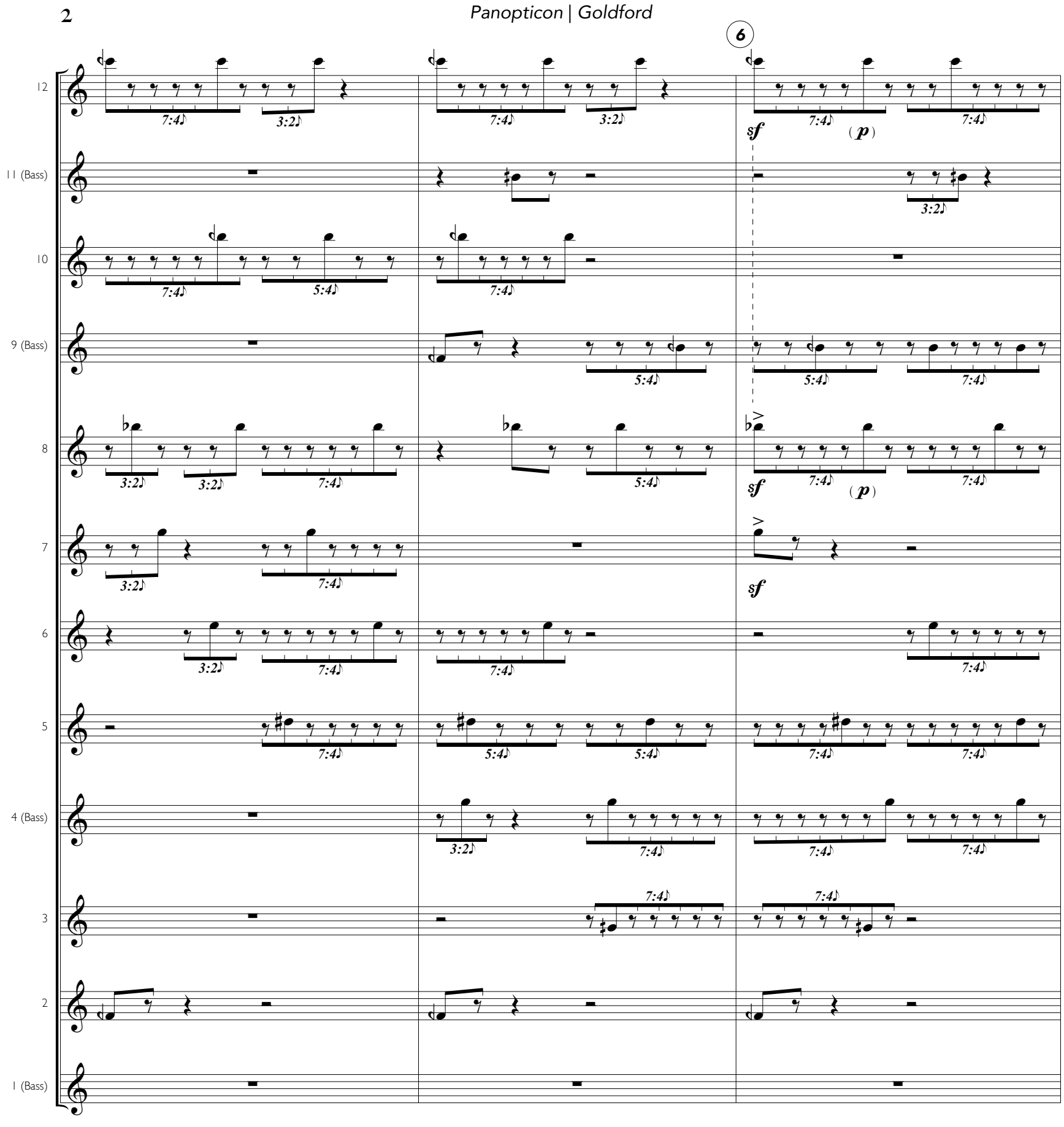
Louis GOLDFORD (2013)

Mechanical, clock-like pulses; all notes equally staccato [♩ = 96**]

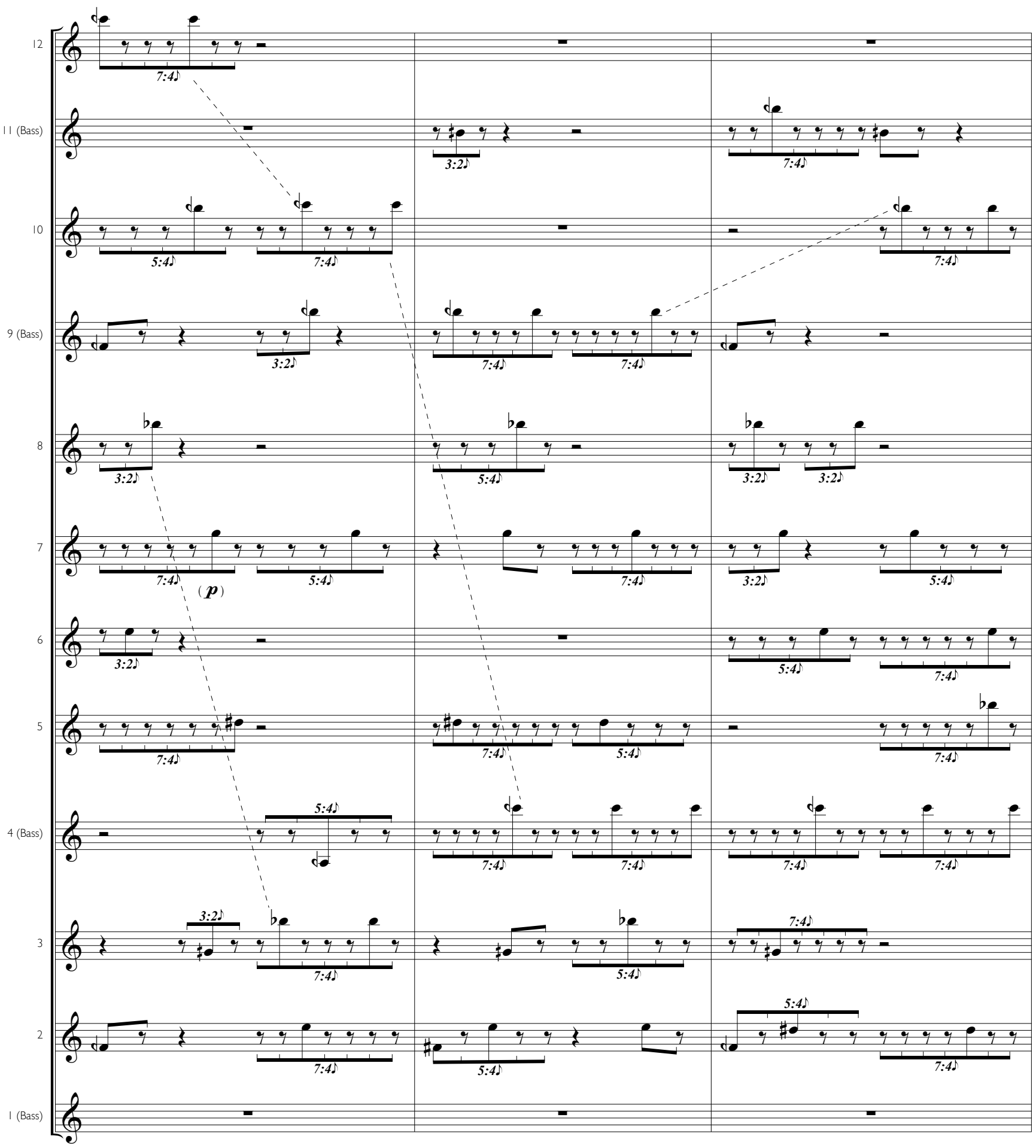


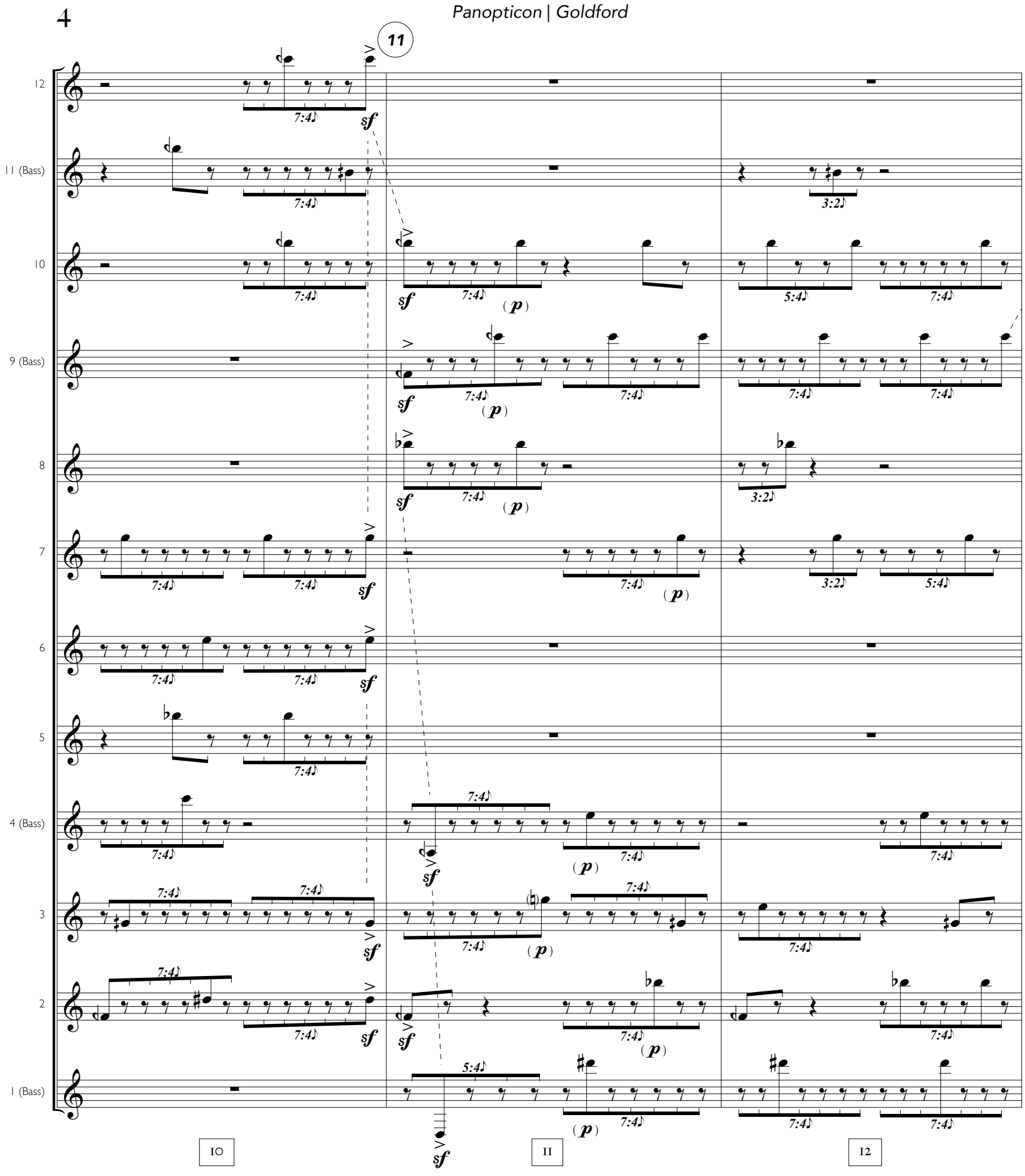
*See the performance setup diagram in the score preface for information on how each part is to be spaced.

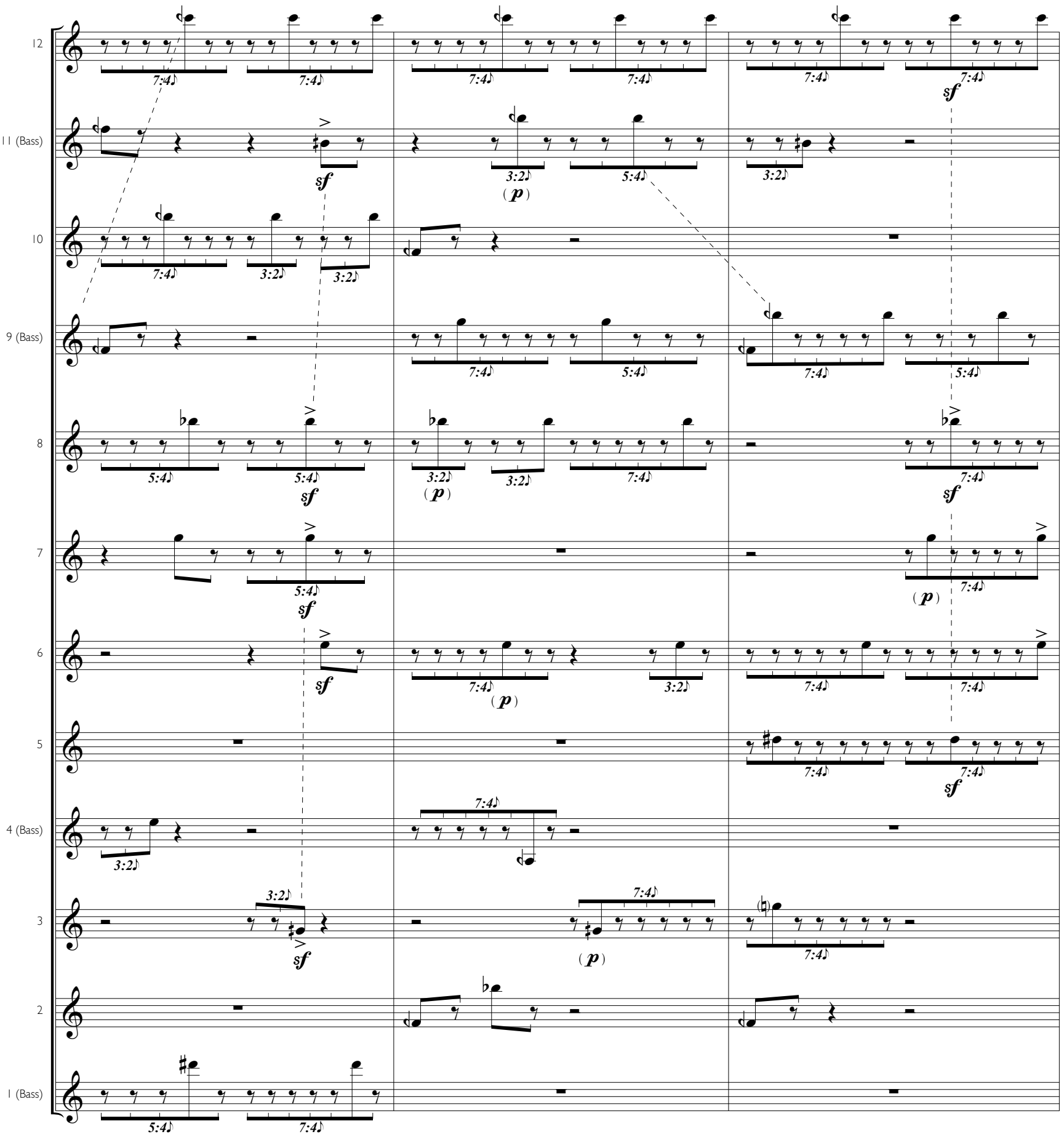
**Although the basic pulse has been given as a quarter note, performers are encouraged to feel the music in a subdivided cut time, rather than 4/4. This will aid in executing the complex tuplets across the half note.



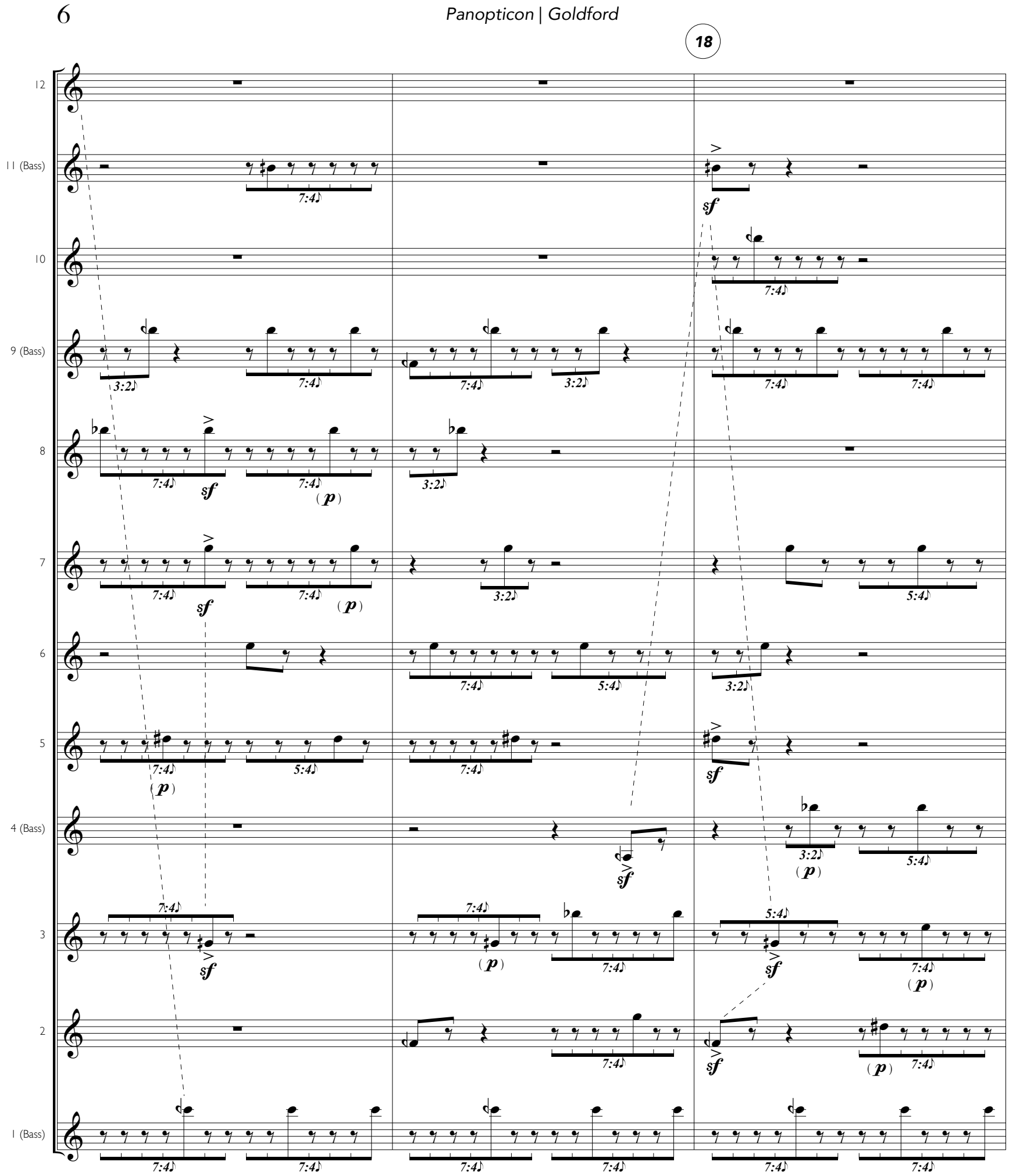
4 5 6

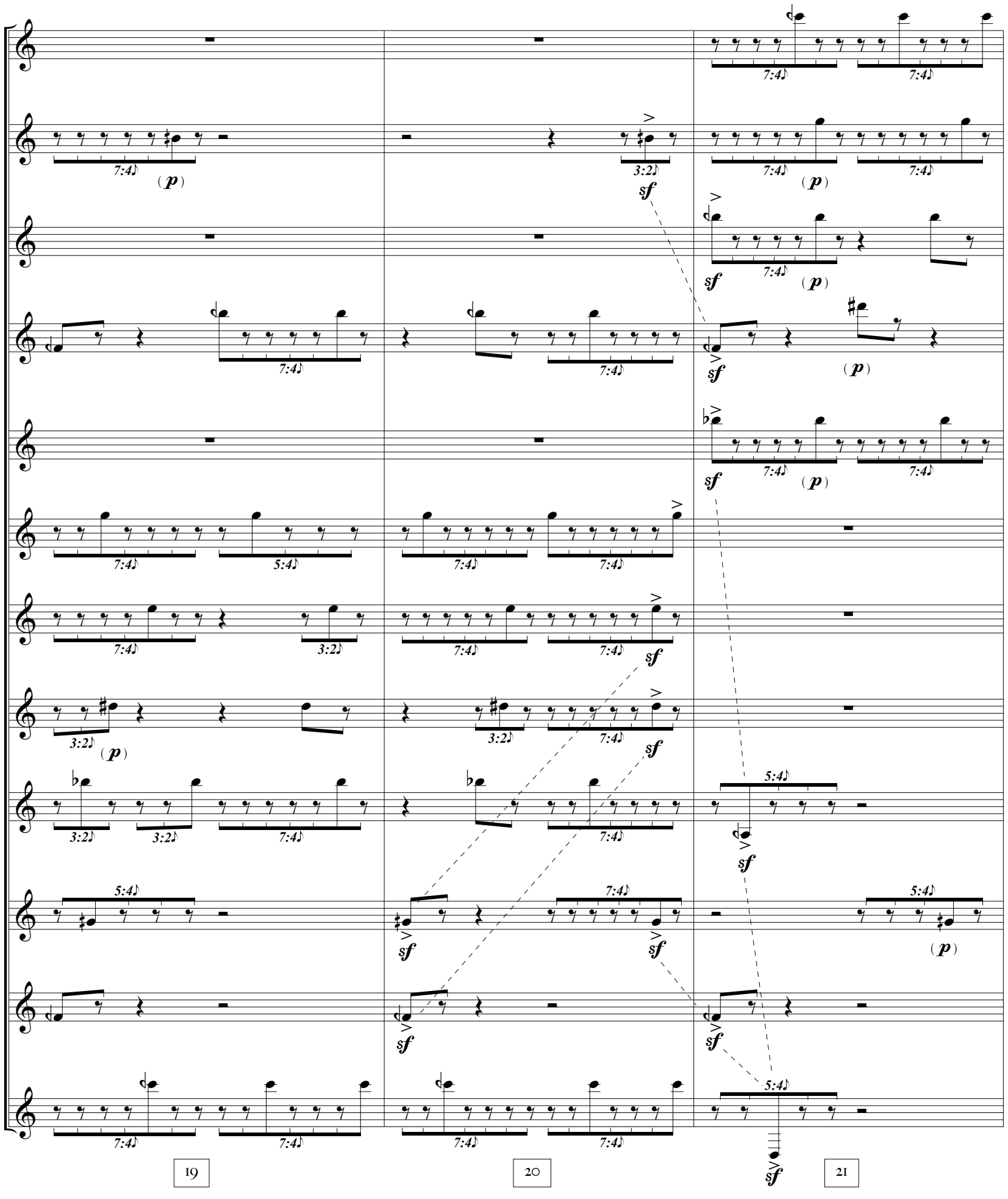

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
7:4♪
3:2♪
5:4♪
(p)
7
8
9

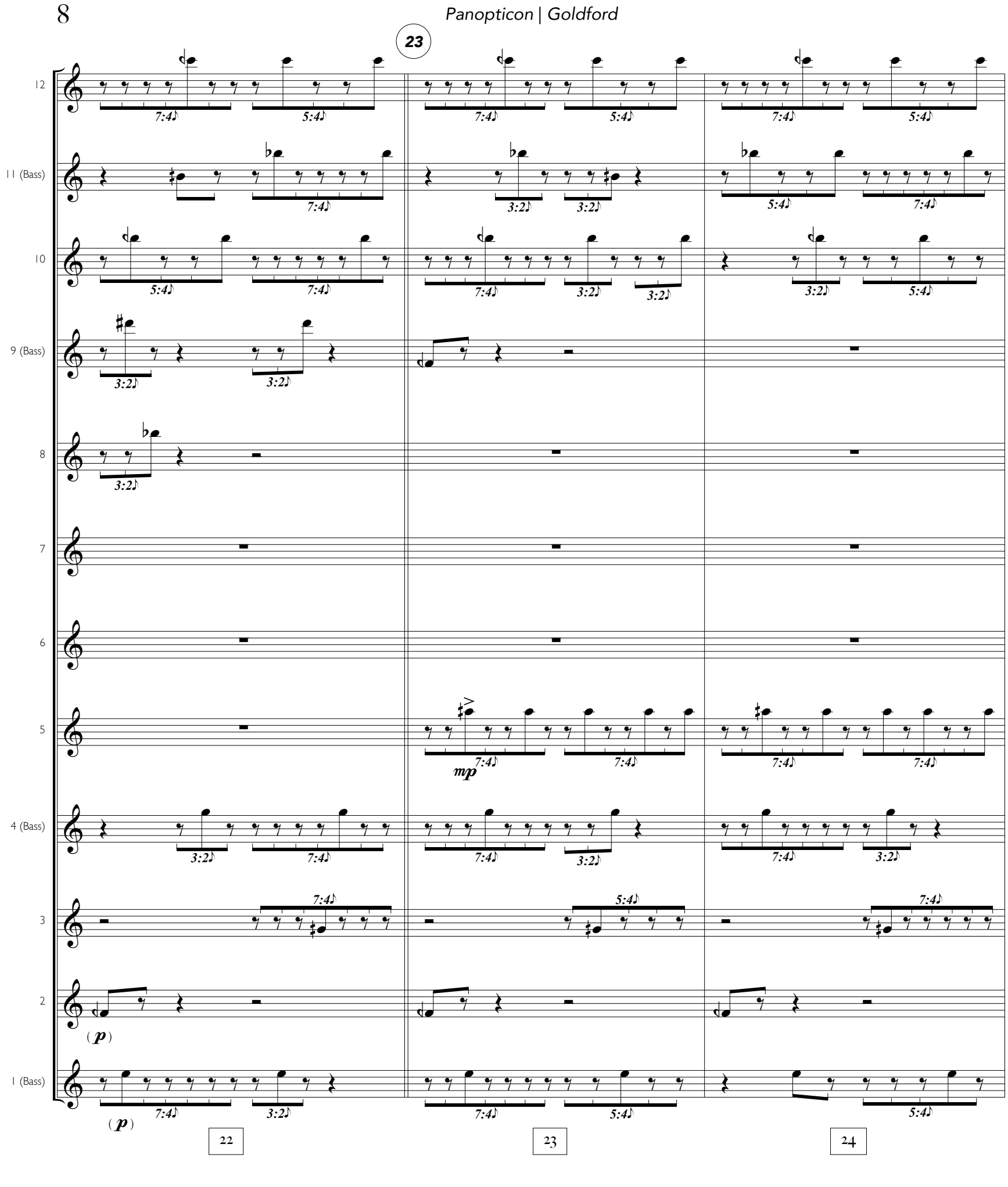

11
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
7:4♪
3:2♪
5:4♪
sf
(p)
10
11
12

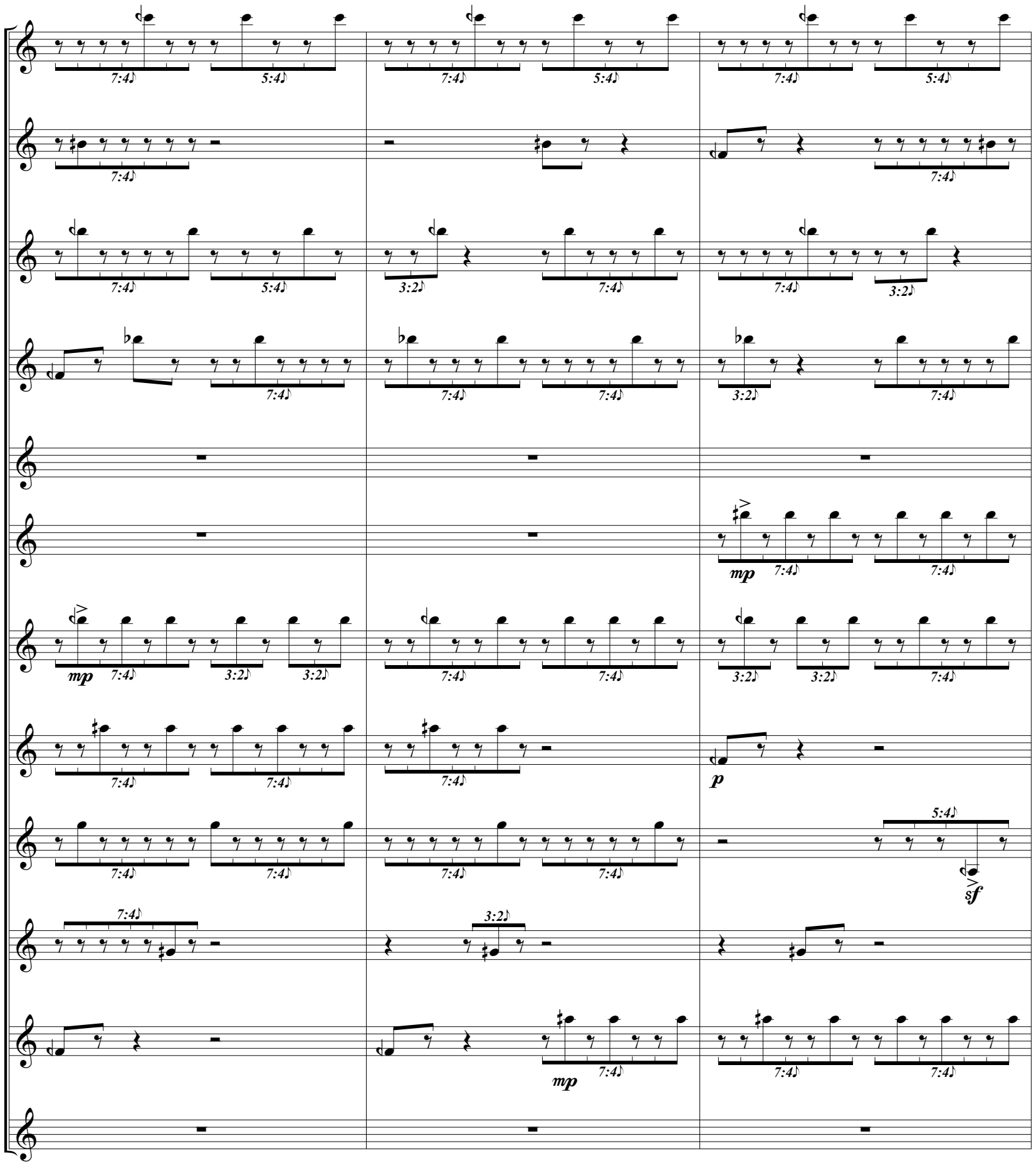


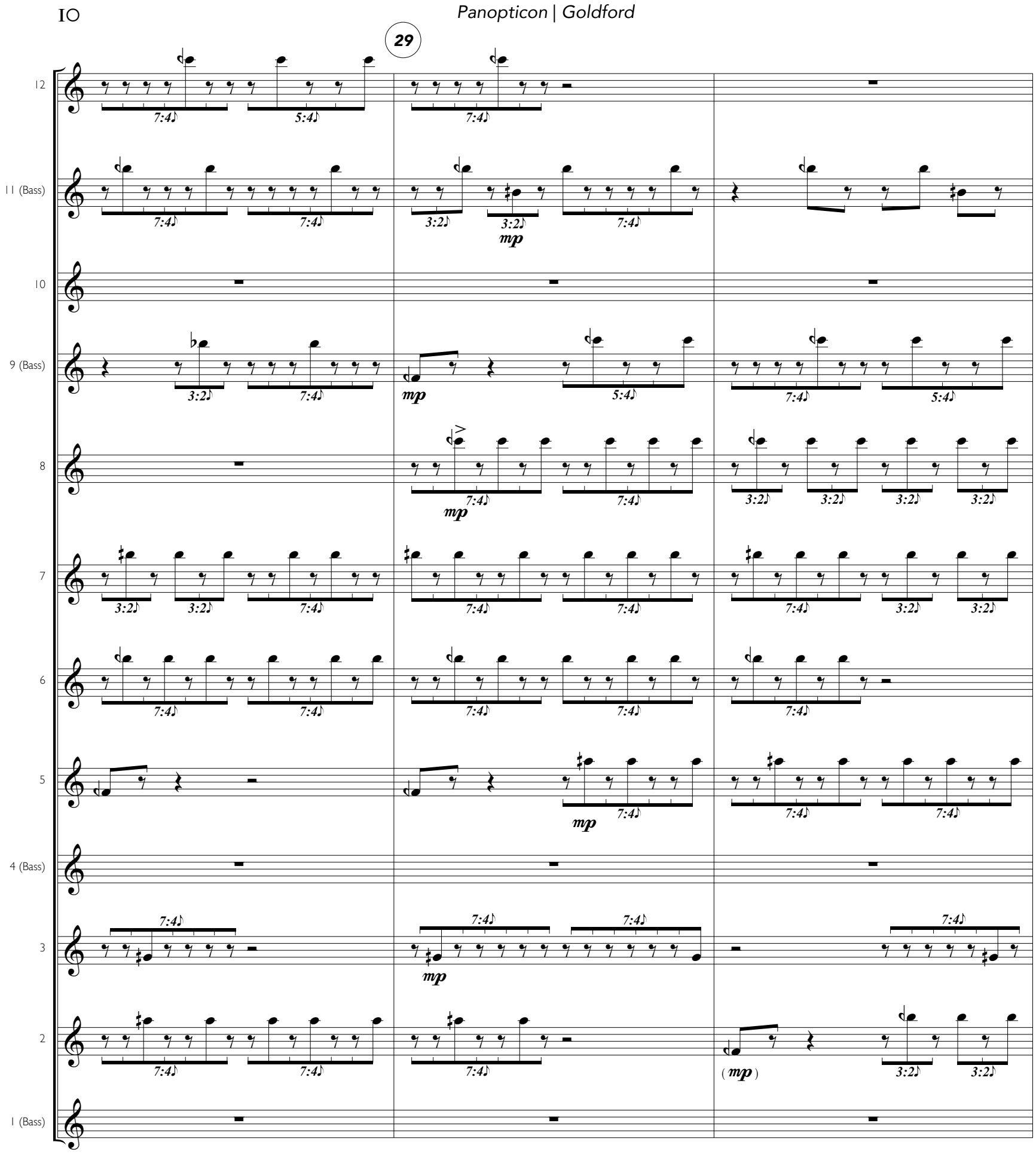
13 14 15

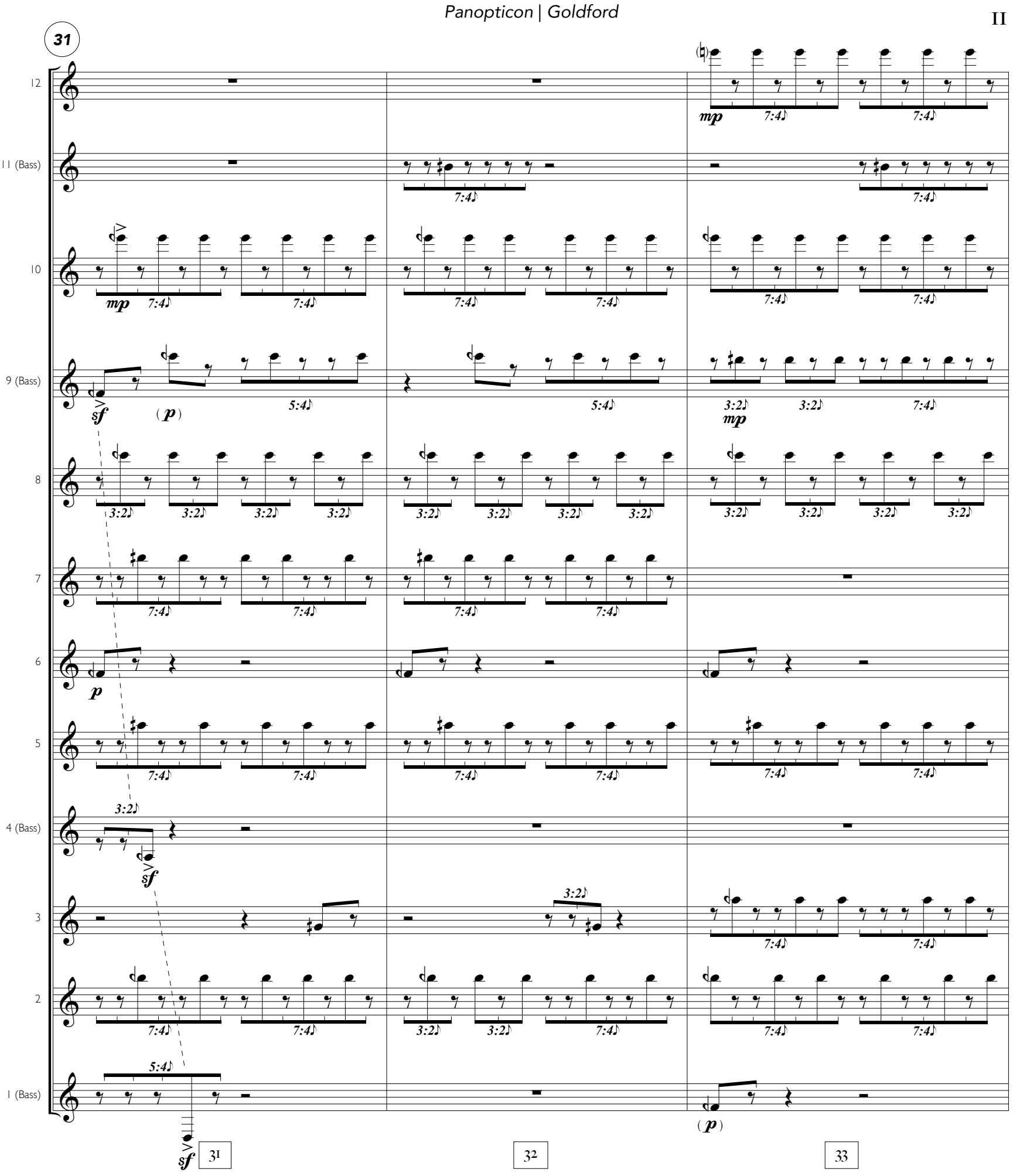

18
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
7:4♪
3:2♪
5:4♪
sf
(p)
16
17
18


12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
19
20
21

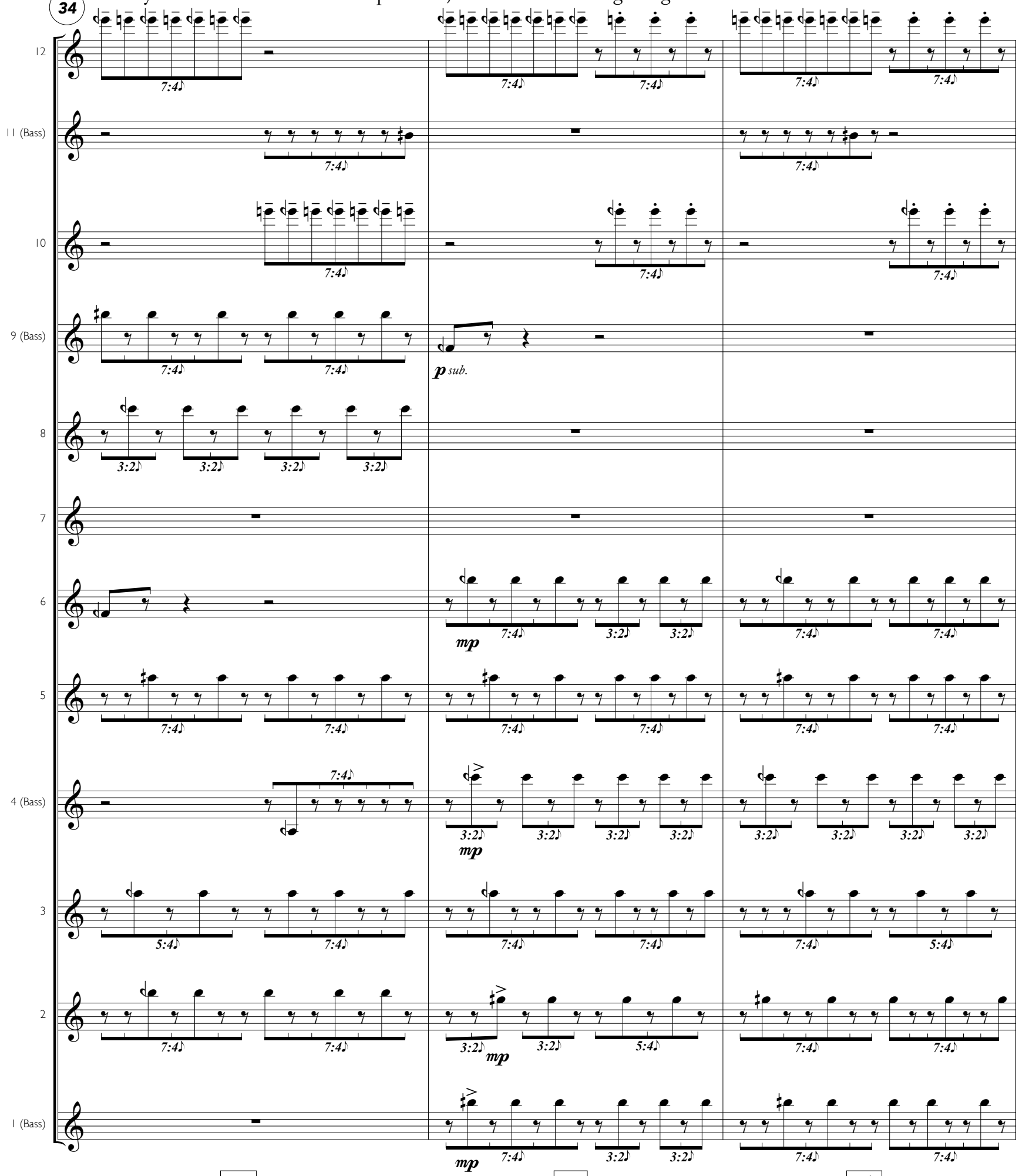

23
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
7:4♪
5:4♪
3:2♪
mp
(p)
22
23
24

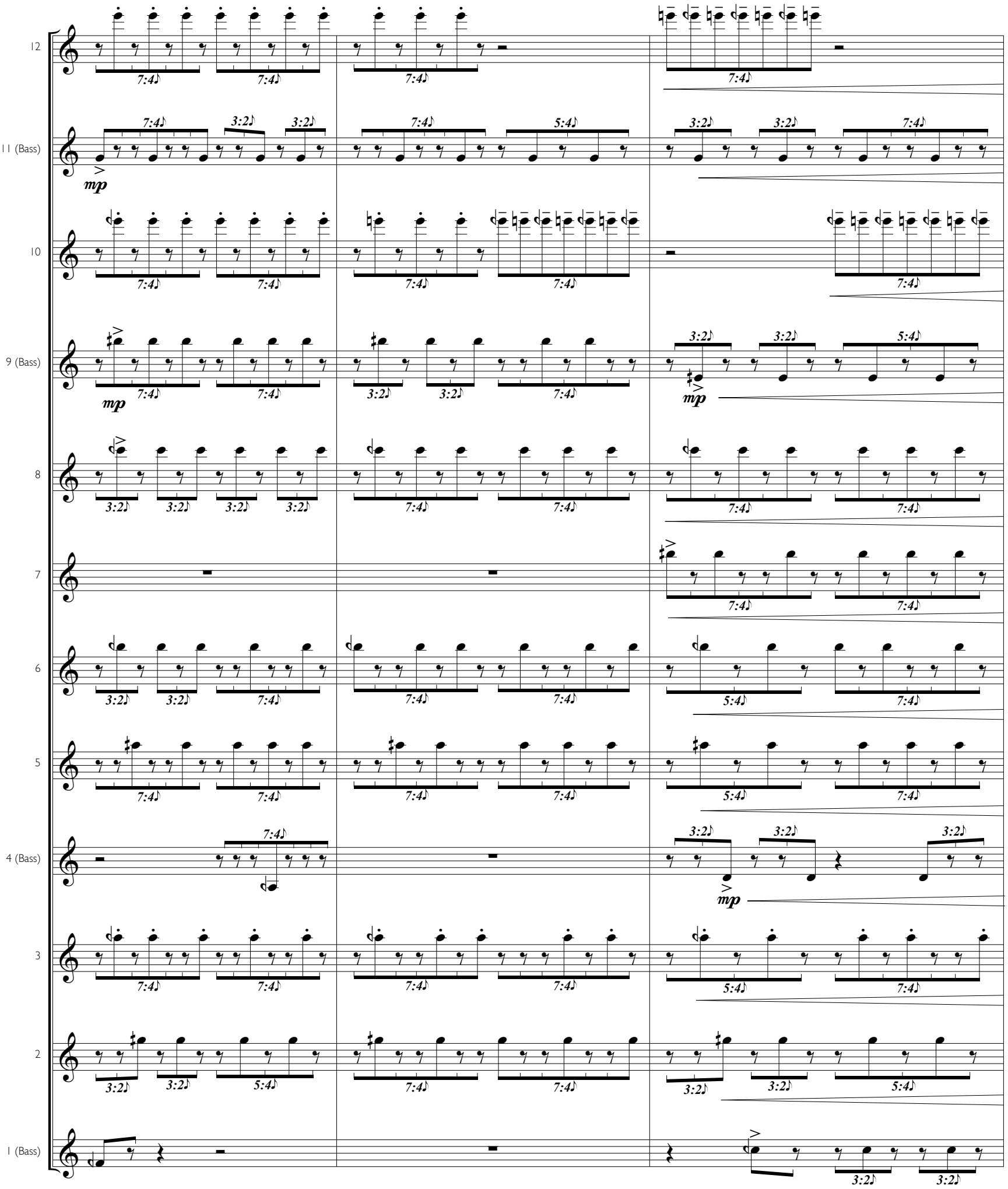

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
7:4♪
5:4♪
3:2♪
mp
p
sf


29
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
7:4♪
5:4♪
3:2♪
mp
(mp)


31
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mp
7:4♪
sf
(p)
5:4♪
3:2♪
p
31
32
33

34 Steadily towards full note values & presence, as if the sound was getting closer...



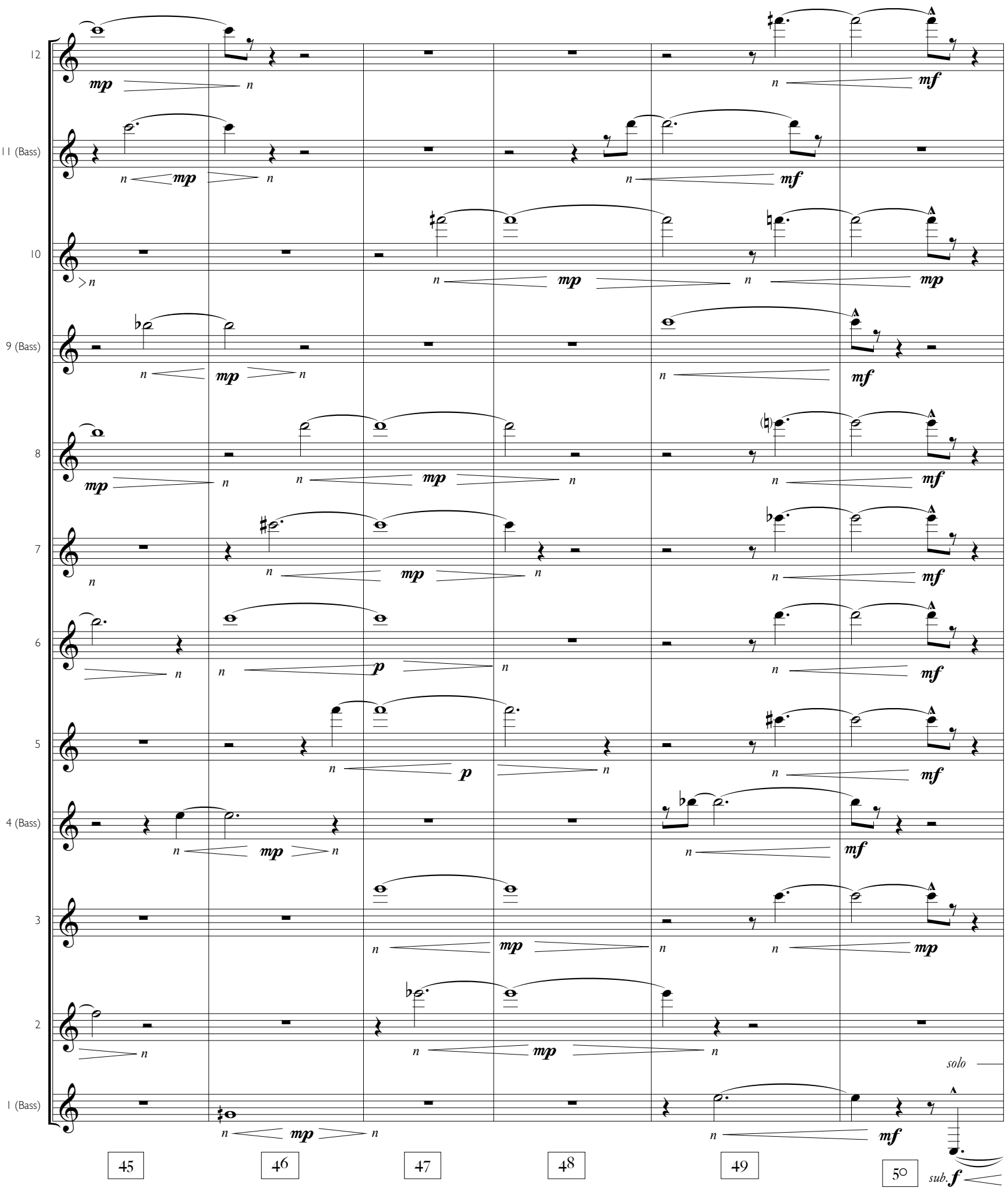

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mp
7:4♪
3:2♪
5:4♪

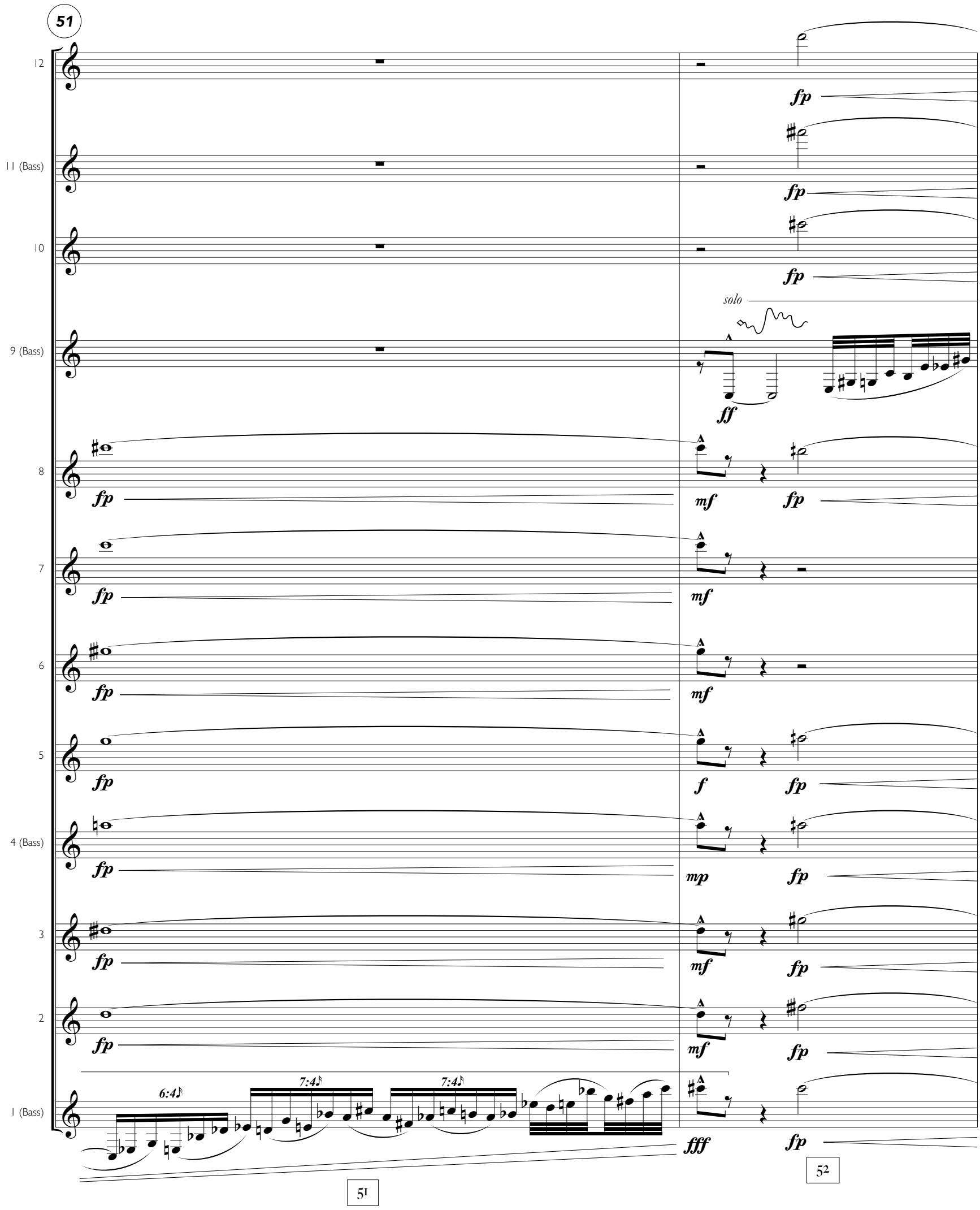
41 Long waves (← 𝅗𝅥 = ♩ →) [♩ = 48]

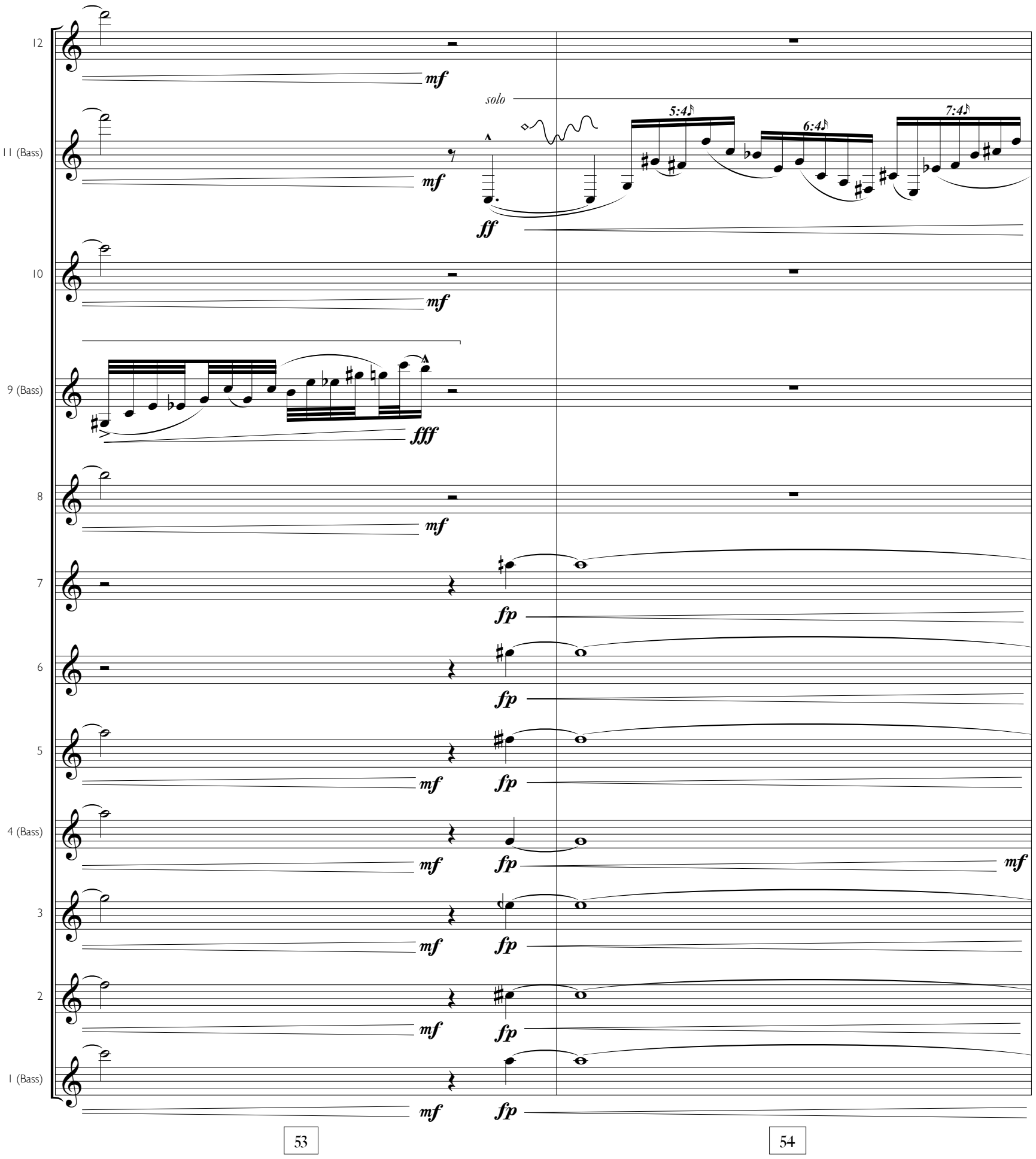
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)

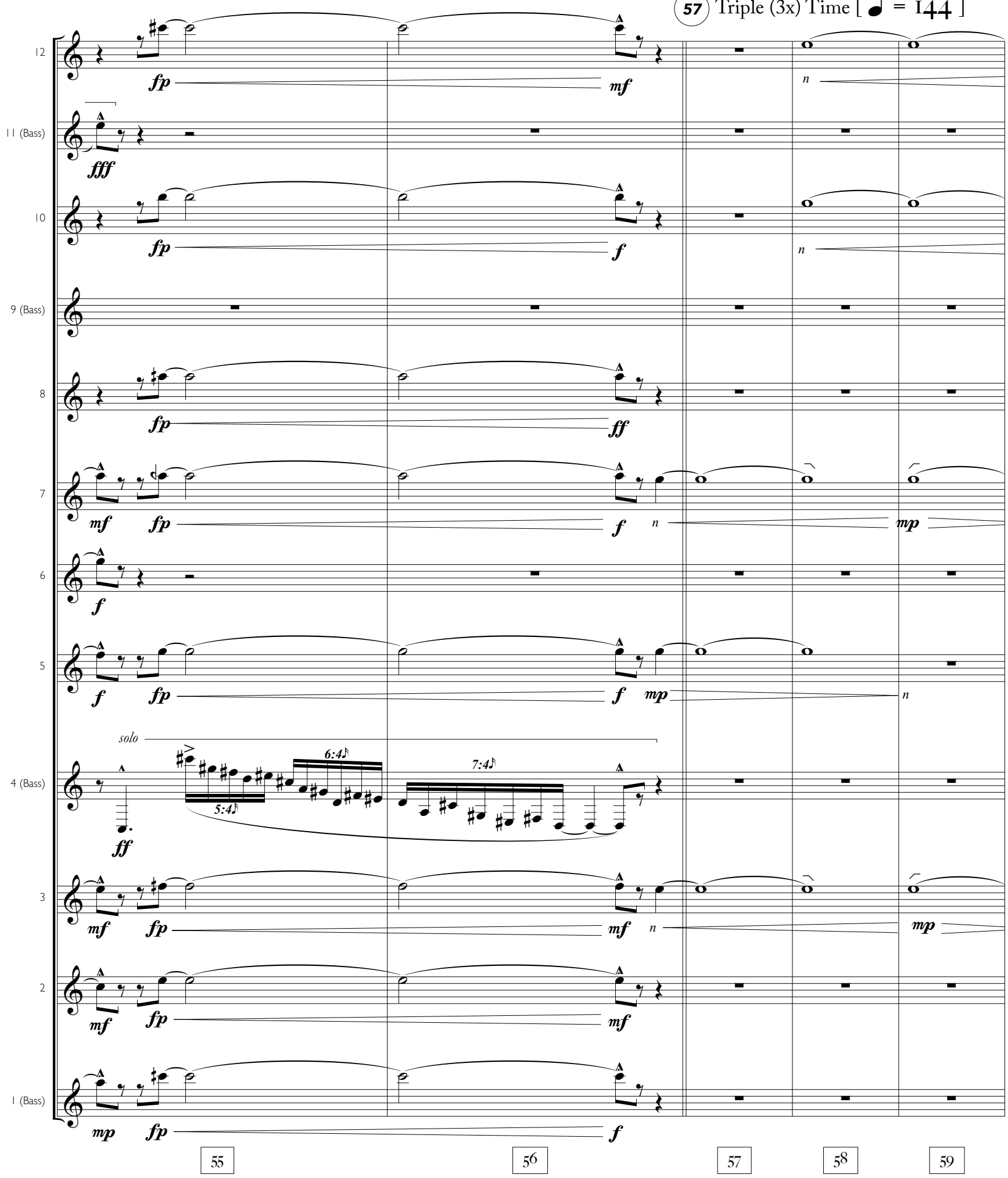
7:4♪ 3:2♪ 5:4♪ f mf mp p ff fp n VI IV solo

40 41 42 43 44


12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mp
mf
p
n
solo
sub. f
45
46
47
48
49
50


51
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
fp
mf
f
mp
ff
fff
solo
6:4♪
7:4♪
7:4♪
51
52

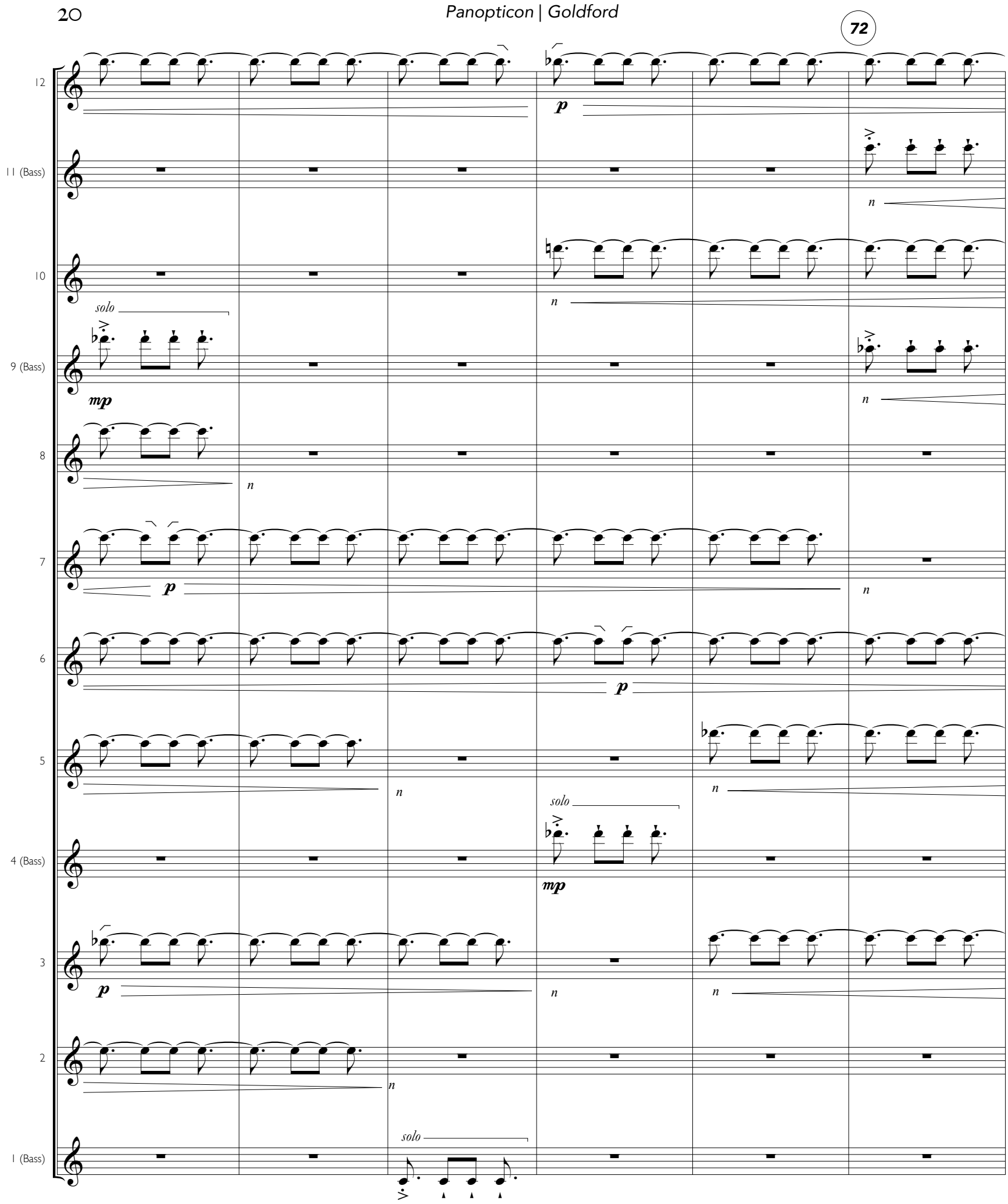

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mf
solo
ff
5:4♪
6:4♪
7:4♪
fff
fp
53
54


57 Triple (3x) Time [♩ = 144]
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
fp
mf
fff
f
ff
mp
n
solo
6:4♪
5:4♪
7:4♪
55
56
57
58
59

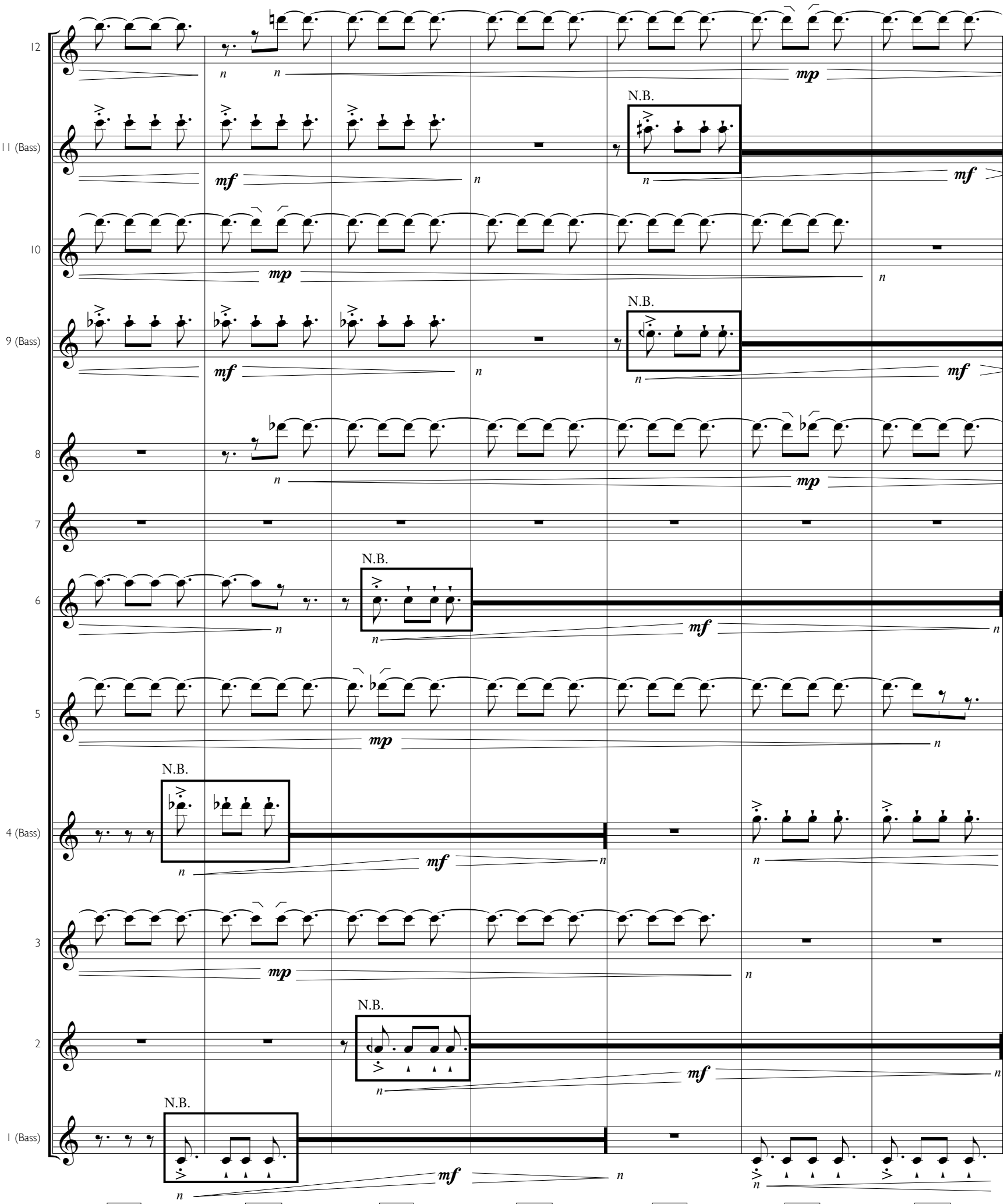
63 Jurjina (← ♪ = ♪ →) [♩ = 144]

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)

60 61 62 63 64 65 66

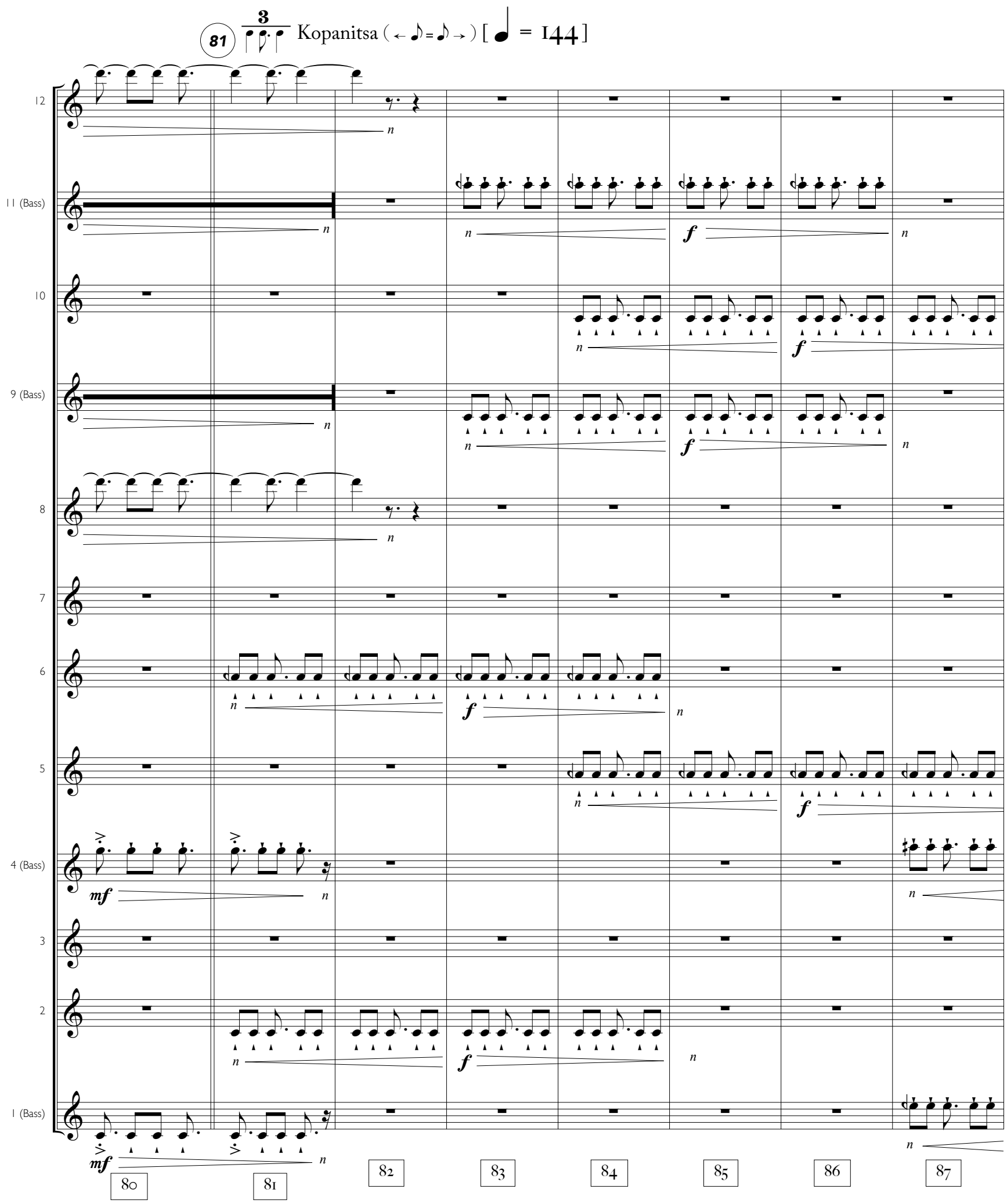


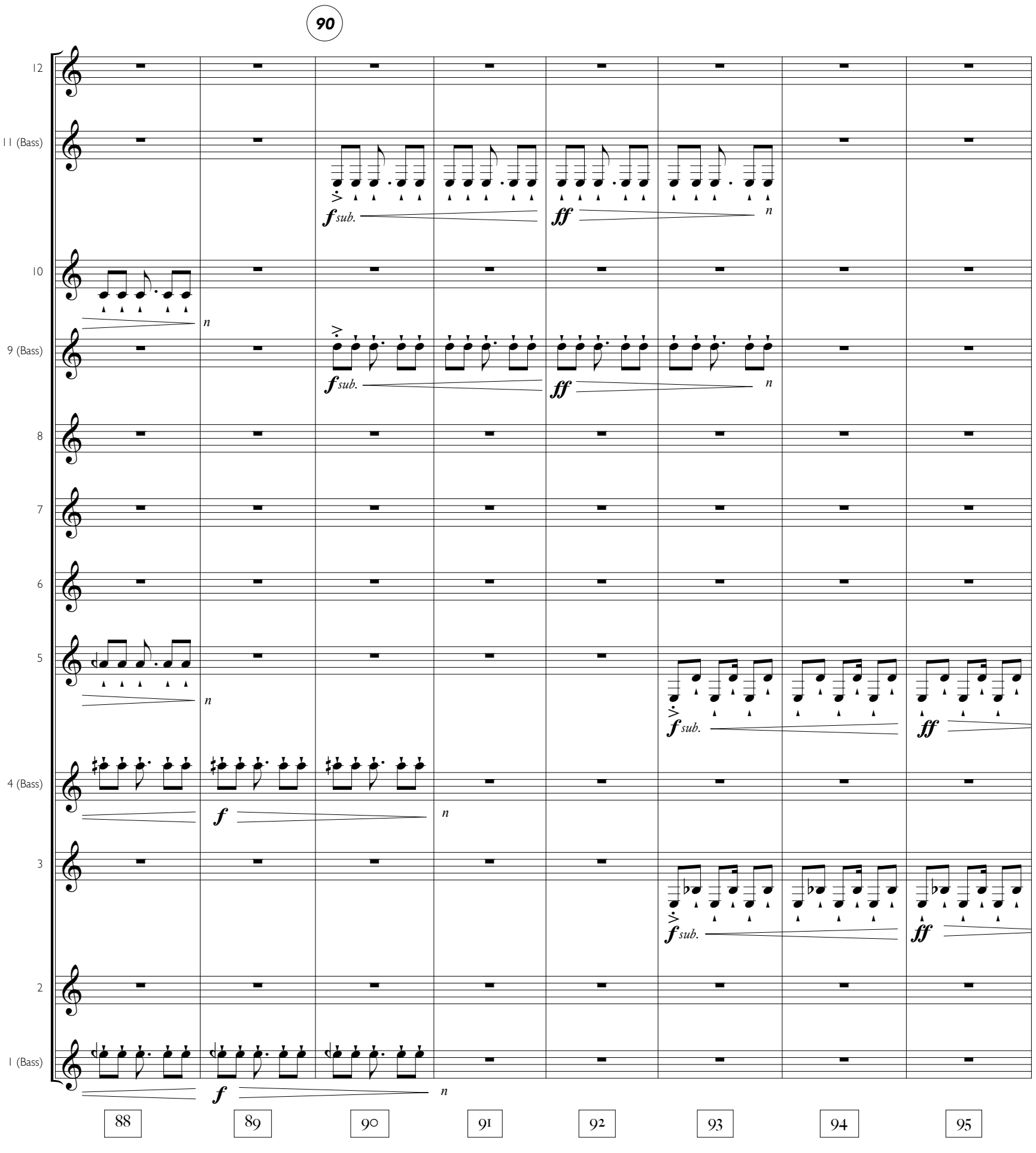
67 68 69 70 71 72

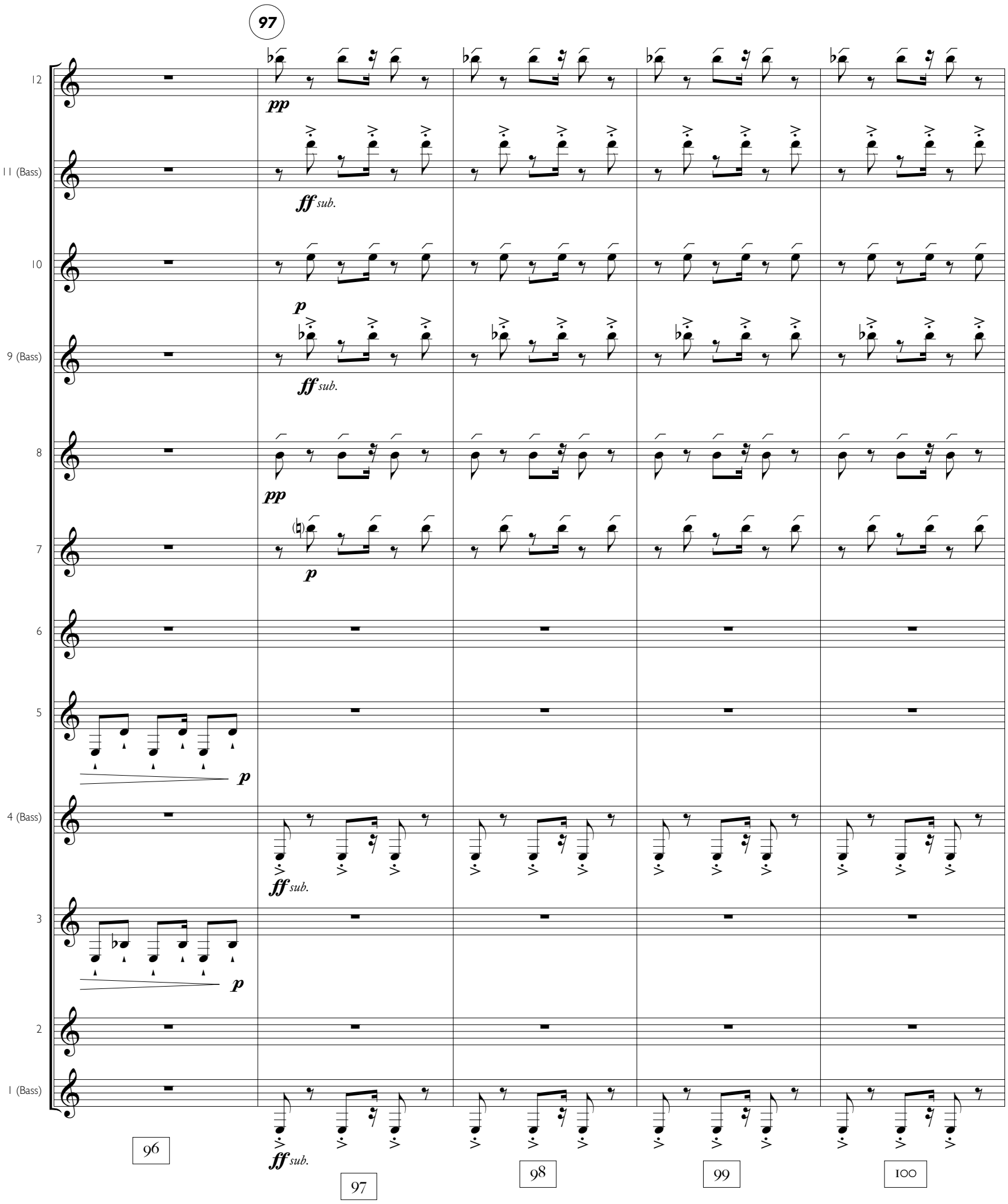


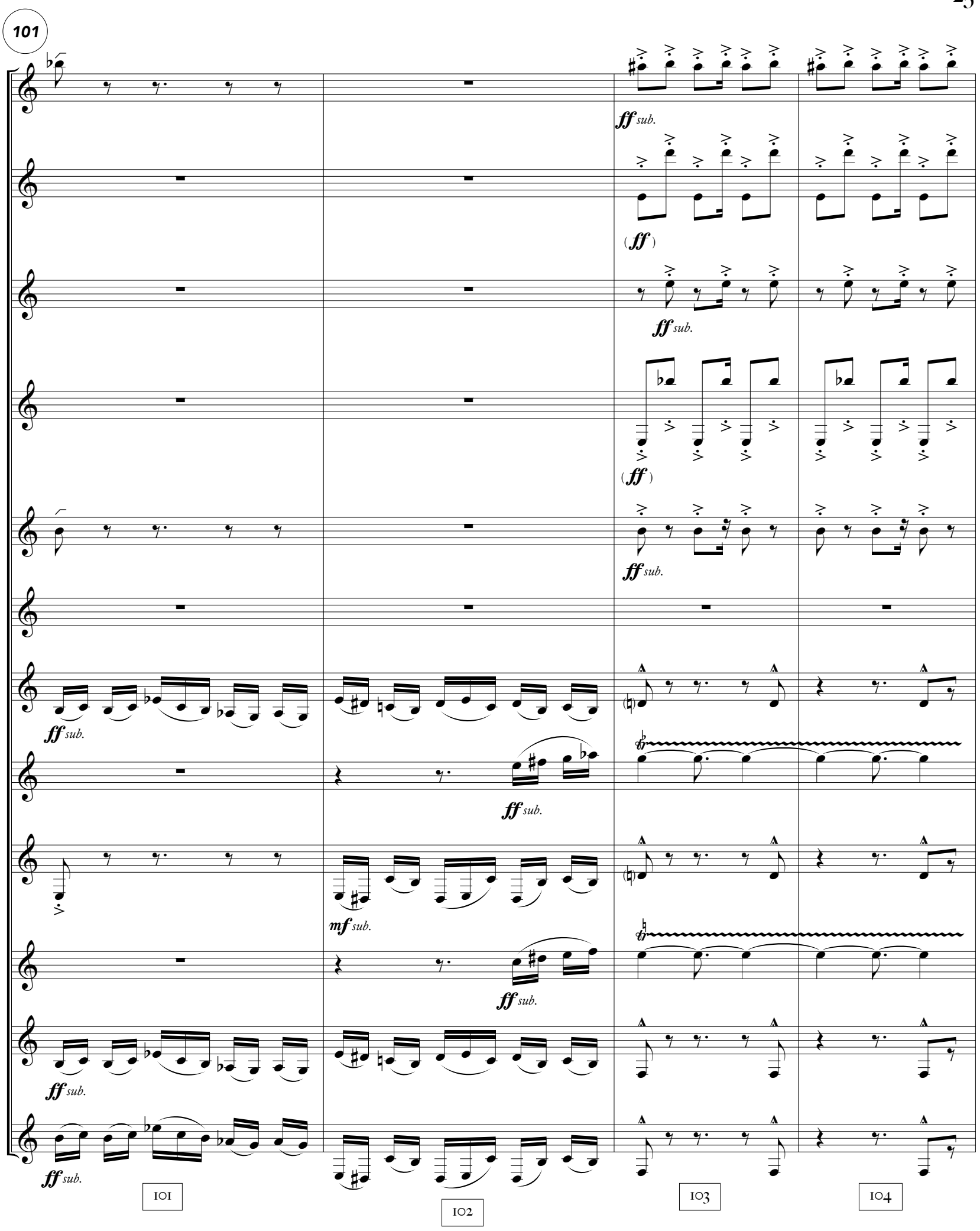
73 74 75 76 77 78 79

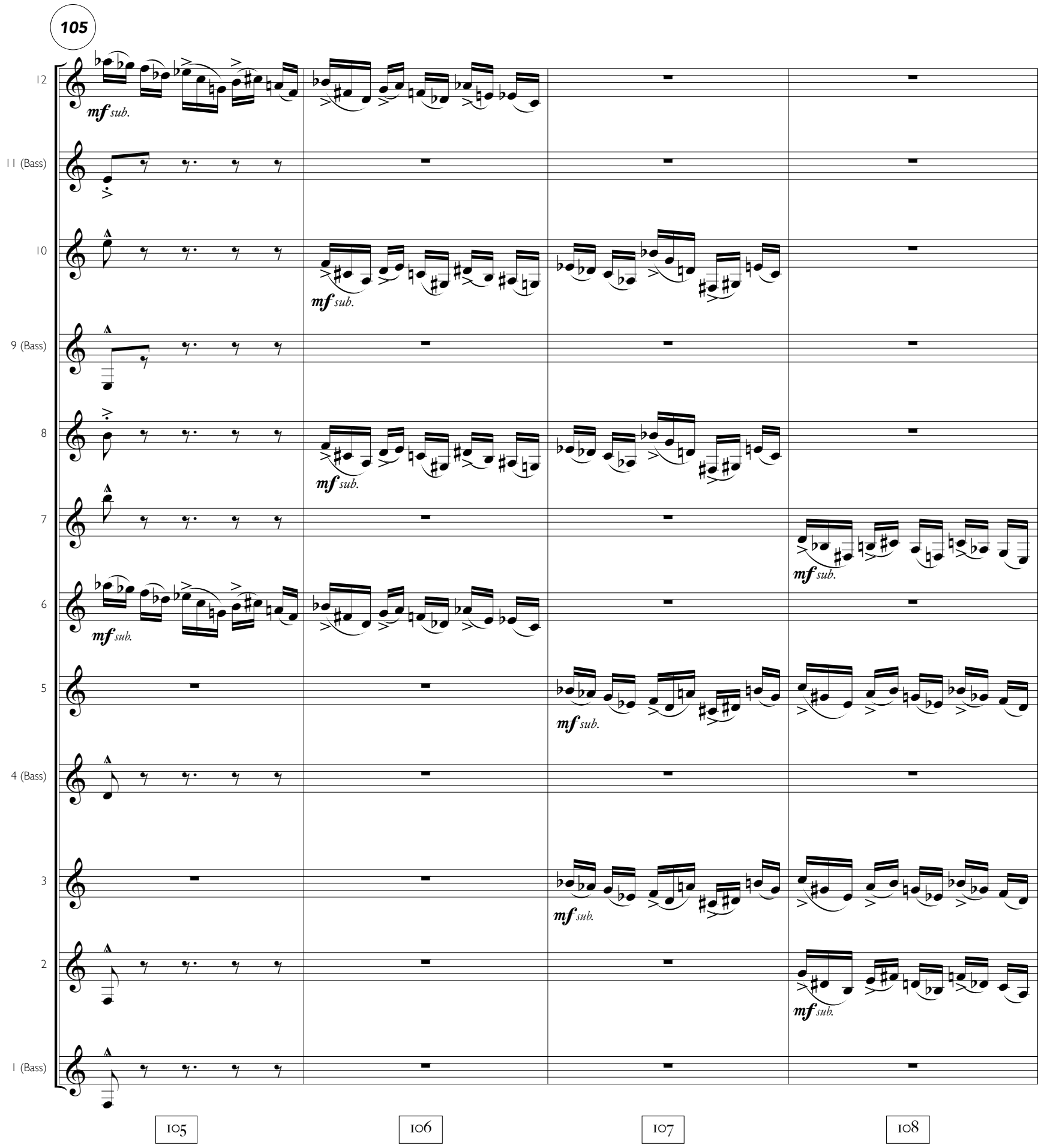
N.B. Parts 1, 2, 4, 6, 9 & 11 need not worry about starting this phrases precisely on such a fast entrance that deviates from the normal Jurinja beat division; a slight phase difference between these parts will reinforce the artificial reverberation effect already at work in these canonic entrances.

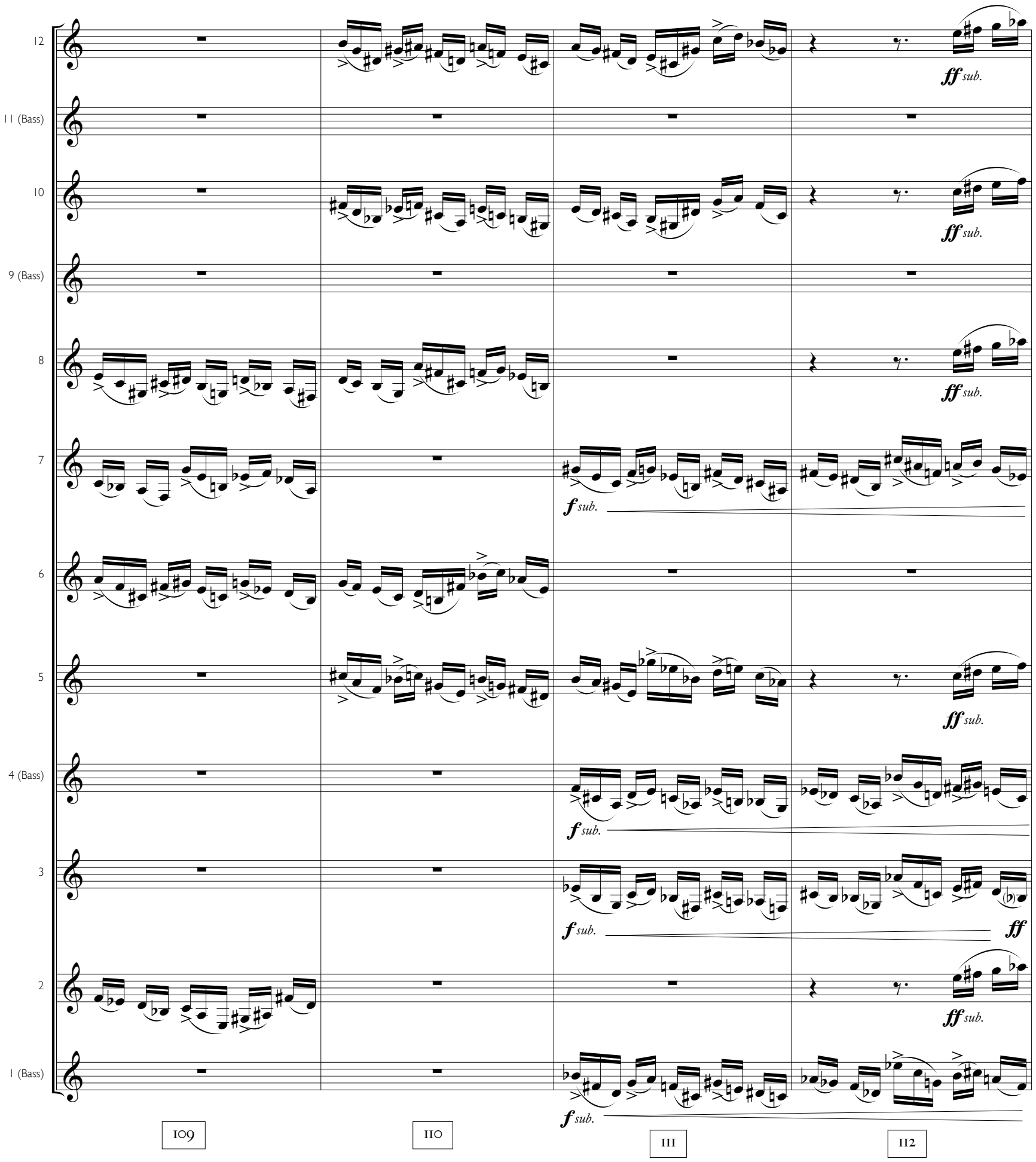

81
3
Kopanitsa (← ♪ = ♪ →) [♩ = 144]
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
n
f
mf
80
81
82
83
84
85
86
87

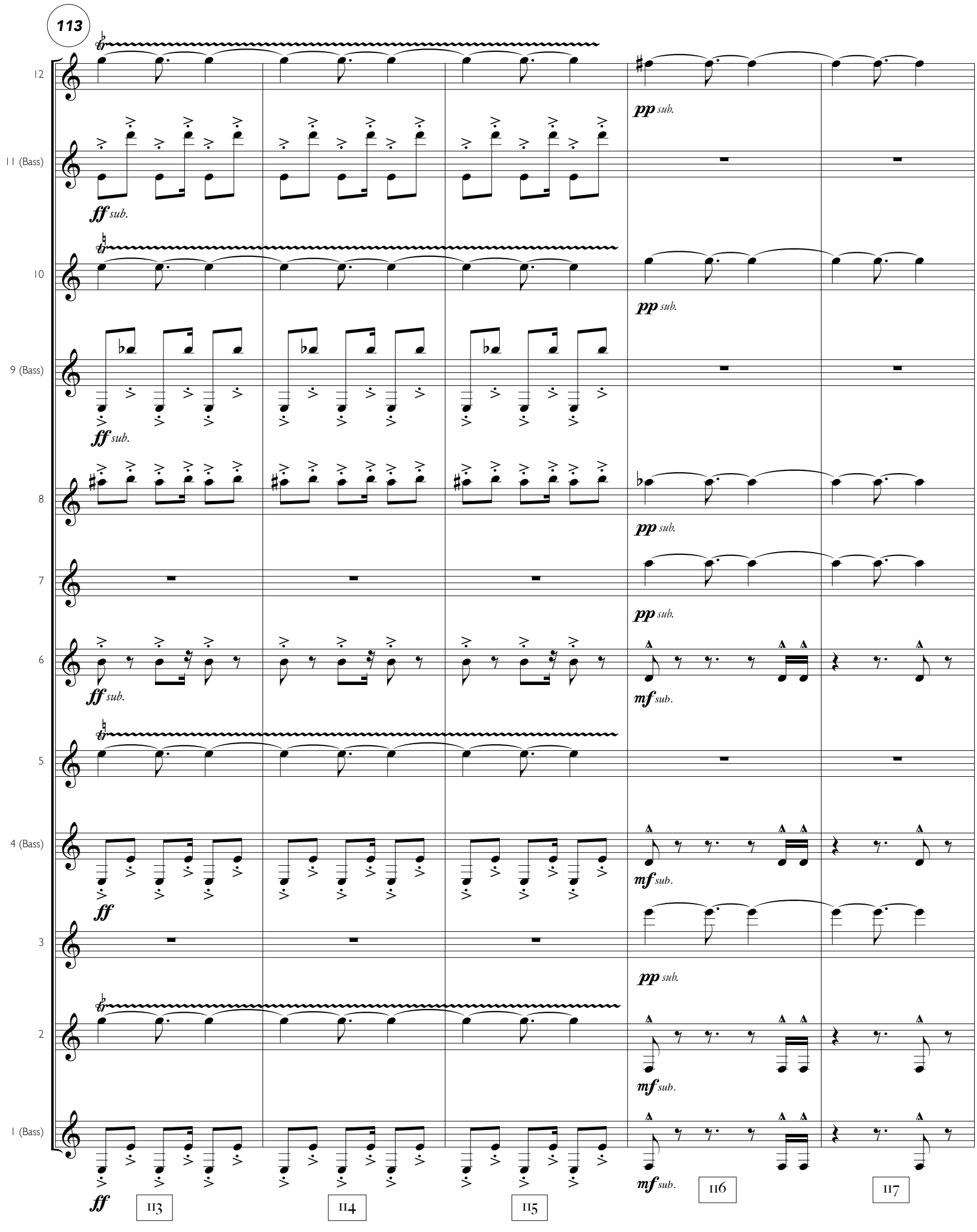

90
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
f sub.
ff
n
f
88
89
90
91
92
93
94
95


97
12
pp
11 (Bass)
ff sub.
10
p
9 (Bass)
ff sub.
8
pp
7
p
6
5
p
4 (Bass)
ff sub.
3
p
2
1 (Bass)
ff sub.
96
97
98
99
100


101
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
ff sub.
(ff)
mf sub.
101
102
103
104


105
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mf sub.
105
106
107
108


12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
ff sub.
f sub.
ff
109
110
111
112


113
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
ff sub.
pp sub.
mf sub.
ff
113
114
115
116
117

118

12 11 (Bass) 10 9 (Bass) 8 7 6 5 4 (Bass) 3 2 1 (Bass)

ff sub. pp sub. mp n

ff sub. mp

ff sub. pp sub. p n

ff sub. mf sub.

ff sub. pp sub. mp n

pp sub. mp n

ff sub. mf sub. mp

ff sub. mf sub. mp n

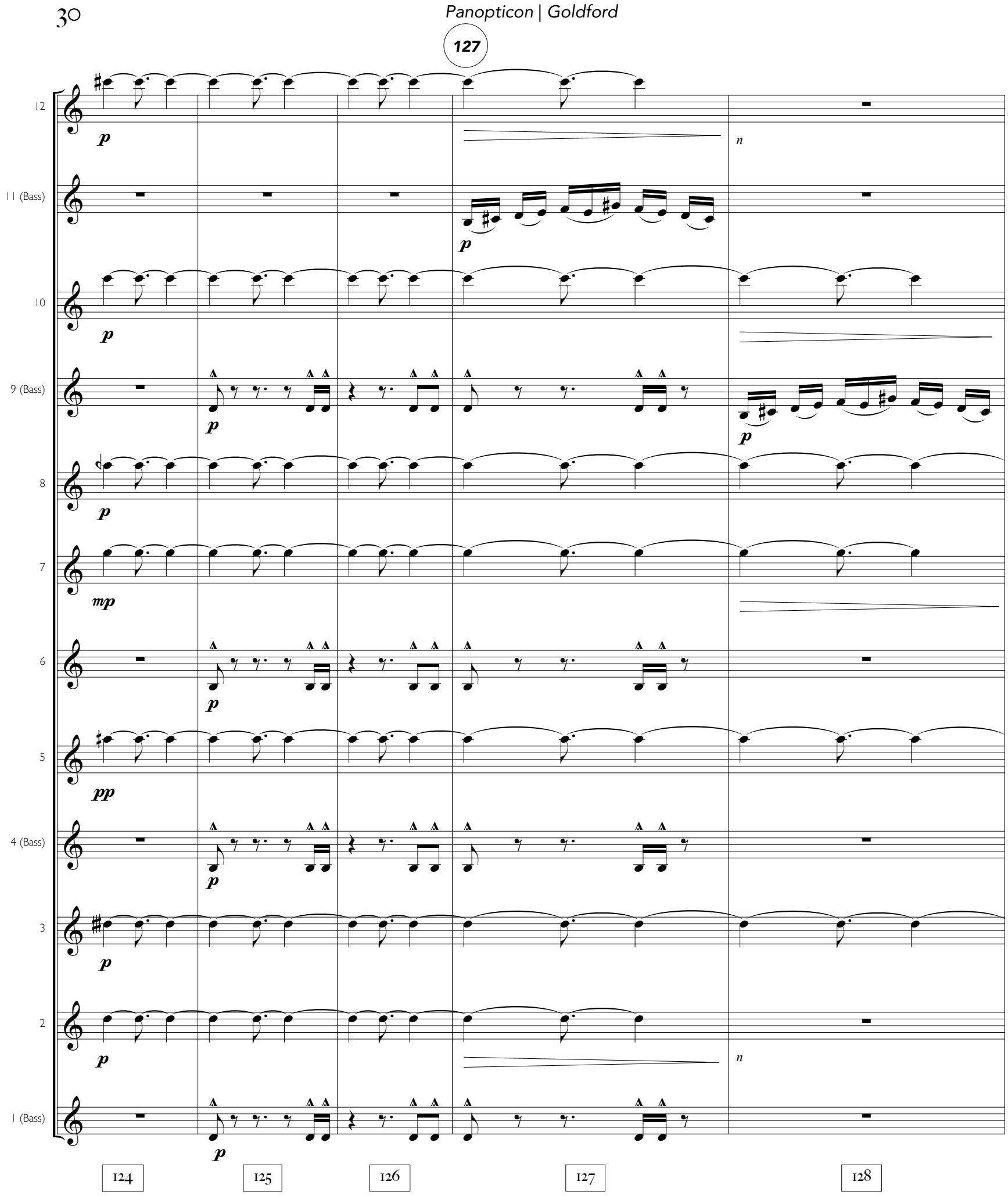
ff mf sub. mp

pp sub. p n

ff sub. mp

ff sub.

119 120 121 122 123


127
12
11 (Bass)
10
9 (Bass)
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7
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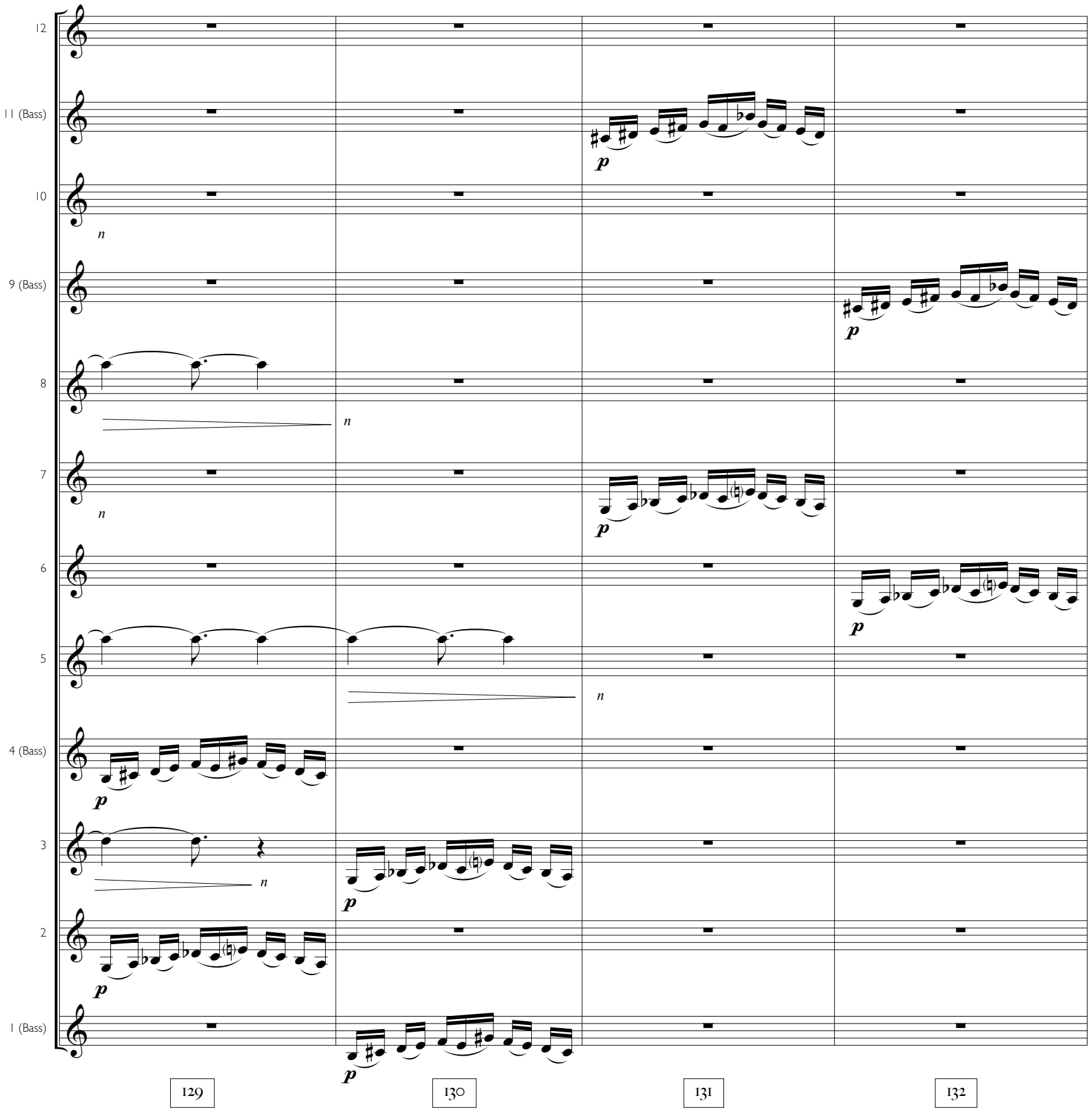
5
4 (Bass)
3
2
1 (Bass)
p
mp
pp
n
124
125
126
127
128


12
11 (Bass)
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9 (Bass)
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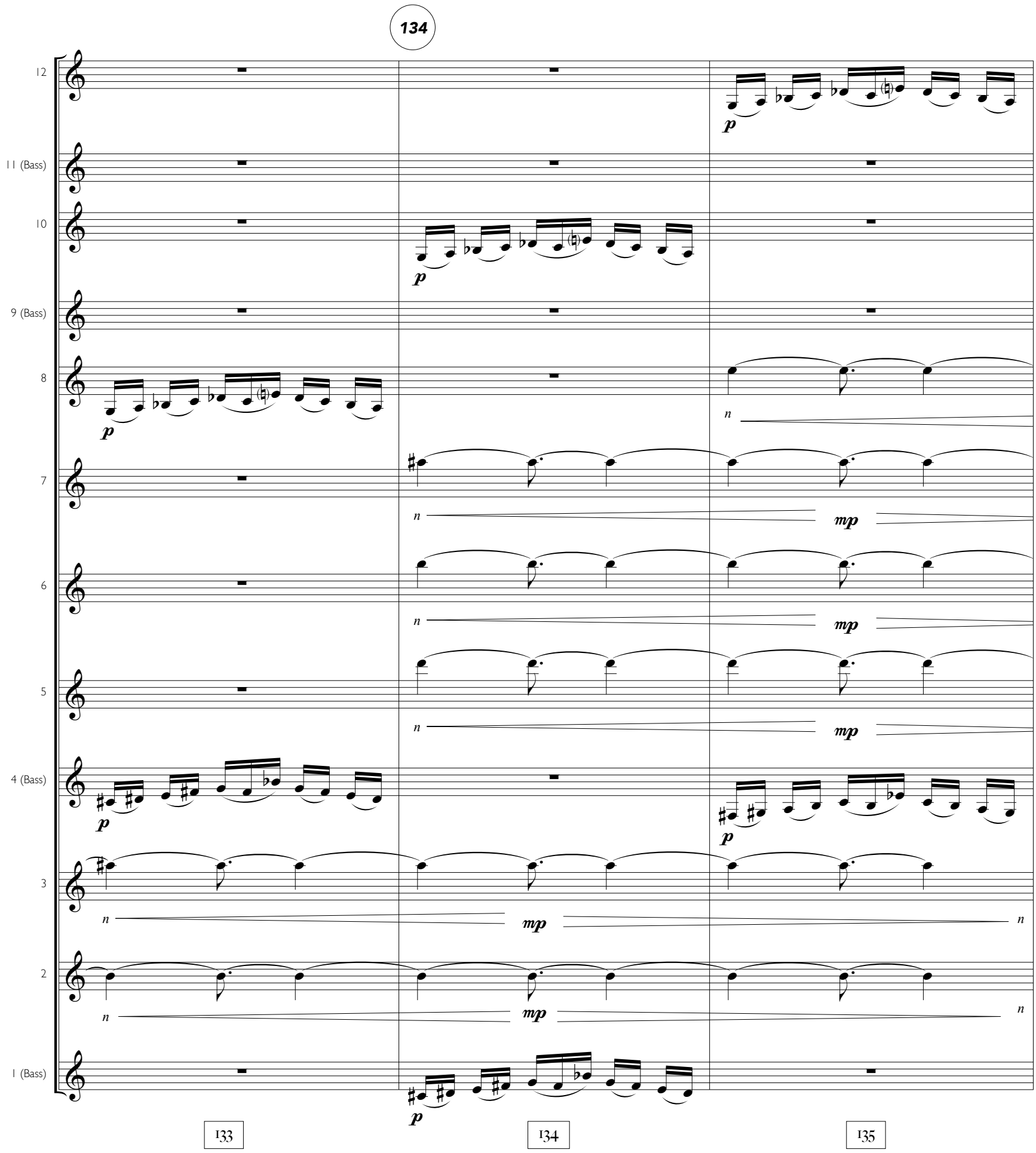
7
6
5
4 (Bass)
3
2
1 (Bass)
p
n
129
130
131
132


134
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11 (Bass)
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7
6
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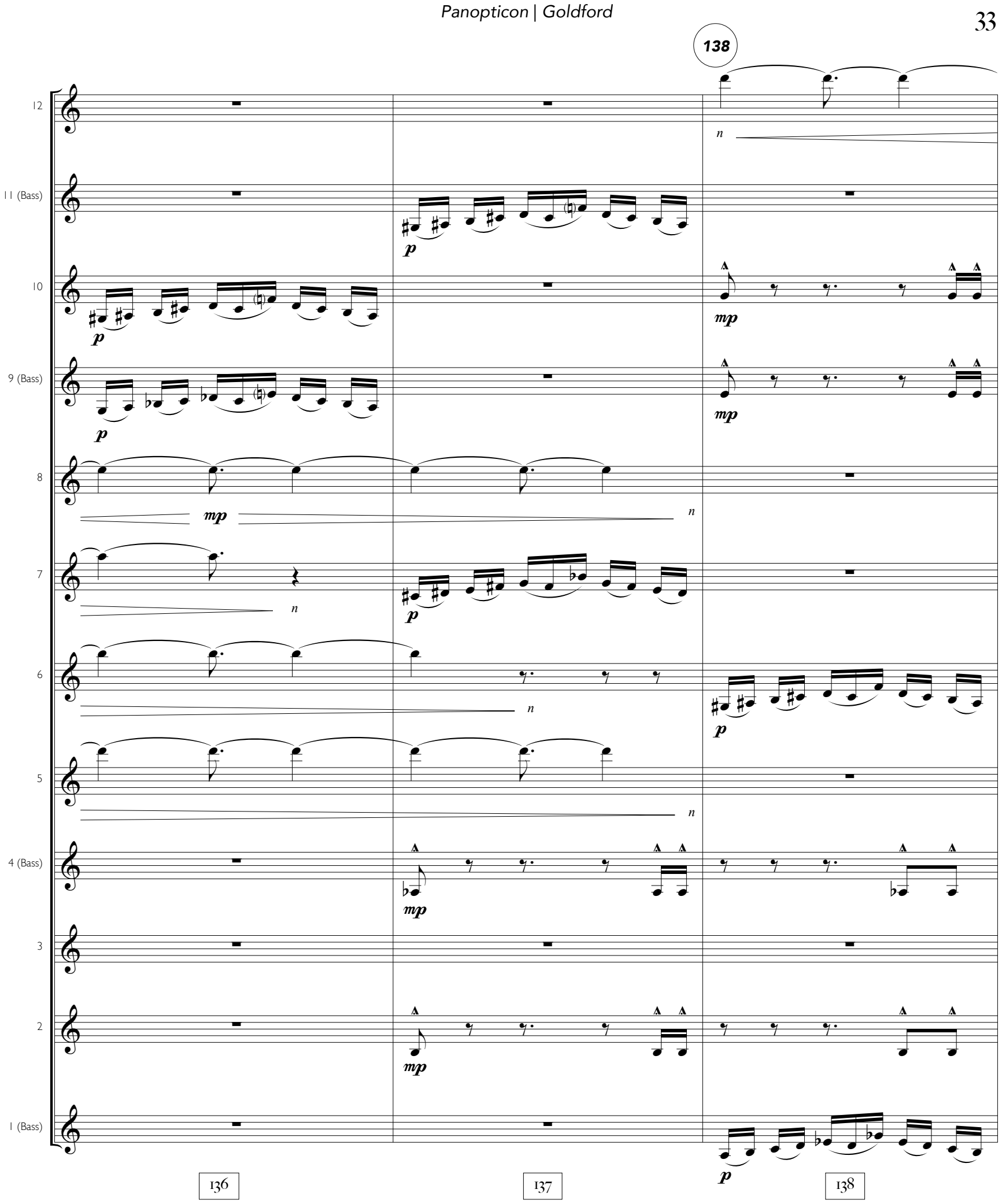
4 (Bass)
3
2
1 (Bass)
p
n
mp
133
134
135


138
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11 (Bass)
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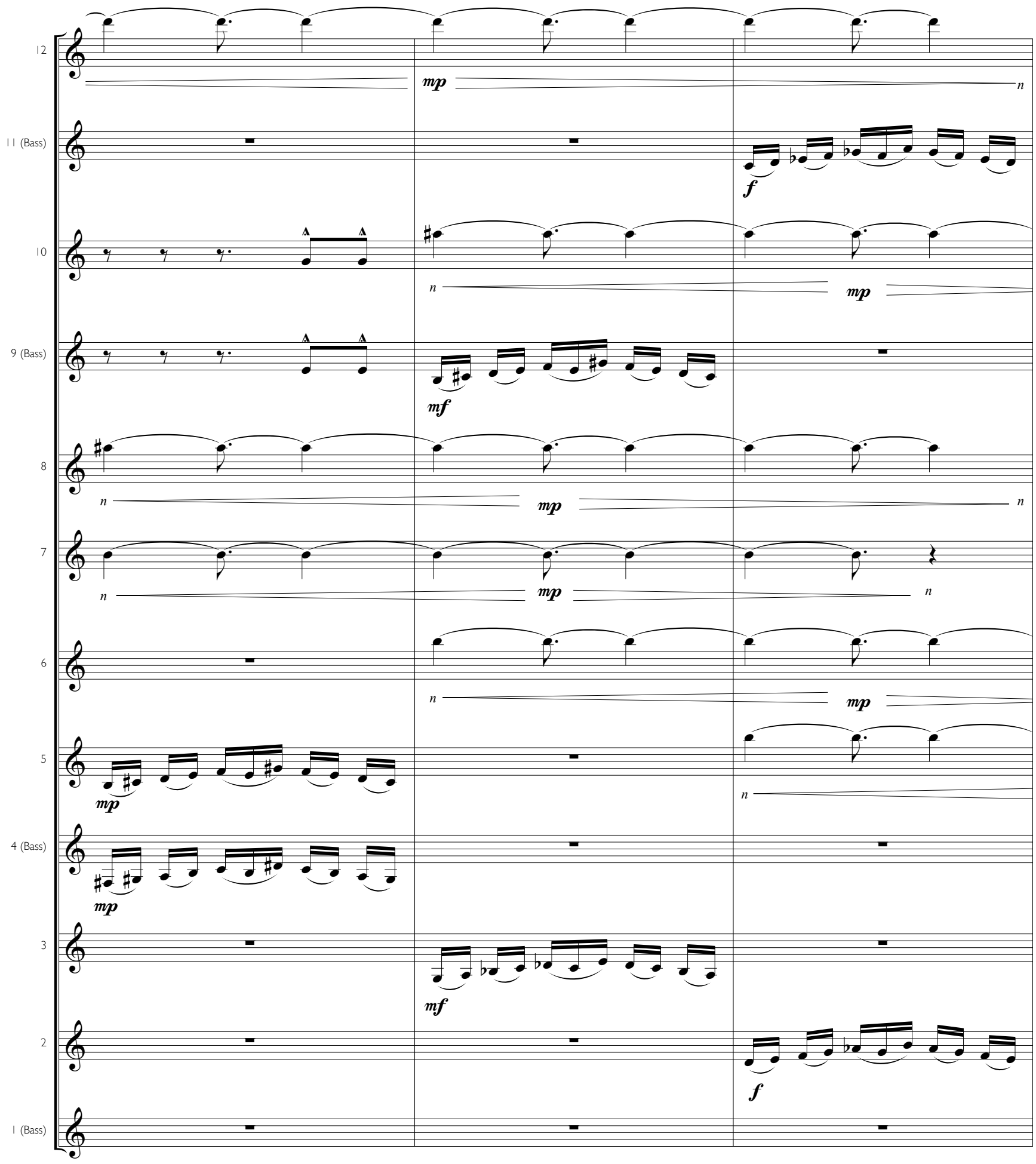
4 (Bass)
3
2
1 (Bass)
p
mp
n
136
137
138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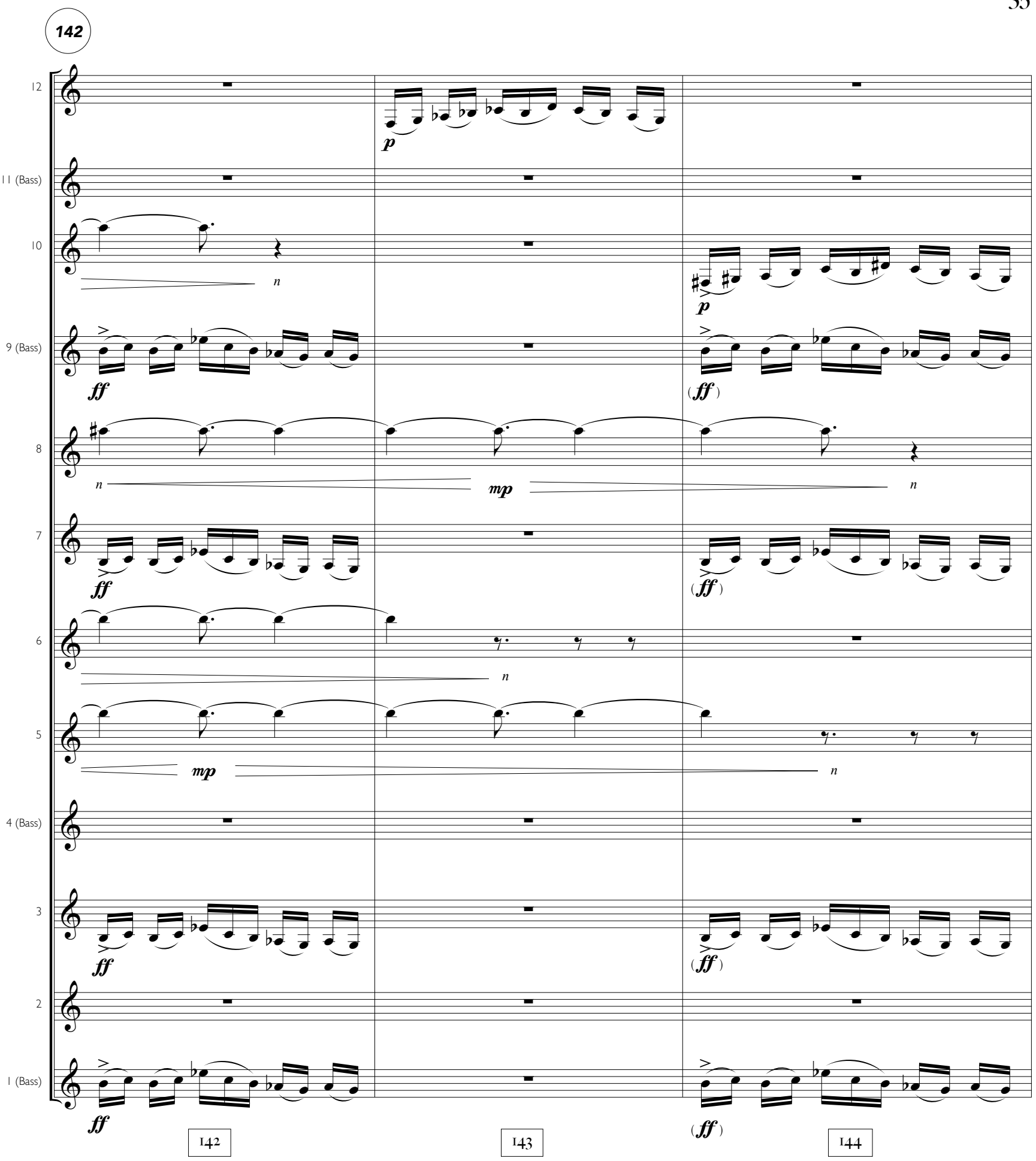
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mp
n
f
mf


142
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11 (Bass)
10
9 (Bass)
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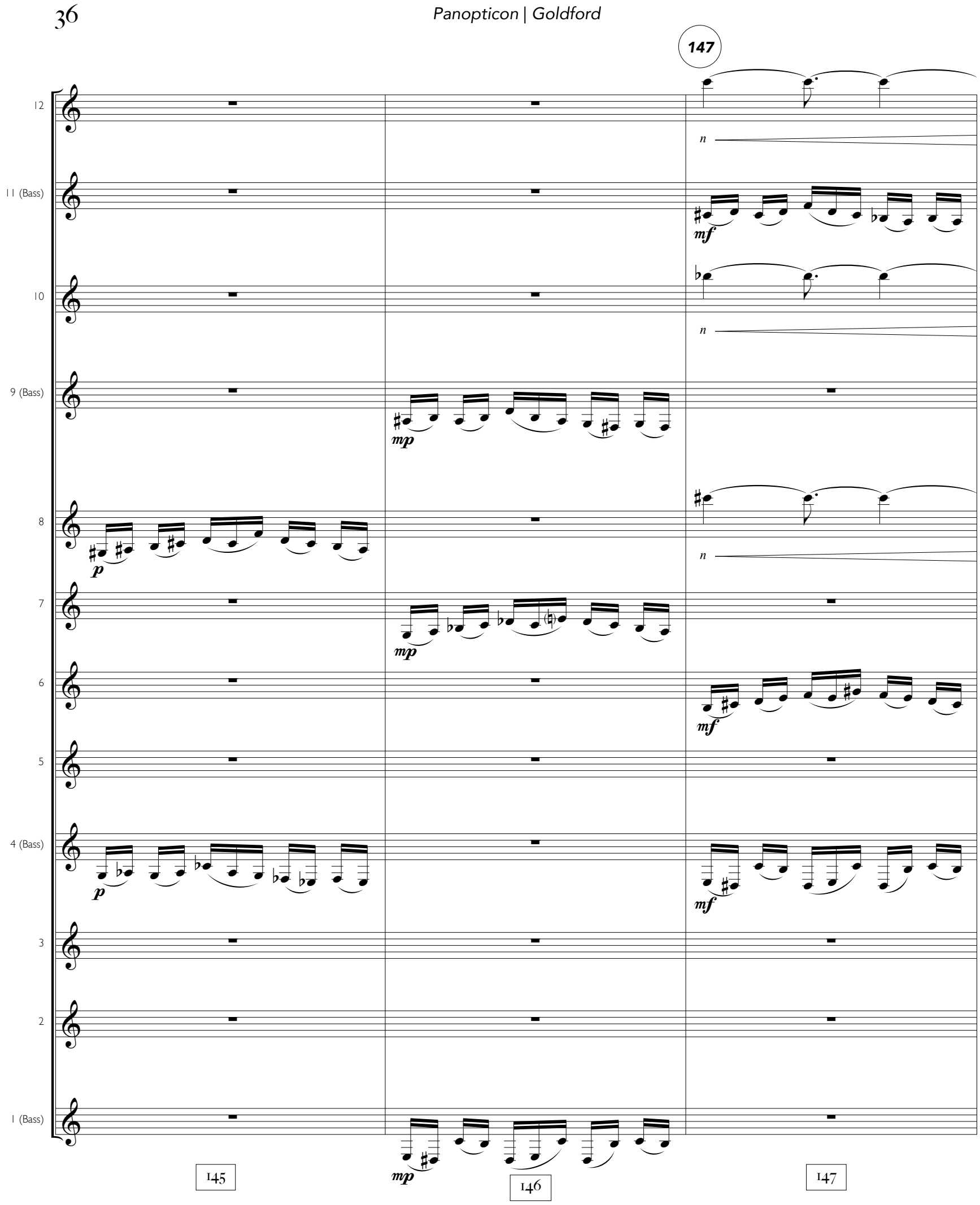
5
4 (Bass)
3
2
1 (Bass)
p
n
ff
mp
(ff)
142
143
144


147
12
11 (Bass)
10
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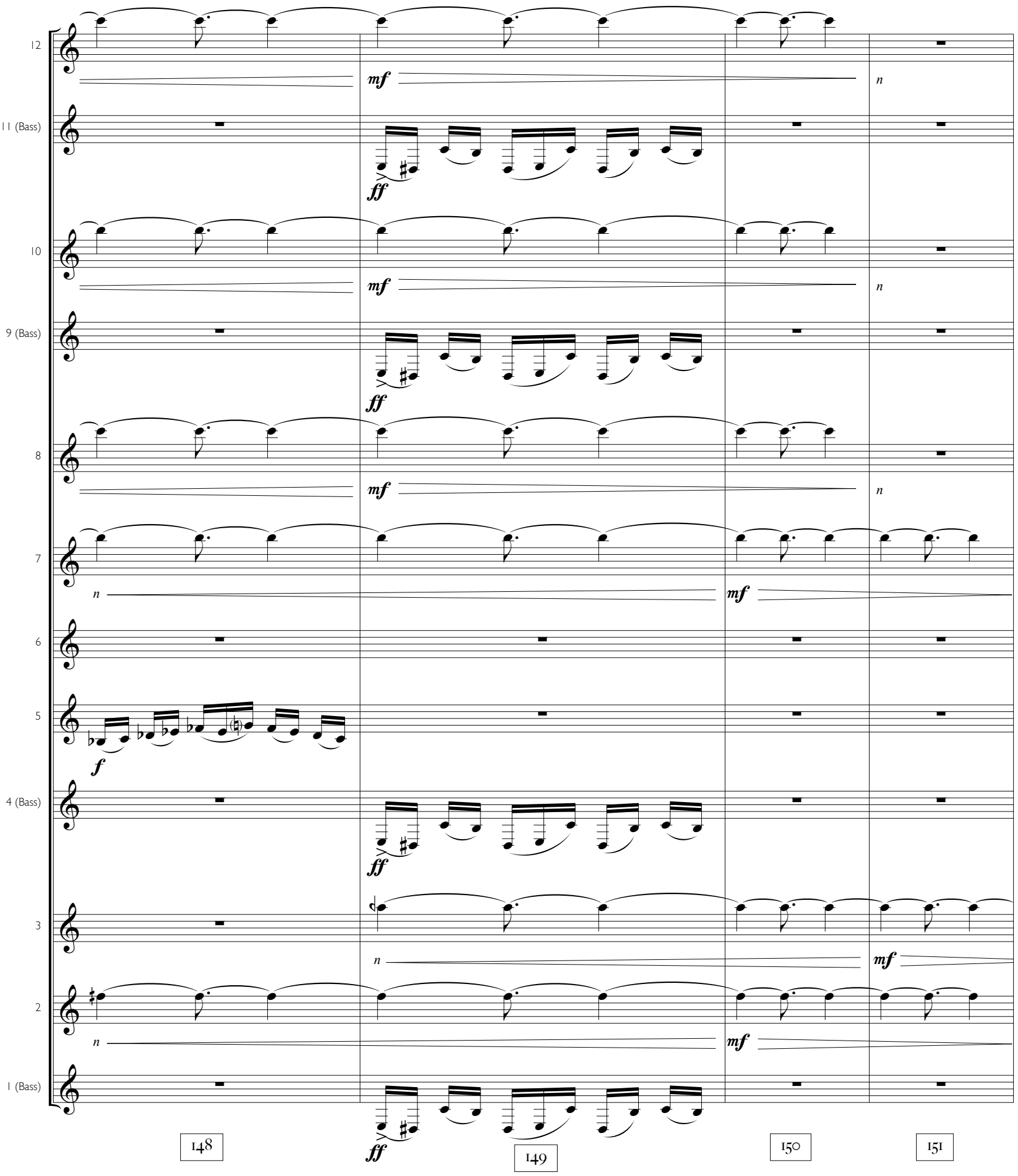
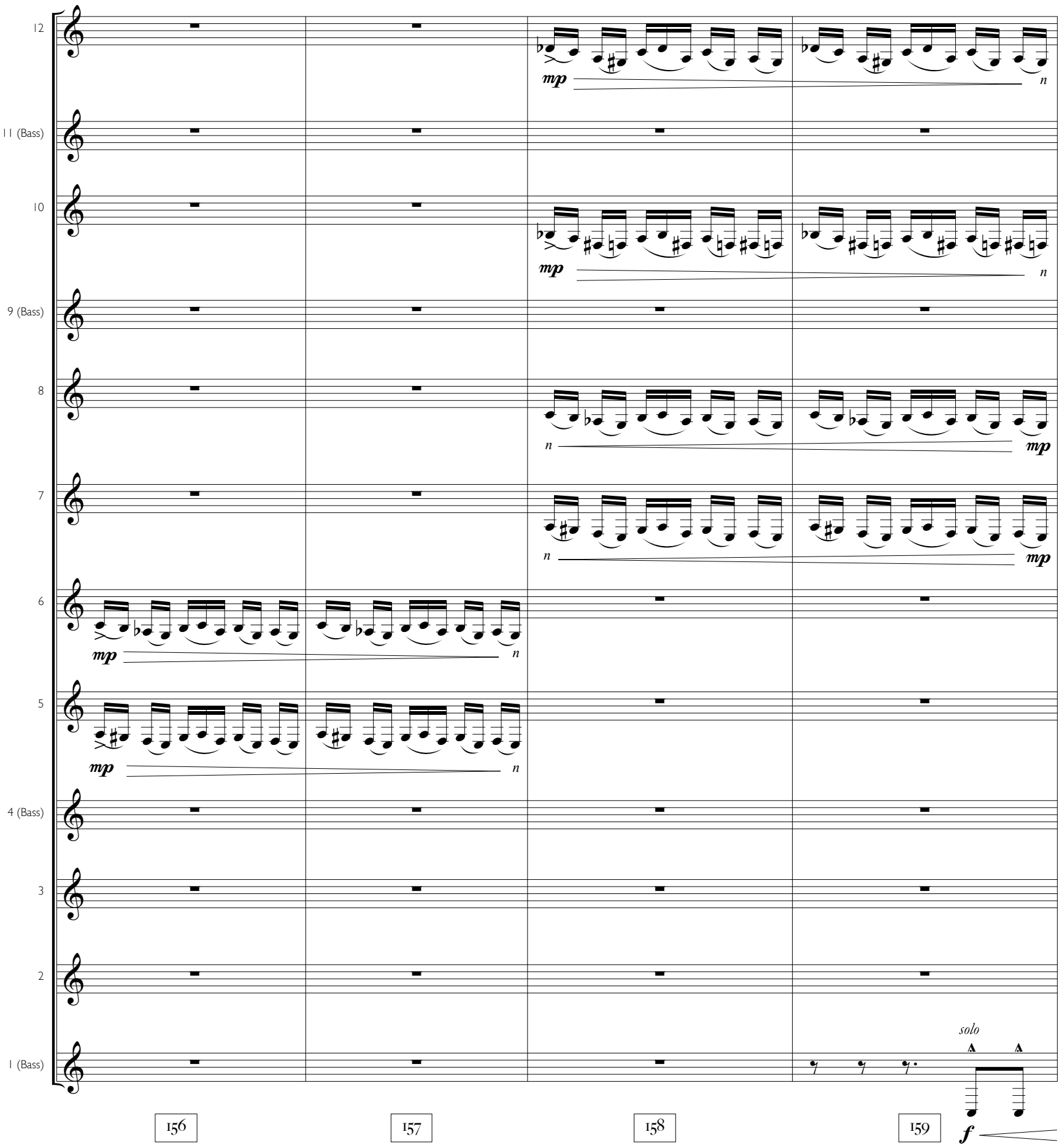
7
6
5
4 (Bass)
3
2
1 (Bass)
n
mf
mp
p
145
146
147

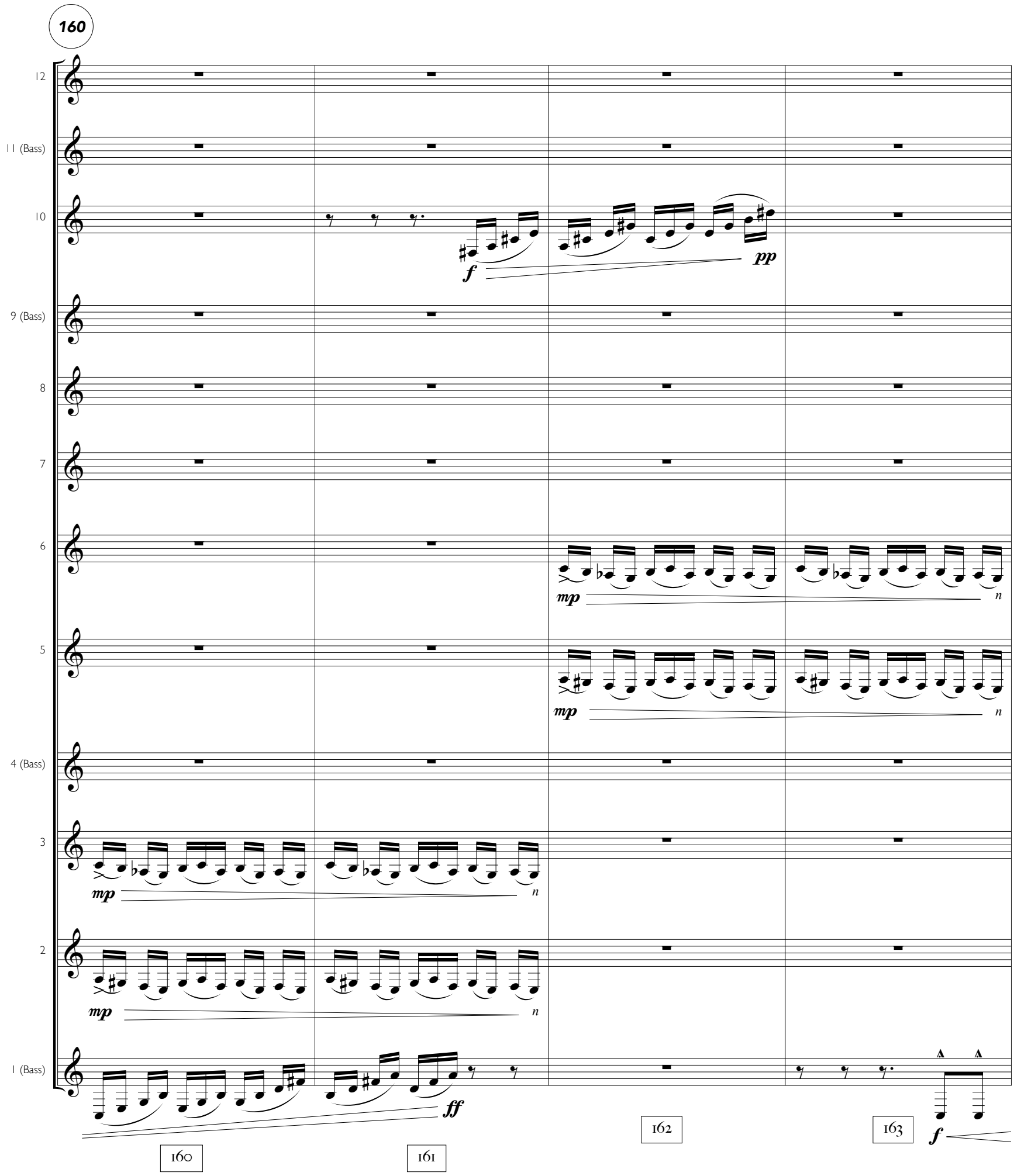

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mf
ff
n
f
148
149
150
151

154

12 n mp ff
11 (Bass) ff
10 n p ff
9 (Bass) ff
8 n mp ff
7
6 n mp ff
5 n mp ff
4 (Bass) ff
3 n n mp n
2 n mp n
1 (Bass) ff

152 153 154 155


12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mp
n
solo
f
156
157
158
159


160
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
f
pp
mp
n
ff
160
161
162
163

167

12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)

mp n mp n

n mp

n mp

f pp

f ff

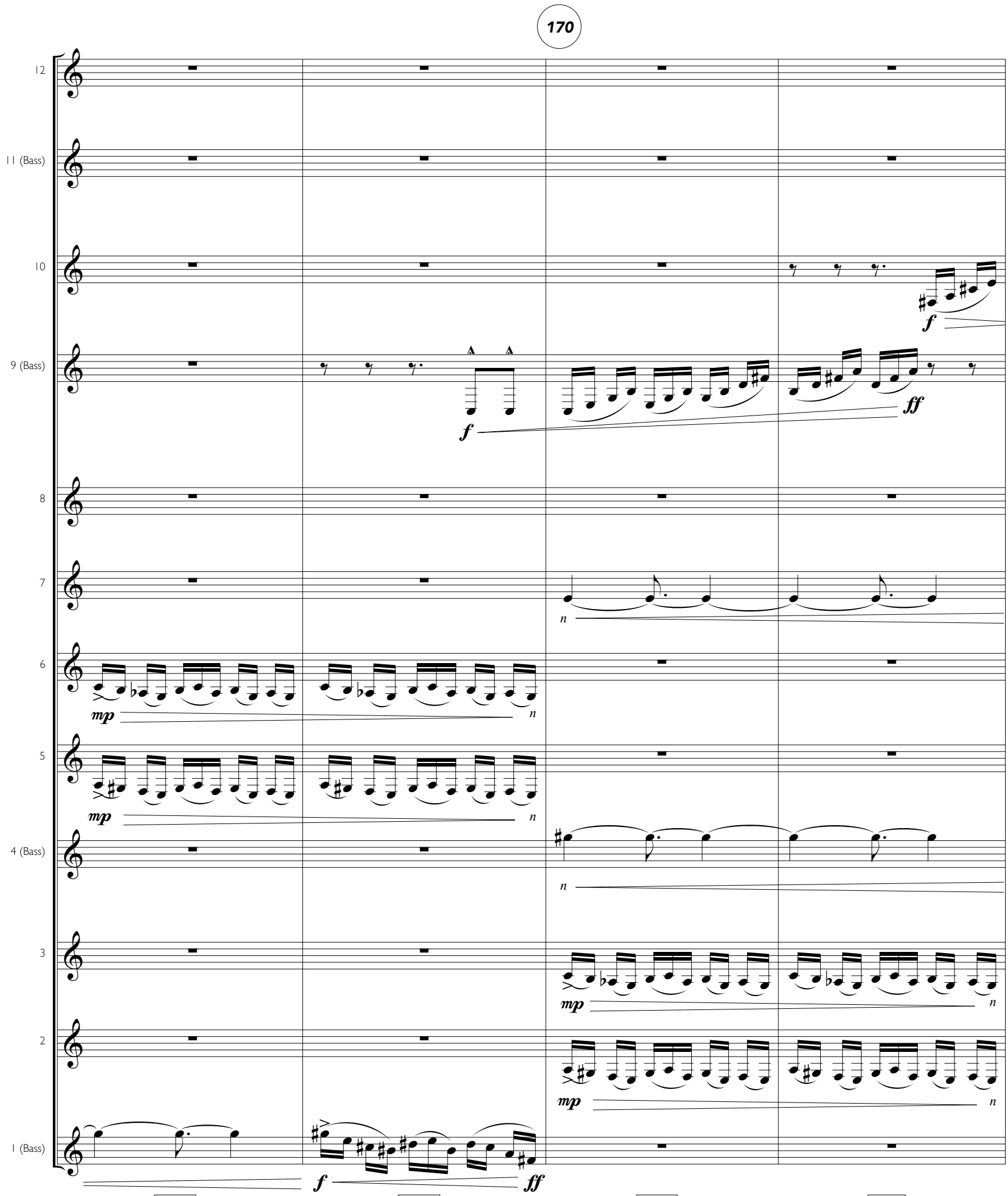
f pp

ff

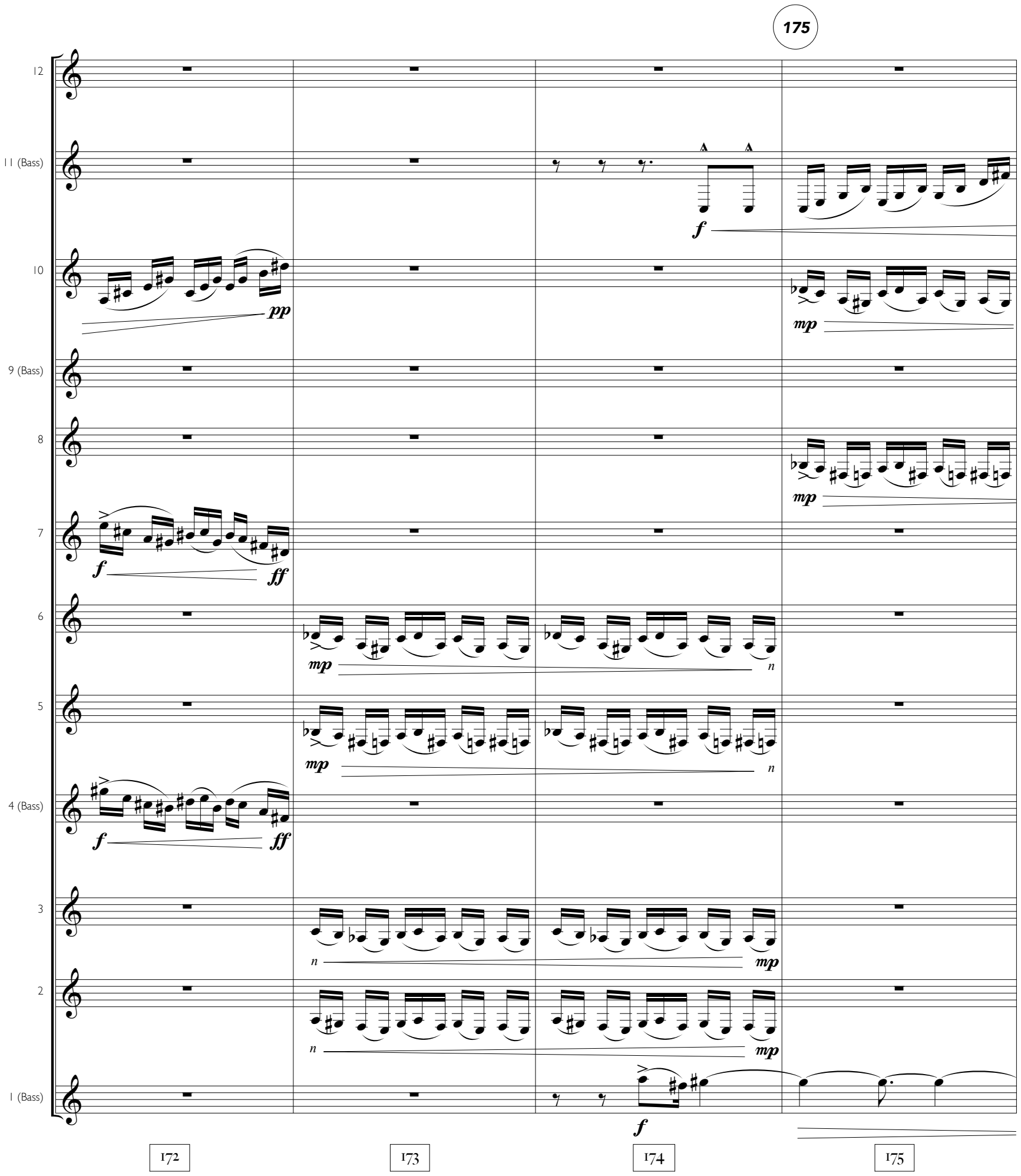
p

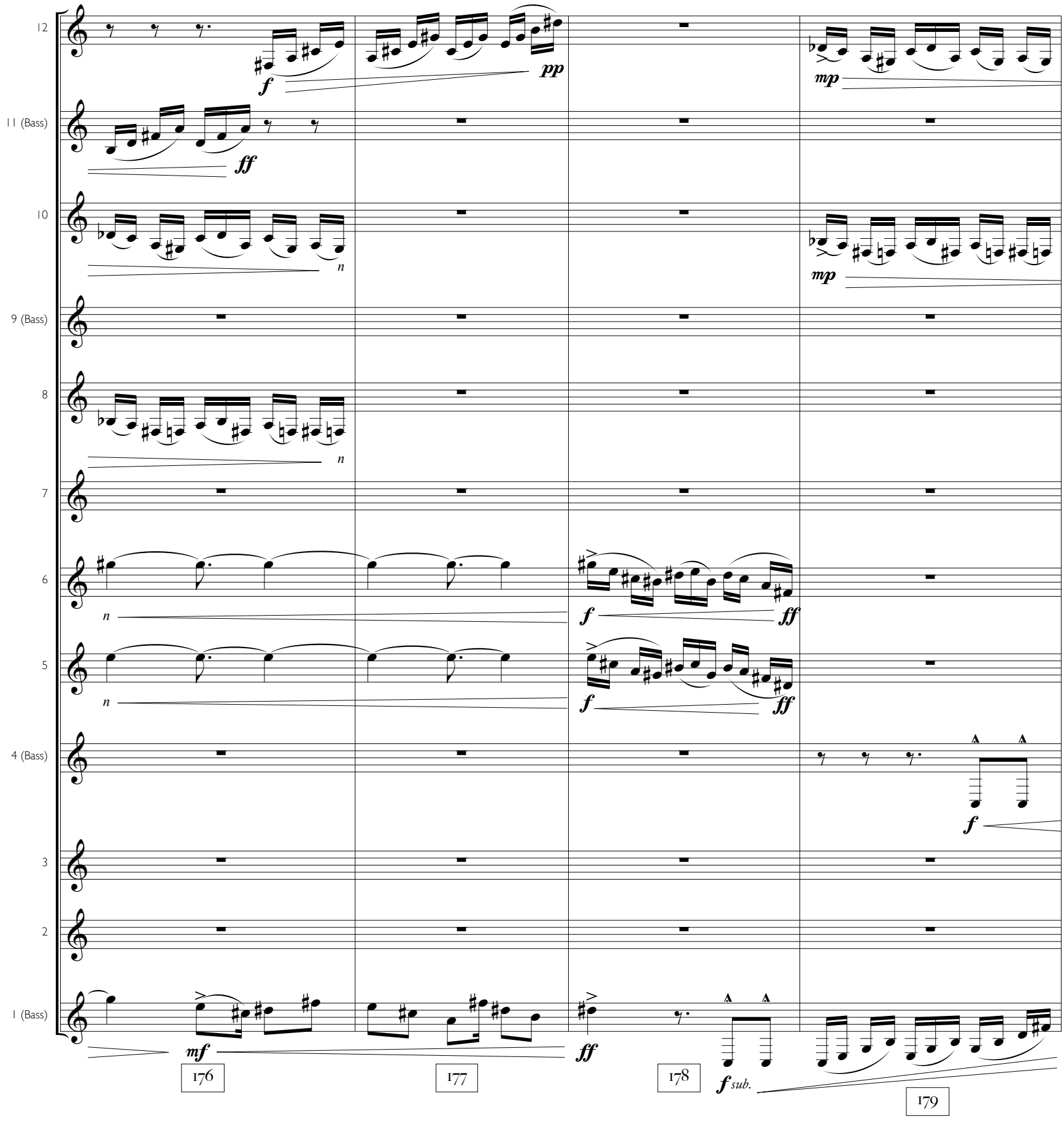
166 167

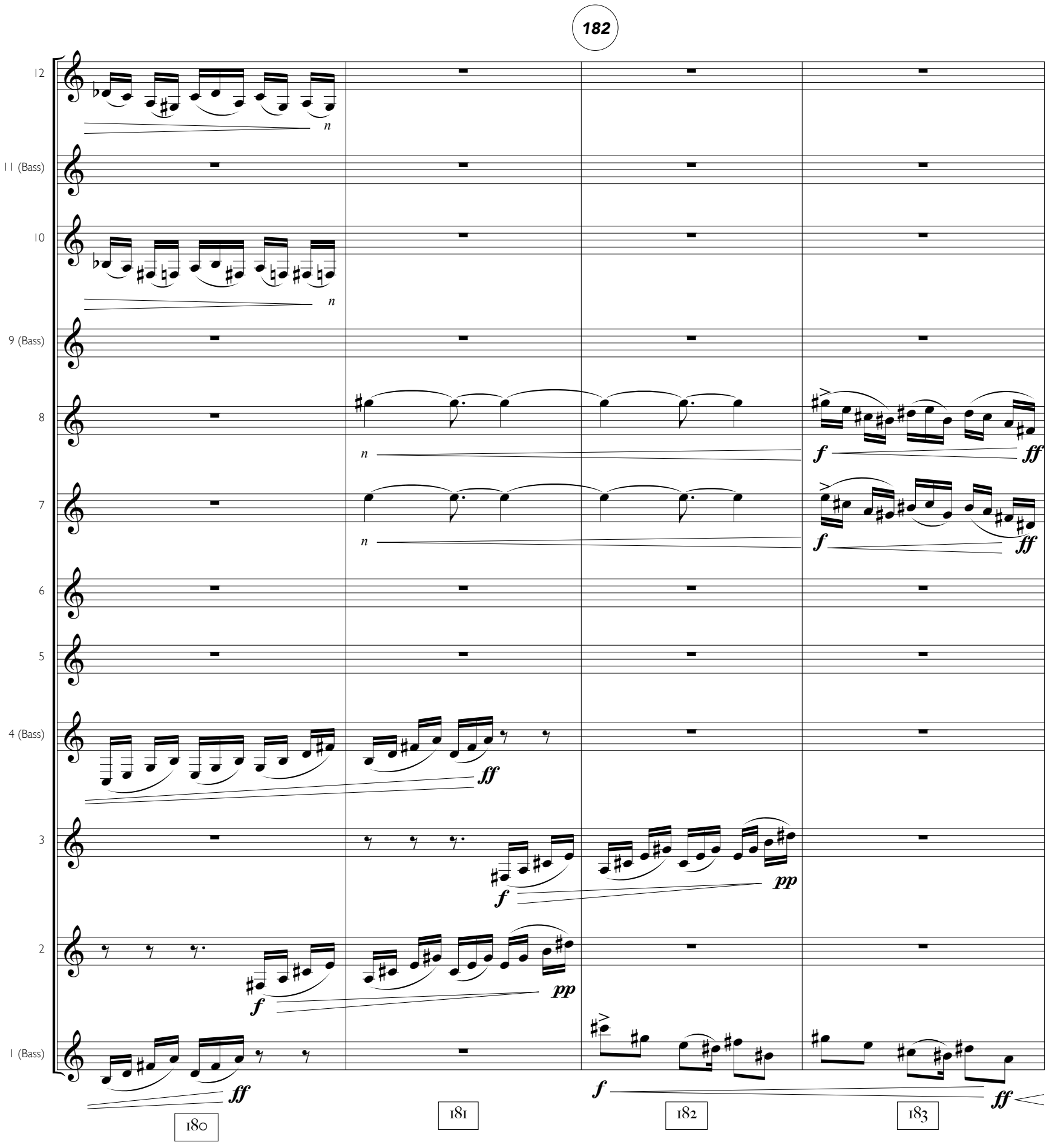
164 165

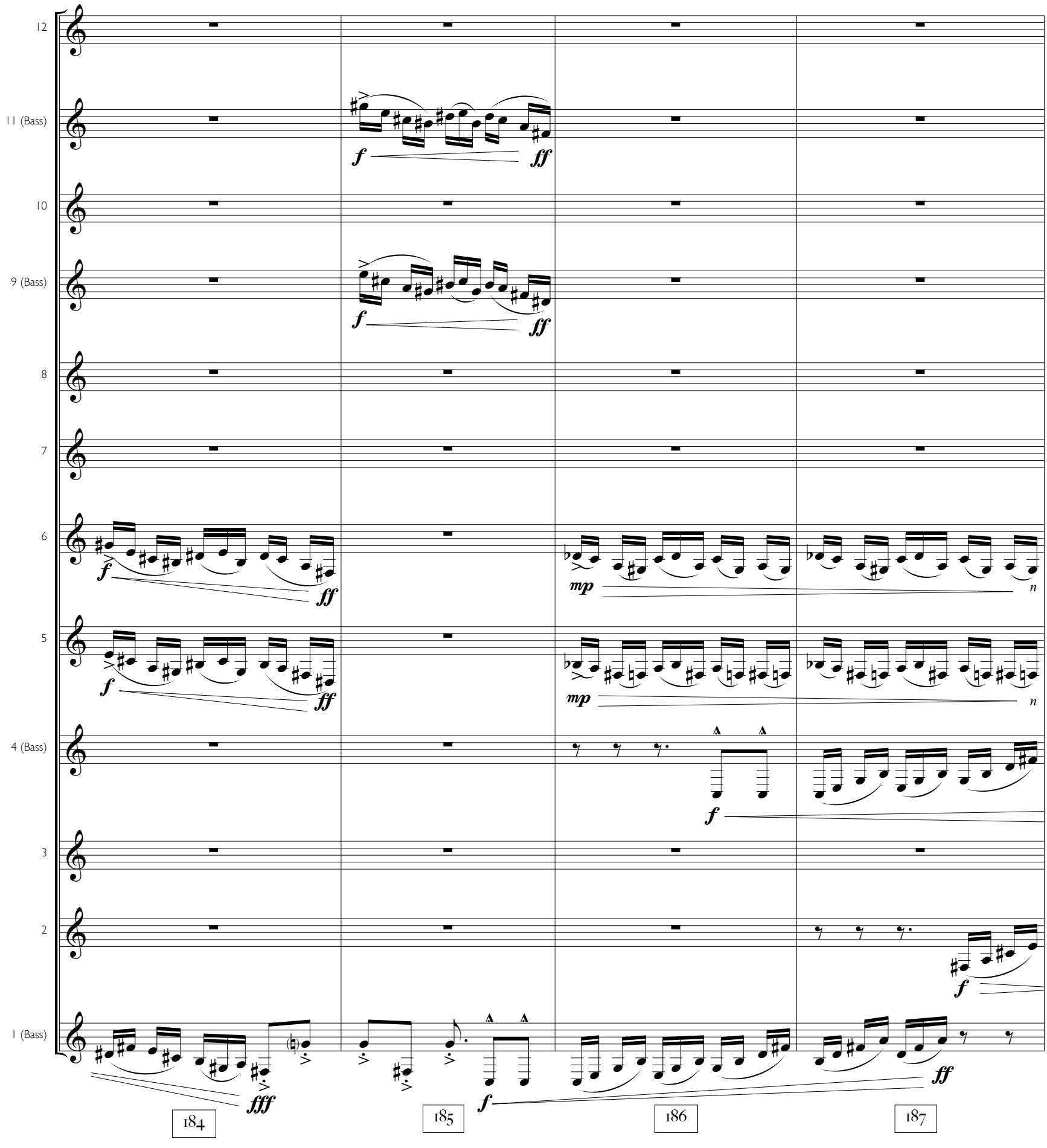


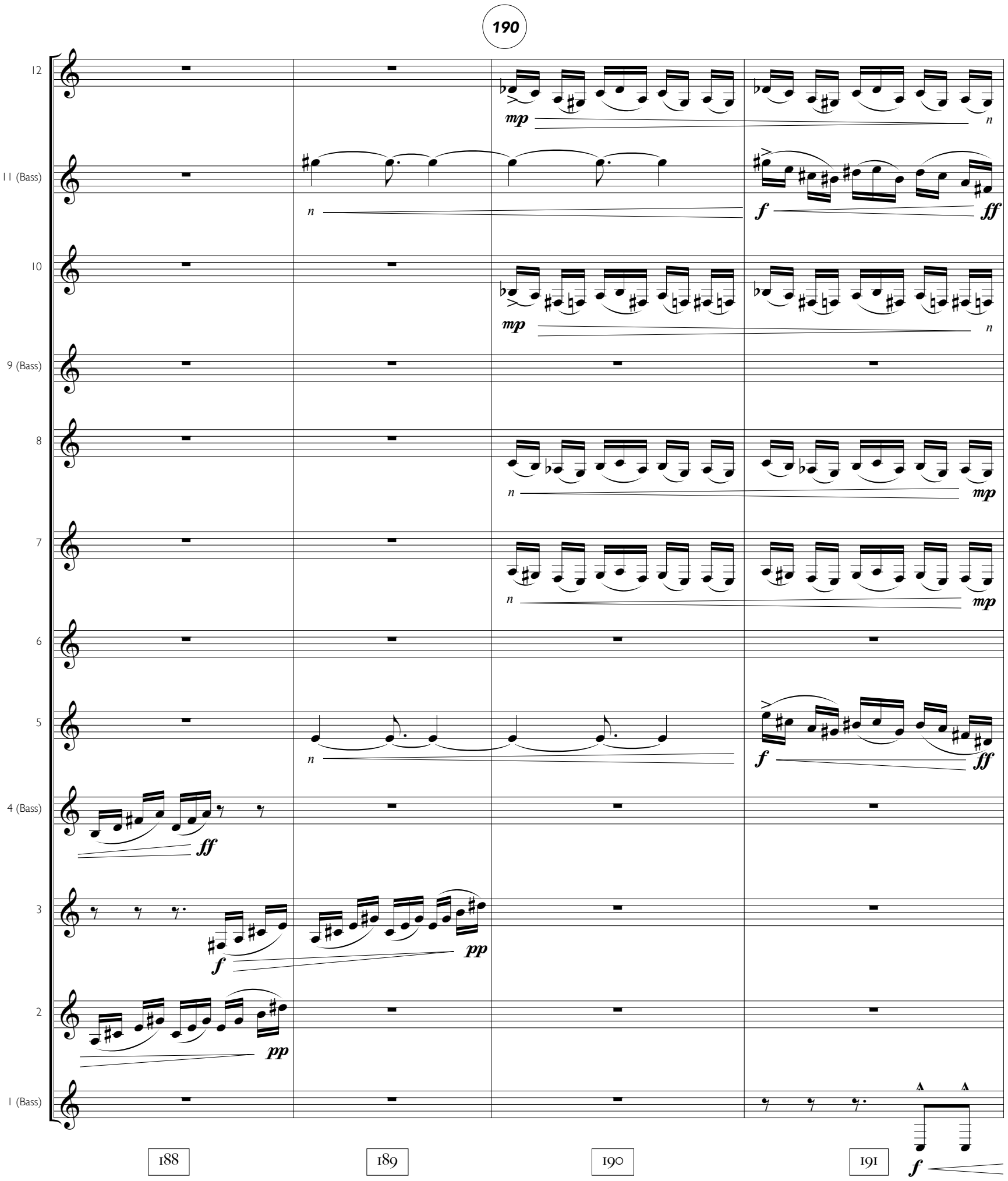
168 169 170 171

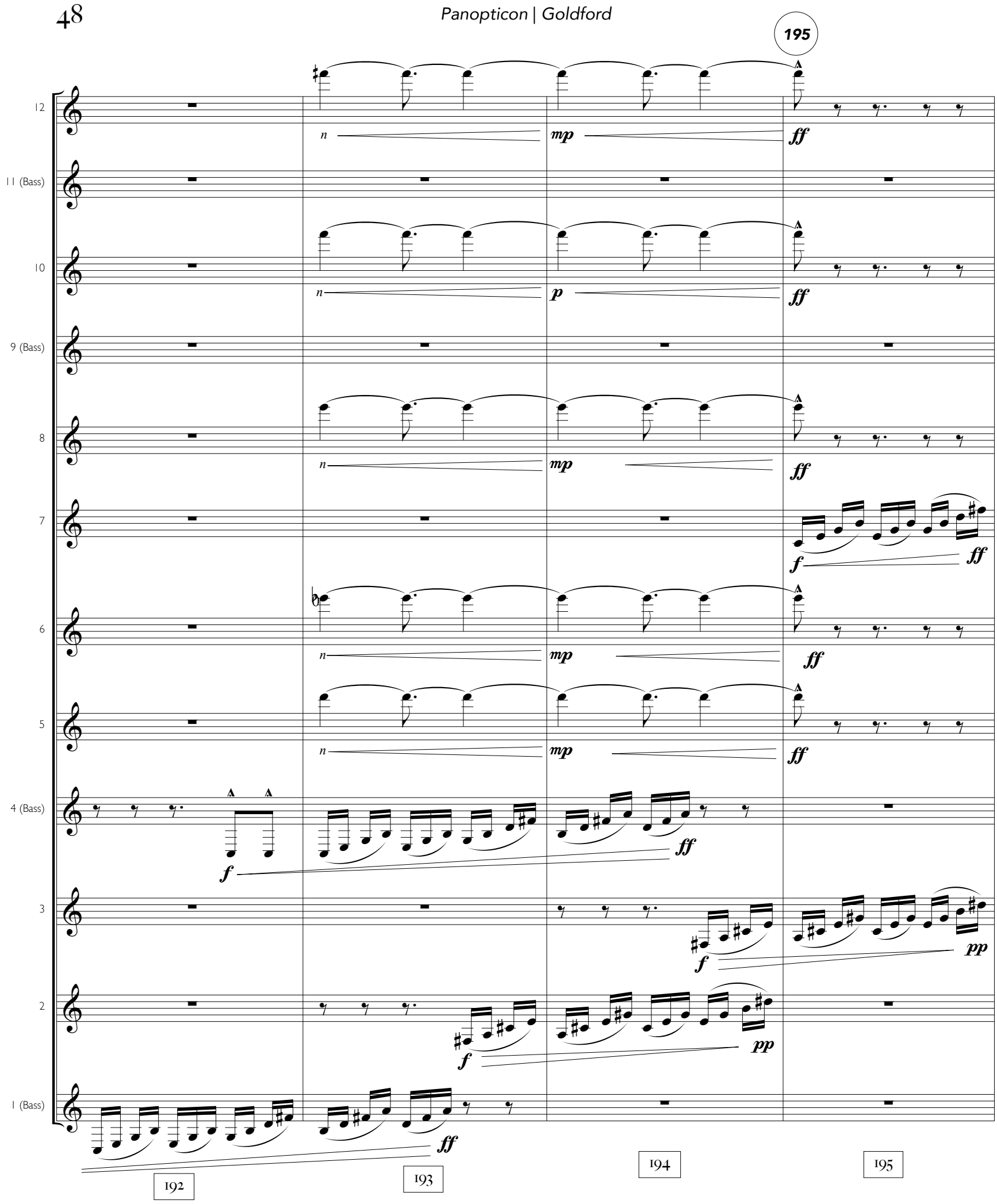

175
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
pp
f
ff
mp
n
172
173
174
175


12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
f
pp
ff
mp
n
mf
sub.
176
177
178
179


182
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
n
f
ff
pp
180
181
182
183


12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
f
ff
mp
n
fff
184
185
186
187


190
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
mp
n
f
ff
pp
188
189
190
191


195
12
11 (Bass)
10
9 (Bass)
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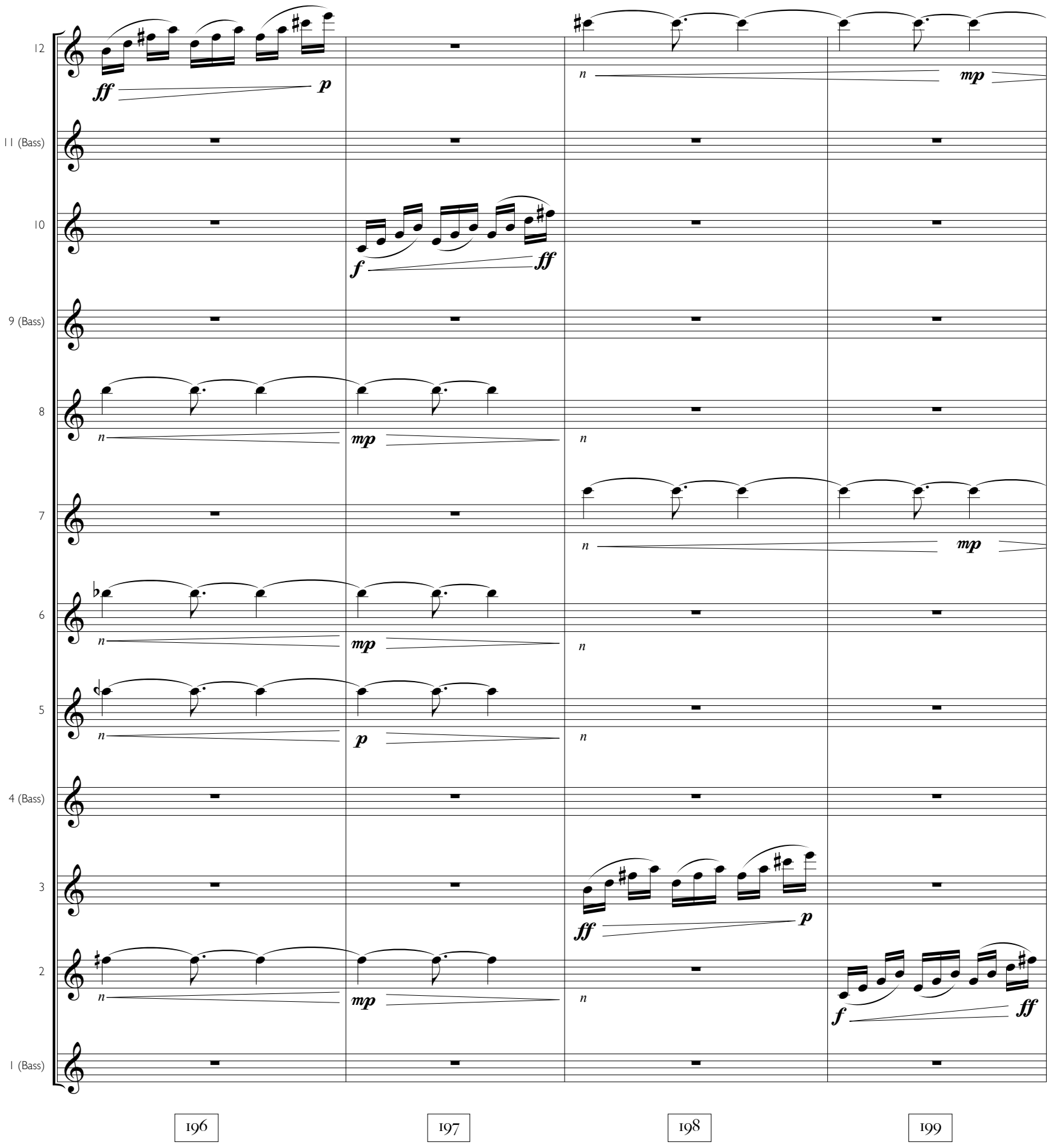
4 (Bass)
3
2
1 (Bass)
n
mp
ff
p
f
pp
192
193
194
195


12
11 (Bass)
10
9 (Bass)
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7
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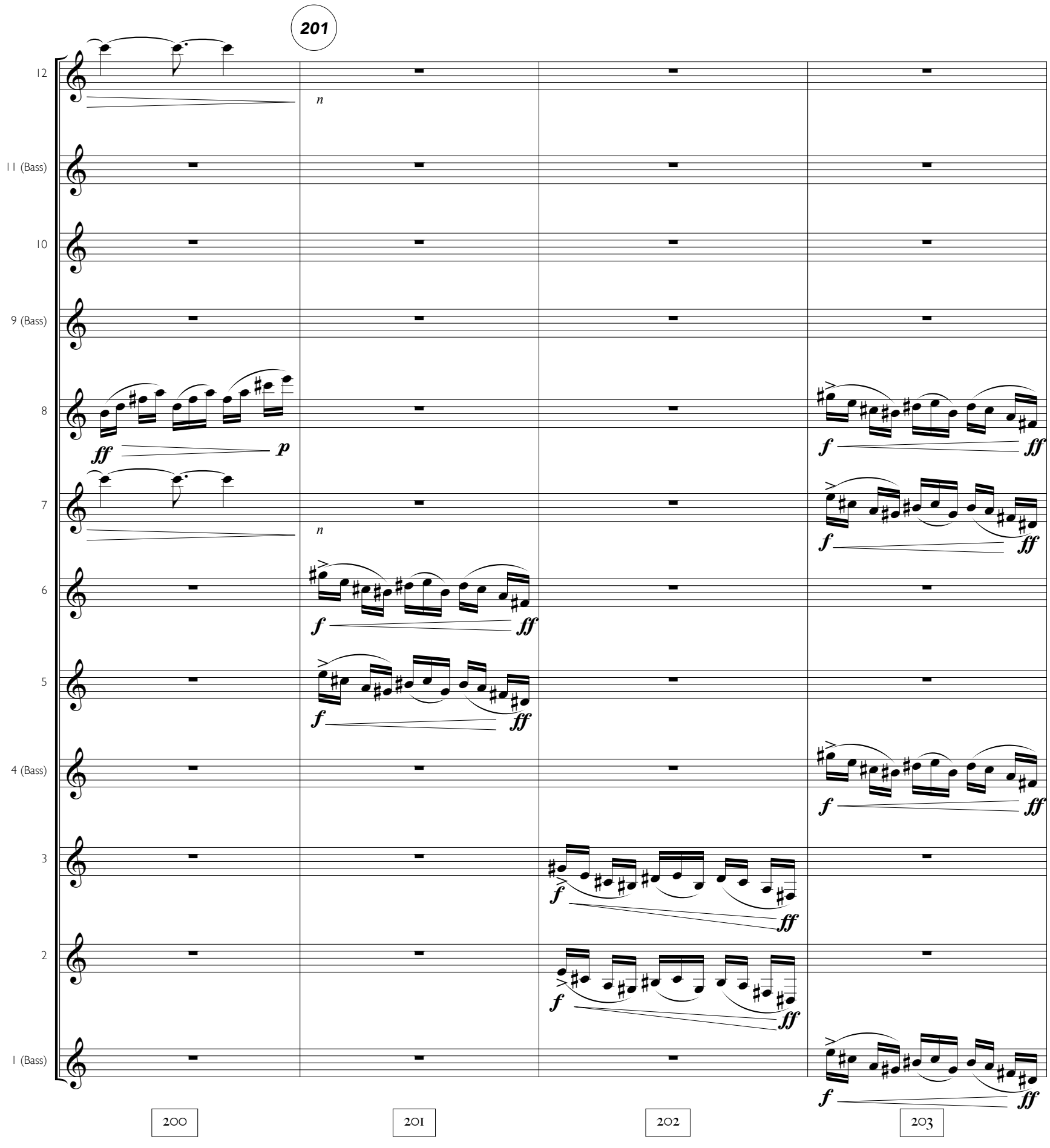
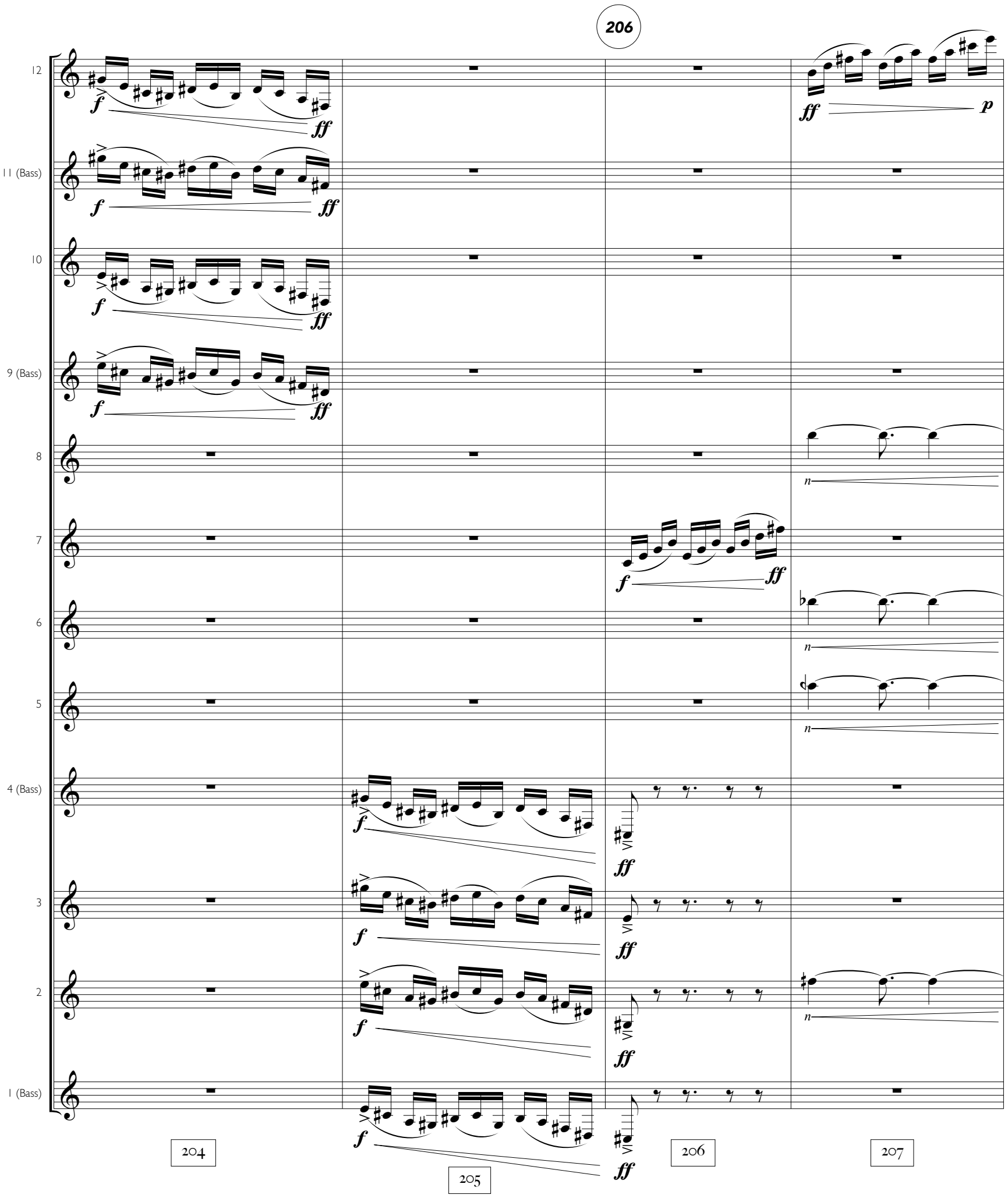
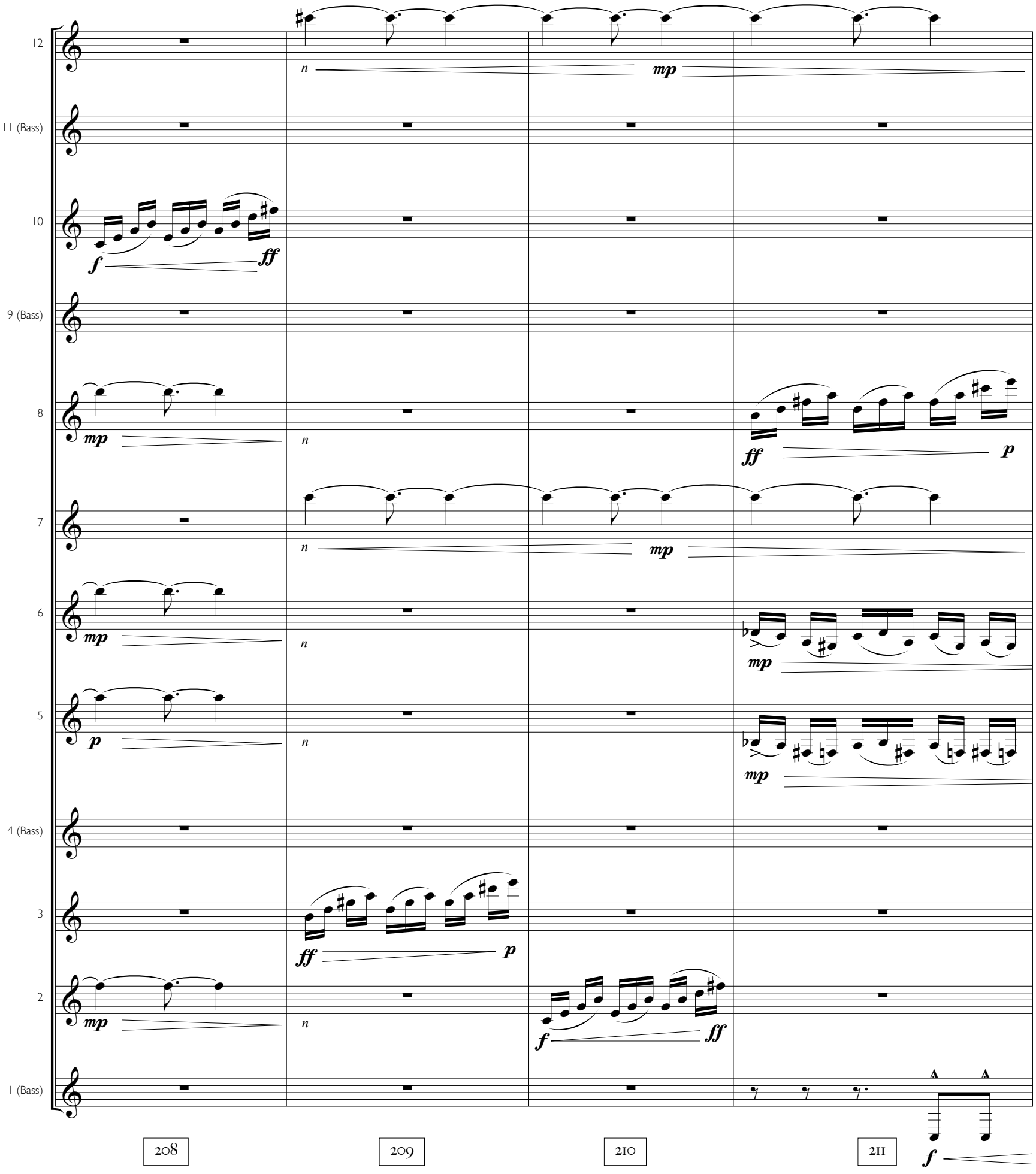
5
4 (Bass)
3
2
1 (Bass)
ff
p
n
mp
f
196
197
198
199


201
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
n
ff
p
f
200
201
202
203


206
12
11 (Bass)
10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
f
ff
p
n
204
205
206
207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9 (Bass)
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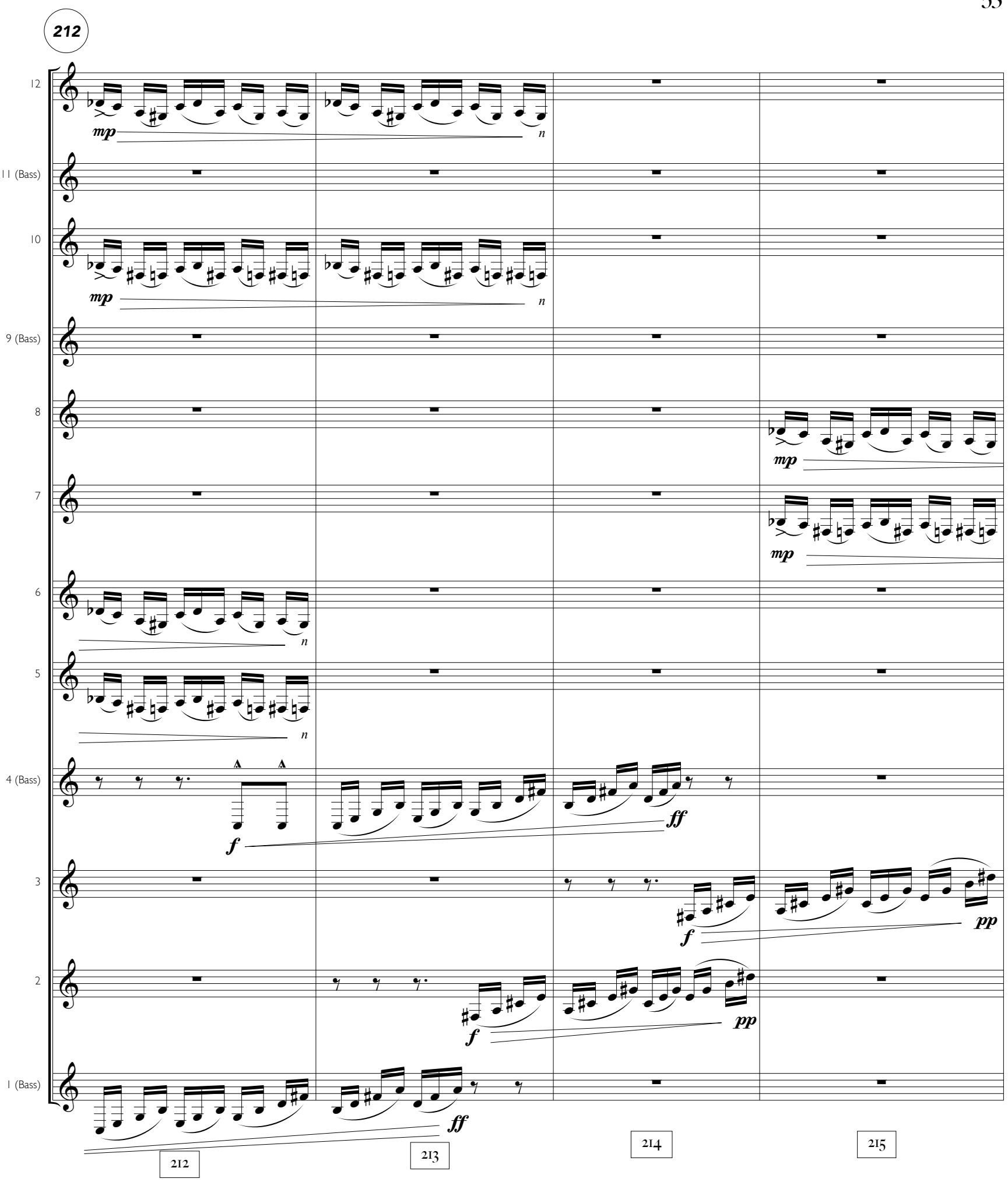
4 (Bass)
3
2
1 (Bass)
n
mp
f
ff
p
208
209
210
211


212
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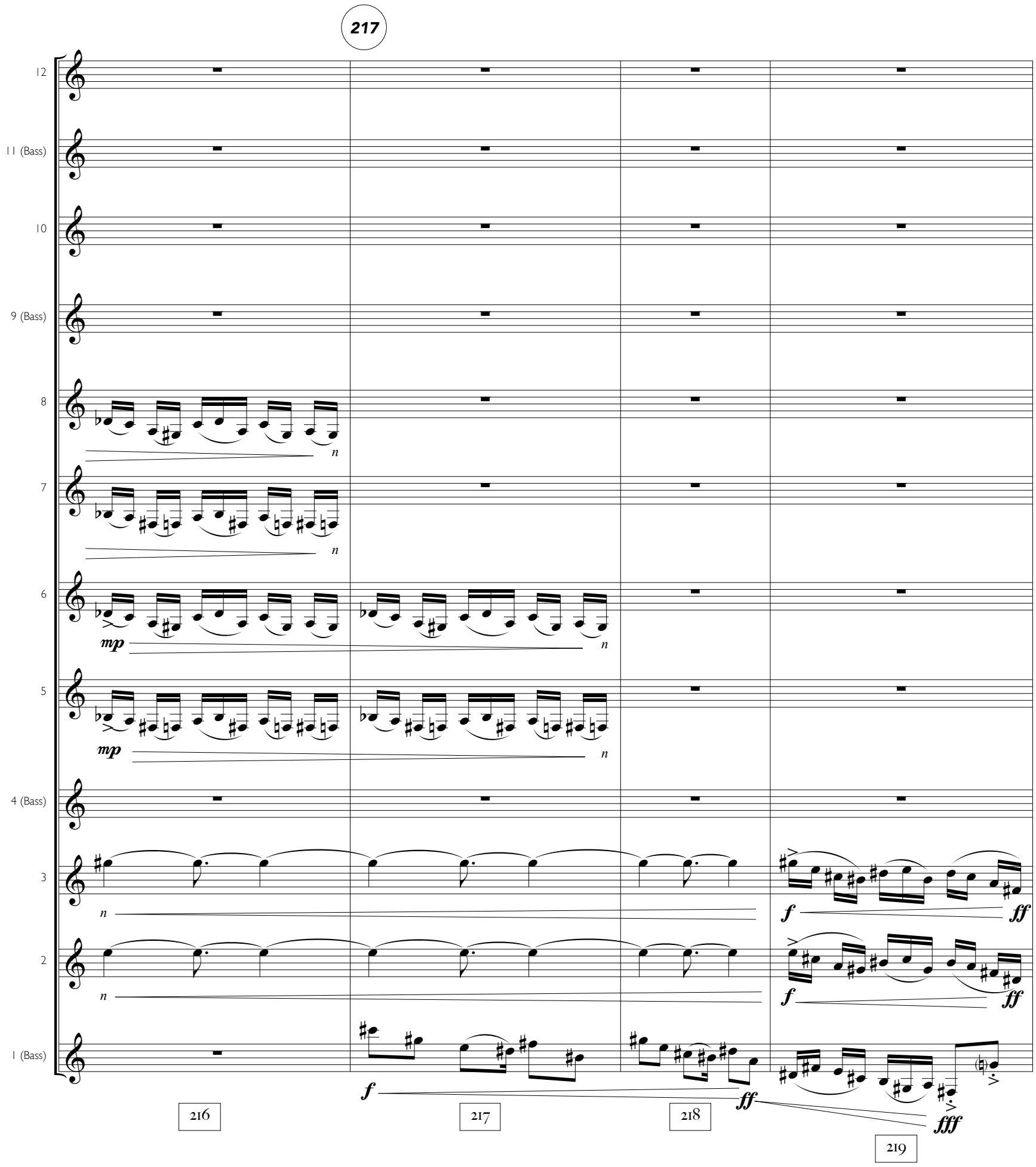
4 (Bass)
3
2
1 (Bass)
mp
n
f
ff
pp
212
213
214
215


217
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9 (Bass)
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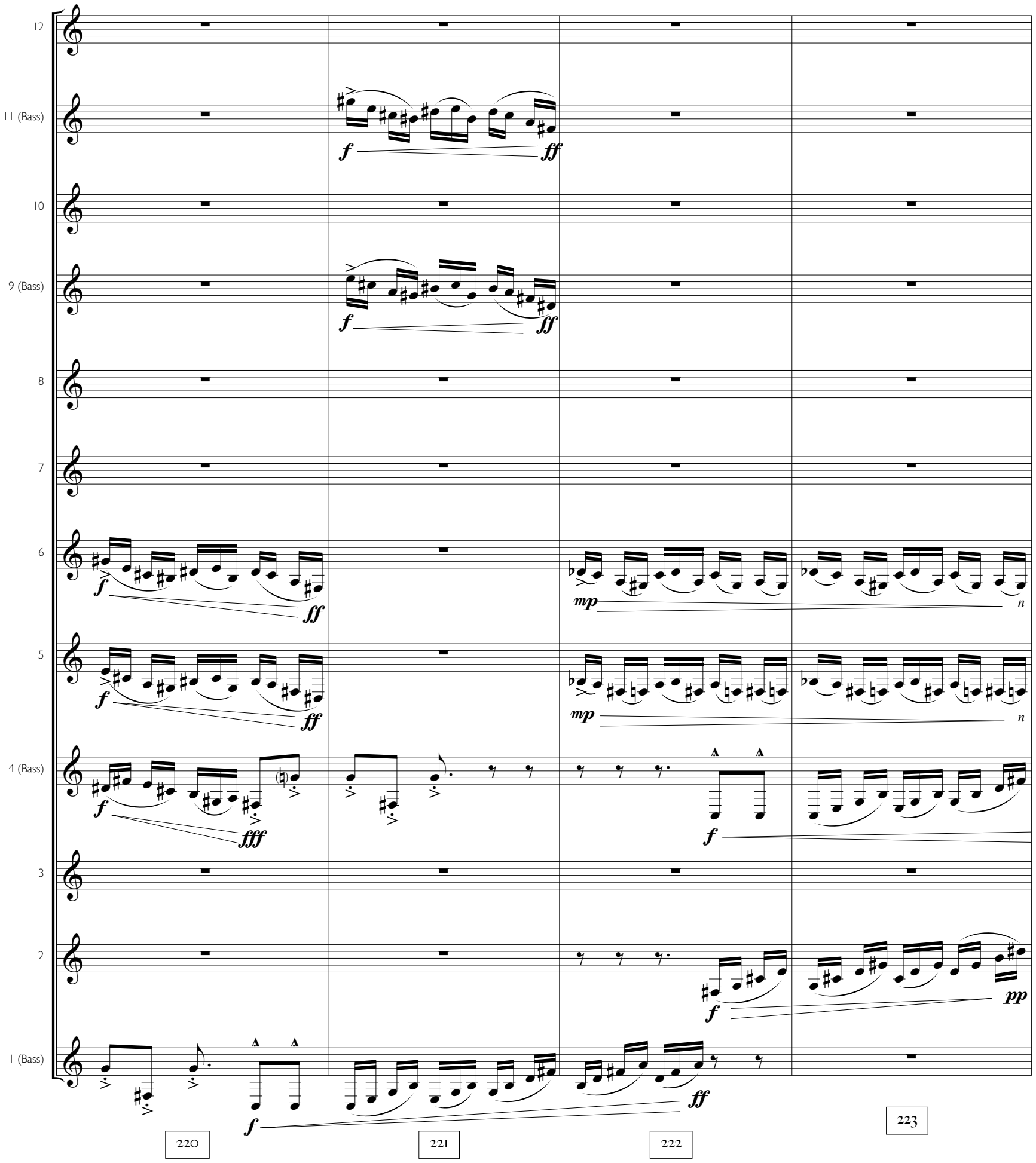
4 (Bass)
3
2
1 (Bass)
n
mp
f
ff
fff
216
217
218
219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9 (Bass)
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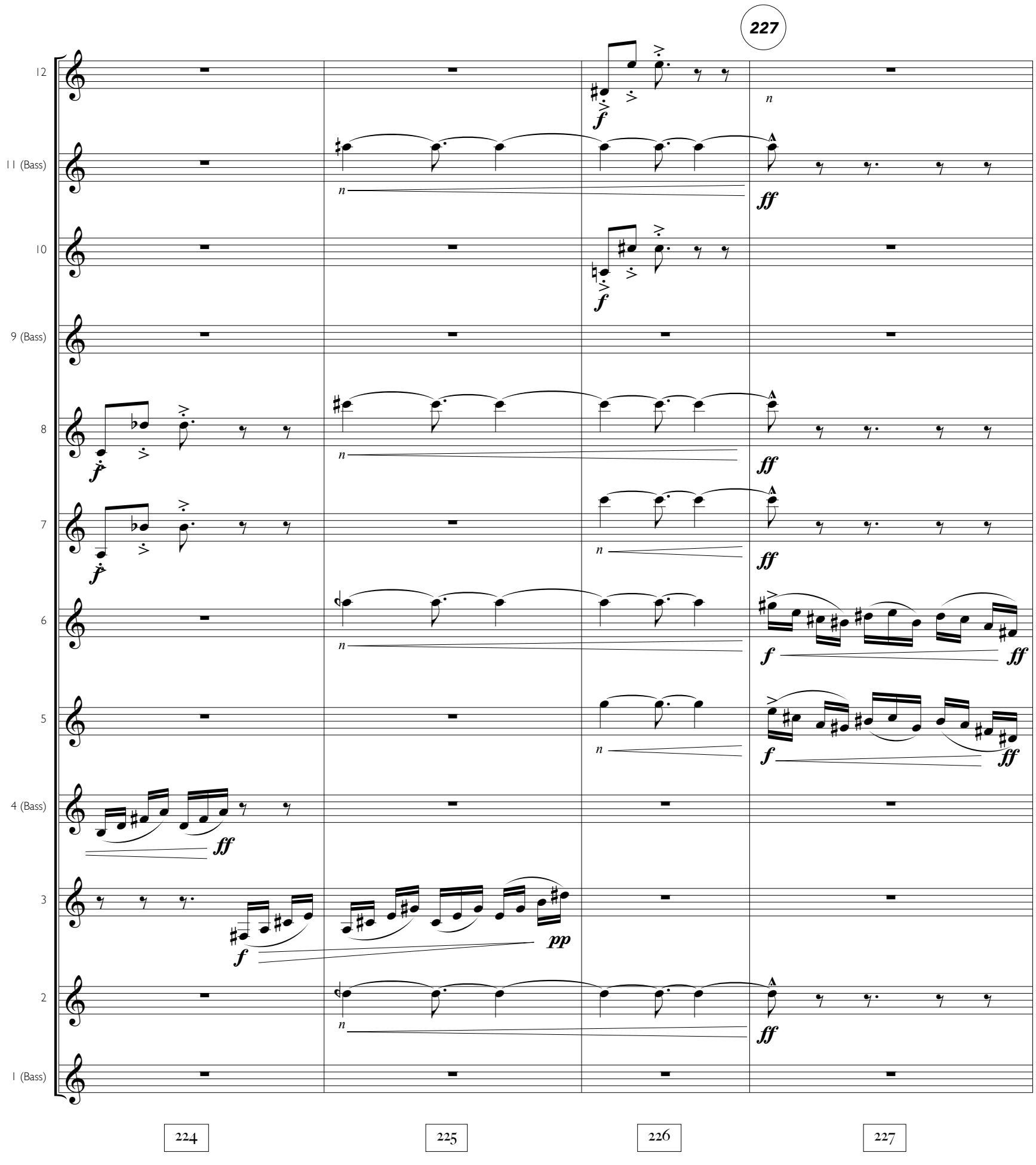
4 (Bass)
3
2
1 (Bass)
f
ff
mp
n
fff
pp
220
221
222
223


227
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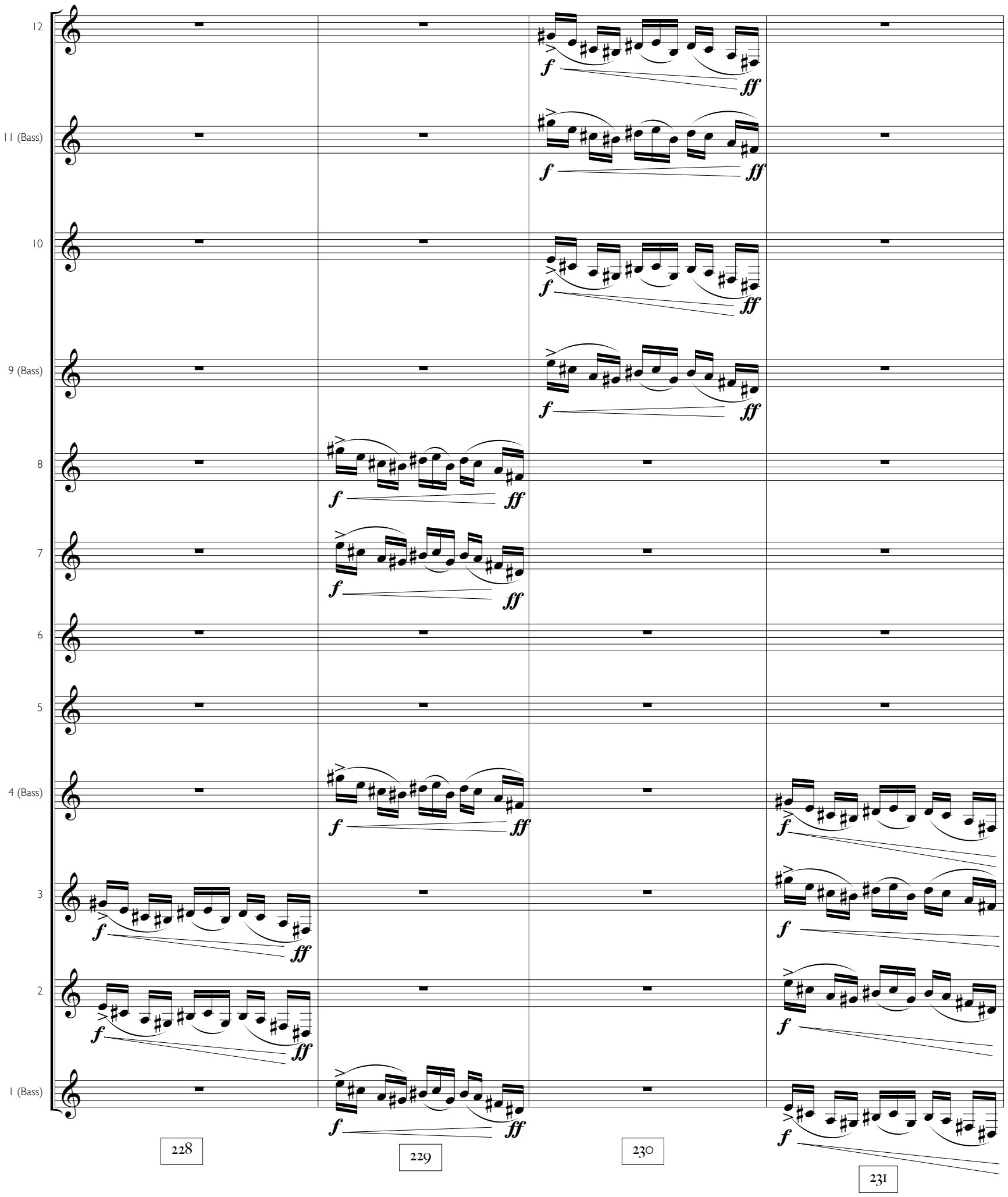
4 (Bass)
3
2
1 (Bass)
f
n
ff
pp
224
225
226
227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10
9 (Bass)
8
7
6
5
4 (Bass)
3
2
1 (Bass)
f
ff
228
229
230
231

232

12 *f* *mf*

11 (Bass) *f* *ff* *mf*

10 *f* *ff* *mf*

9 (Bass) *f* *mf*

8 *f* *ff*

7 *f* *ff* *f*

6 *f* *mf*

5 *ff*

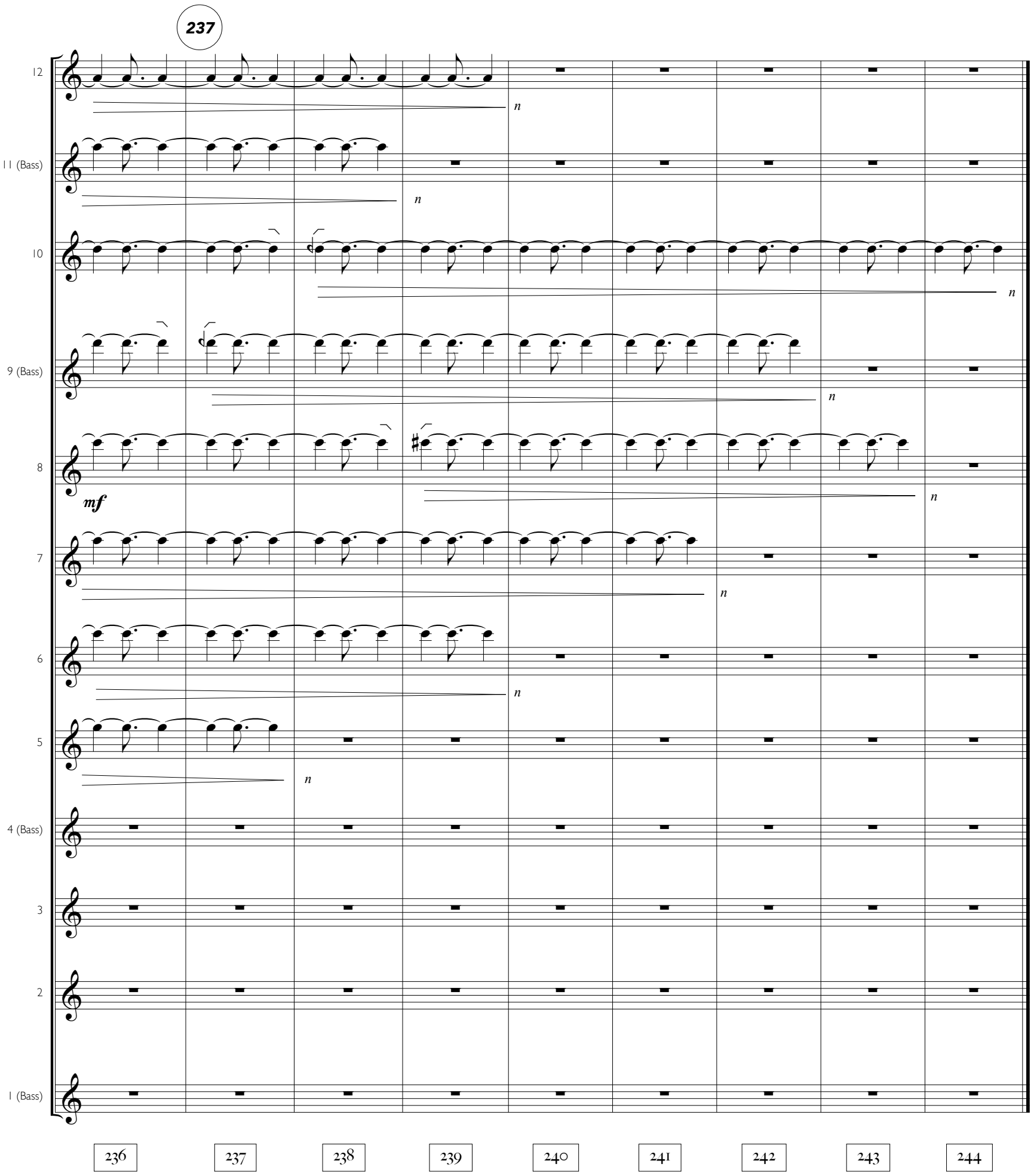
4 (Bass) VII *ff*

3 VI *ff*

2 VII *ff*

1 (Bass) VII *ff*

232 233 234 235



October 2013

Bloomington, IN