Alex Nadzharov

# Motion capture

for chamber ensemble

piano:


slow nail slide, "guiro"

fast nail slide

chain over strings


mallet over strings


mallet over deck


hand glissando over strings

put a metal object (AA battery) over the string, buzz sound

splash cymbal over strings

slide over the strings with the edge of a CD

drop the spring on the strings

cello and double bass:

mallet over tailpiece or col legno over tailpiece (where indicated)


tailpiece arco

bridge, with mallet

on the bridge, tremolo, arco


hit deck with hand

high bow pressure


move bow circulary over the string

place the slider near the string while playing arco to make buzz sound

egg shaker, left hand, loud sound

accordion:



keys "guiro", no sound



air noise

trumpet and trombone:



breath sound

flutter

loud slap over the mouthpiece with hand

loud kiss sound in the mouthpiece

unstable sound

unstable sound with air noise

with the reed inside the mouthpiece



highest possible pitch



lowest possible pitch

percussion:

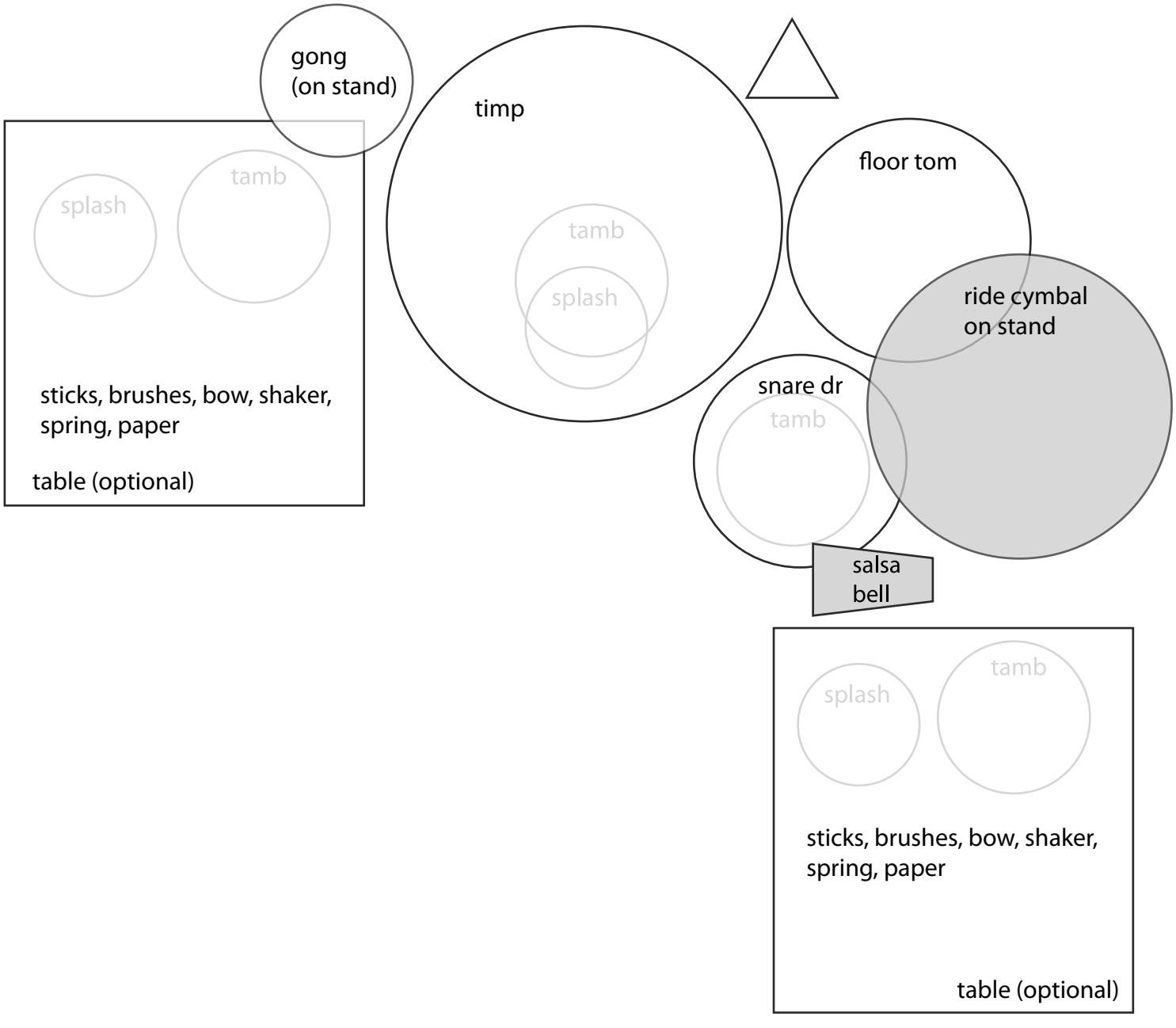


put the chain over the drum



spring over the drum or cymbal

# possible percussion layout



**Trumpet**

**Trombone**

additional for brass:
— plunger
— cup mute
— 2 crotales with metal sticks (tuned d for trombone and d# for trumpet), put near each instrument (i.e. suspended on music stand or can be put on a table)
— oboe reed for trumpet, bassoon reed for trombone

**Percussion:**

– triangle
– shaker
– small gong (suspended)
– salsa bell
– suspended cymbal (ride)
– tambourine
– snare drum (piccolo)
– floor tom
– timpano (26")

— mallets with sticks on another side
— brushes
— bow

additional:
— splash cymbal or larger hand cymbal
— paper
— spring or springdrum
— small metal chain
— 1-2 stands

**Piano**

additional:

— splash cymbal or hand cymbal
— CD
— spring or springdrum
— soft mallet
— pluck (optional)
— small metallic object (AA battery)

**Accordion**

additional:

— paper

**Cello**

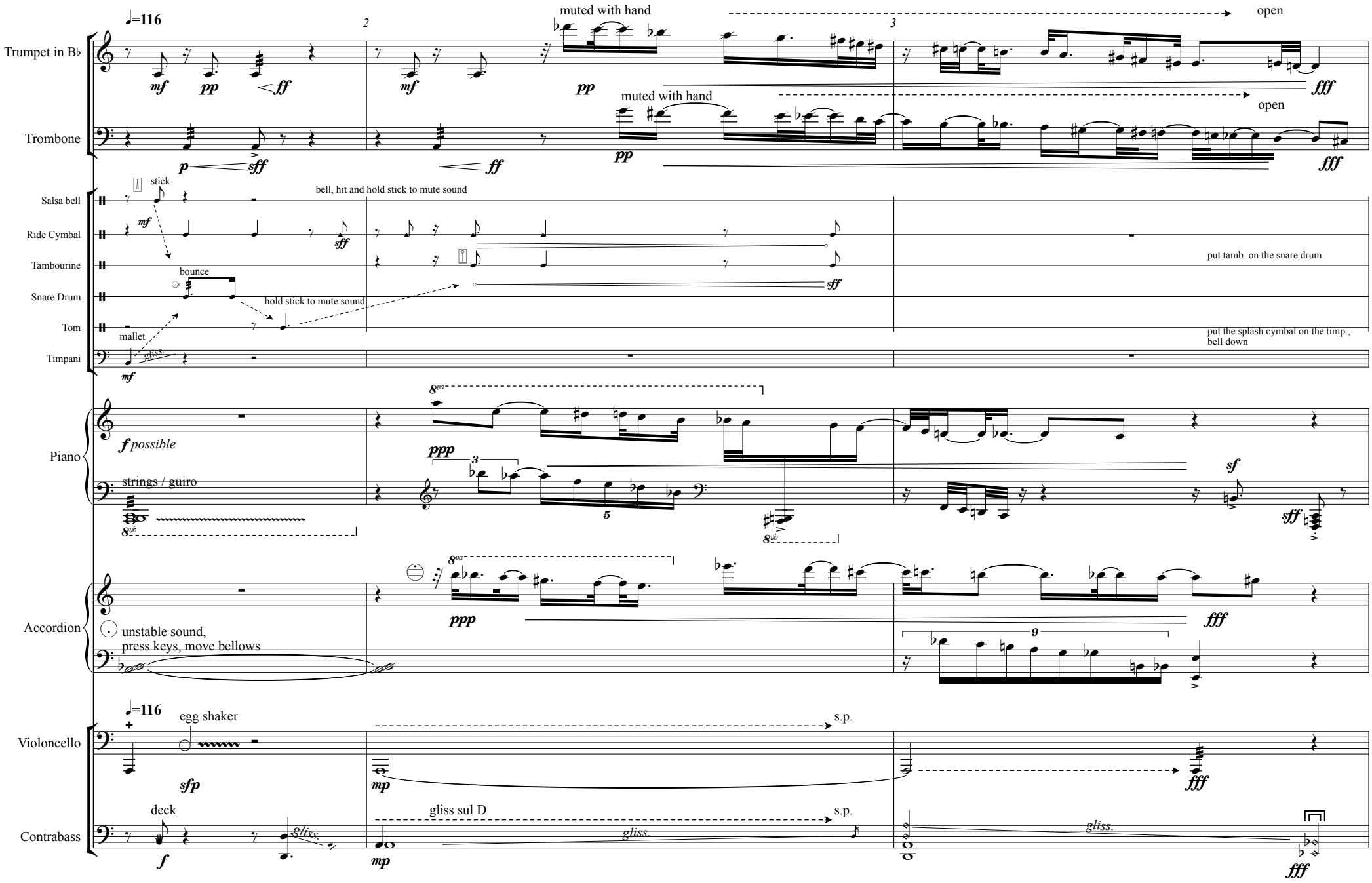
*C string is detuned third down to A*

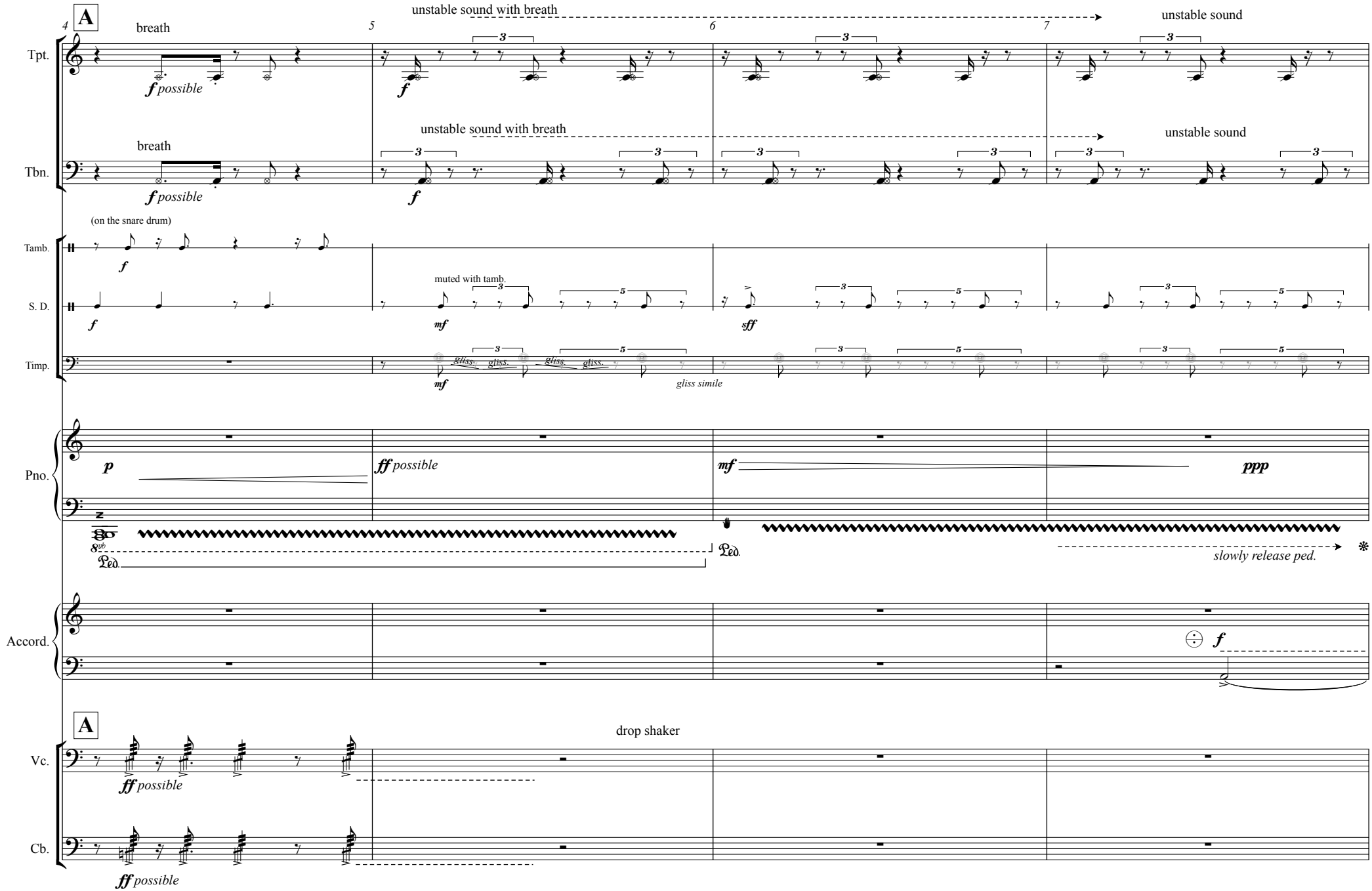
**Double bass**

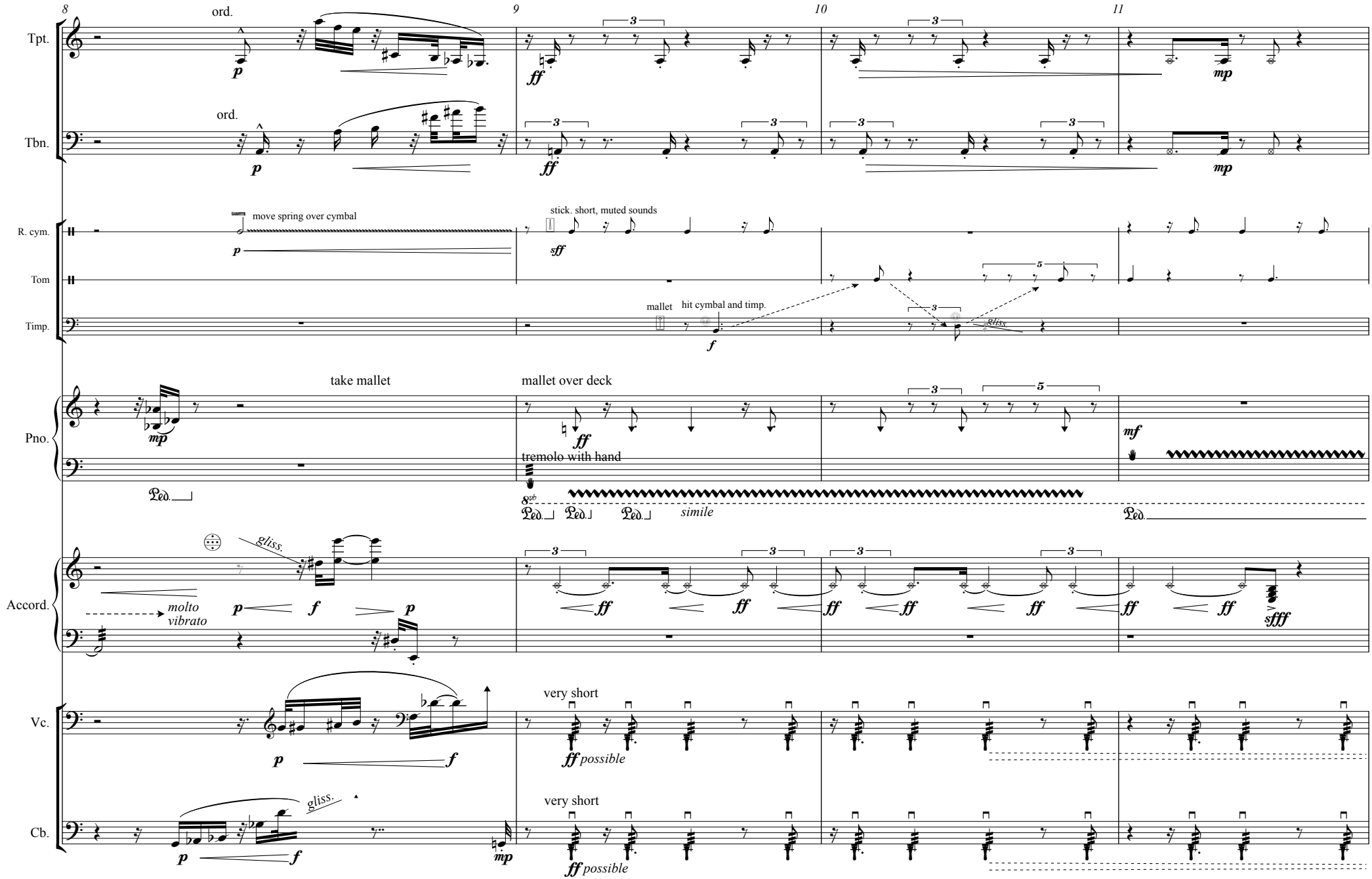
*E string is detuned second down to D*

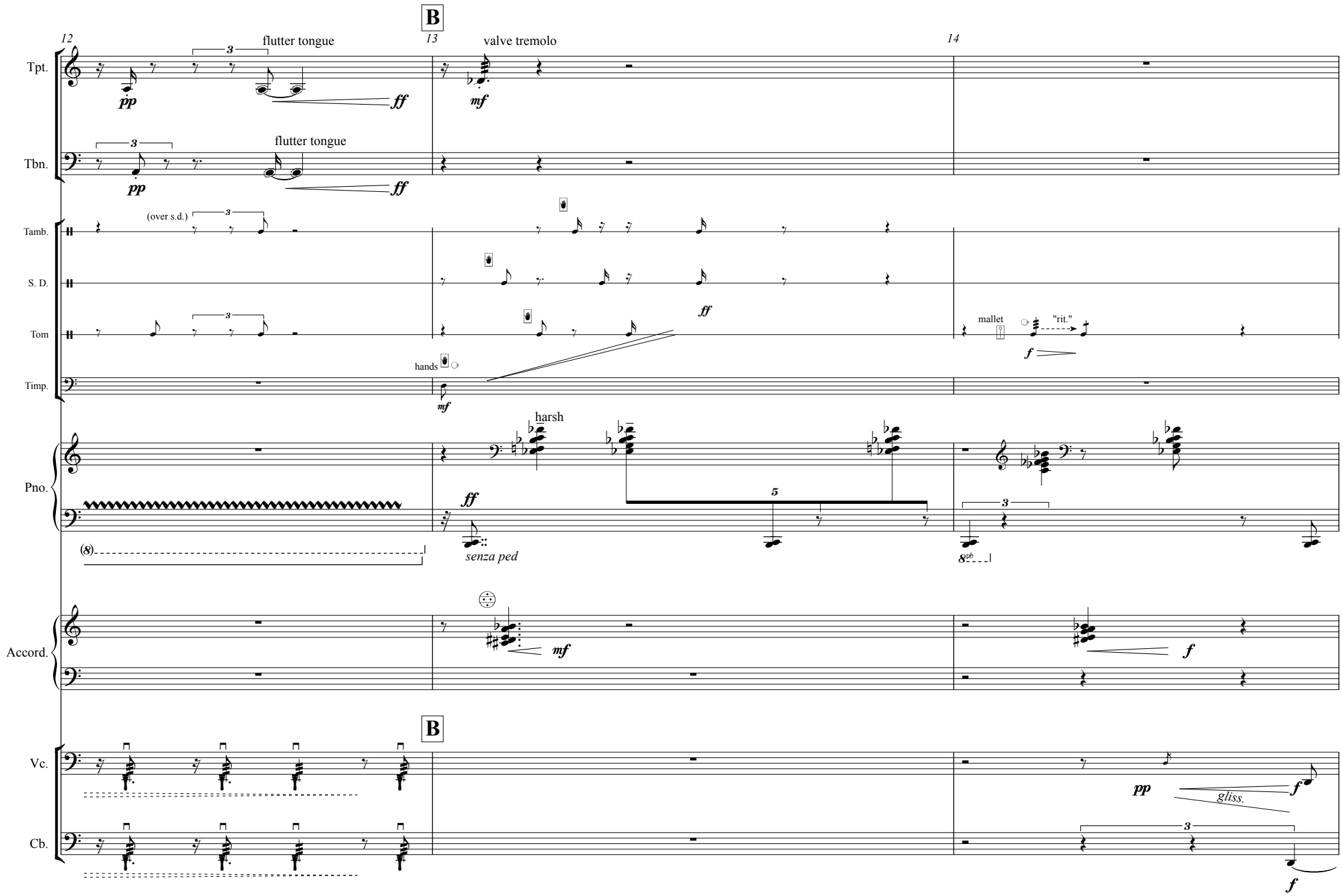
additional for strings:

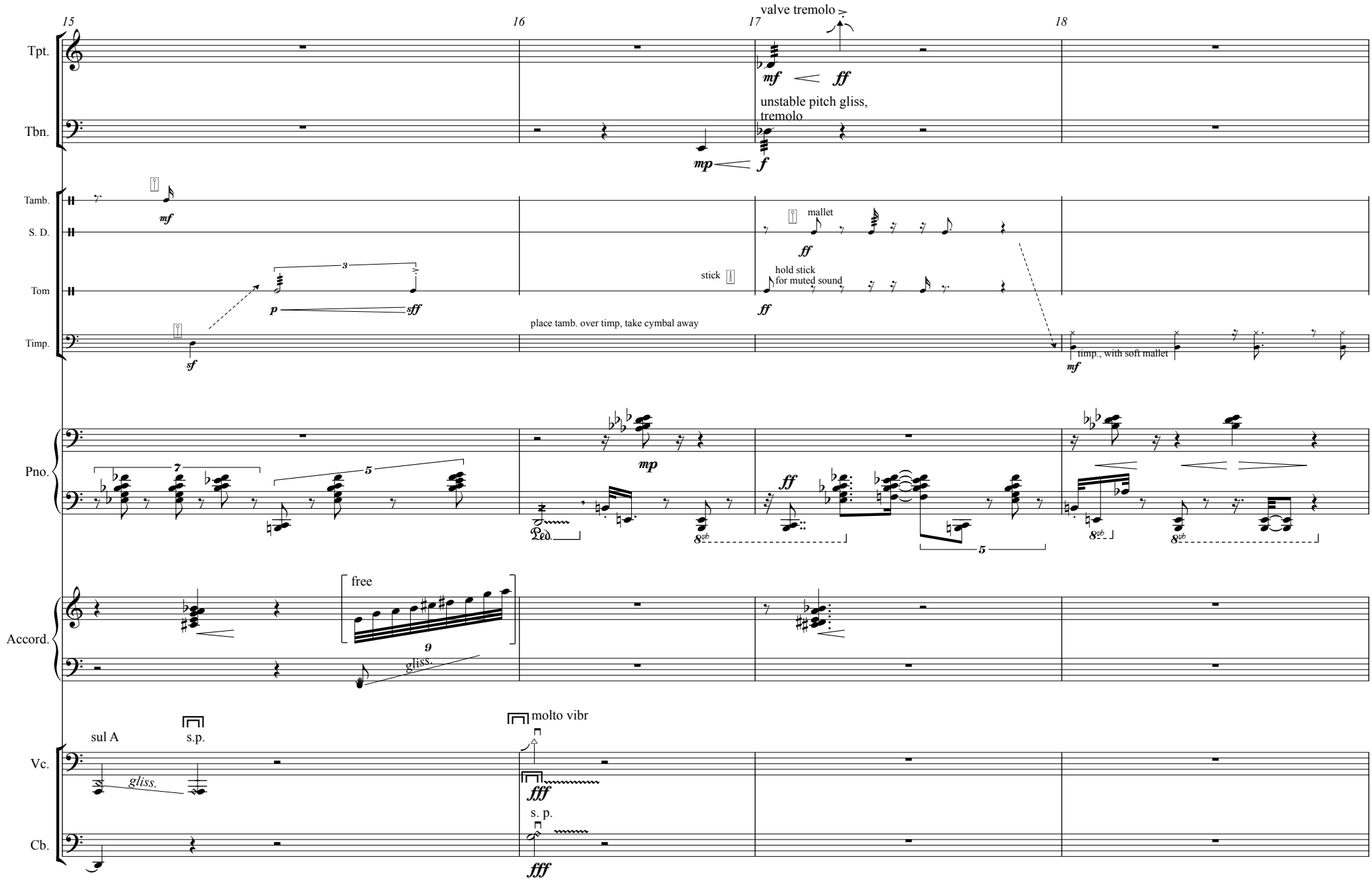
— 3 soft mallets for each performer
— small metallic tube - slider
— small shaker (egg-shaker) for each performer

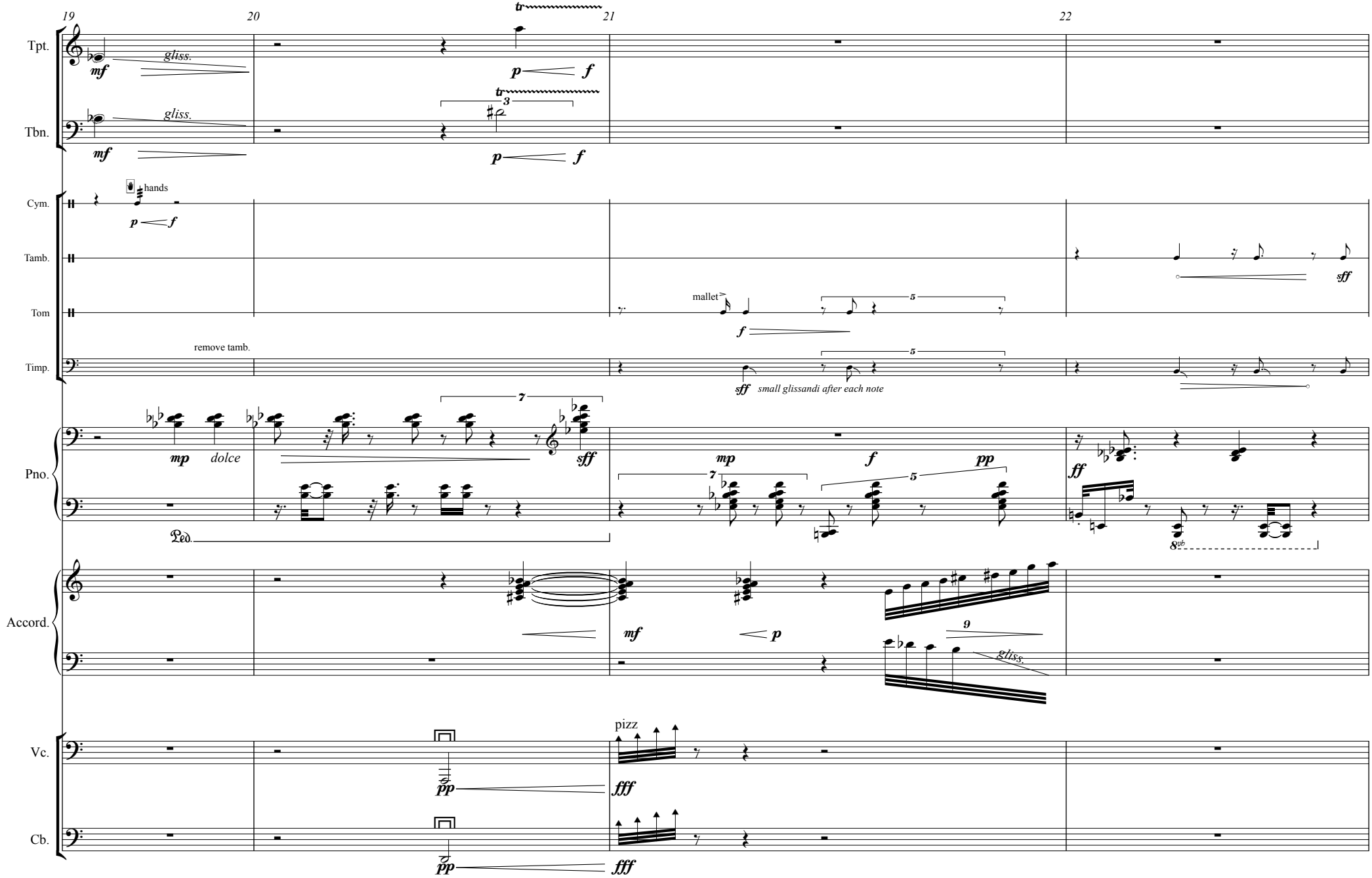

♩=116
Trumpet in B♭
Trombone
muted with hand
open
muted with hand
open
Salsa bell
Ride Cymbal
Tambourine
Snare Drum
Tom
Timpani
stick
bell, hit and hold stick to mute sound
bounce
hold stick to mute sound
mallet
put tamb. on the snare drum
put the splash cymbal on the timp., bell down
Piano
possible
strings / guiro
Accordion
unstable sound,
press keys, move bellows
♩=116
Violoncello
Contrabass
egg shaker
deck
s.p.
gliss sul D
s.p.
gliss.
gliss.
gliss.

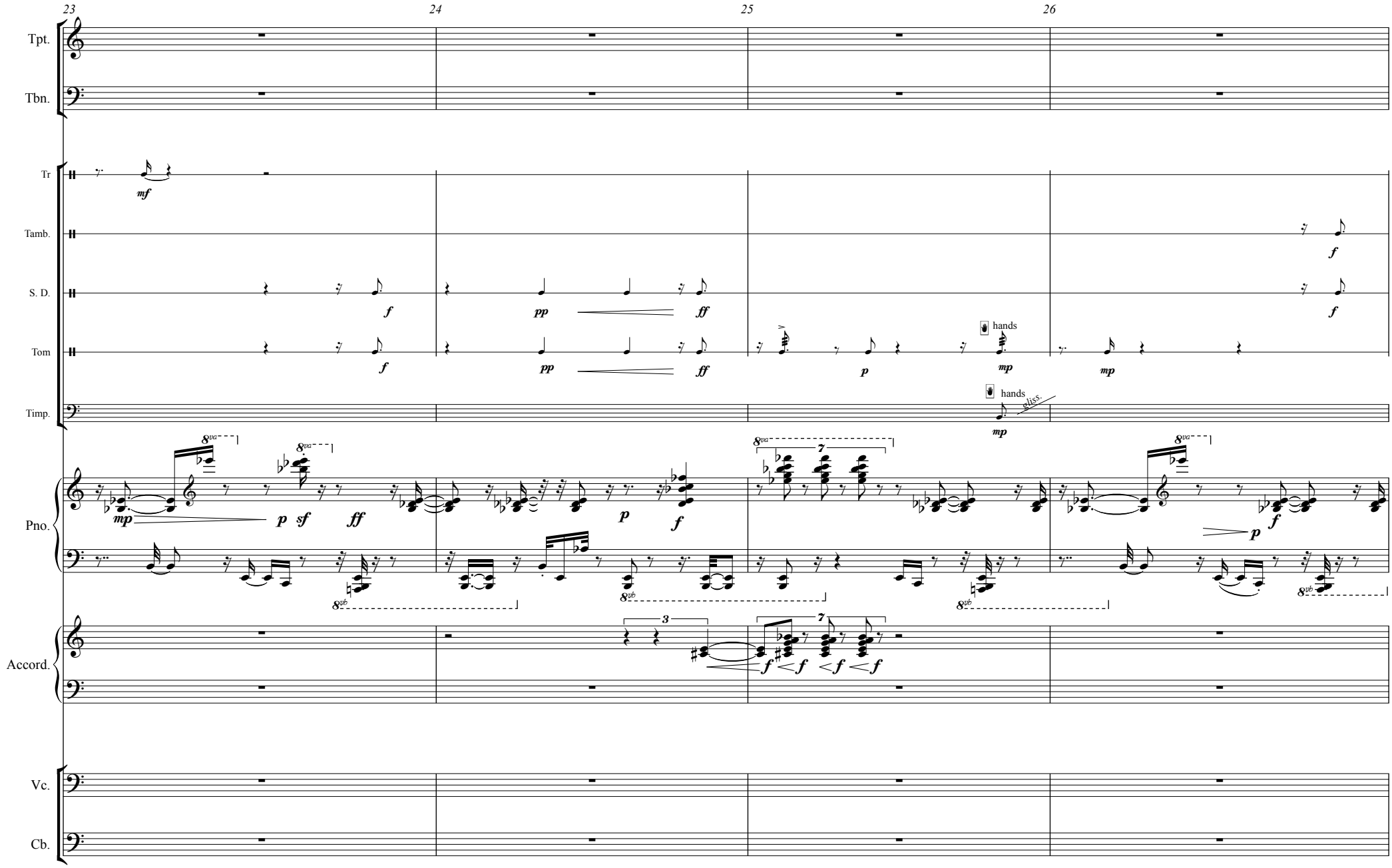

A
4
5
6
7
Tpt.
breath
f possible
f
unstable sound with breath
unstable sound
Tbn.
breath
f possible
f
unstable sound with breath
unstable sound
(on the snare drum)
Tamb.
f
S. D.
f
muted with tamb.
mf
sff
Timp.
gliss.
mf
gliss simile
Pno.
p
ff possible
mf
ppp
8vb
Ped.
Ped.
slowly release ped.
Accord.
f
A
drop shaker
Vc.
ff possible
Cb.
ff possible

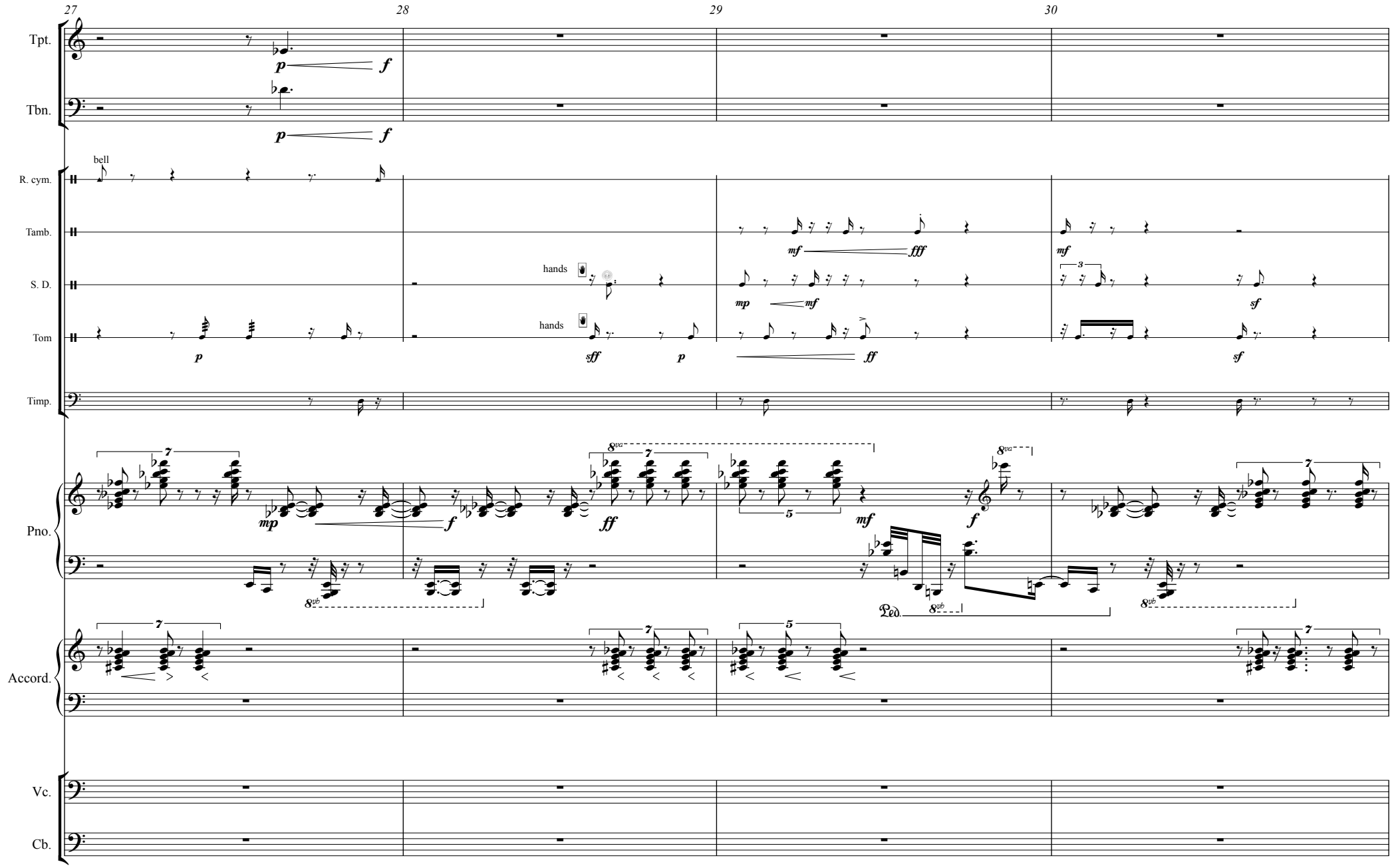

8
9
10
11
Tpt.
ord.
p
ff
mp
Tbn.
ord.
p
ff
mp
R. cym.
move spring over cymbal
p
stick. short, muted sounds
sff
Tom
Timp.
mallet
hit cymbal and timp.
f
gliss.
Pno.
take mallet
mp
mallet over deck
ff
tremolo with hand
8vb
simile
mf
Ped.
Accord.
gliss.
molto vibrato
p
f
p
ff
sffff
Vc.
p
f
very short
ff possible
Cb.
gliss.
p
f
mp
very short
ff possible

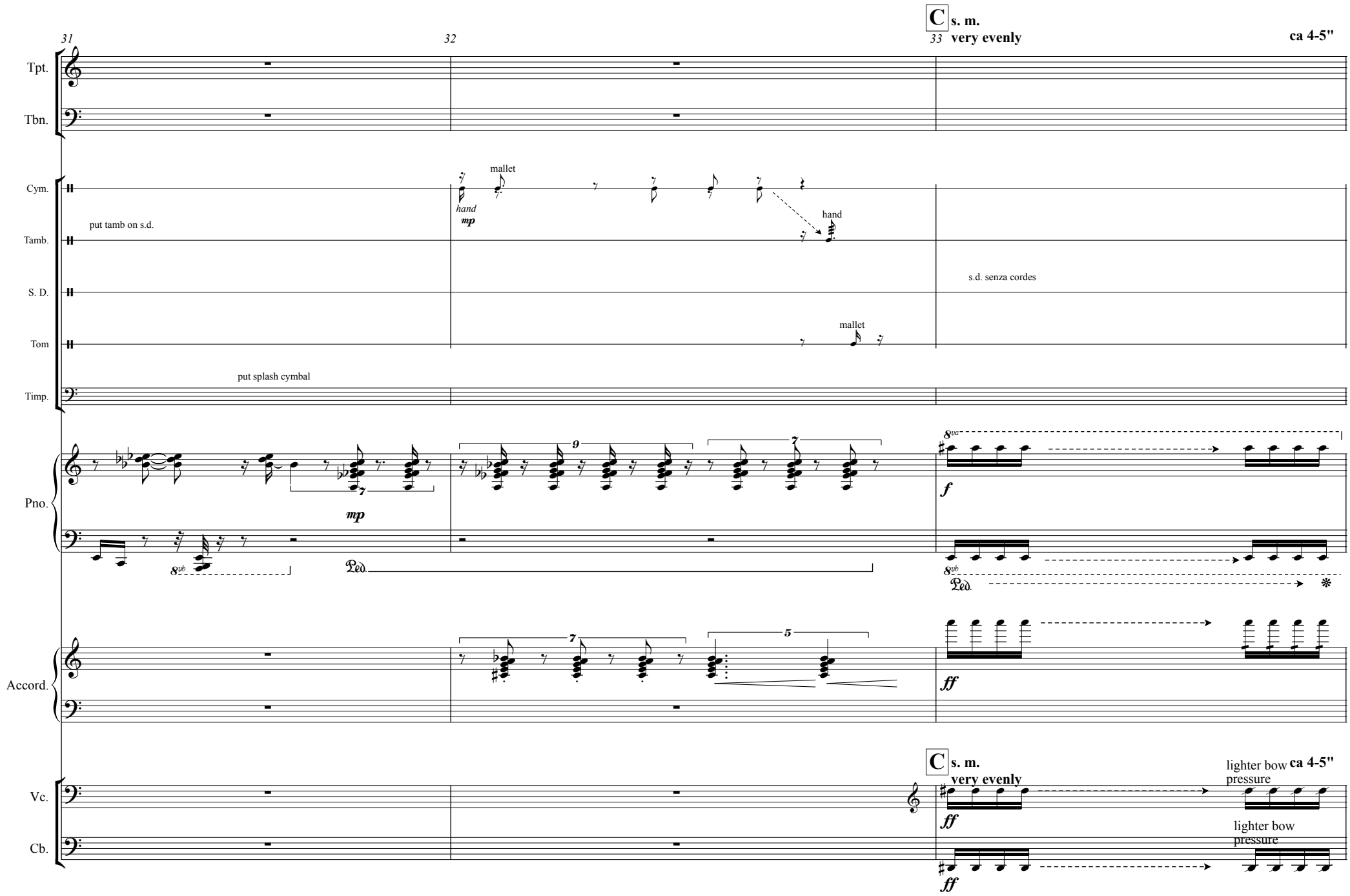

B
12
13
14
flutter tongue
valve tremolo
Tpt.
pp
ff
mf
flutter tongue
Tbn.
pp
ff
(over s.d.)
Tamb.
S. D.
Tom
Timp.
ff
mallet
"rit."
f
hands
mf
harsh
Pno.
ff
senza ped
5
3
8vb
Accord.
mf
f
B
Vc.
Cb.
pp
gliss.
f
3
f

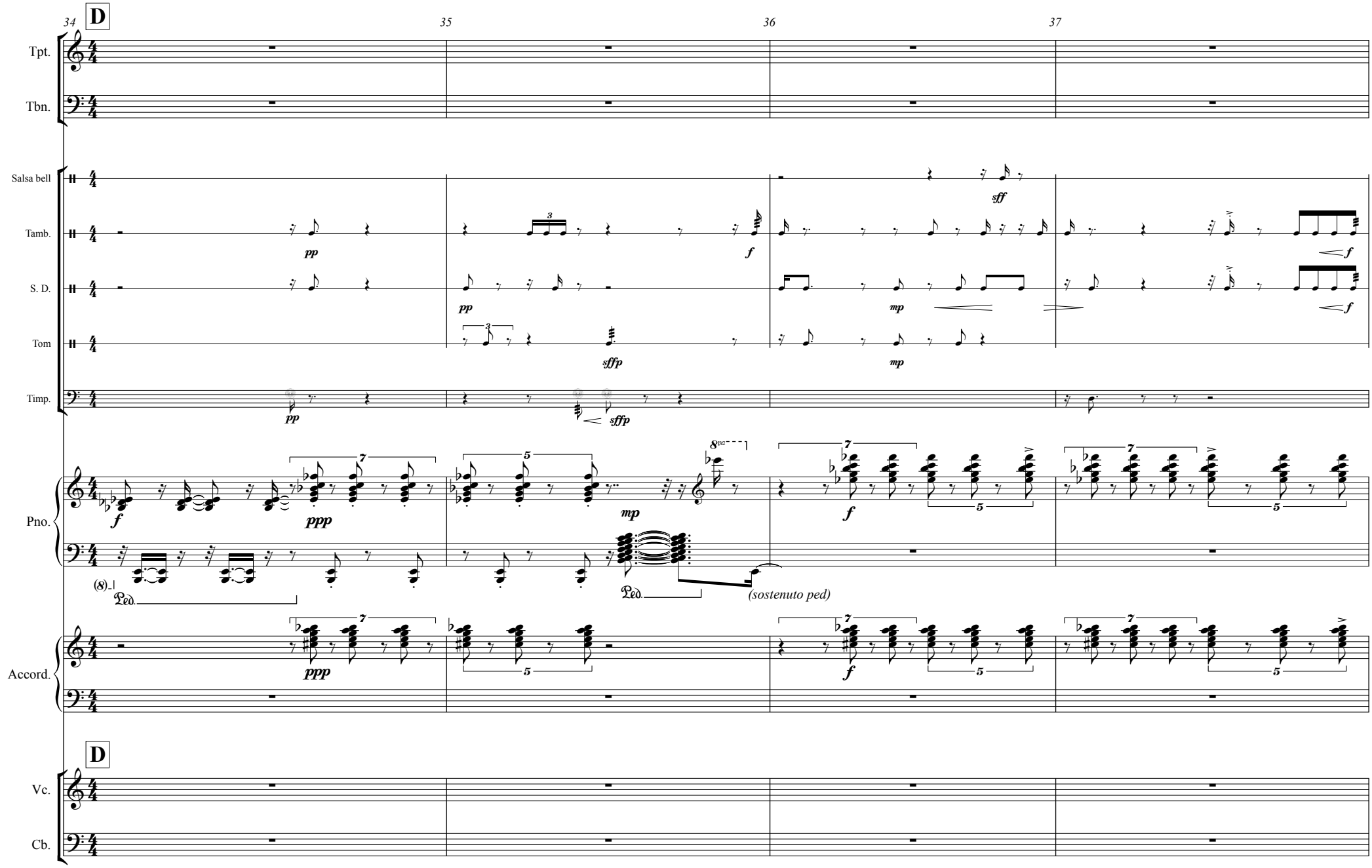

15
16
17
18
valve tremolo
Tpt.
Tbn.
mf
ff
unstable pitch gliss, tremolo
mp
f
Tamb.
S. D.
Tom
Timp.
mf
mallet
ff
stick
hold stick for muted sound
p
sff
sf
place tamb. over timp, take cymbal away
timp., with soft mallet
Pno.
mp
Ped.
8vb
Accord.
free
gliss.
Vc.
Cb.
sul A
s.p.
gliss.
molto vibr
fff
s. p.

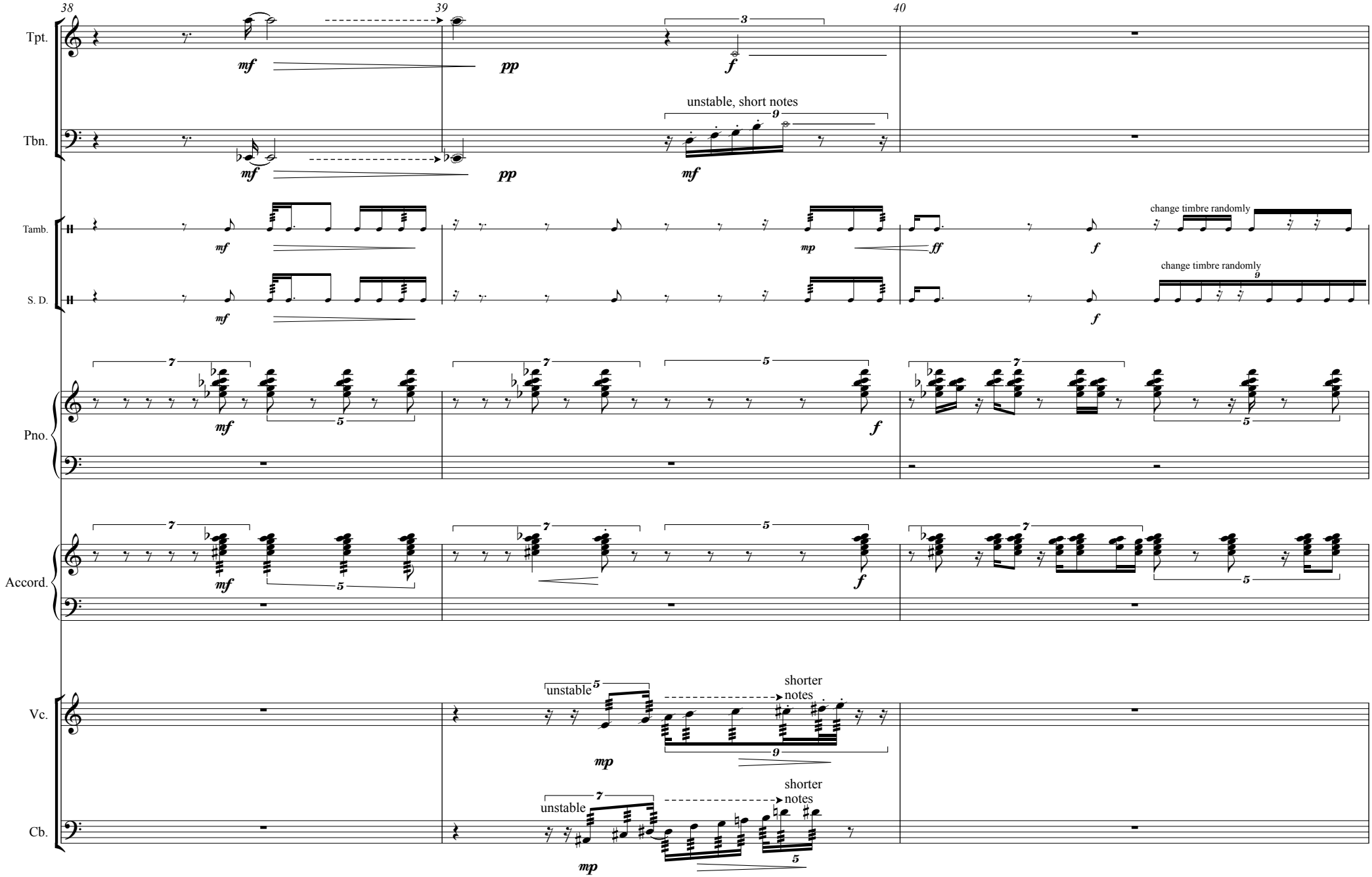

19
20
21
22
Tpt.
Tbn.
Cym.
Tamb.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
gliss.
hands
mallet
remove tamb.
small glissandi after each note
dolce
pizz
Ped.
8vb

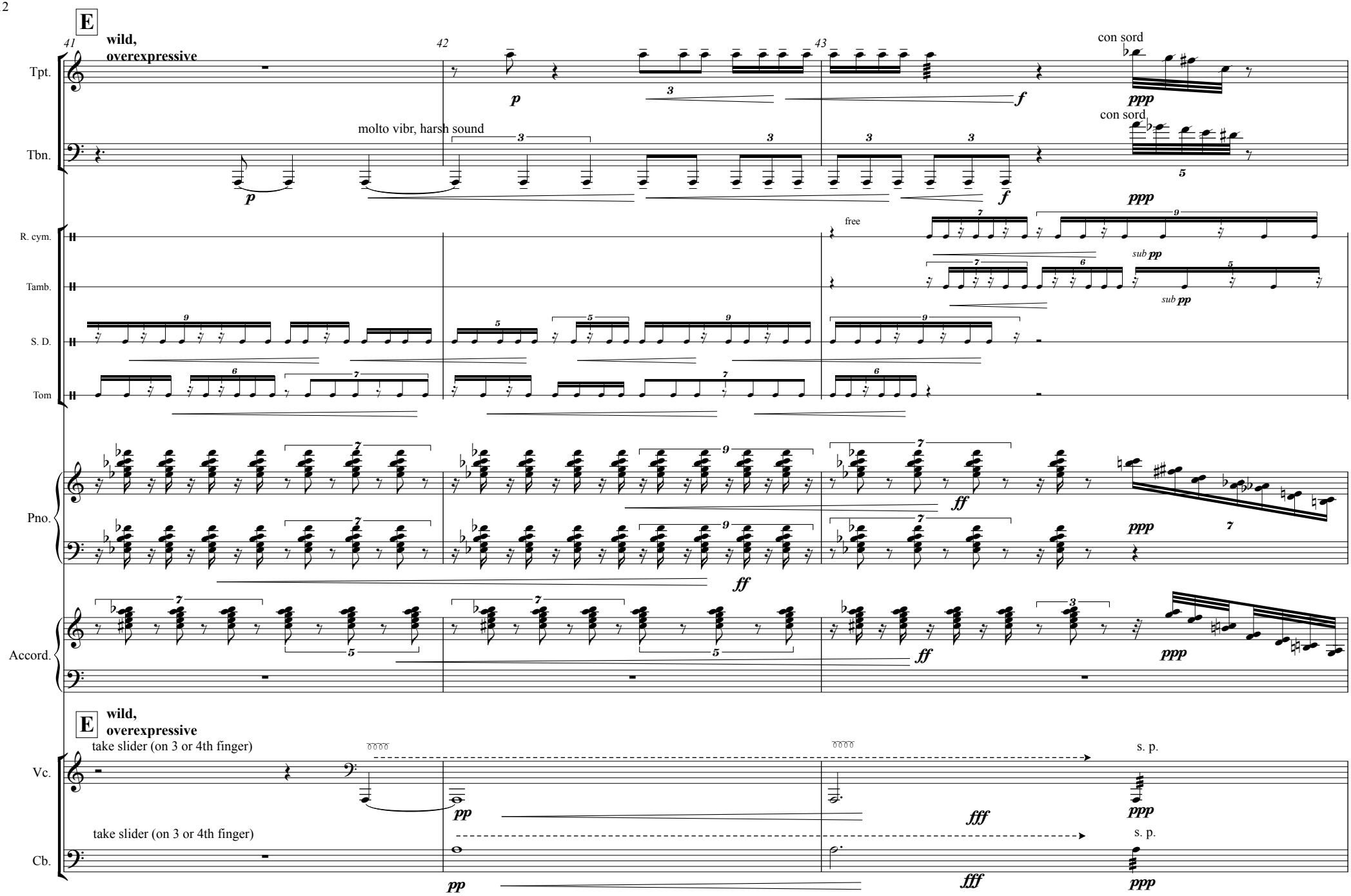

23
24
25
26
Tpt.
Tbn.
Tr
Tamb.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
hands
hands
gliss.

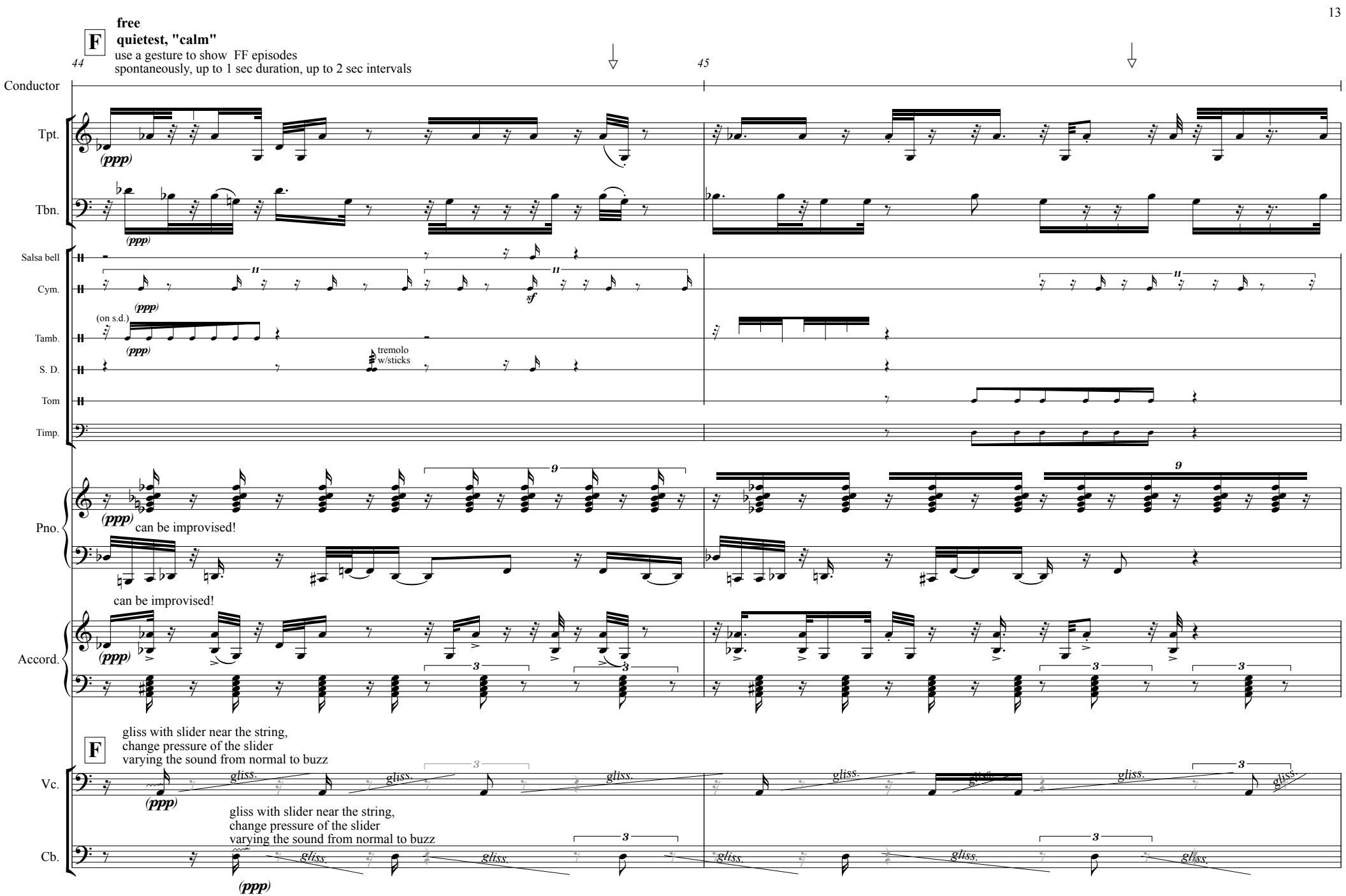

27
28
29
30
Tpt.
Tbn.
R. cym.
bell
Tamb.
S. D.
hands
Tom
hands
Timp.
Pno.
Accord.
Vc.
Cb.

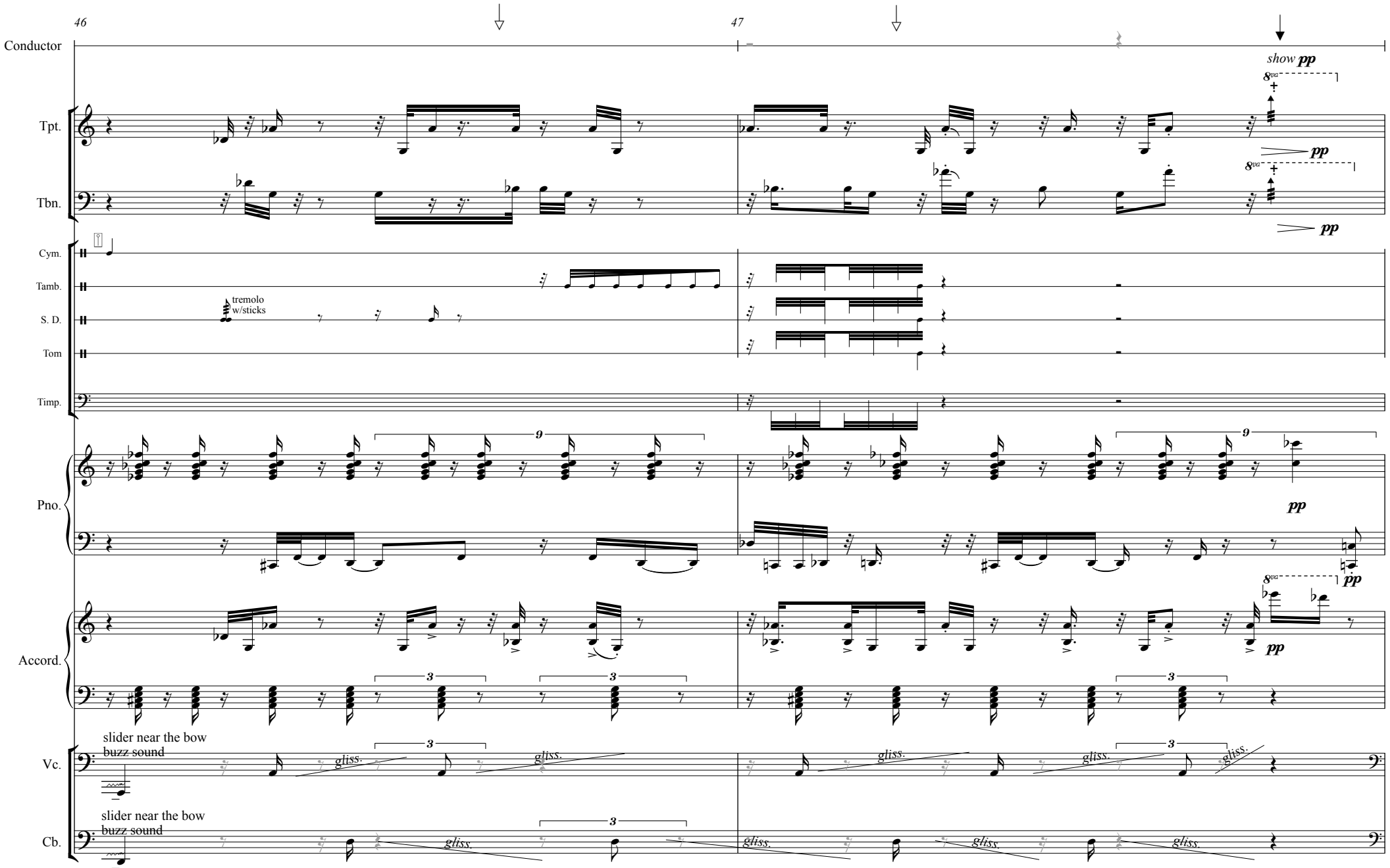

31
32
C s. m.
33 very evenly
ca 4-5"
Tpt.
Tbn.
Cym.
Tamb.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
put tamb on s.d.
mallet
hand
mp
hand
s.d. senza cordes
mallet
put splash cymbal
mp
f
ff
C s. m.
very evenly
ca 4-5"
lighter bow pressure
lighter bow pressure
ff
ff

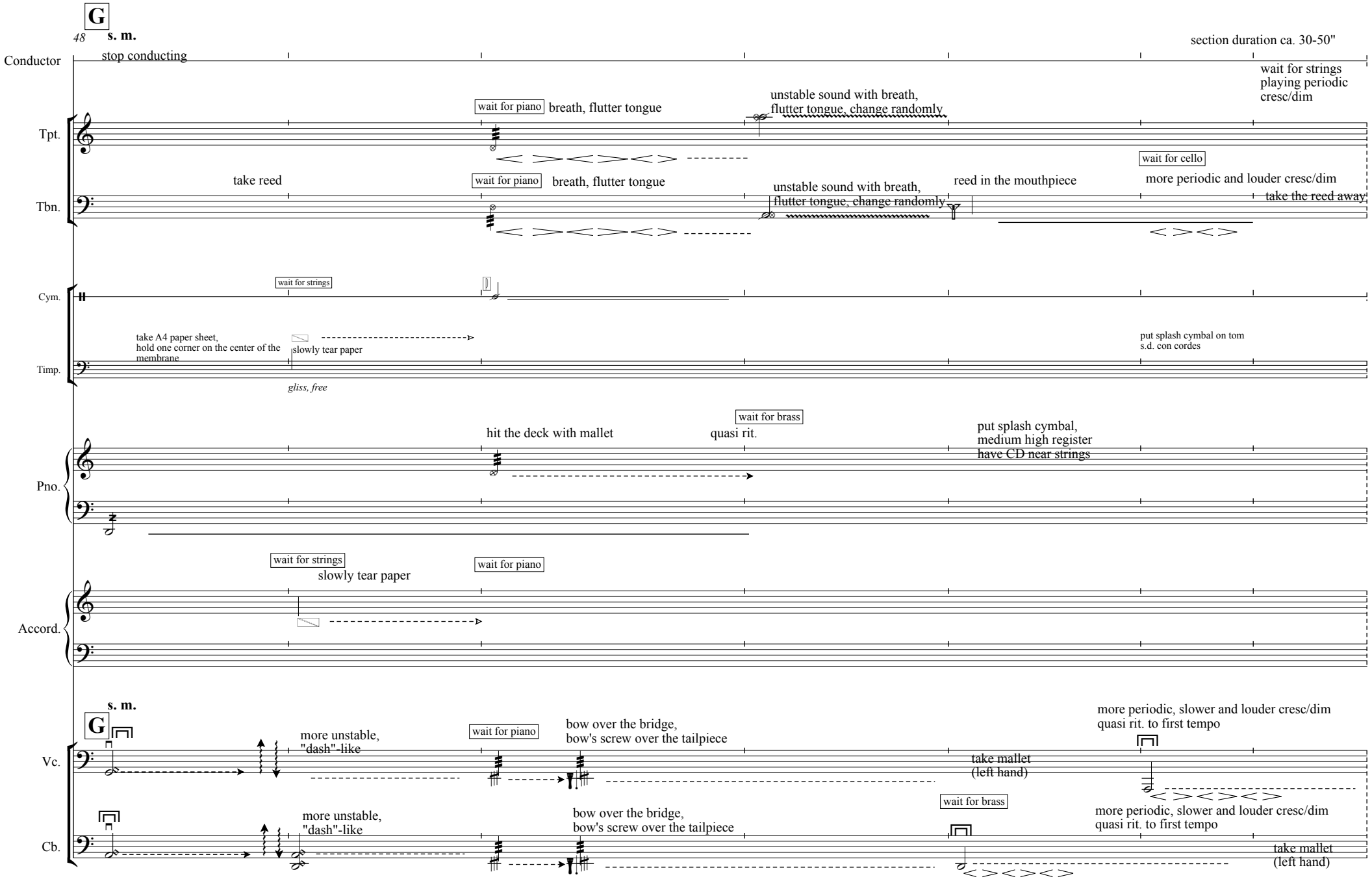

34
D
35
36
37
Tpt.
Tbn.
Salsa bell
Tamb.
S. D.
Tom
Timp.
Pno.
Accord.
D
Vc.
Cb.
pp
f
sff
mp
sffp
ppp
mp
f
(8)
Ped.
8va
(sostenuto ped)

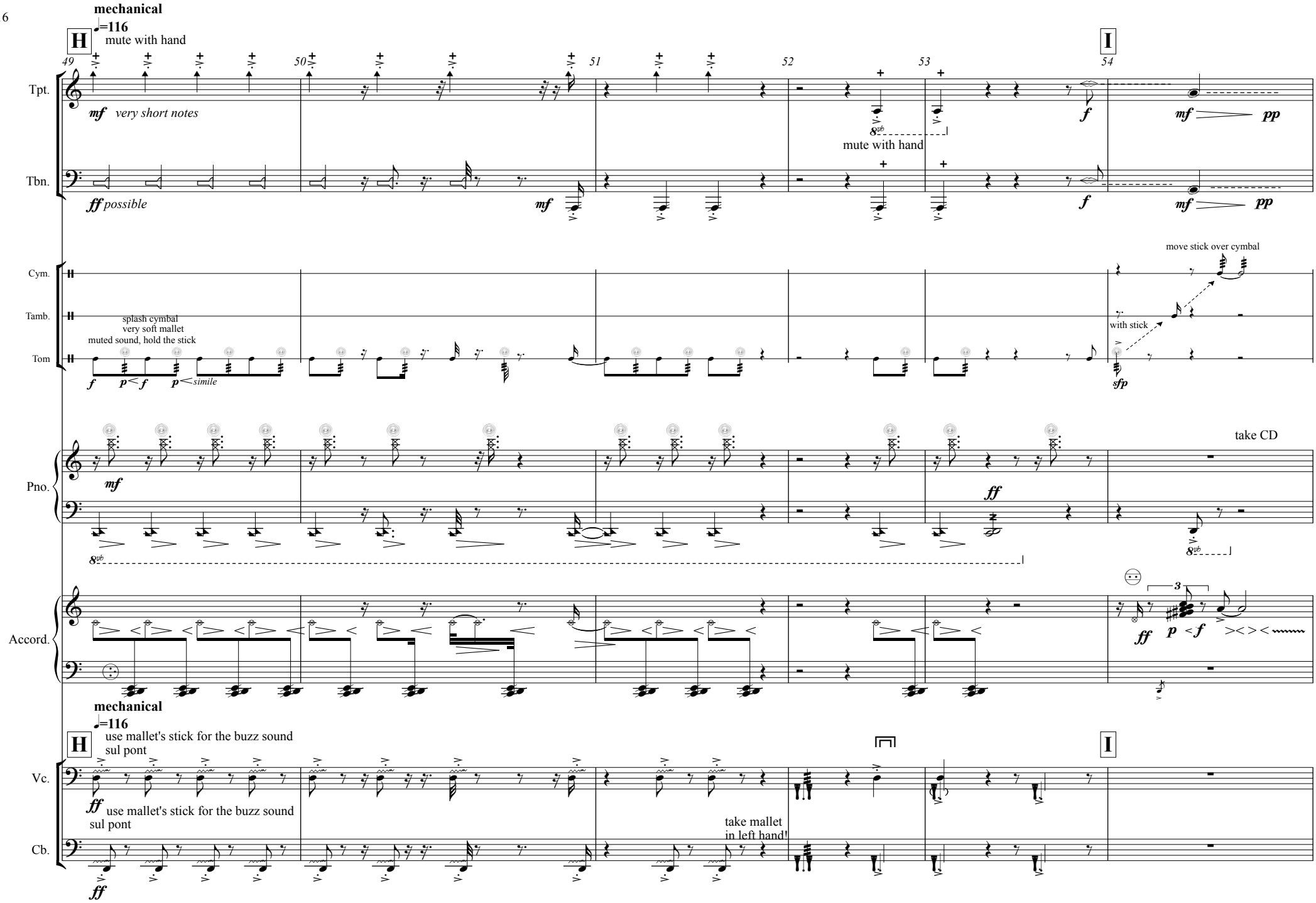

38
39
40
Tpt.
Tbn.
Tamb.
S. D.
Pno.
Accord.
Vc.
Cb.
mf
pp
f
mp
ff
unstable, short notes
change timbre randomly
unstable
shorter notes

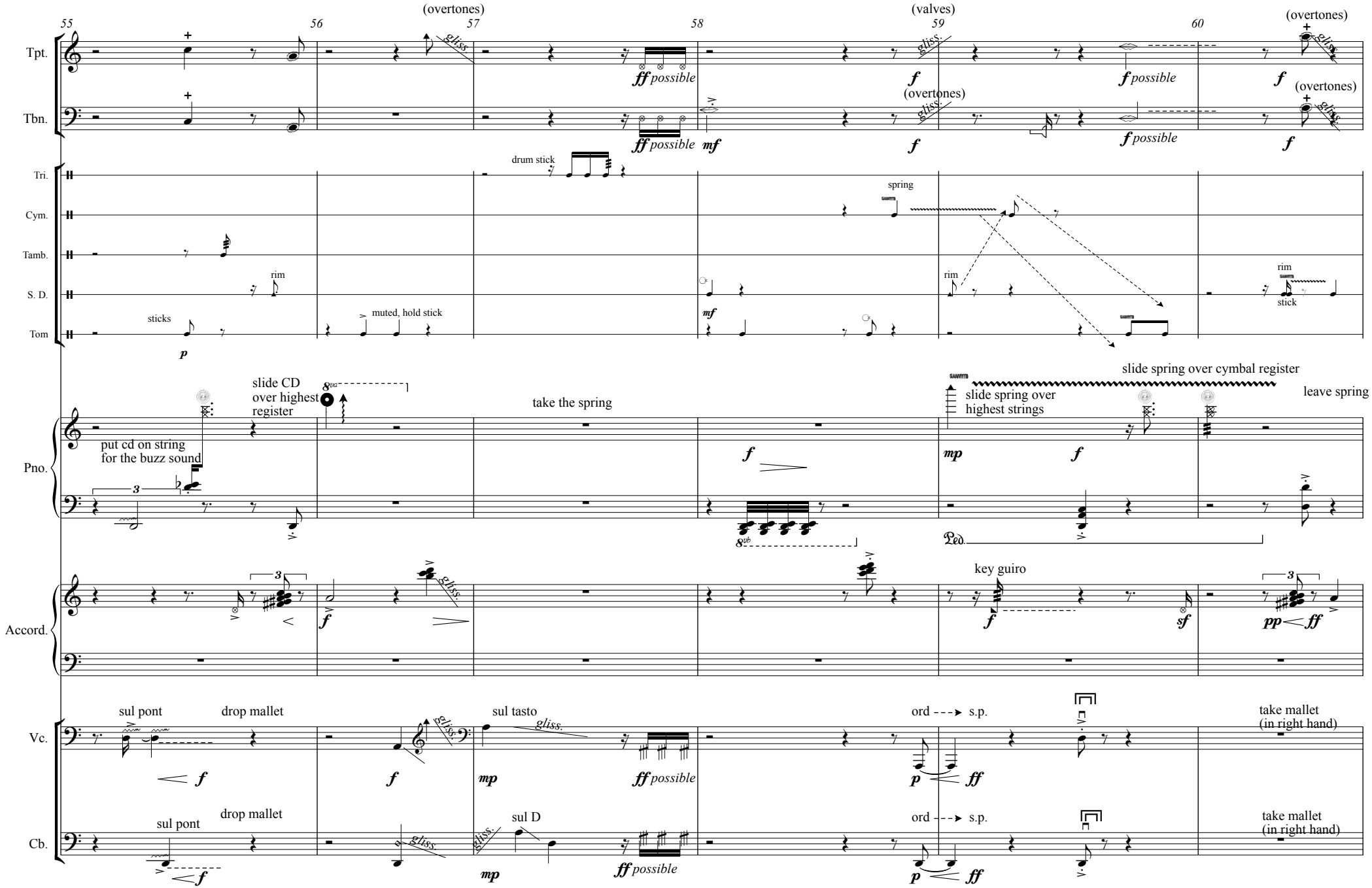

E
wild,
overexpressive
41
42
43
Tpt.
con sord
ppp
Tbn.
molto vibr, harsh sound
con sord
R. cym.
free
Tamb.
sub pp
S. D.
Tom
Pno.
ff
Accord.
E
wild,
overexpressive
take slider (on 3 or 4th finger)
s. p.
Vc.
pp
fff
Cb.

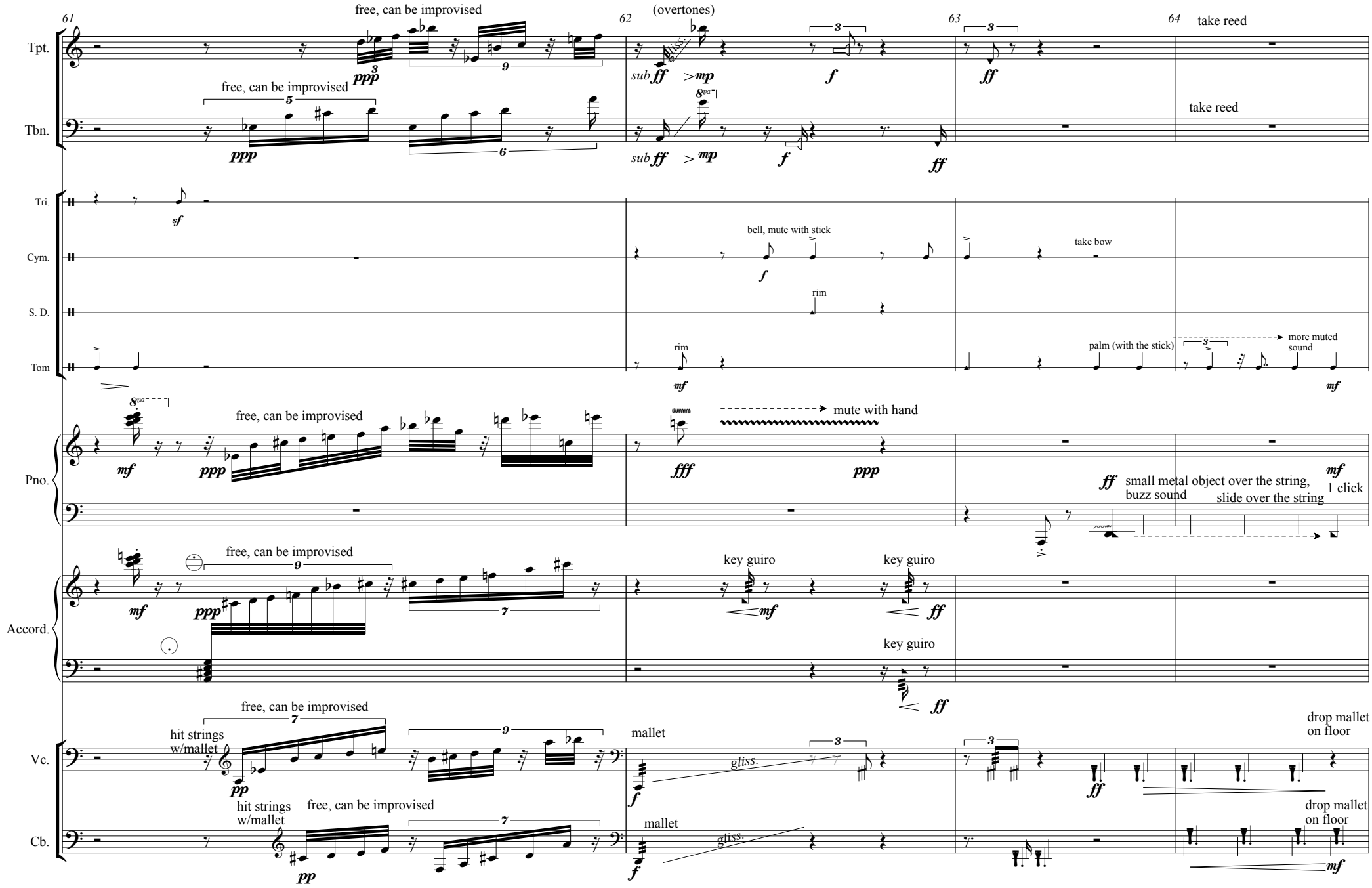

F
free
quietest, "calm"
use a gesture to show FF episodes
spontaneously, up to 1 sec duration, up to 2 sec intervals
44
45
Conductor
Tpt.
(ppp)
Tbn.
(ppp)
Salsa bell
Cym.
(ppp)
sf
Tamb.
(on s.d.)
(ppp)
S. D.
tremolo
w/sticks
Tom
Timp.
Pno.
(ppp)
can be improvised!
can be improvised!
Accord.
(ppp)
F
gliss with slider near the string,
change pressure of the slider
varying the sound from normal to buzz
Vc.
(ppp)
gliss.
gliss with slider near the string,
change pressure of the slider
varying the sound from normal to buzz
Cb.
(ppp)
gliss.

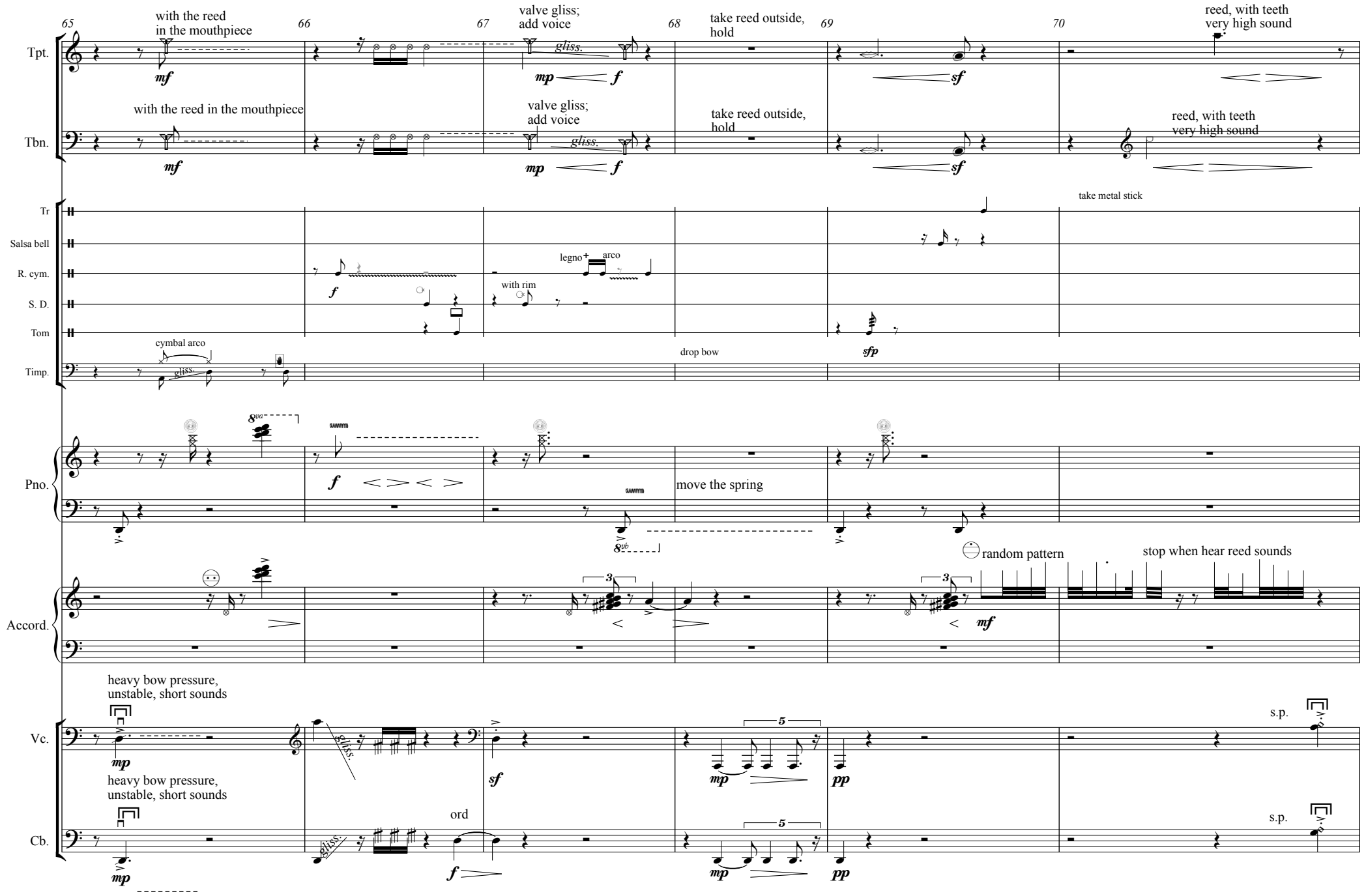

46
47
Conductor
show pp
Tpt.
Tbn.
pp
Cym.
Tamb.
S. D.
Tom
Timp.
tremolo
w/sticks
Pno.
Accord.
slider near the bow
buzz sound
Vc.
Cb.
gliss.

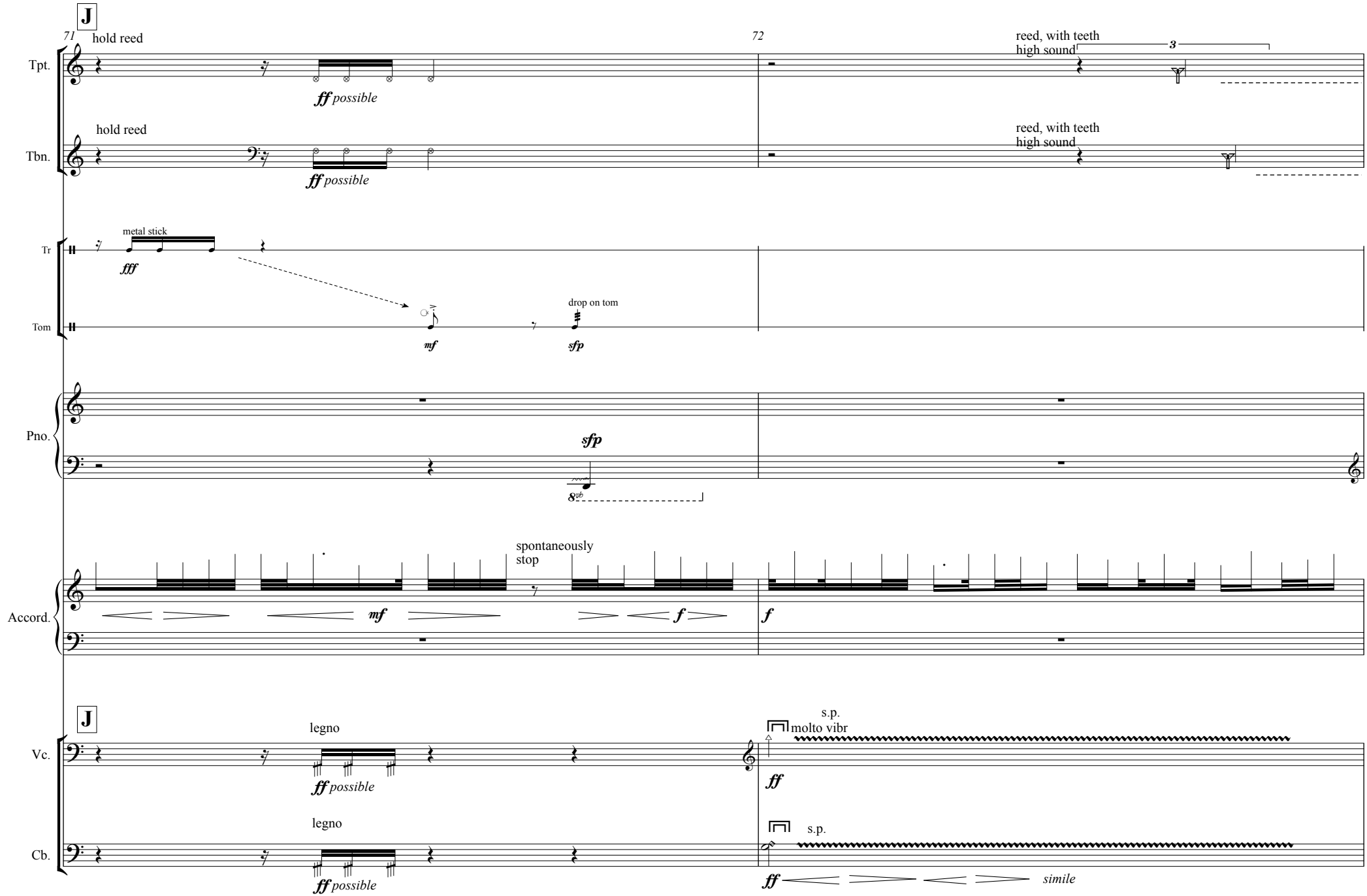

G
48
s. m.
section duration ca. 30-50"
Conductor
stop conducting
Tpt.
wait for piano
breath, flutter tongue
unstable sound with breath,
flutter tongue, change randomly
wait for strings
playing periodic
cresc/dim
Tbn.
take reed
wait for piano
breath, flutter tongue
unstable sound with breath,
flutter tongue, change randomly
reed in the mouthpiece
wait for cello
more periodic and louder cresc/dim
take the reed away
Cym.
wait for strings
Timp.
take A4 paper sheet,
hold one corner on the center of the
membrane
slowly tear paper
gliss, free
put splash cymbal on tom
s.d. con cordes
Pno.
hit the deck with mallet
wait for brass
quasi rit.
put splash cymbal,
medium high register
have CD near strings
Accord.
wait for strings
slowly tear paper
wait for piano
s. m.
G
Vc.
more unstable,
"dash"-like
wait for piano
bow over the bridge,
bow's screw over the tailpiece
take mallet
(left hand)
wait for brass
more periodic, slower and louder cresc/dim
quasi rit. to first tempo
Cb.
more unstable,
"dash"-like
bow over the bridge,
bow's screw over the tailpiece
more periodic, slower and louder cresc/dim
quasi rit. to first tempo
take mallet
(left hand)

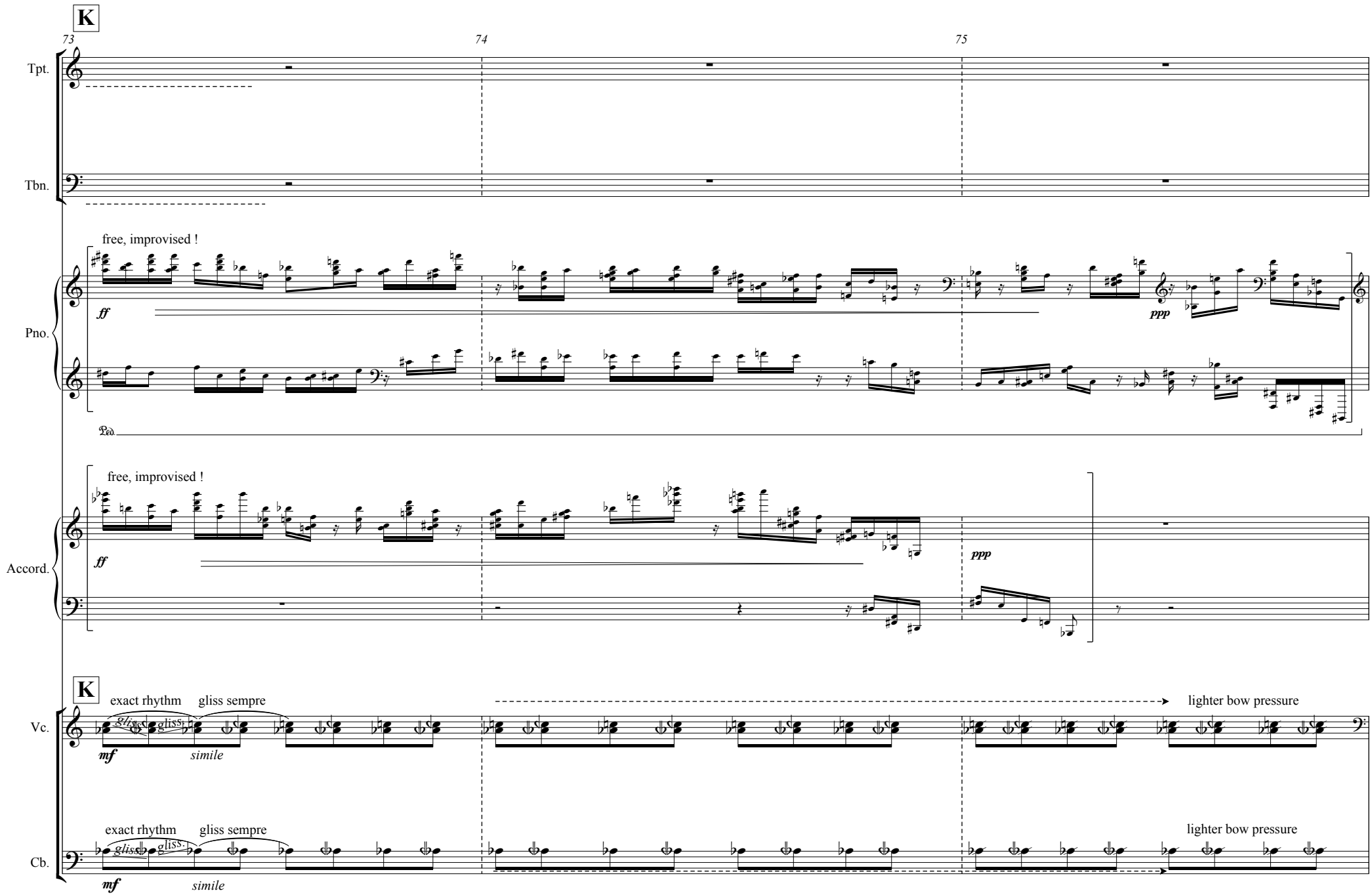

mechanical
♩=116
H
mute with hand
49
50
51
52
53
I
54
Tpt.
mf very short notes
mute with hand
f
mf pp
Tbn.
ff possible
mf
f
mf pp
Cym.
Tamb.
Tom
splash cymbal
very soft mallet
muted sound, hold the stick
f p < f p < simile
move stick over cymbal
with stick
sfp
Pno.
mf
ff
take CD
Accord.
ff p < f
mechanical
♩=116
H
use mallet's stick for the buzz sound
sul pont
I
Vc.
ff use mallet's stick for the buzz sound
sul pont
Cb.
take mallet
in left hand!
ff

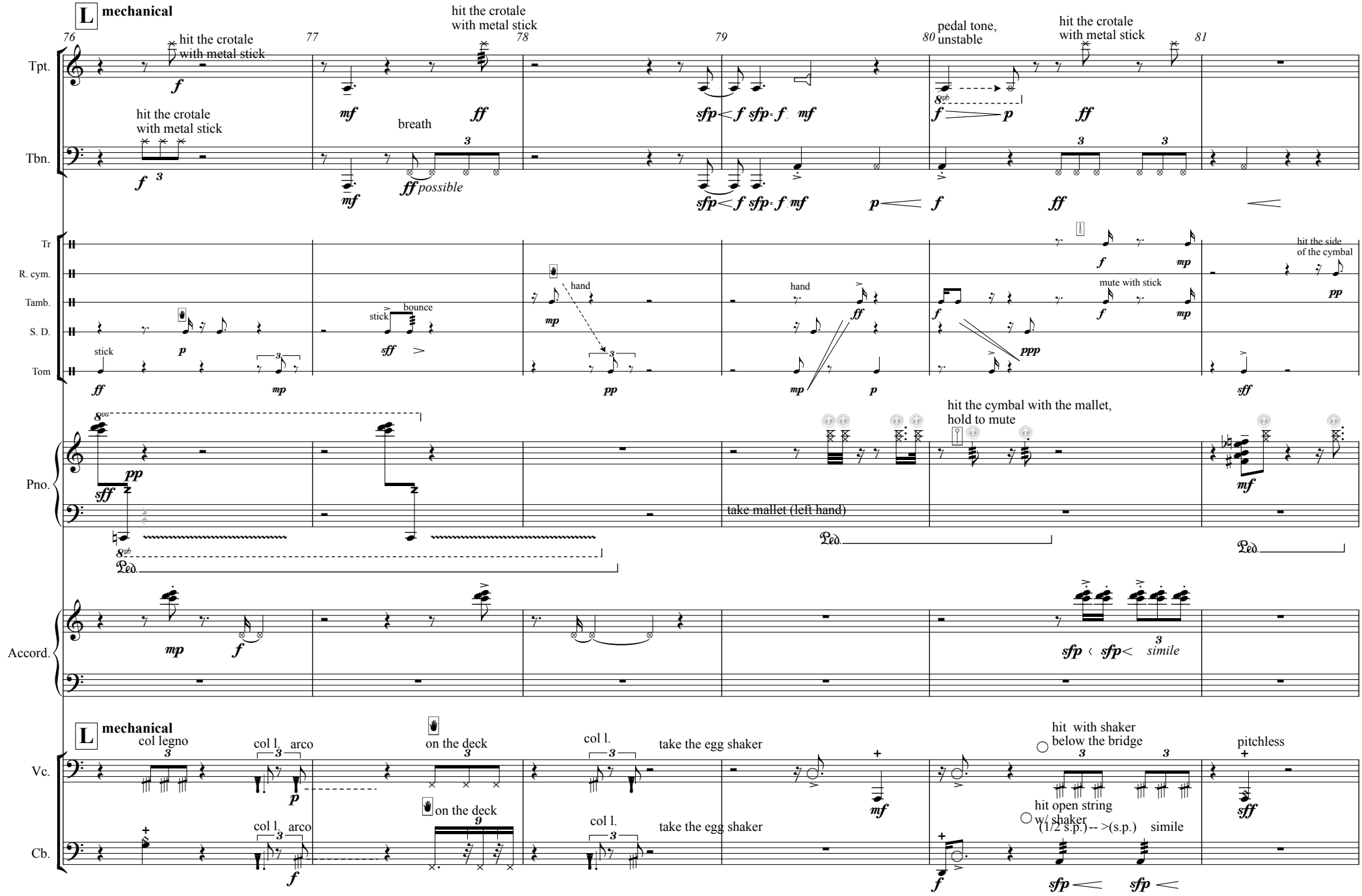

55
56
57
58
59
60
Tpt.
Tbn.
(overtones)
(valves)
(overtones)
gliss.
ff possible
mf
f
f possible
Tri.
Cym.
Tamb.
S. D.
Tom
drum stick
spring
rim
sticks
muted, hold stick
stick
p
Pno.
slide CD
over highest
register
take the spring
slide spring over cymbal register
slide spring over
highest strings
leave spring
put cd on string
for the buzz sound
mp
Accord.
key guiro
sf
pp
Vc.
Cb.
sul pont
drop mallet
sul tasto
ord --- s.p.
take mallet
(in right hand)
sul D

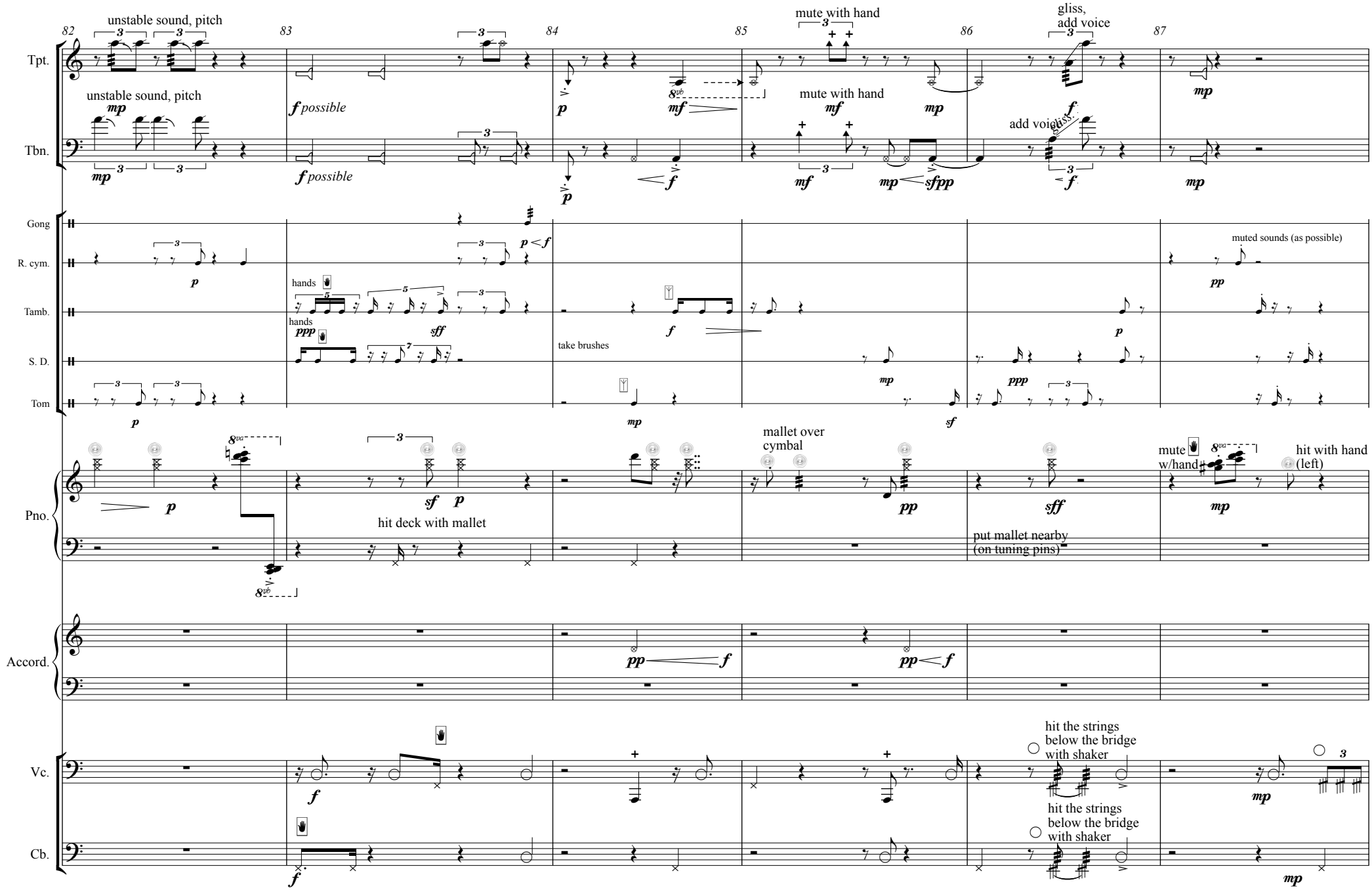

61
62
63
64
Tpt.
Tbn.
Tri.
Cym.
S. D.
Tom
Pno.
Accord.
Vc.
Cb.
free, can be improvised
(overtones)
take reed
bell, mute with stick
take bow
rim
palm (with the stick)
more muted sound
mute with hand
small metal object over the string, buzz sound
slide over the string
1 click
key guiro
hit strings w/mallet
mallet
drop mallet on floor
gliss.

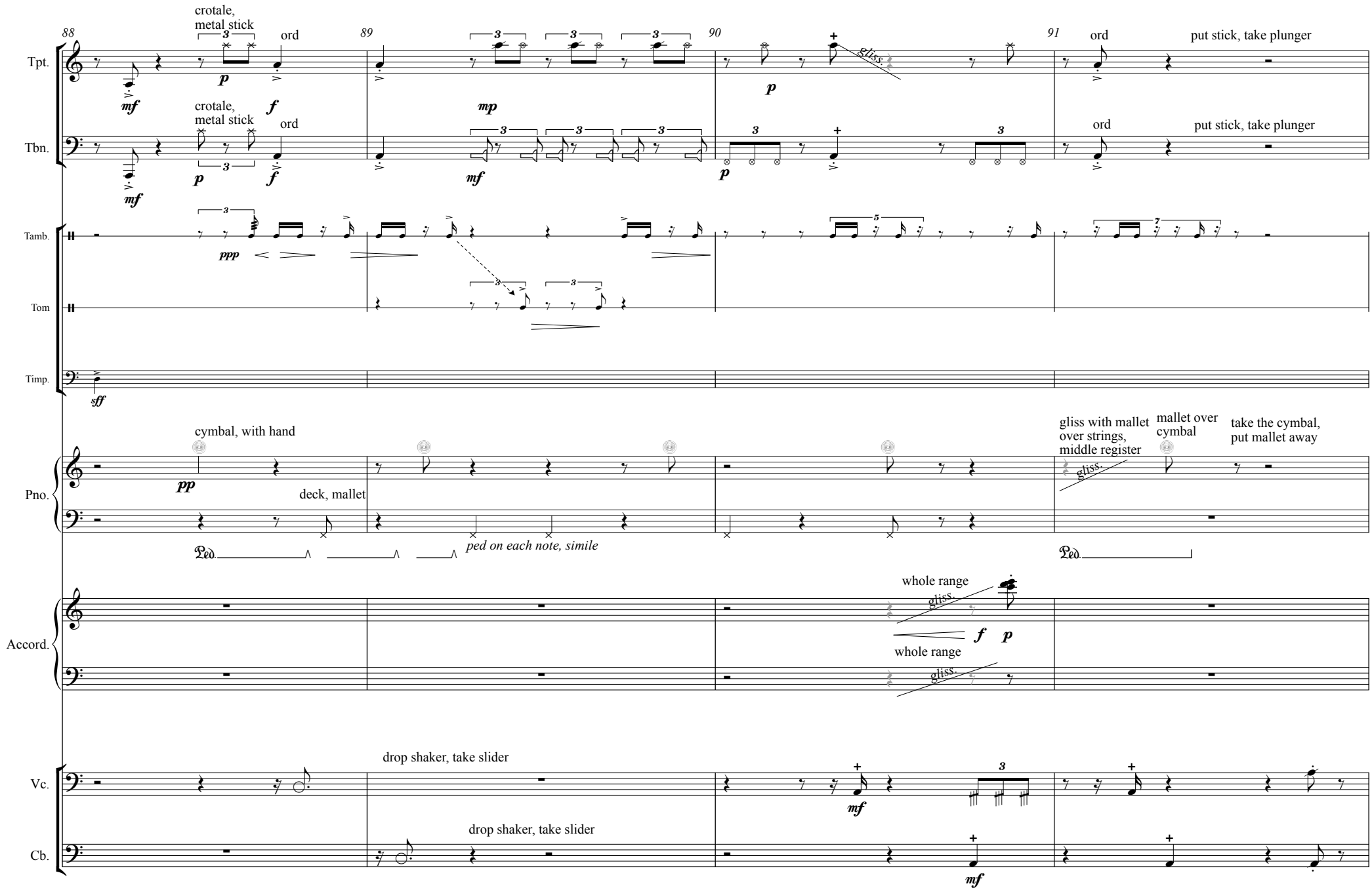

65
66
67
68
69
70
Tpt.
Tbn.
Tr
Salsa bell
R. cym.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
with the reed in the mouthpiece
valve gliss; add voice
take reed outside, hold
reed, with teeth very high sound
take metal stick
legno
arco
with rim
cymbal arco
drop bow
move the spring
random pattern
stop when hear reed sounds
heavy bow pressure, unstable, short sounds
ord
s.p.

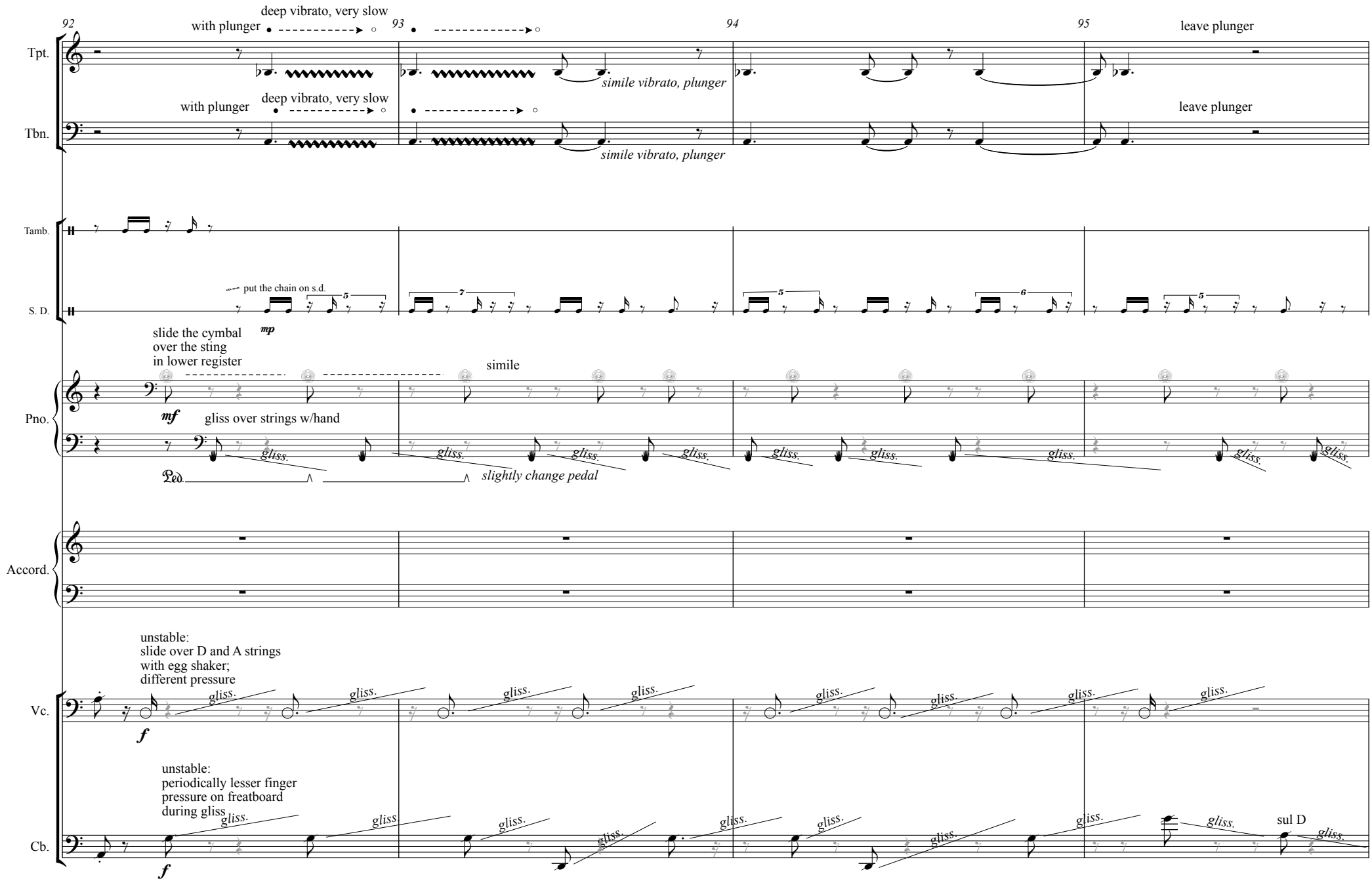

J
71
hold reed
72
reed, with teeth
high sound
3
Tpt.
ff possible
hold reed
reed, with teeth
high sound
Tbn.
ff possible
metal stick
Tr
fff
Tom
drop on tom
mf
sfp
Pno.
sfp
8vb
spontaneously
stop
Accord.
mf
f
f
J
legno
s.p.
molto vibr
Vc.
ff possible
ff
legno
s.p.
Cb.
ff possible
ff
simile

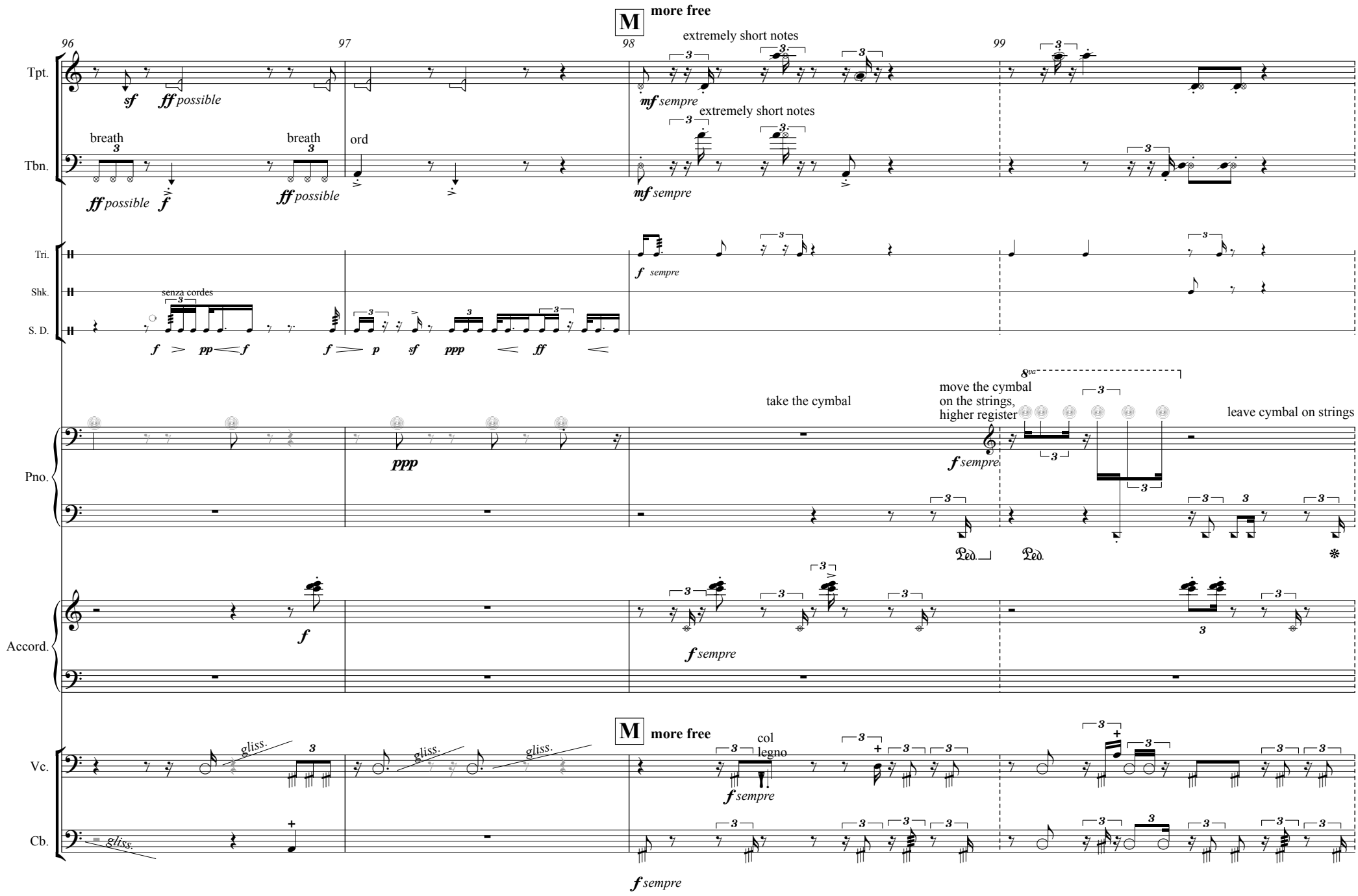

K
73
74
75
Tpt.
Tbn.
free, improvised !
ff
ppp
Pno.
Ped.
free, improvised !
ff
ppp
Accord.
K
exact rhythm
gliss sempre
lighter bow pressure
Vc.
mf
simile
exact rhythm
gliss sempre
lighter bow pressure
Cb.
mf
simile

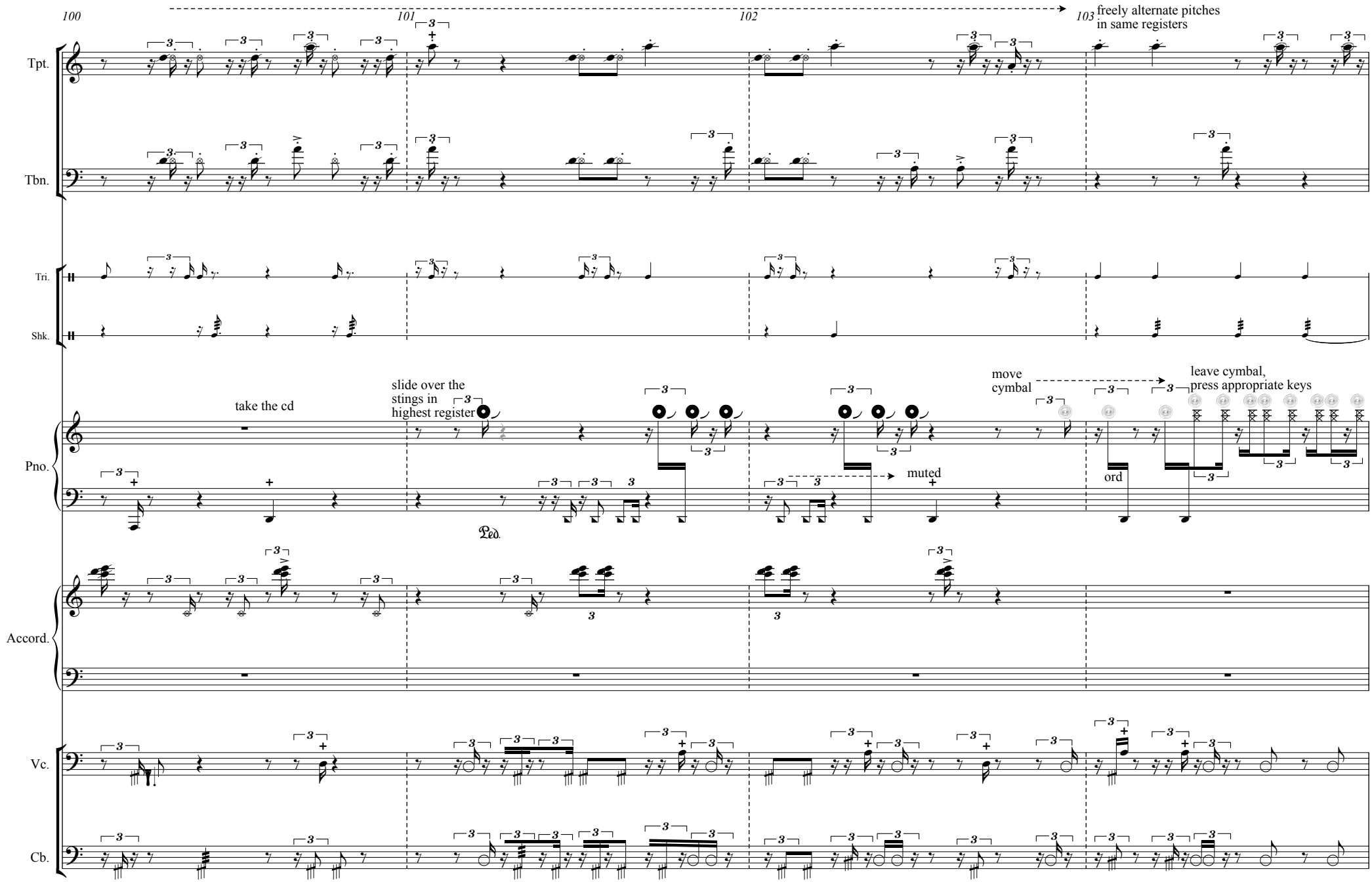

L mechanical
76
77
78
79
80
81
Tpt.
Tbn.
hit the crotale with metal stick
hit the crotale with metal stick
breath
hit the crotale with metal stick
pedal tone, unstable
hit the crotale with metal stick
possible
Tr
R. cym.
Tamb.
S. D.
Tom
stick
bounce
hand
hand
mute with stick
hit the side of the cymbal
Pno.
take mallet (left hand)
hit the cymbal with the mallet, hold to mute
Accord.
simile
L mechanical
Vc.
Cb.
col legno
col l.
arco
on the deck
col l.
take the egg shaker
hit with shaker below the bridge
pitchless
hit open string w/ shaker
(1/2 s.p.)-- >(s.p.)
simile

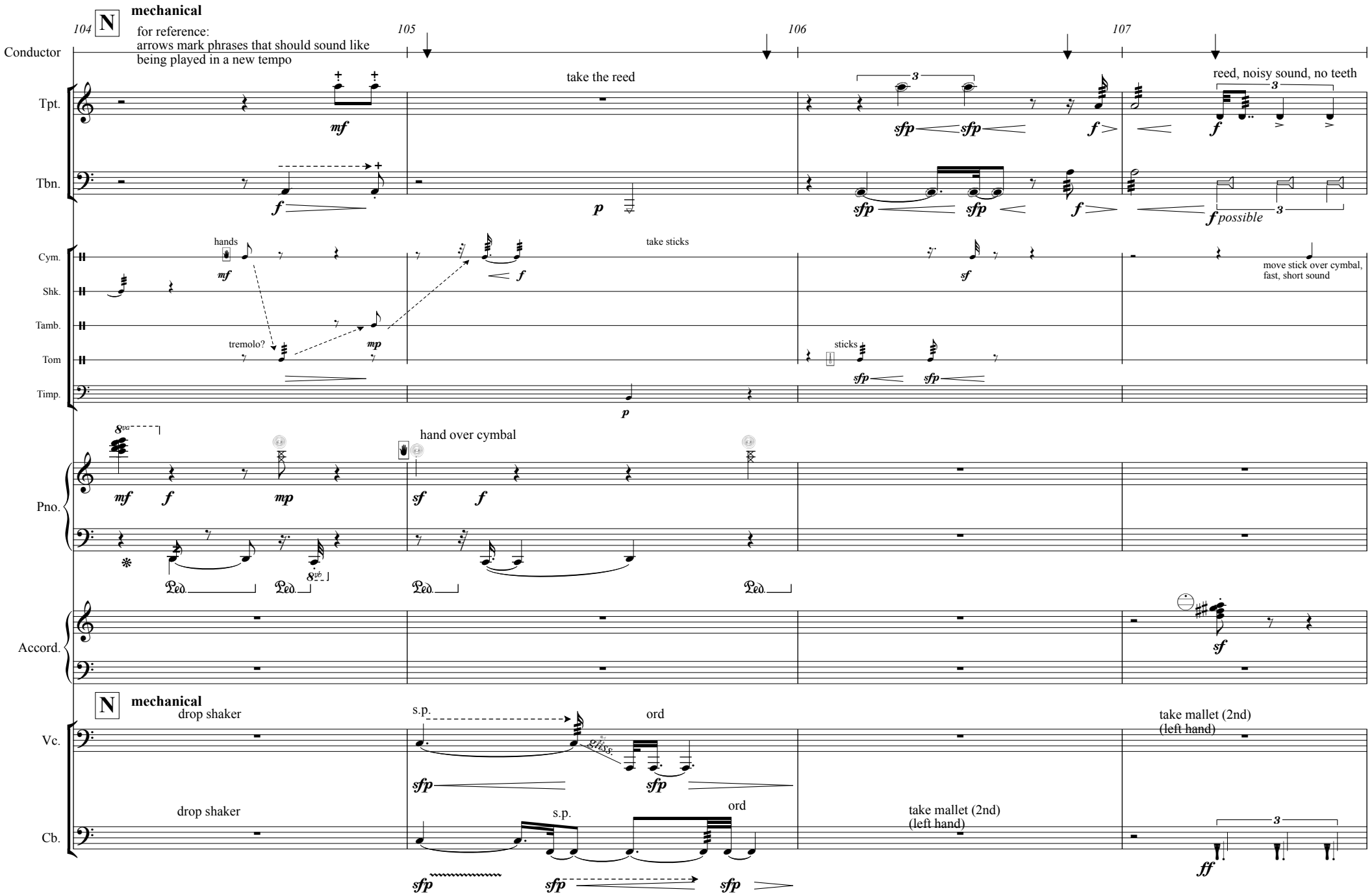

82
83
84
85
86
87
Tpt.
Tbn.
Gong
R. cym.
Tamb.
S. D.
Tom
Pno.
Accord.
Vc.
Cb.
unstable sound, pitch
unstable sound, pitch
mute with hand
mute with hand
gliss,
add voice
add voice
possible
possible
hands
hands
take brushes
muted sounds (as possible)
mallet over
cymbal
hit deck with mallet
put mallet nearby
(on tuning pins)
mute
w/hand
hit with hand
(left)
hit the strings
below the bridge
with shaker
hit the strings
below the bridge
with shaker

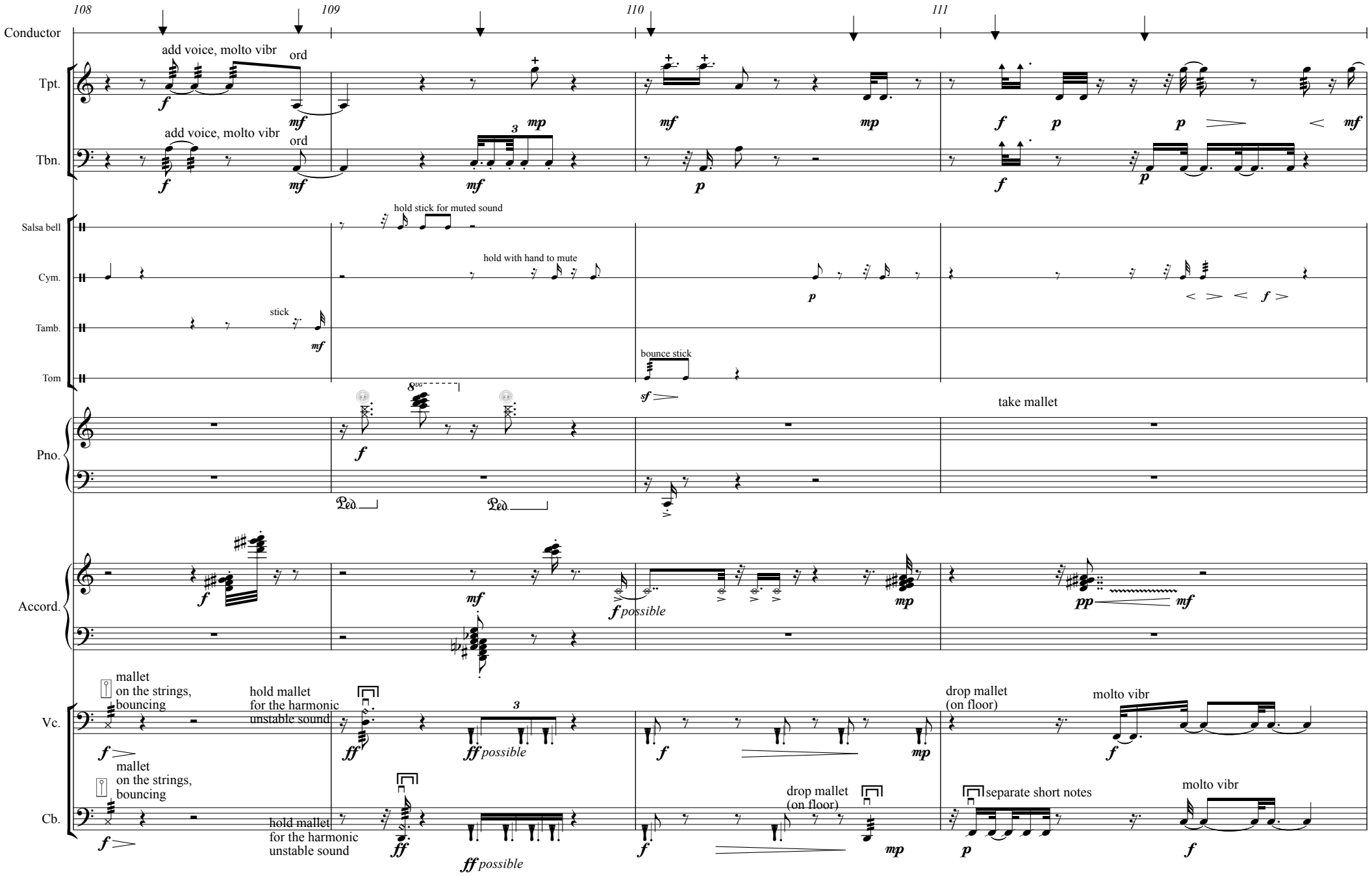

88
89
90
91
Tpt.
Tbn.
Tamb.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
crotale, metal stick
ord
put stick, take plunger
gliss.
cymbal, with hand
deck, mallet
ped on each note, simile
gliss with mallet over strings, middle register
mallet over cymbal
take the cymbal, put mallet away
whole range
drop shaker, take slider

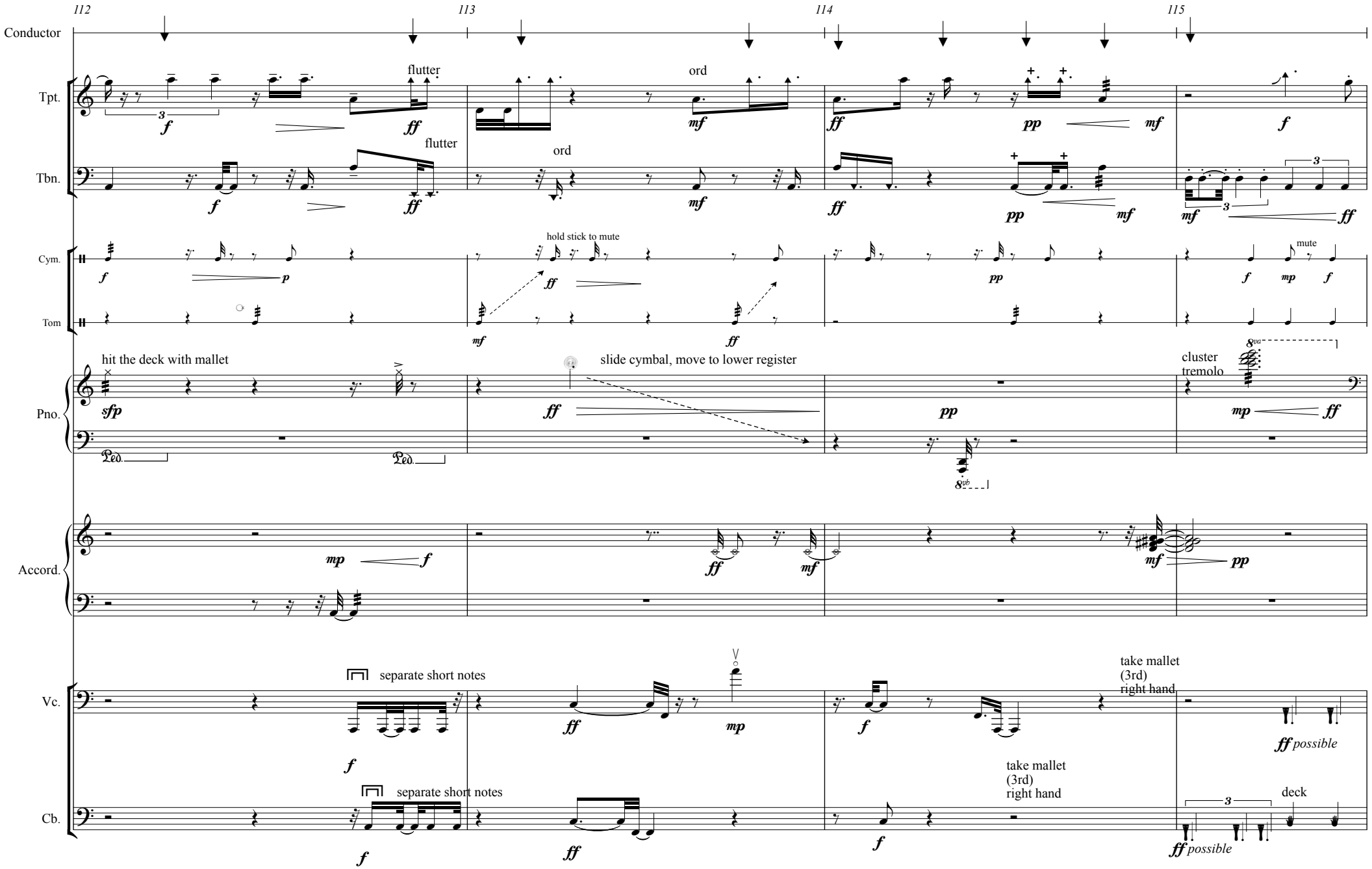

92
93
94
95
Tpt.
with plunger
deep vibrato, very slow
simile vibrato, plunger
leave plunger
Tbn.
with plunger
deep vibrato, very slow
simile vibrato, plunger
leave plunger
Tamb.
S. D.
put the chain on s.d.
mp
slide the cymbal
over the sting
in lower register
simile
Pno.
mf
gliss over strings w/hand
gliss.
slightly change pedal
Accord.
unstable:
slide over D and A strings
with egg shaker;
different pressure
Vc.
f
unstable:
periodically lesser finger
pressure on freatboard
during gliss
Cb.
f
sul D

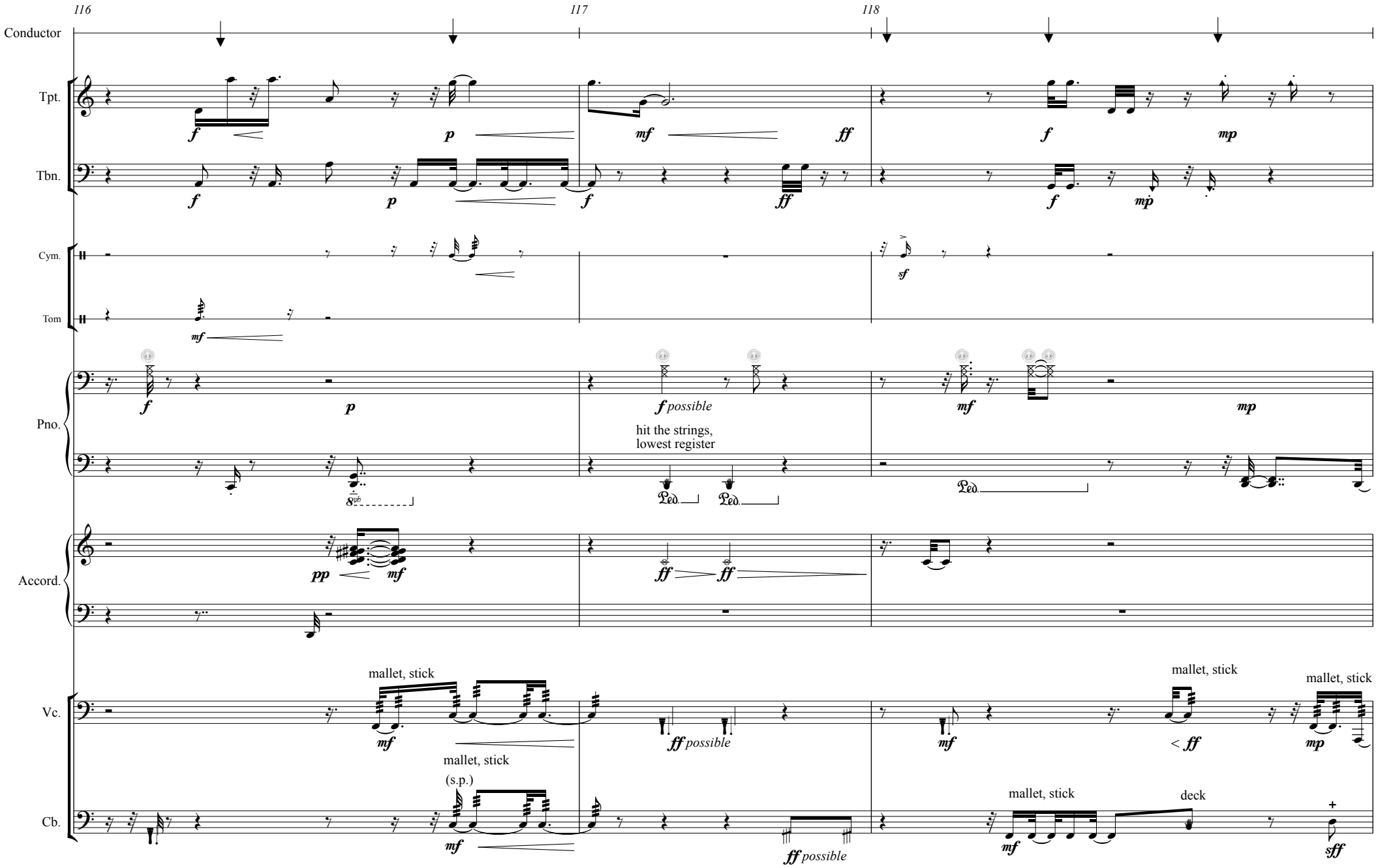

M
more free
96
97
98
99
Tpt.
sf
ff possible
mf sempre
extremely short notes
Tbn.
breath
ord
ff possible
f
Tri.
Shk.
S. D.
senza cordes
f sempre
pp
p
sf
ppp
ff
Pno.
take the cymbal
move the cymbal
on the strings,
higher register
8va
leave cymbal on strings
Ped.
Accord.
Vc.
Cb.
gliss.
col
legno
M
more free
f sempre

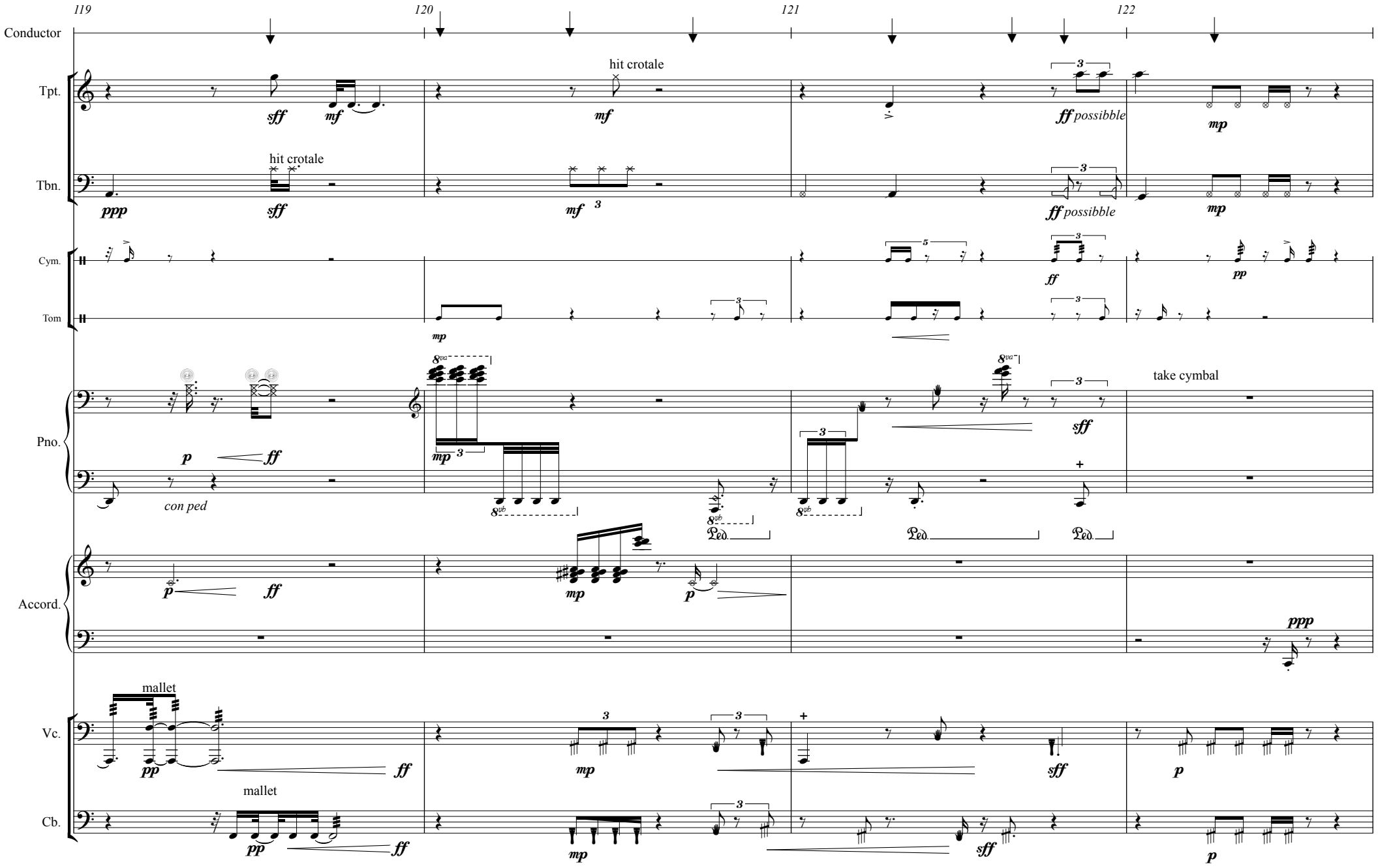

100
101
102
103
freely alternate pitches
in same registers
Tpt.
Tbn.
Tri.
Shk.
take the cd
slide over the
stings in
highest register
move
cymbal
leave cymbal,
press appropriate keys
muted
ord
Ped.
Pno.
Accord.
Vc.
Cb.

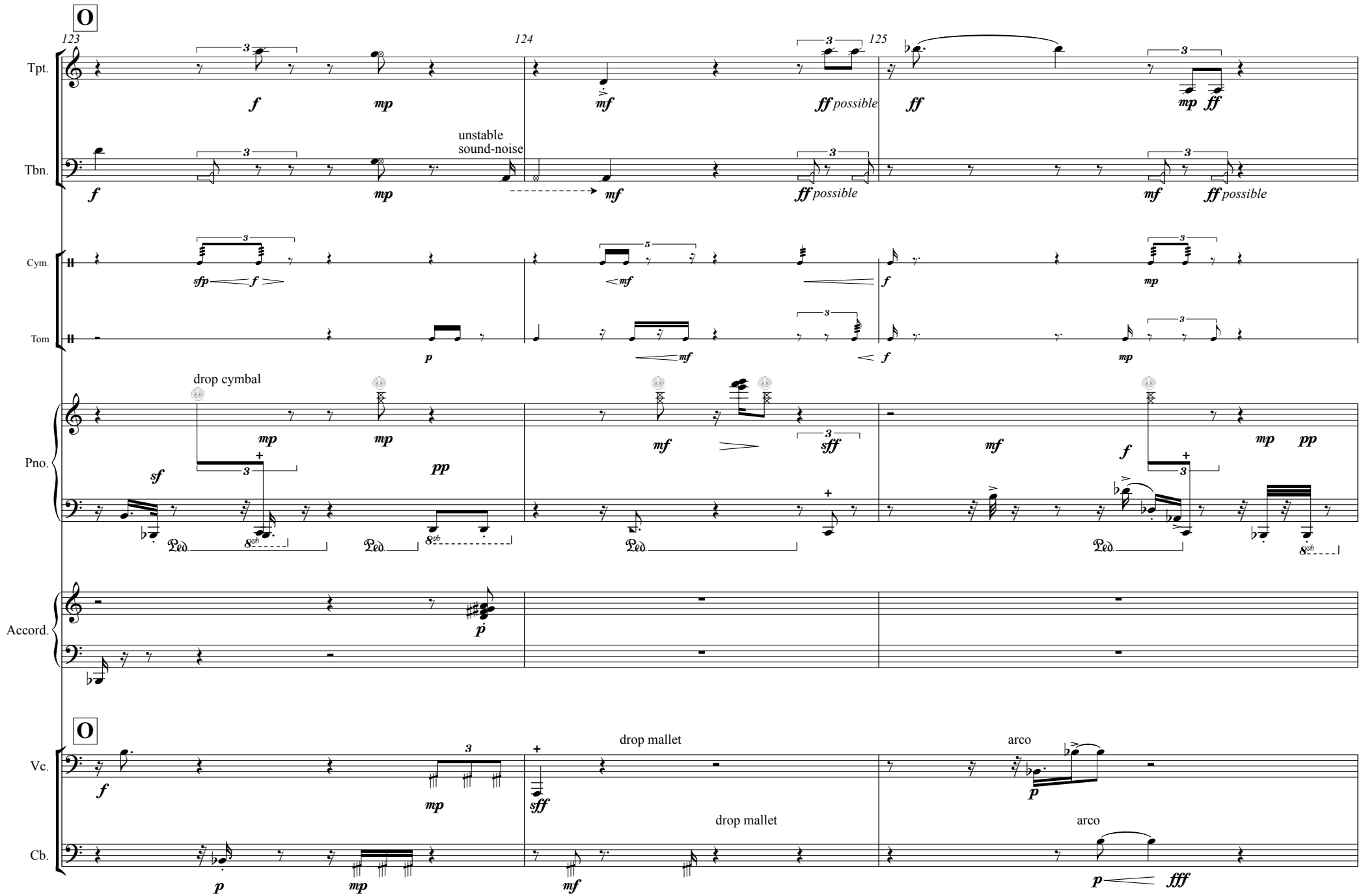

104
N
mechanical
for reference:
arrows mark phrases that should sound like
being played in a new tempo
105
106
107
Conductor
Tpt.
Tbn.
take the reed
reed, noisy sound, no teeth
possible
Cym.
Shk.
Tamb.
Tom
Timp.
hands
take sticks
tremolo?
sticks
move stick over cymbal,
fast, short sound
Pno.
hand over cymbal
Accord.
N
mechanical
drop shaker
s.p.
ord
take mallet (2nd)
(left hand)
Vc.
Cb.
drop shaker
s.p.
ord
take mallet (2nd)
(left hand)

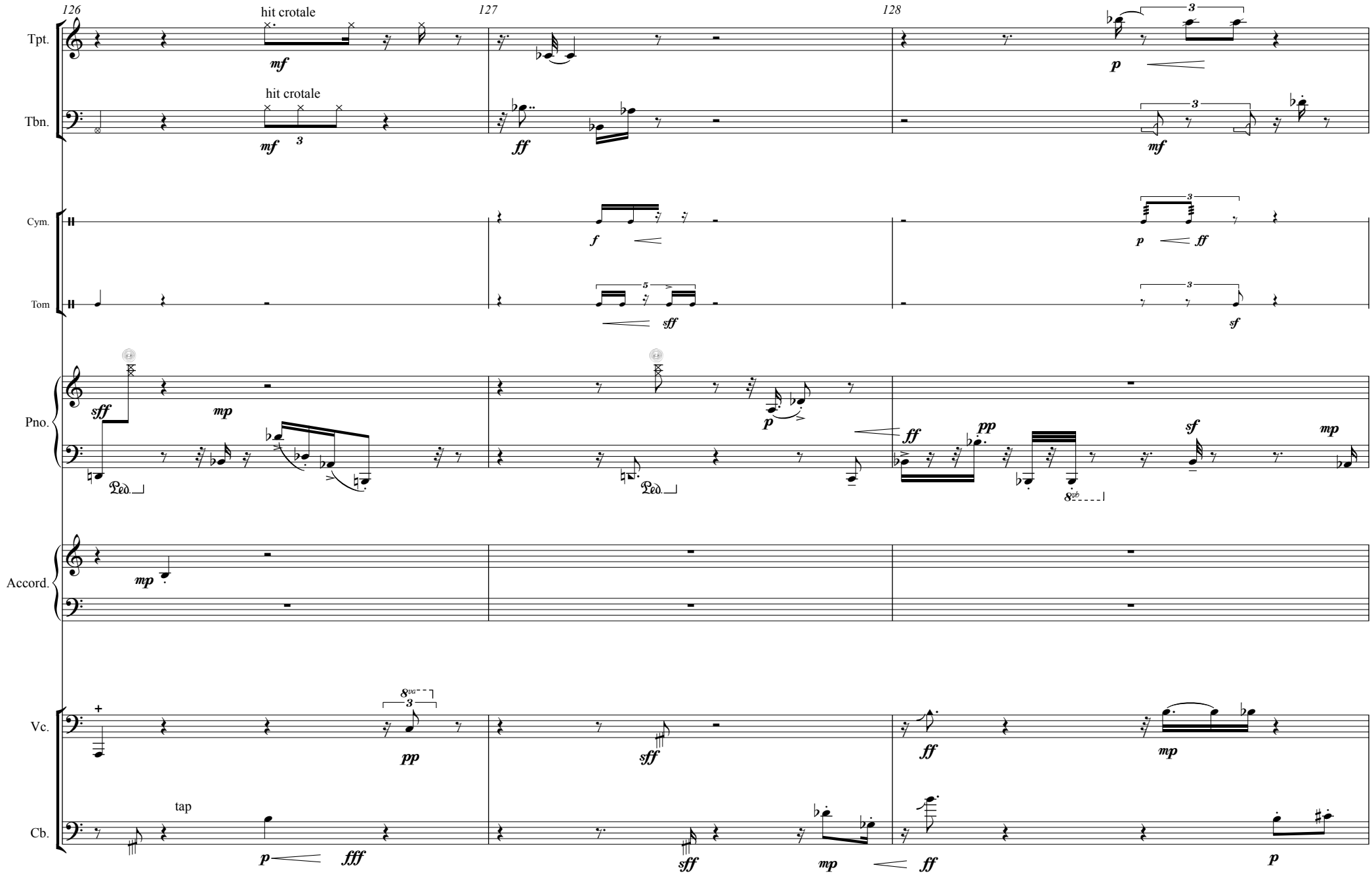

108
109
110
111
Conductor
Tpt.
Tbn.
Salsa bell
Cym.
Tamb.
Tom
Pno.
Accord.
Vc.
Cb.
add voice, molto vibr
ord
hold stick for muted sound
hold with hand to mute
stick
bounce stick
take mallet
mallet on the strings, bouncing
hold mallet for the harmonic unstable sound
drop mallet (on floor)
molto vibr
separate short notes
possible

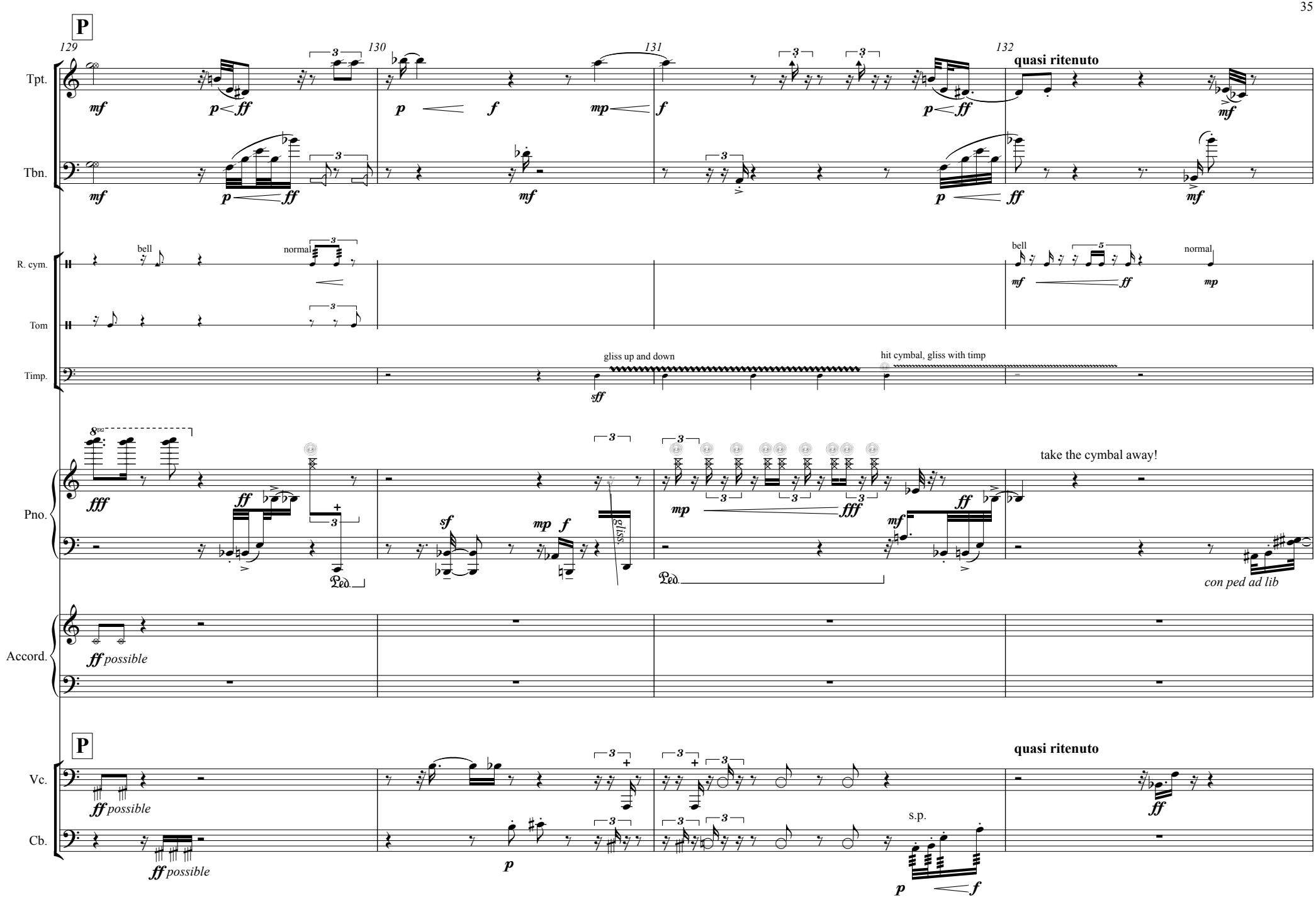

112
113
114
115
Conductor
Tpt.
Tbn.
Cym.
Tom
Pno.
Accord.
Vc.
Cb.
flutter
ord
hold stick to mute
mute
hit the deck with mallet
slide cymbal, move to lower register
cluster
tremolo
separate short notes
take mallet
(3rd)
right hand
possible
deck

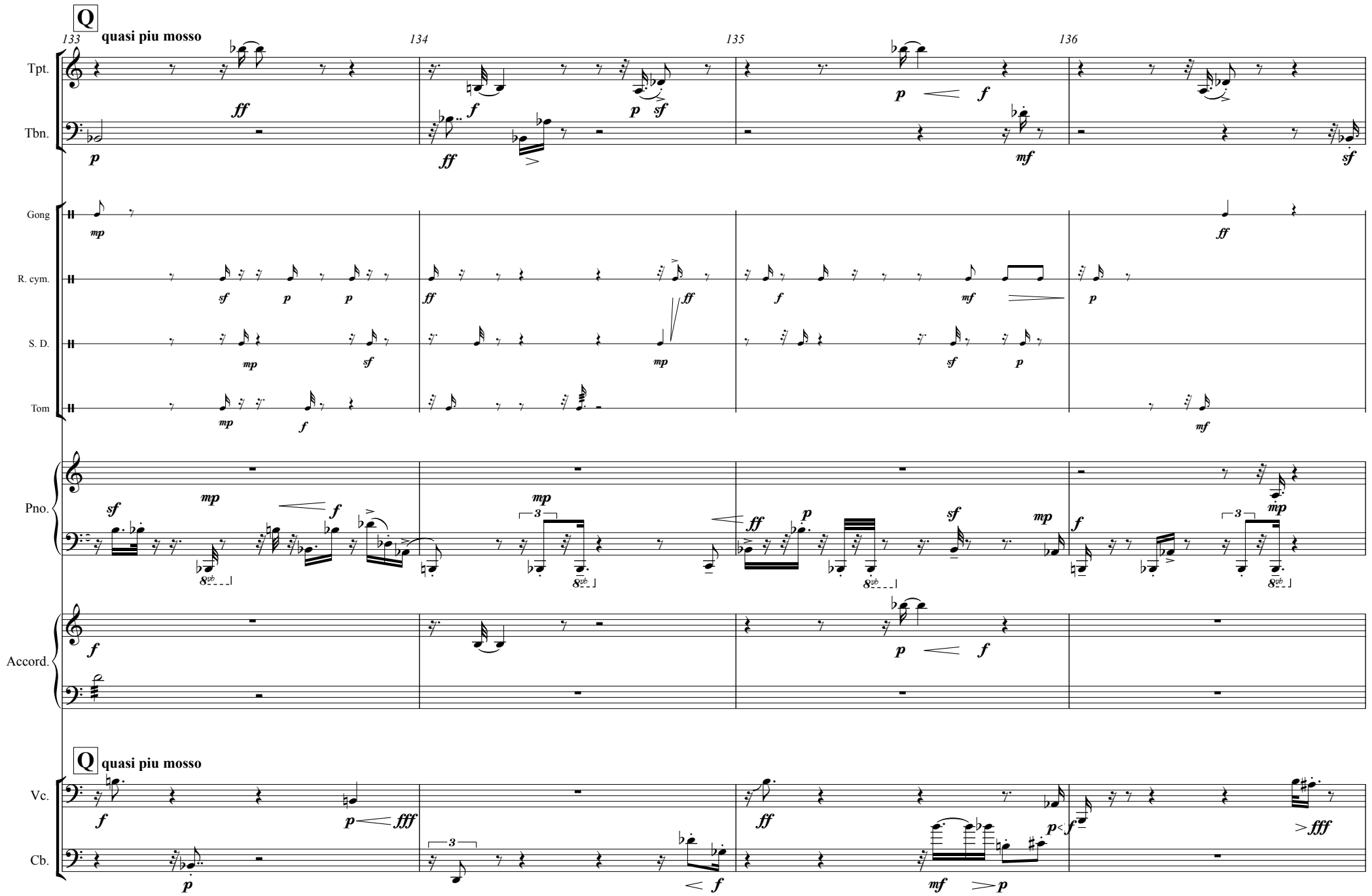

116
117
118
Conductor
Tpt.
Tbn.
Cym.
Tom
Pno.
Accord.
Vc.
Cb.
f
p
mf
ff
mp
sf
f possible
hit the strings,
lowest register
pp
ff possible
mallet, stick
(s.p.)
< ff
deck
sff

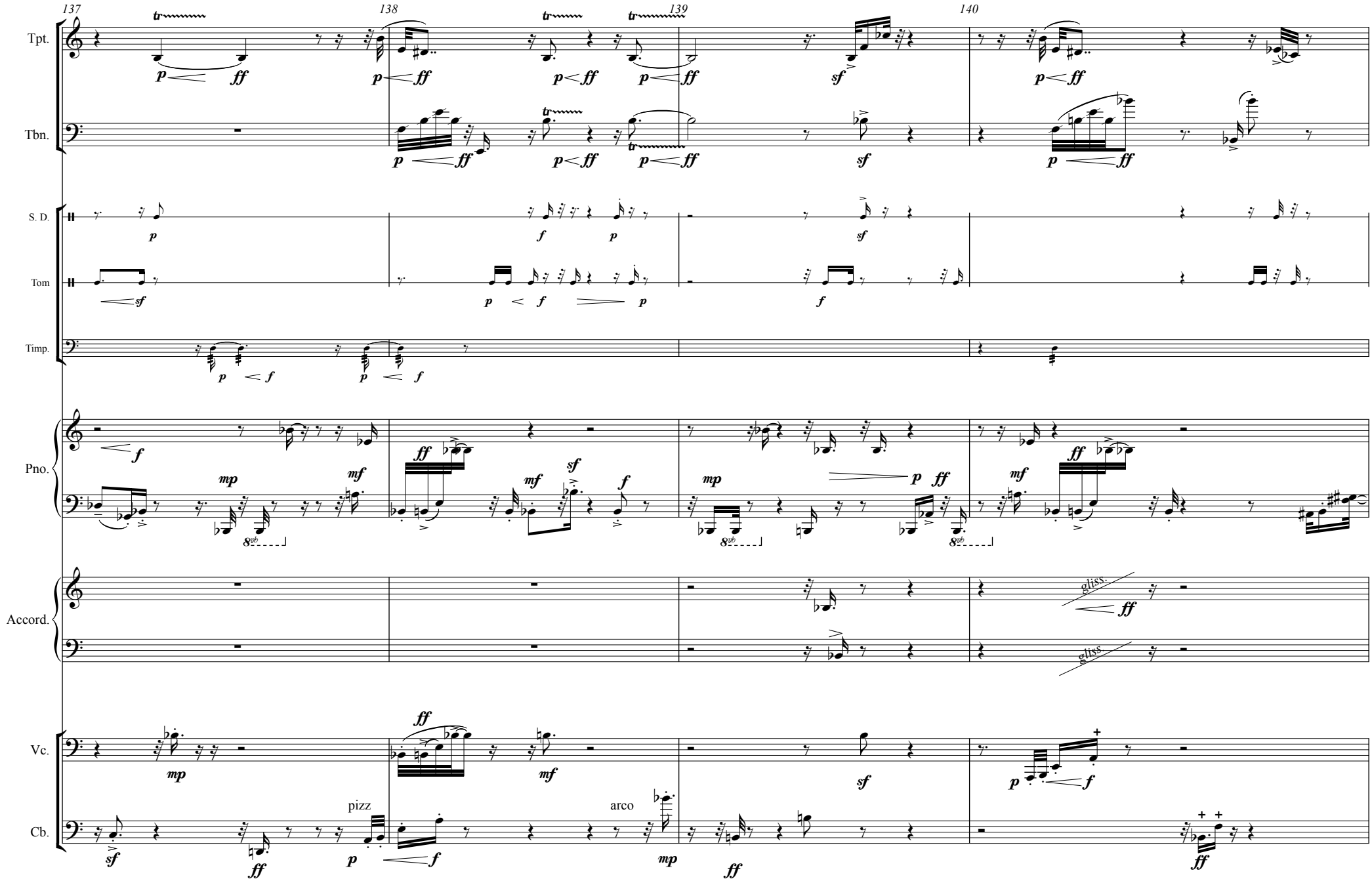

119
120
121
122
Conductor
Tpt.
Tbn.
Cym.
Tom
Pno.
Accord.
Vc.
Cb.
hit crotale
hit crotale
possibble
possibble
take cymbal
mallet
mallet
con ped
sff
mf
ff
mp
pp
ppp
p

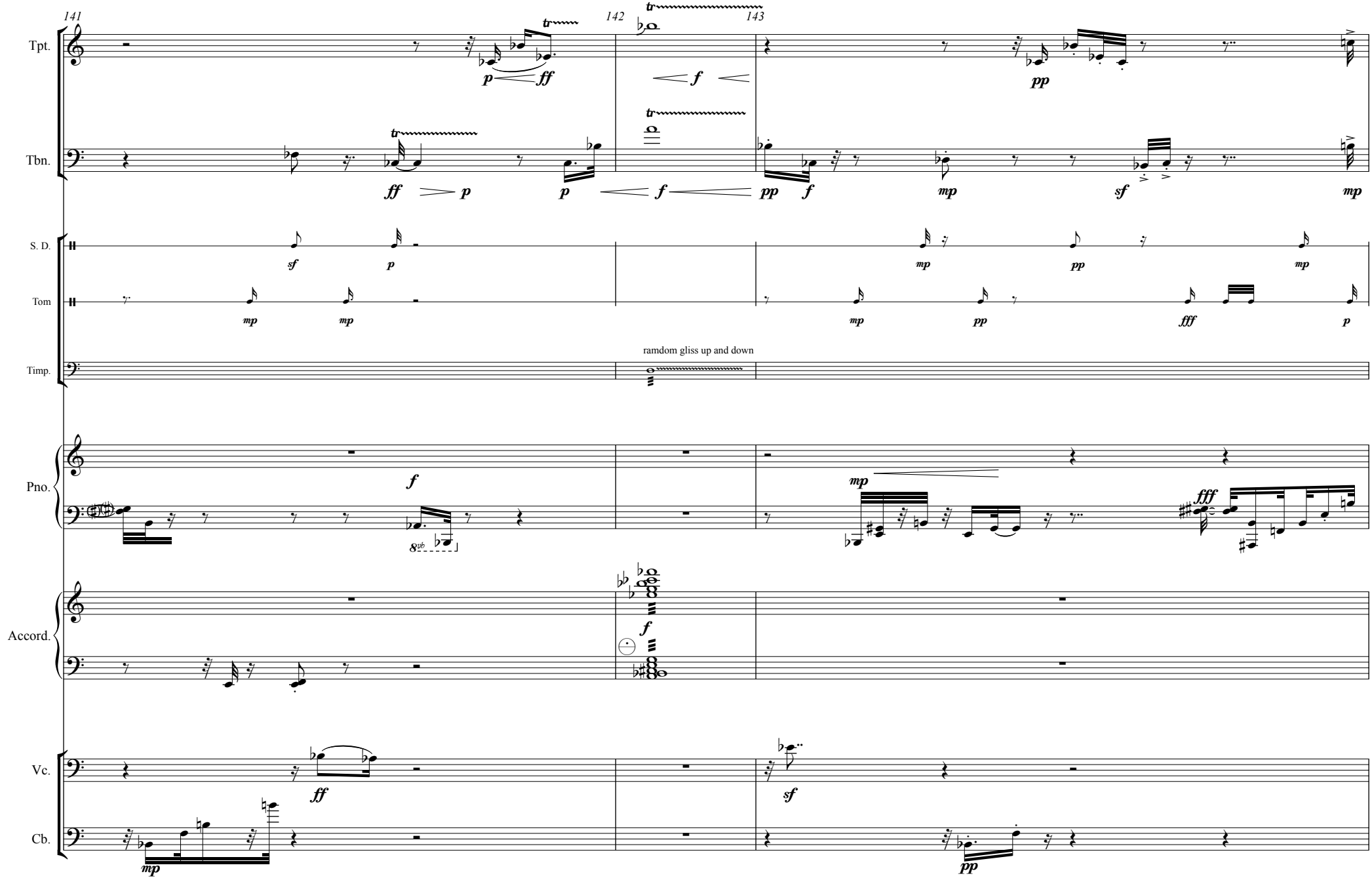

O
123
124
125
Tpt.
Tbn.
unstable
sound-noise
possible
Cym.
Tom
drop cymbal
Pno.
Accord.
O
Vc.
Cb.
drop mallet
drop mallet
arco
arco

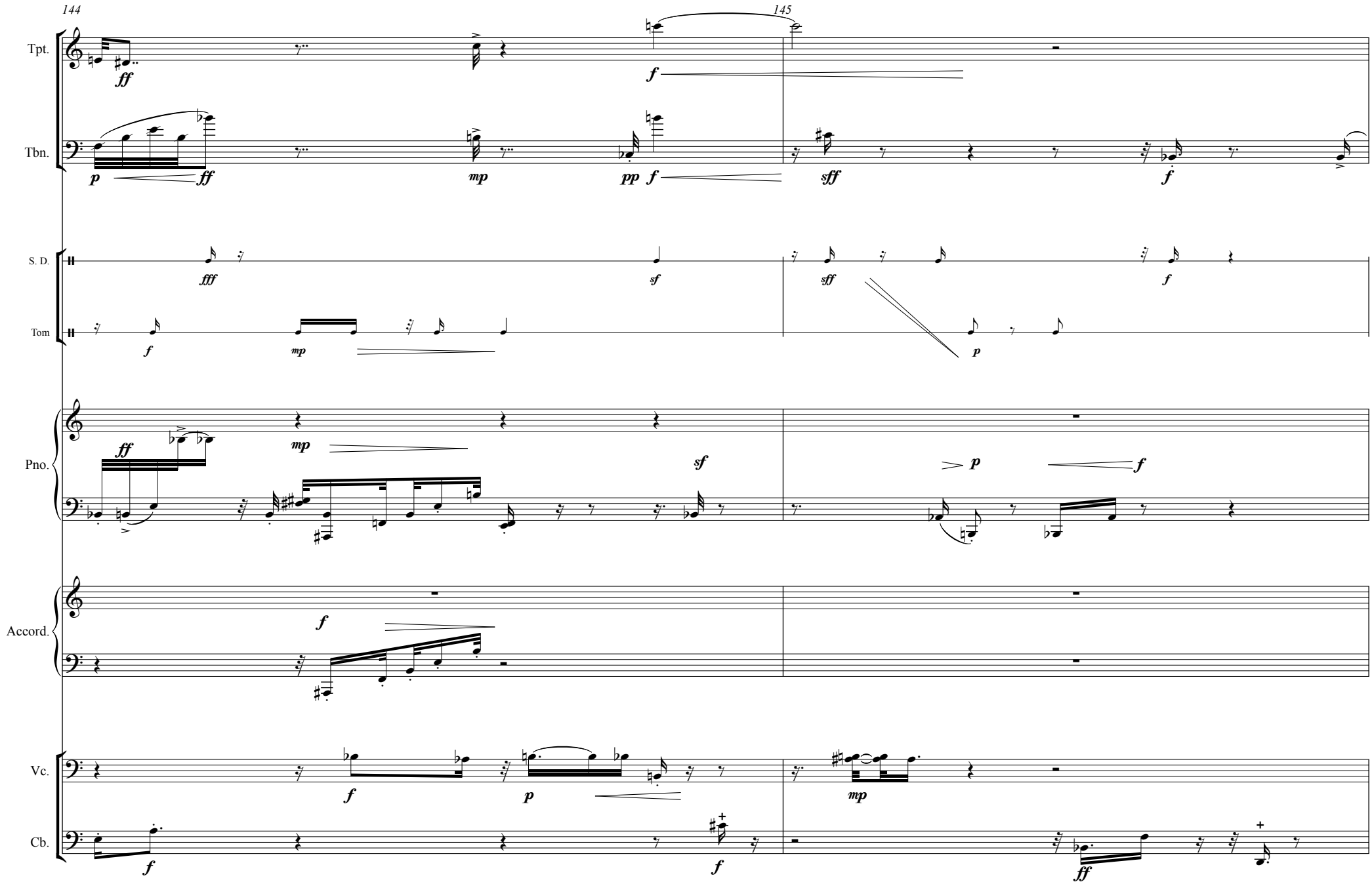

126
127
128
Tpt.
hit crotale
mf
p
Tbn.
hit crotale
mf
ff
mf
Cym.
f
p
ff
Tom
sff
sf
Pno.
sff
mp
p
ff
pp
sf
mp
Ped.
Ped.
8vb
Accord.
mp
Vc.
pp
sff
ff
mp
Cb.
tap
p
fff
sff
mp
ff
p

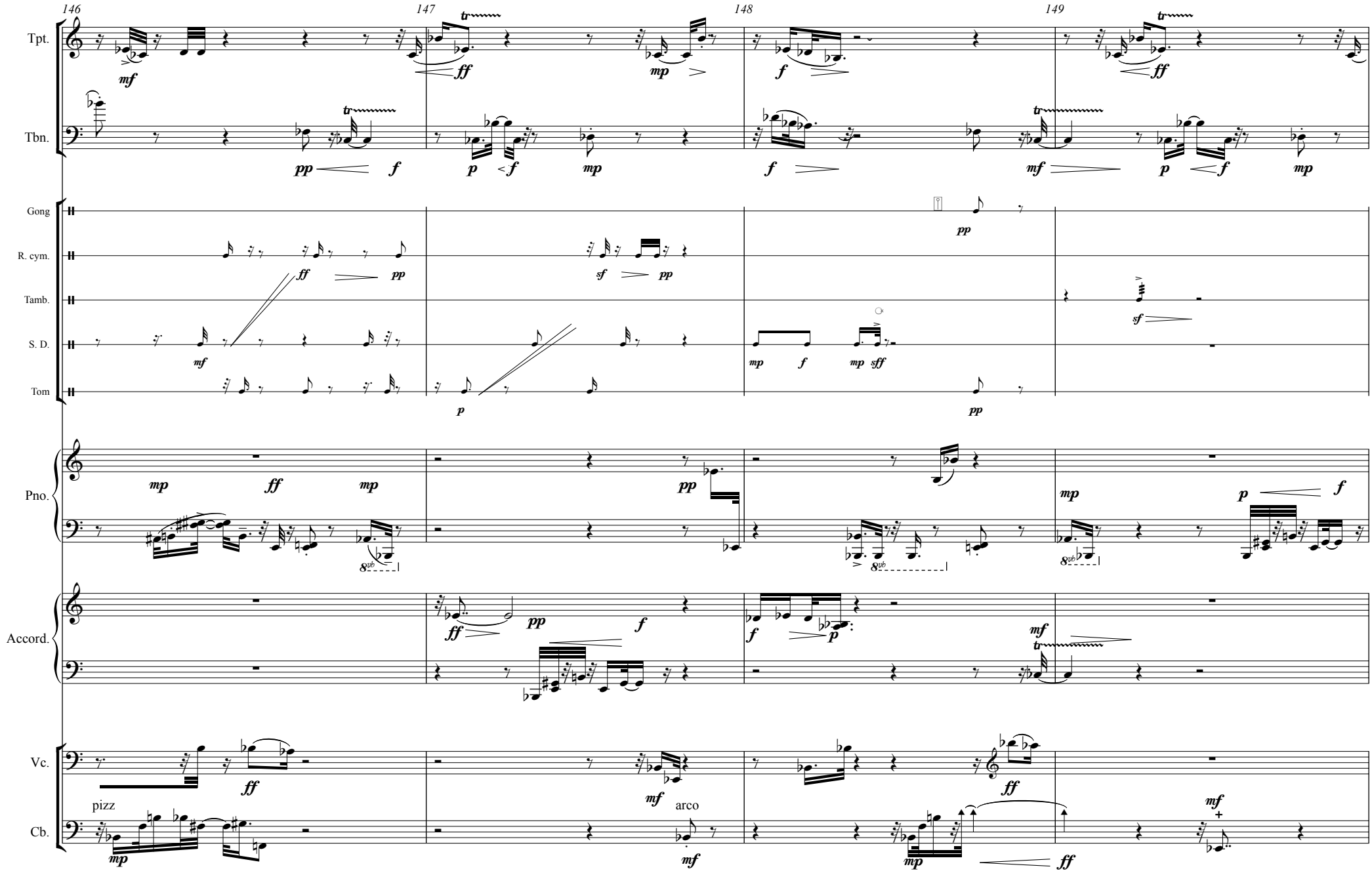

P
129
130
131
132
quasi ritenuto
Tpt.
Tbn.
R. cym.
bell
normal
Tom
Timp.
gliss up and down
hit cymbal, gliss with timp
Pno.
take the cymbal away!
con ped ad lib
Accord.
ff possible
P
quasi ritenuto
Vc.
Cb.
s.p.

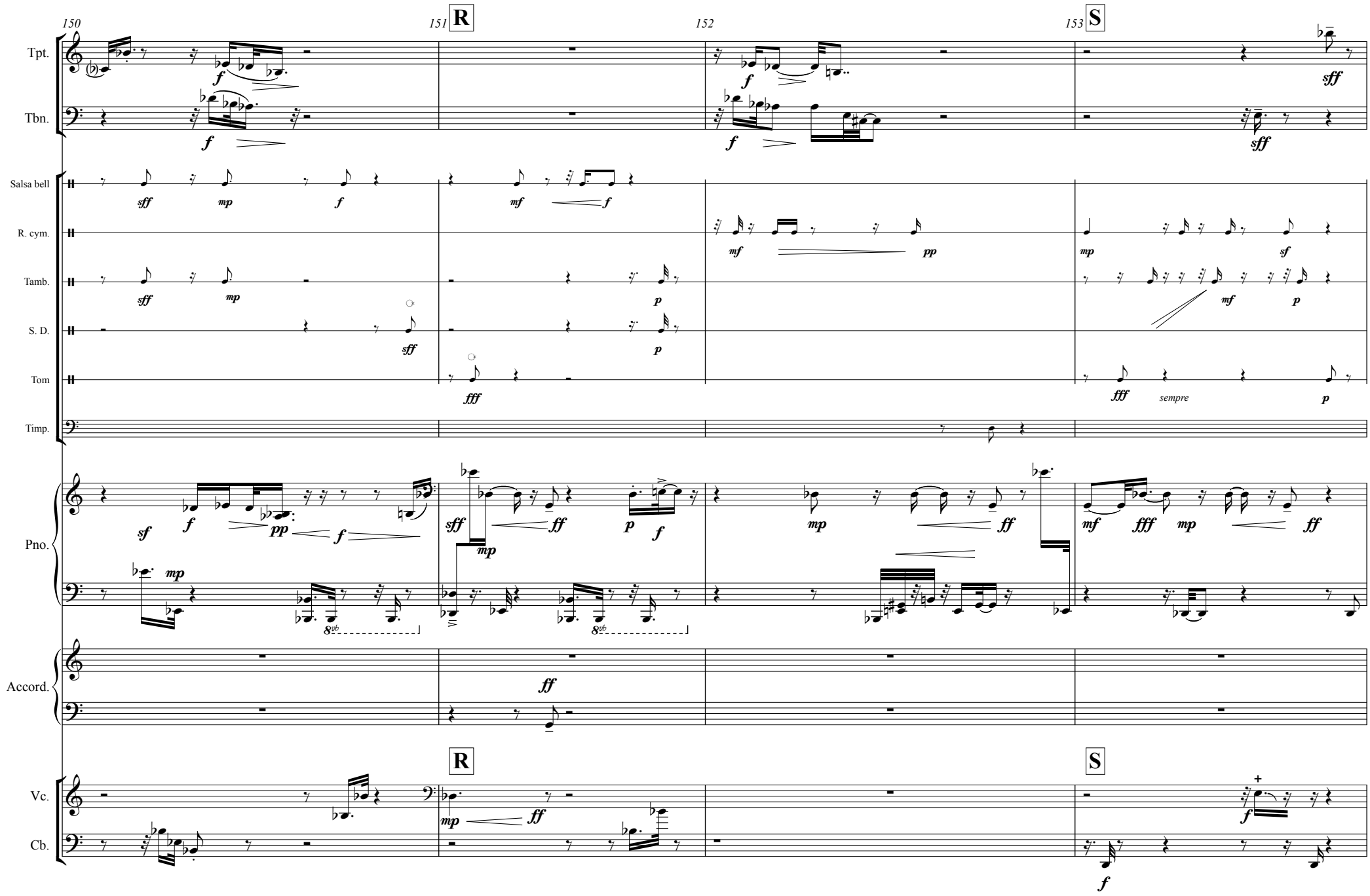

Q
quasi piu mosso
133
134
135
136
Tpt.
Tbn.
Gong
R. cym.
S. D.
Tom
Pno.
Accord.
Q
quasi piu mosso
Vc.
Cb.

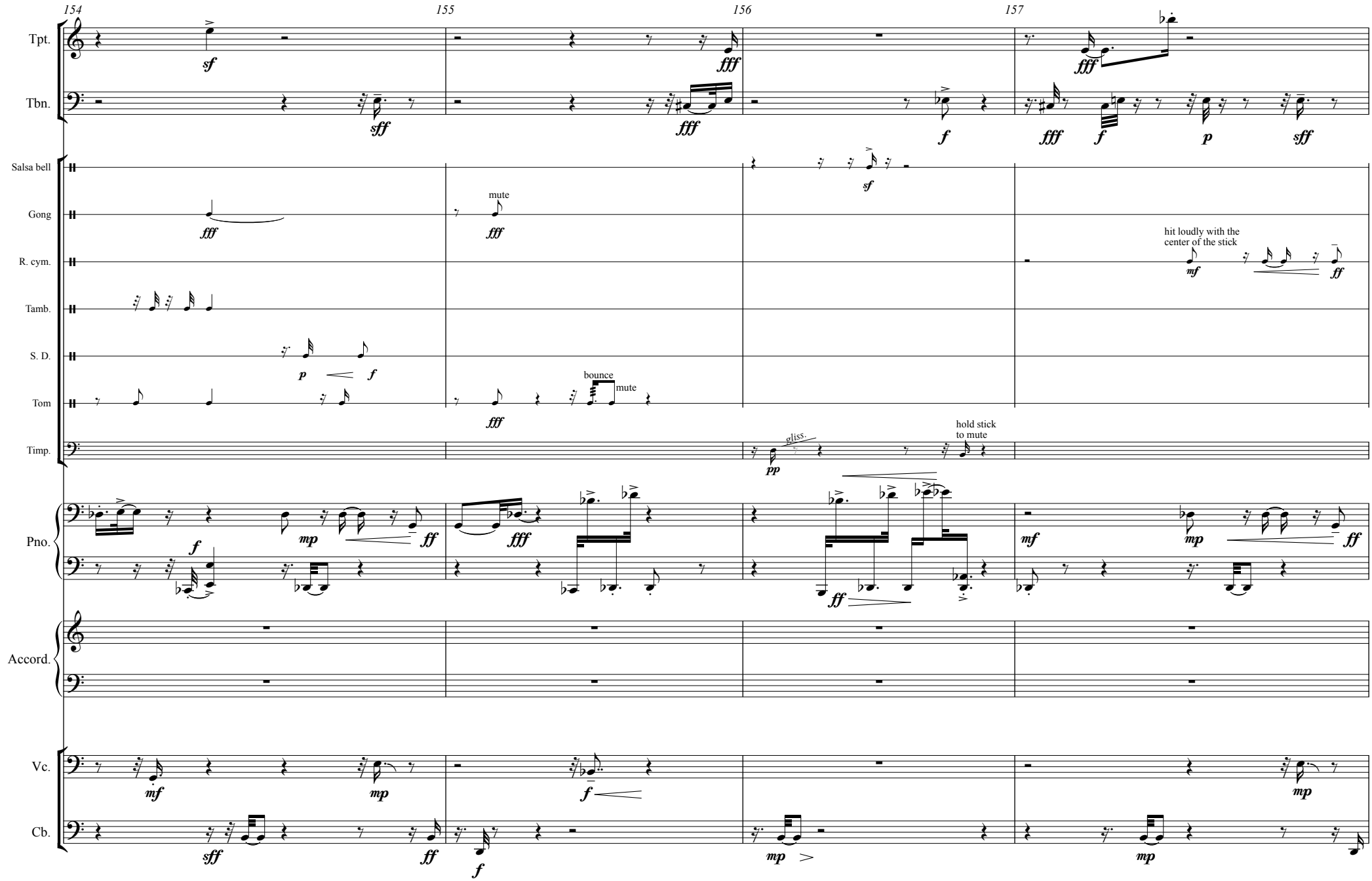

137
138
139
140
Tpt.
Tbn.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
pizz
arco
gliss.
gliss.

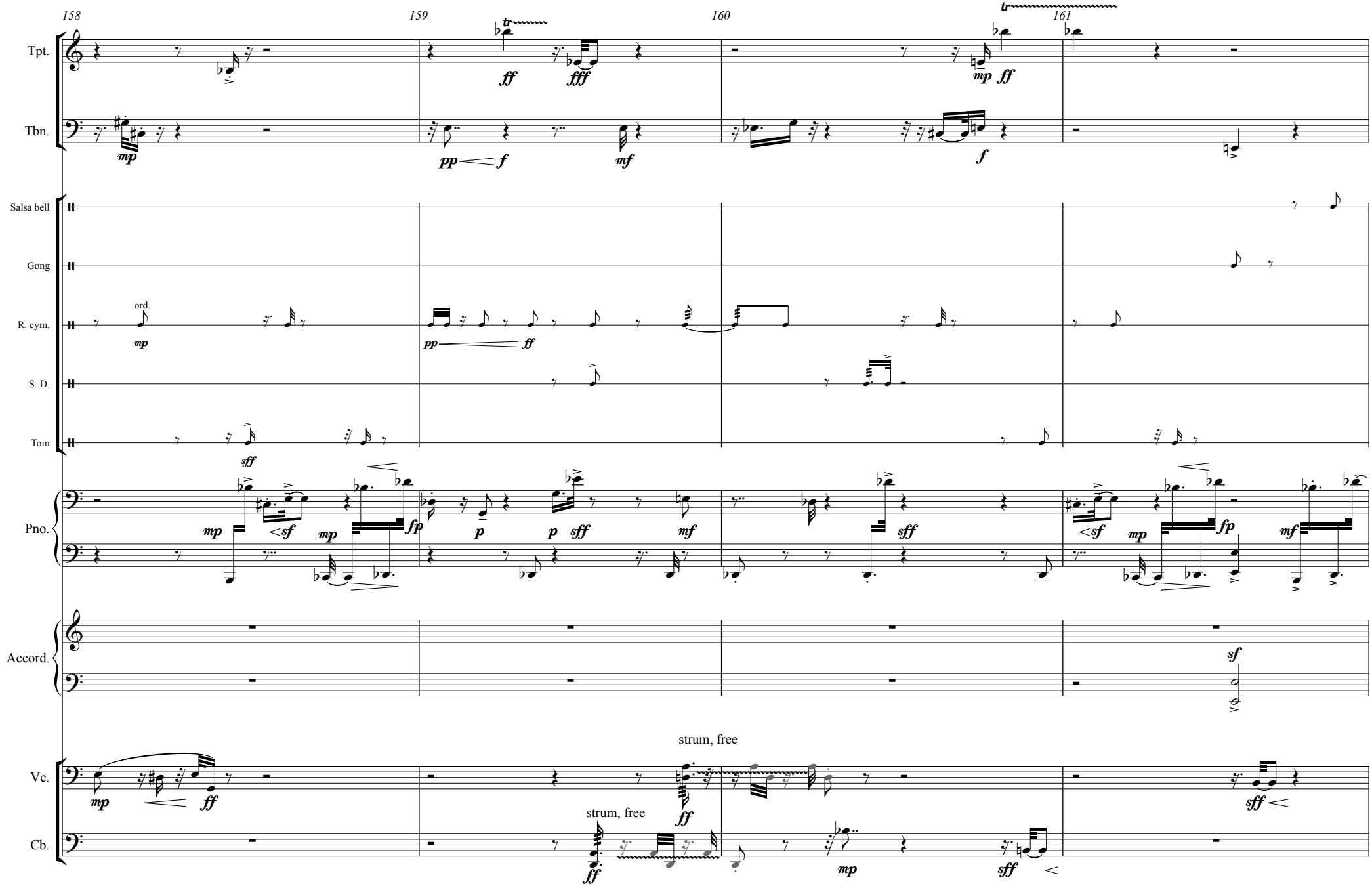

141
142
143
Tpt.
Tbn.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
ramdom gliss up and down

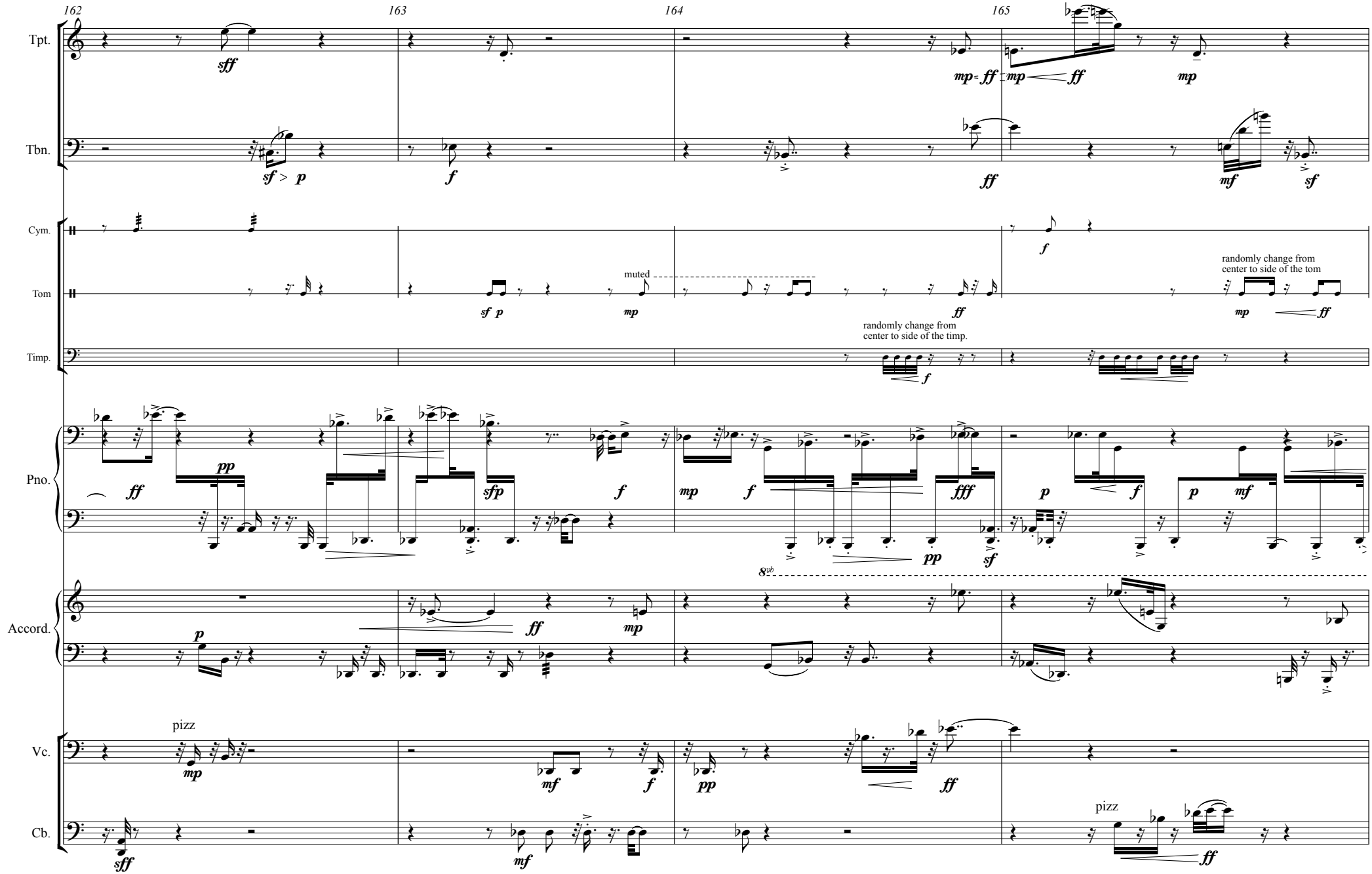

144
145
Tpt.
Tbn.
S. D.
Tom
Pno.
Accord.
Vc.
Cb.

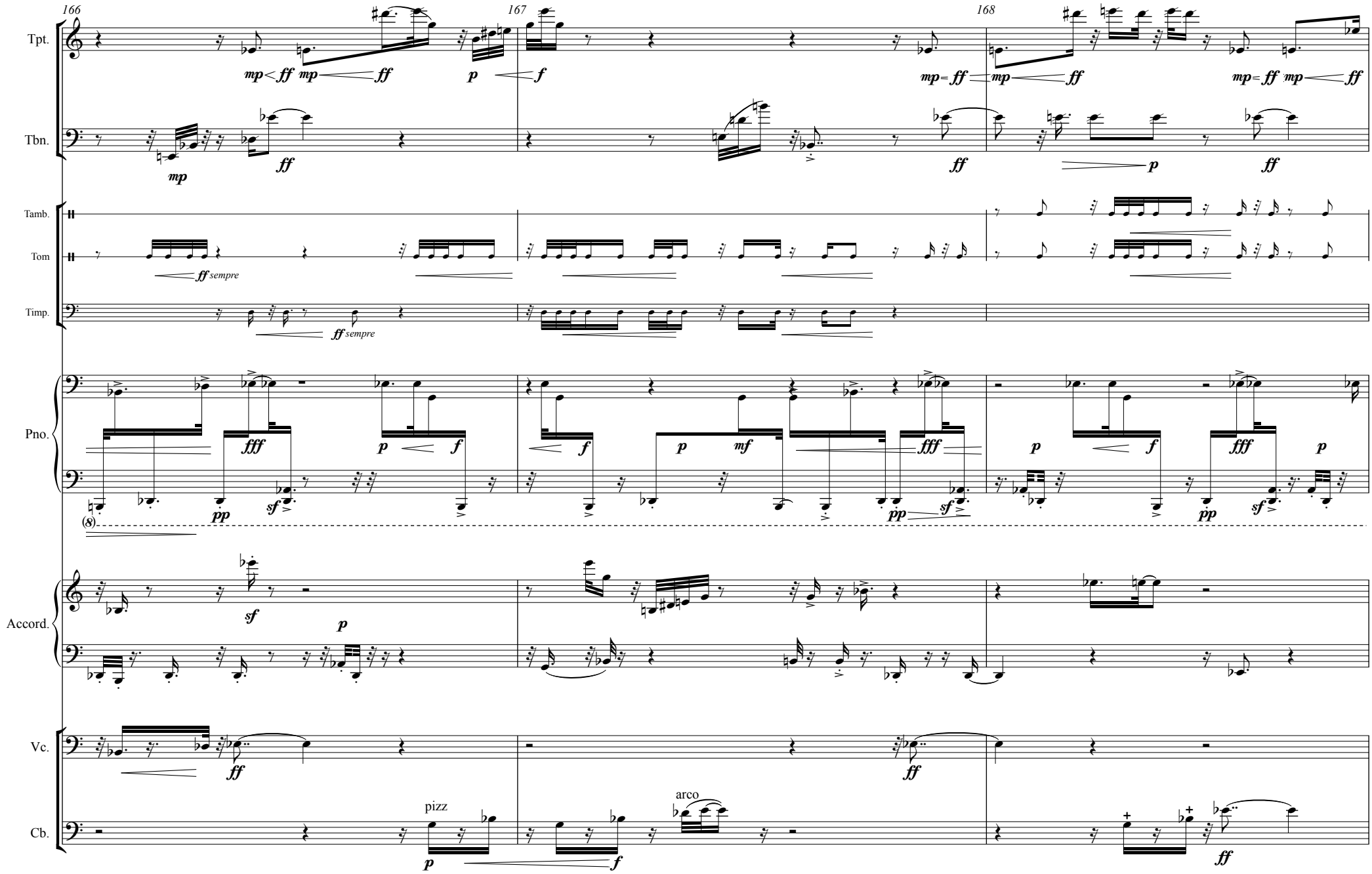

146
147
148
149
Tpt.
Tbn.
Gong
R. cym.
Tamb.
S. D.
Tom
Pno.
Accord.
Vc.
Cb.
pizz
arco

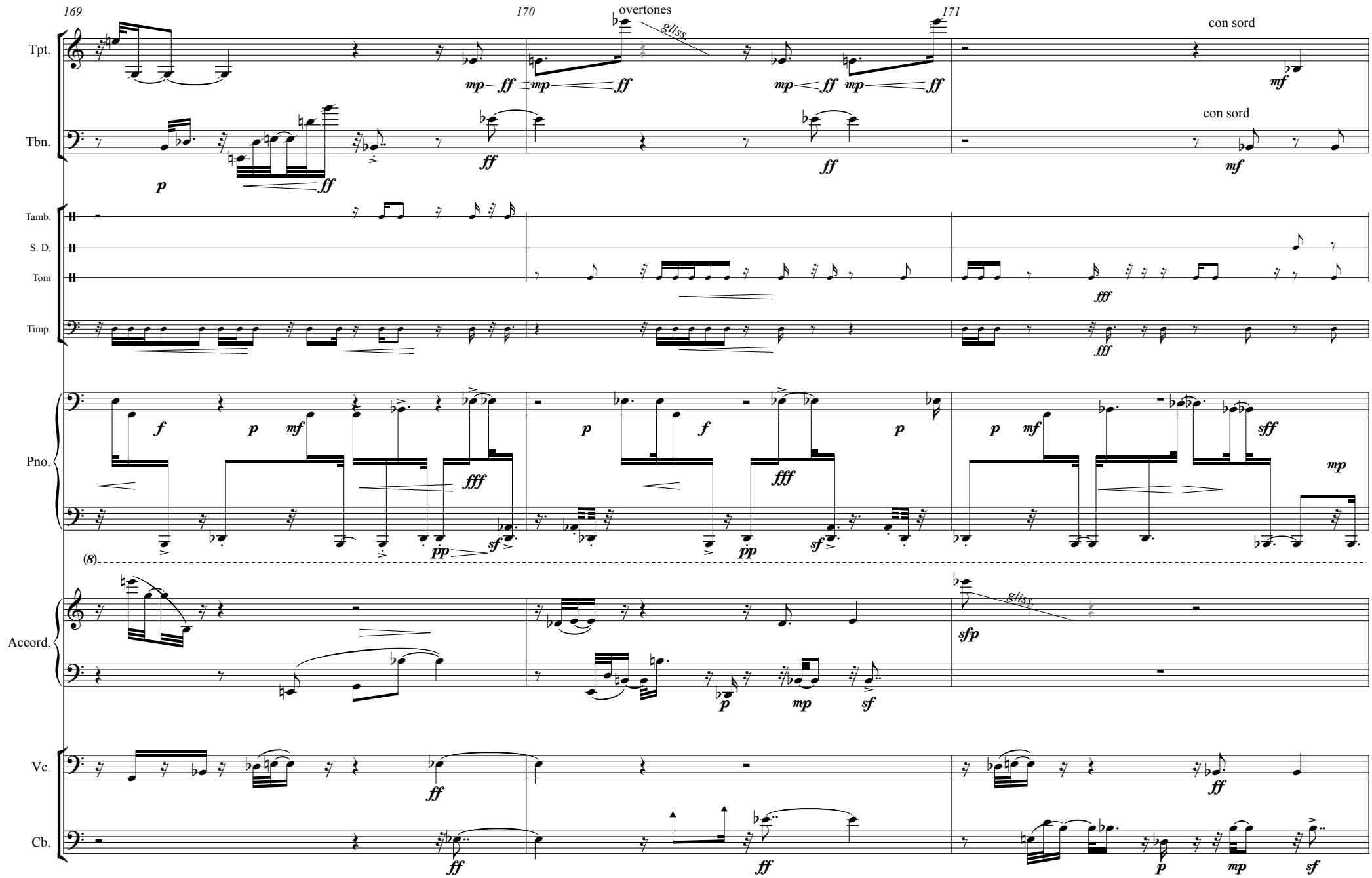

150
151
R
152
153
S
Tpt.
Tbn.
Salsa bell
R. cym.
Tamb.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
sempre

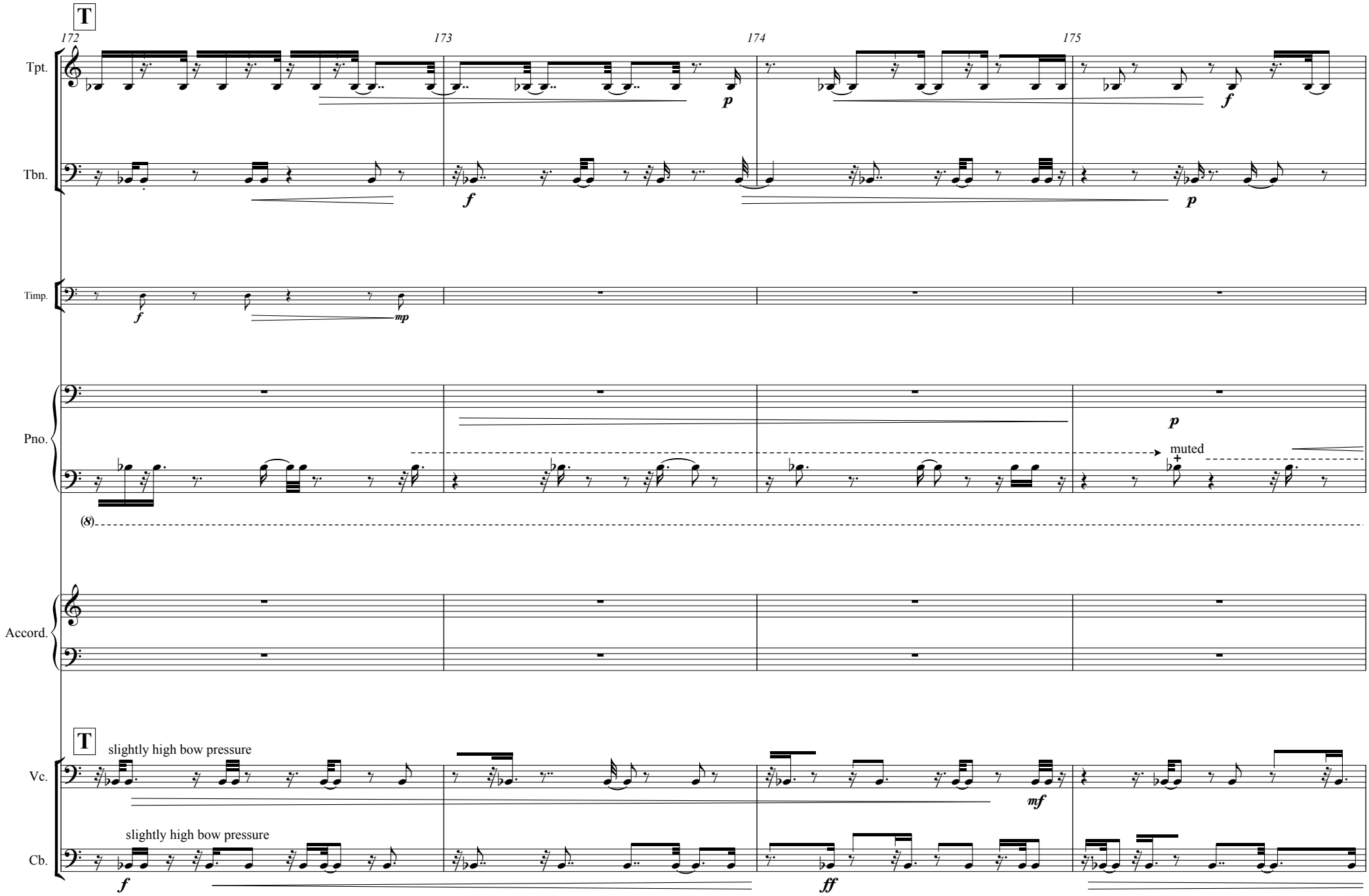

154
155
156
157
Tpt.
Tbn.
Salsa bell
Gong
R. cym.
Tamb.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
mute
bounce
mute
hit loudly with the center of the stick
gliss.
hold stick to mute

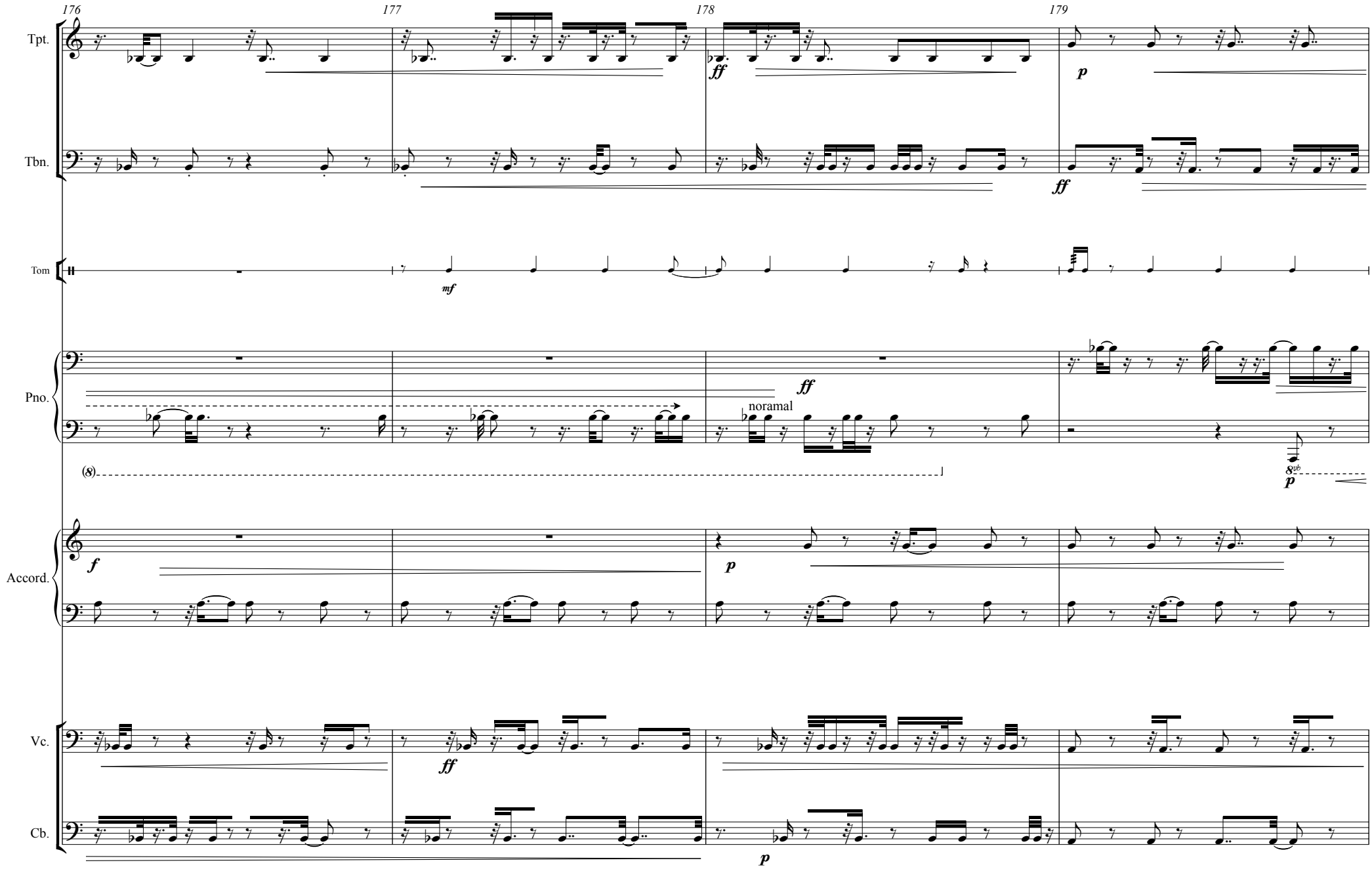

158
159
160
161
Tpt.
Tbn.
Salsa bell
Gong
R. cym.
ord.
S. D.
Tom
Pno.
Accord.
Vc.
Cb.
strum, free
strum, free

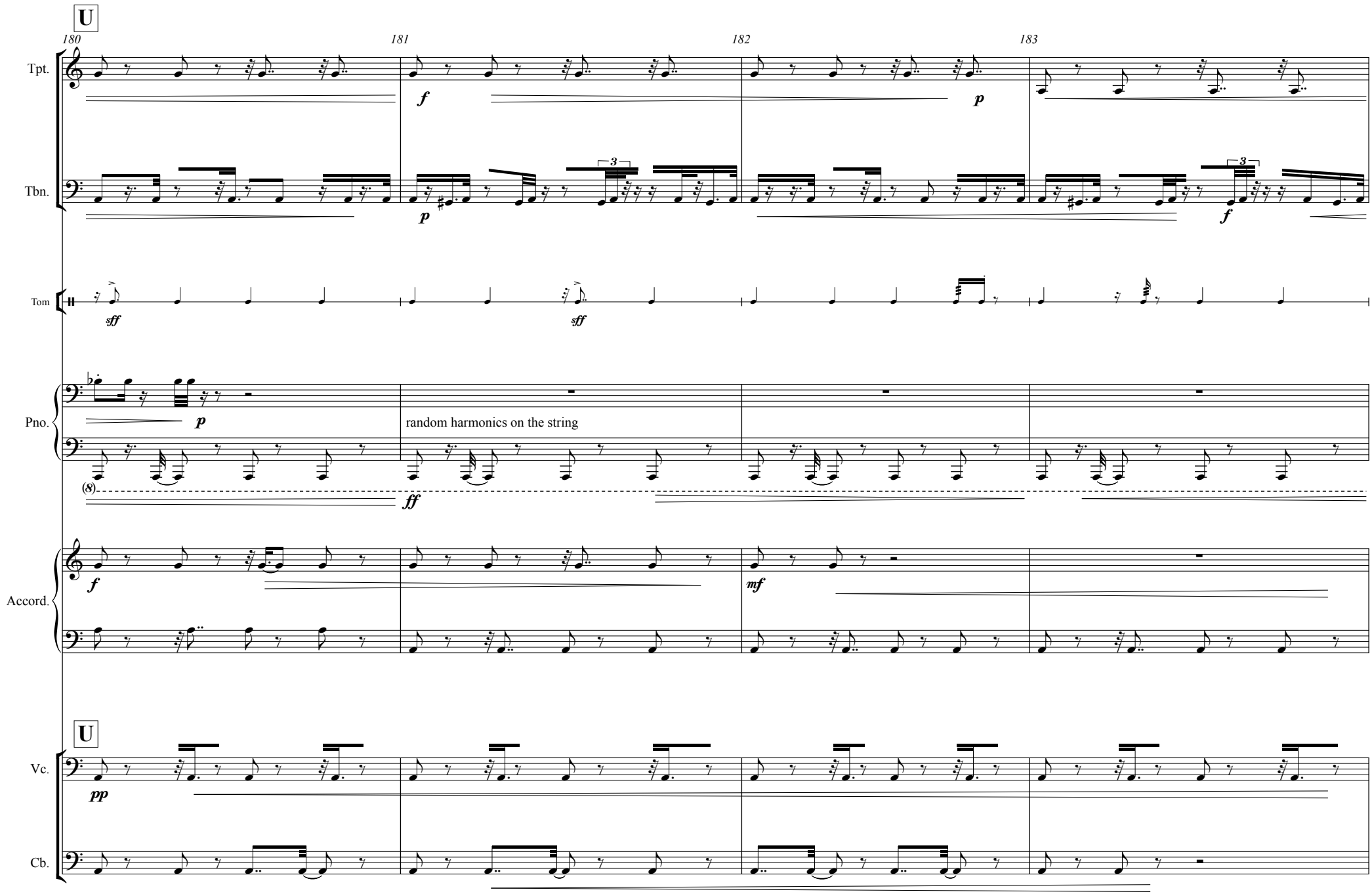

162
163
164
165
Tpt.
Tbn.
Cym.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
muted
randomly change from center to side of the tom
randomly change from center to side of the timp.
pizz
pizz
8vb

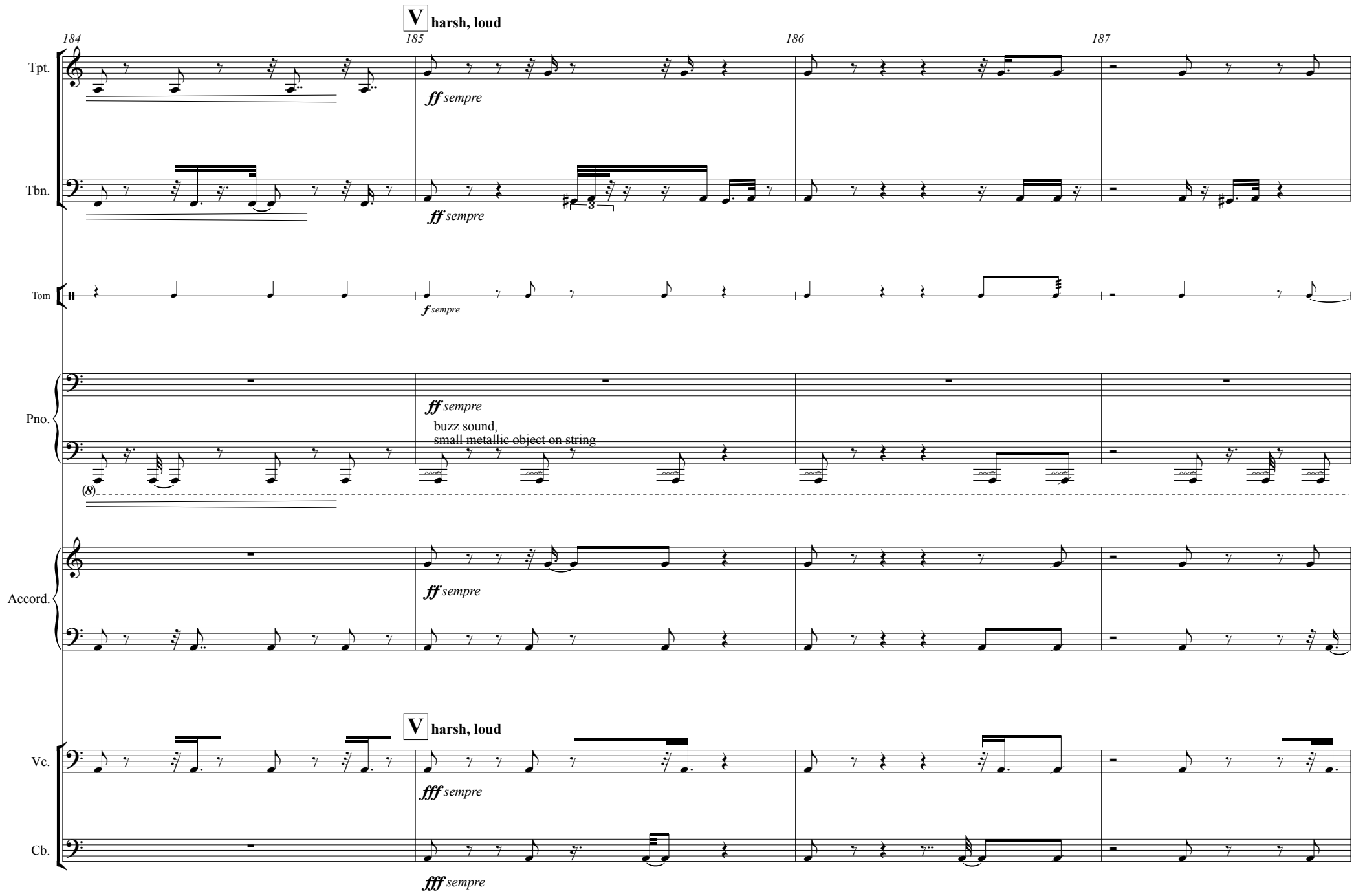

166
167
168
Tpt.
Tbn.
Tamb.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
mp ff mp ff
p f
mp= ff mp ff
mp= ff mp ff
mp
ff
ff
p
ff
ff sempre
ff sempre
fff
p f
f
p mf
fff
p f
fff
p
pp
sf
pp
sf
pp
sf
(8)
sf
p
ff
ff
pizz
arco
p
f
ff

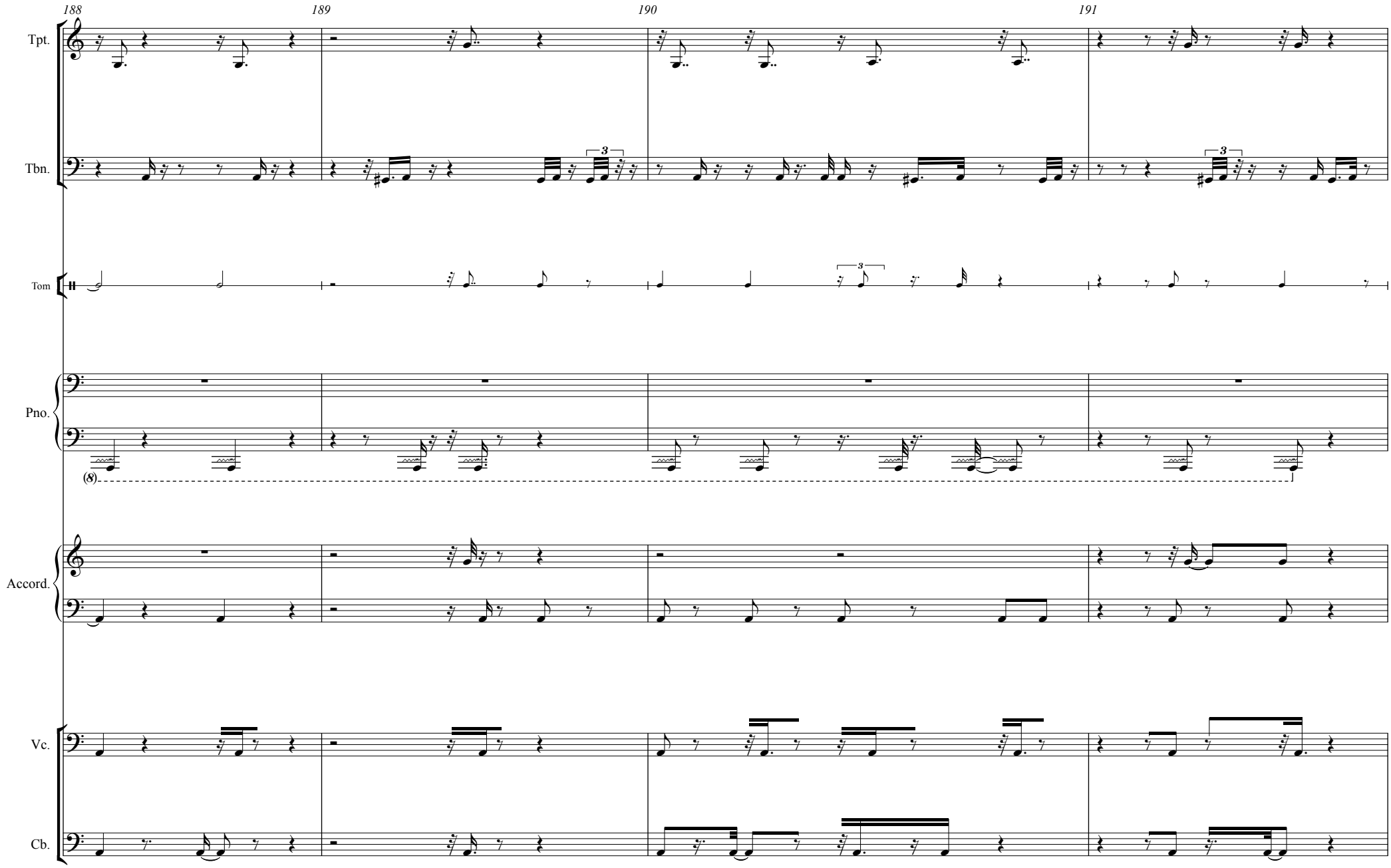

169
170
171
overtones
gliss.
con sord
con sord
Tpt.
Tbn.
Tamb.
S. D.
Tom
Timp.
Pno.
Accord.
Vc.
Cb.
(8)

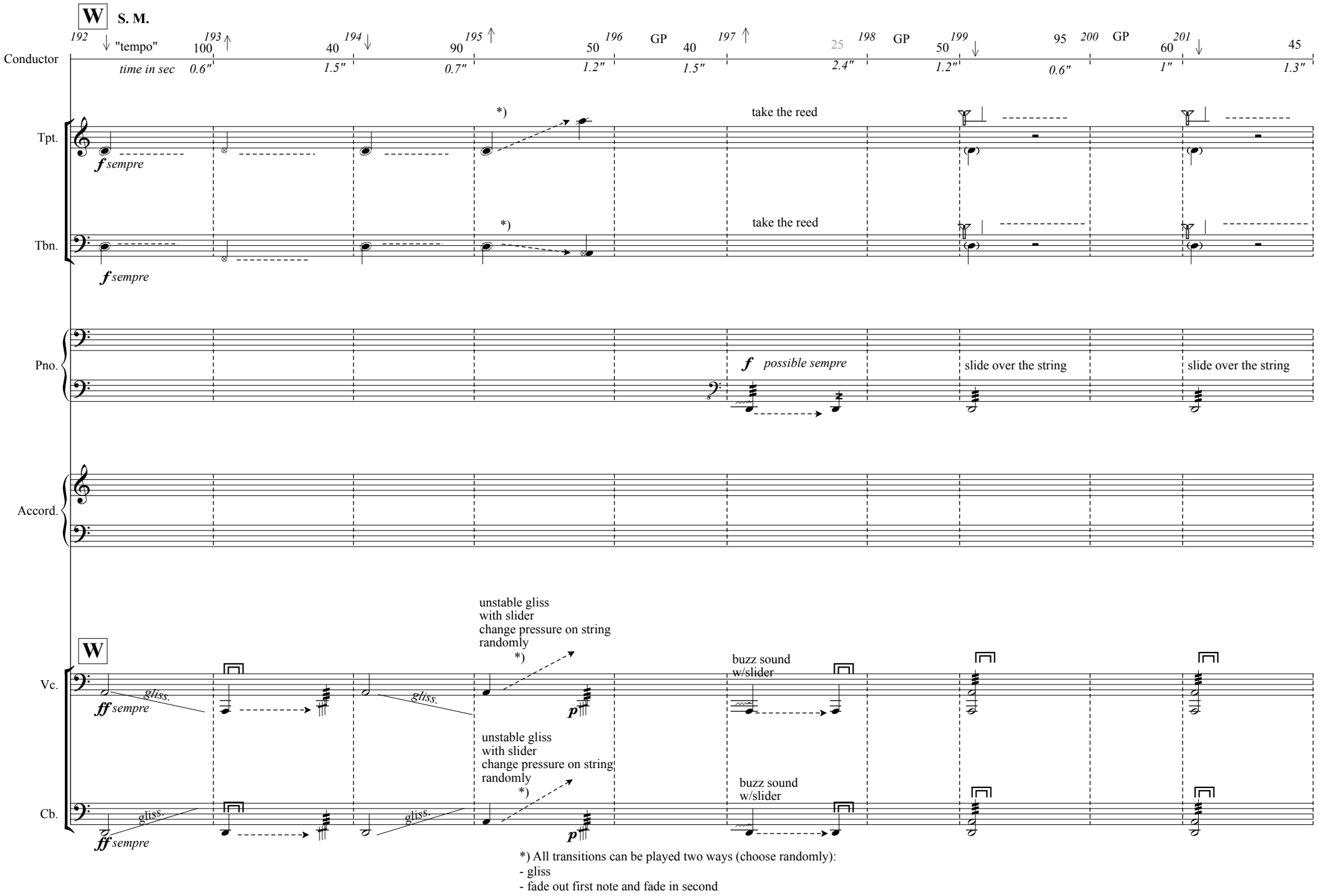

T
172
173
174
175
Tpt.
Tbn.
Timp.
Pno.
Accord.
Vc.
Cb.
p
f
mp
muted
mf
ff
slightly high bow pressure
slightly high bow pressure

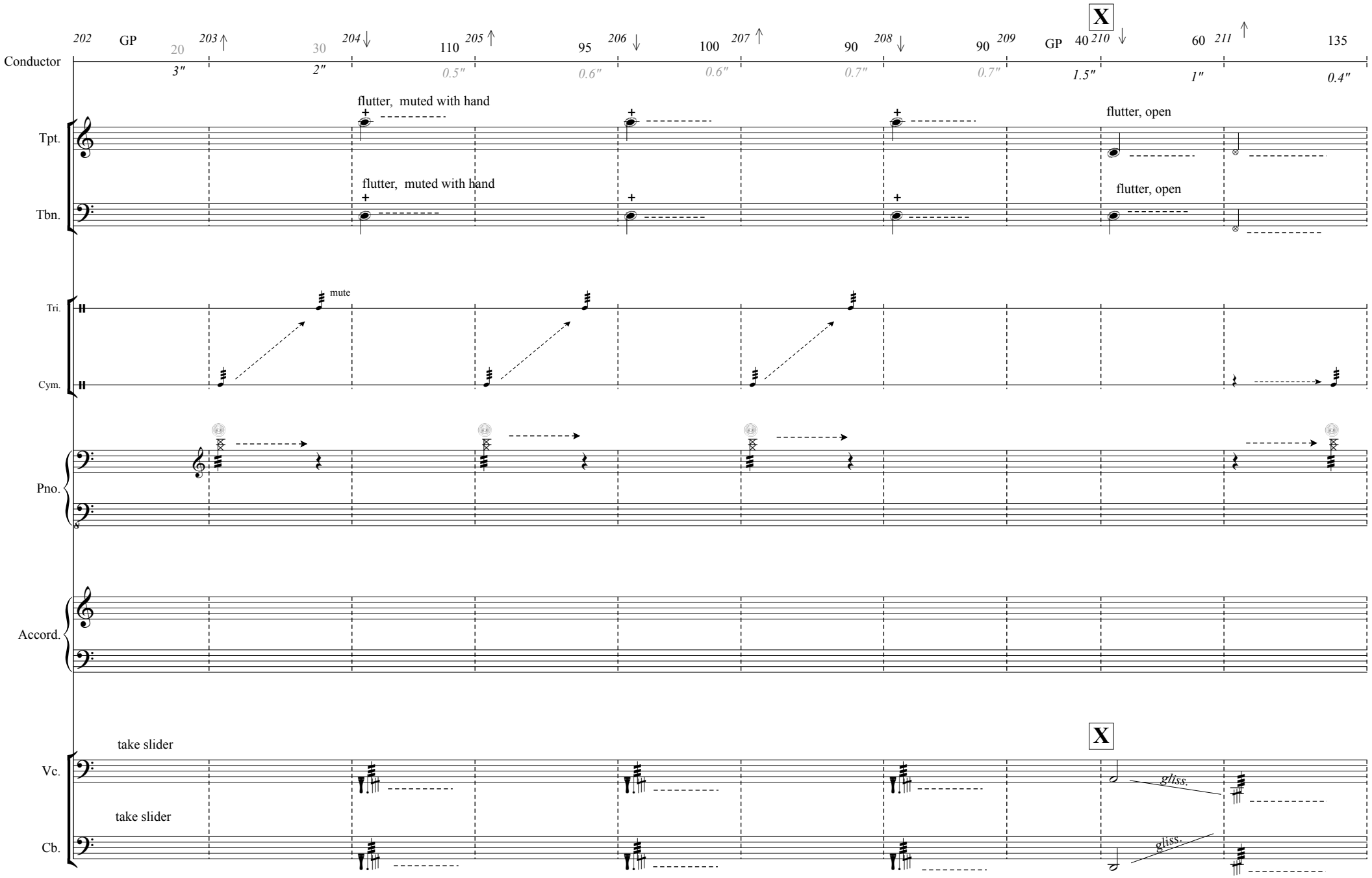

176
177
178
179
Tpt.
Tbn.
Tom
Pno.
Accord.
Vc.
Cb.
ff
p
mf
noramal
(8)
8vb

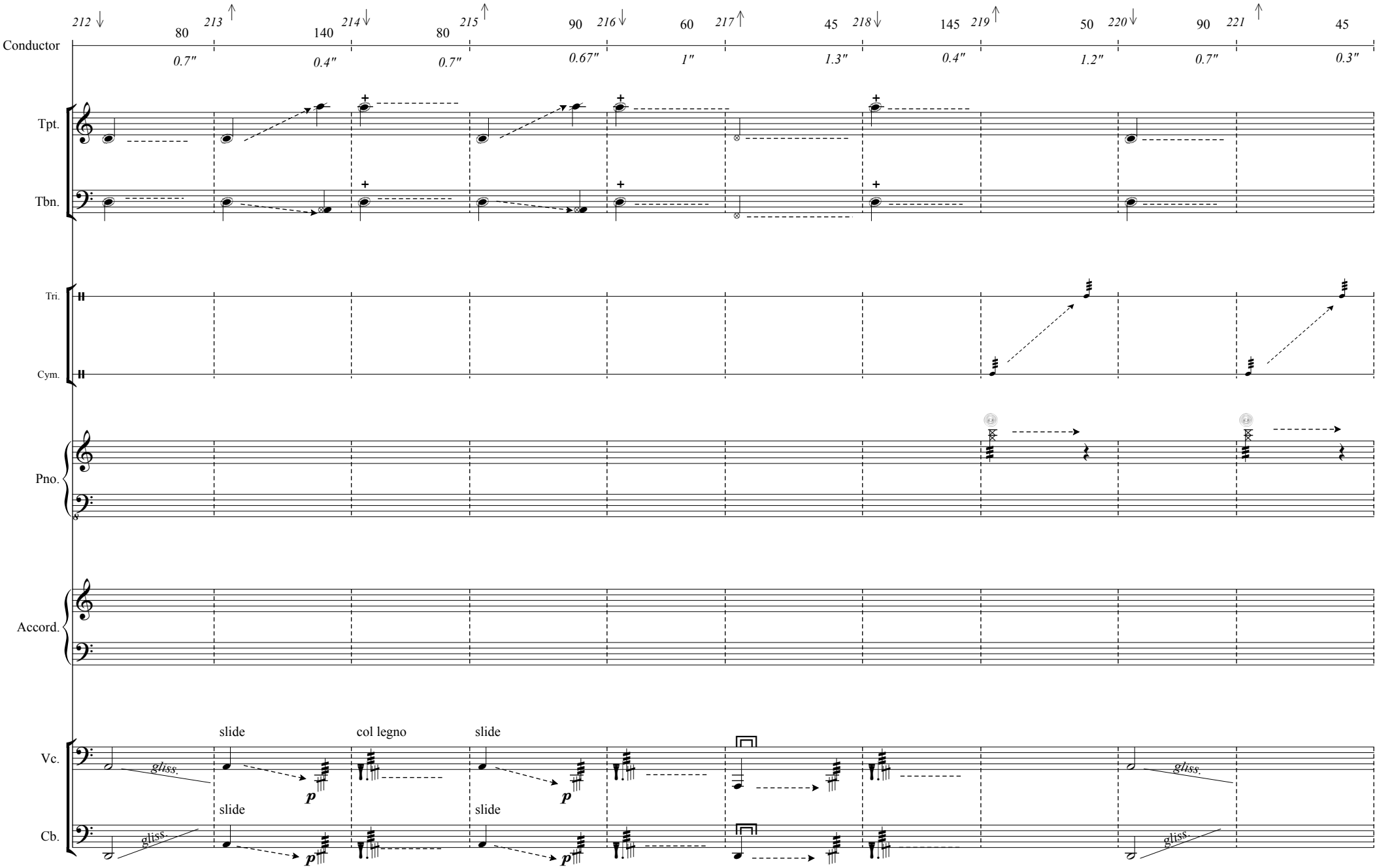

U
180
181
182
183
Tpt.
f
p
Tbn.
3
p
3
f
Tom
sff
sff
Pno.
p
random harmonics on the string
(8)
ff
Accord.
f
mf
U
Vc.
pp
Cb.

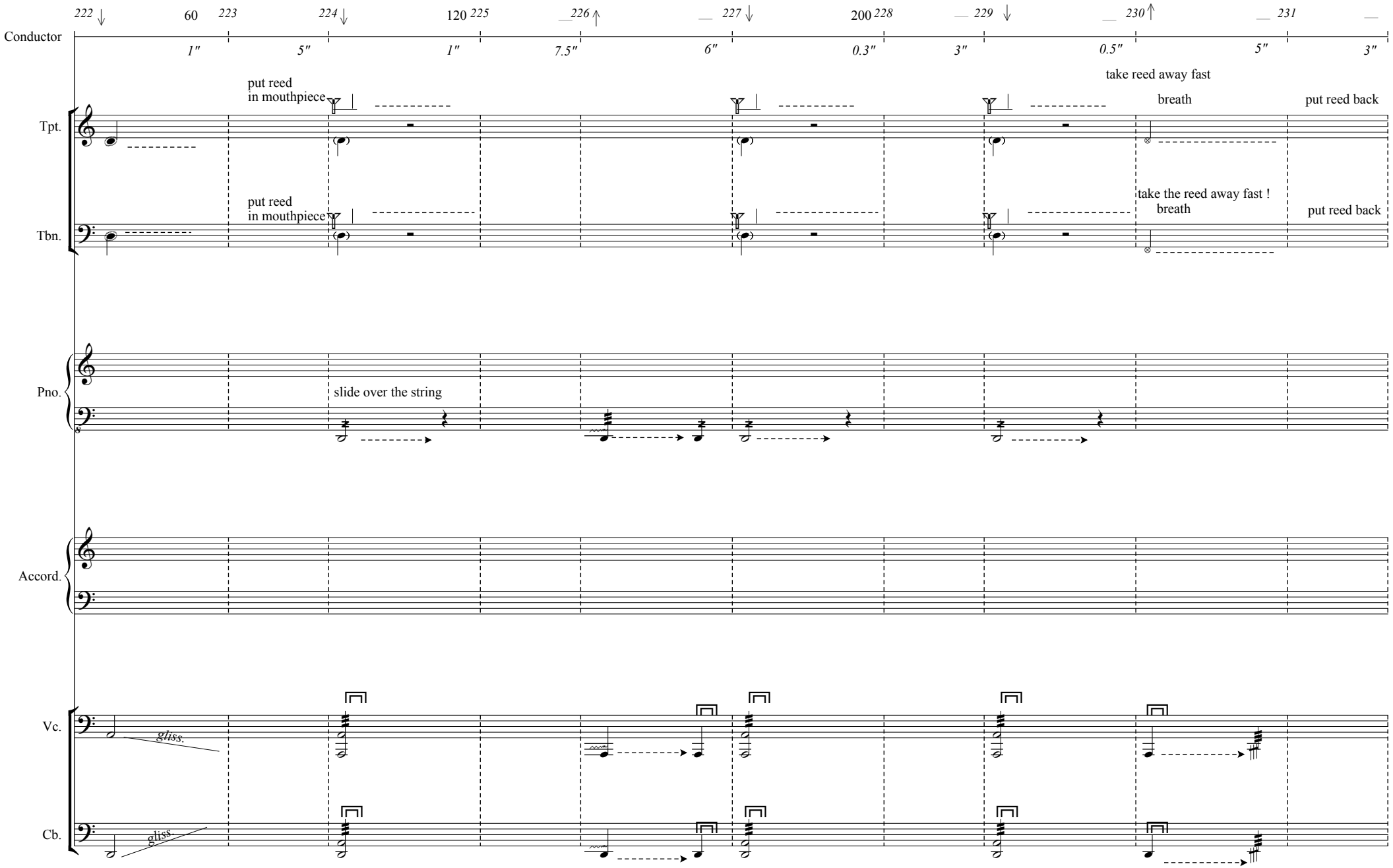

V harsh, loud
184
185
186
187
Tpt.
ff sempre
Tbn.
ff sempre
Tom
f sempre
Pno.
ff sempre
buzz sound,
small metallic object on string
Accord.
ff sempre
V harsh, loud
Vc.
fff sempre
Cb.
fff sempre

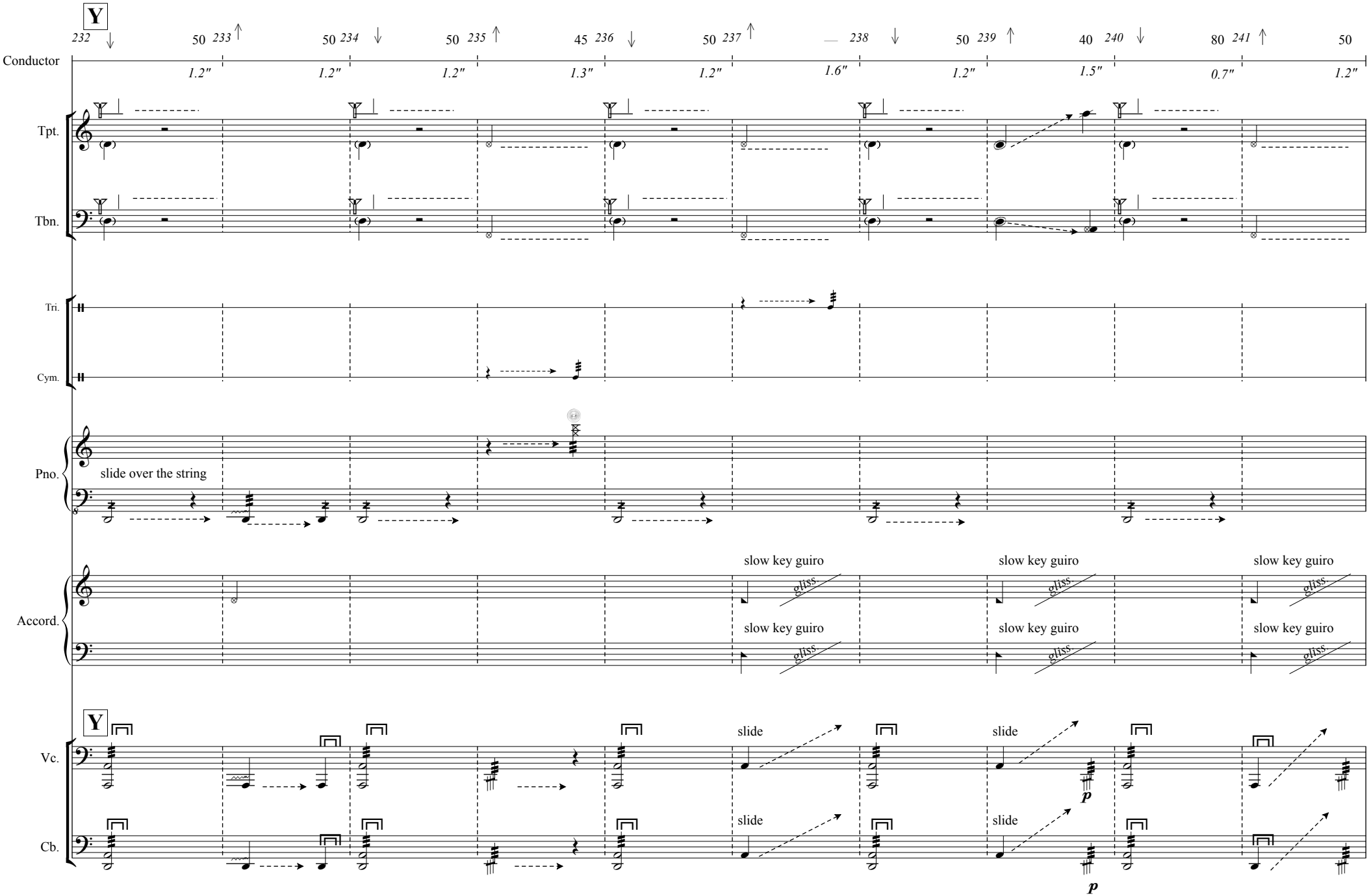

188
189
190
191
Tpt.
Tbn.
Tom
Pno.
(8)
Accord.
Vc.
Cb.

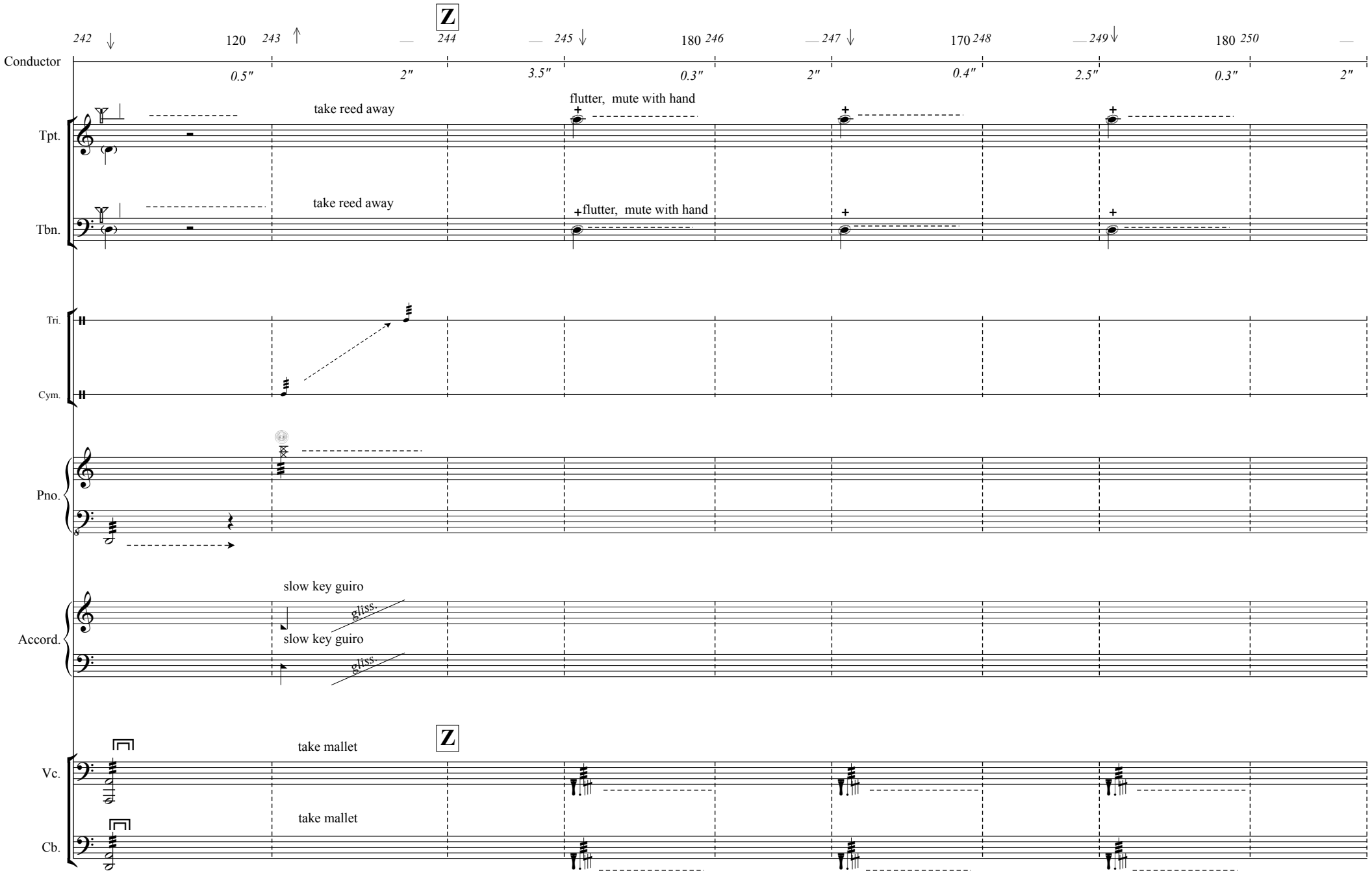

W
S. M.
192
"tempo"
193
194
195
196
GP
197
198
GP
199
200
GP
201
Conductor
time in sec
100
0.6″
40
1.5″
90
0.7″
50
1.2″
40
1.5″
25
2.4″
50
1.2″
95
0.6″
60
1″
45
1.3″
Tpt.
f sempre
*)
take the reed
Tbn.
f sempre
*)
take the reed
Pno.
f possible sempre
slide over the string
slide over the string
Accord.
W
Vc.
ff sempre
gliss.
gliss.
unstable gliss
with slider
change pressure on string
randomly
*)
p
buzz sound
w/slider
Cb.
ff sempre
gliss.
gliss.
unstable gliss
with slider
change pressure on string
randomly
*)
p
buzz sound
w/slider
*) All transitions can be played two ways (choose randomly):
- gliss
- fade out first note and fade in second

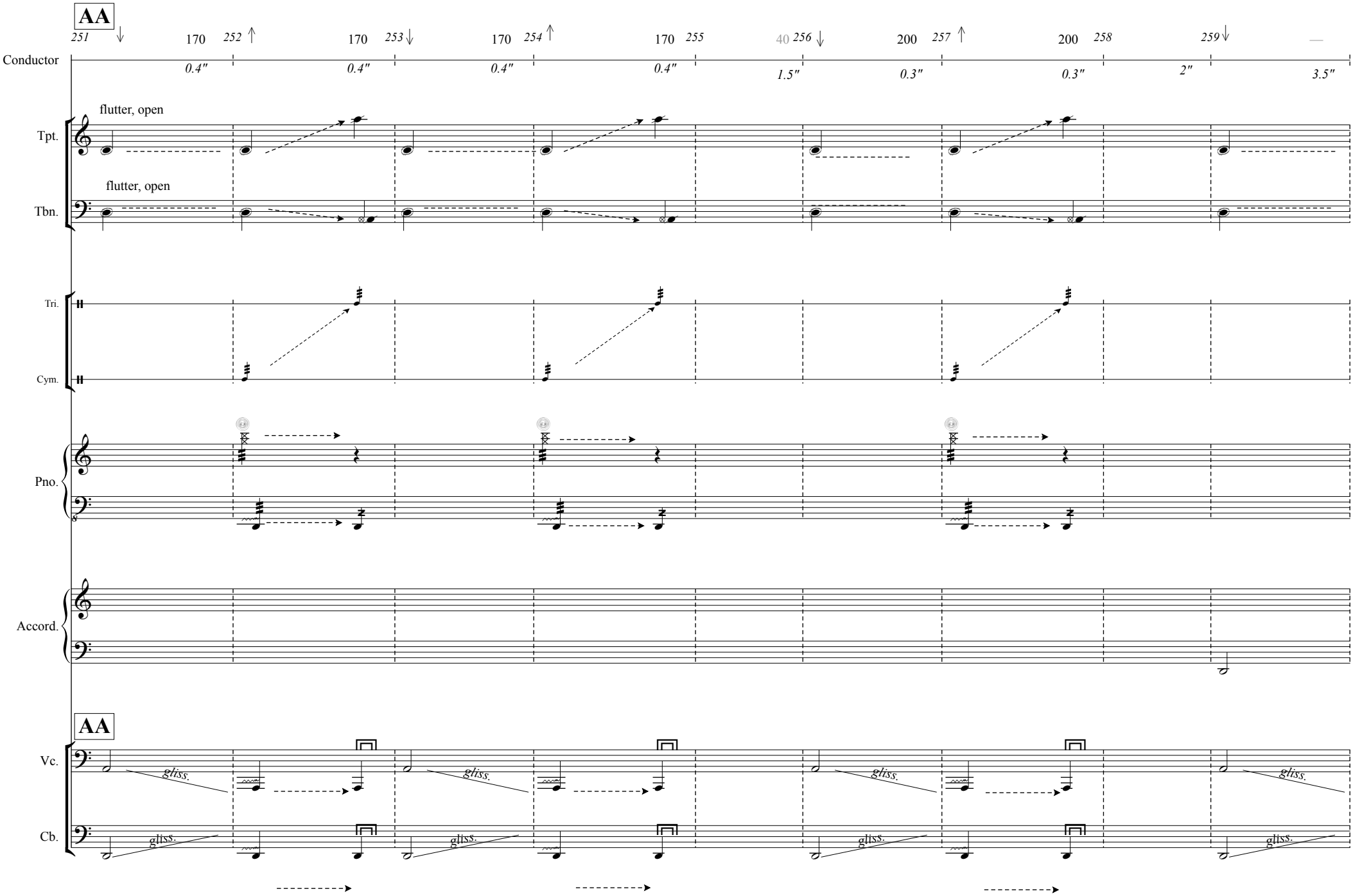

202
GP
20
3"
203
30
2"
204
110
0.5"
205
95
0.6"
206
100
0.6"
207
90
0.7"
208
90
0.7"
209
GP
40
1.5"
X
210
60
1"
211
135
0.4"
Conductor
Tpt.
Tbn.
flutter, muted with hand
flutter, muted with hand
flutter, open
flutter, open
Tri.
Cym.
mute
Pno.
Accord.
Vc.
Cb.
take slider
take slider
X
gliss.
gliss.

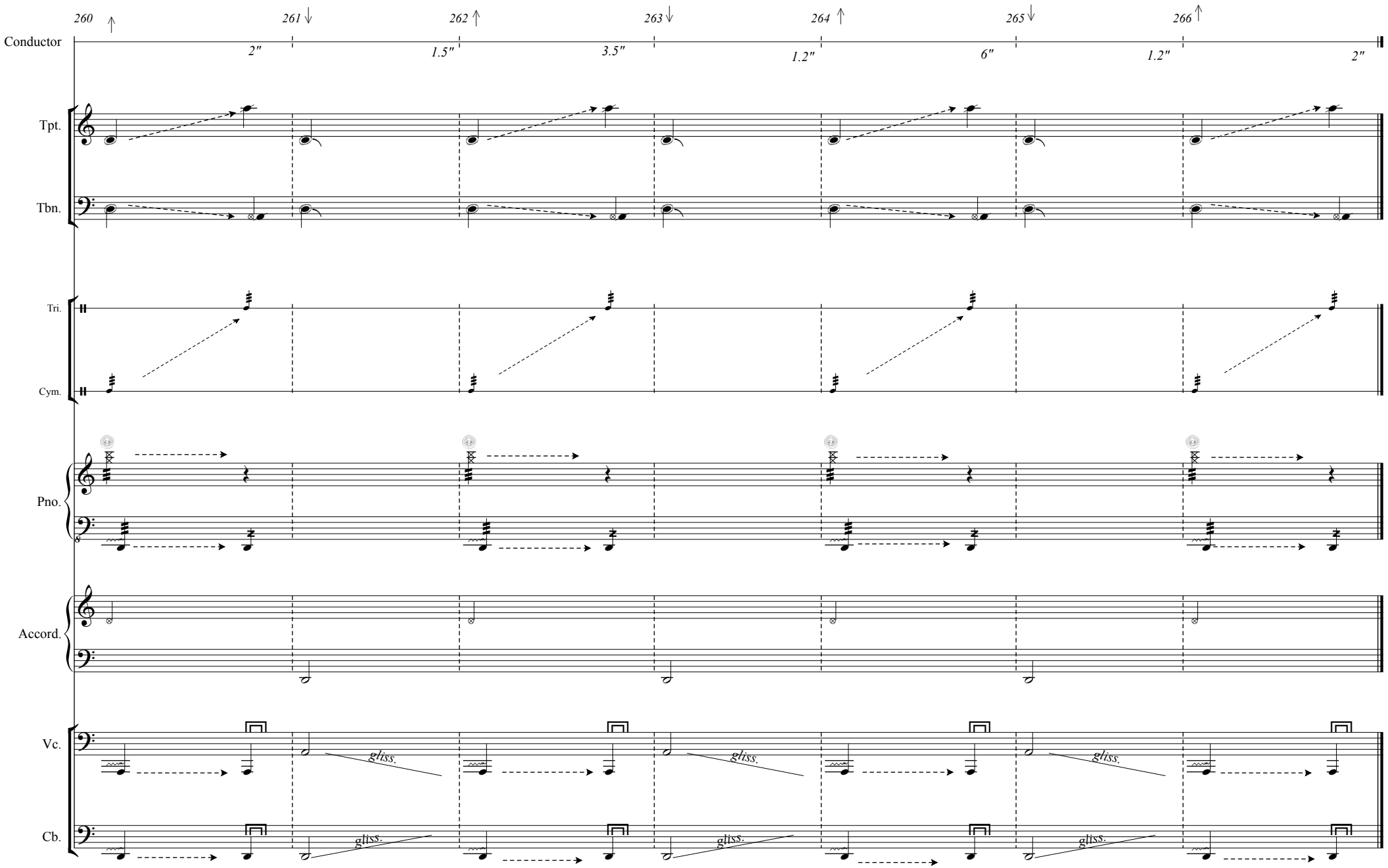

212
213
214
215
216
217
218
219
220
221
Conductor
80
140
80
90
60
45
145
50
90
45
0.7″
0.4″
0.7″
0.67″
1″
1.3″
0.4″
1.2″
0.7″
0.3″
Tpt.
Tbn.
Tri.
Cym.
Pno.
Accord.
Vc.
Cb.
slide
col legno
slide
slide
slide
gliss.
gliss.
gliss.
gliss.
p
p
p
p


222
60
223
224
120
225
226
227
200
228
229
230
231
Conductor
1″
5″
1″
7.5″
6″
0.3″
3″
0.5″
5″
3″
Tpt.
put reed
in mouthpiece
take reed away fast
breath
put reed back
Tbn.
put reed
in mouthpiece
take the reed away fast !
breath
put reed back
Pno.
slide over the string
Accord.
Vc.
gliss.
Cb.
gliss.


Y
232
50 233
50 234
50 235
45 236
50 237
238
50 239
40 240
80 241
50
Conductor
1.2″
1.2″
1.2″
1.3″
1.2″
1.6″
1.2″
1.5″
0.7″
1.2″
Tpt.
Tbn.
Tri.
Cym.
Pno.
slide over the string
Accord.
slow key guiro
gliss.
Y
Vc.
Cb.
slide
p


Z
242
120
243
244
245
180
246
247
170
248
249
180
250
Conductor
0.5″
2″
3.5″
0.3″
2″
0.4″
2.5″
0.3″
2″
Tpt.
take reed away
flutter, mute with hand
Tbn.
take reed away
flutter, mute with hand
Tri.
Cym.
Pno.
Accord.
slow key guiro
gliss.
slow key guiro
gliss.
Vc.
take mallet
Z
Cb.
take mallet


AA
251
170
252
170
253
170
254
170
255
40
256
200
257
200
258
259
Conductor
0.4″
0.4″
0.4″
0.4″
1.5″
0.3″
0.3″
2″
3.5″
flutter, open
Tpt.
flutter, open
Tbn.
Tri.
Cym.
Pno.
Accord.
AA
Vc.
Cb.
gliss.


260
261
262
263
264
265
266
Conductor
2″
1.5″
3.5″
1.2″
6″
1.2″
2″
Tpt.
Tbn.
Tri.
Cym.
Pno.
Accord.
Vc.
Cb.
gliss.
gliss.
gliss.
gliss.
gliss.
gliss.