Israel Neuman

Embracement

for cello and electronics
2013

Program Notes

In 1957 Noam Chomsky introduced Phrase Structure (PS) grammars, a form of generation systems denoted [∑, F], where ∑ is a set of initial symbols and F is a set of rewrite rules. Pierre Schaeffer introduced the TARTYP (Tableau Récapitulatif de la Typologie) in 1966 as part of his typology of sound objects. In ***Embracement*** for cello and electronics, I have used a compositional method that combines the TARTYP classification with generative grammars. My goal was to develop compositional tools that generate and re-compose unified musical structures in real time.

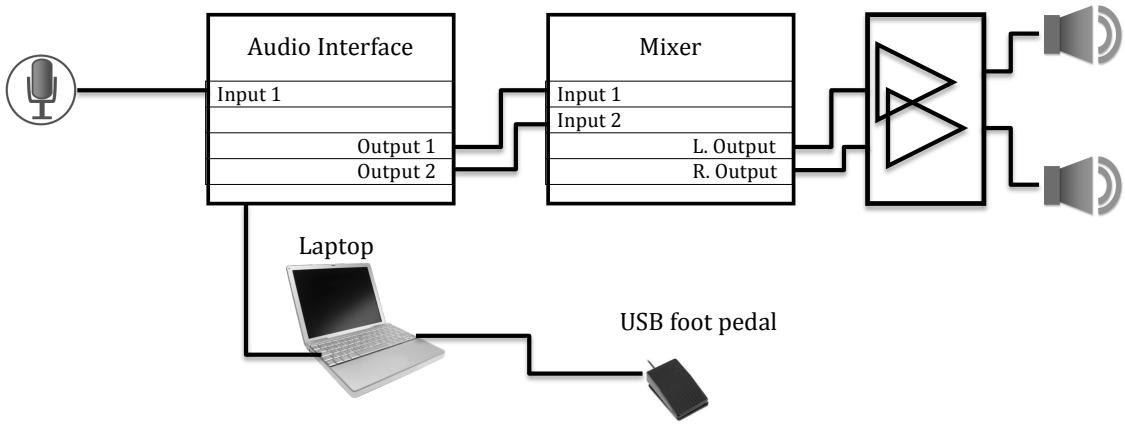
A detailed description of the compositional method used to create the electronics of ***Embracement*** is provided in the paper:

> Neuman, Israel. "Generative Grammars for Interactive Composition Based on Schaeffer's TARTYP," *Proceedings of the International Computer Music Conference* (Perth, 2013)

The sound recording of this composition is available through the link:
http://israelneuman.com/Embracement_dp.html

Technical Notes

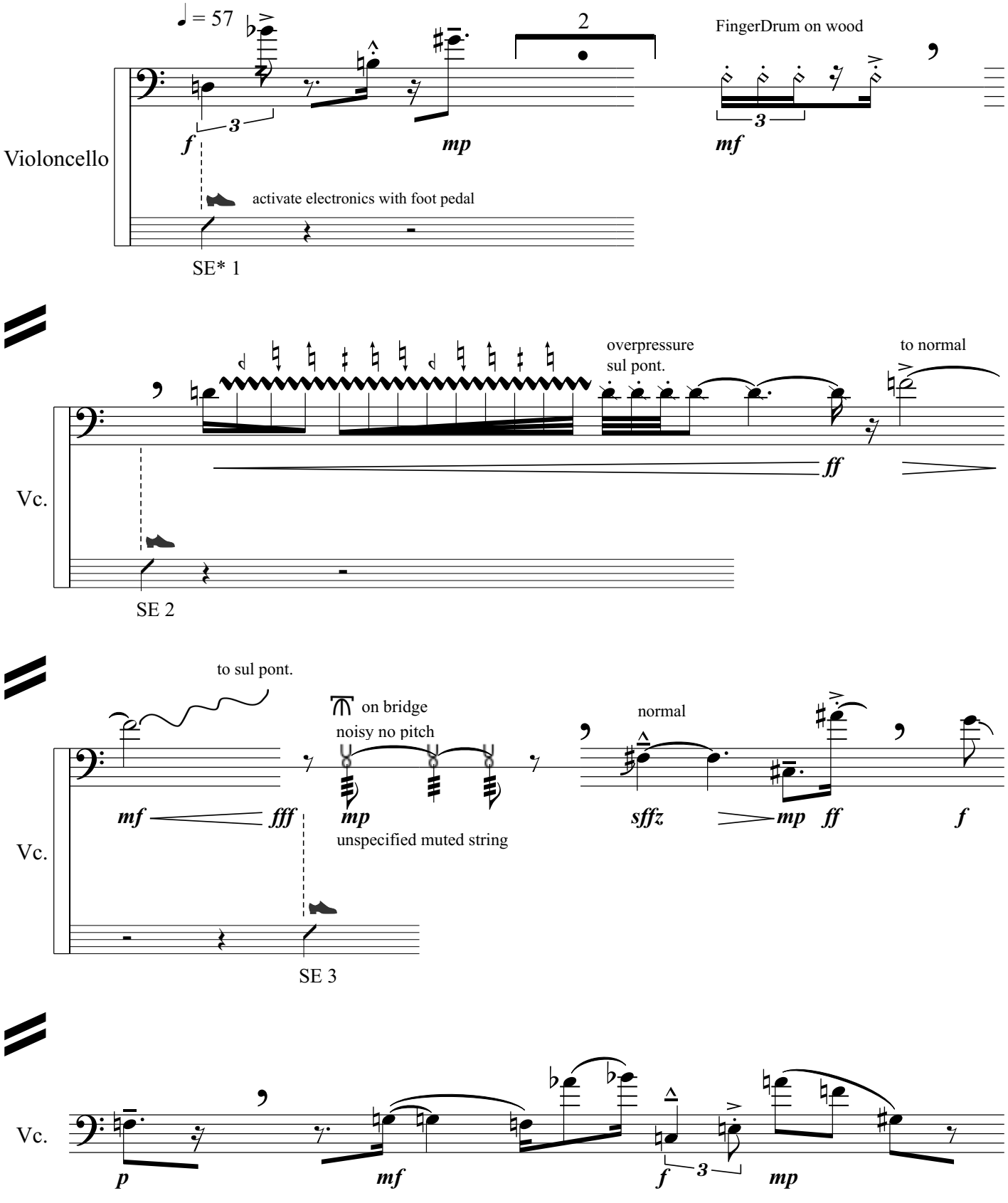
The equipment required for the performance of ***Embracement*** includes: a computer with the PD-extended software (version 0.43.4 or later); a compatible audio interface device with at least one microphone input channel and two output channels; a USB keyboard action foot pedal; a mixer with two input channels and Left/Right output channels; one microphone; and two speakers with amplification. The equipment setup is specified in the following diagram:



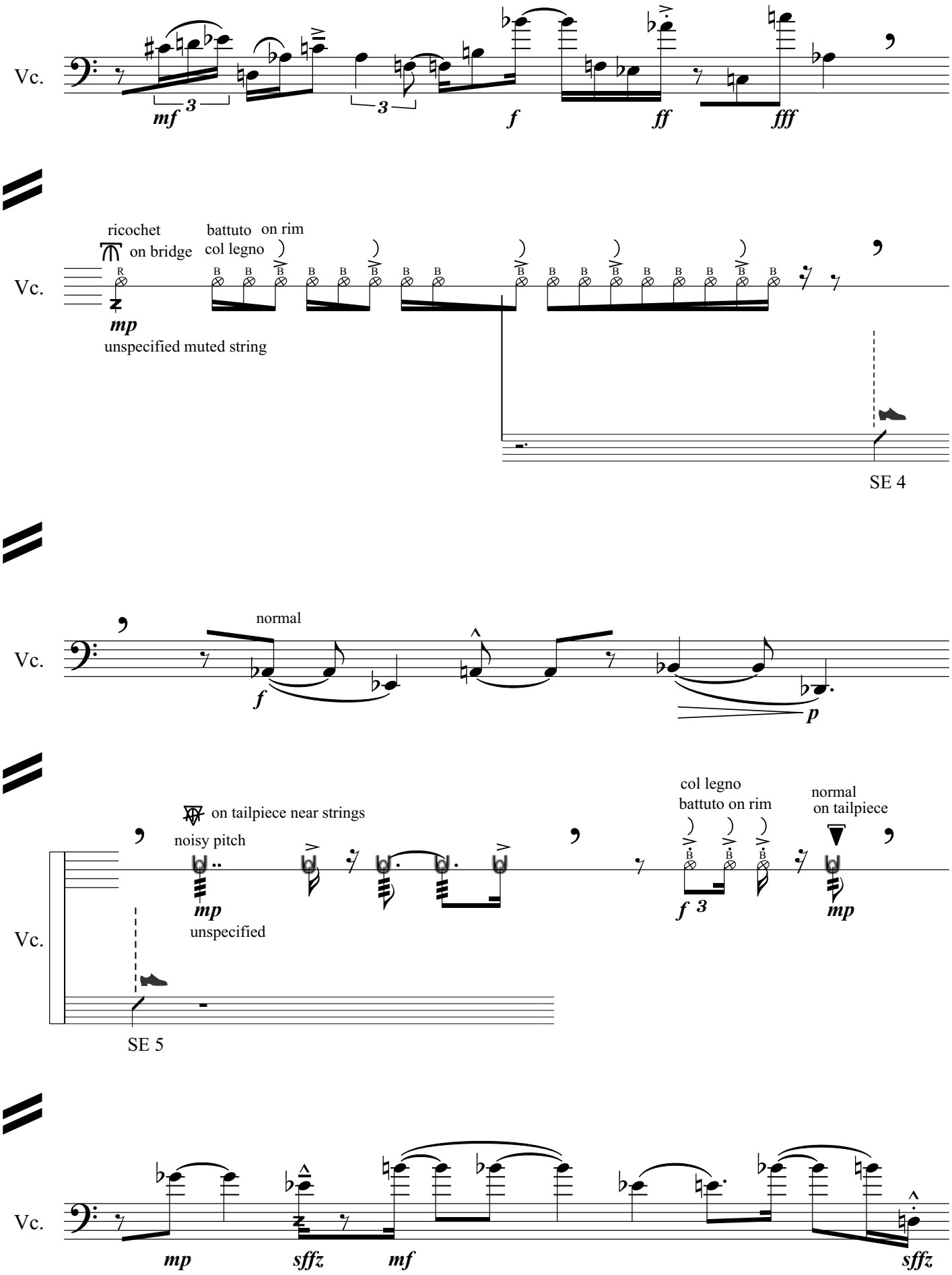
The electronics part of ***Embracement*** could be controlled by the cellist performing the composition. It was composed in PD-extended 0.43.4 and it requires the additional installation of the **pdj** external objects included in the package GenInterTARTYPtoolsPD available on http://israelneuman.com/Other.html.
For detailed installation notes, see the README file included in this package.
The files required for the performance of the electronics part of *Embracement* are located in the folder EmbrPD and should be kept there at all times. Moving files out of this folder may cause the PD-extended patches to fail. Following the equipment setup, to start the performance, launch PD-extended and open the file Embracement.pd. Click on the red button on the right side of the patch to generate rule sets in all the grammars. Click on the green toggle on the left side of the patch to start the audio. Follow the score and press the USB foot pedal in accordance with the score.

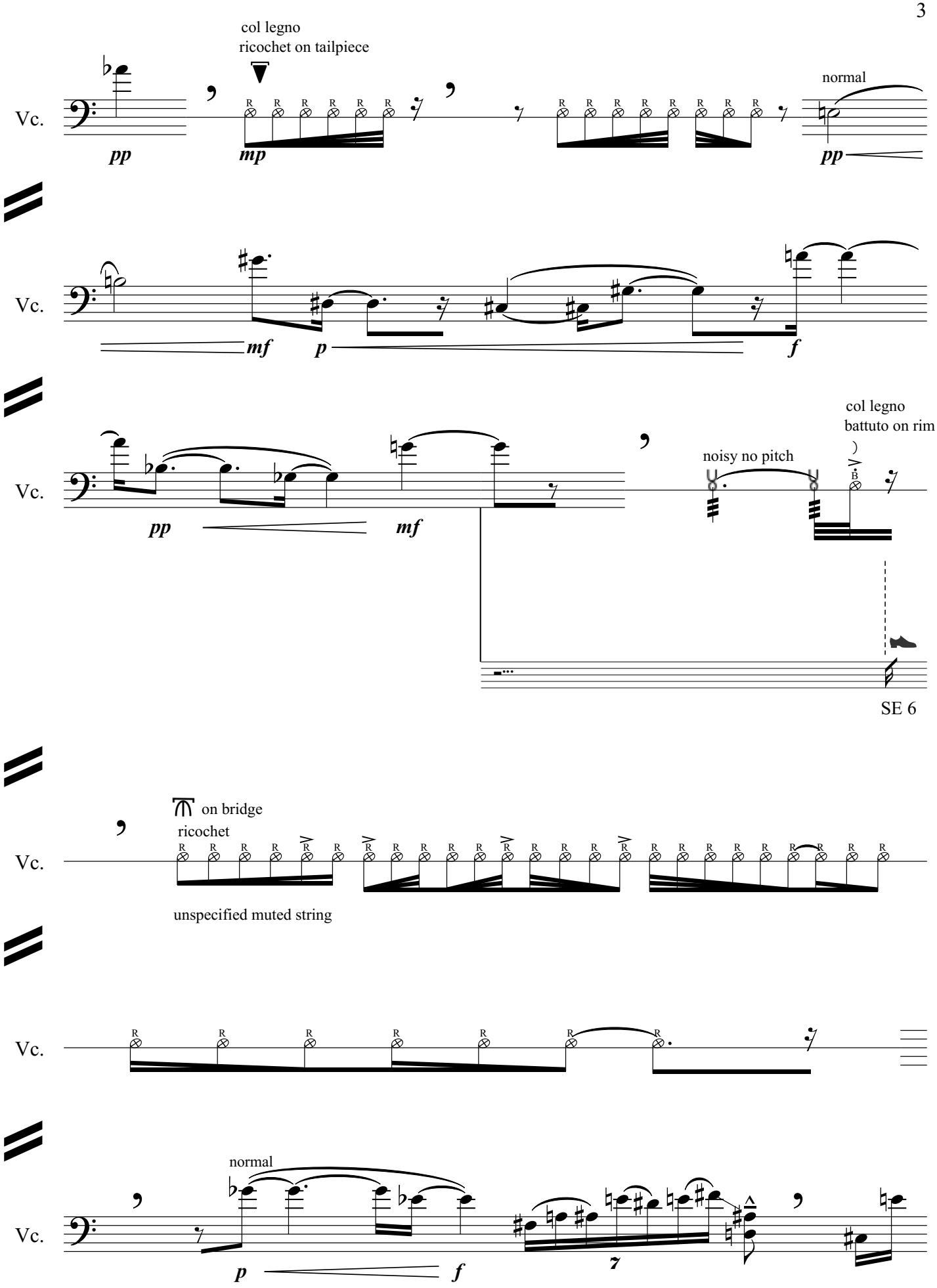
Embracement

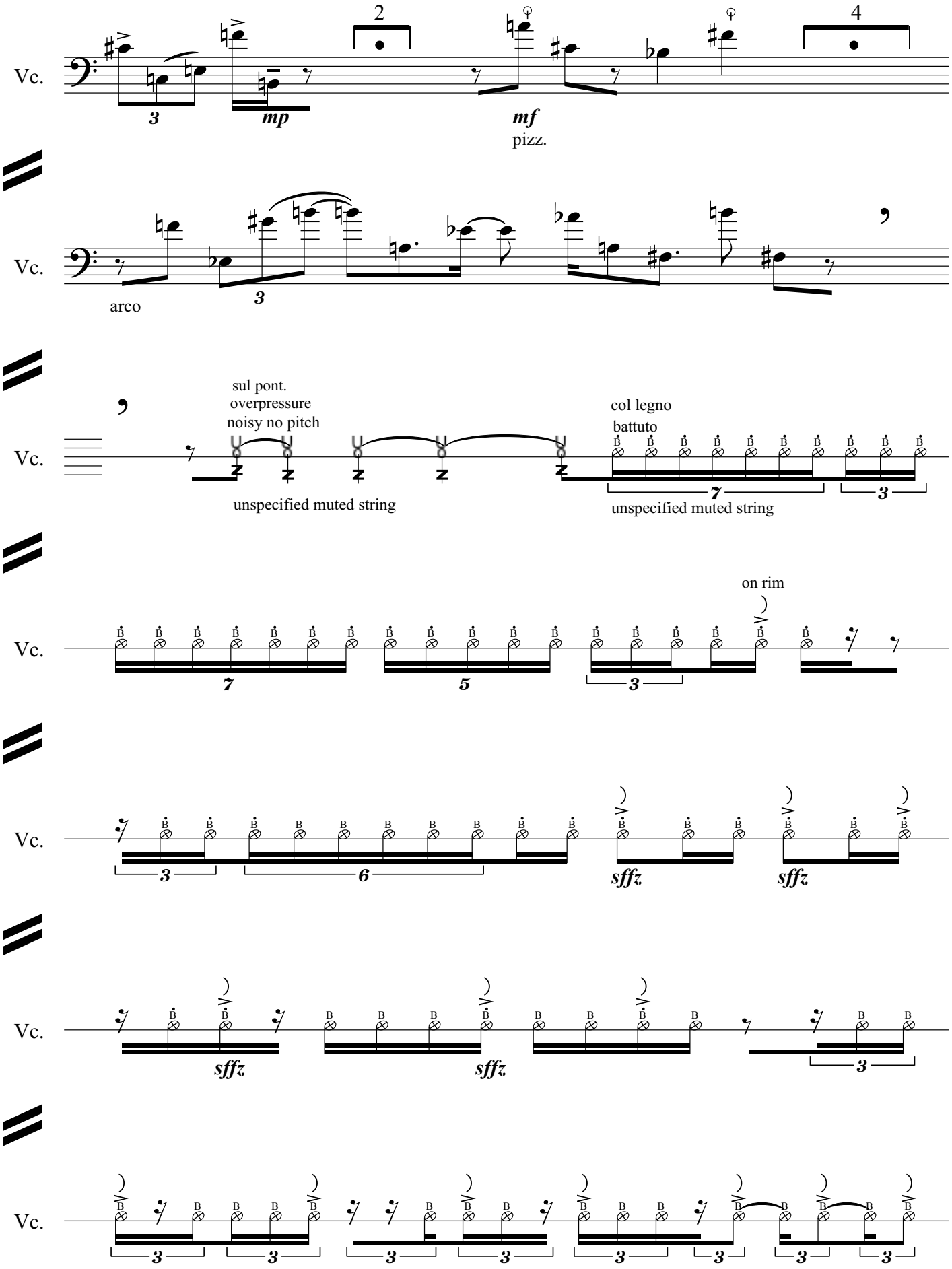
Israel Neuman

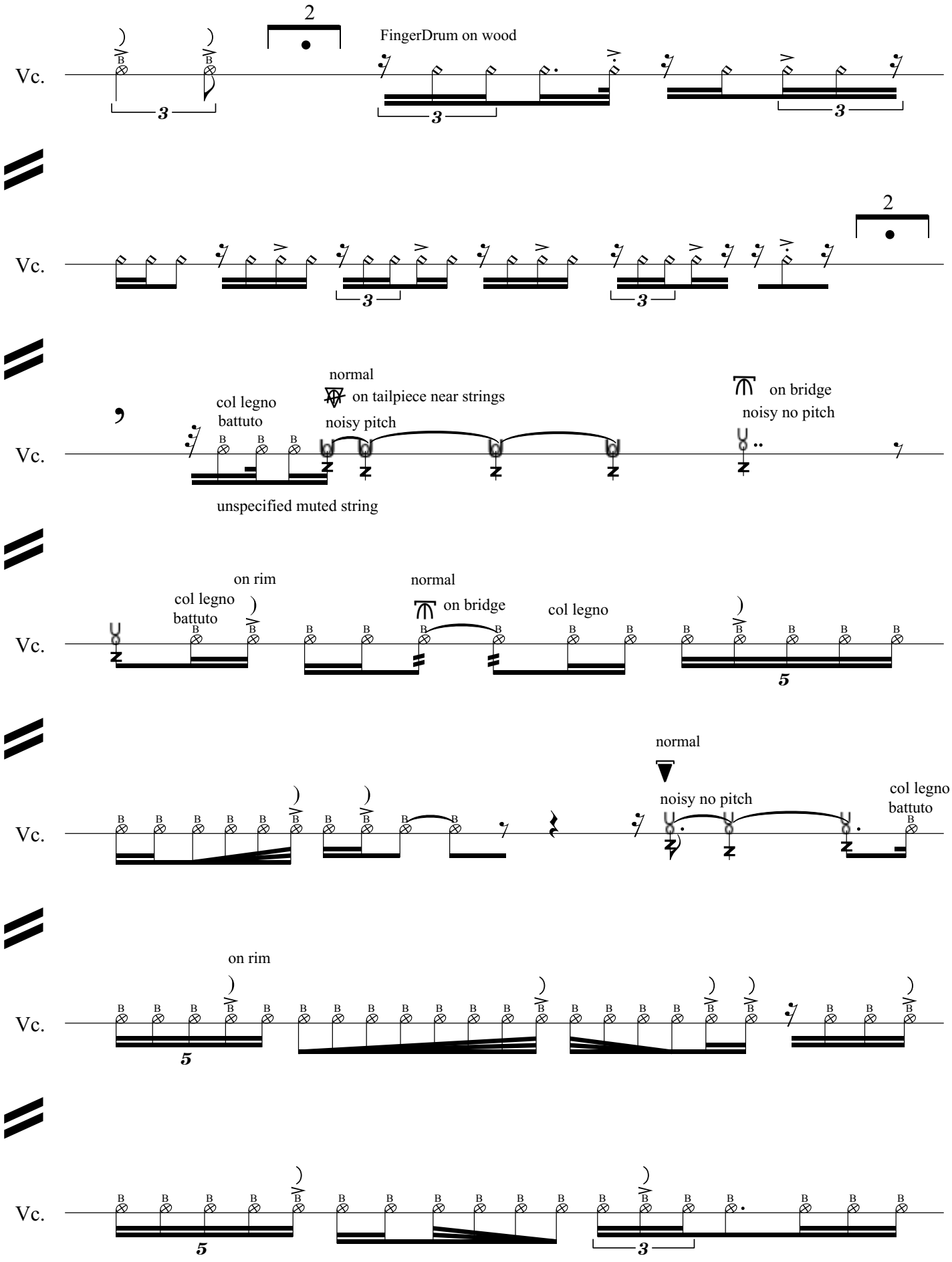


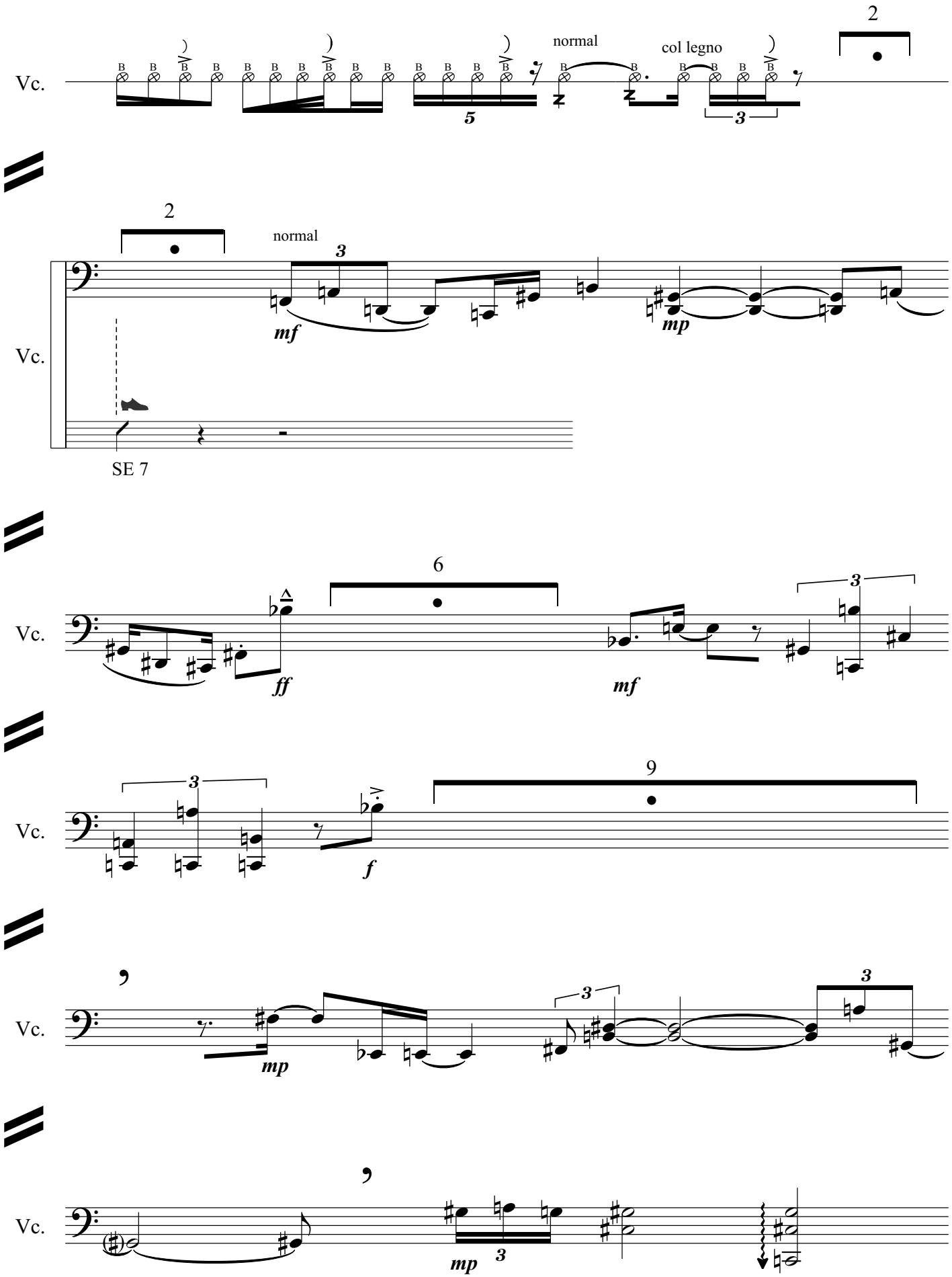
*sound event in the electronics part

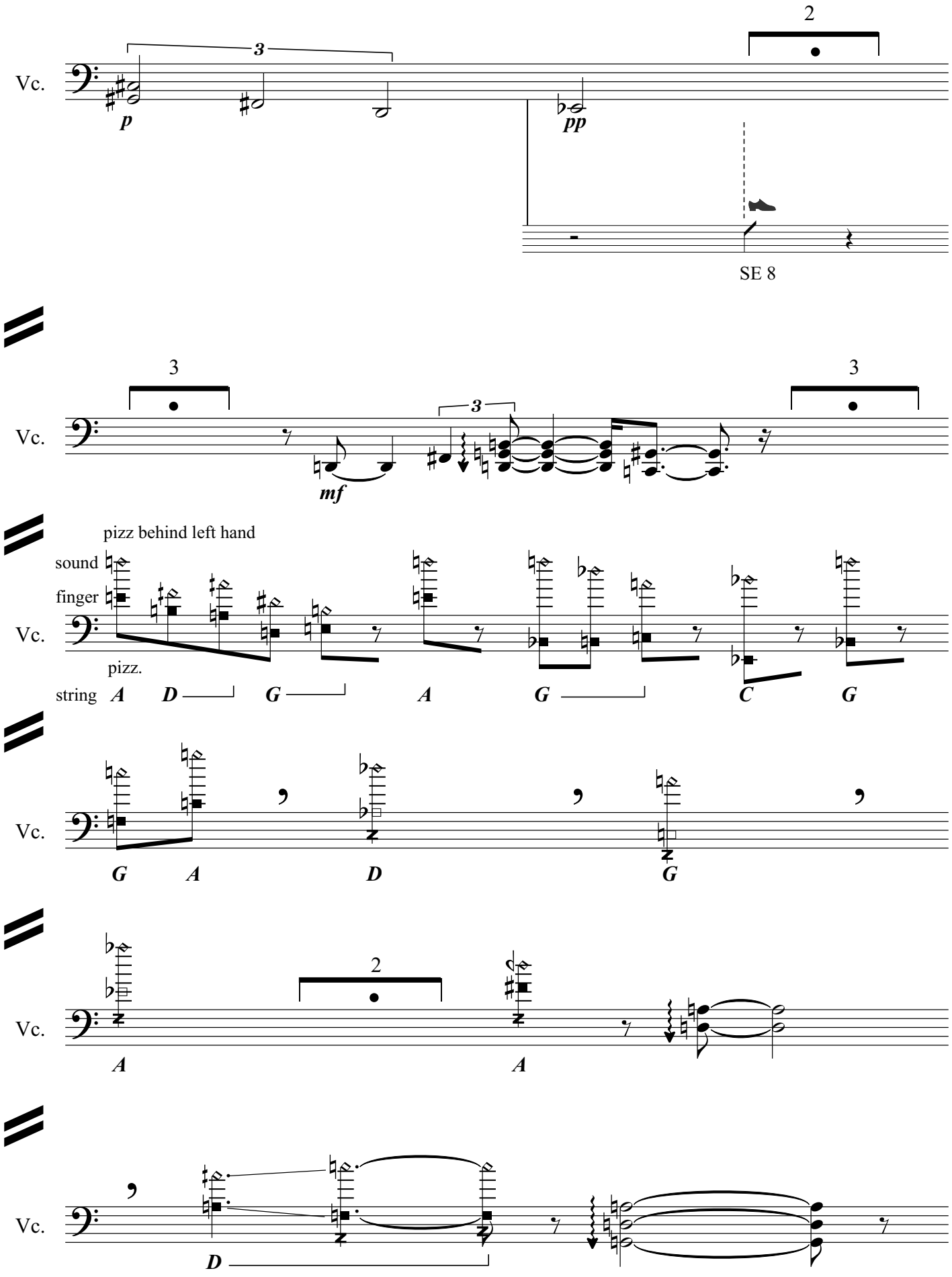

Vc.
mf
3
3
f
ff
fff
ricochet
on bridge
battuto
col legno
on rim
mp
unspecified muted string
SE 4
normal
f
p
on tailpiece near strings
noisy pitch
mp
unspecified
col legno
battuto on rim
f 3
normal
on tailpiece
mp
SE 5
mp
sffz
mf
sffz

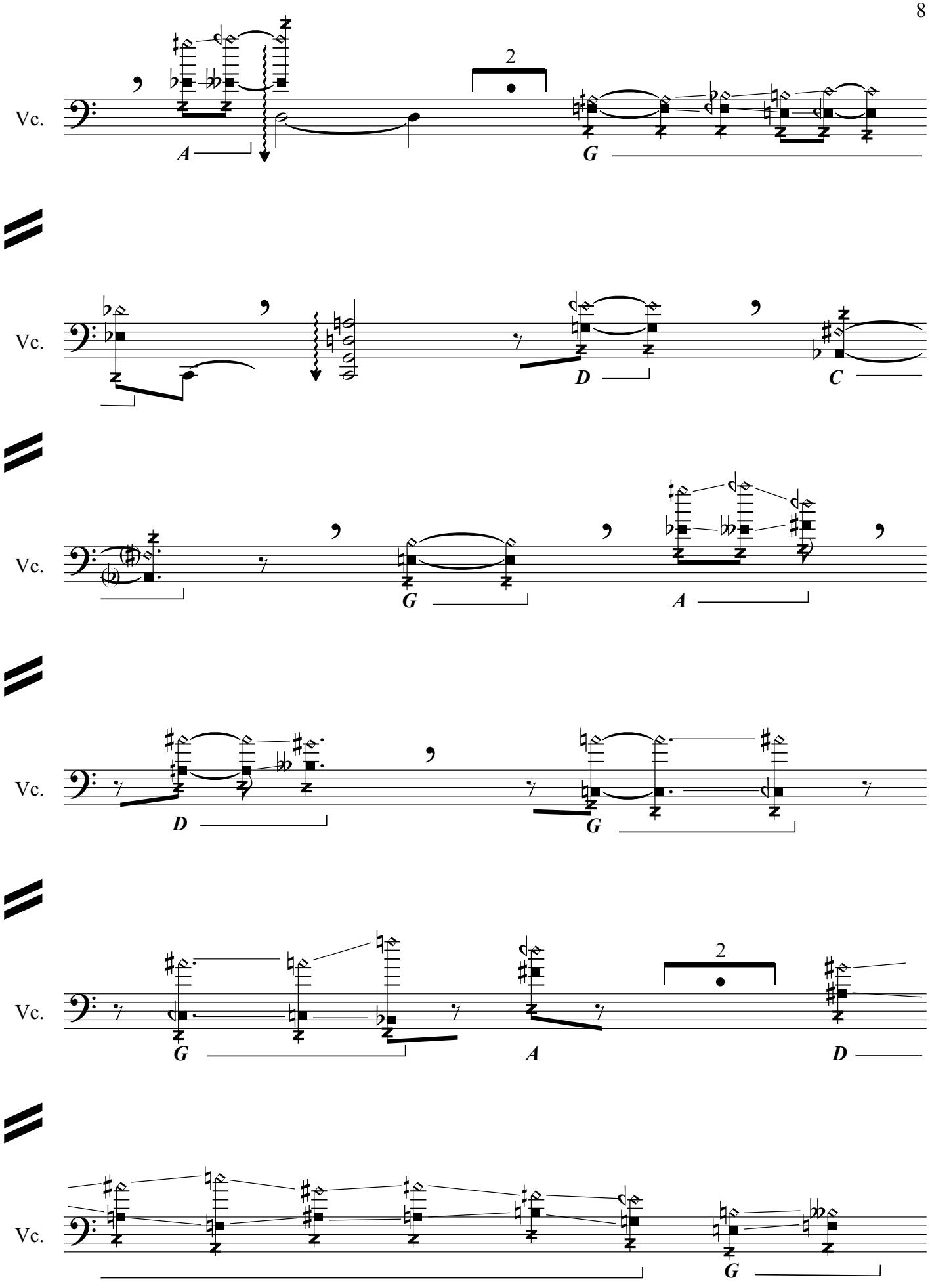

col legno
ricochet on tailpiece
normal
Vc.
pp
mp
pp
mf
p
f
col legno
battuto on rim
noisy no pitch
pp
mf
SE 6
on bridge
ricochet
unspecified muted string
normal
p
f
7

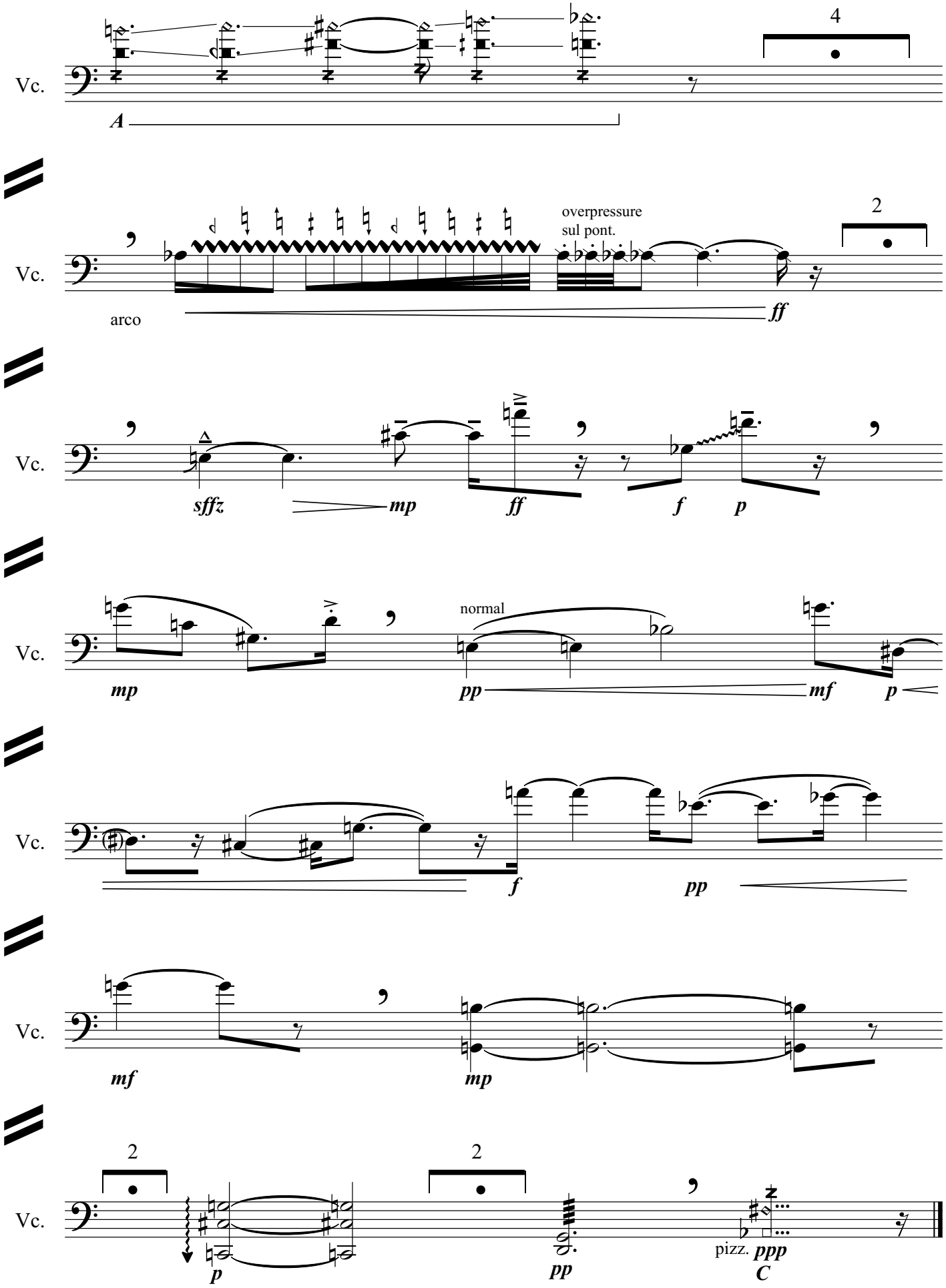

Vc.
2
4
3
mp
mf
pizz.
arco
3
sul pont.
overpressure
noisy no pitch
unspecified muted string
col legno
battuto
7
3
unspecified muted string
on rim
7
5
3
3
6
sffz
sffz
sffz
sffz
3
3
3
3
3
3
3
3


Vc.
2
FingerDrum on wood
3
3
3
Vc.
2
3
3
Vc.
normal
on tailpiece near strings
col legno
battuto
noisy pitch
on bridge
noisy no pitch
unspecified muted string
Vc.
on rim
col legno
battuto
normal
on bridge
col legno
5
Vc.
normal
noisy no pitch
col legno
battuto
Vc.
on rim
5
Vc.
5
3


Vc.
2
normal
col legno
5
3
Vc.
2
normal
3
mf
mp
SE 7
Vc.
6
3
ff
mf
Vc.
3
9
f
Vc.
3
3
mp
Vc.
3
mp


Vc.
3
2
p
pp
SE 8
3
3
3
mf
pizz behind left hand
sound
finger
pizz.
string
A
D
G
A
G
C
G
G
A
D
G
2
A
A
D


Vc.
2
A
G
Vc.
D
C
Vc.
G
A
Vc.
D
G
Vc.
G
2
A
D
Vc.
G


Vc.
A
4
Vc.
arco
overpressure
sul pont.
2
ff
Vc.
sffz
mp
ff
f
p
Vc.
mp
normal
pp
mf
p
Vc.
f
pp
Vc.
mf
mp
Vc.
2
p
2
pp
pizz.
ppp
C