Jonathan Harvey

Advaya

FOR CELLO, ELECTRONIC KEYBOARD
AND ELECTRONICS

(1994)

PLAYING SCORE

FABER *ff* MUSIC

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Advaya was commissioned by IRCAM with help provided by the British Council.
The electronics were realised at IRCAM with the musical assistance of Cort Lippe.
The first performance was given by Antoine Ladrette (cello) and Fuminori Tadaka (electronic keyboard) at IRCAM in Paris on 27 June 1994.

Duration: 22 minutes

Advaya is recorded by Pierre Strauch (cello) with Dimitri Vassilakis (electronic keyboard), Ades AD 750 (CD)

The score is available separately on sale ISBN 0-571-51888-5
CDs for performance purposes together with technical documentation are available from the publishers
A set of 2 audio CDs for rehearsal is available on sale ISBN 0-571-56510-7

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PERFORMANCE NOTE

Advaya requires two players (cello and electronic keyboard/sampler), a sound diffusionist and one or two other technicians for the electronics. There are two performance versions:

MACINTOSH VERSION
1 sampler
1 MIDI keyboard
1 Macintosh computer equipped with an audio card
1 effects processor

CD VERSION
1 sampler
1 MIDI keyboard
2 audio CD playback machines
1 effects processor

Audio CDs/CD-ROMs for both versions are available from the publishers as follows:

MACINTOSH VERSION
1 CD-ROM (labelled CD-ROM MAC)
containing all the data for the Macintosh including the audio sound files for the work
1 CD-ROM (labelled CD-ROM AKAI)
containing the programs of the AKAI S2000 sampler (AKAI S2000 sampler format)

CD VERSION
2 audio CDs (labelled CD-AUDIO CD 1 and CD 2)
containing the pre-recorded soundtracks for the work
1 CD-ROM (labelled CD-ROM AKAI)
containing the programs of the AKAI S2000 sampler (AKAI S2000 sampler format)

ELECTRONIC EQUIPMENT

MACINTOSH VERSION
In addition to the sound diffusionist, this version requires an assistant to operate the Macintosh direct-to-disk program. A further assistant may be used to change the effects processor settings.
1 Macintosh PowerPC (minimal configuration: G3 266 MHz, 32 Mb RAM, 195 Mb defragmented hard disk space) with:
1 digital audio card, with 4 channels out[1]
1 MIDI interface used by the Macintosh to send MIDI messages to the effects processor
1 pedal[2], type 'sustain' (Switch)
1 Midi device[2] (such as a MIDI synthesiser) to convert the pedal signals into MIDI messages. Pedal pressure signals should be converted into MIDI Control Change messages.
1 sampler AKAI S2000, 16 Mb RAM
1 MIDI keyboard (Yamaha KX88) with:
1 pedal, type 'sustain' (Switch)
1 pedal, type 'volume'
1 effects processor (double harmoniser and reverberation, non-simultaneous) for the cello (Yamaha SPX1000)
Mixing console and diffusion system

CD VERSION
In addition to the sound diffusionist, this version requires two assistants to operate the two audio CD playback machines and the effects processor.
2 audio CD playback machines
1 sampler AKAI S2000, 16 Mb RAM
1 MIDI keyboard (Yamaha KX88) with:
1 pedal, type 'sustain' (Switch)
1 pedal, type 'volume'
1 effects processor (double harmoniser and reverberation, non-simultaneous) for the cello (Yamaha SPX1000)
Mixing console and diffusion system

[1] This documentation is based on a Korg 1212I/O digital audio card, with Adat optical outputs. Output channels may be linked to Korg 880D/A digital-to-analogue converters. If the Korg 1212I/O digital audio card is not used, several modifications must be made to the audio output patchers. This operation requires the Max/MSP (version 3.5.9 or higher) software.

[2] optional requirement in order to use the Macintosh automatic command system for the sound files and the effects processor.

SPX1000 EFFECTS PROCESSOR

Programs as in score	Memory no.	Program no.		Left-transposition	Right-transposition
1	41	21		0	-2
2	42	21		+11	-2
3	43	21		+1.5	-2
4	44	21		-1	+1
5	45	21		-6.3	+1
6	46	21		+0.6	-0.7
7	47	21		-6	+5
8	48	21		+0	+15
9	49	21		-11	-3.3
10	50	21		+5.8	-4
11	51	21	(harm.)	-12	+0
12	52	21		+6	-9.1
13	53	21		-2	+1.5
14	54	21		+2.5	-3
15	55	21		-6	+4
16	56	21		+5.5	-8
17	57	21		-2	+1.5
18	58	21		+2.5	-3
19	59	21		-6	+4
20	60	21		+5.5	-8
21	61	21		-2	+1.5
22	62	21		+2.5	-3
23	63	1 (reverb.)		7 seconds	
24	64	21 (harm.)		-2	+1.5
25	65	21 (harm.)		+2.5	-3
26	66	1 (reverb.)		7 seconds	
27	67	21 (harm.)		+5.5	-8
28	68	21		-2	+7
29	69	21		+1.5	-2
30	70	21		+12	+7
31	71	21		+12	+19 *(if a good quality '+19' is available*[1]*)*

[1] Program 31 is *ad lib.* If a good quality '+19' is not available, continue with the previous setting (Program 30)

At certain points in the harmoniser part, actual pitches are given in square brackets

NOTATION

Accidentals apply within the beamed group, including in metred sections

 ¼ tone sharp

¾ tone sharp

 ¼ tone flat

 very slightly flat

 highest possible note

 approximate pitch (cello part)

poco gliss. very slight slide (1-2cm)

 left-hand pizz.

 pizz. with fingernail

[ ] Heavy brackets indicate the points of starting and stopping the audio CD/audio sound files

Sampler:
The duration of sampler notes should always be extremely precise. All clusters are chromatic.

Note to sound diffusionist:
The audio CD tracks/audio sound files should be constantly adjusted in level to produce the balance indicated in the score.

PROGRAMME NOTE

When working on this project in Paris, by chance I came across a word which seemed perfect as a title.

'Advaya' is a first-century Buddhist term meaning 'not two', and it points to the transcendence of duality. We conventionally harbour the illusion that things exist naturally in their own right. Buddhism shows that ultimately this is untrue, and even the subjective 'self' is an 'empty thing' in the same way. All objects are the coloured illusions of a false duality.

As every sound in *Advaya* derives from the cello, and the 'duo' onstage is unreal, it was important to articulate the illusion of multiplicity as vividly as possible so that the inherent unity lying behind would be all the more remarkable.

Some cello sounds are processed live, others were recorded and then processed in depth in order to be played back on compact disks or by a sampler keyboard. Many of the sounds were made by analysing passages of music played by the cello and then resynthesising the music from this analysis, altering the inner structure of the sound (the spectrum) in the process. A hierarchy of 'compressed spectra' from consonant (the natural harmonic series) to unstable was built up: the consonant centre is A (220Hz), the first string of the cello. Cello and electronics are usually concerned with the same musical material at any one time, though sometimes at different speeds. One cello motif, for instance, which lasts 4 seconds, is stretched by a technique which cuts the motif into tiny granules and then scatters them in large quantities for a duration of two and a half minutes.

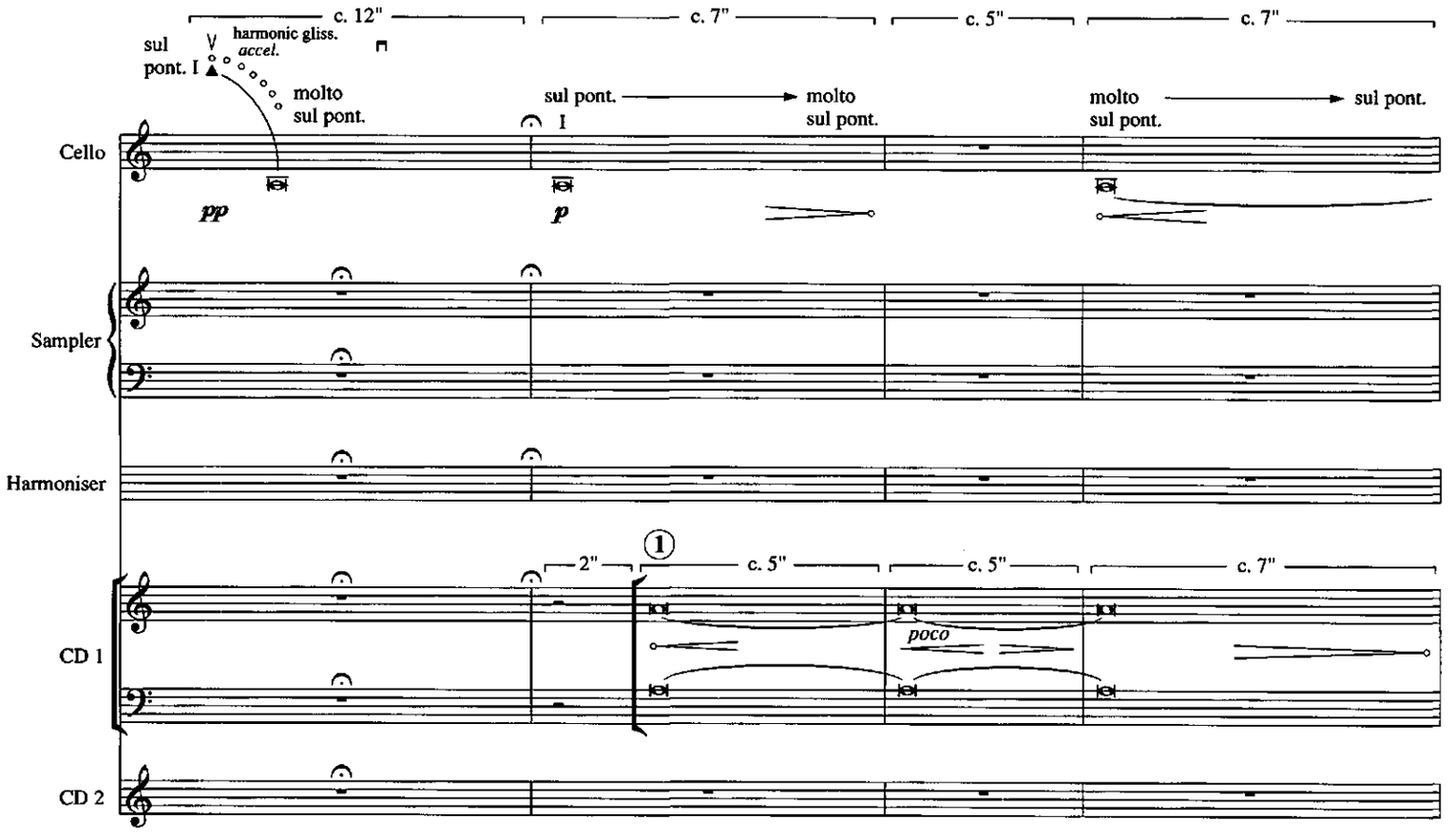
My thanks to Régis Mitonneau, Eric Daubresse and above all Cort Lippe, my musical assistant each day for three months, for their invaluable help with the electronics, to Antoine Ladrette for recording the cello material, and to the British Council for its generous support.

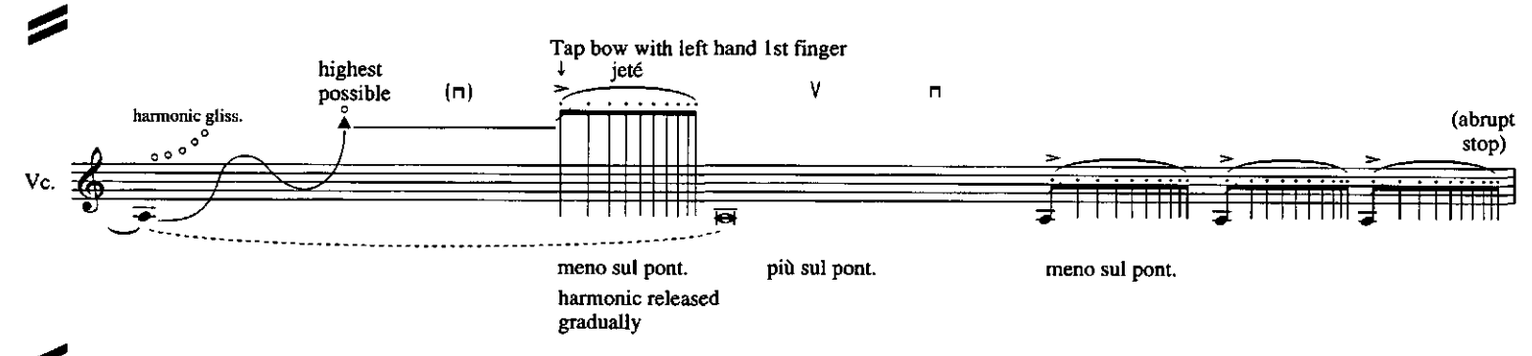
J H

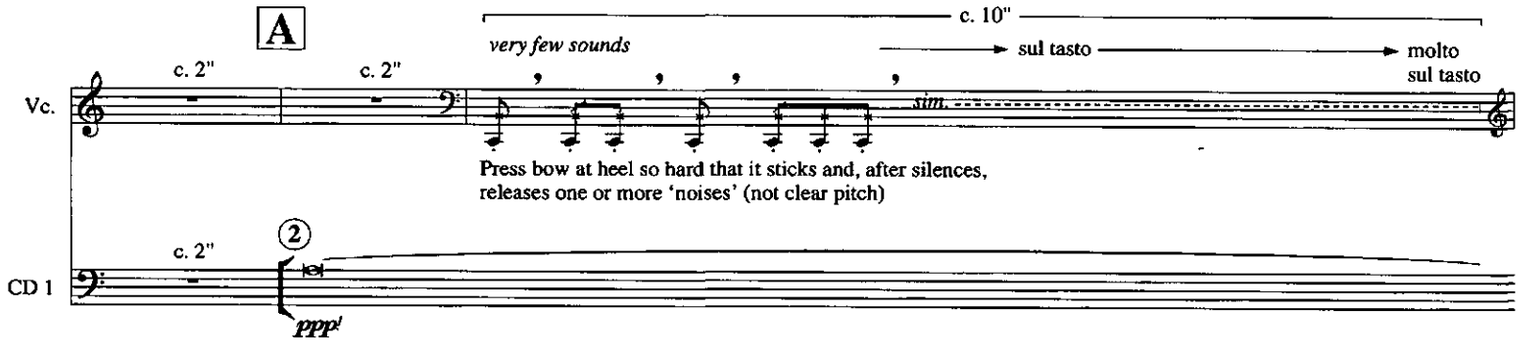
to Risto Nieminen and Jean-Baptiste Barrière

ADVAYA

JONATHAN HARVEY







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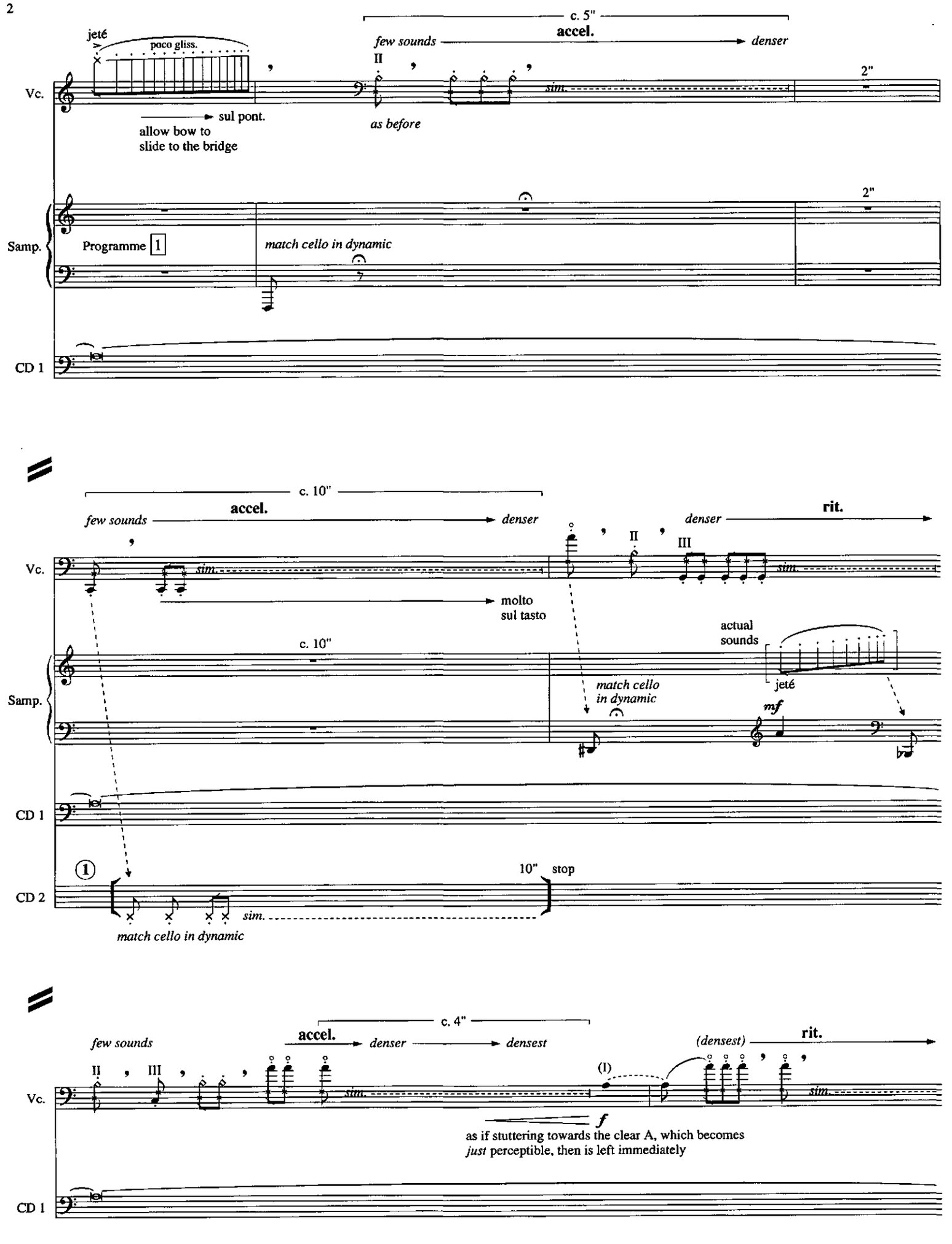
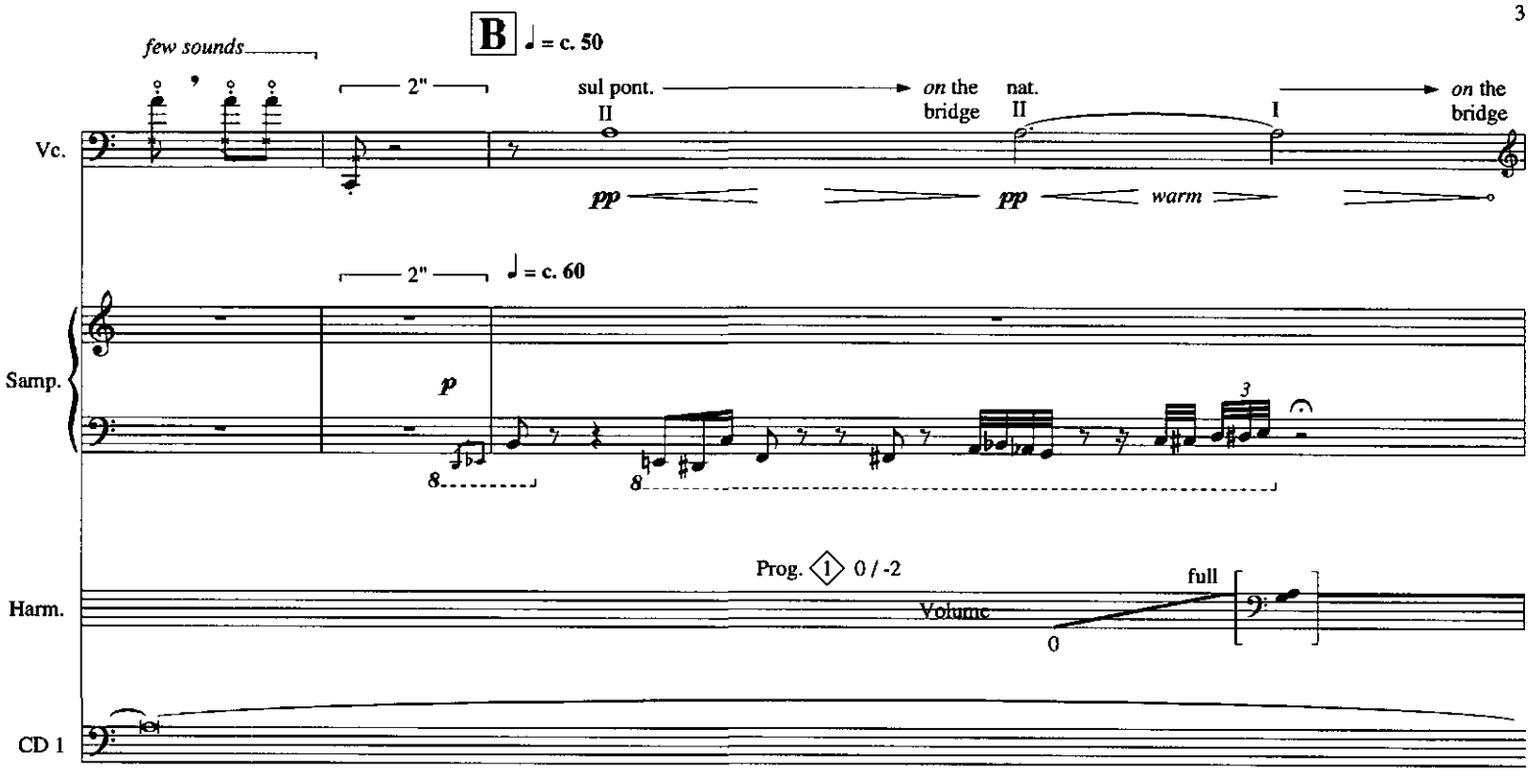
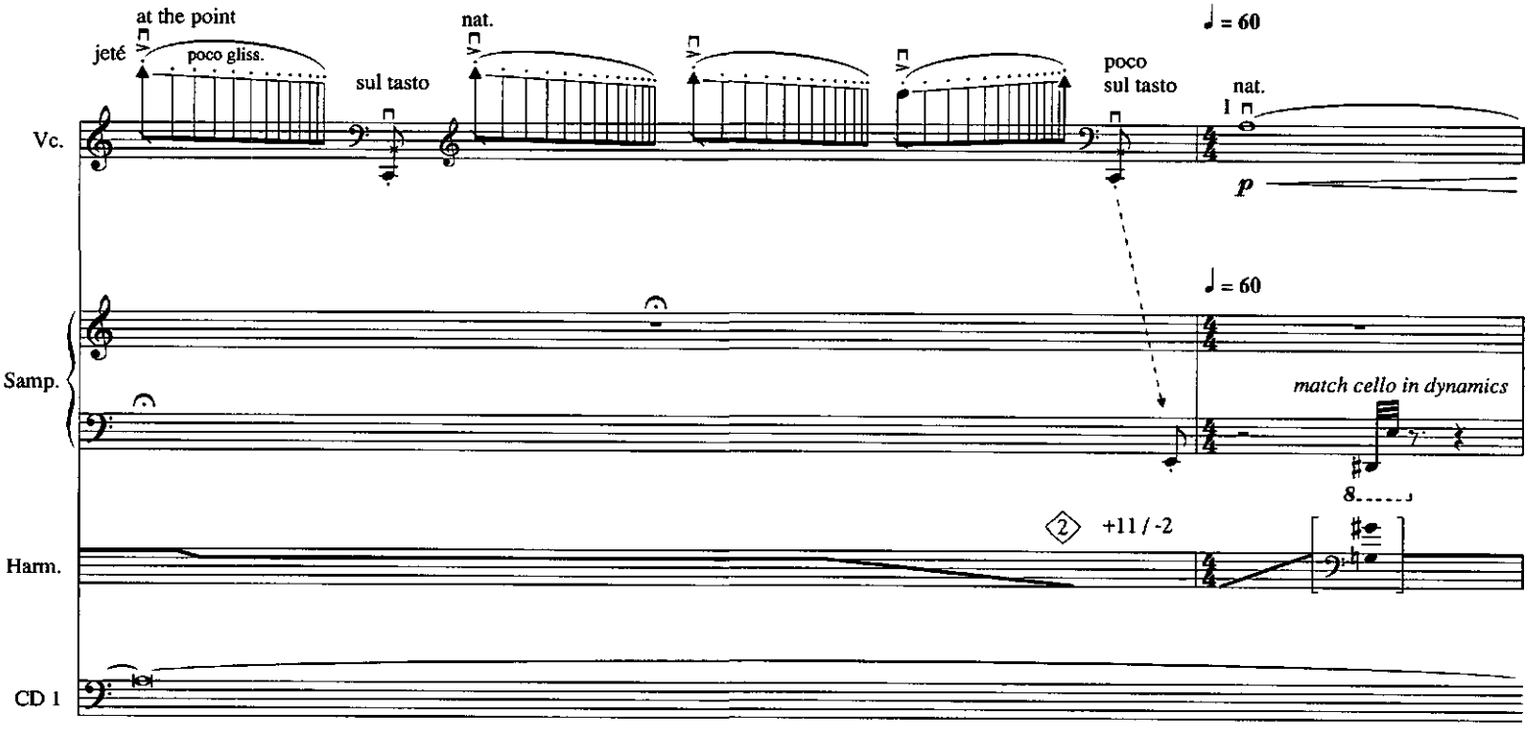
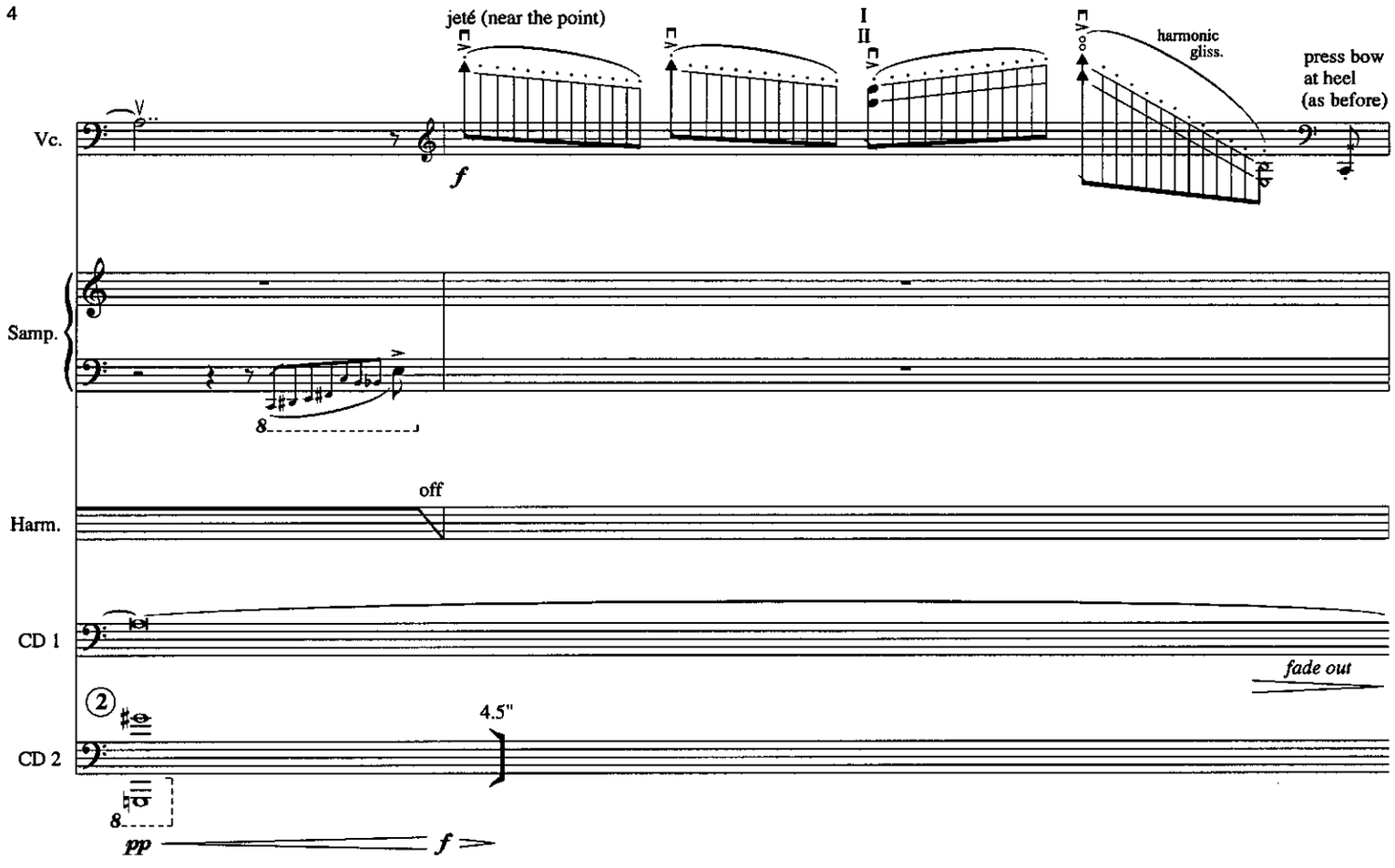
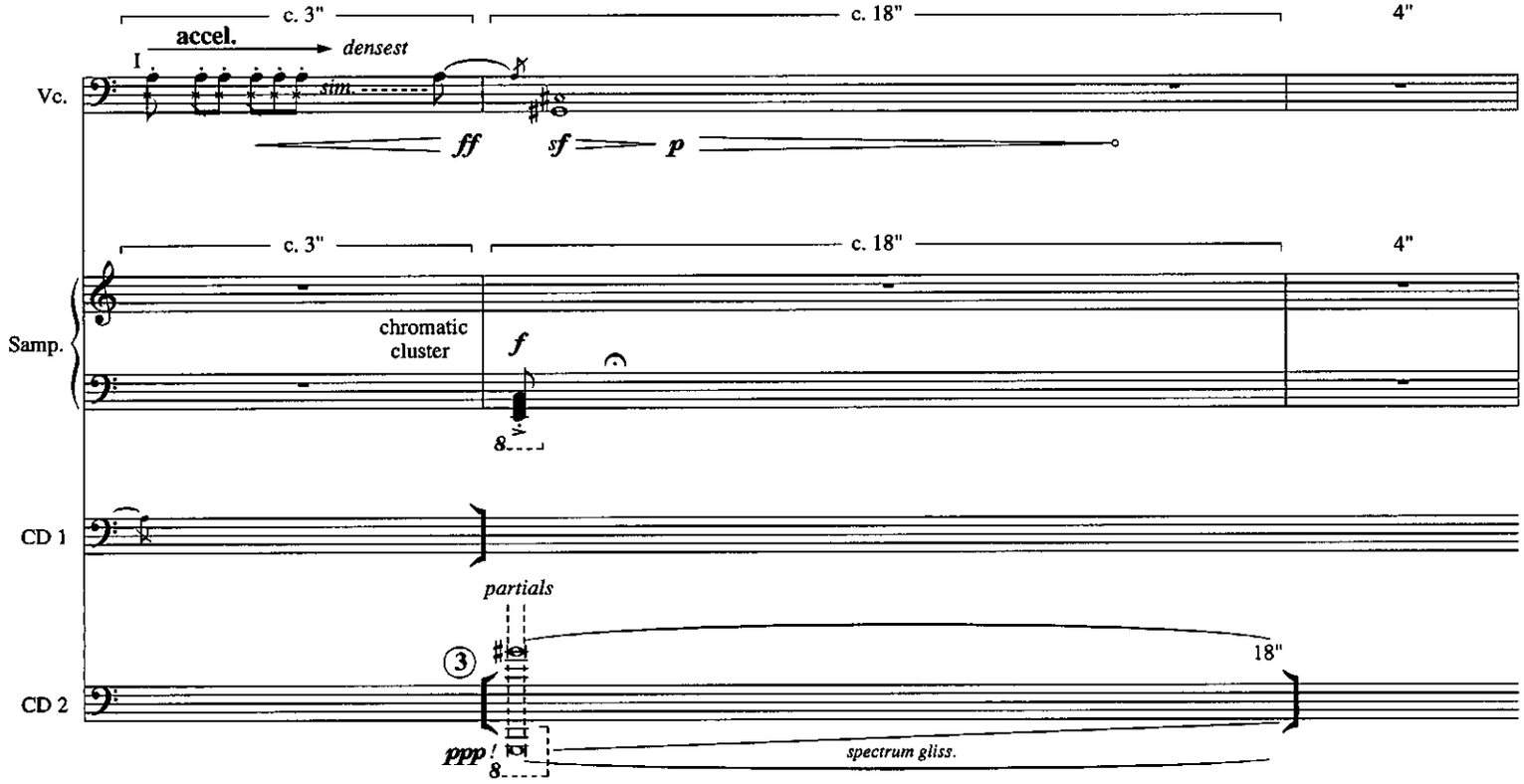
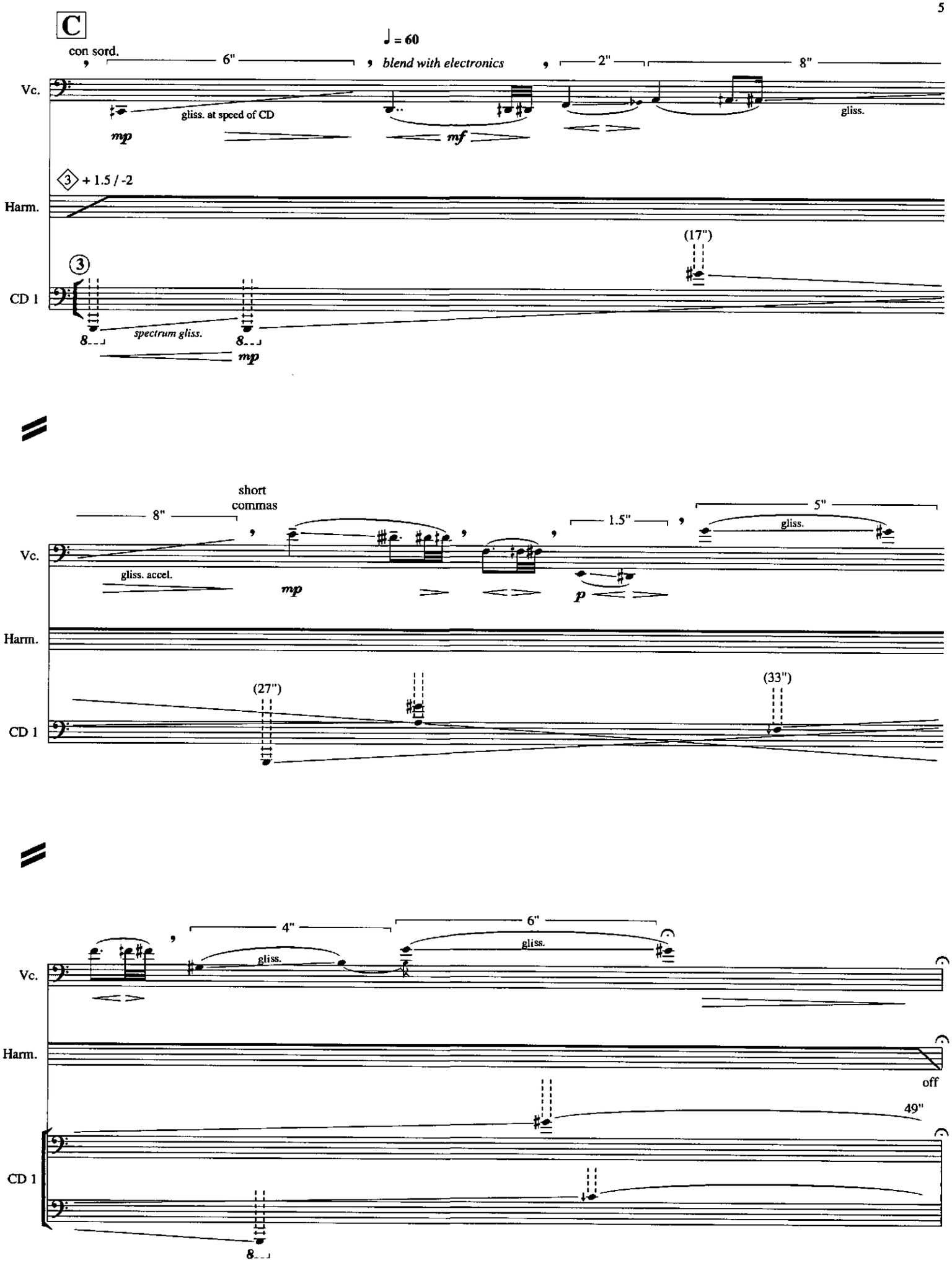

c. 5"
jeté
poco gliss.
few sounds
accel.
denser
II
2"
Vc.
sul pont.
allow bow to
slide to the bridge
as before
sim.
Samp.
Programme 1
match cello in dynamic
CD 1
c. 10"
few sounds
accel.
denser
denser
rit.
II
III
molto
sul tasto
actual
sounds
jeté
match cello
in dynamic
mf
CD 2
10"
stop
match cello in dynamic
c. 4"
few sounds
accel.
denser
densest
(densest)
rit.
(I)
f
as if stuttering towards the clear A, which becomes
just perceptible, then is left immediately

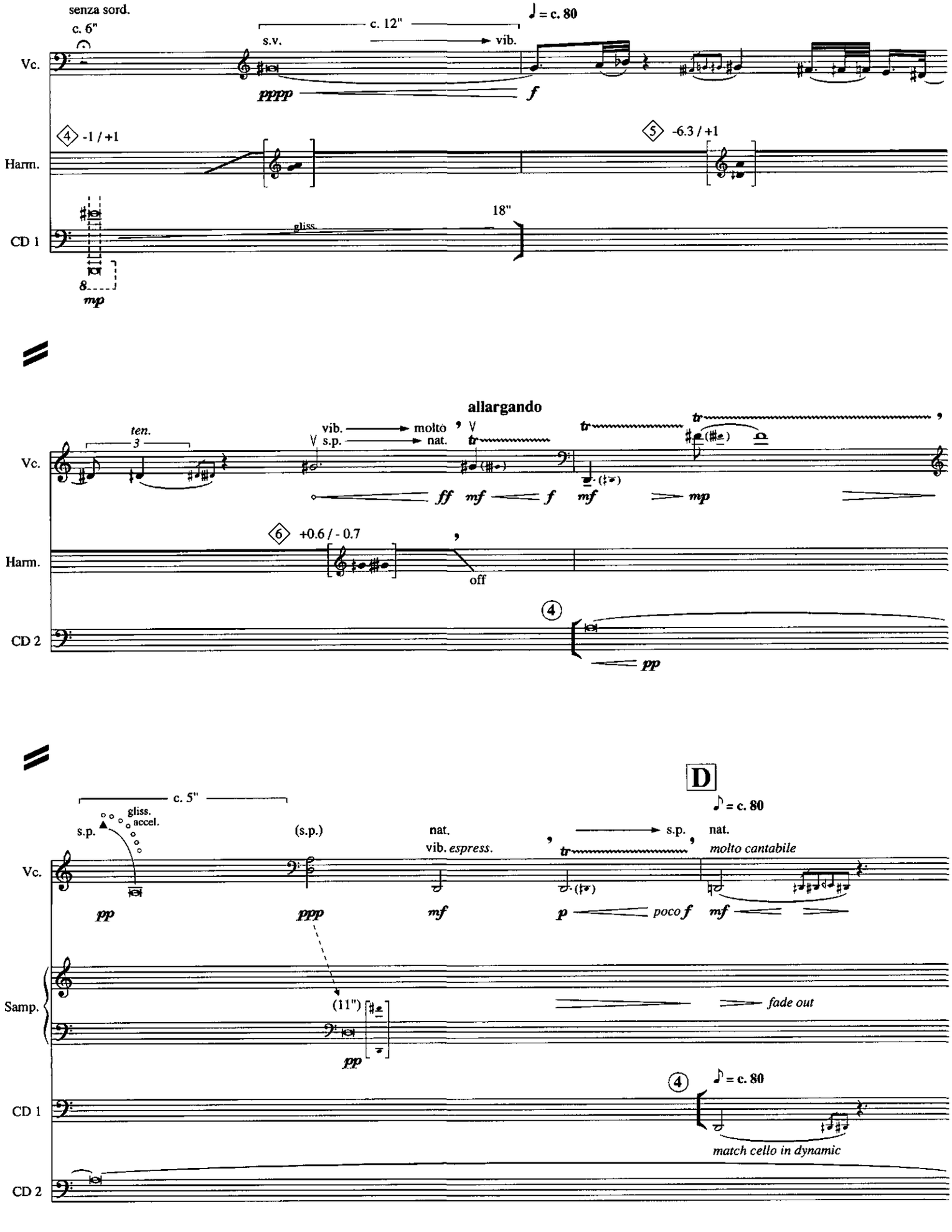

few sounds
B
♩ = c. 50
2"
sul pont.
II
on the bridge
nat.
II
I
on the bridge
Vc.
pp
pp
warm
2"
♩ = c. 60
Samp.
p
8
8
3
Prog. 1 0 / -2
full
Harm.
Volume
0
CD 1

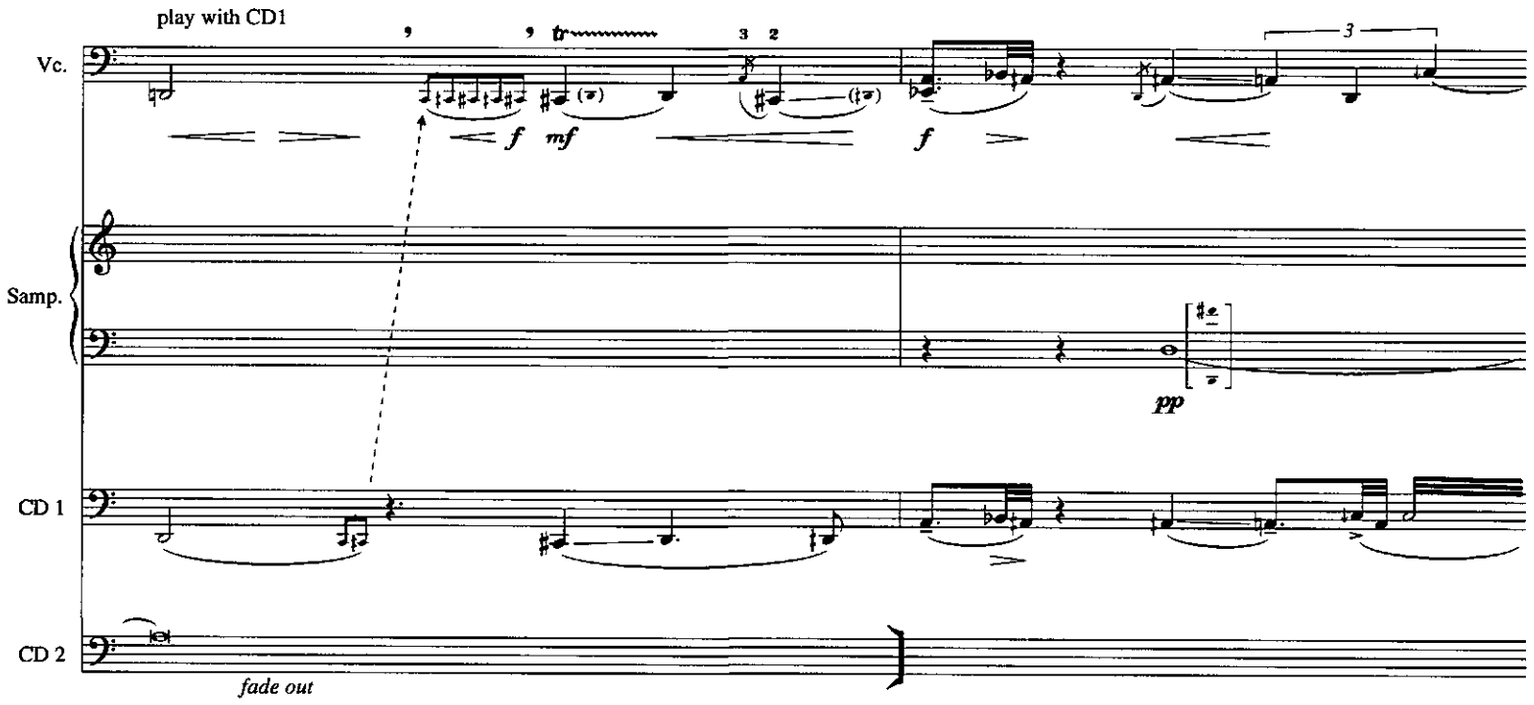

at the point
jeté
poco gliss.
sul tasto
nat.
poco
sul tasto
nat.
♩ = 60
Vc.
p
♩ = 60
Samp.
match cello in dynamics
8
2 +11 / -2
Harm.
CD 1

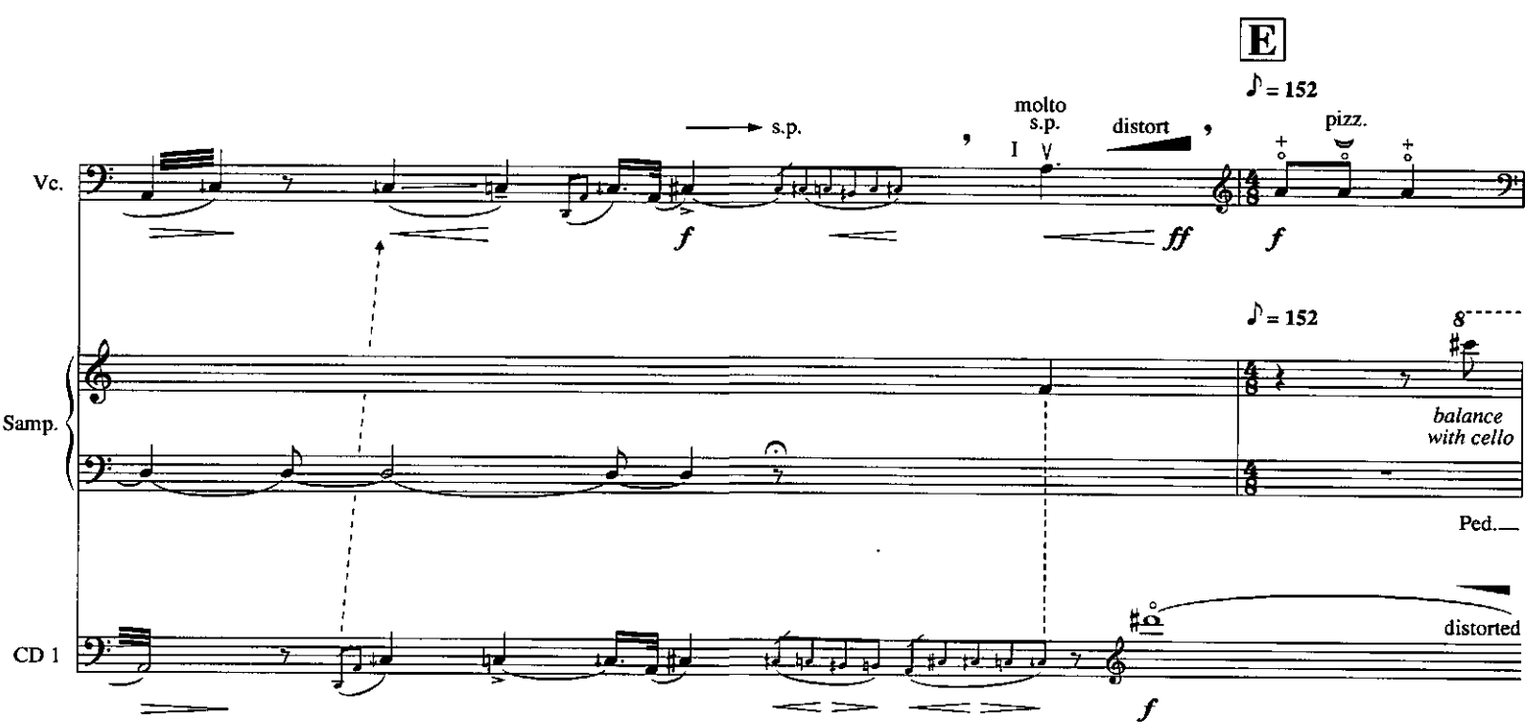

jeté (near the point)
I
II
harmonic gliss.
press bow at heel (as before)
Vc.
f
Samp.
Harm.
off
CD 1
fade out
2
4.5"
CD 2
pp
f

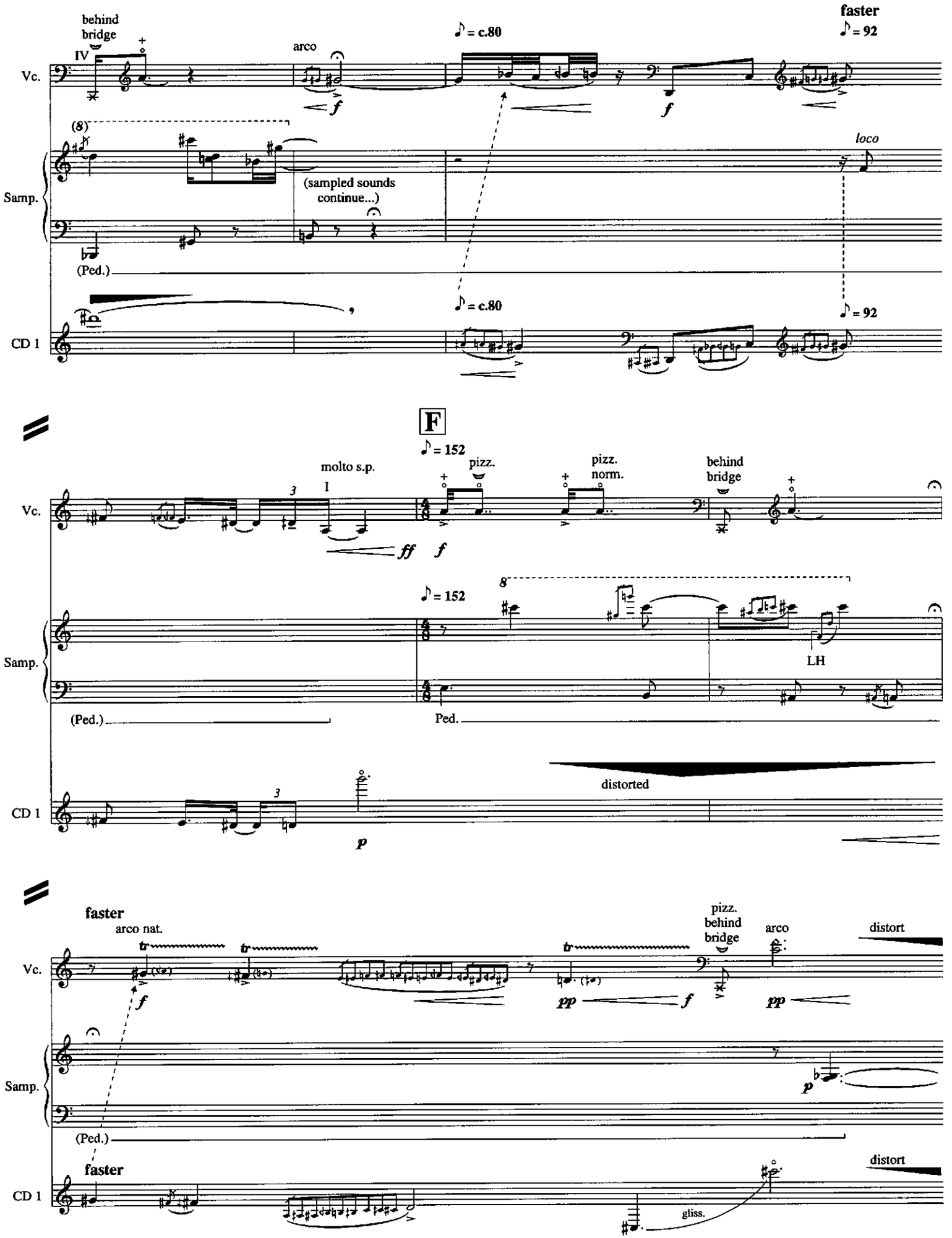

c. 3"
c. 18"
4"
accel.
densest
I
sim.
Vc.
ff
sf
p
chromatic cluster
Samp.
f
CD 1
partials
3
18"
CD 2
ppp !
spectrum gliss.

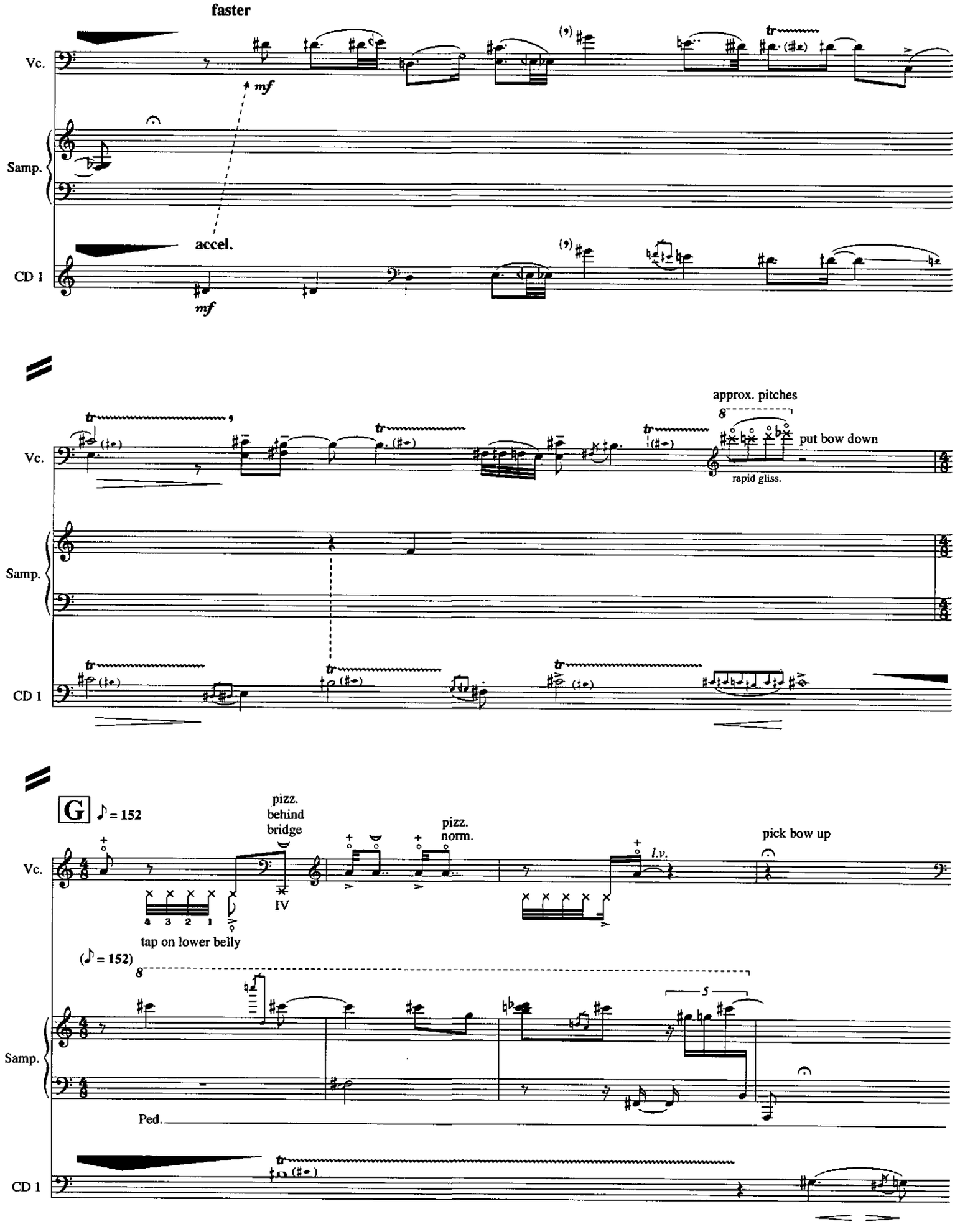

C
♩ = 60
con sord.
6"
blend with electronics
2"
8"
Vc.
gliss. at speed of CD
mp
mf
gliss.
3 + 1.5 / -2
Harm.
(17")
3
CD 1
spectrum gliss.
8
mp
short
commas
8"
5"
1.5"
gliss.
Vc.
gliss. accel.
mp
p
Harm.
(27")
(33")
CD 1
4"
6"
gliss.
gliss.
Vc.
Harm.
off
49"
CD 1
8

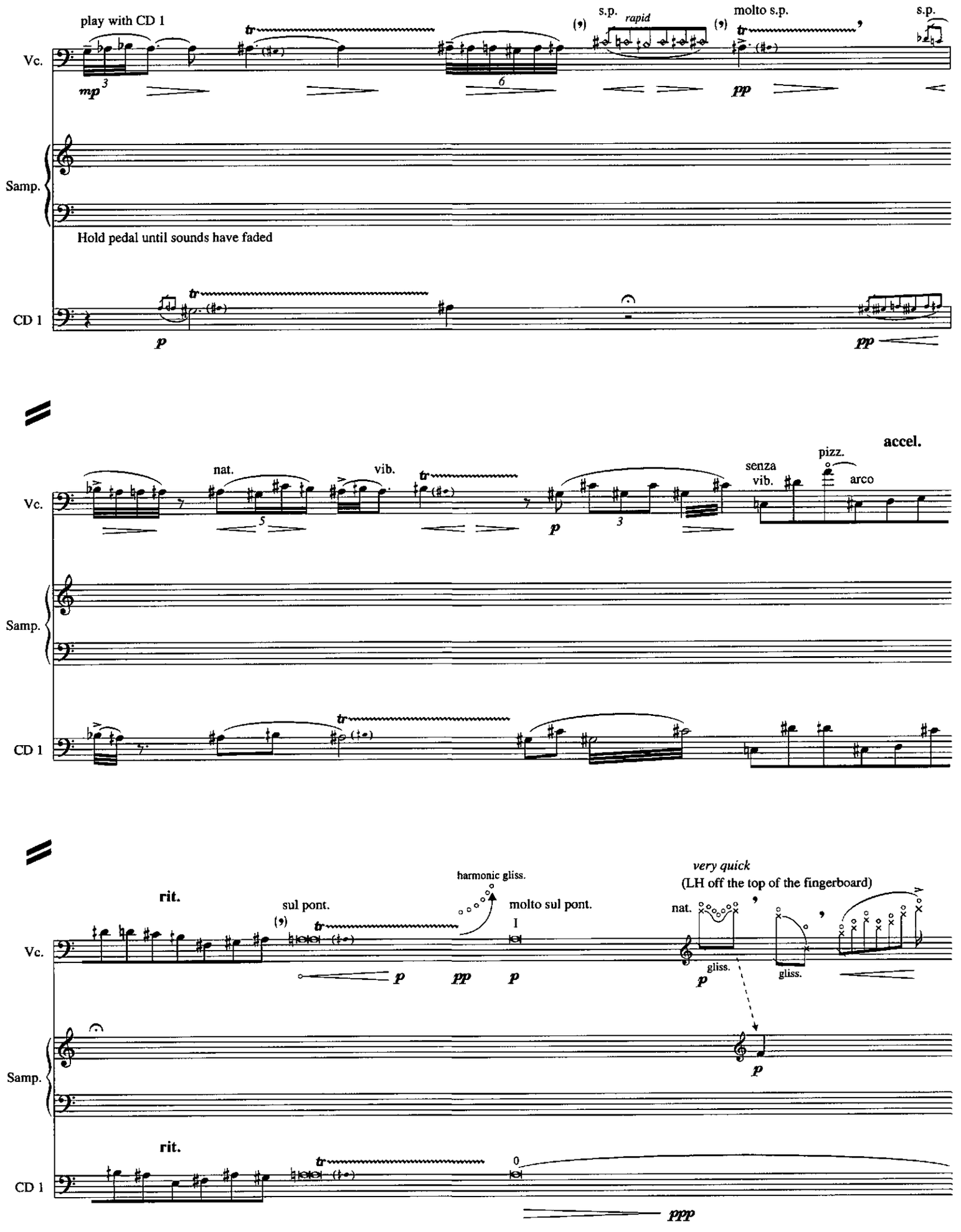

senza sord.
c. 6"
c. 12"
♩ = c. 80
s.v.
vib.
Vc.
pppp
f
4 -1 / +1
5 -6.3 / +1
Harm.
18"
gliss.
CD 1
8
mp
allargando
ten.
3
vib.
molto
s.p.
nat.
tr
ff
mf
f
mf
mp
6 +0.6 / - 0.7
off
Harm.
4
CD 2
pp
D
c. 5"
gliss.
accel.
s.p.
(s.p.)
nat.
vib. espress.
s.p.
nat.
molto cantabile
Vc.
pp
ppp
mf
p
poco f
mf
Samp.
(11")
pp
fade out
4
♪ = c. 80
CD 1
match cello in dynamic
CD 2

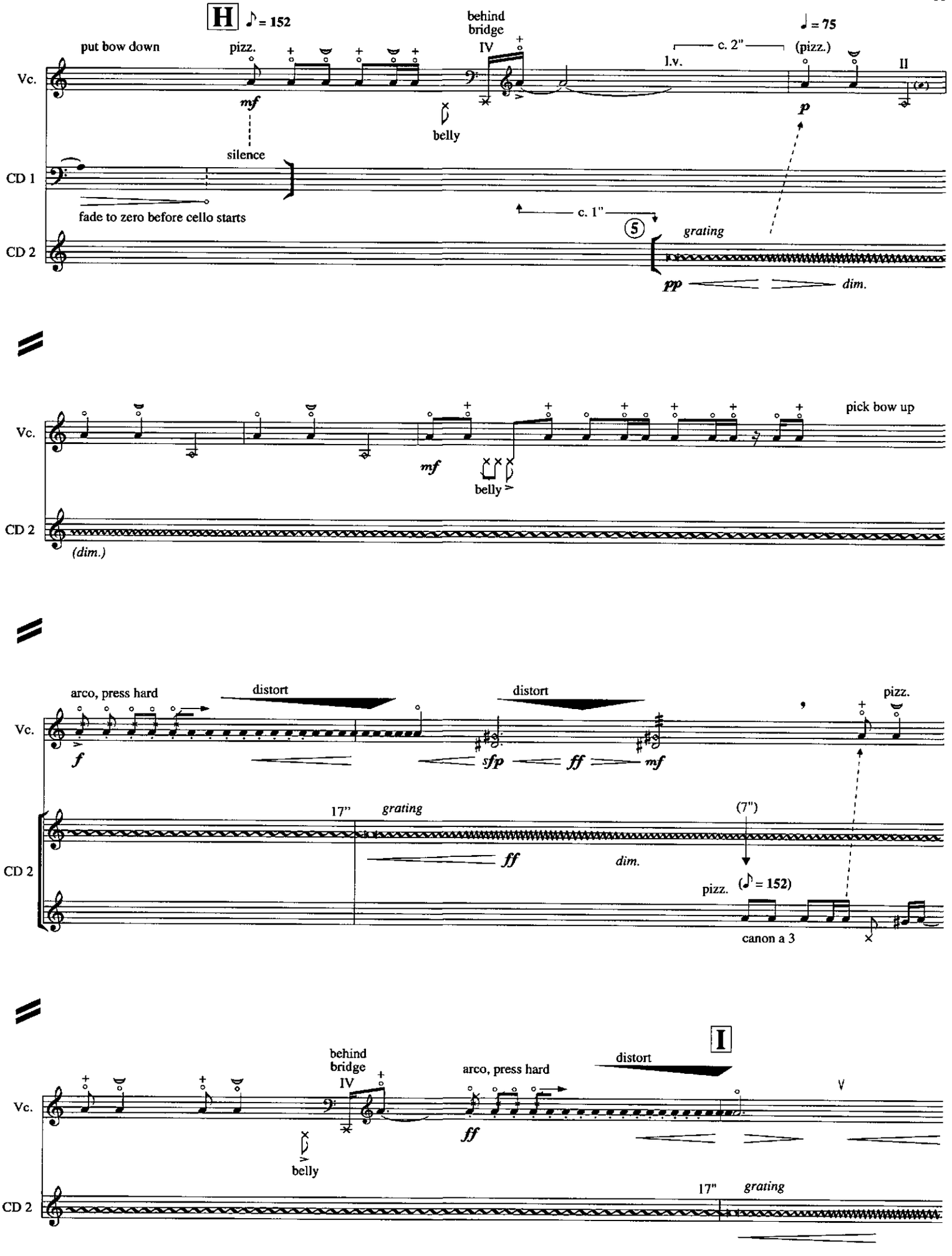

play with CD1
Vc.
Samp.
CD 1
CD 2
fade out

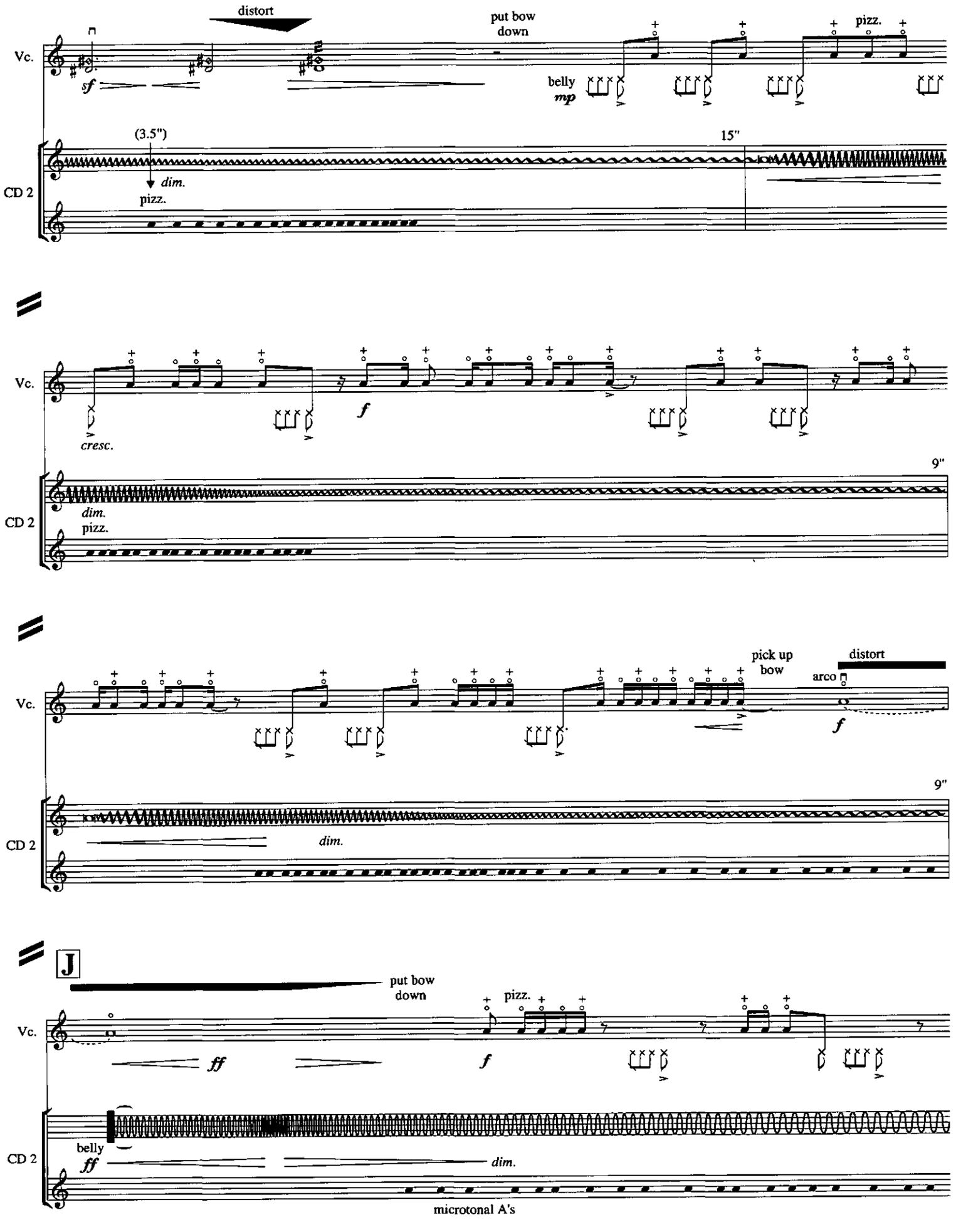

E
molto s.p.
distort
pizz.
balance with cello
Ped.
distorted
Vc.
Samp.
CD 1

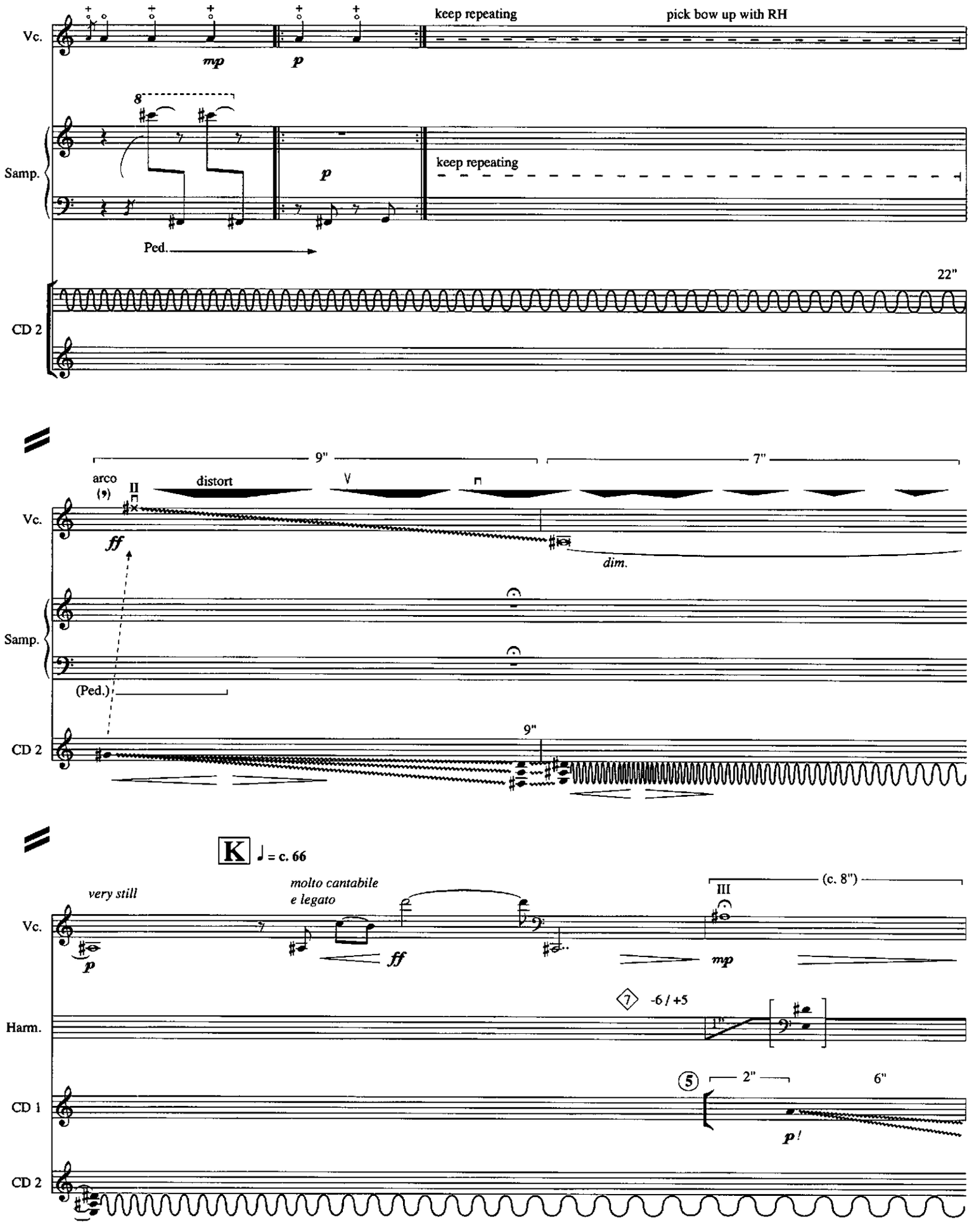

behind bridge
IV
arco
♪ = c.80
faster
♪ = 92
Vc.
(8)
(sampled sounds continue...)
loco
Samp.
(Ped.)
♪ = c.80
♪ = 92
CD 1
F
♪ = 152
molto s.p.
I
pizz.
pizz. norm.
behind bridge
ff
f
♪ = 152
8
LH
Ped.
distorted
p
faster
arco nat.
pizz. behind bridge
arco
distort
pp
gliss.

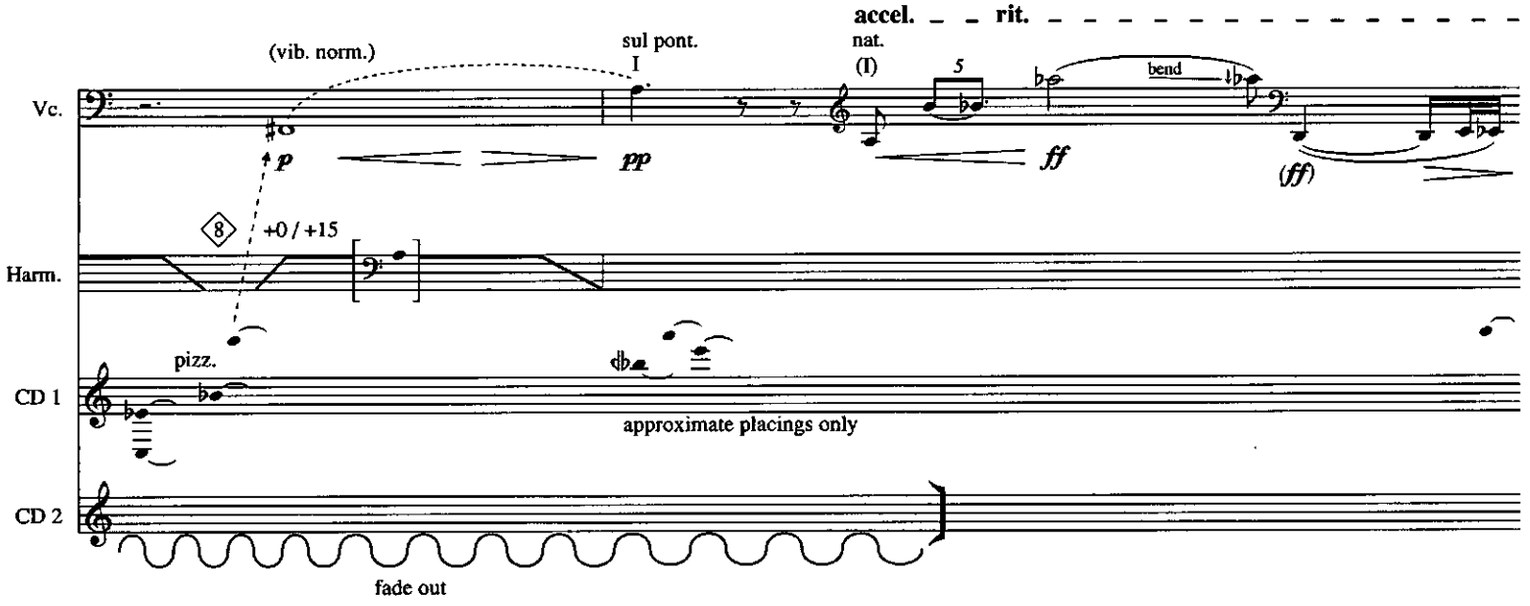

faster
Vc.
mf
Samp.
accel.
CD 1
mf
approx. pitches
8
put bow down
rapid gliss.
G
♪ = 152
pizz.
behind
bridge
IV
pizz.
norm.
l.v.
pick bow up
tap on lower belly
(♪ = 152)
8
5
Ped.

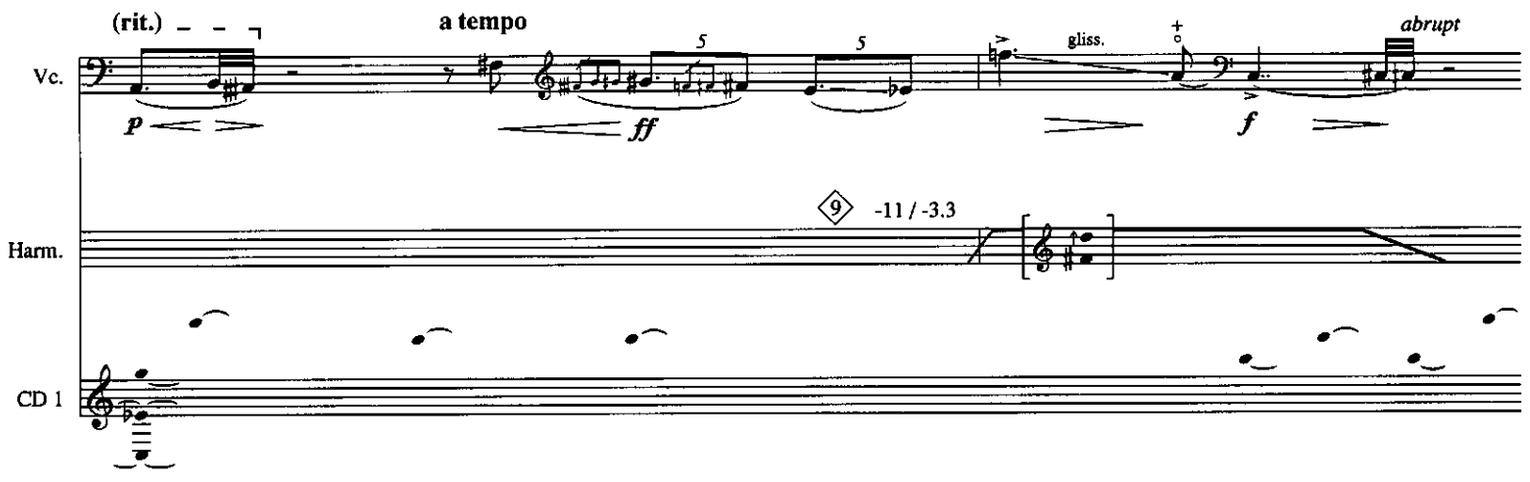

play with CD 1
s.p.
rapid
molto s.p.
s.p.
Vc.
Samp.
Hold pedal until sounds have faded
CD 1
nat.
vib.
accel.
pizz.
senza vib.
arco
rit.
sul pont.
harmonic gliss.
molto sul pont.
very quick
(LH off the top of the fingerboard)
nat.
gliss.
gliss.
rit.

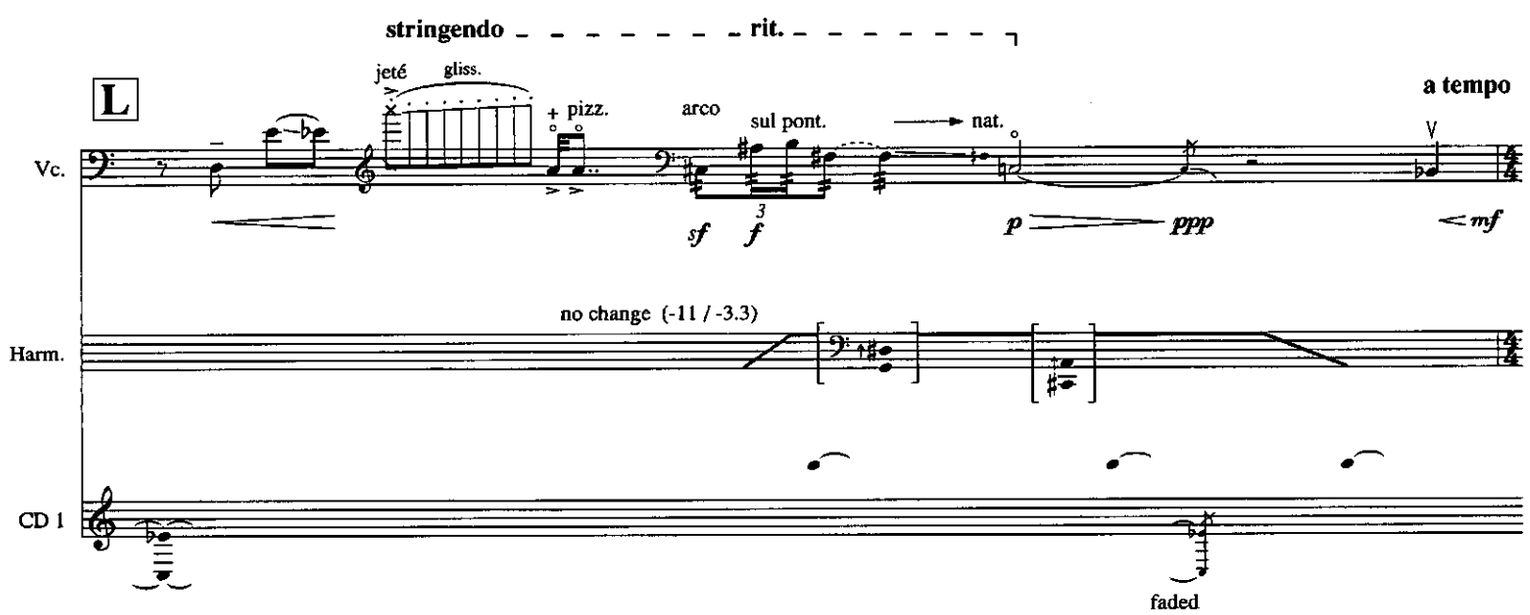

H
♪ = 152
put bow down
pizz.
behind bridge
IV
belly
l.v.
c. 2"
(pizz.)
II
♩ = 75
Vc.
mf
p
silence
CD 1
fade to zero before cello starts
c. 1"
5
grating
CD 2
pp
dim.
pick bow up
mf
belly
(dim.)
arco, press hard
distort
distort
pizz.
f
sfp
ff
mf
17"
grating
(7")
ff
dim.
pizz.
(♪ = 152)
canon a 3
I
behind bridge
IV
arco, press hard
distort
belly
ff
17"
grating

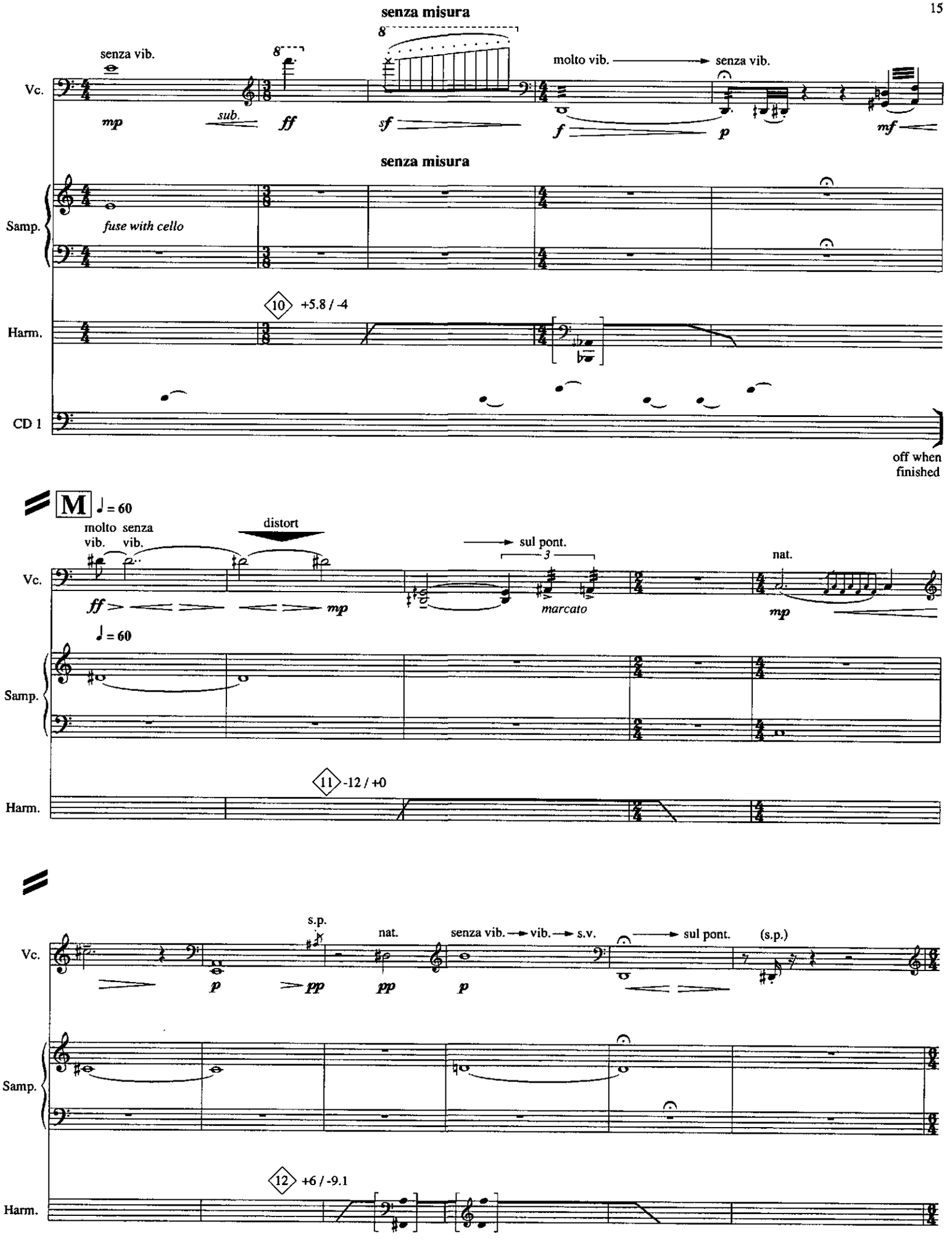

distort
put bow down
pizz.
Vc.
sf
belly
mp
(3.5")
15"
dim.
pizz.
CD 2
cresc.
f
9"
pick up bow
distort
arco
J
ff
microtonal A's

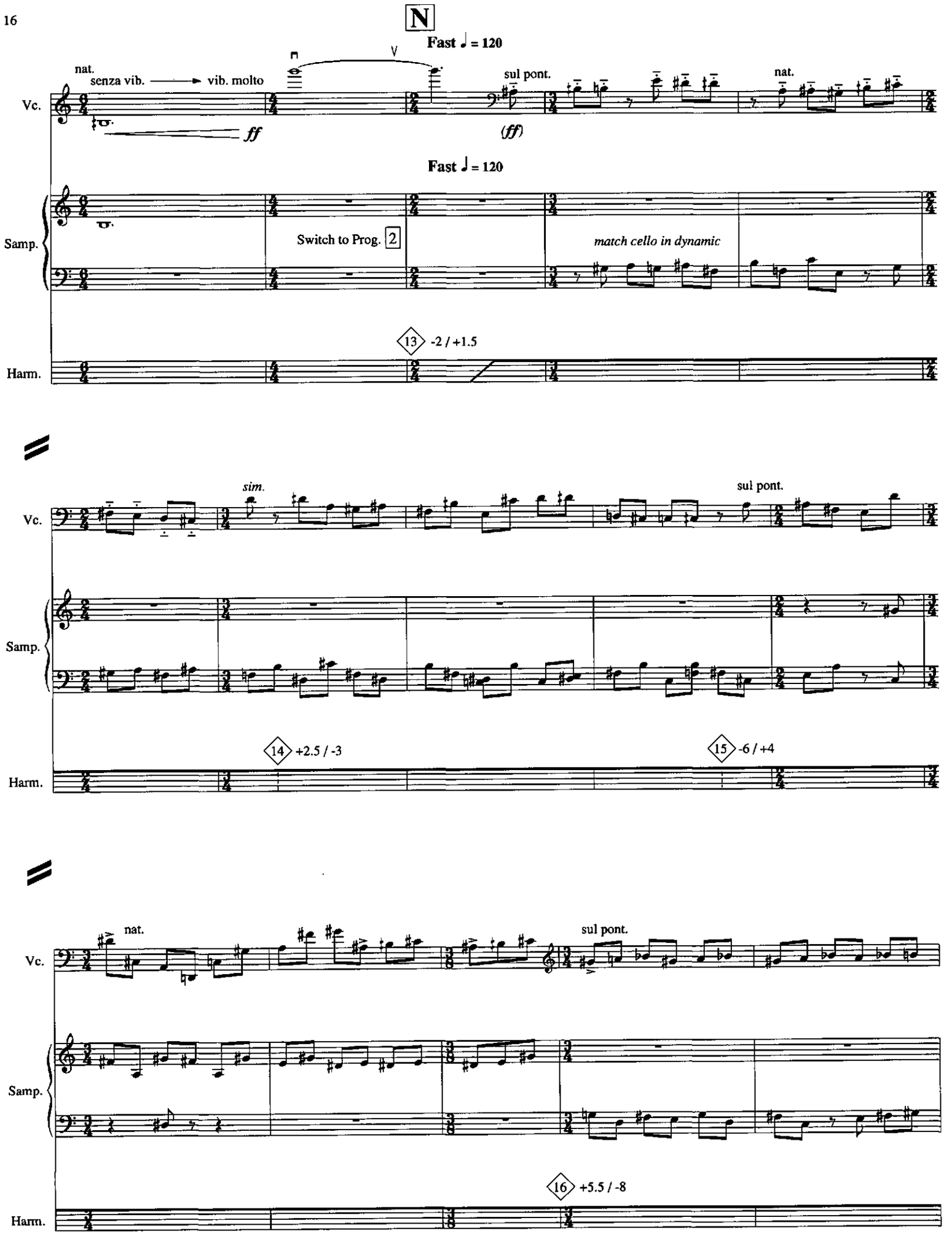

Vc.
mp
p
keep repeating
pick bow up with RH
Samp.
8
p
keep repeating
Ped.
22"
CD 2
9"
7"
arco
(♮)
II
distort
V
ff
dim.
Vc.
Samp.
(Ped.)
9"
CD 2
K
♩ = c. 66
very still
molto cantabile
e legato
p
ff
III
(c. 8")
mp
Vc.
7
-6 / +5
1"
Harm.
5
2"
6"
p !
CD 1
CD 2

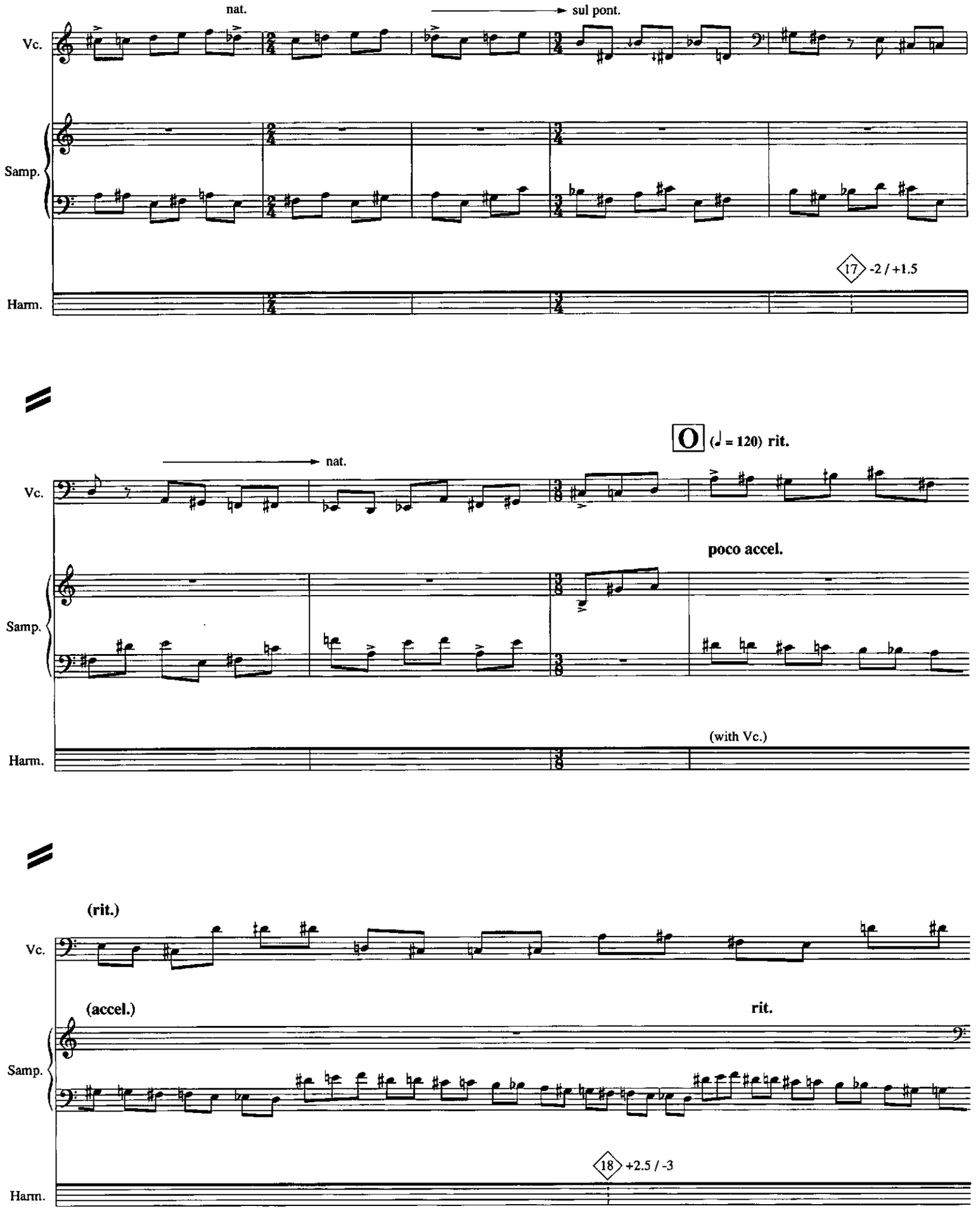

accel. rit.
(vib. norm.)
sul pont.
I
nat.
(I)
bend
Vc.
p
pp
ff
(ff)
8
+0 / +15
Harm.
pizz.
CD 1
approximate placings only
CD 2
fade out

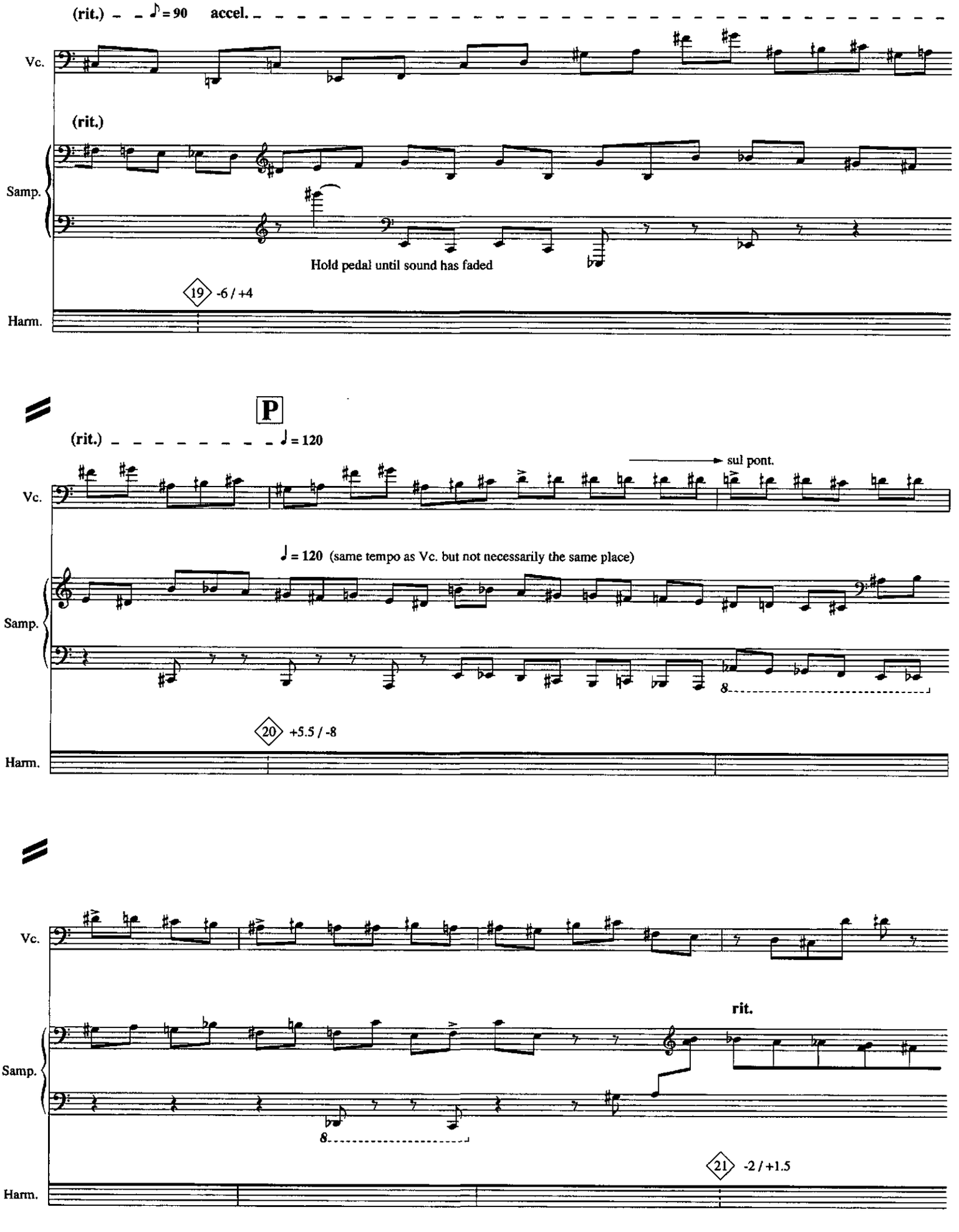

(rit.)
a tempo
gliss.
abrupt
Vc.
p
ff
f
9
-11 / -3.3
Harm.
CD 1

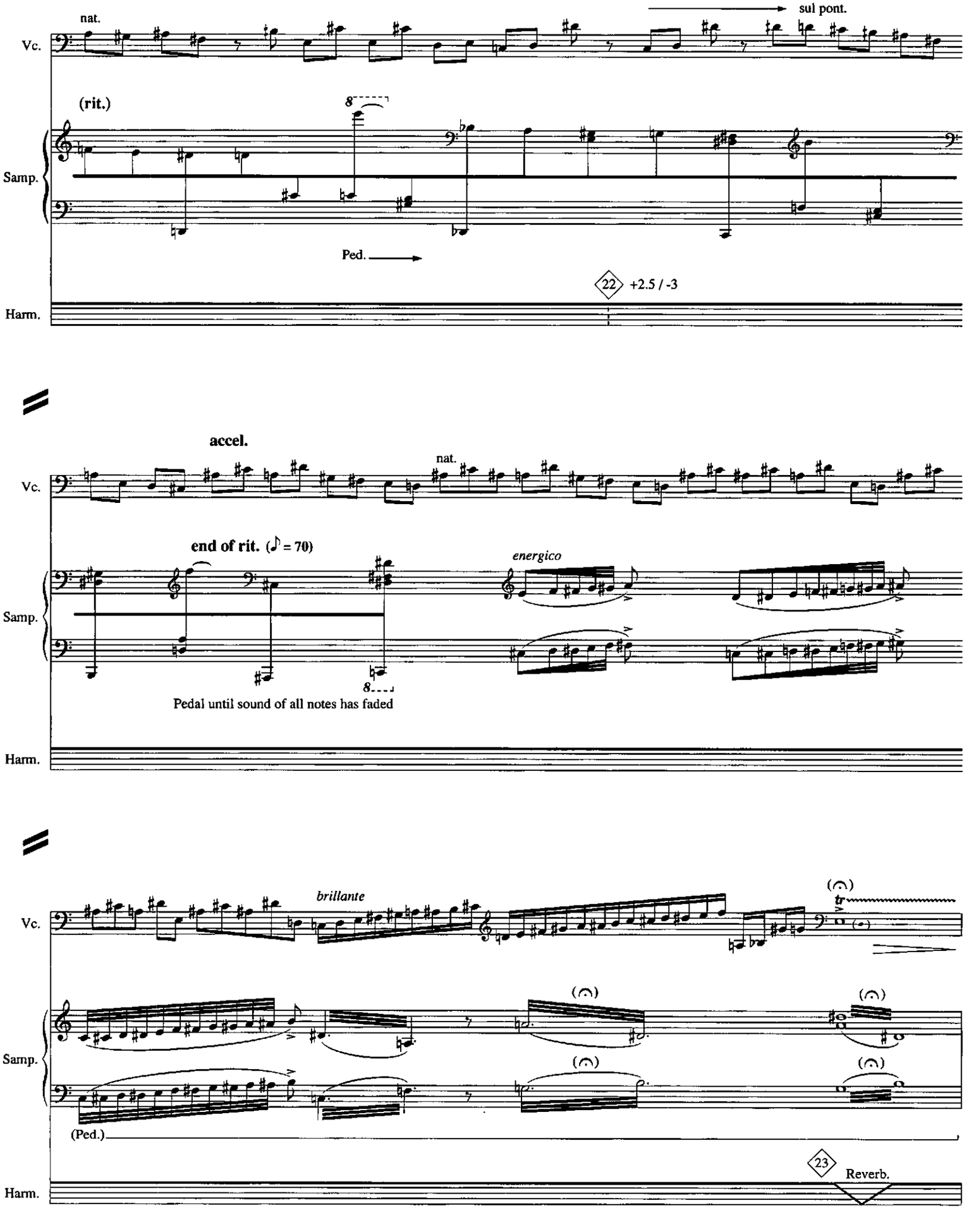

stringendo rit.
L
jeté
gliss.
pizz.
arco
sul pont.
nat.
a tempo
Vc.
sf
f
p
ppp
mf
no change (-11 / -3.3)
Harm.
CD 1
faded

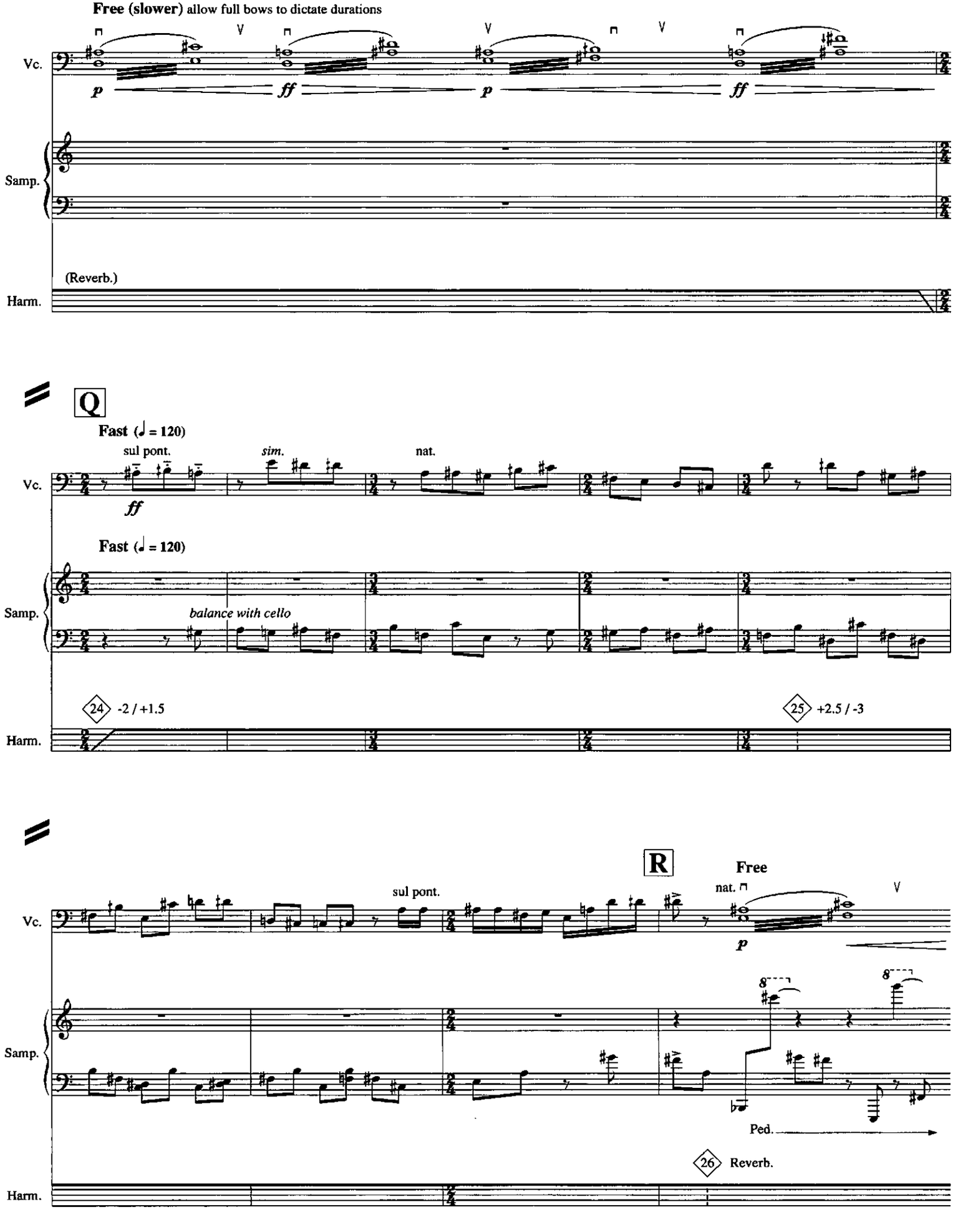

senza misura
senza vib.
molto vib.
senza vib.
Vc.
mp
sub.
ff
sf
f
p
mf
senza misura
Samp.
fuse with cello
10 +5.8 / -4
Harm.
CD 1
off when finished
M ♩ = 60
molto vib.
senza vib.
distort
sul pont.
3
nat.
marcato
mp
♩ = 60
11 -12 / +0
s.p.
nat.
senza vib. → vib. → s.v.
sul pont.
(s.p.)
pp
12 +6 / -9.1

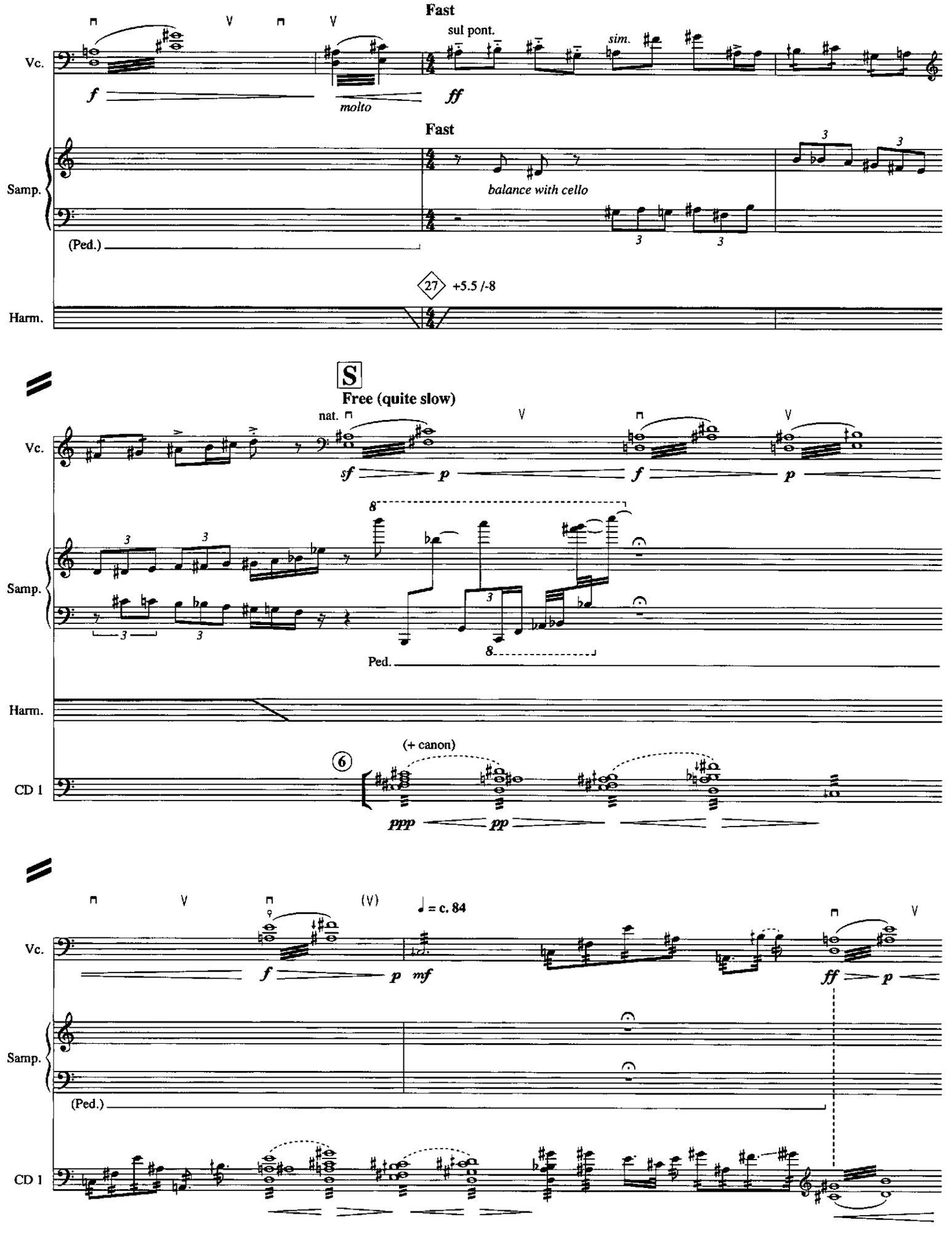

N
Fast ♩ = 120
nat.
senza vib.
vib. molto
sul pont.
nat.
Vc.
ff
(ff)
Fast ♩ = 120
Samp.
Switch to Prog. 2
match cello in dynamic
13 -2 / +1.5
Harm.
sim.
sul pont.
Vc.
Samp.
14 +2.5 / -3
15 -6 / +4
Harm.
nat.
sul pont.
Vc.
Samp.
16 +5.5 / -8
Harm.

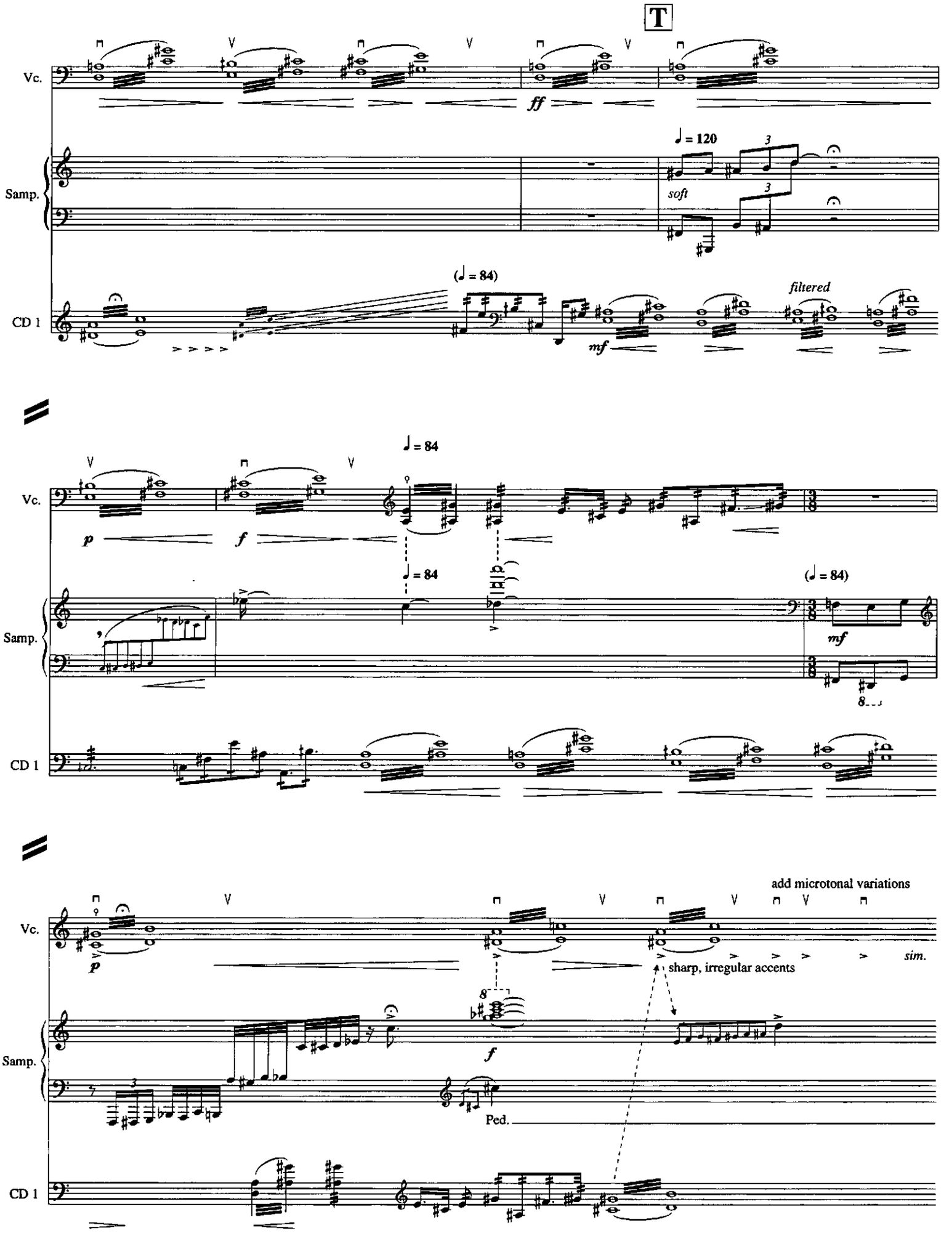

nat.
sul pont.
Vc.
Samp.
17 -2 / +1.5
Harm.
O (♩ = 120) rit.
nat.
Vc.
poco accel.
Samp.
(with Vc.)
Harm.
(rit.)
Vc.
(accel.)
rit.
Samp.
18 +2.5 / -3
Harm.

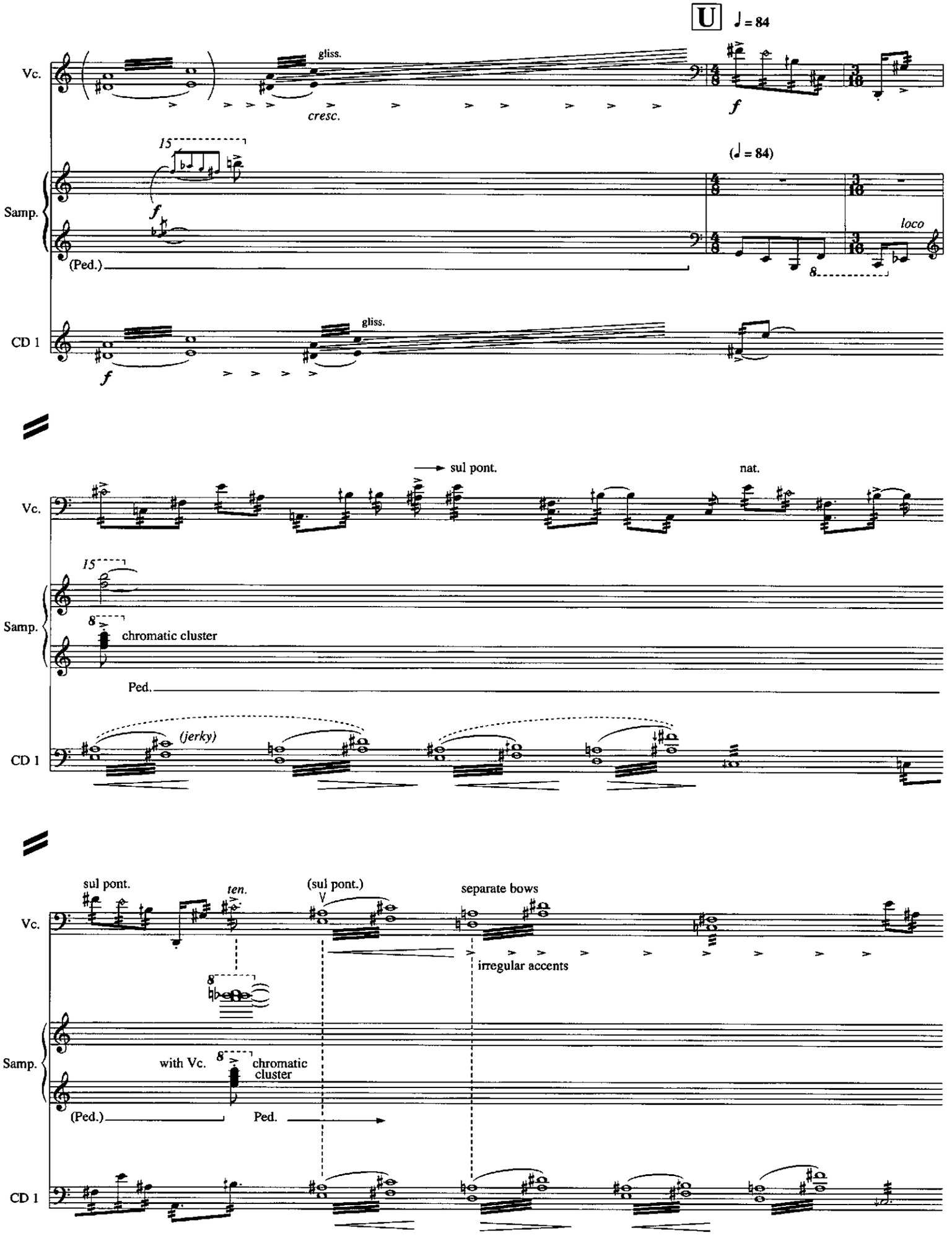

(rit.) ♪ = 90 accel.
Vc.
(rit.)
Samp.
Hold pedal until sound has faded
19 -6 / +4
Harm.
P
(rit.) ♩ = 120
sul pont.
Vc.
♩ = 120 (same tempo as Vc. but not necessarily the same place)
Samp.
8
20 +5.5 / -8
Harm.
Vc.
rit.
Samp.
8
21 -2 / +1.5
Harm.

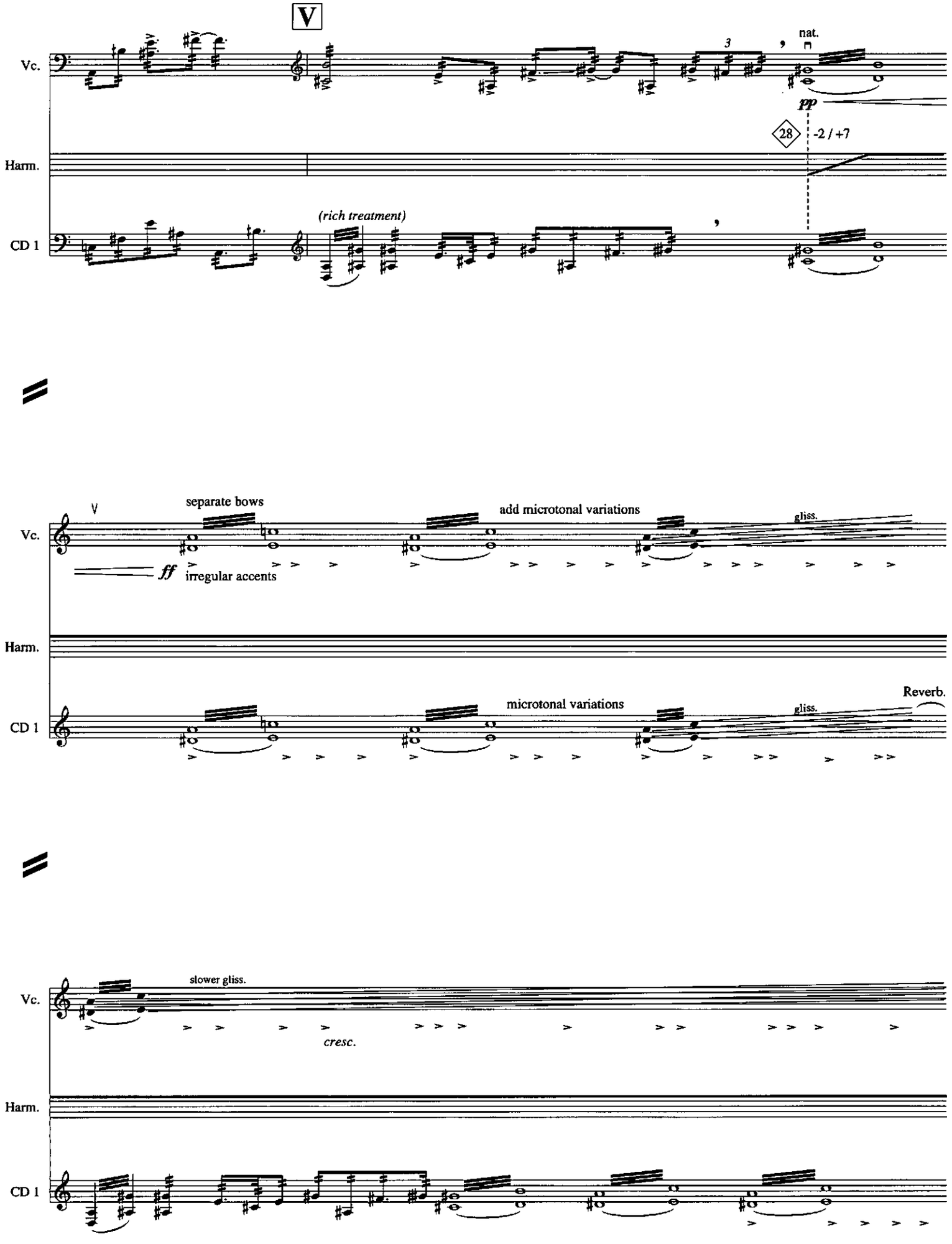

nat.
sul pont.
Vc.
(rit.)
8
Samp.
Ped.
22
+2.5 / -3
Harm.
accel.
nat.
Vc.
end of rit. (♪ = 70)
energico
Samp.
8
Pedal until sound of all notes has faded
Harm.
brillante
Vc.
tr
Samp.
(Ped.)
23
Reverb.
Harm.

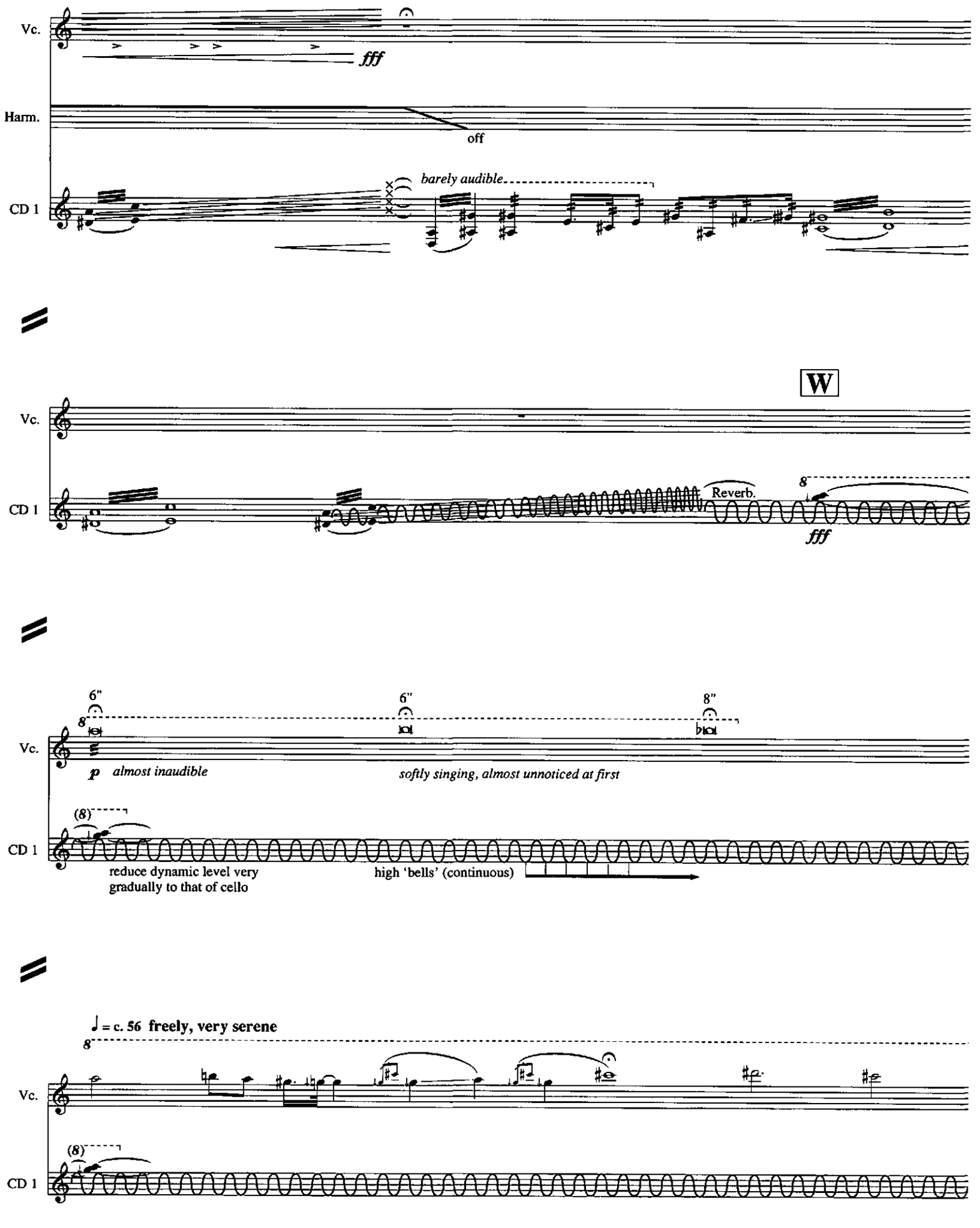

Free (slower) allow full bows to dictate durations
Vc.
p
ff
p
ff
Samp.
(Reverb.)
Harm.
Q
Fast (♩ = 120)
sul pont.
sim.
nat.
Vc.
ff
Fast (♩ = 120)
Samp.
balance with cello
24 -2 / +1.5
25 +2.5 / -3
Harm.
R
Free
sul pont.
nat.
Vc.
p
Samp.
8
8
Ped.
26 Reverb.
Harm.

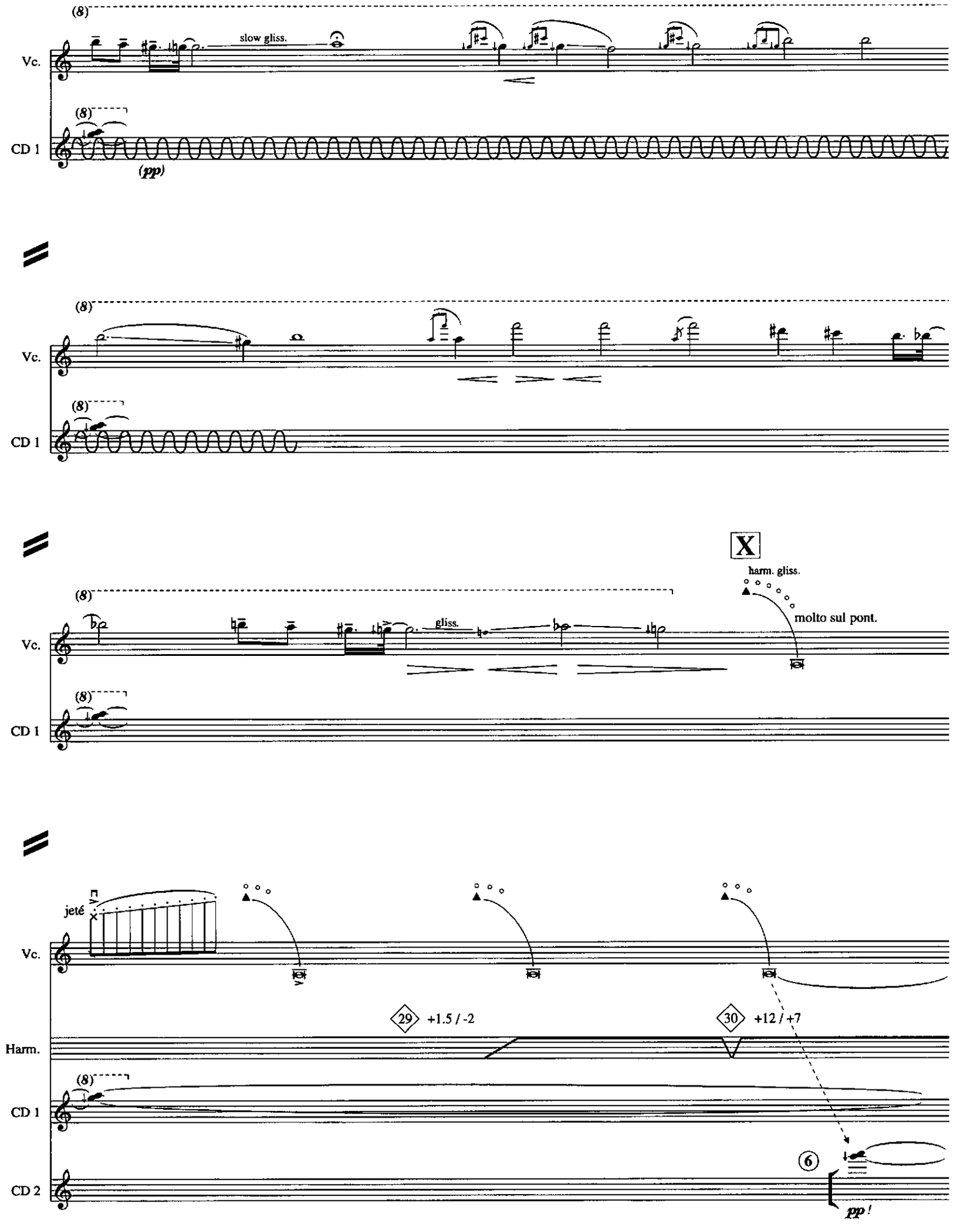

Fast
sul pont.
sim.
Vc.
f
molto
ff
Fast
Samp.
balance with cello
(Ped.)
27
+5.5 /-8
Harm.
S
Free (quite slow)
nat.
sf
p
f
p
Samp.
Ped.
Harm.
(+ canon)
6
CD 1
ppp
pp
(V)
♩ = c. 84
Vc.
f
p
mf
ff
p
Samp.
(Ped.)
CD 1

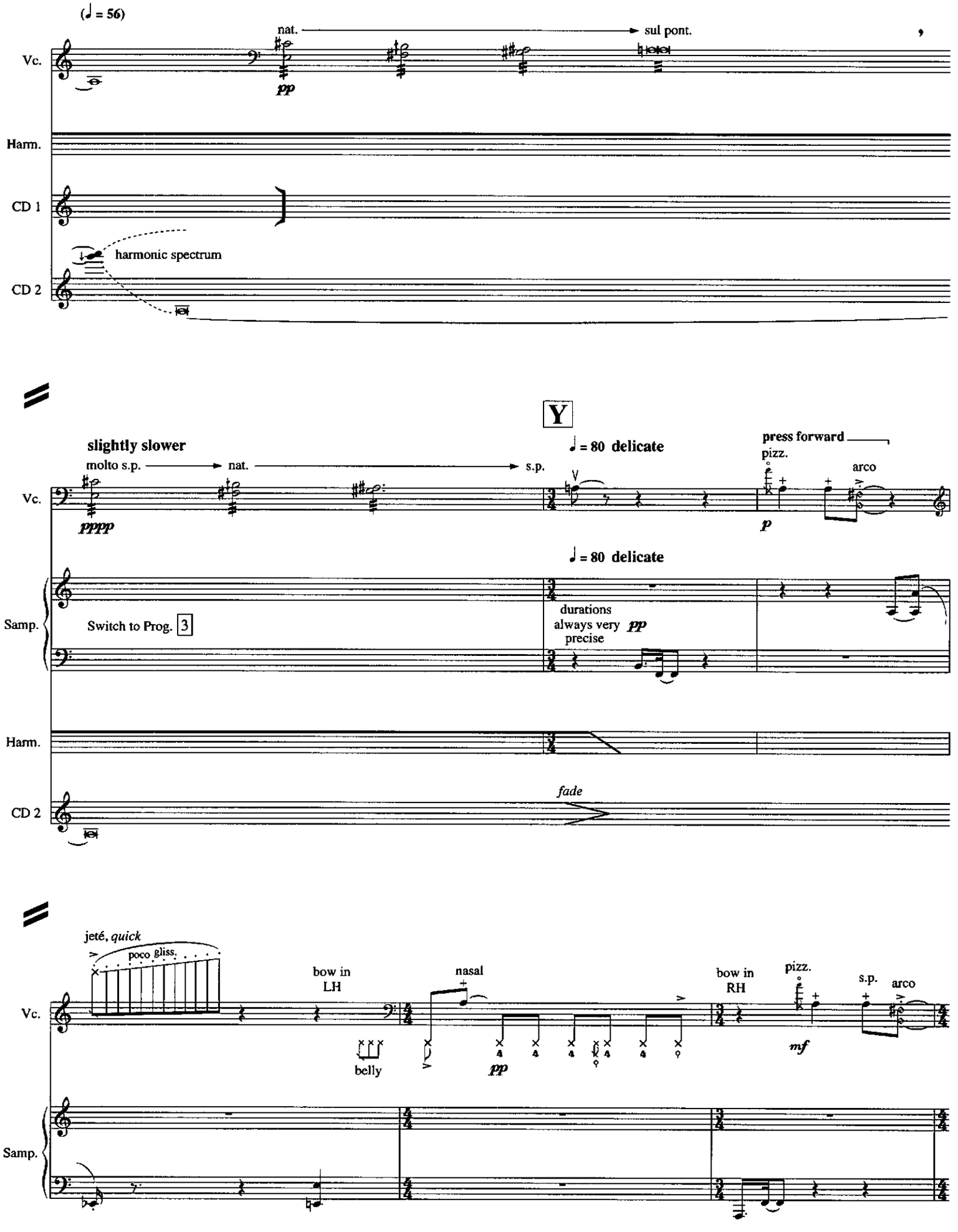

T
Vc.
Samp.
CD 1
ff
♩ = 120
soft
(♩ = 84)
filtered
mf
♩ = 84
p
f
♩ = 84
(♩ = 84)
mf
add microtonal variations
sharp, irregular accents
sim.
Ped.

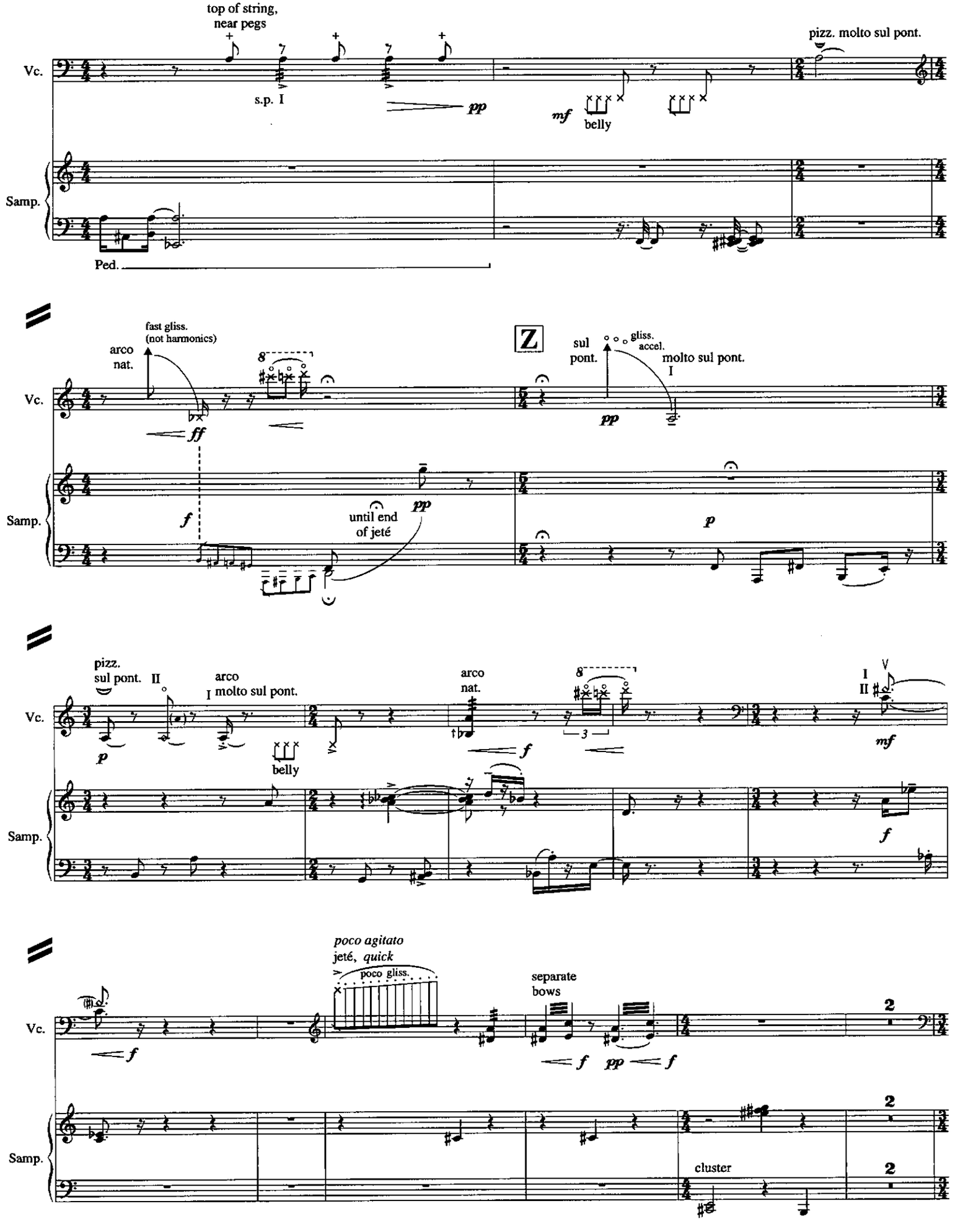

U
♩ = 84
Vc.
gliss.
cresc.
f
15
(♩ = 84)
Samp.
loco
(Ped.)
8
CD 1
gliss.
f
sul pont.
nat.
Vc.
15
Samp.
8
chromatic cluster
Ped.
CD 1
(jerky)
sul pont.
ten.
(sul pont.)
V
separate bows
Vc.
irregular accents
8
Samp.
with Vc.
8
chromatic cluster
(Ped.)
Ped.
CD 1

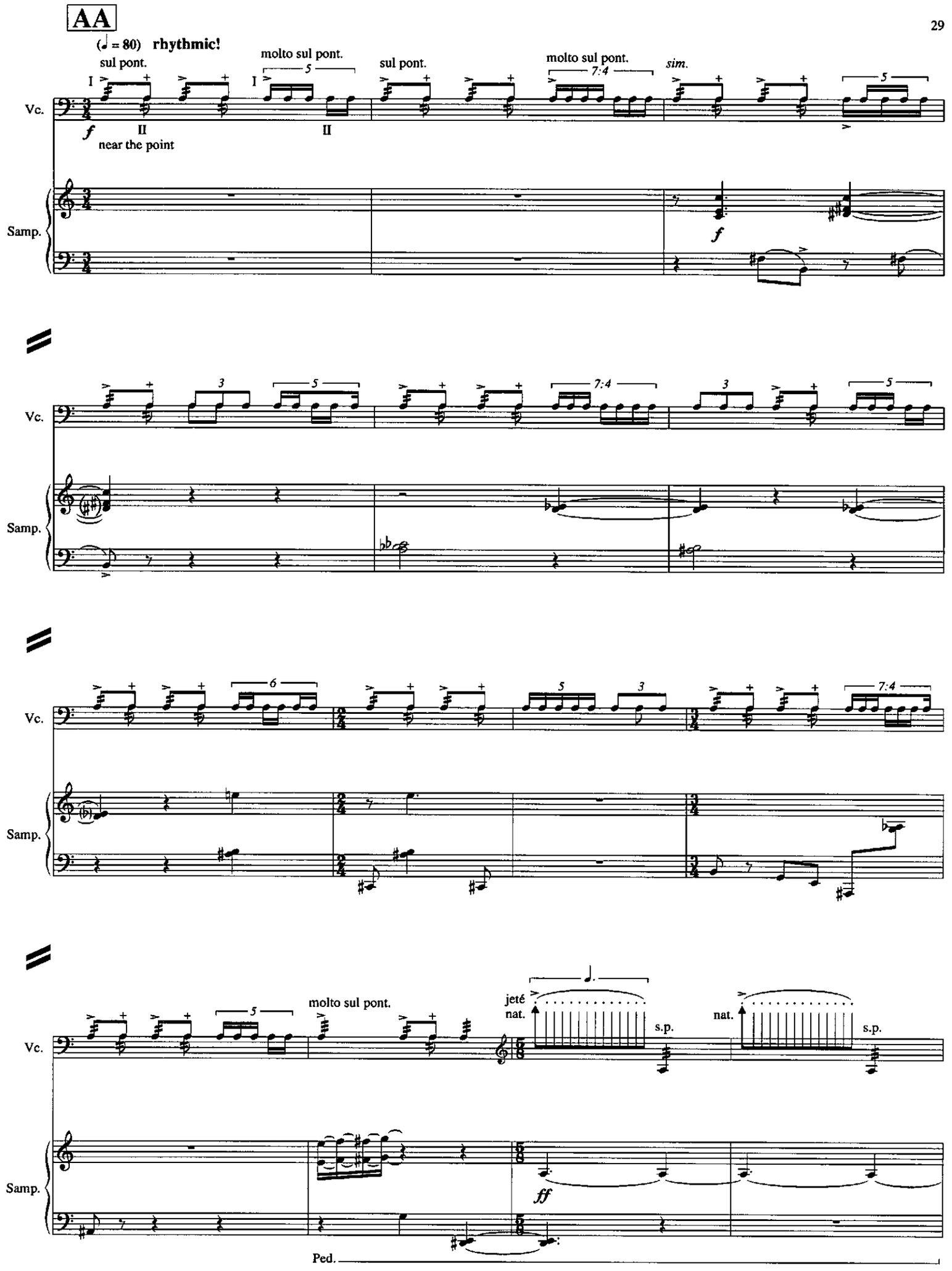

V
Vc.
nat.
3
pp
28
-2 / +7
Harm.
(rich treatment)
CD 1
V
separate bows
add microtonal variations
gliss.
ff
irregular accents
Harm.
Reverb.
microtonal variations
gliss.
CD 1
slower gliss.
Vc.
cresc.
Harm.
CD 1

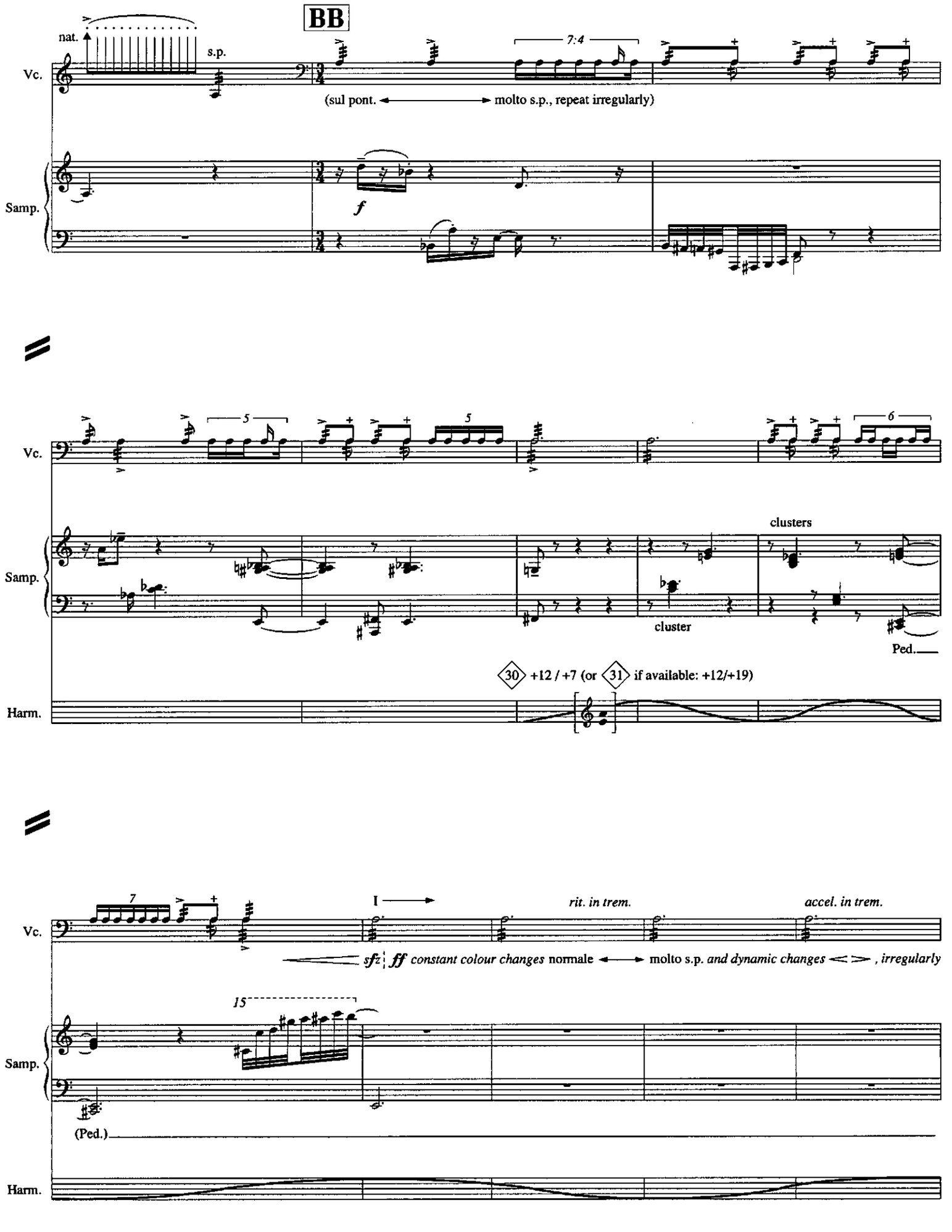

Vc.
fff
Harm.
off
CD 1
barely audible
W
Vc.
CD 1
Reverb.
8
fff
6"
6"
8"
8
Vc.
p almost inaudible
softly singing, almost unnoticed at first
(8)
CD 1
reduce dynamic level very gradually to that of cello
high 'bells' (continuous)
♩ = c. 56 freely, very serene
8
Vc.
(8)
CD 1

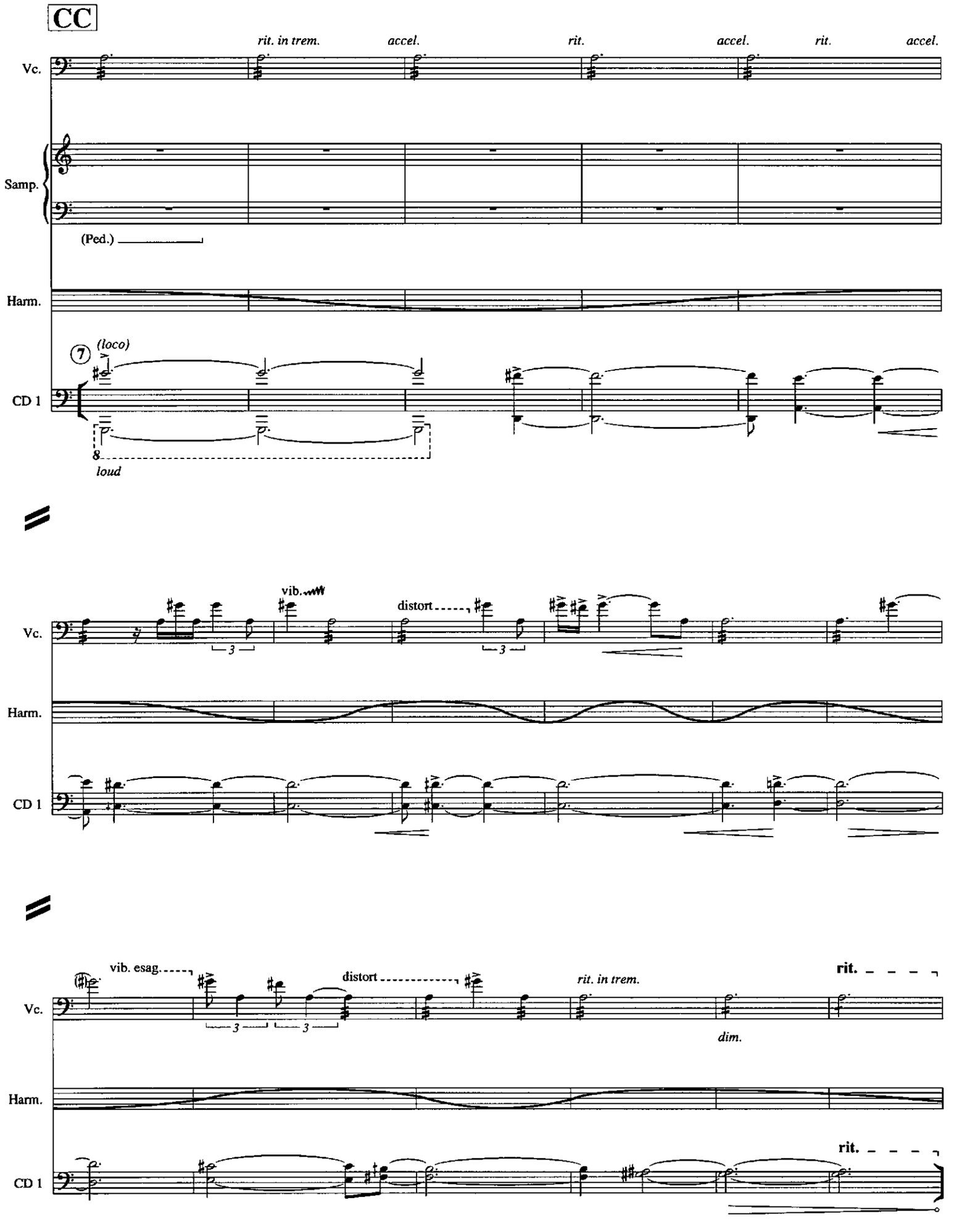

(8)
slow gliss.
Vc.
(8)
CD 1
(pp)
(8)
Vc.
(8)
CD 1
X
harm. gliss.
(8)
gliss.
molto sul pont.
Vc.
(8)
CD 1
jeté
Vc.
29 +1.5 / -2
30 +12 / +7
Harm.
(8)
CD 1
6
CD 2
pp !

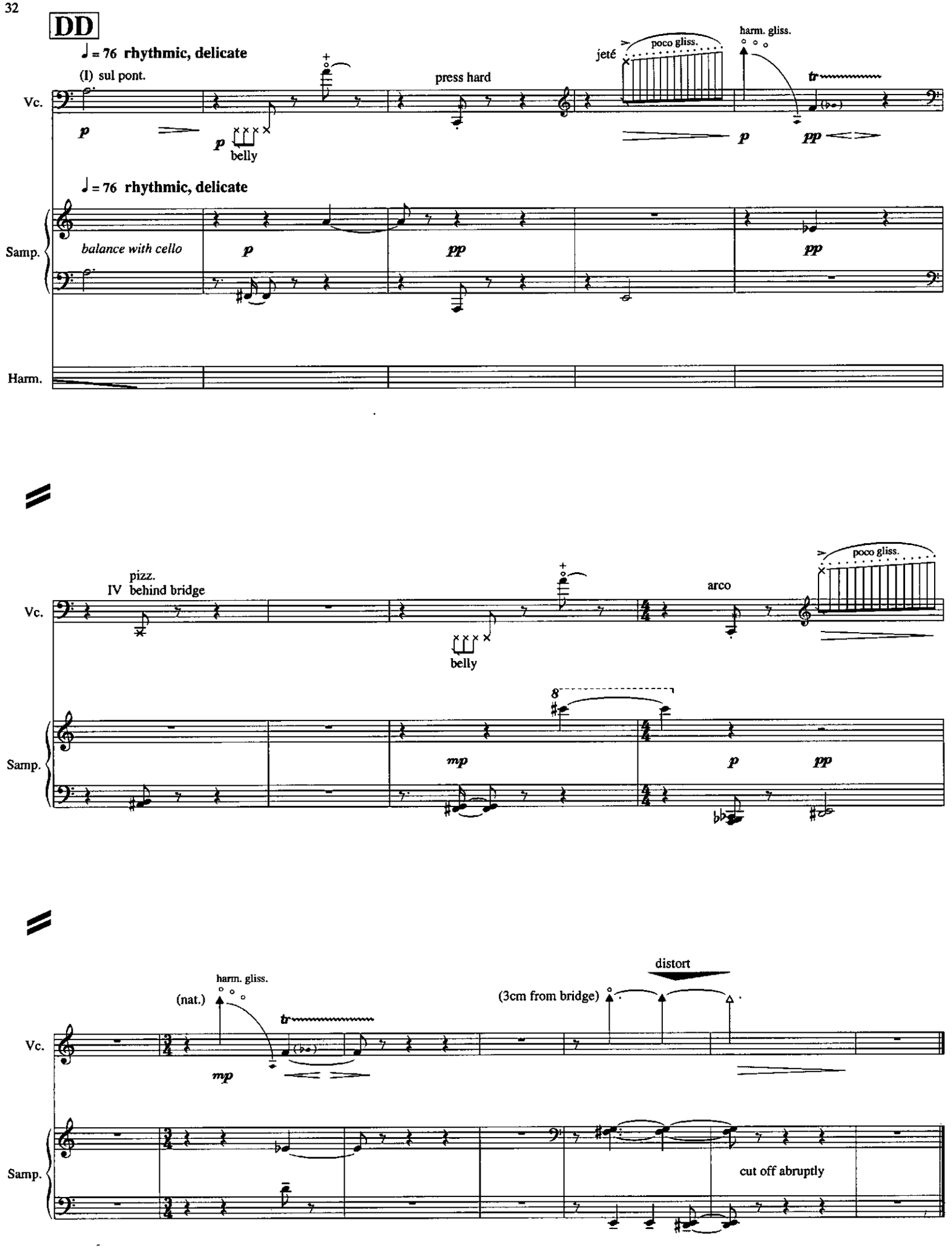

(♩ = 56)
nat.
sul pont.
Vc.
pp
Harm.
CD 1
harmonic spectrum
CD 2
Y
slightly slower
molto s.p.
nat.
s.p.
♩ = 80 delicate
press forward
pizz.
arco
pppp
p
Samp.
Switch to Prog. 3
durations
always very precise
pp
fade
jeté, quick
poco gliss.
bow in LH
belly
nasal
bow in RH
pizz.
s.p.
mf


top of string, near pegs
s.p. I
pp
mf
belly
pizz. molto sul pont.
Vc.
Samp.
Ped.
fast gliss. (not harmonics)
arco nat.
ff
Z
sul pont.
gliss. accel.
molto sul pont.
I
pp
f
until end of jeté
p
pizz. sul pont. II
arco I molto sul pont.
belly
arco nat.
f
3
I II V
mf
f
poco agitato
jeté, quick
poco gliss.
separate bows
f
pp
f
2
cluster


AA
(♩ = 80) rhythmic!
sul pont.
molto sul pont.
sul pont.
molto sul pont.
sim.
Vc.
Samp.
f
near the point
molto sul pont.
jeté
nat.
s.p.
nat.
s.p.
ff
Ped.


BB
nat.
s.p.
Vc.
7:4
(sul pont. molto s.p., repeat irregularly)
Samp.
f
5
5
6
clusters
cluster
Ped.
30 +12 / +7 (or 31 if available: +12/+19)
Harm.
7
I
rit. in trem.
accel. in trem.
sfz ff constant colour changes normale molto s.p. and dynamic changes , irregularly
15
(Ped.)


CC
rit. in trem.
accel.
rit.
accel.
rit.
accel.
Vc.
Samp.
(Ped.)
Harm.
7
(loco)
CD 1
8
loud
vib.
distort
3
3
Vc.
Harm.
CD 1
vib. esag.
distort
rit. in trem.
rit.
dim.
Vc.
Harm.
rit.
CD 1


DD
♩= 76 rhythmic, delicate
(I) sul pont.
press hard
jeté
poco gliss.
harm. gliss.
Vc.
p
p
belly
p
pp
♩= 76 rhythmic, delicate
Samp.
balance with cello
p
pp
pp
Harm.
pizz.
IV behind bridge
belly
arco
poco gliss.
Vc.
8
mp
p
pp
Samp.
harm. gliss.
(nat.)
tr
mp
distort
(3cm from bridge)
Vc.
cut off abruptly
Samp.