Nocturne

A trio with live electronics by Joe Bates

Full score

Performance Notes

Instrumentation

Piano

Double bass (scordatura)

Percussion: woodblock, autoharp

Live electronics (triggered by percussionist): Whammy pedal, contact mic, laptop running Ableton Live, audio interface, PA/amp.

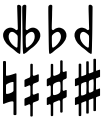
Duration – 5'30"

Programme note

In 2016, I bought myself a cheap autoharp off eBay. I was captivated by its strange, glistening sound and its potential to be retuned. This piece uses what I think of as my 'night music': a pulsing, shifting rhythmic style that has cropped up across my works.

Performance Directions

Accidentals



Stein-Zimmerman quartertones and conventional accidentals are used to indicate a 24-tone equal temperament.

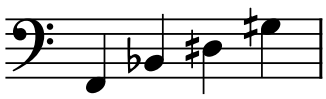
These are combined with Extended Helmholtz-Ellis notation:

↓ A syntonic comma lowers the note by 14c, to be in tune with the fifth harmonic.

Double Bass Scordatura

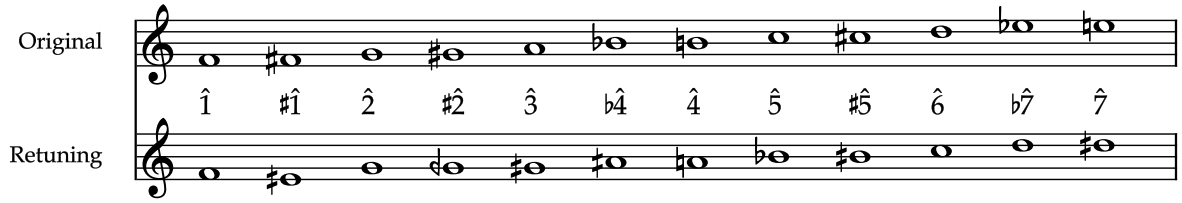
This piece uses scordatura, tuning the strings as indicated below. The score shows only the sounding pitches. The double bass part is presented in two parts, both of which use the customary octave transposition. The upper line shows the sounding pitches; the lower line shows the scordatura transpositions.

IV III II I



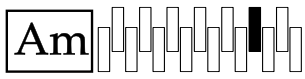
Autoharp notation

The autoharp part is written for a fifteen-chord autoharp in F major that has been microtonally retuned. It will be performable on any autoharp that has the same ten chords (I, ii, II^7, iii, III^7, IV, V, V^7, vi, VI^7) and that can be retuned in the same way. The tuning is:

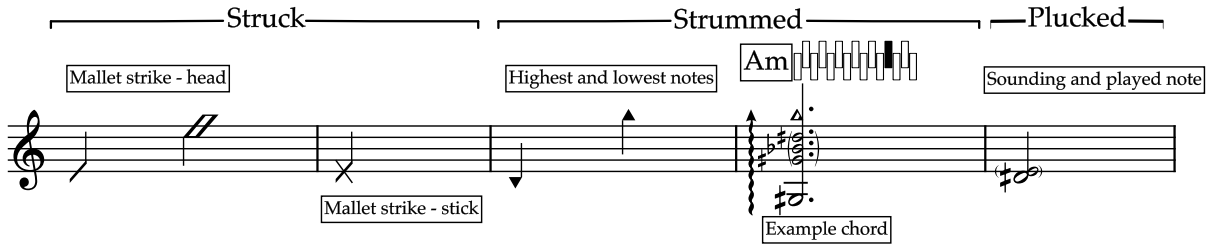


Chords

Chords are notated using standard chord symbols in boxes. They are depressed using the keys on top of the autoharp. The correct key is specified in the given glyphs, as shown below. These are omitted if the same chord is used twice in a row. Sometimes, more than one chord is specified, meaning two buttons need to be depressed. N.C. means that no chord button is depressed, and acts as a cautionary after long passages of chord symbols.



The autoharp is played in three ways: it is struck, strummed and plucked. These are notated using differing noteheads, which are given as examples below.



Struck notes

The percussionist should use a soft mallet. Slash noteheads indicate that the percussionist should use the mallet head, cross noteheads indicate that they should use the stick of the mallet.

The position of the slash noteheads on the staff indicates approximately where the percussionist should strike: the bottom line indicates the bottom of the instrument, and the top line, its top. When using the stick, as indicated by the cross noteheads, the percussionist should always strike as much of the instrument as possible at once.

Strummed notes

Strumming is always specified by showing the top and bottom notes that the percussionist plays. If a chord is specified, then the sounding notes are shown at cue size in brackets. If no chord is specified, a glissando line is shown. If the percussionist is to play from the top or bottom notes, those are indicated using arrow noteheads.

The percussionist is instructed to strum with both their fingernail and with a plectrum.

Plucked notes

Four notes are plucked during the piece. Due to retunings, they sound different to their designation on the autoharp. The first time they are played, their sounding pitch is shown alongside the pitch to which they would conventionally be tuned. The latter is shown as a bracketed cue note.

Whammy pedal

The percussionist operates a Whammy pedal with their foot. Its position is shown using the following symbols. The percussionist should transition smoothly between its depressed and elevated positions.


Depressed – heel down.


Elevated – toe down.

Cloth mute

A hand towel or thick tea towel can be used as the mute. One edge should be placed under the autoharp, so that it can be quickly draped over the strings. It should cover all the strings above the keys, so that the sticks strike the cloth rather than the strings themselves.

Electronics

Equipment

Contact mic

Audio interface (at least one pre-amp line in, four lines out, and a MIDI output)

Laptop (running Ableton Live)

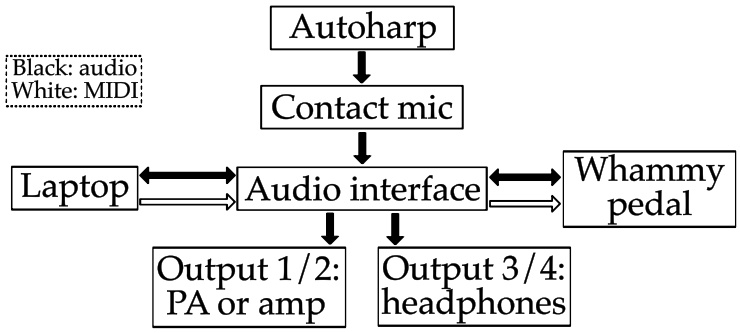
Whammy pedal (with audio cables and 8-pin MIDI cable)

Output 1/2: PA (if whole ensemble is mic'd) or amp (if only the percussionist is mic'd)

Output 3/4: headphones (for click)

Signal flow

A contact mic captures the sound of the autoharp, which is then fed into an audio interface. Ableton Live processes the sound with a delay effect and runs it through a Whammy pedal, which is controlled via MIDI. The Ableton patch also contains four looped audio samples.



Triggering

The patch is best operated by the percussionist. It is run in Ableton's arrangement window. Once started, it will play the whole piece without any need for interaction. It can begin from any rehearsal number; each is connected to a Locator. The Locators can be triggered using the computer keyboard: numbers 1 to 0 for figures 1 to 10, letters Q to P for figures 11 to 20, and letters A to H for figures 21 to 26.

Click track

It should be possible to perform without a click, as the rhythmic delay and the repeated loops provide a clear pulse. However, a click track is available both for the whole piece or just for the first two bars. To select a two bar cue-in, press C. For a constrant metronome sound, press M. The click track will play through outputs 3/4 of your audio interface.

Notation

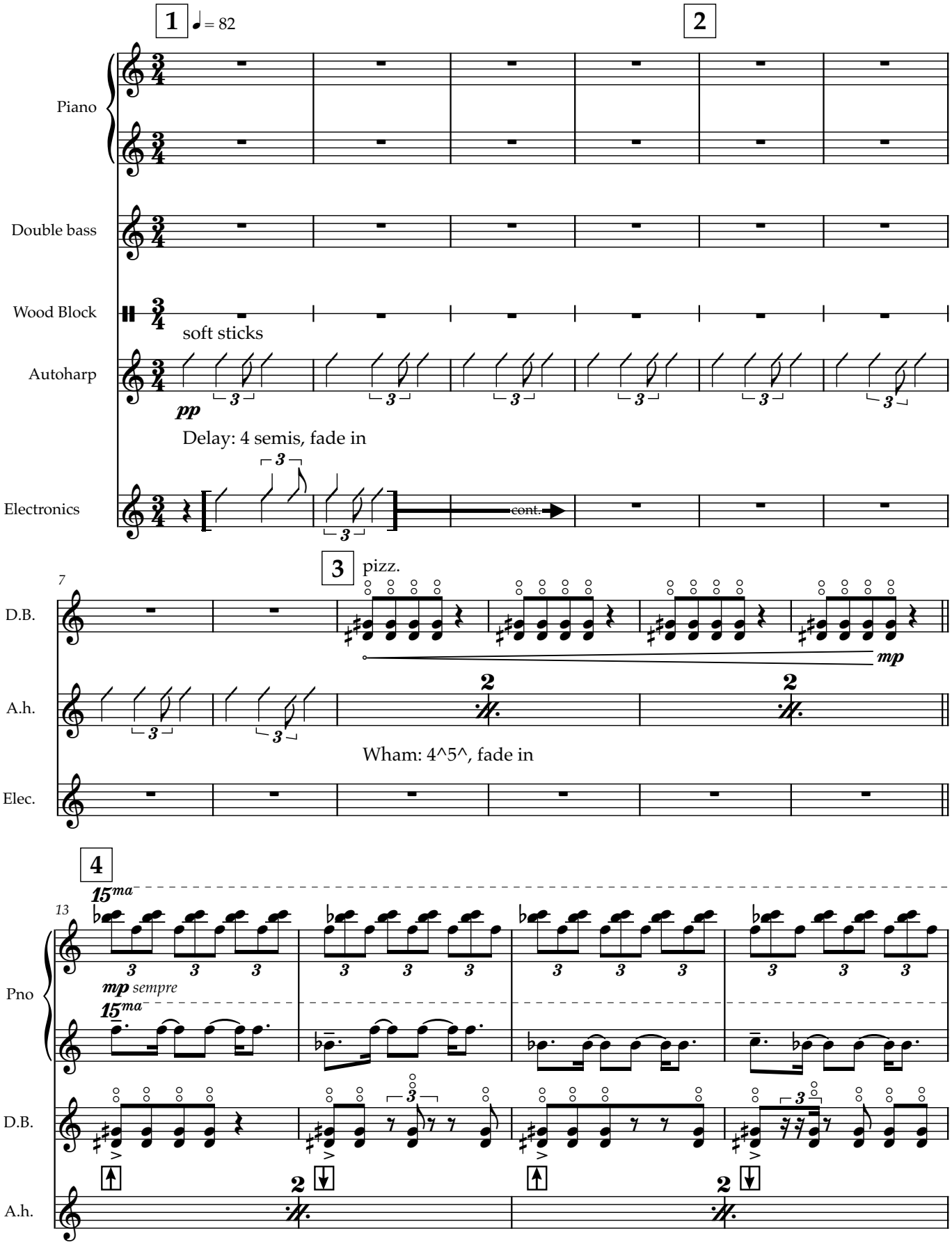
The electronic notation is provided purely as a guide to the sounds that can be expected. It gives a sense of the sounds produced by the delay and Whammy pedal, the nature of the recorded loops, and descriptions of the settings of the delay and Whammy pedal.

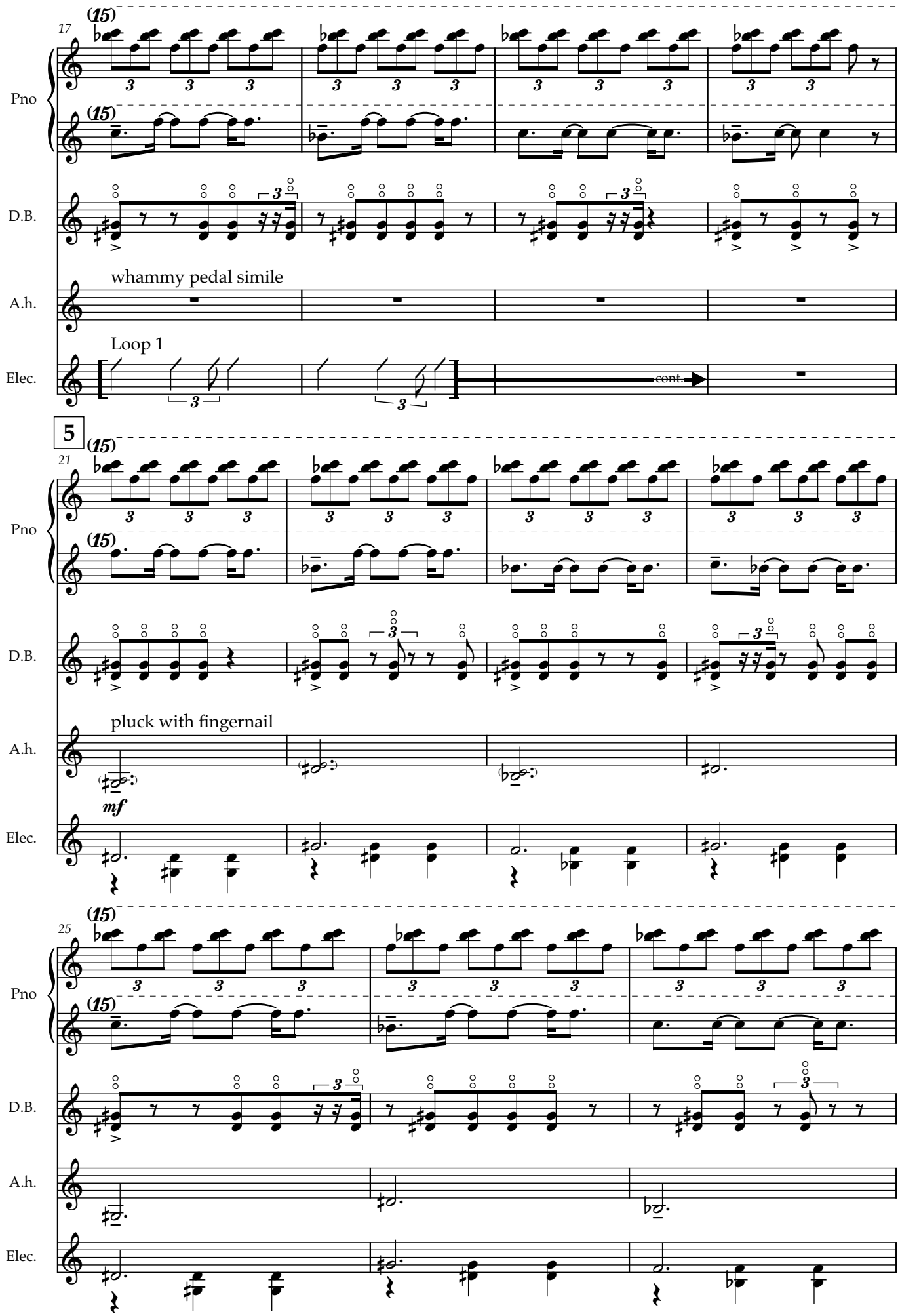
Rhythm, bar 81-110

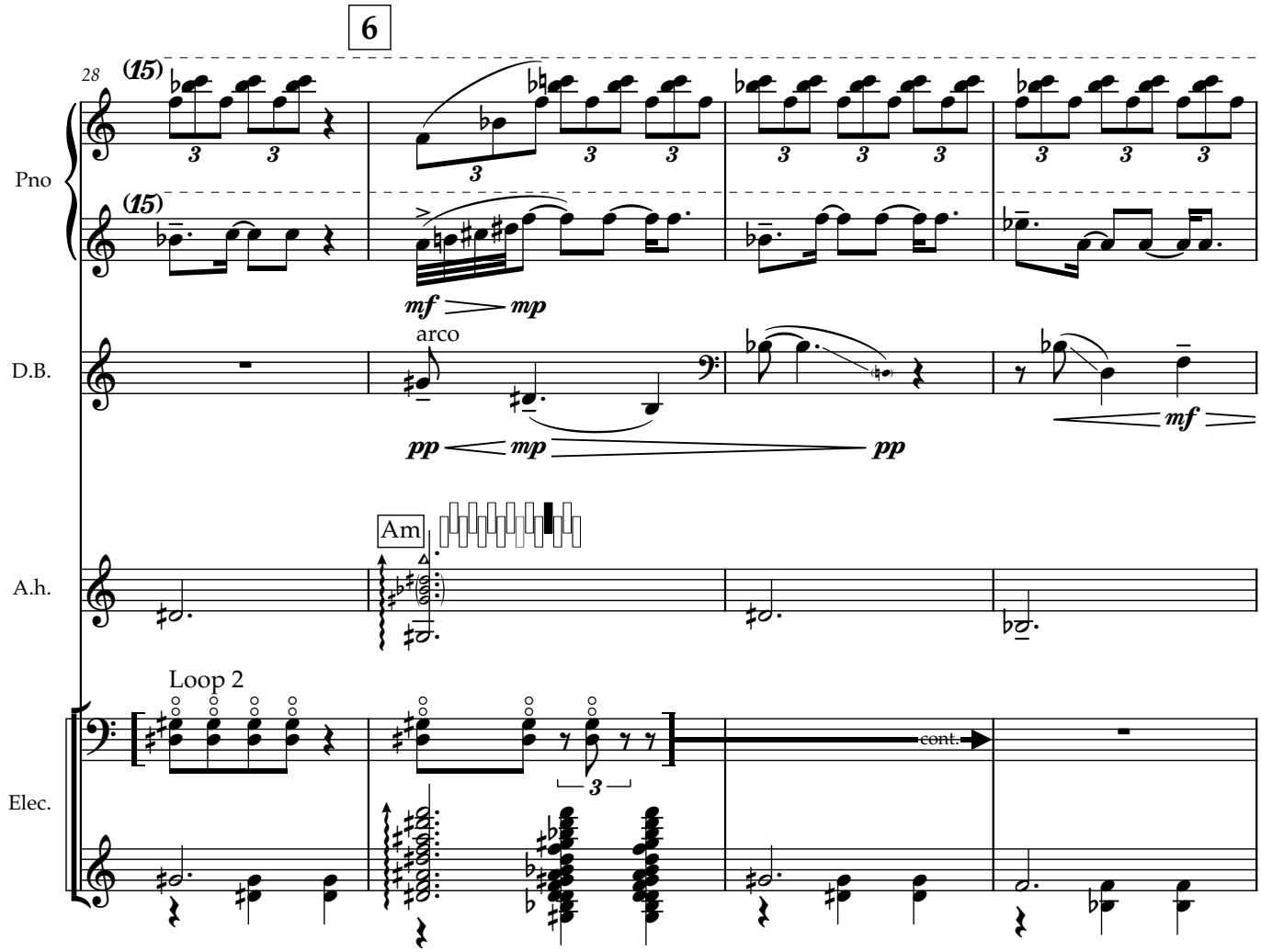
In this passage, the percussionist and piano right hand play 25 quavers for every 24 in the double bass and piano left hand. This awkward rhythm is shown in two ways. In the piano right hand, the melody is written using a 24:25 tuplet, to make the proportions within the melody clear. As this obscures its relationship to the beat, cue notes show where each note should change relative to the quaver pulse. The percussion part only shows the relationship to the quaver pulse as its rhythm is somewhat simpler. The most important thing is to synchronise the percussion and piano right hand, and to arrive simultaneously whenever all the parts converge on a downbeat.

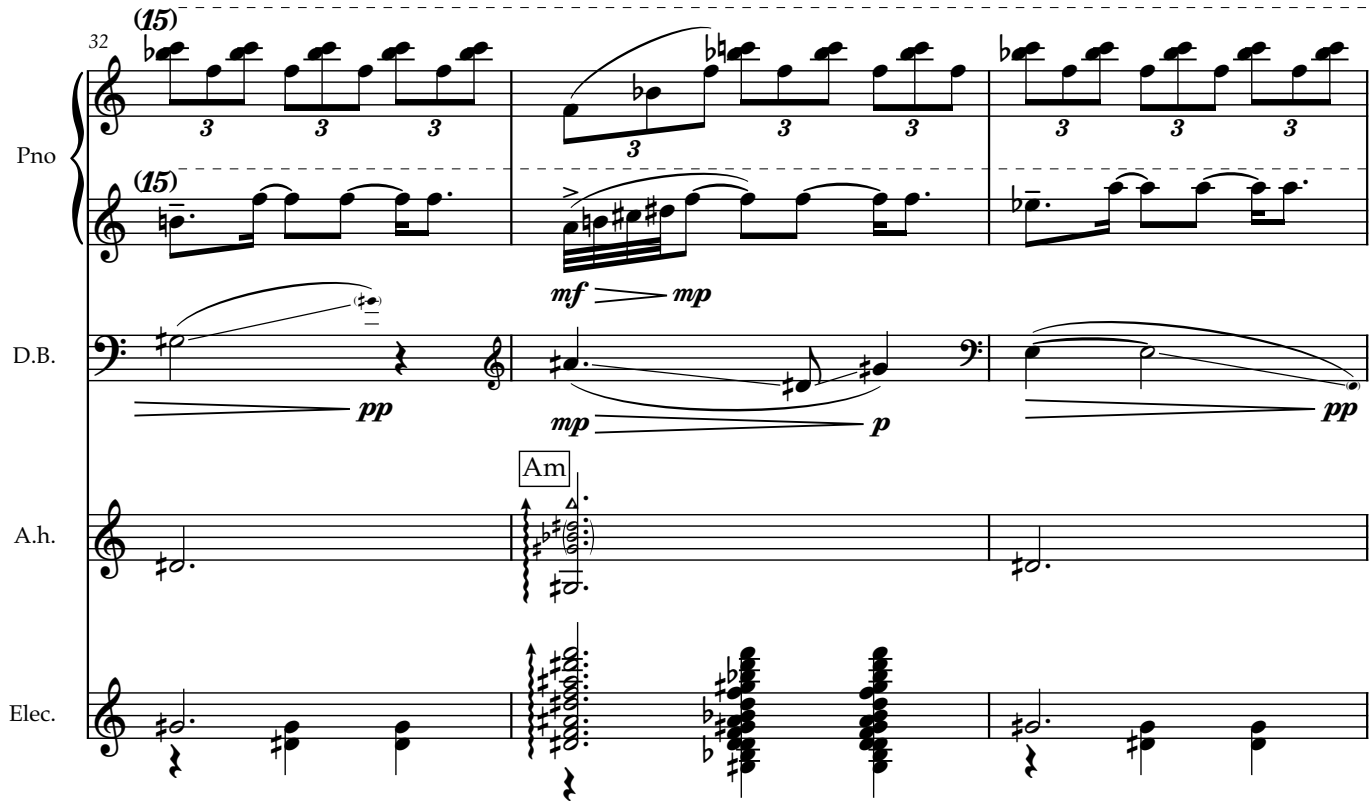
Nocturne

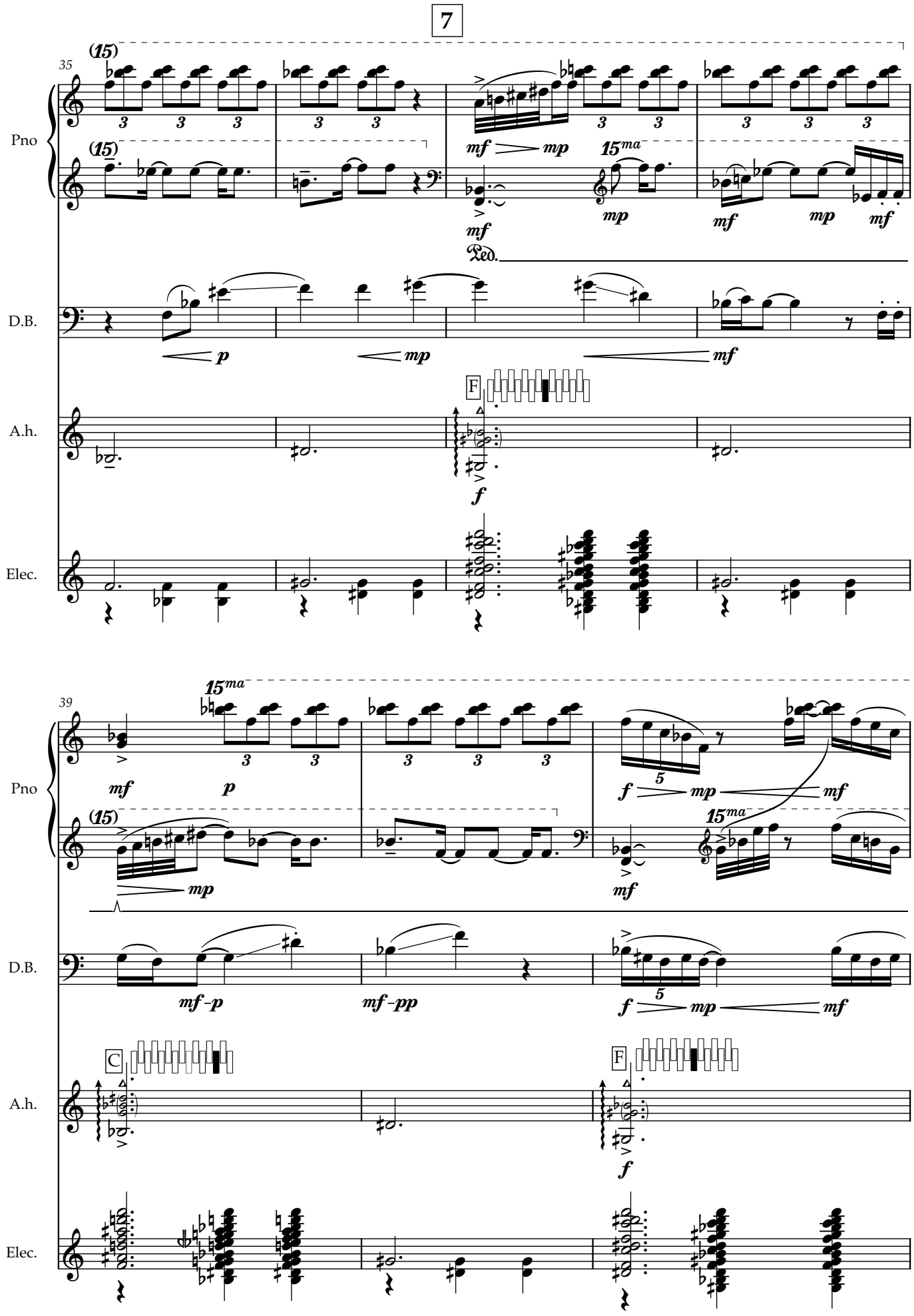
Joe Bates

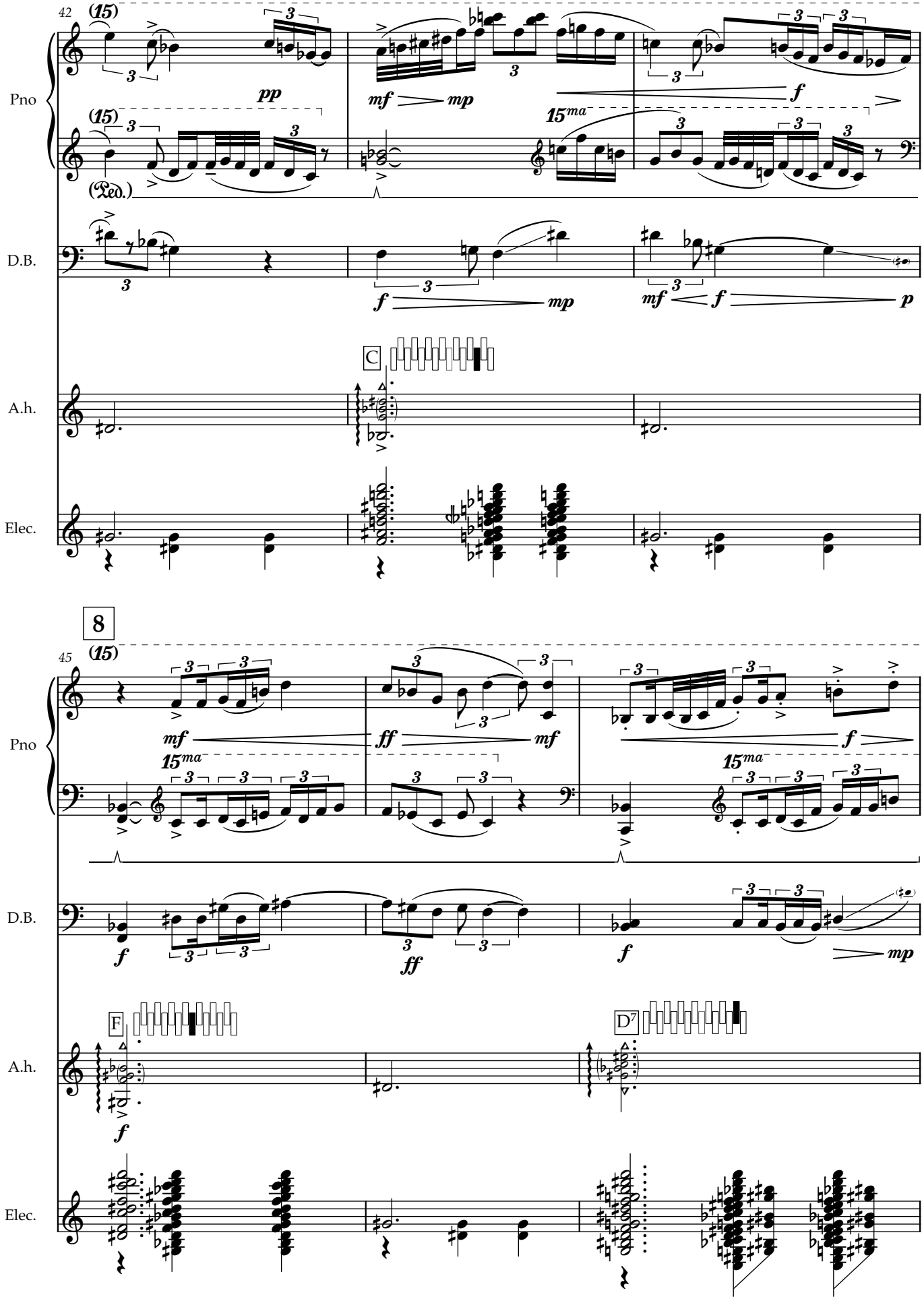


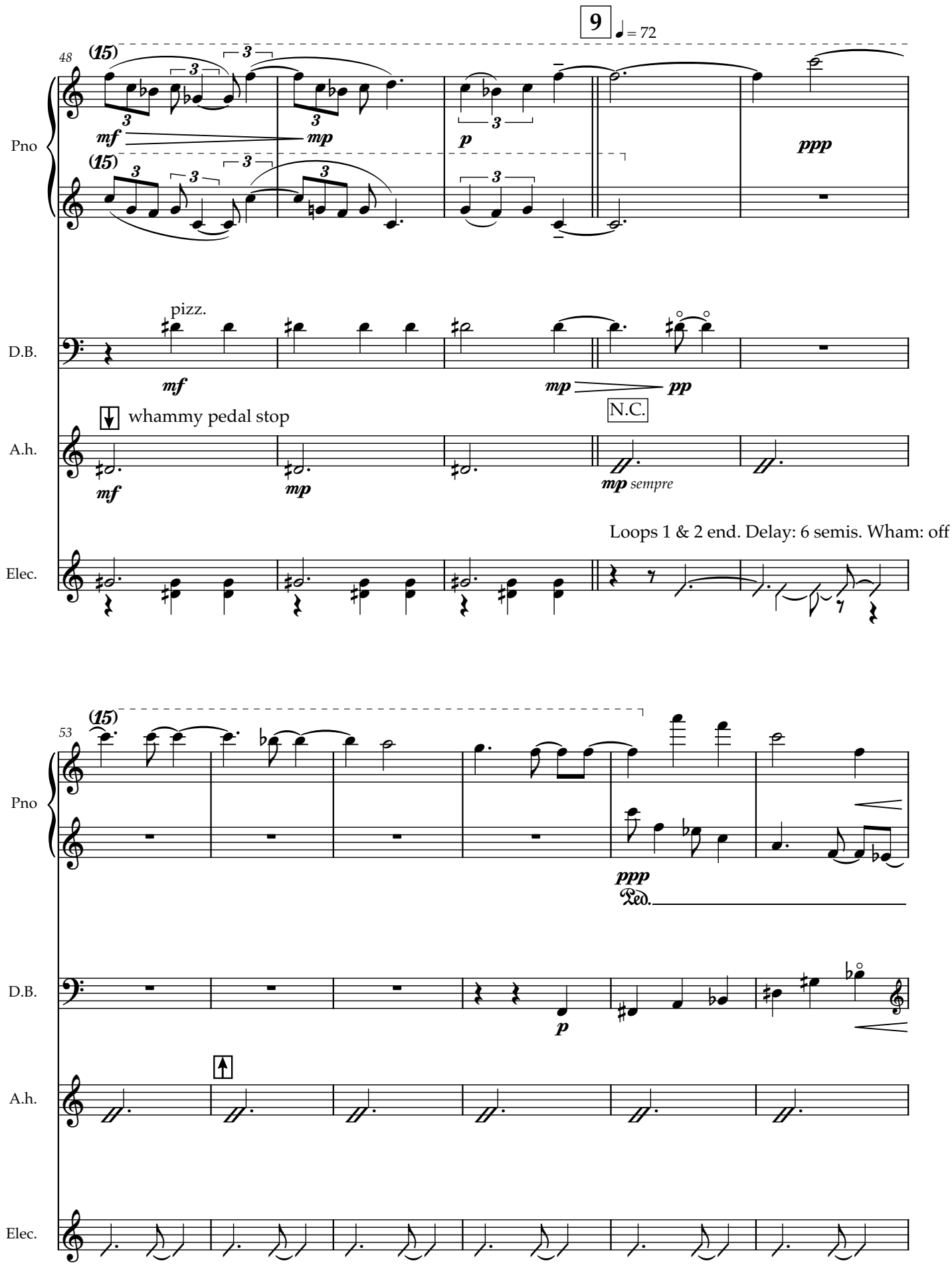

17
(15)
Pno
D.B.
whammy pedal simile
A.h.
Loop 1
Elec.
cont.
5
21
pluck with fingernail
mf
25

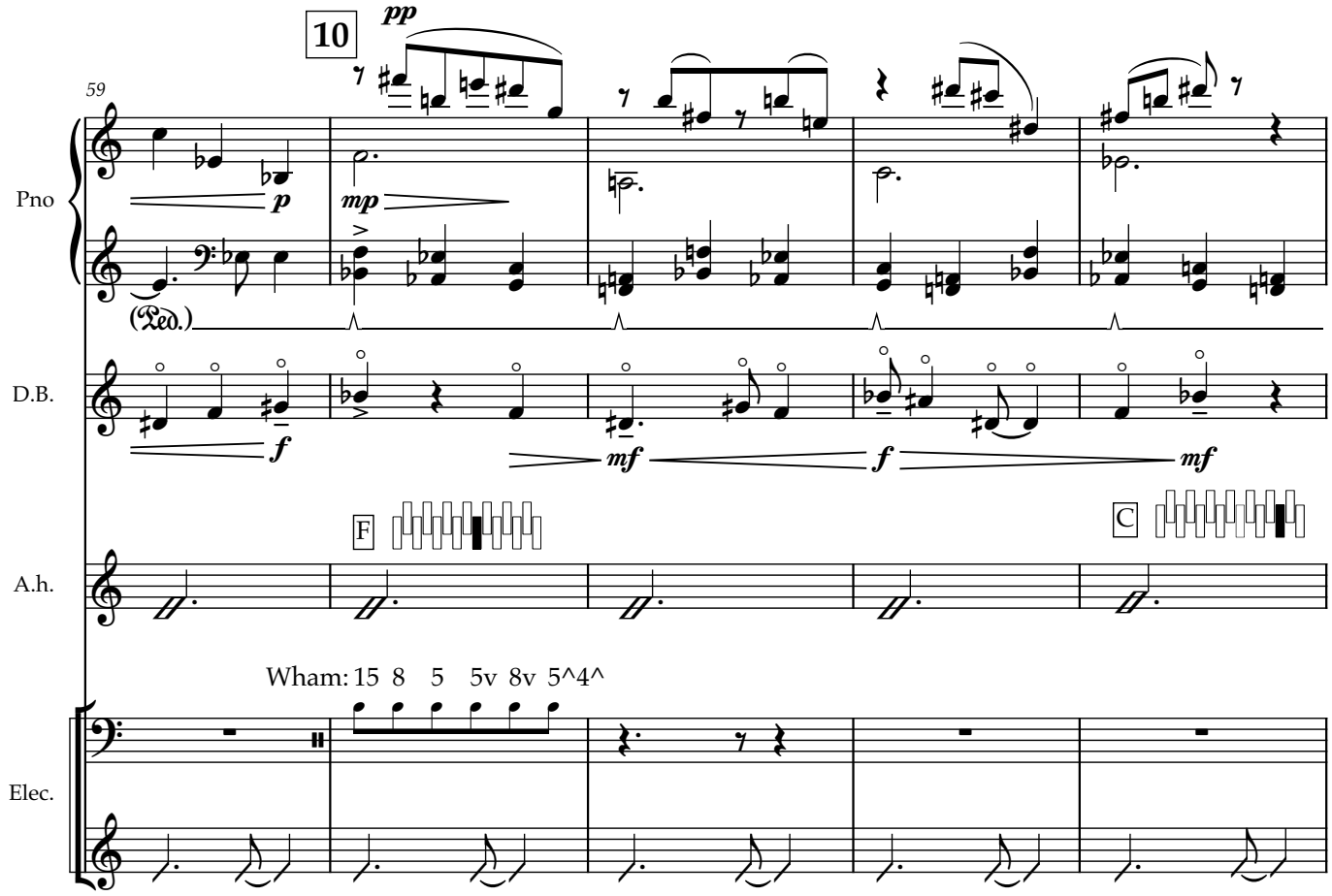

6
28
(15)
Pno
(15)
mf
mp
D.B.
arco
pp
mp
pp
mf
Am
A.h.
Loop 2
Elec.
cont.

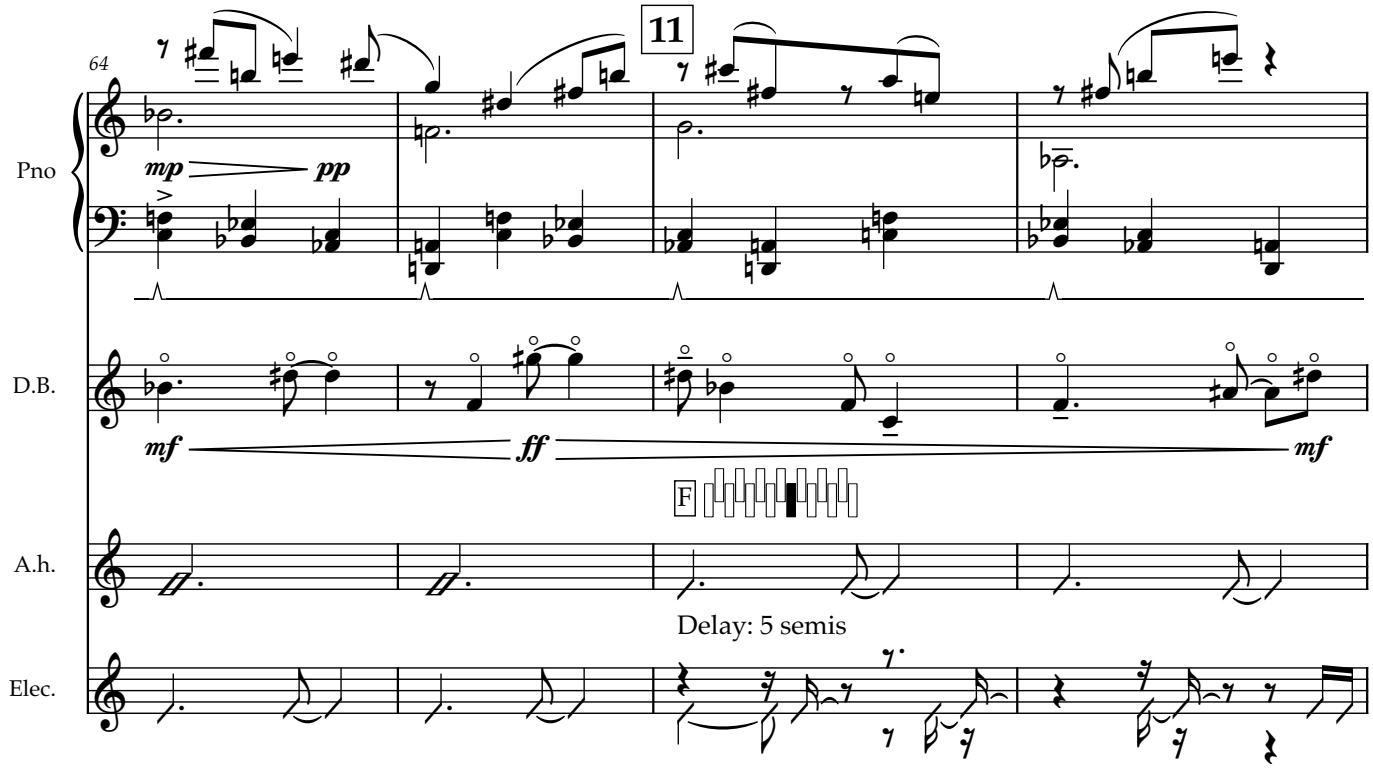

32
(15)
Pno
(15)
mf
mp
D.B.
pp
mp
p
pp
Am
A.h.
Elec.

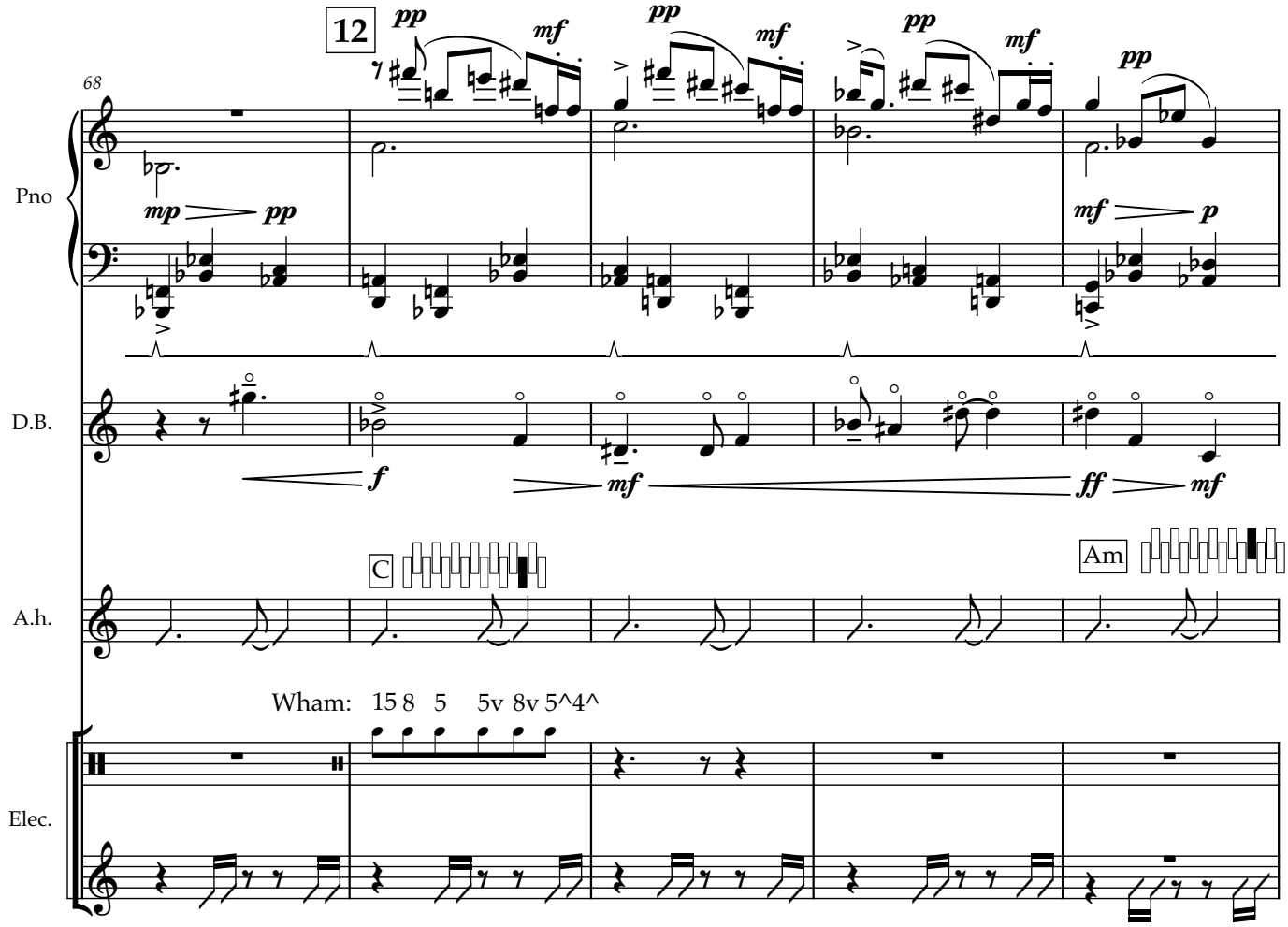

7
35
Pno
D.B.
A.h.
Elec.
F
39
C
F

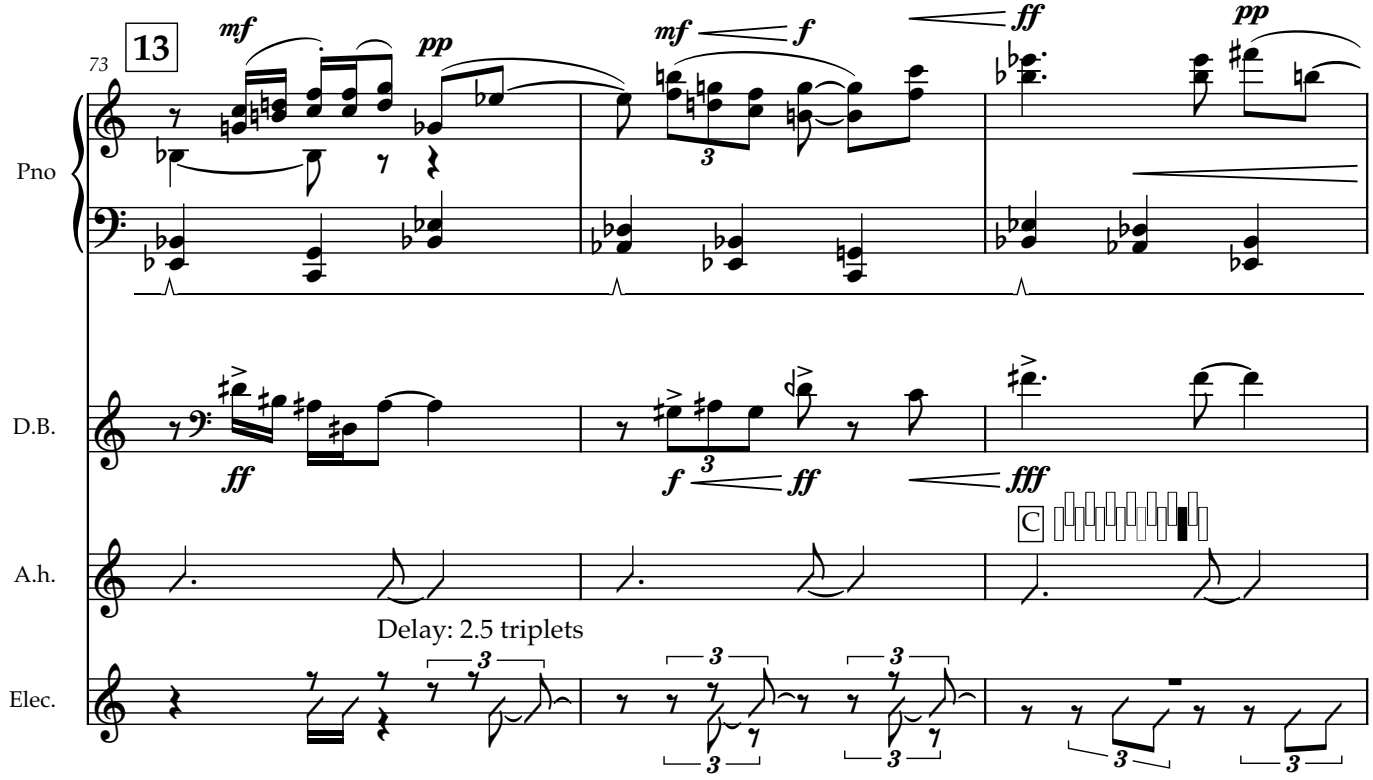

42
(15)
Pno
pp
mf
mp
15ma
f
(Ped.)
D.B.
f
mp
mf
f
p
C
A.h.
Elec.
8
45
(15)
Pno
mf
ff
mf
15ma
f
15ma
D.B.
f
ff
f
mp
F
D7
A.h.
f
Elec.

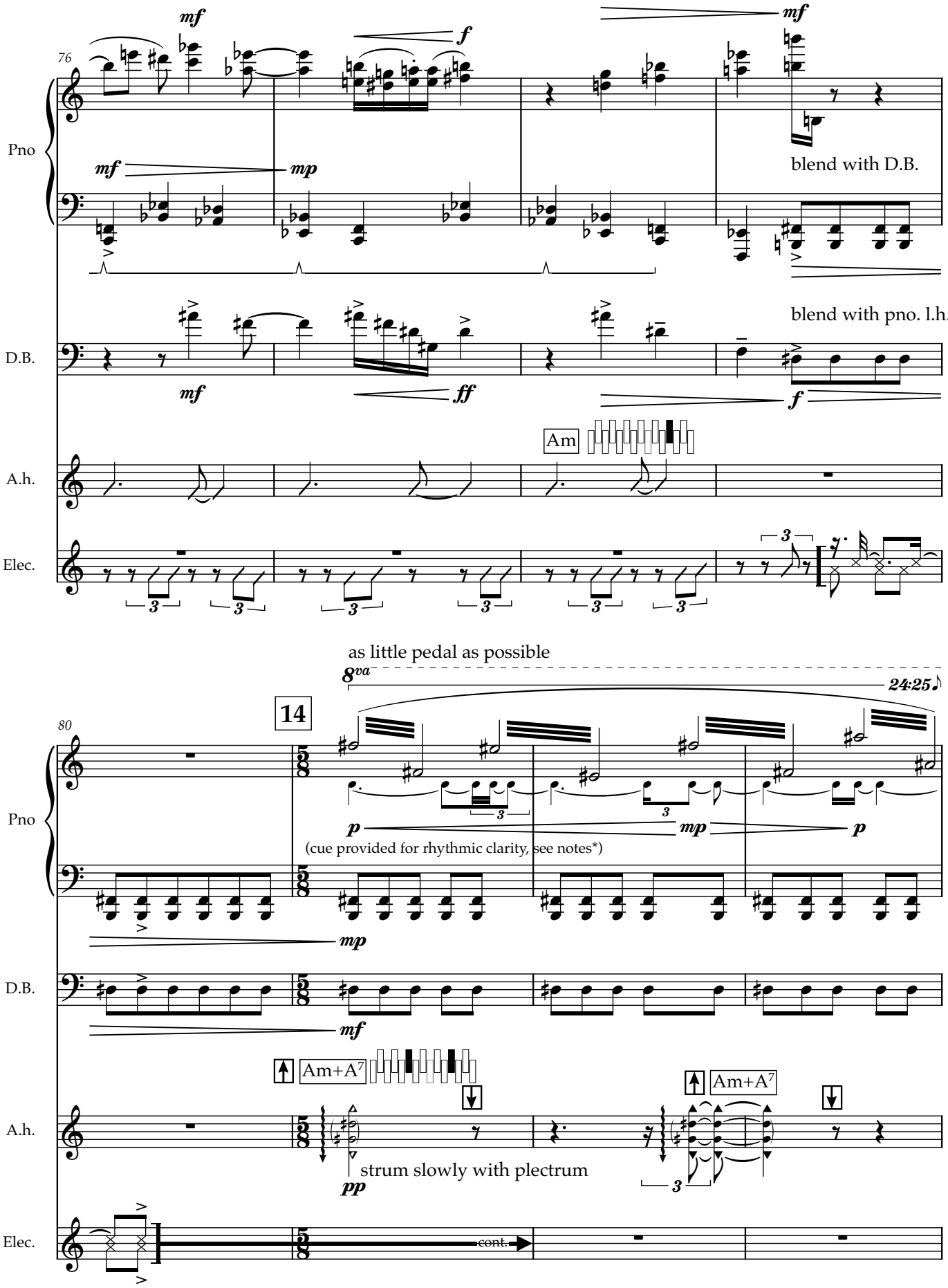

9
♩ = 72
48
(15)
Pno
mf
mp
p
ppp
pizz.
D.B.
mf
mp
pp
whammy pedal stop
N.C.
A.h.
mf
mp
mp sempre
Loops 1 & 2 end. Delay: 6 semis. Wham: off
Elec.
53
(15)
Pno
ppp
Ped.
D.B.
p
A.h.
Elec.


10
pp
59
Pno
p
mp
(Ped.)
D.B.
f
mf
f
mf
F
C
A.h.
Wham: 15 8 5 5v 8v 5^4^
Elec.

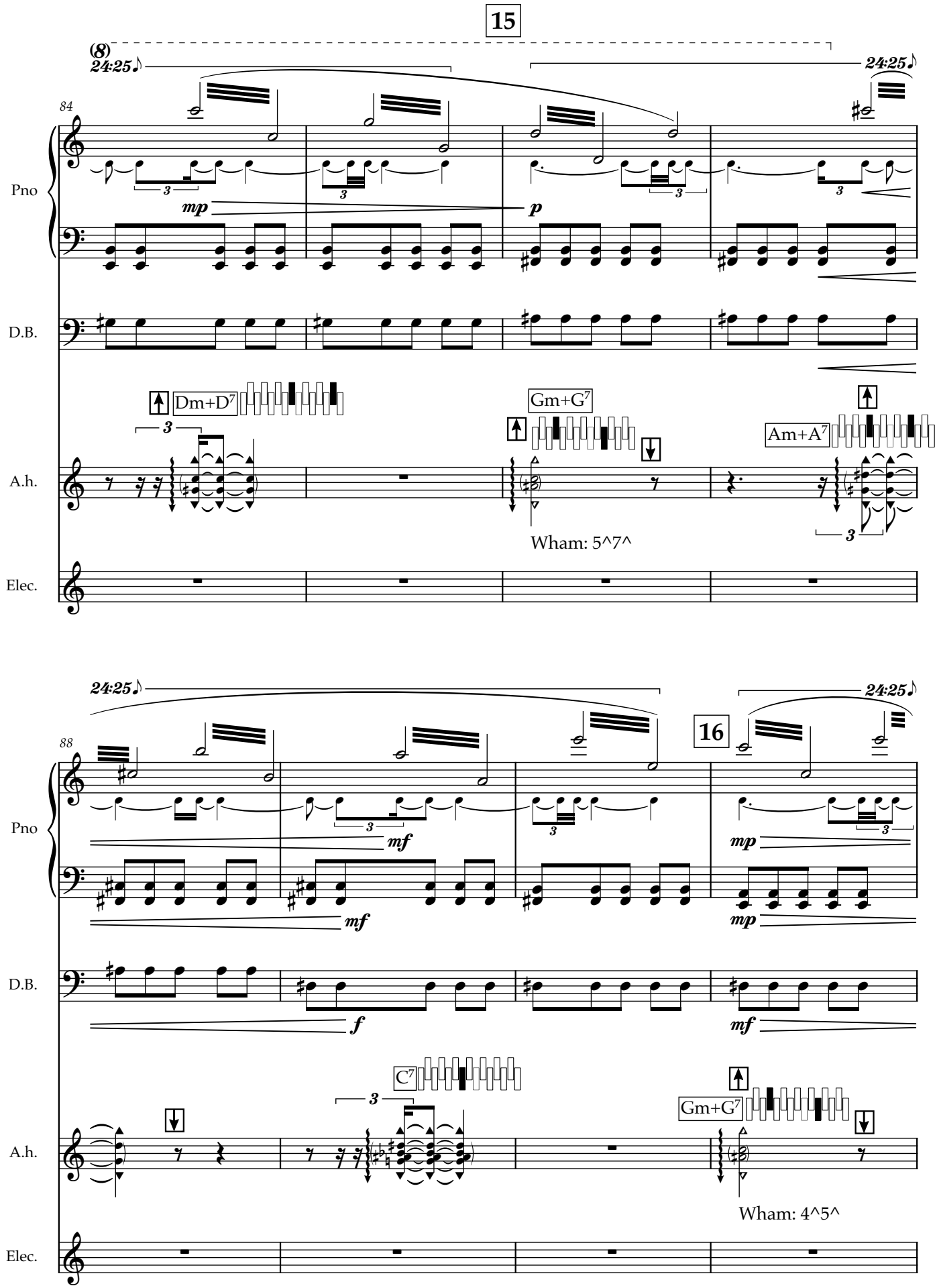

11
64
Pno
mp
pp
D.B.
mf
ff
mf
F
A.h.
Delay: 5 semis
Elec.

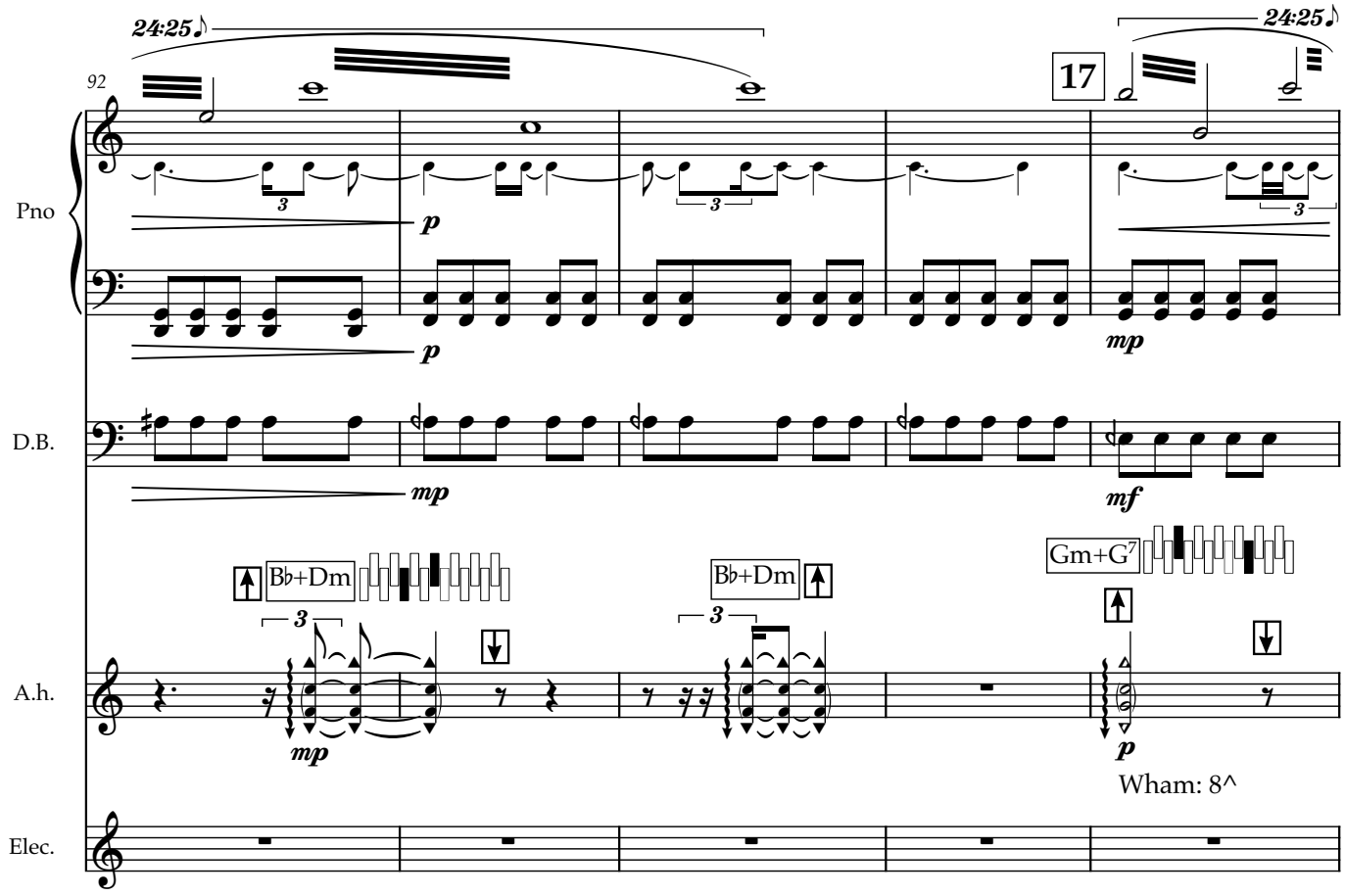

12
68
Pno
D.B.
A.h.
Elec.
C
Am
Wham: 15 8 5 5v 8v 5^4^

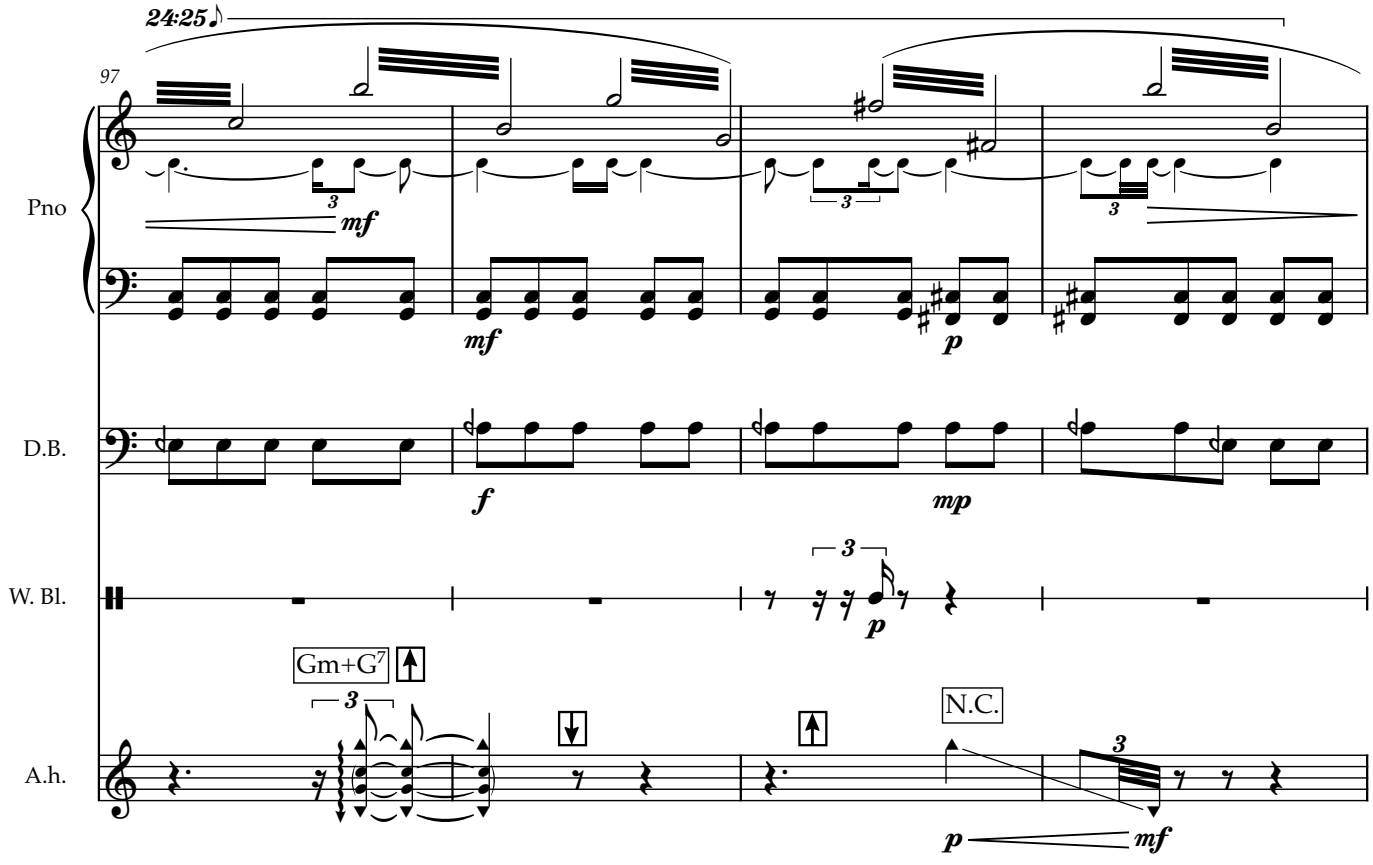

13
73
Pno
D.B.
A.h.
Elec.
C
Delay: 2.5 triplets

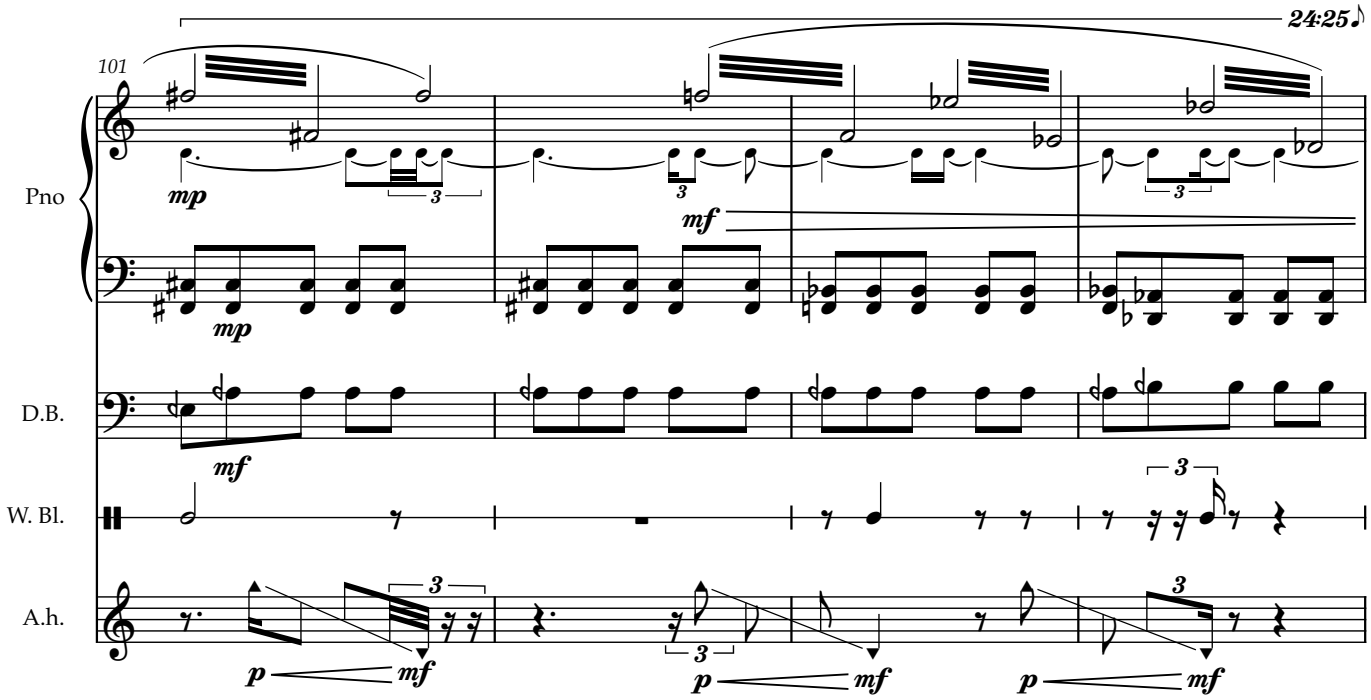


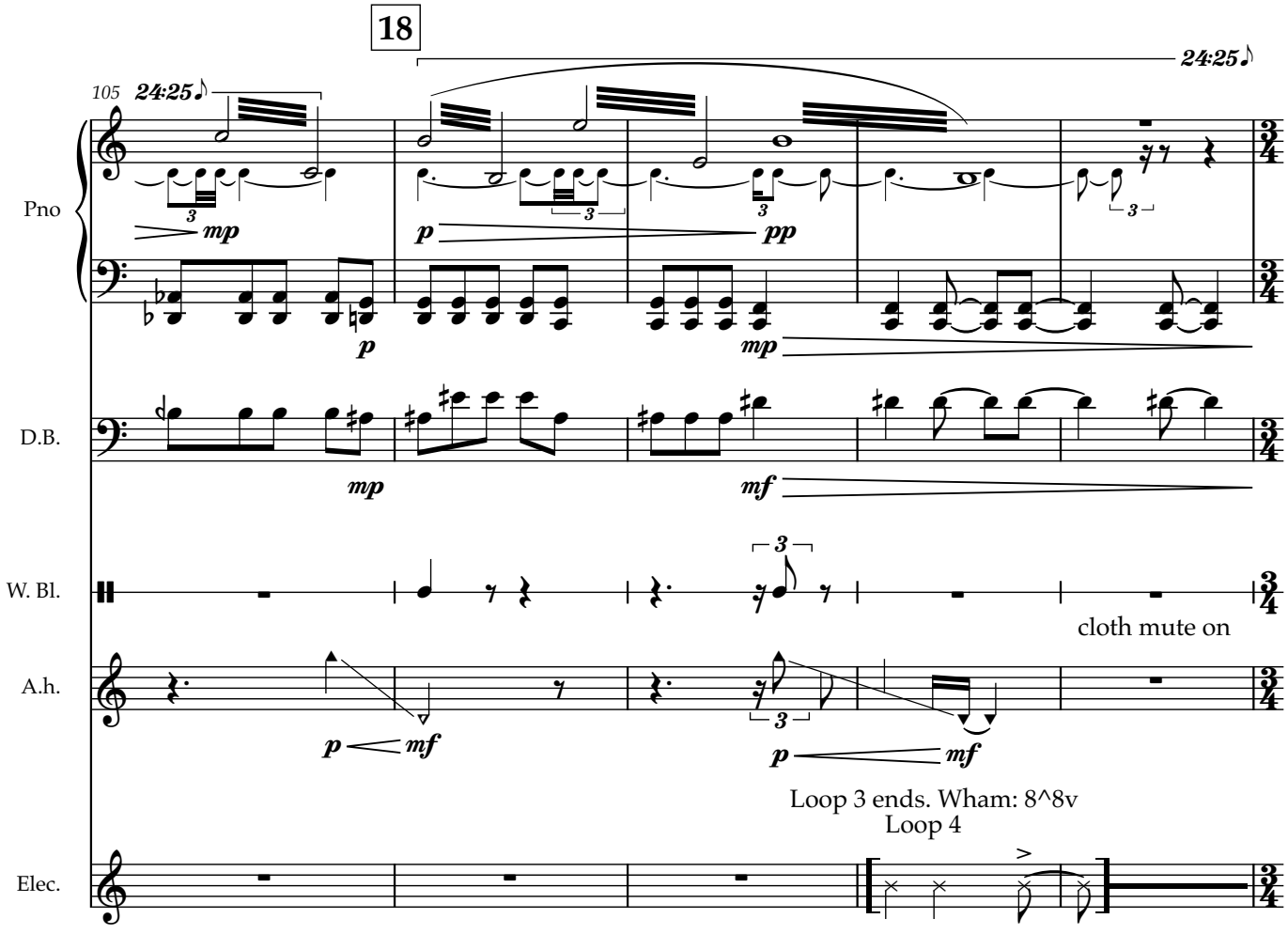
* The piano right hand, autoharp, and woodblock play a 24:25 tuplet. The cue notes in the piano show where the tuplet falls within each quaver beat.

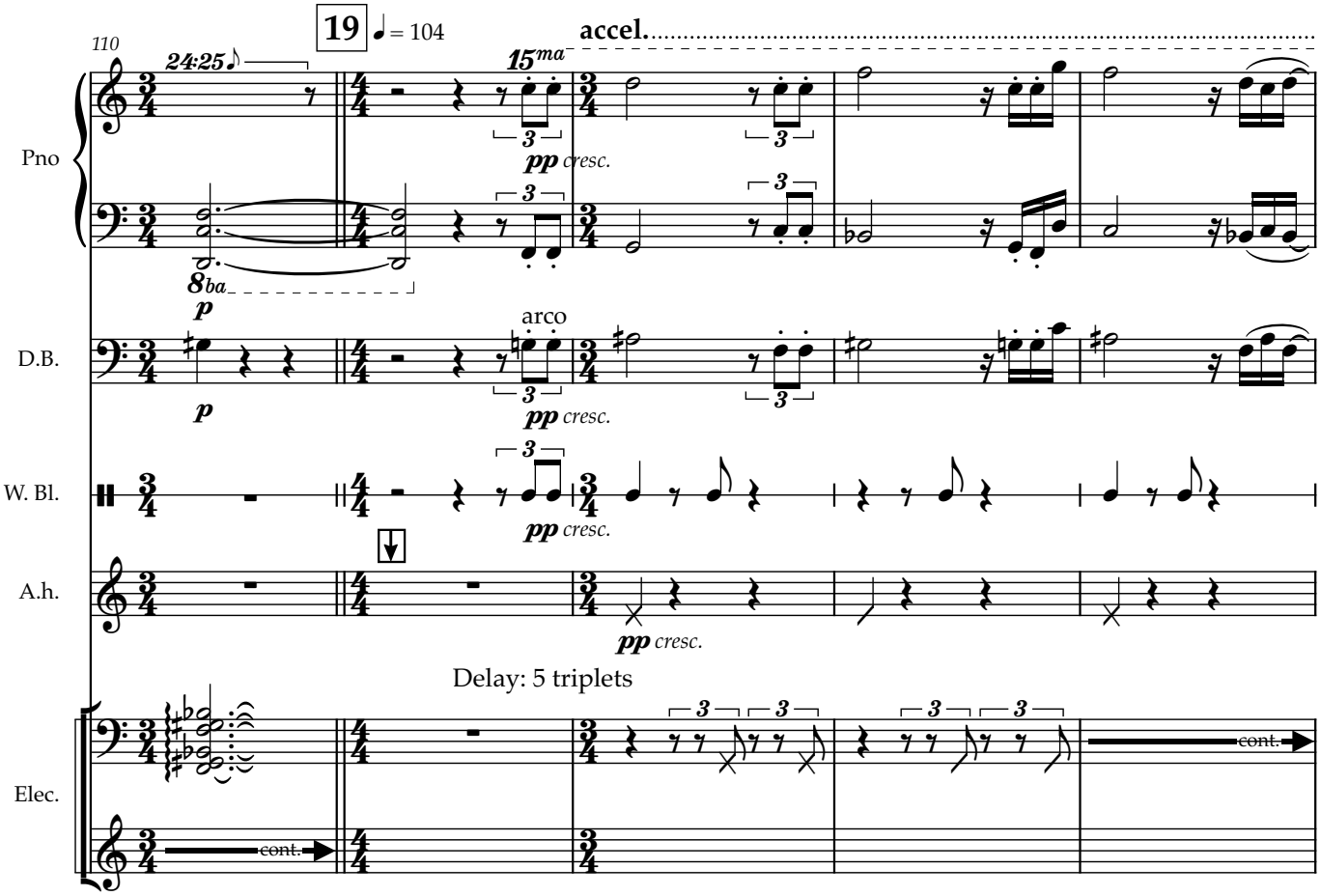

15
(8)
24:25♪
24:25♪
84
Pno
mp
p
D.B.
Dm+D7
Gm+G7
Am+A7
A.h.
Wham: 5^7^
Elec.
24:25♪
24:25♪
88
16
Pno
mf
mf
mp
mp
D.B.
f
mf
C7
Gm+G7
A.h.
Wham: 4^5^
Elec.

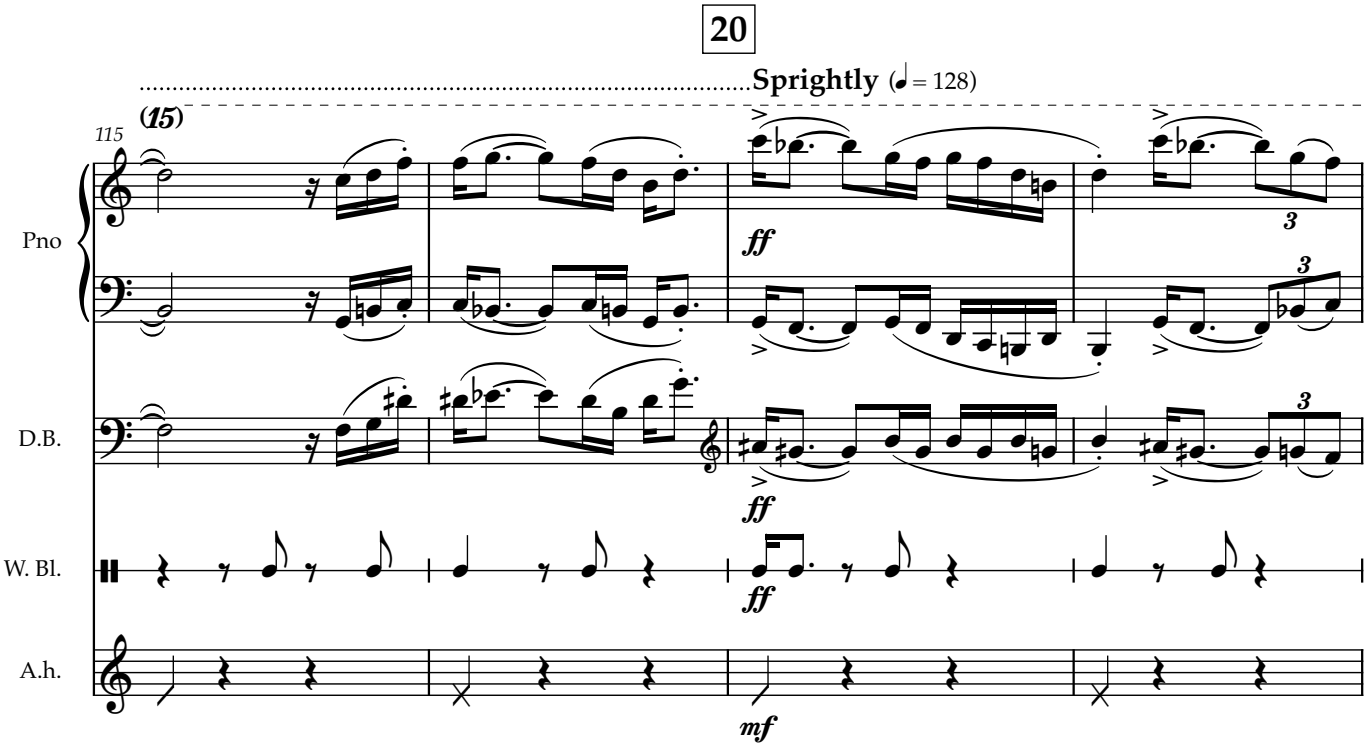

24:25
92
17
Pno
D.B.
A.h.
Elec.
B♭+Dm
B♭+Dm
Gm+G7
Wham: 8^


24:25
97
Pno
D.B.
W. Bl.
A.h.
Gm+G7
N.C.

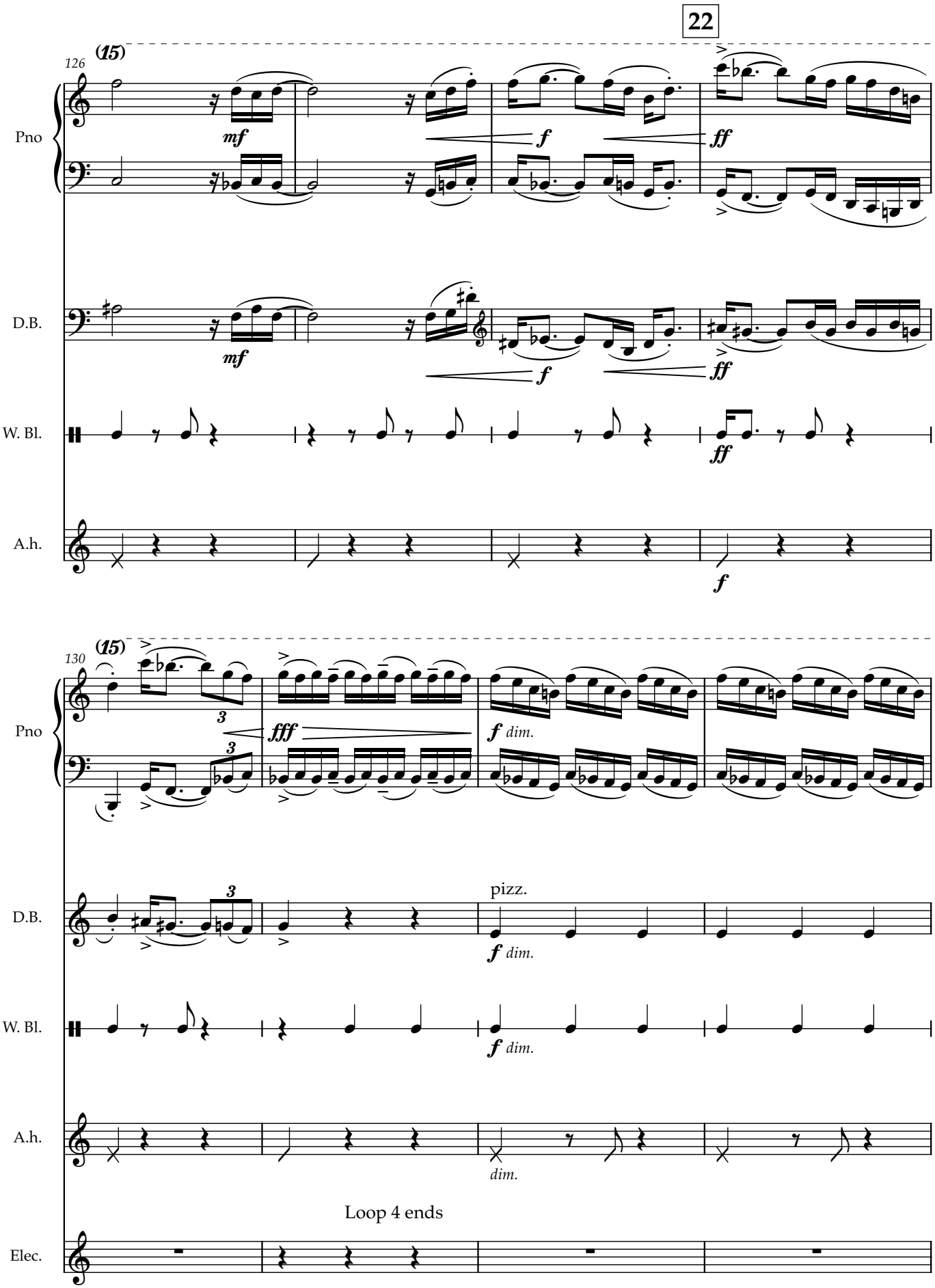

24:25
101
Pno
D.B.
W. Bl.
A.h.
mp
mf
p

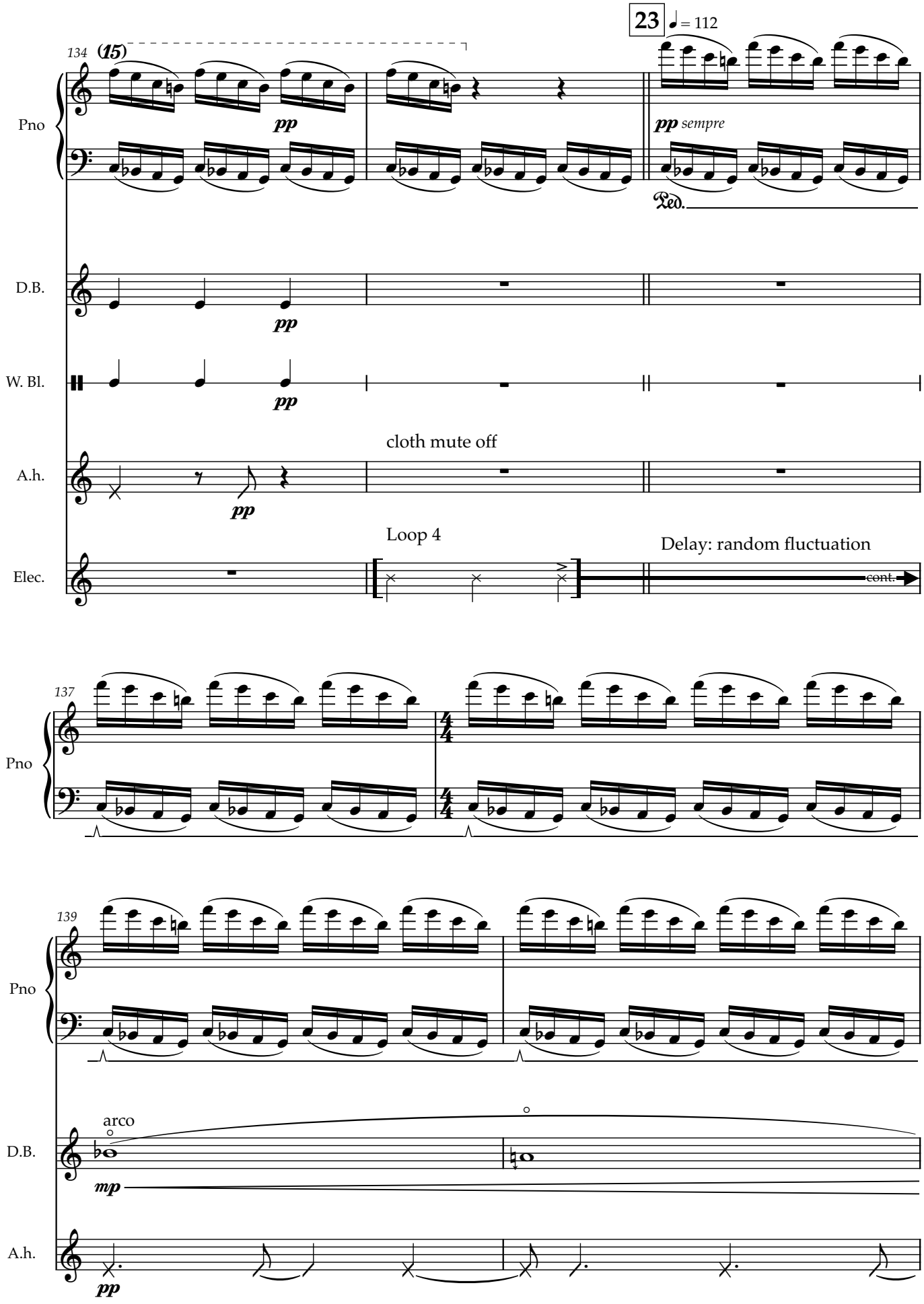

18
24:25
105
Pno
D.B.
W. Bl.
A.h.
Elec.
mp
p
pp
mf
cloth mute on
Loop 3 ends. Wham: 8^8v
Loop 4

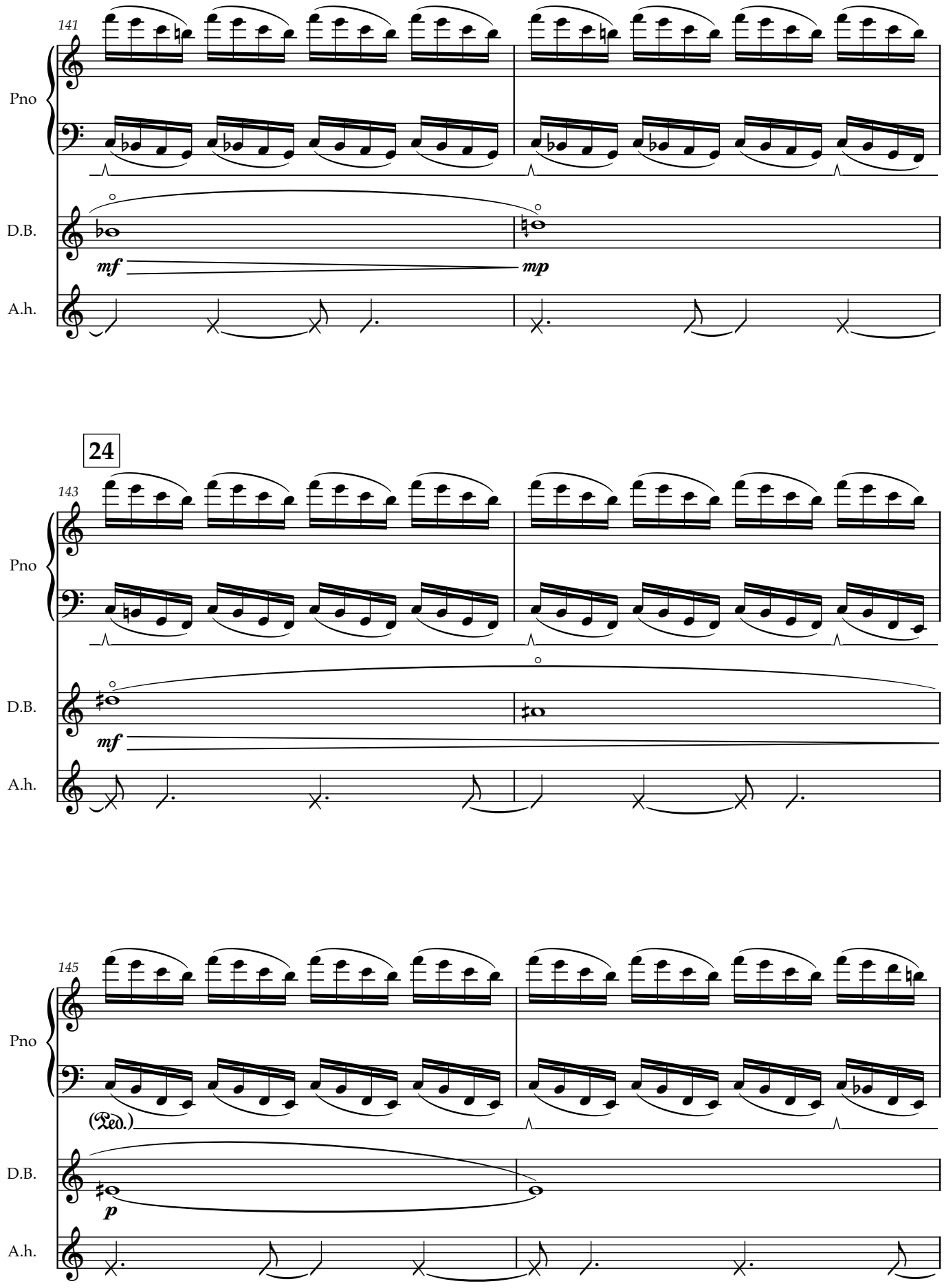

19
♩ = 104
accel.
110
24:25
15ma
Pno
8ba
p
pp cresc.
D.B.
arco
W. Bl.
A.h.
Delay: 5 triplets
Elec.
cont.

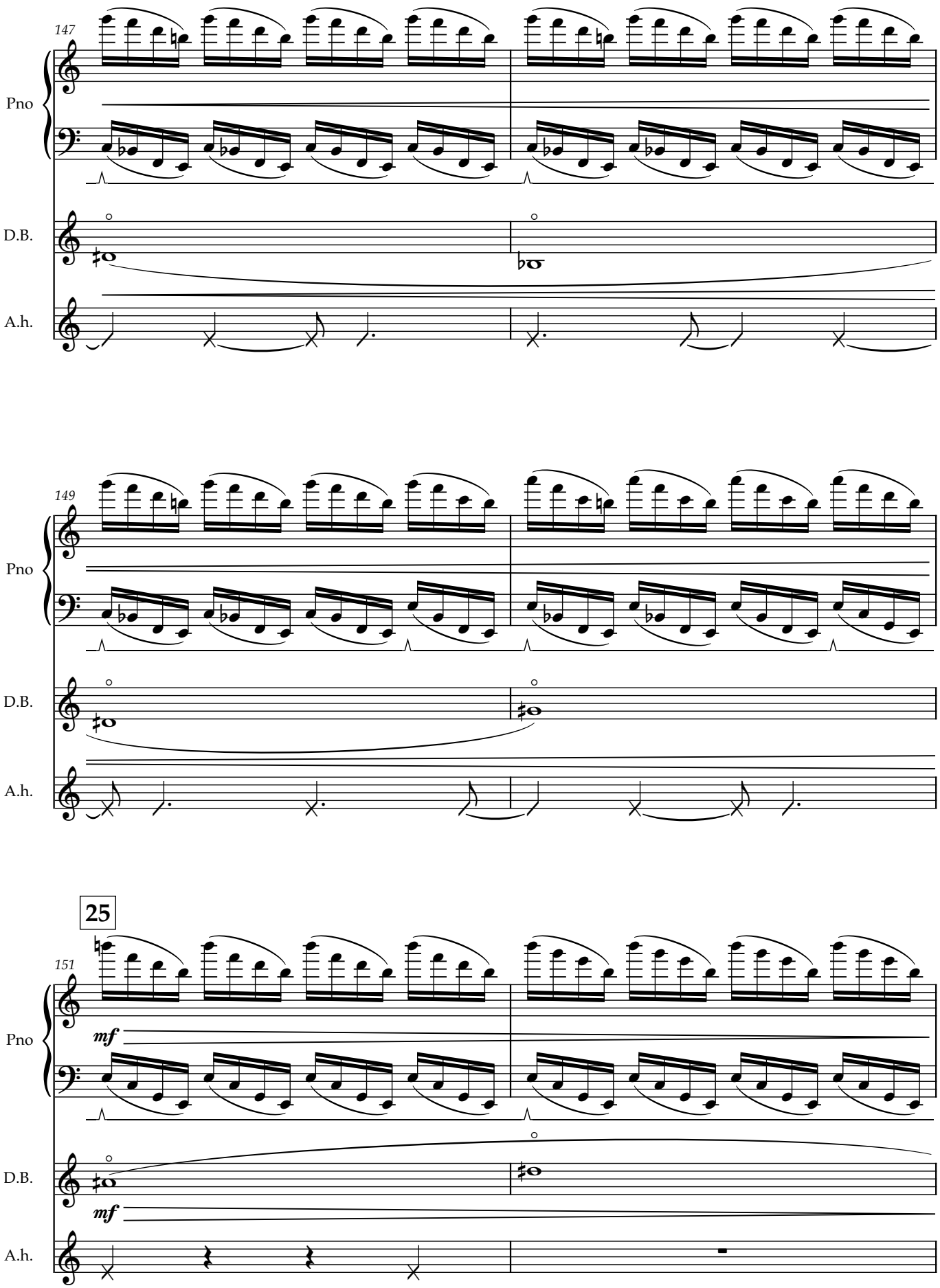

20
Sprightly (♩ = 128)
115
(15)
Pno
ff
D.B.
W. Bl.
A.h.
mf

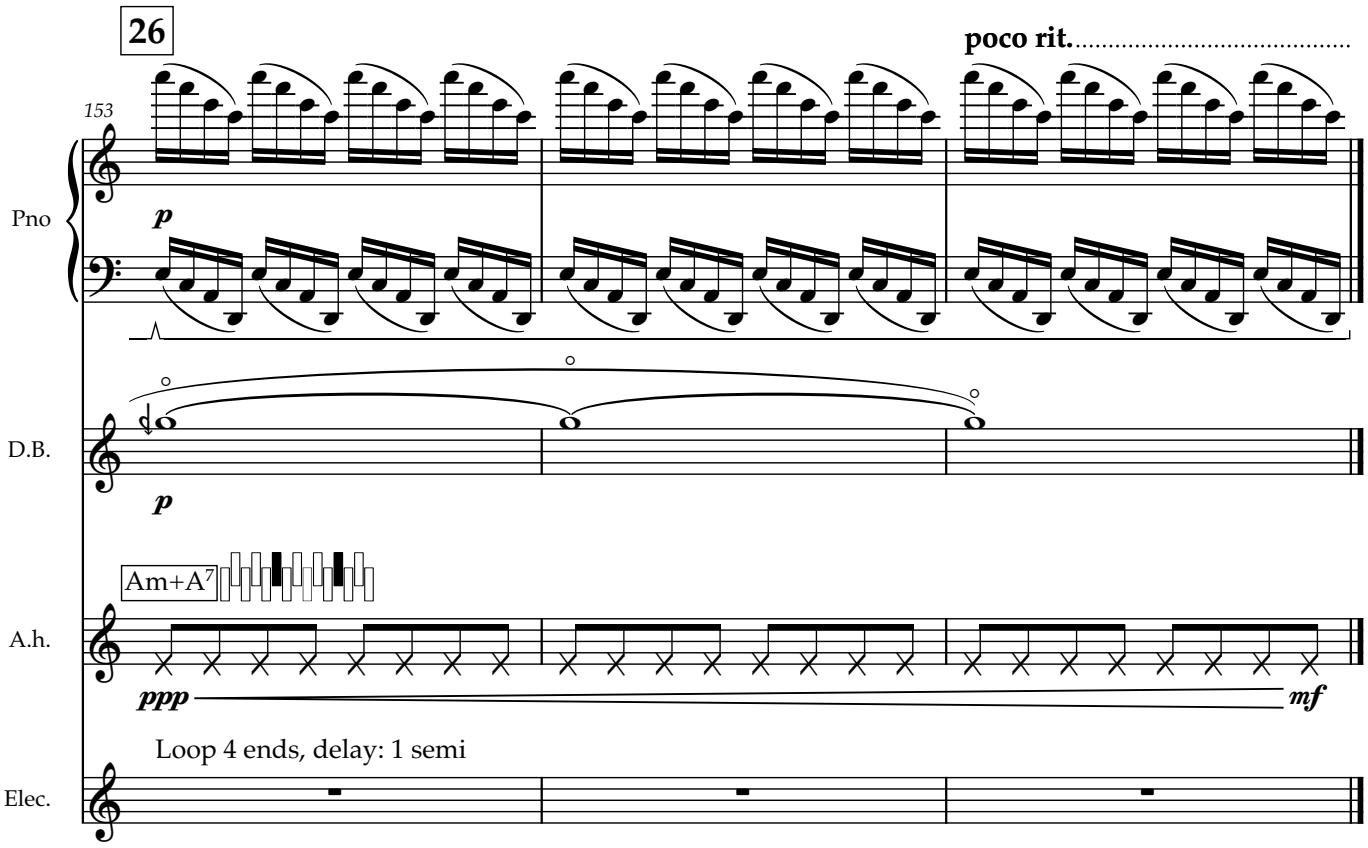

119
(15)
Pno
mf
pizz.
D.B.
mf
W. Bl.
mf
A.h.
mf
Loop 4 ends
Elec.
21
122
(15)
Pno
p
mf
f
arco
D.B.
p
mf
f
W. Bl.
p
mf
A.h.
p
mf
Loop 4
Elec.
cont.


22
126
(15)
Pno
mf
f
ff
D.B.
mf
f
ff
W. Bl.
ff
A.h.
f
130
(15)
Pno
3
fff
f dim.
D.B.
3
pizz.
f dim.
W. Bl.
f dim.
A.h.
dim.
Loop 4 ends
Elec.


23
♩= 112
134
(15)
Pno
pp
pp sempre
Ped.
D.B.
pp
W. Bl.
pp
cloth mute off
A.h.
pp
Loop 4
Delay: random fluctuation
Elec.
cont.
137
Pno
139
Pno
arco
D.B.
mp
A.h.
pp


141
Pno
D.B.
mf
mp
A.h.
24
143
Pno
D.B.
mf
A.h.
145
Pno
(Ped.)
D.B.
p
A.h.


147
Pno
D.B.
A.h.
149
Pno
D.B.
A.h.
25
151
Pno
mf
D.B.
mf
A.h.


26
poco rit.
153
Pno
p
D.B.
p
Am+A7
A.h.
ppp
mf
Loop 4 ends, delay: 1 semi
Elec.