Full score

Pulling the Strings

For Electric Guitar and
Live Electronics Performer

by Aidan Gold

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Required Materials

2 Laptops - 1 for the guitarist, 1 for the electronics player, both with Max/MSP and internet connections
Audio interface with min. 2 in 2 out
Electric Guitar with direct input
Mic for the guitarist
2 foot pedals for the guitarist
MIDI keyboard with 8 MIDI controller knobs (e.g. AKAI MPK mini)
Headphones for both performers

Performance Instructions

This piece is performed by a solo guitarist and an additional performer who manipulates and transforms the sound the guitarist makes in several ways.

There are 5 principal sound sources in this piece:

Direct guitar input, no processing (mono)
Close-mic of the guitarist's playing, capturing string/strumming noise (mono)
The guitarist's own processing of their sound (e.g. delay, distoriton) via their own pedalboard (stereo)
The electronics player's processing of the guitarist's sound through a Max patch
Electronic soundfiles and synthesized textures played and controlled by the electronics player.

All 5 sound sources are mixed via the Max patch and routed via Spat through a virtual space into a binaural output. This may be reconfigured depending on what speaker systems are available at the performance.

Additionally, a 6th sound source should be routed into the guitarist's headphones, and includes various short click tracks to help with rhythmic alignment (as notated in the score).

In addition to the guitarist's own pedals for controlling their sound, they need 2 pedals to trigger cues using MIDI controller data (the specific control #s of each one can be specified in the Max patch). The primary pedal is used to step through the 21 principal cues of the piece, indiciated by the rehearsal numbers in the score. At each rehearsal number the guitarist should trigger the pedal and advance to that cue. If the cues get out of sync, the guitarist can manually type in a number and skip to that cue.

The auxilliary pedal is used for two functions: one is to control the "shepard tone" effect on the melody during Cue 14 (triggered at every ⊗ symbol), and the other is to temporarily enable the pitch detector during Cue 20 when playing notes to remove from the current pitch collection.

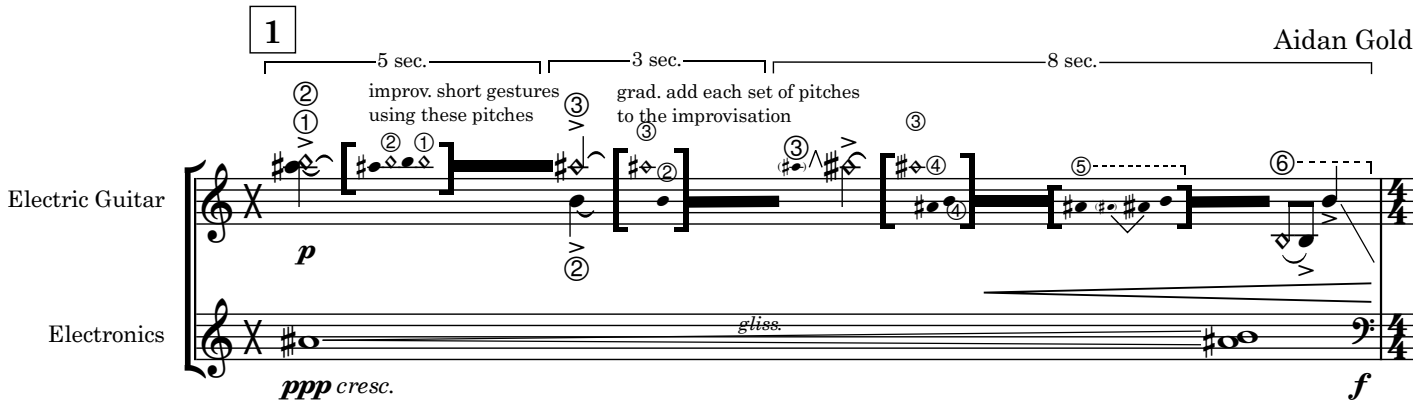
The guitarist should use the patch "Gold_MAINPATCH". In this patch, they can adjust their audio settings, specify channels for direct and mic input, and edit input and output EQ and compression as desired. They also configure their pedals, and then click "initialize patch". At this point they can step through the cues with their pedal.

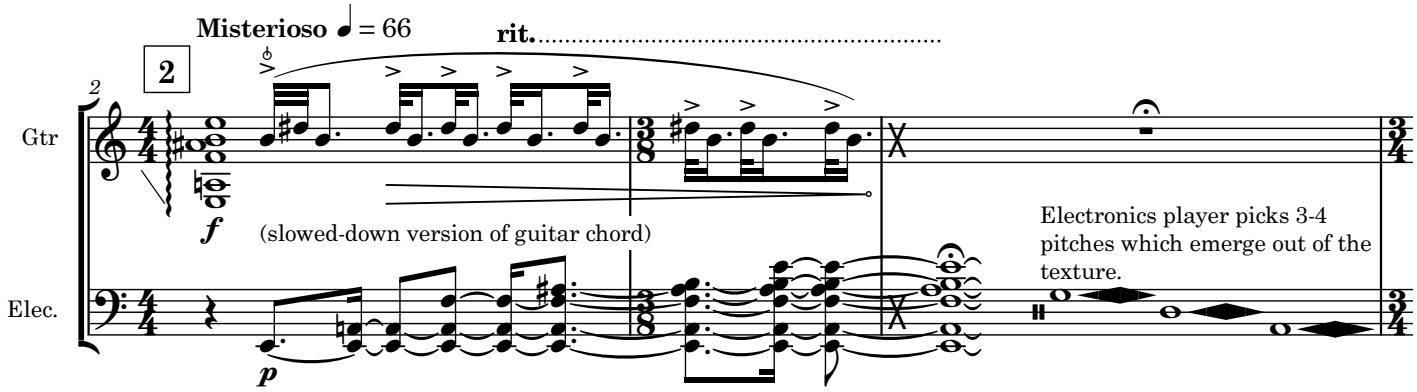
The electronics player uses the patch "Gold_UDPControl". Both players should enter the IP of the other player into the port forwarding box, and change the port numbers if necessary in order to transfer and receive data from each other. If the two players are on two different networks, then they will need to set up port forwarding on both of their routers in order to transfer the data. The electronics player can view a display of the current cue the guitarist is at, and manually go to a new cue (only for rehearsal purposes; should not be used in performace).

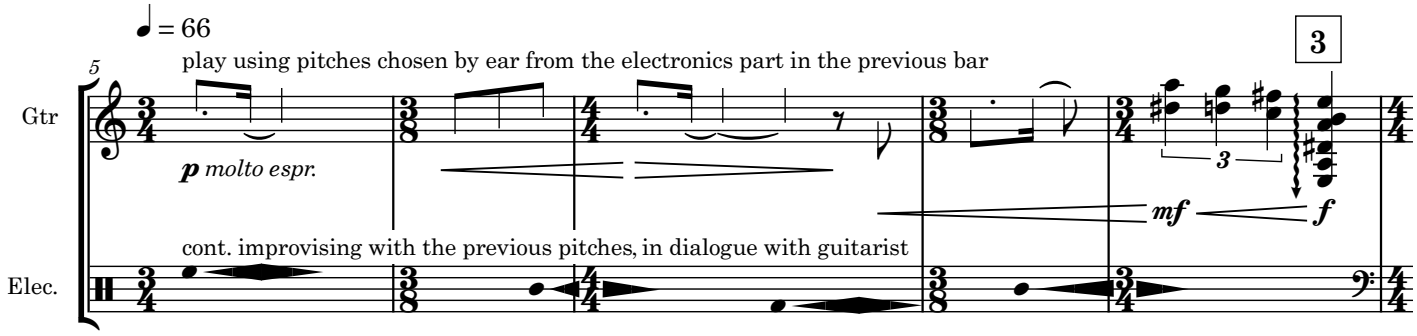
The electronics player uses their laptop keyboard and their MIDI keyboard to control various parameters that change with each cue. In the electronics player's Max patch is a list of what all of the 8 MIDI controls used in their patch control in each cue, as well as a collection of windows for drawing gestures (Cues 8-10), controlling the probablities of various ostinato delays (Cues 11-16), and more.

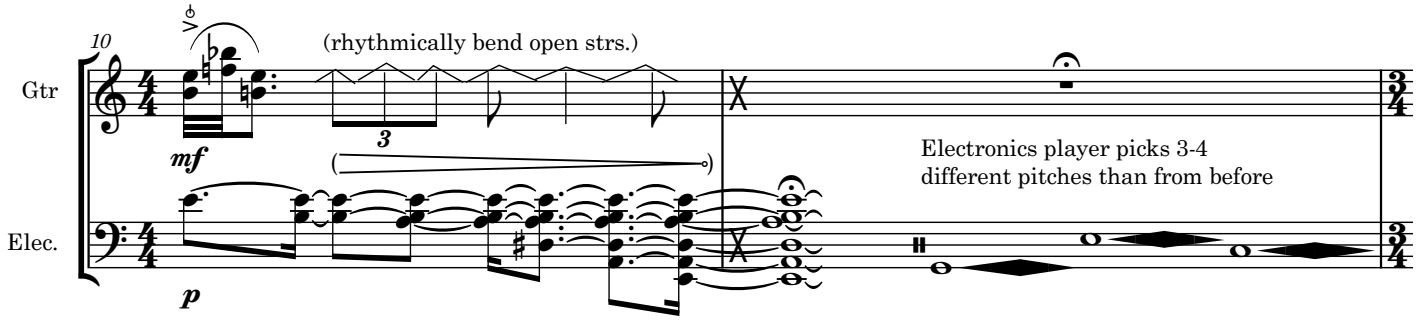
Pulling the Strings

Aidan Gold









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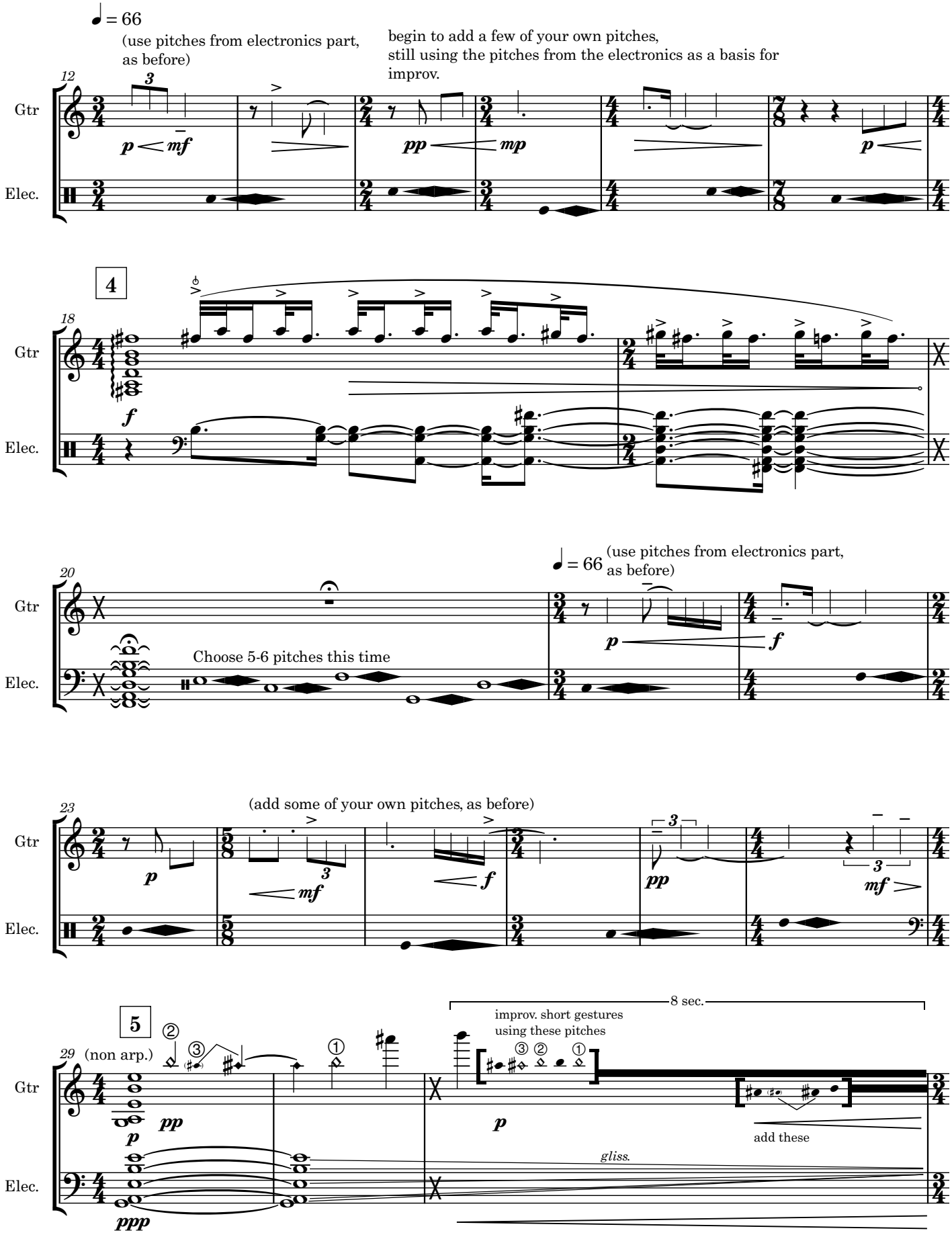
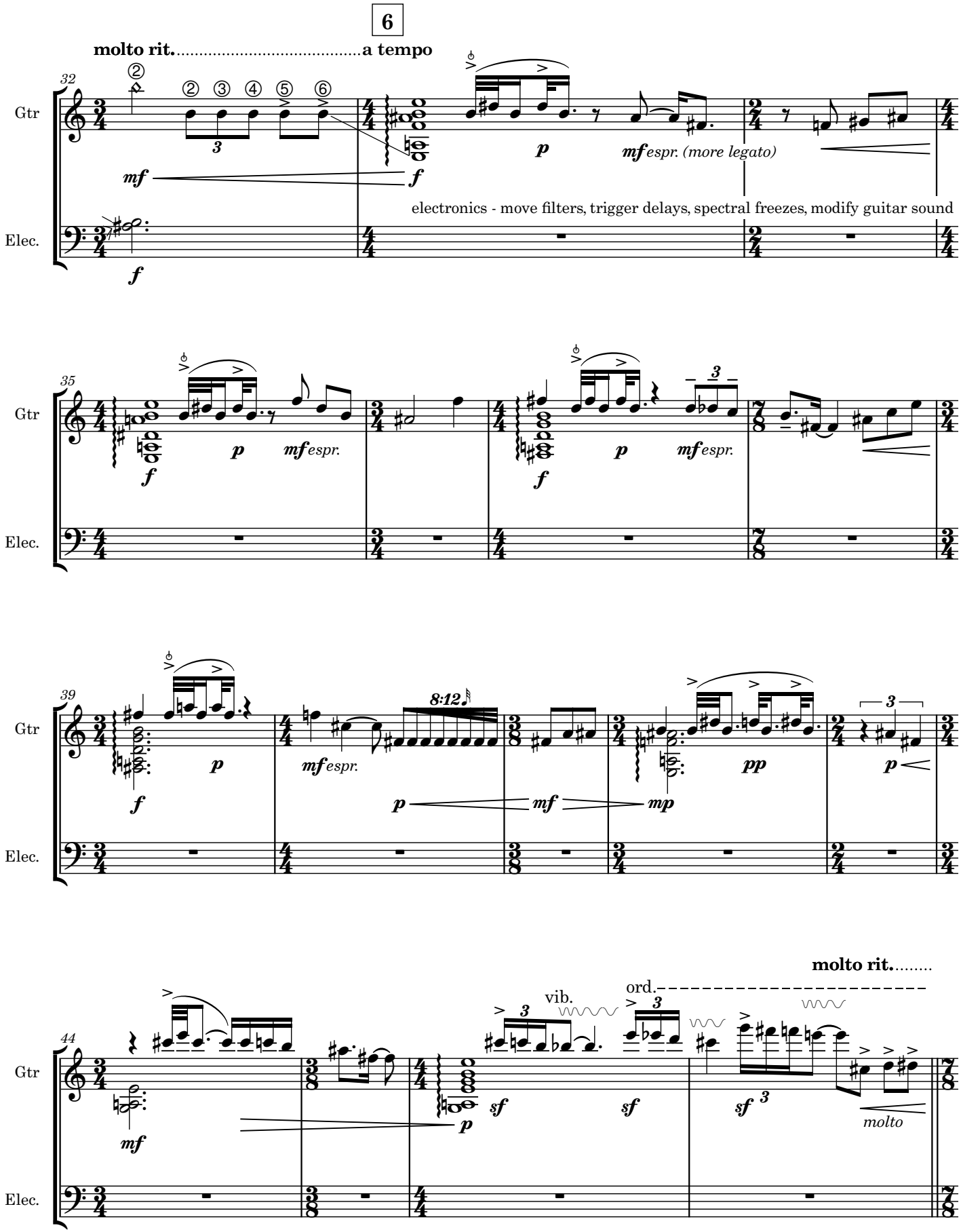
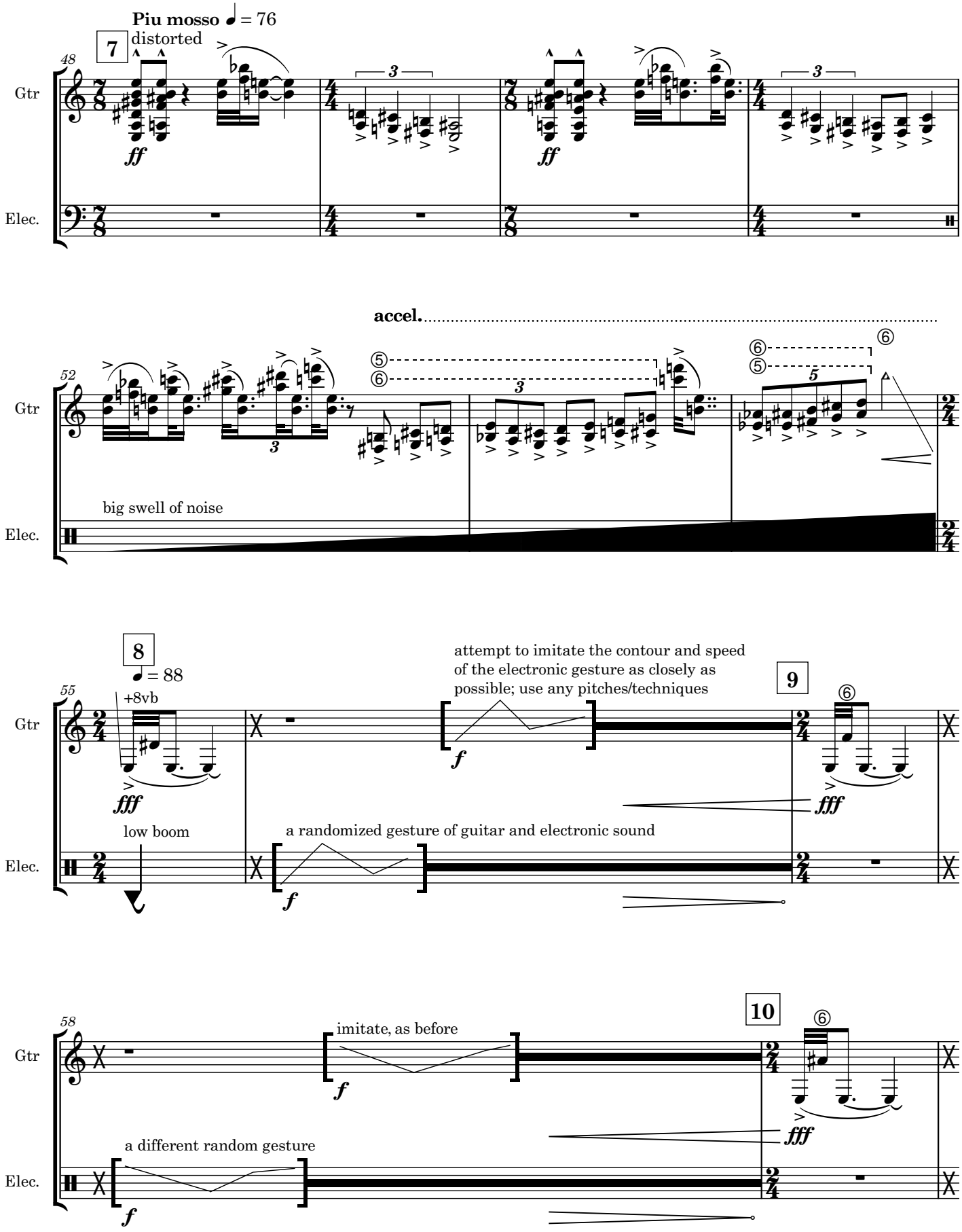
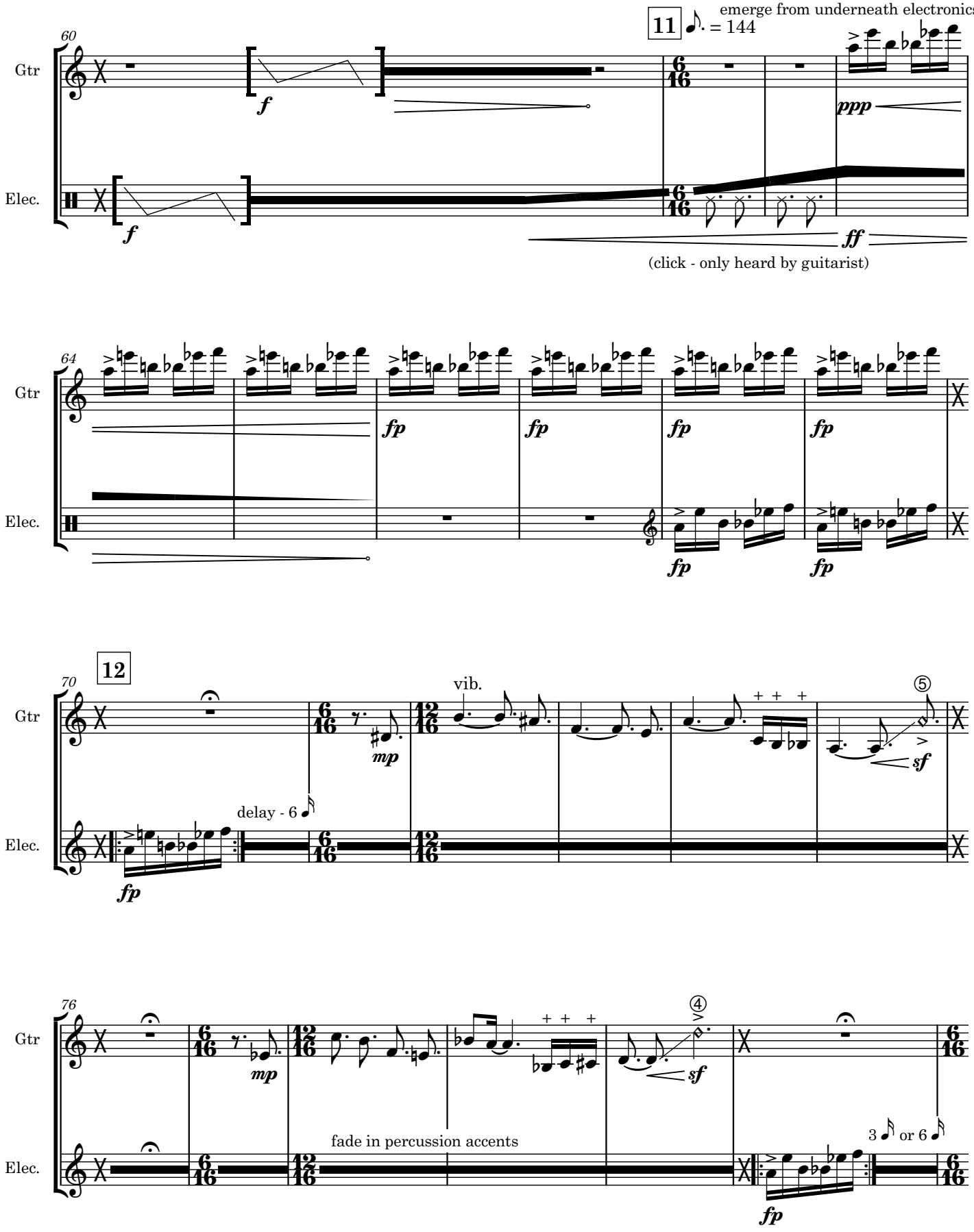
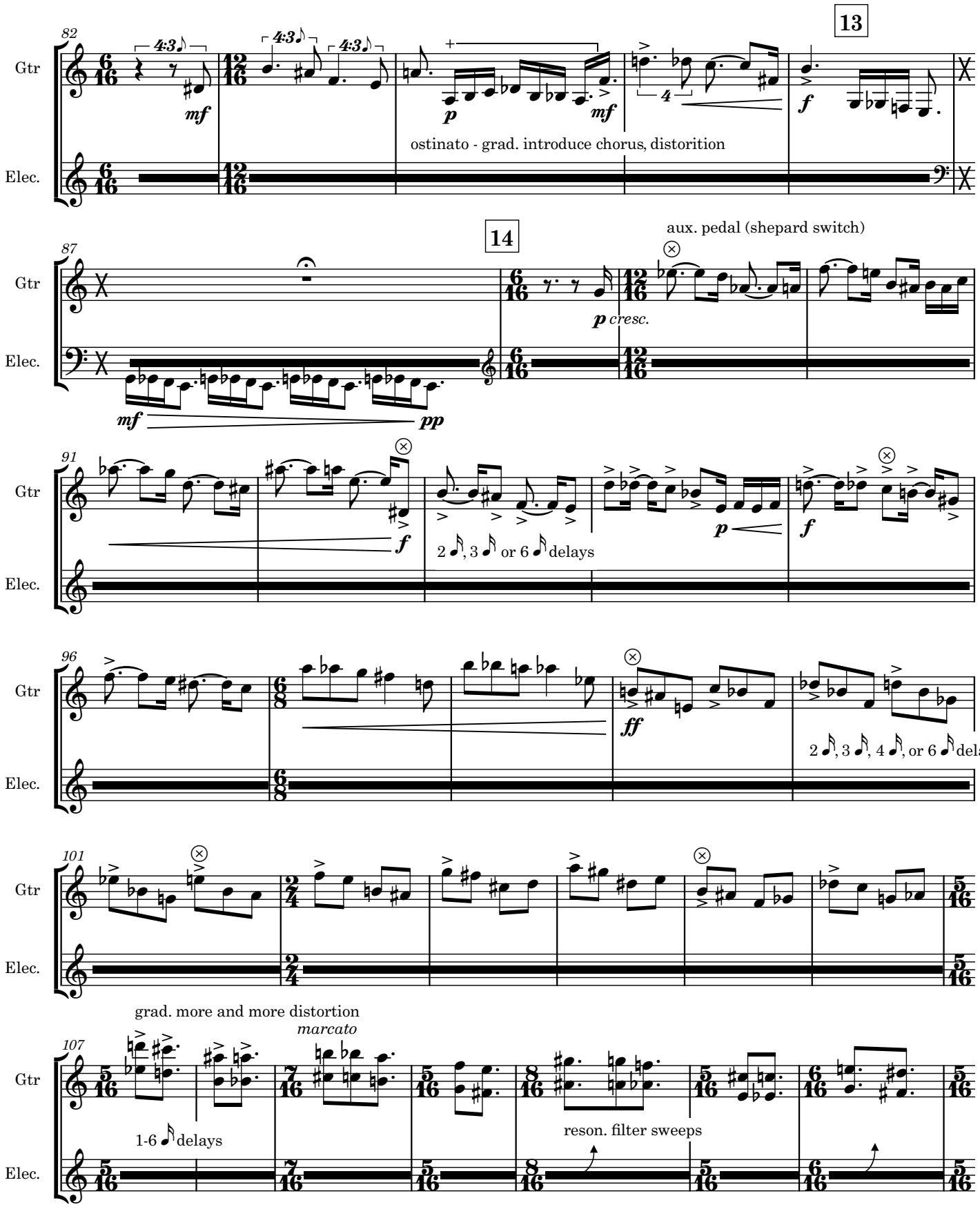
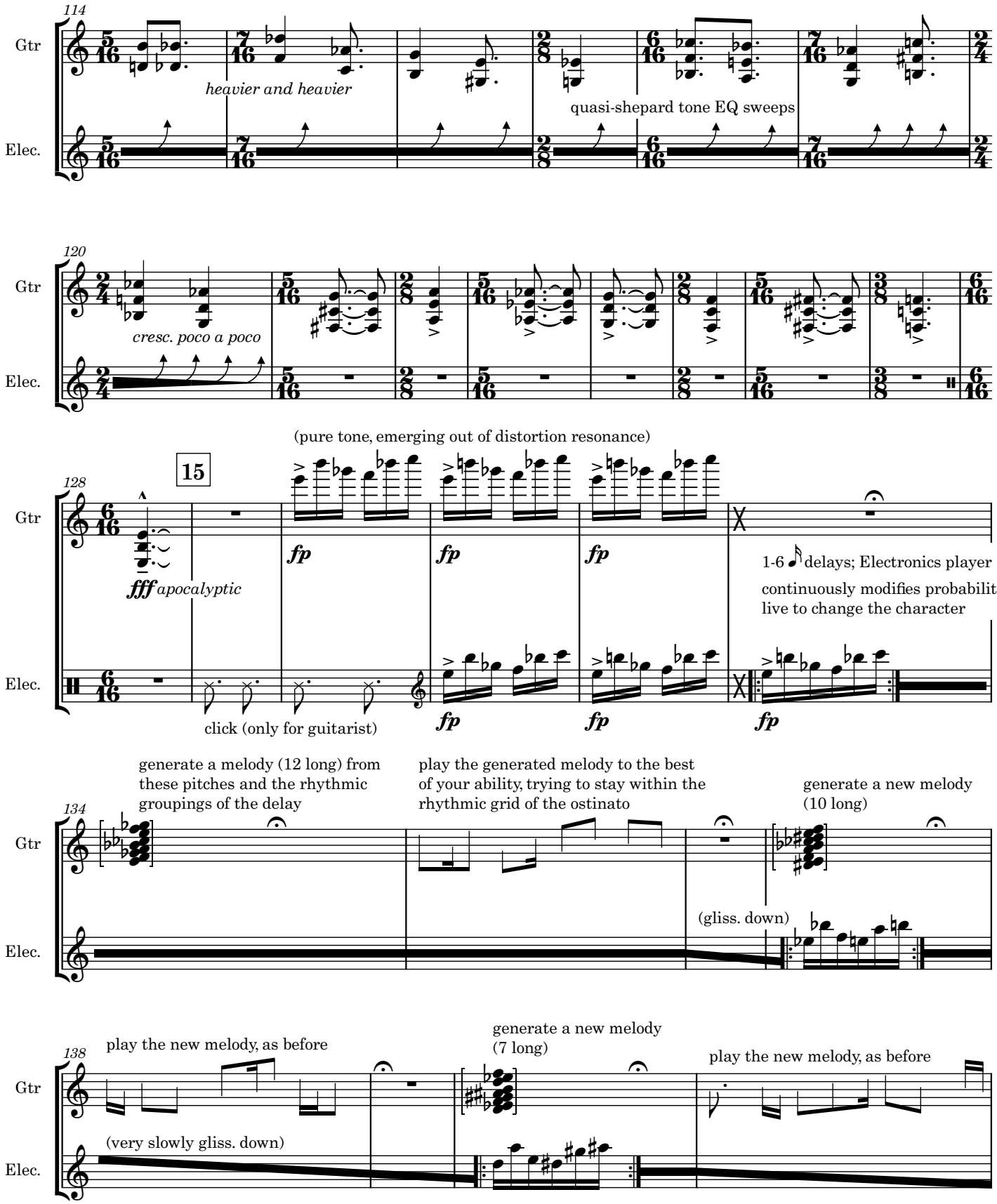

♩ = 66
(use pitches from electronics part, as before)
begin to add a few of your own pitches, still using the pitches from the electronics as a basis for improv.
12
Gtr
Elec.
4
18
Choose 5-6 pitches this time
20
(use pitches from electronics part, as before)
(add some of your own pitches, as before)
23
5
29
(non arp.)
8 sec.
improv. short gestures using these pitches
add these
gliss.

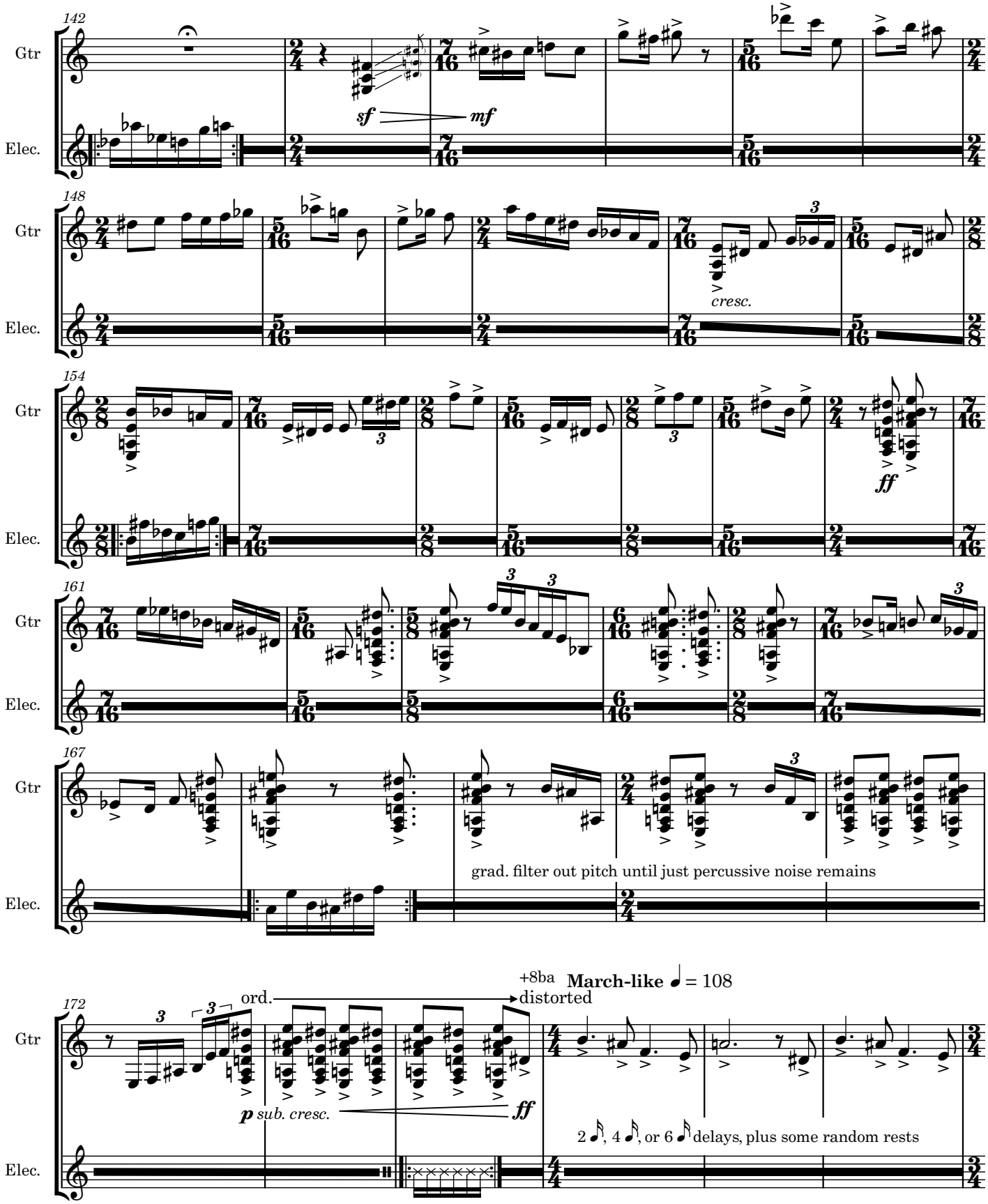

6
molto rit.
a tempo
Gtr
Elec.
mf
f
p
mf espr. (more legato)
electronics - move filters, trigger delays, spectral freezes, modify guitar sound
mf espr.
8:12
pp
mp
molto rit.
vib.
ord.
sf
molto

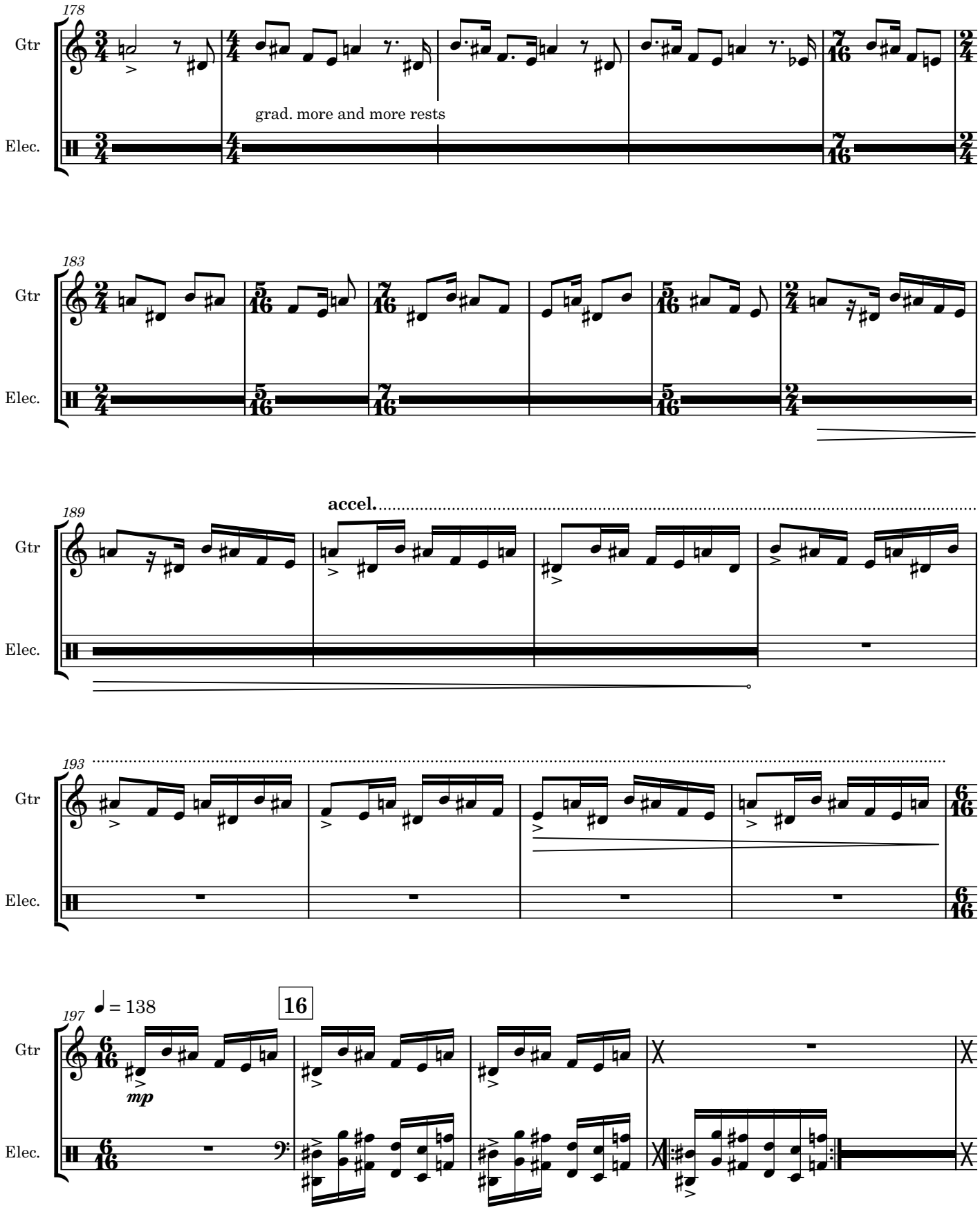

Piu mosso ♩ = 76
7
distorted
48
Gtr
Elec.
ff
ff
accel.
52
big swell of noise
8
♩ = 88
55
+8vb
fff
low boom
attempt to imitate the contour and speed of the electronic gesture as closely as possible; use any pitches/techniques
f
9
fff
a randomized gesture of guitar and electronic sound
f
58
imitate, as before
f
10
fff
a different random gesture
f

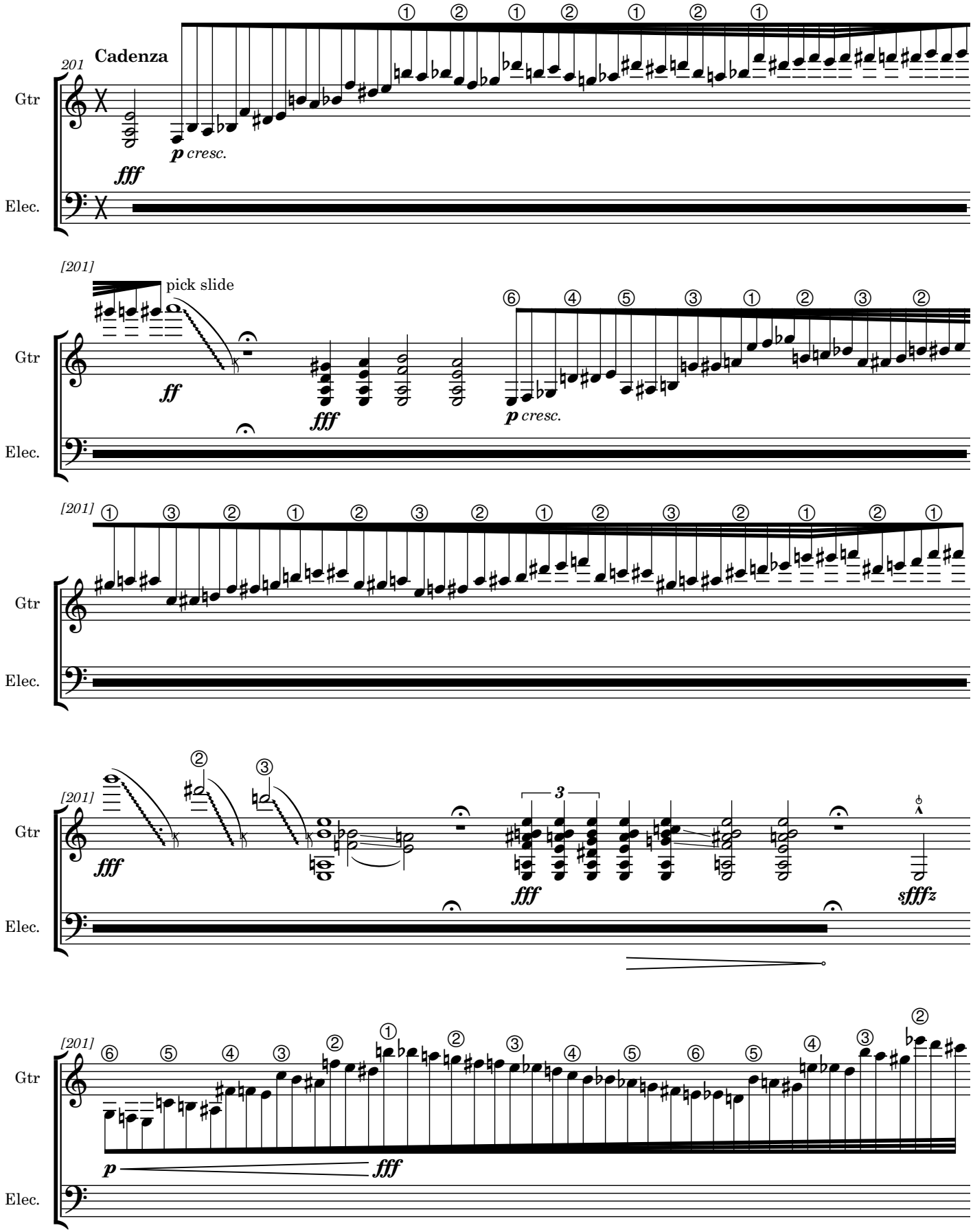

11
emerge from underneath electronics
♪. = 144
60
Gtr
Elec.
f
ppp
ff
(click - only heard by guitarist)
64
fp
12
70
vib.
mp
sf
delay - 6
76
fade in percussion accents
3 or 6

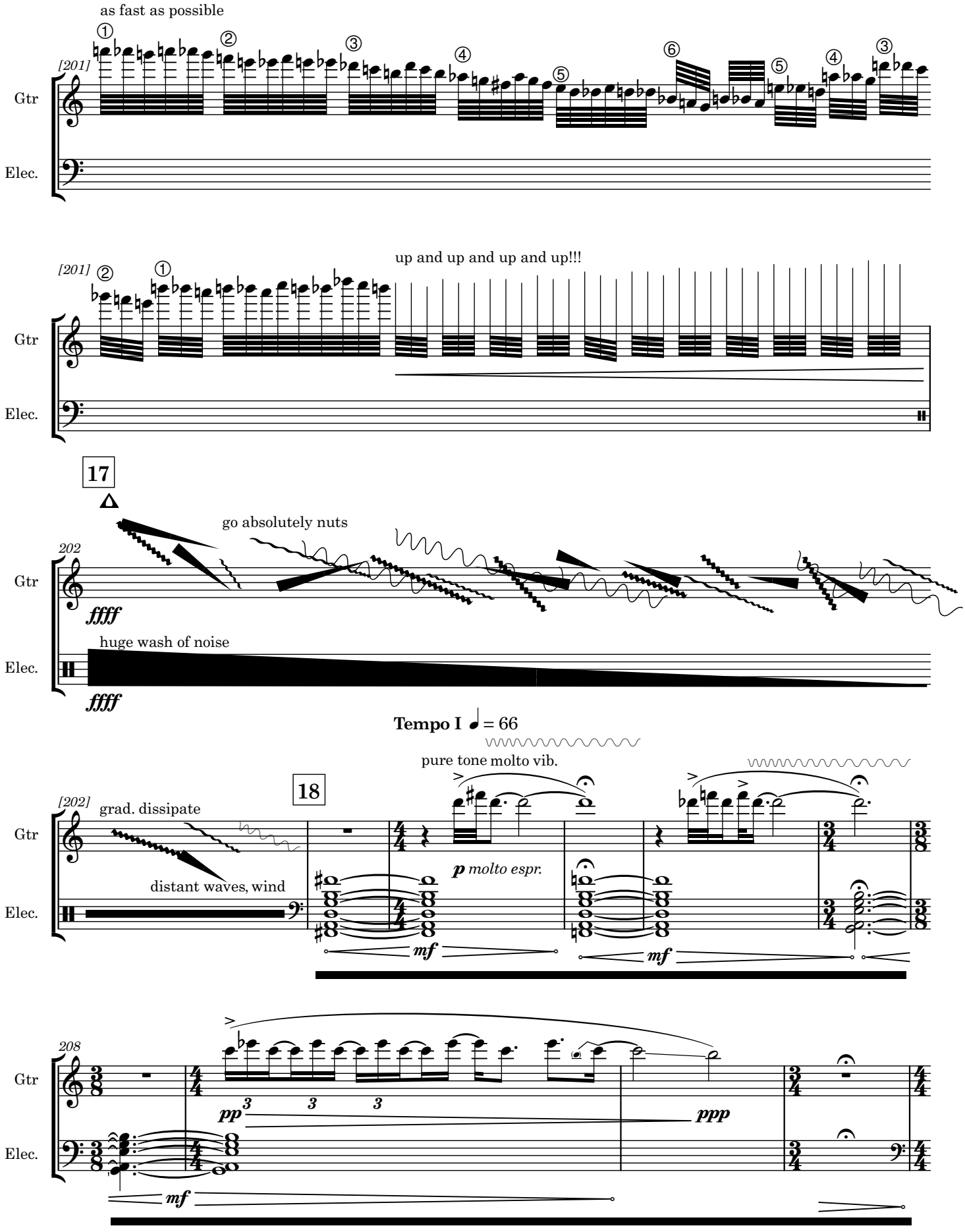

13
82
Gtr
Elec.
4:3
4:3
4:3
mf
p
mf
4
f
ostinato - grad. introduce chorus, distorition
14
aux. pedal (shepard switch)
87
Gtr
Elec.
p cresc.
mf
pp
91
Gtr
Elec.
f
2 , 3 or 6 delays
p
f
96
Gtr
Elec.
ff
2 , 3 , 4 , or 6 delays
101
Gtr
Elec.
grad. more and more distortion
marcato
107
Gtr
Elec.
1-6 delays
reson. filter sweeps

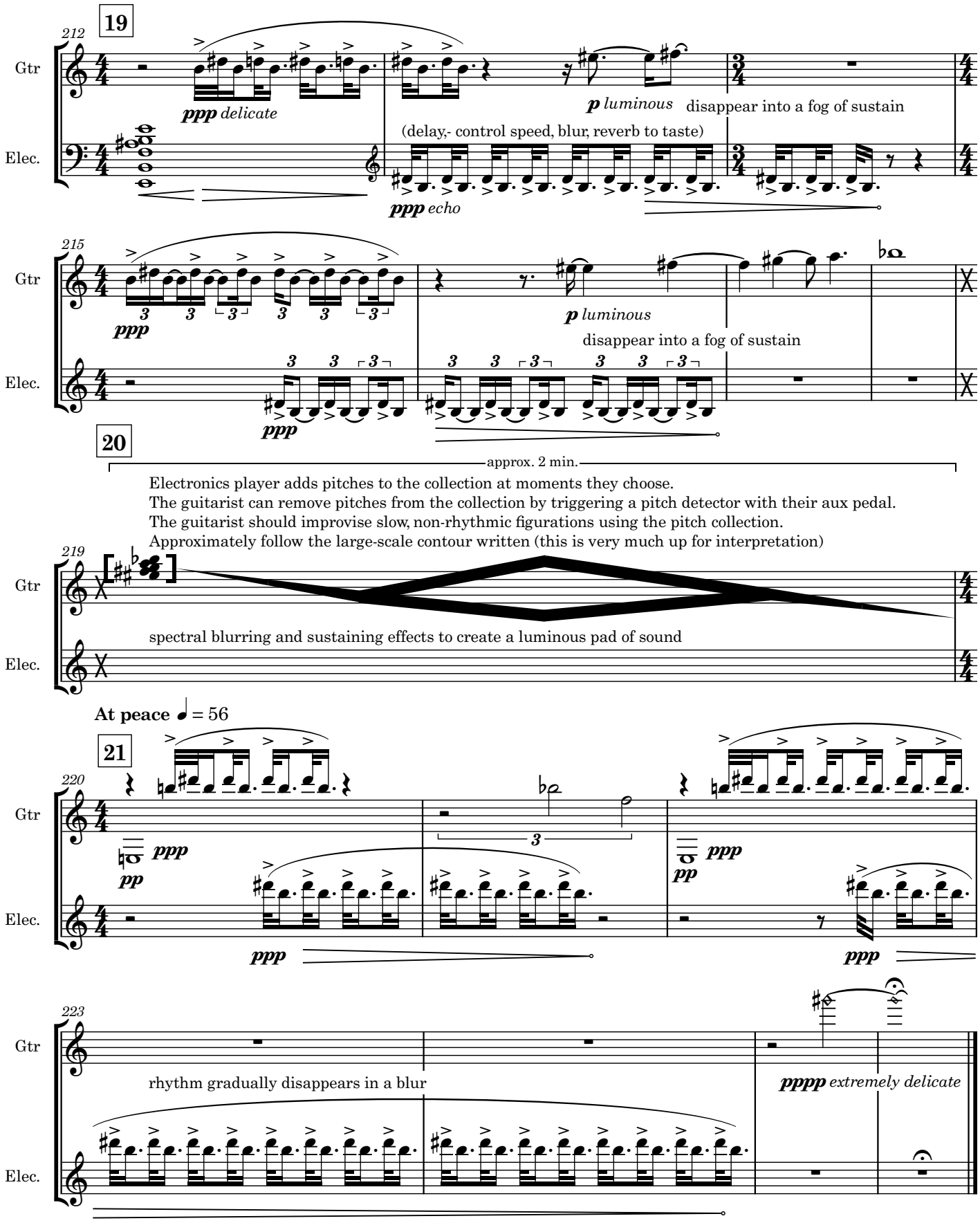

114
Gtr
Elec.
heavier and heavier
quasi-shepard tone EQ sweeps
120
cresc. poco a poco
(pure tone, emerging out of distortion resonance)
15
128
fff apocalyptic
fp
1-6 delays; Electronics player
continuously modifies probabilities
live to change the character
click (only for guitarist)
generate a melody (12 long) from
these pitches and the rhythmic
groupings of the delay
play the generated melody to the best
of your ability, trying to stay within the
rhythmic grid of the ostinato
generate a new melody
(10 long)
134
(gliss. down)
play the new melody, as before
generate a new melody
(7 long)
play the new melody, as before
138
(very slowly gliss. down)


142
Gtr
Elec.
sf
mf
148
cresc.
154
ff
161
167
grad. filter out pitch until just percussive noise remains
172
ord.
+8ba
distorted
March-like ♩ = 108
p sub. cresc.
ff
2 𝅘𝅥𝅯, 4 𝅘𝅥𝅯, or 6 𝅘𝅥𝅯 delays, plus some random rests


178
Gtr
Elec.
grad. more and more rests
183
Gtr
Elec.
189
Gtr
Elec.
accel.
193
Gtr
Elec.
197
Gtr
Elec.
♩ = 138
16
mp


201
Cadenza
Gtr
Elec.
fff
p cresc.
[201]
pick slide
ff
fff
p cresc.
[201]
[201]
fff
fff
sfffz
[201]
p
fff


as fast as possible
[201]
Gtr
Elec.
up and up and up and up!!!
17
go absolutely nuts
202
ffff
huge wash of noise
Tempo I ♩ = 66
pure tone molto vib.
18
[202]
grad. dissipate
distant waves, wind
p molto espr.
mf
208
pp
ppp


19
212
Gtr
Elec.
ppp delicate
p luminous
disappear into a fog of sustain
(delay,- control speed, blur, reverb to taste)
ppp echo
215
ppp
p luminous
disappear into a fog of sustain
20
approx. 2 min.
Electronics player adds pitches to the collection at moments they choose.
The guitarist can remove pitches from the collection by triggering a pitch detector with their aux pedal.
The guitarist should improvise slow, non-rhythmic figurations using the pitch collection.
Approximately follow the large-scale contour written (this is very much up for interpretation)
219
spectral blurring and sustaining effects to create a luminous pad of sound
At peace ♩ = 56
21
220
pp
ppp
223
rhythm gradually disappears in a blur
pppp extremely delicate