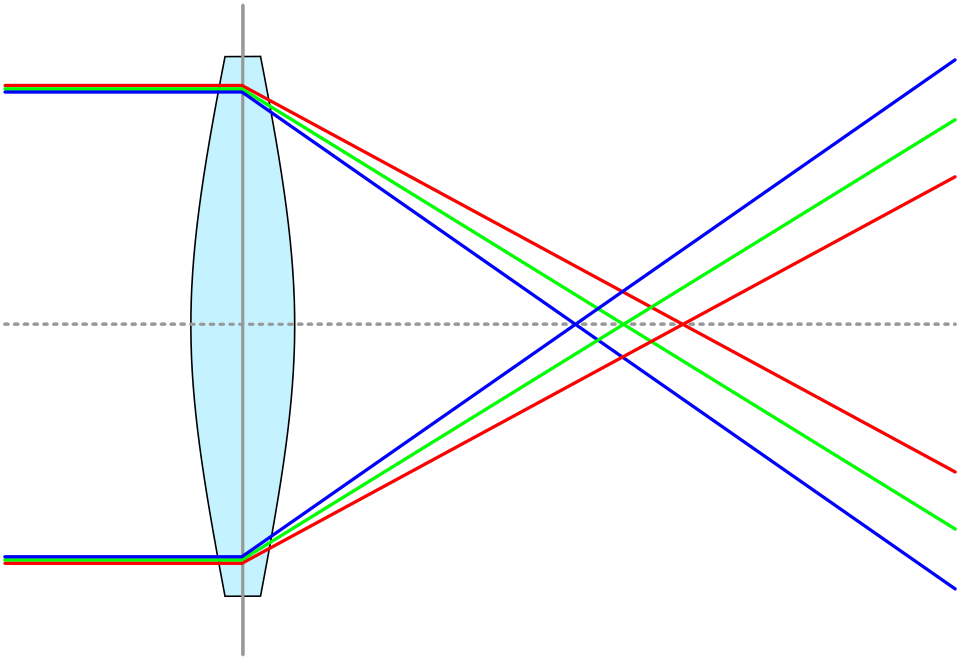
ABERRATION

Trumpet and Live Electronics



Taylor Brook

2018

about *Aberration*

Aberration is dedicated to Andy Kozar, written in the Summer and Fall of 2018.

This piece features the simple trajectory of a plain sine tone becoming more and more complex and distorted. This is realized with both the live trumpet and the electronic processing: the soft muted trumpet tone becomes the rough beating of singing and playing together. An accompanimental sine tone in the electronics becomes delay lines, harmonic exciters, clip distortion, and ever-thickening harmonies.

Technical Rider

General Guidelines:

Aberration is a piece for solo trumpet in C with electronics. The electronics consist of a microphone for the trumpet running though an audio interface into a computer running a Max/MSP patch out to a guitar amplifier. If a guitar amplifier is not available then the sound could come through concert speakers, either a mono speaker placed near the performer or a stereo pair. In a larger hall, I would suggest using guitar amplifier and then micing that amp to a stereo or mono cluster of speakers. The Max/MSP patch requires a trigger for cues, which can be realized either by a technician at the computer or via the performer using a MIDI or USB pedal. Further details are included in the MAX/MSP patch.

Equipment List (guitar amplifier option):

- Computer with max/msp (windows 10 or Mac, i7 7700 CPU or faster)
- Microphone for Trumpet (DPA clip-on, SM58, AEA N22 or similar)
- Mixer
- Audio Interface
- Direct Box (if needed for amplifier)
- Guitar Amplifier (Vox V212C 50-watt or similar)
- Appropriate cabling
- MIDI or USB pedal (if triggered by performer)

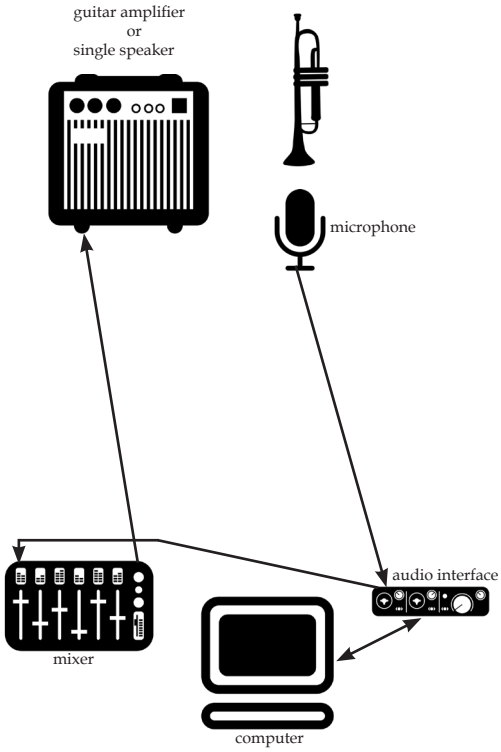
Equipment List (mono concert speaker option):

- Computer with max/msp (windows 10 or Mac, i7 7700 CPU or faster)
- Microphone for Trumpet (DPA clip-on, SM58, AEA N22 or similar)
- Mixer
- Audio Interface
- Concert Speaker
- Appropriate cabling
- MIDI or USB pedal (if triggered by performer)

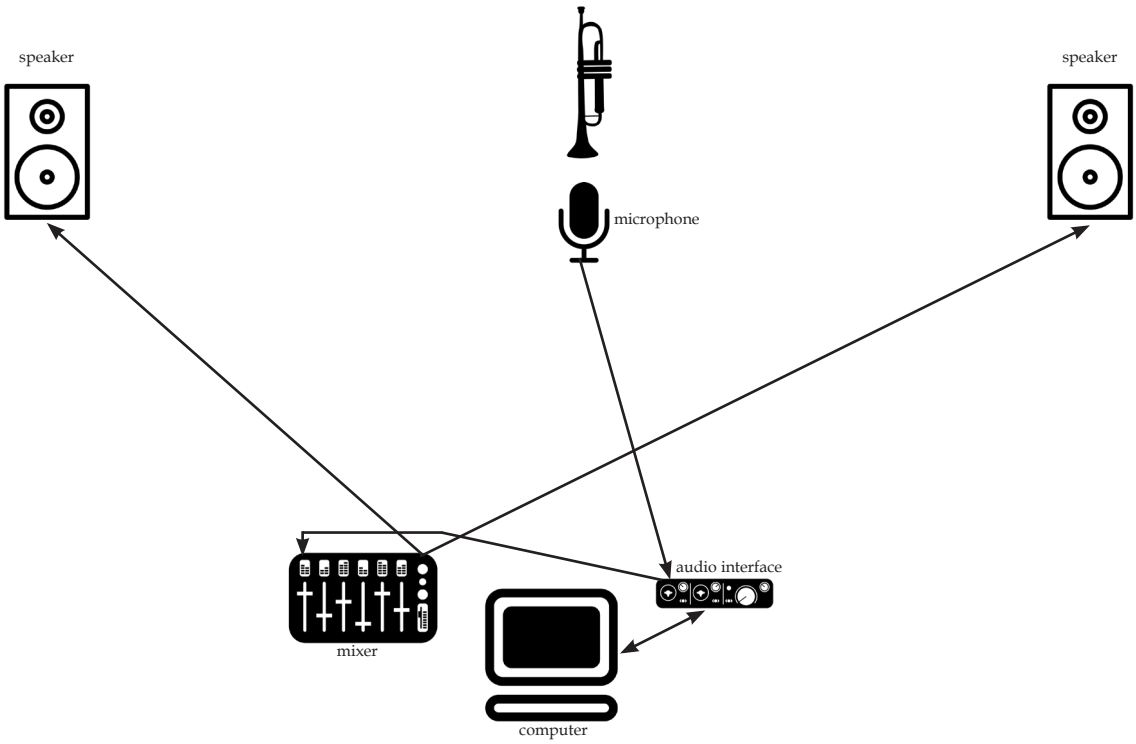
Equipment List (stereo concert speakers option):

- Computer with max/msp (windows 10 or Mac, i7 7700 CPU or faster)
- Microphone for Trumpet (DPA clip-on, SM58, AEA N22 or similar)
- Mixer
- Audio Interface
- 2 Concert Speakers
- Appropriate cabling
- MIDI or USB pedal (if triggered by performer)

signal diagram



OR



Performance Techniques

flz.: fluttertongue

norm.: normale, with a normal tone or technique

half-valve: press the valves part of the way down so that you may bend the pitch freely with an unfocused tone.

m.vib.: molto vibrato

s.vib.: senza vibrato

sing encircled notehead: vocalise through the trumpet on the pitch notated as a normal notehead with a circle around it while playing the unaltered noteheads in a normal fashion.

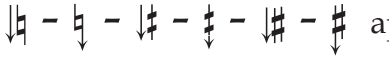
beating: produce a beating sound by playing and singing a unison (or octave) and then bending the sung note while holding the played note steady at pitch. As the bend begins to move away from a unison the beating will be slow and as the bending note moves farther from the unison the beating will become faster.

Microtones

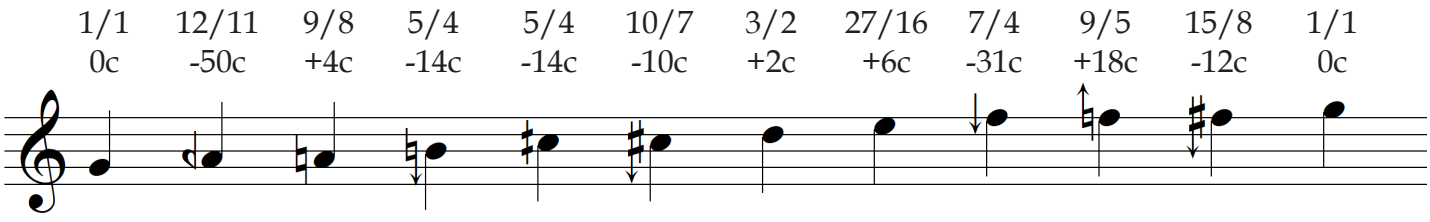
The following acccidental nomenclature is used:

 approximately 1/4 tone flat or sharp (50 cents)

 approximately 1/6 tone flat or sharp (33 cents)

 approximately 1/12 tone flat or sharp (17 cents)

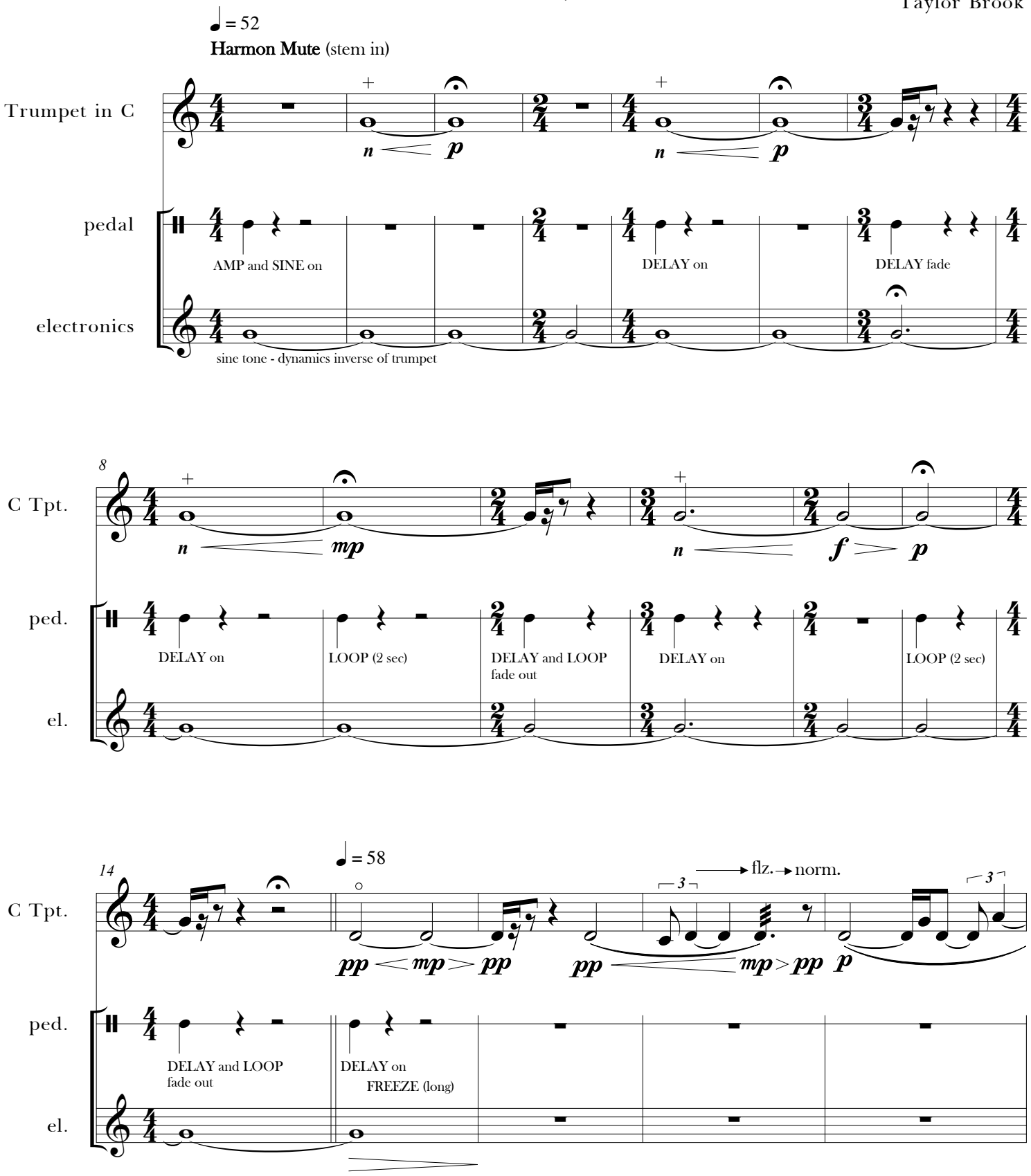
This piece relies heavily upon this just intonation scale:

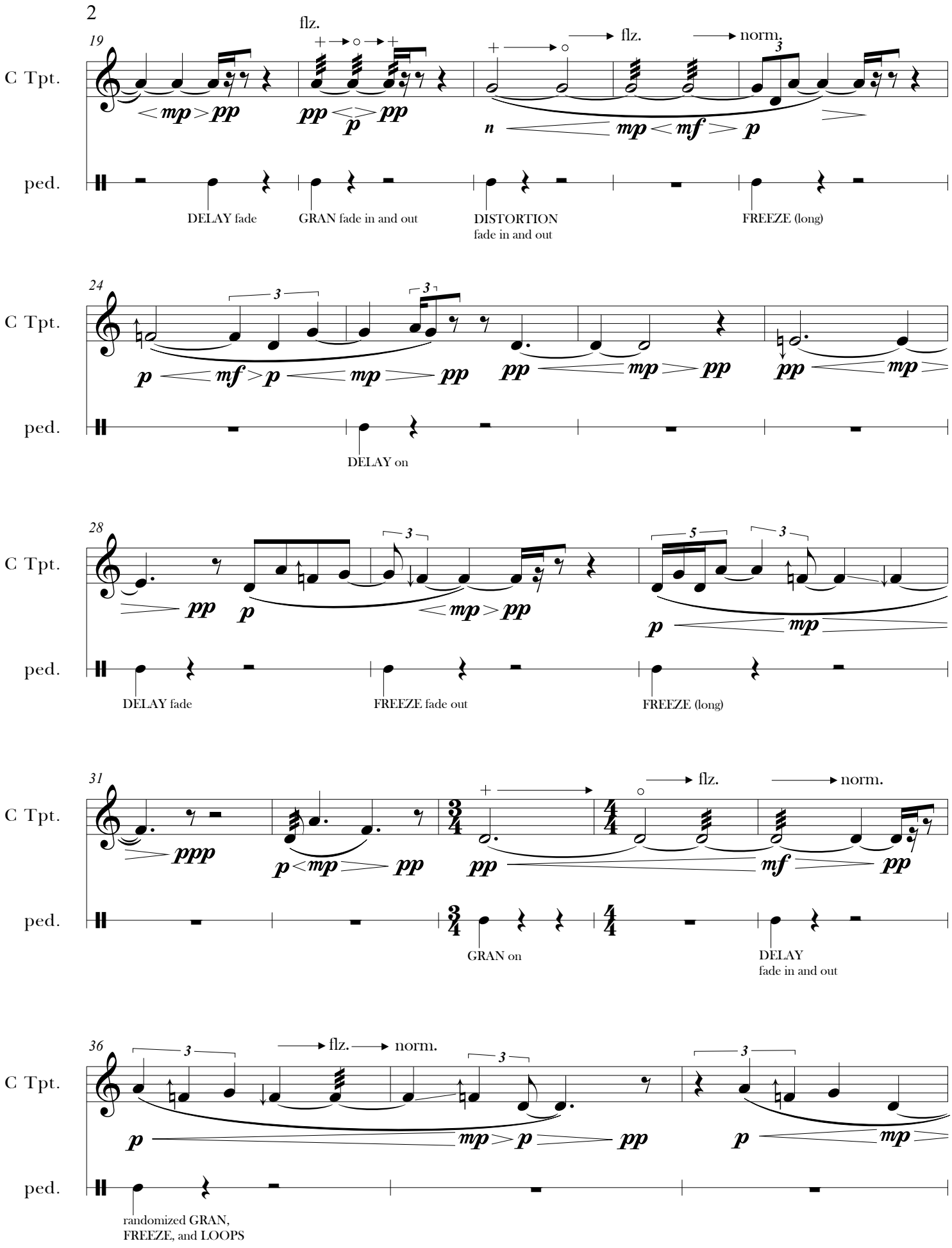


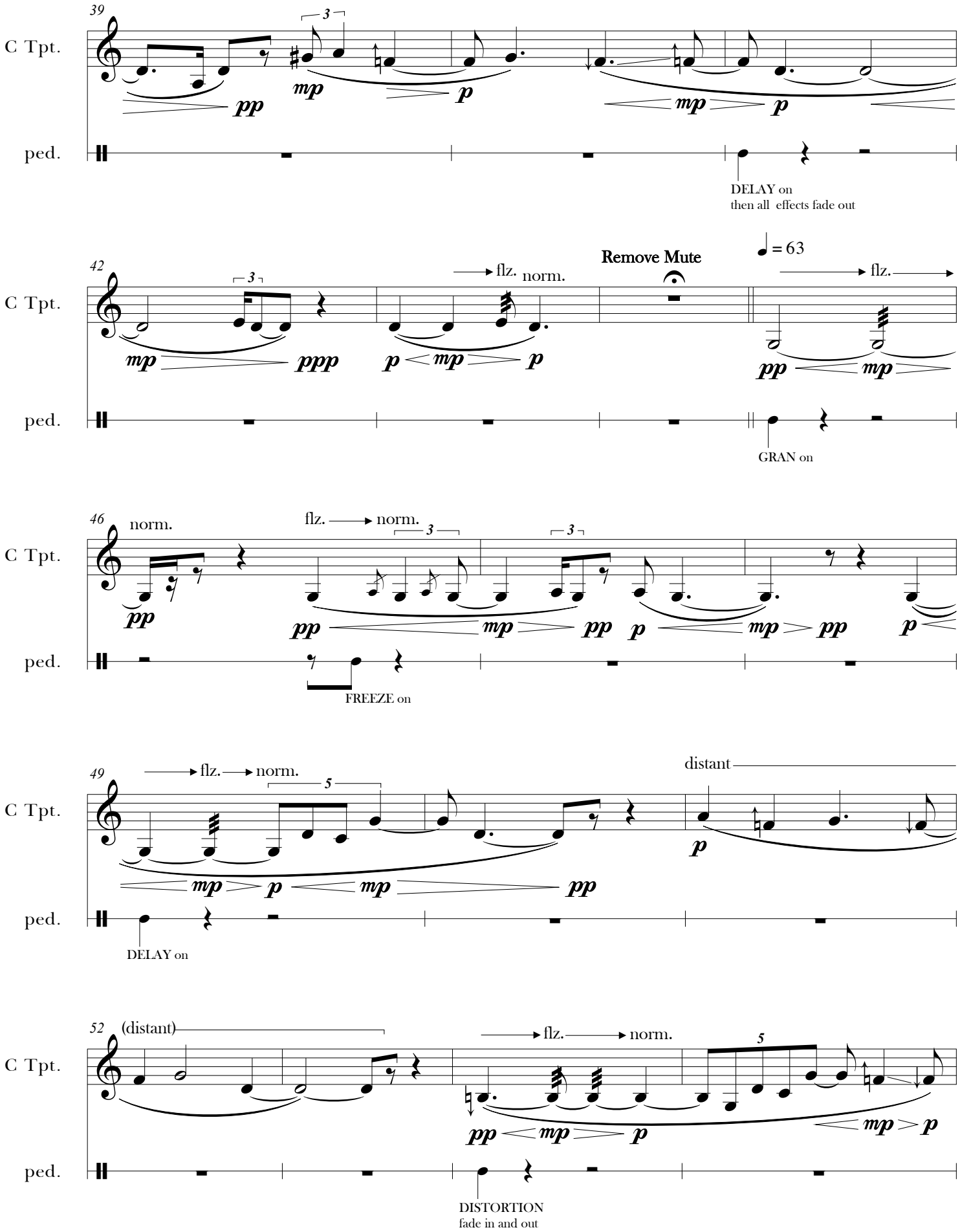
Aberration

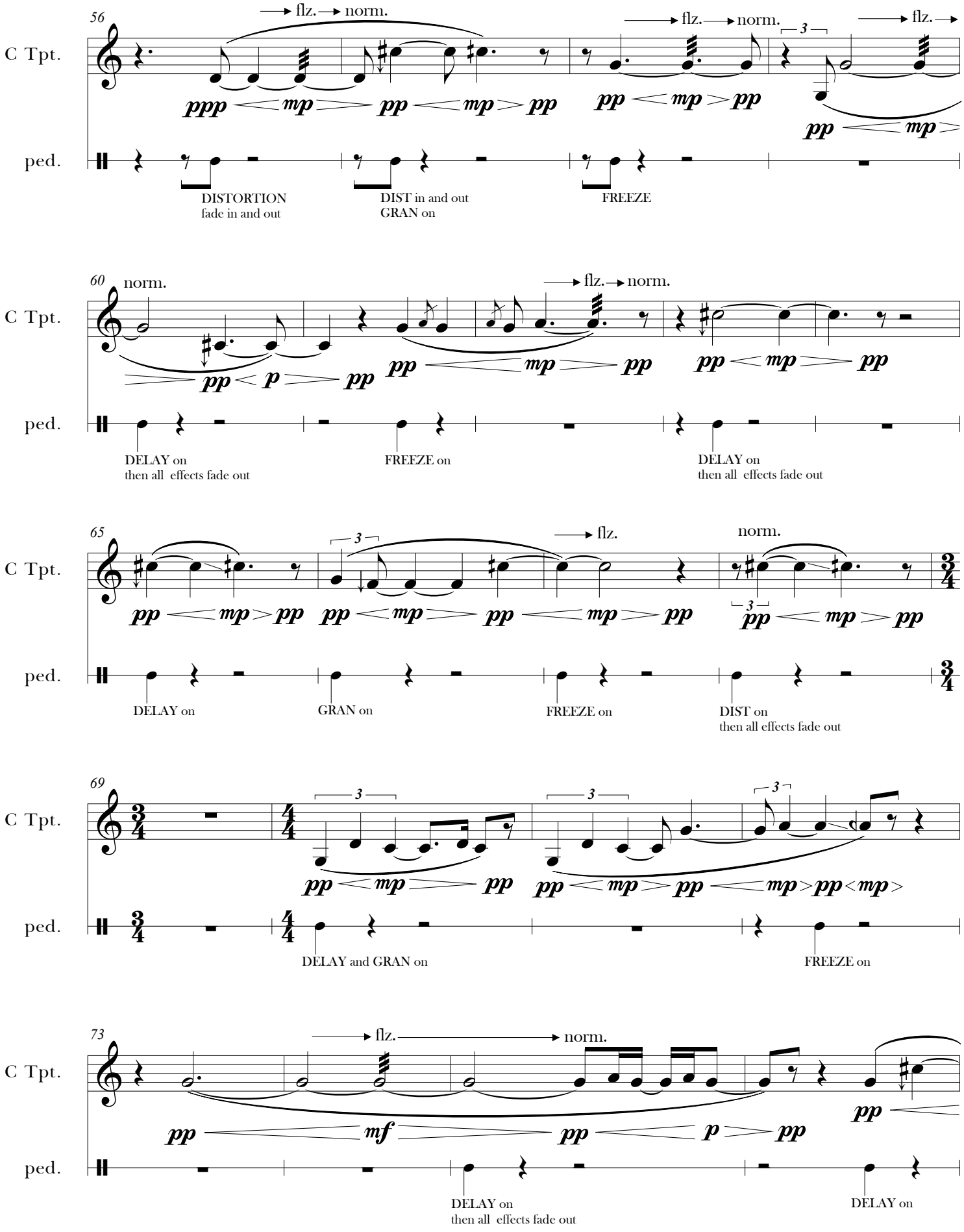
for Andy Kozar

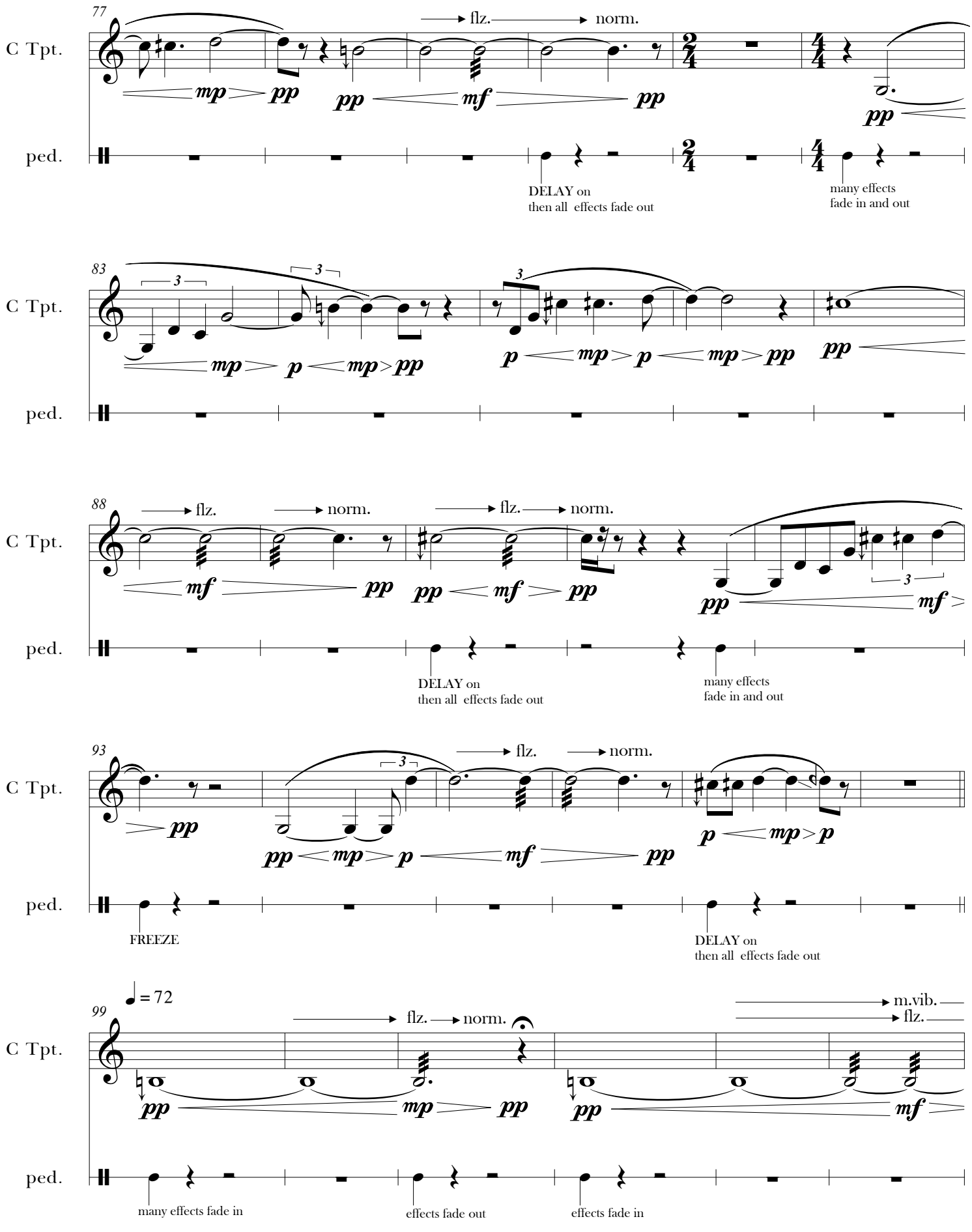
Taylor Brook

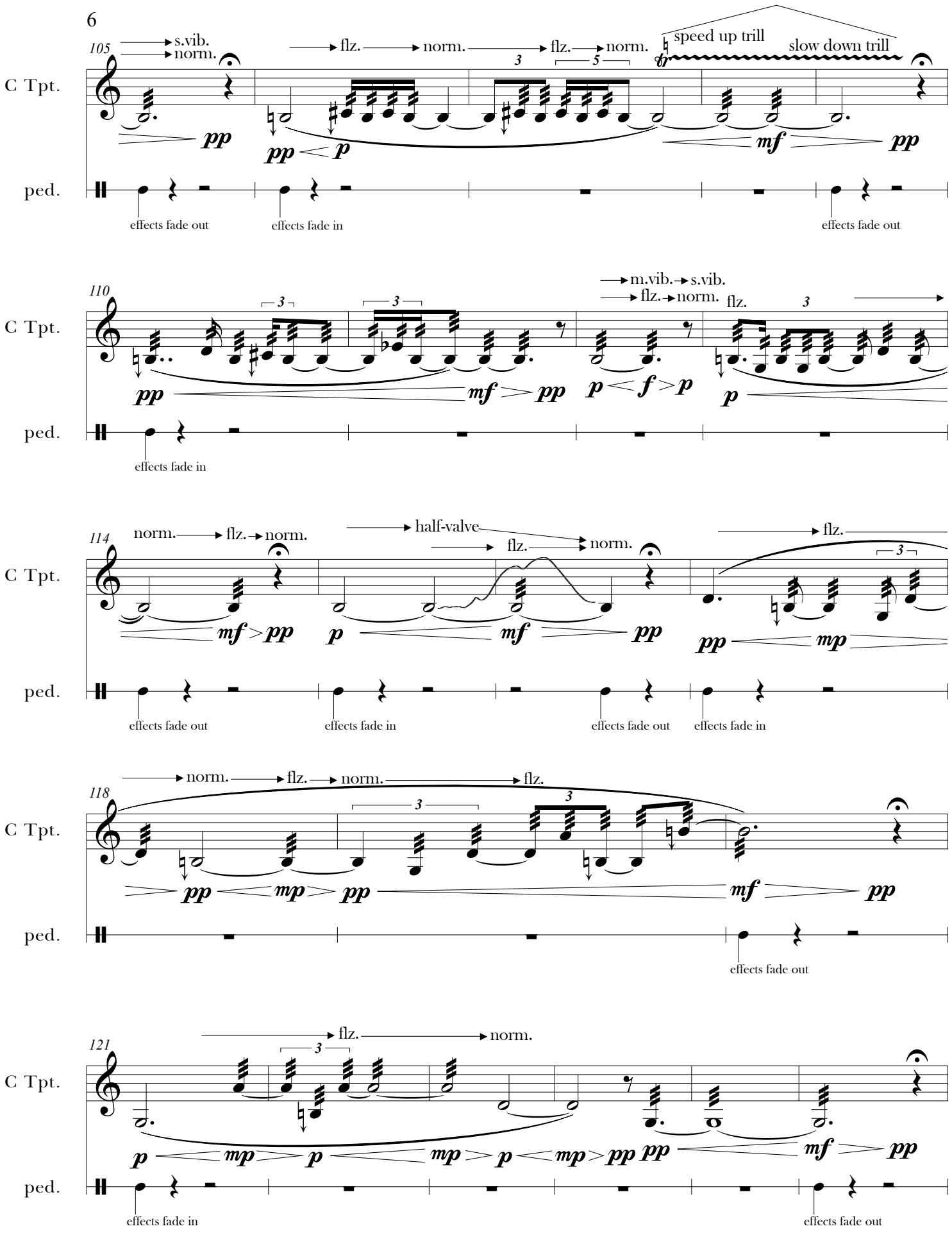


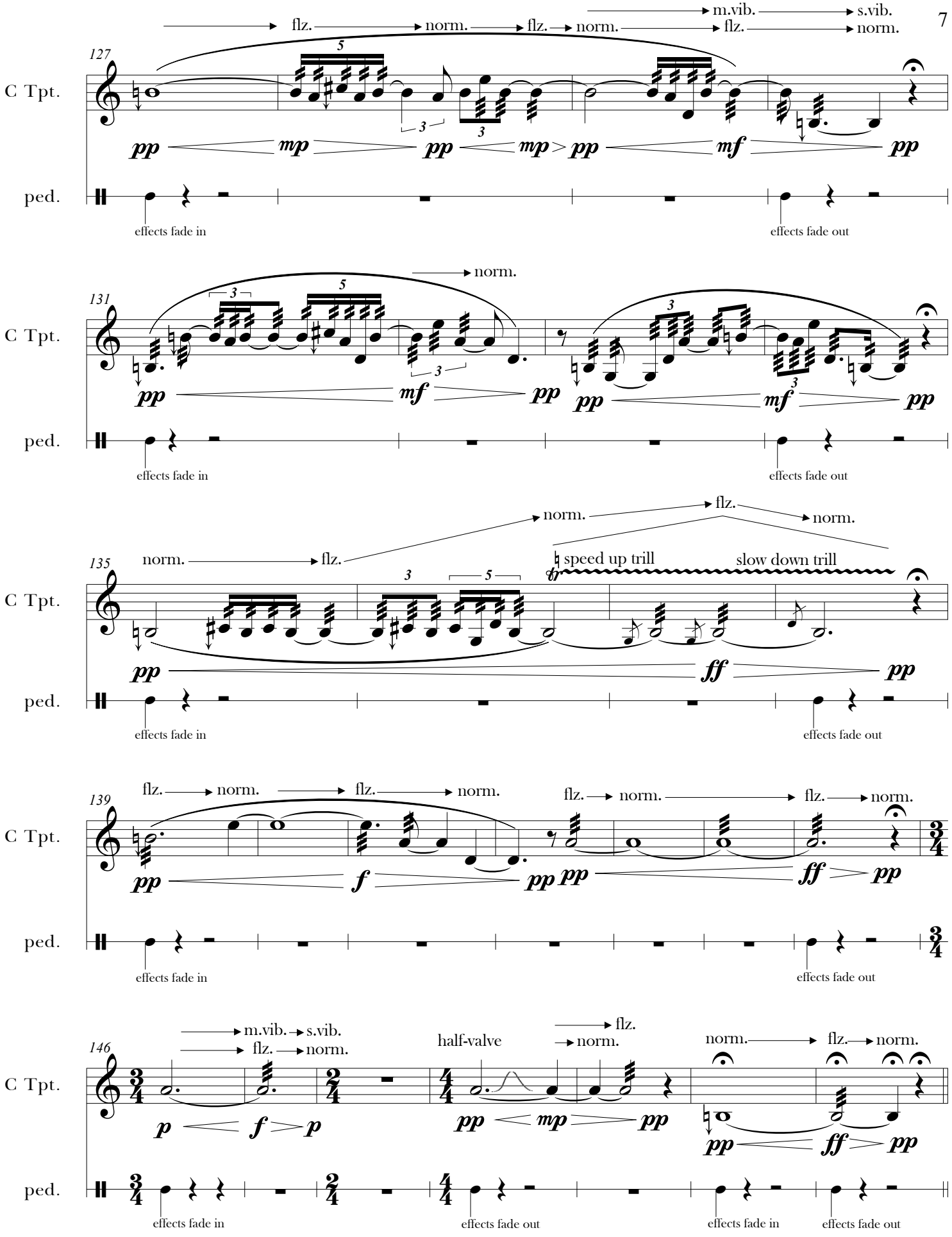

19
flz.
flz.
norm.
C Tpt.
ped.
DELAY fade
GRAN fade in and out
DISTORTION
fade in and out
FREEZE (long)
24
C Tpt.
ped.
DELAY on
28
C Tpt.
ped.
DELAY fade
FREEZE fade out
FREEZE (long)
31
flz.
norm.
C Tpt.
ped.
GRAN on
DELAY
fade in and out
36
flz.
norm.
C Tpt.
ped.
randomized GRAN,
FREEZE, and LOOPS

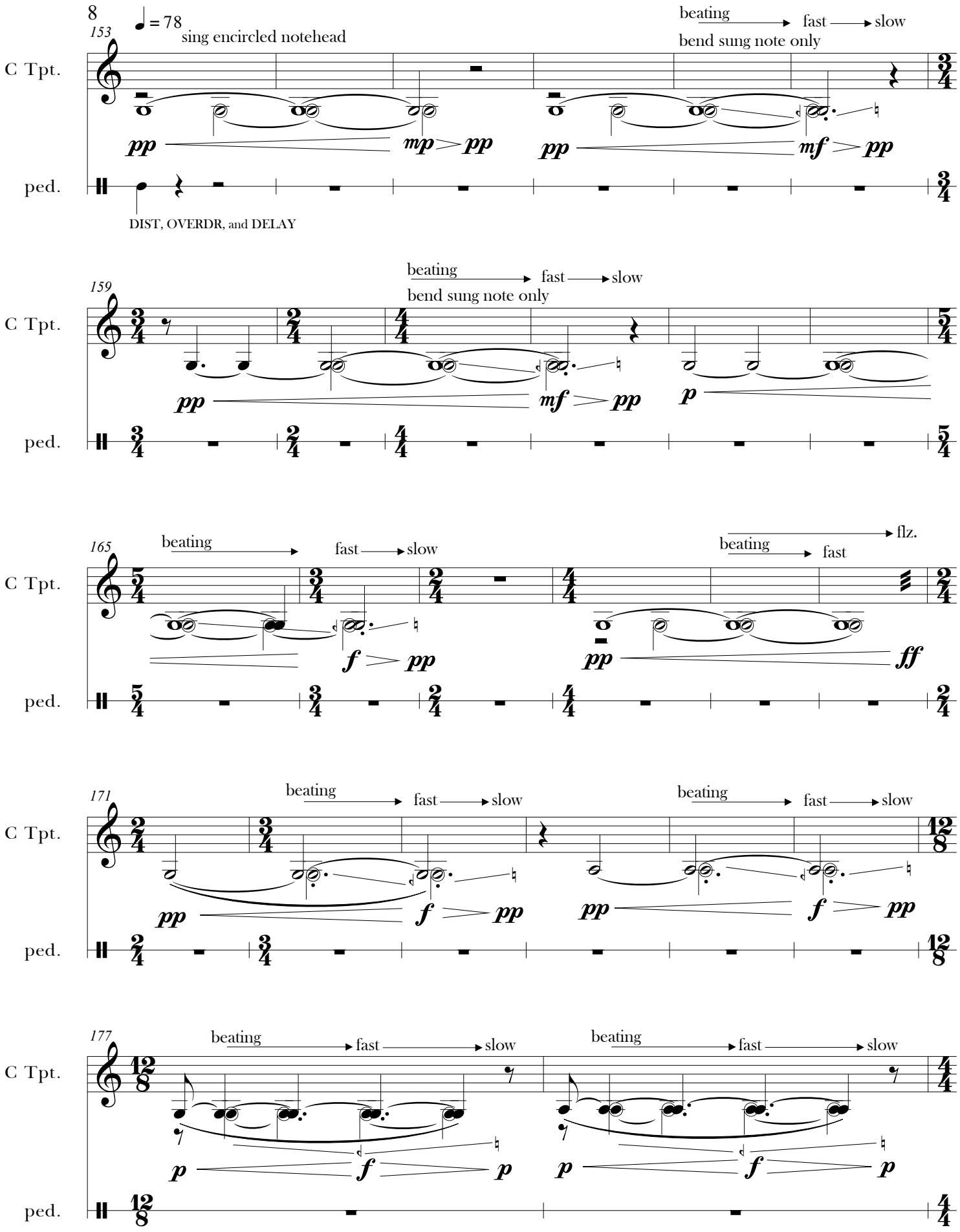

39
C Tpt.
ped.
DELAY on
then all effects fade out
42
Remove Mute
= 63
flz.
norm.
GRAN on
46
FREEZE on
49
distant
DELAY on
52
(distant)
DISTORTION
fade in and out

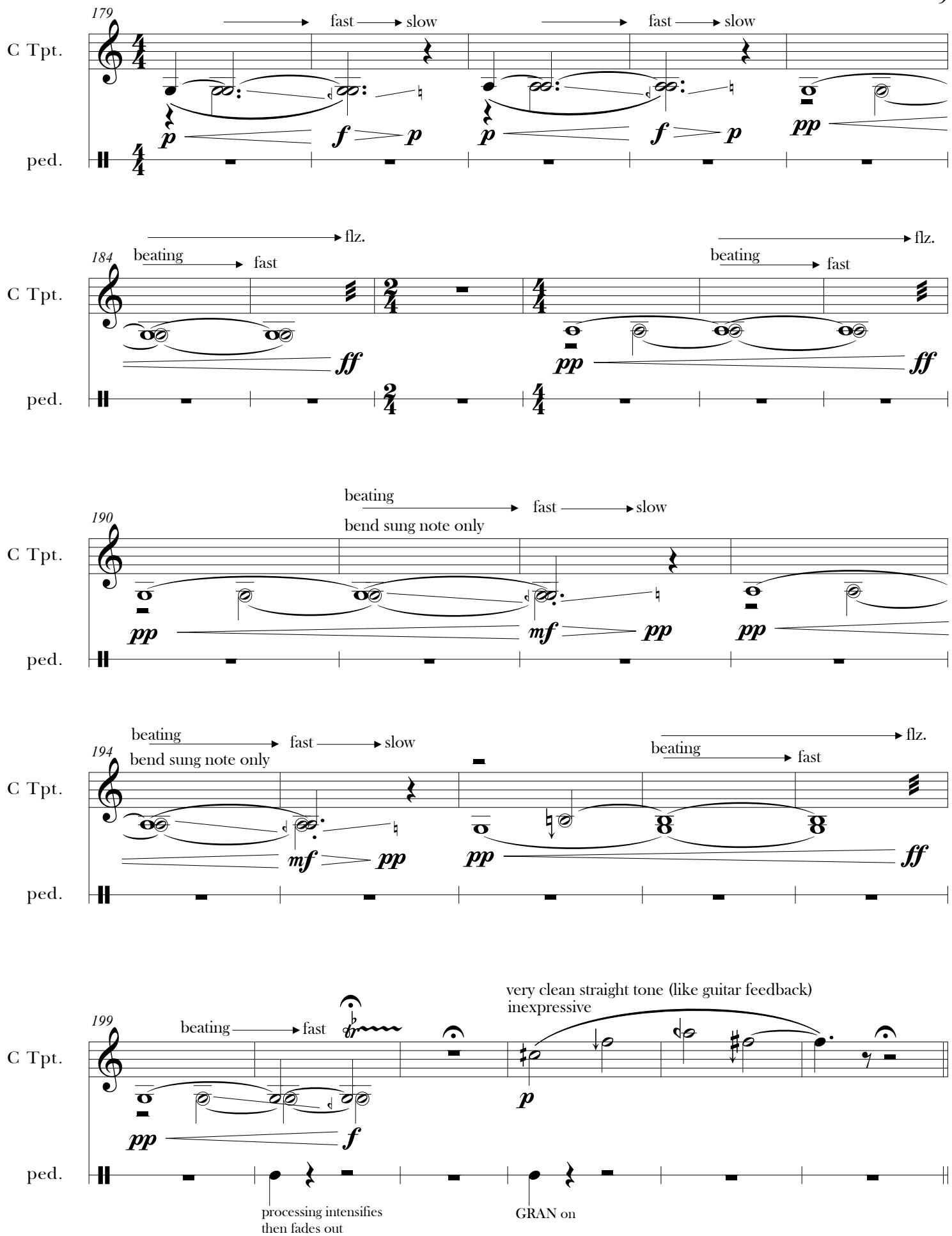

56
flz.
norm.
C Tpt.
ppp
mp
pp
ped.
DISTORTION
fade in and out
DIST in and out
GRAN on
FREEZE
60
norm.
DELAY on
then all effects fade out
FREEZE on
65
DELAY on
GRAN on
FREEZE on
DIST on
then all effects fade out
69
DELAY and GRAN on
FREEZE on
73
DELAY on
then all effects fade out

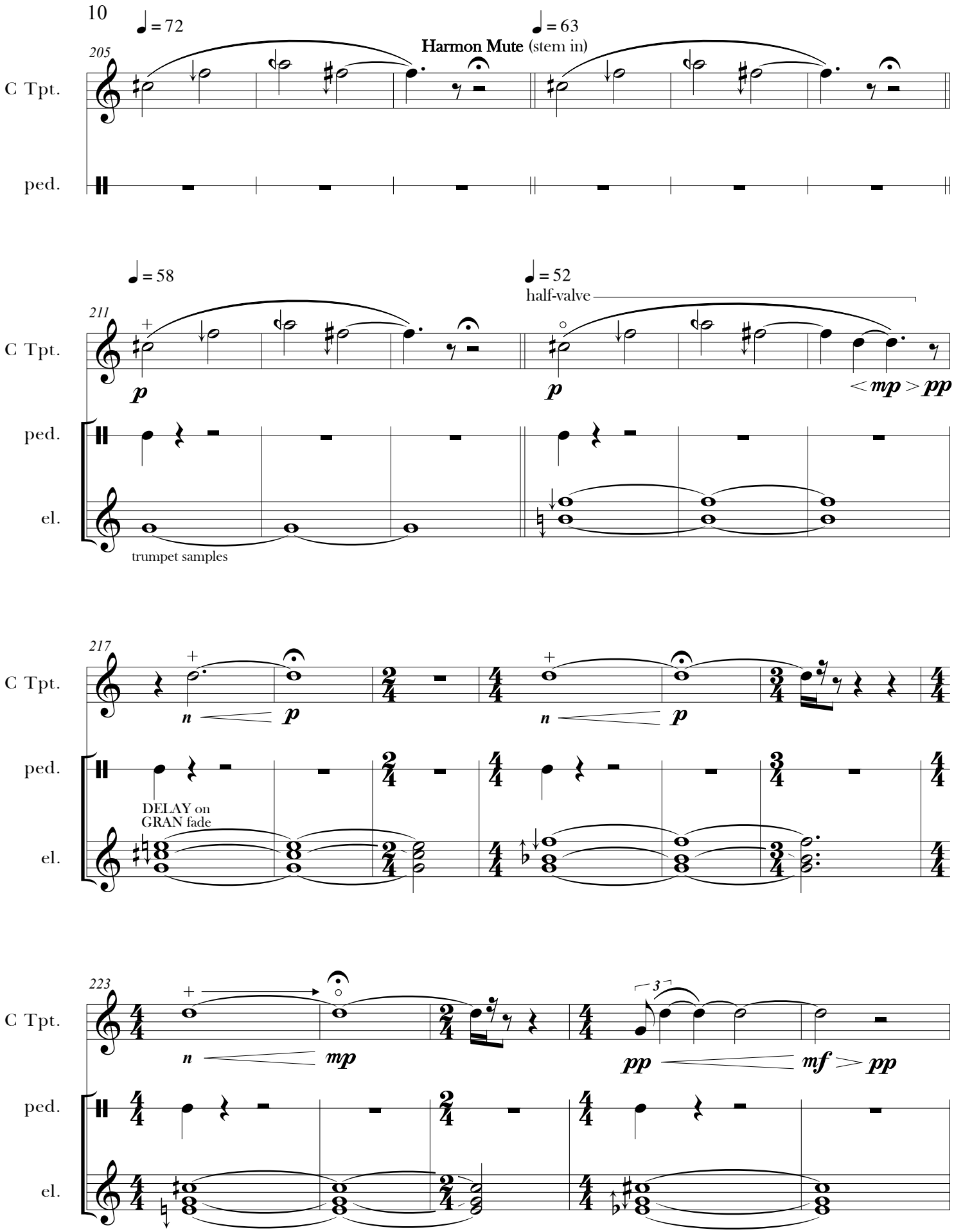

77
C Tpt.
flz.
norm.
mp
pp
pp
mf
pp
pp
ped.
DELAY on
then all effects fade out
many effects
fade in and out
83
C Tpt.
3
3
3
mp
p
mp
pp
p
mp
p
mp
pp
pp
ped.
88
C Tpt.
flz.
norm.
flz.
norm.
mf
pp
pp
mf
pp
pp
3
mf
ped.
DELAY on
then all effects fade out
many effects
fade in and out
93
C Tpt.
flz.
norm.
3
pp
pp
mp
p
mf
pp
p
mp
p
ped.
FREEZE
DELAY on
then all effects fade out
99
♩ = 72
C Tpt.
flz.
norm.
m.vib.
flz.
pp
mp
pp
pp
mf
ped.
many effects fade in
effects fade out
effects fade in

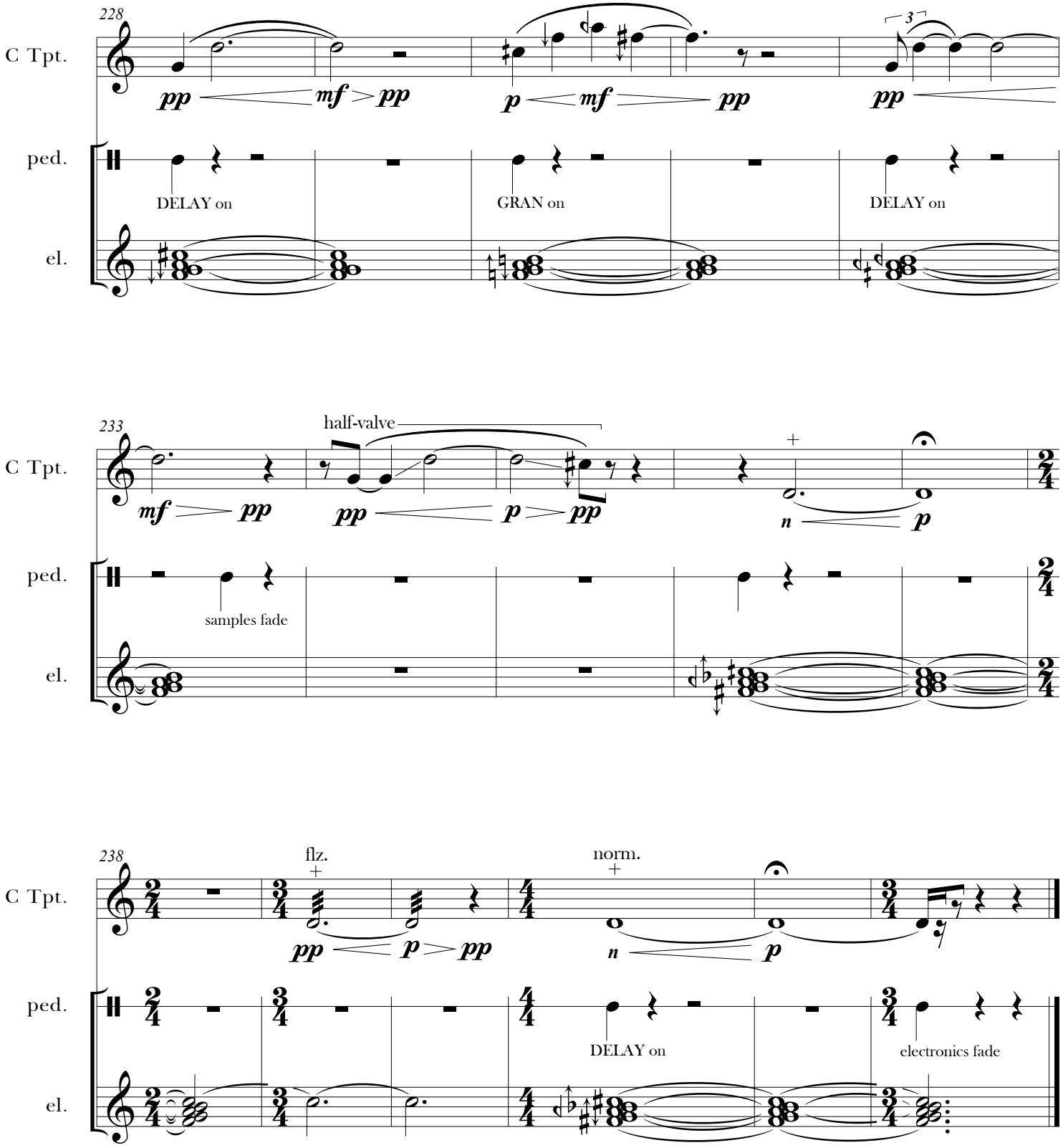

105
s.vib.
norm.
flz.
norm.
flz.
norm.
speed up trill
slow down trill
C Tpt.
ped.
effects fade out
effects fade in
effects fade out
110
m.vib.
s.vib.
flz.
norm.
flz.
C Tpt.
ped.
effects fade in
114
norm.
flz.
norm.
half-valve
flz.
norm.
flz.
C Tpt.
ped.
effects fade out
effects fade in
effects fade out
effects fade in
118
norm.
flz.
norm.
flz.
C Tpt.
ped.
effects fade out
121
flz.
norm.
C Tpt.
ped.
effects fade in
effects fade out


127
C Tpt.
flz.
norm.
flz.
norm.
m.vib.
s.vib.
flz.
norm.
pp
mp
pp
mp
pp
mf
pp
ped.
effects fade in
effects fade out
131
C Tpt.
norm.
pp
mf
pp
pp
mf
pp
ped.
effects fade in
effects fade out
135
C Tpt.
norm.
flz.
norm.
flz.
norm.
speed up trill
slow down trill
pp
ff
pp
ped.
effects fade in
effects fade out
139
C Tpt.
flz.
norm.
flz.
norm.
flz.
norm.
flz.
norm.
pp
f
pp
pp
ff
pp
ped.
effects fade in
effects fade out
146
C Tpt.
m.vib.
s.vib.
flz.
norm.
half-valve
flz.
norm.
norm.
flz.
norm.
p
f
p
pp
mp
pp
pp
ff
pp
ped.
effects fade in
effects fade out
effects fade in
effects fade out


153
♩ = 78
sing encircled notehead
beating → fast → slow
bend sung note only
C Tpt.
pp
mp > pp
pp
mf > pp
ped.
DIST, OVERDR, and DELAY
159
beating → fast → slow
bend sung note only
C Tpt.
pp
mf > pp
p
ped.
165
beating → fast → slow
beating → fast → flz.
C Tpt.
f > pp
pp
ff
ped.
171
beating → fast → slow
beating → fast → slow
C Tpt.
pp
f > pp
pp
f > pp
ped.
177
beating → fast → slow
beating → fast → slow
C Tpt.
p
f > p
p
f > p
ped.


179
fast
slow
fast
slow
C Tpt.
ped.
p
f
p
p
f
p
pp
184
beating
fast
flz.
beating
fast
flz.
C Tpt.
ped.
ff
pp
ff
190
beating
fast
slow
bend sung note only
C Tpt.
ped.
pp
mf
pp
pp
194
beating
fast
slow
bend sung note only
beating
fast
flz.
C Tpt.
ped.
mf
pp
pp
ff
199
beating
fast
very clean straight tone (like guitar feedback)
inexpressive
C Tpt.
ped.
pp
f
p
processing intensifies
then fades out
GRAN on


♩ = 72
205
Harmon Mute (stem in)
♩ = 63
C Tpt.
ped.
♩ = 58
211
half-valve
♩ = 52
p
p
< mp > pp
ped.
el.
trumpet samples
217
n
p
n
p
C Tpt.
ped.
DELAY on
GRAN fade
el.
223
n
mp
3
pp
mf > pp
C Tpt.
ped.
el.


228
C Tpt.
pp
mf
pp
p
mf
pp
3
pp
ped.
DELAY on
GRAN on
DELAY on
el.
233
half-valve
C Tpt.
mf
pp
pp
p
pp
n
p
ped.
samples fade
el.
238
flz.
norm.
C Tpt.
pp
p
pp
n
p
ped.
DELAY on
electronics fade
el.