Austin Franklin

Concentric Circles

for percussion, cello, piano, and reflexive electronics

(2021)

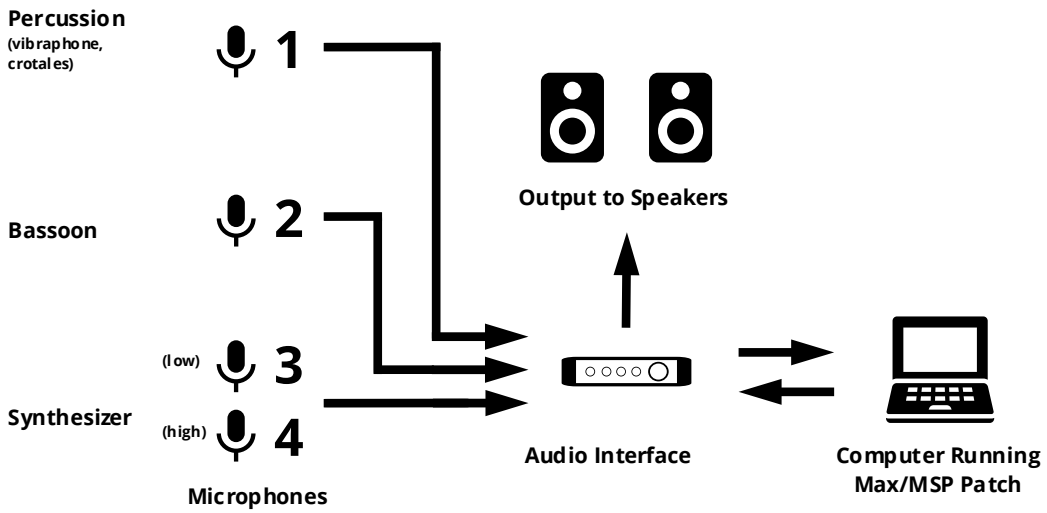
© Copyright 2021, Austin Franklin Music (BMI)
All Rights Reserved

Program Notes

Concentric Circles is a piece that explores overlapping patterns and cycles. It revolves around an initial harmonic progression that descends by step and is varied upon each repetition. Throughout the piece new patterns are introduced or layered on top of existing patterns. The electronics operate by analyzing and averaging data from all players simultaneously, among other processes. This creates new patterns and interactions between performers throughout the piece. These patterns evolve throughout the piece until they transform back into the opening statement.

Technical notes

Concentric Circles uses a Max MSP program (or patch) by which to process and transform the audio. The patch contains instructions on how to set up, operate, rehearse, and finally perform the piece. Please email me for the patch after purchasing, or if you have any questions directly at austinalexanderfranklin12@gmail.com. As for the technical requirements and equipment set up, please use the following configuration:



- A four-channel audio interface is required to perform the piece, and 4 large diaphragm microphones should be used for inputs if possible.
- Microphones should correspond to the input on the interface provided in the graphic above (1-4). Inputs 3 and 4 should be used on the low and high register of the piano, respectively.
- Microphone placement will generally work best closest to the instrument (or amp) but any position that captures the full range of the instrument is sufficient.
- An attempt should be made to place microphones in a position that does not capture other instruments or reduces the amount of bleed from other instruments as much as possible.
- Loudspeakers should be positioned in front of the ensemble to prevent feedback.

Performance notes

The electronic sounds used in the piece come solely from the live input to the microphone. There are no triggers for the individual sections, and no MIDI keyboard or instrument is required. Instead, the range of each instrument is divided into different sections that are processed independently from the others via specific musical parameters. The resulting sound is not notated in the score since it will sound different for repeat performances. The musical parameters and their general effects on the input are described as follows:

Percussion:

- The entire range of the crotales are processed using a variable delay and feedback.
- The entire range of the vibraphone is processed with two variable delay lines that are each pitch shifted up a perfect 5th and octave respectively. The register of the vibraphone determines what transposition is loudest (in the lower register the perfect 5th transposition is prominent, in the higher register the octave transposition is prominent).

Bassoon:

- Pitches above C4 are processed using a delay line that is pitch shifted up a 5th. Brightness, or "glitteryness" is also increased via down sampling on the signal. Loudness determines the length of the delay and the brightness of the signal.
- Pitches above G2 and below C4 are processed with two variable delay lines that are each pitch shifted up a perfect 5th and octave respectively. The register of the cello determines what transposition is loudest (in the lower register the perfect 5th transposition is prominent, in the higher register the octave transposition is prominent).
- Pitches below G2 are processed using a delay line and amplified. There are no controlling parameters for this register.

Synthesizer:

- Pitches above C5 (notated as harmonics in the score) are processed using a delay line that is pitch shifted up a 5th. Brightness, or "glitteryness" is also increased via down sampling on the signal.
- Pitches above G2 and below C5 are processed with two variable delay lines that are each pitch shifted up a perfect 5th and octave respectively. The register of the piano determines what transposition is loudest (in the lower register the perfect 5th transposition is prominent, in the higher register the octave transposition is prominent).
- Pitches below G2 are processed using a delay line and amplified. There are no controlling parameters for this register.

Unless explicitly mentioned above, the amount of processing is determined by the loudness of the individual performers within a particular register (described above) AND the average overall loudness of the ensemble. When all performers are playing at their loudest dynamic, the loudness of the electronics is at its maximum. When a single performer plays loudly while the rest of the ensemble is quiet, the amount of processing is minimal. Reverb decay time is also affected solely by the average loudness of the ensemble. Performers should pay special attention to their dynamics throughout the piece, specifically during moments where accents or "swells" are present and bring these out amongst the surrounding texture.

Concentric Circles was commissioned by Jacob Ottmer

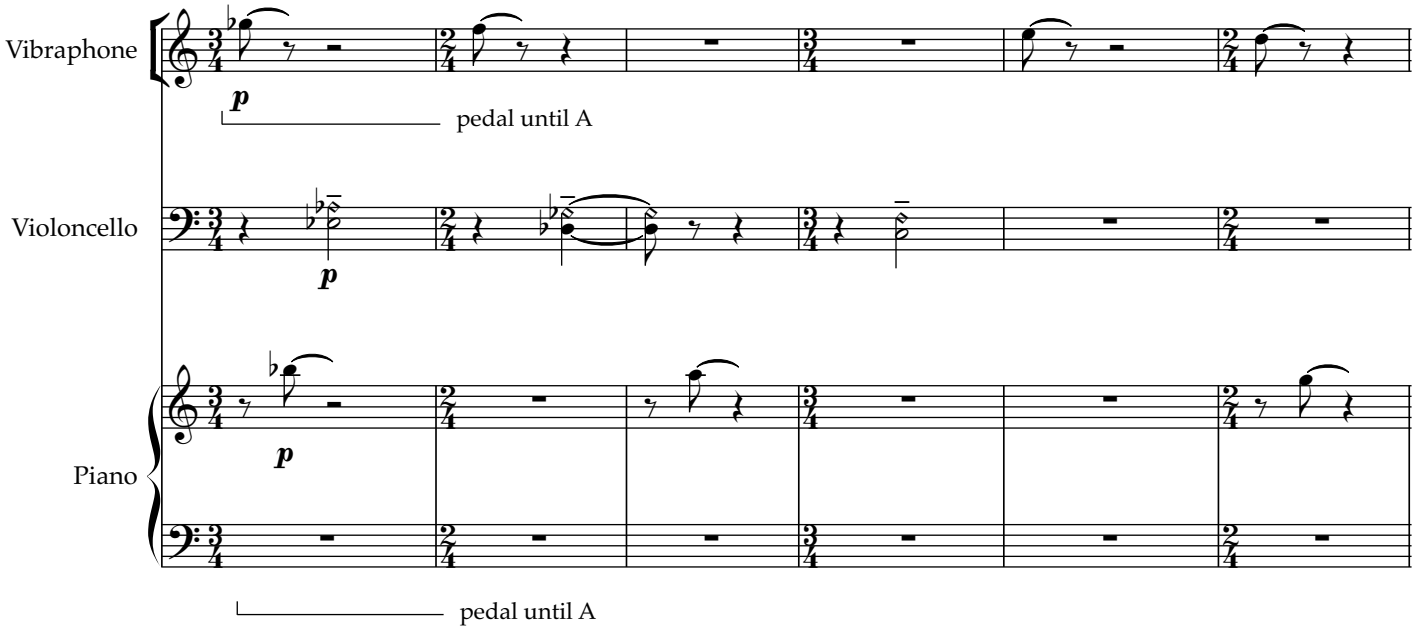
Duration: ca. 10'00"

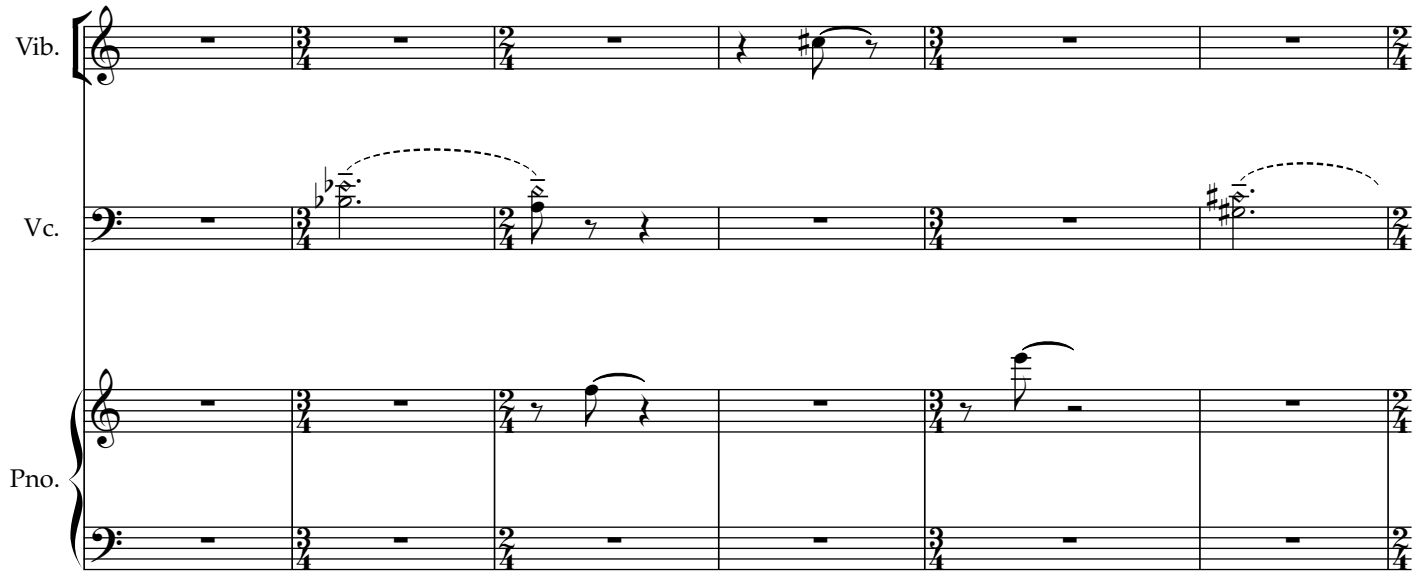
Concentric Circles

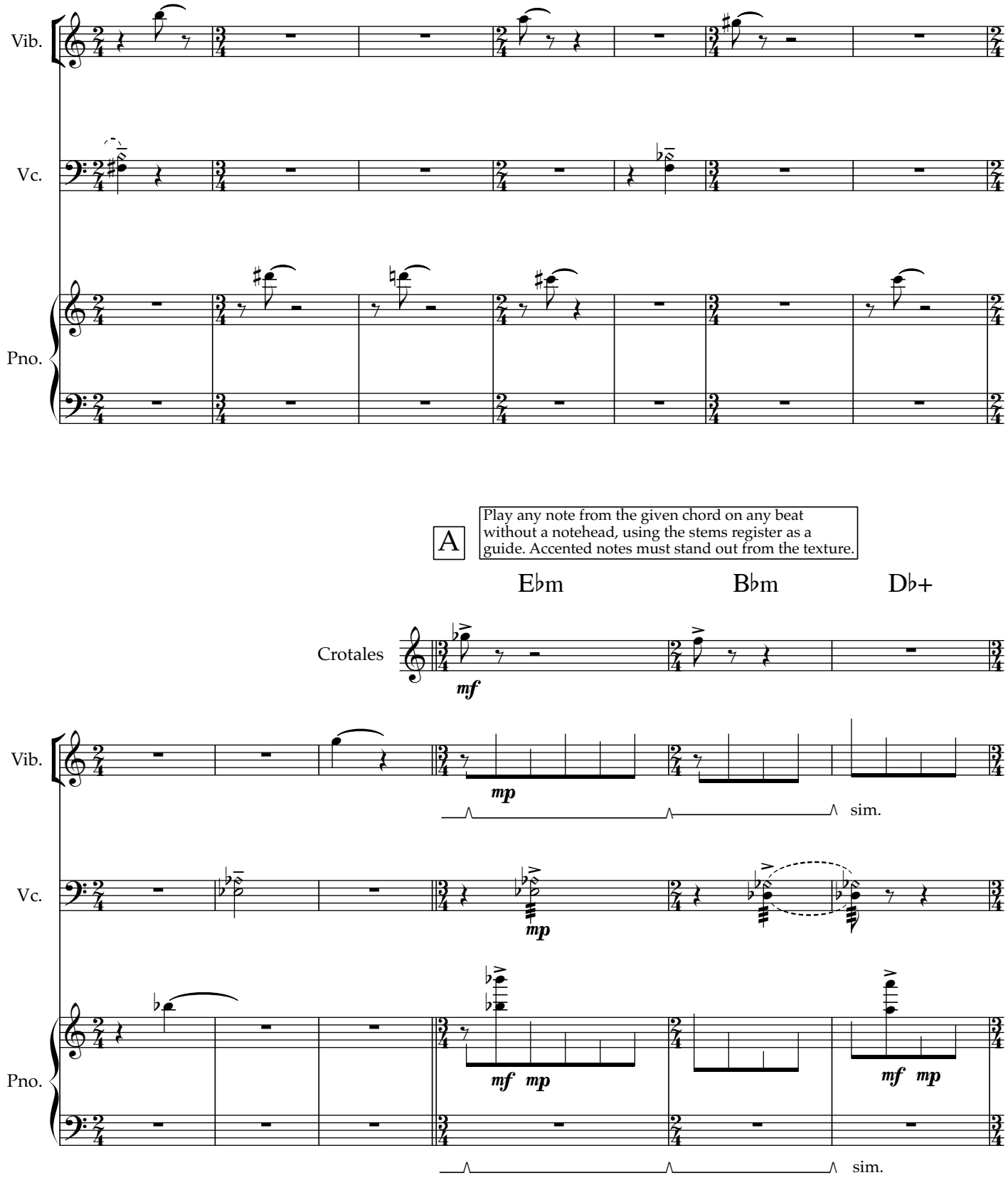
for percussion, cello, piano, and reflexive electronics

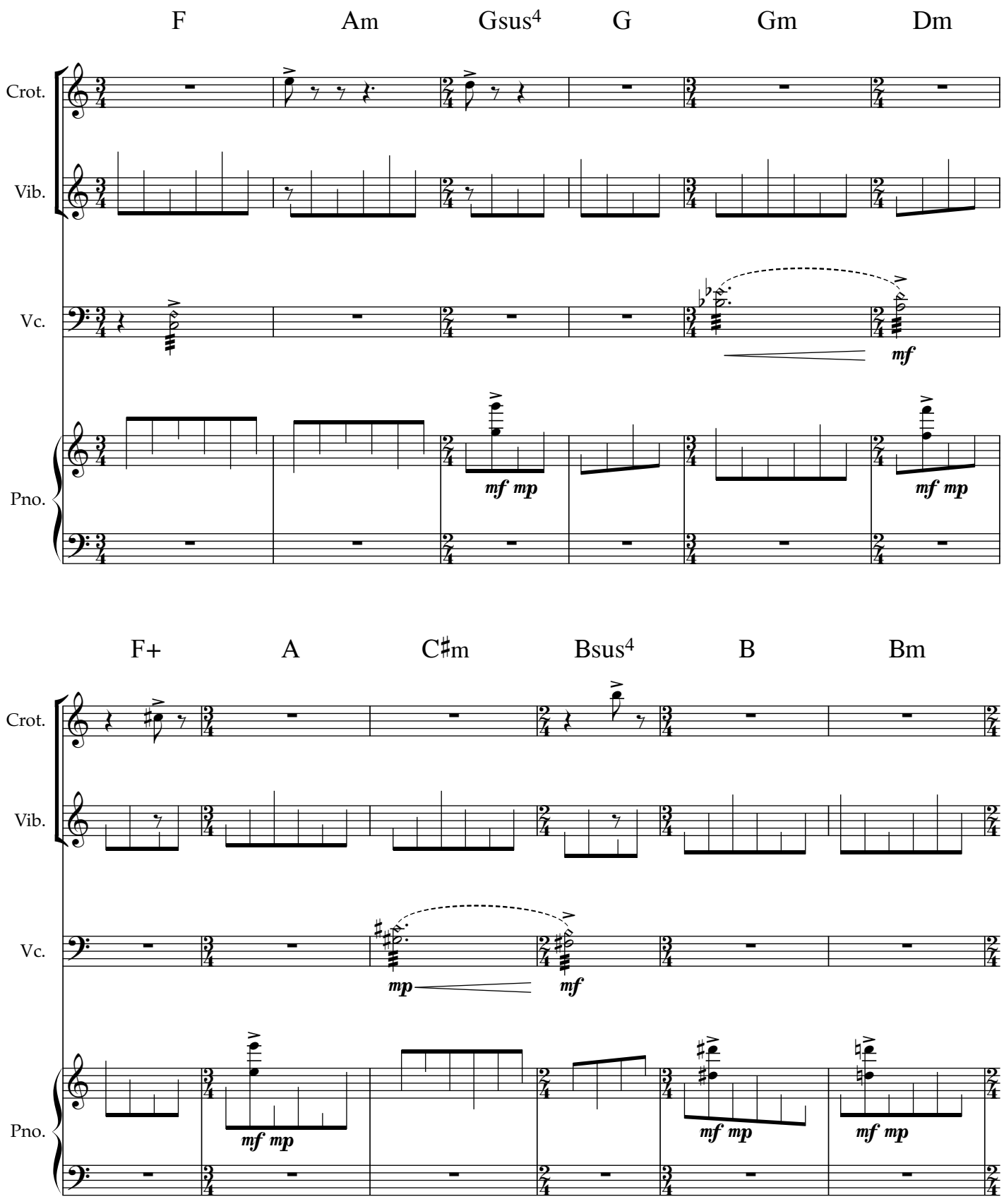
♪ = 135 **Floating**

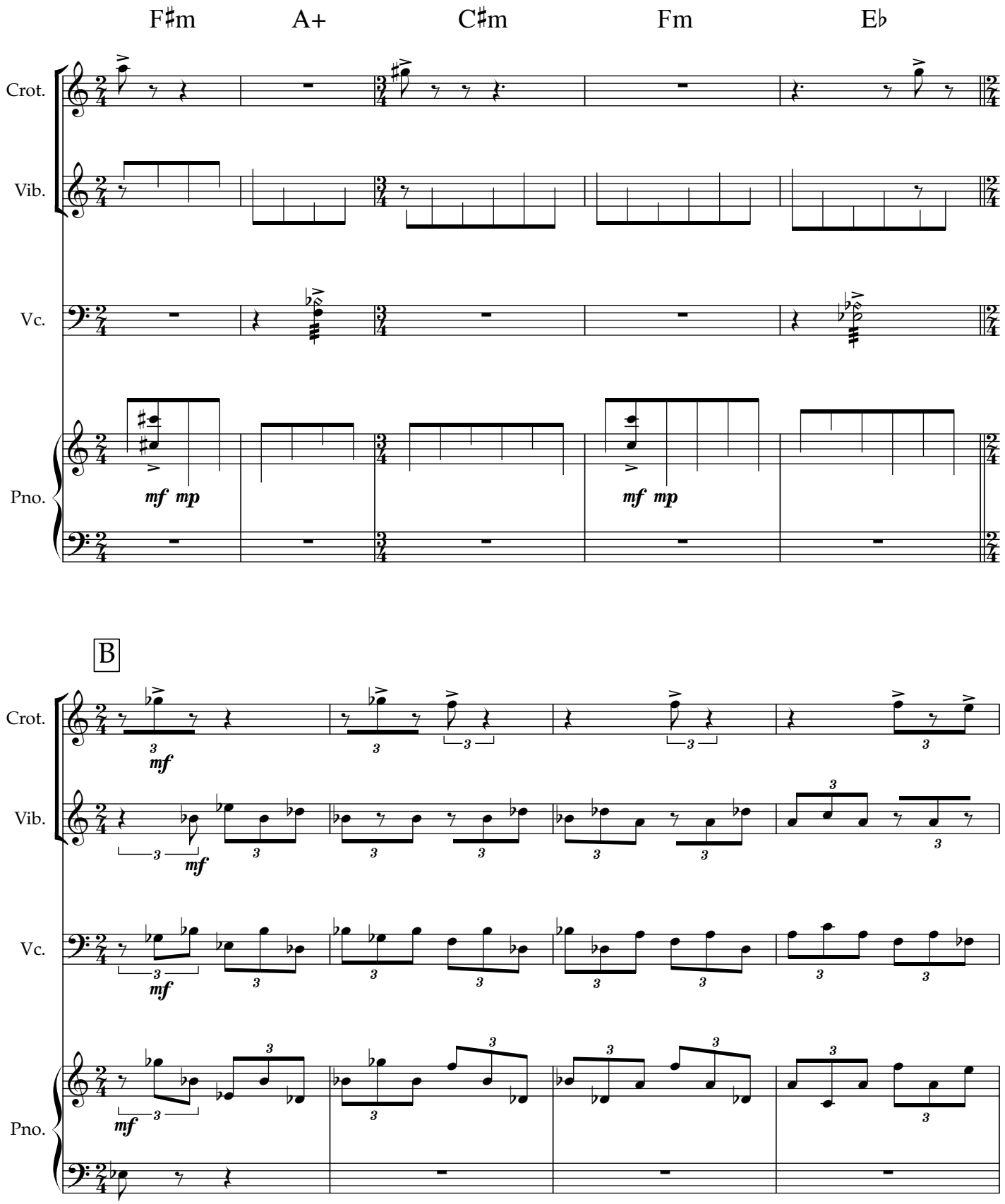
Austin Franklin

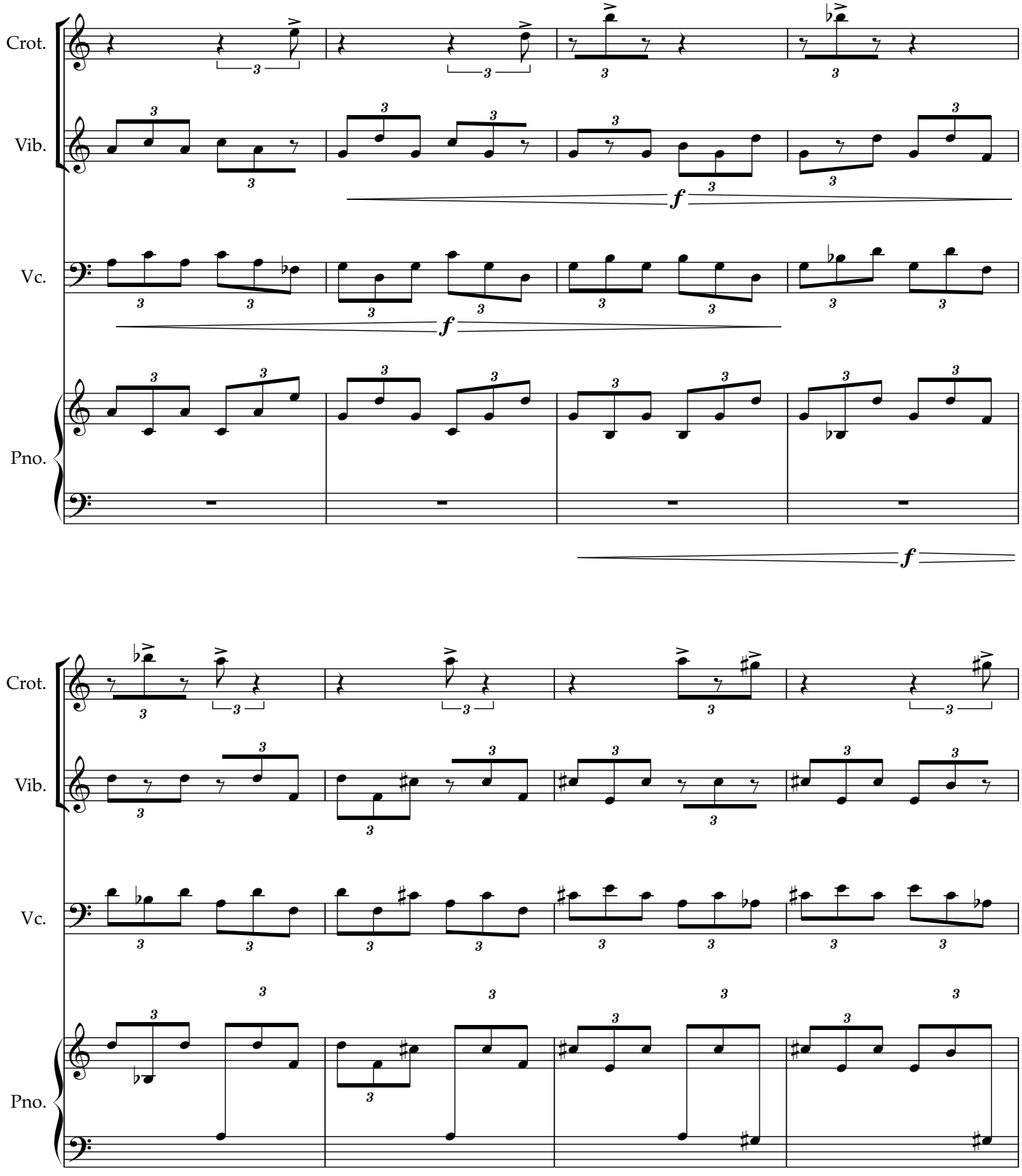


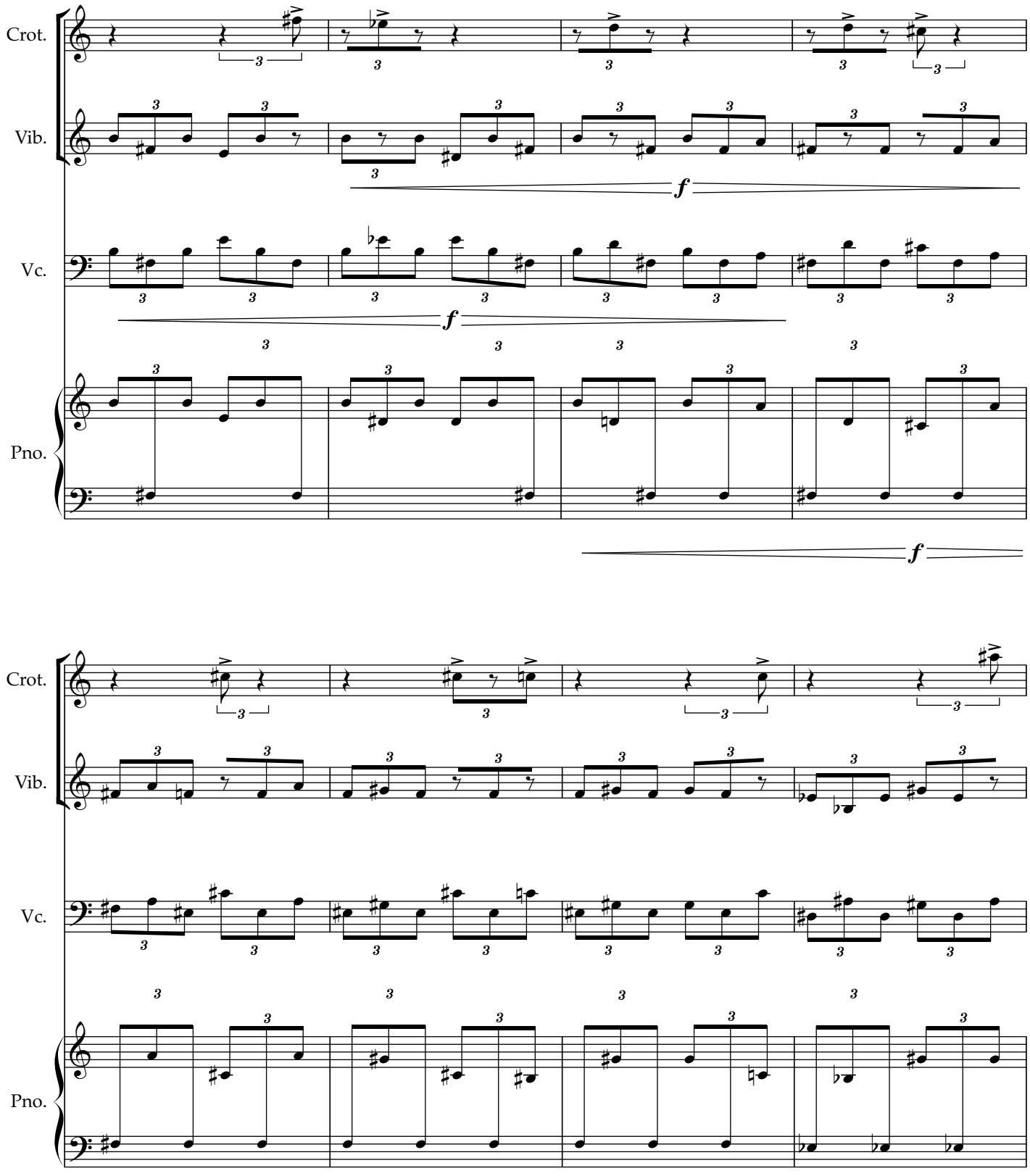



Vib.
Vc.
Pno.
A
Play any note from the given chord on any beat without a notehead, using the stems register as a guide. Accented notes must stand out from the texture.
E♭m
B♭m
D♭+
Crotales
mf
mp
sim.
mf mp


F
Am
Gsus4
G
Gm
Dm
Crot.
Vib.
Vc.
Pno.
mf
mf mp
mf mp
F+
A
C♯m
Bsus4
B
Bm
Crot.
Vib.
Vc.
Pno.
mp
mf
mf mp
mf mp
mf mp

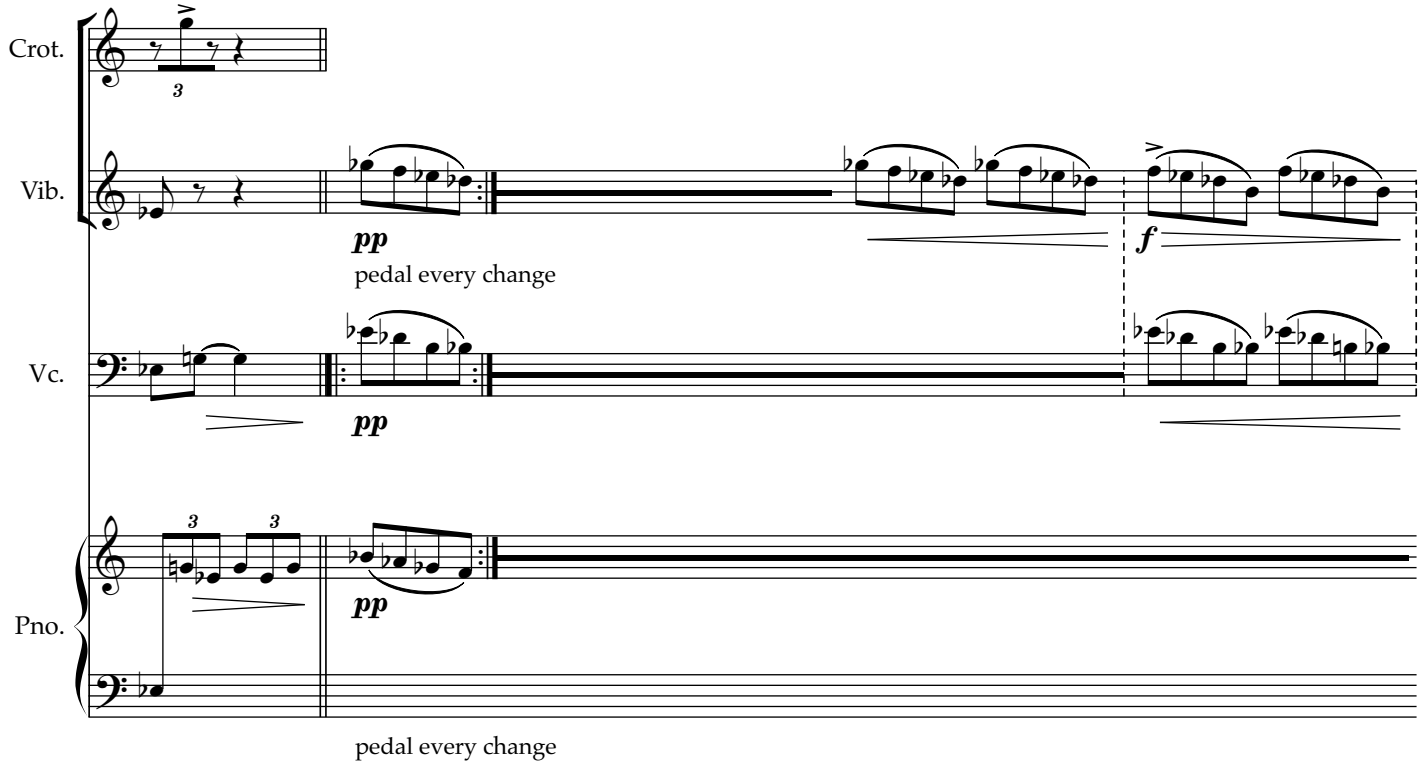

F♯m
A+
C♯m
Fm
E♭
Crot.
Vib.
Vc.
Pno.
mf mp
mf mp
B
Crot.
Vib.
Vc.
Pno.
mf
mf
mf
mf

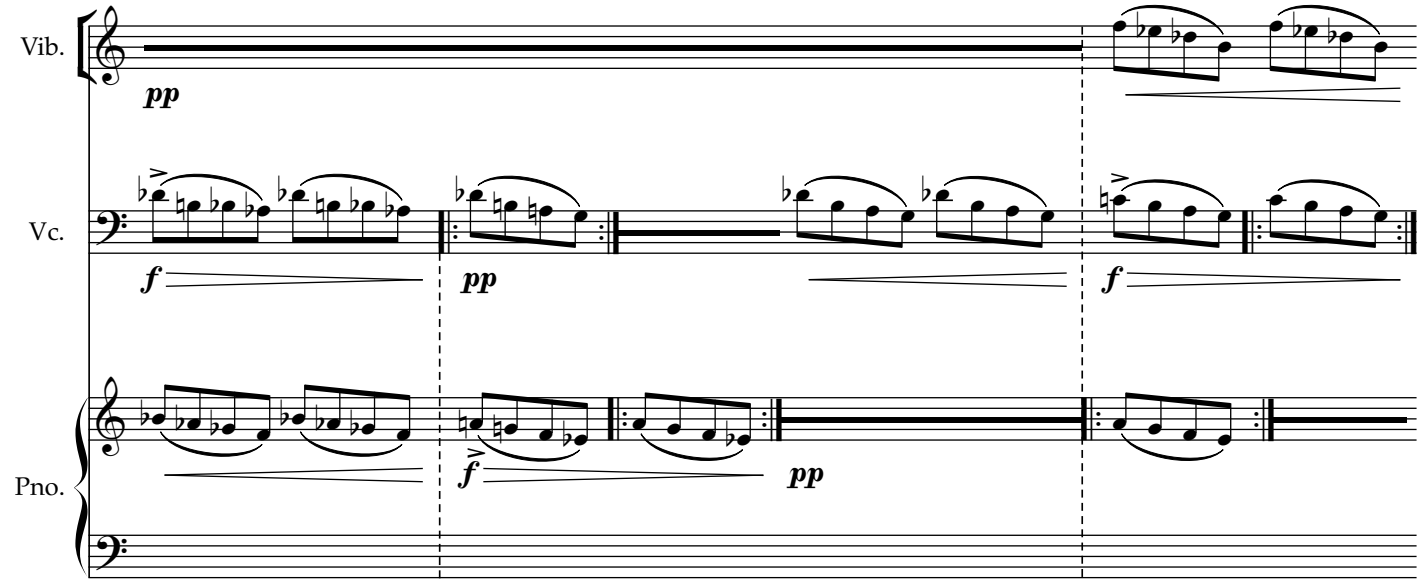

Crot.
Vib.
Vc.
Pno.
f
f
Crot.
Vib.
Vc.
Pno.

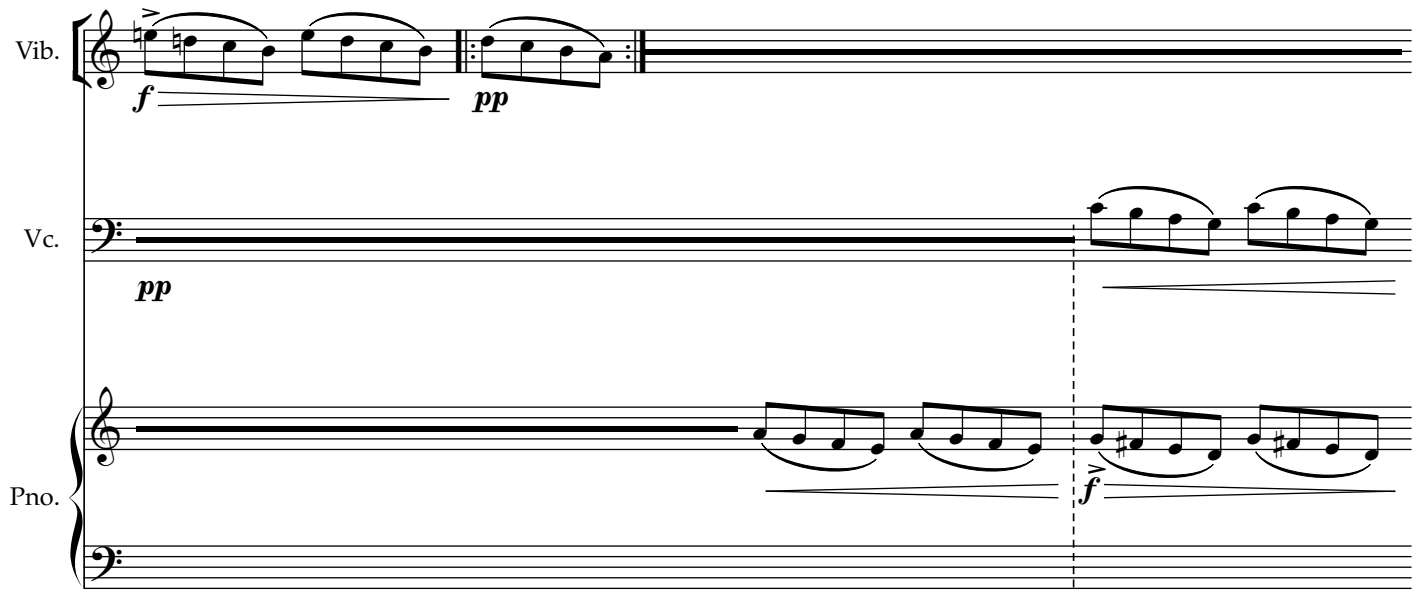

Crot.
Vib.
Vc.
Pno.
f
f
f
Crot.
Vib.
Vc.
Pno.

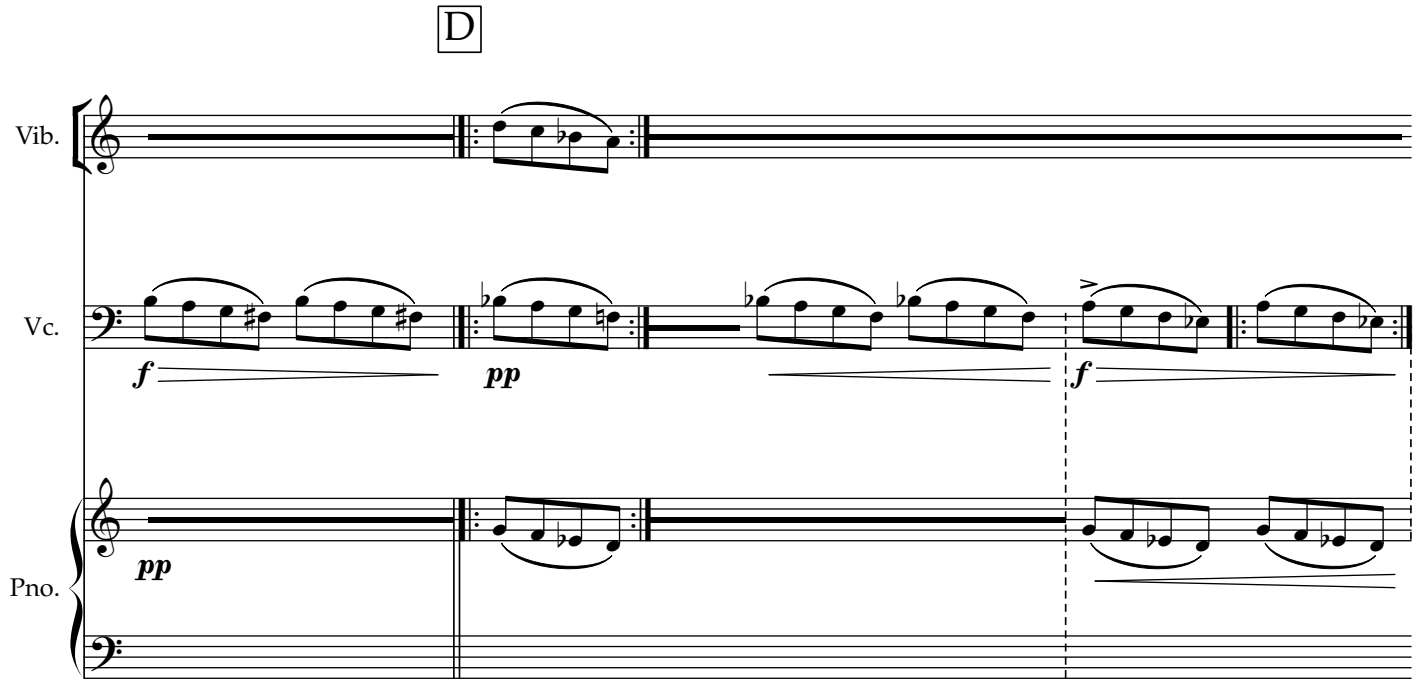
C ♪ = 𝅗𝅥

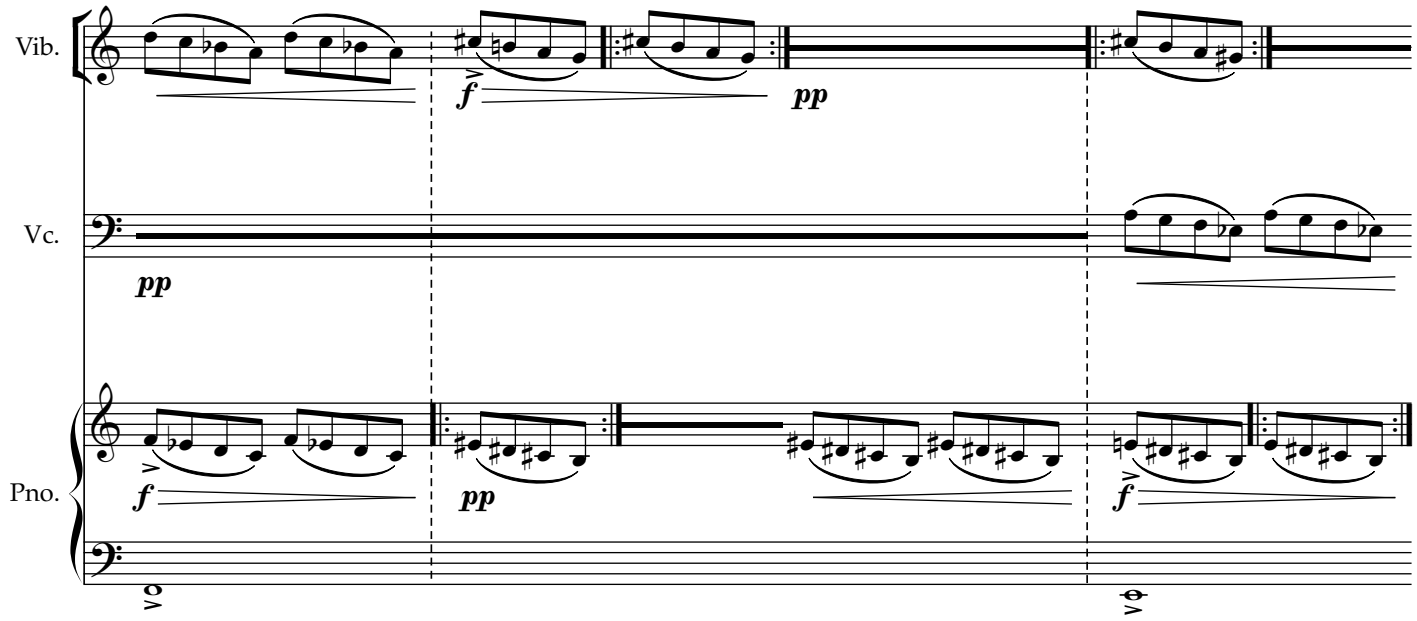
Play independently. Dashed lines between instruments indicate approximate synchronization. All note changes should occur within 3-6 seconds of each other. Accidentals apply to only the note they are on.

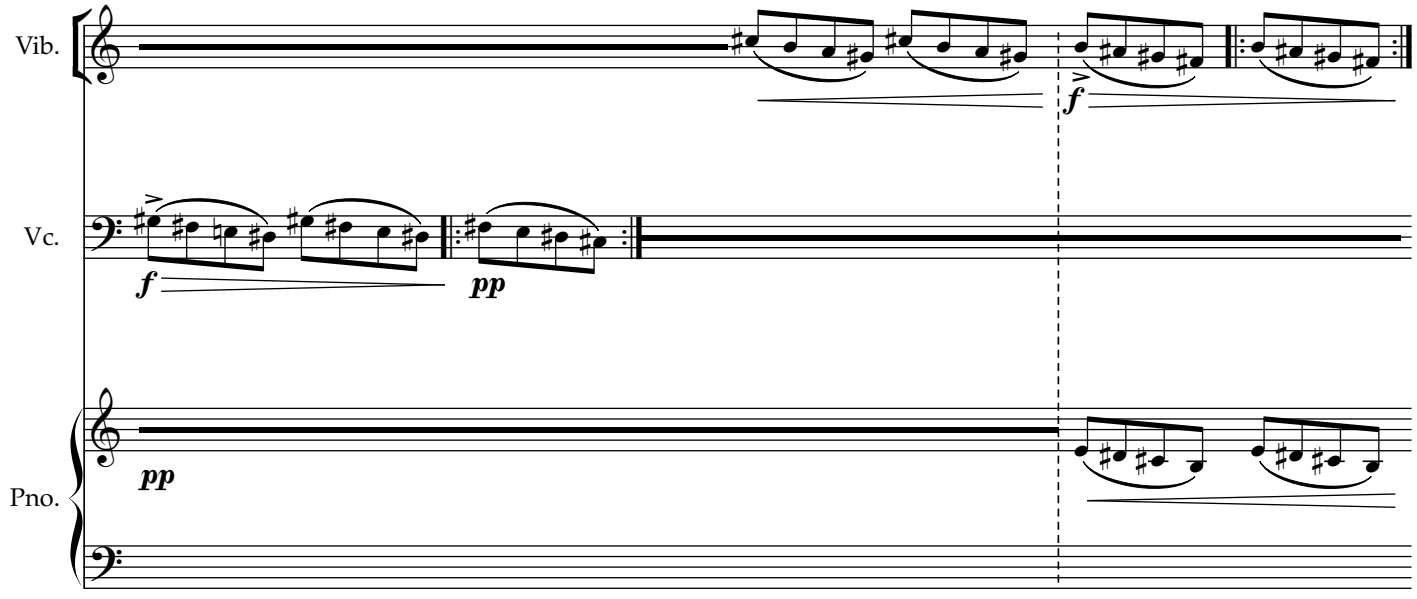


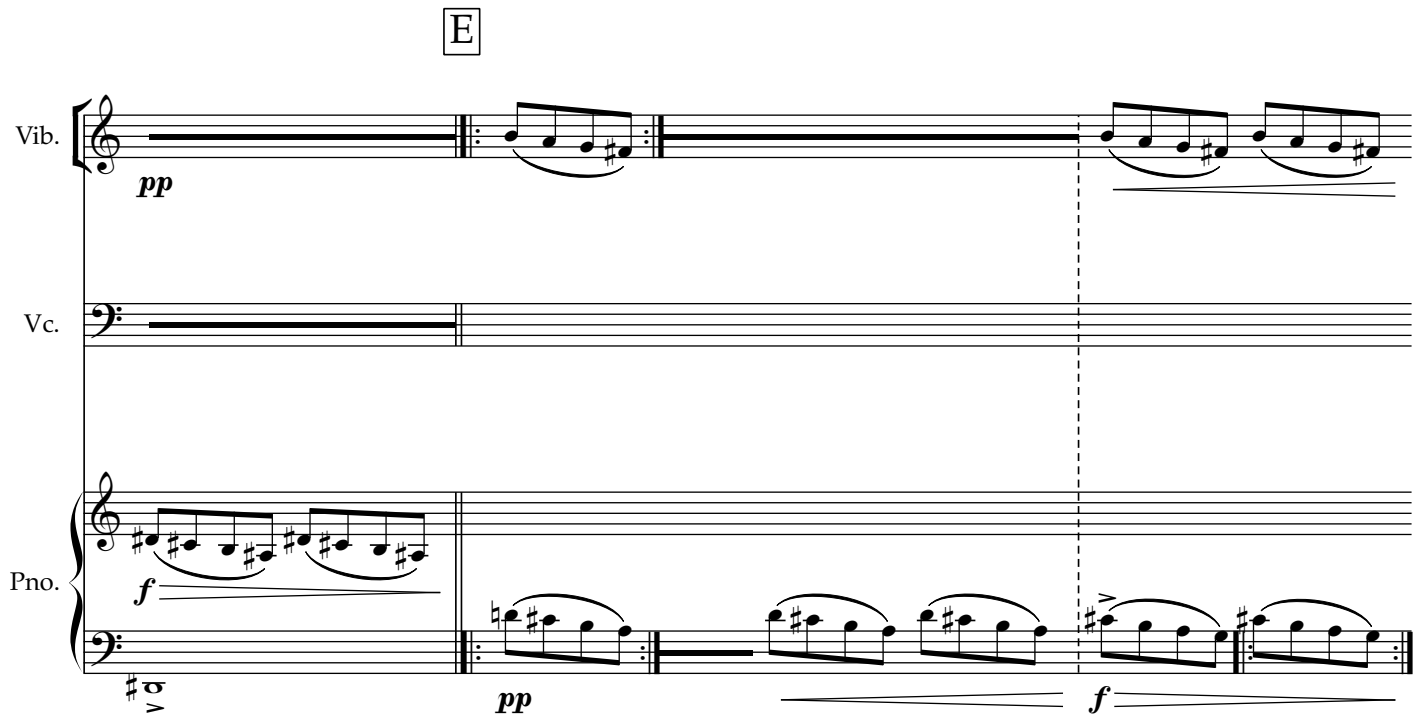


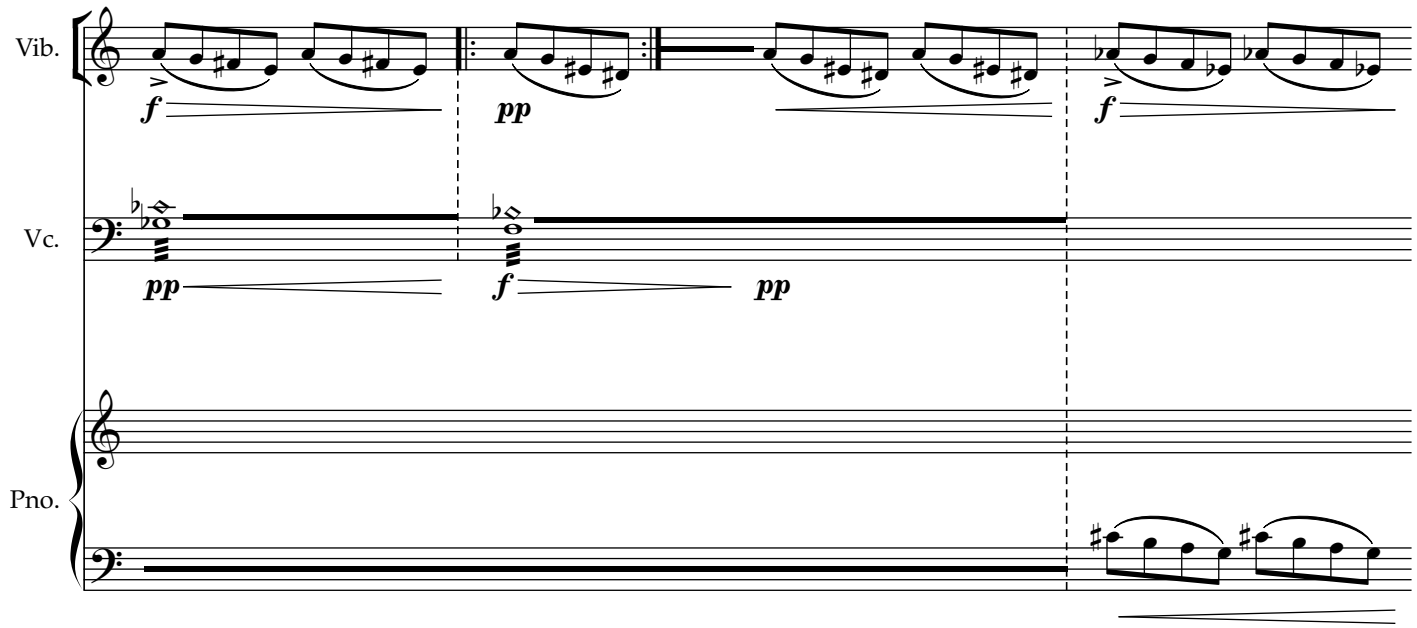

Vib.
Vc.
Pno.
f
pp
pp
f

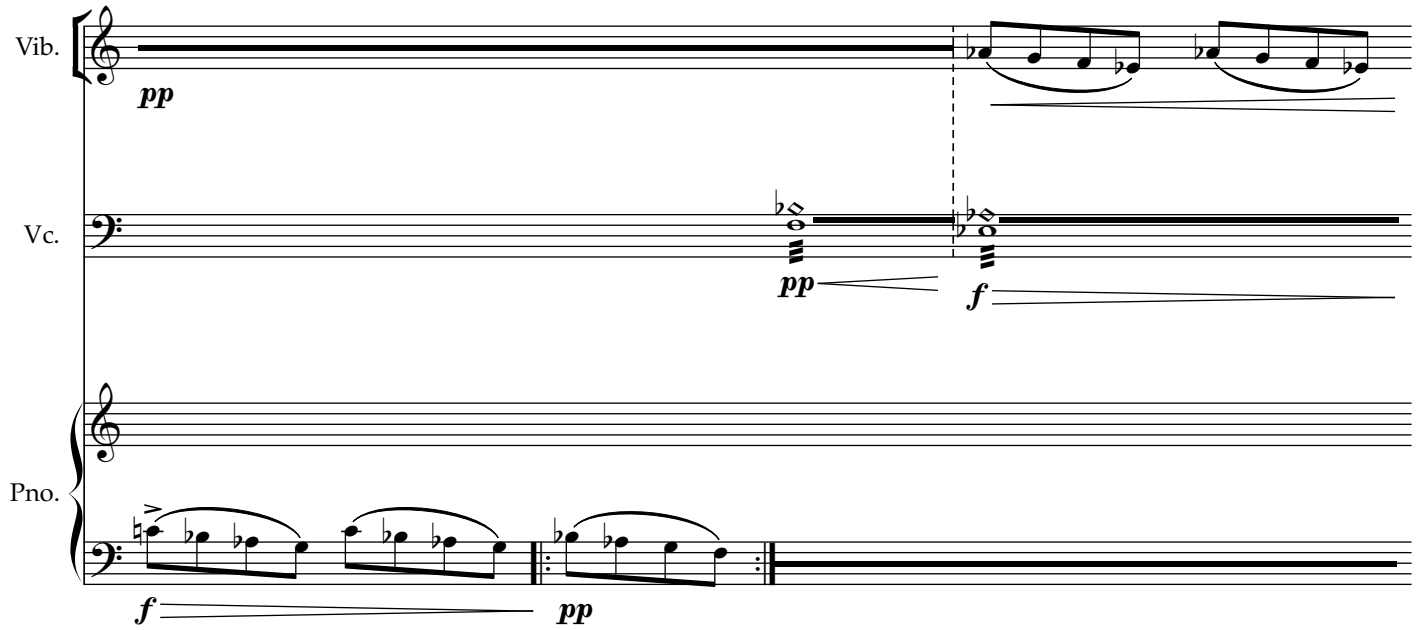

D
Vib.
Vc.
Pno.
f
pp
pp
f

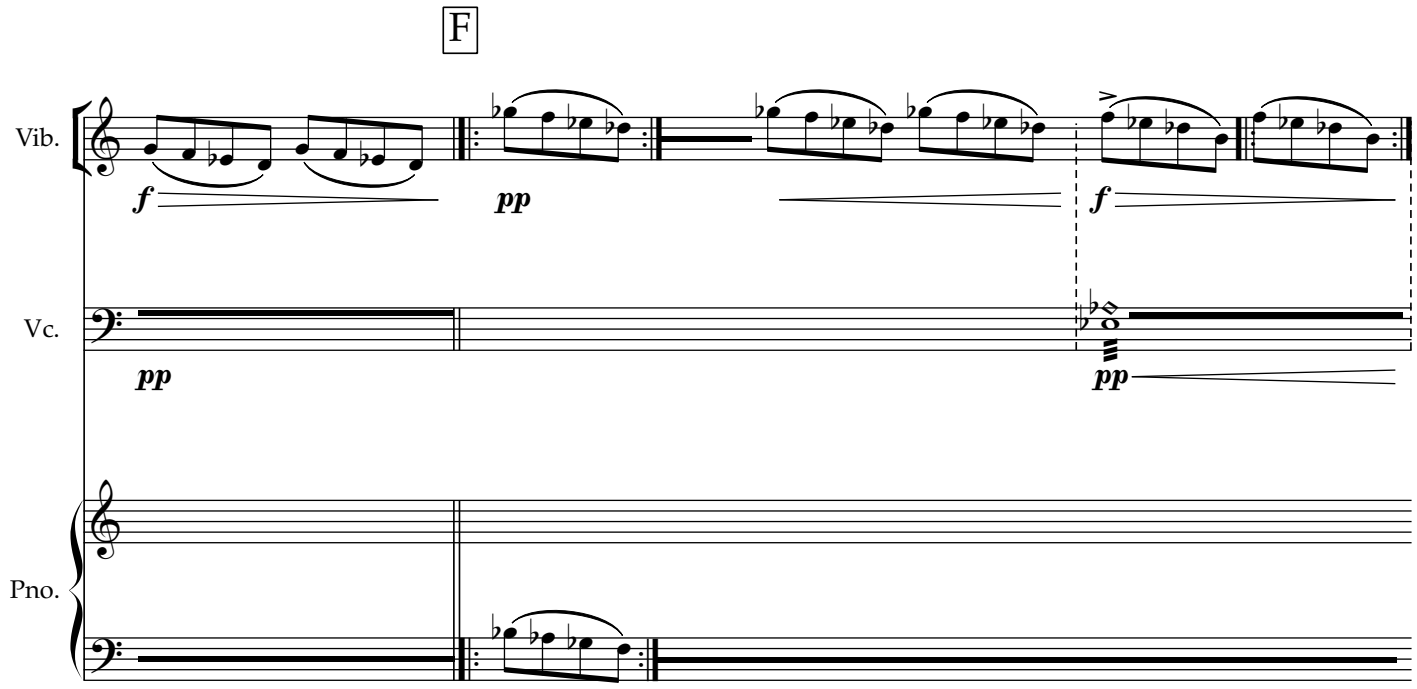

Vib.
Vc.
Pno.
f
pp
pp
pp
f
f

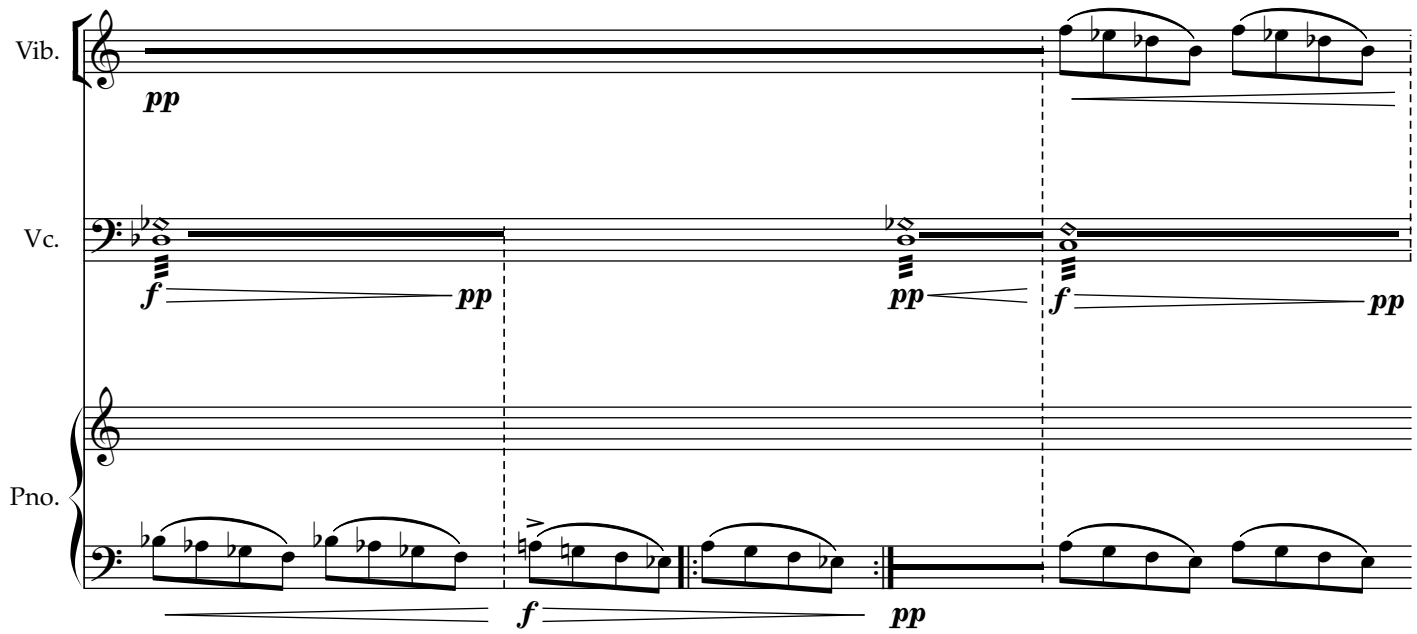

Vib.
Vc.
Pno.
f
pp
pp
f

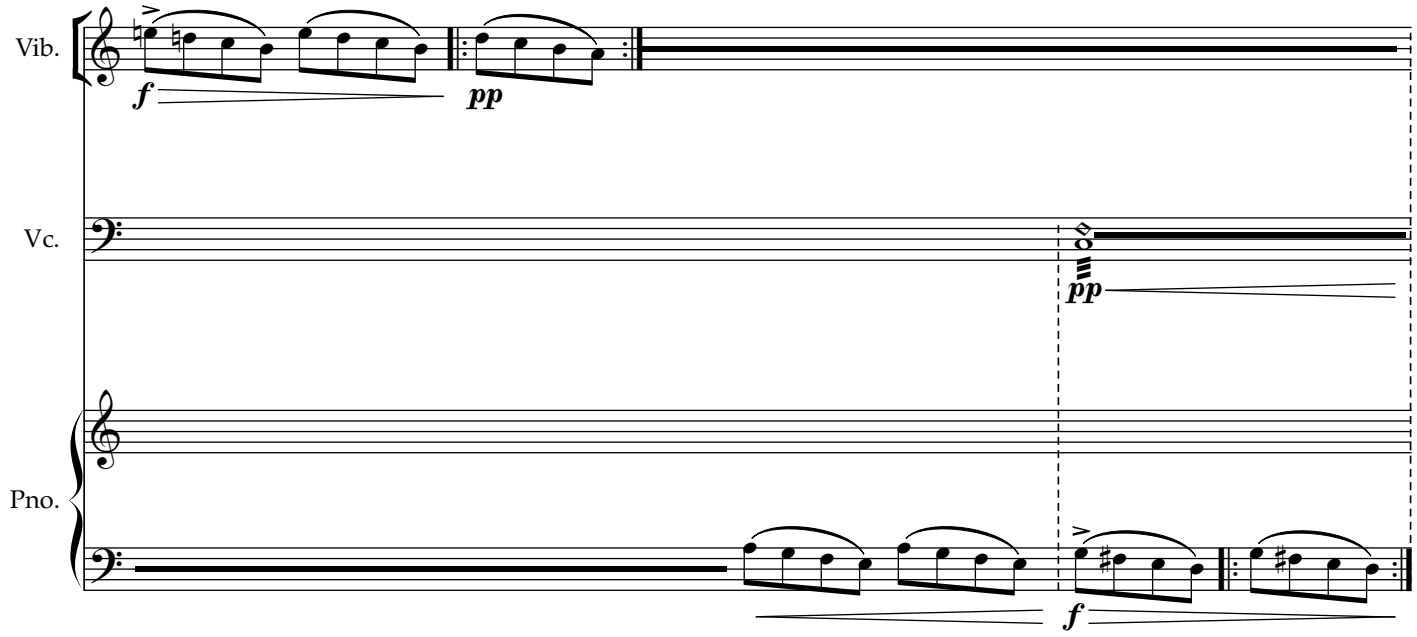

E
Vib.
Vc.
Pno.
pp
f
pp
f

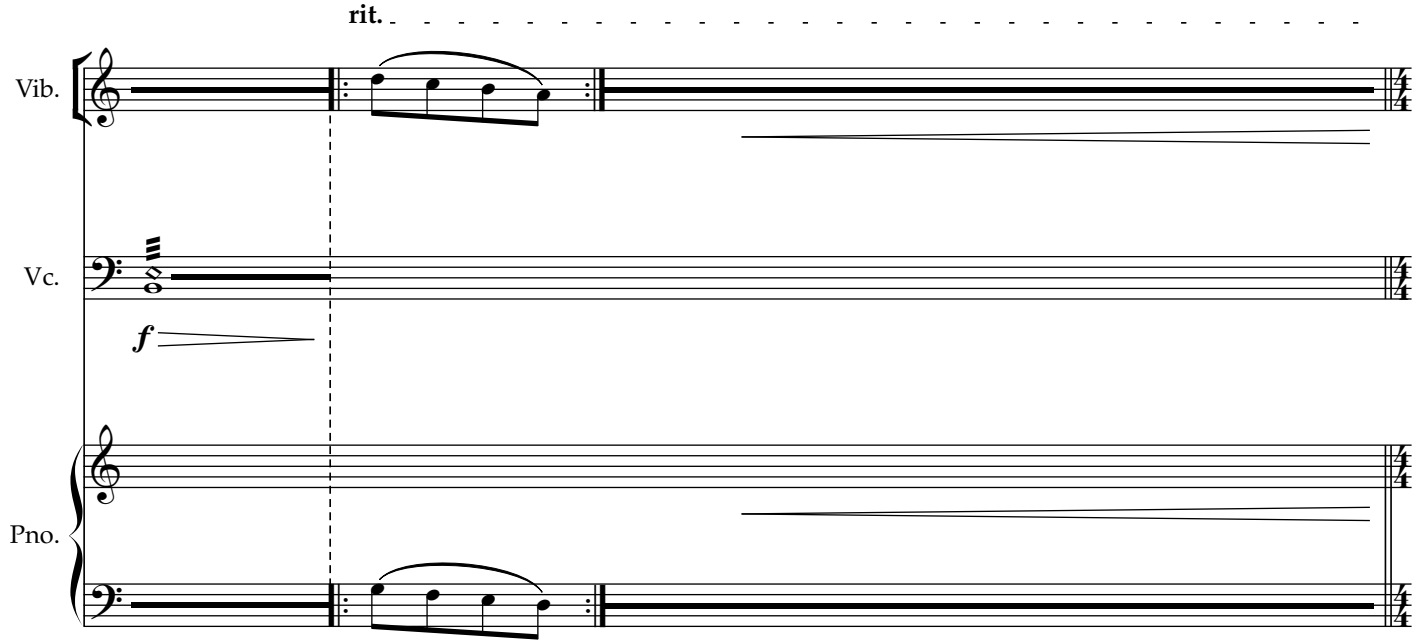

Vib.
Vc.
Pno.
f
pp
f
pp
f
pp

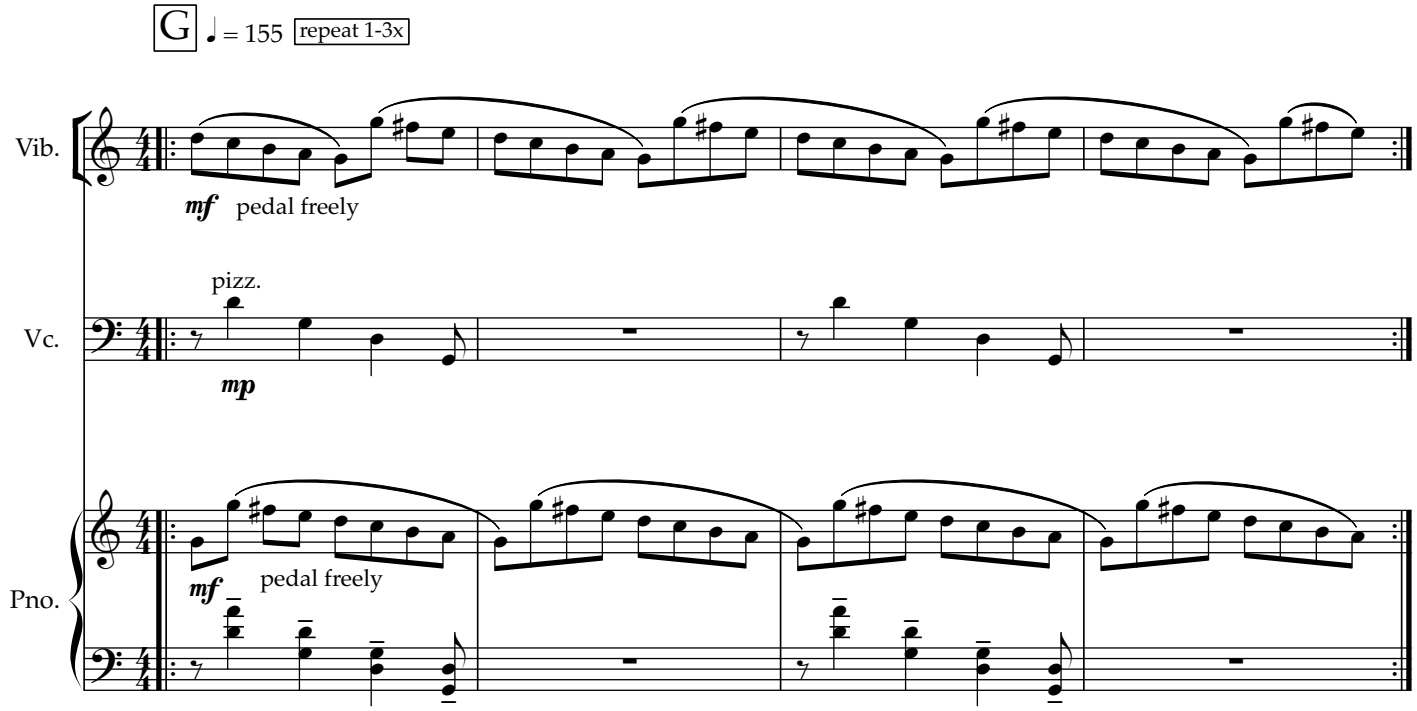

Vib.
pp
Vc.
pp
f
Pno.
f
pp

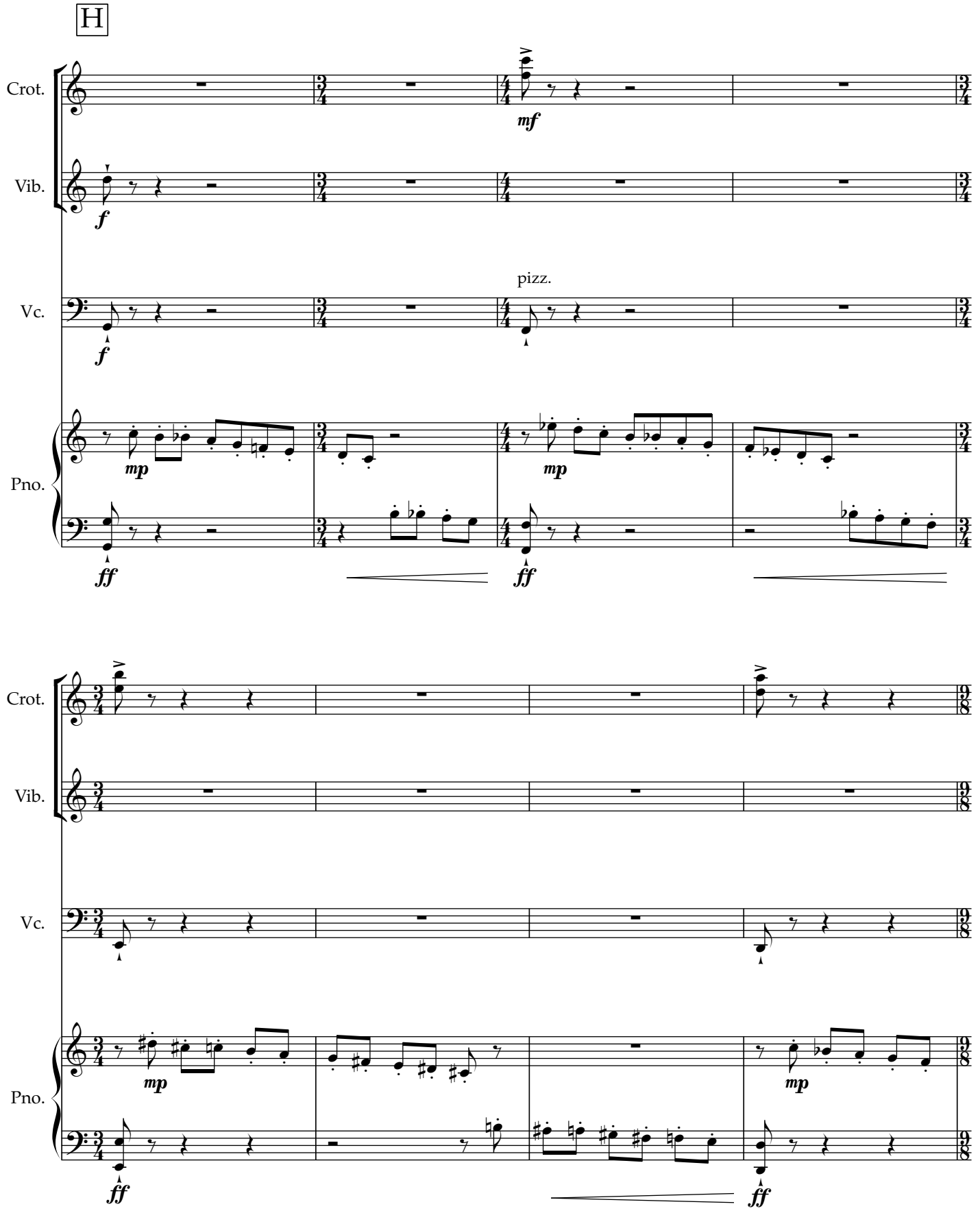

F
Vib.
f
pp
f
Vc.
pp
pp
Pno.

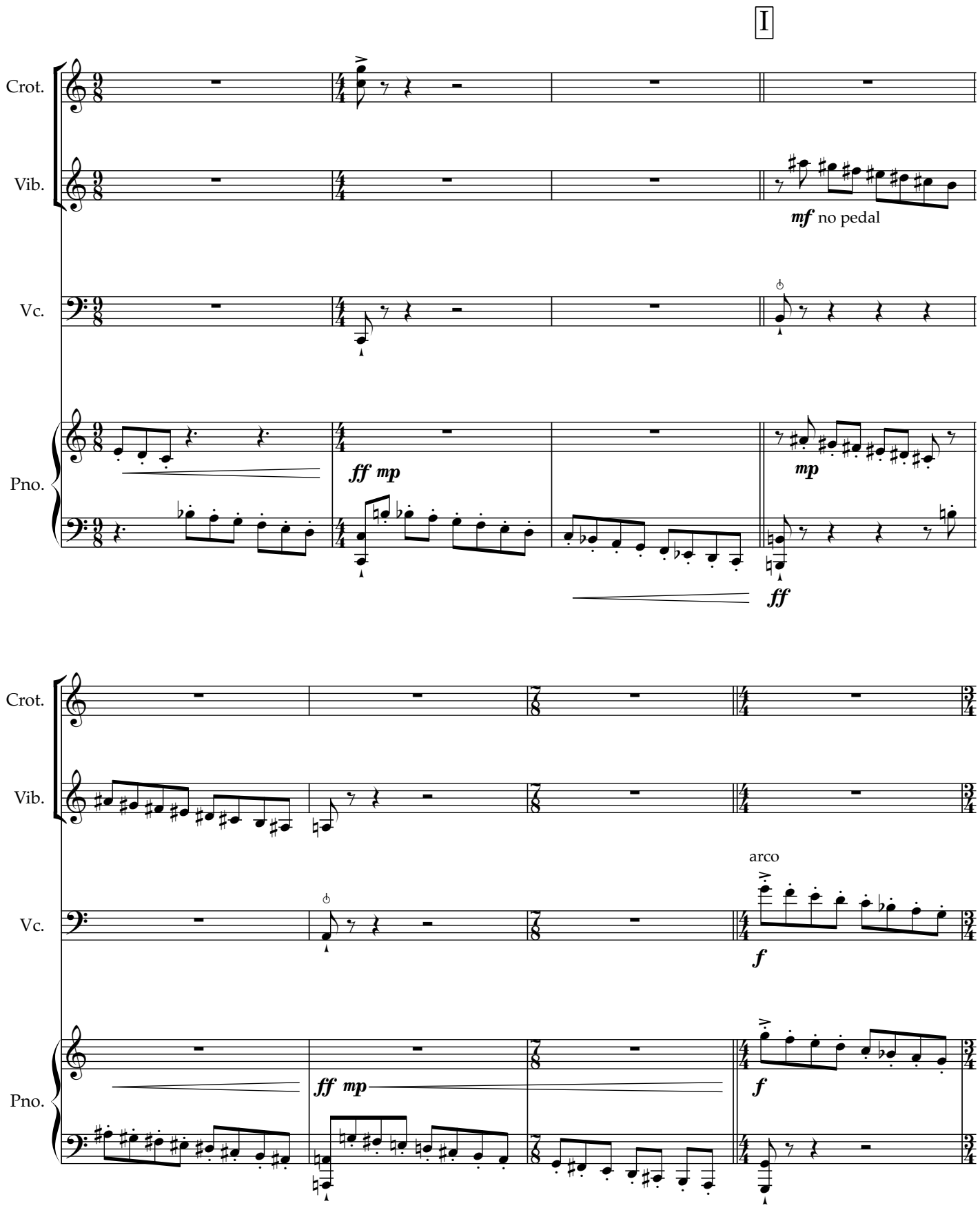

Vib.
pp
Vc.
f
pp
pp
f
pp
Pno.
f
pp

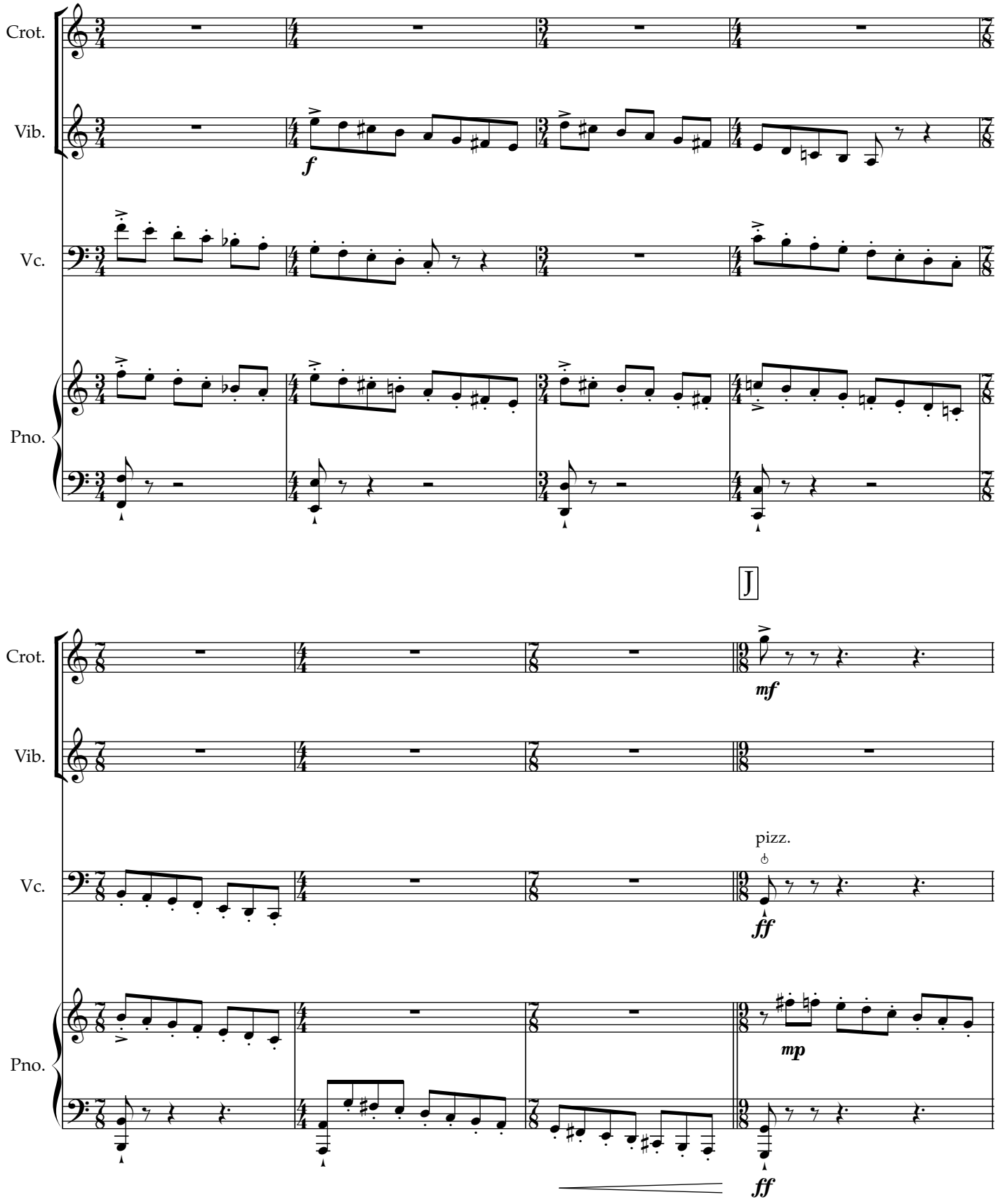

Vib.
f
pp
Vc.
pp
Pno.
f

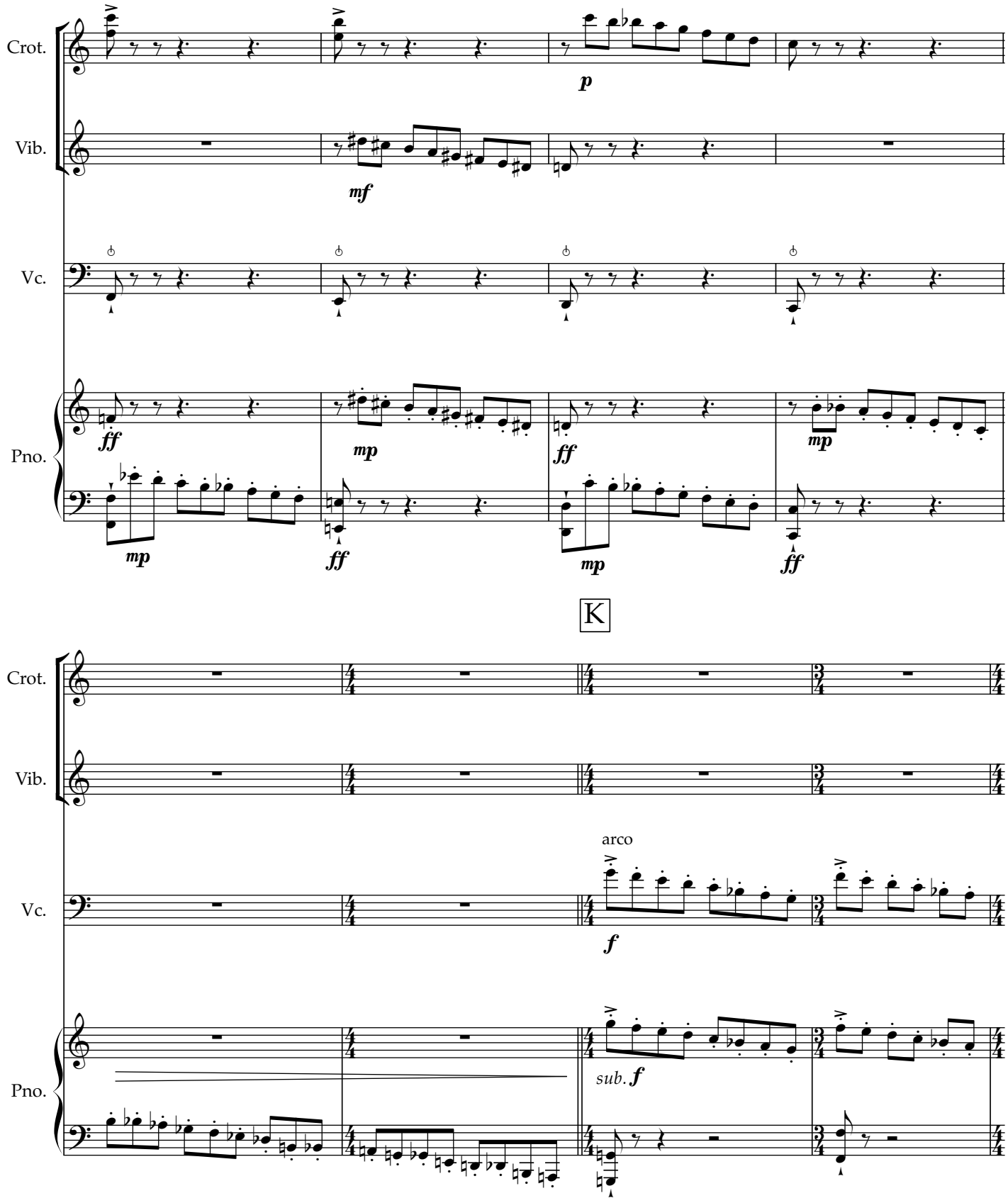

rit.
Vib.
Vc.
f
Pno.

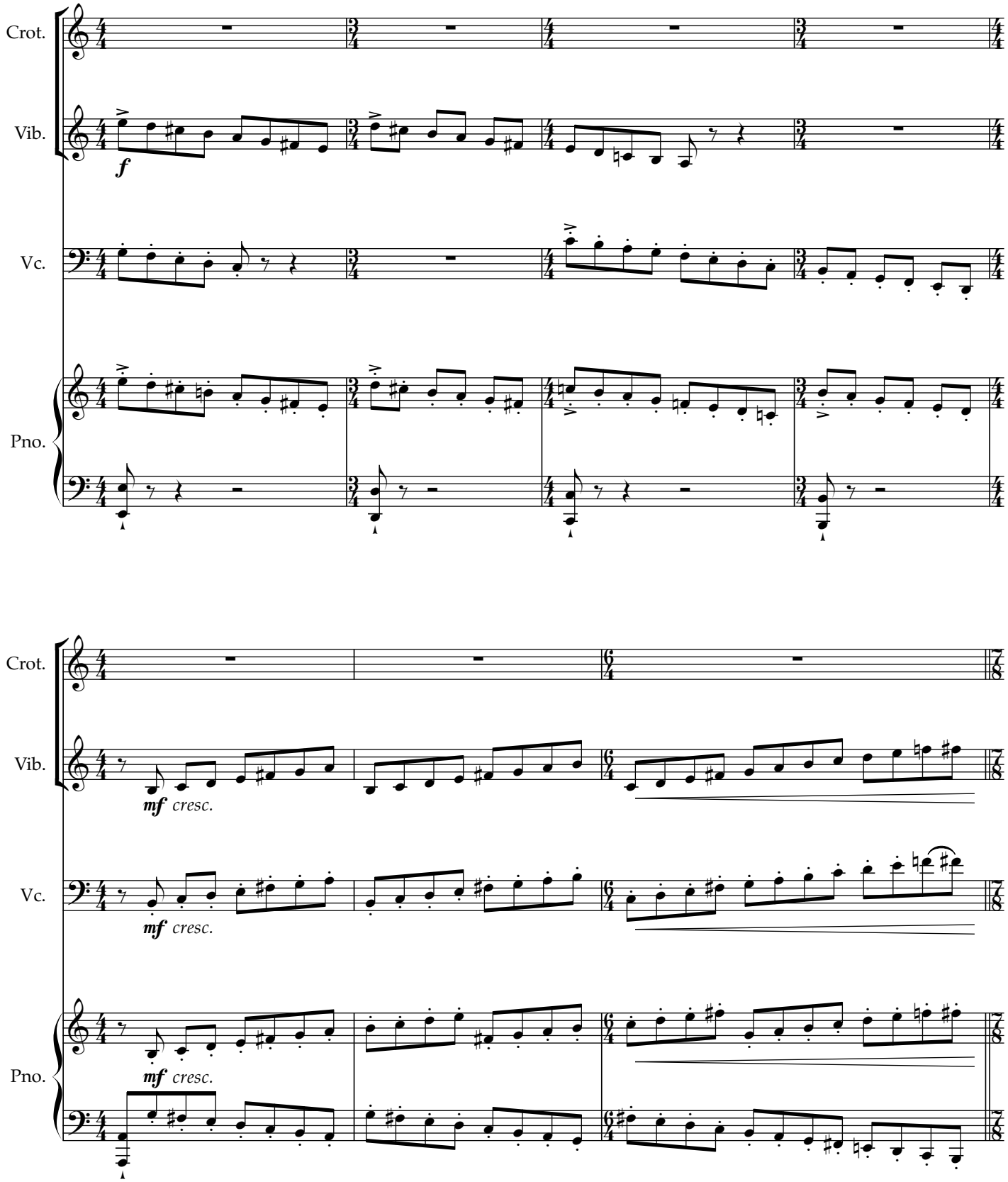

G
♩ = 155
repeat 1-3x
Vib.
mf
pedal freely
pizz.
Vc.
mp
Pno.
mf
pedal freely

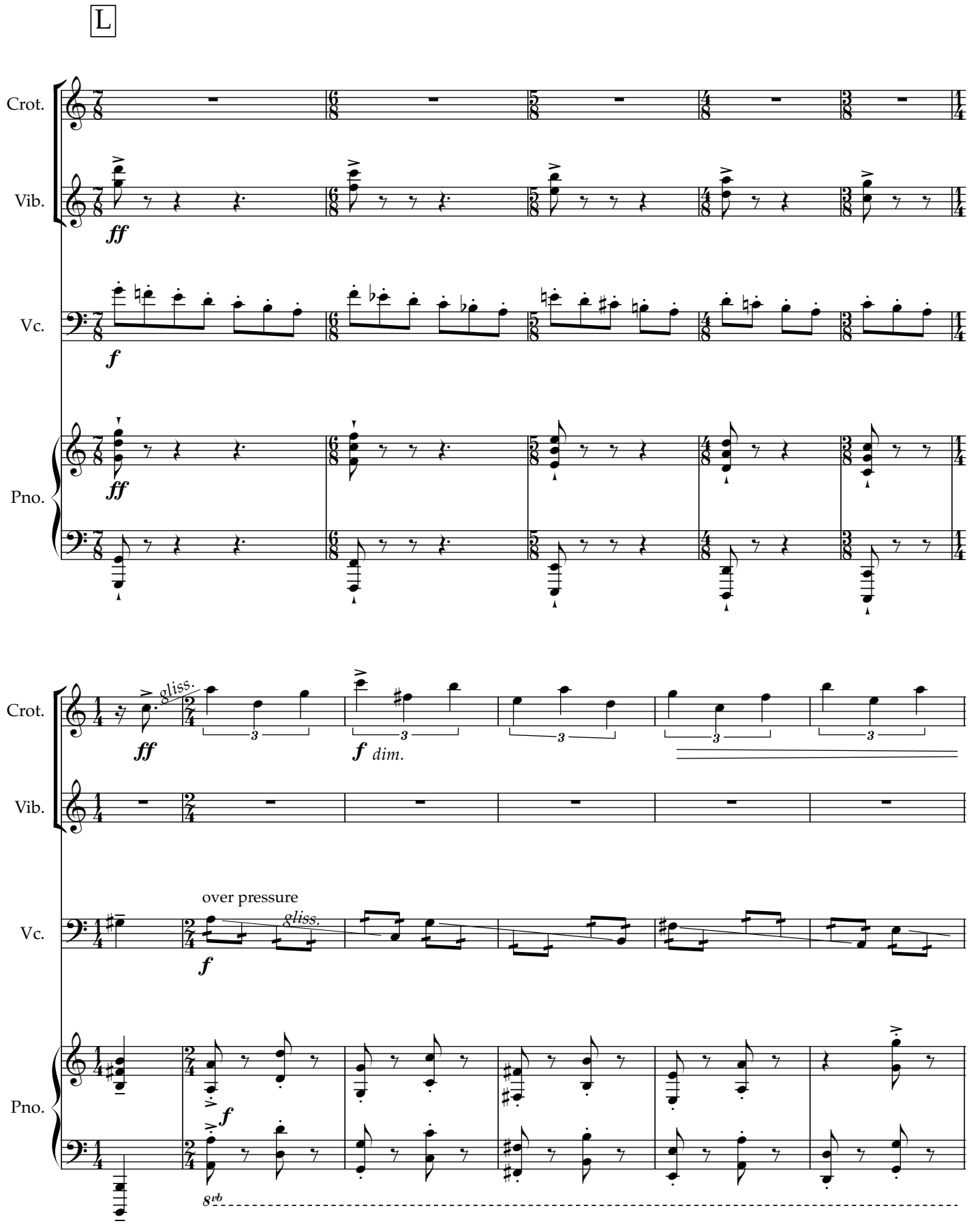

H
Crot.
Vib.
Vc.
Pno.
mf
f
pizz.
mp
ff

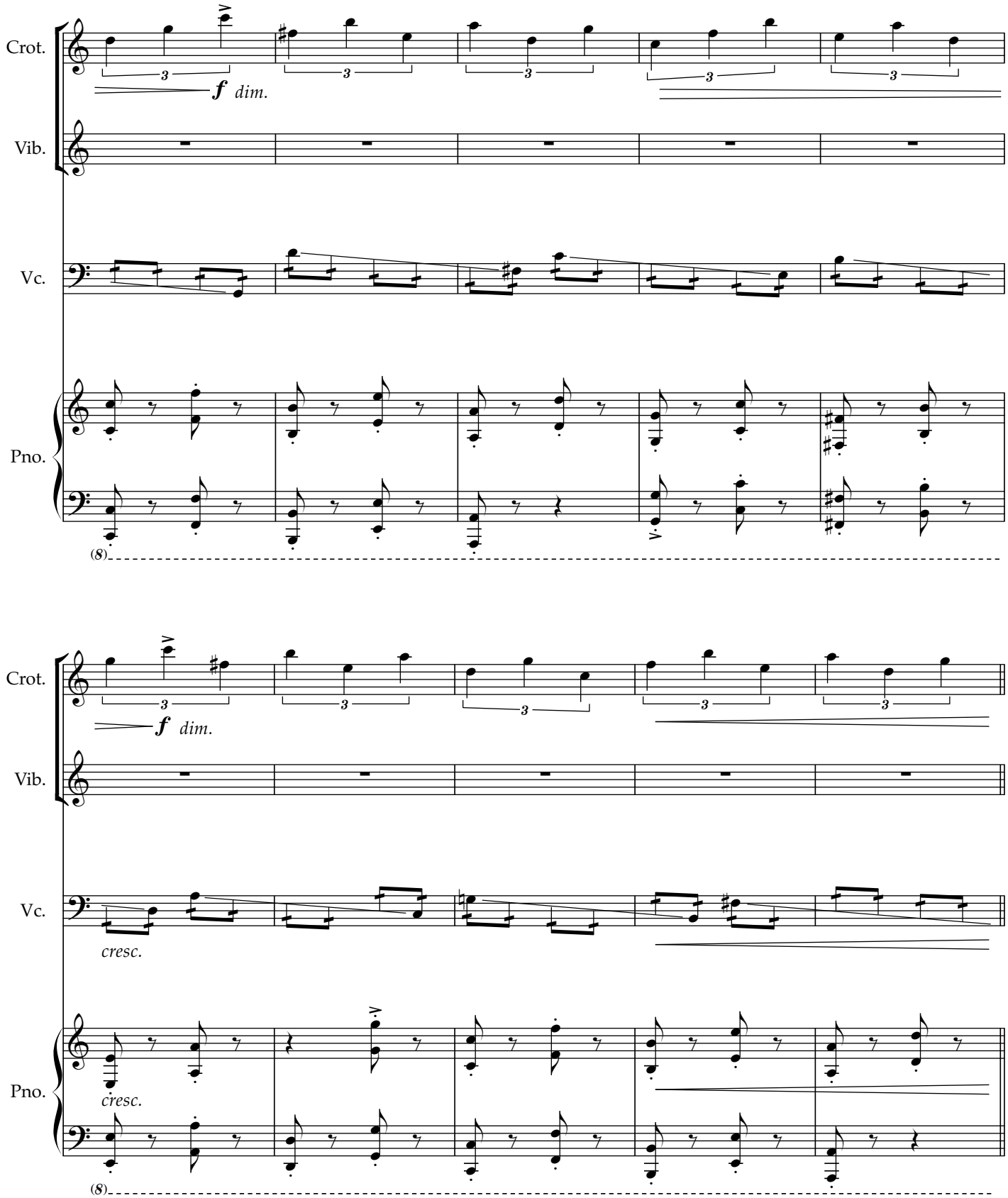

I
Crot.
Vib.
Vc.
Pno.
mf no pedal
ff mp
mp
ff
arco
f

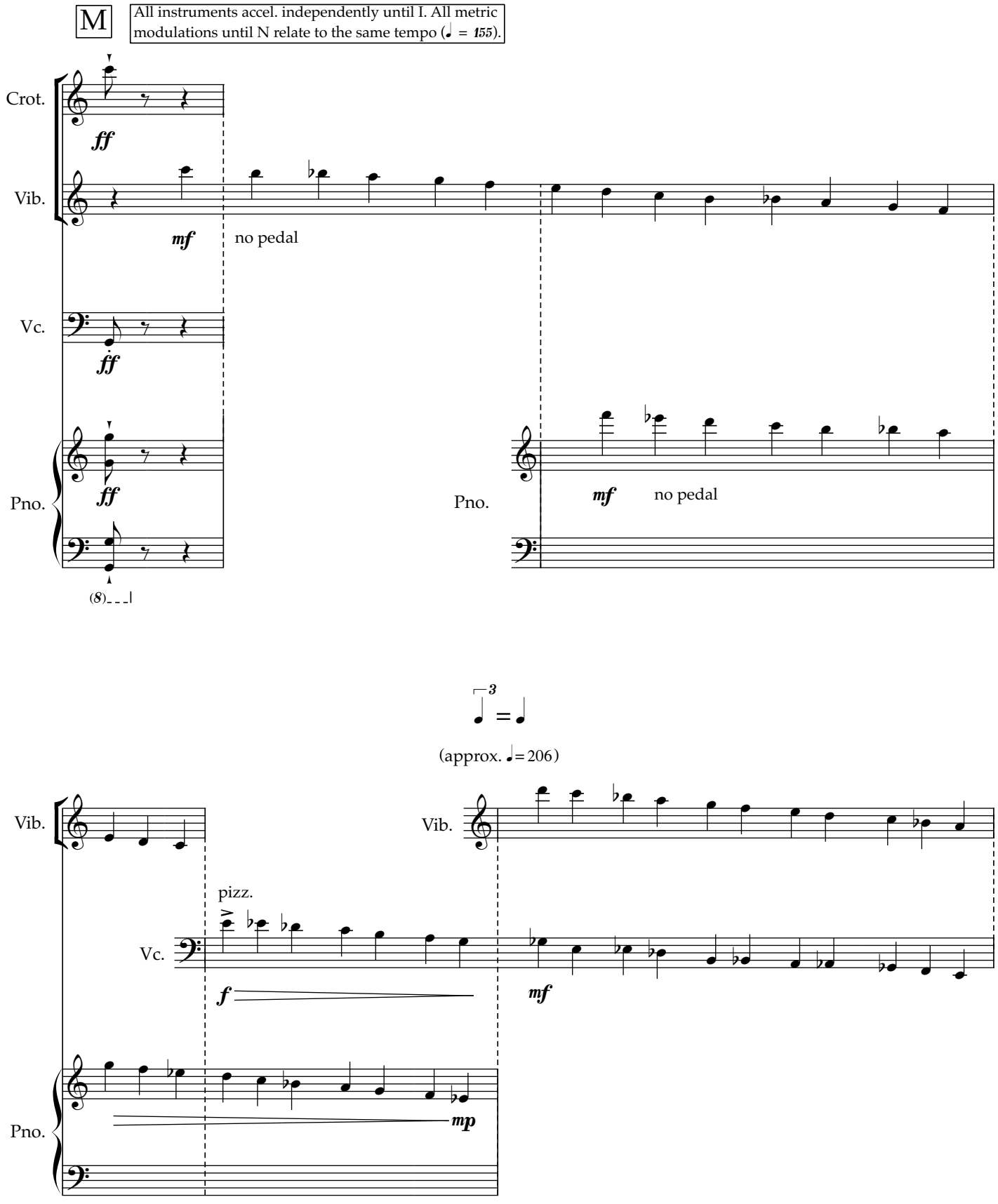

Crot.
Vib.
Vc.
Pno.
f
J
mf
pizz.
ff
mp
ff

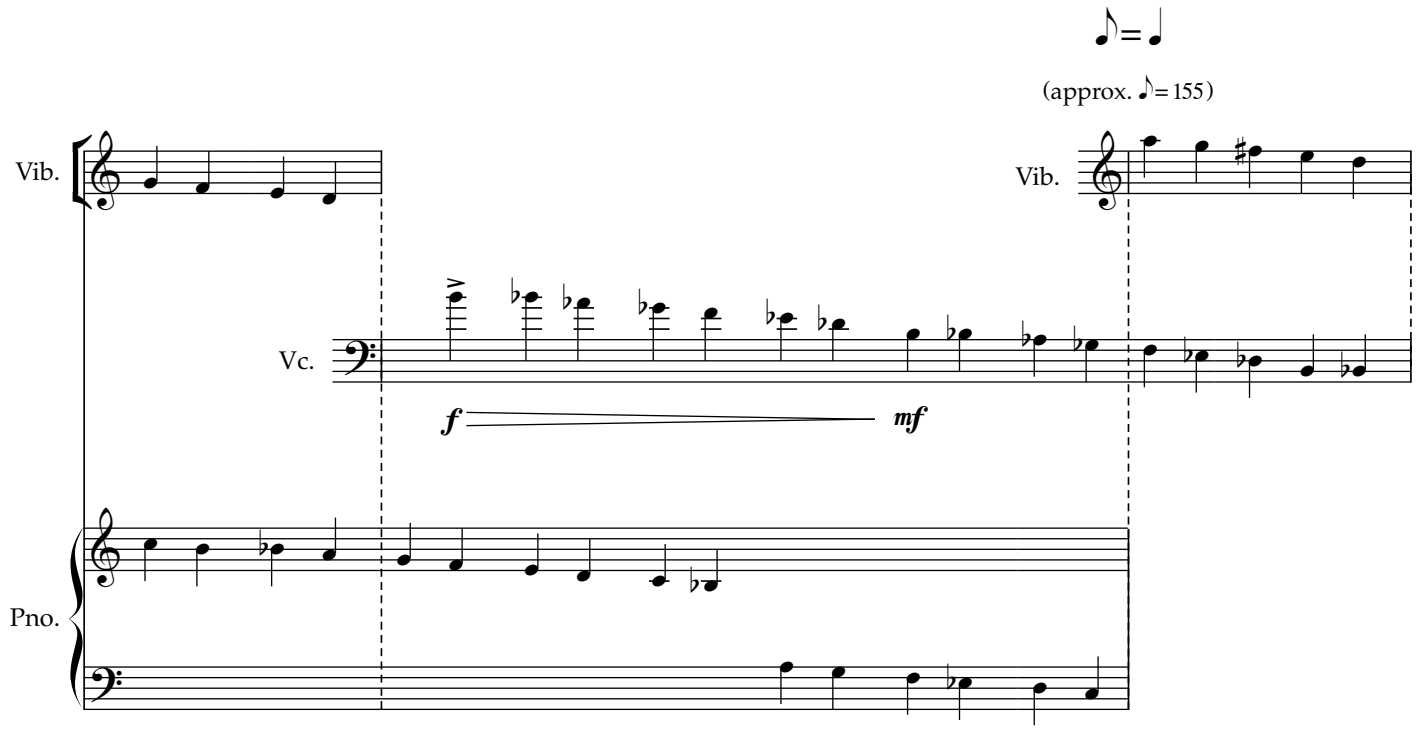

Crot.
Vib.
Vc.
Pno.
p
mf
ff
mp
ff
mp
ff
mp
K
arco
f
sub. f

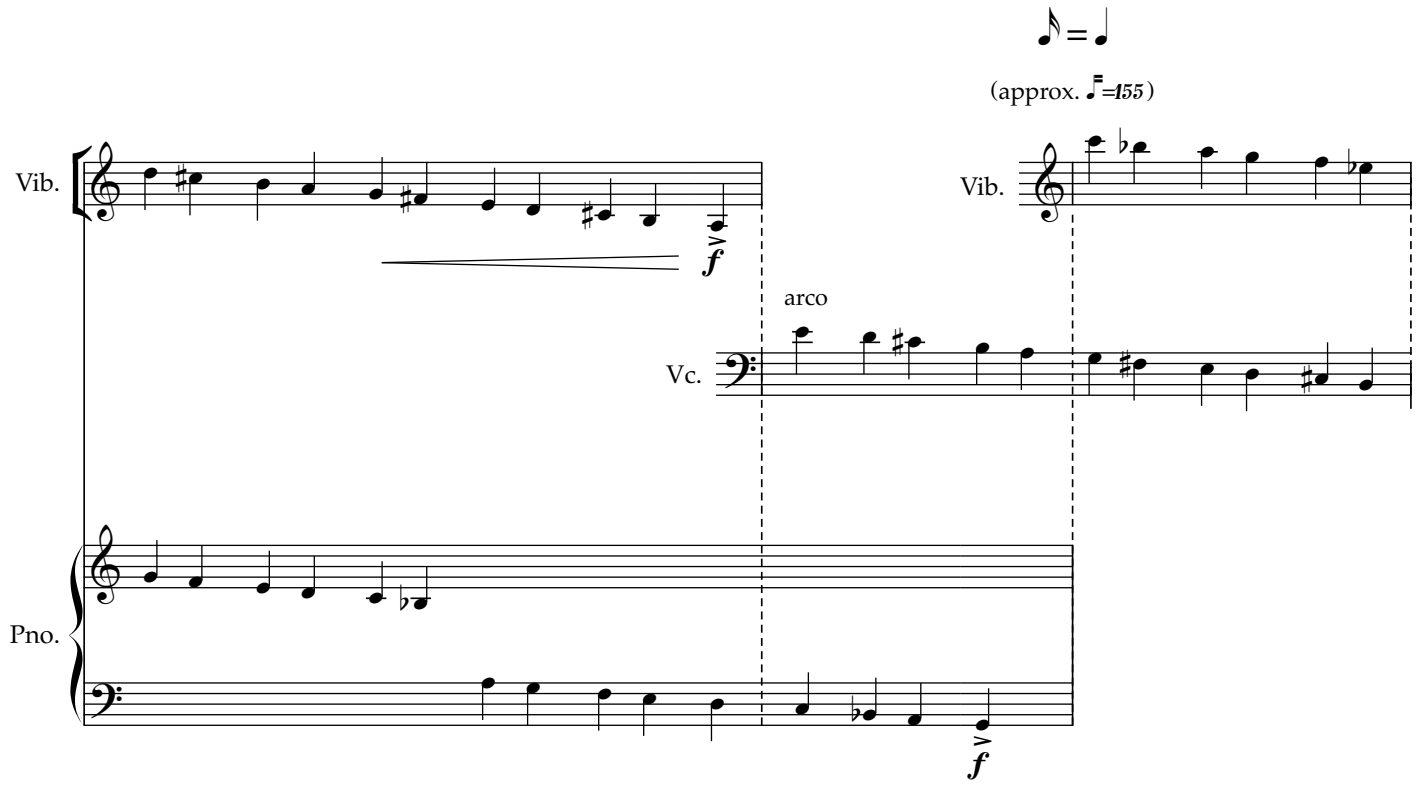

Crot.
Vib.
Vc.
Pno.
f
mf cresc.

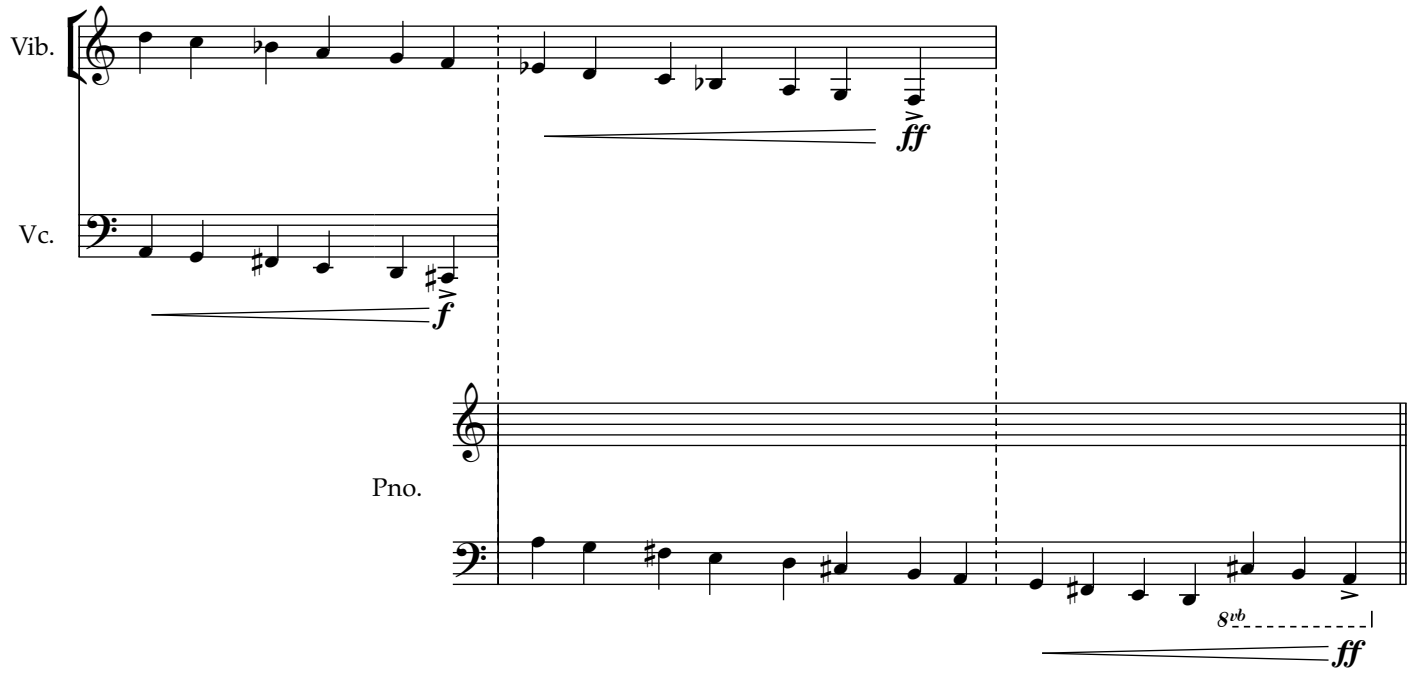

L
Crot.
Vib.
Vc.
Pno.
ff
f
gliss.
dim.
over pressure
8vb

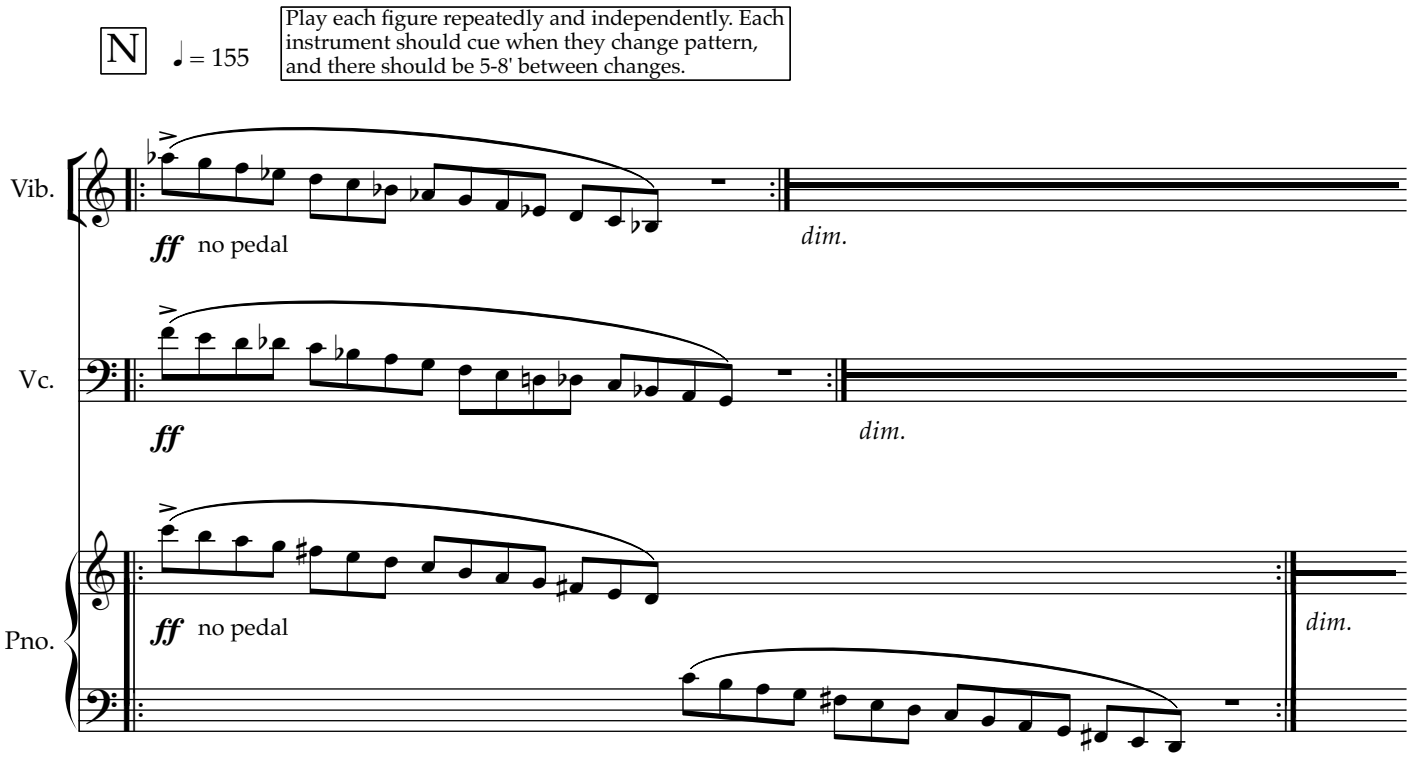

Crot.
Vib.
Vc.
Pno.
f dim.
(8)
Crot.
Vib.
Vc.
Pno.
f dim.
cresc.
cresc.
(8)

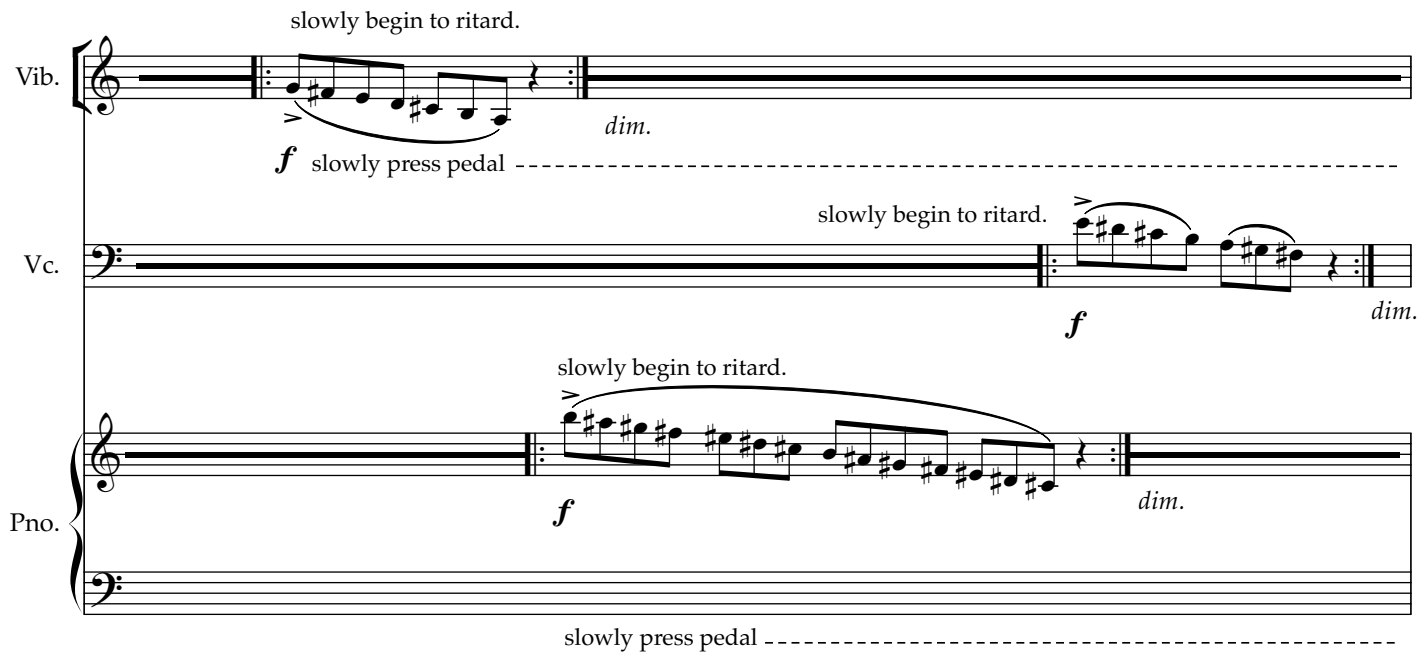

M
All instruments accel. independently until I. All metric modulations until N relate to the same tempo (♩ = 155).
Crot.
ff
Vib.
mf
no pedal
Vc.
ff
Pno.
ff
(8)
Pno.
mf
no pedal
3
♩ = ♩
(approx. ♩= 206)
Vib.
Vib.
pizz.
Vc.
f
mf
Pno.
mp

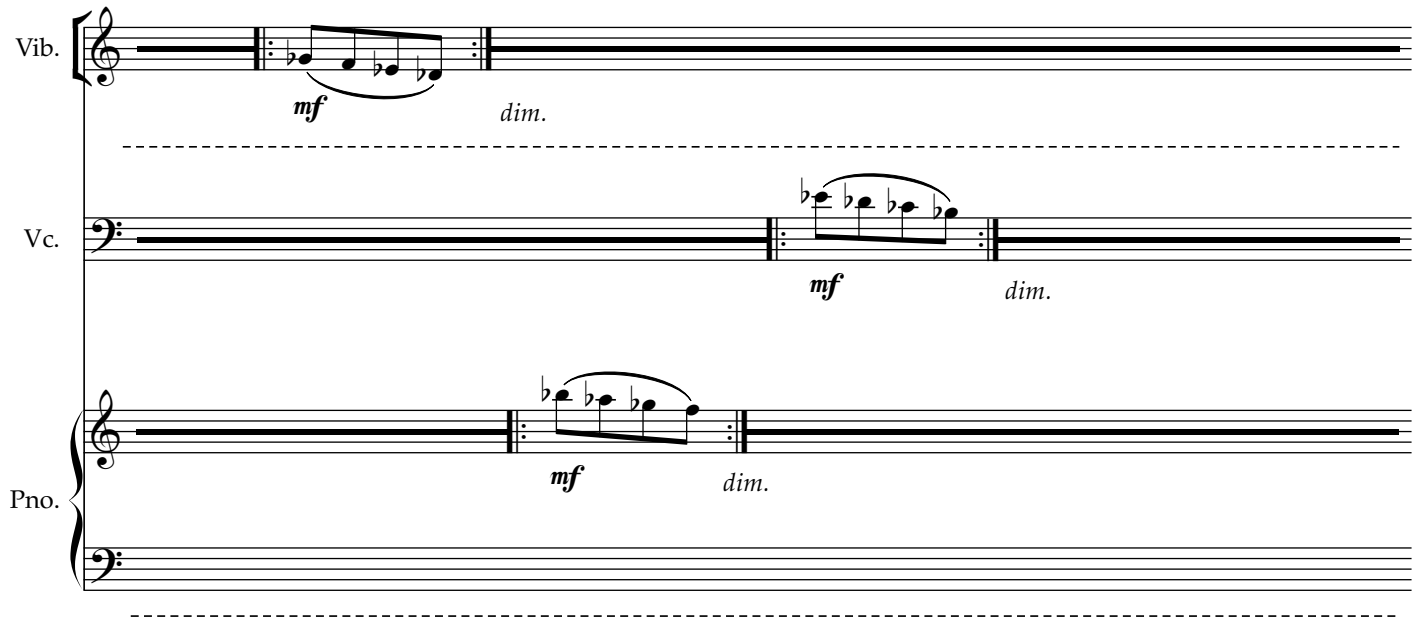

(approx. ♪= 155)
Vib.
Vib.
Vc.
f
mf
Pno.

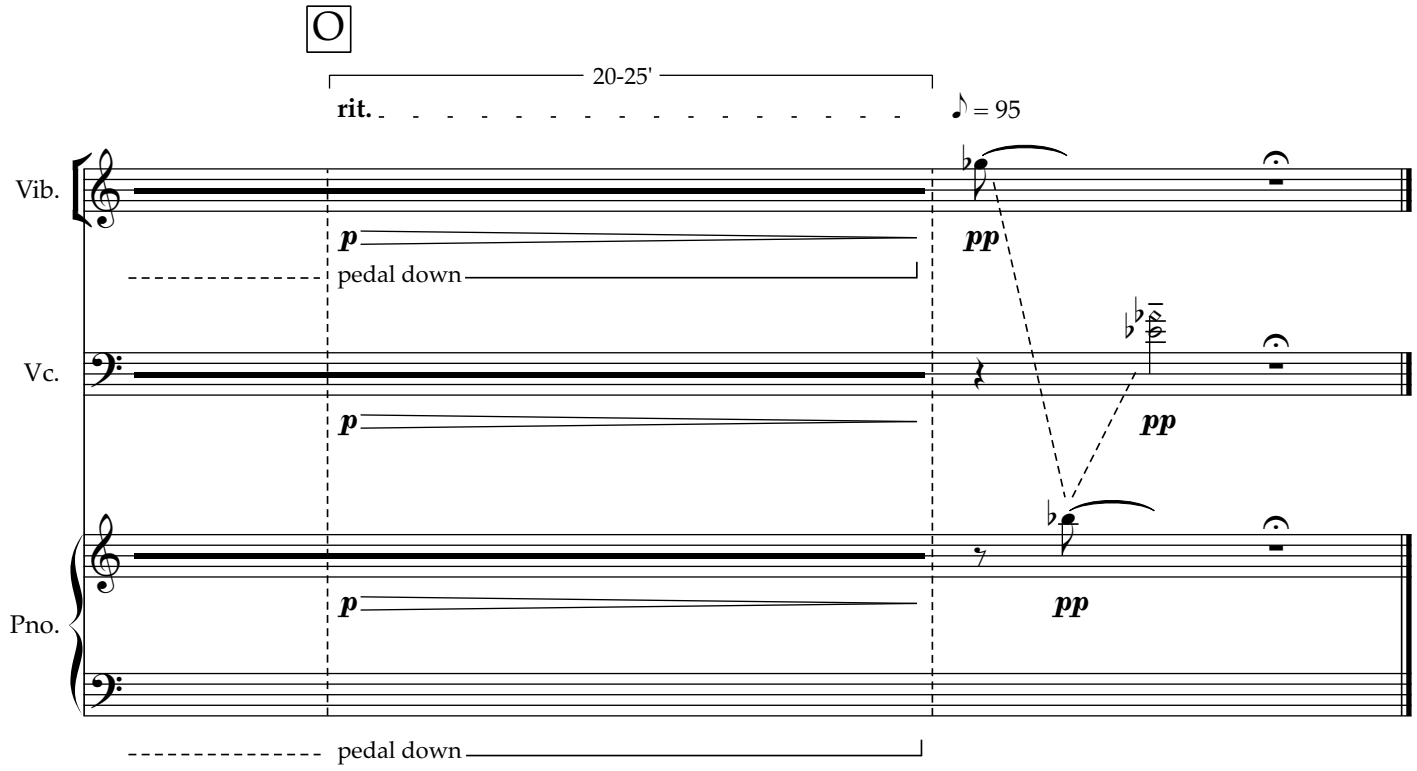

(approx. 𝅘𝅥𝅯=155)
Vib.
Vib.
f
arco
Vc.
Pno.
f


Vib.
Vc.
Pno.
ff
f
8vb
ff


N
♩ = 155
Play each figure repeatedly and independently. Each instrument should cue when they change pattern, and there should be 5-8' between changes.
Vib.
ff no pedal
dim.
Vc.
ff
dim.
Pno.
ff no pedal
dim.


slowly begin to ritard.
Vib.
dim.
f
slowly press pedal
slowly begin to ritard.
Vc.
f
dim.
slowly begin to ritard.
f
Pno.
dim.
slowly press pedal


Vib.
mf
dim.
Vc.
mf
dim.
Pno.
mf
dim.


O
20-25'
rit.
♪ = 95
Vib.
p
pedal down
pp
Vc.
p
pp
Pno.
p
pp
pedal down