PROJECTED RESONANCE

(1990/2004)

for trombone and 4-Channel Surround Computer Music

written for Andrew Glendenning

William Kleinsasser

P R O G R A M N O T E

William Kleinsasser

Projected Resonance (1990/2004)

Projected Resonance, for trombone and surround, was originally written for Andrew Glendening in 1990 as a work for solo trombone and tape. The composition is based on the projection, throughout the piece, of a single, iconic sonority spanning approximately four octaves. The work is set in three large sections each of which develops a specific type of relationship between the trombone and the digital music. The iconic sonority is introduced in the brief prologue followed directly by the opening section which is based on a compressing canon in which the temporal relationship between the three voices (trombone and two digital trombone voices) is constantly tightening. The central section begins with an extended digital music interlude consisting of varying statements of the sonority. This section is set out like a series of overlapping transparencies, then becoming the static backdrop against which the tensely-drawn trombone music emerges and withdraws. In the final section the trombone presents a vigorous line which is amplified and suspended by the digital music.

The original tape, in 1990, was made up of sounds generated by the trombone and complementary FM synthesized sounds. In 1997 the tape music was reconstituted as a more performer-friendly computer program running in the Max environment. The program for the performance of the digital music was developed using the AiffPlayer external object from Eric Singer. This object allowed for multiple stereo sound files to be played on a PowerPC Macintosh computer before the signal-processing extension, MSP, was added to Max. In 2004 the digital music was recomposed with the addition of multi-channel surround mixing (running now in MSP using memory buffers replacing AiffPlayer's play-from-disk approach) and new layers of transformation of the original tape built up from Nobuyasu Sakonda's grain~ granular synthesis method running through a modified version of Randy Jones' yafr~ reverb method. These shared methods were modified and developed into a program that augments the original iconic sonority projections with dynamic transpositions based on ratios related to the overtone series—the basic nature of our brass instruments. The piece's core musical ideas, represented and reconsidered, are also reflected in the title which refers to the natural acoustic nature of the instrument, the idea of a foreground projected upon a "field," and the musical projection of a persistent, thematic musical identity through the passage of time.

Solo Trombone

PROJECTED RESONANCE

for trombone and computer

written for Andrew Glendening

William Kleinsasser
(1990, revised 1997, 2000, 2004)

Watch computer screen
to identify when Cue 2
will begin

Computer CUE

1 ca. 1:15

2 *Expressively, growing toward meas. 54*

♩ = 66 Tempo is given on an on-screen metronome

Trombone

mp

Computer

The computer plays music cue from measure 2 through meas. 52 that is based on the trombone line of the same measures.

Track 1 begins the line at the tempo of ♩= 88 and ritards over the 50 measures to meet the trombone. Track 2 begins at ♩= 72 and similarly ritards to meet the trombone in measure 52. The notation of these tracks is only a rough indication and should not be followed exactly.

7

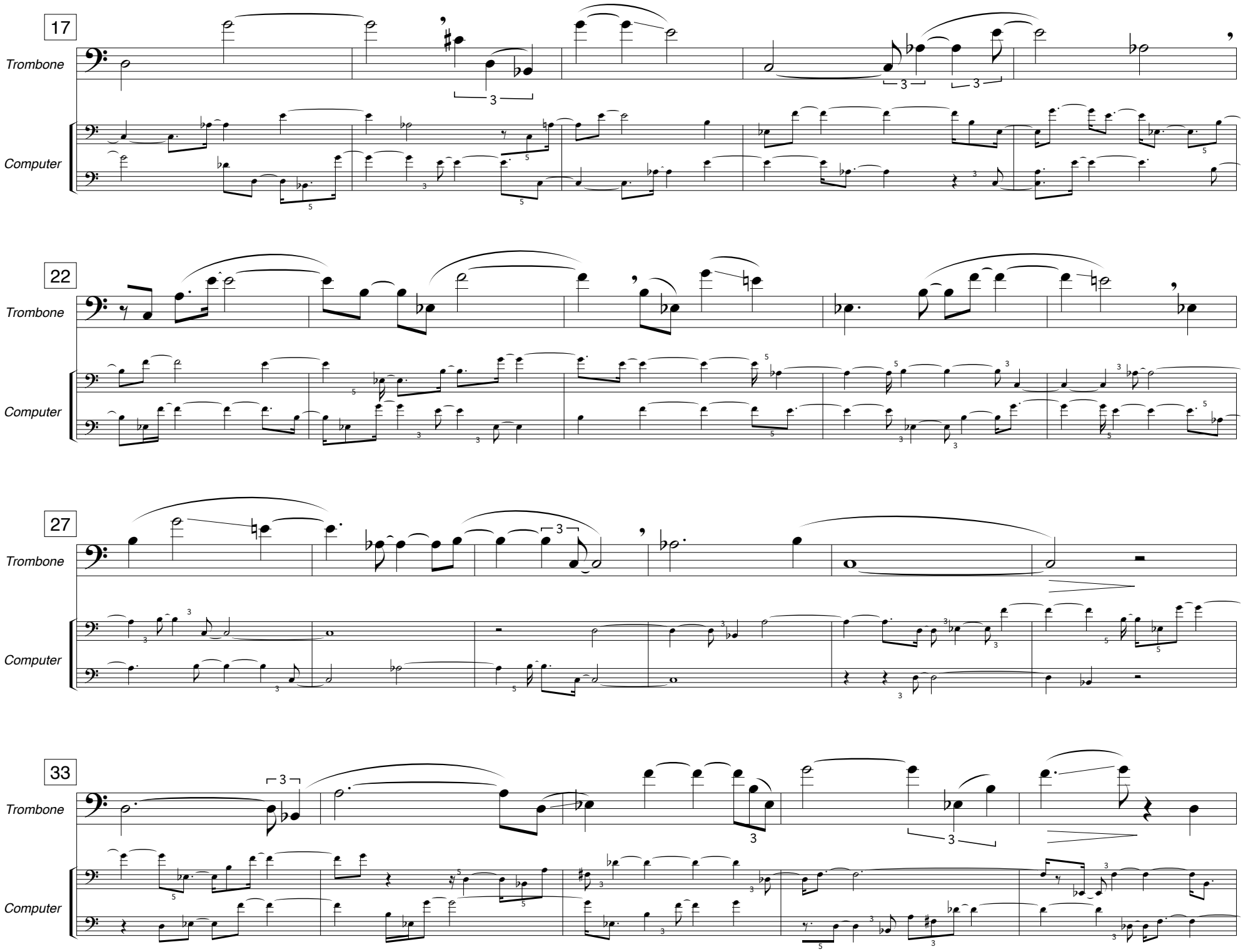
Trombone

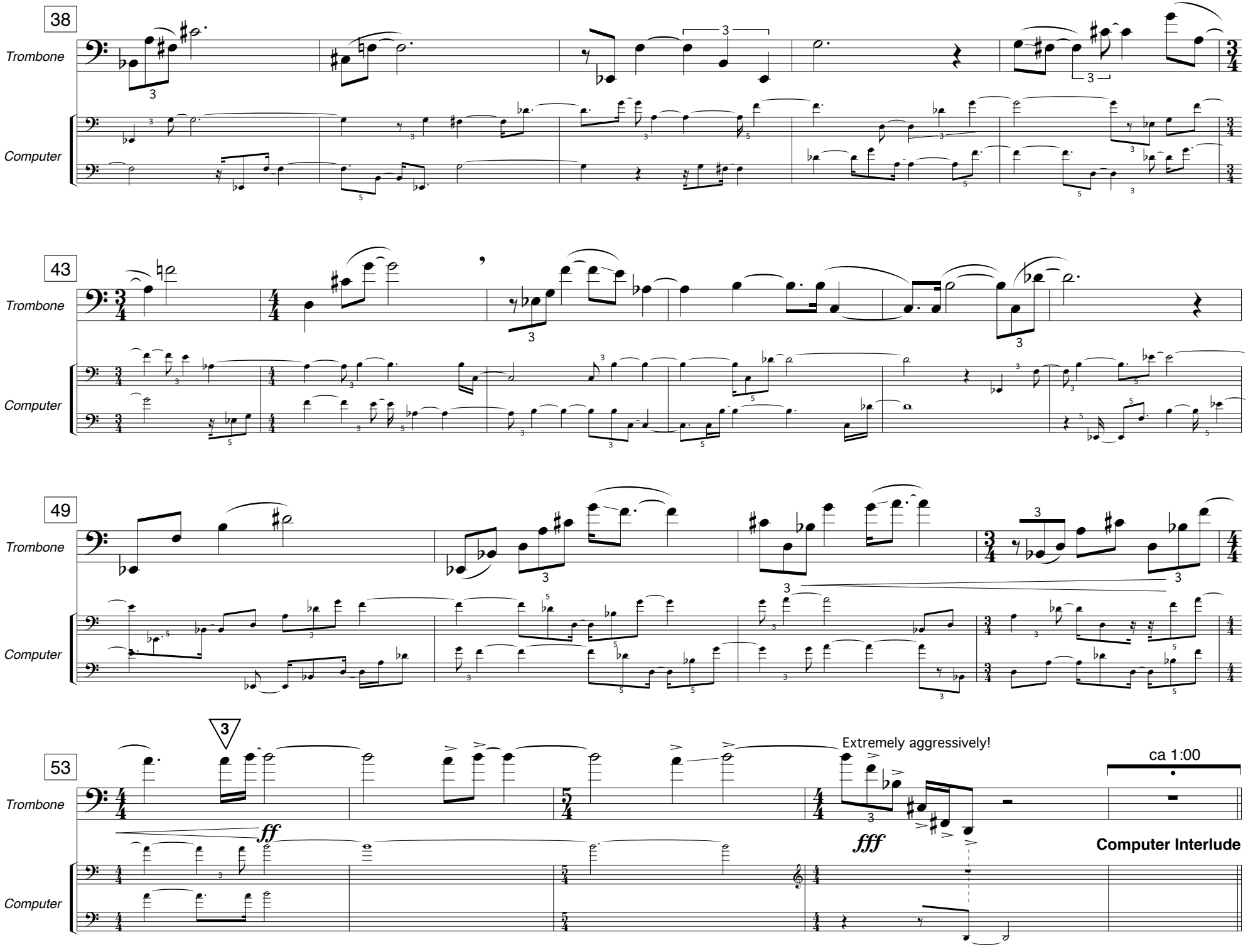
Computer

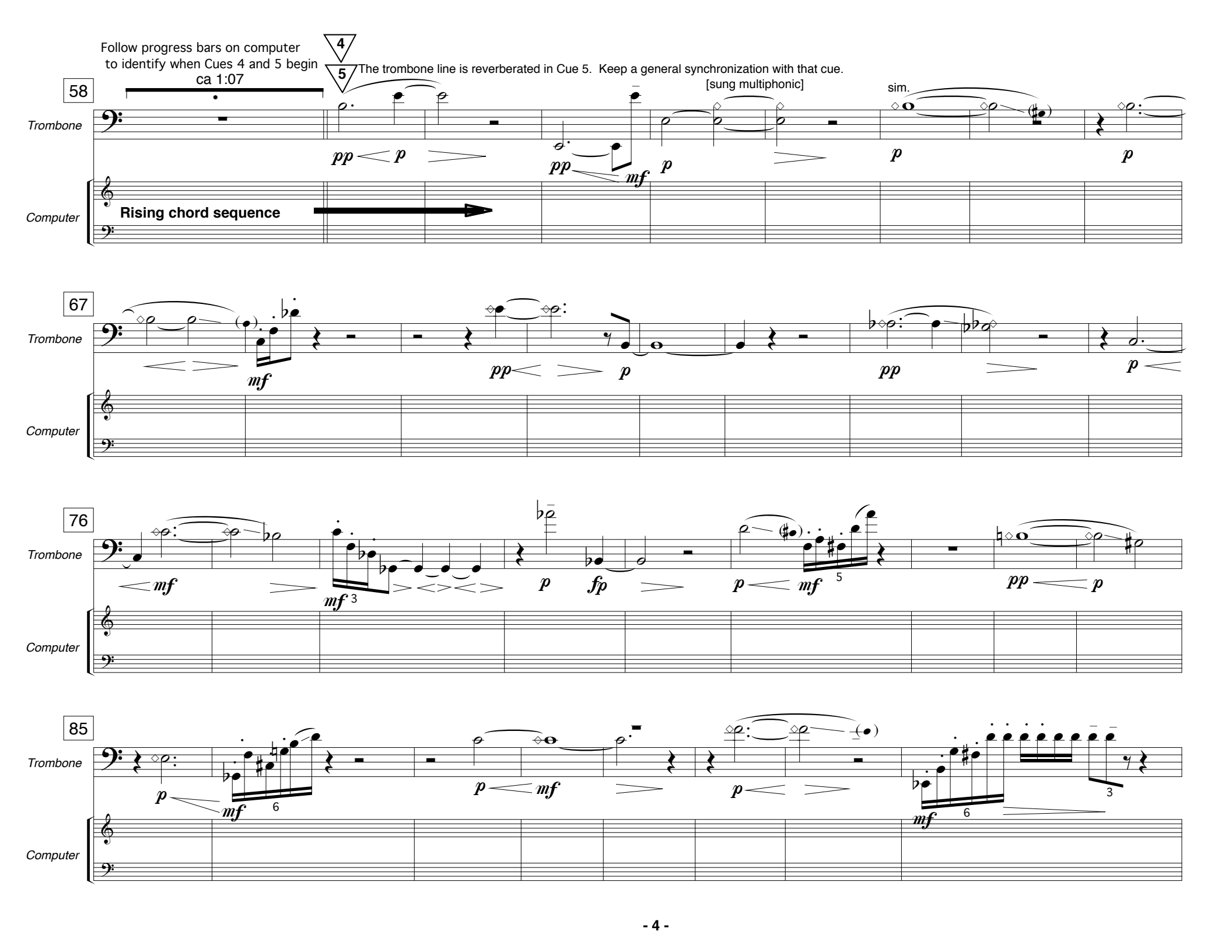
12

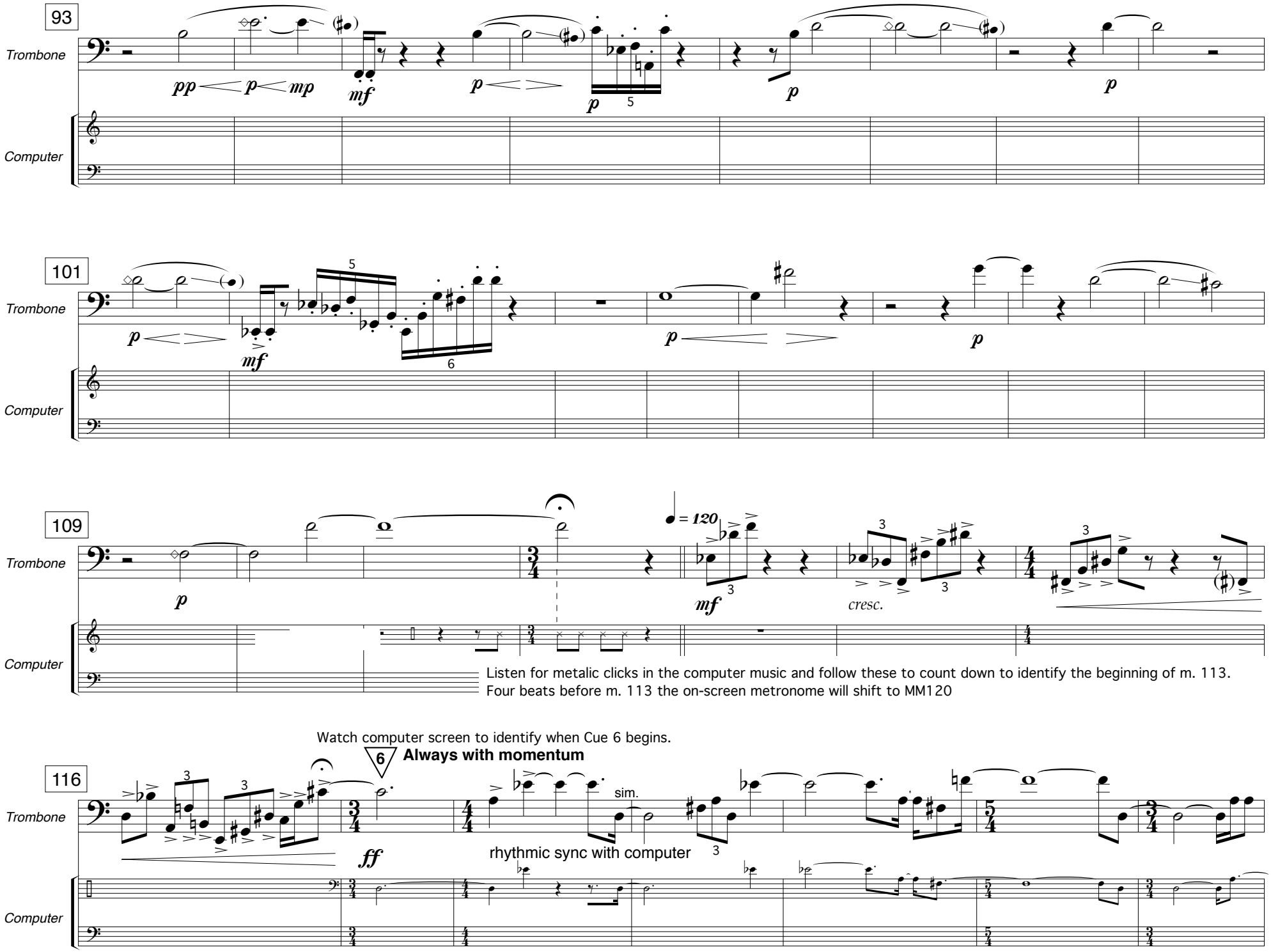
Trombone

Computer


17
Trombone
Computer
22
Trombone
Computer
27
Trombone
Computer
33
Trombone
Computer


38
Trombone
Computer
43
Trombone
Computer
49
Trombone
Computer
53
Trombone
Computer
ff
fff
Extremely aggressively!
ca 1:00
Computer Interlude


Follow progress bars on computer
to identify when Cues 4 and 5 begin
ca 1:07
4
5
The trombone line is reverberated in Cue 5. Keep a general synchronization with that cue.
[sung multiphonic]
sim.
58
Trombone
Computer
Rising chord sequence
67
76
85


93
Trombone
pp
p
mp
mf
p
p
5
p
p
Computer
101
Trombone
p
mf
5
6
p
p
Computer
109
Trombone
p
♩ = 120
mf
3
3
3
cresc.
Computer
Listen for metalic clicks in the computer music and follow these to count down to identify the beginning of m. 113.
Four beats before m. 113 the on-screen metronome will shift to MM120
Watch computer screen to identify when Cue 6 begins.
6
Always with momentum
116
Trombone
3
3
ff
sim.
rhythmic sync with computer
3
Computer

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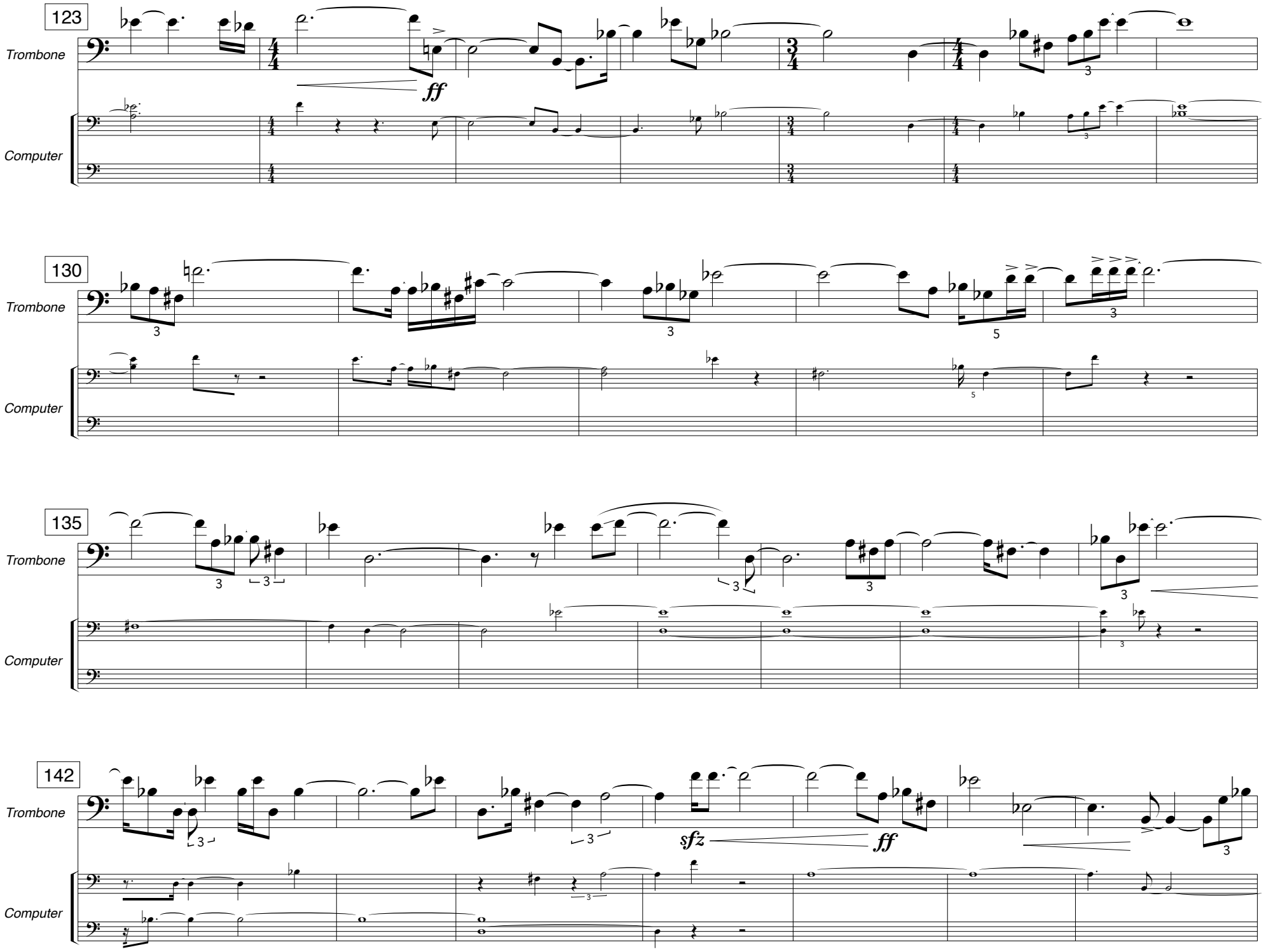

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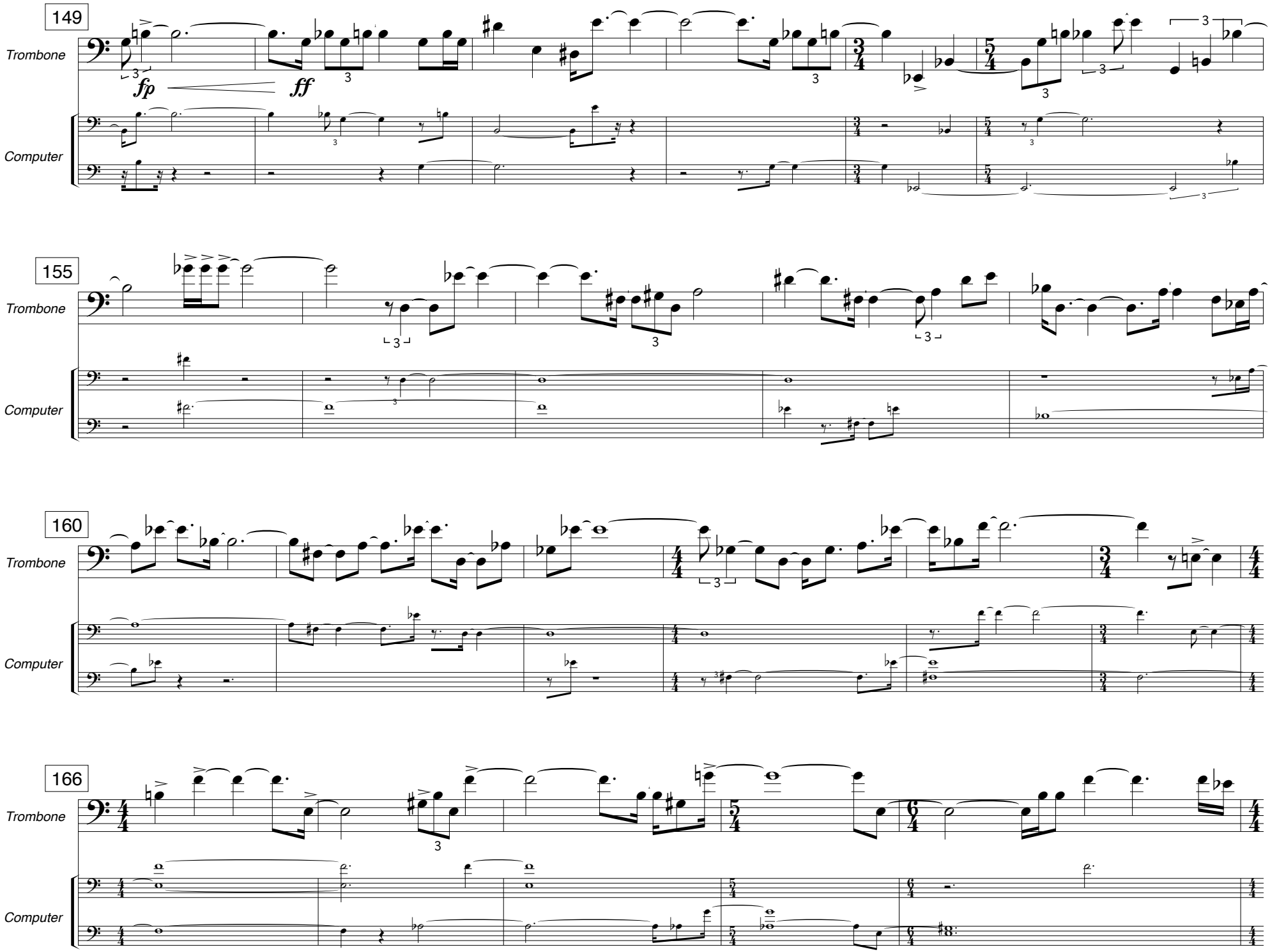
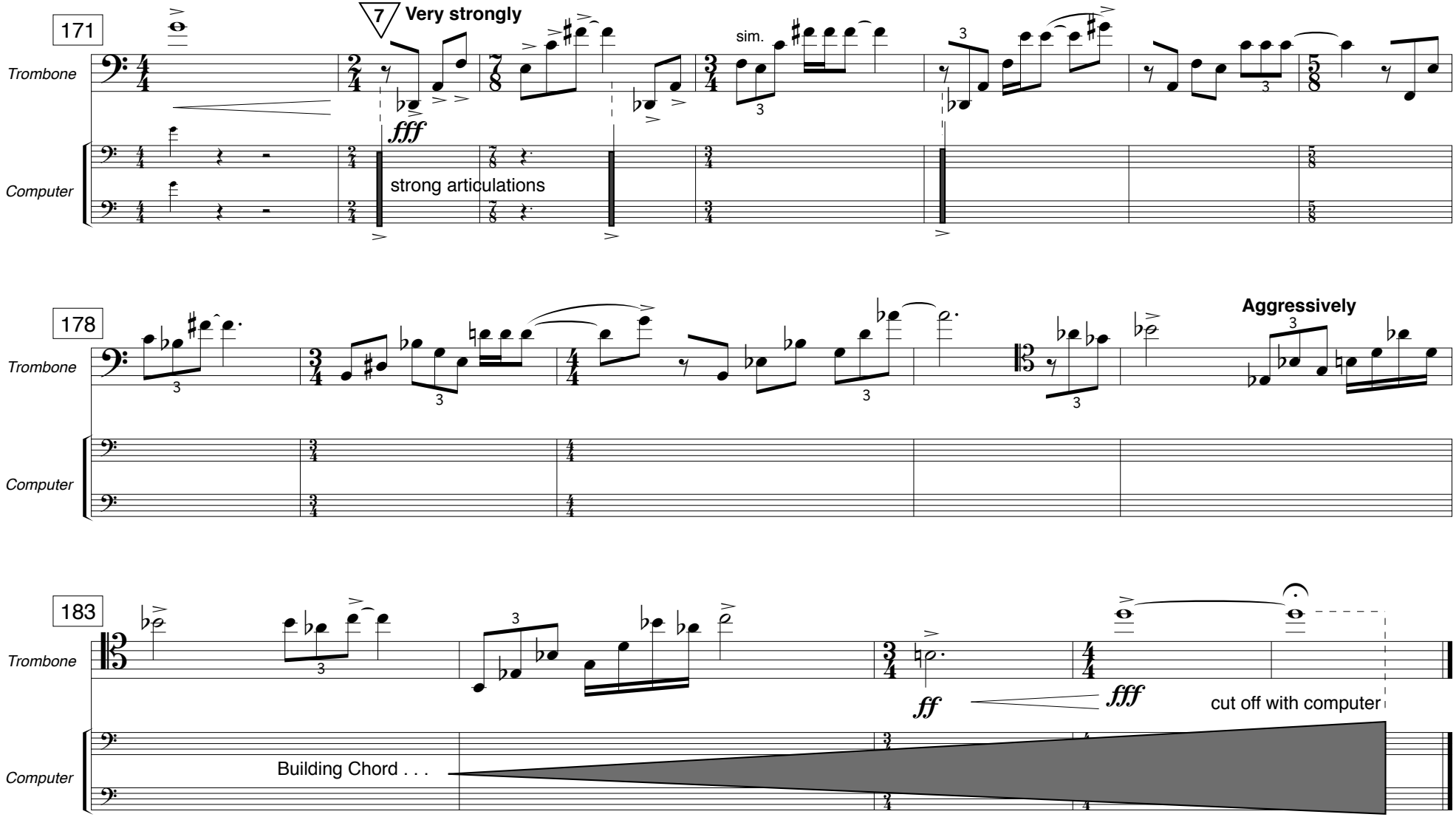

149
Trombone
fp
ff
Computer
155
Trombone
Computer
160
Trombone
Computer
166
Trombone
Computer


171
7
Very strongly
Trombone
Computer
fff
strong articulations
sim.
178
Trombone
Computer
Aggressively
183
Trombone
Computer
ff
fff
cut off with computer
Building Chord . . .