Knut Vaage:

multiMORF 3

for trombone og foss
for trombone and waterfall

2011

Sound design and programming by Thorolf Thuestad
Video and programming by HC Gilje

TECHNICAL NEEDS (detailed setup on next two pages) :
Surround PA with sub (extra: 1 central small speakers), 2 microphones, a computer running the multiMORF 3 software, a pedal trigger with 10 foot-switchers, and a eight channel sound card is required.
The video part needs a high quality video projector and a projection screen*, if not projected directly on e.g. a wall. Rear projection is preferred.
(*size of screen depending of size of room, but minimum 2,66 m wide and 2 m high)
General notes on video by HC. Gilje: "Each section of the score has a corresponding video section.
The video does not attempt at following the score directly, but instead is an expression of the various intensities and textures within a specific section.
Since the length and order of each section can vary from performance to performance, I decided to work with the idea of vertical time instead of horisontal time;
layering the contents of a section on top of each other instead of organising them in a chronological structure. What I hope to achieve is that every instant of the video contains the essence of that section.
Each section has it´s unique identity, and it should be possible to morph from any section to another. Features which distinguishes each section from each other are degrees of intensity,
which is dependent on speed, layering, colours and in constraining the image to only parts of the projection screen. Throughout all sections there is the vertical motion of the waterfall.
The contents of the video mirrors the process of constructing the sound textures: a combination of recorded waterfalls and digitally generated/manipulated material."

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ABOUT THE PIECE:
multiMORF 3 is structured as a piece in open form. The performer is enabled to control the form of the piece, and to use the preprogrammed technology.
The performer should use a dynamic microphone on stand to be able to variate the distance to the mic.
This skill must be practiced with technology during preparing the performance of multiMORF 3.
The effect of the realtime treatment, and the quality of the output sound depends on this ability.
Accidentals apply for each note only. The performer must intonate partials without adaption to the tempered scale.
(In the score this kind of microtonality is not indicatet, but comes with the positions on the instrument)
There will be 10 triggers for 10 different parts. Each part provides 3 staffs for trombone-solo. Maximum time on each part is approx. tree minutes.
The soloist choose which staff to play and is free to jump between staffs inside each part, or make longer rests with background only.
The performer may omit parts and staffs, and may repite each part 3 times during one performance, but not more than 2 times directly repeated.
The patch includes a time-control. Shoving time, and alert when 30 sec left. Part 10 is empty for rapid fade of backgrounds, and for trombone solo only.
The number on each part of the score, 1 to 10 must match the number of the background choosen by the triggerpedal (1 to 10).
At some spots there will be cues (for part 1 marked: 1.1, 1.2, 1.3). To use the cues, the performer press the same pedal trigger again.
Press pedal once to go one step further. Pressing pedal one 3 times rapidly makes the patch jump to 1.3 etc.
To start over again from the beginning of the same part, press pedal 10, before pressing the wanted part, or press pedal "down".
All the triggers will allow a "hangover" fade from the previous part. To avoid "hangover", press pedal 10 and then the wanted part.
Total possible duration is approx. 82 min. Recommended duration: between 15 and 25 minutes.

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Score at Music Information Centre Norway, P.box 2674 Solli, N-0203 OSLO, info@mic.no

Detailed technical requirements for multiMORF 3.

The performer brings a computer running the multiMORF 3 video and audio software.

Audio needs.
Speaker system.
multiMORF3 may be run either on a 7.2/7.4 or 5.2/5.4 surround sound setup.
The speaker system should consist of high quality components, such as L'accoustics or Meyersound , and should be of suitable scale for the venue.

The center speaker should be placed on floor level in front of the performer, a high qualtiy stagemonitor is suitable.

2 stagemonitors for the Trombone player.

Refer to image below for example setup.

The outputs from the soundcards should be routed in the following manner:
1: Left
2: Right
3: Center
4: LFE channel, either to the subs if these are on seperate sends, or too L - R if it is a system with crossover. It is preferable to have the subs on seperate sends in order to send to the subwoofers from all output channels.
5: Left mid surround. (optional)
6: Right mid surround (optional)
7: Left surround.
8: Right surround.

Mixer and effects.

Digital or analog mixer of good quality, with:
10 input channels
2 Vca or Dca (for digital mixer)
12 outputs.

All outputs driving speakers should go through a 31 band eq.

1 Digital reverb unit such as the Lexicon pcm 92
The reverb may be distrbuted in the surround system.

Microphones.
Condensator for amplification of the trombone, Akg 414. (This may be set to hypercardoid to minimize feedback)
Dynamic microphon prerferably a Sennheiser md 421, with tone control set in the middle. (But any dynamic that is eq ed on the mixer is OK.

The Akg 414 is routed to L - R for amplification and reverberation.
The dynamic is routed from FOH console via a stage return, to input 1 on the soundcard. This is the microphone that drives the live processing.
The live processing returned on channel 1 - 8 from the soundcard. This microphone is NOT routed to any speakers.

The dynamic is placed very close to the trombone bell for close microphone placement.

The sound engineer is expected to balance the live processing level by adjusting the level of the dynamic microphone return.

There is a input level meter in the top left corner of the software, make sure there is a healthy input level here.

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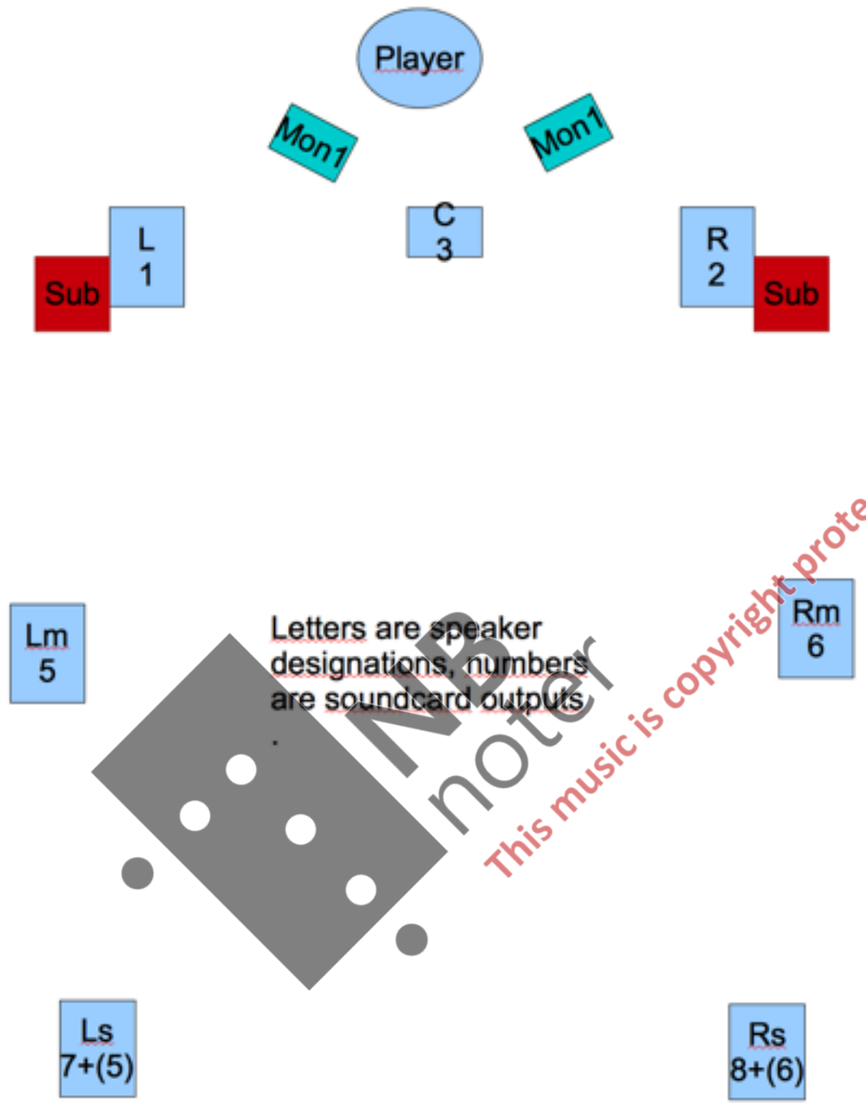

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multiMORF 3

for trombone og foss

Knut Vaage

1 front speaker (kept for this section)

(♩ = c. 60) ✻ optional time to put on straight

✻ Straight

Tbn. variant 1

ensure irregularity in rhythm *ff secco molto*

Tbn. variant 2

I Open *ff*

optional gliss. to

if rep. minor third up, position IV

gliss. to

(from 10)

Tbn. variant 3

Open
opt. tacet *ff*

I II I II sim.

Rhythmically (♪ = c. 108)

flz *p < ff*

for each rep. 1 position lower II III etc.

flz *p < ff*

grad. longer rests

flz *p < ff*

back speakers

morph to closer w.f.

Waterfall distant

0%

Computer

back speakers
playback simultaneously

100%

8va

Col pedal notes/microtonal

gradually less volume

fade microtonal

8va

Col pedal notes sempre

morph

8va

morph

8va

Live electronics
Video

ring modulation

High intensity, black and white layered waterfall filling the whole screen

1.1 (ring modulation/granulation)

optional: play backwards

Tbn. 1

Tbn. 2

ff *mf* *< ff* *< ff* *mf*

opt. gliss.

< ff *< ff* *< ff* *mf*

opt. gliss.

Tbn. 3

straight optional

tempo ad lib. lento <-----> presto, fragments ad lib.

closer w.f. morph to

close up full w.f.

front speakers

100%

Cmp.

back speakers

100%

8va

filter sweep

8va

morph

(add spectrum ad lib.)

8va

morph by fading always highest

back speakers

8va

filter sweep

gradually enforce harmonics

20%

L.E.
Vdo

ring modulation/granulation

gradually add "bubble" effect, surround sweep

cloud of notes

back speakers

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2 (optional: wait, listen to morphing of backgrounds)

front speakers

(semi legato sim.)

Open

Tbn. 1

f espr.

I

II

Tbn. 2

f espr.

Tbn. 3

f

central small speakers grad. to back speakers

distant w.f. closer w.f.

0 % 50% 0% 100%

straight/back speakers

Cmp.

100%

8va

Col pedal notes sempre

morph to

optional spectrums in/out

Harmon open

8va

morph to

optional spectrums in/out

L.E. Vdo

0 % effect gradually to surround delay

A vertical section about 1/3 the width of the screen, right-center
bw waterfall is combined with black circles on blue background moving slowly downwards

if repeated: reduce phrase by phrase from lowest

back speakers

Tbn. 1

Tbn. 2

I

II

I

if repeated, choose block ad lib.

if repeated, reduce by dropping notes from end of phrases

Tbn. 3

even closer w.f. close up, full w.f.

front speakers

0% 50% 100%

Harmon closed

8va

morph (crossfade spectrums)

Bucket

8va

morph

central small speakers

8va

0 %

E spectrum solo

Cmp.

100%

L.E. Vdo

surround delay 100 % effect

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Trigger loop: 3.1 ---> 3.2 (repeated by continue pressing pedal 3) multiMORF 3

3 keep rhythms irregular
optional: jump between lines

3.1 (cut delay/add granulation)
(press ad lib.)

3.2 (surround delay)

opt. morph

Tbn. 1
Tbn. 2
Tbn. 3

I II III IV V VI sim. opt. tacet

front speakers
close up big w.f.
volume 100 %
(morph gradually to surround)
50%

Cmp.
back speakers
50%

Open
7 sec.
E spectrum. Col ped. notes
add G^b spectrum
add A^b spectrum
add B^b spectrum
(keep until end of part)
add F spectrum
add G spectrum
3 sec.

L.E.
Vdo
surround delay

A vertical section about 1/2 width of the screen, center
bw waterfall combined with a dense layer of black circles moving rapidly upwards. A green layer oscillates slowly in and out

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presto
lento ad lib.
improvise

surround
"pleasant" medium calm w.f.
50%
100%
Cmp.

7 sec. 3 sec. 2 sec. 5 sec. ∞
cut E spectrum
cut F spectrum
cut G^b spectrum
cut G spectrum
cut A^b spectrum
cut A spectrum (B^b solo)
add A^b
B^b solo (cut A^b)
add A
B^b solo (cut A)
add $A\natural$ (microtonal)
B^b solo (cut $A\natural$)
add $A\sharp$
B^b solo (cut $A\sharp$)

add A spectrum (tutti)
optional: gradually less surround delay

L.E.
Vdo

front speakers
4 **Outburst, presto**
(optional: wait, listen to morphing of backgrounds)

Tbn. 1
Tbn. 2
Tbn. 3

(flz) (sim.) (flz) (flz)
I VII (highest) I I VI I

back speakers
close up, big w.f.

radical treatment of all w.f. sounds
w.f. w. tbn-harmonics

different w.f. filtered/treated

*

100% 0%

[avoid sounding static in w.f. sounds]

Cmp.

front speakers
Harmon
sim.
very slow bass row continue repeat as needed
(optional transposed by trit twice to 8vb)

bassline continue

all speakers
Harmon open
8va
Col pedal notes sempre
(loudly)

block
TACET

(bassline continue)

all speakers (morph to back speakers)
Harmon closed
8va

crossfade

L.E.
Vdo

granulated (opt. ringmod.)
Whole screen
oscillation between waterfall and its inversion, one layer tinted blue, the other yellow

4.1 (granulation into short delays)

Tbn. 1
Tbn. 2
Tbn. 3

I (flz) I (flz) (flz)
I VII

gliss. to

like E spectrum

4.2 (granulation, calmly, less pitch change)
(E spectrum)
central small speakers
gliss. to

improvise

different peaks; active w.f./active spatialisation/filtering/reverb etc. *

front speakers

Cmp.

back speakers
Straight
8va
(bassline continue)

crossfade w. bucket E-spectrum

Bucket
E spectrum

(back speakers)

L.E.
Vdo

granulation into short delays

* for the w.f. in this section: create a feeling of activity in different rooms/spaces

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Trigger loop: 5.1 ---> 5.3 (repeated by continue pressing pedal 5)

5 front speakers
listen to cloud effect of sustains, optional improvise order/shape of gliss
(sustainer)

5.1 (stop input sustainer)

5.2 (fade sustainer)

5.3 (new input sustainer)

Tbn. 1

dolce

Tbn. 2

dolce

rep. ad lib.

rep. ad lib.

Tbn. 3

dolce

rep. ad lib.

back speakers
full spectre w.f. completely filtered/transformed morph by gradually opening filters

0 %

50%

Cmp.

central small speakers

(short straight mute, sampling of the whole 1, line 1)

(old radio effect)

(reduse)

0%

ensure irregularity in rhythm

sustainer

gradually add "bubble" effect, surround sweep

L.E.
Vdo

surround
spatialize

front speakers

back speakers

0%

output

A horisontal white stripe (1/4 height) combined with orange-brown tinted full screen
White stripe is cropped waterfall, the tinted layer is the same as the source in section 3

6

Bucket

Tbn. 1

Tbn. 2

Tbn. 3

Bucket, lento molto, play lowest octave if possible, change octaves ad lib.

dolce

8vb

polyphonic w.f.
filtered sound open/close random

surround

(central small speakers)

Cmp.

(fragments of intimate w.f.)

grad. to "space"

bucket pitched down, enforce low freq.

front PA/sub

8vb

L.E.
Vdo

low pass/high cut filter, octaver (8va basso)

Whole screen
Yellow tinted layer of waterfall combined with a diffuse white vertical line ((1/4 width) moving slowly back and forth behind the lines of the waterfall

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7

(optional: wait, listen to morphing of backgrounds)

Harmon, enforce harm. spectre

Tbn. 1

dolce

(wah sim.)

pitch ad lib.

open/close ad lib.

sim.

Tbn. 2

dolce

Tbn. 3

dolce

pop

perc. short breath lip sounds

make irregular rhythms

add different intimate w.f. sound (pitch) change

Cmp.

intimate w.f.

pulsate irregular rhythm on bass row

rep. random order

enforce low freq. optional col 8vb

L.E.

Vdo

enforce harmonic spectrum

Vertical section of the sceen, moving in the same way as vertical line in section 6, with a very slowmoving bw waterfall

8

Harmon

optional: play normal notes, sing diamond notes

III

use slide and harmon open/close very slowly on dimond notes

opt. repeat backwards

Tbn. 1

opt. repeat fragments

Tbn. 2

optional combination af playing and singing ad lb., lyrical

opt. repeat fragments

Tbn. 3

intimate w.f. ,different sound quality

Cmp.

harm. spectrum

sim.

morph by grad. fading original Tbn into synthetic spectrals only

L.E.

Vdo

enforce lyric vibration, eg. surround delay/harmonizer

Starts off with the same movement as in section 7, except that now the waterfall is moving. After a while another layer appears, covering the whole screen, containing slow-moving downwards waterfall and slow upwards-moving spheres

It is faded from a brown-orange tint up to greyscale, then the brown-orange tint slowly appears again

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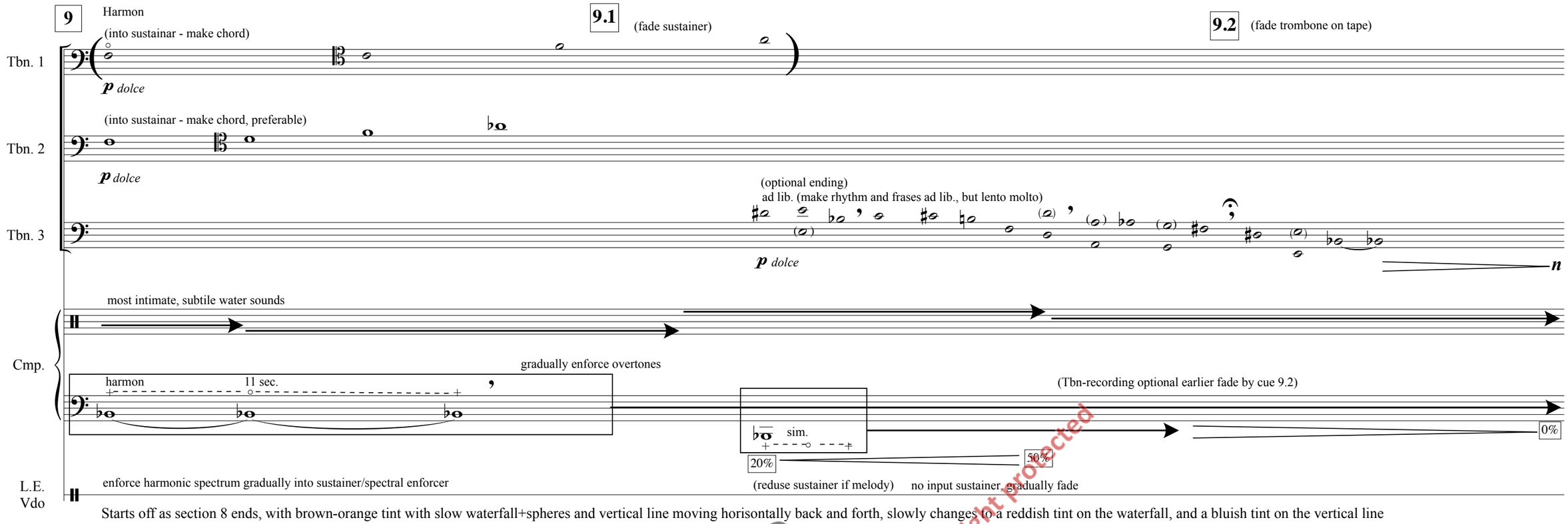
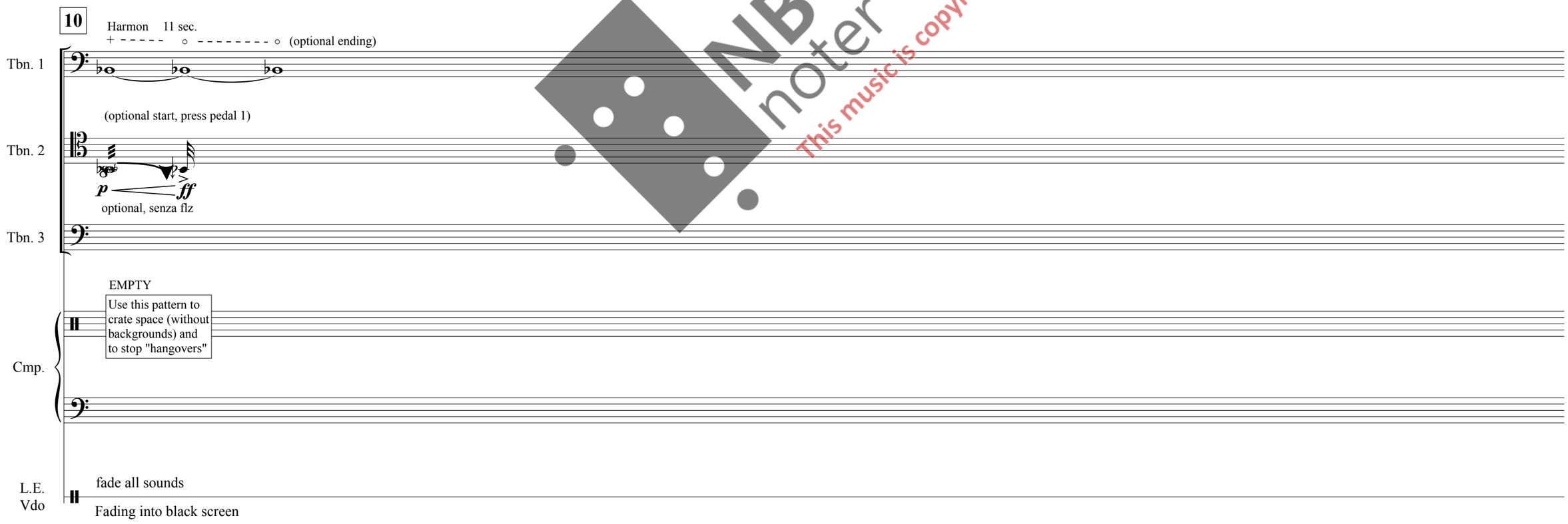


Starts off as section 8 ends, with brown-orange tint with slow waterfall+spheres and vertical line moving horisontally back and forth, slowly changes to a reddish tint on the waterfall, and a bluish tint on the vertical line



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