

Zone-1

The computer part of Zone-1 involves live sound processing and the playback of pre-made electroacoustic material. The computer part is substantial and requires its own performer familiar with MaxMSP and the electroacoustic repertoire. A similarly skilled person should balance the sound at the mixing desk to ensure that the computer and instrumental amplification are balanced. The relative levels of computer signals are controlled by the computer performer.

Technical requirements

- Macintosh computer, at least 2.4 GHz Intel Core 2 Duo.
- MaxMSP (full installation recommended).
- Sound card providing three microphone inputs and seven line outputs
- Seven high quality condenser microphones (one for clarinet, two for piano, two for percussion and two for general amplification).
- midi faders to control Max patch (only three faders needed, but are important to control volumes of live processing during the performance).
- Mixing desk with:
 - 3 pre-fade aux sends (to computer)
 - 7 microphones inputs
 - 5 line inputs (from computer)
 - Enough group and mix outputs to control each loudspeaker with one desk fader.

NOTE: all input and output controls need to be accessible without changing fader banks (so avoid small digital mixers).

• Loudspeakers

The PA should be a high quality PA, not a 'rock-band' PA. Speakers such as Meyer or L'acoustic, not JBL, Electrovoice etc. The PA must be balanced such that loudspeakers are similar.

For location / set-up see rider.

• Mixing desk and signal routing

- (a) The instrumental microphones are panned over speakers 1 and 2 for live amplification.
- (b) The clarinet microphone is routed to input 1 on the sound card
- (c) The two piano microphones are mixed to input 2 on the sound card
- (d) The four percussion microphones are mixed to input 3 on the sound card
- (e) The five outputs from the sound card are routed in the following way: outputs 1,2,3,4,5 routed to speakers 1,2,3,4,5

For larger spaces and more loudspeakers a variation of the output routing should be used.

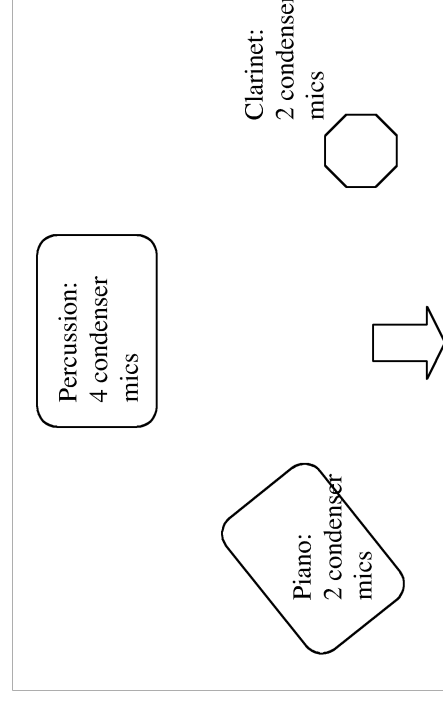
The MaxMSP patch

The Zone-1 MaxMSP patch is straight-forward to use for anyone with good experience of MaxMSP. Because the work involves a lot of live sound processing it is important to calibrate the patch (see point (d) below) and to control live processing volumes actively via the MIDI faders.

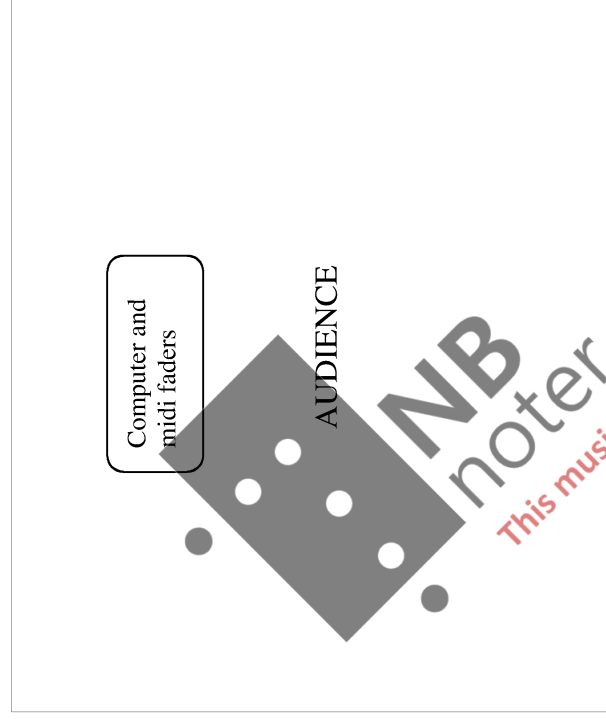
Main points to note are:

- (a) Adjust adc~ input level of each instrument so that the meters clip into yellow on the louder sounds
- (b) Subpatcher 'live-volumes' gives access to volume changes that may need adjustment (see 'I' and 'S' cue points)
- (c) The relative volumes of live and prepared sound are adjusted just before the dac~ output, although can be left until the mixing desk stage unless levels are clipping.
- (d) In the subpatcher "tracking" allows control over the tracking thresholds. To tune this: (i) each instrument plays 'p' and the number in the respective '>~' box is increased or decreased until the 'edge~' box shows a 'bang' output.

STAGE



3



4



5



Speakers 1+2 = main PA system. Not too far away from the performers and not high in the ceiling or above the stage. Speakers 3, 4, 5 should be arranged to created an equilateral triangle (this is not a 5.1 system but a stereo plus triangle). Adjustments can be made with consultation from the composer. Speaker 3 can sit on stage or be elevated from above to avoid visual obstruction of the performers.

High quality loudspeakers should be used (e.g. Genelec, L'Acoustic, Meyer) of size appropriate to the room. Sub-bass (placed anywhere symmetrical and appropriate).

If the main stereo PA is a fixed in-house system then at least speakers 3,4,5 should be on stands of adjustable height. Speaker 3 can be placed lower (or on stage) so as not to obstruct the slight-line to the performers.

8 condenser microphones into desk

- down-mix to 3 aux sends into computer
- down-mix to stereo over main stereo-PA
- down-mix to speakers 3,4,5 such that percussion is on speaker 3, piano on speakers 4, clarinet on speaker 5 (low levels).

5 lines out of computer into desk sent to speakers 1,2,3,4,5 (line 1 to speaker 1, line 2 to speaker 2, line 3 to speaker 3 etc). Subbass as an send from the main channels.

Mixer requirements: 6 mix outputs to speakers on independent faders. 8 mic inputs, 5 balanced line inputs. All inputs and outputs need to be accessible **at the same time on faders** (i.e. a digital mixer with only 8 faders is not suitable as it requires flipping fader banks to adjust levels mid-concert).

It is important for the computer performer and the instrumentalists to have clear sight of each other for cues! Also the computer performer should be centrally located to gain a good impression of the sound balance (and definitely not to be located behind the rear loudspeakers). However, the mixing desk can be located out of the audience area because fine

Piano performance instructions

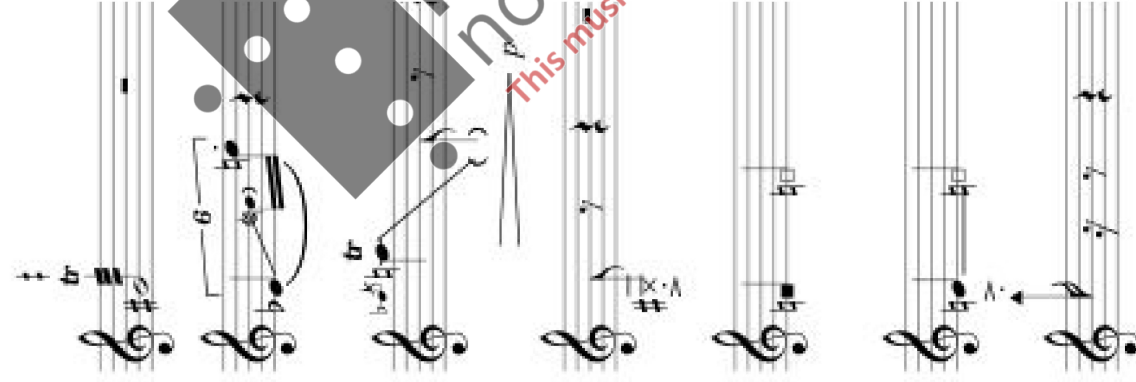
E-flat, b-flat and and bass clarinets are so far used.

There are a few written indications where I need to find the sound type:

Growl MF = a growly type of multi-phonic with the written pitch as the most prominent pitch (need fingering and multi-pitch options).

MF = standard type of multi-phonic with main pitch as written pitch (need fingering and multi-pitch options).

OB = overblow or some other high squeaky / sharp sound.



Flutter tongue or rough sound, and trill to quarter sharp. If no trill note indicated try to keep same pitch and trill with the keys.

Gliss / bend note towards the note in brackets, but don't rearticulate note in brackets.

Gliss downwards to low note of indefinite pitch. Don't re-articulate. Don't play notes in brackets. There are just to indicate speed of glissandi.

Tongue slap or other noise explosive attack articulation.

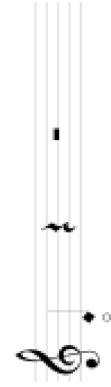
Mainly 'velvet' airy sound, lightly touching normal note

Move continuously between air and pitched sounds.

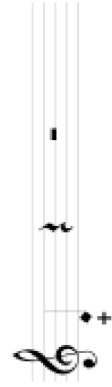
High indefinite pitch

Small note heads without brackets – play if possible, otherwise concentrate on the larger note heads.

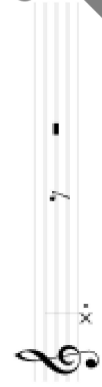
Piano performance instructions



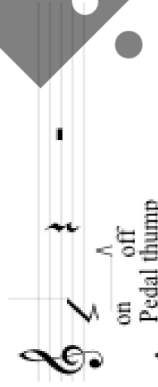
Harmonic (dampened inside piano)



Dampened note (inside piano)



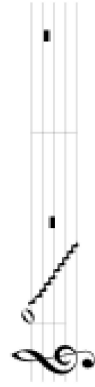
Hit string inside piano



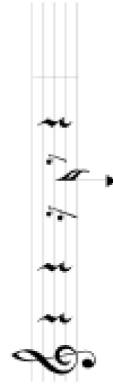
Thump sound with pedals



Gliss inside piano across all strings between written notes.



Scrape along string inside piano



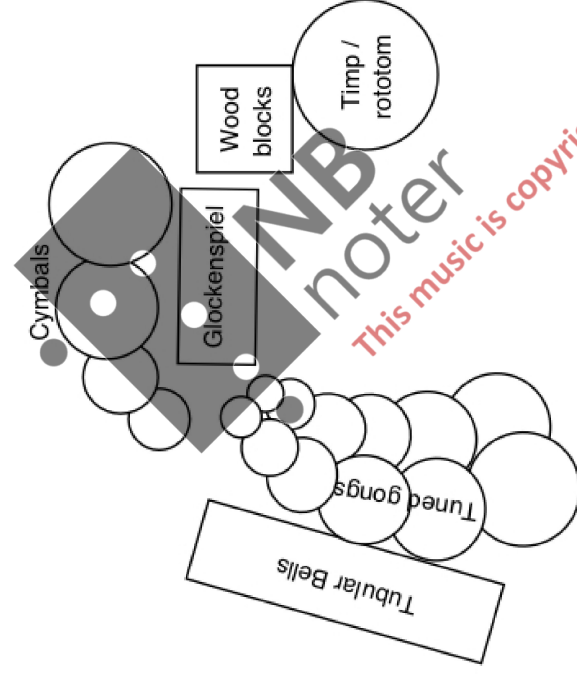
'Clonk' sound somewhere inside piano

Percussion performance instructions

Instruments:

Tuned gongs – full octave: G# to G#
Tubular bells – octave ++: C to D# (plus two extra chimes to extent glock with Eb Bb. See from part 2 bar 88)
Rototom with pedal, or small timpani?
Cymbals x 4
Woodblocks x 5
Glockenspiel
Tambourine

Suggested layout:





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Zone 1 (full score section 1/2)

♩ = 90

Fast, in waves

Clarinet in E♭

If no trill note indicated play smallest possible interval to make a 'textured' sound.

pp mp mf

Piano

mp f (ls)

Tuned gongs

Percussion

Cymbals x 4

Metal sticks (swish)

mp f ls

centre -> outwards

COMPUTER

1 [S1] Pre-prep sound layer [T1] Live sampling of all instruments

2 [T2] Transposition of all instruments 9 / 6 semitones down

≡

E♭ Cl.

mf mp

Pno.

mf

Cymbals x 4

outwards -> centre

Pick up 'hot rods' as well as metal sticks

hot rods

centre -> outwards

centre -> outwards

computer

rapid unstable microtonal changing pitch -> increasing

mf

f

mp

B-flat Cl.

Pno.

Tuned gongs

metal sticks

mf

f

(hot rods)

FAST ARTICULATIONS OVER ALL METAL, VERY LIGHT, PP

yarn wound mallets with medium soft clear focus

cup

mf

Cymbals x 4

(hot rods)

centre -> outwards

ls

(hot rods)

outwards -> centre

mf

Rototom

f

mp

(hot rods)

mf

computer

3

Fade out transposition

MIC!
improvise fast growly air sounds, non-rhythmic / random texture with small articulations with accent as written. Not just flutter-tongue!

mf

(mf)

Pno.

mf

(ls)

Cymbals x 4

mf

metal sticks

p

drums

f

(rim+skin)

computer

4

[S2]

17

Cl. **OB** *f-mp* *mf* *mp*

Pno. *mp* *mf* *ped*

Tuned gongs

Cymbals x 4 *mf* *p* *f* *centre* *mp* *p*

drums

computer 5 **S3** Pre-prep sound layer

22 (to sounding c)

Cl. *mf* *mp* **MIC!** **MF** *p* *mf* **MIC!**

Pno. *mp* *f* *mp* *ped* *mf* *mp* *mf*

Tuned gongs

Cymbals x 4 *mf* *mf* *(metal sticks)* *p* *mp*

drums

computer

4

26

Cl.

MIC!

p *mf* *mf* *p* *mp*

Pno.

mf *mp*

Cymbals x 4

p *mp*

drums

computer

ted

[illegible]

35

Cl.

Pno.

Tuned gongs

computer

mp

yarn mallets

mf

f

f

mp

f

6

MS4 Pre-prep sound layer

40

Cl.

Pno.

Tuned gongs

Cymbals x 4

Rototom

computer

mf

(fast as possible)

f

pp

mf

(fast as possible)

(fast as possible)

mp

yarn mallets, flip for cymbals

f

tr

3

3

Cl. 43

mf

MIC!

Pno. *mf* *

5

mf 5 *

Tuned gongs

mf *f*

metal sticks

Cymbals x 4

computer

This musical score is for the track "The Great Escape" by John Williams. It is a multi-stemmed score for the following instruments:

- Cl.** (Clarinet): Features a melodic line starting at measure 47, marked *f* (forte), and later marked *mp* (mezzo-piano).
- Pno.** (Piano): Includes a complex accompaniment with triplets and a section marked *mp* and *ped* (pedal).
- Tuned gongs**: Provides rhythmic texture with patterns marked *f* and *Fast and random*.
- Cymbals x 4**: Features a rhythmic pattern marked *f* and *mp*.
- computer**: A digital instrument track.

The score includes various musical notations such as dynamics (*f*, *mp*), articulation (*acc*), and performance instructions like "Fast and random". A large watermark "This music is not for sale" is overlaid on the image.

57

Cl. *fast change to E-flat clarinet*

Pno. *f* *clear rest!* *clear rest!* *3*

Cymbals x 4 *rubber beaters* *centre* *outwards* *mf* *f* *tambourine* *cymbals*

computer

61

E♭ Cl. *mp* *pp* *f*

(Drop tempo to 80 if necessary)

Pno. *legato where possible! (to end of section)* *6* *3* *clear rest!* *mp (subito)* *mf* *mf* *f*

computer

64

E♭ Cl.

f *mf*

Pno.

computer 8 T4 T3b Fade out transposition, set buffer for next sampling

==

microtonal bending

66

E♭ Cl.

f

Pno.

computer 5/4 8va

Zone 1 (full score section 2/2)

unstable microtonal motion

♩ = 60

Clarinet in Eb

f

Piano

f sfz

Cymbals

ff

rubber beaters

COMPUTER

♩ = 60

9

T5 Capture cl. 4 second loop, auto end after 12 seconds

S5 Pre-prep sound layer

5

MIC!

E♭ Cl.

mp

B. Cl.

mf

MIC!

Pno.

f

Ped.

sfz

Cymbals

arco

mf

yarn mallets

Tuned gongs

mf

yarn mallets

Lilting / sway. Let all sustain naturally.

Computer

10

T6 Capture cl. and transpose down octave

S6 Pre-prep sound layer auto start here

11

S7 Pre-prep sound layer

12

S8 Pre-prep sound layer

10

B. Cl. *p* *f* *molto* *mp*

Pno. *f* *mp* *sfz*

Tubular bells *mf*

Tuned gongs *mp*

Computer 13 T6b Capture cl and granulate for 15 seconds

14

B. Cl. *p* *mp* *MIC!* *tr* *mp* *f*

Pno. *mp* *Red. mp* *f*

Cymbals bell / cup

Tubular bells dampen

Tuned gongs *f*

Computer 14 Pre-prep sound layer S9 15 Pre-prep sound layer S10

19

B. Cl.

Pno.

Tubular bells

Tuned gongs

Computer

mp

II *

mp

Ped.

(1+2+1) 3

7:4

mp

16

S11

Pre-prep sound layer

Fast texture impro using keys and change in air flow. Try to maintain notated pitch.

24

E♭ Cl.

(in bass cl.)

Change to E-flat

mp

p

MIC!

Pno.

sfz

mf

*

Tubular bells

Tuned gongs

Computer

17

T7

Transpose cl octave up. Auto stop after 15 seconds

Fast texture impro using keys and change in air flow. Try to maintain notated pitch.

29

E♭ Cl.

B. Cl.

Pno.

Cymbals

Rototom

Tubular bells

Tuned gongs

Computer

18 Transpose cl. down two octaves, auto stop after 6 seconds
T8

19 Pre-prep sound layer
S12

p

ff

ff

mp

hit (cup)

hit (edge)

ff

34

B. Cl.

Pno.

Tubular bells

Tuned gongs

Computer

20 Capture piano and granulate
T9

f

molto

f

mf

p

f

mp

38

B. Cl. *MIC!* *tr* *MIC!* *tr* *MIC!*

Pno. *p* *mf*

Cymbals

Rototom

Tubular bells *mp*

Computer 21 Catpure clarinet and granulate, auto stop after 15 seconds T10 22 S13 Pre-prep sound layer

42 $\text{♩} = 75$ $\text{♩} = 60$ $\text{♩} = 50$

B. Cl. *mf* *p* *molto* *f* *mf* *f* *KEY*

Pno. *f* *f* *on pedal thump* *off* *mp* *Ped.*

Cymbals

Rototom

Tubular bells $\text{♩} = 75$ $\text{♩} = 60$ $\text{♩} = 50$

Tuned gongs *mp*

Computer

45

B. Cl. *p* *mf* *f* *tr*

Pno. *p* *f* *mp* (B/C) *f* * *II* * *II*

Tubular bells

Tuned gongs dampen

Computer 23 [S14] Pre-prep sound layer [T10b] Capture piano and granulate

♩ = 75

50 [MF] *mf* *molto* *tr* *tr* MIC!

Pno. *mf* (F) 3 5:3

Cymbals dampen

Tuned gongs *mf* 3 Tubular Bell

Computer

♩ = 60

53

B. Cl.

tr

sfz *p*

mp *f* *mp* *f* *molto* *f*

mf

Pno.

8va *3*

8vb *3*

mp *8vb*

Computer

24 S15 Pre-prep sound layer

56

B. Cl.

sfz *f*

OB

sfz *3*

Pno.

f *5* *3*

Computer

The musical score for 'The Day After Tomorrow' is presented in a four-staff format. The top staff is for the Eb Clarinet (Eb Cl.), the second for Piano (Pno.), the third for Glockenspiel (Glock), and the bottom for Computer. The score begins with a measure number of 62. The Eb Cl. part features a melodic line with a crescendo leading to a fortissimo (f) section. The Pno. part provides harmonic support with a melodic line in the right hand and a bass line in the left hand. The Glock part consists of a rhythmic pattern of eighth and sixteenth notes, marked with 'hard beaters' and 'mp'. The Computer part includes a percussion track with a specific instruction: 'Percussion transpose two octaves down, plus high insert, auto stop after 24 seconds'. The score is marked with various dynamics including mp, f, and crescendo markings.

64

E♭ Cl.

Pno.

Glock

Computer

f

Red.

8/153

67

E♭ Cl.

Pno.

Cymbals

Tuned gongs

Glock

Computer

mf

light and playful apart from accents

p

mp

pp

On rim, but not too loud or noisy

mp

dampen

yarn mallet for gongs

mp

This musical score is for the song "The Sound of Silence" by Simon & Garfunkel. It features five staves: Eb Cl. (E-flat Clarinet), Pno. (Piano), Cymbals, Glock (Glockenspiel), and Computer. The Eb Cl. part starts at measure 71 and includes dynamics like *mp*, *mf*, and *p*. The Pno. part includes a *mf* dynamic and a *Ped.* (pedal) marking. The Glock part includes a *mf* dynamic. The Computer part is marked with a double bar line. The score includes various musical notations such as triplets, slurs, and accidentals.

This musical score is for the track "The Day After Tomorrow" from the album "The Day After Tomorrow". The score is written for a six-piece ensemble: Eb Cl., Pno., Cymbals, Tuned gongs, Glock, and Computer. The music is in 4/4 time and features a variety of musical elements, including complex rhythms, dynamic markings, and a large watermark in the center.

The score is divided into six staves, each representing a different instrument or sound source:

- Eb Cl.:** The Eb Clarinet part, starting at measure 74, features a complex melody with many slurs and ties. It includes dynamic markings of *mp*, *p*, and *mf*.
- Pno.:** The Piano part, starting at measure 74, features a complex melody with many slurs and ties. It includes dynamic markings of *mp* and *mf*.
- Cymbals:** The Cymbals part, starting at measure 74, features a complex melody with many slurs and ties. It includes dynamic markings of *mf* and *mp*.
- Tuned gongs:** The Tuned gongs part, starting at measure 74, features a complex melody with many slurs and ties. It includes dynamic markings of *mp* and *mf*.
- Glock:** The Glockenspiel part, starting at measure 74, features a complex melody with many slurs and ties. It includes dynamic markings of *mp* and *mf*.
- Computer:** The Computer part, starting at measure 74, features a complex melody with many slurs and ties. It includes dynamic markings of *mp* and *mf*.

The score is marked with a large "N.B. notel" watermark in the center, which reads "This music is copyrighted by N.B. notel".

78

E♭ Cl.

Pno.

Cymbals

Tuned gongs

Glock

Computer

82

E♭ Cl.

Pno.

WOODBLOCK

Tubular bells

Glock

Computer

83

The musical score for 'The Great Wall of China' by John Williams is presented in a multi-staff format. The instruments and their parts are as follows:

- E♭ Cl.**: Solo part starting at measure 86, featuring complex rhythmic patterns and trills.
- Pno.**: Piano accompaniment, including a bass line and chords, with dynamic markings like *mf* and *f*.
- Woodblock**: Percussion part, with a note indicating 'Two sticks the same (replace glock stick, choose sticks better for wood rather than metal)'.
- Tubular bells**: Percussion part, featuring a melodic line with a 3:2 ratio indicated.
- Tuned gongs**: Percussion part, with a note indicating '(yarn mallet in one hand)'.
- Glock**: Percussion part, featuring a melodic line with a 3:2 ratio indicated.
- Computer**: Electronic part, represented by a simple rhythmic line.

The score includes various musical notations such as notes, rests, trills, and dynamic markings, all set against a background of a large, stylized image of the Great Wall of China.

The musical score for 'The Great Wall' by John Williams is presented in a multi-staff format. The instruments and their parts are as follows:

- E♭ Cl. (Eb Clarinet):** The top staff, starting at measure 90. It features a triplet of eighth notes in the first measure, followed by a series of eighth and sixteenth notes with dynamic markings *p*, *f*, and *mp*.
- Pno. (Piano):** The second and third staves. The right hand plays a melodic line with a 7:4 ratio, while the left hand provides a bass line. Dynamics include *p*, *f*, and *mp*.
- Woodblock:** The fourth staff, featuring a rhythmic pattern with a 5:4 ratio. Dynamics include *mp* and *mf*.
- Tubular bells:** The fifth staff, playing a melodic line with a 5:4 ratio. Dynamics include *mp*.
- Computer:** The bottom staff, indicated by a double bar line and the text '(lower chimes for access from woodblocks)'. It represents a digital accompaniment.

The score is in 3/4 time and includes various dynamic markings (*p*, *f*, *mp*, *mf*) and articulation marks. A large watermark 'no This music' is visible across the top of the image.

94

E♭ Cl.

Pno.

Woodblock

Rototom

Computer

mf *mp* *mf* *f*

molto stacc

27

S17

Pre-prep sound layer

98

E♭ Cl.

Pno.

Cymbals

Woodblock

Computer

* II

Ped.
on each harmonic note and release in rests

Tambourine!

Cymbals

104

B. Cl. *mf* *mf*

Pno. nat. *mf*

Cymbals cymbal hit and swish cymbal swish

Tuned gongs *mf*

Rototom

Computer 28 WAVE processing (capture and granulation, with spatial, filter and modulation processing derived from the properagation of interffering wave fronts triggered by the timbre, pitch and volume of each instrumental attack. See MaxMSP patch)

==

110

B. Cl.

Pno.

Cymbals cymbal swish

Tuned gongs

Rototom

Computer

116

B. Cl.

Pno.

Cymbals

Tubular bells

Tuned gongs

Computer

cymbal swish

cymbal hit- centre/dry

Ped.

121

B. Cl.

Pno.

Cymbals

Tuned gongs

Rototom

Computer

mf rim

29

S18

Pre-prep sound layer

Ped.

126

B. Cl.

Pno.

Cymbals

Tuned gongs

Computer

OB

sfz -p

Dull

Bright

f

Ped.

cymbal swish

tambourine

==

131

B. Cl.

Pno.

Rototom

Computer

AS FAST AS POSSIBLE
dont need to be together with piano.
But start unit together

AS FAST AS POSSIBLE
dont need to be together with clarinet.
But start unit together

f

sfz

AS FAST AS POSSIBLE

133

B. Cl.

Pno.

Rototom

Computer

30

S19 Pre-prep sound layer

sfz

ff

Red.

** I*

139

E♭ Cl.

Pno.

Cymbals

Computer

31

volume change

T12

32

S20 Pre-prep sound layer

T12b

Envelope follower on clarinet used as volume mod. of opening extract

Multiphonics should 'emerge' from the first lower note. Take the lowest note as the root note and find interesting and gentle multiphonics instead of top note.

Bass cl.

p

f

Red.

arco

f

p

arco

AS FAST AS POSSIBLE

143

B. Cl. *f* **MF** **MIC!** *mf* **MIC!** *mp* only on tremollo notes improvise air sounds with non-rythmic small articulations

Pno. *f* *Red.* *mf*

Cymbals *hit* *f* *arco* *p*

Computer *yarn mallets* *dampened*

33 S21
34 Pre-prep sound layer
T13 Fade out for T12

146 (MIC!)

B. Cl.

Pno. *mp* *

Cymbals *mp*

Rototom

Computer

Pre-prep sound layer continues for approx. 30 seconds, then fade manually at mixer