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Finnish Music Information Centre

21 251

Maija Hynninen

winnowing

for piano and live electronics

2010

Suomalaisen musiikin tiedotuskeskus Fimic
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Finnish Music Information Centre

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Helsinki, 2010

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winnowing

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rev. 11.11.2010

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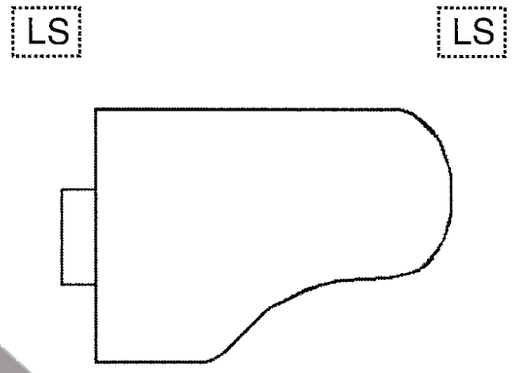
Instructions

needed equipment for the pianist:
- a medium soft guitar plectrum or f.ex. a plastic card with similar flexibility
- a strong and non flexible piece of plastic like a triangle ruler

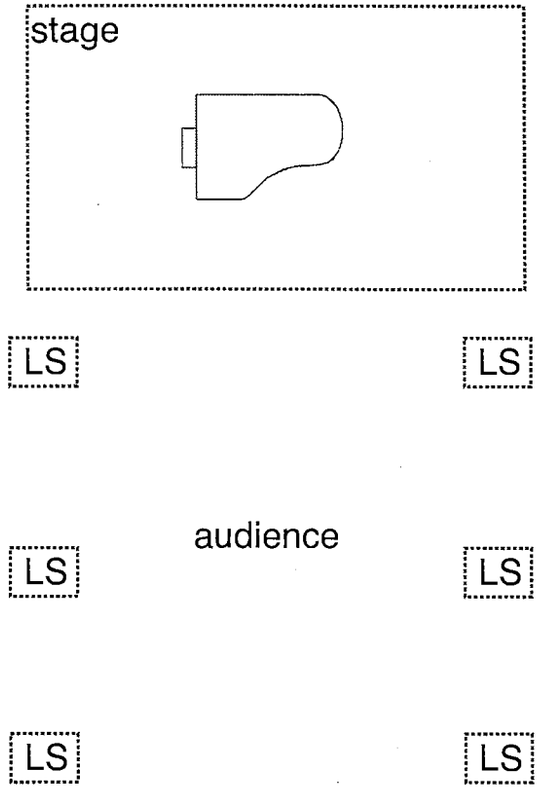
for the electronics:
- a mac computer with approx. 3,00 GHz prosessor speed
  - Max/MSP 5
- soundcard and mixer for atleast nine outputs and four inputs
- eight loudspeakers (atleast)
- two mics atleast inside the piano, preferably four. The idea is to try to separate the frequency range as well as possible.
- get in touch with the composer through Finnish Music Information Centre (info@fimic.fi) to get the patch.

two loudspeaker (LS) spaces:

space I



space II



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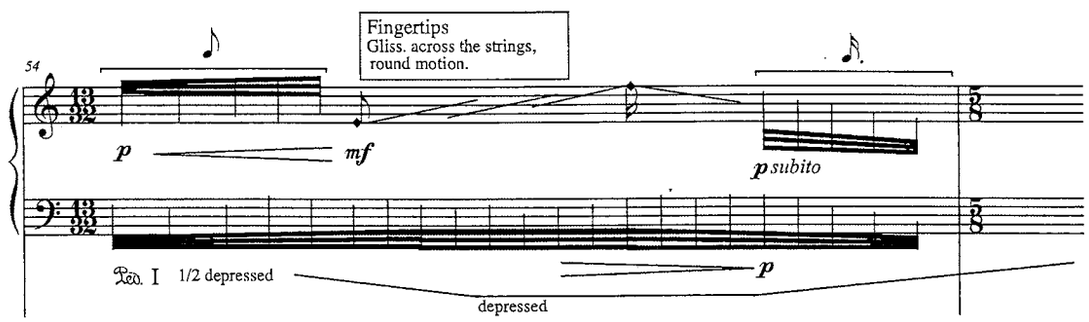
Explanation of signs

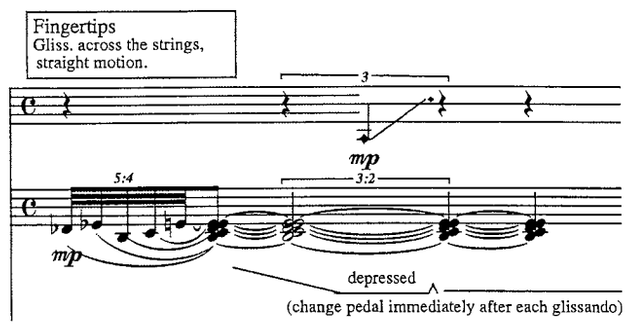
pedal

two pedals are in use: pedal 1 = the right pedal,
SOS = sostenuto pedal (middle)
the pedal 1 can be up, 1/2 depressed or depressed completely.



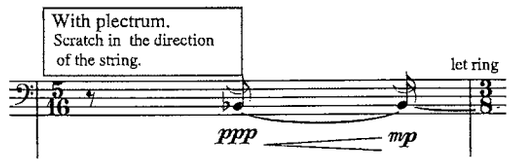
This example shows that the pedal should be first 1/2 depressed,
then pressed gradually more until fully depressed and released again slowly.

Change pedal immediately after each glissando. The idea is to first get all the strings (within the marked range) ringing (by making the glissando) and then with a fast pedal change dampen the rest of the strings so that only the tones held down by the left hand are left ringing softly.



playing techniques inside the piano

Fingertips, tapping on the strings: to get delicate rattling sounds with pitch.
Fingertips, gliss. across the strings round motion: make multiple glissandos moving your hand in round motion moving in register as it shows in the music.
Fingertips, gliss. across the strings straigth motion: only one glissando across the strings.
Fingertips, pluck strings: pluck the strings like playing harp.
With plectrum, scratch in the direction of the string: movement away from you in the direction of the string. More horizontal movement than pressure.



Harmonics, fundamental in left hand: use the string marked in the left hand staff (fundamental) and find the harmonic on that string with your right hand. Don't press right hand too much and lift it off the string quite soon after the attack in the left hand.

Commissioned by Jaana Kärkkäinen with the support of the Society of Finnish Composers Sibelius foundation. Dedicated to Jaana Kärkkäinen.

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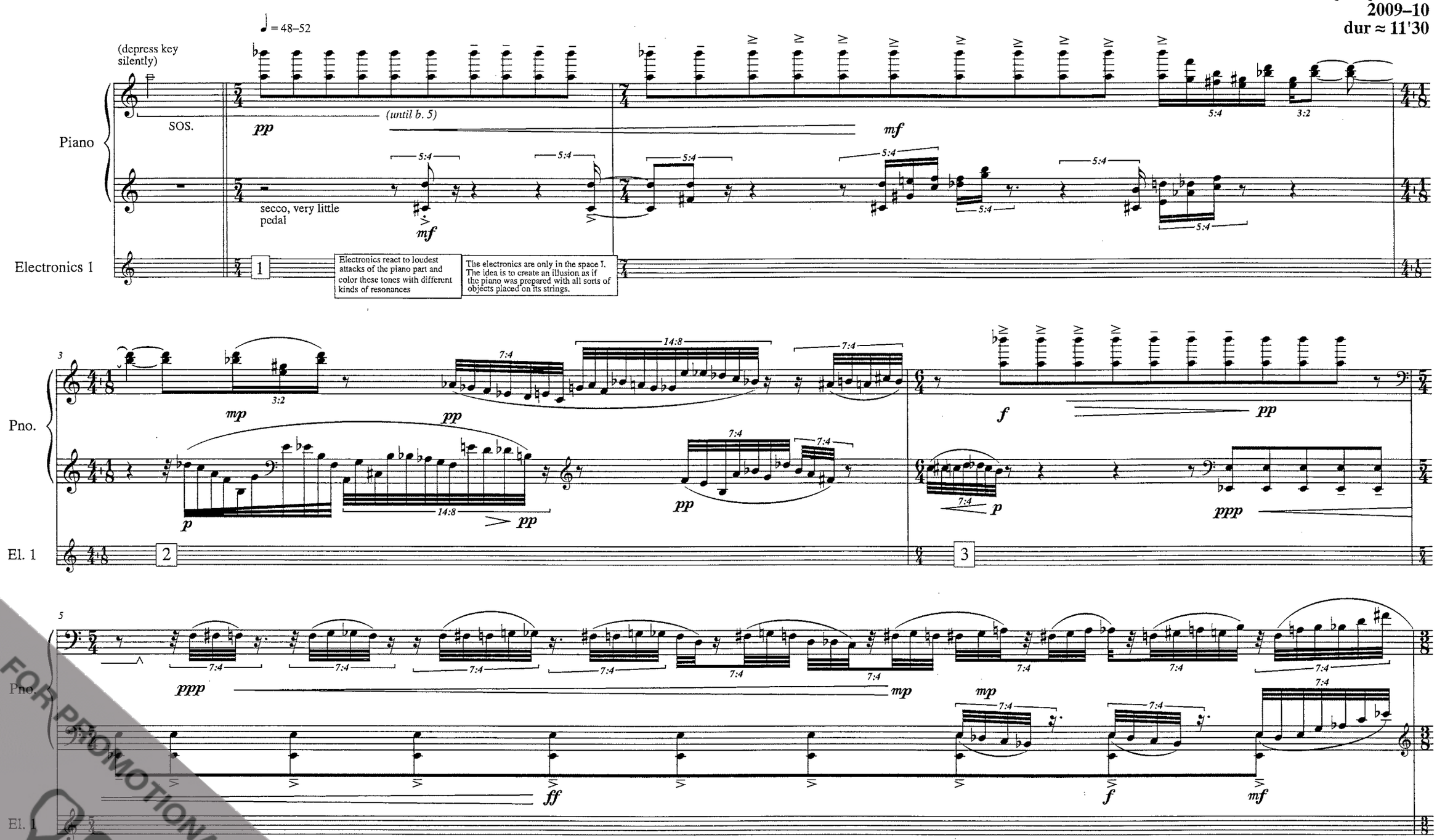
winnowing

Maija Hynninen
2009–10
dur ≈ 11'30



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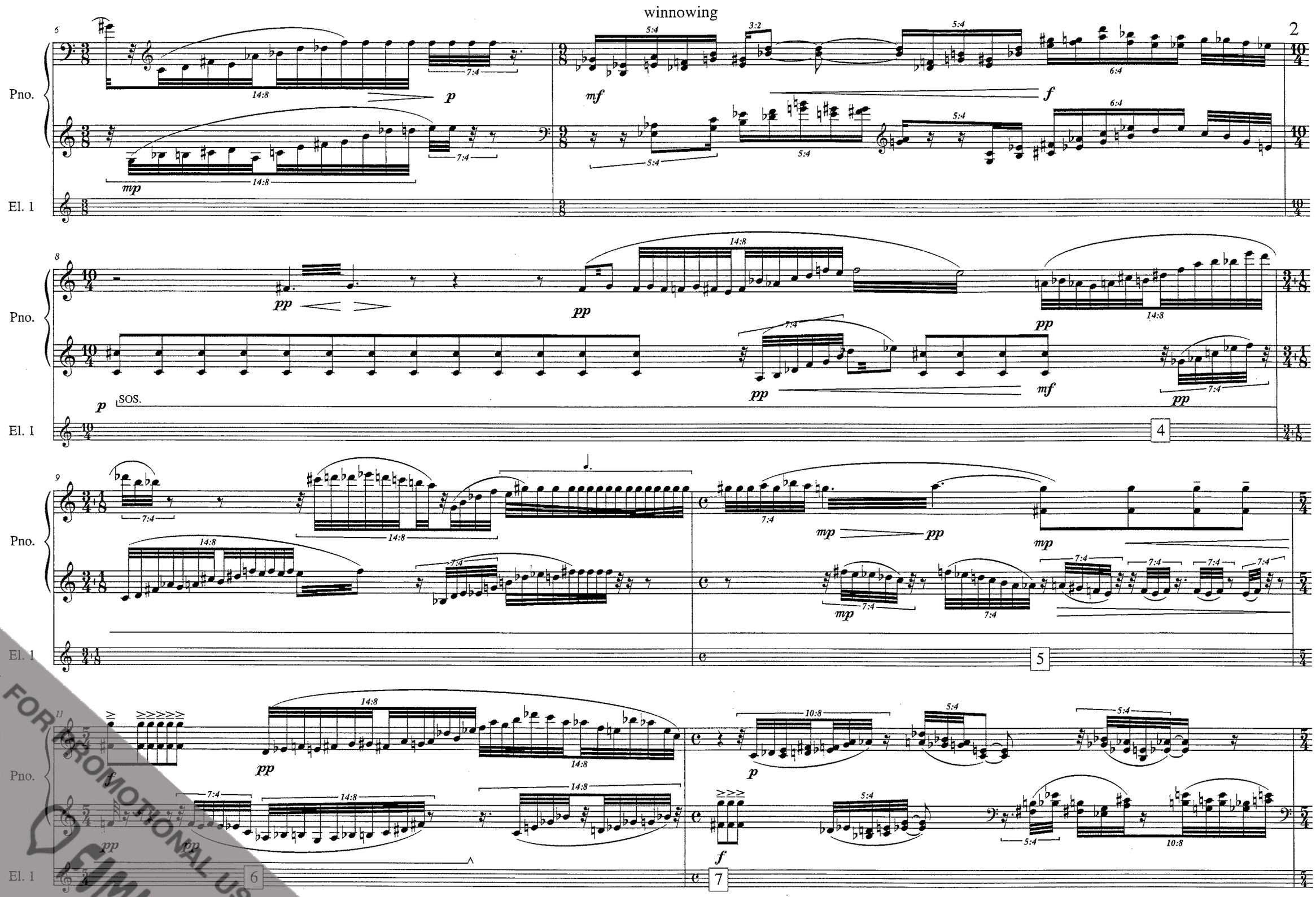

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winnowing

3

13

Pno.

El. 1

f mp mf mp mf

7:4 7:4 7:4 7:4 10:8 5:4 5:4 3:2

15

Pno.

El. 1

f mf pp ff

7:4 7:4 7:4 14:8 14:8 7:4

getting slower liberamente towards the 7:4

16

Pno.

El. 1

mp f pp mf

7:4 14:8 7:4

getting slower liberamente towards the 7:4

17

Pno.

El. 1

p f mp

5:4 14:8 14:8 14:8 7:4 5:4 14:8 7:4

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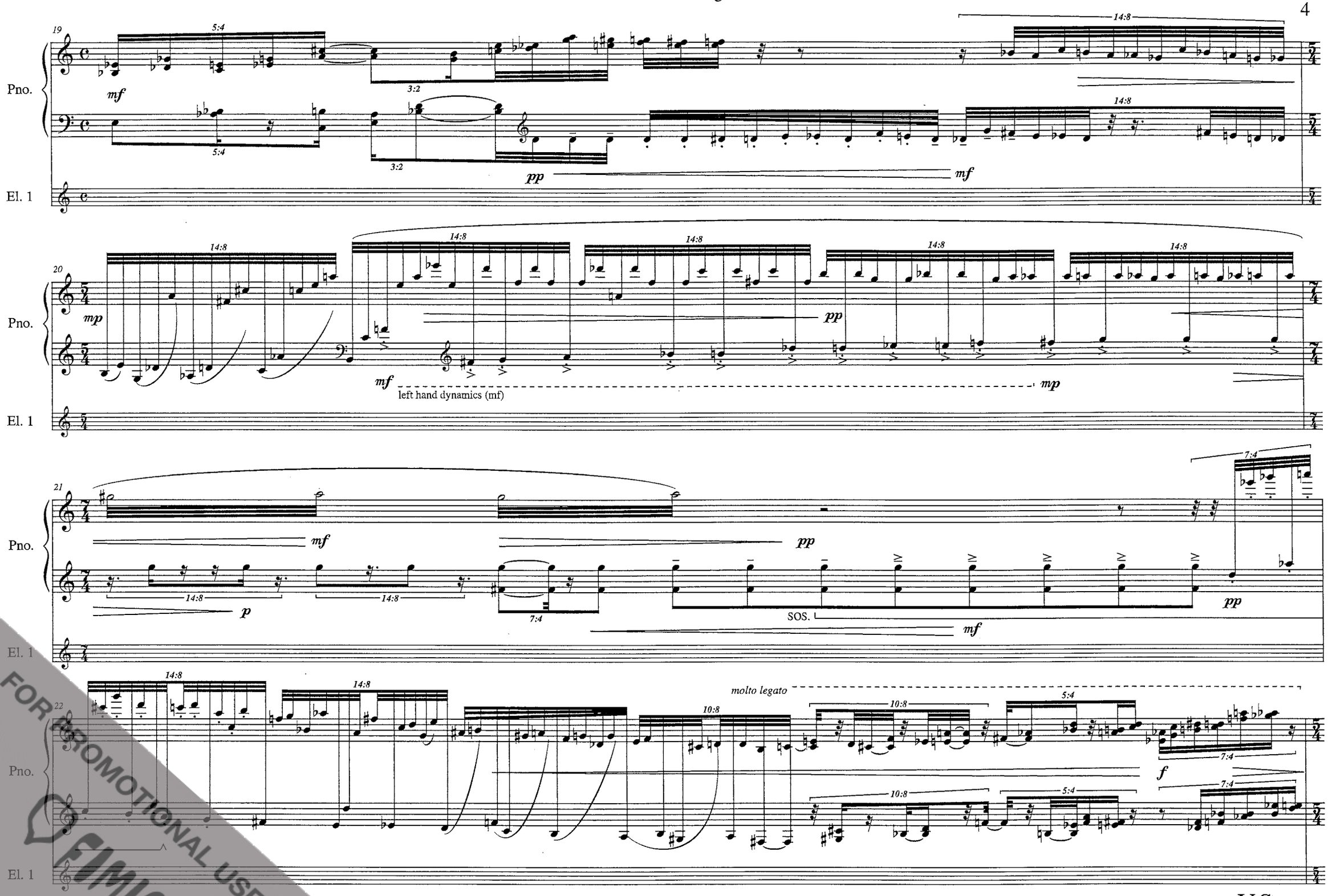

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V.S.

5

Pno.

El. 1

Pno.

El. 1

Pno.

El. 1

Electronics stop reacting to the piano sounds.

pp right hand dynamics

Pno.

El. 1

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33

Pno.

mf

mf

p

mp

mp

38

Pno.

mf

p

pp

mp

individual dynamics in both hands

42

Pno.

mf

pp

8va

mp

pp

mp

mf

El. 1

9

mf

p

The piano attacks create soft resonances in the electronics.

Rattling noisy sounds

mutual dynamics

46

Pno.

p

pp

mp

pp

El. 1

10

Small delay.

11

p

delay increases poco a poco

The electronics start moving slowly into the space II.

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winnowing

50

Pno.

El. 1

Fingertips.
Tapping on the strings.

pp *mp* *ppp*

p *mf* *p*

Ped. I 1/2 depressed

54

Fingertips
Gliss. across the strings,
round motion.

With plectrum.
Scratch in the direction
of the string.

Movement increases rapidly with the crescendo. Don't press the string, but use more horizontal movement.

let ring

p *mf* *p subito*

ppp *mp*

Ped. I 1/2 depressed depressed

p *mf* *p*

Ped. I 1/2 depressed

more delay that moves in the space II.

12

Resonating harmonics.

13

Fingertips
Gliss. across the strings,
straight motion.

58

ppp *mf* *pp*

mf *p*

ppp

mp

5:4 3:2

Ped. I depressed 1/2 depressed

depressed

depressed

(change pedal immediately after each glissando)

14

62

f.t.

pp

depress keys silently

mf

Harmonics
Fundamental is in the left hand.

(sounding)

press the string very lightly, release string after the attack

hold the key down as long as marked

mp

SOS.

15

Electronics are in the space II.
Gentle moving surfaces of sound

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65

Pno.

El. 1

as high as wanted,
no specific pitch

ppp

Ped. I

mf

68

Pno.

hold the key down as long as marked

El. 1

fft freeze ja glissando toiseen jo bufferissa olevaan

16

Fft freeze bufferiin avautuminen

71

Pno.

Fingertips.
Pluck strings.

5:3

mf

Press silently and hold down.
No pedal.

Fingertips
Gliss. across the strings,
straight motion.

SOS.

use both hands

mp

Ped. I

Fingertips.
Pluck strings.

3:2

f

Ped. I

3:2

mp

Fingertips.
Tapping on the strings.

mp f p

El. 1

17

ppp

bending slowly, vibrating in between

18

19

bell-like sounds

mf mp

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9

74

Pno.

mf p mp

3:2

mp

SOS.

20

21

chord changes: these tones start to sound

chord changes: these tones start to sound

El. 1

chord changes: these tones start to sound

77

Pno.

depress keys silently

SOS

Fingertips
Gliss. across the strings,
straight motion.

use both hands

mp

Ped. I

Bell like sounds that turn off these pitches. The sounds have decay.

Bell like sounds that turn off these pitches. The sounds have decay.

22

glissando

El. 1

ppp

79

Pno.

5:4

p mp

f.t.

3:2

depress silently

23

24

25

Taken from the piano sound with a FFT-bandpass filter

glissando

El. 2

thinning out chord

decay

ppp

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82

Pno.

Ped. I

depress silently

con ped.

3:2

pp

3:2

3:2

El. 1

glissando

Thinning out chord. No glissando.

pp

El. 2

Loudspeaker under the piano.
Harmonies in soft dynamics
to make the piano strings resonate.

Sound is played in the space I only.

85

Pno.

3:2

mp

pp

5:4

10:8

14:8

14:8

p

3:2

mp

5:4

10:8

14:8

mp

pp

Pno.

26

El. 1

Ks. 6min_map

mf

El. 2

87

Pno.

use both hands

f.t.

3:2

mp

3:2

mp

Ped. I

depress silently

mf

5:4

Ped. I

27

(this harmony sounds)

28

(a virtual SOS. pedal in the electronics)

29

Glissando 6min20"

El. 1

pp

glissando

mp

El. 2

ppp

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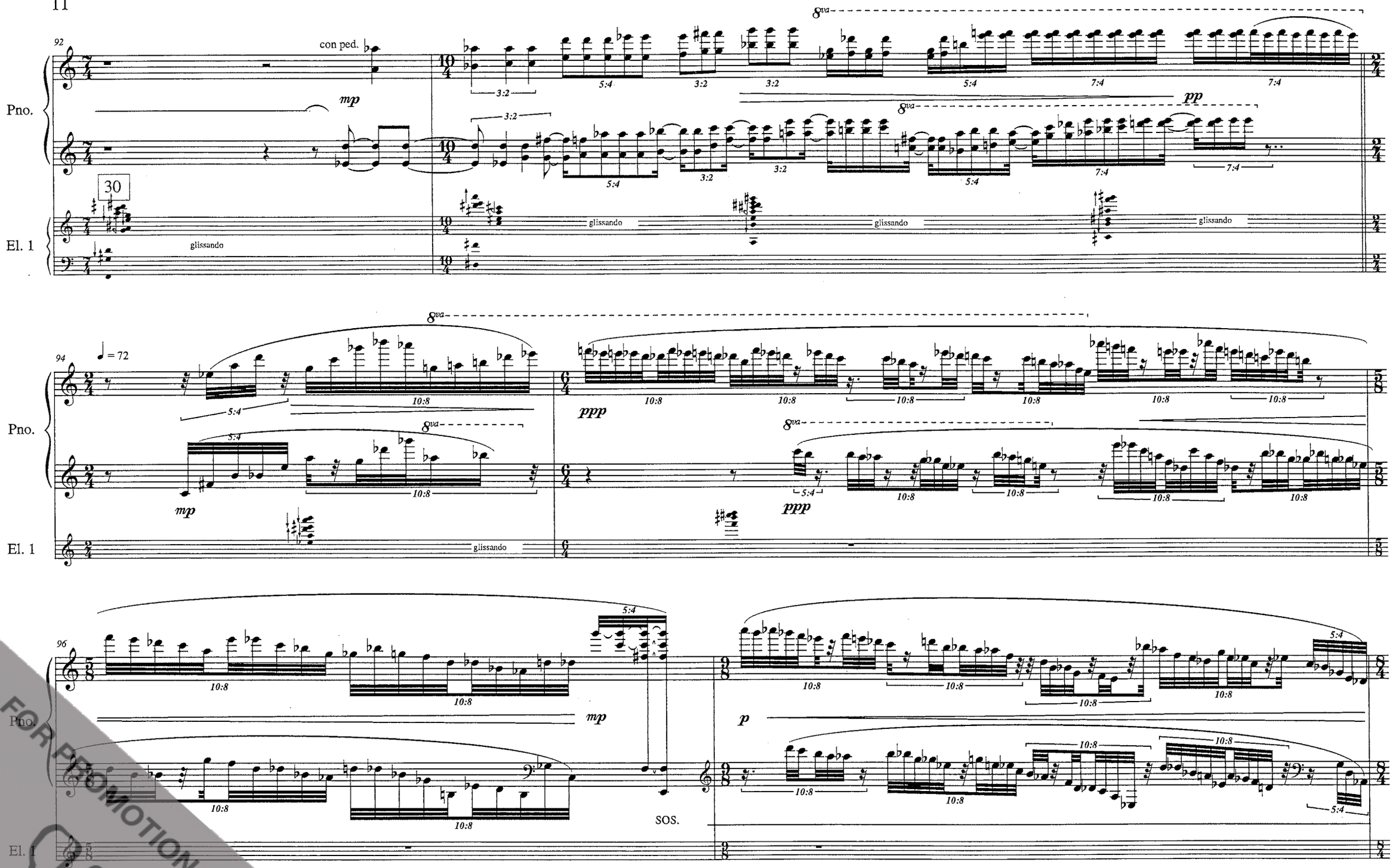

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98

8va

Pno.

ff mf f ppp

ff

the tones cagth by SOS pedal.
Pay attention to. the dynamics.

Pno.

31

El. 1

pppp

mf mp p

mf

100

Pno.

ppp ff

El. 1

dynamics change gradually to the target dynamic of each pitch.

jonkinlainen häivytys

mf ff pp

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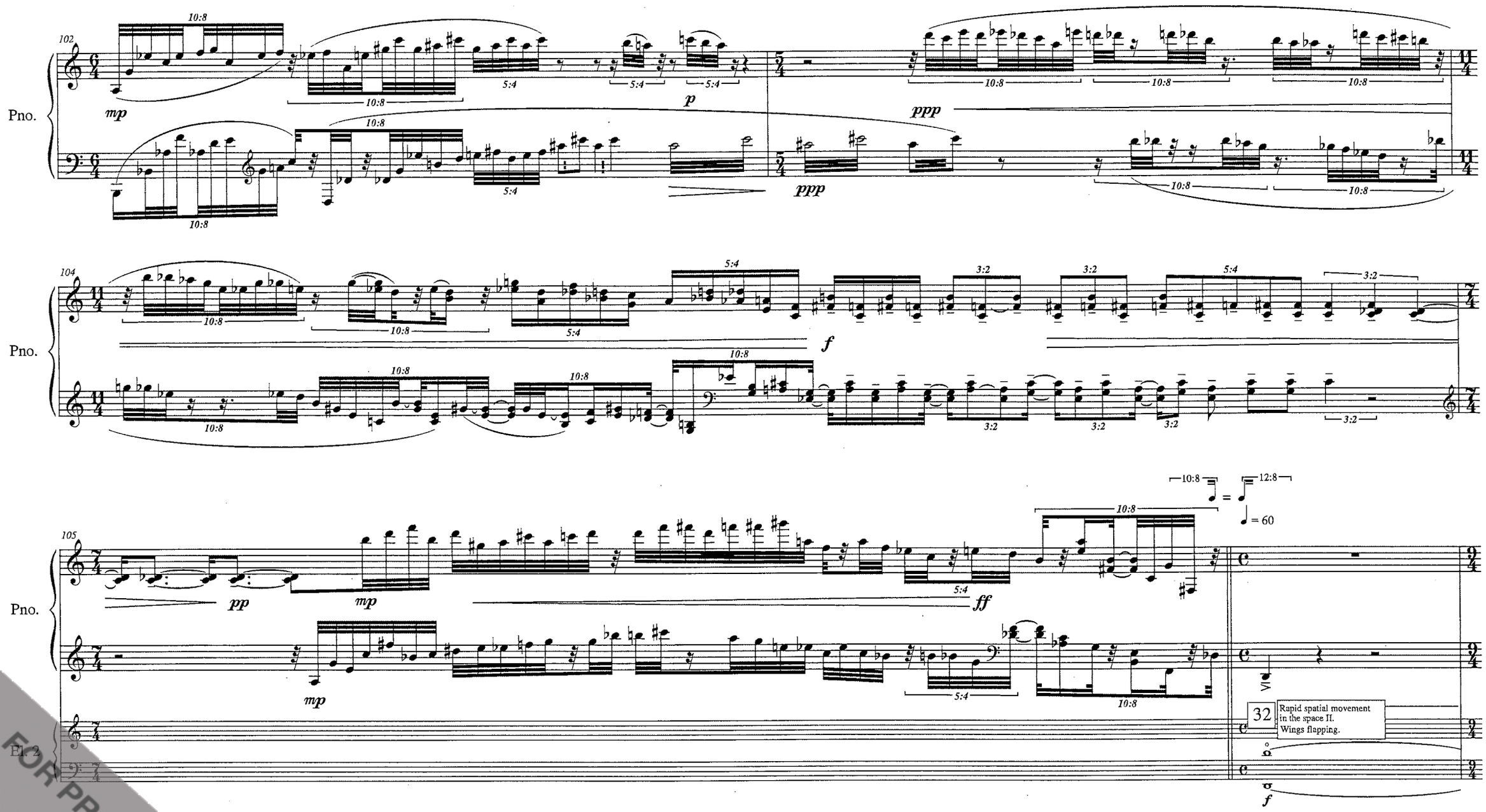

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107

Pno.

El. 2

108

Pno.

109

Pno.

El. 1

33

Rapid spatial movement
in the space II.
Wings flapping.

34

glissando

V.S.

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111

Pno.

10:8 5:4

ppp

Harmonics
Fundamental is in the left hand.

press the string very lightly, release string after the attack

10:8 5:4

hold the key down as long as marked, no pedal

mp

El. 1

Rapid spatial movement
in the space II.
Wings flapping.

Rapid spatial movement
in the space II.
Wings flapping.

glissando

114

TAPE SOLO

Pno.

Tape, multichannel

El. 1

Rapid spatial movement
in the space II.
Wings flapping.

Rapid spatial movement
in the space II.
Wings flapping.

on the first beat of each bar (b. 115–123)

118

Pno.

El. 1

LIVE generalized cross filter synthesis.
The rhythms from the tape and resonating
harmonies from inside the piano.

mp

35

init spat

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124

Pno.

con ped.

mp

El. 1

36

LIVE different delay effects: analyzing the overtones of the sound, coloring them with different effects and playing them back with delay.

Rapid spatial movement in the space II. Wings flapping.

37

38

127

With plectrum. Scratch in the direction of the string.

Movement increases rapidly with the crescendo. Don't press the string, but use more horizontal movement.

3:2

pp *mp*

pp *mp*

pp *mf*

Press silently and hold down. No pedal.

Pno.

El. 1

39

40

LIVE different FFT effects: bin delay, phase modulation, convolution.

The sounds move rapidly in space II.

41

131

3:2

p *f*

Slower movement.

3:2

p *f*

Movement is getting more heavy than fast.

use a strong piece of plastic

mp *f*

8vb

Press to get an ugly scratching sound.

p *mf* *p*

Pno.

8vb

El. 1

42

Vantaa – Stuttgart – Vantaa 5.3.2010

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