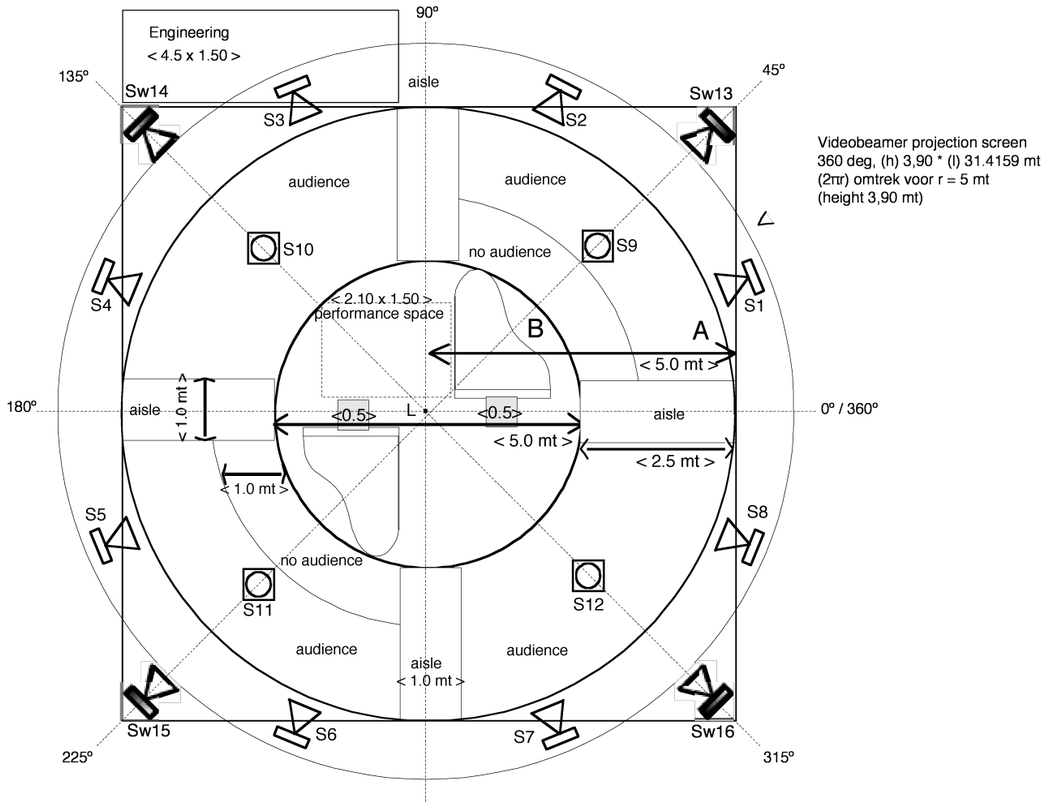
Cyclotron

An electronic music theatre production for 2 pianists 3D surround sound, 360º surround video projection and 'live' computers

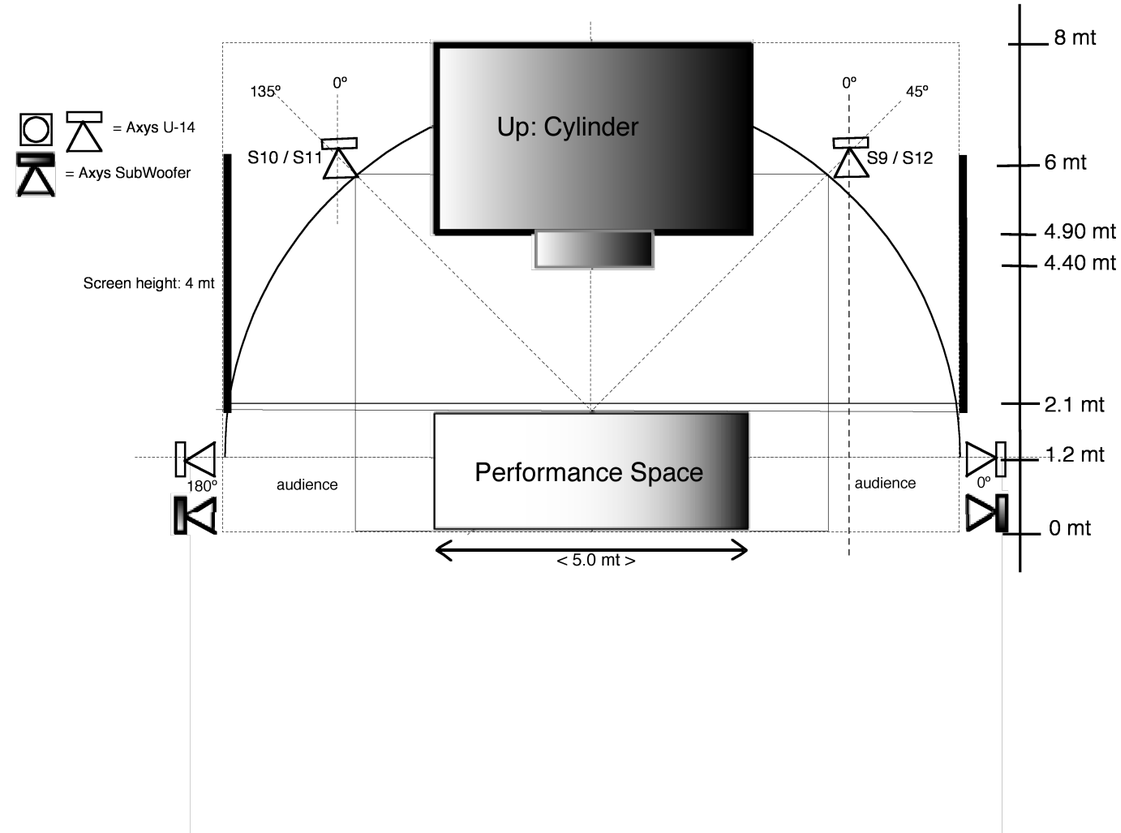
Music: Michèl Koenders - 2006 total play time: ca. 60 mins. Version: 3:58:50 PM Tuesday, April 3, 2007 [Filename]

All additional technical drawings, live (Max/MSP/C) software: Michèl Koenders © 2006 - michelk@wxs.nl

Commisioned by: Het Fonds voor de Scheppende Toonkunst.



Videobeamer projection screen
360 deg, (h) 3,90 * (l) 31.4159 mt
(2πr) omtrek voor r = 5 mt
(height 3,90 mt)

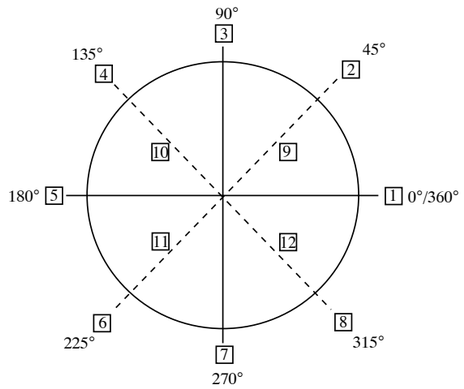


Cyclotron, Part I - Introduction

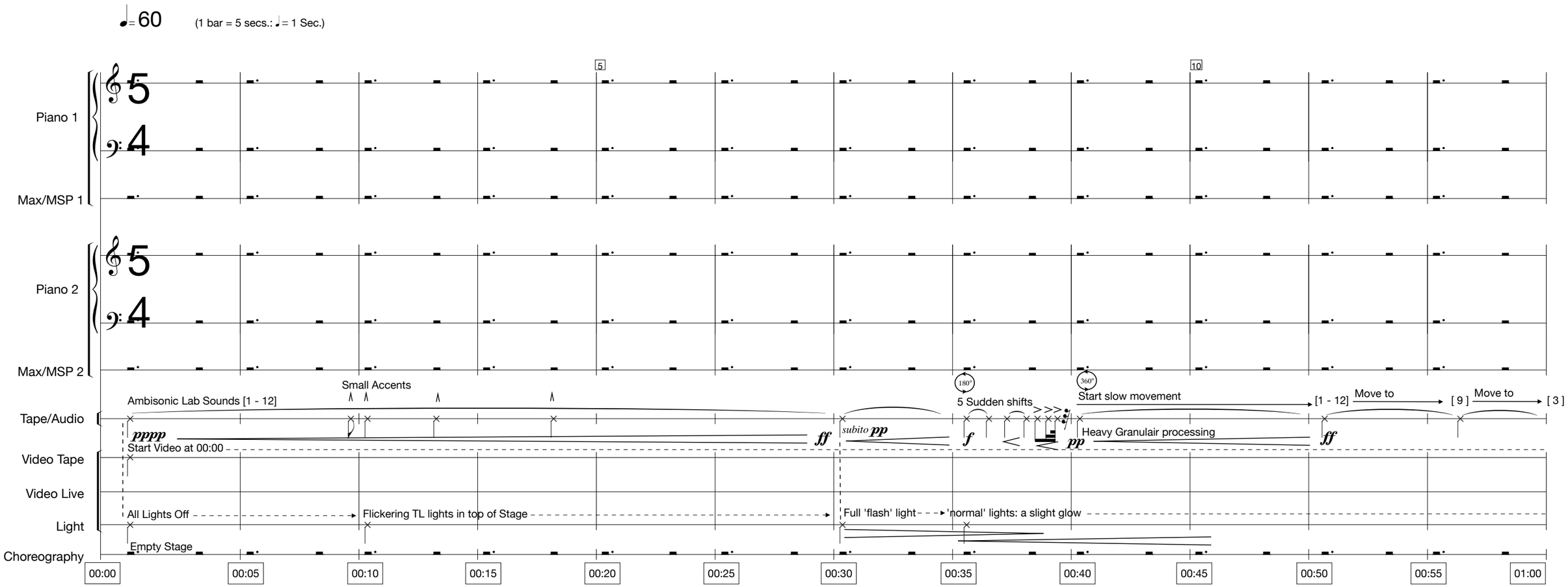
Michèl Koenders

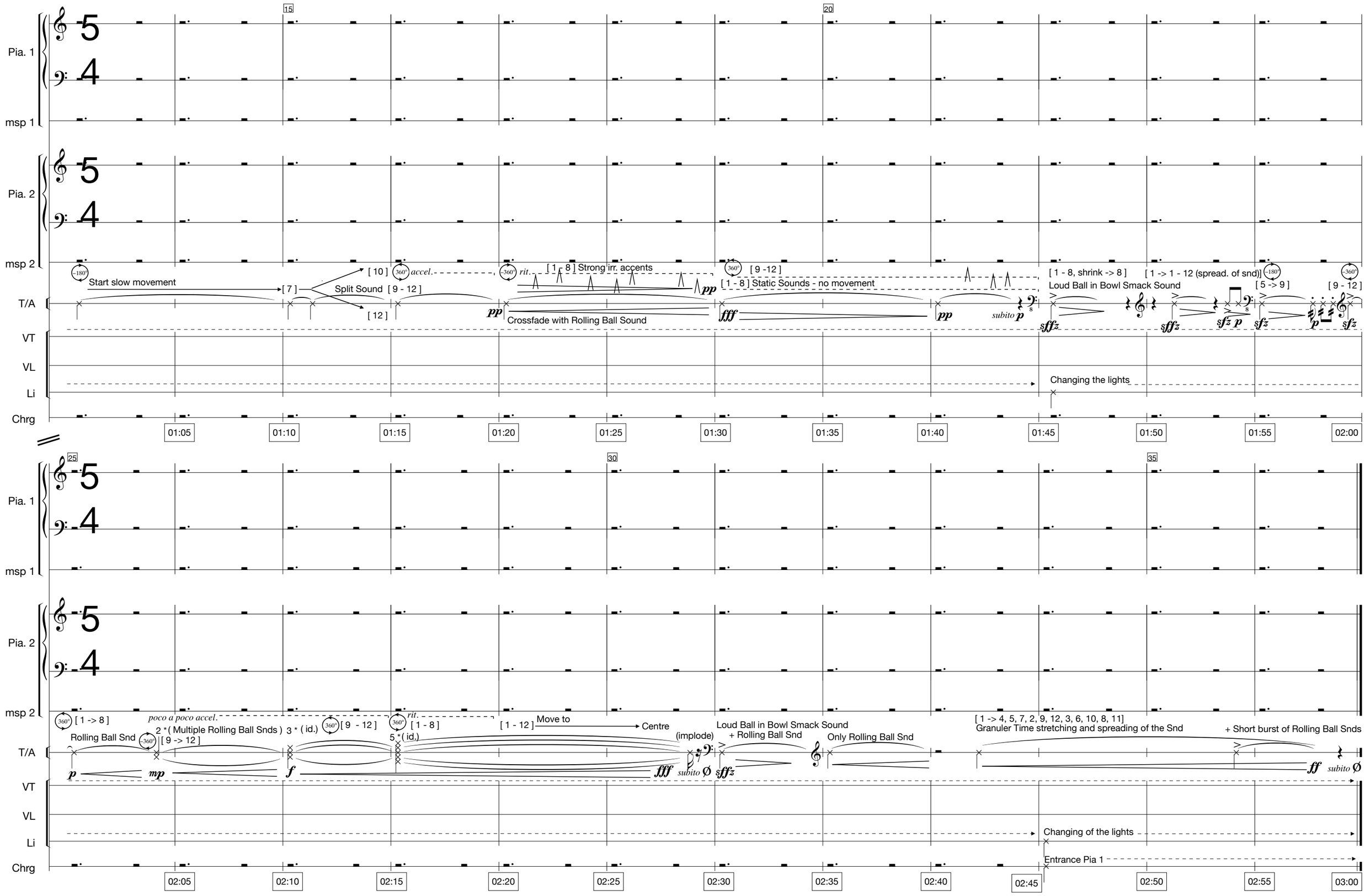
3:58:51 PM Tuesday, April 3, 2007 [Filename]

12 channel tape solo



Cyclotron Speaker Setting

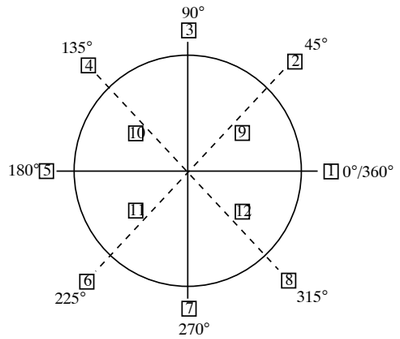



Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
Start slow movement
[7]
[10]
accel.
Split Sound [9 - 12]
[12]
rit.
[1 - 8] Strong irr. accents
[9 -12]
[1 - 8] Static Sounds - no movement
Crossfade with Rolling Ball Sound
subito p
[1 - 8, shrink -> 8]
Loud Ball in Bowl Smack Sound
[1 -> 1 - 12 (spread. of snd)]
[5 -> 9]
[9 - 12]
Changing the lights
[1 -> 8]
Rolling Ball Snd
poco a poco accel.
2 * (Multiple Rolling Ball Snds)
[9 -> 12]
3 * (id.)
[9 - 12]
[1 - 8]
5 * (id.)
[1 - 12]
Move to
Centre
(implode)
Loud Ball in Bowl Smack Sound
+ Rolling Ball Snd
Only Rolling Ball Snd
[1 -> 4, 5, 7, 2, 9, 12, 3, 6, 10, 8, 11]
Granuler Time stretching and spreading of the Snd
+ Short burst of Rolling Ball Snds
subito Ø
Changing of the lights
Entrance Pia 1
01:05
01:10
01:15
01:20
01:25
01:30
01:35
01:40
01:45
01:50
01:55
02:00
02:05
02:10
02:15
02:20
02:25
02:30
02:35
02:40
02:45
02:50
02:55
03:00

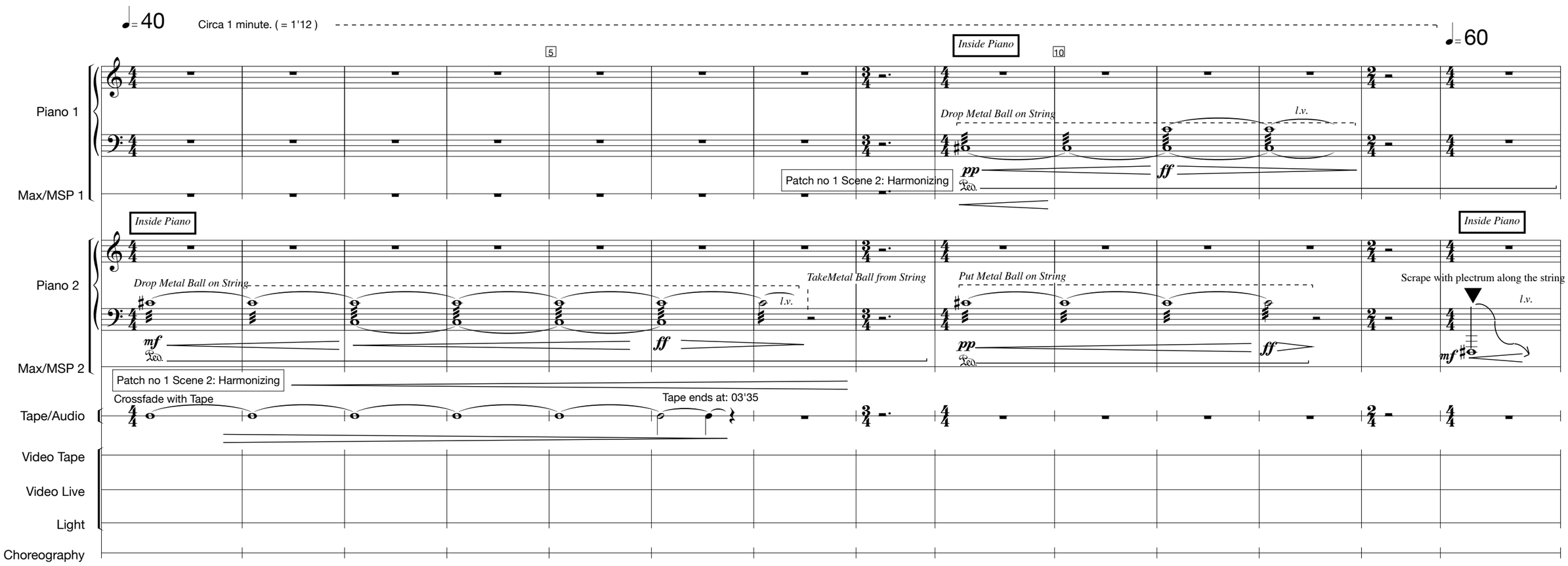
Cyclotron, Part II - The Game: Bouncing Ball II

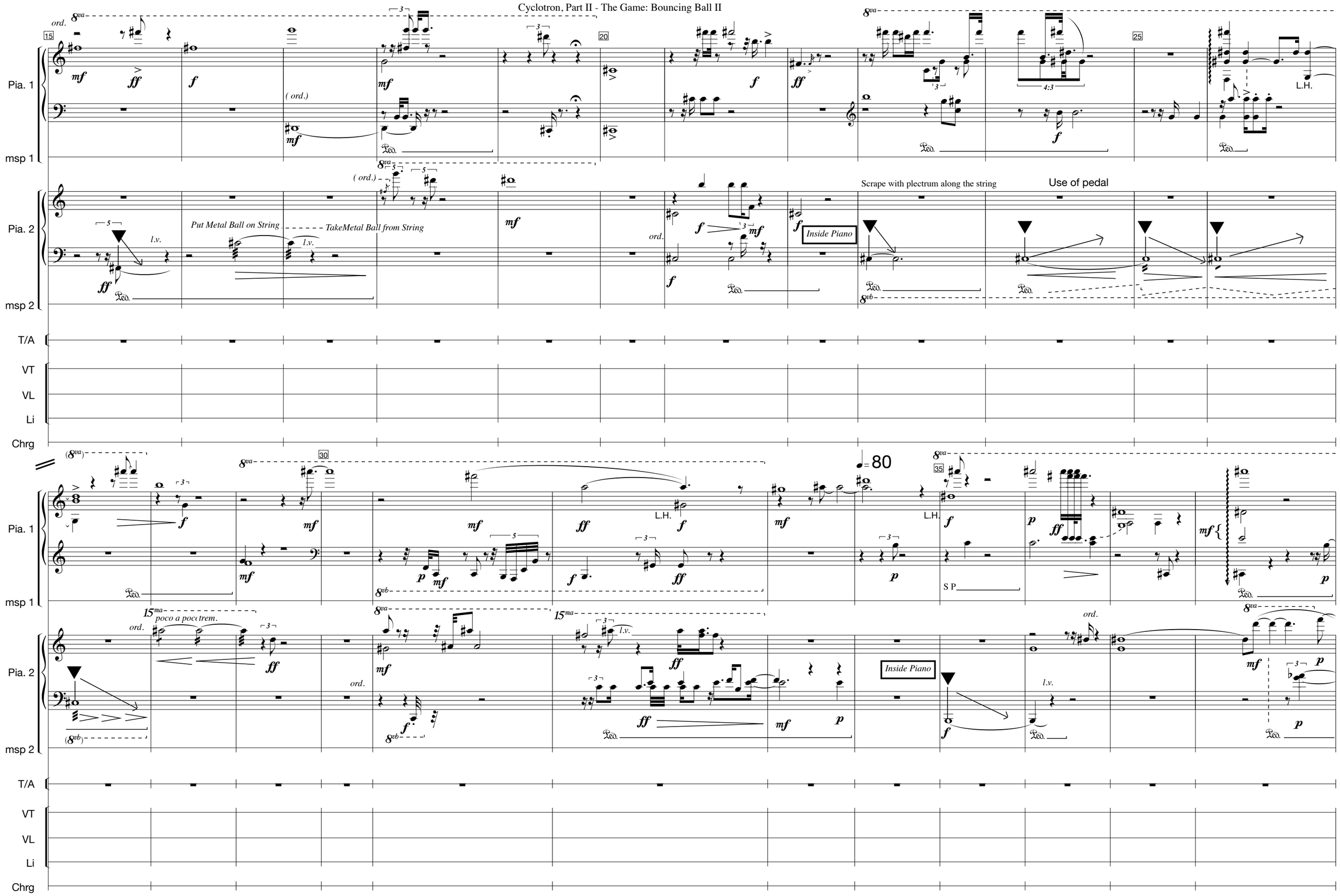
Michèl Koenders

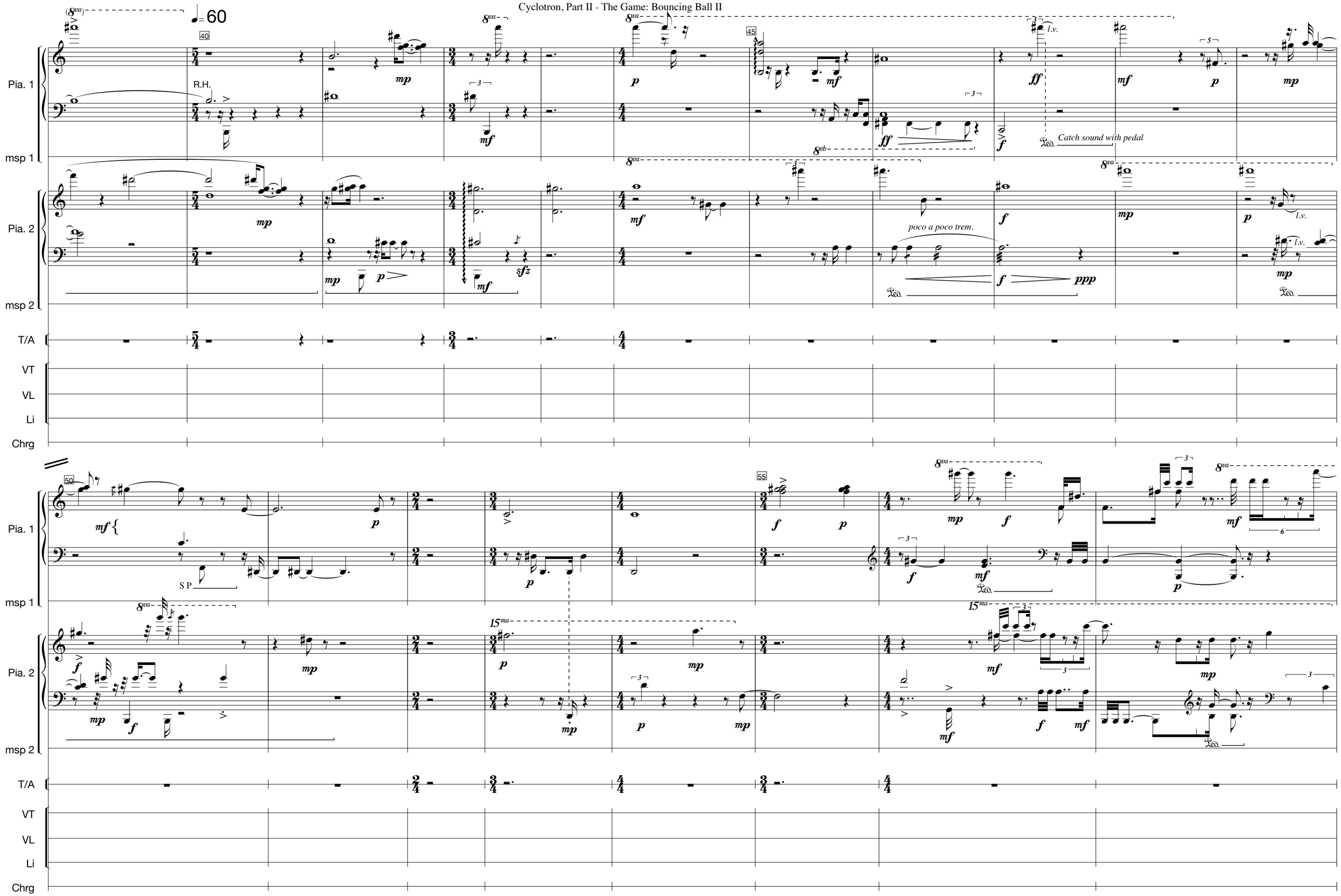
3:59:43 PM Tuesday, April 3, 2007 [Filename]

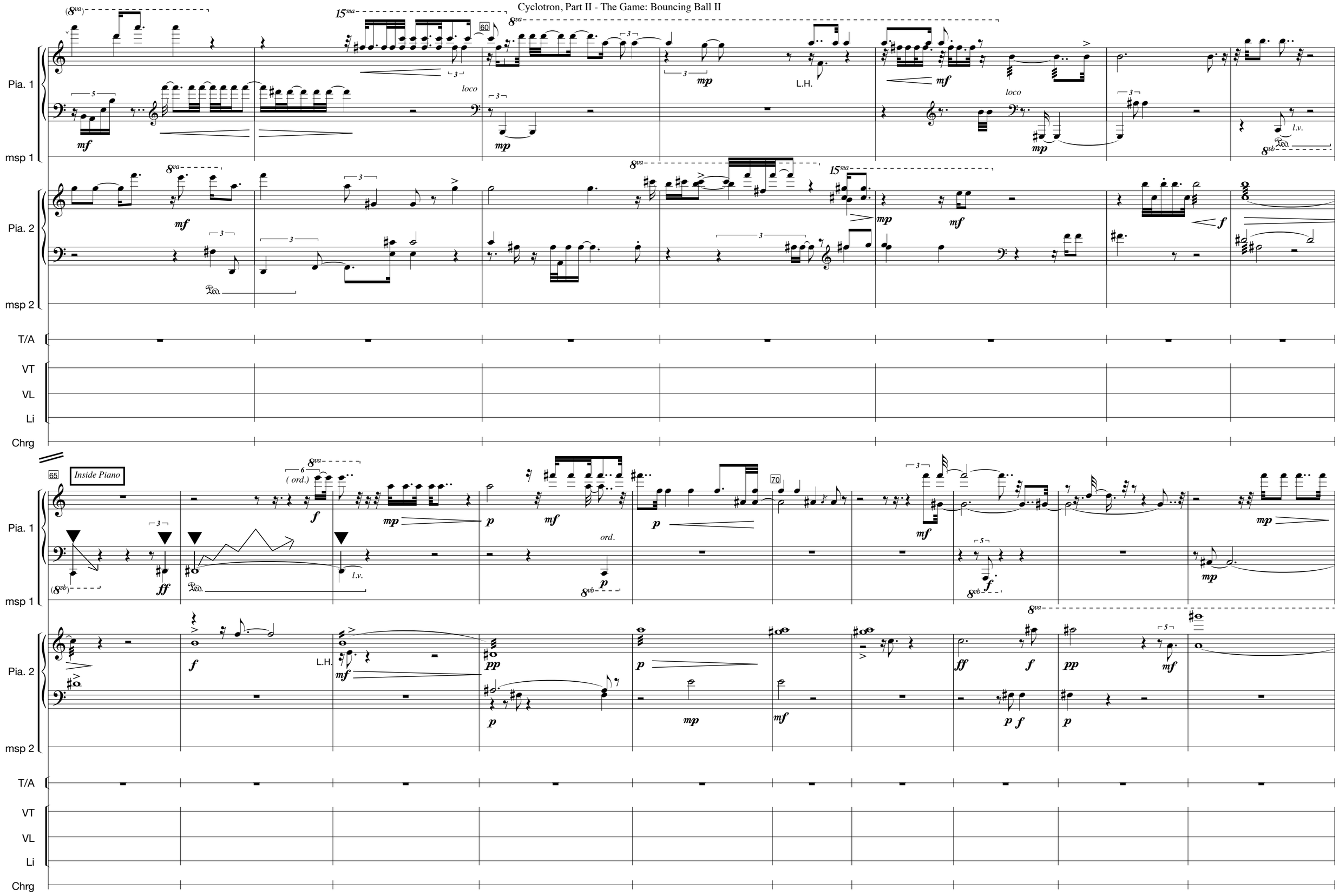


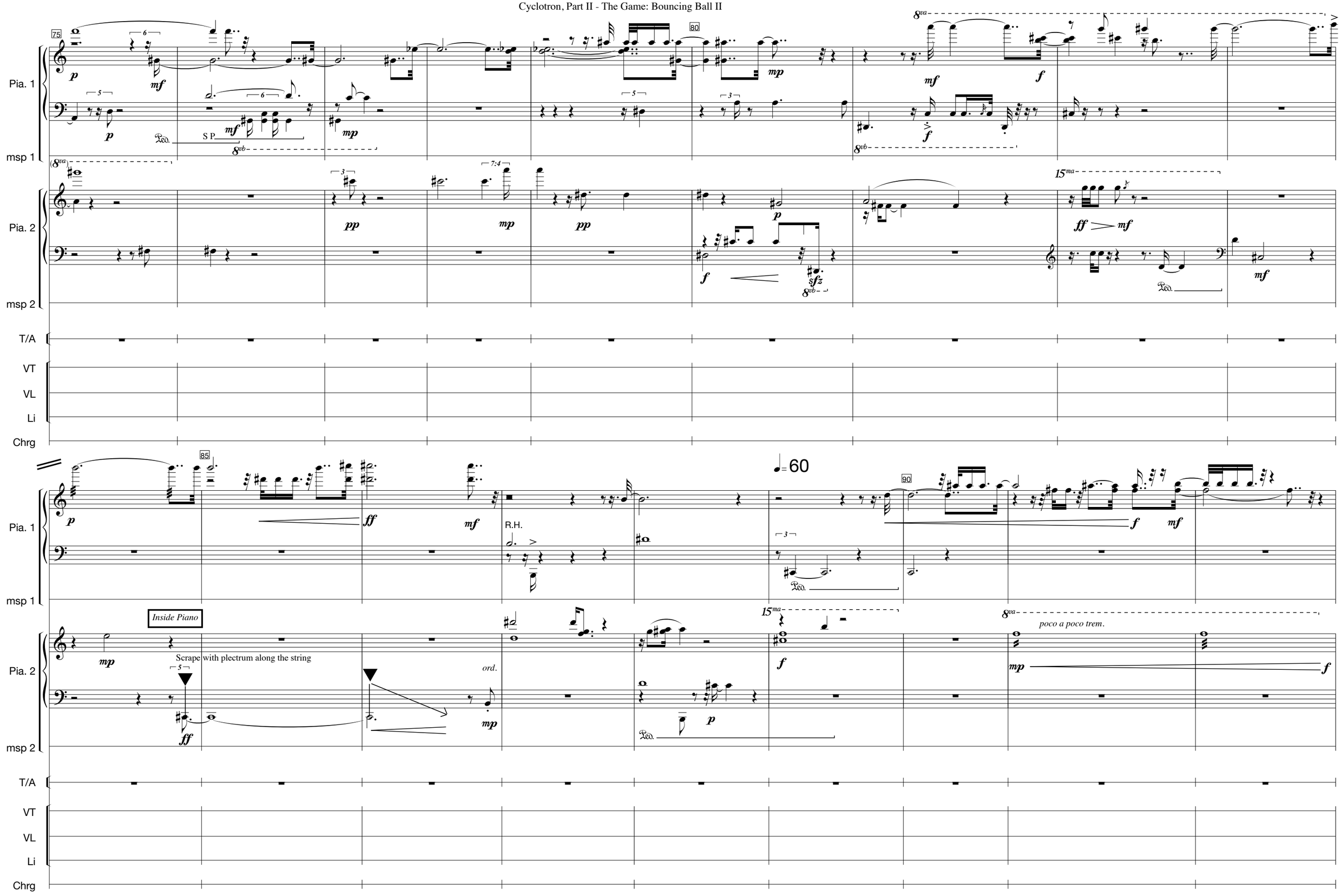
Cyclotron Speaker Setting

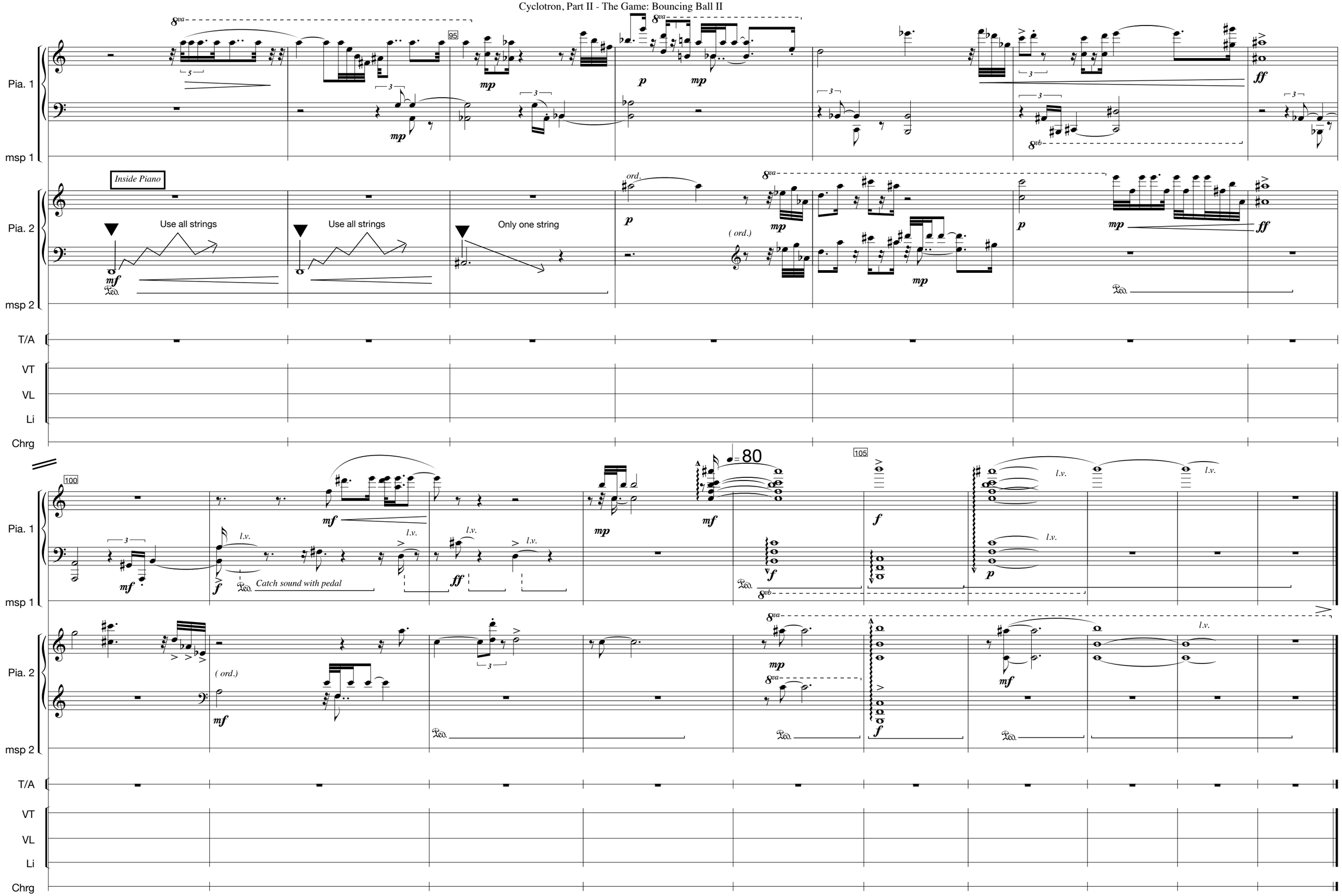



Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
ord.
(ord.)
Put Metal Ball on String
TakeMetal Ball from String
l.v.
Inside Piano
Scrape with plectrum along the string
Use of pedal
L.H.
poco a poco trem.
S P
= 80


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
♩= 60
R.H.
Catch sound with pedal
poco a poco trem.
S P


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
Inside Piano
L.H.
loco
ord.
(ord.)
l.v.

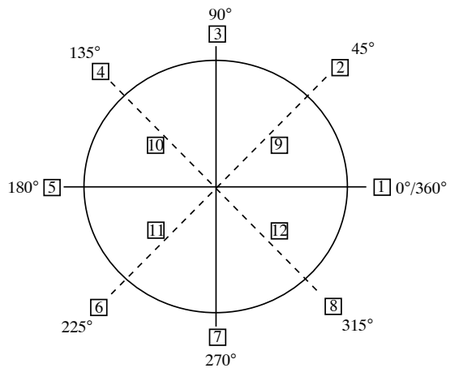

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
75
80
85
90
S P
R.H.
Inside Piano
Scrape with plectrum along the string
ord.
poco a poco trem.
♩= 60


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
Inside Piano
Use all strings
Use all strings
Only one string
ord.
(ord.)
Catch sound with pedal
l.v.
= 80

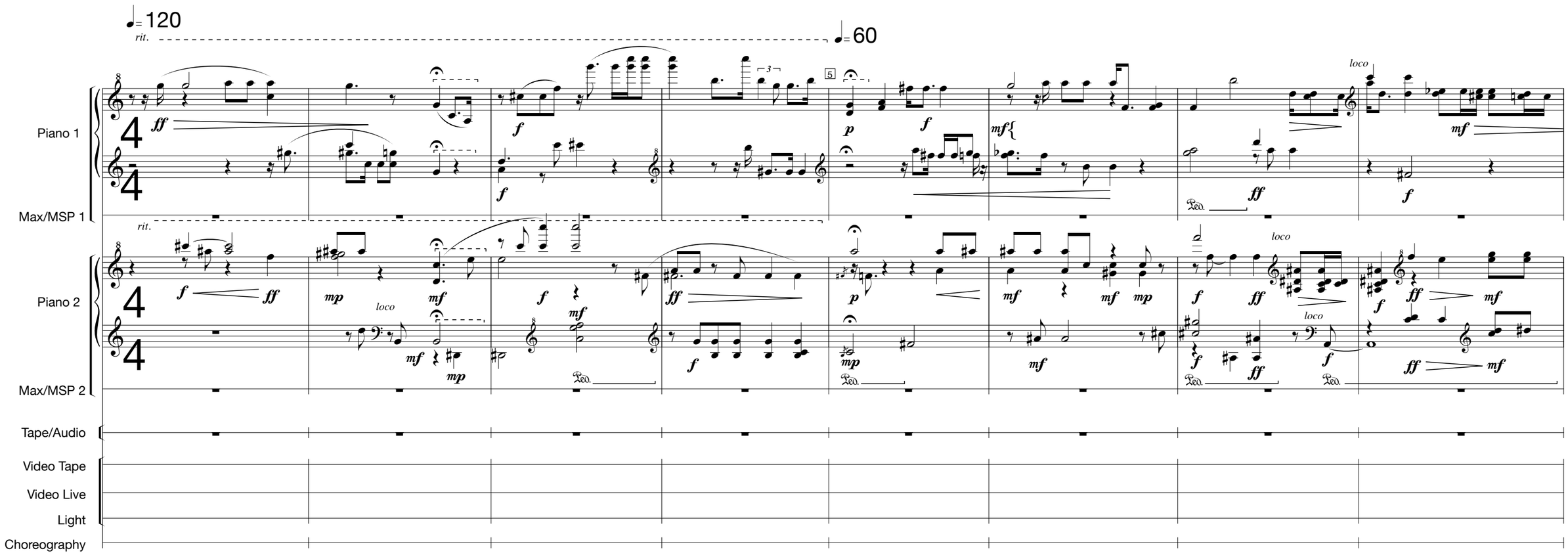
Cyclotron: Part III - The Question

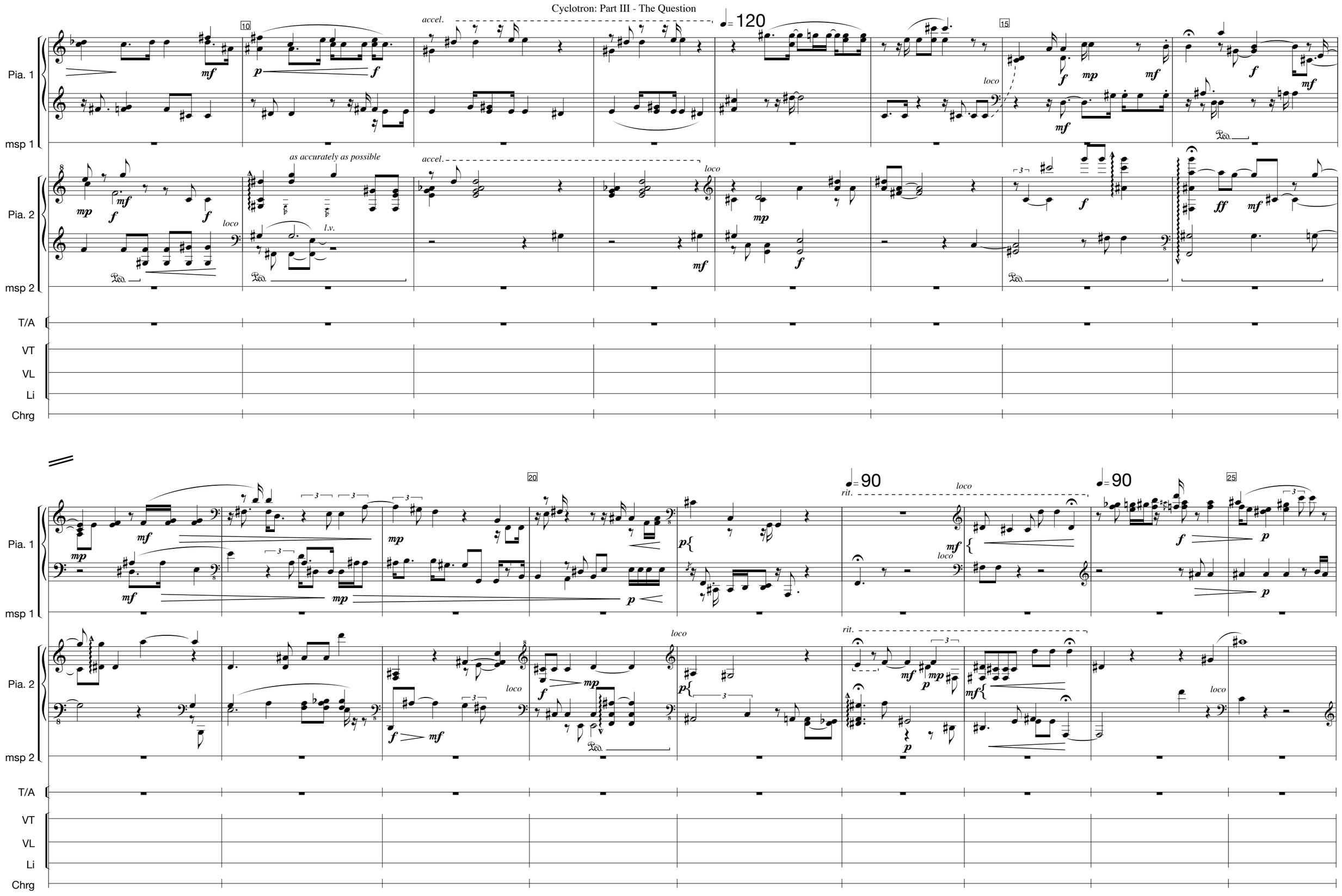
Michèl Koenders

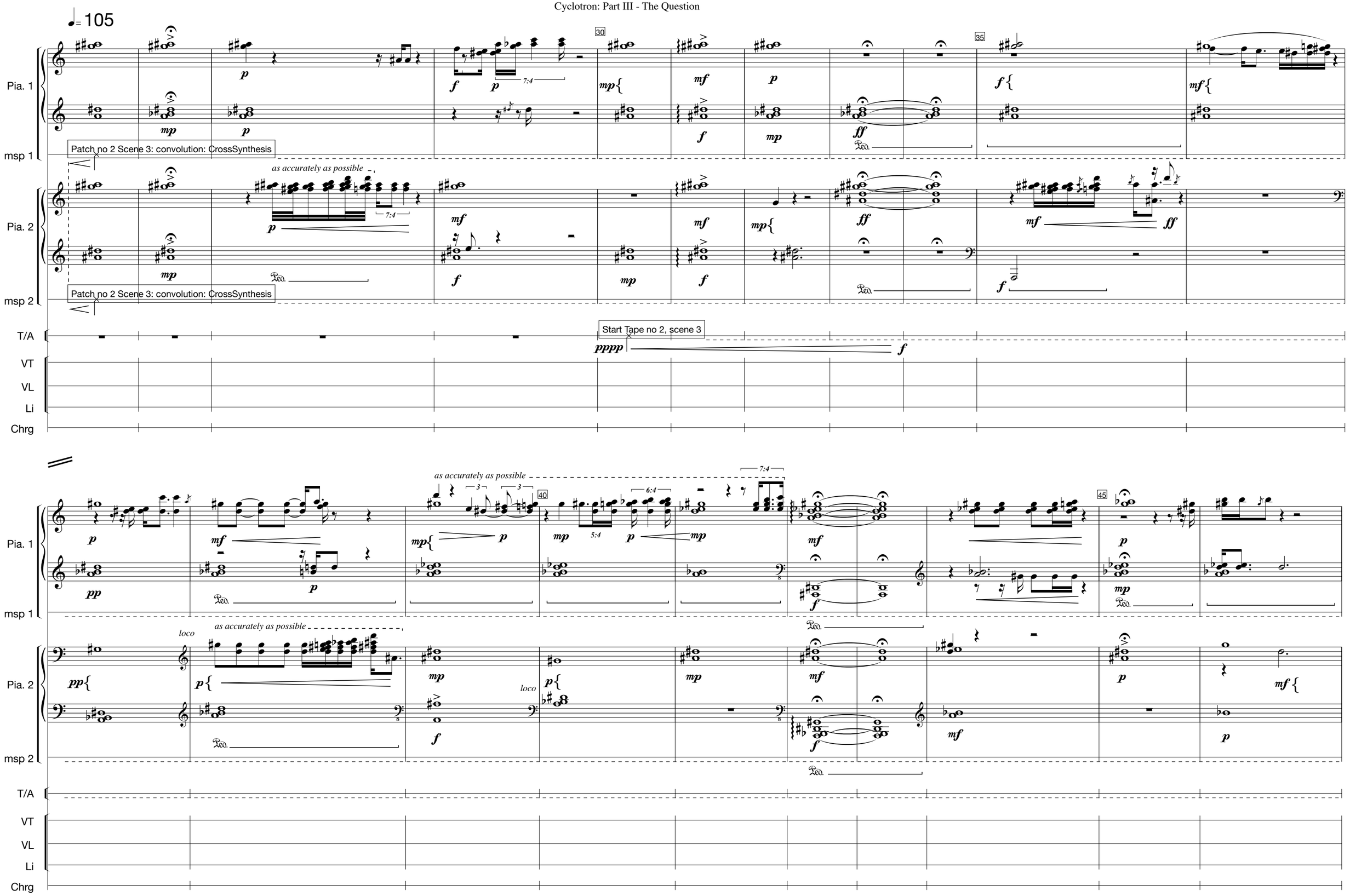
4:00:38 PM Tuesday, April 3, 2007 [Filename]

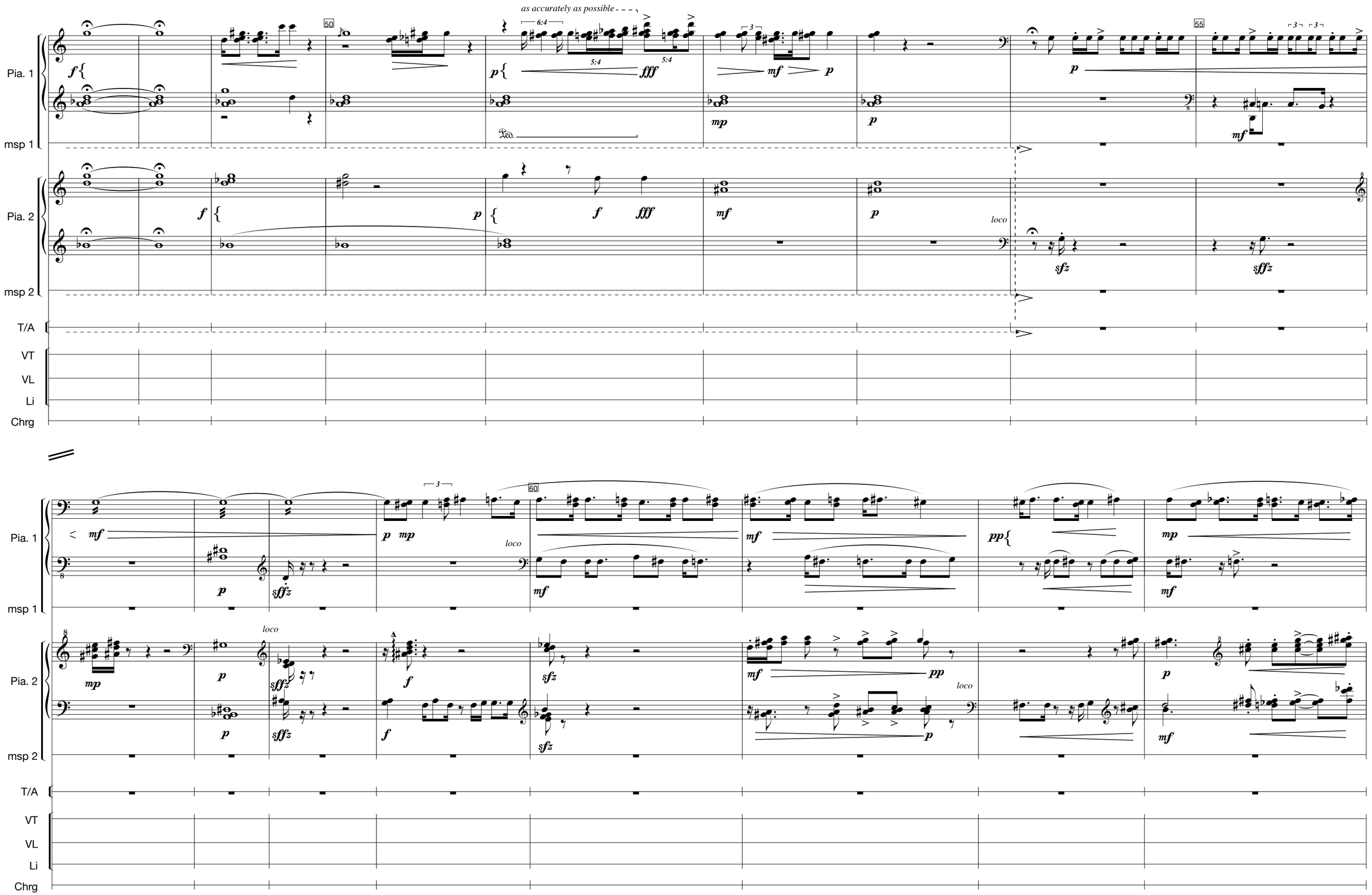


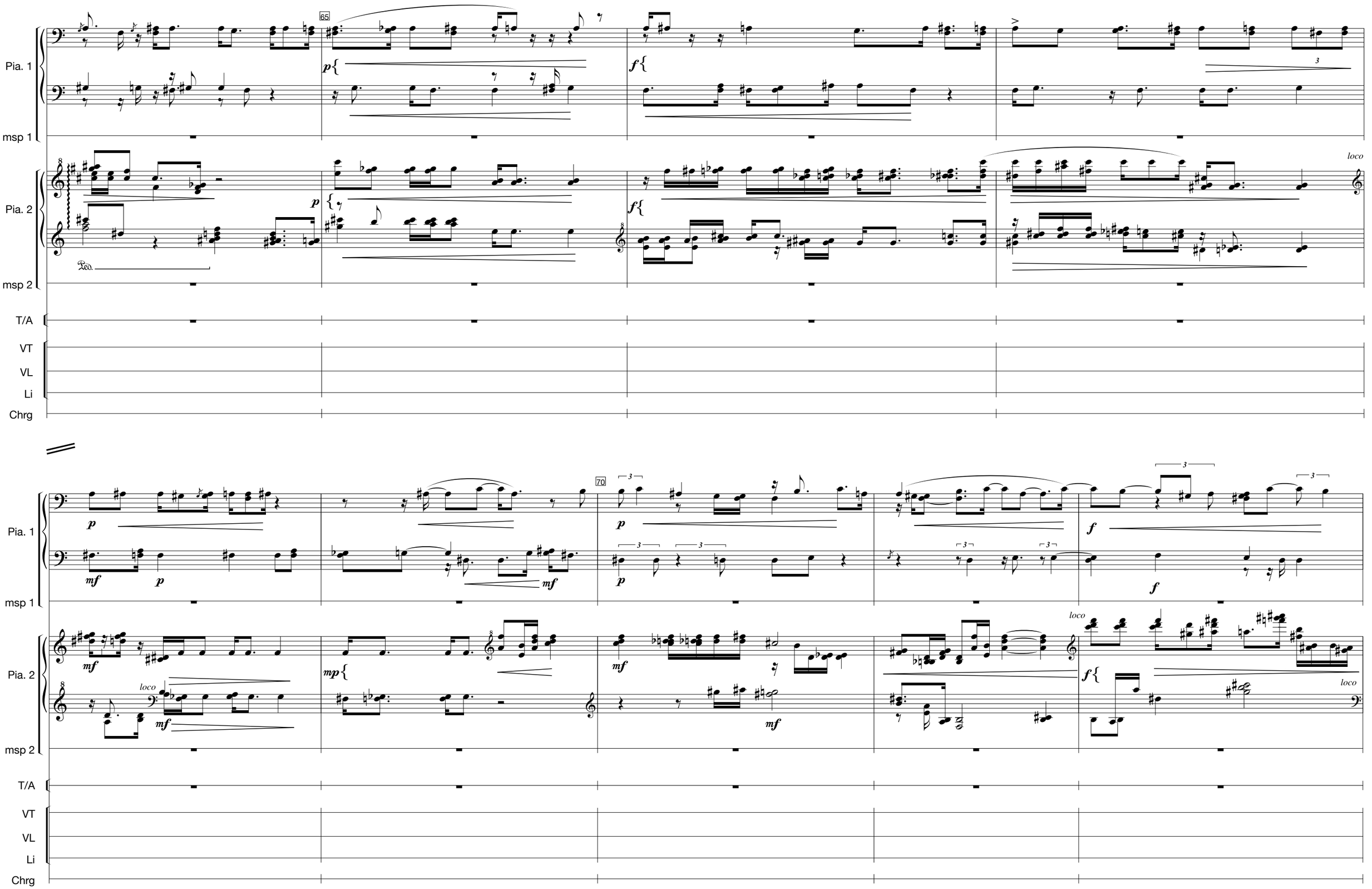
Cyclotron Speaker Setting

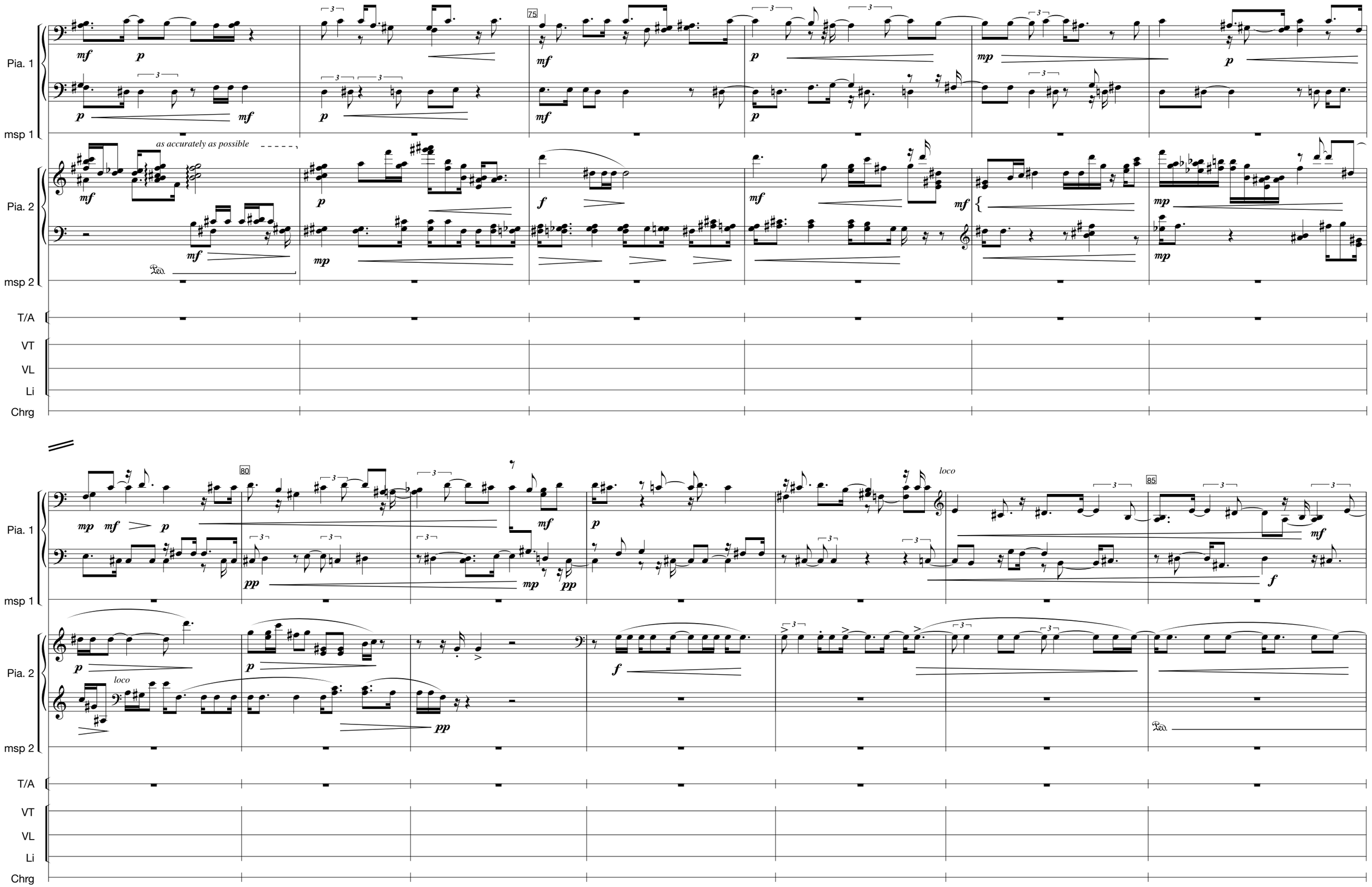


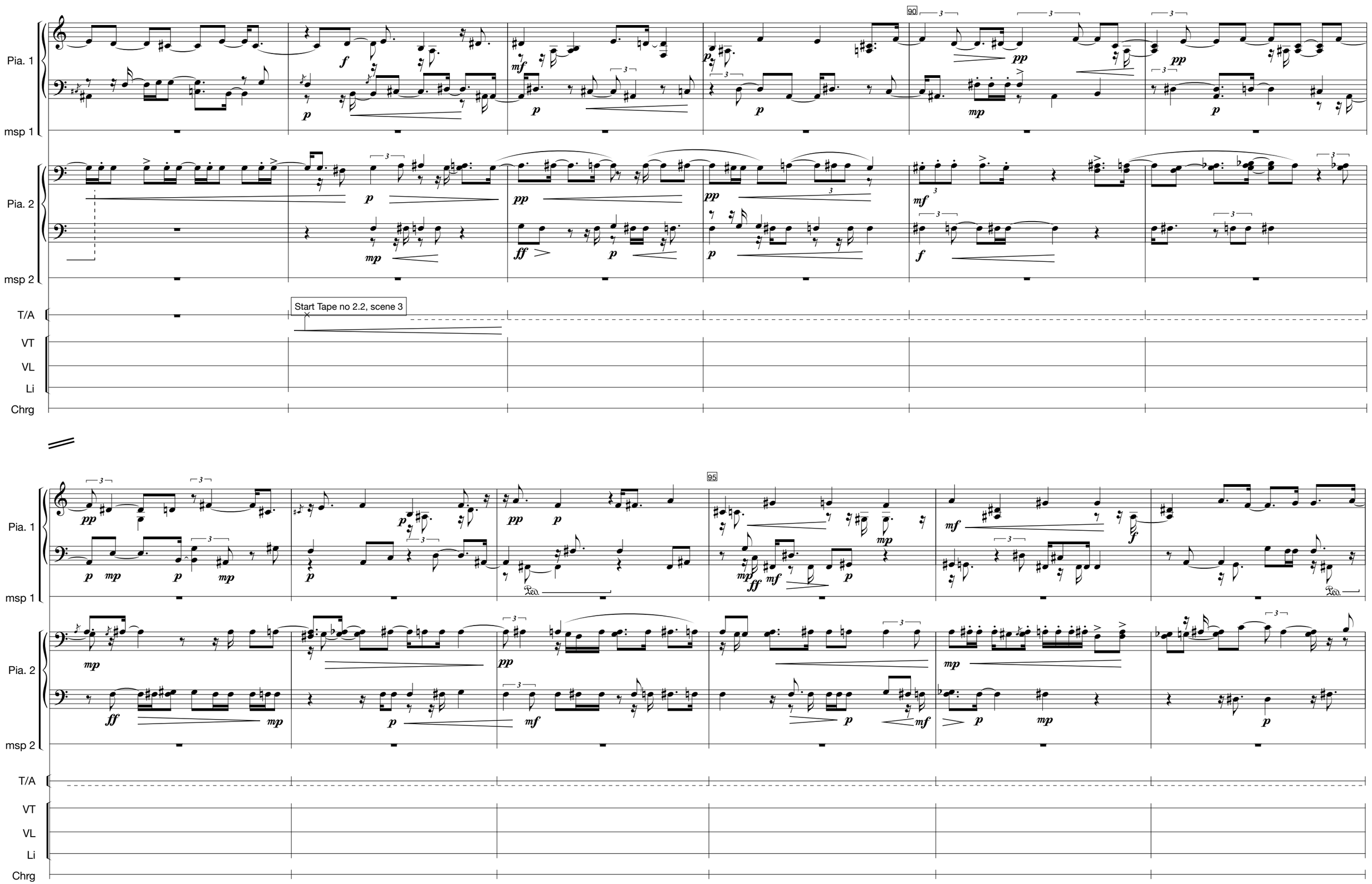

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
accel.
120
as accurately as possible
loco
l.v.
rit.
90
10
15
20
25

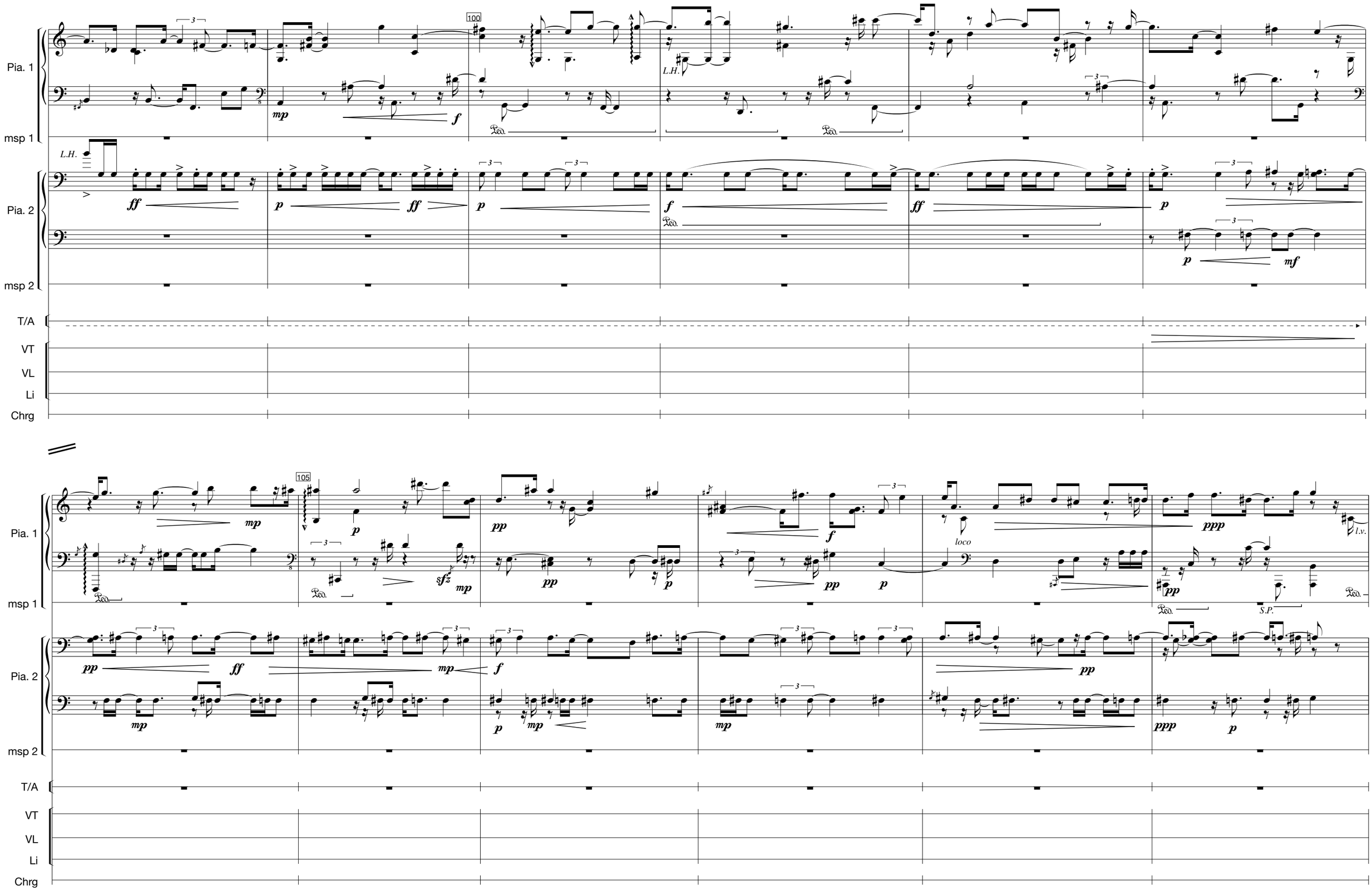

♩= 105
Pia. 1
msp 1
Patch no 2 Scene 3: convolution: CrossSynthesis
Pia. 2
msp 2
Patch no 2 Scene 3: convolution: CrossSynthesis
as accurately as possible
T/A
Start Tape no 2, scene 3
VT
VL
Li
Chrg
30
35
40
45
loco
7:4
3
6:4
5:4

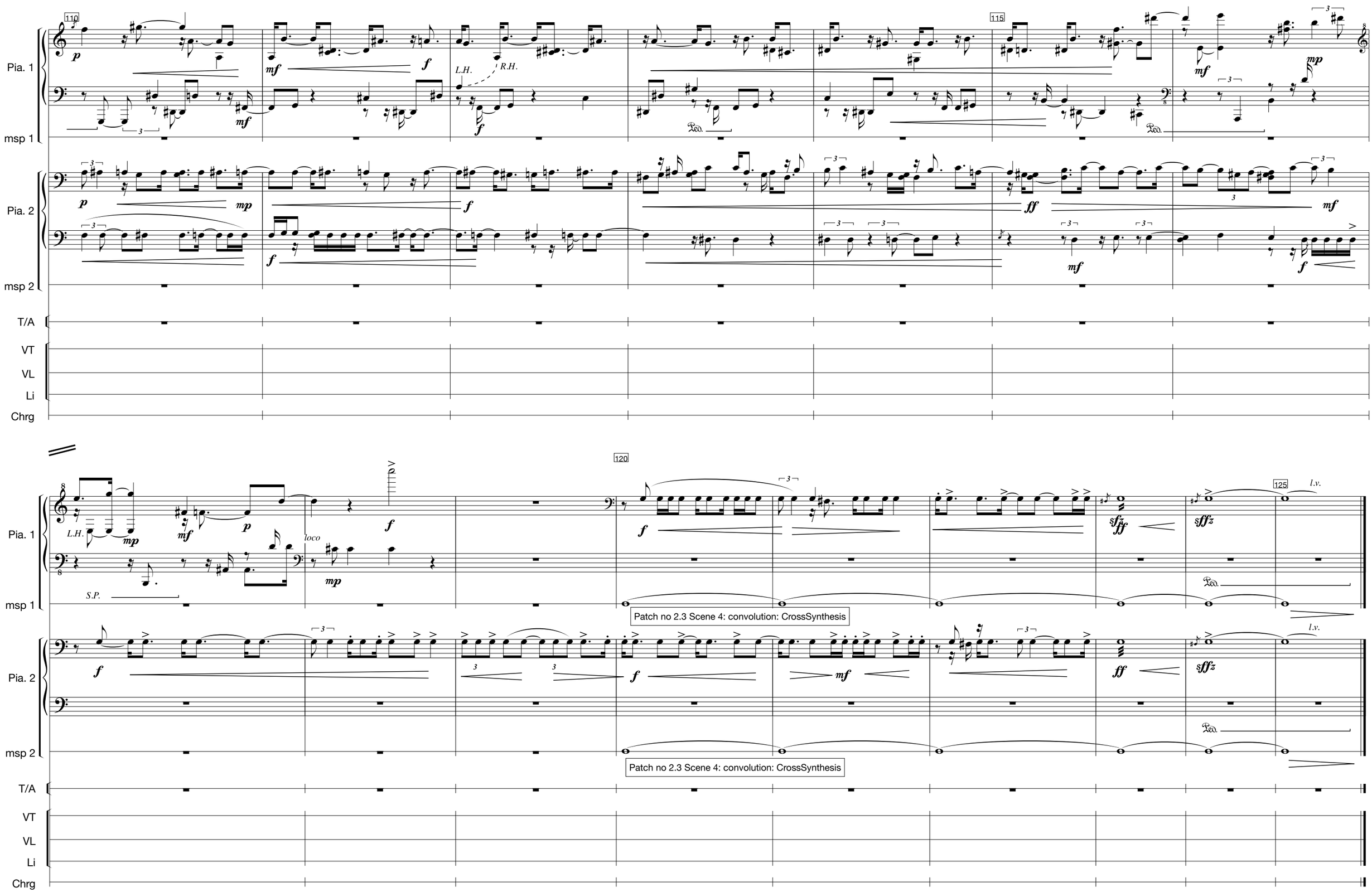

as accurately as possible
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
loco


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
65
70
loco
Ped.


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
as accurately as possible
loco
75
80
85


90
Pia. 1
msp 1
Pia. 2
msp 2
T/A
Start Tape no 2.2, scene 3
VT
VL
Li
Chrg
95
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg

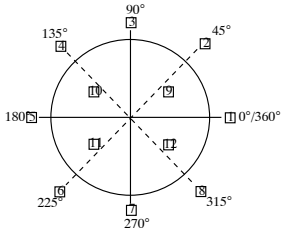

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
100
105
L.H.
mp
f
ff
p
mf
pp
ppp
sfz
loco
l.v.
S.P.


110
115
120
125
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
L.H.
R.H.
S.P.
loco
l.v.
Patch no 2.3 Scene 4: convolution: CrossSynthesis
Patch no 2.3 Scene 4: convolution: CrossSynthesis

Cyclotron, Part IV-interlude

Michèl Koenders

4:02:57 PM Tuesday, April 3, 2007 [Filename]



Cyclotron Speaker Setting

00:00:00 | 00:00:30 | 00:01:00 | 00:01:30

♩= 60 (1 bar = 5 secs)

Audio Track 1
- 360° Start slow movement
- 0:32 Start high1.1.aif.2 snd
- 01:14 Stop Movement
- Static Sound SP8 Sudden shift -> SP1
- mp

Audio Track 2
- Static Sound SP1
- 0:42 Start snd2.aif snd

Audio Track 3
- Whole Track Static Sound SP5+SP6
- 0:05 Start bass1.1.aif snd
- 0:39 Stop
- 0:58 Start bass2.1.aif snd
- mf
- mf

Audio Track 4
- Static Sound SP3
- 0:00 Start bass1.aif.6 snd
- irr. pulses
- mf
- f
- ff

Audio Track 5

Audio Track 6
- Static Sound SP1
- 0:12 Start pinknoise3.aif snd
- 360° Start Slow movement
- ppp
- mf
- p
- f

Audio Track 7

Audio Track 8

Audio Track 9

Audio Track 10

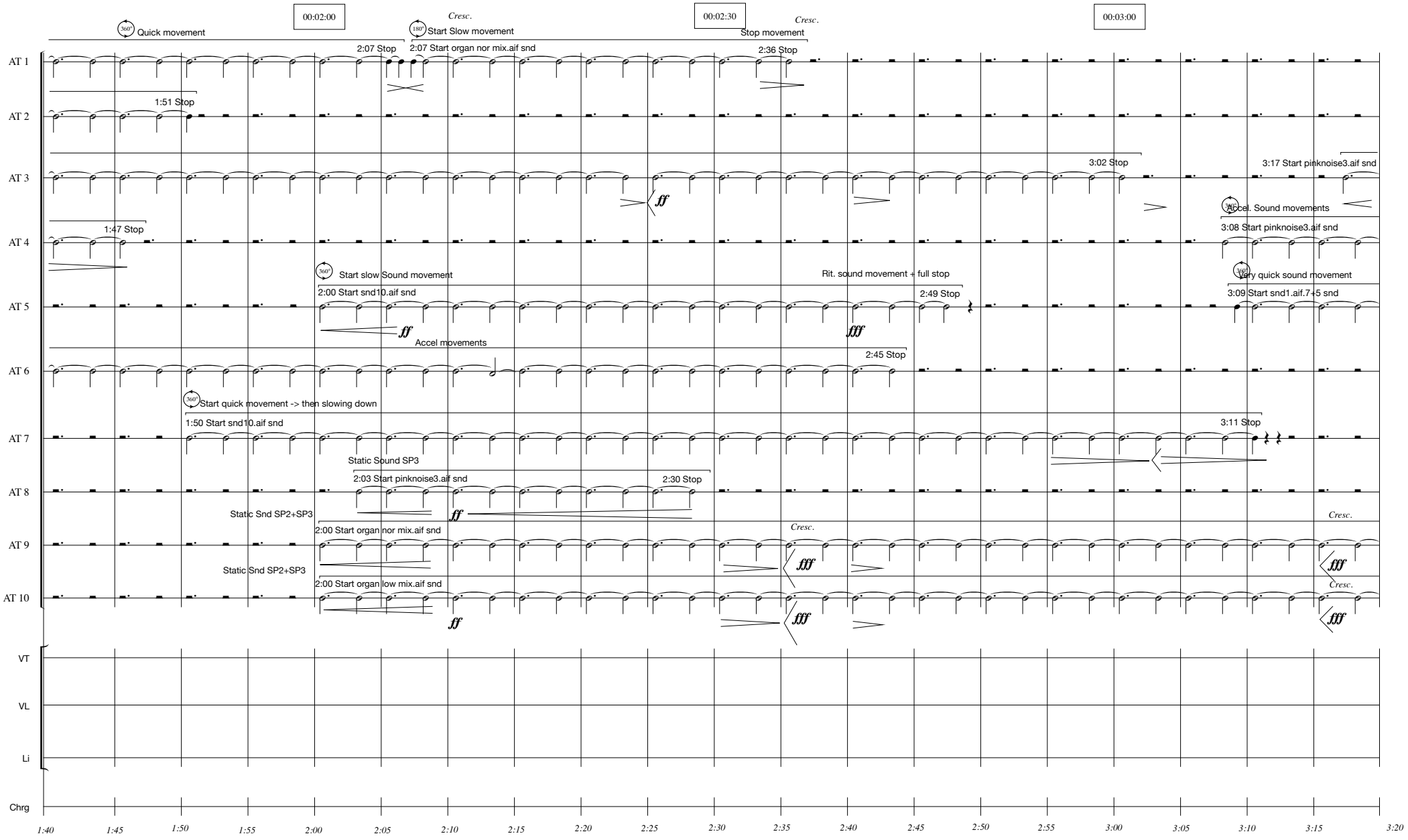
Video Tape

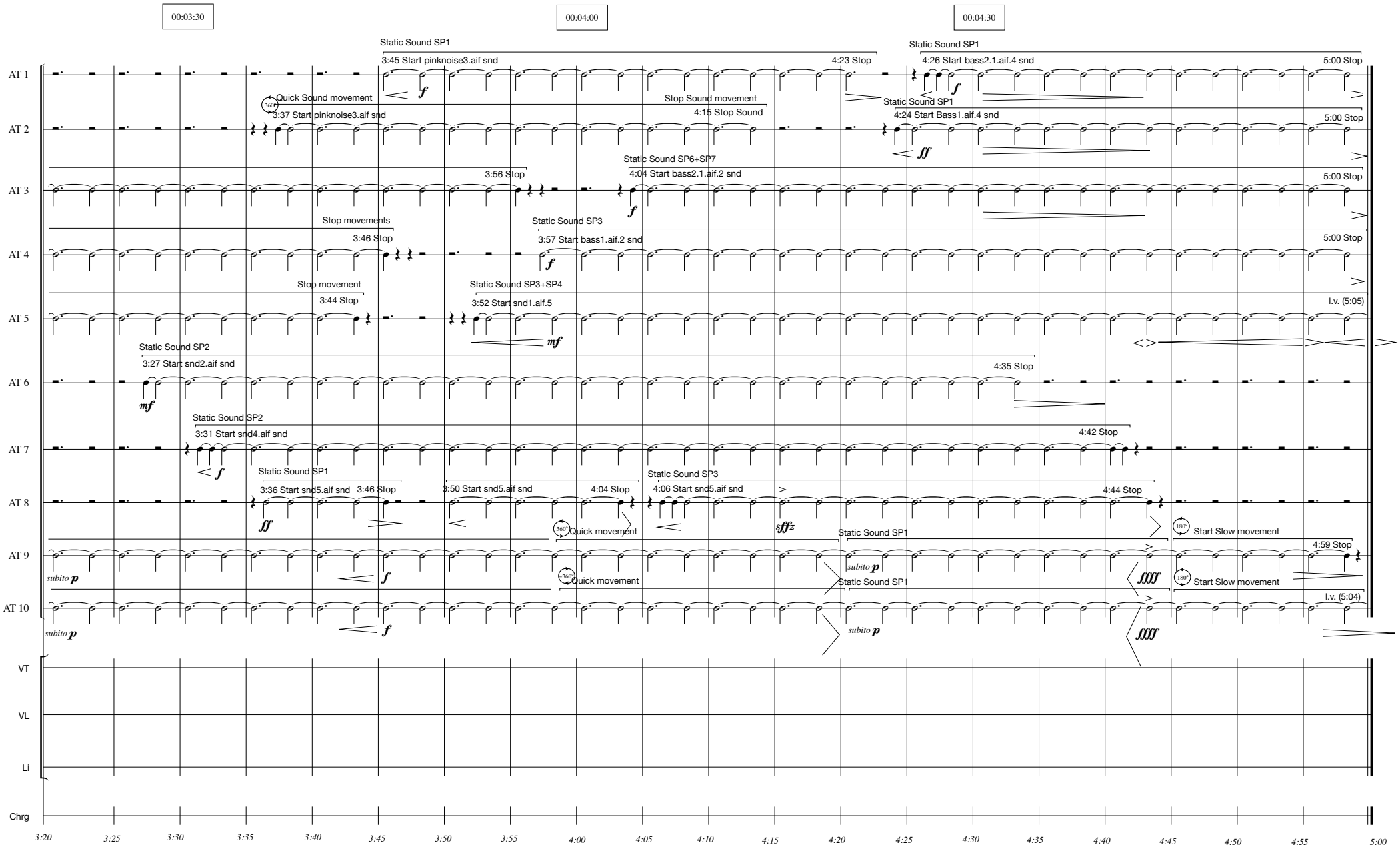
Video Live

Light

Choreography

0:00 0:05 0:10 0:15 0:20 0:25 0:30 0:35 0:40 0:45 0:50 0:55 1:00 1:05 1:10 1:15 1:20 1:25 1:30 1:35 1:40

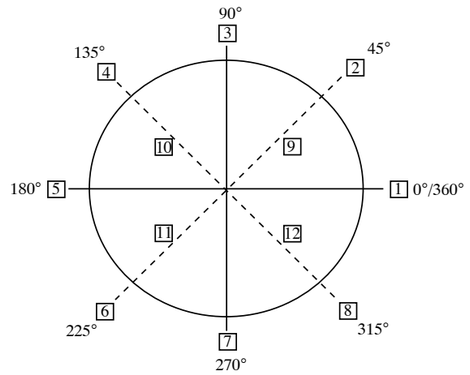

00:02:00
00:02:30
00:03:00
Quick movement
Cresc.
Start Slow movement
Cresc.
Stop movement
2:07 Stop
2:07 Start organ nor mix.aif snd
2:36 Stop
1:51 Stop
3:02 Stop
3:17 Start pinknoise3.aif snd
Accel. Sound movements
3:08 Start pinknoise3.aif snd
1:47 Stop
Start slow Sound movement
2:00 Start snd10.aif snd
Rit. sound movement + full stop
2:49 Stop
Very quick sound movement
3:09 Start snd1.aif.7+5 snd
Accel movements
2:45 Stop
Start quick movement -> then slowing down
1:50 Start snd10.aif snd
3:11 Stop
Static Sound SP3
2:03 Start pinknoise3.aif snd
2:30 Stop
Static Snd SP2+SP3
2:00 Start organ nor mix.aif snd
Cresc.
Static Snd SP2+SP3
2:00 Start organ low mix.aif snd
Cresc.
AT 1
AT 2
AT 3
AT 4
AT 5
AT 6
AT 7
AT 8
AT 9
AT 10
VT
VL
Li
Chrg
1:40
1:45
1:50
1:55
2:00
2:05
2:10
2:15
2:20
2:25
2:30
2:35
2:40
2:45
2:50
2:55
3:00
3:05
3:10
3:15
3:20


00:03:30
00:04:00
00:04:30
AT 1
AT 2
AT 3
AT 4
AT 5
AT 6
AT 7
AT 8
AT 9
AT 10
VT
VL
Li
Chrg
Static Sound SP1
3:45 Start pinknoise3.aif snd
4:23 Stop
4:26 Start bass2.1.aif.4 snd
5:00 Stop
Quick Sound movement
3:37 Start pinknoise3.aif snd
Stop Sound movement
4:15 Stop Sound
4:24 Start Bass1.aif.4 snd
Static Sound SP6+SP7
3:56 Stop
4:04 Start bass2.1.aif.2 snd
Stop movements
3:46 Stop
Static Sound SP3
3:57 Start bass1.aif.2 snd
Stop movement
3:44 Stop
Static Sound SP3+SP4
3:52 Start snd1.aif.5
l.v. (5:05)
Static Sound SP2
3:27 Start snd2.aif snd
4:35 Stop
3:31 Start snd4.aif snd
4:42 Stop
3:36 Start snd5.aif snd
3:46 Stop
3:50 Start snd5.aif snd
4:04 Stop
4:06 Start snd5.aif snd
4:44 Stop
Quick movement
Start Slow movement
4:59 Stop
l.v. (5:04)
subito p
3:20
3:25
3:30
3:35
3:40
3:45
3:50
3:55
4:00
4:05
4:10
4:15
4:20
4:25
4:30
4:35
4:40
4:45
4:50
4:55
5:00

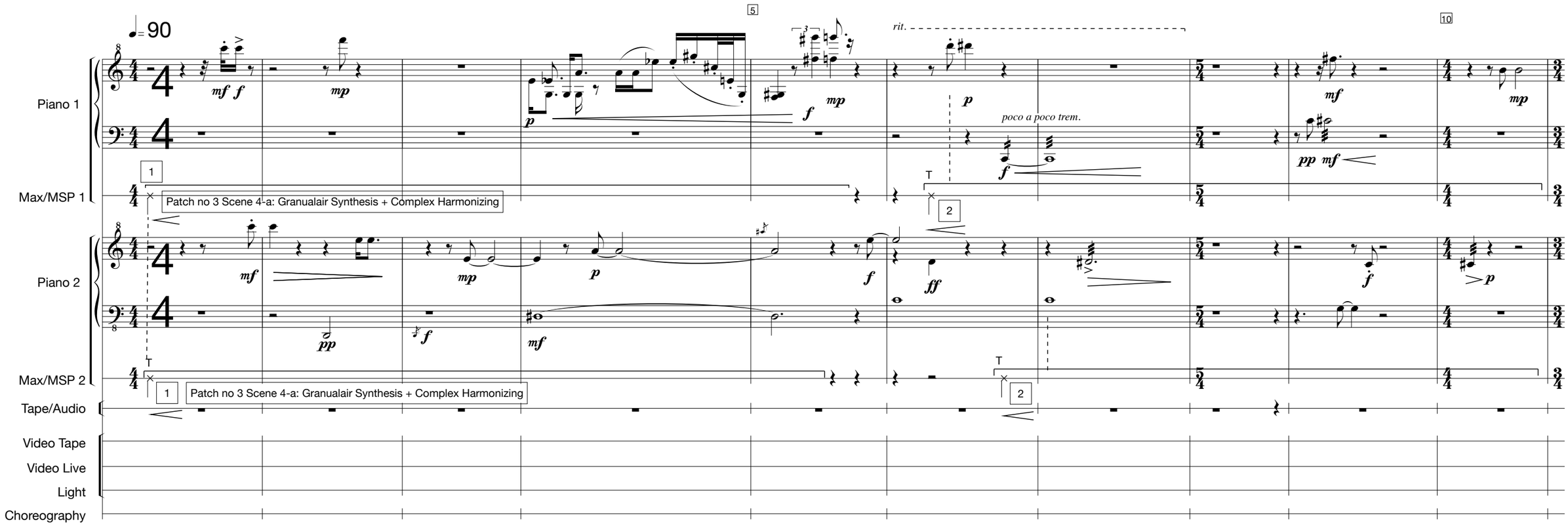
Cyclotron: Part IV-A - Micro

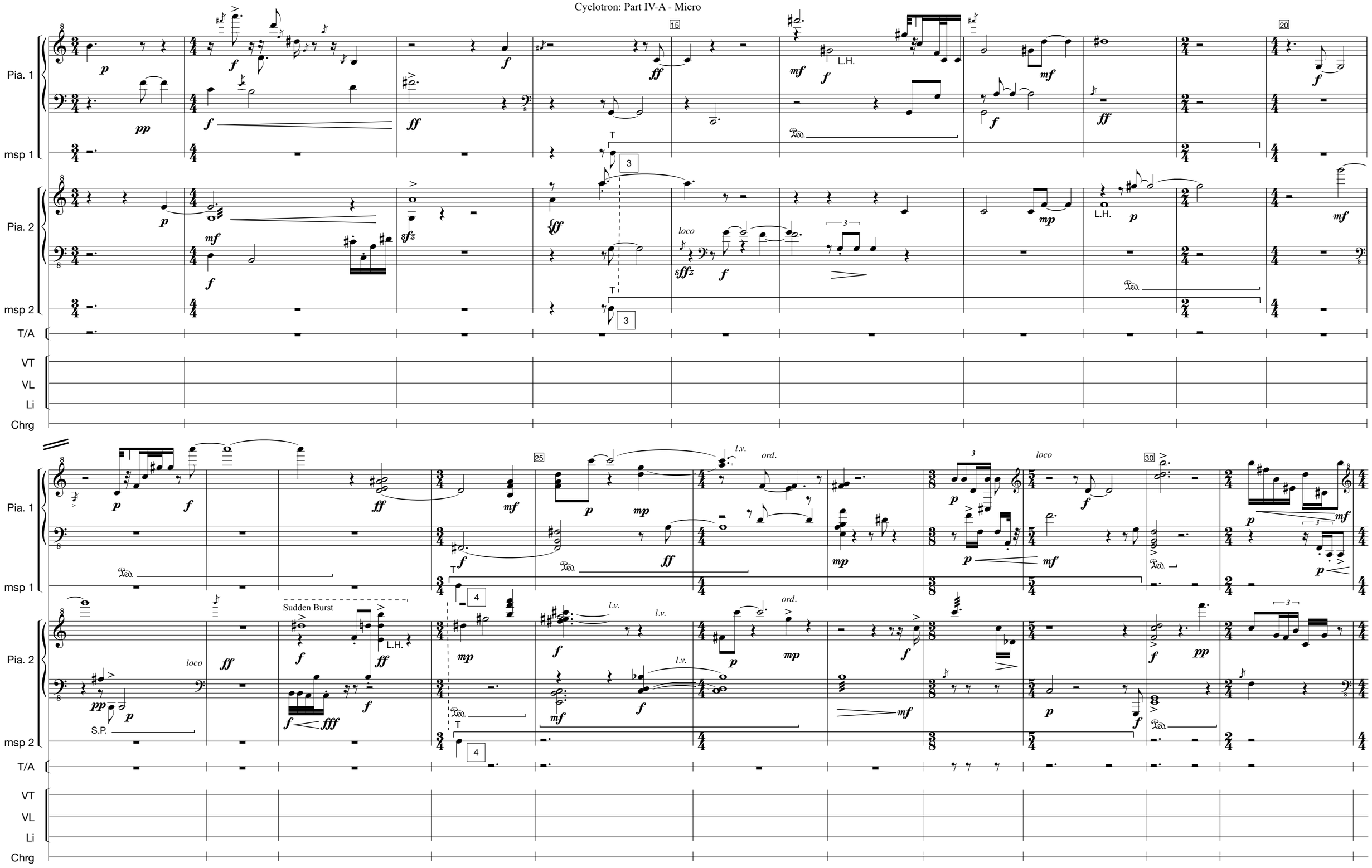
Michèl Koenders

4:06:08 PM Tuesday, April 3, 2007 [Filename]



Cyclotron Speaker Setting




Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
L.H.
Sudden Burst
S.P.
loco
l.v.
ord.

35

Play very soft and gentle

Play vigorously

accel.

40

Play vigorously

accel.

Pia. 1

msp 1

Pia. 2

msp 2

T/A

VT

VL

Li

Chrg

ff mp p pp ff p ff f

loco

L.H.

ff p ff f<

L.H.

mf pp pp f f ff mp ff

loco

ff f

5

T

5

T

ord.

loco

f mf

Play as one movement

mf

45

f mf p

p

ord.

mf mp f p pp

Play as one movement

f

mf

subito p

ff p

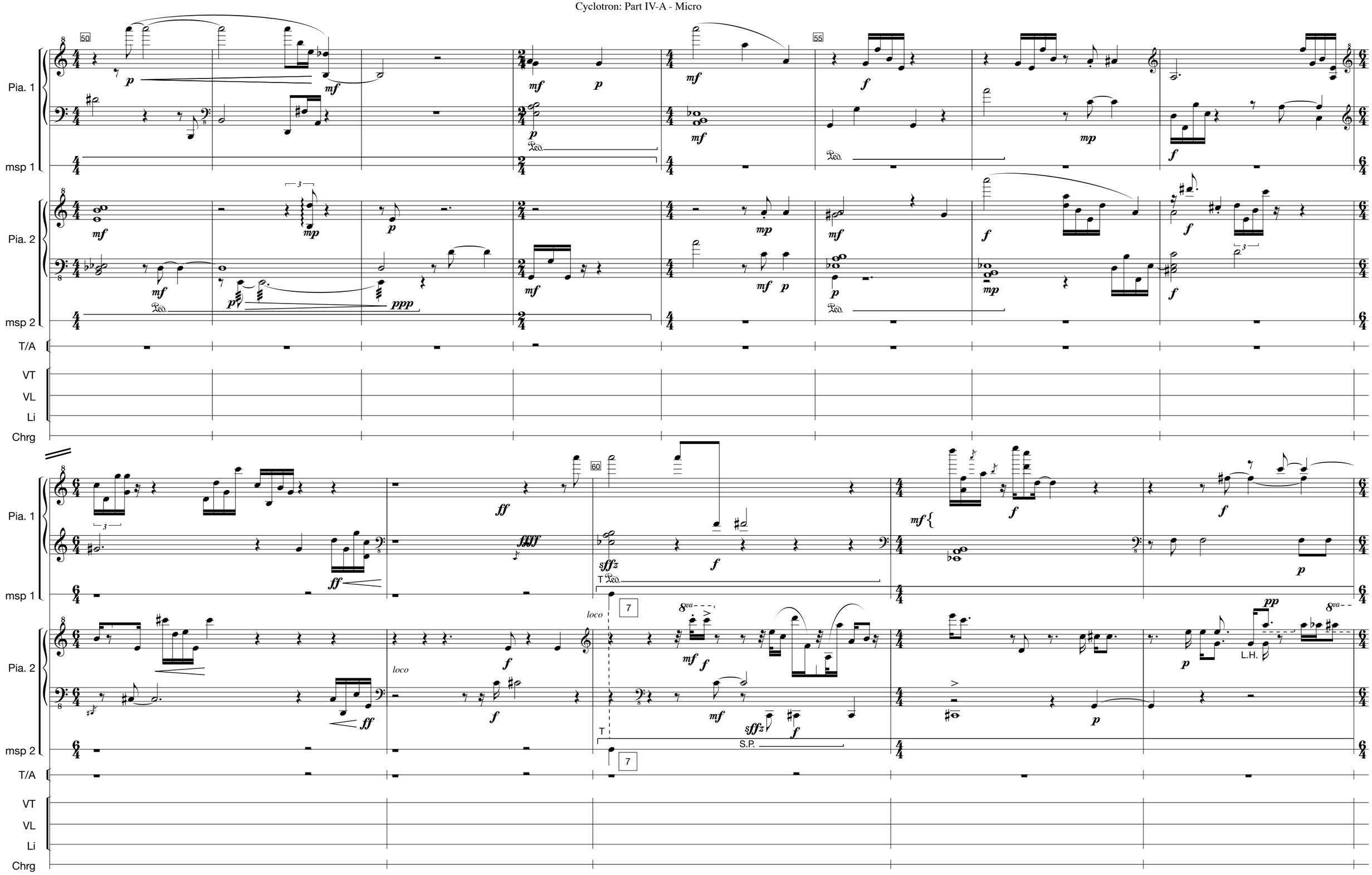
subito p

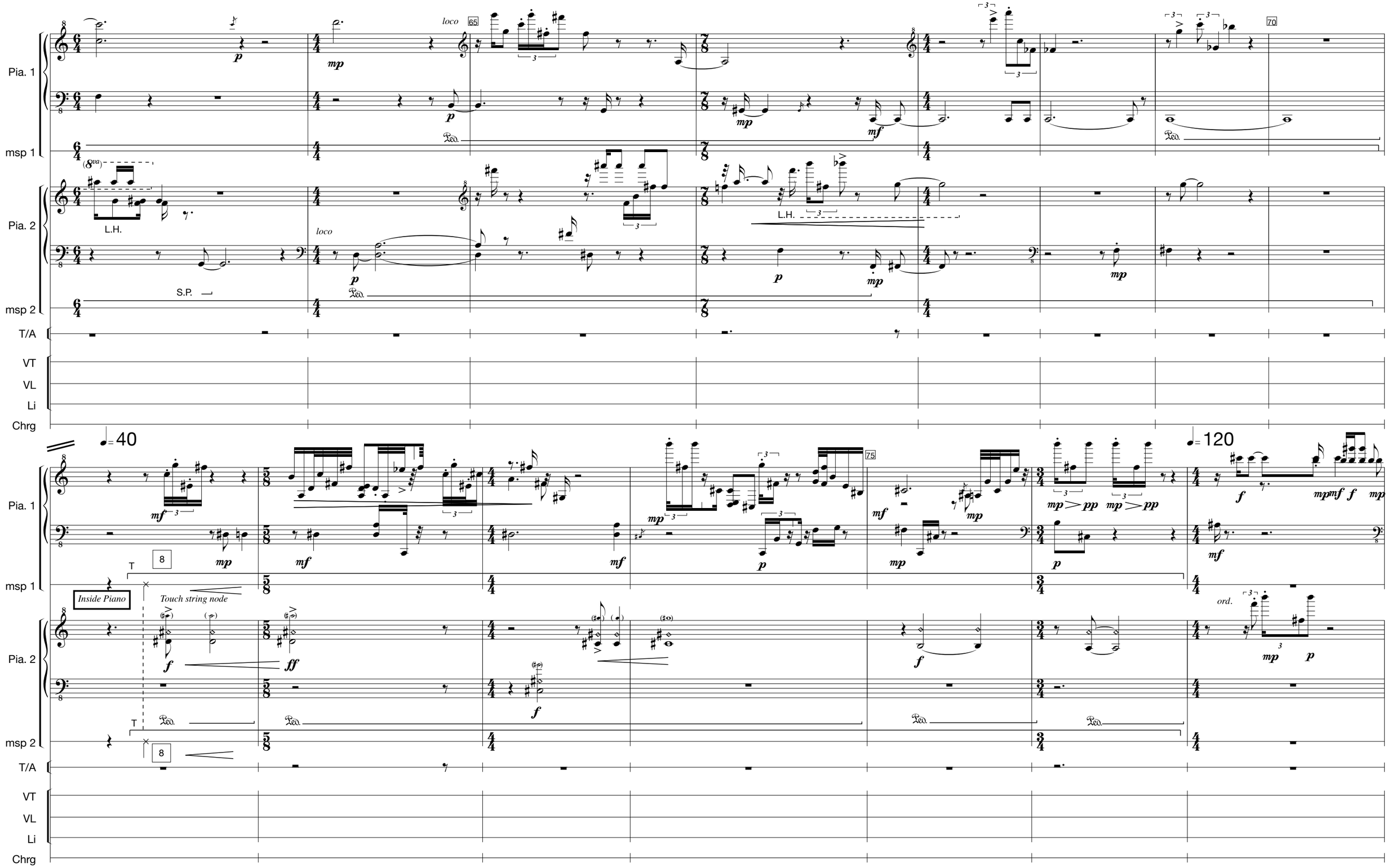
6

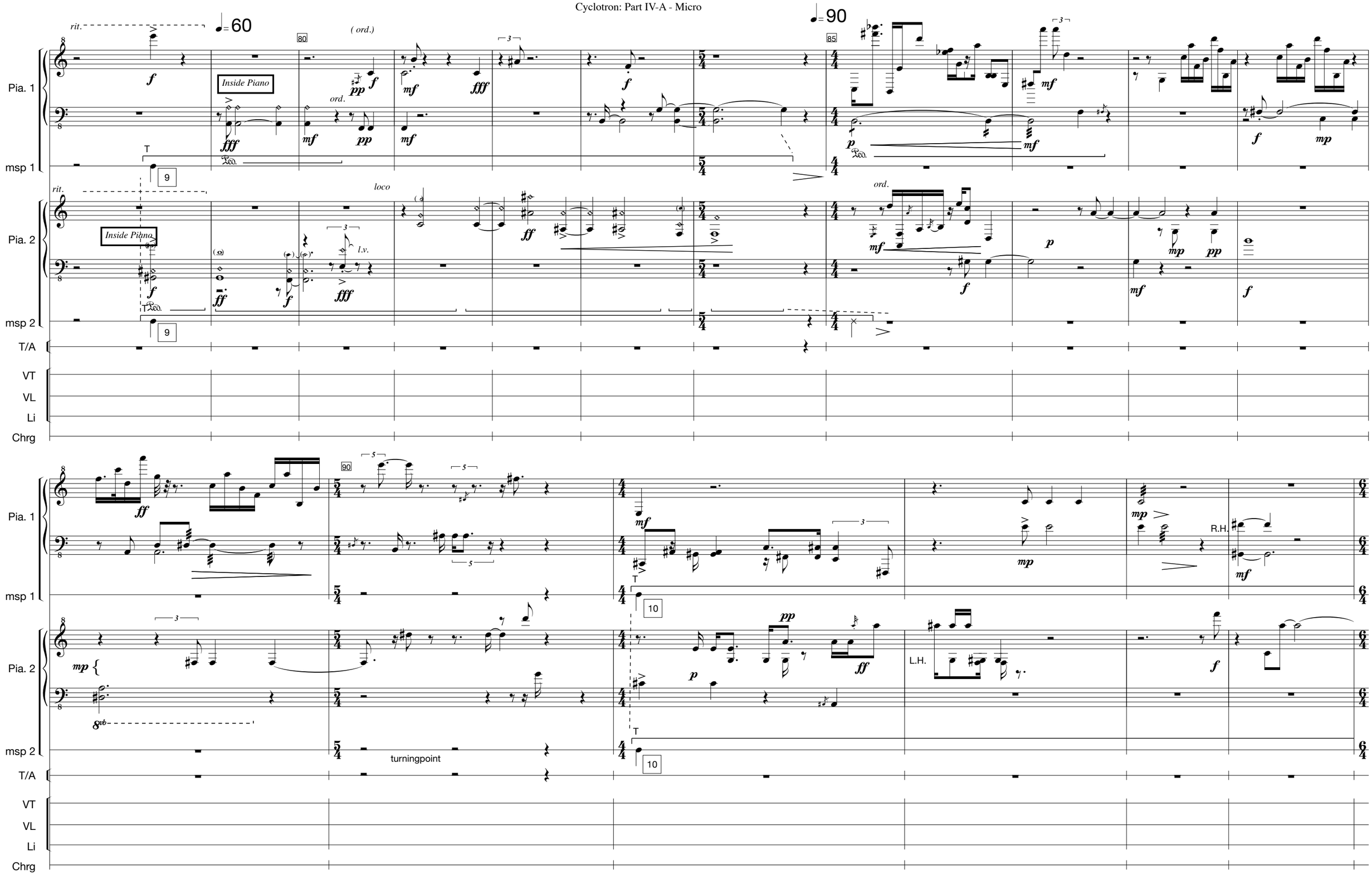
T

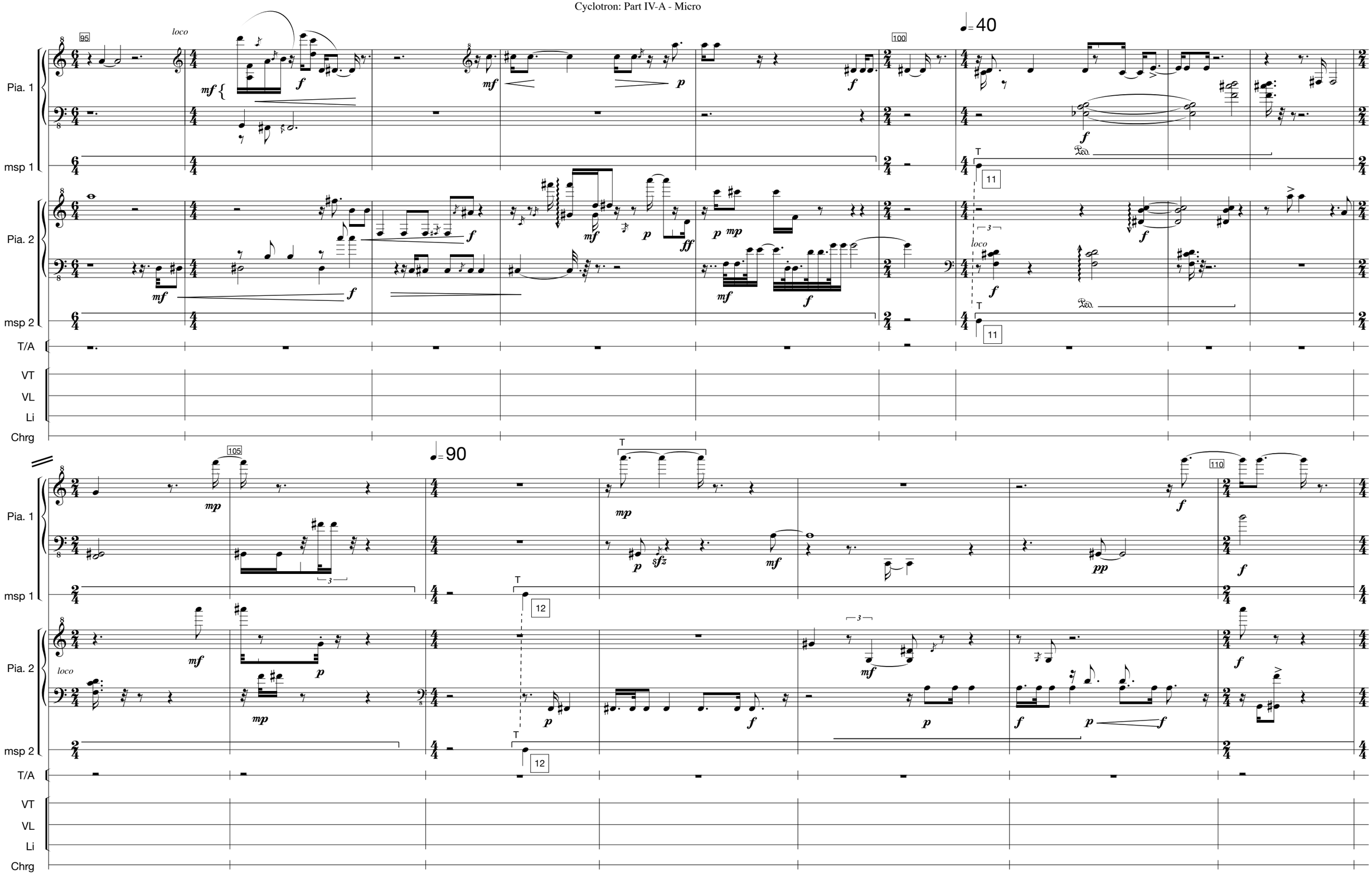
6

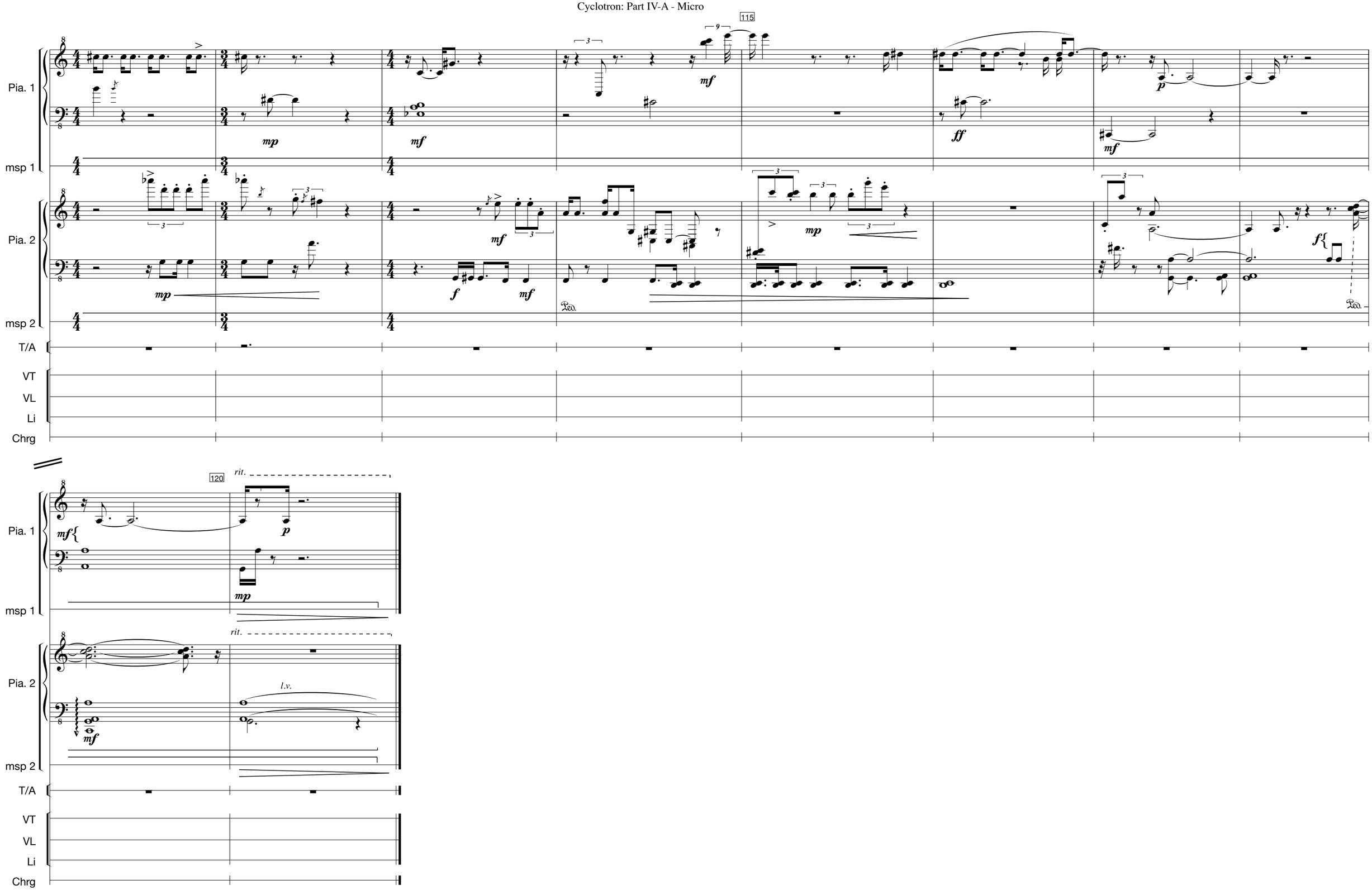
T


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
50
55
60
7
loco
L.H.
S.P.


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
loco
65
70
75
L.H.
S.P.
8va
♩= 40
♩= 120
Inside Piano
Touch string node
ord.


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
rit.
♩= 60
Inside Piano
(ord.)
ord.
loco
l.v.
♩= 90
ord.
turningpoint
R.H.
L.H.

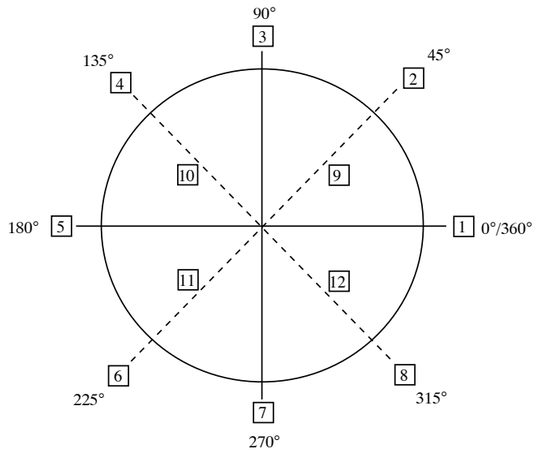

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
95
100
105
110
♩= 40
♩= 90
loco
T
11
12
3


115
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
mp
mf
ff
p
f
Ped.
120
rit.
l.v.

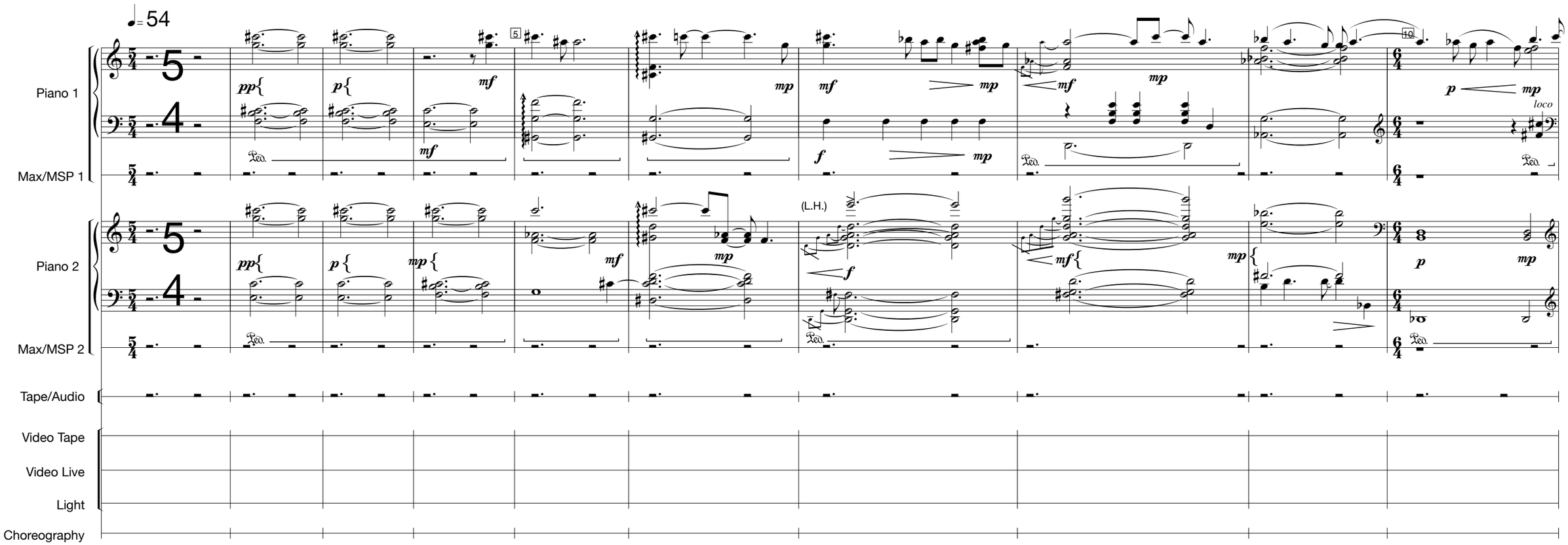
Cyclotron: Part IV-B - Macro

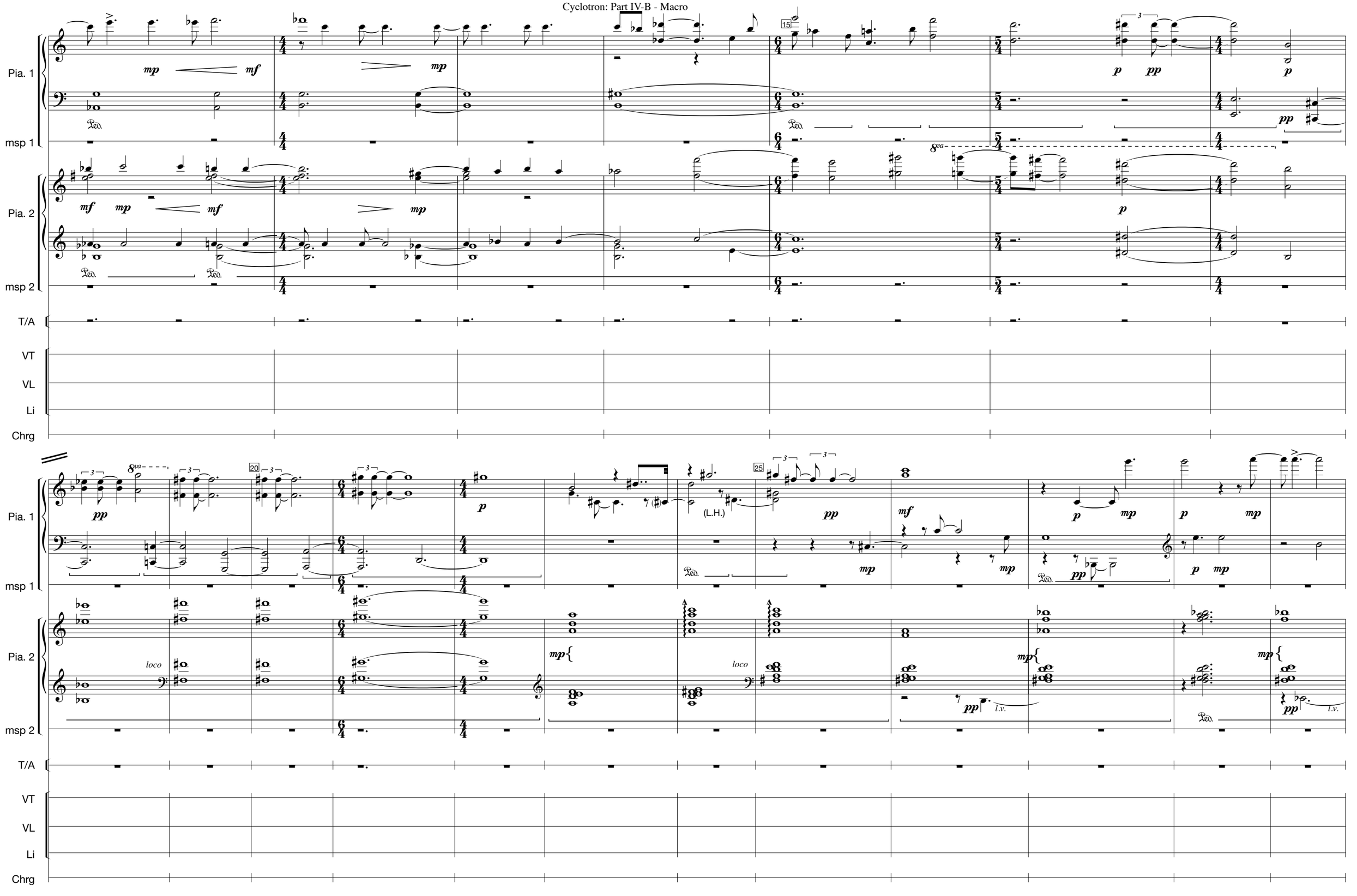
Michèl Koenders

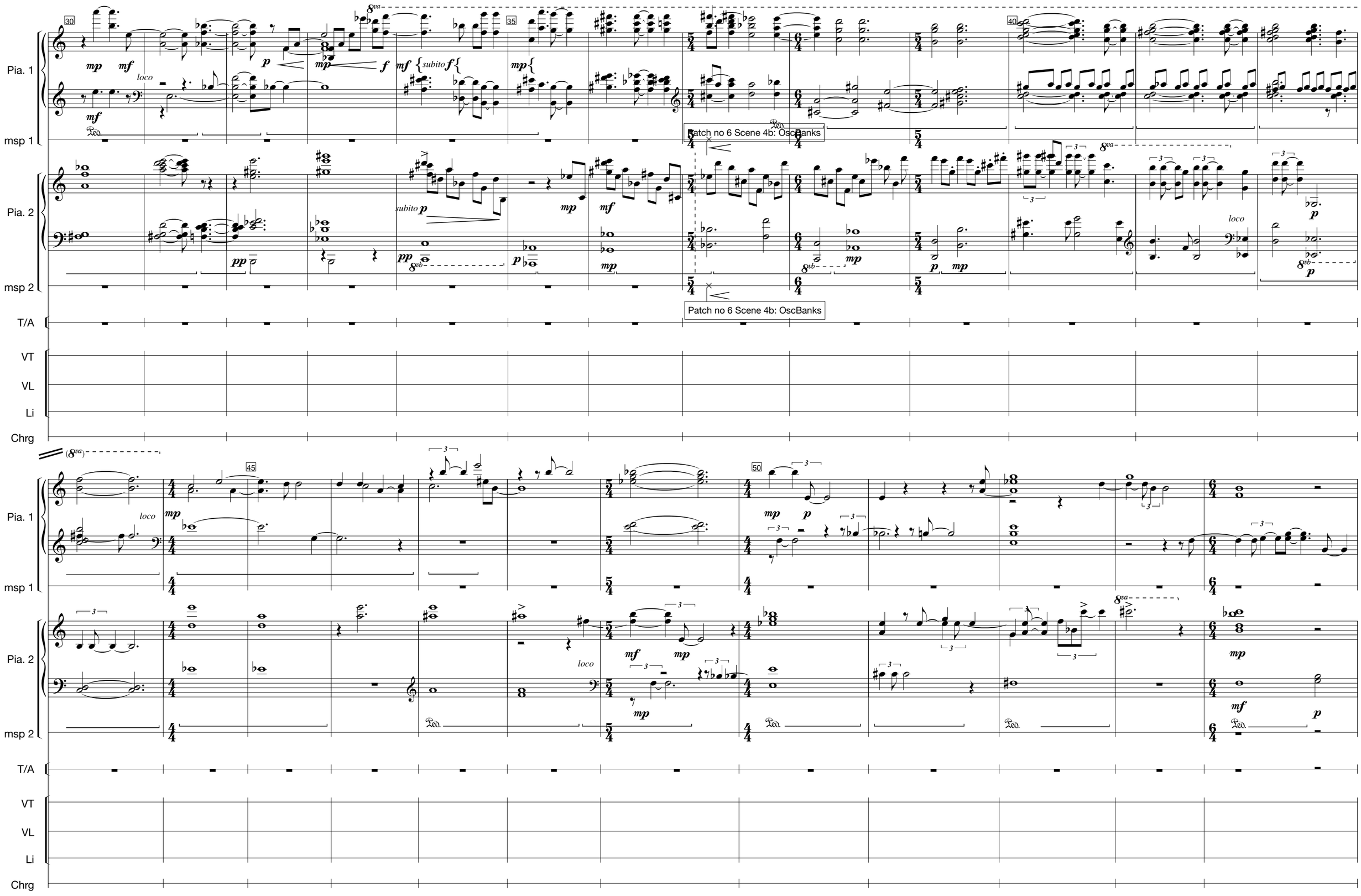
4:11:16 PM Tuesday, April 3, 2007 [Filename]

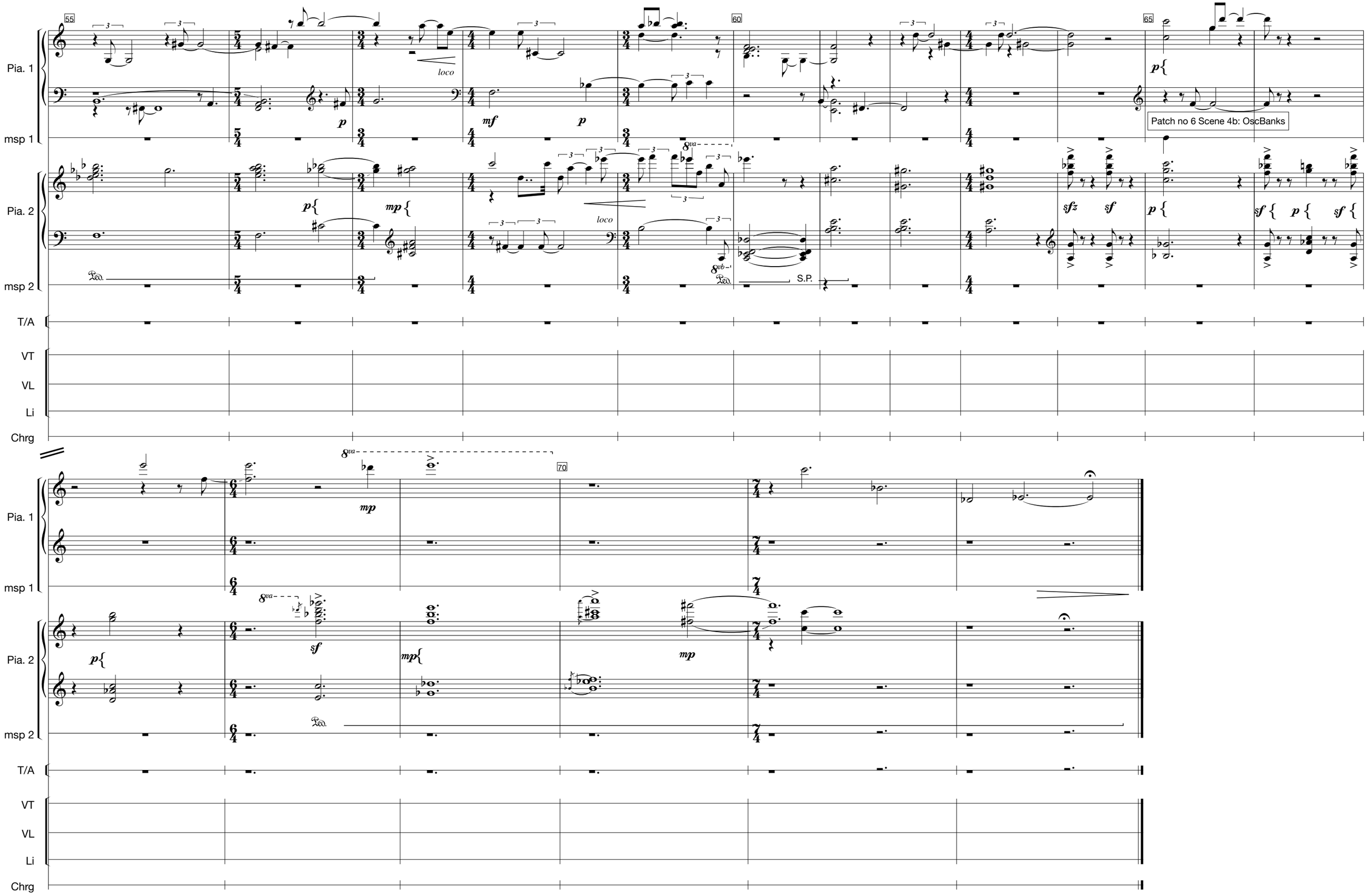


Cyclotron Speaker Setting




Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
15
20
25
(L.H.)
loco
l.v.

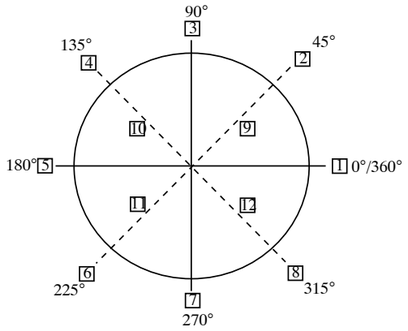

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
Patch no 6 Scene 4b: OscBanks
Patch no 6 Scene 4b: OscBanks


55
60
65
70
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
loco
Patch no 6 Scene 4b: OscBanks
S.P.

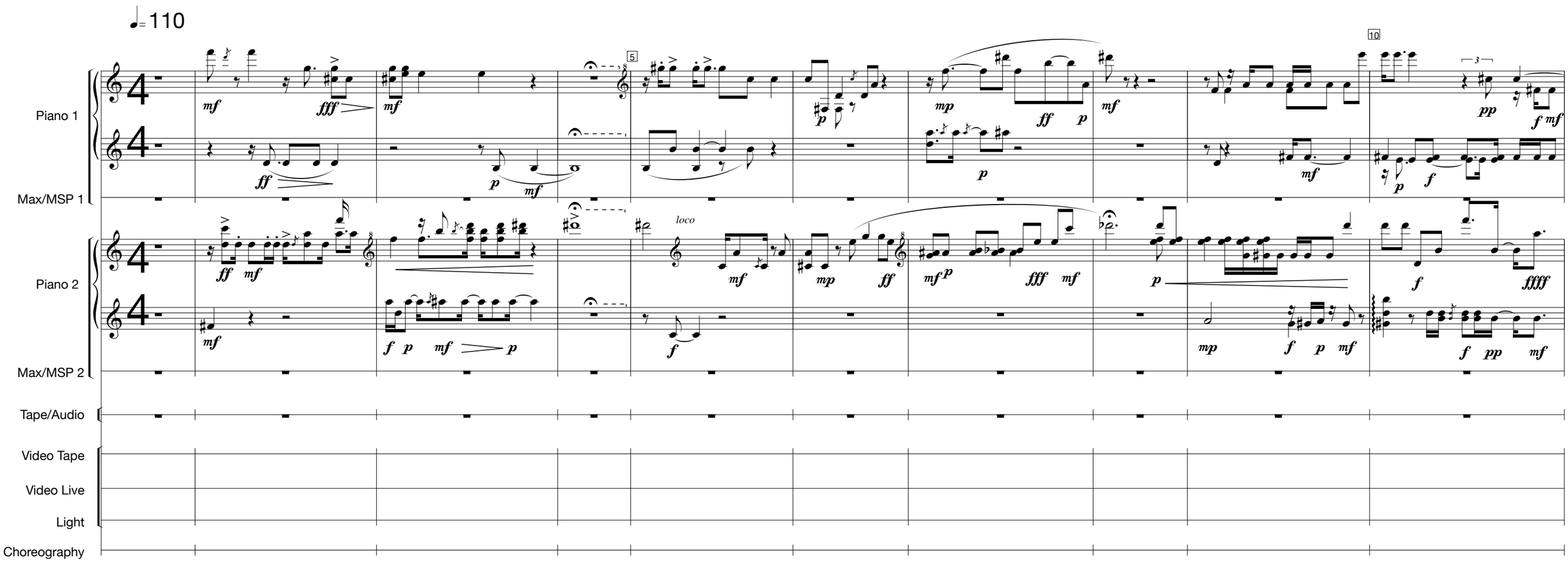
Cyclotron, Part IV-C - Meso

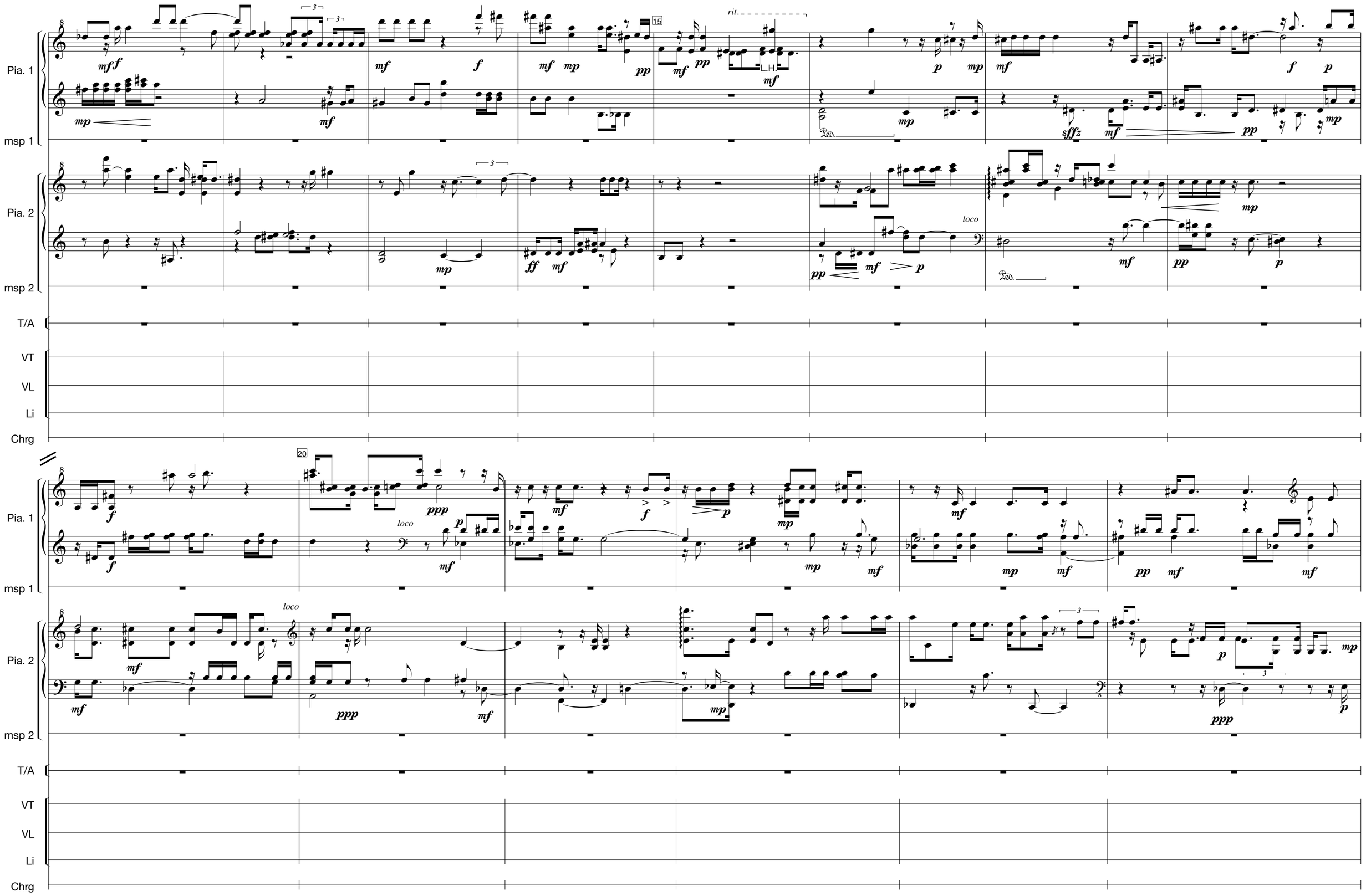
Michèl Koenders

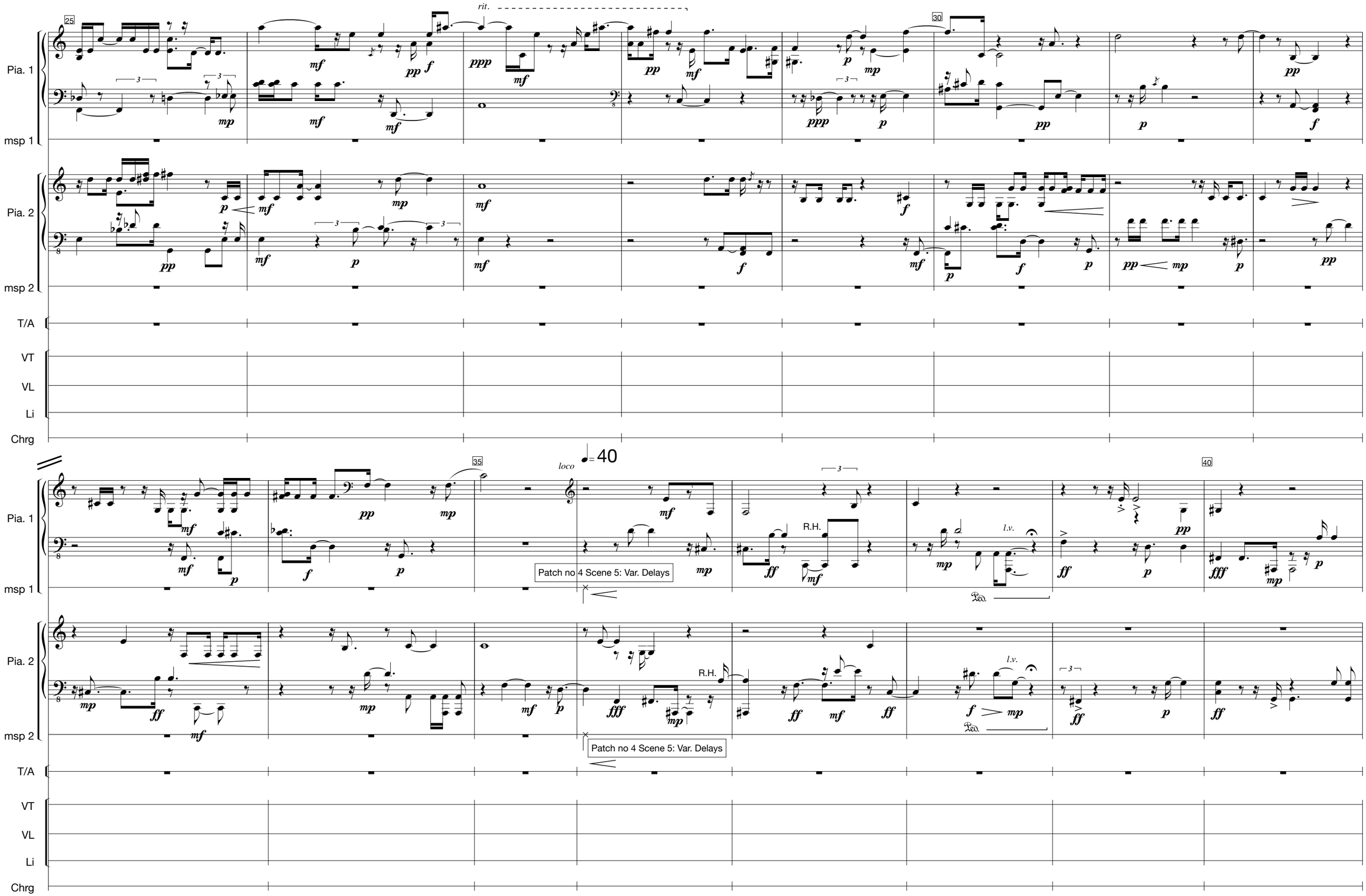
4:12:09 PM Tuesday, April 3, 2007 [Filename]

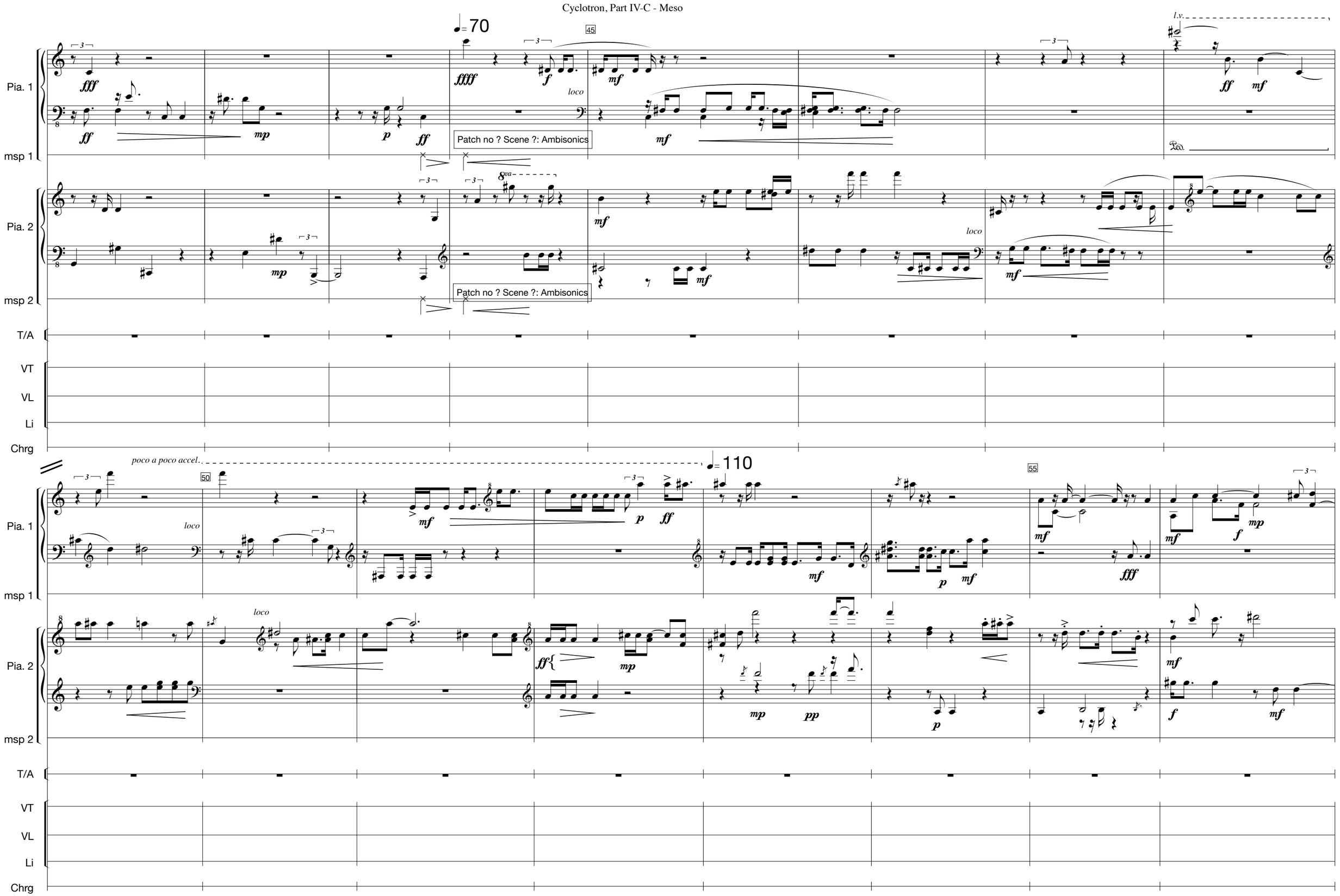


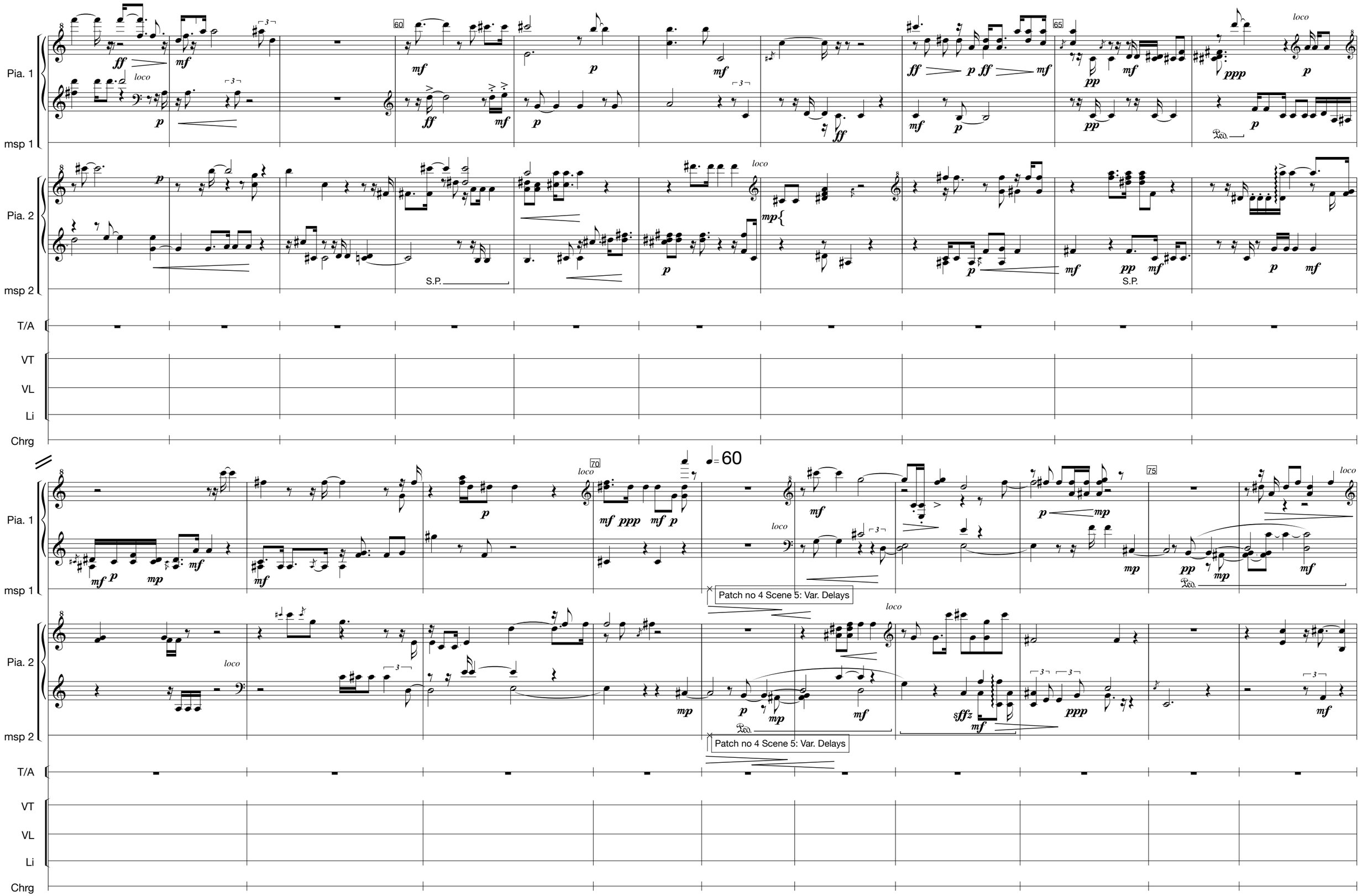
Cyclotron Speaker Setting

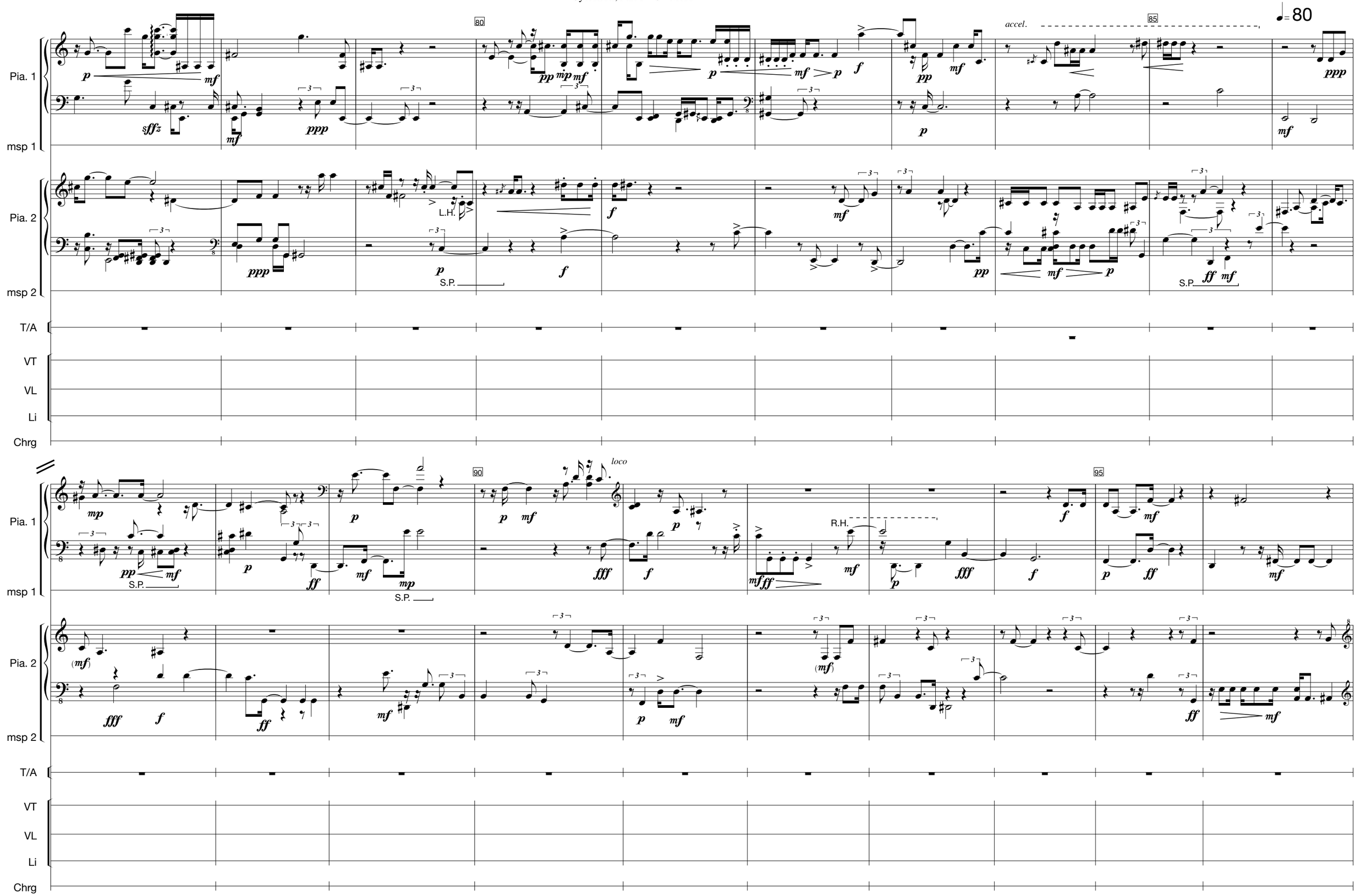


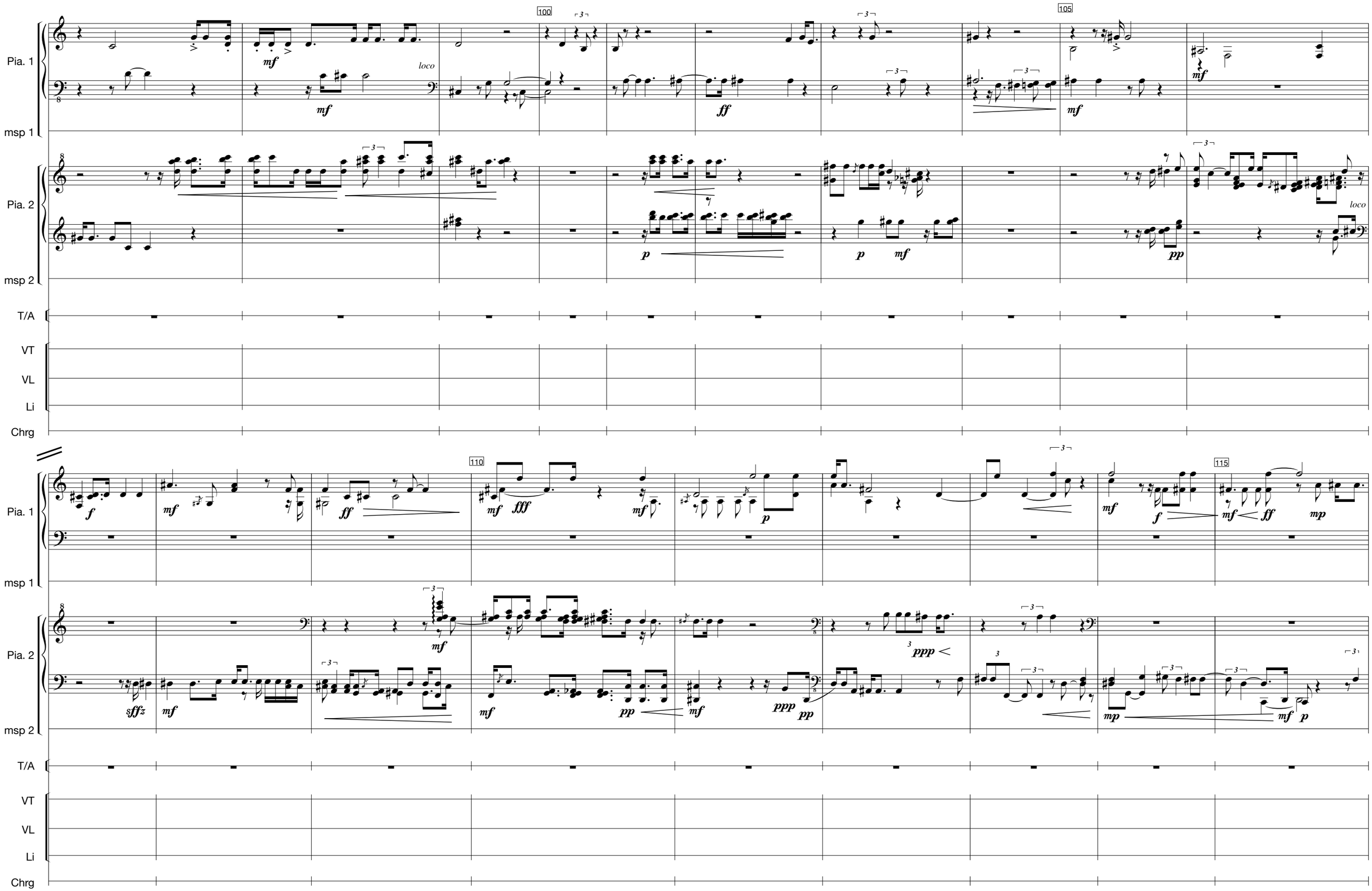

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
rit.
L.H.
loco
15
20

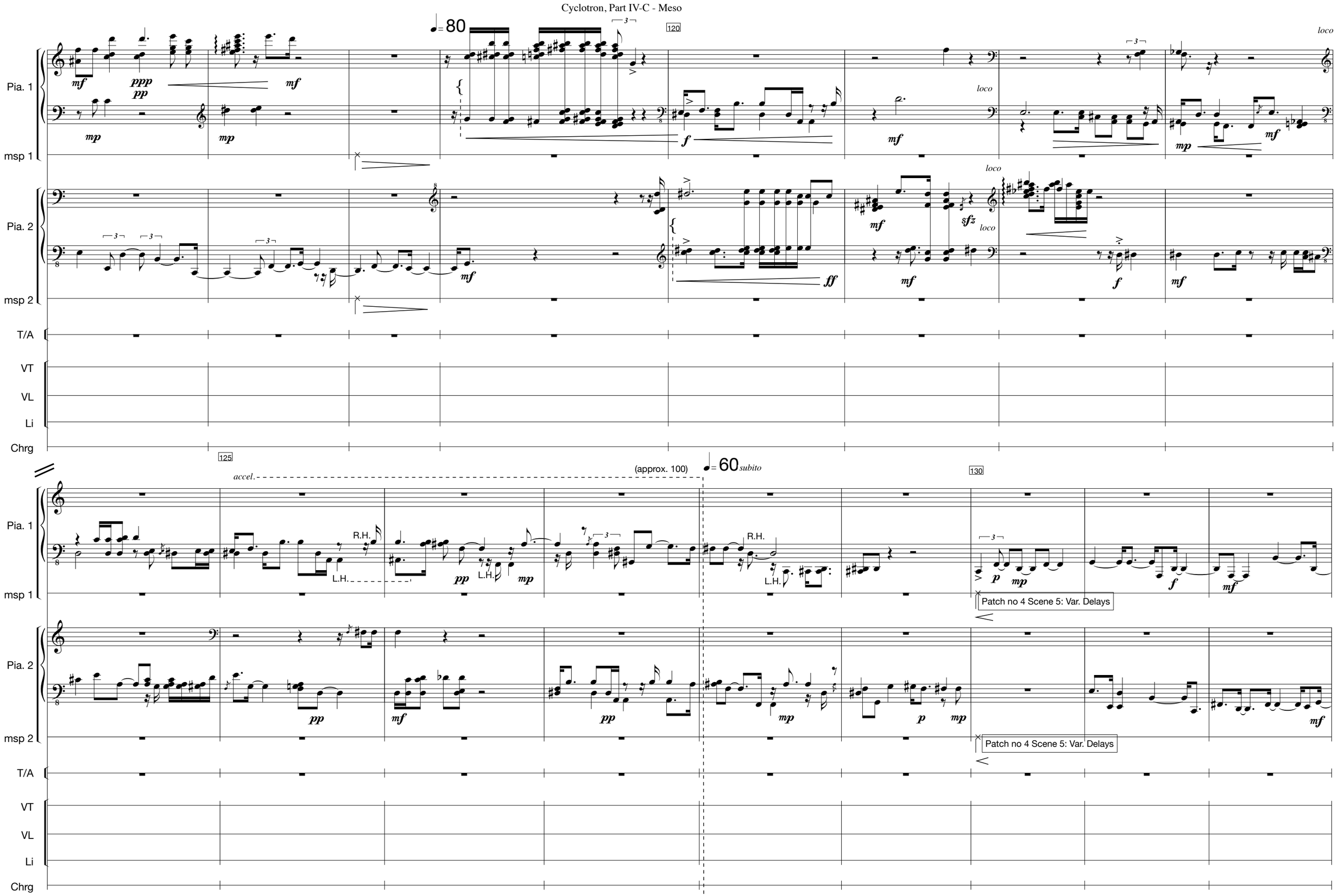

25
rit.
30
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
35
loco
♩= 40
Patch no 4 Scene 5: Var. Delays
R.H.
l.v.
40

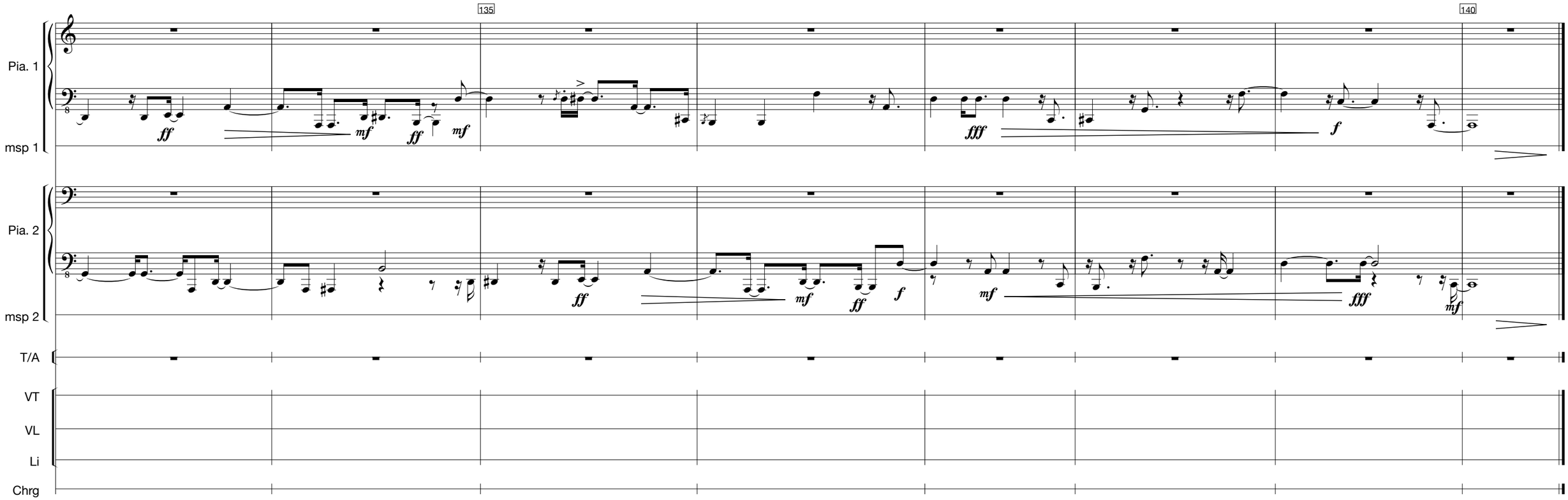

♩= 70
45
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
fff
ff
mp
p
ffff
f
mf
loco
l.v.
Patch no ? Scene ?: Ambisonics
8va
poco a poco accel.
♩= 110
50
55
fff
pp


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
60
65
70
75
loco
S.P.
♩= 60
Patch no 4 Scene 5: Var. Delays
Patch no 4 Scene 5: Var. Delays


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
80
accel.
85
90
95
L.H.
S.P.
R.H.
loco


Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
100
105
110
115
mf
loco
ff
p
pp
ppp
fff
f
mp
sffz

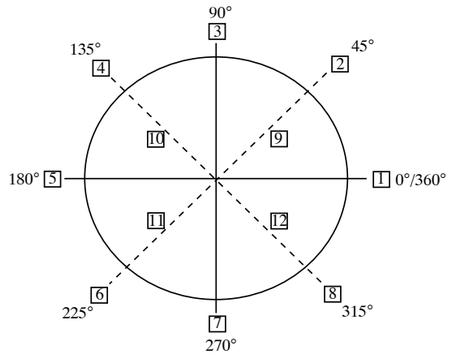

♩= 80
120
loco
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
125
accel.
(approx. 100)
♩= 60 subito
130
R.H.
L.H.
Patch no 4 Scene 5: Var. Delays


135
140
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg

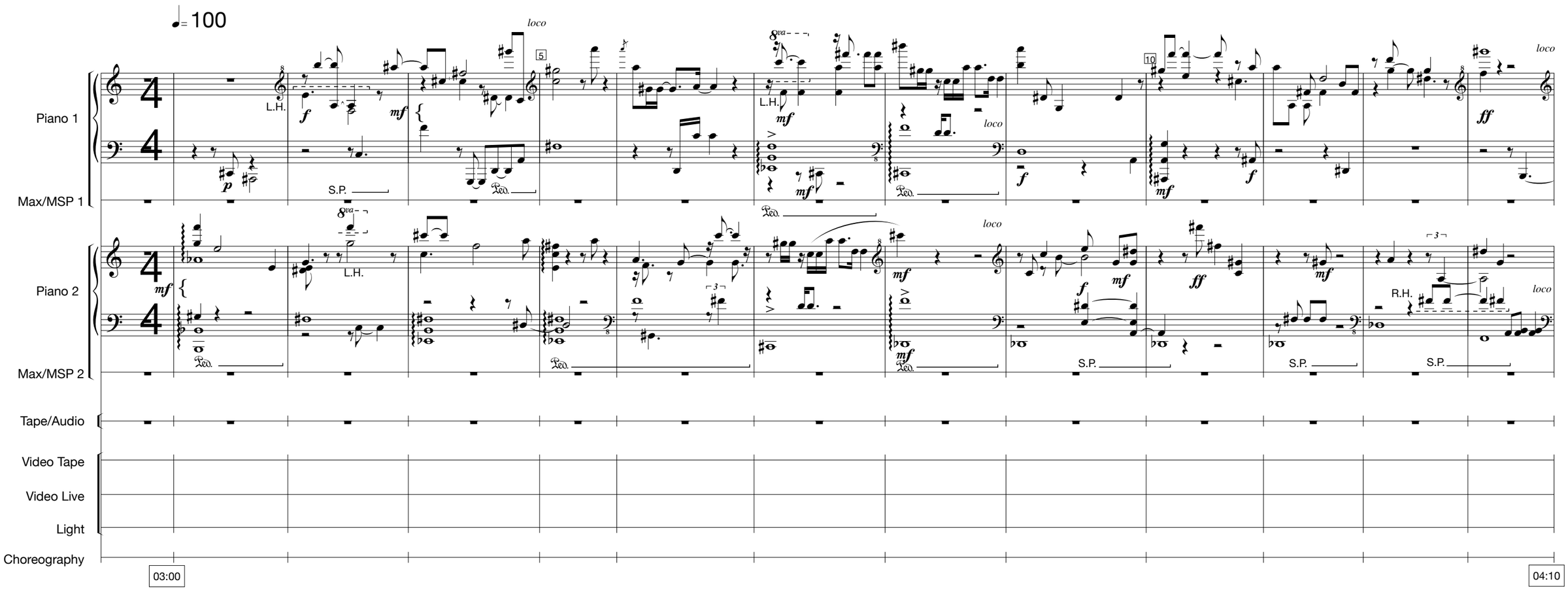
Cyclotron: The Conclusion (Part IV - d)

Michèl Koenders

4:14:59 PM Thursday, February 1, 2007 [Filename]



Cyclotron Speaker Setting



Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg

15 20 25 30

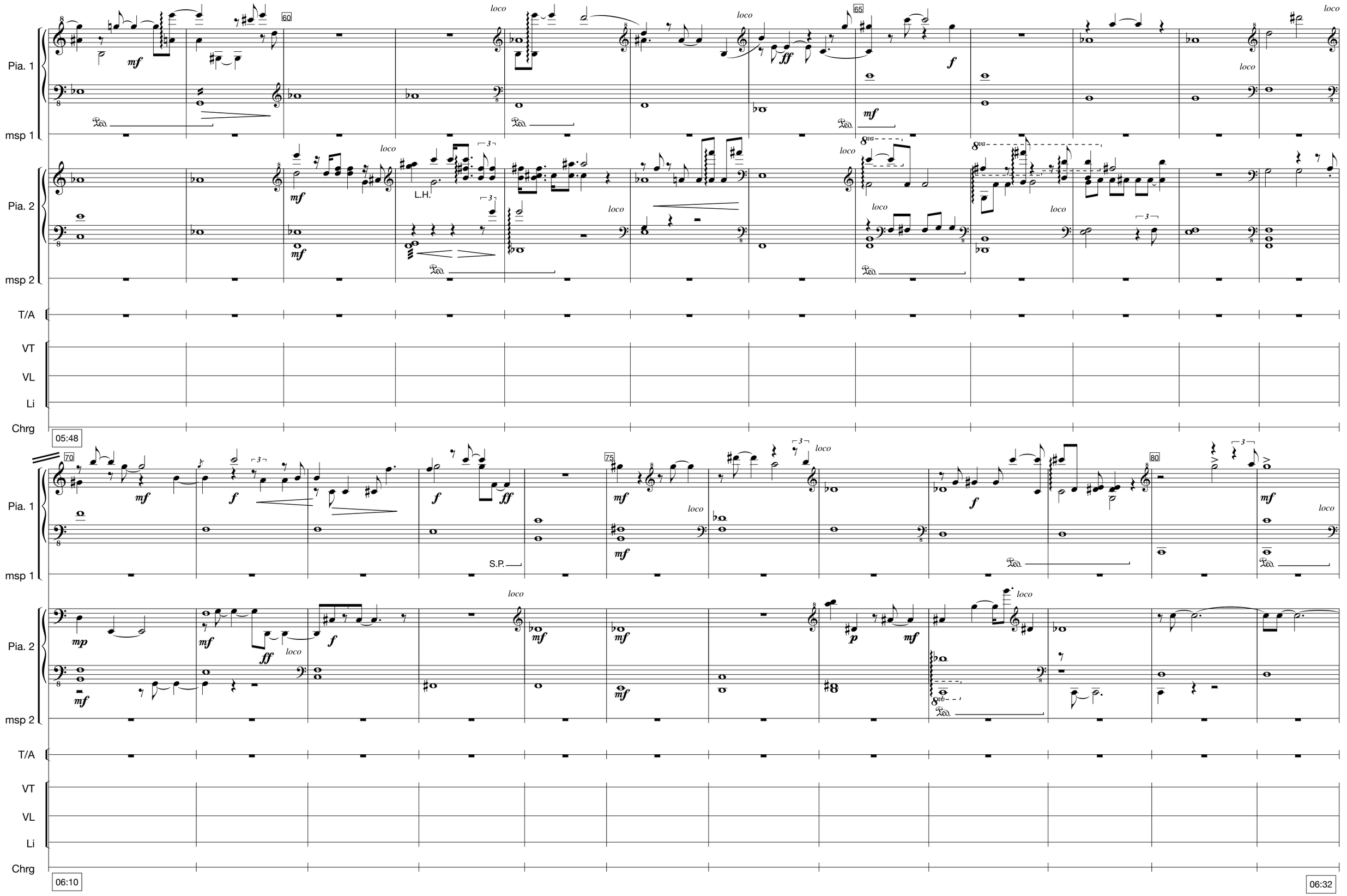
04:10 04:40 04:40

Cyclotron: The Conclusion (Part IV - d)

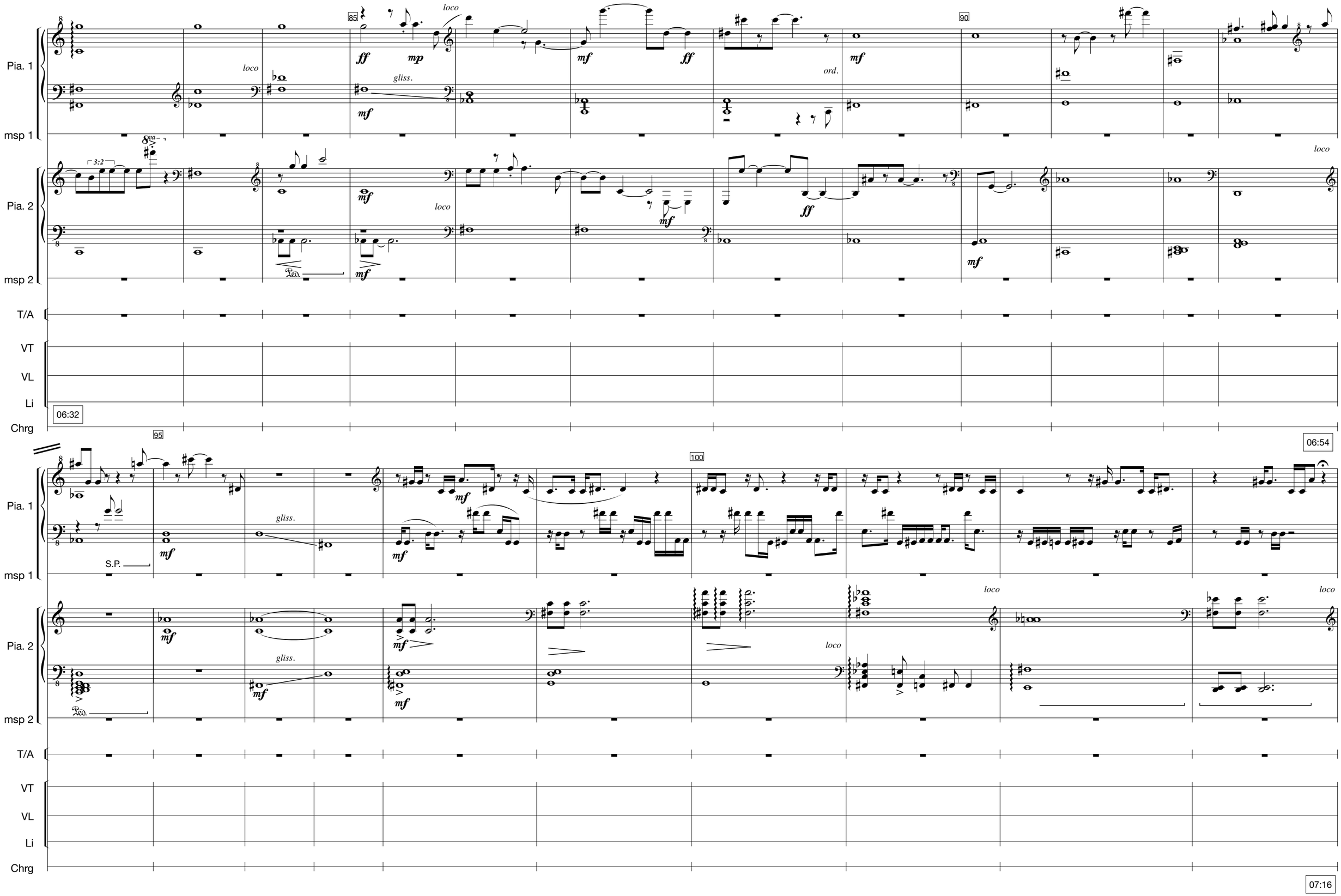
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg

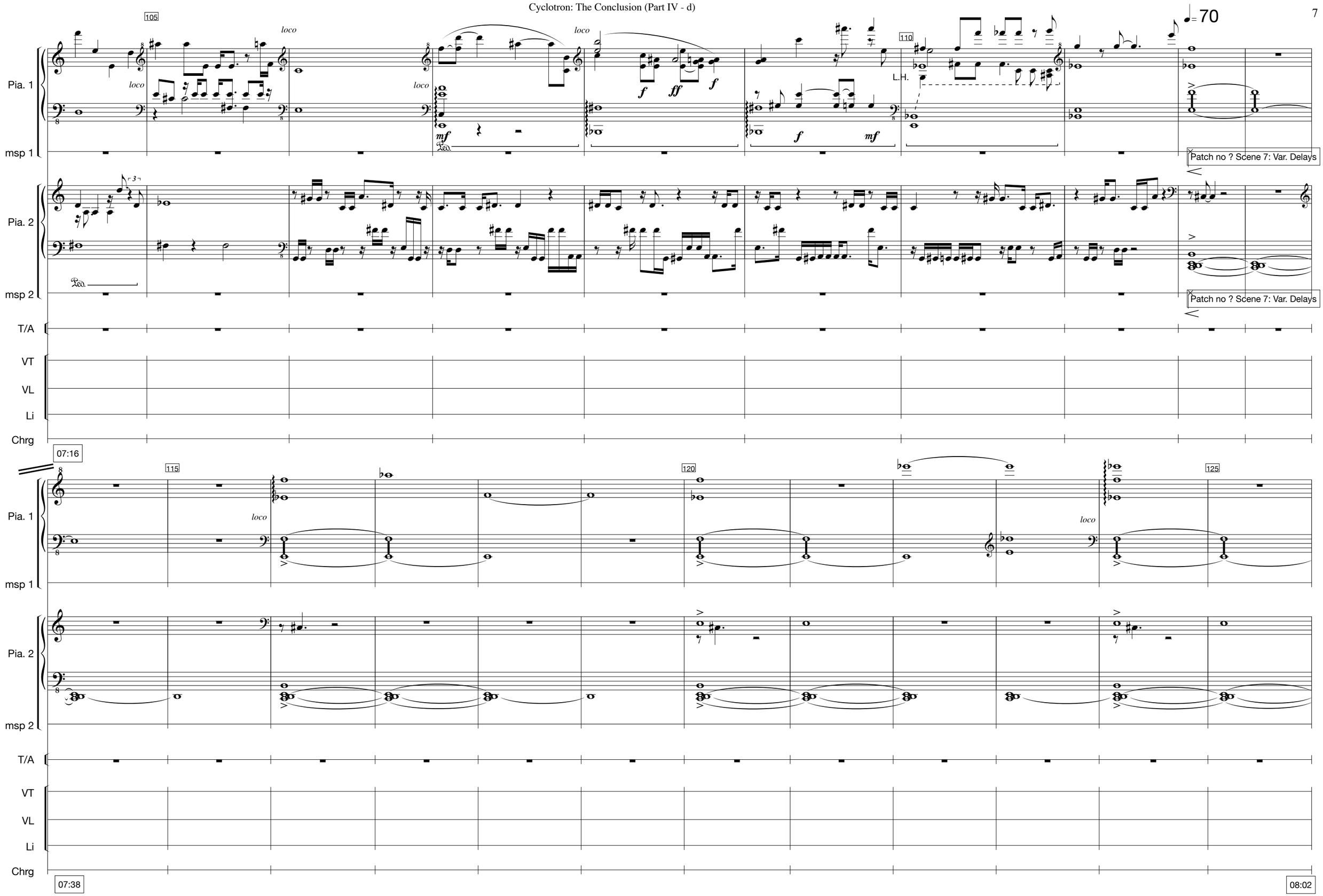
05:04

05:26

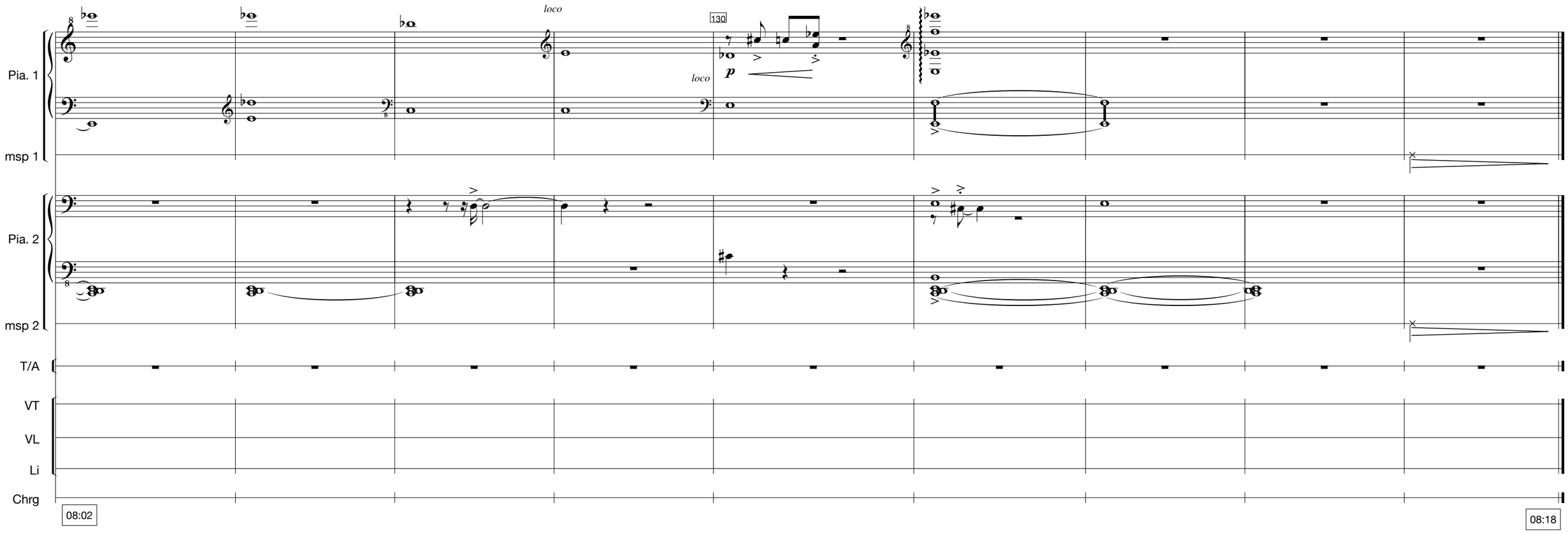

Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
60
65
70
75
80
05:48
06:10
06:32
mf
ff
f
mp
p
loco
L.H.
S.P.
8va
8vb

Cyclotron: The Conclusion (Part IV - d)




105
110
115
120
125
♩= 70
Pia. 1
msp 1
Pia. 2
msp 2
T/A
VT
VL
Li
Chrg
loco
mf
f
ff
L.H.
Patch no ? Scene 7: Var. Delays
07:16
07:38
08:02

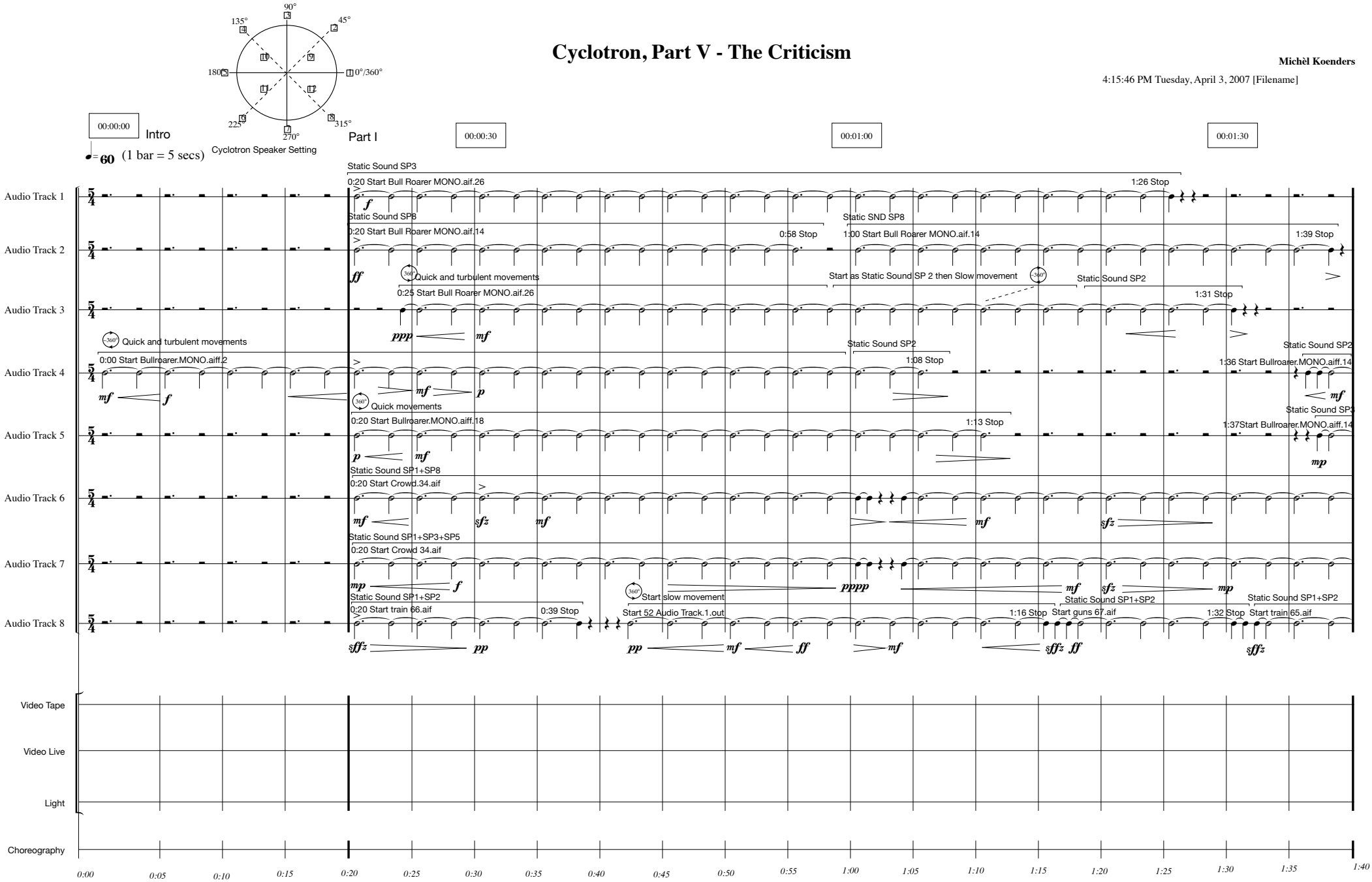
Cyclotron: The Conclusion (Part IV - d)

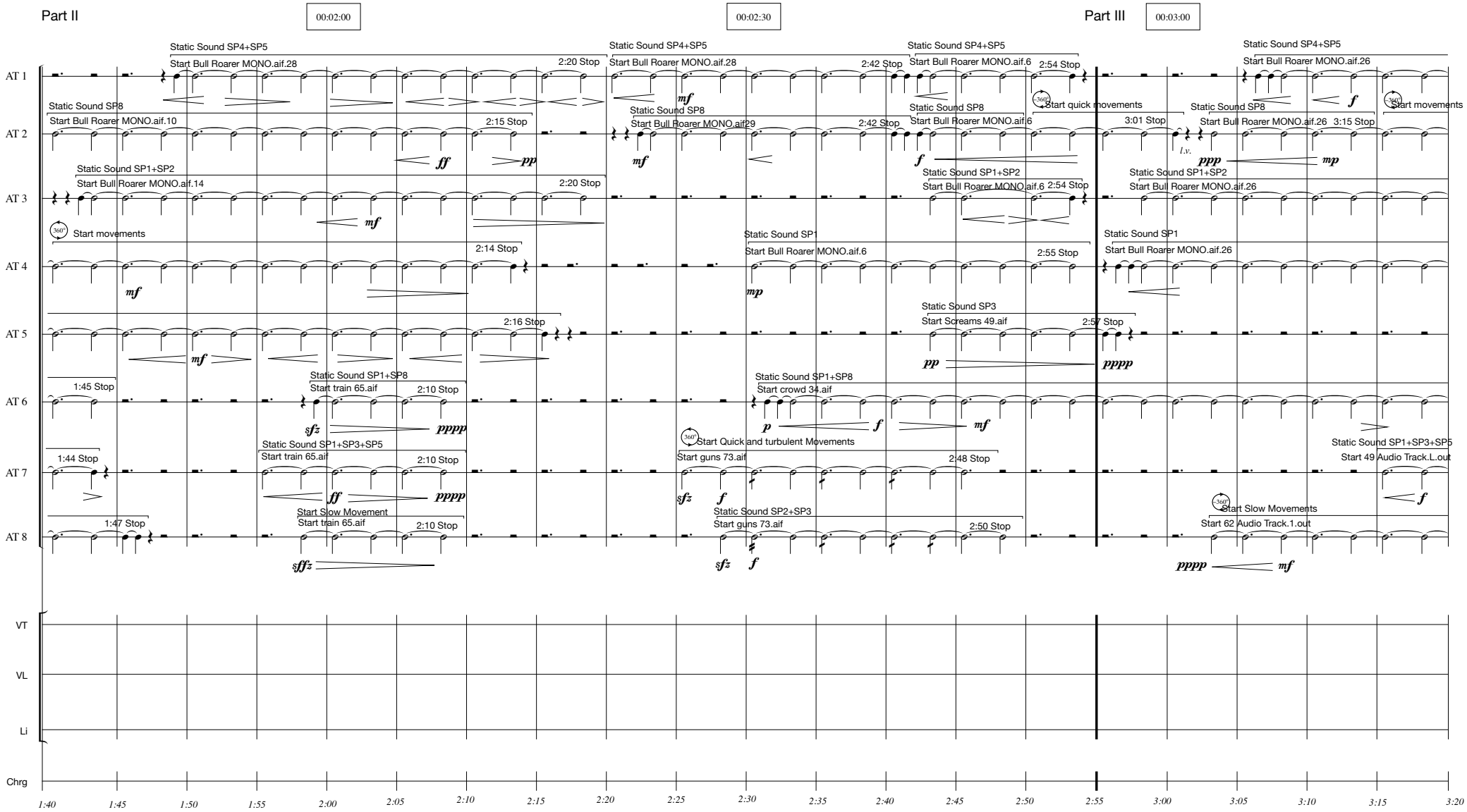


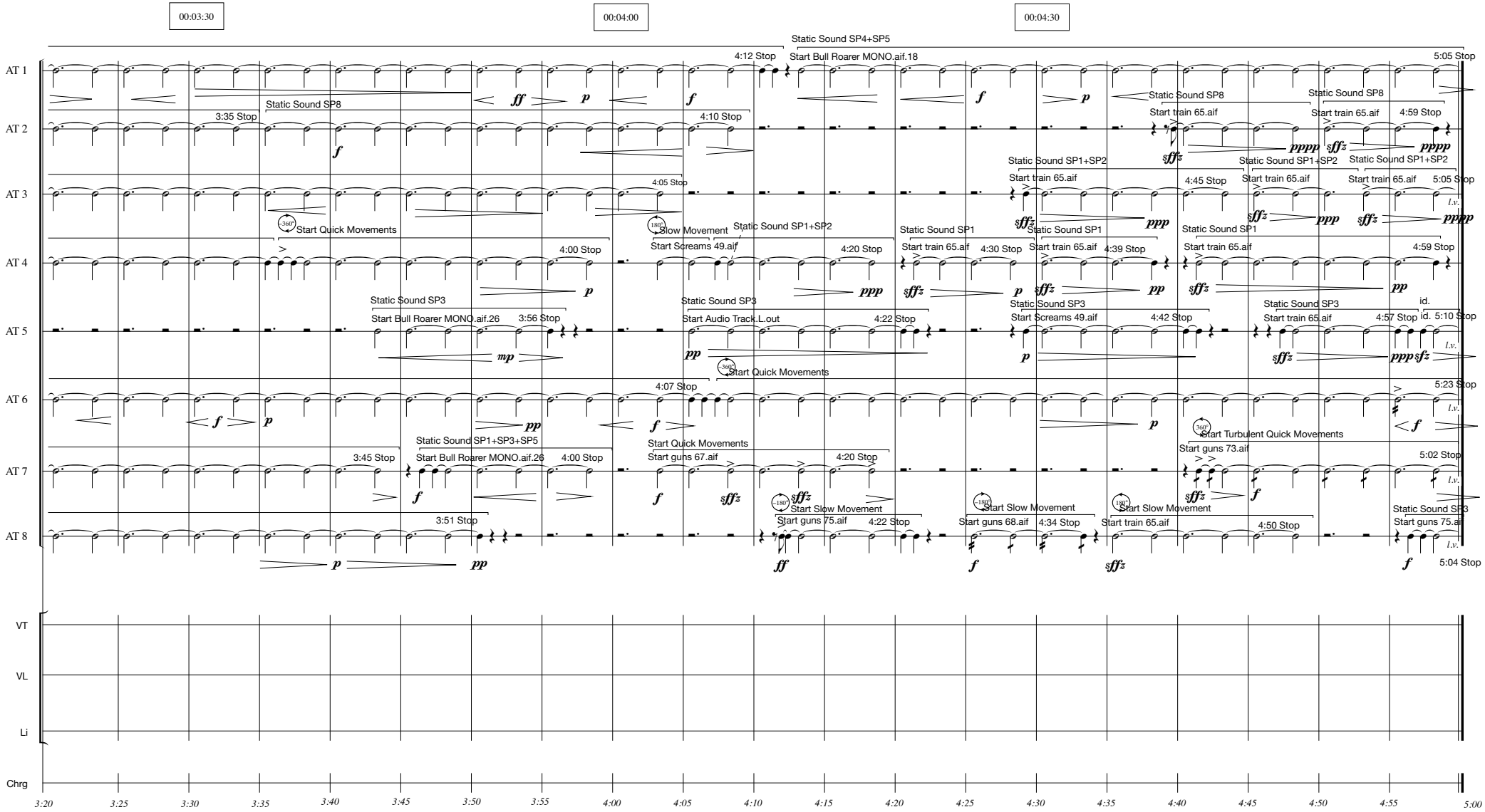
Cyclotron, Part V - The Criticism

Michèl Koenders

4:15:46 PM Tuesday, April 3, 2007 [Filename]




Part II
00:02:00
00:02:30
Part III
00:03:00
AT 1
AT 2
AT 3
AT 4
AT 5
AT 6
AT 7
AT 8
VT
VL
Li
Chrg
Static Sound SP4+SP5
Start Bull Roarer MONO.aif.28
2:20 Stop
Start Bull Roarer MONO.aif.6
2:42 Stop
2:54 Stop
Start Bull Roarer MONO.aif.26
Static Sound SP8
Start Bull Roarer MONO.aif.10
2:15 Stop
Start Bull Roarer MONO.aif29
Start quick movements
3:01 Stop
3:15 Stop
Static Sound SP1+SP2
Start Bull Roarer MONO.aif.14
Start movements
Static Sound SP1
2:14 Stop
2:55 Stop
Static Sound SP3
Start Screams 49.aif
2:16 Stop
2:57 Stop
1:45 Stop
Static Sound SP1+SP8
Start train 65.aif
2:10 Stop
Start crowd 34.aif
Start Quick and turbulent Movements
Static Sound SP1+SP3+SP5
Start guns 73.aif
2:48 Stop
1:44 Stop
Start 49 Audio Track.L.out
Start Slow Movement
Start Slow Movements
Static Sound SP2+SP3
2:50 Stop
1:47 Stop
Start 62 Audio Track.1.out
1:40
1:45
1:50
1:55
2:00
2:05
2:10
2:15
2:20
2:25
2:30
2:35
2:40
2:45
2:50
2:55
3:00
3:05
3:10
3:15
3:20

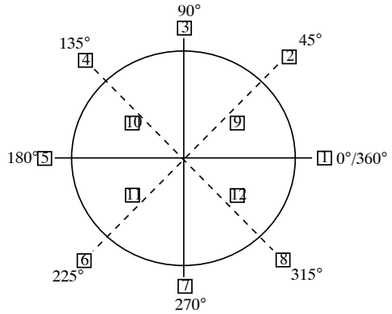

00:03:30
00:04:00
00:04:30
AT 1
AT 2
AT 3
AT 4
AT 5
AT 6
AT 7
AT 8
VT
VL
Li
Chrg
Static Sound SP4+SP5
Start Bull Roarer MONO.aif.18
4:12 Stop
5:05 Stop
Static Sound SP8
3:35 Stop
4:10 Stop
Start train 65.aif
4:59 Stop
Static Sound SP1+SP2
4:05 Stop
4:45 Stop
5:05 Stop
Start Quick Movements
Slow Movement
Start Screams 49.aif
4:00 Stop
4:20 Stop
Static Sound SP1
4:30 Stop
4:39 Stop
4:59 Stop
Static Sound SP3
Start Bull Roarer MONO.aif.26
3:56 Stop
Start Audio Track.L.out
4:22 Stop
4:42 Stop
4:57 Stop
5:10 Stop
4:07 Stop
5:23 Stop
Start Turbulent Quick Movements
Static Sound SP1+SP3+SP5
3:45 Stop
Start guns 67.aif
Start guns 73.aif
5:02 Stop
Start Slow Movement
Start guns 75.aif
Start guns 68.aif
4:34 Stop
4:50 Stop
3:51 Stop
5:04 Stop
3:20
3:25
3:30
3:35
3:40
3:45
3:50
3:55
4:00
4:05
4:10
4:15
4:20
4:25
4:30
4:35
4:40
4:45
4:50
4:55
5:00

Cyclotron, Part VI - The Touch (TDress)

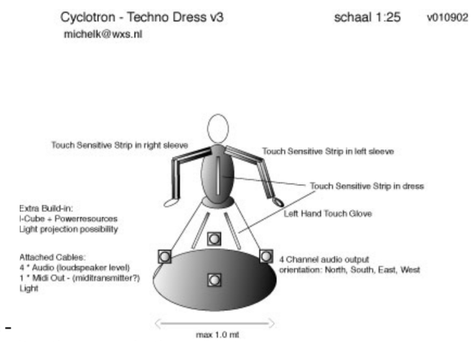
For 2 Dresses with built in MIDI touch sensitive strips

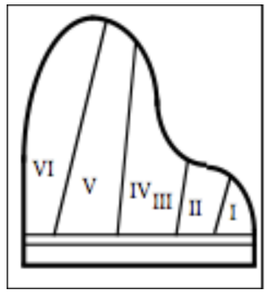
Michèl Koenders

4:17:53 PM Tuesday, April 3, 2007 [Filename]



Cyclotron Speaker Setting





Register notation is used for
all piano parts.
The preciese registers depends on
the actual inside framework of the piano

Use small chains

Use chinese metal balls

Use guitar slide

Use Wirebrushes

Use soft mallets

♩= 60 (1 bar = 5 secs.: ♩= 1 Sec.)

The two players are using - most of the time -
the touch-sensitive strips on their dresses to alter the sounds they create
- at the same time - inside the piano

00:00:00 00:00:30 00:01:00

Part I

Dress I

Inside the piano

Use small chains - Take small chains in left hand
play irregular with short sudden movements

Play touch-strip
Left Arm
Right Arm
Front
Back of other player
Left Leg
Right Leg

Play irregular with short sudden movements
Throw chains

Piano I

Slide to other registers

Tape I

Block pedal !

Play touch-strip
Dress II
Left Arm
Right Arm
Front
Back of other player
Left Leg
Right Leg

Change to right arm

Change to left arm

Take small chains in left hand

Inside the piano

Play irregular with short sudden movements

Throw chains on strings

Piano II

Tape II

Block pedal !

Start Mult. Delay Lines + Ambisonic Sound movement

poco a poco accel. movements

Use short delay times

Max/MSP

Video Live

Light

Choreography

00:00:00 00:00:30 00:01:00

Part II

00:01:30 | 00:02:00 | 00:02:30

D-I

Right arm

Use slide

Make tiny sqeek sounds

Throw slide on strings and let it bounce and roll freely

Pia-I

Throw slide on strings

T-I

D-II

change to right arm

Left arm

Right arm

Pia-II

Throw chains on strings

(Ord. on string)

Use slide

Throw slide on strings

Make tiny sqeek sound

Put slide on strings and let it bounce and roll freely

T-II

M/M

short delay times → long delay times

static short delay times

longer var. delay times →

V.L.

Li.

Chrg

00:01:30 | 00:02:00 | 00:02:30

Part III

00:03:00 00:03:30 00:04:00

D-I

Quick pressure changes

Inside the piano

Use Wirebrushes

Knock on wood: use as in a 'rimshot'

Mix wth normal use of wirebrushes

Pia-I

Move slowly to the end of the string

Pull string

Use Wirebrushes

T-I

D-II

Quick pressure changes

Inside the piano

Use Wirebrushes

Play before 'Bridge' in piano

Pia-II

Play before 'Bridge' in piano

Scrape Strings

Play before 'Bridge' in piano

T-II

M/M

Use static delay times

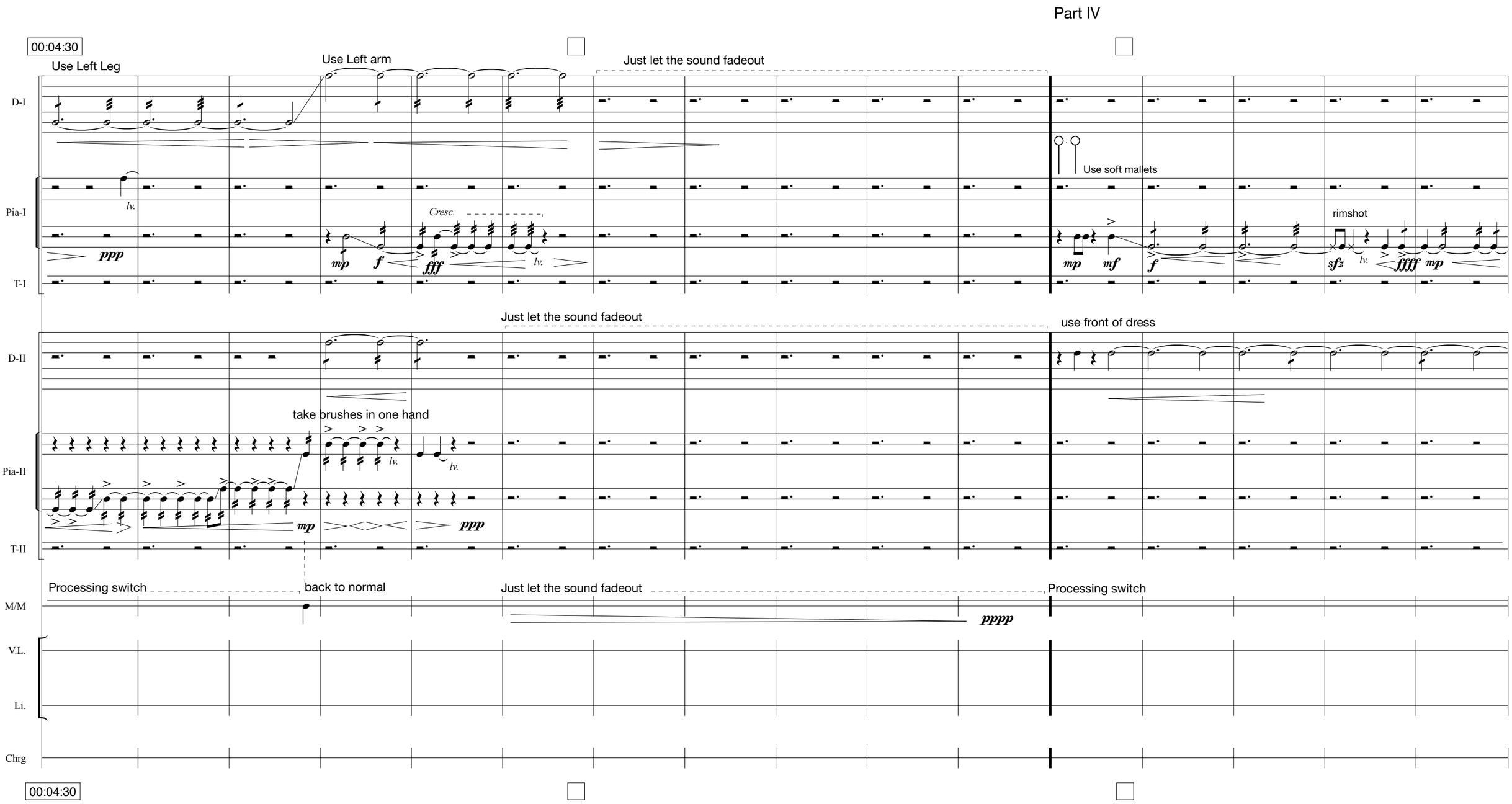
Use dynamic delay times

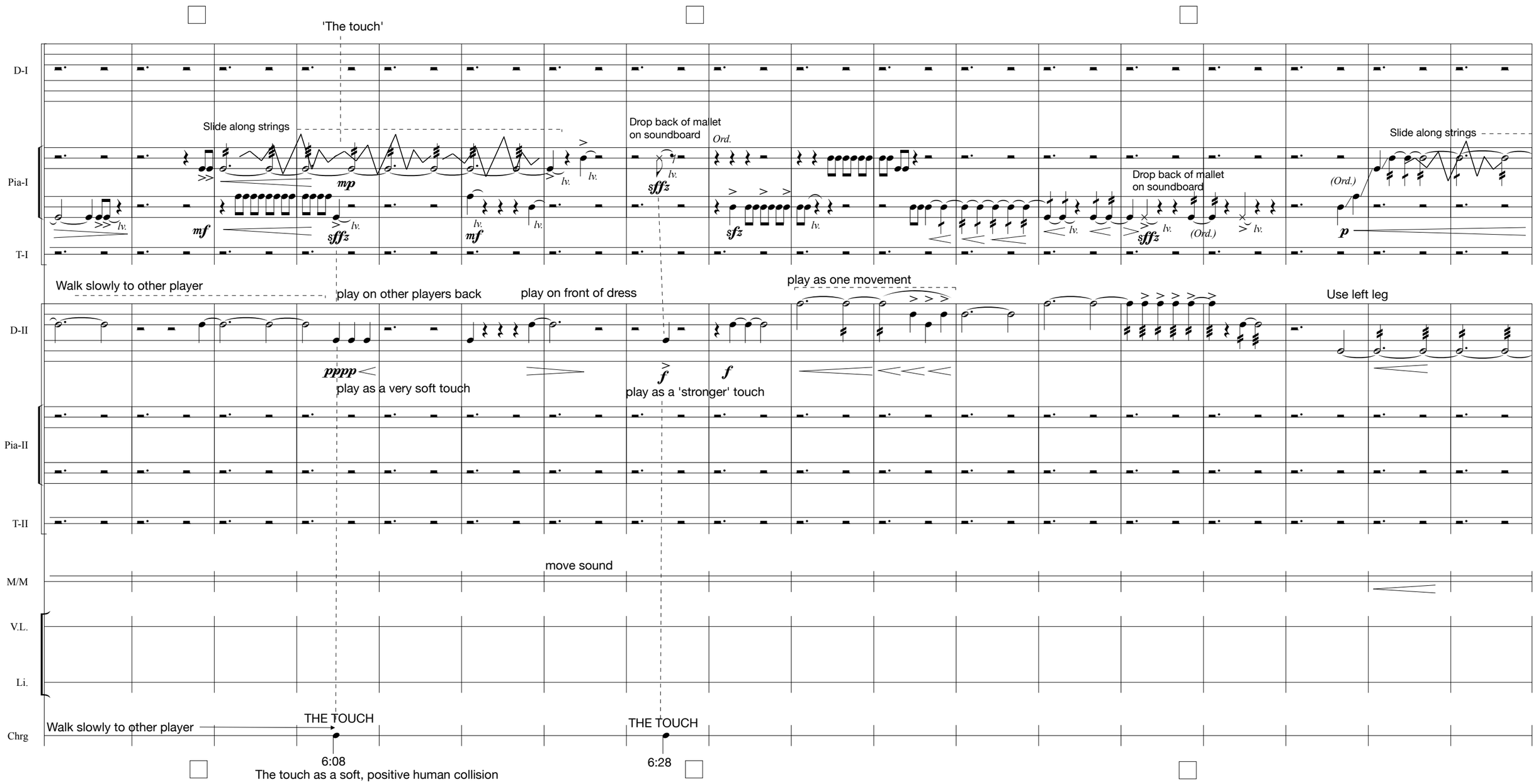
V.L.

Li.

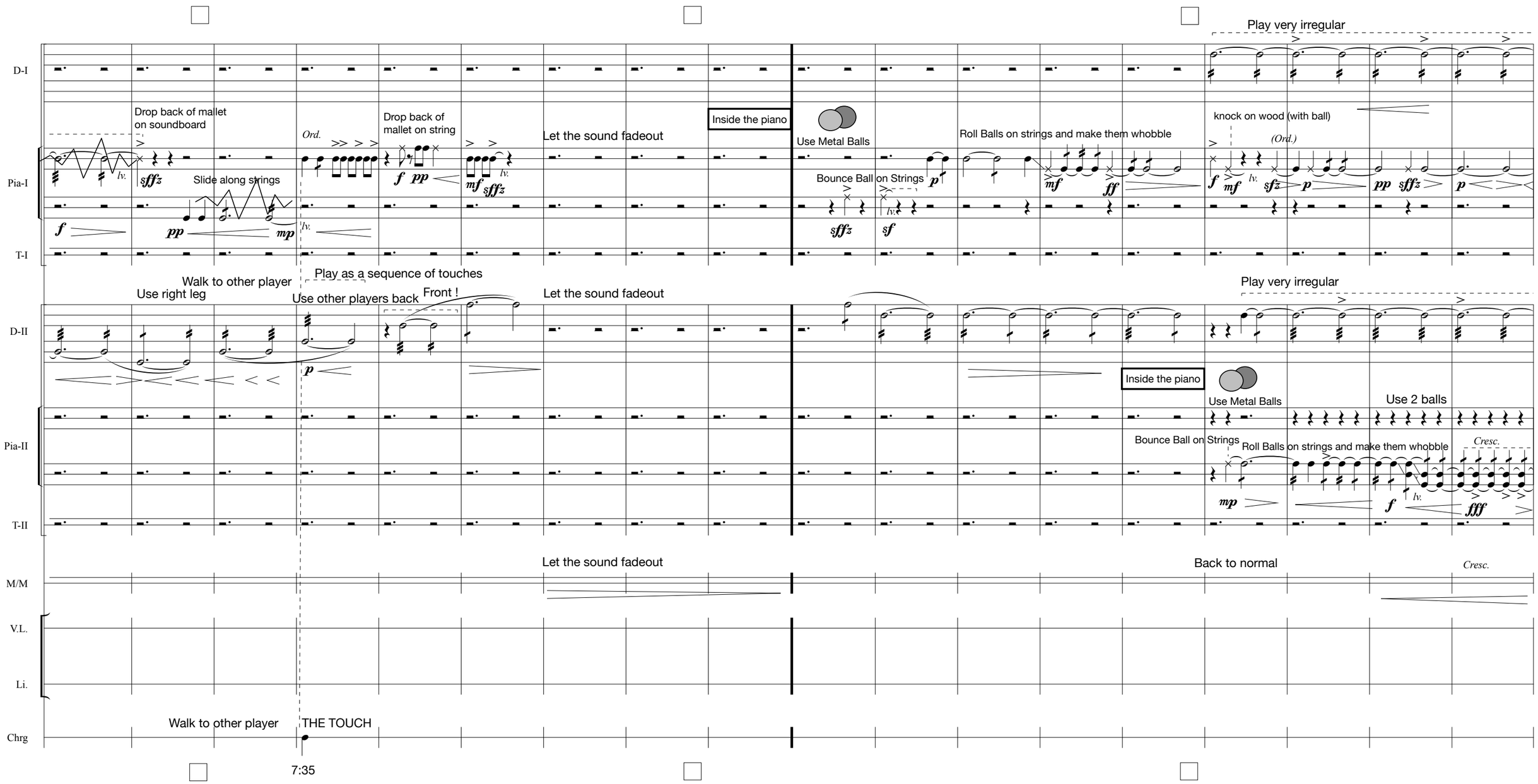
Chrg

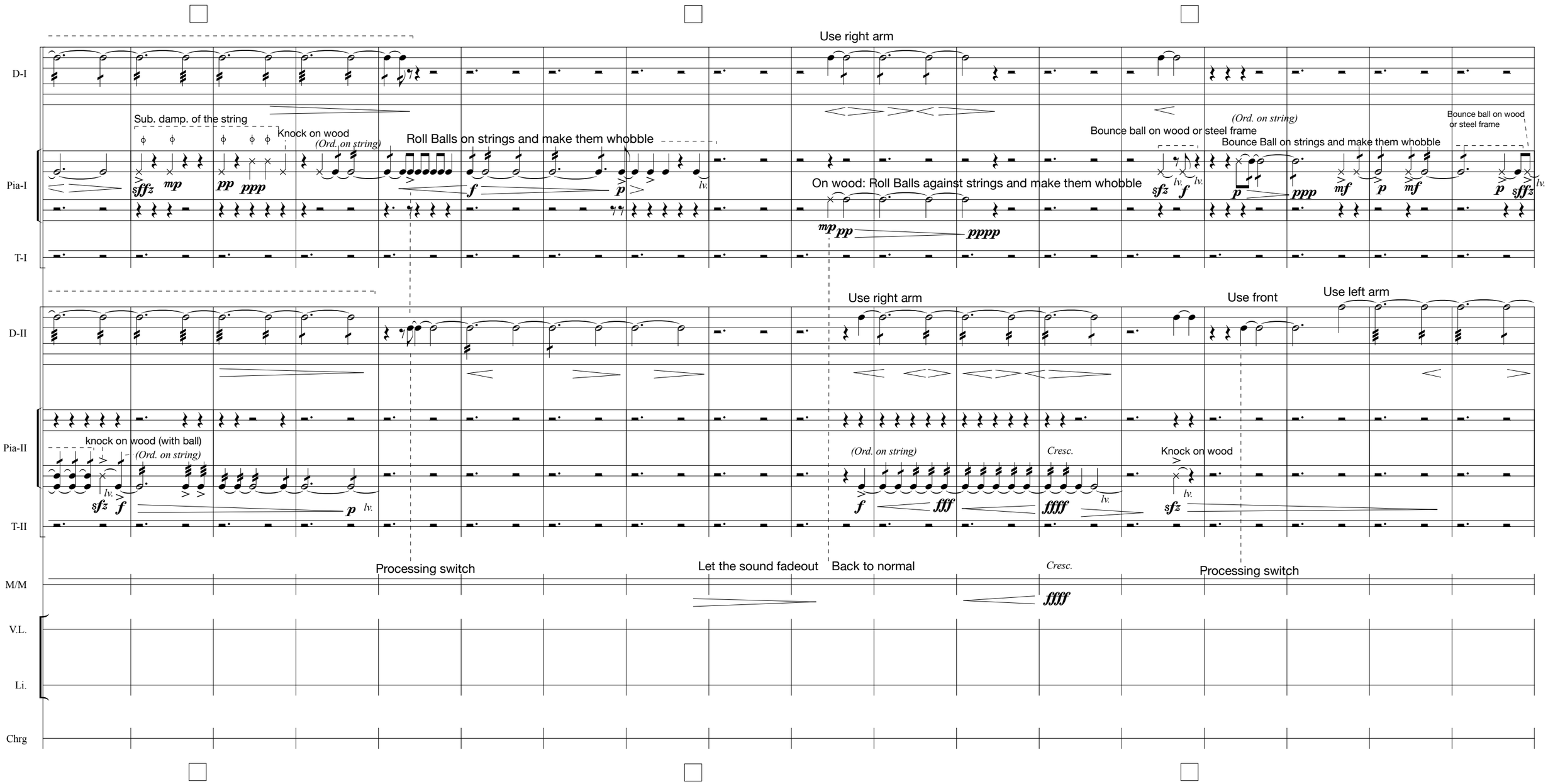
00:03:00 00:03:30 00:04:00

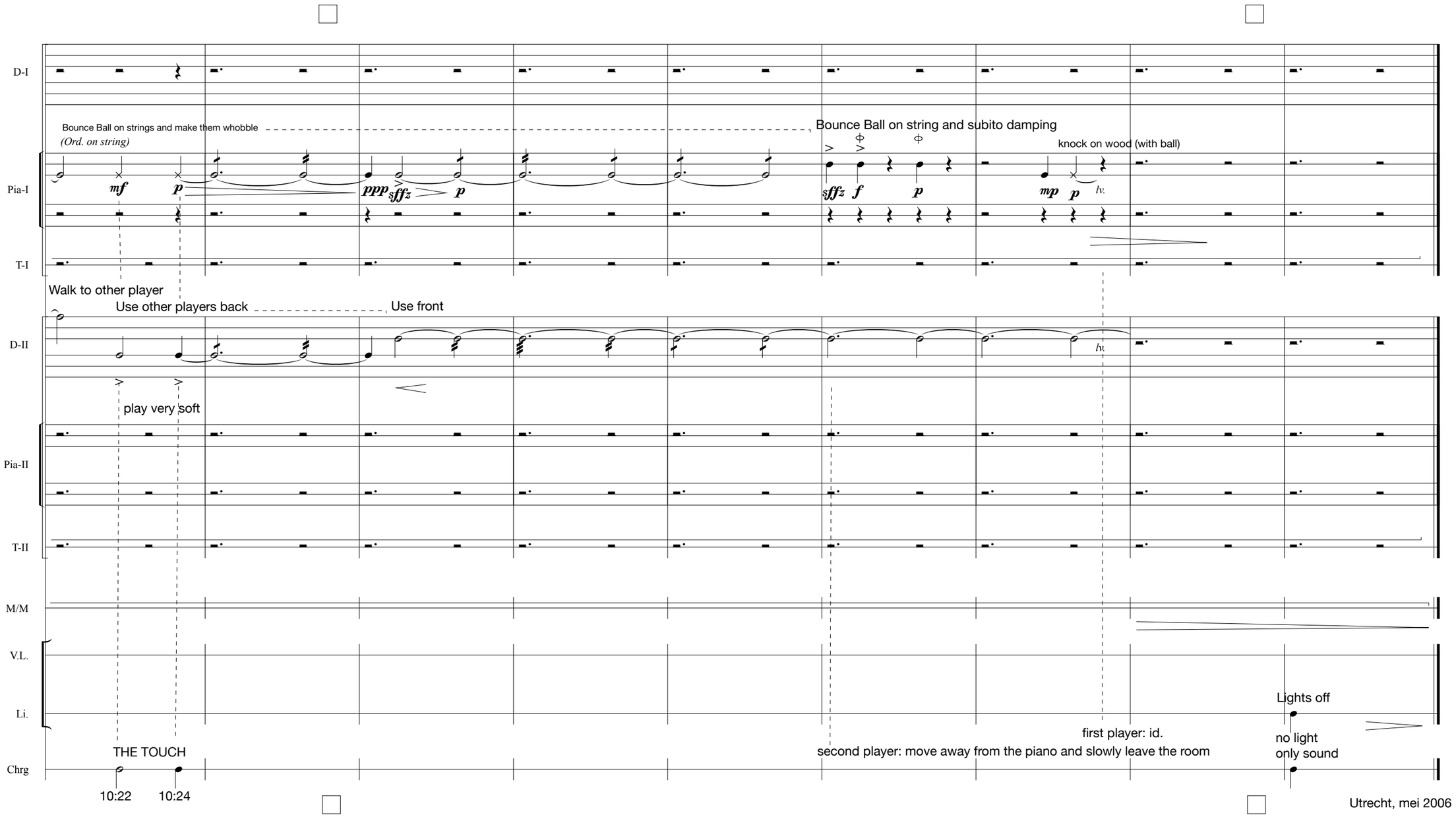

Part IV
00:04:30
Use Left Leg
Use Left arm
Just let the sound fadeout
D-I
Use soft mallets
Pia-I
lv.
ppp
Cresc.
mp
f
fff
lv.
mp
mf
f
rimshot
sfz
lv.
ffff
mp
T-I
Just let the sound fadeout
use front of dress
D-II
take brushes in one hand
Pia-II
lv.
lv.
mp
ppp
T-II
Processing switch
back to normal
Just let the sound fadeout
Processing switch
M/M
pppp
V.L.
Li.
Chrg
00:04:30


'The touch'
D-I
Pia-I
T-I
Slide along strings
Drop back of mallet
on soundboard
Ord.
Drop back of mallet
on soundboard
(Ord.)
Slide along strings
mf
mp
sffz
mf
sffz
sffz
(Ord.)
p
Walk slowly to other player
play on other players back
play on front of dress
play as one movement
Use left leg
D-II
pppp
play as a very soft touch
f
f
play as a 'stronger' touch
Pia-II
T-II
move sound
M/M
V.L.
Li.
Chrg
Walk slowly to other player
THE TOUCH
THE TOUCH
6:08
6:28
The touch as a soft, positive human collision

Part V


D-I
Pia-I
T-I
D-II
Pia-II
T-II
M/M
V.L.
Li.
Chrg
Play very irregular
Drop back of mallet on soundboard
Slide along strings
Ord.
Drop back of mallet on string
Let the sound fadeout
Inside the piano
Use Metal Balls
Bounce Ball on Strings
Roll Balls on strings and make them whobble
knock on wood (with ball)
(Ord.)
Walk to other player
Use right leg
Play as a sequence of touches
Use other players back
Front !
Let the sound fadeout
Play very irregular
Inside the piano
Use Metal Balls
Use 2 balls
Bounce Ball on Strings
Roll Balls on strings and make them whobble
Cresc.
Let the sound fadeout
Back to normal
Cresc.
Walk to other player
THE TOUCH
7:35


D-I
Use right arm
Sub. damp. of the string
Knock on wood
(Ord. on string)
Roll Balls on strings and make them whobble
Bounce ball on wood or steel frame
(Ord. on string)
Bounce Ball on strings and make them whobble
Bounce ball on wood
or steel frame
Pia-I
On wood: Roll Balls against strings and make them whobble
T-I
D-II
Use right arm
Use front
Use left arm
Pia-II
knock on wood (with ball)
(Ord. on string)
(Ord. on string)
Cresc.
Knock on wood
T-II
Processing switch
Let the sound fadeout
Back to normal
Cresc.
Processing switch
M/M
V.L.
Li.
Chrg



Utrecht, mei 2006