



# Solfeggio

for solo piano, feedback interaction and objects


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Composed for Rei Nakamura

Much of this piece is about the performer's reaction and responses to a classic feedback loop, prepared around the piano. The feedback loop is constructed by a specially designed microphone attached to a plastic pipe, sending the input signal via a mixer to a small distorted guitar amplifier.

#### The performer needs

- A piano with the lid completely detached
- An extra tall microphone stand, preferably around 2,5-3 meters
- A specially prepared microphone-inside-a-plastic-pipe, to be used as a Pendulum Microphone (P. Mic.) in the piece.
- A small mixer, for controlling the level of the Pendulum Microphone signal
- A small guitar (combo) amplifier, with inbuilt distortion. Preferably a Kustom tube 12A, or similar.
- 4 Aluminium pipes numbered short to long: I (C $\sharp$ ) - II - III - IV.
- Bubble wrap, ca. 2 x 0,5 meters. This is folded and placed on piano bench; The performer sits on this the first half of the piece, resulting in a constant soft noise.
- Piece of molton/cloth, c. 0,8 X 0,3 meters, with adhesive tac attached on the corners of the length
- Total cables needed: 1 XLR cable (microphone-mixer), 1 jack cable (mixer-amplifier).
- 3 E-bows, to be positioned on these strings (triggered by the use of the sustain pedal): 

All equipment, as well as answers to any questions, can be provided for by the composer:  
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#### **SETUP**

##### Above the piano

Tall stand with Pendulum Microphone.

##### Beneath the piano

Amplifier placed centred, with speaker facing up towards the soundbox. The distortion channel is always turned on: full gain, low/comfortable output level.

##### Right side of the performer

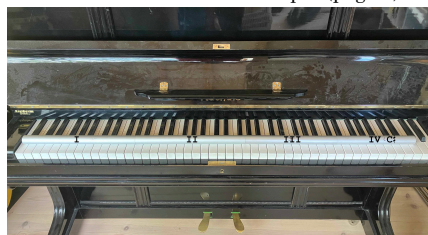
Mixer. The P. Mic. channel is panned all the way to one channel (e.g. left), same channel as the main output sends to the amplifier. The amplifier's and the mixer's EQ are adjusted quite flat, but adjusted to filter the highest frequencies. Trial and error is the way to finding the best settings.

##### Left side of the performer

Small table for placing E-bows and Aluminium Pipes. The table should have a cloth, or something soft on top, to prevent unintentional sounds during performance.

##### On keyboard

Placement of Aluminium Pipes (page 3):



Attachment of the molton (page 14):



Holding the C $\sharp$  pipe, for the glissando technique (page 14):



#### Notation

Durations, as shown as horizontal brackets over motifs or bars, are highly approximate.

○ = Circular motion of either P. Mic. or upper body/torso of the performer. This symbol, continued by a wavy line, indicates an initiating thrust/velocity, with the movement lasting for the length of the wavy line.

There are 4 degrees of thrust/velocities for the P. Mic.:

- *High velocity*. The circular motion is about the breadth of the piano, resulting in a myriad of feedback pitches.
- *Medium velocity*. The circular motion is about half the breadth of the piano, resulting in 2-4 feedback pitches.
- *Minimum velocity*. The circular motion is just somewhat visible, resulting in 1-2 feedback pitches.
- *Still*. The P.Mic. is freely hanging, with no visible movements. 1 feedback pitch.

The movement of the P. Mic. will naturally decrease over time resulting in gradually fewer pitches. "... whenever needed ..." is mentioned several places in the score, meaning as it says; the performer push the P. Mic. whenever needed for the P. Mic. to keep the notated velocity. Dynamics for the P. Mic. are controlled by the main level; *niente* = off / 0%, all dynamic levels (*p/f* etc) are in relative balance to what is played on the piano.

◆ = Non-depressed keys. The performer hit the key(s) without triggering the hammer mechanism (= no pitch); a percussive effect. Also indicates placements of E-bows.

× = Other non-key attacks; hitting the wood on the piano, or the Aluminium Pipes with nail(s).

*Relative pitches* = The performer must find/hear the pitch(es) from the feedback several places in the piece. Relative pitches meaning intervals in relation to the actual sounding pitch(es) from the feedback: 1 = unison, m2 = minor second (up), -M3 = major third (down) etc.

*Relative chords* = Relative in same manner as described above. The roman numbers indicate steps from the relative feedback pitch; e.g. if the feedback pitch is (approximately) C $\sharp$  the notated bVI 2nd indicates a second inversion of an A major chord. The notated squared notes with durational lines indicates approximate octave/placement of chords, and also give clue to whether the progression runs up or down in register.

△ = major 7th chord

no3 / no5 = Exclude the third / fifth of the chord

4 / 2 = the fourth/second replaces the third of the chord (sus-chord)

F.a.p. = Fast as possible

# Solfeggio

**Preparations:**

Pendulum Microphone

Movements

Piano

Bubble Wrap on stool, folded.

Al. pipes on white keys

III

IV

8<sup>va</sup>

I

II

3 E-bows

While seated:  
Slow circular movement with torso

8"

P. Mic.

Mov.

Pno

Hold P. Mic. in left hand,  
arm straight; parallel movement

8"

10"

Send P. Mic. in "orbit", letting the thrust begin  
torso movement in opposite direction, slower

Score for P. Mic., Mov., and Pno.

**P. Mic.** *High velocity* *mp* *mp* *mp* (mute) *As first tempo*

**Mov.** *(Leaning towards mixer)*

**Pno.** *Red.*

Measure lengths: >15" and 4"

*NB noter*  
*This music is copyright protected*

Score for P. Mic., Mov., and Pno.

**P. Mic.** *High velocity* *p* *(balance w/ E-bows)* *1.x only* *slower* *High velocity*

**Mov.** *[No further instructions on movements]*

**Pno.** *2nd x only:* *brackets = tr / repeated motifs* *1.x only* *8* *5 x* *(pulse)*

Measure lengths: 25" and 20"



### Overlapping pulses

[illegible]

The musical score consists of two staves: P. Mic. (Piano) and Pno. (Piano). The P. Mic. staff features a wavy line representing a continuous sound, with a bracket indicating "1 revolution =  $\sigma$ ". The Pno. staff shows a sequence of notes, with some notes in parentheses indicating they are not to be played but gradually more played through repetitions. The score is divided into four sections by vertical double lines, each representing a repetition. The first section is marked "mf" and "High velocity". The second section is marked "High velocity whenever needed". The third section is marked "last rep.". The ratios between the sections are 1, 1 / m3, -2 / m3, and -2 / 1. The notes in the Pno. staff are grouped by brackets, with some groups containing three notes.

1 revolution =  $\sigma$

High velocity

mf

Many rep.

High velocity whenever needed

last rep.

Relative pitches, any non-extreme octave

1

1 / m3

-2 / m3

-2 / 1

P. Mic.

Pno.

Notes in parenthesis are first not to be played, but gradually more played through repetitions

Attentive, slow

6-8"

sim. each bar

P. Mic. *Min. velocity*

Mixer: **p**

Intervals are relative to feedback pitch, suggested melody (rather less than more):

-M2 -M2 P1 P5 M7 m3 -M2 m9 m3 m3 m3 M2

*Min. velocity, at will / when possible*

----- turn up volum very slightly in between motifs -----

Pno **p** (balanced w / feedb.) **sf** **p** **mp** **p**

Relative chords:  $\flat$  VI<sup>2nd</sup>  $\Pi$ <sup>1st</sup>  $\flat$  VII<sup>2nd</sup>

**mp**  $\text{Ped.}$

P. Mic.

M2 m3 -M2 M7 M7 M7 M3

**cont. to respond melodically to feedb.**

**p**  $\leftrightarrow$  **mf** ad lib.

Pno  $\sharp$  IV $\Delta$ (no3) **sf** **p** V<sup>1st</sup> **mp**  $\flat$  VI<sup>2nd</sup>

P. Mic.

**grad. more melodic activity**

Pno IV $\Delta$  1st  $\flat$  VII<sup>4</sup> V<sup>7</sup> 1st (no5)

P. Mic.

Med..velocity

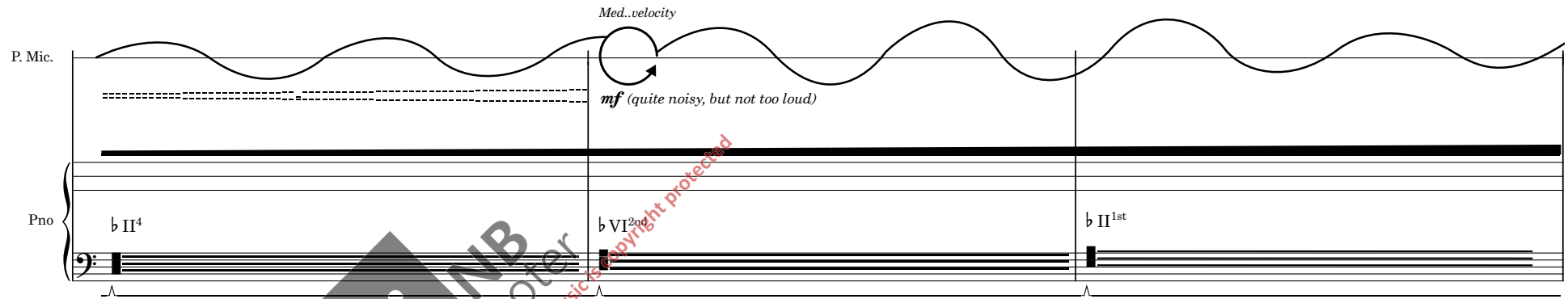
*mf* (quite noisy, but not too loud)

Pno

$\flat \text{ II}^4$

$\flat \text{ VI}^{2\text{nd}}$

$\flat \text{ II}^{1\text{st}}$



P. Mic.

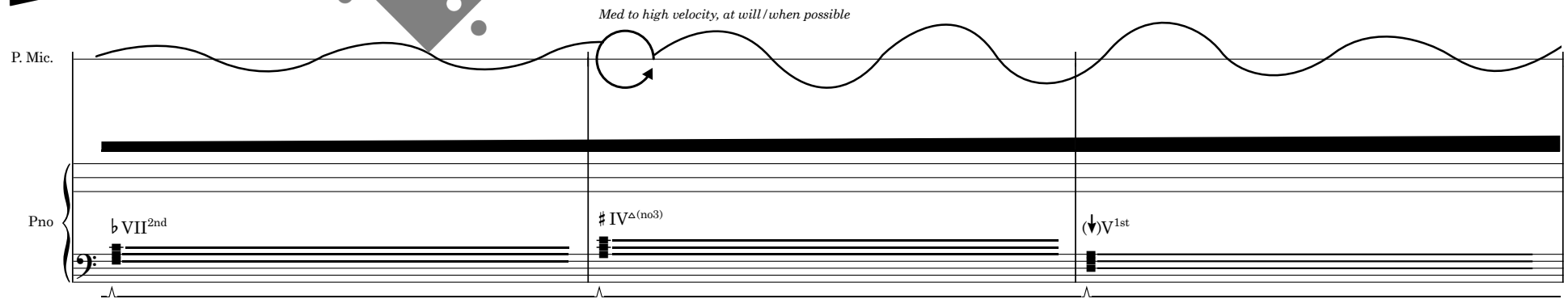
Med to high velocity, at will / when possible

Pno

$\flat \text{ VII}^{2\text{nd}}$

$\sharp \text{ IV}^{\Delta}(\text{no3})$

$\downarrow \text{ V}^{1\text{st}}$



P. Mic.

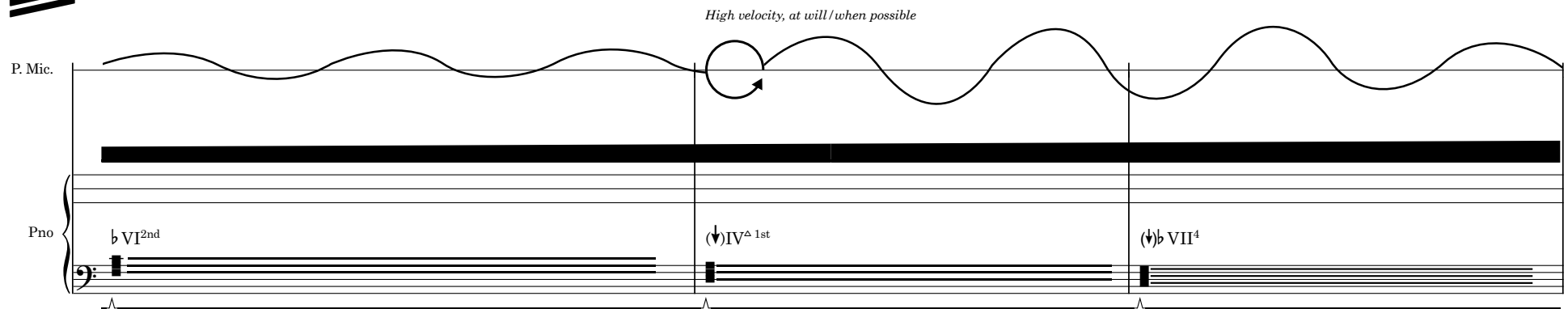
High velocity, at will / when possible

Pno

$\flat \text{ VI}^{2\text{nd}}$

$\downarrow \text{ IV}^{\Delta} 1\text{st}$

$\downarrow \flat \text{ VII}^4$



*High velocity, at will/when possible*

P. Mic.

**High melodic activity**

Pno

V<sup>7</sup> 1st (no5)

$\flat$  II<sup>4</sup>

$\flat$  III<sup>2</sup>

 $\text{♩} = 160$ 9  $\text{♩}$ *(In motion)*

P. Mic.

*(mf)*

Pno

*mf*

*Red.*

8<sup>va</sup>

x2

P. Mic.

Pno

*p*

x3

P. Mic.

Pno

NB noter  
This music is copyright protected

P. Mic.

Pno

Mixer: *mf*

Rep. until  
mixer = 0%

*ppp*

Pno

The image shows a musical score for Piano (Pno). It features a grand staff with a treble and bass clef. The music is written in a key with one flat (B-flat) and a 4/4 time signature. The score includes various musical notations such as eighth notes, sixteenth notes, and beams. There are also some markings like (h) and (q) above certain notes. A large, semi-transparent watermark is visible across the center of the page, reading "Copyrighted Material".

8va

8va

5

Pno

*mf*

*pp sub.*  
Red.

(Red.)

Pno

Pno

Pno


6   5

x5

Pno

*pp*



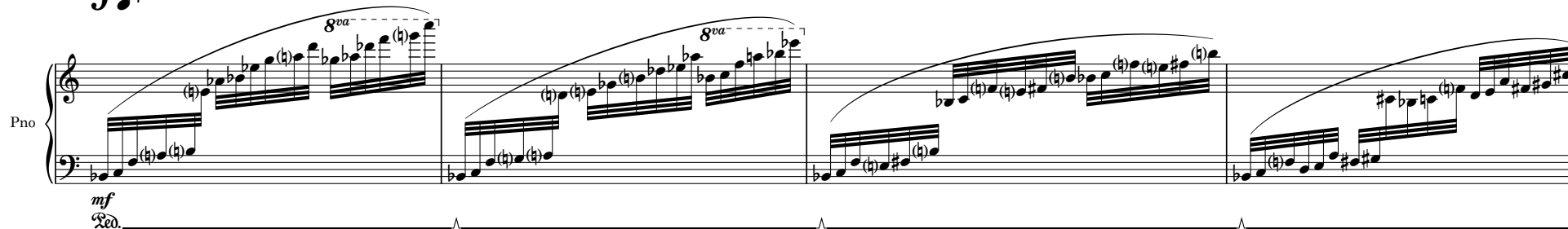
9 

Pno

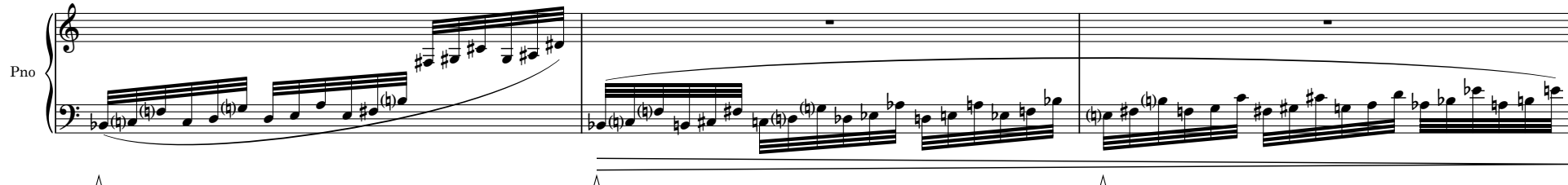
*mf*

*Red.*

8va



Pno





The image displays two systems of musical notation for the piano accompaniment of 'The Wind' by Gustav Mahler. The first system covers measures 1 through 4, and the second system covers measures 5 through 8. Each system consists of a grand staff with a treble and bass clef. The music is written in a key with one flat (B-flat major or D minor) and a 4/4 time signature. The notation includes various musical symbols such as notes, rests, and dynamic markings like 'p' (piano) and 'f' (forte). The piano part features a complex, flowing melody with many slurs and ties, indicating a continuous, winding line. The right hand (treble clef) often plays a more active, melodic line, while the left hand (bass clef) provides a harmonic and rhythmic foundation. The score is presented in a clean, professional layout with clear notation and a white background.

**P. Mic.**

*Still*

*Rep. until ready*

*p*

**Pno.**

*F.a.p:*  
*Throw away bubble wrap*  
*to the left of the piano*

*Heavy attacks*  
*on wood, 3rd octave*

*Cover keys with molton,*  
*attach with poster tack on lid*

*Pick up Al. pipe (C $\sharp$ ),*  
*for left hand*

**F.a.p.**

**No Meter**

$\text{♩} = 160$

**Pno**

*Slide w/ Al. pipe on dampened keys:*

*Duration ad lib.*

*Sim. (gliss. = unmeasured)*

*Sounding:*

*Red.*

**Dynamic markings:** *f*, *p*, *ff*

**Performance instructions:** *8va*, *h*, *#*, *b*, *^*

Pno

*ff* *f* *p* *ff* *f* *p* *ff* *f* *p* *ff*

Pno

*ff* *f* *p* *ff* *f* *p* *ff* *f* *p* *ff* *pp*

Leave Al. pipe on molton

Pno

*ff* *f* *p* *ff* *f* *p* *ff* *f* *p* *ff*

The musical score for 'Still' by John Cage is presented in two systems. The first system includes a 'P. Mic.' (Piano Microphone) staff and a 'Pno' (Piano) staff. The 'P. Mic.' staff features a series of notes, with a '9' and '8va' marking above the first measure, and a '11' and '8va' marking above the second measure. The 'Pno' staff has a '5' marking below the first measure and a '5' marking below the second measure. The second system includes a 'P. Mic.' staff and a 'Pno' staff. The 'P. Mic.' staff features a series of notes, with a '4' and '8va' marking above the first measure, and a 'Still' marking above the second measure. The 'Pno' staff has a 'ppp' marking below the first measure and a '5' marking below the second measure. The score is written in a minimalist style, with a focus on the relationship between the microphone and the piano.

[illegible]