

# **Waves 11 - 13 (No.39)**

for treble instruments, sinetones  
& variable ensemble

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*for ensemble LOOS*

Ca. 18'

The mystery of sound is mysticism; the harmony of life is religion.  
The knowledge of vibrations is metaphysics, and the analysis of atoms  
science; and their harmonious grouping is art.

Hazrat Inayat Khan *The Mysticism of Sound* Ch. Vii p.58

## **Waves 11 - 13**



## Performance Notes:

The score of *Waves 11 - 13* is divided over two instrumental groups + a separate part for eBow Piano and consists of both fixed as well as free parts. The minimum number of players required to perform the pieces should be no less than five, preferably of a heterogeneous nature. An optional part for sinetones can also be added.

The pieces should be performed as an interaction between long, sustained pitches, or sounds - of a static, pure, nature - and regularly recurring pitches of microtonal nature.

All instruments are to be amplified and the pieces should be performed with the aid of a monitor stopwatch.

### Group 1 (staves 1 - 21)

Group 1 (fixed entries) consists of alternating pitches for 1, 2, 3 or 4 players, to be played by any instruments capable of producing microtones. Gradations of tuning are given in front of the staves, where decimal numbers signify the amount of deviation in cents.

Each instrument follows its own particular line, indicated by a number over or under the staff. Entries are to occur within the given time frame, lasting a maximum of 15 seconds. In individual cases some pitches may be extended (e.g. instrument 3 in *Wave 12*). The players should try to create a sense of *regularity* and are allowed to overlap more and more as the time between entrances diminishes from Wave 11 to Wave 13.

### Group 2 (staves 22 & 23)

Group 2 (free entries) functions as 'reference point' for Group 1 and consists of a gamut of 'Available Pitches' (A.P.), to be played by any instruments not playing in Group 1.

The available pitches are divided between 'fixed' pitches (for instruments incapable of microtonal inflection) and 'non-fixed' pitches (for instruments capable of inflection).

Players are to select pitches from either of these lines, freely choosing, combining and alternating pitches while sustaining their sounds for relatively long periods of time. Enter on either straight tones (decreasing towards the end) or on cresc--decrec curves. In *Wave 12* short, resonant and non-resonant, attacks should punctuate the texture periodically. Specific indications for individual instruments are given at the start of each section.

The dynamics for Group 2 should always lie underneath those of Group 1.

### E-Bow Piano (staves 25, 26 & 27)

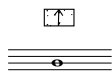
The part for eBow piano should be performed as a *simultaneous* interaction between the eBows and struck keys. The part is notated on 3 staves of which the upper two pertain to the eBows and the lower staff to the struck pitches.

To this purpose, one of the hands should always be free to control the E-Bows (through exerting pressure on the strings) while the other is free to use the keyboard. The part calls for a maximum of 5 (prepared) eBows (for preparation see note on bottom of page).

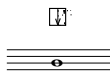
### eBow symbols:

#### Ebows

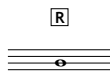
Place E-Bow *in front* of piano dampers



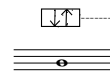
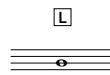
Place E-Bow *behind* piano dampers



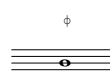
Use *harmonic mode* (right switch)



Use *regular mode* (left switch)



Muted tone:  
Press string *behind* damper while striking key.



Exert *pressure* on the E-Bow:  
hold bow with right hand while pressing down on the string (continual throughout piece)

### Amplification/Sines

All instruments should be amplified, departing from the E-Bow piano as primary sound source. In the overall balance the instruments of Group 1 should be allowed to stand out.

Depart from a good balance between sines and piano, making sure that the sines do not dominate.

(*re preparation:* for a maximum result on the piano, the E-Bows will need to be prepared to fit the (wider) strings of the piano. To do this, the guitar-string crevasses will need to be filed away (creating a flat surface - a pair of sharp scissors are a good tool with which to scrape away the plastic), while also broadening the resonance gap between the bridges in order to fit the three strings of the piano. After doing this, the surfaces of the filed down bridges should be covered with a single strip of textile tape or bandaid so that the contact with the strings is inaudible. In principle the prepared E-Bows should be able to play all of the 3-choired strings.)

Wave 11

Waves 11 - 13

Peter Adriaansz

100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

00 <-> 15  
30 <-> 45  
00 <-> 15  
30 <-> 45  
00 <-> 15

**4 TIME UNITS TO A 'BAR'**  
Ca. 15-20" PER TIME UNIT

Wind 1 (amplified)  
(flute)

1' 2'

**SAMPLE**

15 <-> 30  
45 <-> 00  
15 <-> 30  
45 <-> 00  
15 <-> 30  
45 <-> 00  
15 <-> 30

Perc. Vibraphone trem, use soft mallets  
Choose single pitches & intervals. max 2 pitches at a time

String: select only single pitches, harmonics wherever possible

Bass Guitar: enter twice with subsonic waves (around 2' and 4')

fixed pitch instr.  
non-fixed pitch instrument (strings, winds etc)

Av. P  
non-fixed pitch instr.

microtonal coloring ad lib

microtonal coloring ad lib

d. 1108 hz  
c1 1046 hz

+10c ..... +20c ..... +30c ..... +40c ..... +50c

-10c ..... -20c ..... -30c ..... -40c

Prepare

amplified

Depress pedal

3'

4'

5'

50  
40  
30  
20  
10  
0  
90  
80  
70  
60

30 <-> 45  
00 <-> 15  
30 <-> 45  
00 <-> 15  
30 <-> 45  
00 <-> 15  
45 <-> 00  
15 <-> 30  
45 <-> 00

**SAMPLE**

Proceed to next part immediately

c. 5'30"

3'

4'

5'

fixed pitch instr.

Av. P.  
non-fixed pitch instr.

*microtonal coloring ad lib*

sines

E  
I  
B  
O  
W  
P  
I  
A  
N  
O

-50c  
-10c -20c -30c -40c -50c

-10c -20c -30c -40c -50c

Prepare

release pedal

# Wave 12

100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

(flute)  
Wind 1 (amplified)

(violin)  
String (3)  
extend durations ad lib

(clarinet)  
Wind 2 (amplified)

6' 7' 8'

1 20 <-> 35

1 50 <-> 05

1 20 <-> 35

1 50 <-> 05

3 40 <-> 55

3 40 <-> 55

1 20 <-> 35

3 10 <-> 25

3 10 <-> 25

3 00 <-> 15

3 10 <-> 25

3 00 <-> 15

3 30 <-> 45

2 00 <-> 15

2 30 <-> 45

2 00 <-> 15

6' 7' 8'

# SAMPLE

Percussion: all pitches struck + *sempre sfz*  
Find similarly pitched instruments of heterogenous nature (vibe + chimes, thai gongs, chinese gong etc.).  
All sounds semi-resonant to non-resonant. Periodically alternate resonant vibe pitches with other, resonant to non-resonant, sounds of both pitched and semi-pitched nature.

Bass Guitar: free entries on harmonics and bell-sounds

fixed pitch instr.

Av. P non-fixed pitch instr.

sines

E I B O W P I A N O

str. pitches

df 622 hz  
df 311 hz

microtonal coloring ad lib

+15c +30c +45c +60c +75c +90c et 659 hz

+10c +25c +40c +55c +70c +85c et 329 hz

Depress pedal

Struck intervals: ca 8 - 12" between attacks

**Wind 2**

**Wind 1**

**9'** **10'** **11'**

**2** **3** **1**

$00 \leftrightarrow 15$   $30 \leftrightarrow 45$   $40 \leftrightarrow 55$   $10 \leftrightarrow 25$   $20 \leftrightarrow 35$   $50 \leftrightarrow 05$   $30 \leftrightarrow 45$   $00 \leftrightarrow 15$   $40 \leftrightarrow 55$   $10 \leftrightarrow 25$   $20 \leftrightarrow 35$   $50 \leftrightarrow 05$   $10 \leftrightarrow 25$   $50 \leftrightarrow 05$

**SAMPLE**

**Proceed to next part immediately**

**c. 11'30"**

**1**  $20 \leftrightarrow 35$   $50 \leftrightarrow 05$   $20 \leftrightarrow 35$

*extend and blend into final sound*

**fixed pitch instr.**

**Av. P non-fixed pitch instr.**

**sines**

**E I B O W P I A N O**

**str. pitches**

*microtonal coloring ad lib* *microtonal coloring ad lib*

$-15c$   $-30c$   $-45c$   $-60c$   $-75c$   $-90c$   $d\sharp 622 \text{ hz}$

$-10c$   $-25c$   $-40c$   $-55c$   $-70c$   $-85c$   $d\sharp 311 \text{ hz}$

**Prepare**

**release pedal**

# Wave 13

7.5 <-> 22.5

100 Wind 1

90 1

80 8 TIME UNITS TO A 'BAR'  
Ca. 7.5-10" PER TIME UNIT

70 entrance order:  
string, wind 1, string, wind 2

60 13'

50 14'

40 Wind 1 (amplified)  
(picc)

30 1

20 2

10 2

00 <-> 15 22.5 <-> 37.5 30 <-> 45

Wind 2

String

90 3

80 13'

70 String (3) (*su. p. str.*)

60 14'

50 4

40 String (4)

30 4

20 45 <-> 00

10 Bass Guitar: enter three times with subsonic waves (around 13', 15' and 17')

0 12'

String 15 <-> 30

13'

14'

fixed pitch instr. Av. P.

Percussion: bowed vibe and/or glock: Amplified + delay  
Select and alternate pitches, max 2 at a time

-25c -50c -75c -100c at 1864 hz

bs 1975 hz sines at 880 hz

+25c +50c +75c +100c at 932 hz

E I B O W P I A N O

Depress pedal all attacks: sempre sfz secco, ca 2-3' between attacks

str. pitches

# SAMPLE

The score is organized into three main sections, each spanning 15 measures (15', 16', 17').

- Section 1 (Measures 1-15):** Features a sequence of chords labeled 1, 2, 3, and 4. Chord 1 is at 37.5 <-> 52.5, Chord 2 at 52.5 <-> 07.5, Chord 3 at 30 <-> 45, and Chord 4 at 45 <-> 00. A large "SAMPLE" watermark is centered over this section.
- Section 2 (Measures 16-30):** Continues the sequence with Chord 1 at 7.5 <-> 22.5, Chord 2 at 22.5 <-> 37.5, Chord 3 at 00 <-> 15, and Chord 4 at 15 <-> 30.
- Section 3 (Measures 31-45):** Features Chord 1 at 37.5 <-> 52.5, Chord 2 at 52.5 <-> 07.5, Chord 3 at 00 <-> 15, and Chord 4 at 45 <-> 00.

Additional elements include:

- fixed pitch instr. Av. P.**: A staff of notes with a dynamic marking of *Av. P.*
- sines**: A staff of sine waves with amplitude markings: +25c, +50c, +75c, +100c, -25c, -50c, -75c, -100c. Instruction: *sustain and gradually fade out with sines*
- E I B O W P I A N O**: A staff of notes with a dynamic marking of *ff*.
- str. pitches**: A staff of notes with a dynamic marking of *ff*. Instruction: *release pedal*