



**Wouter Snoei | Och**  
for six voices and live electronics



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## About the score:

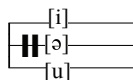
### Text

all text is in phonetic symbols according to the IPA (International Phonetic Alphabet).

### Staffs and clefs

There are two types of clefs and staffs used in the score. The regular 5-line type and a 3-line type with percussion clef. The latter needs some additional explanation:

In the three-line staves the lines do not resemble the pitch of a sound, but its timbre. More specifically they resemble the sound of vowels. The range of vowels starts at [u] (as in English “you”, French “vous” or Dutch “koe”), and goes up via [o] (as in English “no” or Dutch “boot”) and [ʌ] (as in English “love” or German “och”) to [ə] (the neutral vowel, as in English “fur” or Dutch “de”). Then it goes further to [e] (as in English “play” or Dutch “nee”), [ɪ] (as in English “bit” or Dutch “ding”) to end at [i] (as in English “me” or Dutch “bier”). If you speak these vowels fluently in this order ([uɔʌəɛɪi]) as if they were one word and listen carefully, you might hear a glissando of overtones ranging apx 3 octaves. By touting the mouth towards whistling it becomes



more apparent. This is the scale used in the three-line staffs; a continuous range of overtones created by the form of the mouth (compare to overtone singing).

But that is not all. In the score this notation is only used for noise sounds. Sounds like [s] (as in English “see”), [x] (as in German “ich” or Flemish “dag”) and [t] (as in English “tie”) can be made on various vowels. A [x] on the top line may sound like the “ch” in German “ich”, while an [x] just above the bottom line may sound like the “ch” in German “doch”. And an [x] in between the two upper lines may sound like an angry cat’s hiss.

It is important that the singers try to match the sound they make to each other; i.e. practice together and decide on an exact vowel to produce. The electronics will later be tuned to the singers vowels too.

### Note heads

There are three types of note heads used in the score:

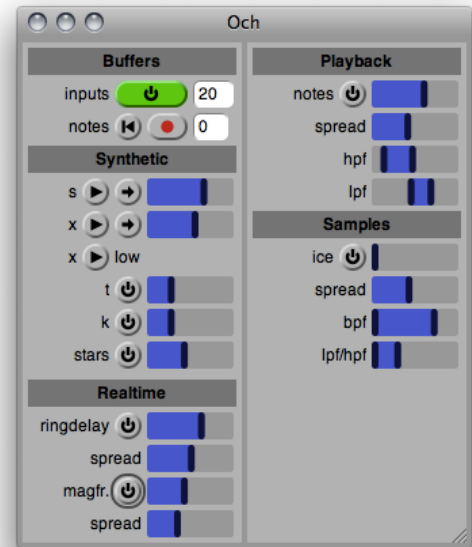
- regular notes (sung)
- ◐ without voice (whispered)
- × spoken (normal speaking voice)



## Live electronics

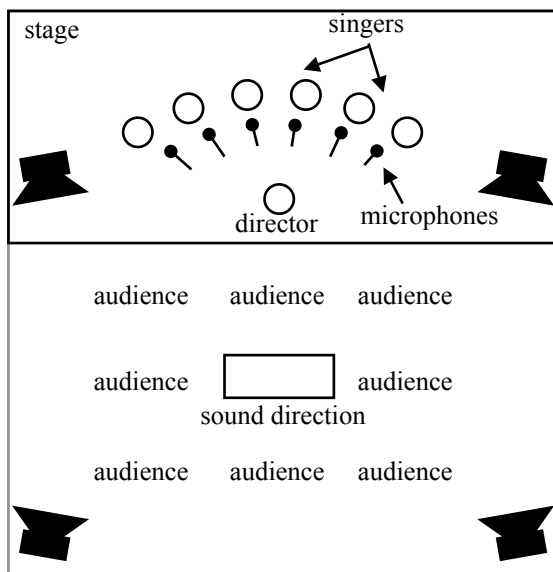
The electronics for Och are a computer program written in the open-source audio synthesis language SuperCollider <sup>1</sup>. For the performance a computer and appropriate audio interface are required, as well as 6 microphones, routed separately into the electronics. The 4 loudspeakers are setup around the audience, to enable the distinct role of spatialisation in the piece. There is no direct amplification, but the voices are sampled and processed in various ways.

The electronics have synthesized, pre-sampled, live sampled and realtime elements. It is controlled via a midi controller with a minimum of 9 faders, 13 buttons and 7 knobs. For this version of the piece the electronics are operated by the composer during the concert.

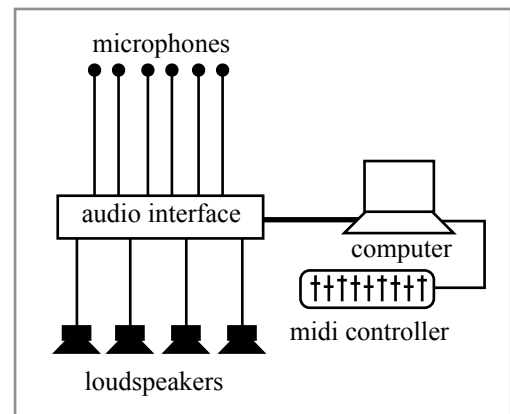


screenshot of the graphical interface

In several parts of the piece (A, B, C, D, I) the electronics mimic the [s] and [x] sounds of the singers, using filtered noise. This effect needs to be tuned during rehearsal.



stage plot



connection scheme

<sup>1</sup> <http://supercollider.sourceforge.net/>





# Och

Wouter Snoei

♩ = 80 A

1 (unvoiced)

Soprano  
Mezzo Soprano 1  
Mezzo Soprano 2  
Tenor  
Baritone 1  
Baritone 2

6 B

[s] [x] [k] [k]

[s] [x] [t] [t] [t]

[s] [x] [k]

[s] [x]

12 *mf*

[k] [k] [k]

[k] [k] [k]

[x]

[k] [k] [x]

[t] [t] [t]

17 C *mp* improvise with [k] [k] [k] at different speeds and timbres

[s] [x] [k] [k] [k] [k] [k] [k] [k] [k] [k] [k]

[s] [x] [k] [k] [k] [k] [k] [k] [k] [k] [k] [k]

[s] [x] [k] [k] [k] [k] [k] [k] [k] [k] [k] [k]

[s] [x] [r] [r] [r] [r] [r] [r] [r] [r] [r] [r]

[s] [x] [r] [r] [r] [r] [r] [r] [r] [r] [r] [r]

[s] [x] [r] [r] [r] [r] [r] [r] [r] [r] [r] [r]

24

mf [tr] [tr] [tr]

mf [k] [k] [k] [tr] [tr] [t] [t] [t] [r] (voiced) ff

mf [k] [k] [k] [k] [k] [k] [k] [t] [t] [t] [r] (voiced) ff

mf (voiced) vary dynamics, vary voiced/unvoiced [tr] [tr] [r] ff

mf vary dynamics, vary voiced/unvoiced [r] [r] [r] [r] ff

mf vary dynamics, vary voiced/unvoiced [r] [r] [r] ff

D

32

p subito mp [s] [x] [s] E p

(unvoiced) p mp [s] [x] [s] p

(unvoiced) p mp [s] [x] [s] p

(unvoiced) p mp [s] [x] [s] p

(unvoiced) p mp [s] [x] [s] p

(unvoiced) p mp [s] [f] (!) [s] [u] p

40

[s] *p* [o]  
 [u] [m]  
 [s] [s] *p* *mf*  
 [u] [u] *p*  
 [s] [o] *p*  
 [s] [o]

47

[m]  
 [m] *p* [Λ] *p* [m]  
 [m] [m] *mp*  
 [u] *mf*  
 [s]

54

[Λ] [x] [o] [ka] [pi]  
 [Λ] [x] [s] [a] [ny] [gu]  
 [Λ] [f] [u] [di] [na]  
 [o] [Λ] [x] [χ] [y] [pΛ] [ty]  
 [Λ] [s] [i] [gu] [ko]  
 [Λ] [x] [ç] [Λ] [to] [de]

62

[no] [gi] [ne] [gy] [pΛ] [ne] [da] [ny] [te] [go] [dy] [nΛ]  
 [de] [nu] [py] [no] [ka] [gi] [kΛ] [gi] [na] [di] [ku] [de]  
 [kΛ] [to] [kΛ] [pu] [ny] [tΛ] [gu] [tΛ] [po] [na] [pΛ] [ty]  
 [gi] [py] [da] [kΛ] [do] [ka] [ny] [da] [kΛ] [pe] [no] [ga]  
 [pa] [kΛ] [gu] [te] [gi] [py] [to] [pu] [gy] [kΛ] [ti] [po]  
 [ty] [da] [to] [di] [te] [du] [pi] [ko] [di] [ty] [ge] [ki]

G

H

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

[de] [p] [t] [k] [g] [n] [d] [k] [tu]

[t] [dy] [pe] [do] [pʌ] [ga] [p] [g] [d] [ty] [ty]

[p] [ka] [no] [gʌ] [nu] [ty] [g] [n] [k] [ne] [ne] [ne] [gi]

[k] [t] [g] [n] [d] [po] [ky] [ta] [pʌ]

[g] [n] [d] [p] [t] [ke] [tʌ] [pe] [na] [ne] [ne]

[n] [g] [k] [t] [k] [du] [ne] [dʌ] [g] [tʌ] [tʌ] [tʌ] [ku]

70 *mf*

[dʌ] [dʌ] [dʌ] [tu]

[ty] [gʌ] [gʌ] [gʌ] [du] [du] [du] [ka] [ka] [ka] [dy]

[gi] [gi] [na] [na] [na] [pi] [pi]

[po] [po] [po]

[ne] [da] [da] [da] [pe] [pe] [pe] [dy][dy][dy] [gi] [gi]

[ku] [ku] [gʌ][gʌ]

73

[tu] [tu] [ki] [ki] [ki] [nu] [nu] [nu] [kʌ] [kʌ]

[dy] [dy] [te]

[pi] [ka] [ka] [ka] [ty] [ty] [ty] [no] [no]

[to] [to] [to] [ge][ge][ge] [dy] [dy] [dy] [no]

[gi] [ku] [ku] [ku] [pi] [pi]

[gʌ] [to] [to] [to] [nʌ] [nʌ] [nʌ] [pi] [pi] [pi] [gu] [gu] [gu] [ta]

77

[kʌ] [gu] [gu] [gu] [du] [ʌ]

[te] [te] [pi][pi][pi] [du] [ʌ]

[no] [dʌ][dʌ][dʌ] [du] [ʌ] [ʌ]

[no] [no] [du] [ʌ] [o] [m]

[pi] [ky] [ky] [ky] [du] [ʌ]

[ta] [ta] [du] [ʌ]

84

Musical score for measures 84-90. The score consists of six staves. The first staff (treble clef) has a measure rest followed by a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *p*. The second staff (treble clef) has a measure rest, a half note G4 with a sharp sign, a half note A4 with a sharp sign, a half note B4, and a half note C5, with a slur over the last two notes and a dynamic marking *p*. The third staff (treble clef) has a measure rest, a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *mf*. The fourth staff (treble clef) has a measure rest, a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *mf*. The fifth staff (bass clef) has a measure rest, a half note G3, a half note A3, and a half note B3, with a slur over the last two notes and a dynamic marking *mf*. The sixth staff (bass clef) has a measure rest, a half note G3, a half note A3, and a half note B3, with a slur over the last two notes and a dynamic marking *mf*. The lyrics are: [m], [m], [m], [m], [s], [u], [s].

91

Musical score for measures 91-97. The score consists of six staves. The first staff (treble clef) has a measure rest, a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *p*. The second staff (treble clef) has a measure rest, a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *p*. The third staff (treble clef) has a measure rest, a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *p*. The fourth staff (treble clef) has a measure rest, a half note G4, a half note A4, and a half note B4, with a slur over the last two notes and a dynamic marking *p*. The fifth staff (bass clef) has a measure rest, a half note G3, a half note A3, and a half note B3, with a slur over the last two notes and a dynamic marking *p*. The sixth staff (bass clef) has a measure rest, a half note G3, a half note A3, and a half note B3, with a slur over the last two notes and a dynamic marking *p*. The lyrics are: [o], [m], [u], [s], [u], [u], [o], [s].



Och - Wouter Snoei

97

The musical score consists of six staves. The top two staves are vocal lines, and the bottom four are piano accompaniment. The score includes various musical notations such as notes, rests, and dynamic markings. Phonetic notations are placed above or below notes to indicate pronunciation. A specific instruction "(whisper 'och')" is written above a note on the sixth staff.

Phonetic notations: [s], [x], [u], [Λ] [x]

Dynamic markings: *p*, *mp*

Articulation: J

Instruction: (whisper "och")