

Magnus Lindberg  
*Kraft*  
1985

Philharmonie Paris Feb. 2024  
2024



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The setup and the execution of the electroacoustic part  
of this work requires a Computer Music Designer (Max expert).

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## Work related information

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### Performance details

- Sept. 4, 1985, Finlande, Helsinki

Publisher : Wilhelm Hansen

### Detailed staff

- soloists: clarinet (also bass clarinet, contrabass clarinet), 2 percussionists, piano, cello
- 4 flutes (also 4 piccolos, alto flute), 3 oboes, English horn, 3 clarinets (also Eb clarinet), bass clarinet, alto saxophone, 3 bassoons, contrabassoon, 4 horns, 4 trumpets, 4 trombones, tuba, 4 percussionists, 2 harp, piano (also celesta), 14 violins, 12 second violins, 10 violas, 8 cellos, 6 double basses

### Useful links on Brahms

- [Kraft](#) for clarinet, two percussions, piano, cello soloists and orchestra (1983-1985), 27mn
- [Magnus Lindberg](#)

## Version related information

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Performance date: Feb. 15, 2024

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### Documentalist

(aleonard@ircam.fr)

Manuel Poletti (Manuel.Poletti@ircam.fr)

You noticed a mistake in this documentation or you were really happy to use it? Send us feedback!

### Realisation

- Manuel Poletti (Computer Music Designer)

Default work length: 27 mn

### Upgrade Motivation

Ableton Live 11 version

### Comment

Approved by M. Lindberg

### Other version(s)

- [Magnus Lindberg - Kraft - 2011-Paris104-Spat \(April 25, 2014\)](#)

## Electronic equipment list

### Computer Music Equipment

- 1 MacBook Pro - *Apple Laptops* (Apple)  
M2 recommended
- 1 other computer gear - *other Computer Gear*  
audio-to-MIDI trigger device with 4 audio inputs and 1 midi output, such as the Ddrum DDTi
- 1 Live - *Music Software* (Ableton)  
Live 11.3 or later
- 1 Sound Board - *Sound Board*  
RME recommended
- 1 BCF 2000 - *MIDI Mixer* (Behringer)  
or any other MIDI controller
- 4 Pad - *Pad*  
on stage, with robust stands - height: ~1m30
- 1 iConnectMIDI2+ - *MIDI Interfaces* (iConnectivity)  
Hosts MIDI from pads on stage - feeds main laptop & spare laptop
- 1 MIDI booster - *Booster*  
Boost MIDI line from stage to FOH
- 2 MIDI Cables - *MIDI Cables*  
MIDI to XLR converter

### Audio Equipment

- 6 Loudspeaker - *Loudspeakers*  
L/R front ( $-30^\circ/+30^\circ$ ), Ls/Rs side ( $-90^\circ/+90^\circ$ ), Lb/Rb rear ( $150^\circ/+150^\circ$ )

**Files**

<b>File</b>	<b>Type</b>	<b>Author(s)</b>	<b>Comment</b>
<a href="#">Kraft 2024 for Ableton Live 11.3</a>	Ableton session	Manuel Poletti	
<a href="#">Live Electronics Instructions</a>	Performance documentation	Manuel Poletti	

## Instructions

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### 1. Audio setup

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1 x Apple Mac Book Pro M2, 1 x RME soundboard, 1 x Ableton Live 11  
1 x iPad Pro for the score

### 2. Loudspeaker setup

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6 x speakers around the audience + 1 or 2 monitors on stage for percussionist

### 3. Midi setup

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1 x BCF2000 or other MIDI controller  
1 x iConnect2 MIDI interface  
4 x electronic drum pads with robust stands - height: ~1m30  
1 x audio-to-MIDI trigger device with 4 audio inputs and 1 midi output, such as the Ddrum DDTi

### 4. Software installation

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Install and authorize a copy of Ableton Live 11.3 or later

#### a) Ableton Live session

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Load the Kraft2024-Philharmonie.als Live document

#### b) Routing in Ableton Live

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Audio input1: Piano (mono)  
Audio input2: Cello (mono)  
Audio input3: Clarinet (mono)  
Audio outputs 1/2: L/R front (-30°/+30°)  
Audio outputs 3/4: Ls/Rs side (-90°/+90°)  
Audio outputs 5/6: Lb/Rb rear (150°/+150°)  
Audio outputs 7/8: pads monitors (on stage)

#### c) Audio settings

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Sample Rate: 48kHz, Buffer Size: 32 samples

### 5. Patch presentation

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#### a) Notations

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Use the Kraft Soloists Score.pdf which can be found in the Docs folder. Annotations are from the sound engineer and the electronic musician. All cues were reported in there.

#### b) Shortcuts

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Events can be triggered using a MIDI control of one's choice.

## 6. Initialization routine

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Follow instructions in the Live Electronics Instructions.pdf document.

## 7. System calibration and tests

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Follow instructions in the Live Electronics Instructions.pdf document.

## 8. Performance notes

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Follow instructions in the Live Electronics Instructions.pdf document.



## Program note

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Étude sur des interpolations rythmiques, développées auparavant dans des œuvres comme *Sculpture II*, *Ground* ou *Zona*, *Kraft* marque le début de l'utilisation par Lindberg de l'ordinateur comme outil de composition assistée. Il passa un an, sur les deux années que dura la composition de cette œuvre massive, à concevoir l'environnement informatique qui devait lui servir ensuite à calculer les proportions et les transformations rythmiques et harmoniques complexes. *Kraft* a été écrit à Paris (1983), à Berlin (1984) et à Helsinki (1985).

L'ensemble des solistes constitue la clef de voûte de l'orchestre, le catalyseur de l'action et le sommet de l'iceberg formé par l'énorme masse sonore. Tous les membres de l'ensemble jouent, en plus de leurs instruments premiers, de nombreux instruments de percussion, surtout métalliques, collectés chez un ferrailleur. La musique est spatialisée dans l'espace par un système de haut-parleurs et par les déplacements des solistes, y compris du chef d'orchestre, pendant l'exécution. Dans sa globalité, *Kraft* se divise en deux grands mouvements, suivis d'une coda relativement longue.

Pièce très forte et originale, *Kraft* apparut vite comme l'œuvre phare de Lindberg. Après la première, remarquée par le grand public, au festival d'Helsinki en 1985, elle devint lauréate de la Tribune des compositeurs à l'Unesco en 1986. Elle reçut également le prix du Conseil nordique en 1986, et l'enregistrement, effectué à Stockholm et publié par Finlandia Records, fut primé par le prix Koussevitsky en 1988.

Risto Nieminen, « Magnus Lindberg », Les Cahiers de l'Ircam, coll. « Compositeurs d'Aujourd'hui » n° 3.

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