



# Heike Kaltenbrunner

Lecture:  
Proximity Organ

5.12.2023 18:00 CEST

Tangible Music Lab  
Tabakfabrik Linz  
Peter-Behrens-Platz 8-9

and online  
<https://tamlab.kunstuni-linz.at>

In her guest lecture Heike Kaltenbrunner will give you an insight into the planning and development process of the 'proximity organ' (Näherungsorgel), from the initial idea to the concept, development and presentation. The instrument combines the pipe organ and the Theremin, therefore the pipes are at the same time sound generators and sensors for proximity. A distant position sends a small amount of air through the pipes, which creates soft overtones, fffffrrrs, humming and hissing, hence getting closer produces a full note sound. The instrument may either be played 'plain' with a direct relation of proximity and amount of wind, or extended with further reaction details. These may be programmed in PD as part of the composition. It offers composers and musicians direct access to overtones and noises. Technically there are three intertwining components: pipes that function as

capacitive proximity sensors, hand-made arduino controlled valves that regulate the wind supply in place of an organ's usual open/close key mechanism and a detailed PD and programming that shapes the interaction. It offers composers and musicians direct access to overtones and noises. The project began in 2022 as a cooperation between of Heike Waldner-Kaltenbrunner and Mathias Lenz and was further developed in Vienna and Berlin with a team of specialists.

Credits 'proximity organ': idea, concept | Heike Kaltenbrunner mechanical engineering, wind-control | Mathias Lenz arduino / C | Mathias Lenz, Frank Dietrich sensors | Mathias Lenz, Sukandar Kartadinata, Frank Dietrich PD-programming | Oliver Stotz, Marcus Zepp, Heike Kaltenbrunner pipes | Walther Vonbank