Hidden Traces

The piece has an open duration between 12 and 15 minutes. The overall control over the structure of the piece is left to the performer, who has however to follow a certain set of indications. The guitar is implemented with two piezoelectric contact microphones and two different transducers, placed on the soundboard of the guitar. The two piezoelectric contact microphones (Piezo1 and Piezo2 from now on) have two different functions. The guitar player uses Piezo1 to play on the strings and on various points of the surface of the guitar, while Piezo2 has to be fixed on the soundboard and it acts as a listener (providing some information for the electronic). A MIDI Controller with 19 buttons and 14 sliders is required to play the piece. The mapping of a Korg Nano Kontrol is shown in the illustration of the following page as an example.

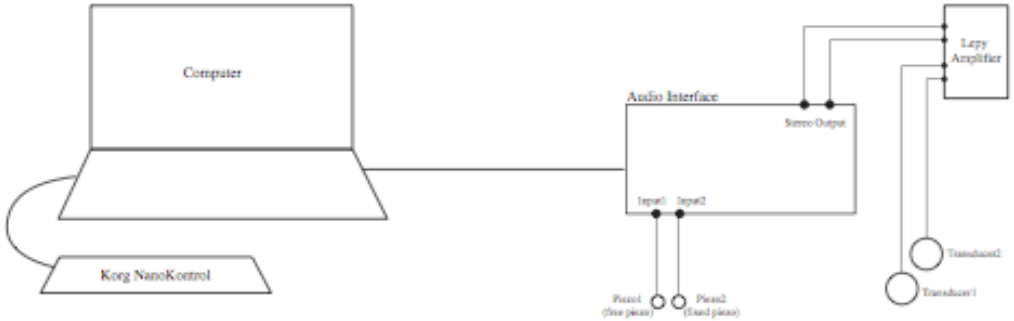
The piece should start with exploring different possibilities of noisy sounds produced playing the instrument with Piezo1. At this first stage, the performer is suggested to use a recorder and different granulators set on the MIDI Controller, in order to overlap different sounds, creating a polyphony of events. During the piece, the initial texture of noisy sounds has to move towards more pitched sounds, through the possibility of playing different sinewaves – some of them resonate with the tuning of the strings - and freezing some guitar sounds, (freezes are set on the MIDI Controller).

Moreover, during the piece, another element has to be slowly revealed: the radio fragments. Three pre-recorded buffer contains fragments from a radio show[1], whose volume is controlled by the overall amplitude detected by Piezo1.

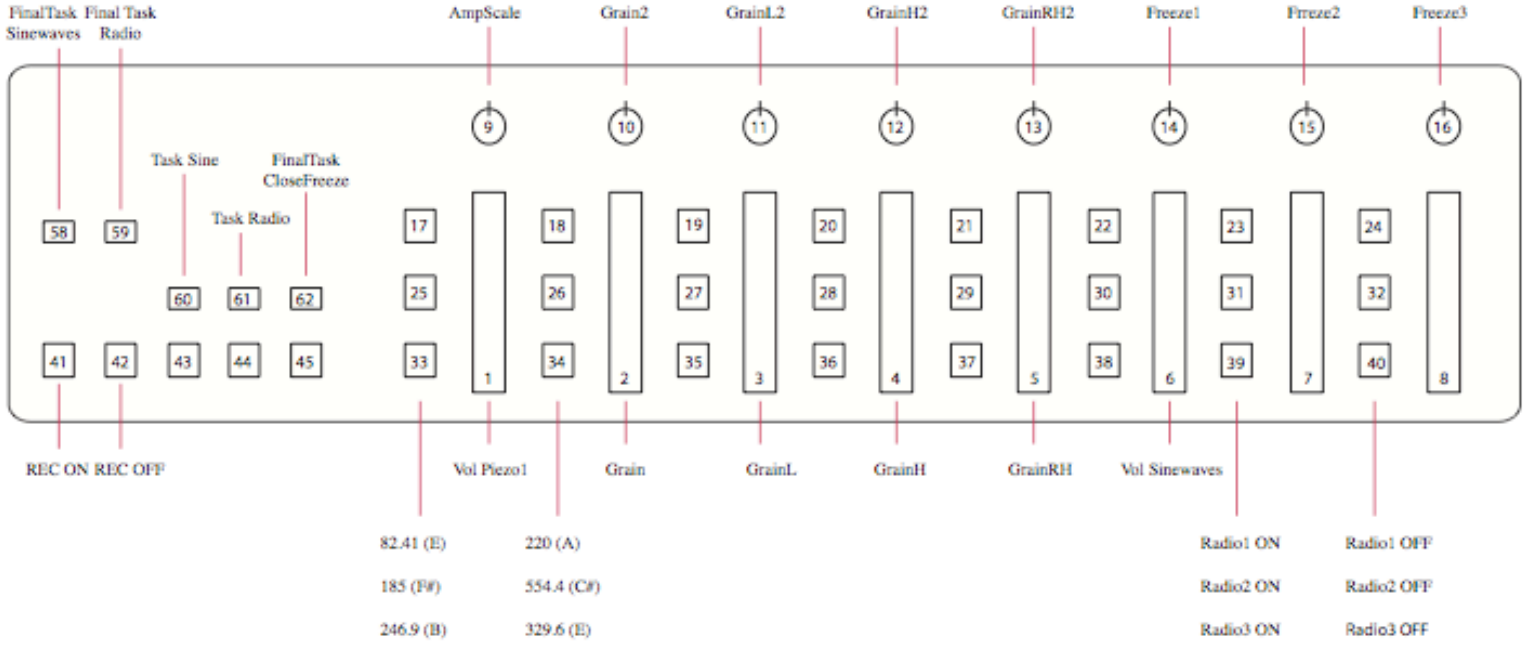
In the last section of the piece, all elements that have been introduced have to slowly fade-out. To do that the performer has to use three tasks – FinalTaskRadio, FinalTaskSinewaves, FinalTaskCloseFreeze – that are better explained in the notes that follow.

1. (The fragments are taken from the Archive of Radio Ghetto https://radioghettovocilibere.wordpress.com/)

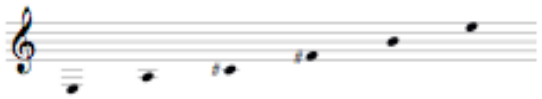
Connections for *Hidden traces*



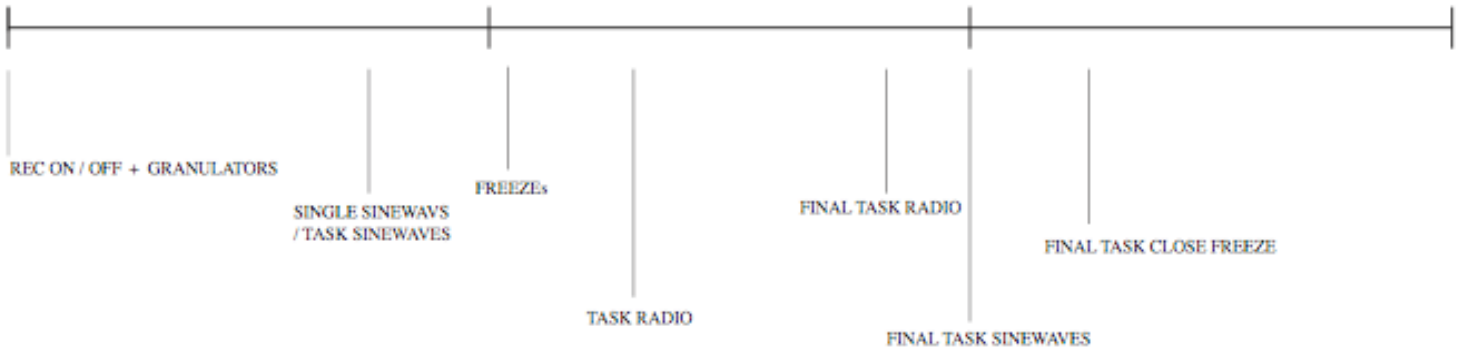
Mapping Controller MIDI for Seth's Korg Nano Kontrol



Tuning:



General schema for the introduction of different elements:



Notes for the MIDI Controller

Buttons:

REC ON: when pressed, this button records one 5" buffer. The recording is set on loop, so, until the REC OFF button is not pressed the buffer is continuously overwritten. If the button is pressed again after the stop of the previous recording (REC OFF), a new recording is set.
Please note that if pressed twice the recording can't be stopped anymore.
REC OFF: when pressed, this button stops the recording. The buffer keeps in memory the last 5" recorded.

82.41 (E) – **220** (A) – **185** (F#) – **246.9** (B) – **329.6** (E) – **554.4** (C#)

Each button of this series of six activates a sinewave with a specific frequency, a specific amplitude and a random duration between 10" to 20", or between 20" to 45".

RADIO1 ON / RADIO1 OFF – RADIO2 ON / RADIO2 OFF – RADIO3 ON / RADIO3 OFF

Each couple of these buttons turns on and off a player associated with a pre-recorded buffer, which contains a fragment from a radio show. (The fragments are taken from the Archive of Radio Ghetto https://radioghettovocilibere.wordpress.com/). The volume of the radio fragments is controlled by the overall amplitude detected by the first piezo microphone.

TASK SINEWAVES: this button activates a task, which sets twice a couple of sinewaves. The frequency is chosen between two different specified range. The duration of each sinewave is randomized, therefore the overall duration of the task oscillates in a range between 30" and 1'30".

TASK RADIO: this button activates a task, which turns on and off one or two players associated with a radio fragment, whose volume is controlled by the overall amplitude detected by Piezo1. Between the on and off of different fragments a silence of a random duration is set. The duration of the task oscillates more or less between 1' and 2'.

FINAL TASK RADIO: this task is the equivalent of TASK RADIO, but with more repetitions. It allows the radio fragments to be continuously available, until the end of the piece, when all the freezes are closed and all the sinewaves are played.

FINAL TASK SINEWAVES : this button activates a task, which sets each time a couple of sinewaves. The frequency is chosen between different sets, which progressively become lower. The duration of each repetition of sinewaves is randomized, therefore the overall duration of the task oscillates in a range between 4' and 7'.

FINAL TASK CLOSE FREEZE: Before pressing this button the performer has to check that the three different freezes are active. This button will turn them off – with a fade out – at a different time interval. The first freeze will be closed after 1'30", the second one after another minute and the last one after other 40".

Faders

VOL PIEZO1: this fader manages the volume of Piezo1
GRAIN: this fader manages the volume of a granulator that has as input the recorded buffer.
GRAINL: this fader manages the volume of the same granulator, which passes through a low-pass filter
GRAINH: this fader manages the volume of the same granulator, which passes through a high-pass filter
GRAINRH: this fader manages the volume of the same granulator, which passes through a resonance filter
VOL SINEWAVES: this fader manages the volume of the same granulator, which passes through a low-pass filter

Knobs

AMPSCALE: this knob manages the level of sensitivity to the amplitude detected by Piezo1.
GRAIN2, GRAINL2, GRAINH2, GRAINRH2: these four knobs double the faders GRAIN, GRAINL, GRAINH, GRAINRH.
FREEZE1, FREEZE2, FREEZE3: these knobs activate and manage the volume of the freezes. When pulled to 0 the freeze is freed and a new freeze on a new note can be activated.