Dr.E.Huckert 08-2024

HUNoEd: Produce Sound

HUNoEd has a menu Player/Play where you can start a player allowing to hear the score shown on the screen. The play process starts from the cursor position (whole measures only) on. During the play process the cursor moves on the screen. No editing should be used. The user interaction is restricted to the **key ESC that stops** the player.

The player in HUNoEd uses MIDI to play the notes.

MIDI can normally played via two mechanisms:

a MIDI hardware device (an E-Piano or a MIDI expander)
a MIDI software synthesizer

I concentrate here on software synthesizers.

Windows

In Windows a software synthesizer is part of the operating system. There should be no problems with MIDI and HUNoEd. Soundfonts are apparently not used by the Windows synthesizer.

No special configuration is necessary under Windows. In the make file “MIDI_MODEL=0” must be specified for Windows. MIDI_MODEL=0 means: use Windows API calls.

Linux

In Linux things are more complicated. HUNoEd acts as a MIDI client. The player uses the ALSA API. Pulseaudio or JACK are **not** required – if installed and running they produce often problems with MIDI. In most (WildMidi is an exception) cases you need a **MIDI server** running in the background. There are at least three commonly used MIDI servers:

- Timidity (a CLI program)
- FluidSynth (a CLI program)
- Qsynth (this is an enhanced FluidSynth with a GUI)

Using a software synthesizer under Linux requires normally that soundfonts have been installed. You find soundfonts normally under */usr/share/sounds.*

It is recommended that you test MIDI before running HUNoEd. The programs aplaymidi or pmidi can be used for this.

In the make file “MIDI_MODEL=1” must be specified for Linux.
MIDI_MODEL=1 means: use ALSA API calls.

The MIDI servers wait for MIDI events on **ports**. In the configuration file *noed.in*i you must specify a port in section *[midi]* under entry *port*=. The Linux command *aconnect -l* shows the MIDI servers that are running and it also shows the ports (called there ex. “client 129” – “129:0” is the MIDI port).

I strongly recommend using Qsynth as MIDI server. Timidity produced a lot of problems in cooperation with HUNoEd – but also outside when used with aplaymidi.

Configuration

There is a special section *[midi]* in the configuration file *noed.ini.* Besides the entry *port*= mentioned above you will find there default settings for:

- instruments
- speed (BPM = beats per minute)
- velocity (volume per note)

All these settings correspond to terms used in the MIDI protocol. Normally values 1-128 are allowed (MIDI uses internally rather 0-127).

The same parameters can be overwritten when a score is created or under menu *player/BPM* or *Settings/Instruments*.