

miniMeep

INSTALLATION & USER GUIDE

MiniMeep is a polyphonic subtractive synthesiser AU/VST plugin based on an analogue-style semi-modular design - oscillators, filters, amplifiers and modulation.

It has been specially developed to support this assignment and learning synthesis, through the design of preset(s). It contains no factory presets, but is capable of a very wide variety of musical timbres - and supports the loading and saving of user presets, as well as full DAW automation.

MiniMeep's design, sound quality, and capabilities are comparable to many other subtractive software and hardware synthesisers, allowing you to explore timbres not only through experimentation, but through familiarity with other synthesisers, general synthesis concepts, literature, tutorials, articles, etc.

PLUG-IN INSTALLATION

WINDOWS (VST)

- Copy the *MiniMeep.dll* file to your VST plugins folder (e.g. C:\Program Files\Steinberg\vstplugins)
- If not already configured, you may also need to point your DAW towards this folder to find the plugins it contains.

MAC (AU)

- Copy the *MiniMeep.component* file to your AU plugins folder (i.e. /Library/Audio/Plug-Ins/Components). If the library folder is hidden, use the *Go > Go to Folder...* menu entry in *Finder*.
- Modern macOS (Cataline or higher) has several levels of extra security that requires you to authorise the plug-in manually:
 1. Attempt to load the plug-in in your DAW. An error will highlight that the plug-in has been blocked.
 2. Open your system's *Security & Privacy* preferences. Under the *General* tab, there should be a note flagging the blocked plug-in. Click "Allow Anyway".
 3. Back in your DAW, try to load the plug-in again. The error will now show an additional option, "Open Anyway". Click this, and the plug-in will be authorised and ready to use.

FEATURES & USAGE

OSCILLATORS

- Three signal generators support band-limited saw/triangle, pulse/square, sine, and noise waveforms.
- The **pitch** can be independently controlled using **semitones** (b/#) and **detune** (-/+) dials, as well as through **MODULATION** (**MOD ENV** and **LFO1**).
- The **duty** cycle allows selection and morphing between saw (0%) and triangle (50%) or square (50%) and pulse (non-50%).
- The relative amplitude **gain** of each oscillator can be set independently.

- FILTER**
 - One multi-mode, analogue-style, resonant (VCF) filter is applied to the mix of the oscillators. It is switchable between low-pass (LPF), band-pass (BPF), high-pass (HPF), and band-cut (BCF) modes.
 - It also includes Moog-style alternative modes, plus an all-pass filter (APF, for phase effects and comb filtering).
 - The **cutoff** (or centre, for band-pass modes) frequency (Hz) can be controlled manually, as well as through **MODULATION** (**MOD ENV** and **LFO2**).
 - The **resonance** adds additional spectral energy at the cutoff point or limits of the band, for squelchy or screaming sounds.
 - The **overdrive** dial introduces pre-filtered harmonic distortion to add additional spectral content, and thicken the sound, prior to filtering.
- AMP**
 - Mixer controls for oscillator balance, **panning**, and **output gain** are provided.
 - Each individual note's amplitude can be modulated using an attack-decay-sustain-release (**adsr**) envelope (**AMP ENV**). The sliders are non-linear for both short and long durations.
- MODULATION**
 - One envelope (**MOD ENV**) and two low-frequency oscillators (**LFO1** and **LFO2**) are provided to modulate pitch and filters over time.
 - The **shape** and **rate** of each LFO can be controlled, as well as the modulation depth for each controlled parameter.
 - For each controllable parameter, the depth and polarity of the modulation is set by the adjacent, colour-coded dial:
 - By default, at the central position, the modulation source has no effect.
 - For positive values (turn right), modulation is *added* to the control value.
 - For negative values (turn left), modulation is *subtracted* from the control value.
 - The controlled parameter should be set to an initial value, which will be added to or subtracted from by the modulation source – *e.g. a low-to-high LPF filter sweep can be achieved with a low cutoff, slow attack, and positive modulation depth.*
- FX (EFFECTS)**
 - Stereo effects processing options include reverb, delay (echo), chorus, and distortion:
 - **reverb** sets the amount of artificial stereo reverberation (based on a feedback-delay network design) added to the overall mix.
 - **delay** sets the amount of patterned delays (multiple echoes) with feedback added to the overall mix.
 - **chorus** controls the amount of stereo modulated delay (chorus / flanger) added to each note.
 - **distort** sets the amount of harmonic clipping (fuzz) distortion added to the mix.
- OTHER**
 - Notes can be auditioned using the built-in piano keyboard, using different pitches (x) and velocities (y), which also responds to the virtual piano layout on the computer keyboard (A and W rows).
 - The initial preset is a sawtooth wave. To reset to the initial settings, choose the "Default" preset. To quickly reset an individual control to its default, simply double click it.
 - All controls can be automated from the DAW and/or controlled via MIDI.
 - Settings are saved automatically with the DAW project, but can also be loaded/saved as user presets.
 - **For the assignment, you should also screenshot the plugin and insert the image in your report.**

FURTHER SUPPORT

- Use the *Discussion* forum on Blackboard or email the Module Tutors for synthesis guidance.
- **For technical issues (e.g. bugs) or questions, please email Chris Nash (chris.nash@uwe.ac.uk).**