Introduction

Pianophonic is a multi oscillator wavetable synthesiser that takes its inspiration from the three stringed hammer action of the piano, featuring 3 wavetable oscillators together with a sample playback engine per voice. This hybrid oscillator combination allows you to create harmonically rich sounds together with the added bonus of a percussive hit at the start. Not limited to piano and hammer sounds, the SD card included with the module features many key mapped wavetables derived from a variety of instruments including acoustic pianos, electric pianos, guitars, tuned percussion, and classic synthesisers as well as useful sets of harmonic waveforms. You can also create your own sounds using our online Waveslicer tool, enabling you to upload your own custom sounds onto the Pianophonic's SD card.

Usage:
Connect Pianophonic to a midi keyboard controller or sequencer to play it polyphonically. Alternatively connect it to a CV and Gate source to play single notes monophonically or to play massive polyphonic chord stacks.
The 8 chord memories can be selected using the Chord Select CV input allowing unlimited integration into larger modular systems and opening up new compositional possibilities.
Pianophonic also features 'Mono Mode' where the unit can play single memorised chords over midi, simply press Voice Mode to toggle between Poly mode and Mono mode.
Main Features:

- 3 Wavetable Oscillators per voice.
- 1 Sample playback engine per voice.
- 16 wavetable and sample parts provided on SD card.
- 8 chord memories selectable by CV or midi.
- Detune from unison to 5th to sub-octave.
- Stereo DJ filter.
- Built in high quality 24bit stereo reverb.

SD Card Contents

Selector	Wavetable	Hammer
1	Grand Piano	Grand Piano
2	Upright Piano	Upright Piano
3	Bright Piano	Bright Piano
4	Felt Piano	Felt Piano
5	Toy Piano	Toy Piano
6	Wurlitzer Piano	Wurlitzer Piano
7	DX Piano	DX Piano
8	Tom's Acoustic	Picked Guitar
9	Ingleby Strat	Picked Guitar
10	Glockenspiel	Glockenspiel
11	Vox Humana	Breath
12	Pulse Width Synth	Kickain Bass
13	SynthWave	PluckWave
14	Wavetables A	SH-3 Bass
15	Wavetables B	Xylophone
16	Wavetables C	Organ Percussion

Installation
Pianophonic requires a -12v/+12v eurorack power source and draws 80mA.

Online manual and support
The online manual can be downloaded from our website at https://www.knobula.com/downloads.
Support can be found on our website at https://www.knobula.com/forum.

Please refer to the online manual for detailed information regarding compliance with EMC directives.

Quick Start Guide

Attack
Fades out the hammer sample and then increases the wavetable attack time.
Decay
Sets the decay envelope of the sound whilst a note is being held down. Turning the control fully clockwise will not decay at all. Note: Some presets, such as the pianos, are internally set to decay faster for high notes and longer for low notes.
Release
Sets the release time of the envelope. Turning the control fully clockwise will cause the envelope to drone indefinitely.

Part Selector
Choose from 16 Wavetable/Hammer sounds stored on the SD card. Use the toggle switch to choose which oscillator parts you wish to replace when loading, Sides, Hammer or All.
Save Preset: While holding Shift, Select a destination and long press Trigger to save.
Load Preset: Hold Shift while selecting.
Wavetable Mix
Select different mixes of the oscillator types. *Sides* or *Middle* make the respective oscillators louder and *Even* sets the volumes equally for all three oscillators.

Detune
Changes the pitch relationship between all 3 oscillators. Blend smoothly from Unison to 5th to Sub Octave.
Temperament. Hold Shift to adjust the amount of dynamic micro-tuning.
Pitch
Increase or decrease the oscillator's pitch in semitone intervals, by up to an octave.
Hold down Shift to fine tune.

Patch Guide
To initialise Pianophonic and to get the most natural piano sound, setup the controls like this.

Start Point
At the centre position the wavetable is played from the very start. Moving the control clockwise to the right will shift the start point later. Turning the control to the left of centre will scan the wavetable in reverse and shift the start point later.
Morph Speed
Turning the control to the right slows down the wavetable scanning speed until it becomes static and plays a single waveform selectable by the Start Point.
(Midi Channel)
To change Midi Channel. Hold down Shift and turn the Morph speed knob. Values range from Omni mode (all channels) then channels 1 through 16.
Trigger
Triggers the last note or last chord played over midi. Same as Gate Input.
Hold Shift and press Trigger briefly to save all the settings to persistent memory.

Dynamics
Increases the compression on decaying sounds to make them more constant in volume. Overdrive goes further and distorts the oscillator signal.
Hold Shift to adjust Output Gain.
Filter
DJ Style stereo filter. High pass to the right, Low pass to the left. Hold Shift to control Resonance.
Reverb
Controls the level of reverb.
Hold Shift to set reverb decay.

Voice Mode
Toggles between Poly Mode (default) and Mono mode which allows you to play stored chords and note stacks over midi.