

Peak version 1.2

New Features User Guide

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New Features Available in Peak version 1.2

Peak is without doubt the most powerful synth we've ever created. Since its launch in 2017, users around the world have let us know ways in which they reckon we could make it even better. For the Peak 1.2 firmware update, we've made the most frequently requested community features reality and have also added 178 new patches, created by Patricia Wolf and GForce software. Peak v1.2 is available now for free via the [Components](#) content manager. The new patches can be found in the Novation tab within Components.

New Wavetables

You can now access an additional 43 wavetables from each oscillator, greatly expanding Peak's sonic palette. The new wavetables can be accessed from the 'WaveMore' Oscillator menu.

This page will be automatically presented on screen when 'More' is selected using the oscillator 'Wave' waveshape selection button.

As before, when in the Oscillator/Osc menu, pressing the 'Page/Select' right button twice will take you to the 'WaveMore' waveform selection area.

The three buttons to the left of the OLED display can now be used to shift control to a particular row of the page being displayed.

When on this page, pressing the top button will shift focus to the WaveMore menu. The rotary controller to the right of the OLED display can now be used to step through the new wavetables added in the v1.2 firmware update.

Previously, there were 17 wavetables available the selection ended at, 'BassOrgn'. The 43 new wavetables are available beyond that selection.

New Wavetables		
Acid	Buzzy	Carousel
Choral	Climbing	CoinFlip
Deep	Dub	Eee
Eris	Flame	Further
GlassSaw	Glassy	Granular
Grime	Grow	Heavy
Hedge	Hungry	Ladders
Lead	Modeling	Modem
Monster	Screech	SeaBase
Shmorgan	Spirals	Steel
Sunrise	Swell	Thicker
Thinner	Tides	Tokyo
Tops	V.Chord	Variance
Vocaloid	Vowelled	WeirdVox
Yeah	–	–

Two New LFOs

Peak version 1.2 benefits from 2 additional LFOs (for a total of four), located in the Mod Matrix menu. Unlike LFO 1 and 2 – LFO 3 and 4 are global and are not voice-specific, making them ideally suited to modulating FX parameters.

The parameters for these LFOs can be found in the LFO menu. From the LFO menu you can select the shape of LFO 3 and 4, selecting from, Triangle, Sawtooth, Square and Sample and Hold. The 'L3/L4Rate' field can be used to control the speed of the LFO. Enable 'L3/L4RateSync' to synchronise the LFO to clock and override the LFO rate option.

FX Mod Matrix

Paging to the end of the FX menu, you will now find a new FX-dedicated modulation matrix with 4 available slots. This FX Mod Matrix gives you access to non-voice specific modulations and FX-specific parameters as destinations.

Sources Available	Destinations Available
Direct	Distortion Level
ModWheel	Chorus Level
After Touch	Chorus Rate
Expression Pedal 1	Chorus Depth
Expression/Breath Pedal 2	Chorus Feedback
Velocity	Delay Level
Keyboard	Delay Time
Animate 1	–
Animate 2	–
CV +/-	–
LFO 3 +/-	–
LFO 4 +/-	–
Bendwheel +/-	–

New Envelope Features

Peak version 1.2 benefits from new envelope features, accessed from the Envelope/Env menu. A hold stage has been added, after the attack stage, essentially now giving Peak an AHDSR envelope.

In the Envelope/Env menu, the top screen button can be used to select 'HoldTime', the rotary control to the right of the screen can now be used to adjust the hold time from off/0 to a maximum value of 127. When at maximum value, a hold time of 500 milliseconds is achieved.

Looping Envelopes

In the same Envelope/Env menu, the middle screen button can be used to select the 'Repeats' control. This can be used to enable 'Looping Envelopes': The Amp and Mod envelopes will loop from the start of the attack phase to the end of decay phase. The Repeats control can be used to select the number of times that the envelope repeats from off to 126. With the Repeat control at maximum/On, the envelope will loop permanently.

Redesigned Mod Matrix

In Peak version 1.2, modulation sources and destinations are now presented on the same page. This redesign greatly improves Peak workflow and eliminates the need to page back and forth between two menus when creating a patch.

Now, when pressing the 'Mod' button to select the Mod Matrix, you will see both sources on the second line of the screen. The top screen button can be used to select this line, if it's not already selected, then a second press will allow you to switch between sources. The rotary control to the right of the screen can be used to make a selection from the available sources. Beneath this we can select the destination and depth value. The Page/Select buttons can be used to page through all 16 available mod slots.

Another new addition to the mod matrix sources is the pitch bend wheel. This provides two sources; up and down, giving you new ways to address different modulations.

Initialise Manual Mode

Due to popular demand, we have added a new way of initialising a Patch using peak version 1.2.

From the Settings Menu you now have two Initialise options: 'IniPatch' will initialise a patch as before, restoring all parameters to their default values.

'Live Initialise' will load up an initial patch but take the values of all of the current 'live', physical position of all of Peak's pots and sliders.

'Live Initialise' is ideal for instantly getting hands-on with new patches, and creating random ones from scratch.

To determine how Peak initialises, press the Settings button and use the Page/Select right button to cycle to the 7th page. The middle screen button can now be used to select either 'IniPatch' or 'Live'.

Microtuning

In Peak version 1.2 we have incorporated powerful microtuning capabilities. You can now retune the pitch of individual keys by fractions of a cent, also known as “microintervals”. This allows you to explore beyond traditional twelve-tone equal temperament tuning.

Gaining complete control over the frequency triggered by each keypress, you can essentially, create notes that fall between the keys of a piano tuned in equal temperament. This allows you to create new chords, scales and harmonies not previously possible with Peak.

Bespoke tuning tables can be quickly created on the Peak hardware itself and 1000s of pre-made, world, historic, and experimental tuning table scales can be freely downloaded online. You can use the Components content manager to add up to 16 unique tuning tables to Peak, in addition to the default 12 tone equal temperament tuning which is locked to tuning table 0.

Creating a Tuning Table

A tuning table ‘holding area’ can be accessed from the Setting Menu. Press the Settings button and navigate right, using the dedicated Page/Select button to the 9th page. Here you will reach the first of 16 customisable tuning tables.

With tuning table 1 on-screen, notes input from a connected MIDI source, such as a keyboard, will be automatically detected and displayed in the ‘Kbd Note’ field. The three screen buttons can be used to shift control to the parameters available. The rotary control to the right of the screen will allow you to make a selection from the values available. Pressing the top button will shift control to Kbd Note. Here you can also manually select the keyboard note that you would like to retune. The rotary control will allow you to select a range from C-2 to G8.

Pressing the middle button will allow you to now select the ‘Retune Note’ where you can edit the note output of the keyboard note selected above.

The bottom button can be used to edit the ‘Retune Frac’ parameter. Here you can fractionally retune the pitch of the note. Each increment adds approximately 0.4 of a cent or $1 \times 256^{\text{th}}$ of a semi tone of detune to a value of up to 255.

Please note: Microtuning changes won’t be audible unless this tuning table is selected from the Oscillator/Osc menu.

Changes made to a tuning table are automatically saved in this tuning table holding area.

Working with Tuning Tables

By default, Peak will use tuning table Zero/0, which cannot be edited and will always be a 12 tone equal temperament tuning table – like the note layout on a piano.

To work with the tuning tables stored and created in the tuning table holding area, they must first be selected from the Oscillator/Osc menu.

Press 'Osc' and use the Page/Select right key to move to the second page.

You can now use the three screen buttons located next to the OLED display to shift focus to the different parameters on-screen. Pressing the middle button will allow you to select the 'TuningTable' menu. Here you can make a selection from the tuning table holding area.

The active tuning table selection will be saved with the Patch.

MIDI Parameters list

The original [Peak User Guide](#) lists all MIDI parameters available (page 38 onwards). In addition to that, the table below lists the new MIDI values available for addressing features introduced in Peak v1.2.

Parameter	CC/NRPN	Control Number	Range	Default Value
Envelope Hold Time	NRPN	0:57	0-127 (0 to +127)	0 (Off)
Envelope Repeats	NRPN	0:58	0-127 (0 to +127)	0 (Off)
LFO 3 Wave-form	NRPN	25:0	0-3 (0 to +3)	0 (0)
LFO 3 Rate	NRPN	25:1	0-127 (0 to +127)	64 (64)
LFO 3 Rate Sync	NRPN	25:2	0-35 (0 to +35)	18 (18)
LFO 4 Wave-form	NRPN	25:3	0-3 (0 to +3)	0 (0)
LFO 4 Rate	NRPN	25:4	0-127 (0 to +127)	64 (64)
LFO 4 Rate Sync	NRPN	25:5	0-35 (0 to +35)	18 (18)
Tuning Table	NRPN	25:6	0-16 (0 to +16)	0 (0)
Oscillator 1 Wave More	NRPN	0:15	0-63 (0 to +63)	0(0)
Oscillator 2 Wave More	NRPN	0:24	0-63 (0 to +63)	0 (0)