Circuit v1.7
New Features User Guide

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New Features in Circuit version 1.7

Tied / Drone Notes

It is now possible to tie notes together in order to create drone notes and long ambient pads.

Each step now has a tie-forward setting. This can be accessed in the Gate View, so first select a pattern on a track, choose a synth track (1 or 2) and press Gate View.

In Gate View select a step that contains the note that you want to tie-forward.

Next press and hold Shift and you will see the following:

You can now turn the tie-forward setting on/off for this step by pressing pad 8 as shown above.

To make the tied note work you need to set the gate length so that the note ends just before the next note is played or overlaps with it.

In this example, the note to tie is on the first step so setting the gate length to 16 steps means that it will end just before the next pattern is triggered as follows:

If this pattern is the only one selected to play in Patterns View then the note will now play indefinitely. Alternatively create a new note of the same pitch at the beginning of the next pattern to play in the pattern chain and the two notes will be tied together.

In Note View, tied notes are shown as Orange when the steps are held down as opposed to the usual red. If notes are added to a step that already has a tied note assigned, they will not inherit the tie-forward setting and will be shown in red. This ensures that overdubbing on a step with a tied note does not result in multiple ties.

It is also the case that newly added notes will have their own gate lengths, which may be different to the length of any pre-existing notes.

If you do want to add a new note to the tie then simply use Gate View to select the step and turn the tie-forward setting off and back on again to apply the tie-forward setting to all the notes on the step just as when you edit the gate length on a step, all notes inherit the same new gate length.

Pattern Chain Sequences

We have expanded what's possible with Patterns View allowing you to now make complex sequences of patterns and pattern chains.

There is a new Pattern Chain Sequence function, which is accessed by holding SHIFT while in Patterns View.

You can then select patterns and chains of patterns, up to a maximum of 32 patterns or 16 pattern chains in any order.

You can repeat patterns and chains and build up a sequence, and use the octave buttons to navigate between sequences.

And you can toggle the Append setting by pressing SHIFT + Patterns to then add patterns and chains to an existing pattern sequence, even when playing.

Here's how it works:
Once patterns of notes (and automation) have been entered, it is possible to make song arrangements with them.

To enter a sequence of patterns to play back, make sure the transport is stopped, then hold down Shift while selecting patterns in the Patterns View. In this way, patterns can be repeated or played non-sequentially. It is even possible to insert pattern *chains* into the sequence, and to mix individual patterns and pattern chains in the sequence.

Whilst entering patterns, only the last entered pattern or pattern chain is displayed on the pads.

Repeat the process for each track that you wish to define a pattern chain sequence for.

Release Shift to finish entering pattern chain sequences. Now any patterns that feature in each track's sequence will be lit brightly on the pads.

NOTE: Any existing pattern chain sequence for the track will be replaced with the newly entered sequence for that track. To append patterns to an existing sequence, see **Appending to a Sequence** below.

TIP: Leave a pattern empty in a track to allow song arrangements to be built up. Repeat the empty pattern in the track's sequence as necessary to create a period where the track does not play.

Track Selection
Whenever a pattern is pressed in a Pattern Set, the corresponding track becomes the 'selected track', and the LEDs underneath the macro knobs are illuminated in the colour of the selected track to indicate how many patterns have been added to the pattern chain sequence.

During playback, the macro knob LED corresponding to the playing pattern will pulse. If a pattern chain is being played then two LEDs are pulsed to indicate this.

Alternatively, use the Oct - and Oct + buttons to manually select which track's pattern chain sequence is displayed on the macro knob LEDs.

Sequence Banks

As a sequence is entered, the LEDs underneath the macro knobs are illuminated in the selected track's colour to indicate how many patterns have been added. Up to four banks of 8 patterns (32 patterns in total) can be added. The octave button and knob LEDs are illuminated to show which bank is being displayed, as follows:

Oct -	Oct +	Knobs	Meaning
Dim	OFF	Dim	Bank 1
Bright	OFF	Bright	Bank 2
OFF	Dim	Dim	Bank 3
OFF	Bright	Bright	Bank 4

Note that entering a pattern chain occupies two entries in the pattern chain sequence.

During playback, the bank containing the currently playing pattern will be shown. While entering a pattern chain sequence, the bank containing the current end of the sequence will be shown, so that you can see where the new patterns will be appended.

Appending to a Sequence

It is possible to append patterns (or pattern chains) to an existing sequence without replacing it. To do this, press Shift + Patterns to enable the 'Append to Sequence' setting (the Patterns button will light brightly).

When Append to Sequence is turned ON, pressing Shift on the Patterns View will cause the sequence LEDs to show the last bank of the pattern chain sequence for the selected track. At this point, holding Shift whilst selecting patterns or pattern chains will *append* to the current pattern chain sequence (instead of replacing it) for the corresponding track. Release Shift when you have finished appending patterns.

The Append to Sequence setting will be saved when the device is turned off with the Power button and recalled when the device is turned on again.

**TIP**: Appending to a Sequence even works during playback!

TIP: To quickly create a new sequence when Append to Sequence is ON, first enter a pattern or pattern chain without Shift pressed, then hold Shift and enter any additional patterns required.

NOTE: When Append to Sequence is turned OFF, holding Shift and entering patterns or pattern chains while playing back will cause an Instant Pattern (Chain) Switch to occur.

Synth Micro-Nudge

It is now possible to take your music 'off the grid' by delaying notes on a step from 1 to 5 ticks. (Each step is divided up into 6 ticks.)

When in Synth 1 or Synth 2 Gate view, press and hold Shift to display the tick location of the note/s on the selected step.
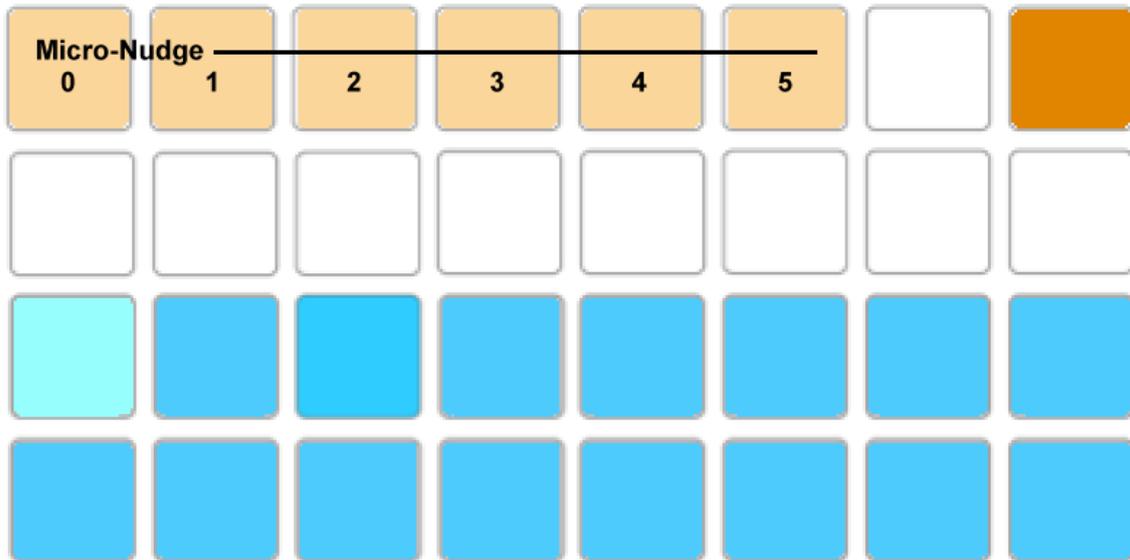
By default, whether entered in step edit or recorded, the first pad will be lit, i.e. the note/s will be positioned with an offset of zero

The five pads to the right of this position can then be used to apply a delay to the note/s

It is also possible to use this setting to create more complex rhythms that were otherwise not possible before, for example, triplets across the beat