

# C15 Firmware Update – Spring 2020

The C15 gets a major update of the operating system, the synth engine and the user interface. The update includes layer, split and mono modes, more voices, and more Macro Controls and modulation targets.

This update continues the constant evolution of the C15 since its launch nearly three years ago. It expands the range and quality of sounds and improves the playability and suitability for musical performance.

The update will be free for all C15 users. All users will also benefit from the interchangeable magnetic foils, as the new version comes with updated overlays reflecting the new features.



## Dual Modes

The 24 voices can be split into two groups of 12 voices (Part I and II), loading different presets. Each Part contains a complete effect section. The voice allocation can run in “Split” or “Layer” mode.

- **Split mode:** Part I and II are assigned to different key ranges.
- **Layer mode:** Voices from Part I and II are stacked per key.

The Feedback Mixer now has additional channels to receive signals from the other Part. This means that in Layer mode the two voices not only can run in parallel but their signal processing can be combined in serial and feedback structures, allowing e.g. 4-operator PM or 8-pole filters.

The Layer mode also offers crossfades that are controlled by the velocity or the key position.

## Monophonic Modes

The voice allocation now supports monophonic playing with Lowest, Highest and Last Key priority, four different Legato modes and an adjustable Glide time. Up to 24 unison voices can be layered.

## Six Macro Controls

The four existing Macro Controls (A, B, C, D) are extended by MC E and F. All six MCs are also available in the “MC View”, a 2-D control surface for touch screens.



## More Modulation Targets

Additional parameters (e.g. the Oscillator Phases) can be assigned to the Macro Controls.

## New Parameters

- Velocity amounts for the Decay 1 and 2 times of the envelopes
- Separate Breakpoint and Sustain levels for timbre and amplitude of the oscillators
- Oscillator Reset can be disabled for free-running mode
- Tremolo effect as an extension of the Flanger
- Dual mode: Volume and Tune for Part I and II
- Layer mode: Fade From (key), Fade Range
- Feedback Mixer: more inputs for cross routing in Layer mode
- Output Mixer: signal split to both Dual mode effect chains
- Individual smoothing times for the six Macro Controls
- Adjustable tuning reference: 440 +/- 40 Hz

## Extended Parameter Ranges and Resolutions

- Unison with up to 24 voices (before: 12)
- Bipolar Level Velocity amounts (for velocity crossfades)
- Internal high-resolution parameter format

## Enhanced Quality and Performance

- More efficient sound engine: 24 voices (before: 20)
- Option for double sample rate for extra-high signal quality
- Sample-precise envelope times
- Enhanced velocity resolution
- Optimized keyboard latency
- Improved glitch suppression for preset recalls and morphing transitions
- Support for more types of pedals and footswitches

## C15 Hardware Revision - 2020



- Additional XLR connectors for the balanced audio outputs
- Revised power supply jack and switch



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