

# C15

## Studio Package Update

The C15 gets a major update that includes USB MIDI connectivity and an internal digital audio recorder. For connecting the C15 directly to a computer we are offering a new small hardware device called the MIDI Bridge.

Again this update continues the constant evolution of the C15 since its launch. Last summer we extended the synth engine by split, layer and monophonic modes, new parameters and added more macro controls.

The current implementation of a MIDI interface is now widening up the spectrum of applications for the C15, especially in the studio environment.

The second feature included in this software release is an internal digital recorder. It automatically stores the audio output signal of the last hours in the C15.



## USB MIDI

### Features at a glance

- Transmits and receives notes, positions of the Hardware Controls, Program Changes
- Up to 90 parameters can be modulated via the Macro Controls
- 14-bit resolution for Note Velocities and for Controls available
- Separate MIDI Channels for Split zones and Parts of the synth engine available
- Local On/Off

### Connecting the C15 to a USB Device

The USB host interface of the C15 can be directly connected to USB MIDI devices.

The C15 has a Type A connector for USB, and its embedded computer system works as a “USB host” for “USB devices” connected to this port. This means that you only need a standard USB cable to set up a MIDI communication with an instrument, a hardware sequencer, or a MIDI interface, or any device with a USB Type B connector.

### Connecting the C15 using 5-pole DIN Connectors

To use the classical MIDI cables and 5-pin DIN Ins and Outs a USB MIDI interface can be connected as an USB device directly to the USB port of the C15.

### High Resolution Mode

As classical MIDI operates on 7 bit resolution (128 steps), there is a loss in accuracy. The C15 operates on much higher precision. Nevertheless, precision can be maintained by enabling the “High Resolution” options.

This increases the resolution to 14 bit (16384 steps). Values are then encoded as a pair of MSB (coarse) and LSB (fine) components, effectively doubling the amount of messages. This is still compatible with the classical resolution, as the LSB component is optional when receiving MIDI messages.

## MIDI Bridge - Connecting the C15 to a Computer

For the connection to a computer we provide the MIDI Bridge. It allows high speed transport of MIDI messages between two USB hosts.

A computer running a DAW or similar is the center of many setups. It functions as a USB host and can only be connected to USB devices. Since the C15 is also a USB host we provide the “MIDI Bridge” that functions as a double-sided USB device with two Type B connectors. One of the ports is connected to the C15 and the second to your computer.



## Internal Digital Audio Recorder

The internal recorder enables you to capture the C15’s output signal with the best possible audio quality at any time, without connecting an audio interface.

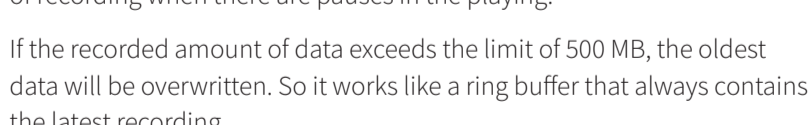
From the browser-based graphical user interface you can play back the recorded audio and you can also restore the synth engine’s state at the time of the play cursor.

Selected segments of the audio can be downloaded in a lossless digital format and be used directly on your computer in your production environment.

The stereo signal behind the Soft Clipper and before the D/A converter is written to the RAM, using the lossless compression of the FLAC format (24 bits, 48 kHz).

A maximum of 500 MB can be stored in the RAM. Because of the FLAC compression this is enough for hours of permanent playing and for days of recording when there are pauses in the playing.

If the recorded amount of data exceeds the limit of 500 MB, the oldest data will be overwritten. So it works like a ring buffer that always contains the latest recording.



### Features at a glance

- Loss-free digital recording of the stereo output signal
- FLAC-compressed storage of the last hours (at least 80 min) of playing
- Auto-start when the C15 is booted (optional)
- Visualization in the browser and play-back controls
- Download of the selected segment as FLAC or WAV file
- The sound parameters at any point of the timeline can be restored
- Complete information about the presets used in the session



**NONLINEARLABS**

[www.nonlinear-labs.de](http://www.nonlinear-labs.de)