

Synth Controller manual addendum for edition 'Bit'

Many thanks to Stephan Kümpel for his help developing this edition.

Technical requirements

This edition is designed to work with the Crumars Bit One, Bit 01 and Bit 99.

For the synth to react to the parameter changes sent by the Controller it must be equipped with two firmware update EPROMS from tauntek.com. The original Crumars do not understand single parameter change commands. You can purchase the firmware update directly from tauntek.com / USA or from undergeek.de in europe:

<https://www.undergeek.de/crumar-bit01-bit99-firmware>

Description

The edition is identical for all 3 Crumar models.

Layer 1: modulation target switches and parameters for LFO1 and DCO1

Layer 2: corresponding for LFO2 and DCO2

Layer 3: VCF and VCA parameters and envelopes

Some parameters are printed in a rectangle with a solid triangle. These are parameters emphasized by velocity – similar to the printon of the Crumar itself.

Most parameter changes will not be noticable unless the next key is pressed.

Exceptions: DCO 1 Waveform, DCO2 Waveform, Noise, Detune, Wheel Amt, alle LFO Destination Switches, VCF Reso, VCF Env Invert.

Shift Parameter

In Layer 3 there are two SHIFT parameter - dynamic attack for both envelopes individually. Normally these knobs change the Attack rate. As long as you keep button 3 pressed („shift“) these knobs change the „Dynamic Attack Rate“.

LFO modulation target switches and LFO Waveform OFF

Some specialty about the LFO routings in the first knob row of layer 1 and 2: switching the LFO waveform to OFF also seths the LFO targets to OFF. After selecting one of the LFO waveform, you need to activate the desired routings again.

Setting the midi channel of the Synth Controller

The button combination for learning another midichannel is the upper 2 buttons. Hold them for 2 seconds, the LEDs start to flash. The Synth Controller awaits an incoming note on it's Midi In jack. If nothing comes in for about 30 seconds, the Synth Controller will return to normal operation mode, keeping it's old Midichannel. If the Synth Controller learnt which channel to use, it will nicely flash and return to normal

operation. You can also leave this mode manually by shortly pressing any of the buttons.

Differences Bit 01/99 and Bit ONE

The knob in the lower right corner alters different parameters on the Bit 01/99 and the ONE as these synths differ slightly in their architecture:

Bit 01/99: in Layer 1 you change NOISE LEVEL, in Layer 2 it's DETUNE of DCO2

Bit ONE: the knob sets the DCO frequency modulation through the ADSR envelope. In Layer 1 you set the amount for DCO1, in Layer 2 for DCO2.

The parameters PRG VOL as well as WHEEL AMT work for the Bit 01/99 only. On the Bit ONE these knobs do not have any impact.

Special case for Bit One: the keyboard will be disconnected from the internal sound source when a MIDI IN cable is plugged

There is a uncommon behaviour of the Bit One which is also mentioned in the Bit user manual. When plugging a Midi jack into MIDI IN , the keyboard is detached from the internal sound architecture. The keyboard still sends data to MIDI OUT though. This is a special behaviour of the Bit One and has nothing to do with the Synth Controller in special.

A possible workaround would be to use a Midi Merger: connect the MIDI OUT of the Bit and your DAW to the Midi Merger to merge notes/pitchbend data of both sources. The OUT of the Merger goes into the Synth Controller which is connected to the Bit's MIDI IN. The Controller forwards all Midi Data (from the Bit itself and the DAW) and mixes it with the sound parameter changes.