

Behringer CHAOS Firmware

Version 1.4.0 (27 Aug 2024)

Bugs:

- Addressed an issue that led to unexpected jumps in the CHAOS loop playback position (happening sporadically when CHAOS is turned counterclockwise) and another bug that caused the loop to change unexpectedly when CHAOS is set at the 12 o'clock position.
- Fixed a problem caused by an unreliable external clock source that "stutters", sending two rapid rising edges just a few milliseconds apart at each clock tick.
- Reduced hysteresis in the quantizers that translate voltage or knob positions into discrete settings (such as a clock divider ratio or LENGTH). This adjustment enhances the consistency between voltage (or knob position) and the corresponding setting.
- Widened the "virtual notch" for the LENGTH knob's 14-step setting.
- Implicit and Explicit Reset

Improvements:

RESET

- With the update to firmware V1.4.0 a reset function has been added. Press and hold buttons t & X for two seconds to re-purpose the CV inputs Jitter and Steps as reset inputs for the t section and X section, respectively. A further press and hold for two seconds will cause the sockets to return to their normal use.

When a clock pulse is received after a prolonged pause (3 seconds or four times the interval between two clock ticks, whichever is longer), the module will reset all counters, dividers, patterns, and step numbers of the relevant section (t or X). If CHAOS is active and set at 12 o'clock, this ensures consistent behaviour with each clock restart.

- Simultaneously hold the t and X section mode buttons to reassign the JITTER and STEPS CV inputs as explicit reset inputs for the t and X sections. The corresponding LEDs will blink for 2 seconds when these reset inputs are active and turn off when they are deactivated (the default setting).

FIRMWARE UPDATE

The Chaos firmware is updated via a 48 kHz sample rate .wav file. To update the Chaos first download the .zip of the file, unzip it and load it into a suitable audio file player.

Set the headphone out of the player to around 60-70% of maximum volume and connect it to the Rate CV input of the Chaos.

Remove all external connections to and from the Chaos, except the file player.

Power up the Chaos while holding down the T Feedback button.

The T and X feedback button LEDs will flash alternately until the file is played.

During file playback, which typically takes around two minutes the T and X feedback button LEDs will flash quickly, and the Rate Range button LED will be lit in green if the level is suitable. Other LEDs will flash occasionally.

When the update is complete, assuming that it was successful, the panel will return to normal.

If the update was not successful then power down, adjust the player level, and try again.