



■ Chorus

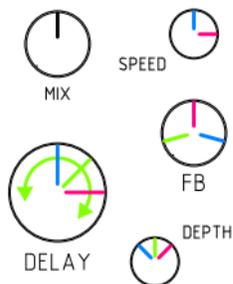
A first and very typical application of a Comb Filter is the Chorus effect. Use a quite large delay, a fast LFO speed, and no feedback.

■ Flanger

A short delay, with rather slow modulation, and a high feedback result in the typical Flanger effect

■ Static Feedback

Use a high negative or positive feedback, without any CV modulation (depth to zero), and play with the DELAY-knob to make comb filter sweeps.



Internal Triangle LFO

Many of the typical applications of a Comb Filter use the modulation of the delay by a triangular LFO. So, a 'default' LFO has been built into the Modor Comb Filter module. The speed of this LFO can be controlled by the SPEED-knob.

The internal LFO is normalled into the CV1 connector. If no cable is connected to the CV1 socket, the internal LFO is used as CV1.

Stereo effects or duophony

The Comb Filter module has two channels. These two channels can be used in a duophonic setup, by providing 2 separate notes into inputs 1&2, and 2 separate CV signals in CV1 and CV2.

But these two channels can also be used to make stereo effects, like stereo choruses and flangers. Input 2 is normalled to input 1. If no cable is attached to input 2, input 1 is the input for both channels.

But CV2 is normalled to the mirror image of CV1. So, if no cable is plugged in the CV2 socket, CV2 goes down when CV1 goes up, and vice versa.

This can be used to make stereo effects, even from a mono input. Listen to outputs 1&2 as left and right stereo signals.



COMB FILTER



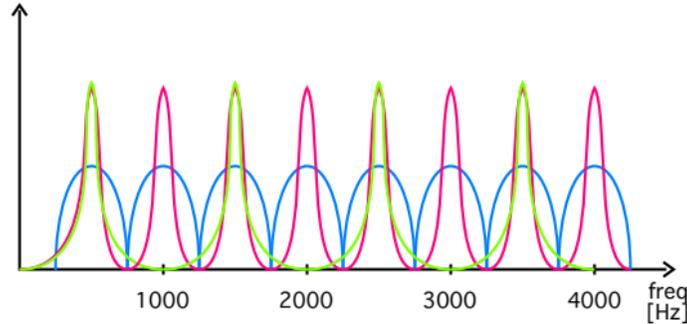
What is a comb filter?

A comb filter mixes the incoming signal with a slightly delayed version of the input. This delay is very short (up to a few milliseconds), so you won't notice it as a delay or echo, you hear an altered sound instead.

When mixing the original signal with the delayed one, certain regularly spaced frequencies cancel each other out, while the frequencies in between get amplified. So, in the frequency response curve you see a number of regularly spaced peaks and holes, like the teeth of a comb.

So, the main parameter of a comb filter is the delay's length. You can set it using the DELAY-knob. There's also a CV control (CV1/CV2 inputs) for this parameter, attenuated by the DEPTH-knob.

A second, very important parameter is the feedback amount. With increasing feedback, the peaks of the comb graph get higher and narrower, so the comb filtering effect gets more pronounced. You can set it using the FEEDBACK-knob. Actually, this knob is symmetric and allows for positive and negative feedback. With negative feedback, only the odd multiples of the lowest comb teeth are pronounced.



■ no feedback



■ negative feedback

■ positive feedback

