



Introduction

The *Flangulator* is, in some ways, a variation on the traditional flanger effect but with some major differences. Normally a flanger effect is created by combining the input signal with a slightly delayed version of itself which produces a comb filter effect. If the length of that delay is modulated, with a sine wave for example, then the comb filter sweeps back and forth producing the familiar flanger effect. The intensity of the effect can be varied by controlling how much of the delayed signal is fed back into the original.

The Flangulator differs from a traditional flanger in two ways:

- 1. It is not the length of the delay that is modulated but the feedback strength.
- 2. The modulation is non-linear. It involves sweeping through an angle from $0 2\pi$ in the Complex Plane.
- 3. Rather than being modulated by an internal LFO, the Flangulator has no internal modulation generator but an external CV input. In this way any voltage source can be used to sweep the filter, an LFO or perhaps an Envelope Follower.

The Interface

Modulation Depth Control

Can be used to either attenuate or amplify the control voltage. Because of the nonlinear nature of the modulation, changing this value can have a significant impact on the sound. At lower levels, adding an external offset voltage can alter the sound by shifting the modulation centre.

CV Input

The signal entering here is will modulate the feedback to produce the sweeping effect. The Flangulator feedback will sweep through its full range as the voltage it receives sweep from 0 - 5V.

Audio Input The audio signal to be Flangulated is passed into this input.

Delay Control

Controls by how much the feedback signal is delayed before it is recombined with the input signal.

Feedback Control

Controls the overall width of the feedback, that is, how much of the delayed signal is combined with the input signal.

Gain

This effect can substantially change the output level of an audio signal and so the Gain control allows up to 24dB of cut or boost to be applied to the output to compensate.

Sweep Meter

This meter shows the level of the feedback sweep.

Bypass Switch Switches the effect on and off. Audio Output

The Flangulated audio signal is passed back out from this output.

AUDIO

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DELXS

FEEDBACK

CAIN

NGU

DJ XII

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