

# How it works

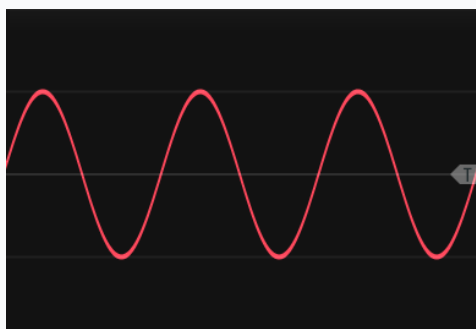
## Bend uses phase modulation:

While phase modulation is a complex subject, detailed explanations can be found in various resources elsewhere. If you're new to this topic, I recommend watching the YouTube video by Groovy DSP as an excellent starting point:

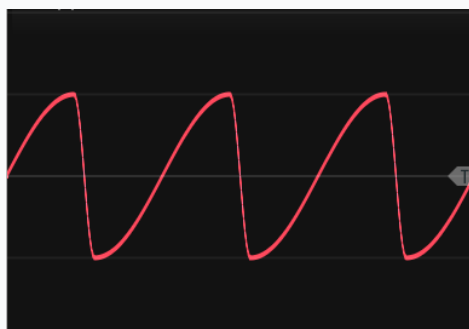
<https://www.youtube.com/watch?v=EW12RYc7QRA>

If you're more interested in understanding what phase modulation (referred to as 'bend' in the context of this module) can achieve with Bend, here's a concise overview. When you apply phase modulation (bend) to a sine wave or a triangle wave, the resulting waveform gradually transforms into something resembling a sawtooth wave. This effect can be harnessed to create a sound akin to a low-pass filter. Below, you'll find a visual representation of the phase modulation (bend) functionality to illustrate this concept.

**Bend: 0.00**

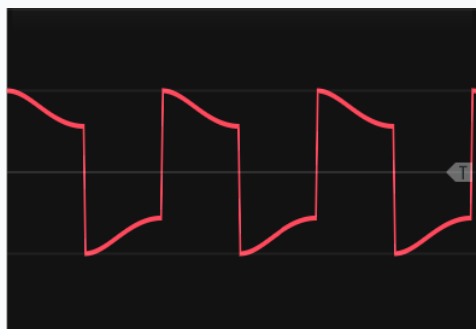


**Bend: 0.8**



Applying phase modulation to a square wave is akin to pulse width modulation:

**Bend: 0.00**



**Bend: 0.98**

