

# How it works

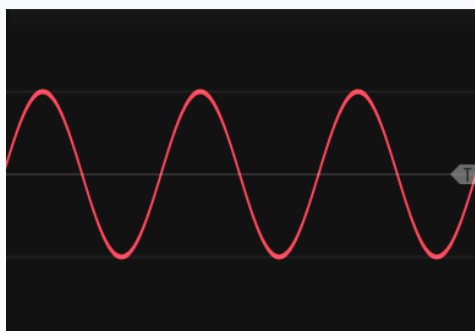
## Bend uses phase modulation:

Phase modulation is a complex topic that has been explained in great depth elsewhere. Rather than try and detail everything here, if you're new to the subject I recommend taking a look at this youtube video by Groovy DSP:

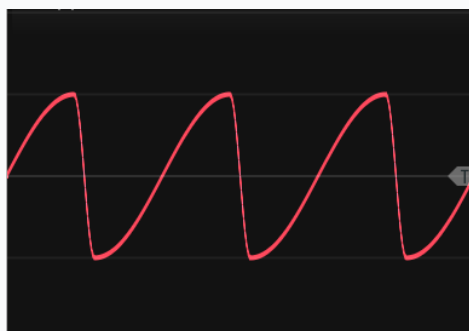
<https://www.youtube.com/watch?v=EW12RYc7QRA>

If you're not too interested in what phase modulation is and you simply want to know what it can do in the context of Bend, here is a very brief synopsis. As you apply phase modulation (bend) to a sin wave or a triangle wave, the resulting wave becomes closer and closer to a saw wave. This can be used to create a similar sounding effect to a low pass filter:

**Bend: 0.00**

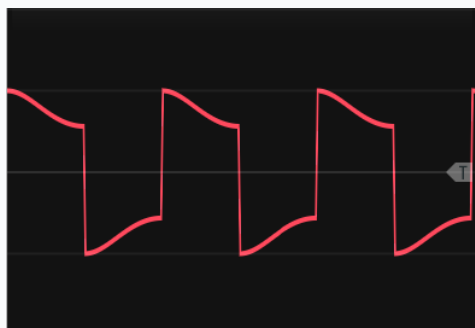


**Bend: 0.8**



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

**Bend: 0.00**



**Bend: 0.98**

