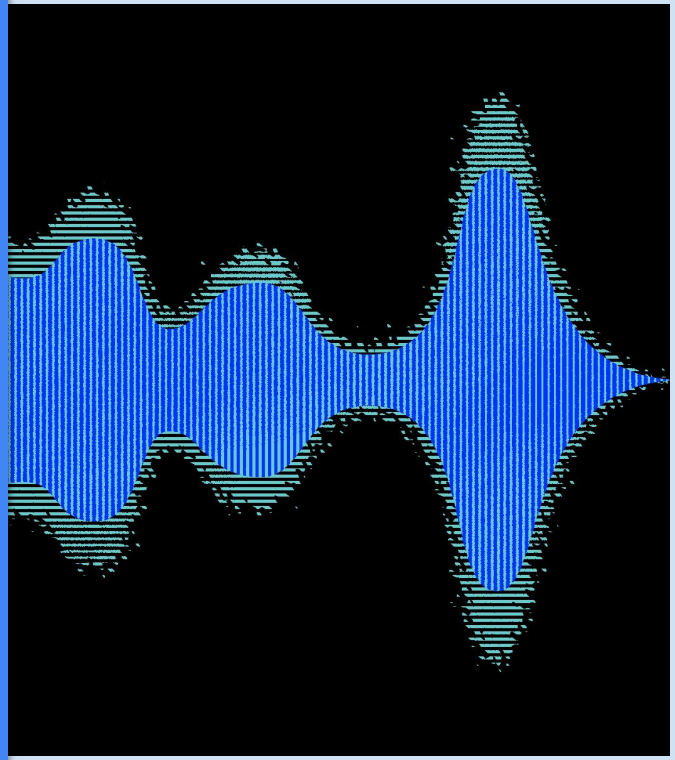
Distortion

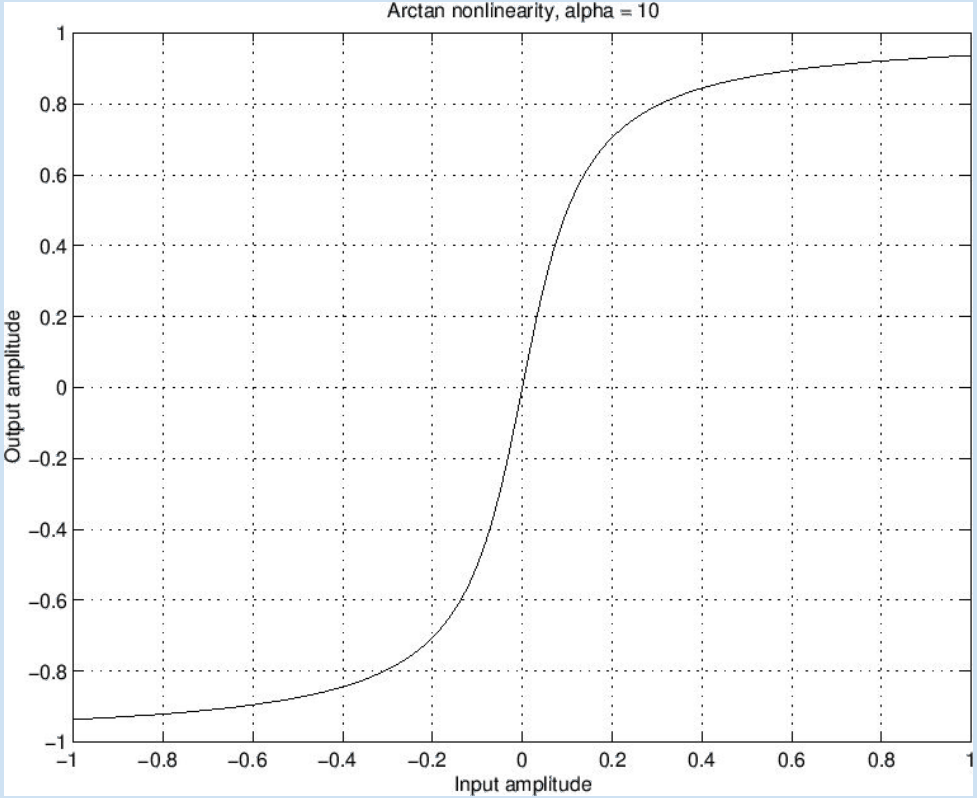
by Zachary Wood

What is distortion?

Distortion is the alteration of an audio signal's waveform, usually in an intentionally disruptive way. Distortion is used in many ways, from being used to replicate a crisp analog sound, to making the vocals of your favorite shoegaze band almost unrecognizable. By adding frequencies that were not originally there, distortion effects distort the shape of the input waveform.



How It Works



Distortions are caused by non-linear functions, and three of the main ones are

- soft clipping (cubic)
- hard clipping
- arctan non-linearity

Types of Distortions

Overdrive:

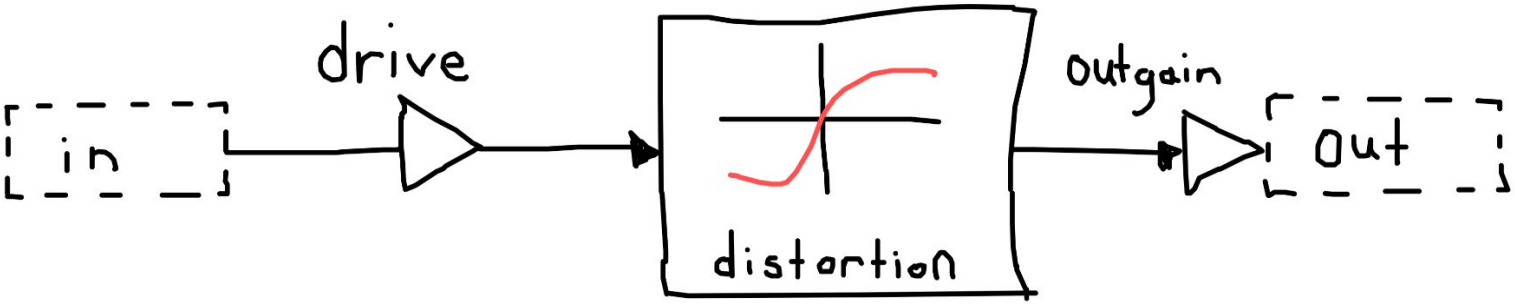
- nearly linear
- becomes more linear as levels increase

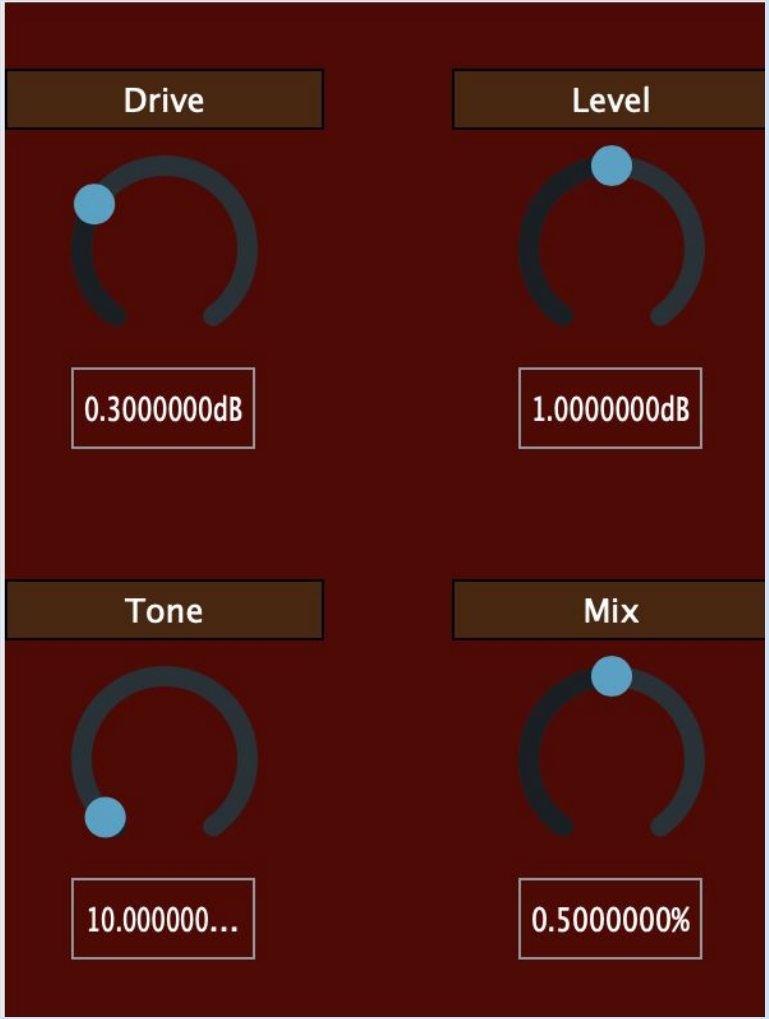
Distortion:

- non-linear at all times

Fuzz:

- non-linear, reminds me of static on a TV.


drive
outgain
in
out
distortion


Drive
Level
0.3000000dB
1.0000000dB
Tone
Mix
10.000000...
0.5000000%

Why I Chose This Effect

I love how creative you can be with this effect, and I love how its origins come from deliberately messing up audio through unintended ways to create a cool sound. Distortion helped create the old rock and metal sounds that bands such as The Kinks, Led Zeppelin, and The Rolling Stones are known for.

The End