

# **DISTORTICON**

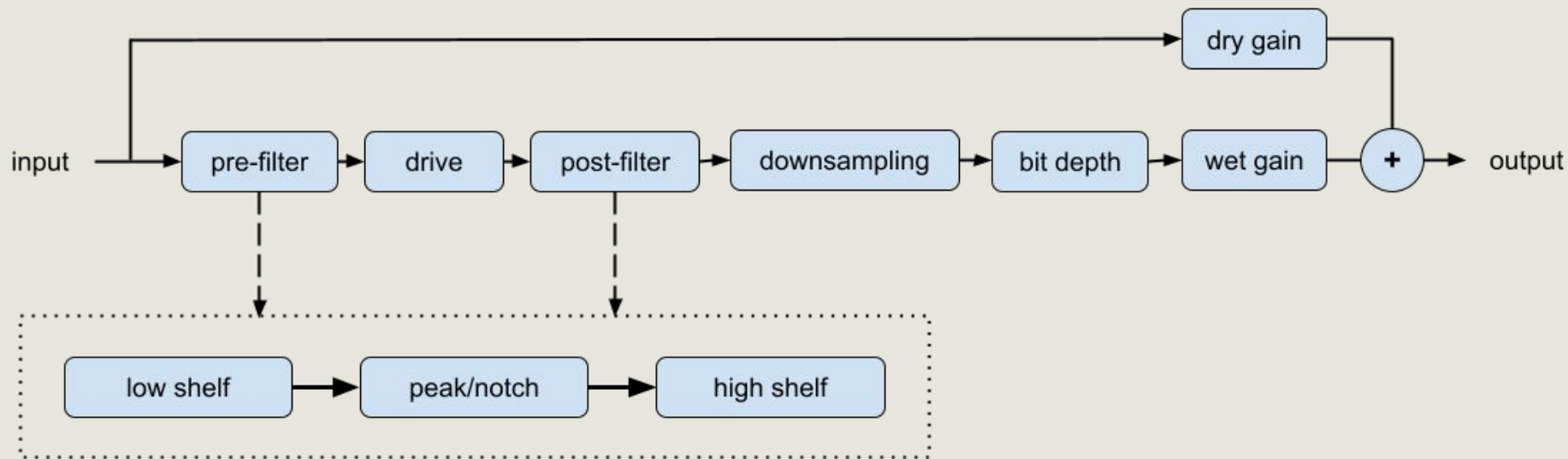
Distortion effect plugin with bit depth reduction, downsampling, and pre- and post-filtering functionality

# HOW IT WORKS

- Drive – soft clipping using *std::tanh*
- Bit depth – quantizes input sample to a limited number of levels
- Downsampling – reduces the sample rate resolution by only passing through every  $n$  samples
- Pre- and post-filters
  - Frequency
    - Low shelf – 0 Hz–500 Hz
    - Peak/notch – 200 Hz–5,000 Hz
    - High shelf – 1,000 Hz–10,000 Hz
  - Gain – -40 dB–20dB
- Separate dry gain and wet gain knobs

# SIGNAL FLOW

*Note: diagram represents one of two identical stereo channels. Both left and right channels follow the same signal flow.*



# WHAT IT SOUNDS LIKE



Original

Bit Depth   Drive   Downsampling

16   48   1

Pre-Filter   Gain   Post-Filter   Gain

Low Shelf Freq   100   Low Shelf Freq   100

Peak/Notch Freq   1000   Peak/Notch Freq   2617

High Shelf Freq   6000   High Shelf Freq   10999

Dry   Wet

0   36



Drive

# WHAT IT SOUNDS LIKE



Original

Bit Depth Drive Downsampling

3 11 1

Pre-Filter Gain Post-Filter Gain

Low Shelf Freq 100 Low Shelf Freq 100

Peak/Notch Freq 1000 Peak/Notch Freq 1000

High Shelf Freq 6000 High Shelf Freq 17574

Dry Wet

0 100



Bit depth

# WHAT IT SOUNDS LIKE



Original

Bit Depth Drive Downsampling

16 15 16

Pre-Filter Gain Post-Filter Gain

Low Shelf Freq 172 100

Peak/Notch Freq 200 1000

High Shelf Freq 7064 7765

Dry Wet

0 100



Downsampling

# WHAT IT SOUNDS LIKE



Original

The screenshot displays a DAW interface with the following parameters and values:

- Bit Depth:** 3
- Drive:** 84
- Downsampling:** 8
- Pre-Filter:**
  - Low Shelf Freq: 100
  - Peak/Notch Freq: 2590
  - High Shelf Freq: 10000
- Gain:** (Two knobs, one for Pre-Filter and one for Post-Filter)
- Post-Filter:**
  - Low Shelf Freq: 100
  - Peak/Notch Freq: 1000
  - High Shelf Freq: 14664
- Gain:** (Two knobs, one for Pre-Filter and one for Post-Filter)
- Dry:** 0
- Wet:** 100



Combination

# DISTORTICON

Distortion effect plugin with bit depth reduction, downsampling, and pre- and post-filtering functionality