Molecular junction overdrive prototype built August, 2014

Builder: Ryan Clarke, Dr. Scientists Sounds
196 Hz tone (from function generator):

- 100 mV

Guitar “G” string (196 Hz):

- 100 mV

Fourier transform:

- Fundamental
- “Noise”, distortion
- Harmonics

Frequency, Hz: 0 - 5000

Decibels: 0 - 100 dB
feedback current

$V_{in}$ (from guitar)
0.1 V

400 Hz input

5 msec
Fourier transforms:

fundamental: 400 Hz
“gain” control

diodes

MJ

linear

amplifier

linear

MJ 40%

Si diodes 40%
Coming soon…

“Heisenberg Nanodrive”
(www.drscientist.ca)
Further reading:

Audio clip of guitar and distortion circuit of previous slide:

One-minute video of diode and molecular junction:

Vendor for “Heisenberg Nanodrive” based on molecular junctions

YouTube videos with many details:

19 minute video on principle of operation:

38 minute video with detailed comparisons: