

VA335

SOUND AND IMAGE

Week 8

Effects and Processors

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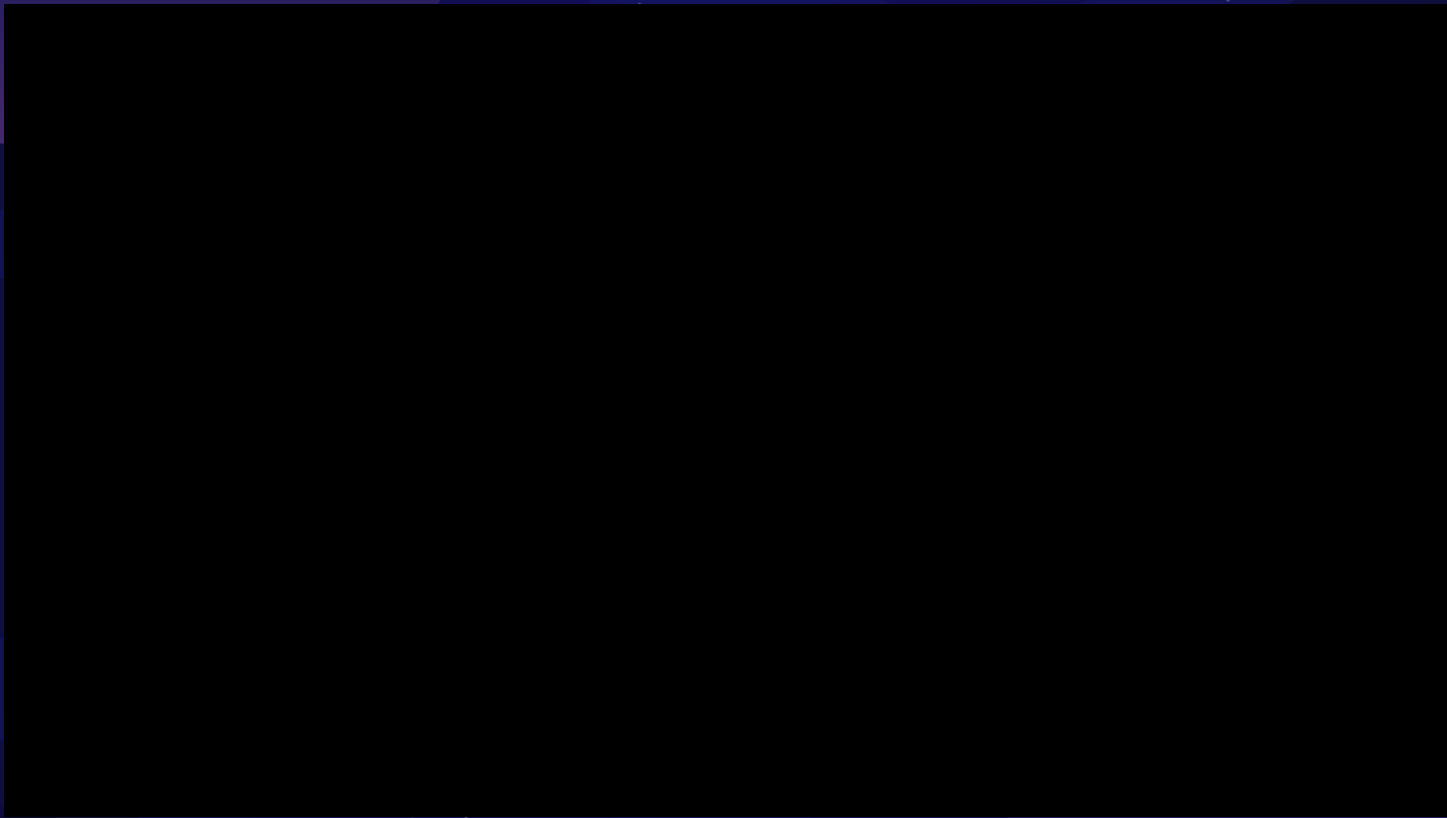
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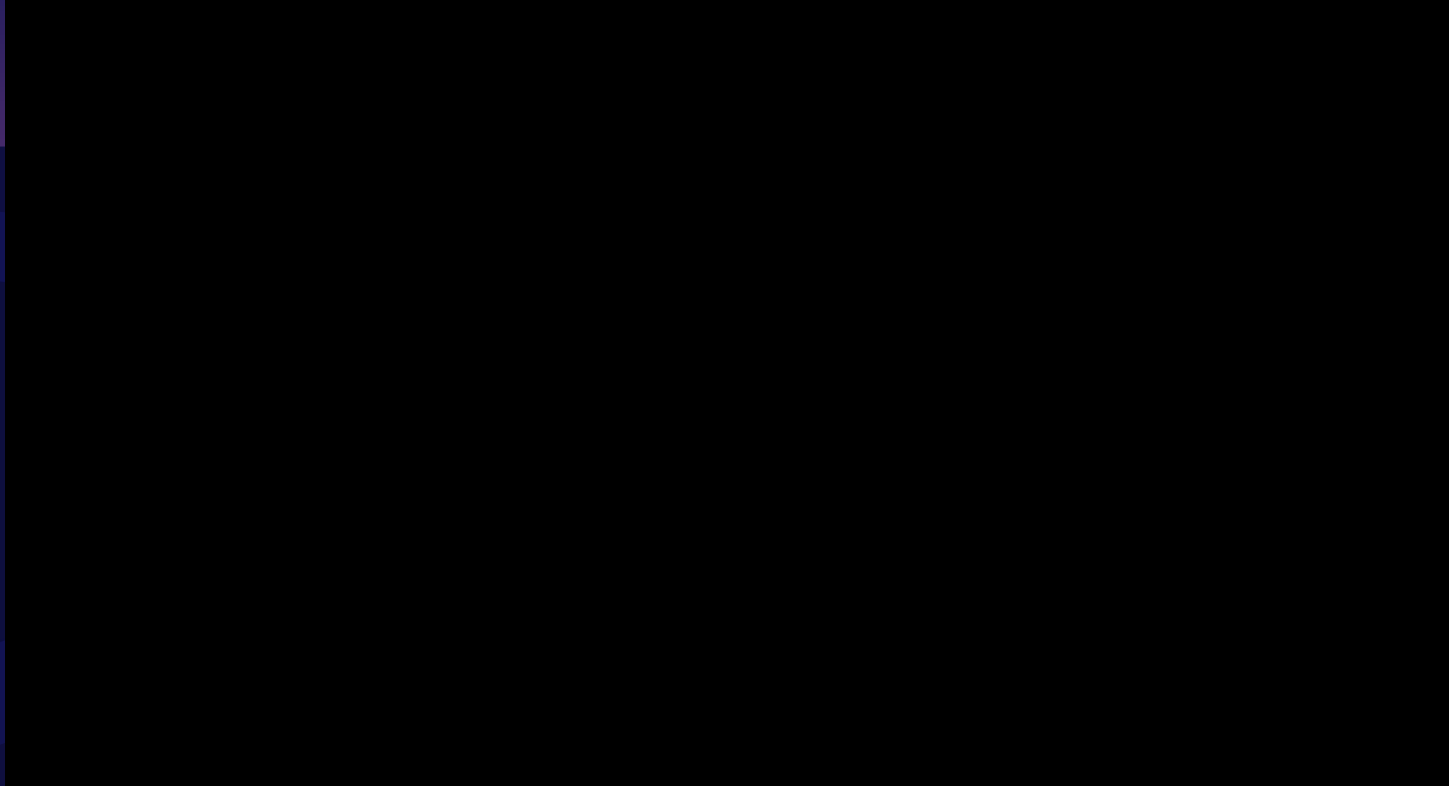
All materials are used for academic purposes

Advanced NOISE removal



Source: <https://vimeo.com/24230801>

VOCO. ADOBE MAX 2016 (Sneak Peeks) | Adobe Creative



Source: <https://www.youtube.com/watch?v=I3l4XLZ59iw>

MeLODYne⁺



Source: https://www.youtube.com/results?search_query=melodyne+plugin

Major Minor

"Californication": original song in Major key
www.youtube.com/watch?v=kvz0oeqGrLs

"Smells like teen spirit": original song in Major key
https://www.youtube.com/watch?v=g_TEOuyPDNo

R.E.M. - "Losing My Religion" In Major Scale
<https://www.youtube.com/watch?v=y6KmiIq2-m8>

"Beat it": original in Major key (full)
<https://www.youtube.com/watch?v=IHsjFdsd5lA>

Major Scaled # 01 : 'Nothing Else Majeur'
<https://www.youtube.com/watch?v=h7FzLX0Ql8M>

Auditory Events / Perceptual Attributes

Pitch

Loudness

Timbre

Duration

Spatial location

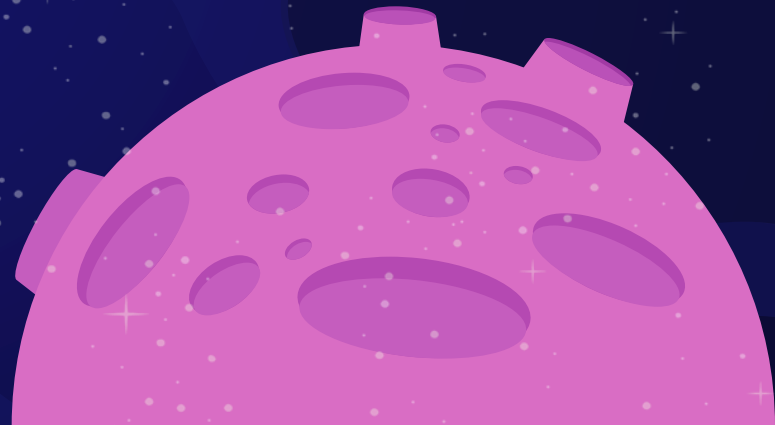
Reverberant environment

EFFECTS

These are modules that carry out a manipulation on one part of the signal.

Within this kind of module the signal is split into two: one part reaches the output directly, whereas the other passes through the circuit to then be manipulated.

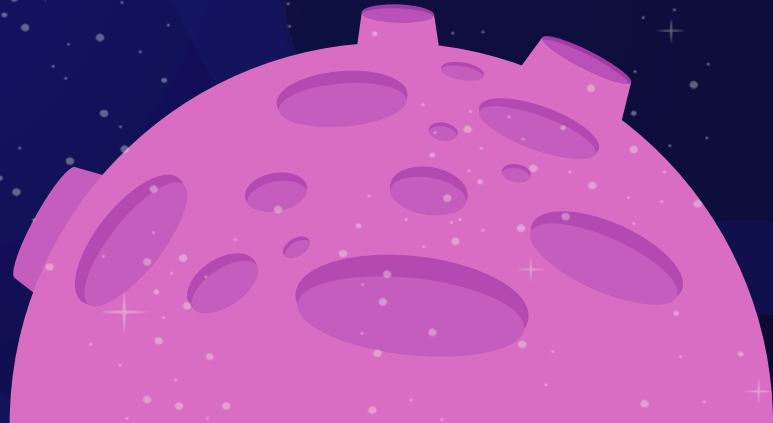
At the module's output, a mixer allows the two signals to recombine, one not having been manipulated (called dry signal) and the other having been manipulated (called wet signal).



processors

Signal processors: these are the modules that on the other hand carry out a manipulation on the entire signal.

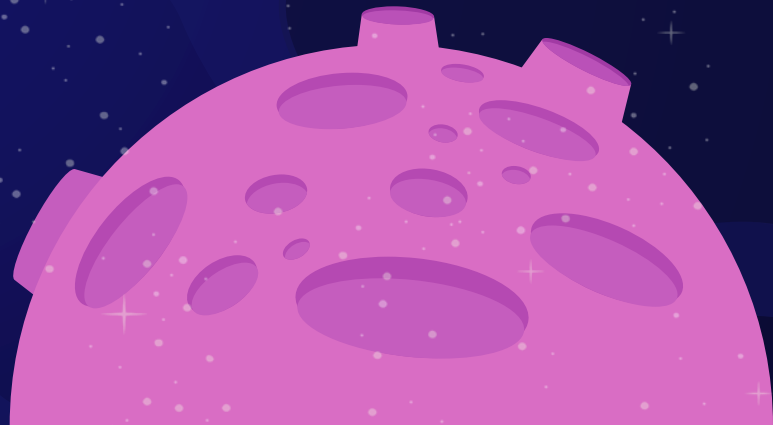
In this case the modules are disposed in series.



EFFECTS and PROCESSORS

At the moment the market is flooding with an infinite amount of different effects with all kinds of unimaginable finalities.

Some of these are absolutely indispensable, others can be considered 'luxuries' to give an extra touch to ones work; others still are so peculiar that they can only be used in certain situations.

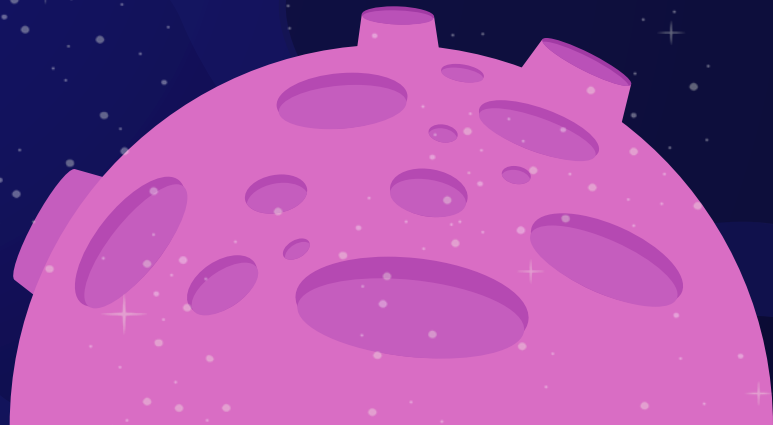


Reverb

Reverb is the sound that remains in an environment when the direct signal has died out.

To get a better picture lets take a macroscopic example: a gunshot in a cathedral. It is admittedly a rather rare event to hear a gunshot in a cathedral, but nevertheless it is an ideal example in terms of sound.

After the gunshot (the sound coming from the gun is a short blast) the sound echoes for a few seconds, slowly dying out. This fading echo is in fact the original sound reflecting off the surfaces it meets.



Reverb

lynda.com

Source: lynda.com

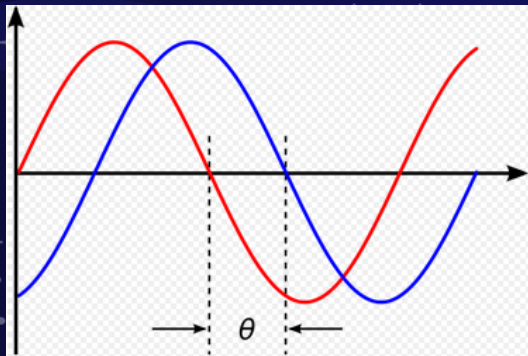
THE WIKISINGER



• This person sings the same song in 15 different locations. Hear what happens!
No artificial reverb added

DELAY

Adds delayed copies of the signal, creating an echo effect.



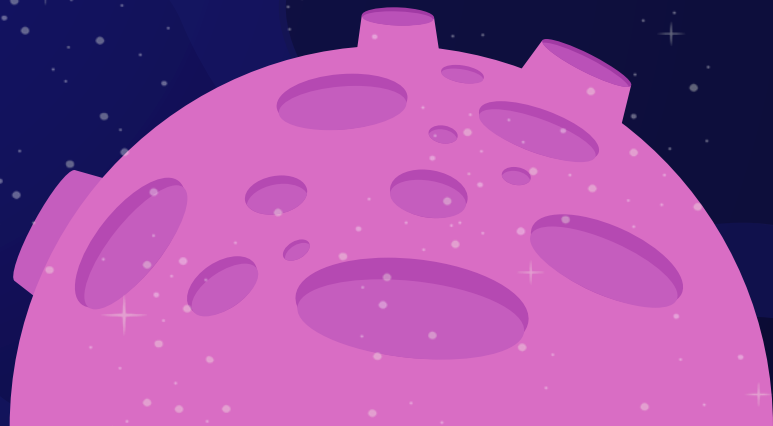
Delay

lynda.com

Source: lynda.com

PITCH SHIFTER

This effect is able to increase or decrease the input signal's tonality.



EQUALIZER

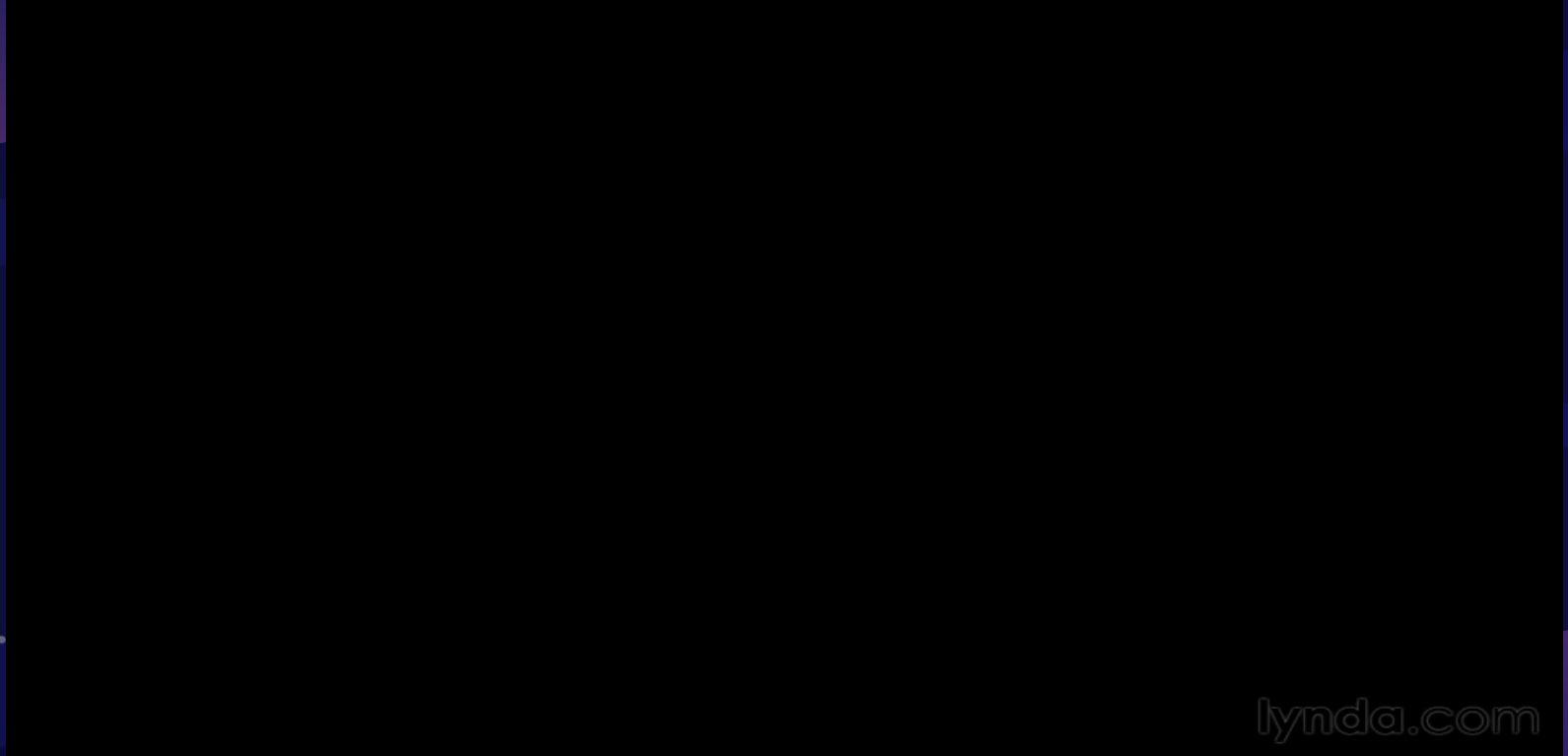
Equalization (British: equalisation) is the process of adjusting the balance between frequency components within an electronic signal.

The most well known use of equalization is in sound recording and reproduction but there are many other applications in electronics and telecommunications.

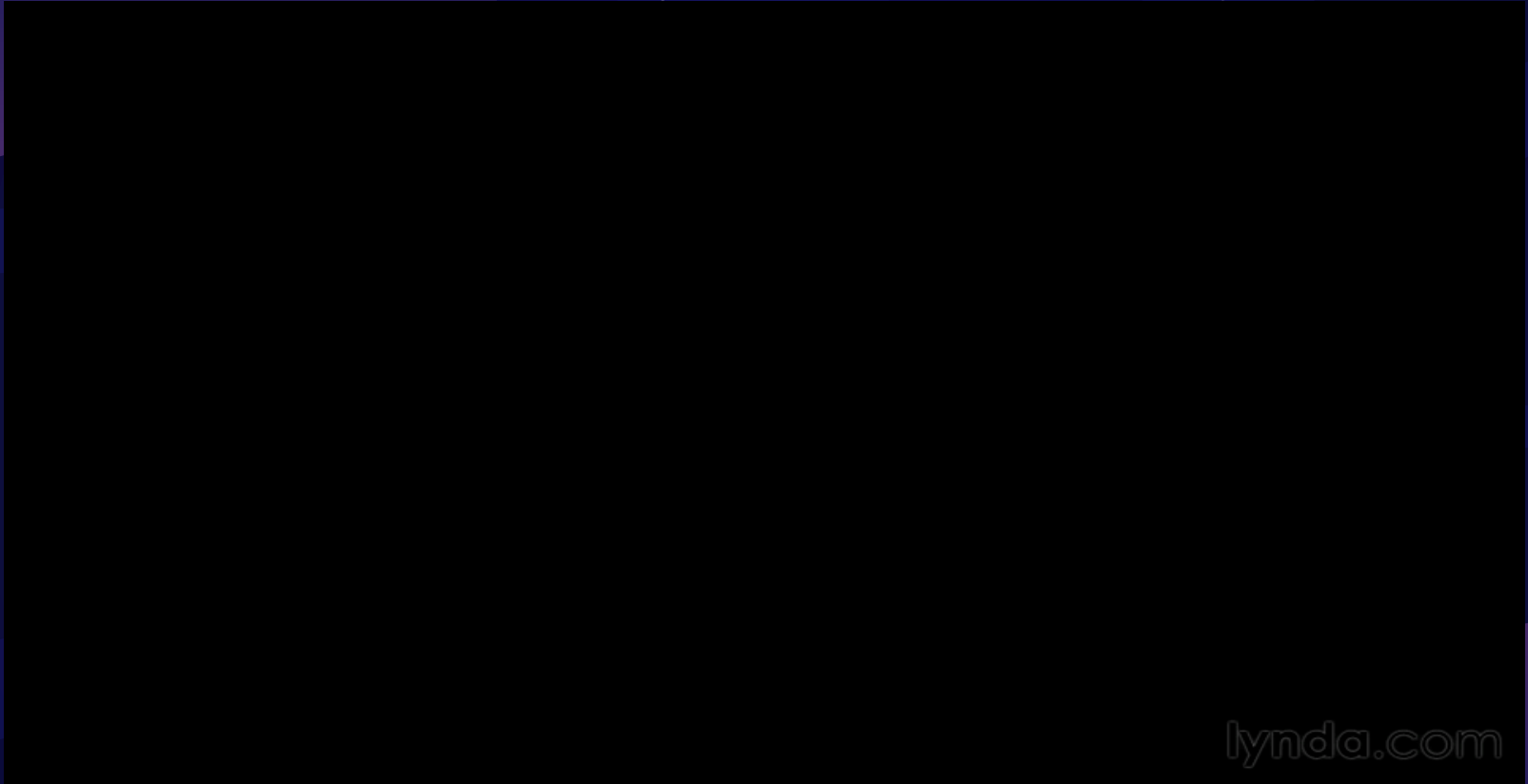
The circuit or equipment used to achieve equalization is called an equalizer.



EQUALIZER CONTROLS



EQUALIZER CONTROLS



lynda.com

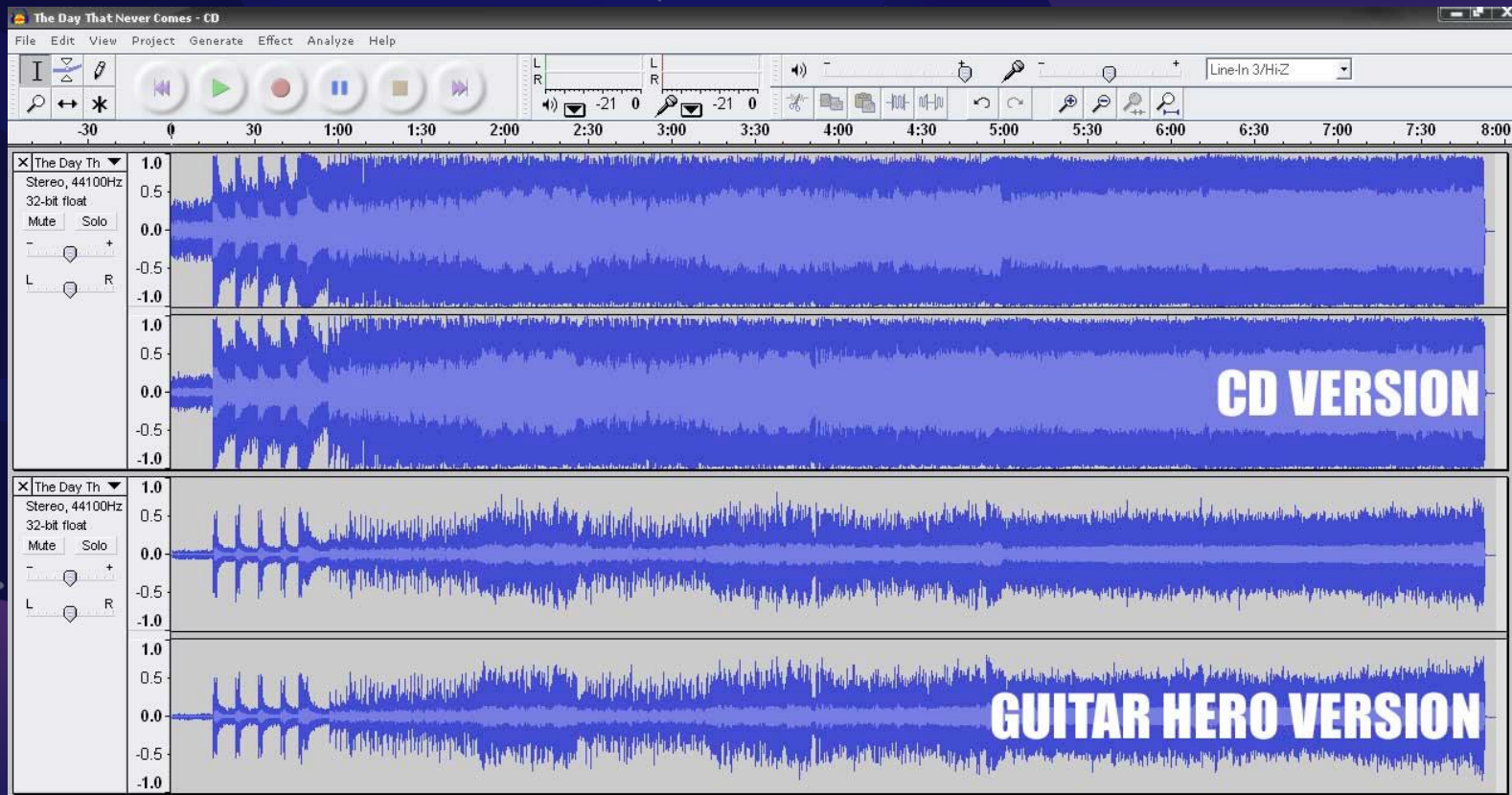
compressor

This is undoubtedly the most important processor. The compressor works on the dynamic range of the input signal and reduces its amplitude when it goes beyond a certain limit.

This reduction is expressed with a ratio; for example a 3:1 ratio means that when the signal goes over a certain threshold, the part of the signal above it gets reduced by $\frac{1}{3}$:



Loudness Wars



Loudness Wars



"Thriller" versus the Loudness Wars

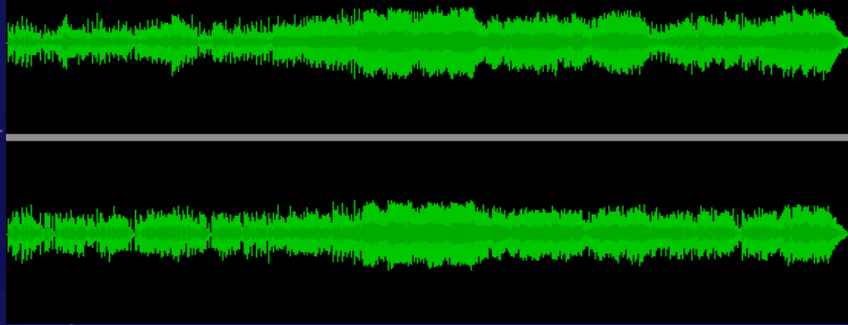
(and why "loud" loses every time)

by Ian Shepherd

www.DynamicRangeDay.com

Loudness Wars

1983



Maximizer



Maximizer

