

## Audio Productions

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Signal processing is an area of systems engineering, electrical engineering and applied mathematics that deals with operations on or analysis of analog as well as digitized signals, representing time-varying or spatially varying physical quantities. Signals of interest can include sound, electromagnetic radiation, images, and sensor readings, for example biological measurements such as electrocardiograms, control system signals, telecommunication transmission signals, and many others. [http://en.wikipedia.org/wiki/Signal\\_p...](http://en.wikipedia.org/wiki/Signal_p...)

**White noise** is a random signal with a flat power spectral density. In other words, a signal that contains equal power within any frequency band with a fixed width. The term is used, with this or similar meanings, in many scientific and technical disciplines, including physics, acoustic engineering, telecommunications, statistical forecasting, and many more. White noise refers to a statistical model for signals and signal sources, rather than to any specific signal. The term is also used for a discrete signal whose samples are regarded as a sequence of serially uncorrelated random variables with zero mean and finite variance. Depending on the context, one may also require that the samples be independent and have the same probability distribution. In particular, if each sample has a normal distribution with zero mean, the signal is said to be Gaussian white noise [http://en.wikipedia.org/wiki/White\\_noise](http://en.wikipedia.org/wiki/White_noise)

**Pink noise** - sometimes also called flicker noise is a signal or process with a frequency spectrum such that the power spectral density is inversely proportional to the frequency. In pink noise, each octave-halving/doubling in frequency -carries an equal amount of noise power. The name arises from the pink appearance of visible light with this power spectrum. Within the scientific literature the term pink noise is sometimes used a little more loosely to refer to any noise with a power spectral density of the form. These pink -like noises occur widely in nature and are a source of considerable interest in many fields. The distinction between the noises with  $\alpha$  near 1 and those with a broad range of  $\alpha$  approximately corresponds to a much more basic distinction. The term flicker noise is sometimes used to refer to pink noise, although this is more properly applied only to its occurrence in electronic devices due to a direct current. Mandelbrot and Van Ness proposed the name fractional noise to emphasize that the exponent of the spectrum could take non-integer values and be closely related to fractional Brownian motion, but the term is very rarely used. [http://en.wikipedia.org/wiki/Pink\\_noise](http://en.wikipedia.org/wiki/Pink_noise)

**Brown noise or red noise**, is the kind of signal noise produced by Brownian motion, hence its alternative name of random walk noise. The term "Brown noise" comes not from the color, but after Robert Brown, the discoverer of Brownian motion. <http://en.wikipedia.org/wiki/Brownian...> Please see my SOUND EFFECT playlist here <http://www.youtube.com/playlist?list=...> Over 100 great Sound Effects with more being added EVERY week. Hope you like them.

**White Noise is a random signal with a flat (constant) power spectral density. In other words, a signal that contains equal power within any frequency band with a fixed width.**

**White noise refers to a statistical model for signals and signal sources, rather than to any specific signal.**



**Hvítt suð (White Noise)  
Jafn mikill styrkur á öllum tíðnum**

**Pink noise is a signal with a frequency spectrum such that the power spectral density (energy or power per Hz) is inversely proportional to the frequency.**

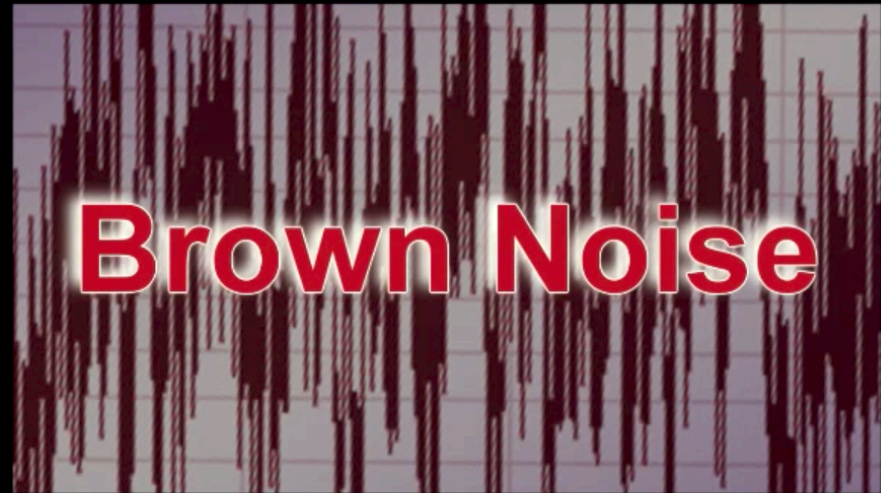
**In pink noise, each octave (halving/doubling in frequency) carries an equal amount of noise power**



**Bleikt suð (Pink Noise)  
Jafn mikill styrkur í öllum áttundum  
Meira eins og eyrað skynjar hljóð**

**Brownian noise, also known as Brown noise or red noise, is the kind of signal noise produced by Brownian motion, hence its alternative name of 'random walk noise.'**

**The term "Brown noise" comes from Robert Brown, the discoverer of Brownian motion.**



**Brúnt suð (Brown Noise)**

**Meiri orka í lægri tíðnum, stundum líkt við hljóð úr fossi, ramdom breyting á hljóði (óreiðusuð)**