

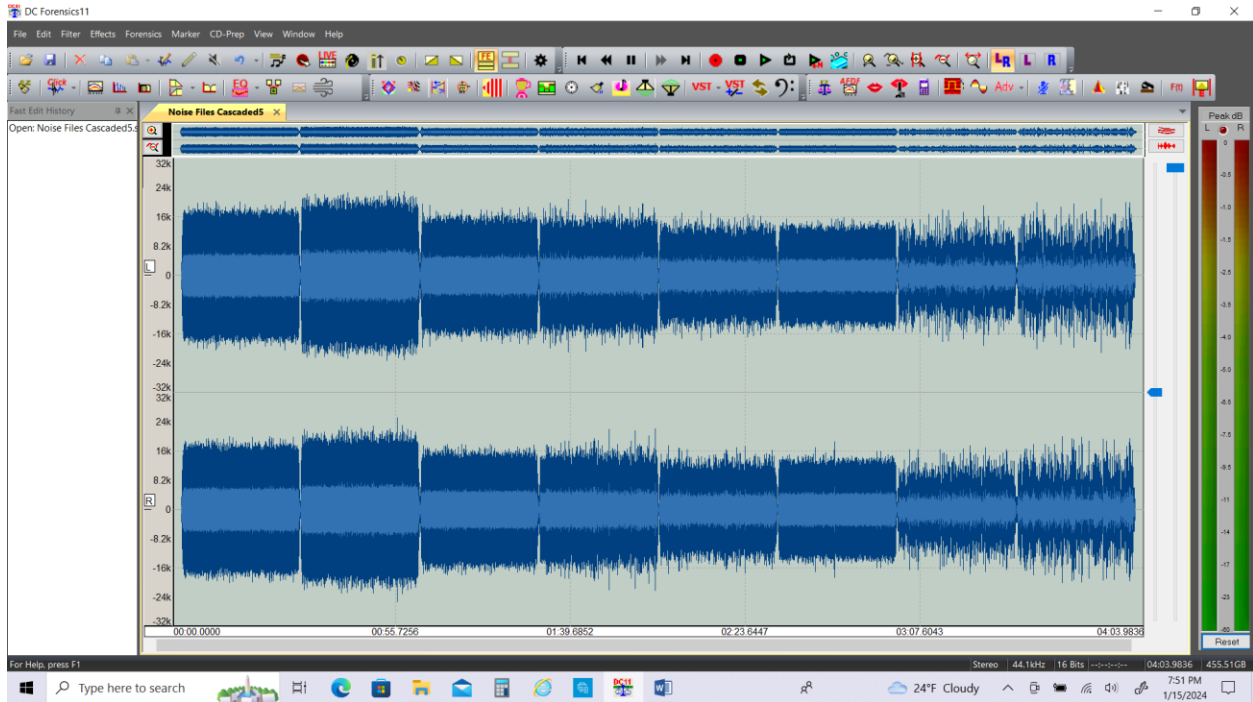
**Hi-Fi to Dine By - - Relaxing & Noise Masking Signals**

Random audible noise has several practical applications. Some work environments demand privacy between adjacent offices or cubicles. Some examples are lawyer’s offices, patient rooms in hospitals and general office situations. Another application for random noise is relaxation which may help some people get to sleep more quickly and without the use of sedatives. Lastly, random noise can be useful for special effects in the theatre or film.

The Make Waves Signal Generator not only has the capability of creating various periodic signal waveforms, but also up to 8 noise files each one having different distributions of noise energy. To hear each of them in a sequence to help you with your decision process, you will find a demo file called “Noise Test Files” which will play 30 second segments of each noise type. They are in the .mp3 format. These files are denoted by “color” and have a prescribed mathematical statistical distribution.

**Random Noise Traits by Color:**

<b>Color</b> (or type)	<b>Characteristics</b>	<b>Slope</b>	<b>Density</b>
<b>White</b>	Equal Energy per unit Hertz	Flat	Uniform
<b>Pink</b>	Equal Energy per unit Octave	-3 dB/Octave	1/F
<b>Brown</b>	Analogous to Brownian Motion	-6 dB/Octave	1/F <sup>2</sup>
<b>Red</b>	Another name for Brown Noise	-6 dB/Octave	1/F <sup>2</sup>
<b>Blue</b>	Azure Noise (proportional to F)	+3 dB/Octave	F
<b>Green</b>	Pink Noise with Emphasis at 500 Hz	Non-Linear	Subjective
<b>Violet</b>	Differentiated White Noise	+6 dB/Octave	F <sup>2</sup>
<b>Grey</b>	Psychoacoustic equal loudness Curves	Proportional to SPL	Varies with loudness
<b>Seismic</b>	Random Noise below 100 Hz	-3 dB/Octave	Semi-audible
<b>Black</b>	Analogous to black body radiation	Silence	No Signal

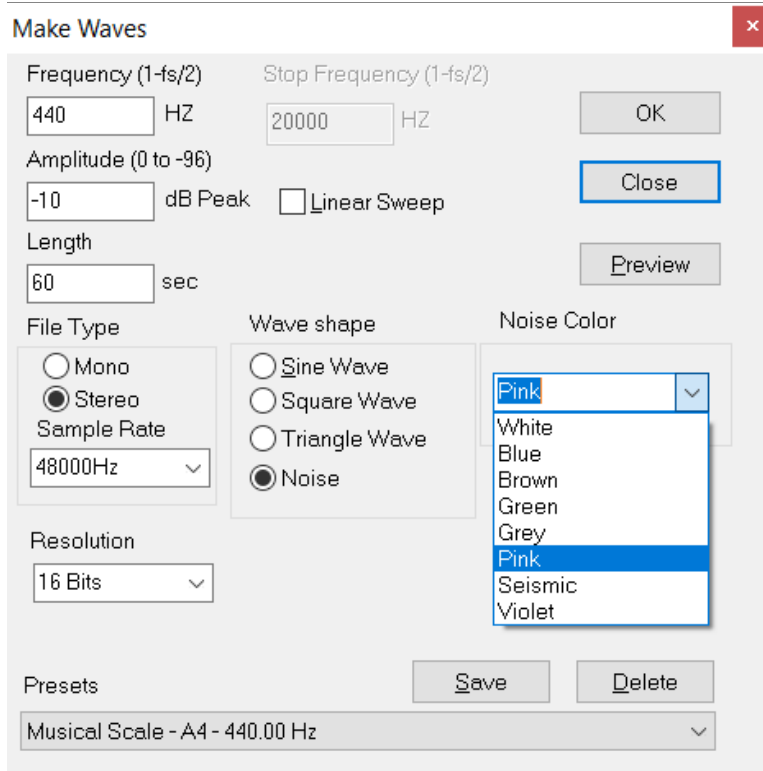


**White - Violet – Blue – Pink – Green – Grey – Brown – Seismic**

The noise signals in the demo file are presented in the following order (as shown above) (in order to maintain some reasonable degree of continuity of their sound balance):

We recommend that you open this demo file in your Diamond Cut software so you can watch the cursor as you listen to the file.

When you decide on which random sound color weighting that you desire, use the dialog box shown below and either preview or run the signal of your choice. Note that noise signals must be created with a 48 kHz sampling rate in order to accurately capture the distribution. If desired, the signal can then be converted to 44.1 kHz and then into an .mp3 compressed version.



The above dialog box is found in the Make Waves Generator found under the Edit Menu. This shows a typical setup to create 60 second bursts of Pink Noise.

Note: The Make Waves Signal Generator also has the ability to create periodic waveforms such as Sine, Square and Triangle Waves.



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