

# AYAIC – Ceilings Of Sound Pro

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## Welcome:

When it comes to mixing music professionals and beginners alike often find the equalization process to be one of their greatest challenges. How much low end does the bass require? How bright or smooth should the hihat sound? How big should the guitars be? How do I get the vocals to stand out? Ultimately because of variances in amplifiers, drums, microphones, FX, mic placement, etc. there can never be a "one size fits all" approach. However there is one thing that every instrument, percussion, guitar and vocal track has in common...they are all just noise. Just as the spectrum of light is perfect color...white, pink and brown noise are perfect sound.



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Everything we hear flows along the spectrum analyzer lines of noise ceilings. These ceilings can tilt by either negative or positive values and remain perfectly musical. By mixing multiple ceilings with any integer of +/-1.5db tilt, you can create the ceiling shape you need to equalize any source material perfectly. In other words, you can now use noise to balance noise elements to the spectrum of noise. This is what Ceilings Of Sound Pro is all about. Ceilings Of Sound Pro couples 15 ceiling bands with the most powerful EQs developed...a 31/50-band Spline EQ. Traditionally these types of EQs, although high in detail and musicality, were very difficult to work with but by driving them with our ceilings and a “conform” feature...they are now easy, fast and fun to use.

## **Getting Started: - *creating a basic ceiling***

Load Ceilings Of Sound Pro into your tracks insert slot. Under “settings”, select your primary or secondary block of frequency “elbowpoints”. Play your sound source. After the spectrum settles into position click the “Ceiling Generator” and the ceiling bands will automatically create your ceiling. To adjust the ceiling simply click-n-drag the crossover points (called: elbowpoints) or click a point to select it, then adjust it using its frequency & slope displays. Double-clicking on an elbowpoint deletes it while double-clicking anywhere on the ceiling creates a new one. To apply your adjustments click the “Conform spectrum to Ceiling” and the 31/50-band EQ will automatically adhere to your created ceiling shape. For highest detail click the “EQ” button to change to EQ edit mode, click the “31” or “50” button to change between band modes, then click “conform” once more. Since the ceiling slopes are based on integers of noise you can experiment with wild and crazy shapes...no matter the shape, things will always remain musical. Ceilings Of Sound Pro allows you to sound-design like never before and sonically fit your tracks together with ease during mix-down. When your song is ready you can use COS Pro to balance the “Master” with the confidence, knowing that your final work will sound great on any speaker you play it on.

## **Presets:**

Ceilings Of Sound Pro comes loaded with many professional presets to get you started. They are comprised in banks and cover everything from mixing to mastering. If you want to create a preset from a pre-existing sound source simply play the sound source you like and click “Auto Generate Ceiling” to create your preset. You may save any preset you create or alter in the “user preset” bank. The “user” bank is designed so that you have easy access to your presets for name changing, preset sharing, etc.

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“**Open user presets folder**” opens your user preset folder. To audition presets quickly or to change presets quickly during mix-down turn on “enable auto conform”...this automatically conforms the EQ whenever a preset is selected. You will find a constant supply of presets from both professionals and fellow users alike on the **Downloads** page of our website -

<http://www.ayaicinc.com>

You can also check out our [Forum](#) page for more preset tips or [sign up](#) to be a member for free to meet, interact with and follow other members of the Ayaic community.

## Reference Equalizing:

There are many great “EQ matching” plugins on the market today that can do a wonderful job at making to separate audio files sound very much alike. Unfortunately they are all plagued with one primary problem...subtle harmonic differences that make one element sound great can often be very detrimental to a similar sounding element. When used in mastering if one mix has a snare around 207hrz and another mix has the snare around 265hrz things can begin to sound worse rather than better in that frequency range as *matching* is applied. This is never an issue for COS Pro because we are conforming to noise ceilings instead of matching to a frequency spectrum capture and since you are dealing with noise slopes, the element or full mix you are conforming will always remain musically intact. Simply import the WAV/AIFF file that you like, load COS Pro into an insert slot, play/loop the WAV/AIFF file and use the “Auto Generate Ceiling” to create your ceiling shape. When you are finished *Save* your preset. Then insert COS Pro into the insert slot of the track you will be EQing, load your created preset, play and allow the spectrum to settle, then click “Conform spectrum to Ceiling”. You will find that your sound has conformed without adding any unmusical or destructive artifacts. If you are M/S (*mid/side*) mastering simply insert an M/S encoder in the insert slot above Ceilings Of Sound Pro and solo the *mid* material. Once you have created your *Mid* ceiling preset, solo the *side* material and create your *Side* ceiling preset. Now you can EQ your Mid & Side material separately using your created presets. Again you will find it very easy to EQ your mixes while retaining the musicality that made you love them in the first place.

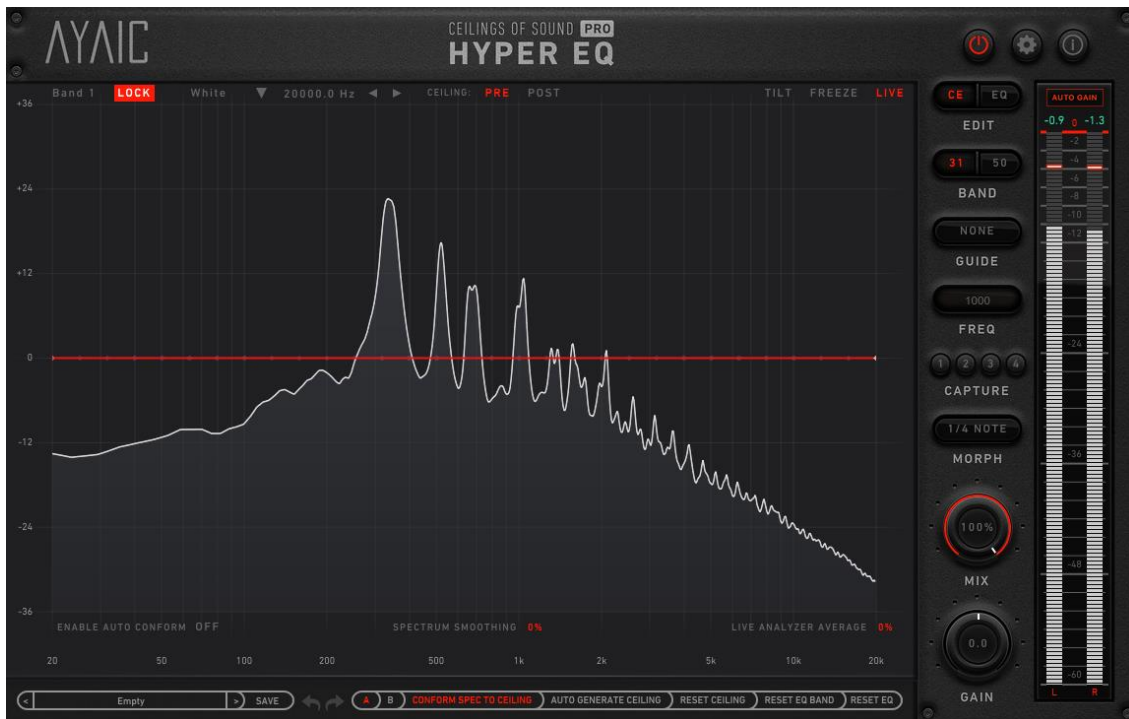
## Using The “Live” Function:

More and more live-sound mixing is being done on digital mixers these days. Some of these mixers are capable of running VST/AAX plugins. If not the FOH engineer is probably using an

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outboard plugin processing unit that brings the power of studio plugins to his real-world mixing station. COS Pro is designed for that as well. Simply select the “**Live**” function and the plugin becomes a realtime spectrum analyzer with all the EQ power of the ceilings. You can right-click anywhere on the spectrum window to bring up the **Spectrum smoothing** and **Live Analyzer Average** options to set the speed and feel of the analyzer window to your taste. - *You can also use **Spectrum smoothing** as a tool when conforming the EQ. Without changing your ceiling shape...experiment with different smoothing integers as you conform the EQ.*

**\*\* (Live Analyzer Average only functions when in Live mode) \*\***



## What Are Ceiling Guides

The ceiling guides in COS Pro (...and COS Xtended) are there to help you equalize your material easily, efficiently and with the utmost confidence. Noise is perfect sound and perfect sound is what the sonic industry is forever chasing whether it is designing recording studios, manufacturing professional speakers or mixing and mastering audio...it's all about balancing to noise.

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Let's talk a little bit more about noise. Although you will often hear the audio industry refer to white, pink and brown noise the truth is that there are many colors of noise. Just like visual colors there are primary and secondary colors of noise.

**Primary noise colors** such as white, pink and brown are noise that is tilted by weights of 3db per octave. In other words all numbers divisible by 3.

**Secondary noise colors** are the 1.5db per octave weights in between...1.5, 4.5, 7.5, etc.

*\*Noise weights can be positive or negative integers and still remain perfectly musical.*

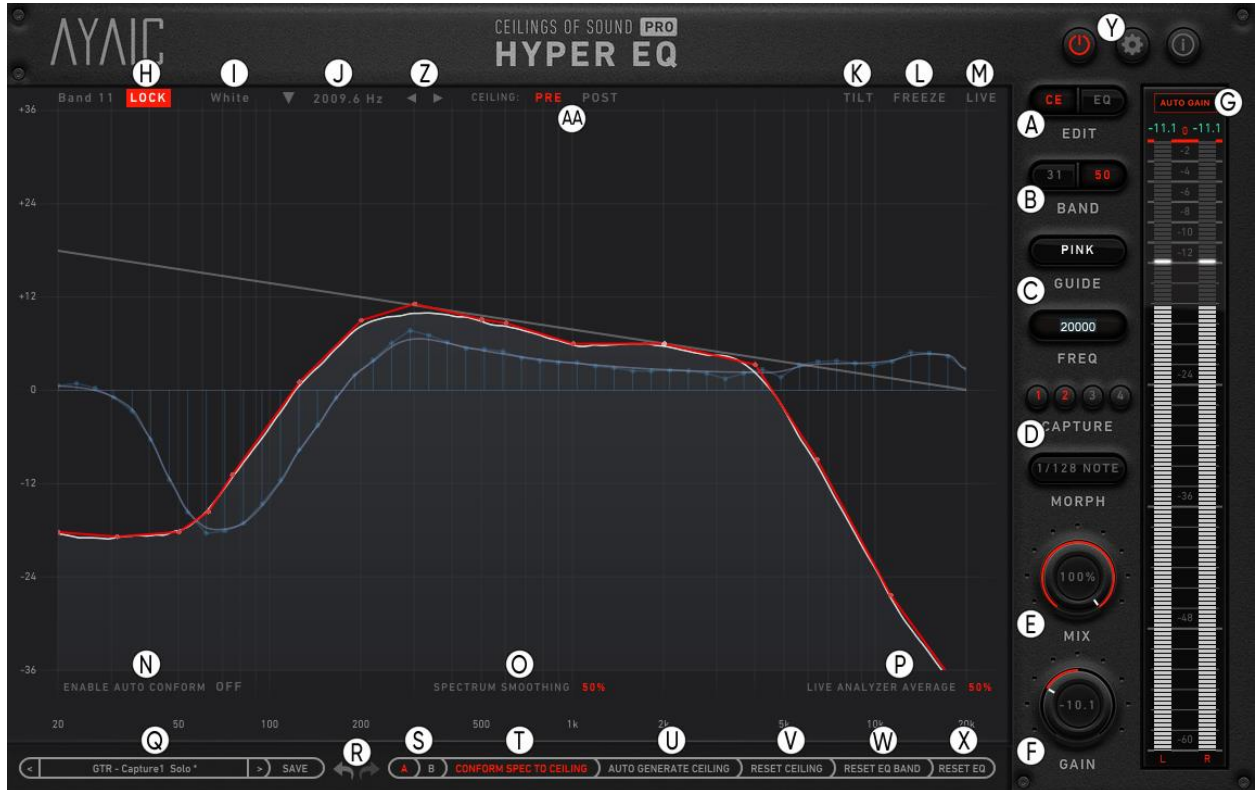
Generally speaking, most overall frequency balances (*the relationship between high and low content*) follow a primary noise color with sections of frequencies following secondary noise colors. However this is not always the case. Warm RnB vocals may follow white noise up to 300hrz, brown noise from 300hrz to 3khrz or 5khrz and pink noise from 3/5khrz on up...of course high and low roll-offs are used as well. Bright Rock vocals may follow inverted pink noise up to 300-500hrz then -4.5 or pink noise to 3khrz then brown or -7.5 noise from 3khrz and above...again high/low roll-offs are used. As you can see some elements will follow a combination of noise colors. The key is to experiment with different noise colors and combinations. Keep in mind that the steeper the "tilt" the less high end is present and the "darker" an element will sound...or "move back" in a mix.

## Using Ceiling Guides

Select a ceiling guide then click-n-drag or type in a frequency to move it into position. Adjust your ceiling or spectrum until it aligns with the guide slope. You may find that you use different guides for different sections of the frequency spectrum. These guides allow you to use COS Pro efficiently in any environment, so no matter if you have ear fatigue after a long day, are fighting a flu while on a deadline, working on an airplane via earbuds or mixing in a hotel room during a tour...you always will be confident that your frequency balances are right where they should be and none of your hard work is ever in vain.

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## Plugin Functions:



A - Ceiling Edit/EQ Edit	N – Auto-Conform Spectrum	AA – Pre/Post Ceiling Generate
B - 50/31-band EQ	O – Spectrum Smoothing	
C - Noise guide Selection	P – Live Analyzer Average	
D - Capture Buttons and Morph	Q – Preset Directory	
E – Mix Knob (%)	R – Undo/Redo	
F – Gain Knob	S – A/B Selector	
G – Auto-gain (on/off)	T – Conform Spectrum to Ceiling	
H – Elbowpoint Lock	U – Auto-Generate Ceiling	
I – Slope Selection	V – Reset Ceiling	
J – Frequency Selection	W – Reset EQ Band	
K – Tilt Feature	X – Reset EQ	
L – Freeze Spectrum	Y - Settings	
M – “Live” Analyzer	Z – Elbow-point Arrows	

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## CREDITS and THANKS

**Produced by Ayaic International LLC**

### **DSP**

Beesting LTD

Pulsar Digital SARL

### **Software**

Ronald Froese

### **GUI Design**

Ronald Froese

Ooecube – Malik Trey

### **Preset Concept and Design**

Ronald Froese

# AYAICWARE

<http://www.ayaicinc.com>