

# AYAIC – Ceilings Of Sound

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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 phat 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 method 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 the ceiling of perfect color...white, pink and brown noise are the ceilings of perfect sound.



Everything we hear flows along the spectrum analyzer lines of one of these noise ceilings. We can tilt them by either negative or positive values and they remain extremely musical. This is what "AYAIC Ceilings Of Sound" is all about. It does not EQ your music in any way rather it

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allows you to use your favorite hardware or software equalizer to it's greatest potential. By mixing multiple instances of any of the noise ceilings with any multiple of +/-1.5db or +/-3db tilts you can create the ceiling shape you need to equalize your source material perfectly. In other words it allows you to simply "EQ along the lines". If you're a large part of your midrange passes the ceiling use an equalizer with a wide Q to bring it below the line. If there is a frequency spike sticking up above a ceiling use a narrow Q setting EQ to drop it below the line. If your high end is below the ceiling apply a shelf EQ and bring it up until it kisses the line. It's truly that simple.

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

Load Ceilings Of Sound into your tracks last insert slot. Choose the desired "global" (*Mid*) noise ceiling and any tilt you need...use the "INV" button to invert the tilt of the ceiling if required. Use steeper ceiling tilts for low end instruments or to help move a track "back" in the mix and shallower or "flatter" ceiling tilts for brighter instruments or to move a track "forward" in the mix. Instruments such as Hihats, Cymbals, Shakers, etc. will require the "INV" to be active and generally use pink or brown noise ceilings. Next turn on & set your *Low* ceiling noise, tilt and frequency crossover (intersection) point..."INV" the ceiling if needed. Generally you will find the white noise setting at the default 300hrz works very well for midrange instruments and vocals however while keeping the low noise selection on *white* move the crossover point up to 500hrz or 1000hrz for a brighter more "in your face" sound or down to 200hr or 100hrz for a deeper more distant sound. Now turn on and set your *High* ceiling noise, tilt and frequency crossover (intersection) point...again you can "INV" the ceiling if needed. The steeper the tilt the "warmer" or "duller" a sound will become. Move the crossover point to 5000hrz or 10khrz for sounds that need a fuller midrange body. Lastly turn on your *HiPass/LoPass* filters and select the degree of rolloff you need. Generally *12db*, *15db* and *18db* will work nicely...*21db thru 36db* work for a more isolated sound...*48db* is good for "boxing in" sounds like reverbs, delays, etc.

Once you have created the ceiling you want play your source material and move the *source adjust* and *ceiling adjust* knobs until the source and ceiling "line up". Now for the fun part. Insert your favorite equalizers into the insert slots above **Ceilings Of Sound** and begin equalizing your sound. Once the *source line* adheres to the ceiling your instrument, vocal, drum, mix, etc will sound great. Remember that not every part of the source may end up *touching* the ceiling but as long as you don't surpass the ceiling things will sound amazing. Also keep in mind that experimentation is key to a great mix so feel free to create interesting ceilings...things will always remain musical even in the most extreme of cases.

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- Crossover settings of 300hrz (low) & 4000hrz (high) are important to remember...“*the lead vocal leads the track*”. All humans produce sound using the same mechanics so although one voice may be full & rich while another bright & thin the overall ceiling will remain the same. Select *brown* for the global (*Mid*) noise, turn on the *low* and create an intersection at 300hrz, turn on the *High*, select *pink* and create an intersection at 4000hrz. Now you’re good to go for POP vocals. Move the *high* crossover point to 5000hrz for R&B/JAZZ vocals. For ROCK vocals select *pink* on the *Low* and *INV* the ceiling to get that rolled-off “in your face” vocal sound. Turn off the *High* completely for backing vocals. The *High filter* default of 10khrz with *18db* off rolloff works great on most vocal styles.

## Presets:

Ceilings Of Sound comes with many professional presets to get you started. They are comprised in banks and cover everything from mixing to mastering. Some presets contain a second preset instance (carve it up) or (rolloff) for extra sound shaping. This is done when more than 5 ceilings are required to sculpt the sound. You may save any preset you create or alter into the “user” bank. The “user” bank is designed so that you have easy access to your presets for name changing, preset sharing, etc. “**Open user presets folder**” opens your user preset folder. You will find a constant supply of presets from both professionals and 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 Ceilings Of Sound 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 Ceilings Of Sound. Since we are only dealing with sonic ceilings the element or full mix you are reference equalizing will always remain musically intact. Simply import the WAV/AIFF file that you plan to *match* from, load Ceilings

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Of Sound into an insert slot, play/loop the WAV/AIFF file and create your ceiling preset by following the sonic curves of the element or mix. When you are finished *Save* your preset. Then insert Ceilings Of Sound into the last insert slot (after the equalizers) of the track you will be EQing, load your preset and begin EQing. You will find that the ceiling helps you sculpt your sound without ever 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 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 *match* your mixes while retaining the musicality that made you love them in the first place.

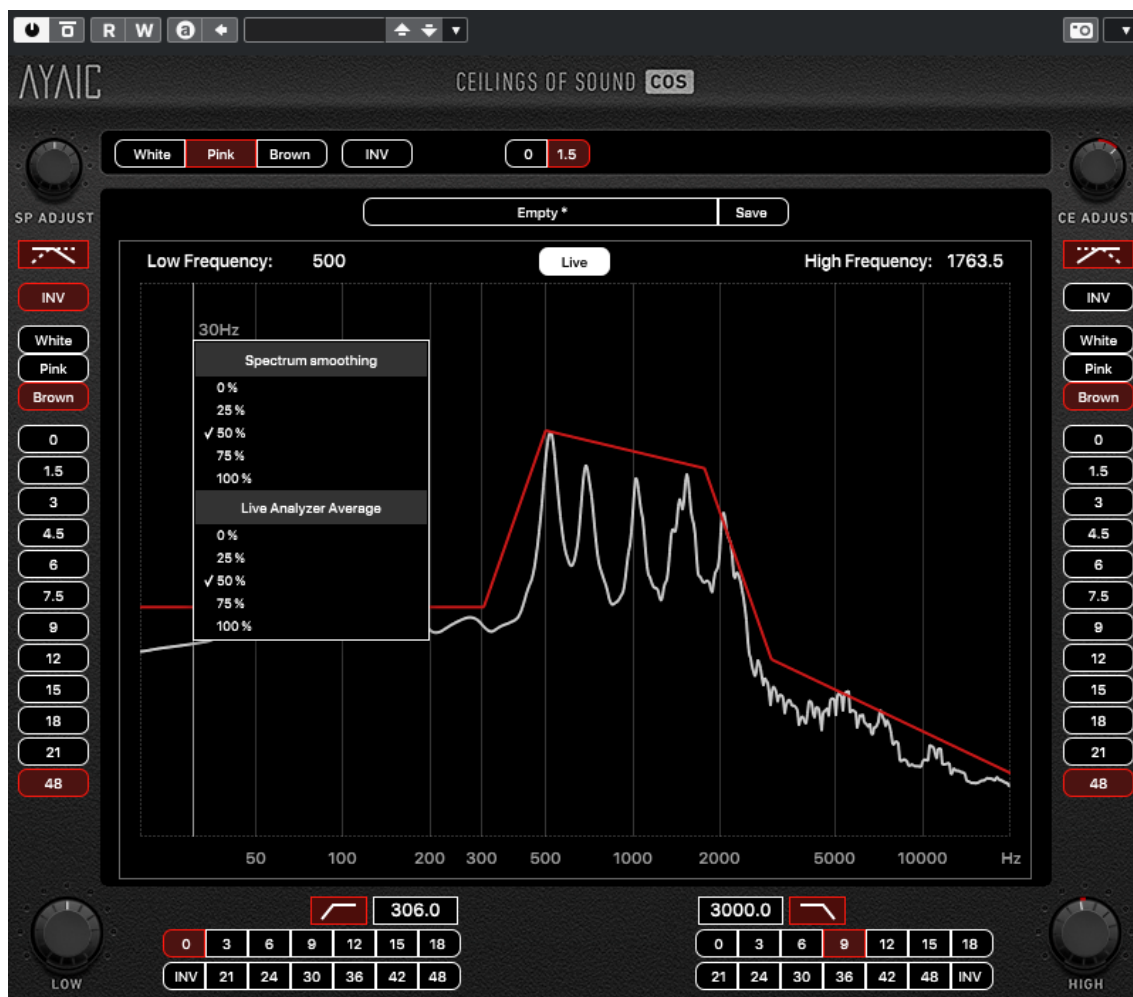
### Using The “Live” Function:

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 outboard plugin processing unit that brings the power of studio plugins to his real-world mixing station. Ceilings Of Sound is designed for that as well. Simply select the “**Live**” function and the plugin becomes a realtime spectrum analyzer with all the power of the EQ 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.

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



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## Plugin Functions:



A – Source Graph Adjust

B – Ceiling Graph Adjust

C – Global Ceiling (MID)

D – Low Ceiling

E – High Ceiling

F – Low Ceiling Frequency Adjust

G – High Ceiling Frequency Adjust

H – Low Ceiling Frequency Display

I – High Ceiling Frequency Display

J – HighPass Filter

K – LowPass Filter

L – Preset Load/Save

M – “Live” Spectrum Analyzer

N – Ceiling (red line)

O – Spectrum (white line)



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## CREDITS and THANKS

Produced by **Ayaic International LLC**

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# AYAICWARE

<http://www.ayaicinc.com>