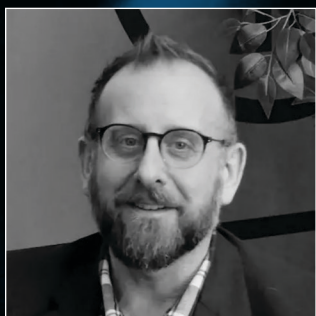




EMPOWERING WORSHIP

Quick Tips & Tricks Guide



Connect with Brent

We'd love to hear from you whether you have a question about audio equipment, musical instruments, or would just like to talk about how to make your service the best it can be!

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EQ FREQUENCY CHEAT SHEET

VOCALS

- Start with the HPF (High Pass Filter) - turn it ON to remove boomy bass frequencies we don't want. If your mixer allows you to choose a specific frequency, set it to 100Hz
- A lot of microphones need help (if your vocal sounds dull) in the high treble frequencies.
BOOST at 5kHz
- To soften a vocal CUT at 2.5kHz
- To smooth out a vocal CUT at 1.6 kHz
- To bring out the bass in a vocal BOOST at 125Hz

FOR EXTRA MUDDY VOCALS: CUT at 315Hz

FOR EXTRA DULL VOCALS: Additional BOOST at 6.3kHz

KEYBOARDS / PIANO

- CUT bass frequencies to help the keyboard/piano blend with other instruments in your mix
- CUT at 500Hz to make a piano sound more like a recording
- To make a thin piano sound fuller BOOST at 80Hz
- To make a dull piano pop out of your mix BOOST at 5kHz
- If the piano sounds harsh CUT at 2.5kHz

GUITAR

- Turn on the HPF (High Pass Filter) and set it to 100Hz. ****Use the HPF on EVERYTHING in your mix except Kick Drum and Bass Guitar****
- CUT at 630Hz to help the guitars blend with other instruments in your mix.
- BOOST at 1.6kHz to help guitars pop out in the mix
- To make thin ACOUSTIC GUITARS sound fuller BOOST at 80Hz or 250Hz
- To make thin ELECTRIC GUITARS sound fuller BOOST at 250Hz or 500Hz

DRUMS & BASS GUITAR

To be covered at the next Yamaha Canada Music Empowering Worship Inspiring Excellence Event!

MAGIC FREQUENCIES

From "The Mixing Engineer's Handbook" by Bobby Owsinski

SUB BASS The very low bass between 16Hz and 60Hz that encompasses sounds that are often felt more than heard, such as thunder in the distance. These frequencies give the music a sense of power even if they occur infrequently. Too much emphasis on this range makes the music sound muddy.

BASS The bass between 60Hz and 250Hz contains the fundamental notes of the rhythm section, so EQ in this range can change the musical balance, making it fat or thin. Too much boost in this range can make the music sound boomy.

LOW MIDS The midrange between 250Hz and 2000Hz contains the low order harmonics of most musical instruments and can introduce a telephone-like quality to the music if boosted too much. Boosting the 500Hz to 1000Hz octave makes the instruments sound horn-like, while boosting the 1kHz to 2kHz octave makes them sound tinny. Excess output in this range can cause listening fatigue.

HIGH MIDS The upper midrange between 2kHz and 4kHz can mask the important speech recognition sounds if boosted, introducing a lisping quality into a voice and making sounds formed with the lips such as "m", "b" and "v" indistinguishable. Too much boost in this range, especially at 3kHz, can also cause listening fatigue. Dipping the 3kHz range on instrument backgrounds and slightly peaking 3kHz on vocals can make the vocals audible without having to decrease the instrumental level in mixes where the voice would otherwise seem buried.

PRESENCE The presence range between 4kHz and 6kHz is responsible for the clarity and definition of voices and instruments. Boosting this range can make the music seem closer to the listener. Reducing the 5kHz content of a mix makes the sound more distant and transparent.

BRILLIANCE The 6kHz to 16kHz range controls the brilliance and clarity of sounds. Too much emphasis in this range, however, can produce sibilance on the vocals.

MONITOR TIPS

WEDGES

- Only put the necessities in each wedge. Not every wedge needs every instrument and vocal.
- Have as many different monitor mixes available as you can. Try not to have every instrument on the same mon mix, daisy-chained together.
- Mix in a subtractive, not additive manner.
- When acoustic player needs more of his own vocals, try turning down guitar and other instruments, rather than raising the volume of his vocals.
- Listen to where the monitor volume starts to bleed into FOH. If you can hear mons past 3-4th row in the house, they are too loud.

IEMS

- Mix in stereo, not mono. The brain will handle this better. Pan instruments according to where they are onstage.
- Add an ambient mic to the room, so the musicians can feel less disconnected.
- Try not to use IEMs and wedges simultaneously, except in cases where there is a guest speaker or singer who is not wearing IEMs, or if you have people backstage who need to hear instructions from the talkback mic in the monitors.
- Mix in a subtractive, not additive manner.