Cheatography

EQ tips Cheat Sheet

by Frederic Villemin (fredv) via cheatography.com/50/cs/73/

EQ Frequency breakdown (1/2)

<= 30Hz	Virtually undetectable, you can safely cut these frequencies
40-60Hz	Sub bass Frequencies. "Feel" only
60-200Hz	Add for tom "boom". Cut to decrease bass "boom"
80Hz	Boost for the kick drum lower end to cut through the mix. Notch most other instruments here. Rolling off the electric guitar here is advisable
80-200Hz	Boost bass instruments for presence. Boost will add warmth and fullness to guitars, vocals and horns
100Hz-4kHz	Scooping/notching instruments here will provide room in the mix
<=120Hz	Add for warmth. Too much will sound muddy
120-125Hz	Top of the range for most subwoofers. Also the low end of music such as kick drums and bass guitar. Bottom end of acoustic guitar and piano. Add for warmth
120-600Hz	Boost for strong vocal presence. Causes problems with vocal resonance and fatiguing
200Hz	Slight boost for depth. Cut to reduce muddiness. This is a good area to get the "gong" out of cymbals.
240Hz	Boost to fatten the snare. Boost acoustic guitars slightly to add fullness. Scoop vocal here if muddy. Notch filter here can add thump to a kick drum
350-400Hz	Cut to remove the "cardboard" sound of drums - Notch the bass guitar a little bit to reduce presence

EQ Frequency breakdown (1/2) (cont)

0.6-3kHz	Provides presence, but are hard in nature. Good for rock.
800Hz	Boost the bass guitar for punch. Cut the electric guitar to remove the "cheap" sound
2-4kHz	In this area you can emphasize the "smack" of the kick's beater
2.5kHz	Good for adding to a dirty guitar for some real sizzle. Boost this area for bass guitar if using the pop/slap style
2.5-5kHz	Boost for clarity with an acoustic guitar and piano

EQ Frequency breakdown (2/2)

3-7kHz	This is the area where vocal sibilance resides. Boost slightly to add sense of "volume" It also adds a harshness that is particularly fatiguing. Add warmth without loss of clarity by attenuating this region a bit
4kHz	Boost vocal here for presence
4-9kHz	Brightness, presence, definition, sibilance, high frequency distortion
4.5kHz	Extremely tiring to the ears, add a slight notch here
5kHz	Add a crisp, sharp "crack" to the snare. Also a good place to add some attack to the toms. Cut on background parts to make them sink in to the back a bit
>=7kHz	Add for the sense of quality and accuracy for cymbals. Too much output will come off as lacking definition. Cut vocals to decrease sibilance
8-12kHz	Cut or Boost to adjust brightness for cymbals and acoustic guitar

EQ Frequency breakdown (2/2) (cont)

9-15kHz	Adding will give sparkle, shimmer, bring out details. Cutting will smooth out harshness and darken the mix
10kHz	Boost to add "air" and clarity to acoustic instruments

http://www.soundgadget.net

EQ Instrument breakdown

Vocals	presence (5 kHz), sibilance (7.5 - 10 kHz), boom (200 - 240 kHz), fullness (120 Hz)
Electric Guitar	fullness (240 Hz), bite (2.5 kHz), air / sizzle (8 kHz)
Bass Guitar	bottom (60 - 80 Hz), attack (700 - 1000 Hz), string noise (2.5 kHz)
Snare Drum	fatness (240 Hz), crispness (5 kHz)
Kick Drum	bottom (60 - 80 Hz), slap (4 kHz)
Hi Hat & Cymbals	sizzle (7.5 - 10 kHz), clank (200 Hz)
Toms	attack (5 kHz), fullness (120 - 240 Hz)
Acoustic Guitar	harshness / bite (2 kHz), boom (120 - 200 Hz), cut (7 - 10 kHz)

EQ Helpful suggestions

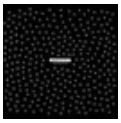
Embrace the idea of “notching”, when in doubt, cut instead of boosting.

Allow instruments to have their own “space” in the frequency spectrum; don’t make them fight for it.

Understand that instruments of the same type can and will sound different, EQ accordingly.

EQing WILL NOT save your mix; you can't EQ out bad sound.

Cut frequencies below 90Hz for vocals, they add little to the mix except mud



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EQ Helpful suggestions (cont)

Listen to 15 minutes of well mixed audio before any mixing session

Limit Stereo Width to 30% except special effects

Don't forget the noise gate

The old RIAA AES mechanical rule for vinyl was to cut at 47Hz and 12k, and some great recordings were made this way. Human perception at extreme highs and lows is not all that accurate or sensitive, and a little goes a long way

EQ Glossary

Attenu-ation	the reduction of a signal level
Band	range of frequencies
Boost	selected frequency levels are amplified
Cut	selected frequency are attenuated
Presence	increasing causes the sounds of voices and such instruments seem more "present"
Q	describes the shape of the EQ curve (higher Q = narrower range, lower Q = wider range)
Sibilance	refers to the hissing "s","s-h","z", or "zh", sound of the human voice
Warmth	sound where the bass and low mid frequencies have depth and where the high frequencies are smooth sounding opposed to aggressive or fatiguing

Thanks to Tikmerd
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