

Equalizer (EQ) Used For

- Adjusting timber of instrument, voice, mix ...and of effects such as echo!
- Massaging a track to make it mix better
- Eliminating a steady state noise
- Fixing a poor recording (a little)
- Making a recording sound better over a particular speaker system (Compensating for speaker limitations)
- Compensating for room acoustics

Related Terms:

bass treble
bands
boost cut
low-end
Q center-frequency
high-pass low-pass
sweep

EQ Advice

- Think minimal!
- Technically, **cutting is better** than boosting. Harmonics are left intact. Cut if you are trying to make things sound better. Boost to sound different. Cut with narrow **Q (band)**. Boost with wider **Q**.
- Roll off bass to make an instrument stand out. Off treble to make it blend in.
- To Sound Bigger Boost the bass. First sweep to find the frequency that best does it. Then try adding another boost at ½ or twice the initial frequency.

Same with effects return EQ.

Busy instruments are better with high pass reverb. Slow instruments sound bigger with extra low end reverb.

Echo and Delay In Music

“Echo”: a recognizable repeating of the sound
Seems to “bounce back”

“Delay”: the time it takes for the first bounce back
Either the first echo, or when the reverb starts to be heard

“Reverb”: a multiple of random little bits of the original sound

- In music, reverb *lengths* are always adjusted to the beat of the song, (bpm) often to quarter note. It will sound right and smooth.

Once the beats per minute are known, charts are available to tell you what the most comfortable delay time would be. Or...

60,000/bpm = Quarter note delay in ms
Divide by 2 for half and full notes.
Multiply by 1.5 for dotted values note+half.

However, **slow songs** will use 1/8 or 1/16 or even 1/32 note reverb so as not to over-reverb it.

- If you are using two reverb returns for the same instrument, the closer one is brighter.

- **Short short reverbs** are not “heard” but still add bigness and wideness to a mix. Space and texture.

- Pan the reverb a little to the outside of the instrument. Reverb sounds wrong if panned hard left or hard right.

- If you want the delay to **stand out**, however, try making sure it is **not** tuned to the track. Adjust length and listen for effect.

- Pre-delay is calculated based on the size of the room you want to create, but is best when also set to a division of the bpm if it is music.

Pre-delay: in very slow music, you may want to set it at 0 so as not to sound strange.

Note that many digital reverbs have problems sounding good with 0 pre-delay. Can make them metallic sounding. They need a little time.