

Tech Time on Equalization

It's Time to Tune Up Your System!

Vol 1 Issue 1

Tech Question: *My sound system sounds muddy and I am getting some feedback. What can I do? How do I know what frequencies to boost or cut in my sound system?*

MSM Answer: For equalizing your mixing console channel or graphic equalizer, you should use your ears to hear the results, but here are some suggestions;

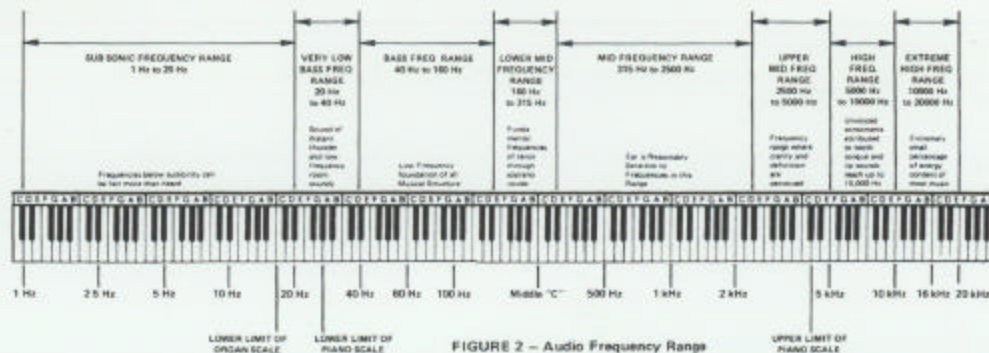
Vocals: fullness at 120Hz, boominess at 200-250, presence at 5kHz, sibilance at 7.5k-10kHz

Piano: bottom at 80-120Hz, presence at 2.5-5kHz

Acoustic Guitar/E. Organ: bottom at 80-120Hz, body at 240Hz, clarity/presence at 2.5-5kHz

Kick Drum: bottom at 80Hz, slap/click at 2.5-3kHz **Snare Drum:** Fatness at 240Hz, attack at 5kHz

Bass Guitar: bottom at 60Hz, attack at 700-1000Hz, string noise @ 2.5kHz



Keys to reduce feedback: mic choice and placement, loudspeaker coverage and freq. response

- 1) Proper mic placement: make sure the mic is pointed away from the loudspeakers and towards the source.
- 2) Turn off mics not being used, each mic turned on reduces your gain before feedback by -3dB!
- 3) Have the talker speak louder into the microphone, and/or reduce the distance between talker and mic. Proper mic selection is also key, we have several excellent options for applications such as wireless microphones or pulpits. Give us a call to try one out.
- 4) Use a graphic (or better) a parametric eq to adjust the sound system frequency response. Your system should have a flat frequency response between 500-4000Hz for good speech intelligibility. MSM has sophisticated computer analysis equipment to properly setup your system if you need assistance.
- 5) Purchase a Feedback Eliminator. They start around \$350 and we can help set it up.



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If you have a Tech Time question, please give us a call or an email.