

When and How to EQ - You Have the Power

By Bruce Lee

EQ, or Equalization, can be your best friend as you attempt to improve the sound coming through your mixing console or it can be your worst enemy. Last month's issue we looked at what the knobs did and this month we will discover when and how to use them.

I have the philosophy that EQ should be used as little as possible. Choosing the right microphone for the application and placing it correctly is always a better solution than trying to fix the sound with EQ. That doesn't mean EQ is a bad thing. But like almost anything good, used to excess it can become quite bad. So where do you begin. Start with the EQ flat, i.e., the cut/boost knobs are at 12 o'clock. Then try different microphones in different positions until you get the best possible sound. If you are using a direct box with an instrument, it doesn't hurt to try different direct boxes. Once you get the best sound possible, then, and only then, do you begin to adjust the EQ, if needed.

It is impossible in this article to make you an expert in EQ, so I want to give you some principles. To help you learn what the EQ sounds like, it won't hurt to exaggerate. If you have a sweep

mid, cut or boost the mid 9dB+ and sweep the frequency knob to hear the difference it makes. Be aggressive with the highs and the lows so you hear the difference. Do this with instruments and voices. And it wouldn't hurt to make notes about what you are hearing and equate it to frequencies.

Voices and instruments have frequencies that exaggerate their strengths and other frequencies that would make them stand out less. For instance, boosting EQ around 2 to 4kHz for voices usually have the greatest impact on making that voice stand out. Cutting those frequencies would make them blend into the mix. The same is true for instruments. Each will have frequencies that make them stand out, blend or sometimes just about disappear in the mix. The careful tech will use these tools to enhance the mix.

Start with listening to each instrument and each voice independently, making adjustments to make them sound how you or your director wants them to sound. (It's important to write down these settings so you can develop a consistency with your EQ.) Once all of them have been adjusted then you begin to listen to the mix as a whole and make

decisions what you need to help stand out by boosting the strengths of the voices/instruments that need to be made more prominent. You would reduce those same frequencies to help those voices/instruments blend more.

Another trick is reducing frequencies in order to create space. You can do this by locating the frequencies that help an instrument stand out and cutting those frequencies on the channels for the other instruments. I'll give you an example. You have a bass player and the keyboard player keeps playing the bass notes with his left hand. You can cut low frequencies on the keyboard in order to create space for the bass player.

I'm going to close with three rules:

1. Cut and boost knobs should usually be adjusted no more than +/-6dB (More than this would indicate something might be wrong like using the wrong mic)
2. Don't turn all the knobs the same way (Contrast is your friend)
3. Don't EQ every channel the same (It will make for a mix that is very tiring to listen to)

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Choosing the right loudspeakers

Back to school: A new beginning for the children – A new beginning for you!

By Yoli Lee

I have thoroughly enjoyed this summer!!! Most people love the summer because the kids are out of school and they finally go on that long planned vacation. Not me! Well, not us! We did something totally amazing – we stayed home! For the first time in 12 years, we were able to stay home for 3 long months. Bruce travelled to do some installations, but was back at home every night. We all agreed that this was the perfect “vacation” for us. Our boys are homeschooled and it is hard to believe that it is already time to start a new school year again. I remember the mixed emotions I felt every year when it was time to start school again. Will I be in the same classroom as my best friend? Who will be my teacher? Then, the first day of school came and it seemed that the worst thing always happened on that first day of school. We were asked to draw a picture of the most exciting thing we did during the summer vacation. Could they be more creative and ask us to do something else? To this day, I detest drawing and I am terrible at it! So, my picture was never chosen to be posted on the bulletin board and I was never chosen as the next Da Vinci. How I dreaded all those “first

days” in elementary school. Time passed and in my senior year I discovered my “gift”. My Dad taught me the art of photography. For as long as I can remember, I’ve always had a camera. My first one was a 110... I know I am old! I remember always taking pictures of everything and everybody. I think I have always been much more comfortable behind the camera than in front of it. So, during my senior year I blossomed! I took pictures of everybody. I was chosen as the photographer for our yearbook. My new position came with “permission” to be out of the classroom in order to photograph various school activities. This came in very handy sometimes. I thoroughly enjoyed taking pictures of everyone and everything all year long! I continue to have the same passion for photography every day. Just last Sunday, I began to take pictures of my Sunday school classmates in church. I must confess, I had my own reason - I want to know who I’m praying for. Many times, someone will talk about a person and ask prayers for that person and I have no clue who they’re

talking about! Our church’s last pictorial yearbook was done in 2004 and people have changed a bit since then! I have no intention of making this a public yearbook, but a pictorial directory for anyone interested. I already have received requests for it! I also thought it would be good to include addresses, emails and their business/profession/area of expertise. Now, I can do business with a person from church instead of with someone else. With this economy, it sure is nice to help each other in business! So, what is your gift or talent? Have you been “discovered” in church? Who knows your passion? How can you use it for the Lord and His church? Have you made yourself available? If money wasn’t an issue, what would you absolutely love to do every day of your life? Remember God doesn’t want our **ability**, He wants our **availability**. He sure can make us as able as He desires to make us!! So, right now, open your heart and mind and start praying for that talent that God has given you and start sharing it with His people... **He knows you can do it and so do!!!!**



A very effective way of telling people to turn their cell phones off during worship is to take a picture of kids in your church holding a cell phone on one hand and making the “Shhh” sign with a finger over the mouth.

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Our tiny church was only about a year old, when a group of us started a praise team. We were not sure about insurance coverage on sound equipment, so the mixer & speakers stayed locked in a closet, until ready for use. About the only thing I knew about the sound system was how to plug everything together & turn it on. One Sunday, the sound system was totally dead, the CD player quit the hymnal kept falling off the piano. Everyone in the church looked at the sound system to no avail. That morning, the praise team sang acapella, and only half the congregation could hear the preacher. After everyone left the church, I opened the door closest to the equipment & said "Ok, devil. You aren't welcome here, so get out." I walked over to the sound system and found a button that didn't look like I thought it should, so I pushed the button and it worked perfectly. When you are totally baffled, **pray!**

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Jane Smith
A/V Tech Crossway Baptist Church, Abilene, TX

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