BEHIND THE MIXER

TEN KEY TIPS
FOR A BETTER SOUND

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with [hi]s g[lo]ry

MIXING GUIDE

THE TEN KEY TIPS FOR A BETTER SOUND

BEFORE STARTING

I have attended church services, live concerts, theater performances, and host of other live events. Most of the time, everything sounds great. But, when there are problems, I have noticed they come from one of ten different areas. These are **key** areas which are basic foundational areas of live audio production. This eBook tackles each of these ten areas and simplifies them into what needs to be done and why it needs to be done.

TIP #1: KNOW WHEN TO TURN MIXER CHANNELS ON AND OFF.

If I had a dollar for every time I heard the crackling sounds of a head-worn microphone being removed. If I had a dollar for every time I heard the noises of a microphone being pulled out of a stand or placed back into the stand. If I had a dollar for every time…then I'd have a lot of money.

Part of your responsibility of running the audio production is *"keeping all eyes forward."* In essence, you don't want to do anything or allow for anything which distracts the congregation…in any way. An obvious distraction would be audio feedback but so is the popping & crackling of a microphone.

Note: mixer channels can be turned on/off or they can be muted. The easiest way to look at this is by looking at your mixing board. If it has an *On* button then the manufacturer considers it an On/Off button. If it has a *Mute* button then the manufacturer considers the channel active or muted.

Consider these four tips on muting microphones;

1. *Mute microphones not in use.* If the band is done playing and the pastor is about to speak, then un-mute the pastor's microphone and mute all of the other microphones. An open microphone can detect sounds on the stage and broadcast them. Occasionally, in the scenario when a microphone is used in conjunction with a monitor, a pastor could walk by an open mic, while talking, and that microphone could broadcast his sound into the monitor.

2. *Mute microphones that are being moved.* When the singers go to put their microphones in the stand, have the microphone muted. Same with those head-worn microphones. The moment you see the user start to take it off, then mute it.

3. *Mute microphones when you don't want to broadcast a sound.* A perfect example is a sneeze. You don't want to broadcast the sound of a sneeze. Therefore, if you see the pastor start to sneeze, then mute the microphone so the congregation doesn't get an earful of sound. Number 3 is really about watching the stage and preventing sound which would be otherwise distracting or unusually abnormal from being broadcast. Optionally, you could use the fader for this.

4. *Have microphones un-muted BEFORE they are to be used.* For example, un-mute the microphone when you see the pastor step on the stage. Don't wait until they are in front of the pulpit. Time and time again, I've seen people start talking while they are walking across the stage. Don't try timing it to the instance before they speak. The moment they step in front of the congregation, you should have the microphone ready.

5. *Fade out sounds completely, like the band or an accompaniment track, and then mute the channel.* If you mute instead of fading, it will break the mood every time. I've heard a tech mute a singer's backing track before it had completely faded out in the house sound. The impression it gave was *"that's over and it's time to move on to something more important."*

TIP #2: USE PROPER MICROPHONE PLACEMENT

This problem crops up in a few ways. Microphones are either too close to a sound source or they are too far away. A microphone which isn't in the proper location will cause problems in the areas of volume control and in secondary sounds bleeding into the microphone.

Regarding lapel microphones, the rule for placement is thus; have the person tilt their head down so their chin meets their chest. Then, have them put their fist just below their chin. The result is that you see a point on their chest, about 5-6 inches below their chin, where the lapel microphone should be placed.

Regarding handheld microphones, this is more about training the user and less about what you do behind the mixer. The user should hold the microphone directly up to their lips. Doing so guarantees their voice will be heard and nothing else will bleed into the microphone. The typical problem occurs when the person holds the microphone at their waist, in front of their stomach. It takes a lot of gain increase on a mixer channel to pick up a voice from far away. Then you start picking out other sounds and have feedback problems.

Regarding instrument microphones, it depends. Many instruments use internal circuitry / pickups for detecting sound, such as with electric guitars, keyboards, and acoustic guitars with onboard pickups. But other instruments, such as drum kits and acoustic pianos, can be mic'd with standard instrument microphones. In most cases, the closer the microphone, the better. In the case of the drum kit,

the drums should be mic'd as close as possible whereas the cymbals can be mic's from farther away – drum mic'ing is covered in detail in my mixing guide, How to Get a Great Drum Sound. Much of the reasoning for close mic'ing is the closer the microphone to the sound source, the more control you have over that particular drum kit piece in your mix. In the case of acoustic piano mic'ing, either use two microphones pointed at the upper and lower octave keys, from about two feet away, or point a microphone at the middle of the piano lid where the sound combines and comes out. When mic'ing pianos, move your head around the piano until you hear the sound you want and then put a microphone there.

A final note on microphone placement – use the right microphone for the job. Most stage work involves condenser and dynamic microphones. Each has it's place. Microphones also have different polar patterns, that is to say they pick up sound around the microphone head in different ways. Microphones treat audio frequencies differently depending on the make and model (and purpose) of the microphone. There is no *"one [microphone] to rule them all."* Check out your microphones and pick the right microphone of the job. For more on microphones, check out this page.

TIP #3: CLEAN UP YOUR MIX WITH THE HIGH PASS FILTER (HPF)

There are mean nasty trolls that live in the lower frequencies. They walk around the stage speaking in tones so low that they sound like deep earthly rumblings. And when the High Pass Filter (HPF) isn't engaged, you get all those rumbling in your sound system.

Wait a minute, that's not the whole truth! If they were there all the time, wouldn't there always be a filter at that frequency? Good question.

Frequencies in that lower range can be both good and bad. Kick drum, bass guitar, Froggy from the Little Rascals, those all work around that range. However,

a tenor's vocal microphone that picks up the kick drum on the stage…not good. It's in these areas you start using the high-pass filter.

Each mixer channel has a high-pass filter, often labeled as "/80" or "/100" on analog mixers. This label indicates a filter (/) and the frequency point for the filter. In the case of "/80," it's saying filter out all frequencies below 80 Hertz (Hz). This number, used as a high-pass filter, indicates only frequencies above the set value will be passed along. For example, if you set a digital high-pass filter at 300 Hz, you'd lose a lot of the bass sound from instruments that primarily have fundamental frequencies in that lower range.

A high-pass filter also has a slope associated with it. Think of it as the rate of reduction of that filter. You don't want to abruptly cut frequencies; you want a filter that gently rolls them off the closer to the set point. In advanced filters, you can control the degree of the slope. In the case of the HPF button on an analog sound board channel, it's a fixed slope.

Rules in audio mixing are few and far between because when it comes down to it, if it sounds good then it's right. With that in mind, there are times when I'll engage the HPF for a guitar and times when I won't. These are some simple guidelines you can follow;

- If the microphone's source sound doesn't use those lower frequencies, then engage the HPF.
- After setting your basic mix, engage the HPF on channels and listen to the difference. Pick the best setting.
- Experiment. What if you engaged the HPF on a bass guitar and it gave it a unique sound that fit the song? Try it!

TIP #4: CONSIDER VOLUME MIXING LIKE A RECIPE – DON'T ADD EQUAL AMOUNT OF EVERYTHING.

My family and I had been attending a church which was meeting in a high school auditorium. The mix never sounded right to me. One day, I made sure we were seated near the sound guy. His method of mixing the music was setting all the channels at the same volume. That was it. No adjustments during practice and definitely none during the service. And the sound suffered for it.

Mixing music is a lot like cooking. An analogy I've used before is that mixing music is like cooking a pot of chili. Spicy levels aside, the quantities of the ingredients vary greatly. For example, I'll add two cans of chili beans but there is no way I'd add the same quantity of cayenne pepper. For the chili to taste great, the ingredients need to be in the right quantities. Same goes for mixing music.

The first thing you must realize is that the vocals are the most important. No matter what you do, the vocals should always *"sit on top"* of the other sounds. Primarily, I'm talking about the lead vocals. A quick tip if you are mixing in a space with fierce volume restrictions; set the volume of the lead vocal first and then layer all of the other sounds underneath it (quieter than the lead vocal).

Follow this order for your volume mixing;

1. *Start by setting the volume of the drums.* Set it at a volume that meets the needs of the style of music and the expectations of the congregation.

2. *Add in the bass. It should sit just above the drums.* You might have to do a little EQ work so it fits where you want it.

3. *Add in the electric guitar.* Note: I'm working up from the low-frequency dominant instruments to the higher ones.

4. *Add in the acoustic guitar.* Again, it should be slightly louder than the previous three instruments.

5. *Add in the piano / keyboard.*

6. *Add in the vocals*. First backing, then lead.

7. *Ok, this part is a bit different…now add in the percussion.* I think of percussion as a way of adding depth to my mix. I can tuck it between instruments and I can EQ them so they fit where I want. Just remember the lead vocals should be the loudest.

8. *Review your volume levels and balance them to meet the needs of the song.* For example, if the electric guitar plays a lead line, then it might be appropriate to push it slightly louder than the acoustic guitar.

There are two ways to make instruments sound separate from each other; volume differences and EQ differences. You have to use both. And just like the chili, you have to have the right balance. Sometimes a song calls for more piano, other times it calls for more snare. Listening to professional recordings of the song will help you hear how the volumes should be balanced.

One last point regarding volume balancing, think in terms of supporting roles. Backing vocals support a lead vocalist. A rhythm guitar supports a lead guitar. And how do you support something? You get under it. There can be exceptions, such as when a snare drives a song where it would otherwise likely be mixed in with the drum kit. But for the most part, when performing volume balancing, determine your lead vocal and lead instrument and consider all the rest as supportive roles.

TIP #5: KNOW WHEN YOU CAN STOP MIXING.

In my guide, [Audio Essentials for Church Sound](#), I talk about Active Mixing. In simple terms, you should know there are times for mixing and times to sit back and enjoy your work. Too often, I've seen sound techs get these confused.

Let's start with *when not to mix.* You ARE tasked with creating an excellent audio production for the congregation to be able to focus on worship. But, you must realize you aren't mixing for a professional recording. Think of it this way, you are mixing for a moment. When the congregation is fully involved in worship and everything sounds great, then take your hands off the mixer. I've seen guys tinker around on the mixer making small EQ changes that I guarantee the congregation didn't notice. So, if you do need to make mix changes during a song, they need to be ones that 1) benefit the overall sound and 2) will be noticeable by the congregation.

Next, know *when to mix.* When the pastor is talking and you notice a bit of feedback every now and then, it's time to make an EQ adjustment and eliminate the feedback. When events on stage change, songs change, and anything else "normal" occurs which would require you to make mixer changes, then by all means do it. Going back to the feedback on the pastor's EQ, just because the pastor has started talking or a song has started, those are not reasons to ignore what is going on in the audio spectrum. The way a song was mixed during the rehearsal / sound check is not always sufficient come the actual event. The room fills up with people and the acoustic properties of the room change and the congregation starts singing. The mix of the first song will usually require subtle changes to account for these things. Just because it was mixed and set during the sound check doesn't means it done.

TIP #6: GET THE MONITOR VOLUME AND MONITOR MIXES CORRECT.

Monitors are used so musicians can play /sing in time with each other and play / sing in tune with each other. For example, singers need to harmonize with each other while singing in time with the band. For this reason, monitor usage is critical. The typical monitor problem occurs when the monitor volumes are set too loud and don't have the right mix for the musicians.

Starting with the monitor volume, know the volume has to be loud enough for the intended user to hear it without negatively affecting others on the stage or affecting the house volume. A simple rule of thumb with floor monitors is that you shouldn't be able to hear them if you are sitting in the fourth row of seats/pews from the front. How can you get a reasonable monitor volume? Use proper placement and monitor mixing.

The user of a monitor, such as a singer, should be as close as possible to the monitor while also having their head in direct line to the monitor speaker. A sound-check scenario I've seen has been when a singer stood close to the monitor when the monitor levels were set. Then, when it was time for the band to practice their songs, they put a music stand between themselves and the monitor. Sometimes, they take a few steps back from the monitor. Either way, they notice a huge volume drop and start asking for a louder monitor. With all of this in mind, the musicians need to be as close as possible to the monitor when volume levels are set AND they need to maintain that distance to their monitor. Don't be afraid to put a small dot on the stage if they keep moving around.

The mix of the sounds in a monitor is the other crucial component. Going back to the purpose of monitors, remember the musician needs to hear sounds for keeping in time and in tune (on pitch). The key in mixing is giving them ONLY the sounds necessary for doing that, given their unique position within the band. Let's look at the needs of singers, both lead and backing singers. The best instruments for staying in time are the snare drum and the high-hat from a drum

kit. The rhythm guitar is another key instrument for use if the band doesn't have a drummer. When there is more than one singer focusing on harmony, their voices should be in the mix as well. Finally, the vocalists need to hear themselves in the mix. This will probably be the loudest sound in their mix, depending on their preferences.

Contrast that singer's monitor mix with that of the drummer. These are rhythm players and therefore rhythm is their primary monitor focus. Kick drum, snare, and toms should go in their mix. Add to that a touch of guitar and a lead vocal. The drummer should know if the lead singer says, *"let's do this last verse without the instruments."* I've seen this happen with musicians and it's not pretty.

I'd be remiss if I didn't mention dealing with the *"I need more me"* request. Any time a musician asks for more of themselves in the mix, you need to check a few things. First, check their distance from the monitor. Did they move away? If so, they should move back and then re-evaluate their monitor mix. Next, ask the question, *"is there a sound in their mix that could be lowered?"* It could be the electric guitar is too loud and is overpowering their personal sound. Only once you check these two points should you then consider increasing their volume.

TIP #7: DEAL WITH FEEDBACK BOTH PROACTIVELY AND REACTIVELY.

Feedback occurs when a sound loops between an input and an output and a particular frequency is excited. For example, when a monitor and microphone are in close proximity to each other and the monitor is broadcasting a sound that the microphone then picks up. The audio system is amplifying that sound and broadcasting it back out, through the monitor, where the microphone picks it up again. Eventually, when the volume going into the microphone is the same as the volume coming out of the monitor, feedback begins. The first frequency that *"feeds back"* is the one that requires the least amount of energy to excite resonance. Resonance is a vibration of large amplitude caused by a relatively small stimulus of the same or nearly the same period as the natural vibration period of the system.

Imagine the feedback frequency as a kernel of corn. Making popcorn, heat is applied to kernels of corn. As the kernels get hotter and hotter, they start vibrating. Eventually, the heat pops the kernel and cooks the corn. The kernels don't all pop at the same time. Each has something unique about it that causes it to pop at a certain time. For this reason, imagine each kernel is a separate audio frequency. Think of the first popped kernel as the *"feedback kernel."* It's the kernel that popped first because it required the least amount of heat to pop.

Dealing with feedback proactively is the best way to prevent it. For example, by keeping microphones away from monitors you create an environment that is the least likely to have feedback problems. Consider these points when setting up the stage;

- *Place microphones out of range of speakers.* A microphone that's at the very front of the stage could be in the path of the main house speakers.

- *Set up microphones so their null end, think polar pattern, is pointing at the floor monitors.*

- *Talk with the staff / leaders / worship singers / etc. about proper microphone placement.* Lapel microphones should be one hand's width from the person's chin when they put their chin to their chest. Handheld microphones should be up to the user's mouth. The closer the microphone to the source of the sound, the less gain you have to get and the less likely to get feedback.

- *A small stage can require microphones be located extremely close to monitors.* When this is the case, use a directional microphone with a cardioid pattern so it doesn't pick up sound behind the microphone (the null end pointing at a monitor). Also, try using a close-microphone setup. For example, avoid monitoring problems with drums by placing the drum microphone on the inside of the kick drum instead of the outside where the monitor is pointing.

- *Watch for reflective surfaces that might be bouncing the monitor sound to a microphone not directly in line with the monitor.* For example, you might get reflection off a drum shield or even the back wall if the monitors are loud enough.

Dealing with feedback reactively can be done by changing volume or by changing the sound's EQ settings. Typically, the quick response is lowering the volume of the channel creating the feedback, making a change, and then increasing the volume back to where it was. For example, you can lower the volume of the channel to temporarily eliminate the feedback which is great when you get a surprise feedback spike. Then, you can identify the reason, such as being too close to a monitor and then lower the volume for that stage monitor.

Resolving feedback issues can also be done with EQ changes. Remember the feedback frequency I mentioned? Let's say a person on the stage is talking. Every now and then, you hear a bit of feedback. There is something about the qualities of their voice and your EQ setting that has put that feedback frequency out front, primed for feedback. Listen to the sound they are making when the feedback occurs and then turn to your EQ settings for that channel to make the change. Start by looking at any frequency band you have boosted. Turn it down a little. If it doesn't go away, then you'll have to listen to the sound and make a bit of a guess at the frequency range and then make a slight cut in the EQ at point.

TIP #8: EQ THE SPOKEN WORD

So much time and energy goes into setting up other microphones, such as for the choir and band, that the pastor's microphone is often overlooked. Before you start working on their EQ, know that your goal ISN'T to make them sound like someone they are not. You goal is to make their voice one that's easy to understand and is easy-on-the-ears. What I mean by that last phrase is you want to smooth out any harshness to their voice which could be caused by anything from a nasally voice to a raspy one. Even if you don't agree with me on this point, you MUST make their voice one the congregation can understand. They have to

understand the message being delivered. For some pastors, this is easy, for others…not so much.

Start by knowing sibilance and how to avoid it. Sibilance is noticeable in vocals when the sound of the letter *"S"* sounds more like a hissing snake. You CAN accentuate vowel sounds / add presence by boosting frequencies in the 4.5 kHz to 6 kHz range. However, the *"S"* sound lives between 5 kHz and 7 kHz. Therefore, be careful when adding presence because you can easily go from a great sound to a hissy sound.

Next, focus on vocal quality. There is no simple 1-2-3 process to EQ'ing the spoken word. Therefore, take these points into consideration:

- *Roll off the low frequencies if the proximity effect is causing unusual bassiness.* The proximity effect is the closer a person's mouth to a microphone, the more bass response is produced from the microphone.

- *Don't roll off so much low end as the voice loses some of its umph.* Yes, I'm using *"umph"* as a technical word.

- *Boost in the 1KHz to 5KHz range for improving intelligibility and clarity*.

- *Boost in the 3Khz to 6Khz range to add brightness.* This can help with speakers with poor intonation.

- *Boost in the 4.5Khz to 6Khz range to add presence.* Note that too much boosting in this area can produce a thin lifeless sound.

- *Boost in the 100Hz to 250Hz for a boomy effect.*

- *Before boosting anything, cut out any frequencies that are giving you a harsh sound.* With the above ranges, you've got an idea of where to

start. And you should always cut before boosting – first eliminate the bad and then boost to improve.

TIP #9: SET THE PROPER GAIN FOR CLEANER / LOUDER / BETTER SOUNDS

I almost titled this one, *"Use the gain / trim control the way it was intended."* And that's a great starting point. I've seen the gain / trim control, herein referred to as the gain control, used incorrectly in more ways than one. Many times, the result of improper use can be seen as monitor problems, added noise in a channel, and sounds which are never loud enough. Without going into the grizzly details of how this happens, let's look at using proper gain control.

The gain control is used to control the amount of audio signal coming into the channel of a mixing board. The level of the audio signal coming into the channel affects the fader control and auxiliary sends which a channel might use, such as using Aux 1 for setting the volume of the channel for a monitor mix. Just keep in mind that input level is the first control on your mixer and that many processes depend on a proper setting for that level.

Setting the gain control, you want a signal level that gives you the best signal-to-noise (S/N) ratio and the most granular control via the fader. Once you set the gain, then you should only use the fader for controlling the volume.

In short, the signal-to-noise (S/N) ratio explains the quality of your sound. For example, let's say you have an acoustic guitar with an on-board amplifier. This gives the musician the ability to control the level of the signal from their guitar. If they don't raise the on-board amp's volume high enough, you could hear a large amount of line noise in their incoming signal. By increasing the volume on their guitar amp, they are improving / increasing the signal-to-noise ratio. This means when the signal is amplified, there is very little noise heard because the strongest

signal is coming from the guitar. The more signal and less noise, the greater the S/N ratio.

Here is a process for setting the channel gain:

1. Select a channel for setting a gain level, let's say a vocal microphone in channel #4.

2. Have the singer sing a verse or two of a song they will be singing that day – and sing at their normal level.

3. With the PFL/SOLO button pressed and the Gain knob set at zero, start turning the Gain knob up. The fader should be set at 0.

4. Stop turning the Gain knob when the volume meter is showing 2-3 green bars. You should be hearing ample sound with a solid signal and a good S/N ratio. If not, increase the gain until you are.

5. Tell the singer to sing louder in volume.

6. Turn the knob back if the meter goes into the red or the sound distorts.

7. Expect it to stay green with an occasional yellow.

8. You don't want to be on the edge of green/yellow as when you add in other channels, every 3 channels increase the overall volume level.

There is more than one way to set the gain but the other two methods still focus on setting the proper gain control so as to give the best S/N ratio, most granular control via the fader, and ensure the gain should not need to be altered.

Regarding gain control and in-ear monitors, if you do ever need to increase the gain on a channel after the musicians have put in their earbuds, ask them to

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remove the earbuds while you increase the gain. Then, they can alter the volume mix for their in-ears to account for this change. If you don't do this, you could potentially do damage to their hearing.

TIP #10: KNOW THE MUSIC

I can usually tell when the sound tech doesn't know the type of music they are mixing. In some cases, it's because they aren't familiar with the song. In other cases, you can tell they don't even like the style of music. They don't create a good music mix. Instead, they create a mix that either represents what they think the music genre sounds like or they create a mix that forces their music biases upon the mix, i.e. *"I don't like the bass, therefore, I'm not going to give the bass much presence in the mix."*

Mixing in the church isn't about mixing to meet your personal preferences. It has to do with a lot of factors and one of those is mixing to create the sound intended by the worship leader and the musicians. How can this be done?

There are a few ways to create the intended sound of a song. Some come easier with experience. Focus on these methods for creating the intended mix:

1. *Listen to how the other techs mix the song.* Mixes should be consistent from week-to-week and therefore when the band performs the same song two weeks in a row, it should sound the same. The exception would be if they intentionally change the arrangement of the song. If you struggle with matching their sound, ask another tech for help or hang out with them the next time they are mixing.

2. *Know the sound of your band.* Each worship team is unique. Each has their own sound / style. Think about all of the bands you like within a specific

music genre. They don't all sound the same. Therefore, if your band tends toward an acoustic sound versus a more "electric" sound, then mix with that acoustic bent in mind. Don't make them sound like something they are not. Make them sound like the best they can be.

3. *Work with the band.* This comes in two ways; knowing what they are trying to accomplish with their mix and knowing what they are using as their point of reference. In the first point, talk with the band about the song.

    Whenever I'm working with a new band or a band playing a new song, I'll ask two questions, *"what is the lead instrument"* and *"who is the lead singer."* Listening to them practice the song, I can usually get a feel for their intended sound.

    On the second point, I'm ripping a page out of the playbook of my friend, Steve Dennis. I've done it, but he's taken it to a whole new level. Each week, have the worship leader email you the list of songs which will be played at the upcoming service. Along with the song names, have them include the album recording of the song which they are using as a basis for their arrangement. For example, the email would have a line like *"In Christ Alone – Newsboys version from the Ultimate Collection album."* Then, you can search for the song on Youtube®, Spotify®, or whatever online music service you like. Steve makes a weekly playlist on Spotify and then listens to that playlist throughout the week. Once it's time to mix the songs for our worship band, he knows exactly how the mix should sound.

    As a bonus, if your church uses Planning Center then the worship leader can add direct links to iTunes®, Youtube®, Spotify®, and other places. This makes your job even easier.

TIP #11: BONUS – LEARN FROM YOUR EXPERIENCE

Life gets busy. You finish one task then move to the next. A few days later, you remember to do something. Two minutes later, you've forgotten about it and you're off doing something else. This is why taking after-the-service notes is so important.

There are two questions you must ask yourself after the service:

1. *What did I learn today that will help me in the future?* This is where note-taking is helpful. You might have learned a better way to mic an instrument or EQ a specific singer's vocal. You might have learned how to use a mixer setting that's new to you. The more you remember from previous times behind the mixer, the faster you can improve because you aren't re-learning the same material over and over.

2. *What did I learn today that would be helpful for the rest of the audio team?* A musician might have brought in a new percussion instrument, like a cajon, and you were the first person, on your team, to mic such an instrument. You might have had an "Ah ha!" moment when mixing and got the perfect snare sound that's eluded the whole tech team. Whatever it is that you learn and you know would help the team, then by all means, help the team! You could write up an email explaining what you learned. You could share it at the next tech team meeting. Do whatever works for your situation, but to borrow the phrase from Nike™, *"Just Do It!"*

DID THIS EBOOK HELP YOU?

You can get even more helpful information like pro tips, resources, article links, and notes on the latest gear. Thousands of church sound techs receive my regular newsletter filled with this useful information. Join them and you'll get my FREE 25-page eBook, *How to Get a Great Drum Sound.*

[Check it out today!](#)

READY TO MOVE TO THE NEXT LEVEL?

These ten key tips are crucial in creating a great sounding audio production. However, they are only PART of the work that goes into producing a church service. Move to the next level by picking up *Audio Essentials for Church Sound.* You'll get over 300 pages packed with information that every sound tech should know. Not only will you learn what to do, but how to do it, when to do it, and WHY it needs to be done.
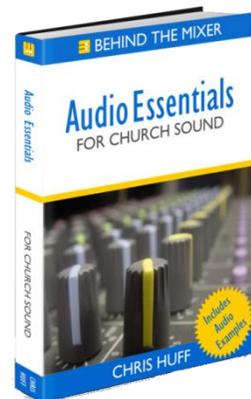
Technical Director Brian Gowing said of the guide, *"[This] is pretty much a solid week worth of audio training that if you sent your audio tech out for it would cost you around $500 – $1,000."*

Check out [Audio Essentials for Church Sound](#)