

SOUND BOOTH

[Insert Church Name]



Volume One

By [Insert Name]

Welcome to the first issue of the Sound Booth Review. The newsletter provides schedule and event information. It contains a "Meet The Team Member" section, as well as a few technical articles. You might even find some humor sprinkled within.

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Djembe Microphone Techniques

The **djembe** is a great musical instrument that blends well into the church worship setting. However, **microphone placement for the djembe** is not a hard and fast rule. Here are the guidelines you can use for providing the best amplification.

Djembes are **either mic'd with a single microphone from above or with two microphones**. The difference in techniques is primarily about the amount of **low end signal**. Mic'ing the top of a djembe gives plenty of the slap sound associated with the drum. However, there isn't much in the way of the bass sound.

Using the two microphone method, use the MXL **condenser** microphone for the top microphone. Place it 1-2 inches from the drum head. You can pick up a drum mic clip that will hold it on the djembe. Next, using a **dynamic microphone (our Shure SM58's)**, place it **near the bottom of the djembe using a small mic stand**. Don't place the microphone up and inside the djembe. Place it near the bottom and angle it at 45 degrees. **This part requires trial and error** until you get the bass sound the way you like. Here at church, I place the stand base right next to the

djembe stand base and I like that sound.

Using the two microphone method, you can now brighten your slaps on the top microphone via EQ and adjust your bass sounds using the lower microphone. **Take out a lot of the midrange and highs from the bottom microphone**. When you listen to just the bottom microphone, you'll hear a **muddy sound – but that's OK**. **Once you add in that top microphone, you'll get the crisp, fat drum sound you want**.

I've used both methods. I prefer the two microphone method. It sounds much fuller. The difference is surprising.



From

[Http://www.behindthemixer.com](http://www.behindthemixer.com)

Meet [Insert Name]

How long have you been playing guitar?

My dad found an old Silverton arch top guitar and brought it home. It sat for months in the bedroom that my brother and I shared. During my sophomore year when basketball season had ended, I picked it up after acquiring a chord book and worked through those awful "buzzing" days of learning chords. I never learned to read music and so I would try and match chords to music I'd heard. To this day, I still play most songs I learn by ear.

If you could play any other instrument, what would it be?

That would be a cello.



What's worse, spam or white castle sliders?

I can't handle W.C. The first trip is great but all of those return visits kill me. (indigestion)

Why did you first decide to play guitar?

I had a friend in high school who inspired me with his playing. He taught me a lot and encouraged me.

What is your favorite song to play on guitar ?

Chris Tomlin's "How Great is our God"

A Worship Leader's Perspective

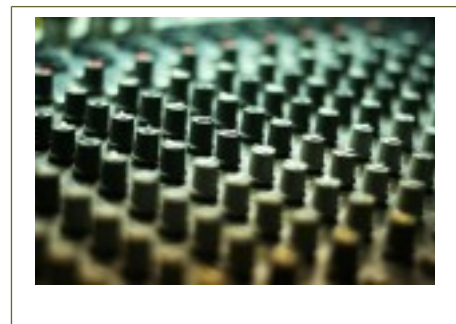
By **Karl Verkade**, music director for Life Church in Southern California

Q: How do you establish a good relationship with your sound tech?

A: I think the key to maintaining a good relationship with your sound tech is to realize that he/she is the absolute most important part of the worship team. It doesn't matter if your band sounded like Coldplay this morning on stage; what matters is how it sounded in the house, and that is up to the sound guy. Once we realize this, it will be simply academic to treat the sound guy as part of the worship team, not the tech

team. The sound guy gets all the worship e-mails, is invited to all the worship functions, and is listed every Sunday on the band roster. The soundboard is simply another instrument.....and the most important one.

"...what matters is how it sounded in the house, and that is up to the sound guy."



Phantom Power and When To Use It

Phantom power (labeled as +48 V on most audio equipment) is a method that *sends DC voltage through microphone cables*. It is best known as a power source for **condenser microphones**, though many active DI (direct input) boxes also use it.

Phantom power supplies are often built into mixing desks, microphone pre-amplifiers and similar equipment. In addition to powering the circuitry of a microphone, in traditional (DC-polarized) condenser microphones the phantom powering directly or indirectly supplies the voltage used for polarizing the microphone's transducer element ("capsule").

Polarizing a WHAT?

Microphones have transducers, either dynamic or condenser types (hence dynamic or condenser microphones). A transducer changes energy from one form into another, in this case, acoustic energy into electrical energy.

Condenser microphones are based on an **electrically-charged diaphragm/backplate assembly** which forms a sound-sensitive capacitor/capsule. This capsule stores an electrical charge. When the element is charged, an electrical field is created in proportional size to the distance between the backplate and the diaphragm.

Take a standard grocery store **tub of whip cream**. Empty it and then cover it tightly in saran-wrap. Now if you press down on the saran wrap, you are decreasing the potential energy because there is less space inside. If you pull up on the top of the saran-wrap in the middle you are increasing the potential energy because there is more room.

The **variation between the spacing** (the increasing and decreasing pressures) produces the electrical signal which represents the sound detected by the condenser microphone.

Back to That Old Phantom Magic



A condenser microphone needs some means for **maintaining the electrical charge / polarizing voltage**. Creating the charge on the capsule of condenser microphones can be accomplished by battery, phantom powering, and by using fixed charge materials in manufacturing.

In the case of phantom powering, *the voltage supplied through the microphone cable*, such as by a mixer equipped with phantom power, is equal on Pin 2 and Pin 3 of a typical balanced, XLR-type connector. For example, a 48 volt phantom source, would have Pin 2 at 48 VDC and Pin 3 at 48 VDC, both with respect to Pin 1 which is ground.

Because the voltage is exactly the same on Pin 2 and Pin 3, phantom power will have *no effect on balanced dynamic microphones*: no current will flow since there is no voltage difference across the output. In fact, phantom power supplies have current limiting which will prevent damage to a dynamic microphone even if it is shorted or mis-wired.

Phantom power can be thought of as just the right amount of power where you need it. In some sound board mixers, multiple phantom power buttons can be present for different channels. For example, a button for channels 1-8 and one for 9-16. Knowing what microphones require it, tells you what channels will need it.

Note: condenser microphones that are made with pre-charged metals or are battery charged may be damaged if used in conjunction with phantom power so make sure you read the instructions with the microphone.

From [Http://www.behindthemixer.com](http://www.behindthemixer.com)

Luke, I am Your Father's Sound Guy

From [Http://www.behindthemixer.com](http://www.behindthemixer.com)

You've probably seen the **personality tests** on the internet that align you with a character from a movie, like Lord of the Rings. The characters in Star Wars (the old movies, not the new ones) have such iconic personalities, that they can be **matched up to the type of sound tech that you are**. Which one sounds like you?

Luke Skywalker: You are eager to learn about sound reinforcement. You have a bit of a naive outlook on how everything is supposed to work together on Sunday morning. Your weak point is you are impulsive and don't do well with failure.

Luke: *"Well why don't you outrun them? I thought you said this thing was fast!"*

Han Solo: You think you can do anything - and you probably have. You can also make anything work with a few bolts and a pocket-knife. Your shortfall is you are closed minded.

Han: *"Watch your mouth kid, or you're gonna find yourself floating home. We'll be safe enough once we make the jump to hyperspace. Besides, I know a few maneuvers. We'll lose em!"*

Chewbacca The Wookiee: You are a hard worker and take directions well. You listen to the worship leader and give him what he wants. Your weakness is you hate equipment and blame it for most problems.

Han: *"That's 'cause droids don't pull people's arms out of their sockets when they lose. Wookiees are known to do that."*

Princess Leia: You are very diplomatic when working

with the pastor and the worship leaders. However, when problems arise, instead of helping other work through the problem, you do it yourself.

Leia: *"Someone has to save our skins. Into the garbage chute, fly boy."*

Darth Vader: You order others around - well at least you are good at delegation. You are a leader wherever you are. Your weakness is you are the father of the Worship leader and that causes rifts in your ability to lead effectively.

Vadar: *"Luke, I am your father."*

Obi-Wan: You give others key pieces of information that help them solve important problems. You can lead others through the difficult times such as when the tape deck catches fire mid-service. Your weakness is you stretch the truth so others act as you want.

Obi-Wan: *"A young Jedi named Darth Vader, who was a pupil of mine until he turned to evil, helped the Empire hunt down and destroy the Jedi knights. He betrayed and murdered your father."*

Yoda: Great with sound reinforcement you are. Willing to help others you must. Slow to action, your weakness is.

Yoda: *"Nothing more will I teach you today."*

"Your weakness is you hate equipment and blame it for most problems."

A Round of Applause for Mr. [Insert Name]

[Insert Name] has been on the sound team for as long as I can remember. He helped build the sound booth! In fact, if you pry off the fire extinguisher box, you will find his signature written on the drywall.



[Insert Name] even goes above and beyond the call of duty by occasionally helping fellow sound techs clean up after a service.

[Insert Name] also runs sound for the POP's crew.

He's provided years of quality sound work and I'm glad he is on the team.

Here's a round of applause for [Insert Name] and his years of service!

Notify me if you have a scheduling problem.

DATE					
	1/4	1/11	1/18	1/25	2/1
SOUND SYSTEM	[Insert Name]	[Insert Name]	[Insert Name]	[Insert Name]	[Insert Name]
SPECIAL MUSIC	[Insert Name]	[Insert Name]	[Insert Name]	[Insert Name]	[Insert Name]
WORSHIP TEAMS	[Insert Name]	[Insert Name]	[Insert Name]	[Insert Name]	[Insert Name]

News

1. News item #1
2. News item #2
3. News item #3

About

All content was written by yours truly unless otherwise noted. Any typo's or grammar issues are not my fault as the newsletter was perfect when I wrote it...really! If you want to write something for an upcoming issue, or would like a certain topic covered, please let me know.

- [Insert Your Name]

"The thoughts and views in this newsletter are mine. If you object to something, talk with me about it. My views are not necessarily those of this church."