

CHURCH SOUND SYSTEMS & CHURCH ACOUSTICS ARTICLES SERIES



UPDATED MARCH 2020 - JUNE 2012

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Sharing Microphones is a health risk. Do you share toothbrushes at home? Then Why do we share microphones on stage?

Singing on stage is a great experience. It is uplifting and spiritual. Being on stage makes us all performers. This is also true for ministers and laypeople. The instrument of choice to project your voice to a large room of people is a microphone that is connected to a sound system.

Microphones come in all kinds of shapes and sizes. They are used in one of several common ways. Microphones are either static, handheld, or worn on the body. There is also another type of microphone used as pickups for guitars and pianos. A microphone is nothing more than speakers in reverse.

In general, microphones used for singing or talking are mounted in a barrel or rod. Depending on the size of the microphone capsule between the output of the mic and the output of the barrel, there are circuits that are either passive or active to boost the output and created the desired frequency response. Some mics are so small that they go from mic to barrel and out to the mic wire without a protective barrel. Then within 10ft or so, a balancing circuit is placed into the barrel of a mic connector before the signal is sent to a mixer or recording device.

The three most common microphones used are handheld and static microphones on lecterns or microphone stands and body mics. Many of these microphones have foam windscreens that are replaceable. Did you know that every microphone has a personality?

Some mics are ideal for bass singers. Some microphones are great for people who scream out their music. Every professional-quality microphone model has unique characteristics, and within each model, there are subtle differences. Just as when you play 3 piano's that look the same, one of them will be better for that performer. This is the same with Guitars, Violins, and so on. It is also true with microphones. (Try sitting in on a recording session at a high-end recording studio. Some studios have every type and model of microphone that has ever been made to meet the artist's needs.)

Sadly, there are only a few performers who travel around with personalized microphones. Performers like Crystal Gale or Wayne Newton have personal mics, and they also have custom finished colored sleeves and windscreens to match the



clothing they wear. Many people who see these custom microphones often think the performer as having a big ego. What's wrong, isn't the microphone the sound company is supplying not good enough?

But wait, microphones are musical instruments. They are an extension of the singer or minister. People don't say much when musician customize their guitars and drum sets. In fact, people try to get copies of such instruments. So what is so wrong with people doing the same with microphones? Singers should have a personalized microphone they bring from show to show. Here is the reason why.

How often do you hear of concerts that are canceled because the main performer had bad flu, cold, or throat problem? I am sure we all have heard of such events. Did you ever wonder how they might have gotten sick? Do you ever wonder how ministers who travel from church to church get sick or why they get sick so often?

All microphones are used in front of our mouths. People spit on them, sneeze on them and handle the microphone from the top down. If the person before you is sick, all of those germs and viruses can be passed on, even up to 48 hours after it was last used. It can be longer, too – depending on how wet the windscreen gets or how old the windscreen is. (See below for an update.) Did you know that there is no way to clean a microphone for germs except to replace the windscreen?

At my church, there has been a number of times where everyone on the praise team would get sick. It is most likely to happen where there are back to back worship services or for a series of evening meetings. It seems that one week one person has strep throat. The next week 3 members of the team are sick with the same problem until everyone gets sick who uses a microphone. For some churches, it seems like there is someone always getting sick in the worship team.

Here is some info about viruses and bacteria and how there are transmitted. These are excerpts from the Mayo Clinic.

“The length of time that cold and flu viruses can survive outside the body on an environmental surface varies greatly. But the suspected range is from a few seconds up to 48 hours, depending on the specific virus and the type of surface.

Flu viruses tend to live longer on surfaces than cold viruses. Also, it is generally believed that cold and flu viruses survive for longer periods on nonporous surfaces — such as plastic, metal, or wood — than they do on porous surfaces — such as fabric or paper.

Although cold and flu viruses primarily spread from person-to-person contact, they can also spread from contact with contaminated objects or surfaces. The best way to avoid becoming infected with the cold or flu virus is to wash your hands frequently with soap and water or alcohol-based hand sanitizer.

Other tips for staying healthy during cold and flu season include:

- *Get a flu shot. This is the one of the most effective ways to prevent influenza.*
- *Regularly clean your desk, phone and computer keyboard and mouse — at home and at the office — with disinfectant sprays or wipes.*
- *Stay home if you're sick. Don't expose others to your germs by dragging yourself to the office, theater or PTA meeting.*

The cause of strep throat is bacteria known as Streptococcus pyogenes, or group A beta-hemolytic streptococcus.

Streptococcal bacteria are highly contagious. They can spread through airborne droplets when someone with the infection coughs or sneezes. You can also pick up the bacteria from a doorknob or other surface and transfer them to your nose or mouth. Kitchen utensils and bathroom objects are other common sources of infection transmission.



Prevention

Proper hand cleaning is the best way to prevent all kinds of infections. That's why it's essential to clean your own hands regularly using soap and water or an alcohol-based hand sanitizer. In addition, don't share drinking glasses or eating utensils. Wash those items carefully in hot, soapy water or in a dishwasher."

This means that items like microphones should be cleaned after every worship service. Better yet, don't share your microphones. If you do, it is like sharing your toothbrush. I think it is high time that singer take their craft more seriously and consider their health when performing. I have been bringing a personal microphone for all of my speaking engagements for years. Every few months I change the windscreen, which costs about as much as a toothbrush and wipe the barrel down after each use with alcohol hand wipes. But I have not been doing that for sanitary reasons, I just like the way I sound on that microphone, and I take care of it the same way a musician takes care of their instrument.

I think it is high time to re-think the way we use microphones in general. If you are concerned about your health, don't feel embarrassed to use a piece of plastic over a public telephone mouthpiece or cell phone. If you want to cut down on the number of colds you get, you should change the way you use microphones – especially if you a minister or performer.

Ministers and singers should be making the same investment as musicians do and personalize their microphone. They don't



cost much. A Shure SM58 costs around \$100.00, and a high-end microphone like a Shure SM87 Beta costs about \$400.00. Yes, I know these are older mic models, but I still like the way they sound. A professional mic used by one person can last 20 years or longer.

Whether you're a singer in a praise team, singing to tracks from church to church, or do Church concerts, you should be bringing your own microphone with a 25 ft cord. You should have a case for the mic, replacement windscreens, and mini wipes to clean your mic after each performance. You should also have your name etched into the barrel or even have the barrel custom finished. You could also use colored tape. I know of one person who uses an embossed silver-coated wallpaper for the barrel of the mic with a custom mic clip.

This also goes for lapel mics and headset mics too. If anything, there is a greater need to personalize them as the mic is so close to the mouth that the capsule can remain moist for days. A light alcohol spray should do the trick.

In writing this article, I did not check with any of the mic companies to ask them about cleaning their mics. However, I did check with a number of churches and have a number of personal experiences of people getting severe colds, flu's, and streptococcal infections that never seemed to go away or passed on too quickly within a worship team, gospel group or ministers at a seminar. I can ever recall at a Church Convention of 2000 minister where after a week, all of the main guest speakers came down with colds after the first guest speaker sneezed onto the lectern microphone 10 minutes into his sermon. At the end of the week, nine ministers all went home with a serious cold.

If you perform in public and use your voice as an instrument, you should be doing whatever you can to take care of it. You should seriously look at getting yourself a microphone – if for nothing else, do it for your health. This is a great way to get out of sharing toothbrushes. Microphone etiquette should include personalized microphones.

Update - Covid-19 or any future infectious viruses and bacteria.

Covid 19 is a new version of the Coronavirus that has gone from animals to humans. It is so new that scientists are still scrambling to figure out how it spreads. The speed of how fast it is spreading and the fatality rate is still changing. When people who were isolated on a cruise ship were getting the virus, did they already have it, or was it being spread around by the ships' ventilation system? It makes you wonder. The reason for raising the alarm is because, in churches, we share microphones, and microphones are a way to spread around harmful bacteria's, common cold, and the flu. Since Covid-19 can remain active for hours or days, depending on the type of surface it lands on, sharing a microphone can be as bad as sharing a toothbrush.

I've written in the past that worship leaders and pastors, if they can afford it, they should own their own microphones and take personal responsibility for the cleaning and care of their microphones. The reality, most churches can't afford to buy microphones for every person who uses one. With a virus that is spreading around so fast, it would be easy for a person to spray moisture onto a microphone, pass it on to another person and if that person inhales without moving the mic away, could they get the virus? While the possibility seems remote, until we know everything about Covid-19, until there is a vaccine for it, we can still take precautions to prevent or slow down the spread.

Here is what we do know. If you have gotten the annual flu shot, it may not protect you from Covid-19, but if you don't have the flu or cold, if you get Covid-19, your chances of living through seems to be 100% unless you have other illnesses at the time you get it. Getting the flu shot, even now, will most like you allow you to live through the illness. Cleaning hands often and not touching your face is always good advice. Sprays or hand sanitizers with 70% alcohol will kill the virus. Wearing a mask without goggles won't help because the virus can enter through your eyes.

Cleaning a microphone can be an issue. How do you clean them? One option is to do what hospitals do. Hospitals use high levels of UV light to disinfect germs, bacteria, and viruses. The UV light is used to kill everything contagious, including superbugs—specifically, ultraviolet light called UV-C. There are several products available to use. Ultraviolet can be harmful to humans if you are exposed to it too long.

The suggestion here is to make a wooden box large enough for all of the microphones and cables used during a worship service. Line the inside of the box with tin foil, mirrors or reflective metal. Install a UV-C light inside the box. Generally, a 25 to 35watt lamp should do. You should also have a timer for the light. At the end of the service, have the performers and pastor place all of their microphones and cables in the box. Add the wireless microphones after removing the batteries as well. If you have to handle them, wear gloves. If the pile is more than 3 cables deep, have more boxes, make a larger box, or clean in batches. Put the cables on the bottom and microphones on top. You can also put in any hearing-impaired headsets and earbuds in the box too. Anything that people share should be cleaned this way.

According to what hospitals do, they sterilize this way for 30 minutes. The cost of making a clean box with the right type of UV lamp (UV-C) and a timer should be less than \$150.00. That is a small price to pay to keep people safe. Even if Covid-19 doesn't come to your church, this is still a good practice to prevent colds, flues, and bacteria from giving other church members an unwanted present.