

Volume Levels and Hearing Safety at Covenant Life Church

Introduction

Thanks for your questions and comments about Covenant Life Church's choices on sound volume levels during our church services. We frequently receive messages from individuals who have similar questions and thoughts. We do hope this document can explain our decisions and help answer your questions.

We want you to be assured that we make the safety of our church, both present and future, one of the highest priorities in our decisions. We take any questions about the safety of our volume levels extremely seriously and are continuously evaluating what will serve our congregation most effectively in the long run.

Standards of Safety

Because the pastors and staff of Covenant Life are not scientific experts, we are thankful that the US government has done much research in the area of hearing safety. The government's Occupational Safety and Health Administration (OSHA) has researched and published its recommended sound levels for employees.

You can find their chart of safe sound levels at this web address:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9735&p_text_version=FALSE

The pertinent table is a little bit down the web page and is labeled "TABLE G-16 – PERMISSIBLE NOISE EXPOSURES." To summarize what it says, the following sound levels are permissible, given the lengths of time indicated:

15 minutes per day = 115 dBA¹
30 minutes per day = 110 dBA
1 hour per day = 105 dBA
1.5 hours per day = 102 dBA
2 hours per day = 100 dBA
3 hours per day = 97 dBA

The table goes further, but we will stop there since it is very rare that the church will ever have more than one hour of music in a particular service, let alone more than three hours.

¹ dBA is short for decibel measured in the "A" rating scale. It is simply a label to indicate that the number is a measurement of sound volume.

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Applying These Standards To Covenant Life

In order to adhere to these standards at Covenant Life, we use a sound pressure level meter to measure the volume levels. That meter resides at the main sound board and is consistently monitored to make sure that we are not exceeding our desired levels.

For most services, we target a sound level of 90dB to 95dB. Only occasionally will we go beyond that level, though sometimes the levels may reach as high as 100dB.

At this point, we have to note a couple technical details in order to fully explain our measurement system.

First, our meter measures in dBC, which is slightly different than dBA. It responds more like the human ear, and as a result will score higher than a meter measuring in dBA. For instance, 90 dBC will register around 86 dBA. Because dBC always measures higher than dBA, if we are able to meet the OSHA safety levels using our dBC meter, we actually are below the safety levels they indicate.

Second, the volume level in the auditorium is not perfectly even throughout the room. The area near the stage is louder than where we measure at the sound booth, and the top of the bleachers is softer than where we measure at the sound booth. Nevertheless, the difference is on the order of 4 dB more or less.

Examples for Consideration

Let's take a few examples in order to work this out in real life.

A Normal Congregation Member | A congregation member will normally experience about 35 minutes of music on Sunday morning. Let's round up to one hour to be safe. That person can listen to music at 105 dB without concern for hearing damage. The normal level of 95 dB is well below that threshold.

A Greeter Attending Both Services | A Greeter, or any other person who attends both services in the auditorium, will experience about 70 minutes of music on that Sunday morning. Let's round up to 1.5 hours to be safe. That person can listen to music at 102 dB without concern for hearing damage. Again, the 95 dB is well below that threshold.

A Single or Youth Attending "One" or "10:31" | The occasional times we go past 95dB typically happen in the meetings aimed at the younger generation of the church. A person attending a "One" or "10:31" Meeting will experience about 45 minutes of music. Let's round that up to one hour again. They can listen at

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105 dB without any hearing damage. And once again, even the highest levels of 100dB are well below the threshold of danger.

Safety, Comfort, and Preference

Finally, we must acknowledge that even within the range of safe sound volume, different people will have different preferences. Scientific findings will not necessarily make it easier for people to enjoy sound levels that are higher than they desire.

The sound crew and the technical director are responsible to ensure that the sound levels do not exceed safety standards. However, within those guidelines, the pastors responsible for meetings are the ones who choose the sound levels for their meeting. If you have concerns about a specific meeting you have attended or will attend, please contact the pastor who is responsible for that meeting.

Of late, we have also become aware that some people have hearing problems that may cause a level of physical discomfort due to certain sounds or the overall volume. If this is your experience, please know that we are very sorry for the discomfort. The discomfort does not necessarily mean that your hearing is being damaged. You may want to have your hearing checked by a professional audiologist to learn if there is anything you can do to reduce the discomfort.

In Conclusion

Thanks again for your comments and questions about our sound levels. We appreciate your courage to bring your thoughts to our attention, and we hope that your concerns have been addressed here. If you have any more questions at all, please feel free to contact the church technical director or your pastor.