

Evaluating Your Sound System

by Ron Huisinga

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Your church sound system plays an important supporting role in your worship service. Is it enhancing the worship experience or detracting from it? Three sound tests can help you evaluate your sound system.

Almost every church needs some sort of sound system. From enhancing music and worship, to amplifying the spoken word, to cassette recording, the simple fact is that most churches can't get along without one. When a churches' sound system is appropriate and functioning properly, you never think about it. However, an ineffective or poorly adjusted system can seriously detract from the worship experience. That's unfortunate, because today's system design technology and equipment can almost guarantee a good system for any size church.

High Expectations

Many people, especially young adults, have grown up with high quality stereo systems in their homes, cars, or trucks. They know what good sound is. They also want to hear that same quality in their church sound system. Most of us can accept the sound of speech on a poor system. It is not natural, but as long as you can understand the words, it's easy to get by without improvements. However, if a soloist sings or recorded music is played, it becomes much harder to accept that poor sound system. The reproduced sound is not natural, so we become frustrated and distracted. All too often the system has too much distortion, and that becomes irritating. It is hard to maintain a spirit of worship.

So let's get practical. How can you evaluate your sound system? The following three tests should help you determine the quality of your system.

Natural Sound Test

First, the amplified sound should sound natural. That is, the sound from the speaker system should sound the same as the talker or singer, but only louder. Try this experiment on your sound system. Turn the system off and have a friend read aloud for a while. You should be standing about eight feet away. Listen carefully and imprint the live, unamplified sound in your memory.

Now move to the rear of the room and turn up the sound system. With the same person reading, does your sound system reproduce the same voice tone and quality? Does the sound appear to come from the reader? Is it clear? Can you understand what the reader is saying without straining? If your answer is no to any of the previous questions, then your system may be in need of some improvement or adjustment.

Intelligibility Test

Second, use the following test for intelligibility. Place as many listeners as you can find in different locations in your church nave or sanctuary. Have some sit in areas where people complain about the sound. Put others in the front, the sides, or the rear.

Now have a person with a good clear voice speak on the sound system. The volume should be adjusted to a comfortable level. Using the word list in Figure 1, do this simple test. The reader

should say, "Write the word (_____) now." One by one, insert the words from the list into the blank. Say the word only once. The listeners should write down the word that they hear. After the test is complete, have the listeners score their word list. Spelling doesn't count, nor do homonyms.

Figure 1:

- | | | |
|------------|-------------|----------------|
| 1. cane | 18. end | 35. such |
| 2. there | 19. then | 36. use (yews) |
| 3. dish | 20. bask | 37. crash |
| 4. hid | 21. fraud | 38. ride |
| 5. heap | 22. smile | 39. pile |
| 6. pants | 23. death | 40. rat |
| 7. hunt | 24. are | 41. rag |
| 8. no | 25. bad | 42. is |
| 9. bar | 26. pest | 43. wheat |
| 10. pan | 27. slip | 44. rise |
| 11. fuss | 28. rub | 45. hive |
| 12. creed | 29. feast | 46. grove |
| 13. box | 30. dead | 47. tow |
| 14. strife | 31. cleanse | 48. plush |
| 15. dike | 32. folk | 49. clove |
| 16. not | 33. nook | 50. fern |
| 17. ford | 34. mange | |

If several listeners have 15 percent or more wrong, you should be concerned about the intelligibility of your sound system. Regular attendees can probably fill in the missing words based on the context of the sentence. However, new people, unfamiliar with church terminology, may find it impossible to understand. They may get frustrated and never come back.

Music Test

Next, listen to some music from a high quality cassette tape or, better yet, a compact disc. Is it natural? Are the high frequencies from the strings and cymbals clear? Can you hear the bass? Listen from different places. Does the quality change dramatically as you move around?

After conducting these three tests, study the results. If the sound is natural and intelligible throughout your church, that's great. If you do have some concerns, consider talking to other churches in your denomination or area. Chances are good that someone has solved the same problem. Also, an outside consultant or contractor may be able to further evaluate your system and offer suggestions. The Internet Sound Institute can provide more sound system information and assistance in enhancing or improving your system.