

SCHOOL SOUND

SOUND ADVICE FOR TODAY'S SOUND OPERATOR

FALL 2010

Call us...



Sound Planning

Wheaton, IL

(630) 653-6700

www.soundplanning.com

Pro sound & video for schools and performing art centers

- Design and consulting for renovation and new construction projects
- Alterations, upgrades, service, and repairs to any system
- Multi-purpose room, auditorium, gymnasium, and school sound systems

In This Issue

Tips to develop your own
check out procedure...

Page 1

Proper positioning of a
lavalier microphone...

Page 2

Training resources for
sound operators...

Page 3

For More Information



Sound Planning

Wheaton, IL
(630) 653-6700
www.soundplanning.com

Phone:

(630) 653-6700

Fax:

(630) 653-8672

Website:

www.soundplanning.com

Educational Website:

www.soundinstitute.com

E-mail:

sales2010@soundplanning.com

Hints for the Occasional Sound Operator

This article is dedicated to anyone who was “volunteered” to be a sound operator. Maybe you happened to walk by the mixer and somebody thought you looked interested. Perhaps it just came with the job. Anyway, you are now responsible for operating a sound system. “It’s a low-pressure job,” they said. “Just turn the power on and you’ll be set.” But after the first few weeks, you discovered there was much more to the job than “turn it on.” You found out the sound has to be set at the right volume at all times for all the listeners. Of course, there can’t be any hint of feedback.

Only time, training, and experience will bring about a skilled sound operator. To help get you off on the right foot, let’s discuss a few basic operating procedures.

Check It Out

The first procedure, and one of the most important, is to make sure the system is working. That may seem rather obvious, but the time you don’t check out the system before the program starts is

going to be the time it fails.

Checking the system means just that. You need to check every microphone, cable, and piece of equipment you will need. It’s wise to gently flex the microphone cables to find intermittent connections (Fig.1). Also, do you have a fresh battery in each wireless? Check the battery, too. Just because it is in a new package doesn’t mean it will work. Yes, it will take some time to check everything so arrive early enough to get the job done. That is one of those thankless but necessary responsibilities that comes with being a responsible sound operator. With time, you will develop your own



Figure 1 Flex the microphone cables to find intermittent connections.

check-out procedures. Try starting with the basic checklist list below.

Feedback Solutions

Now for some operating hints. Let's first talk about feedback. Feedback is a sound term for the terrible squeal, howl, or loud tone, that occurs when the microphone volume control is turned up too loud. We won't go into detail about what causes feedback, but there are some basic operating methods which will minimize feedback problems.

First, turn on only the microphones that are actually being used. Used means someone is talking or singing into a microphone. In sound systems, less is better. This means you may need to actually operate the mixer controls. Or, you may want to use microphones with switches. However, switches are often forgotten on or off. A good alternative is to use an automatic mixer. An automatic mixer will turn on the microphone when a talker speaks into it. No more forgotten switches!

A fast solution to feedback is to move the talker or singer closer to the microphone. Because the talker is closer, the microphone will receive a stronger signal. Then, the mixer volume control can be turned down and the feedback will go away. You don't want the talker or singer to move further away from the microphone if they hear feedback. That will only make the problem worse, since you already can't get enough volume without feedback.

How Many Microphones?

Another operating hint for good sound is to have only one microphone on for each talker. For example, the lecturer is wearing a wireless lavalier microphone. He walks from the chalk board to the lectern, which also has a microphone. If both the lectern and the lavalier microphones are on, the

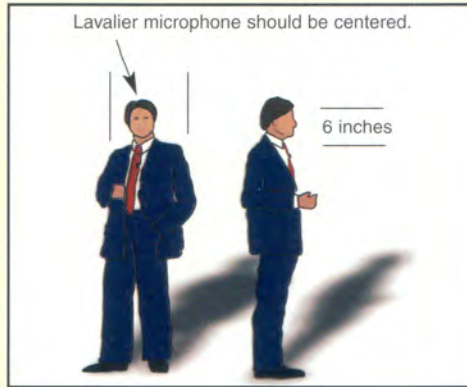


Figure 2 The Lavalier microphone needs to be positioned correctly.

resultant sound can be very unnatural. Only one microphone should be used. In this situation the lavalier should be the primary microphone. It will provide the least variance in volume as the talker moves around. It should be worn in the center of the body, and about six inches from the mouth (Fig. 2). That will provide the most consistent level with the most volume before feedback occurs. The microphone will produce the best sound if it is placed outside any clothing. It is also good to put a small loop in the cable to reduce cable-movement noise into the lavalier microphone (Fig. 3).

Volume Control

One of the great challenges any sound operator faces is setting the right volume for every listener. There is no easy formula. Every auditorium or room will be a little different because of size, acoustics, and the environmental noise. Now add listener age, hearing loss, and personal



Figure 3 Loop cable back through tie bar to reduce cable noise.

preference into the formula. About all you can do is experiment and see what level is right for your situation. You must have the level loud enough to hear clearly above the ambient noise in the room. But too loud will be distracting to some people. A sound operator will know the volume is right when the sound system is not noticed.

Another side note about hearing loss. Usually, more volume is not the answer to overcoming hearing difficulties in a room. Because of the acoustics and the ambient noise, people with hearing loss are much better served with a hearing assistance system. This will provide the clarity and volume needed to enjoy the lecture or concert.

These operational hints and guidelines will help improve the sound of your system. If an automatic mixer or a hearing assistance system is of interest, don't hesitate to call us for more information. We are here to help you. Please call today!

■ Ron Huisinga

Basic Checklist

1. Turn On System
 - a. Are all the power indicators lit?
2. Do A Preliminary System Check
 - a. Do you hear sound?
 - b. Any unwanted noises?
 - c. System distortion free?
 - d. Sound natural/normal?
3. What Microphones are Needed for the Event?
 - a. Types and quantity
 - b. Location
4. Check Out Wired Microphones
 - a. Test
 - b. Flex cables for intermittent problems
5. Check Out Wireless Microphones
 - a. Battery good?
 - b. Microphone cable/connector noise free?
6. Set Preliminary Microphone Volume
7. Need Monitor System?
 - a. Position monitor(s)
 - b. Plug in and check
 - c. Set preliminary level
8. Need to Record Event?
 - a. Confirm media is ready
 - b. Check signal to the record deck
 - c. Check proper record levels

TECH TALK

Training Resources

The question usually occurs after a disastrous school event - Where can our staff get sound operation training?

They mean well, but the sound quality isn't very consistent. There are others interested in contributing their time and effort, but they don't feel qualified to jump to the controls. What help is available?

Before we look at the types of help available, let's look at some important considerations:

1. Are you certain it's the operation that needs attention, or are the sound system operators doing the best they can with what they have? Before you look at training you should consider contacting us for a system evaluation. After the evaluation, if the system works well, we can recommend the best training approach.
2. Is your sound system used in a "set it and leave it" fashion? If so, training should focus on set-up, tear-down, and basic troubleshooting techniques.
3. Does your sound system require hands-on operation because of multiple microphones, background music tracks, instruments, etc.?

In this case, the operator needs to know what microphones to use and how to position them. They also must understand mixing techniques and even how to use processors such as reverbs or compressor/limiters.

Training Options:

This School Sound Newsletter: What you are reading is a great place to start. Have your staff and volunteers read back issues. It's not intended to serve as intensive training, but it's a

great resource. This newsletter has practical, hands-on information to help your operators learn their craft. Please consider saving these newsletters in a three ring binder. We have left room for the holes so no information is lost.

Audio Reference Books: Audio books are a good resource of detailed information. Many books are available, and there are books for every skill level. Please call us for a recommendation.

Seminars: A local contractor may put on a one day event held at a local facility. It includes detailed instruction and eye-opening demonstrations. This is a great place to learn about solving real world problems concerning sound system set-up and operation.

Personal Training: This is the most effective of the options. It involves training sessions held at your facility, using your equipment. You can learn about set-up and tear-down procedures, troubleshooting, microphone techniques, and much more! This is probably the most expensive option, but by far the best value for your staff.

Videos: There are several educational videos available on sound. Some

of the better DVDs are geared towards recording, but they do provide valuable accurate information. Topics include microphone types and selection, getting a good mix, and how to use processing equipment.

Internet: The World Wide Web is a fast growing resource for ideas, operating hints and new products to help solve problems. Many manufacturers have good web sites with training on their equipment. There are also sites providing education and sound system principles, operating tips, and advice. One good source is the Internet Sound Institute at www.soundinstitute.com.

There are also forums for you to participate or observe. Try www.prosoundweb.com. At this site you can read and learn from other sound system users, post your own questions and wait for a response, or post answers to others questions from your own experiences. However, a word of caution: The responses may not be totally accurate but they are interesting to read.

The Bottom Line: There are many resources to help you get up to speed if you are a beginner. The more advanced sound technician can improve their knowledge through classes and reference books. Like any craft, there is always more to learn.

■ Ron Huisinga



Figure 4

SCHOOL SOUND

**SOUND ADVICE
FOR TODAY'S
SOUND OPERATOR**

FALL 2010

Attention Secretary,
PLEASE ROUTE TO:

- Sound Operator
- Principal
- Athletic Director
- Drama Director
- Other _____
- Save for the
Sound Operator Manual

**A newsletter for
anyone who
wants to learn
about sound!**

PO Box 53
Willmar, MN 56201-0053

PRSR STD
U.S. POSTAGE
PAID
HUISINGA & OLSEN

RETURN SERVICE REQUESTED

Impact Your School with a Great Sound and Video System!

Since 1976, **SOUND PLANNING** has served hundreds of schools in the Chicago area with high-quality sound systems, video systems, professional service, and guaranteed results. We have the people, the equipment, the technology, and the experience to meet your needs.

Great sound can breathe life into any event. It can help you make an impact on your students and it can bring excitement and clarity to any presentation!

- School sound systems
- Wireless microphones
- Wireless listening systems for the hearing impaired
- **SANYO** video projection system

 **Sound Planning**
923 West Liberty Drive
Wheaton, IL
(630) 653-6700

**Pro sound & video for
schools and performing
art centers**



Call Sound Planning today at (630) 653-6700 for a free sound system evaluation!
Sound Planning / Design - Installation - Sales - Service / (630) 653-6700