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Microphones

This section will tell you how to mic common things such as an MC, a small band or an ensemble. My talk again will be brief, because there is a whole world of material out there foryou to peruse yourself Ask questions and be experimental. No one says you have to do it this way. Just use something that sounds good.

Speech

Podium

You will most likely mic speech the most. Traditionally, assemblies and other low key shows use a podium set-up, and occasionally a second microphone for other introductions. When you are using the podium be sure that the microphone is placed in one position and left there. As I've said , before, a 45 degree angle works well. Be sure that your talent doesn't speak directly into the microphone. Popping b and p sounds are annoying to listen to, and could possibly damage the microphone. Use a pop filter. If you can buy at least one, and use it on the podium because it is used so often. Podium speakers can be sombre or serious, excited or rowdy, depending on the venue. Some may feel they have to bang on the podium to get attention, or to look like a star politician or leader. The banging noise will be induced into the microphone and sound annoyingly loud. It can also damage the microphone, your main loudspeakers or both. Leave the mic switches on and keep the mics down at the mixer. Be sure that no one turns their mics off.

A more professional alternative to using microphones on stands for the podium is to use a gooseneck microphone. I'll write more about it if I'Am ever gets one...

Types of Microphones and Examples

For most speech, a good dynamic microphone will work. The workhorse of PA microphones is the Shure SM 58. Reconditioned ones are relatively inexpensive to purchase. New SM 58s are good as well, and often come with warranties if the microphone ceases operation. If you have to rent mics, the SM 58 is also inexpensive and easy to use. They work well on speech, and are standard issue for small scale bands.

If you have the luxury of using a condenser microphone, it should be used for vocals, especially if the music is classical or jazz. These mics can't be thrown around as much as dynamic mics, but they sound great. Most condensers come with shock mounts and good stands. Used ones are in the low three digit range, while new ones can range anywhere from $600 to over $3000. It is a good investment to buy at least one for your crew. When you are miking speech, be sure that the mic is easy to use and relatively good looking, especially if it is going to be shot on camera.

Tips

- Microphone stands are often used for speakers, and very often for singers
- Be sure the stand doesn't wobble or make noise once the microphone is on it.
- Adjust the stand in rehearsal so the singer doesn't make popping or blowing sounds.
- Tape or label the stand so you remember where everything goes if you have to set it up again.
- Don't wrap the cable around the stand, especially if you know the speaker or singer is going to take the microphone off and walk around with it. The unwrapping could make unwanted noise, or make the stand tip.
- If a mic is going to be handheld, be sure your talent knows how to use the microphone and talk into it. Work with the talent and make sure they feel comfortable holding the mic. Be sure that you have enough cable for them to walk around.
- Put pop filters (l'Am has one already) on the microphones to avoid popping or blowing sounds. Be sure that the talent doesn't “drop the mic”.

Music

This should be a page by itself I'll briefly cover the basics, and leave the rest for you to research. You get points for inventiveness and creativity with music miking. Just remember that you're working with a budget and a limited supply of mics. Most of the time, you'll have to rent proper mics if you are going to mic a band for a performance.

Drums

A drum kit always contains a bass or kick drum, a snare, a high-hat, cymbals (ride and crash) and some tom-toms mounted on the kick drum, or on the floor. You will always have to mic the kick drum, especially if your mix is going to tape. For this, a large diaphragm dynamic mic works the best because it can handle the high sound pressure level (SPL) inside the drum. If you rent mics, an AKG D-112 works. So does an Electrovoice RE-20. Place the mic inside the drum, close to the head that gets hit by the beater Experiment with the mic placement until you get a sound you're satisfied with. When miking the snare drum, keep the mic close to the head, but out of the way of the drummer. Use a Sure SM 57 or an equivalent dynamic microphone. Research and experiment with the mic placement. Unless you have the budget to mic every single drum, you will most likely mic the rest of the kit with two overhead microphones. (you'll need boom stands for this). One mic covers the left side of the kit, while the other covers the right. AKG 414s work here, but you may use an equivalent mic in your set-up. Again, experiment and do some research. If you have to mic other percussion instruments such as tambourines, congas or instruments from other cultures, pick a basic mic to start with and experiment from there. If you are running out of time, use the mic that works best for everything and worry about the miking later.

Research and experiment until you get something you're happy with.

Guitars

Miking guitars can be challenging, especially if the guitar is acoustic. For electric guitars, a tough dynamic mic like the SM 58 placed in front of the amplifier works pretty well, especially if the music is blues based like rock or R&B. This eliminates the need for you to do any processing at your end with the guitar's signal. Work with the guitarist to achieve a good sound. Experiment with the mic to source distance, the microphone and the amplifier Be sure the guitarist can hear him or herself once you've miked them up.

Another way of miking an electric guitar is not using a microphone at all, but a direct insertion box. The DI box lets you take a balanced signal from the amp or guitar, while the guitarist has the freedom to amplify the same signal to their heart's content. DI boxes are great for guitars, electric basses and keyboards. You can rent them for relatively cheaply. If the guitar you're miking is acoustic, use a mic stand and mic the guitar near the bridge or above the fretboard. Don't mic the guitar hole, you'll only get a boxy sound. Experiment until you and the guitarist are happy. Sensitive dynamic mics or a good condenser make acoustic guitars sound wonderful. Ask for advice on guitar miking at a music store, and you'll surely spark a debate among the staff. Keep your ears open and take note of what everyone says. The same principles for miking guitars also applies to miking bass guitars and their associated amplifiers. For electronic keyboards, you can use DI boxes, or mic the amps. It's up to you.

Pianos

A piano can be easy or hard to mic, depending on what it is playing. For rock, blues or funk, the best way to mic an upright piano is by placing two microphones directly in front of the soundboards at the back of the piano. This is where the piano is the loudest, which will give you a lot of flexibility as an audio director. If you are miking a piano for jazz or classical music, a more subtle sound is required. For this, open the top of the piano and place two microphones inside, facing the strings. Keeping the mics slightly above the top will give you a lighter and more appealing sound. Experiment with the techniques discussed here and ask around at music stores.

Ensembles

For a choir or a band, miking up each instrument is impractical and would cost you thousands of dollars to rent the equipment. A simpler approach is possible by using two directional microphones in a stereo pickup pattern. The mics can either be placed one over top the other at an angle of 90 degrees, or placed side by side, facing away from each other at an angle of about 110 degrees. Experiment until you are satisfied. It is rare that you will have to mic an ensemble, especially if it is for an assembly. The Market Square has great acoustics, so it is rarely necessary to mic a band or choir for PA. If you're putting a video together, these mic techniques will give you a nice stereo pickup. I won't bother going into miking individual wind instruments here. It is too detailed and this page would probably be twice as long.

Consult the web, music stores or a library for more information.

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