

# Microphone Technique



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**Bring Out Your Voice!**

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## Introduction

Microphone (or mike) technique is the key to a singer's live performance when the mike is required for an amplified sound.

## About Microphones

Microphone design and manufacture is a huge industry. There are *many* different types of microphone; each type is designed with different uses (and price brackets) in mind. There are many different microphones: those for male voice, female voice, solos, groups, drums, brass, strings, etc. Not all microphones perform the same job. They are also used in different settings, such as a) live performance, where a rugged and sturdy microphone is required, and b) studio recording, where a more delicate but accurate microphone is needed.

A good microphone must:

- Have excellent feedback rejection i.e. not prone to causing feedback in PA systems
- Only pick up the instrument or voice that it is supposed to and disregard everything else
- Most importantly, SOUND GOOD. The best judge is YOU. You decide which one is right for your voice by trying them out. Sing with them and see which one you like the sound of the most  
*TIP: Once you've determined the mike you like, purchase one or two, with leads, for yourself*

At the LHSS we use the *Shure SM58* Microphone. This is *the* industry standard in vocal microphones. It is also very robust mike which can withstand most knocks and bumps (this is not the case for many mikes). It has a big bass boost up close to your mouth, a kick up (or better clarity) in the high mid frequencies and excellent feedback rejection. NOTE: It is important to purchase the mike that works best for your voice. There is a huge range on the market and the Shure is just one of the better brands. We use the *Shure SM58* simply because it is a good, reliable all-rounder.

## Some Microphone Types (not an exhaustive list)

### Mike with cord:

- Live on stage: cheaper, less popular since high quality radio mikes are now available,
- Studio: very sensitive, very expensive, top quality.
- Good quality mikes start around \$350

### Condenser mike:

- Have a pick-up of approx. 1 meter. Useful for miking groups of people.
- Most studio mikes for recording are condensers because of their supreme quality and sensitivity.
- Require 'phantom power' at the desk or batteries in the mike (phantom power is preferable and normal) to operate.
- High quality mikes start around \$2,500

### Headset (or Hair) mikes (no boom arm):

- Very small microphone that is fed through the hair (incorporated into the hairstyle) and attached to the hairline to create the illusion that there are no microphones.
- Used in theatre (particularly professional musical and live theatre productions), when miking is necessary but a large microphone will detract from the performance or not be practical.
- Good quality mikes start around \$500

### Radio mike (cordless):

- Live on stage: gives freedom of movement to the artist, now have high quality sound
- Studio: not used, corded gives better quality recording and no issues with flat batteries
- Have batteries and an on/off switch.
- Good quality mikes start around \$1,000

### Lapel (or clip) mike:

- Small mikes, with a clip attachment that attaches to the lapel, hence the name.
- Usually used for public speaking when the speaker wants freedom of movement.
- Also used on television, particularly on variety shows or talk shows, so the host and guests don't have to bother with a hand held mike.
- Good quality mikes start around \$750

### 'Headset' mikes (with boom arm):

- Microphones that wrap around the back of the head with an arm on the front, which holds the small mike at a constant distance from the mouth.
- Pioneered by Madonna and now very popular with pop artists; allow freedom of movement on stage and leave the hands free
- They are also used in professional and amateur stage shows
- Good quality mikes start around \$500

## Lapel or headset Microphones

If a performer is using a lapel, or a headset, microphone, they will have a small box (known as a 'transmitter') clipped to them during performances. This transmitter sends out the signal from the mike to a receiver (another box usually found elsewhere in the room near the 'desk' and controlled by the mixer). The sound engineer (or 'mixer') is then able to adjust and mix the sound as he would with a corded mike. At the LHSS, during our major concerts, we use handheld, cordless (radio) microphones to give students the radio mike experience and give them maximum freedom of movement.

## Microphone Placement

Good mike placement (position from the mouth) is responsible for most of the quality and volume of sound through a mike, and ultimately through the entire PA system. Good placement makes the mixer's (and PA's) job MUCH easier. Different mikes require different placement.

For the Shure SM58 mike, hold the microphone like an ice cream cone close to the lips.

Experience and experimentation (by listening through the foldback speaker) will determine where to place the mike. Watch professional vocalists sing live and observe how they use the microphone. They push the mike away on high, loud notes. When they are in their weaker or softer ranges, they pull the microphone right next to their bottom lips. Basically, push the mike away when you want to fade or decrescendo, and pull the mike closer when you want more presence, or a breathy or soft voice is required. **Listen closely to yourself through foldback: it's the key to getting this right.**

## Microphone Etiquette

- Avoid cupping your hands over the top of the microphone or underneath the wire mesh basket of the mike. This can cause severe squeal (or feedback).
- Keep the microphone pointed away from the foldback speakers as this can cause feedback – sometimes sudden and violent. During breaks, never wave it around or lower your arm while holding it. Hold it like an ice cream cone at all times or put it on the mike stand.
- Avoid tapping the top of a mike at any time. Inexperienced singers often do this to see if a microphone is working. However, it can damage a microphone or, more likely, the loudspeakers. It also annoys the sound engineer as he/she may be listening through the headphones. The most professional way to check a mike is working (or 'live') is to speak through it.

## Foldback speakers (also known as stage monitors)

- Foldback speakers (or wedges) are provided for you as a singer to hear yourself. They differ from Front of House (FOH) speakers which are for the audience to hear the whole mix.
- In large productions, each singer will have their own foldback to hear whatever they want – usually they just want to hear their own voice. In smaller concerts, singers share foldback or there may only be one foldback for everyone (the lead singer's preference should come first in this case).
- When working live, with a PA system, it is critical to listen to yourself through the foldback speaker (or wedge); it is there for you, not for the mixer or the audience.
- When we sing acoustically, it is natural to hear ourselves as we sound in our heads. But, when we use a microphone, we need to focus on the sound that is coming out of the foldback speakers. This is what the audience hears and we must ensure that it sounds great.
- By listening to the foldback, you can immediately know, as you sing, how your voice is performing; whether you need more vibrato, more vocal presence, whether you're in tune, if your timing is out (or the band is out), if your lyrics are crisp and clear and so on. If you cannot hear the foldback, ask the mixer to increase the volume for you. **If your voice does not sound good to you through the foldback, chances are it will not sound good to the audience.**

## PA System

The microphone is plugged into the P.A system by its lead. The mixer can then adjust many things with the PA; most importantly, volume, but also the amount of treble and bass the audience hears. He can also add a vast array of effects like echo, distortion and reverb. When using multiple microphones at one time, the sound engineer (also known as the 'mixer'), who runs the mixing desk (usually known simply as the 'desk'), will also balance the microphones and instruments so that the audience hears a nice blend (called 'the mix') of sound, instead of one or two mikes dominating.

## Summary

- Familiarise yourself with the types of microphones on the market.
- If buying, try different types out for yourself and, when you've found what you like, purchase one or two (with leads) and use them as your tools of the trade.
- Be aware of foldback, what it is and how to use it. USE IT WELL.