

## UNIT V

Production techniques - audio formats - outdoor - indoor recording techniques - ambience - types of program - News reading - live interviews - news reels - story telling - education and development program - radio - drama - radio commercials.

# Audio Production Techniques

## Pre-production

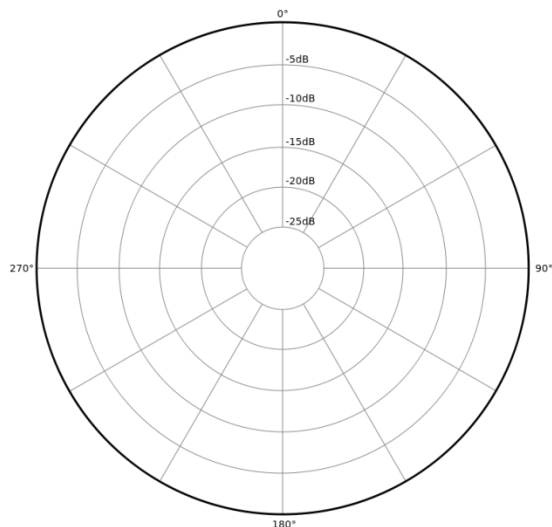
Here are a few tips for setting up your space before you start recording:

- **Try to find a SOFT LOCATION to record your audio.** Look for quiet locations with textured surfaces (try to steer away from large, open areas with smooth surfaces that audio waves can bounce off of) where you can be **comfortable spending hours on end.**
- **Try to find a location that is CONTROLLABLE.** Before setting up your recording space, go to the area where you are going to record and just listen. Are there any background noises? If so, is there anything you can do about the background noise? You can turn off air conditioner or (temporarily) unplug a refrigerator to remove background noise, but there is little you can do about noisy neighbors or the sound of traffic from a nearby motorway.
- **Prepare a script (to the extent your podcast requires):** Some podcasts are very structured and regimented while some are more casual and loose. Depending on how much your podcast depends on being scripted, take the time to develop a working script. If your podcast is about true crime or heavily utilizes statistics, include this information into your script to serve as a reference.
- **Make arrangements with potential podcast co-hosts or guests:** Very few podcasts feature only one voice; most podcasts make use of the act of conversation. Coordinate with co-hosts or guest to arrange a time to meet -- either in-person or virtually -- and discuss what you'll be covering in the podcast to give everyone involved time to prepare.
- **Here are some resources to help with the pre-production phase of podcasting:**

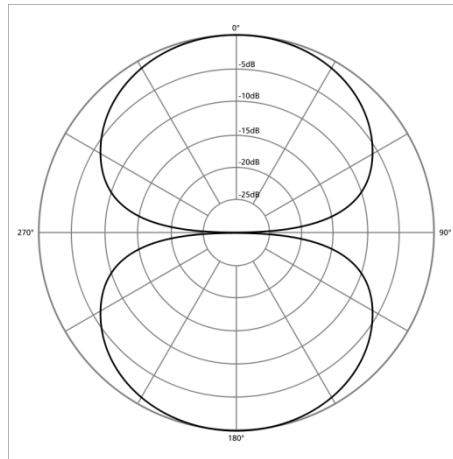
## Production

Best practices for recording audio:

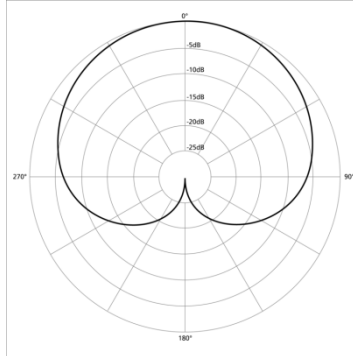
- **MICROPHONE PICKUP TYPE:** first, figure out what kind of pickup pattern your microphone has. The most common are:
  - Omnidirectional



- Bidirectional (polar):



- Cardioid (somewhat unidirectional)



- *The areas that are highlighted in each of the above diagrams corresponds to where the microphone pickup is pointing.*
- Based on the pickup pattern, you'll have an idea of where your microphone needs to point.
  - If you are recording solo, a cardioid pattern is perfect; situate the cardioid mic either just above or below (not directly in front of) your mouth, between 6-8 inches away from the mouth. This will get the cleanest recording of your voice while minimizing any unwanted noise coming from the sides or behind the microphone.
  - If two people are recording together, either have a bidirectional mic placed directly between (again, above or below the mouths) of the two people talking.
  - If 3 or more people are being recorded (and there aren't separate mics for each participant) place an omnidirectional mic in the middle of a space with everyone in a circle around it. The omnidirectional mic will pick up sound evenly from all directions. This isn't ideal if you have participants who vary in speaking volumes, but if you move the softer-speaking participants closer to the mic and louder talkers further from the mic, this can be somewhat mitigated.
- **SET MIC RECORDING LEVELS:** the optimal recording level (the decibel level where you want most of your audio to reside) is -12db. This level ensures that your recording will be loud enough to hear clearly without too much risk of peaking (having the audio near 0db, at which point the audio will begin to distort. Every recording software or standalone recorder has different methods of adjusting the mic level.
- **RECORD ROOM TONE:** After getting everyone who will be present for the recording situated in the room and the microphone recording level is set, record about 20-30 seconds of absolute silence. This bit of silent recording at the beginning of your audio track comes in handy when editing because it allows you to reduce background noise throughout the entire track easily AND it gives you some ambient background noise to use when trying to cover up audio edits. We tend to forget that there is no actual *complete silence* in life, but if you make an audio cut with nothing but blank space on the track, it will sound out of place and jarring. Making sure to record room tone at the beginning of each recording session is a good habit to get into; not having room tone in the editing phase is difficult to work around.
- **GET CONVERSATIONAL:** both as a way to help set your recording levels and as a way to make yourself and any co-hosts/interview guests more comfortable, try starting out with some light chatting. Talk about the weather, about music, about anything inconsequential. Humans are social animals; we conduct some of our deepest social bonds through engaging in conversation.
- **HAVE YOUR SCRIPT HANDY, BUT BE WILLING TO GO "OFF-SCRIPT":** while putting together a script in the pre-production phase is incredibly helpful in the production phase, remember that people would much rather hear you speaking naturally than reading lines word-for-word. Also, if you have a list of questions that you attempt to get through at a rapid-fire rate, there could be some wonderful tangents or anecdotes that get lost completely because of a strict adherence to the script. Be willing to think on your feet and stay in the moment of your conversation; if there are any lulls or dead ends, you can always refer back to the script.

- **STAY NATURAL:** there are plenty of guides on public speaking that insist upon speaking loudly and slowly with purposeful pronunciation, etc. Podcasts are much more personal and intimate than a crowded public address; one reason people listen to podcasts is because they feel like they are hearing a more casual conversation. Be yourself and speak as you normally would if you were having a talk with a friend.
- **MAKE SURE TO SAVE YOUR FILE:** whether you are using audio recording software or a standalone recorder, make sure that when the recording session is over that you are saving the file properly. For most audio recording software, this simply means saving the project (or session) from the File menu. For most standalone recorders, you have to hit the STOP button to write the files to the device/SD card.

### Remote Recording

There are many different scenarios that will require you to record podcasts with multiple participants in multiple locations. There are two main ways to handle this sort of recording session, depending on how comfortable you and your co-hosts/guest are in technical recording practice.

- **COMPUTER TO COMPUTER:** this is when all participants are connected and communicating via an online meeting platform and the audio is recorded from that meeting within the platform or by one podcaster using recording software on their computer to record the audio. A few options will be listed below, but keep in mind that there are several platforms that either record a separate track for each participant or mixes all the vocals together on a single track. When choosing which platform to use, keep this in mind. Having all vocals already mixed is easier, but if edits need to be made or if one participant had a short-lived microphone issue, that will be difficult to cut around in post.
  - [Zoom](#): a familiar application to connect and hold audio and video conferences. Easy to use. Can enable automatic recording. Recording already mixed in one audio file upon download. Not the greatest audio quality.
  - [Skype](#): used the world over to conduct meetings and interviews. Audio or audio+video option. Intuitive, easy to use. Recording already mixed in one audio file upon download. Not the greatest audio quality.
  - [Zencastr](#): web-based audio recording application with multiple-track feature; each participant is recorded separately to be mixed in post-production. High quality audio, though it takes more steps to produce.
  - [Cleanfeed](#): web-based audio recording application with multiple-track feature; each participant is recorded separately to be mixed in post-production. High quality audio, though it takes more steps to produce.
- **DOUBLE-ENDER:** this is when each participant in a podcast recording session records their own audio separately, then once the recording session is over, the audio files are sent to the audio editor to mix together. This method would mean that each participant would need to have their own microphones and know enough about recording audio best practices to get good vocal recordings. Considering that excellent audio can be captured using any smartphone, the Double-Enders method is preferable when possible. This method takes more effort and technical skill, but the results are generally of much higher quality.

### AUDIO FILE TYPES /FORMATS

## Lossy formats.

Lossy audio formats lose data in the transmission. They don't decompress back to their original file size, so they end up smaller and some sound waves are lost. Artists and engineers who send audio files back and forth prefer not to use lossy formats, because the files degrade every time they're exported.

### MP3

MP3 (MPEG-1 Audio Layer III) is the most popular of the lossy formats. MP3 files work on most devices and the files can be as small as one-tenth the size of lossless files. MP3 is fine for the consumer, since most of the sound it drops is inaudible, but that's not the case when it comes to bit depth. "MP3 files can only be up to 16-bit, which is not what you want to be working in," says producer, mixer and engineer Gus Berry. "You want to be working in at least 24-bit or higher when recording and mixing."

## **AAC**

Advanced Audio Coding or AAC files (also known as MPEG-4 AAC), take up very little space and are good for streaming, especially over mobile devices. Requiring less than 1 MB per minute of music and sounding better than MP3 at the same bitrate, the AAC format is used by iTunes/Apple Music, YouTube and Android.

## **Ogg Vorbis**

Ogg Vorbis is the free, open-source audio codec that Spotify uses. It's great for streaming, but the compression results in some data loss. Experts consider it a more efficient format than MP3, with better sound at the same bitrate.

## **Lossless formats.**

These files decompress back to their original size, keeping sound quality intact. Audio professionals want all of the original sound waves, so they prefer lossless. These files can be several times larger than MP3s. Lossless bitrates depend on the volume and density of the music, rather than the quality of the audio.

## **FLAC**

Free Lossless Audio Codec offers lossless compression and it's free and open-source.

## **ALAC**

Apple's Lossless Audio Codec allows for lossless compression, but it works only on Apple devices.

## **Uncompressed formats.**

These files remain the same size from origin to destination.

## **WAV**

WAV (Waveform Audio File) retains all the original data, which makes it the ideal format for sound engineers. "WAV has greater dynamic range and greater bit depth," creative producer and sound mixer Lo Boutillette says of her preferred format. "It's the highest quality," Berry agrees. "It can be 24-bit, 32-bit, all the way up to 192kHz sample rate and even higher these days." If you're collaborating and sending files back and forth, WAV holds its time code. This can be especially useful for video projects in which exact synchronisation is important.

## **AIFF**

Originally created by Apple, AIFF (Audio Interchange File Format) files are like WAV files in that they retain all of the original sound and take up more space than MP3s. They can play on Macs and PCs, but they don't hold time codes, so they're not as useful for editing and mixing.

## **DSD**

Direct Stream Digital is an uncompressed, high-resolution audio format. These files

encode sound using pulse-density modulation. They are very large, with a sample rate as much as 64 times that of a regular audio CD, so they require top-of-the-line audio systems.

### **PCM**

Pulse-Code Modulation, used for CDs and DVDs, captures analogue waveforms and turns them into digital bits. Until DSD, this was thought to be the closest you could get to capturing complete analogue audio quality.

## **Ambience (sound recording)**

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- ❖ In filmmaking, ambience (also known as atmosphere, atmos, or background) consists of the sounds of a given location or space. It is the opposite of "silence". Ambience is similar to presence, but is distinguished by the existence of explicit background noise in ambience recordings, as opposed to the perceived "silence" of presence recordings.
- ❖ Every location has distinct and subtle sounds created by its environment. These sound sources can include wildlife, wind, music, rain, running water, thunder, rustling leaves, distant traffic, aircraft and machinery noise, the sound of distant human movement and speech, creaks from thermal contraction, air conditioning and plumbing noises, fan and motor noises, and harmonics of mains power.
- ❖ Reverberation will further distort these already faint sounds, often beyond recognition, by introducing complex patterns of peaks and nulls in their frequency spectrum, and blurring their temporal characteristics. Finally, sound absorption can cause high frequencies to be rolled off, dulling the sound further.

*Ambience* comes from a French word meaning “surrounding.” Ambience is the mood or atmosphere of a certain environment. Many factors contribute to ambience. For example, in a restaurant the choice of music, the color of the paint, the volume of conversation, and the smells of cooking food may lend to a pleasant or unpleasant ambience. But what about *ambiance*? Is it a misspelling of *ambience*?

### **TYPES OF PROGRAM**

- News reading
- Live interviews
- News reels
- Story telling
- Education and development program
- Radio - drama - radio commercials.

News reading

Reading the news off a teleprompter may sound easy, but it's actually more complicated than it seems. Anchors and reporters have to develop a reading style that seems natural, but isn't

too fast, too slow, too nuanced, too accented, too high-pitched, too quiet, or any other extreme. Reading news like a professional news anchor requires skill, practice, and training.

### Practice Makes Perfect



Photo by New York Film Academy.

The best way to start is to practice reading news stories that you've written for class. If your school has a student TV station, doing some on-air work there is also helpful, as you'll probably be able to get a recording of it afterward. You can also record yourself with various apps on your phone.

It's hard to be objective about your own reading, so it's a good idea to ask others their honest opinions. Does your reading sound natural? Is it hard to understand for any reason? Would your listeners want to hear you read more?

### **Things to Work On**

Speed is one important consideration when reading the news. If you read too slowly, viewers may get bored and impatient and consider changing the channel. If you read too fast, viewers may have a hard time understanding you. Typically, news anchors read between 150 and 175 words per minute, and some stations may time new reporters or anchors to get a baseline for that individual's usual reading speed.

## **Sounding Natural and Conversational**

- Another common problem students face when learning to read the news is learning to sound as if they're not reading — something that is much harder than it sounds!
- Most of us sound very different when we read something aloud than when we're having a conversation with friends. It's also very easy to sound robotic when you've been reading for a long time and your attention has started to wander, which can easily happen to an anchor, particularly during a slow news day or a repetitive morning show.

## **Adjusting Tone for Content**

- In general, when you read you should sound moderately upbeat, but not overly chipper. However, you'll need to adjust your tone when reading somber stories, like those involving deaths or serious injuries. Sometimes slowing down and speaking more quietly can help you convey the seriousness of a sad situation.
- This should extend to the whole story, including the reporter's "standard out" and anchor tags. Recently there was a news story about the death of a twelve-year-old boy in a house fire. The reporter sounded appropriately somber while reading the details of the story. However, when she read her "standard out" (usually something like "Reporting live, Jane Doe for XYZ News"), she suddenly sounded very upbeat and chipper. My guess is that she practiced her standard out this way, and it probably worked fine for most news topics. Unfortunately, in this case it was a sharp contrast to the rest of the story and seemed both jarring and awkward.

## News reels

Newsreels were short films shown in movie theaters, generally along with cartoons and feature films. Though some footage of newsworthy events survives from the 1890s, the first American newsreels were produced by the French Pathé firm in 1911. A competing newsreel was produced by Vitagraph.

Newsreels were initially seen as entertainment rather than news, and as a matter of policy, avoided controversial topics; later newsreel footage was censored. Several film companies produced newsreels in America, including Fox (Movietone News), Hearst/MGM (News of the Day, Metrotone News), Warner Pathé and Paramount (Paramount News).

## **EDUCATIONAL DEVELOPMENT PROGRAM**

In 1995 the late Anne Gilbert and her husband Barry supported the first Marovo Lagoon student John Hotton. Anne's passion to improve education levels in Marovo Lagoon were continued by her friends and family, who at Anne's request, donated all money that would have been spent on flowers for her funeral, to a memorial fund. Jill ran this program for the initial years. From this simple but passionate beginning the scale of the program has increased dramatically with the number of students, teachers and schools supported increasing to (in our view) staggering numbers.

**Aims:** The Educational Development Program is comprised of a number of activities that are targeted at improving education, both academic and social, at the community and institutional level.

**Youth Development Program:** This program aims to provide a holistic set of support activities for the high-school aged population of the Marovo Lagoon to strengthen their position in society and their ability to deal with the changing world around them. The program presents opportunities for personal development and provides examples of good role models for the youth to aspire to. The outcome will be Communities that have assisted their own youth to develop into educated, valuable and responsible members of society. These youths are the young leaders that will have the knowledge and confidence to make much needed meaningful change in their village and provincial regions.

**Institutional Support Program:** This program supports the needs of the Community High Schools of the Marovo Lagoon to better serve their students. The program carries out targeted teacher training courses that address knowledge, teaching techniques and class management. These courses not only improve the effectiveness of the individual teachers but also the school as a whole. The lack of School resources is also being addressed. Whilst Secondary Schools have been the major focus varied support is also given to Primary Schools and Kindergartens. Primary Schools suffer from a lack of trained teachers and our first graduate from the Solomon Islands National University has greatly strengthened a local schools teaching staff.

**The Educational Development Program:** is providing the opportunity for the communities of the Marovo to develop their youth into well-informed, educated and respectful members of society.

## Radio drama

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Radio drama (or audio drama, audio play, radio play, radio theatre, or audio theatre) is a dramatized, purely acoustic performance. With no visual component, radio drama depends on dialogue, music and sound effects to help the listener imagine the characters and story: "It is auditory in the physical dimension but equally powerful as a visual force in the psychological dimension." Radio drama includes plays specifically written for radio, docudrama, dramatized works of fiction, as well as plays originally written for the theatre, including musical theatre, and opera.

Radio drama achieved widespread popularity within a decade of its initial development in the 1920s. By the 1940s, it was a leading international popular entertainment. With the advent of television in the 1950s radio drama began losing its audience. However, it remains popular in much of the world.

Recordings of OTR (old-time radio) survive today in the audio archives of collectors, libraries and museums, as well as several online sites such as Internet Archive.



By the 21st century, radio drama had a minimal presence on terrestrial radio in the United States, with much American radio drama being restricted to rebroadcasts of programmes from previous decades. However, other nations still have thriving traditions of radio drama. In the United Kingdom, for example, the BBC produces and broadcasts hundreds of new radio plays each year on Radio 3, Radio 4, and Radio 4 Extra. Like the US, Australia ABC has abandoned broadcasting drama but in New Zealand RNZ continues to promote and broadcast a variety of drama over its airwaves.