

MAS 432: Audio Production Midterm Exam Review

Music Recording

Close miking: Just what it sounds like. The mic is positioned close to the sound source. This produces a dry sound, providing greater flexibility in adding space, or reverb, in the mixdown.

Distant miking: Placing the mics several feet away from the sound sources. Picks up a fuller range of an instrument or instruments, adds ambience to the recording, often used for jazz and acoustic instruments.

Coincident miking: distant stereo array miking, also called x-y miking, employs two microphones for recording stereo ambience. The mics are crossed like an X.

Spaced miking; distant stereo array miking, two widely spaced mics are employed to record an ensemble on a stage.

Accent miking: Mics placed strategically throughout an ensemble for soloists, like in a big band.

Six Principles of Miking

1. The closer a microphone to a sound source, the drier, more detailed, and bassier the sound. The farther a mic is from a sound source, the more diffused, open, less intimate, and ambient the sound.
2. The higher the frequency, the more directional the sound wave and therefore the mic pickup: the lower the frequency, the more omnidirectional the sound wave and the mic pickup
3. Close miking may employ a number of microphones, but more is not always better. Each additional mic adds a little more noise to the system.
4. For most moving-coil mics, the farther from the sound source they are placed, the more reduced the high frequency response.
5. Large-diaphragm mics are more suitable for recording low-frequency instruments and small-diaphragm mics are more suitable for recording high-frequency instruments.
6. Do not confuse perspective with loudness. In considering mic-to-source distance, it is more or less ambience that helps create perspective.

When miking and recording drums, the place to start is good tuning on the drums.

When miking acoustic instruments, remember that the entire instrument resonates. To get the full range of the instrument's sound, do not mic too closely. The same is true for woodwinds. The sound comes out of the entire instrument, so don't position the mic to

closely because it will pick up the noise of the keys. For brass instruments, the sound comes solely out of the bell, so position accordingly.

Miking amplifiers. Guitarists generally want to use their amps. Close miking is employed. Pointing a moving coil mic directly into the center of the speaker produces a lot of high end. Correct that by hanging a mic down the front of the amp or by using an omnidirectional mic. However, the latter option only works in the studio, not live.

Amplifiers very often make a lot of noise. If you have a problem with hum, use a mic with a humbuck circuit. Alternatively, you can use a direct box, or direct insert (DI). Bass (due to extreme sound pressure levels) is almost always recorded this way, and keyboards are, as well, unless you are miking a Leslie amplifier.

If possible, try to talk the guitar players out of using amps in the studio and convince them to use an amplifier and effects modeling device, like Line 6.

When recording the human voice, the most salient factor is dynamic range. In other words, you can sing really softly, and you can sing really loudly. If you have two very distinct levels, the thing to do is record them on two different tracks.

Encourage singers to work on mic technique. Use a pop filter, and instruct singers to direct their voices slightly below the mic to help eliminate breathing sounds, plosives, (popping) and sibilance, which results from excessive sss.

The point in postproduction at which the recorded tracks are sweetened, positioned, and combined into stereo sound is called the mixdown.