

Lesson 8

Getting Audio into your Digital Audio Workstation. Q&A

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NAME OF MENTOR(S): Take

1. There are four fundamental styles of microphone placement that relate to the distance a microphone is from the source. (page 132-141)

- a. Distant
 - b. Close
 - c. Accent
 - d. Ambient
-) miking

2. To protect against excessive microphone phasing, the microphones should be apart by 3 times the individual distance from the source to its microphone. This guideline is also known as the 3:1 Distance Rule. (page 137-138)

3. When recording electric guitar and bass amps, the brightest sound is achieved when the microphone is facing into the center of the speaker's cone. (page 153)

4. After mics are set up and ready to record, the engineer will label each input in the software. (page 28)

5. A list of instruments and vocals per track are recorded on a sheet called a track log. (page 29 fig. 1.23)

6. During the practice rundown, the entire song should be played so that the engineer notices the loudest sections in order to adjust overloads and add compression, if needed. (Research this question on your own) p. 30

7. Explain the importance of the practice rundown (the point discussed in Question 6).
It gives you an idea as to where the breaks, bridges and other important points may be. (Often different sections have different melodies so you want it to flow).

8. Explain accent miking: (page 140). The different voices or instruments blend to bring out or accent the quieter sound

9. Explain ambient miking: (page 141). A sensitive mic is placed at a distance from the sound source. You receive a broader, natural sound.

10. What is the importance of the 3:1 rule? (page 139) For every unit of distance between a mic and its source, a nearby mic or mics should be separated by at least 3 times that distance.

NOTES:

- There are 2 main ways to get audio into digital audio workstation:
 - Recording from a mic
 - Importing audio
- Some general suggestions about using mics that you might keep in mind
 - 1) Take off axis coloration and proximity effect into consideration
 - 2) Avoid overloading - use your mic preamp in a way that works for you and your signal
 - 3) Protect the mic against "breath noise" - wind and "p" (popping) and vibrations
 - 4) Be careful to prevent unwanted sound from going to unintended mics
 - 5) All mic lines should be "shielded"
 - 6) Watch for your "phase" issues
 - 7) Help to avoid "comb filtering" in a stereo situation by observing the 3 to 1 rule
 - 8) Avoid recording in a stereo configuration; use your X/Y, near co-incident pair, mid side or Blumlein Bar instead of a spaced pair
- Choice of mic techniques depends on a number of factors:
 - The collection of extraneous noise
 - Choice of signal type (mono, stereo, or multi-channel)
 - Type of sound source: acoustic instruments produce a very different sound from electric instruments, which are, again, different from the human voice
 - Situational circumstances: sometimes a mic should not be visible, or having a mic nearby is not appropriate
 - Processing: if the signal is destined to be heavily processed, or "mixed down," a different type of input may be required
 - The use of a windshield, as well as a pop shield, to reduce vocal plosives
 - In close miking, a mic is placed relatively close to an instrument or sound source
 - In ambient or distant miking, a mic, typically a sensitive one, is placed at some distances from the sound source
 - In accent miking, the different voices or instruments blend to bring out or accent the quieter ^{sound}
 - There are 2 features of sound that the human brain uses to place objects in the stereo sound field between the loudspeakers; These are the relative level (or loudness) difference between the 2 channels ΔL , and the time delay difference in arrival times for the same sound in each ^{channel} Δt
 - The "interaural" signals (binaural ILD and ITD) at the ears are not the stereo mic signals which are coming from the loudspeakers and are called "interchannel signals" (ΔL and Δt)
 - When the mics are bidirectional and placed facing $\pm 45^\circ$ with respect to the sound source, the X/Y setup is called a Blumlein Pair (helps create a realistic, almost holograph soundstage)
 - Binaural recording is a highly specific attempt to recreate the conditions of human hearing; reproducing the full 2-dimensional sound-field with earphones
 - Pro Tools always records audio in either 16 or 24 bit format, using sample rates from 44.1k and up to 192k for HD systems
 - Mac Pro Tools AIFF, WAV (bwf), SDII files can be imported
Save conversions onto Pro Tools to the Audio Files folder