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Digi 385

Module 3 Supplementary Reading

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Assignment 1 - Answer in a doc or pdf file. Please answer question #1 for each reading. Questions 2 through 7 can be answered in general for the group of readings.

1. What were your three key takeaways after reading the assigned material and why? In other words, what were you grateful to learn?

• *Stereo Microphone Techniques Part 1 – SOS*

- Early stereo recording happened early as 1930 as we know it today
- 'Stereophonic' – is derived from Greek which they mean to say 'Solid Sound'.
- 3 ways of creating a stereo image with speakers
 - Use Blumlein set up
 - Two identical spaced microphones
 - Use coincident microphones
- Coincident microphones
 - Favorite quote - "To avoid timing differences, the two microphones must be placed as close together as is physically possible -- hence the term 'Coincident Stereo' (pg1)
 - Favorite quote- Using the right polar pattern for the job will get better recording - "choice of polar pattern is the main tool we have for governing the nature of the recorded sound stage." (pg2)
 - Polar Patterns help with the physical separation of the recordings of the stereo image.
- Mid-Side-
 - For television sound recordist
 - Uses any polar pattern facing forward mostly cardioid
 - The other is a figure of 8 facing side ways

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- *Stereo Microphone Techniques Part 2 – SOS*

- Spaced microphones VS Coincident microphones
 - Mono compatibility
- Lovely Omnis
 - Classical usually recorded using Spaced Microphones with omnis because of the smooth frequency response. And off-axis works great.
 - I liked this quote “then good coincident recordings are like etchings or line drawings —very precise imaging, lots of detail, leaving nothing to the imagination. On the other hand, spaced microphone recordings are more like water colours — the detail is blurred, and the essence is more about impression than reality.” (pg3)

- *Introduction to Mid-Sides Recording – SOS*

- It will record less or more of the room
- Will record sound at the center of the stage more directionally because it will hit the mics on axis. This recordings gives more center and cleaner, with a MONO sound.
- The Mid mic can be unidirectional (cardioid hypercardioid and so on), omnidirectional or bidirectional (figure-8). They’ll all work, as whatever else they capture they’ll pick up the sound coming directly from the source. But, in general, your choice of polar pattern should be determined by how wide you want your stereo recording angle (SRA) – Great for understanding the polar pattern to choose form.

- *JB-Introduction to Recording Ensembles*

- Choosing the right mic technique will make a difference in the stereo field.
 - Use X-Y, M/S, ORTF, and Spaced Pair, use outriggers also use Spot mics to fill in the solos.
 - You want to make sure you hear all the instruments and the vocals,
 - Best to target for the room to be flat in frequency response.

- *The Right Direction - Using Mic Polar Patterns Effectively – SOS*

- 'Proximity Effect' is when you get up close to the mic and cause more bass to be picked up by the mic or 'Bass tip up'.
 - Directional mics helps the instruments be more isolated in the mix but the mic will be picking up sounds from other directions or bled and give it coloration.
 - Omnis is for more natural recordings
 - 'the smaller the diaphragm the greater the off axis sound'
- *Adding Omnis to Arrays – SOS*
 - There are many ways to capture a stereo omni recording, all that matters is experimenting and picking which mic technique/pick up pattern works best for the project.
 - ORTF and Spaced Pair is a popular set up chosen by the editor Hugh Robjohns – ORTF as main array and with the Spaced Pair on the same plane.
 - Outriggers bring more space that the coincident pair or near coincident pair don't pick up, and they also capture more low end or 80Hz.
- *Guidelines for Recording Symphony Orchestra with multiple microphones- DPA*
 - Make sure the time alignment between mics is important because it can get out of phase and the waveforms start to comb-filter on top of each other. Think about how the room acoustics changes the sound.
 - Here is a good quote I liked from the many I read 'if you can see the source, you can hear it'
 - A-B setup cons- if you spread the mics farther apart from each other you end up with a hole in the mix, so, use a 3rd mic to make up for it. it depends on the size of the band/orchestra how far to place them.
- *Spot Microphone Phase Problems*
 - Be aware of reflected walls because it can cause phase issues and the mic can pick up the direct sound + the reflected sound.
 - Floor stands can capture more of the room the farther back you are from the mic due to com filter effects.
 - The closer the mic to the floor less reflected sound.
2. What three things did you notice that were similar or common between them all?
- Experiment which pick up polar pattern + mic technique best works for the project.

- There are many ways to capture a recording but being aware of which polar pattern and mic technique is essential to getting the best recording

- being aware of comb-filtering and how to avoid that to get the best possible mix.

3. What are two things that were approached differently?

- Coincident mics are for more detail

- Omnis is best for ensembles and getting a wider sound for bigger performances.

4. What four things covered that you think are **essential** to this topic? You might have already known these things.

- Coincident mics is like a very details drawing in the other hand, spaced mic record more blurry and the essence is about impression then reality.

- Omni mics are best for Decca Trees

- using the right polar pattern will get you closer to the sound you desire.

- to create a stereo image, use a blumlein, spaced mics, or coincident mic set up.

- Using Mid-Side is great for close micing but not for ensembles.

5. What are two things in these materials that are different than as presented in "Modern Recording Techniques" textbook?

- more in depth/history about the beginning years of using mic techniques.

- better quality pics

6. What has contradicted your experience recording?

- picking the right mic set up for the job.

- having to decide with is best for the recording with out having to do other setup because the performer might get tired or prefers another mic set up.

- having the right mic for the jobs or having a variety to choose from

7. Is there anything you are confused or unsure about the content? The more detailed the better.

- how many mics is enough for an orchestra or small ensemble?

- two?

- three or Decca or is that to much for a small ensemble?

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