

On Sunday, March 18, 2018, the monthly meeting of the Audio-Video Club of Atlanta was held at the Patchwerk Recording Studios near downtown Atlanta. This meeting featured an extensive tour of their facilities and a question and answer session with several of their audio engineers. We had a good turnout of about 35 members and guests present.

John Morrison, president of the club, announced the results of our annual election, and these folks were elected: President John Morrison, VP-Industry Relations Chuck Bruce, and Secretary Tom Horner. After a couple of other announcements, next up was the owner of the studio Curtis Daniel who came up and gave us a history of the studio and how they built it. For example, each recording and mastering studio resides on its own slab of concrete for separation between them, and the entire building is wired with balanced power. It took about one year for design and another seven months for actual construction, and the cost was about \$10 million. Then the tour began.

We spent a lot of time in the main recording studio which has a 96(!) channel analog mixer, the Studio 9000 (SSL 9000J). This unit and the accompanying equipment which was located behind the mixer in a set of multi-section cabinets took almost the entire room. There were two sets of monitoring speakers, a smaller set sitting on the mixer, and a custom-built set of large multi-driver speakers built into the wall in front of the mixer that cost \$80,000 to build. The studio now uses "Pro Tools" for many of their recordings, but some engineers prefer the sound of the analog mixer. The "Pro Tools" setup was a computer and monitor, obviously much "smaller" (in size only) than the huge mixing board. The hardware previously used for recording is being superseded by software tools such as "Pro Tools". The studio used tape for recording up until around 2002, and they still have the tape machines in the equipment room.

In this room the engineers present answered our questions about how recordings were made, how they were engineered, and what they did to create the best recorded sound. I am not sure of all the names, but my notes indicate there was Ray, mixing engineer, Mike (recording engineer and partner to Curtis of the studio), and Kenny "Mixx" Daniels, chief mastering engineer present. My notes also have Luther, Vern, and Gus listed. I was not able to note all the questions and answers that were asked and answered (there were a lot of them!), but the session was fascinating. One question was why so many channels, and the answer was that just the kick drum on a drum kit (set) may need four channels.

Next, we went down to the basement mastering studio operated by KennyMixx. He showed us the equipment he uses for mastering. There were \$40,000 JBL speakers, "Overtone" wood sound diffusers on the walls, Monster Cable power conditioners, Wireworld cabling, plus multiple pieces of hardware used to create the final recording which I was not able to list. Kenny gets a two-channel file from the recording engineers from which he creates the final mix. His objective is to have the music time-aligned and in phase for the best sound. He demonstrated what the sound is like and what it "looks like" on screens he uses to do this. He is working to patent the techniques he uses to produce his final mixes.

The refreshments were provided by Dan Wittmayer, and our thanks to him again. Many, many thanks once again to Curtis and Kenny and all the engineers for opening his studios for us to see and answering our many questions!

Thomas Horner  
Secretary, A-V Club of Atlanta