

Martin Audio CDD for Dolby Atmos Learning Facility



Picture: Full Sail University

Specialising in Audio Production, Music Production, Show Production and Recording Arts degrees, Full Sail University recently commissioned a new Dolby Atmos-enabled facility for class sessions, workshops, listening experiences and guest lectures at its Winter Park, FL campus. Payout of the 'objects based' spatial concept is uniquely via 26 carefully selected, and strategically located loudspeakers from the Martin Audio catalogue.

One of the largest, and most advanced Dolby Atmos rooms on a university campus, according to Education Director of Audio Arts, Brandon Egerton, this had been a topic of discussion for a number of years. "But we needed to make sure we were wrapping our arms around the right technology. We felt it was important to have a solid understanding of both the emerging technology and also how the industry intended on adopting it and so we intentionally took our time." Along with Darren Schneider, who is in charge of Full Sail's Advanced Session Recording they utilised existing industry collaborations to gain "a really intimate perspective of the production workflow."

"We already have a 7.1 dub stage on campus, but we wanted to create an

additional dedicated space for our students to explore and engage with the Atmos format. The biggest challenge for any educational institution is the ability to teach a larger number of students a format in an intimate setting. This new classroom facility allows us to do that.” Taking up the story, Michael Orłowski, Director of Technical Services, explained how the classroom space was originally designed as a 5.1 large audio classroom. He noted, “This room was frequently used for courses focused on surround sound and multichannel audio, making it a perfect candidate for renovation and an upgrade to Dolby Atmos.”

Seeking the ideal layout for such discreet and localised positioning of an object-based format led Full Sail to the Focusrite Group and their engagement with Martin Audio. “Our goal in creating this space was how do we accurately demonstrate the Dolby Atmos format ... hear the immersive properties of an Atmos mix and the separation between ceiling speakers, side speakers and rear speakers? And so, our approach was to consult with our manufacturers who specialize in high quality installation-class audio systems.”

“We had a roadmap meeting with Focusrite Group where we were first looking at installation classroom speakers for [Martin Audio’s] O-Line product, giving students in the first row and students in the last row the same optimised experience.” Schneider said that while their interest was piqued by O-Line for this application, their focus then pivoted to the discreet coaxial differential dispersion technology of CDD. The Dolby Atmos SPL spec of 85dB in the 100-seat space was achieved once they had upgraded to the CDD12 and increased the original sub capability. “Dolby has a 20dB headroom, and although we’ll never achieve 105dB we have limited maximum level that the teacher can set in the room to 85dB SPL.” A global system touch panel control panel ensures this.

Full Sail’s end result was to specify three of the largest CDD12 as a conventional L/C/R system, with students and guests enveloped in a (side/rear/overhead) surround system comprising 12 CDD8 (four per wall) and eight Martin Audio C8.1T series speakers overhead. LF extension is delivered through a pair of SX118 (1 x 18in) subs, with a matched pair at the rear, Fellow Focusrite partners, Linea Research have provided the engine, in the form of pure Class D amplification, with a 44C10 4-channel DSP amp driving the L/C/R CDD12s and front pair of LFE’s, and three 8-channel Linea Research 88C03 assigned to everything else.

Orłowski explained how they had arrived at this integrated solution. “When we met with Martin Audio, we learned about the asymmetrical dispersion that the CDD range provided, and its ability to work well with an existing classroom that has a drop ceiling.” Dolby were very specific about speaker placement and angulation, he said, in order to meet the specification required using Dolby’s DARDT room design tool. “Having ingested all the information on the CDD speakers it was straightforward to go through the product line to find which speakers we needed.”

Assisted by Martin Audio’s technical specialists Brad Stephens and Joe Lima, he said, “Martin Audio was great to work with. We could take those specifications, put

them into DARDT, and have Dolby look at the plan.” This included roof predictions taking into account intrusion of HVAC, projection positions etc. “We could input into the DARDT and simulate what the performance was going to be, and as we made adjustments Brad and Joe would join us on Zoom calls to make changes as to how many amplifiers we were going to need.”

And it was the dedicated DSP of the Linea Research amplifiers that provided a real plus point. As Michael Orłowski pointed out, “Since this classroom would be hosting multiple degree programs and demonstrating the software of Avid Pro Tools, Apple Logic and so on, we didn’t wish to put the room corrective EQ, including delays into [DADman control software], only for any of those settings to change in a lecture, and then not be properly recalled ...shifting the Dolby curve that we had tried so hard to hit.” So instead, all corrective EQ is stored within the Linea Research amps. “Everything else is set up in a flat recallable preset so we can teach the technology, but it doesn’t change the sound characteristics of what the speakers and amplifiers are doing.” Feeding the speakers is an Avid Pro Tools AVID MTRX II. The signal comes out over Dante and passes through a QSys Core, feeding the Linea Research amplifiers, again within Dante.

Aside from their satisfaction with the Martin Audio CDD deployment, Full Sail’s takeaway was the Linea Research amplification. Orłowski further stated “Martin Audio came out and did training to run the System Engineer software. We did straight-out-of-the-box tuning and voicing with Martin Audio, and Dolby then tuned the room with two presets: one matches Dolby’s modified X-curve for music and home entertainment, the second was a more flat, corrected response. The tuning presets are stored in Linea Research, and we used the Linea Research plug-in on QSys to switch between the two tunings.”

The new room was commissioned in August, road ready for their first major event when industry legend Bob Clearmountain hosted two educational sessions exclusively for Full Sail University students in the space, sponsored by Apogee. In conclusion, Michael Orłowski, acknowledged, “We’re extremely happy with this outcome.”

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