Martin Audio's TORUS at Sundance Film Festival 2023



Having upgraded the MARC Theatre in Salt Lake City with a Martin Audio Wavefront Precision system in time for the 2020 Sundance Film Festival, cinema specialists DBPC again turned to the Martin Audio catalogue this year to find a solution for another of the event's iconic theatres.

Due to the pandemic, 2023 marked the event's first staging in front of a live audience since 2020, the year that DBPC was formed by Dan Beedy, a long-term member of the event's technical crew (and latterly project manager), and another Sundance veteran, Ben VanDonkelaar. They have been tasked with systematically upgrading sound systems used in the event's theatres to keep pace with the fast-moving advances of digital screen technology.

While the Boston, MA-based specialists were tasked with fitting out all Sundance cinema spaces this year (working with Sundance Institute Technical Director, Holden Payne), Beedy's attention turned, in particular, to the ornate and historic Egyptian Theatre in Park City, one of the Sundance Festival's oldest and most recognisable venues - focusing on upgrading the surround sound. His search led him to Martin Audio's TORUS constant curvature system as the final piece in the jigsaw.

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Explaining the background, he said, “In 2018 we added permanent surrounds to the theatre. Since the Egyptian is a year-round theatre not operated by Sundance, we had a lot of restrictions on what we could do. The theatre is historic, so we had even more limitations on placement. It was agreed with the theatre that we would install them at the bottom of the soffit around the ceiling. The soffit was plaster only, so a light and small speaker had to be chosen.”

Ultimately the speakers - four on each wall - were hung from the ceiling to prevent them from being an eyesore, all year round. But of course the placement was less than ideal for cinema. “The height and the size of these speakers made them under-powered and underwhelming for the audience. For this year’s festival, getting the speakers lower was one of my main goals.”



Enter Martin Audio Northeast Regional Sales Manager, Martha Callaghan, complete with the manufacturer’s award-winning TORUS platform. Dan Beedy soon recognised the advantages. “Although I hadn’t heard them before, Ben was aware of them and felt they would be an excellent choice. And I’m glad I trusted his instincts! Having a wide pattern would represent a real upgrade, and would help realise the filmmaker’s intention in their sound mixes.

“In addition to that, we wanted to add the [Martin Audio] WPM line array as the behind-the-screen workhorses for the L/C/R part of the system.” These were reinforced by SXH218 subwoofers with the whole rig powered by Martin Audio multi-channel iKon processor amps, and run over Dante.

As to deployment of TORUS, The Egyptian is a bijou 200-seat theatre and thus three T1230 enclosures on each wing provided the necessary side surrounds. Due to the protective nature of the house, some lighting instruments were moved to make way for the speakers, which were set in lighting alcoves at optimal height for surround speakers and distributed as single boxes.

“We were aiming for complete horizontal coverage in the space while limiting the amount of vertical spread that would be reflecting off the opposite theatre wall. The effect of the T1230 was amazing! We had limited reflection off the walls and were able to direct the sound mainly at the audience,” exclaims Beedy.

In terms of visualisation and optimisation, in stepped Martin Audio’s tech team of Joe Lima, who was responsible for the initial system design, and Will Harris, who became de facto system tech, handing over to Jim Barlow from Dolby for final tuning.

The change in speakers had been responsible for the audio change, notes Beedy. An ancient, 30-year-old point source system - from which they could only achieve a sound field of about ± 6dB from the front to back and about ± 5dB side to side - was replaced with a Martin Audio set-up from which they achieved a mere ± 1dB front to back and side to side.

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This consistency is a philosophy dear to Dan Beedy's heart, and underlines his advocacy of combining cinema products with speakers purposed for live work. "I've always felt that we can achieve a better end product for the audience combining the best practices from both disciplines," he says. "Since we are often tasked with turning non-cinema spaces into cinemas, we as a company feel using products designed for those spaces is typically a better choice. Martin Audio has been an excellent choice for us over the years. We've used their CDD, O-Line, WPS, WPL, and MLA products to great effect in movie premieres and film festivals." To that list he can now add TORUS.

Reflecting on his desire to have every seat receiving a near-identical audio signal, he confirmed "TORUS helped us achieve that 100%. Martha's suggestion was an excellent one as we've never previously come close to achieving the side surround spread at the Egyptian."

To underline the point, he added, "We use trailer material for testing between all venues to get a sense of how each house sounds with the same pieces of content. The Egyptian had some of the best surrounds at the festival this year.

“TORUS really got us over the finish line. “Next year, we’d like to have an additional four to the rear to complete the 7.1 surround field. Unfortunately, this year, the challenge of mounting those rear speakers was too great for the timeline. As for WPM, I was really impressed with how it sounded and worked in a small-to-medium sized cinema space.”

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