



The worship space's massive stained glass wall, designed by a current synagogue member, could not be marred by the project in any way, at Congregation Shalom in Milwaukee, WI.

## Video Upgrades Add Projection, Streaming for Wisconsin Synagogue

Install also included major audio system upgrade, featuring d&b audiotechnik speakers, amplifier. **BY ANDRES CAAMANO**

**F**OR MOST HOUSES of worship that are fortunate enough to undergo a significant audio and video upgrade in their space, typically the before and after pictures are noticeably different. For Congregation Shalom, a synagogue that has grown from around 102 families to more than 1,000 members since it first opened its doors 67 years ago, the upgrades completed about a year ago were intentionally made to minimally impact the overall look of the space.

Among the updates were a pair of 123-inch Screen Innovations Zero-G screens with

Slate 1.2, adding permanent projection to a space that previously had none. As noted by Brady Garrison, operations manager for Sven Pro, who assisted on the installation, "(In the past) they would use a portable system, and they didn't like the look of that." Aside from the projection screen install, the synagogue for its worship space added a pair of d&b audiotechnik 10S loudspeakers, a d&b audiotechnik 10D amplifier, Blackmagic Design video switching and distribution (including the ATEM Production Studio 4K and Smart VideoHub 12x12), Panasonic PTZ video cameras, Vivitek laser projectors, and a Behringer X32 Producer digital mixing sys-

tem. The project was made possible, thanks to a large gift from one of their congregants, with a main interest in education, to go with enhancing worship at Congregation Shalom; to make it "a more technologically-friendly space," adds Garrison.

Even with such an expansive project, Congregation Shalom executive director Linda Hollifield explained that first and foremost, with the sanctuary's massive stained-glass wall (designed by a current synagogue member), that it "could not be marred in any way" by the project's work.

And not marred, either physically or visually. Which meant that any desired addition of

Three of four d&b audiotechnik 10S speakers in the worship space that were part of the install work. (lower left) A view of the video production system/room at Congregation Shalom in Milwaukee, WI

projection in the space, could not include permanently mounted projection screens, either hanging from the ceiling or from the wall.

Therefore, a Screen Innovations solution was chosen, with a flexible screen that can be hung from a pair of cables, along with it being rolled and hidden into a ceiling.

"There was to be no evidence that there were screens, when not in use, and to install them into the ceiling," tells Holifield. "There was only one company that made screens that could fit in the space."

When Garrison originally met with the synagogue to discuss potential upgrade ideas for the house of worship two years ago, Congregation Shalom was "really interested in adding projectors, or an LED wall, from the very beginning. The main thing, though, was that we had to maintain the aesthetics," he says. "Our primary goal was to maintain their space, then to get them what they wanted. The architect spent time to make (the wall) look really nice, and we could not disrupt the stone, or cover it with a fixed frame, or a permanently hanging screen."

From the ceiling, the wire install to the screen accounted for a full five-foot drop, before unrolling, to create "the viewing angle as good as we could," he adds. "Everyone calls them floating screens, as the cords blend with the brick backdrop."

Regarding the screen size, Holifield said, "We were limited on how large the screen could be, with the constraints we had ... even if we had wished to have had a larger screen." Nonetheless, in the months since the install, when discussing the extensive amounts of ambient light in the space, caused in large part because of windows in the ceiling, that the "projectors and the screen work really well in that room," adding how the screens have fared very well, as designed, in rejecting ambient light.

Garrison notes the positioning and size of the screen were maximized to the fullest extent, without negatively impacting the worship space. "One of our guys was able to trim out these screens, and did some drywall work to get the screens to fit appropriately. When the screens drop, the sizing was so accurate, there is only about one inch to fit between two walls," he says.

Another dramatic improvement with the video in the space, was by the synagogue moving from aging 480i cameras retrofitted with PTZ motors, to Panasonic PTZ cameras, capable of running 1080p, which enabled the synagogue to begin streaming their services.



The video improvements also featured a Blackmagic Design video switching system, including an ATEM live production switcher. As noted by Holifield, the new system includes a large video screen in a small production studio at the synagogue, to help staff control and see each of the views from each of the Panasonic PTZ cameras.

Beyond the video improvements in the space, were the adding of the pair of d&b audiotechnik 10S speakers, powered by a single d&b 10D four-channel amplifier, capable of driving up to 350 watts in 8-ohms. The 10S model speakers each are two-way models, with a 10-inch driver, along with a 1.4-inch high frequency compression driver.

Originally, there had not been plans to update the synagogue's sound system, explains Garrison, but "they had a couple of older

**"Our primary goal was to maintain their space, then to get them what they wanted."**

speakers deployed, and they weren't covering anything at all, including their podiums." With the d&b speakers, he adds, "We were not looking for chest thumping sound, but intelligibility. With d&b, we don't have to do much EQ'ing, to have it sound good right out of the box."

Both Holifield and Garrison noted how demanding the work associated was with wiring for the new system.

"I can't imagine how the guys got to the areas to get what they needed. It was quite a challenge, where they crawled," said Holifield. For Garrison, he adds, "getting access to above the ceiling (was problematic), as I had to go through a cold air return to then get up to the high steel."

When asked about the feedback he's received since completing the project, Garrison says, "The reactions I have heard a lot, were in reference to the sound, the intelligibility. In particular, they could concentrate more on the people talking from lecterns, or the rabbi, to go with the improved quality and picture (for video)"

Each of the items included in the multi-faceted install, was completed within about a five-day span, avoiding any delays or cancellations of worship services. To help Congregation Shalom to successfully implement the system during its first service, Garrison says, "we usually send our primary designer from staff and the engineer to be on site, to handle any questions. (The house of worship) can have them do as little or as much as they want, including running sound next to their volunteers."

To make sure that the synagogue continues to have a solid understanding of the system, Garrison says, staff from Sven Pro connects periodically with the house of worship about sending "a technician to provide support from time to time."

That support, Holifield concludes, is crucial, "when we have a more complicated service, as we are planning to then have someone from the company to work on the equipment," in those instances. During the high holidays in September, Garrison notes, "I was able to assist them then, since they were relatively new to the whole system. We try to provide them as much assistance as we can, even if we have to come back two or three years later, to train new volunteers, to make sure that everyone knows how to use the system." **WF**