CASE STUDY

MILE HI CHURCH, COLORADO

Originally founded in 1959, Mile Hi Church is a spiritual community based in Colorado that’s dedicated to empowering people to make a profound difference. Although the community first began as a small study group in the sales auditorium of a vacuum store more than 60 years ago, Mile Hi completed construction on a new 1,500-seat sanctuary in Lakewood in 2008. Today, Mile Hi Church hosts three Sunday services and a special Wednesday night service each week, along with special events such as weddings, concerts and public speakers like Deepak Chopra and Marianne Williamson. Originally outfitted with a JBL VerTec Series sound system, Mile Hi Church recently decided to upgrade their aging audio system with a state-of-the-art sound solution to deliver clear, detailed audio for speakers and performers.

“We were getting complaints about volume and guests not being able to hear the vocalists over the band,” said Jennifer Burnett, Artistic Director, Mile Hi Church. “We realized that we needed a new system; that we needed to upgrade our technology and create a better experience for our congregants.”

“We had a series of technical challenges with our old sound system appearing to be too loud,” said Michelle Medrano, Lead Minister, Mile Hi Church. “We tried everything we could to mitigate the problem, but we were not very successful. We had been contemplating a new sound system for many years, but it wasn’t until we connected with the new VTX system that we felt good about it in every way possible.”

After taking a trip to the HARMAN Experience Center to hear the new JBL by HARMAN VTX A8 line array loudspeakers in action, Mile Hi Church Audio Visual Coordinator Nathan Marschall made the decision to upgrade to a cutting-edge VTX A-Series sound solution.

“Our first experience with the VTX system was at Stanley Hotel in Estes Park, Colorado,” said Marschall. “They were setting up a show there and we were able to take a listen to the system in that room. It was a very live room but they weren’t using EQ or anything.

I love working with JBL and VTX; it’s been great. The box sounds great and it’s made a big difference here at Mile Hi. I’ve gotten letters praising the system, which is something I never got before.”
We were really impressed with the way that it sounded right out of the box. After Estes Park, I flew out to the HARMAN Experience Center and got to hear all those HARMAN products in a controlled environment. It was really impressive to see all the different PAs and subs—it really sealed the deal for me.”

Mile Hi Church reached out to HP Marketing, Colorado’s leading manufacturer representative for over 40 years, to help coordinate the purchase and installation of a new VTX A-Series sound system.

“As technology and facilities grow, churches’ needs grow and vary,” said Steve Johnson, Owner, HP Marketing. “And one of the things that we have with HARMAN, which is what I love about this project, is we have products to fit all these needs. We can grow with the church. We can go pretty much anywhere technology needs to go in our products. That is fantastic. It shows the breadth of what HARMAN can bring to market. They see it, I see it, and hopefully the world sees it.”

The new JBL sound solution at Mile Hi Church consists of two flown line arrays on either side of the stage, each with nine VTX A8 loudspeakers and two B18 subwoofers. The system is powered with class-leading Crown I-Tech 4×3500 and I-Tech 12000HD amplifiers. VTX A8 loudspeakers utilize next-generation JBL transducer technology to deliver unparalleled detail and clarity, which has significantly improved vocal intelligibility at Mile Hi Church.

“With the old system, we had to fight to try to get enough volume out of the choir over the band,” said Marschall. “With the new system, I don’t fight it anymore. I can get a lot more volume and it’s a lot clearer. The vocals just cut right through the mix. That’s a great feeling because I’ve struggled with that for many years, and now I don’t have to struggle with it anymore.”

“The new sound system has really helped with the clarity of things,” said Barry Ebert, Associate Minister, Mile Hi Church. “Personally, I’m hearing more clarity in the vocals. Being able to hear the full range of the choir, being able to hear the bottom and all the parts—that’s the thing that I really noticed from this system. I can really hear a full-spectrum sound, which is something I’ve been looking for.”

With a high-frequency compression driver and state-of-the-art waveguide technology, VTX A-Series loudspeakers deliver uniform, consistent coverage, making it easy to design systems that match the needs of any listening environment. Mile Hi Church utilized the 110-degree dispersion pattern of the VTX A8 loudspeakers to deliver smooth, even coverage for every seat in the house.
"When we walk into the room with the new system, it sounds nice and even from left to right and from front to back," said Nathan Marschall, Audio Visual Coordinator, Mile Hi Church. "With the old system, there was a bit of a dead spot in the back of the room. One of my goals was to fill that in, and we accomplished that. That was a great feeling for the people who sit in the back; it really makes them feel part of the event."

"This room is round, so it’s very hard to get an equal sense of sound," said Michelle Medrano. "We feel like there’s a wonderful balance now and it’s really great for us. The notes I’m getting now are, ‘It sounds so much better,’ ‘It’s so much clearer,’ ‘It doesn’t hurt my ears’—there’s a lot of gratitude."

With a patented JBL rigging mechanism and redesigned suspension system, VTX A-Series loudspeakers offer streamlined deployment and setup. Paired with a compact, lightweight design and a full range of rigging and transportation accessories, VTX A-Series loudspeakers provide unparalleled flexibility during transportation, mounting, integration and installation. By utilizing The VTX A-Series’ innovative rigging system, Mile Hi Church was able to install the new system in a limited time frame. The compact design of VTX A-Series loudspeakers also makes it easier to access system components for maintenance.

"The install itself went pretty smoothly," said Nathan Marschall, Audio Visual Coordinator, Mile Hi Church. "We had a couple of issues with timing, which threw things off schedule, so the first Sunday we ended up running just on the amplifier presets for the A8s and it sounded great. We were very surprised. When we first turned the system on at a very low volume there was a level of clarity and detail that impressed us. Then when we turned it up loud, it never got brittle or harsh. It was very smooth, especially in the vocal range."

"With our previous system, we had a lot of maintenance issues," continued Marschall. "The biggest issue was with the install; we were not able to lower the arrays to do any kind of maintenance. It was an active system, so the amplifiers were attached to the speaker boxes and we just couldn’t access them to get them down and service them. So with the new system, we put our amp racks offstage where we had easy access to them for any maintenance that would come up in the future."

All VTX A-Series loudspeakers include JBL Performance Manager, a next-generation software application designed to configure networked audio systems. Marschall and his team used Performance Manager to calibrate the new system, dramatically reducing setup time and improving the system’s sound quality even further.

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"The tuning process was very easy, which was another thing that I really loved about the VTX system," said Marschall. "We were only here a few hours and we didn’t do a whole lot of EQ tweaking. With the previous system, there was a lot of parametric EQ and graphic EQ on the main system to make it sound the way we wanted it to. With the A8 loudspeakers, we barely tweaked anything. I think there were three frequency adjustments; two cuts and a boost and that was it. Very simple."

"Working with Performance Manager has been really easy," continued Marschall. "With just a couple of tweaks, Performance Manager made it easy to create different zones in the PA and apply EQ to all the different zones of the PA."

Since installing the new JBL VTX A-Series sound system, staff at the Mile Hi Church have noticed a significant improvement in sound quality. And they’re not the only ones—guests have been commenting on the improved clarity and detail of the new system as well.

"I love working with JBL and VTX; it’s been great," said Marschall. "JBL has treated us well. The box sounds great and it’s made a big difference here at Mile Hi. I’ve gotten letters praising the system, which is something I never got before. I’ve had people come up to me and say, ‘I don’t know what you did, but it sure sounds great in here!’"

"We love the new speaker system," said Jennifer Burnett. "We’re getting such wonderful compliments and comments from our congregants. It’s just an overall better listening experience and more enjoyable for the congregation. JBL was great with the install. They were communicative and responsive and did everything on time. It was really a very easy and wonderful experience."

**PRODUCTS USED**
- CROWN I-TECH 4×3500
- CROWN I-TECH 12000HD
- JBL VTX A8 LINE ARRAY LOUDSPEAKERS
- JBL VTX B18 SUBWOOFERS
ABOUT HARMAN

HARMAN (harman.com) designs and engineers connected products and solutions for automakers, consumers, and enterprises worldwide, including connected car systems, audio and visual products, enterprise automation solutions; and services supporting the Internet of Things. With leading brands including AKG®, Harman Kardon®, Infinity®, JBL®, Lexicon®, Mark Levinson® and Revel®, HARMAN is admired by audiophiles, musicians and the entertainment venues where they perform around the world. More than 50 million automobiles on the road today are equipped with HARMAN audio and connected car systems. Our software services power billions of mobile devices and systems that are connected, integrated and secure across all platforms, from work and home to car and mobile. HARMAN has a workforce of approximately 30,000 people across the Americas, Europe, and Asia. In March 2017, HARMAN became a wholly-owned subsidiary of Samsung Electronics Co., Ltd.