Shure Wireless “Key to Halftime Show” at Super Bowl LVIII

Reba McEntire. Picture: Perry Knotts/Getty Images

For the first time in history, the biggest game in American Football descended upon Las Vegas’ Allegiant Stadium. This presented a massive new challenge: managing the Super Bowl’s immense production in Las Vegas’ already crowded wireless radio frequency (RF) environment. An expert production crew fearlessly tackled this challenge and delivered an outstanding entertainment experience to all attendees and a staggering 202.4 million broadcast viewers. To ensure the highest-quality audio for the entire Super Bowl, the production team trusted the Emmy Award-winning Shure Axient® Digital Wireless Microphone System.

“Axient Digital is the key to the Halftime Show,” shared Lead RF Engineer Cameron Stuckey. “We are using every feature that sets it apart to the fullest extent possible. And, at this point, it is hard to picture how I would design the wireless system without it. The unmatched coverage Quadversity provides, combined with the reliability of Frequency Diversity, means the team and I can support every artistic decision across an entire football field with confidence in the harshest environment of the year.”

The RF team depended on ten AD4Q Four-Channel Digital Wireless Receivers, an

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AD600 Axient Digital Spectrum Manager, and two AXT400 Axient Dual Channel Receivers. For another year, ATK used Axient Digital AD4Q with Quadversity, a patented Shure technology, leveraging four simultaneous RF inputs to feed a single RF channel. Quadversity can extend the coverage area of a microphone channel or enable multiple coverage areas with additional antenna inputs, making it ideal for challenging RF environments like Las Vegas.

ATK Audiotek and Professional Wireless Systems (PWS) handled all wireless microphones and IEM systems for the pre-game entertainment, halftime entertainment, and referees. This is the 27th year PWS has served as ATK’s wireless partner at the big game.

The team included Broadcast Mixer Tom Holmes, Entertainment Front of House Mixer Alex Gussard, Entertainment Front of House Music Mixer Dave Natale, Monitor Mixer Tom Pesa, Lead RF Engineer Cameron Stuckey, and RF Techs Gary Trenda and Kasey Gchachu. The RF Team Lead for CP Communications was Loren Sherman. The production was made possible by a hardworking crew of A2s.

Michael Mason, President of CP Communications, worked with his team to supply 45 channels of Axient Digital wireless and 14 channels of Shure PSM® 1000 In-Ear Monitoring Systems that were used for the pre-half and post-game studio shows as well as in game reports from the sidelines. Michael also made a point to note that Shure equipment was not only present for the big game, but for studio shows around Las Vegas during pre-week as well the Opening Night, Red Carpet, and Honors shows.

“At CP Communications, we continue to rely heavily on the Shure Axient Digital series of microphones and Shure PSM to bring the highest-quality RF experience to our broadcast partners,” shared Michael. “Using the Quadversity option with the Axient Digital Microphones affords us assurances on coverage while the Frequency Diversity option gives us the comfort of protection on the frequency interference front. It was an easy choice of products given our client’s request for coverage of the big game in Las Vegas”

“Shure at the Super Bowl has been a standard for entertainment for many years,” shared Tom Pesa, Monitor Mixer. “Shure began outperforming others years ago on this event, most notably in the wireless in-ear department. The standard is Shure PSM 1000 for ears, and, from a sound standpoint, nobody argues about how good they sound and how widely used they are. That acceptance allows our audio team to not worry about trying to make some other product work. The programming capability allows for quick preparation for some of the first rehearsals on field as almost 80 in-ear receiver packs are used among principal performers, band, and large core dance groups. Also, as always, cue mode saves the day when quickly bringing a mix to a pack for a choreographer, guest engineer, or producer to hear what any particular artist is hearing.”

Tom continued, “Topping it all off in monitor world is the utilization of Wireless

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Workbench to constantly monitor wireless in-ears as well as all of the Shure microphones to gauge metering, RF status, and an array of other details since the actual RF equipment lives and is managed by the RF team away from monitor mix. All of these Shure products, seamlessly working together, is a massive part of the success of the audio team at the Super Bowl each year.”

Days before the game, football players joined GRAMMY award-winning musical artists to share uplifting music and inspirational messages during the Super Bowl Soulful Celebration. All performers at this event were equipped with Shure KSM8 microphones. “I loved using the Shure KSM8 capsule on all of the vocal mics for this year’s Super Bowl Soulful Celebration,” shared Larry Reed, A1 Audio Mixer. “I especially like it for its crisp top end and its off-axis rejection around a loud house band. I was able to use it on Kirk Franklin, Mary Mary, Rachel Platten, Robyn Thicke, Mickey Guyton, and Earth, Wind & Fire. The KSM8 is my go-to capsule for vocals.” During the TikTok Tailgate event, Gwen Stefani took to the stage with an Axient Digital transmitter outfitted with a patented, new Shure microphone technology.

L-R: Cameron Stuckey, Kevin Lu, Gary Tranda, Jim Van Winkle, Kasey Gchachu

Before kickoff, Reba McEntire trusted Shure Axient Digital for her spectacular live performance of “The Star-Spangled Banner.” Reba used a frequency diversity

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handheld microphone transmitter outfitted with a nickel-plated KSM11 capsule. The accompanying drumline was also relying on Axient Digital transmitters. “Shure KSM series capsules are perfect for every type of singer, and for me, the KSM9 and KSM11 are my go-to favorites for wireless vocals. Clear, crisp, and just the right amount of rejection without getting too 'spitty' sounding,” shared Tom Holmes, Broadcast Mixer. “They [Shure] have a great range of mics suitable for every application.”

Andra Day’s rendition of “Lift Every Voice and Sing” was performed on Shure Axient Digital Frequency Diverse (FD) wireless transmitters. Also, Cameron Heyward of the Pittsburgh Steelers accepted the Walter Payton Man of the Year award with an Axient Digital transmitter and KSM9 microphone capsule. Every handheld transmitter on stage during the Halftime Show was Axient Digital (ADX2 / ADX2FD) and nearly every performer featured new, patented Shure microphone technology. For headsets, multiple artists used Axient AXT100 bodypacks. One of these artists was H.E.R., who used AXT100 for her headset and guitar. She also relied on a new Shure microphone technology for her jaw-dropping on-stage appearance.

For another year, referees used two Axient Digital ADX1 bodypack transmitters working together in Frequency Diversity mode and paired with Shure’s premium subminiature TL47 model TwinPlex omnidirectional lavalier microphones. While omnidirectional lavaliers are typically used in controlled audio environments like theaters, TwinPlex was uniquely suited for this stadium application, given the lavalier microphone’s ultra-pristine, natural response, and off-axis consistency.

Meanwhile, the CBS broadcast relied on ADX2 transmitters and Shure Mic Flag Extenders. “I always enjoy collaborating with the artist teams who work diligently to find the right technology for talent,” shared Jenn Liang-Chaboud, Manager of Entertainment Relations, at Shure. “It’s truly a mutually beneficial relationship. Their insights and feedback help make our products better.”

“From the sounds of the game to the entertainment and everything involved with the broadcast, the Super Bowl is a tour de force of audio production and wireless management,” said Nick Wood, Senior Director, Professional Audio Products, at Shure. “Shure is honored to be a part of it and grateful for the trust of the many amazing professionals who make it work each year.”

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