

## Clear-Com connects Ed Sheeran's Mathematics



USA – Ed Sheeran's record-breaking international Mathematics Tour is as much a display of artistic and technological prowess as a testament to the impact a single performer can have – when supported by the right technology. Which, here, includes an expansive Clear-Com system supplied by Major Tom.

Typically, artists of Sheeran's status tend to add more players, more instruments, and a fair bit of backing tracks to satiate their audiences' demands. As ever, Sheeran takes a different approach, creating a grand spectacle utilising innovative and unique staging and production elements while primarily performing alone, using a custom loop setup to generate accompanying sounds live in the moment, ensuring no show is the same.

Mathematics plays out on five stages placed around the floor of the venue, usually a stadium: one centre stage with a revolving rim allowing 360-degree visibility for (and of) Sheeran, and four platforms for members of his band who – in a first for Sheeran – occasionally accompany him, each at the bottom of six "masts" that act as counterweights in a sophisticated pulley rigging setup for a 42-ton halo above the main stage. As if that wasn't enough, pyro also figures heavily into the spectacle, with flame throwers used multiple times, culminating with a fireworks display as a finale.

Saying there are a lot of moving parts to the technical side of the production is putting it mildly. And that's where Clear-Com comes in. To pull off this technological extravaganza show after show, city after city, every member of every department – lighting, audio, video, stage management, riggers, and automation – need to be in constant communication, not only from a health and safety perspective but to handle the massive infrastructure deployed for Mathematics.

Designed and implemented by David White, Looper and RF tech for Sheeran, and Adam Wells, audio systems

engineer, the intercom system for the Mathematics Tour consists of five 4-channel HelixNet Digital Network Partyline remote stations, FreeSpeak II Wireless Intercom System, and LQ Series IP Interfaces to distribute over the IP Network. HelixNet belt packs are distributed across six remote camera operators, and an antennae splitter distributes the IP network to three different transceivers across the show grounds. All the various departments utilise the same system on their own dedicated HelixNet channel.

Comms are increasingly integral to any show with multiple departments, even in a traditional single stage setup. Multiply that by five separate stages, and it's obvious the deployment here is out of the ordinary in terms of scale and the degree of collaboration required. Here, they're even more critical given that the production crew is spread out, with some beneath the stages, some at FOH, and others not even in the room; among them, follow spot operators controlling spots remotely and video crew working from outside the venue. Put bluntly, without rock-solid, reliable comms, this wouldn't be possible.

With his background in live theatre, Chris Marsh, manager for audio production company Major Tom and production manager for Sheeran, contributed to a very artistic production style. Beneath the main stage during shows, cues are being given as if this were a theatre performance for lighting, video, sound, pyrotechnics, and operation of the massive moving halo above the main stage. All need to be carefully orchestrated, synchronised, and communicated quickly and clearly.

"All of that is standard to large theatrical productions, but this was the first time we've done something of this scale with comms," says Wells. "It's the first time we've had a show with this many bells and whistles and moving parts, and it's so busy and loud everywhere, it's an absolute necessity to have that level of clear communication. With HelixNet and FreeSpeak, it's crystal clear. That's a game-changer to have clear communications for everyone, particularly when dealing with elements like pyro and weather emergencies.

"Clear-Com's systems are robust," Wells concludes. "It's set up in a way that it just turns on and works seamlessly every day, allowing all the various crews on tour to collaborate with ease. You just plug it in, and it's crystal-clear, and it just works."