Sennheiser for ‘Jesus Christ Superstar’

In September and October 2025, the Komische Oper Berlin created a real sensation with performances of almost biblical proportions. On 14 evenings, the rock oratorio ‘Jesus Christ Superstar’ was staged in the monumental setting of Hangar 4 at the former Tempelhof airport – an extraordinary venue where the explosive power of the work was showcased in a spectacular production. And the result was highly impressive. Hundreds of performers filled the vast stage, accompanied by an orchestra, a rock band, and a large choir. The stage design in the aircraft hangar – itself an iconic listed building – created an exciting setting where the action flowed back and forth between intoxicating collective ecstasy and quiet contemplation.

This multifaceted rock opera that effectively combines music, theatre and dance set new standards not only visually but also in terms of electroacoustics – and it did so in a location that is anything but ideal for the use of PA equipment. A key role in ensuring the best sound quality was played by the brand-new Sennheiser Spectera wideband ecosystem. Two Spectera Base Stations, 32 SEK bodypacks and eight DAD antennas delivered a magnificent performance.

“There are two main reasons why Sennheiser Spectera systems were the preferred choice for ‘Jesus Christ Superstar’,“ explained tonmeister Holger Schwark, who was responsible for the sound design of the rock oratorio. “First of all, Spectera is remarkably unaffected by interference that usually occurs in such demanding environments with lots of RF reflection. Secondly, the performers enjoy the high level of wearing comfort that it offers, as they only need a single beltpack instead of the usual two devices – the special feature of the SEK bodypacks is that they function simultaneously as a bodypack transmitter and an in-ear receiver. That benefit is much appreciated, of course, even though ‘Jesus Christ Superstar‘ does

not have all that many costume changes.”

Schwark pointed to the hangar’s huge metal doors, the metal ceiling and the multitude of steel girders. “Many of the challenges that you have to overcome with conventional wireless systems are simply not a problem with Spectera because of its innovative transmission principle. Even the RF reflections, which are usually extremely annoying, are beneficial! In a direct comparison to the settings that had to be made in previous years, operating the wireless system for ‘Jesus Christ Superstar’ in Hangar 4 was remarkably stress-free.”

During the performances of ‘Jesus Christ Superstar’, 27 of a total of 32 Sennheiser Spectera SEK bodypacks were used in their dual function as a transmitter and receiver. The nine main actors as well as a further 18 ensemble members benefited from this bidirectional operation. The saxophonist of the live rock band also used an SEK bodypack as a transmitter enabling him to move around the stage during the show. His instrument was fitted with a Neumann Miniature Clip Mic MCM system with a KK 14 cardioid capsule. Two additional SEK bodypacks served as pure in-ear solutions at the monitoring console. During the rehearsals, the assistant directors also used two SEK bodypacks, which were then available as back-ups for the shows themselves.

This project commissioned by the Komische Oper Berlin in 2025 was the third time that Schwark had worked in a hangar at the former Tempelhof airport. “It was already decided last year that ‘Jesus Christ Superstar’ would be on the programme for 2025,” he said. “Detailed planning began at the start of this year. The contract to provide the sound equipment was awarded to Neumann & Müller GmbH & Co. KG. As usual, additional material was rented from external providers. For the new Sennheiser Spectera systems, this was FREAKSOUND GmbH. Currently, there are still only a few rental companies in Germany that can supply Spectera systems.” Before the performances in Hangar?4, Schwark had used Spectera for “The World of Hans Zimmer – An Immersive Symphony” in Oberhausen.

In order to configure the Sennheiser Spectera systems efficiently, Schwark used the brand-independent RF planning software ‘SoundBase Sennheiser Spectera Mode Planner’. In Hangar 4, Spectera WebUI was displayed on a screen in the wireless world, and the wireless specialists working there on behalf of Neumann & Müller confirmed its exceptional clarity.

In Hangar 4, each of the two Spectera Base Stations used two 8 MHz wide TV channels in the UHF range, which corresponded to an overall bandwidth of 32?MHz (4 × 8MHz). The centre frequencies were 474, 490, 538 and 586MHz. The redundant power supplies of the Spectera Base Stations were connected both to a UPS and to the mains power supply. The compact 19” mainframes were integrated via MADI into the PA system, which was operated in a fibre optic ring with a word width of 24 bits and a sampling rate of 96 kHz.

A total of eight Spectera DAD antennas were distributed throughout Hangar 4 in strategic positions and were connected to the two Spectera base stations using long Cat cables. Spectera does not require the use of conventional coaxial cables and eliminates the need for combiners, splitters and boosters. “Flexible Ethernet cables are a huge advantage especially when you have to route long cables high up below the ceiling into the rig,” said Böttler. “The wireless connections between the SEK bodypacks and the DAD antennas work reliably and the signal is not lost even when the performers move from the performance area into the canteen, which is

separated by a door.” The Sennheiser DAD antennas serve both as receiving and transmitting antennas for IEM/IFB signals, mic/line signals and control data.

In addition to the sound crew from the Komische Oper Berlin, others involved in setting up Spectera included Stefan Ickert (Project Manager Neumann & Müller), and on behalf of Sennheiser, Per Witte, Business Development Manager, Volker Schmitt, Manager Technical Application Engineering, and Gerhard Spyra, Technical Application Engineer.

Kaspar Schwabe from Komische Oper Berlin operated the monitoring console for ‘Jesus Christ Superstar’. He had already worked at the former Tempelhof airport in Hans-Werner Henze’s ‘The Raft of the Medusa’ (2023) and Georg Friedrich Händel’s ‘Messiah’ (2024). “Using Spectera is a premiere for me”, the experienced audio professional explained. “About a year ago, I attended a Sennheiser presentation on the new WMAS technology, so I already knew quite a lot about the fundamentals in theory. The excellent initial impression that I had gained has now been confirmed in practice. The sound provided by Spectera is far better than with analogue in-ear channels, and the transmission of the microphone signals also works perfectly. For ‘Jesus Christ Superstar’, we didn’t even use the PCM mode, but used the data-reduced audio link modes ‘Live’ for the microphone signals and ‘Live Low Latency’ for the in-ear channels. ‘Live’ mode provides a clear, detailed sound that is comparable with other digital Sennheiser wireless systems – but when it comes to reception and range, the Spectera system sets completely new standards, especially in such a demanding environment as Hangar 4.”

When asked, finally, whether he had noticed anything particular about the new Sennheiser Spectera systems during ‘Jesus Christ Superstar’, Schwark replied: “I think what’s fantastic is that I really didn’t notice anything at all at the FOH console

– Spectera worked perfectly and sounds excellent! Perhaps I can take a phrase often used by a Californian tech company and apply it to Spectera: It just works!”

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