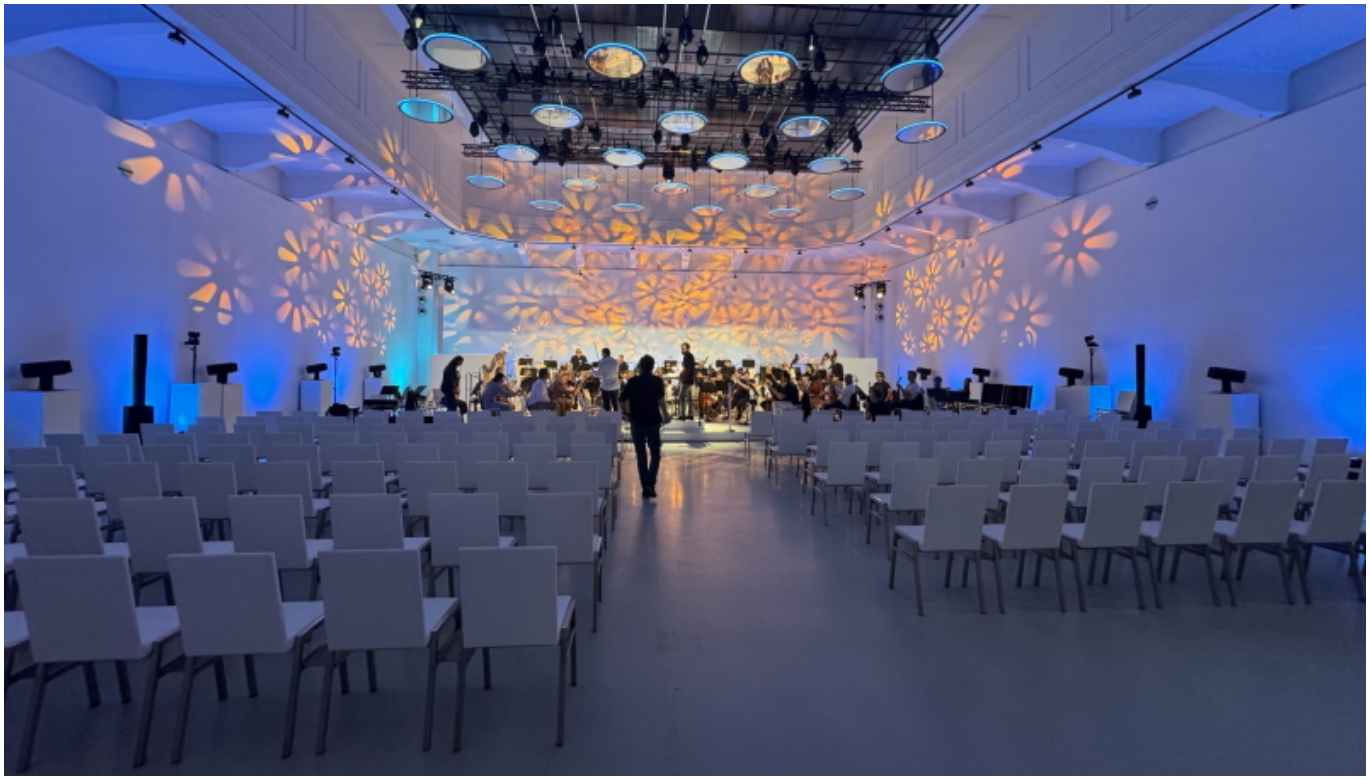
Lawo Technology for “Waltz into Space”



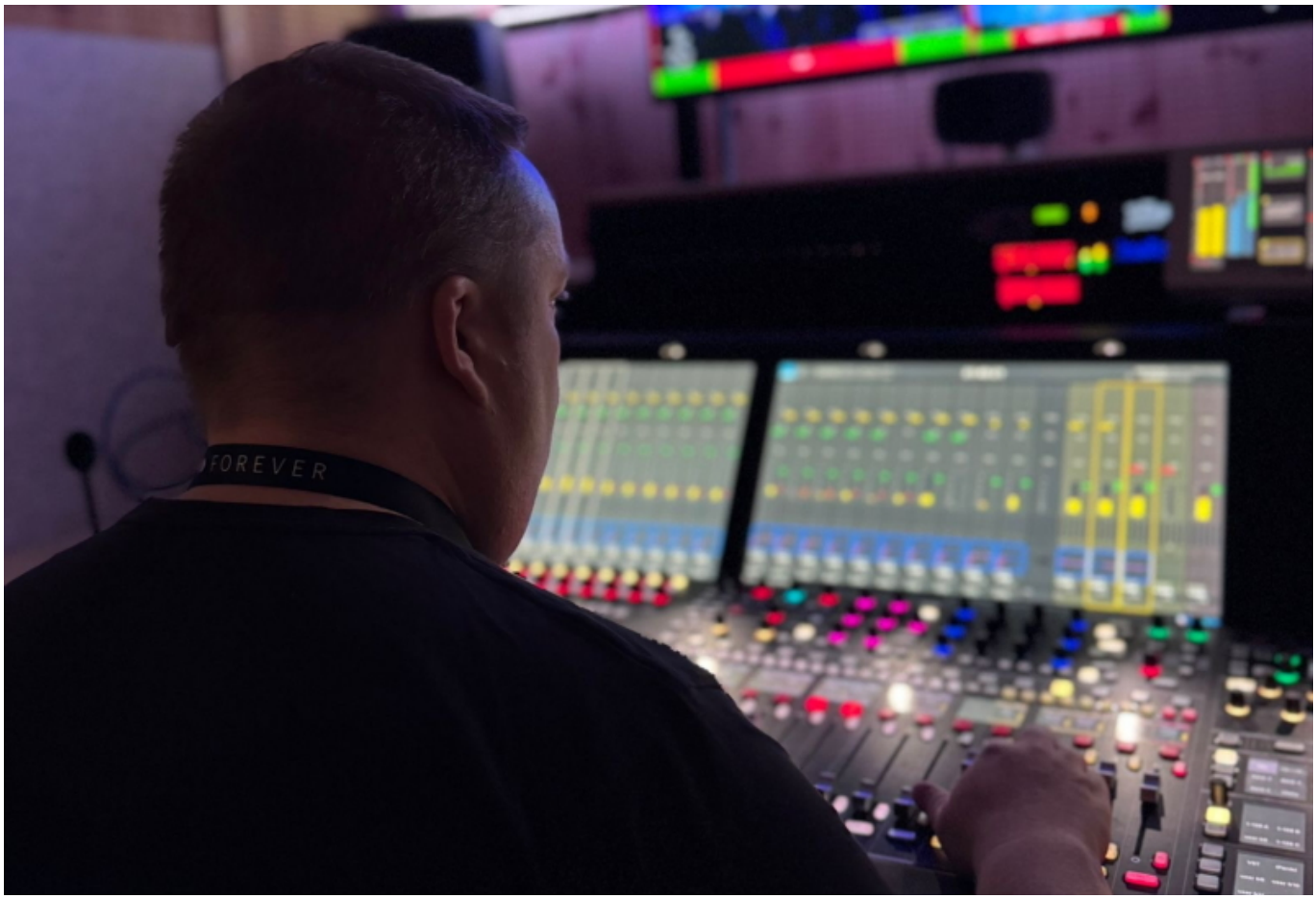
It was a moment where technology, culture, and pioneering spirit converged: On May 31, 2025, Johann Strauss II’s iconic Blue Danube Waltz was not only performed at Vienna’s Museum of Applied Arts (MAK) but was also transmitted live towards Voyager 1 – currently more than 24 billion kilometers (15 billion miles) from Earth. This extraordinary feat was the centerpiece of the “Waltz into Space” initiative, celebrating both the 200th birthday of the “Waltz King” and the 50th anniversary of the European Space Agency (ESA).

The Danube Waltz gained renewed global popularity in the 20th century thanks to Stanley Kubrick’s 2001: A Space Odyssey, where it was memorably used to underscore a scene of orbiting spacecraft – a poetic juxtaposition of romantic music and futuristic visuals that helped seal the waltz’s status as a timeless masterpiece. The audio production was entrusted to Vienna-based studio tonzauber, led by Georg Burdicek, who deployed a mobile production studio centered around a Lawo mc²36 MkII audio production console. “Our goal was to deliver audio at the highest standard – not only for the audience in the hall and global streams, but symbolically, for the universe,” says Georg Burdicek. “Being the first team to send music into space via a Lawo console is a special distinction for me.”

Inside the tonzauber OB truck, a Lawo mc²36 MkII with integrated A__UHD Core handled central routing and real-time mixing of all audio signals. With its 384 DSP channels at 96kHz, support for 864 I/O paths, and native compatibility with ST2110, AES67, and RAVENNA, the compact all-in-one desk proved ideal for this complex

multimedia live production – which included a Dolby Atmos mix, multiple broadcast feeds, and simultaneous multitrack recording.

“In terms of sonic performance, I’m very happy with Lawo,” says Burdicek. “The desk has no coloration – it gives me exactly what I feed into it and responds exactly as I expect. That’s crucial when you’re not necessarily mixing for outer space, but for the inner depth of sound.” Surprisingly, the main technical challenge wasn’t the orchestra – but the room. “It’s not a concert hall, it’s an exhibition space with a glass ceiling and hard surfaces. Acoustically, that’s a nightmare,” Burdicek notes. “We had to compensate with a lot of know-how and the right tools.”



The 40-piece orchestra, conducted by the Vienna Symphony’s new chief conductor Petr Popelka, was recorded using 28 Schoeps condenser microphones, chosen for their high fidelity and low visual impact – an essential consideration for the video team. To achieve a coherent and immersive result despite the difficult acoustic environment, the tonzauber crew relied heavily on the Waves integration within the Lawo console: “Multiband compression, dynamic EQs – we used every tool available to shape a mix that wasn’t just audible, but emotionally resonant.”

The production’s complexity demanded advanced signal distribution capabilities. Using RAVENNA AoIP technology, the team was able to route all elements – from on-

site commentary to playout and surround streams – with full flexibility. “The network infrastructure made things vastly easier,” Burdicek confirms. “There’s no way we could’ve handled this with traditional point-to-point routing.”

Also contributing to the fluid workflow was the mc²36 MkII’s intuitive user interface, featuring color-coded faders and freely assignable layers. "And don’t forget: This was a live event with worldwide attention,” Burdicek explains. “In the end, we successfully transmitted a concert signal in real time to an ESA ground station in Spain – a facility normally used to communicate with deep space missions.”

From ESA’s DSA 2 ground station in Cebreros, Spain, the electromagnetic signal was beamed into deep space at the speed of light. Within 23 hours, the Danube Waltz was projected to overtake the Voyager 1 spacecraft – a symbolic gesture of recognition, as the piece had not been included on the original “Golden Record” that accompanied the 1977 probe. “And to be able to say that I’ve mixed a program for the universe – that’s something truly special,” Burdicek adds with a smile.

The “Waltz into Space” project resonated worldwide – with events not only in Vienna, but also in New York’s Bryant Park and at the ESA antenna site in Cebreros. In his speech, ESA Director General Josef Aschbacher underscored the deeper meaning behind the project: “Our technology is capable of transmitting not just scientific data, but also human art across vast distances. Music – like space – connects all of humanity.”

With Waltz into Space, a timeless piece of music became an interstellar ambassador – carried by precision audio engineering and forward-looking network technology. Once again, the Lawo mc²36 MkII proved its reliability and performance for high-profile live productions under extraordinary conditions. “We tried to craft a sound from an acoustically challenging room that wasn’t just pleasing, but emotionally powerful – maybe even for aliens,” Burdicek concludes. “And I think we pulled it off.”

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