

AUDIO

KIVIKYLÄN AREENA

Rauma, Finland

Images: MONDO | STADIA

The quaint town of Rauma, Finland, pays homage to the traditional ways of Finnish culture. The old shacks of shops and houses are built up like the on-screen set of a Wes Anderson film, with pastel pinks and yellows illuminating the narrow roads that wind around the unique settlement. Located in this eccentric village is the Kivikylän Areena, home to local ice-hockey champions, Lukko. The 5,400-capacity venue has recently been equipped with a brand-new sound system, installed by Finland-based loudspeaker manufacturer, Aura Audio.





With ice-hockey being Finland’s largest and most competitive sport, the arena’s audio had to pack as much of a punch as the players at the heart of the fans roaring cheers. Aura Audio’s Managing Director, Mika Isotalo, explained how the project ended up in his hands: “We first heard about the project through our dealer, F-Pro, and we were really excited about it! This was the first sports arena we had been involved with. The Kivikylän Areena has also been serviced by an old customer of mine, so Aura Audio already helped design some rental event systems in there, which meant I was pretty familiar with the set-up.” Aura Audio was brought in to fulfil the clients dreams of a venue that was equivalent to an American NHL stadium, that could be comparable to some of the best in the world. With such a large and competitive brief, it was essential that Mika visited the arena and drew inspiration from his ice-hockey hobbies outside of the audio industry. “Luckily, I have been to see a couple of NHL games, so I knew what they wanted. The Aura Audio idea was that it needed to be as loud as the loudest place in Finland!” he explained. “The guys at the Kivikylän Areena working on the brief were willing to spend a little bit more to get bigger bass and muscle to revive the sound system that was already in place. They also had recently installed a brand-new LED screen in the centre of the rink, and they needed a good sound system to compliment that.” The design process, for the team at Aura Audio, proved

to be an extensive process of continuous visitation and implementation, as its mantra is that products can only be considered when they’re shown in complete action, in a practical environment. “It’s tough to sell loudspeakers through photographs – you can’t just look at them, it doesn’t tell you anything,” explained Mika. “After the brief, we used EASE simulation which allowed us to simulate the acoustical performance of the complete sound system to find the optimal setup in the arena, which needed to be perfect when combined with multiple audience areas and curved, inclined seating. We provided the team with three different options, based mainly on the SPL that they wanted. After the demonstrations, they chose the second option, mainly down to the preferred SPL.” Cost was a big thing for both the team at Aura Audio and those designing the stadium, as well as something that has been a driving force for Mika throughout the journey with his company. “The loudspeakers that we manufacture take as little amplifier channels as possible, something completely different to the usual self-powered ideologies. This is mainly to make sure we can use our budget elsewhere. In places like the Kivikylän Areena, a lot of cabling is needed, and that is expensive. We ran around 10km of cable around the arena and that in itself took two weeks, so when you combine that with 100 plus loudspeakers, the challenge is avoiding any





TECHNICAL INFORMATION

AUDIO: 2 x Aura Audio D80DSP amplifiers, 3 x Aura Audio D80 amplifiers, 1 x Aura Audio D120 amplifier, 24 x Aura Audio A2 line arrays, 20 x Aura Audio C12 coaxial point source monitors, 32 x Aura Audio i3 fill loudspeakers, 2 x Aura Audio XQ48 subwoofers, 1 x Allen & Heath Qu-16 mixing console.

inconveniences and cutting costs as best we can.” The main audience areas are equipped with Aura Audio’s line arrays and 20 Aura Audio C12 12-inch coaxial point source monitors were supplied for the ice rink and lower ceiling side audience. In the balcony areas, Aura Audio i3 fill loudspeakers create dynamic sound with limitless possibilities. “Aura Audio loudspeakers are highly efficient, and we have that passive approach which makes our loudspeakers a great match for these type of arenas. Our approach is to concentrate on areas where we can use less quantities, therefore, saving on quality.” The arena is also using Aura Audio’s D80 and D100 OEM amplifiers, some using DSP and some without, that are supplied by UK based company mc2-audio alongside the internal XTA processing at the venue. The subwoofers are the XQ48, giving the biggest punch with the smallest footprint.

The arena also bought in a brand-new Allen & Heath Qu-16 mixing desk from Aura Audio’s distributor, “the reason behind the Allen & Heath mixing console was for the amount of control it could give in a space this size,” furthered Mika. The audio configuration in the arena is centred around the middle where the subwoofers are placed, this placement gave Aura Audio the ability to add delays to more remote locations with ease. Mika said: “We avoid shooting anything to the ceiling or floor apart from the ice. It has one virtual source in the middle and, in this case, putting the loudspeakers in the centre would create too many reflections, so we decided to put them as close to the audience as possible. “The loudspeakers that are the furthest away are roughly 20-metres and still, because of the acoustic character



of these type of places, it creates a lot of indirect sound as well. The clarity is problematic too because of the reverberation. We overcame this with very careful aiming of the line arrays. Even the subwoofers are arrayed vertically.” The Kivikylän Areena is a place where the highest of skills are tested. Whether that be with the players involved with the intense game, the competitive chants rallied back and forth between competitors, or the sound system that is as integral to the end result as the force and fitness of the team, everything needs to be agile and work the best it can. Even with a project like this, Aura Audio faced some difficulties, however, it was nothing that could not

be overcome, “the acoustics and the placement of the loudspeakers were our main challenges but as we had approached these issues in the design process, we were always thinking about how we could execute the project in the best way possible, right from the beginning, so we quickly fixed any issues we faced,” concluded Mika. The installed Aura Audio system has proved to be a newly, electrifying element of the Kivikylän Areena. An iconic venue in Finland’s fanatical sporting world, Kivikylän is now ready to take on some of the cities bigger games with the roaring sound to match.

INSTALLER: F-Pro | BRAND: Aura Audio, Allen & Heath | WEBSITES: www.auraaudio.fi, www.f-pro.fi, www.allen-heath.com