**Nordstern Riverboat Nightclub Delivers Singular Dance Experience Designed by WSDG**

*Floating discotheque features superior sound and acoustics despite being below the waterline*

**Basel, Switzerland, April 22, 2020 –** When the celebrated electronic dance music (EDM) nightclub [Nordstern](https://www.facebook.com/nordsternbasel/) was forced to vacate its original premises in an industrial building in Basel, Switzerland, owner Agi Isaku decided on a unique approach for its next location. Isaku selected a former riverboat docked in the Rhine River for its new location, and called upon the global acoustic consulting and audio-visual integration firm [WSDG](https://wsdg.com/) to tackle the challenging task of external sound isolation and internal room acoustics for the ultimate floating discotheque experience.

Before its transformation into the latest version of Nordstern, the boat was known as the Expo Star, a former bar/restaurant. Isaku had it towed to Holland, where the whole ship was skinned and then redone with the nightclub inside, under the direction of the architect in charge of interior design, [Gabriel Heusser](https://gabrielheusser.com/). With the boat back in Basel and docked on the Rhine just across the river from Huningue, France, WSDG partner and Director of Acoustics Gabe Hauser entered the picture to take charge of the new Nordstern’s sound isolation, acoustics, and audio design. Besides the novelty of the club being on the bottom floor of a boat and mostly below the water line, Hauser also had a mandate to make the sound inaudible from outside the club.

“Having been used for transportation of coal, the boat already had a two-layered thick steel hull,” Hauser explained. “We added decoupled side walls for sound isolation, low-frequency absorbers, and to save room height, a floor that’s isolated by using a special kind of compact decoupling mat. We also installed a highly absorptive ceiling, and we angled the hard, reflective walls upwards by about seven degrees to project sound energy to the absorptive ceiling and keep flutter echoes from happening. This also helps to reduce the reverberation time.”

Hauser used acoustic modeling to show Isaku that angling the wall up could help with sound absorption and therefore save on acoustic material, but there was another tough problem to solve. Due to the fact that many of the EDM DJs that Nordstern puts on use vinyl records, the club’s main subwoofers could not be too close to the DJ booth or else the low-end frequencies might skip the records purely by proximity to the high energy from the subs. Nor could the subwoofers be on the floor and still meet the requirements for balanced low frequency distribution on the dancefloor.

“We had to find a way to focus the low-end on the dance floor to keep it away from the entrance and the DJ booth,” Hauser said. “We installed a line of six subwoofers in a row over the top of the dance floor that radiates in a cylindrical pattern along the length of the room. It’s a long and wide sound wave resulting in very even coverage of the dancefloor and steep drop in SPL at the two ends of the dancefloor towards the DJ booth and the entrance area. This approach might be a bit unusual, but it worked great.”

Hauser chose all [L-Acoustics](https://www.l-acoustics.com/en/) loudspeakers. To complement the six SB28 subwoofers over the dance floor, he used eight ARCS II speakers for the mid/high frequencies, paired in four two-speaker arrays suspended from each corner of the 20 x 10 meter, 700-capacity room. The DJ booth system uses two lower-powered SB18 subwoofers with two X15 speakers, and the two fill speakers for the bar area are X12s. Lighting and video projections play a big role in Nordstern’s party vibe, with booths for the VJ (video jockey) and LJ (light jockey) flanking each side of the bar and facing the projection screen behind the DJ booth.

“Despite the unique circumstances and additional challenges, we’ve received great reviews for the sound quality when it was finished,” Hauser said. “One of our recording studio clients is legendary techno producer and DJ Carl Craig, and he posted that this is the best sounding club he’d ever played in.”

## ABOUT WSDG, LLC

For over 50 years, acoustic consulting and A/V integration firm [WSDG](http://www.wsdg.com/) has designed over 3,500 media production facilities worldwide and counting. Projects range from Jimi Hendrix’s Electric Lady Studio and Jazz at Lincoln Center in New York, to broadcast facilities for The Food Network, CBS and WNET, over twenty teaching studios for The Art Institutes, and corporate clients such as Sony, IBM and Novartis. Recent credits include Jungle City in New York, The Church Studios in London, private studios for Green Day, Jay-Z, Bruce Springsteen, Alicia Keys and Academy Award-nominated film composer Carter Burwell. WSDG has collaborated with such noted architects as Frank Gehry, Philippe Stark, Rafael Viñoly, Santiago Calatrava, Grimshaw, and Norman Foster.  An eleven-time winner of the prestigious pro audio NAMM [TEC Award](https://www.tecawards.org/) for outstanding achievement in Acoustics/Facility Design, WSDG maintains U.S. offices in New York, Washington, DC, San Francisco and Miami and global offices in Barcelona, Basel, Berlin, Belo Horizonte, Buenos Aires, Guangzhou, Mexico City and Mumbai.

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