



Press Information – for immediate release

Fohhn's Focus Modular takes Opéra Bastille by storm

Loudspeaker manufacturer's beam steering technology delivers highest quality sound to every seat in France's national opera house.

Nürtingen, Germany, 17th December 2015 – A new installation of Fohhn Audio loudspeaker systems in the Opéra Bastille, Paris, has ensured that each of its 2745 seats is “the best in the house” with regard to sound quality and audibility. The German manufacturer's Focus Modular systems with Beam Steering capability beat off stiff competition in the quest to deliver highest levels of speech intelligibility and music reproduction to every seat, without impeding audience views or spoiling the hall's stunning architecture.

The opera house's main auditorium has seating on three levels – stalls and two main balconies, as well as eight side balconies. With the top tier 18 metres high and 40 metres from the stage, and other seating covered by the balconies, how to replace the existing system with a more effective solution posed a challenge for planners.

Focus Modular loudspeakers proved first choice for the main system due to their sound quality, precise coverage capabilities and unobtrusive appearance. A 7.48 metre column, comprising five loudspeaker modules, has been installed each side of the stage. Three wall-mounted, stacked FM-400 low-mid modules form the column's centre, with high frequency FM-110 modules added top and bottom. Each speaker's individually generated beams (one from the top FM-110, two each from the FM-400 modules and two from the lower FM-110) can effectively cover all seating areas without spoiling the audience view, or interfering with the architecture.

Fohhn Linea LX-150 and LX-100 passive line source speakers, driven by D-4.1200 DSP amplifiers, provide supplementary coverage for some of the side balconies. The aluminium housing of these slender systems has been colour-matched to the ventilation ducts on which they are mounted to blend with the interior. For extended low frequency coverage, two of Fohhn's 21-inch PS-9 active subwoofers, clad and hidden from view at the side of the stage, provide precise and powerful reproduction in the 28 Hz – 110 Hz frequency range.

Coverage of the highest and lowest side balconies has been achieved using Fohhn's compact LX-10 ASX AIREA system loudspeakers, with an AIREA AM-20 Master module serving as the central digital interface for the speakers. The AIREA system is remarkable in requiring just a single CAT cable for wiring. All digital audio signals and control signals, as well as 48V power, are transmitted via this one network cable. Here it has proved a significant factor in reducing both the cost and complexity of the installation.

The entire sound system, including the Focus Modular loudspeakers, digital amplifiers and AIREA system components, has been incorporated into a Fohhn-Net network. This enables each device to be individually controlled and adjusted in real time using Fohhn Audio Soft control software, creating a secure and efficient working environment for the opera house's sound technicians. Further benefits of Fohhn's optimised digital technology have included the need for just one control rack in the opera house basement (replacing six racks from the previous installation), as well as the need to use far fewer loudspeakers to effectively cover the hall.

“We wanted to change our PA system, but it was important not to spoil the hall's beautiful architecture by having large stacks of loudspeakers everywhere”, says Philippe Taberlet, Technical Director of the Opéra Bastille. “Then we discovered Fohhn. The Focus Modular systems have proved perfect for achieving high quality reproduction of music and voices, with their Beam Steering

technology providing impressive, direct coverage possibilities. What's more, the speakers have integrated perfectly into the hall's interior, leaving its 'look' untouched. We're happy!"

The Opéra Bastille installation was carried out by system integrator SILENCE! and Fohhn's French distributor Rock-Audio Distribution, in cooperation with Fohhn planning engineers.

www.fohhn.com

About Fohhn

Fohhn Audio AG specialises in the manufacture of professional loudspeaker systems for both mobile and fixed-installation sound reinforcement. For over 20 years, the Nürtingen-based company has developed system concepts that combine innovative design and functionality with first class sound quality. Development of all Fohhn systems takes place in-house in Nürtingen, Germany, incorporating the company's own highly developed DSP-, amplifier-, network- and remote control technology. Special focus is placed on the integration of state-of-the-art technologies such as Beam Steering and on the latest developments in 3-D audio and digital audio networking technology.

Fohhn is currently distributed in more than 30 countries. Fohhn customers and users include, among others, the Opéra Bastille and Charles de Gaulle airport in Paris, the University of Heidelberg, Mainz Cathedral, Hengdian Studios in China, the Shanghai Tower, Doonsan First Methodist Church in South Korea, the Danish Parliament, as well as the German, Kazakh and United Arab Emirates pavilions at EXPO 2015 in Milan.

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