

LANDMARK GOYA THEATRE IN BARCELONA INSTALLS AT BLACKBIRD LINE ARRAY SYSTEM

The *Goya* Theatre, which was founded in 1914, first started its theatrical activity in 1916 and was later converted into an important theatre in the city of Barcelona. In addition to being used as the headquarters of the Aragonese Centre, the theatre has staged productions in which many famous names in the drama sector, such as Margarita Xirgu, have taken part.

During recent years, many successful plays have been staged at the *Goya* in Barcelona, including performances by Paco Moran, the Gutiérrez Caba sisters, Núria Espert, Maria Jesús Valdés, Àngels Gonyalons, Pepe Rubianes and many other great professionals.

In 2004, the theatre was forced to close and was on the verge of ceasing its activities, but the Focus Group took charge of bringing it back to life in order to prevent the loss of one of the most emblematic artistic and drama centres in the city.

The reform work executed in the *Goya* Theatre, which will celebrate its 100th birthday in 2016, is based on building a new theatre within an existing frame. The theatre has a capacity for 520 people, including both the tiered stalls and the amphitheatre. The remodelling project has a cost of 3.7 million euros, of which 2.2 million euros have been put up by the local authorities, through the Barcelona Theatre Rehabilitation Consortium, whose members include Generalitat de Catalunya, Barcelona City Council and the Ministry of Culture. The Deputation of Barcelona and Regional Government of Aragón have also collaborated in the project.

As a consequence of the process of renovating the Theatre, Ecler a major Spanish based electronics manufacturer and distributor, were awarded the contract to install the new sound system. The Spanish firm decided on a combination of Ecler DPA series amplifiers and speaker systems made by the Australian company AT Professional, a brand that is distributed by Ecler throughout Europe on an exclusive basis.

In the *Goya* Theatre, Ecler has used a sound system that fully satisfies all the needs of a modern theatre, one that offers excellent coverage, with high quality speaker systems, that are compact, discreet and easily camouflaged.

The AT Professional speaker systems are characterised by their constant directivity and high intelligibility, and are therefore perfect for this type of application, providing extraordinary coverage of the whole audience area. In addition, the project includes the latest version of the AT Blackbird Sound Level

Prediction software, which makes it possible to achieve precise modelling of the configuration and the Blackbird TLA Line Array sound system's performance.

The system consists of 4 active filters to obtain increased band-pass fidelity and is designed as PA L+R, plus one central channel. This configuration allows each playing point to be controlled separately, and for each of them to send signals that are processed separately, depending on their specific characteristics. For example, the basic music programme can be played by the PA L+R, and the voice through the central channel.

The pitch of all the loudspeakers is the same and the composition of the PA L+R cluster is as follows: Blackbird TLA306 Line Array systems at each side, one central channel with Blackbird TLA306 Line Array cabinets, 2 subwoofers at the front of the stage and an additional front fill with 4 x full range AT Professional speakers.

Each lateral line array element consists of 8 x AT Professional TLA306 cabinets, an innovative 3-way design with two powerful neodymium 6.5 transducers. One transducer is used for the low frequency band and the second reproduces the information of the intermediate band. The high frequency band is processed by means of a 1" compression driver coupled to an Isophasic Diffraction Aperture that provides a horizontal dispersion of 150°. The vertical dispersion is determined by the length of the array curve.

This unit is supported by 1 x TLA306B subwoofer manufactured by the Australian firm, an extremely powerful direct radiation box fitted with a 12" transducer for the low-frequency band, developed specially for the TLA Line Array series.

The Blackbird TLA306 Line Array system is amplified at each side by 1 x DPA1400 phase for high frequency, 1 x DPA4000T for medium frequency, 1 x DPA4000T for high frequency and 2 x DPA4000T for the subwoofers.

The DPA amplifier line has been specially designed for the fixed installation sector, and combines the contrasted SPM technology developed and patented by Ecler, with the possibility of adding processors such as the AMIC digital module, that is configured through USB by a PC, and enables exhaustive processing of the audio signal.

The central channel has 4 x TLA306 line array cabinets but without subwoofers. The amplifying consists of 1 x DPA600 phase for high frequency, 1 x DPA2500T phase for medium frequency and 1 DPA2500T for low frequency.

At the front of the stage, 2 more TLA306B subwoofers have been installed on the same PA line, from left to right. Through this combination, the possibilities of use are multiplied, depending on production requirements.

The front fill consists of 4 x SS12 speakers which are extremely compact trapezoidal speakers. The SS12 has 2 x 6.5" transducers and is coupled by a crossover network to the 1" compression driver for high frequencies. The

compression driver and its diffusor have a dispersion of 90° x 60° and the unit can be rotated to 90°, allowing the box to be installed vertically or horizontally, and the required high-frequency dispersion characteristics to be maintained.

The front fill system includes an Ecler AMIC control card. This device, which has a powerful DSP driver, allows for shaping of the sound and the simple configuration of systems using a computer. AMIC is the accessory card of the Ecler DPA series amplifier line and the AMICLAB software enables its interactive configuration.

The AMIC system offers complete flexibility in a 2 IN /4 OUT audio processor, where each output is the result of applying the following processes to any of the input signals that are selected: level adjustment, separation of channels, parametric equalising, delay, compressor/limiter and phase muting and reversal.

The interior of the stage has 4 monitoring transmissions or effects with 4 x SS12 speakers, amplified with 2 x DPA1400 phases. The stage is also fitted with an AMIC control card for equalising and applying the necessary filters and delays.

Friday 3 October, the President of Generalitat de Catalunya, José Montilla, re-inaugurated the *Goya Theatre*, which opened its doors again four years after closing, following a process of thorough rehabilitation and adaptation to the demands of this new century by the Focus Group. The event was attended by many celebrities from Catalan society and many well-known faces from the theatre.

Josep Maria Pou, responsible for the theatre's artistic management, staged the opening performance of *The History Boys* by Alan Bennet. Not only did he direct the play, but he also played a leading role. The new *Goya Theatre* bases its programme on an open, balanced repertoire, with particular emphasis on its own productions and collaboration between artists, companies and public and private institutions.

Under the artistic management of Josep Maria Pou, mostly works by famous 20th-century authors are produced and staged, together with modern plays, with the collaboration of famous Catalan, Spanish and international artists.

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