

globe, including the Avalon clubs in Hollywood, Singapore, San Diego, CA, and Boston, MA. Lyons and EAW's co-founder Ken Berger worked together on the original Avalon loudspeaker system's design launched in 1997.

The system was redesigned from the ground up as the "Avalon by EAW" Sound System, and re-launched in 2011. Avalon Hollywood's Avalon-series system has now



Spanish manufacturer D.A.S. Audio introduced its new Sound Force Series line-up of dance systems at the 2015 Prolight+Sound show in Frankfurt, Germany. The series includes the SF-30A, a M-Force powered ultra-low system, using 30" diaphragms, that provide 7,500 W of continuous power.



been improved with the help of Powersoft's latest technology, implemented in a new range of Avalon subwoofers.

The innovative setup was unveiled at Avalon's Grand Reveal 2014, replacing the original Avalon EAW system, which was recognized as a world reference and can still be heard in hundreds of nightclubs around the globe. Each speaker cabinet now includes a 40" Powersoft diaphragm and M-Force, resulting in a cleaner, more powerful sound than was previously possible to produce.

Each subwoofer cabinet (there are six in total in the reference installation) is powered by two Powersoft M-Drive modules that are used to supply power to the M-Force motor, the cone, and each of the traditional speakers, generating 15,000 W at 2  $\Omega$ .

Another example about to reach the market is the Sound Force Series of club systems by Spanish manufacturer D.A.S. Audio.

The new Sound Force Series of dance systems is aimed at top-level clubs and discos. The system is comprised of four speaker models for mid-high, mid bass, and two subwoofer options, including the impressive SF-30A, a M-Force powered ultra-low

system, using 30" diaphragms, offering 7,500 W of continuous power.

Other M-Force powered systems are currently in development from other manufacturers but no details have become public at the time of writing.

### Open Applications

Powersoft has been extensively promoting the M-Force concept in different forums. Lastrucci introduced the technology also at the Association of Loudspeaker Manufacturing & Acoustics (ALMA) International's Winter Symposium 2015, in Las Vegas, NV, convincingly demonstrating the efficiency of the new moving magnet linear motor technology in subwoofers and detailing working methodologies, cabinet design, and loudspeaker application scenarios.


According to Lastrucci, the M-System is currently an exciting new platform for OEM applications. "As soon as the results on the initial prototypes provided some effective performances, we started to pursue a process of optimization and engineering that led to a finished product. Since our goal, as Powersoft, is not to be a speaker manufacturer but a supplier

of components for their products, this was naturally in line with the company's vision."

Another surprising aspect was how the concept was quickly converted into actual products. According to Lastrucci, "We do like to have and maintain a tight relationship with our existing partners and users, always listening to their needs and looking for their feedback on our "crazy" ideas: speaker manufacturers, rentals and FOH all have their own unique perspective on a system and it is important to verify that a new technology brings some real benefits to all of them. With M-Force it was exciting to see the reaction when we started to

talk about this new technology, and above all, after getting them listening to it and playing with the first samples. We know well that new technologies take a very long time to be accepted in our industry (it happened so many times to us...) but it sounds like this time the word is spreading faster... Maybe the industry is beginning to trust we can make crazy ideas real."

Lastrucci adds, "The technology is intended also for other applications, not necessarily to produce sound... Likely, otherwise, to remove it... This is a field of application [active noise canceling] we are investigating for a considerable period of time and foreseeing interesting possibilities."

Apart from high power and energy efficient subwoofers, Powersoft says its M-System is currently being tested for diverse applications such as steerable low-frequency arrays, low-frequency noise, and standing waves active removal systems and dipole low-frequency acoustic generation. "We are already working on other fields of application for the technology, there is a kind of market that is demanding large forces and medium stroke, typical of the M-Force technology," concludes Lastrucci. 

## Resources

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