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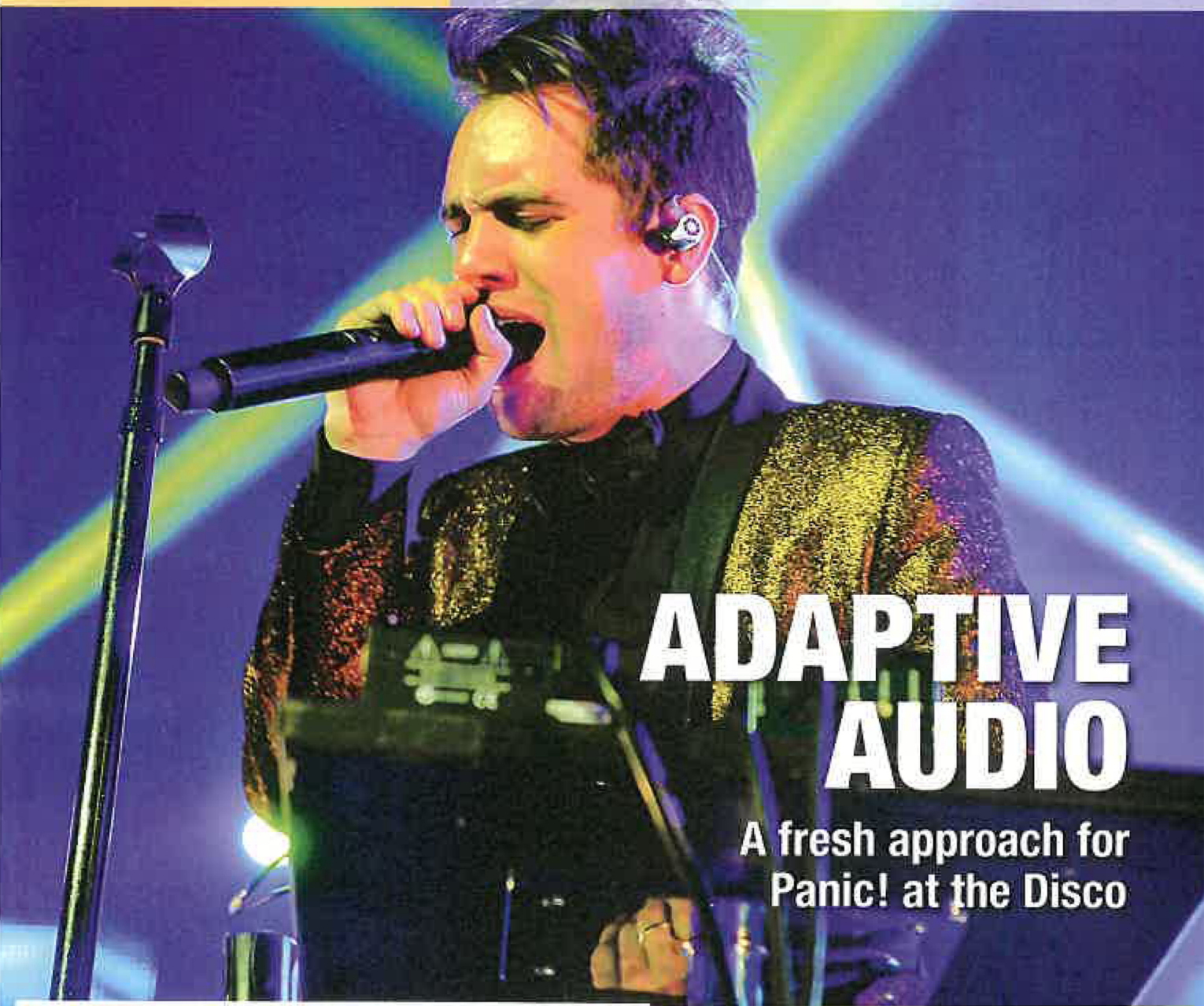
LIVE SOUND INTERNATIONAL

April 2014 | www.prosoundweb.com | $10



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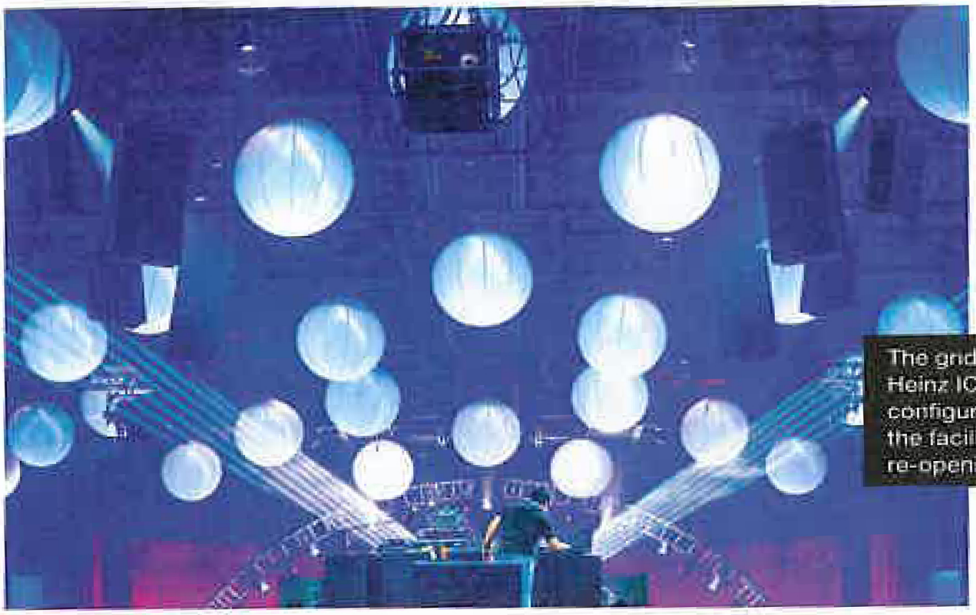

The grid and Renkus-Heinz IC² loudspeaker configuration for the facility's grand re-opening party.

MULTI-FUNCTION SOUND

Revitalizing a Long Beach landmark with new audio technology.

by Live Sound Staff

BUILT IN THE EARLY 1960s as part of the city's convention center, the Long Beach Arena is a cornerstone of entertainment in Southern California, hosting sporting events such as the 1984 Olympic volleyball tournaments to live performances as diverse as Cirque du Soleil, Iron Maiden, Run-DMC and Disney on Ice. The arena's Pacific Ballroom, along with the rest of the convention center, has recently reopened after a series of renovations that includes new audio, lighting, and curtaining systems, including the largest tension grid system in the U.S.

The grid, weighing in at more than 500,000 pounds and including in excess of 8 miles of steel cabling, has been recognized by *Venues Today* magazine with an Ops and Tech Award, and more importantly, has helped transform the arena into even more of a multi-functional venue. It's 46,000-square-foot, 200-foot long elliptical floor can now be partitioned for use without the surrounding arena seating and arranged in a wide range of configurations. In fact, the difference is significant enough that the venue now has its own moniker when the system is in use — The Pacific Ballroom at the Long Beach Arena.

Yet while the curtains do wonders to partition and conceal the arena seating and frame the flat floor, they do little for the acoustics of the overall space, which presented a challenge in finding a sound system flexible enough to meet the demands of a wide-ranging roster of events.

Working with architectural firm John Fisher & Associates, engineering firm JR Clancy, and installers Pro Sound, Burbank, CA-based Electrosonic put together a new sound reinforcement system to integrate into the movable grid scheme. Left and right hangs of 10 Renkus-Heinz IC² digitally steerable array cabinets each are suspended from the grid, with each array augmented by eight IC118S subwoofers for added low-frequency power and punch.

Andy Batwinas of Electrosonic explains that it's a concept that likely hasn't been implemented on this scale. "The grid itself can be lowered to 30 feet for smaller events, and be raised up to 70 feet for games and larger events," he says. "A series of connection points allow the loudspeaker arrays to be moved around and relocated across the grid. Depending on how high the grid is positioned, and where the arrays are located, we're going to have different coverage needs. Once the arrays are in place for any given event, we can digitally steer the sound to focus on the areas where the seats have been located, and steer it away from the outer perimeter, ceiling, and other reflective areas."

Further, the grid can be lowered and completely removed for events like a Disney on Ice or Cirque Du Soleil show, where full access to the ceiling

A closer look at some of the loudspeakers on the grid.

is required. The IC² arrays can then be removed from the grid and ground stacked.

COVERAGE WHERE NEEDED

Batwinas also points to the consistent coverage of the IC² boxes as an important consideration. "They really needed a system that would be able to deliver a dependable sound pressure level from one end of the floor to the other. When we did the demo, we set up the array at the far end of the arena and aimed it down the floor the long way. It delivered a very even sound pressure level from front to back, across the entire 200-foot length of the floor. You could walk the whole space and measure the sound at a solid 98 dB SPL from one side to the other."

"The beam steering technology made it a vastly superior alternative to a standard line array system," he adds. "With IC² you can aim the sound directly down to the floor, to your seating area, so it's not bouncing off the architecture."

The system is networked using Renkus-Heinz RHAON control, enabling the arena's technical crew to implement preset coverage configurations for different event needs, and making quick changeovers possible with the press of a button. "Using RHAON, the technical crew can program coverage configurations for some of the most commonly used event setups and save them in the software," Batwinas notes. "Those saved presets can then be easily recalled, making quick changeovers possible with the press of a button. They often have only about six or eight hours to do a turnover between shows, and this enables them to make the most of that limited time."

Based on the success of the IC² application, Renkus-Heinz VARIA modular point source arrays and 12 VA15S subwoofers were subsequently added to cover the arena's 19,000-square-foot lobby area and 29,000-square-foot concourse. VARIA's modular design and variable dispersion patterns enable the systems to be custom configured for the area's different ballrooms, theaters, halls, and atrium. Additionally, 16 CFX81 loudspeakers were installed in the ceiling of the arena's lobby for added foreground coverage.

The Long Beach Arena's grand reopening late last year, featuring a live laser show as well as performances by William Close and his Earth Harp that were met with rave reviews, with the ballroom set to host a full calendar throughout this year.