

## CASE STUDY



# STADIUMS & ARENAS



### OPPORTUNITY

Owners needed audio coverage was even and clear throughout the Racecourse.



### SOLUTION

Ba Sao Investments designed a full HARMAN-based audio system that included JBL Professional loudspeakers, Crown amplification, Soundcraft mixing, BSS networked audio, and AKG microphones.

### VIETNAM'S DAI NAM RACECOURSE

Opened in October 2016, Dai Nam Racecourse was created to boost tourism in the Dai Nam tourism park complex, 24.8 miles (40 kilometers) away from Ho Chi Minh City. With such a huge space, it was critical that audio coverage was even and clear throughout the Racecourse. Local systems integrator and HARMAN distributor, Ba Sao Investment, took on the responsibility of installing the audio system for Dai Nam.

Spanning more than 460,180 square feet (42,753 square meters), the \$100 million complex was built to accommodate five racing disciplines, with tracks for dog and horse racing, auto and motorboat racing, go-kart racing and fly-board performances. The large racecourse is able to accommodate up to 60,000 spectators with four grandstands that seats 18,000.

The biggest challenge that Ba Sao Investments faced was the tight schedule as the owners wanted to open the Race Course by 2017. Featuring a full HARMAN based system with the BSS BLU Link enabled the seamless ease of connectivity, thus helping the system integrator meet the deadline.

"I am extremely satisfied with HARMAN's products and their Vietnam partner Ba Sao Investments' services including installation, operation and timely completion of the project," said Vo Kim Thanh, Vice President, Dai Nam Race Course. "Not only am I very happy with the quality of HARMAN's products but the local television stations have also praised the products during their visit."

The completed racecourse boasts an impressive lineup of technology, with 52 JBL AWC82 taking responsibility for main audio coverage within the stadium. Two JBL PRX710 speakers were installed for monitoring purposes, within the control room. Four AWC129 units were placed for coverage at the entrance of the racecourse and parking area.

“

I am extremely satisfied with HARMAN's products and their Vietnam partner Ba Sao Investments' services including installation, operation and timely completion of the project.”



AKG

AMX

BSS

CROWN

dbx

JBL  
PROFESSIONAL

lexicon

Martin

Soundcraft

STUDER



“

Not only am I very happy with the quality of HARMAN's products but the local television stations have also praised the products during their visit.”

Driving the speakers are 15 units of Crown CTs2000 and one CTs3000. Both the AWC82 and AWC129 are highly weather-resistant speakers that offer 1200 x 1200 dispersion and 900 x 900 dispersion respectively. Both speakers offer extraordinary clarity for speech, with extended frequency response for music, which is exactly what the Racecourse required.

A Soundcraft Si Expression 1 console handles mixing duties, with its massive mix capacity of 66 inputs, in a small format. One distinctive advantage with the Si Expression 1 console is the FaderGlow™ that gives the user an additional level of status indication that helps to reduce operating errors. Several different functions can be assigned to a fader and to ease operations the FaderGlow™ indicates the actual function type that is currently assigned to the particular fader.

BSS networked audio played an important role at the installation. A mix of five units of BLU-50, one unit of BLU-100, one unit of BLU-102 and six units of BLU-DAN integrate the digital signal processing into one seamlessly working audio system.

Speech reinforcement is offered via five units of AKG WMS470 Vocal Set D5. The set includes a HT470 handheld transmitter featuring a dynamic D5 capsule for well-balanced, powerful sound. The space diversity receiver offers both a microphone level and a line level output.

The AKG wireless system is also supported by two units of AKG CGN521 STS, which is a professional tabletop microphone set with excellent shock absorbing properties. Its features a CGN521 condenser gooseneck microphone with a cardioid polar pattern on a slim, 50 cm long gooseneck. The microphones are used for commentary purposes.

“We are extremely privileged to be associated with Dai Nam Racecourse and thank them for choosing HARMAN's suite of solutions including our iconic JBL, Crown, BSS, dbx and Soundcraft products,” said Ramesh Jayaraman, VP & GM HARMAN Professional Solutions, APAC. “We are sure HARMAN Professional Solutions will enhance the experience of Dai Nam customers and ensure complete satisfaction. Thanks to our partners Ba Sao Investments for their support and customer first approach.”



## PRODUCTS USED

**AKG CGN521 GOOSENECK MICROPHONES**

**AKG WMS470 WIRELESS MICROPHONE SYSTEMS**

**BSS SOUNDWEB LONDON SIGNAL PROCESSORS**

**JBL PROFESSIONAL ALL-WEATHER COMPACT SPEAKERS**

**SOUNDCRAFT SI EXPRESSION 1 MIXING CONSOLE**



## CONTACT

For PR Inquiries:

David Glaubke

Director, Public Relations

HARMAN Professional Solutions

david.glaubke@harman.com

+1 (818) 895-3464 Office

+1 (818) 470-7322 Mobile

To Speak With Someone About  
HARMAN Products and Solutions,  
visit [pro.harman.com/contacts](http://pro.harman.com/contacts)

## ABOUT HARMAN

HARMAN ([harman.com](http://harman.com)) designs and engineers connected products and solutions for automakers, consumers, and enterprises worldwide, including connected car systems, audio and visual products, enterprise automation solutions; and services supporting the Internet of Things. With leading brands including AKG®, Harman Kardon®, Infinity®, JBL®, Lexicon®, Mark Levinson® and Revel®, HARMAN is admired by audiophiles, musicians and the entertainment venues where they perform around the world. More than 50 million automobiles on the road today are equipped with HARMAN audio and connected car systems. Our software services power billions of mobile devices and systems that are connected, integrated and secure across all platforms, from work and home to car and mobile. HARMAN has a workforce of approximately 30,000 people across the Americas, Europe, and Asia. In March 2017, HARMAN became a wholly-owned subsidiary of Samsung Electronics Co., Ltd.



© 2018 HARMAN International Industries, Incorporated. All rights reserved. Harman Kardon, Infinity, JBL, Lexicon and Mark Levinson are trademarks of HARMAN International Industries, Incorporated, registered in the United States and/or other countries. AKG is a trademark of AKG Acoustics GmbH, registered in the United States and/or other countries. Features, specifications and appearance are subject to change without notice.