



BOSE

PROFESSIONAL

CASE STUDY – SPORTS | JAKARTA INTERNATIONAL STADIUM





THE SOUND OF FOOTBALL, FANS AND GROWTH

Jakarta International Stadium is one of the five biggest stadiums in Asia. Visually magnificent, the total height of the stadium is 73 meters (240 feet), making it one of the tallest stadiums in the world. The stadium façade features a tiger striped-styled pattern designed after Persija's (Jakarta soccer club) color and mascot and pays tribute to the local culture with the stadium shape inspired by the shape of a "Peci" — the traditional cap worn by the Betawi in Indonesia.

The stadium first opened its doors in 2022 and is located near the city center of Jakarta, the capital of Indonesia. The stadium's stands are divided into three levels with a capacity to hold over 80,000 spectators — the first in Indonesia to accommodate such a large number of fans. Constructed to meet FIFA requirements, the Jakarta International Stadium hosts a variety of activities in addition to football and other sporting events.

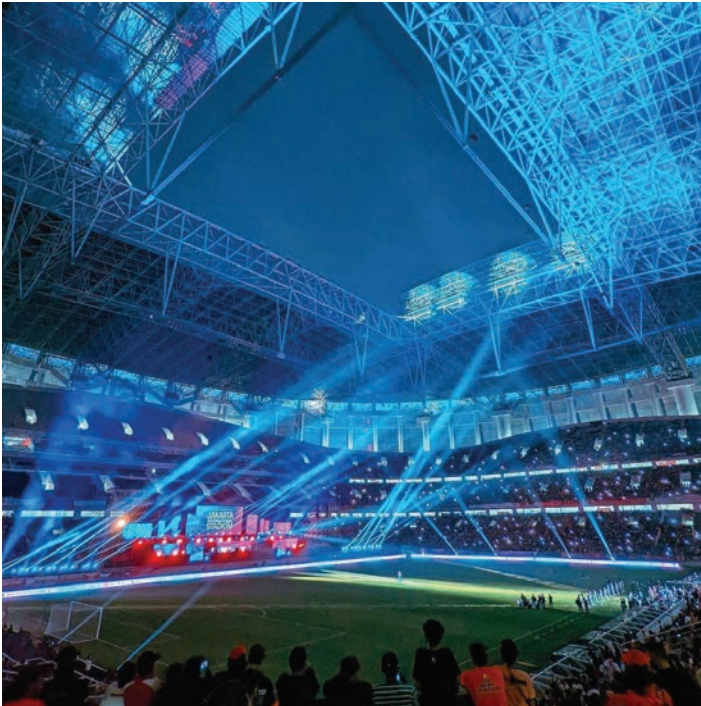
Football matches in Indonesia consistently draw one of the largest crowds of any sport played in the country. To meet the growing needs of fans and teams, stadiums need to provide their patrons with an inclusive experience, which is shown to increase attendance, participation, and revenue over the long run. With this in mind, the stadium's needs for a powerful audio solution were at the forefront of its long-term plan for growth.

WEATHERPROOFING AND ENGINEERING THE RIGHT SOUND

Jakarta International Stadium makes an impressive statement and a fascinating landmark, all while redefining the standards for stadiums in Indonesia. However, its unique architecture posed serious audio challenges, which is common in large, reverberant spaces like stadiums where sound reflects and becomes unintelligible.

Dependent on the event and weather, the Jakarta International Stadium's retractable roof may be open or closed, which greatly alters the atmosphere of the space. While convenient for events, this in turn impacts the sound quality within the stadium. What's more, the towering 90-meter (295-foot) dome and need for a weather-proof outdoor system further intensified the project's requirements.

Clearly, Jakarta International Stadium's intricate audio needs demanded extensive customization and expert knowledge, especially in handling sound within its vast dynamic space. To address these challenges, PT Prabu Jaya Sentosa, a leading Bose Professional and sound contractor, was brought in to create a tailor-made audio solution for the iconic venue.



FLEXIBLE AND CAPABLE IN A SLEEK, POWERFUL SOLUTION

Leveraging their vast experience with stadium sound engineering and using the Bose Professional Modeler sound system software, PT Prabu Jaya Sentosa created an effective sound system solution to overcome the project's intrinsic problems.

The stadium now boasts an impressive Bose Professional solution which includes the ArenaMatch AM20 and AM40 loudspeakers with 40-degree vertical and 60-degree horizontal coverage. To cover the stadium's top infrastructure, PT Prabu installed the ArenaMatch Utility AMU208 loudspeakers, and the ArenaMatch AM10 loudspeakers were used to provide an 80-degree nominal coverage pattern.

These ArenaMatch loudspeakers bring DeltaQ sound quality and freedom to outdoor installations like sports stadiums or amphitheatres, ensuring clear and consistent sound for every listener. Made for direct-exposure setups, ArenaMatch DeltaQ loudspeakers deliver the needed high SPL and long throw music production, ensuring reachability of sound, voice intelligibility, and far-reaching horizontal coverage.

To deliver sharp, clear, and powerful bass throughout the outdoor area, PT Prabu chose the LT MB12 and MB24 compact subwoofers. Positioned at an ideal height of 80 meters (262 feet), the stadium will be evenly covered with sound, regardless of whether the roof is open or closed.

For the indoor area of the stadium, the loudspeakers needed to provide high coverage and superior voice intelligibility without disrupting the beautiful design of the interior.

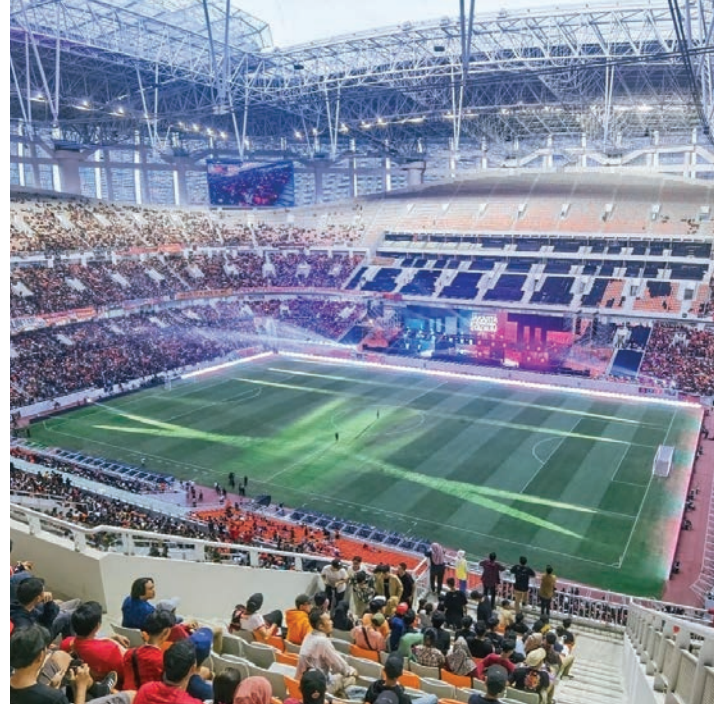
Bose Professional DesignMax DM6SE and DM8S were chosen not only for their discreet, sleek design, but also for their rich lows and clear, intelligible highs. Now, the Jakarta International Stadium interiors are not disrupted by the bulky design of traditional loudspeakers.

“Using Bose Professional ArenaMatch ensured Jakarta Stadium had a top-tier sound solution that addressed the complexities of a space this large. Every fan has an amazing experience — whether it’s clarity of what the announcer says or music that energizes the fans.”

— PT Prabu Jaya Sentosa
Professional AV Contractor
Prabu Jaya Sentosa AV

BOSE PROFESSIONAL SOUND SCORES WITH FANS AND CONCERT ATTENDEES

The success of the installation was evident during the recent FIFA World Cup Qatar 2022. Fans, players, and coaches were met with improved sound throughout the stadium. Speech intelligibility was significantly improved, and sound travels across the stadium without significant reverberation, allowing clear, crisp sounds and powerful bass.



What's more, these remarkable loudspeakers also deliver a staggering total SPL of 111db, which exceeds the FIFA standard of 105db — creating an electrifying atmosphere that leaves every spectator in awe.

With the stadium equipped with a top-tier audio solution, any future events the stadium hosts will be poised to capitalize on the roar of the crowds and sounds of sports, music, or other arena events. Bose Professional and partner PT Prabu Jaya Sentosa provided a valuable and sound-worthy masterpiece, meeting the needs of Jakarta International Stadium perfectly.

A triumph for Indonesia, Jakarta International Stadium stands tall as an iconic landmark, promising an unforgettable experience for years to come. ■

SYSTEM COMPONENTS

ArenaMatch AM10 loudspeaker

ArenaMatch AM20 loudspeaker

ArenaMatch AM40 loudspeaker

ArenaMatch Utility AMU208 loudspeaker

DesignMax DM6SE loudspeaker

DesignMax DM8S loudspeaker

LT MB12 modular bass loudspeaker

MB24 modular bass loudspeaker

PARTNER: **PT PRABU JAYA SENTOSA**



Founded in 2014, PT Prabu Jaya Sentosa is a General Contractor and Mechanical Electrical Supplier located in South Kalimantan, Indonesia. They are committed to providing 24-hour service staffed by technicians with deep audio expertise. Their solid team of experienced professionals specialize in providing quality services from sound systems to CCTV installation. They partner closely with their customers to provide them with best audio solution for a variety of venues.



ARENAMATCH

Bose Professional ArenaMatch loudspeakers bring proven DeltaQ sound quality and flexibility to outdoor installations — sports stadiums, arenas, outdoor entertainment centers, and more. Featuring an IP55 weather rating, ArenaMatch DeltaQ modules make it easy to create durable and reliable outdoor loudspeaker arrays that bring consistent, intelligible sound to every listener.



DESIGNMAX

A complete loudspeaker assortment to enhance any space, DesignMax loudspeakers offer rich lows and clear, intelligible highs — along with premium aesthetics that complement any commercial sound installation. Choose from 15 models — including coaxial two-way loudspeakers, subwoofers, and compact models for tight spaces — great for both background and foreground audio applications indoors and outside with several models IP55 rated.



Bose Professional serves many different markets, delivering great sound in venues all around the world — performing arts centers, theaters, places of worship, stadiums, restaurants, schools, retail stores, hotels, and corporate buildings.

We know that our pro audio customers depend on us in a unique way. This is your business, your reputation, your livelihood — not just an amp, not just a loudspeaker. So, when you buy a Bose Professional product, you get the full weight of the global Bose Professional team behind you — our time, support, and attention. We see every purchase as the beginning of a partnership.



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