




BOSE

PROFESSIONAL



CASE STUDY - SPORTS | COTE D'OR NATIONAL SPORTS COMPLEX





BRINGING INTERNATIONAL SPORTS TO MAURITIUS

The Cote D'Or sports complex in Mauritius consists of four stadiums, a gymnasium, an aquatic center, a football stadium and an athletics track. In February 2018, Prime Minister Pravind Jugnauth laid the foundation stone of the complex, which he called the "future jewel of the sports landscape of Mauritius".

The Cote D'Or, a state-of-the-art sports complex that meets international standards and complies with the requirements of their respective international federations, aims to transform Mauritius into a sports destination and will be approved to allow Mauritius to host sports events of international standing.

The goal was for the complex to become an essential destination in the Indian Ocean and a sports hub of the region for international meetings. This complex also needed to be in line with the country's "green" ambitions, leveraging solar panels and a rainwater harvesting system. The project was also aimed at making sports more accessible to the greatest number of people possible, especially young people, enhancing the elite sporting scene in the country and producing world-class athletes.

The Multi-Sports Complex Project in Côte d'Or was created initially to host the swimming and judo events of the IOIG (Indian Ocean Island Games) games in July 2019, and hosted the games July 19-28. The other stadiums around Mauritius housed the other events in the IOIG games. As of October, the entire site was completed.

The IOIG is a multi-sports event held every four years, and the Prime Minister opened the 2019 event on Monday, July 15, and hosted the games July 19-28. The event brings together athletes from different islands of the Indian Ocean (Mauritius, Seychelles, Comoros, Madagascar, Mayotte, Reunion and the Maldives).

The first edition of the IOIG was held in Reunion Island in 1979. The multi-sport event brings together athletes from Indian Ocean islands to compete for medals across 14 different disciplines.

With more than 25 years of experience in the market and a strong reputation for providing quality products and services, systems integrator SKR was the best choice to execute this major project.

OVERCOMING DEADLINES, WEATHER AND STADIUM CONSTRAINTS

The project is the first of its kind in Mauritius, featuring multiple stadiums and a gym area in a single location. The government wanted to have a sports facility that met international standards to allow Mauritius to host international sports and cultural events in the future. The main criteria were to have a product meeting international standards and of premium quality. SKR was responsible for the audio and PA portions of the project.

There were several project challenges including time constraints, climatic conditions and a final budget that was one tenth what was originally expected.

The Bose Professional team met delivery needs for the newly introduced ArenaMatch loudspeakers and the SKR project team, worked through the weather, which is mainly cold and very windy between April and June each year.

DELIVERING ON TIME AND ABOVE EXPECTATIONS WITH ARENAMATCH

Pascal Vierdeel, regional sales engineer for Bose Professional, designed the systems for each stadium. There was no acoustical room model supplied, only an architectural drawing, so an acoustical room model needed to be created by relying on Vierdeel's experience designing other sports complexes in the Bose Modeler software.

The design of the system had to adhere to the following criteria:

1. Create a room model that provided optimal, clear audio for all spectators.
2. Provide even coverage over the entire audience area.

3. Provide the appropriate sound pressure level.
4. Provide the highest possible speech intelligibility.

ArenaMatch loudspeakers allowed for the projection of sound to the listening areas in the venue, as they behave like a modular custom loudspeaker. This avoided reflections from the sidewalls, ceilings, and other hard surfaces.



GYMNASIUM

In this venue, a solution needed to be designed for positioning the arrays in the optimal location, respecting a minimum free height above the playing field. Therefore, the arrays were placed just above the first seating row. This required the readjustment of the pitch angles of the arrays. However, the wide, 100° horizontal angles of the modules and the one 40° vertical unit at the bottom of each array, superior coverage was possible from the front seat up to the last seat in the stands.

SWIMMING POOL

Given the different elements within this space, the loudspeaker clusters needed to be placed close to the curved ceiling. Initially, the design put all loudspeaker clusters at the same height, independent from the arched ceiling. Placing each loudspeaker at different heights results in different coverage patterns for the direct sound in the seating areas, but was overcome by redesigning the cluster angles, guaranteeing an optimal result thanks to the wide horizontal angles of the array modules.

STADIUM/ATHLETICS TRACK

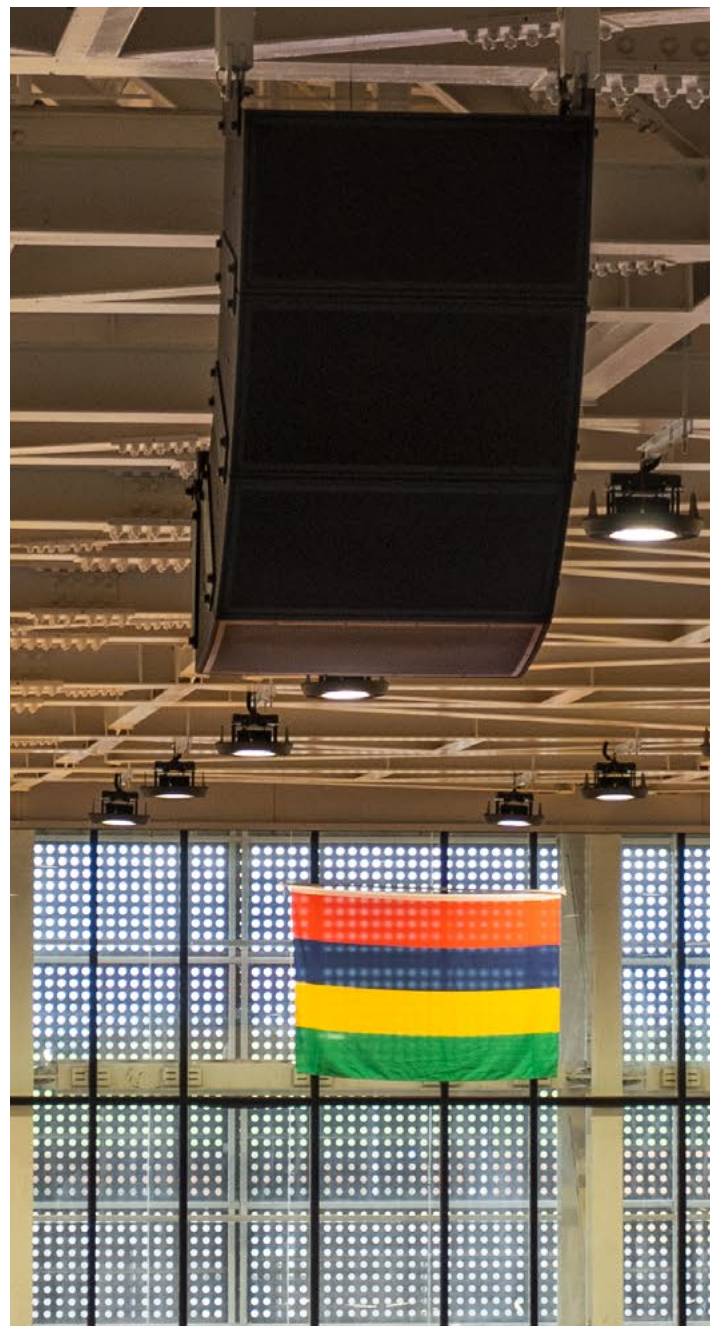
The final roof structure was different from the initial blueprints during the design phase. Therefore, arrays needed to be placed deeper into the stands and hung two meters lower. As the arrays moved closer to the audience area, the coverage pattern was reduced. However, the system was designed with enough vertical coverage to overcome this problem, ensuring consistent, quality coverage from front to back in the stands.

SKR, BOSE BRING 'JEWEL OF THE SPORTS LANDSCAPE OF MAURITIUS' TO LIFE

Bose is an international brand well known for its quality sound systems, and, in Mauritius, SKR has built a strong reputation for providing quality products and services to its clients with a well-trained technical team and a fleet of vehicles to provide maintenance and after-sale service.

The combination of Bose engineers' system expertise and SKR's experience in this market created a winning team, which enabled SKR to deliver to a quality audio system throughout the athletic complex.

The Bose ArenaMatch loudspeakers were explicitly chosen for their weather resilience, and were ideal for this environment that features humidity and rain, delivering the vocal clarity needed.

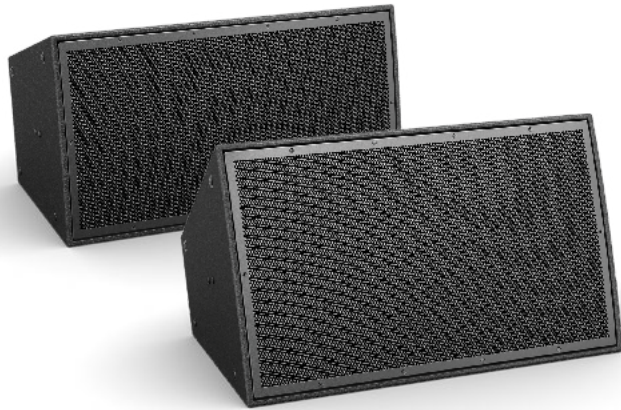


LASTING RESULTS AND A RENEWED INTERNATIONAL PRESENCE

All stadiums are now open and in full use ensuring the National Sports Complex at Côte d'Or, St. Pierre, it's position as an international sports destination.

“The system has been fully operational in the Aquatic Centre and the Multipurpose Gymnasium for the Indian Ocean Island Games (IOIG) 2019, held between July 19-29th, 2019, and has provided a vibrant environment with clear audible and high-quality sound effects.”

**- A. Beetun, Technical Director, Mauritius
Multisports Infrastructure Ltd**



ARENAMATCH DELTAQ ARRAY LOUDSPEAKERS

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.

SYSTEM COMPONENTS

ATHLETICS TRACK

ArenaMatch AM40 loudspeaker

PowerMatch PM8500 power amplifier

PowerMatch ESP digital link card

ControlSpace EX-1280 digital signal processor

ControlSpace CC-64 zone controller

ControlSpace CC-PS1 universal power supply

AQUATIC CENTER

ArenaMatch AM20 loudspeaker

ArenaMatch AM40 loudspeaker

PowerMatch PM8500N network amplifier 8x 500W

PowerMatch Dante network card

ControlSpace EX-1280C digital signal processor

ControlSpace CC-64 zone controller

ControlSpace CC-PS1 universal power supply

STADIUM OPENED

ArenaMatch AM20 loudspeaker

PowerMatch PM8500N network amplifier 8x 500W

PowerMatch Dante network card

GYMNASIUM

ArenaMatch AM10 loudspeaker

ArenaMatch AM20 loudspeaker

ArenaMatch AM40 loudspeaker

PowerMatch PM8500N network amplifier 8x 500W

PowerMatch ESP digital link card

ControlSpace EX-1280C digital signal processor

ControlSpace CC-64 zone controller

ControlSpace CC-PS1 universal power supply

STADIUM COVERED

ArenaMatch AM20 loudspeaker

PowerMatch PM8500N network amplifier 8x 500W

PowerMatch Dante network card

ControlSpace EX-1280C digital signal processor

ControlSpace CC-64 zone controller

ControlSpace CC-PS1 universal power supply



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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