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Sporting

Guide to Developing a Specification for Upgrading PA and Digital Signposting Systems at Outdoor Sporting Facilities



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Upgrading the Public Address (PA) and digital signposting systems at large outdoor sporting facilities, such as racecourses and multi-area venues, involves addressing unique challenges to maintain clear communication with patrons while minimizing noise spillage into sporting arenas. This guide is designed for facilities directors who need to develop a technical specification for a system upgrade by a third-party audiovisual installation company.

Acoustic Environment Reassessment

- Conduct a fresh acoustic analysis of the entire venue to understand the current sound dynamics and identify changes since the last assessment.
- Reevaluate noise-sensitive areas, focusing on zones where athletes and animals are present, and where clear communication with patrons is essential.

Revised Zoning and Coverage

- Reexamine the venue's zoning based on updated usage patterns and new developments within the facility.
- Ensure that each zone has tailored PA systems to avoid unnecessary noise in sensitive areas. Use directional speakers to target specific areas and reduce sound spillage.

Advanced Speaker Selection and Placement

- Choose modern speakers with improved focused sound dispersion patterns and better energy efficiency. Horn-loaded speakers with updated technology may offer enhanced performance.
- Optimize speaker placement based on the latest acoustic analysis to ensure even coverage and minimize disturbance in sensitive areas.

Enhanced Volume Control and Sound Management

- Implement an advanced central control system capable of more precise real-time adjustments of volume levels across different zones. Integrate AI-driven ambient noise sensing for automatic volume adjustments.
- Establish updated maximum volume limits for each zone to prevent excessive noise, considering the latest noise regulations and standards.

Modern Digital Signposting Integration

- Upgrade digital signposting systems to include high-resolution displays with enhanced visibility in various lighting conditions.
- Position digital signs at newly identified high-traffic areas and key decision points within the venue for better information dissemination.

Improved Emergency Communication

- Ensure the upgraded PA system integrates seamlessly with enhanced emergency communication systems. The system should automatically override regular announcements with clear, high-priority messages during emergencies.
- Upgrade visual alert systems on digital signposts to complement audible emergency messages, ensuring multi-channel communication.

Updated Acoustic Analysis Report

Comprehensive findings from the recent acoustic environment analysis, including any changes in noise-sensitive areas and recommended zones for PA coverage.

Revised Zoning Plan

A detailed map of the venue with updated zones and their specific requirements for the upgraded PA and digital signposting systems.

Advanced Speaker Specifications

- **Type:** Modern horn-loaded, weather-resistant with improved technology
- **Coverage pattern:** Enhanced narrow beam for long-distance projection, wide beam for close-range areas
- **Power handling and sensitivity ratings**

Optimized Speaker Placement Plan

Updated diagrams showing new speaker locations, mounting heights, and orientation to ensure optimal coverage with minimal noise spillage.

Enhanced Volume Control System

- Advanced central control interface with precise zone-specific volume adjustments
- Integration with AI-driven ambient noise sensors for automatic volume control

Modern Digital Signposting Plan

- Locations and sizes of upgraded digital signs
- Advanced content management system specifications, including remote updating capabilities
- Seamless integration with the upgraded PA system for synchronized messages.

Improved Emergency Communication Integration

- System capabilities for automatic override in emergencies with improved clarity
- Procedures for testing and maintaining the upgraded emergency communication system.

Installation and Maintenance Guidelines

- Detailed procedures for installing the upgraded PA and digital signposting systems
- Updated regular maintenance schedule to ensure optimal performance and longevity of the systems

Conclusion

Upgrading the PA and digital signposting systems at large outdoor sporting facilities requires a careful reassessment of the current acoustic environment and the needs of both patrons and participants. By conducting a thorough reevaluation, strategically zoning the venue, selecting advanced equipment, and integrating enhanced control systems, facilities directors can ensure clear communication without disturbing sporting activities or animals.

This guide serves as a blueprint for developing a detailed technical specification for a third-party audiovisual installation company, ensuring a successful and efficient upgrade implementation.

Case Studies



Newmarket Racecourse.

Venue

R a c e c o u r s e

Location

N e w m a r k e t

Product

C o m m u n i t y
Q S C

AudioTek solved the problems of poor intelligibility that had been plaguing Newmarket Racecourse.

Following a full survey of the site and EASE simulations, Community full-range Loudspeakers were specified to replace ageing limited frequency range speech-only components for the main spectator standing areas, Premier Enclosure, betting ring, and second and fourth floor balconies, integrating into the existing PA for other areas.

QSC amplifiers provide power for the speaker systems, with control and monitoring by QSC Q-SYS.

The new sound system has been noticed by many racegoers who have all commented on the vast improvement in intelligibility of the commentary.



York Racecourse, UK.

Venue

R a c e c o u r s e

Location

Y o r k ,
U K

Product

B a l d w i n - B o x a l l ,
Q S C , H i Q

Audiotek took over maintenance of York Racecourses PAVA system, and have now completed a major refurbishment of the exterior PA zones, as well as installing a full network audio system across the whole site for additional control. The new HiQ line-source loudspeakers offer coverage of all of front betting ring and premier enclosure areas. This was installed as part of the PAVA system by expanding the existing Baldwin-Boxall Sound System.

A new fibre network was also run around the venue to the various amplifier locations, allowing easy control of all zones now from a central space in the broadcast office.



Bowl Central.

Venue

Bowling
Alley

Location

Bournemouth

Product

Martin Audio

Bowl Central is Bournemouth's premier entertainment destination. When an opportunity arose to expand the business, they called on Audiotek to design and install a complete Martin Audio sound system based around Adorn on-wall speaker system supplemented with SX110 subwoofers for a new top-of-the-range bowling alley – complete with six lanes imported directly from the USA – created in a previously unused space.