



“The new system now adheres to EN 54 standards and delivers outstanding sound quality, thanks to our powerful DSP, while also allowing for scalability in the future.”

Market Segment:
Airports

Country of installation:
United Kingdom

Year of Installation:
2019

End customer:

- **Heathrow Airport Holdings at Heathrow Airport Terminal 3**
- **Trinity Fire & Security Systems (System Integrator)**

Solutions:

Voice Alarm and Public Address

Key Products:

iVENCS, VIPEDIA-12-NET, INTEGRA VRMS04-IP

Key Technology:

VIPA Audio Platform, EN 54

PAVA System upgraded at London Heathrow Airport T3

ASL/Zenitel technology delivers outstanding sound quality to ensure the protection and safety of Terminal 3 staff and passengers.

The Customer/End User

Heathrow Airport Holdings Limited (formerly BAA) owns and operates Heathrow, the UK's largest airport.

Project integrator and installer, Trinity Fire & Security Systems, was appointed to replace the existing Public Address and Voice Alarm (PAVA) system at Heathrow Airport's Terminal 3 (T3).

Heathrow Airport Holdings enlisted AMS Acoustics, to assess various PAVA systems. Based on hardware suitability, technical capability and a track record of project support and experience within the airport industry, ASL/Zenitel was appointed to fulfil the project.

The Requirement

An extensive and scalable networked system capable of working within the complex and ever-evolving environment of Terminal 3 was essential. Ensuring minimal downtime of the critical PAVA system was also crucial to minimize disruption to airport services, passengers and staff during the transition phase.

To simplify installation, pre-built, configured, and tested cabinets were required. These cabinets were designed to accommodate various functions, such as live and automatic emergency broadcasts, live and paging broadcasts, scheduled and spot pre-recorded messages from ASL/Zenitel's control system (iVENCS), and potential integration with the airport's flight information system for automated messaging.

Seamless integration with existing loudspeaker chains and support for a 10-15 year operational life were also essential requirements for the PAVA system.

The Solution

ASL/Zenitel successfully designed, built, tested, and delivered a distributed IP-based PAVA system fully certified to EN 54. The extensive system comprised 30 audio routers, incorporating a mix of rack and wall mount models (VIPEDIA-12-NET and INTEGRA) split across 18 separate communication rooms. Facilitating seamless and synchronised broadcast across 144 distinct zones.

The compact size, mounting options and high power density of the new PAVA system allowed for seamless coexistence in the communication rooms with the old system during

the transition phase. This facilitated smooth over and back testing across the site, ensuring the new system's full functionality before ultimately switching off and removing the old system.

The PAVA system supported various inputs, including four hardwired Fire microphones (EMS20) and 95 IP connected flush-mounted, vandal-proof gate microphones (VRMS04). These industry specific microphones were strategically installed throughout the terminal, effectively utilizing the existing IP network infrastructure, significantly reducing installation costs.

Moreover, a centrally deployed control and monitoring PC based GUI (iVENCS) was implemented, providing enhanced control and monitoring capabilities. The system also featured impedance line monitoring functionality (EOLZ01) to ensure compliant monitoring of existing loudspeaker assets and circuits.

Additionally, the VIPA-API interface over IP, ensures support for future integration with flight automation systems.

The Result

The combined collaboration of Trinity Fire & Security Systems, Heathrow Airport Holdings, and ASL/Zenitel's advanced PAVA technology led to a successful site upgrade that minimized disruption to daily services.

This upgrade not only improved the sound quality across the site but also prioritized the safety and protection of airport staff and passengers. The implemented solution offers flexibility, enabling future expansion and ensuring its ability to adapt to the evolving needs of the airport.



Why Zenitel?

Zenitel is well positioned to drive the future of intelligent critical-communication solutions. Through our portfolio of IP products & solutions, with built-in intelligence and a focus on cybersecurity, we provide organizations with superior, scalable security and flexibility. Zenitel is the proven, preferred choice for environments requiring crystal-clear audio to ensure the protection of human life, property, assets and the management of critical activities. With interoperability at all levels, we seamlessly integrate with access control, video management and security platforms.