



zenitel

because communication is critical

CASE STUDY

Rail Infrastructure



Market Segment:
Rail Infrastructure

Country of installation:
London, UK

Year of Installation:
2000 - ongoing

End Customer:
**London Underground,
Transport for London (TfL)**

System Integrator:
**Telent, Fourway
Commuication Limited,
Delatim, Siemens Mobility
Atkins, Tubelines, Metronet**

Solution:
**Public Address, Voice Alarm,
Control System**

Key Products:
**iVENCS, VIPEDIA-12-NET,
INTEGRA, V400, V2000**

Key Technology:
**Powerful API integration,
remote control and
monitoring, Exceptional audio
quality, EN 54 compliance,
VoIP**

London Underground upgraded with PAVA solution

Zenitel's advanced PAVA and Long Line PA technology helps to make journeys on the London Underground safer and more secure.

The End Customer

London Underground's tube services cover a combined distance of over 400km of line, serving 272 stations. The entire network handles almost five million passenger journeys on a daily basis. With such high traffic, it is vital that every journey is made as secure, safe, and seamless as possible, which is where Zenitel came in.

The Requirement

In November 1987, a devastating fire took hold at King's Cross Underground Station in London, where 31 people were killed and 19 seriously injured. It was concluded that the fatalities would have been greatly reduced had there been a spoken voice alarm to direct the passengers out of the station.

In response to the tragedy, London Underground Ltd (LUL) ensured that installation of voice alarm across all 130+ stations was given high priority. The tragedy prompted the evolution of the first nationally recognised standards for Public Address and Voice Alarm (PAVA).

Certified to the most stringent voice alarm and safety standards, including EN54-16, Zenitel's PAVA solutions met LUL's safety needs.

The Solution

Zenitel's solution began with the design and development of SIL2 rated matrix control and micro control products for LUL in 1993. From here, Zenitel then began developing their comprehensive PAVA and Long Line Public Address (LLPA) product ranges, adopting SIL2 standards for both hardware and software design.

Throughout the system, Zenitel pioneered the use of Adaptive Class D amplification with fanless

cooling and DSP routing. These unique developments in voice alarm technology gave marked improvements in space utilisation, energy efficiency and Mean Time Between Failure (MTBF) performance.

The Result

Over 130 LUL stations now rely on Zenitel's PAVA systems. Zenitel's work on the project led to the award of the Whole Life Maintenance Contract for the Jubilee Line Extension over a 19-year period.

Zenitel continue to provide ongoing support for installation, commissioning, and maintenance to delivery partners, as part of a comprehensive 3rd line maintenance package. Zenitel's long-standing relationship with LUL is further strengthened through continued investment in research and product development that will improve operations in the future.



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.