



Market Segment:

**Road Tunnels**

Country of installation:

**Slovakia**

Year of Installation:

**2021**

End Customer:

**Tunelový rozhlas**

System Integrator:

**Národná diaľničná spoločnosť, a.s.**

Solution:

**Voice Alarm Control System**

Key Products:

**iVENCs, V2000 Power Amplifier, VIPEDIA-12-PRO**

Key Technology:

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

## Zenitel delivers voice alarm solution to Tunelový rozhlas

The system consists of three main motorway tunnels in Northwest Slovakia containing an EN 54-compliant voice alarm to handle the challenging acoustic environment.

### The End Customer

Founded in 2005, the 100% state owned Slovakian construction company, Národná diaľničná spoločnosť, a.s., employs more than 1,900 people, dealing with the building and management of highways across the region.

Národná diaľničná spoločnosť, a.s. ensures the maintenance and operation of highways under their jurisdiction via 15 management and maintenance centers located near the motorways. The company generates income through tolling, which it feeds back into developing more infrastructure, such as these tunnels.

### The Requirement

Slovakian highway construction and maintenance company, Národná diaľničná spoločnosť, a.s., recently deployed a sophisticated ASL/Zenitel Voice Alarm (VA) system for three motorway tunnels on the D1 and D3 motorways which bypass the city of Žilina in Northwest Slovakia, spanning over 6km of road. The brief was to provide an EN 54-compliant system for a series of motorway tunnels to allow for the safe and troublefree evacuation of people in case of a fire event or traffic accident. The system had to cater for acoustic challenges of tunnels and to be centrally controlled and monitored.

### The Solution

The system was designed and supplied by ASL/Zenitel's distributor and system design specialists, Avalon,

with support from ASL/Zenitel. The three tunnels were treated as separate entities, with two or three racks installed in each. Each rack consisted of a VIPEDIA-12-NET audio controller with eight message players and ASL/Zenitel's V2000 range amplifiers, allowing complex scenarios to be programmed.

Built-in SFP modules allow the connection of the single mode fibre-optic cables required to cover the large distances involved. Delays to speaker outputs were calculated and configured via the VIPEDIA's powerful DSP to ensure optimum intelligibility.

An ASL/Zenitel iVENCs control system provides a central control and monitoring location that conveniently brings together the three remote tunnel systems. A 2D map shows the status of the PAVA system in the tunnel and allows pre-recorded and live announcements to be made as required.

## The Result

Thanks to the high availability ASL/Zenitel voice alarm system, announcements can be heard clearly throughout the tunnels.

The unified control solution from ASL/Zenitel allows the system to be monitored from a central point – streamlining the operations of the client. Using an open protocol, iVENCs can be customised to the specific needs of any client to integrate seamlessly with existing systems.

To ensure the efficacy of the integration, ASL/Zenitel provided constant technical support and assisted in the remote configuration of devices.



## 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.