

# Praesideo voice evacuation by Bosch

Application Note: Airports

- ▶ Superb sound & speech reproduction
- ▶ Multi-zone functionality
- ▶ Future-ready expandability
- ▶ Easy-to-use: intuitive user interfaces
- ▶ Endless integration possibilities



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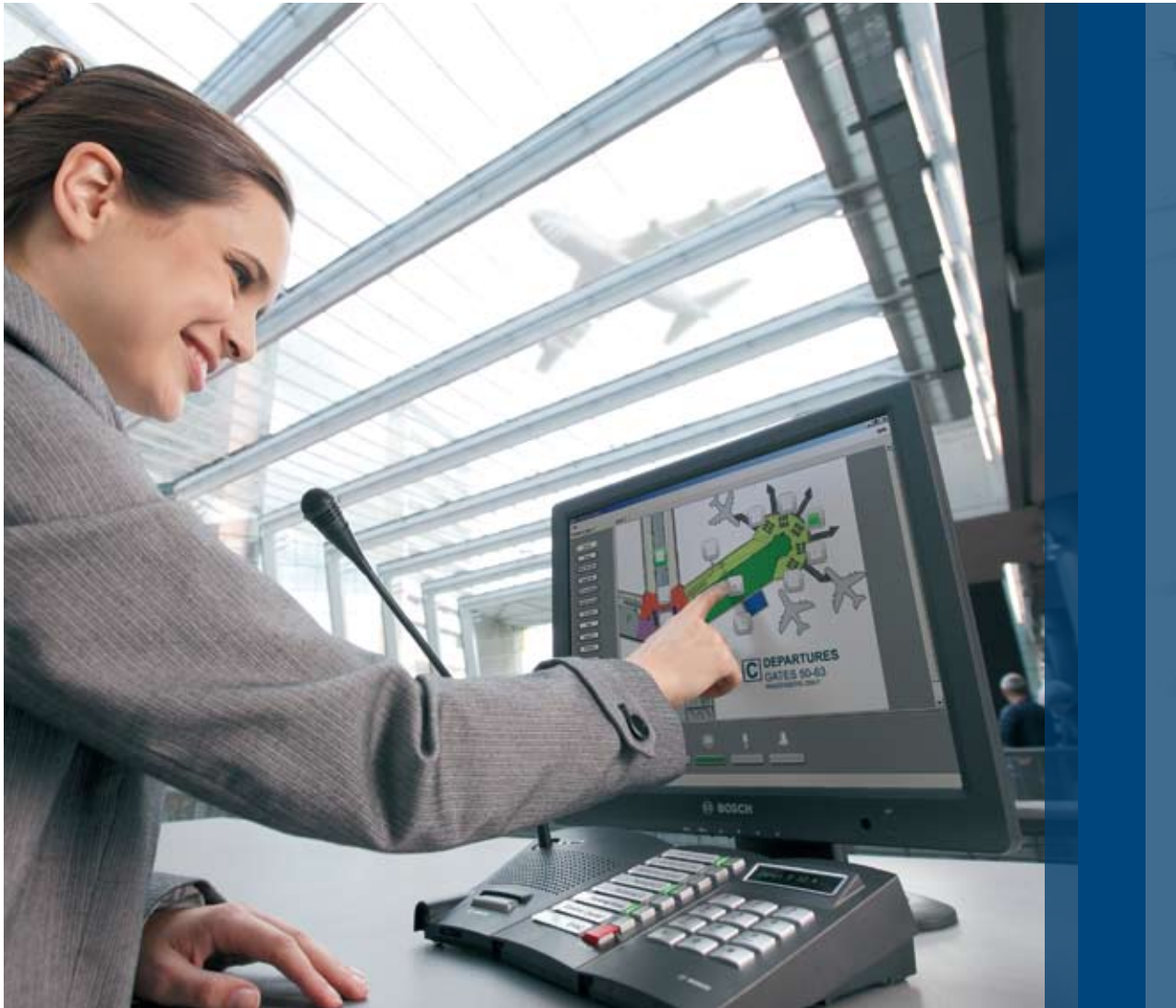


## Introduction

Praesideo is the perfect solution for complex applications. It's a fully digital system capable of handling even the biggest international airport. Praesideo uses a daisy-chain optical system bus that facilitates decentralized equipment racks. The system's built-in supervision and redundancy includes a system bus loop and automatic spare amplifier switching for operational reliability.

## Airports

The public address and emergency sound system for an airport must deliver exceptional performance and reliability. Spoken messages must be intelligible even in zones with high background noise, like baggage handling areas. The system must route background music, arrival and departure announcements, pre-recorded messages and live speech, and it must be fully supervised for secure operation in emergency situations.



### Summary of requirements

- ▶ Exceptionally high-quality speech reproduction
- ▶ Multilingual information and evacuation messages
- ▶ Connection to automatic passenger information system
- ▶ Automatic routing of messages and background music
- ▶ Realtime announcement recording for engaged zones
- ▶ EN54-16, ISO7240-16, EN60849 and BS5839 compliant

### A customized solution

The Praesideo system equipment racks are distributed over rooms in the arrival halls and departure halls in terminals 1 and 2. All 28 audio channels, plus control data, are routed via the optical system bus using fiberglass cables. The system is connected to the airport's fire detection system via supervised connections.

Automatic passenger information announcements are controlled by the Praesideo open interface, while audio is routed through the audio inputs of the Praesideo network controller.

Multilingual information and evacuation messages are stored inside the network controller. Messages can be automatically played at pre-set intervals. Each gate has a paging call station for live announcements and a numeric keypad for operator access and zone addressing.



- 1 Terminal 1  
Call Stations  
Numeric Keypads
- 2 Security Room 1  
Equipment racks  
Fireman's Panel  
PC Call Stations  
Configuration/diagnostic  
and logging software
- 3 Terminal 2  
Call Stations  
Numeric Keypads
- 4 Security Room 2  
Equipment racks  
PC Call Stations  
Configuration/diagnostic  
and logging software
- 5 Terminal 3  
Call Stations  
Numeric Keypads
- 6 Security Room 3  
Equipment racks  
Fireman's Panel  
PC Call Stations  
Configuration/diagnostic  
and logging software

### System description

The Praesideo system is connected to a fire detection system, automatic flight information system and background music sources.

The power requirement per zone depends on the number of loudspeakers used. In areas with difficult acoustics and high background noise, line array loudspeakers by Bosch are used to optimize sound distribution.

Spare amplifiers are used to automatically take over in case a power amplifier fails. Furthermore, "wire-free" loudspeaker supervision continuously monitors the functioning of all loudspeaker lines and individual loudspeakers at critical locations. Fault conditions are immediately reported, allowing corrective actions to be taken.

Praesideo audio inputs and outputs have digital parametric equalizers to optimize speech intelligibility. A Call Stacker is installed as part of the redundant system bus. Live messages to occupied zones are recorded and automatically played back when the zones are free. Up to eight messages can be recorded and played back simultaneously on each Call Stacker. Using time-shifted playback, it also eliminates acoustical feedback, a common problem in airport terminals.



### **TÜV certified**

As part of the Bosch Security Systems commitment to meeting international standards, Praesideo is EVAC-compliant and meets legislated requirements for voice alarm systems. TÜV, the independent German quality and safety organization, has certified Praesideo by Bosch as compliant with EN 54-16, ISO 7240-16, EN 60849 and BS 5839:8. The system is also certified for many local evacuation standards.

### **Complete security solutions**

Bosch Security Systems offers a wide range of security, safety, and communication solutions that are relied upon every day in applications and places around the world, from government facilities and public venues to businesses, schools and homes.

**For more information about the Praesideo Digital Public Address and Emergency Sound System, please feel free to contact your nearest Bosch representative or visit our website: [www.boschsecurity.com](http://www.boschsecurity.com).**



### **Bosch Security Systems**

To learn more about our product offering, please visit [www.boschsecurity.com](http://www.boschsecurity.com) or send an e-mail to [emea.securitysystems@bosch.com](mailto:emea.securitysystems@bosch.com)

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