



Railways

Security & Operational Communications



Rail communication

Audio communication to improve customer service and provide integrated security

Made to fit

STENTOFON communication systems have secured rail facilities throughout the world for many years. Whether the requirement is to communicate with a small unattended railway station from a control room many kilometres away, or complete security management integration covering a large geographical area, Zenitel's STENTOFON systems have the flexibility to provide a tailored communication solution, both traditional links and over IP.

STENTOFON systems offer clear and secure communication, and are easy to operate and maintain.

On the trains

- Emergency and information points
- PA announcements
- Pick up and broadcast platform announcements on the train



At the railway station

Station platform and station halls

- Emergency and information points
- PA announcements
- Talking CCTV

Along the track

- Track side communication for maintenance personnel
- Common line for telephones along the track

Parking

- Emergency announcements
- Barrier control
- Payment machine communication
- Help and information points
- Door control
- Talking CCTV



If you're looking to optimise your operations with central control room monitoring and responding to large areas, quickly, you'd be hard pushed to beat STENTOFON CCoIP.

THOMAS HÆGH, VICE PRESIDENT PRODUCTS & DEVELOPMENT
ZENITEL NORWAY AS

Central control room

<p>Alarm and video</p> <ul style="list-style-type: none"> · Active monitoring · Early indication · Access control · Video · Alarms 	<p>Command and control</p> <ul style="list-style-type: none"> · Radio · Intercom · Public address · Security management · Integration 	<p>Recording</p> <ul style="list-style-type: none"> · Quick access to critical information · Investigations · Evidence 
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Rail security

<p>Intercom</p> <ul style="list-style-type: none"> · Emergency calls · Information points · Lifts · Parking · Railroad platform · Payment machines · Barriers · Door control 	<p>Camera</p> <ul style="list-style-type: none"> · Active monitoring · Early warning · Record events 	<p>Micro-zone PA</p> <ul style="list-style-type: none"> · Fast response · Prevent crime · Reduce panic and stress 
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Made for communication

Security announcements

At Zenitel our specialism is critical communication, so we know a rail security system that enables you to communicate and respond fast, prevent crime and reduce panic and stress. This gives you a better chance of preventing critical situations.

Integration increases security

Using over sixty years of experience in this field, Zenitel's STENTOFON systems will interface to the emergency services, give priority to security announcements, and provide voice evacuation to guide travellers away from a critical area. Integrated to other security systems and devices, the guard has an eye, voice and ear, and can make security PA announcements from any intercom station or the PA system itself. By placing

loudspeakers near the perimeter fence, intruders can be warned off before any damage is done.

Operational announcement

Using IP network technology, rail operators are finding Zenitel's remote and distributed PA solutions easy to implement and for the first time, PA announcements over an unusually wide geographical area, financially viable.

Infrastructure on IP – cost efficient

Zenitel's STENTOFON CCoIP allows operational communication with railway station halls and platforms whether near or far. Remote, unmanned stations can receive the same delayed/departure information as the busy, city centre stop.

Audio quality

Voice is carried within the system at Hi-fi bandwidth (18kHz) and is much clearer than any telephone. Also when on IP connections, our G.722 codec enables a superior quality to be maintained.

Hi-fi

Made for communication

Two-way communication on platforms and in station halls

Zenitel's STENTOFON stations offer arguably the best voice reproduction available on the market. All of the stations and help points are easy to use – once a call has been placed, speech can be made hands-free.

For outdoor track locations, remote platforms and carriages, vandal, tamper and weather resistant stations are available which, when integrated to the CCTV system, provide a solution of audio together with video to solve any problems that users may have.

Emergency calls have priority

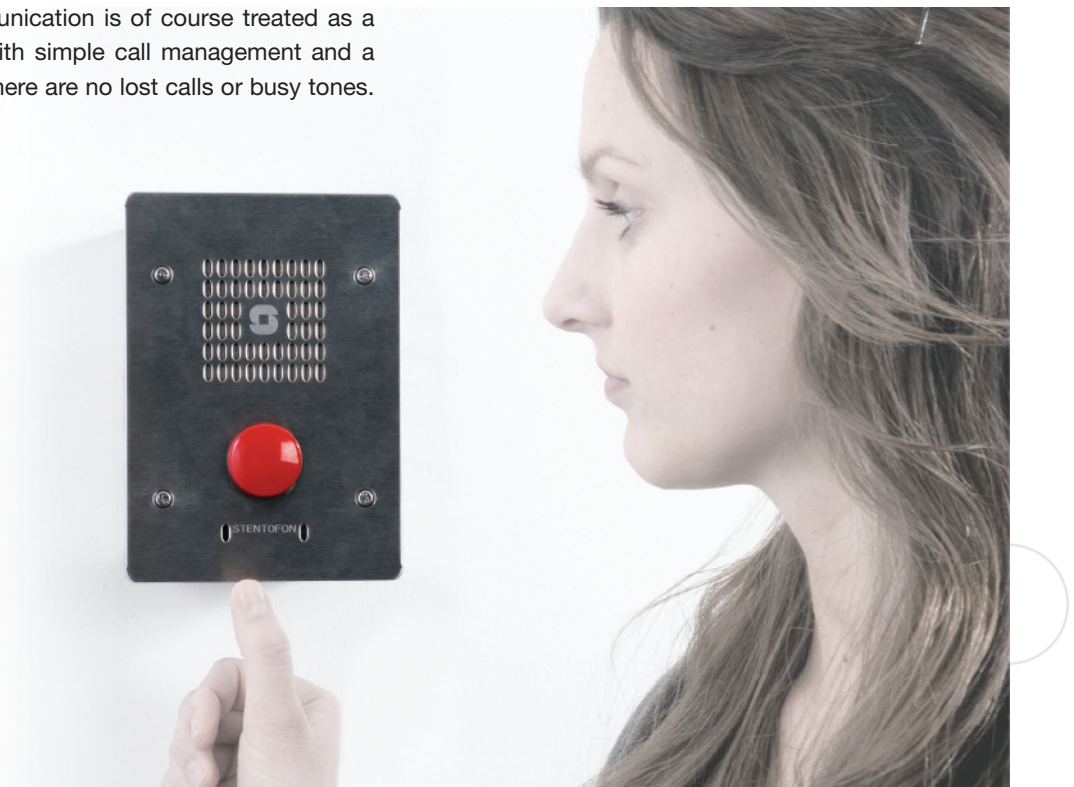
Emergency communication is of course treated as a priority call and with simple call management and a queuing system, there are no lost calls or busy tones.

Along the track communication

Maintenance staff using STENTOFON track communication don't have to wait for a call to dial through, the connection is instantaneous. A common line is used for telephones along the track side.

Reduced cost

Using IP network technology, Zenitel's PA system speakers can easily be part of multiple zones and it is even cost efficient to have many small zones; the cost factor is solely the number of speakers, not the planning and wiring of additional zones. It's these types of adaptations which distinguish a STENTOFON system.



STENTOFON IP stations can be tailored to suit all your rail needs.

Micro-zone Public Address

Zenitel's new STENTOFON micro-zone PA amplifier introduces a completely new set of PA applications. The micro-zone PA amplifier connects to the IP network, supporting up to 8 speakers and micro-zones. The possibility to make announcements on small unattended railway stations from a control room many kilometres away is easy to implement, and it is even possible for the operator in the control room to address and talk into individual speakers far away. This allows for announcements and response to video monitoring and other local events. The STENTOFON AlphaCom E system supports up to 10,000 micro-zones.

Made to improve operational efficiency

Industry standard management interface

Through supporting industry standard protocols (SNMP, syslog, HTTP, NTP) for supervision and maintenance, the management and operation of Zenitel's STENTOFON AlphaCom E system can be aligned to the other systems handled by the IT department to reduce operating costs.

Efficient system change and upgrading

Using a single IP infrastructure, system behaviour and software upgrades can be managed from a central location for all sites.

Automatic monitoring and supervision

AlphaCom E's advanced network monitoring and supervision function allows fast detection, identification and repair of faults, throughout the system, to create a secure IT operation.

User actions and faults can be logged and information can be distributed by e-mail, SMS or other means to the control room, mobile maintenance staff or any other person in the organisation who needs the information.



Made for Critical Communication – CCoIP®

Complying with industry rules and regulations

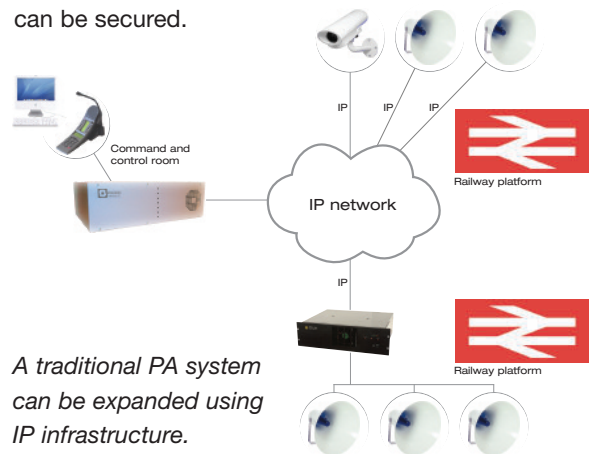
Zenitel understands that rules and regulations are imposed to increase customer security. STENTOFON systems therefore fulfil and even exceed some industry standards and emergency services requirements to provide security and efficiency.

Always operational

AlphaCom E continuously monitors all connections to ensure complete integrity; when you need to make that one important call, the system works. Using its inbuilt redundancy feature, each site can have its own local intelligence that automatically reports if a fault occurs. Alternative routing is implemented to overcome network problems, no matter what technology is employed to link the sites together.

Architecture of the system

Use of the IP network to provide communication to all unmanned stations – including passengers on those stations who can call in an emergency – is more cost effective than the traditional approach and more areas can be secured.



Several layers of security – CCoIP®

High security is the first and most important issue for Zenitel, even more so now the STENTOFON AlphaCom E is in the IP domain. The AlphaCom E has multiple levels of user authorization and logon. It has dual IP/Ethernet ports with built-in firewall, which allows separation of physical security network and IT administration network. IP forwarding is disabled to secure that AlphaCom E is not a backdoor between networks. The IP stations meanwhile have an adaptive end-node firewall built in.



Highlights

- High audio quality, at least 7 kHz audio bandwidth on any link for extreme clarity of speech
- Integrated interface to telephone systems
- Open interfaces
- Reliable communication
- Easy to maintain and upgrade
- Remote maintenance – possible via the Internet
- Customisable
- Stations made to fit the purpose
- Micro-zone Public Address for use with CCTV cameras

System capacity

- Exchange capacity – 552 intercom stations per exchange
- Exchange network – 254 exchanges can be linked together
- Site capacity – virtually unlimited. Any number of stations can be linked to a remote site
- Traffic capacity – Over 60,000 calls per hour

Global rail references

- Norges Statsbaner (NSB), Norway
- Metro Tapei, Taiwan
- Metro de Caracas, Venezuela
- Transrapid magnetic train, China
- Finnish Railways, Finland
- Danish Railways, Denmark
- The Sydney Airport Rail Link, Australia

