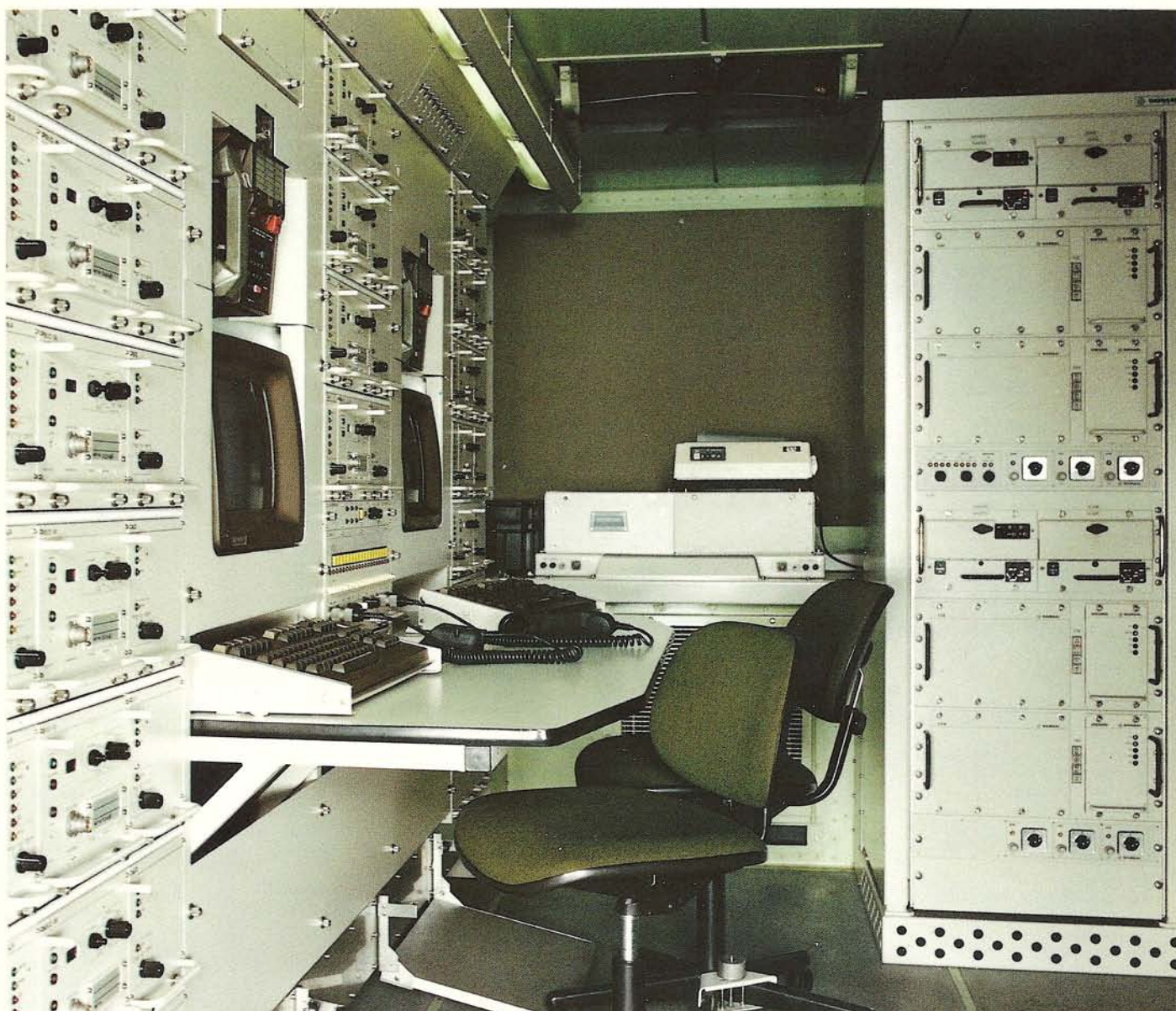




DELTACS

Delta-modulation Tactical Area Communications System



Automatic switch for 768 full-duplex channels (16 groups), including link encryption, line terminating equipment, and two operator positions

OPERATIONAL FEATURES

DELTACS is a mobile tactical area communications system. It can be interfaced with existing military and civil networks, as well as with various types of terminal equipment.

Integrated communication, coordination, command and control are conditions which to a large extent determine the success of military manoeuvres. To set up a reliable tactical area communications network, not only permanent stations, but in particular mobile communications stations are indispensable elements.

For this purpose, Signaal designed DELTACS.

The system is fully in compliance with the Eurocom D/0-D/1 recommendations.

All the equipment of the grid network is mobile. Set-up and tear-down times are very low, so the equipment can be moved quickly in response to the prevailing tactical situation. The integration of network management and control facilities in each switch greatly enhances rapid relocation.

DELTACS can handle voice, teleprinter, facsimile and data traffic. Furthermore, the system offers a complete range of subscriber facilities. As an option, DELTACS offers the possibility to process PCM multiplex signals.

MAIN CHARACTERISTICS

- DELTACS automatic circuit switches are the building-bricks for Eurocom tactical area communications networks.
- Delta-modulation is used to digitise voice.
- Non-blocking switches are used.
- DELTACS configurations are flexible and can be adapted to the specific needs of the user.
- DELTACS is completely mobile.
- DELTACS can be enhanced with Signaal's MILPACS message- and packet switching system.

DELTACS: the mobile tactical communications system for Communication, Command, Control and Coordination.

FUNCTIONAL ASPECTS

DELTACS automatically establishes a connection between any calling subscriber and any called subscriber, wherever they may be located in the network. DELTACS can be separated into several parts that will each continue to operate autonomously. These parts can be recombined to form a new system (e.g. during exercises).

DELTACS is processor-controlled. All DELTACS processors and their data bases in a system are automatically updated regarding the network configuration and the status of exchanges (switches) and subscribers.

DELTACS provides dialled connections, switched hot-lines and sole-user circuits. The latter include automatic rerouting upon an interruption.

A variety of end-user equipment can be accommodated: digital and analogue telephones, telegraphy and data terminals as well as facsimile equipment.

TECHNICAL DATA

Applications

- local exchange
- nodal exchange
- gateway exchange
- Eurocom access switch
- Eurocom trunk switch

Capacity

- Up to 24 groups of 16, 32 or 64 full-duplex channels per group
- Up to 768 full-duplex channels; either 16 or 32 kb/s per channel

Interfaces

TDM interfaces according to: Eurocom A (AMI) or C (HDB3);

- Eurocom loop group
- Eurocom concentrator loop group
- Eurocom trunk group
- STANAG trunk group

Single-channel interfaces (via multiplexer):

- digital subscriber set (CPC signalling)
- analogue subscriber set (pulse signalling)
- analogue subscriber set (ring down)
- STANAG 5040
- 6w E/M
- PTT/PABX (with automatic Dial-In/Dial-Out)
- asynchronous terminals (9600 b/s)
- synchronous terminals (64 kb/s)

Facilities according to Eurocom D/1-I A3

- dialled connection
- switched hot-line
- sole-user circuit
- precedence, pre-emption
- camp on busy/pending-call indication
- trunk/gateway barring
- conference and broadcast (predefined and add-on)
- deducible directory scheme
- abbreviated dialling
- compressed dialling
- call transfer
- call hold
- call forward
- line grouping
- step-up (transfer of command)
- communities of interest
- call tracing
- multi-channel connections
- non-secure line warning signal

Security

- bulk encryption on groups (optional)
- end-to-end encryption on single channels (optional)

System features

- automated subscriber-affiliation or de-affiliation
- overload protection
- built-in test facilities
- diagnostic programs
- automatic fault location
- software in high-level language (PASCAL)
- modular software structure
- integrated network management with System Control (SYSCON) facilities included in each switch
- special SYSCON cells (optional)
- separation or combination into sub-networks
- message/packet switching (optional): MILPACS
- connections between incompatible subscribers (voice-data) are inhibited

Man-machine interface

- intelligent terminal
- printer (optional)

Network features

- automatic (re-)routing
- automatic subscriber and switch affiliation and de-affiliation (without operator intervention)
- automatic system reconfiguration
- fault tolerant
- automatic reporting of status, traffic figures and alarms

Associated Signal equipment

- Multiplexer : DELTAMUX MTR-30
- Terminal Equipment : - MX-542 Digital non-secure subscriber set
- SPENDEX-50 Digital secure subscriber set
- FS-210 Military teleprinter
- AN/UXC-7 Analogue/digital military facsimile
- Link Encryption/
Line Terminating Unit : Mucoclex LTU
- Line Terminating Unit : Dual LTU

ENVIRONMENTAL CONDITIONS

According to DEF-STAN 07-55 and MIL-STD 810

POWER REQUIREMENTS

24 (20-32) V DC, 165 W