

# TCE 500/B

## Narrow Band Secure Terminal for Voice and Data

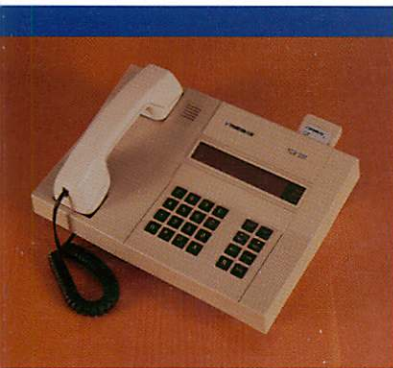


TOP SECRET

 **THOMSON-CSF**  
NORCOM

Fast, secure and reliable interchange of information is essential for effective operation of any organization.

TCE 500/B provides the secure communication solution for voice and data.



TCE 500/B is a narrowband crypto terminal offering end-to-end encryption of connections between users in any type of telephone network.

#### Secure and reliable operation....

Initial PLAIN voice mode with later transition to SECURE mode, only SECURE mode or just PLAIN mode, you decide which per call.



It is as easy to use as the modern feature telephone you are already familiar with. In fact, TCE 500/B in PLAIN mode operates as a standard telephone.

State-of-the-art modem technology based on digital signal processing makes the connectivity more reliable,

and together with improved speech encoders, TCE 500/B is the ultimate choice for secure communications from anywhere to everywhere.

#### The Portable Office....

For travelling executives, a brief-case with TCE 500/B and a lap-top PC or fax-adapter is also available.

#### Classified Data Messages....

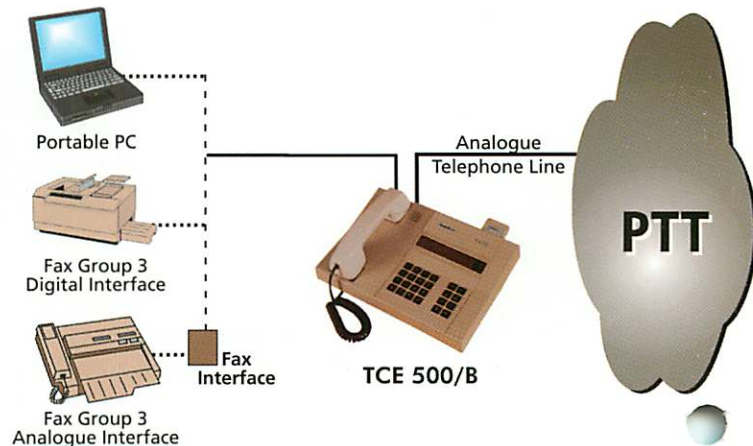
Each TCE 500/B has a local data interface making secure data communication possible

between terminals, computers or fax machines. Data rates may vary from 2400 b/s to 14400 b/s depending on the available communication channel.

If you want to maintain the voice communication while sending data messages, TCE 500/B offers simultaneous voice and data transmission.

Sending data messages to unattended stations is another built-in feature.

### TERMINAL ALTERNATIVES

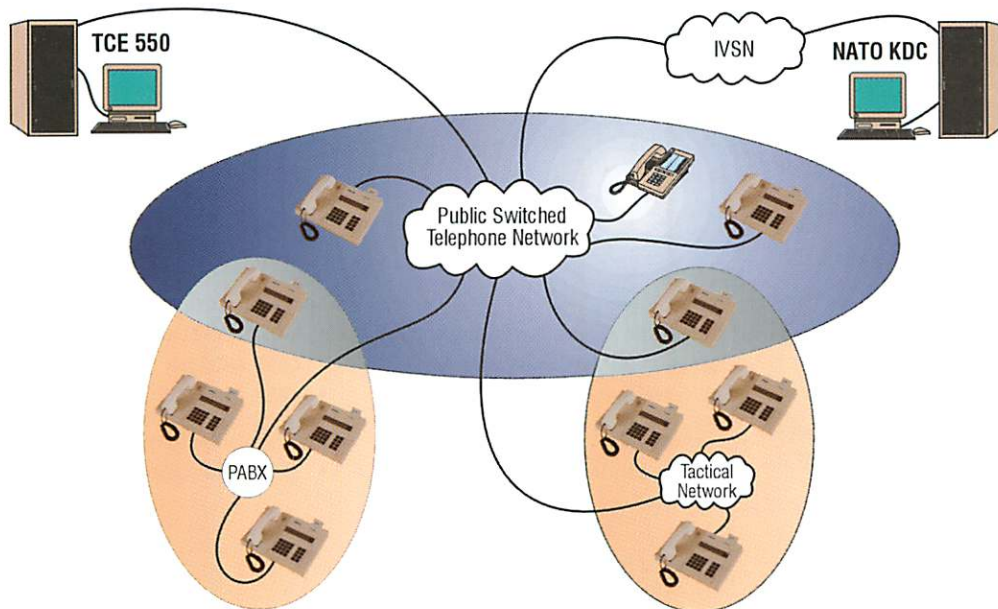


#### Access Control Mechanisms....

When TCE 500/B is used in SECURE mode a Crypto Ignition Key (CIK) must be inserted. The CIK is a small detachable unit, leaving key information unattainable when removed. In an emergency situation the memory contents of the CIK can be erased in an easy and quick way.

A special feature makes the CIK unique for each TCE 500/B: Inserting another CIK than the one assigned to TCE 500/B will not give access to security functions.

## POSSIBLE SYSTEM CONFIGURATION



### Secure Call Setup....

For a secure call, different modes of operation are available. By use of the Group Mode you may establish different predefined closed user groups of any size where you and your colleagues can share total privacy. If you need to communicate with more than one party, just enter the conference mode and dial up the participants you want.

In Group Mode, TCE 500/B is operating without any supporting unit in the network. It is then using manual key distribution and management. Crypto keys may be entered from the keypad or loaded from a fill device.

### EKD using TCE 550....

TCE 500/B is also capable of interaction with the TCE 550 Key Distribution Centre as well as with NATO Key Distribution Centres.

When operating in the Electronic Key Distribution (EKD) mode, the manual key distribution procedure is reduced to distribution of one unique key for each TCE 500/B.

TCE 550 Key Distribution Centre is connected to telephone lines (preferably configured with a group number) anywhere in the network and is capable of handling a very large number of call requests per hour with a short average service time.

Configuration, crypto key handling, status display and the changing and displaying of operation related parameters are available through a user friendly menu system.

# TCE 500/B

## Technical Data

### Security Characteristics

#### Security Level

- Approved for all classifications and categories including TOP SECRET

#### Operational Features

- Emergency Key Erasure (with or without power)

### Interfaces

#### Line Interface

- 2- or 4-wire with DTMF or pulse signalling

#### Data Interface

- V.24 with V.10/V.28 or V.11, user selectable Synchronous or Asynchronous with line data rates 2400-14400 b/s.

#### Key Fill Interface

- KYK-13 / KOI-18 and compatible equipment
- RS-232-C compatible equipment

### Physical Characteristics

#### Operating Temperature

- 0 to +40°C

#### TEMPEST

- According to AMSG 720B

#### Reliability

- MTTF > 50 000 h

#### Key Distribution

- Manual
- Electronic via TCE 550 Key Distribution Centre

#### Input Power:

Automatic adaptation to any voltage between 20 V DC and 264 V AC.  
AC frequency 50-400 ± 10% Hz.

#### Transmission:

- Built-in modems according to
- STANAG 4291 with echo cancelling for 2400 b/s full duplex and half duplex
  - V.32bis with echo cancelling for 4800-14400 b/s full duplex

#### EMC

- EN 55022 Class B

#### Environment

- IEC 68-2-X

#### Access Control:

- Detachable Crypto Ignition Key
- Tampering protection

#### Speech Encoders

- LPC-10E/52. iteration
- CELP 4800 b/s
- CELP 7200 b/s

#### COMSEC Interoperability

- STU-II and compatible equipment.

#### Dimensions

- Width: 308 mm
- Height: 110 mm
- Depth: 248 mm

#### Weight

- 3.1 kg

### Functional Characteristics

#### Featurephone

- Last Number Redial
- 100 Abbreviated Numbers
- Ringing Tone Adjustment
- Earphone Volume Adjustment
- Microphone Mute
- Display of Functional Operation
- Display Contrast Adjustment
- Audible and Visual Alarm
- On-Hook Dialling

#### Operating Modes

PLAIN Voice	Standard Telephone
SECURE Voice	CELP 7200 b/s FDX, CELP 4800 b/s FDX LPC-10E 2400 b/s FDX & HDX
SECURE Conference	LPC-10E 2400 b/s HDX Group Mode
SECURE Data	19200/9600/4800/2400/1200 b/s Async 14400/12000/9600/4800/2400 b/s Sync
Unattended SECURE Data	As above
Simultaneous Voice and Data	CELP 4800 b/s and 2400-9600 b/s Data

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