



Fax Encryption Unit

PFDX 6335
(Mod. 1)

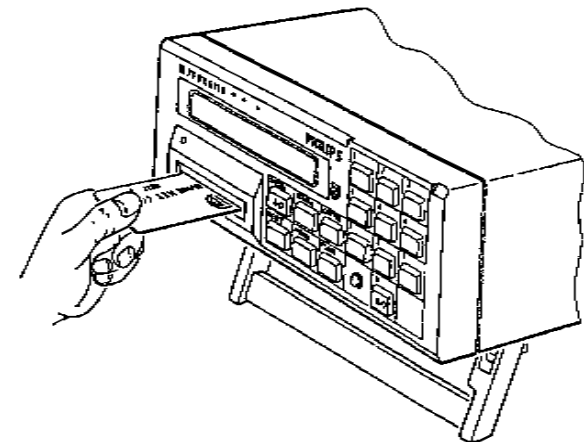
**Crypto Installation and
System Installation Guide**

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(Mod. 1)

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System Installation Guide**



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Document No. 9922 154 19101

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Printed in The Netherlands

This manual contains the step-by-step procedures to perform the crypto installation and system installation of a PFDX unit.

As these actions must be performed by the local security manager and system engineer, this manual is distributed only to the responsible persons concerned.

PART I describes how the local security manager can install the crypto and security parameters using a Crypto Installation Card.

PART II describes how the system engineer, if necessary, can adapt the modem transmit level and the protocol speed of the PFDX unit to suit the telephone network to which the unit will be connected.

NOTE:

All details with respect to the operating controls and cable connections are described in the **User's Guide** supplied with the PFDX unit.

Fax Encryption Unit

PFDX 6335

PART I

Crypto Installation

1.1 Crypto and Security parameters

Crypto parameters

Before a subscriber may use a PFDX unit, the unit must be opened for the subscriber by means of a special PIN-protected Crypto Installation Card. Once the unit is opened for a subscriber, the unit is able to use the keying material stored on the subscribers Personal Key Card.

Security parameters: Crypto Set Number and Identity Number

In accordance with the Philips Crypto key management system all subscribers are arranged in one or more groups within the organization. Each group has its own number, the Crypto Set Number (CSN), indicated by 4 upto 6 digits. To identify subscribers within a group each user has his own Identity Number (IDN), indicated by 4 upto 6 digits.

The subscribers Personal Key Card contains the security parameters CSN and IDN assigned to the subscriber during production of the key material. To open a PFDX unit for a subscriber the subscribers CSN must be entered into the unit during crypto installation, together with a certain IDN (see section 2.9).

In case the Personal Key Card is prepared for Group Access (IA = 0), the IDN is set to "000000" or left open. In case the card is prepared for Individual Access (IA = 1), the subscribers IDN is to be entered (see figure 1).

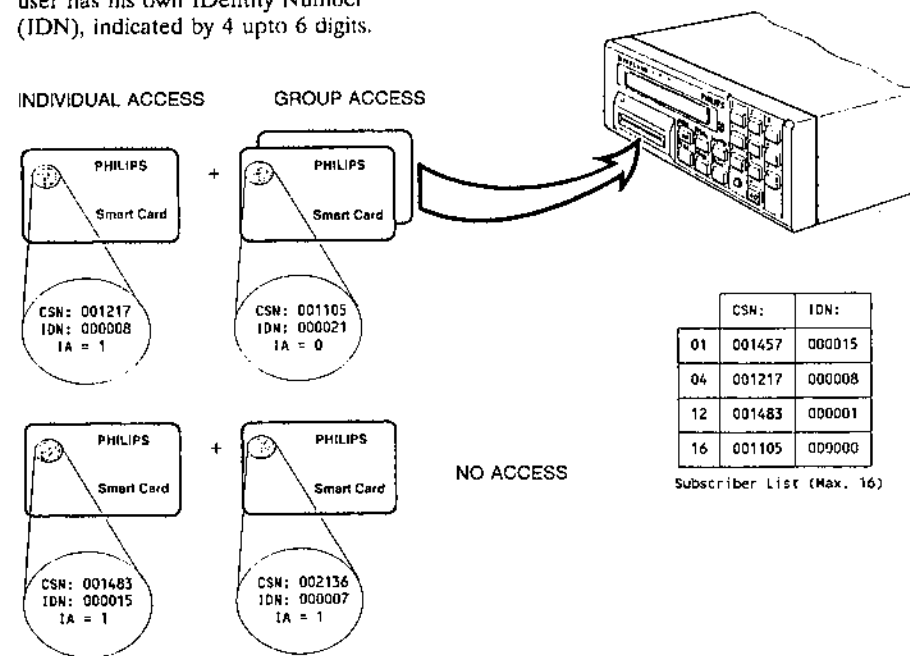


Figure 1

1.2 Distribution of new Keying material

K4 System (Sliding replacement)

New keying material is introduced by distributing new Personal Key Cards, each with a higher version number. In the K4 system each Personal Key Card contains two sets of keying material, the material of the new version and that of the version immediately preceding it. The distribution to the users thus can take place at any time and in any order, without interfering with the operational secure fax network.

Crypto communication between two users is always possible if the difference between the version numbers of the Personal Key Cards concerned is not higher than 1 (see figure 2).

K3 System

In the K3 system each Personal Key Card contains one set of keying

material. Crypto communication between two users is only possible if the version numbers of the Personal Key Cards are the same. Sliding replacement is not possible; introduction of new keying material can take place only from a certain moment fixed up beforehand.

Update access protocol data

Each Personal Key Card contains besides communication keying material, keying material for access protocol. During the generating of new communication material, it is possible that this access keying material is also updated. Once a Personal Key Card with updated access keying material is used, the preceding version of that card has no access anymore to the PFDX unit concerned.

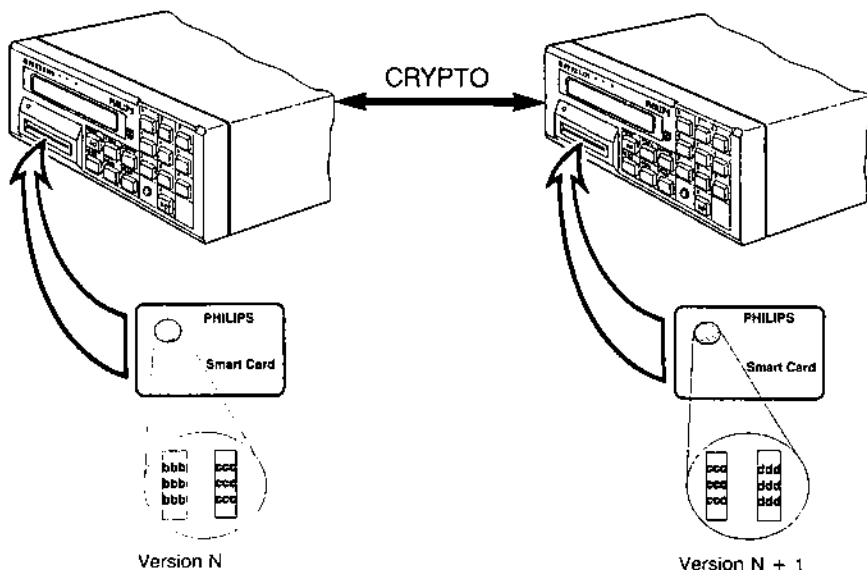


Figure 2

1.3 Crypto Installation menu

The PFDX unit has a special menu facility which is accessible only via a Crypto Installation Card (CIC) and associated PIN.

Via this crypto installation menu, the security manager can:

- identify the unit;
- set/change the period that the accepted PIN of an inserted Personal Key Card will remain valid;
- enable/disable the user zeroize function;
- set/change the communication possibility of the unit to transmit in plain mode;
- set/change the communication possibility of the unit to receive in plain mode;
- set/change the period that the PFDX will remain in the plain mode after a plain transmit session;
- display information about enlisted subscribers;
- add subscribers to the list of allowed subscribers;
- remove subscribers from the list of allowed subscribers;
- un-install the unit;
- zeroize Personal Key Cards;
- zeroize the unit.

The structure of the crypto installation menu is shown in chapter 5.

1.4 Zeroize function

The menu proposal "Zeroize terminal" of the crypto installation menu can be used to reset the PFDX unit to the state as delivered by the manufacturer.

Do not zeroize by pressing the ENTER and 0 keys simultaneously when the Crypto Installation Card is inserted! This two-button zeroize function will erase all key material present in the PFDX unit, and will block the Crypto Installation Card for further use.

2.1 How to proceed

Preparations

Check whether the voltage specified on the identification label of the PFDX unit (bottom side) corresponds with the local mains supply. Only if correct, you can connect the PFDX unit to the local mains. Otherwise contact your service organization.

Crypto installation

- Perform the following start-up procedure:
 - switch the power ON, see section 2.2;
 - insert the Crypto Installation Card and enter associated PIN, see section 2.3 or 2.4.
- Select the PIN-validity of the Personal Key Cards as described in section 2.6.
- Enlist the allowed subscribers as described in section 2.9.
- Select the communication possibility for the transmit plain mode, see section 3.1.
- Select the communication possibility for the receive plain mode, see section 3.2.
- Select the plain time-out, see section 3.3.
- Remove Crypto Installation Card and switch the unit OFF.

All crypto and security parameters are now installed.

The PFDX unit can be passed to the person responsible for system installation, see PART II.

2.2 Switch on mains

The unit is switched off.

Switch on mains

Following an automatic test, which takes a few seconds, the unit starts up.

YYYYyy - ZZ is a crypto installation code. This code indicates that the PFDX unit has been initialized; the unit is ready for crypto installation.

YYYYyy = Crypto Set Number of Master Installation Card (CSNmic), 4 upto 6 digits;
ZZ = Location Number (LN), 2 digits.

ZEROIZED STATE

PFDX unit in Zeroized State; not ready for crypto installation.

PRE-INITIALIZED STATE

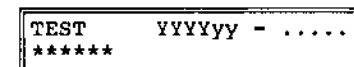
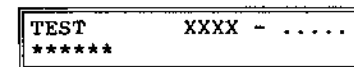
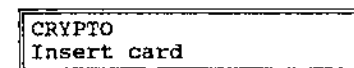
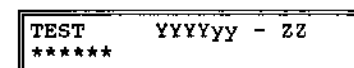
PFDX unit in Pre-initialized State; not ready for crypto installation.
XXXX = Fabrication Number (FN), 4 digits.

NOT-INITIALIZED STATE

PFDX unit has not been initialized; not ready for crypto installation.
YYYYyy = Crypto Set Number of Master Installation Card (CSNmic), 4 upto 6 digits.

ALARM

This alarm message denotes that the unit is inoperative. See section 4.2 for further actions.



2.3 Crypto Installation Card (First-time use)

The Crypto Installation Card contains a microchip in which crypto installation data is stored. These data are protected amongst others by a PIN. Each new card has an initial PIN allocated by the manufacturer. When you use the card for the first time, you must enter this PIN and immediately replace it with your own unique PIN.

Note: This procedure can be done only once.

Insert Crypto Installation Card with the chip first and facing upwards

CRYPTO
Insert card

Key in initial PIN

Note: An asterisk (*) is displayed as you key in each digit. The PIN itself is never displayed.

First digit keyed in

AUTHORIZE
PIN : *----

Last digit keyed in

*Entry can be cancelled by pressing
RESET*

AUTHORIZE
PIN : ****

To confirm initial PIN
Press ENTER

ENTER
[ENTER]

Key in Installation Code (IC)

Note: An asterisk (*) is displayed as you key in each digit. The IC itself is never displayed.

First digit keyed in

AUTHORIZE
IC: *-----

Last digit keyed in

*Entry can be cancelled by pressing
RESET*

AUTHORIZE
IC: *****

see next page

2.3 Crypto Installation Card (First-time use) (continued)

To confirm Installation Code
Press ENTER

ENTER
[ENTER]

Key in your preferred PIN

First digit keyed in

CHANGE PIN
New PIN: *----

Last digit keyed in

CHANGE PIN
New PIN: ****

To confirm your preferred PIN
Press ENTER

ENTER
[ENTER]

For verification

Key in your preferred PIN again

First digit keyed in

CHANGE PIN
Verify PIN: *----

Last digit keyed in

CHANGE PIN
Verify PIN: ****

To confirm PIN
Press ENTER

ENTER
[ENTER]

Shown for 3 seconds

AUTHORIZE
Card accepted

You have access to the crypto
installation menu.

MENU CRYPTO INSTALL
01 Check terminal

2.4 Crypto Installation Card
(After first-time use)

Insert Crypto Installation Card with the chip first and facing upwards

CRYPTO
Insert card

Key in associated PIN

AUTHORIZE
PIN : *---

First digit keyed in

AUTHORIZE
PIN : ****

Last digit keyed in

Entry can be cancelled by pressing
RESET

ENTER
[X]

To confirm PIN

Press ENTER

ONLY WHEN AUTHORIZATION TAKES PLACE FIRST TIME AFTER
INITIALIZING OR UN-INSTALLING:

Key in installation code (IC)

Note: An asterisk (*) is displayed as you key in each digit. The IC itself is never displayed.

AUTHORIZE
IC: *-----

First digit keyed in

AUTHORIZE
IC: *****

Last digit keyed in

Entry can be cancelled by pressing
RESET

ENTER
[X]

To confirm installation code

Press ENTER

Shown for 3 seconds

AUTHORIZE
Card accepted

MENU CRYPTO INSTALL
01 Check terminal

You have access to the crypto
installation menu.

2.5 Check terminal

This section describes how to determine the identity of the unit in order to assist the service organization. If you contact the "help desk", please refer to the identification numbers shown.

Note:

Crypto Installation Card inserted,
PIN accepted.

MENU CRYPTO INSTALL
01 Check terminal

ENTER
[X]

To select sub-menu "Check terminal"
Press ENTER

MENU Check terminal 1
Terminal: xxxxxxxx

The identity is shown for about 3 seconds:
xxxxxxx = terminal identification
(8 digits, hexa-decimal)

MENU CRYPTO INSTALL
01 Check terminal

SCROLL
[]

To select another menu proposal
Press SCROLL until the required menu
proposal appears

To quit menu

Remove the Crypto Installation Card

2.6 PIN-validity of inserted
Personal Key Card

The PIN remains valid in the standby mode for a period of time after the PIN-acceptance or after the last fax message, provided that the user's Personal Key Card is not removed from the PFDX unit. This period of time (card valid time) can be set to a value from 00 hrs - 01 min to 23 hrs - 59 min. If 00 hrs - 00 min is selected, the PIN will be valid as long as the Personal Key Card remains in the unit. This time setting does not affect the PIN-validity of the Crypto Installation Card.

Note:
Crypto Installation Card inserted,
PIN accepted.

MENU CRYPTO INSTALL
01 Check terminal

To select the next menu line
Press **SCROLL**

SCROLL
[]

MENU CRYPTO INSTALL
02 Card valid time

To select sub-menu "Card valid time"
Press **ENTER**

ENTER
[]

Sub-menu is selected
The installed value is displayed
(Default value: 02 hrs - 00 min)

MENU Card valid time 1
xx hours yy minutes

see next page

2.6 PIN-validity of inserted
Personal Key Card
(continued)

MENU Card valid time 1
pp hours yy minutes

Press 2 digits indicating the new number
of hours

Entry can be cancelled by pressing
RESET

ENTER
[]

To confirm
Press **ENTER**

MENU Card valid time 1
pp hours qq minutes

Press 2 digits indicating the new number
of minutes

Entry can be cancelled by pressing
RESET

ENTER
[]

To confirm
Press **ENTER**

MENU CRYPTO INSTALL
02 Card valid time

To select another menu proposal
Press **SCROLL** until the required menu
proposal appears

SCROLL
[]

To quit menu
Remove the *Crypto Installation Card*

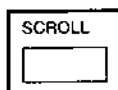
2.7 Enable/disable user zeroize function

This section describes how to enable or disable the user zeroize function. If the user zeroize function is enabled, the user is able to zeroize the PFDX unit by pressing the push-buttons ENTER and 0 simultaneously. If the user zeroize function is disabled the user cannot zeroize the unit.

Note:
Crypto Installation Card inserted,
PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

To select the menu line
Press *SCROLL* twice



```
MENU CRYPTO INSTALL
03 Zeroize function
```

To select sub-menu "Zeroize function"
Press *ENTER*



The display shows the active (i.e. the last selected) possibility, indicated by means of an asterisk.

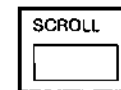
```
MENU Zeroize function 1
01 Enable *
```

or

```
MENU Zeroize function 1
02 Disable *
```

see next page

2.7 Enable/disable user zeroize function
(continued)



To select the other possibility
Press *SCROLL*



To confirm your selection
Press *ENTER*

```
MENU CRYPTO INSTALL
03 Zeroize function
```



To select another menu proposal
Press *SCROLL* until the required menu proposal appears

To quit menu
Remove the *Crypto Installation Card*

2.8 Show subscribers

This section describes how to display information about allowed subscribers already enlisted.

Note:

Crypto Installation Card inserted,
PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

To select the menu line
Press *SCROLL* 6 times

```
SCROLL
```

```
MENU CRYPTO INSTALL
07 Show subscribers
```

To select sub-menu "Show subscribers"
Press *ENTER*

```
ENTER
```

```
mXO
```

xx = number of subscribers already
enlisted.

```
MENU Show subscribers 1
Max: 16 in : xx
```

To select the first subscriber
information
Press *ENTER*

```
ENTER
```

```
mXO
```

pppppp = Crypto Set Number (CSN),
6 digits;

qqqqqq = Identity Number (IDN),
6 digits ("000000" indicates
Group Access);

rr = Access Number,
2 characters (A...Z), "**"
indicates that Personal Key
Card has not yet been used.

see next page

```
MENU Show subscribers 1
pppppp - qqqqqq rr
```

2.8 Show subscribers

(continued)

```
SCROLL
```

To select the next subscriber
information
Press *SCROLL*

```
MENU Show subscribers 1
pppppp - qqqqqq rr
```

Next subscriber information.

Note: To display more subscribers,
scroll through the list.

To quit sub-menu "Show subscribers"
press *RESET*

```
MENU CRYPTO INSTALL
07 Show subscribers
```

End of list

```
SCROLL
```

To select another menu proposal
Press *SCROLL* until the required menu
proposal appears

To quit menu
Remove the *Crypto Installation Card*

2.9 Add subscribers

This section describes how to add a new subscriber to the list of allowed subscribers.

Note:
Crypto Installation Card inserted,
PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

To select the menu line
Press *SCROLL* 7 times

```
SCROLL
```

```
MENU CRYPTO INSTALL
08 Add subscribers
```

To select sub-menu "Add subscribers"
Press *ENTER*

```
ENTER
```

xx = number of subscribers already
enlisted.

```
MENU Add subscribers 1
Max: 16 in : xx
```

To add a new subscriber
Press *ENTER*

```
ENTER
```

Key in Crypto Set Number (CSN)
(4 upto 6 digits)

```
MENU Add subscribers 1
CSN: -----
```

Entry can be cancelled by pressing
RESET

```
MENU Add subscribers 1
CSN: xxxxxx
```

see next page

2.9 Add subscribers

(continued)

```
ENTER
```

To confirm Crypto Set Number
Press *ENTER*

```
MENU Add subscribers 1
IDN: -----
```

Key in Identity Number (IDN)
(0 upto 6 digits)

```
MENU Add subscribers 1
IDN: xxxxxx
```

Note: 0 digits means: IDN = 000000
(Group Access for prepared
Personal Key Cards)

Entry can be cancelled by pressing
RESET

```
ENTER
```

To confirm IDentity Number
Press *ENTER*

```
MENU Add subscribers 1
Adding new subscriber
```

Procedure in progress

```
MENU CRYPTO INSTALL
08 Add subscribers
```

```
SCROLL
```

To select another menu proposal
Press *SCROLL* until the required menu
proposal appears

To quit menu
Remove the *Crypto Installation Card*

Error messages

```
MENU Add subscribers 1
Subscriber zone is full
```

Subscriber list contains already a
maximum (16) of subscribers.

```
MENU Add subscribers 1
Subscriber is already in
```

Subscriber already enlisted.

2.10 Remove subscribers

This section describes how to remove subscribers from the list of allowed subscribers.

Note:

Crypto Installation Card inserted,
PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

To select the menu line
Press **SCROLL** 8 times

```
SCROLL
```

```
MENU CRYPTO INSTALL
09 Remove subsc
```

To select sub-menu "Remove subsc"
Press **ENTER**

```
ENTER
```

xx = number of subscribers enlisted.

```
MENU Remove subsc      1
Max: 16 in : xx
```

To select the first subscriber
information
Press **ENTER**

```
ENTER
```

pppppp = Crypto Set Number (CSN),
6 digits;
qqqqqq = IDentity Number (IDN),
6 digits ("000000" indicates
Group Access);
rr = Access Number,
2 characters (A...Z), "**"
indicates that Personal Key
Card has not yet been used.
see next page

```
MENU Remove subsc      1
pppppp - qqqqqq rr
```

2.10 Remove subscribers

(continued)

```
SCROLL
```

Press **SCROLL** until the display shows
the subscriber you wish to remove

```
ENTER
```

To remove the displayed subscriber
Press **ENTER**

```
MENU Remove subsc      1
pppppp - qqqqqq rr
```

Next subscriber information.

Note: To remove more subscribers,
scroll through the list to select
the next subscriber and press
ENTER

To quit sub-menu "Remove subsc" press
RESET

```
MENU CRYPTO INSTALL
09 Remove subsc
```

End of list

```
SCROLL
```

To select another menu proposal
Press **SCROLL** until the required menu
proposal appears

To quit menu
Remove the *Crypto Installation Card*

2.11 Un-install

This section describes how to remove all specific crypto parameters from the installed PFDX unit.

The procedure resets the unit to the Initialized State.

The action must be taken first when a re-installation is required.

Note:

Right Crypto Installation Card inserted (i.e. CIC that has been used to perform the installation), PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

Press *SCROLL* 9 times

```
SCROLL
```

```
MENU CRYPTO INSTALL
10 Uninstall
```

To start the "Un-install" process

Press *ENTER*

```
ENTER
```

Procedure in progress

```
MENU Uninstall      1
Uninstalling ...
```

Un-installing successful

```
MENU Uninstall      1
Uninstalled, remove card
```

To quit menu

Remove the *Crypto Installation Card*

2.12 Zeroize cards

This section describes how to zeroize a Personal Key Card. The procedure removes a large part of the data stored on the Personal Key Card. As a result the card cannot longer be used as a Personal Key Card and can be sent back safely to the card issuing centre.

Note:

Crypto Installation Card inserted, PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

```
SCROLL
```

Press *SCROLL* 10 times

```
MENU CRYPTO INSTALL
11 Zeroize cards
```

```
ENTER
```

To select sub-menu "Zeroize cards"
Press *ENTER*

```
MENU Zeroize cards  1
Activated, remove card
```

Remove the *Crypto Installation Card*

```
ZEROIZING CARDS
Insert Card/Press RESET
```

Insert the *Personal Key Card*, you wish to zeroize

or:

Press *RESET* to quit sub-menu

see next page

2.12 Zeroize cards

(continued)

pppppp = Crypto Set Number (CSN),
6 digits;
qqqqqq = IDentity Number (IDN),
6 digits.

```
ZEROIZE pppppp - qqqqqq
Y=ENTER / N=Remove card
```

Do you really want to zeroize the
Personal Key Card, then
Press **ENTER**

```
ENTER
  X
```

if not:

Remove the Personal Key Card

```
ZEROIZE pppppp - qqqqqq
Zeroized, remove card
```

Remove the Personal Key Card

```
ZEROIZING CARDS
Insert card/Press RESET
```

To Zeroize more Personal Key Cards
Insert next Personal Key Card

To quit sub-menu "Zeroizing cards"
Press **RESET**

Error messages

Zeroize procedure failed.
x = error code (0..F)

```
ZEROIZE pppppp - qqqqqq
Failed (x), remove card
```

Card inserted is not a Personal Key
Card.

```
ZEROIZING CARDS
Remove installation card
```

Personal Key Card inserted incorrectly
or not recognised.

```
ZEROIZING CARDS
Remove unknown card
```

2.13 Zeroize terminal

This section describes how to zeroize
the PFDX unit.
The procedure resets the unit to the
Zeroized State.

Note:

Crypto Installation Card inserted,
PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

```
SCROLL
```

Press **SCROLL** 11 times

```
MENU CRYPTO INSTALL
12 Zeroize terminal
```

```
ENTER
```

To select "Zeroize terminal"
Press **ENTER**

```
MENU Zeroize terminal 1
Are you sure ? Y=ENTER
```

```
ENTER
```

Do you really want to zeroize the unit,
then:
Press **ENTER**

if not:

Press any other key

```
MENU Zeroize terminal 1
Zeroized, remove card
```

To quit menu
Remove the Crypto Installation Card

3.1 Change Transmit plain mode

This section describes how to select one of the following transmission possibilities in the PLAIN mode:

- "Never possible" means that the user cannot transmit messages in PLAIN mode;
- "Only with Card" means that the user can transmit messages in PLAIN mode only, if the Personal Key Card is inserted, the PIN accepted and still valid;
- "Always possible" means that the user can transmit messages in PLAIN mode without restriction.

Note:

Crypto Installation Card inserted, PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

Press *SCROLL* 3 times

```
SCROLL
```

```
MENU CRYPTO INSTALL
04 Transmit PLAIN
```

To select sub-menu "Transmit PLAIN"
Press *ENTER*

```
ENTER
mXO
```

see next page

3.1 Change Transmit plain mode

(continued)

```
MENU Transmit PLAIN 1
01 Never possible *
```

or

```
MENU Transmit PLAIN 1
02 Only with card *
```

or

```
MENU Transmit PLAIN 1
03 Always possible *
```

The display shows the active (i.e. the last selected) possibility, indicated by means of an asterisk.

```
SCROLL
```

To select another possibility
Press *SCROLL*

```
ENTER
mXO
```

To confirm your selection
Press *ENTER*

Note:

When "Never possible" is selected, the push-button PLAIN is disabled.

```
MENU CRYPTO INSTALL
04 Transmit PLAIN
```

```
SCROLL
```

To select another menu proposal
Press *SCROLL* until the required menu proposal appears

To quit menu
Remove the *Crypto Installation Card*

3.2 Change Receive plain mode

This section describes how to select one of the following receiving possibilities in the PLAIN mode:

- "Never possible" means that the user cannot receive messages in PLAIN mode;
- "Only with Card" means that the user can receive messages in PLAIN mode only, if the Personal Key Card is inserted, the PIN accepted and still valid;
- "Always possible" means that the user can receive messages in PLAIN mode without restriction.

Note:
Crypto Installation Card inserted,
PIN accepted.

```
MENU CRYPTO INSTALL
01 Check terminal
```

Press *SCROLL* 4 times

```
SCROLL
```

```
MENU CRYPTO INSTALL
05 Receive PLAIN
```

To select sub-menu "Receive PLAIN"
Press *ENTER*

```
ENTER
mXO
```

see next page

3.2 Change Receive plain mode

(continued)

```
MENU Receive PLAIN 1
01 Never possible *
```

or

```
MENU Receive PLAIN 1
02 Only with card *
```

or

```
MENU Receive PLAIN 1
03 Always possible *
```

The display shows the active (i.e. the last selected) possibility, indicated by means of an asterisk.

```
SCROLL
```

To select another possibility
Press *SCROLL*

```
ENTER
mXO
```

To confirm your selection
Press *ENTER*

```
MENU CRYPTO INSTALL
05 Receive PLAIN
```

```
SCROLL
```

To select another menu proposal
Press *SCROLL* until the required menu proposal appears

To quit menu
Remove the Crypto Installation Card

3.3 Set Plain time-out

After pressing the PLAIN button and when no or no longer plain messages are transmitted, the PFDX will remain in the plain mode for a restricted period of time. This period of time (plain time-out) can be set to a value from 00 hrs - 01 min to 23 hrs - 59 min.

After this time the PFDX will return to the state as defined by the previous crypto installation settings.

The "Plain time-out" setting allows the user to send plain messages in the 'SEND LATER' mode of a connected fax apparatus.

This setting does not affect a receiving PFDX which always falls back to its original (installed) state immediately after the received message.

Note:

Crypto Installation Card inserted, PIN accepted.

MENU CRYPTO INSTALL
01 Check terminal

Press *SCROLL* 5 times

SCROLL
[]

MENU CRYPTO INSTALL
06 Plain time-out

To select sub-menu "Plain time-out"
Press *ENTER*

ENTER
[XO]

see next page

3.3 Set Plain time-out

(continued)

MENU Plain time-out 1
xx hours yy minutes

Sub-menu is selected
The installed value is displayed
(Default value: 00 hrs - 05 min)

MENU Plain time-out 1
pp hours yy minutes

Press 2 digits indicating the new number of hours

Entry can be cancelled by pressing *RESET*

ENTER
[XO]

To confirm
Press *ENTER*

MENU Plain time-out 1
pp hours qq minutes

Press 2 digits indicating the new number of minutes

Entry can be cancelled by pressing *RESET*

ENTER
[XO]

To confirm
Press *ENTER*

MENU CRYPTO INSTALL
06 Plain time-out

SCROLL
[]

To select another menu proposal
Press *SCROLL* until the required menu proposal appears

To quit menu
Remove the *Crypto Installation Card*

4.1 Smart Card messages

This section gives a survey of the display messages related to the Crypto Installation Card.

Wrong PIN
(displayed for about 3 seconds)

```
AUTHORIZE
Incorrect PIN
```

Key in PIN

```
AUTHORIZE
PIN: ----
```

Wrong IC
(displayed for about 3 seconds)

```
AUTHORIZE
Incorrect IC
```

To start authorization again
Key in PIN

```
AUTHORIZE
PIN: ----
```

Cause:
3 consecutive wrong attempts to enter PIN. The Crypto Installation Card can no longer be used.

Remedy:
Forward the card for regeneration.

```
AUTHORIZE
Card disabled
```

Cause:
This Crypto Installation Card has no access authority to the unit (wrong LN).

Remedy:
Use the right Crypto Installation Card.

```
AUTHORIZE
No access allowed
```

Cause:
Crypto Installation Card inserted incorrectly or not recognised.

Remedy:
Insert card correctly (chip first and facing upwards).

```
AUTHORIZE
Card unknown
```

Cause:
PFDX unit has not been initialized; not ready for crypto installation.

Remedy:
The unit has to be initialized by the proper authorities.

```
AUTHORIZE
Not initialized
```

4.2 Alarms

ALARM messages may be displayed. An ALARM message denotes that the unit is inoperative. The alarm state can be cancelled by pressing RESET or, if this fails, by switching the unit OFF and ON again.

Note: Each ALARM condition is identified by a number in the top right-hand corner of the display.

Cause:
The unit is inoperative. All functions are blocked.

XXXXXX indicates a number for service purposes, please TAKE NOTE!

Remedy:
Restart is executed only by pressing RESET or by switching the power off and after a few seconds on again.

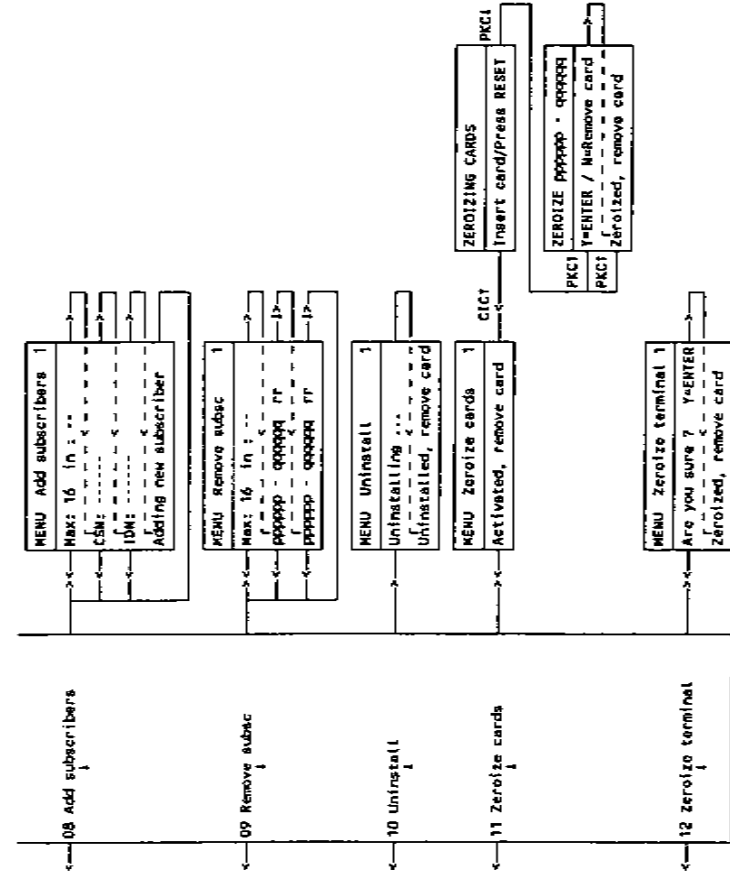
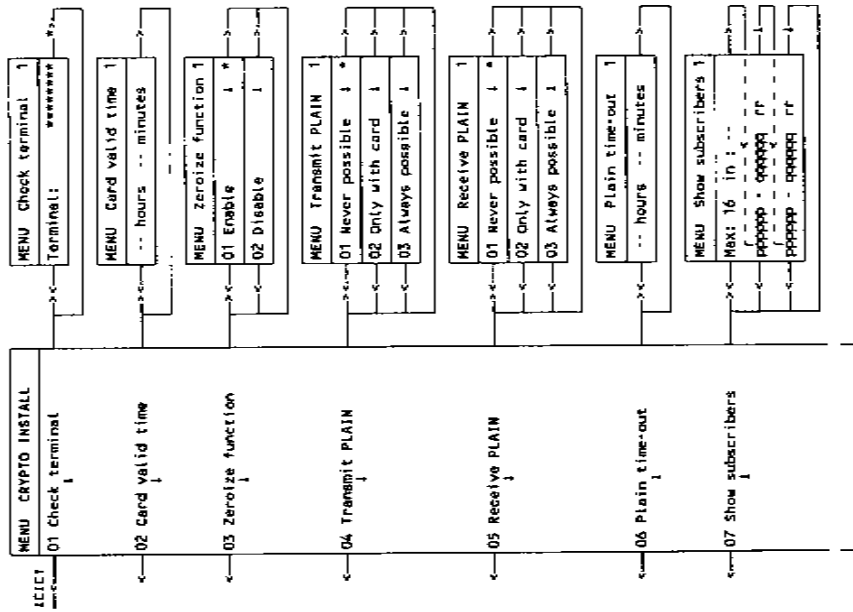
- An automatic test is carried out for a few seconds

- If test O.K. 'Insert Card' is displayed

```
ALARM          XXXXXX
Press "RESET"-button
```

```
TEST          YYYYyy - ZZ
*****
```

```
CRYPTO
Insert card
```



Symbol:

- ENTER
- ← RESET
- ↓ SCROLL
- CIC1 Insert CIC
- CIC2 Remove CIC
- PKC1 Insert PKC
- PKC2 Remove PKC
- Factory setting
- *— Displayed for 3 seconds

Fax Encryption Unit

PFDX 6335

PART II

System Installation

This PART contains the step-by step procedures to adapt the system settings of the PFDX unit.

You (system engineer) as well as the user have access to the menu facility of the PFDX unit via the Personal Key Card and associated PIN.

With the aid of the Password, however, you have also access to the menu proposal "Settings", and you can:

- adapt the modem transmit level;
- select the protocol speed;
- restore the "factory" default values for the modem transmit level and protocol speed.

The structure of the menu with all setting-proposals is shown in chapter 5.

Asterisks are used in the appropriate sub-menu displays to indicate the active modem transmit level and protocol speed.

The password of each PFDX unit is 5691.

2.1 How to proceed

Preparations

Check whether the voltage specified on the identification label of the PFDX unit (bottom side) corresponds with the local mains supply. Only if correct, you can connect the PFDX unit to the local mains. Otherwise contact your service organization.

System installation

- Perform the following start-up procedure:
 - switch the power ON, see section 2.2;
 - Insert the Personal Key Card and enter associated PIN, see section 2.3 or 2.4.
- Adapt modem transmit level as described in section 3.1.
- Select protocol speed as described in section 3.2.
- Remove Personal Key Card and switch the unit OFF.

All parameters are now installed; the PFDX unit can be passed to the user.

2.2 Switch on mains

The unit is switched off.

Switch on mains

Following an automatic test, which takes a few seconds, the unit starts up.

YYYYyy - QQQQqq is a crypto installation code. This code indicates that the PFDX unit has been installed; the unit is ready for system installation.
 YYYYyy = Crypto Set Number of Master Installation Card (CSNmic), 4 upto 6 digits;
 QQQQqq = Crypto Set Number of Crypto Installation Card (CSNcic), 4 upto 6 digits.

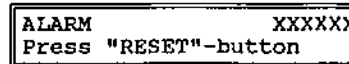
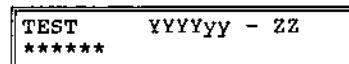
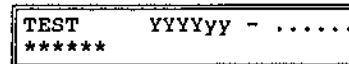
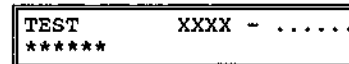
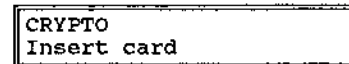
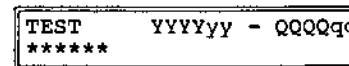
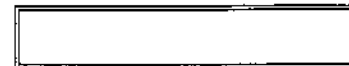
ZEROIZED STATE
 PFDX unit in Zeroized State; not ready for system installation.

PRE-INITIALIZED STATE
 PFDX unit in Pre-initialized State; not ready for system installation.
 XXXX = Fabrication Number (FN), 4 digits.

NOT-INITIALIZED STATE
 PFDX unit has not been initialized; not ready for system installation.
 YYYYyy = Crypto Set Number of Master Installation Card (CSNmic), 4 upto 6 digits.

INITIALIZED STATE
 PFDX unit in Initialized State; not ready for system installation.
 ZZ = Location Number (LN), 2 digits.

ALARM
 This alarm message denotes that the unit is inoperative. See section 4.2 for further actions.



2.3 Personal Key Card
(First-time use)

Your Personal Key Card contains a microchip in which your personal set of processing material is stored, together with personal identification data. These data are protected amongst others by a PIN. Each new card has an initial PIN allocated by the manufacturer. When you use your card for the first time, you must enter this PIN and immediately replace it with your own unique PIN. **Note:** This procedure can be done only once.

Insert Personal Key Card with the chip first and facing upwards

CRYPTO
Insert card

Key in initial PIN

Note: An asterisk (*) is displayed as you key in each digit. The PIN itself is never displayed.

First digit keyed in

AUTHORIZE
PIN : *---

Last digit keyed in

Entry can be cancelled by pressing RESET

AUTHORIZE
PIN : ****

To confirm initial PIN
Press ENTER

ENTER
[ENTER KEY]

Key in your preferred PIN

First digit keyed in

CHANGE PIN
New PIN: *---

Last digit keyed in

CHANGE PIN
New PIN: ****

see next page

2.3 Personal Key Card
(First-time use)
(continued)

To confirm your preferred PIN
Press ENTER

ENTER
[ENTER KEY]

For verification
Key in your preferred PIN again

First digit keyed in

CHANGE PIN
Verify PIN: *---

Last digit keyed in

CHANGE PIN
Verify PIN: ****

To confirm PIN
Press ENTER

ENTER
[ENTER KEY]

Your PIN has been accepted and is now stored on your Personal Key Card; the equipment is ready to select the menu facility.

CHANGE PIN
Card accepted

CRYPTO

2.4 Personal Key Card
(After first-time use)

Insert Personal Key Card with the chip first and facing upwards

CRYPTO
Insert card

Key in associated PIN

AUTHORIZE
PIN : *---

First digit keyed in

Last digit keyed in

Entry can be cancelled by pressing RESET

AUTHORIZE
PIN : ****

To confirm PIN

Press ENTER

ENTER
[ENTER KEY]

Your PIN has been accepted; the equipment is ready to select the menu facility.

AUTHORIZE
Card accepted



CRYPTO

3.1 Modem Transmit level

As far as possible the PFDX unit is adjusted at the factory to suit the telephone network to which it will be connected. It may, however, be necessary to adapt the modem transmission level.

Adaptation is possible in 1dB steps either side of the level set at the factory. (up: 6 steps, down: 9 steps)

This section describes this procedure.

Press MENU

MENU
[MENU KEY]

MENU
01 Internal test

To select next menu line
Press SCROLL

SCROLL
[SCROLL KEY]

MENU
02 Settings

To select "Settings"
Press ENTER

ENTER
[ENTER KEY]

MENU Settings 1
Password: ----

Key in 4-digit password

MENU Settings 1
Password: ****

Entry can be cancelled by pressing RESET

see next page

3.1 Modem Transmit level

(continued)

To confirm the password
Press **ENTER**



```
MENU Settings 1
01 Modem Tx level
```

To select "Modem Tx level"
Press **ENTER**



The display shows the active (i.e. the last-selected) value, indicated by means of an asterisk.

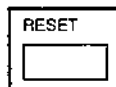
```
MENU Modem Tx level 2
07 0 dB relative *
```

Press **SCROLL** until the display shows the value you wish to select.

To confirm your selection
Press **ENTER**



To quit menu
Press **RESET** twice



```
CRYPTO
```

3.2 Protocol speed

```
CRYPTO
```

Before one fax terminal can communicate with another, each terminal must send certain information to the other; this is known as "protocol exchange".

At most fax terminals the speed at which protocol exchange occurs is standardised at 300 bits per second (bps). The PFDX unit is factory-set to operate at this speed.

Some fax terminals, however, have a standard protocol speed of 2400 bps and the PFDX unit can therefore be set to operate at this speed. It can also be set to "Auto bps" in which it will adapt automatically to the speed of the remote terminal.

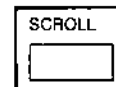
This section describes the procedure.

Press **MENU**



```
MENU
01 Internal test
```

To select next menu line
Press **SCROLL**



```
MENU
02 Settings
```

To select "Settings"
Press **ENTER**



see next page

3.2 Protocol speed

(continued)

Key in the 4-digit password

```
MENU Settings 1
Password: ----
```

Entry can be cancelled by pressing
RESET

```
MENU Settings 1
Password: ****
```

To confirm the password
Press **ENTER**

```
ENTER
  X
```

```
MENU Settings 1
01 Modem Tx level
```

To select next menu line
Press **SCROLL**

```
SCROLL
  X
```

```
MENU Settings 1
02 Protocol speed
```

To select "Protocol speed"
Press **ENTER**

```
ENTER
  X
```

The display shows the active (i.e. the last-selected) value, indicated by an asterisk.

```
MENU Protocol speed 2
01 300 bps *
```

Press **SCROLL** until the display shows the value you wish to select.If fax protocol speed is 300 bps then select "300 bps";
If fax protocol speed is 2400 bps then select "2400 bps";
If fax protocol speed is 300/2400 bps then select "Auto bps".

see next page

3.2 Protocol speed

(continued)

```
ENTER
  X
```

To confirm your selection
Press **ENTER**

```
MENU Settings 1
02 Protocol speed
```

```
RESET
  X
```

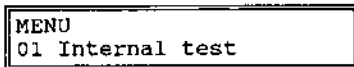
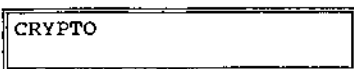
To quit the menu
Press **RESET** twice

```
CRYPTO
```

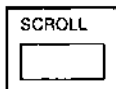
3.3 Restore default settings

This section describes how to restore the Modem Transmit level and the Protocol speed to their factory-set default values, i.e. 0 dB relative and 300 bps.

Press *MENU*



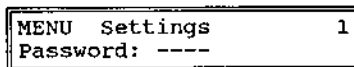
To select next menu line
Press *SCROLL*



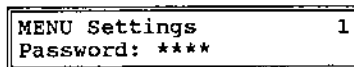
To select "Settings"
Press *ENTER*



Key in 4-digit password



Entry can be cancelled by pressing *RESET*



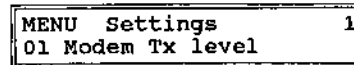
To confirm the password
Press *ENTER*



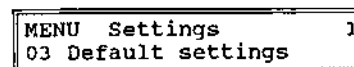
see next page

3.3 Restore default settings

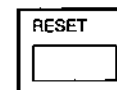
(continued)



To select menu line
Press *SCROLL* twice



To restore the factory-set default values
Press *ENTER*



To quit the menu
Press *RESET* twice



4.1 Smart Card messages

This section gives a survey of the display messages related to the Personal Key Card.

Wrong PIN
(displayed for about 3 seconds)

AUTHORIZE
Incorrect PIN



Key in PIN

AUTHORIZE
PIN: ----

Cause:
3 consecutive wrong attempts to enter PIN. The Personal Key Card can no longer be used.

Remedy:
Forward the card for regeneration.

AUTHORIZE
Card disabled

Cause:
The Personal Key Card has no access authority to this PFDX unit.

Remedy:
Access authority can be provided by the security manager.

AUTHORIZE
No access allowed

Cause:
Personal Key Card inserted incorrectly or not recognised.

Remedy:
Insert card correctly (chip first and facing upwards).

AUTHORIZE
Card unknown

Cause:
PFDX unit not installed; not ready for system installation.

Remedy:
The unit has to be crypto installed by the security manager.

AUTHORIZE
Not installed

4.2 Alarms

ALARM may be displayed.
An ALARM message denotes that the unit is inoperative. The alarm state can be cancelled by pressing RESET or, if this fails, by switching the unit OFF and ON again.

Note: Each ALARM condition is identified by a number in the top right-hand corner of the display.

ALARM XXXXXX
Press "RESET"-button

Cause:
The unit is inoperative. All functions are blocked.

XXXXXX indicates a number for service purposes, please TAKE NOTE!

Remedy:
Restart is executed only by pressing RESET or by switching the power off and after a few seconds on again.

TEST YYYy - QQQq

- An automatic test is carried out for a few seconds

- If test O.K. 'Insert Card' is displayed

CRYPTO
Insert card

