ND Display Terminal 1200 Operator Guide

ND-12.045.2 EN

ND Norsk Data

ND Display Terminal 1200
Operator Guide

About this user guide

If your terminal is already installed and ready to use, you can go directly to part 2 of this user guide.

If your terminal is still in the packaging, we suggest that you read part 1 before you start to install the terminal.

This user guide will introduce you to the ND Display Terminal 1200 (ND product number 110140). As you may know, a terminal is used to communicate with a computer, and to a large extent its behavior depends on the program that is running in the computer. However, local operating instructions are also needed in order to use the terminal in a typical work situation. This guide tells you about:

- Assembling and adjusting the terminal
- Using the soft keys
- Defining your own menu settings
- Programming PUSH-keys
- Adjusting light intensity and contrast
- Creating and handling a window
- Using the notepad

These things are common to all ND Display Terminal 1200s. Features applying to particular versions of the terminal are described in a separate booklet entitled "Functional Specifications".

Related manuals   ND Display Terminal 1200 Reference Manual ND-12.047

ND Display Terminal 1200 Functional Specifications ND-12.054

Contents

PART 1 - Before you begin

Important hints

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┌─ WARNING! ──────────────────────────────────┐
│                                              │
│  Do not remove the terminal cover unless the │
│  power cable is unplugged.                   │
│                                              │
└──────────────────────────────────────────────┘
```

Do not cover the ventilation slots on top of the terminal. Blocked slots may cause the terminal to overheat.
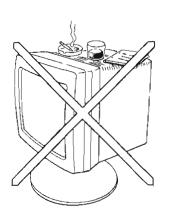
Never place the terminal directly on the desk or working surface. Always use a stand to ensure proper ventilation.

Never place paper clips, coins or beverages on top of the terminal. If such objects enter the interior, they may cause serious damage to the electronic components.

Always refer servicing to qualified personnel. No internal parts should be serviced by the user. No work should be attempted on an exposed chassis by anyone unfamiliar with the servicing procedures and precautions.
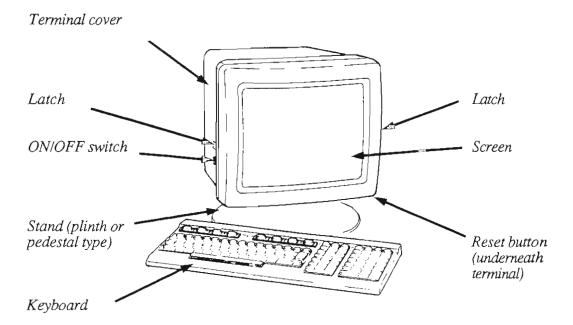
The power plug must be connected to a **grounded** wall outlet. Make sure all other cables are in position before plugging in the main power cable (see page 7).

Clean the screen once a week with a damp cloth and a spray. We recommend the use of Antistatic Screen Cleaner.
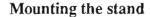
Special terminology

The illustration below shows the ND Display
Terminal 1200 and identifies its major parts.

Terminal cover

Latch   *Latch*

ON/OFF switch   *Screen*

*Stand (plinth or
pedestal type)*   *Reset button
(underneath
terminal)*

Keyboard
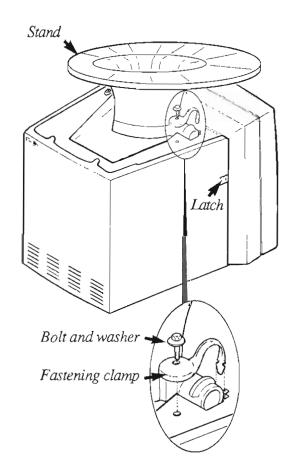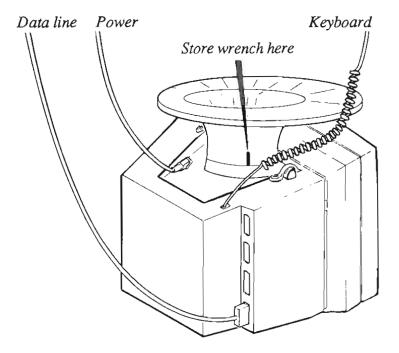
Assembling the terminal

The basic ND Display Terminal 1200 package consists of the terminal, the keyboard and a simple stand (or plinth). A pedestal stand which permits height adjustment and rotation of the terminal is available as an option. The mounting procedure described below applies to both the plinth and pedestal stand.

Mounting the stand

1. Turn the terminal upside down with the screen facing away from you.

2. Position the stand in the metal groove as shown.

3. Insert the fastening clamp in the slot and slide it slightly forward so that the notches are properly engaged. Do this with both fastening clamps.

4. Secure each fastening clamp with the bolt and washer.

5. Tighten the bolts using the enclosed wrench (spanner), but do not tighten them completely. They should be tightened so that the stand can be easily tilted forward and backward, yet be stable when left in position.

Stand

Latch

Bolt and washer

Fastening clamp

Data line   Power   Keyboard

Store wrench here

Connecting the cables

6.   Turn the terminal upright.

7.   Press the two side latches on the terminal cover to remove the cover.

8.   Turn the terminal upside down again so you can easily see the location of the connectors.

9.   Connect the three cables as shown above.

10. Turn the terminal upright and replace the cover, making sure that all cables hang freely from the opening at the base of the terminal, and are not pinched by the cover.
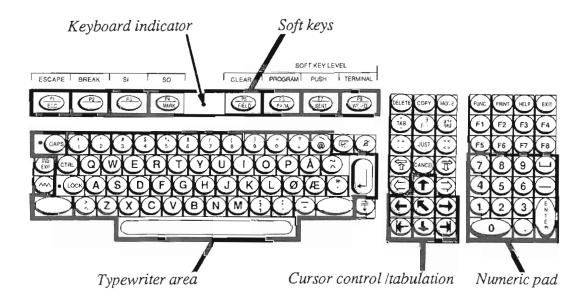
Adjusting your terminal position

11. Tilt and turn the terminal to a comfortable viewing angle which eliminates disturbing light reflections. If necessary, loosen or tighten the bolts so that the terminal is easily tilted while in an upright position.

12. Store the wrench (spanner) in the slot at the rear right side of the stand (plinth).

PART 2 - Getting started

The keyboard

If you have used a NOTIS keyboard before, you will
see that this one is slightly smaller.

Keyboard indicator   *Soft keys*

Typewriter area   *Cursor control /tabulation*   *Numeric pad*

Typewriter area

The keys in the typewriter area are very similar to those of an ordinary typewriter, and are used in the same way. The location of the particular keys will vary a bit according to various national standards.

Cursor control and tabulation

The keys in the cursor control and tabulation area are used to move the cursor on the screen, indicating the writing position.

Numeric pad

The keys in the numeric pad function like the numeric keys in the typewriter area - except that the CAPS key has no effect.
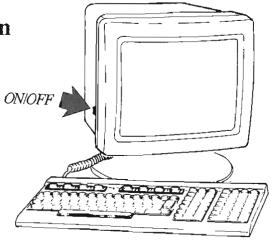
Soft keys

The soft-key concept is new for NOTIS terminals. These are eight distinct keys (P1-P8), each with several functions. The use of soft keys limits the number of keys needed, thereby reducing the size of the keyboard. The soft keys are described briefly in this part of the guide and more extensively in Part 4. The current soft-key functions are shown at the bottom of your screen.

Keyboard indicator

If the power is on and the terminal is working properly, the keyboard indicator is green. If an error occurs in the terminal, or in its link with the host computer, the indicator light will be red.

Turning the terminal on

ON/OFF
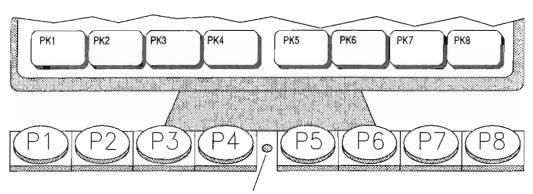
You turn the terminal on with the ON/OFF switch located on the left side of the terminal.

Test routines

When the terminal has been turned on, the keyboard indicator light will be green, and a moment later the contents of the screen appear. During this delay period, the terminal goes through certain test routines to discover possible errors.

Error messages
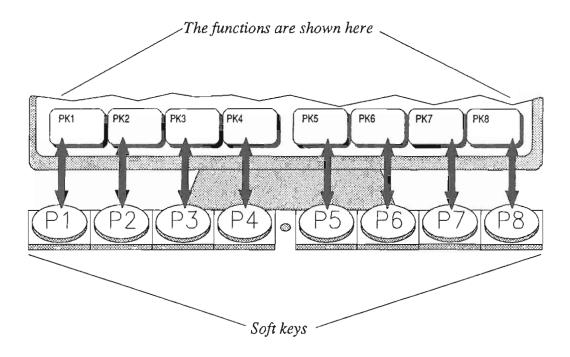
If an error is detected during the warm-up tests, a diagnosis is shown on the screen, and the keyboard indicator light will be red. Usually, there is no error and the bottom of the screen will appear similar to the one shown below. (Your screen picture may be slightly but not significantly different.)
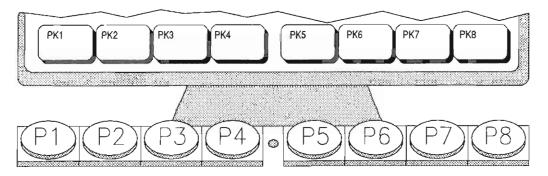
Keyboard indicator (green or red)

Soft keys

The "soft keys" are the keys marked P1-P8 at the top
of your keyboard. Each of the soft keys is capable of
serving many purposes and performing many
functions and subfunctions. **The current function
of the soft keys is always displayed at the bottom
of the screen picture.**

The functions are shown here

PK1   PK2   PK3   PK4   PK5   PK6   PK7   PK8

P1   P2   P3   P4   P5   P6   P7   P8

Soft keys

**Soft keys used
as PUSH-keys
(CTRL + P7)**

When you log in or when you press CTRL + P7 (while holding down CTRL press P7), the soft-key functions shown at the bottom of your screen look like this:

The eight soft keys can now be used as PUSH-keys (PK1 - PK8). A PUSH-key is a key you can define or "program" with a series of characters or key strokes.

You can, for example, program one key to write the name of your company every time you press it. This saves time if the name appears often in the text you type.
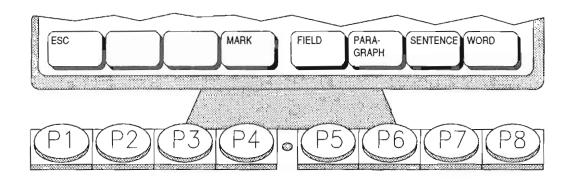
You can program another key with the procedure for storing and printing your text, so that these operations are carried out at the touch of a single key.

In addition to the eight PUSH-keys that are now available, you can use up to eight more (PK9 - PK16) by pressing the SHIFT key.

When a PUSH-key is empty (not yet programmed) the box at the bottom of the screen contains the number of the key (PK1, PK2, etc.). When the PUSH-key has been programmed, the box contains the short name you gave it when you programmed it to help you remember what has been programmed into it.

For a detailed discussion of PUSH-keys and how to program them, refer to Part 4, page 39.

**Soft keys used
for PROGRAM
functions
(CTRL + P6)**

When you press CTRL + P6 (while holding down CTRL press P6), the soft-key functions shown at the bottom of your screen look like this if you are using a NOTIS product:

| ESC | | | MARK | FIELD | PARA-GRAPH | SENTENCE | WORD |

| P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
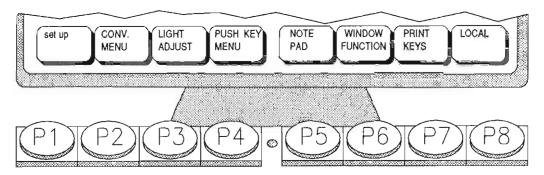
These soft-key functions are pre-defined by NOTIS, and you will not be able to re-define them. This soft-key set is perhaps the one you will use most often, since it is used to mark parts of the text for editing or special handling.

This soft-key set is software dependent. If you run a program other than NOTIS, the soft keys will have different functions.

Soft keys used for TERMINAL functions (CTRL+P8)

When you press CTRL +P8 (while holding down CTRL press P8) the soft-key functions shown at the bottom of your screen look like this:

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

| P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
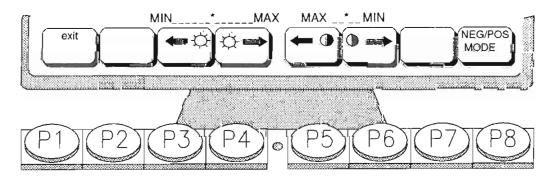
All of these functions deal with the set up of your terminal. You can control and change virtually all of the terminal characteristics to suit your own needs.

You can think of this first screen picture as the main or "top" level of TERMINAL functions. You will notice that some of the box titles are written in **lowercase** letters and some in **uppercase**.

Lowercase: If you press a key with a title in lowercase, you enter a new, lower TERMINAL function level; a level of subfunctions. This hierarchy of functions and subfunctions is shown in the overview on the next page.
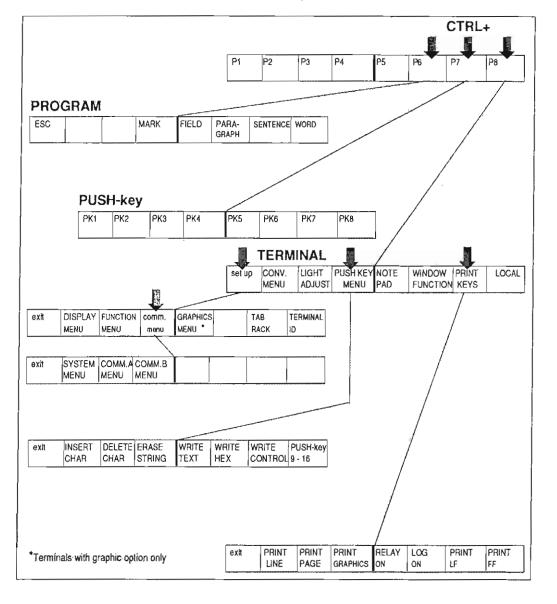
Uppercase: If you press a key with an uppercase title, you can perform the task described in the title. For example, if you press the LIGHT ADJUST key (P3), the screen picture changes to:

MIN_____*_____MAX   MAX __*__MIN

| exit | | ⬅ ☼ ☼ ➡ | | ⬅ ◐ ◑ ➡ | | | NEG/POS MODE |

| P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
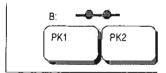
Now you can use the soft keys to adjust the light and contrast of your screen picture.

You must always press the 'exit' key (P1) to return to the higher TERMINAL function level. You must be at the top TERMINAL function level to change the soft keys to PROGRAM (CTRL+P6) or PUSH-key (CTRL+P7).

For more details, see Part 4.

CTRL+

P1	P2	P3	P4	P5	P6	P7	P8

PROGRAM

ESC			MARK	FIELD	PARA-GRAPH	SENTENCE	WORD

PUSH-key

PK1	PK2	PK3	PK4	PK5	PK6	PK7	PK8

TERMINAL

set up	CONV. MENU	LIGHT ADJUST	PUSH KEY MENU	NOTE PAD	WINDOW FUNCTION	PRINT KEYS	LOCAL

exit	DISPLAY MENU	FUNCTION MENU	comm. menu	GRAPHICS MENU *		TAB RACK	TERMINAL ID

exit	SYSTEM MENU	COMM.A MENU	COMM.B MENU				

exit	INSERT CHAR	DELETE CHAR	ERASE STRING	WRITE TEXT	WRITE HEX	WRITE CONTROL	PUSH-key 9 - 16

*Terminals with graphic-option only

exit	PRINT LINE	PRINT PAGE	PRINT GRAPHICS	RELAY ON	LOG ON	PRINT LF	PRINT FF

Logging in for the first time

To log in you must be certain that your terminal is in direct contact with the computer. Check that the "connector" symbol in the lower left corner of your screen is closed.

CTRL+
P7

CTRL+
P1

If it is closed:

1. Press CTRL + P7 to enter the PUSH-key function level.

2. Press CTRL + P1 to log in.

If it is not closed:

CTRL+
P8

P8

P1

CTRL+
P7

CTRL+
P1

1. Press CTRL + P8 to enter the TERMINAL function level.

2. Press P8 (LOCAL) until the symbol is 'closed'.

3. Press P1 (exit) to return to the TERMINAL function level.

4. Press CTRL + P7 to enter the PUSH-key function level.

5. Press CTRL + P1 to log in.

You must always press CTRL + P1 to log in, unless you have programmed PUSH-key P1 with the escape function. This and other things you should know when logging in for the first time are explained on the following pages.

**The ESCAPE
function on P1**

Notice that the soft key P1 has two labels: P1 and ESCAPE. On many terminals you simply press the key labelled ESC (escape) to log in. On the ND Display Terminal 1200, however, you must press CTRL + P1 unless you specifically program the escape function onto the soft key P1/ESCAPE. To save you time and effort each time you log in, we recommend that you program P1/ESCAPE so it will function as your 'normal' log-in key. Here is the recipe:

CTRL+

| P8 |
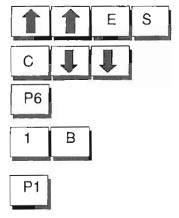
1. Press CTRL + P8 to get this screen picture:

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

| P4 |

2. Press P4 (PUSH KEY MENU) to get this screen picture:

PUSH-key 1:   Label: _____   _____

PUSH-key 2:   Label: _____   _____

PUSH-key 3:   Label: _____   _____

PUSH-key 4:   Label: _____   _____

PUSH-key 5:   Label: _____   _____

PUSH-key 6:   Label: _____   _____

PUSH-key 7:   Label: _____   _____

PUSH-key 8:   Label: _____   _____

| exit | INSERT CHAR | DELETE CHAR | ERASE STRING | | WRITE TEXT | WRITE HEX | WRITE CONTROL | PUSH-key 9 - 16 |

3. Press the up-arrow key twice and type the letters ESC. Then press the down-arrow key twice.

4. Press P6 (WRITE HEX).

5. Type the characters 1B. **Do not press return.**

6. Press P1 (exit).

Now, if you press CTRL + P7, you will see the letters ESC in the screen label for P1 in the lower left corner of your screen. The next time you log in, you just have to press P1 (and not CTRL + P1). How to program your PUSH keys will be thoroughly explained in part 4 "Setting up and programming the terminal".

NOTE! ----------------------------

CTRL + P1 will always give ESCAPE on the Display Terminal 1200.

Correct terminal type

If you have disturbances on the screen when you start an application like User Environment or NOTIS, you probably have the wrong terminal type.

The correct terminal type for the Display Terminal 1200 is 113.

This can be set with the SINTRAN command:

SET-TERMINAL-TYPE,,113
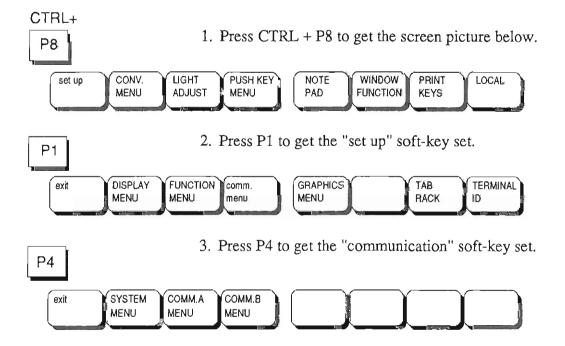
If you are not able to do this yourself, call your system supervisor.

The VTM-tables Wrong VTM-tables (if you are using any) can also cause screen problems. Ask your system supervisor to check that the VTM-tables DDTABLES-C07, -D07, -E07 and G02 (or later versions of these) are installed.
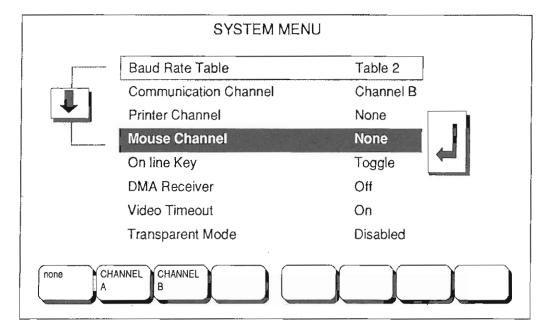
Setting the mouse channel If you have a terminal with a graphic option *and* a mouse connected, you must set the mouse channel.

CTRL+

| P8 |

1. Press CTRL + P8 to get the screen picture below.

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

| P1 |

2. Press P1 to get the "set up" soft-key set.

| exit | DISPLAY MENU | FUNCTION MENU | comm. menu | | GRAPHICS MENU | | TAB RACK | TERMINAL ID |

| P4 |

3. Press P4 to get the "communication" soft-key set.

| exit | SYSTEM MENU | COMM.A MENU | COMM.B MENU |

P2

4. Press P2 to get the SYSTEM MENU on the screen.

5. Use the down-arrow key to move the cursor bar down to the menu entry "Mouse Channel". Initially, this is set to "None". Press carriage return.

SYSTEM MENU

Baud Rate Table	Table 2
Communication Channel	Channel B
Printer Channel	None
Mouse Channel	**None**
On line Key	Toggle
DMA Receiver	Off
Video Timeout	On
Transparent Mode	Disabled

| none | CHANNEL A | CHANNEL B | | | | | |

P2   or   P3

6. In most cases the mouse will be connected on channel A, therefore press P2. If it is on channel B, press P3. Whether the mouse is on channel A or B depends on the configuration of your terminal. If you run into trouble here, contact your system supervisor.

P5

7. Press P5 to store the new value.

P1   P1   P1

8. Press P1 three times to return to the TERMINAL function level.

PART 3 - Installing a local printer
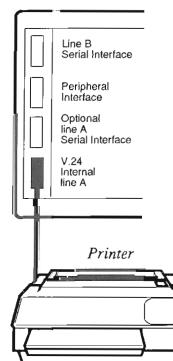
┌─ **NOTE!** ──────────────────────────────

If you are not sure how or where to connect
the printer, contact your system supervisor.

└──
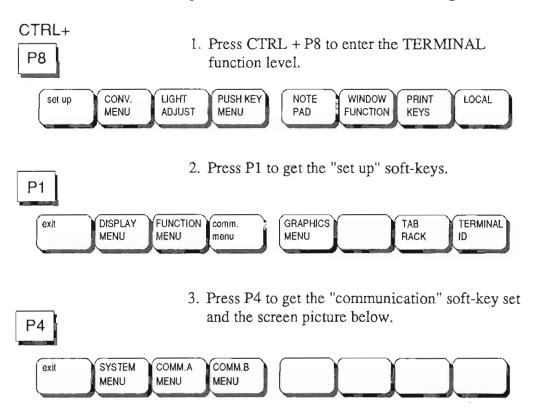
If you are going to connect a printer directly to the
ND Display Terminal 1200, the printer must have a
serial interface. On the terminal, the lowest of the
four connector positions (under the cover) is a serial
connector and can be used for the printer. If this
connector is already in use, you should contact your
system supervisor for help in installing your printer.
If the lowest connector is available, you can connect
the printer as follows:

1. Try to connect the printer cable to the connector
    marked "V.24 Internal line A". If the plug does
    not fit, call your system supervisor for help.

2. Connect the other end of the cable to the printer.

3. Plug the printer into a grounded wall socket.

4. Turn on the power to the printer.

5. Put the cover on the terminal.

Terminal

Line B
Serial Interface

Peripheral
Interface

Optional
line A
Serial Interface

V.24
Internal
line A

Printer
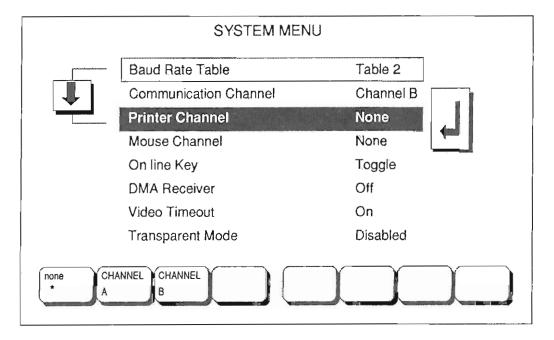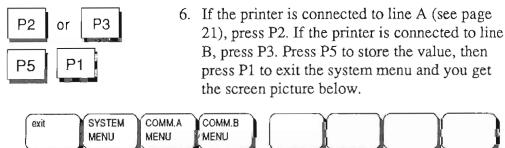
After connecting the printer cable between the printer and the terminal, do the following:
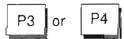
CTRL+

| P8 |

1. Press CTRL + P8 to enter the TERMINAL function level.

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

2. Press P1 to get the "set up" soft-keys.

| P1 |

| exit | DISPLAY MENU | FUNCTION MENU | comm. menu | GRAPHICS MENU | | TAB RACK | TERMINAL ID |

3. Press P4 to get the "communication" soft-key set and the screen picture below.

| P4 |

| exit | SYSTEM MENU | COMM.A MENU | COMM.B MENU | | | | |

P2

4. Press P2 to get the SYSTEM MENU on the screen.

5. Use the down-arrow key to move the cursor bar down to the menu entry "Printer Channel". Initially, this is set to "None". Press carriage return.

SYSTEM MENU

Baud Rate Table	Table 2
Communication Channel	Channel B
Printer Channel	**None**
Mouse Channel	None
On line Key	Toggle
DMA Receiver	Off
Video Timeout	On
Transparent Mode	Disabled

none *	CHANNEL A	CHANNEL B					

P2 or P3

P5   P1

6. If the printer is connected to line A (see page 21), press P2. If the printer is connected to line B, press P3. Press P5 to store the value, then press P1 to exit the system menu and you get the screen picture below.

exit	SYSTEM MENU	COMM.A MENU	COMM.B MENU				

P3 or P4

7. If the printer is connected to line A (see page 21), press P3 to get the COMM.A MENU. If the printer is connected to line B, press P4 to get the COMM.B MENU.

8. Check that "Transmission Delay" is set to "None". If not, move the cursor bar down to "Transmission Delay"and press carriage return.

```
                    COM. A MENU

          Transmit Speed                9600 Baud
          Receive Speed                 9600 Baud
          Communication Code Parity     Even
          Communication Code Stop-Bit(s) 1 bit
          Communication Code Length     7 bits
          Echo On Transmitted Codes     External
          Channel A  Interface Select   Internal
          Transmit Handshake            None
          Receive Handshake             XON/XOFF
          Modem                         Inhibit
          Transmission Delay            None
          Handshake Threshold           1/4 buffer
          Inverted Busy Signal          No


  none      20 ms     40 ms     60 ms
   *
```

9. Press P1, then press P5 to store the value,.

10. In the same way, set both "Transmit Handshake" and "Receive Handshake" to XON/XOFF. Press P1, then press P5 to store the values.

11. Press P1 three times to return to the TERMI-NAL function level.

P7

Switch on the printer. You can now press P7 to get the PRINT KEYS soft-key set.

| exit | PRINT LINE | PRINT PAGE | PRINT GRAPHICS | RELAY ON | LOG ON | PRINT LF | PRINT FF |

P8

Then press P8 (PRINT FF) to test the connection. One sheet of paper should advance through the printer. If the printer does not respond to this, you might have used the wrong channel (A or B) as the printer channel. Repeat the above procedure and use the other channel from step 6 to step 11.

It is also possible that baud rate or data format is wrong. This is set in the same menu as "Transmission delay" in step 8 in the previous procedure. You will have to consult the printer manual to find the values for the settings. The first five entries in the "COMM. A MENU" or "COMM. B MENU" (depending on which channel the printer is connected to) should be checked.

Using the PRINT KEYS soft-key set

> ┌─ **NOTE!** ──────────────────────────────────┐
>
> CTRL + PRINT is not implemented on the
> ND Display Terminal 1200. Use Print Page in
> the print keys soft-key set instead.

CTRL+

`P8`

Press CTRL+ P8 to enter the TERMINAL function
level and get the screen picture below.

set up	CONV. MENU	LIGHT ADJUST	PUSH KEY MENU	NOTE PAD	WINDOW FUNCTION	PRINT KEYS	LOCAL

If you have a printer connected directly to your
terminal (not to the computer), you can use the print
keys to get a printout of whatever is written on your
screen. Press 'print keys' (P7) and you get this screen
picture:

`P7`

exit	PRINT LINE	PRINT PAGE	PRINT GRAPHICS	RELAY ON	LOG ON	PRINT LF	PRINT FF

Print line (P2)

If you press 'PRINT LINE', the line where the cursor
is placed is printed.

Print page (P3)

If you press 'PRINT PAGE', everything written on
your screen is printed. (this replaces the NOTIS
method of printing a screen picture, CTRL +
PRINT).

Print Graphics (P4)   This key can be used only if you have a graphics
option installed on your terminal. Press 'PRINT
GRAPHICS' and the graphic shown on your screen
is printed.

Print LF (P7)   If you press 'PRINT LF' (line feed) nothing is
printed but the sheet in the printer moves up one
line. Use 'PRINT LF' in connection with other keys.

Print FF (P8)   If you press 'PRINT FF' (form feed), the printer
advances to the next sheet of paper.

Relay on (P5)   This function is seldom used. It can be used from
SINTRAN, but not from NOTIS or other 'screen
handling' programs. If you press 'RELAY ON', the
information you request from SINTRAN is printed
directly on the paper and does not appear on the
screen. For example, if you give the SINTRAN
command "list-files" the list would be printed out on
the paper but would not be shown on your screen.
Press 'RELAY OFF' to return to the PRINT KEY
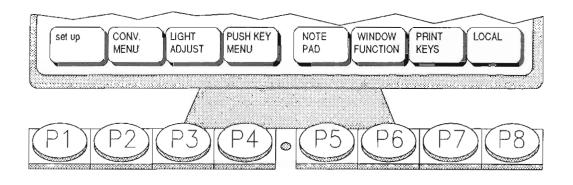soft key set.

Log on (P6)   This function can be used only from SINTRAN. If
you press 'LOG ON' the text you enter on the screen
is also printed out on paper. Each time you begin a
new line of text, the previous line is sent to the
printer. Press 'LOG OFF' to reurn to the PRINT
KEY soft key set.

PART 4 - Setting up and programming the terminal

To a large extent, you can choose exactly how you want the terminal to behave when you use it. You can, for example, adjust the light intensity, switch the margin bell on or off, or program the terminal to perform complex functions at the touch of one key. All this is possible with the soft keys, P1-P8.

In Part 2, we talked about the three main soft key functions: PROGRAM function, PUSH-key function and TERMINAL function. All the operations described here, in Part 4, are done from TERMINAL function. To get into the TERMINAL function level, press **CTRL + P8** (if you are in a menu, you must first press 'exit' (P1). You get this screen picture:

CTRL+

P8
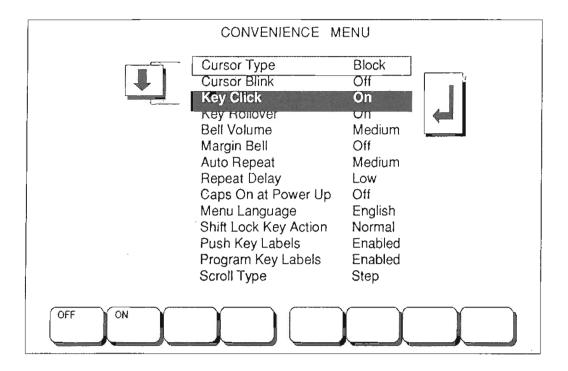
Changing the terminal characteristics - an example

Before going into detail about all the terminal characteristics you can change, here is an example which will give you an overview of how to program your terminal.

Let us say that you have just logged in and started to work at the terminal, but you are annoyed by a high-pitched clicking sound every time you press a key. You would prefer a "quiet" keyboard.

P2

Choose 'CONV. MENU' (P2) and the following screen picture appears. Proceed like this:

1. Use the down-arrow key to move down to "Key Click".

2. Press carriage return and the possible key-click settings appear in the lower left corner.

CONVENIENCE MENU

Cursor Type	Block
Cursor Blink	Off
Key Click	**On**
Key Rollover	Off
Bell Volume	Medium
Margin Bell	Off
Auto Repeat	Medium
Repeat Delay	Low
Caps On at Power Up	Off
Menu Language	English
Shift Lock Key Action	Normal
Push Key Labels	Enabled
Program Key Labels	Enabled
Scroll Type	Step

OFF	ON						

P1

3. Choose "OFF" by pressing P1.
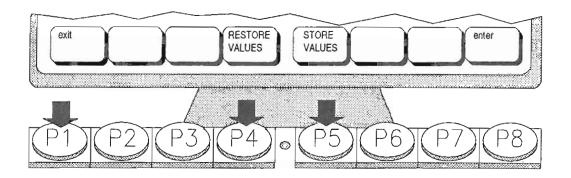
You now get the screen picture below, and you can choose whether or not to make the change permanent.

| exit | | | RESTORE VALUES | STORE VALUES | | | enter |

P1 P2 P3 P4 ○ P5 P6 P7 P8

Making the change permanent (P5)

If you press 'STORE VALUES' (P5), your new key-click setting is stored permanently, and the keys will still be silent the next time you switch on the terminal.

Leaving without making the change permanent (P1)
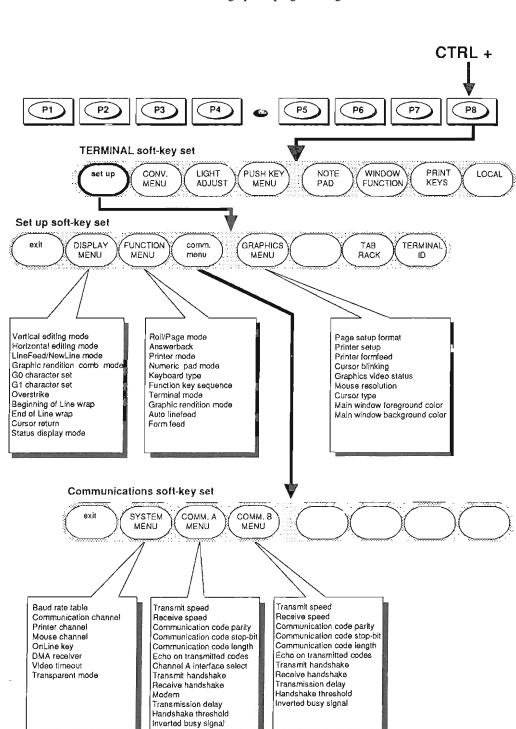
If you just press 'exit' (P1), the new key-click setting is lost when the terminal is switched off. The next time you turn on the terminal, the keys will click again.

Cancelling the change (P4)

If you press 'RESTORE VALUES' (P4), the new key-click setting is ignored, and the keys will still click.

Press 'exit' (P1) to go back to the TERMINAL function level and the screen picture below. On the following pages, we shall describe the different terminal characteristics that you can change.

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

CTRL +

| P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |

TERMINAL soft-key set

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

Set up soft-key set

| exit | DISPLAY MENU | FUNCTION MENU | comm. menu | GRAPHICS MENU | | TAB RACK | TERMINAL ID |

Vertical editing mode
Horizontal editing mode
LineFeed/NewLine mode
Graphic rendition comb mode
G0 character set
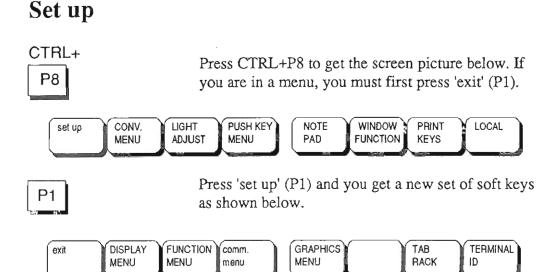G1 character set
Overstrike
Beginning of Line wrap
End of Line wrap
Cursor return
Status display mode

Roll/Page mode
Answerback
Printer mode
Numeric pad mode
Keyboard type
Function key sequence
Terminal mode
Graphic rendition mode
Auto linefeed
Form feed

Page setup format
Printer setup
Printer formfeed
Cursor blinking
Graphics video status
Mouse resolution
Cursor type
Main window foreground color
Main window background color

Communications soft-key set

| exit | SYSTEM MENU | COMM. A MENU | COMM. B MENU | | | | |

Baud rate table
Communication channel
Printer channel
Mouse channel
OnLine key
DMA receiver
Video timeout
Transparent mode

Transmit speed
Receive speed
Communication code parity
Communication code stop-bit
Communication code length
Echo on transmitted codes
Channel A interface select
Transmit handshake
Receive handshake
Modem
Transmission delay
Handshake threshold
Inverted busy signal

Transmit speed
Receive speed
Communication code parity
Communication code stop-bit
Communication code length
Echo on transmitted codes
Transmit handshake
Receive handshake
Transmission delay
Handshake threshold
Inverted busy signal

Set up

CTRL+

| P8 |

Press CTRL+P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

| P1 |

Press 'set up' (P1) and you get a new set of soft keys as shown below.

| exit | DISPLAY MENU | FUNCTION MENU | comm. menu | GRAPHICS MENU | | TAB RACK | TERMINAL ID |

The chart on the next page shows the set up options available. Normally, any set up changes are made by your system supervisor. Appendix A provides details.

The TAB RACK key is not used because NOTIS has its own tabbing function. Pressing the TERMINAL ID key gives version information about the terminal. This information is useful only to service people if there is a problem with the terminal. In general, you will never use these keys and you will not have to worry about them.

Convenience menu

CTRL+

| P8 |

Press CTRL+P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

| P2 |

Press 'CONV. MENU' (P2) and the screen picture shows the convenience menu:

CONVENIENCE MENU	
Cursor Type	**Block**
Cursor Blink	Off
Key Click	On
Key Rollover	On
Bell Volume	Medium
Margin Bell	Off
Auto Repeat	Medium
Repeat Delay	Low
Caps On at Power Up	Off
Menu Language	English
Shift Lock Key Action	Normal
Push Key Labels	Enabled
Program Key Labels	Enabled
Scroll Type	Step

The convenience menu consists of a list of things that can be changed to make your routines with the terminal more convenient or more comfortable. The example on page 29 shows you how to make the changes.

┌─ **NOTE!** ─────────────────────────────

Remember to press the 'STORE VALUES' key (P5) to make the change(s) permanent.

Cursor type

You can decide what shape the cursor should have. The alternatives are:

Block
Line

Cursor blink

You can decide if you want a blinking or a non-blinking cursor. Both alternatives are valid for both cursor types:

Off: *The cursor is not blinking.*
On: *The cursor is blinking.*

Key click

You can decide whether you want to hear a click every time you press a key. The alternatives are:

Off: *No clicking sound is heard*
On: *A clicking sound is emitted every time a key is pressed.*

Key rollover

You can decide whether one or more characters should be registered if two keys are pressed simultaneously. The alternatives are:

Off :   *When two or more keys are pressed down at the same time, only the first one is registered. You risk losing some characters if you are a fast typist, but the facility might be useful if you have large fingers.*

On: *All keys pressed down at the same time are registered.*

Bell volume

You can set the loudness of the keyboard bell. The possible settings are:

Off
Low
Medium
High

Margin bell

You can decide whether or not you want a margin bell to sound (just as for a typewriter). The settings are:

Off
On

Auto repeat

You can decide at what speed a character should be repeated when the key is kept pressed down. The choices are:

Off: *The character is registered only once.*
Low: *The character is repeated slowly.*
Medium:The character is repeated rather fast.
High: *The character is repeated very fast.*

Repeat delay

You can set a time delay before the key you have pressed starts to be repeated. The alternatives are:

Low: *The repeat function starts almost immediately if you press and hold a key.*

High: *You have to press and hold a key for a slightly longer time before it starts to be repeated.*

**Caps on at
power up**

You can decide whether you want the CAPS key
(capital letters) to come on automatically when the
power is turned on.

The alternatives are:

Off: *Previous setting of the CAPS key is igno-
red after the power has been switched off.*

On: *Caps will be on automatically after power
up.*

Menu language

You can decide which language you want your menu
texts to be written in. For the time being, only the
English menu language is implemented.

**Shift lock key
action**

Normally, you press the LOCK key once to get
uppercase letters, and press the SHIFT key to go back
to lowercase letters. If you have a tendency to hit the
LOCK key too often by accident, you may wish to set
it to the "twice" option. You must then press the
LOCK key twice to make it function as shift lock. If
you prefer, you can also totally disable the LOCK key.
The alternatives are:

Normal
Twice
Disabled

PUSH-key labels

You can decide whether or not you want the PUSH-
keys to appear at the bottom of your screen. The
PUSH-keys are the set of soft keys that come up when
you switch on your terminal, or when you press
CTRL+P7. The alternatives are:

Enabled
Disabled

PROGRAM key labels

The same functions as for PUSH-key labels, but this time for the soft-key set that you get when you press CTRL+P6. The alternatives are:

Enabled
Disabled

Scroll type

You can decide how you want the screen picture to move up as you scroll through text. The alternatives are:

Step: Scrolls one text line at a time.
Smooth: Scrolls in smaller increments (one pixel at a time) so the scrolling is slow and smooth. (Receive Handshake in the communication A or B menus must be set to XON/XOFF, see page 24.)

Light adjust

CTRL+

| P8 |

Press CTRL+P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

| P3 |

Press 'LIGHT ADJUST' (P3) to adjust the contrast and intensity of your screen. This picture appears:

MIN_____*_____MAX   MAX __*__MIN

| exit | | ← ☼ ☼ → | ← ◐ ◐ → | | NEG/POS MODE |

Light (P3, P4)

For less light, press P3 repeatedly. For more light, use P4. As you do this, you will see that the asterisk (*) moves left or right indicating your position on the brightness scale.

In positive mode (dark characters on a light background), adjusting the light means adjusting the background light. In negative mode, it is the brightness of the characters that is adjusted.

Contrast (P5, P6)

You can vary the difference between the light intensity of the characters and the background. To get maximum contrast, press P5 until the asterisk (*) has moved all the way to the left. Press P6 to minimize the contrast.

NEG/POS mode (P8)

With this key you can change the screen picture from dark characters on a light background to light characters on a dark background, or the other way around. The current setting is always written above the key text.
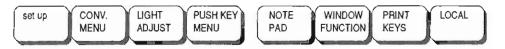
Exit (P1)

Once you have made the adjustments so that the screen intensity and level of contrast are comfortable for you, press the 'exit' key.

PUSH-key menu

CTRL+

| P8 |

Press CTRL+P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

As mentioned on page 12, the keys P1-P8 can be used as PUSH-keys, and can be programmed so that you will need to press only one key to generate frequently used phrases and commands (PUSH means Programmable Utility for String Handling).

| P4 |

To program the PUSH-keys, first press 'PUSH KEY MENU' (P4), and the following menu appears:

PUSH-key 1:   Label: _____   _____

PUSH-key 2:   Label: _____   _____

PUSH-key 3:   Label: _____   _____

PUSH-key 4:   Label: _____   _____

PUSH-key 5:   Label: _____   _____

PUSH-key 6:   Label: _____   _____

PUSH-key 7:   Label: _____   _____

PUSH-key 8:   Label: _____   _____

| exit | INSERT CHAR | DELETE CHAR | ERASE STRING | | WRITE TEXT | WRITE HEX | WRITE CONTROL | PUSH-key 9 - 16 |

Programming a
PUSH-key

┌─ **CAUTION!** ──────────────────────

Never save passwords or other entry codes on
the PUSH-keys.

Suppose you frequently use the phrase "Please
contact us if you have any questions". You want to
store this phrase on PUSH-key number seven.

P5

1. Press the 'WRITE TEXT' key (P5).

2. Use the down-arrow key to move down to
   PUSH-key 7.

PUSH-key 1:	Label:	_____	_____
PUSH-key 2:	Label:	_____	_____
PUSH-key 3:	Label:	_____	_____
PUSH-key 4:	Label:	_____	_____
PUSH-key 5:	Label:	_____	_____
PUSH-key 6:	Label:	_____	_____
PUSH-key 7:	Label:	**any**	**questions**
PUSH-key 8:	Label:	_____	_____

3. You are now in the first of the two 'Label' fields.
   Here you can write key words to make it easier to
   remember the contents of the PUSH-key.
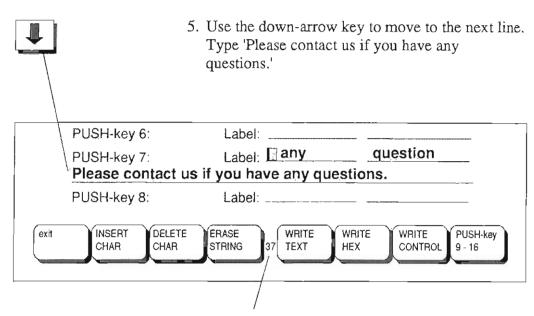
   The key words for PUSH-key 7 could be 'any
   questions'. Write 'any' in the first field.

4. Use the down-arrow key to move to the next field
   and write 'question'. You have to skip the 's' in
   'questions' because each label can contain only
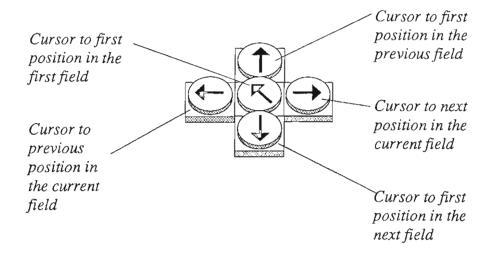   eight characters.

5. Use the down-arrow key to move to the next line. Type 'Please contact us if you have any questions.'

PUSH-key 6:   Label: _____   _____

PUSH-key 7:   Label: ▯any_____   question_____

Please contact us if you have any questions.

PUSH-key 8:   Label: _____   _____

| exit | INSERT CHAR | DELETE CHAR | ERASE STRING | 37 | WRITE TEXT | WRITE HEX | WRITE CONTROL | PUSH-key 9 - 16 |

The text can have up to 80 characters. This number is a character count.

Moving in the menu

You move the cursor with the arrow keys like this:

Cursor to first position in the first field

Cursor to first position in the previous field

Cursor to previous position in the current field

Cursor to next position in the current field

Cursor to first position in the next field

Insert character (P2)   If you make a typing error and need to insert a character, place the cursor to the right of the insertion point and press 'INSERT CHAR' (P2). You get a space in which to insert a new character.

Delete character (P3)   If you make a typing error and need to delete a character, place the cursor at the character and press P3.

> **NOTE!**
>
> You can always change the contents of a PUSH-key by writing new text on top of the old.

Erase string (P4)   Use this key if you want to erase all the text from the cursor position to the end of the field.

Write text (P5)   Press this key before you start programming, to notify the terminal that ordinary characters and symbols are to be programmed.

Push key 9-16 (P8)   You can have as many as 16 PUSH-keys, each containing up to 80 characters. Press P8 and the fields for programming keys 9 -16 are displayed.

Exit (P1)   Press P1, and you will leave the PUSH-key menu. The text and commands you have programmed into the PUSH-keys are stored, even if power is turned off.

Write hex (P6)   *For the advanced user:* When you press this key (P6), all characters must be entered as hexadecimal codes. This means that only the digits 0 to 9 and characters A to F are valid symbols.

Write control (P7)   *For the advanced user:* Control characters can be entered using the CTRL key, and special function keys can be entered directly. Example:

LF (line feed) should be entered as:

CTRL + | J | (while holding down CTRL press J)

or

| LF | if the key is available on your keyboard.

Cursor forward can be entered directly

┌─ **NOTE!** ─────────────────────────────────┐

WRITE CONTROL works in only one field at a time. This means that to move to another field, you have to go back to WRITE TEXT or WRITE HEX first.

└───┘

Refer to other PUSH-keys   *For the advanced user:* You can refer to one PUSH-key sequence within another one by using the hexadecimal code for the PUSH-key number.

Exit (P1)
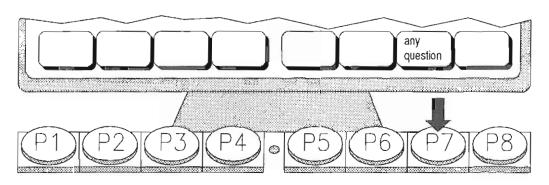
When you have finished programming the PUSH-keys, you must press 'exit' (P1) to get back to normal operation of the terminal. You can now start using the programmed PUSH-keys.
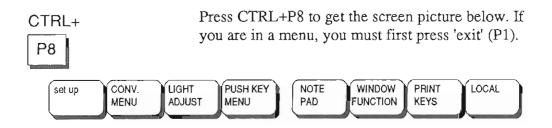
Let us say that you are writing a letter to a customer, and want to include the text you programmed in PUSH-key number seven 'Please contact us....'

This is what you do:

1. Move the cursor to the point on the screen where you want the text to appear.

CTRL+

P7

2. Press CTRL + P7, and the boxes at the bottom of the screen will contain the labels you have given your PUSH-keys.

P7

3. Now press the soft key for PUSH-key number seven (P7), labelled 'any question', and the contents of this PUSH-key appear on the screen where the cursor is placed.

Local/Line

CTRL+

| P8 |

Press CTRL+P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |
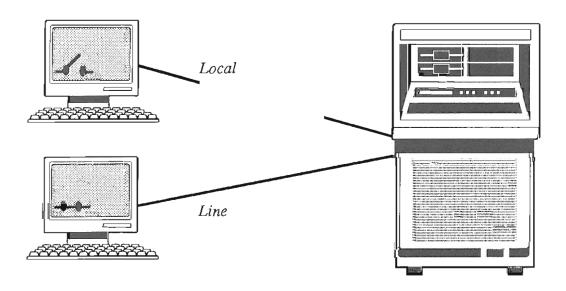
Note the switch symbol in the lower left corner of the screen, indicating the current mode of connection. Closed means line connection, open means local connection.
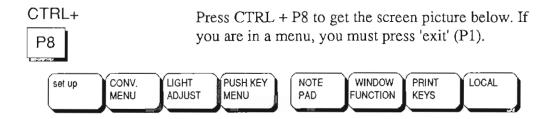
Local (P8)

If you press the 'LOCAL' key (P8), you switch off the connections between the terminal and the host computer. The terminal then operates independently.

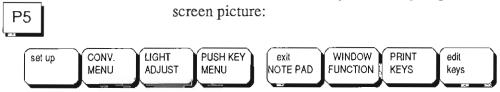If you press the same key again, the terminal is re-connected to the host.

Local

Line

PART 5 - Using the notepad and window keys

Notepad

CTRL+

| P8 |

Press CTRL + P8 to get the screen picture below. If you are in a menu, you must press 'exit' (P1).

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

The notepad is your notebook - a blank sheet where you can write notes and comments, hints to remember, phone numbers, agendas, guidelines for using programs and so forth.

Press the 'NOTE PAD' key (P5) and you get this screen picture:

| P5 |

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | exit NOTE PAD | WINDOW FUNCTION | PRINT KEYS | edit keys |

The cursor is in the upper left corner of the screen, and you can start making your notes. The notepad is only one screen picture in size (25 lines). The notepad is a local function, and the computer does not know what is in your notepad. Your notes are, however, stored in your terminal even when the power is switched off, so the information is quite safe. Use the arrow keys to move the cursor in the notepad.

| P5 |

To leave the notepad, press the 'exit NOTE PAD' key (P5).

P8

If you need to edit the text you have typed in your notepad, press 'edit keys' (P8), and the following appears:

| exit | | | | DEL LINE | INS LINE | DEL CHAR | INS CHAR |

Del line (P5)   Deletes the text on the line where the cursor is located.

Ins line (P6)   Inserts a new line above the one where the cursor is located.

> **NOTE!**
>
> If the cursor is located on the last line of the notepad, this line will be deleted from the notepad when the new line is inserted.

Del char (P7)   Deletes the character at the cursor position.
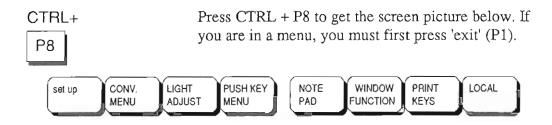
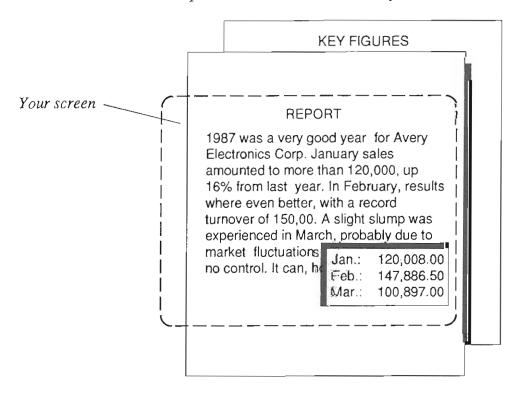**Ins char (P8)**   Inserts a space to the left of the cursor position.

Exit (P1)   Press the 'exit' key (P1) to return to the notepad subfunction level, then press the 'exit NOTE PAD' key (P5) to leave the notepad and return to the TERMINAL function level.

Window keys

CTRL+

P8

Press CTRL + P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

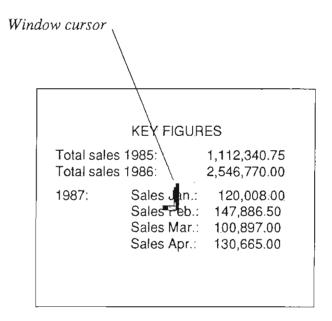| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

The window function keys are used to create a window on the screen. Through this window you can look at text that is not part of the current screen picture. For example, if you are writing a report, the window may contain key figures which would be helpful to have in front of you for easy reference. The contents of the window may come from the notepad of from another section of your current text.

KEY FIGURES

Your screen

REPORT

1987 was a very good year for Avery Electronics Corp. January sales amounted to more than 120,000, up 16% from last year. In February, results where even better, with a record turnover of 150,00. A slight slump was experienced in March, probably due to market fluctuations no control. It can, h

Jan.:	120,008.00
Feb.:	147,886.50
Mar.:	100,897.00

Press 'WINDOW FUNCTION' (P6) and the
following boxes appear at the bottom of your
screen.

P6

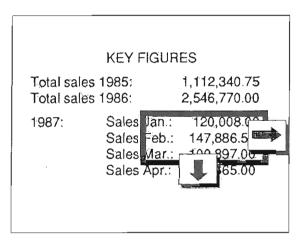| exit | KILL WIDOW | COPY TO WINDOW | PASTE | | HIDE WINDOW | EDIT WINDOW | MOVE WINDOW | PAN WINDOW |

A blinking 'window cursor' appears in the upper left
corner of your screen. Use the arrow keys to move
the window cursor into the text area and place it
where you want the upper left corner of the window.
This may be anywhere in the text area.

Window cursor

```
              KEY FIGURES

Total sales 1985:        1,112,340.75
Total sales 1986:        2,546,770.00

1987:        Sales Jan.:    120,008.00
             Sales Feb.:    147,886.50
             Sales Mar.:    100,897.00
             Sales Apr.:    130,665.00
```

P6

Press 'EDIT WINDOW' (P6) and use the arrow keys to adjust the size of the window.

```
            KEY FIGURES
  Total sales 1985:      1,112,340.75
  Total sales 1986:      2,546,770.00

  1987:        Sales Jan.:    120,008.0
               Sales Feb.:    147,886.5
               Sales Mar.:    100,897.00
               Sales Apr.:    65.00
```

P1

Now press 'exit' (P1) and move to another place in the same document (or to the notepad). As you see, the window remains on your screen.
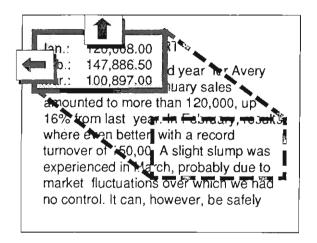
```
                 REPORT

  1987 was a very good year  for Avery
  Electronics Corp. January sales
  amounted to more than 120,000, up
  16% from last yea
  where even better    Jan.:   120,008.00
  turnover of 150,00   Feb.:   147,886.50
  experienced in Ma    Mar.:   100,897.00
  market  fluctuations over which we had
  no control. It can, however, be safely
```

P6

You can work with the window by pressing 'WINDOW FUNCTION' (P6) again and using the soft keys in the following manner:
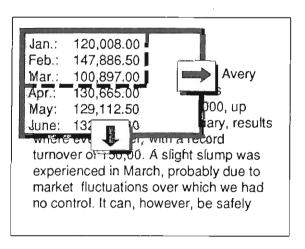
Move window (P7)   Press this key and use the arrow keys to move the entire window to any screen location you wish.
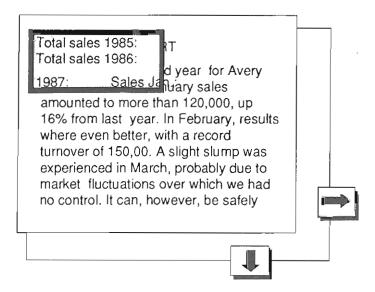
Jan.:   120,008.00
b.:   147,886.50
r.:   100,897.00

d year for Avery
uary sales
amounted to more than 120,000, up
16% from last year. In February, results
where even better with a record
turnover of 150,00. A slight slump was
experienced in March, probably due to
market fluctuations over which we had
no control. It can, however, be safely

Edit window (P6)   Press this key and use the arrow keys to adjust the size of the window.

Jan.:   120,008.00
Feb.:   147,886.50
Mar.:   100,897.00   Avery
Apr.:   130,665.00
May: 129,112.50   000, up
June: 132   ary, results
where ev   r, with a record
turnover of 150,00. A slight slump was
experienced in March, probably due to
market fluctuations over which we had
no control. It can, however, be safely

Pan window (P8)

The window shows only a small portion of the "underlying" text (the key figures). However, you can view other sections of this text by pressing 'PAN WINDOW' (P8) and using the arrow keys to move the surrounding text through the window area.

Total sales 1985:
Total sales 1986:   d year for Avery
1987:   Sales January sales
amounted to more than 120,000, up
16% from last year. In February, results
where even better, with a record
turnover of 150,00. A slight slump was
experienced in March, probably due to
market fluctuations over which we had
no control. It can, however, be safely

Copy to window and Paste (P3 and P4)

You can use these keys to remove a portion of your working text and "paste" it into the notepad for future reference.

1. Create a window around the text you want to save and press 'COPY TO WINDOW' (P3). When you do this, the portion of the screen that appears in the window is "frozen" and you can no longer pan the surrounding text.

2. Press 'exit' (P1) followed by 'NOTE PAD' (P5) to enter the notepad area.

3. Press 'WINDOW FUNCTION' (P6) and you will see that the window and the enclosed text now appear on the notepad.

4. Press P7 and use the arrow keys to move the window into position in the notepad.

5. Press 'PASTE' (P4) and the windowed text is placed in your notepad.

6. Press 'KILL WINDOW' (P2) to remove the window from both the text area and the notepad since it is no longer usable as a window for panning text.

7. Press 'exit' (P1) and 'exit NOTE PAD' (P5) to return to your working text.

Hide window (P5)

Press this key and the window is no longer visible on the screen. It still exists, however, and can be recalled by pressing 'WINDOW FUNCTION' (P6) from the TERMINAL function level.

Kill window (P2)

Press this key to delete the window permanently.

Exit (P1)

Press this key to return to your regular work area. The window remains on the screen until you press the 'HIDE WINDOW' key, the 'KILL WINDOW' key, the reset button or until you turn off the terminal.

PART 6 - If you have problems

Here are some problems and error situations that you might run into. If our suggested solutions don't work, contact your system supervisor.

Error messages on the status line

Error messages will be written on the status line, just above the soft key labels in the bottom of your screen. You will first get the message

ERROR! (Push CLEAR key)

Push CLEAR key means that you have to push CTRL + P5. The word ERROR will now disappear, and an error message will be displayed in its place. This might look like:

Receive Buffer Overflow (Push CLEAR key)

Write the error message on a piece of paper, press CTRL + P5 again and in most cases you can continue your work.

As soon as you can, however, go to Part 3 of this manual (especially page 24) and make certain that Receive Handshake is set to XON/XOFF. If it is not, then set it accordingly or ask your system supervisor for help. In any case, give your note with the errror message information to your system supervisor.

Problem:	What to do:
You do not get in contact with the ND computer.	Is the data cable connected at both ends? Is the terminal configuration correct? The correct communication channel (A or B) must be set in the SYSTEM menu, and the communication parameters for that channel must be correctly set in the COMM. A or COMM. B menu.
The error message "CONFIGURATION DATA NOT VALID" is displayed at power on.	The reason for this is that the battery RAM is cleared. Press P2, P1, P1, P2 to store the defaults.
The terminal hangs when you are running old applications designed for the 2115 terminal.	Set the menu entry Transmit Handshake in the COMM. A or COMM. B MENU (depending on which communication channel you are using) to "None".
The function keys do not work.	Go into the FUNCTION MENU under "set up", and set "Function Key Sequence" to ISO (on P1).
The cursor movement is delayed when one of the arrow keys is held down.	Go into "set up" and then "comm. menu". Then go into the COMM. A MENU or the COMM. B MENU, (depending on the communication channel you are using. Set "Transmission delay" to "None".
The shift lock key does not work.	Change the setting of "Shift Lock Key Action" in the CONV. MENU.
CTRL + PRINT does not work.	This function is not implemented on the Display Terminal 1200. Use PRINT PAGE in the "print keys" soft-key set (press CTRL + P8, then P7 and then P3).

Selftest error messages

If an error occurs during the power-up selftest, the message "Terminal Ready" appears on the screen and a more specific message appears on the status line at the bottom of the screen.

If an error message occurs, first try to turn the terminal off and on again. If this does not help, contact your system supervisor. If the problem still exists, contact your ND Service representative. In many cases, the terminal can be healed by using the system test, but leave this to the experts.

Here are the error messages that can occur on the status line:

Configuration Error
RAM Test Error
PROM Checksum Test Error
Communication Error Ch.A
Communication Error Ch.B
Communication Error with Keyboard
CRT Controller Error
DMA Controller Error
Timer Controller Error
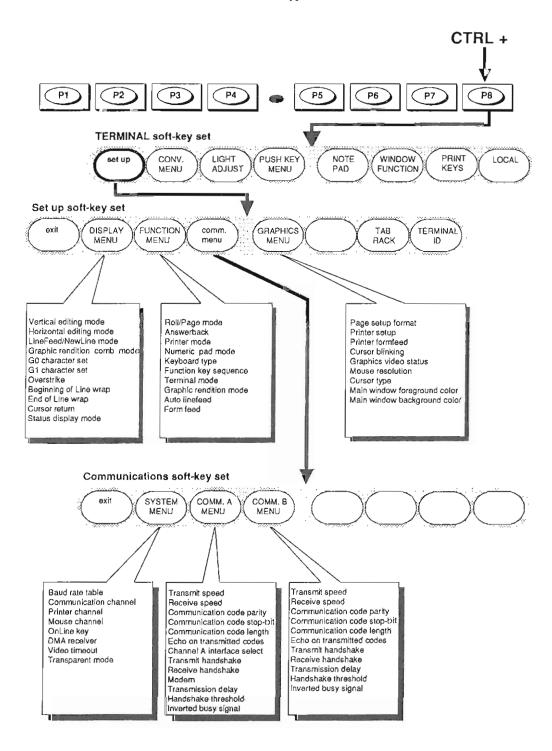
APPENDIX A - The set-up functions (for the advanced user or system supervisor)

Press CTRL + P8 to get the screen picture below. If you are in a menu, you must first press 'exit' (P1).

set up	CONV. MENU	LIGHT ADJUST	PUSH KEY MENU	NOTE PAD	WINDOW FUNCTION	PRINT KEYS	LOCAL

Changes in the ND Display Terminal 1200 set-up functions are made from within the set-up soft-key set. A complete overview of these functions is given in the chart on next page. In the discussion which follows, the functional options for each entry in each menu are defined and the default (or recommended) setting is given. More detailed information about the set-up functions is given in the manual ND Display Terminal 1200 Functional Specifications, ND 12.054.

CTRL +

| P1 | P2 | P3 | P4 | • | P5 | P6 | P7 | P8 |

TERMINAL soft-key set

| set up | CONV. MENU | LIGHT ADJUST | PUSH KEY MENU | NOTE PAD | WINDOW FUNCTION | PRINT KEYS | LOCAL |

Set up soft-key set

| exit | DISPLAY MENU | FUNCTION MENU | comm. menu | GRAPHICS MENU | | TAB RACK | TERMINAL iD |

Vertical editing mode
Horizontal editing mode
LineFeed/NewLine mode
Graphic rendition comb mode
G0 character set
G1 character set
Overstrike
Beginning of Line wrap
End of Line wrap
Cursor return
Status display mode

Roll/Page mode
Answerback
Printer mode
Numeric pad mode
Keyboard type
Function key sequence
Terminal mode
Graphic rendition mode
Auto linefeed
Form feed

Page setup format
Printer setup
Printer formfeed
Cursor blinking
Graphics video status
Mouse resolution
Cursor type
Main window foreground color
Main window background color

Communications soft-key set

| exit | SYSTEM MENU | COMM. A MENU | COMM. B MENU | | | | |

Baud rate table
Communication channel
Printer channel
Mouse channel
OnLine key
DMA receiver
Video timeout
Transparent mode

Transmit speed
Receive speed
Communication code parity
Communication code stop-bit
Communication code length
Echo on transmitted codes
Channel A interface select
Transmit handshake
Receive handshake
Modem
Transmission delay
Handshake threshold
Inverted busy signal

Transmit speed
Receive speed
Communication code parity
Communication code stop-bit
Communication code length
Echo on transmitted codes
Transmit handshake
Receive handshake
Transmission delay
Handshake threshold
Inverted busy signal

Using the menus

Once you have entered the menu where you wish to make the adjustments, proceed as follows:

Use the up- or down-arrow keys to move the cursor bar to the menu entry to be changed.

Press carriage return or 'enter' (P8) and the set-up options for the function are shown as soft-key labels at the bottom of your screen. The current value is identified with an asterisk (*). If you do not want to change anything, just press carriage return once more (or the up- or down-arrow key).

Press the soft-key corresponding to the option you wish to select. The new value will be entered in the menu, but will be highlighted with an asterisk (*) until it is stored or the original value is restored.

You may now return to the application you are working on (press P1) to test the new setting. If it seems ok, go back to the menu and press 'STORE VALUES' (P5) to store the new value. If you want the old value back, press 'RESTORE VALUES' (P4).

After you have made all the changes in the menu, press 'exit' (P1) until you return to the set-up soft-key set. Press 'exit' again to return to the TERMINAL function level.

The display menu

If you press 'DISPLAY MENU' (P2) you will get the display menu on the screen. In the following we will explain all the entries in this menu.

Vertical editing mode

This menu entry has two options, Following and Preceding. Although it will not have any practical influence on the NOTIS software it should be set to Following, which is the default.

Horizontal editing mode

This menu entry has two options, Following and Preceding. It will not have any practical influence on the NOTIS software, but it should be set to Following, which is the default.

Linefeed/Newline mode

This menu entry has two options LF (line feed) and NEL (new line). This function should always be set to LF.

Graphic rendition comb mode

This menu entry has two options, Replacing and Cumulative. Replacing is default, and ND software demands Replacing.

G0 and G1 character sets

By selecting this menu entry, you can choose the character set you will use on the ND Display Terminal 1200. The character sets are related to the languages listed in the function key labels on the bottom of your screen. If you press P8, (- more -), another set of languages will come up. Pressing it once more will bring you back to the first set.

The G0 character set is the ASCII values from 32 to 127, and G1 the ASCII values from 150 to 256. ND software uses only the G0 set.

> **NOTE!**
>
> Also set language in the Function menu, under
> Keyboard type.

Overstrike

This function is not used by ND. The menu entry has two options, Enabled and Disabled. Disabled is default. It should be set to Disabled.

Beginning of line wrap

This menu entry has two options, Stop and Wrap. Stop is default. This function has no effect on ND software.

End of line wrap

This menu entry has two options, Stop and Wrap. Wrap is default. It has no practical effect on the NOTIS software.

Cursor return

This menu entry has two options, CR (Cursor Return) and NEL (Next Line). CR is default. This function should be set to CR.

Status display mode

This menu entry has two options, Normal and Full. Normal is default. By choosing normal or full, you decide how much information you want to have in the bottom part of the screen, underneath the horizontal line.

The function menu

If you press 'FUNCTION MENU' (P3) when you are in the set-up level, you will get the function menu on the screen. We will describe the menu entries one by one.

Roll/Page mode

This entry has two options, Roll and Page. It has no practical effect on the NOTIS software. Roll is default.

Answerback

This function is not used by ND. It is normally None.

Printer mode

This entry has two options, Local/Remote and Remote. Local/Remote is default. This entry determines if a local printout can be initiated both from the terminal and the host computer (local/ remote), or if it can be controlled only from the host computer (remote).

Numeric pad mode

This menu entry determines the function of the white numeric keys on the right side of the keyboard. It has two options, Numeric and Function. This function should normally be set to Numeric. *In numeric mode*, the numeric keys are numeric keys. *In function mode*, the numeric keys will act as function keys. This is used by some ND software; for example in NOTIS-WP as User Definable Keys (UDKs).

Keyboard type

This menu entry lets you choose the keyboard nationality for your Display Terminal 1200. The layout of the keyboard is related to the nationalities listed in the function key labels on the bottom of your screen. If you press P8, (- more -), another set of nationalities will appear. Pressing it again will bring back the first set.

┌─ **NOTE!** ─────────────────────────────────┐

Also set language in the Display menu, under G0 and G1 character sets.

└───┘

Keyboard nationality and character set nationality (G0) can be set independently, but in most cases they should be set to the same nationality.

Function key Sequence

This menu entry defines the format of the function key sequences. It may be utilized by future ND software. It should always be set to ISO.

Terminal mode

This menu entry has two options, 2115 mode and NATIVE mode. Native is default. 2115 mode can be used with applications that are written for the 2115 terminal, without use of VTM tables.

Graphic rendition mode

This menu entry has two options, Attribute and Underline. Attribute is default. It has effect only when in 2115 mode, and controls the way in which the graphic rendition of characters on the screen can be selected.

Auto linefeed

Auto linefeed has two options, Off and On. On is default. *When auto linefeed is off,* each printed line is terminated with carriage return, CR. *When auto linefeed is on,* each printed line is terminated with carriage return and line feed, CR LF.

Form feed

This menu entry has four options, None, After, Before, and After & Before. None is default. This function will cause the local printer to feed one sheet of paper, according to the option selected.

None: *No paper feed will take place.*

After: *One sheet of paper will be fed after printing is finished.*

Before: *One sheet of paper will be fed before printing starts.*

After & Before: *A sheet of paper will be fed before printing and another sheet will be fed after printing.*

The communication menu

Pressing 'comm. menu' (P4) in the set-up soft key set generates a new set of communication soft keys: System menu, the Comm. A menu and the Comm. B menu.

The system menu

Pressing 'SYSTEM MENU' (P2) will allow you to alter the general system parameters for the terminal.

Baud rate table

There are two baud rate tables, Table 1 and Table 2. Table 2 is default. There are different baud rate selections in the two tables. You must use one or the other. It is not possible to combine baud rates from both tables. The two tables contain the following baud rates:

Baud rate	Table 1	Table 2
50	x	
75		x
110	x	x
134.5	x	x
150		x
200	x	
300	x	x
600	x	x
1200	x	x
2400	x	x
4800	x	x
9600	x	x
19200		x
38400	x	

Communication channel	There are two communication channels, A and B. B is default. Both have serial interfaces. Channel A is always V.24 (RS-232-C). Channel B is normally current loop but can also be used for other protocols, such as V.11 and RS-232-C. Each channel has a separate plug. For the location of the plugs, see page 21. Channel A has full modem support.
	The parameters can be set individually for each channel. To do this, you must return to the communication soft-key set and press P3 or P4, depending on the channel you wish to adjust.
Printer channel	There are three options: None, Channel A and Channel B. None is default. If a printer is connected, the switch is normally set to channel A, and the printer is connected to the port marked "Internal line A". This is a V.24 (RS-232-C) interface.
Mouse channel	There are three options: None, Channel A and Channel B. None is default. If the graphics option is installed and a mouse is connected, the switch should normally be set to channel A. This depends, however, on the configuration of the terminal.
Online key	There are two options: Online and Toggle. Toggle is default. *In Online* the terminal is always online. *In Toggle* the terminal can be switched offline.
DMA receiver	There are three options: Off, Channel A and Channel B. Off is default.
	This function selects the built-in Direct Memory Access (DMA) feature for receiving characters. This feature should be used on the host channel if high speed communication is required. Note that the use of this feature disables the Transmit handshake (i.e. the host can stop the terminal).

Video timeout

The options are On or Off. On is default.

When this function is on, the video signal to the screen will be switched off approximately ten minutes after the last action on the terminal. This will lengthen the lifetime of the screen considerably, so it is advisable to have this function on. Pressing any key restores the screen picture.

Transparent mode

The options are Disabled or Enabled. Disabled is default. *Disabled* is the normal operation of the screen. In *Enabled* all the sequences and codes for the screen will be displayed, but not executed. This function is normally used only when debugging a program, in order to see what is sent to the screen.

The comm. A menu

This menu allows you to set and alter the parameters for communication channel A.

Transmit and receive speed

Initially these are both set to 9600 baud. To see the other possible baudrates, press 'enter' (P8). You will the see the four highest baudrates. To see the seven lowest, press '- more -' (P8). If the speed you want is not available, go to the System Menu, select 'Baud-rate table', and change to the other baud rate table. Then return here and see if you can find the appropriate baud rate.

Communication code parity

The options are None, Even, Odd, Mark and Space. The initial setting is Even.

Communication code stop-bit(s)

You can set either 1 or 2 stop bits. One is set initially.

Communication code length

The code length can be either 7 or 8 bits. Seven is the initial setting.

Echo on transmitted codes

The echo can be External, Internal or Loopback. External is set initially, and is always used on ND systems.

Channel A interface select

The interface select can be either External or Internal. Internal is set initially. In which slot the interfaces are mounted, depends to a certain degree on the configuration of the terminal. Most often the lowest slot will be the V.24 (RS-232-C) interface. If an optional interface adapter is mounted, it will probably be in the second lowermost slot, this will be External. See page 21.

Transmit handshake   This can be either None, XON/XOFF or CTS/DSR. None is set initially.

This function selects the type of handshake on the transmission line, i.e. determines how the host can start/stop transmission from the terminal.

If the function is set to None, the handshake is disabled and the host cannot interfere with the transmission from the terminal.

> **NOTE!**
>
> XON/XOFF is ignored when the terminal is in 2115 mode, and when the terminal is set to relay printing mode.

Receive handshake   This can be either None, XON/XOFF or DTR. XON/XOFF is set initially.

This function selects the handshake type on the receiving line, i.e. determines how the terminal can start/stop transmission from the host.

If the switch is set to None, the handshake is disabled and the terminal cannot interfere with the transmission from the host.

Modem   The modem function can be set to Inhibit, Leased or Dialed. Inhibit is the initial setting.

Transmission delay   This can be set to None, 20 ms, 40 ms or 60 ms. None is set initially. Transmission delay is the time the terminal waits until it sends a character to the host computer. If this time is increased, the host computer will have more time to receive data from the terminal. Try to increase the transmission delay if you get "wild" characters on the screen.

Handshake threshold   The options are 1/16 buffer, 1/8 buffer or 1/4 buffer. 1/4 buffer is set initially. 1/4 buffer should always be used on ND systems.

This indicates how much is left in the input buffer in the terminal when an XOFF is sent to the host computer.

Inverted busy signal   The options are No or Yes. No is set initially.

This switch can be used in cases where the terminal is connected to a device that has the logical levels of the busy signal inverted.

The comm. B menu

The comm. B menu is identical to the comm. A menu, except for the menu entries 'Channel A interface select' and 'Modem' which are not present in the B menu.

The graphics menu

> **NOTE!**
>
> This menu will be functional only if the graphic option is installed in the terminal.

From the set-up soft-key level, press 'GRAPHICS MENU' (P5) to get the graphics set-up menu on the screen.

Page setup format

This menu entry has four selections: Screen, Rotated screen, Portrait and Landscape. With this menu entry you can define the format of the printout from the graphics bitmap. This choice may depend on the size of the sheet of paper you are using. The initial setting is Screen.

Screen: *Any graphics printout will be a hardcopy of the whole screen as you see it.*

Rotated screen: *Any graphics printout will be a hardcopy of the whole screen as you see it, but it will be rotated 90 degrees on the sheet of paper.*

Portrait: *Any graphics printout will be a hardcopy of the whole graphics page in memory (or as much as you can print on a sheet of paper). Usually the page is bigger than the size of the screen (default is 1024 x 1024 pixels).*

Landscape: *Any graphics printout will be a hardcopy of the whole graphics page in memory (or as much as you can print on a sheet of paper), but it will be rotated 90 degrees on the sheet of paper. Usually the page is bigger than the size of the screen (default is 1024 x 1024 pixels).*

Printer setup

This menu entry lets you set one of two local printers, Epson or PT88. This depends on which printer you have connected directly to the terminal. Remember that we are not talking about the printer or printers connected to the host computer, but the one (if any) connected to your terminal as a local printer.

Epson is a Epson LX-86 matrix printer, ND-110090. PT88 is an inkjet printer, ND-110079. Both printers have serial interface.

Printer formfeed

This defines whether the printer should eject one empty sheet of paper before or after printing. The initial setting is None.

None: *No form feed before or after printing.*

Before: *One blank sheet of paper is ejected before printing starts.*

After: *One blank sheet of paper is ejected after printing.*

Before & after :One blank sheet of paper is ejected before printing and one after.

Cursor blinking   The cursor blinking can be either On or Off. The
                             initial setting is Off.

Graphics video status   The graphics video status can be either On or Off.
                             The initial setting is On. This function describes
                             whether the graphics should be visible or not when
                             you are working in alpha modus.

Mouse resolution   The mouse resolution can be Low or High. Low is set
                             initially. This function describes the relation between
                             the movement of the mouse and the corresponding
                             movement of the cursor on the screen.

Cursor type   The graphics cursor can be Tracking cross or
                             Crosshair. Crosshair is set initially. Some applica-
                             tions will, however, override this setting.

Main window   These two menu entries allow you to set the
foreground and   foreground and background color for the main
background color   graphics window. The selections are Light grey,
                             Dark grey, Black and White. Black is set initially for
                             the foreground and light grey for the background.

Tab rack

If you press TAB RACK (P7) when you are in set-up level, it is possible to edit the terminal's tab rack. These tabs will have no effect on the tabs in NOTIS-applications.

Terminal ID

Press TERMINAL ID (P8) when in set-up level and you will have the terminal identification. This will give you the revision number of the terminal emulator.

Index