TallyGenicom™

LA550N

LA550W

User guide

Matrix printer

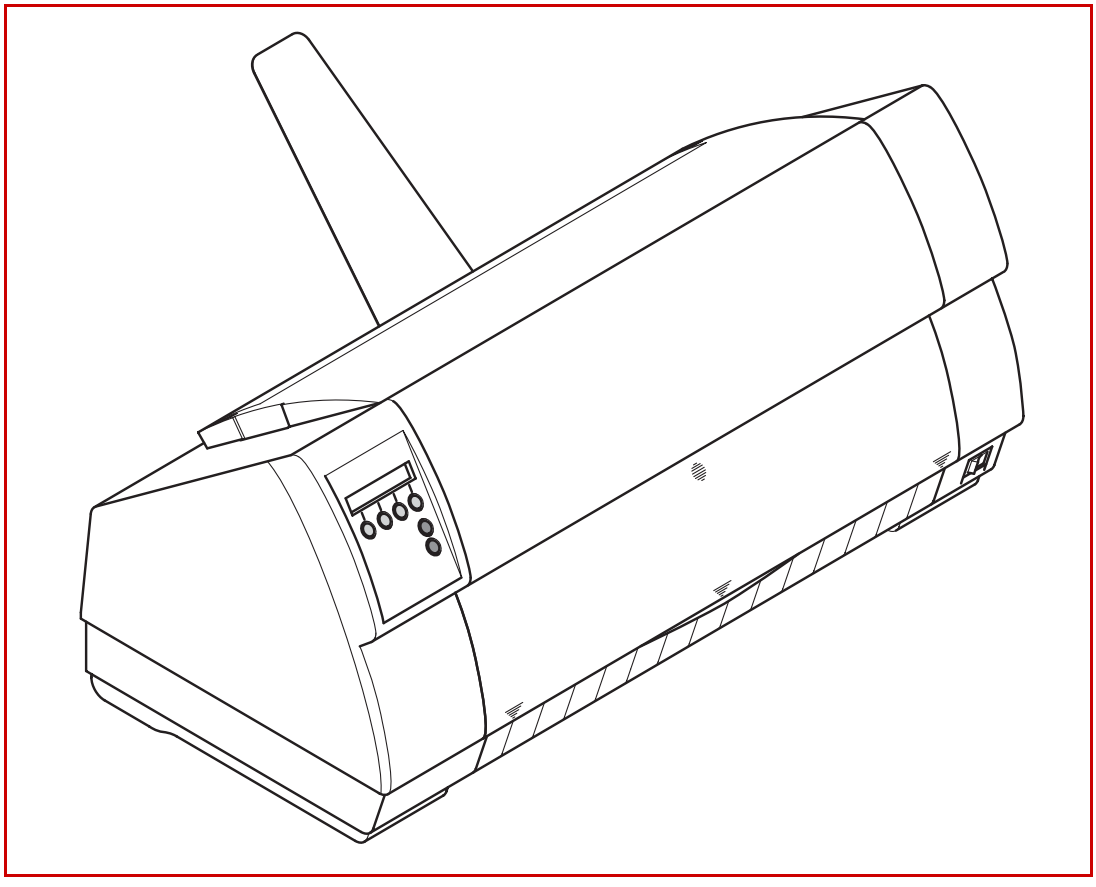


Table of contents

Introduction

Printer features

Your printer is a high speed and rugged design for easy use and heavy duty operation. It is designed for service-free PC, network and mini system operations.

At top speeds of up to 500 cps the LA550N and LA550 keep pace with the bustling, demanding world where printing is time sensitive and critical. Engineered for printing under adverse conditions, these devices produce multi-part invoices, shipping documents or bar code labels at a rate of up to 26,000 pages per month.

The printer handles up to 5-part forms with no skewing or jamming; it automatically adjusts for different forms thickness. The straight paper path is easy to access, for reliable forms handling.

The LA550N/LA550W optionally is configured with an optional tractor (front). A straight paper path on the front tractors results in jam-free operation and flawless 24-wire impressions on up to 5-part forms. Both models offer fully automated gap adjustment, paper parking, loading, etc.

With extensive connectivity alternatives and popular emulations, the printer is ideal for a variety of industrial or business applications.

Symbols used

Important information is highlighted in this manual by two symbols.

CAUTION highlights information which must be observed in order to prevent injuries to the user and damage to the printer.

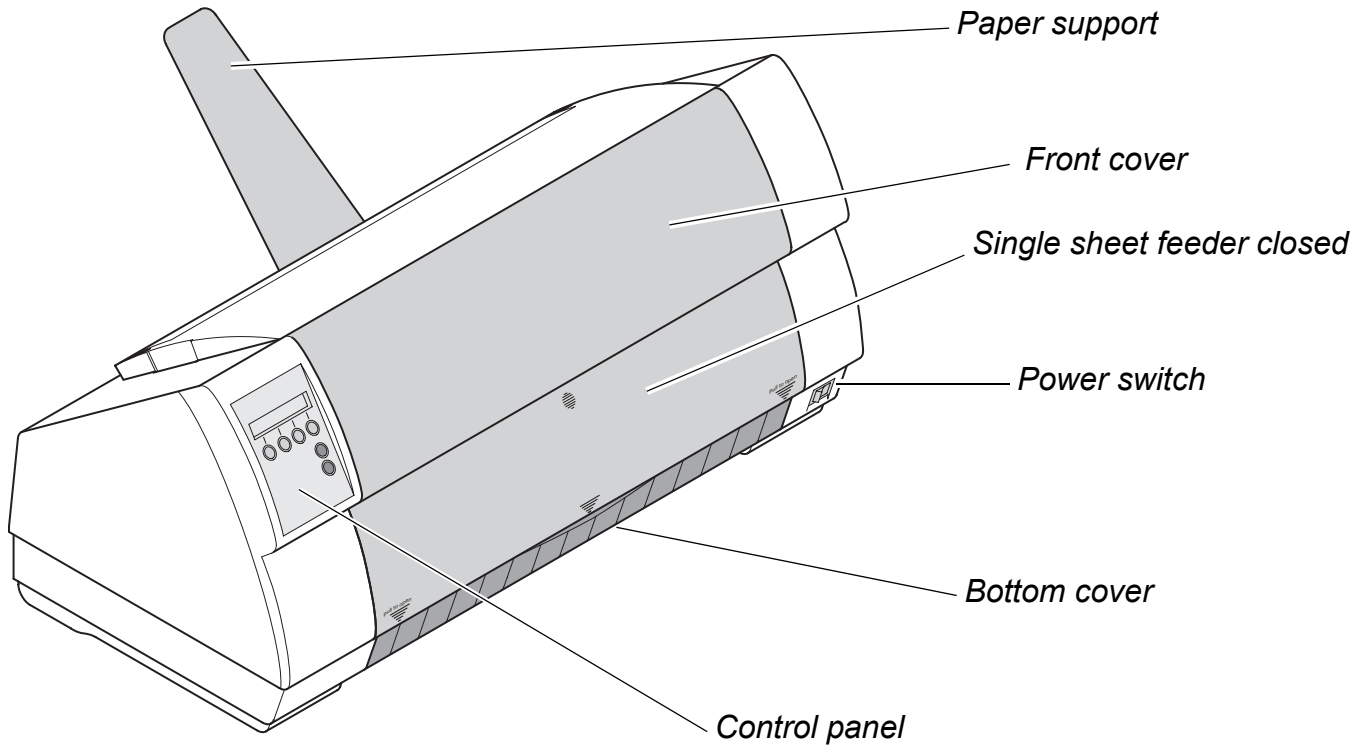
NOTE highlights general or additional information about a specific topic.

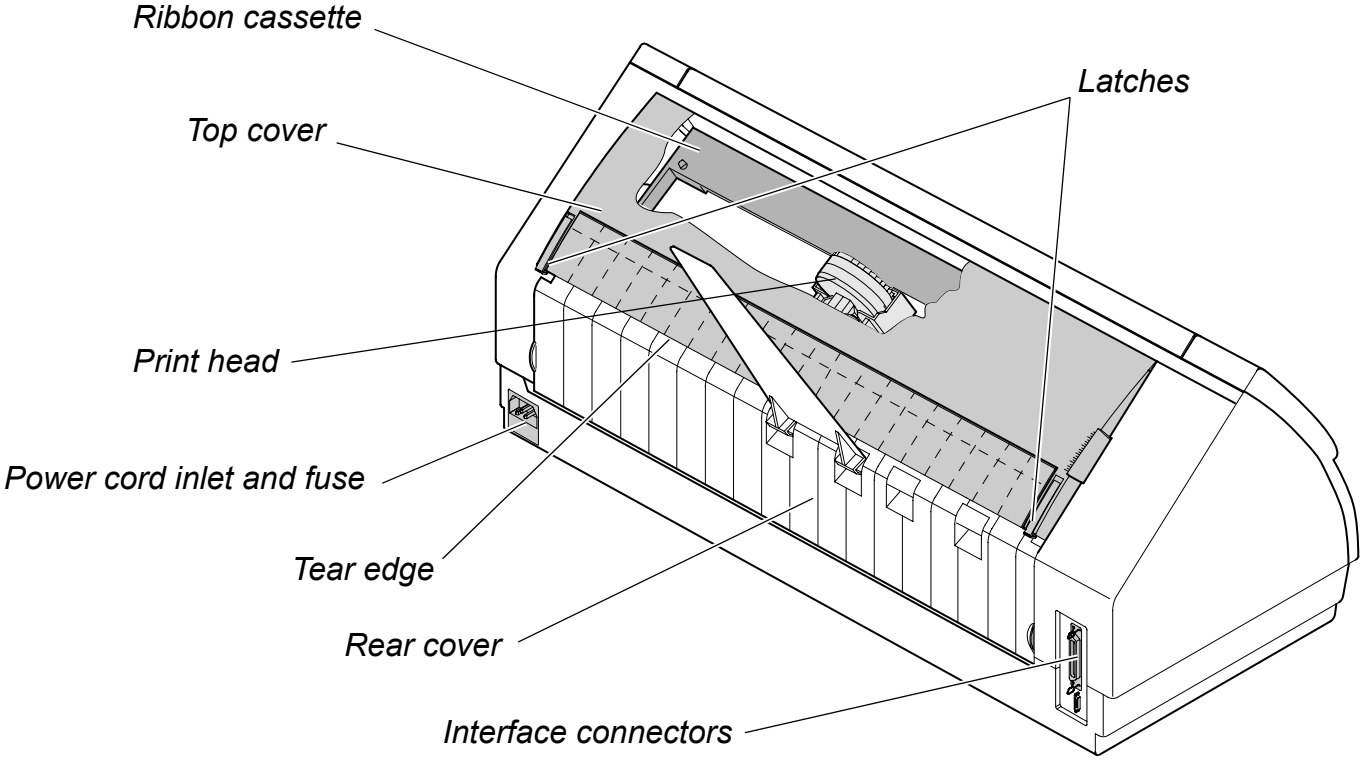
About this manual

The user guide contains a detailed description of the printer, its characteristic features and additional information.

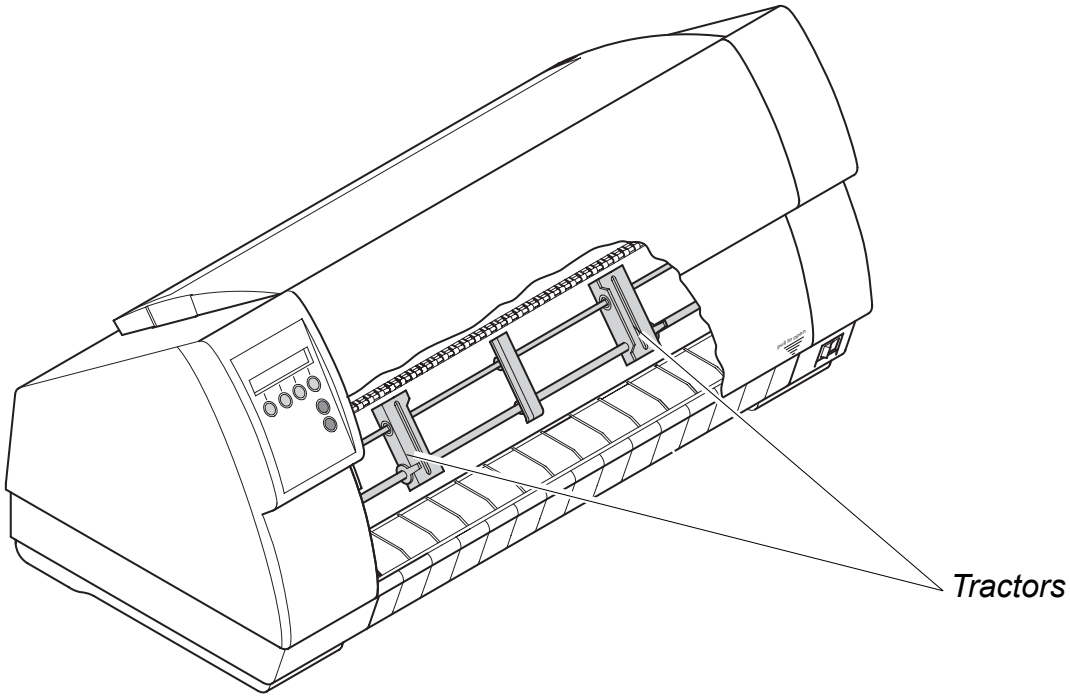
- Chapter 1 *Printer at a glance* lists all the parts of the printer.
- Chapter 2 *Installation* contains start-up instructions and points to note.
- Chapter 3 *Changing the ribbon cassette* provides step-by-step instructions for changing the ribbon cassette.
- Chapter 4 *Printer drivers* provides step-by-step instructions for installing the printer driver.
- Chapter 5 *The control panel* explains how to control printer operations.
- Chapter 6 *Paper handling* tells you how to set the paper type and how to load, transport and move the paper to the tear-off position.
- Chapter 7 *Settings* tells you how to adjust the basic settings such as font, character density, print head distance, print line height and tear-off position.
- Chapter 8 *The Menu* contains all the information necessary for controlling the printer via the control panel.
- Chapter 9 *Advanced menu* describes the possible test settings and other technical adjustments of the printer.
- Chapter 10 *Troubleshooting* provides instructions for rectifying faults which do not require the intervention of qualified personnel.
- Chapter 11 *Care and maintenance* provides information on the upkeep of the printer.
- Appendix A *Specifications* informs you about the technical specifications of your printer and the paper which should be used.
- Appendix B *Available character sets and fonts* lists the available character sets.
- Appendix C *Emulations* deals with programming via the interface.
- Appendix D *Interfaces* explains the interfaces.
- Appendix E *Options and accessories* contains information about options and accessories you can purchase for your printer.

1 Printer at a glance

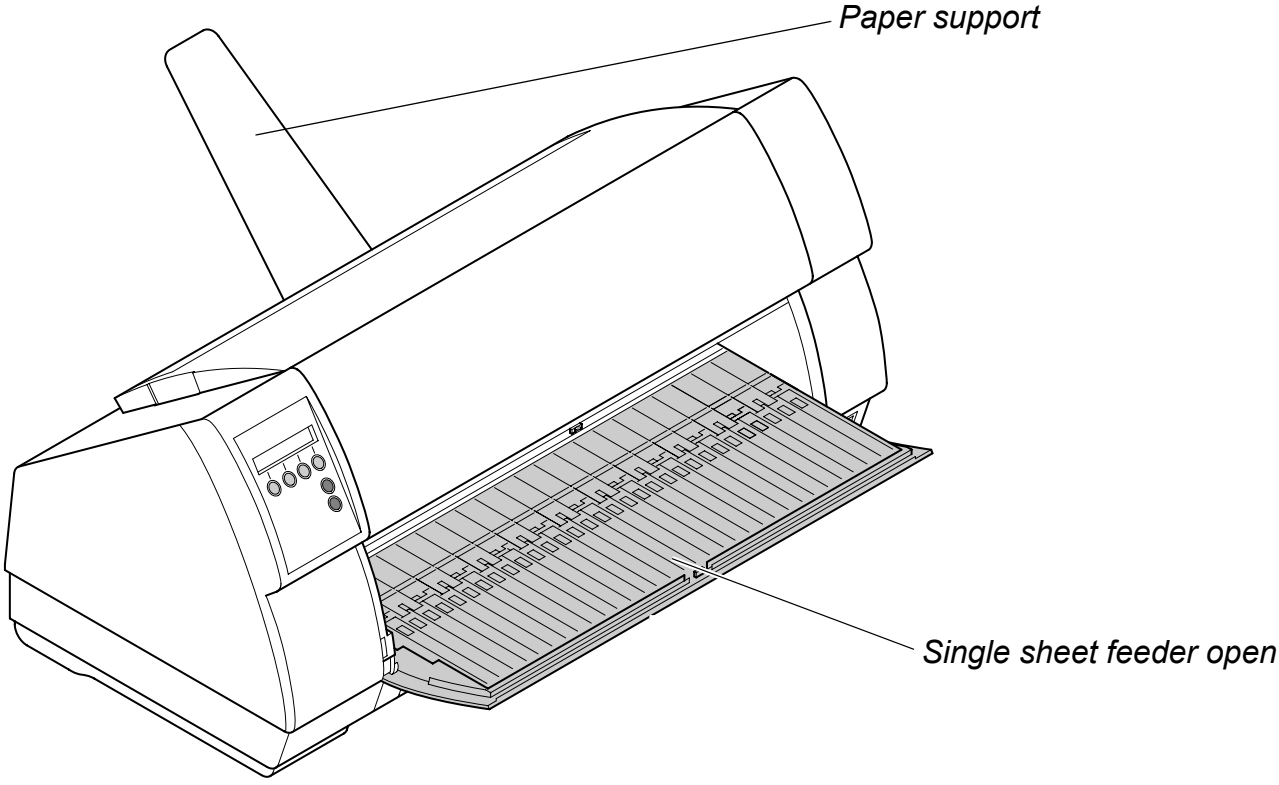




Printer in fanfold paper mode



Printer in single-sheet mode

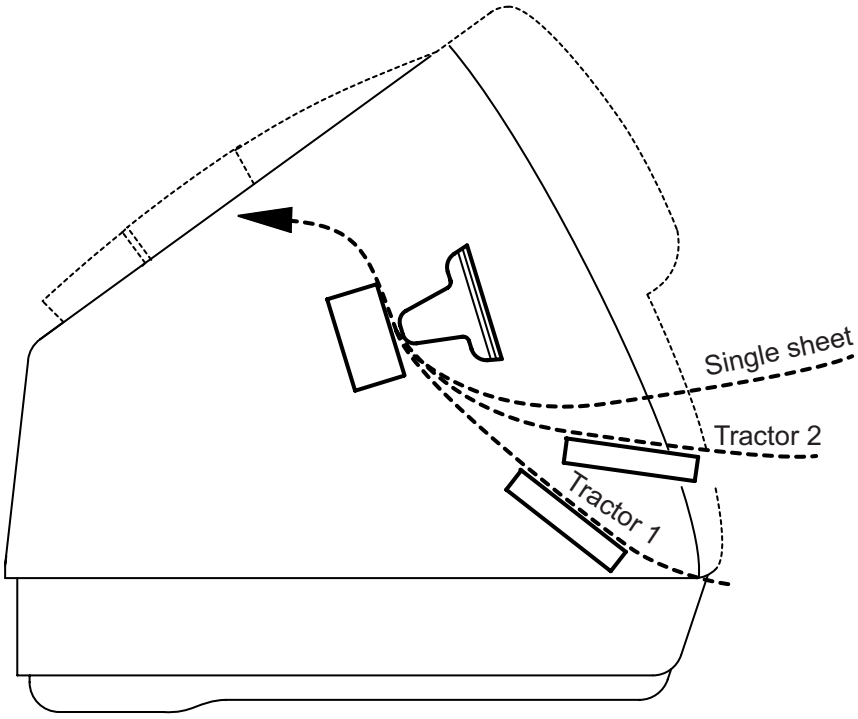


Paperway

Standard printer: Tractor 1
Single sheet

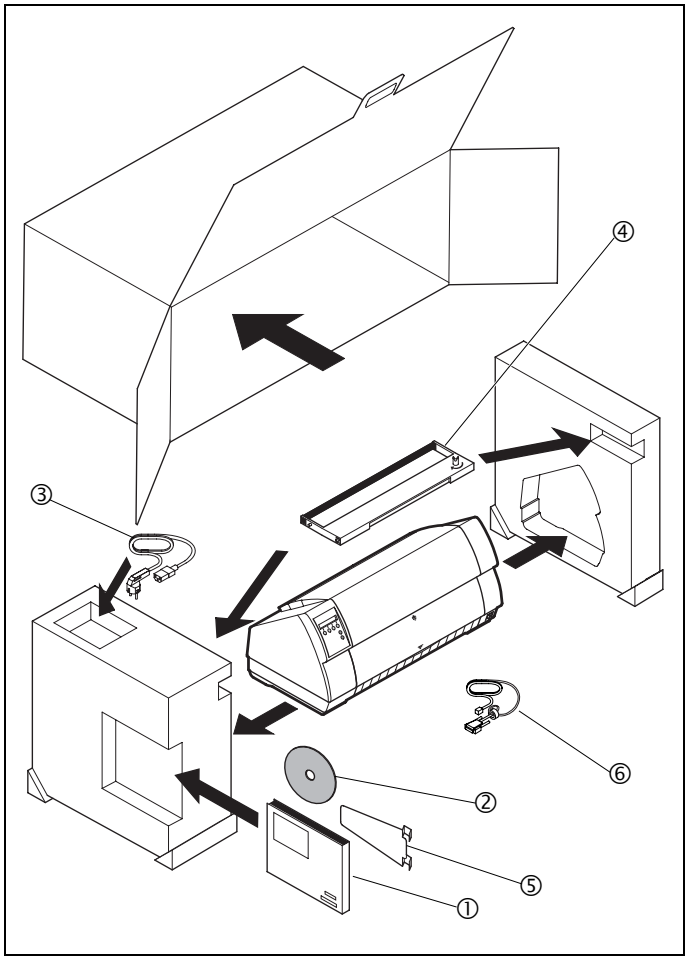
Option: Tractor 2

▸ **Fanfold paper mode**



2 Installation

Unpacking the printer



Place your printer on a solid surface (see *Placing your printer*, page 7).

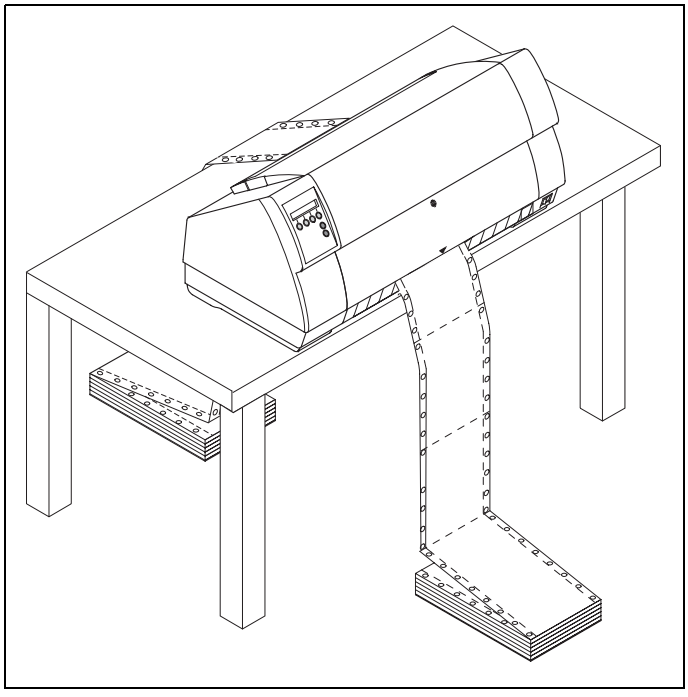
Make sure that the “Up” symbols point in the correct direction.

Open the packaging, take out the accessory cassette and unpack it. Pull the printer out of the cardboard box towards you and remove the remaining packaging material.

Check the printer for any visible transport damage and completeness. Apart from this CD-ROM (①) the Quick start guide (②), the power cable (③), the ribbon (④) and the MMJ interface adapter (⑤) should be included.

If you find any transport damage or if any accessories are missing, please contact your dealer.

Placing your printer



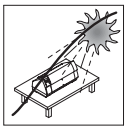
Place the printer on a solid, flat, surface, ensuring that the printer is positioned in such a way that it can not topple, and that there is easy access to the control panel and paper input devices. Also ensure that there is sufficient space for the printed output.

If you expect that frequent forward and reverse feeds will occur, you should place the printer as shown in the figure, if possible.

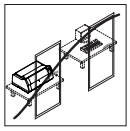
STOP **The power supply cable may be damaged if the paper edges constantly chafe the insulating sheath. The user must always ensure that there is sufficient distance between the power supply cable and the paper.**

When selecting the printer location, observe the following additional instructions:

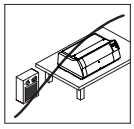
STOP **Never place the printer in the vicinity of inflammable gas or explosive substances.**



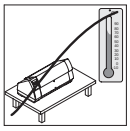
Do not expose the printer to direct sunlight. If you cannot avoid placing the printer near a window, protect it from the sunlight with a curtain.



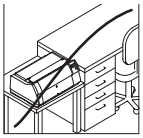
When connecting the computer with the printer, make sure not to exceed the permitted cable length (see *Interface specifications*, page 112).



Ensure sufficient distance between the printer and any heating radiators.



Avoid exposing the printer to extreme temperature or air humidity fluctuations. Above all take care to avoid the influence of dust.

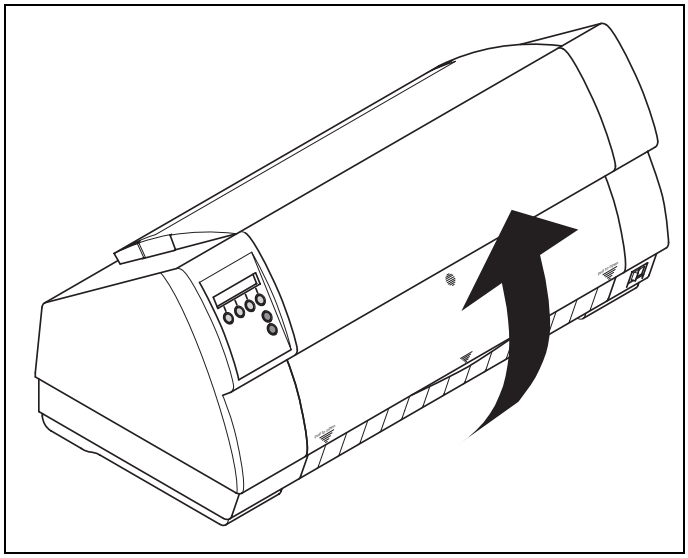


It is recommended to install the printer in a place which is acoustically isolated from the workplace because of the noise it may produce.

Checking the printer voltage

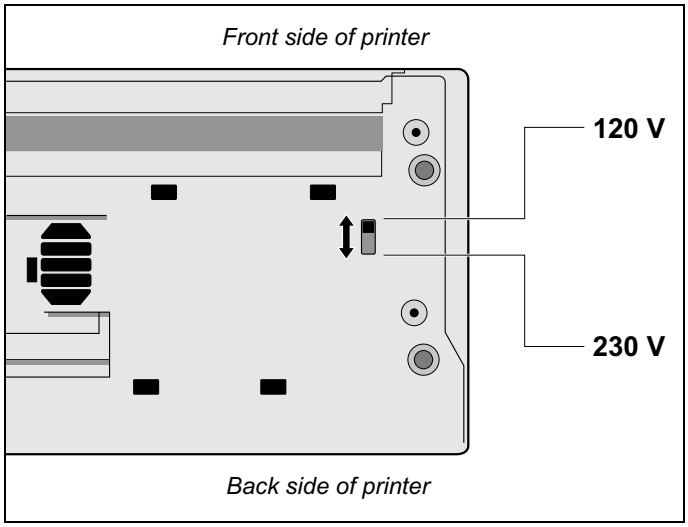
Make sure that the device has been set to the correct voltage (e.g. 120 V in the USA, 230 V in Europe). To do this, check the type plate above the power inlet at the back of the printer. Contact your dealer if the setting is incorrect.

STOP **Never switch on the printer if the voltage setting is incorrect, since this may result in severe damage.**



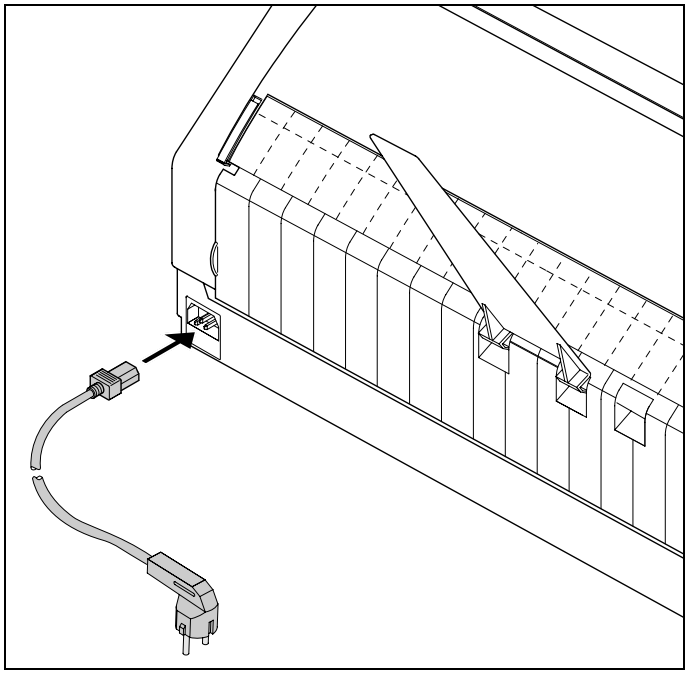
You can set the printer to the correct mains voltage yourself. To do this, cautiously place the printer on its back side.

STOP **Make sure that the fixing clips of the parallel connection are not bent.**

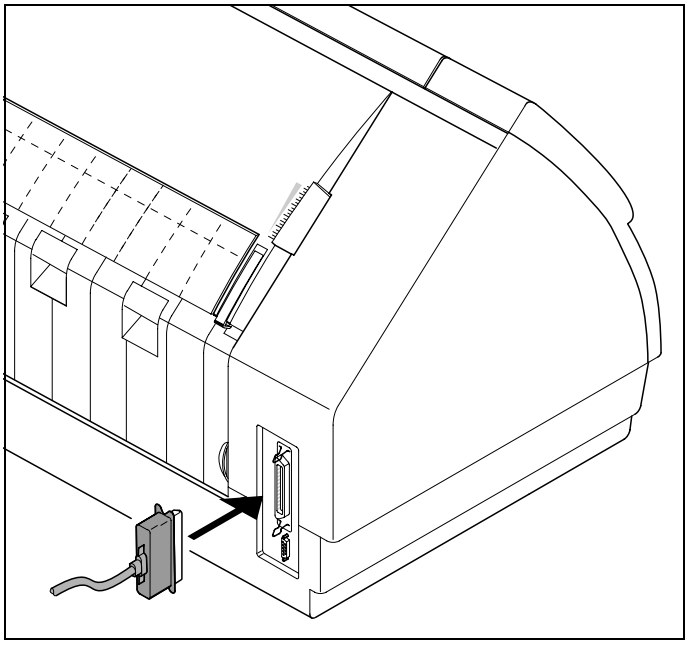


Use a suitable object (e.g. a screwdriver, but never a pencil) to set the slide switch on the left at the bottom of the printer to the correct voltage.

Connecting the printer

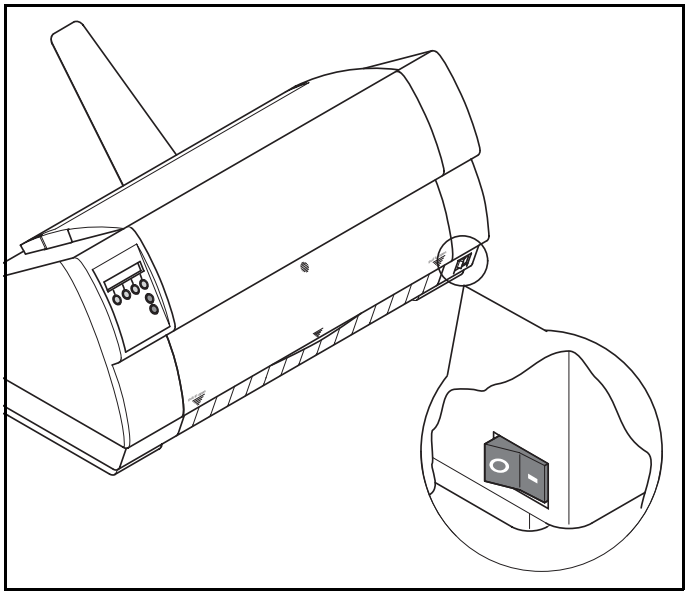


Connect the power cable to the power inlet of the printer. Connect the power cable plug to a mains socket.



Make sure that the printer and the computer are switched off and connect the data cable between the printer and the computer.

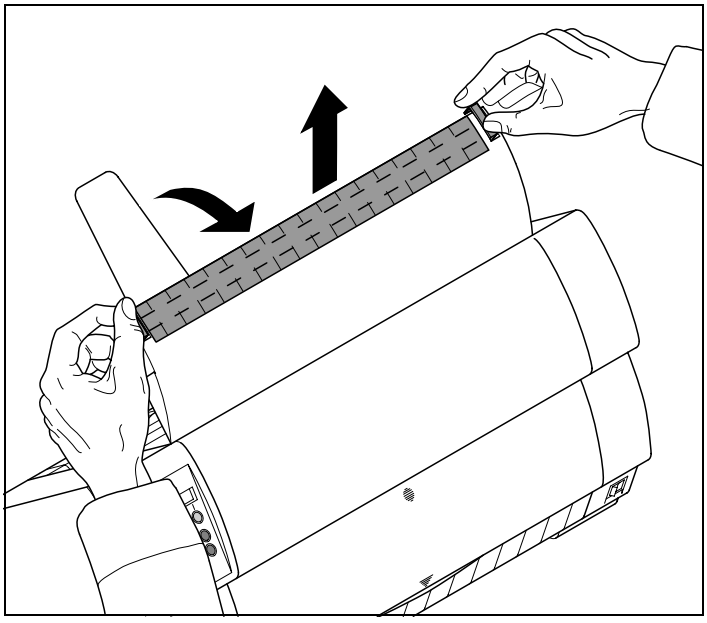
Switching on the printer



The power switch for switching on the printer is located at the bottom left at the front of the printer when viewed from the front.

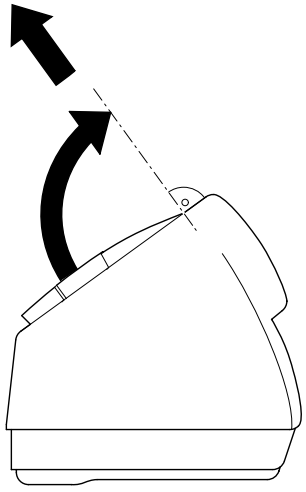
3 Changing the ribbon cassette

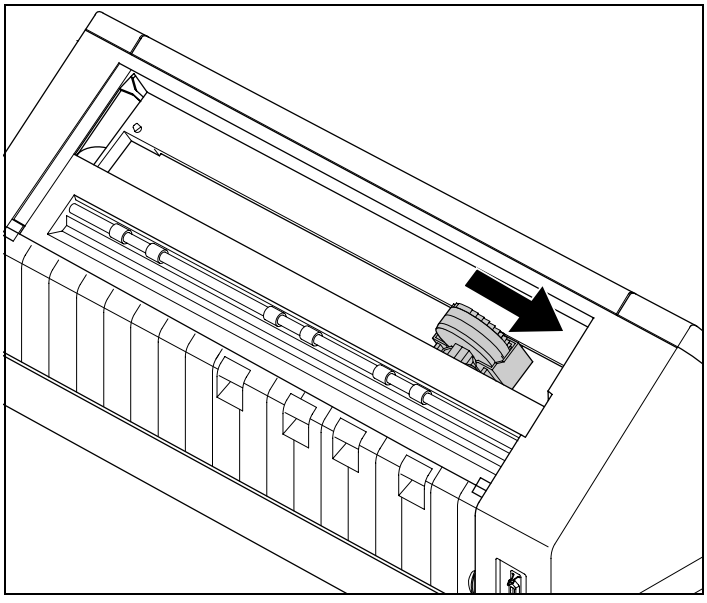
The ribbon consists of a dense synthetic fabric saturated with ink. When printing, the needles hit the ribbon and transfer the ink particles on to the paper. After printing several million characters, the ink is consumed and the fabric worn out.



Remove all the paper from the printer and make sure that the printer is switched off before opening the cover.

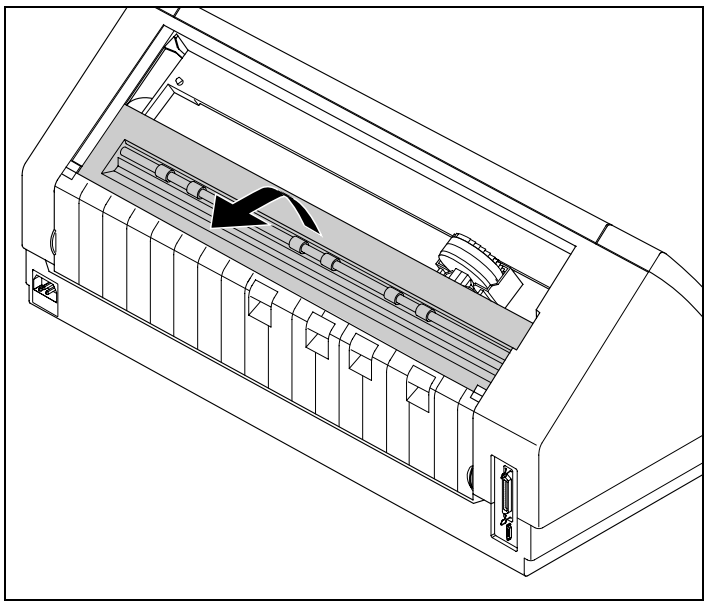
Press the two slide latches, raise the top cover to an angle of 90 degrees relative to the top cover of the printer and remove it.



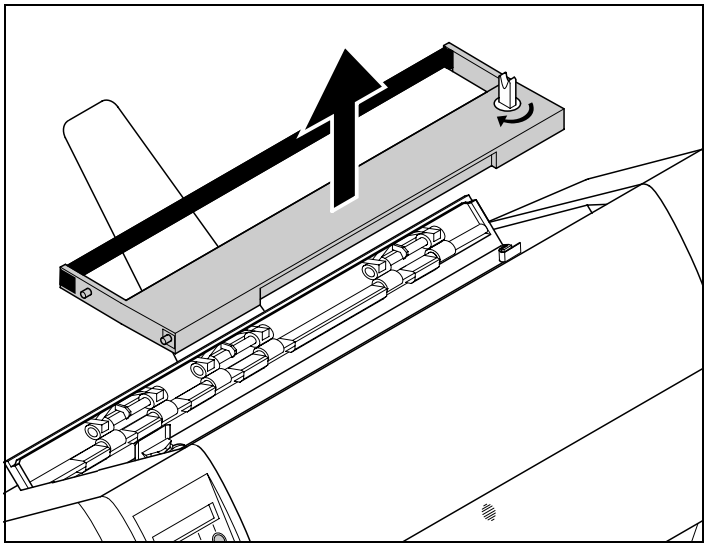


Cautiously slide the print head carriage to the left stop (viewed from the printer front).

STOP **The print head heats up during printing. Let it cool down before touching, if necessary.**

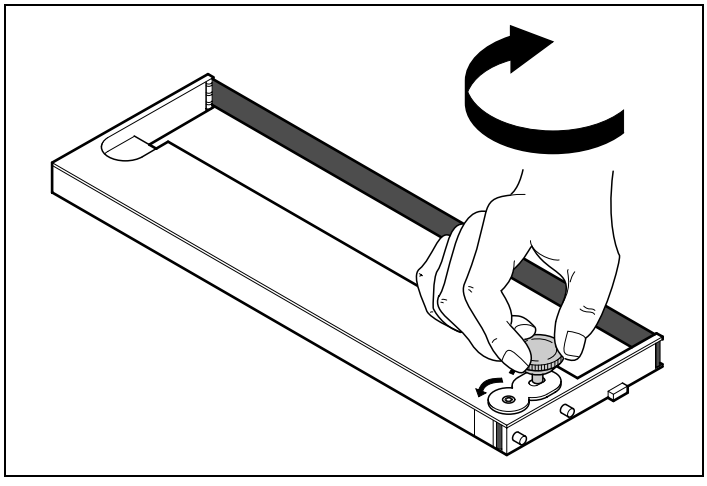


Raise the printer bar cover.

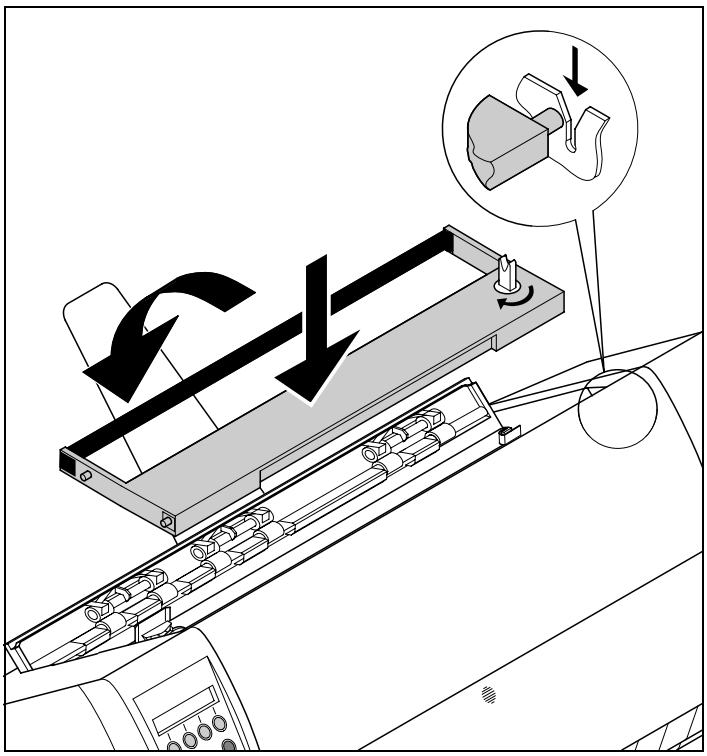


Remove the used cassette.

We recommend use of genuine ribbon cassettes only.

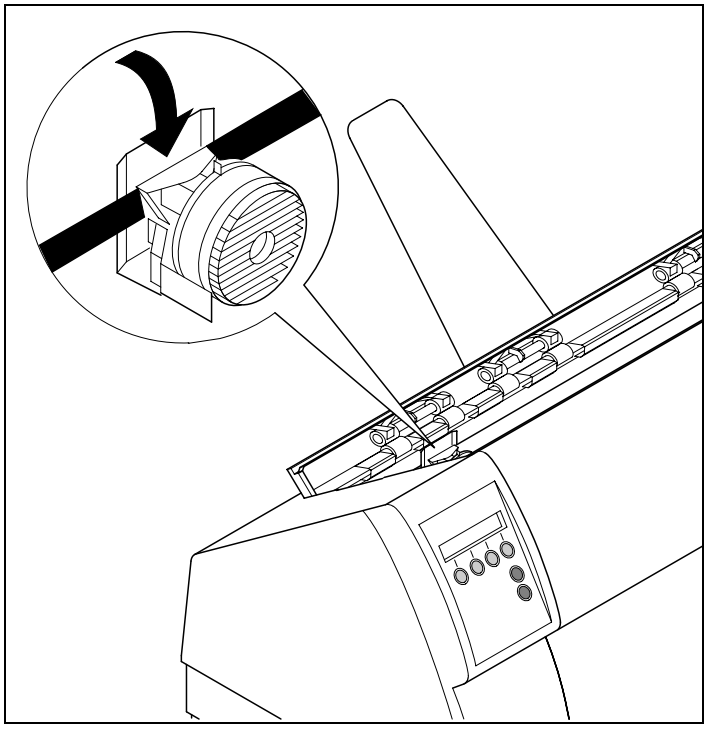


Turn the coloured ribbon feed knob at the right of the new ribbon cassette in the direction of the arrow in order to take up slack of the ribbon.



Slightly tilt the ribbon cassette forwards in such a way that it is parallel to the housing top and thread in the ribbon in front of the print head.

Locate the two projections in the left and right guide rails of the printer and gently press down on both sides until it clicks into place. In this way, the cartridge is automatically positioned correctly.



Use the knob on the right side of the cassette to take up slack of the ribbon again. Thereby the ribbon will slide over the plastic noses on the left and right of the print head into the correct positon.

Press the printer bar cover down until it clicks into place, remount the top cover, making sure that the projections on the cover are inserted correctly into the recesses of the printer housing, and close it.

4 Printer drivers

You need to install a printer driver so that the printer can process the data from your application programs.

An original driver offers the best conditions for optimal printing results. All available printer drivers can be found on the CD-ROM enclosed with the printer, as well as on our *Internet* site, from which you can also download updated versions as necessary.

Installing a printer driver in Windows 95/98/ME

To install the printer driver, proceed as follows.

1. Insert the supplied online CD-ROM in the CD-ROM drive.
2. Click on the **Start** button in the Windows taskbar.
3. Move the mouse to **Settings** and click on **Printer** to open the printer folder.
4. Click on **New Printer**.
5. Click on **Next** In the **Printer Installation Wizard**.
6. Specify whether you want to operate the printer as a **Local Printer** or **Network Printer** by clicking on the relevant option, then press **Next**.

For instructions on installing the printer as a network printer, please consult the documentation supplied with your network operating system and/or printer server, or contact the network administrator.

7. Click on **Disk**, then on **Browse**.
8. Select the CD-ROM drive and open the directory **n:\english\drivers\<printer model>** (“n“ stands for the letter of your PC drive).

The printer driver is also available in German, French, Italian and Spanish language. If you want to install a printer driver in one of these languages open the respective directory.

9. Open the folder of your printer’s operating system, select the file oemsetup.inf and click on **OK**.
10. Select the printer type. Click on **OK**, then on **Next**.
11. Select the port to which your printer is connected, then click on **Next**.

12 If required, edit the name of the default printer and specify whether you wish to use the printer as a default printer by clicking on the relevant option. Then click on **Next**.

13 Specify whether you wish to print out a test page (recommended) by selecting the relevant option and click on **Finish**. The printer driver will now be installed.

Installing a printer driver in Windows 2000/NT 4.0/XP

The online CD-ROM contains printer drivers for the most common Windows applications. To install the printer driver, proceed as follows.

1 Insert the supplied online CD-ROM in the CD-ROM drive.

2 Click on the **Start** button in the Windows taskbar.

3 Click on **Printers and Faxes** to open the printer folder.

4 Click on **File** and **Add Printer** in the menu bar.

5 Click on **Next** In the **Printer Installation Wizard**.

6 Specify whether you want to operate the printer as a **Local Printer or Network Printer** by clicking on the relevant option, then press **Next**.

For instructions on installing the printer as a network printer, please consult the documentation supplied with your network operating system and/or printer server, or contact the network administrator.
To install a network printer, you will need Administrator rights.

If you are using the printer locally, you can continue installing the driver in one of two possible ways:

- Manual installation of printer driver: in this case, continue with Step 7.
- Automatic installation of printer driver via Plug & Play function: in this case, continue with Step 12 once the printer installation wizard has determined the printer, port and printer name.
  Then click on **Next**.

7 Select the port to which your printer is connected, then click on **Next**.

8 Click on **Data Carrier**, then click on **Browse**.

9 Select the CD-ROM drive and open the directory **n:\english\drivers\<printer model>** (“n“ stands for the letter of your PC drive).

10 Open the folder of your printer’s operating system, select the file **oemsetup.inf** or **printer.inf** (Windows NT 4) and click on **OK**.

11 Select the printer type. Click on **OK**, then on **Next**.

12 If required, edit the name of the default printer and specify whether you wish to use the printer as a default printer by clicking on the relevant option. Then click on **Next**.

13 If you are using the printer as a network printer, you have the option of sharing it with other network users. In this case you must enter an access name which will be displayed to the other network users. Then click on **Next**.

14 Specify whether you wish to print out a test page (recommended) by selecting the relevant option and click on **Finish**. The printer driver will now be installed.

The printer driver only works if the Epson emulation is selected (default setting for parallel interface). For details how to select Epson emulation, refer to *Setting the EPSON Mode (EPS-Mode)* **(page 86).**

The printer drivers either support the printer font Draft **or** Draft Copy**, not both. Selection, which kind of draft font is used, has to be made in the printers Menu mode (see** *Selecting font (Font)*, **page 49). If you want to switch between print qualities** NLQ **(Near Letter Quality) and** LQ **(Letter Quality), you also have to make this selection in Menu mode.**

Other operating systems

The printer can also be used with other operating systems such as Linux or Unix. In this case, set the printer to the Epson emulation or IBM emulation for which default drivers are available in most operating systems.

Changing printer settings

You can make permanent changes to the printer settings using the control panel of the printer (see *The Menu*, page 41). Various printer settings can also be entered in the operating system of your PC, however.

1 Click on the Start button in the Windows taskbar.

2 Windows 95/98/ME: move the mouse to Settings and click on Printers to open the printer folder.
Windows 2000/NT 4.0/XP: click on Printers and Faxes to open the printer folder.

3 Move the mouse pointer to the appropriate printer symbol, press the right mouse key and click on Properties.

Details of the settings available in this window can be found in the Windows documentation or help pages.

Settings entered in the printer driver via Windows have priority over settings entered via the printer menu. It is therefore possible that the former may overwrite the latter.

Form settings (Windows 2000/NT 4.0/XP)

In contrast to Windows versions 95/98/ME, in which forms are defined in the printer driver itself, Windows versions 2000/NT 4.0/XP have a central facility for managing form properties and assign one paper feed only.

If you want to set up a form not included in the Windows default settings, proceed as follows.

You will need Administrator rights to define new forms.

1 Click on the **Start** button in the Windows taskbar.

2 Click on **Printers and Faxes** to open the printer folder.

3 In the menu bar, click on **File** and **Server Properties**.

4 In the window **Printer Server Properties**, click on **Form** if necessary.

5 Either select an existing form from the **Forms** list or activate the option **New Form**.

6 Enter a form name and the desired values.

7 Click on **Save** to save the new form.

You can now assign this form to the paper feeds of your printer (see *Changing printer settings*).

The form cannot be assigned if its dimensions exceed the permissible paper sizes of the specified paper feed.

Graphic options

You can select different print qualities via the Windows printer drivers (see table). This selection will affect the printing speed: the higher the print quality, the lower the speed (see *Printer specifications*, page 109).

To set the desired print quality, proceed as follows.

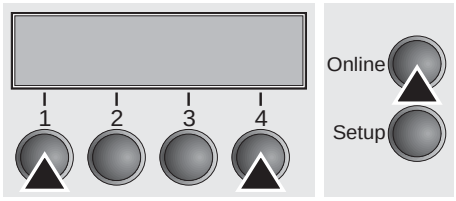
1. Click on the **Start** button in the Windows taskbar.
2. Windows 95/98/ME/2000: move the mouse to **Settings** and click on **Printers** to open the printer folder.
   Windows NT 4.0/XP: Click on **Printers and Faxes** to open the printer folder.
3. Move the mouse pointer to the printer symbol, click on the right mouse key and click on **Properties**.
4. Windows 95/98/ME: Click on **Graphics**.
   Windows 2000: Click on **Printer Properties**, then click on **Advanced**.
   Windows NT 4.0/XP: Click on **Printer Settings**, then click on **Advanced**.
5. Windows 95/98/ME: Highlight the required setting in the list next to **Resolution**.
   Windows 2000/NT 4.0/XP: Highlight the required setting in the list next to **Print Quality**.
6. Confirm your selection by clicking on **OK**.

Print quality	Resolution
Data Print Quality	180 x 90 dpi
Copy Print Quality	180 x 180 dpi
Near Letter Quality	360 x 180 dpi
Letter Quality	360 x 360 dpi

Loading optional firmware

To load new firmware, proceed as follows.

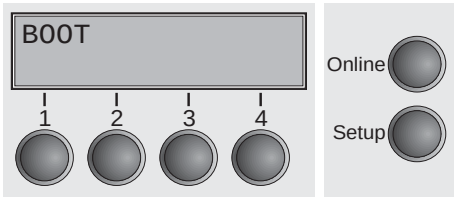
The most current version of the firmware can be downloaded from our *internet* page.



1 Switch off the printer. Connect your DOS PC (LPT1:) to the parallel port on the printer.

2 Press keys **1**, **4** and **Online**. Hold the keys pressed.

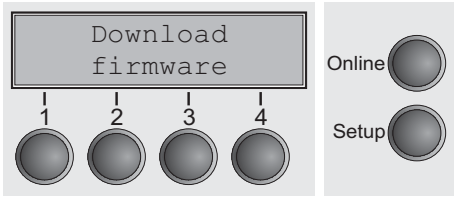
3 Switch on your printer.



The printer is ready for the download when **BOOT** appears on its display.

4 In Windows open the MS-DOS window.

5 Copy the file, e.g. DOWNLOAD.FDF, to your printer:
`COPY /B X:\path\DOWNLOAD.FDF PRN`
(`X:\path` stands for the drive and the directory in which the file is located.)



A progress indicator (bar) and DOWNLOAD FIRMWARE appears on the display during the download; alternatively, an error message is displayed:
PRG = Firmware
GEN = Character set or font (character generator)
P+G = Firmware and character set
BOO = Firmware, character set and boot block

The number of the currently transferred data block (frame) is displayed in addition in the top line of the display on the right.

DOWNLOAD OK and **BOOTAREA SKIPPED** is displayed briefly when the procedure has been completed successfully. The printer then runs through its initialisation routine, after which it is ready for use. Repeated separate loading of firmware and character generators is possible.

Troubleshooting

It is necessary to repeat the entire procedure if an error occurs during the download. This is indicated by a corresponding message on the display. It may be that not all fault messages can be shown on the display. In this case, the operating system of your PC displays an error message such as “Write error on device”.

5 The control panel

The control panel keys are used for controlling your work with the printer. The control panel is located on the front right side of your printer and consists of a two-line LC display and six keys.

The functions of the keys depend on the printer's current mode (status). There are four basic modes.

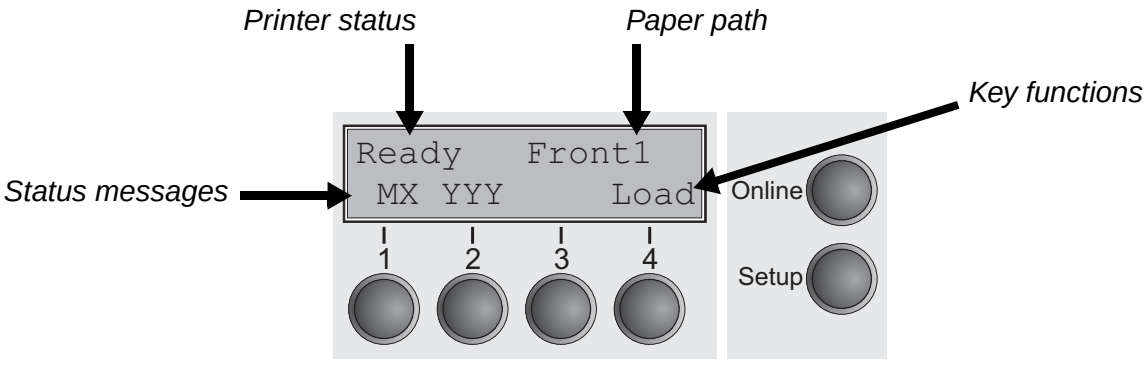
- The *Online* mode (display message: **Ready**) is the printer's normal operating mode. Data from your computer can be received and printed.
- In the *Offline* mode (display message: **Pause**) the link between printer and computer is interrupted, i.e. no data can be received and printed.
- In the *Setup* mode you can either select the printer menu or carry out the so-called quick-switch function. The quick-switch option was included so that you can change the most important parameters (for example adjustments, character density, font, paper path, adjustments i.e. head gap) directly without having to enter them via the menu. The settings for the parameters character density and font are lost when the printer is switched off. They can be selected permanently in the Menu mode of the printer.
- In the *Menu* mode further printer settings (line spacing, size of the interface buffer etc.) can be altered and saved permanently.

The LC display

The LC display tells you all the important printer settings and informs you which functions are currently assigned to which keys.

The upper line informs you that the printer is either in Online or Offline mode (in the example below the printer is in the Online mode), and the selected paperpath (below: **Front1** = tractor mode).

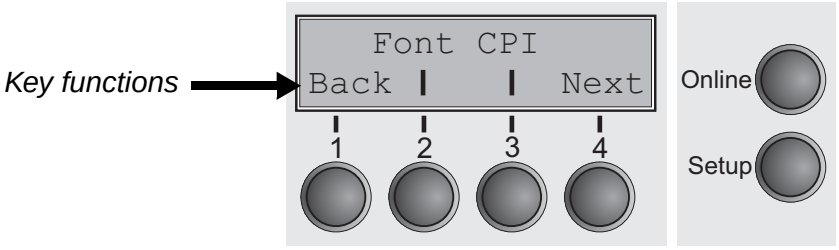
Example:



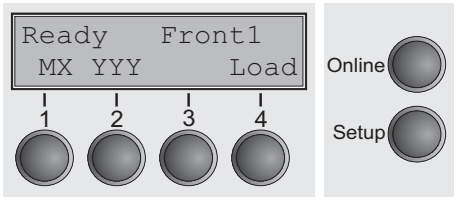
The second line informs you which functions are currently assigned to which keys. The word or symbol directly above a key tells you the current function of the key.

In our example, key 1 (**Back**) serves to activate the previous parameter group, while keys 2 (**Font**) and 3 (**CPI**) open the menus for editing the settings for fonts and character density. Key 4 (**Next**) takes you to the next parameter group.

Example:



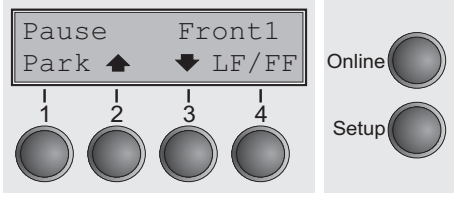
Online mode



After switching on, the printer is automatically set to Online mode. Only in this mode can it receive data from the computer.

- **MX** (a message only; X = 1 to 4): Shows the selected menu (Macro); for further information refer to *Loading menu configurations (Macro)* (page 47).
- **YYY** (a message only; YYY = EPS, IBM, DEC): Shows the active emulation of the active interface (parallel or serial); for further information refer to *Selecting Protocol (emulation)* (page 51).
- **Load** key (4): If this is displayed above this key, no paper is loaded in the printer or the paper is in park position. In this case the display switches between **Ready** and **Park** Position. Press the key to feed paper to the printing position.
- **Setup** key: Sets the printer to Setup mode.
- **Online** key: Sets the printer to Offline mode. Loaded paper will be transported to printing position. If the printer is set to Online mode by pressing the **Online** key again, the printer transports the paper in tear position.

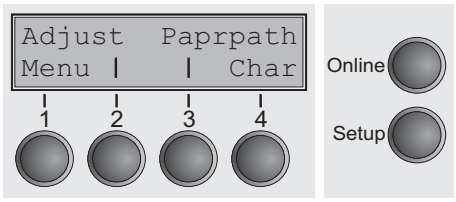
Offline mode



Only in this mode is it possible to perform step, line, or form feeds from the control panel, see *Paper transport* (page 34); however, data cannot be received.

- **Park** key (1): Clears the paper path with paper loaded and activates paper path quick selection, see *Changing the paper path* (page 26).
- Key ▲ (2): Short keypress: Microstep forward. Long keypress: Continuous paper feed.
- Key ▼ (3): Short keypress: Microstep reverse. Long keypress: Continuous paper reverse feed up to the park position.
- **Load** key (4): If no paper is loaded, see above.
  If paper is loaded: Loads paper from the selected paper source; the display changes to **LF/FF**
  Short keypress: Line Feed (**LF**).
  Long keypress: Form Feed (**FF**).
- **Setup** key: Sets the printer to Setup mode.
- **Online** key: Sets the printer to Online mode.

Setup mode



In this mode, the following settings are available:

- **Setup** key: Sets the printer to Setup mode, in which the following settings can be selected:
- **Menu** key (1): Other menu settings. Acces may be disabled by the manufacturer (see note below).
- **Adjust** key (2): Sets the Tear position, first printing line and print head gap.
- **Paprpath** key (3): Sets the paper path.
- **Char** key (4): Sets the font and number of characters per inch.

Access to the other menu settings (Menu) may be – depending on the model – disabled by the manufacturer.

Proceed as follows to release this lock temporarily.

1. Switch off the printer for approx. 5 seconds.
2. Switch the printer on again keeping the **Setup** key pressed until **Selftest** disappears on the display.

For information on how to enable access permanently and about the available settings, refer to the section *Menu lock (MenLock) (page 58)* **and** *Menu parameters* **(page 47).**

The settings for Font **and** CPI **are lost when the printer is switched off. The section** *Selecting font (Font)* **(page 49) and** *Horizontal spacing of characters (CPI)* **(page 76), (page 82), (page 86) explains how to set fonts and character density permanently.**

Messages in the LC display

If the printer detects an internal fault or user error or if it expects you to do something, a message will appear in the LC display. It also displays the status during an operation (e.g. **Loading default**). Below you will find a list of messages with brief descriptions of each message. The messages are described in greater detail in the chapter *Error messages via the display* (page 102).

Message	Meaning
`Eject error`	The printer cannot eject the paper / advance it to park position.
`Hardware Alarm`	Internal hardware error, contact your dealer or service technician.
`Head hot`	The printer reports that the print head is hot and that print speed will be reduced.
`Initializing`	This message appears during the printer's initializing phase.
`Load error`	The printer cannot draw in the loaded paper.
`Loading default`	Indicates that the printer is being initialised and is carrying out the internal self-test immediately after turning on the printer. Factory defined parameters will be reloaded in all available menues.
`Out of paper`	The printer has detected paper end during operation / printer was switched on with no paper loaded.
`Parity error`	A parity error during data transmission is indicated.
`Press any key`	The user is requested to press any key.
`Tear Paper off`	The user is requested to tear off paper which has been advanced to the quick tear edge.
`Selftest`	After power-on, the printer executes a short hardware self-test.

Key functions when turning on the printer

If you keep one of the following keys pressed during power-on until the printer has completed initialisation, the corresponding function is activated:

- If you keep the **Online** key depressed while turning on the printer, you enter the printer's advanced Menu mode. The advanced Menu mode is described in the section *Advanced menu* (page 90) of this manual.
- If you keep the **Setup** key depressed while turning on the printer, you regain access to the printer menu if you had locked it before with the help of the MenLock function. The **MenLock** function is described in the section *Menu lock (MenLock) (page 58)*.
- If the four **function** and **select** keys (keys 1 to 4) are depressed simultaneously while turning on the power, all printer settings are reset to the default values.

This causes all the user's previous settings to be lost.

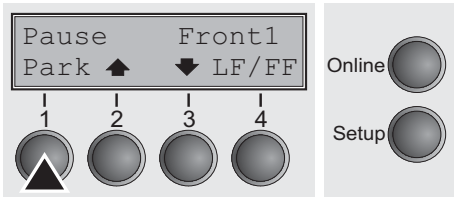
- If you keep the key 4 depressed while turning on the printer, a status page is printed out from the active paper source with the selected settings of all menus.

6 Paper handling

This section describes how to set the paper type, load fanfold paper and single sheets, transport paper and move the paper to the tear position.

Changing the paper path

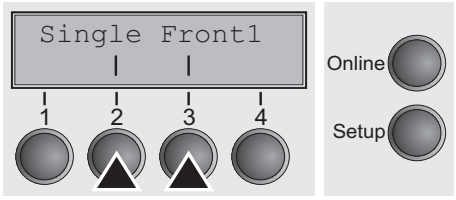
You can change the paper type either from an application program, by means of the paper path quick selection feature or in the Setup menu. In this section, the quick selection feature is described; for detailed information on how to make this setting via the Setup menu, refer to the section *Setup mode* (page 23).



Make sure that the printer is in Offline mode (**Pause**); press the **Online** key, if necessary.

Press the **Park** (1) key. If fanfold paper is loaded in the printer, it is fed to the tear position. The text **Tear paper off** appears in the display.

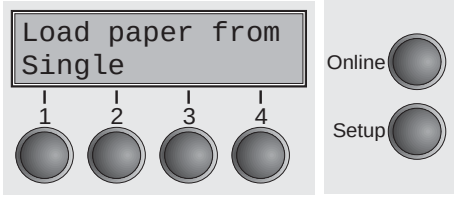
After having torn off the paper, press any key. If a single sheet is loaded in the printer, it is ejected.



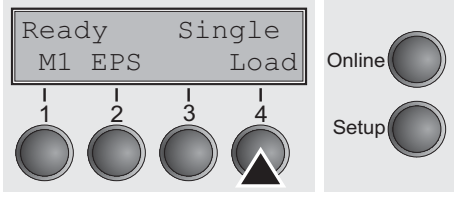
Use one of the marked keys to select the desired paper path, for example, **Single** (2).

The display shown here may vary depending on which paper options you have installed.
If you do not make a selection within 5 seconds, the menu is closed.

The display alternates between the basic menu and the menu in the following figure:



Insert a single sheet (for the procedure, see *Loading paper* (page 28)).



Press the **Online** key to set the printer to ready status. When the printer receives data from the computer, the single sheet is automatically loaded. Press the **Load** (4) key to load the single sheet before starting the printout.

Changing the paper type in the setup menu

If you wish to change the paper type in the Setup menu, proceed as follows.

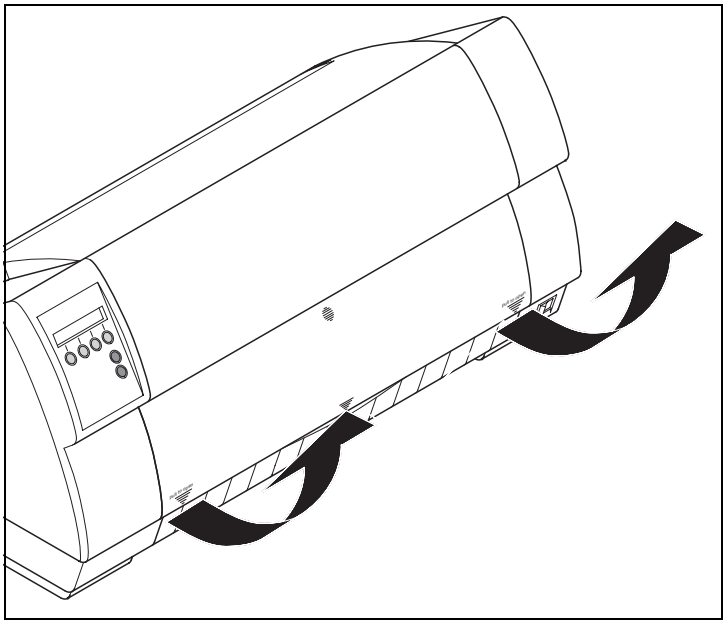
- Press the **Setup** key followed by the **Paprpath** key (3).
- Select the desired paper type with the key **<** (2) or **>** (3).
- Press the **Set** (1) key to confirm your selection.

Loading paper

Your printer can process both fanfold paper and single sheets. For information on the supported paper sizes, please refer to section *Paper specifications* (page 113).

Only use dust-free or low-dust paper. Many paper qualities are suitable for this printer. For more information, please refer to the section *Paper specifications* (page 113).

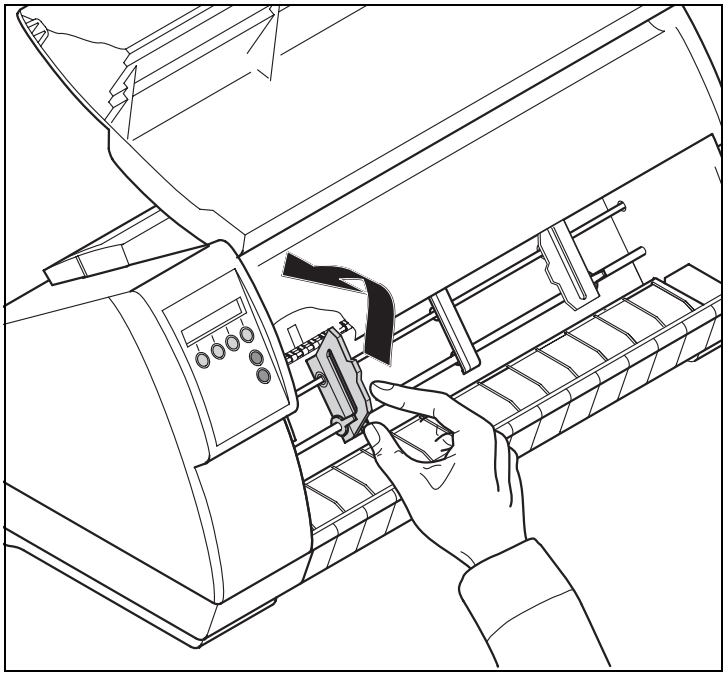
Fanfold paper



If necessary, remove the paper support.

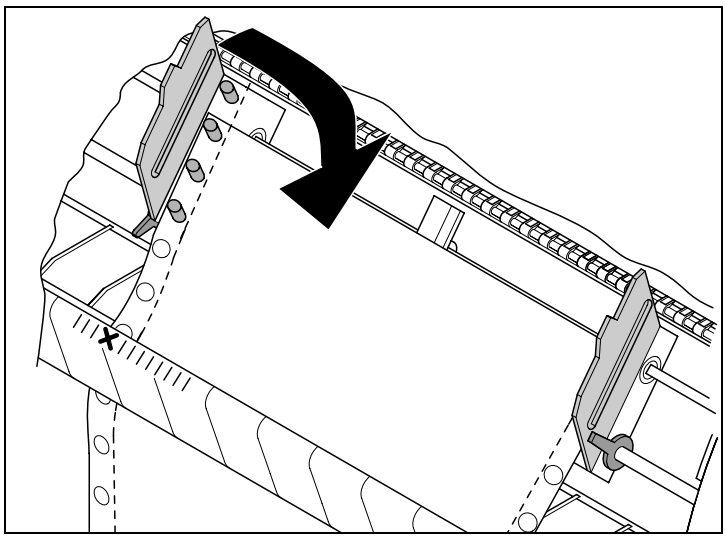
Make sure that the printer is set for fanfold paper printing. If necessary, change the paper type, see *Changing the paper path* (page 26).

Raise the front cover, taking it by the areas marked with arrows on the left and right.



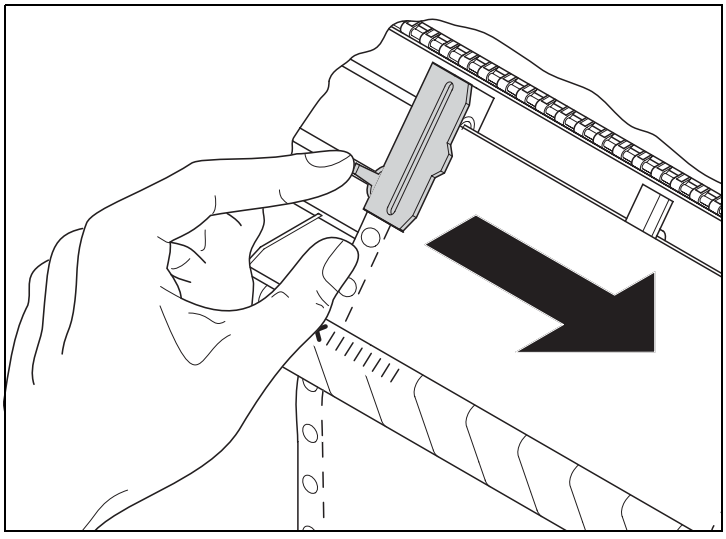
Open the right and left tractor flaps.

You may also want to remove the bottom cover in order to facilitate loading the fanfold paper. However, you can also feed paper to the tractor with the bottom cover mounted.



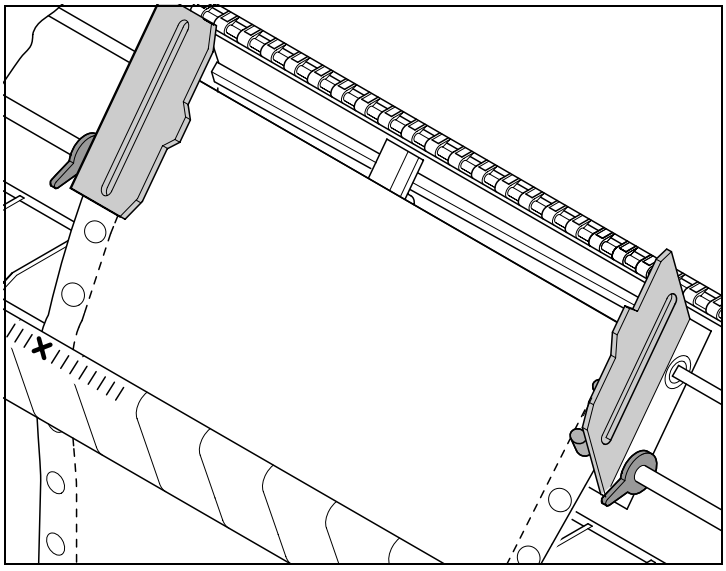
Insert fanfold paper into the left-hand tractor. Make sure that at least three paper transport holes are positioned on the tractor pins. Close the left tractor flap. Insert the fanfold paper in the left-hand tractor first, ensuring that at least three perforation holes engage with the tractor pins.

Close the tractor flap.



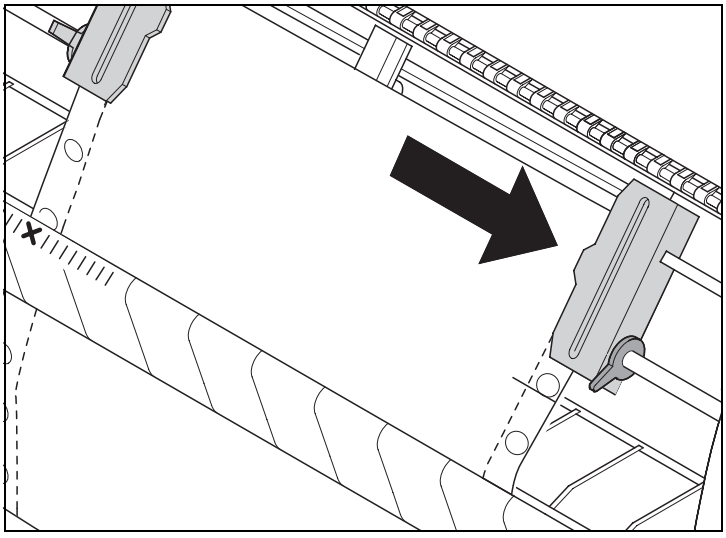
Open the coloured latch lever and align the tractor so that the first printing position on the paper matches the **X** mark on the printer housing.

Lock the lever again.

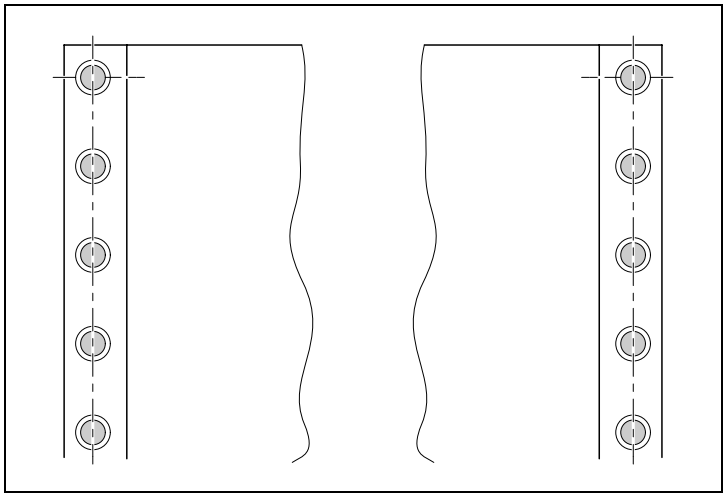


Align the right-hand tractor to the width of the paper and insert the paper.

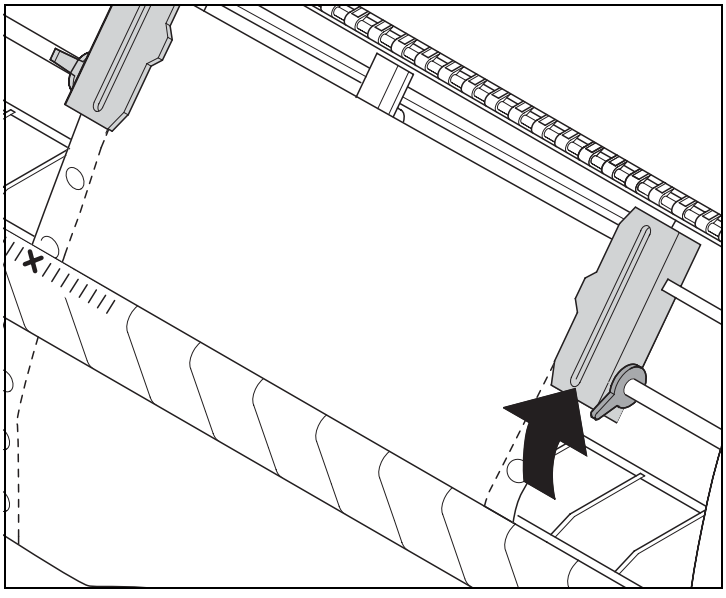
Make sure that it is inserted by the same length as on the left-hand tractor in order to avoid any paper jam.



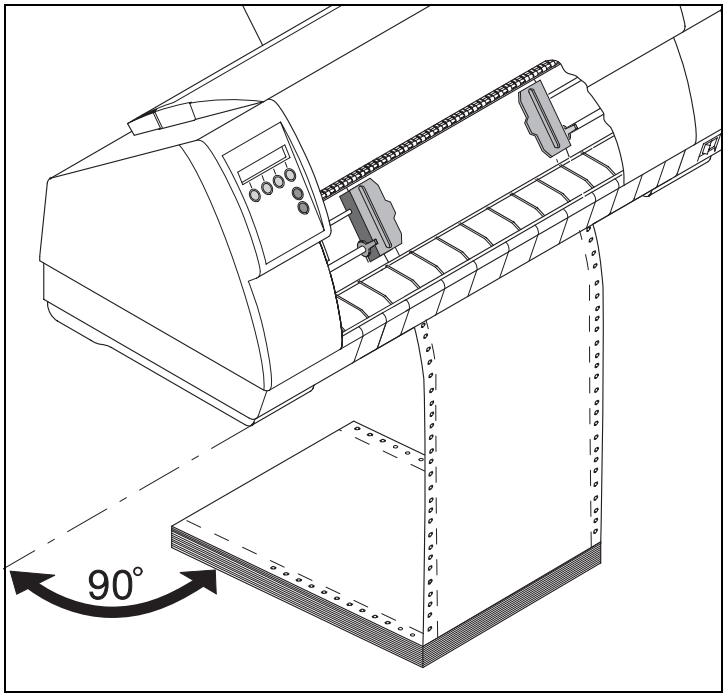
Close the tractor flap and slide the tractor to the right until the paper is slightly tensioned.



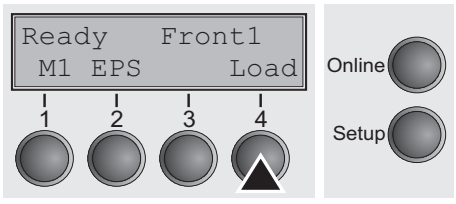
Do not tension the paper excessively to avoid tearing the perforation holes; do not allow excessive slack since in this case the paper will bulge and there may be problems in the feeding process.



Then lock the tractor.



Make sure that the paper stack is aligned in parallel to the printer and that the paper supply cannot be obstructed.

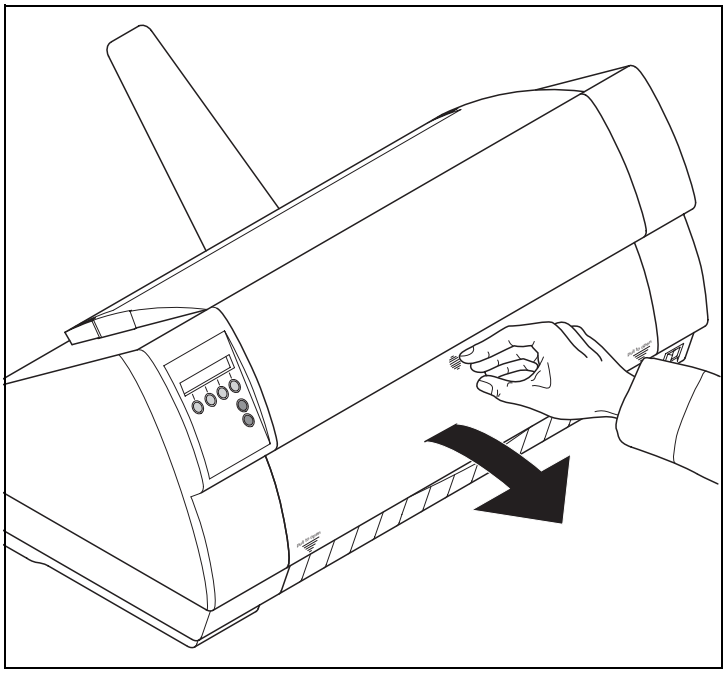


Lower the front cover.

Switch the printer on. The active paper source (**Front1** = tractor 1) appears in the display. The paper is automatically loaded when the printer is in Online mode (**Ready**) and receives data from the computer.

Press the Load **(4) key only to load paper before starting the printout.**

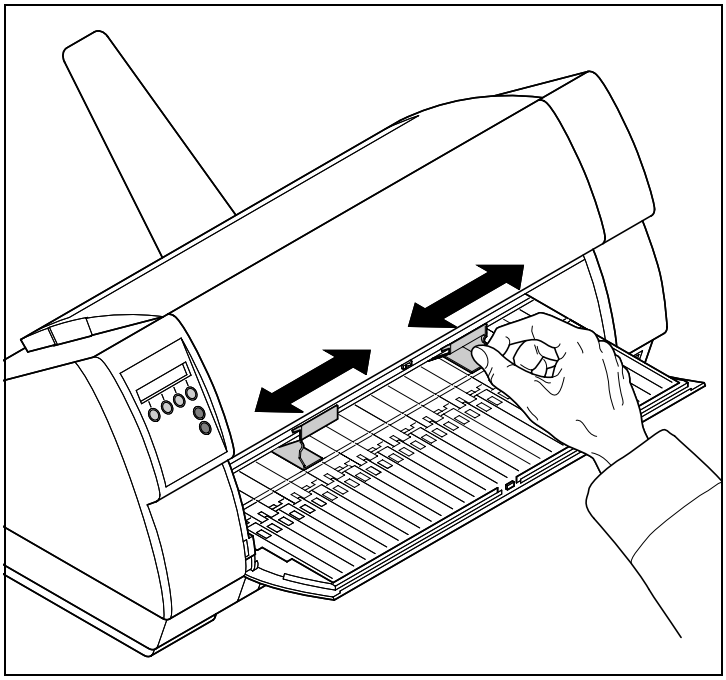
Single sheets



If required, install the paper support.

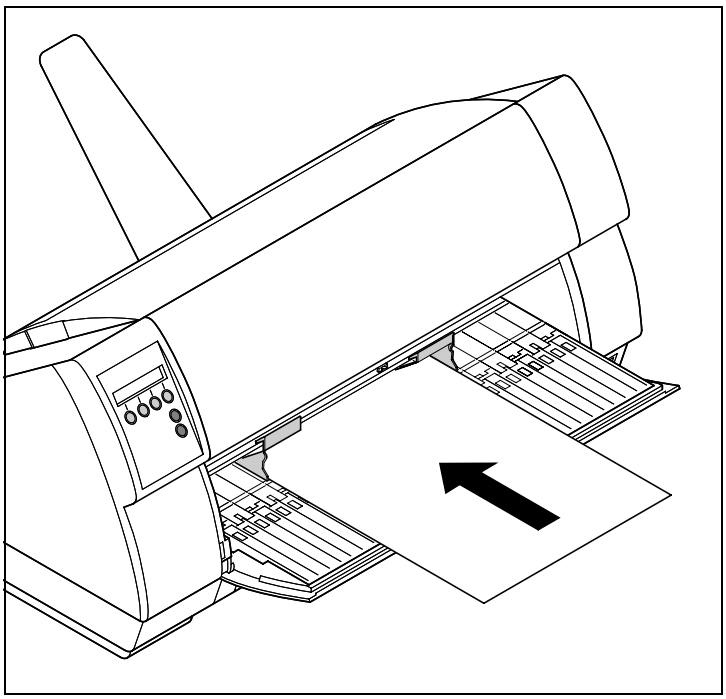
Make sure that the printer is set to single sheet mode. If necessary, change the paper type, see *Changing the paper path* (page 26).

Press the latch at the middle of the front cover. The single sheet input tray opens downwards.



Align the left paper guide with the mark on the left of the single sheet input tray marking the first printing position.

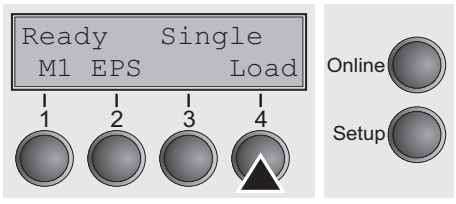
Adjust the right paper guide to the width of the paper used.



Insert the single sheet into the input tray as far as possible.

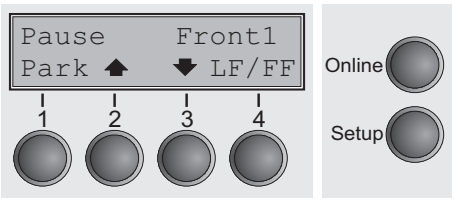
Press the **Online** key to set the printer to ready status. The sheet is automatically loaded when the printer is in Online mode (**Ready**) and receives data from the computer.

The printer reports a paper out condition by displaying **Load paper from single** and beeping.



Press the **Load** (4) key only to load paper before starting the printout.

Paper transport



Loaded paper (fanfold paper/single sheets) can be transported in the printer in several ways.

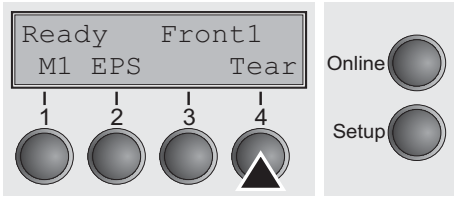
Make sure that the printer is in Offline mode (**Pause**); press the **Online** key, if necessary.

- Key **Park** (1): If fanfold paper is loaded in the printer, it is fed to the park position or the tear position. If a single sheet is loaded, it is ejected.
- Key ▲ (2): Short keypress: Paper is transported upwards step by step. Long keypress: Continuous transport upwards.
- Key ▼ (3): Short keypress: Paper is transported downwards step by step. Long keypress: Continuous transport downwards.
- Key **LF/FF** (4): Short keypress: Line Feed (**LF**) is effected. Long keypress: Form Feed (**FF**) is effected.
- Key **Online** (4): Moves Paper to tear position if the automatic tear function is activated.

The maximum value of the paper return feed is 22 inches. You can not remove paper generally if the Tear **parameter is set to** No Tear/Reverse **in the active macro.**

Moving the paper to the tear position

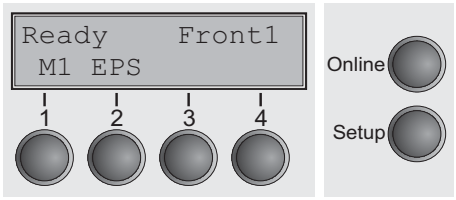
Your printer by default moves the paper into tear position once paper is loaded. If you deactivate this feature in the printer's menu (setting: **Manual**) you can use the **Tear** key to move the paper to the tear position. For more information refer to *View and tear position (TearView)* (page 63).



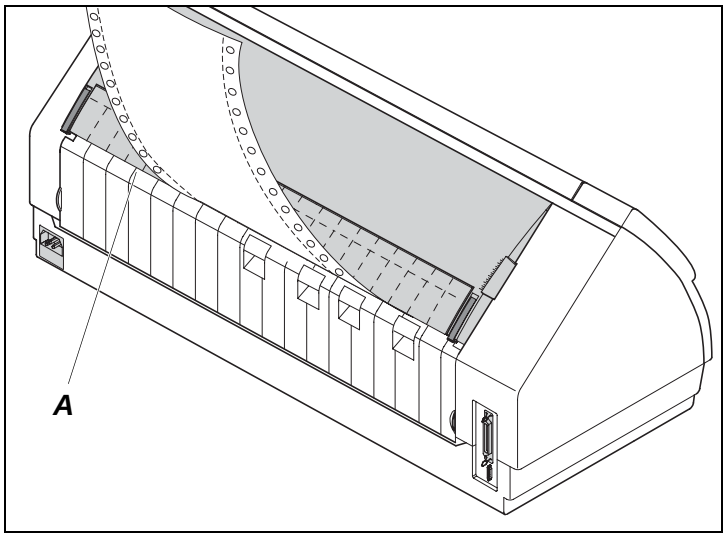
Swing the soundproofing cover towards the front (see below). The tear edge is located at the front side of the paper output opening.

Make sure that the printer is in Online mode (**Ready**). If necessary, press the **Online** key.

Press the **Tear** (4) key. The printer moves the perforation edge of the fanfold paper to the tear edge.

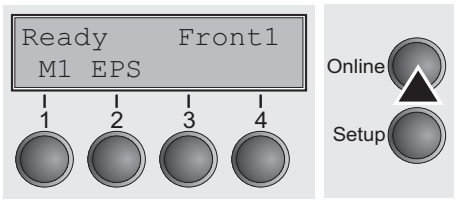


The display changes to…



Tear off paper at the tear edge **A**.

Make sure you tear the paper off straight, otherwise a paper jam may occur.



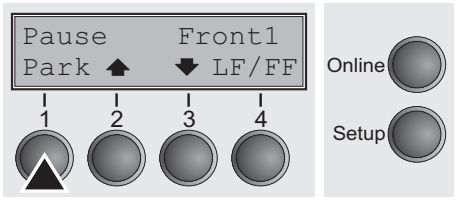
After having torn off the paper, press the **Online** key. The printer returns the paper to the first printing position.

If a print job is active, the printer returns the paper automatically to the first printing position.

The tear function can be deactivated completely (No Tear/ Reverse). In this condition the Tear **key is not accessible; the paper can not be moved reverse. For more information, please refer to** *View and tear position (TearView)* **(page 63).**

Removing paper

Never use force to remove the paper from the printer. Otherwise the mechanical components may be damaged.



Make sure that the printer is in Offline mode (**Pause**); press the **Online** key, if necessary.

Press the **Park** (1) key. If fanfold paper is loaded in the printer, it is fed to the tear position. The text **Tear paper off** appears in the display.

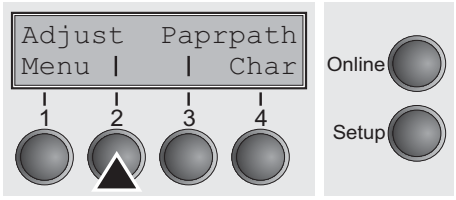
Now remove the paper from the tractor. Then press any key. If a single sheet is loaded in the printer, it is ejected.

7 Settings

This section describes how to set the tear position, the first printing line, the print head gap as well as the font and the character density.

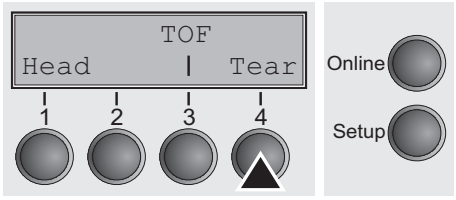
Setting the tear position

If the tear position of the paper is not aligned with the tear edge of the printer, you can adjust it. Inserted paper needs to be torn off if necessary and retracted to park position.

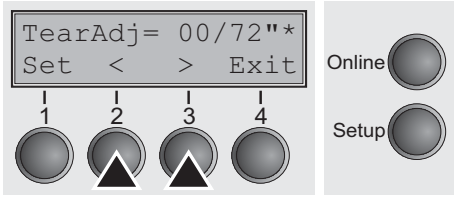


Press the **Setup** key. The printer changes to Setup mode.

Press the **Adjust** (2) key.



Press the **Tear** (4) key.



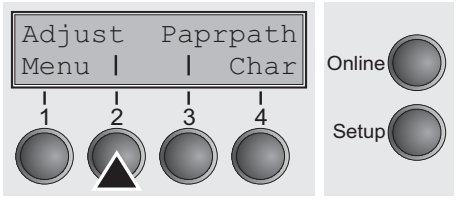
Press the **<** (2) or **>** (3) key to move the perforation to the desired position. Confirm the input by pressing the **Set** (1) key. Confirm the input again by pressing the **Setup** key. The printer is reset to the initial status.

The correction made – a maximum of approx. 1" (2.5 cm) in each direction – will be retained after switching the printer off. It can be set separately for each paper path.
Make sure that the set form length corresponds to the actual length of the forms you are using.

Setting the first printing line (TOF)

You can use the TOF function for setting the position of the first printing line for each paper source and each menu individually.

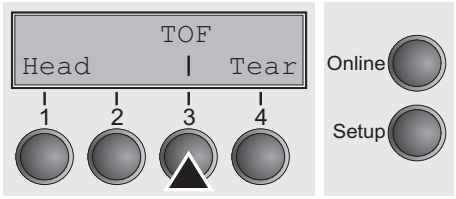
Before using the TOF function (if fanfold paper is used), you should first set the tear position; see *Setting the tear position* (page 37).



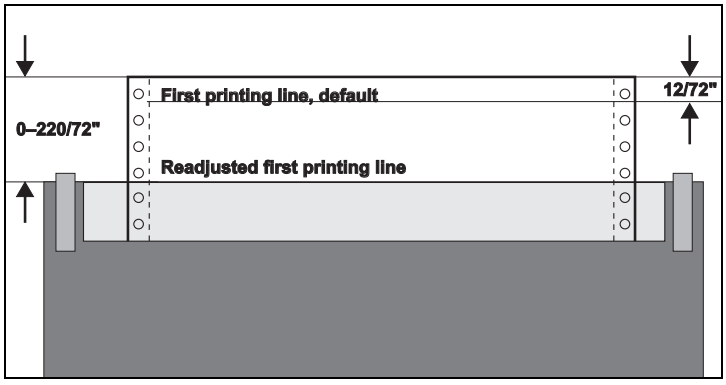
Swing the soundproofing cover towards the front (see *Printer at a glance*, page 3).

Press the **Setup** key. The printer changes to Setup mode.

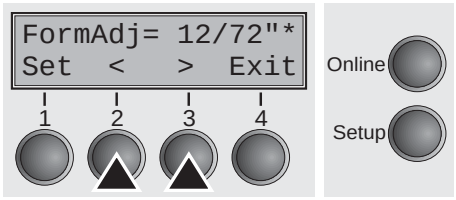
Press the **Adjust** (2) key.



Press the **TOF** (3) key.



The paper is fed to the position where the bottom edge of the first printing line is aligned with the tear edge of the printer. The factory setting for the first printing position (TOF) is 8 / 72" (4.23 mm). This is equivalent to the first line from the top.



Press the **<** (2) or **>** (3) key to move the first printing line to the desired position. You can set values from 0 to 220/72" for fanfold paper or for single sheets.

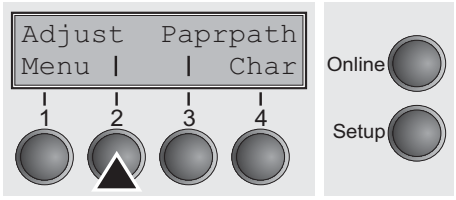
Confirm the input by pressing the **Set** (1) key. Press the **Setup** key. The printer returns to the initial status.

The selection made will be retained after switching off the printer.

Setting the print head gap

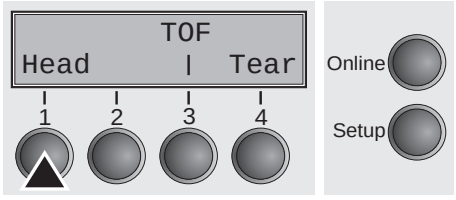
The printer features automatic print head gap adjustment to the thickness of the paper used. In Setup mode, you can enter a correction value to modify the head gap that is normally determined automatically. This correction is useful for modifying the appearance of the type face. This correction will modify the appearance of the font. It may be necessary to obtain optimum printing results on certain paper types.

The AGA (automatic gap adjustment) function must be set to once **or** always**. For more detailed information, refer to the section** *Automatic gap adjustment (AGA) (page 68)***.**

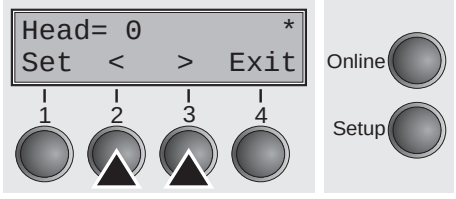


Press the **Setup** key. The printer changes to Setup mode.

Press the **Adjust** (2) key.



Press the **Head** (1) key.



Use the **<** (2) or **>** (3) key to set the range within which the automatic gap adjustment is to be corrected. You can select values in the range from -10 to +10. Negative values reduce the head distance, positive values increase it.

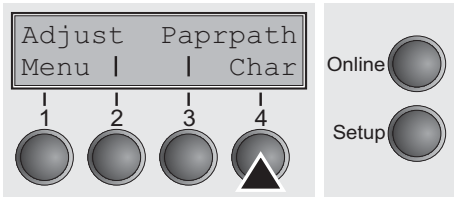
Confirm the input by pressing the **Set** (1) key.
Press the **Setup** key. The printer returns to the initial status.

Negative values decrease the print head gap, positive values increase it. Changing the automatically determined value may have a strong effect on the printing quality.
The setting made will be retained after switching off the printer.

Selecting character density and font temporarily

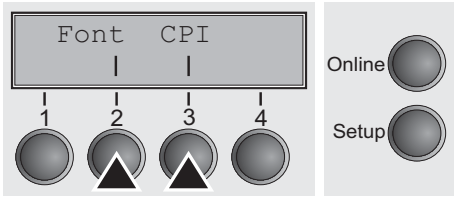
You can use the **CPI** (**C**haracter **P**er **I**nch) key in Setup mode to select the number of characters per inch to be printed.

You can use the **Font** key to select resident fonts.

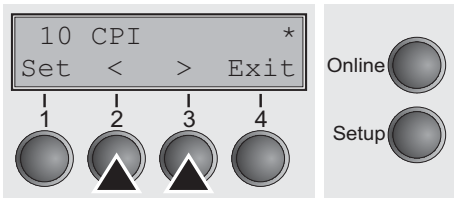


Press the **Setup** key. The printer changes to Setup mode.

Press the **Char** (4) key.

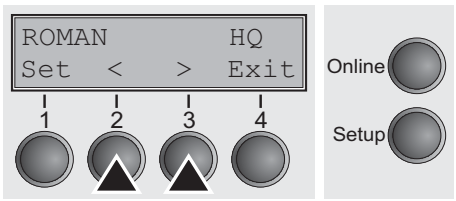


Press the **CPI** (4) or **Font** (1) key (in our example, press **CPI**).



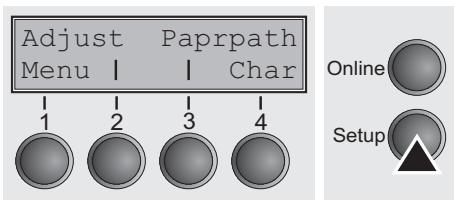
Use the **<** (2) or **>** (3) key to set the desired character density. Confirm the selection by pressing the **Set** (1) key.

You can cancel the selection and leave the setting unchanged by pressing the **Exit** (4) key.



If you pressed the **Font** (1) key, use the **<** (2) or **>** (3) key to select the desired font. Confirm the selection by pressing the **Set** (1) key.

You can cancel the selection and leave the setting unchanged by pressing the **Exit** (4) key.



Press the **Setup** key. The printer returns to the initial status.

It is also possible to press the **Online** key. The printer then changes directly to Online mode.

The selection made will not be retained after switching off the printer. For more details on how to set the character density and fonts permanently, please refer to the chapter *Horizontal spacing of characters (CPI)* **(page 76), (page 82), (page 86) and** *Selecting font (Font)* **(page 49).**

8 The Menu

Programming via the control panel

Apart from being able to control your printer via the applications software you use, you can also program the printer directly. There are two programming options you can use:

- Programming via the control panel.
- Programming via the interface using Escape sequences or control codes.

Settings made by escape sequences have priority over settings made in Menu mode; therefore they will override these. Informations on Escape sequences can be found in Appendix E, *Emulations* (page 120).

Programming via the interface gives you far greater freedom for designing your printed pages, however, it is also a more sophisticated method and requires some experience with programming languages and printer control systems.

All programming via the interface is lost after you turn off the printer, whereas the programming carried out using the control panel, is saved and stored even after you turn off the printer.

Enabling access to Menu mode

On some printer models the menu can be locked by default to protect it from accidental or unauthorised access.

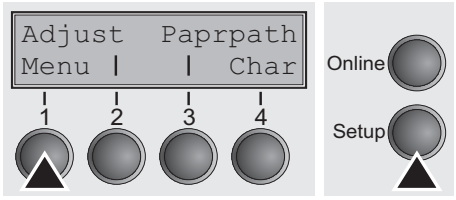
Proceed as follows to release this lock temporarily.

1. Switch off the printer for approx. 5 seconds.
2. Switch the printer on again keeping the Setup key pressed until **Selftest** disappears from the display.

For information on how to enable access permanently and about the available settings, refer to the section *Menu lock (MenLock)* (page 58).

Calling up the menu

You can access the menu in the following way:



Press the **Setup** key. The printer switches to Setup mode. (The Setup mode can be selected both in the Online and Offline mode.)

To access the printer menu, press the key directly underneath the word **Menu** (1).

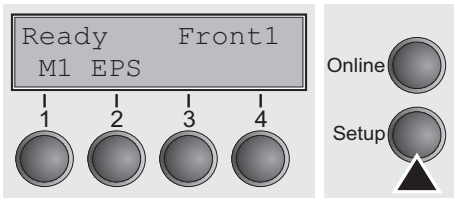
Menu configurations (Macros)

Every printer is shipped with factory default settings. Basic settings such as emulation, character size, form length etc., which many applications make use of, are set. At the end of this chapter you will find a menu printout (*Seite 89*) which shows you the printer's default settings.

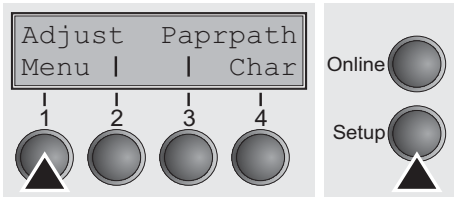
Your printer allows you to set and use four independent menu configurations (Macros). If one of your applications for example requires an IBM printer while another program works better with an EPSON printer, you can set an IBM emulation configuration with the desired settings, and set the second configuration as an EPSON emulation.

The active macro is always the one you used last. When you switch on the printer for the very first time, macro no. 1 is loaded. Macro no. 1 only remains active until you load another macro. The last active macro is stored even after the printer is switched off and is reloaded automatically when the printer is switched on again.

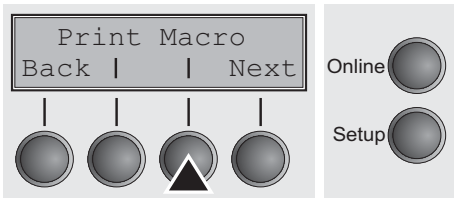
For example, to change from macro no. 1 to macro no. 3:



Press **Setup** key.

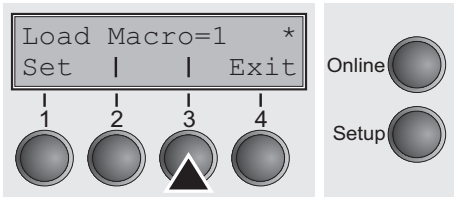


Press **Menu** (1) key.



Press **Macro** (3) key.

Now the following message appears in the LC display:



Now press the **<** (2) or **>** (3) key repeatedly until **Load Macro=3** appears.

Then select macro no. 3 as the current setting using the **Set** key (1).

The currently active setting is marked with an asterisk (*****).

If changing macros it is possible that the printer initializes due to different emulation settings.

Menu handling

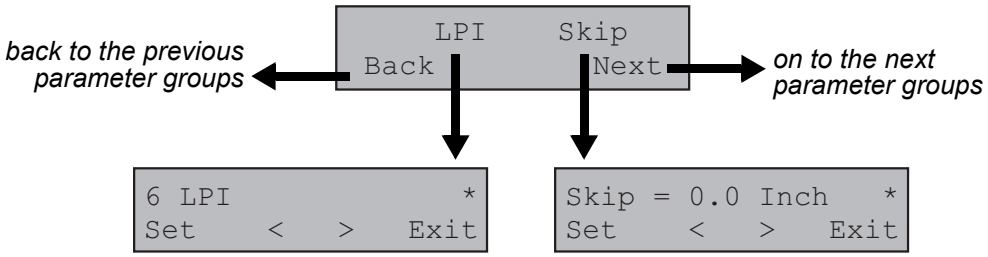
You can navigate in the current menu using the four function and selection keys arranged below the LC display field. Each function and parameter displayed in the LCD is executed or selected by the corresponding key below, respectively. Usually two parameter groups are combined at one level. In the following example, these are the **LPI** and **Skip** parameter groups.

If you do not wish to change one of the two parameters you can either press the **Next** key (to access the two following parameter groups in the menu), or you can press the **Back** key (to access the two previous parameter groups in the menu).

If you want to change a setting, (e.g. the line density), then press the **LPI** key (LPI = lines per inch) to access the actual parameter level.

The currently valid setting is marked by a * (in the example below the current setting is 6 lpi). With the **<** and **>** keys you can view the other parameters available for this setting.

Example:



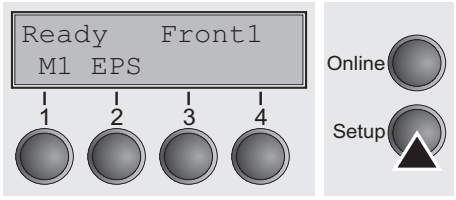
Save settings

Once the desired parameter is displayed on the LC display, you can save it by pressing the **Set** key. The parameter is then set and the printer automatically displays the parameter groups again. With the **Exit** key you can leave the sublevel without saving your changes.

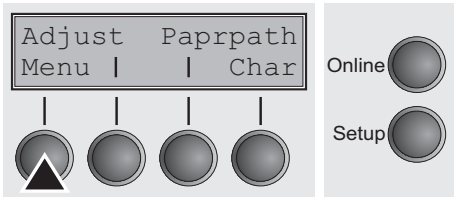
Selecting the LC display language

This section describes how to make settings in the menu, using the selection of the national language as an example.

This example shows how to change from the English language to the German language. The same procedure applies to the other languages (French, Italian and Spanish).

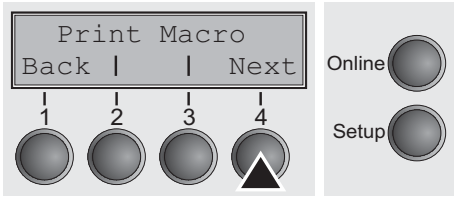


Select the **Setup** mode by pressing the **Setup** key.

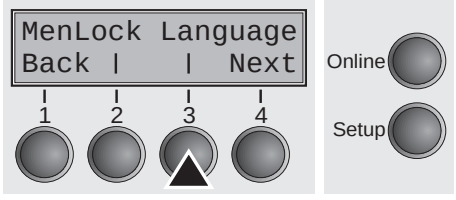


Press the **Menu** key (1).

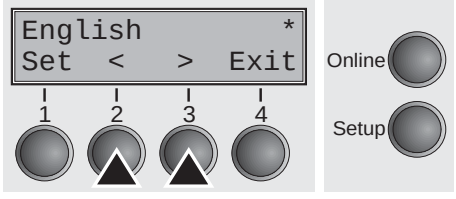
Setup mode and Menu mode may be disabled. Hold down the Setup **key while switching on the printer to enable Menu mode. If you want to enable access to this mode permanently, you need to change the appropriate setting in the menu; see** *Menu lock (MenLock)* **(page 58).**



Press the **Next** key (4) several times until the display indicates **Language**.

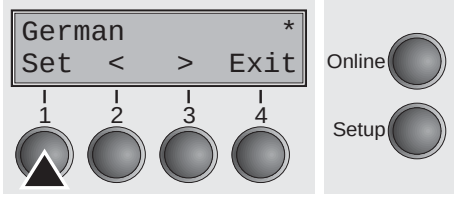


Press the **Language** key (3).

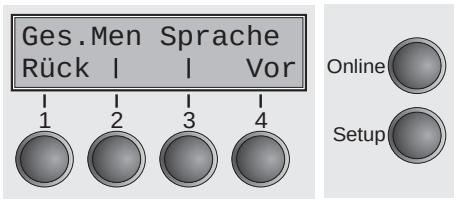


The display now changes to Parameter mode and indicates **English** in the top line.

The lower line displays **Set** and **Exit**. The two arrows **<** (2) and **>** (3) represent the symbols for parameter selection ("**<**" indicates descending and "**>**" ascending). Press the **<** (2) or **>** (3) key until the desired language is displayed, in our example **German**.



Save your selection by pressing the **Set** key (1). An acoustic signal verifies this action.



You can exit Parameter mode without saving a setting by pressing the **Exit** key (4), the old setting is retained.
After saving your setting (**Set**), the display in our example indicates the following text:

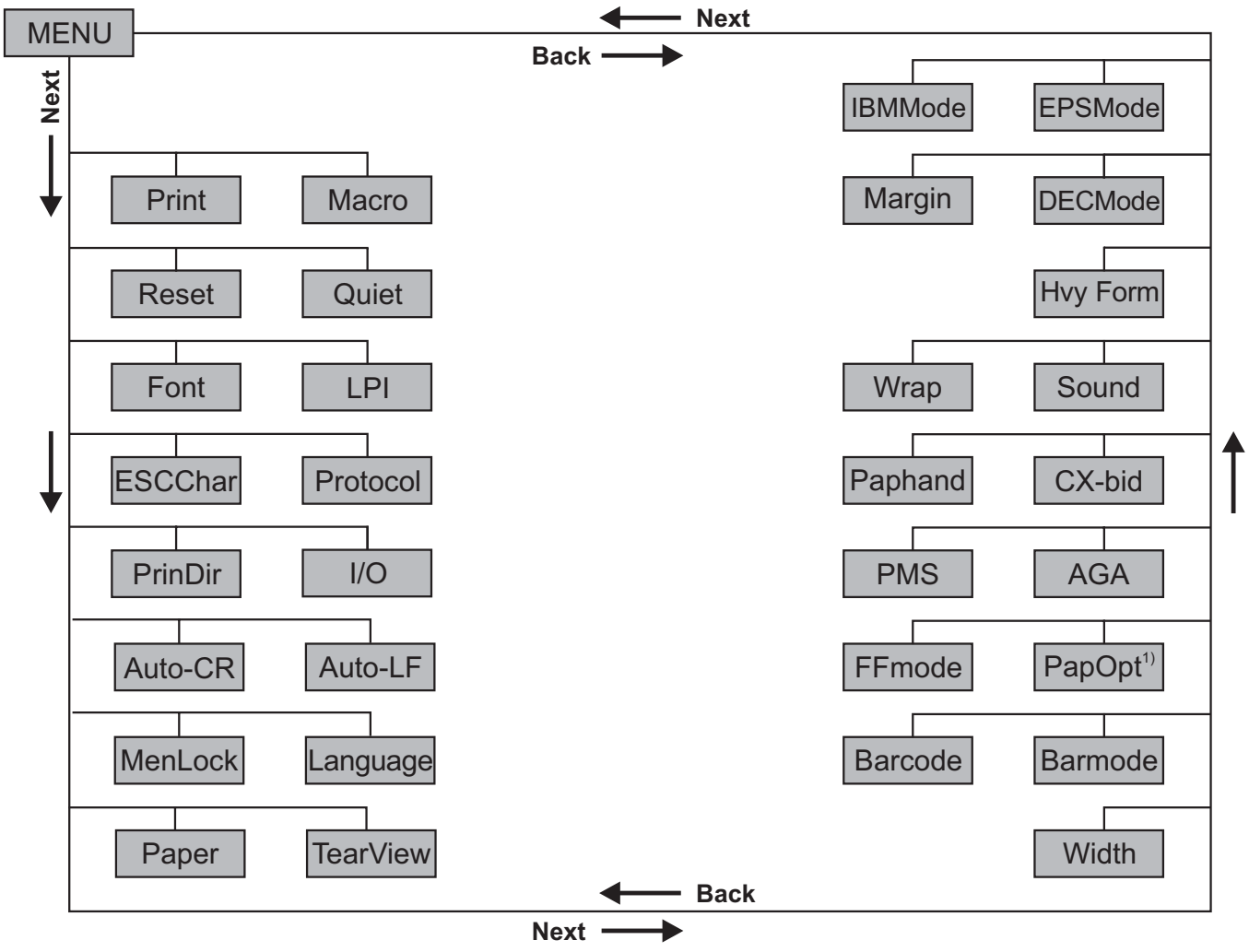
This setting is retained even after switching off your printer.

Terminating Setup mode

Press either the **Setup** key to change into Offline mode (**Pause**) or the **Online** key to change to Online mode (**Ready**).

Menu structure

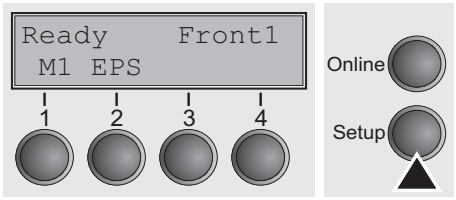
The menu structure of your printer may be slightly different from the example shown here, depending on the printer software.



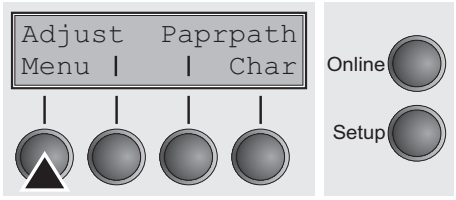
1) only with installed optional paperway

Menu parameters

The following section introduces and explains all the possible menu settings.



Press **Setup** key.

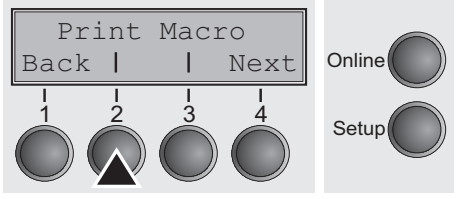


Press **Menu** (1) key.

Setup mode and Menu mode may be disabled. Hold down the Setup **key while switching on the printer to enable Menu mode. If you want to enable access to this mode permanently, you need to change the appropriate setting in the macro; see** *Menu lock (MenLock)* **(page 58).**

Printing out macro configurations (Print)

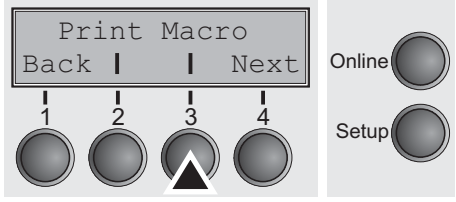
Prints the menu configurations using the active paper feed; see *Menu settings (example)* (page 89).



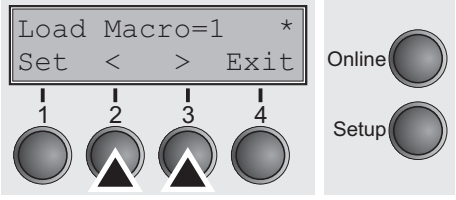
Press **Print** (2) key, to start the printout.

Loading menu configurations (Macro)

A menu is loaded, you can choose between four menus; see *Menu handling* (page 43).



Press **Macro** (3) key.



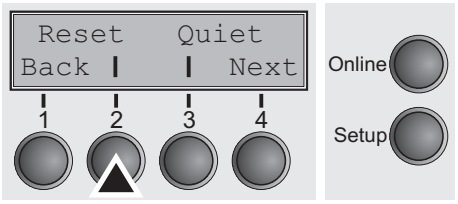
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Load Macro=1/2/3/4**
Default Setting: **Load Macro=1**

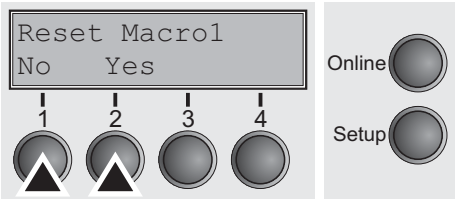
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Reset to default values (Reset)

The current macro returns to the default values (factory settings).



Press **Reset** (2) key.



Press the **No** (1) or **Yes** (2) key to select the desired setting.

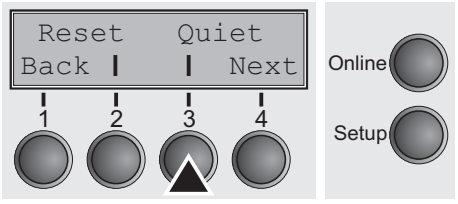
STOP

All manually altered settings in the current menu are lost when it is reset to the default settings.
We therefore recommend that you print out the menu first.

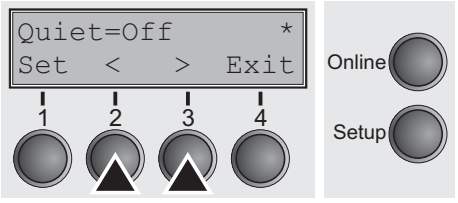
Confirm the setting by pressing the **Set** key (1).

Quiet mode printing (Quiet)

Switches between normal and quiet mode printing. For all printing modes, the print-out is made with the bidirectional method in quiet mode printing. In the first step the first row of pins is activated, during the second step the second row is used.



Press **Quiet** (3) key.



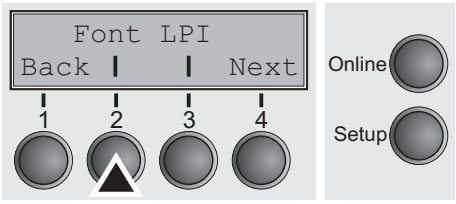
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Off/On**
Default Setting: **Off**

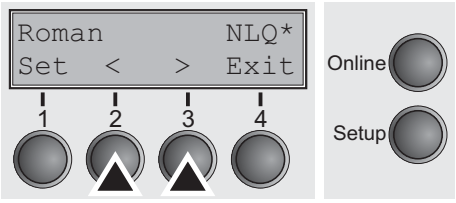
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Selecting font (Font)

This parameter selects the character style and its quality permanently.



Press **Font** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: see table below
Default Setting: **Draft**

Character styles marked with an **I** (for example **Courier I LQ**) are IBM compatible fonts.

Fonts with the identifier PS in their name are proportional fonts which use only the space actually required for the character width.

Example:

Roman LQ: Wiiii

Roman PS LQ: Wiiii

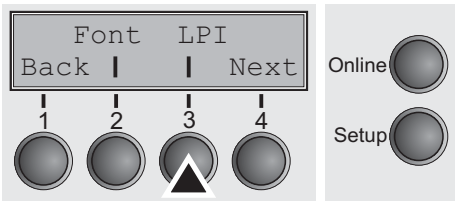
The abbreviation NLQ stands for Near Letter print quality, which means that the printer works faster but with a slightly lower resolution. LQ stands for Letter Quality, which means that the resolution is higher at the expense of a slightly slower speed.

Available fonts		
Draft	S Serif PS LQ	OCR-A NLQ
Draft Copy	Courier NLQ	OCR-A LQ
Roman NLQ	Courier LQ	Courier I NLQ
Roman LQ	Prestige NLQ	Courier I LQ
Roman PS NLQ	Prestige LQ	Cour I PS NLQ
Roman PS LQ	Script NLQ	Cour I PS LQ
Sans Serif NLQ	Script LQ	Orator NLQ
Sans Serif LQ	OCR-B NLQ	Orator LQ
S Serif PS NLQ	OCR-B LQ	

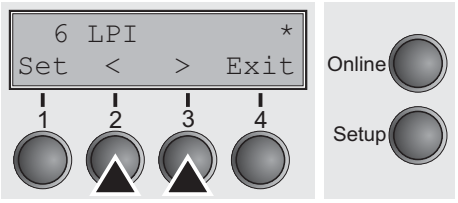
Confirm the setting by pressing the **Set** key (1).

Setting line spacing (LPI)

Sets the lines per inch (line density). The higher the parameter the smaller the line spacing (random LPI can be selected via the ESC sequences).



Press **LPI** (2) key.



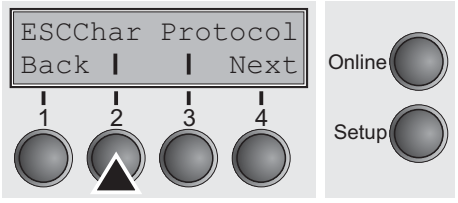
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **2 LPI, 3 LPI, 4 LPI, 6 LPI*, 8 LPI, 12 LPI**
Default Setting: **6 LPI**

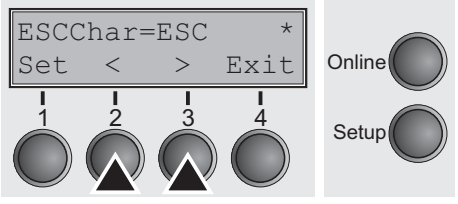
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Selecting start signal for escape sequence (ESC-Char)

Selects the start signal for control sequences. Setting ESC: Only character Escape (27d, 1Bh) can be used. Setting ESC+$$: Character Escape or alternatively two $ characters ($$) can be used. For more information see the section *Escape sequences* (page 120).



Press **ESCChar** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

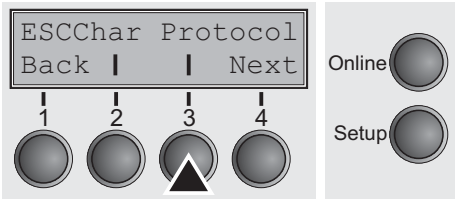
Setting Options: **ESC/ESC+$$**
Default Setting: **ESC**

Confirm the setting by pressing the **Set** key (1).

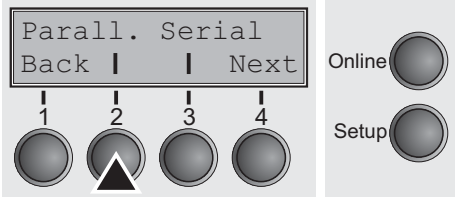
Selecting Protocol (emulation)

Selects the emulation for the serial or parallel interface. When a printer understands the control set written for another printer type, it is said to emulate the other printer.

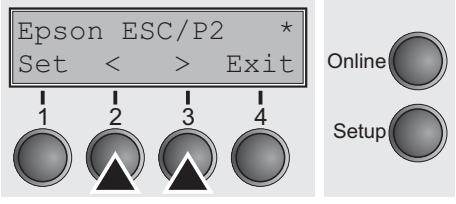
The selected emulation of the active interface is shown in on-line or Offline mode in the second line of the printers display. For more information refer to *Online mode* (page 22)



Press **Protocol** (3) key.



Press **Parall.** (2) if you want to select a emulation for the parallel interface or **Serial** (3) if you want to select a emulation for the serial interface of the printer (in our example: **Parall.**).



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **DEC PPL2, Epson ESC/P2, IBM XL24, IBM XL24+AGM,**

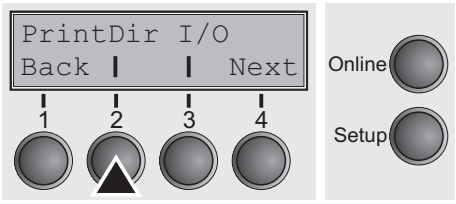
Default Setting: **Epson ESC/P2 (Parall.)**
DEC PPL2 (Serial)

If the printer is switched to Online mode after changing the emulation, it performs a reset.

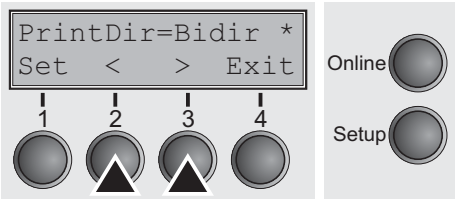
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Bidirectional printing (PrintDir)

Selects if the printer prints in both directions (bidirectional) or only in one direction (unidirectional from left to right).



Press **PrintDir** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

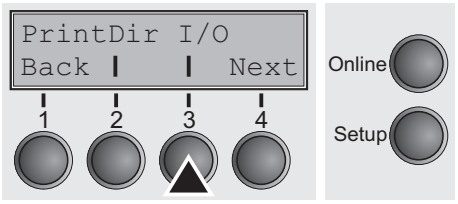
Setting Options: **Bidir/Unidir**
Default Setting: **Bidir**

Normal internal characters will be printed always bidirectional, whereas graphic, semigraphic, large characters (LCP) and bar-codes are printed depending on the setting of PrintDir**.**

Confirm the setting by pressing the **Set** key (1).

Settings for interfaces (I/O)

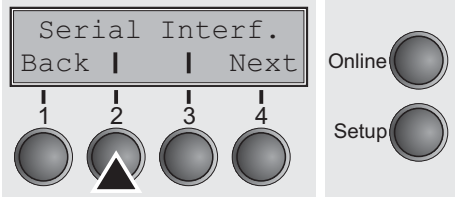
In this parameter group, you can choose various settings for the printer interfaces. See also *Interfaces* (page 122).



Press **I/O** (3) key.

Serial interface (Serial)

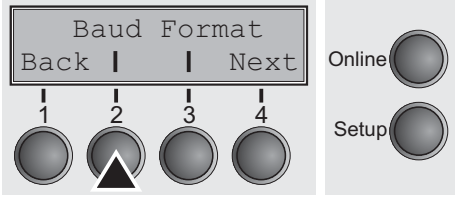
STOP **To ensure the proper functioning of serial data transfers, the serial settings of the printer and computer (host) must coincide.**



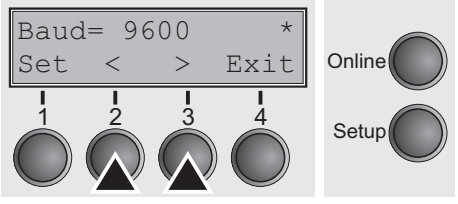
Press **Serial** (2) key.

Data transmssion rate (Baud)

Selects the data transmission rate (baud rate) (baud = bit per second).



Press **Baud** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

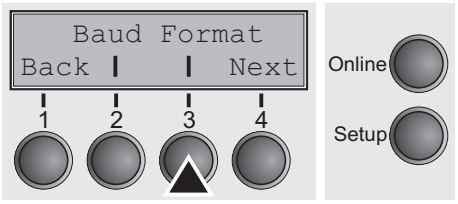
Setting Options: **600, 1200, 2400, 4800, 9600, 19200**
Default Setting: **9600**

Printer and computer must have the same baud rate.

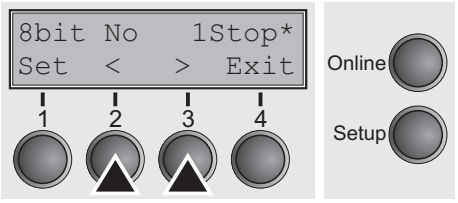
Confirm the setting by pressing the **Set** key (1).

Data format (Format)

This parameter serves to define the number of data bits, the parity check for received data bytes and the number of stop bits per data byte.



Press **Format** (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: see table below
Default Setting: **8 Bit No 1 Stop**

1 number of data bits	2 parity test	3 number of stop bits
8 Bit	No	1 Stop
8 Bit	No	2 Stop
8 Bit	Even	1 Stop
8 Bit	Odd	1 Stop
8 Bit	Mark	1 Stop
8 Bit	Spc	1 Stop
7 Bit	No	2 Stop
7 Bit	Even	1 Stop
7 Bit	Odd	1 Stop
7 Bit	Even	2 Stop
7 Bit	Odd	2 Stop
7 Bit	Mark	1 Stop
7 Bit	Spc	1 Stop
7 Bit	Mark	2 Stop
7 Bit	Spc	2 Stop

1 Sets the number of data bits: You can select 7 or 8.

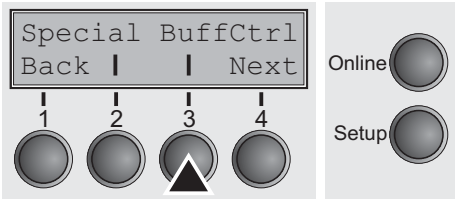
2 The parity test for received data bytes can be selected. **NO** causes transmission in both directions without parity bit. If **EVEN** or **ODD** is selected, the bytes are checked if they have even or odd parity. The selection of **MARK** or **SPACE** causes a data byte transmission with parity bit, but without checking the received data. Transmission data with parity bit is always marked with **1** (**MARK**) or **0** (**SPACE**).

3 Selects one or two stop bits per data byte.

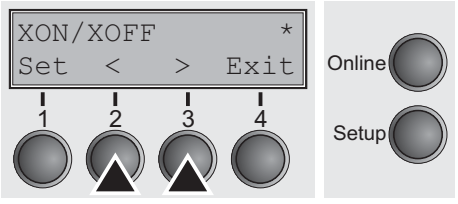
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Buffer control (BuffCtrl)

This parameter serves to select the type of protocol, i.e. a certain set of rules and procedures for ensuring error-free data exchanges between computer and printer. Details of the available protocols can be found in the section *Protocols* (page 127).



Press **BuffCtrl** (3) key.



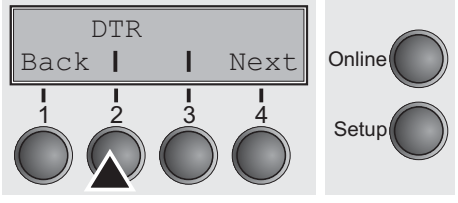
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **XON/XOFF, Robust XON/XOFF,**
Default Setting: **XON/XOFF**

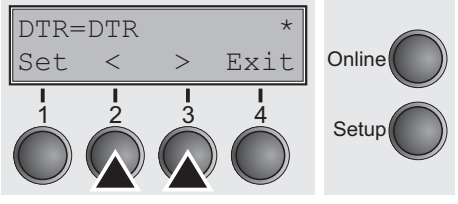
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Signal Processing (DTR)

Defines the conductor to which the DTR signal is connected (DTR = **D**ata **T**erminal **R**eady).



Press **DTR** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **DTR/READY**
Default Setting: **DTR**

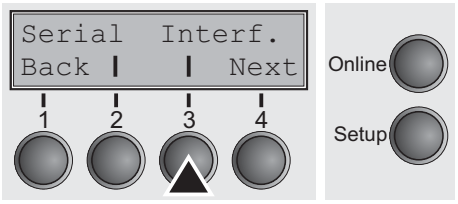
DTR=DTR: DTR signal is assigned to DTR line.
DTR=READY: READY signal is assigned to DTR line.

DTR = Pin 20 on 25-pin female V.24 connector.
DTR = Pin 4 on 9-pin female V.24 connector.

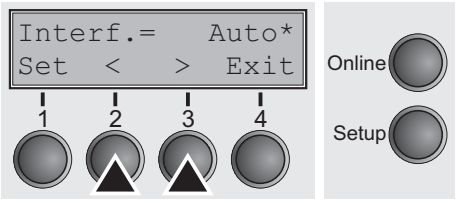
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Selecting interface (Interf.)

Selects the interface. Printer is configured either for parallel or serial connection or in automatic change for both (**Auto**).



Press **Interf**. (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Auto**, **Parallel**, **Serial**
Default Setting: **Auto**

Interf.=Auto: Printer switches automatically between parallel and serial interface.

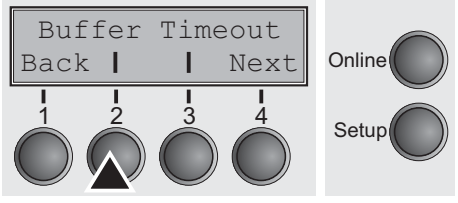
Interf.=Parallel: Printer using parallel interface.

Interf.=Serial: Printer using serial interface.

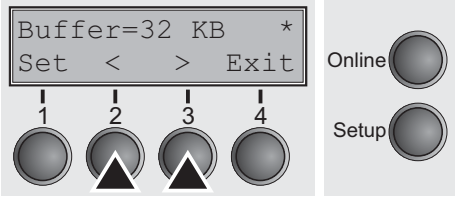
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Interface buffer (Buffer)

Selects the size of the interface buffer.



Press **Buffer** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

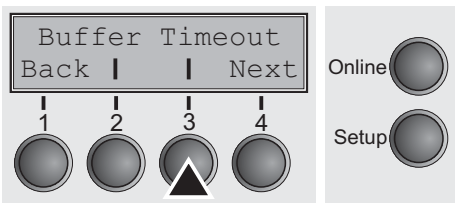
Setting Options: **0**, **16, 32, 48, 64**
Default Setting: **32 KB**

If buffer = 0 KB and the serial interface is selected, or if the setting Auto **is active, the actual buffer size will be 512 bytes.**

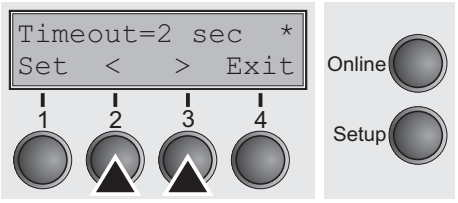
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to leave the parameter group **Interf.**. Press the **Next** key (4) again to access the next group of parameters.

Selecting interface timeout (Timeout)

The Timout option allows you to define the duration after which the interface switches back to the Stand-by state, when the printer stops receiving data.



Press **Timeout** (3) key.



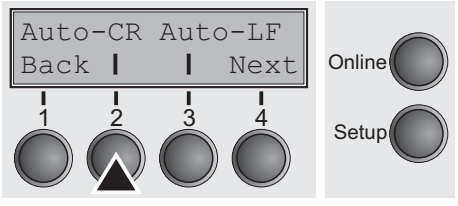
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **2 sec … 30 sec**
Default Setting: **2 sec**

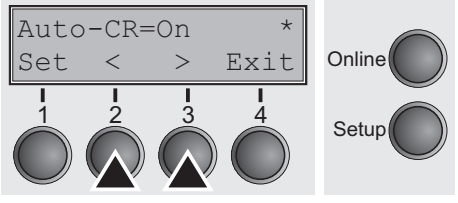
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Automatic carriage return (Auto-CR)

Switches the automatic carriage return on or off after receiving the signal LF (line feed).



Press **Auto-CR** (2) key.



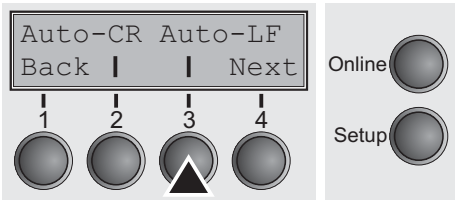
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Off/On**
Default Setting: **On**

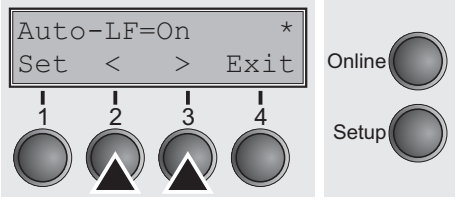
Confirm the setting by pressing the **Set** key (1).

Automatic line feed (Auto-LF)

Switches the automatic line feed (LF) on or off after receiving the signal CR (carriage return).



Press **Auto-LF** (3) key.



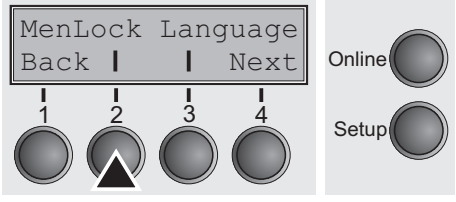
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Off/On**
Default Setting: **Off**

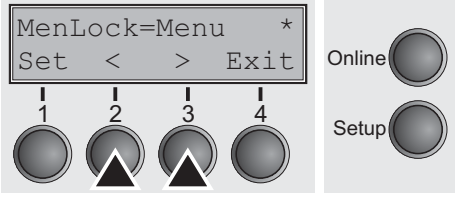
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Menu lock (MenLock)

With **MenLock = Off**, all functions and settings are accessible without restriction in Online, Offline and Setup mode.
If **MenLock = Menu** is activated, all functions and settings are still accessible in Online and Offline mode, however, in Setup mode you can only access the parameter groups **Adjust** (setting the print head gap [**Head**], top of form [**TOF**] and tear position [**Tear**]), **Paprpath** (setting the paper path), **Font** (setting the font) and the character spacing (**CPI**), while access to Menu mode (**Menu** key) is disabled.
If you select **MenLock = All**, you can access the Online/Offline, Load/Park, Paper and Paper Feed (LineFeed/Form Feed, ▲/▼) functions in Online and Offline mode while Setup mode is disabled. In this case, the Setup menu can only be called up by holding the key **Setup** while switching on the printer.



Press **MenLock** (2) key.



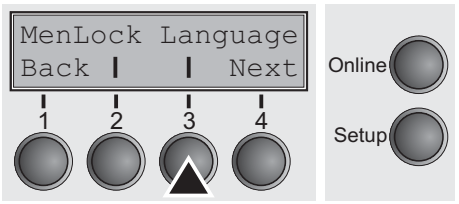
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Off, Menu, All**
Default Setting: **Off**

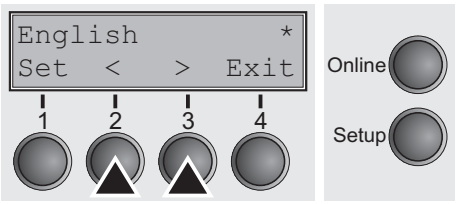
Confirm the setting by pressing the **Set** key (1).

Language (Language)

The menu can be shown in five languages on the LC display.



Press **Language** (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

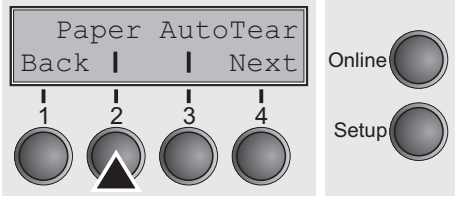
Setting Options: **English**, **German**, **French**, **Italian**, **Spanish**
Default Setting: **English**

Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

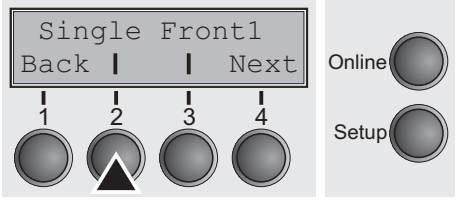
Paper parameters (Paper)

Selects the paper parameters **Formlen** (form length), **FormAdj** (first printing position) and **Head** (print head gap, only if **AGA=Off**) separately for each paper source in the current menu.

Only installed options can be selected.



Press **Paper** (2) key.



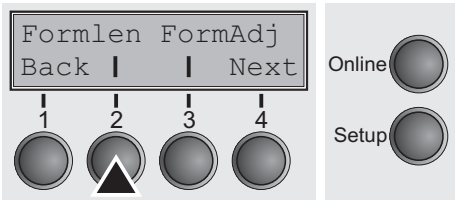
You can now choose between the following paper options:

- Single
- Front1 (tractor 1)
- Front2 (tractor 2 front, option)

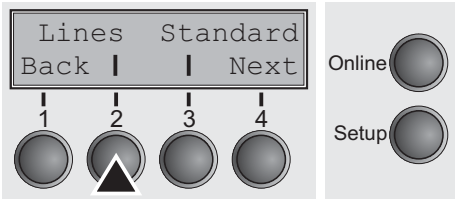
Select the desired paperway, in our example **Single** (2). Press **Next** (4) key, to proceed to the installed optional paperways.

Form length (Formlen)

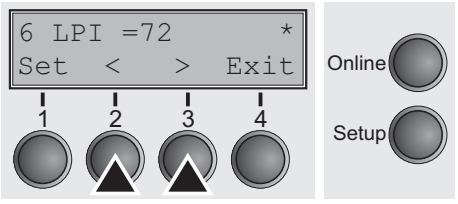
You can define the form length in one of two ways: via the number of lines or via standard formats (e.g. Letter, Legal).



Press **Formlen** (2) key.



If you wish to define the form length via a line format, press **Line** (2) key.



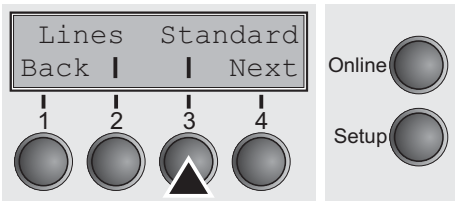
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **6 to 132**
Default Setting: **66**

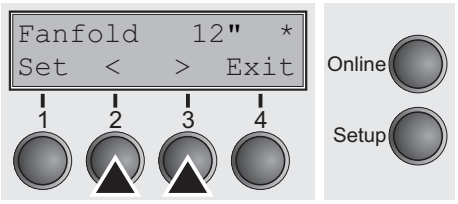
Sets the form length via line formats. Please note that the adjustment in **Lines** depends on the selected LPI. For example 8 LPI at a selected line number of 96 lines results in a formlength of 12 inches (96 lines/[8lines/inch]) = 12 inches). The selectable range is between 3 and 21 inches, i.e. for 2 LPI from 6 to 42 lines and for 12 LPI from 24 to 262 lines.

If the form length is set it will not be changed by changing the LPI later on.

Confirm the setting by pressing the **Set** key (1).



If you wish to define the form length via standard formats, press **Standard** (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **DIN A3, DIN A4, DIN A5, DIN B5, DIN B6, DIN C6, Executive 10.5", Letter 11", Fanfold 12", Legal 14", No Format**

Default Setting: **Letter 11"**

Selects the form length by standard formats. Using **Standard**, different paper formats can be selected directly, e.g. DIN A4, Legal, Letter.

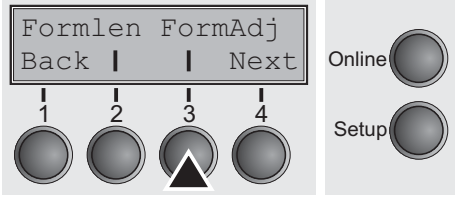
The LC display indicates **No format** if a value is selected by the **Line** function or ESC sequences, which does not correspond to a standard format.

Confirm the setting by pressing the **Set** key (1).

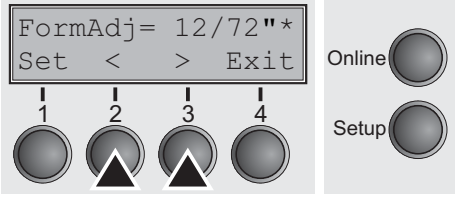
First printing position (FormAdj)

Sets the first print position of a form in n/72 inch, separately adjustable for each paper path.

The settings made here reduce the height of the printable area.



Press **FormAdj** (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **0/72" bis 220/72"**
Default Setting: **8/72"**

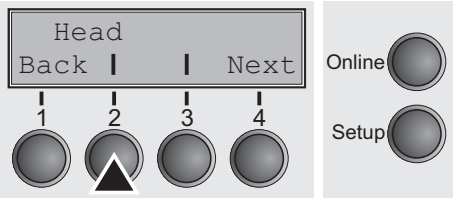
An alternative notation for FormAdj **is** TOF **(Top Of Form).**

Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

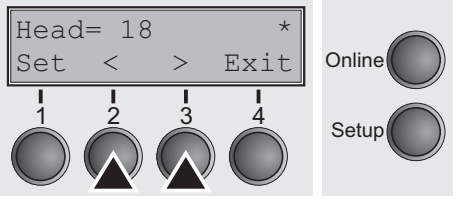
Print head gap manually (Head)

This parameter is ignored if the automatic gap adjustment (AGA) is activated; see *Automatic gap adjustment (AGA)* (page 68).

Adjusts the print head gap manually; separately adjustable for each paper path.



Press **Head** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **0 to 100**
Default Setting: **18**

Select the **Head = 18** parameter for normal paper. Use a greater distance for thicker paper.
Recommended values for the print head gap:

1 layer	2 layers	3 layers	4 layers	5 layers	6 layers
18	26	34	42	50	58

If you change this value, this may affect the print quality.

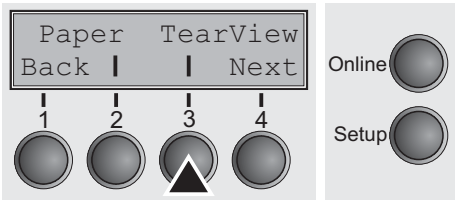
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

View and tear position (TearView)

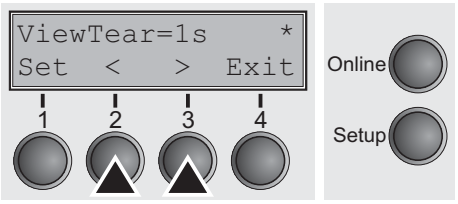
The auto tear or the auto view function can be selected as desired.

When auto view is switched on, the last printed text is visible.

When auto tear is switched on, the perforation of the paper is positioned at the tear off edge of the printer, when no data are processed.



Press **TearView** (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **View=1s/3s/6s**
Tear=1s/3s/6s
Tear at TOF
No Tear/Reverse
Manual

Default Setting: **Tear=1s**

If the parameter **View** is set to **1s**, **3s** or **6s**, the paper moves to the “normal” print position as soon as data is received. After printing the printer waits for the given interval to bring the paper once more to the auto view position.

If the parameter **Tear** is set to **1s**, **3s** or **6s**, the perforation of the paper is positioned at the tear off edge of the printer. If data is received, the paper returns to the normal print position. After printing, the printer waits for the given interval to bring the paper once more to the tear off position. If the tear off edge is not aligned with the perforation of the paper, this can be corrected (see *Setting the tear position* (page 37)).

If the parameter **No Tear/Reverse** is set, TearView mode is disabled and no backward movements are performed.

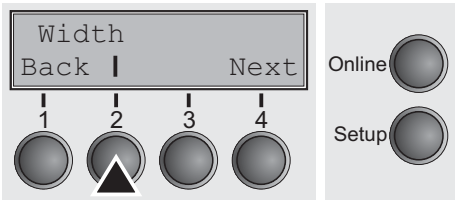
If the parameter **Manual** is set, the paper can still be brought into a View or Tear position via a specific sequence or by pressing the **Tear** key.

If the parameter **Tear at TOF** is set, the paper perforation is automatically positioned at the tear off edge as long as the current print position TOF is activated. Feeding takes place after approx. 1.5 seconds (hold time). If any data is received during this period of time the paper is not positioned at the tear off edge. With this function it must be noted that the printer may only be switched off when the print position is at TOF.

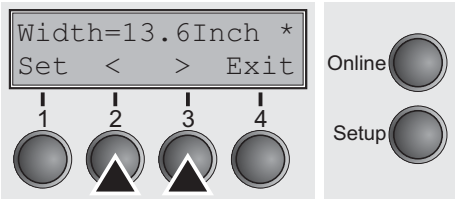
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Line length (Width)

Selects the line length in inches. With the setting of **8 Inch**, the printer operates like a printer with a width of only 8 inches.



Press **Width** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

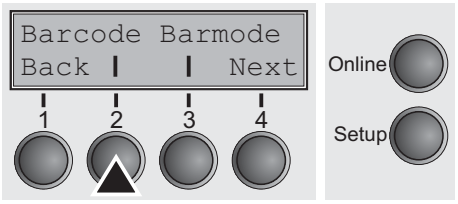
Setting Options: **8 Inch, 13.2 Inch, 13.6 Inch**
Default Setting: **13.6 Inch** (wide printer)/**8 Inch** (narrow printer)

The setting options 13.2 Inch **and** 13.6 Inch **are available in the wide printer only. The narrow printer has a fix line length of** 8 Inch**.**

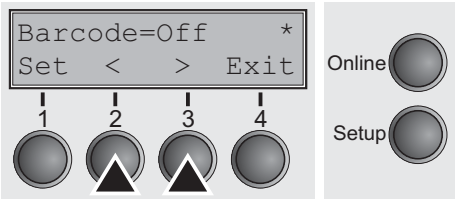
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Barcode (Barcode)

With this function selected it is posible to print different barcodes and LCP (Large Character Printing).



Press **Barcode** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

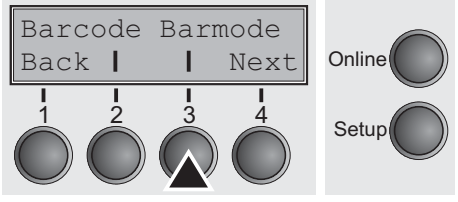
Setting Options: **On/Off**
Default Setting: **Off**

The definition and activation is performed by special sequences through the interface. Since this selection is possible for all emulations it must be noted that conflicts in sequence conformity with the selected emulation may occur. (The possible barcodes, LCP characters and the operation of these functions are described in the *Programmer's Manual*).

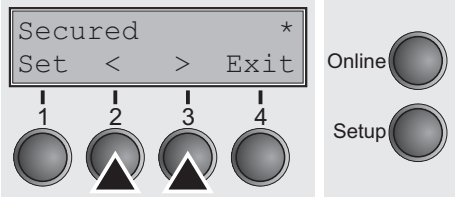
Confirm the setting by pressing the **Set** key (1).

Normal characters and barcode (Barmode)

Allows printing of normal characters on the left and right of the barcode.



Press **Barmode** (3) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Secured/Unsecured**
Default Setting: **Unsecured**

In **secured** mode, the space which the barcode characters require is "protected". In each line, other barcode or normal characters can also be printed. These additional characters are printed in the line currently being printed and and in the subsequent lines, without affecting the barcode which is already being printed. Consequently, normal characters can be printed in every line to the right or left of the barcode.

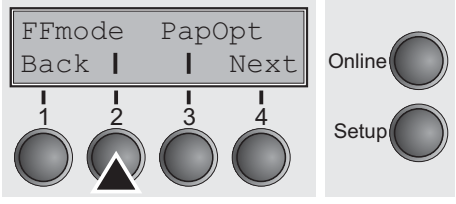
In **unsecured** mode, the required paper transport for printing barcodes is carried out automatically, it is not possible to print more than one line of normal characters in the barcode line. All characters in the mixed line are printed such that their bottom edges are in a straight line. This function may be switched on and off by sequences.

This function can be activated/deactivated by sequences.

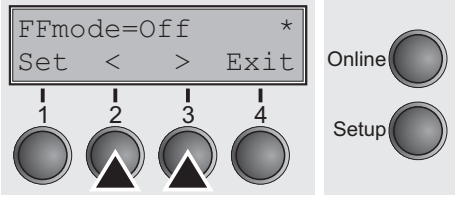
Confirm the setting by pressing the **Set** key (1). Press the **Next** key (4) to access the next group of parameters.

Form feed mode (FFmode)

Specifies whether a form feed is to be performed when the paper reaches the top print line.



Press **FFmode** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **On/Off**
Default Setting: **Off**

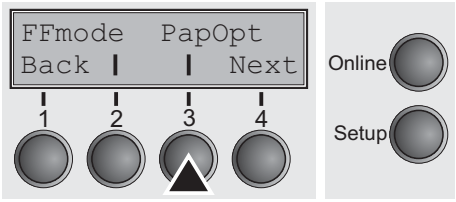
FFmode = On: If the paper is positioned in the first printing line (TOF), form feeds will be ignored.

FFmode = Off: Form feed will be performed in all cases.

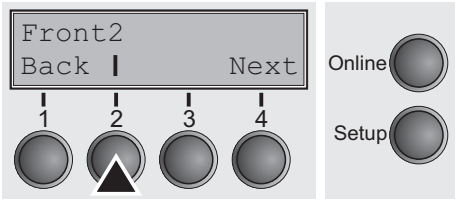
Confirm the setting by pressing the **Set** key (1).

Setting and activating options (PapOpt)

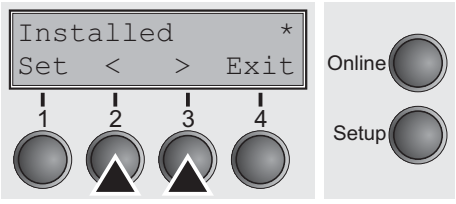
Selection of the optional tractor; see *Paperway* (page 5). If you set any of these options to Not installed, they will not be displayed in the paper path quick selection menu.For setting the tractor



Press **PapOpt** (3) key.



Press **Front2** (2) key.



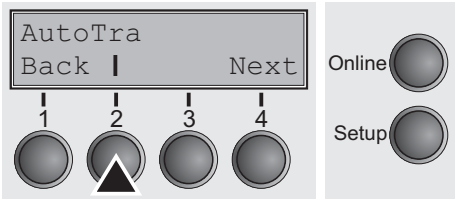
Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **installed/Not installed**
Default Setting: **Not installed**

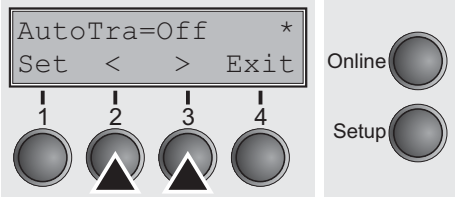
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Activation of tractors (AutoTra)

This parameter only appears if the optional tractor is installed. It regulates the activation of tractors when there is no more paper left in one of them.



Press **AutoTra** (2) key.



Use the **<** (2) or **>** (3) key to select the desired setting.

Setting Options: **Off/T1=T2**
Default Setting: **Off**

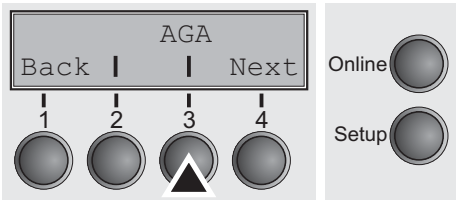
If an optional tractor is installed and the **Off** parameter is activated, only the selected tractor is supported (either via the menu or an ESC sequence). If the selected tractor is out of paper, printing stops.

If an optional tractor is installed and you select **T1=T2**, the printer will load paper from the other tractor if the selected one is empty.

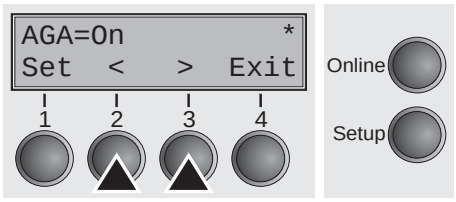
Confirm the setting by pressing the **Set** key (1).

Automatic gap adjustment (AGA)

This function allows you to switch the Automatic Gap Adjustment (AGA) off or on.



Press the **AGA** key (3).



Setting options: **Off/once/always**
Default setting: **always**

AGA=always: printer checks paper thickness and changes gap adjustment if necessary (default). Measurments take place
– after power-on
– in single sheet mode: for each sheet
– in tractor mode: whenever changing the paper path, when loading paper

AGA=once: The printer checks the paper thickness only once after power-on for each selected paper path and after paper end.

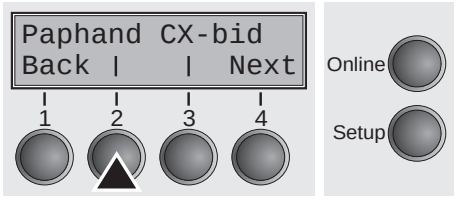
AGA = Off: selects manual gap adjustment; the value can be set for each paper source and each of the 4 macros available.

Confirm the setting by pressing the **Set** (1) key. The printer automatically leaves test mode and assumes Online mode.

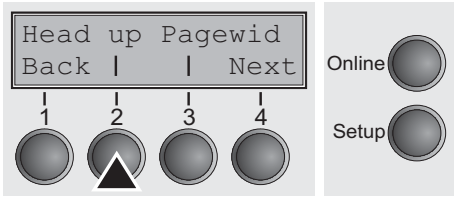
Paper handling (Paphand)

The **Paphand** group of menus improves the possibilities for the troublefree printing of paper with properties likely to cause problems (perforations etc.) or paper of poor finish.

Put the printer into Menu mode by pressing the **Setup** key. Press the **Menu** key. The display shows **Print/Macro**. Press Next or Back key until the parameter group **Paphand/CX-bid** appears in the display.



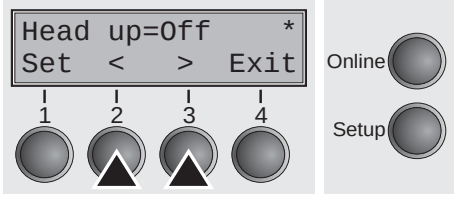
Press the **Paphand** key (2).



Select the **Head up** menu (2).

Increasing the print head gap (Head up)

With this function you can increase the print head gap before and after the perforation of the form.

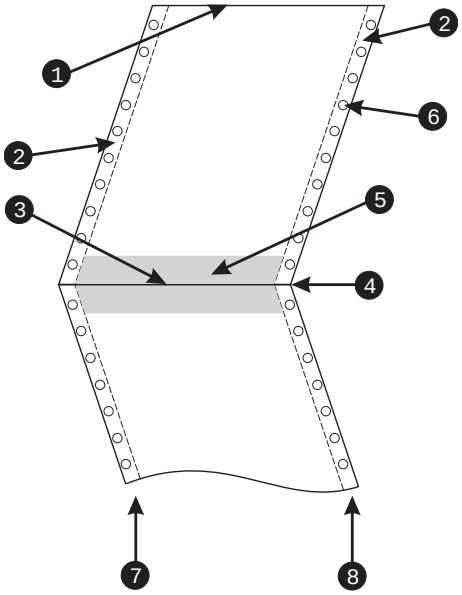


Setting options: **On/Off**
Default setting: **Off**

If the parameter is set to **On**, the print head gap increases during form feed and line feed four lines before and after the perforation on the form (= protected zone). The print head gap is always increased during form feeding past the perforation even when feeding takes place outside the protected zone.

Printing is possible in the protected area.

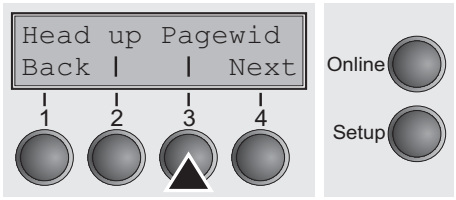
Confirm the setting by pressing the **Set** (1) key.



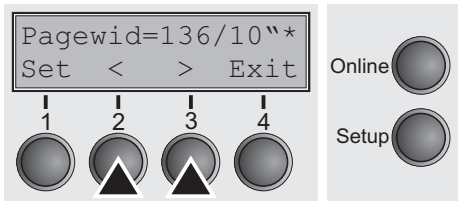
1 Top edge of form
2 Paper transport strip
3 Bottom edge of form
4 Form separation perforation
5 Protected zone
6 Transport holes
7 Left-hand area
8 Right-hand area

Paper width (Pagewid)

This parameter determines the actual paper width.



Press the **Pagewid** key (3).



Setting options narrow printer: From 20 to 80 in 1/10 inch steps
Setting options wide printer: From 20 to 136 in 1/10 inch steps
Default setting narrow printer: **136/10"**
Default setting narrow printer: **80/10"**
(80/136 characters at 10 characters/inch)

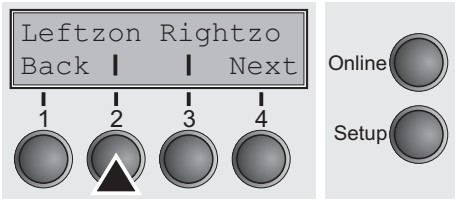
If **Head up = On**, the print head moves to the calculated center of the paper during the time the paper is moving in the protected zone. If **Rightzo = On** (see below), the print head moves out of the perforation zone on the right as long as the paper is being transported.

Set the printing width rather than the actual paper width.

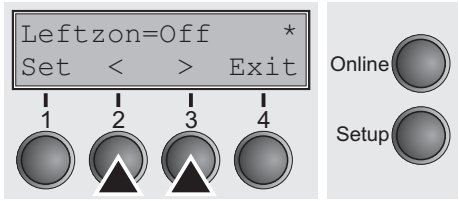
Confirm your settings with the **Set** key (1) and press the **Next** key (4) to access the next group of parameters.

Left-hand area (Leftzon)

If the parameter is **On**, the print head moves out of the perforation zone (area ❼) on the left as long as the paper is being transported. The Pagewid setting has no influence (see above).



Press the **Leftzon** key (2).

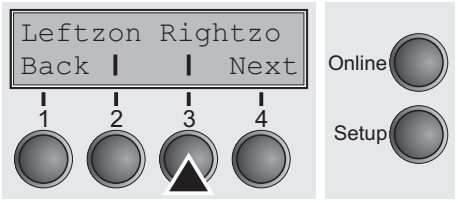


Setting options: **On**/**Off**
Default setting: **Off**

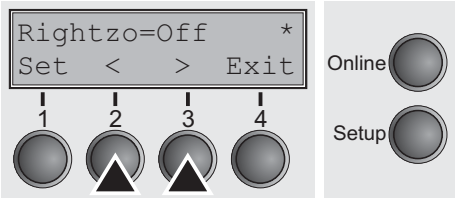
Confirm your settings with the **Set** key (1).

Right-hand area (Rightzo)

If the parameter is **On**, the print head travels from the right-hand perforation area (❸) towards the center of the paper while the paper is moving. The **Pagewid** option must be correctly set in this case, see *Paper width (Pagewid)* (page 70).



Press the **Rightzo** key (3).



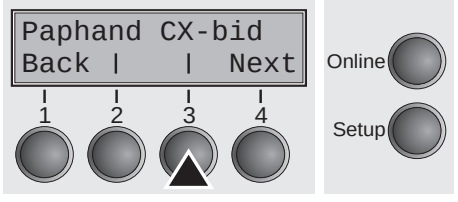
Setting options: **On**/**Off**
Default setting: **Off**

If this parameter is On**, the print head carriage travels to the center of the form while the paper is loaded.**

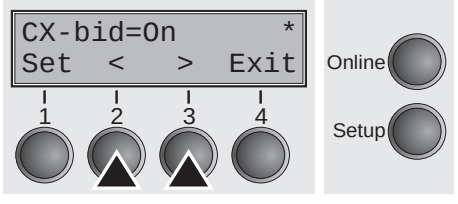
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Bidirectional parallel interface (CX-bid)

This parameter sets the parallel interface either to bidirectional or to compatibility mode.



Select the **CX-bid** menu (3).



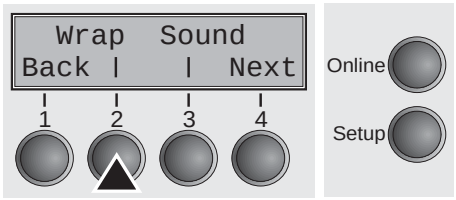
Setting options: **On/Off**
Default setting: **On**

CX-bid = On sets the parallel interface of the printer to bidirectional mode (IEEE 1284, Nibble mode), e.g. for Windows Plug & Play.

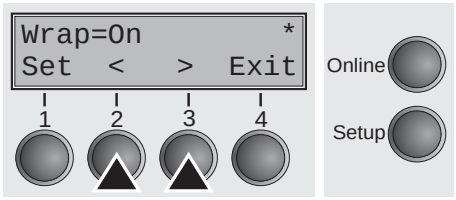
CX-bid = Off sets the interface to compatibility mode in order to ensure reliable operation with special external boxes or print server.

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Line wrap (Wrap)



Select the **Wrap** menu (2).



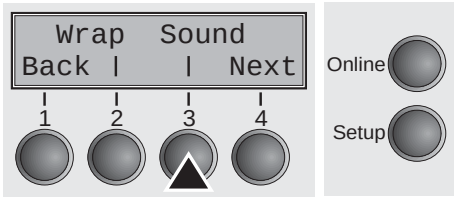
Setting options: **On/Off**
Default setting: **On**

Wrap = On: If the number of transferred characters per print line exceeds the maximum printing width, the supernumerary characters are printed at the beginning of the next line.
Wrap = Off: The supernumerary characters are cut off.

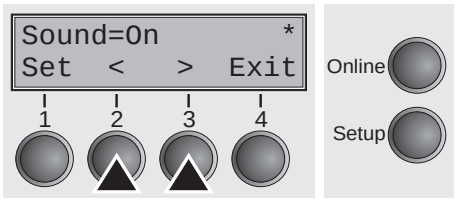
Confirm the setting by pressing the **Set** (1) key.

Beep at paper end (Sound)

Generates a beep when paper is empty.



Select the **Sound** menu (3).



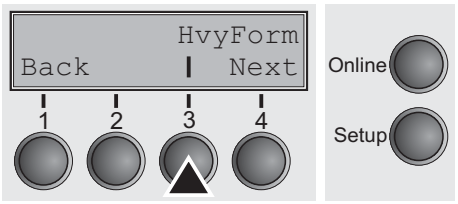
Setting options: **On/Off**
Default setting: **On**

When **Sound = On**, a beep is generated every second to notify that paper is empty.

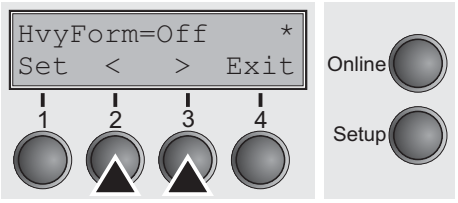
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Setting for printing copy paper (HvyForm)

If you set **HvyForm = On**, the printer prints the same line twice at double strike. This setting ensures that copy paper produces optimum results.



Select the **HvyForm** menu (3).



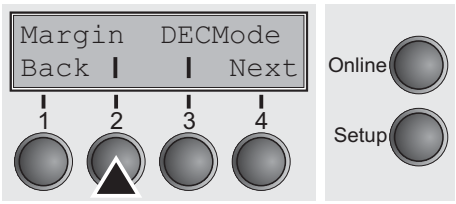
Setting options: **On**/**Off**
Default setting: **Off**

With the Copy Draft, NLQ and LQ print qualities, the line is printed twice, however, at single strike.

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Setting the page margins (Margin)

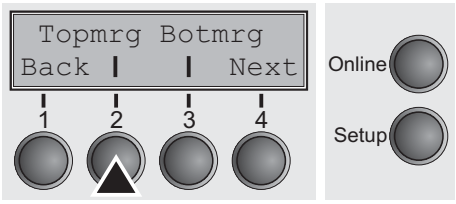
This parameter group allows you to define the area for printing. You can set the top, bottom and left margin.



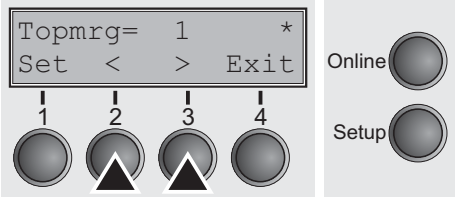
Press the **Margin** key (2).

Setting the top margin (Topmrg)

This option lets you set the top margin with the number of the line (numbered from the top paper edge) where the printing actually starts.



Press the **Topmrg** key (2).



Setting options: Line **1 to Formlength**
Default setting: Line **1**

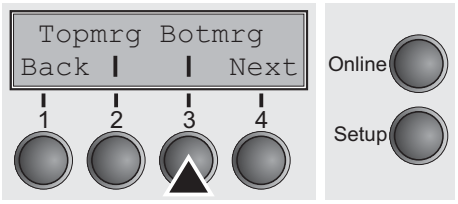
The setting of this Option depends on the setting of both the vertical pitch and the form length options. For details refer to *Setting line spacing (LPI)* **(page 50) and** *Form length (Formlen)* **(page 60).**

STOP **Do not set** Topmrg **eqal or higher than** Botmrg**.**

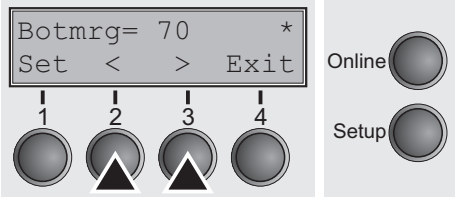
Confirm the setting by pressing the **Set** (1) key.

Setting the bottom margin (Botmrg)

The bottom margin option gives you the possibility to set the bottom margin with the number of the line (numbered from the top paper edge) where the printing actually stops for a given page.



Press the **Botmrg** key (2).



Setting options: Line **1 to Formlength**
Default setting: **Formlength**

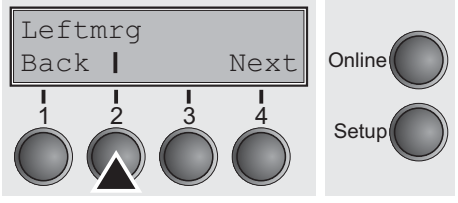
The setting of this Option depends on the setting of both the vertical pitch and the form length options. For details refer to *Setting line spacing (LPI)* **(page 50) and** *Form length (Formlen)* **(page 60). The Values range from the value for top margin (see** *Setting the top margin (Topmrg)* **on page 74) to the value for form length.**

STOP **Do not set** Topmrg **eqal or higher than** Botmrg**.**

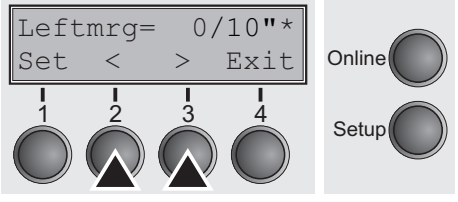
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter with the **Next** key (4).

Setting the left margin (Leftmrg)

The left margin option is defined by the number of the columns (numbered from the left paper edge) where the printing actually starts.



Press the **Leftmrg** key (2).

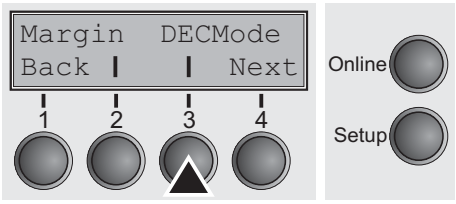


Setting options: **0 to 30/10**"
Default setting: **0/10**"

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Setting the DEC Mode (DECMode)

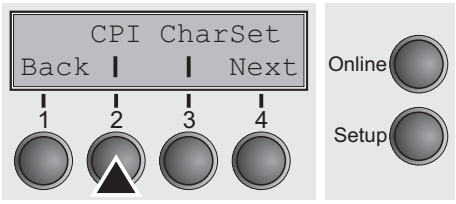
The DEC mode option sets the DEC protocol specific features.



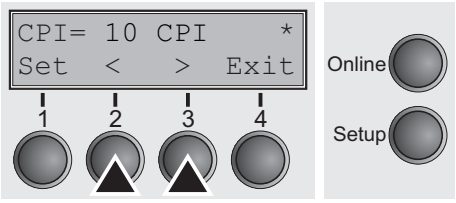
Press the **DECMode** key (3).

Horizontal spacing of characters (CPI)

Sets the horizontal spacing of the printed characters used with the DEC protocol.



Press the **CPI** key (2).



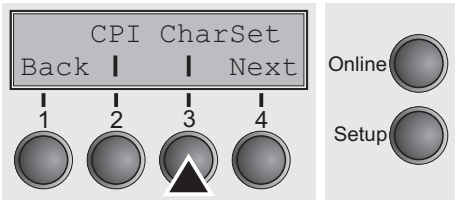
Setting options: **5, 6, 6.65, 8.25, 8.6, 9, 10, 12, 13.3, 15, 16.5, 17.1, 18, 20 cpi and Proportional Spacing**

Default setting: **10**

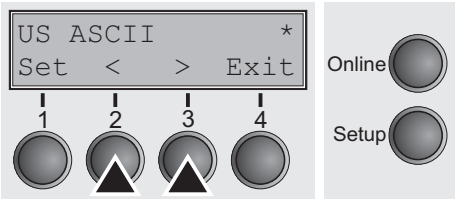
Confirm the setting by pressing the **Set** (1) key.

Character set (CharSet)

Selects the G0 character set that will be used with the DEC protocol.



Press the **CharSet** key (3).



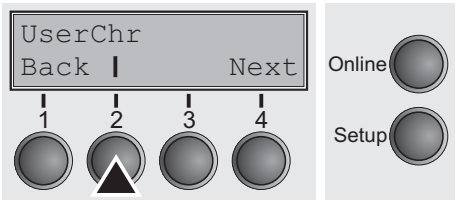
Setting options: see **table** below
Default setting: **US ASCII**

Character Set	Definition
US ASCII	US ASCII
British	British
French	French
German	German
Norw./Danish	Norwegian/Danish
DEC Finnish	DEC Finnish
DEC French-Can.	DEC French-Canadian
DEC Norw.-Dan.	DEC Norwegian/Danish
DEC Swedish	DEC Swedish
DEC Dutch	DEC Dutch
DEC Swiss	DEC Swiss
DEC Portuguese	DEC Portuguese
DEC Supplement.	DEC Supplemental
DEC Spec.-Graphi.	DEC Special Graphics
DEC Technical	DEC Technical
DEC 7bit Hebrew	DEC 7Bit Hebrew
DEC Turkish	DEC 7Bit Turkish
DEC Hebrew Sup.	DEC Hebrew Supplemental
DEC Greek Sup.	DEC Greek Supplemental
DEC Turk. Sup	DEC Turkish Supplemental
ISO Italian	ISO Italian
ISO Spanish	ISO Spanish
JIS Katakana	JIS Katakana
JIS Roman	JIS Roman
Legal	Legal

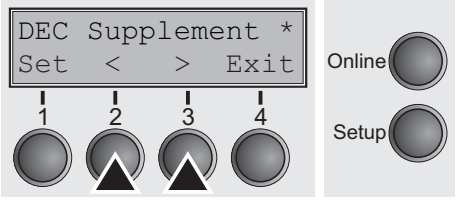
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

User preference character set (UserChr)

This option sets the user character set for the DEC protocol.



Press the **UserChr** key (2).



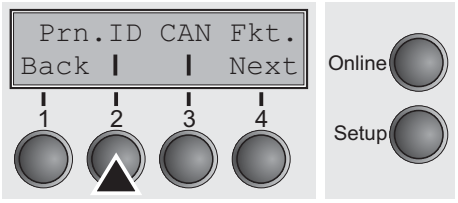
Setting options: see **table** below
Default setting: **DEC supplement**

DEC Finnish	ISO Latin-Hebr. Su	Code Page 853
French	ISO Latin-Cyr. Sup	Code Page 855
DEC French-Can.	ISO Latin-5 Su	Code Page 857
German	ISO Latin-9 Su	Code Page 858
ISO Italian	E-USA	Code Page 860
JIS Roman	E-France	Code Page 861
DEC Norw./Dan.	E-Germany	Code Page 862
ISO Spanish	E-United Kingd	Code Page 863
DEC Swedish	E-Denmark 1	Code Page 864
Norw./Danish	E-Sweden	Code Page 865
DEC Dutch	E-Italy	Code Page 866
DEC Swiss	E-Spain 1 XXX	Code Page 869
DEC Portuguese	E-Japan	Abicomp
Legal	E-Norway	Brazilian ASCII
DEC Supplement	E-Denmark 2	Mazowian
DEC Spec.Graph.	E-Spain 2	Code MJK
DEC Technical	E-L. America	Bulgarian
DEC 7Bit Hebrew	E-Turkey	ISO 8859-7
DEC Hebrew Sup.	E-Korea	ISO 8859-15
DEC Greek Sup.	E-Legal	ISO Latin 1T
DEC 7Bit Turk.	E-Old Hebrew	New Hebrew
DEC Turk. Sup.	Code Page 437	D-Hebrew
JIS Katakana	CP 437 Greek	Code Page 210
ISO Latin-1 Su	Code Page 850	Code Page 220
ISO Latin-2 Su	Code Page 851	
ISO Latin-Greek Su	Code Page 852	

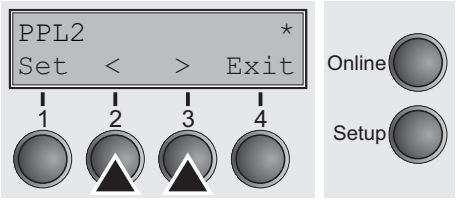
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Printer ID (Prn.ID)

This option defines the DEC printer ID used by the printer when responding to DA commands (DA = device attributes, see *Programmer's Manual, Reports*. from your host computer or application software (serial transmission only).



Press the **Prn.ID** key (2).



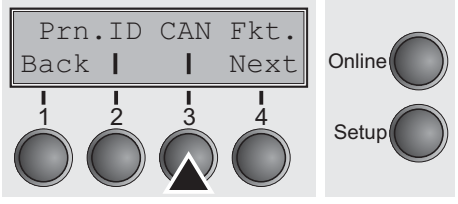
Setting options: **PPL2**, **LA120 ID**, **LA210 ID**
Default setting: **PPL2**

PPL2: Allows the printer to respond as a DEC Conformance Level 2 device.
LA120 ID: The printer responds as a LA120 printer.
LA210 ID: The printer responds as a LA210 printer.

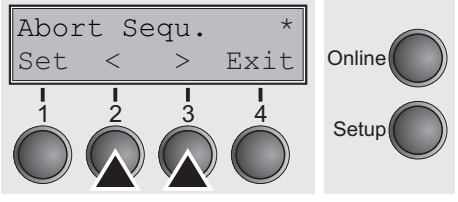
Confirm the setting by pressing the **Set** (1) key.

Deleting sequence or buffer (CAN Fkt.)

This option defines the behaviour of the cancel function.



Press the **CAN Fkt.** key (3).



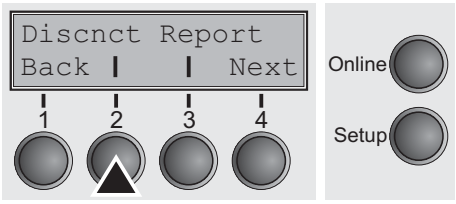
Setting options: **Abort Sequ./Kill Buffer**
Default setting: **Abort Sequ.**

If **Abort Sequence** is set, the printer immediately deletes the currently processed sequence (without execution). If **Kill buffer** is selected, the printer immediately deletes the complete receiving buffer, even if a prior X-OFF was sent to printer.

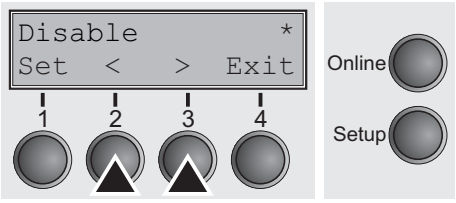
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Disconnection on end of transmission (Discnct)

This option determines whether the communication disconnect occurs at the end of the transmission.



Press the **Discnt** key (2).

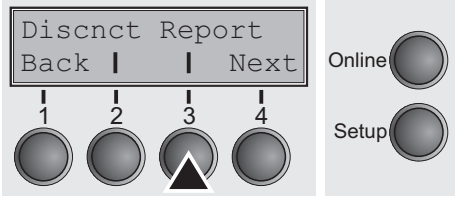


Setting options: **Enable**/**Disable**
Default setting: **Disable**

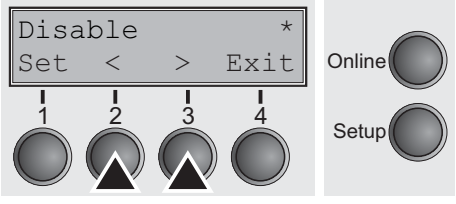
Confirm the setting by pressing the **Set** (1) key.

Initial Report (Report)

This option determines whether the printer sends an initial report to the host or not.



Press the **Report** key (3).

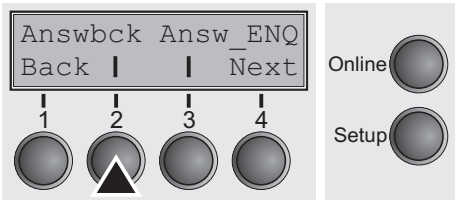


Setting options: **Enable**/**Disable**
Default setting: **Disable**

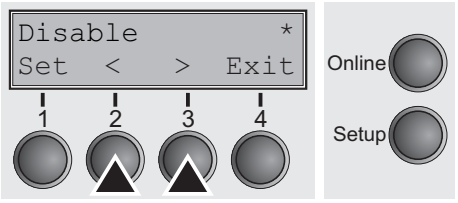
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Automatic answerback (Answbck)

This option determines whether the printer sends an answerback message to the printer during initialization or not.



Press the **Answbck** key (2).

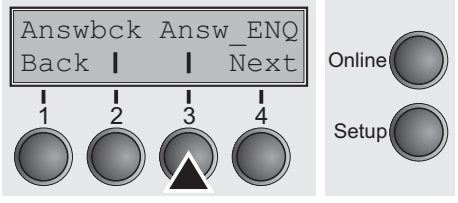


Setting options: **Enable**/**Disable**
Default setting: **Disable**

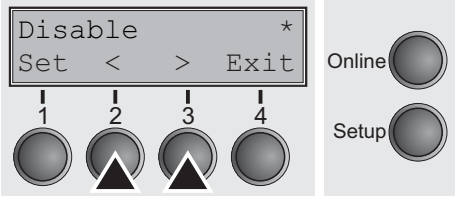
Confirm the setting by pressing the **Set** (1) key.

Answerback on ENQ (Answ_ENQ)

This option determines whether the answerback message is sent to the host when the printer receives an ENQ code.



Press the **Answ_ENQ** key (3).

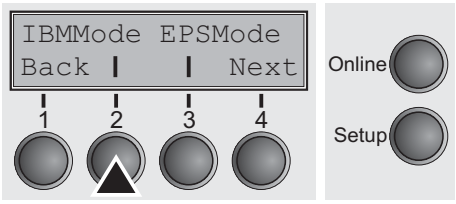


Setting options: **Enable**/**Disable**
Default setting: **Disable**

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Setting the IBM mode (IBMMode)

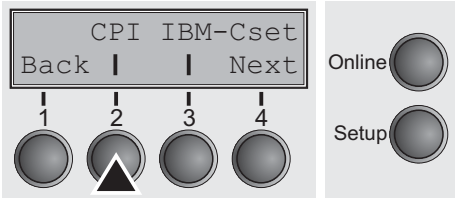
The IBM mode option sets the IBM specific features.



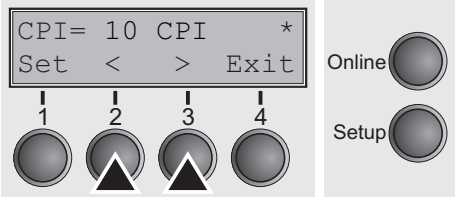
Press the **IBMMode** key (2).

Horizontal spacing of characters (CPI)

Sets the horizontal spacing of the printed characters used with the IBM protocol.



Press the **CPI** key (2).

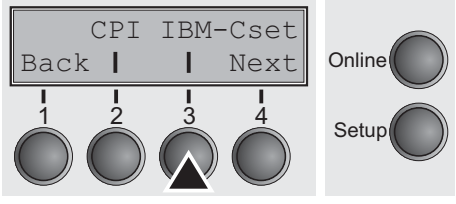


Setting options: **5, 6, 7.5, 8.6, 10, 12, 15, 17.1, 20 cpi and Proportional Spacing**
Default setting: **10**

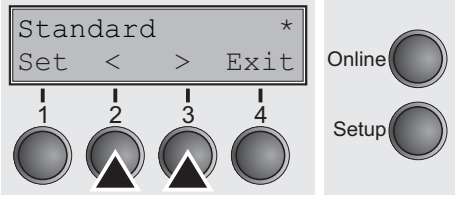
Confirm the setting by pressing the **Set** (1) key.

IBM character set (IBM-Cset)

This option identifies which kind of character set is to use: for English (IBM standard characters) or non English languages (IBM extended characters).



Press the **IBM-Cset** key (3).

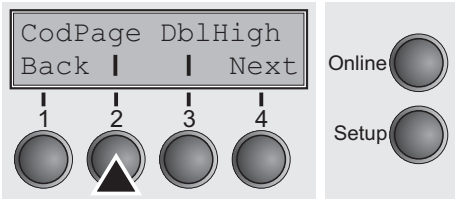


Setting options: **Standard/Extended**
Default setting: **Standard**

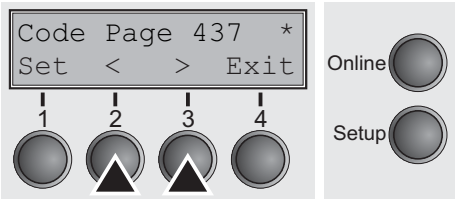
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Code page (CodPage)

This option determines which code page the printer uses in IBM mode.



Press the **CodPage** key (2).



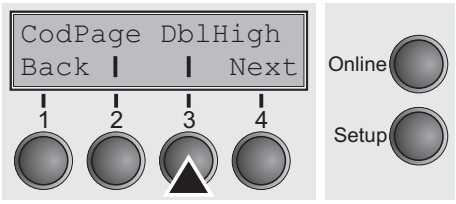
Setting options: see **table** below
Default setting: **Code Page 437**

E-Denmark 2	US ASCII	
E-Spain 2	British	ISO Latin-Greek
E-L. America	DEC Finnish	ISO Latin-Hebr. Su
E-Turkey	French	ISO Latin-Cyr. Sup
E-Korea	DEC French-Can.	ISO Latin-5 Su
E-Legal	German	ISO Latin-9 Su
E-Old Hebrew	ISO Italian	E-USA
Code Page 437	JIS Roman	E-France
CP 437 Greek	DEC Norw./Dan.	E-Germany
Code Page 850	ISO Spanish	E-United Kingd
Code Page 851	DEC Swedish	E-Denmark 1
Code Page 852	Norw./Danish	E-Sweden
Code Page 853	DEC Dutch	E-Italy
Code Page 855	DEC Swiss	E-Spain 1
Code Page 857	DEC Portuguese	E-Japan
Code Page 858	Legal	E-Norway
Code Page 860	DEC Supplement	Code MJK
Code Page 861	DEC Spec.Graph.	Bulgarian
Code Page 862	DEC Technical	ISO 8859-7
Code Page 863	DEC 7Bit Hebrew	ISO 8859-15
Code Page 864	DEC Hebrew Sup.	ISO Latin 1T
Code Page 865	DEC Greek Sup.	New Hebrew
Code Page 866	DEC 7Bit Turk.	D-Hebrew
Code Page 869	DEC Turk. Sup.	Code Page 210
Abicomp	JIS Katakana	Code Page 220
Brazilian ASCII	ISO Latin-1 Su	
Mazowian	ISO Latin-2 Su	

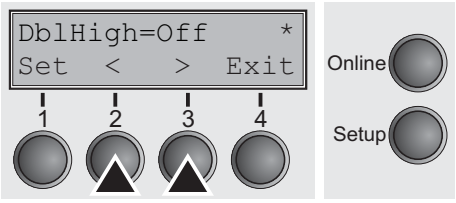
Confirm the setting by pressing the **Set** (1) key.

IBM Double Height (DblHigh)

This option determines whether the IBM double height mode should be used (**On**) or not (**Off**).



Press the **DblHigh** key (3).



Setting options: **On/Off**
Default setting: **Off**

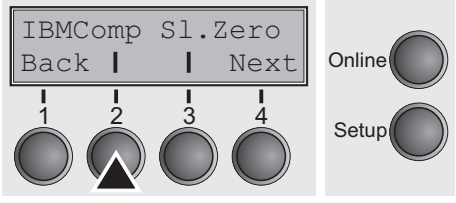
If the parameter **On** is selected, all data will be printed in double height.

If the parameter **Off** is selected, all data will be printed in normal height.

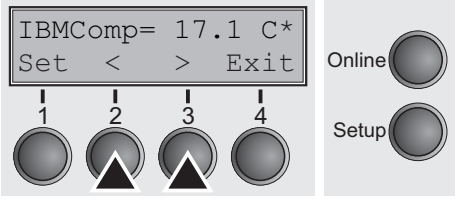
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Horizontal pitch on Compress (IBMComp)

This option selects the character density when receiving the Compress command (SI or ESC SI).



Press the **IBMComp** key (2).

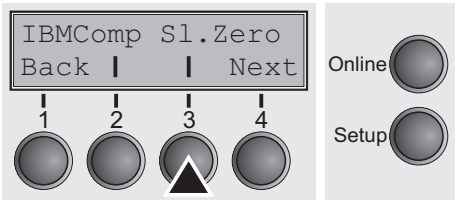


Setting options: **17.1**, **20 CPI**
Default setting: **17.1 CPI**

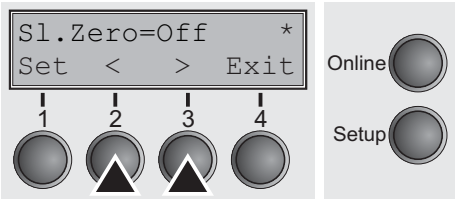
Confirm the setting by pressing the **Set** (1) key.

Slashed Zero (Sl.Zero)

This option selects whether the zero character is printed with or without a slash.



Press the **Sl.Zero** key (3).

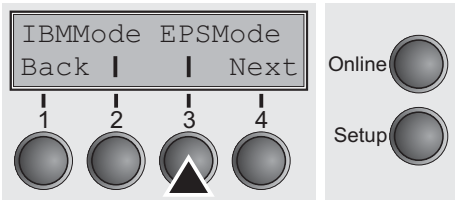


Setting options: **On/Off**
Default setting: **Off**

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Setting the EPSON Mode (EPSMode)

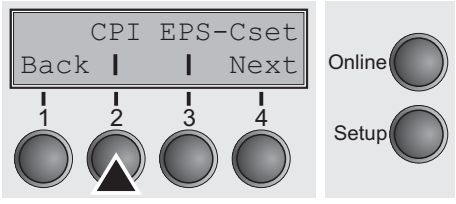
The EPSON mode option sets the EPSON protocol specific features.



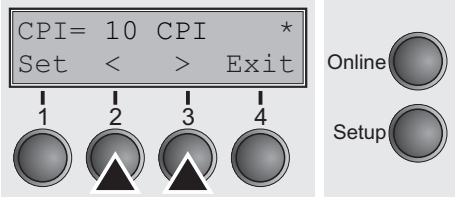
Press the **EPSMode** key (3).

Horizontal spacing of characters (CPI)

Sets the horizontal spacing of the printed characters used with the EPSON protocol.



Press the **CPI** key (2).

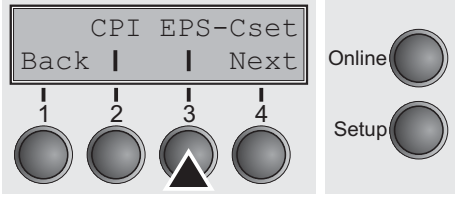


Setting options: **5, 6, 7.5, 8.6, 10, 12, 15, 17.1, 20 cpi and Proportional Spacing**
Default setting: **10**

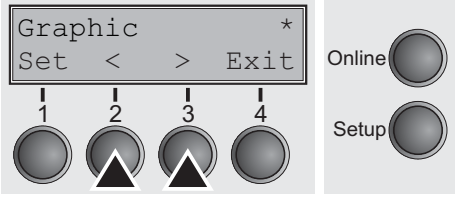
Confirm the setting by pressing the **Set** (1) key.

EPSON character set (EPS-Cset)

This option defines the style which is applied to the character set.



Press the **EPS-Cset** key (3).



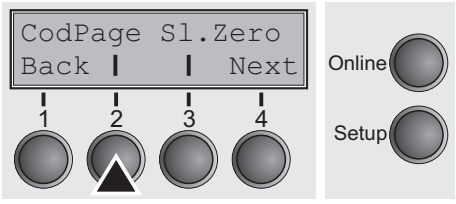
Setting options: **Graphic**, **Italic**, **DLL**
Default setting: **Graphic**

Graphic: The character sets are not altered.
Italic: The Italic style is applied to the character set.
DLL: A DLL (download) character set, as defined before, can be activated in the code range from hex. A0 to hex. FE.

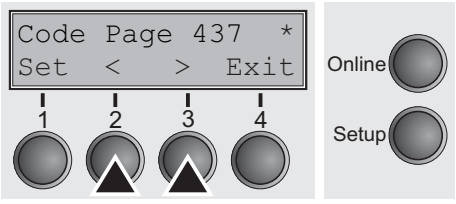
Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Code Page (CodPage)

This option determines which code page the printer uses in EPSON mode.



Press the **CodPage** key (3).



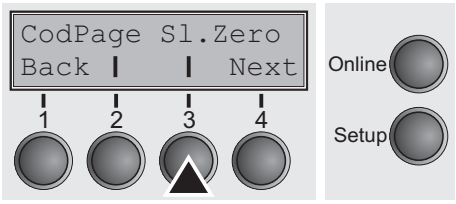
Setting options: see **table** below
Default setting: **Code Page 437**

CPI 210	ISO Latin-2 Su	Code Page 852
US ASCII	ISO Latin-Greek	Code Page 853
British	ISO Latin-Hebr. Su	Code Page 855
DEC Finnish	ISO Latin-Cyr. Sup	Code Page 857
French	ISO Latin-5 Su	Code Page 858
DEC French-Can.	ISO Latin-9 Su	Code Page 860
German	E-USA	Code Page 861
ISO Italian	E-France	Code Page 862
JIS Roman	E-Germany	Code Page 863
DEC Norw./Dan.	E-United Kingd	Code Page 864
ISO Spanish	E-Denmark 1	Code Page 865
DEC Swedish	E-Sweden	Code Page 866
Norw./Danish	E-Italy	Code Page 869
DEC Dutch	E-Spain 1	Abicomp
DEC Swiss	E-Japan	Brazilian ASCII
DEC Portuguese	E-Norway	Mazowian
Legal	E-Denmark 2	Code MJK
DEC Supplement	E-Spain 2	Bulgarian
DEC Spec.Graph.	E-L. America	ISO 8859-7
DEC Technical	E-Turkey	ISO 8859-15
DEC 7Bit Hebrew	E-Korea	ISO Latin 1T
DEC Hebrew Sup.	E-Legal	New Hebrew
DEC Greek Sup.	E-Old Hebrew	D-Hebrew
DEC 7Bit Turk.	Code Page 437	Code Page 210
DEC Turk. Sup.	CP 437 Greek	Code Page 220
JIS Katakana	Code Page 850	
ISO Latin-1 Su	Code Page 851	

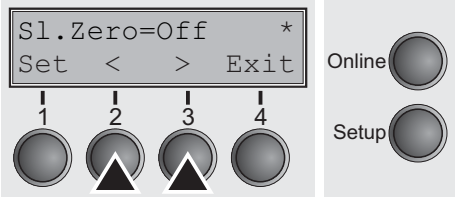
Confirm the setting by pressing the **Set** (1) key.

Slashed Zero (Sl.Zero)

This option selects whether the zero character is printed with or without a slash.



Press the **Sl.Zero** key (3).



Setting options: **On/Off**
Default setting: **Off**

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Menu settings (example)

	Macro 1 *	Macro 2	Macro 3	Macro 4	Current
Protocol					
Parall.	EPSON ESC/P2	IBM XL24E	EPSON ESC/P2	IBM XL24E	EPSON ESC/P2
Serial	DEC PPL2	DEC PPL2	DEC PPL2	DEC PPL2	DEC PPL2
Font	Draft	Draft	Draft	Draft	Draft
LPI	6 LPI	6 LPI	6 LPI	6 LPI	6 LPI
Single	*				*
Formlen	DIN A4 (297 mm)	Letter 11"	Executive 10.5"	Letter 11"	DIN A4 (297 mm)
Head	18	18	18	18	18
FormAdj	0/72"	0/72"	0/72"	0/72"	0/72"
Front1		*	*	*	
Formlen	Letter 11"	Letter 11"	Letter 11"	Letter 11"	Letter 11"
Head	18	18	18	18	18
FormAdj	12/72"	12/72"	12/72"	12/72"	12/72"
Width	13.6Inch	13.6Inch	13.6Inch	13.6Inch	13.6Inch
Topmrg	1	1	1	1	1
Botmrg	66	66	66	66	66
Leftmrg	0/10"	0/10"	0/10"	0/10"	0/10"
PrinDir	Bidir	Bidir	Bidir	Bidir	Bidir
Auto-CR	On	On	On	On	On
Auto-LF	Off	Off	Off	Off	Off
FFmode	Off	Off	Off	Off	Off
Rightzo	Off	Off	Off	Off	Off
Leftzon	Off	Off	Off	Off	Off
Head up	Off	Off	Off	Off	Off
AGA	On	On	On	On	On
AGA offset	0	0	0	0	0
Hvy Form	Off	Off	Off	Off	Off
TearView	Tear-ls	Tear-ls	Tear-ls	Tear-ls	Tear-ls
ESCChar	ESC	ESC	ESC	ESC	ESC
Barcode	Off	Off	Off	Off	Off
Barmode	Secured	Secured	Secured	Secured	Secured
DECMode					
CPI	10 CPI	10 CPI	10 CPI	10 CPI	10 CPI
Country	US ASCII	US ASCII	US ASCII	US ASCII	US ASCII
UserChr	DEC Supplement	DEC Supplement	DEC Supplement	DEC Supplement	DEC Supplement
Wrap	On	On	On	On	On
Prn.ID	PPL2	PPL2	PPL2	PPL2	PPL2
CAN Fkt.	Abort Sequ.	Abort Sequ.	Abort Sequ.	Abort Sequ.	Abort Sequ.
Discnct	Disable	Disable	Disable	Disable	Disable
Report	Disable	Disable	Disable	Disable	Disable
Answbck	Disable	Disable	Disable	Disable	Disable
Answ ENQ	Disable	Disable	Disable	Disable	Disable
IBMMode					
CPI	10 CPI	10 CPI	10 CPI	10 CPI	10 CPI
CharSet	Standard	Standard	Standard	Standard	Standard
CodPage	Code Page 437	Code Page 437	Code Page 437	Code Page 437	Code Page 437
DblHigh	Off	Off	Off	Off	Off
IBMComp	17.1 CPI	17.1 CPI	17.1 CPI	17.1 CPI	17.1 CPI
Sl.Zero	Off	Off	Off	Off	Off
EPSMode					
CPI	10 CPI	10 CPI	10 CPI	10 CPI	10 CPI
CodPage	Code Page 437	Code Page 437	Code Page 437	Code Page 437	Code Page 437
Eps-Cset	Graphic	Graphic	Graphic	Graphic	Graphic
Sl.Zero	Off	Off	Off	Off	Off
Interface	**Power-On Value**	**Options**	**Power-On Value**	**Options**	**Power-On Value**
Interf.	Auto	PNS	On	AutoASF	Off
Timeout	2 sec	Quiet	Off	AutoTRA	Off
Buffer	128 KB	Pap.back	normal	Single	On
CX-bid	On	Sound	On	Language	English
Baud	9600	Pagewid	136/10"	Menu Locked	Off
Format	8Bit No 1Stop				
BuffCtrl	XON/XOFF				
DTR	DTR				
TearAdj Front1	0/72"				

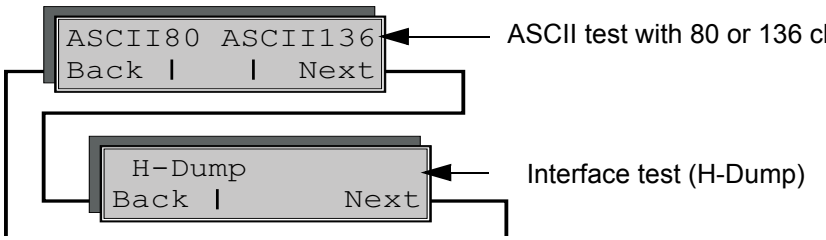
9 Advanced menu

The advanced menu consists of test functions and advanced settings.

Test functions

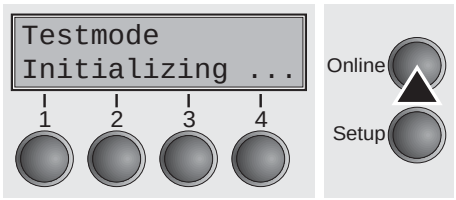
Various tests to check proper operation of the printer are available at any time. With these tests it is possible to check the print quality, proper operation of the print head and the mechanics, as well as efficient data transmission from the computer to the printer.

The extended menu contains two or three test functions (wide printer: **ASCII 80**, **ASCII 136**, **H-Dump**; narrow printer: **ASCII 80**, **H-Dump**).



ASCII test with 80 or 136 characters per line.

Interface test (H-Dump)

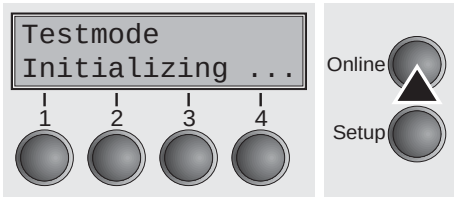


Enter advanced Menu mode by pressing the key **Online** while switching on the printer and keep the key pressed until **Testmode** appears on the display.

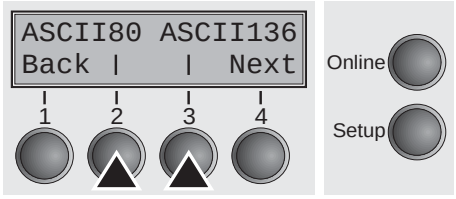
The display shows **Test mode** for approx. 1 second and then automatically changes to display **ASCII 80 ASCII 136**.

Printer self-test (Rolling ASCII)

To check operational readiness, your printer contains a self-test routine which allows testing of the printer configuration, the print quality and correct operation of your printer.



Before performing a self-test, your printer must be switched off. Ensure that paper is inserted. Keep the key **Online** pressed while switching on the printer, until **Testmode** appears on the display.



Press the soft key for the ASCII 80 format (corresponds to Legal Portrait) or for ASCII 136 (Double or Legal Landscape). The display will indicate **Test mode Off**.

Press the **Online** key, to start the test.

It is also possible to change to Setup mode when you are in Rolling test mode if you want to change the configuration for the test printout.

To do this, press the key **Setup**. The printer then changes to Setup mode and the first of the main levels is then displayed.

Program your printer in the usual way for the test printout to change the parameters. See section *Programming via the control panel* (page 41).

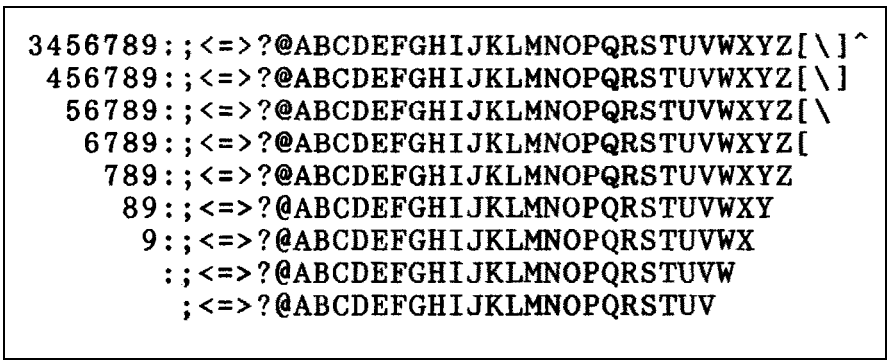
Some changes in Menu mode may cause the printer to reinitialize; in this case the Rolling ASCII test is aborted.

By pressing the key Setup you exit Setup mode and the printer once again returns to Rolling ASCII test mode test mode.

Testmode Off is displayed. Press the key **Online**, the test printout starts.

The self-test can be interrupted by pressing the key **Online** which will stop printing and put the printer into Offline status.

Before you begin printing, you can adjust the paper for the printout with soft keys ▲ and ▼.



Example of an ASCII test printout

If you selected a proportional font (PS font) , the printed length of the lines varies.

This test can also be used to determine and set the optimal print head gap (see the section *Setting the print head gap* **(page 39).**

Exiting Rolling ASCII test mode

The self-Rolling ASCII test mode test mode can only be terminated by switching off your printer. For this operation the printer must be Offline.

If you want to stop the test printout before switching off the printer, press the key Online**.**

Interface test (H-Dump)

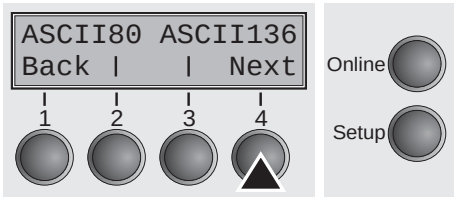
With the interface test (Hex-Dump/H-Dump) you can test data transmission from the computer to the printer. During this test, the data from the computer is printed out in two columns. The text in the left column is printed in hexadecimal format and in the right column in ASCII format.

Printout in Hex-Dump

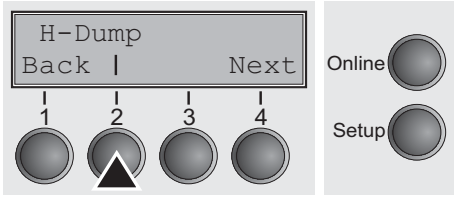
Put the printer into advanced Menu mode by pressing the key **Online** while switching on the printer.

Press the key Online until Test mode **is shown on the display.**

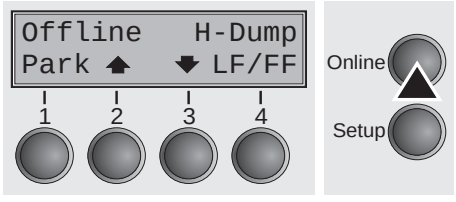
The display shows **Test mode** for approx. 1 second and then automatically changes to display **ASCII 80 ASCII 136**.



Press the key **Next** (4), the display shows the next menu level.



If you press the key **H-Dump** (2) you select the H-Dump mode and **Offline H-Dump** is shown on the display.



Put the printer into **Online H-Dump** mode by pressing the key **Online**. The printer is now ready to receive data from the computer and to print it out in hexadecimal format. The printed data can now be analyzed and evaluated.

```
                                        1B 5B 36 7E 1B 5B          .[6~.[
3F 36 7E 1B 74 01 1B 36 1B 28 72 1B 5B 31 31 68    ?6~.t..6.(r.[11h
1B 5B 30 3B 30 20 44 1B 5B 31 3B 31 20 44 1B 5B    .[0;0.D.[1;1.D.[
32 3B 32 20 44 1B 5B 33 3B 33 20 44 1B 5B 34 3B    2;2.D.[3;3.D.[4;
34 20 44 1B 5B 35 3B 35 20 44 1B 5B 36 3B 36 20    4.D.[5;5.D.[6;6.
44 1B 5B 3F 35 32 68 1B 5B 35 3B 3B 30 7B 1B 32    D.[?52h.[5;;0{.2
1B 5B 38 34 31 38 74 1B 5B 37 32 38 20 68 0A 1B    .[8418t.[728.h..
5B 31 32 30 20 68 1B 5B 37 31 32 60 1B 5B 31 30    [120.h.[712'.[10
6D 1B 5B 34 79 1B 5B 34 77 54 68 69 73 20 69 73    m.[4y.[4wThis.is
20 61 20 73 61 6D 70 6C 65 20 74 65 78 74 20 73    .a.sample.text.s
68 6F 77 69 6E 67 20 74 68 65 20 66 75 6E 63 74    howing.the.funct
69 6F 6E 61 6C 69 74 79 20 6F 66 20 74 68 65 20    ionality.of.the.
68 65 78 2D 64 75 6D 70 20 0D 1B 5B 31 32 30 20    hex-dump...[120.
68 0A 1B 5B 31 32 30 20 68 1B 5B 37 31 32 60 66    h..[120.h.[712'f
65 61 74 75 72 65 2E 20 69 74 20 69 73 20 69 6E    eature..it.is.in
74 65 6E 64 65 64 20 74 6F 20 61 6E 61 6C 79 73    tended.to.analys
65 20 74 68 65 20 69 6E 63 6F 6D 69 6E 67 20 64    e.the.incoming.d
61 74 61 20 73 74 72 65 61 6D 2E 20 20 0C 1B 5B    ata.stream.....[
35 34 7B 1B 5B 36 7E                               54{.[6~
```

Example of a Hex-Dump printout

After the transmission you must switch the printer to Offline. Any remaining data left in the interface buffer is then printed.

Terminating Hex-Dump

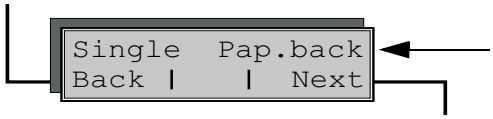
Hex-Dump mode can only be terminated by switching off the printer.

If you want to stop the Hex-Dump printout before switching off the printer, press the key Online **and then the key** LF/FF **(4) once.**

Advanced settings

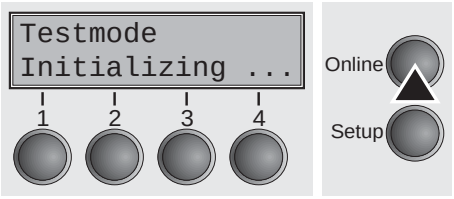
In the advanced menu, there are two other settings available besides the test functions.

- The **Single** option can be used to deactivate the single sheet function (for printers without single sheet feeder).
- The function **Pap.back** allows printing on paper with a dark back.



Activate/deactivate manual single sheet feeder and setting for printing on paper with dark back

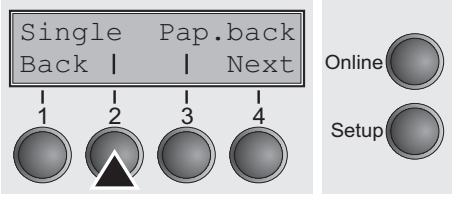
Enter Extended Menu mode by pressing the key **Online** while switching on the printer and keep the key pressed until **Testmode** appears on the display.



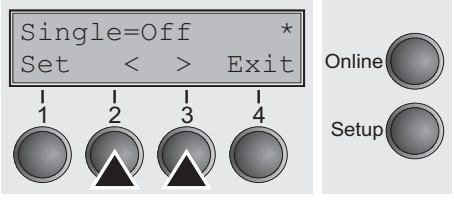
The display shows **Test mode** for approx. 1 second and then automatically changes to display **ASCII 80 ASCII 136**.

Deactivate single sheet feeder (Single)

Some printer models are designed for fanfold paper operation only and therefore do not feature a single sheet feeder. To prevent erroneous selection of the single sheet paper source, all sequences referring to the single sheet feeder can be deactivated by setting the **Single** menu option to **Off**.



Select the **Single** (2) menu.



Setting options: **On**/**Off**
Default setting: **On**

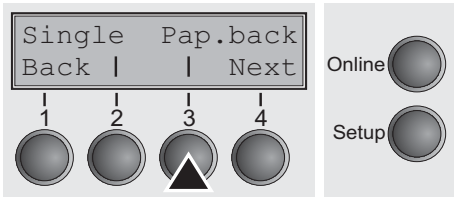
Single = On is the default setting for printer models with single sheet function.

Single = Off must be selected for printer models without single sheet function.

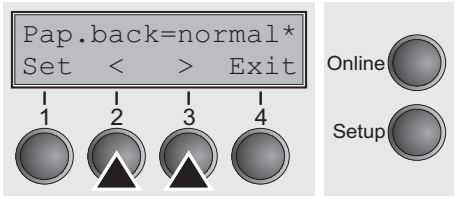
This setting is not reset by loading the default factory settings.

Confirm your settings by pressing the **Set** key (1).

Settings for paper with dark back (Pap.back)



Select the **Pap.back** (3) menu.



Setting options: **normal/dark**
Default setting: **normal**

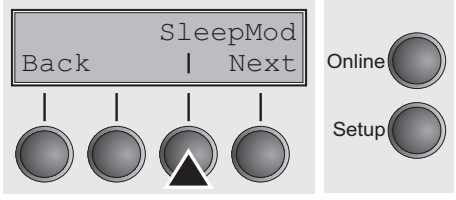
Pap.back = normal is the standard for normal paper.

Pap.back = dark can be set to process paper with a gray back.

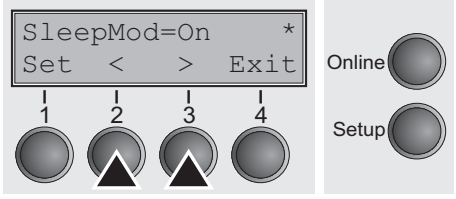
Paper with a completely black back side cannot be used if the ink is carbon-based. However, the printer can handle aniline-based black paper (undefined colors).

Confirm the setting by pressing the **Set** (1) key. Change to the next parameter group with the **Next** key (4).

Reduced power consumption (SleepMod)



Select the **SleepMod** menu (3).



Setting options: **On**/**Off**
Default setting: **On**

SleepMod = On reduces the electric power consumption of the printer in standby mode to ≤10 W.

SleepMod = Off ensures the first printing position even after longer printing pauses.

Confirm the setting by pressing the **Set** (1) key.

10 Troubleshooting

Many of the faults and problems which may occur while using the printer are minor problems which you can solve yourself. The following chapter should help you to distinguish between a simple operating error and a major malfunction.

This chapter provides information on the rectification of faults without the assistance of specially trained personnel. Follow the advice and tips in this chapter if your printer is not working correctly.

Important notes on the care and maintenance of your printer can be found at the end of this chapter.

Repairs should only be performed by authorised service personnel.

General print problems

Problem	Corrective action
The display remains dark The printer is switched on, but nothing happens (nothing is displayed, no noise).	Switch off the printer and proceed as follows: 1 Check that the power plug is correctly connected to the socket on the printer. 2 Check that the power plug is seated properly in the wall socket. 3 Switch on the printer again. If the printer is now connected correctly, the printer initializes and text is shown on the display. If these steps do not eliminate the fault: ▸ Replace the power cord and repeat step 3. ▸ Check whether the fuse is faulty and if so exchange it:, see *Replacing the fuse* (page 106). ▸ Check that power flows at the socket e.g. using a desk lamp, if necessary use a different socket and repeat step 3. ▸ Contact your dealer if the printer cannot be powered up. STOP **Do not attempt to open the printer. You might suffer an electric shock.**
The display is lit, but the printer does not print	1 Check that the printer is **Online**. If the displays shows **Offline**, then press the key **Online**. Try to print again. 2 Check the connection from the printer to the computer (interface cable): ▸ Check that the interface cable is properly connected to the computer and to the printer. ▸ Check that it is the correct interface cable for your printer. Information on the interface is located in the section *Connecting the printer* (page 9) and in chapter *Interfaces* (page 122). ▸ Check that the printer is properly adapted to the computer (configured). Refer to section *The control panel* (page 20). Check the parameter set in the **Setup** menu under *Settings for interfaces (I/O)* (page 53)and if necessary correct it. 3 Check whether the printer is working properly. To do this, print out a copy of the menu; siehe *Printing out macro configurations (Print)* (page 47) 4 Check that the top cover is closed. 5 Check that paper is inserted and loaded. Refer to the section *Loading paper* (page 28)

Problem	Corrective action
Problems with the paper feed The paper is not fed in	1 Check that the display shows the correct paperway, if necessary select the correct paperway (single sheet or fanfold) with the key **Park**. See *Changing the paper path* (page 26). If you wish to use optional paper types, make sure they are correctly installed. 2 Make sure that the paper guide is correctly adjusted at the side. 3 When using single sheets, push the paper fully into the paper feed. **When having torn off the fanfold paper and after switching over from fanfold paper to single sheets, the fanfold paper moves to the park position.** 4 Check that the fanfold paper is in the park position when you insert a single sheet. This means the fanfold paper should not be loaded (pulled in). To check this, raise the guide of the single sheet feeder. **If necessary, drive the remaining paper manually to the park position with the ▼ key.**
Paper jam (fanfold paper)	1 Open the top cover. If a paper jam should occur, then remove the jammed paper by tearing it off at the tear off edge (the tear off edge is located at the outfeed for the fanfold paper). 2 Press the ▼ key to transport the paper backwards. 3 You may support the paper return feed by cautiously pulling the paper in the correct direction. Before you replace the fanfold paper, refer to the instructions in the section *Loading paper* (page 28). You should pay special attention to the following points: ▸ Insert the paper straight. ▸ After inserting the paper, close the tractors. ▸ Adjust the tractors, the paper should be positioned in the tractors straight but without tension. ▸ Adjust the print head gap to the paper thickness (if AGA=Off). ▸ Set the parameter Head-up to On, see section *Increasing the print head gap (Head up)* (page 69). ▸ Clean upper friction, see section *Cleaning the upper friction* (page 108).

Problem	Corrective action
Paper jam (single sheets)	Open the top cover and remove the paper manually or with the functions **LF** (line feed)/**FF** (form feed) in Offline mode from the printer. Before you replace the single sheet, refer to the instructions in the section *Single sheets* (page 32). Pay attention to the following points: ▸ Set single sheet feed to the corresponding paper width. ▸ Insert the paper straight as far as possible. ▸ Adjust the print head gap to the paper thickness (card-like paper etc.) (if AGA=Off).
Paper does not move to tear off position Single sheet inserted	It is only possible to tear off when fanfold paper is used, refer to the section *Moving the paper to the tear position* (page 35).

Problems with the print quality

Problem	Corrective action
Print is too pale	1 The ribbon is used up or the ribbon cassette is not correctly fitted. Refer to the section *Changing the ribbon cassette* (page 11). 2 The print head to platen gap is not correctly set, refer to the section *Setting the print head gap* (page 39). 3 For printers with the AGA = ON: Enter a correction value <0. See the section *Setting the print head gap* (page 39).
Smudged print	1 The ribbon is damaged (e.g. frayed). Change the ribbon as described in the section *Changing the ribbon cassette* (page 11). 2 The print head gap is too small, increase the gap. See the section *Setting the print head gap* (page 39). For printers with **AGA = ON**: Enter a correction value >0 (correction value 0 to +10). See the section *Setting the print head gap* (page 39).
Prints undefined characters	1 Check that the interface plug is correctly connected to the computer and to the printer. 2 Check that the proper emulation and the correct character set (country, CG table or character set) is selected in the **Setup** menu. 3 Check the length of the interface cable, see section *Interface specifications* (page 112). 4 Set **CX-bid** in the advanced menu to **Off**, see section *Bidirectional parallel interface (CX-bid)* (page 71). 5 Check that the printer is properly adapted to the computer (configured). Refer to section *The control panel* (page 20). Check the parameter set in the **Setup** menu under *Settings for interfaces (I/O)* (page 53)and if necessary correct it.
The first line is not completely printed out at the top	Check the function **FormAdj**. Refer to the section *First printing position (FormAdj)* (page 61).
Dots within characters are missing	1 Check whether the ribbon is damaged, if necessary replace it. See the section *Changing the ribbon cassette* (page 11). 2 Set the correct print head gap. 3 Check whether the platen is damaged. 4 Check whether the print head is damaged. We recommend to use genuine ribbon cassettes only. In case of points 3 or 4, please contact your dealer.

Error messages via the display

Message	Possible cause	Corrective action
Eject Error	The printer cannot eject the paper or cannot place the paper in the park position.	Check the following: ▸ Whether the paper path is blocked by a foreign object. ▸ Whether the paper is damaged. ▸ Whether the upper friction is down and clicked into place. ▸ Whether the print head gap is too small; see section *Setting the print head gap* (page 39).
Load Error	The printer cannot feed in the loaded paper.	Check the following: ▸ Whether the paper path is blocked by a foreign object. ▸ Whether the paper is damaged. ▸ Whether the tractors are closed and locked. ▸ Whether the paper is too tight or loose. ▸ Whether the paper is within the specified range. Details see section *Loading paper* (page 28)
Load paper from ...	The paper has run out during operation. 1 Printer is switched on but no paper is loaded in the displayed (active) paper compartment. 2 The paper is not fed past the light barrier.	▸ Insert paper in the active sheet feeder. ▸ Place the paper more to the left. If the display shows **Online** or **Offline** instead of **Print**, the printer has loaded no paper and there is no print job. It is no error message in this case, actions are not required.

Message	Possible cause	Corrective action
Paper Jam	Paper jam.	▸ Eliminate the paper jam detected by the paper motion sensor. For the procedure, see *Paper jam (fanfold paper)* (page 99) or *Paper jam (single sheets)* (page 100). ▸ Paper is too narrow. Use paper with a width of at least 6.3“ (16 cm).
Cover open	Top cover is open.	▸ Close the top cover.
Hardware Alarm	Internal hardware error.	▸ Try switching off and on. ▸ Check if changes to options have been previously carried out. ▸ Note down the display message. Contact your dealer.
Parity Error	Transmission error from computer to printer via the optional serial interface.	▸ Compare the interface configuration of your printer with the settings of your computer (protocol), see *Interfaces* (page 122). ▸ Check the cable, if necessary replace it. ▸ The cable exceeds the maximum allowed length, see *Interface specifications* (page 112).
Frame Error	Transmission error (serial interface).	▸ Compare the format setting of your printer with the setting of your computer. ▸ Check the permissible cable length, see *Interface specifications* (page 112). ▸ See parity error.

Message	Possible cause	Corrective action
Overrun Error	Received data which has not yet been printed is overwritten with new data.	▸ Check that the correct busy protocol (e.g. XON XOFF) is set in the menu **Serial interface, protocol**, see *Protocols* (page 127). ▸ Check the interface cable, see section *Connecting the printer* (page 9) and *Interfaces* (page 122).
Head Hot	The printer prints at lower speed.	▸ No action required. When this message comes up even in a “cold” printer, please contact your technical service.

Additional display messages

These are not error messages, they give operating instructions and information from the printer to the user.

Message	Possible cause	Corrective action
Press any key	—	▸ To proceed press any key.
Loading Default	The factory-set parameters are loaded and are written into all menus.	▸ No action required.
Only available in Epson Mode	Functions which have no meaning in this emulation have been selected.	▸ For this function please switch to the appropriate emulation in the menu, see *Selecting Protocol (emulation)* (page 51).
Park position	You are informed when the fanfold paper is in the park position.	▸ No action required.
Tear paper off	Note for the operator to tear off the paper automatically positioned at the tear off edge.	▸ Tear paper off.
Load paper from ...	Paper is not available in the selected paper path (… indicates the active paper path). Data is in the interface receiver buffer.	▸ Load paper, see section *Loading paper* (page 28)

If messages appear which are not described here, please contact your customer service representative with exact details of the message.

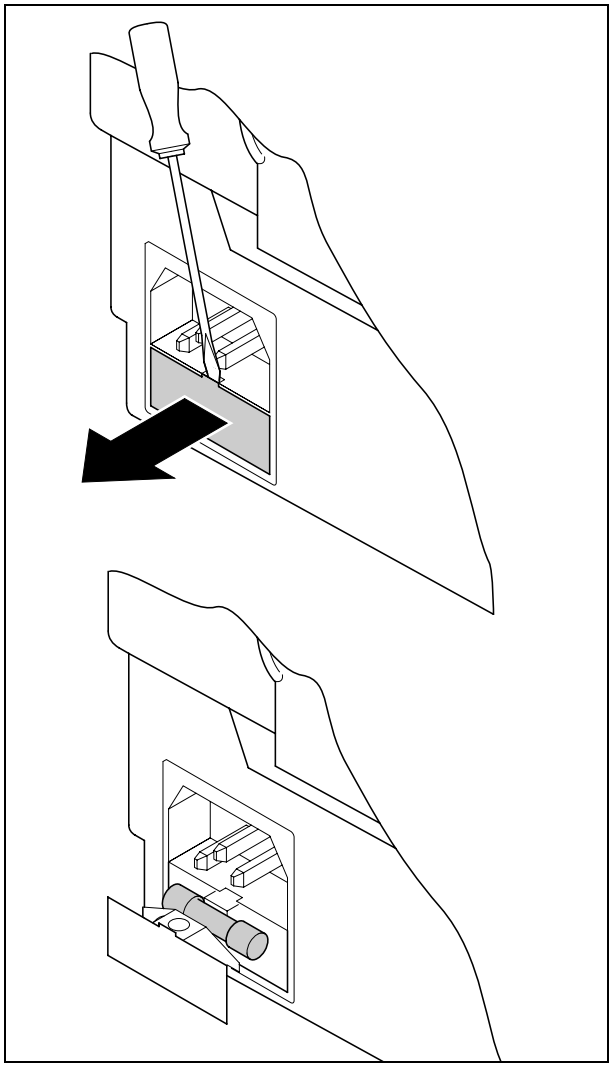
11 Care and maintenance

The printer is designed to operate with minimal maintenance. It is advisable to clean the inside of the printer from time to time with a vacuum cleaner.

Before cleaning, turn off the printer, wait 5 to 10 seconds and disconnect the power cable.

Do not oil or grease the printer, especially the sliderails and shafts.

Replacing the fuse



The printer is provided with a line fuse accessible from the exterior. Open the small compartment below the power supply connector with a screwdriver and pull out the compartment completely. Remove the defective fuse.

Install the new fuse in reverse order of steps.

Only use the same type of fuse for replacement.

The fuse ratings are specified on the printer type plate which is mounted above the power connector on the rear:

T2,50AH/250V

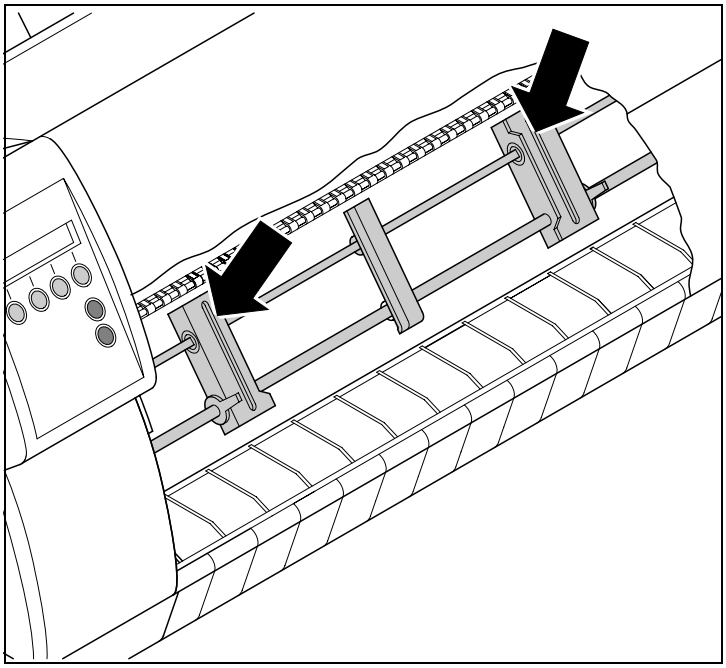
Cleaning the housing

Clean the printer housing with mild detergent (use a dishwashing agent, if necessary, or a plastic cleaning agent) and a soft lint-free cloth.

Do not use abrasive cleaners. Never use solvents.

Cleaning the interior

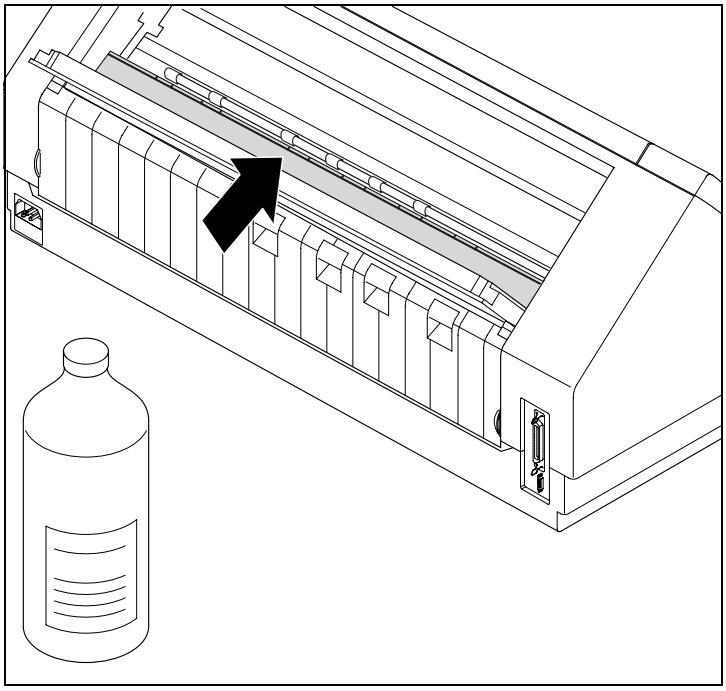
Remove paper and dust (ribbon deposits) with a soft brush.



Check that any paper has been removed from the tractors.

For optimal function of the print head the interior of the printer has to be as dust free as possible. Clean the interior with a vacuum cleaner if necessary.

Cleaning the platen



Remove the ribbon. Carefully clean the platen with platen roller cleaner (available from dealers).

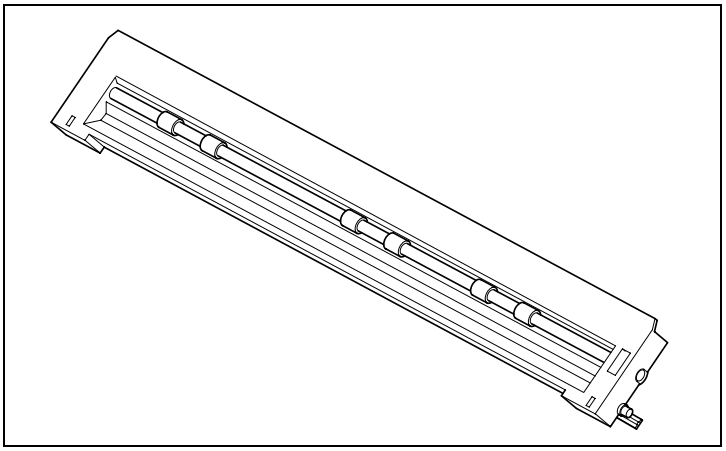
Remove dust carefully from the platen.

STOP **Avoid touching parts and components in the printer interior.**

Ribbon

Check whether the ribbon is worn or damaged. The ribbon must be replaced if it is frayed, see *Changing the ribbon cassette* (page 11) and *Error messages via the display* (page 102).

Cleaning the upper friction



Clean the rollers of the upper friction as necessary with a mild cleaning agent and a soft, lint-free cloth.

STOP **Avoid touching the pin rollers.**

Carriage shafts

STOP **Carriage shafts must not be oiled or greased; otherwise damage will occur on the printer.**

A Specifications

Printer specifications

Printer system	Serial impact matrix printer Printhead with 24 needles ∅ 0.25 mm bidirectional printing	
Print speed and character matrices		
DPQ = Draft (Data Print Quality)	500 cps / 10,0 cpi 12 x 12 600 cps / 12,0 cpi 12 x 10 750 cps / 15,0 cpi 08 x 08* 750 cps / 15,0 cpi 12 x 08 515 cps / 17,1 cpi 12 x 12 600 cps / 20,0 cpi 12 x 10	
CPQ = Copy Draft (Copy Print Quality)	225 cps / 10.0 cpi 24 x 12 270 cps / 12.0 cpi 24 x 10 340 cps / 15.0 cpi 16 x 08* 340 cps / 15.0 cpi 24 x 08 230 cps / 17.1 cpi 24 x 12 270 cps / 20.0 cpi 24 x 10	
NLQ (Near Letter Quality)	180 cps / 10.0 cpi 24 x 18 220 cps / 12.0 cpi 24 x 15 270 cps / 15.0 cpi 16 x 12* 135 cps / 15.0 cpi 24 x 12 155 cps / 17.1 cpi 24 x 18 180 cps / 20.0 cpi 24 x 15	
LQ (Letter Quality)	90 cps / 10.0 cpi 24 x 36 110 cps / 12.0 cpi 24 x 30 135 cps / 15.0 cpi 16 x 24* 135 cps / 15.0 cpi 24 x 24 155 cps / 17.1 cpi 24 x 18 180 cps / 20.0 cpi 24 x 15	
	* Epson emulation only: superscript, subscript, 15 cpi, microscript and MTPL microscipt	
Tab speed	50 inch/sec.	
Print width	*Narrow printer* 80 characters at 10 cpi	*Wide printer* 136 characters at 10 cpi
Character pitch	5 / 6 / 7,5 / 8,6 / 10 / 12 / 15 / 17,1 / 20 cpi	

Character size Height Width	 3,32 mm (incl. descenders) 2,19 mm, max. 2,43 mm
Fonts Standard Barcodes (standard)	 Print Qualities: DPQ (Draft), CPQ (Copy Draft) Near Letter Quality (NLQ), Letter Quality (LQ); Fonts: Courier, Roman, Sanserif, OCR A + B (all resident in NLQ und LQ); DLL is standard, but not battery-buffered 18 (see *Barcode* (page 121)
Emulations Standard Optional	 – DEC PPL2 – IBM Proprinter XL24E, IBM Proprinter XL24E+AGM – EPSON ESC/P2 on request
Resolution	60 to 360 dpi horizontal 90 to 360 dpi vertical
Print attributes in all character pitches	Double width, italics, right justification, shadowed, auto centered, double height, bold, proportionally spaced, underlined, overlined, superscript, subscript
Self-test	– ASCII test – Hex-dump – Fault display – Ribbon test
Printer buffer	64 KB
Panel	LCD display, 2 x 16 digits 6 function keys: – Online – Setup – 4 softkeys
Sound power level **Sound pressure level**	L_{WAd} = ≤7.2 B(A) (EN 27779, Print in highest print quality) L_{PAm} = ≤55 dB(A) (EN 27779, Print in highest print quality)
Continuous operation Throughput (ECMA 132) MTBF MTTR	 >26 000 pages/month DPQ >430 pages/hour >10 000 h; 25% DC <15 min.
Mains voltage	120 V ±10%, 60 Hz, ± 2% 230 V ±10% 50/60 Hz, ± 2%

Power consumption When Printing Stand by	 ≤40 W ≤10 W	
Main fuse	T2,50AH/250V	
Approvals	IEC 60950, CE, GOST, VDE/GS, $_{c}UL_{US}$, FCC/B	
Dimensions Width Height Depth	*Narrow printer* 424 mm 300 mm 399 mm	*Wide printer* 600 mm 300 mm 399 mm
Weight	*Narrow printer* 10.5 kg	*Wide printer* 13.2 kg
Paper feed Feed speed Feed first line (6 lpi) Reverse motion	 3.8 inch/sec 48 ms Up to max. form length (22 inch)	
Printhead gap Standard	 Automatic gap adjustment	
Paper transport Standard Optional	 – Tractor with parking position – Manual single sheet via front insertion (friction rollers) – Tractor 2 (Front2)	
Service life Printhead Ribbon	 250 millions/DPQ 12 x 12 Matrix *Narrow printer:* 3.5 millions characters, 20 m–0,8 m *Wide printer:* 5.0 millions characters 25 m–0,8 m	
Environmental conditions		
Operation Temperature Rel. humidity Climate **Storage** Temperature Rel. humidity Climate **Transport** Temperature Rel. humidity Climate	 +10° to +35°C 16 to 73% IEC 721-3-7, Class 7K1 -5° to +45°C 5 to 95% IEC 721-3-1, Class 1K3 -40° to +70°C 5 to 95% IEC 721-3-2, Class 2K4	

Interface specifications

Parallel interface	bidirectional
Type of data transmission	8-bit parallel interface (Centronics compatible) IEEE-1284; Nibble mode
Transmission rate	Max. 12 KHz
Signal status	Low: 0,0 V to +0,4 V High: +2,4 V to +5,0 V
Connection cable	Material: AWG 28 at least Length: up to 2,0 m Twisted-pair cable with double-shield, acc. IEEE Std 1284 – 1294
Voltage supply of external devices on pin 18	U = +5 V ±10% I = 0,5 A_{max}
Interface connections	Printer side: Amphenol 57-40360, 36-pin (or compatible) Cable side: Amphenol 57-30360, 25-pin (or compatible)
Serial interface	RS232C interface
Synchronization	Asynchronous
Transmission rate	600 bauds to 19,200 bauds
Signal status	OFF = Mark = log.1 = –3 V to –15 V ON = Space = log. 0 = +3 V to +15 V
Connection cable	Length up to 15 m
Interface connections	ITT Cannon connector, series DB-9 S
Transmission protocol	XON/XOFF, Robust XON/XOFF
Capacity of data buffer	64 KB max.

Paper specifications

Tractor 1	**Continuous paper, single part forms**	
	Weight	60 to 120 g/m^2
	Width	76 to 254 mm (narrow printer)
		76 to 420 mm (wide printer)
	Form length	76 to 559 mm
	Multi part forms (to be tested individually!)	
	Copies	1 + 5
	Weight of original	45 to 65 g/m^2
	Weight of copies	45 to 56 g/m^2
	Weight of bottom sheet	45 to 65 g/m^2
	Thickness (max.)	0.6 mm
	Width	76 to 254 mm *(narrow printer)*
		76 to 420 mm *(wide printer)*
	Form length	76 to 559 mm
Manual single sheet feeder	**Single part forms**	
	Weight	80 to 120 g/m^2
	Width	76 to 254 mm
		76 to 420 mm *(narrow printer)*
	Form length	76 to 305 mm (wide printer)
	Multi part forms (to be tested individually!)	
	Copies	1 + 5
	Weight of original	50 to 60 g/m^2
	Weight of copies	45 to 56 g/m^2
	Weight of bottom sheet	50 to 60 g/m^2
	Thickness (max.)	0.6 mm
	Width	76 to 254 mm (narrow printer)
		76 to 420 mm (wide printer)
	Form length	76 to 305 mm
	Envelopes	
	Width	76 to 420 mm
	Length	76 to 305 mm
	Thickness	0.32 mm

Printing paper	Recycling paper made of 100% waste paper (to DIN 19 309) can be processed.
Set of forms	Sets of forms may be used only if the top edge is bound. The binding edge should be as soft as possible. A wavy binding edge may hamper the smooth feeding of these sets. Multi-part forms have to be inserted with the glued top facing down. Multi-part forms should be tested for suitability.
Paper quality	Light pulp paper of medium fine quality, paper bearing the quality mark SM Post and photocopy paper are suitable for use. Unsuitable are: satin-finisch or coated papers, imitation art papers, and embossed papers. Since paper as natural material reacts strongly to environmental influences (e.g. humidity, temperature), the place of storage should be selected carefully. We recommend that this kind of paper should be tested extensively before larger quantities are acquired.
Coloured paper	Should papers with a dark reverse side be used, these should also be tested for their functionality. Please pay attention to the use of infrared reflecting colors, when acquiring these papers.

B Available character sets and fonts

The following list includes all the character sets you can select from the control panel or via ESC sequences and specifies the fonts in which they are available.
The character sets are only available in the fonts marked with an X. They can be selected via the menu or by means of ESC (<n> printer control sequences, in the EPSON emulation, also by ESC R, in the DEC emulation by the SCD command.

	ID for ESC R/ESC (	Draft	Draft Copy	Roman	Sans Serif	Courier (incl. Courier IBM)	OCR-B	OCR-A	Prestige	Script	Orator
ISO USA (ASCII)	42	X	X	X	X	X	X	X	X	X	X
ISO UK (British)	41	X	X	X	X	X	X	X	X	X	X
ISO France (French)	52	X	X	X	X	X	X	X	X	X	X
ISO Germany (German)	4B	X	X	X	X	X	X	X	X	X	X
ISO Italy (Italian)	59	X	X	X	X	X	X	X	X	X	X
ISO Norway (Norw./Danish)	60	X	X	X	X	X	X	X	X	X	X
ISO Spain (Spanish)	5A	X	X	X	X	X	X	X	X	X	X
ISO Portugal	4C	X	X	X	X	X	X	X	X	X	X
Epson USA	00	X	X	X	X	X	X	X	X	X	X
Epson France	01	X	X	X	X	X	X	X	X	X	X
Epson Germany	02	X	X	X	X	X	X	X	X	X	X
Epson UK	03	X	X	X	X	X	X	X	X	X	X
Epson Denmark	04	X	X	X	X	X	X	X	X	X	X
Epson Sweden	05	X	X	X	X	X	X	X	X	X	X
Epson Italy	06	X	X	X	X	X	X	X	X	X	X
Epson Spain	07	X	X	X	X	X	X	X	X	X	X
Epson Japan	08	X	X	X	X	X	X	X	X	X	X
Epson Norway	09	X	X	X	X	X	X	X	X	X	X

	ID for ESC R/ESC (	Draft	Draft Copy	Roman	Sans Serif	Courier (incl. Courier IBM)	OCR-B	OCR-A	Prestige	Script	Orator
Epson Denmark II	0A	X	X	X	X	X	X	X	X	X	X
Epson Spain II	0B	X	X	X	X	X	X	X	X	X	X
Epson Latin America	0C	X	X	X	X	X	X	X	X	X	X
Epson Korea	0D	X	X	X	X	X	X	X	X	X	X
Epson Legal	40	X	X	X	X	X	X	X	X	X	X
Epson Turkey	0F	X	X	X	X	X	X	X	X	X	X
Epson Old Hebrew	10	X	X	X	X	X	X	X	X	X	X
Epson/IBM New Hebrew	A5	X	X	X	X	X	X	X	X	X	X
Epson/IBM D-Hebrew	A4	X	X	X	X	X	X	X	X	X	X
CP437 Latin US	80	X	X	X	X	X	X	X	X	X	X
CP850 Latin 1	82	X	X	X	X	X	X	X	X	X	X
CP851 Greek	88	X	X	X	X	X	X	X	X	X	X
CP852 Eastern Europe	87	X	X	X	X	X	X	X	X	X	X
CP853 Turkish	89	X	X	X	X	X	X	X	X	X	X
CP855 Cyrillic	8A	X	X	X	X	X	X	X	X	X	X
CP857 Turkish	8D	X	X	X	X	X	X	X	X	X	X
CP858 IBM with _	9E	X	X	X	X	X	X	X	X	X	X
CP860 Portuguese	84	X	X	X	X	X	X	X	X	X	X
CP861 Icelandic	94	X	X	X	X	X	X	X	X	X	X
CP862 Hebrew	8B	X	X	X	X	X	X	X	X	X	X
CP863 French Canada	85	X	X	X	X	X	X	X	X	X	X
CP864 Arabic	8C	X	X	X	X-	X	X	X	X	X	X
CP865 Nordic	86	X	X	X	X	X	X	X	X	X	X

	ID for ESC R/ESC (	Draft	Draft Copy	Roman	Sans Serif	Courier (incl. Courier IBM)	OCR-B	OCR-A	Prestige	Script	Orator
CP866 Russian	8E	X	X	X	X	X	X	X	X	X	X
CP866 Bulgaria	9D	X	X	X	X	X	X	X	X	X	X
CP869 Greek	9F	X	X	X	X	X	X	X	X	X	X
Mazowia (Polish)	92	X	X	X	X	X	X	X	X	X	X
8859-7 Greek	2D	X	X	X	X	X	X	X	X	X	X
8859-15 Latin 9 (Euro)	2F	X	X	X	X	X	X	X	X	X	X
Brazilian ASCII	6D	X	X	X	X	X	X	X	X	X	X
Abicomp (Br. Portuguese)	6E	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-1 Supplem.	63	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-2 Supplem.	B1	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-Greek Supp.	B2	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-Hebrew Sup.	B3	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-Cyrillic Sup.	B4	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-5 Supplem.	B5	X	X	X	X	X	X	X	X	X	X
DEC ISO Latin-9 Supplem.	B6	X	X	X	X	X	X	X	X	X	X
DEC Hebrew Supplemental	3F	X	X	X	X	X	X	X	X	X	X
DEC 7-Bit-Hebrew	44	X	X	X	X	X	X	X	X	X	X
DEC Legal	50	X	X	X	X	X	X	X	X	X	X
DEC JIS Katakana	49	X	X	X	X	X	X	X	X	X	X
DEC 7-Bit-Turkish	53	X	X	X	X	X	X	X	X	X	X
DEC 8-Bit-Turkish Suppl.	54	X	X	X	X	X	X	X	X	X	X
DEC 8-Bit-Greek Supplem.-	57	X	X	X	X	X	X	X	X	X	X
DEC Dutch	34	X	X	X	X	X	X	X	X	X	X

	ID for ESC R/ESC (	Draft	Draft Copy	Roman	Sans Serif	Courier (incl. Courier IBM)	OCR-B	OCR-A	Prestige	Script	Orator
DEC Finnish	35	X	X	X	X	X	X	X	X	X	X
DEC French-Canadian	39	X	X	X	X	X	X	X	X	X	X
DEC JIS Roman	4A	X	X	X	X	X	X	X	X	X	X
DEC Norwegian/Danish	36	X	X	X	X	X	X	X	X	X	X
DEC Swedish	37	X	X	X	X	X	X	X	X	X	X
DEC Swiss	3D	X	X	X	X	X	X	X	X	X	X
DEC Supplemental	62	X	X	X	X	X	X	X	X	X	X
DEC Technical	3E	X	X	X	X	X	X	X	X	X	X
DEC Special Graphics	30	X	X	X	X	X	X	X	X	X	X
DEC Portuguese	61	X	X	X	X	X	X	X	X	X	X
CP437 Greek	A0	X	X	X	X	X	X	X	X	X	X
Code MJK	A1	X	X	X	X	X	X	X	X	X	X
CP210	A2	X	X	X	X	X	X	X	X	X	X
CP220	A3	X	X	X	X	X	X	X	X	X	X

All codepages will be printed in all fonts, but the character shape may look the same although the font names are different. In IBM emulation only the codepages defined by ESC [T ... are available.

- DEC Technical: non-Greek characters are the same for all LQ fonts
- Greek characters are the same in OCR-A and OCR-B
- There are only two LQ fonts for cyrillic characters : Roman = Courier = Prestige = Script and Orator = SansSerif = OCR-A = OCR-B
- Arabic characters exist only in LQ 10 and 12 cpi, no Arabic Draft, Draft Copy and 15 cpi Epson style
- Greek characters look the same for all LQ fonts

- Epson Turkey, Old Hebrew, New Hebrew and D-Hebrew have preliminary IDs and cannot be selected via the ESC (t ... command; but the code pages will be implemented and shown in the menu and can be selected via the menu or with the ESC R ... command.
- Codepages 210 and 220 cannot be selected with ESC (t ... commands in Epson emulation, these commands are not defined, instead these codepages can be selected via the menu or with the ESC R ... command.
- There is only one Draft- and one LQ-font for all Hebrew characters and for all Katakana characters

C Emulations

General

When a printer understands the control set written for another printer type, it is said to emulate the other printer. Your printer in its standard version emulates, i.e. “understands” the DEC-PPL2 for the serial interface and Epson ESC/P2 using the parallel interface.

Escape sequences

Escape sequences or control codes tell the printer that the following transmitted code is a printer command and not a printable character.

They allow the selection of printer functions or the changing of printer parameters from the computer. By transmitting an escape sequence, you are able to change the previously set configuration of the printer (e.g. character set).

This chapter contains an introduction into the sequences and control codes which are used by your printer.

The settings made by escape sequences have priority over the settings made in Menu mode; therefore they override these.

What are escape sequences?

An escape sequence consists of an ESCape control character (ESC = decimal 27 or hexadecimal 1B) followed by one or more characters, which represent commands to the printer. Please note that this escape character has nothing to do with the ESC key on your computer keyboard.

For example, the control character ESC followed by the character “4” tells your printer to print the subsequent text in italics.

How are escape sequences used?

Escape sequences are transmitted to the printer by your computer software via the printer driver. Experienced users and programmers can also control the printer directly via control sequences, however before you start working with escape sequences and control codes, we recommend that you study the computer software manual.

To enter control codes the Ctrl key and an ASCII character must be pressed simultaneously. For instance, by pressing Ctrl and J a line feed is accomplished (it is required to output the character string on the printer). More information concerning this topic is contained in your computer software manual and the corresponding Programmer’s Application Manuals (see section *Programming manuals*, page 131).

For details on the escape sequences in the DEC, EPSON and IBM emulation refer to the *Programmer’s Manual* on this CD-ROM.

Barcode

Even the standard version of your printer has the possibility of using up to 18 different barcode types.

Barcode mode can be accessed in DEC emulation. The user can decide whether barcode is activated permanently or activated depending on the situation by means of an escape sequence.

List of available barcodes

Type	Barcode	Type	Barcode
0, 2	Code 3 of 9	11	UPC-A
1	Interleaved 2 of 5	12	UPC-E
4	EAN 8	13	Postnet
5	EAN 13	14	Industrial 2 of 5
7	Codabar a/t	15	not supported
8	Codabar b/n	16	MSI mod 10/10
9	Codabar c/*	17	Code 128 (EAN 128)
10	Codabar d/e	18	Matrix 2 of 5

Please note that within the Barcode environment the barcode commands have priority in case of conflicts with the emulation.

Additional information is provided in the *Programmer's Manual* on this CD-ROM.

D Interfaces

Your printer offers the possibility of operating either via a parallel or via a serial interface. This chapter informs you about the parallel Centronics compatible interface and the serial interface type RS232C/V.24 and describes the communication between your computer and the printer.

These interfaces are linked to form a so-called **shared interface**. Your printer can be configured to use only one interface or both alternately. When only one interface is used, it is monitored by the printer. If the printer is configured to use both interfaces simultaneously it monitors both interfaces for incoming data. As soon as the printer recognizes a signal it switches to the respective interface and sends the BUSY signal to the other interface. After finishing the data transmission, the printer remains switched to this interface for a certain period of time (Macro: 1 to 30 seconds, default 2 seconds). When this time has elapsed, the controller reenables both interfaces and the sequence described restarts. If incoming data is on the other interface and the current print position is not “Top of Form”, a form feed is carried out.

In the chapter *Options* (page 130) , the interfaces which can be purchased with your printer are listed.

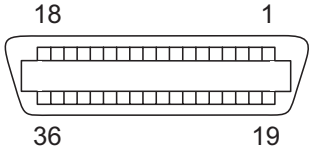
Parallel interface

The bidirectional parallel interface offers the so called “nibble” mode of the IEEE1284 interface norm. This enables installation in accordance with Windows “Plug & Play”.

The standard parallel interface is able to transfer data at a speed of max. 30,000 bytes per second. When the receiving buffer is full, the data input is blocked until the data buffer is empty. This guarantees data transmission in blocks of 1 KB.

Connector assignment

Connector no.	Direction Printer–PC	Signal
1	←	$\overline{\text{STROBE}}$ (active low)
2	←	DATA 1
3	←	DATA 2
4	←	DATA 3
5	←	DATA 4
6	←	DATA 5
7	←	DATA 6
8	←	DATA 7
9	←	DATA 8
10	→	$\overline{\text{ACK}}$ (active low)
11	↔	BUSY
12	↔	PAPER EMPTY (PE)
13	↔	SELECT
14	↔	$\overline{\text{AUTO FEED}}$ (active low)
15		not used
16	–	SIGNAL GROUND
17	–	CHASSIS GROUND
18	–	5 V (Imax = 500 mA)
19–30	–	SIGNAL GROUND
31	←	$\overline{\text{INIT}}$ (active low)
32	↔	$\overline{\text{ERROR}}$ (active low)
33	–	SIGNAL GROUND
34–35		not used
36	←	SELECT IN



Transmission length: max. 2,0 m

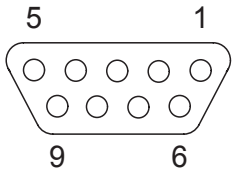
Serial interface V.24/ RS232C

Your printer's serial interface supports the RS232C specification. The signals are received and transmitted by a 9 pin connector.

Basically 3 lines are already enough for exchanging information between computer and printer (one receive line, one send line, one line for common grounding).

Connector assignment

Connector no.	Direction Printer–PC	Signal
3	→	TxD
4	→	DTR
2	←	RxD
6	←	DSR
7	→	RTS
8	←	CTS
5	—	Signal Ground SG
Shield	—	Frame Ground FG



Transmission length: max. 15 m

Interface cable (serial interface)

The cables used must be shielded. The cable shield must be connected to the connector shield on both ends.

PC/AT (9-pin)			Printer (9-pin)	
RxD	2	———	3	TxD
TxD	3	———	2	RxD
CTS	8	———	4	DTR/RDY
SG	5	———	5	SG
DSR	6	———		
DTR	4	———		

PC/AT (25-pin)			Printer (9-pin)	
FG	1	———		FG
TxD	2	———	2	RxD
RxD	3	———	3	TxD
CTS	8	———	4	DTR/RDY
SG	5	———	5	SG
DSR	6	———		
DTR	4	———		

It depends on the menu setting whether DTR or RDY is active at pin 4.

Input signals

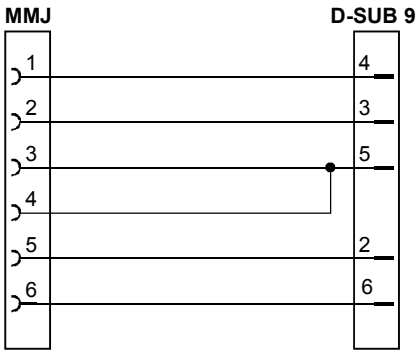
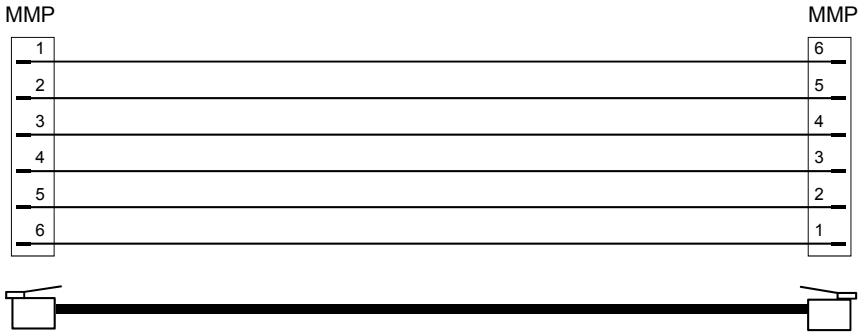
Signal	Function
CTS	Clear to Send
DSR	Data Set Ready
RxD	Receive Data

Output signals

Signal	Function
DTR	Data Terminal Ready
RTS	Request to Send
READY	Ready to receive data
TxD	Transmit Data

Interface-Adapter IF Adapter-Set RS232 (DB9M)/MMP

The set consists of an adapter RS232 (D-Sub9)/MMJ and a MMJ cable.

Adapter RS232(D-Sub9)/MMJ	
Serial connector	D-SUB9, male, 9 pins
Modular connector	DEC-MMJ, female, 6 pins
Internal wiring	
MMJ-Cable	
Length	3 m, unshielded, leads crossed (1–6, 2–5, 3–4)
Connector	2 x MMP, plug 6-pin
Internal wiring	

Make sure that the ferrit bead always points in direction to the printer.

Protocols

Memory mode XON/XOFF

The received characters are stored in a FIFO buffer (first in/first out). The characters are processed in this buffer.

The buffer capacity can be adjusted from 0 to 64 Kb.

If the buffer is full, the interface signals NOT READY (signal acknowledgement: Level 1, -12 V) and XOFF (hex. 13, dec. 19). This results in stopping the data transmission. When the FIFO buffer is empty again, the interface signals READY (level 0, +12 V) and XON (hex. 11, dec. 17). Data transmission can be continued.

In addition, the READY signal is influenced by the status of the printer (On/Off Line). If the printer assumes an undefined state, the interface also signals NOT READY and XOFF.

Memory mode Robust XON/XOFF

Robust XON/XOFF is similar to XON/XOFF. However, the state of the printer (XON or XOFF) is also periodically transmitted via the TxD line in the case of Robust XON/XOFF.

Configuring the serial interface of the PC

DOS mode

To use the serial interface of your PC, you must add the following mode commands to the AUTOEXEC.BAT file:

```
mode com1:9600,n,8,1,p
mode lpt1:= com1:
```

With the first MODE command, you configure the serial interface Com1 of your PC to the printer's factory defaults. The second MODE command redirects the parallel standard output port LPT1 of your PC to Com1.

Transmission rate:	9600 bauds
Parity:	none
Data bits:	8
Stop bits:	1

These settings must be modified to use other values.

Windows 95/98/ME

Click on the **Start** button in the Windows taskbar. Move the mouse to **Settings** and click on **Control Panel**. Click on **System**, followed by **Device Manager**. Click on **Ports**, **COM1** and **Port Settings**.

Bits per second:	9600 bauds
Data bits:	8
Parity:	none
Stop bits:	1

These settings must be modified to use other values.

Windows 2000/NT 4.0/XP

Click on the **Start** button in the Windows taskbar. Click on **Printers and Faxes** to open the printer folder. In the menu bar, click on **File** and **Server Properties**. Click on **Ports**, then select **COM1** and click on **Configure…**.

Bits per second:	9600 bauds
Data bits:	8
Parity:	none
Stop bits:	1

These settings must be modified to use other values.

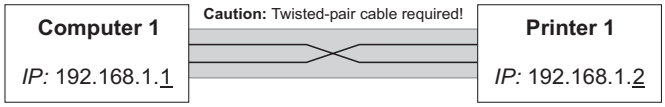
Physical printer port in Ethernet with TCP/IP

If you use your printer in a local network with Ethernet connections and the transmission protocol TCP/IP, you have to assign some adress informations.

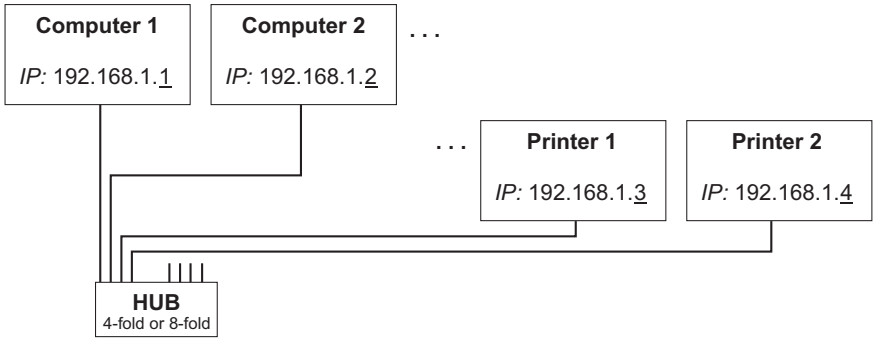
Address information for the Ethernet port can only be made available by your network administrator, who has the necessary rights to install printers on the network and/or make any changes.

- The assumed address space corresponds to the TCP/IP adress, class C, 192.168.1.xxx.
- The subnet mask to be used is 255.255.255.0
- The address of the router, or gateway, is 0.0.0.0, if not available.

Example of a printer connected to a computer in an Ethernet



Example of several devices in an Ethernet



You wll find more information on our *internet page*.

E Options and accessories

Options

The following options can be ordered for your printer.

Tractor 2, front

The push tractor is suitable for fanfold paper and sets of forms with 1 + 5 forms. Paper formats with a width of 76 to 264 mm (narrow printer) or 406 mm (wide printer) may be used. Each format in between can be set.

Part no.: 061 795 (narrow printer)

Part no.: 061 796 (wide printer)

Serial interface adapter

Serial interface adapter from 9 to 25 pins

Part no.: 047 995

MMJ interface adapter

Part no.: 070 086

Others

on request

Optional firmware

on request

Accessories

Ribbon cassettes

Ribbon cassettes are available in the following versions.

Name	Part no.
Ribbon cassette black, narrow printer	LA55R-KN
Ribbon cassette black, wide printer	LA55R-KW

Optional paper support

Name	Part no.
Optional paper support	062 217

Programming manuals

The available programming manuals are enclosed on this CD-ROM.

Index

M

N

O

P

Q

R

S

T

U

V

W

X

TALLY REPRESENTATIVES

U.S.A.
TallyGenicom
4500 Daly Drive, Suite 100
Chantilly, VA 20151
U.S.A.
Phone: +1 703 633 8700
Fax: +1 703 222 7629
http://www.tallygenicom.com

CANADA
TallyGenicom
125 Traders Boulevard, 9
Missisauga, Ontario L4Z 2E5
Canada
Phone: +1 905 8904646
Fax: +1 905 8904567
http://www.tallygenicom.com

UNITED KINGDOM
TallyGenicom Limited
Rutherford Road
Basingstoke, Hampshire
RG24 8PD
England, U.K.
Phone: +44 870 872 2888
Fax: +44 870 872 2889
http://www.tallygenicom.co.uk

GERMANY
TallyGenicom
Computerdrucker GmbH
Postfach 2969
D-89019 Ulm
Deutschland
Tel.: +49 731 2075 0
Fax: +49 731 2075 100
http://www.tallygenicom.de

FRANCE
TallyGenicom S.A.
19 avenue de L'lle Saint Martin
F-92237 Nanterre Cedex
France
Tél.: +33 1 41 30 11 00
Fax: +33 1 41 30 11 10
http://www.tallygenicom.fr

ITALY
TallyGenicom S.R.L.
Via Borsini 6
I-20094 Corsico (MI)
Italia
Tel.: +39 02 48608 1
Fax: +39 02 48601 141
http://www.tallygenicom.it

SPAIN
TallyGenicom SRL
Joaquin Lorenzo 4, Local
28033 Madrid
España
Phone: +34 902 196 183
Fax: +34 913 739 943
http://www.tallygenicom.es

AUSTRIA
TallyGenicom Ges.m.b.H.
Eduard-Kittenberger-Gasse 95B
A-1232 Wien
Austria
Tel.: +43 1 863 40 0
Fax: +43 1 863 40 240
http://www.tallygenicom.co.at

Russian Federation and C.I.S.
TallyGenicom Representative
Park Place Moscow
Office D-206
Leninsky Prospekt 113/1
117198 Moscow
Russian Federation
Phone: +7 095 956 56 40
Fax: +7 095 956 55 41
http://www.tallygenicom.ru

SINGAPORE
TallyGenicom Pte. Ltd
63 Hillview Avenue
#08-22, Lam Soon Industrial Building
Singapore 669569
Phone: +65 6760 8833
Fax: +65 6760 1066
http://www.tallygenicom.com.sg

MALAYSIA
TallyGenicom Sdn. Bhd.
Wisma KT, Suite 3.02
No 14 Jalan 19/1
46300 Petaling Jaya
Selangor Darul Ehsan
Malaysia
Phone: +3 7625 1988
Fax: +3 7625 2688
http://www.tallygenicom.com.my