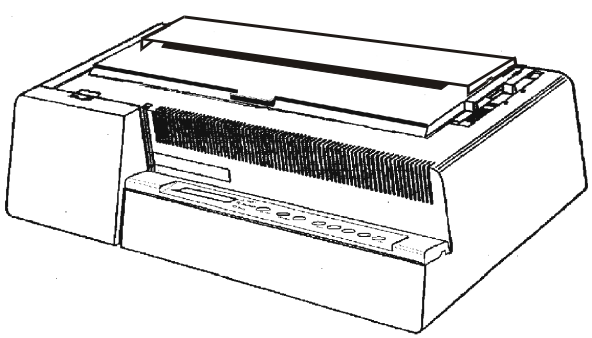
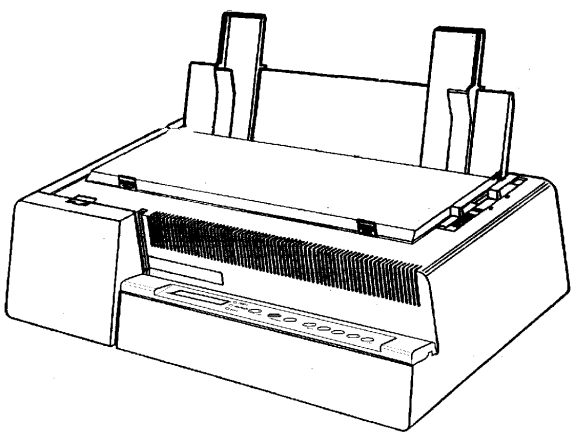
4051 / 4051N plus
4056 / 4056N plus

User Manual





Rev. 003

Compuprint Products Information

Thanks *for choosing the* **4051/51plus** *or the* **4056/4056plus** *printer.*

Your printer is a reliable working equipment that will be very useful in your daily job.

Our printers have been designed to be compact and respectful of the work environment. They offer a wide range of features and multiple functions that confirm the high technological level reached by the printers with Compuprint brand.

To maintain these printing performances unchanged in the long run, Sferal wwt has developed specific Compuprint branded consumables for each printer type (for example: ribbon cartridges for dot matrix printers, toner and OPC cartridges for laser printers, bubble ink jet cartridges for inkjet printers) that assure an excellent operation with high printing quality level reliability.

Sferal wwt recommends to use only its original Compuprint branded consumables with original packaging (identified by its holographic label). In this way, a proper use of the printer at quality level stated in the product characteristics can be assured. All typical usage problems related to not certified consumables may be avoided, such as an overall quality print level degradation and, often, the reduction of the product life due to the fact that the proper working conditions for the print heads, OPC cartridge and other printer parts are not assured.

Moreover, Sferal does not only certify its consumables in terms of working conditions but also carefully controls their compliance with the international standard rules concerning:

- *no cancerous materials;*
- *no flammability of the plastic materials;*
- *other standards*

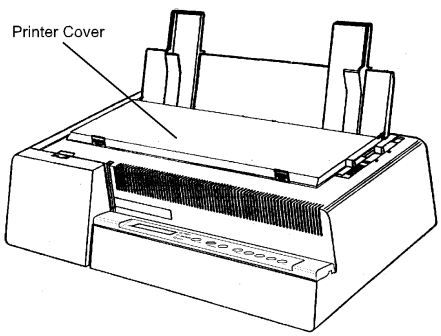
Sferal advises the customers not to use products for which the compliance to this safety rules are not warranted. Finally seek your dealer or contact a Sferal office and be sure that you are supplied with the original Compuprint branded consumables.

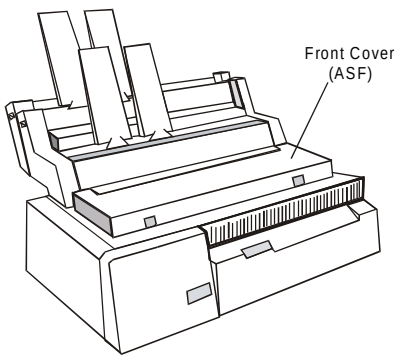
Safety Information

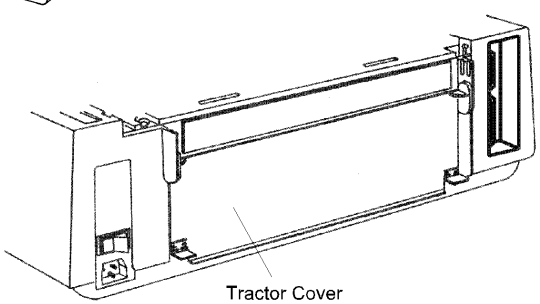
Never remove any printer cover unless it is necessary for the installation of a printer accessory and expressly described in this manual.

Please retain the printer covers in a safe place because they should be reinstalled if you decide to remove any printer.

The following areas of the printer should be covered for safety reasons:







The above openings must always be protected with their cover when the corresponding option is not installed. Do not touch inside and do not insert any object into these openings or into the gears.

FCC Notes

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver to outlets on different circuits.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could avoid the user's authority to operate the equipment. The use of a non-shielded interface cable with the referenced device is prohibited. The length of the parallel interface cable must be 3 meters (10 feet) or less. The length of the serial interface cable must be 15 meters (50 feet) or less.

Canadian D.O.C. Radio Interference Regulation

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des communications du Canada.

EEC Regulations

This equipment conforms to the EEC Directive 89/392 (the sound pressure, measured according to ISO 7779, does not exceed 70 dBA).

Table of Contents

Getting to Know Your Printer

Printer Features

4051/4051N plus

Common Features

- 9 Needle Print Head
- Draft printing at 480 cps and in Letter Quality at 120 cps
- IBM Proprinter XL III, EPSON FX Series (ESC/P) emulation
- High resolution printing at 240 x 144 dots per inch
- Operator panel with a Liquid Crystal Display (16 alpha-numeric characters), three leds and eight function keys to control the operating printer state
- Easy usage through the Operator Panel and through software commands
- Printing of the commonly used bar codes
- Plug & Play capability for 95/98/2000®
- Bidirectional IEEE 1284 parallel interface and standard serial RS-232/C-RS-422/A interface.

4051 plus Model Specific Features

- 136 columns
- An Automatic Sheet Feeder (option) that handles large quantities of cut sheets and allows simultaneous use of fanfold paper
- An optional Ethernet 10/100 Base-T interface that coexists with the serial interface.

4051N plus Model Specific Features

- 100 columns

4056/4056N plus

Models Common Features

- 24 Needle Print Head
- Draft printing at 480 cps and in Letter Quality at 133 cps
- IBM Proprinter XL24E, XL24E AGM, EPSON LQ 1050/2550 (ESC/P) emulation
- High resolution printing at 360 x 180 dots per inch
- Operator panel with a Liquid Crystal Display (16 alpha-numeric characters), three leds and eight function keys to control the operating printer state
- Easy usage through the Operator Panel and through software commands
- Printing of the commonly used bar codes
- Plug & Play capability for 95/98/2000®
- Bidirectional IEEE 1284 parallel interface and standard serial RS-232/C-RS-422/A interface.

4056 plus Model Specific Features

- 136 columns
- An Automatic Sheet Feeder (option) that handles large quantities of cut sheets and allows simultaneous use of fanfold paper
- An optional Ethernet 10/100 Base-T interface that coexists with the serial interface.

4056N plus Model Specific Features

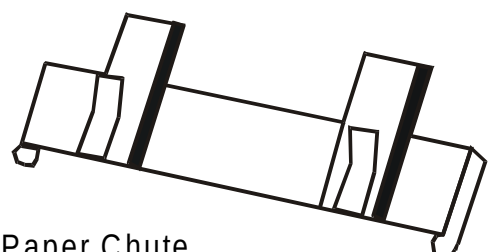
- 100 columns

Unpacking Your Printer

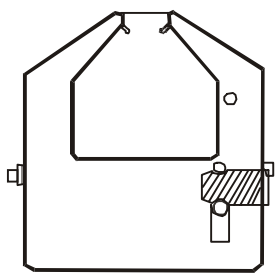
Together with the *Installation Guide* and the CD-ROM with the *User Manual*, the following items are included in the box:

Notify any damage to your supplier.

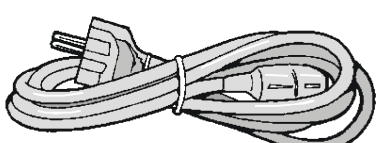
CD-ROM



Paper Chute
(4051/4056 plus only)



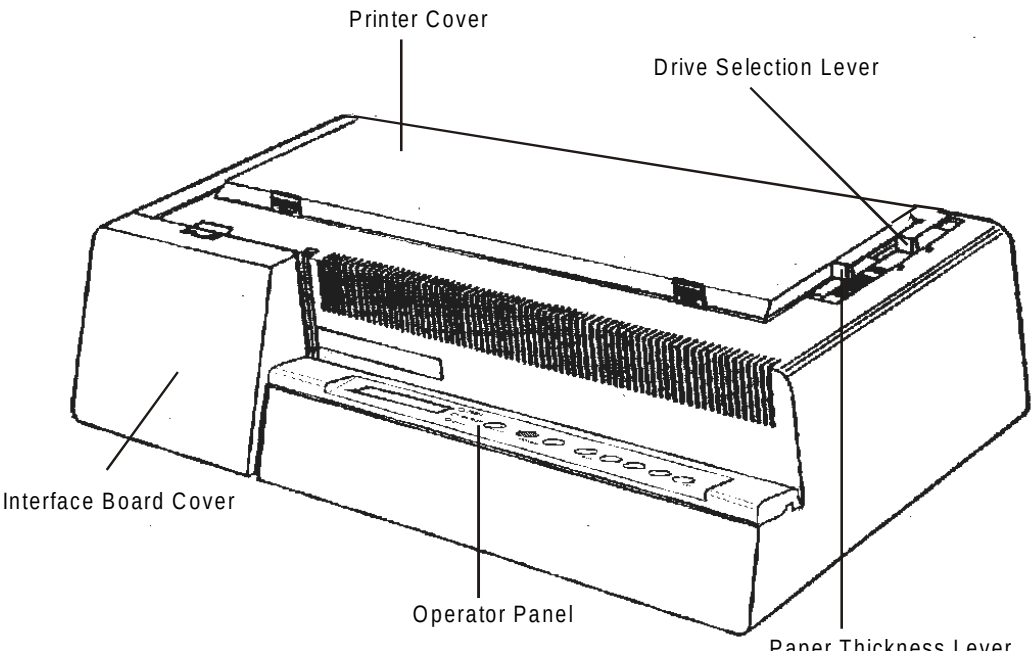
Ribbon Cartridge
Black Ribbon - 3 Mcrt



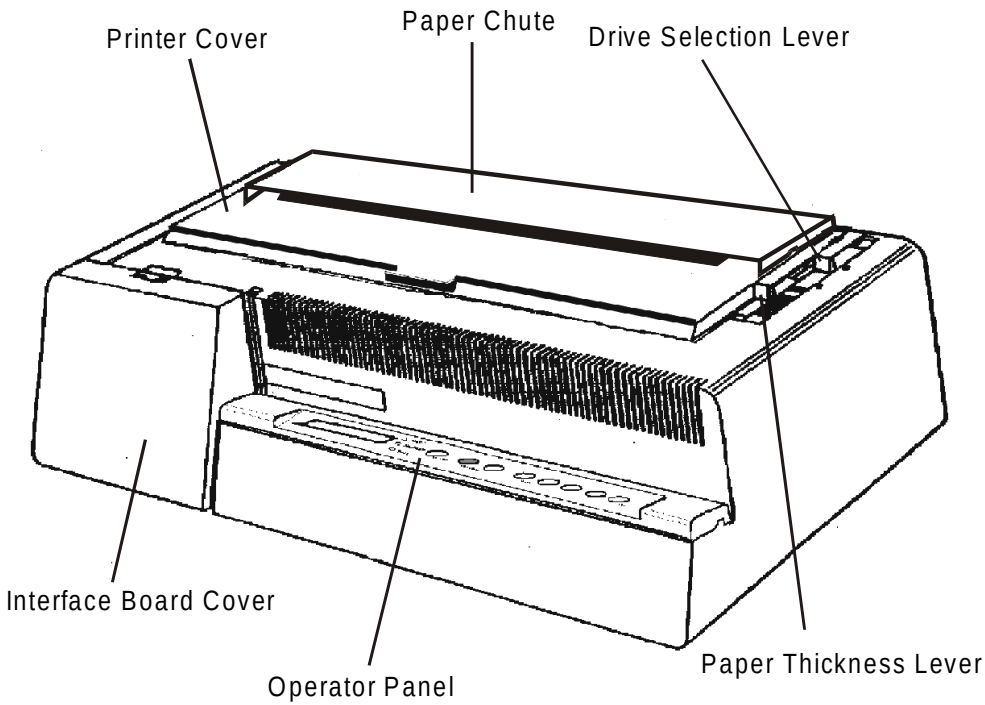
Power Cable

Printer Parts

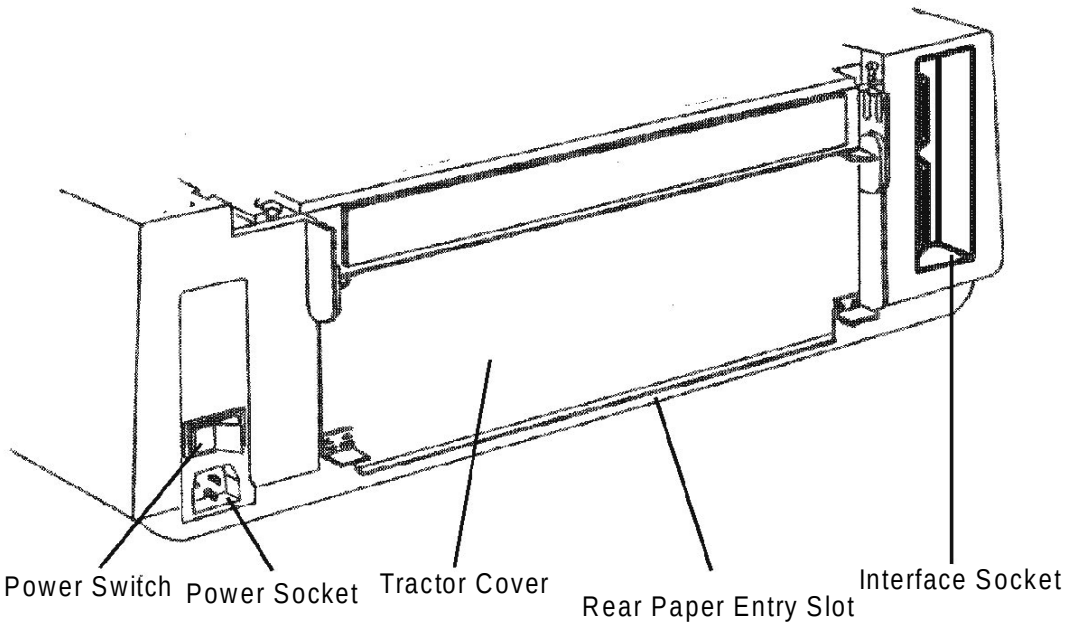
4051/4056 plus Models – Front View



4051N/4056N plus Models – Front View



All Models – Rear View



Setting Up Your Printer

Choosing a Suitable Location

Consider the following points when you choose the location for your printer:

- The distance between the printer and the host computer must not exceed the length of the interface cable;
- The location must be sturdy, horizontal and stable;
- Your printer must not be exposed to direct sunlight, extreme heat, cold, humidity or dust see "Printer Specifications" section later;
- You need a power outlet compatible with the plug of the printer's power cord. The voltage of the outlet must match the voltage shown on the printer's Rating Plate.

After selecting an installation location, install the printer making sure that there is sufficient space for operation.

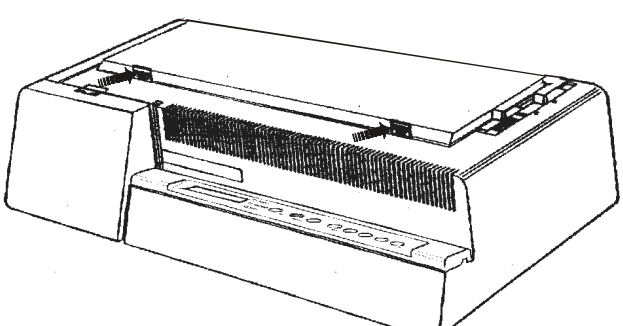
Printer Assembly

Ribbon Cartridge Installation

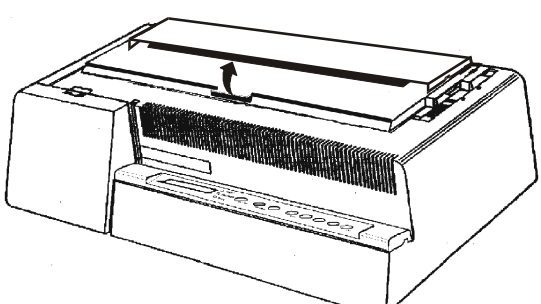
It is advisable to insert the ribbon cartridge while the printer is turned off.

However, your printer can be turned on during this procedure, but do not forget that it must be disabled to print (`Wait` displayed and READY led turned off).

1. Remove the printer cover by pressing simultaneously the two buttons in the front part of the cover.
   - If your printer is the 4051N plus or the 4056N plus model, do not remove but lift the printer cover.

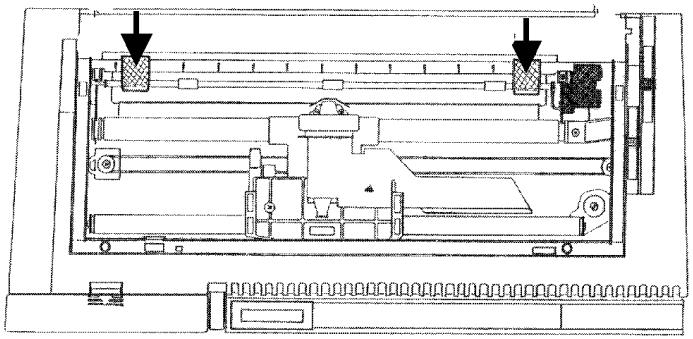


4051/4056 plus Models

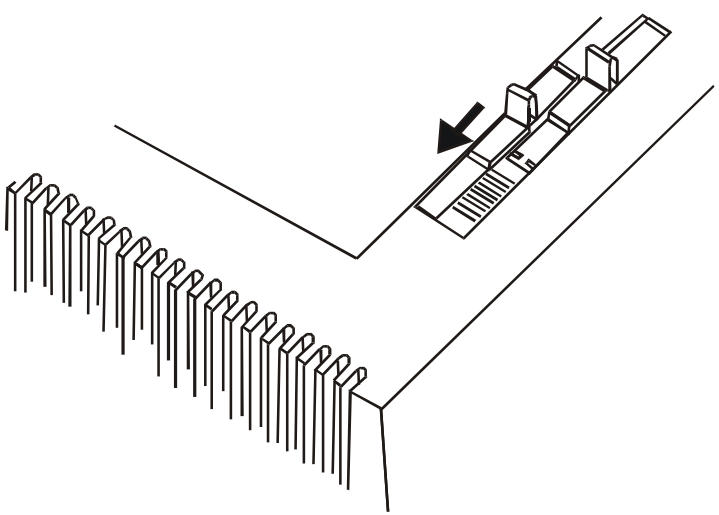


4051N/4056N plus Models

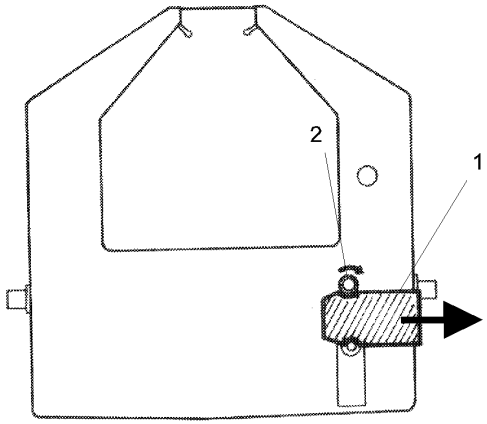
2. If you are inserting the ribbon cartridge for the first time, do not forget to complete the unpacking procedure by taking off the plastic hooks that fix the paper bail.



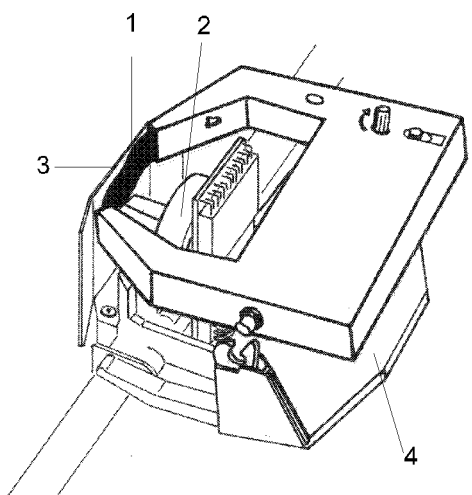
3. Pull the paper thickness lever towards the front of the printer to facilitate ribbon insertion.



4. Remove the new ribbon cartridge from its bag. Remove and discard the holdfast (1) that blocks the ribbon. Turn the tension knob (2) to tighten the ribbon.

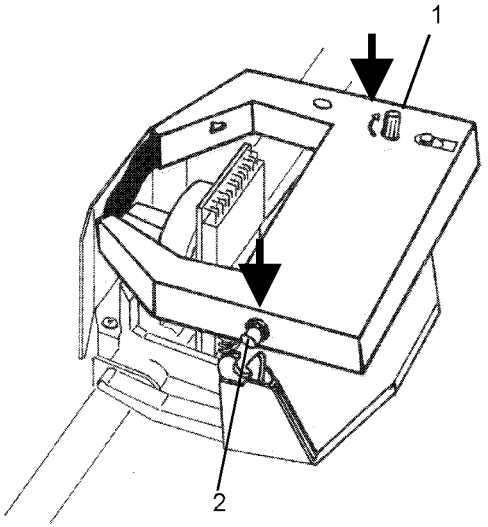


5. Insert the ribbon (1) between the print head (2) and the print head mask (3). Lay the cartridge over the printer carriage (4).

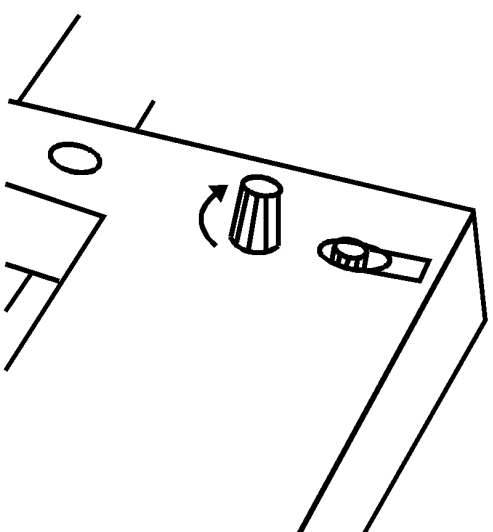


Make sure that the two pins on each side of the cartridge are positioned over the retaining clips of the printer carriage.

6. Push the cartridge gently down while turning the tension knob (1). Make sure that the cartridge clicks into place (2).

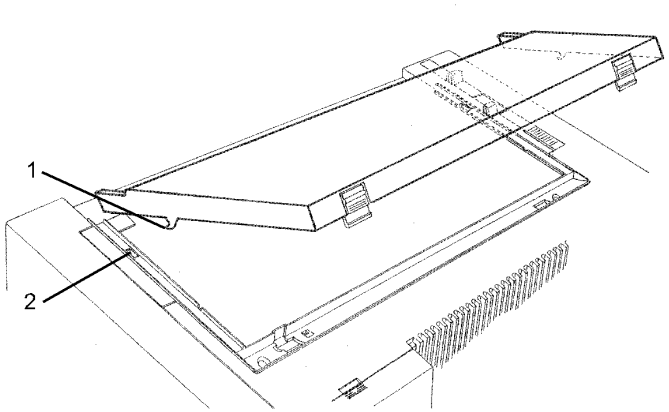


7. To tighten the ribbon, turn the tension knob in the direction shown by the arrow on the ribbon cartridge



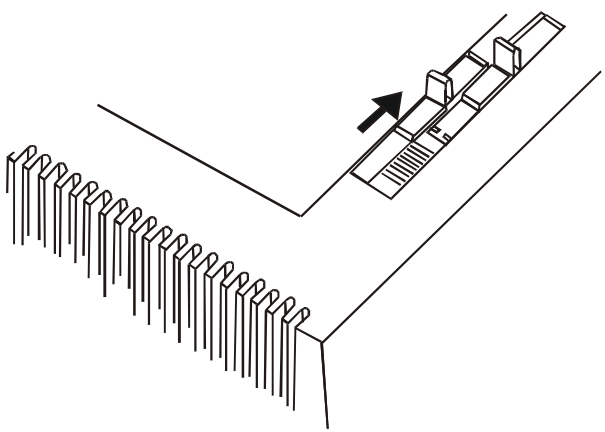
8. Replace the printer cover by first inserting the hooks (1) into the appropriate grooves (2) and then lower the cover ensuring that clicks in place.

- If your printer is the 4051N plus or the 4056N plus model, simply lower the printer cover to close it.



9. Move the paper thickness lever according to the paper type:

- If a cut sheet is loaded move the lever towards the back of the printer.
- If a multicopy-chemical paper is loaded, first move the lever completely towards the back of the printer, then 1 notch towards the front of the printer for each copy.
- If a carbon multicopy-paper is loaded, first move the lever completely towards the back of the printer, then 2 notches towards the front of the printer for each copy.



Now, you can load the paper and print your first test document, see "Printing the Self Test". If the pattern does not satisfy your expectation, adjust the paper thickness lever again.

When printing on multicopy-paper follow the above instructions to avoid damaging the print head.

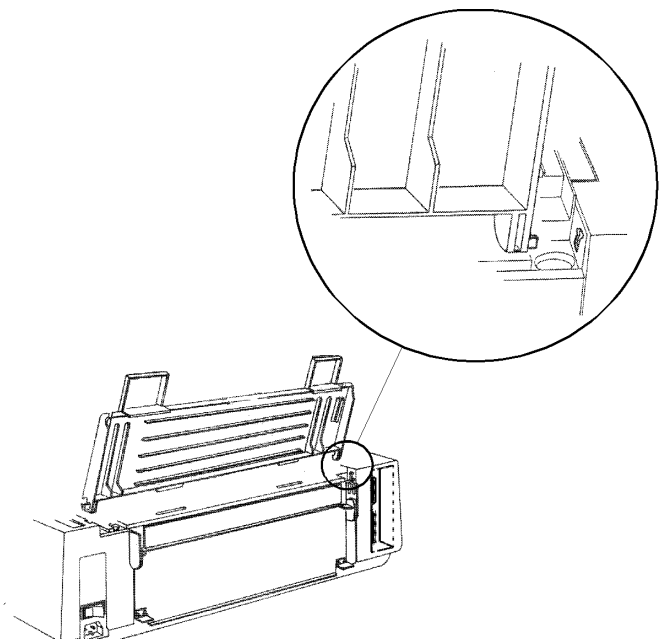
Paper Chute Installation (4051/4056 plus models only)

The paper chute is provided with the 4051plus and 4056 plus printers. To install the paper chute in the printer follow this sequence:

To insert the paper chute correctly, make sure that you are in front of the printer and that you hold the paper chute in the front position.

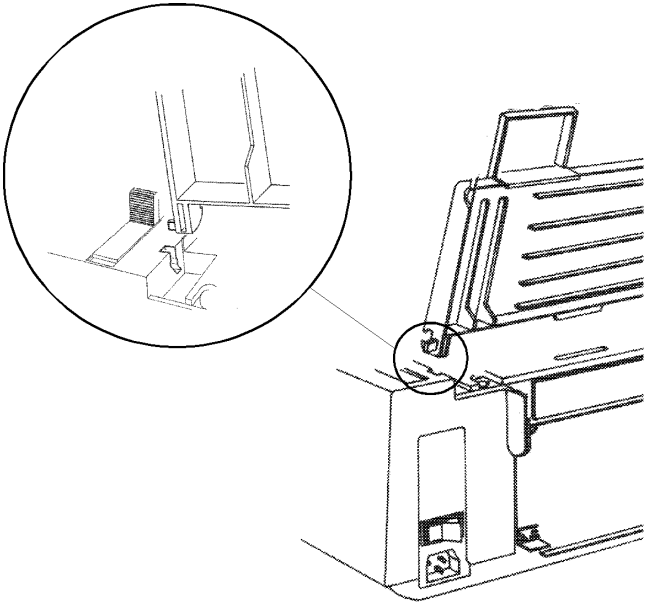
1. Insert the hook on the left side of the paper chute in the groove situated near the paper entry slot.

   The figure shows the back of the printer and the paper chute in the back position for a good view of the hook and groove. For this reason, you will see the left side of the paper chute shown on the right.

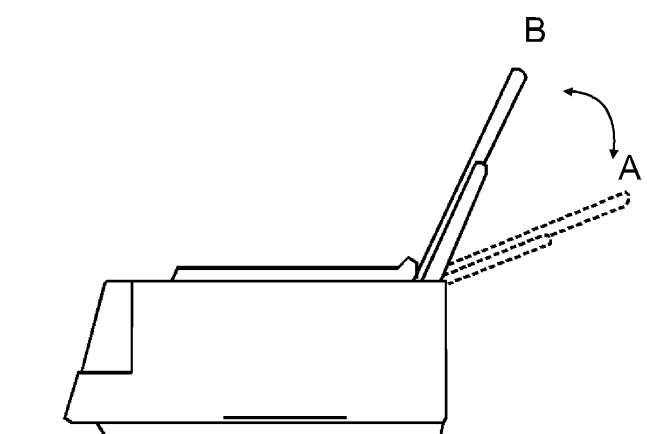


2. Flex the paper chute towards the front of the printer and insert the hook on the opposite side of the paper chute in the corresponding groove.

   This printer accessory may assume two different positions according to the paper type: down position for fanfold paper (A) and raised position for cut sheet (B).



3. If you wish to position the paper chute down, lift it towards the back of the printer and push it gently down until it stops. If you wish to place the paper chute in the raised position, lift it and hook it firmly.



Host Computer Connection

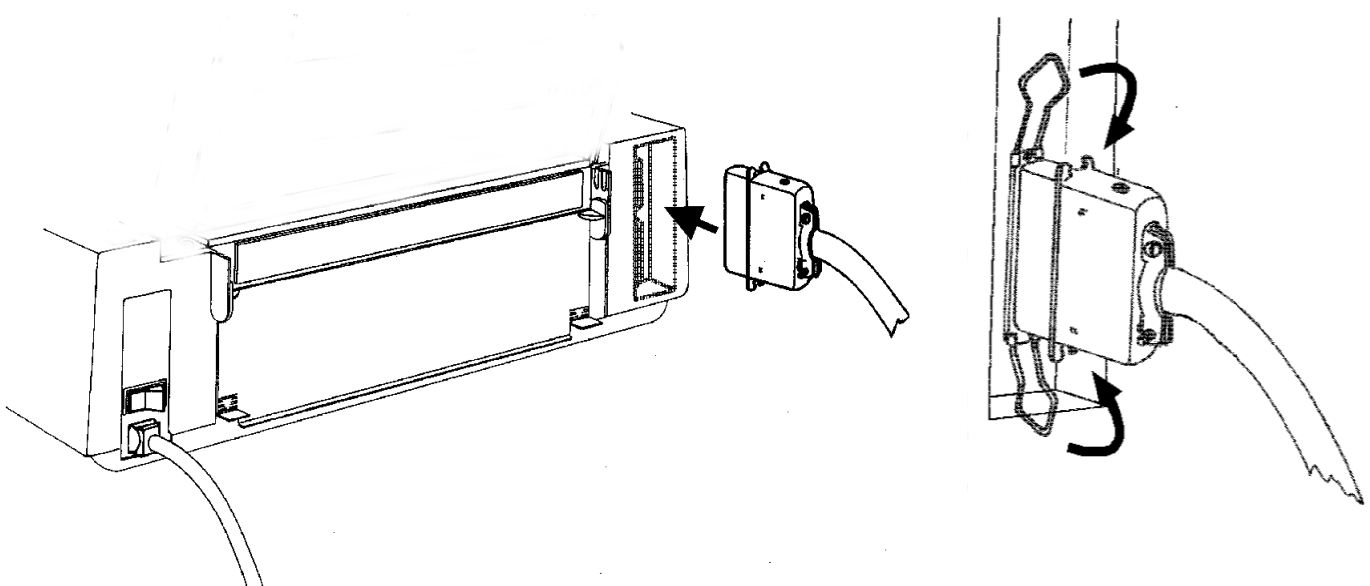
This printer can be connected to your host computer via two available interfaces. The interface connectors are located on the rear of the printer.

- A bidirectional IEEE1284 parallel interface
- A RS-232C/422A serial interface

Make sure that both printer and host computer are switched off.

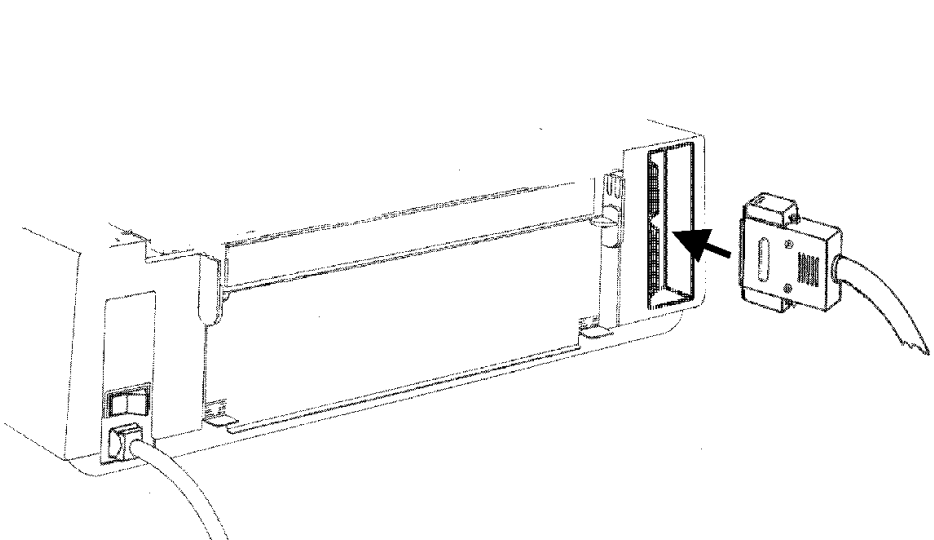
Parallel Connection

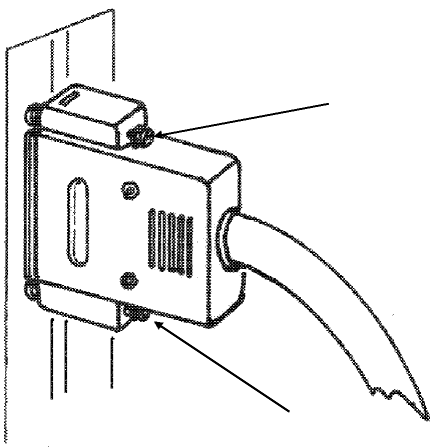
Insert the *parallel interface cable* into the parallel connector and fasten it by means of the clips.



Serial Connection

Insert the *serial interface cable* into the serial connector, and fasten it by means of the two screws (use the screwdriver).





Software Driver Selection

At this point it is necessary to configure your printer for your application package. The installation procedures depend upon the host environment:

Follow the instructions in the readme file you find on the CD-ROM.

In a WINDOWS® 95/98/2000 environment the printer supports the Plug & Play feature.

The printer drivers of all Compuprint printers can be found at the Internet Address http://www.compuprint.net/drivers

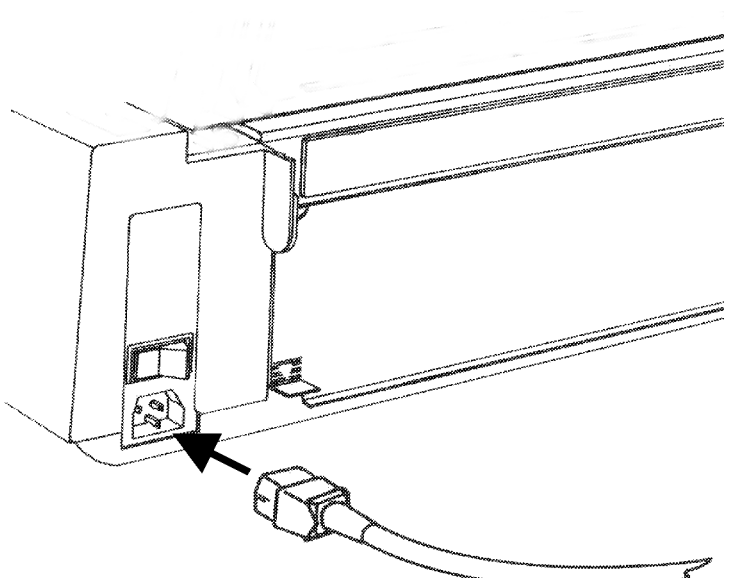
Power Connection

Make sure that the power outlet matches the power rating of the printer. See the name plate of the printer, that you find in the rear of the printer.

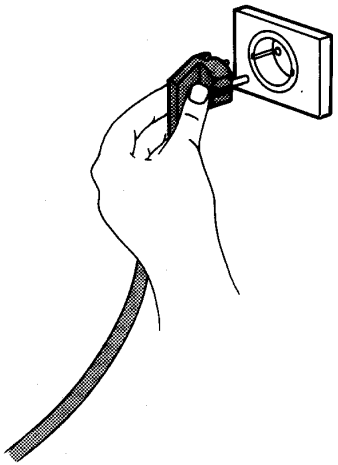
Always use a grounded outlet.

Make sure that the power outlet is near the printer location and easily accessible.

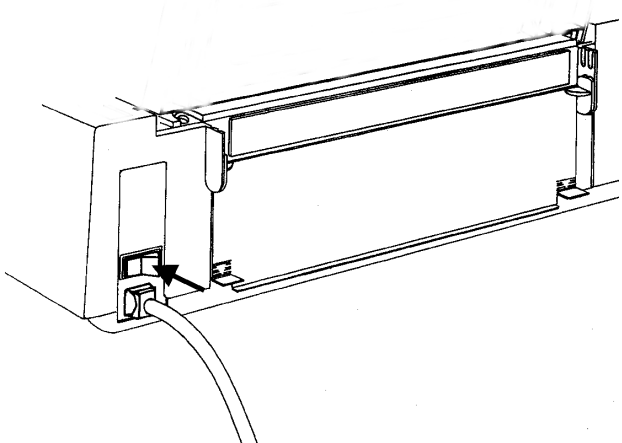
1. Make sure that the power switch at the rear of the printer is in the "*printer off*" position. Insert one end of the power cable plug into the printer connector placed on the rear of the printer.



2. Insert the other end of the power cable in a convenient outlet.



3. To turn the printer on, press the part of the power switch that now is up. The print head moves and stops at about 6.5 inches from the left side of the printer and the indicators on the operator panel light up for a few seconds.



Every time the printer is turned off and you need to turn it on again, wait 3 seconds before turning it on.

Selecting the Display Language

The display messages for this printer can be displayed in two different languages: English (Default) and Italian.

To select the language that you prefer, proceed as follows:

1. Enter the *Power on Configuration* procedure.
   - Make sure that the printer is turned off.
   - Keep the PROGRAM key pressed while you turn on the printer. After the initialization phase the following message will be displayed:

INSTALLATION

2. Press the → key to select the function.
3. Press the ↓ key until the language first level function is displayed:

LANGUAGE

4. Press the → key to select the function. The following message will be displayed:

* English

   The symbol ' * ' means that the shown parameter is the selected one, in this case it is the default value.

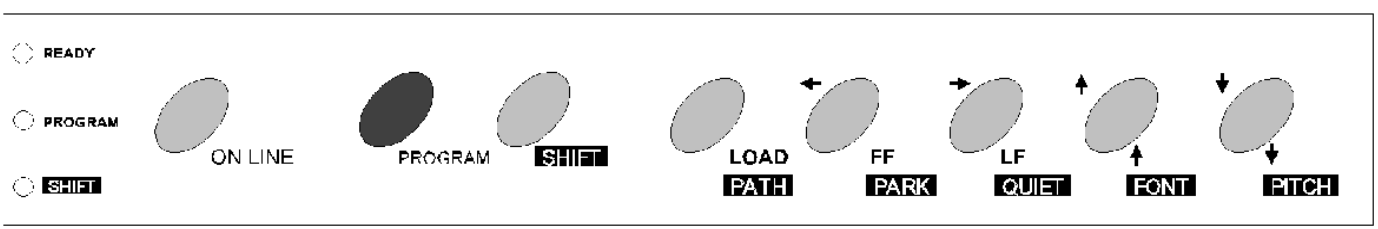
5. Press the → key to select it.
6. Press the PROGRAM key to exit the *Power on Configuration* procedure. From now the display message will appear in the selected language.

Configuring the Printer

Operator Panel Presentation

The operator panel consists of three elements:

- *Display*: you can see on the display various messages usually regarding the printing functions.
- *Indicators*: give information about the operating state of the printer.
- *Function keys*: allow you to change operating state of the printer as necessary.



Display Messages

The display messages can be divided into three main groups:

STATUS MESSAGES	give information about the current operating printer state.
SETUP MESSAGES	are displayed during the printer setup procedure. See "Printer Setups" later in this section.
ERROR MESSAGES	signal the printer faults.

Basic Indications on the Display

When turning the printer on, after the message `405x plus`, the display indicates the printer status (`Ready`, `Wait`, `Busy`, `Quiet`), the current macro (`M1`, `M2`, `M3`, `M4`) and the selected emulation (IBM XL III or EPSON FX for the 4051/4051N plus printers and IBM XL 24E, IBM XL24 AGM and EPSON LQ for the 4056/4056N plus printers) as follows:

```
Ready              M1-EPS
```

The following list shows you the status and error messages in alphabetical order:

`1.Enable path SS` `2.Remove paper`	Displayed when `Bin 1`, `Bin 2` (4051/4056 plus models only) or `Manual` paper path loading is not successful. Check the position of the selection lever (towards the back of the printer for single sheets).
`1.Tear-off paper` `2.Remove paper`	Displayed when the fanfold paper to park is too long. Tear the printed paper and press the PARK key again.
`2. Park paper`	Displayed when Park operation is not successful.
`4051 plus` or `4051N plus` or `4056 plus` or `4056N plus`	This message appears on the display immediately after turning the printer on to indicate that it is initializing to its power on setting. The print head moves to its initial position. The printer is logically disconnected from the host and is disabled to receive data. The READY indicator is turned off.
`Bin 1`	Displayed when ASF Bin 1 paper path is selected (4051/4056 plus models only).
`Bin 1/2`	Displayed when ASF Bin 1/2 paper paths are selected (4051/4056 plus models only).
`Bin 2`	Displayed when ASF Bin 2 paper path is selected (4051/4056 plus models only).

Buffer cleared	Displayed after input buffer clearing (all the stored data are erased).
Call Service	Displayed in rolling mode together with the failure message to indicate a call to Service.
Carriage error	Displayed when there is an unrecoverable carriage error. This means that the printer carriage does not move correctly. When the Carriage error message is displayed, the indicator READY blinks. Check that the ribbon cartridge is not used up neither damaged.
Check connection	Displayed when a DSR, DCD, or CTS signal fault occurs.
Check interface	Displayed when an Input buffer overflow occurs
Check its moving	Displayed when a carriage fault occurs.
Check line	Displayed when a communication error occurs.
Comm. failure	Displayed when a communication error occurs
Data lost	Displayed when an input buffer overflow occurs.
Enable path FF	This message appears on the display immediately after switching Manual path to Fanfold path. Place the drive selection lever in the fanfold position.
Enable path SS	This message appears on the display immediately after switching Fanfold path to Manual path. Place the drive selection lever in the single sheet position.
Fanfold	This is one of the messages that will be displayed when you press PATH (Shift function). Press the SHIFT key to select the fanfold paper path.

Fanfold thru ASF	This is one of the messages that will be displayed when you press PATH (Shift function). Press the SHIFT key to select the handling of the fanfold paper with the Automatic Sheet Feeder (option) installed (4051/4056 plus models only).
Initializing	Displayed while the printer is turned on.
Invalid keypress	An invalid pressing of a key has occurred.
Labels	This is one of the messages that will be displayed when you press PATH (Shift function). Press the SHIFT key to select the fanfold paper with adhesive label loading.
Load	Displayed when a paper out occurs.
Loading paper	Displayed when there is a paper loading request (fanfold or cut sheet).
Manual	This is one of the messages that will be displayed when you press PATH (Shift function). Press the SHIFT key to select the manual cut sheet path.
NVM changed	Displayed when NVM contents has been changed.
Parking paper	Generic status message for all parking operations.
Press any button	Generic user intervention message.
Press Park	You are requested to press the PARK key.
Printer failure	Displayed in case of fault during the initialization.
Printing test	Displayed while the self-test is running.
Processing	Generic wait message for an operation.

Quiet --- OFF	Displayed when the Quiet function is not selected.
Quiet --- ON	Displayed when the Quiet function is selected.
Ready M1-EPS	Displayed when the printer is on line and ready to print.
Release button	Generic user intervention message.
Remove paper	Displayed when Eject operation is not successful.
Self-test	Displayed during the self test procedure. You can select the test procedure keeping pressed the ON LINE key while turning on the printer. The printer is disabled to receive data from the host and the READY indicator is unlit. To stop test procedure press again the ON LINE key.
Serial I/F error	Displayed when a DSR, DCD, or CTS signal fault occurs.
Shift	Displayed every time that the SHIFT key is pressed to indicate that the Shift function is selected.
Stand-by	Displayed when the printer is in stand-by status.
Top cover open	Displayed as long as the top cover is open.
Wait M1-EPS	Displayed when the printer is unable to print. The indicator READY is unlit.

Indicators

READY	Lit	When the printer is enabled to receive and print data.
	Blinking	The printer is unable to receive and print data (`Wait` message displayed) but there is still data in the input buffer.
	Unlit	When the printer is unable to print because: • the test procedure is running; • the printer initialization is running.
PROGRAM	Lit	When the PROGRAM function of the operator panel keys has been selected and enabled.
	Unlit	When the normal function of the operator panel keys is selected.
SHIFT	Lit	When the SHIFT function of the operator panel keys has been selected and enabled.
	Unlit	When the normal function of the operator panel keys is selected.

Function Keys

Each key can select one of the three available function modes: Normal, Program or Shift.

- The *Normal* function does not require previous action to be selected.
- The *Program* function is selected by pressing the PROGRAM key when the printing is disabled. Keep pressed this key while turning on the printer until the message `Release button` is displayed, the Power on Configuration Setup will be entered. Pressing this key while the printer is in Wait (indicator READY unlit) the Program Setup will be entered.
- The *Shift* function is selected by pressing the SHIFT key. This function key is disabled when the Program function is selected.

ON LINE Key

ON LINE	Normal Function	Pressing this key you will obtain different results depending on the printer status: • When the READY indicator is lit on, pressing this key you will cause the stop of the printing at the end of the current line; the READY indicator blinks if there is some data left in the Input buffer, otherwise the indicator is turned off and the `Wait` message will be displayed. • When the READY is unlit or is blinking pressing this key the printing will be enabled and the READY indicator is turned on. • Pressing this key while powering the printer on, the message `Printing test` is displayed and the check test is executed. If you want to stop the self-test press this key again.
	Program Function	Pressing this key you will obtain different results depending on the interface configuration (parallel or serial interface). • In parallel configuration, the information in the Input buffer is reset and the `Buffer cleared` message will be displayed. • In serial configuration, the information in the Input buffer is reset.

LOAD/PATH Key

LOAD	Normal Function	If you press this key while the printer is unable to print you will obtain the following effects: • No action if paper is already present. The `Invalid keypress` will be displayed • If paper is not present, pressing this key, the paper is loaded according to the drive selection lever selection • If the optional ASF is installed, the paper is loaded from the selected ASF bin (4051/4056 plus models only).
PATH	Shift Function	This key selects the paper paths and it is enabled when the printing is disabled. The display shows the paper path you can use. If you want to select the displayed paper path, release the key and do not press it again within 1 sec. The available paper paths are • For 4051/4056 plus models: `Fanfold - Labels - Fanfold Thru Asf - Manual - Bin 1 - Bin 2` • For 4051N/4056N plus models: `Fanfold - Labels - Manual`

FF/PARK Key

FORM FEED	Normal Function	Pressing this key while the printer is offline causes: • The paper, if loaded, advances at new page or, if parked, is positioned on the first printable line. • The cut sheet, if loaded, is ejected (max. 21 inches) or a new cut sheet will be loaded.
PARK	Shift Function	No action if the paper is not present. `Invalid keypress` message is displayed. Fanfold paper, present in the printer, is set in parking position. `Parking paper` is displayed. Cut sheet, already inserted, is ejected.
←	Program Function	The ← function allows you to get at the previous level of the *Printer Setup*.

LF/QUIET Key

LINE FEED	Normal Function	It is available when printing is disabled. This function causes a paper advancement to the next printable line. Keeping pressed this key for more than a second, you will obtain the continuous execution of paper advancing.
QUIET	Shift Function	It allows a noise level reduction. Keeping pressed this key `Quiet---OFF` and `Quiet--- ON` will be displayed in rolling mode. If you want to enable this function, release this key when the message `Quiet---ON` is displayed. On the display remains the message `Quiet`. To disable this function release this key when `Quiet ---OFF` is displayed. If QUIET mode is selected while the printer is printing , it will be activated at the end of the current line.
→	Program Function	The function → allows you to get to the next level of the Printer Setup. When `SELECT MACRO` is displayed, pressing → key the selected and operating macro will be displayed. Using the ↑ and the ↓ keys you will be able to display all the selectable macros. (`MACRO n` is displayed). Pressing the → key the displayed macro is selected and using the ↑ and ↓ keys the selectable parameters will be displayed. Select the parameter to be modified by pressing the → key (the selected and active value is marked with an asterisk (*) on the left of the value itself), press the ↑ and the ↓ keys to select it then press → key to confirm it.

FONT Key

↑	Normal Function	The ↑ (MICRO FEED FORWARD) function is available when the printer is not printing and causes a forward micro feed of the paper. Keeping pressed this key for a second, the paper will advance in continuous mode at the speed of 3.5 ips (slew speed).
FONT	Shift Function	The Font function will be enabled. This function allows you to choose among the selectable fonts. Keeping pressed this key or pressing it within 1 second, the fonts will be scrolled. Release this key when the name of the requested font is displayed or do not pressed again within a second. The font messages are: `Draft - Courier - Gothic - OCR-A - OCR-B` for the 4051/4051N plus printers and `Draft - Courier – Gothic – Boldface – Prestige – Script -Presentor - OCR-A - OCR-B` for the 4056/4056N plus printers.
↑	Program Function	The ↑ (Up arrow) key allows you to scroll upwards the functions that are present in a function level, or to scroll upwards the function values if you are at selection level. The numeric values are incremented.

PITCH Key

↓	Normal Function	The ↓ function is available when the printing is not printing and allows to move backwards the paper with a micro advancement. Keeping pressed this key for a second, the paper moves backwards in continuous mode at the speed of 3.5 ips (slew speed).
PITCH	Shift Function	The pitch function allows you to select the available horizontal spacing. Keeping pressed this key or pressing it within a second the spacings will be scrolled. Release the key when the desired spacing is displayed or do not press it again within a second. Available horizontal spacings (CPI): `5 - 6 - 7.5 - 8.55 - 10 - 12 - 15 - 17.1 - 20`
↓	Program Function	The ↓ function allows to scroll downwards the functions that are in a level, or to scroll downwards the function values if you are at a selection level. The numeric values are decremented.

PROGRAM Key

PROGRAM	Normal Function	Keeping pressed this key while you turn on the printer you will enter *Power on Configuration Setup*. Pressing this key when the printer is unable to print, (indicator READY unlit) you will enter the *Program Setup* and the Program Function of keys are enabled. The PROGRAM indicator is turned on when the function is enabled. Pressing this key when the PROGRAM indicator is turned on, the Program Function is disabled and the indicator turned off.
	Program Function	If you press this key while you are in the *Program Setup* you will exit the configuration mode saving the function values that have been changed. If changes occurred, the message `SAVE MACRO?` will be displayed. Now, if you press the PROGRAM key you will exit the function and the new values will be only used as current ones. (When you turn off the printer you will loose any change you have made).If you press the → key, you will exit the Program Function and the modified values of the selected macro will be stored in a permanent mode.

SHIFT Key

SHIFT	Normal Function	Press the SHIFT key to select the Shift Function of the keys. The SHIFT indicator lights and the message `Shift` will be displayed as long as a key available for this function is pressed.
	Shift Function	Pressing the SHIFT when the SHIFT indicator is lit and the message `Shift` is displayed, disables the Shift function. The SHIFT indicator is unlit.

Buzzer

This printer is provided with a buzzer to indicate particular conditions according to the problem detected:

- 1 short "beep" (0,25 sec): the BEL code has been sent; when the buzzer sound stops, the printer returns to normal operation.
- Continuous "beep": the printer cover has been raised when the printer is enabled to print. Close the cover and make sure that the message `Wait` (READY indicator unlit) is displayed before raising the cover again.
- 4 long "beeps": a fault condition has occurred. See later "Error Handling".
- 4 short "beeps": A condition of paper end or paper removal has occurred.

Printer Setups

You can customize the printer depending on your needs via the *Power on Configuration Setup* and the *Program Setup* procedures.

Entering the Printer Setups

The PROGRAM key allows to enter the Printer Setups.

- Keep pressed the PROGRAM key while powering the printer on to enter the *Power on Configuration Setup*.
- Press the PROGRAM key when the printer is disabled (READY indicator unlit) to enter the *Program Setup*.

When you enter the desired Printer Setup, the Program functions, described above the key area, will be enabled.

Moving within the Printer Setups

The arrow keys ↑, ↓, ←, → are used to move within the different functions inside the Printer Setups.

- Use the ↓ key to scroll forward the functions (next ones) and ↑ to scroll them backwards (previous ones).
- Use the → key to select the next function or the value and ← to display the previous one.
- When the desired value is displayed, press the → key to select it.

Leaving the Printer Setups

Whenever you wish to leave the current Printer Setup, proceed as follows:

- In the *Power-On Configuration*, press the PROGRAM key and the new settings will be automatically stored. The printer leaves the Power on Configuration Setup and is disabled to print (READY indicator unlit).
- In the *Program Setup*, press the PROGRAM key and if any change occurred the message SAVE MACRO? will be displayed. Press the PROGRAM key and the modified values will be used as current settings (When the printer will be turned off they will be lost) or the key → to store the changes in a permanent way.

Power on Configuration Setup

The default values are marked with an asterisk (*) on the left. These are the available functions:

INSTALLATION	This function contents general parameters such as Protocol, Emulation and the display language.
INTERFACE	This function defines the interface physical type and communication features.
PRINT STATUS	This function allows to print the current printer configuration.
RECALL FACTORY	This function allows to reset the factory default values.

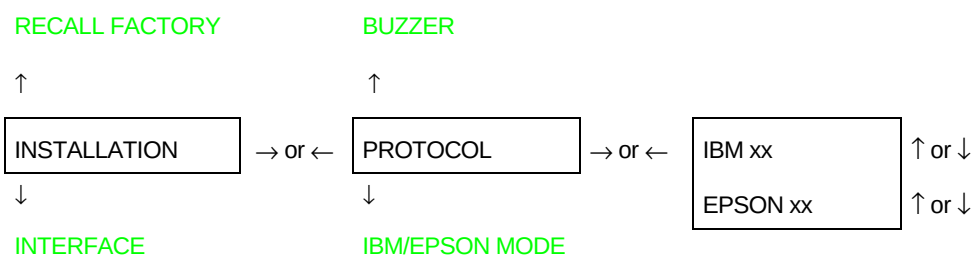
Entering the Power-On Configuration

1. Make sure that the printer is turned off.
2. Keep pressed the PROGRAM button key while turning on the printer. The `4051 plus`, `4051N plus`, `4056 plus` or `4056N plus` message will be displayed then `Release button` message.
3. Release the button key and the following message will be displayed:

```
INSTALLATION
```

INSTALLATION Function

Emulation Selection



IBM XL III	IBM XL III emulation (4051/4051N plus models only - default).
IBM XL 24E	IBM XL 24E emulation (4056/4056N plus models only - default).
IBM XL 24E AGM	IBM XL 24E AGM emulation (4056/4056N plus models only).
EPSON FX	EPSON FX Series emulation (4051/4051N plus models only).
EPSON LQ	EPSON LQ 1050/2550 emulation (4056/4056N plus models only).

IBM Mode

PROTOCOL

↑

IBM MODE	→ or ←	IBM C-SET (1/2)	↑ or ↓ → or ←	IBM set...
		NATION	↑ or ↓ → or ←	CP 437 ...
		20 CPI	↑ or ↓ → or ←	No

↓

EPSON MODE

IBM C-SET (1/2) IBM character sets selection.

NATION IBM national character sets selection.

20 CPI IBM compressed printing selection.

- IBM Character Sets

20 CPI

↑

IBM C-SET (1/2)	→ or ←	IBM set 1 (*)	↑ or ↓
		IBM set 2	↑ or ↓

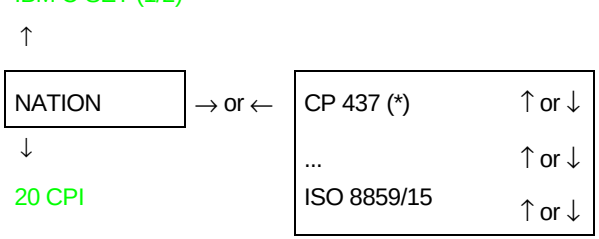
↓

NATION

IBM set 1 IBM CS1 character set selection.

IBM set 2 IBM CS2 character set selection.

- IBM National Character Sets

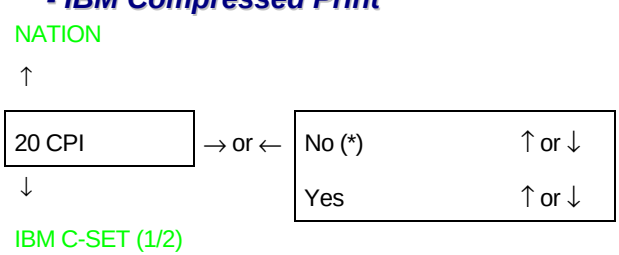


Selection of the IBM National Character Sets:

CP 437(*)	CP437 G	96 GREEK	CP850	CP851	CP 852
CP 853	CP 855	CP 857	CP 858	CP 860	CP 862
CP 863	CP 864	CP 865	CP 866	CP 867	CP 876
CP 877	CP 1250	CP 1251	CP 1252	GOST	TASS
MAZOWIA	ISO 8859/1	ISO 8859/2	ISO 8859/3	ISO 8859/4	ISO 8859/5
ISO 8859/6	ISO 8859/7	ISO 8859/8	ISO 8859/9	ISO 8859/15	

The CP 858 and ISO 8859/15 character sets contain the Euro character.

- IBM Compressed Print



No	The compressed printing is performed at 17.1 cpi.
Yes	The compressed printing is performed at 20 cpi.

EPSON Mode

PROTOCOL

↑

EPSON MODE	→ or ←	NATION	↑ or ↓	→ or ← USA
↓		EPSON C-SET	↑ or ↓	→ or ← Italics ....

LINE MODE

NATION EPSON national character sets selection

EPSON C-SET EPSON character sets selection.

- EPSON National Character Sets

EPSON C-SET

↑

NATION	→ or ←	USA (*)	↑ or ↓
↓		...	↑ or ↓
EPSON C-SET		ISO 8859/15	↑ or ↓

Selection of the EPSON National character sets:

USA (*)	FRANCE	GERMANY	ENGLAND	DENMARK1	SWEDEN
ITALY	SPAIN 1	JAPAN	NORWAY	DENMARK 2	SPAIN 2
LATIN A1	CP 437(*)	CP437 G	96 GREEK	CP850	CP851
CP 852	CP 853	CP 855	CP 857	CP 858	CP 860
CP 862	CP 863	CP 864	CP 865	CP 866	CP 867
CP 876	CP 877	CP 1250	CP 1251	CP 1252	GOST
TASS	MAZOWIA	ISO 8859/1	ISO 8859/2	ISO 8859/3	ISO 8859/4
ISO 8859/5	ISO 8859/6	ISO 8859/7	ISO 8859/8	ISO 8859/9	ISO 8859/15

The CP 858 and ISO 8859/15 character sets contain the Euro character.

- EPSON Character Sets

NATION

↑

EPSON C-SET	→ or ←	Italic	↑ or ↓
↓		Graphic 1	↑ or ↓
NATION		Graphic 2 (*)	↑ or ↓

Italic — EPSON Italic character set selection.

Graphic 1 — EPSON Graphic 1 character set selection.

Graphic 2 — EPSON Graphic 2 character set selection.

Line Mode

EPSON MODE

↑

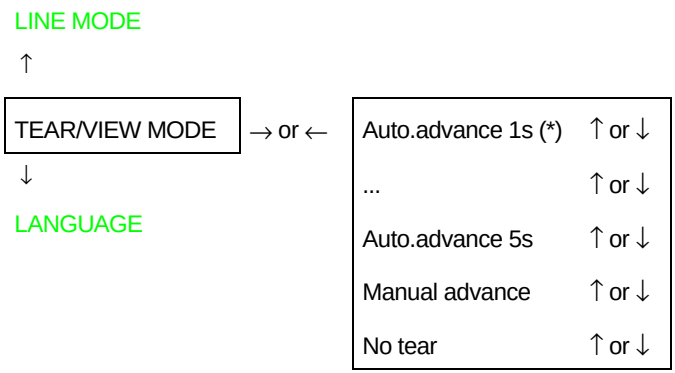
LINE MODE	→ or ←	LF=LF, CR=CR (*)	↑ or ↓
↓		CR=LF+CR	↑ or ↓
TEAR/VIEW MODE		LF=LF+CR	↑ or ↓
		LF&CR=LF+CR	↑ or ↓

LF=LF,CR=CR — If the printer receives a LF code, it only performs a line feed. If the printer receives a CR code, performs a carriage return.

CR=LF+CR — If the printer receives a CR code, it performs a carriage return followed by a line feed. If the printer receives a LF code, it performs a line feed.

LF=LF+CR	If the printer receives a LF code, it performs a line feed followed by a carriage return. If the printer receives a CR code, it only performs a carriage return.
LF&CR=LF+CR	If the printer receives a LF code or a CR code, it performs both a line feed and a carriage return.

Tear/View Mode



Auto.advance 1s ... 5s	Paper moves automatically to the tear/view position after the specified time-out (1s. to 5s.)
Manual advance	Paper moves to the tear/view position using the ON LINE key.
No tear	Tear/view mode is disabled. It is useful to print labels or paper that backward movements may cause a paper jam.

Display Language Selection

TEAR/VIEW MODE

↑

LANGUAGE	→ or ←	English (*) ↑ or ↓
		Italiano ↑ or ↓

↓

BUZZER

This function selects the language of the display messages: in English or Italian language.

Enable/Disable Buzzer

LANGUAGE

↑

BUZZER	→ or ←	Enabled (*) ↑ or ↓
		Disabled ↑ or ↓

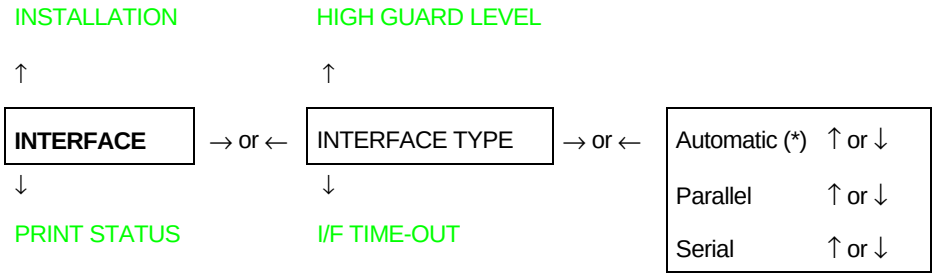
↓

PROTOCOL

This function enables or disables the buzzer.

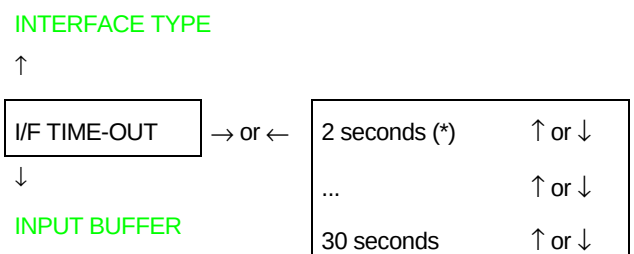
INTERFACE Function

Interface Type



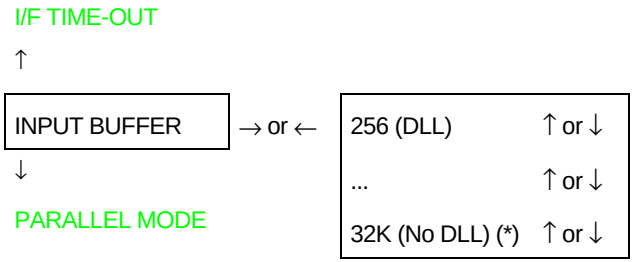
Automatic	The interface type is automatically selected according to the data transmission.
Parallel	Parallel interface selection.
Serial	Serial interface selection.

Interface Time-out



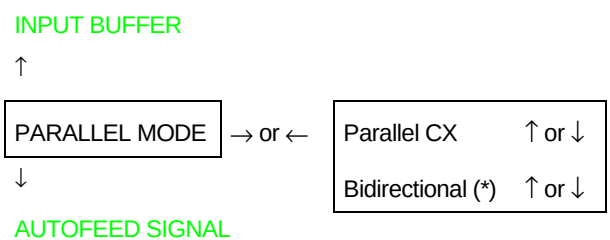
This function defines the time duration (2 to 30 sec.) after which the interface switches to the other.

Input Buffer Size



This function selects the input buffer size with one of the following values: 256, 4K, 8K, 16K or 32 K. The 16K and the 32K values do not allow the DLL. The most suitable value for the DLL function is 256 (DLL).

Parallel I/F Mode



Parallel CX — Parallel interface in Centronics monodirectional mode.

Bidirectional — Parallel interface in IEEE 1284 bidirectional standard mode.

AUTOFEED Signal

PARALLEL MODE

↑

AUTOFEED SIGNAL	→ or ←	Enabled ↑ or ↓
		Disabled (*) ↑ or ↓

↓

SLCT-IN SIGNAL

Enabled The parallel interface uses the AUTOFEED signal.

Disabled The parallel interface ignores the AUTOFEED signal.

SELECT-IN Signal

AUTOFEED SIGNAL

↑

SLCT-IN SIGNAL	→ or ←	Disabled (*) ↑ or ↓
		Enabled ↑ or ↓

↓

SERIAL TYPE

Enabled The parallel interface uses the SELECT-IN signal.

Disabled The parallel interface ignores the SELECT-IN signal.

Serial Interface Type

SLCT-IN SIGNAL

↑

SERIAL TYPE	→ or ←	RS232C (*) ↑ or ↓
		RS422A ↑ or ↓

↓

SERIAL MODE

This function selects the serial interface type: RS-232/C or RS-422/A.

Serial Connection Mode

SERIAL TYPE

↑

SERIAL MODE	→ or ←	Local (*) ↑ or ↓
		Remote ↑ or ↓

↓

BAUD RATE

This function selects the serial connection type: local or remote.

Baud Rate

SERIAL MODE

↑

BAUD RATE	→ or ←	600 bps ↑ or ↓
↓		... ↑ or ↓
WORD LENGTH		9600 bps (*) ↑ or ↓
		... ↑ or ↓
		38400 bps ↑ or ↓

This function selects the data transmission speed in bits per second (bps). The values available are: 600, 1200, 2400, 4800, 9600, 19200, 38400.

Data Format

BAUD RATE

↑

WORD LENGTH	→ or ←	7 bit ↑ or ↓
↓		8 bit (*) ↑ or ↓
PARITY BIT		

This function selects the data format, using 7 or 8 bits.

Parity Check

WORD LENGTH

↑

PARITY BIT	→ or ←

↓

BUFFER CONTROL

Even	↑ or ↓
Odd	↑ or ↓
Mark	↑ or ↓
Space	↑ or ↓
None (*)	↑ or ↓

Even	Parity check is enabled for even parity.
Odd	Parity check is enabled for odd parity.
Mark	Parity check disabled and the transmitted parity bit is always in Mark state.
Space	Parity check disabled and the transmitted parity bit is always in Space state.
None	Parity check (for 8 data bits only).

Buffer Control

PARITY BIT

↑

BUFFER CONTROL	→ or ←

↓

ROBUST XON

DTR	↑ or ↓
XON/XOFF (*)	↑ or ↓

This function selects the buffer control protocol: DTR or XON/XOFF.

Robust XON

BUFFER CONTROL

↑

ROBUST XON	→ or ←	No (*)	↑ or ↓
		Yes	↑ or ↓

↓

HIGH GUARD LEVEL

This function selects the execution of Robust XON.

High Guard Level

ROBUST XON

↑

HIGH GUARD LEVEL	→ or ←	10% Buffer Size	↑ or ↓
		...	↑ or ↓
		90% Buffer Size (*)	↑ or ↓

↓

INTERFACE TYPE

Selects the percentage of the input buffer to fix to the High Guard Level signal.

PRINT STATUS Function

- Press the → key to select the function.

The message `Printing test` will displayed while the following output will be printed:

405x plus: CONTROLLER:78XXXXXX Rel.:x.xx GENERATOR: 78XXXXXX Rel.:x.xx

OPTIONS	CURRENT VALUES	MACRO1*	MACRO2	MACRO3	MACRO4
FONT	Draft	Draft	Draft	Draft	Draft
DRAFT MODE.	Normal	Normal	Normal	Normal	Normal
VERTICAL PITCH	6 lpp	6 lpp	6 lpp	6 lpp	6 lpp
LPI LOCK	Disabled	Disabled	Disabled	Disabled	Disabled
FORM LENGTH	66 lines	66 lines	66 lines	66 lines	66 lines
TOP MARGIN	Line #1	Line #1	Line #1	Line #1	Line #1
BOTTOM MARGIN	Line #66	Line #66	Line #66	Line #66	Line #66
HORIZONTAL PITCH	10 cpp	10 cpp	10 cpp	10 cpp	10 cpp
CPI LOCK	Disabled	Disabled	Disabled	Disabled	Disabled
LEFT MARGIN	Column #1	Column #1	Column #1	Column #1	Column #1
RIGHT MARGIN	Column #136	Column #136	Column #136	Column #136	Column #136
	(4051/4056 plus models)	(4051/4056 plus models)	(4051/4056 plus models)	(4051/4056 plus models)	(4051/4056 plus models)
	Column #100	Column #100	Column #100	Column #100	Column #100
	(4051N/4056N plus models)	(4051N/4056N plus models)	(4051N/4056N plus models)	(4051N/4056N plus models)	(4051N/4056N plus models)
SLASHED ZERO	No	No	No	No	No
MULTICOPY	No	No	No	No	No
PRINT DIRECTION	Soft. control	Soft. control	Soft. control	Soft. control	Soft. control

INTERFACE	
INTERFACE TYPE	Automatic
I/F TIME-OUT	2 seconds
INPUT BUFFER	32 k (No DLL)
PARALLEL MODE	Bidirectional
AUTOFEED SIGNAL	Disabled
SLCT-IN SIGNAL	Disabled
SERIAL TYPE	RS232C
SERIAL MODE	Local
BAUD RATE	9600 bps
WORD LENGTH	8 bit
PARITY BIT	None
BUFFER CONTROL	XON/XOFF
ROBUST XON	No
HIGH GUARDLEVEL	90% Buffer Size

PRINT ADJUSTMENT	
BIDI. ALIGNEMENT.	Offset: 0
TOP OF FORM	0/72 inches
	(4051/4051N plus models)
	0/90 inches
	(4056/4056N plus model)
TEAR PERFO ALIGN	0/72 inches
	(4051/4051N plus models)
	0/90 inches
	(4056/4056N plus model)

INSTALLATION	
PROTOCOL	IBM XL xx
IBM MODE	
IBM SET-C (1/2)	IBM set 1
NATION	CP437
20 CPI	No
EPSON MODE	
EPSON C-SET	Graphic 2
NATION	USA
LINE MODE	LF=LF,CR=CR
TEAR/VIEW MODE	Auto.advance1s
LANGUAGE	English
BUZZER	Enabled

RECALL FACTORY Function

- Press the → key to select this function. The values of the functions return to the factory default setting.

All values of the functions are reset to the factory default ones in both Power on Configuration Setup and Program Setup.

These are the default values:

OPTIONS	CURRENT VALUES	MACRO1*	MACRO2	MACRO3	MACRO4
FONT	Draft	Draft	Draft	Draft	Draft
DRAFT MODE.	Normal	Normal	Normal	Normal	Normal
VERTICAL PITCH	6 lpp	6 lpp	6 lpp	6 lpp	6 lpp
LPI LOCK	Disabled	Disabled	Disabled	Disabled	Disabled
FORM LENGTH	66 lines	66 lines	66 lines	66 lines	66 lines
TOP MARGIN	Line #1	Line #1	Line #1	Line #1	Line #1
BOTTOM MARGIN	Line #66	Line #66	Line #66	Line #66	Line #66
HORIZONTAL PITCH	10 cpp	10 cpp	10 cpp	10 cpp	10 cpp
CPI LOCK	Disabled	Disabled	Disabled	Disabled	Disabled
LEFT MARGIN	Column #1	Column #1	Column #1	Column #1	Column #1
RIGHT MARGIN	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)
SLASHED ZERO	No	No	No	No	No
MULTICOPY	No	No	No	No	No
PRINT DIRECTION	Soft. control	Soft. control	Soft. control	Soft. control	Soft. control

INTERFACE	
INTERFACE TYPE	Automatic
I/F TIME-OUT	2 seconds
INPUT BUFFER	32 k (No DLL)
PARALLEL MODE	Bidirectional
AUTOFEED SIGNAL	Disabled
SLCT-IN SIGNAL	Disabled
SERIAL TYPE	RS232C
SERIAL MODE	Local
BAUD RATE	9600 bps
WORD LENGTH	8 bit
PARITY BIT	None
BUFFER CONTROL	XON/XOFF
ROBUST XON	No
HIGH GUARDLEVEL	90% Buffer Size

PRINT ADJUSTMENT	
BIDI. ALIGNEMENT.	Offset: 0
TOP OF FORM	0/72 inches (4051/4051N plus models) 0/90 inches (4056/4056N plus model)
TEAR PERFO ALIGN	0/72 inches (4051/4051N plus models) 0/90 inches (4056/4056N plus model)

INSTALLATION	
PROTOCOL	IBM XL xx
IBM MODE	
IBM SET-C (1/2)	IBM set 1
NATION	CP437
20 CPI	No
EPSON MODE	
EPSON C-SET	Graphic 2
NATION	USA
LINE MODE	LF=LF,CR=CR
TEAR/VIEW MODE	Auto.advance1s
LANGUAGE	English
BUZZER	Enabled

Program Setup

The default values are marked with an asterisk (*). These are the available functions:

SELECT MACRO	This function defines four different macros and allows to configure the printer for different job types.
PRINT ADJUSTMENT	This function allows the adjustment of the mechanical parameters and the tuning of the first printing line.
PRINT STATUS	This function allows to print the current printer configuration.
HEXADECIMAL DUMP	This function allows to enable the Hexadecimal Dump mode.

Entering the Program Setup

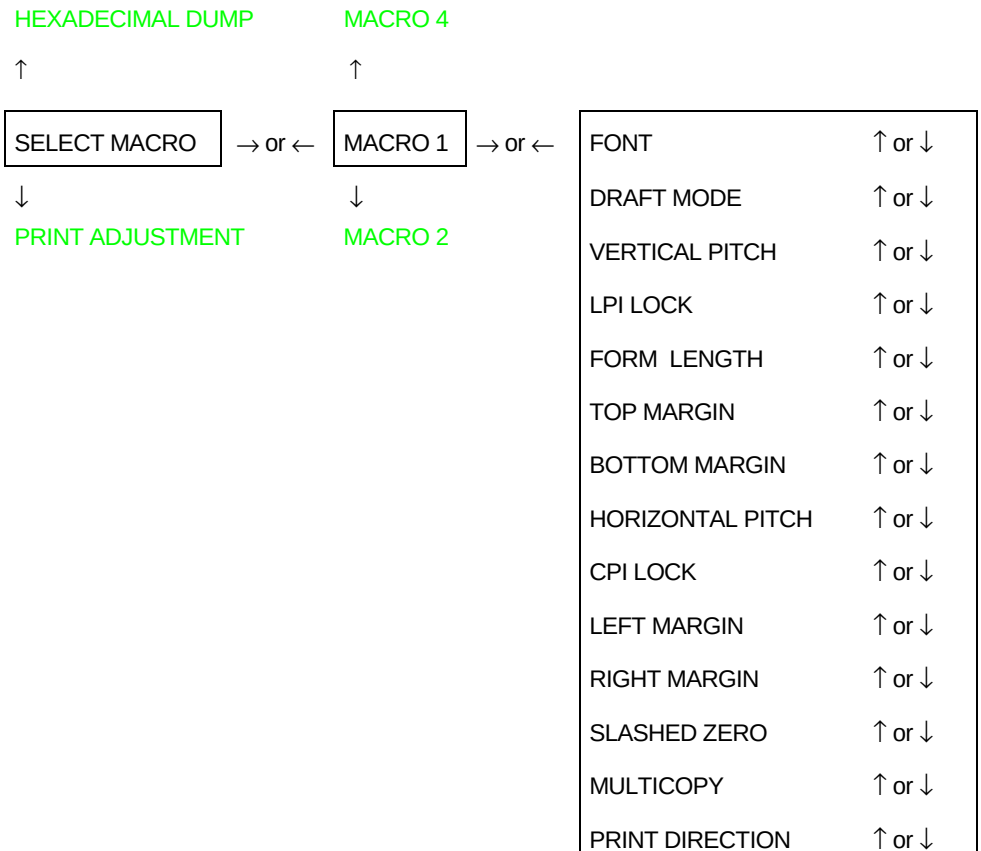
To enter the *Program Setup* procedure, proceed as follows:

1. Make sure that the printer is not enabled to print (READY indicator unlit).
2. Press the PROGRAM key (PROGRAM indicator lit). The following message will be displayed:

```
SELECT MACRO
```

SELECT MACRO Function

MACRO SELECTION



This function allows to select one of the four available print environments.

Font Selection

PRINT DIRECTION

↑

FONT	→ or ←	Draft (*)	↑ or ↓
↓		...	↑ or ↓
DRAFT MODE		OCR-B	↑ or ↓

Selects the type of character to use: Draft, Courier, Gothic, OCR-A, OCR- B for the 4051/4051N plus models and Draft, Courier, Gothic, Prestige, Presentor, OCR-A, OCR-B, Script, Boldface for the 4056/4056N plus models. OCR-A and OCR-B may be selected only when the non-proportional pitch is selected. Boldface may be selected only when the proportional pitch is selected.

Draft Mode

FONT

↑

DRAFT MODE	→ or ←	Normal (*)	↑ or ↓
↓		High speed	↑ or ↓
VERTICAL PITCH			

This function selects the draft printing speed: Normal or High Speed.

Vertical Spacing

DRAFT MODE

↑

VERTICAL PITCH	→ or ←	6 lpi (*)	↑ or ↓
↓		...	↑ or ↓
LPI LOCK		12 lpi	↑ or ↓
		3 lp/30 mm	↑ or ↓
		...	↑ or ↓
		12 lp/30 mm	↑ or ↓

This function determines the density with which the lines are printed according to different units: lines printed per inch (6, 8, 12 lpi) or lines per 30 mm (3, 4, 6, 8, 12 lp/30 mm).

Lpi Lock

VERTICAL PITCH

↑

LPI LOCK	→ or ←	Enabled	↑ or ↓
↓		Disabled (*)	↑ or ↓
FORM LENGTH			

Enabled	Vertical spacing can be changed only by the operator panel keys.
Disabled	Vertical spacing can be changed by software or by operator panel keys.

Form Length

LPI LOCK

↑

FORM LENGTH	→ or ←	NUMBER OF LINES	↑ or ↓	→ or ←	1 line (*)	↑ or ↓
↓		A4 (11.6 inches)	↑ or ↓		...	↑ or ↓
TOP MARGIN		A5 (8 inches)	↑ or ↓		126 lines	↑ or ↓

This function selects the physical page length in n° of lines (1 to 126 lines at 1/6”) or in standard formats (A4 or A5).

Top Margin

FORM LENGTH

↑

TOP MARGIN	→ or ←	Line #1 (*)	↑ or ↓
↓		...	↑ or ↓
BOTTOM MARGIN		Line #X	↑ or ↓

This function selects the top margin defined as n° of lines (at 1/6”). The value X corresponds to the n° of lines set in the FORM LENGTH function.

Bottom Margin

TOP MARGIN

↑

BOTTOM MARGIN	→ or ←	Line #1	↑ or ↓
↓		...	↑ or ↓
HORIZONTAL PITCH		Line #66 (*)	↑ or ↓
		...	↑ or ↓
		Line #126	↑ or ↓

This function selects the bottom margin defined as n° of lines (at 1/6”). The value X corresponds to the n° of lines set in the `FORM LENGTH` function.

Horizontal Spacing

BOTTOM MARGIN

↑

HORIZONTAL PITCH	→ or ←	5 cpi	↑ or ↓
↓		...	↑ or ↓
CPI LOCK		10 cpi (*)	↑ or ↓
		...	↑ or ↓
		20 cpi	↑ or ↓
		Prop. Spacing	↑ or ↓

This function sets the horizontal spacing at the following values: 5, 6, 7.5, 8.55, 10, 12, 15, 17.1, 20 cpi or the proportional spacing.

Cpi Lock

HORIZONTAL PITCH

↑

CPI LOCK	→ or ←	Enabled	↑ or ↓
		Disabled (*)	↑ or ↓

↓

LEFT MARGIN

Enabled Horizontal spacing is selected only by operator panel (PITCH key).

Disabled Horizontal spacing is selected by the operator panel (PITCH key) or by software.

Left Margin

CPI LOCK

↑

LEFT MARGIN	→ or ←	Column#1 (*)	↑ or ↓
		...	↑ or ↓
		Column#136 (4051/4056 plus models)	↑ or ↓
		Column#100 (4051N/4056N plus models)	↑ or ↓

↓

RIGHT MARGIN

This function sets the left margin defined as n° of columns. The physical margin position depends on the selected horizontal spacing.

Right Margin

LEFT MARGIN

↑

RIGHT MARGIN	→ or ←	Column#1	↑ or ↓
↓		...	↑ or ↓
SLASHED ZERO		Column#136 (*) (4051/4056 plus models)	↑ or ↓
		Column#100 (*) (4051N/4056N plus models)	↑ or ↓

This function sets the right margin defined as number of columns. The physical margin position depends on the selected horizontal spacing.

Zero Character Typeface

RIGHT MARGIN

↑

SLASHED ZERO	→ or ←	Yes	↑ or ↓
↓		No (*)	↑ or ↓
MULTICOPY			

This function selects the zero character printing with (Yes) or without slash (No).

Multicopy Form

SLASHED ZERO

↑

MULTICOPY	→ or ←	Yes	↑ or ↓
		No (*)	↑ or ↓

↓

PRINT DIRECTION

This function selects the printing on multicopy format paper (Yes) or on normal paper (No).

Print Direction

MULTICOPY

↑

PRINT DIRECTION	→ or ←	Unidirectional	↑ or ↓
		Bidirectional	↑ or ↓
		Soft. control (*)	↑ or ↓

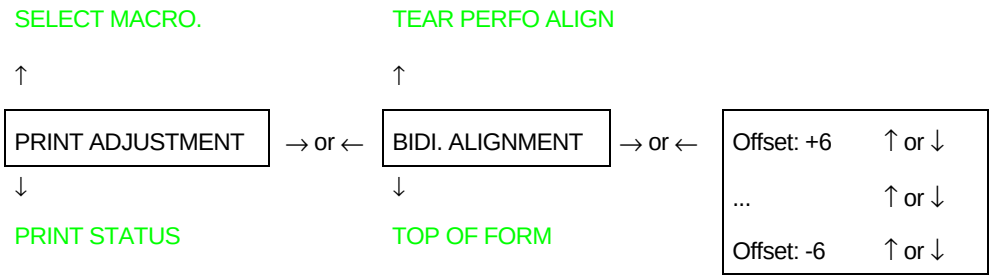
↓

FONT

This function selects the print direction: unidirectional, bidirectional o controlled by software.

PRINT ADJUSTMENT Function

Bidirectional Print Alignment



This function adjusts the bidirectional printing in a range between - 6 and +6. When the previous value is changed, the printer prints two '|' lines to control the final output.

Top of Form (ToF)

BIDI. ALIGNMENT

↑

TOP OF FORM	→ or ←	0/72 inches	(4051/4051N plus models) ↑ or ↓
↓		0/90 inches	(4056/4056N plus models) ↑ or ↓
TEAR PERFO ALIGN		...	↑ or ↓
		792/72 inches	(4051/4051N plus models) ↑ or ↓
		990/90 inches	(4056/4056N plus models) ↑ or ↓

This function adjusts the top of the form in n/72 inch (4051/4051N plus models) or n/90 inch (4056/4056N plus models). The values range between 0 and 792 (4051/4051N plus models) or between 0 and 990 (4056/4056N plus models). At value selection level, the printer prints a **x/72** string (4051/4051N plus models) or a **x/90** string (4056/4056N plus models), where the x value indicates the current value corresponding to the current ToF position. If the value is changed, the new value will be printed from its corresponding ToF position.

See "Top of Form Adjustment" later in this manual.

Tear Position Alignment

TOP OF FORM

↑

TEAR PERFO ALIGN → or ←

↓

BIDI. ALIGNMENT

0/72 inches	(4051/4051N plus models)	↑ or ↓
0/90 inches	(4056/4056N plus models)	↑ or ↓
...		↑ or ↓
36/72 inches	(4051/4051N plus models)	↑ or ↓
45/90 inches	(4056/4056N plus models)	↑ or ↓

This function adjusts the tear off position in n/72 inch (4051/4051N plus models) or n/90 inch (4056/4056N plus models). The values range between -36 and 36 (4051/4051N plus models) or between -45 and 45 (4056/4056N plus models). At value selection level, the tear off line position aligns to the corresponding tear off border of the printer cover. Pressing the ↑ or ↓ keys, the tear off position moves in steps of 1/72 inch (4051/4051N plus models) or 1/90 inch (4056/4056N plus models). When the tear off perforation line is set in the desired position, selects this value.

See "Tear Off Line Adjustment" later in this manual.

PRINT STATUS Function

- Press the → key to select the function.

The message `Printing test` will displayed while the following output will be printed:

405x plus: CONTROLLER:78XXXXXX Rel.:x.xx GENERATOR: 78XXXXXX Rel.:x.xx

OPTIONS	CURRENT VALUES	MACRO1*	MACRO2	MACRO3	MACRO4
FONT	Draft	Draft	Draft	Draft	Draft
DRAFT MODE.	Normal	Normal	Normal	Normal	Normal
VERTICAL PITCH	6 lpp	6 lpp	6 lpp	6 lpp	6 lpp
LPI LOCK	Disabled	Disabled	Disabled	Disabled	Disabled
FORM LENGTH	66 lines	66 lines	66 lines	66 lines	66 lines
TOP MARGIN	Line #1	Line #1	Line #1	Line #1	Line #1
BOTTOM MARGIN	Line #66	Line #66	Line #66	Line #66	Line #66
HORIZONTAL PITCH	10 cpp	10 cpp	10 cpp	10 cpp	10 cpp
CPI LOCK	Disabled	Disabled	Disabled	Disabled	Disabled
LEFT MARGIN	Column #1	Column #1	Column #1	Column #1	Column #1
RIGHT MARGIN	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)	Column #136 (4051/4056 plus models) Column #100 (4051N/4056N plus models)
SLASHED ZERO	No	No	No	No	No
MULTICOPY	No	No	No	No	No
PRINT DIRECTION	Soft. control	Soft. control	Soft. control	Soft. control	Soft. control

INTERFACE	
INTERFACE TYPE	Automatic
I/F TIME-OUT	2 seconds
INPUT BUFFER	32 k (No DLL)
PARALLEL MODE	Bidirectional
AUTOFEED SIGNAL	Disabled
SLCT-IN SIGNAL	Disabled
SERIAL TYPE	RS232C
SERIAL MODE	Local
BAUD RATE	9600 bps
WORD LENGTH	8 bit
PARITY BIT	None
BUFFER CONTROL	XON/XOFF
ROBUST XON	No
HIGH GUARDLEVEL	90% Buffer Size

PRINT ADJUSTMENT	
BIDI. ALIGNEMENT.	Offset: 0
TOP OF FORM	0/72 inches (4051/4051N plus models) 0/90 inches (4056/4056N plus models)
TEAR PERFO ALIGN	0/72 inches (4051/4051N plus models) 0/90 inches (4056/4056N plus models)

INSTALLATION	
PROTOCOL	IBM XL xx
IBM MODE	
IBM SET-C (1/2)	IBM set 1
NATION	CP437
20 CPI	No
EPSON MODE	
EPSON C-SET	Graphic 2
NATION	USA
LINE MODE	LF=LF,CR=CR
TEAR/VIEW MODE	Auto.advance1s
LANGUAGE	English
BUZZER	Enabled

HEX DUMP Function

This function may be selected at any point of the printing. To activate the hexadecimal printing follow this sequence:

1. After entering the *Program Setup*, select the following item:

HEXADECIMAL DUMP

2. Press the → key to activate this function. Press the ↓ key, the following messages will be alternatively displayed.

HEX DUMP OFF	HEX DUMP ON

3. Release the ↓ key when the `Hex dump ON` message is displayed, to confirm this selection, press → key. The printer will print the data in hexadecimal code as well the ASCII notation:

30 31 32 33 34 35 36 37 38 39 41 42 43 44 45 46	0123456789ABCDEF
47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56	GHIJKLMNOPQRSTUV
57 58 59 5A 0D 0A	WXYZ

4. To cancel the hexadecimal printing, set the printer in Wait (READY indicator unlit), press again the PROGRAM key and proceed as described above but now select the `Hex dump OFF` message.

Paper Handling

Paper Specifications

Use the correct paper in your printer for obtaining good results in your printout.

Fanfold Paper

		4051/4056 plus	4051N/4056N plus
Width	Minimum	76 mm (3 inches)	76 mm (3 inches)
	Maximum (*)	406 mm (16 inches)	305 mm (12 inches)
Weight	Minimum	55 g/m^2	55 g/m^2
	Maximum	80 g/m^2	80 g/m^2
Length	Minimum	76 mm (3 inches)	76 mm (3 inches)
Number of copies	1 original plus 5 copies		
Weight: First sheet	Minimum Maximum	55 g/m^2 75 g/m^2	55 g/m^2 75 g/m^2
Other sheets	Minimum	55 g/m^2	55 g/m^2
	Maximum	75 g/m^2	75 g/m^2
Carbon paper	Minimum	14 g/m^2	14 g/m^2
	Maximum	35 g/m^2	35 g/m^2
Total thickness	Maximum	0,52 mm (0.02 inches)	0,52 mm (0.02 inches)

(*) If you are using fanfold paper through the optional Automatic Sheet Feeder (4051/4056 plus models only), the maximum width is 381 mm (15 inches).

Cut Sheets

Width	Minimum	102 mm (4 inches)
	Maximum	420 mm (16.6 inches)
Length	Minimum	63,5 mm (2.5 inches)
Weight	Minimum	50 g/m^2
	Maximum	120 g/m^2
Number of copies	1 original plus 5 carbon copies	
Weight:		
First and last sheets	Minimum	55 g/m^2
	Maximum	75 g/m^2
Other sheets	Minimum	45 g/m^2
	Maximum	75 g/m^2
Carbon paper	Minimum	14 g/m^2
	Maximum	35 g/m^2
Total thickness	Maximum	0,52 mm (0.02 inches)

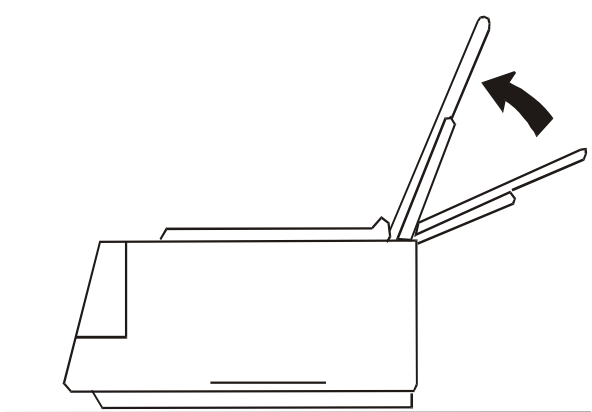
Cut Sheets

Cut sheets are inserted from the top of the printer. You can load manual cut sheet whether fanfold paper is inserted or not.

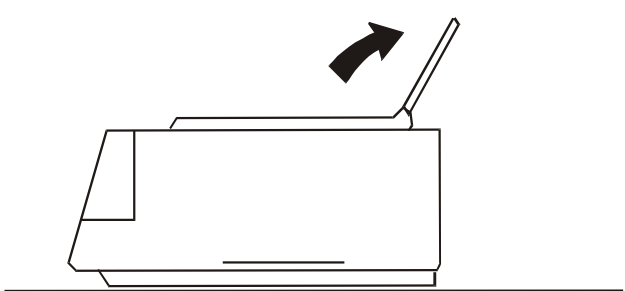
If no fanfold paper is present, proceed as follows; otherwise, go to "Switching From Fanfold Paper to Cut Sheet" section.

Loading Cut Sheets

1. Put the paper chute in the raised position by pulling and hooking it firmly.
    - If your printer is the 4051N plus or the 4056N plus model, simply lift the paper chute that is fixed in the printer cover.

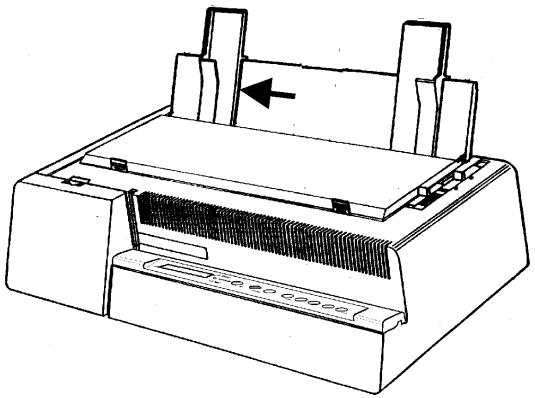


4051/4056 plus Models

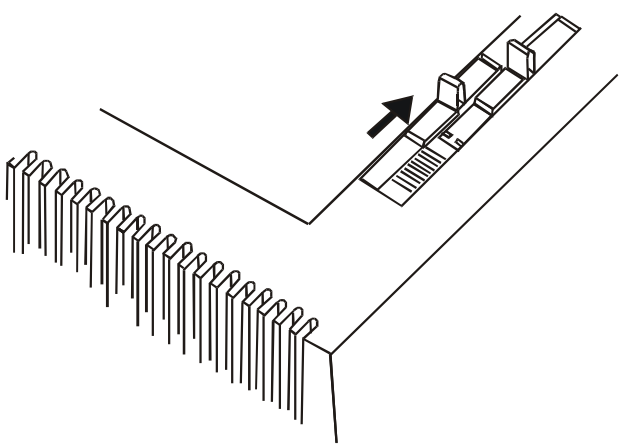


4051N/4056N plus Models

- If your printer is the 4051plus or the 4056 plus model and you wish to position the first printing column at 25 mm from the edge of the paper, slide the left paper guide to the left as far as it will go, then adjust the right paper guide according to the paper width.



2. Move the paper thickness lever according to the type of paper:
   - If a cut sheet is loaded move the lever towards the back of the printer.
   - If multicopy-chemical paper is loaded, first move the lever completely towards the back of the printer, then 1 notch towards the front of the printer for each copy.
   - If carbon multicopy-paper is loaded, first move the lever completely towards the back of the printer, then 2 notches towards the front of the printer for each copy.

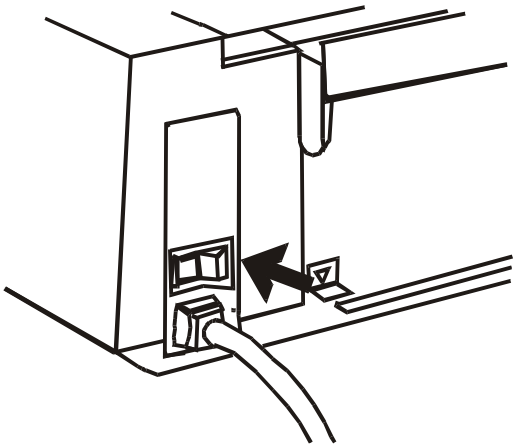


Now, you can load the paper and print your first test document, see "Printing the Self Test". If the pattern does not satisfy your expectation, adjust the paper thickness lever again.

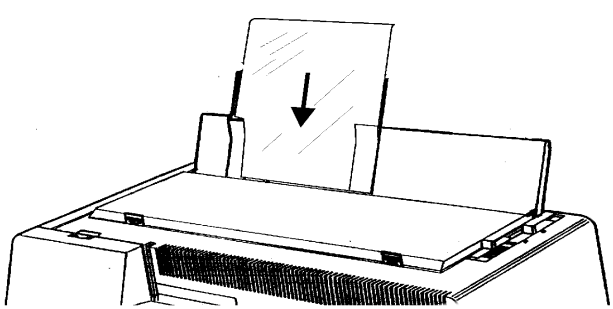
When printing on multicopy paper, follow the above procedure to avoid damaging the print head

3. If the printer is turned off, turn the printer on. The display shows `Load Paper`, if there is no paper in the printer. If you turn the printer on when paper is already inserted, the display will show `Remove Paper` while buzzer sounds 4 short "beeps".

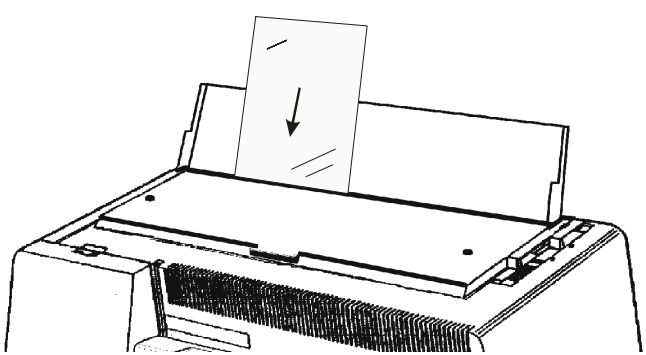
   The paper is ejected with a backward movement of maximum 24 inches. If you have not removed the paper yet, the buzzer will sound again 4 short “beeps”. Finally the display will show `Load paper`.



4. Feed the cut sheet in the slot. Press the LOAD or FF key. The paper will be loaded to the first printable line. The paper is positioned at the first printable line at 1/6 inch from the top edge of the paper. The last printable line of the sheet is positioned at 0.83 inch (21 mm) from the bottom edge of the paper.



4051/4056 plus Models



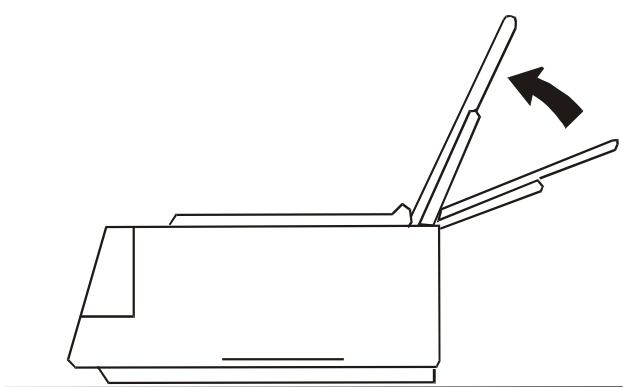
4051N/4056N plus Models

Fanfold Paper

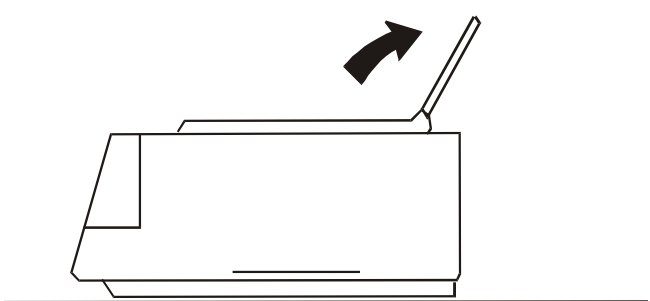
The fanfold paper must be inserted at the rear of the printer.

Inserting Fanfold Paper

1. Put the paper chute in the raised position by lifting and hooking it firmly.
    - If your printer is the 4051N plus or the 4056N plus model, lift the paper chute that is inserted in the printer cover.

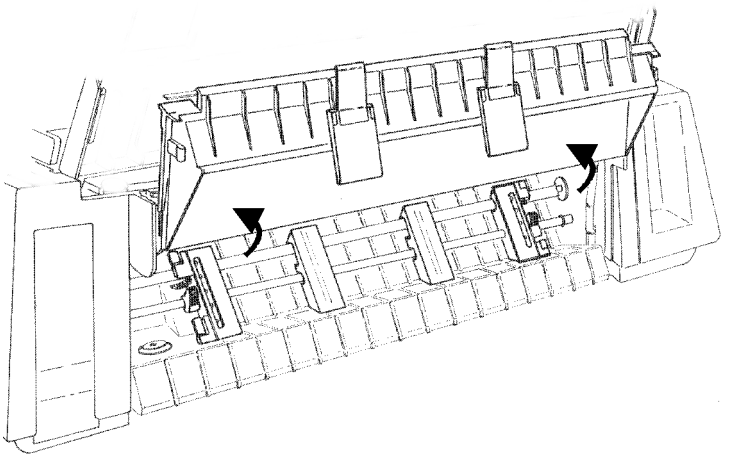


4051/4056 plus Models

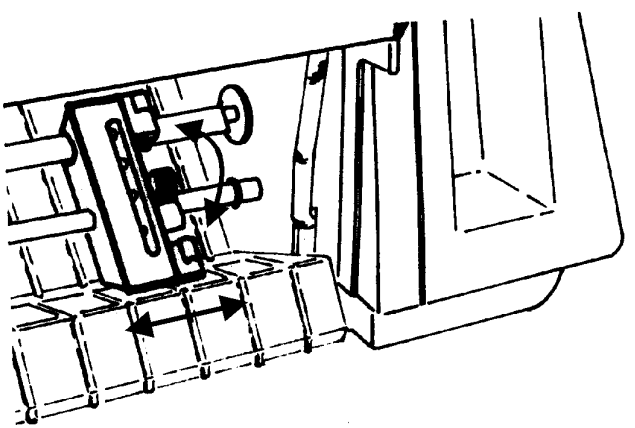


4051N/4056N plus Models

2. Open the tractor cover until it clicks into place.

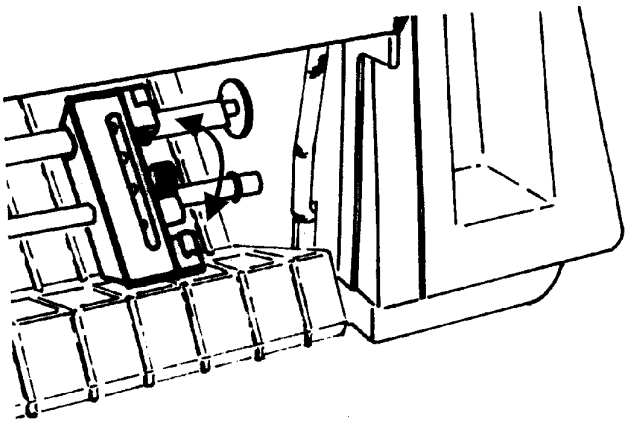


3. Unlock the sprocket on the side of the interface connector and, if it is not already positioned, slide it to the right until it stops.

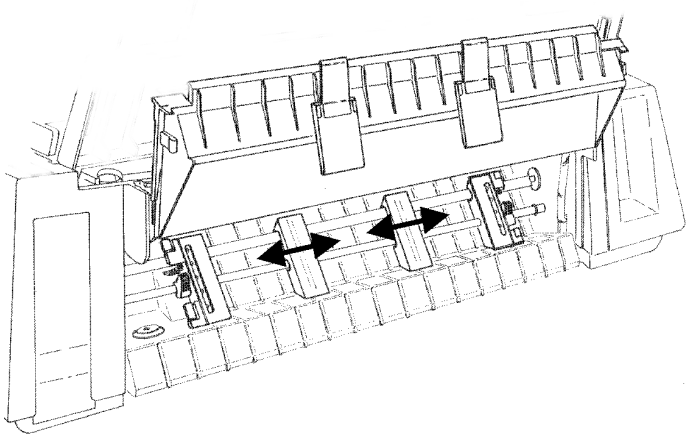


4. If you wish the first column in a particular position, the ruler under the tractor should be helpful to position the sprocket. The distance between the marks on the ruler is 1/10 inch.

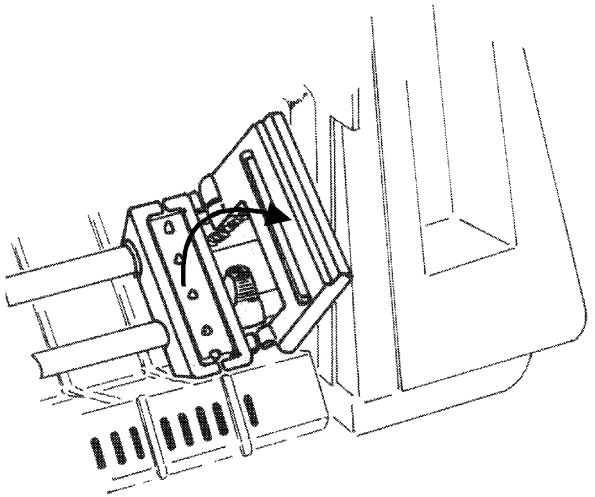
5. Lock the sprocket in place.



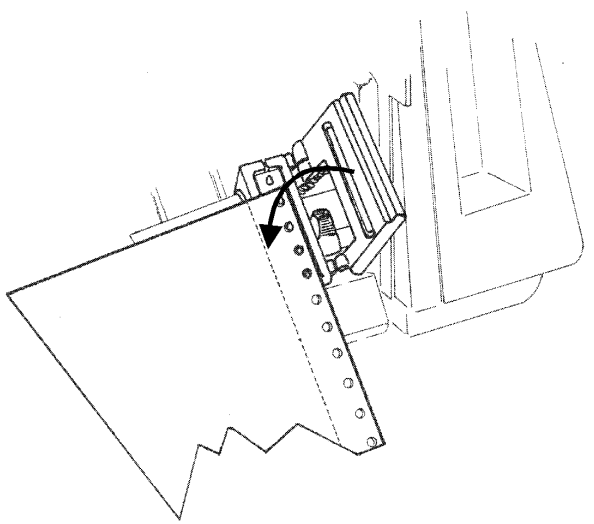
6. Unlock the other sprocket and position it in accordance with the paper width. Slide the spacers evenly along the tractor bar.



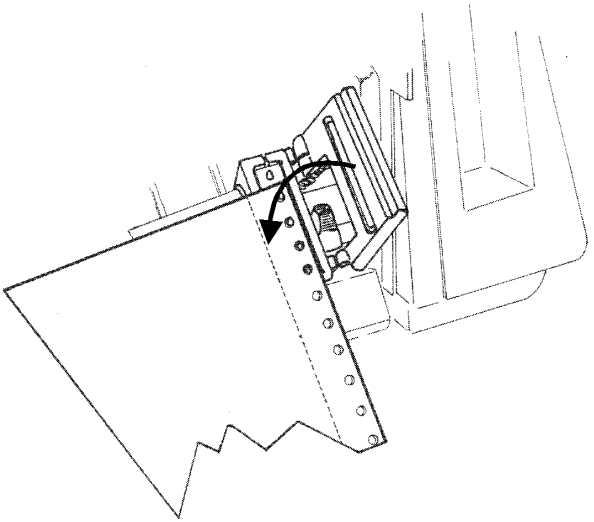
7. Open the sprocket covers.



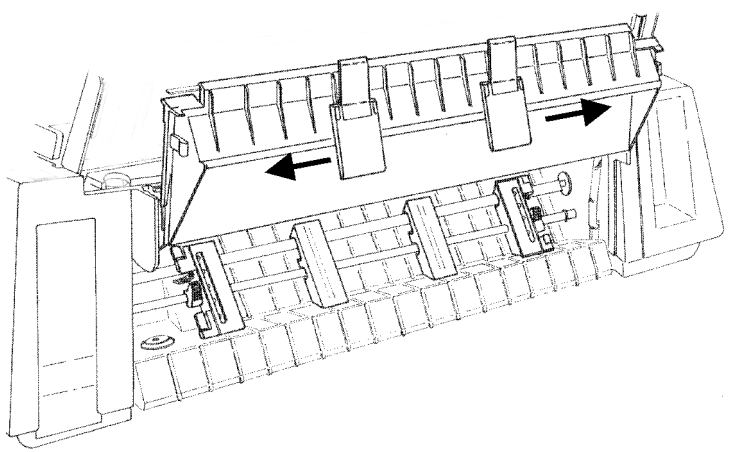
8. Position the holes in the paper over one sprocket and then over the other.



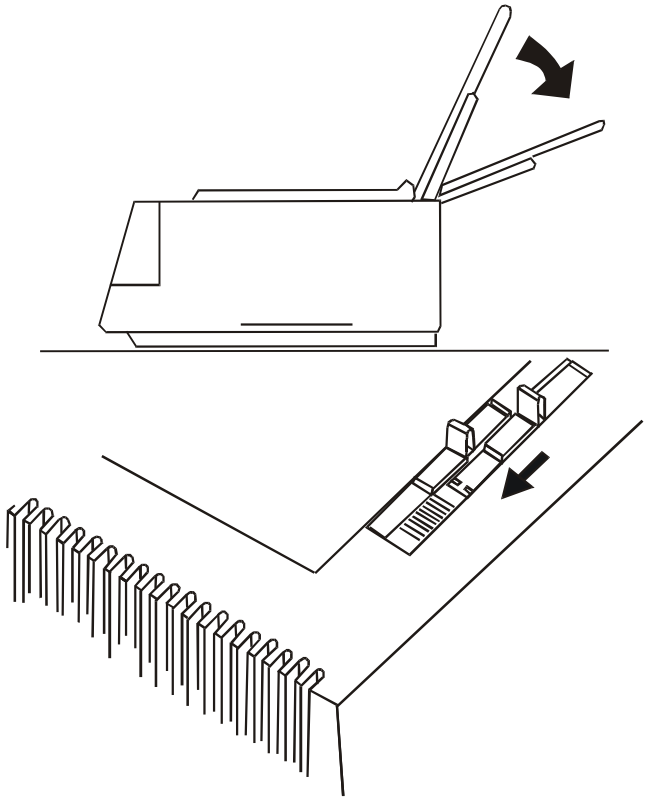
9. Close the sprocket covers.



10. Adjust the two sliders on the tractor cover in alignment with the spacers and close the cover firmly.



- If your printer is the 4051 plus or the 4056 plus model, put the paper chute in the down position by lifting it towards the back of the printer and pushing gently down until it stops. Space the paper guides evenly on the paper chute



11. Place the drive selection lever in the fanfold position (fanfold drawing) and make sure that *Fanfold* is selected by pressing PATH key (SHIFT function) on the operator panel.

12. If the printer is turned off, turn the printer on (see "Power Connection" section before). The display shows `Load paper`.

13. Press the LOAD or FF key and the paper will be positioned in front of the print head.

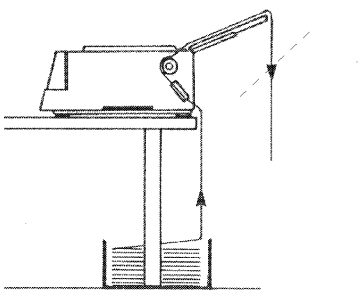
The paper is positioned at the first printable line at 1/6 inch from the top edge of the paper. If you want to adjust the paper position, follow the instructions of the "Top of Form Adjustment" section later. The last printable line of the last form is positioned at 0.31 inch (8 mm) from the bottom edge of the paper

It is advisable not to print two lines before and two lines after the paper perforation.

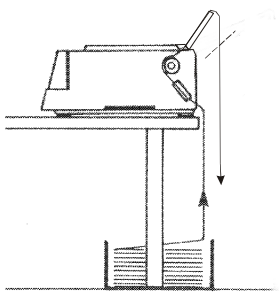
Parking Fanfold Paper

Whenever you wish to park the fanfold paper, follow the sequence:

1. Make sure that the printer is disabled to print (`Wait` message is displayed and the READY indicator is unlit) and tear the fanfold paper that is currently loaded along the last perforation.



4051/4056 plus Models



4051N/4056N plus Models

2. Press the SHIFT key and then the PARK key to enable the PARK function. The message Parking paper will be displayed, the fanfold paper will move backwards up to its parking position. The fanfold paper is still inserted into the tractors and ready to be fed as necessary.

   - *When the fanfold paper to park is too long*, two messages will be alternatively displayed:

     1. `Tear-off paper`
     2. `Remove paper`

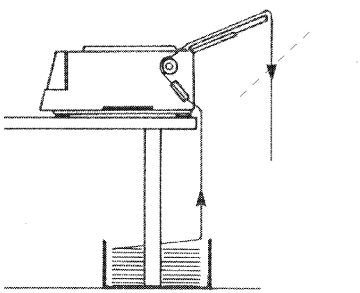
     Tear the printed paper and press again the PARK key.

   - *When you need to load again the fanfold paper*, make sure that the drive selection lever is in fanfold position and that the paper type (PATH function) selection is Fanfold.

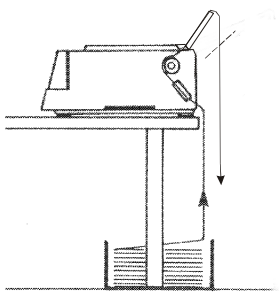
Switching From Fanfold Paper to Cut Sheet

If you have been using fanfold paper and you have not removed it, your printer allows the cut sheet loading after performing a parking of the inserted fanfold paper (PARK function).

1. Make sure that your printer is turned on and disabled to print (READY indicator unlit). Tear the fanfold paper that is currently loaded along the last perforation.



4051/4056 plus Models



4051N/4056N plus Models

2. You can perform the paper switching as follows:

   - Press the SHIFT key and then the PATH key. Select `Manual` and exit by pressing the SHIFT key. The fanfold paper moves backwards and the `Enable path SS` message will be displayed, then place the drive selection lever in the cut sheet position. The message `Load paper` will be displayed.

   or

   - Park the fanfold paper (PARK function). The Manual paper feeding will be automatically selected when the cut sheet is loaded.

Now, your printer is ready to load cut sheet. Follow step 1 to 5 in ” Loading Cut Sheets” section.

Top of Form Adjustment

The Top of Form Adjustment procedure allows you to adjust the position of the first printable line and therefore it is advisable to perform it immediately after a paper loading. Turn the printer on, if it is not, and proceed as follows:

Make sure that the printer is not printing. (READY indicator unlit). If the fanfold paper has been loaded, park it by pressing the PARK key. If the cut sheet has been inserted, eject it by pressing the FF key.

1. Press the PROGRAM key. The following message will be displayed:

SELECT MACRO

2. Press the ↓ key until the following message is displayed:

PRINT ADJUSTMENT

3. Press the → to select the function. The following message will be displayed:

BID. ALIGNMENT

4. Now go on pressing the ↓ key until the following message will be displayed

TOP OF FORM

5. Press the → key to select the function. The paper is unloaded and reloaded at the TOF quote. The current value will be printed and the display will show the following message:

0/72 inches	(4051/4051N plus models)

   or

0/90 inches	(4056/4056N plus models)

The paper is moved to the view position. While scrolling all the possible values by pressing the ↑ and ↓ keys the paper will be moved.

Pressing again the → key the displayed value is selected and printed, after the paper has been taken to the correct position. Then the paper will be taken to the view position.

Tear Off Line Adjustment

The Tear Off Line Adjustment procedure allows you to adjust the position of the fanfold perforation in order to tear it against the printer tear off border on the cover. This procedure is available only if the *Program Setup* is previously entered.

The Tear Off Line Adjustment procedure can be executed at any time during the printing.

Proceed as follows.

1. Make sure that the printer is not enabled to print (READY indicator unlit and the message `Wait` displayed).
2. Enter the *Program Setup* by pressing the PROGRAM key. The following message will be displayed:

SELECT MACRO

3. Press the ↓ key until the following message will be displayed:

PRINT ADJUSTMENT

4. Press the → key to select the function. The following message will be displayed:

BID. ALIGNMENT

5. Now go on pressing the ↓ key until the following message will be displayed:

TEAR PERFO ALIGN

6. The following temporary message will be displayed :

Parking paper

Now if you press the → key the paper will be unloaded, reloaded and a form feed executed. The paper will be taken to the corresponding tear off line.

Pressing the ↑ and ↓ keys you can scroll all the selectable values while the paper will be moved.

Pressing again the → key the displayed value will be selected.

Printer Maintenance and Troubleshooting

Cleaning the Printer

Make sure that the printer has been turned off for at least 15 minutes before any cleaning intervention.

Periodical cleaning will help to keep your printer in top condition.

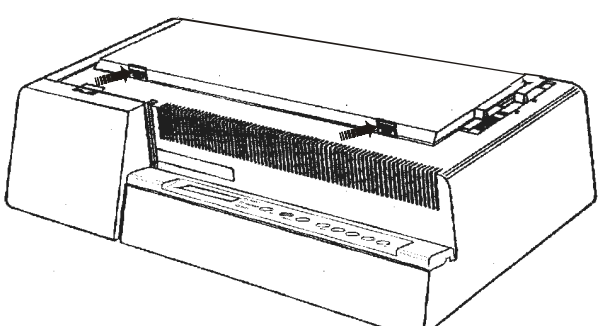
- Use a neutral detergent or a water solution on a soft cloth to clean dirt and grease from the cabinet of the printer.
- Do not use an abrasive cloth, alcohol, paint thinner, or other similar agents, because they can cause discoloration and scratches.
- Be careful not to damage the electronic and mechanical components.

Replacing the Ribbon Cartridge

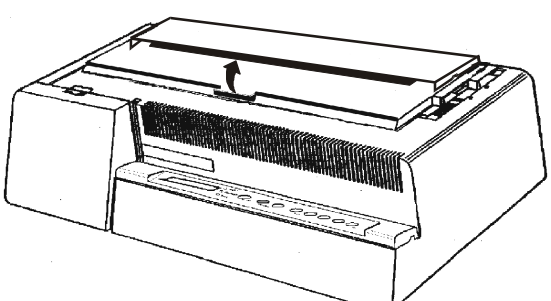
If the printing is fading, the ribbon could be worn or damaged. It is advisable to remove the used ribbon cartridge while the printer is turned off. However, your printer can be turned on during this procedure, but do not forget that it must be disabled to print (`Wait` message displayed).

Make sure that the new ribbon cartridge is an original Compuprint spare part. If it is not so the quality and reliability level declared in the product features won't be assured.

1. Remove the printer cover by pressing simultaneously the two buttons in the front part of the cover.
   - If your printer is the 4051N plus or the 4056N plus model, do not remove but lift the printer cover.

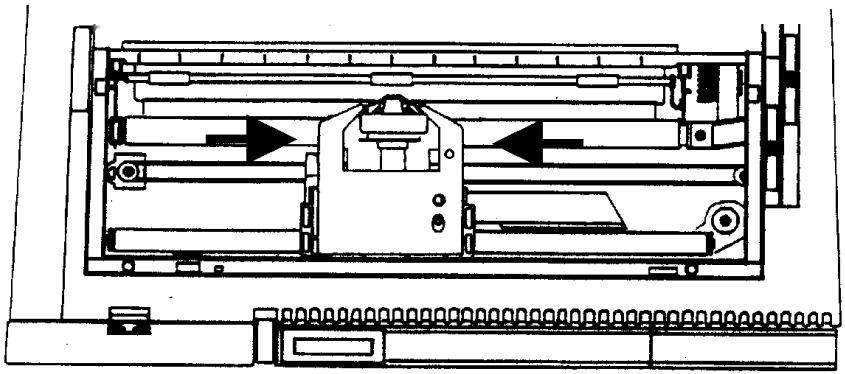


4051/4056 plus Models

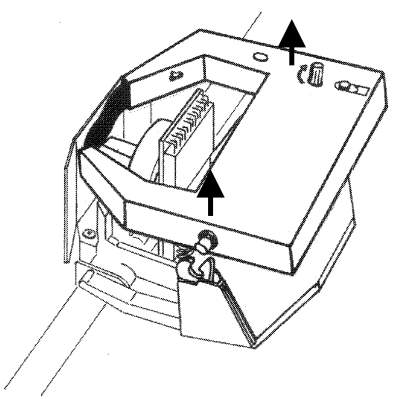


4051N/4056N plus Models

2. Move the printer carriage to the center of the printer.



3. Lift the cartridge off until the clip release it.



Now, you are ready to insert a new ribbon cartridge. Follow from step 2 of "Ribbon Cartridge Installation" section.

Printing the Self Test

It is advisable to print the self-test printout to inform you about the current printer configuration and to check if the printer is working well.

Then, proceed as follows:

1. Keep the ON LINE key pressed while you turn the printer on, the display will show the following message:

   ```
   Printing test
   ```

   The message `Printing test` will remain displayed while the following output will be printed

2. Press ON LINE key to stop printing.

Error Handling

The following table will help you to identify and solve problems which may occur when using the printer. If the problem is not listed, or if it is not corrected by any of the methods suggested, contact your supplier for help.

Problem	Cause	Solution
Printer fails to print	Wait is displayed	Press ON LINE key to enable printing.
	Interface cables are not properly connected	Push cables firmly into sockets at both ends.
Fanfold paper is not advancing	Paper holes are torn	Remove torn paper and replace with next good sheet. Check the tension of the paper between left and right sprocket wheels. If too tight, loosen, by moving right sprocket wheels slightly to left (see "Paper Handling" before).
	Paper is not correctly aligned on sprocket wheels	Reload paper, ensuring that corresponding holes at each side of paper are correctly aligned on sprocket wheels.
	The drive selection lever is selected in cut sheet position.	Position lever in the fanfold position.
Print fading	Ribbon not feeding	Check that ribbon is correctly loaded (see "Ribbon Cartridge Installation" before). Turn the tension knob to ensure that the ribbon is not jammed.
	Ribbon worn or damaged	Replace ribbon.
	Print head too far from paper	Pull paper thickness lever towards the back of the printer to move print head closer to paper.

Problem	Cause	Solution
Dark, smudgy print	Print head too close to paper	Pull paper thickness lever towards the front of the printer to move print head away from paper.
Self-test not printed	ON LINE key not pressed while turning the printer on.	Repeat the sequence (see "Printing the Self Test" before).
	Carriage fault	Press ON LINE key and repeat the sequence (see "Printing The Self Test" before).
The display shows `Remove paper`	Error in the paper handling procedure	Try to eject the paper using ↑ and ↓ in MICRO FEED function.
The display shows `Carriage error`	An unrecoverable carriage error occurred	Turn the printer off. Make sure that the ribbon is not blocked inside the cartridge by turning the tension knob, then wait 3 seconds and turn the printer on. If the problem is not solved, call Technical Assistance.
Cut sheet has not been loaded	You have not correctly inserted the cut sheet	Insert again cut sheet into the front paper entry slot making sure that it reaches the roller.
		Press LOAD or FF key.
	The paper chute is in down position *fanfold paper* (4051/4056 plus models only)	Place the paper chute in raised position and insert again the cut sheet. Press LOAD or FF.

Options

LAN Connection

For the 4051/4056 printer models, an integrated Ethernet 10/100 Base-T interface for the network connections is available that coexists with the serial interface.

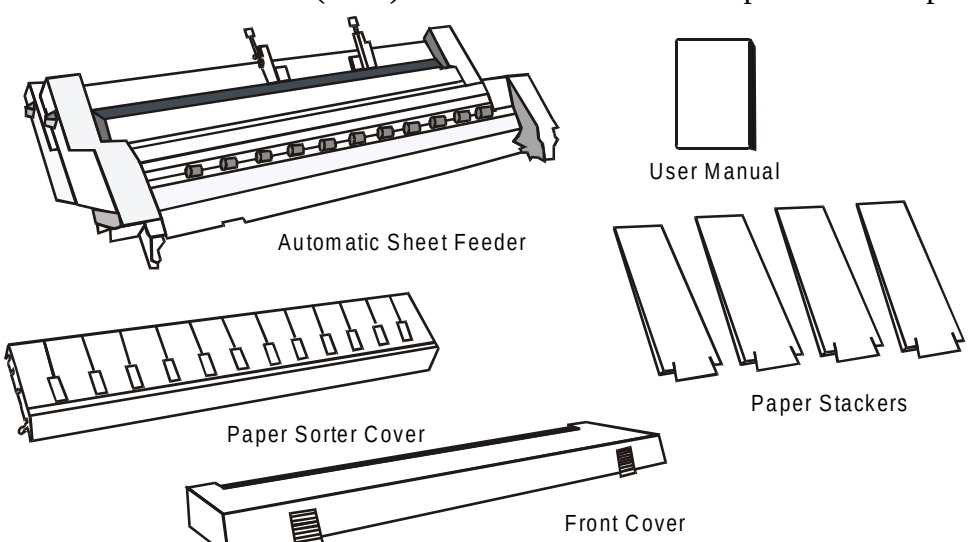
For more information, refer to the *Installation Guide* you receive together the "*PRINTER SERVER ETHERNET 10/100 Mbit Multiprotocol*" CD-ROM.

Automatic Sheet Feeder (4051/4056 plus models only)

This Automatic Sheet Feeder (ASF) provides fast and automatic feeding of cut sheets and multicopy-forms on your printer. This option is quickly and easily installed onto the printer by the operator. No tools or special equipment are necessary. Operation of the sheet feeder is relatively simple and with proper installation and care, it will provide long and trouble-free service. The cut sheets are contained in adjustable paper feed bin and are individually fed by the feeder to the printer platen. After printing, the feeder automatically transports the sheet or form into the output stacker of the feeder.

Unpacking Automatic Sheet Feeder

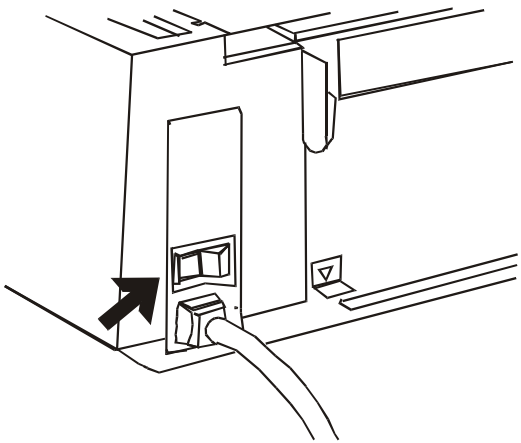
Unpack the Automatic Sheet Feeder (ASF) and check that all components are present:



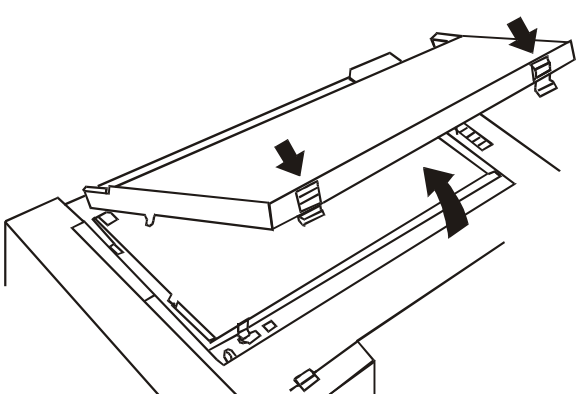
Preparing the Printer

Make sure that no paper is present in the printer and that the Automatic Sheet Feeder loading is selected via your printer operator panel (see "Configuring the Printer" section).

1. Turn the printer off.

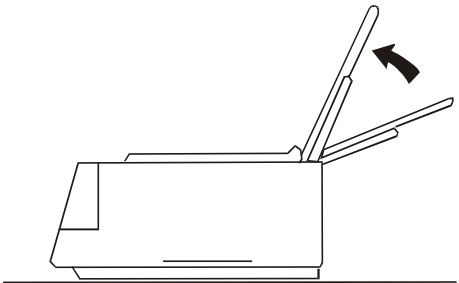


2. Remove the printer cover by pushing down simultaneously the two buttons in the front part of the cover and lifting it out.

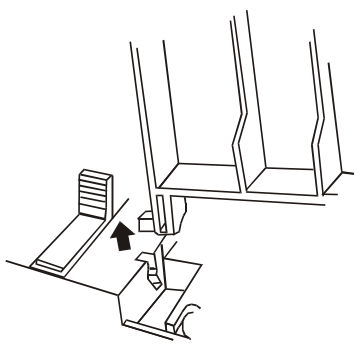


3. Remove the paper chute, if present, as follows:

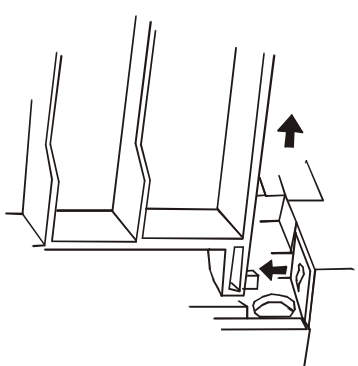
- put it in the raised position and flex it towards the front of the printer;



- lift the right side of the paper chute;

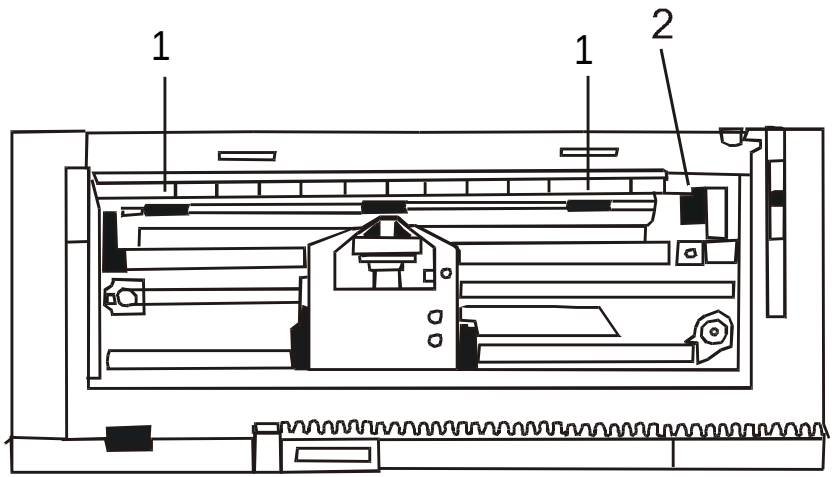


- unhook the left side of the paper chute.

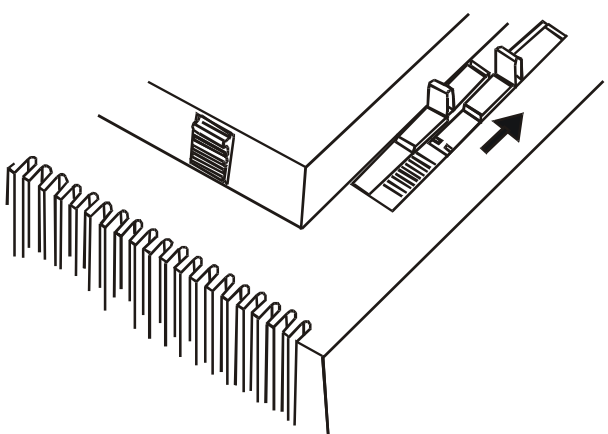


Keep the printer cover and the paper chute in a safe place as they must be reinstalled if the ASF is removed.

4. Slide the rubber rollers (1) of the paper bail to the extreme right side. Remove the plastic mask (2) that protects the feeding mechanism on the right side of the platen.

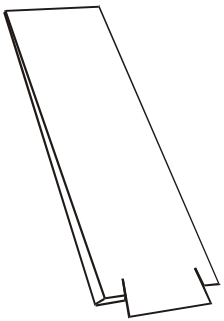


5. Put the drive selection lever in the cut sheet position.

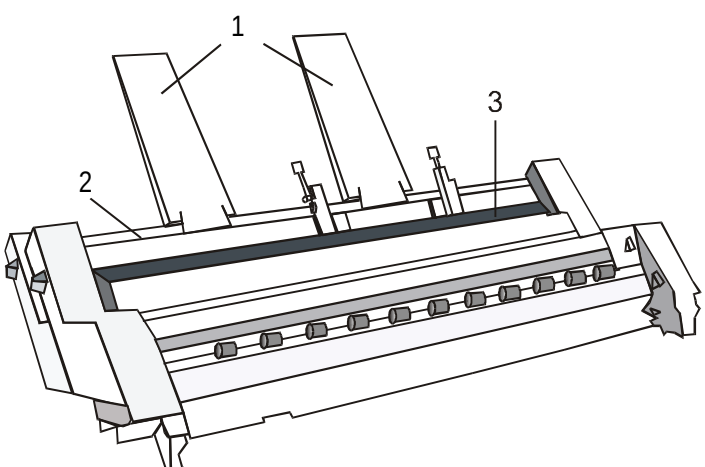


Automatic Sheet Feeder Assembly

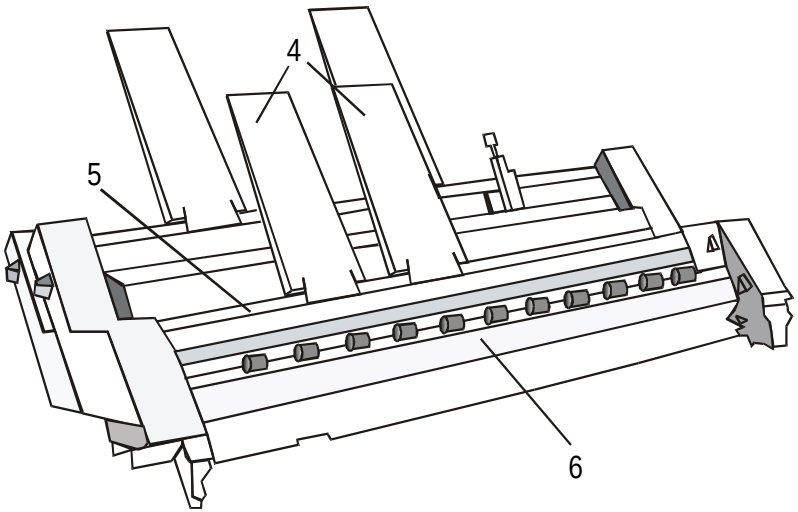
1. Find the paper stackers.



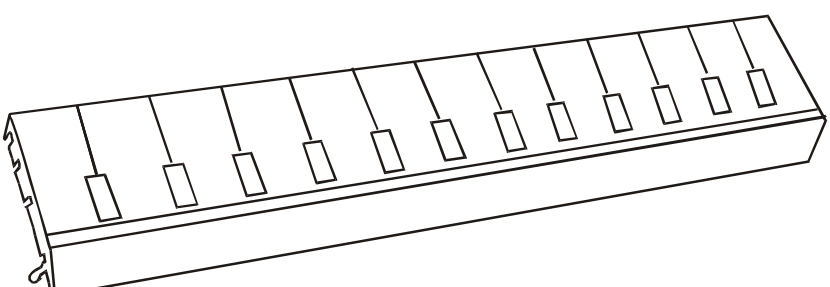
2. Clip two paper stackers (1) onto the metal strip (2), placed over the paper entry slot (3), for the input of paper.



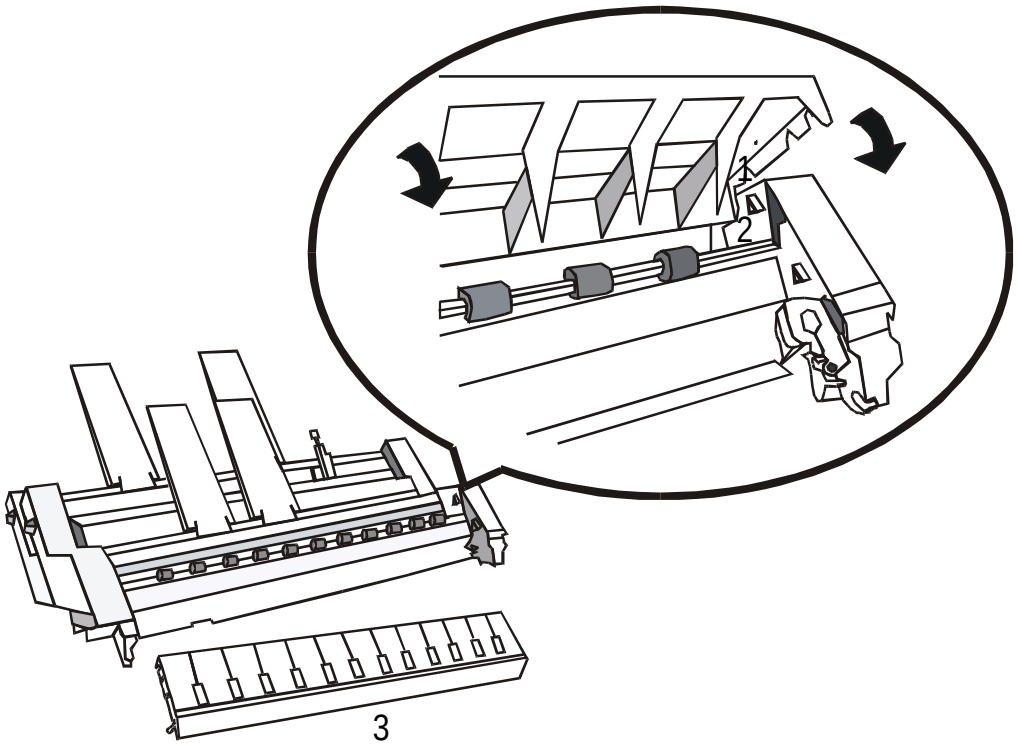
3. Clip the other two paper stackers (4) onto the metal strip (5), placed over the paper sorter (6), for the output of paper.



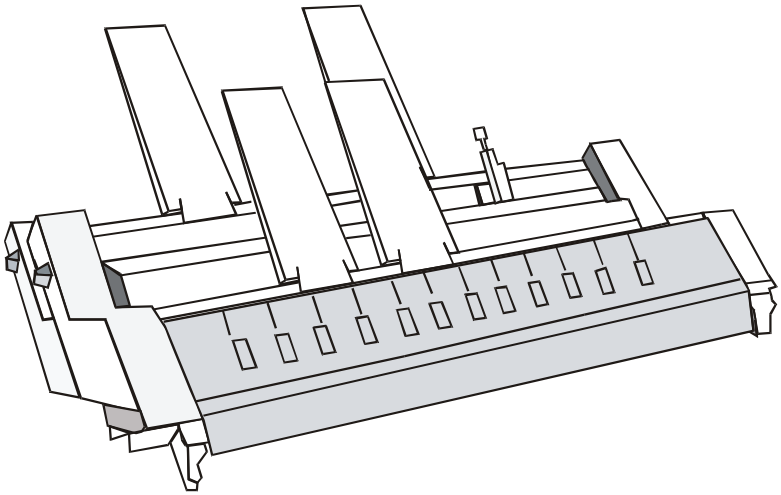
4. Find the paper sorter cover.



5. Lay the upper locking groove (1) of the paper sorter cover (3) on the upper internal pin (2) placed in the paper sorter. Rotate the paper sorter cover towards the front of the printer.

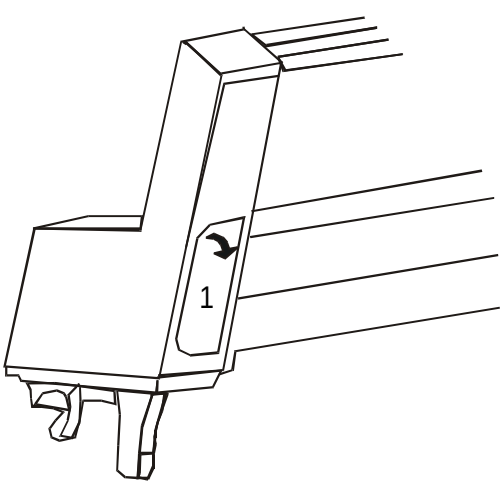


6. Click the paper sorter cover into place.

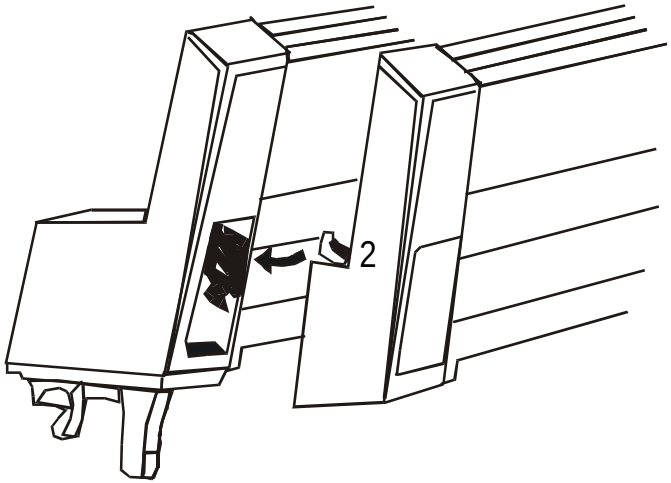


If you have the optional second bin, install it now on your ASF as follows:

- Remove the cover plates (1) from the rear of the first bin.

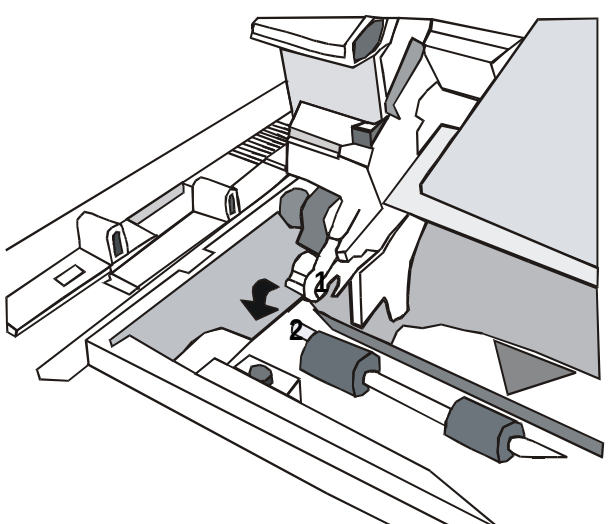


- Insert the second bin into the first bin of ASF, ensuring that the two support arms (2) snap in place.

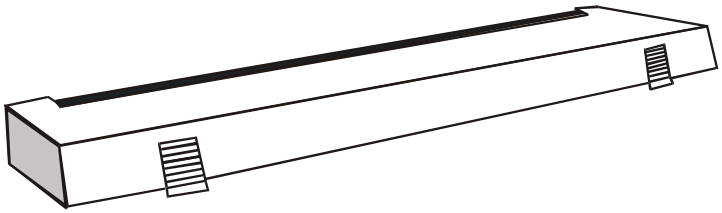


Remember that once you have placed the second bin, it is not possible to separate it from the first bin.

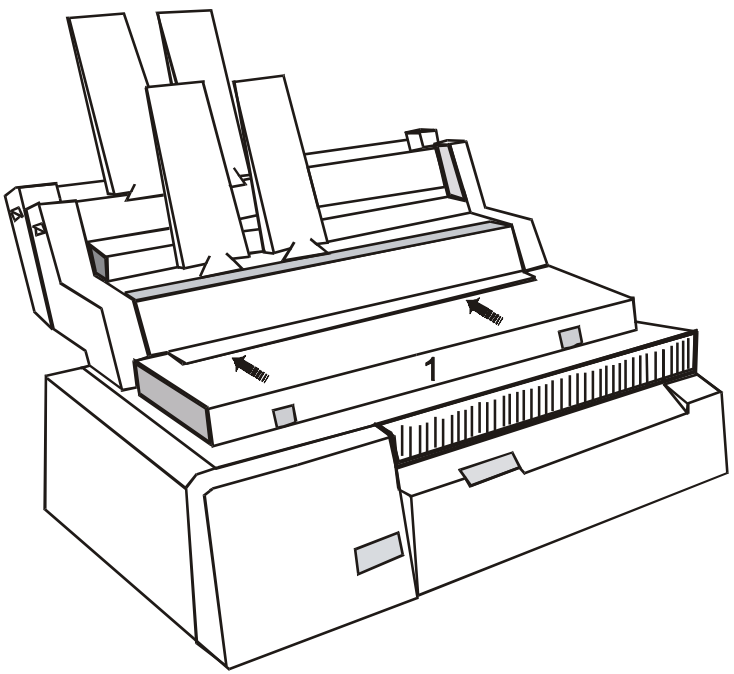
7. Hold the ASF parallel to the platen and slightly tilted towards the front of the printer. Fit the hooks (1) into the small bars (2) at either side of the platen. Release the ASF.



8. Find the front cover.



9. Slide the front cover (1) under the ASF and then push it down until it clicks in place.



Paper Specifications

The following specifications should be adhered to in order to assure reliable feeder operation. See the following tables:

Cut Sheet

Width	Minimum	85,4 mm (6 inches)
	Maximum	381 mm (15 inches)
Length	Minimum (Bin 1)	145 mm (5.7 inches)
	Minimum (Bin 2)	203 mm (8 inches)
	Maximum	355 mm (14 inches)
Weight	Minimum	60 g/m^2
	Maximum	100 g/m^2
Storage	At least five hours before use, keep the paper between 18 °C and 24°C° (64°- 75° F) with a 40% to 60% of relative humidity.	

Multi-part Forms

Pressure Sensitive Paper	Maximum 2 copies	
	First Sheet	70 - 80 g/m^2
	Copies	40 - 60 g/m^2
	Last Sheet	70 - 80 g/m^2
Carbon Paper	Maximum 2 copies	
	First Sheet	70 - 80 g/m^2
	Copies	35 - 40 g/m^2
	Last Sheet	70 - 80 g/m^2
	Carbon Paper	25 g/m^2
The uncovered surface of the carbon paper has to be rough.		

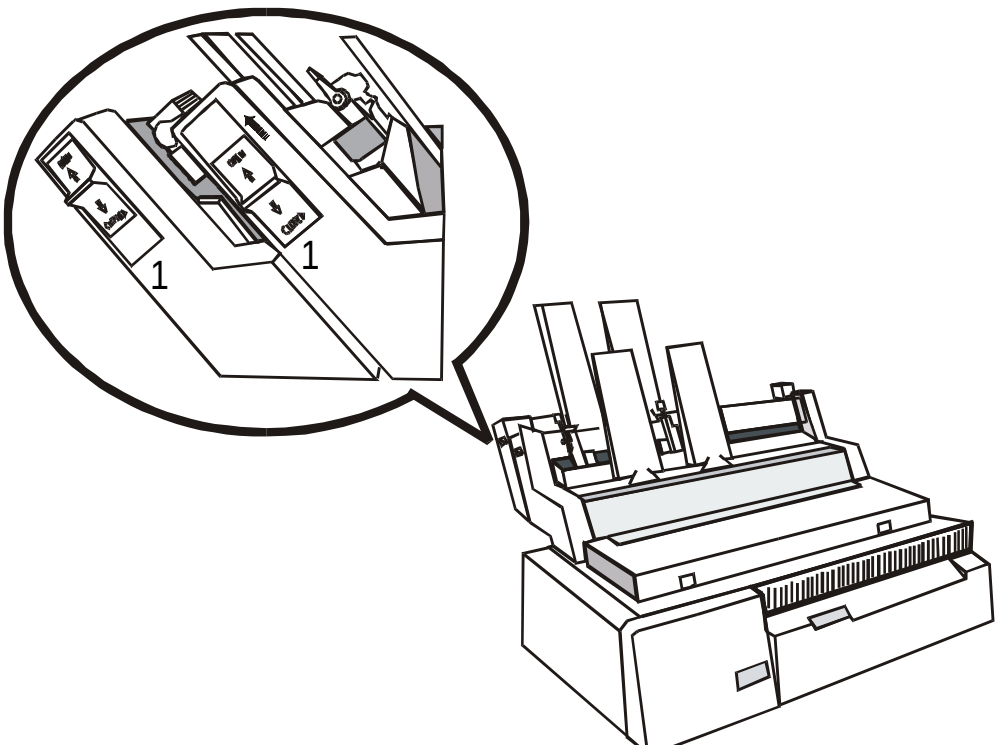
Envelopes

Width	Minimum	127 mm (5 inches)
	Maximum	254 mm (10 inches)
Length	Minimum	101 mm (4 inches
	Maximum	160 mm (6.5 inches)
Thickness	Minimum	0.10 mm (0.004 inch)
	Maximum	0.13 mm (0.005 inch)
Max. Thickness Area	max. 0.51 mm (0.020 inches)	
Printable Area:	it is advisable to print into the constant thickness area.	

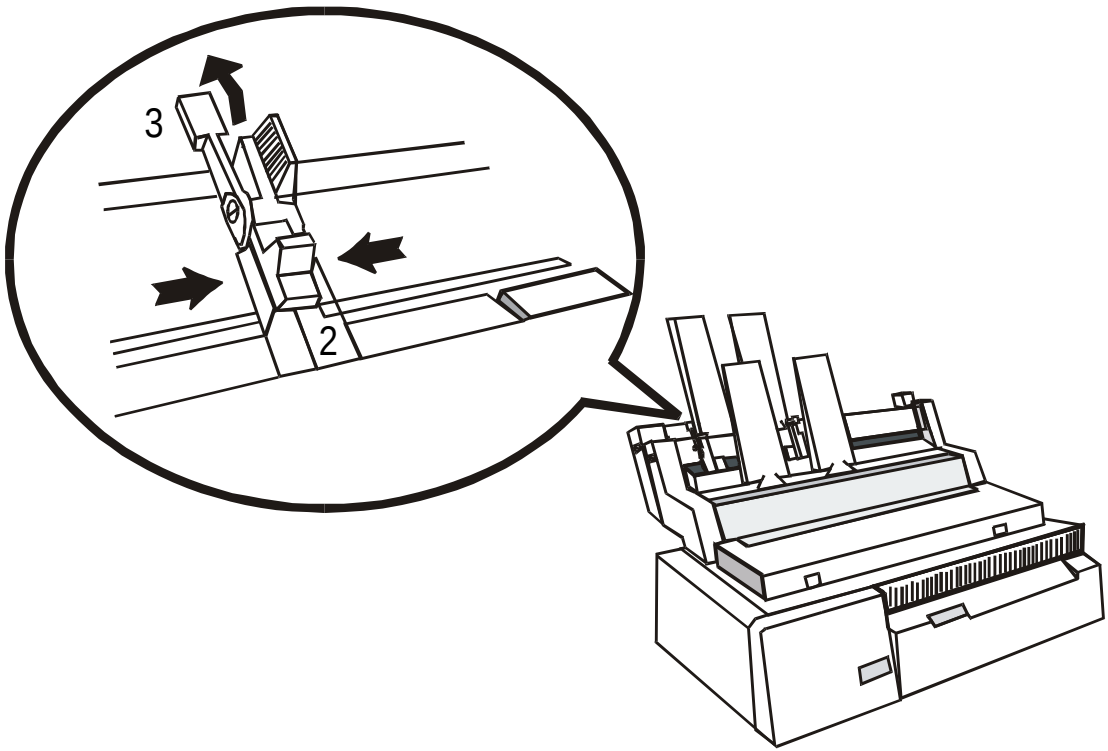
Paper Loading

Make sure that all preliminary operations of preparing the printer are executed, then follow the sequence:

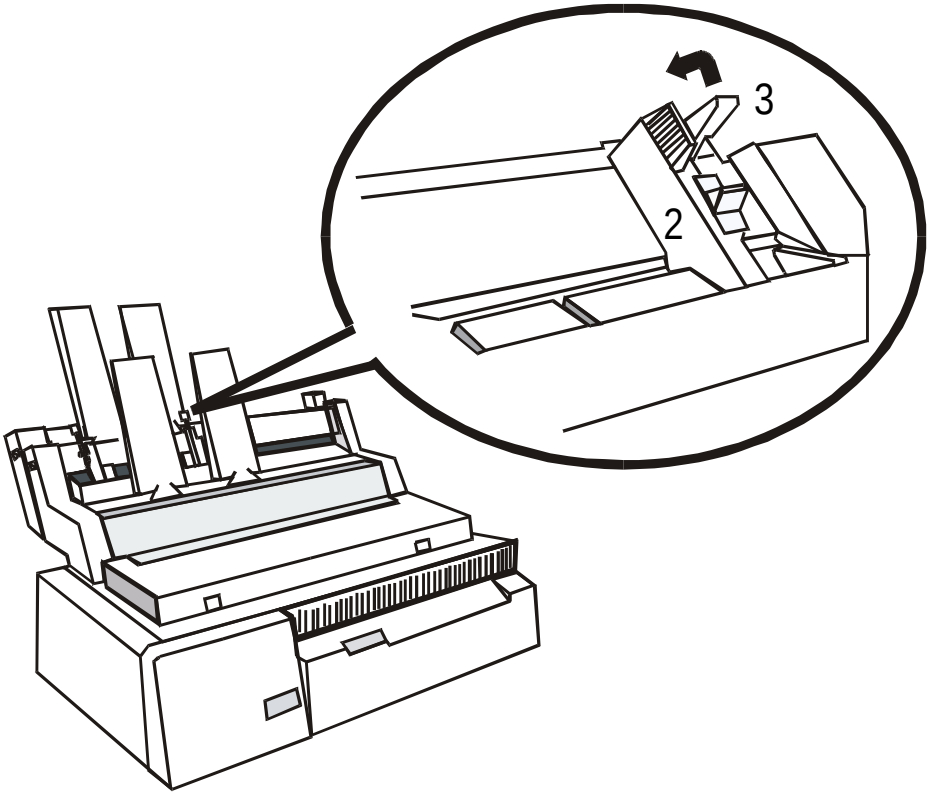
1. Open the paper bin by moving the slider (1) up in OPEN position.



2. Unlock the left paper guide (2) by moving the paper guide lever (3) up. Move the paper guide towards the desired position.

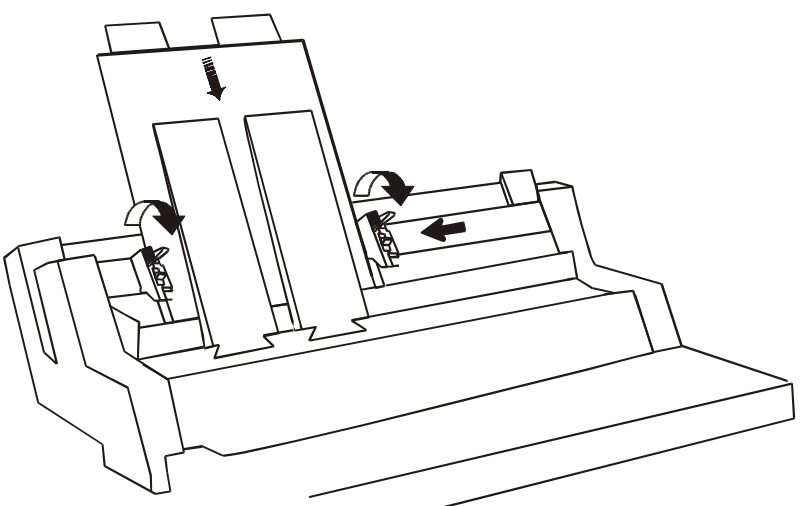


3. Unlock the right paper guide (2) by moving the paper guide lever (3) up.



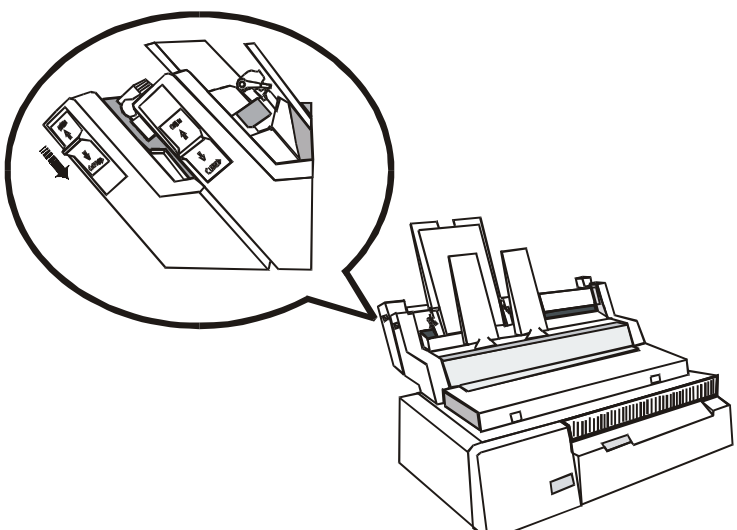
4. Fan the paper thoroughly.

5. Stack the paper firmly in the bin. Adjust the right paper guide to the correct paper width and ensuring that the paper is not too close in the bin. Lock both paper guides by moving the paper guide levers down.



Bin	Capacity	Weight
Bin 1	100 Cut Sheets	80 g/m^2
	35 Multi-part Forms	
Bin 2	100 Cut Sheets	80 g/m^2
	35 Multi-part Forms	
Output Stacker	150 Cut Sheets	80 g/m^2
	50 Multi-part Forms	

6. Close the paper bins by moving the slider down in CLOSED position.



- Whenever the bin is opened, reposition the paper in the bin.
- Whenever the printer received a print command, it automatically performs a paper loading.

Switching From Fanfold Paper to ASF

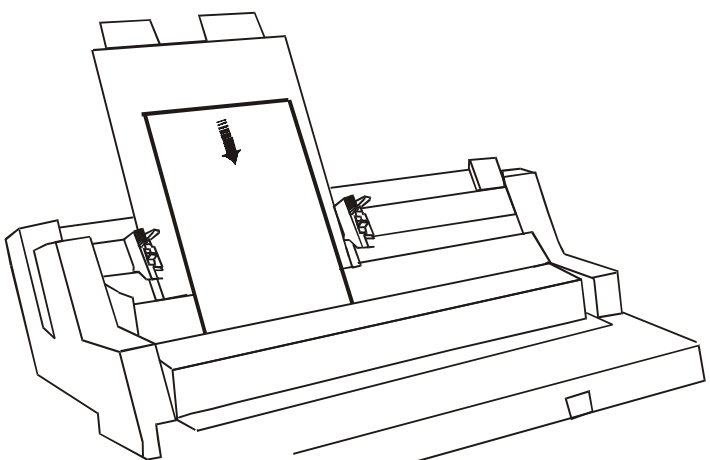
If you have been using fanfold paper and the printer receives a command to load a cut sheet through the Automatic Sheet Feeder:

1. Park the fanfold paper: press the SHIFT key and then the PARK key to enable the PARK function, the message `Parking paper` will be displayed.
2. Place the drive selection lever in the cut sheet position. Press the ON LINE key.

Inserting Manual Cut Sheets Without Removing the ASF

Follow the sequence:

- Open the paper bins.
- Make sure that the printer is disabled to print.
- Insert the cut sheet in the entry slot in front of the first bin until it stops against the platen. Perform the paper loading procedure as explained before in "Loading Cut Sheets " section.
- Whenever you wish to enable again the ASF loading, stack the paper in the bins and close them.

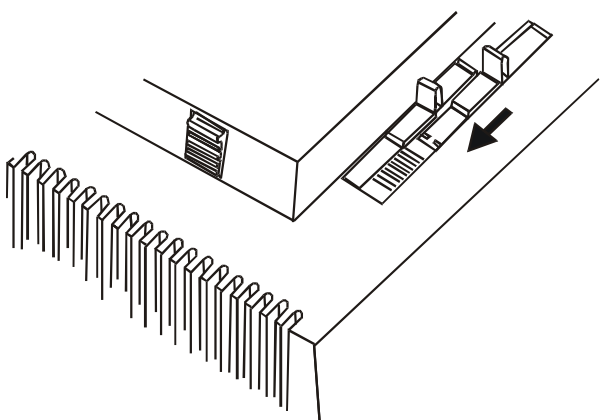


Using Fanfold Paper through Automatic Sheet Feeder

Your printer allows to load the fanfold paper with the Automatic Sheet Feeder (option) installed.

The paper width must be maximum 15 inches (381 mm) and it is advisable to test it so that this feature can be correctly performed. Follow the sequence:

1. Make sure that the fanfold paper is in parking position and that the printer is idle.
2. Press the SHIFT key and then PATH key. When the display shows the message `Fanfold Thru ASF` release the key or do not press it within 0.8 sec.
3. Place the drive selection lever in the fanfold position.



4. Load paper as explained before and then proceed with your printing job. You will see the fanfold that comes through the Automatic Sheet Feeder and positions itself towards the front of the printer.

It is advisable to remove the paper stackers for the output of paper, if installed, from the Automatic Sheet Feeder to facilitate the paper exit.

How to Keep the Automatic Sheet Feeder Clean

Your Automatic Sheet Feeder has been designed to operate reliably over a long period of time with minimal care and attention. However, it is advisable:

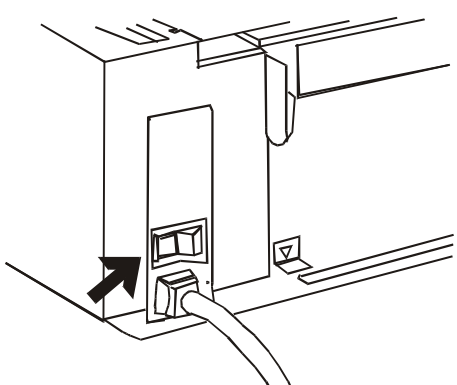
- Remove the dust from the ASF by first removing it from the printer. To remove dust and paper particles from the ASF you should use a soft brush.
- The pick-up rollers and printer platen may become slightly less efficient with use, therefore they must be cleaned periodically by a lint-free cloth and a suitable platen cleaner. Please contact your dealer for suitable platen cleaner.

Do not use platen cleaner on the plastic parts of the printer or ASF since platen cleaner will melt plastic.

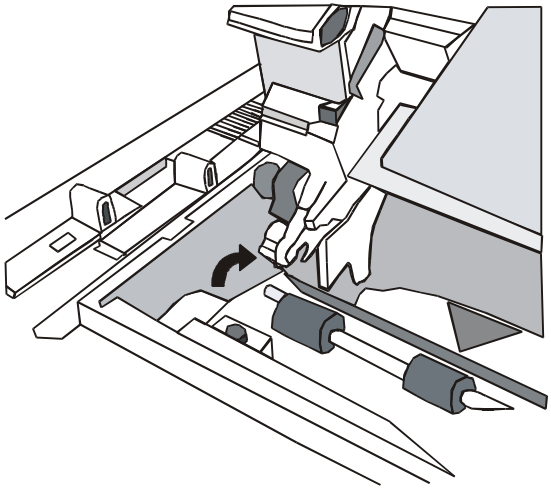
Removing the Automatic Sheet Feeder

When the ASF is no longer required, do not forget to disable its use by selecting another type of paper loading via your printer operator panel, see "Operator Panel Presentation" before.

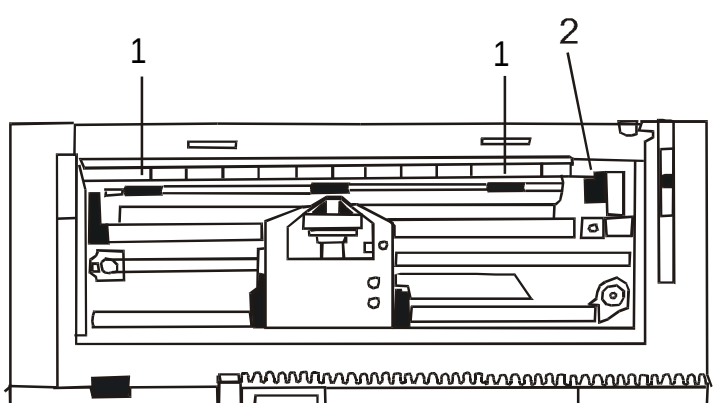
1. Turn the printer off.



2. Remove the front cover. Then remove the ASF by tilting it slightly towards the front of the printer and lifting it off.



3. Position the rubber roller (1) in their places evenly along the paper bail. Fix the plastic mask (2) again.



4. Replace the printer cover and the paper chute.

Problem Solving

The following table will help you to identify and solve problems which may occur when using the ASF. If the problem is not listed, or if it is not corrected by any of the methods suggested, contact your supplier for help.

Problem	Cause	Solution
The ASF does not feed the paper	The paper bin(s) not in operating position.	Set paper bin(s) to correct operating position.
	The platen movement is not being transferred to ASF.	Check the ASF mounting and proper gear contact.
	The printer must be set to ASF mode.	Set the ASF mode, refer to the manual.
	The ASF is out of paper.	Reload the paper bin(s).
	There is a paper jam condition.	Remove the jammed paper and restack the paper
More than one sheet of paper feeds at a time	The paper is not fanned enough.	Fan the paper and reload paper stack.
	The paper is out of specifications or damaged conforming to ASF standards.	Replace with new paper according to the ASF standards.
Paper goes a skew	The paper is damaged.	Remove paper from the bin and replace it with new paper.
The paper is not stacker ejected properly	The output paper stacker is full.	Empty the output paper.
	The paper does not match the specifications	Replace the paper with proper one.

Printer Specifications

Printing Characteristics

Print Head			
		4051/4051N plus	4056/4056N plus
Matrix		9 needles	24 needles
Needles Diameter		0.30	0.20
Print Head Life		400 Mchar	400 Mchar
Ribbon Type		Black 3 million of characters	

Print Speed (cps)			
		4051/4051N plus	4056/4056N plus
HS Draft		480	480
Draft	10 cpi	400	400
Quality LQ	10 cpi	120	133
	12 cpi	120	160
	15 cpi	120	200

Throughput (page/hour)			
		4051/4051N plus	4056/4056N plus
HS Draft		390	390
Draft		370	370

Print Matrix (horizontal per vertical)			
		4051/4051N plus	4056/4056N plus
HS Draft	10 cpi	10 x 9	9 x 24
Draft	10 cpi	12 x 9	12 x 24
	12 cpi	10 x 9	10 x 24
	15 cpi	10 x 9	8 x 16
	17.1 cpi	12 x 9	12 x 24
	20 cpi	12 x 9	12 x 24
Quality LQ	10 cpi	20 x 18	36 x 24
	12 cpi	20 x 18	30 x 24
	15 cpi	20 x 18	24 x 16
	17.1 cpi	20 x 18	36 x 24
	20 cpi	20 x 18	30 x 24
	24 cpi	-	24 x 16

Print Density (characters per inch)	
Normal	10 - 12 - 15
Expanded	5 - 6 - 7.5 -8.55
Compressed	17.1 - 20
Proportional	

Line Length (number of characters)		
	4051/4056 plus	4051N/4056N plus
	136 at 10 cpi	100 at 10 cpi
	163 at 12 cpi	120 at 12 cpi
	204 at 15 cpi	150 at 15 cpi
	233 at 17.1 cpi	171 at 17.1 cpi
	271 at 20 cpi	200 at 20 cpi

Vertical Spacing		
	4051/4051N plus	4056/4056N plus
	6,8,12 lpi	6,8,12 lpi
	3,4,6,8,12 lines/30 mm	3,4,6,8,12 lines/30 mm
	n/72, n/144, n/216	n/72, n/144, n/216, n/360

Resident Fonts
4051/4051N plus: Draft, Courier, Gothic, OCR-A, OCR-B
4056/4056N plus: Draft, Courier, Gothic, OCR-A, OCR-B, Boldface, Prestige, Script, Presentor

Print Attributes
Subscript (*), Superscript (*), Underline (*), Overscore, Italics (*), Emphasized, Double Strike, Compressed Double Width, Double Height
Note: (*) Graphic characters do not accept this attribute

Graphic Resolution (dots per inch)		
	4051/4051N plus	4056/4056N plus
Horizontal	60, 72, 80, 90, 120, 144, 240	60, 80, 90, 120, 180, 240, 360
Vertical	72, 144	90, 180

Bar Codes
UPC-A, EAN-8, EAN-13, Code 39, Code 128, 2/5 Interleaved, 2/5 Industrial, 2/5 Matrix, Postnet, Codabar

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Draft/Quality in EPSON IBM + Native

Character Sets	
ASCII	Normal + Slanted (italics)
IBM PC Character Sets	CS1 and CS2
EPSON National Variations	USA, France, Germany, United Kingdom, Denmark-1, Sweden, Italy, Spain-1, Japan, Norway, Denmark-2, Spain-2, Latin America.
IBM /EPSON Character Sets	USA (CP 437), Greek (CP437-G), 96 Greek, Multilingual (CP850), Greek (CP851), Eastern Europe (CP 852), Turkish (CP 853), Cyrillic (CP 855), Turkish (CP 857), Euro PC Multilingual (CP 858), Portugal (CP 860), Hebrew (CP 862), Canada/France (CP 863), Arabic (CP 864), Denmark/Norway (CP 865), Russian (CP 866), Turkish2 (CP 867), OCR-A (CP 876), OCR-B (CP 877), Central Europe (CP 1250), Cyrillic (CP 1251), Windows Latin1 ANSI (CP 1252), GOST, TASS, MAZOWIA
ISO Characters Sets	Latin1 (ISO 8859/1), Latin2 (ISO 8859/2), Latin3 (ISO 8859/3), Latin4 (ISO 8859/4), Latin/Cyrillic (ISO 8859/5), Latin/Arabic (ISO 8859/6) Latin/Greek (ISO 8859/7), Latin/Hebrew (ISO 8859/8), Latin5 (ISO 8859/9), Latin9 (ISO 8859/15)

Paper Feed	
Paper Line Feed	90 msec at 6 lpi (line per inch)
Paper Slew	5 IPS

Emulations	4051/4051N plus	4056/4056N plus
	EPSON FX Series	EPSON LQ1050/2550
	IBM Proprinter XL III	IBM Proprinter XL 24E
		IBM Proprinter XL 24 AGM

Paper Handling

Copies	1+ 5	
Thickness	0.52 mm max.	
Size	Fanfold	Width: 76 to 406 mm (3'' to 16'') for 4051/4056 plus models Width: 76 to 305 mm (3" to 12") for 4051N/4056N plus models
	Cut Sheet	Width: 102 to 420 mm (4'' to 16,6") Height: 63 to 304 mm (2.5'' to 12'')
Paths	Fanfold	Rear Push
	Cut Sheet	Manual Front
Labels	on Fanfold or Cut Sheet	
Envelopes	Manual Front or through the ASF	
Reverse Movement	on all paper types (max. 1'' on ASF)	
Tear off	under the printable line	
Option ASF (for 4051/4056 plus models only):		
Paper Bins	Capability: 100 sheets each	
Paper Stacker	Capability: 150 sheets	
Stacker Size	Width: Length:	85,4 to 381 mm (6'' to 15'') Bin 1: 145 to 355 mm (5,7'' to 14'') Bin 2: 203 to 355 mm (8'' to 14'')

Physical and Electrical Characteristics

Interfaces	
Parallel I/F	IBM-Epson and Centronics compatible
	Bidirectional, IEEE 1284
	Buffer: up to 32 KBytes
	Nibbles and Byte Mode
	Shared w/ DLL buffer
	7/8 data bits max 100 KBPS
Serial I/F	RS-232/C and 422/A
	600 to 38400 baud bps
	7/8 data bits
	DTR
	XON/XOFF
	Break
	Buffer : up to 32 KBytes
	Shared w/ DLL buffer
Automatic Interface Switching	

Reliability	
MTBF	Mean Time Between Failure: 10000 hours @ 25% Duty Cycle
Print Head	(Draft) 400 MC
Ribbon	(Draft) 3 MC

Power Supply
220/240 Volt - 50 Hz

Noise level
4051/4051N plus: 55 dBA
4056/4056N plus: 54 dBA

Physical Dimensions	4051/4056 plus	4051N/4056N plus
Height	173 mm (6,7 “)	186 mm (7,3”)
Width	615 mm (24,2”)	520 mm (20,4”)
Depth	310 mm (12,2”)	310 mm (12,2”)
Weight	15 kg	13 kg

Environment Conditions		
Storage Conditions		
	Temperature	-40° to 50° C
	Relative Humidity	10%t o 90% RH (non condensing)
Operating Conditions		
	Temperature	10° to 38° C
	Relative Humidity	10% to 90% RH (non condensing)
Paper Conditions		
	Temperature	16° to 24° C
	Relative Humidity	40% to 60% RH (non condensing)

Options (for 4051/4056 plus models only)
LAN Interface Board (factory installation)
Automatic Sheet Feeder - ASF (user installation)

Standard Compliance
ESD IEC 801-2
GS/EN 60950 (included IT Power System) certified by TÜV Product Service in conformity to IEC 950
VDE 0871/6.78 e VDE 875 in conformity to Class B (Radio Protection Mark)
ECMA 8,11,132