logiJET T4-2
logiJET T6-2
with RFID (optional)

Operator's Manual

Edition 2.2

microplex
printware ag

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1. Introduction

1.1. General Description

The logiJET T4-2 and the logiJET T6-2 are multifunctional non-impact printers based on thermal print technology.
The devices can be used for thermal transfer printing as well as for thermal direct printing. Because of its wide range of application, you can use them to print all kind of information as barcodes, alphanumerical characters and vector graphics e.g. .
These printers not only know one device-specific page description language as standard thermal printers usually do, but most of the languages used in the industrial field and the well-known market standards of laserprinters, too.

All printers of the logiJET T4-2 /T6-2 series are provided with a controller that is also used in SOLID laserprinters. So the advantages of the thermal print technology are combined with the flexibility of the „laserprinter intelligence".

The MICROPLEX printer controller has its integrated website, this allows a printer configuration via Ethernet. See Networking Features of MICROPLEX Printers for more information.

Data can be sent without programming expenditure from almost any software platform, because printer drivers are already available for this.

The capabilities featured include the MICROPLEX page description language IDOL. Using this language, complex tasks such as the creation of forms can be carried out by simple software commands (see separate IDOL manual).

The resolution is 300 dots per inch corresponding to about 12 dots per mm.
The print speed is 50 up to 150 mm/second.
Roll-fed media as well as continuous-media can be printed on.
The maximum processable width of media for the logiJET T6-2 is 174 mm. 168 mm of that are printable.

1.2. Information on RFID Technology

The MICROPLEX printers logiJET T4-2 and logiJET T6-2 are optionally provided with an integrated multi-protocol RF Write/Read module **(factory option)**.
The printer functions as a complete system for writing, reading and printing RFID labels (**R**adio **F**requency **ID**entification), when it is connected to a host computer.
The printer receives instructions from the host computer. The MICROPLEX Controller interprets this information and controls printer's mechanical drive, RFID subsystem and printhead.

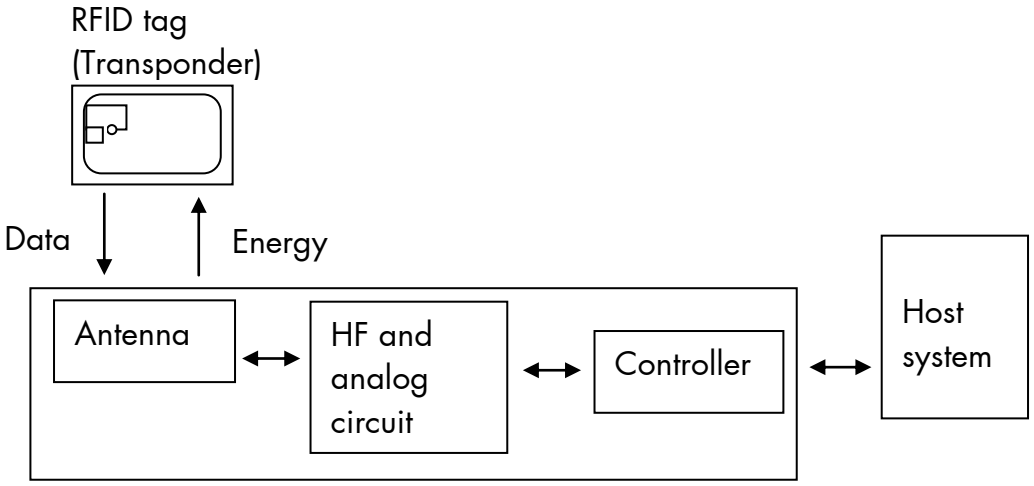


Fig. 1.2.a Block diagram: High Frequency Identification technology (RFID)

The multi-protocol RF Write/Read module is built-in in the printers paper path.

To use the RFID capabilities of this printer, you will need the appropriate RFID media. This media includes the label, backing, and an RFID transponder inlay encased by the label material.

The commands for the RFID functions are sent like print data via the active data channel (Centronics, USB, Ethernet,...).
The ID of the label (Transponder Identification number) can be read in order to be transmitted to the host via the printer's status channel.
This allows a clearly assignment of the specific label identification number to the information printed on this label.

1.3. Informations on Status Out and SPS-Control (GPIO)

The MICROPLEX **Status Out function** provides the possibility to get information on the printer status (paper jam, offline, ...) and on the print job process (idle, busy, page printed,...).

With the **optional SPS - Control (GPIO Board)** Microplex printers are able to synchronize their internal print data processing to external signals: they can wait until other machines are ready and they are able to control postprocessing machines, too.
For every print job a real handshake between printer and post processing can be realized.

1.4. Fundamentals of Thermal Printing

The thermal print technology enables a quiet and fast print process with a high resolution output. The printhead produces the image by heating single elements (dots). So you need a special ribbon (thermal transfer printing) or a special kind of paper (thermal direct printing).
While thermal transfer printing the dots touch the thermal ribbon so that the heating of particular dots leads to a partial melting of the ribbon. Due to the contact with a media (future carrier of the information, for example paper) this leads to a transfer of the image onto the media.
While thermal direct printing the dots touch the thermal paper directly. The dyes and developers within the paper respond to the heat of particular dots, change their color to black and so the wanted image emerges.

The printers of the logiJET T4-2 /T6-2 series can be used for both methods of printing.

1.5. Conventions

To find the requested information more quickly and to understand instructions more easily, the following conventions are used:

This symbol refers to a possible source of danger. If you do not pay attention to this information, injuries may result, the function of the printer could be reduced or objects could be damaged.

This symbol refers to important hints and suggestions on using the printer. Disregarding these hints might cause problems with the printer or within the environments.

This symbol shows a key of the control panel. Such symbols will be used in this manual whenever keys have to be pressed in order to activate certain functions.

blue colored text — Link to another chapter or a different document. By clicking the blue colored text you'll enter the concerning chapter or document.

[Menu Level 1] — This symbol represents messages shown in the display (panel).

1.6. CE - Conformity

EC DECLARATION OF CONFORMITY

Manufacturer:	**MICROPLEX Printware AG** Panzerstrasse 5 D-26316 Varel Germany	
Product:	Thermal Printer	
Type:	LOGIJET T4-2 LOGIJET T6-2	
Conforms with the following EC directives:	EN 60950-1	(Low Voltage directive)
	EN 55022	(Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement)
	EN 55024, EN 61000-6-2	
	EN 61000-3-2	(Immunity for industrial environments)
	EN 61000-3-3	(Limitation of voltage changes,
	voltage	fluctuations and flicker in public low-voltage supply systems)

Varel, 02 May 2011

General Manager
Jürgen Schmitt

On the basis of this declaration, this product will bear the following mark: CE

The printers logiJET T4-2 and logiJET T6-2 with RFID factory option incorporate an integrated compact reader (RF Write/Read module).
The Declaration of Conformity can be found in section 10.1 Integrated RF Write/Read module.

1.7. General Safety Regulations

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.

This MICROPLEX product and its consumables are designed and tested according to strict safety standards.

Heeding the following instructions ensures secure operation:

- Please make sure your electricity source is appropriately grounded.

- Install the device on solid and level ground.

- Only trained staff are authorized to transport the equipment.

- Only use consumables which are specially developed for this device.

- Using unsuitable consumables may cause a reduction of output quality or damages to the device.

- Ensure no liquids get on or into the device.

- Do not remove any cover or safety device fastened by screws.

- Do not remove or bridge over any safety device.

- Do not push anything into the ventilation apertures.

- Never carry out installations, cleanings or maintenance operations which are not described in this manual. This should only be done by MICROPLEX authorized service personnel.

- Be careful when operating equipment with opened cover hoods (setting-up work or service). Rotating parts **can cause injury** , and it is also possible for hair, clothing, jewellery, etc. to be caught in the machinery.
  Ribbon and material should only be inserted and changed by specially instructed personnel.

- Optional device components may only be installed by authorized personnel, and in accordance with the appropriate assembly and usage regulations.
- The cutter may only be installed by trained personnel.
- Only attach or remove the printhead when the device is switched off.
  After switching off the device, wait at least 3 minutes before removing the printhead.
- Only plug in or remove interface connectors when the device is switched off.

In order to disconnect the printer quickly from the main power in case of emergency please note the following:

- For connected printers with plugs, the power-outlet should be installed near the printer and easily within reach.
- For permanently connected printers, an easily accessible emergency power-off switch should be installed close to the printer.
- Please do not conceal any disconnect devices with the printer or other objects.

- After switching off the device, wait at least 15 seconds before the device is switched on again.
- Please follow all the information and hints directly attached to the device and/or described in this manual.

2. Installation

2.1. Printer Unpacking

1. Open the box and remove the accessory parts.

   Hint: The shipping box etc. of your printer may differ in form and optic from the parts shown in the following figure.

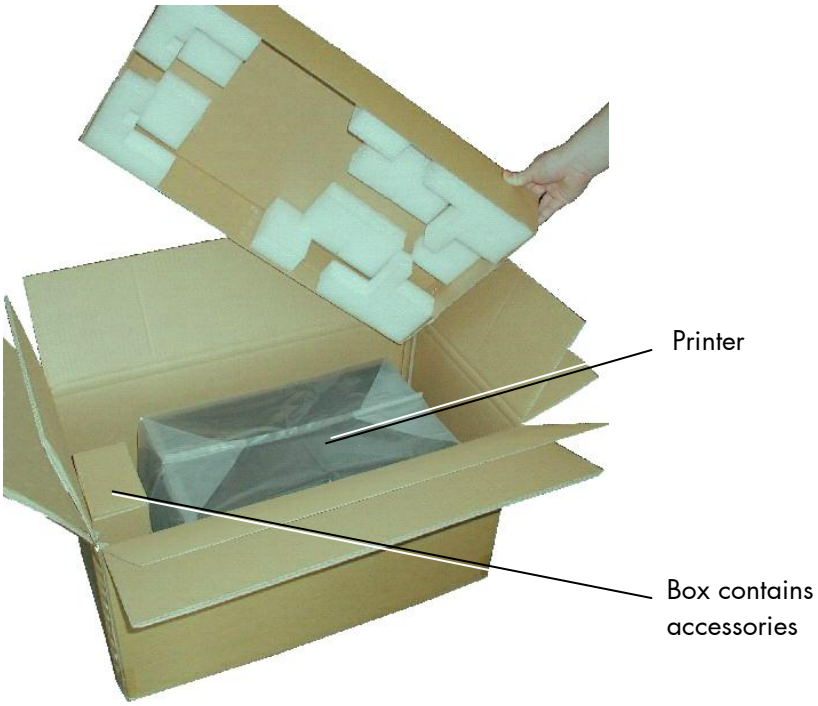


Fig. 2.1.a Printer in the shipping box

2. Take the printer and lift it out the box carefully. Get somebody to hold the box when removing the printer.

Take hold of the printer <u>from the bottom.</u>
Do **not** use other parts of the printer (e.g. plastic parts at the printer's front or rear side ...) to lift the device!

Fig. 2.1.b Lifting the printer

3. Remove the foil covering the printer.

4. Place the printer onto a suitable base (see section 2.3).

Please retain the original packing materials in case the printer has to be transported in the future.

2.2. Check List

First of all place the printer and the accessories onto a level surface until the definitive location is chosen.

Please make sure that all items are included and that there are no defects.
Immediately inform your supplier of any damage.

Open the cardboard box carefully and check the contents:

1. Printer logiJET T4-2 or T6-2
2. Power cord
3. Data cable (USB)
4. CD containing:
    - Operator's Manual for logiJET T4-2 /T6-2 /RFID
    - Print drivers
    - IDOL Programming Manual

Fig. 2.2.a Accessories

2.3. Printer Installation

- The chosen location should be well-ventilated, clean and dry.
- Damaging environmental factors such as metal vapors, oil mist, corroding lixivium or the like must not come into contact with the printer.
- Position the printer on solid and level ground.
- Do not exposure the printer to shocks or vibrations.
- The printer and socket have to be easily accessible.
- The printer should not be located near volatile or combustible materials (e.g. a curtain).

- The printer must be connected to an appropriate AC power source 120V AC/60 Hz (North America) or 230V/50 Hz (Europe, United Kingdom e.g.). The power source must be properly grounded. The socket and power cords must not be damaged.
- Use the printer only within the allowed fluctuation range of ±10%.
- The voltage support must not be impaired by interference.

- In order to run the printer reliably, please maintain the following environmental conditions:

  Temperature: +5°C to +40°C (operating)
  -20°C to +50°C (storage temperature)
  Relative atmospheric humidity: 30% to 85% (without condensation)

- Do not expose the printer to abrupt temperature changes (heating, window or air condition).
- The printer should not be exposed to direct sunlight.

2.4. Printer Components

Main view:

Fig. 2.4.a Main view of the printer

Rear view:

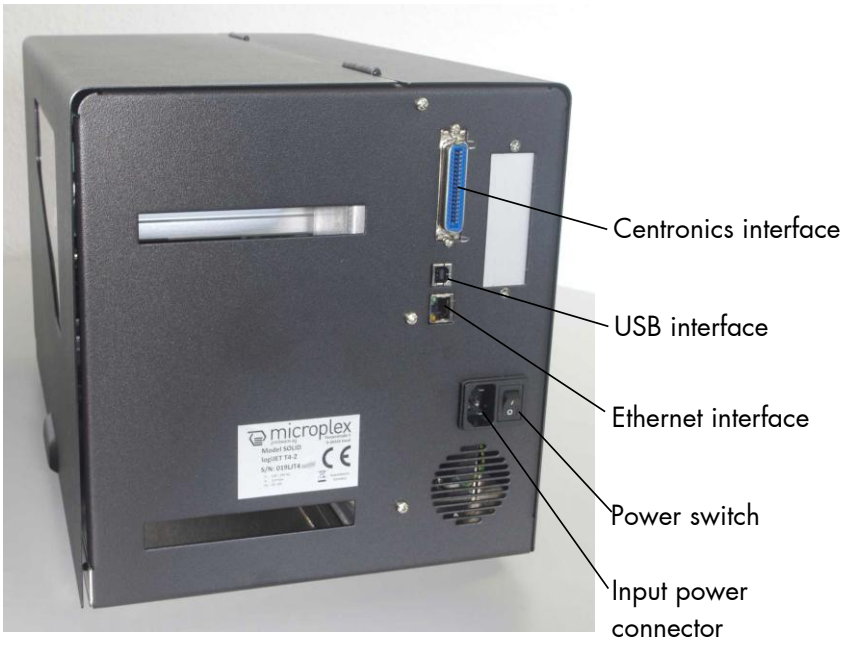


Fig. 2.4.b Rear view of the printer

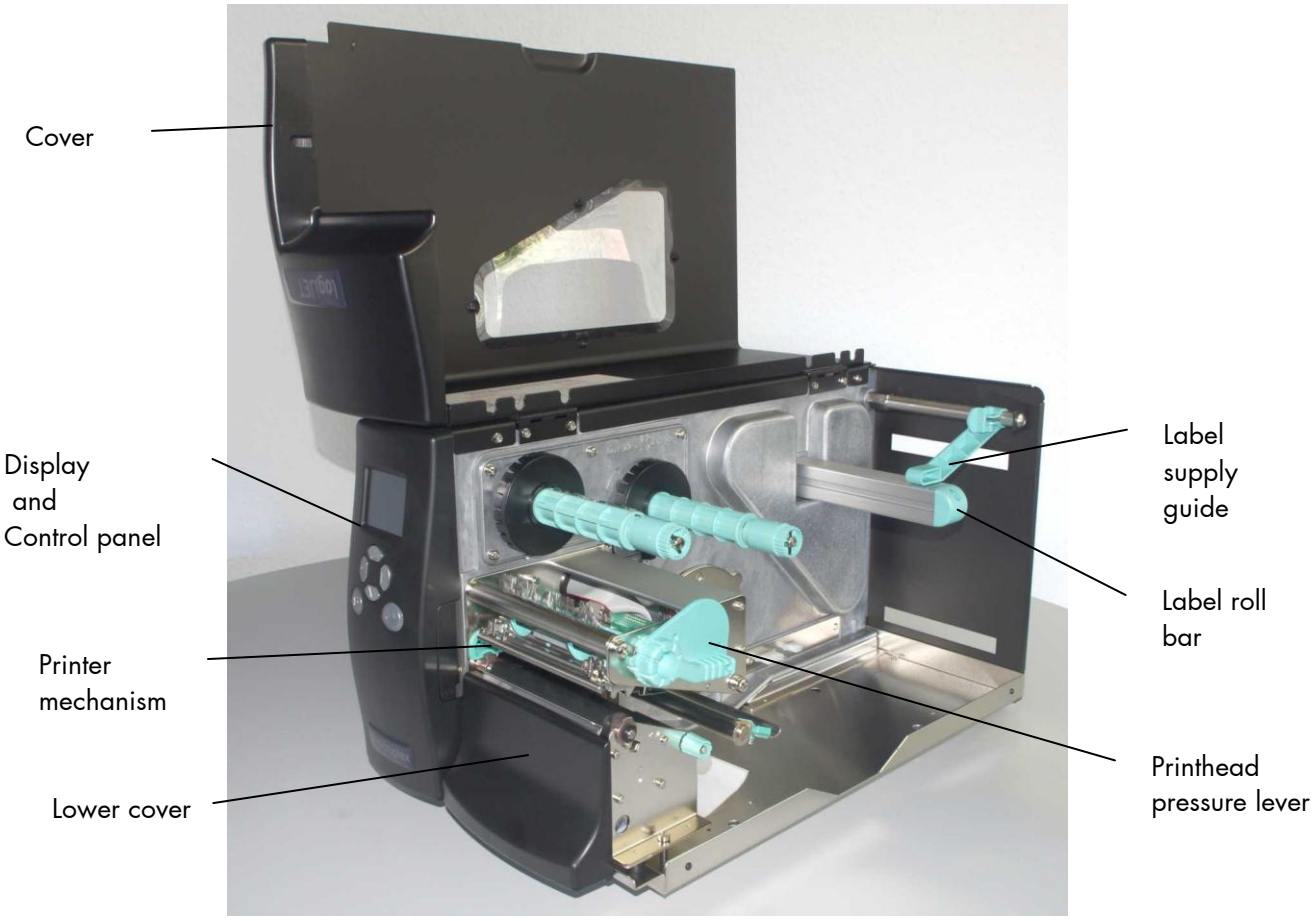


Fig. 2.4.c Printer opened

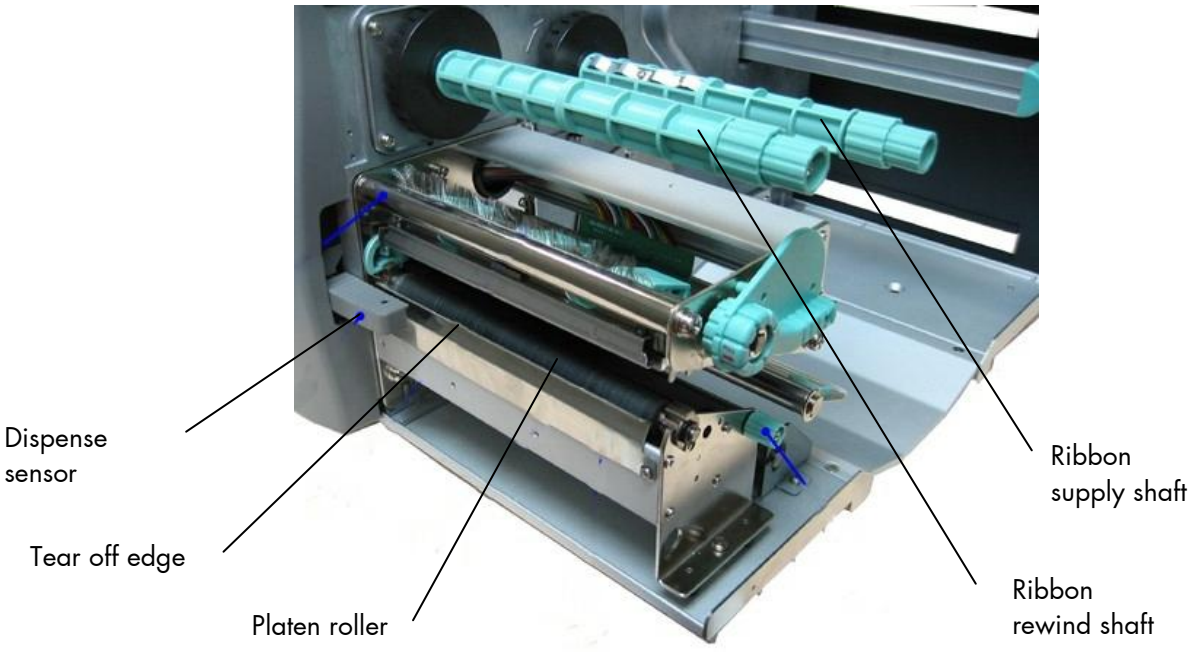


Fig. 2.4.d Details printer mechanism

3. Media and Ribbon Requirements

Since print quality is affected by media and ribbon, printing speeds, and printer operation modes, it is very important to run tests for your applications.

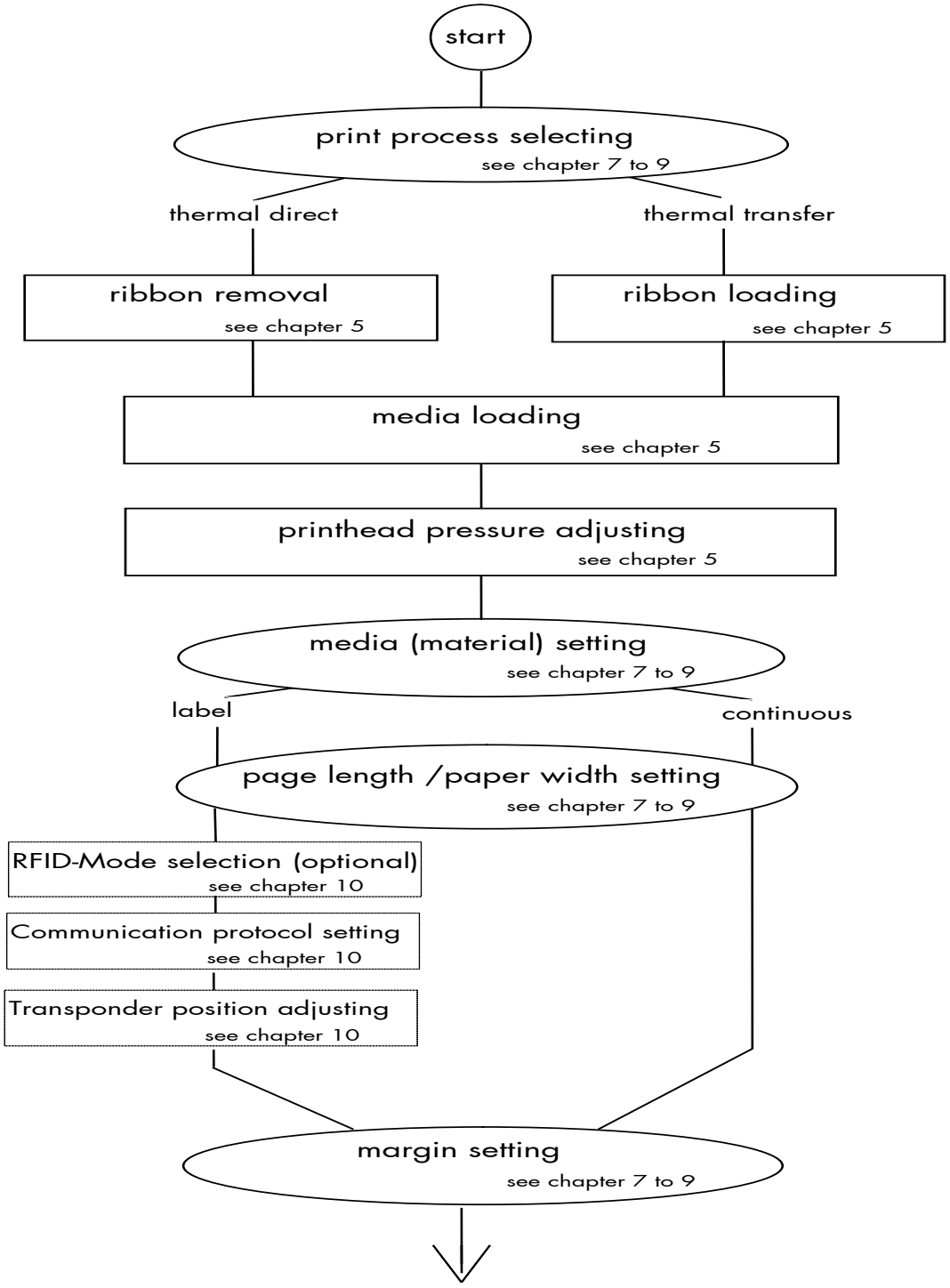
Fig. 3.a Labels

To use the RFID capabilities of this printer, you will need the appropriate RFID media. This media includes the label, backing, and an RFID transponder inlay encased by the label material.
Only high-quality RFID media has to be used.

A general rule is:
High quality labels are always recommended to ensure against premature printhead wear.
We strongly recommend the use of MICROPLEX supplies for continuous high-quality printing.

4. Basic Operation Sequences

4.1. Overview



If the panel settings above shall be effective permanently (that means they do not have to be put in again after a printer OFF/ON) the setting values can be saved permanently by operating the ENTER key two times.

An output of the current setting values can be generated using the "Printing the Status Sheet" panel function (see section 9.8).

After each material changing (print media/label material) the sensors have to be suitable adjusted (via automatic adjustment or, if necessary, via sensor current and switching threshold, see section 9.3 Adjusting the Sync Sensor).

Detailed information on the operations above and to further functions of the printers logiJET T4-2 /T6-2 /RFID can be found in the following chapters.

5. Handling of Consumables

Pay attention to the following safety instructions and the instructions listed in section 1.5 up to 1.7, too!

Safety instructions:

- The cutter (optional device of your printer) can cause injuries if the printer is operated incorrectly.
- There is a danger of fingers, hair, clothing, jewellery etc. being drawn into the machine in the vicinity of the material transport unit.
- Be careful when operating equipment with opened cover hoods (setting-up work or service). Rotating parts can cause injury, and it is possible for hair, clothing, jewellery, etc. to be caught in the machinery.
- Print material should only be inserted and changed by specially instructed personnel.

For thermal direct printing it is not allowed to load a ribbon to avoid damaging the printhead. Make sure your settings using the control panel and display respectively via interface (see chapter 6 to 9) fit to the printer implementation (ribbon inserted /not inserted).

Ribbon and material should only be inserted/exchanged by specially instructed personnel.

5.1. Winding Diagram

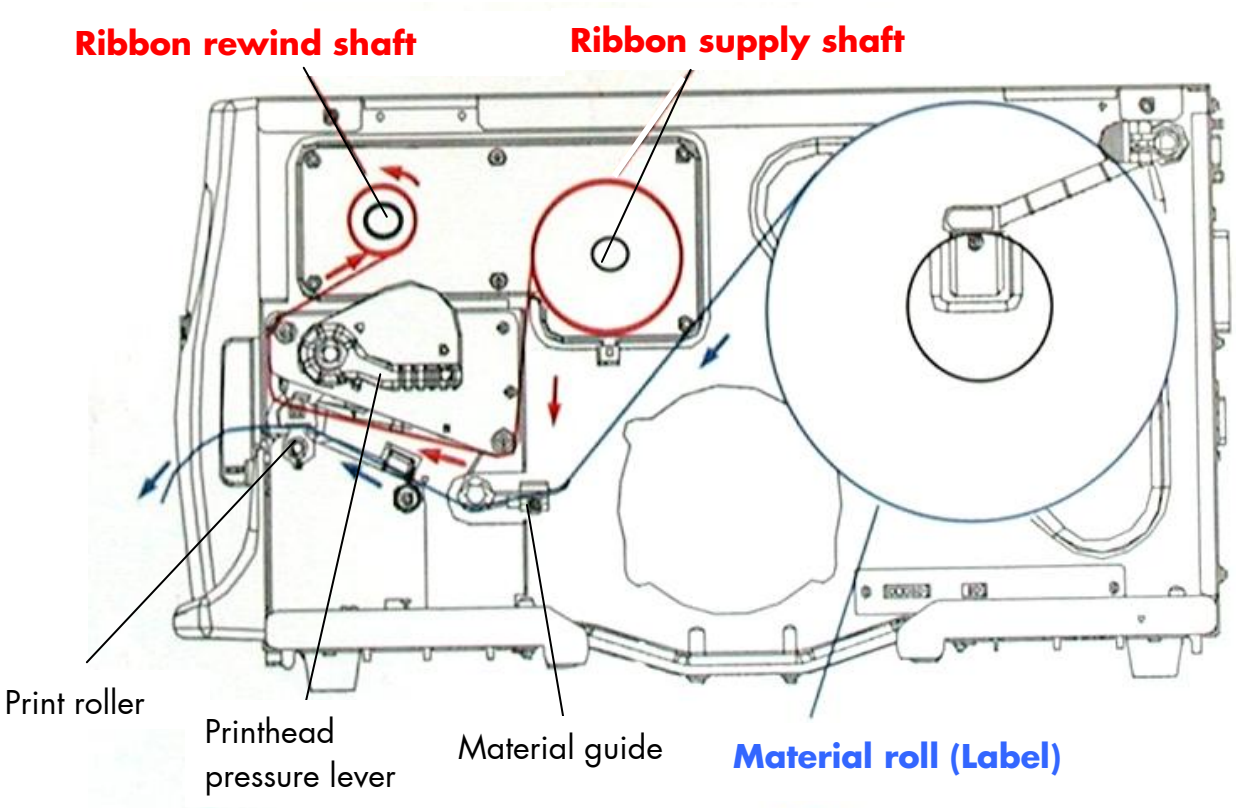


Fig. 5.1.a Winding directions of material and ribbon (here: ink inside the roll)

The diagram above shows the usual winding directions of material and ribbon.
Pay attention to the different ribbon roll winding directions described in section 5.3.1 Ribbon Loading. The figure above shows the winding directions for "Ink inside the roll" ribbons. Also pay attention to the instructions located on the inside of the printer hood.

5.2. Roll-Fed Media Handling

5.2.1. Tear Off Media Loading

To load roll-fed media for tear off respectively for further external processing go on like this:

The tear off roll-fed media is easier to insert if the end is gored before inserting as shown in figure 5.2.1.a (when using a new roll you should first remove the protection foil if necessary and discard one full turn of the media).

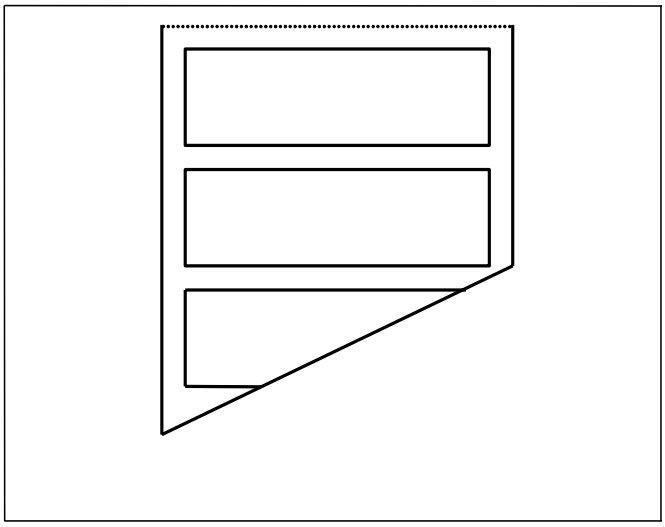


Fig. 5.2.1.a Goring the tear off roll-fed media

1. Switch the printer to OFF LINE mode.

2. Open the printer hood.

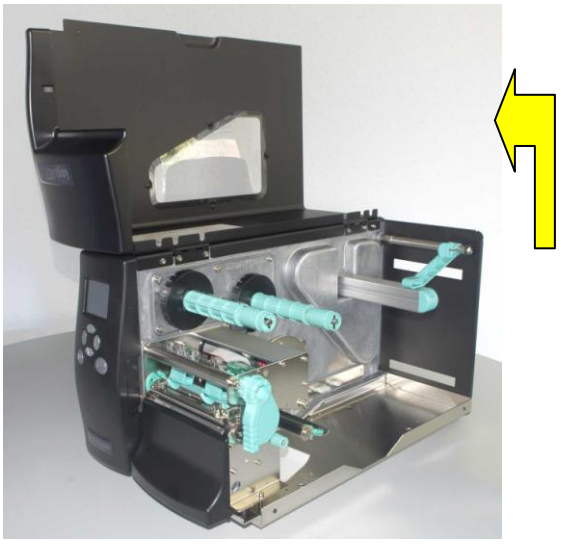


Fig. 5.2.1.b Opening the printer hood

3. Unlock the label supply guide (the small locking lever has to be "opened" by flipping this lever in the direction shown in figure 5.2.1.c by the yellow arrow). Then pull the label supply guide rightward.

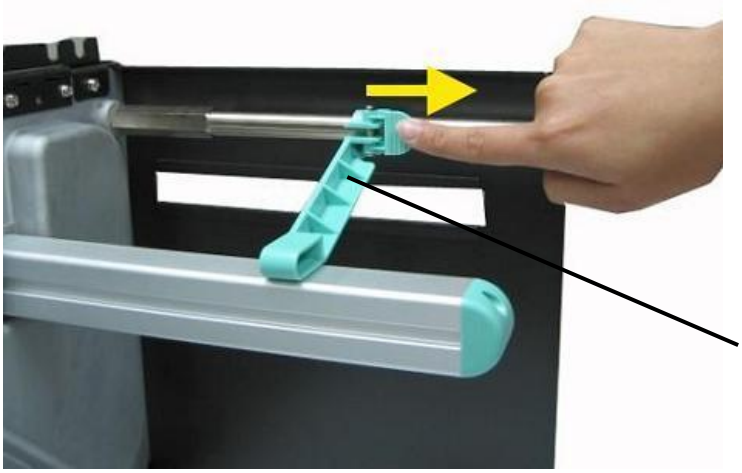


Fig. 5.2.1.c Pulling the label supply guide rightward.

4. Swivel the label supply guide upward.

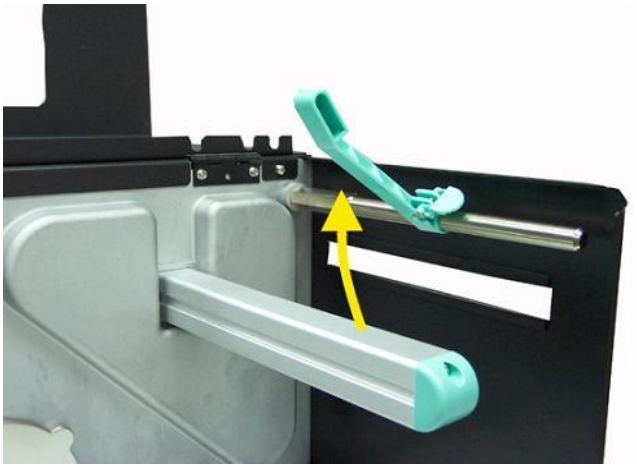


Fig. 5.2.1.d Swiveling the label supply guide upward

5. The media roll must turn counterclockwise when unwinding. Take the Tear off roll-fed media and hold it in the corresponding way.

6. Slide the media roll onto the label roll bar all the way back to the printer's inner wall.

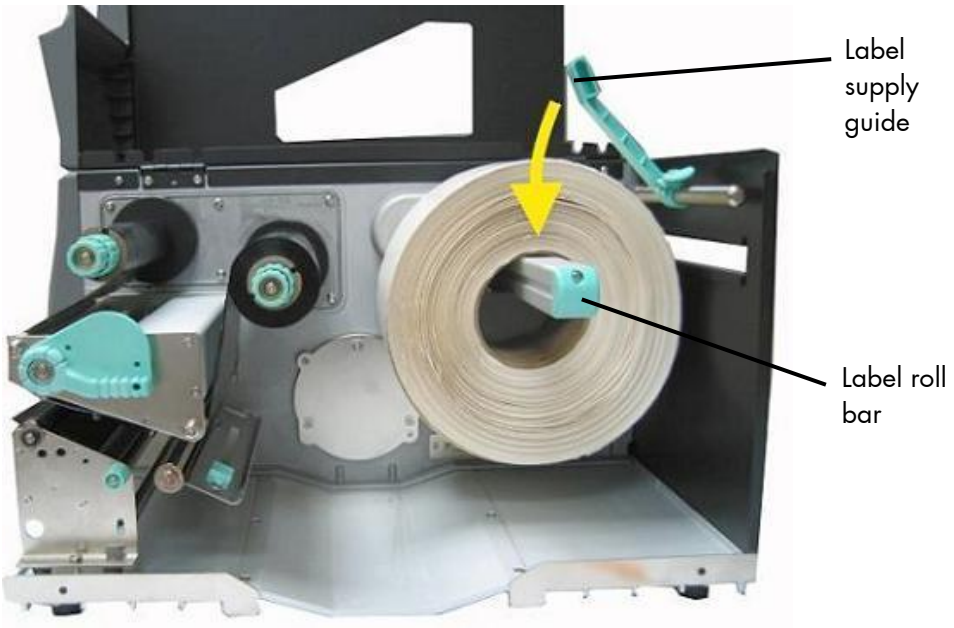


Fig. 5.2.1.e Inserting the media roll

7. Swivel the label supply guide downward.

8. Slide the label supply guide in towards the label roll (as shown in the right figure below).

False OK

Fig. 5.2.1.f Please refer to the right photo!

9. Avoid pushing the label supply guide in too far or you will damage the edge of the label stock.

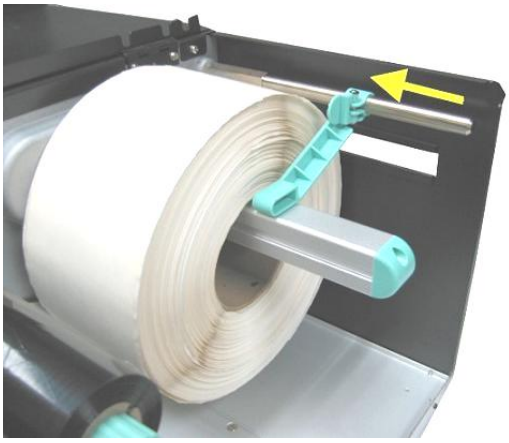


Fig. 5.2.1.g Setting the label supply guide to the right position

10. Lock the label supply guide (the small locking lever has to be "closed" by flipping this lever in the direction shown in figure 5.2.1.g by the yellow arrow).

11. Release the printhead pressure lever to lift the pressure rollers.

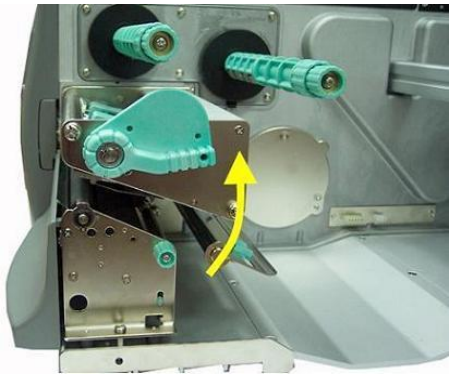


Fig. 5.2.1.h Swivel the printhead pressure lever upward (counterclockwise).

12. Slide the material guide to its outermost position. (Compare figure 5.2.1.j).

13. Feed the label through under the label tension plate (under the moveable sensor) to the tear off bar.

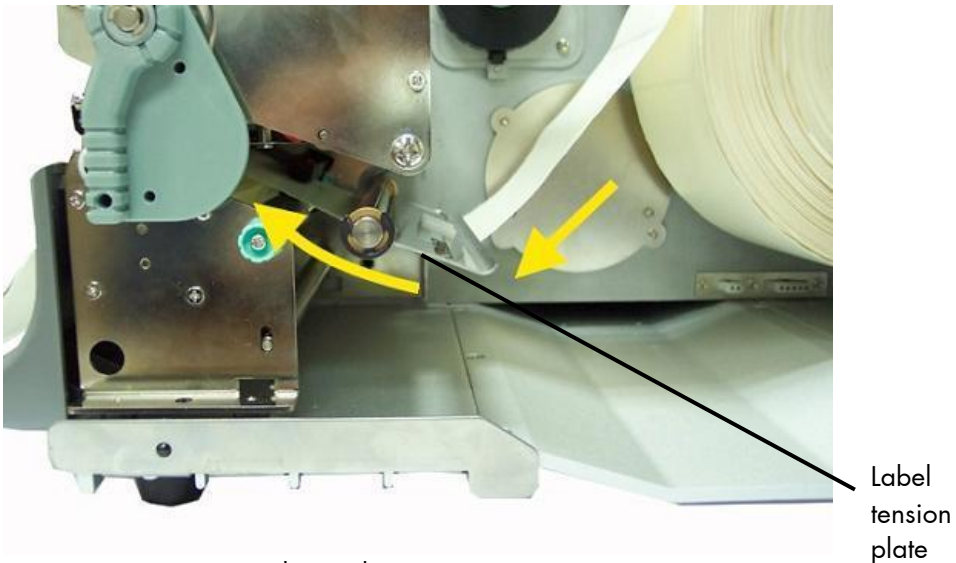


Fig. 5.2.1.i Inserting the media

14. Align the media to ensure a straight transport.

15. Slide the material guide inwards until it contacts the edge of the media, without deforming the media.

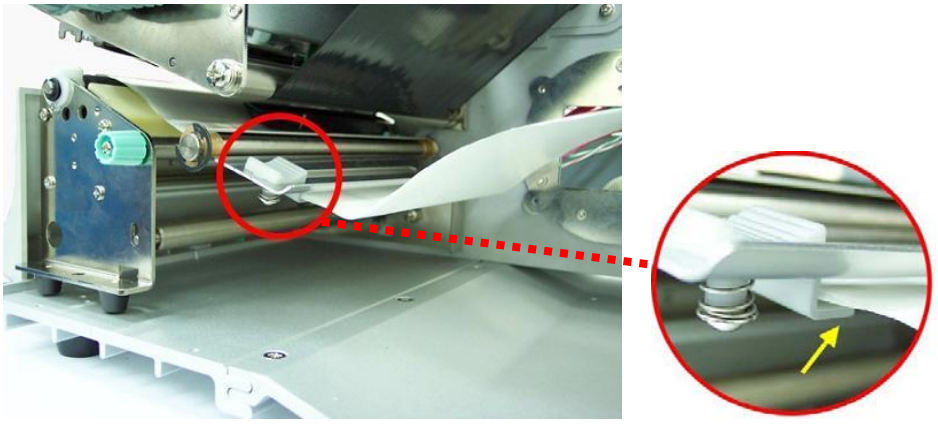


Fig. 5.2.1.j Setting the material guide

16. Use the setting knob to adjust the sensor position (light barrier). (If you turn the setting knob clockwise, the sensor will move rightward.)

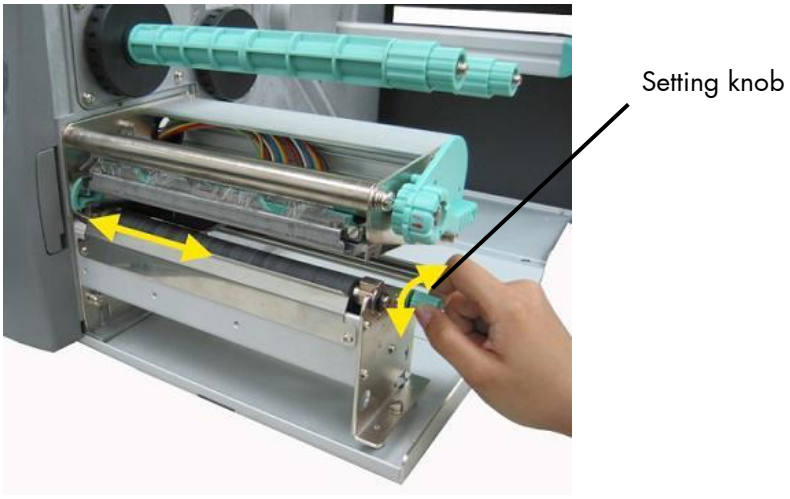


Fig. 5.2.1.k Adjusting the sensor position

17. The right position is found when the pointer is located above the material's gap.

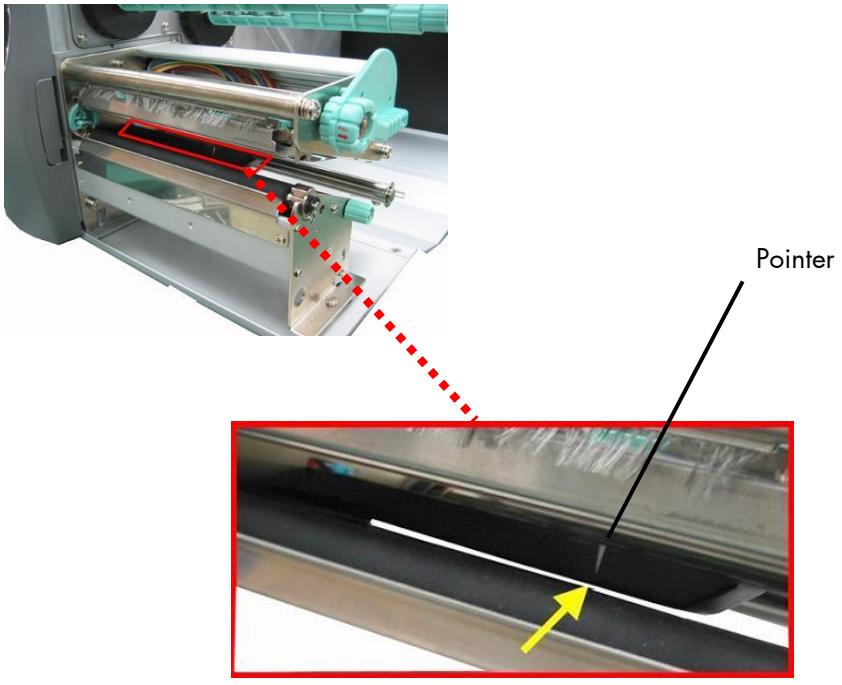


Fig. 5.2.1.l The pointer indicates the sensor position

18. If you want to print using the thermal direct process, now close the pressure lever (Fig. 5.2.1.m).
    To print using the thermal transfer process, you still need to insert ribbon.

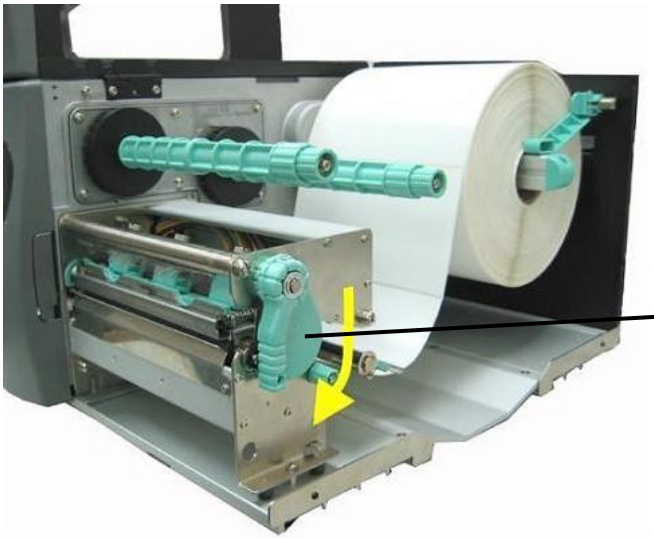


Fig. 5.2.1.m Closing the pressure lever

Pay attention to the following safety instructions!

Safety instructions:

- The cutter (optional) can cause injuries if the printer is operated incorrectly.
- There is a danger of fingers, hair, clothing, jewellery etc. being drawn into the machine in the vicinity of the ribbon and media transport unit.

19. Close the hood of the printer.

5.2.2. Media Removal

1. Switch the printer to OFF LINE mode.

2. Open the hood of the printer.

3. Release the printhead pressure lever to remove the media (see section 5.1 Winding Diagram) and at the same time pull away the material to the rear.

4. Rotate the tear off roll-fed media roll clockwise until the free end of the media is winded up.

5. Remove the roll with the tear off roll-fed media (if necessary protect the media against unintentional unwinding first).

6. Close the hood of the printer.

5.3. Handling of Ribbon (Foil)

5.3.1. Ribbon Loading

If you want to operate the printer in the thermal transfer mode a printer ribbon has to be used (compare section 1.1).

Make sure you always use a printer ribbon being wider than the media to print on. In the case of printing on abrasive media printhead damaging can be avoided this way.

To set the ribbon go on like this:

1. Switch the printer to OFF LINE mode.

2. Open the printer hood.

3. Release the printhead pressure lever to lift the pressure rollers.

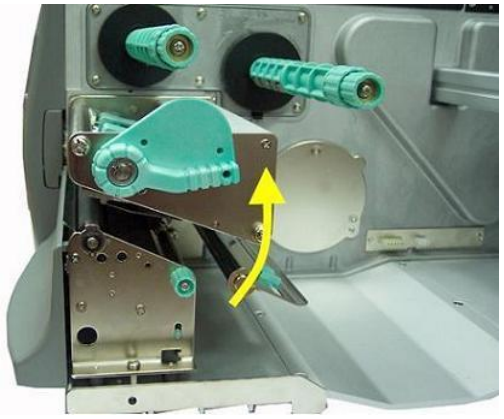


Fig. 5.3.1.a Swivel the printhead pressure lever upward (counterclockwise).

4. Take the ribbon roll and remove the protection foil, if necessary (by unwinding it and cutting it off).

5. Find out the right winding direction for your ribbon roll:

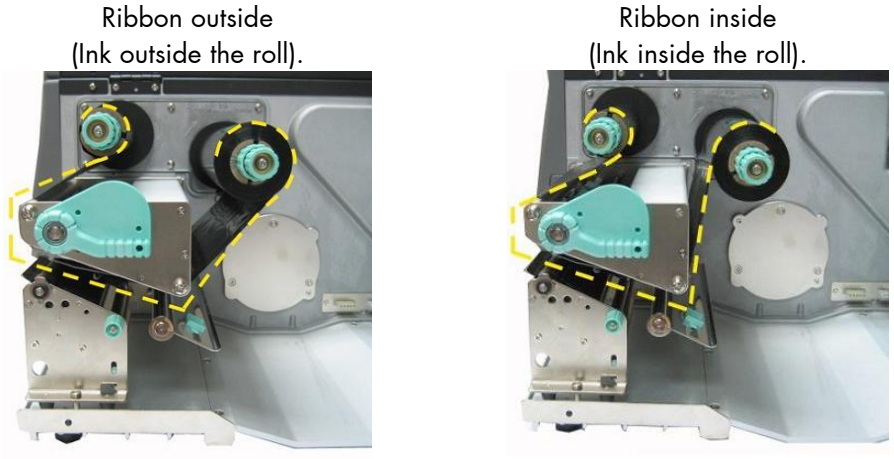


Fig. 5.3.1.b Different ribbon roll winding directions

6. Slide the ribbon roll onto the ribbon supply shaft all the way back to the printer's inner wall.

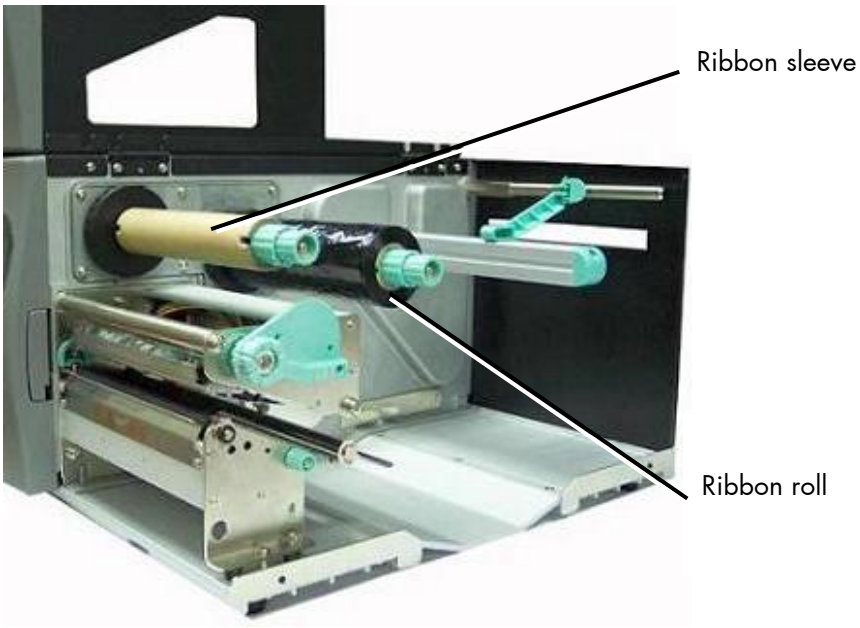


Fig. 5.3.1.c Inserting the ribbon roll and the empty ribbon sleeve

7. Slide the empty ribbon sleeve (ribbon core) onto the ribbon rewind shaft.

8. Route the ribbon around the printhead without folds.

Be sure you don't feed the ribbon underneath the moveable sensor.

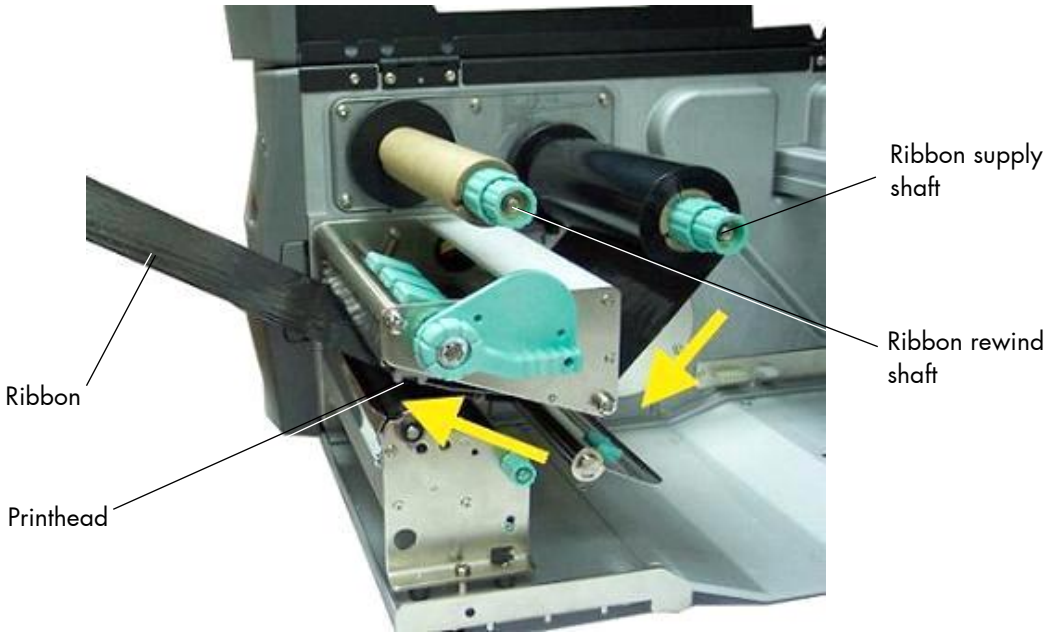


Fig. 5.3.1.d Feeding through the ribbon below the printhead

9. Route the ribbon to the rewinding mandrel and fasten it to the ribbon sleeve (turn up the ribbon once so that the adhesive part at the beginning of the ribbon can be used).

Make sure that the ribbon rewind direction is correct. (Compare figure 5.3.1.b.)

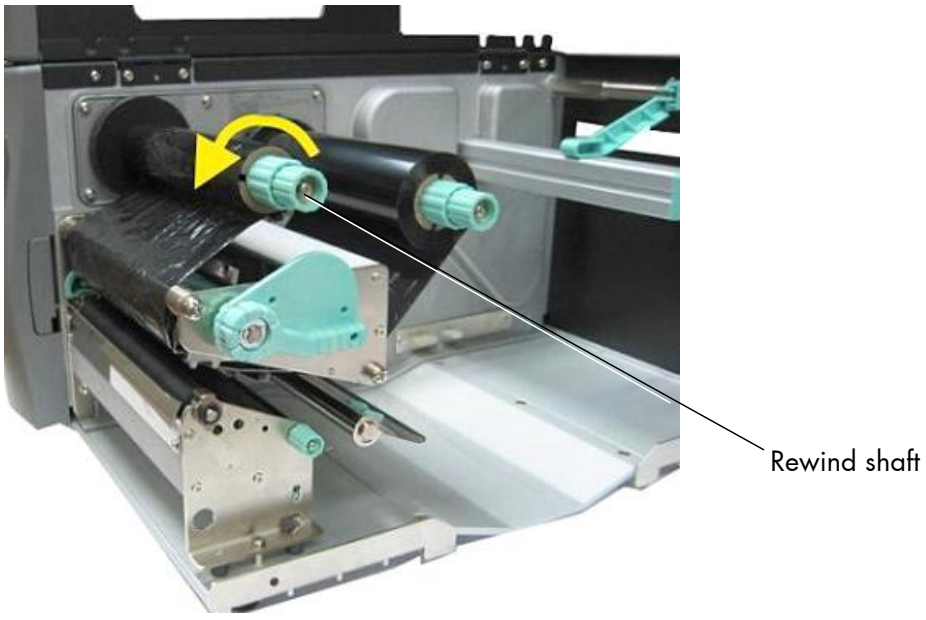


Fig. 5.3.1.e Tautening the ribbon by turning the ribbon rewind shaft

10. Check that the ribbon has no folds and is running straight. If necessary, tauten the ribbon by turning the rewind shaft.

11. Swivel the printhead pressure lever clockwise back to its original position making sure it clicks into place.

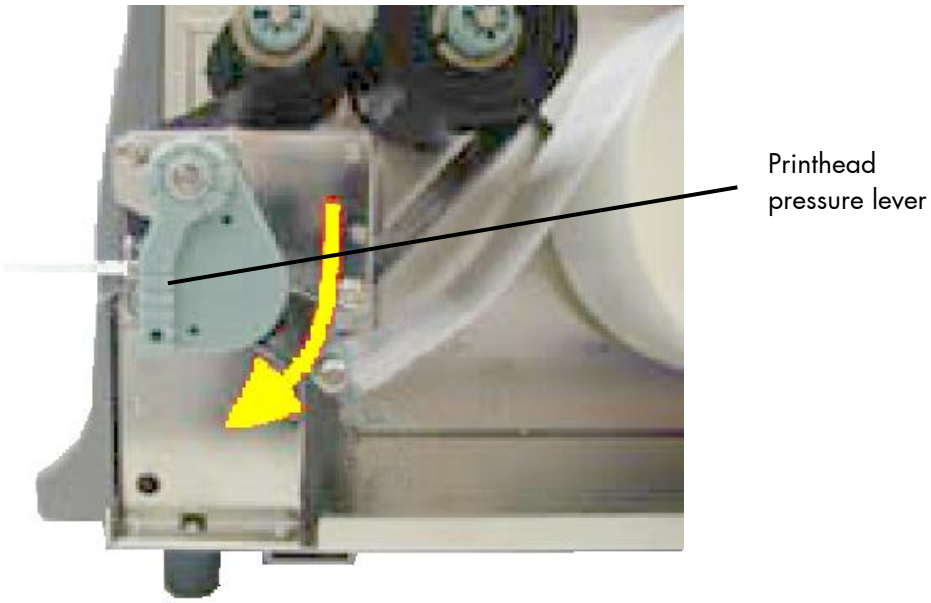


Fig. 5.3.1.f Locking the pressure lever

Hint:
The printhead pressure lever has to be swivelled clockwise completely („until the stop“) to lock the printhead. Otherwise the error message „ Head open “ will be displayed by the printer panel display.

5.3.2. Ribbon Tension Adjustment

A) Increasing the ribbon tension

Due to differences in ribbon material, **ribbon wrinkles** may occur during printing.

To solve this problem the ribbon tension has to be increased:

1. Push the adjusting ring of the ribbon rewind shaft towards the ribbon roll.

2. Then turn the adjusting ring of the **ribbon rewind shaft** clockwise to **increase** the **ribbon tension**, while you hold the ribbon roll with the other hand.

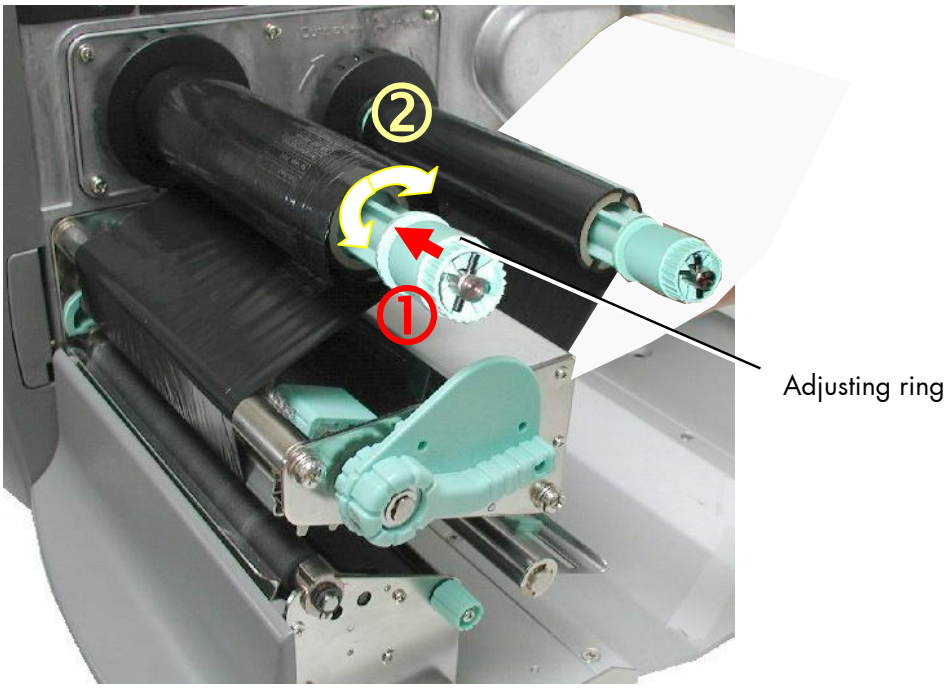


Fig. 5.3.2.a Adjusting the ribbon tension at the ribbon rewind shaft

3. Push the adjusting ring of the ribbon supply shaft towards the ribbon roll.

4. Then turn the adjusting ring of the **ribbon supply shaft** clockwise to **increase** the **ribbon tension**, while you hold the ribbon roll with the other hand.

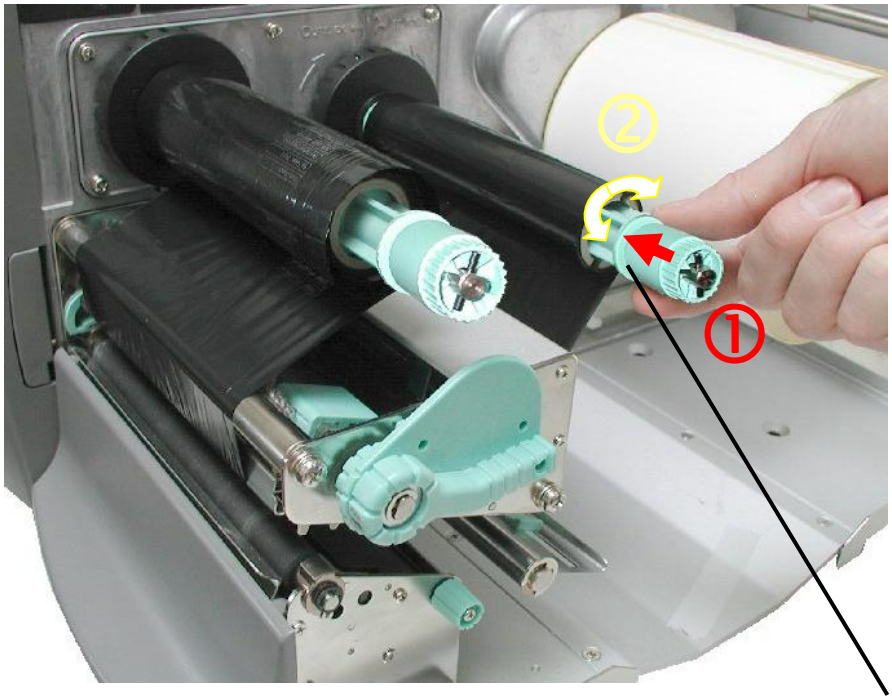


Fig. 5.3.2.a Adjusting the ribbon tension at the ribbon supply shaft

5. Check that the ribbon has no folds and is running straight. Optimize your adjustment of the ribbon tension, if need be.

Check to see that slack and wrinkles on the ribbon are removed completely. Do not be afraid to 'waste' a little extra ribbon to ensure the ribbon is running correctly and wrinkle-free.

B) Decreasing the ribbon tension

If narrow ribbon is used (ribbon widths of less than 2", e.g.), the printer might have a **problem feeding the material**. Moreover, the ribbon maybe difficult to be removed caused by a high ribbon tension. Excessive values of ribbon tension may cause shapechanges of the ribbon, too.

To solve this problems the ribbon tension has to be decreased:

1. Push the adjusting ring of the ribbon rewind shaft towards the ribbon roll. See figure 5.3.2.a.

2. Then turn the adjusting ring of the **ribbon rewind shaft** counterclockwise to **decrease** the **ribbon tension**, while you hold the ribbon roll with the other hand.

3. Push the adjusting ring of the ribbon supply shaft towards the ribbon roll. See figure 5.3.2.b.

4. Then turn the adjusting ring of the **ribbon supply shaft** counterclockwise to **decrease** the **ribbon tension**, while you hold the ribbon roll with the other hand.

5. Check that the ribbon has no folds and is running straight. Optimize your adjustment of the ribbon tension, if need be.

Check to see that slack and wrinkles on the ribbon are removed completely. Do not be afraid to 'waste' a little extra ribbon to ensure the ribbon is running correctly and wrinkle-free.

5.3.3. Ribbon Removal

The following steps are necessary if you want to switch from printing in the thermal transfer mode to printing in the thermal direct mode.
In case only a used-up ribbon has to be removed the steps 5 and 6 have to be omitted.

1. Switch the printer to OFF LINE mode.

2. Open the the printer hood.

3. Release the printhead pressure lever.

4. The core of a used-up ribbon can be removed by pulling it from the ribbon supply shaft.

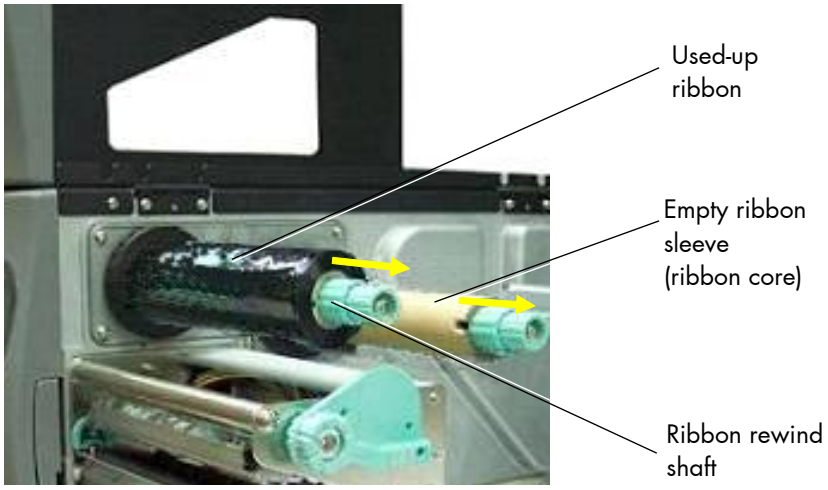


Fig. 5.3.3a Removing used-up ribbon

5. If the inserted ribbon is not used-up, cut it close to the ribbon rewind shaft.

6. Rotate the ribbon supply shaft until the free end of the ribbon is winded up.

The unused ribbon can remain within the device until it is used for the next thermal transfer operation (if necessary protect the ribbon against unintentional unwinding). The ribbon has to be loaded as described in section 5.3.1.

7. Rotate the rewind shaft until the free end of the used-up ribbon is winded up.

8. Remove the used-up ribbon from the rewind shaft and dispose it according to the rules.

The media for thermal direct printing has to be loaded as described in section 5.2.1.

5.4. Printhead Pressure Adjusting

Different material width and/or material thickness have an effect on the contact pressure of the thermal bar on the platen roller.

To allow a compensation of this influences, the position of the spring boxes and the contact pressure are both adjustable.

The spring boxes are located above the printhead:

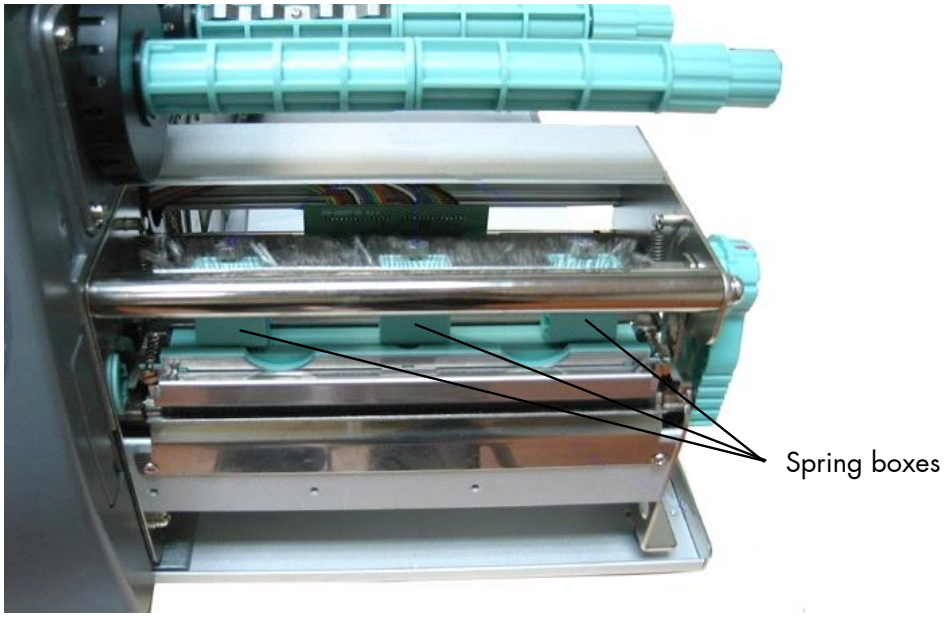


Fig. 5.4.a Printhead contact pressure: position of the spring boxes

Please note:

- Printing should always be carried out with the lightest contact pressure possible for creating a satisfactory print quality. This protects the printhead and the entire device.

- Excessive contact pressure can result in premature wearing of the printhead.

- See also section 11.2 Printhead Exchange
  and section 11.3 Adjusting the Right Pressure Value.

1. Open the printer hood.

2. Release the printhead pressure lever.

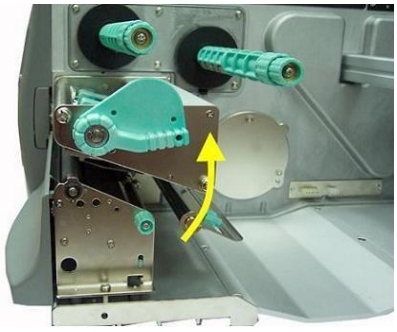


Fig. 5.4.b Swivel the printhead pressure lever upward (counterclockwise).

3. Please adjust the lateral positions of the thermal printhead spring boxes in accordance to the current material width.

Normally, the wider the paper, the farther the spring boxes on the right side have to be positioned from the center wall (and vice versa for small labels).

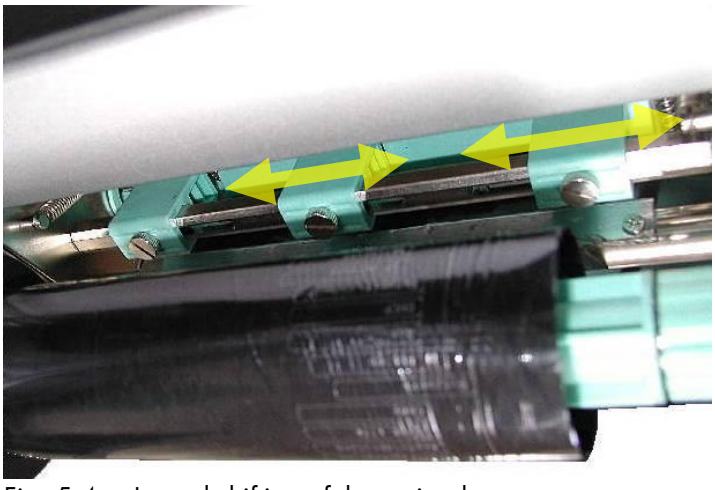


Fig. 5.4.c Lateral shifting of the spring boxes

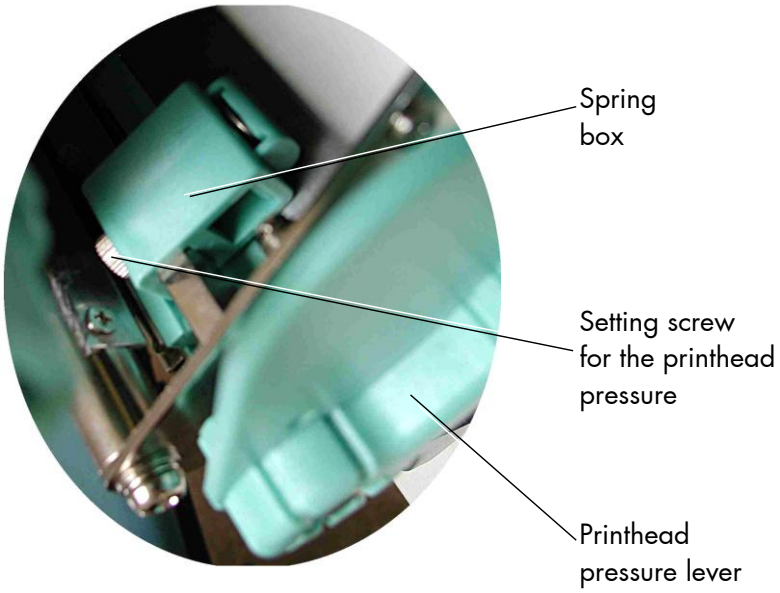


Fig. 5.4.d Detailed picture of a spring box

4. Swivel the printhead pressure lever clockwise back to its original position making sure it clicks into place.

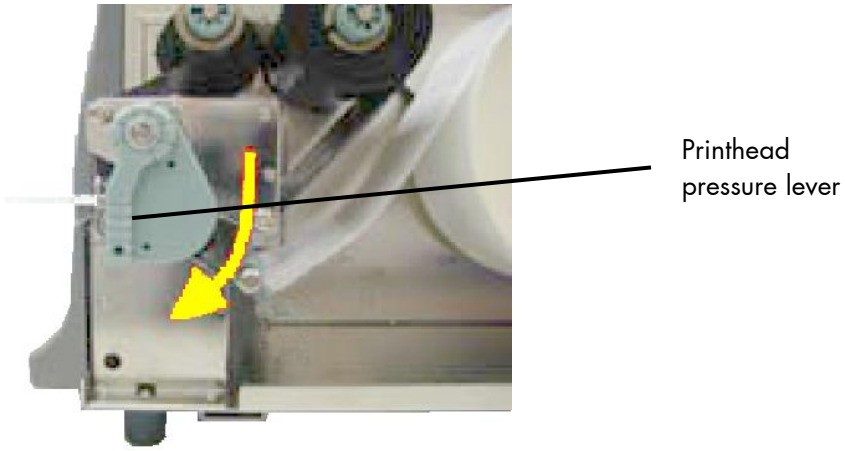


Fig. 5.4.e Locking the pressure lever

The following picture helps you to locate the setting screws for the printhead pressure:

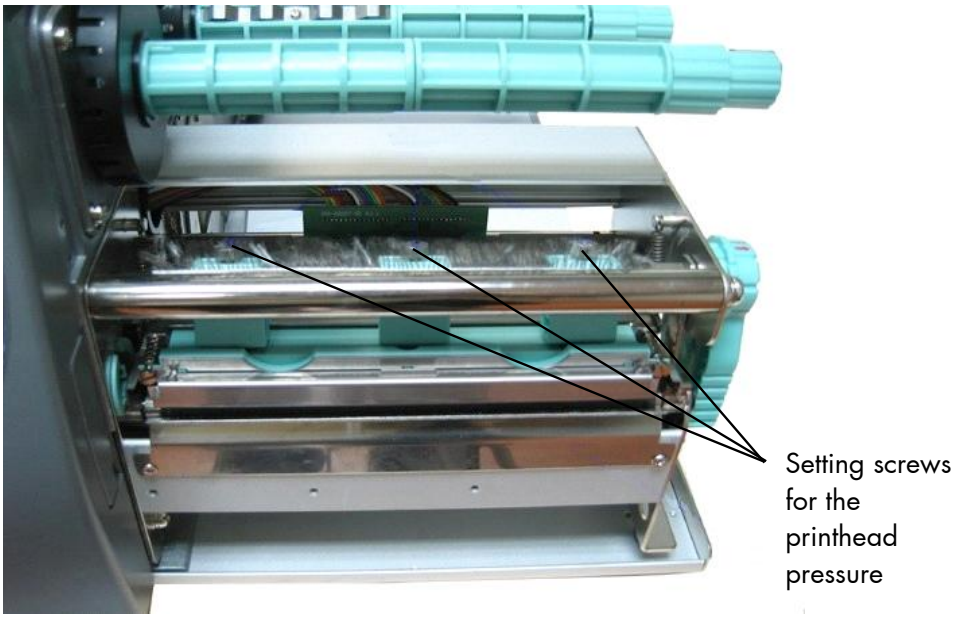


Fig. 5.4.f Adjusting the printhead's contact pressure

5. Every spring box is provided with a setting screw to enable printhead pressure adjustment.

Be careful when using a flat blade screwdriver to avoid damaging the printer!

Turning the screw clockwise increases the printhead's contact pressure.

6. Carry out a test print.

Note: If one side of the printed material is not being printed clearly, or if ribbon wrinkles occur, then adjust the thermal printhead spring box position or pressure appropriately to cure the problem.

6. Setting up the Printer

6.1. Attaching the Printer to a Network/PC and to the Power Supply

1. Make sure the printer, computer, and any other attached devices are turned off and unplugged.

2. Use a proper interface line to connect the printer to the computer or to attach the printer to the network.
   The logiJET T4-2 /T6-2 /RFID printers are provided with several interfaces; see chapter 14 Specifications, too.

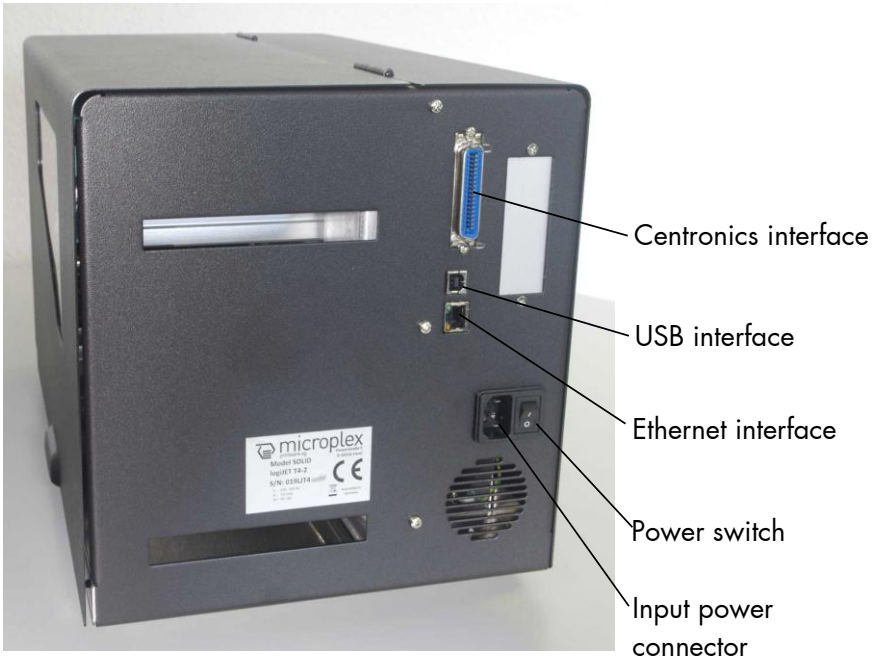


Fig. 6.1.a Rear view of the printer

6.2. Turning on the Printer

First, please notice the instructions given in chapter 5 Handling of Consumables.

1. Plug one end of the printer power cord into the socket at the back of the printer and the other end into a properly grounded outlet.

2. Turn on the printer. The power switch is located at the rear side of the printer (see section 2.4 Printer Components).

As soon as the printer's warm up phase is finished the printer goes into the ON LINE mode. A status message and the name of the printer are displayed.

6.3. Control Panel of the Printer

Display
Here the printer's status messages are displayed

6 function keys

The bwo lower keys, the ONLINE key and the ENTER key both come with a light ring. These "indicator lights" are used to show printer status.

Fig. 6.3.a Control Panel of the logiJET T4-2 / T6-2

6.3.1. Function of the Control Panel Elements

Display

The display (LCD-panel) serves to show the printer's status messages..

Light ring of the ONLINE key

In addition to the display messages the Light ring of the ONLINE key indicates the printer status:

The printer is ready (ON LINE) to receive data from the host.

The printer is not ready to receive data from the host (OFF LINE).
The control panel keys are active.

Light ring of the ENTER key

Error indication

When an error occurs, a corresponding error message is displayed by the printer.

In addition, the ring oft he ENTER key ligths up red.

After the error was fixed, the printer is ready again. The ring of the ENTER key is colorless again.

Control Panel Keys

Now the individual control panel keys are described:

The ONLINE key turns the printer ON- / OFF LINE.

In the OFF LINE mode this key is used to **start the cutter** (the cutter is available as an option).

In the OFF LINE mode the paper is conveyed one format length further (**FEED**) after using this key.

These keys are used for working within the different levels of the menu structure described in the following.

By pressing the ENTER key the function values currently displayed are confirmed respectively the selected function is activated.

Pressing the ONLINE key takes the user back to the respective menu level above.

7. Control the Print System Remotely via Website / IP-Admin Panel

7.1. Abstract

You can also access the logiJET T4-2 /T6-2 remotely.
The internal web page of the printer enables you for example to control or configure the printer using a computer that is connected via Ethernet (MICROPLEX IP-Panel and WebPanel).

7.2. Connecting the Printer to the Network

1. Connect the logiJET T4-2 /T6-2 to your network* (via the Ethernet port, compare section 6.1 Attaching the Printer to a Network/PC).

   The following network parameters** are for instance factory default settings:

IP Address	192.168.128.128
Subnet mask	255.255.255.0
Gateway	0.0.0.0

2. The status sheet (see section 9.8) contains information about the current printer configuration and the IP address of the printer.
   The panel function **Show Info** (see section 9.9) serves to show some basic information about your printer: the IP Address, Firmware Release, Serial Number and the current Printer Emulation.

3. Start your Web Browser and type the IP address of the printer in the address bar of the Web browser:
   http://192.168.128.128/

* More details are described in the document Networking Features of MICROPLEX Printers. You'll find this document on the MICROPLEX Documentation CD. The CD belongs to the extent of supply of your printer.

** The network settings can be changed.
(See section 9.33 Configuration of Network Parameters).
The **status sheet** of the logiJET T4-2 /T6-2 shows the **current settings**.

The Web Browser shows the Information page of the MICROPLEX **WebPanel**:

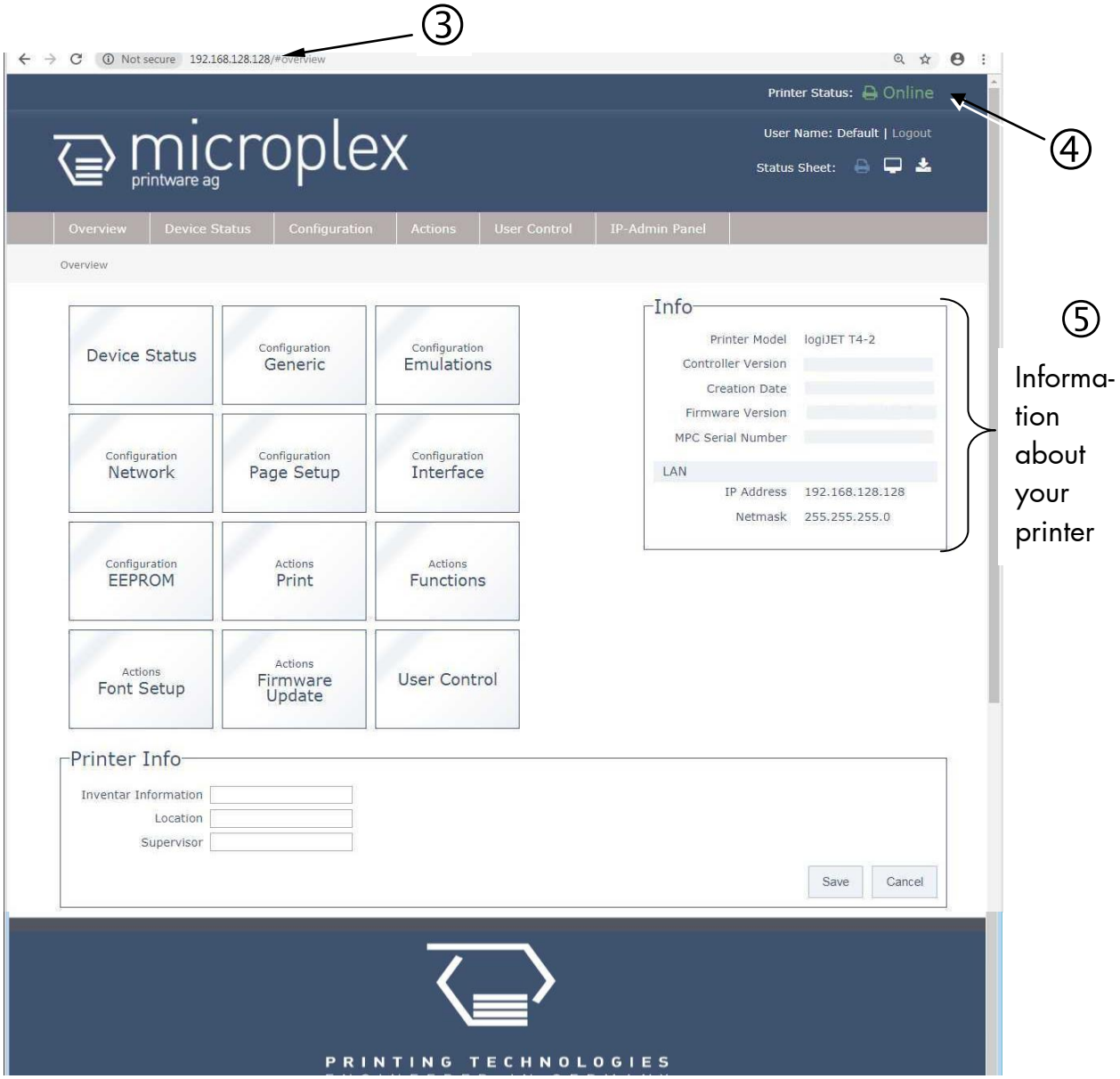


Fig. 7.2.a logiJET T4-2 /T6-2: Overview page of the MICROPLEX WebPanel

④ On the **Overview page** the printer status is displayed,

⑤ as well as information on the controller and firmware version of your device.

Hint:
More details about this WebPanel are described in the following sections. If you are already familiar with the panel functions of MICROPLEX printers you may skip to section 7.4 Remote Control via the IP-Admin Panel.

7.3. Remote Control via the integrated Website (WebPanel)

The print system settings can only be changed if the **printer** is turned **OFF LINE**.

7.3.1. Overview Page

On the Overview page the printer status is displayed, as well as information on the controller and firmware version of your device.

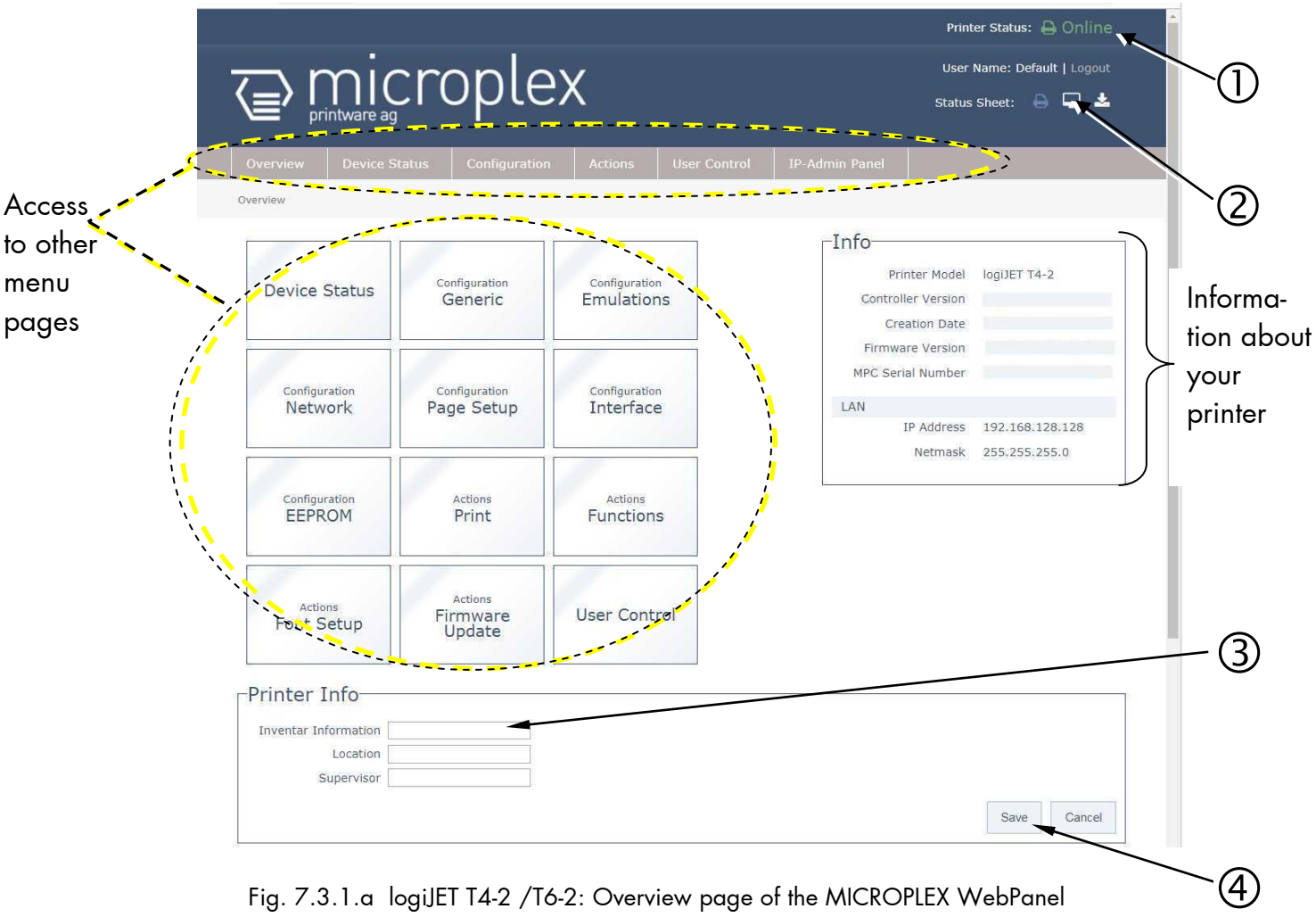


Fig. 7.3.1.a logiJET T4-2 /T6-2: Overview page of the MICROPLEX WebPanel

① The printer status messages are displayed here (Offline/Online).

② Here you can release the printing of the printer status sheet, view it and save it to a file.

③ To change a parameter, „click“ on this specific parameter:
Select for example the input field „Inventar Information“ and then enter a new inventory number for this printer.

④ Complete the input of the function value with the Save key.

The print system confirms the acceptance of the new setting value. (An improper setting value leads to an error message.)

The following descriptions of panel functions are written assuming the printer is turned **OFFLINE**.

7.3.2. Configuration Page

On the Configuration page a number of print system configuration parameters can be changed.

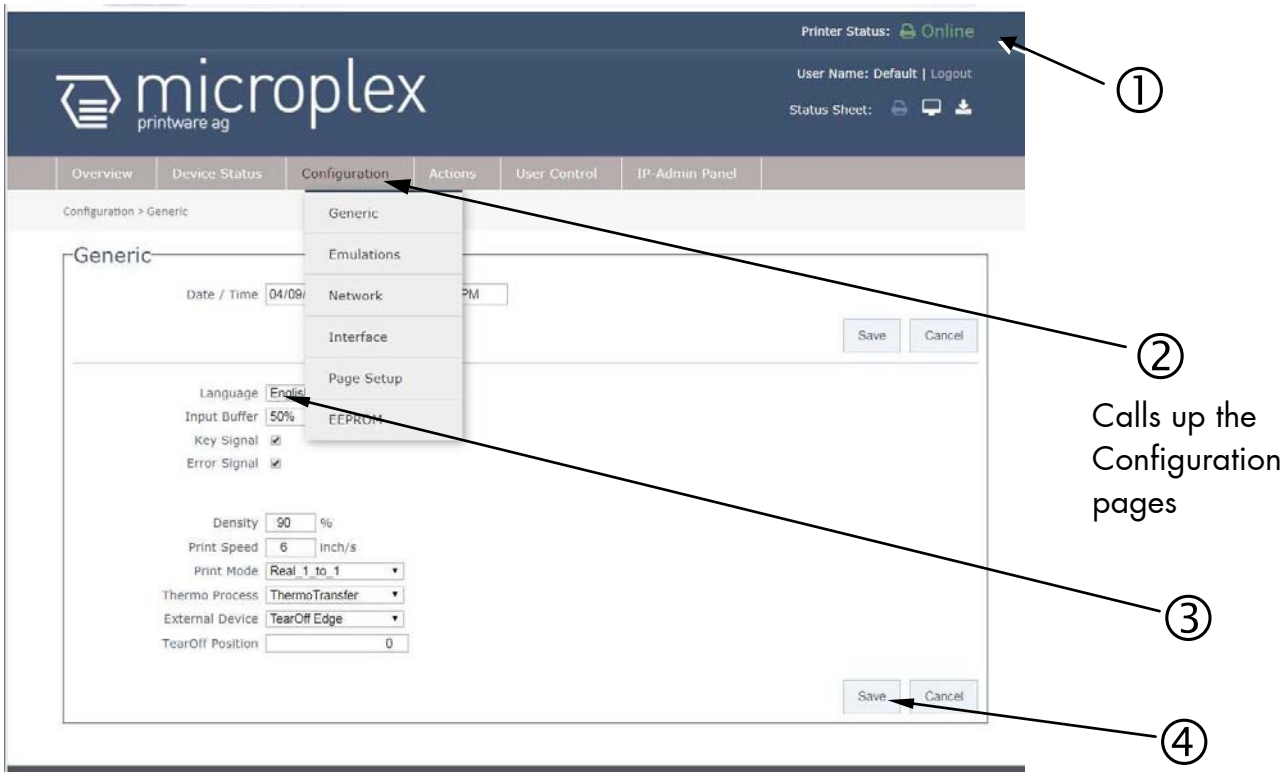


Fig. 7.3.2.a logiJET T4-2 /T6-2: Configuration Generic page of the MICROPLEX WebPanel

Abstract:

Please „click" on the parameter you wish to change:

① Click on the „online" status message to turn the printer offline.
(Clicking on the „offline" message turns the printer online again).

② Click on „Configuration" and select the menu item „Generic", to get to the Configuration page, that is shown above.
(or click on the button „Configuration Generic" on the Overview page of the MICROPLEX WebPanel, compare Fig. 7.2.a)

③ Click the input field for the Language to change the language of the display messages, the status sheet...

④ Complete the input of the function value with the Save key.

7.3.3. Page Setup Page

On the Page Setup page you can for example set the paper size and the margins for the printouts.

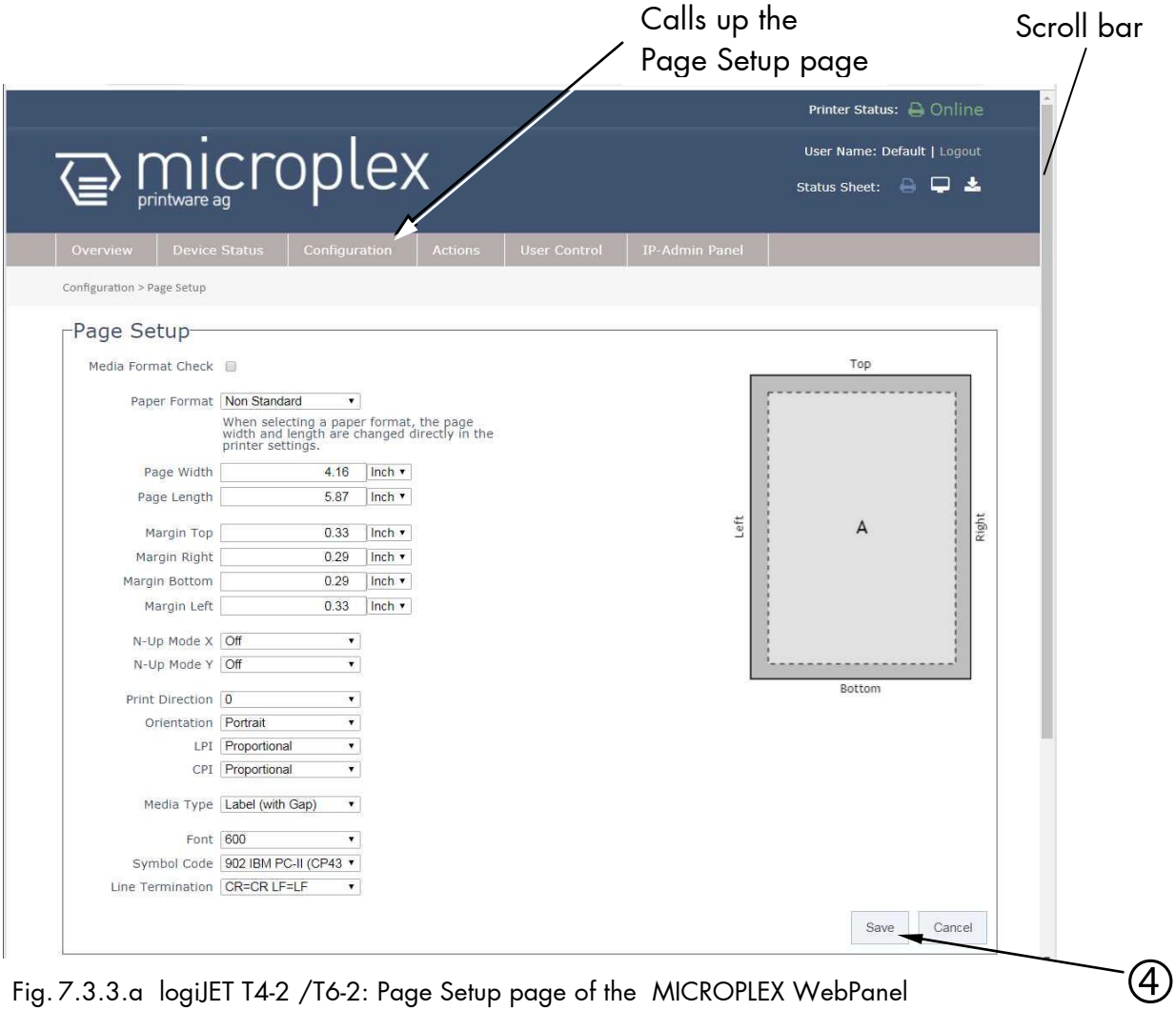


Fig. 7.3.3.a logiJET T4-2 /T6-2: Page Setup page of the MICROPLEX WebPanel

If the lower part of the menu page is not visible:
Please use the scroll bar at the right side of the screen to make the lower part of the menu page visible.

② Click on „Configuration“ and select the menu item „Page Setup“, to get to the Page Setup page, that is shown above.
(or click on the button „Configuration Page Setup“ on the Overview page of the MICROPLEX WebPanel, compare Fig. 7.2.a)

③ Click on the adjustable values, use the input fields.

④ Click the Save button to finalize your settings.

7.3.4. Network Page

On the Network page you can configure the parameters for a network connection of the printer.

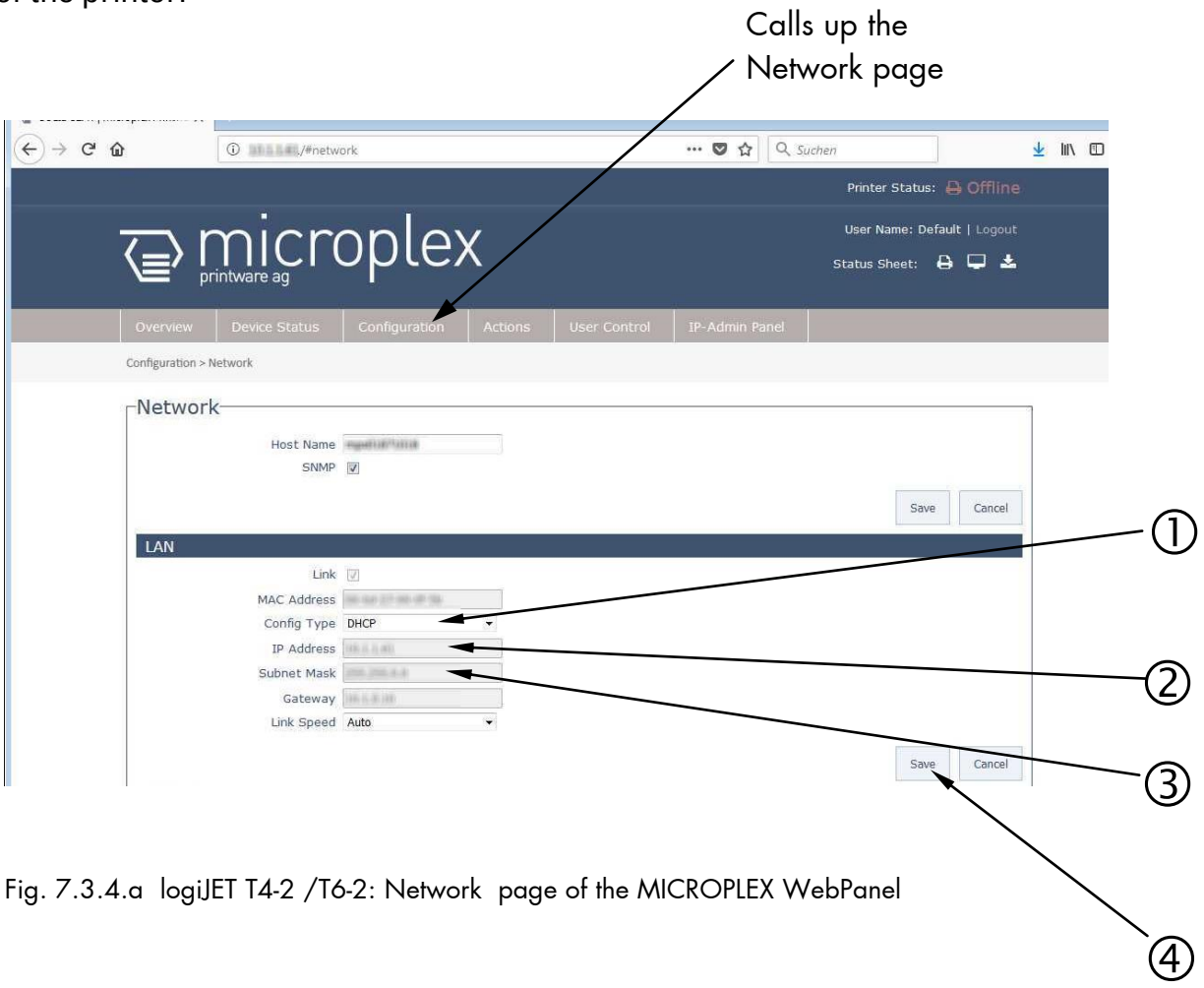


Fig. 7.3.4.a logiJET T4-2 /T6-2: Network page of the MICROPLEX WebPanel

Abstract:

Please „click" on the parameter you wish to change:

① Click for example on ConfigType and select Manual.

② Click on the input field for the IPAddress and then enter a new IPAddress.

Hint: The best way is to write the new IPAddress for example on a label and put it onto the device.

③ Click on the input field for the Subnet Mask and enter the subnet mask.

④ Click the Save button to finalize your settings.

More details on the network parameters can be found in chapter 6 up to 9.

7.3.5. Device Status Page

The Device Status page is not only accessible via the menu, but also appears if you click on the error message (in the event of a fault).

(Or you are on the Overview page of the MICROPLEX WebPanel, then you can click on the button „Device Status“, compare Fig. 7.2.a)

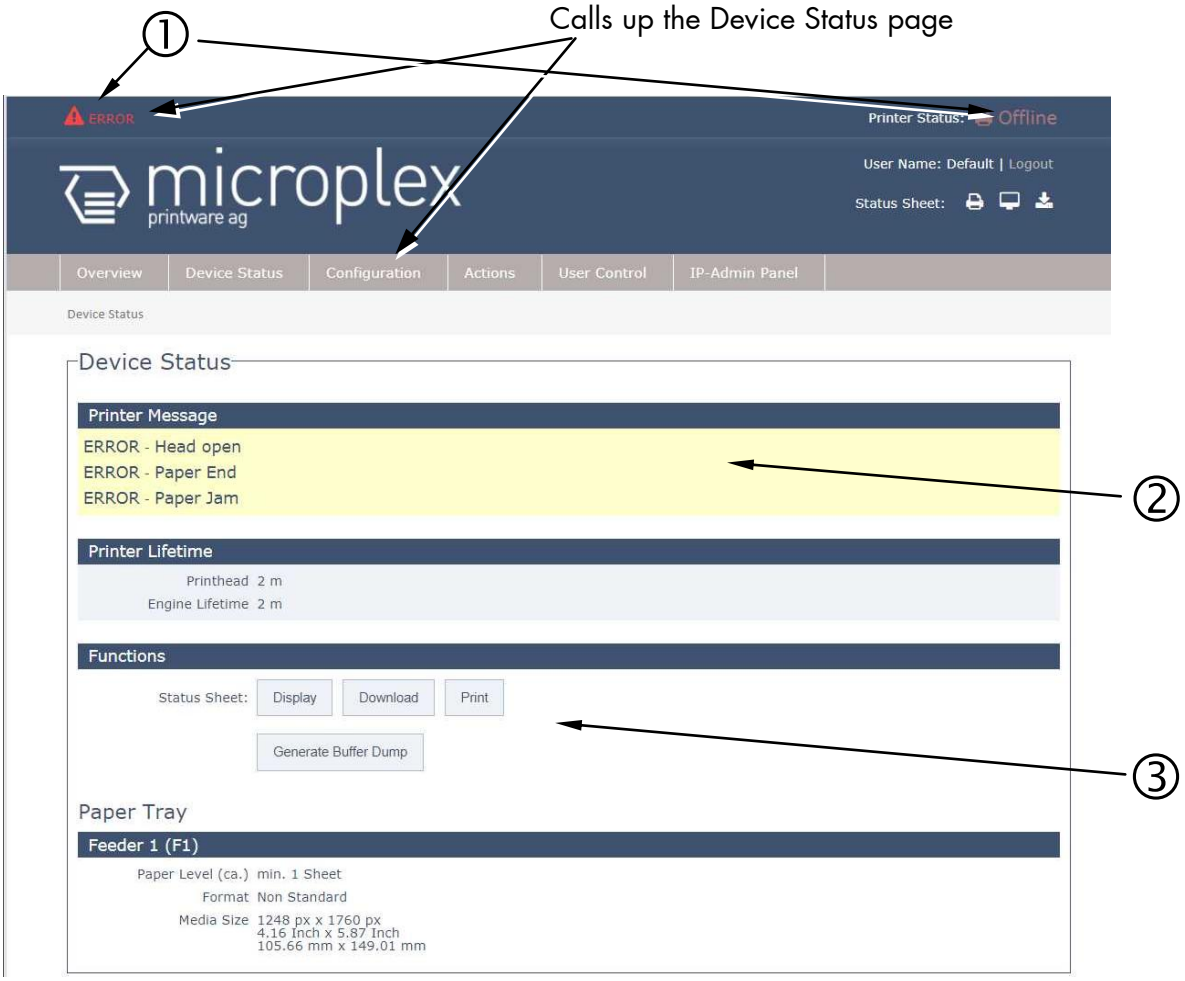


Fig. 7.3.5.a logiJET T4-2 /T6-2: Device Status page of the MICROPLEX WebPanel

Abstract:

① The printer status messages are displayed here (Offline/Online). Error messages (short form) are displayed in this area, too.

② The (Error)Messages of the printer are listed here.

③ Here you can show the printer status sheet, save it to a file, and release its printing.

7.3.6. EEPROM Page

Attention:
You have to be **very careful** when changing parameters via the EEPROM page. If you use wrong parameters, the printer could hang up!

Before you change EEPROM parameters of the print system it is recommended to generate a **Status Sheet**! This facilitates a reset of the printer (resetting the parameters to the former settings).

The parameters must be written in hexadecimal numbers (0000 to FFFF). These EEPROM values are printed out in the first to third line of the Status Sheet.

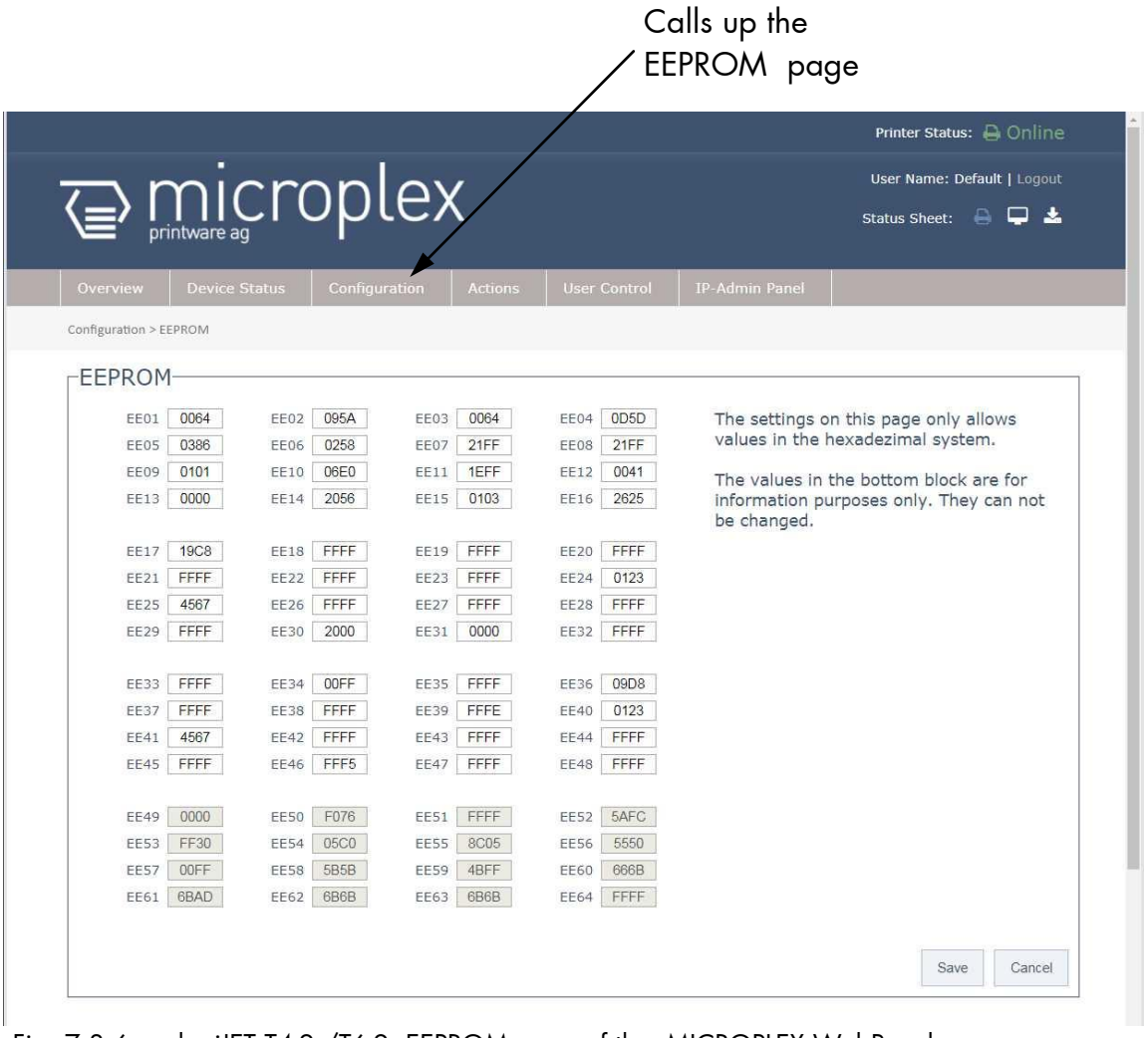


Fig. 7.3.6.a logiJET T4-2 /T6-2: EEPROM page of the MICROPLEX WebPanel

The fourth line (Word 49 to Word 64) cannot be changed by the user.

Hint:
For more details refer to our offer of MICROPLEX Training Courses and the corresponding documentation: “The EEPROM-Sequence”.

7.3.7. User Control Page

On the User Control page you can register all users with user name and password.

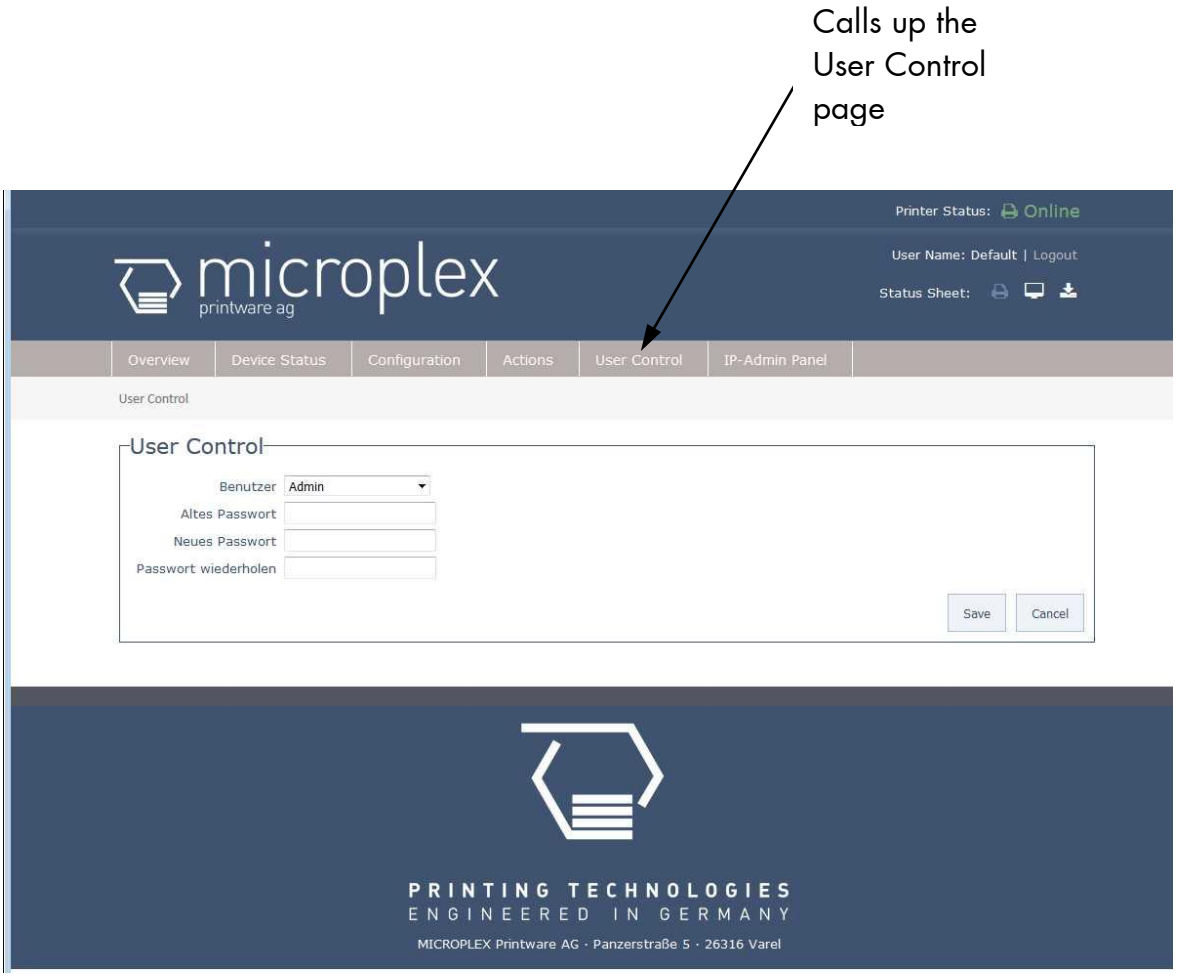


Fig. 7.3.7.a logiJET T4-2 /T6-2: User Control page of the MICROPLEX WebPanel

Choose the User/Group and enter the passwords.

Click the Save button to finalize your settings.

7.4. Remote Control via the IP-Admin Panel User Interface

7.4.1. Abstract

If you are already familiar with the panel functions of MICROPLEX printers the IP Panel enables you to do the well-known operating steps.

1. Type the IP address of the printer in the address bar of your Web browser: (compare the previous sections, example: http://192.168.128.128/).

   The browser shows the Overview page of the MICROPLEX WebPanel:

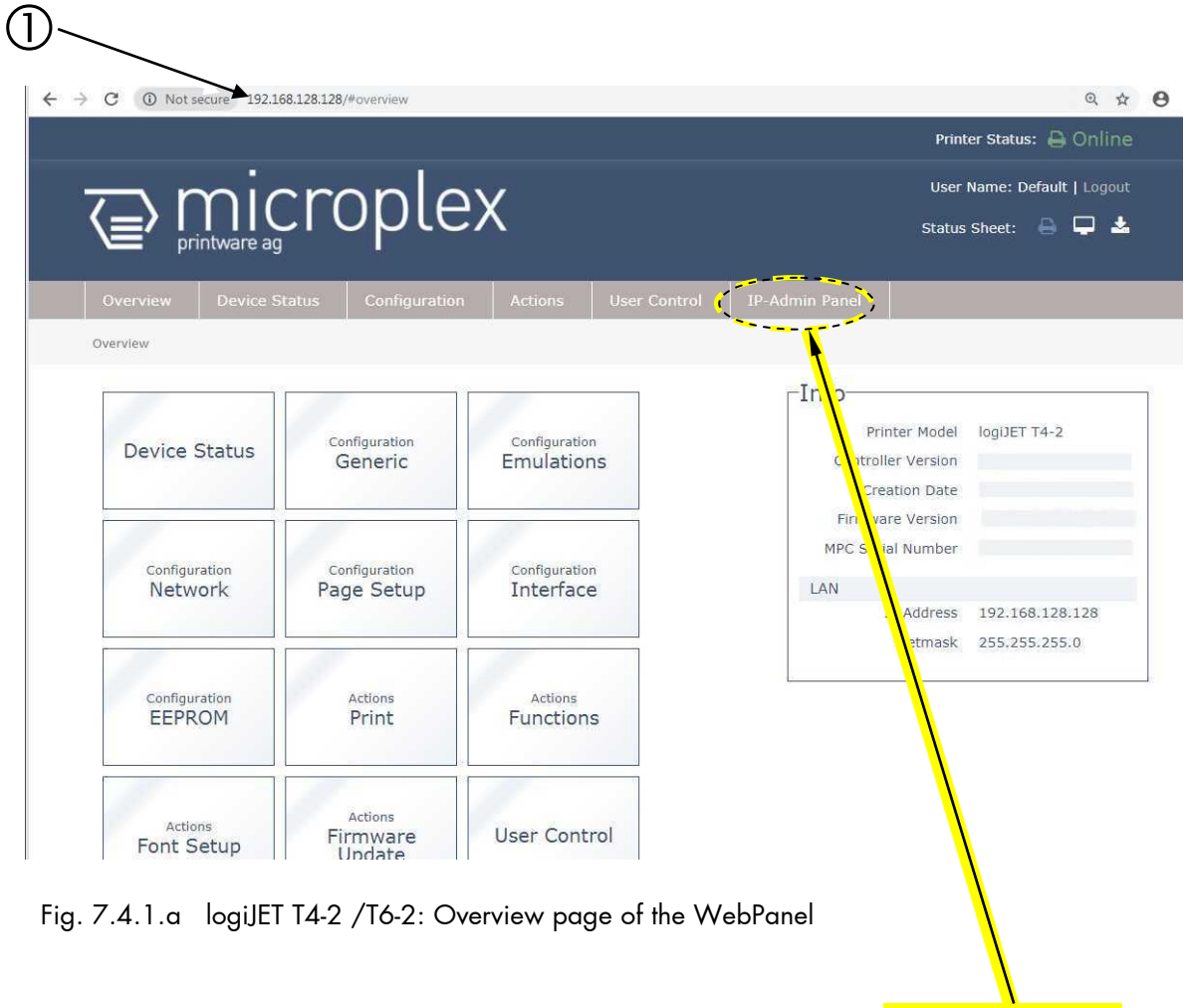


Fig. 7.4.1.a logiJET T4-2 /T6-2: Overview page of the WebPanel

2. By „touching“ the IP-AdminPanel button you can switch to the **IP-Admin Panel** user interface directly („panel“ as you know it from other MICROPLEX printers, see the following sections).

The **virtual control panel** (internal web page of the printer) of the logiJET T4-2 /T6-2 pops up:

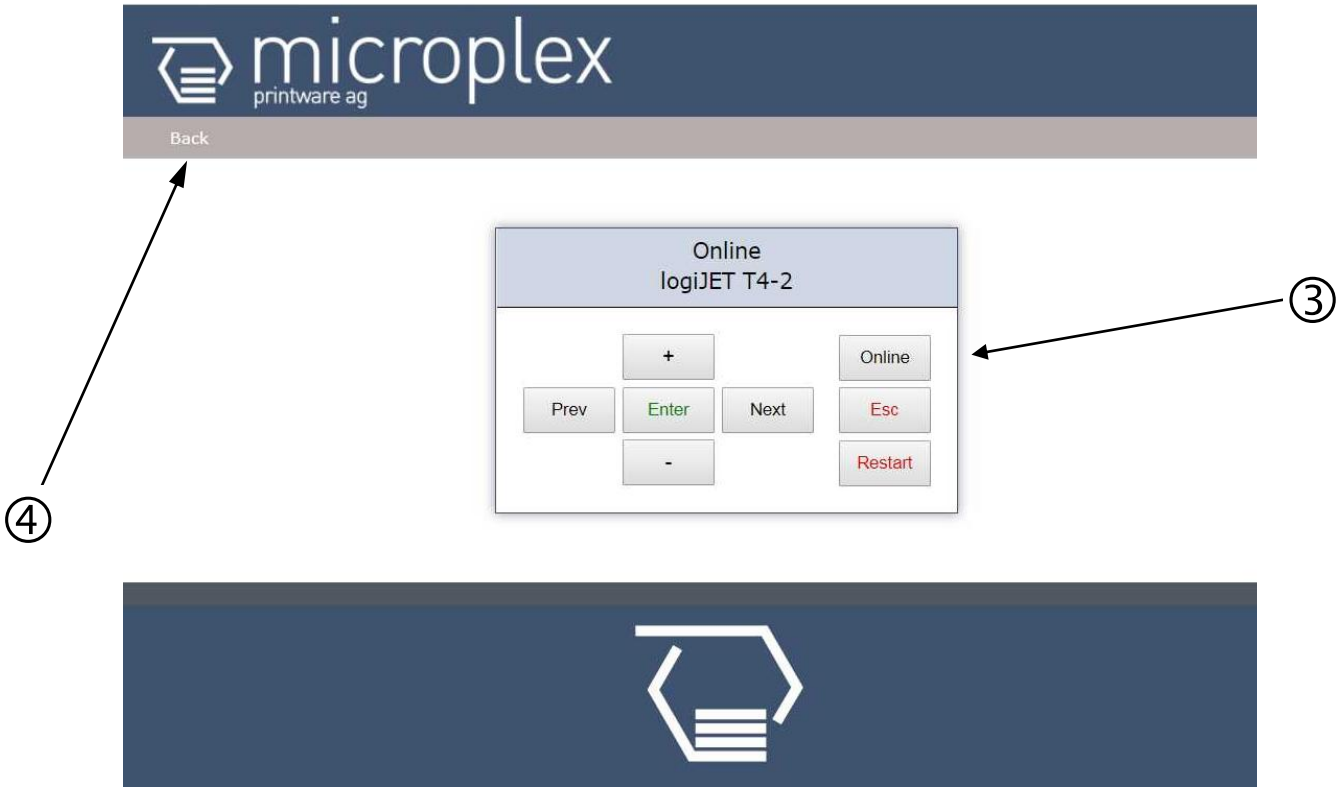


Fig. 7.4.1.b The MICROPLEX IP-Admin Panel is the virtual control panel of the logiJET T4-2 /T6-2

③ This virtual control panel enables you to get access to the printer's menu structure.

Details about the panel functions can be found in the following sections.

④ A „click" on the Back button brings you back to the Overview page of the MICROPLEX WebPanel.

7.4.2. Details of the IP-Panel Elements

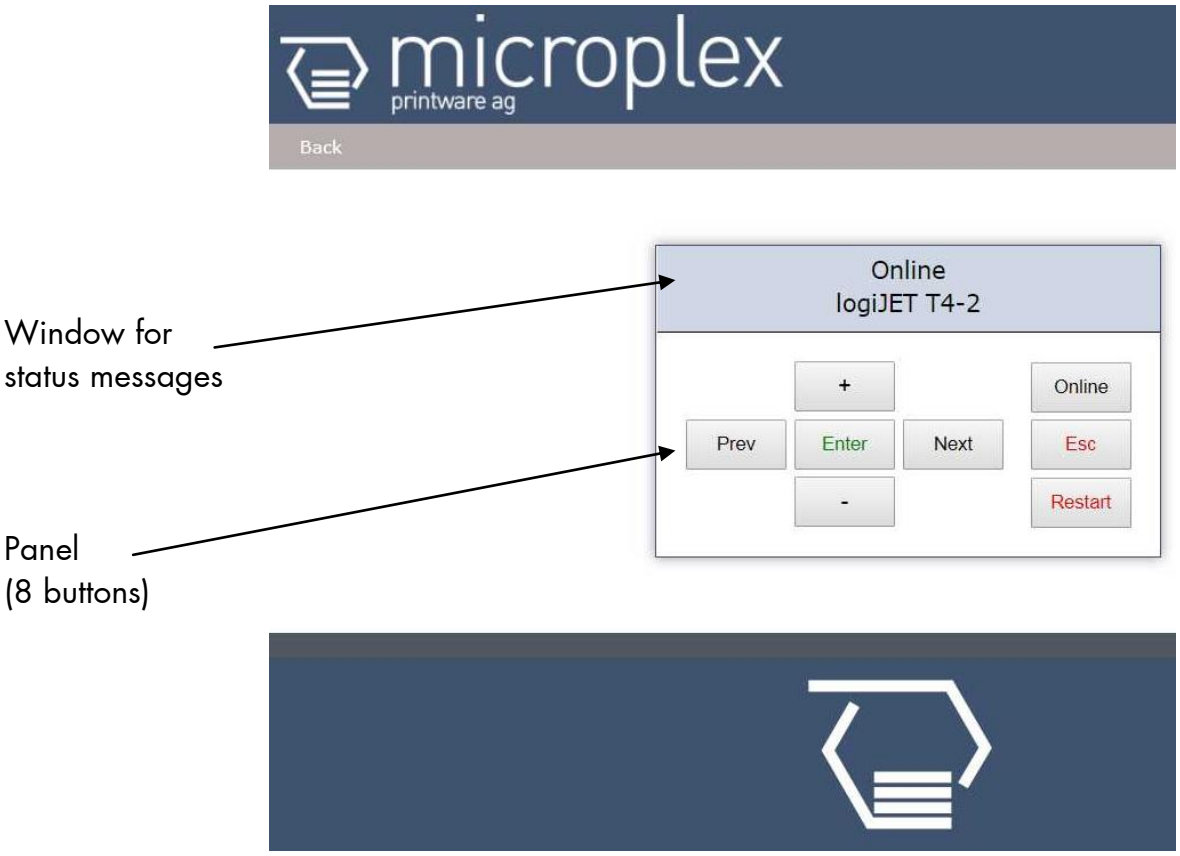


Fig. 7.4.2.a MICROPLEX IP-Panel (virtual control panel of the logiJET T4-2 /T6-2)

Buttons („Panel keys“)

The Online key turns the printer ON / OFF LINE.

These keys are used for working within the different levels of the menu structure.
This structure and the panel functions are described in the following.

Using this key a “Restart” is released in the OFF LINE mode.
You can back out e.g. error messages by a Restart.

8. Printer Configuration and Menu Structure

8.1. Changing the Printer Configuration

You can use the panel functions directly via the touch panel of the logiJET T4-2 /T6-2 or by remote-controll via network (**IP-Panel** and **WebPanel**) to change the printer configuration and to customize your device to meet your specific needs.

Chapter 9 and 10 (Panel Functions) describe how to reach the particular printer functions via the panel.

T e m p o r a r y changes in printer configuration are effective only as long as the printer stays turned on. To select such changes temporarily, the user must terminate the change of function by pressing the **ENTER** key one single time.

P e r m a n e n t changes in printer configuration are active each time the printer is turned on again. To select such changes permanently, the user must terminate the change of function by pressing the **ENTER** key **two times**.

An output of the current printer values can be generated using the "Printing the Status Sheet" panel function (see section 9.8).

Please note:

- User default settings remain in effect until you save new settings or restore the factory defaults.
- Settings you choose from your software application or printer driver can also change or override the user default settings you select from the printer panel.

Switching the Printer OFF LINE

After the printer was turned on (and as soon as the warm up phase is finished) the printer goes into the ON LINE – Mode

[Online]
[logiJET T4-2] Printer messages are displayed on the control panel display.

This symbol shows the ONLINE key.
The printer is turned OFF LINE with this key.

[Offline]
[logiJET T4-2]

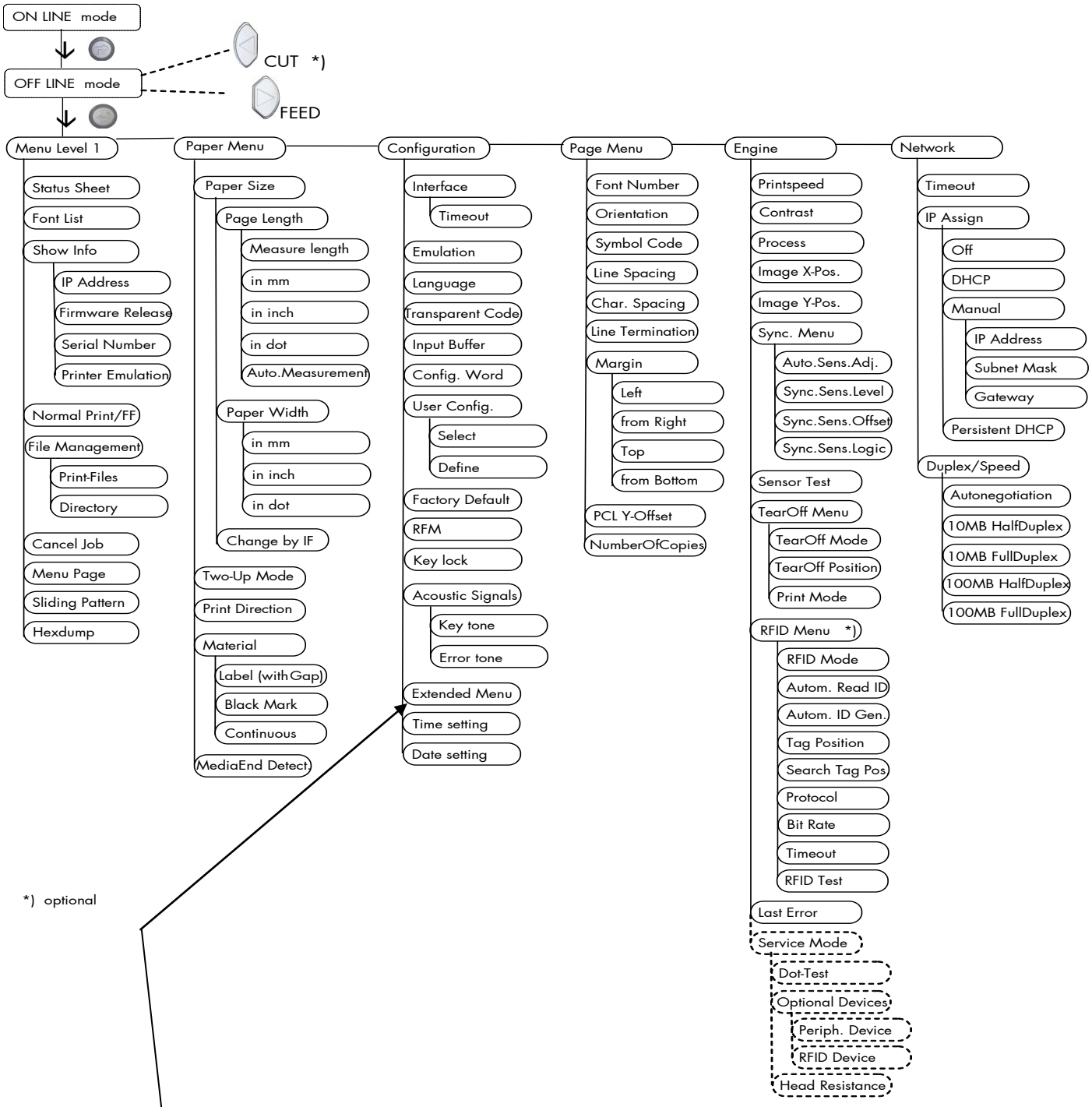
With this ENTER key you get into the first menu level.
.

[Offline]
[Menu Level 1] Now the message "Menu Level 1" is displayed on the display.

In the interest of simplicity, in the following chapters only the most important display messages are shown in the Panel display column.

8.2. Menu Structure

Access to the menu structure is possible as soon as the printer is turned OFF LINE and the ENTER key was pressed. The menu structure of the logiJET T4-2 /T6-2 /RFID printers is arranged in different levels:



This panel function allows the user to choose a **reduced menu** instead of the extended menu shown above.

Selecting positions in the menu structure:

This symbol shows the ONLINE key.
The printer is turned OFF LINE with this key.

With this key (ENTER key) you get into the first menu level of the menu structure.

The NEXT key and the PREVIOUS key are used to move within the menu levels.

["Menu Level "]

Each menu item / sub-item within a menu level is shown in the display of the control panel.

The ENTER key has two main functions. It gives the user access to a particular menu and, once in the menu, it allows the user to select a particular function.

["Function"]

Functions / Changing of function values:

Within one function the value can be changed by pressing the key NEXT or PREVIOUS.

In case of a multi-digit function value pressing the NEXT key switches to the next position of the function value. Pressing the PREVIOUS key switches to the previous digit of the function value.

Please note: If you press the PREVIOUS key although the absolute left digit of the function value is still arrived, the changing procedure will be cancelled and this moves you to the next menu level above.
If you press the ENTER key although the absolute right digit (digit 1) of the function value is still arrived, the currently displayed function value is stored.

In case of a multi-digit function value the value of the currently chosen digit will be changed via the UP and DOWN keys. Press the UP or DOWN key to increase or decrease the value.

By pressing the ENTER key the function values currently displayed are confirmed respectively the selected function is activated (the changes are saved until the next printer power off; this kind of saving is called temporary).

[Save as Setup?] After this you have to decide, if you want to save the changes permanent (Save as setup).

To select such changes permanently, the user must press the ENTER key one more time. These permanent changes in printer configuration are active each time the printer is turned on again.

If the ONLINE key is pressed instead, the changes are only stored temporary (not saved as setup).
(This key takes the user to the respective previous menu level).

Return to the ON LINE mode:

A) Return to the ON LINE mode step by step:

Pressing the ONLINE key takes the user to the respective previous menu level.
Aim is to jump back to Menu Level 1. The next ONLINE key pressing switches the printer to the ONLINE mode.

B) In one step:

Press the ONLINE key longer than 2 seconds (using the repeat function). This switches the printer directly to the ON LINE mode from nearly any menu position.

8.3. Syntax of Diagrams

The control panel functions will be described using diagrams. These diagrams show the course necessary in order to activate a certain function.

First the elements of the diagram are explained:

The sequence on the left describes which keys have to be pressed briefly in succession.

In this example the ONLINE key has to be pressed first.
Then the ONLINE key is released and the ENTER key has to be pressed. Then the ENTER key has to be released and the NEXT key has to be pressed.

["Message"]

The "Panel display" column shows the display messages corresponding to the sequences listed on the left.

In the column "Notes" explanations to particular operational steps are given.

9. Panel Functions

For the panel functions described in the following text, the printer is presumed to be turned on and in the ON LINE mode.

The following panel functions can provide a first overview of the most relevant functions of the logiJET T4-2 und T6-2:

- **Show Info** see section 9.9

  This function serves to show some basic information about your printer: the IP Address, Firmware Release, Serial Number and the current Printer Emulation.

- **Printing the Menu Page** *) see section 9.14

  This function prints a survey of the available panel functions.

- **Printing the Status Sheet** *) see section 9.8

  This function generates a status sheet.
  The status sheet contains information about the current printer configuration and the available fonts.

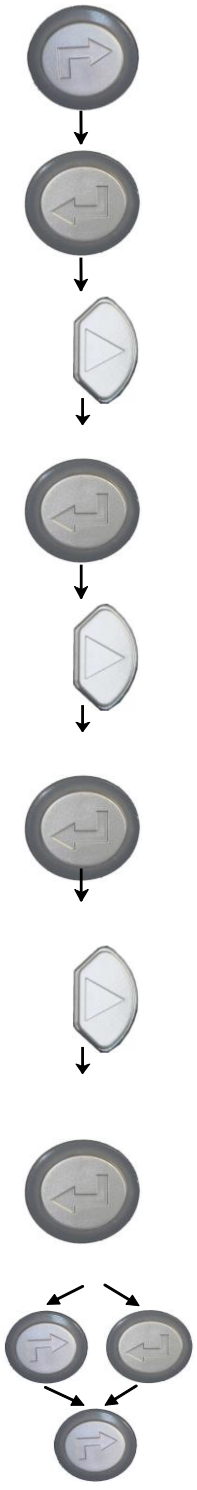
*) Please follow the instructions step by step (as described in the following sections: 9.1 Print Process Selecting, 9.2 Adjusting the Printer to the Print Material , 9.3 Adjusting the Sync Sensors …).

9.1. Print Process Selecting

This function allows to select the print process.
While thermal direct printing the device operates without ribbon, direct thermal media is required.
While thermal transfer printing a ribbon is needed to transfer the print contents onto the media (see chapter 5 Handling of Consumables, too).

For thermal direct printing it is not allowed to insert a ribbon to avoid damaging the printhead.
Make sure your settings match to the printer implementation (ribbon inserted/not inserted).

Description of this control panel function continues on the next page.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	
	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Engine] is displayed.
[Engine]	
	The menu item Engine is selected.
[Printspeed]	
• • •	Press the NEXT or PREVIOUS key until [Process] is displayed.
[Process]	
	The menu item Process is selected.
[Thermo direct]	
• • •	Press the NEXT or PREVIOUS key until the display message is corresponding with the printer implementation (ribbon inserted = Thermo transfer e.g.).
[Thermo transfer]	
	The thermal transfer print process is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

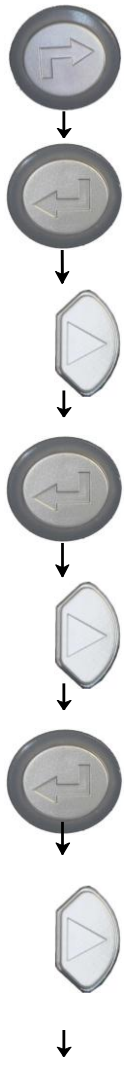
9.2. Adjusting the Printer to the Print Material (Paper Type)

This function is necessary to adjust the printer to the current media in use. This adjustment selects the active Light Sensor Type (SyncSensor).

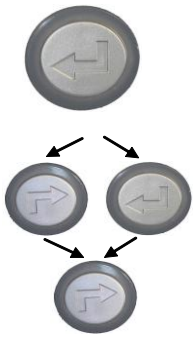
The printer is able to handle

- continuous media
- material with Gaps (label material)
- material with Black Marks

The **Gap Sensor** (Transparent Photoelectric Switch) is suitable for labels with transparent or register gaps.
The **Reflex Sensor** (Reflex Photoelectric Switch) is suitable for materials with markings / Black Marks.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Paper Menu] is displayed.
• • •	
[Paper Menu]	Press the ENTER key, this selects the Paper menu.
[Paper Size]	Press the NEXT or PREVIOUS key until [Paper Type] is displayed.
• • •	
[Paper Type]	Press the ENTER key, this selects the Paper type menu.
[Label (with Gap)]	The currently set value is displayed.
• • •	Press the NEXT or PREVIOUS key until until the statement shown by the display corresponds to the inserted media (Black Mark e.g.).
[Black Mark]	



[Save as Setup?]

The printer is adjusted to material with Black Marks.

In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.3. Adjusting the Sync Sensors

Please note: **Always adjust** the **sensors** of your printer to your consumables in use (**sensor positions as well as the levels and currents**).

9.3.1. Checking and Adjusting the Position of the Sensors

The device is provided with sensors to enable controlling of consumable movements (Synchronization).
The upper media sensor (Transparent sensor) as well as the lower media sensor (Reflex sensor) are located "below" the printhead mounting.

Move the sensors to the accurate position (appropriate to your consumables):

Please note: Always adjust all sensors of this print unit to your current consumables (sensor positions and the levels and currents).

1. Open the printer's cover and swivel it to a vertical position.

2. Release the printhead pressure lever to lift the pressure rollers.

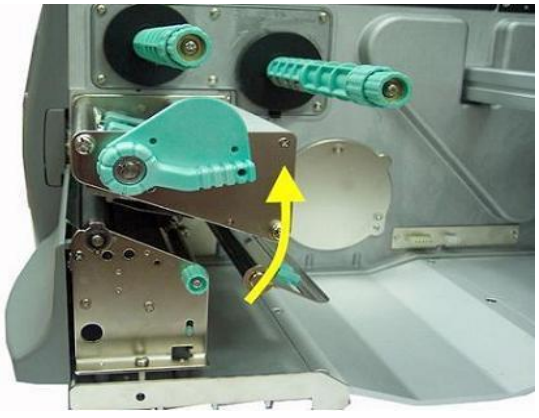


Fig. 9.3.1.a Swivel the printhead pressure lever upward (counterclockwise).

3. Slide the material guide to its outermost position. (Compare figure 9.3.1.c).

4. Insert the consumables (refer to section 5 for details).

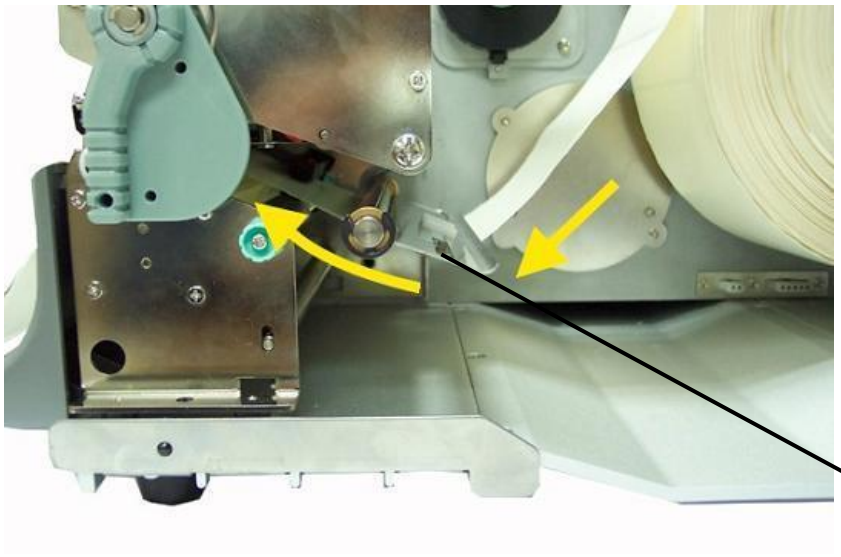


Fig. 9.3.1.b Inserting the media

5. Slide the material guide inwards until it contacts the edge of the media, without deforming the media.

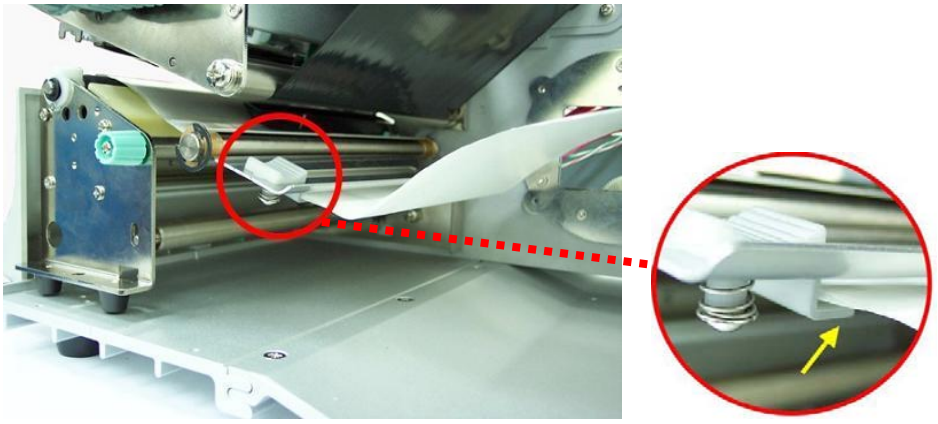


Fig. 9.3.1.c Setting the material guide

6. Find out the position of the gaps/marks of your consumable.

7. Use the setting knob to adjust the sensor position (light barrier). (If you turn the setting knob clockwise, the sensor will move rightward.)

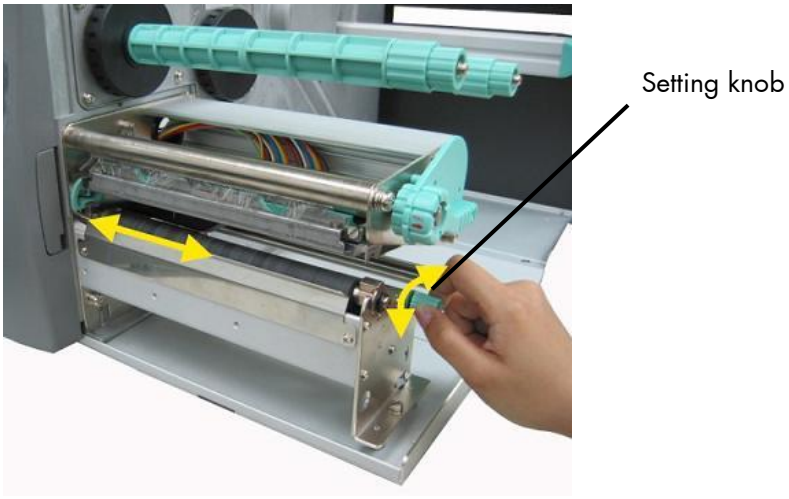


Fig. 9.3.1.d Adjusting the sensor position

8. The right position is found when the pointer is located above the material's gap.

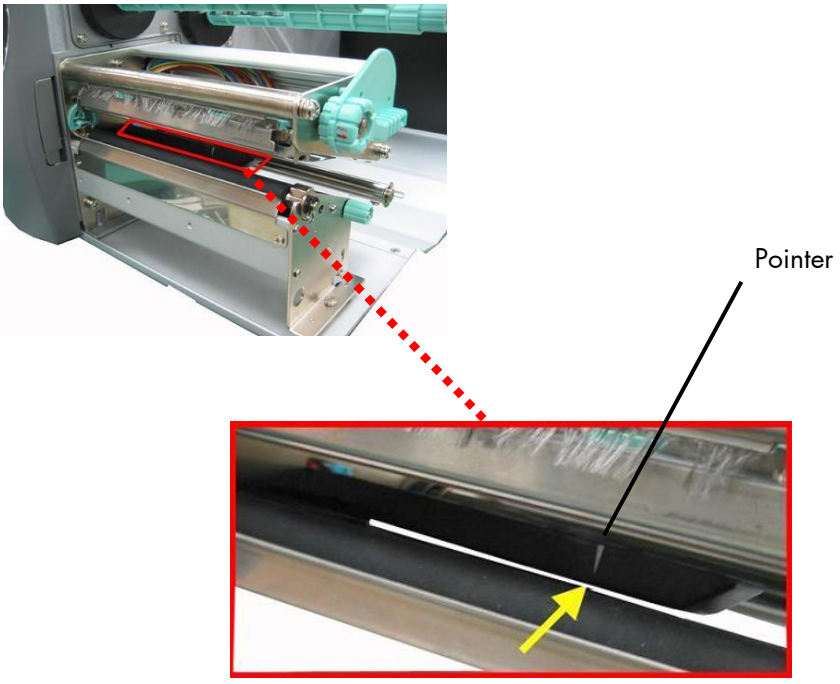


Fig. 9.3.1.e The pointer indicates the sensor position

9. The following table gives you an **overview of print media and sensor target positions** (upper sensor = transparent sensor, lower sensor = includes the reflex sensor):

Media	Sensors required	Sensor position mark
Media with Black marks	Lower sensor (Black mark) (+ upper sensor for paper end detection)	Directly over the black mark
Die-cut label	Lower and upper sensor (Gap)	The middle of media
Center-punched hole tag	Lower and upper sensors(Gap)	Directly over the hole
Notched tag	Lower and upper sensors(Gap)	Directly over the notch

10. Set the lower sensors to the lateral position of the gaps or marks of your material. (Compare the yellow arrows in the previous figure.)

The next step is to adjust the currents and the switching thresholds of the sensors. (Please read the following sections.)

Always adjust **both sensors** to your current consumables (upper sensor and lower sensor)!

For applying the **through-beam light barrier** functionality it is anyway necessary to use both, the upper Transparent sensor as well as the lower Reflex sensor.

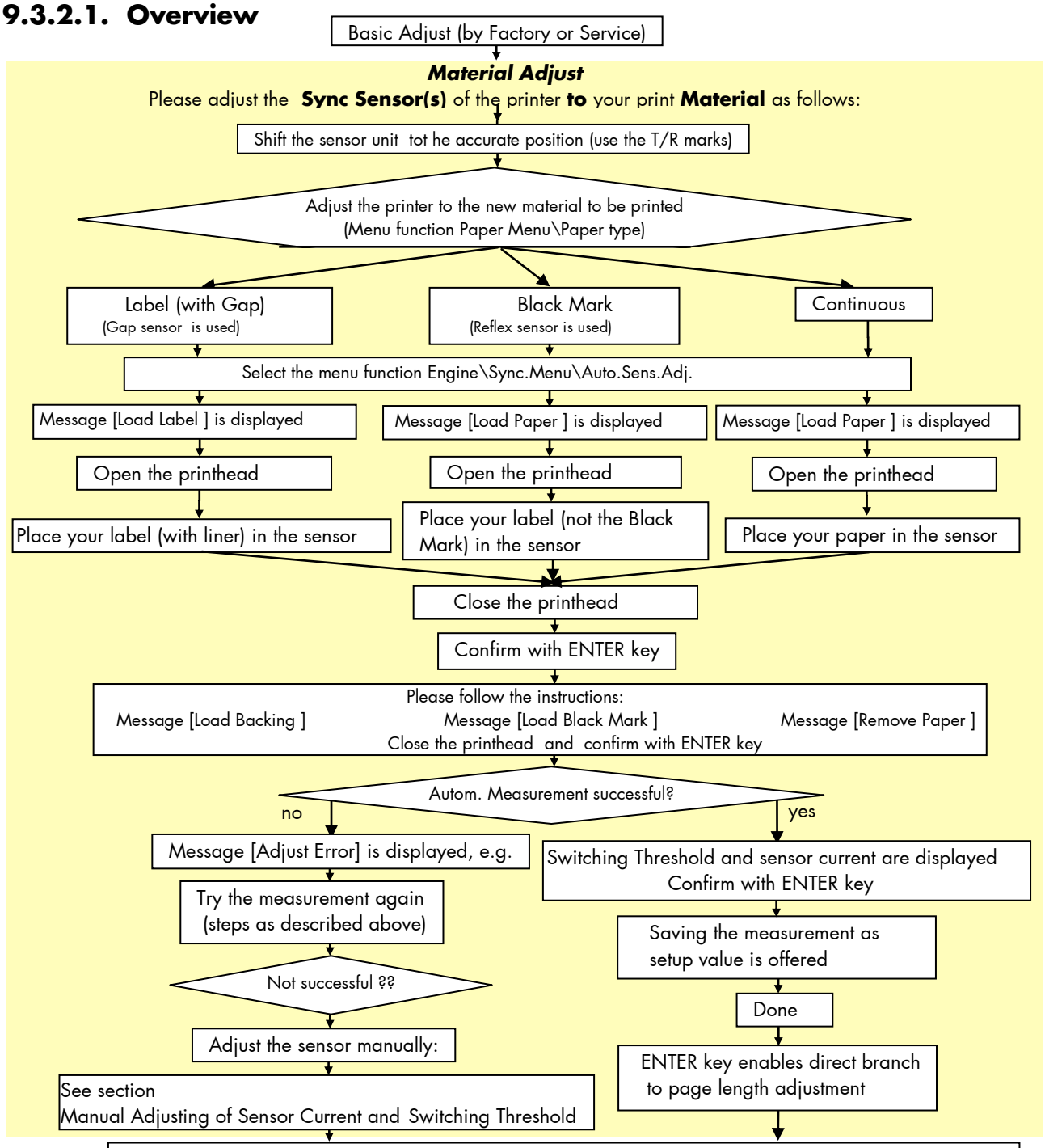
For using the **reflex light barrier** functionality only the (lower) Reflex sensor is needed to detect the markings / Black Marks, but the through-beam light barrier is needed for paper end detection.

9.3.2. Automatic Adjust of Sensor Current and Switching Threshold

This function serves to adjust the level and current of the printer's Sync Sensors (located at the rear print unit) to the material in use.

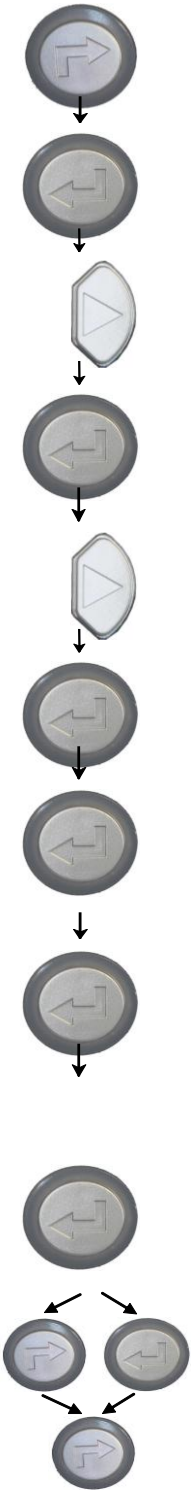
If this automatic function does not work with your specific print material, please perform the steps described in section 9.3.3 Manual Adjusting of Sensor Current and Switching Threshold.

9.3.2.1. Overview



9.3.2.2. Example

Adjusting the printer to the currently used media (Paper Type) is described in section 9.2. The following example describes the steps of the **automatic sensor adjust** of the Gap Sensor (transparent sensor).



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	Press the ENTER key, this selects the Engine menu.
[Printspeed]	Press the NEXT or PREVIOUS key until [Sync. Menu] is displayed.
• • •	
[Sync. Menu]	Press the ENTER key, this selects the Sync.Menu.
[Auto.Sens.Adj.]	Press the ENTER key, this starts the automatic sensor adjust.
[Load Label]	Open the printhead and place label (with masking paper) in the sensor area. Close the printhead. Press ENTER: the printer automatically measures the contrast value.
[Load Backing]	Open the printhead and place (only) the masking paper in the sensor area. Close the printhead. Press ENTER: the printer automatically measures the contrast value.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.3.3. Manual Adjusting of Sensor Current and Switching Threshold

Manual adjusting of the Sync sensor current and switching threshold allows the processing of materials with high contrast proof points within the label, which would otherwise be falsely measured by the system. *)

The panel functions Sensor Test and Sync Sens Level serve to adjust the Sync sensors (Reflex sensor and Gap sensor) to special media (material to print on).

The following sections describe the steps to adjust the Black mark sensor (reflex sensor) and the Gap sensors (transparent sensor) in form of flow charts as well as in form of step by step listings.

*) Special solution: If the adjusting of the Gap Sync sensor failes because the contrast value of the label material itself is very low, you can use the panel function **Sync.Sens.Logic** to invert the logic. (Black marks can be used as "inverse gaps" in this way.)

To get access to the Service Functions you have to **start** the printer in the **Service Mode**:

The Service Functions can be carried out by a MICROPLEX authorized operator or a service engineer.
A not trained person is **not allowed** to carry out this operations.

Please be especially careful when carrying out the following operations to avoid maladjustments and damaging the printer.

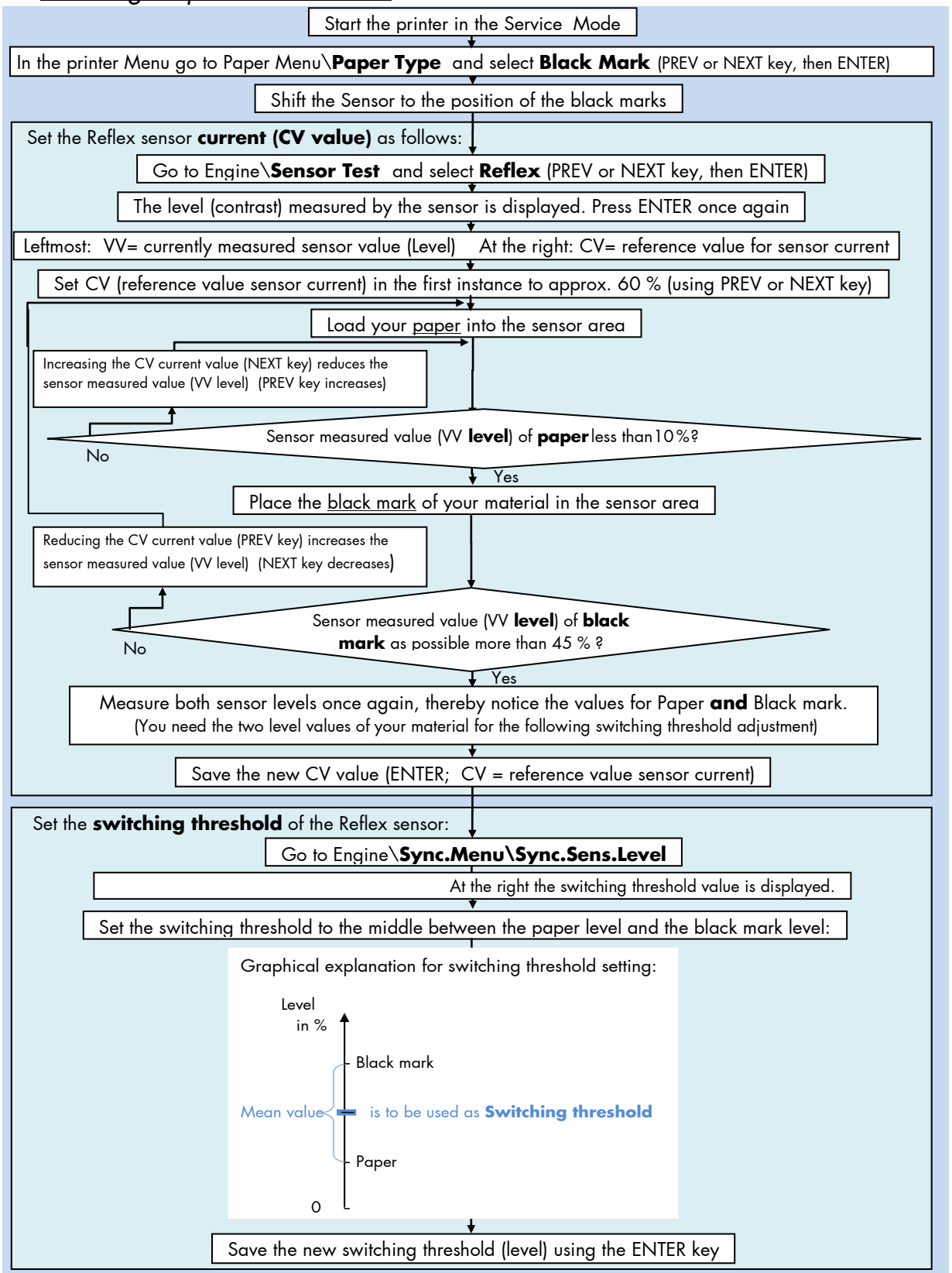
Start the printer in the **Service Mode:**

	Panel display	Notes
Turn the printer off		
		Before starting the printer the ENTER key and NEXT key have to be pressed simultaneously.
Turn the printer on		Turn the printer on and keep the keys ENTER and NEXT pressed until the messages [Service Mode] is displayed.
	[Service Mode]	
		Now the functions of the service menu are available (compare dashed areas in the Menu Structure of section 8.2).

• • •

9.3.3.1. Reflex Sensor (Black Mark Sensor)

Working Steps as Flow Chart:



*Description of the Working Steps for the **Reflex Sensor** (Black Mark Sensor):*

A) Start the printer in the Service Mode, compare section 9.3.3 (necessary for steps in section D).

B) Select the **Paper Type** Black Mark

Please go to [**Paper Type**] in the printer menu structure:
Paper Menu\Paper Type\ select **Black Mark**
(use PREV or NEXT key, then ENTER)

C) Shift the **Sensor** to the **position** of your **black marks**
See section 9.3.1 Checking and Adjusting the Position of the Sensors

D) Sensor Current (**CV** value) adjusting Reflex

Please go to **Sensor Test** and select the subpoint **Reflex**:
Engine\Sensor Test\ select Reflex
The currently measured sensor level (contrast) is displayed.
Press the ENTER key again, after this 2 values are displayed:
Left VV = curr. measured sensor value (level) Right CV = reference value for sensor current.
CV is modifiable (and has an effect on the VV value).

Use the NEXT or PREV key to set the CV value. Approx. CV value: 60 %

Load paper into the **sensor**.
The sensor measured value (VV **level**) of the **paper** (not black mark) should count less than 10%.
If the VV level is too high, increase CV (sensor current).

Put a **black mark** **into** the **sensor** area.
The sensor measured value (VV **level**) of the black mark should count as possible more than 45 %.

If the sensor measured value (VV level) of black mark is too low, the CV value should be decreased.
Higher black mark VV values than 45 % are more advantageous so long as there is no rising above 10 % of the paper VV level.

Measure both sensor levels once again for Paper **and** Black mark.
(You need the two level values of your material for the following switching threshold adjustment)

Save the new current value (CV) using the ENTER key.

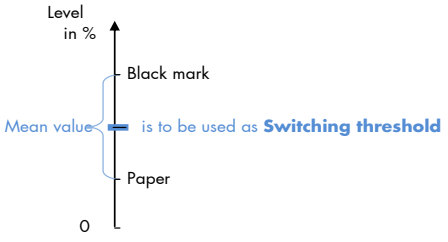
E) **Sensor Switching Threshold** adjusting

Please go to [**Sync.Sens.Level**] in the printers menu structure:
Engine\Sync.Menu\Sync.Sens.Level
At the right the switching threshold value is displayed.

Use the NEXT and PREV keys to set the switching threshold of the sensor to the middle between the paper level and the black mark level:

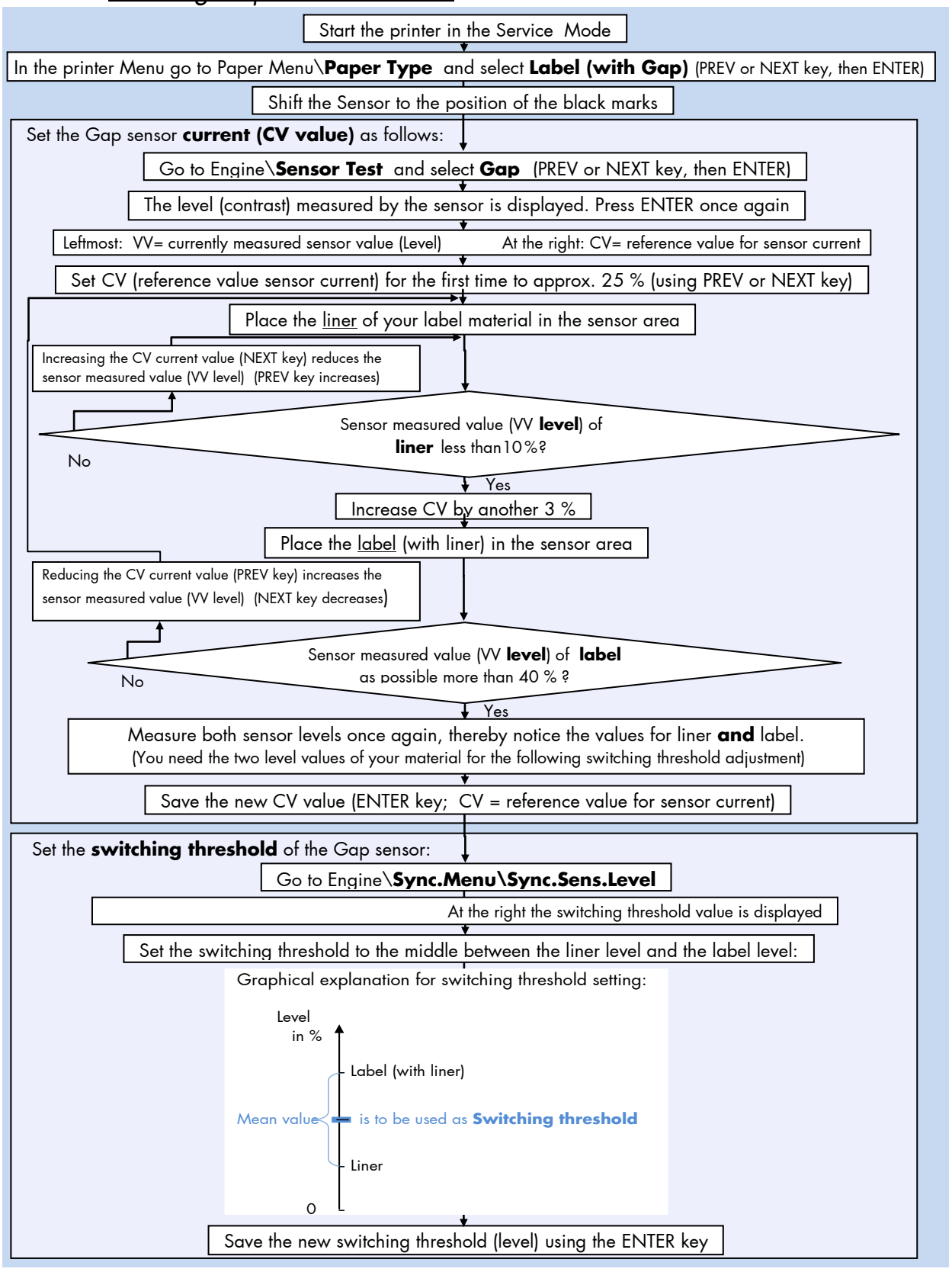
Save the new switching threshold (ENTER key).

Graphical explanation for switching threshold setting:



9.3.3.2. Gap Sensor (Transparent Sensor)

Working Steps as Flow Chart:



*Description of the Working Steps for the **Gap Sensor** (Transparent Sensor):*

A) Start the printer in the Service Mode, compare section 9.3.3 (necessary for steps in section D).

B) Select the **Paper Type** — Label with Gap

Please go to [**Paper Type**] in the printers menu structure:
Paper Menu\Paper Type\ select **Label (with Gap)**
(use PREV or NEXT key, then ENTER)

C) Set the **sensor (T)** to the accurate **position** (upper and lower sensor)
See section 9.3.1 Checking and Adjusting the Position of the Sensors

D) **Sensor Current** (**CV** value) adjusting — Gap

Please go to **Sensor Test** and select the subpoint **Gap**:
Engine\Sensor Test\ select Gap
The currently measured sensor level (contrast) is displayed.
Press the ENTER key again, after this 2 values are displayed:
Left VV = curr.measured sensor value(level) Right CV = reference value for sensor current.
CV is modifiable (and has an effect on the VV value).
Use the NEXT and PREV keys to set the CV value. Approx. CV value: — 25 %

Put the **liner** (not the label) of your material into the **sensor**.
Increase CV (current) until the sensor measured value (VV **level)** of the **liner** is **under 10 %**.

After that increase CV (sensor current) by another 3 %. — + 3 %

Load label (with liner) **into the sensor**.
The measured sensor level (VV **Pegel)** of **label** should count **as possible more than 40 %**.

If the sensor measured value (VV level) of label is too low, the CV value should be decreased.
Higher label VV values than 40 % are more advantageous so long as there is no rising above 10 % of the liner VV level.

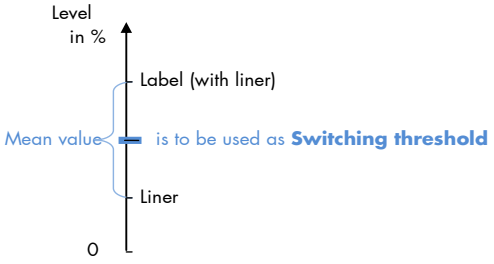
Measure both sensor levels once again for Liner **and** Label.
(You need the two level values of your material for the following switching threshold adjustment)
Save the new current value (CV) using the ENTER key.

E) **Sensor Switching Threshold** adjusting

Please go to [**Sync.Sens.Level**] in the printers menu structure:
Engine\Sync.Menu\Sync.Sens.Level
At the right the switching threshold value is displayed.

Use the NEXT and PREV keys to set the switching threshold of the sensor to the middle between the liner level and the label level:
Save the new switching threshold (ENTER key).

Graphical explanation for switching threshold setting:



9.3.3.3. Example: Determining the Switching Threshold for a Label Material

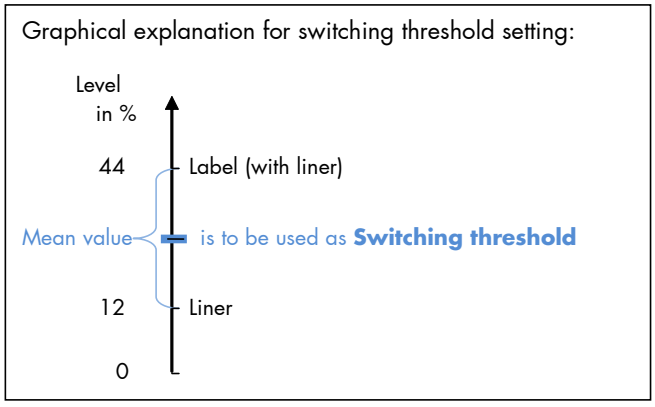
After selecting the **panel function Sync.Sens.Level** the contrast of the inserted material (placed in the photoelectric sensor area) is shown on the printer display. The **left level value** is the **currently measured sensor value** (You'll find more details in the previous sections.)

For **all** different **contrast zones** of the current **material** now sensor values (level values in %) have to be measured. **Place** every specific zone of the material **in the** photoelectric **sensor area** and read the level values.

Example: Self-adhesive material with black bars across the label

Zone of the inserted material:	Sensor measured value (level):
Label + liner + black bar	75 %
Label + liner	44 %
Liner (other names: carrier or backing)	12 %

Calculation of the Switching Threshold



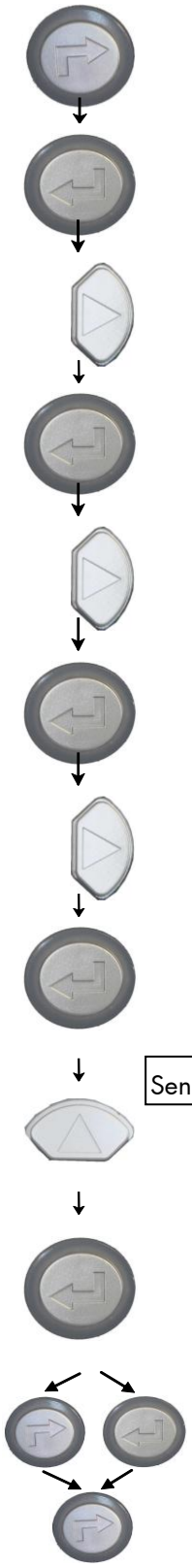
The **middle between the label level** (incl. liner) **and the liner level** has to be calculated:

(44% - 12%)/2 + 12% = 28%

In this example the switching threshold is to be set to the value 28 %.

The steps to set the Sync sensor level at the printer panel can be found on the following page:

Steps to **set the Switching Threshold (Sync.Sens.Level)** at the printer panel:



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	Press the ENTER key, this selects the Engine menu.
[Printspeed]	Press the NEXT or PREVIOUS key until [Sync. Menu] is displayed.
• • •	
[Sync. Menu]	Press the ENTER key, this selects the Sync.Menu.
[Auto.Sens.Adj.]	Press the NEXT or PREVIOUS key until [Sync.Sens.Level] is displayed.
• • •	
[Sync.Sens.Level]	Press the ENTER key to set the switching threshold of the sensor.
[Level: 44% 40.0%]	The measured contrast value is displayed at the left; the currently set level is displayed at the right side.
• • •	Press the UP or DOWN key until the desired sensor level is displayed.
[Level: 44% 28.0%]	In this example the switching threshold is set to 28%.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Sensor measured value

Switching Threshold

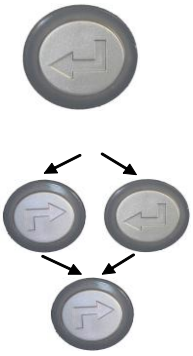
Nach dem Abschluss der Einstellung der Sensoren ist der **Drucker** jetzt erst einmal **auszuschalten.** Dies ist erforderlich, um den Service Modus zu beenden (um den Zugriff auf die Servicefunktionen wieder zu sperren).

9.4 . Adjusting the Zero Position of the Material Transport (Sync.Sens.Offset)

With this function the position of **printout and tear off/cut** on the material is adjusted. This is carried out by setting an offset from the printer-detected punch position (gap or start of the label, compare figure 9.4.a). The setting range for the offset is approximately ± 20 mm.

Note: Please execute this offset adjusting after you have successfully adjusted the Sync sensors. (See previous sections).

Panel display	Notes
[ON LINE]	
	Turn the printer OFF LINE with this key.
[OFF LINE]	
	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	
	Press the NEXT or PREVIOUS key until [Sync. Menu] is displayed.
• • •	
[Sync. Menu]	
[Sync.Sens.Type]	
	Press the NEXT or PREVIOUS key until [Sync.Sens.Offset] is displayed.
• • •	
[Sync.Sens.Offset]	
[Offset: + 0.0 mm]	The currently set value is displayed.
	Press the NEXT or PREVIOUS key until the desired offset is displayed.
• • •	
[Offset: + 1.0 mm]	



[Save as Setup?]

The gap position is shifted 1 mm against the feed direction.

In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ON LINE again: Press the ON LINE key longer than 2 seconds.

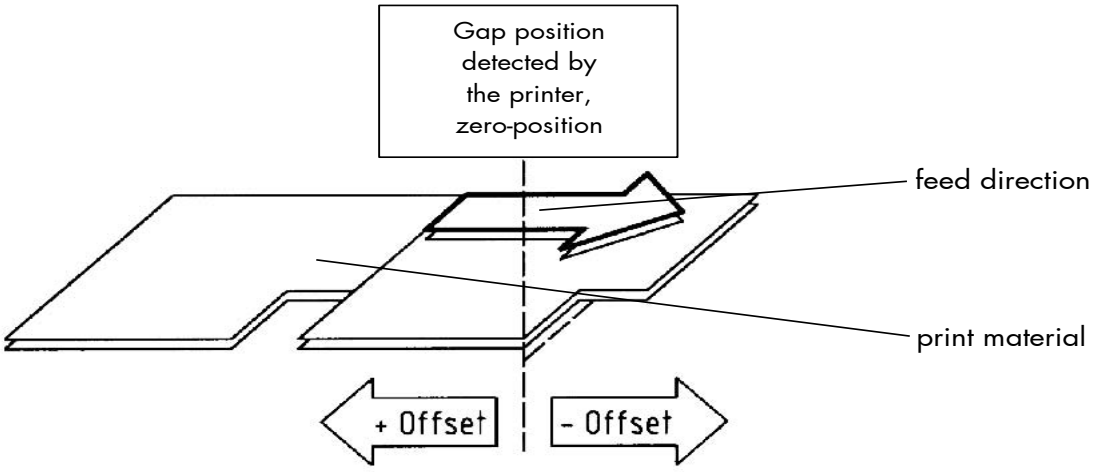
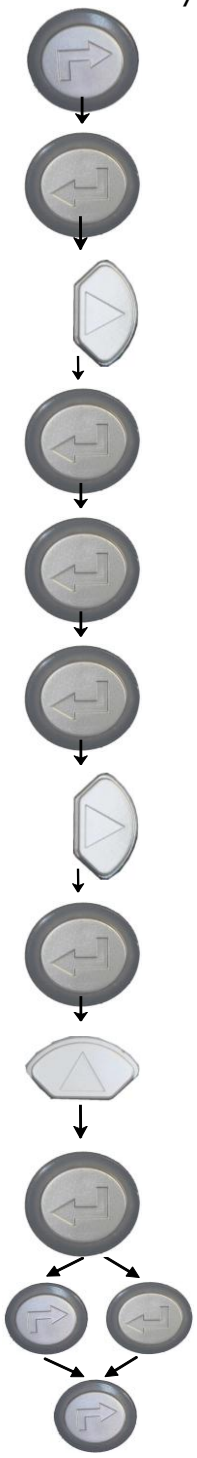


Fig. 9.4.a Adjusting the Zero Position of the Material Transport

9.5. Page Length Adjustment

After inserting new material (e.g. paper) this function is used to adjust the printer to the new page length.

Hint: Alternatively, the printer itself is able to measure the label length. See next sections. Please execute **this** length adjusting **after** you have successfully **adjusted** the Sync **sensors** and the **Sync.Sens.Offset**. (See previous sections).



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Paper Menu] is displayed.
• • •	
[Paper Menu]	Press the ENTER key to select the paper menu.
[Paper Size]	Press the ENTER key to select the paper size menu.
[Page Length]	Press the ENTER key to adjust the page length.
[Measure Length]	Press the NEXT or PREVIOUS key if you want to **adjust the page length manually**:
• • •	
[in mm]	mm = currently selected measuring unit. (Alternative the units inch or dot can be chosen with NEXT or PREVIOUS).
• • •	
[Digit4 149.9]	Pressing the UP or DOWN key changes the value of the current digit (Digit4 = left position, in this example: 1). Pressing the NEXT key moves you to the next digit (the PREVIOUS key combination moves you back, if need be).
• • •	
[Digit1 149.5]	The page length is changed to 149.5 mm.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.5.1. Starting the (Printer's) Measurement of Label Length

Use the panel function

logiJET T4-2\Paper Menu \ Paper Size \ Page Length \ **Measure Length**

The printer performs a material feed and reports the measured label length on the display.
Use the ENTER key to confirm this value (configuration of the measured label length).
In addition this new value can be saved permanent as setup value (using the ENTER key, again).

9.5.2. Configuration of Semiautomatic Label Length Measurement

The panel function

logiJET T4-2\Paper Menu \ Paper Size \ Page Length \ **Auto.Measurement**

serves to switch the semiautomatic label length measurement function to on or off (and to save this setting as setup value).

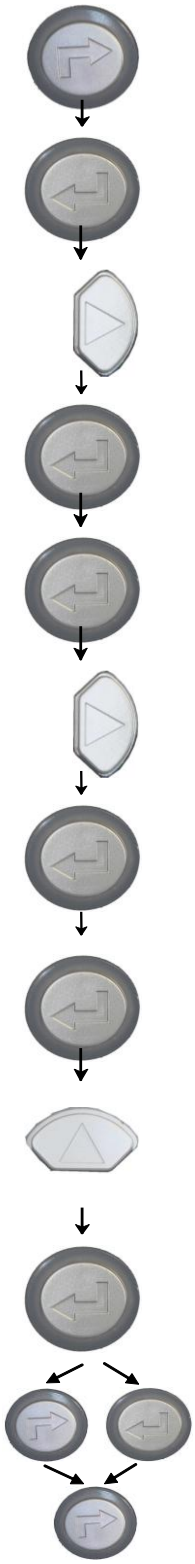
If the semiautomatic label length measurement function is chosen, the printer **automatically offers** you the **measurement of the label length** after every printer power on and **after every closing of the printhead** (for example after the inserting of a new label roll):

Panel display [Measure length]

Use the ENTER key to start the measurement of label length, use the ESC key to suppress this function.
The printer saves the measured label length temporal (as long as the printer stays turned on).

9.6. Material Width Adjustment (Paper Width)

The paper width (print width) has to be adjusted with this function according to the currently used format.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Paper Menu] is displayed.
• • •	
[Paper Menu]	Press the ENTER key to select the paper menu.
[Paper Size]	Press the ENTER key to select the paper size menu.
[Page Length]	Press the NEXT or PREVIOUS key until [Paper Width] is displayed.
• • •	
[Paper Width]	Press the ENTER key to adjust the format width to the paper width.
[in mm]	mm = currently selected measuring unit. (Alternative the units inch or 1/300 inch can be chosen with NEXT or PREVIOUS).
• • •	
[Digit4 1̲08.4]	Pressing the UP or DOWN key changes the value of the current digit (Digit4 = left position, in this example: 1). Pressing the NEXT key moves you to the next digit (the PREVIOUS key combination moves you back, if need be).
• • •	
[Digit1 108.0̲]	The format width (paper width) is changed to 108.0 mm.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.7. Configuration of Text Margins

This function sets text margins. Margins are expressed in dots at the concerning edge of the paper.

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Page Menu] is displayed.
[Page Menu]	
[Font Number]	
• • •	Press the NEXT or PREVIOUS key until [Margin] is displayed.
[Margin]	
[Left]	
• • •	Press the NEXT or PREVIOUS key until the desired margin is displayed.
[from Right]	
[Digit4 0081]	Pressing the UP or DOWN key changes the value of the current digit (Digit4 = left position, in this example: 0). Pressing the NEXT key moves you to the next digit (the PREVIOUS key combination moves you back, if need be).
• • •	
[Digit1 008Z]	The right margin is changed into 87 dot.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.8. Printing the Status Sheet

This function generates a status sheet.
The status sheet contains information about the current printer configuration and the available fonts.

	Panel display	Notes
	[ON LINE]	Turn the printer OFF LINE with this key.
↓ 	[OFF LINE]	The ENTER key gives the user access to the menu structure.
↓	[Menu Level 1]	
		Press the ENTER key. Menu level 1 is selected.
↓	[Status Sheet]	
		Press the ENTER key again. A status sheet is printed.
↓	[Status Sheet]	
		Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Status sheet contents:

The first lines, entitled SERVICE INFORMATION, contain hexadecimal coded configuration parameters.

Printed in plain text:

- Controller version / memory / serial number
- Firmware release
- Interface
  parameters of Parallel, Serial, USB, Network (Ethernet)
- Printer emulation
- User-RAM / free User-RAM
- Input data buffer
- Transparent code
- Paper size
- Default margins top / left
  bottom / right
- Default character code
- Options
- Fonts installed (Font banks)

Note: Use the panel function Printing the Font List to show the fonts installed (see the following section).

9.9. Show Info (IP Address, Firmware Release ...)

This function serves to show some basic information about your printer: the IP Address, Firmware Release, Serial Number and the current Printer Emulation.

Panel display	Notes
[ON LINE]	
	Turn the printer OFF LINE with this key.
[OFF LINE]	
	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
	Press this key. Menu Level 1 is selected.
[Status Sheet]	
• • •	Press the NEXT or PREVIOUS key until [Show Info] is displayed.
[Show Info]	
	Press this key. The Show Info menu is selected.
[IP Address]	
	Press this key again to show the IP Address of your printer.
	Alternative: Use the NEXT or PREVIOUS key to select for example the Firmware Release or the Serial Number of your printer.
[192.168.002.002]	The currently set IP Address is displayed.
	If you need to change the setting, refer to section Configuration of Network Parameters.
	Turn the printer ON LINE again: Press the ON LINE key longer than 2 seconds.

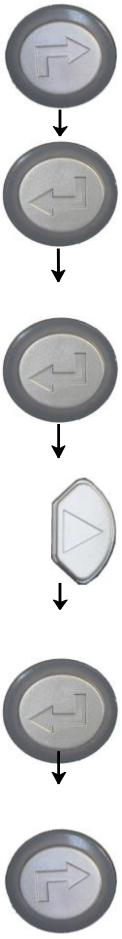
9.10. Printing the Font List

This function generates a list of all fonts installed to the printer. The font list shows demo prints of all fonts and, in addition, the concerning PCL selection commands. These commands contain information on font width and font height (see section 9.22 Font Selection, too).

Panel display	Notes
[[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Menu Level 1 is selected.
[Status Sheet]	Press the NEXT or PREVIOUS key until [Font List] is displayed.
• • •	
[Font List]	
[Font List]	The font list is printed.
	Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.11. Hexdump-Mode Activation

Within the Hexdump-Mode the printer prints all characters received via interface without any interpretation (hexadecimal coded).
This mode helps with error diagnosis. The Hexdump-Mode can be activated only temporarily.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Menu level 1 is selected.
[Status Sheet]	Press the NEXT or PREVIOUS key until [Hexdump] is displayed.
• • •	
[Hexdump]	The Hexdump-Mode is activated.
[Hexdump]	Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Note: By activating the normal print mode (see next section) or by turning the printer off and on again the printer can be taken out of Hexdump Mode.
Time between turning the printer off and on again should be at least 15 seconds.

9.12. Normal Print Mode Activation (incl. FORM FEED)

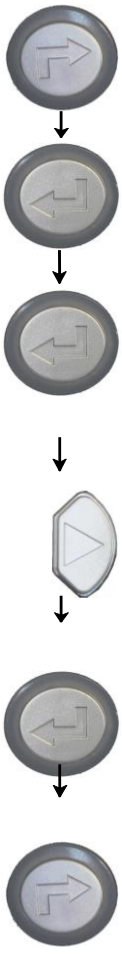
The normal print mode suspends the Hexdump-Mode.
This function is activated, when a print job must be continued without turning the printer off and on again.
In addition to that the function “Normal Print Mode Activation“ is used to produce a FORM FEED.

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
[Status Sheet]	Press the NEXT or PREVIOUS key until [Normal Print/FF] is displayed.
• • •	
[Normal Print/FF]	The normal print mode is activated.
[Normal Print/FF]	Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Note: After activating the normal print mode a FORM FEED is released automatically and one sheet is put out.
This is necessary because after a test in the Hexdump Mode it is possible that data can remain in the input buffer unintentionally (cause: in the Hexdump Mode no control characters are evaluated and no FORM FEED is effected).

9.13. Clearing the Input Buffer (Cancel Job)

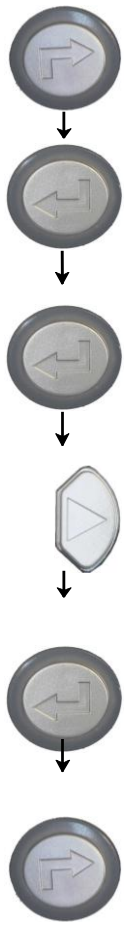
This function permits the resumption of a print job at a particular page after a print interruption (e.g. paper jam). The data contained in the input buffer before the interruption are cleared.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Menu level 1 is selected.
[Status Sheet]	Press the NEXT or PREVIOUS key until [Cancel Job] is displayed.
• • •	
[Cancel Job]	
[Cancel Job]	All data contained in the input buffer will be cleared.
	Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.14. Printing the Menu Page

This function prints a survey of the available panel functions.
Note: When printing the menu page please use a large paper.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Menu level 1 is activated.
[Status Sheet]	Press the NEXT or PREVIOUS key until [Menu Page] is displayed.
• • •	
[Menu Page]	A menu structure presentation of the logiJET T4-2 /T6-2 is printed out (compare section 8.2).
[Menu Page]	Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.15. Generating Test Prints (Sliding Pattern)

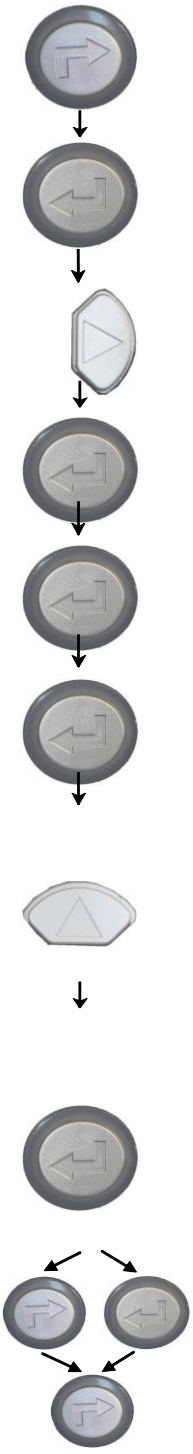
This function generates a series of test prints without sending data to the printer.
These test prints facilitate error analysis.

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Menu level 1 is selected.
[Status Sheet]	Press the NEXT or PREVIOUS key until [Sliding Pattern] is displayed.
• • •	
[Sliding Pattern]	A series of test prints is generated.
[Sliding Pattern]	Turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

The printing out of test prints can be stopped by pushing the ESC key.

9.16. Data Interface Configuration

This function is used to set the interface parameters.

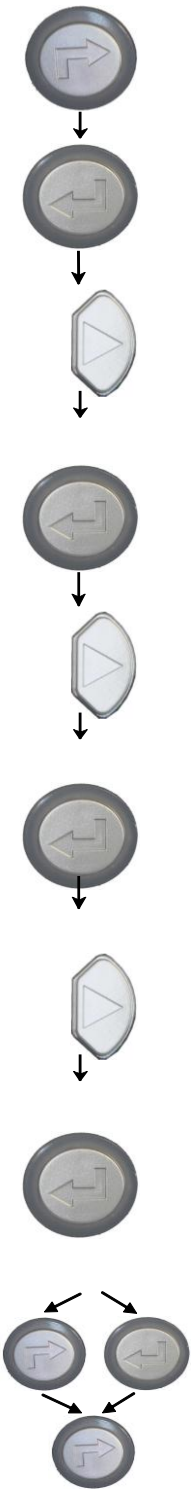


Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	
	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Configuration] is displayed.
[Configuration]	
[Interface]	
[Timeout]	
[Digit3 030]	The currently set value for he timeout is displayed (here: 30 seconds). Pressing the UP or DOWN key changes the value of the current digit (Digit3 = left position, in this example: 0). Pressing the NEXT key moves you to the next digit (the PREVIOUS key combination moves you back, if need be).
• • •	
[Digit2 040]	The timeout (the waiting period for SIA to switch to the next interface) is increased to 40 seconds.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Note: The printer uses SIA (Simultaneous Interface Administration) to check, which interface is currently used for the transfer of print data.

9.17. Emulation Selection

With this function you can change the active emulation.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Configuration] is displayed.
• • •	
[Configuration]	
[Interface]	Press the NEXT or PREVIOUS key until [Emulation] is displayed.
• • •	
[Emulation]	
[SOLID Standard]	Press the NEXT or PREVIOUS key until the desired emulation (e.g. Datamax) is displayed.
• • •	
[Datamax]	The emulation Datamax is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Available Emulations:

Standard:

MICROPLEX IDOL,
Epson FX,
IBM Proprinter,
Datamax (FGL),
cab,
GODEX EZPL,
Diablo 630,
Eltron EPL2,
ZPL II (Zebra Programming Language),
CUPS Raster

Optional:

HP PCL5 (factory option only),
Kyocera Prescribe,
Printronix IGP/PGL,
LabelPoint,
TIFF (CCITT group 4)
µPostscript,
IPDS (via PPD/PPR Protocol),
TEC B6xx (Thermal Transfer),
TEC Bx72 (Thermal Transfer),
Etimark (Thermal Transfer),
AGFA Reno,
S3000 Lineprinter,
HPGL (7475A),
DEC LN03+,
Tally MT 6xx,
Bull MP6090

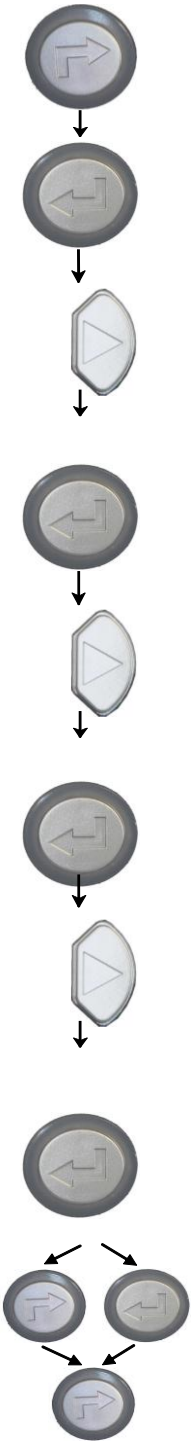
(More emulations on request)

Notice:

The brand names mentioned are registered trademarks of the enterprises named above.

9.18. Display Language Selection

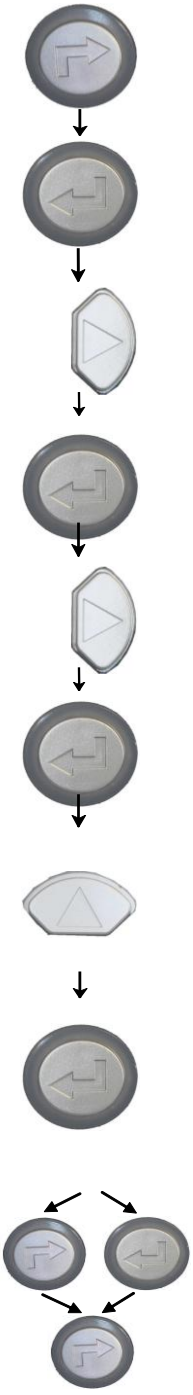
This function enables the user to determine the language for the display messages, the status sheet and the font list.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Configuration] is displayed.
• • •	
[Configuration]	
[Interface]	Press the NEXT or PREVIOUS key until [Language] is displayed.
• • •	
[Language]	
[German]	Press the NEXT or PREVIOUS key until the desired language (e.g. English) is displayed.
• • •	
[English]	The display language English is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.19. Transparent Code Adjustment

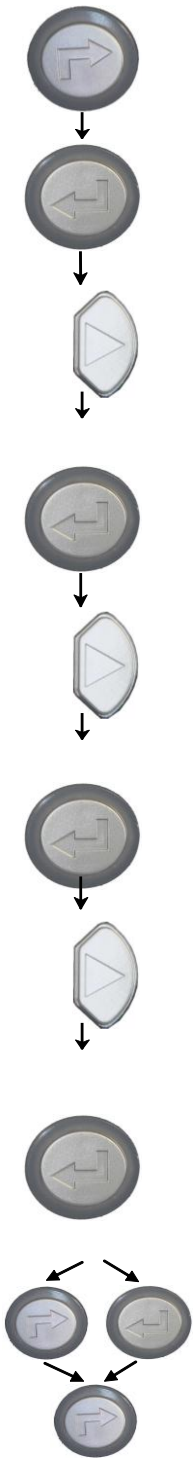
This function configures the transparent code. Using the transparent code enables you to initiate the commands of the page description language IDOL by **printable** characters. The transparent code pre-setting is 2625. These are the ASCII character codes (hexadecimal) for the characters &% (ref. IDOL Programming Manual).



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Configuration] is displayed.
• • •	
[Configuration]	
[Interface]	Press the NEXT or PREVIOUS key until [Transparent Code] is displayed.
• • •	
[Transparent Code]	
[Digit4 2625]	The hexadecimal number for &% is preset. Pressing the UP or DOWN key changes the value of the current position (Digit 4 = left position, in this example: 2). Pressing the NEXT key moves you to the next digit (the PREVIOUS key combination moves you back, if need be).
• • •	
[Digit1 2626]	2626 is selected as transparent code. From now on use the characters && before programming the IDOL commands.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.20. Selection of Memory Distribution (Input Buffer)

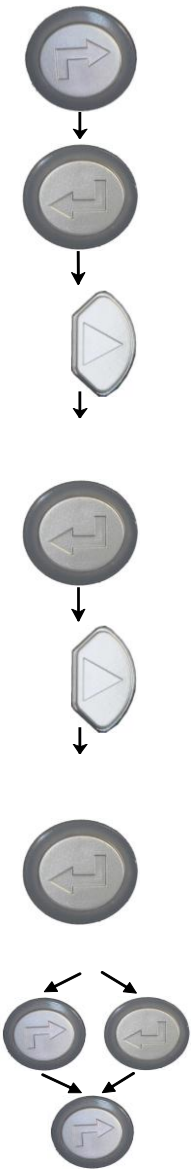
This function enables the user to choose the distribution of the available RAM memory between input buffer and macro/download memory.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Configuration] is displayed.
[Configuration]	
[Interface]	
• • •	Press the NEXT or PREVIOUS key until [Input Buffer] is displayed.
[Input Buffer]	
[32 kB]	
• • •	Press the NEXT or PREVIOUS key until the desired memory distribution is displayed. The input buffer size is specified in kilobyte (kB) or in percent of the installed memory.
[100 kB]	100 kB is selected as input buffer.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.21. Setting to Factory Default

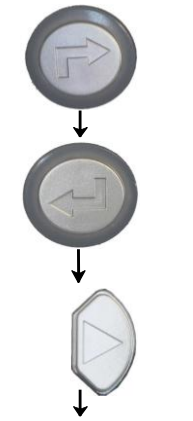
This function back-outs all configurations to factory defaults.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Configuration] is displayed.
[Configuration]	
[Interface]	
• • •	Press the NEXT or PREVIOUS key until [Factory Default] is displayed.
[Factory Default]	
[Save as Setup?]	Only if you press the ENTER key a second time the configuration will be back-outed to factory defaults.
	Turn the printer ON LINE again: Press the ENTER key longer than 2 seconds.

9.22. Font Selection

This function selects the active font. Select font number out of the list of available fonts.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Page Menu] is displayed.
• • •	
[Page Menu]	
[Font Number]	
[Font 600]	Press the NEXT or PREVIOUS key until the desired font number (e.g. *5507* Langeoog) is displayed.
• • •	
[Font *5507*]	The font number *5507* Langeoog is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

The **logiJET T4-2 /T6-2 /RFID standard equipment** contains the following **fonts**:

Font no.	Font width	Font height	Font name
0600	10	12	Kurilen
0602	10	12	Kurilen Italic
0610	12	10.1	Kurilen
1710	12	10.1	Kurilen Italic
4508	P	8.1	Helgoland
4510	P	10	Helgoland
4714	P	14.4	Helgoland Bold
5507	20	7	Langeoog
5508	16.6	7.9	Langeoog
5509	15	9.1	Langeoog
6610	10	10.1	Juist Monosp.
9210	P	10.1	Tasmanien
9310	P	10.1	Tasmanien Italic
2000	P	SC	Tasmanien
9900	P	SC	Neuwerk

Resumption of this standard font list see next page.

Explanations:

Font width:
Character distance in CPI (Characters Per Inch).
P = proportional, (meaning that each character has an individual width).

Font height:
Font height from the lowest descender to the upper edge of the highest character, measured in graphical points (1/72 inch).
SC = scalable.

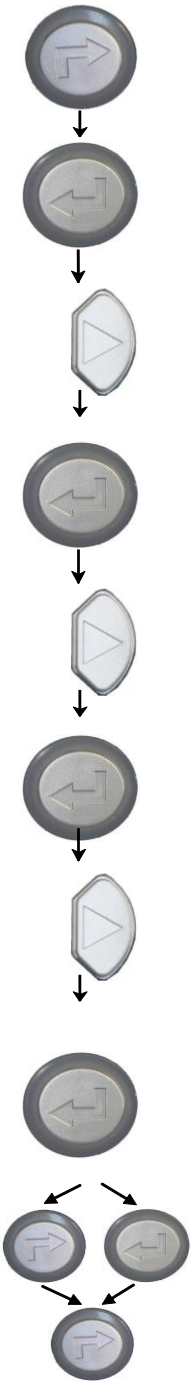
	Font no.	Font width	Font height	Font name
	0050	SC		Plakatschrift
	0590	SC		OCR /B
	0591	SC		OCR /A
	6600	SC		Juist Monospaced
PCL 5 compatible	0699	SC		Kurilen
	1700	SC		Kurilen Italic
	1800	SC		Kurilen Bold
	1900	SC		Kurilen Bold Italic
	5500	SC		Langeoog
	5600	SC		Langeoog Bold
	5700	SC		Langeoog Italic
	5800	SC		Langeoog Bold Italic
	2100	P	SC	Texel Bold
	2200	P	SC	Texel Italic
	2300	P	SC	Texel Bold Italic
	9800	P	SC	Neuwerk Italic
	9500	P	SC	Neuwerk Bold Italic
	9600	P	SC	Neuwerk Bold
	0060	SC		Plakatschrift
	9501	P	SC	Neuwerk-II Condensed Italic
	9601	P	SC	Neuwerk-II Condensed Bold Ital.
	9801	P	SC	Neuwerk-II Condensed Bold
	9901	P	SC	Neuwerk-II Condensed
	0530	P	SC	PiktoWin
	5100	P	SC	Amrum
	5200	P	SC	Amrum Bold
	5300	P	SC	Amrum Italic
	7500	P	SC	Antigua
	7700	P	SC	Antigua Bold
	7800	P	SC	Antigua Italic
	7900	P	SC	Antigua Bold Italic
	9199	P	SC	Tasmanien-II Bold Italic
	9299	P	SC	Tasmanien-II
	9399	P	SC	Tasmanien-II Italic
	9499	P	SC	Tasmanien-II Bold

Notes: Additional fonts can be selected from the font catalogue depending upon the memory capacity.

You can use the panel function Printing the Font List (see section 9.10) to generate a list of all fonts installed to the printer.

9.23. Text Orientation Selection

This function selects the active text orientation.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	
	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Page Menu] is displayed.
[Page Menu]	
[Font Number]	
• • •	Press the NEXT or PREVIOUS key until [Orientation] is displayed.
[Orientation]	
[Orientation 0]	
• • •	Press the NEXT or PREVIOUS key until the desired orientation is displayed.
[Orientation 1]	
	The orientation 1 = landscape is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Text orientation assignment:

Orientation 0 = Portrait (upright format)
Orientation 1 = Landscape (horizontal format)
Orientation 2 = Portrait upside down
Orientation 3 = Landscape upside down

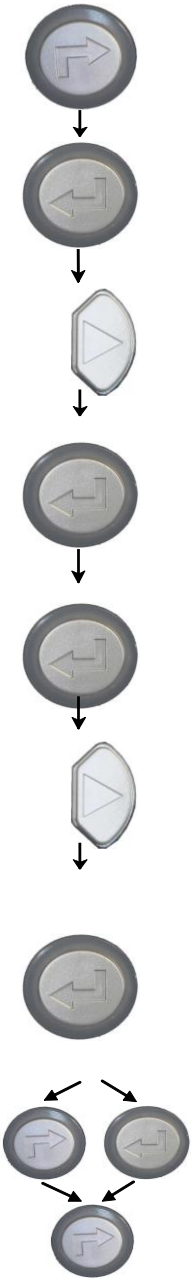
9.24. Symbol Code Selection

This function selects the active symbol code.

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Page Menu] is displayed.
• • •	
[Page Menu]	
[Font Number]	Press the NEXT or PREVIOUS key until [Symbol Code] is displayed.
• • •	
[Symbol Code]	
[902, IBM PC-II]	Press the NEXT or PREVIOUS key until the desired symbol code is displayed.
• • •	
[901, IBM PC-I]	The symbol code 901, IBM PC-I is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.25. Print Speed Adjustment

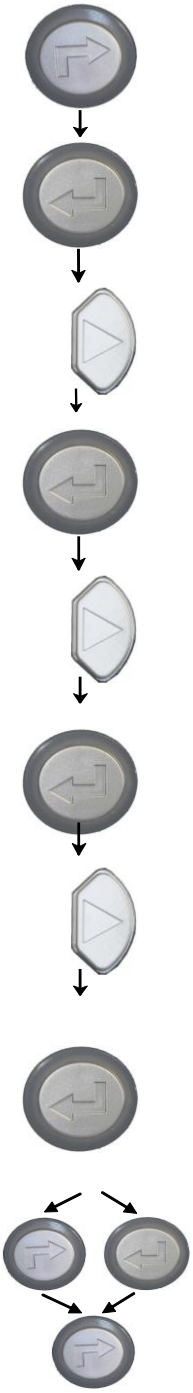
This function is used to change the print speed (adaptation to the actual used materials, e.g. to optimize the contrast of the printout). The setting range for the print speed is 2 inch/s to 6 inch/s.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	
[6 inch/s]	The currently set value is displayed.
• • •	Press the NEXT or PREVIOUS key until the desired value is displayed.
[4 inch/s]	Here the print speed is reduced to 4 inch/s.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

9.26. Contrast (Density) Setting

Using this function the print density (contrast) of the printed characters can be changed.

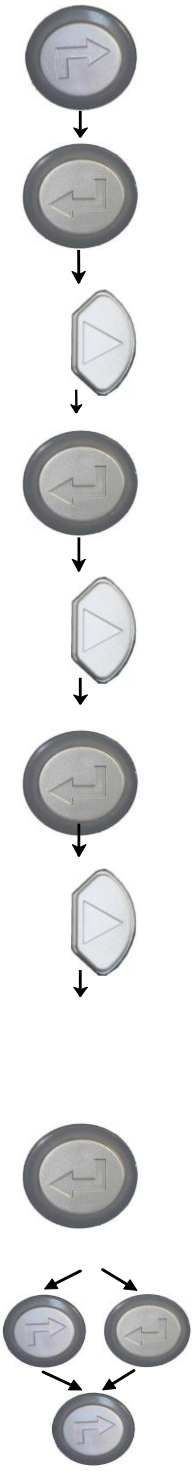


Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [Contrast] is displayed.
• • •	
[Contrast]	
[Contrast: 85 %]	The currently set value is displayed.
	Press the NEXT or PREVIOUS key to change the contrast. Values from 10% to 120% are settable *.
• • •	
[Contrast: 60 %]	The contrast is reduced to 60 % (the density is decreased).
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

*** Note:** Please consider that using high contrast values (more than 100%) can result in a reduced lifetime of the printhead.

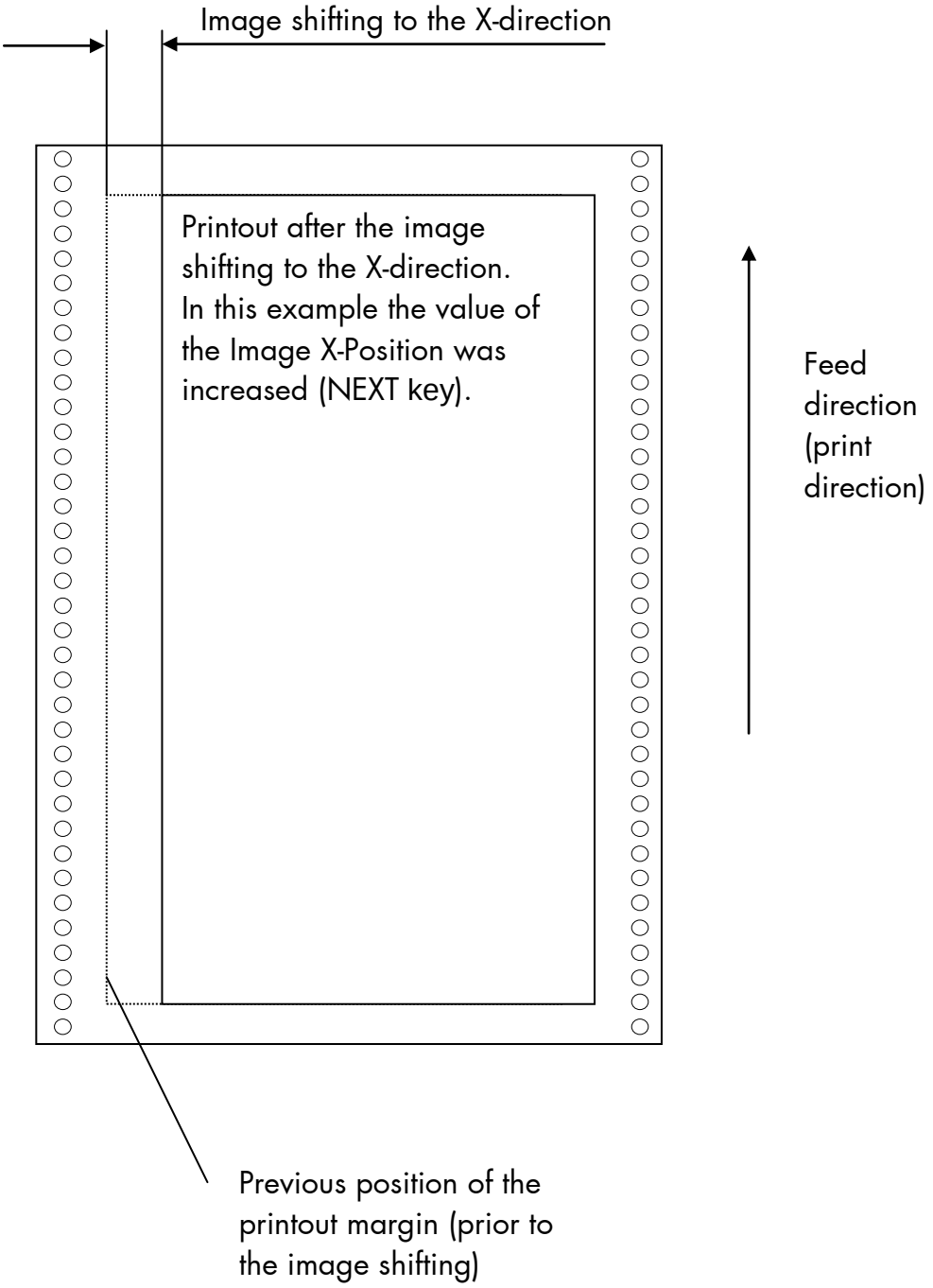
9.27. Image Shifting to the X-Direction

This function shifts the print image in relation to the paper to the X-direction (crosswise the print direction).



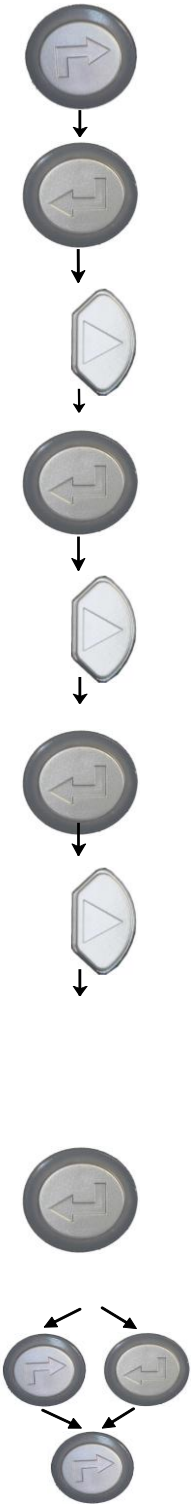
Panel display	Notes
[ON LINE]	
	Turn the printer OFF LINE with this key.
[OFF LINE]	
	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	
	Press the NEXT or PREVIOUS key until [Image X-Pos.] is displayed.
• • •	
[Image X-Pos.]	
	The panel function Image Shifting to the X-Direction is selected.
[X-Pos.: 0 Dot]	Currently set value (0 =Default). Operating the NEXT or PREVIOUS key the value for the image shift can be altered. Values from -288 up to +288 Dot are settable, so a max. image shifting of appr. ±1 Inch (approx. ±25 mm) can be reached.
• • •	
[X-Pos.: +160 Dot]	
	Now the new image X-Position is saved
[Save as Setup?]	
	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Example for shifting the image to the X-direction:



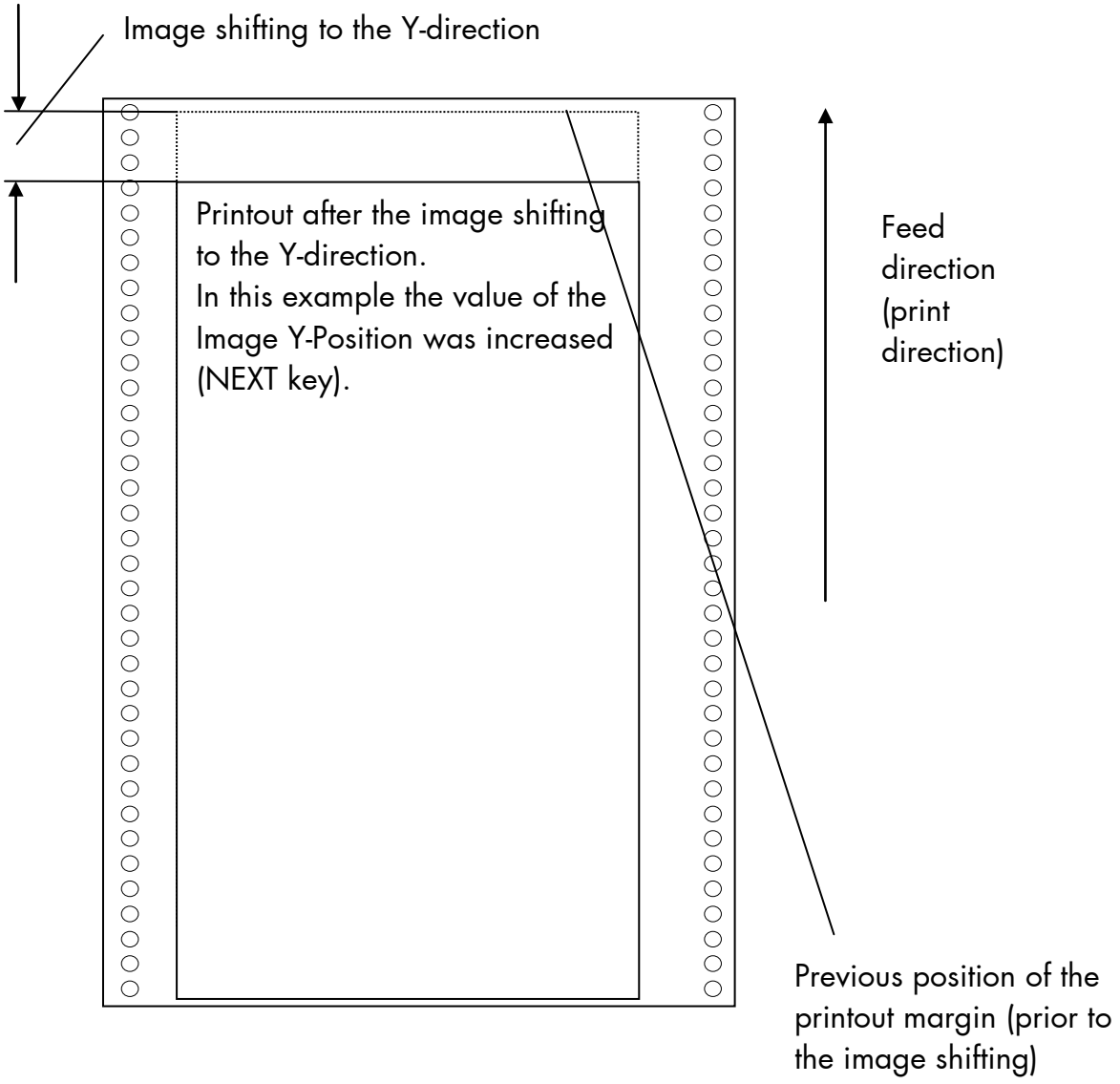
9.28. Image Shifting to the Y-Direction

This function shifts the print image in relation to the paper to the Y-direction (print direction).



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [Image Y-Pos.] is displayed.
• • •	
[Image Y-Pos.]	The panel function Image Shifting to the Y-Direction is selected.
[Y-Pos.: 0 Dot]	Currently set value (0 =Default). Operating the NEXT or PREVIOUS key the image can be shifted relative to the paper. Values from -496 up to +496 Dot are settable, so a max. image shifting of approx. ± 1.6 Inch (approx. ± 42 mm) can be reached.
• • •	
[Y-Pos.: +120 Dot]	Now the new image Y-Position is saved.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Example for shifting the image to the Y-direction:



9.29. Peripheral Device Activation (Tear Off Edge, Cutter)

After installation or deinstallation of a peripheral device this function has to be used to adjust the printer configuration.

Start the printer in the **Service Mode:**

	Panel display	Notes
 Turn the printer on		Before starting the printer the left panel key and the panel key in the middle have to be pressed simultaneously. (Inscription above this keys: FEED and PAUSE.) Turn the printer on and keep the two keys pressed until the messages [Service Mode] is displayed.
	[Service Mode]	Now the functions of the service mode are available (compare dashed areas in the Menu Structure of section 8.2).

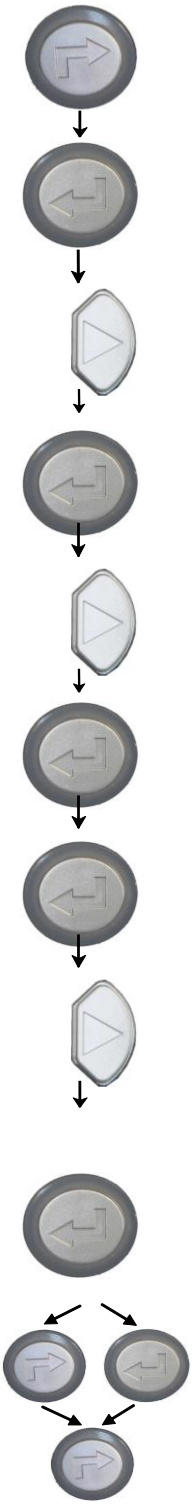
• • •

Peripheral device selection:

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [Service Mode] is displayed.
• • •	
[Service Mode]	
[Dot-Test]	Press the NEXT or PREVIOUS key until [Optional Devices] is displayed.
• • •	
[Optional Devices]	The panel function Optional Devices is selected.
[Periph. Device]	Select the submenu [Periph. Device] .
[TearOff Edge]	Press the NEXT or PREVIOUS key until the desired peripheral device is displayed.
• • •	
[Cutter]	The cutter (option) is selected.
[Saved!]	Turn the printer ON LINE again: Press the ENTER key longer than 2 seconds.

9.30. Selecting the Tear Off Mode (Option: Cutting Mode)

With this function the printer's material transport can be adjusted to the following media processing.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [TearOff Menu] is displayed.
• • •	
[TearOff Menu]	
[TearOff Mode]	
[OFF]	Press the NEXT or PREVIOUS key until the desired value is displayed.
• • •	
[ON]	The tear off mode is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Information on the Tear Off mode:

OFF = After printing no additional media transport takes place, the printhead position is TOP OF FORM.

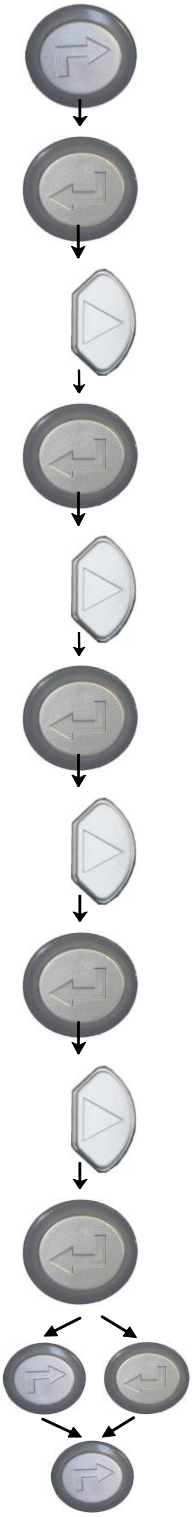
ON = The printer will feed the material (label) out to the tear edge, waiting for the user to tear it off before printing the next label. This additional media transport after printing enables to disjoin the material along/at the perforation. *)
The tear off mode is not carried out, if the next page is already ready to print. (In this case the next page is printed instead).

*) A draw back of the material can be selected. Prior to the next print job the material is moved back until the printhead position is TOP OF FORM (Real 1:1 Mode).
Use the panel function Selecting the Print Mode for this (see the following pages).

If the **optional cutter** is installed and activated, the menu structure of the printer contains the **Cutting Menu** instead of the Tear Off Menu.
The adjustment of the cutting parameters has to be done in the same way as it is described for the tear off functions here.

9.31. Selecting the Print Mode

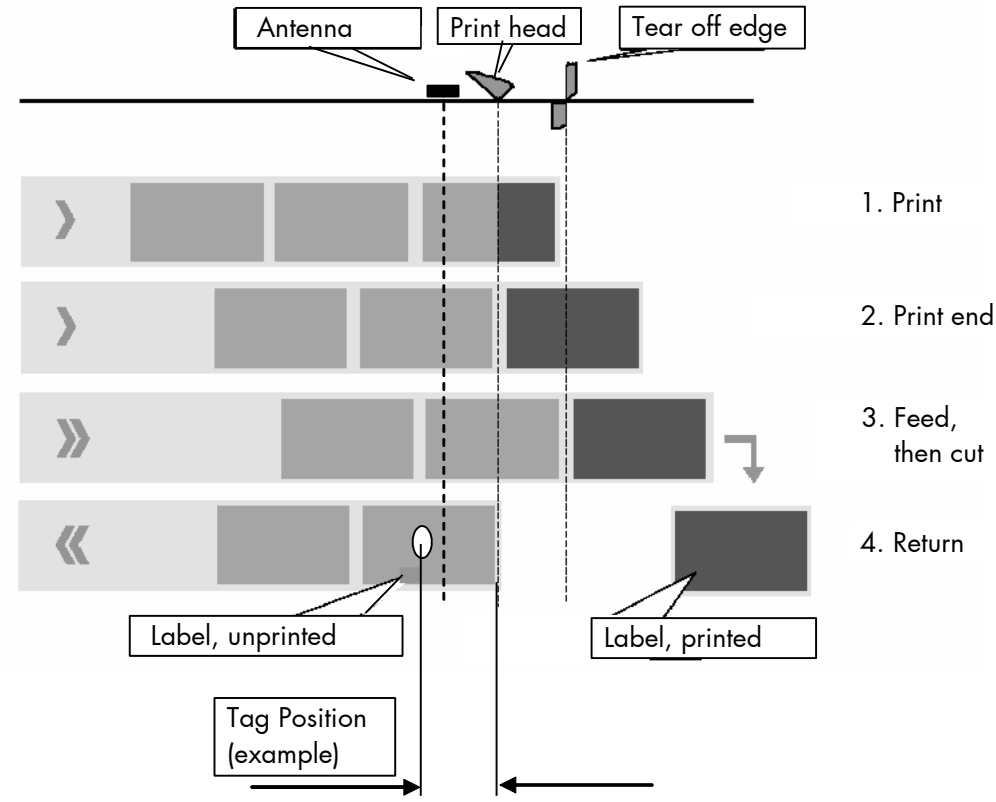
With this function the procedure for the label output and print is defined.
The different print modes are described on the following pages.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [TearOff Menu] is displayed.
• • •	
[TearOff Menu]	
[TearOff Mode]	Press the NEXT or PREVIOUS key until [Print Mode] is displayed.
• • •	
[Print Mode]	
[Real 1:1 Mode]	The currently set print mode is displayed. Press the NEXT or PREVIOUS key until the desired print mode is displayed.
• • •	
[Normal 1:1 Mode]	The Normal 1:1 mode is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Real 1:1 Mode

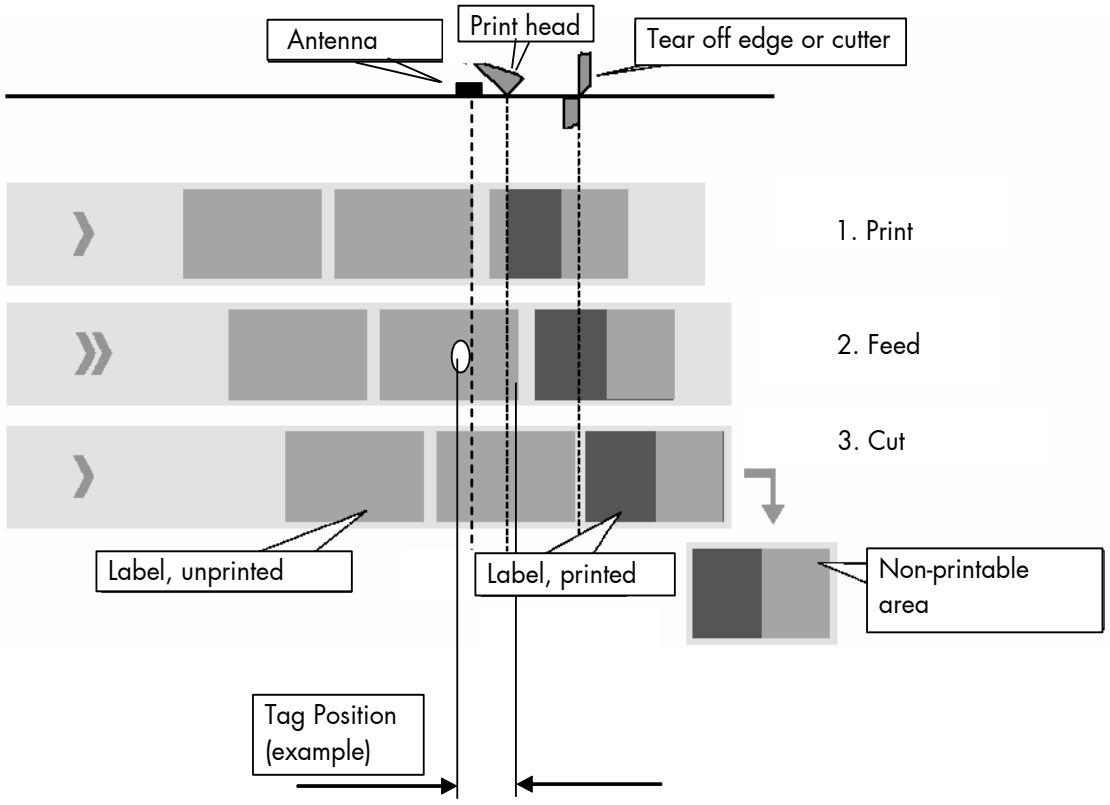
The whole surface of the label is printable.
The label is pushed forward to the tear off edge for tear off (see the previous section: Selecting the Tear Off Mode). After the tear off, the beginning of the next label is drawn back under the print head. This reduces the output volume (in relation to a certain time).



Hints: In the RFID mode a tear off (single label operation) is useful only on condition that the distance between the transponder and the beginning of the label is greater than 31 mm (Tag Position). (See section 10.2.1 Selecting the RFID Mode and 10.2.3 Adjusting the Transponder Position as well as the comments in figure 10.4.1.a).
Using the optional cutter, RFID labels equipped with a tag position shorter than 31 mm are cutted not before the next page is ready to print.

Normal 1:1 Mode

In this mode after tear off or cut no draw back of the unprinted material takes place. The output volume is at its maximum level. As a result the first 18 mm of the label are not printable. These measurements correspond to the distance between print head and tear off edge or cutter.



Hints: In the RFID mode a tear off (single label operation) is useful only on condition that the distance between the transponder and the beginning of the label is greater than 31 mm (Tag Position). (See section 10.2.1 Selecting the RFID Mode and 10.2.3 Adjusting the Transponder Position as well as the comments in figure 10.4.1.a).
Using the optional cutter, RFID labels equipped with a tag position shorter than 31 mm are cutted not before the next page is ready to print.

9.32. Adjusting the Tear Off Position (Option: Cutting Position)

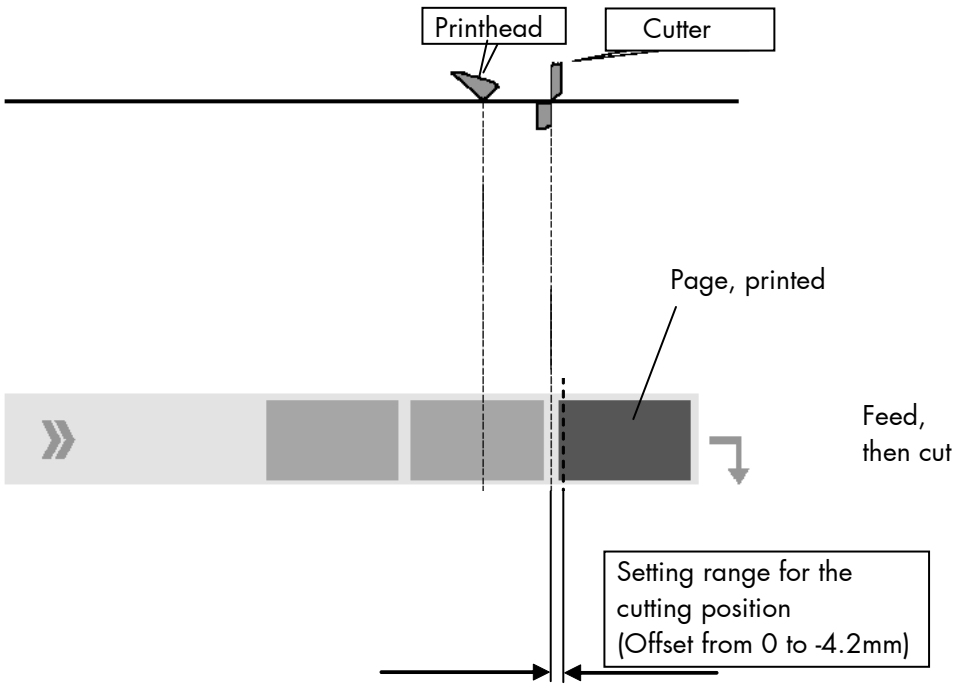
The tear off position② is identical to the detected gap position, i.e. with the perforation or the start of the label. With this function a fine setting of the tear off position is carried out. The setting range for the offset is approximately 0 to -4.2 mm.

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Engine] is displayed.
[Engine]	
[Printspeed]	
• • •	Press the NEXT or PREVIOUS key until [TearOff Menu] is displayed.
[TearOff Menu]	
[TearOff Mode]	
• • •	Press the NEXT or PREVIOUS key until [TearOff Position] is displayed.
[TearOff Position]	
[Position: - 2.0 mm]	The currently set value is displayed. Press the NEXT or PREVIOUS key until the desired offset is displayed.
• • •	
[Position: - 2.5 mm]	The tear off position is shifted 0.5 mm in feed direction.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

② If a cutter is installed and activated, the concerning panel function Cutting Position has to be used.

Hints on adjusting the position:

Using the optional cutter, you can set the cutting position (for Z-folded paper, e.g.) to the perforation line or in front of this line (offset in feed direction, see the following figure).



Please note:
Avoid to set the cutting offset to or **near zero** because the media may drop out of the transport path. (The media is drawn back too far in case of cut or tear off and is no longer under the printhead).

If you need to **increase the offset** (to set the cutting position more against the print direction – for example to cut the material behind the perforation), this is possible **by changing the SyncOffset**.
For further information see section 9.4 Adjusting the Zero Position of the Material Transport.

9.33. Configuration of Network Parameters (IP Address, e.g.)

The functions of the submenu Network are used to set the parameters for connecting the printer to a network (Ethernet).

Setting the IP address manually:

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Network] is displayed.
[Network]	Press the ENTER key to select the Network menu.
[Timeout]	Press the NEXT or PREVIOUS key until [IP Assign] is displayed.
[IP Assign]	Press the ENTER key to select the IP Assign menu.
[Off]	The currently set configuration is displayed.
• • •	Press the NEXT or PREVIOUS key until [Manual] is displayed.
[Manual]	
[IP Address]	Press the ENTER key to set the IP address manually.
[192.168.002.002]	Pushing the UP or DOWN key changes the value of the current position (left digit first, in this example: 1). Pressing the NEXT key moves you to the next digit (the PREVIOUS key combination moves you back, if need be).
• • •	
[192.168.010.123]	
[Saved !]	The new IP address is saved as setup value.
	Turn the printer ON LINE again: Press the ENTER key longer than 2 seconds.

Notes: If your network is using DHCP[1] , an address can be automatically assigned (select the item **DHCP** from the network submenu IP Assign).

The parameters **Subnet Mask** and **Gateway** are configured in the same way as described above. Please select the concerning panel functions for this (compare section 8.2 Menu Structure).

Select the subitem **Off** from the network menu to switch off the network access.

[1] Dynamic Host Configuration Protocol: offers among other things a centralized address management.

Duplex/Speed Setting

This panel function is located in the network menu (submenu Duplex/Speed Setting).

The factory default value is Autonegotiation.

Autonegotiation means that devices on the network agree a transmission mode, which each unit is able to handle, before data transmission starts. By this the printer automatically adjusts itself to maximize link performance.

Hint: Autonegotiation is the recommended setting!

If you set the Duplex/Speed parameters manually, you may experience problems. Wrong settings can slow down the speed of the link (worst case: communication does not occur).

Explanations:

Auto-Negotiation
A Ethernet procedure that allows devices at either end of a link segment to advertise and negotiate modes of operation such as the speed of the link (100 Mbit/s or 10 Mbit/s) and half- or full-duplex operation.

Half duplex
A device can either receive or send data at a given time.

Full duplex
Capability of a device for sending and receiving data at the same time. In the case of full duplex, collision detection is deactivated. A full duplex capable device is able to buffer data packets.

10. Using the RFID Functions

The printers logiJET T4-2 and logiJET T6-2 are optionally equipped with an compact reader (RF Write/Read module).
The following sections are valid only for printers incorporating the integrated compact reader (factory option).

10.1. Integrated RF Write/Read module

A Block diagram of High Frequency Identification technology (RFID, **R**adio **F**requency **ID**entification) is shown in section 1.2 Information on RFID Technology.

The MICROPLEX RFID printers incorporate an integrated Write/Read module in the paper path to write and read the RFID tags.

RFID tags have coils built into them. When these tags line-up over an antenna, the information of the tag can be read.

10.1.1. CE - Conformity

See next page.

DECLARATION OF CONFORMITY

Manufacturer:	**MICROPLEX Printware AG** Panzerstrasse 5 D-26316 Varel Germany
Product Model Code:	WA828XAAAAAA
Product Model Description:	OEM UHF compact reader (ETSI EN 300 220)
Standards to which conformity is declared	ETSI EN 301 489-3 V1.4.1 (2002/08) CEI EN 60065 (2003/01) ETSI EN 300 220-3 V1.1.1 (2000/09)

The present document declares that the specified product complies with the reported standards and satisfies the essential requirements of the European regulations: 73/23/CEE (EMC), 89/336/CEE (LV) and of the following modifications, 92/31/CEE and 93/68/CEE.

Varel, 1 November 2007

General Manager Engineering
Matthias Krusch

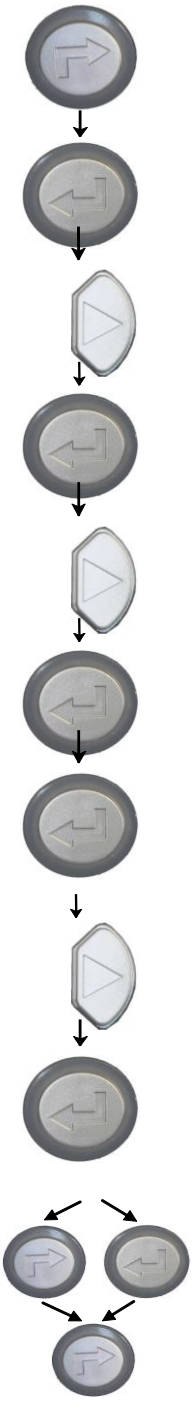
On the basis of this declaration, this product will bear the following mark:

CE

10.2. RFID Panel Functions

10.2.1. Selecting the RFID Mode

With this panel function the RFID mode can be enabled or disabled.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
• • •	
[RFID Menu]	Press the ENTER key to select the RFID menu.
[RFID Mode]	Press the ENTER key to select the RFID mode.
[OFF]	Press the NEXT or PREVIOUS key until the desired value is displayed.
• • •	
[ON]	The RFID mode is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

10.2.2. Selecting the Communication Protocol

With this panel function the protocol for communication between RF Write/Read module and transponder is selected (matching to the RFID label type in use).

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	Press the ENTER key to select the RFID menu.
[Printspeed]	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
• • •	
[RFID Menu]	Press the ENTER key to select the RFID menu.
[RFID Mode]	Press the NEXT or PREVIOUS key until [Protocol] is displayed.
• • •	
[Protocol]	Press the ENTER key to select the Protocol.
[Gen 2]	Press the NEXT or PREVIOUS key until the desired value is displayed.
• • •	
[ISO18000-6b]	The protocol ISO18000-6b is selected (saved as setup value).
[Saved !]	Turn the printer ON LINE again: Press the ENTER key longer than 2 seconds.

10.2.3. Adjusting the Transponder Position (Tag Position)

The transponder position depends on the RFID label type in use.
The right distance value between the transponder and the start of the label (detected gap position) has to be set.

A) Automatic transponder position measurement by printer:

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
• • •	
[RFID Menu]	
[RFID Mode]	Press the NEXT or PREVIOUS key until [Search Tag Pos] is displayed.
• • •	
[Search Tag Pos]	
[Searching Tag]	This message is displayed during the automatic search procedure.
• • •	
[Position: + 20 mm]	The ascertained tag position is displayed and saved temporarily.
	Using the ENTER key this new value can be saved as setup value. After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Please note the following **hints**, if the automatic transponder position measurement routine fails:

Note: Please always carry out several automatic transponder position measurements. This is necessary to find the right transponder position of your label material.

Defect (Panel display)	Remedies
[No Tag Found]	The RFID tag was not found in the RF Field (area inside the printer where RFID tag is read) - check supply loading - rerun the automatic transponder position measurement - further remedies are listed below
[Pos. Invalid]	The RFID tag was found in the RF Field, but could not be read. - increase the number of retries See section 10.2.4 Adjusting the Number of RFID Access. - rerun the automatic transponder position measurement - Set the transponder position manually (see next page). - If there is still no proper access to the RFID tags inspite of setting the right transponder position value manually, please choose a different material.

B) Adjusting the Transponder Position (Tag Position) manually :

The transponder position depends on the RFID label type in use.
The following steps describe how to measure the transponder position and how to configure the printer. To find the optimal setting for your label material, you have to set/adjust different tag position values and ascertain the RFID reading results for each position.
(The setting range for the Tag position is 0 up to + 254 mm.)

1. Take a peace of your label material and use a ruler to measure the distance between the RFID Inlay and the end of the previous label.

In the following figure the distance to be measured is indicated by a black arrow.

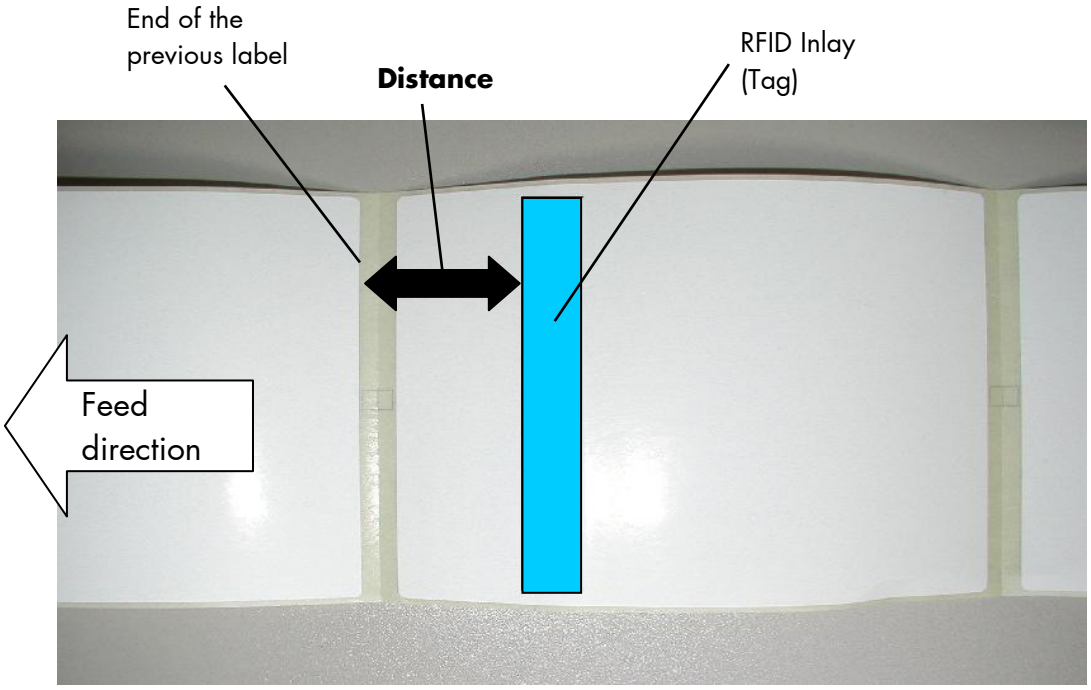


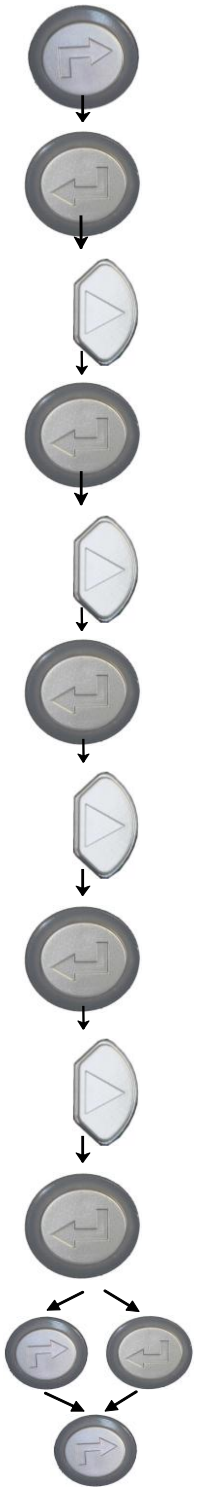
Fig. 10.2.3.a Measuring the transponder position
(Distance between the RFID-Inlay and the end of the previous label)

2. **Insert your label material** into the printer.

Further details on inserting consumables can be found in chapter 5 Handling of Consumables.

3. Use the following **panel function** to enter the distance value (measured transponder position value).
   Select the menu item **[Tag Position] of the** printer's **RFID menu**.

   The distance value is the **first approximate value** on the way to adjust the optimal tag position.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Engine] is displayed.
[Engine]	
[Printspeed]	
• • •	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
[RFID Menu]	
[RFID Mode]	
• • •	Press the NEXT or PREVIOUS key until [Tag Position] is displayed.
[Tag Position]	
[Position: + 20 mm]	The currently set value is displayed.
• • •	Press the NEXT or PREVIOUS key until the right position value is displayed (in accordance with the RFID labels in use; in this example a distance of 48 mm was measured before).
[Position: + 48 mm]	
[Save as Setup?]	The new tag position is saved In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

4. Open the printhead now and **check** the **position of the RFID Inlay**: is the RFID Inlay positioned in the **area of the printer antenna?**

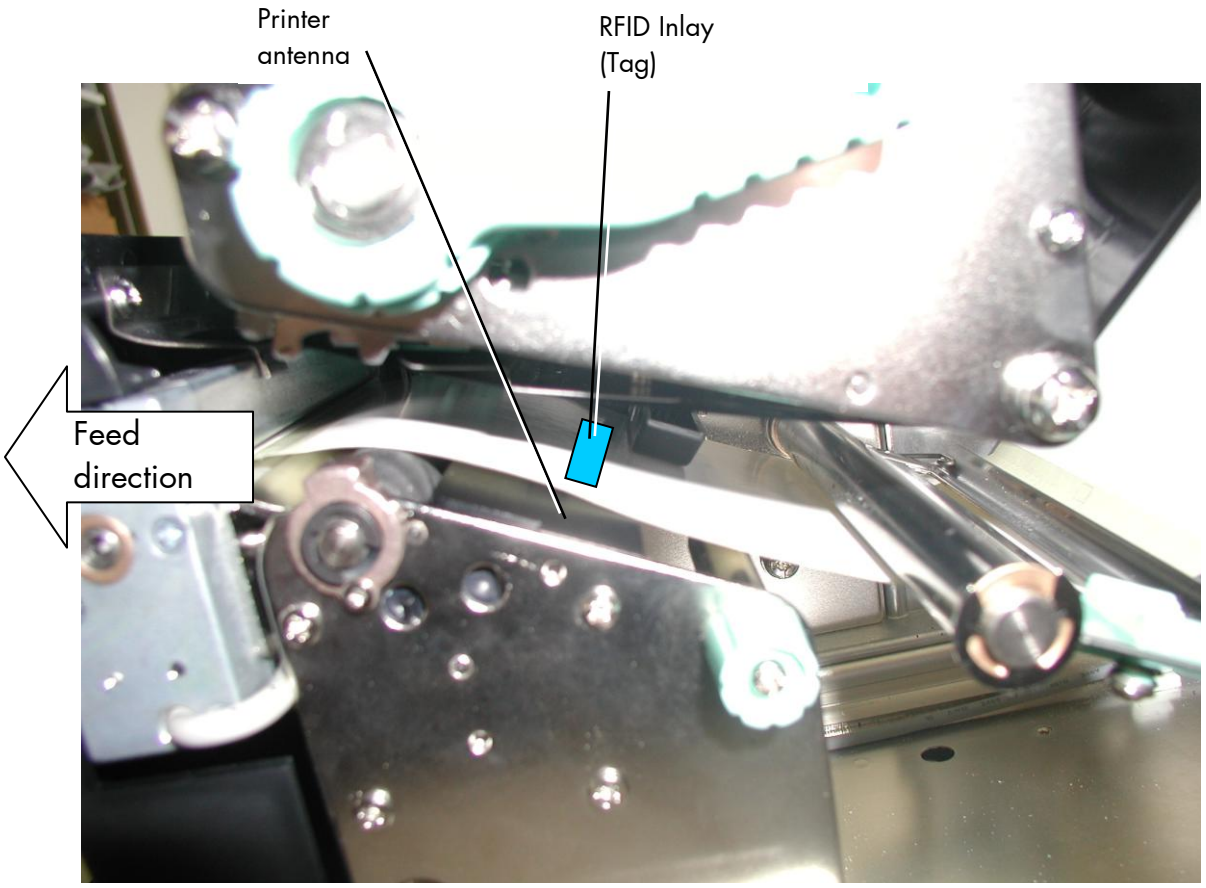


Fig. 10.2.3.b View into the printer: Check the position of the RFID Inlay above the printer antenna

5. Please ascertain, how far the label material has to be moved, until it would be positioned in the optimal position right above the center of the printer antenna. (Compare the figure above.)

6. Close the printhead.

7. **Adjust the setting** in accordance to the results of step 5:
   use the [Tag position] panel function to set the transponder position value (offset).
   (Second approximate value for the Tag Position.)

8. Repeat the steps 4 up to 7 **until** the **RFID Inlay (Tag)** is **positioned central above** the **printer antenna**.

If Autom. Read ID is set to on *[3], after the adjusting of the tag position the label is read and the reading results are shown by the panel display.

9. Check if the **ID number of your label material** is read by the printer.

You have always to perform several RFID reading tests with different tag position settings to find the optimal tag position.
If, for example, the tag is read at the positions 50mm, 52mm and 54mm, at each position you have to wait approximately 10 seconds to check if the tag is read by the printer constantly.
If, for example, at the positions 50mm and 54mm the message „Read Time Out" or „Multi Tag Read" is displayed shortly, this positions are not interesting. (Using this RFID inlay the best reading position is in the middle.)
After setting the tag position to 52 mm please generate **Test prints**.
If the printing of 5 up to 10 test labels is successful, the optimal tag position is found.

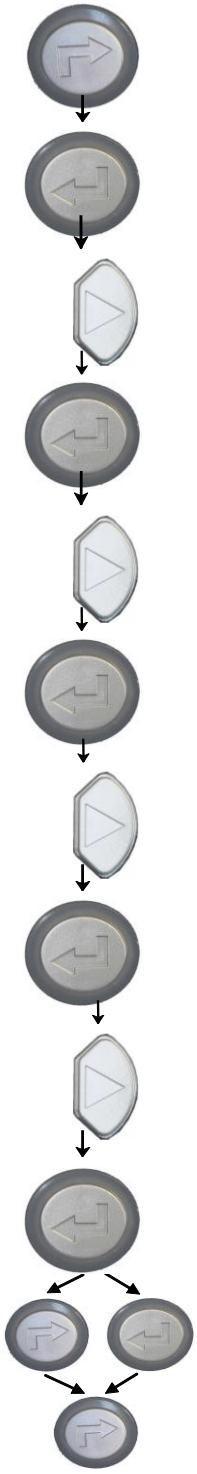
If the RFID inlay covers the whole label, the entire length of the label has to be checked/tested in order to find the optimal tag position
(e.g. Frog-Inlay by UPM).

10. Select the option Save as Setup from the menu item [Tag Position] to save the **optimized Tag Position** as setup value.

*[3] Autom. Read ID = on is the factory default setting.
The panel function described in section 10.2.6 allows to change this setting.
The panel function [RFID Test] can be used as well to read the label.

10.2.4. Adjusting the Number of RFID Access (Timeout)

This panel function sets the maximum number of unsuccessful RFID accesses (read, program, etc.) being allowed until the printer treats this label as defective.
The setting range is 1 up to 16 tries.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Engine] is displayed.
[Engine]	
[Printspeed]	
• • •	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
[RFID Menu]	
[RFID Mode]	
• • •	Press the NEXT or PREVIOUS key until [Timeout] is displayed.
[Timeout]	
[Timeout 2]	The currently set value is displayed.
• • •	Press the NEXT or PREVIOUS key until the desired value is displayed.
[Timeout 8]	From now on up to 8 unsuccessful RFID access tries are allowed.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

Note: Maximum throughput results when labels are programmed on the first try.

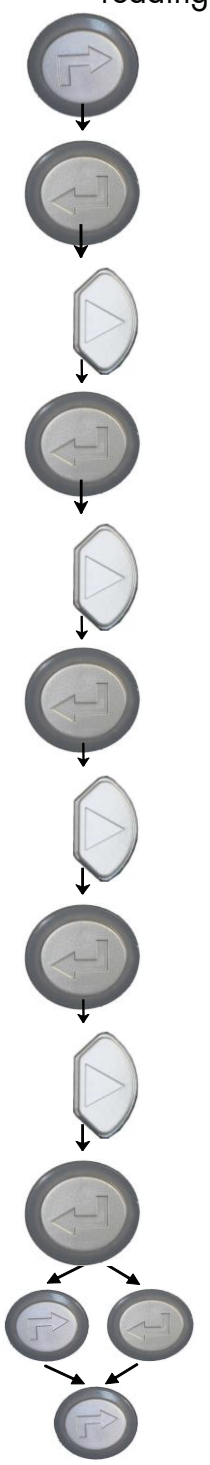
10.2.5. Adjusting the Transmission Speed (Bit Rate)

This panel function sets the data transfer speed between RF Write/Read module and transponder (air interface).

Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	
• • •	Press the NEXT or PREVIOUS key until [Engine] is displayed.
[Engine]	
[Printspeed]	
• • •	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
[RFID Menu]	
[RFID Mode]	
• • •	Press the NEXT or PREVIOUS key until [Bit Rate] is displayed.
[Bit Rate]	
[T=40, R= 160 kBit]	The currently set value is displayed.
• • •	Press the NEXT or PREVIOUS key until the desired value is displayed.
[T=40, R= 40 kBit]	The transmission speed was reduced (saved as setup value).
[Saved !]	Turn the printer ON LINE again: Press the ENTER key longer than 2 seconds.

10.2.6. Reading the Label Identification Number automatically

This function enables to read the transponder identification number (ID) of RFID labels during the print process and send it to the host automatically (Status message: page handshake incl. ID). Compare IDOL commands in section 10.4.2 and 10.4.4.
In addition this function helps to find the optimal tag position (see section 10.2.3) by reading the label automatically and showing the reading results on the panel display.



Panel display	Notes
[ON LINE]	Turn the printer OFF LINE with this key.
[OFF LINE]	The ENTER key gives the user access to the menu structure.
[Menu Level 1]	Press the NEXT or PREVIOUS key until [Engine] is displayed.
• • •	
[Engine]	
[Printspeed]	Press the NEXT or PREVIOUS key until [RFID Menu] is displayed.
• • •	
[RFID Menu]	
[RFID Mode]	Press the NEXT or PREVIOUS key until [Autom. Read ID] is displayed.
• • •	
[Autom. Read ID]	
[OFF]	Press the NEXT or PREVIOUS key until the desired value is displayed.
• • •	
[ON]	The automatic label ID reading function is selected.
[Save as Setup?]	In addition this new value can be saved as setup value (using the ENTER key). After this decision turn the printer ONLINE again: Press the ONLINE key longer than 2 seconds.

10.3. Data Interface Status Out

The RFID capabilities of the printer allow you to read and process RFID data.

The commands for the RFID functions (getting the label ID...) are sent like print data via the active data channel (Centronics, USB, Ethernet,...).

The host will receive the RFID data from the printer via the active interface or via a separate status channel which is independent of the data channel. Physically the status channel may be the serial interface or the Ethernet interface, e.g.

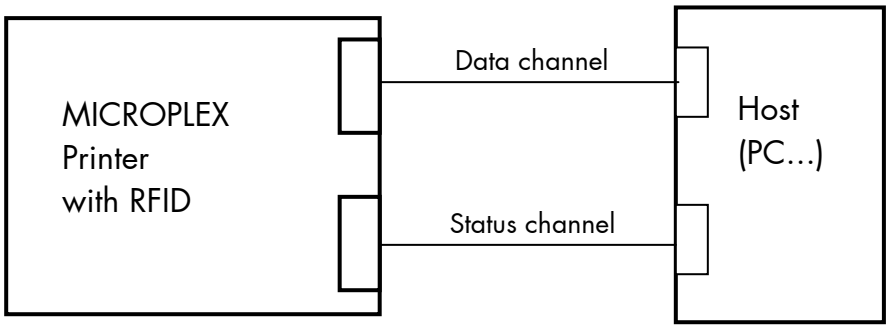


Fig. 10.3.a Status Channel and Data Channel

Two modes are available. In the first mode some messages will be sent to the host automatically. In the second mode you have to "ask" the printer via IDOL commands about the current status.

For further information about the configuration of the Data Interface Status Out please take notice of the appendix of this manual.

10.4. IDOL Commands for RFID

Your MICROPELX RFID printer has been engineered to read and to program RFID (Radio Frequency Identification) labels (commonly called "RFID tags"). The commands for the RFID functions are sent like print data via the active data channel (Centronics, USB, Ethernet,...).
The RFID capabilities enable you to read the ID (Transponder identification number) of RFID labels, for example, and to transmit it to the host via the printer's status channel.
The user may add personalized ID data (a page identification number, e.g.) to send it to the host, too.
This allows a clearly assignment of a specific label identification number to the information printed on this label.

Note: If the RFID tag is not readable/programmable for any reason, the label will be printed with an overstrike pattern, indicating that it should not be used. (Compare section 10.2.4 Adjusting the Number of RFID Access and section 10.6 RFID Errors).

10.4.1. Overview Function Group RFID

Function: Thanks to a number of parameters the rf command can be used for many different RFID tasks.

Syntax: **<ESC><ESC>rf** <k$_{xx}$nn> ... <k99"cc">

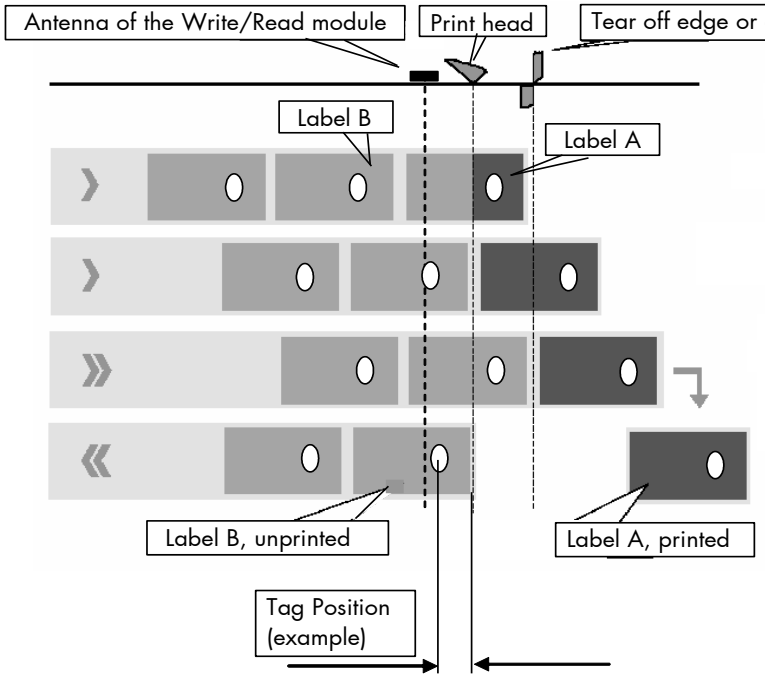
Parameters: Each rf command contains one or more type codes. Most of these type codes are followed by an appropriate parameter.

Permissible values of the rf command parameters <k_{xx}nn> :

Type code k_{xx}	**Parameter**	**Description**
00	no parameter allowed	**Terminate RFID processing** of the current label (label that is below the RF Write/Read module of the printer). Please refer to the example in figure 10.4.1.a. This command can be used to teminate RFID processing of label B in order to cut label A immediately. Hint: the ID number of label B is available only if it was read previously.
01	no parameter allowed	**Read ID** Reads the transponder (label ID number), the answer is sent to the host (via the printer SOLID status channel; ASCII formatted).
11	nn = 2-digit decimal	**Data block number** When writing: 00 = EPC* = default 01 = user When reading: nn = block number
12	n = 1-digit	**Data format** 0 = binary = default (ASCII presented as they are) 1 = Hex-ASCII

*EPC: Electronic Product Code

Type code k_{xx}	Parameter	Description
13	n = 1-digit	**Write protection** 0 = no protection = default 1 = write protection
99	"cc" = string	**Write Tag** last type code, data has to follow immediately (see example in section 10.4.3)



Course:

1. Printing Label A
2. Reading/Writing Tag of Label B and Print end of Label A
3. Feed forward to tear off or cut Label A. Normally this procedure is not started before print data for label B is available.
4. Return: label B is drawn back (if it is still unprinted) either to the TOF position (Top Of Form) or to the RFID reading position (if the function "Reading the Label Identification Number automatically" is selected, see section 8.2.6).

Notice:
Depending on your label material in use the printer may not be able to write/read the tag of label B again. This is relevant if the distance between label edge and tag is smaller than 31 mm (smaller than the distance between print head and antenna that is what is shown in the illustration). No more back feed of label B is possible because at least a small part of the label has to remain under the print head.

Fig. 10.4.1.a Example: Printing and reading RFID labels

Hint: Please refer to chapter 9 for more information (for example: 9.32 Selecting the Tear Off Mode (Option: Cutting Mode) and 9.31 Selecting the Print Mode). Refer to section 10.4.2 and following, too.

10.4.2. Reading the Label ID Number (Prior to the Print Process)

The following IDOL command enables you to receive the label identification number (ID) via the status channel before the print data for this label is sent:

Example: The label ID number is to be read before printing.

Send the following command to the printer via the print data channel:

&%&%rf 01

This command leads to a "status message" sent by the printer.

The status message includes the Label ID Number:

1020<S><Label ID><S><T>

If the RFID hardware can not read and send the label ID number the printer will send a different 1020 message via the status channel.
This message contains an “X” instead of the label ID:

1020<S><X><S><T>

Note: The command described above may reduce the print speed.
If a higher output of print material is needed, a different command should be preferred (see section 10.4.4).

Please read the following sections for details!

10.4.3. Writing Data into a Data Block of the RFID Label

The IDOL command used in the following example enables you to write data into the data blocks of the RFID label.

Example: The text "MICROPLEX" is to be written into the user block of the RFID label.

Send the following command to the printer via the print data channel:

&%&%rf 11 01 99*MICROPLEX*

This command effects that the string "MICROPLEX" is written into the RFID chip (without write protection).

Note: Data are given as a text string, the data format can be set by the parameter k12 (binary = default, see section 10.4.1).
The length of the data is flexible. Therefore the end of data has to be marked by a so-called termination character, which has to be located at the end of the text string. The termination character can be chosen freely, it has to be defined at the first position of the parameter k99. Important is to make sure that this termination character does not exist within the bar code data itself. In the example described above the character * is used as termination character.

Note: The command described above may reduce the print speed.

If the RFID tag is not programmable for any reason, the label will be printed with an overstrike pattern, indicating that it should not be used. (Compare section 10.6).

10.4.4. Generating a Page ID Number, Receiving the RFID data after Printing

The following IDOL command is used to get the RFID data and, in addition, to generate a page ID number:

<ESC><ESC>: 0019<ddd><Page ID>

This command is used to generate a printer status message, which is sent via the SOLID status channel. This message includes the RFID data and the page ID number

Parameters: <ddd> = string length (3 digits, decimal).
000 is to be used, if no text string shall be added.
The maximum string length is 31 characters.

<Page ID> = Text string (ASCII characters).
A page identification number, e.g., can be added here. (The text string will be stored as a page acknowledgement string.)

Note: Status request commands (command type <ESC><ESC>: <nnnn>) can be used only if the printer is ON LINE. As soon as the printer is in the OFF LINE state, no more commands can be sent to the printer.

The printer is able to send a message just in that moment he's switching to the OFF LINE mode:

Set the printer to the automatical status message mode (EEPROM Word 23 Bit 13 = 0). Then status messages (OFF LINE, Paper Jam ...) will be sent to the host automatically.

Hints: Refer to the IDOL Programming Manual for more information about the usage of IDOL commands.

More details concerning the status request functionality are described in the appendix of this manual.

Example: A custom page identification is to be assigned to each RFID label. This page ID includes the text "PAGE:" and a 4-digit successive number (this is generated by the user).

For the first label the RFID status request command looks as follows:

&%&%: 0019 009 PAGE:0001

The command described above is send to the printer together with the print data for this label.
This command leads to a "ready message" (status message) sent by the printer just when this label was printed.
The status message includes the Label ID Number:

1000<S><Page ID><S><Label ID><S><T>

For the page identification number (page ID) is also included in that message, the user is able to recognize what page was printed successfully.

If the RFID hardware can not read and send the label ID number the printer will send a different 1000 message via the status channel.
This message contains an “X” instead of the label ID:

1000<S><Page ID><S><X><S><T>

Please read the following section for details!

10.5. Syntax of RFID Data (Status Messages)

The RFID capabilities of the printer allow you to read the ID (transponder identification number) of the RFID label. Together with other user relevant data this number can be send to the host via the printer status channel.

The RFID data (status messages of the printer) are sent using the following syntax:

<**Key-No.**><S><**Page ID**><S><**Label ID**><S><T>

Key-No.	:	4...6 - digit decimal status number (ASCII character)
S	:	Separator (SPACE, e.g.)
Page ID	:	Text string, for example page identification number. (As supplied in the status request command, compare section 10.4.4. If nothing was feed in there, only the relating separator is sent). **Note:** If the command **Read Label ID Number** prior to the print process was used (see section 10.4.2), **no Page ID** and no separator is included in the RFID data.
Label ID	:	Label identification number (is read by the integrated RF Write/Read module of the printer).
T	:	Terminator (ASCII NUL (HEX 00), e.g.)

Note: Only ASCII characters are to be used.

It is possible to configure the separator and terminator (see Appendix).

For more details about the status messages, see the appendix of this manual.

Examples: In the following status messages the character / is used as separator, the character \ is used as terminator.

a) Reading the Label ID Number (Prior to the Print Process):

Command: &%&%rf 01

Status message: 1020/058000098B7C1F6B/\

This printer status message contains the following information:

Key-No. = 1020 : This is a answer to a RFID support command.

Label ID = 058000098B7C1F6B : Identification number of the label (in this example the string includes 16 characters)

b) Generating a Page ID Number, Receiving the RFID data after Printing:

Command: &%&%: 0019 009 PAGE:0001

Status message: 1000/PAGE:0001/058000098B7C1F6B/\

This printer status message contains the following information:

Key-No. = 1000 : The label (one page) was printed well.

Page ID = PAGE:0001 : This is the page identification (page ID) given by the user. See previous sections: parameter of the status request command.

Label ID = 058000098B7C1F6B : Identification number of the label (in this example the string includes 16 characters)

10.6. RFID Errors

- Pay attention to the hints given in chapter 12 Troubleshooting!
- Check if the RFID material has been inserted correctly, clear paper jams.
- Only use RFID material that is suitable for your printer.

Unreadable Transponder Identification Number:

If the printer can not read and send the transponder identification number of the label (Label ID), the printer marks the print image as an error label (two black bars are printed on the label).
After the printing of this label the printer sends a 1000 or a 1020 message with an "X" instead of the label ID via the status channel.
Compare section 10.4.2 and section 10.4.4.

Hint: The panel function described in section 10.2.4 is used to set the maximum number of unsuccessful RFID accesses (read, program, etc.) being allowed until the printer treats this label as defective.

Panel display	Explanations, Remedies
[RFID Error] [ID Read TimeOut]	The read command has failed to complete in the maximum amount of allowed time. The RFID tag was not found in the RF Field (area inside the printer where RFID tag is read) or the RFID tag was found in the RF Field, but could not be read. - check supply loading - if you made supply or print position settings, make sure the RFID tag was not moved out of the readable range. - see section 10.2.3 Adjusting the Transponder Position, too. - check the communication protocol setting See section 10.2.2 Selecting the Communication Protocol. - increase the number of retries See section 10.2.4 Adjusting the Number of RFID Access.

Panel display	Explanations, Remedies
[RFID Error] [DataReadTimeOut] or [RFID Error] [DataWriteTimeOut]	An RFID command (read, program, etc.) has failed to complete in the maximum amount of allowed time. - increase the number of retries * See section 10.2.4 Adjusting the Number of RFID Access. - make sure the media has been loaded correctly (compare section 5.2) - if you made supply or print position settings, make sure the RFID tag was set to the right position - see section 10.2.3 Adjusting the Transponder Position (Tag Position), too. * Note: The RFID printer pauses while programming the RFID tag

Panel display	Explanations, Remedies
[RFID Error] [Multi Tag Read] or [RFID Error] [Buffer Overflow]	More than one RFID tag was found in the RF Field. - check if there is a paper jam (compare section 12.3 Incorrect Media Transport) - remove the jammed consumables completely - reload the consumables (compare section 5.2) - if you made supply or print position settings, make sure the RFID tag was set to the right position - see section 10.2.3 Adjusting the Transponder Position, too. - choose different label material, if the distance between the tags of your material in use is too small

If the remedies above are not successful, please call a MICROPLEX authorized service engineer.

Problems with the integrated RF Write/Read module:

An error message is displayed by the printer panel display and an error message is send via the status channel of the printer.

Panel display	Explanations, Remedies
[RFID Error] [Device Time Out]	The integrated RF write/read module (option) is not connected or defective. - make sure the RF write/read module is installed correctly (check the hardware connection)
[RFID Error] [ConfigureTimeOut]	An error occurred during the configuration. - the RFID write/read module is defective
[RFID Error] [Update TimeOut]	An error occurred during update of the RFID reader software (firmware).

If the remedies above are not successful, please call a MICROPLEX authorized service engineer.

11. Operator Maintenance

In order to run the printer on its highest quality level, it is necessary to perform regularly simple cleaning operations, and to occasionally replace certain components.
These operations can be performed by a MICROPLEX trained operator. A not trained person is not allowed to perform these operations.

11.1. Printer Cleaning

By a regular and conscientious performance of the following operations, the printer is guaranteed to always work at an optimum reliability.

For safety pull out the mains plug first. Make sure the elements that are to be cleaned have cooled down.

Please be especially careful to avoid damaging mechanical or electronic modules.
Do not use detergents, or any other devices or tools not mentioned in this manual to avoid damages and unnecessary costs of repairs.

For the following cleaning operations the concerning parts or modules have to be freely accessible. Because of this please perform the following operational steps first if necessary:

- ribbon removal (see section 5.3.3)

- media removal (see section 5.2.2)

After the cleaning operations please load the wanted consumables (again), see chapter 5: Handling of Consumables.

11.1.1. Printer Cabinet Cleaning

Soilings like dust, grease or similar things can be removed with a soft, lint-free cloth. If necessary the cloth can be moistured with water or a neutral detergent. Inside the printer dust or paper dust can be removed best with a soft (non-metallic) brush.

11.1.2. Printhead Cleaning

This maintenance operation should be done after each ribbon exchange or not later than the print quality is reduced (unwanted "lines" or "gaps" in the printout).

Please pay attention to the following:

- For the printhead cleaning there is no need to disassemble or remove the printhead.
- The printhead can be damaged by electrostatic charges. Therefore first of all touch a properly grounded part of the printer (the base plate of the printer, e.g.).

1. First release the printhead pressure lever.
2. The printhead moves up.
3. Take out the ribbon if one is loaded.
4. Clean the printhead:

a) Using a **soft, lint-free cloth** or a **special cleaning pen**:

- Move the cloth or pen along the print area of the printhead (see figure 11.1.2.a). This working step requires light pressure and has to be repeated several times.

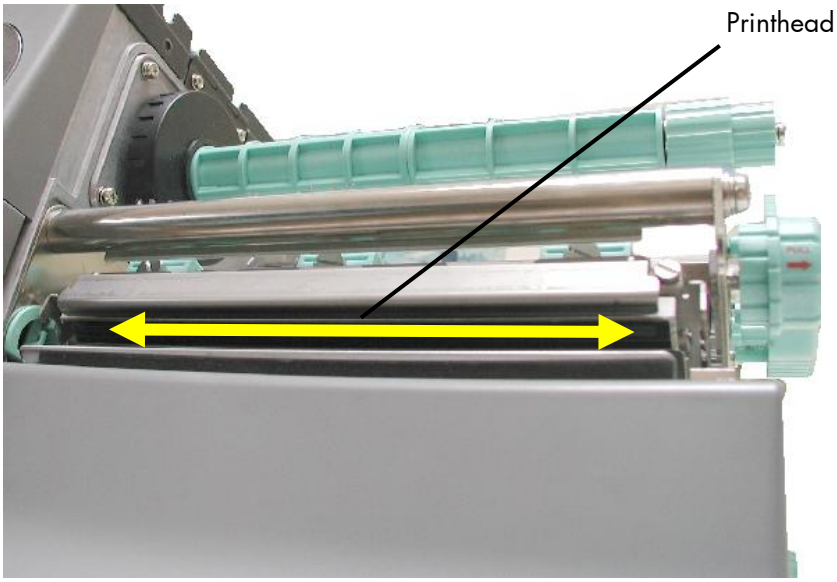


Fig. 11.1.2.a Cleaning the printhead

b) Using a **Cleaning strip**:

- Take a cleaning strip and feed it to the printer (see figure 11.1.2.b; rough side uppermost).

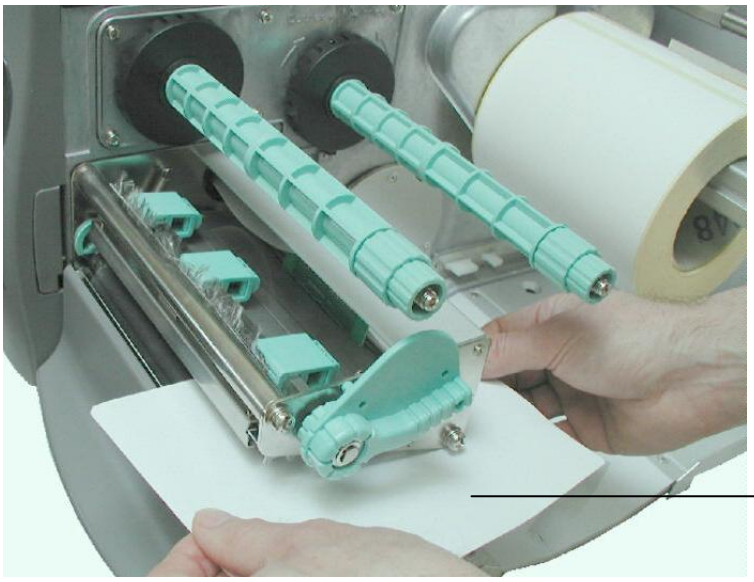


Fig. 11.1.2.b Cleaning the printhead using a cleaning strip

- Close the printhead pressure lever and then move the cleaning strip in and against the paperfeed direction (see figure 11.1.2.c). This working step has to be repeated several times.

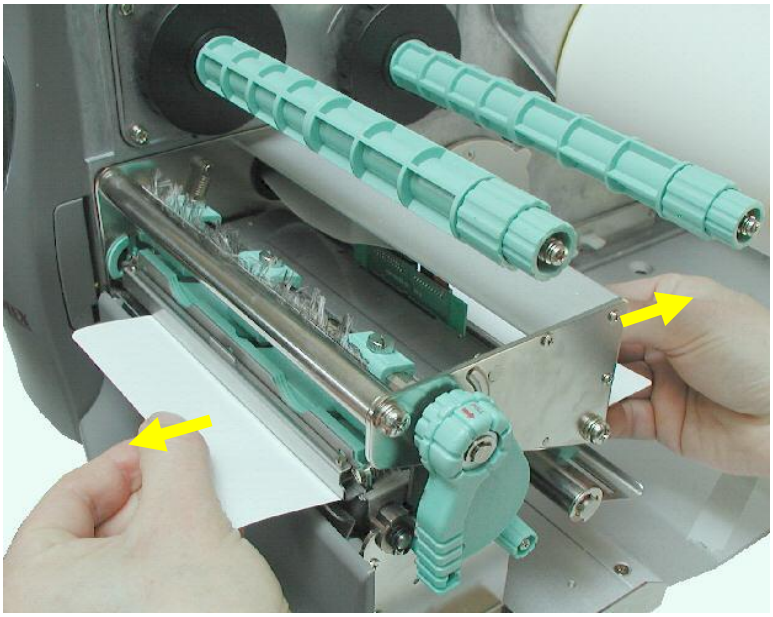


Fig.11.1.2.c Moving the cleaning strip in both directions

- Release the printhead pressure lever, remove the cleaning strip from the printer and discard the cleaning strip.

c) Using **Spirit** for the cleaning work:

Spirit (Ethanol) should only be used if no cleaning tool and no cleaning strip are available!

Spirit is an easily combustible liquid!
Take notice of the safety instructions for combustible liquids!

Don't smoke!

- Use a soft lint-free cloth, moisten it with spirit and then use it to wipe several times along the print area of the printhead (compare figure 11.1.2.a).
- Allow the printhead to dry for 2-3 minutes.

5. Install a ribbon, if you want to operate the printer in the thermal transfer mode.
6. Close the printhead pressure lever.
7. The printhead moves down and the printer is ready for printing again.

To help keep the printhead clean and to avoid premature wear out of the printhead, the hood of the printer should always be closed. Moreover it is not allowed to use dusty or dirty print media.

11.1.3. Transport Roller Cleaning

The printer's transport rollers (platen roller and transport rollers) can be soiled by the print media (e.g. with adhesive residues).

For the following cleaning operations the hints of section 11.1.2 are valid, too !

Stickings can be removed best with a soft lint-free cloth saturated with isopropyl alcohol (99.9 %).
Make sure the concerning transport rollers have been cleaned on their whole extent so that there is no reason for irregular media transport after that.

Allow the transport rollers to dry for at least 3 minutes.

11.2. Printhead Exchange

Only use consumables being specially developed for this device. Using unsuitable consumables or excessive contact pressure can result in premature wearing of the printhead.

Only a MICROPLEX - trained operator is allowed to exchange the printhead.

The following operations have to be done to carry out the printhead exchange:

- Printhead removal and installation
- Adjusting the right printhead pressure
  (see section 5.4 and section 11.3)

The printhead is adjusted to the printhead mounting during manufacture. Therefore the printhead can only be replaced in conjunction with the printhead mounting.

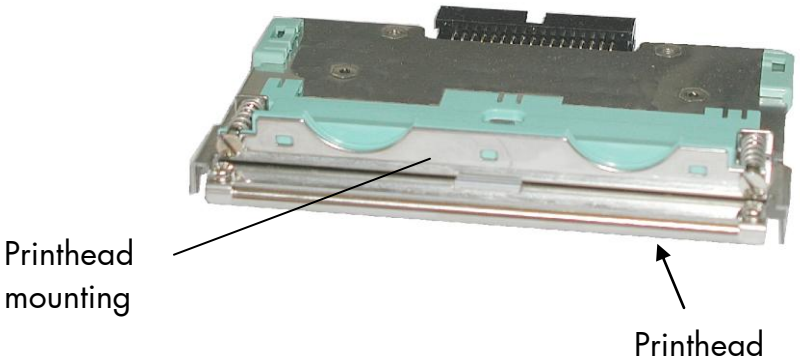


Fig. 11.2.a Printhead with printhead mounting

11.2.1. Printhead Removal and Installation

1. Switch off the printer and pull the power plug.

2. Open the hood of the printer.

3. Release the printhead pressure lever.

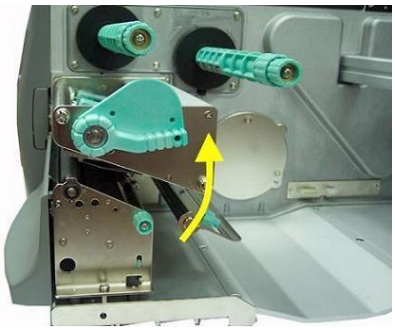


Fig. 11.2.1.a Pull the printhead pressure lever out and swivel it upward (counterclockwise).

4. Remove the ribbon (see section 5.3.3).

5. Remove the printmedia (see section 5.2.2).

Please pay attention to the following:

- Wait at least 3 minutes after switching off the device before disassembling the printhead.
- The printhead can be damaged by electrostatic charges. Therefore first of all touch a properly grounded part of the printer (the base plate of the printer, e.g.).
- The printhead must not be touched on the print bar or on the plug-in contacts.

6. Grasp the printhead assembly with both hands (as shown in the next picture).

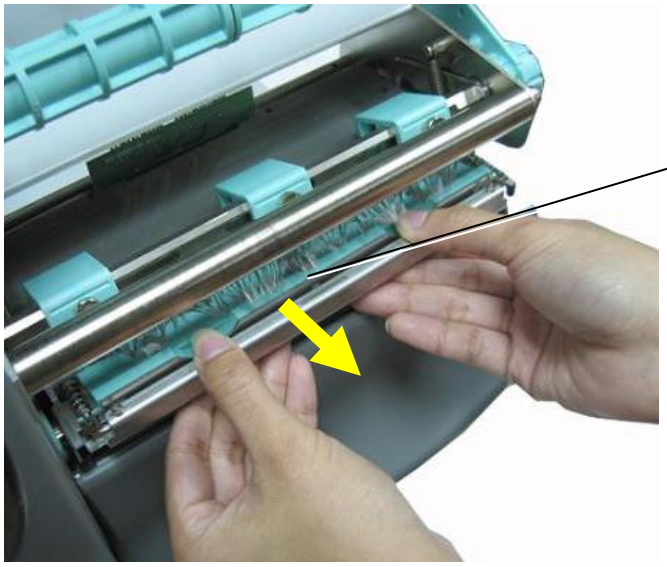


Fig. 11.2.1.b Gently pull the printheada little bit towards you

Tip: Have a look at the printhead's position in the side guides of the printer. Later on the new printhead has to be assembled just in the same way.

7. Now gently pull the old printhead assembly completely out of the device.

Fig. 11.2.1.c Removing the printhead

8. Take the **new printhead**.

9. Gently insert the new printhead assembly into the side guides of the printer. (In the same way the old printhead was positioned there.)

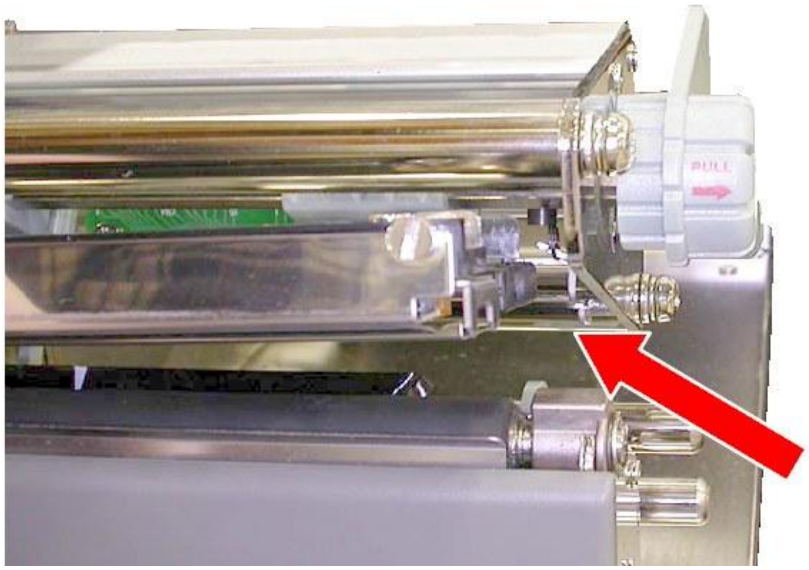


Fig. 11.2.1.d Insert the printhead into the side guides

10. Pay attention to the connectors of the printhead: line up the plug.

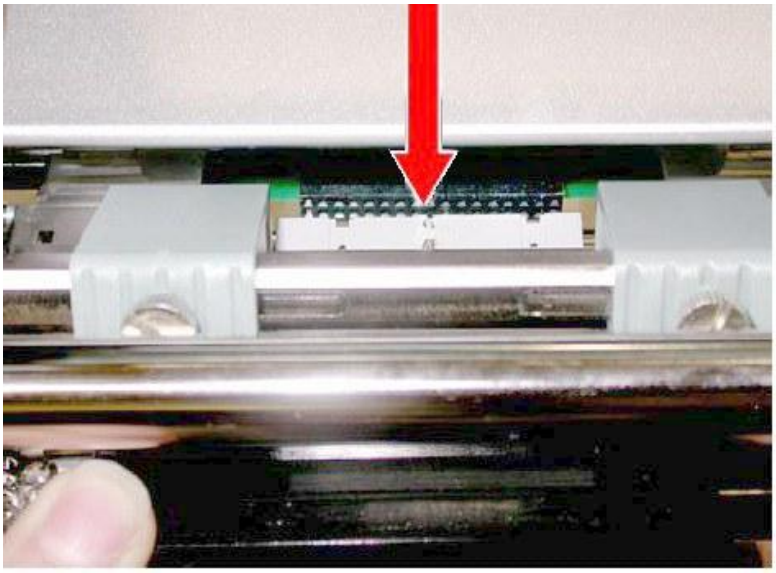


Fig. 11.2.1.e Line up the printhead plug

11. Gently press the printhead into its carriage until it clicks into place.

Fig. 11.2.1.f Inserting the printhead into its carriage

11.3. Adjusting the Right Pressure Value

A correction of the pressure value is necessary, if the diameter of the new printmedia is bigger or smaller than the previous one. In addition the pressure value can be modified in order to adapt the characteristics of the consumables. An increase of the pressure value, for example, can improve the transfer of the image onto the printmedia.

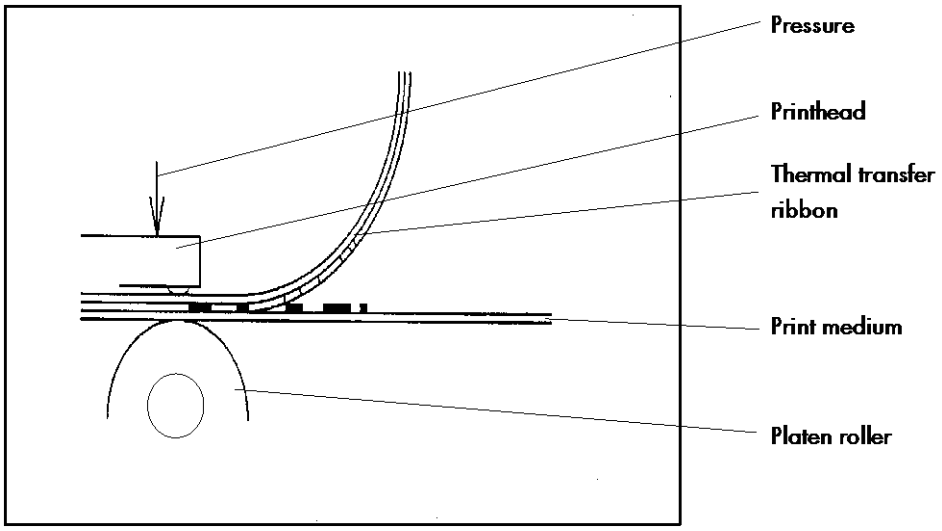


Fig. 11.3.a Principle view of the print process

While printing small labels the printhead may come in contact with the print roller just in that area that isn't covered by the label. This may lead to an accelerated abrasion of the printhead and to a print quality that isn't even over the whole print width.

The operation steps to adjust the pressure value are described in section 5.4 (Printhead Pressure Adjusting).

Please consider that increasing the pressure value will increase the friction between printhead, ribbon, printmedia and the print roller, too. The abrasion of the concerning components (for example the printhead surface) will be accelerated considerably due to the increase of the pressure value.

12. Troubleshooting

When an error occurs, a corresponding error message is displayed in the control panel (see section 12.1 and section 10.6).

In addition errors are indicated by an **illuminated ring around the ENTER key**:

In the case of an error messages displayed in the control panel the ring around the ENTER key is illuminated red.

Once the fault has been corrected, the printer is ready again for operation. The ring around the ENTER key is no longer illuminated then.

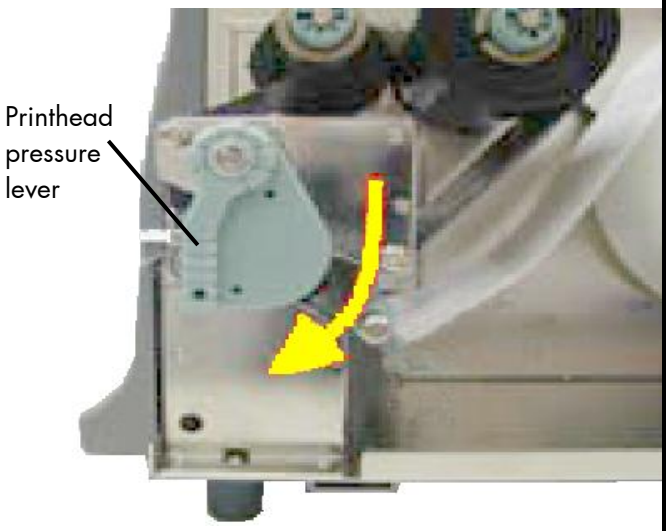
Please address the problems described in this chapter yourself (especially the consumable replacement).
Please regard the following subjects if an opening of the printer becomes necessary:

- While operating the printer components inside the device will heat up. Take care that you do not burn your fingers when removing a paper jam.

- Make sure all covers of the device are completely closed afterwards.

Any others but the troubles described on the following pages are only to be repaired by a MICROPLEX authorized operator or a service engineer.
When reporting a problem to your service engineer, please give him the exact error message. That helps to localize the error more quickly.

12.1. Printer Error Messages

Panel display	Remedies
[Head open]	The printhead assembly is not firmly in place. - Swivel the printhead pressure lever clockwise back to its original position making sure it clicks into place.  Fig. 12.1.a Locking the pressure lever
[Paper End]	- insert a media (roll-fed media e.g.) - make sure the media has been loaded correctly (compare section 5.2) - clean the sensors
[Foil Error]	The thermal transfer print mode is selected. A printer ribbon is needed. - insert a ribbon - make sure the ribbon has been loaded correctly (compare section 5.3) - Correct the print process setting, if you don't want to use a ribbon. (compare section 9.1)

Panel display	Remedies
[Paper Jam] or [Punch Error] or [Sync.Mark Error]	These error messages indicate a paper jam: - remove the jammed consumables (labels sticking together e.g.) - reload the consumables (paper) (see chapter 5) - perform the basic operations (see chapter 4) - For further **information about the avoiding of paper jams** please take notice of section 12.3 Incorrect Media Transport

[HeadNot Found]	- the printhead is not connected or faulty.
[Head defective] or [Print Head Err.]	- the printhead is defective. A new printhead has to be installed.
[High Head Temp.]	The printhead temperature is too high. - make sure the consumables have been loaded correctly (compare section 5.2 and 5.3)
[Pls.ReplaceHead]	- a new printhead has to be installed

Note: Information about error messages referring to the RFID – functions of the printer can be found in section 10.6.

If the remedies above are not successful, please call a MICROPLEX authorized service engineer.

12.2. Reduced Print Quality

Defect	Remedies
Printout too light	- check the print process selecting and correct it, if necessary (see section 9.1) - check the printhead pressure (see section 11.3 Adjusting the Right Pressure Value). - check the ribbon transport (load the ribbon again, if necessary; see section 5.3) - increase the contrast (see section 9.26) - choose different consumables (adjust media to the ribbon resp. print process or vice versa, see chapter 3, 5 and 7 to 9) - check the environment conditions and correct them if necessary (admissible values for humidity, temperature etc., see chapter 2.3 and 14)
Printout too strong	- check the print process selecting and correct it, if necessary (see section 9.1) - reduce the contrast (see section 9.26)

Defect	Remedies
Printout blurred or incomplete	- clean the printhead (see section 11.1.2) - check the ribbon transport (load the ribbon again, if necessary; see section 5.3) - also, see section 12.3: Incorrect Media Transport - the printhead has to be exchanged if, for example after a big printout performance the printout isn't correct any more (printhead exchange; see section 11.2)

If the remedies above are not successful, please call a MICROPLEX authorized service engineer.

12.3. Incorrect Media Transport

Defect	Remedies
Incorrect media transport (no gap detection between labels e.g.) Panel display: [Paper Jam] or [Punch Error] or [Sync.Mark.Error]	- perform the basic operations (see chapter 4) - check if the Sync Sensor has been adjusted correctly (see section 9.3 up to 9.4) - check if the media has been loaded correctly (compare section 5.2) - check if the ribbon has been loaded correctly (compare section 5.3) - clean the transport rollers (see section 11.1.3)
No straight transport of the consumables (torsion or folding of the ribbon, e.g.)	- check if the ribbon has been loaded correctly (compare section 5.3) - check if the media has been loaded correctly (compare section 5.2) - check if the printhead pressure was adjusted correctly (see section 5.4 and section 11.3) - clean the transport rollers (see section 11.1.3)
Paper Jam	in addition to the remedies above: - release the printhead pressure lever to remove the paper (compare chapter 5) - check if the jammed consumables have been removed completely.

If the remedies above are not successful, please call a MICROPLEX authorized service engineer.

12.4. Rewinder, Dispenser and Cutter Error Messages

The following error messages are valid for the optional rewinder, the optional dispenser and the optional cutter.

Panel display	Remedies
[Rewind.NotFound]	The optional rewinder is selected, but not connected or defective. - make sure the rewinder is installed correctly. Compare section 9.29 Peripheral Device Activation - Unselect the rewinder, if the rewinder was deinstalled. Compare section 9.29
[Rewinder Full]	The max. rewinder diameter (120 mm) is reached. - clear the rewinder
[Rewinder Error]	An error occured during rewinder operation - check if the label/carrier, which should be wound up, is torn - check if the consumables have been loaded correctly (compare section 5.2) - reload the material

Panel display	Remedies
[Dispen.NotFound]	The optional dispenser is selected, but not connected or defective. - make sure the dispenser is installed correctly. Also, see section 9.29 Peripheral Device Activation - Unselect the dispenser, if the dispenser was deinstalled. See section 9.29
[Dispenser Error]	An error occured during dispenser operation. - check for a paper jam. Remove the jammed paper. - reload the consumables (paper)

[CutterNotFound]	The optional cutter is selected, but not connected or defective. - make sure the cutter is installed correctly. Also, see section 9.29 Peripheral Device Activation (Tear Off Edge, Cutter) - Unselect the cutter, if the cutter was deinstalled. See section 9.29
[Cutter Error]	An error occured during cutter operation. - check for a paper jam. Remove the jammed paper. - reload the consumables (paper)

If the remedies above are not successful, please call a MICROPLEX authorized service engineer.

12.5. Print Repetition after an Error

The printer is provided with an automatic jam safety function to prevent a loss of data.
When an error occurs, all the pages on the paper path will be printed again. This ensures that no data will get lost.

The exact number of pages to repeat depends on the format length and the position where the error occurred on the page.

This automatic jam safety function can be switched off (by changing the EEPROM - configuration) if the user wants to resume the print job at a position he chooses himself.
In addition to this see panel function Clearing the Input Buffer (section 9.13).

13. Measures for Transport and Shipping (Repacking)

The Printer is shipped with special packing material and fixing measures. It is recommended to store the boxes and those packing materials.

In case of further shipping or returning of the products they must be repacked in the original way in order to avoid damaging during transportation.

The following list gives you an overview of the working steps necessary for repacking. Pay attention to the notices located on the products and the hints given in the Service Manual as well.

If you are not familiar with any of the working steps please ask your service engineer or your supplier.

- Remove the printer's optional peripheral devices (for example: external rewinder…).
- Remove the paper.
- Remove the ribbon, if one is loaded.
- Close the printhead.
- Lock all moveable parts of the printer (use all original transport safety devices, adhesive fasteners and so on).

Repack all items in their original packing material and ship them in the original boxes.

14. Specifications

Printer Specifications:

Print technology:	non-impact, thermal transfer printing / thermal direct printing	
Print speed:	2 up to 6 Inch / second (50 up to 150 mm / second)	
Resolution:	300 dpi (dots per inch, horizontal and vertical)	
	logiJET T4-2	logiJET T6-2
Media width:	up to 120 mm	up to 174 mm
max. Print width:	105 mm	168 mm
Media thickness:	0.06 up to 0.25 mm	
Interfaces:	parallel: IEEE 1284 (Centronics), (MP-BUS, GPIO-Interface (SPS-Control) optional) serial: USB 1.1 (RS232, RS422 optional) LAN: Ethernet 10/100 Mbit (TCP-IP) Optional: LAN: Ethernet (SPX-IPX, LAT), Token Ring Host: IBM SCS / IPDS (Twinax/Coax), Siemens (BAM/SS-97)	
Dimensions:	logiJET T4-2	logiJET T6-2
Width (W):	276 mm	350 mm
Depth (D):	455 mm	516 mm
Height (H):	277 mm	285 mm
Weight:	appr. 13 kg	appr. 17 kg
Environment:	temperature: +5°C to +40°C (operating) -20°C to +50°C (storage temperature) relative atmospheric humidity: 30 to 85 % (without condensation)	
Mains connection:	230 V AC, 50 Hz, (Europe, United Kingdom e.g.) 120 V AC, 60 Hz, (North America)	
Power input:	max. appr. 0.30 kVA	max. appr. 0.33 kVA

Reader Specifications:

The MICROPLEX printers logiJET T4-2 and logiJET T6-2 are optionally equipped with an compact reader (factory option) to allow UHF tag programming and reading.
The technical specifications of this compact reader module are listed below.
The reader is fully compliant to the European telecommunication regulation ETSI EN 300 220 (869.525 MHz).

RFID Reader:	fully integrated multi protocol reader
Functions:	read/write/check
Standards:	EPC Class 1Gen2, EPC 1.19 Philips, ISO 18000-6B/6C
Frequency:	869.525 MHz (CEPT/ETSI 300 220 regulation)
Output power	Fixed 50 mW (17 dBm)
Frequency Tolerance:	± 10 ppm over the entire temperature range
Operating Temperature:	-20°C to +60°C

Costs per Page for MICROPLEX Print Systems

The term "costs per page" is the most frequently used one in connection with the purchase of a printer. Nevertheless this term is the one with the biggest lack of definition.
The distributors normally attach great importance to having small values for the costs per page. The user normally wants to have a value that is as realistic as possible.

There isn't any generally valid rule to calculate the costs per page. Therefore values given by different manufacturers are very often not comparable.

The values given by MICROPLEX are based on the utilization time of the so-called consumables of the printer. There isn't any generally valid rule for this calculation, either. Therefore MICROPLEX has fixed the definition of consumables as follows:

1. Consumables

Consumables are parts or substances which the user can exchange or refill without tools.

MICROPLEX understands by this definition that the user can decide by visible criteria when he should exchange or refill consumables. The working steps can be done by the user in accordance with the manual without the usage of tools.

Consumables can be different depending on the printer type.
The most important consumable for example is **toner**.

Usually the utilization time of these materials is given as a number of pages (DIN A4). These values often refer to the print density (3%, 4%, or 5%) which is given as an application specific parameter. Usually a value of 5% print density is defined, very seldom is 4% used.
In the case of a low print density (e.g. 3%) the utilization time increases, in the case of a high print density (e.g. 10%) the utilization time is decreased.
Therefore the utilization time is strongly dependant upon the application.
Experience proves that in professional applications a print density of higher than 5% is usually reached. For a delivery note containing a form and some bar codes a print density of 8 - 10% is quite normal.

There are further parts that must be exchanged in addition to the consumables during the life time of a print system. MICROPLEX divides these additional parts into two categories:

2. Application specific wearing materials

Application specific wearing materials are parts which have to be exchanged by a service engineer or a trained operator. The criterias for the exchange aren't always easily recognizable for a user. Some of the criterias require measuring techniques or the experience of a service engineer or operator.
In a normal application, parts of this category are:
- fuser unit
- process unit (drum, OPC)
- ozone filter

3. Spare parts

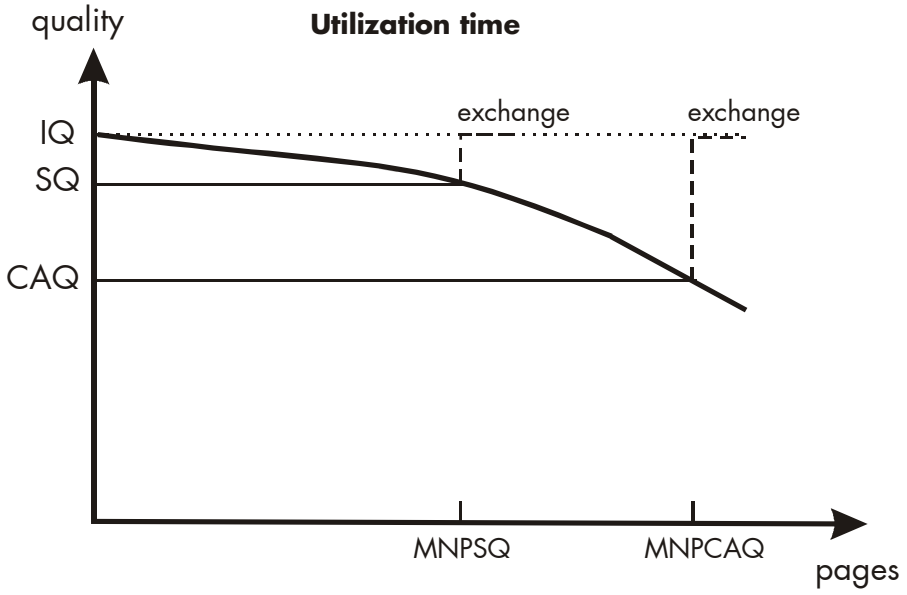
Spare parts are exchanged by the service engineer, when they fail.
Examples for spare parts are:
- couplings
- electronic assemblies
- rollers

Depending on the application some parts may change categories under certain circumstances. If for example very rough paper is used, the rollers can become an (application specific) wearing part.

It's a fact, that the right time to exchange a component depends not only on the failure of a component but also on a possible loss of print quality in the printouts.

MNPSQ = Mean Number of Prints with Specified Quality (**SQ**).
This value is often associated with "Lifetime". This term is not correct. MNPSQ describes the period of time in which a defined print quality is maintained.
The print quality is determined by the values for
- print density
- background darkness
- homogeneity

The value **IQ** (Initial Quality) is used to designate the print quality that is reached with a new printer. **CAQ** (Customer Acceptable Quality) is a purely subjective lower limit which a respective customer is willing to accept the print quality. An exchange of parts is only then necessary even if the MNPSQ is already exceeded.



15. Appendix

15.1. Configuration of the Status Channel

The firmware function "Status Out" provides the possibility to get information on the printer status (paper jam, offline, out of paper, ...) and on the print job process (idle, busy, page printed,...) from the printer. This function was developed to get more detailed printer information during the print process.

The status messages are sent to the host via the current interface or a separate status channel which is independent of the data channel. For this status channel the serial interface (USB) of the printer is used, for example.

Two modes are available. In the first one some messages will be sent automatically, within the second mode you may "ask" the printer via IDOL commands about the current status.

15.1.1. Status Messages automatically or on Request

A keycode will be needed to get access to the Status Out function (Option).

With this keycode release the second mode asking for printer status via IDOL commands will be always active.

For the automatical generation of status messages you have to set one bit in the EEPROM sequence:

Word 23 Bit 13 (Panel: Config 23, 2/5)

Bit 13 = 0 : Mode 1, messages will be sent to the host automatically and after a request.
Bit 13 = 1 : Mode 2, messages will be sent after a request only.

Please use the IDOL command <ESC><ESC>ee for setting the bit 13.

Syntax of the command <ESC><ESC>ee:

<ESC><ESC>ee <ddd> <hhhh>

Parameter <ddd> : The word which should be set (here: 023).

Parameter <hhhh> : The new value for the specified word.

The words of the EEPROM sequence are coded in HEX. If you want to change one bit of a word, you have to program the complete word. It is not possible to change one bit only.

Example:

Word						<FFFF>										
Bit No.	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Binary	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

To change bit 13 to "0" the new value for the word is <EFFF>.
The start value of the word may differ from the value described above. The value depends on the configuration of the printer.

To set the word no. 23 to the new value <EFFF>, send the command <ESC><ESC>ee 023 EFFF to the printer.

After power off and on the new value will be valid.

15.1.2. Changing the Separator and Terminator Characters

The default settings for the separator and terminator are the following:

- Separator : SPACE (Hex 20)
- Terminator : NUL (Hex 00)

To change the default setting you have to set the word 30 within the EEPROM sequence.

EEPROM word 30 : Bit 1 - 8 = Separator
Bit 9 - 16 = Terminator

Please use the IDOL command <ESC><ESC>ee for setting the word 30.

Example: Set the following configuration for the separator and terminator:

Separator should be the character " | " (ASCII 124, Hex 7C)
Terminator should be the character " # " (ASCII 35, Hex 23)

To set these values, you have to send the following sequence to the printer:

<ESC><ESC>ee 030 237C

After power off and on the new values will be valid.

Note: The character for separator and terminator has to be different. Otherwise the default characters will remain valid!

15.2. Survey of Print Job Status Messages

1000 : One page was printed well.
This message will appear after each page of a print job, if the status channel is set to automatical mode.

1010 : Power on - state.
This message will appear after turning on the printer. Now the printer will be warmed up and ready for printing. All settings will be switched to the EEPROM values.

1011 : IDLE - state.
This is not an automatical message. This message will be sent only after a request (<ESC><ESC>: 0011).

Idle means:
- No more pages are in the print process (job is finished).
- All pages left the printer.
- No print data (without FF) are present.

1012 : BUSY - state.
Job is still in the printing process.
This is not an automatical message. This message will be sent only after a request (<ESC><ESC>: 0011).

1020 : Answer to a RFID support command.
This message will appear after a command like "Read Label ID Number" was sent to the printer.

15.3. Survey of Printer Status Messages

2116 : No error, printer "OFF LINE"

2117 : No error, printer "ON LINE"

2035 : Toner low

2037 : Paper jam

2039 : No paper

2040 : Cover open

2042 : Service call

3001 : Paper near out, one feeder empty (at auto-cass-mode).

This message will appear in the auto-cass-mode, if the active cassette will run empty, whereas one of the others still contains paper.

Refilling of the empty cassette generates no special message.

The status of those cassettes not in use will not be checked.

16. Index

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