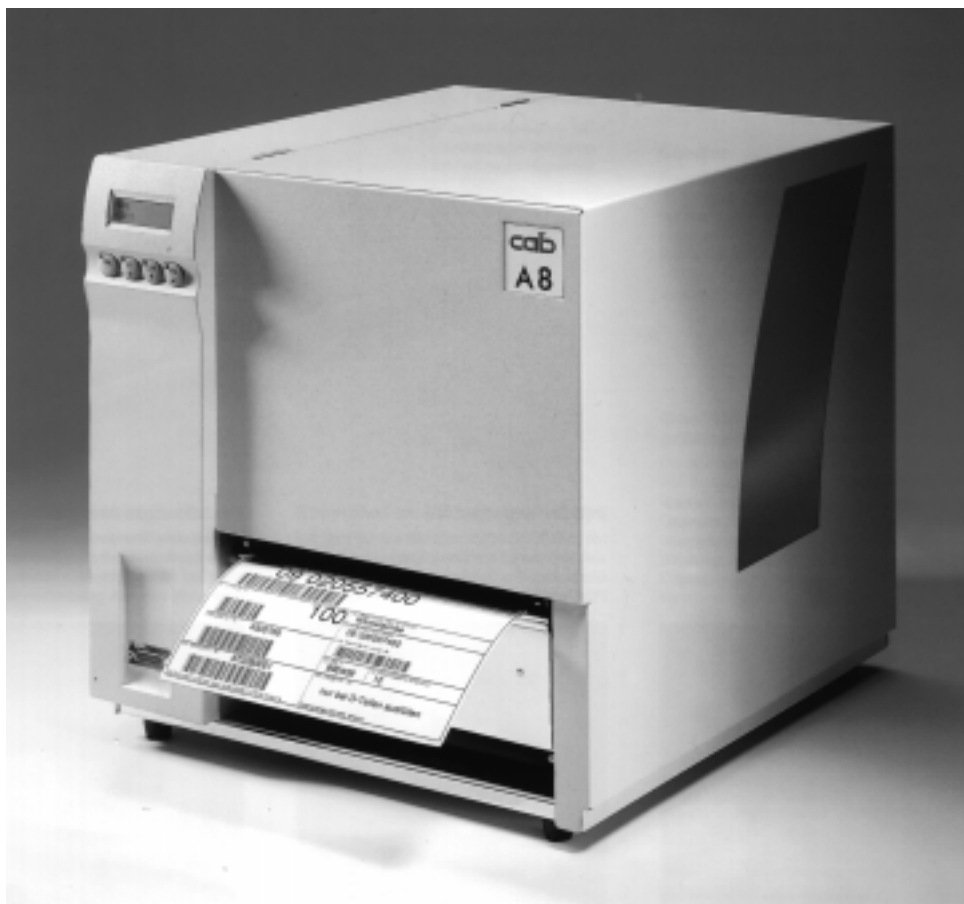




Transfer Printer

A8

Operator's Manual





Gesellschaft für
Computer- und Automations-
Bausteine mbH & Co KG
cab Produkttechnik GmbH & Co KG
Postfach 1904 D-76007 Karlsruhe
Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe
Telefon +49 (0) 721 / 66 26-0
Telefax +49 (0) 721 / 66 26-249
Web : <http://www.cabgmbh.com>
e-mail : info@cabgmbh.com

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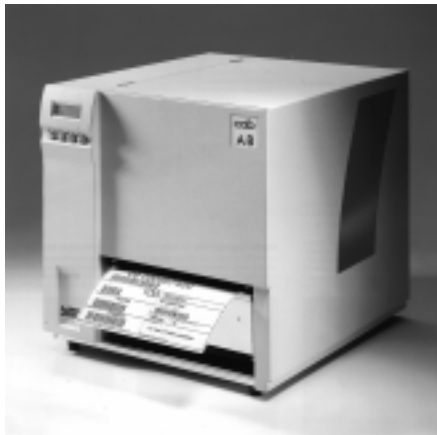
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Tharo Systems, Inc.
2866 Nationwide Parkway
P.O. Box 798
Brunswick, OH 44212-0798
Web: <http://www.tharo.com>
E-mail: tharo@tharo.com
Tel. : +1 330-273-4408
Fax : +1 330-225-0099

A 8

Thermal Transfer Printer Operator's Manual



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EC-Conformity Declaration

Trademarks

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A General Guide to the Documentation

Operating Manual

The present manual contains information on the characteristics, features, functions, and use of the **A8** transfer printer.

The first few chapters of this manual cover general information which is necessary for unpacking and operating the printer as well as information about accessibility to different components of the printer and on optional accessories. In the next chapters, the loading of media and ribbon, the self test of the printer, and the configuration in setup will be explained. In the appendices, you will find useful additional information, such as internal character sets of the printer, and cabling specifications. Furthermore, comments on possible error messages and printer maintenance are included.

Note the directions for use on recommended material and comments on maintenance in order to avoid damage and premature failure of your **A8**.

Every effort has been made in the creation of this manual to provide as much information as possible in an understandable manner.

We welcome your comments and suggestions regarding additions or corrections to improve future editions of this manual. Please, let us know if you have any questions.

Further Documentation

The **A8** programming with its own set of commands is total compatible to the printers of the **Apollo**-series and can be found in the "Programming Instructions - **Apollo**".

Detailed information about service and maintenance are included in the "Service Manuals" of the **A8** (e.g. replacement of components, adjustment instructions, circuit diagrams, spare parts lists, etc.)

Characteristics of the Thermal Printhead



CAUTION !

The thermal printhead is the most sensitive part of your printer.
Pay special attention to the following guidelines :

- 1) The glass cover on the printhead must not be touched with the hand.
Do not use any sharp items, such as knives or screwdrivers, to clean the printhead.
- 2) During printing, always take care that there is no dirt or foreign objects on the labels in order to avoid scratching or abrasion of the printhead. This way, the printhead might be damaged.
- 3) Use proper label material with a smooth surface only.
A rough surface will affect the printhead and may cause damage and reduce its operating life.
- 4) Clean the printhead regularly with a special printhead cleaning pen, or an isopropyl alcohol soaked cotton swab.
- 5) Print with the lowest possible printhead temperature.

Careful use will allow you to print approximately between 18 to 30 miles (30 to 50 km) of print media before the printhead needs replacing.

Improper usage can cause damage to the printhead.

1. Product Description

General Information

The **A8** is an innovative printer which may be used in either direct thermal or thermal transfer mode. It offers a high resolution with a virtually unlimited variety of printout design.

All known capabilities of the Apollo printer family are true for the **A8, the new 8"-printer.**

By using a new 32 bit-processor from Motorola vary large labels (until a length of 47 in / 1.20 m) can be printed quickly. **A8** auto-senses whether there is a parallel or a serial interface to transfer the data.

A8 has a keyboard interface to connect a standard keyboard as well as a barcode scanner. By using a memory card it is possible to print and to enter variable data without any connection with a computer.

The printer has at one's disposal five Bitmap- and three Speedo™-fonts internally.

Besides it is possible to load True-Type™-fonts. The use of scaleable fonts and their flexibility in width and height allows exceptional flexibility in label design to suit any requirements. Additional printing features include reverse, italic, bold, underlined, and rotated characters. All current barcodes are printed precise.

The operation and usage of the **A8** is simple and friendly. All printer settings can be carried out with only four function keys on the front panel of the printer.

The graphic LCD display keeps the operator constantly informed about the current status of the printer. The modular design of the **A8** guarantees efficient service.

There is an optional External Rewinder, Present Sensor and Cutter offered for **A8.**

Compliances

A8 complies with the following safety regulations :

CE : Safety requirements

- EC-Low Voltage Directive (73/23/EWG)
- EC-Machinery Directive (89/392/EWG)
- EC-Electromagnetic Compatibility Directive (89/336/EEC foll. 93/31/EEC)

FCC : **A8** complies with the requirements of the FCC regulations part 15 for class A computers. Under disadvantageous circumstances, the operation of these devices may cause interference with radio or TV reception, which has to be eliminated by the operator.

WARNING !

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Instructions for the Lithium Battery

The PCB of the **A8** is equipped with a Lithium battery.

Take necessary precautions against a possible short circuit if the battery is not fully discharged. Properly remove the battery should the printer be strapped.

Technical Specifications

Type :	Direct thermal / Thermal transfer printer
Printhead :	Thin-film transfer printhead
Resolution:	203 dpi $\hat{=}$ 8 dots / mm
Number of dots / line :	1728
Print width :	8.5 in (216 mm)
Print speed :	2, 3, 4, 5 ips (50, 75, 100, 125 mm/s)
Available fonts :	5 Bitmap fonts incl. OCR-A and OCR-B 3 scaleable fonts (Speedo™) - internally Speedo™- and True-Type™- fonts - to load externally
Character sets :	Support Windows '95 Windows 1252/1250, IBM Codepage 850/852, ISO 8859-1, ISO 8859-8, EBCDIC, Macintosh, Supports all Western and Eastern Latin characters
Font size :	Scaleable fonts : Width and height .035 to 5 in (.9 - 128 mm) Width and height are individually changeable. Bitmap fonts : Width and height .04 to .1 in (1 - 3 mm) Width and height are selectable up to 10.
Font style :	Revers, bold, italic, underlined, mirror-inverted, outlined, grey
Font rotation :	Bitmap fonts and Barcodes : 0°, 90°, 180°, 270° Scaleable fonts : optional, texts in circular format
Graphic elements :	Line, box, circle, ellipse, fill-in segment, arrow
Graphic file type:	.PCX-, .IMG-, .BMP-, .TIF-, .GIF- and .MAC files
Bar codes :	one-dimensional codes for industry, logistics, medicine : Code 39, Code 93, Code 128 A,B,C, Codabar,FIM, HIBC, Interleaved 2/5, Ident-/Leitcode der Deutschen Post AG, MSI, Plessey, Postnet, one-dimensional codes for the trade : EAN-8, EAN-13, EAN-128, EAN/UCC 128, EAN/UPC App. 2, EAN/UPC App. 5, JAN-8, JAN-13, UPC-A, UPC-E two-dimensional codes : Data Matrix, PDF417, MicroPDF, UPS-Maxicode Bar code height, module width and, ratio are variabel, with/without check digit, human readable character, start/stop character

Max. numbers of fields per label :	250 text fields 100 bar codes 200 graphic elements 128 Bitmap graphics (max. 100 several)
Processor :	32 Bit, Motorola
Memory :	Internal memory 4 MB
Interfaces :	serial : RS-232 8 Bit; 1.200-115.200 Baud RS-422 8 Bit; 1.200-230.400 Baud RS-485 8 Bit; 1.200-230.400 Baud RS-232/485 Host 8 Bit; 1.200-115.200 Baud parallel : Centronics Keyboard interface (PS/2) Peripheral interface for label cutter or label edge sensor
Test features :	System test when switching on Self test with printout of firmware data and system parameters
Label material:	Thermal paper, normal paper, plastic foil, PE, PP, PVC, Polyamid Adhesive labels : 60-160 g/sqm Tag Stock : up to 180 g/sqm Material width : 9 in (230 mm) Label width : 1 to 8.6 in (51-220 mm) Label length : .2 to 47 in (5-1200 mm) Core diameter : 3 in (76 mm) Supply roll diameter : up to 8 in (200 mm) Labels may be wound face-in or face-out on the roll.
Material recognition :	Gap sensor ("see-through"), Bottom-reflective sensor Distance to paper edge : .12 to 2 in (3 bis 52 mm)
Transfer ribbon:	Length : max. 17.7 in (450 m) Outer diameter : max. 3 in (80 mm) Width : max. 8.6 in (220 mm) Core diameter : 1 in (25 mm) Ink side in or ink side out
Backfeed :	In order to always start a print job from the front edge of the first label the label strip may be fed back after the completion of the previous print job.
Rewinder internal :	to rewind the liner in the dispense mode Core diameter : 1.6 in (40 mm) max. Rewind diameter : 5.7 in (145 mm)
Control features :	paper out, ribbon out, printhead open

Control panel :	4 Function keys with LED display lighting up graphic LCD display LCD can be set to display in 8 different languages
Dimensions (HxWxD):	15.8 x 14.8 x 18.3 in (402 x 377 x 465 mm)
Weight :	59.5 lb. (27 kg)
Operating voltage :	Switchable between 230 V A.C / 50 Hz or 115 V A.C / 60 Hz
Maximum power input :	1.5 A (at 230 V) / 3 A (at 115 V)
Circuit protection :	T 4 A (at 230 V) / T 6,3 A (at 115 V)
Environment :	Operation at 50° to 95° F (10 to 35°C) at a humidity of 30 to 85% Transport at -13° to 158° F (-25 to +70°C) at a max. humidity of 95% non-condensing Storage at 41° to 104° F (5 to 40 °C) at a humidity of 5 to 85%

Optional Features

External Rewinder

For rewinding large print jobs, an external rewriter is available to handle an entire label roll. Please note, that for an external rewriter, the maximum size of the supply roll is limited to 8 in (200 mm) with a core diameter of 3 in (76 mm). The power supply of the external rewriter will be realized by an integrated power pack. It is independent on the printer.

Cutter Assembly

With the optional cutter unit, labels or continuous media (up to 180 g/sqm) may be cut immediately after printing. You can choose whenever you want to cut, whether you cut off the individually, after a pre-selected quantity of labels have been printed, or only at the end of a print job.

The cutter is powered and controlled directly by the peripheral connector of the **A8**.

For cutter operation, the firmware of the **A8** will automatically backfeed the label, so that after cutting, the label roll will be repositioned for the print of the next label.

Present Sensor

This option allows for on-demand labelling. The present sensor consists of the dispense edge and the sensor itself. The sensor, which is attached to the **A8** by the peripheral connector, indicates the presence of a label, and pauses the printing process until the label is removed.

Cut / Peel-off Adapter

By using the cut/peel-off adapter it is possible, to operate the **A8** with cutter assembly or present sensor in a special mode, where the print of one label can be started by an external start signal.

In the peel-off mode, after removing a label from the peel-off position the use of the adapter avoids the immediate print of the next label.

In the cut mode the print job can be divided in single prints.

In both cases, a label will only be printed, if it is required (cut/peel-off on demand).

PC Memory Card

A8 includes an option for using memory cards in order to permanently store graphics, fonts or whole label formats.

The data can be downloaded via interface.

PCMCIA 2.1 conforming sRAM cards or Flash-EPROM cards are accepted.

The maximum capacity for **A8** is 32 MegaByte.

Using a memory card, the printer can be operated **without** being connected to a computer which represents a great advantage regarding the flexibility.

External Keyboard

The keyboard connector allows you to connect your **A8** to a MF-2 compatible PC keyboard using a PS/2 plug. This will allow you to modify variable data stored on a memory card.

Label Design Software EASYLABEL for Windows

EASYLABEL is an intelligent and useful label design software which is easy to use in connection with your **A8**.

EASYLABEL can be run on all Microsoft Windows compatible computers.

For further information about EASYLABEL, contact your local reseller.

Print Media

The **A8** can be operated in direct thermal as well as thermal transfer mode.

For direct thermal mode, only use print material with a thermal-reactive coating. The print image is transferred by heating the material at the printhead, causing a reaction on the surface of the paper and, consequently, darkening the material.

In thermal transfer mode, not only standard paper labels are needed but also the thermal transfer ribbon with a color surface. The printout is created by heating the transfer ribbon, causing a transfer of color particles onto the label.

A8 allows to regulate the heat level and also the print speed. Thus, the **A8** offers a wide range of opportunities for usage.

The **A8** is able to print on labels and continuous paper with a maximum supply roll diameter of 8 in (200 mm).
The minimum core diameter is 3 in (76 mm).
The printer can also process fanfold label material.

The ability of label edge recognition, which guarantees the precise position of the printer output, is accomplished by a moveable photocell. This sensor is controlled by the processor of the **A8** and ensures recognition for different sorts of material. There is no need for additional electronic adjustment.

On the following pages, you will find detailed information and specifications concerning suitable materials.

If you have any questions, check with your local distributor as not every material can be used for direct thermal or thermal transfer printing.

If in doubt, we will perform test prints with your label material to find the best suitable transfer ribbon.

Print Media for Direct Thermal Printing

The print material must correspond to several important specifications, in order to ensure high quality printing, and to avoid damage to the printhead or early wear.

Using labels which we have tested and which we recommend to our customers, will guarantee a gentle treatment of the printhead. If you want to use material by another supplier, please note the following requirements regarding the condition of thermal printer paper :

1. To avoid damage to the printhead, the surface coating must cover the thermal-reactive layer. If the coating is too thin, this may cause a "pitting" effect on the printhead, i.e. very small explosions during the chemical reaction of the thermal coating quickly resulting in damage to the printhead.
2. The surface of the labels should be very smooth to avoid a "sandpaper" effect on the printhead.
3. Always choose material which can be printed on with the lowest possible heat level. The greater the heat level, the shorter the life of the printhead. Moreover, with highest heat levels the phases of heating up and cooling down extend. This may have a negative effect on the print quality, especially if a high print speed is required.

Print Media for Thermal Transfer Printing

In thermal transfer mode, a wide range of different label materials may be used (e.g. normal paper, tag stock, a variety of synthetic material such as polyester foil, etc.).



NOTICE !

The print quality greatly depends on the right combination of label material and transfer ribbon.

The surface of the labels determines which ribbon material may be used. Unsuitable ribbons may cause an extremely poor print image.

If in doubt, your local distributor will advise you on a good combination of suitable material, or carry out tests to find out which ribbon fits your label material best.

Label / Tag Media Specifications

Label and tag media to be used for the **A8** can be found in the table below. Note this information before ordering your labels.

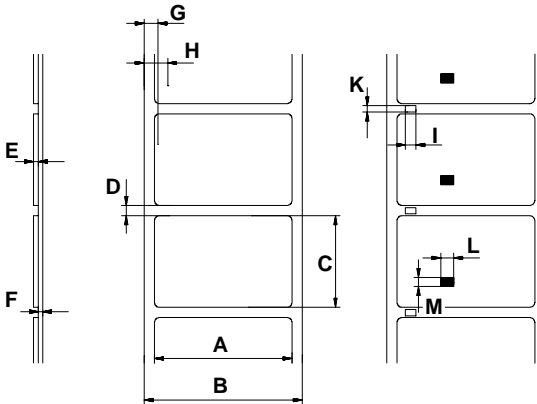


Fig. 1 Label formats

Item		MINIMUM	MAXIMUM
A	Label width	2 (51)	8.6 (220)
B	Width of silicon liner	2 (51)	8.6 (220)
C	Label length	.2 (5)	47.2 (1200)
D	Gap between labels	.08 (2)	47.2 (1200)
E	Label thickness	.0024 (.06)	.01 (.25)
F	Thickness of silicon liner	.0024 (.06)	.01 (.25)
G	Distance of the first printing position from the edge of the silicon liner	.1 (2.5)	
H	Distance of the label sensor from the edge of the silicon liner	.12 (3)	2 (52)
I	Width of punch hole	.2 (5)	-
K	Height of punch hole	.08 (2)	.4 (10)
L	Width of reflective mark	.2 (5)	-
M	Height of reflective mark	.08 (2)	-

Table 1 Label formats in inches (figures in brackets are in mm)

Transfer Ribbon

The choice of a suitable transfer ribbon is important for the print quality of your printer as well as the useful life of the printhead.



CAUTION !

Transfer ribbons of inferior quality may cause premature deterioration of the printhead !

The ribbon material must be antistatic, because the extremely thin surface coating of the thermal printhead can be damaged by electrostatic discharge. Also, the material must be extremely resistant to high temperatures to avoid melting the ribbon with the printhead.

The heat which arises during printing must be carried off by the label and by the transfer ribbon itself. Transfer ribbons of inferior quality are often poor heat conductors. This may cause overheating of the printhead in spite of electronic protection.

Poor transfer ribbons also tend to lose parts of the coating which leads to accumulating dirt on the printhead and the sensors. With some ribbons the color rubs off and soils the printhead. All of these effects contribute to poor print quality.

We have carried out numerous tests with many different ribbons and we recommend you use transfer ribbons made by well-known/ brand manufacturers only. Depending on the label material, several transfer ribbons may be suitable.

The quality of print is determined by the right combination of these materials.



NOTICE !

When choosing the materials, make sure that the transfer ribbon is slightly wider than the width of the label liner.

If the transfer ribbon is too narrow, the printhead directly touches the label surface in the area beside the ribbon. This may cause premature deterioration of the printhead.

If the transfer ribbon is too wide the risk of ribbon wrinkling increases.

The recognition of the transfer ribbon is sensed by the rotation control of the transfer ribbon unwinder, rather than by photocell sensors. As a result, ribbons with a thinner coating or those with a colored coating can be used safely. To be able to print all labels up to the exact end of the transfer ribbon, the length of the uncoated trailer is limited.



NOTICE !

When buying transfer ribbons, make sure that the trailer of the ribbon does not exceed a length of 5.9 in (150 mm).

2. General Safety Instructions



CAUTION !

- The printers of the **A8** series are built exclusively to print labels and tags, continuous paper, etc. Do not use other materials than listed in chapter 1.
- Connect the printer only to an outlet with the correct voltage !
The printer is configured for either 230V or 115V power supply, which can be switched using the input voltage selector at the back of the printer. Connect only to a power outlet with a **grounded** contact.
- The printer must only be connected to devices which have extra low voltage.
- Power must be OFF before plugging in any accessory or connecting the printer to a computer, etc. Also switch power off on all appliances before disconnecting.
- Do not expose the printer to any moisture, or use in damp or wet areas.
- The printer will operate with the cover open if necessary. This is not recommended, as moving or rotating parts become accessible. Keep long hair, jewelry, loose clothes away from the moving parts.
- During the print process the printhead will become hot. Use extra caution when touching the printhead.

3. Unpacking

Delivery Contents

Inspect the **A8** packaging and contents immediately after receipt for possible damage caused by shipping.



NOTICE !

Please keep the original packaging in case the printer must be returned.

The supplied equipment consists of :

- Transfer Printer **A8**
included
 - 2 Adapter (mounted on the media hub)
 - Flange (mounted on the media hub)
 - Clamp (mounted on the internal rewinder)
 - Empty cardboard core (mounted on the transfer ribbon take up hub)
 - Tear-off plate (mounted on the front)
- Rewind guide plate (packed separately)
- Power cable for Germany
- Operator's Manual
- 2 Fuses to operate at 115V or 230V (depending on the country)

Removing the Securing Devices

Place the A8 on a firm surface and remove the securing devices.

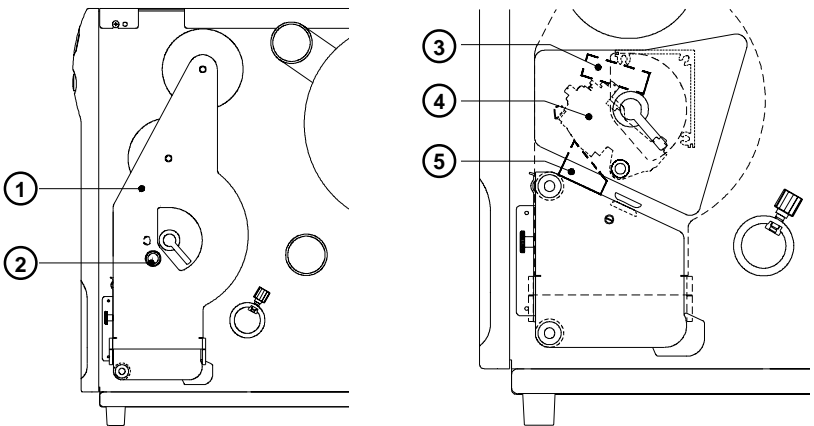


Fig. 3 Removing the securing devices

1. Open the cover.
2. Loosen the knurled knob (2) attached to the plate (1).
3. Remove the foam rubber pieces (3, 5) which are securing the printhead unit (4).



NOTICE !
Do not touch the printhead with your hands.

4. Printer Component Location

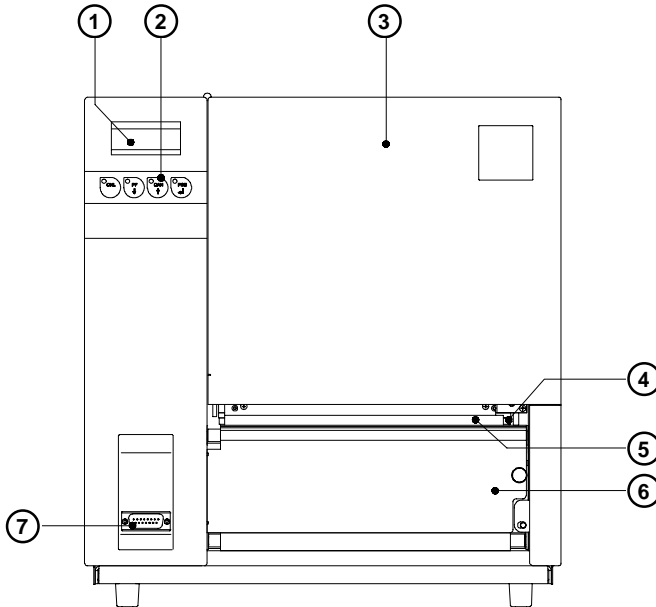


Fig. 4a Front view

- 1 - Display
- 2 - Function keys with indicator LEDs
- 3 - Cover
- 4 - Printhead
- 5 - Ribbon shield
- 6 - Tear-off plate
- 7 - Peripheral port

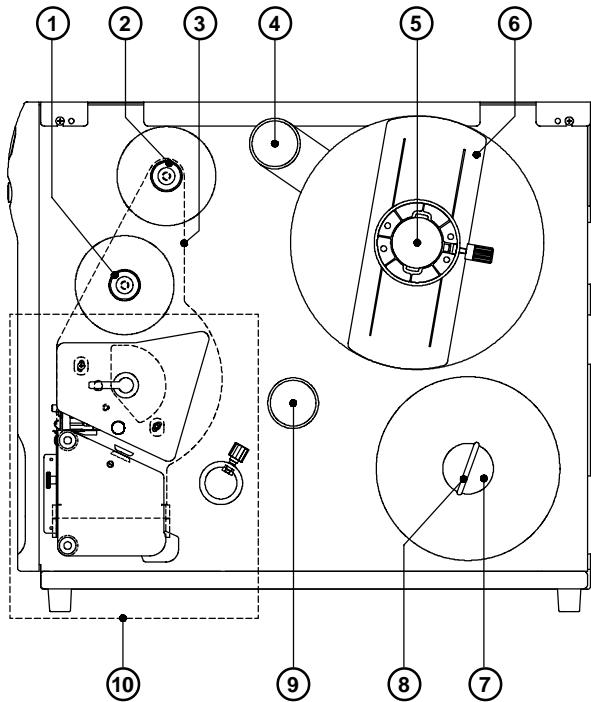


Fig. 4b Side view (with cover open)

- 1 - Ribbon take up hub
- 2 - Ribbon supply hub
- 3 - Plate
- 4 - Swing arm
- 5 - Media hub
- 6 - Flange
- 7 - Internal rewinder
- 8 - Clamp
- 9 - Media assist bar
- 10 - Print mechanism

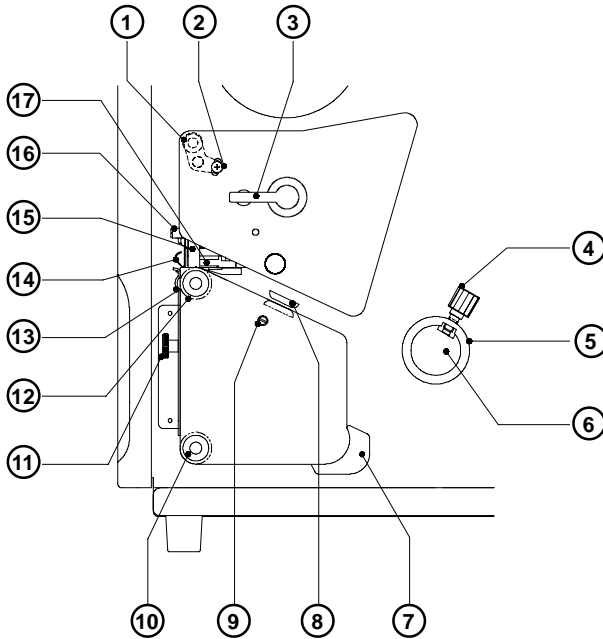


Fig. 4c Detailed view of the print mechanism

- 1 - Adjustable axle to adjust ribbon
- 2 - Screw to fix the adjustment of the ribbon
- 3 - Printhead lever
- 4 - Knurled screw
- 5 - Media stud
- 6 - Rewind guide axle
- 7 - Media guide
- 8 - Label edge sensor
- 9 - Label edge sensor adjustment strut
- 10 - Rewind assist roller
- 11 - Knurled screw
- 12 - Media feed roller
- 13 - Tear-off plate
- 14 - Ribbon shield
- 15 - Printhead support
- 16 - Tappet to adjust the printhead support
- 17 - Thermal printhead

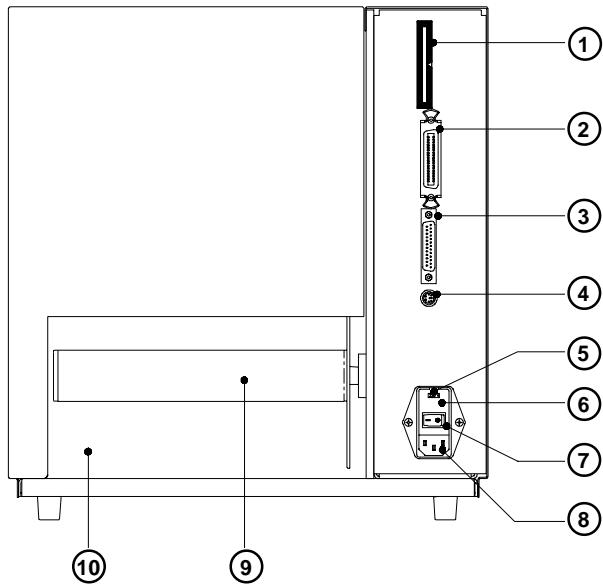


Fig. 4 d Back view

- 1 - Memory card module slot
- 2 - Parallel interface port
- 3 - Serial interface port
- 4 - Connection for the external keyboard
- 5 - Input voltage selector / Fuse holder
- 6 - Input voltage selector cover
- 7 - Power switch
- 8 - Power supply connector
- 9 - Internal rewinder
- 10 - Slot for fanfold paper

5. Connecting the Printer

Connection to a Computer

A8 is equipped with three serial interfaces, these are RS-232, RS-422, and RS-485, all of them using the 25 pin interface connector (2) at the back.

In most cases, you can use the RS-232 interface for the connection to the computer.

If your computer is located more than 50 ft (15m) away from the printer you should use the RS-422 interface.

The RS-485 interface is provided for using the **A8** as part of a networked system. Using the RS-422 or RS-485 interface assume the existence of the appropriate interface in the computer.

It is possible to operate the **A8** in a special mode to create small printer networks without a RS-485 interface at the computer. Further information on this matter is given in appendix F.

In addition to the serial port, the **A8** also provides a parallel (Centronics) interface with a 36 pin interface connector (1).

The **Centronics interface** is **always active**. Any settings in the Setup are not necessary.

Select the required interface settings using the Setup procedure (see chapter 9) and connect the printer to the computer by a suitable interface cable. You will find a list of typical cables as well as a description of the pin assignment of the interface connectors in Appendix B.



CAUTION !

Make sure that all connected computers and their connecting cables are correctly grounded.

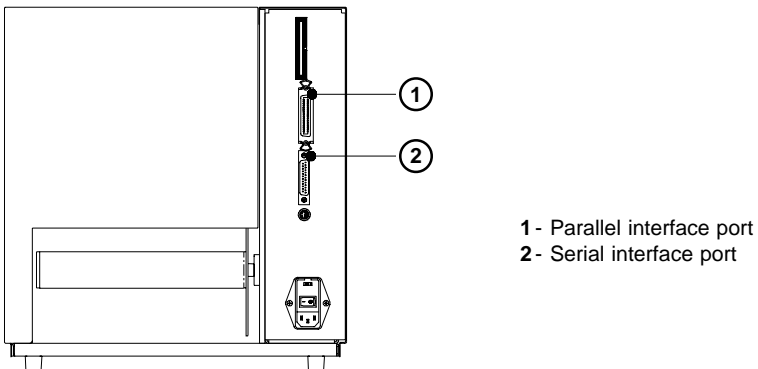


Fig. 5 a Interface ports (rear view of the printer)

Connection to Power Supply

The **A8** is designed for use with 230V A.C/50 Hz (standard) or 115V A.C/ 60 Hz.



CAUTION !

Before connecting the printer to the power supply, make sure that the voltage selected on the power supply module of the printer is the same as your main power supply ! Pay attention that the power switch (3) is in position "O" (OFF).

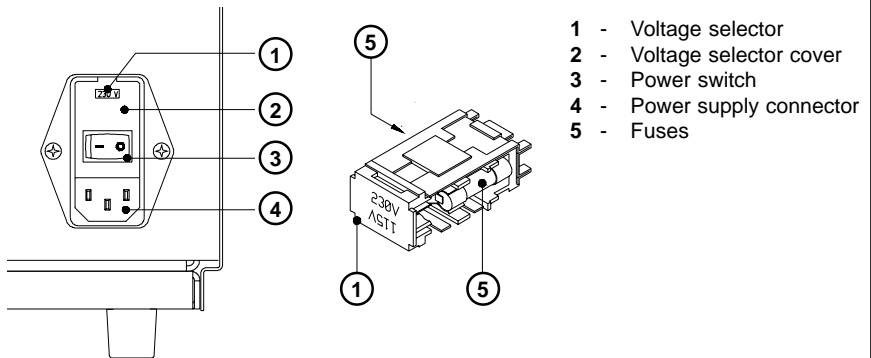


Fig. 5 b Power supply module (rear view of the printer)

To change the voltage setting, open the cover (2) and remove the voltage selector (1) from the power unit.



CAUTION !

If you have changed the operating voltage of your printer the fuses (5) need replacing as stated below !

230V - 2 x T 4A

115V - 2 x T 6,3A

When delivered, the correct fuses for the pre-selected operative voltage are installed. You will find the necessary fuses for the other voltage in the accessories package. Slide the voltage selector back into the power supply module so that the correct voltage is visible in the lid window of the cover (2).

Connect the printer to a **grounded** outlet using the power cable supplied in the accessories package.

Switch on the printer

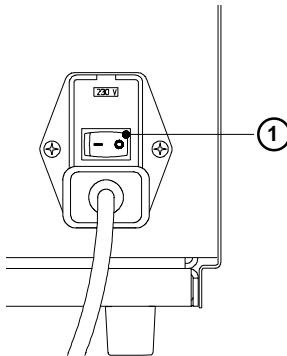



Fig. 5 c Switch on the printer

After making all connections switch on the printer at the power switch (1).

The printer carries out a short system test and following the display is shown the system mode "ONLINE".

If a hardware failure occurs during the system test the symbol  and the type of the failure will be shown. In this case the printer should be switched off and on again. If the failure occurs again call the service.

If the display is not showing anything after switching on the printer, please check the following whether:

- the connection of the power switch is correct
- the setting of the voltage selector corresponds with the power supply voltage
- the fuses in the voltage selector are not defective

If all these conditions are true and the device nevertheless cannot be switched on call for service, please.



CAUTION !

If the fuses in the voltage selector are defective do not use the fuses of the delivery contents as spare parts.

These fuses are only for using at the other operation voltage.

By using the fuses of the delivered contents without changing the setting of the voltage selector, the printer will be damaged.

6. Media Loading

Preparing for Tear-off Mode / Rewind Mode

A8 with the standard equipment can be operated in two methods. The device is delivered with a mounted tear-off plate and so it is prepared for the **tear-off mode**. In this mode the label strip comes out of the print at the front side and can be torn off after the end of the print job. In the **rewind mode** small print jobs can be rewound internally. To operate in this mode the tear-off plate must be replaced by the rewind guide plate.

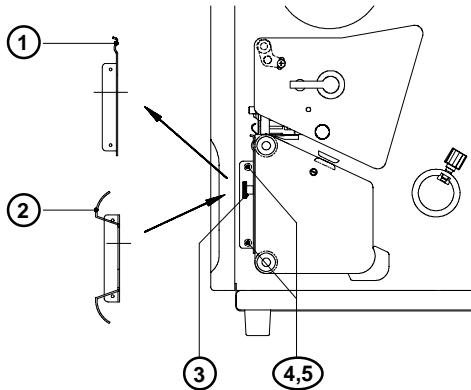


Fig. 6 a Exchange tear-off plate / rewind guide plate

1. Loosen the knurled screw (3) completely.
2. Remove the tear-off plate (1) out of the holes (5) in the center mounting plate of the printer.
3. Slide the rewind guide plate (2) with the bolts (4) into the holes (5) in the mounting plate. Secure the rewind guide plate with the knurled screw (3) at the threaded hole in front of the printer.
4. The attachment of the options "Present sensor" and "Cutter" is carried out in the same manner. Further information is to find in chapter "Options".

Loading Labels

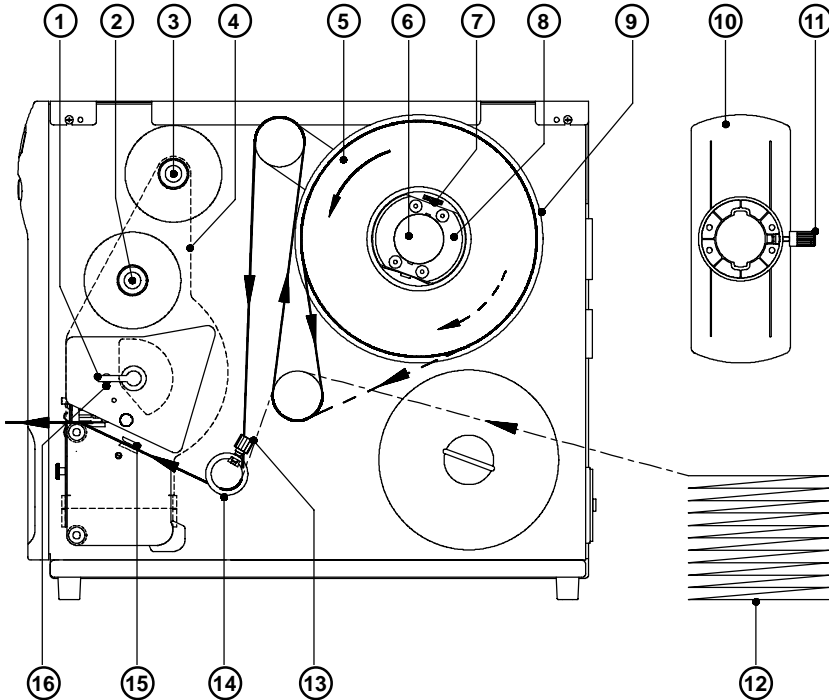


Fig. 6 b Loading labels for the tear-off mode

1. Open the cover.
2. Loosen the knurled screw (11) and remove the flange (10) from the media supply hub (6).

3. On the media hub are two adapters (8). After loosening the knurled screws (7) these adapters can be moved on the media hub (6). Slide one adapter to the wind plate (9) of the media hub. Slide the second adapter to such a position that the distance between the outer edges of both adapters is a little smaller than the width of the label roll. Secure both adapters by tightening the knurled screws (7).
4. Place the label roll (5) onto the media hub and slide it against the wind plate (9).
5. Put the flange (10) onto the supply hub (6), slide it against the label roll and secure it by tightening the knurled knob (11).
6. Loosen the knurled screw (13) and slide the media guide (14) as far as possible into its outermost position.
7. Lift the printhead by rotating the lever (1) clockwise until it stops.
8. Swing the plate (4) downwards.
9. Unroll a length of label stock from the media roll and feed it through the printer as shown in figure 6b.

The solid line represents the feed path of outside-rolled labels, the broken line of inside-rolled labels. The broken-dotted line shows the media path of fanfold paper (12).



NOTICE !

It is particularly important to ensure that the media strip slides properly between the fittings of the adjustable photocell assembly (15).

10. Slide the media guide (14) back until it lightly touches the edge of the media strip and tighten the knurled screw (13).
11. Swing the plate (4) upwards and pay special attention that the center pins (2,3) in both ribbon hubs slide into the corresponding holes of the plate.
12. In order to lock the printhead turn the lever (1) counterclockwise until it stops. The printhead is locked, if the side of the lever presses onto the ball snap (16), that is mounted on the plate (4).

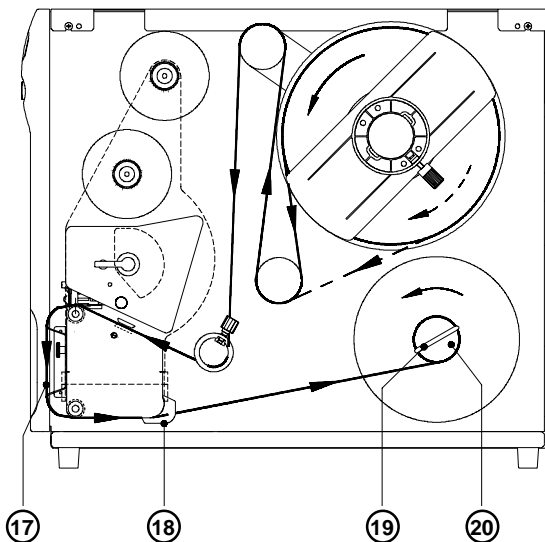


Fig. 6 c Loading labels for the rewind mode

13. To operate in the rewind mode the rewind guide plate must be mounted at the front side of the printer (see previous chapter).
 - Slide the media guide (18) as far as possible into its outermost position.
 - Remove the clamp (19) from the internal rewriter (20).
 - Feed the label strip across the rewind guide plate (17) to the internal rewriter (20).
 - Attach the label strip with the clamp (19) in the grooves on the axle of the internal rewriter (20).
 - To tighten the media, rotate the rewriter counterclockwise.
 - Slide the media guide (18) against the edge of the media strip.

14. In case of using the printer with one of the options "Present sensor", "Cutter" or "External rewriter" the label loading is a little different. See chapter "Options" for a detailed description.



NOTICE !

If you do not use the printer for an extended period of time, lift the printhead to avoid possible flattening of the print roller.

Loading Transfer Ribbon

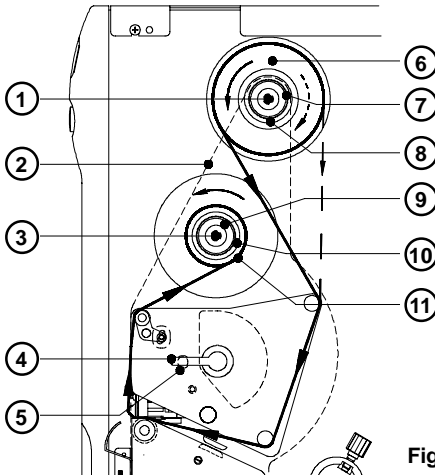


Fig. 6 d Loading thermal transfer ribbon

1. To lift the printhead, turn the printhead lever (4) clockwise until it stops.
2. Swing the plate (2) downwards.
3. Slide the roll of transfer ribbon (6) onto the ribbon supply hub (8) as far as possible.

NOTICE !

Pay attention to the side of the ribbon material which is coated with ink ! The inked side is generally the dull side. When the ribbon is inserted, the inked side must face the opposite side of the printhead !

In figure 6 d, the solid line shows the path of inside wound ribbon, and the broken line represents the path of outside wound ribbon.

4. Hold the ribbon supply roll and turn the knurled knob (7) clockwise until it stops. That way the roll (6) will be attached at the ribbon supply hub (8).
5. Slide an empty cardboard core (11) onto the ribbon take up hub (10) and attach it by turning the knurled knob (9) clockwise.
6. Feed the transfer ribbon along the path as shown in figure 6d, then attach it to the core (11) using adhesive tape or label.
7. Turn the take up hub (10) counterclockwise in order to smooth and stretch the ribbon.
8. Lift up the plate (2) and take care that the center pins (1,3) in both ribbon hubs slide into the corresponding holes of the plate.
9. In order to lock the printhead turn the lever (4) counterclockwise until it stops. The printhead is locked, if the side of the lever presses onto the ball snap (5), that is mounted on the plate (2).

7. Adjustments Concerning the Labels

Adjustment of the Label Edge Sensor

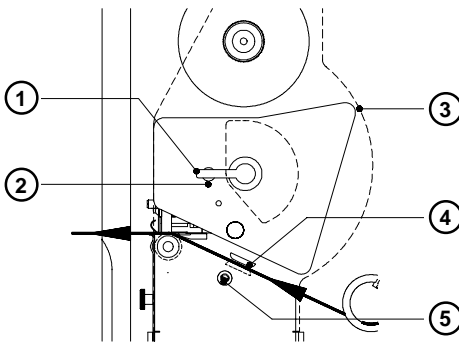


Fig. 7a Adjustment of the label edge sensor

To accommodate a variety of print jobs, the position of the label edge sensor (4) can be adjusted cross to the path of the paper feed. This setting is particularly useful if the required labels are either narrow, or have punch holes or reflective markings, or deviate from the square or rectangular shape.

It is important to ensure that the sensor is positioned in a way that the gaps between the labels or the markings can be recognized by the photocell. The position of the sensor is marked by a notch in the sensor holder. If using labels with an unconventional shape (i.e. round or curved) the sensor should be positioned at the front edge of the label.

Adjust the sensor position as follows :

1. To lift the printhead, turn the printhead lever (1) clockwise until it stops.
2. Swing the plate (3) downwards.
3. Shift the label edge sensor (4) by rotating the spindle (5) with a screw driver. The sensor is shifted outwards by rotating clockwise and by rotating counterclockwise the sensor is moved to the mounting plate.
4. Lift up the plate (3).
5. In order to lock the printhead turn the lever (1) counterclockwise until it stops. The printhead is locked, if the side of the lever presses onto the ball snap (2), that is mounted on the plate (3).

Adjustment of the Transfer Ribbon

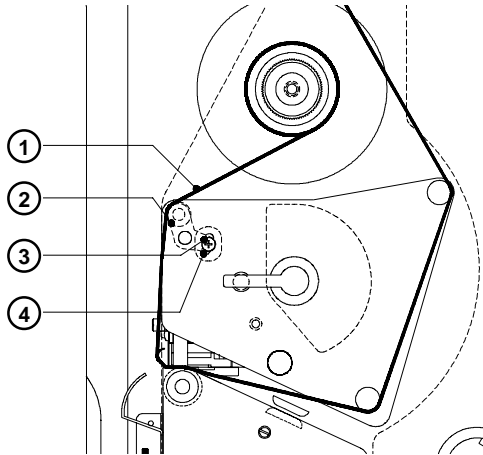


Fig. 7 b Adjustment of the transfer ribbon

If creases, lines or black patches appear in the print image resulting in a poor print quality, this may be caused by wrinkles in the transfer ribbon (1). To remove the wrinkles, the tension of the ribbon should be made even from the left to the right by slanting the axle (2).

1. Loosen the adjustment screw (3).
2. The axle may be slanted by moving the adjustment screw (3) as required inside the adjustment slot (4).

Moving it to the bottom will tighten the ribbon on the inner edge. Moving it to the top will tighten the outer side of the transfer ribbon.

To reduce the formation of wrinkles the ribbon must be tightened at this side where the wrinkles are starting.

3. After completing the adjustment, tighten the adjustment screw (3).

Adjustment of the Printhead Support

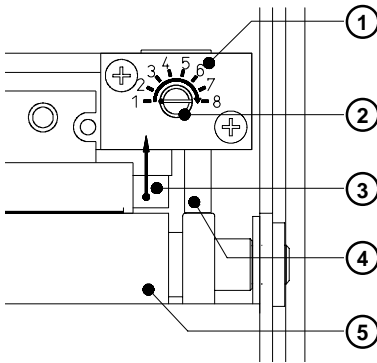


Fig. 7c Adjustment of the printhead support

When printing narrow labels (width less than 5 in or 120 mm), it is possible that the printhead (3) will come into direct contact with the drive roller (5). This will lead to premature wear on the printhead. In addition, the printhead will be at a slight angle to the label, thus, the uneven pressure may result in an inconsistent image density from one edge of the label to the other. To correct this problem, the printhead support (4) may be activated. This adjustment can be carried out during printing :

1. The current position of the printhead support (4) is shown at the scale (1). At the tappet (2) is a color mark.
The figures at the scale are not in reference to an exact value of the label width. They should serve as guideline data.
2. When using wide labels the position 1 is recommended. In this case the printhead support (4) is total deactivated.
3. When using narrow labels the tappet must rotate to the position 8 one step at a time. The correct position for your stock will depend on the thickness and width of the media. The higher the number, the greater the gap between printhead and roller.
4. Check the adjustment by analyzing the quality of the printed label.



NOTICE !

An incorrect adjustment of the printhead support may cause wrinkles in the transfer ribbon.

8. Control Panel

The front panel of the **A8** is fitted with 4 function keys, 4 LEDs and a graphic display.

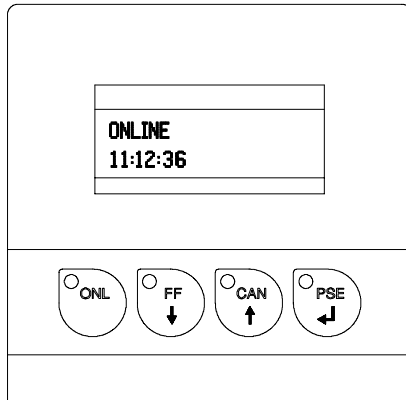



Fig. 8 Control panel

The control panel display constantly provides the operator with the actual information concerning the current printer mode and label processing. The LEDs support the information shown in the display by indicating which keys have to be pressed (e.g. in the event of a fault).

On the following pages, you will find descriptions of the system modes of the **A8**, the related indications by the LCD display and the LEDs as well as a description of the function keys under differing conditions.

System Mode SYSTEM TEST

When switched on, the printer automatically performs an internal self test. If the test is completed successfully, the **A8** proceeds to the ONLINE mode.

If a hardware fault occurs the symbol  and the type of the fault is shown.

In this case the printer is switched off and on again. If the error recurs call the service, please.

Display

The top line of the display shows the version of the printer :

***** A8 *****

The bottom line of the display shows the numbers "123456" one after the other dependent on the progress of the several test steps.

LED Display

All LEDs flash during initialization once briefly.

Function Keys





	ONL key	By pressing this key until the end of the system test switch into the system mode TEST PRINT.
	FF key	By pressing this key until the end of the system test switch into the system mode MONITOR MODE.
 	ONL key + CAN key	By pressing both keys at the same time until the end of the system test switch into the system mode SETUP.


Table 8 a Function keys in the system mode SYSTEM TEST


System Mode ONLINE

The printer is switched ON and ready to receive data.

Display

The top line of the display shows "ONLINE".
The bottom line of the display shows the time of day.

During the transfer of data a rotating symbol  appears in the right hand corner of the bottom line of the display.

When saving data on the PC card the symbol  appears in the right hand corner of the bottom line of the display.

LED Display

LED ONL on.

Function Keys







	ONL key	Switch into OFFLINE mode (LED ONL off)
	FF key	Provides label feed. The leading edge of the next label to be printed is in print position.
	CAN key	Deletes data of the previous print job in internal memory Following that, "Pause reprint" is not available (see PSE key)
	PSE key	Repeats the print of the last label, after the previous print job has been completed. (only when setup parameter "Pause reprint" is on)
 + 	ONL key + CAN key	Pressing both keys together for at least 5 seconds will switch into the SETUP mode (LED ONL off)

Table 8 b Function keys in the system mode ONLINE

System Mode OFFLINE

The printer is not ready to print or to receive data.
The status of the printer may be requested.

Display

The top line of the display shows "OFFLINE".
By repeatedly pressing the PSE key, the status of the printer will be shown (see also chapter 11).

LED Display

The display is blank.

Function Keys





	ONL key	Switch into ONLINE mode (LED ONL on)
	FF key	Provides label feed. The leading edge of the next label to be printed is in print position.
	CAN key	Switch into LABEL FROM CARD mode (only if memory card is installed and formats are stored on it)
	PSE key	Display shows current printer mode ("Printer info"/ see also chapter 11)

Table 8 c Function keys in the system mode OFFLINE

System Mode PRINT


The printer is in operation.

In this mode, the transfer of data is possible. New print jobs will be carried out immediately following the completion of the previous job.

Display

The top line of the display shows the message "Printing label".

The bottom line displays the current number of printed labels.

During the transfer of data, a rotating symbol  appears in the right hand corner of the lower display line.

LED Display

LED ONL on.

Function Keys



	CAN key	short press less than one second : longer press greater than one second :	Cancels the current print job Switch to the next job, which is available in the input buffer Cancels the current print job Clears the input buffer (LED CAN blinks) Switch into ONLINE mode (LED ONL on)
	PSE key	Interrupts the current print job Switch into PAUSE mode (LED PSE on)	

Table 8 d Function keys in the system mode PRINT

System Mode PAUSE

The printing process is temporarily interrupted by the operator.

Display

The top line of the display shows "PAUSE".

LED Display

LED ONL on, LED PSE on.

Function Keys





	FF key	Provides label feed. The leading edge of the next label to be printed is in print position.				
	CAN key	<table><tbody><tr><td>short press less than one second :</td><td>Cancels the current print job Switch to the next job, which is available in the input buffer</td></tr><tr><td>longer press greater than one second :</td><td>Cancels the current print job Clears the input buffer (LED CAN blinks) Switch into ONLINE mode (LED ONL on)</td></tr></tbody></table>	short press less than one second :	Cancels the current print job Switch to the next job, which is available in the input buffer	longer press greater than one second :	Cancels the current print job Clears the input buffer (LED CAN blinks) Switch into ONLINE mode (LED ONL on)
short press less than one second :	Cancels the current print job Switch to the next job, which is available in the input buffer					
longer press greater than one second :	Cancels the current print job Clears the input buffer (LED CAN blinks) Switch into ONLINE mode (LED ONL on)					
	PSE key	Continues the current print job Switch into PRINT mode (LED PSE off)				

Table 8 e Function keys in the system mode PAUSE

System Mode FAULT-CORRECTABLE

The printer has encountered a fault during printing which is easily correctable by the operator (e.g. "Out of paper"), following which the printing process may be continued.

Display

The symbol  appears in the display. Additionally the type of fault and the total of the remaining labels is shown alternately.

LED Display

LED CAN on, LED PSE is flashing.

Function Keys




	CAN key	short press less than one second :	Cancels the current print job Switch to the next job, which is available in the input buffer
		longer press greater than one second :	Cancels the current print job Clears the input buffer (LED CAN blinks) Switch into ONLINE mode (LED ONL on)
	PSE key	Continues current print job after error correction Switch into PRINT mode (LED ONL on, LED CAN off, LED PSE off)	

Table 8 f Function keys in the system mode FAULT-CORRECTABLE

System Mode FAULT-IRRECOVERABLE

During printing, a fault has occurred which cannot be cleared by the operator without cancelling the current print run.

Display

The symbol  appears in the display and the type of the fault is shown.

LED Display

LED CAN is flashing.

Function Keys






	CAN key	Cancels the current print job Switch into ONLINE mode (LED ONL on, LED CAN off, LED PSE off) If ONLINE mode cannot be entered, switch the printer on and off If the fault remains call for service.
---	---------	---

Table 8 g Function keys in the system mode FAULT-IRRECOVERABLE

System Mode SETUP

To enter the SETUP mode, use either one of the procedures described below :

either : press both keys the  key and the  key simultaneously when switching on the printer, and keep them pressing down, until the system test is completed,

or : in ONLINE mode, press both keys the  key and the  key simultaneously for at least 5 seconds.

In SETUP mode, various printer parameters can be specified to suit the current print requirements (for details see chapter 9).

Display

Following the completion of the system test, the display briefly shows "SETUP", followed by "Land" or "Country". Depending on the selection, all of the setup parameters and their settings will be shown.

LED Display

All LEDs off.

Function Keys






	ONL key	Stores the chosen settings of the setup parameters and completes the SETUP mode (i.e. switch into ONLINE mode/ LED ONL on)
	FF key	Skips to next setup parameter Reduces numerical setup values
	CAN key	Skips to previous setup parameter Increases numerical setup values
	PSE key	Confirms selected settings for parameters

Table 8 h Function keys in the system mode SETUP

System Mode TEST PRINT

The TEST PRINT mode is entered by pressing the  key when switching on the printer, and keeping it pressed down until the system test is completed. Following, an internal test sample will be printed (for details see chapter 10). Then, the system test will be repeated.

Display

Following the completion of the system test, the display shows "Test print".

LED Display

LED ONL on.

Function Keys



	CAN key	Cancels the test print Switch into SYSTEMTEST mode
---	---------	---

Table 8 i Function keys in the system mode TEST PRINT

System Mode MONITOR MODE / ASCII Dump Mode

The monitor mode/ ASCII Dump mode is entered by pressing the  key

when switching on the printer, and keeping it pressed down until the system test is completed.

In this mode, the control codes received by the printer are directly printed as text corresponding to the set font, rather than being interpreted as defined by the programming (see chapter 12).

Display

After the completion of the system test, the display shows "ASCII Dump Mode".

LED Display

LED ONL on.

Function Keys





	ONL key	Switch into ONLINE mode
	FF key	Initiates a paper feed of about .8 in (21 mm)

Table 8 k Function keys in the system mode MONITOR MODE / ASCII Dump Mode

System Mode LABEL FROM CARD

Provided that a memory card is installed and a label format is present, in OFFLINE mode, press the  key to enter the LABEL FROM CARD mode. In this mode, the labels stored on the card can be selected to print. For files with a variable number of labels the quantity of labels to be printed can be set.

Display

The top line of the display shows "Label from card". The bottom line of the display shows the file name of the first label file in the list stored on the card. After the requested label has been selected, for files without a fixed number of labels the display shows "No. of labels" in the top line and "00001" in the bottom line. The symbol  appears when the user has to enter some information via control panel or external keyboard.

LED Display

All LEDs off.

Function Keys





	ONL key	Switch into OFFLINE mode
	FF key	For scrolling down within the file list stored on the card Reduces the quantity of labels to be printed
	CAN key	For scrolling up within the file list of the card Increases the quantity of labels to be printed
	PSE key	Confirms file selection Moves the cursor to the right when setting the quantity of labels to print Switch into PRINT mode

Table 8 I Function keys in the system mode LABEL FROM CARD

System Mode ENTER DATA

This system mode is entered when it is necessary to input varied data during preparing a print job.

It is possible to input the data via control panel of the **A8** as described earlier. But it is easier to enter the data by using an external keyboard.

More information on this subject can be found in chapter 13.

Display

In the first line appears the name of the input field. The second line is provided to enter the value which is necessary. A cursor is flashing at the current position.

The symbol  appears in the display.

LED Display

All LEDs off.

Function Keys






	FF key	Altering the character at the cursor position to lower ASCII values
	CAN key	Altering the character at the cursor position to higher ASCII values
	PSE key	Pressing the PSE key moves the cursor to the right. Upon completing the input fields with fixed length the printer switches to the PRINT mode. When entering data into input fields with variable length, press the PSE key twice to switch to the PRINT mode.

Table 8 m Function keys in the system mode ENTER DATA

9. Setup

Using the setup mode, the configuration of the **A8** may be customized to suit specific requirements. Initial setup should be performed when operating the printer for the first time. Changes which become necessary to process different print jobs, e.g. when different materials are used, can mostly be accomplished by changing the software settings.


Start of Setup Mode

This mode is initiated by **either** simultaneously pressing the  key and the  key when switching on the printer and keep them pressed down until the system test is completed, **or** in ONLINE mode, press the same two keys down for at least 5 seconds.




Starting the setup mode, the display shows "SETUP" for about one second, followed by "Land" or "Country" which represents the first of the parameters to select from. Depending on the selection, the setup parameters and their settings will be shown. The list of parameters is brought up in a row and may be run through repeatedly.

Each time a parameter setting has been changed, there will be a request for confirmation. There will not be a general request before leaving the setup mode.



NOTICE ! The setup mode can be left at any point by pressing the  key. The confirmed parameters will be saved.

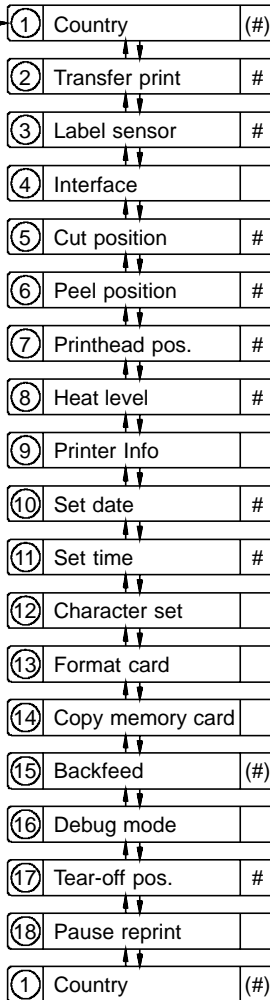
If an already confirmed setting is not desired any more, switch off the printer during the setup mode to cancel changes.

To return to the original factory default settings, press all three keys, the , the , and the  key simultaneously and keep them pressed down until the display shows "--- RESTORE ---".

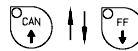
Note, that in some cases the printer may initially be set to certain parameters which may differ from the default settings (e.g. "Country"). On the following pages, you will find details to change the setting of the parameters.

Overview of the Setup Parameters

Starting Setup



Scrolling up/down the parameters :



Definition of the list item :



- No Item number
- Para Name of the parameter
- # Parameter may be altered via software software
- (#) Parameter is limited changeable via software

Fig. 9 a Setup parameters

Country/Land

The parameter "Country" (or "Land") allows the LCD display language to be set, which also dictates the format of date and time used for the printer display as well as for printing.

The formats of date and time used for the printout can be altered via software. The language that the prompts on the LCD are displayed in cannot be altered through software, only with the front panel.

Default Setting : USA

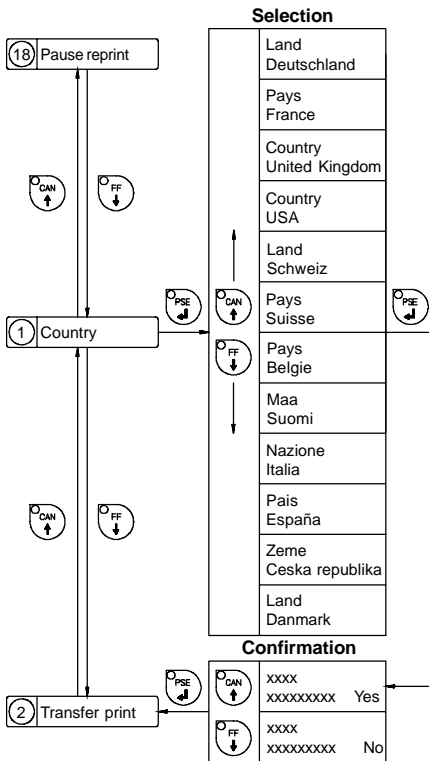


Fig. 9 b Set "Country" parameter

The following table shows the specific settings for the date format and the time format of all countries available.

	Date	Time
Land Deutschland	02.06.1999	15:56:56
Pays France	02.06.1999	15:56:56
Country United Kingdom	02/06/1999	15:56:56
Country USA	06-02-1999	03:56:56 pm
Land Schweiz	02.06.1999	15,56,56
Pays Suisse	02.06.1999	15,56,56
Pays Belgie	02/06/1999	15:56:56
Maa Suomi	02.06.1999	15:56:56
Nazione Italia	02-06-1999	15:56:56
Pais España	02-06-1999	13:56:56
Zeme Česká republika	02.06.1999	13:56:56
Land Danmark	02/06/1999	13:56:56

Table 9 Specific format settings for date and time

Transfer Print

The parameter "Transfer print" is used to set the **A8** to the print mode, either direct thermal printing or thermal transfer printing. This setting has an influence on two factors. On one hand, in thermal transfer mode the printer works at a lower heat level compared to the direct thermal printing mode. On the other hand, the ribbon sensor is only active in thermal transfer printing mode.



NOTICE !

This parameters can also be changed via software. For different print jobs it is recommended that you carry out all changes in the software.

Default Setting : Transfer print ON

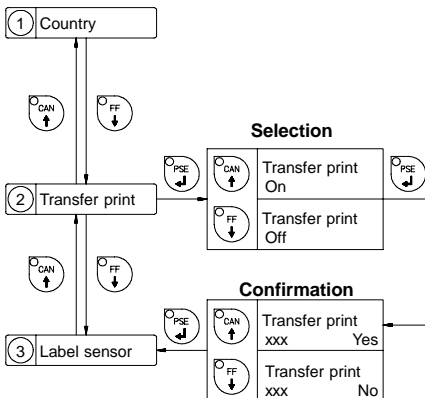


Fig. 9 c Set "Transfer print" parameter

Label Sensor

A8 offers two variants to recognize the front edge of the label. Mostly the label edge sensor photocell can be used in the see-through mode (gap sensor). This sensor evaluates the difference in opacity between the label and the gap between labels. In certain cases (e. g. pre-printed continuous paper) the label edge can also be recognized through reflective marks on the bottom side of the material (see chapter Label / Tag Media Specifications).



NOTICE !

This parameter can also be changed via software. For different print jobs it is recommended that you do the changes in the software.

Default Setting : Gap sensor

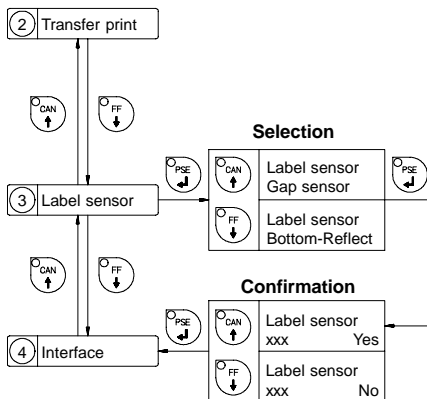


Fig. 9 d Set "Label sensor" parameter

Interface

The settings of this parameter determine the method of communication between printer and computer.

Therefore, the type of interface and, if necessary, the baud rate, and the protocol or network address can be specified.

Interfaces to select :

- RS-232 : Serial standard connection, available at every computer
- RS-422 : Serial connection to transfer data via a long distance requires an appropriate interface on the computer
- RS-485 : Serial connection for network requires an appropriate interface on the computer
- RS-232/485 Host : make it possible to install a RS-485 network with several **A8** or **Apollo** printers via RS-232 interface of the PC

Additional to the selection :

- Centronics : The parallel interface in addition to the selected serial interface is **always active**.

The parameter setting cannot be changed via software.

- Default Setting : Interface RS-232,
baud rate 9600,
protocol RTS/CTS
(network address A)

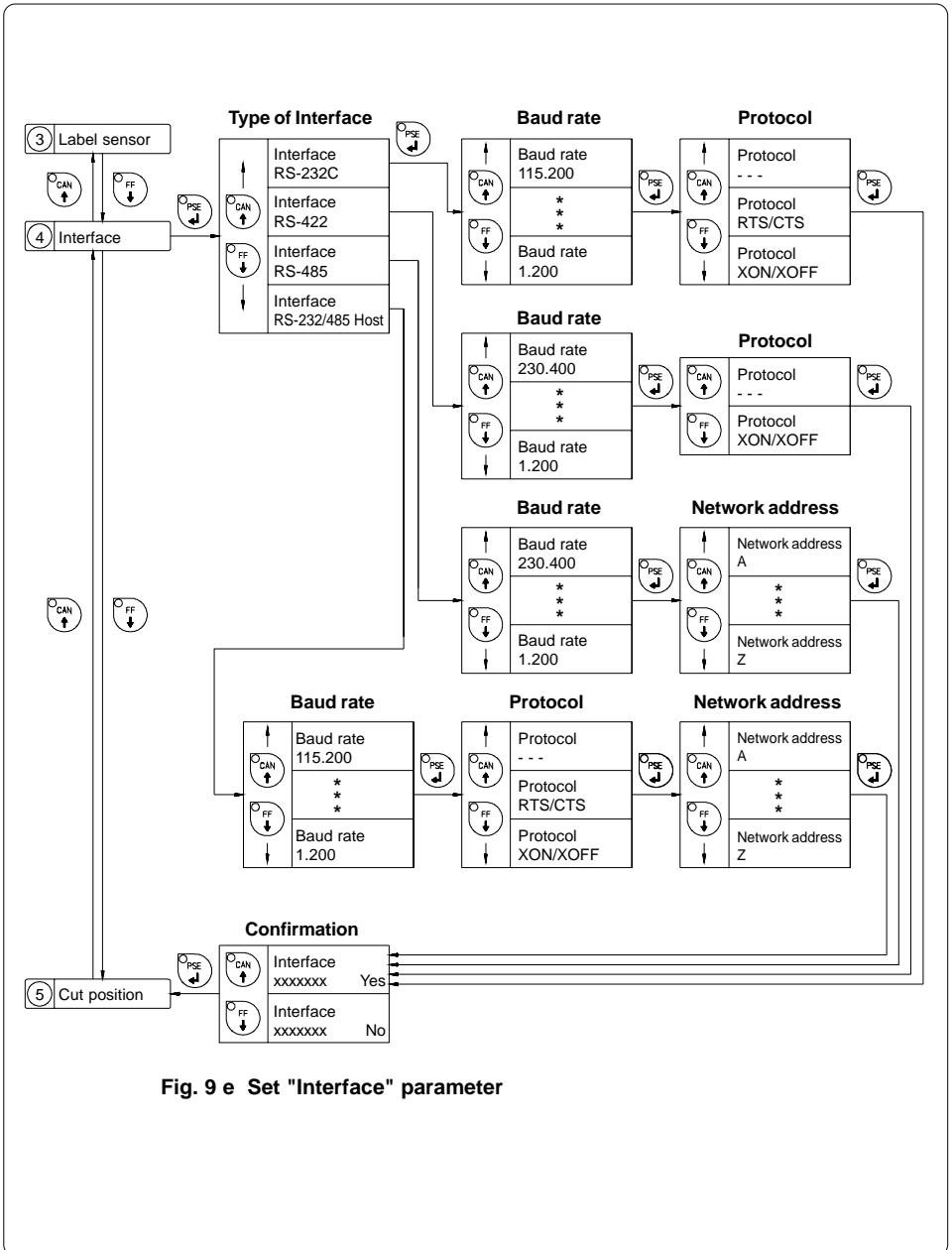


Fig. 9 e Set "Interface" parameter

Cut Position

Using the optional cutter, the "Cut position" parameter allows you to alter the distance between the cutting edge and the rear edge of the label. Normally, with the initial offset value of "0" the cutting edge is in the middle of the gap between two labels. Adjustments have to be carried out only once after a cutter has been installed (range from -0.39 to $+0.39$ in or -9.9 mm to $+9.9$ mm). If the cut position value is positive, the media will be advanced before it is cut, that means there is a greater distance between the cutting edge and the rear edge of the label.



NOTICE !

It is recommended to carry out changes for different print jobs in the software (e.g. if the cut is not wanted in the middle of the gap). The software provides a second value for individual adjustments.

Any front panel value and software command value are totaled together for printing.

The current field to be changed is flashing in the display.

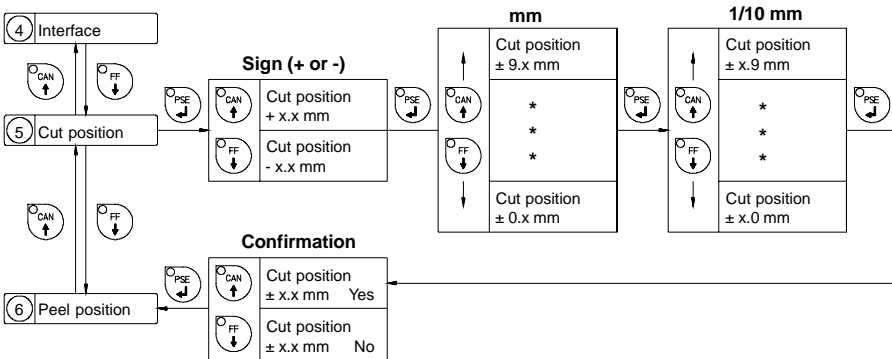


Fig. 9 f Set "Cut Position" parameter

Peel Position

Using the optional present sensor, the "Peel position" parameter allows you to alter the position of the dispensed label relative to the dispense edge. Normally, with the initial offset value of "0" the label is removed from the silicon liner until only a .08 in or 2 mm wide part of the label still sticks to the liner. Adjustments have to be carried out only once when a present sensor is being installed (range from -.39 to +.39 in or -9.9 mm to +9.9 mm). If the peel position value is positive, the label will be removed further leaving a smaller portion sticking on the liner.

The setting of this parameter will affect the parameter "Tear-off Position". If this function is active, an additional feed forwards take place after completion the print job. This makes it possible to cut off the last label at the tear-off plate. If the value of the peel position is "0" the cut edge should be in the middle of the gap between the labels. When setting the peel position the tear-off position may be adjusted.



NOTICE !

It is recommended to alter the parameter for different print jobs via software (e.g. if an applicator is used and, therefore, the labels have to be removed completely). The software provides a second value for individual adjustments.

Any front panel value and software command value are totaled together for printing.

The current field to be changed is flashing in the display.

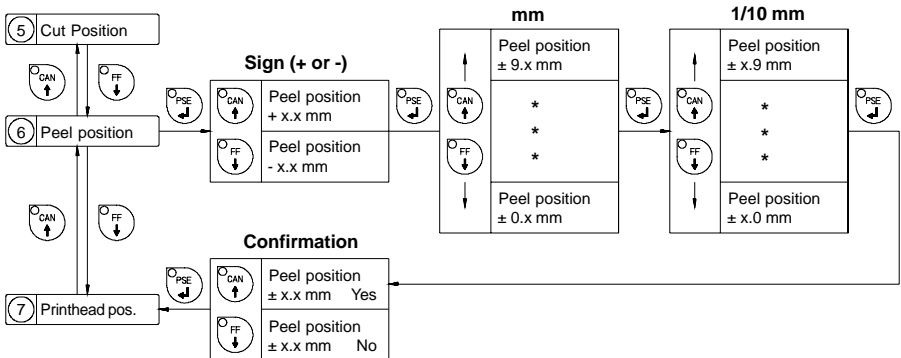


Fig. 9 g Set "Peel position" parameter

Printhead Position

The "Printhead position" parameter defines the location of the print image on the label in x- and y-direction. The parameter should only be altered if you are using the same label formats on several printers, and you find the print image located differently on the labels when they were printed on another printer.

X-Offset

With this parameter the location of the print image can be shifted across to the label path. It is possible to set a shifting until .39 in (9.9 mm) outward in the Setup.



NOTICE !

The difference between the width of the printhead and the width of the label set in the software may not be smaller than the X-offset value set in the setup. In this case the shifting is only applied for the difference value. This limitation is necessary to guarantee the printing of the whole label.

The setting of a negative X-offset value (shifting the print image inward) is not possible.

Y-Offset

With this parameter the location of the print image can be shifted in the direction of the label path (range from -.39 to +.39 or -9.9 mm to +9.9 mm). When the offset values are positive the printing in the direction of the label path starts later.



NOTICE !

A change of the printhead position value influences the tear-off and the cut position. For that reason alter the values of the parameters "Peel position" and "Cut position" by the same amount as the "Printhead position" but in the opposite direction.

Adjustments for various print jobs may also be carried out via software which provides an additional offset value. There are additional offset values in x- and y-direction.

Any front panel value and software command value are totaled together for printing.

The current field to be changed is flashing.

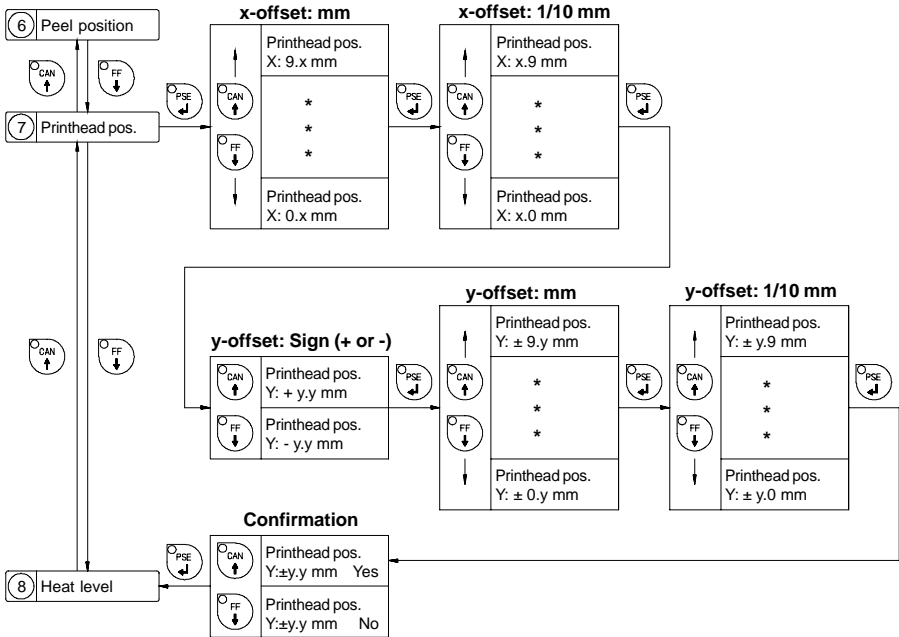


Fig. 9 h Set "Printhead Position" parameter

Heat Level

The parameter "Heat level" enables the printer to adapt to possible differences in the thermal properties of different printheads.

The parameter scale is from -9 to +9.

A previous adjustment has already been carried out in the factory.

In the event of replacing the printhead, the setting possibly has to be adjusted.



NOTICE !

To adjust the printer to current print jobs, it is recommended to alter the heat level parameter via software (e.g. for different material and speed).

Any front panel value and software command value are totaled together for printing.

The current field to be changed is flashing in the display.

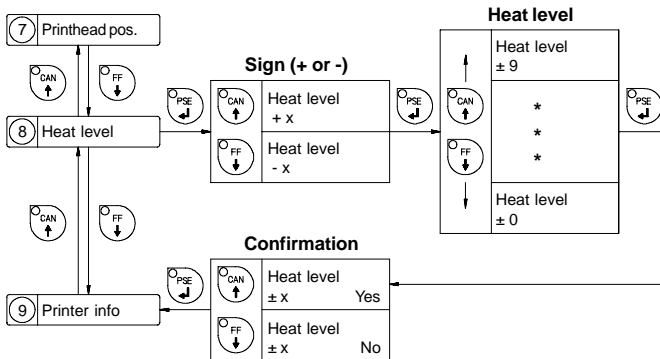


Fig. 9 i Set "Heat level" parameter

Printer Info

The "Printer info" parameter provides information about the firmware. Furthermore, information about the cumulative length of printed media as well as the number of operating hours are shown.

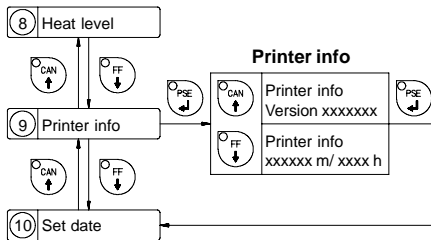


Fig. 9 k Printer info display


Set Date

The "Set date" parameter allows you to change the system date of the **A8**.

The date format shown depends on the selected "Country" parameter. Regardless of the format, the order of data to be changed (day - month - year) always follows the same routine as shown below (figure 9 I).

The date range available is from January 1, 1970, to December 31, 2069.

If an invalid date entry is made, the display shows "Invalid input!"

After pressing the  key the parameter may be set again.

Date changes in the software will only influence the date on the printout but not affect the system date as stored in the setup.

The current field to be changed is flashing in the display.

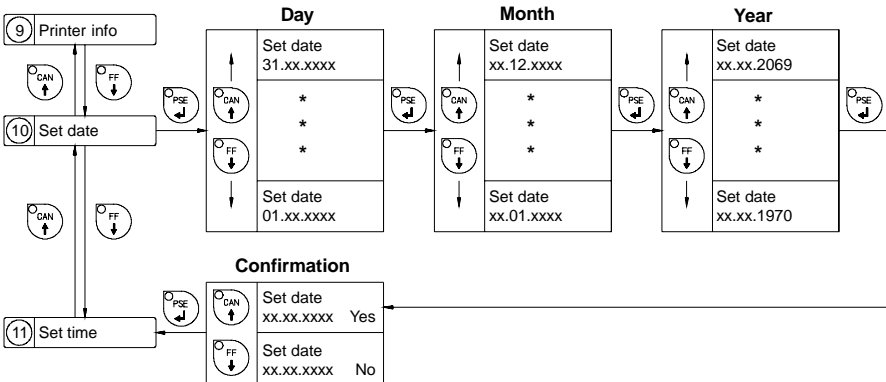


Fig. 9 I Set system date

Set Time

The "Set time" parameter allows you to change the system time of the **A8**.

The time format shown in the display depends on the selected "Country" parameter.

Time changes in the software will only influence the printout but not affect the system time of the printer. The changed time will neither be shown in the display nor be stored in the printer setup.

The current field to be changed is flashing in the display.

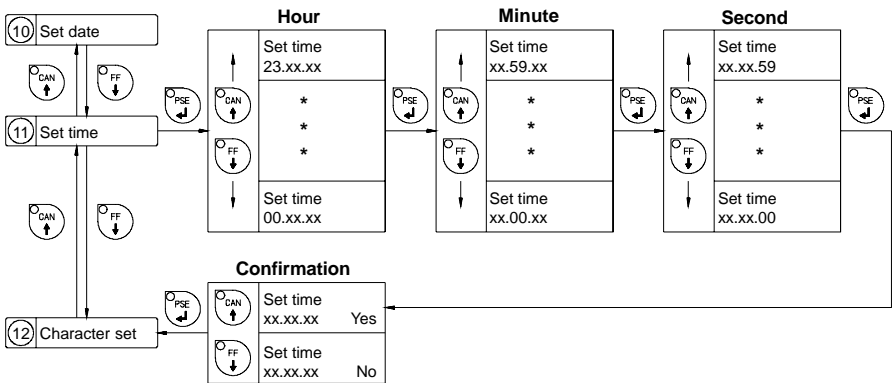


Fig. 9 m Set system time

Character Set

Before starting to operate the **A8**, the "Character set" of the printer should be adapted to the character set of the computer.

Adjustment via software is not possible, however, for characters which are not included in the selected fonts the Unicode character table can be used.

The character set tables are included in Appendix A.

Default Setting : Windows 1252

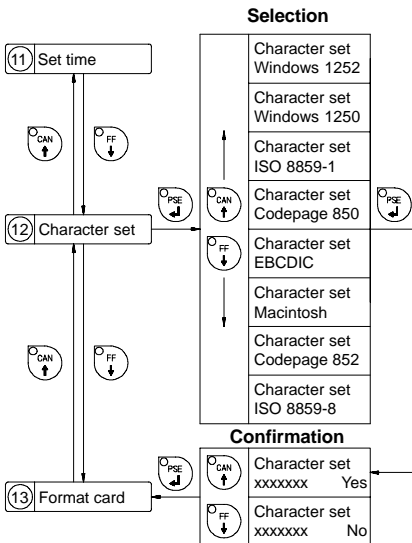


Fig. 9 n Set "Character set" parameter

Format Card

The "Format card" facility may be used to delete all stored data from a memory card, for instance PC card, PCMCIA card, etc. (optional). The delete process will format the card. Therefore, this option may also be used to prepare new memory cards for operation.

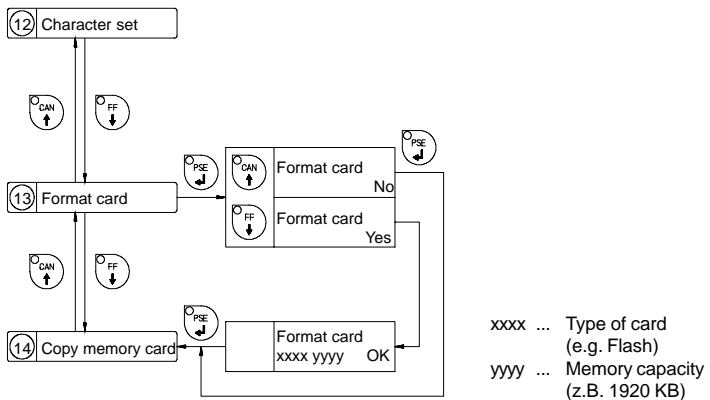



Fig. 9 o Delete / Format a memory card

It will take several seconds to delete files and format a high capacity memory card. During this time the symbol  is shown in the right hand corner of the display.

If the procedure has been started without having a card installed the display will show "No card".

Pressing the  key will skip to the following parameter.

Copy Memory Card

The "Copy memory card" facility may be used to copy information from one memory card, for instance PC card, PCMCIA card, etc., onto another one.



NOTICE !

Before starting the duplication, the source card has to be installed.

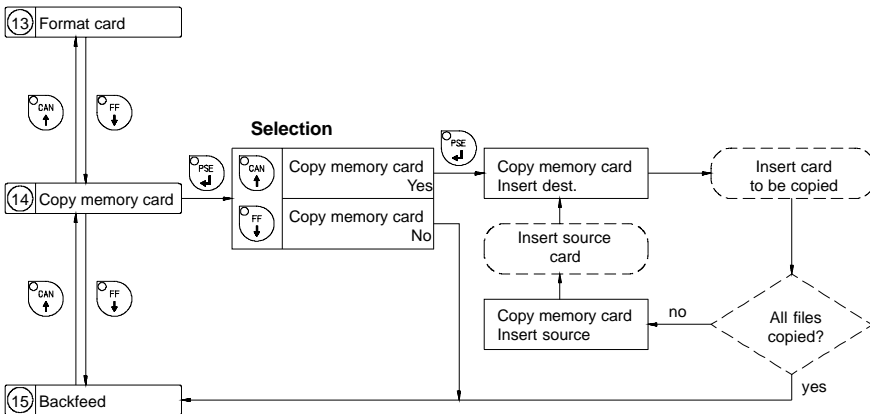


Fig. 9 p Copy memory card

The duplication is carried out file by file. This allows the usage of memory cards with different capacities.

When the duplicate card cannot store any more information the display shows "Card full".

If data with a capacity of more than 1Megabyte has to be copied, the duplication process will be divided into several cycles. Alternately, the printer display will ask to insert either the source card or the destination card.

Backfeed

In the cut and present mode, the material will be stopped in a position where the front edge of the following label has already been forwarded over the print line. The **A8** will carry out a backfeed of the label material from its cut and peel position to the print line. Thus, the next label can be printed all at once. The backfeed will be performed independent of the label design if the parameter is set on "always". If the setting is on "smart", the backfeed will only be performed if the front label is in its cut and peel position and the **A8** has not yet received all of the data for printing the following label. Otherwise, the print of the second label will be started, but only completed after the first one has been picked up. Smart backfeed can cause flaws in the printed image.



NOTICE !

If the printer will be operated with the setting "smart", there can be a small white gap at the position the print is broken. If there is an important information at this position it is recommended to choose the setting "always".

Default Setting : smart

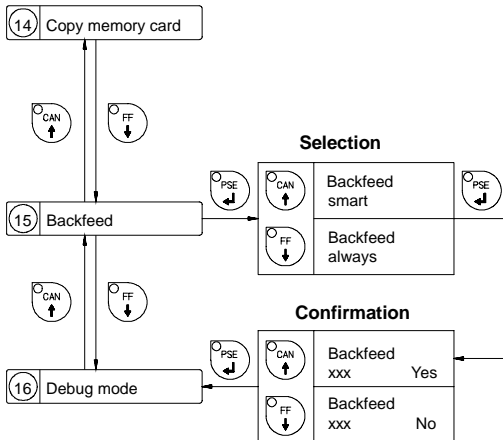


Fig. 9 q Set "Backfeed" parameter

Debug Mode

The "Debug mode" represents a tool for the firmware programmer. It will help to recognize faults and their possible sources beyond standard error messages.

For standard use of the printer, the parameter should always be switched OFF.

Default Setting : Debug mode OFF

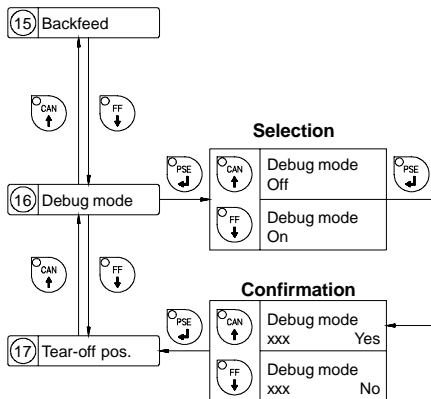


Fig. 9 r Set "Debug mode" parameter

Tear-off Position

If the "Tear-off position" is active, an additional feed forward will take place after completion of the print job. This makes it possible to tear off the last label at the tear-off plate. After starting a new print job, first the label material will be fed back until the front edge of the first label is located at the print line. If the parameter is OFF, the label dispense stops immediately after the last label has completely passed the print line.

Default Setting : Tear-off position OFF

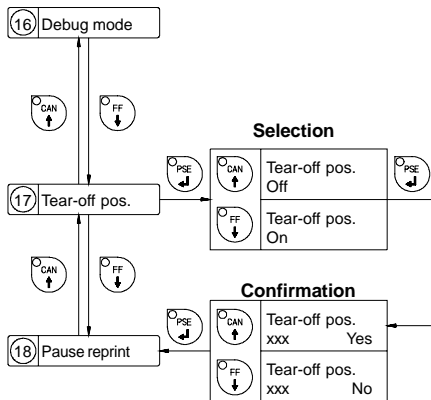



Fig. 9 s Set "Tear-off position" parameter

Pause Reprint

After completion of a print job, the print of the last label may be repeated by pressing the  key.

This function may be switched ON or OFF in the "Pause reprint" parameter of the setup mode.

Default Setting : Pause Reprint ON

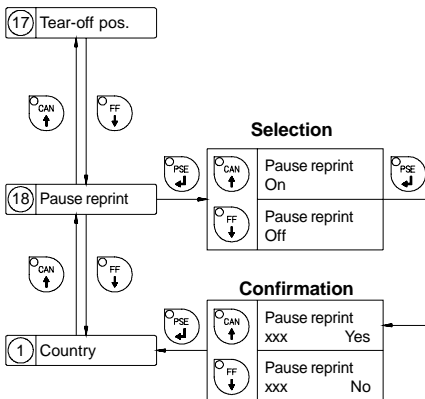


Fig. 9 t Set "Pause Reprint" parameter

10. Self Test / Test Print

Start of Test Print


To prepare a test print, load media (labels or continuous paper) which extends over the entire print width of the **A8**.

If you want to perform the test print in thermal transfer mode, also use transfer ribbon of the maximum width.



NOTICE !


During test print, the A8 will not sense any label gaps. The length of the printout will be about 8 in (200 mm). It depends on the number of loaded fonts. Continuous media would be best suited for test prints, otherwise, a normal sheet of paper can be used in thermal transfer mode, too.

To initiate a self test printout, press the  key when switching on the printer and keep it pressed down until the system test is completed. The display shows "Test print", and the **A8** will print an internal test sample which contains a variety of information about the configuration of the printer as well as the results of the internal test.

The test printout can also include a range of hardware errors which have occurred previously, even if they have disappeared again. This information is important for service purposes and can only be deleted by Technical Support.

The information in the printout is also useful for checking the print quality, such as differences in the blackness left/right, missing ink dots, etc. It is recommended you carry out a print test immediately after receiving the printer.

After completing the test print, the **A8** will run the system test once again. Then, the printer proceeds to ONLINE mode.

To cancel the test print press the  key.



NOTICE !

The self test can also be carried out with the command "t" from the ONLINE mode (see Programming Manual Apollo).

Explanation of the Self Test Printout

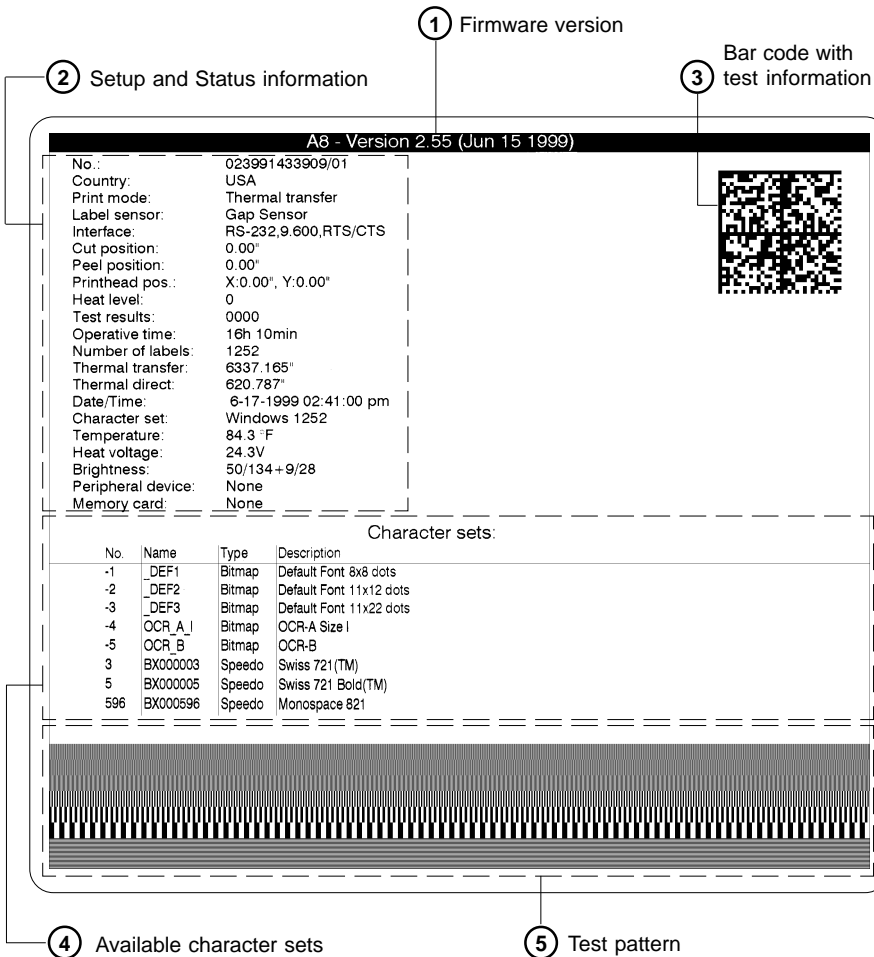


Fig. 10 Self test printout

On the following pages you will find detailed information about the contents of the test printout.

① Firmware Version

Type of device, number and date of the firmware version.

② Setup and Status Information

No.	: Series no. and revision stand of the printer-PCB
Country	: Setting of the "Country" parameter
Print mode	: Setting of the "Transfer print" parameter
Label sensor	: Setting of the "Label sensor" parameter
Interface	: Setting of the "Interface" parameter
Cut position	: Setting of the "Cut position" parameter
Peel position	: Setting of the "Peel position" parameter
Printhead pos.	: Setting of the "Printhead position" parameter
Heat level	: Setting of the "Heat level" parameter
Test result	: Result of the system test Any errors will be shown coded as four digit hexadecimal numbers (see table 10). (for fault correction see appendix C)
Operative time	: Cumulative operating time of the printer
Number of labels	: Cumulative amount of printed labels
Thermal transfer	: Cumulative length of printed material in thermal transfer mode
Thermal direct	: Cumulative length of printed material in direct thermal mode
Date/Time	: Setting of system date and system time
Character set	: Setting of the "Character set" parameter
Temperature	: Printhead temperature
Heat voltage	: Current value of heat voltage (approx. 24V)
Brightness	: Service information on brightness used at gap sensor and at transfer ribbon sensor
Peripheral device	: Type of device connected to peripheral port
Memory card	: Type and capacity of memory card (PCMCIA/PC card)

Error code		Type of error
HEX	DEC	
0001	1	dRAM fault
0002	2	dRAM multiplexer fault
0004	4	A/D converter fault
0008	8	FPGA fault
0010	16	sRAM fault
0020	32	
0040	64	Cutter fault
0080	128	ROM fault
0100	256	Voltage error
0200	512	
0400	1024	
0800	2048	
1000	4096	
2000	8192	Printhead error
4000	16384	Wrong board revision
8000	32768	Setup invalid

For the test result, the codes of occurred errors are added up to a four-digit hexadecimal number to determine the final test result.

For example : A/D converter fault + Printhead error : Test result = 0004

Table 10 Self test - Test result error code

③ Bar Code with Test Information

This special bar code is designed for use by Technical Service. It contains compressed information about the current configuration of the **A8** as well as previously occurred faults.

④ Available Character Sets

- No.** : Identifikation No. of the font for programming
(**command T**)
- Name** : Name of font used for internal storing
Name of command (query sequence) **q...CR**
- Type** : Method of generating the characters
(see programming of **command T**)
- Description** : Font description (size, type)



⑤ Test Pattern


The test pattern field contains seven areas with different stroke patterns. With these patterns a range of print faults can be analyzed. The printout shows errors such as varying print intensity which indicates the printhead being misadjusted or dirty, or missing dots causing vertical white lines.

11. Printer Info Display

Viewing the Printer Info Display

A8 offers a convenient option for retrieving and viewing information about the printer configuration and occurred hardware problems without using setup mode or test print mode.

After switching on, or completing the system test or print jobs, the printer is in ONLINE mode. Pressing the  key will switch into OFFLINE mode where the display shows the status information on five different pages which are accessible by repeatedly pressing the  key.

The printer info display can be exited by pressing the  key (back into ONLINE mode).

Definition of the Printer Info Display

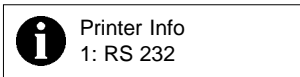


Fig. 11 a Printer info display 1

On the first page, the selected serial interface (RS-232, RS-422, RS-485, RS232/485Host) will be shown.

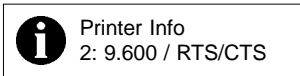


Fig. 11 b Printer info display 2

The second page contains information about the fixed baud rate and the handshake or protocol (RTS/ CTS, XON/OFF or - - -) of the serial interface.

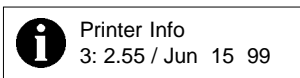


Fig. 11 c Printer info display 3

On the third page, the version and the date of the firmware are shown. The example as shown in figure 11c represents the firmware version No. 2.55 created on June 15, 1999.



Printer Info
4: 0000 / 3 / 5 / 03

Fig. 11 d Printer info display 4

The fourth page of the info display contains coded informations on the configuration of the printer and the internal test results in the format "xxxx / y / z / R".

- xxxx Result of the system test
The four-digit hexadecimal number contains (coded) hardware faults. The figure is the same as in the printout of the self test. For fault encoding see code table 10 in chapter 10 "Self Test". The example, as shown in figure 11d, displays "0000" indicating that there have been no hardware faults.
- y Type of peripheral device
0 : Cutter
1 : Present sensor
2 : Applicator
3 : None fitted
4 : External print start
For example, figure 11 d : "3" - No peripheral device connected.
- z Configuration setting Transfer print / Label sensor
The value of z results from adding the code numbers for selected settings.
Transfer print : 1 = ON
 0 = OFF
Label sensor : 8 = Bottom-Reflect
 4 = Gap sensor
For example, figure 11d : "5" - Transfer print ON (1) + Gap sensor (4).
- R This value represents the state of modification of the hardware (PCB).



Printer Info
5: Windows 1252

Fig. 11 e Printer info display 5

The last of the info pages shows the name of the character set as selected in setup.

12. Monitor Mode / ASCII Dump Mode


If programming directly, the monitor mode provides a method to print control sequences which were received at the interface. The commands will be printed in text format depending on the selected character set. Error messages will be printed directly behind the fault, e.g. for unknown commands. In monitor mode, the **A8** will not recognize gaps between labels nor control the ribbon feed.





NOTICE !

The font used for printouts in monitor mode is suitable to send by facsimile. For questions or future reference, print and retain one copy of the label format for each label printed.

Start of Monitor Mode / ASCII Dump Mode

To start the monitor mode, press the  key while switching on the printer, and keep it pressed down until the system test is completed. The display shows "ASCII Dump Mode".

To cancel ASCII Dump mode, press the  key.

In monitor mode, the print of data will be started after every four lines of data received. Therefore, in some cases, the last lines of the label have to be retrieved by pressing the  key.

Representation of the Control Characters

The control characters (ASCII Code 00 ... 31) as shown in monitor mode printouts are as follows.

Code DEC | HEX	Druck	Code DEC | HEX	Druck	Code DEC | HEX	Druck	Code DEC | HEX	Druck
00 | 00	N _{UL}	08 | 08	B _S	16 | 10	D _{LE}	24 | 18	C _{AN}
01 | 01	S _{OH}	09 | 09	H _T	17 | 11	D _{C1}	25 | 19	E _M
02 | 02	S _{TX}	10 | 0A	L _F	18 | 12	D _{C2}	26 | 1A	S _{UB}
03 | 03	E _{TX}	11 | 0B	V _T	19 | 13	D _{C3}	27 | 1B	E _{SC}
04 | 04	E _{OT}	12 | 0C	F _F	20 | 14	D _{C4}	28 | 1C	F _S
05 | 05	E _{NQ}	13 | 0D	C _R	21 | 15	N _{AK}	29 | 1D	G _S
06 | 06	A _{CK}	14 | 0E	S _O	22 | 16	S _{YN}	30 | 1E	R _S
07 | 07	B _{EL}	15 | 0F	S _I	23 | 17	E _{TB}	31 | 1F	U _S

Table 12 Representation of the control characters in monitor mode

Example of ASCII Dump Mode

The following figures show the "normal" appearance of a printed label, and the appearance of the same label when its commands are printed in ASCII Dump mode.

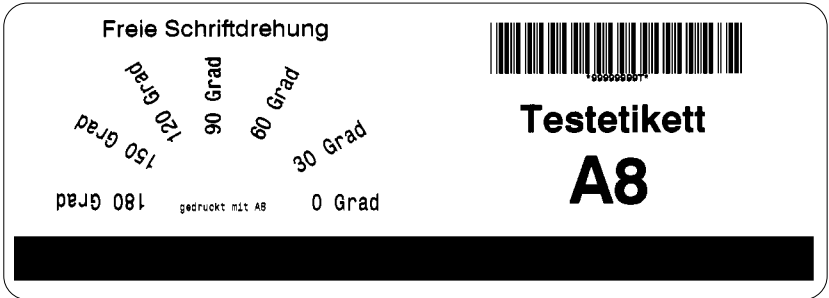


Fig. 12 a "Normal" label

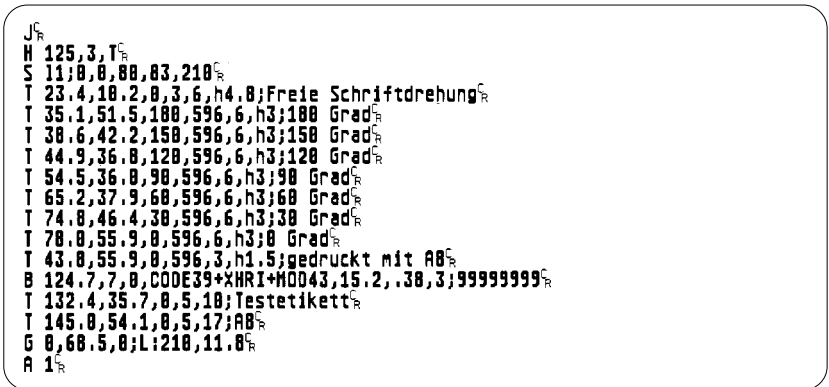


Fig. 12 b The same label as above printed in ASCII Dump mode

13. Options

External Rewinder

To handle large print jobs, the external rewriter R220 is available which allows you to rewind complete rolls of label material after printing.

Delivery Contents

The rewriter is packed separately from the printer.



NOTICE !

Please keep the original packaging in case the rewriter must be returned !

The following components are included in the package :

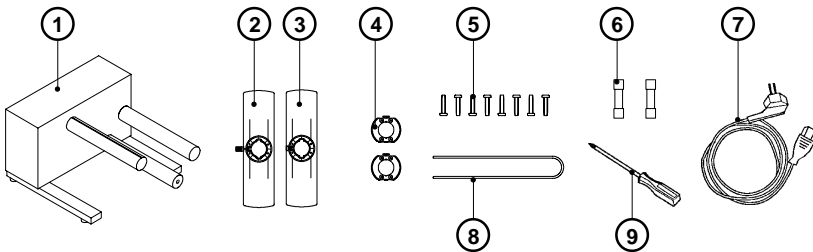


Fig. 13 a Package contents of the external rewriter

- 1 - Rewinder
- 2 - Flange (with knurled screw)
- 3 - Flange (with Phillips screw)
- 4 - 2 Rewind axle adapter with a diameter of .3 in or 75 mm
- 5 - 8 Screws
- 6 - 2 Fuses T 1,6 A (for use at 115 V)
- 7 - Power cable
- 8 - Clamp
- 9 - Phillips screwdriver

Safety Instructions



The printer must be powered OFF before mounting the rewinder. Before connecting the rewinder to the power supply, make sure that the voltage selected on the power module corresponds with the supply voltage !

If it differs, alter the setting accordingly.

During operation, the rotating axle is openly accessible ! Therefore, keep long hair, loose clothes, and jewelry away from the moving parts !

The rewinder starts operating as soon as it is switched ON ! Risk of injury from moving parts !

Selecting the Method of Rewinding

The external rewinder allows rewinding of labels in both ways outside and inside winding.

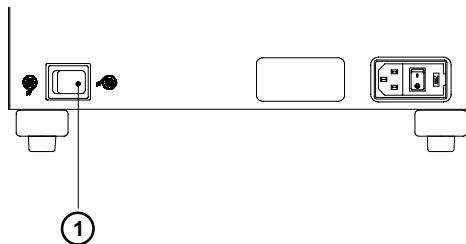




Fig. 13 b Set the method of rewinding

Set the switch (1) to the required method of rewinding:

-  - Rewind with the labels on the outer side of the silicon liner
-  - Rewind with the labels on the inner side of the silicon liner

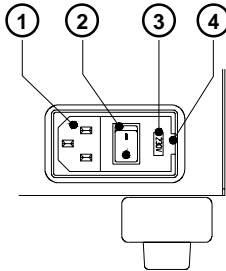
Connecting the Rewinder to the Power Supply

The rewinder operates with a supply voltage of 230V/ 50Hz or 115V/ 60Hz.



CAUTION !

Before connecting the rewinder to the power supply, make sure that the voltage selected on the power supply module is the same as your main power supply ! Besides take care that the power switch (2) is in position "0" (OFF).



- 1 - Power supply connector
- 2 - Power switch
- 3 - Voltage selector
- 4 - Cover

Fig. 13 c Power supply module of the external rewinder

The current voltage setting of the power module is visible in the lid window (3). To alter the voltage setting open the cover (4) and remove the voltage selector (3).



CAUTION !

If you have changed the operating voltage of the rewinder you need to replace the fuses.

230V - 2 x T 800mA

115V - 2 x T 1,6A

By delivery of the rewinder the fuses for the selected voltage are installed. The other fuses are supplied in the accessories package. Slide the voltage selector back into the power supply module so that the correct voltage is visible in the lid window (3).

Connect the rewinder to a **grounded** outlet using the power cable supplied in the accessories package.

Rewinding Directly onto the Rewind Axle

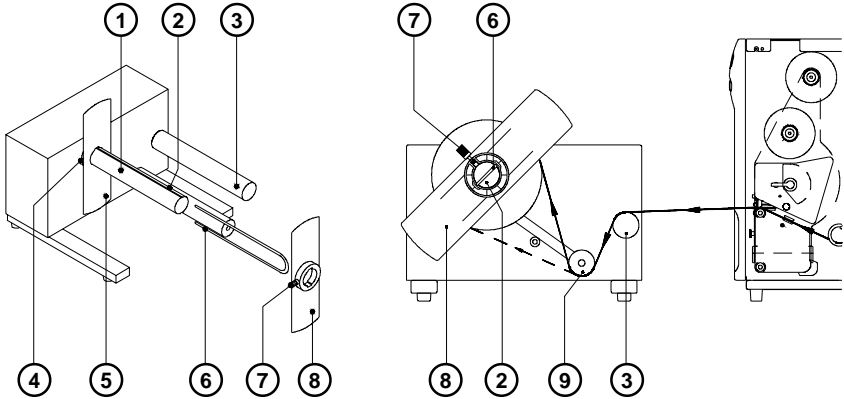


Fig. 13 d Rewinding directly onto the rewind axle

1. Slide the flange (5 / with Phillips screw) at the rewind axle (1). The side of the flange with the screw must point to the casing. Justify the gap in the flange to the groove (2) of the rewind axle. Tighten the screw (4) in the flange.
2. Feed the label strip over the guide bar (3) and under the roller (9) to the rewind axle (1). Make sure that it lays tight at the flange (5).
3. Press the label strip with the clamp (6) into the groove (2) of the rewind axle. Pay attention to the selected direction of rewinding (full line shows the path of outside roll labels).
4. Slide the clamp (6) into the gaps of the flange (5).
5. Slide the flange (8 / with the knurled screw) at the rewind axle. The side of the flange with the screw must point to the outside.
6. Move the flange (8) in such a way, that it lays smooth at the label strip. The label strip must be moved between the flanges slightly.
7. Tighten knurled screw (7) at the flange (8).
8. Position the rewinder in relation to the printer so that the label strip runs cleanly and without hindrance from the printer to the rewinder.
9. Switch ON the rewinder at the power switch.



CAUTION !
When switched ON, the rewinder immediately starts rotating !

Rewinding onto 3 in (75 mm) Cardboard Roll

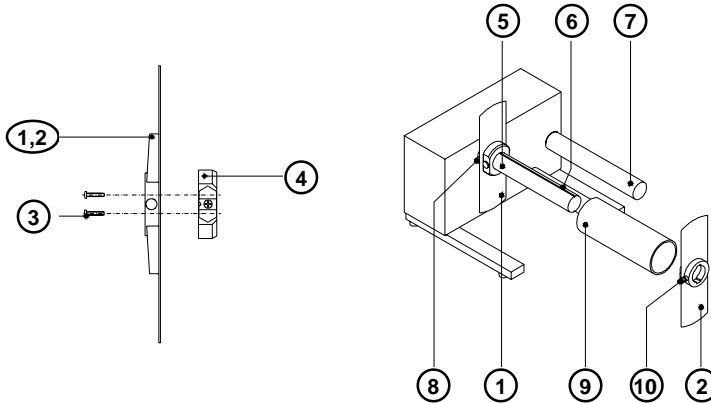


Fig. 13 e Rewinding onto 3 in (75 mm) cardboard roll

1. Attach the two adapters (4) onto each of the two flanges (1, 2) using the screws (3) which are included in the delivery contents.
2. The cardboard roll (9) which serves as the core of the rewind roll should be approx. .04 in (1 mm) wider than the label strip.
3. Slide the flange (1 / which is fitted with a Phillips screw) onto the rewind axle (5) with the collar of the flange facing towards the rewinder casing. Secure the flange onto the axle by tightening the Phillips screw (8).
4. Slide the cardboard roll (9) onto the rewind adapter mounted on the inner flange (1).
5. Slide the flange (2 / fitted with a knurled screw) onto the rewind axle so that the rewind adapter locates inside the cardboard core.
6. Tighten the knurled screw (10) at the flange.

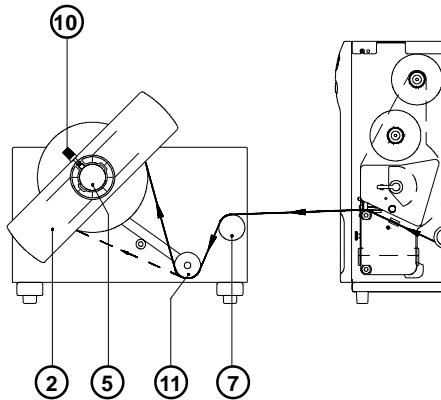


Fig. 13 f Rewinding onto 3 in (75 mm) cardboard roll

7. Feed the label strip over the guide bar (7) and the roller (11) until it is long enough to reach the cardboard core (9).
8. Taking note of the direction of rewinding, use an adhesive strip (or a label) to affix the end of the strip to the cardboard core. The illustration (fig. 13 f) shows the arrangement for rewinding with the label stock on the outside of the silicon liner.
9. Position the rewinder in relation to the printer so that the label strip runs cleanly and without hindrance from the printer to the rewinder.
10. Switch ON the rewinder at the power switch.



CAUTION !
When switched ON, the rewinder immediately starts rotating !

Present Sensor

The optional **present sensor** allows for on-demand label dispensing. That means, the labels are removed from the silicon liner immediately after printing, and then available in a dispense position ready for further processing (present mode). The present sensor (2) consists of two components, the dispense edge (9) and the present sensor photocell (7). The presence of a label (8) in dispense position is observed by the photocell. Through its connection to the peripheral port of the **A8**, the signal pauses the print of the next label until the label in the dispense position is removed. To activate this function the printer has to be switched into the present mode through software.



NOTICE !

When editing or creating labels in demand mode, make sure that the part of the label which lies directly underneath the photocell is only colored (black) to a maximum of 50%. Higher blackening / density print may cause malfunctions of the sensor.

Mounting the Present Sensor

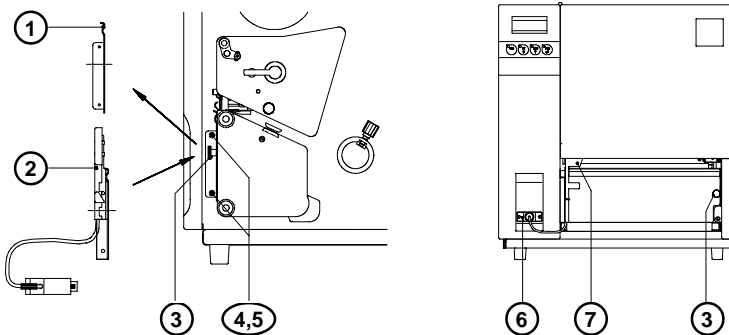


Fig. 13 g Mounting the present sensor

The **A8** is generally shipped with the tear-off plate (1) mounted. When operating in dispense mode, the tear-off plate has to be replaced with the present sensor (2) :

1. Loosen the knurled screw (3) completely.
2. Remove the tear-off plate (1) from the mounting holes (5) of the mounting plate of the printer.
3. Guide the present sensor (2) with the bolts (4) into the holes (5) of the mounting plate. Attach the present sensor with the knurled screw (3) at the threaded holes in front of the printer.
4. Connect the cable (6) of the present sensor (7) to the peripheral port of the **A8**.

Inserting the Labels for Peel-off

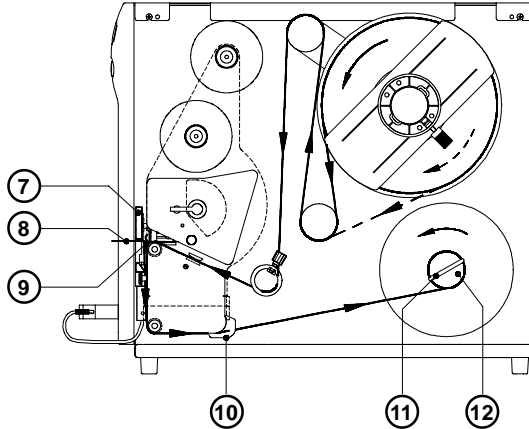



Fig. 13 h Inserting the labels for peel-off

1. Put in the labels according to the description "Loading Labels" for the tear-off mode (see chapter 6). Feed the label strip as far as possible through media feed roller and printhead. It is particularly important to ensure that the media strip is long enough to reach the internal rewriter (see fig. 13 h).
2. Slide the media guide (10) to their outermost position.
3. Remove the clamp (11) from the internal rewriter (12).
4. Feed the label strip past via dispense edge (9) to the internal rewriter (12).
5. Attach the label strip with the clamp (11) into the grooves of the internal rewriter (12).
6. Rotate the internal rewriter counterclockwise to tighten the paper.
7. Slide the media guide (10) to the edge of the label strip.
8. Press the  key to synchronize the paper running.



NOTICE !

If you do not use the printer for an extended period of time, lift the printhead to avoid possible flattening of the print roller.

Cut / Peel-off Adapter

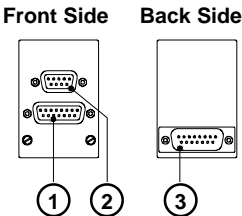
By using the cut / peel-off adapter it is possible, to operate the **A8** with cutter assembly or present sensor in a special mode, where the print of one label can be started by an external start signal.

In the peel-off mode, after removing a label from the peel-off position the use of the adapter avoids the immediate print of the next label.

In the cut mode the print job can be divided in single prints.

In both cases, a label will only be printed, if it is required (cut / peel-off on demand).

Connectors



- 1 - 15-pin SUB-D connector for cutter assembly or present sensor
- 2 - 9-pin SUB-D connector for an external release switch
- 3 - 15-pin SUB-D plug to connect the adapter to the peripheral port of the printer

Fig. 13 i Connectors of the cut / peel-off adapter

Pin assignment of the 9-pin SUB-D connector

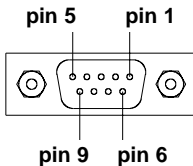


Fig. 13 k 9-pin SUB-D connector of the cut / peel-off adapter

- Pin 1/2 - Optocoupler inputs. A short impuls of 24V= at the pins (+ at pin1, - at pin2) releases the print of one label (external start signal).
The start impuls has to be shorter than the print time of the label. The current is internally limited to 10 mA.
- with present sensor : The print is released, if there is no label in the presentation position
- with cutter assembly : The print including the following cut is released

Pin 3/4 - Pin 3/4 - Transistor outputs of an optocoupler (pin3 - collector, pin4 - emitter). If the adapter is used with the present sensor, the state of the transistor shows the presence of a label in the peel-off position. If there is a label, the transistor is blocked so that no current can flow between the pins.



CAUTION !

The current at the pins 3 and 4 has to be limited externally to 10mA. Otherwise the output will be destroyed.

Pin 5/6 - Pin 5 : Internal operating voltage +24V ; Pin 6 : Ground
The operating voltage can be used to generate the external start signal with a switch.
The use of this voltage for other purposes is prohibited.

Pin 7/8/9 - n.c.

Inputs and outputs are designed with optocouplers, i.e. they are potential free in relation to the A8. The isolation voltage is 500 V. The voltage at the outputs should not be higher than 30V.

Installation of the Cut / Peel-off Adapter

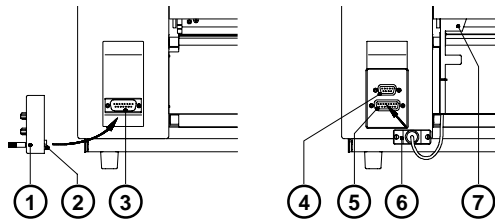


Fig. 13 I Installation of the cut / peel-off adapter

1. Switch OFF the printer.
2. Connect the 15-pin SUB-D plug (2) at the back side of the cut / peel-off adapter (1) to the peripheral port (3) of the printer.
3. Mount the cutter assembly or the present sensor (7) and connect the cable (6) to the 15-pin SUB-D connector (5) at the front side of the cut / peel-off adapter.
4. Plug the cable of the external release switch into the 9-pin SUB-D connector (4).
5. Insert the labels and the transfer ribbon.
6. Switch ON the printer.



NOTICE !

Make sure, that the external release switch is open (no voltage at pin 1 of the 9-pin connector) when the printer is switched ON.

7. Start a print job in the cut or peel-off mode.
8. Release the print of single labels by actuating the external switch.

Memory Cards

A8 offers the possibility for using memory cards to permanently save graphics, fonts, complete label formats, or database information.

Data transfer may be performed via interface.

It is recommended that you make backup copies in case of malfunction of the original cards.

PCMCIA version 2.1 compatible sRAM cards or Flash-EPROM cards could be used as memory cards. The maximum memory is 32 MegaByte.

Preparing the Memory Card

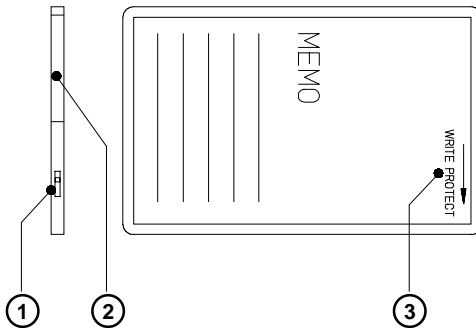


Fig. 13 m Write protection / Inserting the battery

The write protection of the card may be activated or deactivated by shifting the switch (1) located at the front side of the card. The interpretation of the setting may be read from an imprint (3) on the back of the card.

If you want to format the card or write on it, switch off the write protection.

For replacing or inserting the battery in sRAM cards refer to the instructions of the manufacturer. In case the battery has to be replaced, it is usually found in a slot (2) above the switch (1).

Installation of the Memory Card

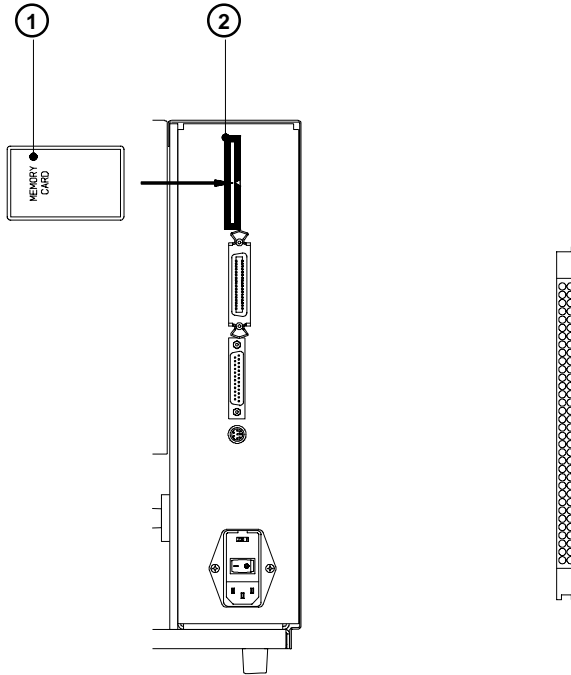


Fig. 13 n Installation of the memory card

Fig. 13 o Connecting side



NOTICE !

At the connecting side of the card there are different guides on the top and the bottom which make it impossible to insert the card incorrectly.

Insert the card (1) that way into the slot (2), that the one-rail guide is at the upper and the two-rail guide at the lower side of the card .

Formatting the Memory Card

For operation, the memory card first has to be structured internally in a certain way. Normally, memory cards are already pre-formatted in a suitable manner. If the card you are using is not formatted at all, the **A8** will bring up one of the messages "Unknown card" or "Structural err." Then, you may format the card using one of the following methods :

1. Formatting the card using the **A8** setup command "Format card" (see chapter 9).
2. Formatting the card using the **A8** interface and the printer command "Mf;name CR".

Writing on the Memory Card

There are also different methods to write onto a memory card.

The easiest way is to write on the card using the card drive of the **A8** and transfer the data via interface.

For saving a label, you need to put the label design commands into "brackets" consisting of "Ms"-commands :

Ms LBL;ABC	Command to save a file called "ABC"
J	|
H 100,0,T	|
S I1;0,0,68,71,108	| Contents of the file "ABC"
T 10,10,0,3,pt15;Memory card	|
A 1[NOPRINT]	|
Ms LBL	End of Save File command

After completing the commands the file "ABC" is stored on the card with all commands from "J" to "A" which describe the label format.

The parameter [NOPRINT] used within the command A line will suppress the print of the label while saving the file.

Whenever the file "ABC" is called up, exactly one label will be printed.

If you want to print the label in a variable quantity do not use the A command within the label description.






Printing from the Memory Card








NOTICE !

Using a memory card provides the opportunity to print without a connection of the A8 to a computer.

Follow the instructions below, after the card has been installed and the printer has been switched ON :

1. Switch the printer into OFFLINE mode by pressing the  key.
2. After pressing the  key, the file name of the first label saved on the card will be shown.
3. Using the  key and the  key, you may scroll up and down the contents of the card. Select one file and confirm it by pressing the  key.
4. If you have chosen a label with a set number of labels to print, the **A8** will instantly start printing.
5. For labels with a variable number of labels to print, the top line of the display shows "Number of labels", the bottom line shows "00001" with the first figure flashing (cursor).

Using the  key and the  key, the figure at the position of the cursor may be altered. By pressing the  key the cursor can be moved to the next figure. After confirming the last figure, the **A8** starts to print.

6. When it is necessary to input data by the user via control panel or external keyboard, the symbol  appears in the display.
To input variable content of a label via control panel use the same procedure as entering the number of labels. It is possible to input alphanumeric characters via the control panel.
7. To escape the selection of a label or the input of the number of labels you may press the  key.

The data saved on the card is also accessible via interface and computer.

External Keyboard

A8 offers the opportunity to connect an external keyboard or any other compatible input device (e.g. a bar code scanner) via its keyboard interface. Using the external keyboard facilitates the input of variable data during preparing a print job as well as the printing from memory card from the OFFLINE-mode. Input data requests as well as data received from the keyboard will be shown in the display of the **A8**.

All MF-2-compatible keyboards with PS/2-plug, supporting code set 3, are usable.



CAUTION !

The current consumption of the connected keyboard (e.g. a scanner) may not exceed 150 mA.

Connection the external keyboard

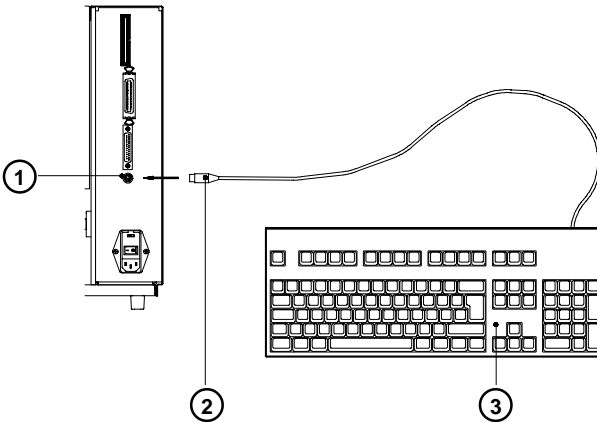


Fig. 13 p Connection the external keyboard

1. Switch OFF the printer.
2. Connect the cable (2) of the keyboard (3) to the connector (1) of the keyboard interface at the rear of the printer.
3. Switch ON the printer.

Key Assignment

The **A8** can easily be adjusted to the keyboard configuration of the particular country by using the setup parameter "Country". For each of the available settings the **A8** has a different table of key assignment, which, generally, complies with the assignment under Microsoft DOS.

The [ALTGR] key has no function. Therefore, all signs which are located on the right hand side of the key opposite of the normal characters (e.g. { } [] \) can be generated by pressing the [ALT] key.

A few of the other special signs (e.g. ~ ¨ x ÷) may also be generated the same way (see appendix A, table A-3a).

Other special characters (e.g. ñ ç œ) can be generated by inserting two characters one after the other, where the second input is a combination with the [ALT] key (see appendix A, table A-3b).

Some of the special characters cannot be shown in the display of the printer. In that case, the **A8** will use a character which looks similar to the required character.



NOTICE !

When using a scanner, the character set of the scanner has to be the same as used by the A8.

Special Key Functions

- | | |
|------------------------|--|
| [F1] | To enter the list of labels stored on the memory card. |
| [F2] | To repeat the print of the last label (as command A 1 CR). |
| [F3] | To repeat the print of the last label including a new enquiry for variable data. |
| [Shift]+[F5] | To start the monitor mode/ASCII dump mode. |
| [Shift]+[F6] | To start the self test printout. |
| [F7] | Printer Info Display |
| [F8] | Form feed |
| [ENTER] or
[RETURN] | Without a current print job : to switch between ONLINE and OFFLINE;
While processing a print job : to confirm the data input. |
| [ESC] | To cancel the data input.
(while printing same effect as CANCEL) |
| [SPACE] | While printing same effect as PAUSE. |
| [Shift]+[Del] | To delete the input line. |
| [↑], [↓] | To scroll up/down the list of labels on the memory card. |

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Appendix A - Character Tables

Setup Selectable Character Tables

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□	0	@	P	`	p	€	□	°	À	Ð	à	ð		
..1	□	□	!	1	A	Q	a	q	□	´	±	Á	Ñ	á	ñ	
..2	□	□	"	2	B	R	b	r	,	¸	²	Â	Ò	â	ò	
..3	□	□	#	3	C	S	c	s	f	“	£	³	Ã	Ó	ã	ó
..4	□	□	\$	4	D	T	d	t	”	”	¤	´	Ä	Ö	ä	ö
..5	□	□	%	5	E	U	e	u	...	•	¥	µ	Å	Ø	å	ø
..6	□	□	&	6	F	V	f	v	†	–	¦	¶	Æ	Ö	æ	ö
..7	□	□	'	7	G	W	g	w	‡	–	§	·	Ç	×	ç	÷
..8	□	□	(	8	H	X	h	x	ˆ	”	”	”	È	Ø	è	ø
..9	□	□	)	9	I	Y	i	y	‰	™	©	¹	É	Ù	é	ù
..A	□	□	*	:	J	Z	j	z	Š	š	ª	º	Ê	Û	ê	û
..B	□	□	+	;	K	[	k	{	<	>	«	»	Ë	Ü	ë	ü
..C	□	□	,	<	L	\	l	|	Œ	œ	–	¼	Ì	Û	ì	ü
..D	□	□	-	=	M	]	m	}	□	□	–	½	Í	Ý	í	ý
..E	□	□	.	>	N	^	n	~	□	□	®	¾	Î	Û	î	Û
..F	□	□	/	?	O	_	o	△	□	Ÿ	–	¿	Ï	ß	ï	ÿ

Table A-1 a Character Set "Windows 1252"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..	
..0	□	□	0	@	P	`	p	€	□	°				Ð		d	
..1	□	□	!	1	A	Q	a	q	□	´	˘	±	Á	Ñ	á	ñ	
..2	□	□	"	2	B	R	b	r	,	¸	˘	²	Â	Ñ	â	ñ	
..3	□	□	#	3	C	S	c	s	□	“	£	³	Ã	Ó	ã	ó	
..4	□	□	\$	4	D	T	d	t	”	”	¤	´	Ä	Ö	ä	ö	
..5	□	□	%	5	E	U	e	u	...	•	¥	µ	Å	Ö	í	ó	
..6	□	□	&	6	F	V	f	v	†	–	¦	¶	Ç	Ö	ć	ö	
..7	□	□	'	7	G	W	g	w	‡	–	§	·	Ç	×	ç	÷	
..8	□	□	(	8	H	X	h	x	ˆ	”	”	”	È	Ř	č	ř
..9	□	□	)	9	I	Y	i	y	‰	™	©	¹	É	Û	é	û
..A	□	□	*	:	J	Z	j	z	Š	š	ª	ª	Ê	Û	ę	ú	
..B	□	□	+	;	K	[	k	{	<	>	«	»	Ë	Ü	ë	ü
..C	□	□	,	<	L	\	l	|	Š	š	–	–	Ĺ	Ë	Û	ě	ü
..D	□	□	-	=	M	]	m	}	T	ť	–	–	Í	Ý	í	ý
..E	□	□	.	>	N	^	n	~	Ž	ž	®	®	Î	Û	î	Û	
..F	□	□	/	?	O	_	o	△	Ž	ž	Ž	ž	Đ	ß	đ	·	

Table A-1 b Character Set "Windows 1250"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□	0	@	P	`	p	□	□	°	À	Ð	à	ð		
..1	□	□	!	1	A	Q	a	q	□	□	í	±	Á	Ñ	á	ñ
..2	□	□	"	2	B	R	b	r	□	□	ê	²	Â	Ò	â	ò
..3	□	□	#	3	C	S	c	s	□	□	£	³	Ã	Ó	ã	ó
..4	□	□	\$	4	D	T	d	t	□	□	¤	´	Ä	Ô	ä	ô
..5	□	□	%	5	E	U	e	u	□	□	¥	µ	Å	Ö	å	ö
..6	□	□	&	6	F	V	f	v	□	□	¦	¶	Æ	Ø	æ	ø
..7	□	□	'	7	G	W	g	w	□	□	§	·	Ç	×	ç	÷
..8	□	□	(	8	H	X	h	x	□	□	¨	¸	È	∅	è	ø
..9	□	□	)	9	I	Y	i	y	□	□	©	¹	É	Ù	é	ù
..A	□	□	*	:	J	Z	j	z	□	□	ª	º	Ê	Ú	ê	ú
..B	□	□	+	;	K	[	k	{	□	□	«	»	Ë	Û	ë	û
..C	□	□	,	<	L	\	l	|	□	□	¬	¼	Ì	Ü	ì	ü
..D	□	□	-	=	M	]	m	}	□	□	-	½	Í	Ý	í	ý
..E	□	□	.	>	N	^	n	~	□	□	®	¾	Î	Þ	î	þ
..F	□	□	/	?	O	_	o	△	□	□	˜	¿	Ï	ÿ	ï	ÿ

Table A-1 c Character Set "ISO 8859-1"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□	0	@	P	`	p	Ç	É	á	■	■	■	ð	Ó	-
..1	□	□	!	1	A	Q	a	q	æ	í	■	■	■	Ð	β	±
..2	□	□	"	2	B	R	b	r	é	Æ	ó	■	■	É	Ô	=
..3	□	□	#	3	C	S	c	s	â	ô	ú	■	■	Ê	Ö	¾
..4	□	□	\$	4	D	T	d	t	ä	ö	ñ	■	■	Ë	ø	¶
..5	□	□	%	5	E	U	e	u	à	ò	Ñ	■	■	Ì	õ	§
..6	□	□	&	6	F	V	f	v	â	û	ª	■	■	Í	μ	÷
..7	□	□	'	7	G	W	g	w	ç	ù	°	■	■	Î	þ	¸
..8	□	□	(	8	H	X	h	x	ê	ÿ	¿	■	■	Ï	þ	º
..9	□	□	)	9	I	Y	i	y	ë	ÿ	©	■	■	Ë	Û	¨
..A	□	□	*	:	J	Z	j	z	è	Ü	¬	■	■	Û	·	
..B	□	□	+	;	K	[	k	{	ï	ø	½	■	■	Û	¹	
..C	□	□	,	<	L	\	l	|	î	£	¼	■	■	Û	³	
..D	□	□	-	=	M	]	m	}	ï	Ø	■	■	■	Û	²	
..E	□	□	.	>	N	^	n	~	Ä	×	■	■	■	Û	'	
..F	□	□	/	?	O	_	o	△	Å	f	■	■	■	Û	'	

Table A-1 d Character Set "Codepage 850"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□	□	□	□	&	-	□	□	□	□	□	{	}	\	0
..1	□	□	□	□	□	□	/	□	a	j	~	□	A	J	□	1
..2	□	□	□	□	□	□	□	□	b	k	s	□	B	K	S	2
..3	□	□	□	□	□	□	□	□	c	l	t	□	C	L	T	3
..4	□	□	□	□	□	□	□	□	d	m	u	□	D	M	U	4
..5	□	□	□	□	□	□	□	□	e	n	v	□	E	N	V	5
..6	□	□	□	□	□	□	□	□	f	o	w	□	F	O	W	6
..7	□	△	□	□	□	□	□	□	g	p	x	□	G	P	X	7
..8	□	□	□	□	□	□	□	□	h	q	y	□	H	Q	Y	8
..9	□	□	□	□	□	□	□	□	i	r	z	□	I	R	Z	9
..A	□	□	□	□	□	¢	!	□	:	□	□	□	□	□	□	□
..B	□	□	□	□	□	.	\$,	#	□	□	□	□	□	□	□
..C	□	□	□	□	□	<	*	%	@	□	□	□	□	□	□	□
..D	□	□	□	□	□	()	□	'	□	□	□	□	□	□	□
..E	□	□	□	□	□	+	;	>	=	□	□	□	□	□	□	□
..F	□	□	□	□	□	|	_	?	"	□	□	□	□	□	□	□

Table A-1 e Character Set "EBCDIC"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□		0	@	P	`	p	Ä	ê	†	∞	¿	-	‡	
..1	□	□	!	1	A	Q	a	q	Å	ë	°	±	i	-	·	Ò
..2	□	□	"	2	B	R	b	r	Ç	í	¢	≤	¬	“	,	Ù
..3	□	□	#	3	C	S	c	s	É	ì	£	≥	√	”	„	Û
..4	□	□	\$	4	D	T	d	t	Ë	î	\$	¥	f	'	%	Ü
..5	□	□	%	5	E	U	e	u	Ï	ï	•	μ	≈	'	Å	ı
..6	□	□	&	6	F	V	f	v	Ü	ñ	¶	Δ	÷	Ê	˘	
..7	□	□	'	7	G	W	g	w	á	ó	β	Σ	«		Á	˘
..8	□	□	(	8	H	X	h	x	à	ò	®	»	ÿ	Ë	˘	
..9	□	□	)	9	I	Y	i	y	â	ô	©	π	...	ÿ	Ë	˘
..A	□	□	*	:	J	Z	j	z	ä	ö	™	/	í	·		
..B	□	□	+	;	K	[	k	{	ä	ö	'	a	Á	˘	ı	°
..C	□	□	,	<	L	\	l	|	á	ú	“	°	Á	<	ı	°
..D	□	□	=	>	M	]	m	}	ç	ù	≠	Ω	Ö	ı	ı	°
..E	□	□	.	>	N	^	n	~	é	û	Æ	æ	Œ	fi	Ó	ı
..F	□	□	/	?	O	_	o	△	è	ü	Ø	ø	œ	fl	Ô	ı

Table A-1 f Character Set "Macintosh"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□	0	@	P	`	p	Ç	É	á	■	■	Ł	đ	Ó	-
..1	□	□	!	1	A	Q	a	q	ù	í	■	■	±	Đ	ß	"
..2	□	□	"	2	B	R	b	r	é	í	ó	■	■	†	Ö	´
..3	□	□	#	3	C	S	c	s	â	ô	ú	■	■	‡	È	Ñ
..4	□	□	\$	4	D	T	d	t	ä	ö	Ä	■	■	—	d	ñ
..5	□	□	%	5	E	U	e	u	û	Û	ä	■	■	±	ñ	§
..6	□	□	&	6	F	V	f	v	ó	í	Ž	■	■	±	í	Š
..7	□	□	'	7	G	W	g	w	ç	š	ž	■	■	±	ě	š
..8	□	□	(	8	H	X	h	x	ı	ś	Ę	■	■	±	ě	°
..9	□	□	)	9	I	Y	i	y	ë	Ö	ę	■	■	±	ı	°
..A	□	□	*	:	J	Z	j	z	Ó	Ü	—	■	■	±	ı	°
..B	□	□	+	;	K	[	k	{	ó	ł	ž	■	■	±	ı	°
..C	□	□	,	<	L	\	l	|	ı	ı	č	■	■	±	ı	°
..D	□	□	-	=	M	]	m	}	ž	ł	š	■	■	±	ı	°
..E	□	□	.	>	N	^	n	~	Á	x	«	■	■	±	ı	°
..F	□	□	/	?	O	_	o	△	Ć	ć	»	■	■	±	ı	°

Table A-1 g Character Set "Codepage 852"

	0..	1..	2..	3..	4..	5..	6..	7..	8..	9..	A..	B..	C..	D..	E..	F..
..0	□	□	0	@	P	`	p	□	□	□	□	□	□	□	■	ı
..1	□	□	!	1	A	Q	a	q	□	□	□	□	□	□	□	ı
..2	□	□	"	2	B	R	b	r	□	□	□	□	□	□	□	ı
..3	□	□	#	3	C	S	c	s	□	□	£	□	□	□	□	ı
..4	□	□	\$	4	D	T	d	t	□	□	¤	□	□	□	□	ı
..5	□	□	%	5	E	U	e	u	□	□	¥	□	□	□	□	ı
..6	□	□	&	6	F	V	f	v	□	□	ı	□	□	□	□	ı
..7	□	□	'	7	G	W	g	w	□	□	§	□	□	□	□	ı
..8	□	□	(	8	H	X	h	x	□	□	°	□	□	□	□	ı
..9	□	□	)	9	I	Y	i	y	□	□	©	□	□	□	□	ı
..A	□	□	*	:	J	Z	j	z	□	□	×	□	□	□	□	ı
..B	□	□	+	;	K	[	k	{	□	□	«	□	□	□	□	ı
..C	□	□	,	<	L	\	l	|	□	□	—	□	□	□	□	ı
..D	□	□	-	=	M	]	m	}	□	□	-	□	□	□	□	ı
..E	□	□	.	>	N	^	n	~	□	□	®	□	□	□	□	ı
..F	□	□	/	?	O	_	o	△	□	□	-	□	□	□	□	ı

Table A-1 h Character Set "ISO 8859-8"

Unicode-Tables

	Control		ASCII					Control		Latin 1						
	000	001	002	003	004	005	006	007	008	009	00A	00B	00C	00D	00E	00F
0	NUL	DLE	☐	0	@	P	`	p	CTRL	CTRL	☐	°	À	Ð	à	ð
1	SOH	DC1	!	1	A	Q	a	q	CTRL	CTRL	ı	±	Á	Ñ	á	ñ
2	STX	DC2	"	2	B	R	b	r	CTRL	CTRL	ø	²	Â	Ò	â	ò
3	ETX	DC3	#	3	C	S	c	s	CTRL	CTRL	£	³	Ã	Ó	ã	ó
4	EDT	DC4	\$\$	4	D	T	d	t	CTRL	CTRL	□	´	Ä	Ô	ä	ô
5	ENQ	NAK	%	5	E	U	e	u	CTRL	CTRL	¥|¥	µ	Å	Ö	å	ö
6	ACK	SYN	&	6	F	V	f	v	CTRL	CTRL	!	¶	Æ	Ö	æ	ö
7	BEL	ETB	'	7	G	W	g	w	CTRL	CTRL	§	·	Ç	×	ç	÷
8	BS	CAN	(	8	H	X	h	x	CTRL	CTRL	¨	˙	È	Ø	è	ø
9	HT	EM	)	9	I	Y	i	y	CTRL	CTRL	©	¹	É	Ù	é	ù
A	LF	SUB	*	:	J	Z	j	z	CTRL	CTRL	à	º	Ê	Ú	ê	ú
B	VT	ESC	+	;	K	[	k	{	CTRL	CTRL	«	»	Ë	Û	ë	û
C	FF	FS	,	<	L	\	l	|	CTRL	CTRL	¬	¼¼	Ì	Ü	ì	ü
D	CR	GS	-	=	M	]	m	}	CTRL	CTRL	-	½½	Í	Ý	í	ý
E	SD	RS	.	>	N	^	n	~|	CTRL	CTRL	®	¾¾	Î	Þ	î	þ
F	SI	US	/	?	O	_	o	DEL	CTRL	CTRL	-	¿	Ï	ß	ï	ÿ

Table A-2 a "Unicode" (0000 - 00FF)

European Latin								Extended Latin								
010	011	012	013	014	015	016	017	018	019	01A	01B	01C	01D	01E	01F	
0	Á	Ð	Ġ	İ	ı	Ó	Š	Ú	ƒ	ε	σ	ϣ	||/	ı	Ä	Ĵ
1	ā	đ	ġ	ı	Ł	ó	š	ú	ƒ	ƒ	σ	ϣ	||/	ö	ä	
2	Ă	Ĕ	Ģ	Ĳ	ł	Œ	Ŧ	Ū	Ɔ	f	Œ	Ū	≠	ö	Æ	
3	ă	ĕ	ģ	ĳ	ł	œ	ŧ	ū	ɔ	ƒ	Œ	Ū	!	Û	æ	
4	Ą	Ę	Ĥ	Ĵ	ń	Ŕ	Ŧ	Ű	ɔ	ʋ	Ɔ	ʎ	DŽ	û	Ĝ	
5	ą	ę	ħ	ĵ	Ń	ŕ	ŧ	ű	ɔ	ʋ	Ɔ	ʎ	Dž	Û	ĝ	
6	Ć	Ė	Ħ	Ĵ	Ń	Ŕ	Ŧ	Ŷ	ɔ	ʋ	Ŕ	ʎ	dž	ü	Ģ	
7	ć	ė	ħ	ķ	Ń	ŕ	ŧ	ŷ	ɔ	ʋ	Œ	ʎ	LJ	Û	ġ	
8	Ĉ	Ė	Ī	κ	ň	Ř	Ū	Ÿ	ɔ	ʋ	α	ɛ	Lj	û	Ķ	
9	ĉ	ę	ī	ł	h	ř	ű	ž	Đ	κ	Σ	ε	lj	Û	ķ	
A	Č	Ě	Ĭ	í	Ń	Ś	Ū	ž	Đ	†	ł	ʎ	NJ	ü	Q	
B	č	ě	ĭ	ł	Ń	ś	ű	ž	đ	λ	ł	ʎ	Nj	Û	q	
C	Č	Ĝ	Ĭ	ł	Ō	Ŝ	Ū	ž	đ	W	T	ʎ	nj	ü	Q̇	
D	č	ĝ	ĭ	Ł	ō	ŝ	ű	ž	đ	N	f	ʎ	Ă	ə	q̇	
E	Ď	Ĝ	Ĭ	ł	Ō	Ŝ	Ū	ž	đ	Ń	T	ʎ	ă	Ă	ž	
F	ď	ġ	ĭ	Ł	ō	ŝ	ű		ð	ø	U	ʎ	ĭ	ă	ž	

Table A-2 b "Unicode" (0100 - 01FF)

General Punctuation							Sups & Subs			Currency			Diacritics		
200	201	202	203	204	205	206	207	208	209	20A	20B	20C	20D	20E	20F
0			†	%	˘		°	º		€			◊	◌̅	
1		№	‡	‰	λ			¹		⌘			◊	◌̆	
2		¶	•	′	**			²		⌘			◊		
3		—	▶	″	—			³		⌘			◊		
4		—	.	″	/		⁴	⁴		⌘			◊		
5		—	.	′			⁵	⁵		⌘			◊		
6		≡	⋯	″			⁶	⁶		⌘			◊		
7		≡	⋯	″			⁷	⁷		⌘			◊		
8		‘		^			⁸	⁸		Rs			◊		
9		’		˘			⁹	⁹		⌘			◊		
A		,		˘			⁺	⁺		⌘			◊		
B		‘		⊗			⁻	⁻		⌘			◊		
C		“		!!			⁻	⁻		€			◊		
D		”		‡			⁻	⁻					◊		
E		”		—))					◊		
F		”					n						◊		

Table A-2 c "Unicode" (2000 - 20FF)

	Letterlike Symbols					Number Forms				Arrows						
	210	211	212	213	214	215	216	217	218	219	21A	21B	21C	21D	21E	21F
0	%	<i>S</i>	SM	<i>S</i>			I	i	Ⓓ	←	→	↖	→	⇐	↔	
1	%	<i>T</i>	TEL	<i>T</i>			II	ii	Ⓔ	↑	↓	↖	→	↑	↕	
2	C	<i>L</i>	™	<i>L</i>			III	iii	Ⓢ	→	←	↙	↓	⇒	↗	
3	°C	<i>l</i>	<i>Y</i>	<i>m</i>		$\frac{1}{3}$	IV	iv		↓	↗	↘	↓	↓	↓	
4	¢	<i>Th</i>	Z	<i>o</i>		$\frac{2}{3}$	V	v		↔	↔	↘	↗	↔	↔	
5	%	N	<i>3</i>	<i>x</i>		$\frac{1}{5}$	VI	vi		↕	↑	↙	↗	↕	→	
6	%	N _o	Ω	<i>2</i>		$\frac{2}{5}$	VII	vii		↗	→	↘	↗	↗	↔	
7	£	⊙	Ü	<i>λ</i>		$\frac{3}{5}$	VIII	viii		↗	↓	↘	↔	↗	↕	
8	Ⓓ	⊗	3	<i>γ</i>		$\frac{4}{5}$	IX	ix		↘	↕	↗	↔	↘	↘	
9	°F	P	<i>1</i>			$\frac{1}{6}$	X	x		↙	↔	↖	↔	↙	↘	
A	<i>S</i>	Q	K			$\frac{5}{6}$	XI	xi		↔	↔	↖	↔	⇐	↕	
B	<i>H</i>	<i>R</i>	Å			$\frac{1}{8}$	XII	xii		↗	↖	↘	↔	⇒		
C	<i>H</i>	<i>R</i>	<i>B</i>			$\frac{3}{8}$	L	l		↖	↖	↖	↔	↔		
D	H	R	Ⓒ			$\frac{5}{8}$	C	c		↖	↔	↖	↔	↔		
E	<i>h</i>	<i>R</i>	<i>e</i>			$\frac{7}{8}$	D	d		←	↔	↖	↖	↖		
F	<i>h/h</i>	<i>R</i>	<i>e</i>			<i>λ</i>	M	m		↑	↘	↖	↖	↖		

Table A-2 d "Unicode" (2100 - 21FF)

Special Characters available with an external keyboard

Character	[ALT] + key ...													Character	[ALT] + key		
€	E	E	E	E	E	E	E	E	E	E	E	E	E			č	
{	7	'			ä	à	ç	7	8	'	7	B				ž	
}	0	=			\$	\$	à	0	9	ç	0	N				á	
[	8	(			ü	è	^	8	è	`	8	F				é
]	9	)			"	"	\$	9	+	+	9	G				´
\	ß	_			<	<	<	+	°	<	<	Q				ú	
|	<	-	`		1	1	&	<		1	'	W)	
'										\	0					š	
´			'	`	'	'	ù									í	
˘		è					μ	'								ý	
ˆ		ç					\$	\$								š	
˘	^	^	6	6	\$	\$	2	\$	ì	<	½					;	
"	=
˜	+	é			^	^	=	"	ù	4	"	+					
°			0	0				'	0	0						ř	
²	2								2								
³	3								3								
#		"			3	3	"		à	3		X					
\$								4			4		ù				
€					8	8											
£								3			3						
¤		\$														¨	
@	q	à			2	2	é	2	ò	2	2	V					
μ	m								m	m	m						
¬					6	6					6						
÷	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
×	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	GR	FR	UK	US	SG	SF	BE	SU	IT	SP	DK	CZ					

Table A-3 a Special characters with reference to different country settings, which are available with the [ALT] key of the external keyboard

| / |, | * | ... Keys of the numeric keyboard

GR :	Deutschland	BE :	Belgie
FR :	France	SU :	Suomi
UK :	United Kingdom	IT :	Italia
US :	USA	SP :	España
SG :	Schweiz	DK :	Danmark
SF :	Suisse	CZ :	Ceska republika

ZZ	Z1	Z2	ZZ	Z1	Z2	ZZ	Z1	Z2	ZZ	Z1	Z2
À	`	A	Ò	`	O	å	°	a	ò	`	o
Á	´	A	Ó	´	O	æ	a	e	ó	´	o
Â	^	A	Ô	^	O	a	_	a	ô	^	o
Ã	~	A	Õ	~	O	ç	,	c	õ	~	o
Ä	¨	A	Ö	¨	O	ç	|	c	ö	¨	o
Å	°	A	Ø	/	O	č	ˇ	c	ø	/	o
Æ	A	E	Œ	O	E	d'	'	d	œ	o	e
Ç	,	C	Ř	ˇ	R	è	`	e	°	_	o
Ĉ	˘	C	Š	ˇ	S	é	´	e	í	´	r
D'	'	D	Ù	`	U	ê	^	e	ř	ˇ	r
È	`	E	Ú	´	U	ë	¨	e	š	ˇ	s
É	´	E	Û	^	U	ě	ˇ	e	ß	s	s
Ê	^	E	Ü	¨	U	ì	`	i	t'	'	t
Ë	¨	E	Ý	´	Y	í	´	i	ù	`	u
Ì	`	I	Ÿ	-	Y	î	^	i	ú	´	u
Í	´	I	Ž	ˇ	Z	ï	¨	i	û	^	u
Î	^	I	à	`	a	ij	i	j	ü	¨	u
Ï	¨	I	á	´	a	l'	'	l	û	°	u
J	I	J	â	^	a	ĺ	´	l	ý	´	y
£	-	L	ã	~	a	ň	~	n	ÿ	¨	y
Ñ	~	N	ä	¨	a	ň	ˇ	n	ž	ˇ	z

Table A-3 b Special characters, which are available by entering two characters one after another via external keyboard

Enter the character **ZZ** : 1. input [Z1] - 2. input [ALT-Z2]

Example : enter "ñ" : 1. input [-] - 2. input [ALT-n]



NOTICE !

Use the data of the table A-3 a to enter the character Z1 if necessary.

Appendix B - Pin Assignment of the Interface Connectors

Pin Assignment of the Serial Interface Connector

A8 provides a 25 pin SUB-D-connector for the serial interfaces which are internally available, i.e. RS-232, RS-422 and RS-485 as well RS-232/485-Host operation.

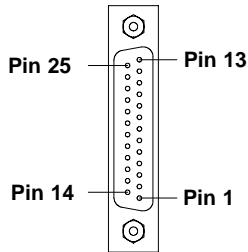


Fig. B-1 Connector of the serial interface (rear of the printer)

Pin	Description	Function
1	CG	Protective Ground
2	TxD	Transmit Data (RS-232)
3	RxD	Receive Data (RS-232)
4	RTS	Request to send
5	CTS	Clear to send
7	GND	Logic Ground
9	TDATA+	Transmit Data (RS-422, RS-485)
10	TDATA-	Transmit Data (RS-422, RS-485)
18	RDATA+	Receive Data (RS-422, RS-485)
19	RDATA-	Receive Data (RS-422, RS-485)
20	DTR	Data Terminal Ready

Table B-1 Signals of the serial interface connector

Interface Cable for RS-232

The following chapter shows some typical RS-232 interface cable configurations. Note, that the pin assignment may vary for different computer. If you have any problems with the connections, contact the manufacturer of your computer on the pin assignment of the interface. Use the pin assignment of the printer as shown in table B-1 to obtain a suitable cable.

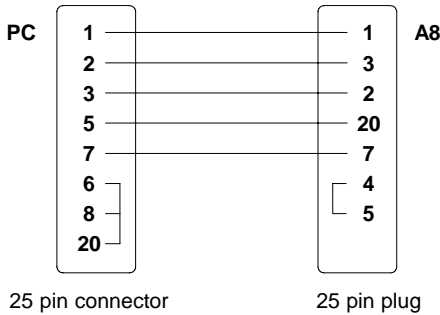


Fig. B-2 Interface cable with 25 pin computer connector for RS-232 with protocol " ---" or "XON/XOFF"

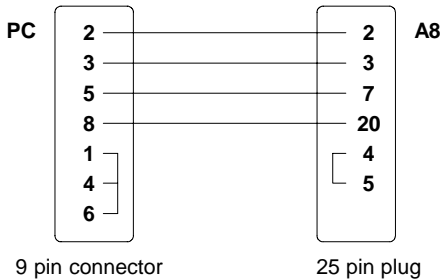


Fig. B-3 Interface cable with 9 pin computer connector for RS-232 with protocol " ---" or "XON/XOFF"

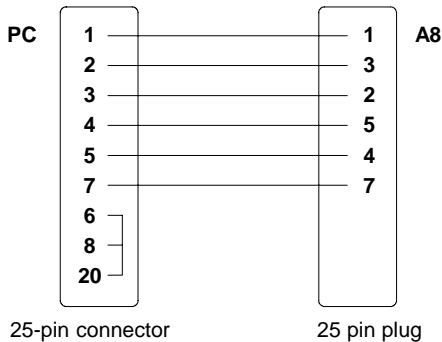


Fig. B-4 Interface cable with 25 pin computer connector for RS-232 with protocol "RTS/CTS" or "XON/XOFF"

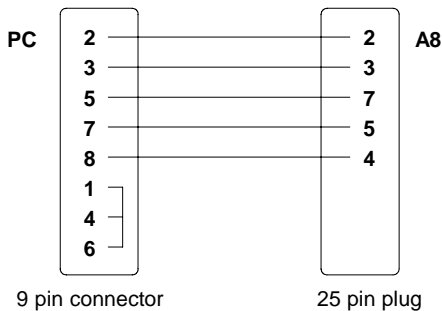


Fig. B-5 Interface cable with 9 pin computer connector for RS-232 with protocol "RTS/CTS" or "XON/XOFF"

Interface Cable for RS-422 / RS-485

To control the **A8** by RS-422 / RS-485 interface, only the signals TDATA+, TDATA-, RDATA+, and RDATA- are necessary.

Check the pin assignment for the interface of your computer, and use the pin assignment of the printer as shown in table B-1 to obtain a suitable cable. The connectors of TDATA+ and RDATA+ as well as TDATA- and RDATA- at the plug-in-connection of the cable must be united. If there is a very large transfer distance a termination of the cables is recommended.

Interface Cable for RS-232/485-Host Operation

The RS-232/485-Host operation makes it possible to install a RS-485 network system of printers without any RS-485 interface of the computer. The **A8** operates as converter. With this configuration additional 25 **A8** or **Apollo** printer can be controlled. The cable shown in the figure below can be used for a maximum of three printers.

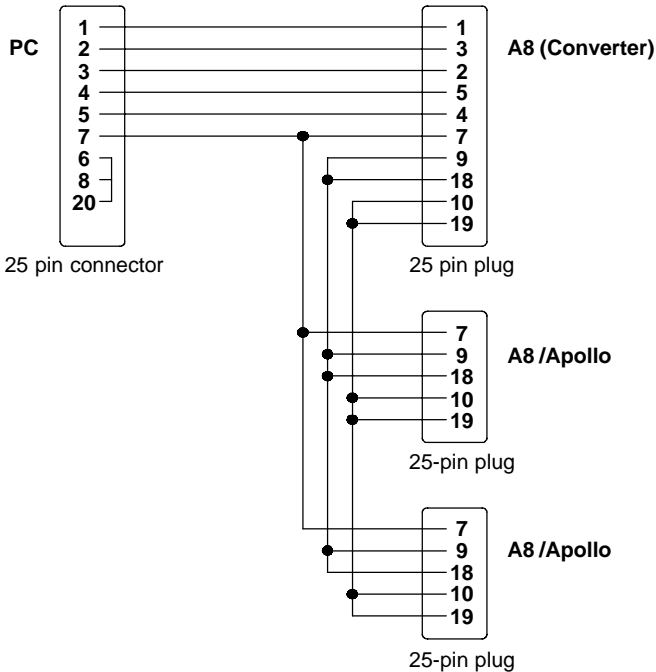


Fig. B-6 Interface cable with 25 pin computer connector for RS-232/485-Host operation used for three printers in a network

If more than three printers have to be controlled further connectors equal to the bottom 25-pin plug have to be added to the cable. For long distance cables or a higher baud rate, it is important to terminate the cables when wiring. Normally the termination will be carried out at the first and at the last device.

Pin Assignment of the Parallel Interface Connector

A8 provides a 36 pin connector for the parallel Centronics interface.

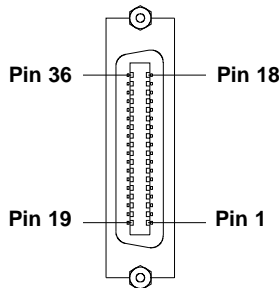


Fig. B-7 Centronics connector (rear of the printer)

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	/STROBE	10	/ACKNLG	19	GND	28	GND
2	DATA 1	11	BUSY	20	GND	29	GND
3	DATA 2	12	PE	21	GND	30	GND
4	DATA 3	13	SLCT	22	GND	31	nc
5	DATA 4	14	nc	23	GND	32	nc
6	DATA 5	15	nc	24	GND	33	nc
7	DATA 6	16	GND	25	GND	34	nc
8	DATA 7	17	nc	26	GND	35	nc
9	DATA 8	18	nc	27	GND	36	nc

Table B-2 Signals of the Centronics interface

Centronics Interface Cable

The cables used for Centronics interface connectors are standard cables, so that normally there are no problems with the external control of the **A8**. In the event of any difficulties, consult the manufacturer of your computer on the pin assignment of the computer's interface. Use the pin assignment of the printer as shown in table B-2 to obtain a suitable cable.

Pin Assignment of the Peripheral Port

A8 provides a 15-pin SUB-D-connector at the front of the printer to control several options.

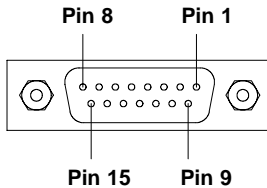


Fig. B-8 Peripheral port

Pin	Description	Function
1	COD0	Code bit 0
2	PAI0	Sensor bit 0
3	PAO0	Control bit 0
4	PAO2	Control bit 2
5	GND	Logic grounding
6	+ 5V	Logic voltage $I_{\max} < 500 \text{ mA}$
7	PGND	Power grounding
8	+ 24V	Voltage for power level $I_{\max} < 1,2 \text{ A}$
9	COD1	Code bit 1
10	PAI1	Sensor bit 1
11	PAO1	Control bit 1
12	PAO3	Control bit 3
13	GND	Logic grounding
14	PGND	Power grounding
15	+ 24V	Voltage for power level $I_{\max} < 1,2 \text{ A}$

Table B-3 Pin assignment of the peripheral port

Appendix C - Error Messages / Problem Solution

Error Messages

The **A8** is equipped with a comprehensive self diagnostic system which will indicate errors in the display of the printer. Also, the operator will be informed by the LEDs whether the fault is correctable and will, therefore, allow to continue the current print job after corrections (e.g. "Out of paper"), or the fault may require you to cancel the current print job.

Correctable Errors

While processing a print job, an error has occurred which may be corrected by the operator, and also allows you to continue the print job after fault correction.

Display

The symbol  appears in the display.

The display shows alternately the type of fault and the total of the remaining labels of the current print job.

LED Display

LED CAN on, LED PSE is flashing.

Function Keys



	CAN key	short press less than one second :	Cancels the current print job. Switch to the next job, which is available in the input buffer
		longer press greater than one second :	Cancels the current print job. Clears the input buffer (LED CAN blinks), Switch into ONLINE mode (LED ONL on)
	PSE key	Continues current print job after error correction. Switch into PRINT mode. (LED ONL on, LED CAN off, LED PSE off)	

Table C-1 Function keys in mode FAULT-CORRECTABE

Irrecoverable Errors

While switching on the printer or during printing, a fault has occurred which cannot be cleared by the operator without cancelling the current print run (e.g. hardware fault).

Display

If an irrecoverable error occurs the symbol  appears in the display and the type of fault is shown.

LED Display

LED CAN is flashing.

Function Keys


	CAN key	Cancels the current print job. Switch into ONLINE mode. (LED ONL on, LED CAN off, LED PSE off) If ONLINE mode cannot be entered, switch printer on and off again. If the fault remains again, call for Service
---	---------	--

Table C-2 Function keys in mode FAULT-IRRECOVERABLE

Error during System Test

When switched on the printer automatically performs an internal self test. If the test is completed successfully, the **A8** proceeds into the ONLINE mode.

If a hardware-fault occurs, the symbol  appears in the display and the type of error is shown. In this case switch printer on and off again. If the fault remains again, call for Service

List of Error Messages

The following table contains an overview of possible error messages, their possible causes as well as solutions to the problems.

Correctable faults as defined above are marked with a " * ".

If the suggested solutions turn out unsuccessful, call for Service.


Error message	Possible cause	Solution
ADC malfunction	Hardware error	Switch printer off and then on If error recurs → contact Service
Battery low	PC card error	Replace battery inside the PC card
Buffer overflow	The data receive buffer is full but the computer is still transmitting data	Use the protocol (preferably RTS / CTS) for data transmission
Card full	Refers to the optional memory card; No more data can be stored on the card	Replace card
Cutter blocked	Error of the option "Cutter" The cutter is unable to cut the labels due to the extreme thickness of the material; Cutter cannot return into its home position and stays in an undefined position	Switch printer off, remove material from the cutter, switch printer on If then the error message "Cutter stuck" appears → contact Service. Otherwise, check the thickness of the label material and replace if necessary.
Cutter jammed *	Error of the option "Cutter" The cutter is unable to cut the labels due to the extreme thickness of the material but is able to return into its home position	Switch printer off, and check the material in the cutter area for possible double laying. Start test cut by pressing the  key. If error recurs, replace the label material.
Cutter stuck	Hardware error of the option "Cutter"	Switch printer off and then on If error recurs → contact Service

Table C-3 Error messages


Error message	Possible cause	Solution
dRAM malfunction	Hardware error	Switch printer off and then on If error recurs → contact Service
File not found	Requested file is not on the card	Check the contents of the card
FPGA malfunction	Hardware error	Switch printer off and then on If error recurs → contact Service
Head is lifted up *	Printhead is not correct locked	Lock the printhead
Head malfunction	Hardware error	Switch printer off and then on If error recurs → contact Service
Head too hot *	Printhead is overheated due to labels containing a lot of graphics, text, bar codes, etc.	After pausing to cool down the printhead, the print job will be continued automatically. If the fault recurs repeatedly, reduce the heat level or the print speed via the software.
Invalid data	Fault while downloading graphic data	Cancel current print job Check data
Invalid outline	Error with the selected font (download font)	Cancel current print job Change font
Invalid setup	Setup is invalid	Use RESTORE function to reset all settings back to factory settings Configure setup (see chapter 9) If error recurs → contact Service
LCD malfunction	Hardware error	Switch printer off and then on If error recurs → contact Service
Memory overflow	Current print job contains too much information (selected fonts, large graphics)	Cancel current print job Reduce amount of information
No label found *	There are labels missing on the label material	Press  key repeatedly until printer recognizes the next label on the material.

Table C-3 Error messages (continuation)

Error message	Possible cause	Solution
No label found * (continuation)	The label format as set in the software does not correspond with the real label format	Cancel current print job Change the label format set in the software; Restart print job
	Printer is loaded with continuous paper but the software is set on labels	Cancel current print job Change either software setting or print media; Restart print job
No label size	Definition of the label size is missing at the label description	Check programming
No record found	Refers to the optional memory card; database access error	Check programming and card contents
Out of paper *	Out of label material	Insert new supply roll
	Label has not properly been loaded in the label sensor fittings	Check paper feed
Out of ribbon *	Out of transfer ribbon	Load new supply roll of transfer ribbon.
	Ribbon melted during printing	Cancel the current print job. Change the heat level via software, clean the printhead , load transfer ribbon, restart print job.
	The printer is loaded with thermal labels for direct thermal mode (without transfer ribbon); but the software is set for transfer printing.	Cancel current print job Set software to direct thermal mode Restart print job
	The supply roll of transfer ribbon is turning on the supply hub.	Tighten the supply roll of transfer ribbon by turning the knurled knob at the supply hub.
Protocol error (*)	The interfaces of computer and printer are set differently.	Switch printer off Correct the interface setting in the printer setup (see chapter 9)

Table C-3 Error messages (continuation)



Error message	Possible cause	Solution
Protocol error * (continuation)	Printer has received an unknown or invalid command (display shows command abbreviated)	Depending on the type of fault, the command can be skipped by pressing the  key or the print job has to be cancelled by pressing the  key.
Read error	Refers to the optional memory card; Read error when reading from the card	There is no solution. Check the battery. Reformat card. Copy backup files onto the card
ROM malfunction	Hardware error	Switch printer off and then on If error recurs → contact Service
Structural err.	Refers to the optional memory card; Fault in file list	Data access is uncertain Format card
Unknown card	Refers to the optional memory card; Card not formatted, or Card not supported by printer	Format card Use different type of card
Voltage error	Hardware error	Switch printer off and then on If error recurs → contact Service The voltage which failed is shown Please note it !
Write error	Refers to the optional memory card; Hardware error	Repeat the write process or format the card.
Write protected	Refers to the optional memory card; Write protection is activated	Deactivate write protection
Wrong revision	Error during firmware update Firmware version is not valid for the present hardware version	Load a valid firmware version

Table C-3 Error messages (continuation)

Problem Solution


Problem	Cause and Solution
Thermal transfer ribbon creases	Guide axle of the transfer ribbon is not correctly adjusted. Make the adjustment according to chapter 7.
	Printhead support is not correctly adjusted. Make the adjustment according to chapter 7.
	Transfer ribbon too wide. Use transfer ribbon which is max. 10% wider than the label media.
Print image has smears or voids	Printhead is dirty, Clean printhead (appendix D)
	Temperature too high; Decrease heat level via software
	Unsuitable combination of ribbon and label media; Choose different type of ribbon
Printer does not stop after transfer ribbon runs out	Direct thermal printing is chosen in the software Change to thermal transfer printing
Printer does not print error message: "Paper out"	Label is not inserted in the label edge sensor Correct the label path (chapter 6)
	Label edge sensor is dirty → Clean it
Printer prints a sequence of characters instead of the label format	Printer is in Monitor Mode (ASCII Dump Mode) Press the  key to cancel this mode.
Printer transports label media, but the ribbon does not move	Transfer ribbon is wrong inserted. Check, if the inked side faces the label (see chapter 6)
	The combination of ribbon and media is unsuitable Choose different type of ribbon
Printer only prints each second label	Setting of the size in the software is too large. Correct the setting

Table C-4 Problem solution

Problem	Cause and Solution
Vertical white lines in the print image	Printhead is dirty, Clean printhead (appendix D)
	Printhead is defective (failure of heat elements), Replace printhead (service)
Horizontal white lines in the print image	Printer is used with the backfeed "smart" setting in the cut or dispense mode (see chapter 9), Set the backfeed in the setup on "always"
Print image is irregular, one side is lighter	Printhead is dirty, Clean printhead (appendix D)
	Printhead is not correct adjusted, Adjust printhead (appendix D)
	Faulty adjustment of the printhead support, Adjust printhead support (see chapter 7)
Error message "Ribbon out", though ribbon is loaded	Transfer ribbon is not locked at the supply hub, Supply hub does not turn, Tighten the ribbon (see chapter 6)

Table C-4 Problem solution (continuation)

Appendix D - Maintenance / Cleaning / Adjustment of the Printhead

The printer **A8** only requires a minimum of maintenance.

It is most important to clean the printhead on a regular basis. This will guarantee a permanent high quality of the print image. Moreover, it helps to prevent an early wear of the printhead.

Apart from that, the servicing only requires you to clean the outside of the printer occasionally.



WARNING !

Before starting any maintenance, switch the printer OFF and disconnect it from the power supply !

General Cleaning

While operating, dust accumulates especially within the printer mechanism. Remove dirt and dust regularly using a soft brush or a vacuum.

The cover of the **A8** may be cleaned using standard cleanser.



CAUTION !

Do not use abrasive cleaning powders or solvents !

Cleaning the Media Feed Rollers

Accumulations of dirt on the media feed rollers or the guides may impair the media transport and the print quality.

Clean the rollers as follows :

1. Lift the printhead.
2. Remove the label stock and transfer ribbon from the printer.
3. Remove all accumulations of dirt and dust with isopropyl alcohol and a soft cloth.

Cleaning the Printhead

While operating, dirt such as paper dust or particles of ink or back coating from the ribbon may accumulate on the thermal printhead.

This can cause a deterioration of the print quality (e.g. different contrasts on the label, appearance of light horizontal lines, etc.).

In that case, the printhead needs cleaning.

Recommended cleaning intervalls :

Direct Thermal Printing : each time you change the label roll

Thermal Transfer Printing : each time you change the ribbon



CAUTION !

Do not use any sharp objects for cleaning the printhead !

Do not touch the protective glass layer of the printhead !

Clean the printhead as follows :

1. Lift the printhead.
2. Remove label material and transfer ribbon from the printer.
3. Clean the printhead surface with a special cleaning pen, or use a cotton swab soaked with isopropyl alcohol.
4. Allow it to dry for about 2 to 3 minutes before restarting the printer.

Adjustment of the Printhead

For optimum print quality, the line of heating elements on the printhead must be parallel and aligned correctly to the print roller. This alignment has already been performed in the factory. Nevertheless, it may become necessary to adjust it.

A misaligned printhead causes a poor print quality which appears as described below :

- the print image looks generally light, spotted, and irregular; or
- the print image appears uneven from one side to the other.

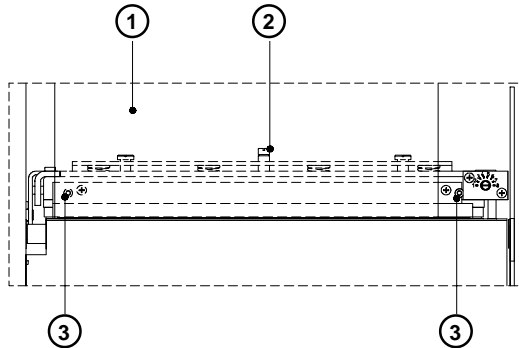


Fig. D-1 Adjustment of the printhead

Adjust the printhead as follows :

1. You may leave the transfer ribbon (1) inside the printer, and simply poke through it with your hex wrench.
2. Loosen the locking screw (2) on the printhead by half a turn. This will allow for the required horizontal adjustment of the printhead.
3. By turning the two screws underneath (3) you may shift the printhead as follows :
 - By turning the screws clockwise, the printhead will be shifted forwards. (about .02 in or .5 mm per turn)
 - Adjust in small steps ! (quarter turns only)
 - First, turn both screws constantly until at least one side of the print image is optimum. Following, adjust the screw which is located at the side of the label where the quality is still poor.

4. Note, that the printhead must be closed after every single adjustment step to make the change effective.
5. Tighten the locking screw (2).
6. Perform a test print, for instance a wide black line over the whole width of the label, and review the results.
7. Repeat steps 2 to 6 as necessary to complete the adjustment.

Appendix E - Firmware Updates

General Updates

The firmware of the **A8** printer series is subject to constant development, e.g. a growing variety of features available, easier fault correction, etc.

In **A8**, the firmware is stored in a flash-EPROM, which represents a new technology. For updates, only a file containing the up-dated version needs to be copied via interface.

The file may be distributed on a disk or else is available on the Internet.

The **cab** and **THARO** Internet addresses are included in our latest brochures.

Firmware Updates

1. Use the Centronics interface to update the firmware.
2. When switching ON the **A8**, press all of the four function keys at once. The display will show "SYSTEM UPDATE".
3. Transmit the data to the printer. Under DOS, use the following copy command:
COPY A8_XXX.FMW LPT1: /b
4. During processing, the printer display indicates the progress with a graphic progress bar.
After completing the copy process the display shows "OK", and all LEDs are flashing. This also indicates the completion of the up-dating. Switch OFF the printer.
5. In the event of an error during the up-dating process, the error code will be shown in the display :

'C' : Check sum error (possibly "/b" missing in COPY command or file faulty)

'H' : Header fault (possibly "/b" missing in COPY command or file faulty)

'E' : EPROM could not be deleted

'V' : Programming voltage too low

'P' : Programming fault



NOTICE !

If any one of the faults described above occurs, the previous firmware setting is invalid and the update has to be started again.

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Appendix F - RS-232/485-Host Operation

The RS-232/485-Host operation makes it possible to install a RS-485 network system of printers without any RS-485 interface on the computer. The **A8** serves as converter. It will be called as Printer 1 in the further description. With this configuration 25 **A8**- or **Apollo** printer can be controlled.

1. Make a special cable with the wanted number of network printers to work in the RS-232/485-Host network (see appendix B).
2. Connect the computer and all network printers with this cable. The plug-in connector on which both the RS-232 lines and the RS-485 lines are wired has to contact to Printer 1.
3. Connect all printers to the power supply and insert label media and transfer ribbon in all printers.
4. Set the parameter "Interface" in the setup of the Printer 1 as follows:

Type :	RS-232/485 Host
Baud rate :	optional
Protocol :	RTS/CTS
Network address :	optional (e.g. "A")
5. Configure the interface at all other printers as follows :

Type :	RS-485
Baud rate :	like Printer 1
Net work address :	optional, but different from each other printer (e.g. "B", "C" and so on)
6. Transmit the data via suitably configured RS-232 interface (baud rate must match Printer 1) of the computer.
7. Use the command ESC<Net work address> (e.g. ESCA, ESCB, ESCC and so on) to activate one printer or the command ESC* to activate all printers. Further information can be found in the programming instructions for Apollo.



NOTICE !

Commands which require an answer from the printer (e.g. ESCs), may used, if only one printer is activated. Otherwise the result is not defined. By using such commands the computer has to wait until the complete answer has been received. After that new commands can be transmitted. The computer must be able to receive the answers very fast. Otherwise Printer 1 signals "Buffer overflow", because the buffer capacity from RS-485 to RS-232 in the A8 is limited.

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Gesellschaft für Computer-
und Automationsbausteine
mbH & Co KG
Wilhelm-Schickard-Str. 14
D-76131 Karlsruhe

EU - Conformity Declaration

We declare herewith that as a result of the manner in which the machine designated below was designed, the type of construction and the machines which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health.

In the event of any alteration which has not been approved by us being made to any machine as designated below, this statement shall thereby be made invalid.

Description:

Type:

Thermal Transfer Printer

A8

Applied EU Regulations and Norms:

- **EC Machinery Regulations**
- Machine Safety

89/392/EEC, Appendix IIA
EN 292 T1 & T2:1991-11

- **EC Low Voltage Regulations**
- Data and Office Machine Safety

73/23/EEC
EN60950:1992 & A1:1993
EN 60950/A2:1993

- **EC Electromagnetic Compatibility Regulations**
- Threshold values for the Interference
of Data Machines
- Interference Resistance in both
Industrial and Small Plants

89/336/EEC
EN 55022:1995-05
EN 50082-1: 1992-12

Signed for, and on behalf of, the Manufacturer :

cab Produkttechnik Sömmerda
Gesellschaft für Computer-
und Automationsbausteine mbH
99610 Sömmerda

Sömmerda, 15.07.99

Erwin Fascher
Managing Director