Info Printouts & Parameters

PRINT INFO

PRINT PARAMETERS

INTERFACE PARA

SYSTEM PARAMETERS

I/O BOARD

DISPENSER PARA

REWINDER PARA

MLI PARAMETERS

SPECIAL FUNCTION

SERVICE FUNCTION

SERVICE DATA

General Information

Important setting instructions

Starting in offline mode, you get to the parameter menu by pressing the prog button. There you can set/alter the different parameters of the printer and activate/deactivate options.

Many Parameters provide a range within the setting can be changed with a standard step width. By this step width, the setting is changed, if the Cut-(Apply-) or Feed button is pressed once.

➠ The step width can be increased ten times, if the Online button is pressed simultaneously (Cut+Online or Feed+Online).

➠ Wait at least 10 seconds between switching the device off and on again, otherwise any modified parameter settings are not saved.

➠ With some parameters, false settings can result in the device being damaged (e. g. if the print head temperature is too high). Data and/or print orders are also deleted during formatting and with other settings.

➠ Pay attention to the corresponding notes in the following description to ensure that no damage occurs!

Area of application

The description counts for all devices listed in the headline of this document. All status printouts and parameters are described in the same order as they *may appear* in the parameter menu of the respective printer.

➠ Not all of the parameters appear in each of the listed printers!
At the beginning of each parameter description can be found information about the availability of the parameter:

AP 5.4	AP 5.6
➠ Only with installed I/O board.	

Fig. 1: At the beginning of each parameter description, the availability of the parameter is specified: Between the two lines is a list of the concerned printer types; the remark below (arrow) quotes further conditions.

If a parameter appears in the menu of a certain printer type or not, depends on the following, which can be read from this bar:

- The *printer type:*
  Printers, which have the parameter available in the parameter menu, are listed between the lines. Example (see fig. 1): AP 5.4, AP 5.6.
- The configuration with *options* and/or certain *parameter settings*:
  Example (see fig. 1): The parameter only appears in the menuof an AP 5.4/ 5.6, if the device is equipped with an board. If the remark is not assigned to a special printer type, it is valid for all listed printers.

Firmware

This description applies to all printers which are equipped with a firmware version 7.34 Pre 4081 for AP 5.4/AP 5.6.

❍ The paragraph „Overview Parameter Menues“ in this topic section contains an overview of all available parameters of the respective printer.

Operating the parameter menu

The illustrations on the following pages clarifie the operating principle of the parameter menu. The return path shown on the left of the screen, called up using the Prog. button, also applies for parameters in the middle of the screen.

Setting values

The setting of a parameter always follows this scheme:

1. Select the parameter.
2. Press the Online button.
3. Set the parameter to the intended value by pressing the Cut or Feed button.
4. Confirm by pressing the Online button.

Example

Setting the parameter PRINT PARAMETERS > Material type to punched material.

1. Press prog button.

OFFLINE 0 JOBS	Initial state: off-line mode

2. Press prog button.

PRINT INFO

3. Press cut button.

PRINT PARAMETERS

4. Press online button.

PRINT PARAMETERS Print speed	First parameter in the PRINT PARAMETERS menu.

5. Press cut button repeatedly, until the following is displayed:

Material type Endless

6. Press feed button.

Material type Punched	Setting the parameter to the intended value by pressing the Cut or Feed button.

7. Press online button.

PRINT PARAMETERS Material type	Confirm with Online button.

8. Press prog button 2x.

OFFLINE 0 JOBS	"Way back" by pressing the Prog button.

Parameter Menu

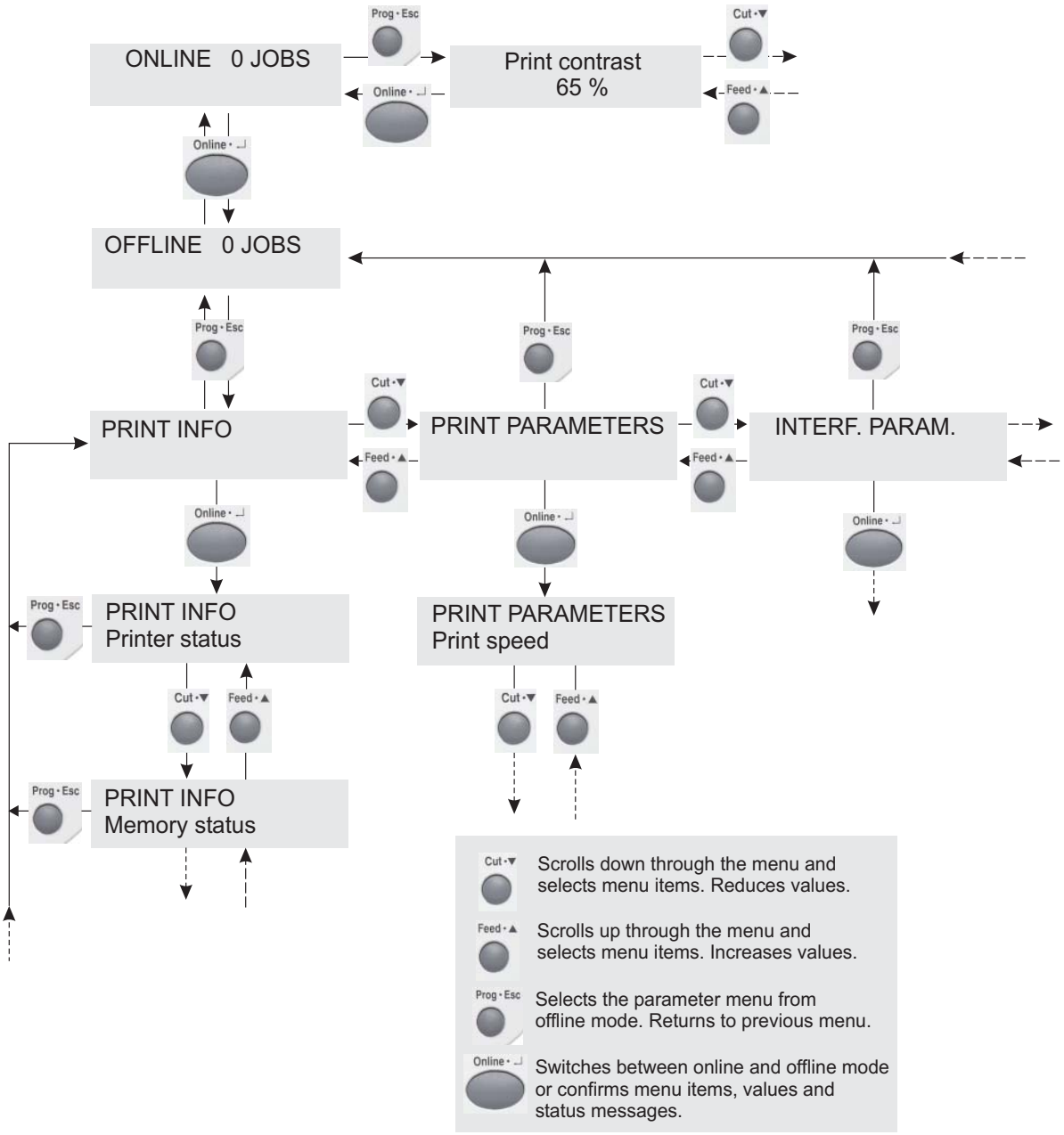

Fig. 1: Guideline through the parameter menu. Start into it by pressing the Prog button in off-line mode.

Overview Parameter Menus

Understanding the Parameter Overviews

The charts in the following show all of the parameters implemented in the printer firmware. Some parameters are only visible in the parameter menu under specific preconditions. These parameters are provided with a gray background and a digit at the right column edge. The digit refers to a footnote describing the precondition under which the parameter is visible.

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Memory status	
Font status	
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Dottest endless	
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PRINT PARAMETERS	
Print speed	
Feed speed	
Material type	
Material length	
Material width	
Print direction	
Punch offset	
Bar code Multi.	
Tradit. Imaging	13
UPC plain-copy	
EAN Readline	
EAN sep. lines	
Cut mode	6
Cut position	6
Double cut	6
Rewind direction	5
Rotated barcodes	
Dispenseposition	8
X – Printadjust	
Y – Printadjust	
Punch mode	
Punch level	12

INTERFACE PARA	
> EASYPLUGINTERPR	
Interface	
Spooler mode	
Printer ID No.	
Spooler size	
Offline mode	
Interface delay	

> COM1 PORT	
Baud rate	
No. of data bits	
Parity	
Stop bits	
Data synch.	
Frame error	

> COM3 PORT	23
Baud rate	23
No. of data bits	23
Parity	23
Stop bits	23
Data synch.	23
Serial Port Mode	23
Frame error	23

> COM4 PORT
Baud rate
No. of data bits

(INTERFACE PARA cont.)
Parity
Stop bits
Data synch.
Frame error

> USB
USB select

> NETWORK PARAM.	
IP Addressassign	
IP Address	
Net mask	
Gateway address	
Port address	
Ethernet speed	
MAC address	
SNMP agent	
SNMP password	13
FTP server	
FTP password	13
WEB server	
WEB display refr	1
WEB admin passw.	13
WEB supervisor p.	13
Time client	
Time server IP	3
Sync. intervall	3
DHCP host name	

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> OPTIONS
RFID Option
StandAlone Input

> DRIVEASSIGNMENT
Drive C
Drive D

SYSTEM PARAMETER	
Foil end warning	
Foil warn stop	
Print Interpret.	
Character sets	
Character filter	
Light sens. type	
Head-sensor dist	13/14
Sens. punch-LS	
Foil mode	
Turn-on mode	
Error reprint	
EasyPlug errors	
Single job mode	
Head resistance	
Temp. reduction	
Thin line emphas	13
Voltage offset	
Miss. label tol.	
Gap detect mode	
Periph. device	
Singlestartquant	
External signal	
Start print mode	24
Print contrast	
Ram disk size	
Font downl. area	
Free store size	
Print info mode	

1. Only with INTERF.PARAM. > NETWORK PARAM. > WEB Server = „enabled“ **2.** Only with BLDC firmware version V4-T36 or higher **3.** Only with INTERF.PARAM. > NETWORK PARAM. > Time client = „Enabled“ **4.** Only with at least one data block stored in the flash memory **5.** Only with rewinder **6.** Only with cutter **7.** Only with „AP 5.4 peripheral“ **8.** Only if SYSTEM PARAMETERS > Periph. device = „Tear-off edge“ or „Tear off + sensor“ **10.** Only with activated MONARCH LANGUAGE INTERPRETER™ **12.** Only if PRINT PARAMETERS > Punch mode = „Manual“ **13.** Only in production mode **14.** As in 13. or with a setting value > 0 **18.** Only with installed RFID option **20.** Only if SYSTEM PARAMETERS > Periph. device = „Dispenser“ **21.** Only if SYSTEM PARAMETERS > Periph. device = „Int Rewinder“ **22.** Only with an activated RFID option **23.** Only with I/O board **24.** Not with I/O board **29.** Availability depends on device configuration **30.** Only with a memory card inserted

(SYSTEM PARAM. cont.)

Reprint function
Language
Keyboard
Access authoriz.
Realtime Clock

I/O BOARD PARA	23
Start delay	23
Start print mode	23
Reprint Signal	23
Feed input	23
Pause input	23
Error output	23
Error polarity	23
Status output	23
Status polarity	23
End print mode	23

MLI PARAMETERS	10
Version	10
Darkness	10
Control Prefix	10
Format Prefix	10
Delimiter Char	10
Label Top	10
Left Position	10
Manual Calibrate	10
Resolution	10
Error Indication	10
Error Checking	10
305 DPI Scaling	10
Image Save Path	10
Command ^PR	10
Command ^MT	10
Label Invert	10
Command ^JM	10

DISPENSER PARA	20
Dispense Mode	20
Dispenseposition	20
Display mode	20
Dispense counter	20
Application mode	20
Start source	20
Calibration mode	20
Start offset	20
Start error stop	20
Product length	20
Speed Adaption	20
Current mode	13+20
Min rew. current	13+20
Max rew. current	13+20
Start rew. curr.	13+20
Start cur. len.	13+20
Pullback current	13+20
Back diameter	13+20
Break current	13+20
Break diameter	13+20

REWINDER PARA	21
Rewind direction	21
Current mode	13+21
Min rew. current	13+21
Max rew. current	13+21
Start rew. curr.	13+21
Start cur. len.	13+21
Pullback current	13+21
Back diameter	13+21
Break current	13+21
Break diameter	13+21

SPECIAL FUNCTION	
Printer type	13
Default values	13
Command sequence	13
Delete job	
Delete spooler	
Factory settings	
Store parameters	
Store diagnosis	
EasyPl. file log	30
Log files delete	30
Data blocks del.	4
RFID stat. del.	22

1. Only with INTERF.PARAM. > NETWORK PARAM. > WEB Server = „enabled“ **2.** Only with BLDC firmware version V4-T36 or higher **3.** Only with INTERF.PARAM. > NETWORK PARAM. > Time client = „Enabled“ **4.** Only with at least one data block stored in the flash memory **5.** Only with rewinder **6.** Only with cutter **7.** Only with „AP 5.4 peripheral“ **8.** Only if SYSTEM PARAMETERS > Periph. device = „Tear-off edge“ or „Tear off + sensor“ **10.** Only with activated MONARCH LANGUAGE INTERPRETER™ **12.** Only if PRINT PARAMETERS > Punch mode = „Manual“ **13.** Only in production mode **14.** As in 13. or with a setting value > 0 **18.** Only with installed RFID option **20.** Only if SYSTEM PARAMETERS > Periph. device = „Dispenser“ **21.** Only if SYSTEM PARAMETERS > Periph. device = „Int Rewinder“ **22.** Only with an activated RFID option **23.** Only with I/O board **24.** Not with I/O board **29.** Availability depends on device configuration **30.** Only with a memory card inserted

SERVICE FUNCTION	
Service	13
Head exchange	13
Roller exchange	13
Cutter exchange	13+6
Serv. data reset	13
EasyPlug monitor	23
EP Monitor Mode	13
Sensor adjust	13
Sensor test	
Cutter test	
Matend adjust	
Matend tolerance	
Feedadjust label	
Feed adjust	
Punch y calibr.	13
Memory card test	
Send test	
Receive test	
Rewinder adjust	5
Print test	

SERVICE DATA	
> MODULE FW VERS.	
System version	
System revision	
System date	
Bootloader	
uMon	
Peripheraldriver	7
Intern. rewinder	21

> OPERATION DATA	
Serv. operations	
Headnumber	
Roll number	
Cutter number	6
Head run length	
Roll run length	
Cuts on knife	6
Tot. mat. length	
Tot. foil length	
Total cuts	6
Head strobes	
Head temperature	
Foil diameter	
Operation time	

> POWERSUPPLYDATA
Type
PS temperature

(Service Data cont.)

> CPU BOARD DATA	
CPU identifier	
PCB revision	
FPGA version	
MAC address	
Serial number	
Production date	
PCB part number	
Board part numb.	
Manufacturer	13
Work place	13
Company name	13

> DISPLAY DATA
Display version
Display SerialNr

> MEMORY DATA	
Ram memory size	
Flash mem size	
SD card	30
Space for Jobs	
Max. Labellength	
Default values	

1. Only with INTERF.PARAM. > NETWORK PARAM. > WEB Server = „enabled“ **2.** Only with BLDC firmware version V4-T36 or higher **3.** Only with INTERF.PARAM. > NETWORK PARAM. > Time client = „Enabled“ **4.** Only with at least one data block stored in the flash memory **5.** Only with rewinder **6.** Only with cutter **7.** Only with „AP 5.4 peripheral“ **8.** Only if SYSTEM PARAMETERS > Periph. device = „Tear-off edge“ or „Tear off + sensor“ **10.** Only with activated MONARCH LANGUAGE INTERPRETER™ **12.** Only if PRINT PARAMETERS > Punch mode = „Manual“ **13.** Only in production mode **14.** As in 13. or with a setting value > 0 **18.** Only with installed RFID option **20.** Only if SYSTEM PARAMETERS > Periph. device = „Dispenser“ **21.** Only if SYSTEM PARAMETERS > Periph. device = „Int Rewinder“ **22.** Only with an activated RFID option **23.** Only with I/O board **24.** Not with I/O board **29.** Availability depends on device configuration **30.** Only with a memory card inserted

Alphabetical Parameter List

PRINT INFO

➠ Printing of individual reports can be deactivated for certain options (e. g. for the infeed option).

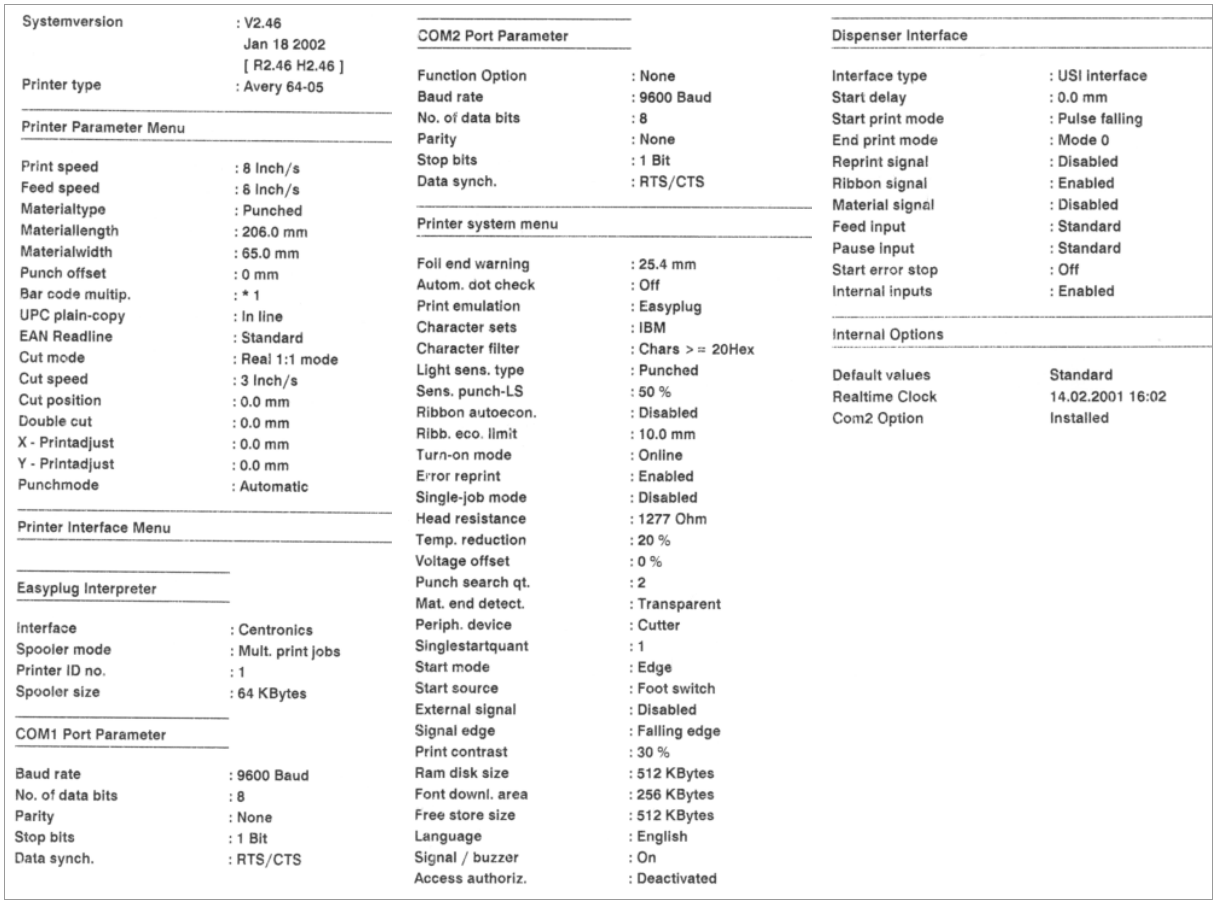
A material width of 100 mm is necessary to print the reports. The status printout is approx. 200 mm long.

Printer status

AP 5.4 AP 5.6

A protocol can be printed to get an overview of customer-specific parameter settings (three pages, see [1]).

➠ Which parameters are listed, depends on the printer type.



Systemversion	: V2.46 Jan 18 2002 [R2.46 H2.46]
Printer type	: Avery 64-05

Printer Parameter Menu

Print speed	: 8 Inch/s
Feed speed	: 8 Inch/s
Materialtype	: Punched
Materiallength	: 206.0 mm
Materialwidth	: 65.0 mm
Punch offset	: 0 mm
Bar code multip.	: * 1
UPC plain-copy	: In line
EAN Readline	: Standard
Cut mode	: Real 1:1 mode
Cut speed	: 3 Inch/s
Cut position	: 0.0 mm
Double cut	: 0.0 mm
X - Printadjust	: 0.0 mm
Y - Printadjust	: 0.0 mm
Punchmode	: Automatic

Printer Interface Menu

Easyplug Interpreter

Interface	: Centronics
Spooler mode	: Mult. print jobs
Printer ID no.	: 1
Spooler size	: 64 KBytes

COM1 Port Parameter

Baud rate	: 9600 Baud
No. of data bits	: 8
Parity	: None
Stop bits	: 1 Bit
Data synch.	: RTS/CTS

COM2 Port Parameter

Function Option	: None
Baud rate	: 9600 Baud
No. of data bits	: 8
Parity	: None
Stop bits	: 1 Bit
Data synch.	: RTS/CTS

Printer system menu

Foil end warning	: 25.4 mm
Autom. dot check	: Off
Print emulation	: Easyplug
Character sets	: IBM
Character filter	: Chars > = 20Hex
Light sens. type	: Punched
Sens. punch-LS	: 50 %
Ribbon autoecon.	: Disabled
Ribb. eco. limit	: 10.0 mm
Turn-on mode	: Online
Error reprint	: Enabled
Single-job mode	: Disabled
Head resistance	: 1277 Ohm
Temp. reduction	: 20 %
Voltage offset	: 0 %
Punch search qt.	: 2
Mat. end detect.	: Transparent
Periph. device	: Cutter
Singlestartquant	: 1
Start mode	: Edge
Start source	: Foot switch
External signal	: Disabled
Signal edge	: Falling edge
Print contrast	: 30 %
Ram disk size	: 512 KBytes
Font downl. area	: 256 KBytes
Free store size	: 512 KBytes
Language	: English
Signal / buzzer	: On
Access authoriz.	: Deactivated

Dispenser Interface

Interface type	: USI interface
Start delay	: 0.0 mm
Start print mode	: Pulse falling
End print mode	: Mode 0
Reprint signal	: Disabled
Ribbon signal	: Enabled
Material signal	: Disabled
Feed input	: Standard
Pause input	: Standard
Start error stop	: Off
Internal inputs	: Enabled

Internal Options

Default values	Standard
Realtime Clock	14.02.2001 16:02
Com2 Option	Installed

[1] Example printout „printer status“ (64-05 with firmware version 2.46).

Listed items:

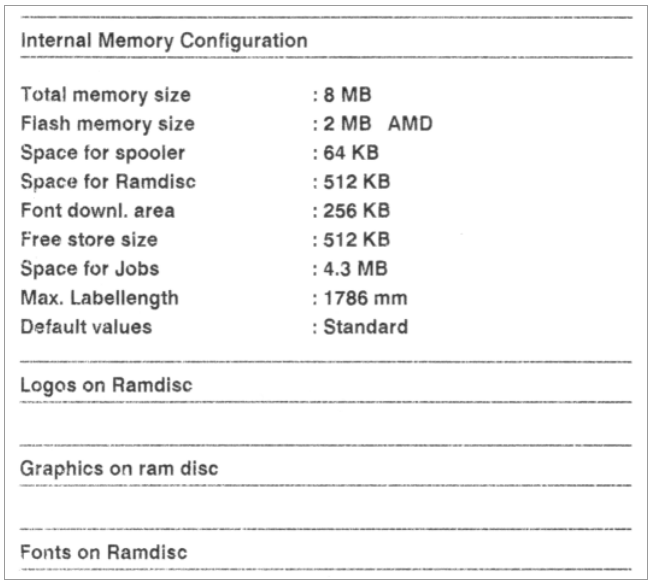
- Systemversion:
  - Shows the installed firmware version as well as the release date of this version.
  - Firmware version: R = firmware RISC processor, H = firmware H8 processor.

- Printer type:
  – Shows the printer type, which has been set using parameter SERVICE FUNCTIONS > printer type (e.g. Avery 64-04)
  – "USA" displayed after the printer type indicates that the USA font is loaded.
  – "8DOT" displayed after the printer type indicates that the 8-Dot emulation is loaded.
- Printer Parameter Menu
  Shows the setting of the parameters in the PRINT PARAMETERS menu.
- Printer Interface Menu
  Shows the setting of the parameters in the INTERFACE PARA menu.
- Printer system menu
  Shows the setting of the parameters in the SYSTEM PARAMETERS menu.
- Dispenser Interface
  Shows the setting of the parameters in the DP INTERFACE menu.
- Internal Options
  – Default values: Shows the values which are used in case of a factory reset (Standard or Default). See parameter SPECIAL FUNCTION > Default Values.
  – Realtime Clock: Shows the set time and date, if a realtime clock is installed. In case of a too low battery, the line "Battery empty" is added.
  – 2. com port: Shows if an additionall serial Interface is installed (not supported).

Memory status

AP 5.4 AP 5.6

A memory protocol can be printed to provide an overview of the distribution of the available memory capacity (one page).



[2] Example of a memory Status printout.

Listed items:

- Internal Memory Configuration

❍ See paragraph > MEMORY DATA 🗋 on page 168.

- Logos on RAM disc
- Graphics on RAM disc
- Fonts on RAM disc

❍ See Plug-in card manual 🗋, topic section „Application“, chapter „Compact-Flash card“.

Font status

AP 5.4 AP 5.6

Print samples of all installed characters, bar codes and line samples (several pages).

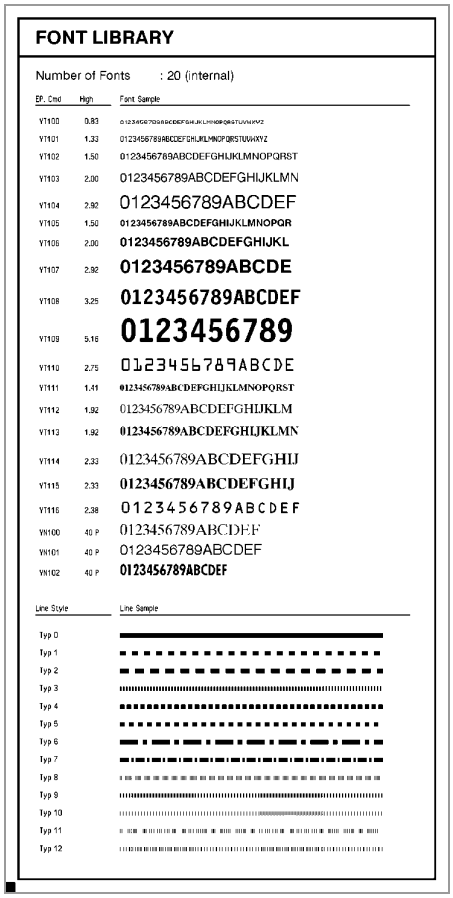
Page „Font Library“ shows a list of the internal fonts and line styles.

Internal Fonts

➜ Use the Easy-Plug commands listet in the first column of the report (e.g. #YT100), to print using the appropriate font.

❍ Easy Plug commands: Refer to the Easy Plug Manual, topic section Description of Commands 🗋.

❍ For a list of all characters contained in the internal fonts, refer to the User Manual, topic section Internal Fonts 🗋.



[3] Print sample „Font Status“ / „Font Library“.

Internal Line Styles

➜ Use the line style number (fist column) with one of the Easy Plug commands #YL or #YR to print lines in the matching style.

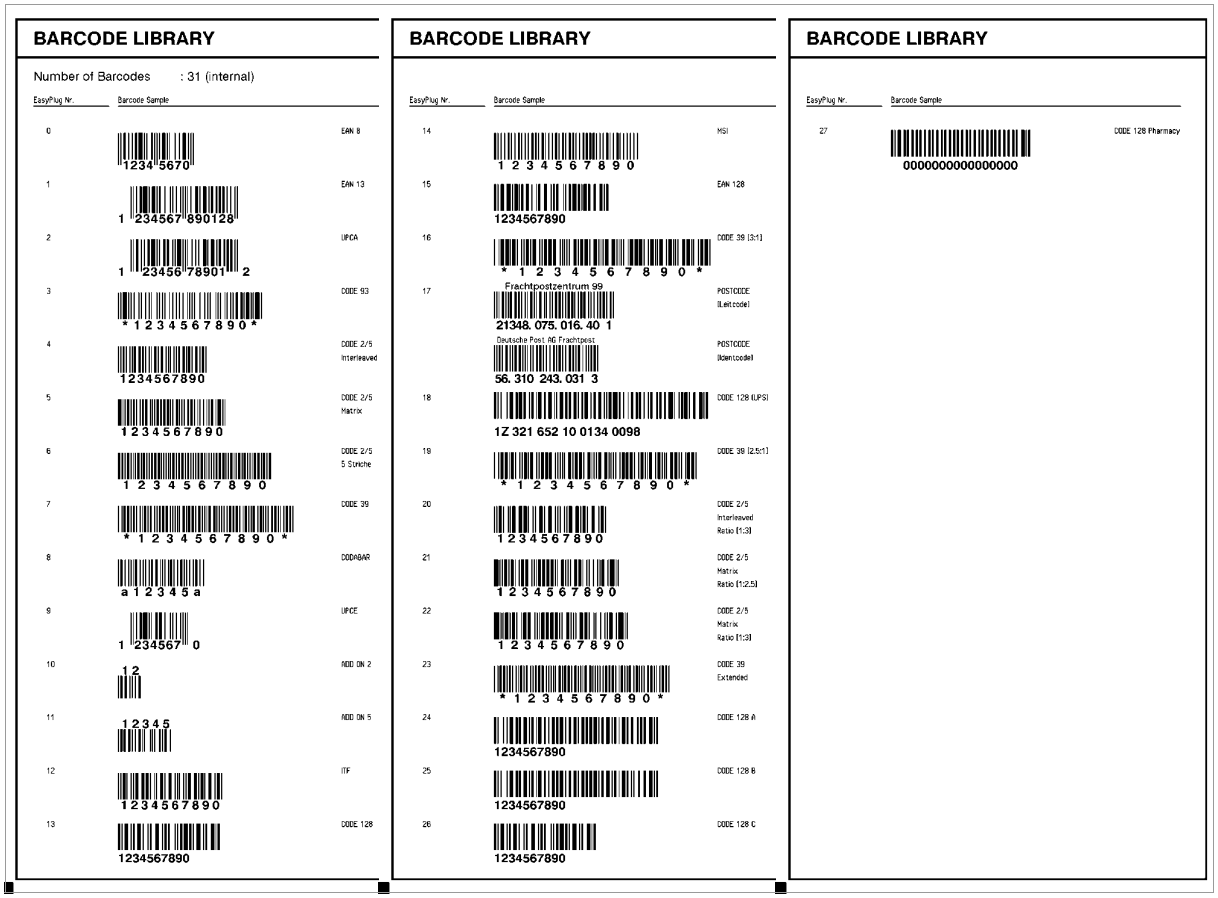
❍ Easy Plug commands: Refer to the Easy Plug Manual, topic section Description of Commands 🗋.

➠ Additionally, the following line styles are available:
– 13: Checked pattern with 3 dot edge length
– 14: Checked pattern with 1 mm edge length
– 15: Checked pattern with 5 mm edge length

➠ The line width has to be defined as a multiple of the edge length of the checked pattern!

Internal bar codes

The pages titled „Barcode Library“ show print samples of the internal bar codes (see [4], [8]).



[4] Print sample „Font Status“ / „Font Library“: Bar code listing.

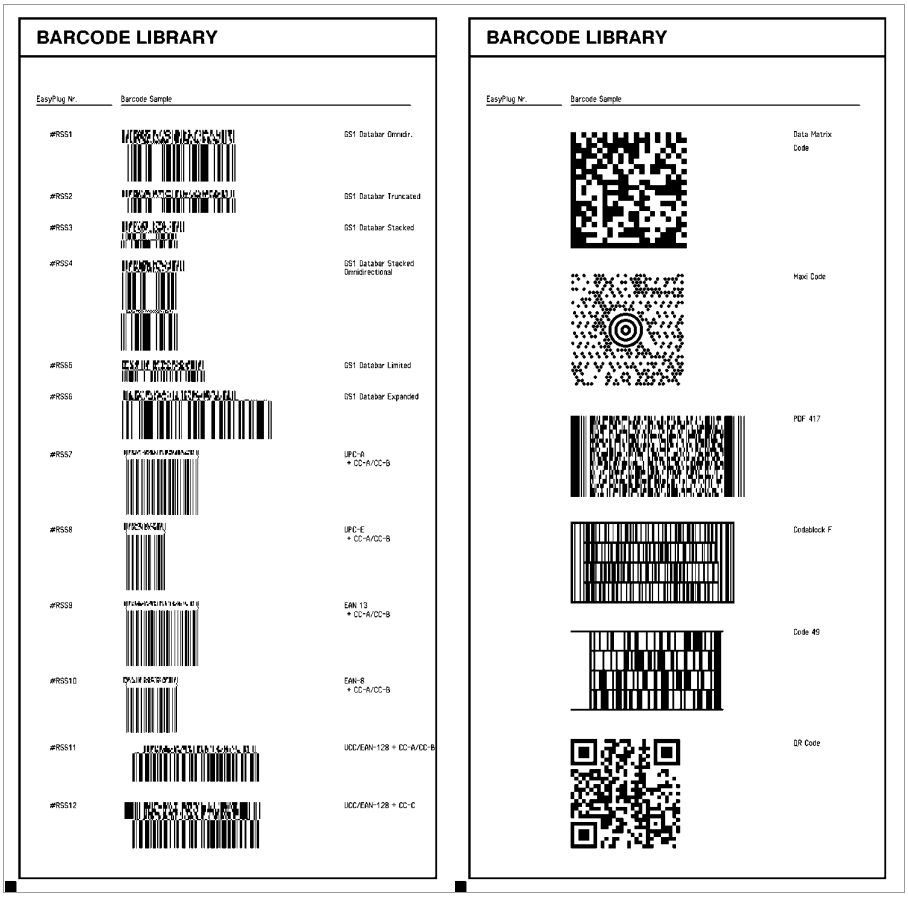
- *Onedimensional bar codes* are printed with the Easy-Plug command #YB, see manual Easy-Plug, topic section Description of Commands 🗋.
- *Two-dimensional bar codes* are printed by means of special Easy-Plug commands:

Easy-Plug command	Bar code
#IDM	Data Matrix Code
#MXC	Maxi Code
#PDF	PDF 417
#CBF	Codabar F
#CFN	Code 49
#SQR	QR Matrix Code

[1] Internal, two-dimensional bar codes.

- *GS1 DataBar* (formerly RSS) and *Composite Component* (CC) bar codes are printed by means of the Easy-Plug command #RSS. The bar code is

determined by the number in the first column of the subsequent table. This number is added to the command as a parameter.



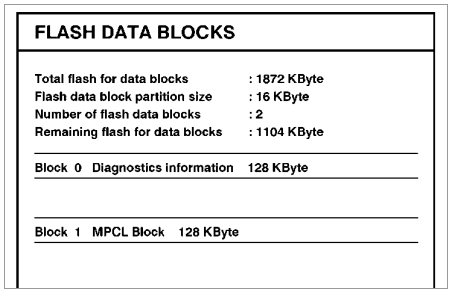
[5] Print sample „Font Status“ / „Font Library“: Listing of RSS-Codes and 2-dim. bar codes.

Flashdata status

AP 5.4 AP 5.6

Prints a list of all fonts stored in the flash memory. This can be e. g. customized fonts or diagnose data.

- For details see topic section Internal Fonts, paragraph „Customized fonts“.
- For detailed information about diagnosis data refer to the service manual, topic section „Fault location“, „Reading out diagnosis data“.



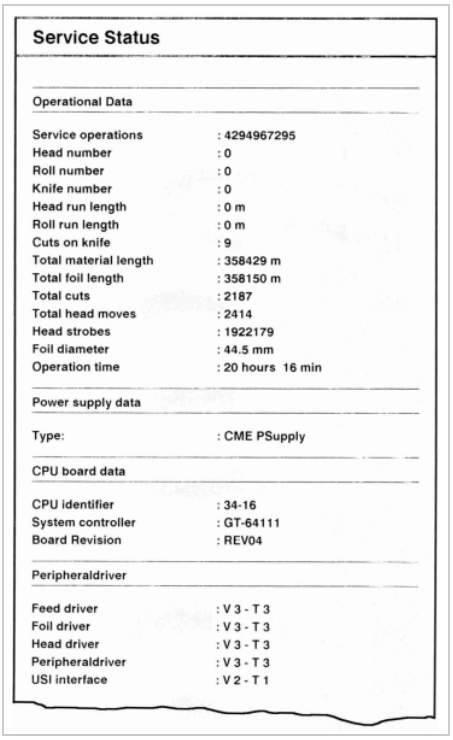
[6] Example printout „Flashdata status“.

Service Status

AP 5.4 AP 5.6

Print the Service status report to read about operation time, no. of services, no. of exchanged parts and other matters of service interest (one page).

Use the parameter SERVICE FUNCTION > Serv. data reset, to set all the counters to zero, which are listed on the printout.



Service Status

Operational Data

Service operations	: 4294967295
Head number	: 0
Roll number	: 0
Knife number	: 0
Head run length	: 0 m
Roll run length	: 0 m
Cuts on knife	: 9
Total material length	: 358429 m
Total foil length	: 358150 m
Total cuts	: 2187
Total head moves	: 2414
Head strobes	: 1922179
Foil diameter	: 44.5 mm
Operation time	: 20 hours 16 min

Power supply data

Type:	: CME PSupply

CPU board data

CPU identifier	: 34-16
System controller	: GT-64111
Board Revision	: REV04

Peripheraldriver

Feed driver	: V 3 - T 3
Foil driver	: V 3 - T 3
Head driver	: V 3 - T 3
Peripheraldriver	: V 3 - T 3
USI interface	: V 2 - T 1

[7] Example of a „Service Status“ printout.

- For information on the operational data on the service status printout refer to paragraph > OPERATION DATA on page 159.
- For information on the power supply data on the service status printout refer to paragraph > POWERSUPPLYDATA on page 164.
- For information on the CPU board data on the service status printout refer to paragraph > CPU BOARD DATA on page 165.
- For information on the peripheral driver data on the service status printout refer to paragraph > MODULE FW VERS. on page 157.

Dottest endless

AP 5.4 AP 5.6

Dottest for application with endless label stock.

This function prints a pattern which enables trained personnel to check the adjustment as well as the function of the printhead.

Test pattern

The „Dottest endless“ or „Dottest punched“ prints a pattern consisting of 33 rows filled with vertical lines on the upper label area. All lines have a constant distance of 4 dot. With every new row, the line pattern is shifted one dot. The resulting line-pattern repeats every four rows.
The test pattern shows missing dots clearly as white vertical lines running through the pattern.

The lower label area is filled with testpatterns, which are kept close to those used by Kyocera. The patterns are useful for printout comparison.

The bars underneath the test pattern allow the adjustment of the different zero lines.

Dottest punched

AP 5.4 AP 5.6

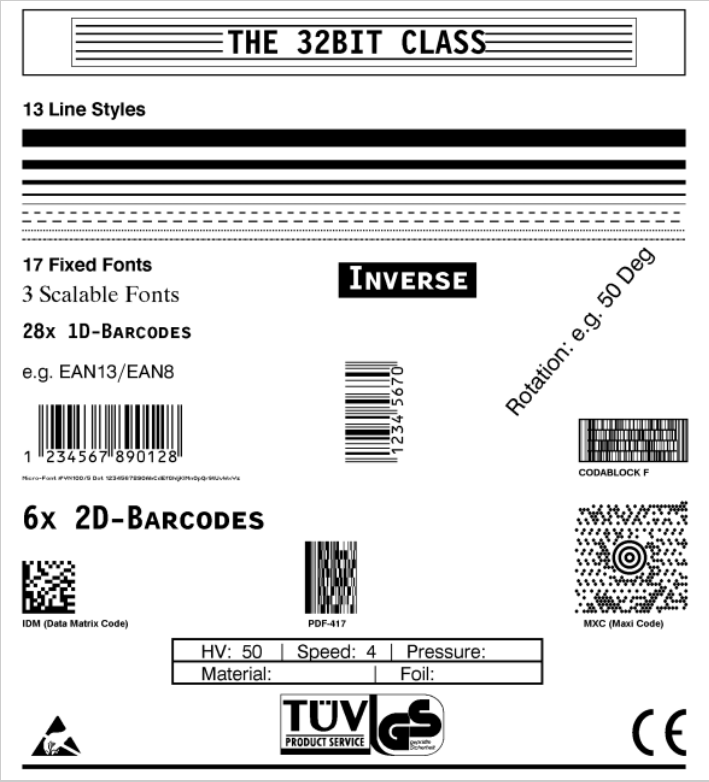
Dottest for application with punched material.

❍ See parameter Dottest endless 🗋 on page 25.

Reference label

AP 5.4 AP 5.6

Prints a label with some examples of barcodes, fonts, logos... just try out!



[8] Example of a Reference label printout INFO AUSDRUCKEN > Reference label.

RFID Status

➠ Only with activated RFID option.

AP 5.4 AP 5.6

Prints a status printout with RFID specific data:

RFID Status

System version	: V4.00 Jun 23 2005 [R4.00 PE2.50 H4.00Q]
Printer type	: Avery 64-05
Nr CMD retries	: 3
Nr invalid tags	: 3

Statistics

Nr of Tags	: 7043
Nr. invalid tags	: 2788
Total Nr. SELECT	: 7803
Invalid SELECT	: 16%
Total Nr. READ	: 1189
Invalid READ	: 29%
Total Nr. WRITES	: 5483
Invalid WRITE	: 37%
Rate READ	: 45
Rate WRITE	: 46

[2] Beispiel eines Ausdrucks INFO AUSDRUCKEN > RFID Status.

PRINT PARAMETERS

Print speed

AP 5.4 AP 5.6

The print speed (material feed) can be adjusted according to the ribbon and material combination being used in order to optimise the contrast depth and the density of the print image.

x Inch/s

Setting range: see table; Unit interval: 0,2 inch/s;
Default setting: 8 Inch/s

Feed speed

AP 5.4 AP 5.6

The feed speed can be increased between print periods hereby reducing the total print time, particularly with long labels with a minimum printed surface.

Setting:
The value for the feed speed should not be set too high for print applications with long calculating units (e. g. consecutive numbering). This can help to avoid alternating between abrupt braking to 0 (zero) and acceleration to print speed.

➠ When altering the print speed, the feed speed is equal to the print speed. If a different feed speed is required, this must be set again.

x inch/s

Setting range: 2 to 12 inch/s; Unit interval: 1 inch/s
Default setting: 8 inch/s

Material type

AP 5.4 AP 5.6

Definition of the materials used. A distinction is made between reel material and gapped material (hole gaps, self-adhesive material with register gaps). The detected gap position corresponds to the start of the label.

➠ The value is overwritten by the appropriate Easy Plug command when sending label formats.

Endless If material is to be used without gaps.

Punched If material is to be used with gaps (default setting).

Material length

AP 5.4 AP 5.6

The material length (label length) is the distance between the gaps, measured from the front edge (beginning) of a label to the front edge of the next label.

➠ The value is overwritten by the appropriate Easy Plug command when sending label formats.

xxx mm Setting range: 5 mm to "max. length entry"; Unit interval: 0.1 mm
Default setting: 100 mm

Maximum length entry: dependent on the print head width and memory configuration.

Material width

AP 5.4 AP 5.6

Zero position of the left border. If the printer is working in line-printer mode, alterations can be made in millimetre units.

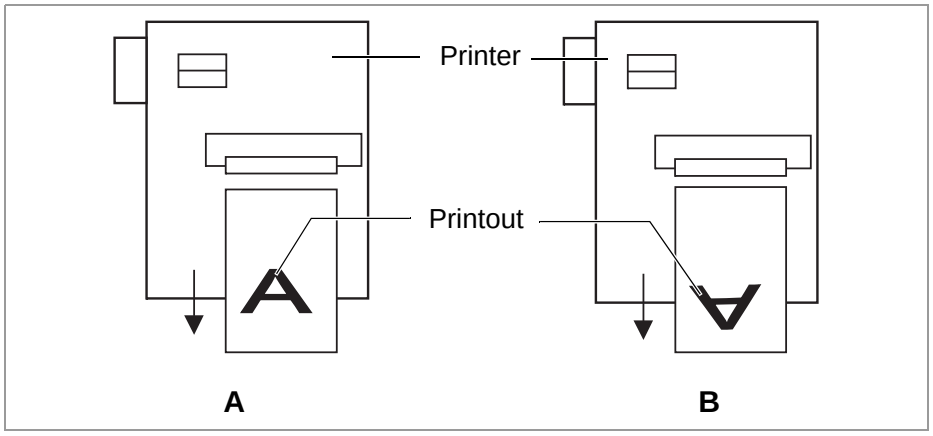
xxx mm Setting range: "min. width" to "max. width"; Unit interval: 0.1 mm
Default setting: 100 mm

- Min. width: dependent on the printer type
- Max. width: dependent on print head width and memory configuration.

❍ For detailed material width information, refer to topic section „Specifications“.

Print direction

AP 5.4 AP 5.6



[9] Orientation of the printout „Foot first“ (A) or „Head first“ (B).

Foot first (Default) Orientation of the printout according to [10A].

Head first Orientation of the printout according to [10B]. Mind the following:

➠ Define the „true“ label length (without gap length) in parameter PRINT PARAMETERS > Material length. If the label gap is wider than 5 mm, the parameter SYSTEM PARAMETERS > Miss. label tol. must be set to a value more than zero.

➠ The distance between material base line and the first printable dot is 1 mm. To keep this distance while printing „head first“, the material width must be calculated as follows::

$b_{Mat} = b_{Bp} - 2mm$, with

b_{Mat}: Material width
b_{Bp}: Backing paper width

Punch offset

AP 5.4 AP 5.6

The zero position can be determined offset in millimetre units from the detected gap position.

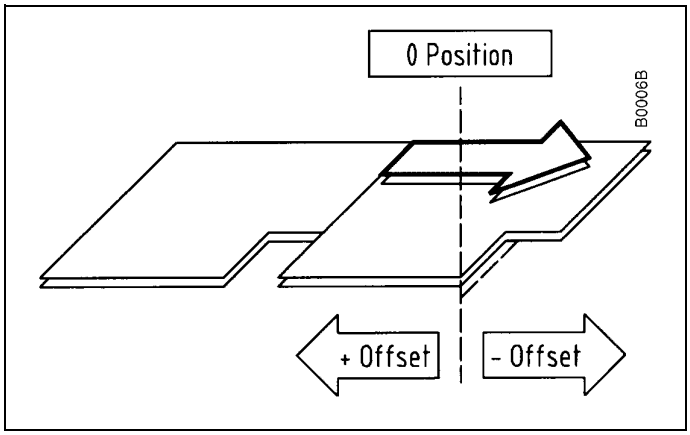
➠ The value is overwritten by the appropriate Easy Plug command when sending label formats.

xxx mm

Setting range: -8 to +max. label length; Unit interval: 0,1 mm
Default setting: 0 mm

Maximum offset in feed direction: -8 mm

Minimum offset against feed direction: +max. label length



[10] Positive and negative offset in relation to the feed direction (arrow).

Bar code multip.

AP 5.4 AP 5.6

Bar code height scaling factor

Increases the bar code height defined in the label layout (Easy-Plug) by multiplication by a factor of 1 to 10.

x

Setting range: 1 to 10; Unit interval: 1; Default setting: 1

The printed bar code height calculates starting with the value defined in the label layout multiplied by the scaling factor x.

Tradit. Imaging

AP 5.4 AP 5.6

➠ In production mode only.

Up to firmware version x.31, the barcode height was calculated with the formula:

$$Barcodehight_{Print} = (Barcodehight_{Layout} + 1) \cdot x$$

with x = PRINT PARAMETERS > Barcode Multi.

By doing so, the printed barcode height in millimeters was by 1 higher than the value defined in the layout (1 --> 2 mm, 2 --> 3 mm, etc.)[1)].

From firmware version x.31 on, the printed barcode is exactly as high in millimeters, as the value in the layout is (1 --> 1 mm, 2 --> 2 mm, etc.) [1)].

No — New height calculation (1 --> 1 mm, 2 --> 2 mm, etc.) is applied (default setting).
The plain copy line is printed with OCR-B font.

Yes — Setting for customers with print layouts based on the *old* height calculation scheme.
The plain copy line of the barcodes EAN8, EAN13, UPC-A and UPC-E is printed with the same fonts, which older printer types like TTK or TTX x50 have used.

UPC plain-copy

AP 5.4 AP 5.6

The position of the first and last digit in the plain-copy line - underneath the bar code - can be adjusted as required.

Raised — First and last digit of the UPCA or first digit with the UPCE are raised (default setting).

In line — All digits in the decoded line are in line under the code.

EAN Readline

AP 5.4 AP 5.6

<> Signs — Readline enclosed in "<>" signs or terminated by a ">"-Sign (EAN 13).

Standard — Readline without "<>" or ">" signs (default).

1) *Assumed that* PRINT PARAMETERS > Barcode Multi. = *„1“.*

EAN sep. lines

AP 5.4 AP 5.6

EAN separation lines. Parameter for controlling of EAN or UPC barcodes if they are printed without readline.

With readl. only — (Default) The seperation bars at the beginning, end and in the middle of the barcode are only long, if the barcode is printed with a readline.

Always long — The seperation bars at the beginning, end and in the middle of the barcode are always long, regardless if the barcode is printed with or without readline. The position of the barcode is the same as with the readline option switched on.

Rotated Barcodes

AP 5.4 AP 5.6

Improves the readability of rotated (90° and 270°) bar codes.

Normal — „Normal“ printing without a special processing of rotated bar codes.

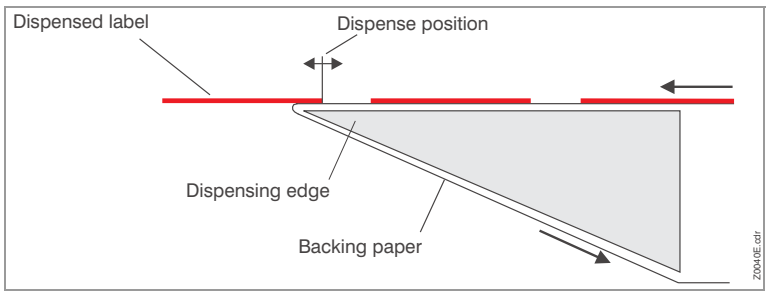
Optimized — (Default setting) The line and gap widths of rotated bar codes are modified in order to improve their readability.

Dispenseposition

AP 5.4 AP 5.6

Dispense position

Adjusts the dispense position in or against the feed direction. Depending on the set dispense position, the dispensed label sticks to the backing paper with a more or less wide strip [13]. The required width of this strip depends on the further processing.



[11] Dispense position (= stopp position) of the dispensed label.

x.x mm — Setting range: -30.0 to +20.0 mm; Unit interval: 0,1 mm; Default setting: 0 mm

Cut mode

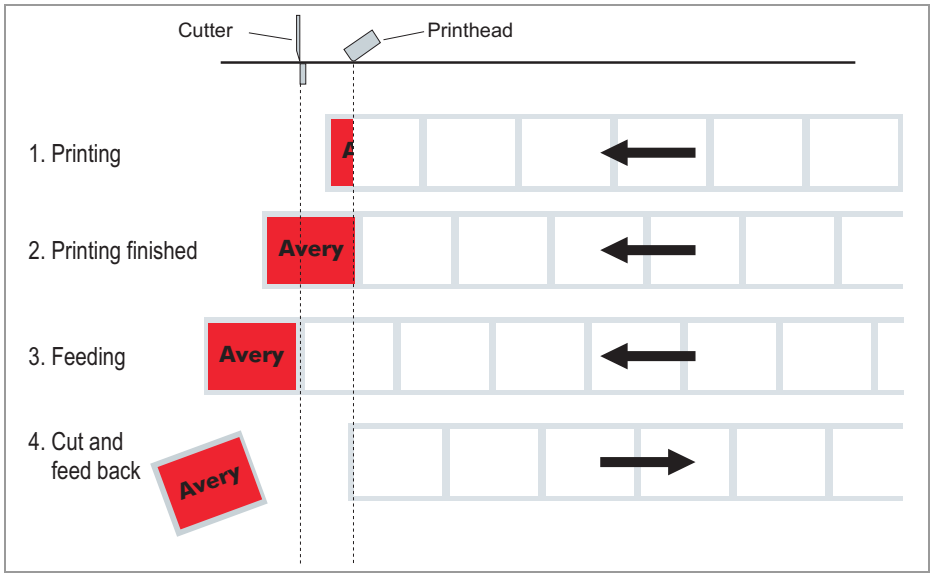
AP 5.4 AP 5.6

➠ Only with mounted and activated cutter (SYSTEM PARAMETERS > Periph. device = „Cutter“).

This is where the procedure for the label output and cut is defined.

Real 1:1 mode

The whole surface of the label is printable. The label is pushed forward to the cutter for cutting. After the cut, the beginning of the next label is drawn back under the print head. This reduces the output volume (in relation to a certain time).



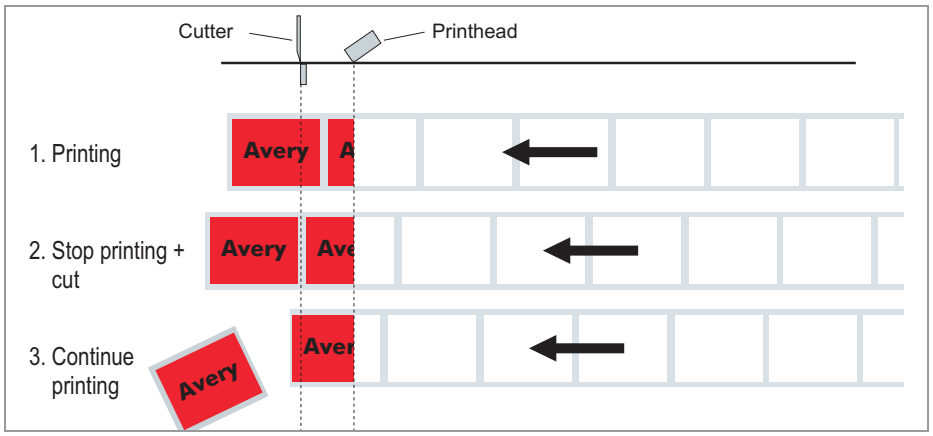
[12] Printing process (schematic) in „Real 1:1 Mode“.

Batch mode

The whole surface of the label is printable. Cutting takes place during printing. This can result in brief interruptions within the print zone of the following label. The output volume is at its maximum level.

Requirements for the batch mode are:

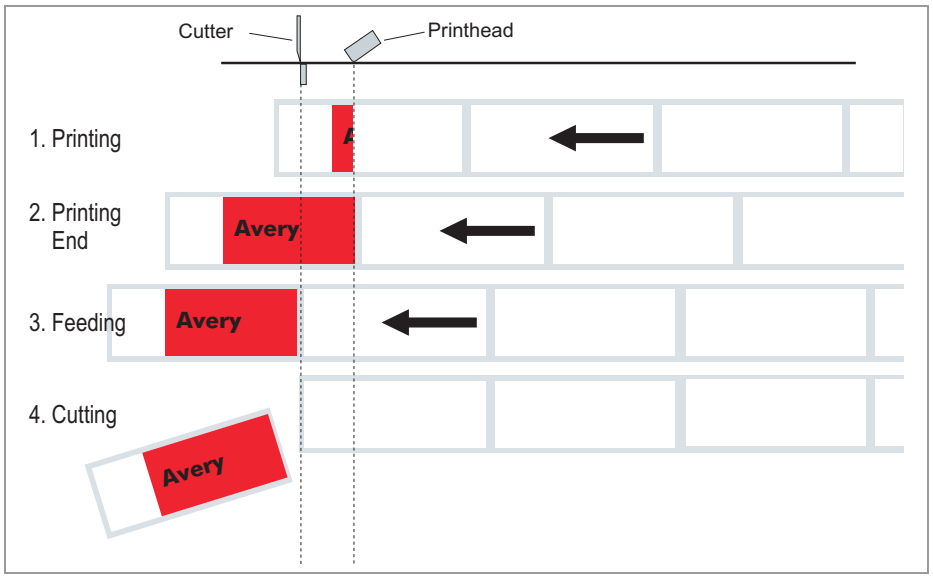
- Ribbon economy is not active (parameter SYSTEM PARAMETERS > Ribbon autoecon. = "Deactivated")
- Material length >18 mm (>14 mm on the TTX 350)
- Number of cuts for a print job - at least 2 or more



[13] Printing process in Batch mode (schematic).

Normal 1:1 mode

In N1:1 mode, cutting takes place during printing. The zero-line of the printing is shifted 18 mm in y-direction. This offset equals the distance cutter-printhead. Caused by this shifting, the first 18 mm of the label are not printable. These measurement corresponds to the distance between print head and cutter. The output volume is at its maximum level.
(The offset of the zero-line is caused historically and serves the compatibility of older printer models).



[14] Printing process in Normal 1:1 mode (schematic).

Cut speed

AP 5.4 AP 5.6

➠ Only with mounted and activated cutter (SYSTEM PARAMETERS > Periph. device = „Cutter“).

The cut speed is to be adjusted to the material thickness and strength.

x inch/s

Setting range: 2 to 5 inch/s; Unit interval: 1 inch/s

- 2 inch/s: extremely slow; for thick and strong material
- 5 inch/s: extremely fast; for thin material

Cut position

AP 5.4 AP 5.6

➠ Only with mounted and activated cutter (SYSTEM PARAMETERS > Periph. device = „Cutter“).

The cut position is identical to the detected gap position, i. e. with the start of the label. Fine settings to meet specific customer requirements can be programmed using the parameter PRINT PARAMETER > Cut position.

x inch/s

Setting range: -2.0 to +2.0 mm; Unit interval: 0.1mm

- Maximum offset in feed direction: -2.0 mm
- No offset: 0 mm
- Minimum offset against feed direction: -2.0 mm

Double cut

AP 5.4 AP 5.6

➠ Only with mounted and activated cutter (SYSTEM PARAMETERS > Periph. device = „Cutter“).

Joining grids or the gap area between the labels can be removed using a double cut, thereby improving the outline.

The first cut is offset by the distance set from the recognized gap position away in the feed direction, the second cut is made at the gap position.

A possible correction of the cut position ("Cut position" function) is calculated for both cuts and must be taken into consideration.

x inch/s

Setting range: 0.0 to 5.0 mm; Unit interval: 0.1mm

Normal simple cut: 0.0 mm

➠ The smallest possible double cut distance of 1.0 mm must be adhered to!

Rewind direction

AP 5.4 AP 5.6

➠ Only with mounted and activated rewinder (SYSTEM PARAMETERS > Periph. device = „Rewinder“).

Determines the sense of rotation of the optional Rewinder.

Printing outside — Rewind direction: The printed label is facing outside.

Printing inside — Rewind direction: The printed label is facing inside.

X - Printadjust

AP 5.4 AP 5.6

The zero point of the mask is moved in relation to the edge of the label on the X- axis, i. e. lengthways to the material.

➠ If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.

➠ Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter "X-Printadjust", the part of the graphics which "juts out" will get lost.

x.x mm — Setting range: -5.0 to +5.0 mm; Unit interval: 0.1mm
Default setting: 0.0 mm

- Maximum offset away from the edge of the label: +5.0 mm
- No offset: 0.0mm
- Maximum offset towards the edge of the label: -5.0 mm

Y – Printadjust

AP 5.4 AP 5.6

The zero point of the mask is moved in relation to the gap position on the Y-axis, i. e. in the feed direction.

➠ If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.

➠ Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter "Y-Printadjust", the part of the graphics which "juts out" will get lost.

x.x mm — Setting range: -5.0 to +5.0 mm; Unit interval: 0.1mm
Default setting: 0.0 mm

- Maximum offset in feed direction: +5.0 mm
- No offset: 0.0mm
- Minimum offset against feed direction: -5.0 mm

Punch mode

AP 5.4 AP 5.6

Automatic

Automatic mode, for material with a contrast zone = gap in the label.

"Automatic" is the default setting, suitable for all materials with which there is a difference in the transparency between the label and gap of more than 2 values (see Description, sensor check).

Manual

Manual setting, for material with several varying contrast zones. Settings are made using the parameter PRINT PARAMETER > Punch level.

The range of the value automatically measured by the gap detection can be defined specifically for the label material. This allows materials with high-contrast proof points within the label to be processed, which would otherwise be measured as 'false' gaps by the system. The corresponding setting value is then equal to, or smaller than, the value measured at the actual gap.

Punch level

AP 5.4 AP 5.6

➠ Only if PRINT PARAMETERS > Punch mode = „Manual“.

xxx

Setting range: 0 to 255; Unit interval: 1

The value xxx stands for the current contrast within the photoelectric switch of the material which has just been inserted. This serves to determine a threshold value for the inserted material.

```
Punchlevel
Punch xxx Val yyy
```

xxx = current measurement at the punch sensor
yyy = set threshold value

Example

Self-adhesive material with black bars lengthways across the label

- Reading:
  – Masking paper: 30
  – Masking paper + label: 60
  – Masking paper + label + black bars: 190
- Setting value: 60
  A setting value of 60 means that all readings over 60 are ignored, therefore also the reading 190 at the black bar.

INTERFACE PARA

Interface parameter

> EASYPLUGINTERPR

Interface

AP 5.4 AP 5.6

Interface type

This parameter sets the interface, by which the printer will receive data.

Serial Com1 — Serial interface Com1.

❍ Selection of the type of serial interface is done with parameter INTERF. PARAM > EASYPLUGINTERPR > Serial Port Mode.

Only for Ethernet interface (10/100 Base T):

TCP/IP Socket — Print data can be sent to the printer via a TCP/IP socket

LPD Server — Print data can be sent to the printer via the LPR/LPD-protocol

USB — USB 1.1 interface

Serial Com3 — Serial interface Com3.

➠ Only with optional I/O board mounted.

Automatic — All interfaces are enabled to receive data, but *not simultaneously*.

➠ Don´t send data to more than one interface at a time.

➠ Except are interfaces, which are being used by an option (e.g. OLV).

Spooler mode

AP 5.4 AP 5.6

The operating mode of the spooler determines whether print series are processed individually, or whether the spooler can receive print data when printing several series.

Single print job — Single print series mode (the interface can only receive data after printing the required number of labels of a single series)

Mult. print jobs — Multiple print series mode (the interface can receive data while the series is being printed)

Printer ID No.

AP 5.4 AP 5.6

Printer identification number

Determines the identification number of the printer. In such a way, the printer can be addressed by the Easy Plug command #!An (n=printer ID).

The use of ID numbers is in particular reasonable for data transfer by RS422/485 interface, if several printers are connected by one data line. Each of the connected printers then only incorporates the data mapped to him by #!An command.

xx — Setting range: 0 to 31; Unit interval: 1

Spooler size

AP 5.4 AP 5.6

The memory capacity of the printer buffer can be set according to the requirements of each customer.

xxx Kbyte — Unit interval: 16-2048 kBytes; step width: 16 kBytes; default setting: 64 kBytes

Offline mode

AP 5.4 AP 5.6

Interf. disabled — Easy-Plug commands are *not* accepted, while the machine is in offline mode (default setting).

Interf. enabled — Easy-Plug commands *are* accepted in offline mode.

Interface delay

AP 5.4 AP 5.6

After switching from online to offline mode, the printer interface is deactivated. This parameter offers a setable delay time before deactivating the interface.

xxxx ms — Setting range: 0-1000; Unit interval: 100; Default setting: 0

> COM1 PORT

Baud rate

AP 5.4 AP 5.6

Data transfer speed

Speed of data transfer using the serial interface.

xxxxxx Baud — Setting range: 300 to 115200 Baud; Unit interval: 300/600/1200/2400/4800/9600/19200/38400/115200 (default)

No. of data bits

AP 5.4 AP 5.6

This parameter can be defined in connection with both the serial and the parallel interface.

7 — 7 Data bits

8 — 8 Data bits

Parity

AP 5.4 AP 5.6

Defines the parity check of serial transmitted data.

The parity bit is for checking data transmission. If the check shows an error, a corresponding message is displayed. The setting must be identical at the sender and the receiver. Normally transmission is set without a parity bit.

Odd — Odd parity.
A parity bit is added so that there is an odd number of 1 Bits.

Even — Even parity.
A parity bit is added so that there is an even number of 1 Bits.

None — No check bit. Sending and receiving without check bit.

Always zero — Check bit is always 0 (zero). Sending and receiving without parity check.

Stop bits

AP 5.4 AP 5.6

Number of stop bits

Number of stop bits at the serial interface.

1 Bit — 1 stop bit

2 Bit — 2 stop bits

Data synch.

AP 5.4 AP 5.6

Data synchronisation at the serial interface.

RTS/CTS	Data synchronisation through hardware
XON/XOFF	Data synchronisation through software
None	Handshake signals are ignored

Frame error

AP 5.4 AP 5.6

Display	(Default) An error message is displayed, if a framing error is detected while the printer is receiving serial data.
Ignore	Framing errors will be ignored, no error messages are displayed.

> COM3 PORT

➠ This menu only appears, if the optional I/O board is installed.

Baud rate

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Baud rate 🗋 on page 45.

No. of data bits

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter No. of data bits 🗋 on page 45.

Parity

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Parity 🗋 on page 45.

Stop bits

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Stop bits 🗋 on page 45.

Data synch.

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Data synch. 🗋 on page 46.

Frame error

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Frame error 🗋 on page 46.

Serial Port Mode

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

Setting of the serial interface type.

RS232 Sets Com2 to RS 232.
Data synchronisation may be done by hardware (RTS/CTS) or by software (XON/XOFF). Maximum cable length is 15 m.

RS422 Sets Com2 to RS 422.
RS 422 is a 4 wire point to point connection, suitable for only one device. Receiver and driver of the printer are always enabled. Data synchronization is only possible by software (XON/XOFF). Maximum cable length is 1 km with twisted telecommunication cable.

RS485 Sets Com2 to RS 485.
RS 485 is a 2 or 4 wire bus system for up to 30 devices. The printer´s receiver is always enabled, the printer´s driver is only enabled, if the printer sends data to the host. Data synchronization is only possible by software (XON/XOFF). Maximum cable length is 1 km with twisted telecommunication cable.

> COM4 PORT

Internal interface, to which the optional RFID read/write unit can be connected.

Baud rate

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Baud rate 🗋 on page 45.

No. of data bits

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

Fixed setting of 8 Bits.

Parity

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Parity 🗋 on page 45.

Stop bits

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

Fixed setting of 2 Bits.

Data synch.

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Data synch. 🗋 on page 46.

Frame error

AP 5.4 AP 5.6

➠ With mounted and connected I/O board only.

❍ See parameter Frame error 🗋 on page 46.

> USB

USB select

AP 5.4 AP 5.6

External Device	(Default setting) Setting for the connection of an USB device (e. g. USB-Stick).
Internal Device	Setting for the use of the USB port for internal communication (as device).
Internal Host	Setting for the use of the USB port for internal communication (as host).

> NETWORK PARAM.

IP addressassign

AP 5.4 AP 5.6

➠ A change of this parameter setting forces a printer restart.

Fixed IP address	This setting activates the parameters "Net mask" and "Gateway address" (see below).
DHCP	IP address is assigned automatically. The assigned IP address is displayed for a moment on the printer display, while the printer is starting.

IP address

AP 5.4 AP 5.6

xxx.xxx.xxx.xxx	Setting range per xxx value: 0 to 255 Change between the digits by pressing the Cut or Feed button; Acknowledge the setting by pressing the Online button. After a change of the IP address, the printer will reset automatically.

Net mask

AP 5.4 AP 5.6

xxx.xxx.xxx.xxx	Setting range per xxx value: 0 to 255 Depending on the set IP address appears a default value. ➠ We recommend to use the default value!

Gateway address

AP 5.4 AP 5.6

xxx.xxx.xxx.xxx Setting range per xxx value: 0 to 255

000.000.000.000 = no gateway is used

Port address

AP 5.4 AP 5.6

Setting range: 1024 to 65535. Default: 9100.

Ethernet speed

AP 5.4 AP 5.6

Auto negotioation The communication speed is selected automatically.

10M half duplex The communication speed is set to 10 MBit/s *half duplex*.

10M full duplex The communication speed is set to 10 MBit/s *full duplex*.

100M half duplex The communication speed is set to 100 MBit/s *half duplex*.

100M full duplex The communication speed is set to 100 MBit/s *full duplex*.

MAC address

AP 5.4 AP 5.6

Displays the MAC address of the CPU board. This address can not be changed in the parameter menu.

SNMP agent

AP 5.4 AP 5.6

➠ Function is not released yet.

SNMP password

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Function is not released yet.

FTP server

AP 5.4 AP 5.6

The File Transfer Protocol (FTP) server (RFC959) allows access to the internal RAM disk of the printer and, if available, to the memory card. The FTP server is capable of multisession mode, without evaluating the user name when logging in. The password must match the set password (see below).

❍ For further information read the user manual, topic section „Advanced Applications“, chapter „Data transmission with FTP“.

Enabled — Switches the FTP server *on*.

Disabled — Switches the FTP server *off*.

FTP password

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

Input of the FTP server password by means of a connected keyboard or the printers operation panel. Default setting: „avery“.

Changing the password:

1. Press the Esc button. The cursor jumps to the first character.
2. Press the Cut- or Feed button until the wanted character appears. Acknowledge by pressing the Online button.
3. Put in the next character.
4. Acknowledge the new password by pressing the Online button.

   ➠ If a keyboard is connected, this can be used for typing in the password.

WEB server

AP 5.4 AP 5.6

The web server may be used to

- read out or change parameter settings of the printer into a web browser
- Operate the printer via a web browser.

Requirements for use of the web server function:

- Printer is connected to network
- A valid IP address is assigned to the printer (by the network administrator or by a DHCP server)
- INTERFACE PARA > NETWORK PARAM. > WEB server must be set to „Enabled“.

Starting the web server:

1. Write down the printers IP address (INTERFACE PARA > NETWORK PARAM. > IP address).
2. Start the web browser.

   Insert into the address field:
   http://[IP address without leading zeros]
   Example: IP address = 144.093.029.031
   Input: http://144.93.29.31
3. Click „Login“.
4. Type in user name (admin) and password (admin).

   If the login was successful, you will find the following menu items at the left window margin:

Menu item	Function
Home	Jump to the home page
Logout	Interrupt the connection to the printer
Parameter	Opens the parameter menu. By clicking on submenus and parameters, those can be opened and the parameter setttings be changed. ➠ Some parameters force the printer to reset, if their setting is modified by means of the operation panel. If the parameters are changed via the web server, this doesn´t happen automatically. Therefore, the modifications only become effective after the next printer restart. A restart can be triggered remote in the „Display view“.
Display view	Opens the display operation panel. Enables remote operation of the printer.
Download	Opens another browser window with the URL of the FTP server. For more information read the description of INTERFACE PARA > NETWORK PARAM. > FTP server.
Help	Help texts

[3] Functions of the web server.

Enabled Switches the web server *on*.

Disabled Switches the web server *off*.

WEB display refr

WEB display refresh

AP 5.4 AP 5.6

➠ Only appears, if INTERF.PARAM > NETWORK PARAM. > Time client = „Enabled“.

Automatic updating of the web browser display. The setting determines the time in seconds between two updates.

➠ Setting 0 = „no automatic updating“.

xx s Setting range: 0 to 20; Default setting: 5

WEB admin passw.

WEB administrator password

AP 5.4 AP 5.6

➠ Only in production mode.

Modifying the password for web server access as admin.
Default setting: „admin“
➠ The user name is also „admin“.

➠ If the user logs in as admin to the web server, he/she has access to all parameters, which are *not* marked with the footmark „only in production mode“.

Changing the password at the operating panel:

1. Press the Esc button. The cursor jumps to the first character.
2. Press the Cut- or Feed button until the wanted character appears. Acknowledge by pressing the Online button.
3. Type in the next character.
4. Acknowledge the new password by pressing the Online button.

   ➠ Alternatively, the password can be typed in using a keyboard, or via the web server.

WEB supervisor p.

WEB supervisor password

AP 5.4 AP 5.6

➠ Only in production mode.

Modifying the password for web server access as supervisor.
Default setting: „supervisor“
➠ The user name is also „supervisor“.

➠ If the user logs in as supervisor to the web server, he/she has access to *all* parameters.

Changing the password at the operating panel:

1. Press the Esc button. The cursor jumps to the first character.
2. Press the Cut- or Feed button until the wanted character appears. Acknowledge by pressing the Online button.
3. Type in the next character.
4. Acknowledge the new password by pressing the Online button.

➠ Alternatively, the password can be typed in using a keyboard, or via the web server.

Time client

AP 5.4 AP 5.6

Loads the current time from a time server.

Disabled The time client is switched off.

Enabled The time client is switched on. The time is loaded with the frequency set under Sync. interval from a time server with the IP address Time server IP.

With the time client service, the current date and time can be obtained from a time server using RFC868 time protocol on UDP port 37. For this purpose, a time server IP address needs to be given. Date and time are initially requested at start up an optional in a setable update interval during operation time. It is also stored in the internal real time clock. There is no time offset or daylight saving hour, so the server time must exactly match the local time of the printer.

Time server IP

AP 5.4 AP 5.6

IP address of the time server.

➠ Only appears if INTERFACE PARA > NETWORK PARAM. > Time client = „Enabled“.

xxx.xxx.xxx.xxx Enter the IP address following the xxx.xxx.xxx.xxx schema.
Setting range for each xxx value: [0…255].

Sync. Interval

AP 5.4 AP 5.6

Determines the frequency for time requests.

➠ Only appears if INTERFACE PARA > NETWORK PARAM. > Time client = „Enabled“.

xxxx Setting range: [0…9999] s; Default setting: 3600 s.

DHCP host name

AP 5.4 AP 5.6

Host name of the printer. Default setting: „Device name“ + the last 3 figures of the MAC adress.

Typing in the host name at the operating panel:

1. Press the Esc button. The cursor jumps to the first character.
2. Press the Cut- or Feed button until the wanted character appears. Acknowledge by pressing the Online button.

   ➠ Valid characters: A-Z, a-z, 0-9, -
3. Type in the next character.
4. Acknowledge the new password by pressing the Online button.

   ➠ Alternatively, the password can be typed in using a keyboard, or via the web server.

> OPTIONS

RFID Option

AP 5.4 AP 5.6

Disabled — RFID-Option is *not* activated (RFID = Radio Frequency Identification).

➠ The RFID reader is connected to Com1 or Com2 *internally*, what means, that it does not have to be plugged into the external serial interface connector.

Serial Com1 — The RFID reader is connected to Com1.
➠ This setting option is only visible, if no other option is activated at Com1.

Serial Com4 — The RFID reader is connected to Com4.
➠ This setting option is only visible, if no other option is activated at Com4.

StandAlone Input

AP 5.4 AP 5.6

Defines an interface for data input in standalone mode.

➠ Interfaces are only selectable, if installed and not used by another function (e. g. as data interface). If INTERFACE PARA > EASYPLUGINTERPR > Interface = „Automatic“, all interfaces besides Com3 are blanked out.

None — No data input via interface.

Serial Com1 — Com1 is applied for data input in standalone mode.

Serial Com3 — Com3 is applied for data input in standalone mode.

TCP/IP socket — TCP/IP socket is applied for data input in standalone mode.

> DRIVEASSIGNMENT

❍ For detailed information read the Easy-Plug manual, topic section General Notes, Definitions and Command Overview 🗋, chapter „Drive names“.

Drive C

AP 5.4	AP 5.6

Assigns drive letter C: to the card slot or to the USB port.

None	C: is not assigned
	(Default setting) C: is assigned to the SD card slot.
USB-stick	C: is assigned to the USB host port.

Drive D

AP 5.4	AP 5.6

Assigns drive letter C: to the card slot or to the USB port.

None	D: is not assigned
SD card	D: is assigned to the USB host connector

SYSTEM PARAMETERS

Foil end warning

AP 5.4 AP 5.6

Setting of a limit diameter for the ribbon roll. If the ribbon roll diameter falls below the set value, the displayed message changes from…

ONLINE	X JOBS	…to…
FOLIE	X JOBS	…while the display is blinking.

❍ For details refer to the parameters DP INTERFACE > Ribbon signal and SERVICE DATA > OPERATION DATA > Foil diameter

x.xx mm — Setting range: 25.4 to 50.0 mm; Unit interval: 0.1 mm;
Default setting: 25.4 mm

Foil warn stop

AP 5.4 AP 5.6

Disabled — (Default setting) Printer does *not* stop in case of a „Foil end warning“.

Enabled — If a „Foil end warning“ occurs, the printer stops after the current label and shows the status message:

PrintStatus:	5110
Foil low	

➜ Press the online button to acknowledge the message, then the feed button to continue printing.

Print Interpret.

AP 5.4 AP 5.6

The printer uses the MONARCH LANGUAGE INTERPRETER™ to interprete and process data.

Easyplug — Printjobs written in the Easy-Plug command language can be interpreted.

Lineprinter — Lineprinter (or similar to Lineprinter), print-out of the print command.

Hex Dump — Print-out in hexadecimal format.

In Lineprinter and Hex Dump, commands are printed out in the form of a list with the character set 12.

➠ When setting Lineprinter or Hex Dump, Easy Plug commands which have not yet been processed are deleted!

MLI — Printjobs written in the ZPL II®[1)] command language can be interpreted.
➠ Firmware loading requires changing into EasyPlug first.

Character sets

AP 5.4 AP 5.6

Setting the character set:

- *8bit*: Choose between IBM and ANSI character set.
- *7Bit*: Additionally to the IBM and ANSI character sets, some country specific character sets are provided, which have some characters allocated differently (see table below)

➠ The country specific character sets are only suitable for older 7bit applications!

Decimal	35	36	64	91	92	93	94	96	123	124	125	126	>127
ASCII	#	$	@	[	\	]	^	‘	{	|	}	~	
ISO 8859-2 [a]	#	$	@	[	\	]	^	`	{	|	}	~	print
ANSI (CP 1250) [a]	#	$	@	[	\	]	^	`	{	|	}	~	print
ANSI (CP 1252)	#	$	@	[	\	]	^	`	{	|	}	~	print
IBM	#	$	@	[	\	]	^	`	{	|	}	~	print
Special	ƒ	¢	blank	blank	¼	½	blank	blank	«	•	»	±	blank
Norway	#	$	@	Æ	¥	Å	^	`	æ	¢	å	~	blank
Spain	#	$	@	i	Ñ	Ç	^	`	¿	ñ	ç	~	blank
Sweden	#	•	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	blank
Italy	Š	$	§	°	ç	é	^	ù	à	ò	è	`	blank
Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß	blank
France	£	$	à	°	ç	§	^	`	é	ù	è	~	blank
United Kingdom	£	$	@	[	\	]	^	`	{	|	}	½	blank
USA	#	$	@	[	\	]	^	`	{	|	}	~	blank
	blank = space, print = printable												

[4] Country settings for applications, which base on 7bit ASCII code.

a) Not available with AP 4.4

❍ For complete tables of all fixfonts characters available with setting "IBM" refer to the User Manual, topic section "Internal Fonts". You also find there a comparison of the IBM and ANSI character sets.

1) ZPL II is a registered trademark of ZIH Corp. ZIH Corp. and Avery Dennison (including Paxar Corporation and its subsidiaries) are not related in any way, and ZIH Corp. has not licensed or otherwise sponsored MONARCH® printers or Avery Dennison's MONARCH LANGUAGE INTERPRETER™. MONARCH®, MONARCH LANGUAGE INTERPRETER, MLI are trademarks of Paxar Americas, Inc. Avery Dennison is a registered trademark of Avery Dennison Corporation.

Character filter

AP 5.4 AP 5.6

Character >= 20Hex — Filter function is activated. Characters smaller than 20H are filtered out of the data flow.

All character — Filter function is deactivated. Characters smaller than 20H are treated as normal characters.

Light sens. type

AP 5.4 AP 5.6

Light sensor type

The optional reflex photoelectric switch for labels with reflecting length markings, or the normal factory-fitted photoelectric switch for labels with transparent or register gaps (self-adhesive labels), must be defined according to the application.

Short label opt. — Activates the optional short label sensor.
➠ Appears only in AP 5.4 printers which are equipped with the short label sensor.

Reflex — Reflex photoelectric switch (for reflecting markings)

Punched — Transparent photoelectric switch (for gaps)

Head-sensor dist.

AP 5.4 AP 5.6

➠ Parameter appears only in production mode or if a value > 0 is set.

Printhead-sensor distance

Special function for setting non-standard punch sensors. Such sensors can be applied in special application devices ("Nistan"). The value x is the distance between thermal edge and punch sensor in millimeters.

x mm — Setting range: 0 to 400 mm

➠ A „non standard sensor“ must be installed and connected instead of the regular punch sensor.

➠ 0 = disabled (the regular punch sensor is used).

Sens. punch-LS

AP 5.4 AP 5.6

Sensitivity punch light sensor

Sets the sensitivity of the material photoelectric switch.

xxx% Setting range: 10 to 100%; Unit interval: 10%
Default setting: 50%

Maximum sensitivity: 100%. for narrow gaps (perforations).

Minimum sensitivity: 1%. for clearly detectable gaps.

➠ Too high a level of sensitivity can lead to gaps being detected which do not even exist (on proofs, material thickness fluctuations, perforations etc.).

Foil mode

AP 5.4 AP 5.6

Thermo transfer Thermo transfer printing (Ribbon sensor activated)

Thermal printing Thermo direct printing (Ribbon sensor deactivated)

Turn-on mode

AP 5.4 AP 5.6

Operating mode of the printer after it has been switched on.

Online Printer starts in on-line mode.

Offline Printer starts in off-line mode.

Standalone Printer starts in standalone mode.

Error reprint

AP 5.4 AP 5.6

If an error occurs while a label is printed, the last printed label will normally be reprinted. In case of label layouts containing variable data like e.g. count fields, switching off the reprint function possibly makes sense.

Enabled Reprint in error cases (default setting)

Disabled No reprint in error cases.

EasyPlug error

AP 5.4 AP 5.6

Handling of errors caused by faulty Easy-Plug commands.

Tolerant handl. The label is printed, after the Easy-Plug/Bitimage error was acknowledged (default setting).

Strict handling The Easy-Plug command, which caused the error, is displayed after approx. 2 seconds in the lower display line. The displayed text is up to 30 characters long and is scrolled automatically.

If a single character caused the error, this character is marked with „>> <<„ in the display text, to facilitate the detection.

By pressing the cut button, the display can be toggled between error message and Easy-Plug command text.

After acknowledging the first occured Easy-Plug error, the printjob and the spooler are deleted (as by #!CA). This prevents the printing of labels with format errors.

Single job mode

AP 5.4 AP 5.6

In single job mode (also stop mode) the printer stops after every job and waits until the operator restarts the print process.

Deactivated Single job mode is switched off (default setting).

Activated Single job mode is switched on. The printer always displays "Start next job", before starting a new print job. This requests the user to acknowledge by pressing the Online button.

Head resistance

AP 5.4 AP 5.6

For optimum print quality, the individual print head resistance of the thermo head employed in the device must be set once with this parameter.

When replacing the print head, the resistance value of the print head (to be read off from the print head) must be entered again.

➠CAUTION! - Entering a false value can damage the print head!

➜ Read off the correct value from the print head and set it accordingly.
➠ The value set here remains when the factory settings are carried out.

xxxx Ohm Setting range: 1000 to 1500 Ohm; Unit interval: 1 Ohm

Setting the print head resistance:

Setting:

1. From the print head, read off the resistance value to be set and make a note of it (1000 to 1500).
2. In off-line mode press the Prog. button, display: *PRINT INFO*.
3. Press the Cut button until *SYSTEM PARAMETER* is displayed.
4. Press the Online button, display:

   SYSTEM PARAMETER
   Foil end warning

5. Press the Cut button until the following is displayed:

   SYSTEM PARAMETER
   Head resistance

6. Press the Online button, set value is displayed.
7. Set the previously noted resistance value of the print head using the Feed and Cut buttons.
8. Press the Online button to confirm the set value.
9. Press the Prog. button to return to the display *OFFLINE 0 JOBS*.

Temp. reduction

AP 5.4 AP 5.6

Reduction in the print head temperature

The parameter SYSTEM PARAMETER > Temperature reduct. allows the power supply to be reduced in the event of an increase in the print head temperature, thereby ensuring an evenly good print image.

xxx% Setting range: 0 to 100%; Unit interval: 5%

The following setting alternatives are available:

- 0%: No temperature reduction.
- xx%: Up to xx% temperature reduction with a hot print head.
- Default setting: 20%.

❍ For further information refer to the user manual, topic section „Advanced Application“, chapter „Printing with Termperature Compensation“

Thin line emphas

AP 5.4 AP 5.6

➠ Only in production mode

Thin line emphasis. Print emphasis for thin lines in order to get a better print result.

On (Default) Print emphasis for thin lines is switched on.

Thin lines in the printout, which run crossways to the printing direction, are printed approx. 1.5 times wider. This may have the effect, that small white patches are closed with color (e.g. in the „e“ with very small fonts).

Off — Print emphasis for thin lines is switched off.

Voltage offset

AP 5.4 AP 5.6

The voltage offset increases the head voltage and therefore the head temperature which e.g. was set by Easy Plug command (HV).

xx% — Setting range: 0 to 20%; Unit interval: 1%
Default setting: 0%

Miss. label tol.

AP 5.4 AP 5.6

Missing label tolerance

The maximum search path for gaps which cannot be found can be varied. In cases of difficult gap detection (i. e. minimum variation in the light transparency, gap to label), shortening the search path is to be recommended. Label loss resulting from gaps not being detected can be reduced in this way. Printing does not take place during the search process.

xx — Setting range: 0 to 50; Unit interval: 1

- Example 0 (Zero label length): A gap must be found after a printed label otherwise an error message is given. This setting is for detecting every missing label.
- Example 5 (Five label lengths): A gap must be found after a maximum of 5 label lengths otherwise an error message is given.

Gap detect mode

AP 5.4 AP 5.6

After one of the following events, the printer must always search for the punch, that is initialize the label material:

- After switching the printer on
- After changing the label material

Manual — The operator has to initialize the material always manually by pressing the feed key several times.

Autom. Forward — (Default for printers) The material initialization is always done automatically, if necessary. There is no backward movement of the material during the initialization.

Periph. device

AP 5.4 AP 5.6

After installation, options must be selected under "Peripheral device" in order to be assured of the corresponding sensor queries and printer reactions.

➠ CAUTION! - Selecting an incorrect option can lead to malfunctions or damage!

None	No peripheral device is installed.
Cutter	Sets the printer firmware to the cutter option. Selection permits access to the cut parameters.
Rewinder	Sets the printer firmware to the rewinder option. Selection permits access to the rewinder setting parameters.
Tear-off edge	Sets the printer firmware to the tear-off edge option. The punch is fed forward to the tear-off edge.
Dispenser	Setting for AP 5.4/5.6 dispenser version.
Intern Rewinder	AP 5.4/5.6 dispenser only: Setting for printer operation in „internal rewinder“ mode, that is operation with a deflector and without dispensing edge.
Tear-off + sensor	AP 5.4 only: Setting for using the dispensing edge as tear-off edge. The punch is fed forward to the dispensing edge.
Disp. with LTSI	Setting for operation of a LTSI applicator, see Technical Manual LTSI 🗋

Singlestartquant

AP 5.4 AP 5.6

Single start quantity

xx	Setting range: 1 to 10; Unit interval: 1

External signal

AP 5.4 AP 5.6

The parameter determines, if and how an incoming signal at the - optional - single start connector will be interpreted.

Disabled	Signal interpretation disabled.
Singlestart	The signal triggers the printing of a single label. This setting may be used e.g. for printing single labels by means of a foot switch.
Stacker full	The signal triggers the display of a status report and stops the printer. This setting may be used when using a stacker (= stacker full signal).

❍ Detailed information about using start signals can be found in the user manual, topic section „Advanced Applications“, chapter „Printing with start signal“, Settings in the parameter menu 🗋

Start print mode

AP 5.4 AP 5.6

➠ Only appears, if no I/O board is installed. Otherwise, the parameter appears in the I/O BOARD menu.

See parameter Start print mode on page 102.

Print contrast

AP 5.4 AP 5.6

xxx% Setting range: 1 to 120%; Unit interval: 1; Default setting: 60

CAUTION!

The parameter Print contrast affects directly the life durance of the printhead. It counts: „The higher the setting of Print contrast is, the lower is the life durance of the printhead“. This counts even more for settings above 100%. Therefore mind:

➜ Always choose the lowest possible setting necessary to produce an acceptable print result.

Ram disk size

AP 5.4 AP 5.6

A part of the printer memory can be identified as a RAM disk. The RAM disk can be used in the same way as the Compact Flash Card, e.g. for storage of logos or fonts.
With the parameter Ram disk size, the customer can set the size of the RAM disk to his needs. Be aware, that RAM disk memory is not available for print picture buildup. Use of much RAM disk memory reduces the picture buildup rate of the printer.

➠ Switching the printer off extinguishes the memory content! Fonts, logos etc., which were loaded on the RAM disk, must be loaded again after switching the printer off.

xxxx KBytes Setting range: 2048 KBytes to the maximum size, which depends on the memory configuration and allocation of the printer; Unit interval: 128 KBytes; Default setting: 512 KBytes

Font downl. area

AP 5.4 AP 5.6

If speedo-fonts are supposed to be used, they have first to be copied to a reserved RAM disk area. Use parameter „Font downl. area“ to reserve the RAM disk area in the required size.

The size of the required RAM disk area depends on the size of the font files to be loaded.

➠ Mind to reserve a big enough RAM disk area!

There are two ways to copy the font files to the RAM disk:

- Copy from SD-card:
  The font files must be placed in a folder named \fonts on the SD-card during system startup. The files must be named fontxxx.spd (xxx = No. from 200 up to 999).

❍ For details refer to the „Plugin-card manual“, topic section „Application“, paragraph CF/SD-cards 🗋.

- Copy via Easy Plug command #DF (download file).

❍ More information: manual „Easy Plug“, subject section Description of Commands 🗋.

xxx KBytes

Setting range: 128 KBytes to the maximum size, which depends on the memory configuration and allocation of the printer; Unit interval: 128 KBytes; Default setting: 256 KBytes

➠ Switching the printer off extinguishes the memory content! Fonts, logos etc., which were loaded on the RAM disk, must be loaded again after switching the printer off.

Free store size

AP 5.4 AP 5.6

By setting this parameter, a part of the memory is reserved, which the printer firmware can use if necessary (dynamic memory allocation). If this memory area is dimensioned too small, the printer firmware can not work and the error message „8856 Free store size“ shows up.

➠ The more memory is allocated using this parameter, the less memory is available for print jobs.

xxx KBytes — Setting range: 2048 KBytes to the maximum size, which depends on the memory configuration and allocation of the printer; Unit interval: 128 KBytes; Default setting: 2048 KBytes.

➜ A good advice is to increase the set value step by step, starting with the minimum of 2048 KBytes, until the status message 8856 ("Free store size", what means the memory area is low) does no longer appear during data conversion.

❍ Use with the Easy Plug command #YG, see manual Easy Plug 🗋.
❍ See parameter Memory status 🗋 on page 18.

Print info mode

AP 5.4 AP 5.6

Structure option for info printouts.

Par. values right — Setting for 100 mm material width. The parameter values are printed on the right side of the parameter names:

Parameter name: Value

Par. values left — Setting for 100 mm material width. The parameter values are printed on the left side of the parameter names:

Value: Parameter name

Compact right — Setting for 50 mm material width. The parameter values are printed on the right side of the parameter names:

Parameter name: Value

Compact left — Setting for 50 mm material width. The parameter values are printed on the left side of the parameter names:

Value: Parameter name

Reprint function

AP 5.4 AP 5.6

Disabled — (Default setting) Reprinting is not possible.

Enabled — The last printed label can be reprinted by pressing the feed button in online mode, if the printer is not printing at that moment.

Language

AP 5.4 AP 5.6

Setting the display language.

Turkish
Polish
Italian
Danish
Dutch
Spanish
French
English
German

Keyboard

AP 5.4 AP 5.6

Setting the keyboard layout country version for standalone operation.

Polish
Swedish
Finish
Danish
Spanish
French
English
German

Access authoriz.

AP 5.4 AP 5.6

Access authorization

Limits the access either to all printer functions (Power-up code) or only to the parameter menu (user or supervisor mode). Changed settings become active after the next switch-on.

Key codes

Regardless when the code is prompted, can three different key codes be typed in tab. 9.

Enter code

Entering a key code: Type the corresponding buttons of the control panel in succession. A valid key code switches the printer into the appropriate mode.

Mode	Key code	Impact
User	2x Cut Feed, Online	Access only to the submenus PRINT INFO and SERVICE DATA
Supervisor	2x Online, Feed, Cut, 2x Online	Access to all parameters except production parameters
Production	Cut, Online, Feed, Cut, 3x Online	Access to all parameters

[5] Permissible key codes.

➠ CAUTION! - The key code "production" allows the access to parameters, which are used during production to adjust the printer. Input errors to those parameters can make the printer inoperable or can damage it. For this reason, the production code may only be applied by *trained service technicians*!

➠ Especially service technicians may use the direct access into production mode, even if the parameter *Access authoriz.* is set to *Deactivated*, what means that no password will be queried at all. To do so, proceed as follows:

1. Switch printer off.
2. Switch printer on, simultaneously press the Feed+Prog-key until the printer type is displayed.

   After the printer was powered up, the key code will be queried:
3. Enter the production code.

Possible Settings

Deactivated
Password interrogation switched off (default)

Power-up code
Activates the password interrogation directly after switching the printer on.

After the input of a valid key code, the printer switches into offline mode. Depending on the entered key code, the printer starts in user, supervisor or production mode.

User
Activates the password interrogation when accessing the parameter menu.
- The printer is in the offline mode after switch-on
- Change to the online mode is possible without restriction
- To reach the parameters-menu, enter a valid key code
- Valid key codes: all

Supervisor
As setting „User“, with different valid key codes:
- Valid key codes: Supervisor, Production

User auto start
Printer starts without password interrogation. Only the menus PRINT INFO and SERVICE DATA are accessible.

Realtime clock

AP 5.4 AP 5.6

The realtime clock provides actual date and time. Those data can be processes using the Easy-Plug #YC, #YS or #DM commands.

Realtime Clock dd.mm.yyyy hh:mm	dd=Day, mm=Month, yyyy=Year, hh=Hour, mm=Minute (Example: 19.02.2001 14:41)

Setting date / time:

1. Press the CUT button repeatedly, until the digit blinks which you want to alter.
2. Set the intended value to the digit by pressing the FEED button (repeatedly).
3. Repeat steps 1 and 2 until date / time is set correctly.
4. Press the ONLINE button.

➠ Press the ESC button to leave the parameter without altering the setting.

I/O BOARD

➠ This menu appears only if the optional I/O Board is mounted.

Start print mode

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

Selecting a print mode. Depending on the selected mode, the input signal START_PRINT will be interpreted differently by the I/O Board signal interface. The parameter is also used for the device connected to the foot switch jack.

- Make sure to select SYSTEM PARAMETER > External Signal = Single Start.
❍ See parameter External signal 🗋 on page 85.
- Note: The parameter Start Print Mode replaces the parameter Signal Edge in the SYSTEM PARAMETER menu.
- Preconditions: Print job is available (DATA READY), printer is in “Online” mode, no error messages.

Pulse falling (Default setting) The printing of a label is triggered by a high-to-low change of the signal at the input START PRINT. The printing occurs only after the set delay time.

Pulse rising The printing of a label is triggered by a low-high change of the signal at the input START PRINT. The printing occurs only after the set delay time.

Pulse fall/ris The printing of a label is triggered by a low-high-change as well as by a high-low change of the signal at the input START PRINT. The printing occurs only after the set delay time.

Level low active Labels will be printed as long as the signal at input START PRINT is held low.

Level high active Labels will be printed as long as the signal at input START PRINT is held high.

Reprint Signal

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

Disabled The input signal is disabled

Enabled The last printed label will be reprinted on the falling edge of the REPRINT signal.

Preconditions:

- The label to be reprinted, should be printed and dispensed.
- Printer is in online mode.

If a REPRINT is triggered while the printer is in “I/O-Board Pause” mode, the reprint will proceed as soon as the printer is switched back in online mode. Precondition: in level mode START PRINT must be inactive.

Feed input

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

Concerns the input signal FEED at the signal interface.

Enabled — (Default setting) Feeding of one label on the falling signal edge. The display shows „I/O board feed“ during feeding. Requirements are:

- Offline mode, „stopped mode“ or „pause mode“
- Online mode and no print job loaded.

Disabled — Signals at the FEED input are ignored.

Pause input

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

Concerns the input signal PAUSE at the signal interface.

Disabled — Signals at the PAUSE input are ignored.

Pause — A high-to-low transition switches the printer into the “I/O-Board Pause” mode. The next high-low-transition switches the printer back into the online mode. If parameter I/O-Board > Start print mode is set to „Level high active“ or „Level low active“, any activating of the PAUSE signal stops the printing after the current label.

Features:

- Printer display shows „I/O-Board pause“
- ERROR is active (only if I/O Board > Error output is set to „Printer err+Offl“)
- If a print job is available: DATA READY becomes inactive (if I/O Board > Status output is set to „Print job ready“)
- START PRINT signals are suppressed
- REPRINT requests are processed after switching into online mode.

A "low" signal for 20 ms switches the printer into the pause mode. The pause mode is the same as the "Online stopped" mode and can be switched to the “Online” mode by pressing the feed button.

Error output

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

This parameter defines different events, which activate the output signal ERROR.

Printer error — ERROR will be activated in all of the following cases:

- Material end
- Ribbon end (only if SYSTEM PARAMETER > Foil mode = „Thermo transfer“)
- No punch recognized (only if PRINT PARAMETERS > Material type = „punched“)

- Printhead pressure lever was opened during the printing of a label.
- Start print error
- Other errors, which keep the printer from printing

➠ During the initialization (powering up) of the printer, the ERROR-signal is instable!

Printererr + Offl In addition to the above mentioned cases avtivate the following events the ERROR-signal:

- The printer is in offline mode
- The printhead pressure lever is open
- „I/O board pause“ mode
- Stopped mode (the printing was stopped)

Error Polarity

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

Switches the polarity of the ERROR signal.

Level high activ The output is high when it is active, otherwise low.

Level low active The output is low when it is active, otherwise high. (Default)

Status output

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

This parameter defines different events, which activate the output signal MACHINE STATUS.

Low ribbon warn The signal is activated, if the ribbon roll diameter is less than the limit.

❍ See parameter Foil end warning 🗋 on page 68.

Print job ready The signal is activated, if the printer has finished image processing and is ready to start printing.

The signal is *not activated*, if:

- the print job is done,
- the print job was stopped,
- the printer was switched to offline mode,
- the printer is in pause mode.

Status polarity

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

Switches the polarity of the MACHINE STATUS signal.

Level high active The output is high when it is active, otherwise low.

Level low active The output is low when it is active, otherwise high. (Default)

End print mode

AP 5.4 AP 5.6

➠ Only with an I/O board mounted.

➠ Not available in batch mode.

Concerns the output signal PRINT_END at the I/O board signal interface. Determines the signal response after printing of a label.

Mode0 inactve	No print end signal.
Mode1 high level	Low, if the print module is just printing a label, otherwise high. The output is also deactivated (= low) as long as labels are fed with “Feed Button” or “Feed Signal”.
Mode2 low level	High, if the print module is just printing a label, otherwise low. The output is also deactivated (= high) as long as labels are fed with “Feed Button” or “Feed Signal”.
Mode3 low pulse	(Default setting) Low for 20 ms after printing and dispensing a label. The output is also activated (= low) after a label is fed with “Feed Button” or “Feed Signal”.
Mode4 high pulse	High for 20 ms after printing and dispensing a label. The output is also activated (= high) after a label is fed with “Feed Button” or “Feed Signal”.

DISPENSER PARA

➠ This menu appears only in AP 5.4/5.6, and only, if SYSTEM PARAMETER > Periph. device is set to „Dispenser“.

Dispense Mode

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Governs the run of the print-dispense procedure.

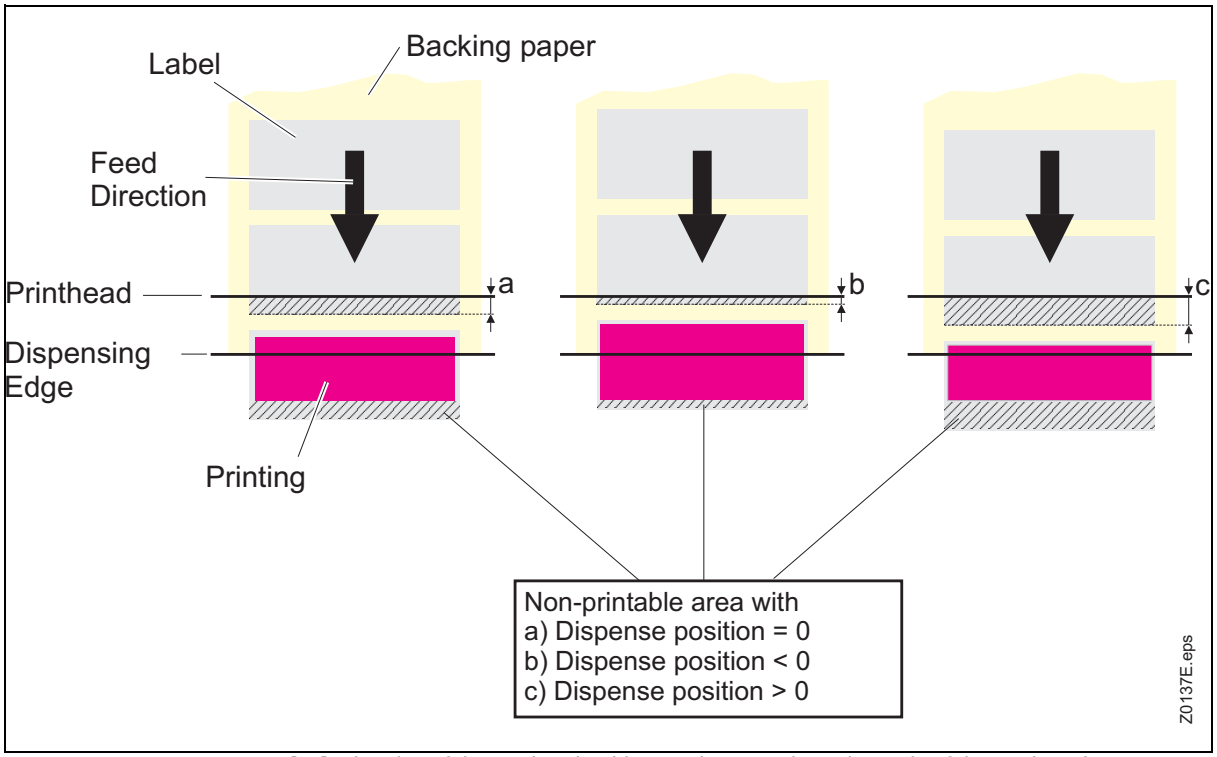
➠ The ribbon autoeconomy function can only be used in "Real 1:1 Mode"!

Normal 1:1 Mode

- The printer cannot print on the whole label surface. A stripe at the label beginning stays unprinted.
- The label is being dispensed while printing.
- The output volume is at its maximum level.

➠ The width of the unprintable stripe is calculated as follows:
Distance print line to dispensing edge (25 mm) + Dispense position

❍ Also refer to parameter PRINT PARAMETERS > Dispense position.
❍ A graphic can be found under PRINT PARAMETERS > Cut mode > Normal 1:1 mode.



[15] The size of the not imprintable area in Normal 1:1 depends of the setting of parameter "SYSTEM PARAMETERS > Dispense Position".

Batch Mode

- The printer can print the whole label surface.
- Dispensing of the label takes place during printing. Printing of the next label is interrupted until the label is completely dispensed.
- The output volume is at its maximum level.

➠ The *Batch mode* is optimised for printing and dispensing at high speeds. Due to this, it is not possible to use all features awaliable in modes *Normal 1:1* or *Real 1:1*. Also consider, that printing data must be available on time and in sufficient quantity.

➠ The following Job/Parameter-combinations must not be used:

- Jobs with counter fields
- Jobs with variable fields
- SYSTEM PARAMETER > Dispensing mode must be set to "fast".
- The USI reprint function is not supported. DP INTERFACE > Reprint signal must be set to "deactivated".
- Foil save

❍ A graphic can be found under PRINT PARAMETERS > Cut mode > Batch mode.

Real 1:1 Mode

(Default setting)

- The printer can print the whole label surface.
- After dispensing a label, the beginning of the next label is drawn back under the print head.
- The output volume is lower than in *Batch Mode* or *Normal 1:1 Mode*.

❍ A graphic can be found under PRINT PARAMETERS > Cut mode > Real 1:1 mode.

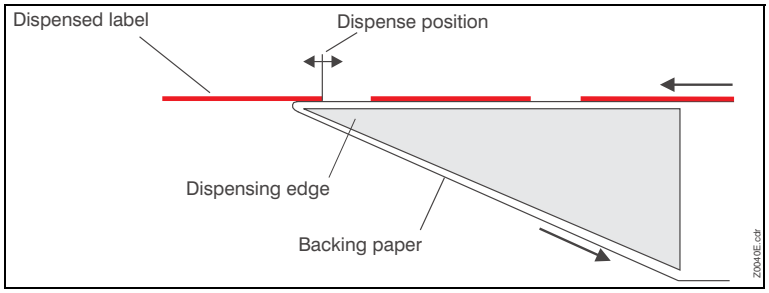
Dispenseposition

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Dispense position

Adjusts the dispense position in or against the feed direction. Depending on the set dispense position, the dispensed label sticks to the backing paper with a more or less wide strip (Fig. 11). The required width of this strip depends on the further processing.



[16] Dispense position (= stopp position) of the dispensed label.

x.x mm

Setting range: -30.0 to +20.0 mm; Unit interval: 0.1 mm; Default setting: -6.0 mm

Display mode

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Makes the *already* printed labels appear in the display instead of the *not yet* printed ones.

Job rest quant. Display of the *not yet* printed labels of a print job.

➠ The counter keeps it´s value even after switching the printer off.

Dispense counter Counting of start pulses. Activate the counter by selecting "Dispense counter". The counted number appears on the display after the parameter *Dispense counter* (see below) has been selected.

Dispense counter

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Dispense counter xxxxxx	xxxxxx = Number of dispensed labels.

➠ The displayed value can be varied by pressing the Cut or Feed button.

There are two ways of setting back the counter:

- Set the parameter *Display mode* (see above) to "Job rest quant." , then back to "Dispense counter" and confirm by pressing the Online button.
- Reduce the displayed number by pressing the Cut button.

Application mode

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Save Mode A start signal is required to draw the next label back under the print head. This setting bears advantages for label material with a strong adhesive, which would not stay attached to the applicator when the backing paper is fed backwards.

Immediate Mode After the just printed label has reached the dispense position, the following label is drawn back under the print head. The dispensed label stays attached to the applicator (default setting).

Synchronous mode Not yet implemented (Fw. 3.33).

Start source

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Choose a signal source for the start signal:

Foot switch Optional foot switch is used to generate the start signal.

Light barrier (Default setting) Photoelectric switch at the dispensing edge which detects the taking off of the dispensed label.

➠ The setting "Light barrier" is unsuitable for product sensors! Product sensors must be connected to the I/O board!

Calibration mode

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

➠ Is only effective with label material shorter than 40 mm!

If label material shorter than 40 mm is used, the printer automatically initializes before printing. This measuring of the label material improves the impression accuracy. The initialization occurs in the following cases:

- After switching the printer on
- After opening and closing the printhead pressure lever.

➠ *Advice*: Start the material initialization manually before printing. This is done by pressing the feed button in offline mode.

Selecting a material initialization procedure:

Automatic (Default) Material initialization is done automatically. Therefore, the label material is fed forwards and backwards several times.

➠ There is a risk of the dispensing edge roller getting jammed by labels sticking to it, which were dispensed by the forward/backward movement. If this happens, use the setting „Manual“ instead.

Manual The label material is fed two or three label lengths forwards. If this is done, dispense two labels by pressing the feed button - only afterwards, the initialization is complete.

Start offset

AP 5.4 AP 5.6

Function for operation with product sensor.

Use this parameter to set the distance between product sensor (light barrier) and dispensing edge. The recommended delay time is calculated of the "Start delay" distance and the conveyor speed (= print speed in cases of direct application).

xxx.x mm Setting range: 0.0 bis 999.9 mm; Unit interval: 0.1 mm;
Default setting: 0 mm

Start error stop

AP 5.4 AP 5.6

Function for operation with product sensor.

Determines the reaction of the machine on a product start error. A product start error occurs in the following cases:

- If a further start signal arrives, before the current label is completely printed.
- *With mounted I/O board only*: If a reprint is requested, before the first label after powering on is printed.
- If a start signal arrives and no printjob is loaded.

If a product start error occurs, the machine stops and displays the appropriate status message. If an I/O board is installed, the following output signals are activated (set low):

- ERROR\
- MACHINE STATUS\

On — Start errors are worked up (the machine stops!) (default setting)

Off — Start errors are being ignored.

Product length

AP 5.4 AP 5.6

Function for operation with product sensor.

If this function is activated, the printer ignores all start signals until the product has passed the dispensing edge.

0.0 mm — Setting range: [0.0…1999.9] mm; Default setting.: 0,0

Current mode

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

The setting of this parameter influences the impact of the paramters *Min rew. current* and *Max rew. current*.

Table values — Display of the automatically calculated motor current chart PWM values (in %). On the base of this setting, the printer calculates the motor current values for *Min rew. current* and *Max rew. current* out of print speed and material width. The calculated values appear as default 100%.

Absolute values — With this setting, the printer doesn´t calculate and doesn´t adapt to material width and print speed. The set values for *Min rew. current* and *Max rew. current* are given to the output stage without a modification. The valueas appear as absolute values.

➠ The setting "Absolute values" should only be applied by qualified personnell!

Min. rew. current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Minimal rewinder current

This parameter influences the rewinder current with 25 mm rewinder diameter (min. rewinder diameter).

Problem	Solution
The label web runs too loose around the dispensing edge during printer operation. The label roll is wound up too loose.	Increase the setting
The label web runs too tight around the dispensing edge during printer operation. The label roll is wound up too tight.	Decrease the setting

[6] Cases, in which the setting of the minimal rewinder current has to be corrected.

XXX% Setting range: 50-200%; Default setting: 100%
Precondition for the setting in percent:
Parameter DISPENSER PARA > Current mode = Table values (see above).

XXX Setting range: 0-750; Default setting: 100;
Precondition for the setting in absolute values:
Parameter DISPENSER PARA > Current mode = Absolute values (see above).

Max. rew. current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Maximum rewinder current

This parameter influences the rewinder current with 120 mm rewinder diameter (max. rewinder diameter).

XXX% Setting range: 50-200%; Default setting: 100%
Precondition for the setting in percent:
Parameter DISPENSER PARA > Current mode = Table values (see above).

XXX Setting range: 0-750; Default setting: 250;
Precondition for the setting in absolute values:
Parameter DISPENSER PARA > Current mode = Absolute values (see above).

The two parameter values *Min. rew. current* and *Max. rew. current* are used by the motor output stage to calculate all other current values for diameters lying in between.

Problem	Solution
The label web runs too loose around the dispensing edge during printer operation. The label roll is wound up too loose.	Increase the setting
The label web runs too tight around the dispensing edge during printer operation. The label roll is wound up too tight.	Decrease the setting

[7] Cases, in which the setting of the minimal rewinder current has to be corrected.

Start rew. current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Start rewinder current

Setting of the start-up current superelevation in % or the normal motor current.

XXX% Setting range: 0-100%; Default setting: 0%

Start cur. len.

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Start current length

Duration of the start-up current superelevation. To be set is the feed length, during which the increased current is supposed to flow.

XX mm Setting range: 10-40 mm; Default setting: 30 mm

Pullback current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

After a label was dispensed, the label web has to be pulled back under the printhead. To reach this, the rewinder is rotated slightly in the opposite direction. The braking torque of the rewinder against this rotation may not be too strong, otherwise this could decrease the impression accuracy. Because of the brake torque depending on the diameter of the wound up label web, it has to be corrected at the beginning (min. diameter) and at the end (max. diameter) of the winding-up process. This is done by the *Pullback current* (supports the backwards rotation in case of low diameter) and the *Brake current* (amplifies the brake torque in case of high diameter). Additionally can be set:

The diameter up to which the Pullback current is throttled down to zero (parameter *Back diameter*), and the diameter, from which on the brake current starts (parameter *Brake diameter*).

The parameter *Pullback current* sets the support current for the rewinder at the minimum diameter of 25 mm. When the diameter of the rewound label web reaches the set value (Back diameter), the support current will be throttled down to a mimimum.

Back diameter

AP 5.4 AP 5.6

Pullback current diameter

❍ See parameter Pullback current 🗋 on page 118.
➠ If the label web is *loose*, while it is fed back under the printhead, *decrease* this value in small steps. If the material is *tightened* too much, *increase* the value in small steps.

XX mm Setting range: 0-120 mm; Default setting: 50 mm

Brake current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Sets the brake current

❍ See parameter Pullback current 🗋 on page 118.
XXX Setting range: 0-100; Default setting: 0

Brake diameter

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Dispenser“.

Sets the break diameter.

❍ See parameter Pullback current 🗋 on page 118.
XXX Setting range: 0-120; Default setting: 120

REWINDER PARA

➠ This menu appears only in AP 5.4/5.6, and only, if SYSTEM PARAMETER > Periph. device is set to „Intern Rewinder“.

Rewind direction

AP 5.4 AP 5.6

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

(Internal) Rewinder rotation direction

Printing inside — The label face shows *inwards*, when the label stock is wound up.

Printing outside — The label face shows *outwards*, when the label stock is wound up.

Current mode

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Current mode 🗋 on page 116.

Min. rew. current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Min. rew. current 🗋 on page 117.

Max rew. current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Max. rew. current 🗋 on page 117.

Start rew. curr.

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Start rew. current 🗋 on page 118.

Start cur. len.

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Start cur. len. 🗋 on page 118.

Pullback current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Pullback current 🗋 on page 118.

Back diameter

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Back diameter 🗋 on page 119.

Brake current

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Brake current 🗋 on page 119.

Break diameter

AP 5.4 AP 5.6

➠ Only in production mode.

➠ Only if SYSTEM PARAMETER > Periph. device = „Intern Rewinder“.

❍ See parameter Brake diameter 🗋 on page 119.

MLI PARAMETERS

Avery Dennison's MONARCH LANGUAGE INTERPRETER™ (MLI™) helps you use an Avery Dennison 4.4, 5.4, 64xx, ALX92X, DPM/PEM, or AP7.t printer which was set up for use with ZIH Corp.'s ZPL II®[1]. If you have any questions about using an Avery Dennison printer with these data streams, please contact Service.

This section lists the ZPL II® commands that the Avery Dennison printer's MONARCH LANGUAGE INTERPRETER™ can interpret with any special notes, if applicable.

➠ This menu appears only with SYSTEM PARAMETERS > Print Interpret. set to „MLI" or „EasyPlug / MLI".

➠ MLI is not supported in Standalone Mode.

➠ Recommended settings:
SYSTEM PARMETER > RAM disk size at least 2048 Kbytes
SYSTEM PARAMETER > Free store size at least 2048 Kbytes

Darkness

AP 5.4 AP 5.6

Print contrast for MLI printjobs. This setting is modified by printjobs which contain print contrast information. The print contrast set by SYSTEM PARAMETERS > Print contrast is not influenced by this setting.

xx Setting range: 0-30; Step width: 1; Default setting: the Easy-Plug setting is overtaken.

Control Prefix

AP 5.4 AP 5.6

Indicates the start of a MLI control instruction.

xxH Default: xx = 7E (0x7E = „Tilde")

Format Prefix

AP 5.4 AP 5.6

Indicates the start of a MLI format instruction.

xxH Default: xx = 5E (0x5E = „Caret")

1) ZPL II is a registered trademark of ZIH Corp. ZIH Corp. and Avery Dennison (including Paxar Corporation and its subsidiaries) are not related in any way, and ZIH Corp. has not licensed or otherwise sponsored MONARCH® printers or Avery Dennison's MONARCH LANGUAGE INTERPRETER™. MONARCH®, MONARCH LANGUAGE INTERPRETER, MLI are trademarks of Paxar Americas, Inc. Avery Dennison is a registered trademark of Avery Dennison Corporation.

Delimiter Char

AP 5.4 AP 5.6

Used as a parameter place marker in MLI format instructions.

xxH

Default: xx = 2C (0x2C = „Comma“)

Label Top

AP 5.4 AP 5.6

Label top offset (y-offet) in dots. Equals the parameter PRINT PARAMETERS > Y-Printadjust, which will be ignored, when MLI printjobs are printed.

xxx Dots

Setting range: -240 - +240; Default: 0; Step width: 1

Left Position

AP 5.4 AP 5.6

Left position offset (x-offset) in dots. Equals the parameter PRINT PARAMETERS > X-Printadjust, which will be ignored, when MLI printjobs are printed.

xxx Dots

Setting range: -9999 - +9999; Default: 0; Step width: 1

Manual Calibrate

AP 5.4 AP 5.6

For endless material, the label length information is sent in the printjob. For punched material, the label length has to be detected by activating this function.

YES

Label length calculation for punched material.

➠ Activate this function, if label material has changed.

➠ Calibration should be done after changing material, when there are no printjobs loaded in the printer.

➠ Shortcut (in offline mode): press the feed + prog buttons simultaneously to activate the calibration.

Resolution

AP 5.4 AP 5.6

Print resolution in dpi. A 200 dpi graphic printjob can be printed with a 300 dpi printhead.

xxx DPI

Setting range: 200/300 dpi; Default: 300 dpi;

Error Indication

AP 5.4 AP 5.6

Selects the way, in which the printer responds in the event of error occuring during printing.

Low
High
Off

Error Level	Setting		
	LOW	HIGH	OFF
0	Ignore	Ignore	Ignore
1	Ignore	Flash on the display	Ignore
2	Prompt user for action	Prompt user for action	Ignore

[8] Error handling settings.

Error Checking

AP 5.4 AP 5.6

Enables or disables error checking, when the printer is handling print fields.

YES — Error checking is enabled. (Default)

NO — Error checking is disabled.

Image Save Path

AP 5.4 AP 5.6

Selects the memory to be used by the ^IS and ^IL commands.

➠ Interpreter version: 1.10 or higher.

CF Card — Optional CompactFlash card

Internal RAM — The printer´s internal RAM. (Default)

Command ^PR

AP 5.4 AP 5.6

Disable — The **p**rint **r**ate sent in the MLI printjob is ignored.

Enable — The print rate is not ignored.

Command ^MT

AP 5.4 AP 5.6

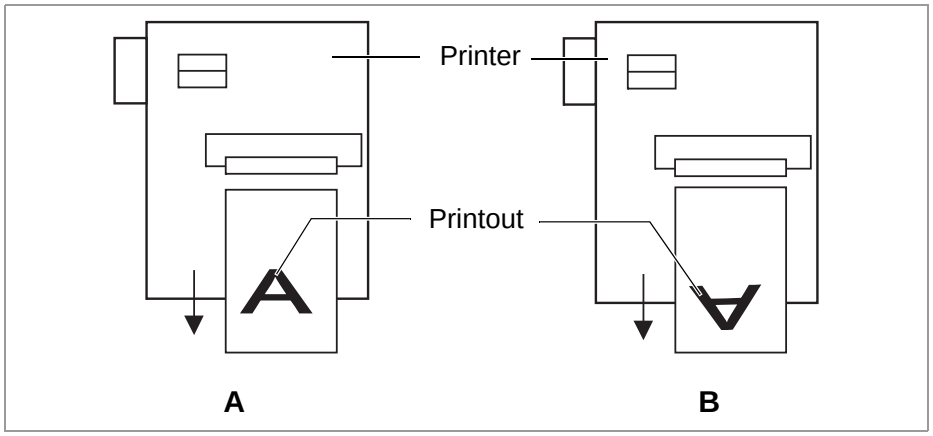
Disable — The **m**aterial **t**ype sent in the MLI printjob is ignored (thermo-transfer or thermo-direct).

Enable — The material type is not ignored.

Label Invert

AP 5.4 AP 5.6

Rotates the printout by 180°. Equals the parameter PRINT PARAMETERS > Print direction, which will be ignored, when MLI printjobs are printed.



[17] Orientation of the printout: Setting „Disable“ (A) or „Enable“ (B).

Disable — The label is printed with „normal“ orientation [20A].

Enable — The label printout is rotated by 180° [20B].

Command ^JM

AP 5.4 AP 5.6

➠ Interpreter version: 1.32 or higher

The ^JM command changes the printer resolution:

- ^JMA sets the resolution to the default value = printhead resolution.
- ^JMB sets the resolution to 200 dpi, if the actual resolution is 300 dpi. If the actual resolution is 200 dpi, this command is ignored.

Disable — The resolution setting sent in the MLI printjob is ignored.

Enable — The resolution setting is not ignored.

Command ^MD/~SD

AP 5.4 AP 5.6

The MLI commands ^MD and ~SD (set printhead darkness value) are processed optionally.

Enable — ^MD- and ~SD are processed.

Disable — ^MD- and ~SD are ignored.

SPECIAL FUNCTION

Printer type

AP 5.4 AP 5.6

➠ Only in production mode.

Selection of the machine type. Must be set after the CPU board was replaced or after new firmware was loaded.

➠ CAUTION! - Selecting an inappropriate machine type can lead to malfunctions or damage!

AP5	AP 5.6
AP7	AP 7.t

Default Values

AP 5.4 AP 5.6

➠ Parameter appears only in production mode.

User defined	The presently selected settings of all parameters will be taken as default values. That is you will get those settings back even after a firmware update. All you have to do is to call the parameter "Factory settings".
Standard	Calling the parameter "Factory settings" will set all parameters to the factory preset values.

Command sequence

AP 5.4 AP 5.6

➠ Parameter appears only in production mode.

~	„~“ is used as start sign for Easy-Plug command sequences.
#	(Default setting) „#“ is used as start sign for Easy-Plug command sequences.

Delete job

AP 5.4 AP 5.6

Press the Online-key to cancel the active print job.

```
Delete Job
Clearing . . .
```

Delete spooler

AP 5.4 AP 5.6

Press the Online-key to delete all print jobs contained in the spooler.

```
Delete Spooler
Clearing . . .
```

Factory settings

AP 5.4 AP 5.6

All parameters are preset ex works to values specific to each device type. These factory settings can be restored at any time.

All parameters are then overwritten by the factory settings.

The currently valid settings can be checked using PRINT INFO > printer status.

➠ CAUTION! - All data present in the spooler, including data belonging to an interrupted print job, is deleted!

Store Parameters

AP 5.4 AP 5.6

Parameter settings are saved in a text file on SD-card (directory FORMATS\). Considered are also parameters which belong to options, which are not activated.

Without adj. par

(Default) Parameters, which contain device specific settings, are *not* saved.

(Default file name: SETUP.FOR).

Application example: Transfer of printer settings to another printer (device specific settings as printhead resistance or sensor settings should not be overwritten).

With adjust para

Parameters, which contain device specific settings, are *also* saved. The relevant parameter names are marked with a * in the text file.

(Default file name: SETUPALL.FOR).

Application example: Service

❍ For more information about saving and reading parameter settings read topic section „Advanced Applications“, chapter „Saving and Transferring parameter settings“.

Store Diagnosis

AP 5.4 AP 5.6

Stores the diagnostic data on SD-card. The default file name composes as follows:

„Diagnose AP 5.4 203 Dpi A429403110613.log“

- *AP 5.4 203 Dpi*: printer type and printhead resolution
- *A429403110613*: serial number of the CPU board; equals the value displayed under SERVICE DATA > CPU board data > Serial number

❍ For details read the service manual, topic section „Fault Location“, chapter „Reading out diagnostic data“.

Data blocks del.

Delete data blocks

AP 5.4 AP 5.6

➠ Only appears, if at least one data block is in the flash memory.

Bxx

(Default setting) After calling the parameter, data block number 01 is displayed:

```
Data blocks del.
B01 diagnose inf
```

„B01“: block number 01
„diagnose inf“: name of the data block, is contained in the data block header.

If the flash memory contains more than one data block:
➜ Press the cut button several times, until the wanted data block appears.

Deleting a data block:
➜ Press the online button.

```
Data blocks del.
Delete? --> no
```

➜ Press the feed button to change to „yes“.
➜ Press the online button to delete the block.

All

All data blocks contained in the flash memory are deleted.

EasyPl. file log

Easy-Plug file log

AP 5.4 AP 5.6

➠ Only visible, if a SD-card is inserted.

➠ Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

➠ Activating this parameter may cause error messages, which may be difficult to understand. Therefore disable the function after error analysis. If an error occurs, disable the function and restart the printer.

Disabled	The file log function is switched off.
All data	All received data, including immediate commands, are written into the log file.
Interpreter data	All data is written into the log file, which the Easy-Plug interpreter reads out of the reception spooler. Immediate commands are *not* included.

Log files delete

AP 5.4 AP 5.6

➠ Only visible, if a SD-card is inserted.

No	(Default setting) No function.
Yes	Deletes all log files on the inserted SD-card, which fulfil the following conditions:

- Filename matches the scheme „EPxxxxxx.log“
  xxxxx = number from 1 to 999999, preceding digits filled with „0“. Example: „EP000001.log“.
- Location: folder \LOGFILES on SD-card

Those conditions are matched by logfiles, which are automatically generated by SPECIAL FUNCTION > EasyPl. file log.

RFID stat. del.

AP 5.4 AP 5.6

Sets all RFID counters to zero.

❍ See PRINT INFO > RFID status.

SERVICE FUNCTION

Service

AP 5.4 AP 5.6

Parameter only appears in production mode.

Increases the counter level of the "Service" counter on the "Service Status" printout by one.

❍ See parameter Service Status 🗋 on page 24.

yes Increases the counter "Services" by one

no Doesn´t increase the counter

Head exchange

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

Increases the counter „Head number“ on the info printout „Service Status“ by one.

❍ See parameter Service Status 🗋 on page 24.

yes Increases the counter "Head number" by one

no Doesn´t increase the counter

Roller exchange

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

Increases the counter „Roll number“ on the info printout „Service Status“ by one.

❍ See parameter Service Status 🗋 on page 24.

yes Increases the counter "Roll number" by one

no Doesn´t increase the counter

Cutter exchange

AP 5.4 AP 5.6

➠ Parameter only appears in production mode and only with a cutter mounted and activated.

Increases the counter „Cutter number“ on the info printout „Service Status“ by one.

❍ See parameter Service Status 🗋 on page 24.

yes — Increases the counter "Cutter number" by one

no — Doesn´t increase the counter

Serv. data reset

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

Sets all counters on the info printout „Service Status“ to zero.

❍ See parameter Service Status 🗋 on page 24.

EasyPlug monitor

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

The parameter activates the logging of received Easy Plug data. Data is transmitted to COM1 or COM2.

➠ Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

➠ To keep the influence of the monitoring function on the data rate as low as possible, the baud rate should be set to 115,000!

Disabled — (Default setting) The monitor function is disabled.

Serial Com1 — The Easy-Plug monitor data is transmitted to Com1.

Serial Com2 — The Easy-Plug monitor data is transmitted to Com2.

EP Monitor Mode

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

➠ Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

Interpreter data — (Default setting) All received Easy-Plug data, apart from immediate commands, are transmitted.

All data — All received Easy-Plug data, including immediate commands, are transmitted.

Sensor adjust

AP 5.4 AP 5.6

➠ Parameter only appears in production mode.

❍ For detailed instructions sensor adjustment, please refer to the service manual, topic section "Service Electronics", paragraph "Settings".

Sensor test

AP 5.4 AP 5.6

❍ The description of the sensor test can be found in the printer service manual, topic section „Service Electronics“, chapter Sensor test 🗋.

The values displayed are for checking the sensors (sensor check) and can by adjusted by service personnel.

Cutter test

AP 5.4 AP 5.6

Makes it possible to test the cutter function without having to set the parameter SYSTEM PARAMETER > Periph. device to „cutter“.

Press Cut Key — Triggers a cut, if a cutter is installed. Without a cutter nothing will happen.

Matend tolerance

AP 5.4 AP 5.6

Material end tolerance

This is relevant for label stock with very long punches. To avoid those punches being recognized as material end by mistake, can here the distance be set, after which the gap over the light sensor is interpreted as material end.

➠ By choosing a very high material end tolerance, you loose the protection of the print roller against being printed on!

xxx mm Setting range: 20-300 mm; Default setting: 35 mm

Feedadjust label

AP 5.4 AP 5.6

Prints a scale, which enables to calculate the feed adjust value (see next parameter).

For application instructions, refer to the Service Manual, topic section „Electronics Gen. 3“, chapter Adjusting the imprint position 🗋.

Feed adjust

AP 5.4 AP 5.6

Corrects the material feed length. Such a correction can be necessary when printing on very long labels, to compensate slippage-related feeding inaccuracy.

For application instructions, refer to the Service Manual, topic section „Electronics Gen. 3“, chapter Adjusting the imprint position 🗋.

x.x % Setting range: -10,0 to +10,0; Step width: 0,1%; Default setting: 0%

Punch y calibr.

AP 5.4 AP 5.6

➠ Only in production mode

Compensating the variation of distance between punch sensor and thermal bar of the printhead.

x.x mm Setting range: -3.0 to 3.0; Default setting: 0.0; Unit interval: 0.1

Memory card test

AP 5.4 AP 5.6

Test SD-cards

Pressing the online button starts a test routine for the Compact Flash Card memory. The following display shows up after successful testing:

```
Memory card test
Card Test O.K.
```

If the SD-card is defective or not available, a corresponding error report shows up.

For test purposes, the printer creates a file named TESTXXXX.TXT in the root directory of the card. An already existing file with this name will be over-written.

Send test

AP 5.4 AP 5.6

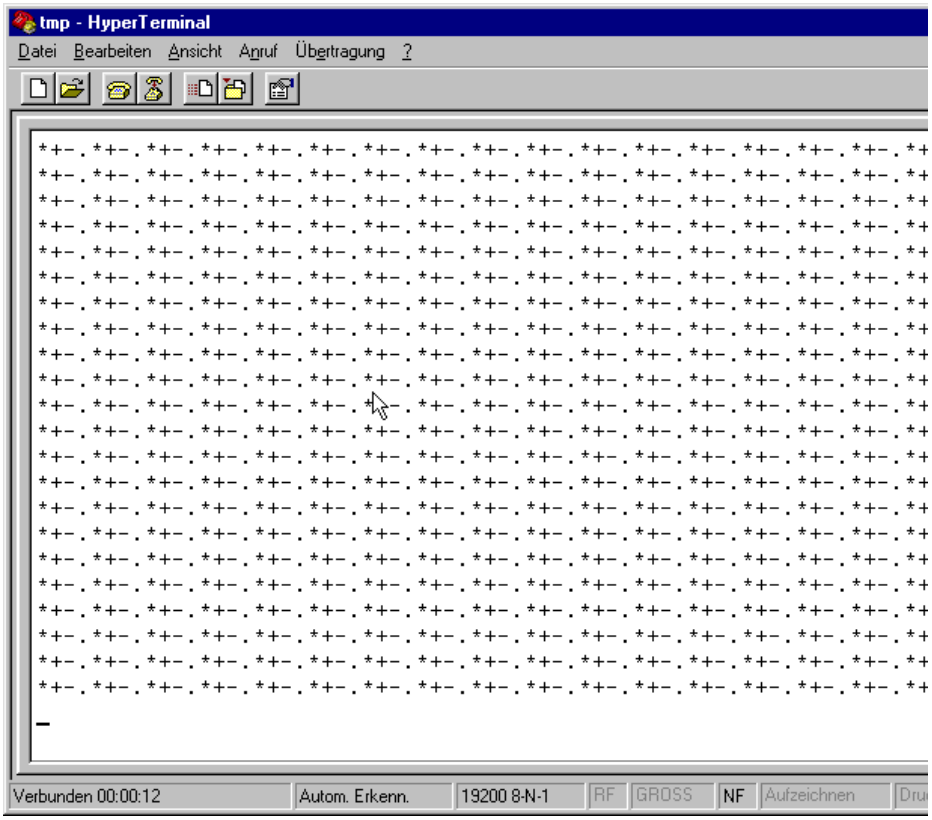
Serial connection

Carrying out the send test requires a terminal program, e.g. the Hyper Terminal contained in Windows95.

Start send test as follows:

1. Start the terminal program and set it to the transmission parameters used by the printer.
2. Press the Online-key to start the send test.

Send test
running . . .



[18] Pattern in the terminal window.

The terminal window should show a regular pattern of four repeating characters. Those characters are continuous sent by the printer.

A transfer fault would be recognizable as irregularity of the pattern. Press the Prog-key to stop testing.

Receive test

AP 5.4 AP 5.6

Serial connection

Assumption is a serial data line between PC and printer; the parameter INTERF.PARAM. > Interface must be set on RS232 or RS485.

1. Start the MS-DOS-window (using Windows).
2. Set the interface to the values adjusted at the printer by means of MS-DOS command MODE:

   Example of printer settings:
   – Baud rate: 19200
   – No. of data bits: 8
   – Parity: none
   – Stop Bits: 1
   – Data synch.: RTS/CTS

   DOS-Command: *mode com2 19200 8 n 1*
   (if com2 is the serial port)
3. Press the Online-key to start Receive test.

   Receive test
   0 Bytes
4. Send any file to the printer (Condition: com2 = Printer port; anyfile.txt = any file):

   copy anyfile.txt com2 (add /b for binary files)

   The following shows up on the printer display:

   Receive test
   xxxxx Bytes

   xxxxxx is the size of the sent file in bytes. This value is being counted up during the test. The test is complete if the file size does not vary any more. If the bytes announced at the printer match the size visible in the MS-DOS window, transfer was successful. Otherwise, transmission errors occurred.

Rewinder adjust

AP 5.4 AP 5.6

➠ Only with „Rewinder 2000“ installed.

Setting up the rewinder.

The rewinder setup compensates differeces in characteristic or assembly of the light barrier.

➠ CAUTION! - This parameter counts for both, the external *rewinder option* for AP 5.4 and the *backing paper rewinder* of the ALX 92x. But mind that the setting values are different!

❍ A setting description for the *rewinder option* is given in the „Manual Rewinder 2000“, paragraph Adjusting the sensor 🗋.

🗋Resting pos.xxx Setup of the resting position (xxx = actual sensor value).

End pos. xxx Setup of the End position (xxx = actual sensor value).

The setting follows in both cases this scheme:

1. Bring the dancer arm to its resting position.
2. Press the cut button

   ➠ *Not* the Online button (as with TTX x50)!
3. Bring the dancer arm to its end position.
4. Press the Online button.

Printtest

AP 5.4 AP 5.6

General printtest, prints line by line the set printer type and the firmware version. Material settings (Material type, length, width) are considered.

Stop the printtest by pressing the Online button.

SERVICE DATA

> MODULE FW VERS.

System version

AP 5.4 AP 5.6

Shows the firmware version number.

System revision

AP 5.4 AP 5.6

Shows a consecutive revision number.

➠ Only for factory-internal use.

System date

AP 5.4 AP 5.6

Shows the date, at which the firmware was generated.

Bootloader

AP 5.4 AP 5.6

Shows the bootloader version number.

uMon

AP 5.4 AP 5.6

Shows the bootloader version number.

Peripheraldriver

AP 5.4 AP 5.6

➠ Only with mounted (optional) peripheral output stage board.

Applied PIC version on the output stage board driving the peripheral motor.

Intern. rewinder

(Internal rewinder)

AP 5.4 AP 5.6

➠ „AP 5.4/5.6 peripheral with internal rewinder“ only.

Applied PIC version on the internal rewinder motor output stage board.

> OPERATION DATA

Serv. operations

AP 5.4 AP 5.6

Shows the num+ber of service operations. The counter is increased by calling the parameter SERVICE FUNCTION > Service = yes. Maximum value: 4 billions.

Headnumber

AP 5.4 AP 5.6

Shows the number of printhead changes. The counter is increased by calling the parameter SERVICE FUNCTION > Cutter exchange = yes. Maximum value: 4 billions.

Roll number

AP 5.4 AP 5.6

Shows the number of exchanged print rollers. The counter is increased by calling the parameter SERVICE FUNCTION > Roller exchange > yes. Maximum value: 4 billions.

Cutter number

AP 5.4 AP 5.6

➠ Only with mounted and activated cutter.

Shows the number of exchanged cutters. The counter is increased by calling the parameter SERVICE FUNCTION > Cutter exchange =yes. Maximum value: 4 billions.

Head run length

AP 5.4 AP 5.6

Shows the total "covered distance" of the printhead. The counter is reset with each calling of the parameter SERVICE FUNCTION > Cutter exchange = yes. Maximum value: 4 billions.

Roll run length

AP 5.4 AP 5.6

Shows the total "covered distance" of the print roller. The counter is reset with each calling of the parameter SERVICE FUNCTION > Roller exchange = yes. Maximum value: 4 billions.

Cuts on knife

AP 5.4 AP 5.6

➠ Only with mounted and activated cutter.

Shows the number of cuts done by one knife. The counter is reset with each calling of the parameter SERVICE FUNCTION > Cutter exchange = yes. Maximum value: 4 billions.

Tot. mat. length

AP 5.4 AP 5.6

Shows the total "covered distance" of the feed roller. In comparison to the counter Roll run length, this counter is not reset after a roller exchange. Maximum value: 4 billions.

Tot. foil length

AP 5.4 AP 5.6

Shows the total "covered distance" of the ribbon roller.

Total cuts

AP 5.4 AP 5.6

➠ Only with mounted and activated cutter.

Shows the number of cuts done by all knifes. In comparison to the counter Cuts on knife, this counter is not reset after a knife exchange. Maximum value: 4 billions.

Head strobes

AP 5.4 AP 5.6

Shows the counted head strobes, which are a measure for the service life of the printhead. A strobe is counted for each line in which at least one dot ist printed. Maximum value: 4 billions.

Head temperature

AP 5.4 AP 5.6

Shows the current printhead temperature in °C.

Foil diameter

AP 5.4 AP 5.6

Shows the calculated foil diameter: A measurement routine calculates the actual ribbon roll diameter with an exactness of 7.5%.

The parameter SYSTEM PARAMETER > Foil end warning can be used to set a critical foil roll diameter. If the foil roll diameter equals this value, a message appears on the printer display.

❍ See parameter Foil end warning 🗋 on page 68.

Dispensing cycl.

(Dispensing cycles)

AP 5.4 AP 5.6

➠ AP 5.4/5.6: Dispenser version only.

Shows the number of dispensed labels.

Operation time

AP 5.4 AP 5.6

Shows the elapsed time since the last switch-on of the machine.

> POWERSUPPLYDATA

Type

AP 5.4 AP 5.6

Shows the type of power supply, e.g. „Blue Mountain“.

PS temperature

AP 5.4 AP 5.6

Shows the current power supply temperature in °C. If for any reason the function is not supported, „??? °C“ is displayed.

> CPU BOARD DATA

CPU identifier

AP 5.4 AP 5.6

Shows the designation of the applied processor.

PCB revision

AP 5.4 AP 5.6

Shows the layout revision and part number of the CPU board.

FPGA version

AP 5.4 AP 5.6

Shows the FPGA version.

MAC address

AP 5.4 AP 5.6

Shows the MAC Address, an unchanging board address, which is programmed by the board manufacturer.

Serial number

AP 5.4 AP 5.6

Serial number: Is programmed by the board manufacturer.

Production date

AP 5.4 AP 5.6

Production date: Is programmed by the board manufacturer.

PCB part number

AP 5.4 AP 5.6

Shows the part number of the board without components.

Board part numb.

AP 5.4 AP 5.6

Shows the part number of the board with components.

Manufacturer

AP 5.4 AP 5.6

➠ Parameter appears only in production mode.

Shows the board manufacturer.

Work place

AP 5.4 AP 5.6

➠ Parameter appears only in production mode.

Shows the printer work place.

Company name

AP 5.4 AP 5.6

➠ Parameter appears only in production mode.

Shows the company name.

> DISPLAY DATA

Display version

AP 5.4 AP 5.6

Shows the *version number* of the operation panel.

Display SerialNr

AP 5.4 AP 5.6

Shows the *serial number* of the operation panel.

> MEMORY DATA

Ram memory size

AP 5.4 AP 5.6

Shows the available RAM memory size.

Flash mem size

AP 5.4 AP 5.6

Shows the available Flash memory size. The abbreviation which is displayed behind the memory size indicates the manufacturer of the applied Flash-RAM:

Abbreviation	Manufacturer
MX	Macronix
AMD	AMD
FUJ	Fuji

[9] The displayed abbreviations indicate the manufacturer of the Flash-RAM.

SD card

AP 5.4 AP 5.6

➠ Only with plugged-in SD-card.

Shows the memory size of the SD-card:

SD card
971 MB / 1024 MB

Display example: 971 MB of 1024 MB are free.

➠ The card slot must be assigned to a drive letter, otherwise the displayed text may be faulty.

❍ Assigning a dirve letter: see chapter > DRIVEASSIGNMENT on page 65.

Space for Jobs

AP 5.4 AP 5.6

Shows the memory size, which is available for print jobs.

Max. Labellength

AP 5.4 AP 5.6

Shows the maximum printable label length, which results from the memory allocation.

Default values

AP 5.4 AP 5.6

Shows the setting of parameter SPECIAL FUNCTION > Default values.