PRODUCT MARKING AND BARCODE-IDENTIFICATION

Barcode Label printer

MACH4 The Business Class.

Edition 3.1
International

Precision - Made in Germany

For more than 30 years now cab has been developing and manufacturing label marking systems for industry, commerce and services. The constant requirements of changing markets demand innovative ideas and form tomorrow´s products.

Our experience and our aim to make our printers more simple in operation have made cab a leading manufacturer worldwide.

Made in Germany with a large vertical range of manufacture, our quality system is subject to DIN ISO 9001 - from receiving inspection up to consignment.

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MACH4 – The new generation of transfer printer

Primary features

The future “made by cab”: MACH4, the new label printer which sets new, innovative benchmarks.

It offers all the features of a high class industrial printer with a wide application range.

Labels and ribbons can be inserted from the front.
The print mechanism and the cover are made of premium materials and are perfectly harmonised in their form and their functions.

Easy and comfortable handling and high reliability were the requirements during development. The large display with white backlight offers best readability.

The navigation pad with the additional “Enter” button simplifies the operation - thereby only the operated functions are indicated.

The centred label path makes adjustments unnecessary and avoids creases on the ribbon.

On the high-tech electronic board all required interfaces are serially integrated and applicable for every adapter.

MACH4 is available in three designs.

1. **“B“ Basic device**
2. **“P“ with serial dispense plate**
3. **“C“ Equipped with a cutter for material up to 250 g/m²**

The software is compatible with the cab devices A+ and Hermes A.

Detailed Perfection
Convincing product advantages

1. Cover with big window
Can be opened widely.
The integrated absorbability mechanism provides smooth closing.

2. Media hub
The label roll is placed within the media hub and centred automatically. Materials varying in width can be easily fit within the box.

3. Ribbon retainer
The ribbon is slid onto a ribbon supply hub with spring mounted brackets. It can be centred with a movable flange and a positioning indicator. Inserting the ribbon into the print mechanism is now easy and convenient.

4. Printing with 203, 300 or 600 dpi
The printheads can be exchanged easily from 203 to 300 dpi. The printer automatically detects the resolution.

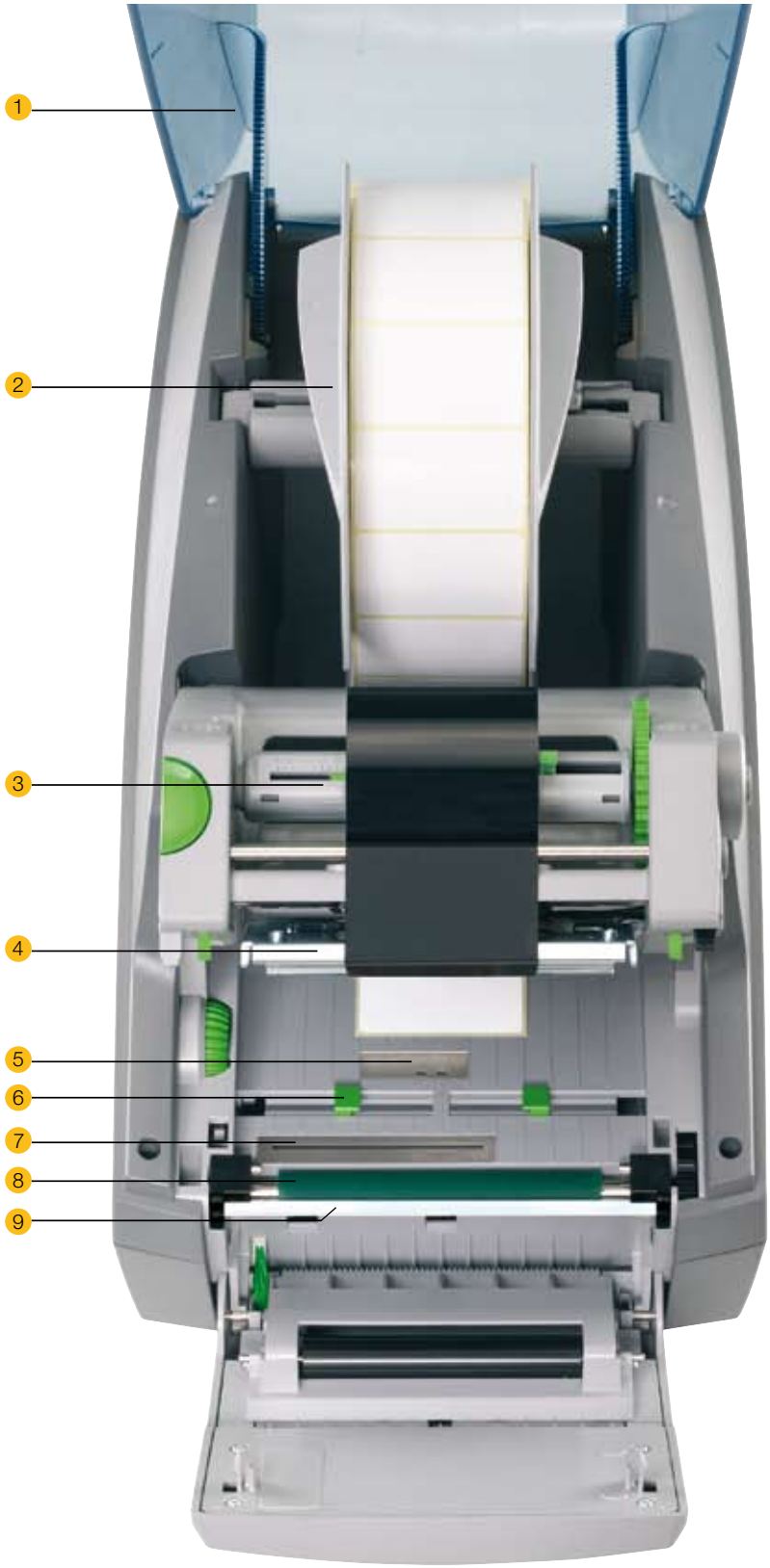
5. Gap sensor
To detect the beginning or end of labels the gap sensor is mounted in the centre of the label path. For two or four labels in a row it is possible to use a gap sensor which can be shifted 10 mm.

6. Label guidance
With the adjustment knob the user can adjust the width of the printing area. This is to centre the labels.

7. Reflex sensor
Start of label, printer‘s imprint and cut outs can be identified with a relocatable reflex sensor.

8. Drive roller
The drive roller can be easily removed for cleaning or replacement.

9. Peel-off-plate
The liner is guided down behind the operation panel. The label is peeled off at the peel-off-plate.



All interfaces built in

Back side of printer

■ Standard ☐ Option

PC/SPS interfaces

■ **1. Serial RS232 C** interface up to 230,400 Baud.

■ **2. USB 2.0 High Speed Slave** interface.

☐ **3. Parallel Centronics** acc. IEEE 1284
The data from the Centronics interface are converted onto the USB Full Speed interface.

Network connection

■ **6. Ethernet 10/100 Base T**- interface with TCP/IP Protocol. Printing with LPR/LPD, Raw IP or FTP.
IP adress can be set manually or obtained via DHCP.
Status information and set up via internet browser.
FTP for firmware updates and PC-card Type II/CompactFlash administration.
Messages can be sent via e-mail or SNMP.
Time and date synchronisation through time server.

■ **7.** Slot for **Wireless LAN**-Card
or **PC-Card Type II** (PCMCIA)

☐ **8. WLAN-card IEEE 802.11 b/g** for wireles network connection, dependend on chip set.
IEEE 802.11 b: 11 MBit/s, 2,4 GHz Band
IEEE 802.11 g: 54 MBit/s, 2,4 GHz Band

Peripherical connection

■ **9.** Two **USB-Master** interfaces to connect keyboard, scanner, external operation panel

■ **10.** Slot for **CompactFlash Type I Card**

Stand-Alone operation without PC

Complete labels can be created on a PC with a labelling software program such as cablabel R2, Codesoft or Easylabel. It will be saved on a CompactFlash card in the printer.

Recall this labels from the printer with an USB keybaord. Add variable text, databases values and graphics and print out the requested labels.

Additionally data from scanners or e.g. scales can be transmitted.

The data for all devices

■ Standard ☐ Option

1. Printhead	MACH4		
Printing method Transfer	■	■	■
thermal direct	☐	☐	-
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width mm	104	105.6	105.6
2. Labels			
Material: labels, continuous mat. on rolls or fanfolded			
Thermal- Standard paper, Cardboard, Textile,			
plastic foils PE, PP, PVC, PA, PI			
Material thickness [1] mm / Weight g/m²	0.07 - 0.35 / 60 - 200		
Media roll: Total diameter up to mm	210		
Core diameter mm	38 - 100		
Winding direction	inside or outside		
Material width mm	25 - 120		
Label width [1] mm	20 - 116		
Label height min. [1] mm	6		
Label height when dispensing [1] min. mm	20		
Label height max. mm	2.000	2.000	1.000
3. Ribbon			
Ink	inside or outside		
Roll diameter up to mm	72		
Core diameter mm	25		
Ribbon length variable up to m	360		
Width up to mm	114		
5. Dimension printer			
Height x Depth x Width mm	312 x 435 x 240		
Weight kg	6		
6. Label sensor			
Transmitted-light sensor for label edge, cut-out marks or label end either centered or shifted 10 mm to the left.			
Reflex sensor from below for label edge, cut-out marks or printed marks from the center, adjustable to the left for 56 mm or to the right for 10 mm			
7. Elektronics			
Processor high speed 32 Bit ColdFire/speed MHz	266		
RAM MB	64		
ROM MB Flash	8		
Slot for CompactFlash card Type I up to 2 GB	■		
Slot for Cardbus / PC-Card Type II	■		
Real-time clock, Printout of date and time	■		
8. Operation panel			
Digits/LEDS illuminated while operation	Pause, Feed, Cancel, Menu, Enter, 4 x Cursor		
LCD-Graphics Display Width x Height in mm	60 x 40		
Text lines/characters	4 / ca. 20		
9. Interfaces			
Parallel Centronics bi-directional acc. IEEE 1284	☐		
Serial RS 232 C 1.200 up to 230.400 Baud/8 Bit	■		
USB 2.0 High Speed Slave for PC-connection	■		
Ethernet 10/100 Base T, LPD, RawIP-Printing, ftp-Printing DHCP, HTTP, FTP, SMTP, SNMP, NTP, Zeroconf, mDNS	■		
RS 422, RS 485 1,200 up to 230,400 Baud/8 Bit	☐		
Peripherical connection	■		
WLAN card 802.11b/g	☐		
USB Master for keyboard and Scanner	2x ■		

10. Monitoring	
Stop printing if	End of ribbon / End of labels Printhead open
11. Settings	
	Country specific (BE, BG, CN, DK, DE, GB, FI, FR, GR, IR, IT, HR, LT, MK, MX, NL, NO, PL, PT, RU, SE, CH, ES, ZA, CZ, TR, HU, US), System settings, print parameters, Interface, security.
12. Test routines	
	System diagnosis of memory and print head when switched on, short status, status print, font list, device list, profile of print head, profile of label, test grid, monitor mode.
Status reports	Extensive status print with information about instrument setting, for example print length counter, runtime counter. Request of the machine status via software command. Detailed status messages on the display, for example network error-no link, barcode error etc.
13. Fonts	
Font types	5 Bitmap fonts incl. OCR-A, OCR-B and 3 Vector fonts Swiss 721, Swiss 721 Bold and Monospace 821 available internally, loadable TrueType fonts, Optional chinese (simplified chinese)
Character sets	Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBCDIC 500, ISO 8859-1 up to -10 and -13 up to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, K0I8-R. All West and East European latin, cyrillic, greek, hebrew and arabic characters are supported.
Bitmap fonts	Size of width and height 1 - 3 mm zoom 2 - 10 Orientation 0°, 90°, 180°, 270°
Vector-/TrueType fonts	Size of width and height 0,9 - 128 mm variable zoom, Orientation 360° in steps of 1°,
Font formats	Bold, italic, underlined, outline, negative, grey, vertical, depending on character fonts
Font width	Variable
14. Graphics	
Graphic elements	Line, arrow, box, circle, ellipse, filled and filled with fading
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG

[1] Small label sizes, thin materials or strong glue can lead to limitations. Critical applications need to be tested and cleared.

■ Standard ☐ Option

15. Codes		
Linear Barcodes	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C Codabar EAN 8, 13 EAN/UCC 128 EAN/UPC Appendix 2 EAN/UPC Appendix 5 FIM HIBC	Interleaved 2/5 Ident- and lead code of german Post AG JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0
2D-Codes	Aztec, Codablock F, Data Matrix, PDF 417, Micro PDF 417, UPS Maxicode, QR-Code, RSS 14 truncated, limited, stacked and stacked omnidirectional, EAN-Datamatrix	
	All codes variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and Start/Stop code, depending on code type.	

The current specifications are according to our technical knowledge. They are subject to change.

16. Software		
Programming	J-Script direct programing	■
	abc-Basic Compiler	■
	Database Connector	☐
System diagnosis/ Administration	cab-printer monitoring	■
	cab-Network Manager	☐
	cab-Card Manager	☐
cab Label software	cablabel R2 Lite	■
	cablabel R2 Pro	☐
More Label software	Easylabel, Codesoft, Nicelabel, Bartender, Label Matrix, Labelview	☐
Windows driver	2000, XP 32/64 bit 2003 32/64 bit, Vista 32/64 bit	■
Mac driver	OS X printer driver from version 10.3	■
Linux driver	Testet with Suse 9.0, CUPS based	■
17. Operation data		
Power supply	100 - 240 V ~ 50/60 Hz, PFC	
Energy consumption	max. 300 W	
Operation temperat.	10 - 35°C	
Humidity not condensing	30 - 85%	
Approvals	CE, FCC class A, CB, CCC	

Accessories

Memory card	
Compact Flash Typ I	512 MB

Speicherung von Etikettenformaten, Fonts, Texten, Grafiken. Im Drucker oder am PC les- und beschreibbar.

Keyboard	Numerical	Compact	Standard
Connection	USB	USB	USB
No. of keys	19	86	115
L x W mm	120 x 76	282 x 132	460 x 192

Zur Eingabe numerischer und alphanumerischer Daten im Stand-Alone-Betrieb.

As the implementation of the USB-standards can alter for different products, adverse effects may occur. On this account the operation and the compliance with CE-standards is only warranted by using cab-made materials or materials recommended by cab.

Media hub

For a quick replacement of labels they can be provided in additional Ribbon retainer.

Ribbon holder

For a quick replacement of ribbons they can be stored in additional trays.

Optimal output through optimal input

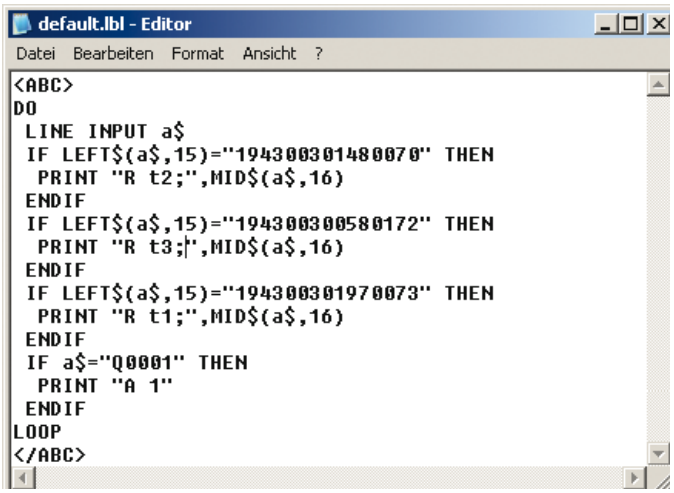
Printer Control

Direct programming with J-Script

J	**Job Start**
H 100	**Speed (100 mm/s)**
O R	**Orientation rotated by 180°**
S l1;0,0,68,70,100	**Size of label (100x68 mm, gap 2 mm)**
T 10,10,0,5,pt20;sample	**Text object/font: Swiss bold, 20 pt**
B 10,20,0,EAN-13,SC2;401234512345	**Barcode EAN 13, size SC 2**
G 8,3.5,0;R:30,9,0.3,0.3	**Graphic, box 30 x 9 mm,**
	Line strength 0.3 mm
A 1	**Number of labels (in this example 1)**

The printer language is easy to understand and integrate into your host system. Linkage of variable data with host application. Label design, graphics and fonts are recorded on the compact flash card. The host computer sends only the variable data to the printer.

abc - Basic Compiler



As an integrated element of the firmware it enables the printer to process data via BASIC programming before being transmitted to print editing. Thereby external printer languages can be replaced or data from other systems, e.g. SPS, can be transferred to be printed on different label sizes.

Database Connector

The database connector enables stand-alone printers to link up data from a SQL-compatible database and to print. Data can be rewritten and modified simultaneously to the printing process.

Monitoring

cab printer monitoring with Intra- and Internet

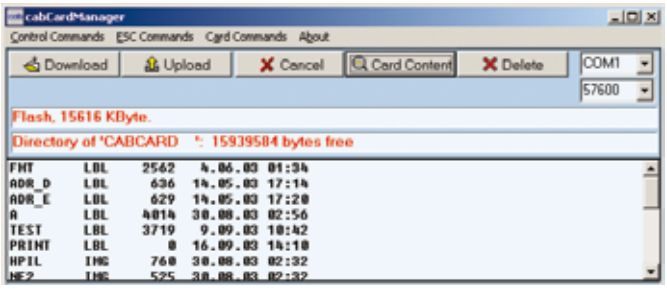
The integrated HTTP- and FTP-Server enables, with standard programs like web browser or FTP-clients, the print monitoring, configuration, the firmware-update and the administration of the memory card. Status signals, warning or error signals are sent to users or administrators either as email or SNMP-datagram via SNMP- and SMTP-clients.

Administration

cab-Network Manager

The cab network manager enables the user to govern several printers within the network at the same time. It supports monitoring, configuration, firmware updates, memory card and PIN-administration centrally.

cab-Card Manager



Via RS232 the memory card can be administrated fast and easy. Label layouts, True-type text fonts, complex graphics and databases can be up- or downloaded.

cablabel software for cab printers

cab Windows driver

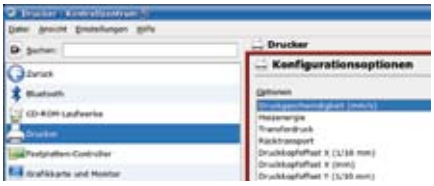
Create and print your label with a Windows program for ex. MS Word, Excel, Access, Works, Corel Draw etc.

Windows printer driver are provided for 2000, XP 32/64 bit, 2003 32/64 bit, Vista 32/64 bit.

Mac OS X driver

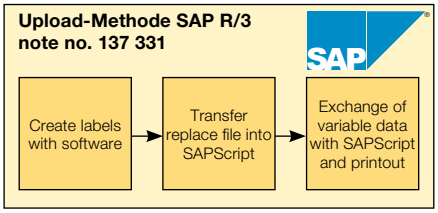
For MAC OS X cab offers a CUPS based printer driver. Please ask us.

Linux driver



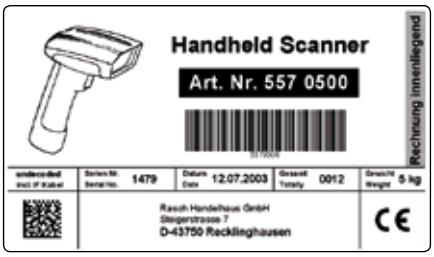
For LINUX cab offers also a CUPS based printer driver.

Integration into SAP R/3



cab developed together with SAP the „replacefil“ application. This is a simple way to run cab printers with SAPScript out of SAP R/3.

The software to create labels



Perfect labels need optimized text fonts. cab offers a large number of bitmap and vector fonts. Height and width of the font can be scaled and the object can be positioned and arranged. Additional true type fonts can be downloaded to the memory card. Most of the country specific codepages are supported.

Take advantage of using the multiple possibilties of cablabel R2.

● cablabel R2 Lite

is equivalent to the previous Advanced-version. You get it - free of charge - with every cab printer.

● cablabel R2 Pro

Assistant for UCC/EAN 128 barcode. Allows the collection of printing data from different data bases.

Wether simple texts, barcodes, graphics and the connection of databases, cablabel R2 is most flexible - all in 24 languages.

MDI (Multiple Document Interface) helps to open and handle several labels at the same time. Objects can be copied, moved and inserted into another label.

cablabel R2 provides its own drivers with individual respond to all different function of cab printers. This most effective way of communication between software and printer enables to achieve perfect results.

Additional label Software

cab offers a range of additional label software (Easylabel, Codesoft, Nice-Label) to program printers, to print and to auto-apply systems.

cablabel R2	Lite	Pro
32-Bit Platform compatibility	■	■
Languages European Version: IR, CZ, D, DK, E, F, FIN, GB/USA, H, I, IL,N, NL, P, PL, RUS, S, TR	■	■
Languages Asian Version : Chinese, EST, J, LV, ROK	■	■
Label samples	■	■
Online documentation with tutorials	■	■
Multi-level Undo number of levels	■ 1	■ 40
Graphic format import	■	■
Color support	■	■
Color graphic reduction		■
Text art		■
TrueType font	■	■
Graphic barcodes numbers	■ 9	■ 37
Native printer barcodes	■	■
Hidden (not printable) objects		■
Label preview	■	■
Graphics preview	■	■
Grid view/print		■
OLE-Client		■
Windows driver support		■
Control of printers	1	99
Support of net printer (TCP/IP)	■	■
Bi-directional communication to the printer		■
Stand-alone		
Printing to file	■	■
Font Downloader	■	■
Database		
Database Manager Access, DBF		■
ASCII, ODBC, OLEDB		■
Variables		
Flexible date and time stamping	■	■
Host of date and time with Date offset		■
Printing counter	■	■
Host counter		■
Variable graphic images		■
Free variables		■
Global files		■
Decimal value formating		■
Basic formular		■
User Input Fields		
Text alignment		■
Set input format		■
Minimum input length		■
Selection of default values		■
Automatic prompt		■
Extras		
UCC/EAN 128 and Maxicode Assistent		■

Transfer printer

Part No.	Description
5541082	Transfer printer MACH4/200B
5541083	Transfer printer MACH4/300B
5541086	Transfer printer MACH4/600B
5541092	Transfer printer MACH4/200P
5541093	Transfer printer MACH4/300P
5541096	Transfer printer MACH4/600P
5541102	Transfer printer MACH4/200C
5541103	Transfer printer MACH4/300C
5541106	Transfer printer MACH4/600C

5541xxx.102	Transfer printer MACH4/XXXX with RFID read-write unit 13,56 MHz

Content of delivery: Label printer, power supply, operation manual, Windows driver, cablabel R2 Lite, Service manual on CD-ROM

Spare parts

5541074.001	Printhead 4/203
5541073.001	Printhead 4/300
5541077.001	Printhead 4/600
5540896.001	Driver roller DR4

Interfaces

5561041	WLAN-Karte 802.11 b/g

5954200	Parallel Centronics
5954201	Serial RS422/RS485

5550818	Connecting cable RS232 C 9/9-pole, length 3 m

5901616	Connecting cable USB length 3 m
5901656	Connecting cable USB Mini length 3 m

Accessories

5561043	Memory card 512 MB CompactFlash Type 1

5917909	Numerical PC keyboard USB

5901630	Compact PC keyboard USB Cherry Classic Line G84-4100 LCMDE

5901626	Standard PC keyboard USB Cherry G83-6504 LADDE

5540867.001	Media hub

5540866.001	Ribbon holder

Software

5580212	Database Connector

5580215	Network Manager

5580216	cab-Card Manager

5580220	Label software cablabel R2 Lite
5580221	Label software cablabel R2 Pro

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