

# EuroForm Barcode 100 User Guide

English



For HP LaserJet Printers

 EuroForm

  
Barcode 100

# User Guide

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EuroForm Barcode 100

Version 1.5

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## Introduction

Thank you for purchasing the EuroForm Barcode 100 product.

The EuroForm Barcode 100 product enables your HP printer to print barcodes. EuroForm Barcode 100 also includes the legacy “HP Barcodes & More” features as it enables you also to print OCR-A or OCR-B characters.

An up-to-date list of supported HP LaserJet printers and MFPs including the required minimum printer firmware level is available on [www.euroform.com/barcode100](http://www.euroform.com/barcode100).

Please contact your local distributor for more information or check all the available information on our web site at [www.euroform.com](http://www.euroform.com).

# Installation

For installation of your EuroForm Barcode 100, we refer to the EuroForm Installation Guides and the relevant documentation supplied with your HP LaserJet printer or downloaded from <http://www.hp.com>

After having installed the EuroForm Barcode 100 you should follow this procedure to verify that the DIMM has been installed correctly:

1. Check that the printer control panel displays READY when the printer is turned on. If an error message appears, the might have been incorrectly installed. Check the printer messages (see “Understanding printer messages” in the relevant HP LaserJet User Guide).
2. Print a Configuration Page (see “Configuration Page” in the relevant HP LaserJet User Guide).
3. Check the Installed Personalities and Options section on the Configuration Page. This area should list an active Barcode 100 IOF filter.

If the Configuration Page does not list this, please check that the EuroForm Barcode 100 product is intended for the HP LaserJet printer model that you are trying to install it in. If the problem persists please contact your supplier.

If the EuroForm Barcode 100 is installed correctly, several features will be available for configuration and management of the EuroForm Barcode 100 emulation.

Please note:

The EuroForm Barcode 100 requires a TCP/IP network connection.

In order to work, the printer needs a build-in JetDirect card or EIO JetDirect card installed.

In HP LJ 2420/2430/4250/4350 the Barcode 100 MFC needs to be installed in Slot 2! – if the MFC is installed in Slot 1 (system code) the Barcode 100 will not work.

## Web Interface

The EuroForm Barcode 100 is configured through a web interface. You can access the specific EuroForm Barcode 100 web page either from the HP LaserJet printer's standard web page by clicking on the EuroForm Barcode 100 button in the left menu or by typing the following address in your browser:

**Syntax:**     http://<printer IP address>/hp/device/euroform.barcode100

**Example:**   <http://192.168.0.10/hp/device/euroform.barcode100>

Online help is available.

# How to use EuroForm Barcode 100

Printing barcodes with the EuroForm Barcode 100 is done in two steps.

1. Modify the current barcode environment:

You can activate a specific barcode by modifying the barcode environment. Use the "Barcode Type Command" `<ESC>#a<value>A` to activate.

2. Print the barcode:

Use the "Start and Stop Barcode Data" `<ESC>#a1C <ESC>#a0C` to print barcode data.

## Features

- The Data is verified according to the specification:
  - Number of characters must be correct
  - Some barcodes allows only numbers; other allows a wider range of characters
- If the data does not match the specification for the barcode, it will be overprinted by an X, which will indicate, that the data is incorrect.
- Depending of the kind of barcode, EuroForm Barcode 100 will automatically calculate a checksum and merge it with the user supplied data. Even if the checksum is provided from the user data, it will be recalculated.
- EuroForm Barcode 100 allows the user to scale the barcode independently in X and Y axis. The barcode can be printed in any height from 3 to 960 points (1 point = 1/72 inch). The barcode will be printed at the current active position (CAP). If the user does not specify all parameters, EuroForm Barcode 100 will provide the remaining parameters as default values according to the international specification standards.
- If required EuroForm Barcode 100 will print the barcode text either under, half-embedded in, full embedded in, or above the bars. Some limits will apply on the size of the text.
- The current active position (CAP) will be placed after the barcode.
- Additionally barcodes can be printed by moving the CAP to a new position and use the "Start and Stop Barcode Data" command again.

## Testing the EuroForm Barcode 100

To verify that the EuroForm Barcode 100 is correctly installed and running properly a couple of simple tests should be performed:

1. Print a Configuration Page from the front panel of the printer. Check if the “Installed Personalities and Options” section on the Configuration Page lists an active Barcode 100 IOF filter.
2. Print a PCL Font List from the front panel of the printer. Check if the OCR-B font name is on the list.

If one or both of these tests fail, please contact your local EuroForm reseller.

For further testing, a test file named “barcode100.txt” can be downloaded from the [www.euroform.com/barcode100](http://www.euroform.com/barcode100) web site. Copy this file to the printer to test if the EuroForm Barcode 100 is working correctly.

More information can be found on [www.euroform.com/barcode100](http://www.euroform.com/barcode100).

## **Barcode Readability**

The readability of a printed barcode depends on several other things than the actual barcode generation algorithms used. In other words, factors like the overall print quality and the type and color of the paper used affect the readability of the printed barcodes.

It is strongly recommended that the readability of the EuroForm Barcode 100 barcodes and OCR-B fonts is tested thoroughly before starting using them in a production environment.

## Default Parameters

The EuroForm Barcode 100 PCL extension includes commands for printing barcode graphics. These commands enable the printer to receive barcode data and print it as a barcode image.

The PCL barcode commands include: Barcode Type Command, Barcode Height Command, Start and Stop Barcode Data, Bar Width Command, Space Width Command, Text Placement Command, Text Style Command, Text Typeface Command, Text Show Start and Stop and Text Show Check Digit Command.

The normal sequence of execution for these commands is shown below:

Barcode Type Command  
Barcode Height Command (optional)  
Bar Width (optional)  
Space Width (optional)  
Text Placement (optional)  
Text Style (optional)  
Text Typeface (optional)  
Text Show Start & Stop (optional)  
Text Show Check (optional)  
Start Barcode Data  
.....  
Stop Barcode Data

First send the Barcode Type Command to specify what kind of barcode you want to print. Let us print an EAN13 barcode

<ESC>#a40A

Now you need to specify the data, but remember to include the Start and Stop Barcode Data Command.

```
<ESC>#a1C  
012345678901  
<ESC>#a0C
```

Here is the final sequence that you have to send in order to print the barcode:

```
<ESC>#a40A<ESC>#a1C012345678901<ESC>#a0C  
or  
<ESC>#a40a1C012345678901<ESC>#a0C
```

This will print an EAN13 barcode.

If you want to change the text typeface to OCR-B, insert this Text Typeface Command:

```
<ESC>#a5N
```

For other values, see the description of Text Typeface Command below.

Now the final sequence will look like this:

```
<ESC>#a40a5n1C012345678901<ESC>#a0C
```

If you want the barcode to be 50 point height, insert this Barcode Height Command:

```
<ESC>#a50B
```

Now the final sequence is:

```
<ESC>#a40a5n50b1C012345678901<ESC>#a0C
```

## Barcode Type Command

The Barcode Type command specifies the type of the barcode.

<ESC>#a<value>A

Default = 0

Range = 0 - 32767

The following types are supported:

0	None
10	EAN8
20	EAN8+2
30	EAN8+5
40	EAN13
50	EAN13+2
60	EAN13+5
70	25 Interleave
80	25 Interleave + Checksum
90	25 Industrial
100	25 Industrial + Checksum
110	25 Matrix
120	25 Matrix + Checksum
130	39
140	39 + Checksum
150	39 Leading Space Ignored
160	39 Leading Space Ignored + Checksum
170	39 Danish Post
190	39 Extended
200	39 Extended + Checksum
210	128 Auto
220	128 A
230	128 B
240	128 C

250	EAN 128
260	CODE 93
270	CODE 93 Extended
280	SG1-128

## Barcode Height Command

The Barcode Height command specifies the height of the barcode in points.

<ESC>#a<value>B

Default=0

<value> = Height in points

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected Barcode.

Barcode	Default Height in points
EAN8	50
EAN13	62
25	29
39	29
128	29

The Barcode Data command specifies the data section for the current barcode.

<ESC>#a<value>C

Default = 0

<value> = Section

The following section values are supported:

0	Not in a barcode data section (STOP Barcode Data)
1	In a barcode data section (START Barcode Data)

When EuroForm Barcode 100 is in a barcode data section, all text will be handled as barcode data. If you need to send text that contains control characters, use the Transparent Print Data Command.

## Barcode Width Commands

### Bar1 Width

The Bar1 Width command specifies the width of the smallest bar.

<ESC>#a<value>D

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

The default values for the Bars and the Spaces are:

Barcode	Bar/Space 1	Bar/Space 2	Bar/Space 3	Bar/Space 4
EAN8	8	16	24	32
EAN13	8	16	24	32
25	6	18		
39	6	18		
128	6	12	18	24

### Bar2 Width

The Bar2 Width command specifies the width of the second smallest bar.

<ESC>#a<value>E

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

### Bar3 Width

The Bar3 Width command specifies the width of the third smallest bar.

<ESC>#a<value>F

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

## **Bar4 Width**

The Bar4 Width command specifies the width of the fourth smallest bar.

<ESC>#a<value>G

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

## **Space1 Width**

The Space1 Width command specifies the width of the smallest space.

<ESC>#a<value>H

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

## **Space2 Width**

The Space2 Width command specifies the width of the second smallest space.

<ESC>#a<value>I

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

## **Space3 Width**

The Space3 Width command specifies the width of the third smallest space.

<ESC>#a<value>J

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

## **Space4 Width**

The Space4 Width command specifies the width of the fourth smallest space.

<ESC>#a<value>K

Default = 0

<value> = Width in 600ths dots

If you specify 0, EuroForm Barcode 100 will choose a default value for the currently selected barcode.

# Barcode Text Commands

## Text Placement

The Text Placement command specifies where to place the text on the barcode.

<ESC>#a<value>L

Default = 0

The following placement values are supported:

0	Default for barcode
1	No Text
2	Embedded
3	Half embedded
4	Under
5	Over

Barcode	Default Placement
EAN8	3
EAN13	3
25	1
39	1
128	1

## Text Style

The Text Style command specifies what style to use for the Text Typeface.

<ESC>#a<value>M

Default = 0

The following style values are supported:

0	Default for barcode
1	Regular

2	Italic
3	Bold
4	Bold + Italic

The default value for all barcodes is bold.

## Text Typeface

The Text Typeface command specifies what typeface to use for the Text.

<ESC>#a<value>N

Default = 0

The following typeface values are supported:

0	Courier
1	Letter Gothic
2	Univers
3	Univers Condensed
4	CG Times
5	OCR B

The default value for all barcodes is 0 = Courier

## Text Show Start & Stop

The Text Show Start & Stop command specifies whether you want to print the start and stop characters in the text.

<ESC>#a<value>O

Default = 0

The following values are supported:

0	Do not show start and stop
1	Show start and stop

## Text Show Check

The Text Show Check command specifies whether you want to print the check digit in the text.

<ESC>#a<value>P

Default = 0

The following values are supported:

0	Do not show check digit
1	Show check digit

This value only affects 39 barcodes.

## Examples

### EAN 8

<ESC>#a10A<ESC>#a1C8888888<ESC>#a0C



### EAN8+2

<ESC>#a20A<ESC>#a1C12345678<ESC>#a0C



### EAN8+5

<ESC>#a30A<ESC>#a1C012345678901<ESC>#a0C



These barcodes are used for retail items in Europe. EAN-8 is a shorter version of EAN-13. EAN-8 includes a country code (2 or 3 digits) data (5 or 4 digits) and a checksum (1 digit). EuroForm Barcode 100 will automatically calculate the checksum.

### EAN13

<ESC>#a40A<ESC>#a1C012345678901<ESC>#a0C



### EAN13+2

<ESC>#a50A<ESC>#a1C01234567890123<ESC>#a0C



### EAN13+5

<ESC>#a60A<ESC>#a1C01234567890123<ESC>#a0C



These examples show the standard barcode used world-wide for marking retail goods. EAN-13 includes a country code (2 or 3 digits) data (10 or 9) and a checksum. A supplemental of 2 or 5 digits may be added for specifying data. EuroForm Barcode 100 will automatically calculate the checksum.

## 25 Interleaved

<ESC>#a70A<ESC>#a1C01234567<ESC>#a0C



## 25 Interleaved with checksum

<ESC>#a80A<ESC>#a1C01234567<ESC>#a0C



Used in warehouse and industry. It contains between 2 and 30 digits.

## 25 Industrial

<ESC>#a90A<ESC>#a1C01234567<ESC>#a0C



## 25 Industrial with checksum

<ESC>#a100A<ESC>#a1C01234567<ESC>#a0C



## 25 Matrix

<ESC>#a110A<ESC>#a1C01234567<ESC>#a0C



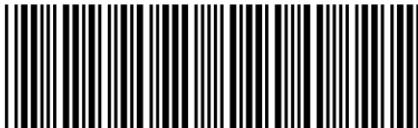
## 25 Matrix with checksum

<ESC>#a120A<ESC>#a1C01234567<ESC>#a0C



## Code 39 / Barcode 2 of 9

<ESC>#a130A<ESC>#a1C01234567<ESC>#a0C



## Code 39 with checksum

<ESC>#a140A<ESC>#a1C01234567<ESC>#a0C



Used widely in many industries and governments. Includes digits, letters and some symbols (space, minus, plus, period, dollar, slash, percent).

The text is printed between the start and stop characters “ \* ”.

If you print barcodes with ID 150 or 160, leading spaces in the data will be ignored.

If you print barcodes with ID 130 or 140, leading spaces will be printed.

### Code 39 Extended

<ESC>#a190A<ESC>#a1C01234567<ESC>#a0C



### Code 39 Extended with checksum

<ESC>#a200A<ESC>#a1C01234567<ESC>#a0C



This barcode supports all ASCII codes from 0 to 126, and it is based on Code 39.

### Code 39 Danish Post

<ESC>#a170A<ESC>#a1C01234567<ESC>#a0C



This barcode is a special Danish Code 39 with 10 digits used by The Danish Post for shipments.

EuroForm Barcode 100 only requires 10 digits.

## Troubleshooting

If you have any questions or problems in connection with the EuroForm Barcode 100, please contact your supplier or alternatively use one of the methods described below.

### Find product support on the World Wide Web

The web is a great place to learn more about the EuroForm Barcode 100. With just a few clicks, you will find updated software, tools, training material and technical solutions. This service is available 24 hours a day, 7 days a week, free of charge. Find us at: [www.euroform.com/barcode100](http://www.euroform.com/barcode100)

### Get answers through email

Get one-to-one assistance. Email your questions to [support@euroform.com](mailto:support@euroform.com)

### Tools and documentation

We have designed a variety of informative tools to assist you with training and troubleshooting. You can locate this information at [www.euroform.com/barcode100](http://www.euroform.com/barcode100)

From there, you can:

- download training material
- download the latest versions of the EuroForm Barcode 100 manual or the product datasheet
- learn more about the EuroForm Barcode 100

## Support

If you experience problems with EuroForm Barcode 100 or you have other questions, please send an email to [support@euroform.com](mailto:support@euroform.com).

However, before contacting us via email or telephone, we recommend that you visit our home page <http://www.euroform.com/barcode100>, where you can find updates, FAQs etc.

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EuroForm BusinessCard  
EuroForm FFM  
EuroForm PowerFlash 200

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