

How do I Make my Laser Printer Print Bar Codes?

Key Words

Print, laser, bar, code, bar code, font, custom, format, form, ticket, invoice, manifest, DIMM, escape sequence, universal product code, UPC, code 39, code 3 of 9, ASCII, American Standard Code for Information Interchange

Situation

Many dealers are implementing bar coding on forms, such as tickets, invoices and manifests. Not all laser printers support this function; this article discusses a few that do, and explains what to look for.

Solution

Successful implementation of bar coding on your laser printers depends not only on your skill with Report Writer, but your experience sending programming code along with a custom format to a laser printer. The following questions and answers discuss how to enable your laser printer to print bar codes. For assistance on the custom formats and hardware configurations, please contact Support:

- Phone: 1-800-366-4778
- Email: support@eci2.com
- On the Web: <http://www.ddms.com/support/supportcall.htm>

1. Can laser printers print bar codes?

Yes. Some printers with the correct hardware and/or software are able to print bar codes. (For requirements, see below.)

2. Can they print them right out of the box?

No. Most printers we have tested require optional software or hardware in order to print bar codes.

3. Will it require a custom format?

Yes. To print bar codes with any bar code-capable printer, your format must include special software commands that tell the printer to use a bar code font for certain fields within the format. To request a custom format, please fill out the Request Form for Custom Report/Format/Financial Table, available on our Web site at http://www.ddms.com/Resources/Support/faq/forms_letters/customform.pdf

4. Will it require anything else?

Yes, you must have the appropriate bar code font installed on your printer.

5. How do I install the font on the printer?

You have three options:

1. **Software option** – Purchase the font from a vendor who sells bar code fonts called “soft fonts.” Upload the fonts to the printer’s memory. Since the printer’s memory is volatile, the fonts are only resident until the printer is turned off. Once the printer is turned off, the fonts must be reloaded into the



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printer. After you load the fonts, they can be called by a custom font control “escape sequence” contained within the format. An escape sequence is merely a sting of characters sent to the printer with a preceding escape character, represented in DDMS by the following string:

^[

When a printer receives the escape character, it reads the subsequent characters as a command.

2. **Font Card Option** - Some older printers have a slot that accepts a special card. You can purchase different cards for different purposes. After the proper card is inserted, the new font will show up on the font list and can be used like the software option described above.
3. **Memory Chip Option** — New printers use a DIMM (Dual In-line Memory Module) or SIMM (Single In-line Memory Module) chip, like a memory chip for a computer, with fonts written into the memory. To use them, you write a custom format that specifies the font for the line that needs to be bar coded.

6. Can I get any SIMM or DIMM chip that does bar codes?

No, the chip must meet very specific requirements:

- First, **it should produce UPC (universal product code)**, which is a type of bar code you see on just about every product in most stores.
- Second, **it should produce CODE 39 (also called CODE 3 of 9)**. This type of bar code supports most ASCII (American Standard Code for Information Interchange) characters. Dealers normally use CODE 39 to bar code ticket numbers.

But there's more to it:

The chip's CODE 39 implementation must be able to bar code a SPACE character. Since we pull the entire ticket number, a six-digit ticket would be:

space space number number number number number number

If you cannot bar code a space, you cannot create a valid ticket number. Some DIMM chips map the spaces to other characters, which means DDMS personnel will have to hard code those characters and drop in the remaining ticket number behind it. For example, if the ticket number is 123456 and the DIMM chip maps the space to the underscore character, then we would hard code "underscore underscore" then the six-digit number like this:

__ 1 2 3 4 5 6

Note: This example has spaces between the characters for clarity only.

When the ticket number rolls over to 1 million (7 digits), the format will have to be corrected.

There's one other thing to remember when bar-coding with CODE 39. We have to hard code an asterisk before and after your characters so the above example becomes:

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* _ _ 1 2 3 4 5 6 *

- Finally, **the font should be scalable**. This means that you will be able to adjust the size of the bar code. If you do not get a scalable font, you will not be able to adjust the height or width.

7. What DIMM chips meet these requirements?

We have identified two chips that meet all the requirements. One can be purchased from Hewlett Packard resellers, and maps the space to the underscore.

The other is available from a company called JetCAPS®. JetCAPS has two versions, the BarDIMM® and BarDIMM® Light. The Light version meets all of our basic requirements. It can be found on the following site: <http://www.makebarcode.com> under the BARCODE PRINTERS & ADD-IN MODULES option. The BARDIMM is a much smarter chip and has some additional features you may find useful with other Windows applications.

8. What is the price for the bar code DIMM chips?

At press time, we saw prices ranging from \$250 to \$450, but please contact the vendor.

9. Can I use them on my printer?

You must check the vendor's Web site to confirm that your laser printer is compatible.

10. What if my printer is not HP?

You must check with either the manufacturer of your printer or the manufacturer of the chip. The printer must also be capable of using a Hewlett Packard Printer Control Language Version 5 or 6 emulation. The HP PCL emulation is the programming language we use to send the font commands to the printer. Many laser printers today have PCL as an available emulation.

11. Where can I buy a printer that already has the capability to print bar codes?

The ECI² sales department can suggest a few models that we know to be capable of printing bar codes. For more information, see our Peripheral Products Web page at <http://www.ddms.com/products/peripherals.htm>, or contact Dean Kim via email — dean@eci2.com — or phone — 1-800-366-3367.

12. What if I only need to print bar codes on labels?

Zebra® brand printers offer several models of label-only printers that meet our bar coding requirements. The model HT146 does not require any additional software or hardware. However, like the HP printers, you will also need a custom format. To order, contact Dean Kim via email dean@eci2.com or call 1-800-959-3367, ext 3236.