

**Using the MicrDIMM  
E-13B/CMC-7 Cheques Printing System  
for MS-Windows™, Unix and ERPs**

**MicrDIMM V6.0**



**Installation and  
Programmer's Guide  
MicrDIMM Level II, III, IV, V**

**Edition 1  
January-2012**

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JCE2508199

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## Introduction

MICR (Magnetic Ink Character Recognition) technology provides an easy, inexpensive and highly accurate means of data encoding for high speed check processing. It appeared in 1956 and quickly developed worldwide mainly in the financial business. Technically, special OCR (Optical Character Recognition) symbols are printed with magnetic ink on documents. Those documents are then processed at very high speed through special machines that read OCR characters, at rated speed of up to more than 2500 documents per minute. MICR technology is used mainly for high volume processing, like checks or parking tickets. On checks, banks encode the bank, account, check, and amount numbers using MICR symbols.

In 1958, the ABA (American Bankers Association) adopted the E-13B symbol set as the unique standard to encode information on checks in the United States. At the same time, other countries like Spain, France and Mexico have standardized on another standard: the CMC-7 OCR symbol set.

Technology now makes it possible to print checks on HP LaserJet corporate laser printers. The printer prints both the MICR line and the check information (addressee, amount, and date...) on a blank special check paper using a special MICR toner cartridge. The quality and flexibility of HP LaserJet printers makes it the best peripheral to print MICR encoded documents. The benefits are: savings through better cash-flow management (capability to switch dynamically from one bank to the other), security (no more MICR-encoded blank check forms to store), savings (no more pre-printed checks to buy).

## Presentation

The Jetmobile MicrDIMM chips is an intelligent memory module adding sophisticated and secured E-13B and CMC-7 symbols printing capabilities to Hewlett-Packard corporate printers (please contact your distributor for the full list). With MicrDIMM in the HP LaserJet printer, you can print checks locally or remotely with the best quality and safety.

There are five versions of MicrDIMM: Level I, II, III, IV and V.

That manual describes the many features proposed by the MicrDIMM kits, in their version II, III, IV and V. Some features are only available on a special level of MicrDIMM, something indicated at the beginning of the related paragraph.

*Please note that Jetmobile reserves the right to modify at any time and without prior notice any MicrDIMM feature.*

MicrDIMM includes high quality 600 dpi E-13B and CMC-7 fonts. As a result, documents MICR encoded with MicrDIMM and a good MICR toner have one of highest readability rate on the market, with a reject rate in the range of 2/1000.

- MicrDIMM level I contains only E-13B and CMC-7 high-resolution fonts (at 600 dots per inch). It includes no security system, or additional feature.
- MicrDIMM Level II, III, IV and V include security software (firmware) that runs inside the printer and linked to the same high resolution E-13B and CMC-7 fonts (600 dots per inch). This security software control the MICR printing environment, prevents most errors and illegal use attempts, and eases the check printing with exclusive features like digits to letters amount conversion and language translation.
- MicrDIMM Level III features a MICR toner sensor to make sure MICR toner is used while printing checks.
- MicrDIMM Level IV features both the MICR toner sensor, and a high security hardware key that can locks MICR fonts, forms and signatures.
- MicrDIMM Level V features no sensor, but a high security hardware key that can locks MICR fonts, forms and signatures.

For developers, MicrDIMM also features the exclusive Freescape system. With Freescape, the Escape code needed to drive the printer in PCL-5 language can have a replacement character, a user-defined Escape Code or Alternate Escape Code (AEC). This functionality does allow all systems to use PCL-5 and MicrDIMM, even if they have technical difficulties to send the binary escape character to a printer.

## **MICR symbols Readability**

The special consideration discussed in this section may pertain to all the MICR fonts or, in some cases, to specific MICR symbols, which are generated by the MicrDIMM product.

### ***When Printing With a New Toner Cartridge***

On some printers, a slight degradation of image quality may occur immediately after replacing the EP cartridge; To assure that the bar code images are printed with sufficient quality for later reading with electronic devices, follow these instructions;

1. Never used recycled or remanufactured MICR toner cartridges.
2. Only use MICR toner especially designed for your HP LaserJet printer. Not all laser printers are the same, and an incorrect toner can void your printer warrantee or be easily removable from the check.
3. Be certain that the storage and care instruction that are supported with the MICR toner cartridge were followed before installing the new MICR toner cartridge in your printer.
4. Be sure to change the MICR toner cartridge when necessary. Carefully follow the installation instructions (especially those relating to proper agitation of the cartridge) before you install the MICR toner cartridge.

### ***Print Density Settings (important information)***

In the past years, multiple countries have set their own requirements in term of ink density. MicrDIMM used to automatically adjusts the Print Density setting to 3 (default value). This has not be suitable for some countries, and since version 3.0 MicrDIMM allows to freely define the toner density setting on the printer front panel. If applicable, we therefore strongly recommend you lock the printer front panel using the control panel locking PJI command to avoid the parameter to be changed (please read page 18).

### ***Check Paper Quality***

Check paper quality is one of the major parts of a safe check printing solution. A paper not designed for the ink and printer fuser characteristics will not perform adequately and will be easily forged. It is highly recommended to use a special laser check paper designed for your HP LaserJet printer and MICR toner.

You should monitor closely the quality of printed check every 3 months to prevent maintenance issues.



The MICR fonts available in the MicrDIMM product have been found to be highly readable.

**HOWEVER:**

**JETMOBILE DOES NOT WARRANT AND HAS NOT TESTED THAT THE MICR SYMBOLS CONTAINED OR GENERATED BY MicrDIMM ARE READABLE BY ALL READING DEVICES.**

**JETMOBILE RECOMMENDS THAT YOU TEST THE READ/WRITE COMPATIBILITY OF THESE MICR SYMBOLS WITH YOUR BANK BEFORE IMPLEMENTING ANY APPLICATION.**

**JETMOBILE DOES NOT WARRANT THAT CHECKS PRINTED USING MicrDIMM CAN NOT BE ALTERED, AND DOES NOT WARRANT THAT ALL ERRORS AND ILLEGAL USE ATTEMPTS WILL BE PREVENTED.**

## Installing the USB or CF memory module

Before installing MicrDIMM, please print a self-test page from the front panel.

The printer must be switched off and unplugged from its power cable before installing the solution. You need to open the printer formatter (electronic) board to install the MicrDIMM memory module. Please refer to the hp printer manual for information on accessing the printer formatter; this is the place where printer memory extensions are also installable.

Your HP LaserJet has two to three slots for USB memories or Compact Flash memory boards. MicrDIMM can be installed in any of these slots. Because the slots are close together, we recommend installing them from right to left or bottom to top.

### *Protecting the printer formatter board*

Printer formatter boards can easily be damaged by small amounts of static electricity. To remove any static electricity from your body touch frequently bare metal on the printer before installing the solution or wear an anti-static wrist strap.

Avoid moving around the work area to prevent static electricity from being generated.

<p><b>WARNING:</b></p>
------------------------

<p>Hazardous voltages are present in the printer. Never remove any access cover or work near exposed electrical parts while power is connected.</p>
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Please refer to your HP LaserJet user manual for the USB or Compact Flash module installation procedure.

## ***Testing the MicrDIMM***

The following operation can be performed to test the correct installation of MicrDIMM:

\* From the front panel of the printer, generate a Printer Auto Test page. The MicrDIMM product is listed on the configuration page, together with its version number.

\* A test file is provided with MicrDIMM. Copy it to the printer to verify if MicrDIMM works correctly. If CMC-7 and E-13B fonts do not appear, or if amounts are not converted from digits to letters (or if a printer error LED blinks), MicrDIMM is not recognized by the printer.

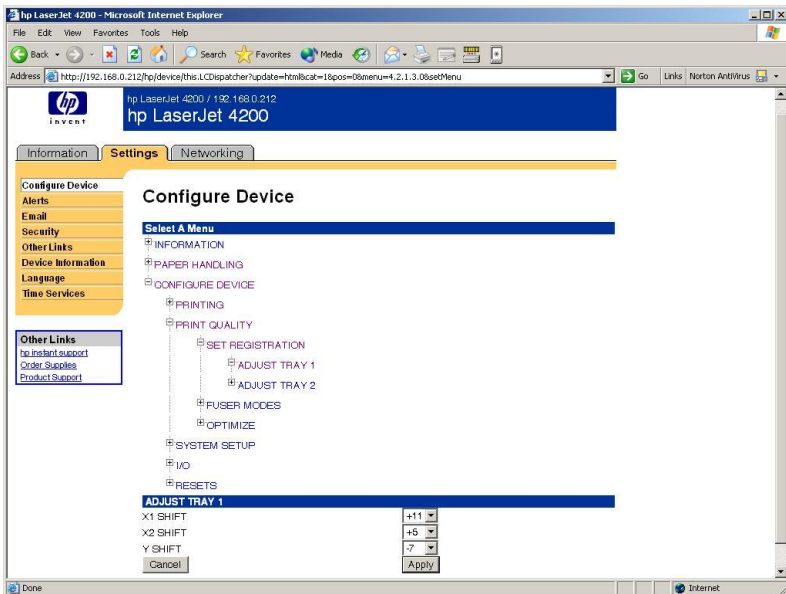
If any test is successful, the MicrDIMM is recognized by the HP LaserJet and operates correctly.

If the Auto Test page test fails, verify if the MicrDIMM you have purchased is compatible with your printer (a label on the board should indicate the compatibility). There is one version of MicrDIMM for each HP LaserJet printer model, and the MicrDIMM memory module is not cross-printer compatible. Make sure you have specified the right model with your MicrDIMM order.

## Tuning the MICR line alignment

You may need to configure the printer to guarantee the perfect alignment of the MICR line and other information on the cheques.

HP LaserJet printers include an **ADJUST TRAY** option to tune the X/Y positioning of the logical page on the paper. This setting is performed per tray (each tray may have its own offset). Please read the HP LaserJet user manual for more information on the tray adjustment menu option.



## MicrDIMM Level II, III, IV and V

Check printing requires some security systems to limit forgery risks and errors. A controlled access to E-13B and CMC-7 symbols, forms, logos and signatures is a requirement that has been expressed by all security consultants. MicrDIMM features PCL commands to enter/quit MICR mode and lock/unlock MICR symbols and signatures.

**NOTE:** In this manual, the escape code is indicated as <Esc>. Those five characters must not be entered as individual symbols, but must be replaced with the unique character of ASCII value 27.

Before using any MicrDIMM OCR symbol of special feature, it is mandatory to activate the MICR mode on the printer. Only that mode can print E-13B and CMC-7 symbols and can secure document printing.

### *MICR mode control*

<Esc>**1M	Enter MICR mode with all security features.
<Esc>**2M	Enter MICR mode with only a front panel prompting to put a MICR toner in the printer (for Level II/V and printers with front panel display only).
<Esc>**0M	Exit MICR mode.

### *E-13B and CMC-7 fonts*

E-13B and CMC-7 are activated using PCL font call sequences. Those bitmap fonts have the following sequences:

E-13B :	<Esc>(100<Esc>(s0p8.00h12.0v0s0b104T
Or E-13B :	<Esc>(8M<Esc>(s0p8.00h10.0v0s0b100T
Or E-13B :	<Esc>(0Q<Esc>(s0p8.00h8.8v0s0b0T

CMC-7 :	<Esc>(14Y<Esc>(s0p8.00h12.0v0s0b105T
Or CMC-7 :	<Esc>(8M<Esc>(s0p8.00h10.0v0s0b101T

Note: 'O' is an uppercase O letter, and 0 is the digit zero.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
32																
48																
64																

*This table shows the ASCII location of CMC-7 symbols*

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
32																
48	□	└	┐	┌	┘	┙	┚	┛	├	┝						
64		┆	┇	┈	┉											

*This table shows the ASCII location of E-13B symbols*

CMC-7 and E-13B can be called each using two or three different Escape sequences. The result is totally identical for the same symbols. The reason for having several escape sequences for each MICR font is to provide backward compatibility with older standards.

**Note:** Font escape sequences should be combined in a unique PCL sequence finishing with the T parameter.

### *Security Fonts*

Security fonts are scalable fonts that include the short digit name as a sub-title under each digit symbol. Short digit names are made of the first and last letter of the full-length digit name (i.e.: ET under '8' for Eight). Under letters and symbols like commas, the character is repeated as sub-title. Any call to a non-security font stops the sub-titling. MicrDIMM is international: it can print subtitles in many languages, from English to Czech, French and Spanish. Please not that «Security» fonts do not provide a full protection against modification of the check information (amount, payee...), but makes it more difficult to alter the check information.

Escape sequence for Security Fonts: **<Esc> (s#p#h#v#T**

- 'p' parameter selects the reverse printing mode

0 Regular text and sub-titles (default mode)

**\$123,456,789.00**  
\$\$ OETOTE C FRFESX C SNETNEP ZOZO

1 Regular text, Reversed sub-titles

**\$123,456,789.00**  
\$\$ OBTOTEC FRFESXC SNETNEP ZOZO

2 Reverse text, Regular sub-titles

**\$123,456,789.00**  
\$\$ OBTOTEC FRFESXC SNETNEP ZOZO

3 Reverse text and sub-titles

**\$123,456,789.00**  
\$\$ OBTOTEC FRFESXC SNETNEP ZOZO

- 'h' parameter selects the font

Format: CBA, numeric value, where

A: Typeface	0 Use Courier to print text (default)
	1 Use Letter Gothic to print text
	2 Use Univers to print text
	3 Use Univers Condensed to print text
	4 Use CG-Times to print text
B: Reserved	0
C: Style	0 Use Default (Bold)
	1 Use Regular
	2 Use Italics
	3 Use Bold
	4 Use Bold Italic

Example: text in Univers Bold Italic, automatic\* size: 402h

- 'v' parameter selects the point size
- 'T' parameter selects the required language for the sub-titles
  - 25100 English (US)
  - 25110 French
  - 25120 Spanish
  - 25130 Czech
  - 25140 German
  - 25150 Italian
  - 25151 Italian with 3 letters for digits short name
  - 25160 Reserved

**I.E.:** Here is the sequence used to print that amount:

Amount : <Esc>(s1p10v25100T \$123,456,789.00<Esc>(s1p12vbs4148T

**\$123,456,789.00**  
SS OETOTE C FR FESX C SNETNEP ZOZO

## *Digits to Text String Conversion*

All checks have a location where the check value has to be printed, as well as two lines on which the same value as to be printed in plain text.

MicrDIMM is capable of automatically converting a digits value to a full text value, in any language supported by the current version. It will also automatically fill the two lines on the check, taking care of word-wrapping the text, activating the right font, and even filling the line to not leave any blank space (optional feature).

MicrDIMM only needs the location and length of the two lines. Those information must be provided in decipoints (1/720 of inch, 1 inch = 2,54cm). Note that those coordinates are relative to the printable area, not the edge of the page.

Escape Sequence for Value conversion:

**<Esc> (s#p#h#v#<sub>1</sub>, #<sub>2</sub>, #<sub>3</sub>b#<sub>1</sub>, #<sub>2</sub>, #<sub>3</sub>s#T<value>**

- 'p' parameter selects the reverse printing mode

- 0 Regular text (default mode)
- 1 Reverse text

**Two Thousand**

**Two Thousand**

- 'h' parameter selects the font

Format: CBA, numeric value, where

A: Typeface

- 0 Use Courier to print text (default)
- 1 Use Letter Gothic to print text
- 2 Use Univers to print text
- 3 Use Univers Condensed to print text
- 4 Use CG-Times to print text

B: Text header, trailer and words separator

- 0 '-' between words, starts with \* and fills end with \* (default)
- 1 no words separator, starts with \* and fills end with \*
- 2 '-' between words, no start/end \*
- 3 no words separator, no start/end \*
- 4 to 9: '-' between words, starts with \* and ends with 3 to 8 \*

C: Text style

- 0 Use Default (Bold)
- 1 Use Regular
- 2 Use Italics
- 3 Use Bold
- 4 Use Bold Italic

Example: text in Univers Bold Italic: 402h



- 'v' parameter selects the font size (in point size)
- 'b' parameter describes the position and size of the first line:
  - #<sub>1</sub> : absolute horizontal position (in Decipoints)
  - #<sub>2</sub> : absolute vertical position (in Decipoints)
  - #<sub>3</sub> : line length (in Decipoints)
- 's' parameter describes the position and size of the second line:
  - #<sub>1</sub> : absolute horizontal position (in Decipoints)
  - #<sub>2</sub> : absolute vertical position (in Decipoints)
  - #<sub>3</sub> : line length (in Decipoints)
- 'T' selects the required language to translate the value:
  - 25000 English
  - 25001 English (Malaysia&Singapore) *First letters uppercase, no currency, ends with "Only".*
  - 25003 English (Australia) *First letters uppercase, AUD printed as "Dollars"*
  - 25005 English (UK) *All letters uppercase*
  - 25010 French
  - 25011 French with ',' as decimal separator
  - 25012 Uppercase french
  - 25013 Uppercase french with ',' as decimal separator
  - 25020 Spanish
  - 25030 Czech
  - 25040 German
  - 25050 Italian
  - 25060 Reserved

- **<value>** must be replaced by the check amount, as digits with/without commas or periods and must be followed by the required ISO currency symbol. When the currency symbol is one of the following, it is translated into plain text in the selected language, otherwise it is printed as-is.

Currently supported ISO currency symbols:

AUD, BHD, CAD, CFA, CFP, CHF, CZK, DKK, EUR, GBP, HKD, IEP, JPY, KRW, MAD, MXN, MYR, NIS, NGN, NZD, SGD, SEK, TND, TWD, USD and ZAR.

**Note:**

- The decimal character is unique and corresponds to the period '.'. The comma ',' can be used to separate thousands (i.e.: 123,456.00USD).

**I.E.:** print a text value in English, using Univers bold 10pt font, and the US dollar as currency

<Esc>(s0p302h10v3240,6696,1920b936,6840,3840s25010T1854.00USD

**\*One-Thousand-Eight-Hundred-Fifty-Four-US-Dollars\*\*\***

## ***Euro currency***

- The EURO symbol is EUR. The Euro subdivision name is localized as per the language (I.e.: Centesimi/Centesimo in Italian).

## ***Test Page***

MicrDIMM features a sophisticated test page. This page makes it possible to test the print quality. Just print it on a check paper using MICR toner. A qualified test lab mandated by you will then be able to use it to test the toner adhesion and MICR readability.

To print the test page, send the following Escape sequence to the printer:

```
E13B/CMC7: <Esc>* * 3M
```

The quality test page is then printed.

## ***Front Panel lock (when applicable)***

A PJJ command inserted in the job header can lock the front panel and prevent any modification of the printer parameters (copies, resolution...) on printers that feature a front panel. PJJ commands can not be inserted in a PCL flow, and must precede it. Please read the HP PJJ Developer's Guide on how to use PJJ commands.

To activate/deactivate the front panel:

```
<Esc>%-12345X@PJJ  
@PJJ DEFAULT CPLOCK = ON/OFF  
<Esc>%-12345X
```

## ***Password Protection***

It is possible to lock the access to MICR mode by using the PJJ password. To initialize the PJJ password, you must enter PJJ, then specify the password, and exit PJJ to activate the password. If a job is not initialized with the password (and if password is not equal to zero), the MICR mode can not be activated.

**To unlock the access to MICR mode with the password:**

```
<Esc>%-12345X@PJJ  
@PJJ JOB  
@PJJ PASSWORD = PasswordValue
```

**If no password has been defined, activate a password protection with:**

```
<Esc>%-12345X@PJJ
@PJJ JOB
@PJJ DEFAULT PASSWORD = PasswordValue
@PJJ EOJ
<Esc>%-12345X
```

**To modify the current password:**

```
<Esc>%-12345X@PJJ
@PJJ JOB PASSWORD = CurrentPasswordValue
@PJJ DEFAULT PASSWORD = NewPasswordValue
@PJJ EOJ
<Esc>%-12345X
```

The password value must be a value between 0 and 65535.  
A password value of 0 disables the password protection.

***Auto-Reprint Off***

When a paper jam occurs, or if someone opens the printer cover during printing, the HP LaserJet printer reprints automatically the page after recovery. Someone could then easily get as many identical checks by opening the printer cover before the page is totally released. When the MICR mode is activated, the printer destroys the page image in memory when a paper jam occurs. The page is then not printed twice.

***No Multi-Copy***

When the MICR mode is activated, MicrDIMM prevents users and software from duplicating checks by requesting more than one copy. MicrDIMM systematically sets the multi-copy to one, and filters front panel and PCL escape sequence multi-copy requests.

***Print Density and Toner low***

To guarantee the best E-13B and CMC-7 reading rate by checks readers/sorters, we recommend to set on the printer front panel the toner density value to 3 (default value). Flexibility on the value was requested by many clients. MicrDIMM will stop the printer in a low toner situation to avoid printing without enough toner.

***Signatures, forms and macros protection***

Unless MICR mode is activated, PCL macros between 10050 and 10085 are not reachable. That range of macros can then be used to store signatures, forms, logos and special fonts.

Macro 10100 is called whenever a macro in the protected range is called when MICR mode is off. This feature can be used to print automatically a macro with «VOID» or «COPY».

When MICR mode is activated, all macros can be called.

Note: Macros 10086 to 10099 are reserved for MicrDIMM.

### ***MICR Toner cartridge detection (Level III and IV Only)***

Special MICR toner must be used to print OCR E-13B and CMC-7 symbols. MicrDIMM Level III features a sensor to verify if such a MICR toner cartridge has been installed before authorizing check printing. This feature is useful when the printer is not dedicated to MICR printing, or to prevent that someone not aware of the special toner requirement replaces a used MICR toner cartridge with a non-MICR toner cartridge.

Note: The sensor only works with MicrDIMM-aware toner cartridges. In Europe, please contact your Jetmobile partner to have more information. Outside Europe, please contact your local Jetmobile distributor.

### ***Hardware Security Key (Levels IV and V Only)***

MicrDIMM Level IV features a hardware security key located on the front right corner of the printer (LJ5, 8000 and 4000) that locks the printer out of MICR mode. The key is needed to enter MICR mode, and can not be removed from the printer in MICR-ON mode.

The hardware security key locks:

- MICR E-13B/CMC-7 fonts
- Security fonts
- Digits to text conversion
- Signatures, forms, logos and fonts in macros 10000 to 10085

The security lock is provided with two keys. No replacement key will be provided. If both keys are lost, your Jetmobile partner or distributor can provides you with a new set of lock plus two keys.

## OCR-A and OCR-B fonts

MicrDIMM features the standard HP Barcode&More OCR-A and OCR-B fonts as high quality bitmap PCL-5 font. Those symbols can be used to print information in a machine-readable way.

PCL Escape sequences to call those fixed-size fonts:

OCR-A: <Esc>(00<Esc>(sp10h12vsb104T

OCR-B: <Esc>(10<Esc>(sp10h12vsb110T

Note: 'O' is an uppercase O letter, and 0 is the digit zero.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
32		!	¢	#	£	¥	&		(	)	*	+	,	-	.	/
48	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
64	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
80	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
96	h	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
112	p	q	r	s	t	u	v	w	x	y	z	{		}		

This table shows the OCR-A character set.

The "Barcode&More" OCR-B font character table is the same, except characters <95>, <96> and <126> which in OCR-B match the standard ASCII characters.

## Euro and other currency symbols

MicrDIMM features Euro symbols in a scalable PCL-5 font. Those symbols can be used to print checks in Euro (big light gray Euro symbol in the background), or put the Euro symbol with the amounts.

Escape sequence: <Esc>(10<Esc>(s1p<size>vsb10452T

where <size> is the symbol size in points (1/72th inch)

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
64		€	€	€	£	¢	¤	¥								
80																
96		€	€	€	€	€	€	€	€	€	€	€	€			

This table shows the ASCII location of Euro symbols

## Software Interface with MicrDIMM Level II, III and IV

MICR symbols and features are activated using a font-like escape sequence:

1. Send an Enter MICR Mode PCL escape sequence to the printer.
2. Activate a MicrDIMM font (font number range: 25000 to 25200) using a combined PCL escape sequence: <Esc> (s#p#h#v#b#s#T where # represents one parameter (or multiple parameters separated by commas).
  - Note: with MicrDIMM 'fonts', PCL font parameters don't always have the standard PCL meaning.
3. Send the data to print using that font.
4. After the Formfeed or End of Job, MicrDIMM prints the expected result according to the specified PCL sequence.
5. Send the MICR Mode Off sequence to the printer.

### **Warning:**

Although special MicrDIMM symbols are generated using a font-like sequence, they are still not PCL fonts. Therefore, some limitation on font sequences apply:

- No font ID can be linked to a security font
- MicrDIMM can only be used in PCL5 printer language
- MicrDIMM E13B, CMC7 and security fonts can not be used from HPGL/2 or PCL-XL language

## FREESCAPE feature

PCL codes always begin with the non-printable Escape code (Hexa: 1B, Dec: 27). Some systems can not use or send binary data to a device. Binary means any character other than a letter, punctuation or a digit. Such systems include Mainframes where printers are connected to terminals, and AS/400. That can be a problem to use the HP PCL language, and to use Barcodes. With the FREESCAPE feature, the Escape code has a synonym, a user-defined Escape Code or Alternate Escape Code (AEC). That character acts exactly like the standard Escape Code when found at the beginning of a regular PCL sequence. Default value for the AEC is the TILDE '~'. Freescape is smart enough to ignore the EAC if it is found as pure data. You can mix regular Escape Codes and Alternate Escape Codes. The AEC can be one of 10 characters.

There is a new PCL sequence to change the Alternate Escape code:

**<Esc or AEC>\*\*#J**

Where # is the ASCII decimal value of the new AEC: 34 (\*), 35 (#), 36 (\$), 47 (/), 92 (\), 63 (?), 123 ({}), 125 (}), 124 (|), 126 (~) and 27. *Indicating 27 disables Freescape.*

### *Freescape parameters on front panel menu*

The Freescape feature can be activated/disabled on the front panel of the printer equipped with MicrDIMM V3 (and only on printer with a front panel with display and except on LJ4000, 5000 and 8000 with FW<4.48).

Browse through the menu options until **BAR MICR MENU** appears.

#### *To activate/deactivate Freescape:*

Press the **Item** **○** key until **FREESCAPE=ON** or **FREESCAPE=OFF** appears

Press the **Value** **+** key to toggle between **ON** and **OFF**

Press the **Select** key to validate the choice

When Freescape is deactivated, only the regular Escape code (Hexa: 1B, Dec: 27) can be used to start PCL commands.

#### *To change the Freescape AEC character:*

Press the **Item** **○** key until **AEC CHAR=** appears

Press the **Value** **+** and **-** key to toggle between possible AEC

Press the **Select** key to validate the choice

The choice will be valid for the next incoming print job.

## How to use MicrDIMM

MicrDIMM features are activated using font-like escape sequences, generated:

- \* from specific developments, where developers write code that generate PCL code with MicrDIMM functionality,
  - \* from standard software, using drivers for HP LaserJet 4, 5, 6P or 4000/4100/8000/2100/8100 like for SAP R/3.
  - \* from Windows application, using PCL5 drivers and BDTTGEN (read below).
- 

## Windows 2000, XP and 2003

You may use MicrDIMM functionality from your word processor, spreadsheet or other Windows 2000, XP, 2003 based applications using MicrDIMM special TrueType fonts generator: BDTTGEN.

BDTTGEN is available at no cost from our WEB site:

**<http://www.jetmobile.com>**

BDTTGEN generates special Windows TrueType fonts that fit your Windows MICR printing needs. BDTTGEN also installs and manages those TrueType fonts in your system.

Those fonts just need to be used in documents to generate at print time MICR encoding and security fonts. MICR and security fonts are not visible on the screen, but are perfectly printed with the MicrDIMM in the printer.

A special MicrDIMM TrueType font also allows you to activate PCL macros in the printer equipped with MicrDIMM. PCL Macros can include signatures, logos, forms.

Please read the BDTTGEN manual for more information on all capabilities available with Windows printing.



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**SUPPORT & INFORMATION:**

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