# mPDF

## Barcodes

NB **Quiet zones** - The barcode object includes space to the right/left or top/bottom only when the specification states a 'quiet zone' or 'light margin'. All the examples below also have CSS property set on the barcode object i.e. padding: 1.5mm;

### EAN-13 Barcodes (EAN-2 and EAN-5)

NB EAN-13, UPC-A, UPC-E, and EAN-8 may all include an additional bar code(EAN-2 and EAN-5) to the right of the main bar code (see below).
A nominal height and width for these barcodes is defined by the specification. 'size' will scale both the height and width. Values between 0.8 and 2 are allowed (i.e. 80% to 200% of the nominal size). 'height' can also be varied as a factor of 1; this is applied after the scaling factor used for 'size'.

| CODE | DESCRIPTION | BARCODE |
|---|---|---|
| EAN13 | Standard EAN-13 barcode. Accepts 12 or 13 characters (creating checksum digit if required). [0-9] numeric only. | 978-0-9542246-0-8 9 780954 224608 > |
| ISBN | Standard EAN-13 barcode with 'ISBN' number shown above [shown at height="0.66"] | ISBN 978-0-9542246-0-8 9 780954 224608 > |
| ISSN | Standard EAN-13 barcode with 'ISSN' number shown above [shown at size="0.8"] | ISSN 978-0-9542246-0-8 9 780954 224608 > |

### EAN-8, UPC-A and UPC-E Barcodes

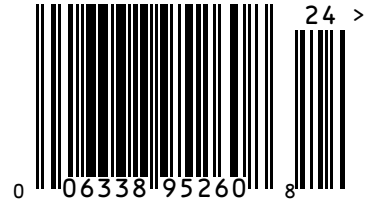
UPC-A, UPC-E, EAN-13, and EAN-8 may all include an additional bar code(EAN-2 and EAN-5) to the right of the main bar code (see below).
A nominal height and width for these barcodes is defined by the specification. 'size' will scale both the height and width. Values between 0.8 and 2 are allowed (i.e. 80% to 200% of the nominal size). 'height' can also be varied as a factor of 1; this is applied after the scaling factor used for 'size'.

| CODE | DESCRIPTION | BARCODE |
|---|---|---|
| UPCA | UPC-A barcode. This is a subset of the EAN-13. (098277211236) Accepts 11 or 12 characters (creating checksum digit if required). [0-9] numeric only | 0 98277 21123 6 |

| CODE | DESCRIPTION | BARCODE |
|---|---|---|
| UPCE | UPC-E barcode. Requires the UPC-A code to be entered as above (e.g. 042100005264 to give 425261). NB mPDF will die with an error message if the code is not valid, as only some UPC-A codes can be converted into valid UPC-E codes. UPC-E doesn't have a check digit encoded explicity, rather the check digit is encoded in the parity of the other six characters. The check digit that is encoded is the check digit from the original UPC-A barcode. |  |
| EAN8 | EAN-8. Accepts 7 or 8 characters (creating checksum digit if required). [0-9] numeric only |  |

## EAN-2 and EAN-5 supplements, and combined forms

UPC-A, UPC-E, EAN-13, and EAN-8 may all include an additional bar code(EAN-2 and EAN-5) to the right of the main bar code.

| CODE | DESCRIPTION | BARCODE |
|---|---|---|
| EAN2 | EAN-2 supplement barcode. mPDF does not generate EAN-5 barcode on its own; see supplements below. Used to denote an issue of a periodical. EAN-2 supplement accepts 2 digits [0-9] only, EAN-5 five. | |
| EAN5 | EAN-5 supplement barcode. mPDF does not generate EAN-5 barcode on its own; see supplements below. Usually used in conjunction with EAN-13 for the price of books. 90000 is the code for no price. | |
| EAN13P2 | Standard EAN-13 barcode with 2-digit UPC supplement (07) |  |
| ISBNP2 | Standard EAN-13 barcode with 'ISBN' number shown above, and 2-digit EAN-2 supplement |  |
| ISSNP2 | Standard EAN-13 barcode with 'ISSN' number shown above, and 2-digit EAN-2 supplement |  |
| UPCAP2 | UPC-A barcode with 2-digit EAN-2 supplement. This is a subset of the EAN-13. |  |

| CODE | DESCRIPTION | BARCODE |
| --- | --- | --- |
| UPCEP2 | UPC-E barcode with 2-digit EAN-2 supplement. |   |
| EAN8P2 | EAN-8 barcode with 2-digit EAN-2 supplement |   |
| EAN13P5 | Standard EAN-13 barcode with 5-digit UPC supplement (90000) |   |
| ISBNP5 | Standard EAN-13 barcode with 'ISBN' number shown above, and 5-digit EAN-5 supplement |   |
| ISSNP5 | Standard EAN-13 barcode with 'ISSN' number shown above, and 5-digit EAN-5 supplement |   |
| UPCAP5 | UPC-A barcode with 5-digit EAN-5 supplement. This is a subset of the EAN-13 |   |
| UPCEP5 | UPC-E barcode with 5-digit EAN-5 supplement. (042100005264 90000) |   |
| EAN8P5 | EAN-8 barcode with 5-digit EAN-5 supplement (55123457 90000) |   |

## Postcode Barcodes

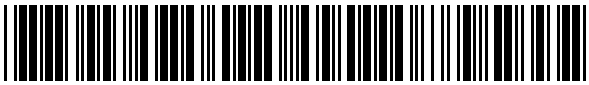
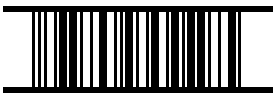
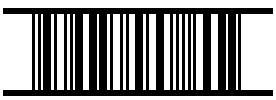
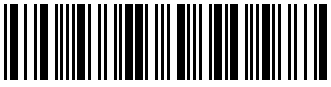
These all have sizes fixed by their specification. Although they can be altered using 'size' it is not recommended. 'height' is ignored.

| CODE | DESCRIPTION | BARCODE |
|---|---|---|
| IMB | Intelligent Mail Barcode - also known as: USPS OneCode 4-State Customer Barcode, OneCode 4CB, USPS 4CB, 4-CB, 4-State Customer Barcode, USPS OneCode Solution Barcode. (01234567094987654321-01234567891) Accepts: Up to 31 digits (required 20-digit Tracking Code, and up to 11-digit Routing Code; this may be 0, 5, 9, or 11 digits). If the Routing code is included, it should be spearated by a hyphen - like this example. |  |
| RM4SCC | Royal Mail 4-state Customer barcode (SN34RD1A). Accepts: max. 9 characters. Valid characters: [A-Z,0-9] Checksum digit: automatic. |  |
| KIX | Dutch KIX version of Royal Mail 4-state Customer barcode (SN34RD1A). Valid characters: [A-Z,0-9]. Checksum digit: automatic. |  |
| POSTNET | POSTNET barcode. Accepts 5, 9 or 11 digits. Valid characters: [0-9]. Checksum digit: automatic. |  |
| PLANET | PLANET barcode. Accepts 11 or 13 digits. Valid characters: [0-9]. Checksum digit: automatic. |  |

## Variable width Barcodes

These barcodes are all of variable length depending on the code entered. There is no recommended maximum size for any of these specs, but all recommend a minimum X-dimension (width of narrowest bar) as 7.5mil (=0.19mm). The default used here is twice the minimum i.e. X-dim = 0.38mm.
The specifications give a minimum height of 15% of the barcode length (which can be variable). The bar height in mPDF is set to a default value of 10mm.
'size' will scale the barcode in both dimensions. mPDF will accept any number, but bear in mind that size="0.5" will set the bar width to the minimum. The 'height' attribute further allows scaling - this factor is applied to already scaled barcode. Thus size="2" height="0.5" will give a barcode twice the default width (X-dim=0.76mm) and at the default height set in mPDF i.e. 10mm.

| CODE | DESCRIPTION | BARCODE |
|---|---|---|
| C128A | CODE 128 A. Valid characters: [A-Z uppercase and control chars ASCII 0-31]. Checksum digit: automatic. |  |
| C128B | CODE 128 B. Valid characters: [Upper / Lower Case + All ASCII Printable Characters]. Checksum digit: automatic. |  |
| C128C | CODE 128 C. Valid characters: [0-9]. Must be an even number of digits. Checksum digit: automatic. |  |

| CODE | DESCRIPTION | BARCODE |
| --- | --- | --- |
| EAN128C [A/B/C] | EAN128 (A, B, and C). Specified variant of Code 128, utilising an FNC1 start code. Also known as UCC/EAN-128 or GS1-128. Valid characters: [cf. Code 128]. Checksum digit: automatic. |  |
| C39 | CODE 39 - ANSI MH10.8M-1983 - USD-3 - 3 of 9. Valid characters: [0-9 A-Z '-' . Space $/+%] |  |
| C39+ | CODE 39 + CHECKSUM. Checksum digit: automatic. |  |
| C39E | CODE 39 EXTENDED. Valid characters: [ASCII-characters between 0..127] |  |
| C39E+ | CODE 39 EXTENDED + CHECKSUM. Checksum digit: automatic. |  |
| S25 | Standard 2 of 5. Valid characters: [0-9] |  |
| S25+ | Standard 2 of 5 + CHECKSUM. Valid characters: [0-9]. Checksum digit: automatic. |  |
| I25 | Interleaved 2 of 5. Valid characters: [0-9] |  |
| I25+ | Interleaved 2 of 5 + CHECKSUM. Valid characters: [0-9]. Checksum digit: automatic. |  |
| I25B | Interleaved 2 of 5 with bearer bars. Valid characters: [0-9] |  |
| I25B+ | Interleaved 2 of 5 + CHECKSUM with bearer bars. Valid characters: [0-9]. Checksum digit: automatic. |  |
| C93 | CODE 93 - USS-93 (extended). Valid characters: [ASCII-characters between 0..127]. Checksum digits: automatic. |  |
| MSI | MSI. Modified Plessey. Valid characters: [0-9] |  |
| MSI+ | MSI + CHECKSUM (module 11). Checksum digit: automatic. |  |
| CODABAR | CODABAR. Valid characters: [0-9 '-' $:/.+ ABCD] ABCD are used as stop and start characters e.g. A34698735B |  |

| CODE | DESCRIPTION | BARCODE |
| --- | --- | --- |
| CODE11 | CODE 11. Valid characters: [0-9 and '-']. Checksum digits: 1 (or 2 if length of code is > 10 characters) - automatic. |  |

**Useful links**

http://www.adams1.com
http://www.tec-it.com/Download/PDF/Barcode_Reference_EN.pdf
http://www.tec-it.com/en/support/knowbase/symbologies/barcode-overview/linear/Default.aspx
http://www.gs1uk.org/downloads/bar_code/Bar%20coding%20getting%20it%20right.pdf
http://web.archive.org/web/19990501035133/http://www.uc-council.org/d36-d.htm (EAN2 and EAN5)
http://www.barcodeisland.com/ean13.phtml (UPC-A)
http://www.idautomation.com/fonts/postnet/#Specifications
http://www.outputlinks.com/sites/AFP/ibm_bcocafaq.pdf
https://ribbs.usps.gov/intelligentmail_mailpieces/documents/tech_guides/USPSIMB_Tech_Resource_Guide.pdf (Intelligent Mail)
http://www.mailsorttechnical.com/downloads_mailsort_user_guide.cfm
http://www.mailsorttechnical.com/docs/mug_jun_2009/MUG_10_2008_Mailsort_700.pdf page 20

### Human-readable text

Human-readable text is only produced as part of the barcode object in EAN-13, ISBN, ISSN, EAN-8, UPC-A and UPC-E. Here is an example to add text to a barcode:

```
<div style="position:fixed; right: 50mm; top: 60mm; border: 0.2mm solid #000000; text-align:
center; padding: 0.5mm; padding-top: 2mm;">
<barcode code="00034698735346987355" type="EAN128C" /><br />
<div style="font-family: ocrb;">(00) 0346987 35346987 355</div>
</div>
```

