## Barcode Tool

A barcode is a graphical information identifier．It is a series of multiple black stripes and white spaces with different widths that are arranged according to specified encoding rules．Using the Prinergy Tools Barcode functionality，you can generate and edit a barcode in an Adobe Illustrator document，and save the barcode in the document．

QR code symbols can be created in a range of matrix sizes．The amount of data that can be encoded in each symbol will vary，depending on Minimum Symbol Size（ $21 \times 21$ to $177 \times 177$ ）， Error Correction Level（ $\mathrm{L}, \mathrm{M}, \mathrm{Q}, \mathrm{H}$ ）and whether the encoded data is numeric，alphanumeric， binary，or double－byte（such as kanji）．For instance，the amount of data that can be encoded in a $141 \times 141$ QR code will range from 2,677 alphanumeric characters with Low error correction to 1，150 alphanumeric characters with High error correction．

## How to create a Barcode

1．Launch Adobe Illustrator．
2．Create a new document or open an existing document in which you want to add a barcode．
3．Select a foreground color to display the color of the strips．
It is recommended to use a single color at $100 \%$ ．


4．To open a barcode panel where you can specify the type of barcode and various parameters，select Window＞Prinergy Tools＞Barcode Tool．

| Patterivoptiols | － | Barcode Tool |  |
| :---: | :---: | :---: | :---: |
| Properties |  | Basic Functions | $\checkmark$ |
| Separations Preview |  | Eye Tool | $\downarrow$ |
| $\checkmark$ Stroke | HF10 | Ink Tool | $\checkmark$ |
| SVG Interactivity |  | Marks Tool | $\downarrow$ |
| $\checkmark$ Swatches |  | Production Tool | $\checkmark$ |
| Symbols | へんF11 | Screen Tool | $\checkmark$ |
| Transform | 仑F8 | Search Tool | こへか7 |
| Transparency | へんF10 | Trap Tool | $\checkmark$ |
| Type | － | Warp Tool | $\checkmark$ |

5. From the Type list, select a barcode type (symbology).

Prinergy Tools currently supports these types of barcodes:

- EAN 8
- EAN 13/ISSN/ISBN supports addon of EAN-2 and EAN-5
- UPC-A
- UPC-E
- Interleave 2 of 5
- ITF-14
- CODE39
- CODE128
- QR
- GS1 128
- GS1 DataBar Omnidirectional
- GS1 DataBar Truncated
- GS1 DataBar Stacked
- GS1 DataBar Stacked Omnidirectional
- ISBN
- ISSN
- CODABAR
- PHARMA
- KURANDT



6. From the Rotation list, select a value for degree of rotation.
7. In the Encoding box, enter the data to be encoded.
8. On the Control Parameter tab, type or select values for the parameters.

The type of barcode you selected determines which of these parameters appear in the panel. See screen captures of Control Parameter tabs for each type of barcode at the bottom of this page.

| Minimum |  |  |
| :--- | :--- | :--- |
| Symbol Size | QR code symbol sizes are available from a matrix of $21 \times$ <br> 21 cells up to $177 \times 177$ cells. The number of cells ( <br> Minimum Symbol Size) along with the Error Correction <br> (ECC) level and data type determines the amount of data <br> that can be encoded in each symbol. For instance, a <br> $21 \times 21$ cell matrix with medium ECC can encode 20 <br> alphanumeric characters, whereas a $177 \times 177$ matrix <br> can encode 3,391 characters. For instance, a $21 \times 21$ <br> matrix can encode "x" bits of data, whereas a $177 \times 177$ <br> matrix can encode "x" bits of data. | Available <br> only for <br> QR type |
| Error <br> Correction <br> Level | Select $\mathbf{L}$ (low), M, Q, or $\mathbf{H}$ (high). |  |
| Bar Width | The amount that the width of individual bars are reduced <br> to compensate for press gain. If there is too much press <br> gain, barcodes can become unreadable by scanners. Bar <br> Width Reduction is used to pre-compensate for press <br> gain and ensure that bar codes remain readable. | All <br> barcode <br> types |
| Device | This parameter adjusts bar width to compensate for gain <br> (or loss) caused by the plate making process. Enter a <br> negative value to expand rather than reduce bar widths. <br> Note that if Bar Width Reduction and Device <br> Compensation values are both specified, the values will <br> be added together. | All <br> only for <br> barcode <br> types |
| Magnification | Rompensation |  |


|  | The scaling factor. The default value is $100 \%$ and the scaling value will be applied proportionally to the horizontal and vertical dimensions. When the magnification is modified, the Height item is also changed. <br> The recommended range is $80 \%-200 \%$ and supports the magnification range from $25 \%$ to $200 \%$ for special occasion. | available <br> for: <br> Interleave <br> 2 of 5, <br> Code 39, <br> and <br> Code 128 |
| :---: | :---: | :---: |
| Height | The height of the barcode. The default value is the height when the scale factor is 1.0. The modification of Height will not change of Magnification setting. | All barcode types |
| Width | The width of the QR barcode | Available only for QR type |
| Cell Size | The following website provides a reference to determine what minimum size of cell matrix (also known as the QR code "version") would be required to represent the required data: Information capacity and versions of the QR code. | Available only for QR type |
| Characters per unit | The number of characters per unit. When this value is modified, the value of Narrow Bar is also changed. | Available only for: Interleave 2 of 5, Code 39, and Code 128 |
| Ratio | The ratio of wide strip to narrow strip. When this value is modified, the value of Narrow Bar also changes. | Available only for: Interleave 2 of 5 and <br> Code 39 |
| Narrow Bar | The width of the narrow strip. When this value is modified, the value of Characters per unit is also changed. | Available only for: Interleave 2 of 5, Code 39, and Code 128 |
| Total Height | Include the height of the bar and the text area. When this value is modified, the setting of Height and Add Human Readable Characters is also changed. | Available only for ITF 14 |


| Left H | The size of the H identifier at the left blank area of the <br> barcode. If you select None, the H identifier is not drawn. | Available <br> only for <br> ITF 14 |
| :--- | :--- | :--- |
| Right H | The size of the H identifier at the right blank area of the <br> barcode. If you select None, the H identifier is not drawn. | Available <br> only for <br> ITF 14 |
| Add Check <br> Digit | If you select this item, a verification digit will be added <br> when you generate the barcode. | Available <br> only for <br> Code 39 |

9. On the Text Parameter tab, type or select values for the parameters.

The type of barcode you selected determines which of these parameters appear in the panel. See screen captures of Text Parameter tabs for each type of barcode at the bottom of this page.

| Add Human <br> Readable <br> Characters | Select this item to display the encoded content below the barcode. |
| :--- | :--- |
| Light <br> margin <br> indicator <br> $\mathbf{( < > )}$ | This parameter appears when EAN 8 or EAN 13 is selected as the <br> barcode type. It controls whether to display an " $>$ " indicator at the <br> white space on the right side of the barcode. |
| Font | Set the text font below the barcode. |
| Font Style | Set the text font style below the barcode. |

10. If you select the Box check box, a box will be added to the barcode with a white border along the top, bottom, left, and right sides to control the position of the outer border.
11. To generate a barcode in the middle of the current page, click Create.

Control and Text parameters available for the EAN 8 barcode


Control and Text parameters, 2 and 5 digit barcode add-on available for the EAN 13 barcode


Control and Text parameters available for the UPC-A barcode


Control and Text parameters available for the UPC-E barcode


Control and Text parameters available for the Interleave 2 of 5 barcode


Control and Text parameters available for the ITF 14 barcode


Control and Text parameters available for the CODE 39 barcode


Control and Text parameters available for the Code 128 barcode


Control parameters available for the QR barcode (there are no Text parameters)


Control and Text parameters available for the GS1 128 barcode


Control and Text parameters available for the GS1 DataBar Omnidirectional barcode


Control and Text parameters available for the GS1 DataBar Truncated barcode


Control and Text parameters available for the GS1 DataBar Stacked barcode


Control and Text parameters available for the GS1 DataBar Stacked Omnidirectional barcode


Control and Text parameters available for the ISBN barcode


Control and Text parameters available for the ISSN barcode


Control and Text parameters available for the CODABAR barcode


Control and Text parameters available for the Pharma Code barcode


Control and Text parameters available for the Kurandt barcode


