

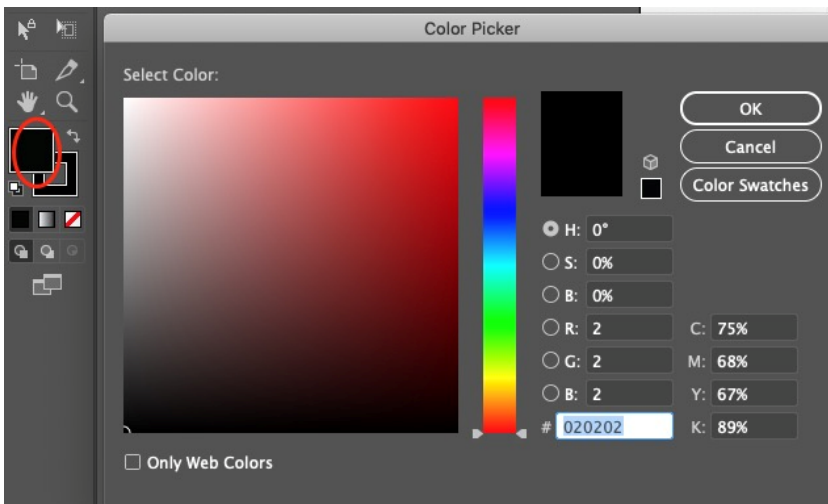
# Barcode Tool

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 Prinerity Tools Barcode functionality, you can generate and edit a barcode in an Adobe Illustrator document, and save the barcode in the document.

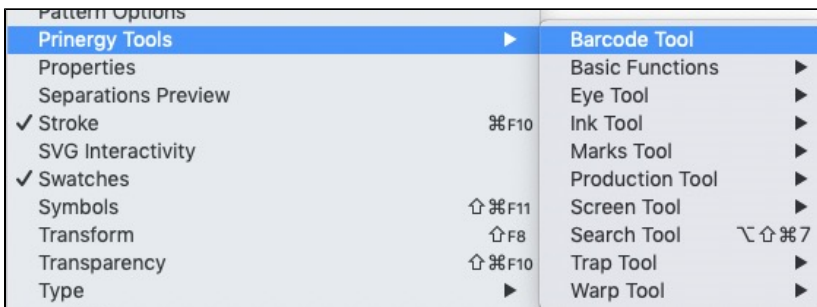
QR code symbols can be created in a range of matrix sizes. The amount of data that can be encoded in each symbol will vary, depending on **Minimum Symbol Size** (21 x 21 to 177 x 177), **Error Correction Level** (L, M, Q, H) and whether the encoded data is numeric, alphanumeric, binary, or double-byte (such as kanji). For instance, the amount of data that can be encoded in a 141x141 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%.

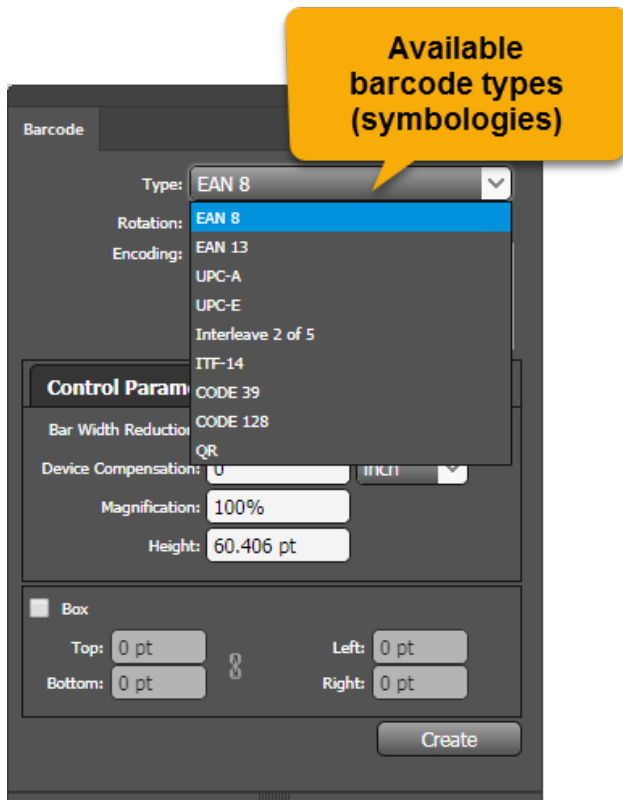


4. To open a barcode panel where you can specify the type of barcode and various parameters, select **Window > Prinerity Tools > Barcode Tool**.



5. From the **Type** list, select a barcode type (symbology).  
Prinerity Tools currently supports these types of barcodes:
  - EAN 8
  - EAN 13
  - 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



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.

<b>Minimum Symbol Size</b>	QR code symbol sizes are available from a matrix of 21 x 21 cells up to 177 x 177 cells. The number of cells ( <b>Minimum Symbol Size</b> ) along with the Error Correction (ECC) level and data type determines the amount of data that can be encoded in each symbol. For instance, a 21x21 cell matrix with medium ECC can encode 20 alphanumeric characters, whereas a 177 x 177 matrix can encode 3,391 characters. For instance, a 21 x 21 matrix can encode “x” bits of data, whereas a 177 x 177 matrix can encode “x” bits of data.	Available only for QR type
<b>Error Correction Level</b>	Select <b>L</b> (low), <b>M</b> , <b>Q</b> , or <b>H</b> (high).	Available only for QR type

<b>Bar Width Reduction</b>	The amount that the width of individual bars are reduced to compensate for press gain. If there is too much press gain, barcodes can become unreadable by scanners. <b>Bar Width Reduction</b> is used to pre-compensate for press gain and ensure that bar codes remain readable.	All barcode types
<b>Device Compensation</b>	This parameter adjusts bar width to compensate for gain (or loss) caused by the plate making process. Enter a negative value to expand rather than reduce bar widths. Note that if <b>Bar Width Reduction</b> and <b>Device Compensation</b> values are both specified, the values will be added together.	All barcode types
<b>Magnification</b>	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 <b>Height</b> item is also changed.	Not available for: Interleave 2 of 5, Code 39, and Code 128
<b>Height</b>	The height of the barcode. The default value is the height when the scale factor is 1.0. The modification of <b>Height</b> will not change of <b>Magnification</b> setting.	All barcode types
<b>Width</b>	The width of the QR barcode	Available only for QR type
<b>Cell Size</b>	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: <a href="#">Information capacity and versions of the QR code</a> .	Available only for QR type
<b>Characters per unit</b>	The number of characters per unit. When this value is modified, the value of <b>Narrow Bar</b> is also changed.	Available only for: Interleave 2 of 5, Code 39, and Code 128
<b>Ratio</b>	The ratio of wide strip to narrow strip. When this value is modified, the value of <b>Narrow Bar</b> also changes.	Available only for: Interleave 2 of 5 and  Code 39
<b>Narrow Bar</b>	The width of the narrow strip. When this value is modified, the value of <b>Characters per unit</b> is also changed.	Available only for: Interleave 2 of 5, Code 39, and Code 128

<b>Total Height</b>	Include the height of the bar and the text area. When this value is modified, the setting of <b>Height</b> and <b>Add Human Readable Characters</b> is also changed.	Available only for ITF 14
<b>Left H</b>	The size of the H identifier at the left blank area of the barcode. If you select <b>None</b> , the H identifier is not drawn.	Available only for ITF 14
<b>Right H</b>	The size of the H identifier at the right blank area of the barcode. If you select <b>None</b> , the H identifier is not drawn.	Available only for ITF 14
<b>Add Check Digit</b>	If you select this item, a verification digit will be added when you generate the barcode.	Available only for 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.

<b>Add Human Readable Characters</b>	Select this item to display the encoded content below the barcode.
<b>Light margin indicator (&lt;=&gt;)</b>	This parameter appears when EAN 8 or EAN 13 is selected as the barcode type. It controls whether to display an ">" indicator at the white space on the right side of the barcode.
<b>Font</b>	Set the text font below the barcode.
<b>Font Style</b>	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

Barcode

Type: EAN 8

Rotation: 0

Encoding: 00000000

**Control Parameter**    **Text Parameter**

Bar Width Reduction: 1 mil

Device Compensation: 1 mil

Magnification: 100%

Height: 21.31 mm

Box

Top: 0 mm    Left: 0 mm

Bottom: 0 mm    Right: 0 mm

Create

Barcode

Type: EAN 8

Rotation: 0

Encoding: 00000000

**Control Parameter**    **Text Parameter**

Add Human Readable Characters

Light Margin Indicator(< >)

Font: Arial

Font Style: Regular

Box

Top: 0 mm    Left: 0 mm

Bottom: 0 mm    Right: 0 mm

Create

Control and Text parameters available for the EAN 13 barcode

Barcode

Type: EAN 13

Rotation: 0

Encoding: 0000000000000

**Control Parameter**    **Text Parameter**

Bar Width Reduction: 1 mil

Device Compensation: 1 mil

Magnification: 100%

Height: 25.93 mm

Box

Top: 0 mm    Left: 0 mm

Bottom: 0 mm    Right: 0 mm

Create

Barcode

Type: EAN 13

Rotation: 0

Encoding: 0000000000000

**Control Parameter**    **Text Parameter**

Add Human Readable Characters

Light Margin Indicator(< >)

Font: Arial

Font Style: Regular

Box

Top: 0 mm    Left: 0 mm

Bottom: 0 mm    Right: 0 mm

Create

Control and Text parameters available for the UPC-A barcode

Barcode

Type: **UPC-A**

Rotation: **0**

Encoding: 000000000000

**Control Parameter**    **Text Parameter**

Bar Width Reduction: **1** mil

Device Compensation: **1** mil

Magnification: **100%**

Height: **25.908 mm**

Box

Top: **0 mm**    Left: **0 mm**

Bottom: **0 mm**    Right: **0 mm**

**Create**

Barcode

Type: **UPC-A**

Rotation: **0**

Encoding: 000000000000

**Control Parameter**    **Text Parameter**

Add Human Readable Characters

Font: **Arial**

Font Style: **Regular**

Box

Top: **0 mm**    Left: **0 mm**

Bottom: **0 mm**    Right: **0 mm**

**Create**

**Control and Text parameters available for the UPC-E barcode**

Barcode

Type: **UPC-E**

Rotation: **0**

Encoding: 00000000

**Control Parameter**    **Text Parameter**

Bar Width Reduction: **1** mil

Device Compensation: **1** mil

Magnification: **100%**

Height: **25.908 mm**

Box

Top: **0 mm**    Left: **0 mm**

Bottom: **0 mm**    Right: **0 mm**

**Create**

Barcode

Type: **UPC-E**

Rotation: **0**

Encoding: 00000000

**Control Parameter**    **Text Parameter**

Add Human Readable Characters

Font: **Arial**

Font Style: **Regular**

Box

Top: **0 mm**    Left: **0 mm**

Bottom: **0 mm**    Right: **0 mm**

**Create**

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

Barcode

Type: Interleave 2 of 5

Rotation: 0 °

Encoding: 00000000000000

Control Parameter	Text Parameter
Bar Width Reduction: 1	mil
Device Compensation: 1	mil
Height: 7.62 mm	
Characters per unit: 0.656168	/mm
Ratio: 2.5	
Narrow Bar: 0.1905 mm	

Box

Top: 0 mm      Left: 0 mm

Bottom: 0 mm      Right: 0 mm

Create

Barcode

Type: Interleave 2 of 5

Rotation: 0 °

Encoding: 00000000000000

Control Parameter	Text Parameter
<input checked="" type="checkbox"/> Add Human Readable Characters	
Font: Arial	
Font Style: Regular	

Box

Top: 0 mm      Left: 0 mm

Bottom: 0 mm      Right: 0 mm

Create

Control and Text parameters available for the ITF 14 barcode

Barcode

Type: ITF-14

Rotation: 0 °

Encoding: 00000000000000

Control Parameter	Text Parameter
Bar Width Reduction: 1	mil
Device Compensation: 1	mil
Magnification: 100%	
Height: 31.8 mm	
Total Height: 40.18 mm	
Left H: 4 mm	
Right H: 3 mm	

Box

Top: 0 mm      Left: 0 mm

Bottom: 0 mm      Right: 0 mm

Create

Barcode

Type: ITF-14

Rotation: 0 °

Encoding: 00000000000000

Control Parameter	Text Parameter
<input checked="" type="checkbox"/> Add Human Readable Characters	
Font: Arial	
Font Style: Regular	

Box

Top: 0 mm      Left: 0 mm

Bottom: 0 mm      Right: 0 mm

Create

Control and Text parameters available for the CODE 39 barcode

Barcode

Type: **CODE 39**

Rotation: **0**

Encoding: 00000

**Control Parameter**   **Text Parameter**

Bar Width Reduction: **1** mil

Device Compensation: **1** mil

Height: **9.398 mm**

Characters per unit: **0.370078** /mm

Ratio: **2.39**

Narrow Bar: **0.190694 mm**

Add Check Digit

Box

Top: **0 mm**   Left: **0 mm**

Bottom: **0 mm**   Right: **0 mm**

Create

Barcode

Type: **CODE 39**

Rotation: **0**

Encoding: 00000

**Control Parameter**   **Text Parameter**

Add Human Readable Characters

Font: **Arial**

Font Style: **Regular**

Box

Top: **0 mm**   Left: **0 mm**

Bottom: **0 mm**   Right: **0 mm**

Create

**Control and Text parameters available for the Code 128 barcode**

Barcode

Type: **CODE 128**

Rotation: **0**

Encoding: 00000

**Control Parameter**   **Text Parameter**

Bar Width Reduction: **1** mil

Device Compensation: **1** mil

Height: **9.398 mm**

Characters per unit: **0.477213** /mm

Narrow Bar: **0.1905 mm**

Box

Top: **0 mm**   Left: **0 mm**

Bottom: **0 mm**   Right: **0 mm**

Create

Barcode

Type: **CODE 128**

Rotation: **0**

Encoding: 00000

**Control Parameter**   **Text Parameter**

Add Human Readable Characters

Light Margin Indicator(< >)

Font: **Arial**

Font Style: **Regular**

Box

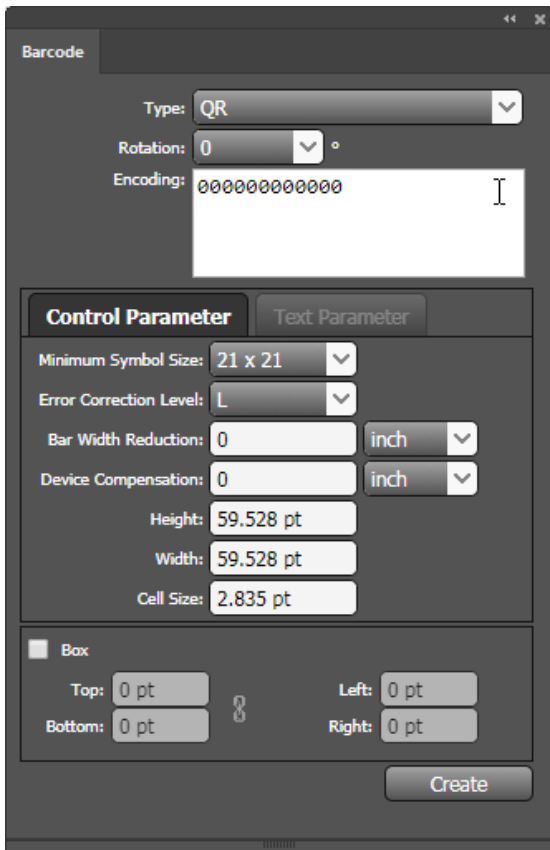
Top: **0 mm**   Left: **0 mm**

Bottom: **0 mm**   Right: **0 mm**

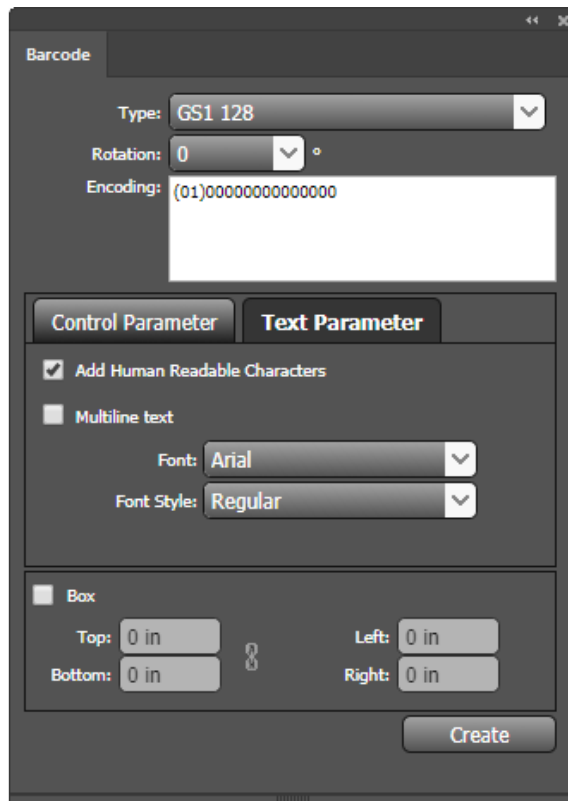
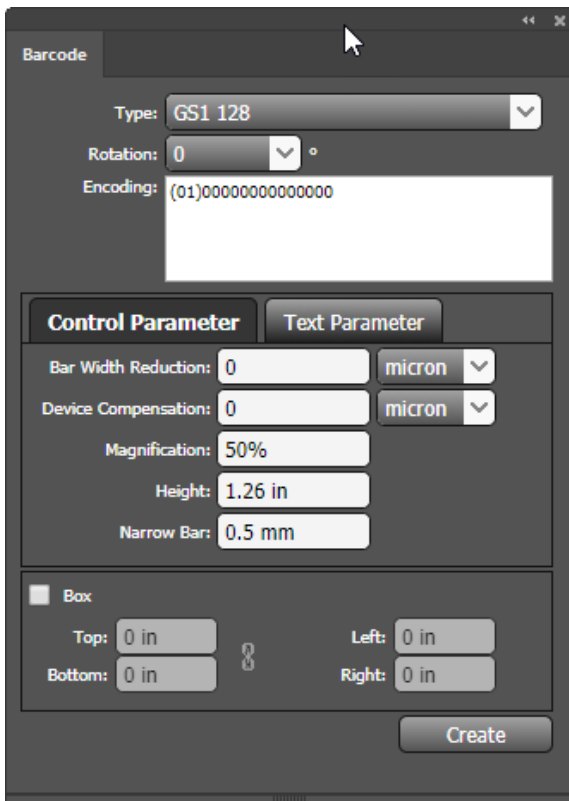
Create

**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

Barcode

Type: **GS1 DataBar Omnidirectional**

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

**Control Parameter** **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: **Arial**

Font Style: **Regular**

Box

Top: 0 in    Left: 0 in

Bottom: 0 in    Right: 0 in

Create

Barcode

Type: **GS1 DataBar Omnidirectional**

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

**Control Parameter** **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: **Arial**

Font Style: **Regular**

Box

Top: 0 in    Left: 0 in

Bottom: 0 in    Right: 0 in

Create

**Control and Text parameters available for the GS1 DataBar Truncated barcode**

Barcode

Type: **GS1 DataBar Stacked**

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

**Control Parameter** **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: **Arial**

Font Style: **Regular**

Box

Top: 0 in    Left: 0 in

Bottom: 0 in    Right: 0 in

Create

Barcode

Type: **GS1 DataBar Stacked**

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

**Control Parameter** **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: **Arial**

Font Style: **Regular**

Box

Top: 0 in    Left: 0 in

Bottom: 0 in    Right: 0 in

Create

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

Barcode

Type: GS1 DataBar Stacked

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

Control Parameter **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: Arial

Font Style: Regular

Box

Top: 0 in Left: 0 in

Bottom: 0 in Right: 0 in

Create

Barcode

Type: GS1 DataBar Stacked

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

Control Parameter **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: Arial

Font Style: Regular

Box

Top: 0 in Left: 0 in

Bottom: 0 in Right: 0 in

Create

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

Barcode

Type: GS1 DataBar Stacked Omnidirection:

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

Control Parameter **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: Arial

Font Style: Regular

Box

Top: 0 in Left: 0 in

Bottom: 0 in Right: 0 in

Create

Barcode

Type: GS1 DataBar Stacked Omnidirection:

Rotation: 0 °

Encoding: 00000000000000

Composite Component:

Control Parameter **Text Parameter**

Add Human Readable Characters

Multiline text

Show (01) with barcode

Font: Arial

Font Style: Regular

Box

Top: 0 in Left: 0 in

Bottom: 0 in Right: 0 in

Create