

Bar Code - A precise arrangement of parallel lines (bars) and spaces that vary in width to represent data. The reader or scanner interprets or decodes the barcode by measuring the bar and space widths in relation to each other.

Symbology - Symbology is a barcode language. Each barcode symbology has advantages and disadvantages. Depending upon the inherent features of the barcode and what you need it to do, selecting the right symbology for the job is the most important decision you need to make.

The characters you want encoded, print quality, and the amount of space available for the bar code are some of the factors that may help determine which bar code symbology to use.

The Elements Of A Bar Code

All barcode symbologies share common elements which make up the symbol. These are the bars and spaces, the human-readables, and the quiet zone.

Bars and Spaces - The information contained in a barcode symbol is encoded in the bar and space pattern. Each symbology uses a different algorithm to create these patterns. The bars and spaces are readable by machine.

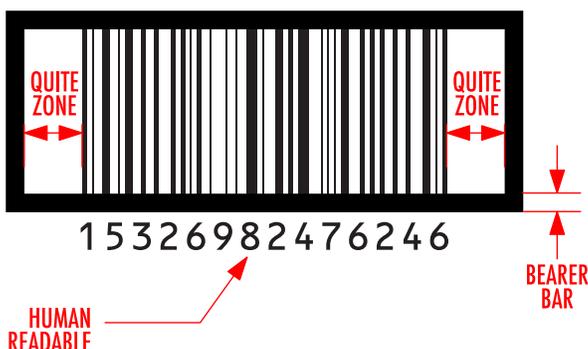
Human Readables - This is usually the data represented by the bars and spaces, printed as text, for people to read.

Bearer Bar - Bearer bars are frames surrounding the barcode symbol. Bearer bars are used to get the ink to flow for uniform printing of bar code. They are also used to highlight the bar code graphic. While they are not strictly considered as part of the barcode and are not necessary in the decoding of the data they are often required by some symbology guidelines.

Quiet Zone - The Quiet Zone is the blank portion surrounding the bar code. This blank area is of equal importance to the bars and spaces. The bar code cannot be read without it. The quiet zones are used by the scanners and the readers to establish the values for the background. Once these have been established, the scanner can compute the bar and space relationships.



The Elements of a Barcode



Bar Width Reduction - (BWR) Also referred to as bar width adjustment or line width reduction. It is a uniform bar width reduction of a bar code symbol to compensate for the bar growth caused by print gain in the imaging or printing process. The width taken from the bars is added to the spaces without effecting overall symbol width.

