

# Label Design - Choosing The Right Barcode

This is a very important decision when you are creating barcode labels for your inventory items, Gift Cards, Clerk Name Tags, etc. Each barcode type has very specific characteristics, and using the wrong barcode type on the label can cause issues that you or your staff will need to correct later.

## Three Basic Barcode Types

The System Five Label designer contains support for 3 basic barcode types.

### UPC

This is the most common type of barcode used throughout the world. It is the type of barcode used on most items you purchase at a store or on your supplier's merchandise. However, UPC barcodes have very specific rules which could cause issues for you on barcodes you are printing from within System Five. The main characteristics of the UPC codes, are:

1. They must be numbers only.
2. They cannot contain Letters or special characters like “!, @, #, \$, %, ^, &, \*, \_, +, - or =”
3. And must be 12 or 13 characters in length.

### 3of9 or Code 39

Found mostly in the automotive industry

1. They can be numbers 0-9, capital letters A-Z, spaces, and the following symbols -, \$/+%
2. They can be any length from 1 character up to about 39 characters in length.

### Code 128

This is a more robust barcode and is most commonly used for part number or serial number barcodes. They are most commonly used on electronic goods like household appliances, printers, TVs stereos, or any device with a serial number on the box or on the device itself. It supports:

1. Supports virtually any ASCII 128 character.
2. They can be numbers, upper and lower case letters and special characters !"#%&'()\*+,-./:;=<?@[\\]^\_`{|}~
3. They can be any length from 1 character up to 128 characters in length.

If you use the UPC barcode on your labels and then have it print a barcode that is smaller than 12 digits, it will print the barcode correctly. However, when you scan the barcode with either a barcode scanner or data collector, it will scan a completely different barcode number, and the item will not

come up in your invoice or in Part Find. You can verify this by scanning the barcode into Windows Notepad, and you will see completely different numbers than the barcode number displayed in the human readable text below the barcode. The reason that this is happening is because smaller numbers are looked at as UPC-E which is a compressed version of UPC code for use on small products. So when a barcode scanner or data collector reads a smaller UPC code, it thinks it has to convert it using a predefined formula to a standard UPC barcode, which will not be the same as the one you printed.

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