

# Barcoding for Dummies

Every day people call up Mr Scanman and start their conversation with, "I know nothing about barcodes..." Bar coding can seem quite complex. This guide attempts to remove some of the mystery from this powerful, enabling technology.

Q: What is a barcode?

A: A barcode is a set of lines and spaces that represents a set of characters. These characters can be alphabetic or numeric depending on the type of barcode used. Below are some individual letters and characters.



Q: How does a barcode scanner read a barcode?

A: The barcode scanner sends a beam of light towards a barcode. The barcode scanner then reads the reflection of that barcode. This is why barcode scanners some times have trouble reading barcodes from shiny surfaces and coloured backgrounds.

Q: Are there different types of barcode?

A: Yes. There are many different types of barcode "symbologies". For example: Retail stores tend to use the UPC/EAN barcode symbology. Factories use the Code 128 barcode symbology. Asset Management commonly uses the Code 39 symbology.



Code 39



Code 128



UPC/EAN

Q: What type of barcode should I use?

A: It depends on what you want to do. If you are printing small barcodes then the best barcode to use is Code 128. If your barcode will be used in retail stores then you will need to use the UPC/EAN barcode. Contact Mr Scanman if you need to know what type of bar code you should be using.

Q: What type of barcode am I currently using?

A: Some bar codes can be identified by the human eye; however it is best to use a barcode scanner capable of telling you what barcode it is reading. Mr Scanman is happy to assist you in identifying the type of barcode you are using.

Q: How do I print barcodes?

A: There are several options depending on your budget and the number of labels you will require. One popular method is to use **barcode fonts**. These are the same fonts that you see in Microsoft® Word or Excel. Barcodes can be printed on a standard laser printer. Another method is to use a **barcode label printer**. These printers are typically used to print larger numbers of labels.



Q: What type of barcode scanner should I use?

A: There are several options depending on your requirements.

The most basic type of barcode scanner is a **CCD or contact scanner**. The barcode scanner has to be pressed up against the barcode.

The most popular type of barcode scanner is the **Laser barcode scanner**. A laser can typically read a barcode from a distance up to 330mm. Laser barcode scanners are extremely fast and can be used in a stand so that your hands are free.

A new type of barcode scanner is called the **Image barcode scanner**. These are commonly used to read two dimensional barcodes such as the Australia Post barcode or the PDF-417 barcode.

Q: How does a barcode scanner get barcodes into my software?

A: The most common way is for the barcode scanner to place the barcode wherever your cursor is on the computer screen. Most barcode scanners insert an ENTER after the barcode so that the software knows that it needs to process the barcode. Think of the barcode scanner as a fast, accurate typist.

The most common ways to connect a barcode scanner to your computer is:

USB connection - Many barcode scanners now use USB connections. The barcode scanner is plugged into a free USB port on your computer. When you scan a barcode the barcode (and an ENTER) is placed wherever the cursor is on the screen.

"Keyboard wedge" - This means that the barcode scanner is plugged in between your keyboard and the computer. When you scan a barcode the information is placed wherever your cursor is on the screen.

Q: What about portable barcode scanners? How do they work?

A: A number of new technologies are being used in the bar coding world.

The first technology is **Bluetooth** which allows devices to communicate information between each other. Bluetooth is being used for cordless barcode scanners. A cradle is attached to the computer (using a keyboard wedge or USB connection) which acts as a charger and receiver for the barcode scanner. The barcode scanner has a radio transmitter which transmits the barcodes (and an ENTER) back to the cradle. Most cordless scanners allow a "wandering" distance of up to 10 metres.



The second technology uses the humble PDA (Personal Digital Assistant). These handheld devices have become quite powerful computers in their own right. Barcode scanners are now being integrated directly into the PDA. Software programs (such as Asset Management & Inventory Control) are run on the PDA. Information is collected/scanned onto the PDA. The PDA is then returned to its cradle and the information is downloaded into the PC. Barcode scanners are also able to use most Wireless technologies (e.g. 802.3, GPRS, etc.).