

Guide

Assetware[®]
technology



What is a Barcode?

An easy to
understand
Guide to
Barcodes



What is a barcode?

Anyone who has shopped at a typical supermarket will be familiar with Barcodes labels; however what you may not know is that there are many types of barcodes, different methods of printing and different barcode coding options. Any label can be turned into a barcode label by adding the right barcode Symbology.

What is a barcode?

A barcode is a machine readable pre-formatted image that contains a reference number containing an alpha-numeric code. This code is then read by the machine and will relate to some other computer or database related information about the item that the barcode has been applied to; (in the case Asset Management this is typically the asset number.)

Barcodes are created based upon a Symbology format and it is important that the barcode that is printed is in the correct format so that it can be read by the barcode reading equipment, typically a handheld scanner.

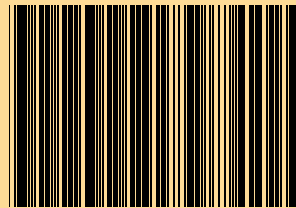
The two most popular barcode Symbologies in use are code 39 and code 128 and these are what is termed as Linear or 1D barcodes Symbologies.



What is a barcode?

1D or Linear Barcodes:

A 1D (or 1 dimensional) barcode is constructed of parallel lines placed in relevant positions to produce machine readable data.



Code 39 Barcode example

Alternative Linear Symbology types are Kix, Royal Mail Barcode format, Interleaved 2 of 5, Plessy, MSI, Anker, Postnet and many more. Your barcode reading equipment supplier will be able to advise on the right barcode format for your environment.



Kix Barcode sample

These standard barcode Symbologies represent a single piece of information such as a number or alpha-numeric code that will link back to a software application or database.



What is a barcode?

2D Barcodes

A linear barcode is limited to the amount of information it can store, the more information stored the wider the barcode becomes. With the development of barcode reading technology and the need to store more information within a barcode, the 2 dimensional barcode emerged. A 2D barcode is a data stored in both the horizontal and vertical reading of the barcode; and is therefore capable of storing a lot more data than a conventional linear barcode. An example of information that can be stored in a 2D barcode is driving licence and personal details whereas a linear barcode could store just the driving licence number.

2D barcodes as with linear barcodes use Symbologies to determine the correct barcode format. 2D Symbologies have been developed by different companies to be used with specific hardware. The principles of the barcode are the same as for the Linear barcode but it has a greater storage range capability.



QR 2D barcode



What is a barcode?

Human-readable format:

When asked “do you require the human readable barcode?” you are being asked if you wish to see the information stored within the barcode:



Standard Linear Barcode



*Standard Linear Barcode
With Human Readable Format*

Printed and Engraved Labels:

As stated earlier you can add a barcode to any type of label however you must consider the environment that the label is to be used in; how long you wish to be able to read the barcode for, how the information is being read and do you want the label to be permanent, temporary or show evidence of the removal of the label.

There are two types of barcode options typically available, printed and engraved.



What is a barcode?

Printed Labels:

A printed label is where the base material is printed upon using a ribbon or thermal transfer. The print quality and life of the label before fading depends upon the combination of label, print ribbon and image and text quality.

Printed labels are the most popular type of label as it can be used in production environments and labels be printed as required. For printed labels the printers, ribbons and label material are readily available and can be produced by the client. This is a single material label just like an ordinary postal label. The dimensions of the label available are determined by the ribbon or roll width available on the label printer.

Engraved Labels:

An engraved label uses completely different technology whereby the label is literally engraved or cut by a specialist label engraving machine. The label itself is typically a two layered material of label to give a colour differentiation between the engraved area of the label and its foreground. To get a black label with white text the label is effectively two labels on top of each other, black on top white underneath. The engraving machine removes the areas of the black label to expose the white label underneath. These are exceptionally good quality labels and some materials have been used in space exploration due to the durability and quality of the image and materials used.

Plastic labels, aluminium and stainless steel labels are also engraved using a similar method.



What is a barcode?

Tamper Evident labels:

There are two types of tamper evident labels available; those whereby the label breaks as it is removed or tampered with and those that leave a residue on the equipment with typically a 'VOID' or alternative marker on the equipment.



www.assetware-technology.com

New Barnes Mill-Cottomill Lane- St Albans—AL1 2HA—UK

t: +44(0)870-112-0700

e:sales@assetware.co.uk