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# HOW TO MAKE SURE YOUR BARCODE OR 2D SYMBOLS SCAN PERFECTHY 


#### Abstract

They are almost everywhere in our lives today, roaming far and wide, and yet as consumers we hardly notice them. We know them best in retail but we also find them in transport and logistics to track deliveries, in healthcare for labelling and packaging, and virtually everywhere else in our world.


"They" are the common barcode. Whether you are in regulatory affairs in the pharmaceutical industry, a graphic designer in an artwork or pre-media agency, in quality control, packaging or printing - here are the big three tips to help you create a perfect barcode or 2D symbol.

## 1 It's all about Contrast

昣|YYNothing spoils your barcode more than poor contrast. Think zebra here. Barcodes aren't black and white just to make them dull; these two colours offer the best contrast. Those in the know talk about the Print Contrast Signal (PCS), which is the reflection difference of differing colours. Zebras have a great PCS. While some barcodes are printed in other colour combinations, the contrast should always be strong. Some scanners don't like red, so it should be avoided.

## 2 Don't crowd the Waterhole

When push comes to shove, barcodes like to have a quiet zone, which is the empty space around the barcode without blemishes, text or graphics. Without these quiet zones, things get very messy and the scanner will be confused. Think ahead about where you need to place the barcode (not too close to edges, creases, graphics, text, etc.) on labelling and packaging and consult the GS1/ISO specifications. This takes a bit of packaging planning, so keep it in mind from the outset.


## 3 Does Size Really Matter? For Barcodes, Yes!



Here we are talking about the "magnification factor", which is the relative size of the barcode compared to its ideal size. There are internationally recognized GS1/ISO specifications for this, but you can't go wrong if you use a barcode in $100 \%$ size.
"Hang on, is it really that simple?" No, it isn't.
The barcode formats EAN (European Article Number) and UPC (Universal Product Code) are GS1 standard barcodes, and these symbologies do have a magnification specification. But Code 39 and Code 128 barcodes, for example, don't define 100\%. And while we're talking about size, best practice would be to avoid truncation if possible, or if you really must, consult the specifications first.

# THE BIG THREE 

1Press gain, also called ink spread, really is a problem when barcodes are printed. Make sure that the correct Bar Width Reduction (BWR) has been applied to the digital barcode before going to press.

## 2 Buy your barcode from a reputable source, such as

 a provider conforming to GS1 specifications.3. Digitally inspect your barcode, with reputable and accurate software, before printing.


4
The best barcodes have a high width-to-narrow ratio when it comes to wide versus narrow bars and spaces.

Keep QR codes square; don't warp.


Be sure to choose the right type of of code for your data requirements. If you try to pack too much information into a barcode it will be too dense and the spaces will be too narrow, resulting in a poor width-to-narrow ratio.

Do you want to know more? TVT Barcode from Schlafender Hase allows users to detect, decode, compare and grade many different industry relevant codes to an extremely high level of accuracy. Get in touch with us.

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