

## Producing Artwork For Printing

Artwork is the thing that gives a musical package a visual identity. No matter what is said in press releases, it is usually an image that sticks in the mind most strongly and for the longest period of time. Artwork is never passive; even a blank white cover makes a statement, either about the artist's attitude or their music, so it's important to get it right.

These days, digital photography and software programs like Adobe Photoshop, Indesign and Quark Xpress, have made it pretty easy for anyone to produce their own artwork on a home computer without the help of professional photographers, graphic designers and reproduction houses. The problem is that if you still don't have a solid understanding of how the production process works, or what quality issues there are, then things can go wrong. Media Sourcing have in-house graphic designers, who can help, and who will check and proof all files before they are printed for total peace of mind. And when you put a quote together online, click the little question marks for more information and help. Otherwise, here are some design pointers.

## Pixels

The most important things to avoid are low-resolution digital camera images because they never look good, no matter what processing is applied to them. Unfortunately one of the commonly held misconceptions about digital images is that if they are too small they can be enlarged to the required size. The truth is that the quality of an image is finite, so it pays to make sure that the camera used is good enough for the job.

Instead of film, digital cameras use a digital sensor to capture an image. The sensor's resolution is defined by its picture elements or pixels, and any decent camera will have a count of several million pixels. Simply put, the more pixels there are, the more accurate the image will be. Quite what is captured by the pixel sensor is determined by the focus of the lens. Zooming in using the camera's manual (optical) zoom will not affect the pixel count; however, digital zooms are different – they merely enlarge the centre pixels, discarding the outer ones. This means that the final image will be made up of fewer pixels, and will have less detail. A camera with a good manual zoom and a high pixel count is a good starting point, but there is such a thing as an 'interpolated resolution' where the camera artificially generates extra pixels to enlarge the image without actually capturing any more genuine detail!

Cameras also tend to offer data compression settings that reduce files size dramatically. For important work it is best to use the lowest compression setting possible. The image can always be compressed later if necessary.

It's also common for people to use software to increase the size of a digital image, but once again, the quality is limited by the original pixel count. In Adobe Photoshop, for example, the Image menu has an option called Image Size where the width, height and resolution of an image can be examined. The default resolution setting is 72 dots per inch (written as dpi), but for printing, a minimum of 300dpi is usually required, preferably 600dpi, so the resolution needs to be changed accordingly. Resetting the dpi will alter the image size boxes, showing the dimensions of the picture at that resolution. If the picture is too small it can be enlarged using the 'resample image' option, but doing so won't actually improve the picture quality, it will simply interpolate the image, adding extra pixels where needed. Certain tools can be used to sharpen a picture and filter its colours but these can only tweak an image, they can't put a blurry picture into focus or improve resolution.

## Using Transparencies

Traditional transparencies are arguably still the best source medium for artwork because they capture detail in a way that only the top-end digital cameras are capable of emulating, particularly if a medium format camera and film is used instead of the standard 35mm.

The benefit of a transparency is that it is not made up of pixels, so it doesn't really have such a thing as a resolution. Instead its quality is determined by its 'grain' which becomes more obvious when enlarged. Unlike digital however, a grainy image looks fairly natural to the human eye because the affect is far less precise than the blocky pixilation of digital images. Things that are too regular never look natural so digital images only really work when pixilation is so fine that the eye cannot really detect its presence. If a source image is taken from a transparency then there is always the option of having it blown up to use on posters or possibly for a vinyl release some time in the future. In the mean time, the transparency need only be scanned at the required resolution for the job, which in the case of a CD cover is relatively small.

## The Four Colour Process

Once an image is inside a computer it can be manipulated in an infinite number of ways, just as long as it still meets the manufacturer's specification. If not, duplication may not be possible. The printer's method of producing copies dictates everything else, and today's factories generally use what's known as the 'four colour process'.

The four colours in question are Cyan (blue), Magenta (red), Yellow and Black, otherwise known as CMYK. When layered in various amounts, the palette is capable of reproducing most tones and colours. This means that factories only need to stock the four ink types which are mass produced at a relatively low cost. It's rarely necessary to introduce another ink – and doing so is usually quite expensive – but metallic colours and certain exotic tones do require special inks.

A printing press adds each colour individually, so it is necessary for the CMYK components to be separated. In days gone by, the original artwork would be photographed four times using filters to exclude the unwanted colours, ultimately resulting in four individual negatives. These were then enlarged to the necessary size and translated into positive dot-based screens (just like the pixels in a digital image, a printed image is made up of dots rather than a continuous wash of colour). Finally the screens were used to transfer the image onto durable metal inking plates from which multiple copies could be made. These days computer technology has made the photographic part of the process pretty much obsolete: the finished CMYK file can be saved as a PDF file and sent to the factory on a CD-ROM or via broadband. Nevertheless, the ink layering process still remains, so the original graphics must conform to the standard colour palate.

When using software, you may find yourself working in RGB (red, green and blue) mode which is sometimes set as the default because it's more akin with computer monitor displays. RGB offers a slightly wider spectrum of colours than CMYK, however the differences are not huge. If a project has been completed in RGB, it will need to be converted to CMYK for printing, and the colours may require tweaking slightly, because they will never look the same as they do on a backlit screen.

For economical reasons the factory will print the artwork for a number of jobs each time the presses are run, so the CMYK colour balance has to be set globally. Most of the time the results will match the PDF, but a better or more accurate result is sometimes had if a Match Print is requested. Using this, the flow of ink can be adjusted to get things closer. This process usually adds a few days to the schedule and cost a little extra.

Please note that simply printing artwork on a laser or inkjet printer will produce a vastly different result to commercial colour litho printing. You should never use this as a colour guide, although it's usually okay for checking the position and sizing of the layout. Essentially, there are three different technologies at work. The most accurate, Litho printing, on-screen backlit monitors, and simple inkjet or laser printers. All three will produce a different result and your designer will know this and advise accordingly.

## Software

It is possible to complete the artwork in a picture editor like Photoshop, Fireworks or Corel, however using a dedicated page layout package like Quark Xpress or Adobe In-Design are much better for piecing things together. The essential difference is that Xpress or In-Design creates Postscript files which retain font information whereas Photoshop has to translate text into graphic elements, or bitmaps, which are not so well suited to resizing. To ensure that the quality of printed text is at a high standard, Media Sourcing ask for images that including text to be produced at 600 dpi instead of 300.

Record sales information is currently taken directly from barcode scans so it might be necessary to invest in software that is capable of generating them. An extension called Azalea is used to add bar codes to Quark Xpress, for example. Once you have the appropriate plug-in, creating barcodes is simply a matter of choosing the code type (in the UK the most common format is the EAN-type) and keying in the correct numbers, leaving the software to generate the familiar series of black and white stripes. If a barcode isn't printed correctly then scanners may have problems reading them, so it's worth paying attention to printing tolerance guidelines. If you don't want to do this yourself, Media Sourcing can produce and position barcodes for you for a small additional cost.

Incidentally, before barcodes can be used a company license should be bought from the e-centre, found at [www.e-centre.org.uk](http://www.e-centre.org.uk). Or contact Media Sourcing direct for help.

## Useful Tips

### Pictures

Don't try to emulate great album or single designs from the past. The most famous album covers were photographed by extremely talented artists using the best equipment, and the rest of the artwork would have been compiled by the cream of graphic designers. Even with the aid of modern software it's impossible to beat the best, so originality is undoubtedly the best policy. It's also best to avoid using the preset effects such as the filters in Photoshop because they get used far too often. If you want to apply one of Photoshop's powerful tools to edit an image, use custom settings to give you work a fresh look.

### Words

Fonts that are designed to look like a handwritten text are not a good choice for large areas of text, although they're sometimes very effective when their use is confined to short titles and sentences. The problem is that they tend to be hard to read and their regularity makes them look artificial. When it comes to including the all-important contact information, using a regular font is the best way to ensure that there are no unreadable or ambiguous digits and letters.

### Packaging

If you're in two minds about whether to go for a digipak or jewel case and booklet, here are some thoughts: glossy booklets lack the tactile quality of cardboard record covers whereas cardboard digipaks feel more wholesome. Booklets make it possible to include more information and lyrics within their pages. Stickers placed on a digipaks can tear away the print when peeled off whereas a plastic case protects the artwork. Plastic jewel cases are easily replaced if they become cracked, but wear and tear to digipaks is permanent.

At the end of the day, whatever packaging option you go for, great design will shine through every time!

## Extras

Make sure you read the documentation provided by the MCPS. It explains what logos and official copyright notices should be included on the artwork.