



## Stone Creek Textiles and Bindery ©

Bush Farm Cottage  
Sunk Island Road  
Ottringham  
E Yorkshire  
HU12 0DX

### Inkjet Printing on Fabric

I guess the first question is why would you want to print your own cloth? When I started binding I was disappointed with the book cloth available – it was largely a single, plain colour. Coming from a textile background I was used to producing dyed or printed fabrics in the colours and patterns I wanted. I had also spent 20 years working in IT and I was intrigued by the possibilities of being able to combine these skills with my book binding. I've been digitally printing fabrics for many years now so I thought the following might be useful to others.

\*\*\*\*\*



Printing on fabric is only slightly more complicated than printing on paper – once you've got the hang of a few things you can print anything you like on to fabric and convert it to book cloth like this cover on a Coptic stitched aquarium logbook.

#### The fabric to print on

The type of fabric you choose will affect how your image looks when it's printed: a smooth, finely woven fabric will show the most detail whereas textured fabric will break up the outlines of the image, which can be very interesting. Naturally you don't want anything too thick or your turn-ins could be bulky.

It's a good idea to wash, dry and iron your fabric before you print on to it so that most surface treatments have been removed. Avoid powder detergents as the particles don't always dissolve properly and you could end up with a residue on your fabric that may resist the ink. Don't use fabric conditioner and make sure the fabric is well rinsed.

You need to know a couple of things before you start:

### **What sort of printer do you have?**

Basically there are two types of printers in common use at home, laser printers and inkjet printers. It is possible to print directly on to fabric using either type but they need a slightly different technique. If you are not sure what you have, there's a simple way to find out. If the paper coming out of your printer is warm then you have a laser. If it's cold then you have an inkjet. The instructions here are just for Inkjet printers.

### **What sort of ink does your inkjet use?**

If you have an inkjet you need to know what sort of ink it uses. There are two main types – pigment based ink and dye based ink. To test, print something, let it dry, then wet the surface. If the ink starts coming off into the water then the ink is dye based. If it doesn't move then the ink is pigment based. Occasionally you'll find printers which have both types – for instance, I found one that had a pigment black cartridge and dye colour cartridges. For most things it really doesn't matter what type the ink is but for fabric it really does as it determines whether you need to treat the fabric before you print. A pigment ink is, to all intents and purposes, waterproof so it doesn't need pre-treating but if you are printing with dye ink then the fabric does need pre-treating.

### **How to treat the fabric if needed**

Bubble Jet Set 2000

- This product is only specified to work with pure silk or cotton according to manufacturers' instructions but I have also used it with linen, bamboo and hemp with good results. However, I haven't done any long term tests with these fibres.
- Shake the bottle and pour the liquid into a shallow dish or pan (I use a small cat litter tray).
- Soak the fabric in the solution for five minutes then hang up to dry. You should be able to treat between 40-50 A4 sheets from a bottle of Bubble Jet Set (32oz/946ml).

Any remaining solution left in the tray after you've removed the fabric can be poured back into the bottle and re-used.

Although the advice is to use the prepared sheets soon after preparation I haven't found any problems using sheets that have been stored for some time.

NB It's important to realise that the use of Bubble Jet Set is to improve the washability of the fabric NOT its lightfastness.

*You might wonder why it matters, after all you aren't going to wash a book but you really don't want the digital design you've spent so much time and skill producing to run just because some moisture inadvertently gets on it.*

## Printing on to the fabric

So, once you have chosen your clean fabric, have determined what type of printer and ink you have and have treated the fabric if necessary, the sequence is as follows:

- Support the fabric on a backing of some sort so it will feed through the printer without wrinkling or jamming
- Prepare your image
- Print using appropriate printer settings
- Post-treat the printed image, if you are using dye ink.

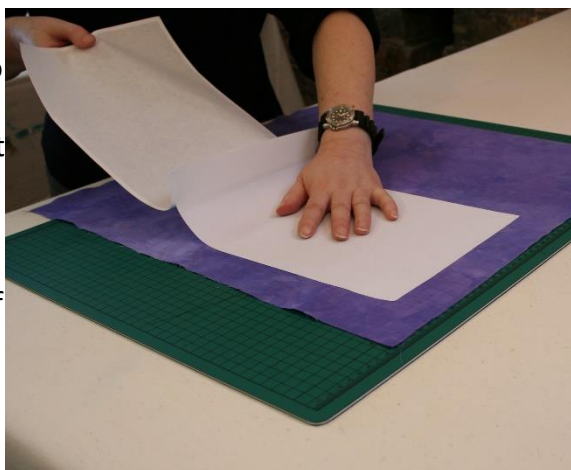
Let's have a look at each step in some detail ...

## Support the fabric

The first reaction when I tell someone that you can put fabric through a printer is often a blank look, followed by 'Isn't it a bit floppy?' Well, yes, it certainly is, so it needs to be attached to a backing of some sort to temporarily stiffen it.

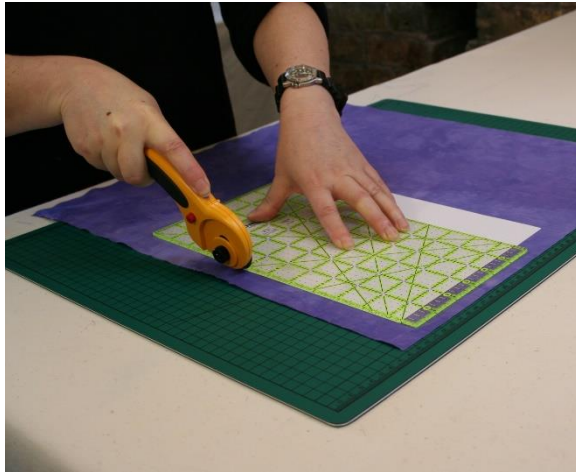
## A4 labels

Most people will be familiar with the sheets of labels you can get with up to 65 individual sticky labels on an A4 sheet. Well, you can also get ones that have a single label on an A4 sheet. With these you peel the backing off the label and stick it down on to the back of the fabric, keeping the edge of the label parallel to the grain of the fabric. Smooth it down well with your hands, then trim the edges of the fabric. No ironing is necessary.



I prefer to use a non-slip quilting ruler with a rotary cutter for the trimming. Alternatively you could, of course, use a scalpel and ruler.

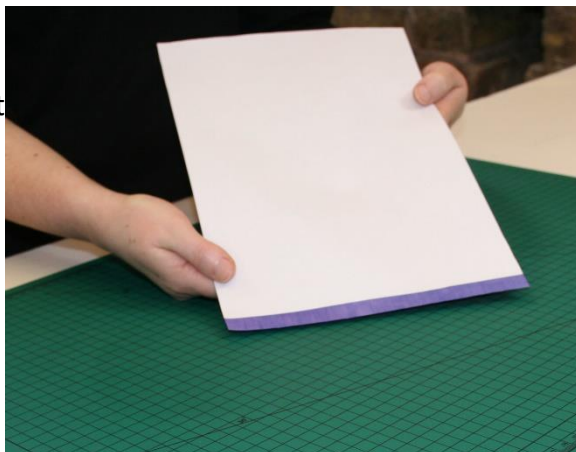
The exact width of the sheet isn't critical, as long as it will fit through your printer, but **IT IS CRITICAL THAT THE SIDES ARE PARALLEL**. The capital letters are justified here; if it is at all skewed it may jam in the printer.



*You have to remember that although I've used a wide range of them for this without any problems, domestic printers aren't really designed to take fabric sheets so you need to make it as easy as possible for them.*

The only problem some of my students have is removing the fabric from the label after printing. Getting it started is a knack but it may help to leave a small extra margin of fabric on one of the short sides of the panel. This gives a bit more to take hold of when you come to pull the fabric off the label,

**NB you feed the other end into the printer first so it has a firm edge to grab!**



*Labels can be re-used several times - until they don't stick to the fabric any more. If you keep the backing sheet when you peel the label off you have somewhere to put the label until you want to use it again.*

## Check the image

Next, make sure your image is the correct size to fit on your fabric. This is exactly the same as if you were printing on paper so I won't cover that here.

Also, make sure there are no bits of thread or other debris on the surface of the fabric just before you print. If there are, you will print over them and they will leave little white specs when they fall off after printing. This can be really annoying!!

Lastly, make sure there are no loose threads around the edges that could catch inside the printer and jam the fabric.

### **Now you get to print ...**

Load the prepared fabric one sheet at a time into your printer. Do make sure you know which side of the paper your printer prints on. On my top feeding Epsoms I load them with the fabric side facing me but yours may be different – check.

Make sure that the guides on either side of the fabric are adjusted correctly. Usually one guide is fixed, the other is moveable. Put one edge of your fabric against the fixed guide and adjust the moveable one so that it is almost touching the other side but not so tight that it grips. The fabric is then guided evenly into the printer.

### **Printer settings for fabric**

Before you finally send the image to the printer, just check a few things in the printer dialogue box.

Firstly, look for **Print Quality** – this is often given as a list of options such as: Draft, Photo and Best Photo. We are printing on to a woven or textured surface when we are printing on fabric so there is no point in printing at a particularly high resolution, as the image is broken up to some extent by the surface. For instance I can see little or no difference between an image printed on cotton sheeting at Photo or Best Photo. The Photo setting is much quicker to print and uses less ink so this is what I normally use.

Next, select the **Paper Option**. This is sometimes called the media type. I have found that the plain paper option almost invariably works well on fabric, so start with this one. Most of the other options, such as Photo Glossy, are designed to work with a coated paper. The colours you end up with are a result of the ink reacting with the coating. You don't normally have this type of coating on your fabric so, selecting the plain paper setting usually gives you the truest colour.

Select the appropriate **paper size** – in this case A4.

### **Time to print**

Send the image to the printer. If you are new to this then you might feel better testing your settings and image on a piece of paper before you feed a piece of prepared fabric through.

## After printing

To remove the fabric from the label loosen one of the short edges. Turn your fabric image side down and stick the revealed, sticky edge of the label on to a firm surface, like the edge of a table. Use both hands to pull the fabric down evenly.

This is where having left that little extra edge of fabric really pays off.



None of the inkjet prints need ironing to set them. Fabric printed using pigment-based ink just needs to be left to dry thoroughly. Fabric that has been pre-treated with Bubble Jet Set and printed with dye-based inks should be left for at least 30 minutes and then washed. Wash sheets individually in plenty of water with a mild detergent. This part of the process is important as it releases excess ink that might otherwise bleed at a later date. Water without the detergent will not do the same job as well.

*NB Don't leave the fabric on the label for more than a day or so as the adhesive seems to cure and makes it very difficult to remove the label.*

*How do I know this? Well, I prepared a batch of cotton panels to sell at a show, sold some and stored the rest ready for the next show. I left the labels on, thinking that they would keep the fabric looking smart. They did, but, unfortunately, I couldn't get any of the labels off the fabric when I got to the next show ... Oh, dear, or words to that effect ....*

## Other supports for Fabric

### Freezer paper:

This paper has a waxy surface on one side that, when heated, will temporarily stick to fabric. It comes in a roll, which can be cut to size or in ready-cut sheets. Since this is an American product, just be aware that the cut sheets are letter sized (ie 11" x 8.5") rather than A4 (11.69" x 8.27") – you need to remember this when you are sizing your image and also when you are about to print, so that you select the appropriate paper size from the printer dialogue box.

Using this method, you iron your fabric to get rid of any creases. Lay the freezer paper waxy side up on a firm surface, then cover it with your fabric, right side up. Iron firmly with a hot iron on the cotton setting – a cool iron won't melt the waxy surface and the fabric won't stick properly. Start in the centre of your sheet and work towards the edges. Then trim the edges of the fabric to fit the paper. Freezer paper can usually be re-used 2 or 3 times - until it won't stick to the fabric any more.

The main problem I've found with using freezer paper is that, when it cools, it curls towards the fabric and this can cause it to jam in the printer. It can be useful to put

something like a heavy book on to your sheet while it cools. This can help keep it flat and it can sometimes help to re-iron the paper/fabric sandwich just before you feed it through the printer if it has curled. I find the labels much simpler and more reliable.

### **505 spray and paper or transparency film**

Labels and freezer paper are probably the best methods of supporting your fabric but if you don't have either and can't wait to play (yep, that's me!) there are other things you can use. I find this is also a reasonable method to use if you are printing on fine fabrics like the lighter weight Lutradur as these can distort as you pull them off a label.

Spray a sheet of normal printer paper or a sheet of transparency film with 505 spray or Spraymount, then smooth a sheet of fabric over the sticky side and trim the edges. The main problem with this method is judging the amount of spray to use – too little and the fabric can catch in the printer, too much and the temporary glue can come through the fabric and stop the ink adhering to the fabric. It helps to let the paper 'sit' for a few minutes after spraying it before smoothing the fabric over – that way the paper is nicely tacky but not wet. Get the amount of spray right and it works very well.

Make sure the leading edge of the fabric is adhered well to the support so it doesn't catch as it is being fed in to the printer. Once it's started then the rest usually follows without any problem.

*Graphic artists use Spraymount to temporarily stick items down while they are working on a layout and 505 spray is used by quilters and other textile artists to stick layers of fabric together. They both seem to do much the same job and, in my tests, neither left a residue on the fabric as long as you spray the paper or film NOT the fabric.*

### **Banner Printing**

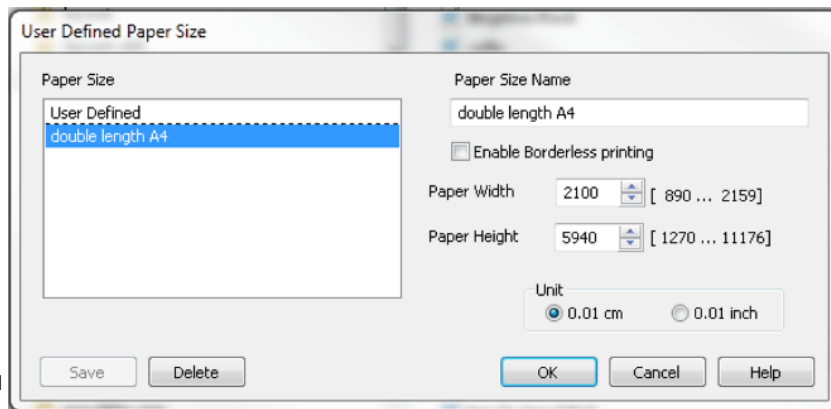
It's a common misconception that A4 printers can print a maximum size of an A4 sheet. In fact, although you are restricted to the width of your printer you can print longer pieces of fabric, sometimes called banners.

To prepare your fabric just follow the instructions for single sheets but use as many labels as you need each one butted up neatly to the next one without leaving any gaps or overlapping.

You need to use something called a User Defined Size sometimes called a Custom Size. User Defined Sizes are specific to a printer. So, if you have two printers and you

want to set up a non-standard size, you will have to do so separately for each printer.

Go to your printer's dialogue box and find the setting where you select the size you are going to print on. Usually at the bottom of the drop down list there will be an option for you to setup/select User



Defined or Custom Sizes. In the illustration here, I've set up a size which is the same width as an A4 sheet (2100mm) but have doubled the length to (5941 mm). I've given it an appropriate name and have saved it.

The numbers next to the paper width and height boxes show the allowable sizes for that particular printer, the paper height being the length of fabric you can print. Different printers may have different maximums.

When you get to the printer dialogue box select the custom paper size you've just created along with the usual printer settings for print quality and paper type. Load the paper into the printer and click on Print, supporting the top of the banner gently as the printer feeds it in.

As printing banners takes a bit of preparation and quite a lot of ink you might want to try a dummy run on paper using the Draft setting (this uses very little ink and is quick) to check that all your sizes and settings are ok and to get some practice at feeding a long item into the printer.

If you lie the banner down to feed it in, the bit where the labels meet tends to open up revealing the sticky surface which can then catch inside the printer.





*If I'm printing a long piece I sometimes have to stand on a stool to do this as my arms just aren't long enough to reach without. Naturally this causes some amusement amongst my students ...*

**These techniques should give you a nice stable fabric but nothing you print at home will be as durable as a commercially printed fabric – we are asking home printers to do things they were not designed to do but, you can get excellent results, the design options are huge and it is fun!**

**I'm in the process of testing various sprays and treatments that are applied after printing and will report back once I have the results.**