

Solving Borderless Printing Issues with Print and Cut Applications

By Sandy McCauley

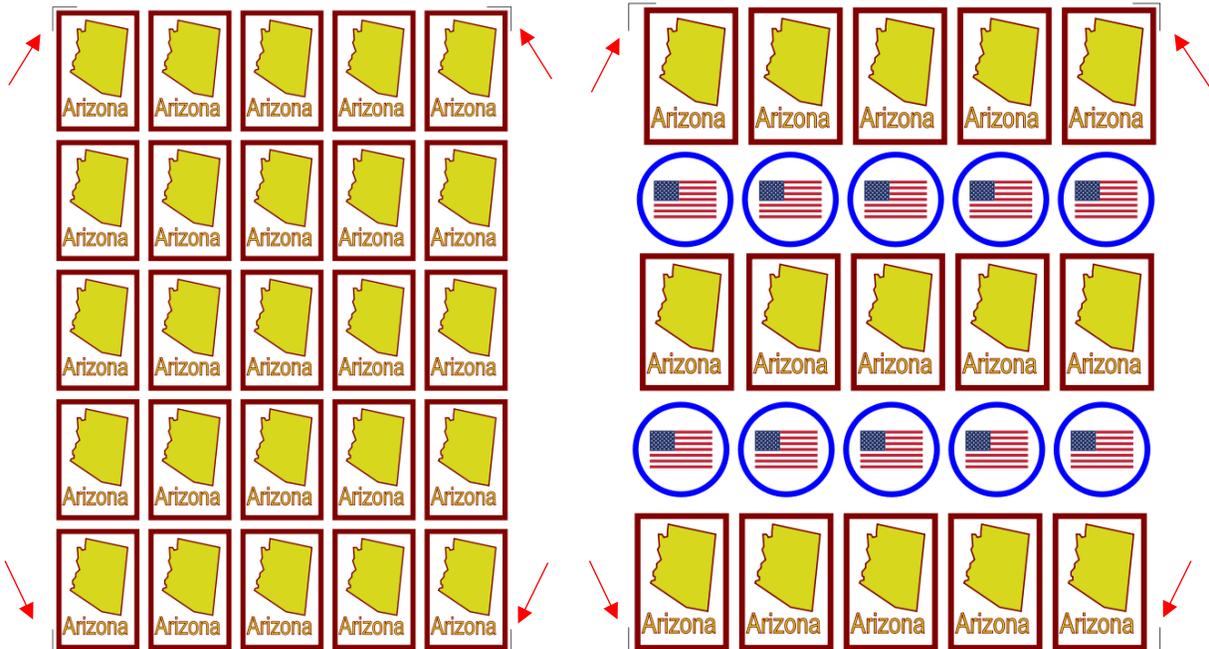
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This document covers two issues that affect those doing Print and Cut applications on cutters with automatic recognition of registration marks (such as Skycut models, KNK Force and KNK Zing Orbit);

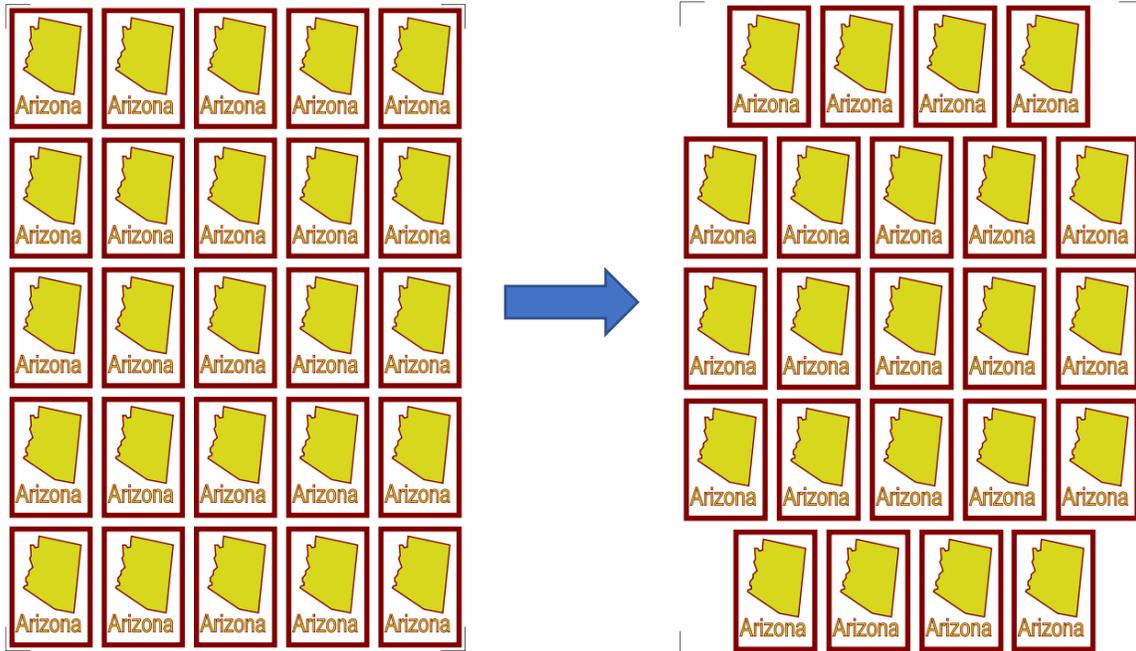
- (1) The registration marks won't print; the software says that images are outside the margins/borders for printing
- (2) Because borderless printing has been selected, the camera or optic eye cannot locate the second or third registration mark. Note that the option was not turned on during calibration of the cutter.

Issue 1: The registration marks won't print; the software says that images are outside the margins/borders for printing

- Sure Cuts A Lot allows the adjustment of registration mark offset (under **Cutter>Cutter Settings**) which is the distance from the bounding box around the shapes to be cut and the location of the registration marks. The default, depending on the cutter model is between about 0.6 cm and 1.2 cm. But it can be lowered to 0.03 cm and, with some cutters, all the way down to 0.
- Now, it's important that the camera or optic eye not confuse a printed image with a registration mark by having that offset too small. But one can often adjust the location of the printed images so that there won't be a problem.
- Note the following two layouts where the reg marks are indicated using red arrows:



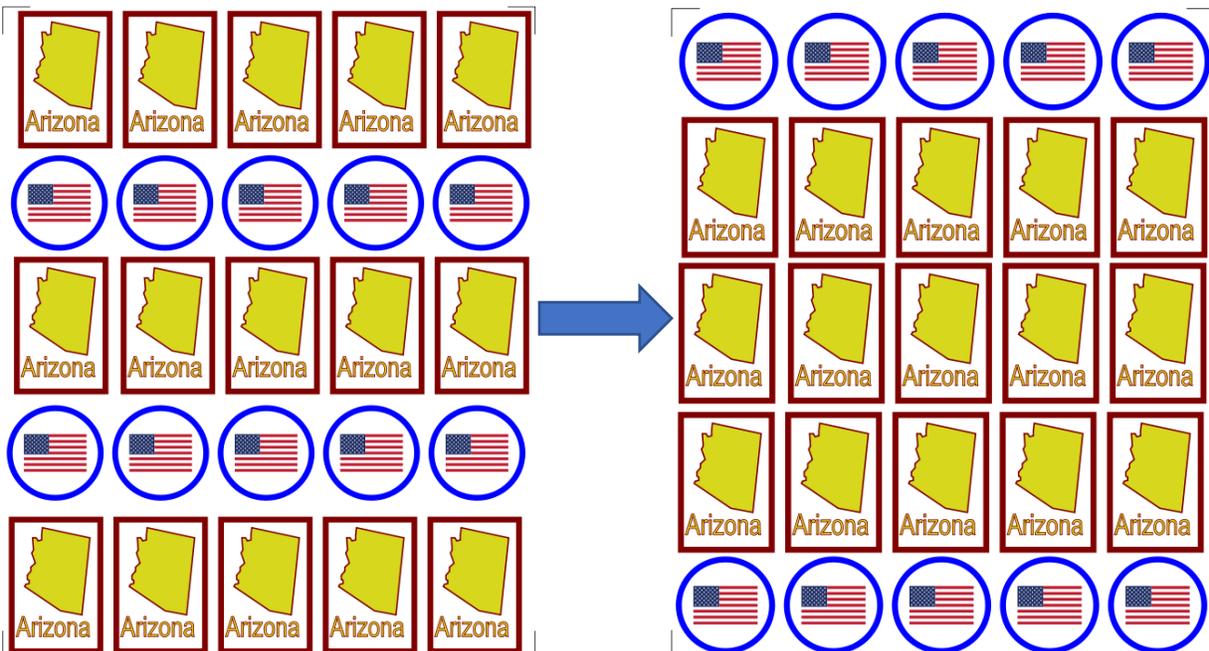
- In both cases there's a very good chance the automatic registration will fail because the marks are too close to the printed images. However, in the first case, only two repeats are deleted and the shapes rearranged in the top and bottom rows so that the registration marks are now far enough away to clear the printed images:



With a low reg mark offset the marks are too close to the printed images

From 25 to 23 shapes, rearranged in the top and bottom rows to solve the issue

- With the second example, just a simple rearrangement of the rows solves the issue because circular-shaped objects can be closer to the registration marks without interfering:



With a low reg mark offset the marks are too close to the printed images

The rows with circular shapes are moved to the top and bottom to solve the issue

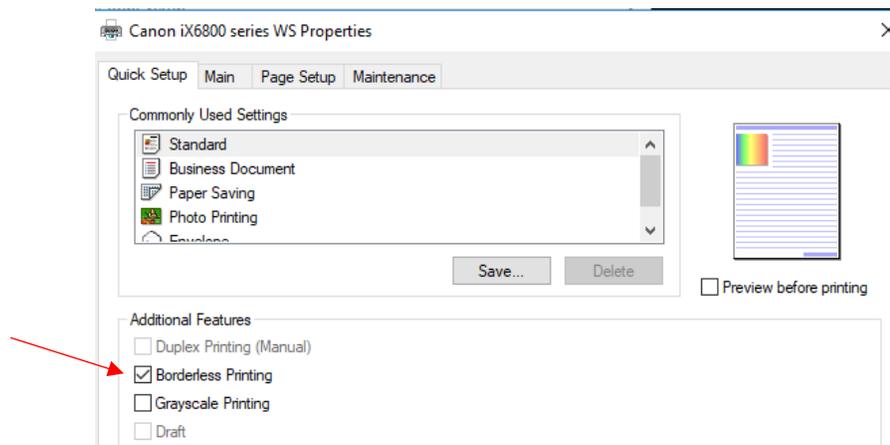
Issue 2: Because borderless printing has been selected, the camera or optic eye cannot locate the second or third registration mark.

- Marking a borderless print option will move the images without adjustment to another setting. At least this is the case when I tested Canon, HP and Epson printers to which I had access. ¹ Thus, after the first registration mark is identified the camera or optic eye doesn't move far enough to locate the next mark. Or, in some cases, the second mark might not have been moved out of range but the third mark has been and the camera or optic eye will fail on that one.
- By Googling the issue, I was able to find the following link which fixed the issue on my own Canon and my customer's Epson. Note that you need to minimize the setting instead of what it shows at this site (which is maximizing).

<https://www.redrivercatalog.com/infocenter/tips/inkjet-borderless-expansion.html>

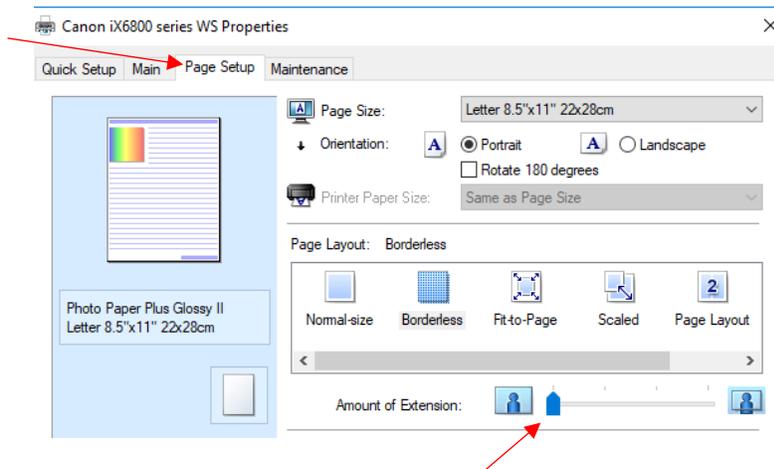
- However, my own HP **Printer Properties** window lacks the setting shown in the above link and I couldn't locate anything similar to change. I could turn on **Borderless** printing but that was it. So, at this time, I cannot offer the solution if you have an HP printer like mine. If you DO figure it out some other way, please send me an email: smccauley45@cox.net.
- Solution in Detail for Canon Printers:

(1) Go to **File>Print Setup**. Turn on the **Borderless** printing option. For my Canon, it looks like this:



(2) Next you need to locate a setting called **Amount of Extension**. It may be on the same tab as the **Borderless** option or you may need to search and find it on another tab or even under an Advanced setting. On my Canon, it was found on **Page Setup** tab. Reduce that setting to the minimum possible setting:

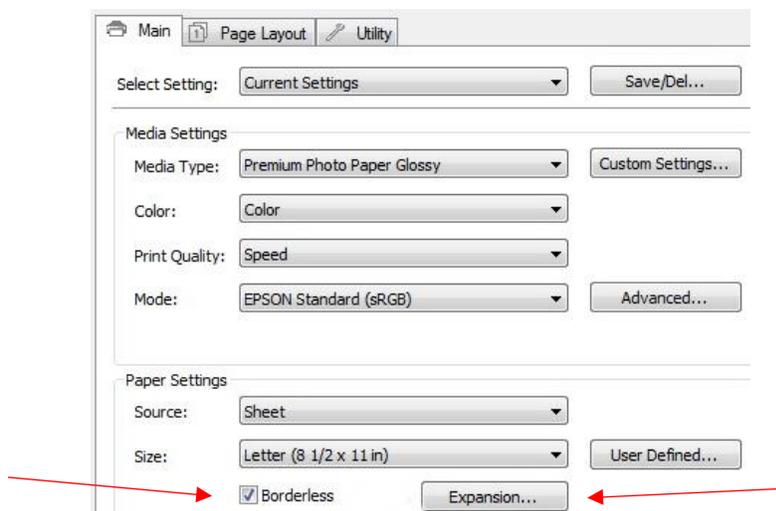
¹ Using Microsoft Publisher, I placed 4 rectangles within an inch of the outside margins of a letter-sized document. I printed twice, once with the borderless option marked and once without. I then held both printouts up to a light so that I could check for alignment. With one rectangle aligned on both sheets, it was readily apparent that the other rectangles did not match up at all.



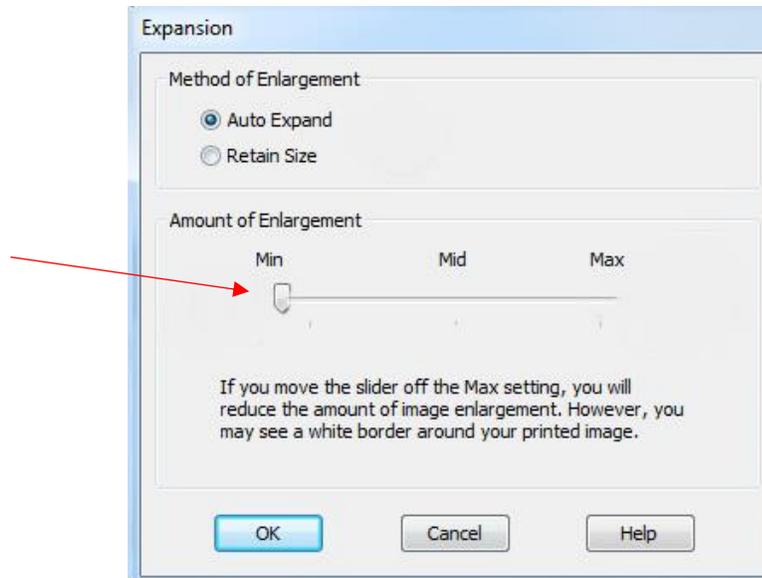
(3) Then click on **OK** and **OK** to save the settings and return to the main SCAL screen. Now you can print the project and the registration marks should be within the distance the camera or optic eye travels to locate subsequent registration marks.

- Solution in Detail for Epson Printers:

(1) Go to **File>Print Setup**. Turn on the **Borderless** printing option. For the Epson I tested, it looks like this:



(2) Next you need to locate a setting called **Expansion**. It may be on the same tab as the **Borderless** option or you may need to search and find it on another tab or even under an **Advanced** setting. Click on **Expansion**, if needed, to then see a scale like the following. Reduce the setting to the minimum possible setting:



(4) Then click on **OK** and **OK** to save the settings and return to the main SCAL screen. Now you can print the project and the registration marks should be within the distance the camera or optic eye travels to locate subsequent registration marks.

- Solution in Detail for SOME HP Printers:

(1) Go to **File>Print Setup**. Click on the **Advanced** tab. Look for a **Borderless** option, along with **Overspray** or **Borderless Expansion** setting to minimize.

