

# Lesson 4: Prepare a publication for commercial printing

## Commercial printing considerations Page 1 of 7

So far, this course has assumed that you're going to print your publications on a regular desktop printer. That's by far the most common scenario, but there may be times when you need to prepare a publication for a commercial printing press.

Most printing companies provide conversion services that clean up your original file and prepare it for the press, but they might charge for the service. It's better if you can do some of the preparation yourself. In this lesson, you'll learn how you can make your Publisher publication more press-friendly so it requires less prepress work.

### TIP

Whichever commercial printing service you select, make sure that you send a hard-copy draft printout of your publication along with the electronic files you prepare in this lesson. This is called a proof copy, and it's essential in making sure that you get the results you intended. Different printers and computers display print jobs quite differently, so the printing company needs to be aware of how you think the finished product should appear.

### How commercial printing presses work

Most commercial color printing presses use a four-color, CMYK (Cyan-Magenta-Yellow-Black) process. In **four-color** printing, four separate passes are made per sheet of paper, with each pass laying down one color. By mixing those four colors, you can make any colors you need. The colors in CMYK, Cyan-Magenta-Yellow-Black, are the four ink colors. Technically, you could make black by mixing all three of the other colors, but you get a cleaner black if you use separate ink. CMYK is considered a **process color** method (as opposed to a spot color method, which is covered shortly.)

To print in four-color CMYK, the printer must have a four-color separation of the publication. This is a set of four separate print pages, each containing only the areas that should be printed in that color. Figure 4-1 shows an example, with the original picture and the color separations.

### Before you contact a professional print shop

Today's affordable business color printers make professional-quality printing in your office a realistic proposition. You should always consider your in-house color printer as the first possible destination for your publications. Don't send your publication out for printing unless you need to print odd-size pages, quantities over 2,000 pieces, or full-bleed documents. If you're concerned about setting your printer up properly, the Introduction to Microsoft Publisher course includes a full tutorial on printing with Publisher as does the Publisher Help system.



**Figure 4-1A: The original.**



**Figure 4-1B: The Cyan separation.**



**Figure 4-1C: The Magenta separation.**



**Figure 4-1D: The Yellow separation.**



**Figure 4-1E: The Black separation.**

Because printing in CMYK is a multipass process, registration is an issue.

**Registration** refers to the proper alignment of each pass with the others. When the paper shifts between one color and the next -- even by a few millimeters -- the printing can look fuzzy or even off-center. You've probably seen registration errors on cheap four-color printing jobs, such as the weekly grocery store ads in your local newspaper. When you see a yellow, magenta, or cyan shadow on a colored object, that's a registration error. (This will become important to know later in this lesson.)

Although CMYK can reproduce almost any color, there are certain colors that it cannot handle -- for example, neons or metallics. For those situations, you use CMYK as the base printing, and then overlay the printed page with a spot color for the extra ink(s). Such print jobs can make five, six, or even more passes through the printing press.

### Spot colors

CMYK color printing is very expensive, and not required for every color print job. When you just need splashes of color on an otherwise monochrome print job, and you don't have any color photos, spot color may be appropriate. Spot color is typically simpler than process color and does not necessarily require four passes.

Suppose, for example, that you have a brochure that is mostly black and white, but you would like the headings to be bright red, and you would like a little swoop of red on the front. You could set this up as a two-color spot color job. The printing press prints the black ink first, and then prints the red ink on the second pass. There's no color blending with spot colors -- only one color overlaid over another.

## Select a color model for your publication Page 2 of 7

When planning any publication, you should consider from the outset where it will be printed and set the color model accordingly. The default color model is RGB (Red-Green-Blue), which is best for desktop printers, and that's the model you've used so far. However, if you're planning to go the commercial printing route, you might need to change the color model.

Publisher supports these color models:

### Time to show off your work

If you choose to print your publication in-house, HP color LaserJet printers are the smart choice for superb results.

- **RGB:** The default, best for desktop printing.
- **Single color:** Only one color of ink. If you select this model, Publisher converts all the color in your publication to monochrome. Black ink is the default but you can use any single color.
- **Spot colors:** Black ink plus accent colors.
- **Process colors:** Full-color CMYK.
- **Process colors plus spot colors:** Full-color CMYK plus extra inks for spot colors.

So which color model should you select? You don't have to decide this totally on your own -- consult the sales representative at the printing company and discuss your needs and your budget to determine which printing model is appropriate. The more passes the paper must make through the printing press, the more it costs. Single color is the cheapest, whereas process colors plus spot colors is the most expensive.

#### **Set the color model in Publisher**

To set the color model for the publication, select **Tools > Commercial Printing Tools > Color Printing**. Make your selection in the Color Printing dialog box, shown in Figure 4-2.



» [HP Color LaserJet 3550 printer series](#)



» [Printer and MFP buying guide](#)

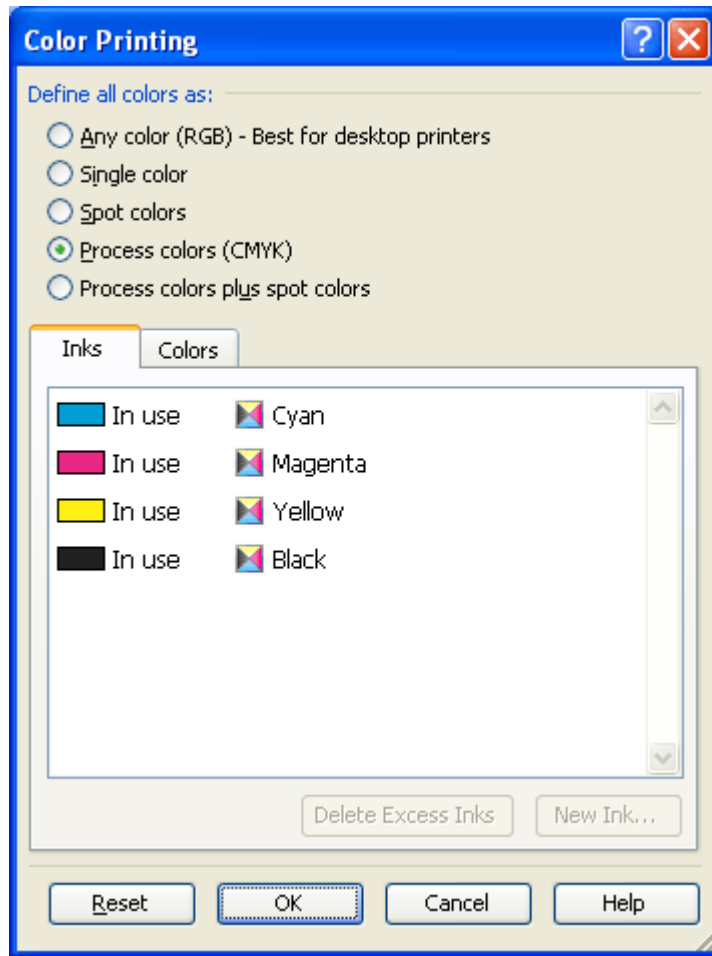


Figure 4-2: Color Printing dialog box.

### Use specific colors Page 3 of 7

Different computers and different monitors and color models make colors look very different. You cannot rely on what you see onscreen as a gauge of what your publication will look like when professionally printed.

One way to guarantee accurate color representation in a publication is to rely on a numeric definition of a certain color. There are four popular color models, and Publisher supports all four:

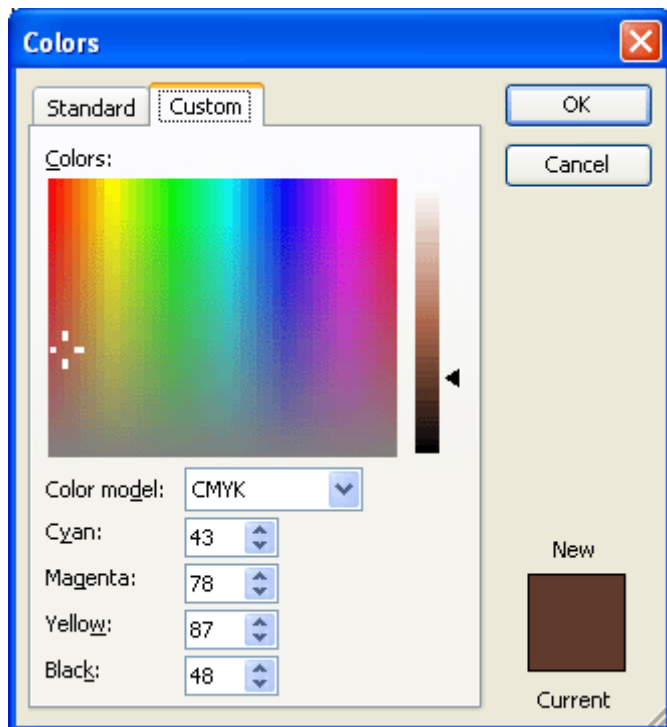
- RGB (Red, Green, Blue)
- HSL (Hue, Saturation, Lightness)
- CMYK (Cyan, Magenta, Yellow, Black)
- PANTONE®

Not all color models are available for color-choosing all the time. If you selected CMYK as the color model for the publication earlier in this lesson, for example, your only choices for selecting individual colors are CMYK and PANTONE®.

You can buy (or get for free) printed cards or books that show the colors in each of these color sets and their numeric values. Then you change the colors in your publication to match the numeric values of the colors you see on the cards. Try contacting your local print shop to get one of these cards or go to your local bookstore and purchase a book on design or printing, such as the *Process Color Manual, 24,000*

To change a color, edit the color scheme, as follows:

1. Select **Format > Color Schemes**. The Color Schemes task pane appears.
2. Make sure a color scheme is applied to the publication that is close to what you want.
3. Click **Custom color scheme**.
4. Open the drop-down list for a color to change and select **More Colors**. The Colors dialog box appears.
5. Click the **Custom** tab.
6. Open the **Color Model** drop-down list and select a color model. (This doesn't select the color model for the entire publication -- it's just helps you define this one particular color.)
7. Enter the numeric value of the desired color for that color model, as shown in Figure 4-3.



**Figure 4-3: The Colors dialog box.**

8. Click **OK** to accept the change.
9. Repeat these steps for other colors in the scheme, or click **OK** if finished.

Depending on the color model you select, there may be either three (for RGB or HSL) or four numbers (for CMYK) to enter. PANTONE? is a special case. If you select PANTONE?, a special dialog box appears in which you can select colors, as shown in Figure 4-4.

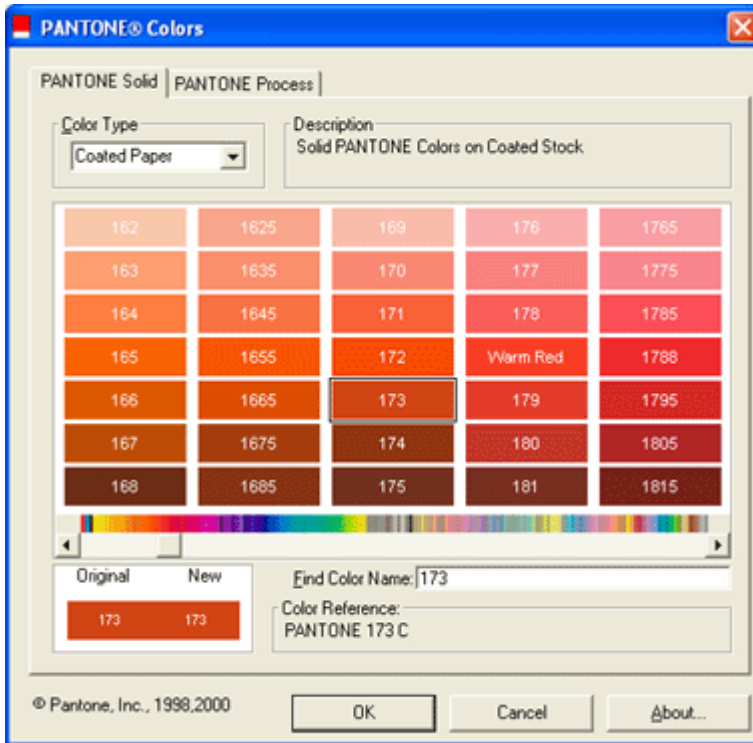


Figure 4-4: PANTONE Colors dialog box.

#### Use trapping Page 4 of 7

During multipass printing, such as on a CMYK press, each color is laid down individually. Therefore, the possibility exists for the paper to shift slightly between colors, resulting in registration errors. One typical registration error might occur when two colored blocks are adjacent to one another in the publication; if registration is off, a tiny amount of white space might appear between them.

To compensate for any potential registration errors, it's customary to make adjacent colored objects overlap by about 1/3 of a point. This overlapping is called **trapping**. By default, trapping is turned off for a publication. However, if you're going to print using process colors (CMYK), you want to turn trapping on, and possibly set its options, according to any instructions you receive from the printing service.

You can set trapping preferences for the entire publication from the Publication Registration Settings dialog box. Follow these steps:

1. Select **Tools > Commercial Printing Tools > Registration Settings > Publication**.
2. Turn on trapping by checking the **Automatic trapping** checkbox, as shown in Figure 4-5.

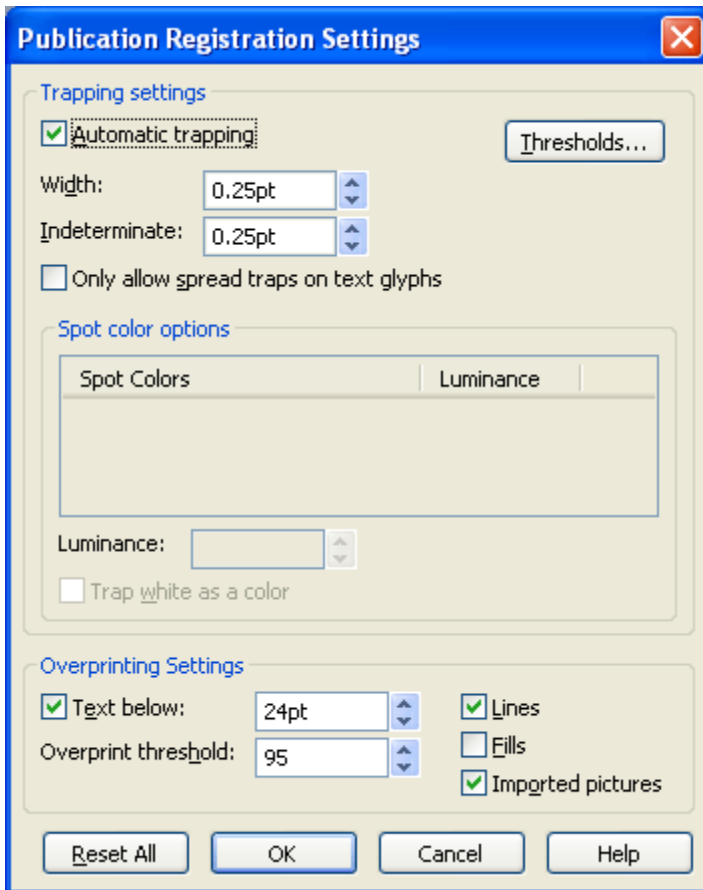


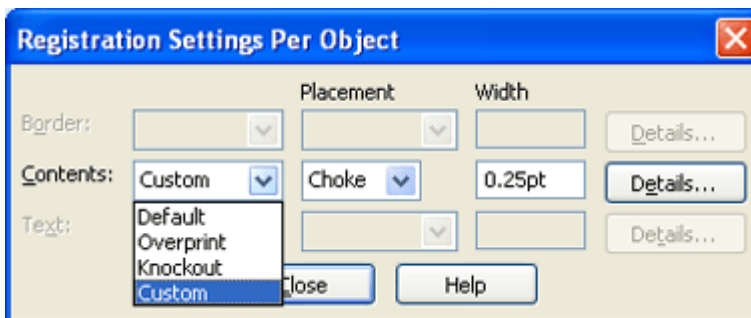
Figure 4-5: Publication Registration Settings dialog box.

3. Click **OK**.

There are a lot more trapping options available than what's covered in this lesson, and you can see some of them in Figure 4-5. Most of these are pretty specialized, but you may be directed by the representative of the printing company you use to change them at some point.

You can also set individual trapping settings for each object. Select an object, and then select **Tools > Commercial Printing Tools > Registration Settings > Per Object**. For each object, you can set different trapping for the border, contents, and/or text.

Your trapping options for an object include Overprint, Knockout, and Custom. These values override Publisher's default trap settings. For more information, click **Help** in the Registration Settings Per Object dialog box, shown in Figure 4-6, to open the Publisher Help system for this topic.



**Figure 4-6: Registration Settings Per Object dialog box.**

**WARNING**

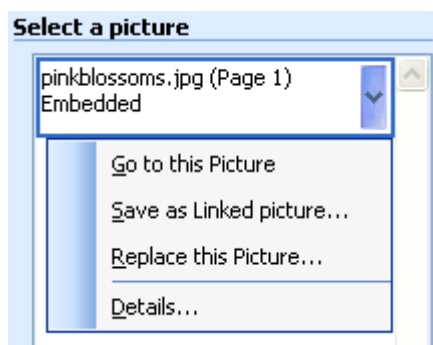
Unless you're an experienced layout professional, or unless you've received specific instructions from your printing service, it's best to leave object trapping settings alone. Simply turn trapping on for the entire publication and let Publisher handle the rest with its defaults.

**Link to external graphic files Page 5 of 7**

When you place clip art or other images in your publication, you usually embed them. That means the graphic is part of the publication, rather than separate from it. However, many printing services require you to submit separate graphic files along with your publication, with links to their positions in the layout.

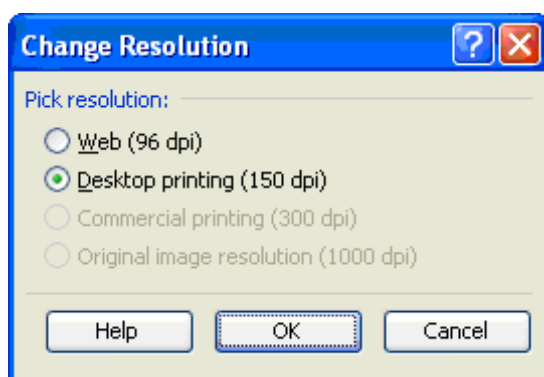
To solve this problem, you can create links for the graphics in your publication with the Graphics Manager. You learned about this in Lesson 3, but here's a review:

1. Select **Tools > Graphics Manager**. The Graphics Manager task pane appears.
2. Open the drop-down menu for an embedded picture and click **Save as Linked picture**, as shown in Figure 4-7. This opens the Save As dialog box, where you can specify a file name and location.



**Figure 4-7: The Graphics Manager helps you separate embedded graphics from the publication.**

3. (Optional) Specify a resolution for the picture, in dpi by clicking the **Change** button, and then selecting from the Change Resolution dialog box shown in Figure 4-8.



**Figure 4-8: Change Resolution dialog box.**

4. Click **Save**.

Not all images will have all settings available. You can decrease but not increase the resolution from the

original setting. Your choices are Web (96 dpi), Desktop printing (150 dpi), Commercial printing (300 dpi), and Original image resolution.

## Embed fonts Page 6 of 7

The printing service you use may not have the same fonts installed on its system as you do. If you use a font that it doesn't have, the publication won't look right, because it will have to substitute a different font for the one you had selected. A solution to this problem is to embed the needed fonts in your publication file. That way, the fonts are available, no matter which computer you use to open it. The tradeoff is that embedding fonts increases the file size.

### Selecting which fonts to embed

To see which fonts are used in the publication and what their license restrictions are, select **Tools > Commercial Printing Tools > Fonts**. As shown in Figure 4-9, this dialog box lists the fonts used in the publication and details the font type, the font source, and the license restrictions.

To embed the selected fonts, check the **Embed TrueType fonts when saving publication** checkbox.

To exclude a font from embedding, click its line in Figure 4-9, and then click the **Don't Embed** button. (The Embed button changes to Don't Embed when a font is selected that is already set to be embedded.)

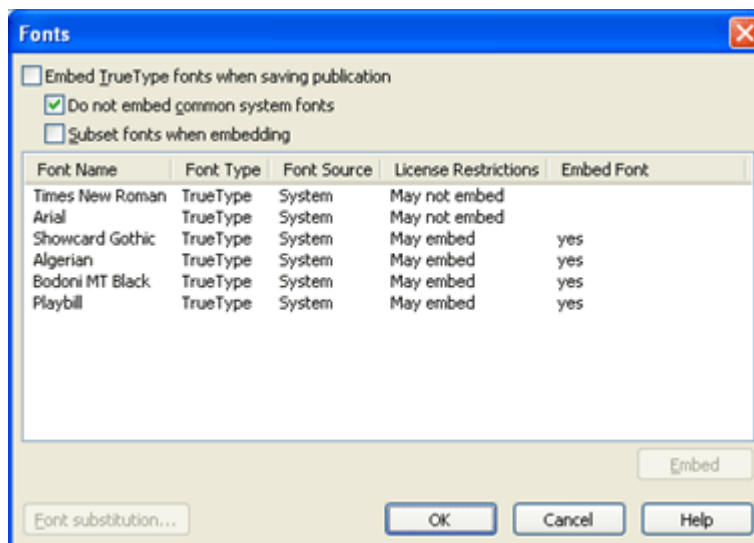


Figure 4-9: Fonts used in the publication.

The fonts Times New Roman, Arial, and Symbol are not set to be embedded by default. These are the default fonts in Microsoft Windows, so everyone should have these. You can change this, and embed them, by clearing the Do not embed common system fonts checkbox. Some other fonts may not be embedded because of licensing restrictions, and there's nothing you can do to make them embeddable.

To embed fonts, check the **Embed TrueType fonts when saving publication** checkbox.

If you use the Pack and Go Wizard (discussed in the next section), that wizard automatically turns font-embedding on for the packed file.

### Use pack and go

When you're ready to send your publication to a printing service, you want to ensure that you send all the

associated files along with the publication itself. These can include linked graphics, fonts, and so on.

#### **WARNING**

Make sure that the printing service accepts Publisher files. Not all of them do. If your printer doesn't, submit the file as a PDF or PostScript file instead, discussed later in this lesson.

The Pack and Go Wizard enables you to pack the presentation, compressing and consolidating all needed files into one convenient package. It also splits large publications across multiple disks if needed. When the printing service receives the packed file, it copies the file to its computer, and then runs the Unpack program to decompress and separate the files.

To run the Pack and Go Wizard, select **File > Pack and Go > Take to a Commercial Printing Service**, and then follow the prompts.

#### **Export a publication to PDF or PostScript Page 7 of 7**

Some commercial printers do not accept Publisher files in their native format, so you will need to use an alternate format to transfer your work to the printing company. Two of the most popular all-purpose formats in the professional printing industry are PostScript and Adobe Acrobat (PDF). Nearly all printing companies accept files in one or both of these formats.

#### **Saving in PostScript format**

You can save in PostScript format just like with any other format.

1. Select **File > Save As**.
2. Open the Save as type drop-down list and select **PostScript**.
3. Continue saving normally.

The main disadvantage of PostScript format is that most computers don't have any capability for viewing a PostScript file, so you can't check your work after saving in PostScript format.

#### **Saving in Adobe Acrobat (PDF) format**

Acrobat is a very different format from any of the standard ones you can select from the Save As dialog box. To save in Acrobat format, you must purchase and install the Adobe Acrobat software on your computer (the full version, not just the free Acrobat Reader). Doing so creates a new "printer" in your Printers and Faxes folder called **Acrobat PDFWriter**. Then you print your publication to that printer, and when prompted for a file name you create the Acrobat file.

Assuming you have Adobe Acrobat installed, you can try this with the following steps:

1. Open the publication and select **File > Print**.
2. Open the Name drop-down menu and then select **Acrobat PDFWriter**.
3. Click **OK**. The Save PDF As dialog box appears.
4. Enter a name and location for the PDF file.
5. Click **Save**. The PDF file is created.
6. (Optional) View the PDF file using Acrobat to check your work.

#### **Moving on**

In this lesson, you learned how to prepare a publication for commercial printing. Whatever commercial printing options you select, be sure that you also print a proof copy on your desktop printer to send along

with it!

Test your mastery of this chapter with the assignment and quiz, and then check the Message Board for any announcements or questions.

See you in Lesson 5, when you'll learn about everyone's favorite: mail merge. Yes, it's not as glamorous a topic as some of the others, but you might find it very useful!