12 | Preparing Documents for High-Resolution Printing

The quality and color of your final printed output depend upon the process you follow to prepare a document for print. Whether you're printing a draft of your work on a desktop printer or producing color separations to be printed on a commercial press, refining your document helps ensure that your printed results meet your expectations.

In this lesson, you'll learn how to do the following:

- Install a virtual printer for high-resolution printing

- Perform a preflight check and correct problems in the document

- Create a bleed

- Separate a color document into its component colors

- Turn on automatic built-in trapping

- Package files for handoff to a service provider

Getting started

In this lesson, you'll work with an oversized four-color poster with a spot color and a spot varnish. The poster is mostly finished and already set up with color management. The document is at final design stage, requiring only some print production tasks for commercial printing.

Note: If you successfully calibrated and characterized your monitor in Lesson 10 and set up color management in Lesson 11, don't restore the InDesign default preferences. The project files for this lesson use the same color management settings as in Lesson 11, so the intended colors will appear more accurate if you use those settings. If you did not do Lessons 10 and 11, you can restore the InDesign defaults and complete this lesson, but the on-screen colors will be unreliable.

Using the PostScript printer driver and PPD files

InDesign uses platform-specific printer drivers to control many printing functions and improve printer performance. In Mac OS systems, for example, the Adobe PS 8.6 driver enables the InDesign printing options for color, scale and fit, graphics, page marks, and so on; without this driver, these options will not even appear in InDesign. In Windows systems, you can set the printing options without the driver, but your PostScript files will be larger and less efficient.

In addition, InDesign uses *PostScript Printer Description (PPD) files* to obtain information about the output device, including printer-resident fonts, available paper sizes, resolution, available line screen values, and the angles of the halftone screens.

About virtual printers

You'll find it useful to install a virtual printer and select a PPD for high-resolution printing so you can set options for color separations. Using a virtual printer, you can print a document to disk as a file, using the attributes of a printer you're not directly connected to. You might do this when preparing a document for printing at another location, such as a prepress service provider.

Installing a virtual printer for Windows 2000

You will use a PPD file called AGFA SelectSet7000 so you can prepare the document for high-resolution printing later in this lesson.

1 Choose Start > Settings > Printers.

2 Double-click Add Printer, and then click Next.

3 Select Local Printer, and deselect Automatically Detect and Install My Plug and Play Printer. Click Next.

4 Make sure Use the Following Port is selected, select FILE:, and then click Next.

5 For Manufacturer, select Agfa, and for Printers, select AGFA-SelectSet 7000. Click Next. If you're asked if you want to keep the existing driver, select Keep Existing Driver (Recommended) and then click Next.

6 For Printer Name, leave the default name, and then select No so that this printer does not become the default printer for your computer. Click Next.

7 For Printer Sharing, select Do Not Share This Printer, and then click Next.

8 For Print Test Page, select No, and then click Next.

9 Click Finish to complete the Add Printer Wizard.

Installing a virtual printer for Windows 98 and NT

You will use a PPD file called AGFA SelectSet7000_ID so you can prepare the document for high-resolution printing later in this lesson.

1 Disable any virus-protection software, as it can interfere with a successful installation. See your virus-protection software documentation for instructions.

2 Insert the Adobe InDesign CD into your CD drive.

3 Do one of the following:

• If a startup screen appears, make sure Installation is selected, and then click the button for the PostScript printer driver for your system (PostScript Driver 5.1 for Windows NT 4.0 or PostScript Driver 4.3 for Windows 98).

• Use Windows Explorer to locate and open the Print Drivers folder on the CD. Depending on your system, open the Win98 or WinNT folder and double-click the Setup.exe file to begin the setup process.

4 Follow the on-screen instructions to install or update the AdobePS printer driver until the Install Printer (Windows NT) or Printer Connection Type (Windows 98) dialog box appears. Select Local Printer and then click Next.

5 When the Select PPD dialog box appears, locate and select AGFA SelectSet7000_ID in the ID_12 folder, located inside the Lessons folder within the IDCIB folder on your hard disk. Then click Next.

6 Do one of the following:

• In Windows NT, in the Select Port dialog box, select FILE: Local Port.

• In Windows 98, in the Local Port Selection dialog box, select FILE: Creates a File on Disk.

Although this step is not necessary for printing to a file, it will prevent you from sending printer data to the wrong port accidentally.

7 Click Next and follow the remaining prompts to add a virtual printer that uses the PPD you selected.

8 When the Device Settings panel in the Properties dialog box appears, click Cancel. Later in the lesson, you'll reopen the Properties dialog box using the InDesign Print dialog box and change some page setup options and film requirements.

9 In the Print to File dialog box, click Cancel.

10 Follow the remaining prompts to finish installing the printer. Then enable your virus-protection software.

Installing a virtual printer for Mac OS

You will use a PPD file called AGFA SelectSet7000_ID so you can prepare the document for high-resolution printing later in this lesson.

1 Disable any virus-protection software, as it can interfere with a successful installation. See your virus-protection software documentation for instructions.

2 Insert the Adobe InDesign CD into your CD drive.

3 Double-click the Install PostScript Driver 8.6 icon on the Adobe InDesign CD to begin the installation process.

4 Follow the on-screen instructions to install the printer driver.

To enable the virtual printer options, you need to install a PostScript printer first.

5 Do one of the following:

• If you have already installed a PostScript printer, skip to step 6.

• If you have a desktop PostScript printer, open the Chooser, select the AdobePS icon, select the printer, and then click Setup. This step selects the default PPD for the printer. To override the default PPD and select the PPD we provide, select the printer, click Setup, and then click Select PPD. Locate and select AGFA SelectSet7000_ID in the ID_12 folder, located inside the Lessons folder within the IDCIB folder on your hard disk. Then click Select. When setup is complete, close the Chooser. If necessary, click OK to acknowledge the Page Setup message.

• If you don't have a desktop PostScript printer, open the Chooser, select the AdobePS icon, and then close the Chooser. Click OK to acknowledge the Page Setup message.

You select a virtual printer from InDesign, not from the Chooser, so you'll open a new blank document.

6 Start Adobe InDesign.

7 Choose File > New, and click OK to close the New Document dialog box.

You start a new document so that the Page Setup command will be active. You won't need to keep this document.

8 Choose File > Page Setup.

9 For Printer, choose Virtual Printer.

10 Also choose Virtual Printer from the menu below the printers.
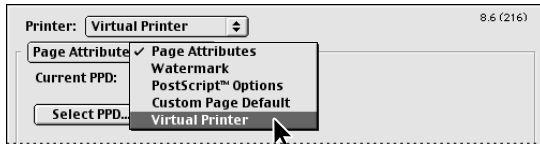
11 Click the Select PPD button.

12 Select AGFA SelectSet7000_ID in the ID_12 folder, located inside the Lessons folder within the IDCIB folder on your hard disk. Then click Select.

13 Click OK to acknowledge the Page Attributes message. Then click OK again to close the Page Setup dialog box. You'll set page options later in this lesson.

14 Close the new, untitled document without saving it. Then enable your virus-protection software.

Opening the work file

To begin working, you'll open an existing InDesign document.

1 If necessary, start Adobe InDesign.

2 Choose File > Open, and open the 12_a.indd file in the ID_12 folder, located inside the Lessons folder within the IDCIB folder on your hard disk. If an alert message appears that asks which dictionary file you want to use, click No (Windows) or Document (Mac OS).

The file contains outdated links, which you will update during the lesson.

3 Click OK to acknowledge the message, and then move the Links palette out of your way.
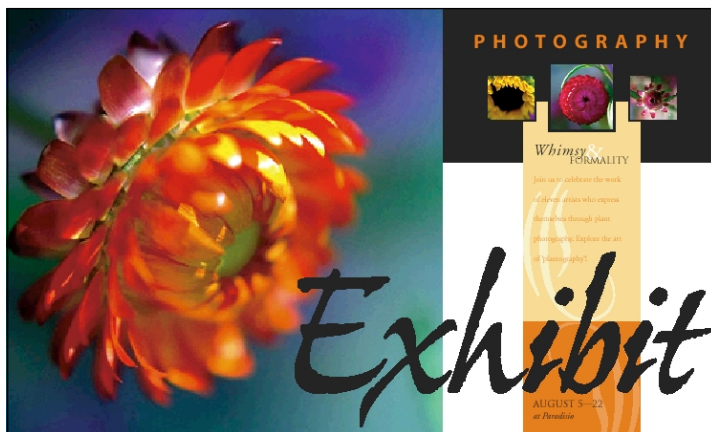
4 Choose File > Save As, rename the file **12_Poster**, and save it in the ID_12 folder.

5 If you want to see what the finished document will look like, open the 12_b.indd file in the same folder. You can leave the document open to act as a guide as you work. When you're ready to resume working on the lesson document, choose its name from the Window menu.

For a color version of the finished document, see the color section.

Note: As you work through the lesson, feel free to move palettes around or change the magnification to a level that works best for you. For more information, see "Changing the magnification of your document" on page 50 and "Using the Navigator palette" on page 57.

## Performing a preflight check before printing

Any time before printing or handing off a document to a service provider, you can perform a quality check on the document. *Preflight* is the industry-standard name for this process, which is analogous to a pilot's preflight check. The preflight check indicates outdated and missing components. It also provides helpful information about a document, such as inks, fonts, and print settings.

Viewing the document components

You'll run a preflight check before making final adjustments to the poster's layout and design and before specifying final output settings. When you begin the preflight process, a Summary panel appears. This panel contains warning icons if certain areas of the document require attention prior to final output.
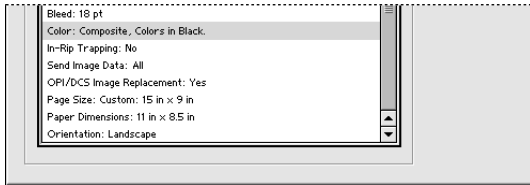
1 Choose File > Preflight.

Note: If you did not go through Lessons 10 and 11 or if you restored the InDesign defaults, you may get an alert message stating that the selected profile is not CMYK. Click OK to use the Adobe InDesign Default CMYK profile. If InDesign indicates you have missing fonts, see "Installing the Classroom in a Book fonts" on page 2.
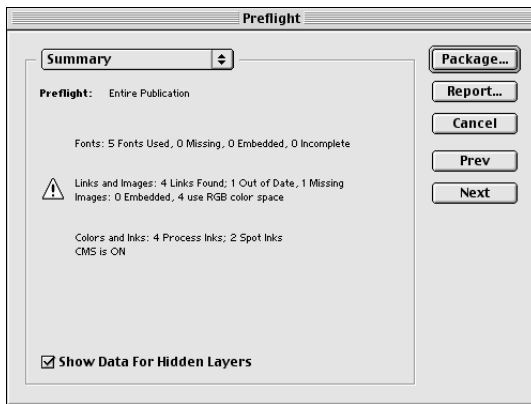
The Summary panel of the Preflight dialog box indicates there is one missing link and one out-of-date link. In addition, InDesign flags RGB images so that you know which ones to convert to CMYK if necessary. In this lesson, you'll use RGB (the original color space of these images) so you can use the document for multiple media. For example, you could convert the images to CMYK for print media or use the original RGB for online media such as the Internet, CD-ROM, or television.

2 Step through the other panels by clicking Next. Examine the current settings for each. When you get to the Colors and Inks panel, notice that the document contains the four process-color inks and two spot-color inks, a PANTONE color, and a spot varnish.

3 Choose Print Settings from the menu at the top of the Preflight dialog box to examine the current print settings for the poster. The poster is currently set up for composite printing on a desktop printer. Later in the lesson, you'll specify paper options and print settings for separations-based printing.
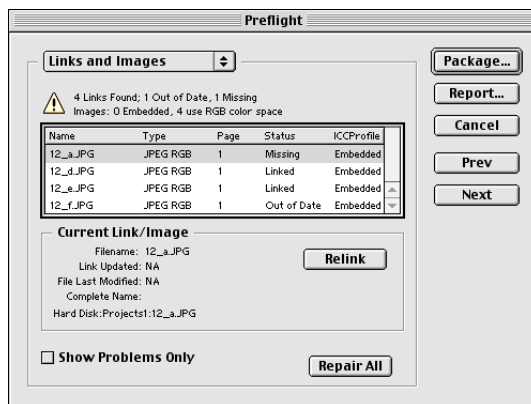
```
Bleed: 18 pt
Color: Composite, Colors in Black.
In-Rip Trapping: No
Send Image Data: All
OPI/DCS Image Replacement: Yes
Page Size: Custom: 15 in × 9 in
Paper Dimensions: 11 in × 8.5 in
Orientation: Landscape
```

4 Leave the Preflight dialog box open so you can use it in the next section.

Repairing broken links

Using the Preflight feature, you'll relink a missing RGB image and update an out-of-date link.

1 From the menu at the top of the Preflight dialog box, choose Links and Images.

2 Select the 12_a.jpg graphic whose Status is listed as Missing (it was renamed), and then click Relink.

```
┌─────────────────── Preflight ───────────────────┐
│                                                  │
│  ┌─ Links and Images  ▼ ─┐      ┌ Package... ┐   │
│                                                  │
│     ⚠  4 Links Found; 1 Out of Date, 1 Missing   ┌ Report... ┐ │
│         Images: 0 Embedded, 4 use RGB color space │          │
│                                                  ┌ Cancel ┐   │
│   Name      Type      Page  Status    ICCProfile │        │   │
│   12_a.JPG  JPEG RGB  1     Missing    Embedded  ┌ Prev ┐  │   │
│   12_d.JPG  JPEG RGB  1     Linked     Embedded  │       │  │   │
│   12_e.JPG  JPEG RGB  1     Linked     Embedded  ┌ Next ┐  │   │
│   12_f.JPG  JPEG RGB  1     Out of Date Embedded │       │  │   │
│   ┌─ Current Link/Image ──────────────────────┐  │   │
│       Filename:  12_a.JPG                      │  │   │
│       Link Updated: NA          ┌ Relink ┐    │  │   │
│     File Last Modified: NA       │        │    │  │   │
│       Complete Name:                          │  │   │
│   Hard Disk:Projects1:12_a.JPG                │  │   │
│   └───────────────────────────────────────────┘  │
│                                                  │
│   ☐ Show Problems Only          ┌ Repair All ┐   │
└──────────────────────────────────────────────────┘
```

3 Locate and double-click 12_c.jpg (the renamed file) in the ID_12 folder, located inside the Lessons folder within the IDCIB folder on your hard disk.

Now you'll update the out-of-date link.

4 Select the 12_f.jpg graphic whose Status is listed as Out of Date.

5 Click Update. The Status changes to Linked. If an alert message stating that the selected profile is not CMYK appears, click OK.

6 Click Cancel to close the Preflight dialog box.

You've corrected the current problems in the document. Throughout this lesson, you'll make changes to the document that affect the settings in the Preflight panels. At the end of the lesson, you'll perform a final preflight check using the Package feature to catch any remaining problem areas.

7 Choose File > Save.

About trapping

The quality of your printed document depends on how well the different inks print *in register* —that is, exactly aligned with each other. Typically when you produce separations from a document with overlapping objects, the color in the topmost objects replaces, or knocks out, any colors beneath them on the other separations. If one or more inks print out of register, white gaps may appear between adjacent objects where the paper shows through, or there may be fringes of unexpected color called *color shifts* . Commercial printers hide flaws in registration by slightly expanding one color region into another, using a border strip called a *trap* .
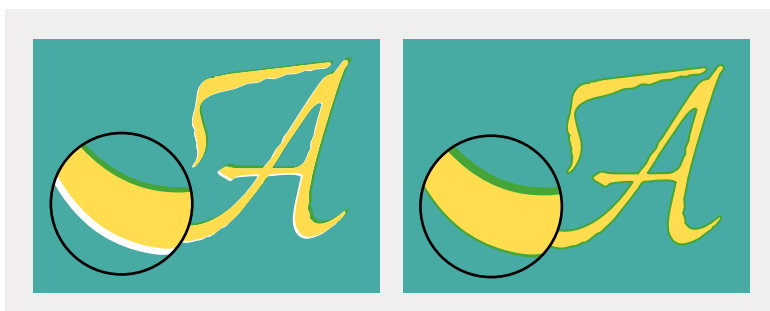
Gap created by misregistration (left); gap hidden by trapping (right)

 For a color version of trapping, see figure 12-1 in the color section.

This section describes the ways you can trap, and will show you how to turn on automatic trapping.

📘 For more information about trapping, see "Using Adobe In-RIP Trapping" in the Adobe InDesign online Help.

About trapping colors automatically

While knocking out underlying colors preserves the purity of colors, the "hole" knocked out of an underlying ink can become visible as a gap when separations are out of register. One frequently used method to avoid color gaps is called *overprinting*, where one ink prints on top of another. For example, large type is typically trapped by adding a stroke the same color as the type, and overprinting the new stroke to cover any potential gaps with the surrounding color. While you can use the Attributes palette to set overprinting yourself, the InDesign built-in or Adobe In-RIP trapping engines can apply overprinting and other trapping techniques intelligently and automatically.

Large type properly trapped by overprinting type strokes (left); and the printed result (right)

◑ For a color version of knocking out versus overprinting, see figure 12-2 in the color section.

By default, InDesign knocks out underlying colors, but if you turn on built-in trapping or Adobe In-RIP trapping (as you will later in this lesson), InDesign will intelligently spread and choke spot and process colors only as necessary to prevent misregistration in type and graphics.
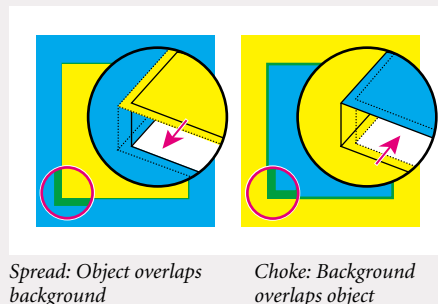
*Spread: Object overlaps
background*

*Choke: Background
overlaps object*

For a color version of this illustration, see figure 12-3 in the color section.

Choosing a trapping method

You can trap InDesign documents using any of three methods:

Adobe In-RIP trapping   Automatically traps all type and graphics at the imagesetter, using
prepress-quality trapping rules. Objects that overlap multiple colors trap properly over
all colors. This method requires an imagesetter that supports Adobe In-RIP trapping.
This method requires the least amount of work from you and your computer, and it
results in the most precise traps for the widest range of text, objects, and imported
graphics.

Built-in trapping   Automatically traps type and most objects at a level of quality similar to
that of Adobe In-RIP trapping. This method works on imagesetters supporting PostScript
Level 2 or higher, but it requires more time and disk space for processing, and traps
slightly fewer kinds of objects than Adobe In-RIP trapping. For more information about
differences between built-in trapping and Adobe In-RIP trapping, see the *Adobe InDesign
1.5 User Guide Supplement*   .

Simulating traps by overprinting manually   Lets you take the responsibility of manually
calculating trap colors and overprinting the stroke or fill of each object you want to trap.
Manual overprinting was more commonly used before automatic trapping became
available. InDesign's built-in trapping is easier, faster, and more precise.

In most cases, built-in trapping or Adobe In-RIP trapping are the most practical solutions because you need to turn on only one option to get high-quality, intelligent trapping. The most common scenario today involves a prepress service provider who has a PostScript Level 2 imagesetter, but may not have one that supports Adobe In-RIP trapping. This lesson assumes this scenario, and will lead you through setting up built-in trapping, which is the best solution for these circumstances.

About manually overprinting strokes or fills to simulate traps

If you want to overprint a particular stroke or fill, you can use the Attributes palette with selected text or objects. The built-in trapping and Adobe In-RIP trapping available in InDesign nearly eliminate the need for manual overprinting, so manual overprinting isn't covered in this lesson. For more information about using the Attributes palette, see the *Adobe InDesign User Guide* .

Manual overprinting can be an effective solution in the rare cases when you can't use automatic trapping. However, manual overprinting is labor-intensive, so it requires more work in documents with many objects. Manual overprinting can also become complicated when text or an object overlaps more than one color. Good manual overprinting requires a thorough understanding of ink interactions and of the press and paper conditions for the final output; applying the wrong overprinting settings can be worse than not trapping at all.

Note: Because overprinting can increase the amount of ink coverage on the page and cause problems on the press, be sure to consult with your prepress service provider before overprinting manually.

Working with black objects

By default, InDesign always overprints process black (shown as [Black] in the Swatches palette). This includes all black strokes, fills, and text characters of any size. Overprinting black-ink objects helps hide misregistration of black text characters positioned over colored areas. Using a process [Black] stroke for *keylines* (borders) around graphics helps hide misregistration of overlapping color.

Because process black is translucent, objects and colors may show through. If you do not want this effect, you can add another process color to black to achieve a more intense color, called a *rich black* .

Creating and applying a rich black

The poster includes large black display type over colored objects and a white background. You'll create a cool rich black (using 100% K, or black, and 20% C, or cyan) and then apply it to the display type to prevent background objects from showing through. Rich-black objects knock out because the cyan ink knocks out the other inks beneath it on the press.
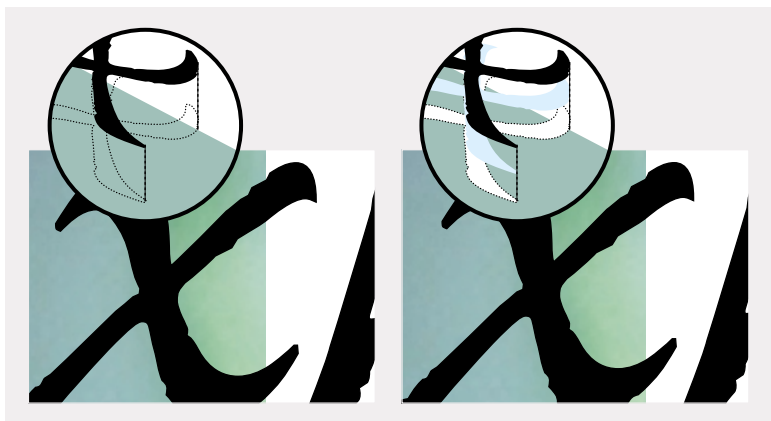

Without cyan support screen (left) and with cyan support screen (right)

For a color version of rich black, see figure 12-4 in the color section.

Note: A cool rich black uses cyan for its under color or support screen—the process inks used to make a rich black. A warm rich black typically uses magenta.

1 In the Swatches palette, select [Black], the default process black color. (You may need to scroll in the palette.)

2 Alt-click (Windows) or Option-click (Mac OS) the New Swatch icon (⬚) in the Swatches palette to duplicate the process black color and open the New Color Swatch dialog box.

3 Deselect Name with Color Value, and then type **Cool Black** for Swatch Name.

4 For Cyan, enter 20%. Leave the remaining options as they are and then click OK.
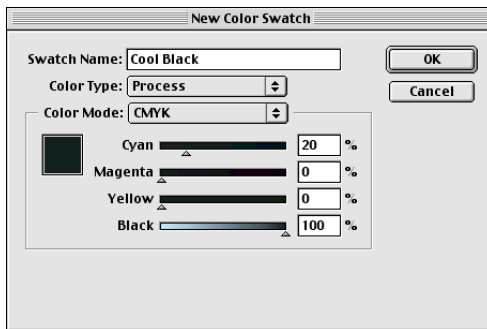
5 Using the selection tool ( ), click "Exhibit" to select it. The text has been converted to outlines (paths) so you can no longer select it with the type tool.

6 Select the Fill box ( ) in the toolbox.

7 In the Swatches palette, select Cool Black to apply the color to the object.

8 Save the file.

About trapping rich black objects

Rich blacks require a trapping technique called a *keepaway* . The support screen is choked back or made slightly smaller than the black area so that misregistration doesn't produce a tiny fringe of color, which is especially noticeable where black type crosses over white areas.

A fringe of cyan appears (left) when the cyan separation is misregistered (right).

For a color version of misregistered rich black, see figure 12-5 in the color section.

When you turn on built-in trapping later in this lesson, InDesign will properly apply a keepaway trap to all rich black objects.

For rich black objects (left), the trapping engine chokes back support screens from edges (right).

For a color version of overprinting a stroke in a rich black, see figure 12-6 in the color section.

Overprinting a varnish

You can use overprinting for special effects. For example, you can apply a varnish (a clear spot ink) to emphasize display type or to enhance images.

The poster uses a varnish over three images and display type. To give the Exhibit display type a shiny effect with clean edges, you'll apply a spot-color varnish to a copy of the display type, and then set its fill and stroke to overprint. The varnish will fit perfectly over the display type because the silhouette is an exact replica of the Exhibit object. To prevent the varnished objects from distracting from the overall poster design, we've placed the varnished objects on their own layer, which is currently hidden.

1 Click the Layers palette tab (or choose Window > Layers) to make the palette visible.

2 Click the eye icon (👁) next to the Display Type layer to hide it. This enables you to see only the silhouette of the display type in the next step.

3 Click the square to the far left of the Varnish layer to display the eye icon.
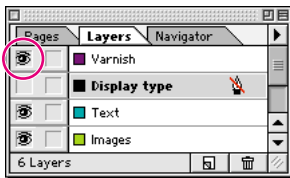
Notice the silhouette of the display type and the three pink squares at the top right of the document. The color pink represents the varnish so that it stands out on-screen; when printed, the varnish will print on its own separations plate according to the values communicated to the commercial printer. The pink squares represent the areas where the varnish will be applied. To complete the special effect in the document, you'll also apply the spot-color varnish to the display type silhouette.

4 Using the selection tool, select the "Exhibit" graphic.

5 Make sure the stroke is set to None. Select the Fill box (🔲) in the toolbox, and then select the Varnish color in the Swatches palette.

For a color version of overprinting a varnish, see figure 12-7 in the color section.

6 Choose Window > Attributes.

7 With the Exhibit graphic still selected, select Overprint Fill in the Attributes palette. This prevents the spot color from knocking out (the default). Close the Attributes palette.
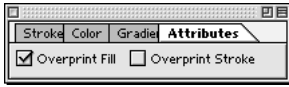

8 Press Shift+Ctrl+A (Windows) or Shift+Command+A (Mac OS) to deselect the graphic so you can see where the varnish will be applied on the press.

9 Position the pointer on the black triangle to the right of the Layers palette tab, and then choose Show All Layers from the Layers palette menu. InDesign prints only visible layers.

10 Save the file. You have completed almost all the overprinting and trapping tasks. When you turn on built-in trapping later in this lesson, you'll set up the Varnish ink as a transparent ink.

Creating a bleed

To make sure that ink is printed to the edge of the page after it is trimmed, you need to create a *bleed,* the area of the document that falls outside the crop marks. *Crop marks* define the edge of the trimmed page. The commercial printer trims the bleed after printing and assembling the document. Always contact your service provider for the exact bleed requirements.
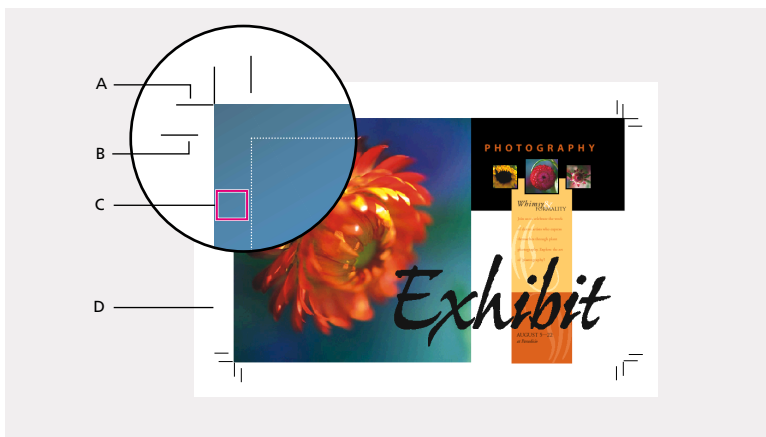
A. Bleed mark **B.** *Trim, or crop mark* **C.** *Bleed area* **D.** *Paper*

To reduce distraction during the design phase, the designer has masked the graphics to the page edge. Now that you're preparing the final document for production, you'll extend the graphics frames to accommodate the required bleed. Later in this lesson, you'll use the Page Marks panel of the Print dialog box to specify how much of a bleed to print beyond the page edge.

1 Choose View > Show Guides. Also choose View > Snap to Guides. Ruler guides define how far to drag the graphics frames.

To see the ruler guides on the pasteboard, you'll zoom out.

2 Select the zoom tool (🔍) in the toolbox, and then press Alt (Windows) or Option (Mac OS). Click the poster until you can see the ruler guides.

**3** Select the selection tool (▶) in the toolbox.

4 Using the selection tool, click the large flower image on the left to select it. Drag the upper left corner of its bounding box diagonally away from the image until it snaps to the ruler guide on the top and left. Dragging diagonally extends both the top and left sides at once. Resizing the frame crops the image without distorting its shape.

5 Now drag the lower middle bounding box handle downward to extend the image until it snaps to the bottom guide.
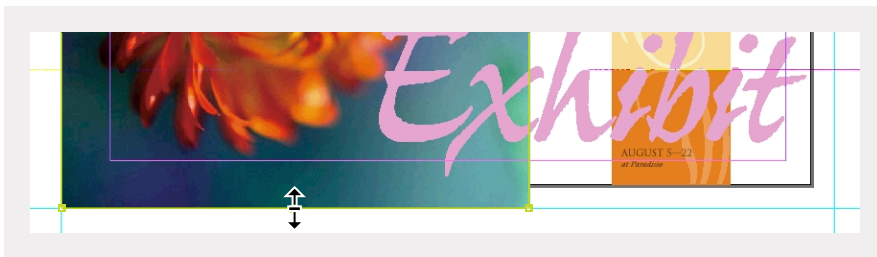
6 Using the selection tool, select the black box in the upper right corner of the poster. Drag the upper right corner of its bounding box diagonally away from the graphic until it snaps to the ruler guide on the top and right.
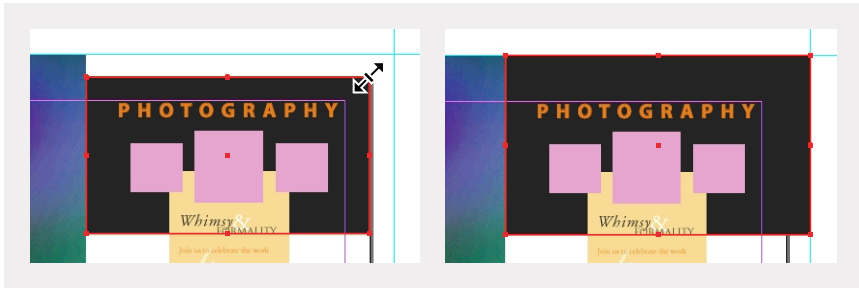
7 Select the orange rectangle at the bottom of the poster.

8 Drag the lower middle bounding box handle downward until it snaps to the bottom guide.


Note: If you accidentally select the text frame containing the date, choose Edit > Undo and select it again.

You have extended all graphics for the bleed.

9 Save the file.

Setting paper options

It's important to distinguish between *page size* (as defined in the Document Setup dialog box for your document) and *paper size* (the sheet of paper, piece of film, or area of the printing plate you print on). Your page size might be US Letter (8.5 x 11 inches), but you might need to print on a larger piece of paper or film to accommodate any page marks or the bleed area.
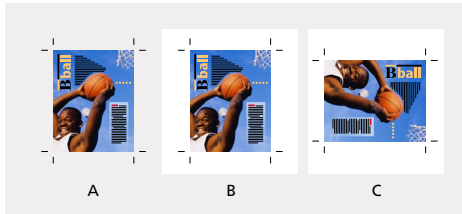
A. Letter (tall orientation) **B.** *Custom paper size*
C. *Transverse paper size*

You'll set options for printing the poster on tabloid-size paper, which can accommodate the poster, its bleed, and all page marks. Follow the steps for your computer platform.

In Windows 2000:

1 Choose File > Print and make sure AGFA SelectSet7000 is selected at the top of the dialog box.

2 Click Properties.

3 Click the Layout tab, and then for Orientation, select Landscape.

4 Click Advanced. Select Tabloid from the Paper Size menu, and then click OK.

5 Click OK to close the dialog box.

6 Leave the dialog box open so you can use it in the next section.

In Windows 98 or NT:

1 Choose File > Print and make sure AGFA SelectSet7000_ID is selected at the top of the dialog box.

2 In the Print dialog box, click Properties, and then click the Page Setup (Windows NT) or Paper (Windows 98) tab.

3 Choose Tabloid from the Paper Size menu.

4 Make sure Landscape is selected and click OK.

5 Leave the dialog box open so you can use it in the next section.

In Mac OS:

1 Choose File > Page Setup. Make sure Virtual Printer is selected in the Printer menu at the top of the dialog box.

2 For Paper, choose Tabloid.

3 For Orientation, make sure Landscape (🖽) is selected.

4 Leave the rest of the options as they are and then click OK.

Creating color separations

To reproduce color documents on a printing press, you must first create individual pieces of film (the separations) for each of the component inks: cyan, magenta, yellow, and black, and any spot colors, if applicable. The process of breaking composite artwork into its component inks is called *color separation* .

The poster is composed of process colors and two spot colors. If you were to print color separations at this point, you would have six pieces of film: one each for the cyan, magenta, yellow, and black plates, and one plate for each of the two spot colors. You can print separations using process colors or spot colors, or you can use a combination of both.

Important: Each print job has specific requirements that you'll need to discuss with your prepress service provider before setting separation options.
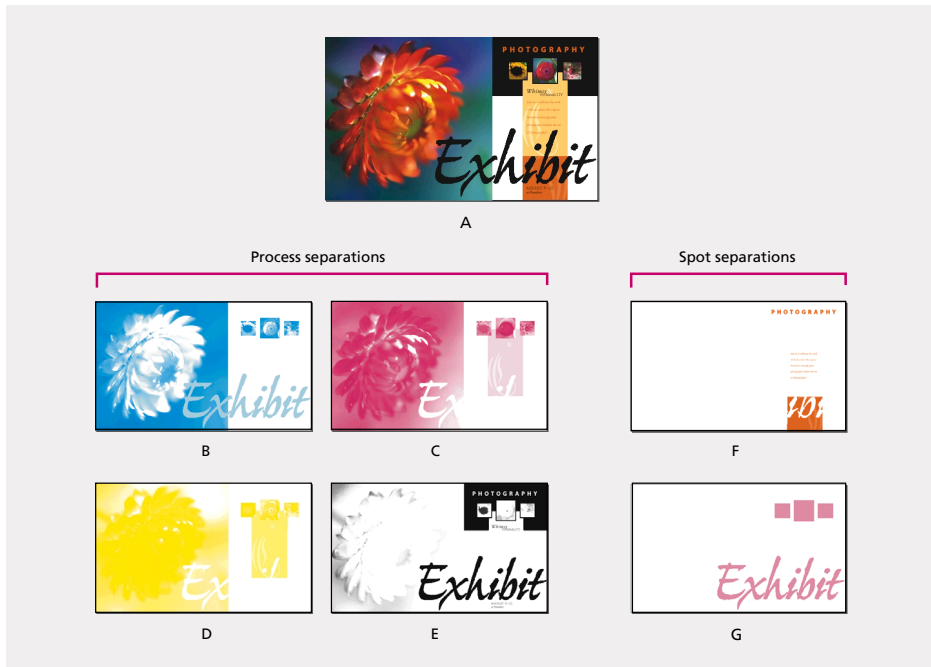
A. Composite *B.* Cyan separation *C.* Magenta separation *D.* Yellow separation *E.* Black separation
*F.* Spot color separation *G.* Spot varnish separation

For a color version of color separations, see figure 12-8 in the color section.

You'll specify separations in the Color panel of the Print dialog box using the high-resolution options available in the PPD you installed with the virtual printer.

1 If the Print dialog box is not open, choose File > Print.

2 Make sure AGFA SelectSet7000 (Windows 2000), AGFA SelectSet7000_ID (Windows NT or 98), or Virtual Printer (Mac OS) is selected at the top of the dialog box.

3 Do one of the following:

• In Windows, click the Color tab.
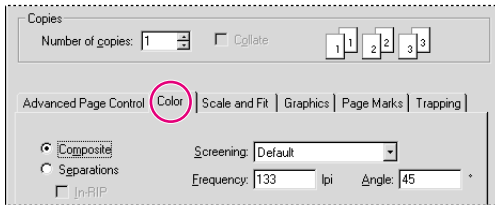
• In Mac OS, choose Color from the menu under the printer name.

The ink functions are grayed out because Composite is selected by default.

4 Select Separations. The poster's colors are represented by their component inks in the ink list on the Color panel. The printer icon to the left of the ink names indicates that a separation will be created for each ink.
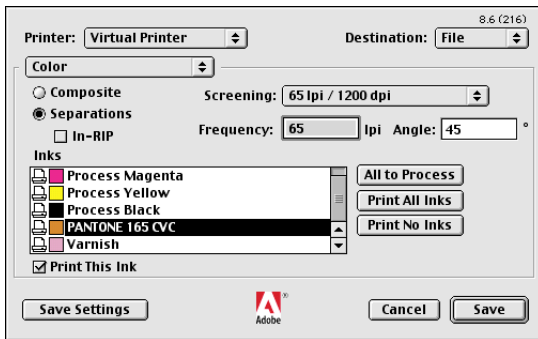

If you need to reprint a single separation (for example, if you changed the content on a certain separation's plate), click Print No Inks to select all of them, and then double-click the printer icon next to the ink you want to print.

5 Leave the dialog box open so you can use it in the next section.

Note: *For convenience, you can preserve applicable print settings for all applications that use the same printer by clicking the Apply (Windows) or Save Settings (Mac OS) button. The current print settings will be saved for the selected printer.*

Specifying the screen frequency

The relationship between *device resolution* and *screen frequency* determines the quality of the printed output. Device resolution is the number of printer dots per inch (dpi) produced by an imagesetter or laser printer. Screen frequency is the number of lines per inch (lpi) of *halftone cells*, dots of varying sizes used to simulate shades of gray on the printed page. Depending on the selected PPD, more than one screen frequency value may be available. Your prepress service provider will direct you to select the screen frequency appropriate for your document.
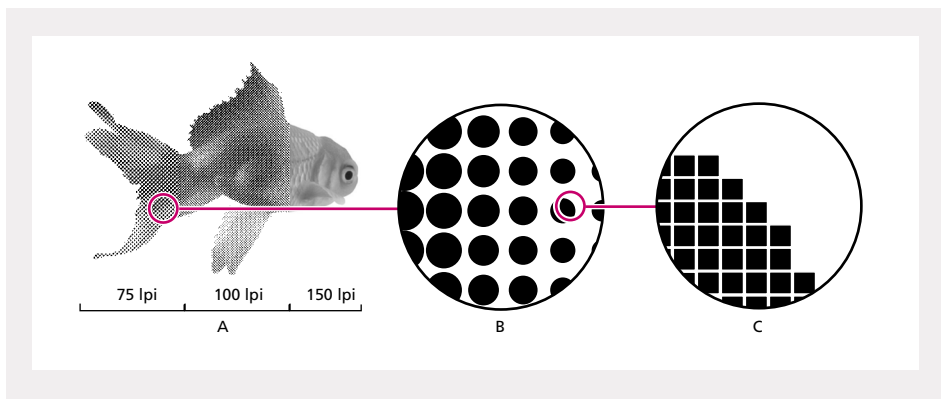

*A. Continuous tone simulated by line screen **B.** Line screen consisting of halftone dots **C.** Halftone dots consisting of printer dots*

For more information about device resolution and screen frequency, see "Specifying the screen frequency" in the Adobe InDesign online Help.

For this exercise, you'll select one of the preset screen frequencies and printer resolution combinations for the virtual printer.

1 In the Color panel of the Print dialog box, choose 133 lpi / 2400 dpi from the Screening menu. The first value, 133, represents the screen frequency (lpi), and the second value, 2400, represents the output device resolution (dpi).
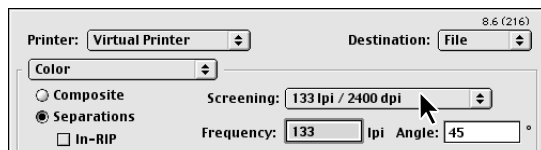
When you select inks in the ink list, the values in the Frequency and Angle text boxes change, showing you the optimum screen frequency and angle for that ink. For this exercise, do not change the values.

2 Leave the dialog box open so you can use it in the next section.

Setting graphics and fonts options

Using the Graphics panel, you can specify ways to print bitmap images, EPS graphics, and PDF pages most efficiently to PostScript printers. In addition, you can specify how InDesign downloads fonts to the printer. The options you choose determine how big the resulting PostScript file is.

1 In the Print dialog box, do one of the following:

• In Windows, click the Graphics tab.

• In Mac OS, choose Graphics from the menu under the printer name.

The default options for graphics are appropriate for printing this document to a contract proofing device, so you won't change them. However, you'll select one additional font downloading option.

2 In the Font Downloading section, select Download PPD Fonts. This option ensures that your version of the fonts in the document are downloaded to the output device, even if those fonts reside in the printer's memory. This prevents line wraps due to outline variances, and is usually worth the larger PostScript file and longer printing time.
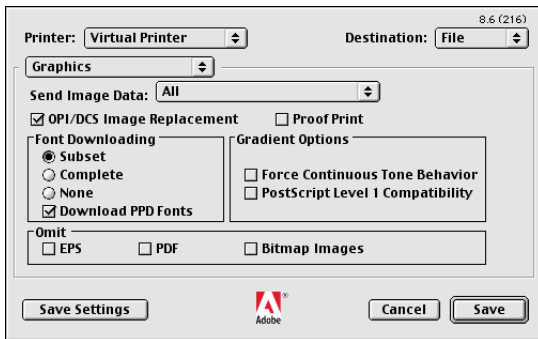
3 Leave the dialog box open so you can use it in the next section.

Adding page marks

You'll set the exact bleed area for the bleed you created earlier in this lesson, in addition to a variety of markings that print outside the page bleed boundary. Service providers use these *page marks* or *printer's marks* to align separation films when producing contract proofs, to measure film for correct calibration and dot density, to trim film to size, to align colors on the press, and so on.

A. Crop marks *B.* Registration marks *C.* Page information
D. Color bars *E.* Bleed marks

**1** In the Print dialog box, do one of the following:

• In Windows, click the Page Marks tab.

• In Mac OS, choose Page Marks from the menu under the printer name.
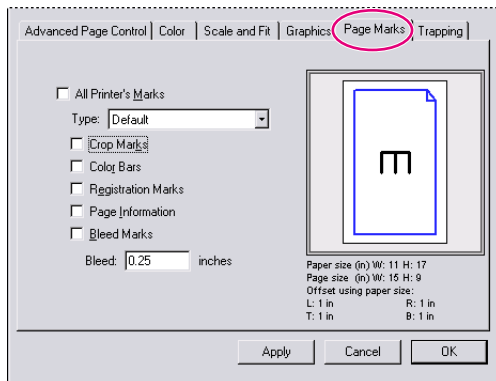
2 Select All Printer's Marks to select all marks at once.

Because you chose Tabloid for the paper size earlier in the lesson, the page marks fall within the paper size.

3 In the Bleed text box, type **p9** (9 points). Page marks will stand off from the bleed this amount.
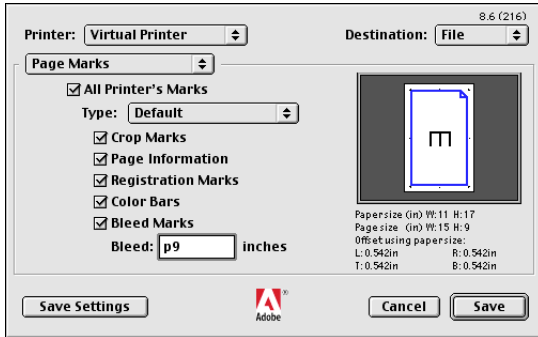
For more information about printer's marks, see "Printing page marks" in the Adobe InDesign online Help.

Setting up built-in trapping

Now you'll turn on built-in trapping. When you use built-in trapping or Adobe In-RIP trapping, don't change any trapping settings until you discuss the requirements of your document with your prepress service provider. The default trapping settings work well for a wide range of print jobs, so in most cases all you have to do is turn trapping on. In this section you'll change just two trapping options—to make black print after all other inks except the varnish, and to describe the varnish as a transparent ink so that objects under the varnish trap properly.

1 In the Print dialog box, do one of the following:

• In Windows, click the Trapping tab.

• In Mac OS, choose Trapping from the menu under the printer name.

2 Choose Application Built-In from the menu under the Trapping menu.

3 Click Inks.

4 Select Process Black in the ink list, and then for Ink Sequence, enter 5.

The ink sequence value of Process Black and the PANTONE color are exchanged. Now black will be the last color to print before the varnish.

5 Select Varnish in the ink list, and then choose Transparent from the Type menu.
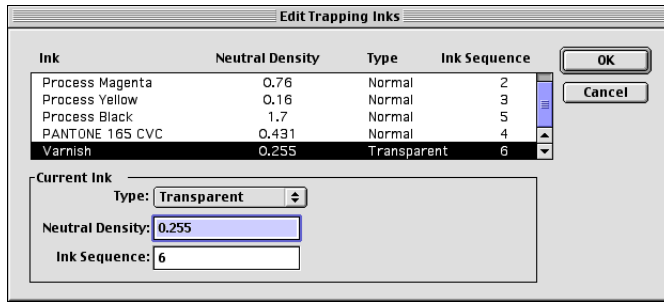
Setting up the varnish as a transparent ink doesn't change its on-screen appearance, but it tells the trapping engine to trap underlying objects normally because they will be visible under this ink.

6 Click OK to close the Edit Trapping Inks dialog box.

7 Do one of the following:

• In Windows, leave the Print dialog box open so you can use it in the next section.

• In Mac OS, make sure File is selected for Destination at the top of the Print dialog box, and click Save Settings. This saves the printer information so that the Package feature can read it later in the lesson. Then click Cancel to close the Print dialog box; you'll specify settings using the Page Setup dialog box in the next section.

Identifying film requirements for high-resolution printing

Now you'll set emulsion direction and indicate whether you want positive or negative film for the imagesetter whose PPD you chose when you installed the virtual printer at the beginning of this lesson. Follow the steps for your computer platform.

Proofing options

As a general rule, the closer the proofing method mimics the conditions of the actual printing press, the more reliably it indicates the final product's quality. The following are proofing steps you can take to ensure that your files print as you intended.

Black-and-white proofs *Before printing your separations to a high-resolution output device, it's a good idea to print a set of separations on your black-and-white desktop printer. Using black-and-white proofs, you can make sure the correct number of separations prints; you can check the bleed size and page marks. You can also check for surprises in overprinted versus knocked-out objects.*

Adobe PressReady color comp or Adobe PDF file *Adobe PressReady is a powerful proofing and printing system for color inkjet printers. Using PressReady, you can produce press-quality color comps on select color inkjet printers using Adobe PostScript 3 technology. You can also create and send color-calibrated PDF files to clients for approval.*

Contract proofs *Color proofs that you sign off on, sometimes called contract proofs, indicate to the commercial printer the color you expect in the final document. Your service provider can provide color proofs based on actual pieces of film (called separation-based color proofs, or analog proofs) or digital CMYK proofs (with or without halftone dots). Next to proofs made on the printing plates themselves, the most accurate proofs are separation-based color proofs, and are regarded as the industry standard. Digital proofing can achieve high quality, but most digital proofs do not show moiré patterns and trapping errors.*

–Adapted from the *Adobe Print Publishing Guide,* Chapter 3

Important: *In your work environment, ask your service provider how they intend to print the film. In most cases, they will print negatives, right-reading and emulsion side up. In other words, the black and white areas are reversed, and the text on the page is readable (not mirrored) when the emulsion side of the film is toward you. Once you know what your service provider wants, ask what settings are best to achieve this result. Some service providers will want you to specify settings in the software, others will set either their RIPs (raster image processors) or recorders to do this.*
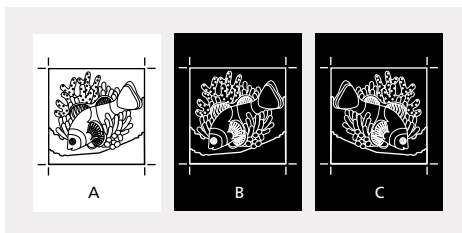
A. *Positive image* **B.** *Negative*
C. *Negative with emulsion side down*

In Windows 2000:

1 Make sure AGFA SelectSet7000 is selected at the top of the Print dialog box. Then click Properties and click the Advanced button.

2 Navigate through the option tree until you come to Document Options\PostScript Options\Mirrored output, and then select Yes.

3 If necessary, click the + (plus sign) next to Printer Features to expand the list.

4 To print negative pages, select Negative Print and then select Negative.

5 Click OK to close the Advanced dialog box.

6 Click OK to close the Properties dialog box.

7 Make sure Print to File is selected near the top of the Print dialog box and then click OK.

8 Leave PostScript selected for Save as Type, and save the 12_Poster.ps file in the ID_12 folder. This saves the printer information so that the Package feature can read it later in the lesson.

In Windows NT:

1 Make sure AGFA SelectSet7000_ID is selected at the top of the Print dialog box. Then click Properties and click the Advanced tab.

2 Navigate through the option tree until you come to Document Options\PostScript Options\Mirrored output, and then select Yes.

3 If necessary, click the + (plus sign) next to Printer Features to expand the list.

4 To print negative pages, select RIP Negative Output and then select Negative.

5 Click OK to close the Properties dialog box.

6 Make sure Print to File is selected at the top of the Print dialog box and then click OK.

7 Leave PostScript selected for Save as Type, and save the 12_Poster.ps file in the ID_12 folder. This saves the printer information so that the Package feature can read it later in the lesson.

In Windows 98:

1 Choose File > Print, click Properties, and click the Graphics tab.

2 To print negative pages, select Print as a Negative Image.

3 To print emulsion side up, select Print as a Mirror Image.

4 Click OK to close the Properties dialog box.

5 Make sure Print to File is selected at the top of the Print dialog box, and then click OK.

6 Leave PostScript selected for Save as Type, and save the 12_Poster.ps file in the ID_12 folder. This saves the printer information so that the Package feature can read it later in the lesson.

In Mac OS:

1 Choose File > Page Setup.

2 Choose PostScript Options from the menu under the printer name.

3 To print emulsion side up, deselect Flip Horizontal and Flip Vertical.

4 To print negative pages, select Invert Image. Then click OK.

Packaging files for handoff

Packaging an InDesign document is similar to the Collect for Output (QuarkXPress®) or Save for Service Provider (Adobe PageMaker) features. InDesign gathers the files you've used, including fonts and linked graphics, for easy handoff to a service provider.

You don't need to perform a final preflight check manually before packaging. InDesign automatically performs an up-to-date preflight check before gathering the files. If it detects problem areas, InDesign displays a dialog box. Because the poster includes RGB images, you will see this dialog box.

1 Choose File > Package.

2 Click View Info to open the Preflight dialog box, where you can assess or correct any remaining problems.

3 Do one of the following:

• If the only problem area is the RGB images, click Package from the Preflight dialog box to begin the packaging process again. You don't need to convert these images to CMYK.

• If you have other problem areas, such as broken links, fix them before continuing or your package may not be complete. (See "Performing a preflight check before printing" on page 393.)

4 When prompted to save the document, click Save.

InDesign displays the Printing Instructions dialog box, where you can provide contact information. The filename at the top of the dialog box is the name InDesign gives to the report it generates for service providers; you can rename the report. This report, which is saved in the default text editor format, includes the information in the Printing Instructions dialog box; a list of all used fonts, links, and inks required to print the document; and print settings. The report is stored in the same folder as the other packaged files.

For this lesson, you'll skip the exercise of filling in the printing instructions.

5 Click Continue.

InDesign creates a new folder for the packaged files.

6 Rename the folder **12_PosterPack,** and make sure ID_12 is the current folder.

In the packaging dialog box, the options for copying fonts, copying linked graphics, and updating graphic links are selected by default. Leave those options selected. InDesign copies the fonts and linked graphics to separate folders named Fonts and Links in the package folder. By updating the graphic links at the time you package the document, you'll ensure that the links are maintained.

7 Select Include Fonts and Links from Hidden Layers, and also select View Report.

◯ *At this time, you could fill in or update the Printing Instructions by clicking the Instructions button. Then click Continue to return to the packaging dialog box.*
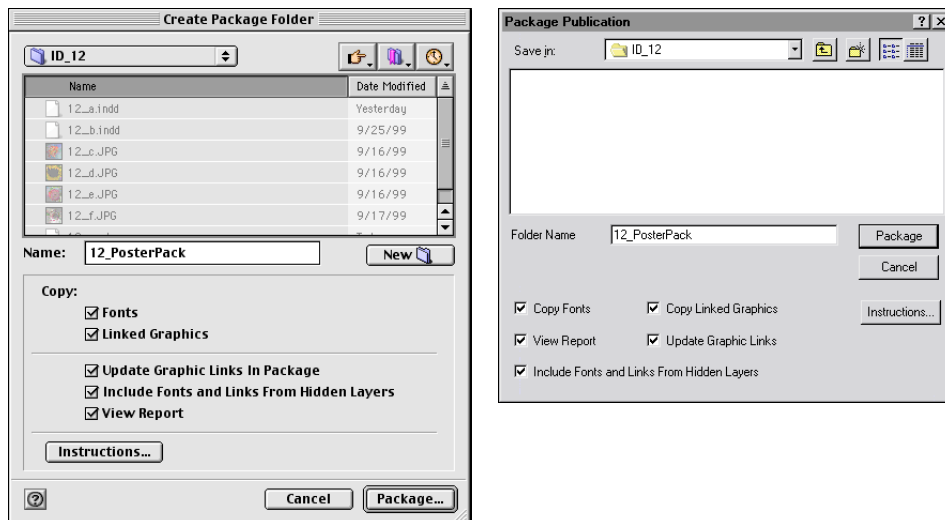
Mac OS (left) and Windows (right)

8 Click Package.

9 When the Font Alert dialog box appears, read the text. If you agree to the terms, click OK.

10 When the service provider report opens in your default text editor, review the print settings you specified in this lesson, such as separations and bleed. Then examine the File Package List (at the end of the report), which describes the components of the poster.

11 Exit from the text editor.

In addition to copying the service provider report, fonts, and linked graphics, InDesign copies the InDesign document to the package folder.

You've finished the lesson. In a typical workflow, you would now be ready to send your document to a service provider. Include proofs of color separation setups when you send your electronic file to a service provider. Also tell your service provider about any traps you created in the document. You could also send a press-optimized PDF file from Press-Ready, for example, to your service provider for final production. Keep in mind that you must remain in close communication with your printing professional for each print job.

On your own

Now that you have learned how to install printers and set print settings, you're ready to improve your printing skills.

Try printing proof separations to a desktop printer. When setting up the printer, be sure to use a PPD for a PostScript level 2 or higher output device. If the poster doesn't print on a paper size your printer supports, set scaling in the Scale and Fit panel of the Print dialog box (not the printer driver dialog box).

Review questions

1 Why should you use the PostScript printer driver supplied on the InDesign CD?

2 What does a preflight check reveal?

3 What is meant by the term *bleed*?

4 What is overprinting? What is knocking out?

5 Why do you overprint a process [Black] stroke on rich black objects that cross over white areas? What is this technique called?

6 In which area of the print dialog box do you specify screen frequencies and output device resolution?

Review answers

1 The printer drivers control many printing functions and improve printer performance. For example, the driver for Mac OS systems enables the InDesign printing options for color, scale and fit, graphics, page marks, and so on. In Windows, the PostScript files will be smaller and more efficient. (In Windows 2000, however, you can use the PostScript printer driver included with Windows 2000.)

2 The preflight check warns of problems that may prevent a document from imaging correctly, such as missing fonts or outdated or missing files. In addition, the preflight check provides information about a document, such as the inks it uses, the first page on which a font appears, and print settings.

3 A bleed is a printed area that extends beyond the crop marks of the page.

4 With overprinting, a second ink is applied on top of the first ink on the page. With knocking out, the first ink is not applied to the area (called the knockout) where the second ink will appear.

5 You overprint a process [Black] stroke to hide flaws in registration on the press. This technique is called trapping.

6 You specify screen frequencies and output device resolution in the Color panel of the Print dialog box.