COLOR SEPARATION FOR SCREEN PRINTING

A BEGINNER'S GUIDE

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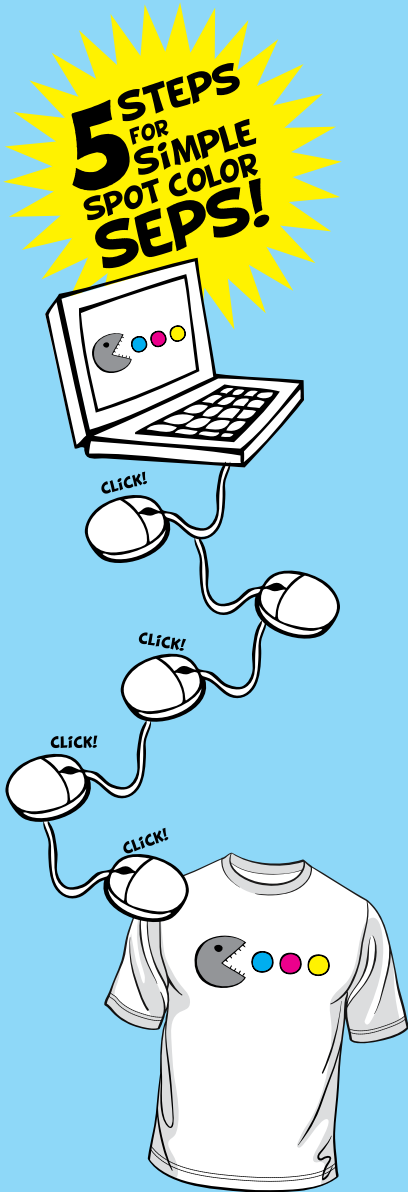
5 STEPS FOR SiMPLE SPOT COLOR SEPS!

INTRODUCTION

Color separation is an art. By definition, color separation is just as it sounds - separating out the colors in a design in to make individual screens for printing.

Many designs are simple enough to be separated easily if you have Photoshop software. This guide has been developed to show you the basic steps of separating a simple spot color Photoshop design into the channels needed to produce the film positives for screen printing. Simple, in terms of separation, means clearly defined color areas at a good resolution. Any number of colors will work using this type of separation, as long as the press has enough heads to accommodate. Colors in the design must be clearly defined with clean, distinct edges.

Deconstructing a design and recreating it using a finite number of colors is a skill that takes many years of experience, press work, and talent to master. Separating photorealistic images using varying halftone percentages to create screen printed blends is exemplary of the craft. This guide does not cover the separation process for highly complex designs. High end color separation is an entirely different process.

Creating spot channels in Photoshop and saving in an appropriate file format is a key part of the separation process. Depending on your level of Photoshop savvy, you may find it easier to create selections in any number of different ways. Photoshop has the ability to accomplish the same objective in many different ways. This guide demonstrates one method.
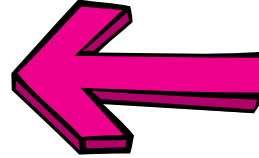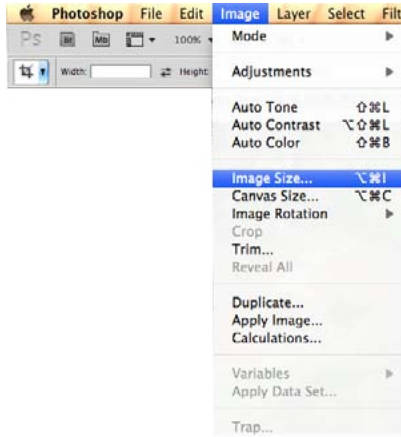
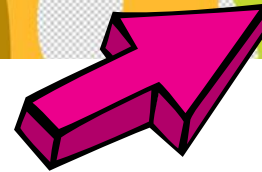For the purposes of this guide, let's separate the design on the t-shirt below.

5 STEPS
FOR
SIMPLE
SPOT COLOR
SEPS!
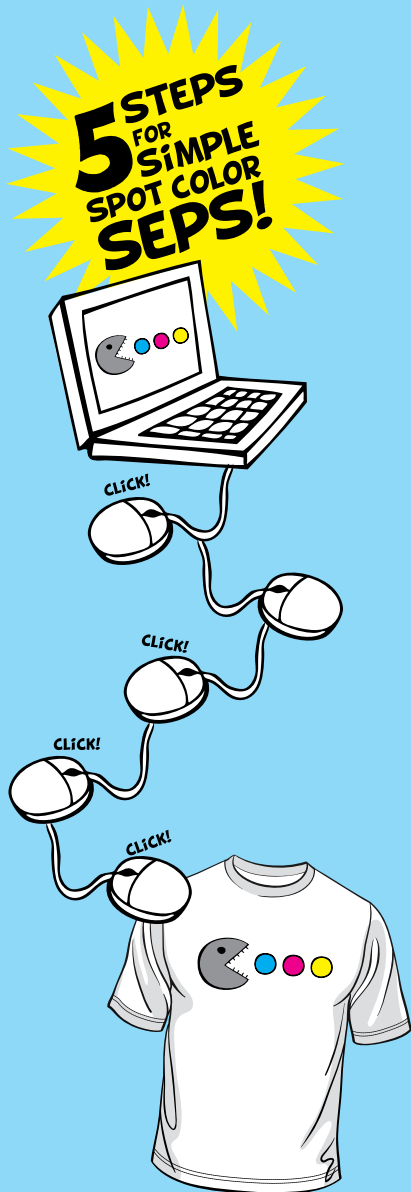
CLICK!
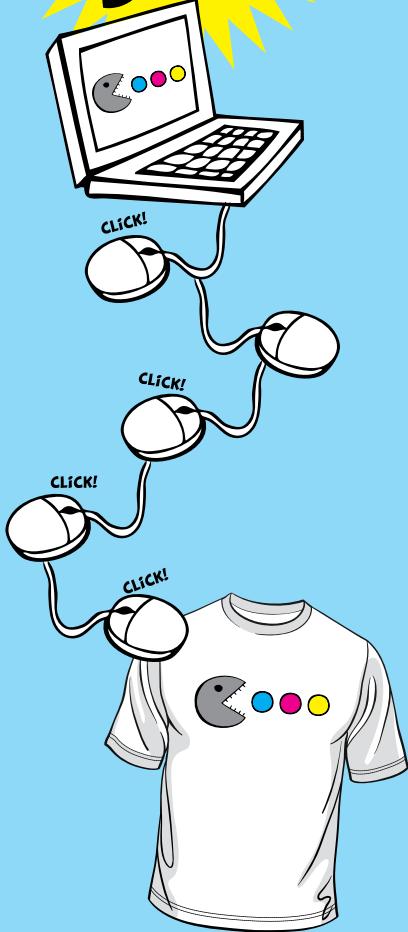
CLICK!

CLICK!

CLICK!

1 CHECK FILE SIZE

Open your file and check the resolution by clicking on Image (top menu bar) then Image Size (from the drop down).

In the Image Size dialogue box, we can see this file is 12" x 7.973" at 150 ppi. Photoshop files for screen printing should be created at a minimum of 150 ppi or dpi at the final print size. If we view this file at 100% the lines look clean, so we know the file is good for color separation.

PRO TIP

Images created at a lower resolution than 150 ppi will look pixelated or jagged. These images are not good for color separation. Most images retrieved from the web are 72 dpi and are not useable for screen printing.
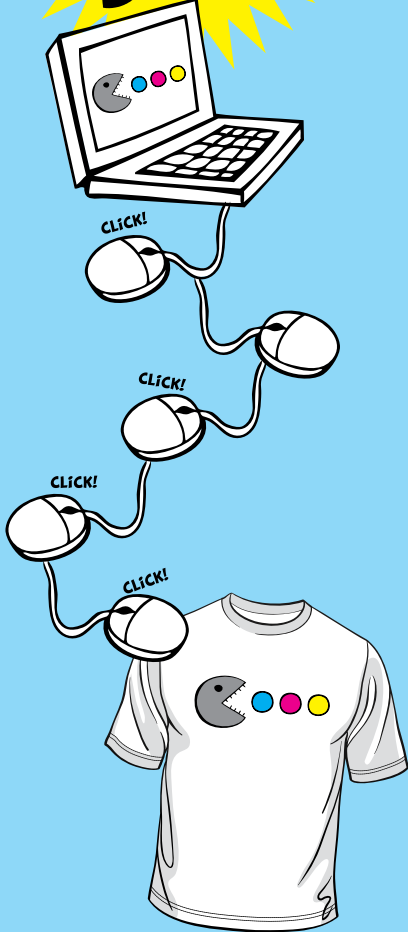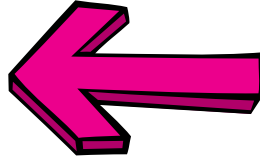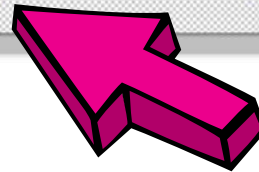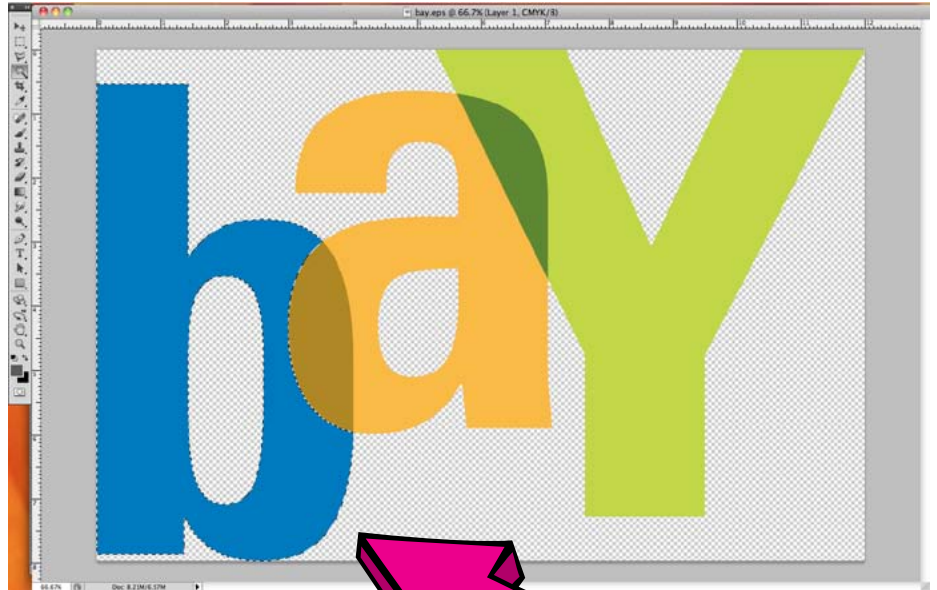
Each color in your design will need it's own screen for printing. The next step is to select each shape area that will be printed in the same color.

Click on the Magic Wand tool to select it. The Magic Wand tool can be found in the toolbar defaulting on the left facing side of your Photoshop desktop.

Click on an area filled with color in you design. In this example, we have clicked on the blue area in the "b." You will notice that a dotted blinking line shows the selected area.

Hold down the shift key and click on multiple areas to select more than one shape. If you have selected an area by mistake, simply click on it again to deselect.
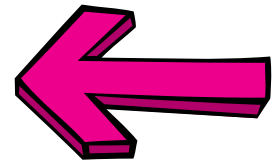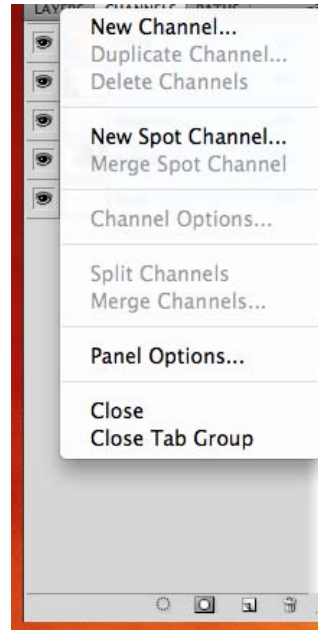
3 CREATE A SPOT CHANNEL

If your Channels window is not visible, click on Window (top menu bar) and make sure Channels has a check mark next to it.
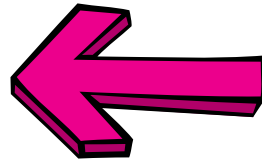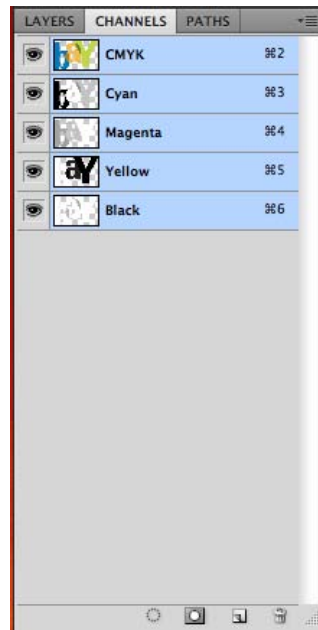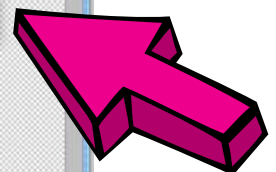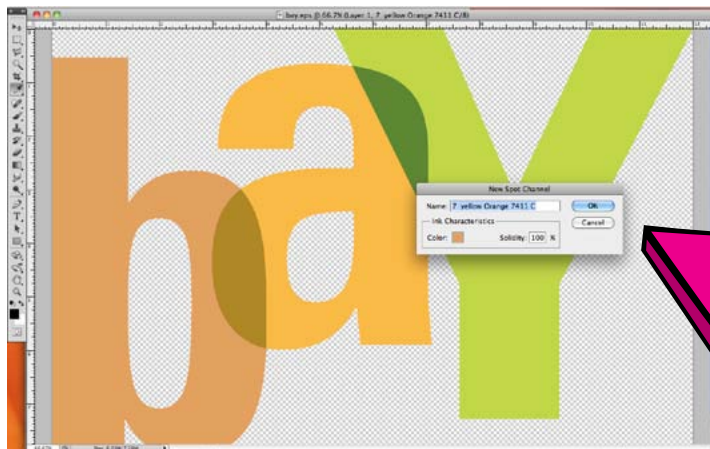
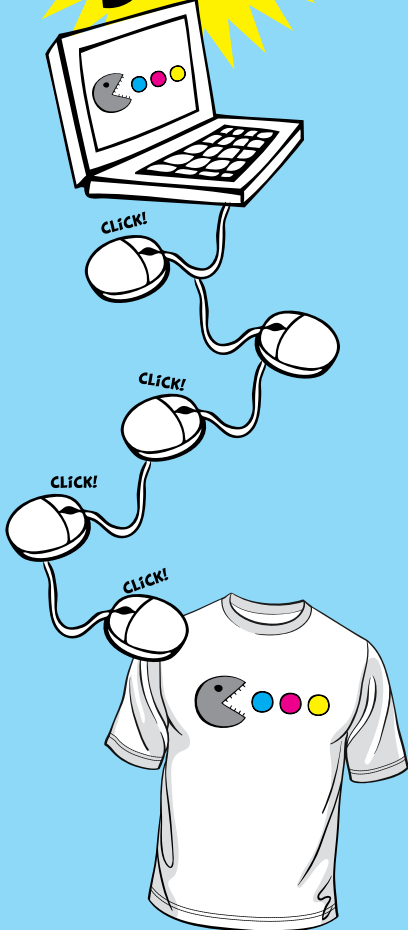Then, click and hold the menu icon in the upper right corner to release the Channels drop down menu.

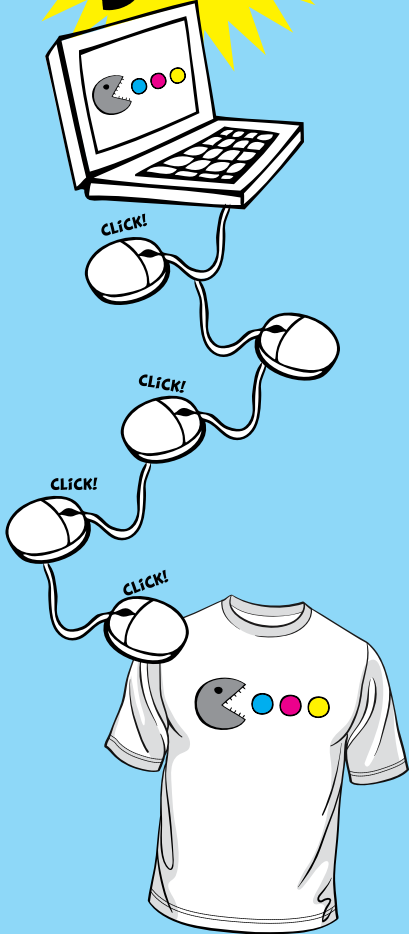Next, select New Channel... from the Channels drop down menu.

A New Spot Channel dialogue box will open with default information or with information from the last channel that was created.

You will notice that the area you selected with the Magic Wand tool changes to the color designated in the New Spot Channel dialogue box. In this example, the "b" has changed from blue to orange. You can assign any color you like for your New Spot Channel and it will not affect your end print. The end print depends on the ink color in the screen. This feature is used to help you view the area you have selected. If you assign a color to match the print color, you can better visualize what the print will look like.
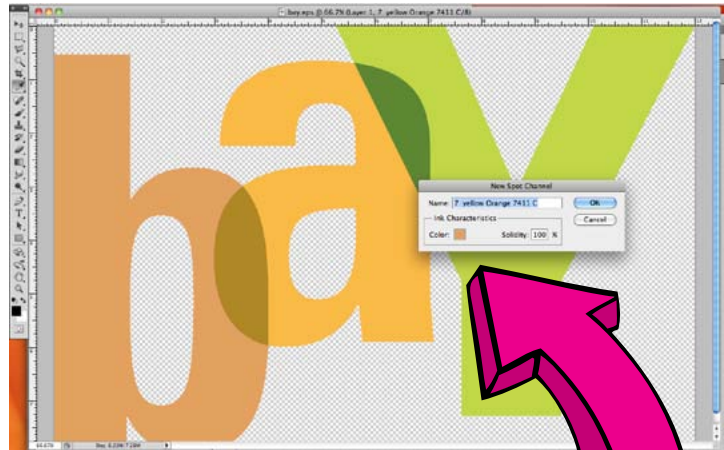
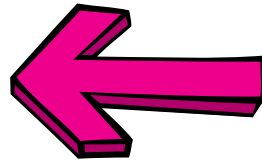Assign a color name. It's helpful to use a specific Pantone color if you have one.
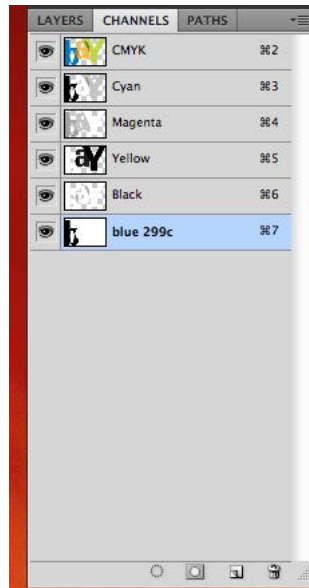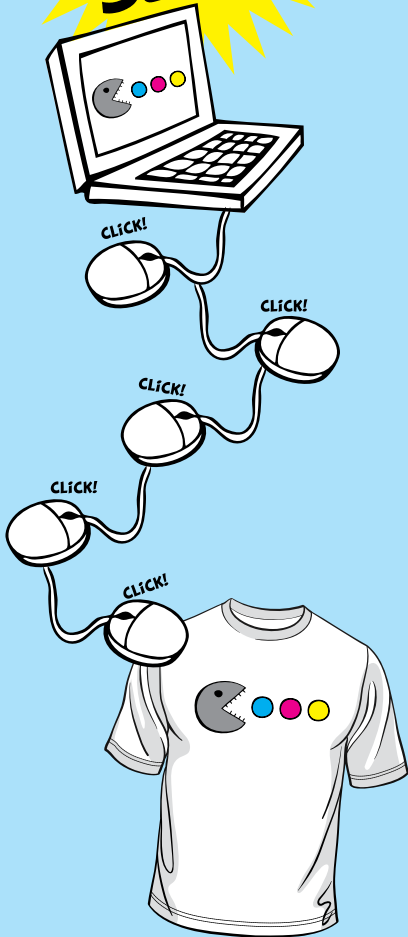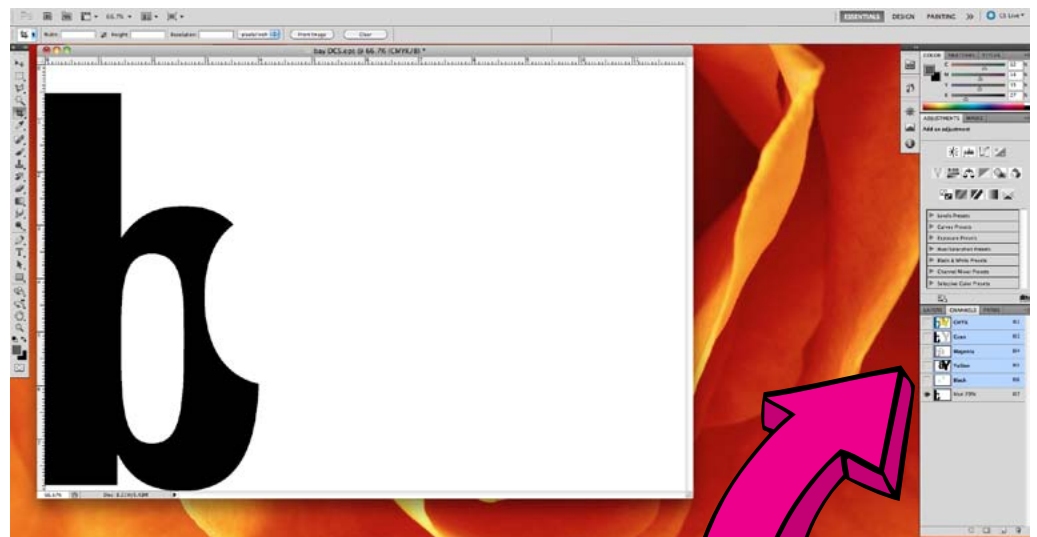
Then, click on the color box to select a representative color for the New Spot Channel.
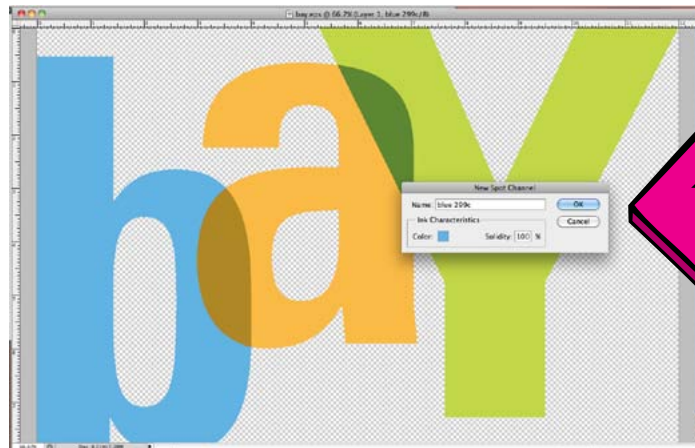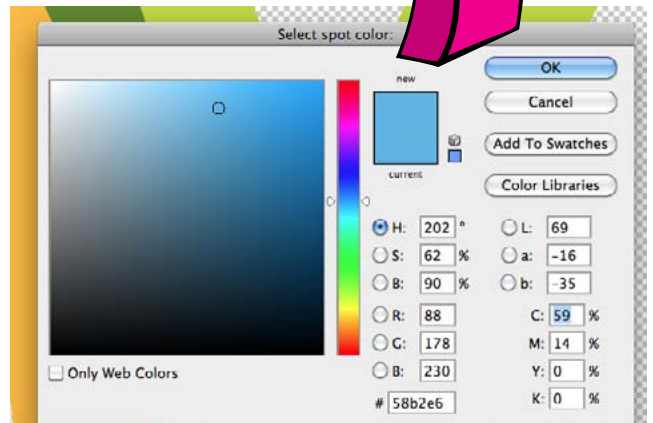
Once the color name and preview color are updated, click OK.

The spot channel you created is now visible in the Channels window.

You can turn off the CMYK channels by clicking the eye to the left of each channel. If you leave the eye on your newly created spot channel and turn the others off, you can see what the film positive will look like when the separations are printed on film.
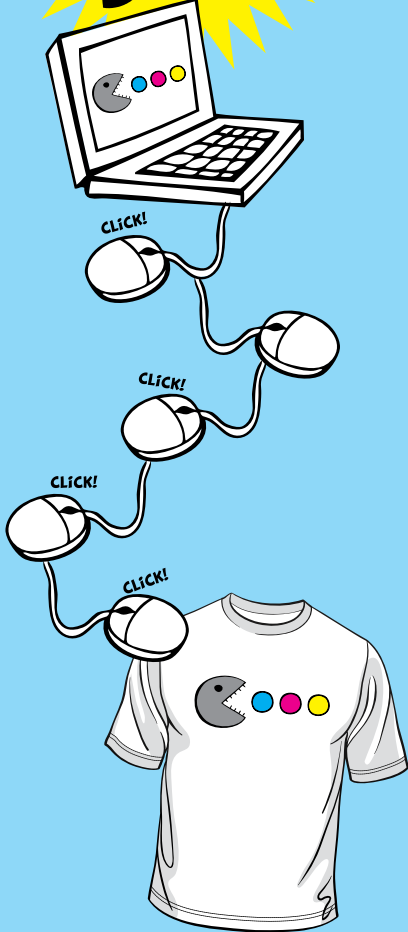
PRO TIP

If you are designing or separating art files for screen print, a Pantone fanbook is worth the investment. Pantone makes a great set for those just starting out. There are some online guides, however, this is not an accurate way to select Pantone colors as computer monitors preview differently.
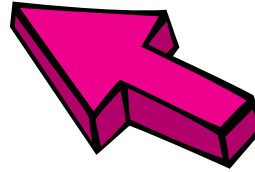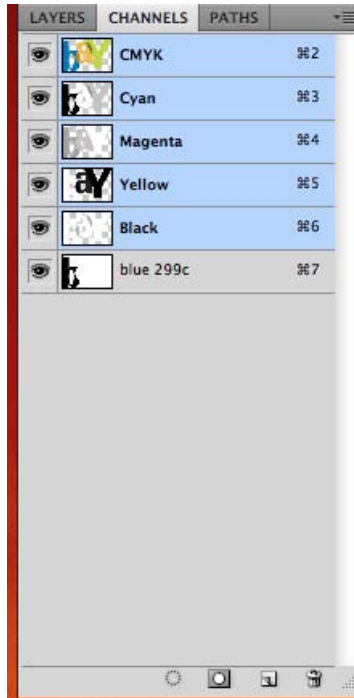
You need a unique spot channel for each color that will be printed in your design. Create New Spot Channels as you did in step three until you have a channel for each print color.
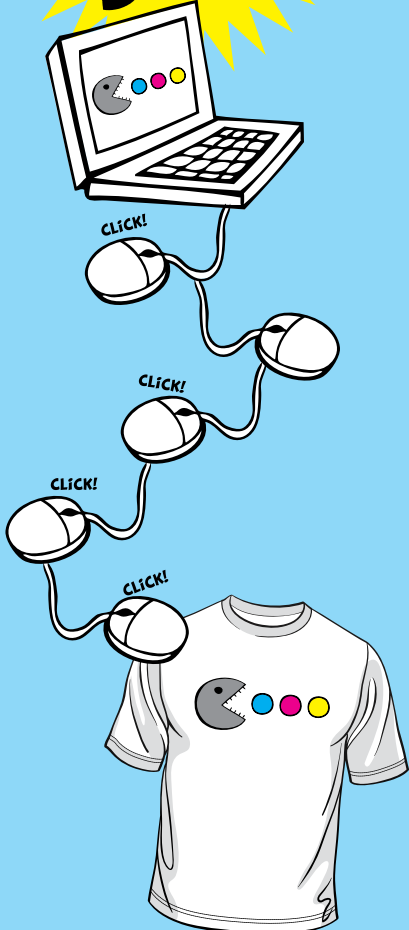
BUT FIRST!

Before you begin selecting areas using the Magic Wand tool, be sure the main CMYK channel at the top of your Channels window is selected. If you are working in RGB, you will select the main RGB channel.

In this example, we have made a total of 5 spot channels.

5 SAVE YOUR SEPS

Now that all channels are created, you will save the file in a format that is compatible with channel information. Do this by clicking on File (top menu bar) and selecting Save As from the drop down menu. A good format to use is Photoshop DCS 2.0. This is a unique EPS format, and the file extension will read ".eps" (not DCS). It is helpful to include the actual text "DCS" in the file name to help differentiate it as the final separation file from any other working files.
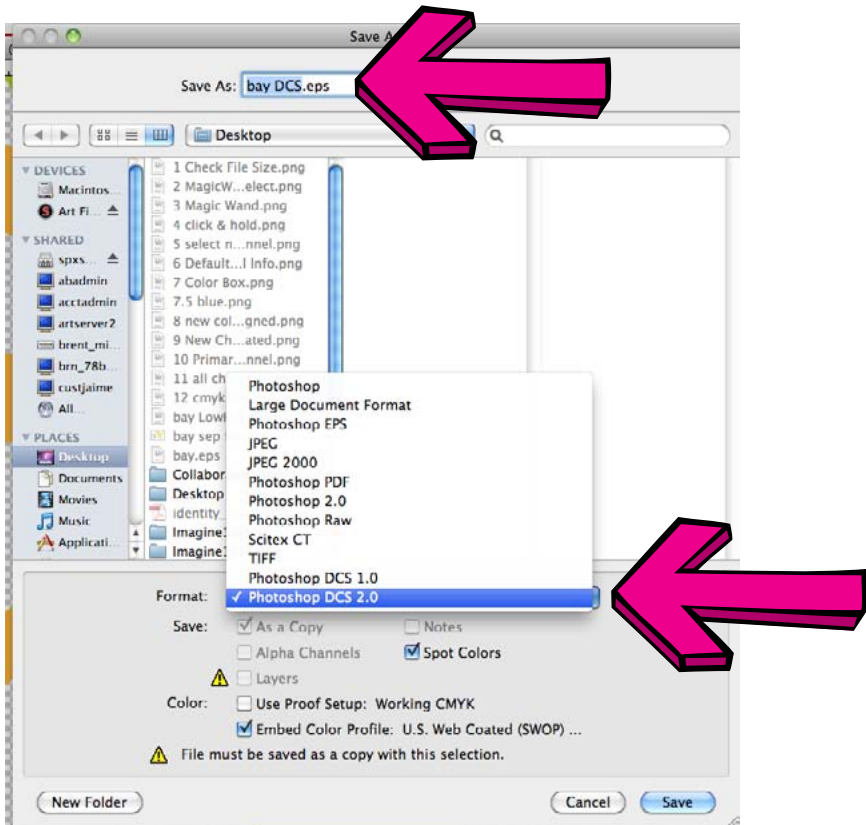

The DCS 2.0 Format settings affect the preview, size, and compatibility of the art file with printers, RIPs, and other design software. Below are some recommended settings for small file size and universal use.

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CLICK!
CLICK!
CLICK!
CLICK!
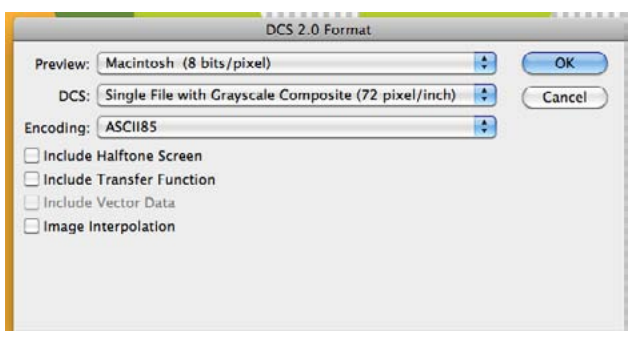
CONCLUSION

There you have it! You can now separate a simple spot color design in Photoshop!

Separating the art file is only part of preparing the design for screen printing. As a designer or separator, you may be making decisions on what size the design will print and which ink colors to use. We've developed a number of guides on these topics and more available for free download online. Enjoy!
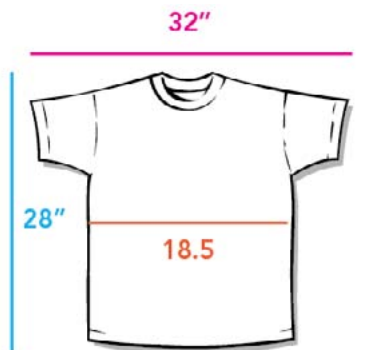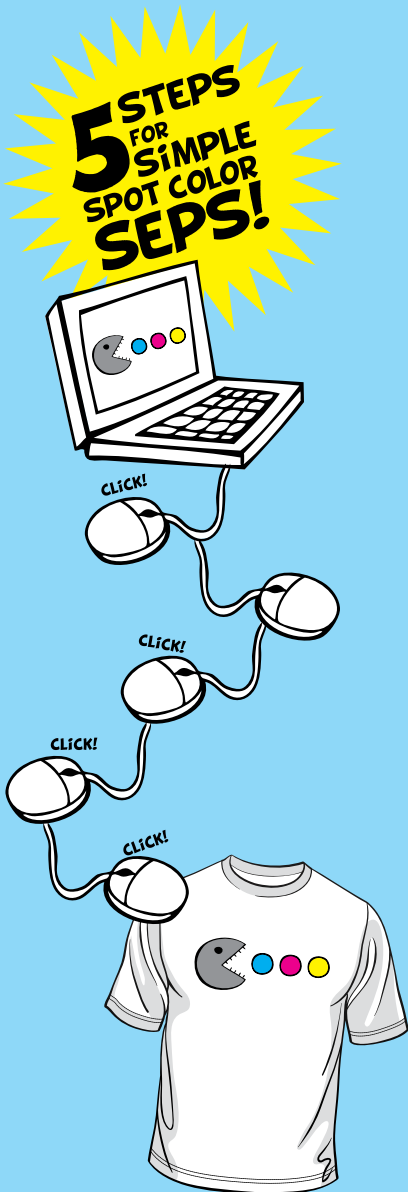
T-shirt Design Sizing Guide
Mock up your design across multiple sizes of guys and girls fashion t-shirts.

Pantone & Textile Screen Printing
This guide covers how to select Pantone colors to make sure your end product prints the way you intend it to.