UltraSeps™

v3

Advanced, Easy-To-Use Color Separation Software For The T-Shirt Screen Printing Industry

www.ultraseps.com • info@ultraseps.com

About UltraSeps Version 3

Welcome to UltraSeps Version 3, the most powerful, accurate and feature rich color separation solution available to screen printers!

UltraSeps v3, is the fifth generation of our original product, QuikSeps released in 1999 and is the successor to UltraSeps v2, our previous high-end color separation program released in 2012.

UltraSeps Version 3 primarily adds increased simplicity, speed, error reduction technology and the ability to install to all of your systems as no additional charge.

UltraSeps is developed by Steve Roginski, a screen print industry veteran of over 30 years and avid Photoshop user since the first commercial version was available in 1990.

Every form of color separation required by the t-shirt screen printing industry is available using UltraSeps. Basically, if UltraSeps doesn't provide it, you'll most likely never need it!

UltraSeps v3 is extremely easy to use. The program does an excellent job of insulating end users from the complexities of Photoshop. Only a modest learning curve is required and even Photoshop novices will be able to generate high quality separations during the very first day of use.

Please take the time to explore the user guide. Although containing many pages as UltraSeps includes an immense number of features, its heavily illustrated and therefore won't take a great deal of time or effort to read.

The user guide was primarily written on a Windows computer using Adobe Photoshop CS4 for the vast majority of screen shots as it utilizes information from the original UltraSeps user guide of 2009.

This version of the user guide is the 2021 edition. Changes and corrections are throughout although the major change to UltraSeps is no longer needing to submit a Request Number to us to unlock UltraSeps on your systems. Updated and clarified information on printing separations to film is covered as well. We assume the vast majority of information within to remain valid for at least a decade from publication date. If a major change occurs with new versions of Photoshop as released, they will be addressed on our website.

Enjoy UltraSeps Version 3!

Steve Roginski
UltraSeps Developer
Extreme Sportswear, Extreme Graphics Technology LLC
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What's New In UltraSeps Version 3

Improvements, Changes and Additions When Compared To UltraSeps v2:

Changes That May Not Be Obvious At First Glance

UltraSeps v3 features updated plugins, JavaScript's and Actions to accommodate future changes to operating systems, Photoshop and system CPU's.

Version 3 also runs considerably faster and is virtually immune to any type of issue or error. In fact, it also includes a function to run that checks if all in installed correctly.

Due to these updates and the removal of the driver software distributed with UltraSeps previously, UltraSeps Version 3 should cover your color separation needs for the next decade or more and have zero issues with yet to be released versions of Photoshop, Windows, Mac OS, and should also be compatible with the new (non-Intel) CPU Apple is switching to in 2021.

Major Changes

The upgrade not only features new plugins, scripts and actions, but we have also eliminated the Request Number – Unlock Code scheme with Version 3. So what does this mean? Well, once installed it will simply run on your system!

Want to install it to your other systems and laptop for example? No problem! Just run the installer, launch Photoshop, load the Actions and you're all set to go!

No hassle! Not possible to get locked out of the software! Easily install at any time if needed to a new system!

All we ask is to please not redistribute, share or give away the software!

This does not infer that a single copy should be shared by countless users! If more than a few users are to access UltraSeps at your shop, please play fair and purchase a copy for each additional user or at the very minimum, pair of users for those with large art department staffs. Years have gone into developing UltraSeps and believe me, putting something together such as this isn't easy!

Improvements, Changes and Additions Continued:

UltraSeps v3 will simplify using UltraSeps when getting a new system, swapping hard disks, migrating to different systems, etc. It also protects you in the very unlikely event of something catastrophic happening to all here involved with UltraSeps as we never want our users locked out of the program.

Both Windows and Macintosh installers are included. Running the installer will install an authorized copy of UltraSeps v3 to your system. It will also overwrite a previous installation (if applicable) which is advisable to do as any future licensing issues will be avoided.

If you have installed UltraSeps previously, such as the trial version, following purchase just download and install Version 3. The installer will overwrite the existing copy of UltraSeps v2 or the trial version.

Version 3 also includes a new set of Actions. These Actions are similar to the Version 2 Actions with changes to reflect the change in licensing.

The Actions also include a function to test if UltraSeps v3 has been installed correctly. If forgetting to use the new Actions, UltraSeps v3 will still run with the older set of Version 2 Actions.

The installers as of the publication date of this user guide support Photoshop versions beginning with CS3 through the latest releases of Photoshop Creative Cloud.

This User Guide contains links to each subject within the Bookmarks Sidebar of Adobe Acrobat Reader.

Click the Bookmarks Icon to reveal links to the contents.

The User Guide is best viewed with a recent version of Adobe Acrobat Reader. Download a free updated version here: http://get.adobe.com/reader/

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Installing UltraSeps Version 3 - Windows

Download UltraSeps Version 3.

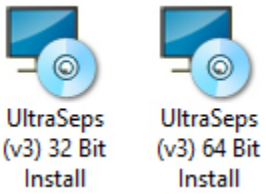
Unzip the file downloaded.

Decompressing the Zip file will result in a single folder named UltraSeps v3 Windows.

Place this folder on your desktop for easy access. It contains all required files.

Do not delete this folder following installation.

Close Photoshop if open.



Run the correct installer file (32 bit System or 64 bit System) within the UltraSeps v3 Folder for your computer.

It doesn't matter what version of Photoshop you're using, CS3-4-5-6-Creative Cloud, etc.
Simply run the installer designed for your system.

It could take a while to begin installation, up to several minutes as the installer needs to search for all installed copies of Photoshop.

If the install seems to be taking too long however, look at your System Tray on the bottom of your screen. Most likely Windows is flashing a warning asking if its okay to proceed. Not all systems will ask for permission to proceed.

Once complete, the plugin and support files needed to run have been installed.

You are now ready to open Photoshop to install the UltraSeps Actions and Color Settings file. See pages 8-9.

We provide all additional test images, distress filters, updates and support files as downloads from our website to registered users.

UltraSeps requires Adobe Photoshop CS3 or higher. All versions of Creative Cloud are supported.

UltraSeps runs on Windows XP, Vista, Windows 7, Windows 8, Windows 10 and higher. Both 32 and 64 Bit.

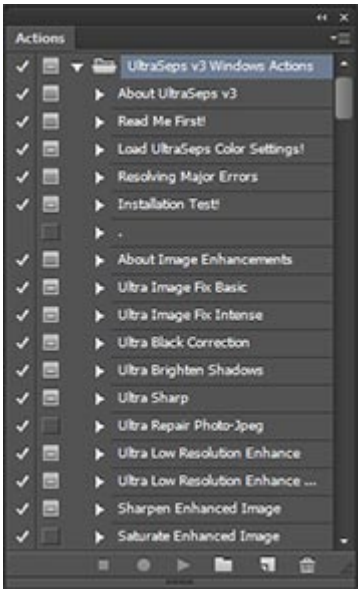
If a new or different copy of Photoshop is installed at some point in the future, see the section on how to install to a newly downloaded version of Photoshop.

Loading The UltraSeps Actions

Launch Photoshop and open the “Actions Palette”.

If not visible on your screen, go to the “Window” menu within Photoshop and check “Actions”.

Click the downward facing arrow at the top right corner of the actions palette and select “Load Actions” as illustrated.



Now locate the **UltraSeps v3 Windows** or **UltraSeps v3 Mac** Actions file from the UltraSeps v3 folder on your desktop, or wherever you may have placed it and click the Load Button.

Once UltraSeps v3 has loaded into your actions panel, expand the folder to view its contents and it should appear similar to the graphic here.

UltraSeps v3
Windows Actions

Again click the downward facing arrow at the top right corner of the actions palette and select “Button Mode”. This is how you’ll want to run UltraSeps.

Using the Actions in Button Mode will avoid malfunctions resulting from clicking the modal boxes accidentally (these are the small icons and check marks next to the actions pictured in List View above.) These also appear within the actions themselves and will damage them if changed.

Rest assured if deciding button mode is not for you and for some reason the actions malfunction, simply delete the entire set and reload a fresh copy. A few functions of UltraSeps must be run with the Actions in Button Mode however.

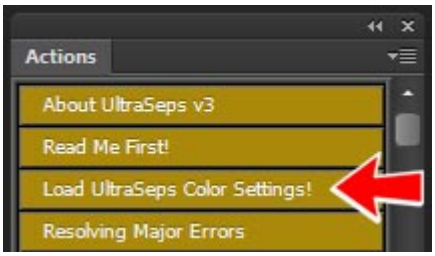
If many other actions are loaded into your Actions Panel in addition to UltraSeps, Button Mode may then provide a confusing view. In that case, use List View and trigger an action by selecting it and clicking the Play Arrow at the bottom of the Actions Palette.

Loading The UltraSeps Color Settings File

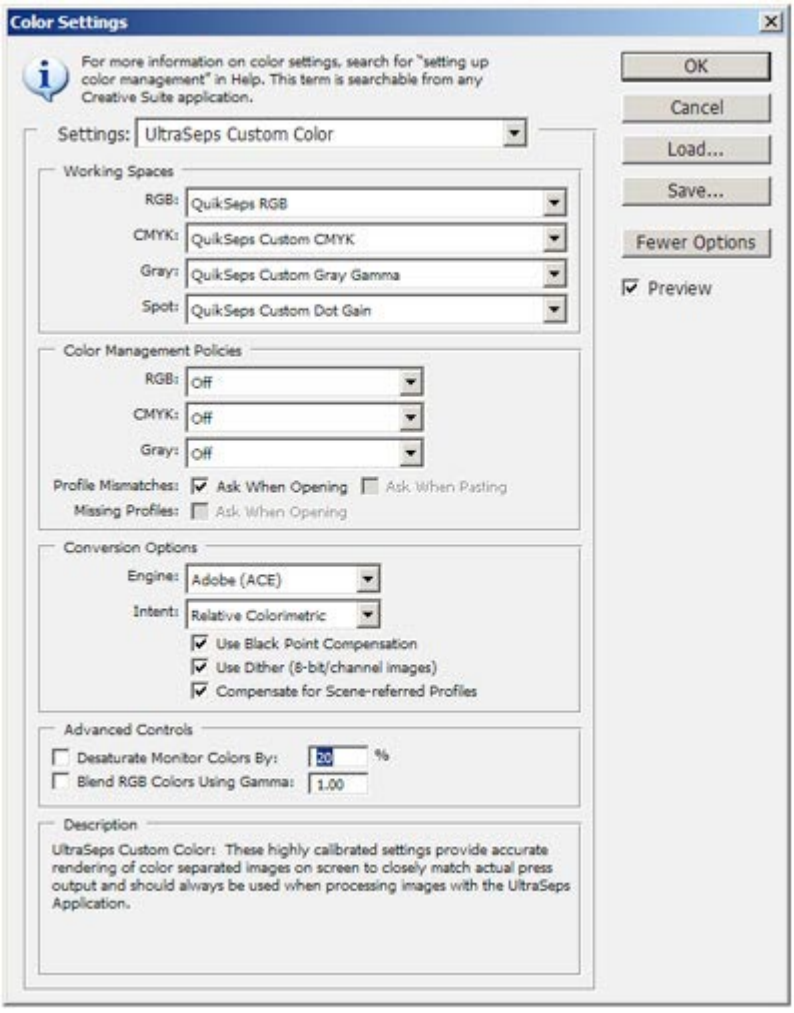
The final step to installation is to configure Photoshop to render separations correctly when running UltraSeps and to adjust for black ink generation. This step is required to run color separations that will print accurately and also display properly on screen. Modifying Photoshop's Color Settings is very simple and requires the automated loading of a single file.

Go to the UltraSeps Actions recently loaded and click the "Load UltraSeps Color Settings" button.

This loads the UltraSeps Custom Color.csf file into Photoshop.



If now choosing Edit > Color Settings from Photoshop's menu bar, you'll see the color settings have been changed.



Note: Its normal for the RGB, CMYK, Gray and Spot Working Spaces to include the term QuikSeps. These are the correct settings.

Loading the "UltraSeps Custom Color.csf" file is vital to the operation of the program and cannot be omitted!

If its not loaded, the channels will not render correctly thus making accurate adjustments impossible as dot gain isn't compensated for.

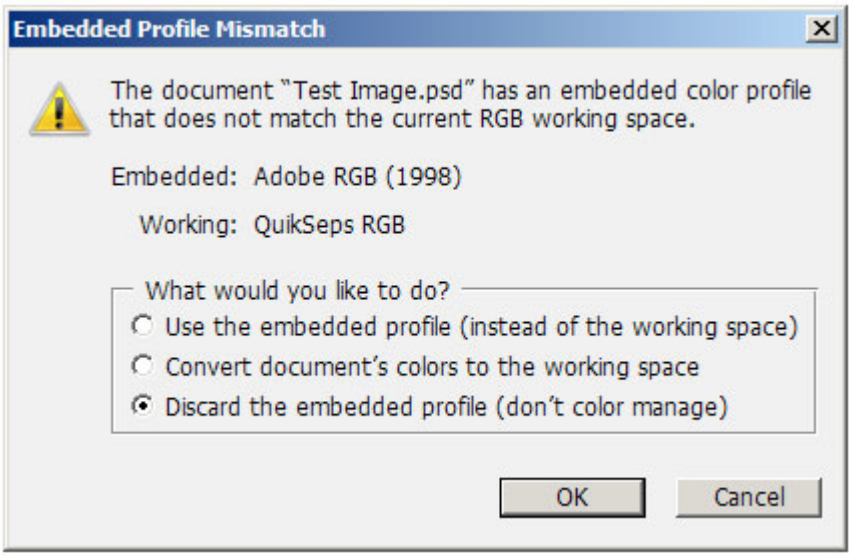
A backup copy of the UltraSeps Custom Color.csf file can be found within the UltraSeps v3 folder inside the Backup Files Folder if for any reason you'd ever need to load the file manually.

A Final Important Word On Color Settings:

Its very possible and likely that previously saved art or files from other sources will generate an **Embedded Profile Mismatch Warning** when attempting to open with Photoshop while using the required UltraSeps Color Settings.

This is nothing to be too concerned with.

Simply check the Convert Document Color or the Discard Embedded Profile button and click OK.



Installing UltraSeps Version 3 - Macintosh

Download UltraSeps Version 3.

Unzip the file downloaded.

Decompressing the Zip file will result in a single folder named UltraSeps v3 Macintosh.

Place this folder on your desktop for easy access. It contains all required files.

Do not delete this folder following installation.

Close Photoshop if open.

Run the installer package within the UltraSeps v3 Folder.

If getting an Unidentified Developer Warning and/or the installer will not run due to Apple's excessive security, control-click the installer and choose Open.

The installer will now run.

This is due to the Apple store not being aware of UltraSeps and trying to prevent the installation in addition to the restrictive security of the latest releases of Mac OS.

Once complete, the plugin and support files needed to run have been installed.

You are now ready to open Photoshop to install the UltraSeps Actions and Color Settings file. See pages 7-8-9.

We provide all additional test images, distress filters, updates and support files as downloads from our website to registered users.

UltraSeps requires Adobe Photoshop CS3 or higher using Macintosh.

UltraSeps requires an Intel processor based Mac or higher. It does not run on older Power PC Macs.

UltraSeps v3 should also run on new yet to be released Macs that use non-Intel processors.

The single installer will install UltraSeps for all versions.

If a new or different copy of Photoshop is installed at some point in the future, see page 14.

Previous Version Indicator! How To Fix!

If the Try-Buy-Unlock-Quit window or the Expiration Window below appears when running UltraSeps v3, the old version (v2) is still installed.

Quit Photoshop and run the UltraSeps v3 installer. Make sure it completes!

After doing so, relaunch Photoshop and try again. If still there, then for some reason the old plugin has not been overwritten by the installer and needs to be deleted manually (which would be unusual)

Go to your Photoshop folder and open it.

Now, open the folder named Plug-ins.

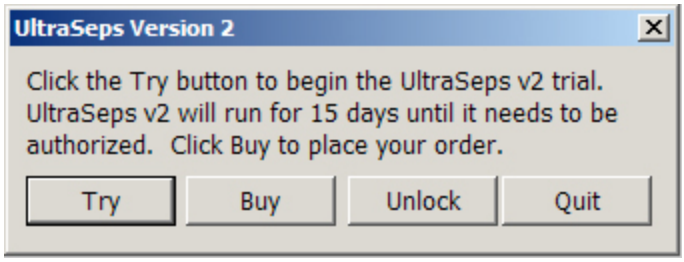
Delete ALL Plugins with UltraSeps in their name (if present).

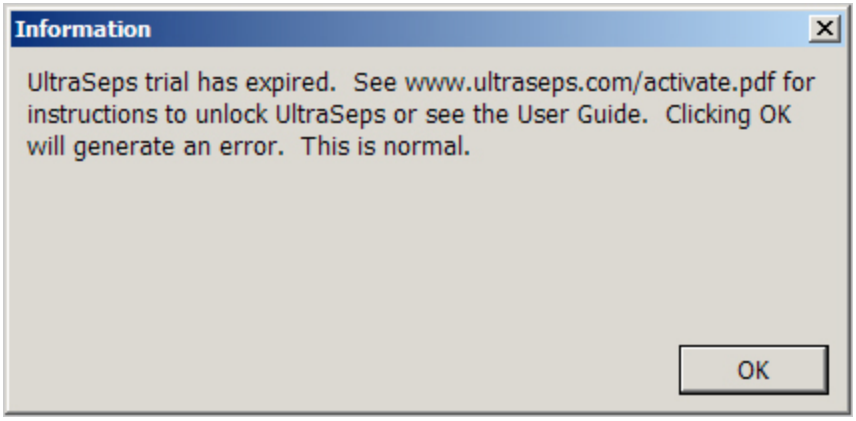
Next, within the Plug-ins Folder, look for a folder named Automate (if one exists).

Open the Automate Folder (if applicable) and delete ALL Plugins with UltraSeps in their name.

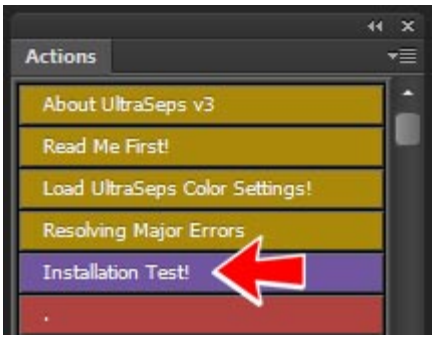
Next, run the installer with Photoshop closed then open Photoshop and try again.

All should now be functional.





Installation Test

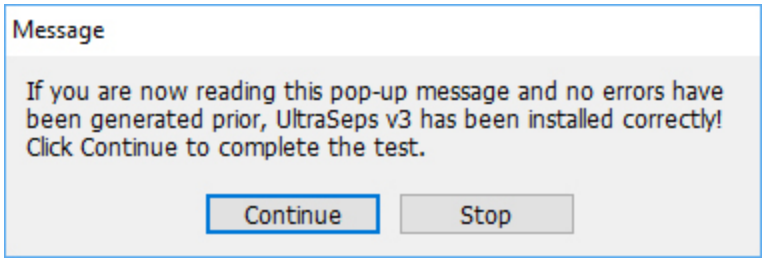


After running the installer with Photoshop closed, followed by opening Photoshop and loading the Actions, it's a good idea to run the Action to test if all has been installed correctly.

The Action is the fifth from the top and named Installation Test!

Simply run the Action and respond to the prompts.

If reading the success message box and no errors have been generated, and/or a dialog box does NOT appear asking you to Open a file, then UltraSeps v3 has been installed correctly.



If an 8800 error is generated, this indicates the UltraSeps Plugin is not installed to Photoshop. Quit Photoshop and run the installer again. Be certain the installer completes.

If the file Open dialog box appears, or a Missing JavaScript message appears, you have likely not run the installer and are missing files. If so, run the installer.

Note: The installer has placed folders on your system named "QSU" and "UltraSeps". These folders and their contents are accessed by UltraSeps only. There are no end-user files within. Deleting or moving these folders or any of their contents will render UltraSeps nonfunctional.

How To Manually Install UltraSeps Plugin

If after running the installer, restarting Photoshop and loading the Actions into Photoshop an error is generated when trying to use or test UltraSeps such as the following:

"8800 Command Unknown Not Available"

"8800 Command QS Not Available"

This indicates the UltraSeps Plugin is not installed to Photoshop.

If generated, make sure you have in fact ran the installer with Photoshop closed. Also be certain the installer has completed.

If the error persists, then likely Photoshop is not installed to its default location or the Photoshop version folder has been renamed by the end user. If this is the case, the UltraSeps Plug-in will need to be installed manually which is easy to do!

Manually installing the plugin will resolve an unknown version of Photoshop issue as well.

The next 2 pages cover how to manually install the correct UltraSeps Plugin using different versions of Photoshop as an example.

Although if Photoshop is installed to its default location and not renamed, manually installing the plugin should not be necessary.

How Manually Install UltraSeps Plugin (If Needed)
Photoshop CC 2017-2018-2019-2020-2021 and Later:

Close Photoshop.

Now go to the UltraSeps v3 Folder you have downloaded previously containing all the files.

Open the folder containing the files for the version in use, Windows or Macintosh.

Open the Backup Files Folder.

Inside the Backup Files Folder open the Plugins Folder. Inside this folder are multiple UltraSeps Plugins. Make sure to select the correct one! Do not double click these in an attempt to run them!

The plugin needs be copied to a specific place within the Photoshop Folder manually. If on Macintosh, the correct plugin is labeled for the copy of Photoshop in use. On Windows, the correct plugin is labeled for the bit version of Photoshop (32 bit or 64 bit)

Now locate the Adobe Photoshop folder currently in use and open it.

Make sure its the copy being used!

Next, open the Plug-ins Folder inside the Photoshop folder.

Copy the correct UltraSeps Plugin to the Plug-ins Folder of Photoshop.

Restart Photoshop if running.

Load the UltraSeps v3 Actions into the Actions Panel of Photoshop if not done so already.

Run the Action to load the UltraSeps Color Settings.

UltraSeps should now be functional. If not, then you have likely copied the wrong UltraSeps Plugin to Photoshop. If so, remove the current UltraSeps Plugin and copy the other version and restart Photoshop.

Make sure only 1 UltraSeps Plugin (the correct copy) is there. Errors will be generated if more than 1 UltraSeps Plugin is installed.

How Manually Install UltraSeps Plugin (If Needed)
Photoshop CS3 - Photoshop CC 2015.5:

Close Photoshop.

Now go to the UltraSeps v3 Folder you have downloaded previously containing all the files.

Open the folder containing the files for the version in use, Windows or Macintosh.

Open the Backup Files Folder.

Inside the Backup Files Folder open the Plugins Folder. Inside this folder are multiple UltraSeps Plugins. Make sure to select the correct one! Do not double click these in an attempt to run them!

The plugin needs be copied to a specific place within the Photoshop Folder manually. If on Macintosh, the correct plugin is labeled for the copy of Photoshop in use. On Windows, the correct plugin is labeled for the bit version of Photoshop (32 bit or 64 bit)

Now locate the Adobe Photoshop folder currently in use and open it.

Next, open the Plug-ins Folder inside the Photoshop folder.

If a folder named **Automate** does not already exist inside the Plug-ins folder, create one.

Copy the correct UltraSeps Plugin to the **Automate Folder** for your copy of Photoshop and system.
Once again, the Automate Folder is inside the Plug-ins Folder of Photoshop CS3 - CC 2015.5.

Restart Photoshop if running.

Load the UltraSeps v3 Actions into the Actions Panel of Photoshop if not done so already.

Run the Action to load the UltraSeps Color Settings.

UltraSeps should now be functional. If not, then you have likely copied the wrong UltraSeps Plugin to Photoshop. If so, remove the current UltraSeps Plugin and copy the other version and restart Photoshop.

Make sure only 1 UltraSeps Plugin (the correct copy) is there. Errors will be generated if more than 1 UltraSeps Plugin is installed.

When Installing A New Photoshop Version

At some point, a new or different version of Photoshop will probably get installed to the computer currently in use by UltraSeps v3.

Following a newly installed version of Photoshop Creative Cloud

If installing a new Creative Cloud version of Photoshop from a previous Creative Cloud version, UltraSeps v3 should automatically copy itself to the new CC version. The only end user requirement is to run the Action to load the Color Settings.

Get UltraSeps v3 Running With A Newly Installed Older Copy Of Photoshop CS3-CS4-CS5-CS6

If installing a new OLD version of Photoshop prior to Creative Cloud, the UltraSeps v3 installer will need to be ran again with Photoshop closed. Then open Photoshop to load the Actions followed by running the Action to load the Color Settings.

If Photoshop Is Installed To A Non-Default Location

Our installers assume Photoshop is installed to where it should be located.

C:/Program Files/Adobe on Windows
or in the Applications Folder on Macintosh.

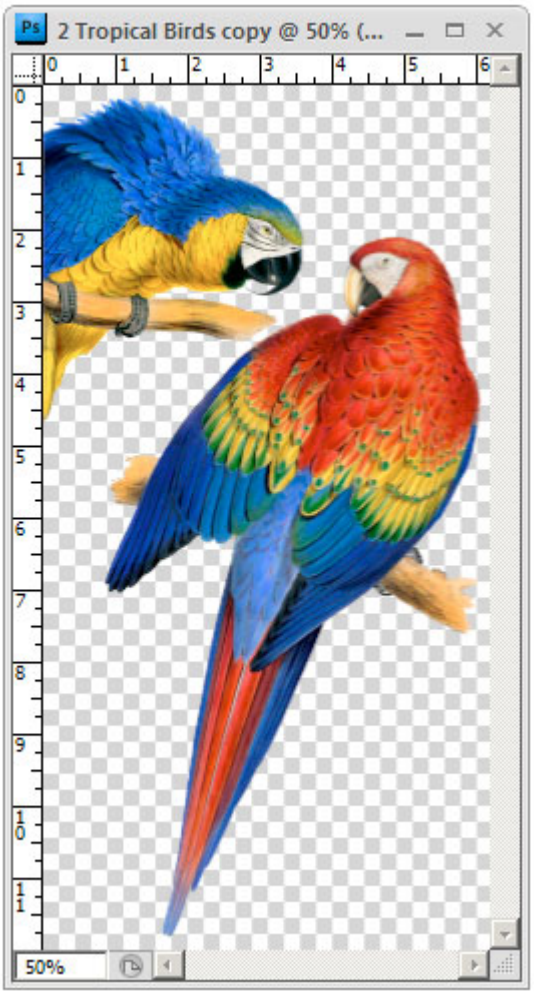
If located elsewhere, the plugin will not get placed by the installer and will need to be installed manually.

Instructions on how to manually install the plugin can be found on the previous 2 pages.

Basic Rules Of Operation

The user guide covers every form of color separation, adjustment, enhancement, etc. Here's a basic head start of what's expected from the end user.

Although UltraSeps v3 contains logic so no errors are ever generated when trying to run a separation on an incorrectly prepared file, there are a few things you should know.



The most important aspect to remember is if intending to use an underbase and highlight white, the file needs to be "transparent", such as the image on this page.

There can be no layers or backgrounds filled with white or the art itself surrounded by white. If there is, obviously this is seen as white ink and will be generated within the white under-base and highlight channels. This is fact, if using UltraSeps or not to color separate with.

Although I could write a script to remove all white surrounding the image, this would also remove most whites within the art itself. There is no guaranteed automated way to determine if the white is part of the image or not.

If not planning on using an underbase or high-light white, then it doesn't matter if the image contains white surrounding the art.

For optimum results, the art should be bright, clean and colorful with adequate color satura-tion and file resolution. Small 72 dpi jpegs taken from websites just won't do.

Avoid working in and assembling art in CMYK mode at all costs since this destroys color. ALWAYS work in RGB mode! If wanting to run a CMYK separation, prepare the art in RGB mode and let UltraSeps handle the conversion.

The file can be named anything you desire.

Once satisfied with the appearance of the art, save it and you're ready to go!

Make sure no other files are open within Photoshop when running a separation!

Continued.....

Decide what kind of separation you'd like, Simulated Process, Index, CMYK, Grayscale, Specialty etc. from the Actions and Click!

If you don't have a file ready to test, the program contains sample images ready to separate. In fact, for those new to UltraSeps, we highly recommend running a few different color separations on the test file named "Space Shuttle" just to get a feel for the program.

When all on-screen activity stops, the separation process is complete.

Make Sure To Review The Entire User Guide!

I highly recommend to continue with the User Guide for in depth instruction. The first few pages will help getting up-to-speed with file preparation. The remainder is structured by starting with the top of the UltraSeps v3 Action Set and working our way down. By the time you're done, you'll be ready to tackle demanding jobs, even for those who are fairly new to Photoshop and color separation.

I'd like to stress again that UltraSeps v3 is very tolerant of processing files which are not formatted correctly for use. This is especially helpful to those new to the program as it eliminates much confusion. No other color separation program is as easy and intuitive.

Enjoy yourself and Welcome to the Power and Simplicity of UltraSeps v3!

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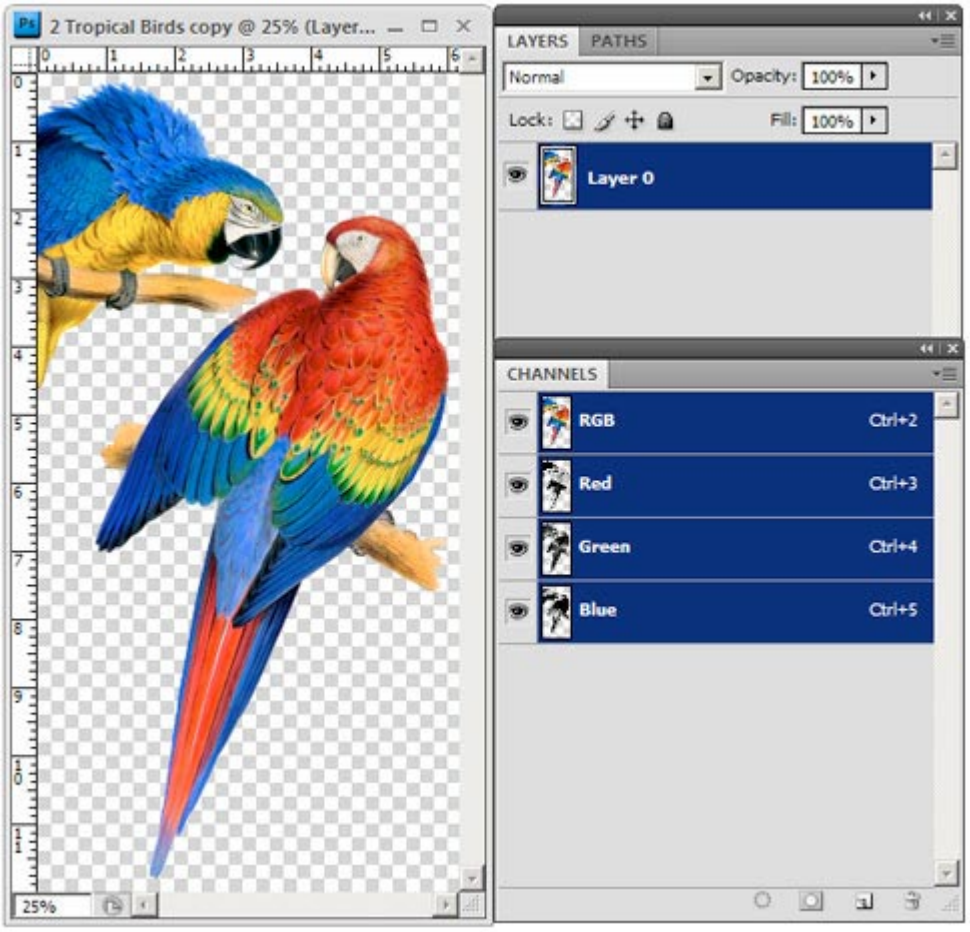
Optimal Image Formatting Example

Checkerboard Behind The Image Indicates Transparency
File is in RGB mode.
Notice there are no Layers filled with a solid color such as white.

Although UltraSeps v3 will correct most all mistakes in file format, the sample here illustrates a perfectly formatted image. The most important aspect is the "transparency" as in no solid white or other color filling all non-printing areas.



Many Photoshop users make the mistake of "Flattening" images once a project is completed. Additionally, customer supplied art created with Photoshop is usually supplied flattened or merged with white.

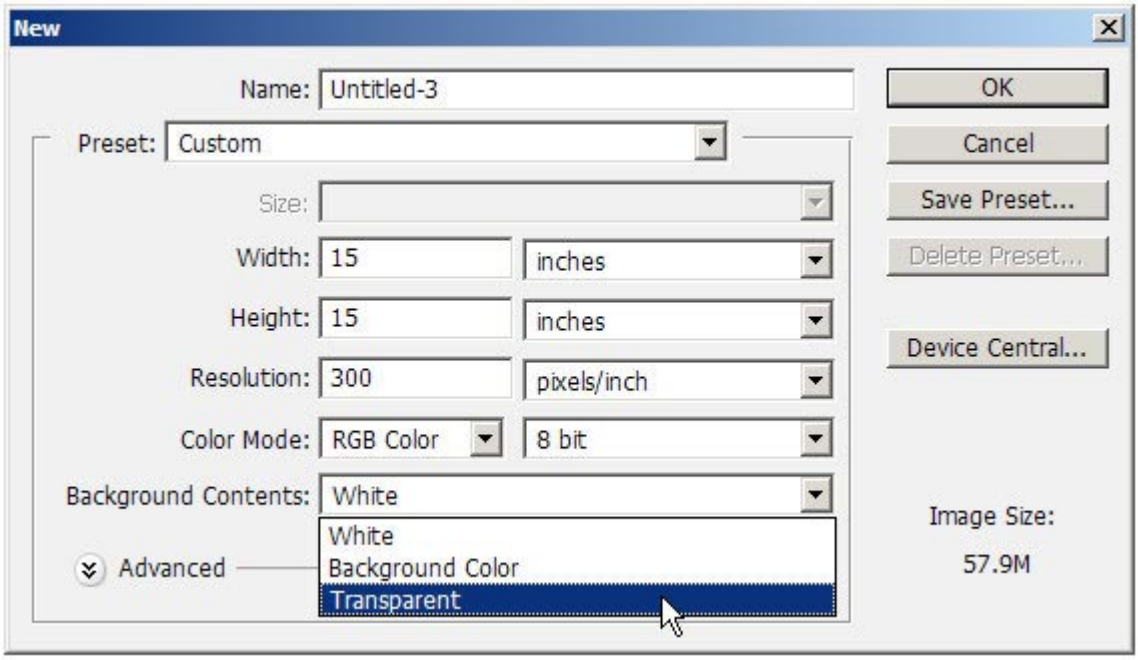
This is a big mistake, even for those who don't use UltraSeps since it makes future modifications such as moving or modifying an element of the art difficult since you've essentially pasted the art to a white sheet of paper. UltraSeps will "see" that background white as white ink and add it to the underbase and highlight channels.

There are 2 methods to prepare your art. The first is to simply to do it correctly from the start if possible. The second is deleting all non-printing background area from the file to be separated. Next we'll discuss several methods on art preparation and converting a flattened image to a transparent file.

Preparing New Artwork With Photoshop

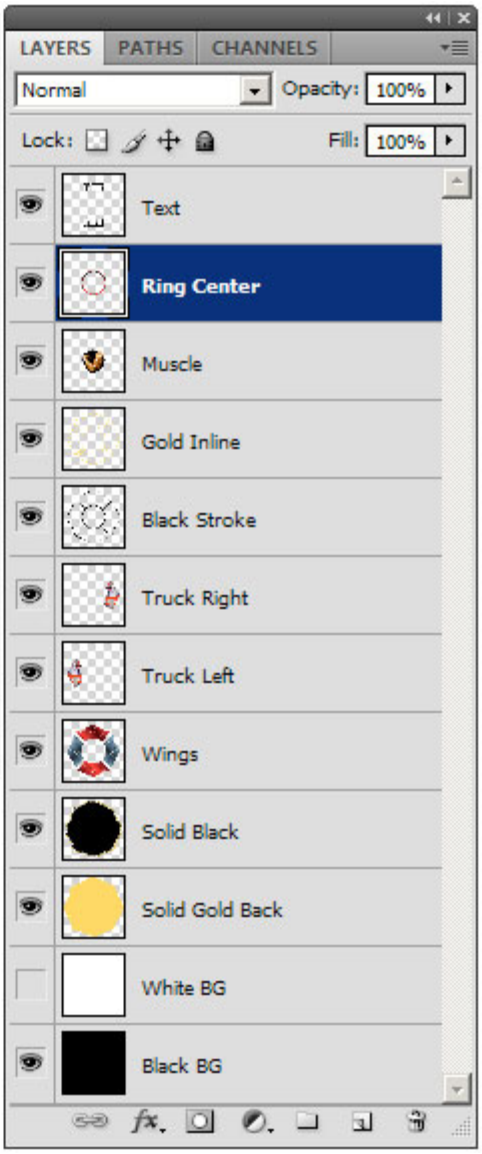
We're fairly certain most users will quickly open some preexisting art and throw it at UltraSeps just to see things work on their files. And I'm also sure most have artwork ready and waiting to separate. However, its probably a good idea to briefly discuss file preparation, especially for those newer to t-shirt graphics, UltraSeps and Photoshop.

Create a new file with slightly larger dimensions than you intend the finished color separated file to be and make sure to select "Transparent" as its contents. Set mode to RGB and select 8 Bit. Resolution should be 200 dpi minimum - 300 dpi maximum. Don't worry about it being the exact size as this can be adjusted or cropped later.



Now simply add your graphics / text / etc. to the transparent file. Since its easier to work against a white or black background, add a new layer to the bottom of the layers palette and fill this layer with white or black.

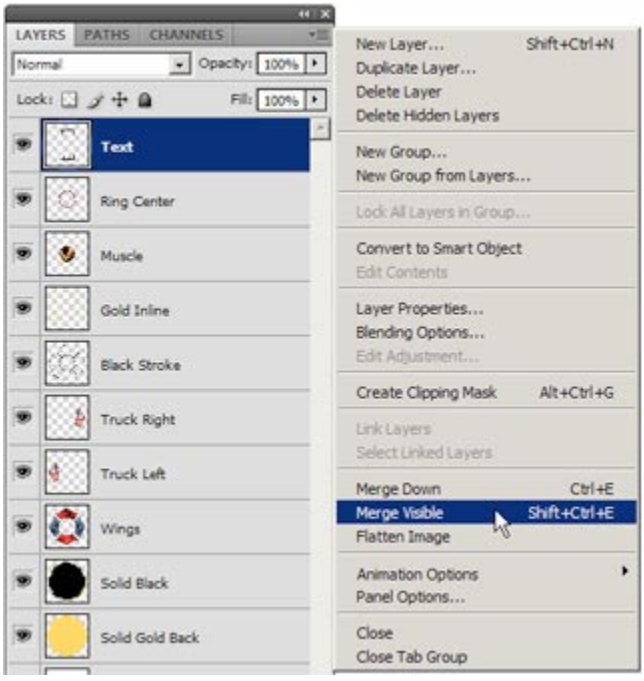
You can add both a white and black filled layer (or another color) if you wish and toggle them on and off. The sample on the following page illustrates a multilayer file. This is how art is assembled using Photoshop but is **NOT** the correct format to run a separation on!



Typical Art File With All Data Layers Visible & Active

The artwork above is complete and needs to be color separated. Obviously the layers should be merged together with the exception of the White BG and Black BG layers but this needs to be done “without” flattening the image.

Here’s how to do it……



Remember, its VERY IMPORTANT to save the original file “AS IS” with all layers intact. It might be needed for future modifications!

Duplicate the file and close the original saved version.

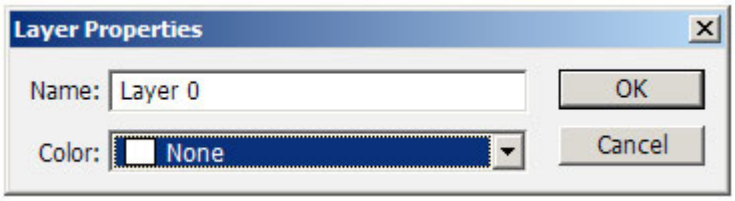
Have all layers containing image data on the duplicate file visible (make sure the eye is next to each required layer) and delete all unwanted layers.

If using a Black / White filled Layer for viewing, make sure to delete those also! Now click the arrow in the upper right corner of the Layers Palette and select **“Merge Visible”.**

This merges all visible channels WITHOUT flattening the image thus leaving transparency surrounding the art which is a requirement of UltraSeps.

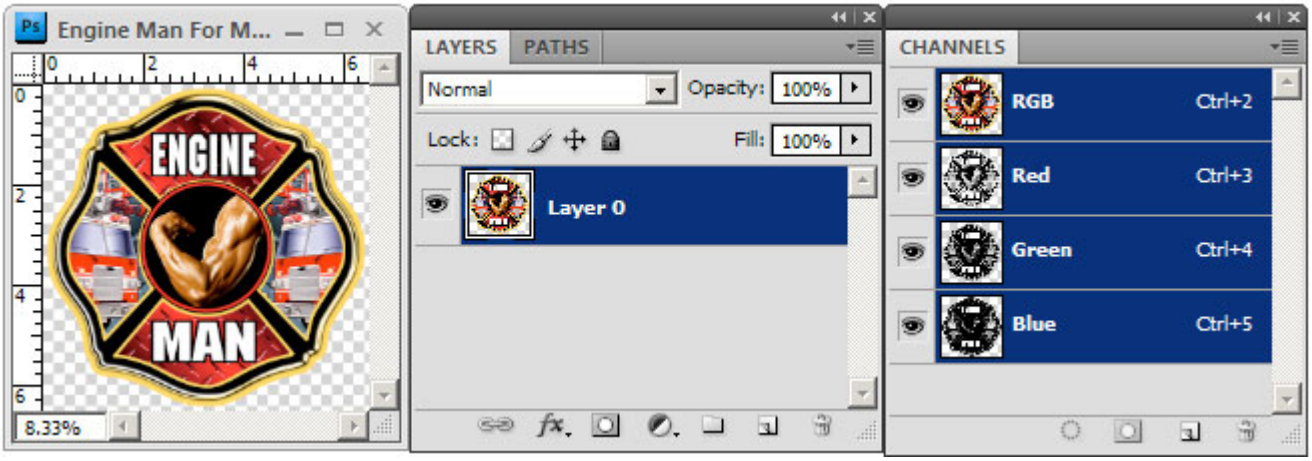
If white, black, etc. surrounded the image, UltraSeps will obviously see that as ink. In fact, ALL color separation programs and those trying to manually separate the art will see it as ink, not just UltraSeps.

After merging the visible layers we're left with one remaining layer containing the entire image. Photoshop will name the single remaining layer, Layer 0.



The Layers Panel should now resemble the sample below with one transparent Layer.

The Channels Panel should only contain the RGB Channels and nothing else.



The next few pages discuss using a file from an illustration program such as Illustrator or CorelDraw in addition to modifying an existing file that has been flattened containing solid white or black around the image.

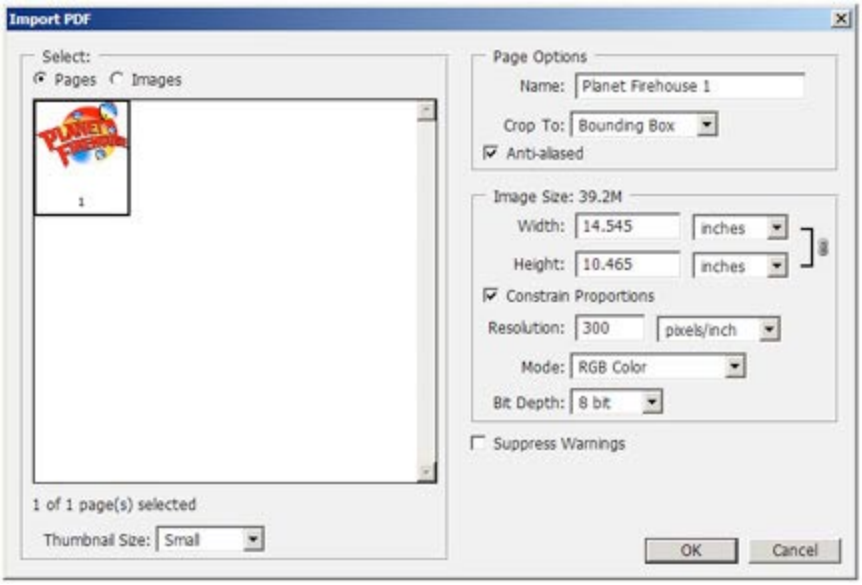
Using Files From Vector Programs

Unless vector images are very basic or consist of clearly defined and limited number of hard spot colors, they're probably better suited to be separated in Photoshop. This is especially true with clipart graphics as they can contain an immense number of colors.

Photoshop can easily open Illustrator, CorelDraw and vector images from other graphics applications. Just save them as a PDF. Newer versions of Photoshop can work with Illustrator files natively if needed.

Illustrator images and elements can also be copied to the clipboard, a new blank document created in Photoshop, then pasted in as pixels.

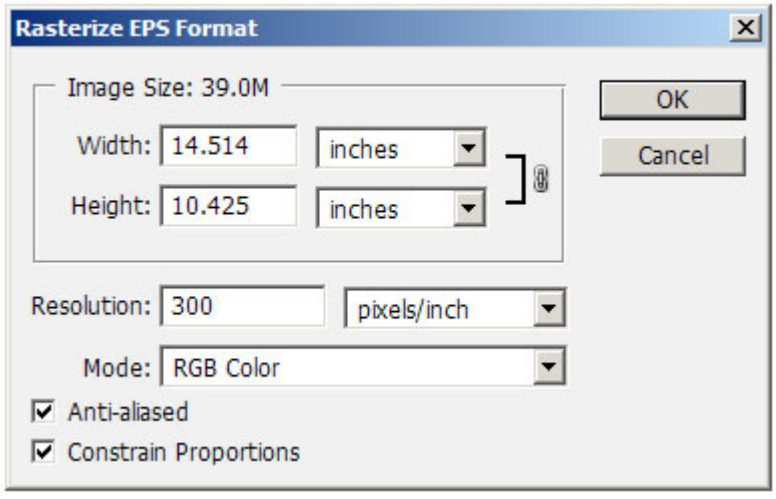
The screen shots below use Photoshop CS4. Newer versions CS6 - CC are similar. Earlier versions of Photoshop may appear differently although the basic settings are the same.



When opening an Illustrator PDF or other PDF file within Photoshop, the Import PDF dialog box appears. Set the resolution to 300, Mode RGB and Bit Depth to 8 bit then click OK.

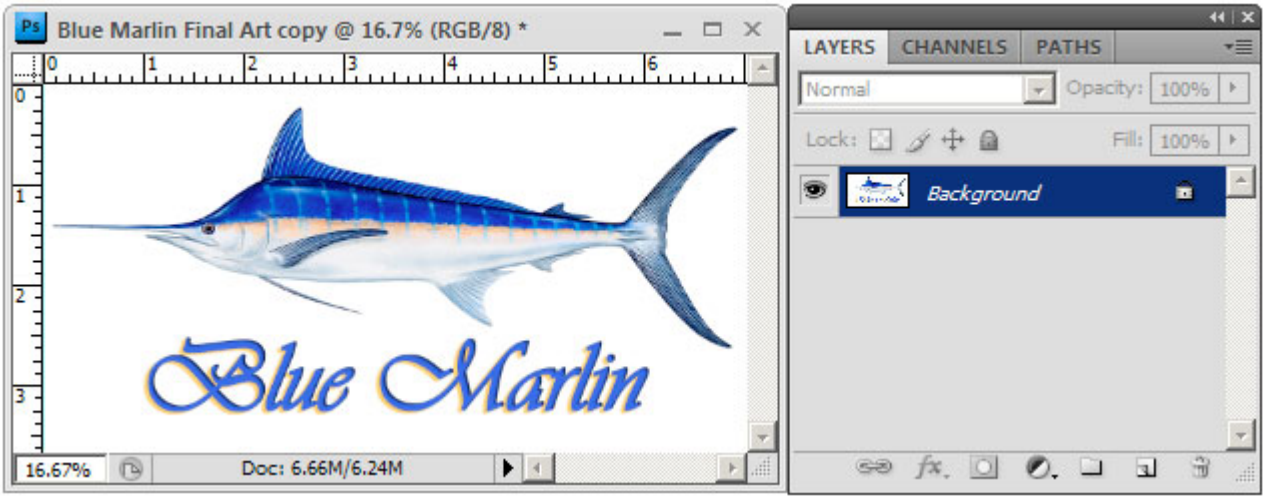
The file will be rasterized and open as a transparent document on a single layer.

When opening an EPS file within Photoshop, the Rasterize EPS Format dialog box appears. Set the resolution to 300 and Mode to RGB then click OK. The file will be rasterized and open as a transparent document on a single layer. If possible, avoid using EPS documents as they can experience slight color shifts. Stick with PDF.

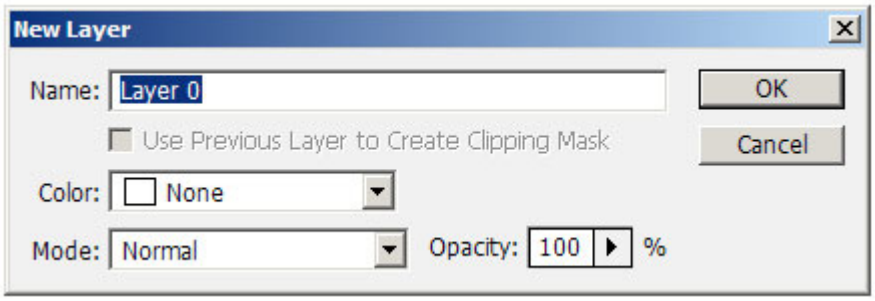


Deleting A Background Color - Flattened Image

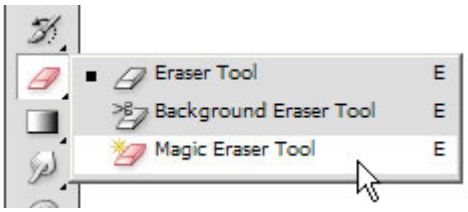
In all likelihood, some of your art is flattened, consisting of a Background Layer which obviously translates to all non-printing areas outside the image opaque like the sample below.



When confronted with a flattened image, you'll need to change it to a single layer document. Double click on the background layer and when the layer dialog box appears, Photoshop will unflatten the image and rename the old Background Layer, **Layer 0**. The image is no longer flattened which permits the removal of all opaque non-printing areas.



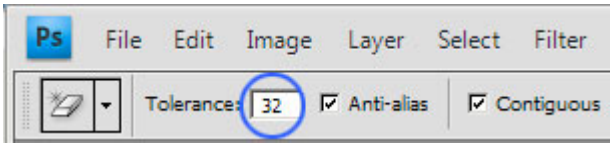
Although the image is now a Layered image and not flattened, the white opaque area outside the image and in closed areas such as within the text needs to be deleted. Several methods are available to achieve this depending on image complexity. We'll discuss the two simplest, although most effective methods here.



The easiest and most accurate way to remove a solid background color from an image with well defined edges (such as the example here) is with the **Magic Eraser Tool.**

Unlike using the Magic Wand, it doesn't leave residual pixels behind and takes the color off cleanly.

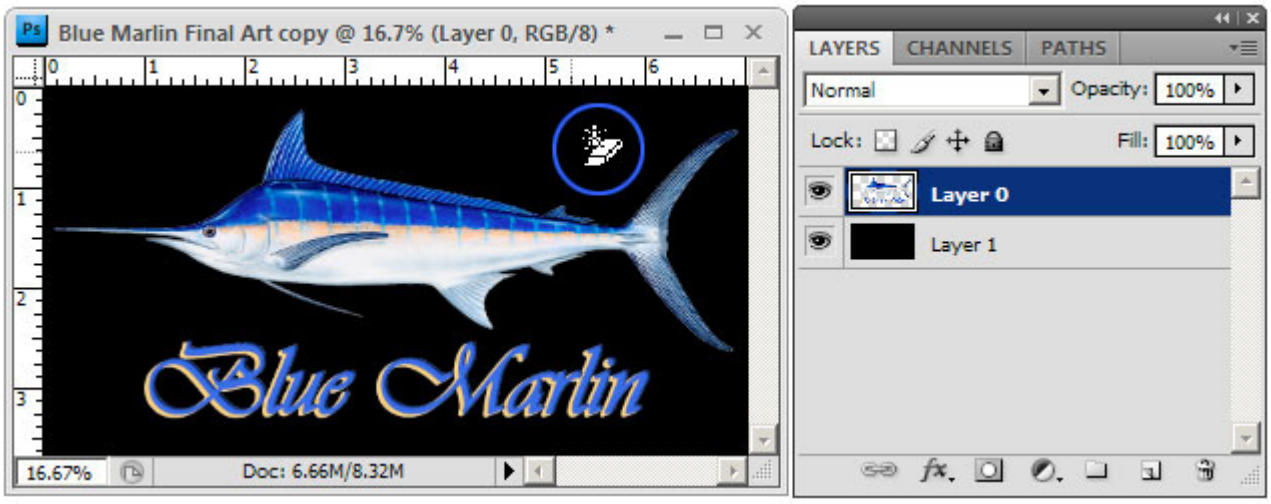
The default Tolerance for the tool is set at 32, which is normally too high. This can be lowered if needed to render the tool less sensitive to colors similar to that being removed. A setting as low as 1 can be used.

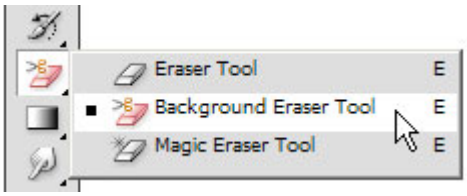


If clicking the tool removes a portion of the image when a very low tolerance setting is selected, this is due to a void area which isn't closed that contains a very similar color. Simply undo the delete, zoom in on the problematic area and using the brush or pen tool, close the open area with solid color.

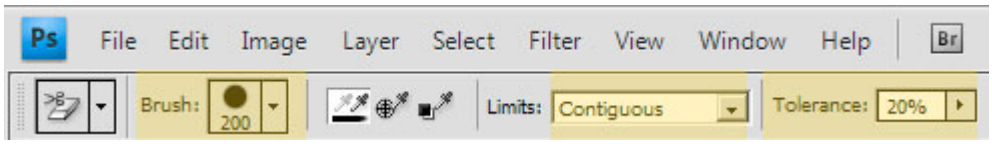
Add a temporary layer under Layer 0 and fill it with Black or another high-contrast color. This will make viewing easier as non printing areas are deleted. Now simply click all opaque areas outside the image and within places where no ink should print. DO NOT delete any white from areas where white ink is required!

Once satisfied, delete the temporary layer filled with black and save. The file is now ready for use.





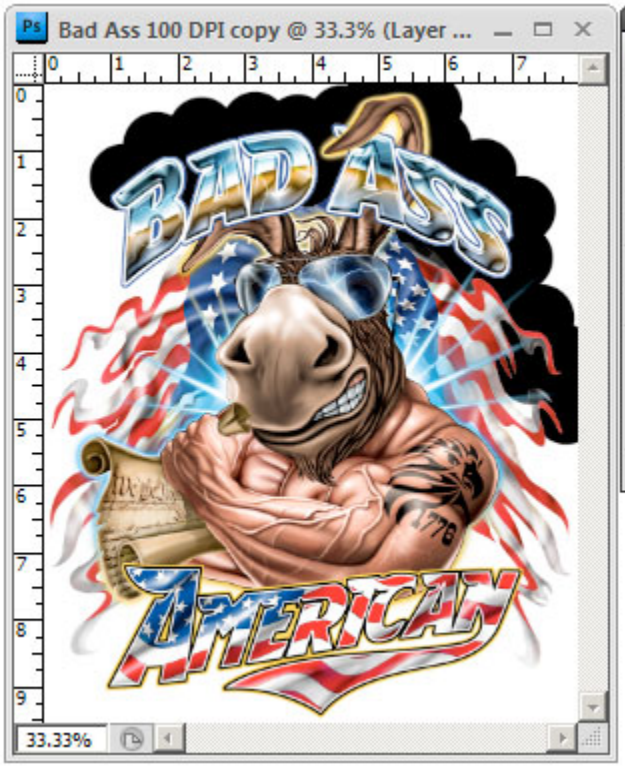
The easiest way to remove a background color from complex images that might have “almost white” edges, smoky areas, soft feathered elements, etc. is by using the **Background Eraser Tool.**

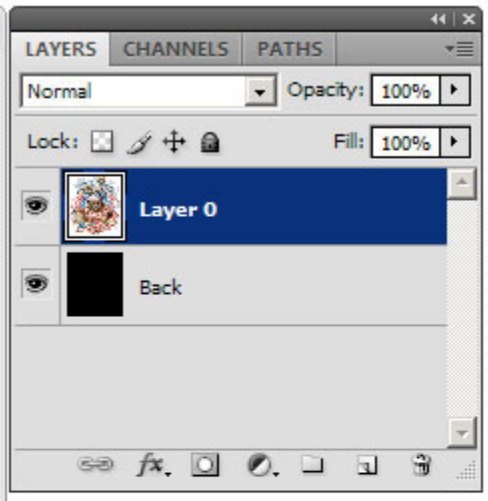


After selecting it from the Tools Panel set the Tolerance at 20%. This can be adjusted higher or lower depending on the image. Add a temporary layer under Layer 0 and fill it with Black. This permits easier viewing as non printing areas are deleted. Create a large “hard edge brush”, I’ve used a setting of 200 here.

Now simply click all opaque areas outside the image, overlapping the brush with each click. Once all non printing background color areas close to the image have been deleted, use the magic eraser or another selection tool and delete the remaining perimeter areas. DO NOT delete any white from areas where white ink is required!

Once satisfied, delete the temporary layer filled with black and save. The file is now ready for use.



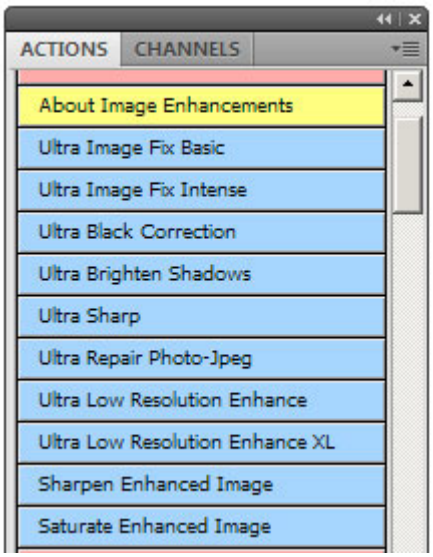


The Background Eraser was able to remove the solid white background while leaving the blue glow intact.

Pre-Separation Image Enhancement

UltraSeps v3 includes 10 image enhancements:

Not all are illustrated in the user guide.



Ultra Image Fix is a color enhancing sequence to help improve an RGB image.

Ultra Image Fix Intense is a more potent form of the above to be used on images of very poor quality.

Ultra Black Correction adds black depth to images with washed out blacks.

Ultra Brighten Shadows is a major improvement of our old Brighten Define Image as it assists in revealing image details while not overly impacting color fidelity.

Ultra Sharp is a basic preset unsharp mask which clarifies the Lightness Channel in LAB Mode and then reverts the file back to RGB.

Ultra Repair Jpeg does a great job on smoothing out rough images and removing artifacts from jpegs. Its also quite helpful to remove halftone screens from scans taken from magazine photos, catalogs, etc.

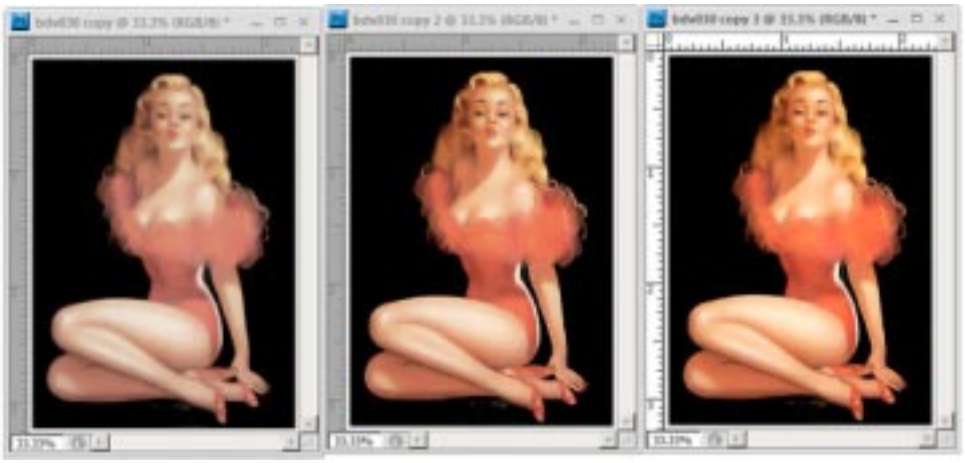
Ultra Low Resolution Enhance helps in making lower-res images usable. No, it won't turn that matchbook size jpeg into full chest artwork but is very useful on most files.

Ultra Low Resolution Enhance XL is similar but increases the file resolution approx 25% further than Low Resolution Enhance.

Sharpen Enhanced Image is used following the Low Resolution Enhance Filters to improve clarity.

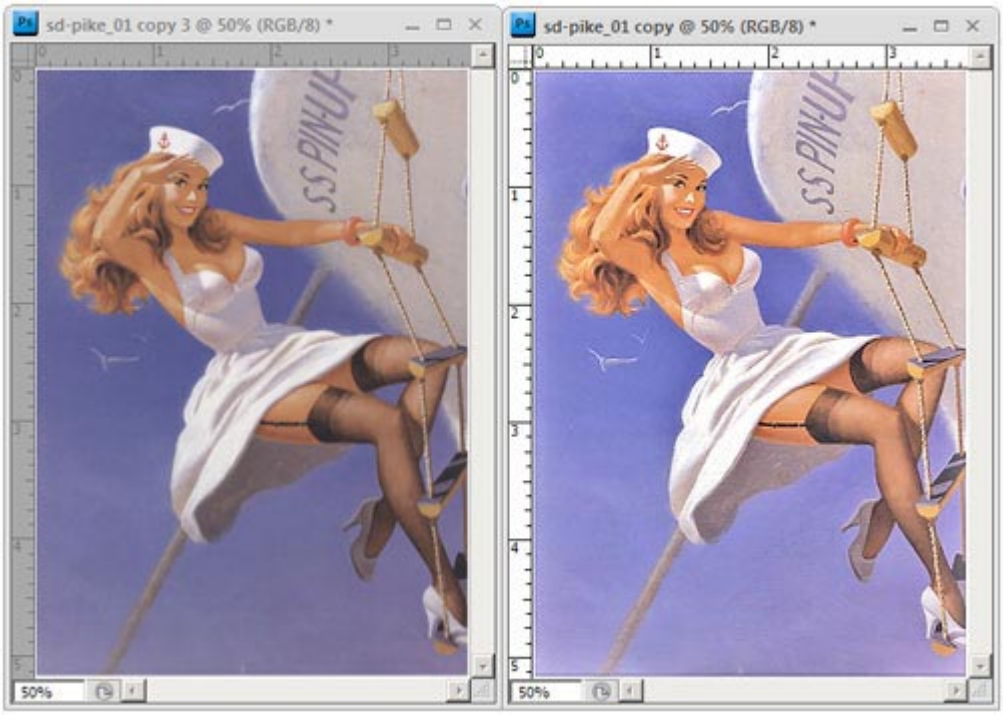
Saturate Enhanced Image is used following the Low Resolution Enhance Filters to improve color intensity.

Original Image | **Ultra Image Fix** | **Ultra Image Fix Intense**



Ultra Brighten Shadows

This filter digs out detail, highlights and hidden color within images. Unlike attempting to use a curve, levels adjustment, saturation or combination of such, this process did not compromise the integrity of the graphic and brought a dreary, dull image to life. It can be run multiple times if needed. If your image is also a bit soft, consider adding Ultra Sharp.



Ultra Sharp

Since the Ultra Sharp Filter doesn't attack colors within the image, it does a better job of sharpening without leaving behind strange artifacts or intensifying preexisting issues. It can be run several times if needed.

Not intended for use on low resolution images.

Ultra Repair Photo-Jpeg

This filter does a great job of smoothing out rough images and removing artifacts, grain, etc. from jpegs. Its also quite helpful for removing halftone screens by scans taken from magazine photos, catalogs, etc. Works as well as many stand-alone commercial file repair plug-ins. Some images respond well to Ultra Sharp following the use of this filter.

Ultra Low Resolution Enhance - Standard & XL

Sometimes you'll get an image that just isn't "quite" good enough to use. Or maybe you've bought some images on-line and really need the resolution and clarity higher. Then simply run Ultra Low Resolution Enhance on the file! This function works best repairing low quality images that are physically larger to begin with. Please, don't expect to convert a matchbook size 72 dpi jpeg into perfect full chest sized artwork! "Nothing can offer that as its simply impossible".

The example below, zoomed in for display purposes began as a 96 dpi jpeg at about 60% final output size. Ultra Low Resolution Enhance was able to increase the resolution and clarify the image substantially. This process can be used effectively on both photographic and hard-line style graphics.

The XL version is essential identical but increases the physical dimensions of the art approx 25% larger.

After running Ultra Low Resolution Enhance, it may be necessary to sharpen and/or saturate it a bit further using the 2 actions to follow.

NOTE! If using Ultra Image Fix or the Ultra Brighten Shadows Action, always run Low Resolution Enhance "first" for satisfactory results.

Simulated Process Color Separations

UltraSeps v3 includes three completely different simulated process color separation functions named UltraSeps Sim Process #1, #2 and #3. They are quite different from one another so experiment with them all as an image may separate more accurately with one as opposed to another. There is no “one best way” to do things, so we have provided multiple choices.

Running UltraSeps simulated process is the EASY part of the color separation process. In fact, if ran using a high quality file that is bright, clear and with sufficient color information there may be little need to adjust any of the color channels.

Even if adjustments are needed, it’s usually only a bump of the Curves Function on a channel containing either too much or too little intensity or the simple deletion or merging of one or a few color channels.

Check List Prior To Running Any Type Of Color Separation:

UltraSeps automatically works on a duplicate of your image so its not required to save another version as a “work file”. Just remember to name the completed color separation differently.

I hate to beat a dead horse but lets review the correct file setup method:

All non-printing areas of the image such as outside the art needs to be transparent (checkerboard background) so the white underbase and highlight white channels render correctly.

If possible, setup the image as a single layer document. This is not an absolute requirement although a good idea.

Your file must be in RGB format with no additional channels other than the Red, Green, Blue and composite RGB channel visible or contained within the channels palette.

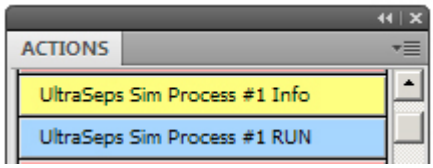
For the best results, file resolution should be 200 dpi to 300 dpi. Although UltraSeps will produce adequate separations at slightly lower resolutions if the situation arises.

Resolutions above 300 dpi increase file size, slows down the separation process and does not improve quality on most images. Art containing hard lines and small text however could benefit from slightly higher file resolutions.

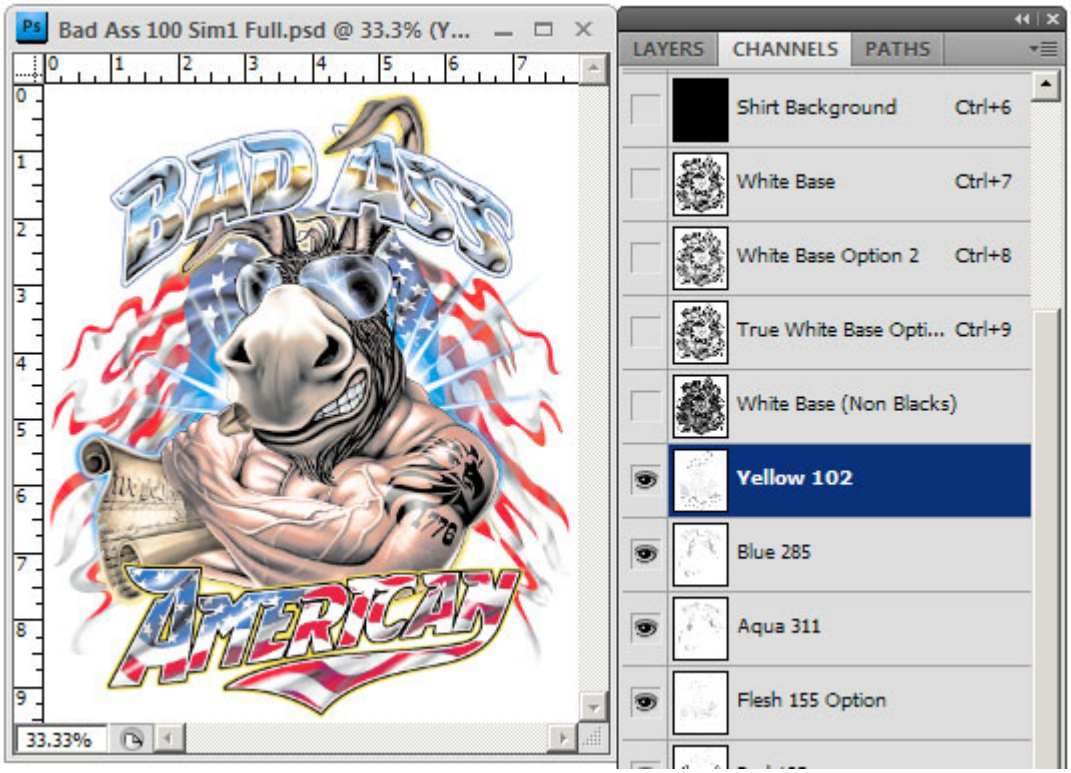
Make sure the UltraSeps Color Settings have been loaded into Photoshop. If not, run the Action to load them.

Do not have any other files open within Photoshop. The only file open should be the file to be separated.

Now lets do a simulated process separation using Sim Process #1.



Click UltraSeps Simulated Process #1 RUN and when all on screen activity stops, the separation is complete.



When UltraSeps Simulated #1 completes the separation, go to the channels panel and turn off the R-G-B channels and shirt background channel. Now sequentially turn on color channels that may be included within the image. A good start is the yellow, aqua, blue, soft red and black option 2. Then experiment with how other channels impact the file at that point.

Next decide which of the 3 black channels works best with the art, which of the 4 underbases (if any) you'll be using, what color channels can be deleted or combined into another and make a decision if the alternate Red Channel that we call "Soft Red 185" looks better than the standard Red 185 Channel.

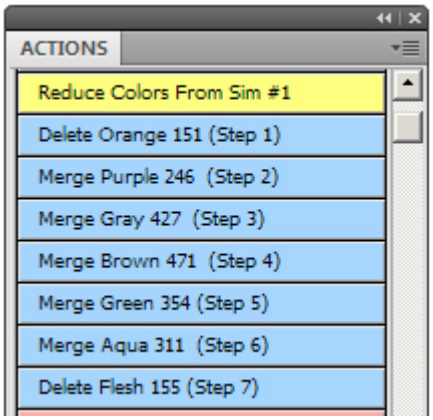
When printing on darks which are NOT black OR when deciding to run a black ink on black shirts to retain detail, use the "White Base (Non Blacks)" channel or see generating an Alternate White Base which removes less black from the white underbase. We'll discuss this later.

If the image is to be printed on black without the use of black ink, view it with the shirt background channel selected with an underbase. Additional black data can be removed from the white underbase if needed to increase contrast.

Consolidating The Color Channels Automatically.

Use With A Simulated #1 Separation Only!

For those choosing not to merge and/or delete channels manually using a separation generated with Simulated #1, we've included a simple set of Actions to merge and delete some of the color channels to reduce the final number of colors.



Merging the Aqua channel could get a bit tricky especially if there's some green in the image. If so, it's best to not merge this channel.

If the art is green intensive or a vital part of the image is green, you'll need to keep the green channel itself then merge some of the Aqua 311 with the Blue 285 and Yellow 102 channels. Once satisfied, delete the Aqua Channel.

Many images won't absolutely require a highlight white.
If being printed on white, the base could be eliminated.
If printed on black, the black ink could be omitted (sometimes).

I think you get the picture. Reducing the colors to a minimum helps the small press owner with images that might require the addition of a special color like a metallic, puff, gel, neon, brown, fleshtone, etc.

The subject of merging channels and using varying opacity settings in the Apply Image Function of Photoshop is covered in detail later on in the user guide.

After merging or deleting all unwanted channels, at this point deciding which underbase, black and red channel works best with the art is the final step.

The next 15 pages or so discusses adjusting a simulated process separation. We'll go over adding custom color channels, adjusting channels and the under-base, merging channels and more.

Following that, we'll review the Simulated #2 and Simulated #3 functions of UltraSeps. Working with channels using those color separation options are identical to working with a separation generated using Simulated #1.

We've also included a fourth simulated process color method called Basic 5 Color Simulated that is great for simple jobs. We'll discuss this later in the user guide.

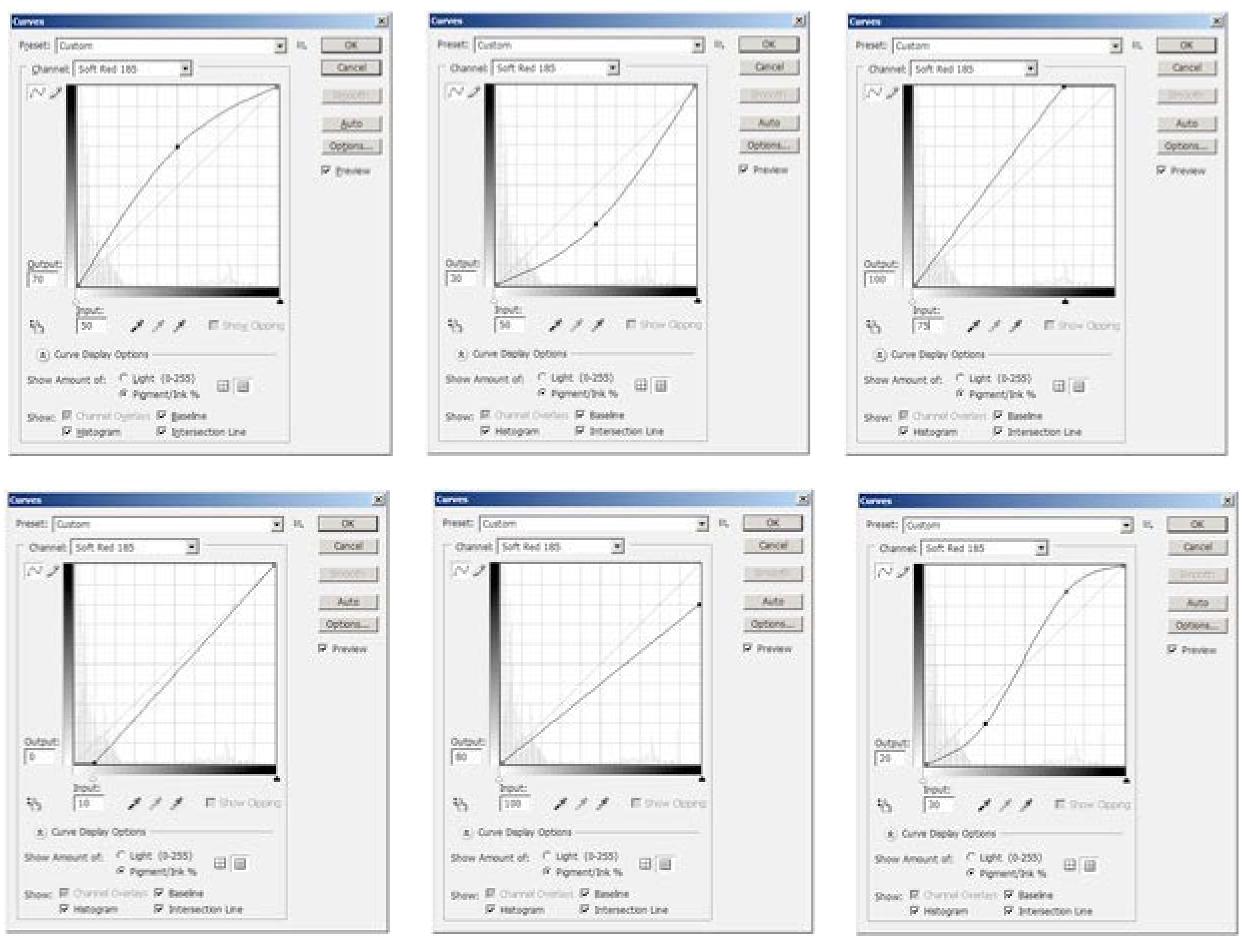
Basic Channel Adjustment

Once decided upon what channels are to be retained and output to film, the most basic of all adjustments to improve image quality is a simple Curve.

Usually increasing or decreasing the intensity of certain Channels is all the simulated process separation needs to look great both on screen and on press. An example of popular Curves are illustrated below and I highly encourage experimentation with this tool.

Higher-end or more difficult separations sometimes require adjustments beyond a simple Curve. Fortunately, these changes are quite simple.

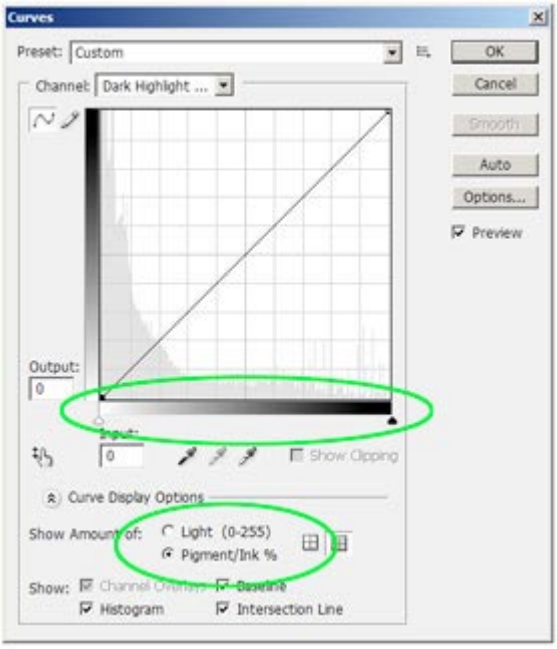
We discuss removing/adding data from one channel to another and generating custom color channels later in the user guide.



All references to Photoshop's Curves Function within the user guide assumes your Curves are setup identically to ours.

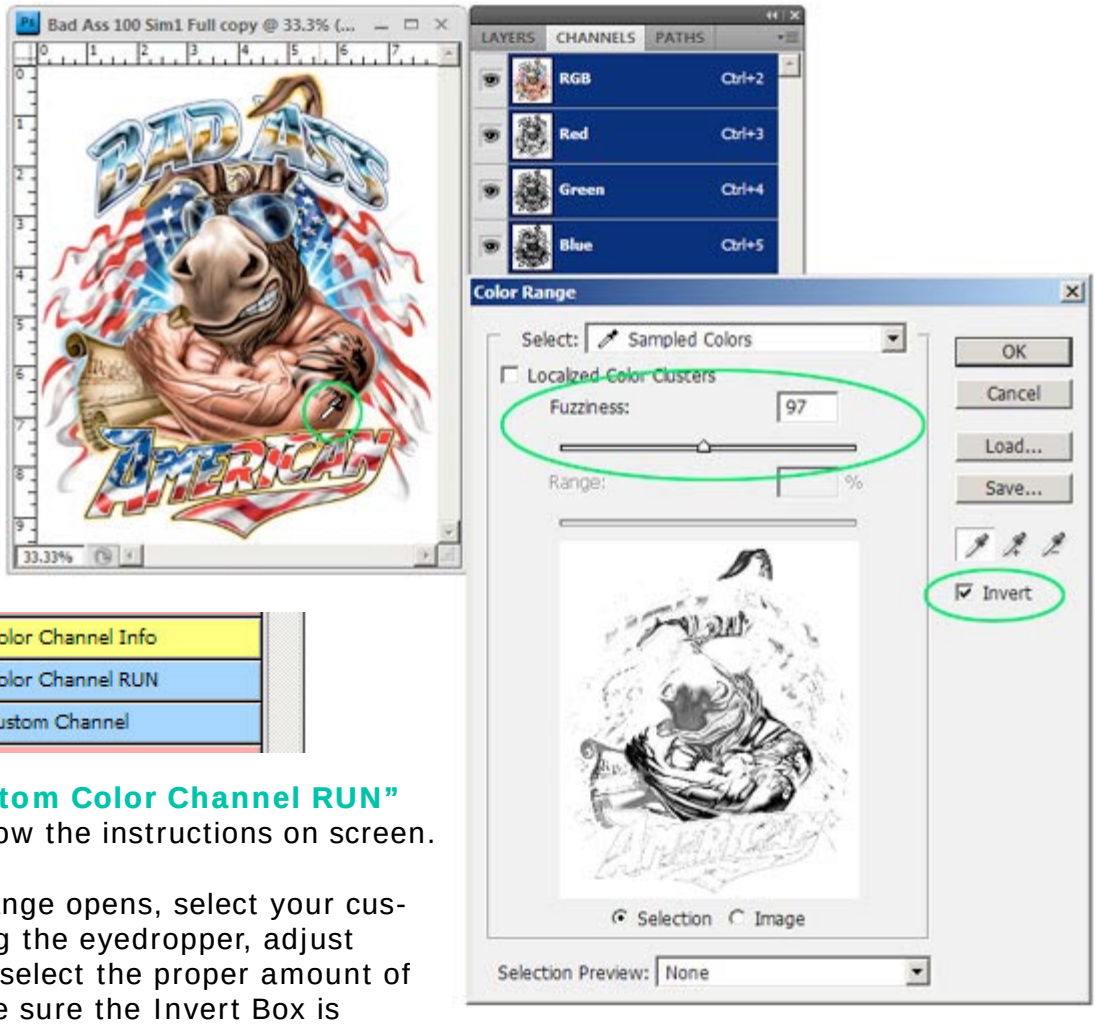
Notice the lower gradient bar is set left-to-right, light-to-dark. Yours must be set this way!

In older versions of Photoshop, click the right lower gradient bar to change the setting. In newer versions, click the Pigment/Ink % button pictured here.



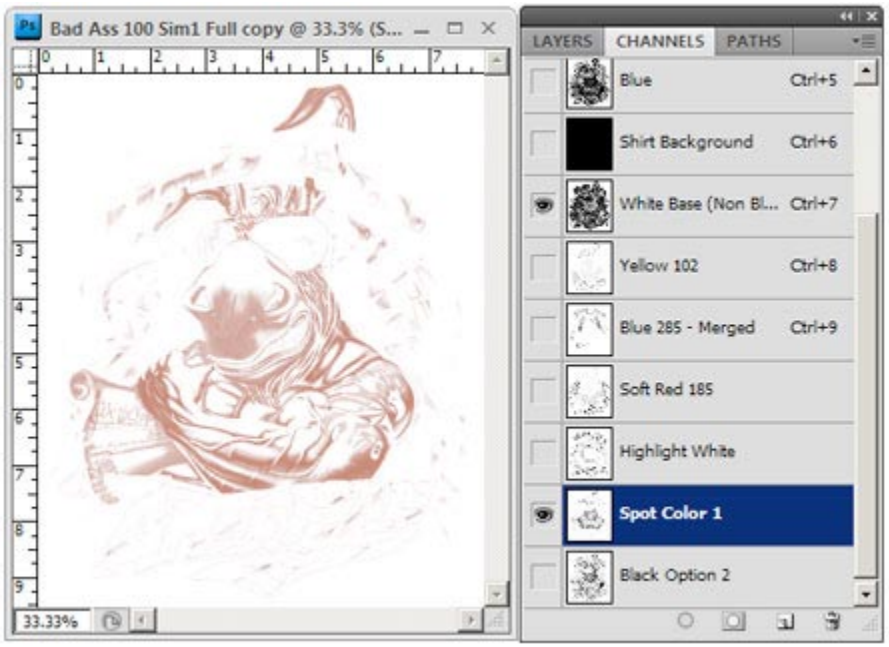
This Area Intentionally Left Blank

Adding A Custom Color Channel To The Separation



Click the **"Custom Color Channel RUN"** Action and follow the instructions on screen.

When Color Range opens, select your custom color using the eyedropper, adjust "Fuzziness" to select the proper amount of color and make sure the Invert Box is checked. Click OK and the program generates a new spot channel.



The new channel is named Spot Channel 1. Its the correct color and is generated by running an RGB Calculation on your selection. If another custom channel is generated, its name will be Spot Channel 2.

The channel name, color and intensity can be adjusted accordingly.

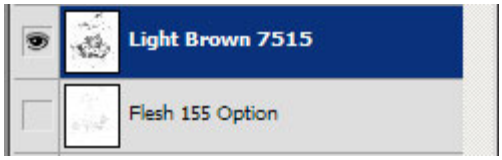
To darken the channel, use the **Darken Custom Color Action**. It can be used more than once if needed.

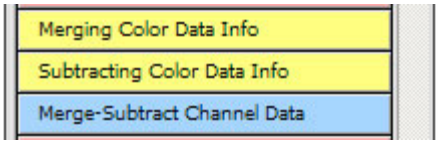
Adding - Merging One Channel To Another

Often you'll find it useful to merge one channel with another. It can be used to reduce the number of channels, to intensify a channel in key areas, to add a specific channel's data to the white underbase so that top color prints brighter on dark substrates, etc.

In the example here we're going to add the Flesh 155 Channel to the Brown 7515 created earlier by using the Custom Color Channel Action. This will ensure the custom brown channel has enough color and also eliminates the need to run a flesh or tan ink.

I selected the Light Brown 7515 Channel in the channels panel then clicked the Merge-Subtract Channel Data Action.

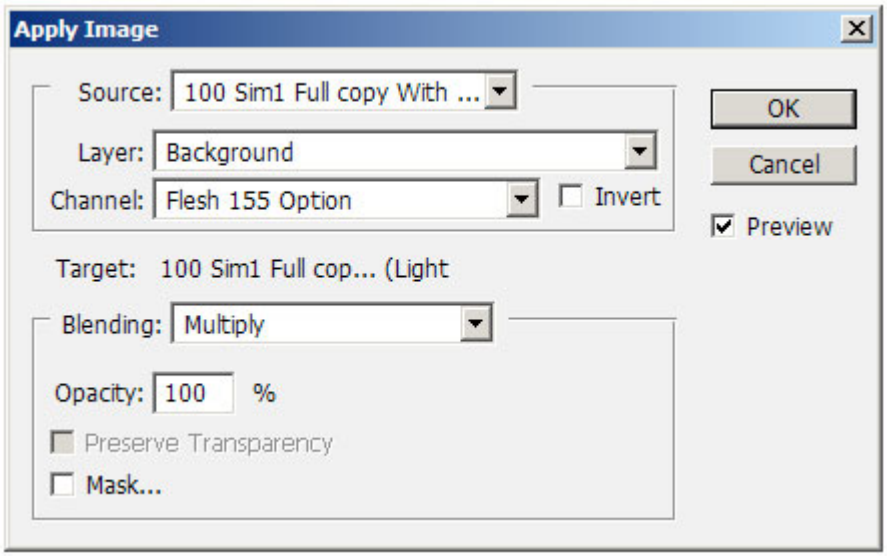




When the Apply Image window opens, we changed the Blending Mode to Multiply, Opacity to 100%, UNCHECK the Invert Box and selected the Flesh 155 Channel.

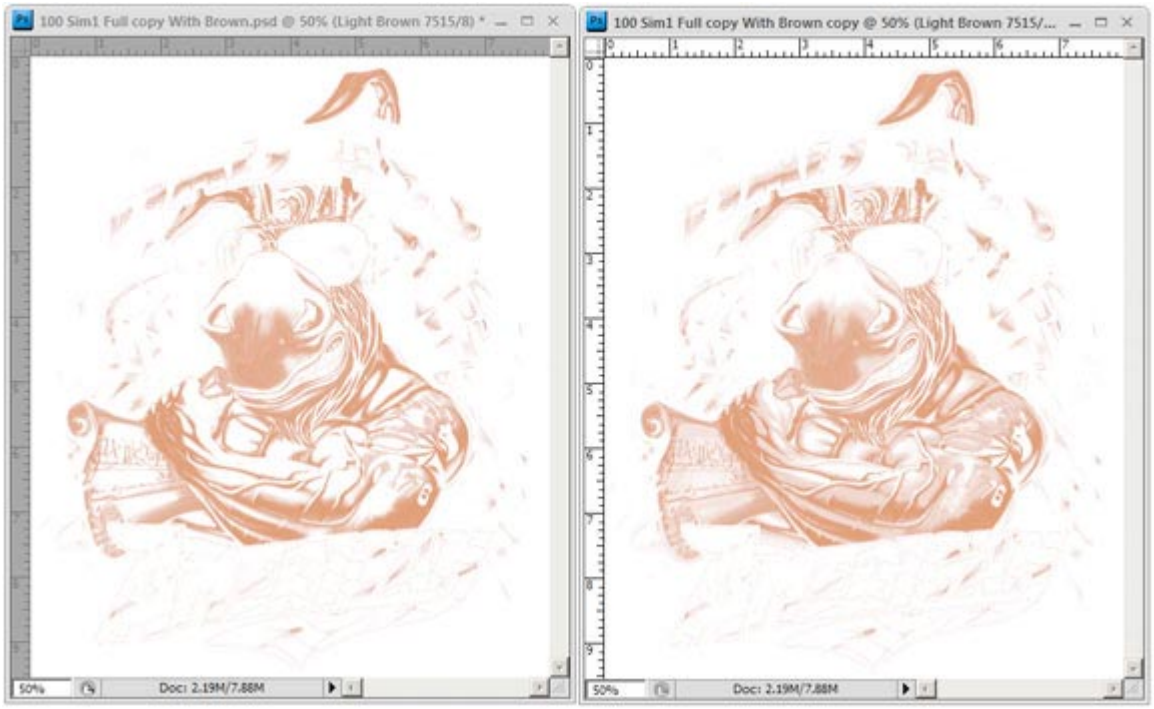
Setting the opacity at 100% will copy all of the selected channel to the target channel. So pay attention to the Opacity Setting and experiment with settings less than 100% if the target channel seems to too dark.

More often than not, an opacity setting of less than 100% is used.



Original Custom Brown Channel

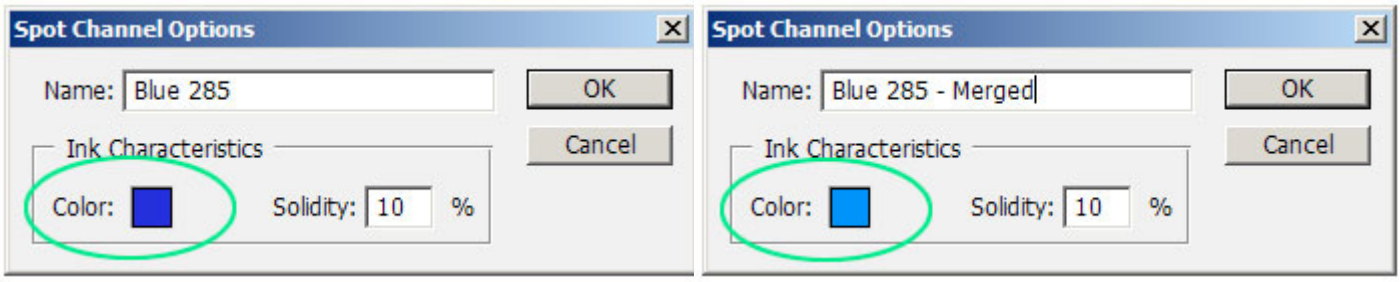
After Merging With The Flesh Channel



The graphic above displays the custom brown channel before and after applying the flesh channel using Apply Image. Notice the overall improvement and how the ink blends more naturally.

The channels most often merged into one are the Aqua 311 and Blue 285. Usually the Aqua will be the channel merged into the Blue 285. When merging these two channels, pay careful attention to the amount of Aqua added to the Blue with the use of the Opacity setting in Apply Image.

Once merged, experiment with changing the color of the Blue 285 channel to a brighter, lighter blue. Most art, aside from those with deep blues will benefit from the change in color following the merge.

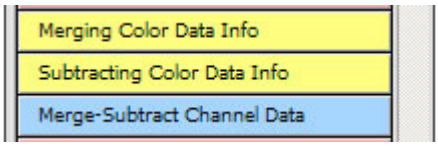


Take note of the “Solidity Settings” of the channels above at 10%. These settings do not affect film output whatsoever and are set only to preview the separation correctly on screen. If they were all set to 100%, you’d have no idea how the separation will actually perform on press and making accurate adjustments in Photoshop would be impossible. UltraSeps uses different settings for certain channels.

Deleting Channel Data From Another Channel

At times you'll find it useful to remove a given channels data from another channel. In our example here, we're using the Custom Spot Channel, Light Brown 7515 and we'd like to remove some of the brown from the Soft Red 185 Channel so the image prints clean and not too red.

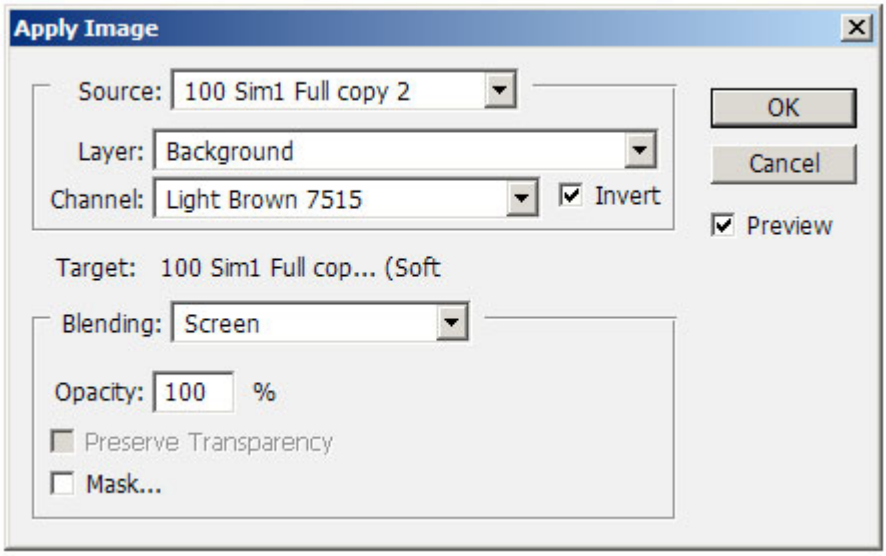
We selected the Soft Red Channel in the Channels Panel and clicked the Merge-Subtract Channel RUN Action.



When the Apply Image window opens, we changed the Blending Mode to Screen, checked the Invert Box and selected the new Brown 7515 Channel. Click OK. Much of the Brown data has now been removed from the Soft Red Channel. If we needed to remove the brown further from the red, simply run the sequence again.

Note, in our example some of the brown information will remain within the red. This is normal when using this tool and won't adversely affect printing.

The Opacity Setting of the Apply Image function can be set to any number up to 100% for times when you'd like to remove less data from the target channel. Its especially useful when running Apply Image more than once on the same channel.

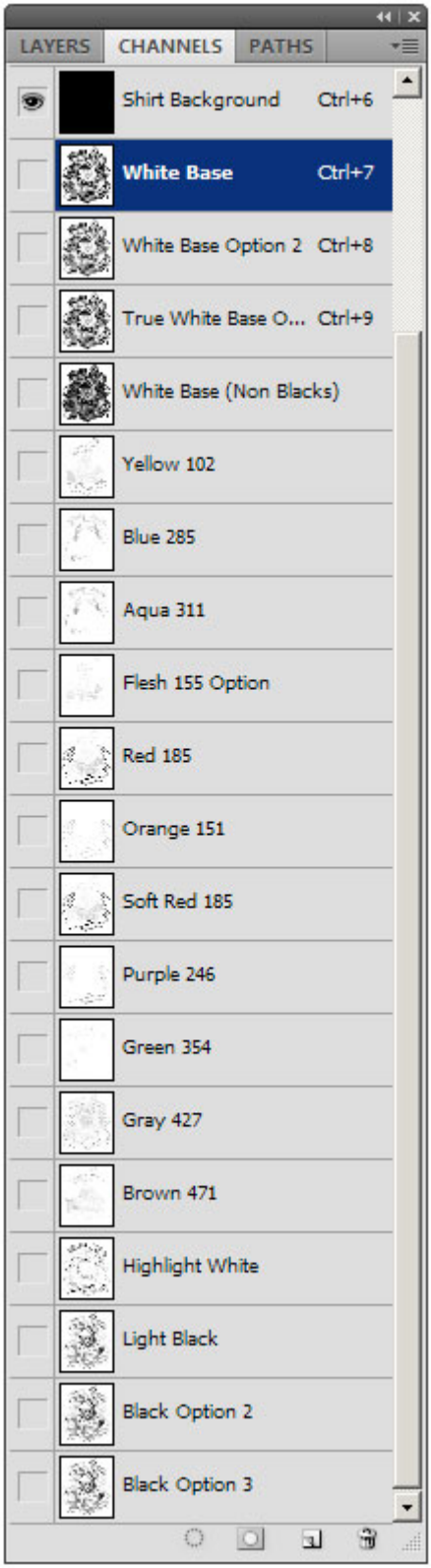


Using A Loaded Selection To Delete Data From Another Channel

Another and possibly easier method to remove the data of one channel from another is to load a channel as a selection. First make sure the background color in Photoshop's tools panel is set to white. Now CTRL-Click in Windows or CMD-Click on Mac the channel you'd like to "load". Once loaded, select the channel to remove the loaded data selection from. Depress the delete key and information from the loaded channel will be removed the selected channel. If the Fill Window opens when hitting the Delete Key, choose White, Opacity 100% and Blending Mode Normal. The delete key can be depressed multiple times to take away more data if needed.

Simulated #1 Full Channels Panel

Pictured here is what you'll see when UltraSeps completes running the simulated process action named "Sim Process #1 RUN ".



At this point the colors can be automatically reduced by using the various actions included or the end user can simply look at each channel and decide which should be kept, deleted or merged / subtracted from another.

The action pulls multiple whites, blacks and reds. Select which looks best for the art and discard the remainder.

Since the Sim #1 Action generates colors which are not obviously used in every job, the automatic numbering of the channels for print order (#1, #2, #3 etc.) is not possible:

Remember, Light Colors First, Dark Colors Last (usually - not always).

Use caution with the orange as it repeats certain red data. Its useful on some files although not all.

Its okay to move channels up or down to obtain desired results. Consider changing channel colors to better match the original image along with using Photoshop's adjustment tools to lighten or intensify the ink of single or multiple channels to achieve the desired effect.

Reminder: When double-clicking a channel to bring up its properties you'll notice a "Solidity Setting".

These settings allow the channels to display correctly on-screen and make accurate adjustments possible. They do not affect the film output. Even if changed to 100% the films would print identically.

Increase Ink White Base

This simple Action intensifies the opacity of a white underbase channel while not greatly affecting light shadow areas or overall contrast. Run more than once if needed.

High Contrast White Base

Removing Black Ink Data From The Underbase

Its possible that you'll need to remove additional black ink data an existing white underbase to guarantee a black ink is not required when running black shirts.

To accomplish this, run the **"High Contrast White Base"** on the white underbase channel to be used and follow the on-screen instructions. The action further defines the base and permits efficient use of the black shirt color.

If the Fill Window opens when hitting the Delete Key, choose White, Opacity 100% and Blending Mode Normal.

Running Black Ink On Black Shirts

When running black ink on black shirts to achieve maximum quality and contrast, its a MUST to reduce the total amount of black ink within shadow areas. Failing to lighten the black channel selected for output will result in a dark image on press.

Use a curve to lighten the black as you'll want the black channel to appear somewhat washed out yet retain full opacity within 100% solid areas when running on black shirts.

Its also helpful to run black ink on 330 - 355 mesh as opposed to 280 or 305 with black shirts. The higher mesh count controls the ink deposit more effectively than constantly adjusting squeegee/ floodbar pressure and speed throughout the run.

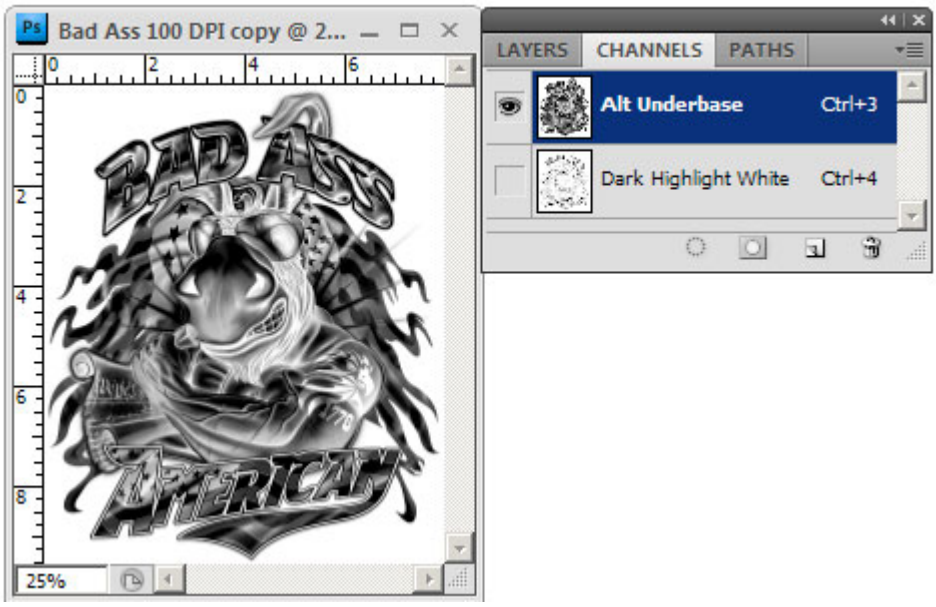
Whenever possible, I would always run a black ink on black tees as it simply looks better when compared to using the black color of the shirt to reproduce all blacks.

White Base Info & The Alt White Base Highlight Action

Although UltraSeps Sim #1 generates 4 different white underbases, sometimes none are quite right. UltraSeps removes much of the black ink data from the #1-#2-#3 underbases so these are primarily used for blacks if no black ink is used. When working with a red, royal, bright green etc., dark background on screen, a color cast from the shirt background color will be seen in many areas.

This is due to the removal of white ink within most areas containing black. Therefore, when printing on a dark substrate other than black, the **White Base (Non Blacks)** channel should be used along with running black ink.

Since we're fanatical on offering multiple choices, we've added the ability to generate yet a different and excellent white base for use on non-blacks without running a full separation named "Alt White Base - Highlights" Action.

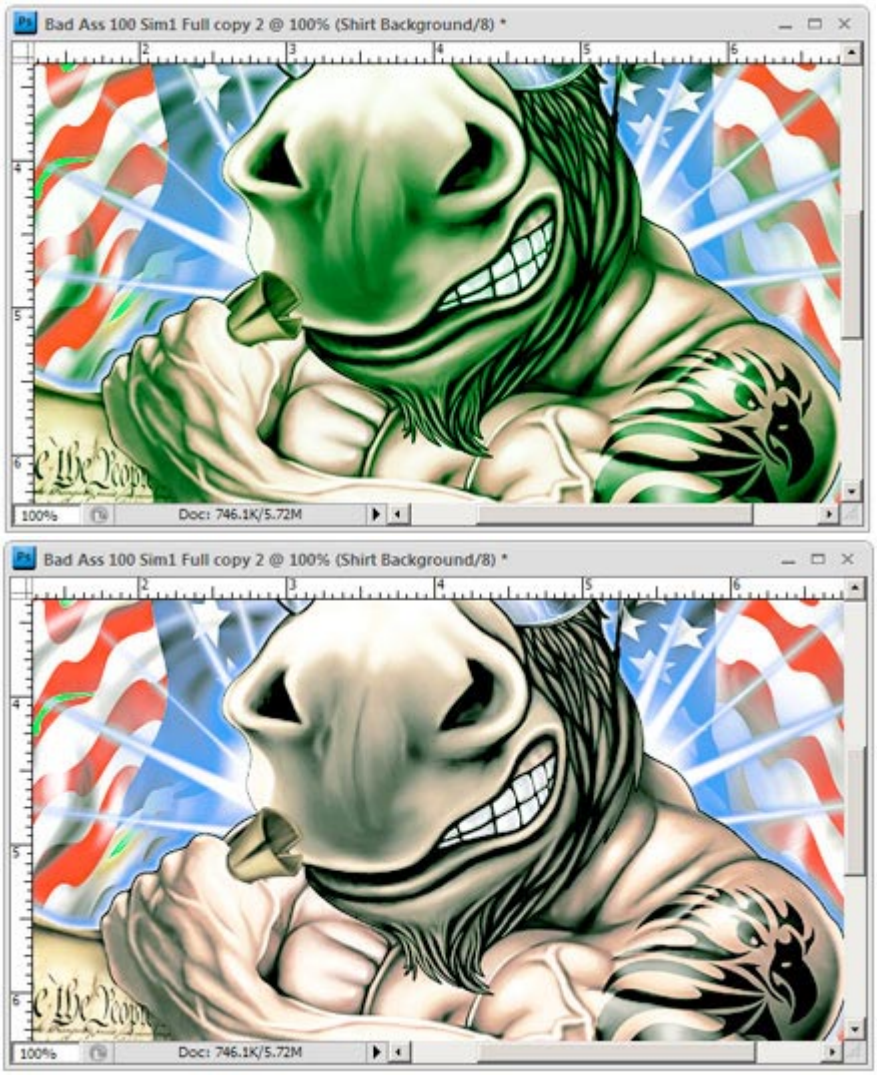


To use this, open the original image file, the one with all image data on the single transparent layer and run the Action.

Upon completion you'll have a file like the sample here.

If the Alt White Base is not dark enough, run the **"Increase Ink White Base"** Action. Its okay to run multiple times if required.

To add the new white underbase or dark highlight to your separation, select Photoshop's Move Tool, select the channel in the palette, hold down the shift key and drag it to window of the separated file. Holding down the shift key will align the new channel with your other colors perfectly.



What we did here was change the background color of our separation to an awful shade of green.

The top image is with one of the #1-#2-#3 white underbases, the bottom with our new Alternate Underbase. Notice the green cast is now gone. The cast will also be gone using the White Base (Non Blacks) channel.

When running non-black shirts, you MUST have some white ink within shadow areas as the black tints and other darker top colors such as reds, blues and browns are not strong enough without that little extra white ink within key areas.

I use this base quite frequently along with the White Base (Non Blacks) when running non-black dark shirts.

Remove Fringe Pixels From White Base Action

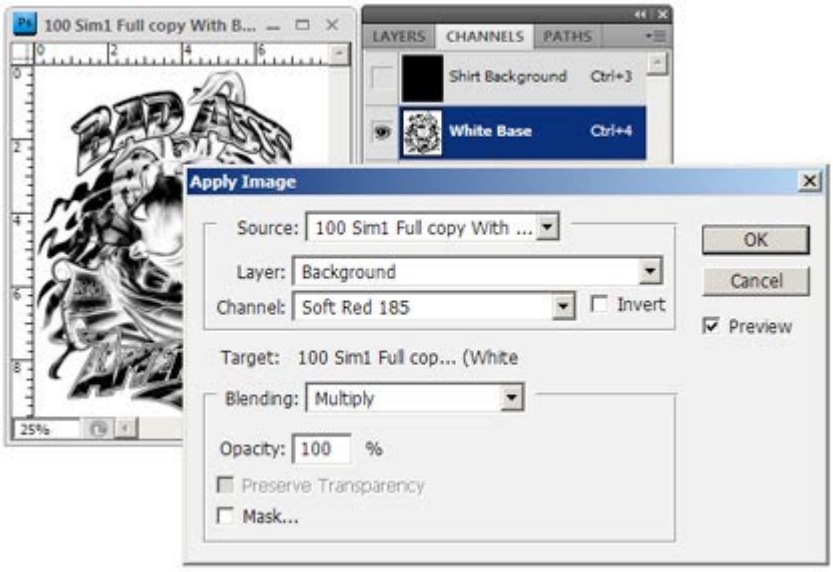
If your underbase looks as if its ever so slightly clouding the background (non-printing) area when viewing the separation on a dark shirt background or if small white fringe pixels or noise is present, this action will remove it.

Select the white base and click the **Remove Fringe Pixels From Base** Action. Basically it deletes pixel data of 5% or less from the base which doesn't affect the quality or performance on press.

Selectively Modifying The White Base

Many times its needed to selectively modify the white underbase. Usually this means darkening areas under a specific ink such as red or blue for example so these colors print brighter on darks shirts.

This is best accomplished by using the Merge-Subtract Channel RUN Action which invokes the Apply Image Function. We've discussed the use of this previously although its vital to review it again here as it relates to the underbase.



In our example we're going to add the Soft Red 185 Channel to the White Base to help brighten the reds further on the shirt.

Start by selecting an under-base channel and then click the Merge-Subtract Channel action or just open Apply Image in Photoshop.

In the Apply Image window select the Soft Red 185 Channel, set the Blending to Multiply and Opacity at 100% to apply all the data and click okay.

All of the Soft Red 185 Channel has now been added to the white underbase so the red ink prints brighter on darks.

Obviously if less pixel data is required, use a lower opacity setting. If more is needed simply repeat the process.

As opposed to using our Action to load the Apply Image window, within Photoshop's menu bar go to Image > Apply Image.

Become An Opacity Junkie!

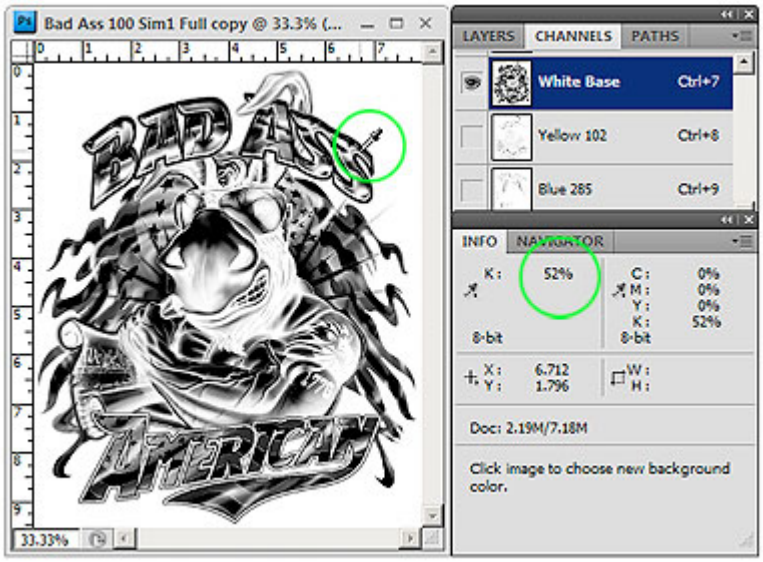
After doing some jobs, you'll get to know what works for you and one of the most powerful tools in Photoshop is the built-in densitometer within the Info Panel.

Its not only helpful for taking readings on the base, but every other channel too.

If 85% white for example works well under solid red, just shoot for that number on the next job.

In fact, I never do a separation without extensive use of this on every channel.

Don't color separate blindly...be a pro and use that Info Panel!



Choking The White Underbase

We've designed each underbase to be as accurate as possible and made adjustments that help in decreasing excessive intensity of the outer edges. Most of the time choking the underbase is not required, especially with photograhic and busy images.

You may find it necessary however (at times) to choke the white underbase a bit to avoid white image data from spreading beyond the borders of your image. This is more of a factor with images that have hard, clearly defined edges such as solid areas of large text. Utilizing a coarse mesh for the white underbase or when dealing with less than ideal printing conditions are other reasons for choking the underbase.

This Is Worth Repeating!
Choking the underbase is more important with images that are comprised of or contain hard, clearly defined boundaries or objects such as large text which are to be printed on a dark substrate.

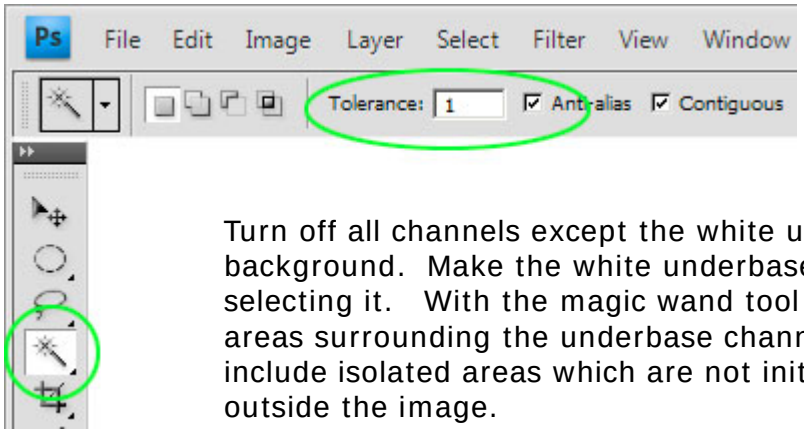
The best way to decide if your white underbase of choice needs a touch of shrinkage is to closely examine the edges at a magnification of 200% with the white underbase, all color channels you intend on using, in addition to the black shirt background channel selected within the channels panel.

If it's "clearly apparent" that unwanted white ink is creeping beyond your top colors, UltraSeps has an to action to address the problem and will choke the white underbase by 1, 2 or 3 pixels.

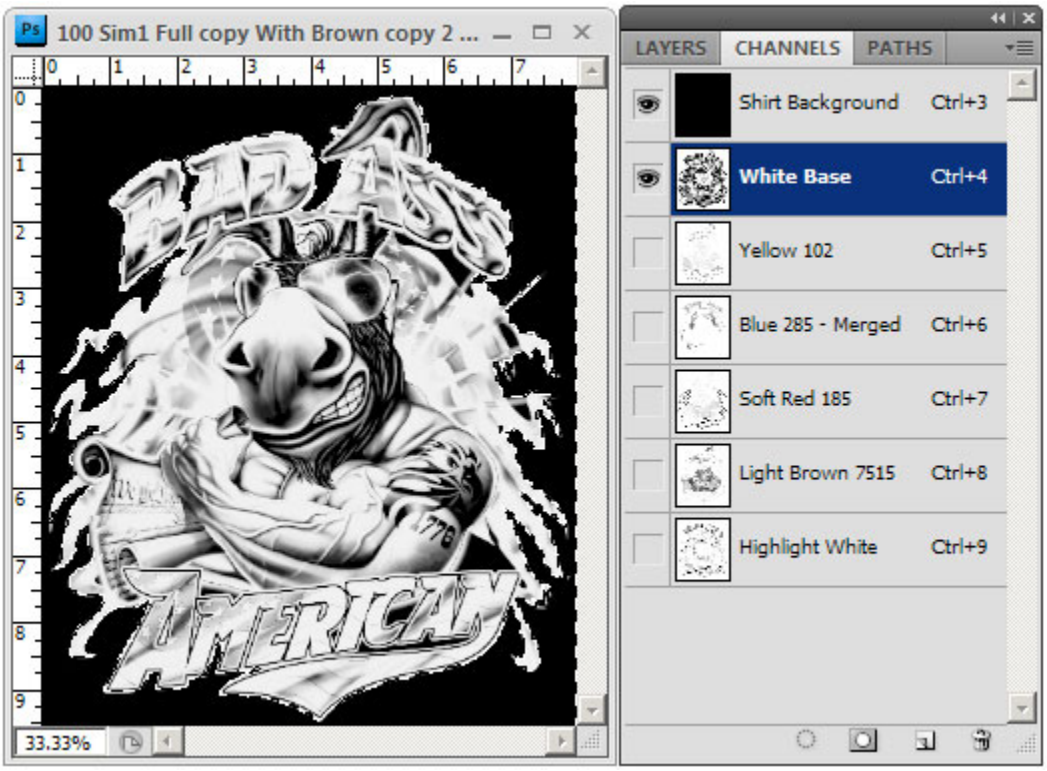
If attempting to test or use these on a low resolution file of say 100 dpi, the effect will be greatly exaggerated.

Choking the white base cannot be totally automated and requires the user to select the canvas surrounding the white underbase along with isolated inner areas such as gaps inside of text using the magic wand tool.

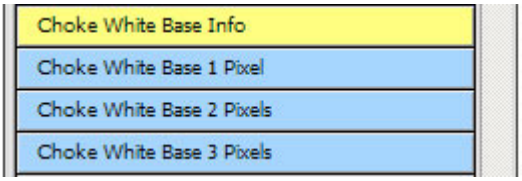
First, select the magic wand tool and lower the tolerance to a factor of 1.



Turn off all channels except the white underbase and the shirt background. Make the white underbase the active channel by selecting it. With the magic wand tool shift-click on all blank areas surrounding the underbase channel. Don't forget to also include isolated areas which are not initially selected by clicking outside the image.



After selecting all areas outside the image along with any isolated spots, the next step is to finish the task by using one of the UltraSeps actions to choke the underbase by 1, 2 or 3 pixels.



Click one of the actions pictured at the right then take a look at your underbase at 200% magnification with all top colors visible.

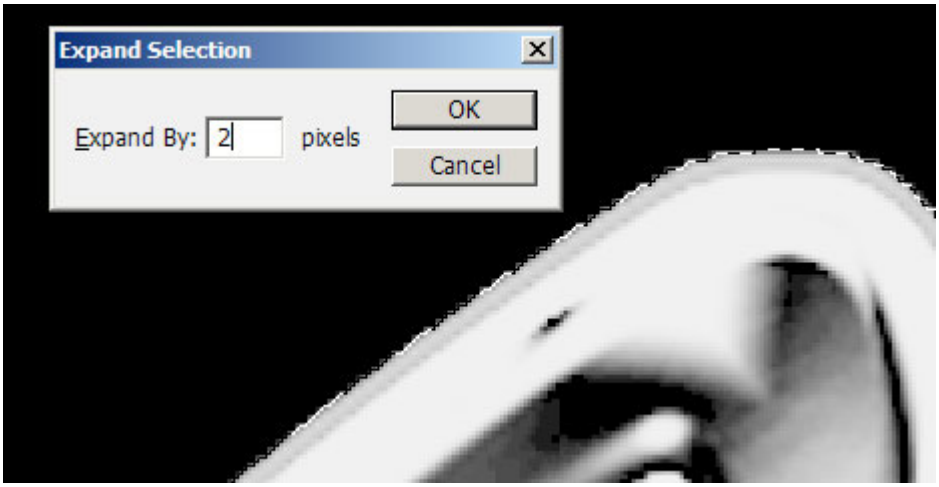
If it appears as though a higher setting is needed, either undo the action and try 3 pixels or run the 1 pixel action to take off a bit more.

It's important not to overdue this. Too much of a good thing will begin to deteriorate the underbase. If just a touch of underbase is visible beyond the top colors, most likely it will not affect the image as top colors have a natural tendency to expand slightly on press and hide minor flaws.

Choking Portions Of The Underbase

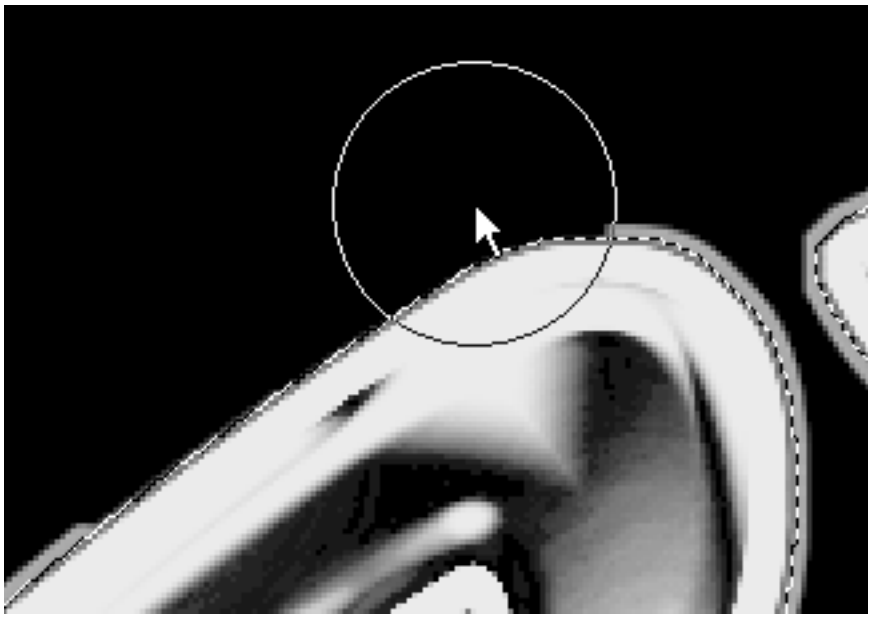
Certain images might contain both hard, clearly defined edges and soft faded elements thus making auto choking somewhat difficult. When presented with such an image, here's a great method to only choke the "hard areas" while leaving softer parts, which could be damaged untouched.

Start again with the Magic Wand tool with a Tolerance setting of 1. As before, shift-click outside the underbase and within any confined areas. Now from Photoshop's "Select Menu" choose Modify > Expand and enter 2 pixels. A higher pixel setting can be used if needed.



Select the Eraser Tool with a hard edge brush at 100% Opacity Setting and manually erase along the edges that require choking.

Don't worry about erasing into the image area since its protected by our selection. Only the outer 2 pixels in the example are "live" and can be erased.



Always make certain the background color within Photoshop's tools panel is set to White when using the eraser tool!

Generate Discharge Underbase

When running Discharge Inks, the white base needs to be modified. Unlike a traditional white base, a discharge base only requires white ink where white is actually seen within the art and not under all top colors.

After completing a simulated process separation, one of the white base channels will require modification using this Action.

The Action will modify the white base you intend on using to work properly with discharge inks.

This Action requires the RGB Channels to be intact! If the RGB Channels have been deleted, the underbase generated will be useless!

The modified base may include a small amount of discharge white under certain top color areas. This is expected and will not adversely affect the image quality on press.

The Action does NOT generate a stand-alone white base, it modifies a preexisting white base that UltraSeps has generated.

Prior to running, the intended White Underbase Channel needs to be the selected active channel within the Channels Panel.

Upon completion, the White Underbase Channel will be named “White Base Discharge Ink”.

Discharge separations do not require a highlight white so its okay to delete it.

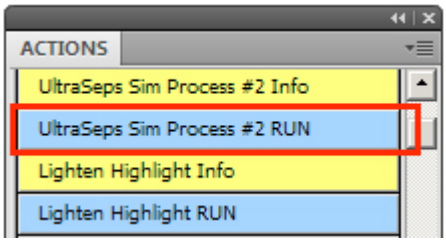
Normal Underbase

After Running White Discharge Base

UltraSeps Simulated Process #2

General Info On Sim Process #2

UltraSeps Sim Process #2 generates simulated process color separations somewhat differently when compared to Sim #1 and Sim #3. It has become a favorite of many users and has been updated slightly in UltraSeps v3.



Do not use any of the Auto Reduce Color Actions with these separations as they are specific to the Simulated #1 output.

With some art, such as those containing tans and fleshtones, these separations help mute the reds within tints to assist in generating those colors using the extended Mute Highlight Channel. This helps printers with smaller presses generate these colors reasonably well without using the actual inks.

With other files, its suggested to use the Dark Highlight White as the Mute Highlight is most likely too strong.

The Black Channels are also different with the #1 Black used as the primary selection, the Heavy Black includes a great deal of shadows and is excellent to adjust while the Light Black is great when using black ink on black shirts.

The White Underbases, Yellow, Blue, Teal and Red Channels are also generated employing different methods when compared to the Simulated #1 Action, so the final separations are not identical. This is a completely different simulated process program.

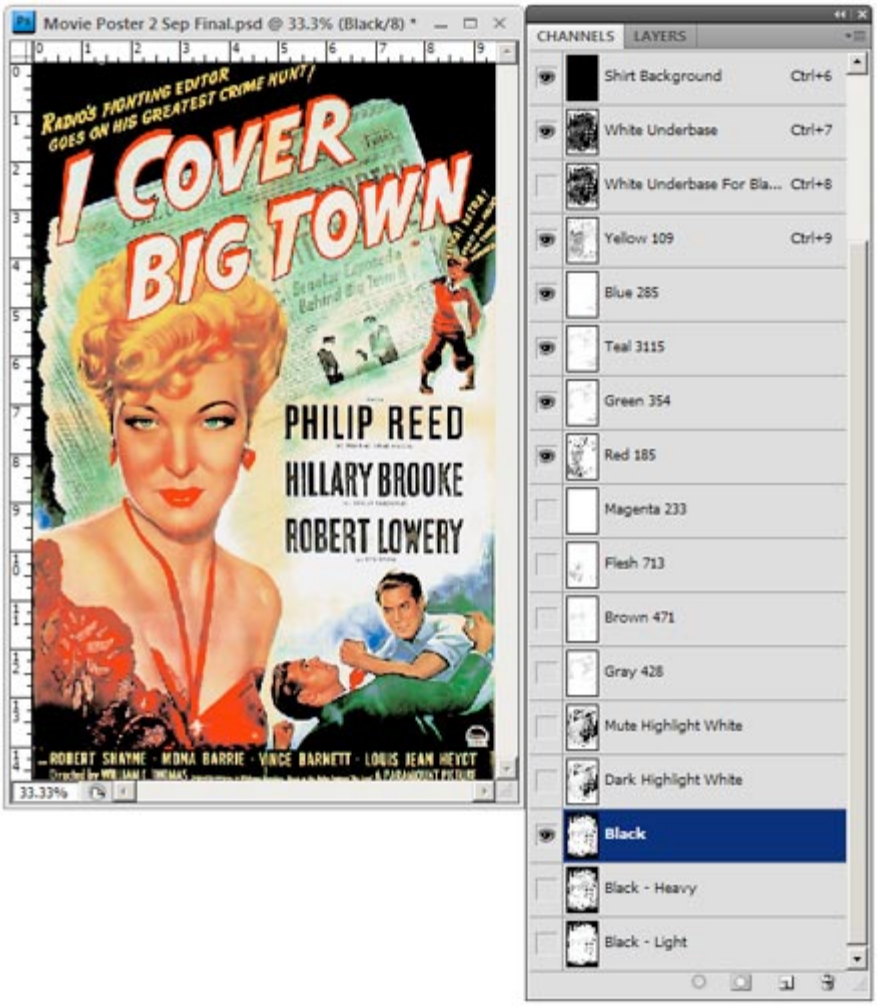
The separations generated are extremely accurate and many will prefer this method above Simulated #1. Usually, a Curve to lighten or darken a channel is all that's needed to get these seps to work with most files. In fact, you'll have less need to merge channels using it.

The only channels you'll find yourself merging regularly to reduce total number of colors are the Teal and Blue channels. And for those with smaller presses, merging the Green channel with the Yellow and Blue to avoid running a Green ink for jobs not highly green intensive.

Clicking the Sim Process #2 RUN Action generates the entire color separation.

Please note the Magenta Channel generated by Simulated #2 is a Spot Magenta and not a process color!

UltraSeps Simulated #2 Separation



The Sim Process #2 RUN Action generated the separation illustrated here.

It provides a white underbase for black shirts and non-blacks, two blues, green, red, magenta, flesh, brown, gray, mute and dark highlight whites and three blacks.

Take note the Black Heavy Channel contains a great deal of black shadow and will be too intense for most work (as is). This special Black channel generates the maximum amount of black data possible while not being destructive. Its intended purpose is to provide a black channel option to adjust, usually lighter to obtain a level of black ink the end user is comfortable with.

The Black Light Channel is far too weak for jobs printed on non-blacks. Its intended primarily for running black ink on black and very dark substrates for maximum contrast.

End user selected custom color channels can be added to these separations by using the Custom Color Channel Actions and-or the Flesh - Earthtone Actions.

Color Separation **Original RGB Image**

The illustration above documents the orignal RGB image and a basic unadjusted separation. No additional custom color channels were used to generate the screen shot as its composed of basic colors generated running the Sim Process #2 Action.

Simulated #2 Highlight Whites

Although most of your files may not include flesh intensive areas such as large faces, an image such as this is an excellent example for reviewing the use of the special highlight channels of Sim Process #2.

The separation above looks great but on press with limited colors and without using flesh inks, the red would dominate the areas masked here in bright green.

No Highlight **Dark Highlight** **Mute Highlight**

Turning on the Dark or Mute Highlight Channels not only adds highlight white to the white areas, its also adds a small amount of white to overprint the red tints and a touch within golden yellows. We got this idea from the Dark Highlight introduced with QuikSeps and is used within our CMYK separations to help mute the magenta channel on problematic images.

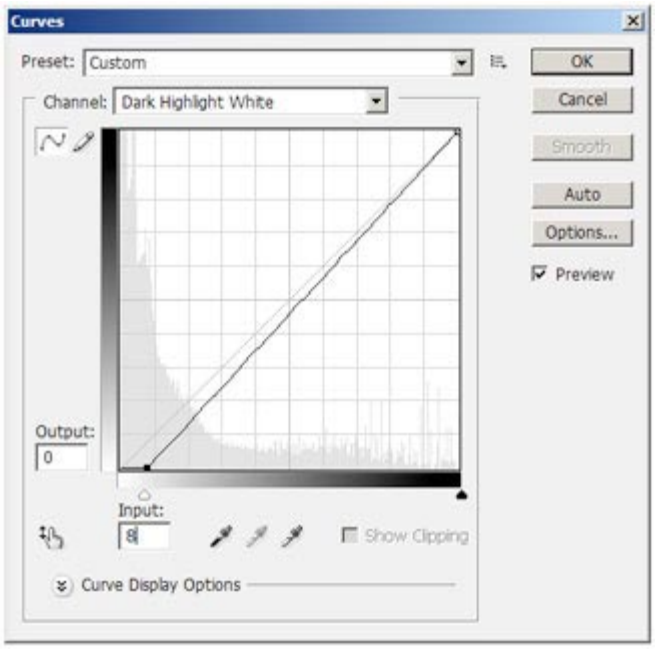
These extended highlights have a more dramatic effect on screen as opposed to on press. In fact, the Dark Highlight will perform similar to a normal highlight channel. Those with smaller presses attempting to print an image such as this or any image with tans, dark golden yellows, flesh, etc. will achieve a higher quality result when using the Mute Highlight.

If you'd prefer to use a more traditional highlight without the additional muting, select a highlight channel and use a curve similar to the this.

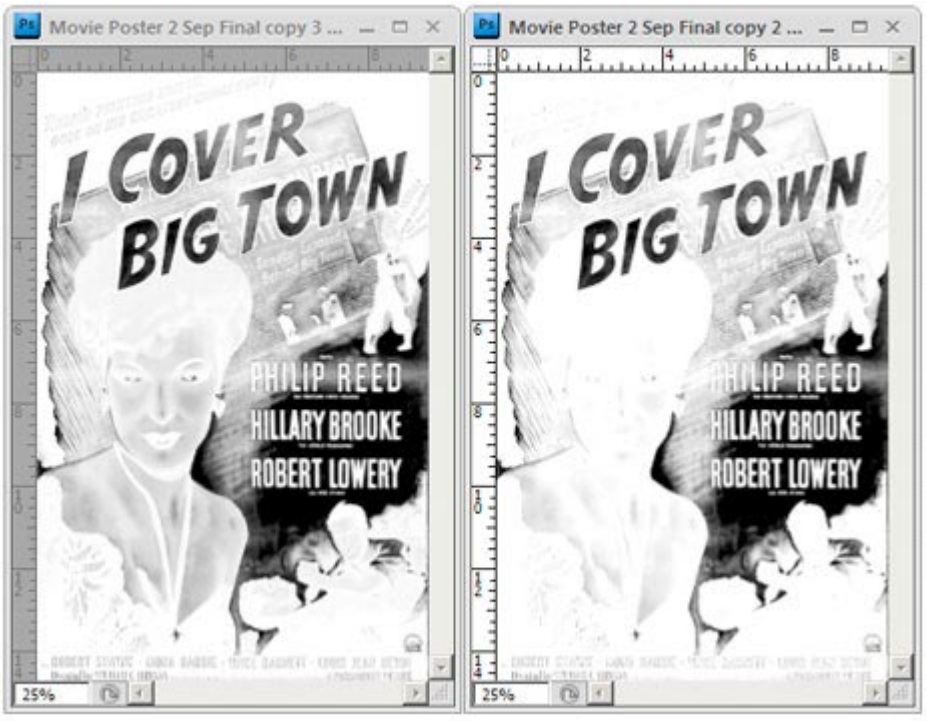
Select the lower Curve handle and enter 4, 5, 6, 7, 8, etc. within the Input Box. The Curve diminishes the muting effect.

Or just click the Lighten Highlight Action. Click several times until the desired amount is removed.

Adjusting The Highlight Whites



Dark Highlight Channel Adjusted To Normal Highlight



The above is the result of clicking the Lighten Highlight Action twice on the Dark Highlight Channel of Sim Process #2. Doing so transforms the slightly muted highlight channel into a traditional highlight. The end user might choose to adjust the highlight in this manner for use with art not benefiting from the muting effect.

Same Separation Before And After Highlight Adjust

Two identical separations before and after adjusting the highlight white. Notice the only change is the muting within the flesh and golden yellow areas. All other areas of highlight remain mostly unchanged.

Since we already discussed most vital points regarding the adjustment and modifications of simulated process separations earlier within the Sim Process #1 pages, there's no reason to further discuss working with an UltraSeps Sim Process #2 separation here.

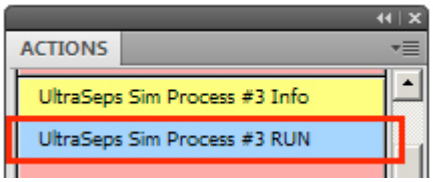
If needing to merge channels, add or delete data from one channel to another, modify the base, generate custom color channels, etc., simply refer to those pages earlier within the user guide.

So lets move on to UltraSeps Simulated Process #3.

This Area Intentionally Left Blank

UltraSeps Simulated Process #3

General Info On Sim Process #3



UltraSeps Sim Process #3 generates simulated process color separations differently by assembling most color channels using a Pure Color Mode. Its possible that some channels can be somewhat cleaner in appearance since they're not influenced by black or gray data within the art.

UltraSeps Sim Process #3 is a "hybrid" color separation function. It generates its channels using both traditional RGB data along with a Pure RGB Channel that is void of all gray and black data. Some files respond quite well to this method and its simply another tool to consider when color separating files using UltraSeps v3.

Some of the differences you'll find using Sim Process #3 are the Red and Yellow channels may include more color information. The Red 185 channel will be darker within areas where golden yellow, tan and fleshtones are seen. This dynamic can be an advantage however with files containing yellow to red blends which is common with a high percentage of images.

The Light Blue 305, Royal Blue 300 and Green 354 channels will exhibit less "overlap" when compared to other forms of simulated process separation. For example, if its a true Green, you'll find most of its data within the Green 354 channel and not also within the two blue channels.

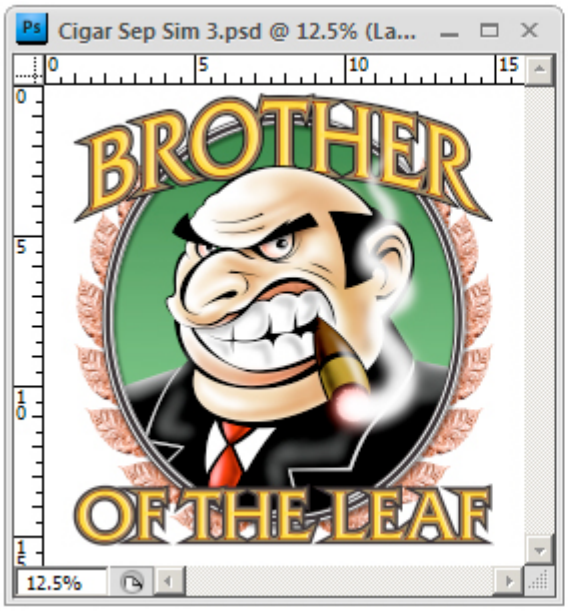
With artwork that isn't green intensive, the Green 354 channel can be merged with the Light Blue 305 and the Yellow 102 channels to generate green on press. However, if the art is that of a Heineken bottle for example, the Green 354 needs to be included.

The Flesh 149 channel also does a good job of selecting flesh and tan and is quite different from all other flesh channels generated using UltraSeps. The Gray 428 channel is usually more intense when compared to the gray from a Sim #1 or #2 separation.

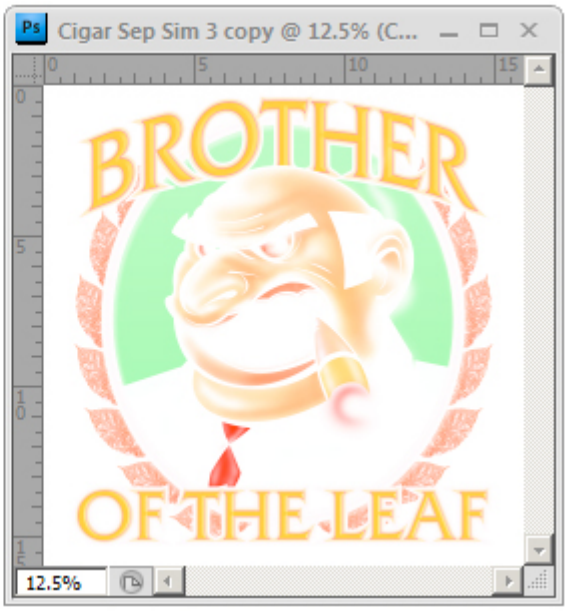
I've tried to keep the initial separation as simple as possible and have included only 2 underbases, one engineered for black shirts and another for non-blacks. Only one black channel is generated therefore if using black ink on a black shirt to assist with contrast, use a Curve in Photoshop to lighten it.

If additional color channels are needed, such as a specific color Sim #3 has not provided, use the Custom Color Action of UltraSeps to pull the needed channel.

Standard RGB Data



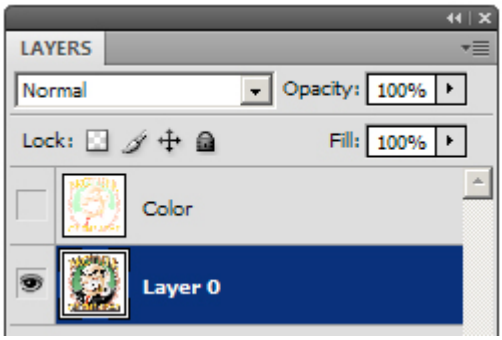
RGB Minus Black & Gray



Pictured here is a standard RGB and modified RGB where all the black and gray data has been removed.

The Layers panel to the right exhibits two layers and not the usual one.

UltraSeps Sim Process #3 creates this new pure layer and then throttles between them to create the separation benefiting from the strengths and weaknesses of each.



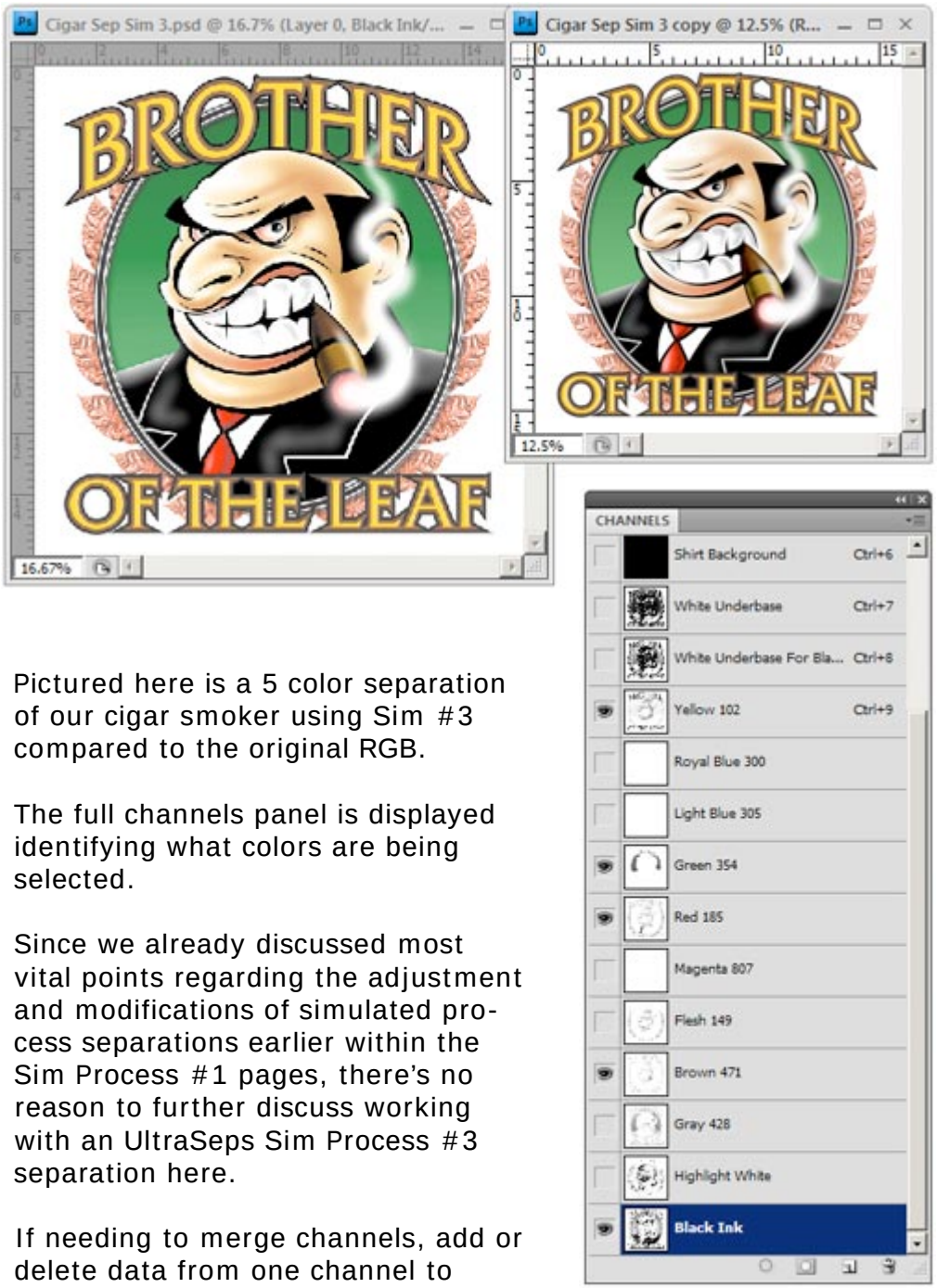
When removing all grays and blacks from the RGB data, its possible the range of some colors become extended while others diminished. This is the reason both are used during the color separation process of Sim #3.

Upon completion, the Layers Panel will contain both layers named Color and Layer 0.

If deleting the RGB channels to output films directly from Photoshop CS4 or lower, the Layers will convert to a single background layer.

Those using Photoshop CS5 (and higher) and printing separations to film with Illustrator or CorelDraw, I suggest deleting the Color Layer and retaining Layer 0 as the RGB. This guarantees the image will preview correctly when using Illustrator, CorelDraw or another application for printing films.

5 Color Separation **Original RGB**



Pictured here is a 5 color separation of our cigar smoker using Sim #3 compared to the original RGB.

The full channels panel is displayed identifying what colors are being selected.

Since we already discussed most vital points regarding the adjustment and modifications of simulated process separations earlier within the Sim Process #1 pages, there's no reason to further discuss working with an UltraSeps Sim Process #3 separation here.

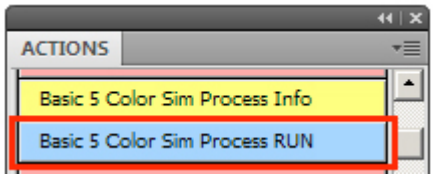
If needing to merge channels, add or delete data from one channel to another, modify the base, generate custom color channels, etc., simply refer to those pages earlier within the user guide.

Do not use any of the Auto Reduce Color Actions with these separations as they are specific to the Simulated #1 output.

Basic 5 Color Simulated Process

General Info Basic 5 Color Sim Process

UltraSeps Basic 5 Color Sim Process makes use of values within our other simulated process color functions and generates a very basic color separation that works for images containing the most used and popular colors.



Upon completion, this has generated yellow, blue, aqua, red and black channels in addition to a highlight white and a choice of 2 underbase whites.

If additional color channels are needed, such as a specific color this simple process has not provided, especially a green, use the Custom Color Action of UltraSeps to pull the needed channel.

See page 33 for instruction on how to use the Custom Color Action to generate a channel for a specific color.

Often the blue and aqua channels can be merged into a single blue channel to further reduce the number of colors.

Outputting Simulated Process Separations:

Dot Shape - Elliptical

All films 26 Degrees at 55 LPI.

Mesh count 280 - 305 Top Colors.

Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

Print Order: Light Colors First - Darks Last (usually). If the separation includes a gray ink, run prior to the highlight white. Run highlight white prior to the Black.

If the separation includes a channel with a large area of solid ink coverage, run that at a later point in the separation regardless of color (if possible) to avoid excess ink buildup.

If problems are encountered such as mesh interference patterns on press, then output the white base using 50 LPI at 56 degrees.

Manual shops and those doing simpler work may want to experiment with heavier line screens such as 45 lpi when outputting the film positives and not to use mesh counts above 280.

Less critical jobs can be effectively printed using 230 mesh for the top colors with excellent results.

Generate Flesh & Earthtones

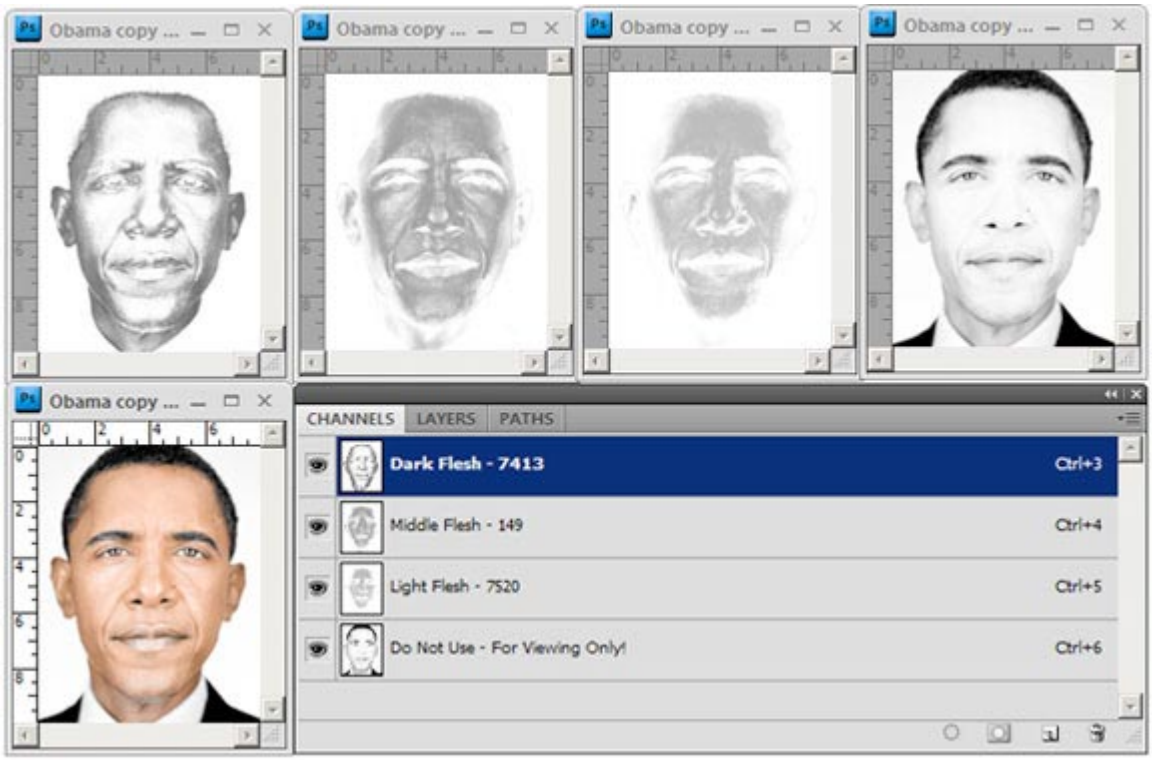
The Flesh-Earthtone section of the user guide is quite extensive. If you don't feel like reading it now, just skip it and refer to when needed.

Sometimes specific inks are needed to image flesh and earthtones very accurately. Especially when the job is primarily focused on those colors and must look great. You wouldn't want to print an image that's primarily a human face and not use at least some actual flesh ink.

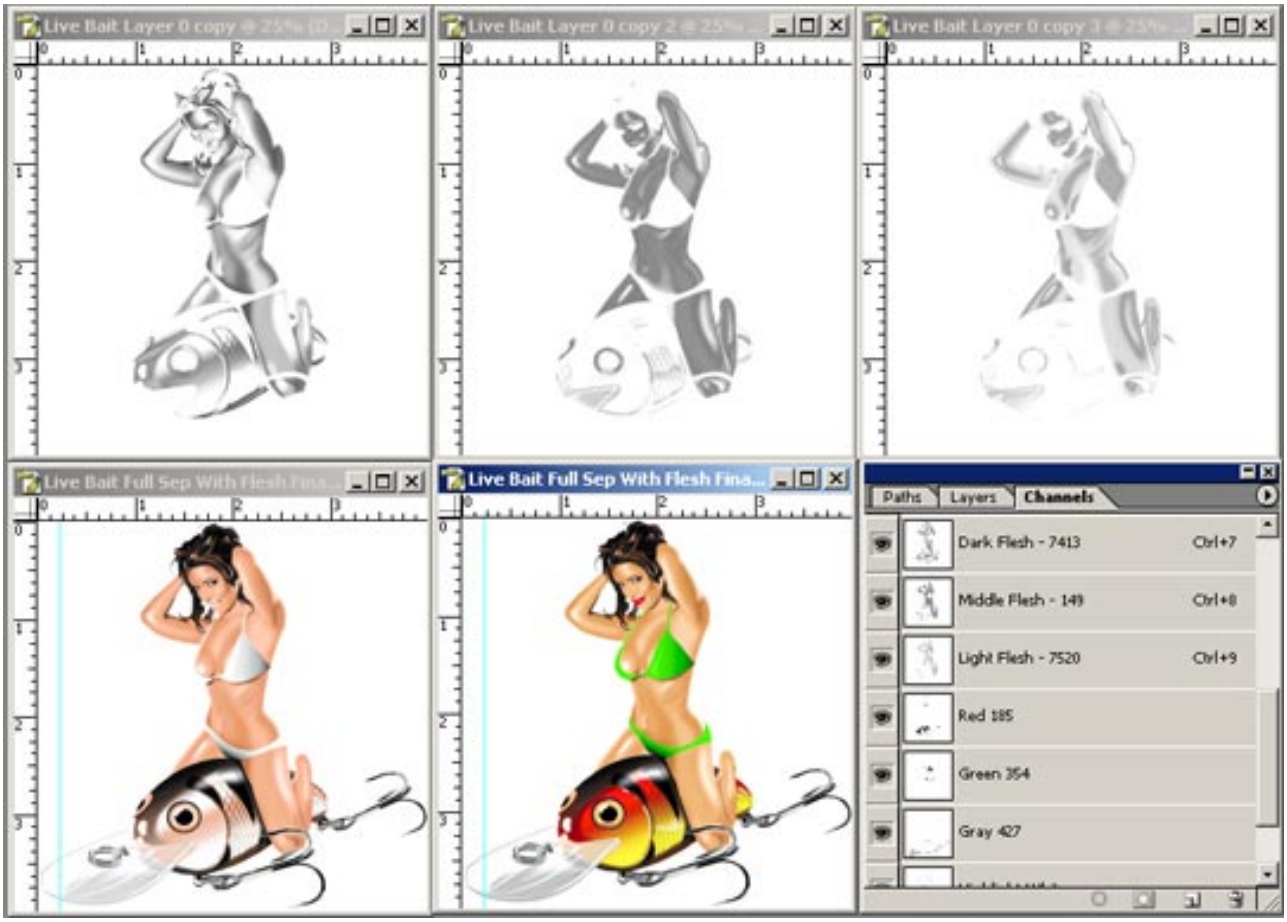
We've included 4 different methods to pull these colors, the first 3 are completely automated and called Auto Flesh Earthtone RUN #1, #2 & #3. Most files respond well to these and provide excellent results.

The other method guides the user through "picking" a dark, medium and light flesh. UltraSeps then makes use of your selection and generates smooth, precise custom channels.

Below are results of running the automated #1 action. We also generate a very basic (not for use on press) black channel within the action to assist in viewing. The #1 Flesh Action works on files with deep, colorful fleshtones and can produce great results with little masking required.



Below is the same automated action on a completely different image with nothing changed or colors adjusted. Believe-it-or-not, it uses the identical colors from the previous image. This time however, we copied our new flesh/earthtone channels into a simulated process separation. The ONLY adjustment made was removing the flesh data within girls body from the red 185 channel which is quite simple using our Subtract Color Data action or using a mask (discussed in detail later).

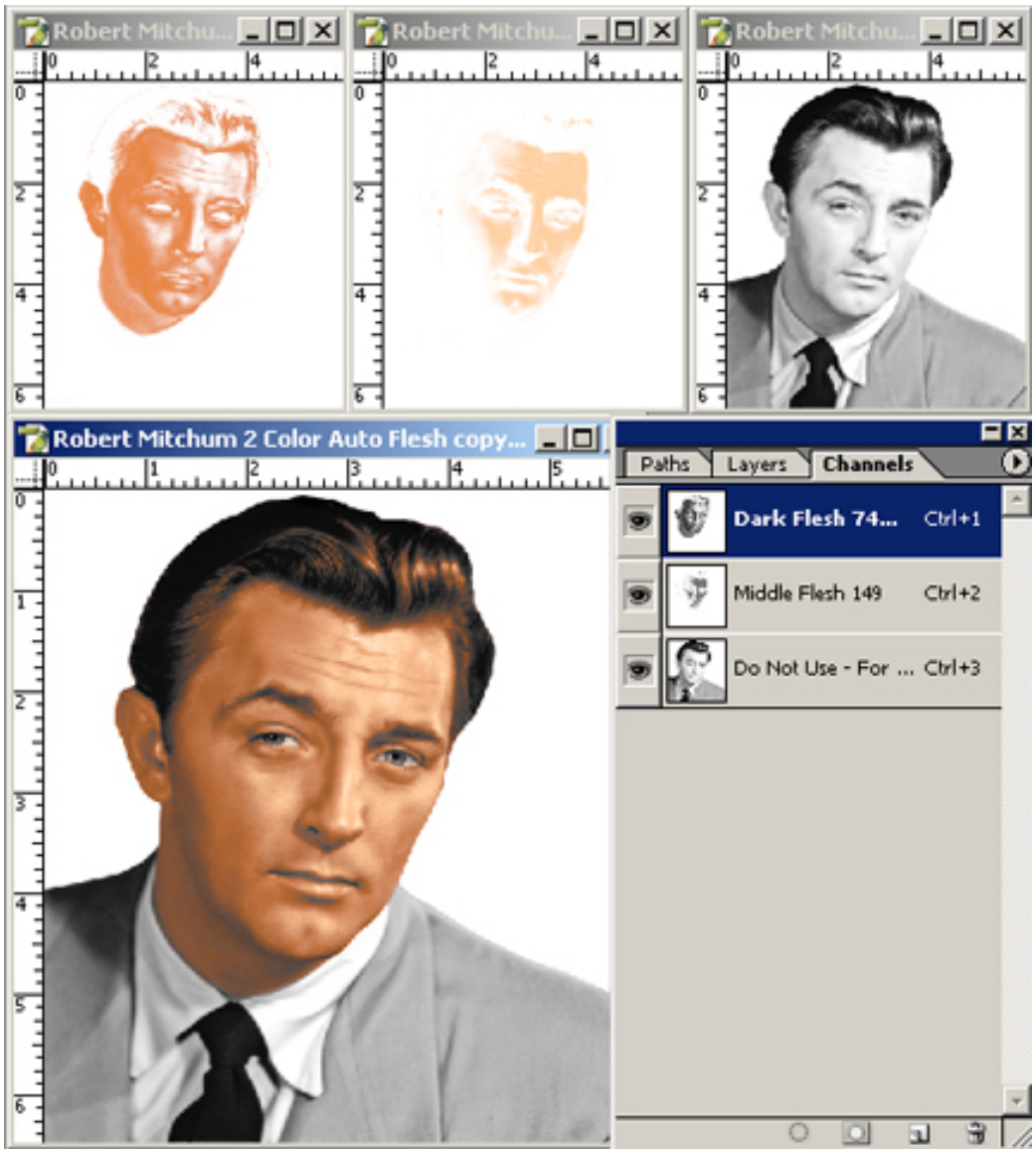


This action works best on images containing flesh / earthtones that have sufficient color information and is not a good candidate for washed out whiteish and pinkish fleshtones.

So if not quite right, run the #2 or #3 Action or the Custom Action. Remember, its okay to change the color of the channels to better match your image in addition to bumping them up or down using the Intensify or Fade.

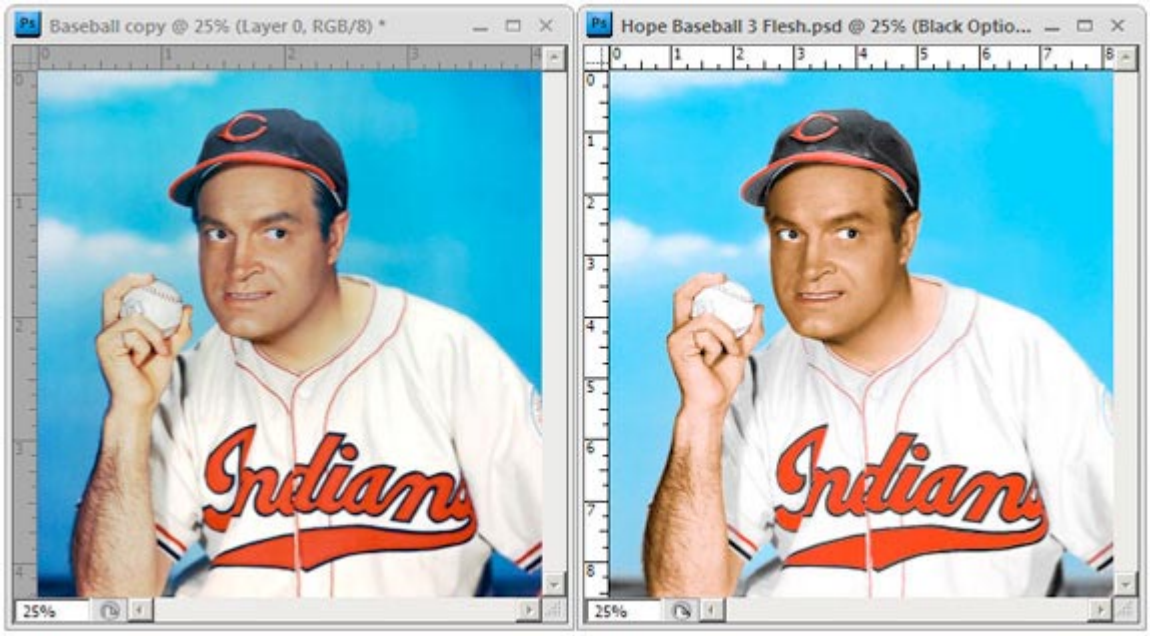
The Auto Flesh #2 and #3 Actions generate flesh and earthtone channels using 2 or 3 colors with inventive calculations to identify all data. They work for any job although require a substantial amount of deleting unwanted flesh ink extending beyond the flesh - earthtone areas.

Auto Flesh Earthtone #2 Output



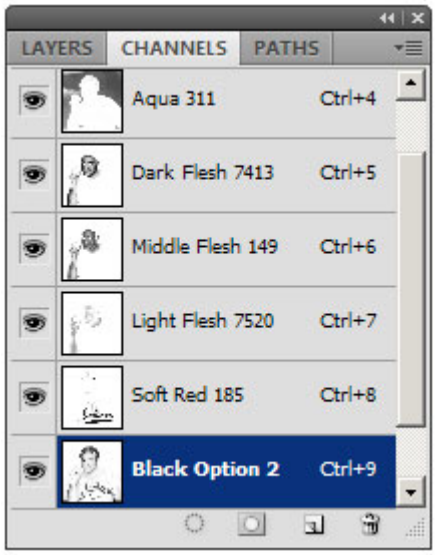
Above is the output from the Auto Flesh #2 action. The results are excellent for only 2 channels and a black for viewing. These channels can now be Shift-Dragged into the color separation for inclusion. Any unwanted ink that may be found within the jacket for example can be deleted with the use of the eraser tool or drawing a path and deleting. We'll discuss that later.

The Auto Flesh #3 Action: Below is a completed separation. Try this one yourself as its great for getting comfortable with flesh channels. In fact, UltraSeps has improved upon the color so the print itself will be a bit more attractive than the original.



Original RGB Image **Color Separaration**

Adjust the channels to more closely match the original if desired by double-clicking a channel, bringing up the color picker and changing its color.

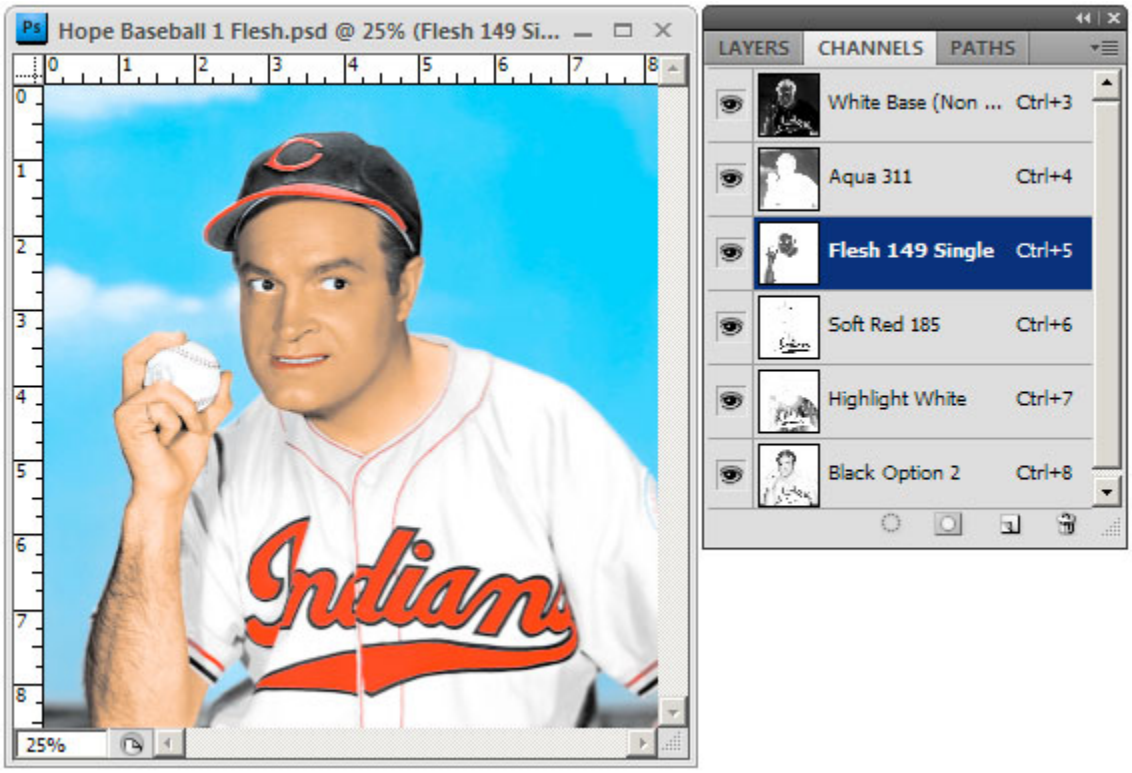


The key to making this excellent separation possible using the #3 action is creating a “mask” of the flesh ink areas surrounding the face and arm.

Once the mask is created, which is just a fancy word for a “path”, all flesh ink outside its intended range can be deleted. Additionally this mask can be used to remove flesh data within the red channel and yellow channels.

We’ll get to that after discussing the single channel flesh action.

The Single Flesh Color Action: For those requiring the use of fewer colors, we've included an action that generates a single flesh channel while still covering the entire flesh range so no areas are left without ink. This action uses a series of RGB calculations to "grab it all" in one shot. Most likely, this action will be the chosen go-to flesh action for many.

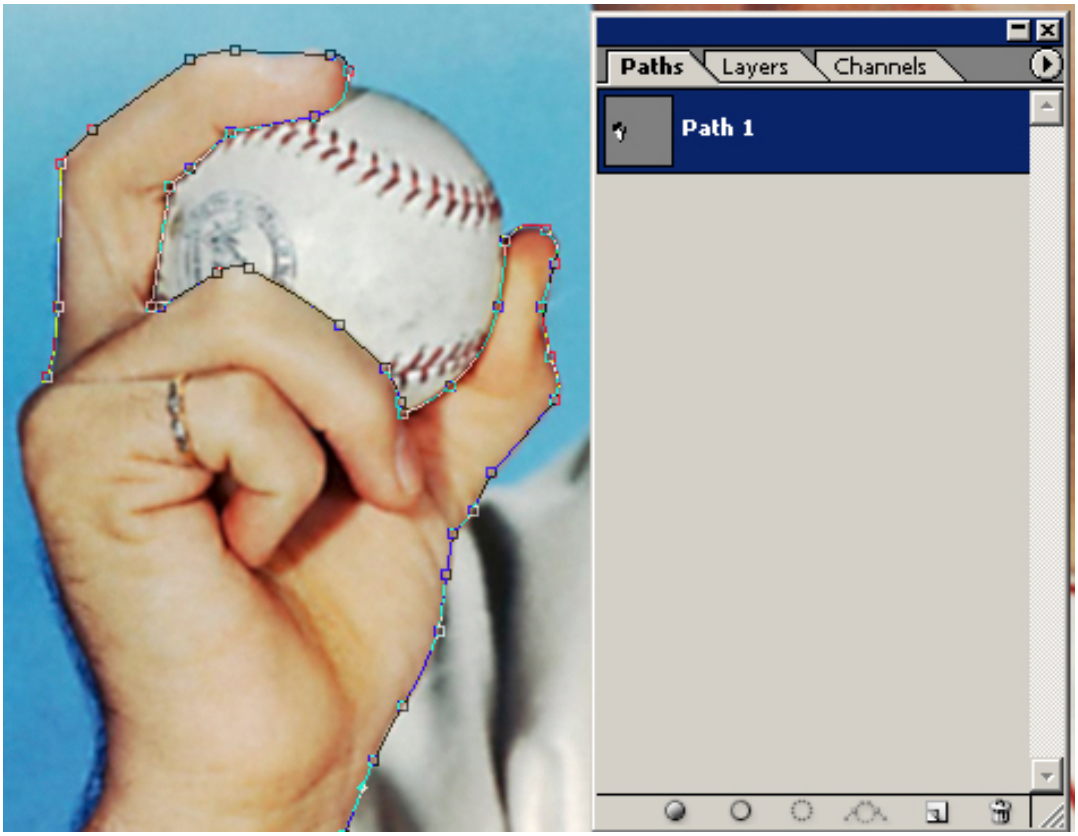


When using only one channel to generate all fleshtones, its important to adjust the color of the flesh channel for the image. And since we're only working with one ink, that should be an easy task. A few pages later we'll discuss changing the color of a flesh channel.

When using only one flesh ink, its a good idea to retain some of the yellow and red ink data under the single flesh channel to help achieve a wider tonal range.
Be careful with that red as its a flesh killer!
Red is an intense color, the strongest of all and a little too much in the wrong spots can destroy fleshtones.

Just A Little Reminder: These actions pull flesh and earthtones only. The channels generated must be "added" to the simulated process separation. This is an easy process, just select the channel using the Move Tool of Photoshop, hold down the shift-key and drag it to the destination file (the color separation). They'll align perfectly.

Deleting Unwanted Fleshtone Ink



Unfortunately, with all this automation must come a little work! The most accurate method to remove flesh ink from outside the boundaries of where its needed is by making some form of “selection” and deleting it. This is normally done by drawing a “Path” surrounding the flesh areas and converting that path into a Channel to allow easy selection and deletion.

First, open your Path Palette and choose “New Path” from the small arrow in the right corner. Next, grab the Pen Tool and start outlining the flesh areas to retain. More than one path can be drawn as it will all be saved within the single path named Path 1 here.

Don’t get all stressed out with this. If a mistake is made while drawing just take the pen tool, click on the point just placed and hit delete. You can delete as many points back as needed. Points can also be moved (nudged) to better conform to the image by holding down the CTRL key which converts the Pen into the Direct Selection Tool to allow moving or adjusting any individual point.

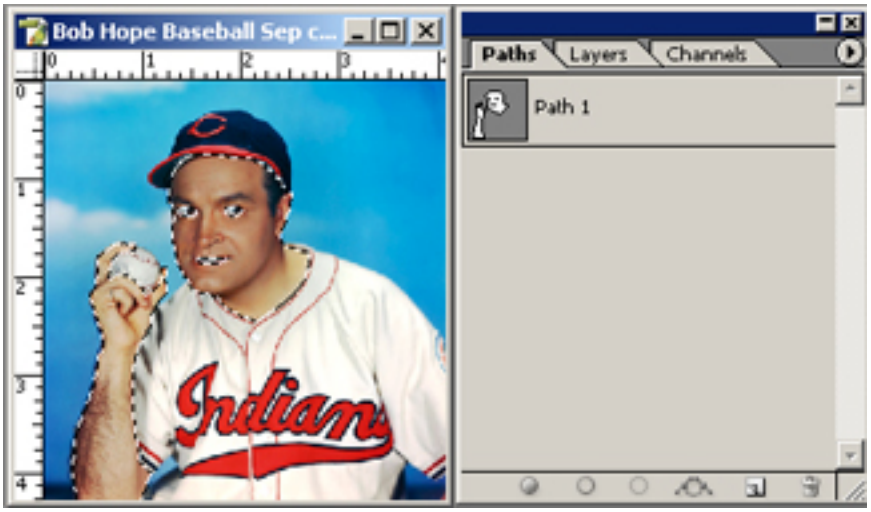
Also noteworthy is once the Path is made into a Channel, if there’s any mistakes they can be corrected by using the eraser or brush to delete or fill areas.

With simple files, you could select all channels (shift-click each channel) and simply use the eraser tool with an appropriate size brush to delete unwanted areas of flesh ink.

Completed Path

When the path(s) are complete, CTRL-Click the path to select it. (CMD-Click Mac)

Marching ants will immediately surround the selection.



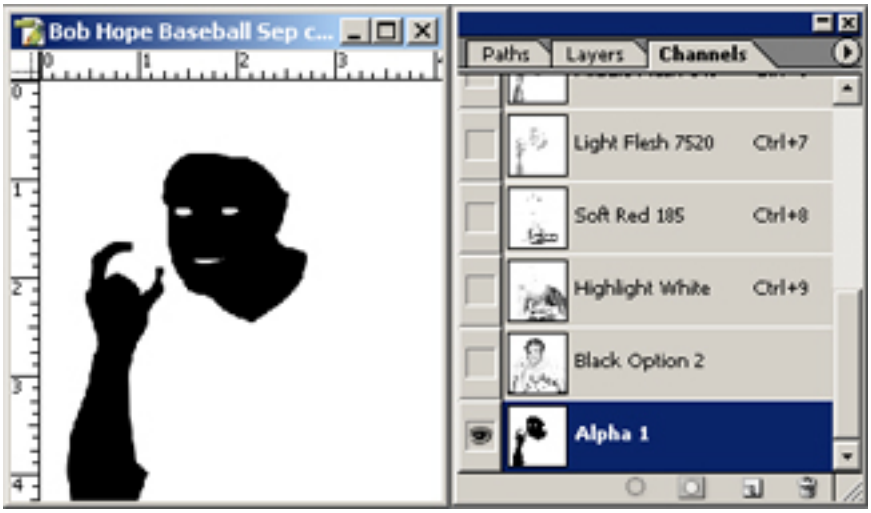
Make New Channel

Go back to the channels palette and choose New Channel from the upper right arrow and make certain “Selected Areas” is checked. Don’t worry about the color or opacity and click OK.

Note: The path selection alone can also be used to delete with however using a Channel allows easy corrections to the selection if needed.

Fill New Channel

A new channel named Alpha 1 has been created with the original selection still intact. Now just Fill with black and we’re ready to start deleting.



Wow, That Looks Bad!

Here's our separation PRIOR to using our newly created Alpha Channel to delete excess fleshtones.

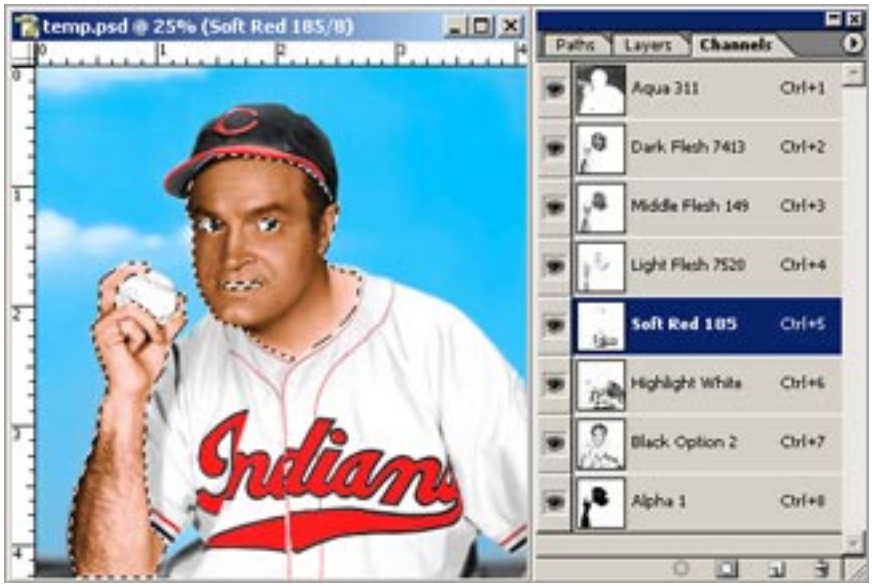
CTRL-Click the Alpha Channel to select it.
(CMD-Click on Mac)

Next choose "INVERSE" from Photoshop's Select Menu. Doing so targets all areas "outside" the selection.

Looking Better!

Simply choose each flesh channel and hit the delete key. All excess ink is now gone and the flesh channels are ready to go. Hit CTRL-D to deselect the area.

If the Fill Box appears when depressing the delete key, select Fill With White at 100% Opacity.



Modify The Red Channel

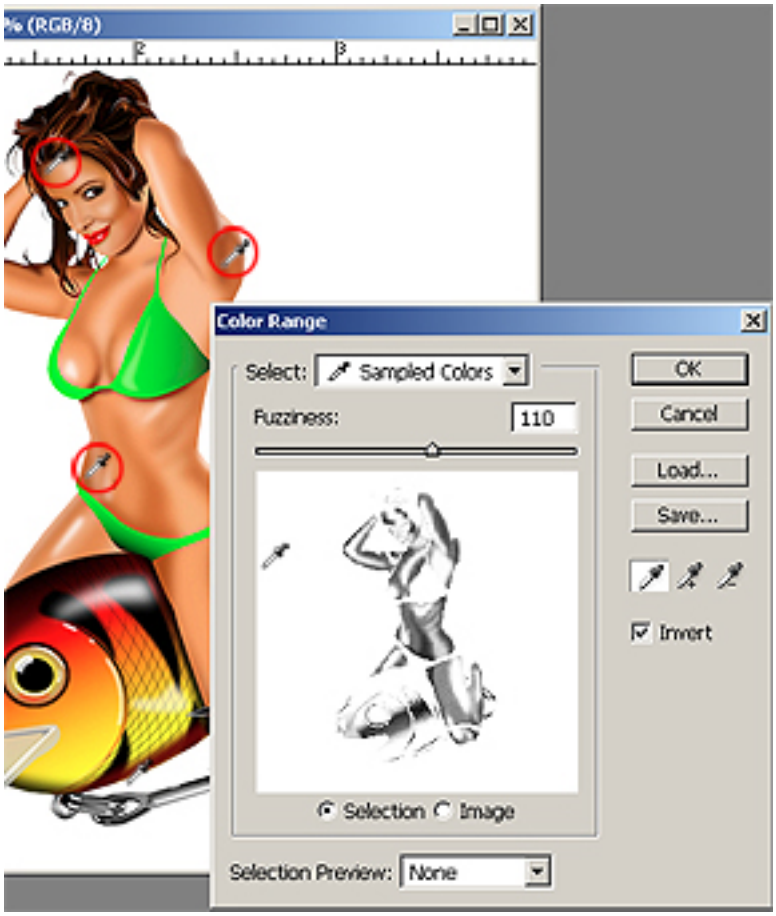
CTRL-Click the Alpha 1 channel again but **DO NOT use INVERSE** since we now want to target the active flesh area itself.

Pick the Red 185 Channel and hit delete to remove all red within the flesh selection or use a Curve to just retain a smaller amount of red within the flesh areas. Done! Ready to output films and print.

Okay, so you've run all the auto flesh actions and would like to try something else. So, lets give our Custom Flesh Earthtone RUN action a try.

This action prompts the user 3 times to select a color using Color Range. UltraSeps will then run an RGB calculation and generate each channel. Its important to pay attention to the on-screen instruction as to which color to select and to make certain the "invert box" is checked.

Select Darks



When prompted the first color to select is the darkest & reddish brown which is usually the most difficult to select. Use the Fuzziness Slider to adjust for more or less of the color.

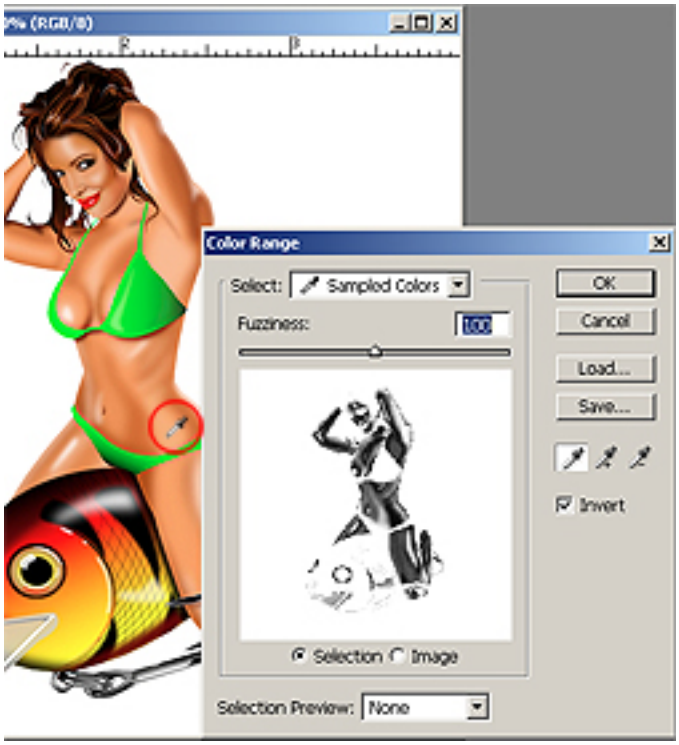
The key here is not selecting too much. You'll want to see some tonal definition within the color range window as pictured here and not a dark, massive blob of ink. A little practice goes a long way!

Our "Custom Color Channel" Action described earlier can also be used for pulling flesh & earthtone channels or any other odd color.

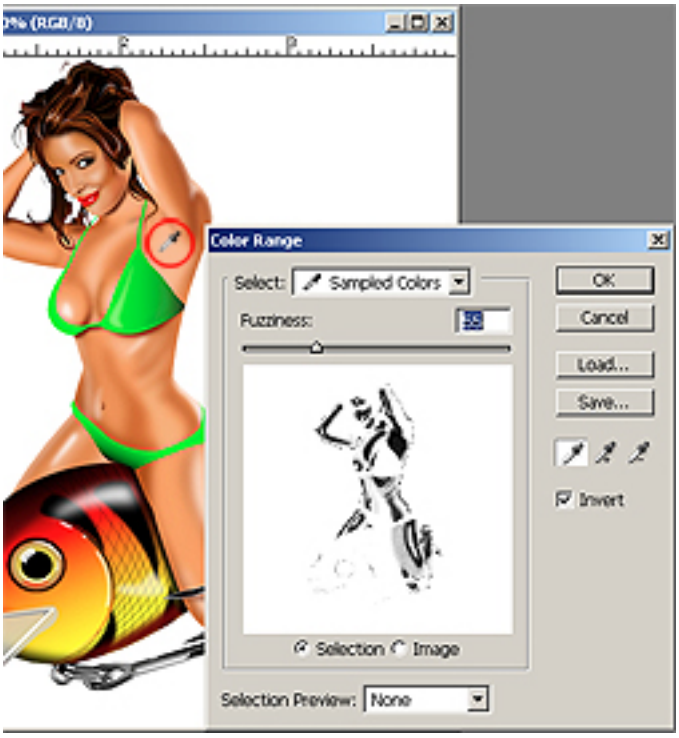
The only difference here is we provide suggested color values to the channels (which might be helpful) and also a non-printing black channel to help view the work.

The next colors on the agenda are the Middle and Light Flesh. These are easier to select. Once again we're using the Fuzziness Slider to select the proper amount of color. When selecting the light flesh, be careful not to contaminate the pure white areas by selecting too much.

Select Middle Flesh



Select Light Flesh



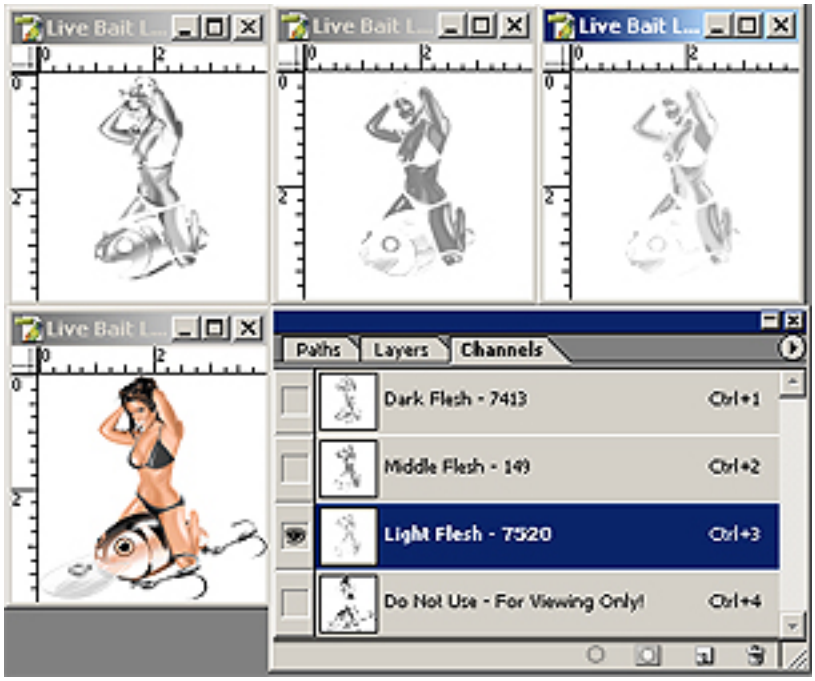
Once completed, three flesh - earthtone channels will be generated along with a non-printing black to help evaluate the results. Notice the non-printing black is not accurate and has black data where green should be. This is normal....as stated previously, its a "non-printing channel".

The examples here made use of faces and human form for illustration purposes only.

These actions can also be called upon when attempting to separate any image that is earthtone and brown intensive.

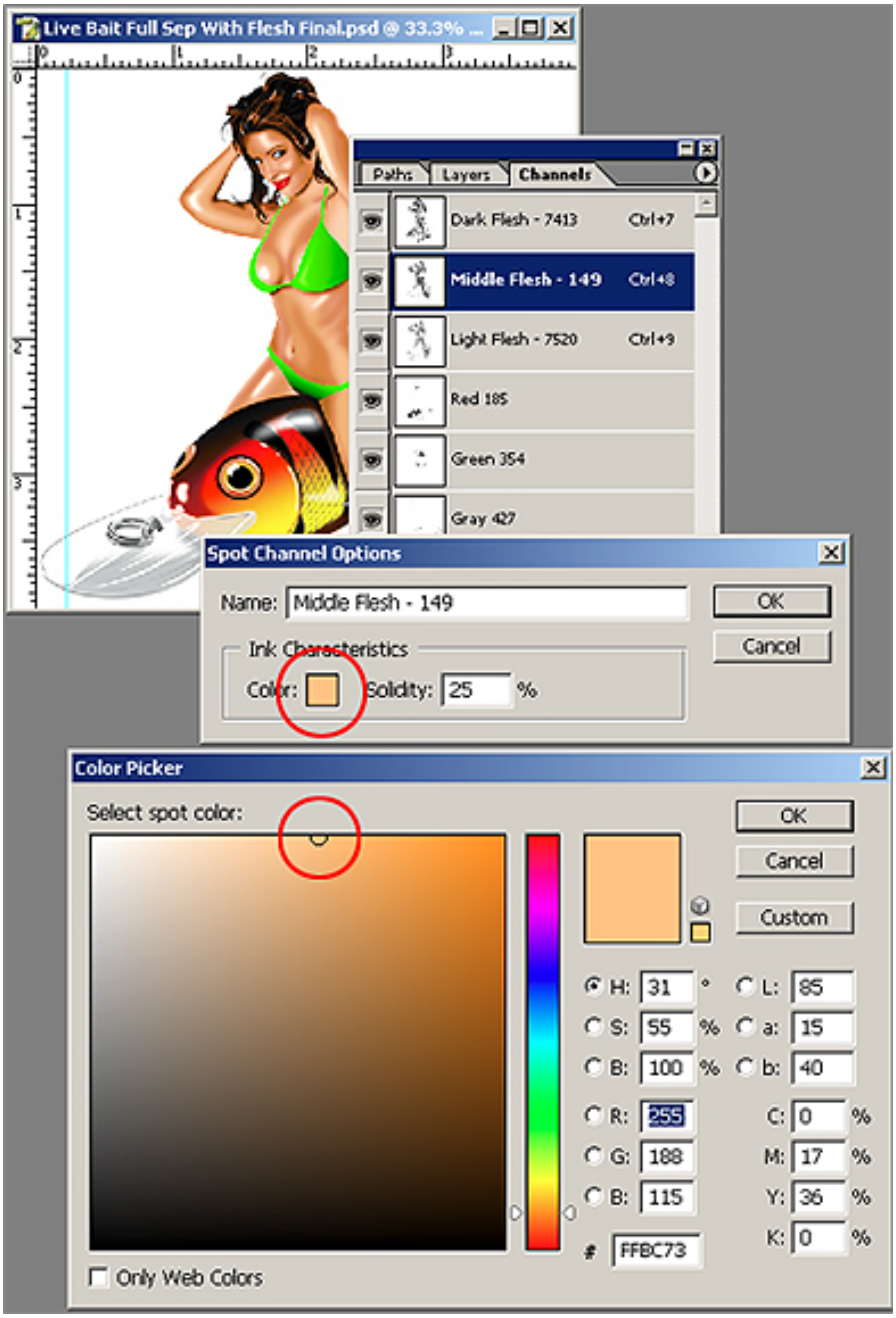
Note! With most art, the Light Flesh can be merged into the Middle Flesh so only two channels are needed for output.

See Adding-Merging Channels earlier in the user guide.

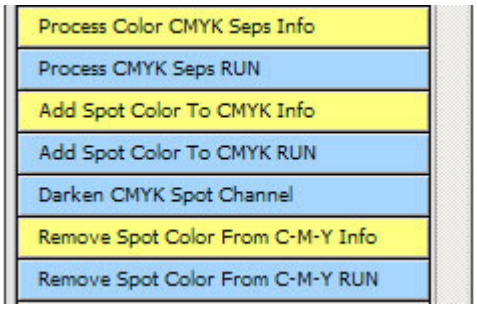


It might be necessary to adjust the color of a channel to match the image. To accomplish this, double-click on a channel, click on the small Color Chip within the Spot Channel Options Window. The Color Picker will now appear. Simply move the circle within the color picker to modify color. As its moved, the image will respond to changes in real-time. Rename the channel with the appropriate PMS color match name.

Clicking “Color Libraries” or “Custom” in older versions of Photoshop will launch a window where an actual PMS number and color can be chosen. Be aware that many absolute PMS colors generated within Color Libraries can appear a bit dirty. If choosing a PMS color by number, after selecting its advised to open the Color Picker and mix a pure version of the PMS color so the separation displays correctly.



Process Color CMYK Separations



Although somewhat forgotten by many printers, true process (CMYK) separations should have a place in your shop. They're easy to deal with since the same basic set of inks are used on all jobs in addition to being very small press friendly.

The major downside to process color is limitation to white and lighter pastel shirts. Darks can be difficult to achieve a bright, vibrant image on and are better left to those who specialize in doing so.

All CMYK separations MUST start with an RGB file configured for UltraSeps. Do not use an existing CMYK file! Also avoid using files saved as CMYK and reverted back to RGB if possible.

We recommend a white underbase at all times when printing CMYK, including white shirts as this helps control ink deposit and always provides a better looking print. Since process inks are transparent, not using a base will always result in faded images after a few washings due to fabric fibrillation which is t-shirt fibers penetrating the thin, transparent layer of ink.

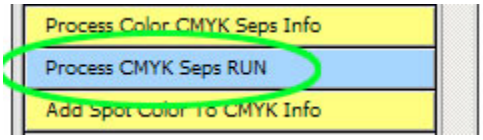
Process color works best with busy photographic style images, soft pastel graphics, animals, people, paintings, etc. We don't recommend CMYK on art with large solid areas of a specific color(s), especially if the integrity of that hard color is vital.

As with all files processed with UltraSeps, make certain the art is bright and colorful prior to running the CMYK action. If in doubt, run Ultra Image Fix and/or Brighten Define Image on a copy of the original and compare. Or just experiment with a curve, bumping up saturation, etc. to improve the art.

Since UltraSeps will convert the composite CMYK to multichannel, establishes the RGB channels again and has made radical adjustments to help the image print correctly, it might appear slightly off and dull on screen. This is normal, so just trust the separation.

Remember, CMYK separations for screen printing are quite different from those used in offset paper printing. By only converting to CMYK in Photoshop, doing nothing else to the image and then outputting films, the first few shirts might look okay, although a few shirts later its a complete disaster.

Process printing is fairly straightforward and you'll simply output the films and go. About the only adjustment required with some art is either lightening or intensifying the Magenta Channel with a simple Curve. Therefore we won't spend too much time on it here aside from an example of separating a file for process printing (sample file is included with UltraSeps). We'll also review the Actions that add spot colors to a CMYK separation and how to adjust the separation to make use of a spot channel.



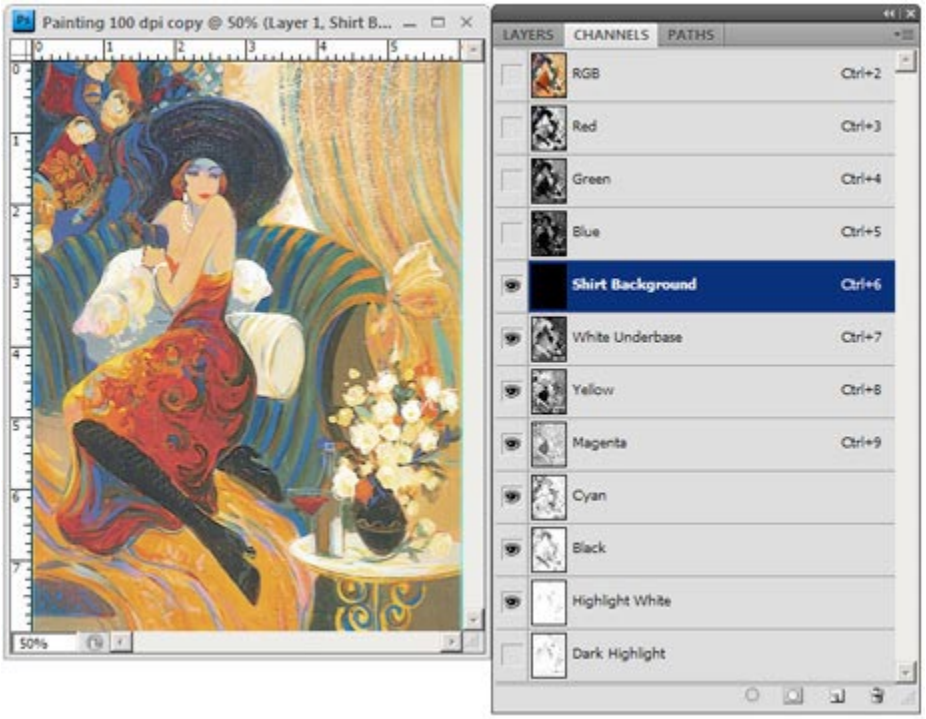
An image like this is ideal for CMYK process color. Its extremely busy with many soft blended pastel shades and no absolute reference colors, such as a company logo.

Plus if any slight color shift occurs during the run which is common with process, its probably not an issue.

Screenshot of orignal RGB file shown at right.

Below is the finished process separation. Notice its slightly faded and muted when compared to the RGB file above. This is normal. If the separation closely matched the original, it would print dark, muddy and be impossible to control.

The process has generated 2 highlight whites. The channel named “Dark Highlight White” helps in muting problematic images on press and has the most impact on the Magenta Channel. This darker highlight is helpful when printing process jobs that are flesh intensive as it takes the intensity off the Magenta in key tonal ranges.



Although a CMYK separation, the RGB Channels have been retained.

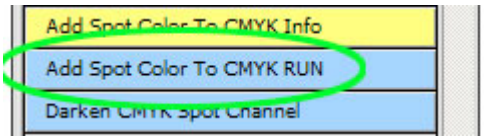
These are needed if any additional spot channels are generated.

When printing process color, always run the job Y-M-C-K.

See output settings for further info.

Add Spot Color To CMYK Separation

Certain colors are not produced well by pure CMYK and a custom spot channel may be needed. This might be a specific PMS color a client requires, neon's, metallic's, or a large area of a solid color such as big solid text.

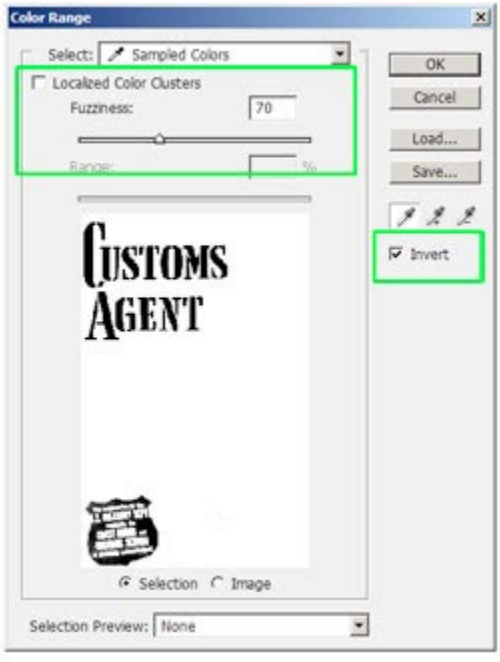


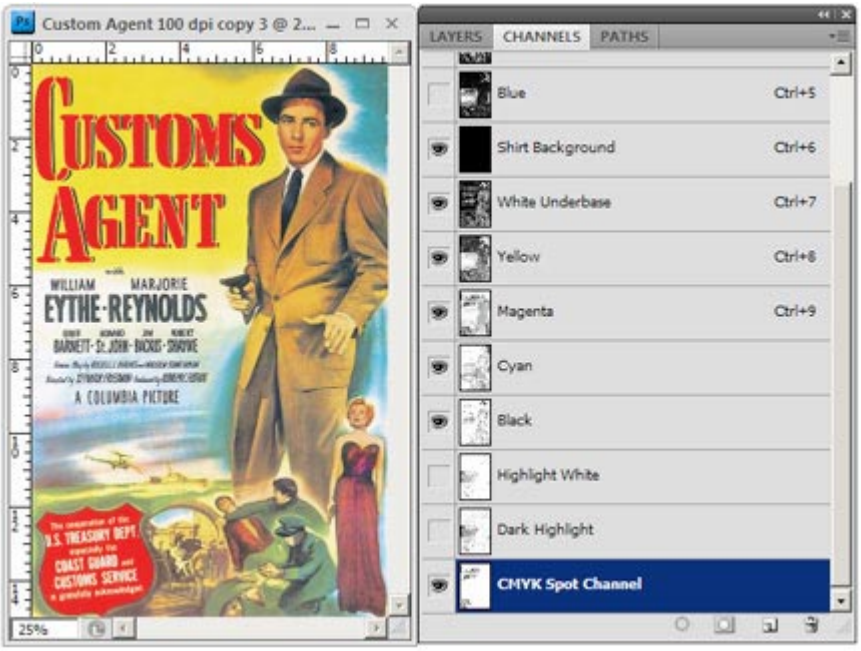
The Add Spot Color Action solves this problem by allowing the end user to select a specific color from the RGB Channels to generate a custom spot color.

This old movie poster art is another good candidate for process color. Its also ideal to demonstrate using the **Add Spot Color To CMYK Action**. Although this would print okay without a spot color, the appearance would be enhanced by using a spot color for the solid red within the large text and badge.

After clicking the Add Spot Color Action, Color Range opens. Make sure "Invert" is checked then using the eyedropper, select the spot color along with using the Fuzziness to control the amount of color selected.

When satisfied, click OK. A perfect spot color channel named CMYK Spot Channel is then generated using the color selected from the image.

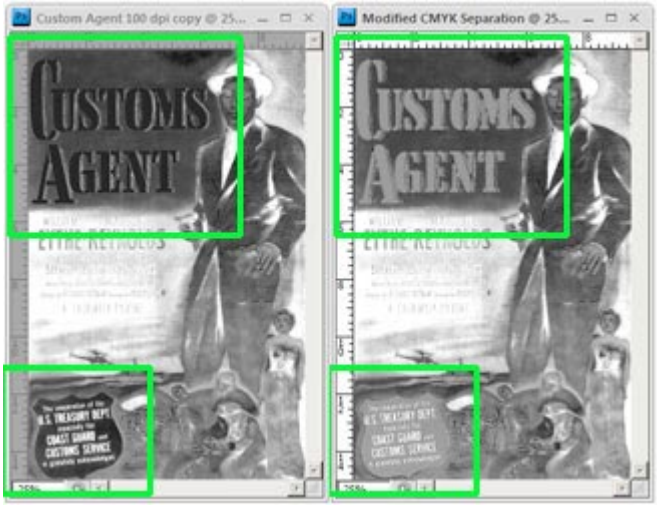




Pictured is the CMYK separation with new spot channel added.

What needs to be done now to assure the art prints cleanly is to remove some of the spot channel data from the C-M-Y channels.

Not doing so will retain excessive process inks under the spot color which can result in a muddy spot color on press.



Before and after of the Yellow process channel following the Remove Spot From C-M-Y Action.

50% of the spot color data has been removed from the Yellow, Cyan and Magenta channels.

The Action didn't remove it all since doing so could adversely affect some images on press. Although if your spot color is an absolute solid such as this, the Action can be run twice to remove the spot channel data further from the process colors.

After removal of the spot color data from the C-M-Y channels the separation will appear more natural and the spot color itself not as strong. If the spot channel needs it, run the Darken CMYK Spot Channel Action.

Always run the spot channel after the C-M-Y channels and prior to the Black!

Outputting CMYK Separations:

Dot Shape - Elliptical

All films 22.5 Degrees at 55 or 60 LPI. (26 degrees works also)

Mesh count 305 - 330 Top Colors.

Mesh count 200 - 230 Underbase White.

Mesh count 230 - Highlight White.

Print Order: White Base - Yellow - Magenta - Cyan - Highlight - Black

You can also try printing the White Highlight last.

If using a Spot Color, always run that prior to the Black.

For those having difficulty controlling an image, the dark highlight may help.

The process separations are normally quite accurate. If for any reason the image appears dark, your process inks are most likely too strong. Switch to less potent inks or add clear extender base to the yellow, magenta and cyan.

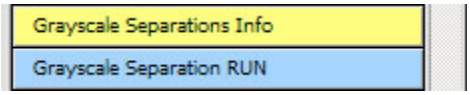
Tip: If your Magenta and Cyan process inks appear more like burgundy and navy blue in the bucket, the inks are too strong.

Only use high pigment content process colors if attempting to run process jobs on darker shirts.

Grayscale Separations

This is one of my favorite types of separations and I've done many designs using it. Show a sample job to your client and I bet they'll love it!

Although we're separating a grayscale image, UltraSeps actually generates the separation using RGB data.



The Grayscale Separation Action works on both full-color or grayscale images.

If the art is already in Grayscale mode, convert it to RGB mode. Although this isn't absolutely necessary, its a good idea just to make sure all runs smoothly.

Below is the original file (included with UltraSeps) and the finished separation using an underbase, 3 grays, a highlight white and black. The action also pulls a dark highlight as an option.

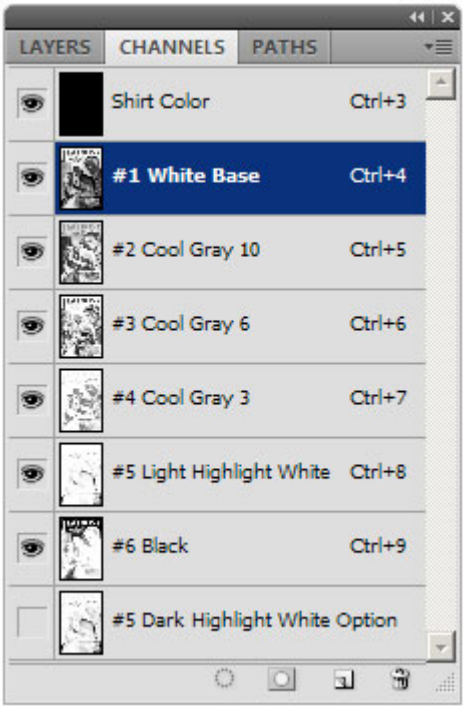
The number of colors required in most grayscale separations can be reduced by merging the Cool Gray #3 Channel with the darker Cool Gray #6 Channel.

Here's a view of the finished grayscale separation with each channel generated illustrated separately. These seps are normally ready to go once the action stops and require little to no adjustment.

Some files may print better by substituting an extremely dark (almost black) dark charcoal gray ink as opposed to using a black ink.

To decide if a file responds well to this, double-click the black channel then click the black color chip within the Spot Color Options Box to bring up the color picker. Now experiment with changing the black channel to an almost-black very dark gray.

Not all grayscale separations require the inclusion of a highlight white.



Outputting Grayscale Separations:

Dot Shape - Elliptical

All films 26 Degrees at 55 LPI.

Mesh count 280 - 305 Top Colors.

Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

Print Order: As specified on channels palette.

If problems are encountered such as mesh interference patterns on press, then output the white base using 50 LPI at 56 degrees.

Grayscale separations are more tolerant to lower mesh counts such as 230 for top colors using a lower line screen such as 45 - 50 LPI.

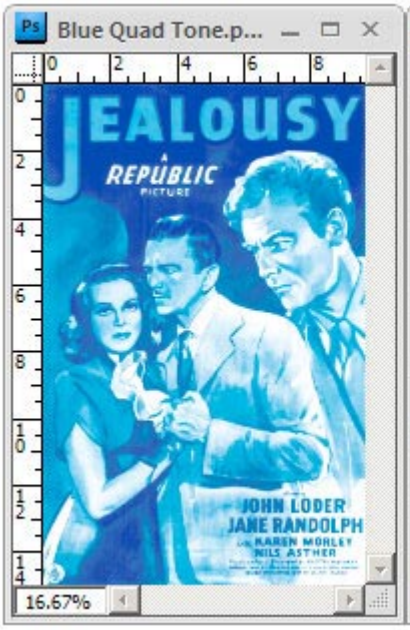
Specialty Separations

Specialty Separations are a set of actions that provide a completely different look to your art.

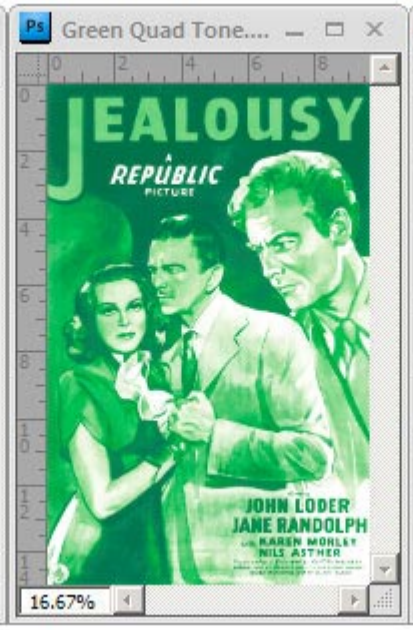
They're great for use with preprint lines or to offer your customer something beyond the ordinary.

They work with any color RGB or grayscale image.

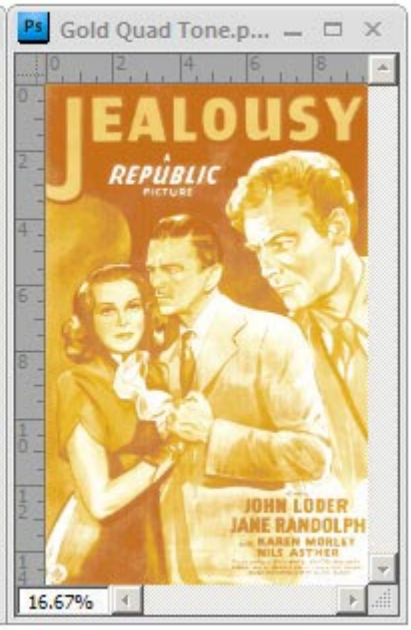
Blue Quad-Tone



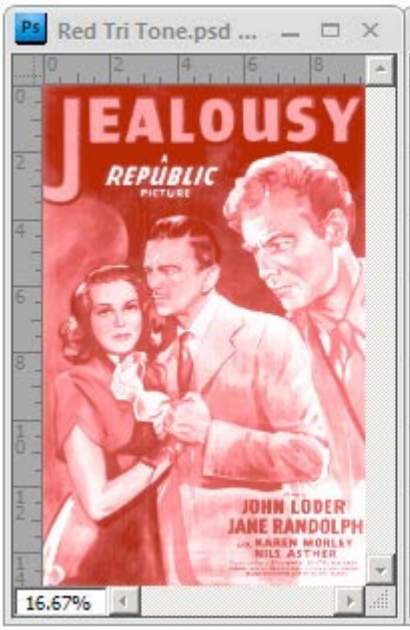
Green Quad-Tone



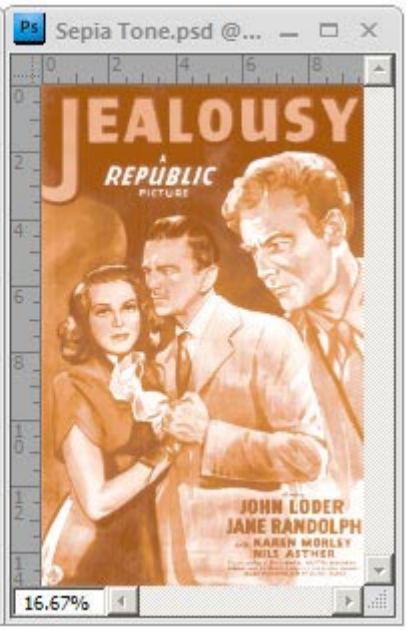
Gold Quad-Tone



Red Tri-Tone



Sepia Tone



General Guidelines On Specialty Separations:

These novelty style Actions run the same as any UltraSeps color separation and require very little (if any) adjustment upon completion.

They work on any color RGB or grayscale file.

The “Quad-Tone” Blue, Green and Gold Actions generate separations containing 4 top colors, an underbase, and 2 highlight channels. We highly recommend using the “Primary Highlight Channel” with most jobs.

Usually, separations can be reduced to 3 top colors by merging two of the first three channels into one. Experiment for best results with a given image. This results in a 5 color job containing an underbase, highlight and 3 top colors.

Using the heavier Primary Highlight White is required to maintain proper color balance and tonal transition on press. Very few jobs can be effectively printed without it. Intensify further using a Curve if needed.

The underbase generated is slightly different and heavier within certain areas when compared to other UltraSeps bases. This is due to white ink being required under the darkest top color to retain a bright image on press.

If printing on non-darks and using the underbase (highly recommended), its okay but not absolutely required to lessen its density by selecting the underbase channel and lighten using Photoshop’s Curves function.

The Tri-Tone Red is similar to the Quad-Tone separations with the exception of using only 3 top colors by default.

Sepia Tone Separations are a tri-tone that includes 3 top colors, an underbase, and 2 highlight channels. We highly recommend using the “Primary Highlight Channel” with Sepia Tone.

Attempting to further reduce the number of top colors within a sepia tone separation may produce unacceptable results.

PMS colors referenced are a general guideline. An exact match is not required although they should be somewhat close. **The most vital criteria is to make certain that no 2 colors are very similar as image definition will suffer greatly.**

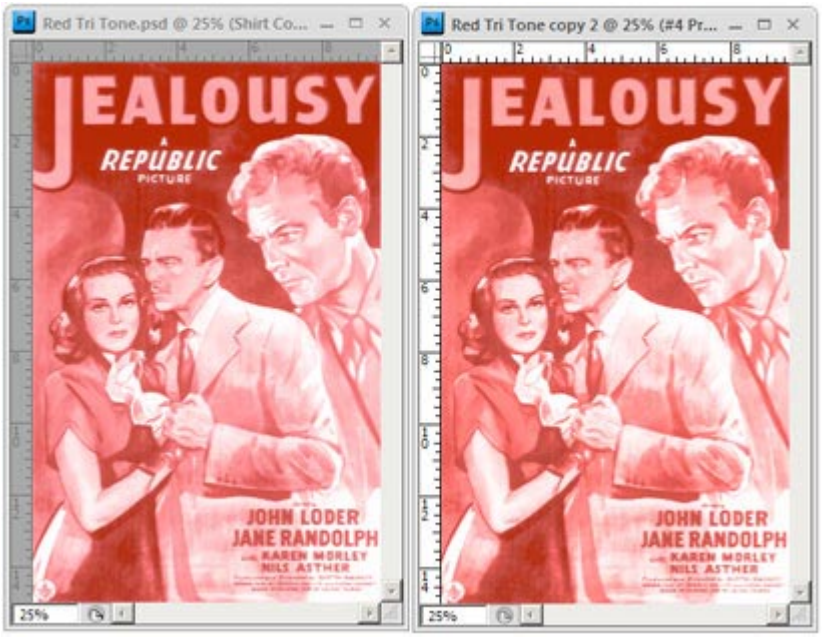
At the end of the separation process, the Action will suggest an alternative PMS color value via a message box to replace the darkest color in the separation if further contrast is needed or desired.

Examples Of Merging Channels With Specialty Separations

Original Separation | **Without Powder Blue** | **Powder Blue Merged With Light Blue**

With most art, great results on press can still be achieved by merging or deleting one channel and this is almost always the lightest color channel. Above we simply deleted the Powder Blue Channel in the center image. On the right we merged 50% of it with the Light Blue 306 Channel. All three will print well. When merging the lightest channel, its sometimes advisable to increase the density of the highlight channel "slightly" to assist with retaining contrast.

Original Separation | **25% Powder Pink Merged With Red 1787**



With the image on the right, we merged 25% of the Powder Pink 182 Channel with the Red 1787.

We also bumped the Primary Highlight White Channel slightly to help retain some lost detail.

The adjustment results in an easy to print 4 color separation containing two reds, a base and highlight.

Outputting Specialty Separations:

Dot Shape - Elliptical

All films 26 Degrees at 55 LPI.

Mesh count 280 - 305 Top Colors.

Mesh count 156 - 230 Underbase White.

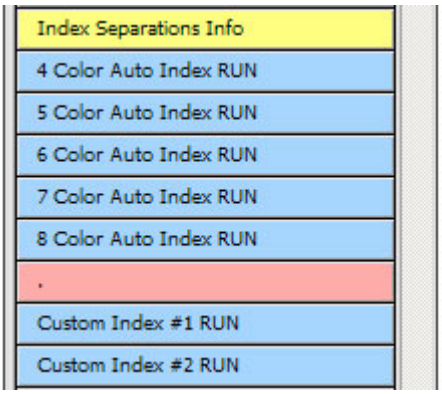
Mesh count 200 - 230 Highlight White.

Print Order: As specified on channels panel.

Its imperative to follow our ink print order guidelines when printing specialty separations.

If problems are encountered such as mesh interference patterns on press, then output the white base using 50 LPI at 56 degrees.

Index Separations



Index Separations don't use traditional halftones. They are composed of square pixels of a given size determined by the image resolution.

All images to be separated as Index need to be in RGB format at 150 to 200 dpi. Resolutions below 150 dpi generate a slight grainy effect and are normally undesired although can look good with the right art.

Do NOT use files above 200 dpi! Doing so generates a bitmap pixel which is too small to be held by the mesh.

The original MUST begin at final output size. Remember, Index Separations can not be up or downsized when complete. When outputting the film, screen frequency or angles are not required as Index Files are a bitmap and not halftones.

Although Indexing has been associated with high-end designs printed in 10 or more colors, you might be surprised how well a 4 or 5 color job prints.

The Automated Actions provided do an excellent job and generate separations using 4, 5, 6, 7 or 8 top colors in addition to underbase and highlight whites.

Usually its preferable to select colors actually used within the image when doing Index, so we've also provided Actions that generate user-defined index separations.

Both the automated and custom Index Actions generate traditional Halftone Underbase and Highlight White Channels in addition to Indexed Channels. Many printers will notice higher quality results along with a softer hand when combining Index top colors with a halftone base and halftone highlight.

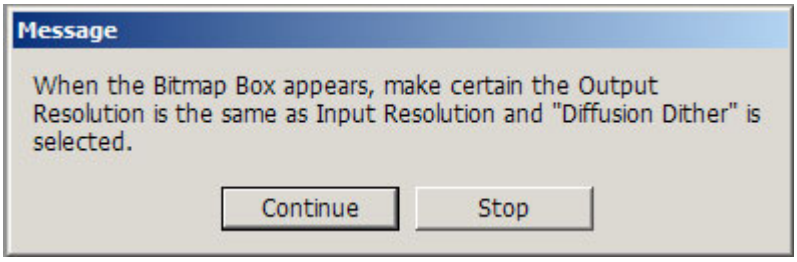
Index seps can offer a fresh, different new look to your work and are very easy to print. Just don't run one of the automated Actions and go with it. Experiment with both the Automated and Custom Index Actions.

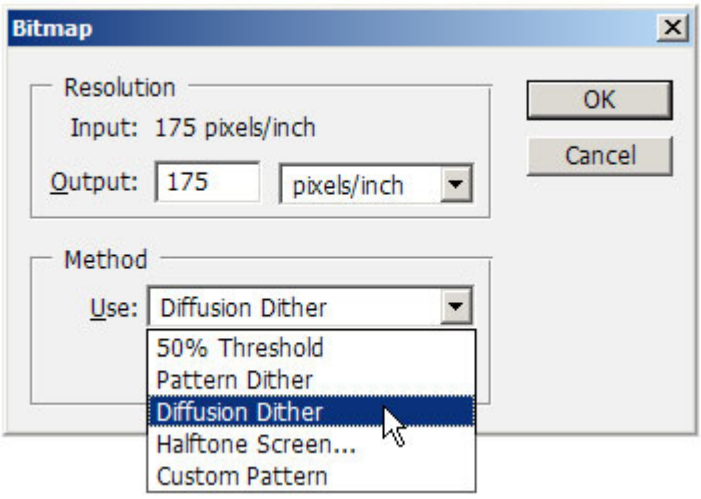
We'll review an automated 5 color Index and a Custom Index Separation using the graphic at left which is included with UltraSeps.

Indexing with UltraSeps prompts the user several times during the process to assure certain critical settings are correct while the calculations are running.

Aside from that, once completed the separation is press ready as index files can't be adjusted using curves, levels, etc. since they are bitmaps.

A short while after initiating any of the Automated Index Actions you'll be presented with the following message:





After clicking Continue, the Bitmap Box will open and here is where a few settings must be verified. The original resolution of the file is shown as the Input, in our sample here its 175 dpi.

Make certain Output Resolution is identical. If not, change it. You must also make sure "Diffusion Dither" is selected. Now click okay.

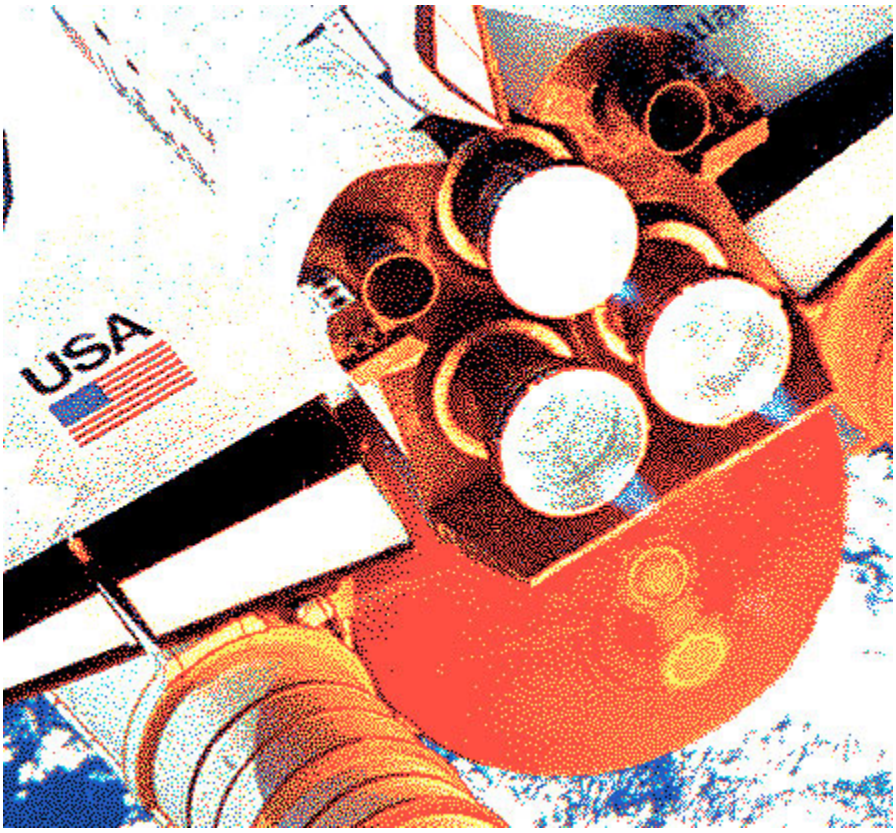
You'll be prompted again twice to verify these settings.

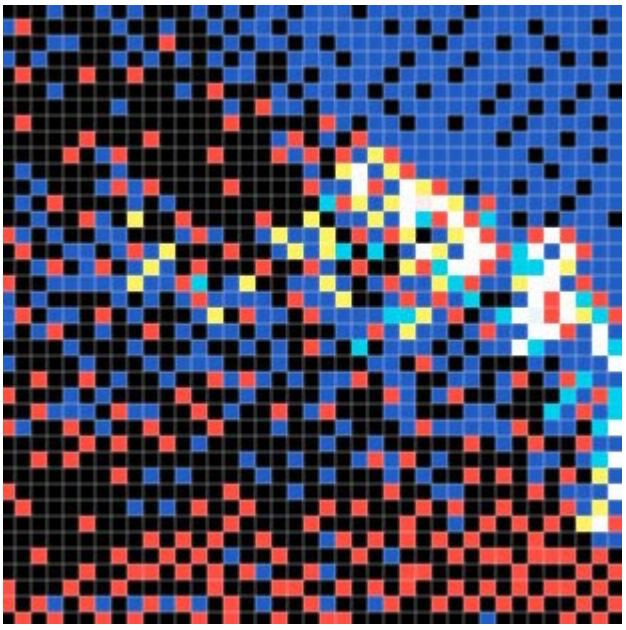
If an index separation was never attempted with the installed version of Photoshop, most likely the the "Discard Other Channels" warning will appear.

Check "Don't Show Again" and click OK.

When all on-screen activity stops the separation is complete. To get a detailed look at the file, turn on all top colors, the indexed underbase, light highlight channel and zoom in.

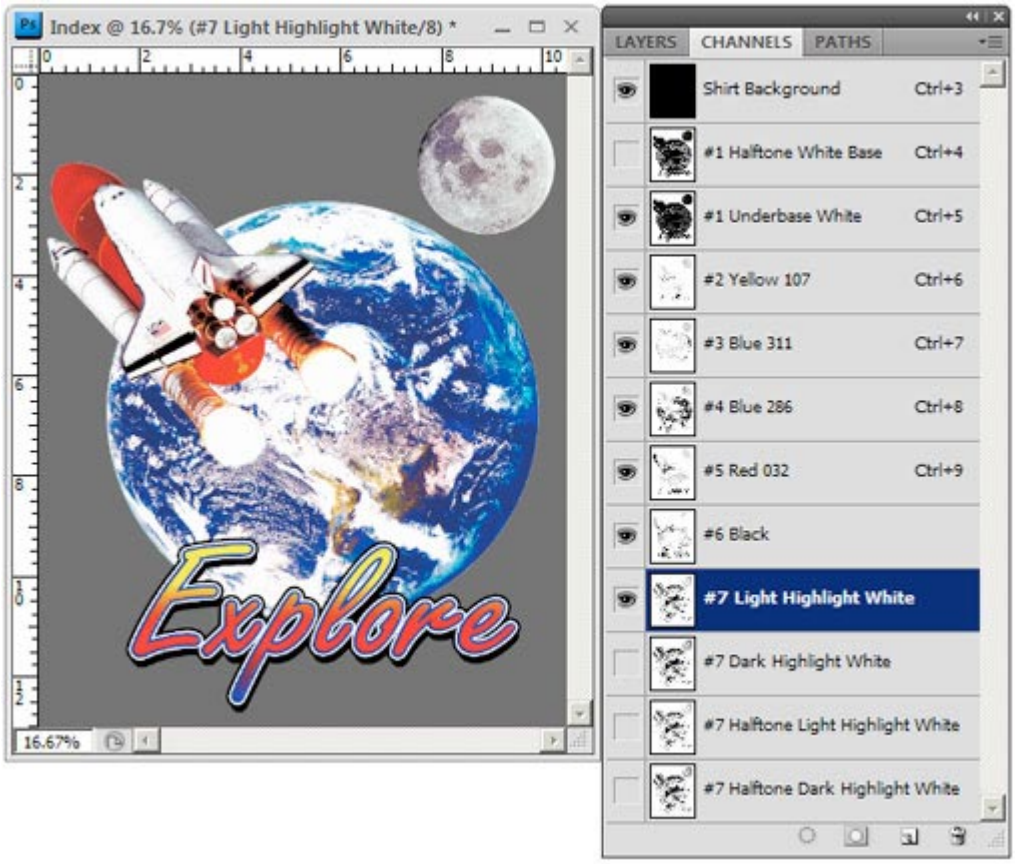
Unlike viewing a simulated process or cmyk separation which render as a smooth, continuous tone image on screen, with Index you're actually viewing the "dots" themselves.





This sample clearly shows at an extreme zoom the makeup of an index separation which is basically small squares that sit next to each other. Index files actually print very smooth and clean so don't get concerned when zooming in on screen.

Also, don't stress too much regarding ultra-precise registration. Although the bitmap "squares" sit next to each other and never mix or overprint like a traditional separation, the on-press behavior of an index separation is quite forgiving. After a few prints the colors will begin to gel together.



A view of the channels panel following a 5 color automated Index run which generates 5 top colors plus whites. Much thought has gone into selecting the color palettes the Index Actions utilize and for many jobs they should work well. If there's any doubt the color palette of an automated index doesn't work with your art, run a Custom Index separation. **(We'll discuss that in detail next)**

When printing Index, its sometimes advisable to not print the black last. If your designs are not printing as well as expected, try running the black one or two stations earlier.

Since Index separations can't be adjusted or resized, the file is now ready for film output. The only decision here is deciding upon what underbase and highlight channel (if any) are needed.

Although Index does not require a line screen, angle or dot shape to be selected at time of output, if deciding to use the traditional halftone base and highlight, those channels do! See the Index film output page at the end of this section for instructions.

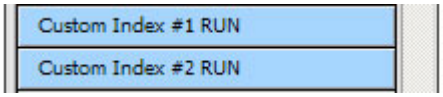
Custom Index Separations

For absolute control and accuracy of your Index separation or if your art includes odd or absolute colors which must be matched such as corporate logos, etc. then run our **Custom Index** Action that guides the end user through selecting all top colors within the design.

The custom index action is actually a set of two. The first action being a script which generates the base and highlight whites and then prompts the user to select the colors within the design. The number of colors selected is entirely up to you.

The second is a short action which generates the user selected index top color channels and must be repeated for every color chosen. The entire process shouldn't take more than 5 minutes to complete.

Macintosh CS3 & CS5 Index Bug! These versions of Adobe Photoshop running on Macintosh have a bug which prevents colors from being selected when using the Color Table. We have found a solution to the problem. See the Mac Index Bug on page 89 for complete information to resolve the issue.



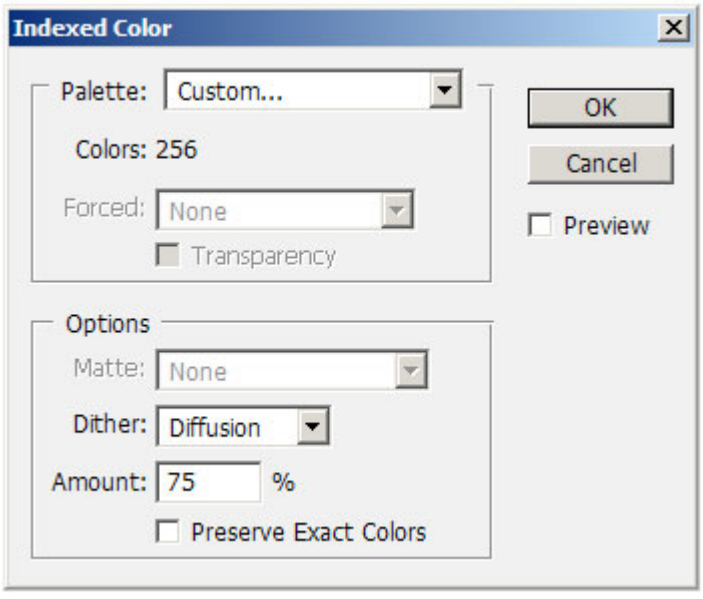
After clicking the Custom Index #1 Action, you'll be presented with the same dialog as when running Automated Index. Make certain at each prompt the Input / Output Resolution is identical. If not, change it. Also make sure "Diffusion Dither" is selected. You'll be prompted again twice to verify these settings.

Follow the simple on-screen message box instructions.

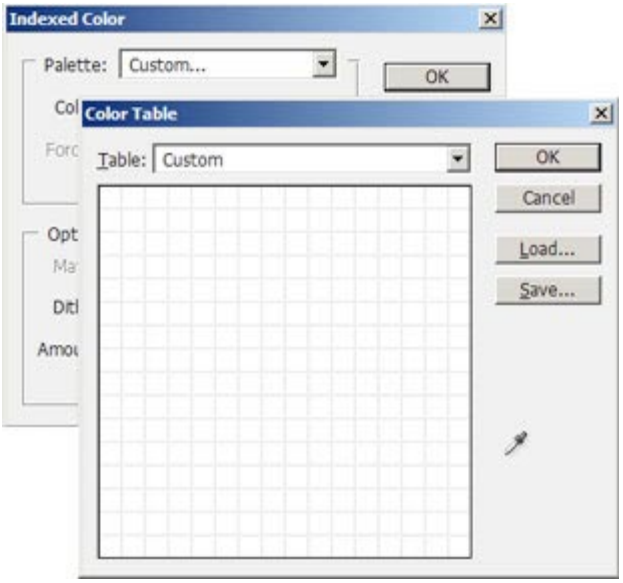
When the Indexed Color Box appears, **make sure to <u>uncheck</u> "Preview" <u>first</u>!**

Then choose a Palette of "Custom". Now make certain your settings match our example here. Click OK.

Preview Unchecked (Do This First)
Palette: Custom
Matte: None
Dither: Diffusion
Amount: 75%
Uncheck Preserve Exact Colors



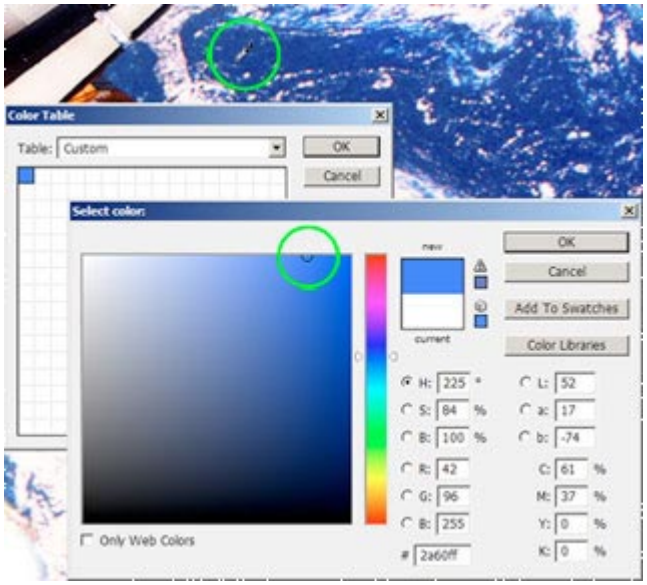
When the Color Table appears, every cube will be filled with white. Next, click the first white cube in the upper left corner.



When the Color Picker appears, zoom in on the art and use the eyedropper to select a color. In the example we've selected a blue. If the color is not critical such as a pms match, I suggest moving the circle around within the color picker to choose the most "pure" version of the color in question.

Here we wanted a bright blue although getting a "pure" sample with the eyedropper is almost impossible. Choosing clean, pure colors is vital for a bright and eye pleasing index separation.

Once satisfied with the color selection, click OK.



Repeat this process for each color desired and when satisfied, click OK in the Color Table Window. In our example here, we've selected a blue, slightly orangey red, yellow and black. When selecting the black, make sure to set it as absolute black! Move the circle within the Select Color Window to the lower left corner until the Black reads all zero's as its RGB value.

Tip: Stay away from selecting deep scarlet reds and choose a more orangey red as this provides a brighter image and smoother blending with the yellows. With blues, yellows, greens, magentas (the vital colors), remember to pick "Pure-Bright-Clean Colors"!

At this point you'll be presented with a channels panel containing a composite Index Channel along with Index and traditional underbase and highlight channels.

The Index channel will look distorted and grainy although this is normal, the final separation will look fine. Just zoom in to get a clear view.

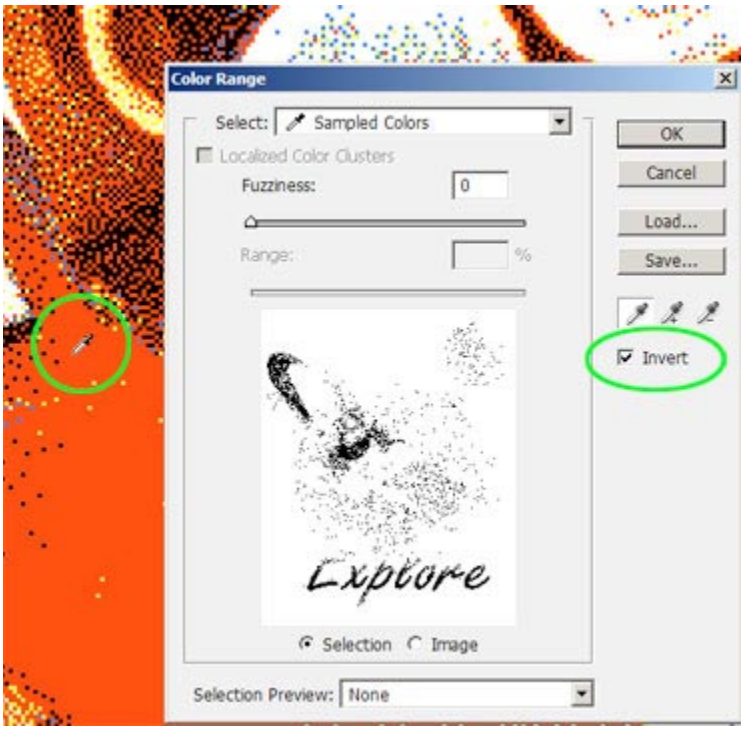
Now make sure the only channel selected and visible is the Index Channel and run the **Custom Index #2 RUN Action**.

When the Color Range window appears make sure Invert is checked.

Use the eyedropper to select one of the colors within the image.

Move the Fuzziness Slider accordingly to select the data and click OK.

A Spot Channel using the selected color is automatically created within the Channels Panel named Spot Color 1.



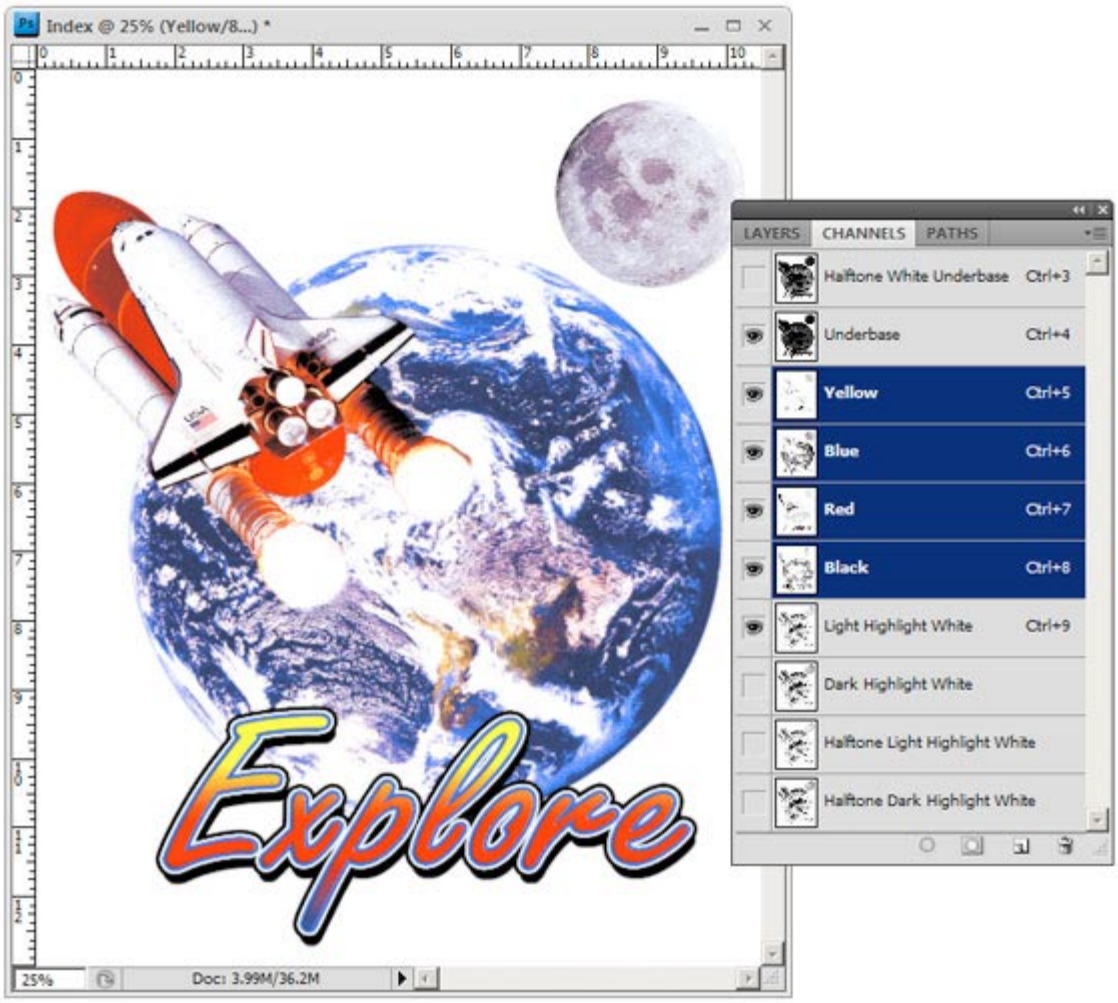
Repeat this Action with all colors in the design. Upon completion your channels panel will contain every user selected color and the multiple white base and highlight channels to choose from.

The composite Index Channel can now be deleted.

Below is our custom index separation which only took a few minutes and is quite accurate while using very few colors. In our sample here we renamed the Spot Color 1,2,3,4 Channels Yellow, Blue, Red, Black to indicate their actual colors.

Most users will rename the custom channels using PMS numbers to avoid confusion at press. We also arranged the channels for correct viewing. Just decide which underbase and highlight to use, output the films and go to press. No further adjustments are either necessary or possible.

I encourage those new to index separations to experiment using the same file shown here. Its included with UltraSeps.



Indexing is actually quite simple and after a few separations you'll be doing these custom index jobs in minutes. Watch the demonstration video since the procedure is easier to get comfortable with by viewing as opposed to reading.

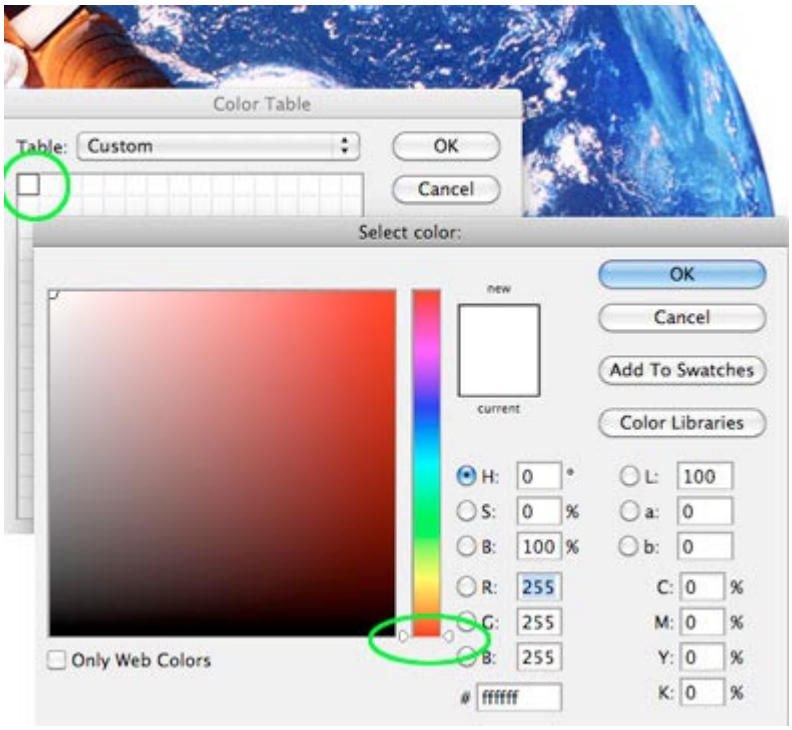
Index Color Bug - Macintosh - Photoshop CS3 & CS5 Only

Adobe Photoshop, “Macintosh Only” versions CS3 and CS5 have a bug which makes it impossible to select colors within an image when using the Color Table during the index color selection process. Clicking within the image using the Eye-dropper while using the Color Table results in no color selection.

If using either of these Photoshop versions on a Macintosh, just follow our below solutions to work around the issue.

CS5 Index Fix

When using Photoshop CS5, follow the instructions within this user guide on picking custom colors for your index separation BUT, prior to clicking within the image to select a color, move the “slider” upwards (circled in green) in the Select Color win-dow.



After moving it, place the Eye-dropper within the image to select a custom color. If this slider isn’t nudged first, the Eyedropper tool will not sample colors from the image.

Repeat prior to selecting all addi-tional colors.

CS3 Index Fix

When using Photoshop CS3, follow the instructions within this user guide on picking custom colors for your index separation but when the Select Color Window opens, hold down the Shift Key and click “anywhere” within the image. Now release the Shift Key and click with the Eyedropper to select your custom color.

If this sequence isn’t followed, the Eyedropper tool will not sample colors from the image. Repeat prior to selecting all additional colors.

The above sounds more confusing than it is, just follow our instructions carefully. If you’re upset about it, please contact Adobe. The error is not due to UltraSeps and is strictly a Photoshop issue. It exists if using UltraSeps or not.

Outputting Index Separations:

Do not attempt to resize the image once separated!

No Frequency, Screen Angles or Dot Shape Required.

Mesh count: 305 All Top Colors. 280 can be used on files 175 dpi or lower.

Mesh count: 156 - 230 Underbase White.

Mesh count: 200 - 230 Highlight White.

Print Order: As specified on channels panel when using Auto Index.
Usually light to dark when running Custom Index.

Index Separations With Halftone White Base & Highlight Channels Only (If Used):

(Settings For Halftone Underbase & Highlight Only)

Dot Shape - Elliptical

Both Underbase & Highlight should be 26 Degrees at 50 LPI.

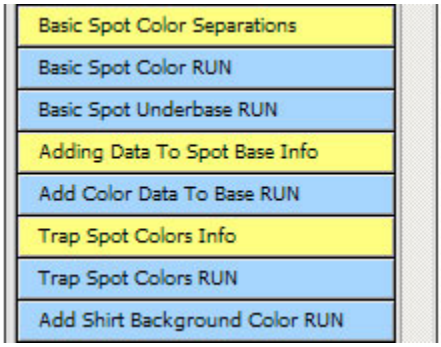
Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

Basic Spot Color Separations

Although basic spot color separations are usually done with Illustration programs, often you'll need to do them within Photoshop. Maybe you've received a basic file that's not saved as a vector image or for some reason, (and there's many) the file is proving difficult to work with using Illustrator, CorelDraw, etc. For these times Photoshop is the answer.

The Spot Color Actions make doing them a breeze and have been further simplified in UltraSeps.

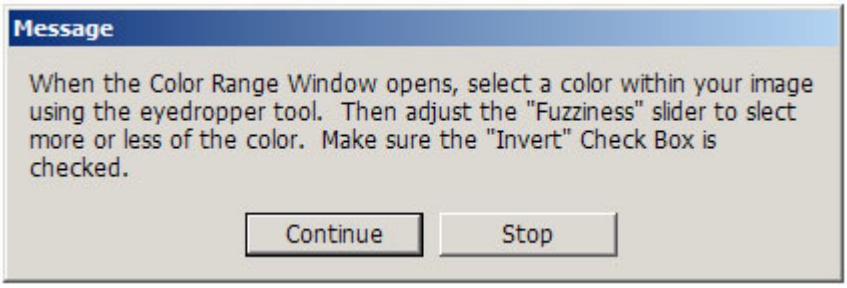


The file at left is an excellent example of basic spot color as it represents 4 solid colors with no tints or gradients. The Actions will generate a perfect user defined color separation from images such as this.

These Actions are primarily for art containing very little or no tinting or blends! It fills the selection with 100% color and does not run an RGB calculation like the Custom Color Action within the Simulated Process group of Actions.

If your spot color art contains tints or gradients, then try running one of the Simulated Process Actions or use the Custom Color RUN Action to select your spot channels.

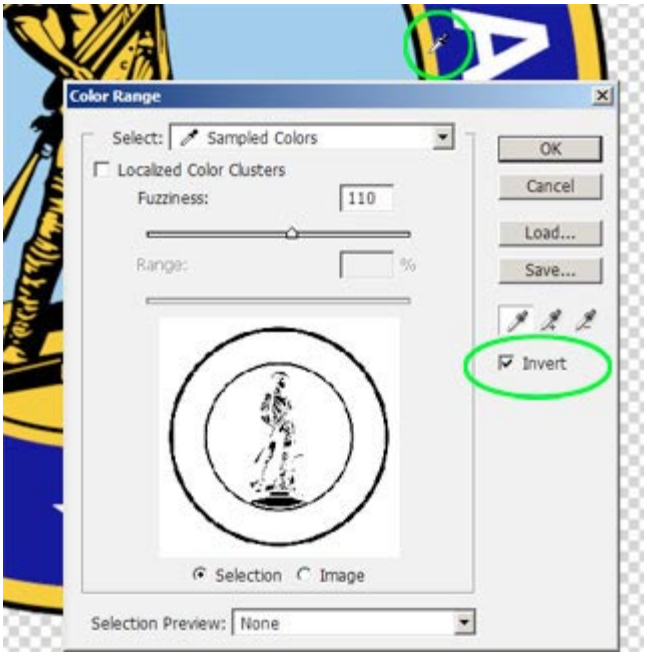
Since UltraSeps can't obviously "see" what hard spot colors are contained within your art, it asks the user to select each color using Color Range. After clicking the Basic Spot Color RUN Action, you'll be presented with the below message:

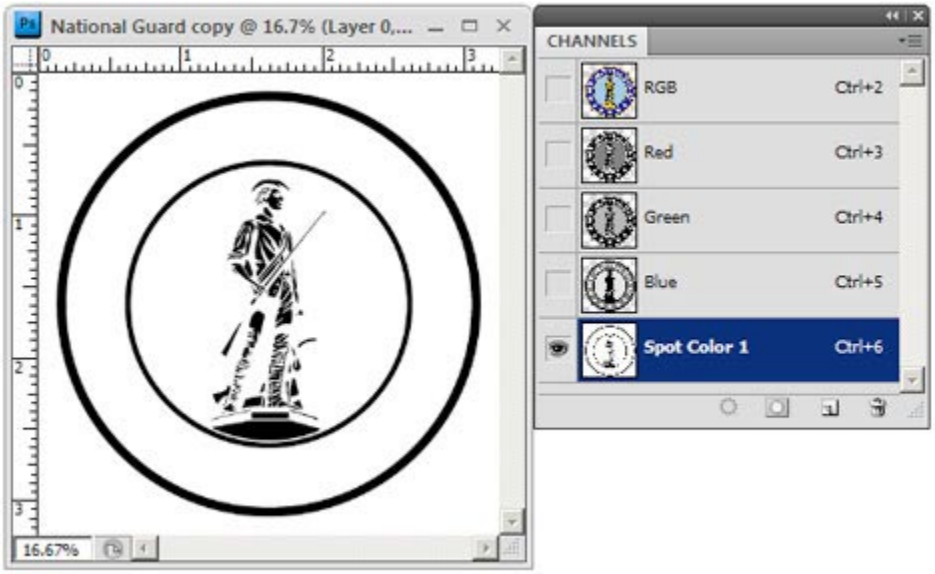


When Color Range opens, select the first color within the design using the Eyedropper and adjust the Fuzziness for more or less of the color.

Make certain Invert is checked!

Once satisfied with the selection click OK.

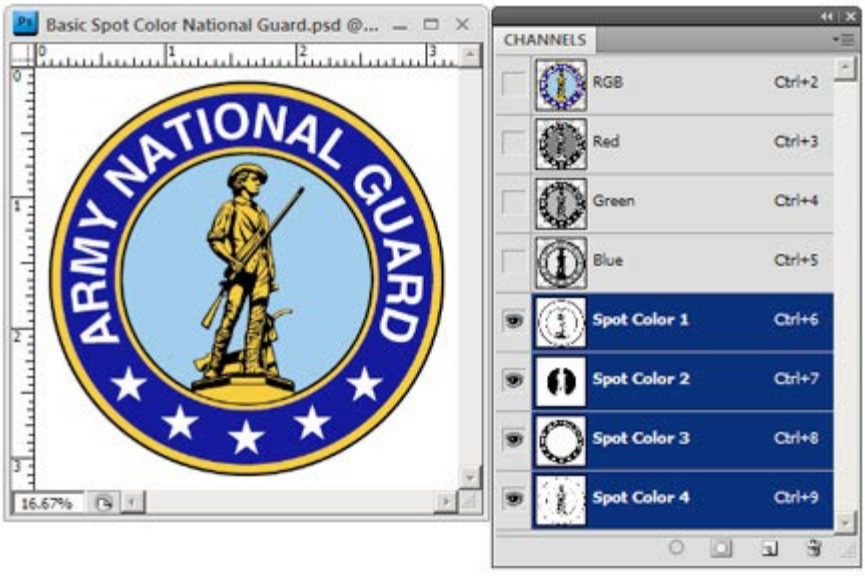


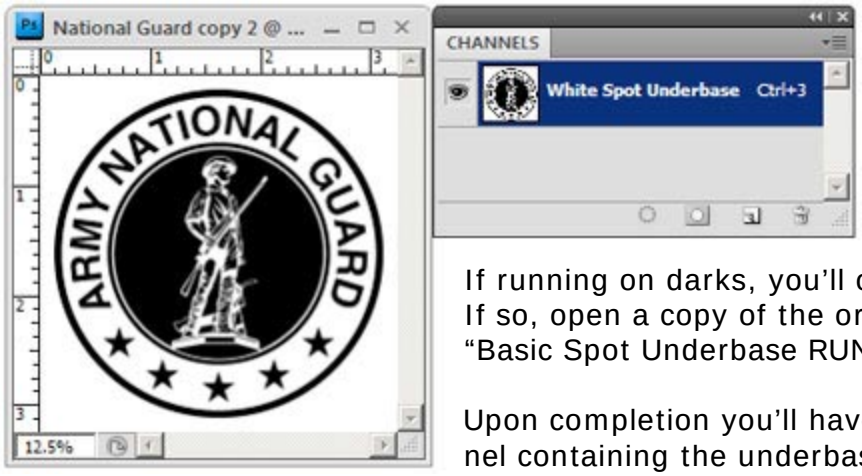


A new spot channel is automatically generated using the selected color and named Spot Channel 1.

Repeat the process for each spot color within the image.

A completed spot color separation. UltraSeps will name each spot channel generated Spot Color 1,2,3,4, etc. These should be renamed to reflect their actual color.





If running on darks, you'll obviously need an underbase. If so, open a copy of the original image and use the "Basic Spot Underbase RUN" action.

Upon completion you'll have a new file with only 1 channel containing the underbase. Select that channel and "Shift-Drag" it to the window of the color separation using Photoshop's Move Tool. (Shift-Dragging aligns it perfectly with the other file).

Note: Do not change the name of the underbase channel yet since UltraSeps may need to modify it.

We Shift-Dragged the white base channel to the separation and placed it above the top spot colors.

Also changed were the generic names of the spot channels to reflect the actual colors.

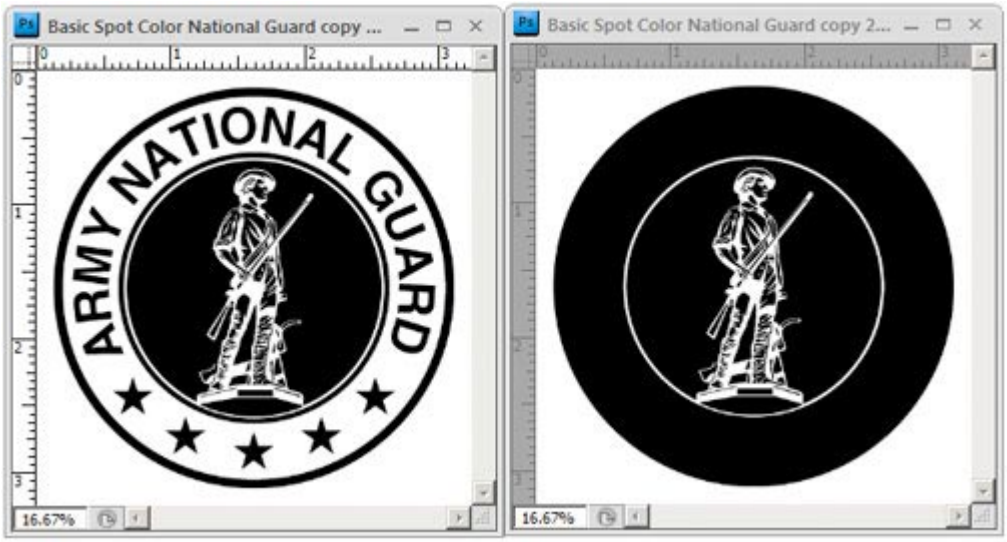
If this image were to be printed on black or another dark color, white ink would be needed under the navy blue ink.
To accomplish this do the following:

1.) Click the Add Color Data To Base RUN Action 

2.) When prompted CTRL-Click the Navy Channel

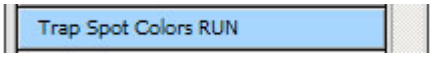
3.) Click the Action Button again (Now Highlighted Red) 

Before and After adding the navy channel data to the white base.

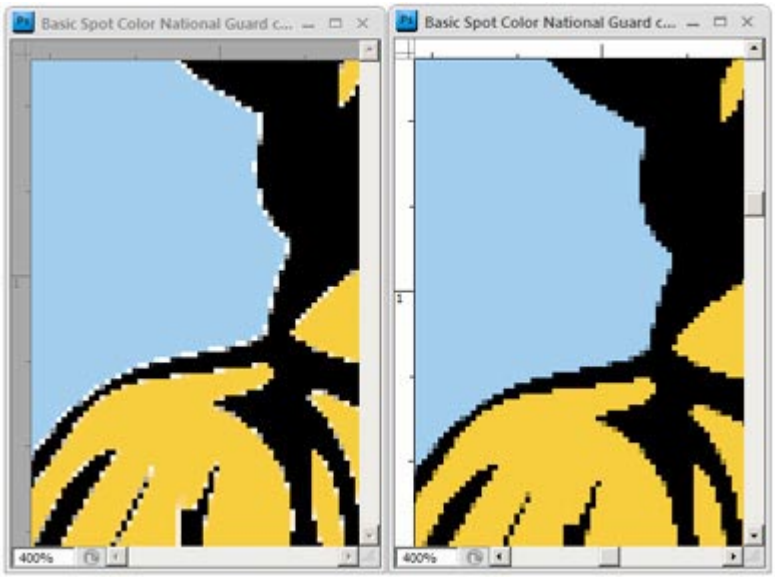


If any white ink is “peeking” from behind the colors, a small “Choke” of the underbase is probably needed. See Choking The White Underbase covered previously. To view a basic spot color separation against a dark background, use the “Add Shirt Background Color Action” to generate a solid channel filled with black and position it as the top channel.

With hard spot color, a very small gap between colors is sometimes unavoidable when generating the separation. If you think the gap could be an issue on-press, a small trap is then needed on some or all colors (except black). UltraSeps includes an action named “Trap Spot Colors RUN” to assist in closing these gaps.



Select a spot channel to be trapped and run the action. Repeat for each spot channel needing a trap.



An extreme close-up view before and after trapping the spot channels.

This file required trapping the Gold and Light Blue channels. The Navy did not require it.

Once again, avoid trapping the Black as this adds noticeable line weight to the image. Only trap the Black if absolutely necessary.

HELP! My basic spot channels are filled with solid black as opposed to the selected area and color.

The reason is that Photoshop has somehow reverted to using Masked Areas as opposed to Selected Areas to generate the channel.

To fix, go to the Channels Panel and click the downward facing arrow in the upper right corner of the palette and select “New Channel”.

When the New Channel window opens, click the “Selected Areas” button and then click OK.

Photoshop is now set to use Selected Areas.

Outputting Basic Spot Color Separations:

Dot Shape (If Needed) - Elliptical

All films (Absolutely No Tints or Gradients) 26 Degrees at 300 LPI .

All films (With Moderate Tints or Gradients)26 Degrees at 45 LPI .

Mesh count 156 - 200 (designs using no white base).

Mesh count 200- 305 Top Colors (designs with a white base).

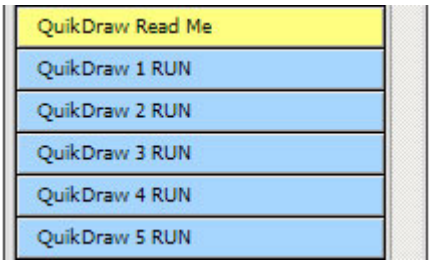
Mesh count 156 - 200 Underbase White.

Print Order: Light to Dark.

Note: Using 300 LPI to output solid color channels helps to keep lines and edges sharp.

QuikDraw

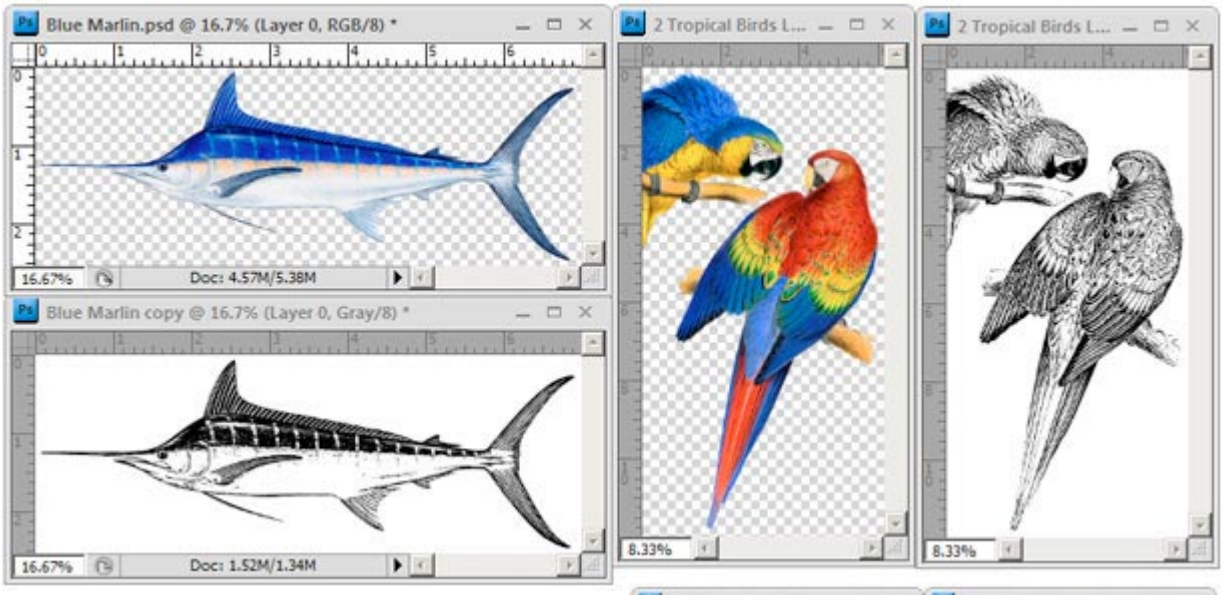
QuikDraw is a set of 5 actions that convert any photograph or continuous-tone image into pure black & white art printable using 1 screen. The original art should be at 200 dpi minimum. QuikDraw will increases the resolution to 300 dpi so if the final QuikDraw output needs to match in size with the original, start with an image already at 300 dpi.



If the image is a small left chest graphic, run QuikDraw on an oversize file if possible then reduce the size following conversion for best results.

We suggest trying all 5 QuikDraw actions then decide which looks best.
Images that convert well using QuikDraw begin with excellent definition and clarity. If results are unsatisfactory, consider running Ultra Image Fix first, then attempt QuikDraw again.

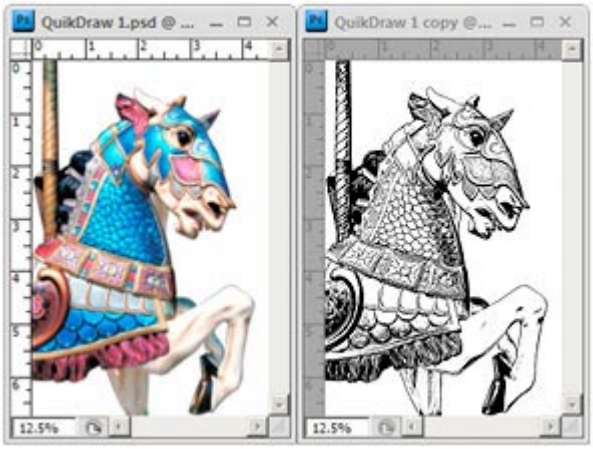
An interesting effect is using the output from QuikDraw and applying it to an RGB color file. What this does is give the photo a hand-stippled cartoon effect. The original must be 300 dpi (exactly) to experiment with this.



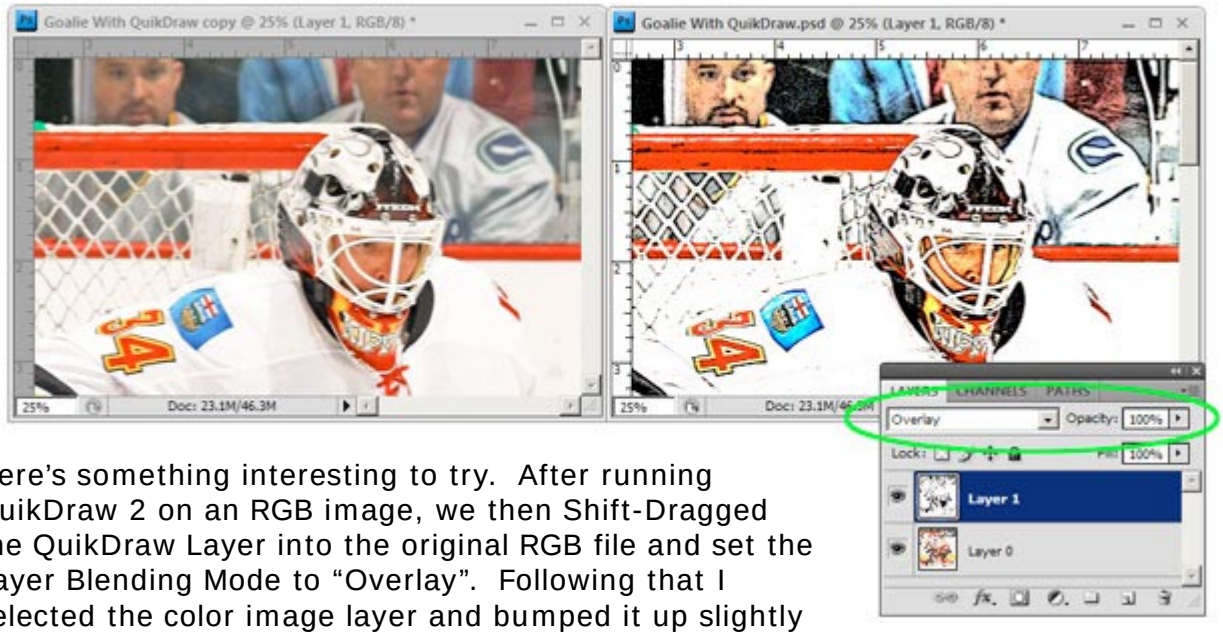
A few samples of running QuikDraw.

Unlike 1-4, The QuikDraw #5 Action is adjustable and prompts the user to set the level of conversion.

Output QuikDraw files at 300 LPI to retain sharpness and edge definition.



Using QuikDraw To Create A Coloring Book Style Effect

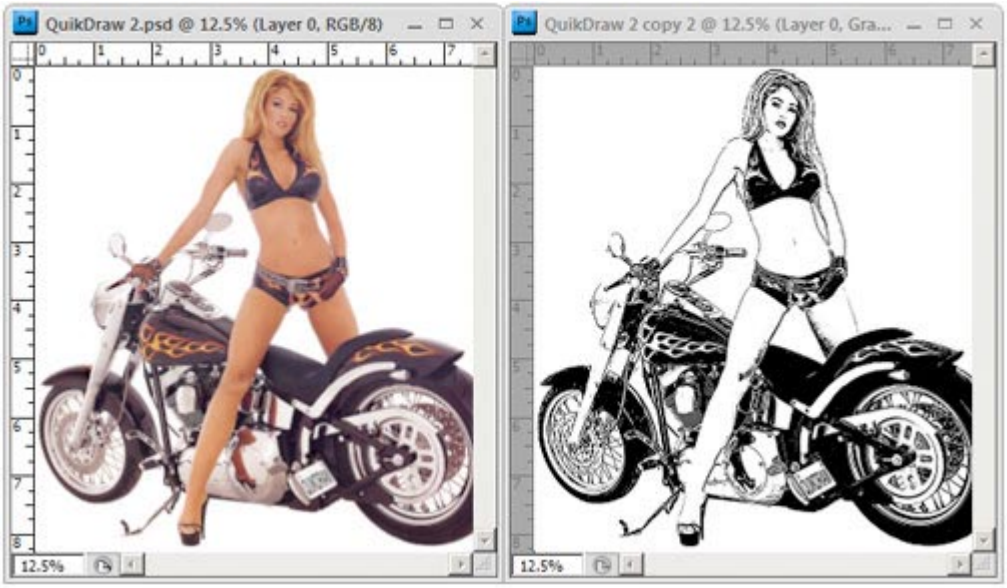


Here's something interesting to try. After running QuikDraw 2 on an RGB image, we then Shift-Dragged the QuikDraw Layer into the original RGB file and set the Layer Blending Mode to "Overlay". Following that I selected the color image layer and bumped it up slightly using Curves and also increased the saturation.

The final effect is a hard-edge coloring book style graphic. The layers would then be merged, (merge visible) into one layer named "Layer 0". UltraSeps Simulated Process or an Index Separation could then separate the file.

The original image MUST start out at 300 dpi for this to work.

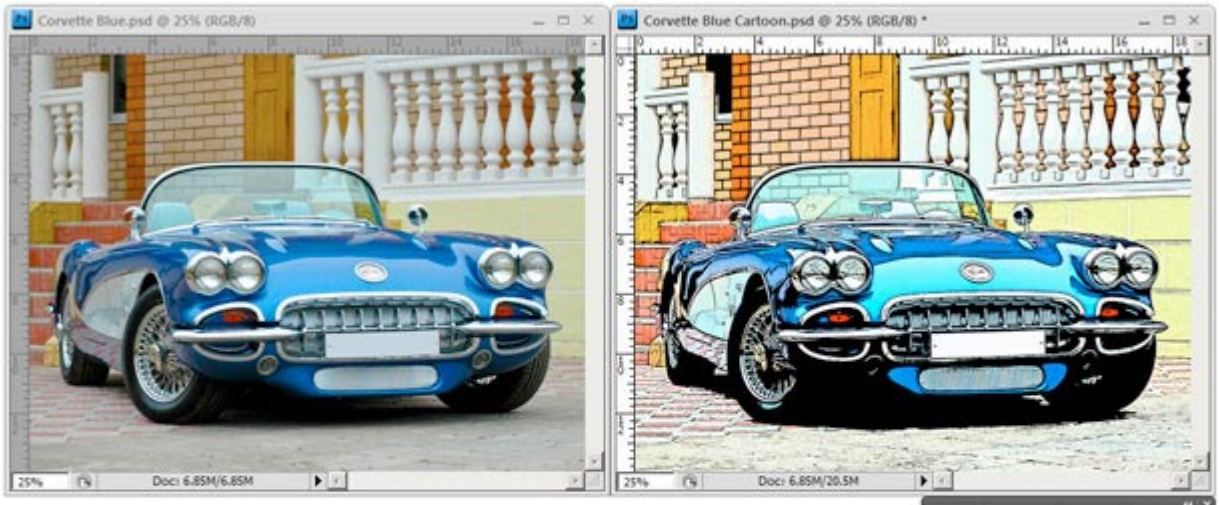
If not, the Layers won't align correctly since QuikDraw upsamples all images to 300 dpi.



When outputting a black and white QuikDraw file to film, use the following settings: 300 LPI at 45 Degrees. Since no halftones are needed, the high LPI guarantees the sharpest film image.

Ultra Cartoon Effect

UltraSeps includes a script which converts an image into a cartoon style effect. The Action works on a duplicate of the original and generates three different layers, each with a different look. Just select the desired layer and discard the others.

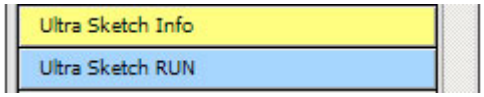


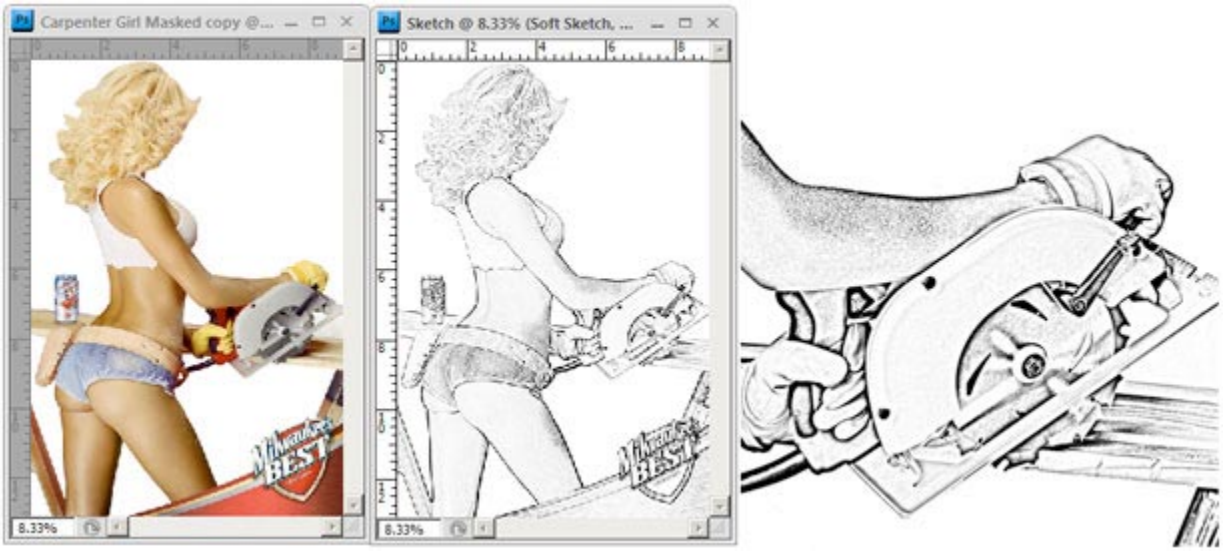
The three layers generated are named Cartoon Rough, Cartoon Detailed and Cartoon Stippled. Since this is an RGB file, use any of Photoshop's tools such as Curves, Hue Saturation, Levels, Selective Color, etc., to modify. The file can then be separated for t-shirts or used for any other purpose.

Ultra Cartoon works best on colorful, clearly defined, high resolution files. Its great for things such as cars, trucks and art with excellent contrast, color and harder edges. Basically, if your image is bland with little contrast or an out-of-focus mess, don't expect too much! If the end result needs help, try improving your art "prior to conversion" by enhancing the color, sharpening, etc. Some artwork may also benefit from using Photoshop's Unsharp Mask filter following conversion.

UltraSketch

UltraSketch is quite unlike QuikDraw as it attemps to produce a lighter drawing of an image and omits most of the darker colors. This usually results results in a pen and ink type effect without all the solid fills.



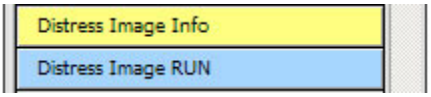


UltraSketch only responds well to higher resolution, clean files that contain sufficient detail. Low resolution, poor quality art should be avoided along with “wishy-washy” pastel style graphics. Quality images that are isolated from their backgrounds work exceedingly well. (As pictured above)

The Action generates two Layers named Soft Sketch and Hard Sketch. Just select the one that better suits your art. In addition to outputting the sketch and using “as is”, there’s many creative uses for these. One example is to “custom paint” the sketch! This is done by adding a new Layer under the Sketch Layer and then changing the “Blending Mode” of the Sketch Layer to “Multiply”. Then choose the new layer created underneath and paint within it to colorize the sketch. The video also demonstrates how to easily change the color of the sketch itself to red, blue, purple or anything which is great for direct to garment printing.

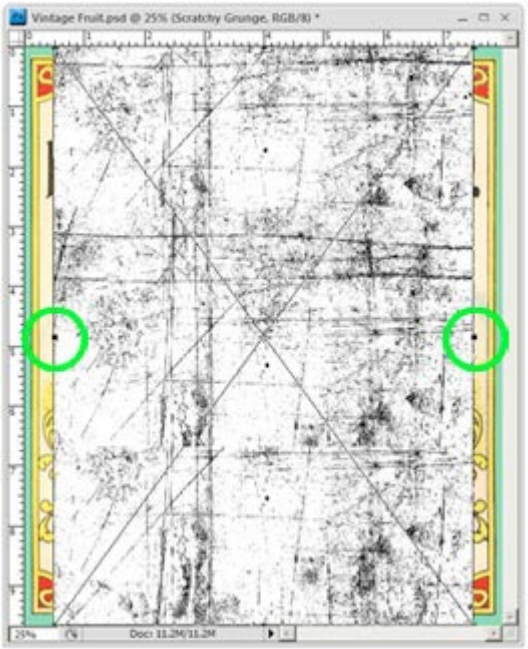
Distress Image

UltraSeps includes an inventive distress - vintage image action. No only is it very simple to use but its also quite unique since it allows the distress effect to be adjusted, removed and turned on or off. Plus, with the use of QuikDraw you can search the internet for any kind of textured image such as stone, bricks, gravel, wood, or whatever and make your own distress patterns in seconds!



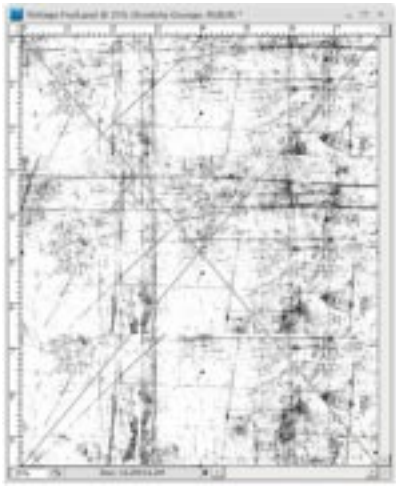
After clicking the Distress Action, you'll be prompted to place a distress filter.

Locate the Distress Textures folder included with UltraSeps, select a filter file and click Place.

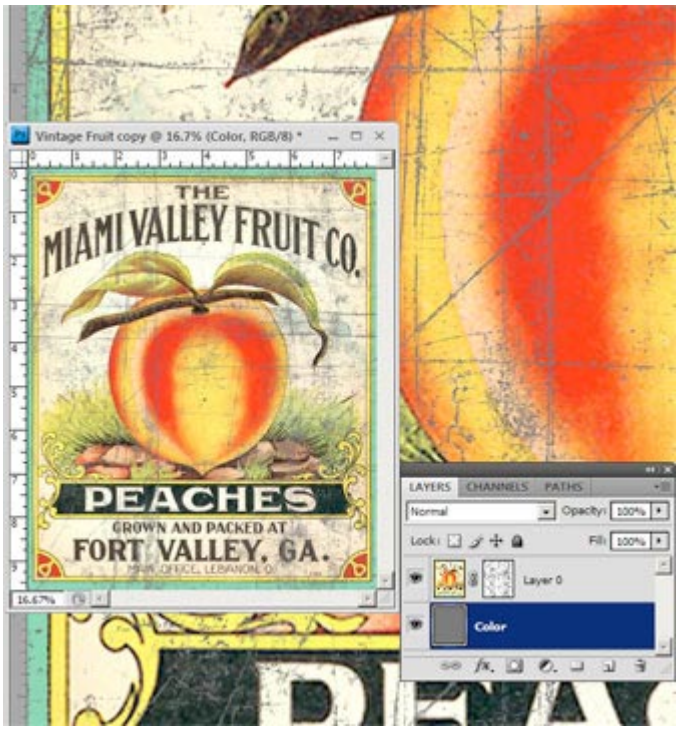


Once the distress filter file has been placed, drag the handles to cover your graphic completely.

It may be required to drag both the horizontal and vertical handles to cover the image.



When the art appears as pictured here on the left, with the distress texture covering it entirely, hit the enter key to complete the process.

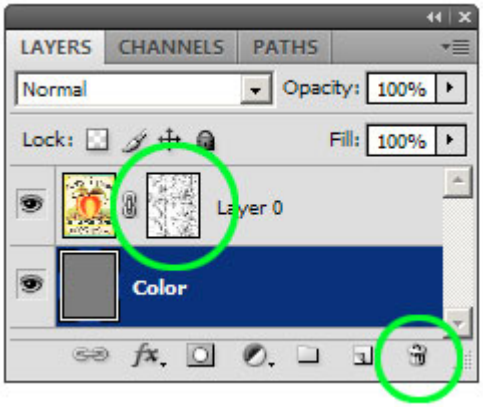


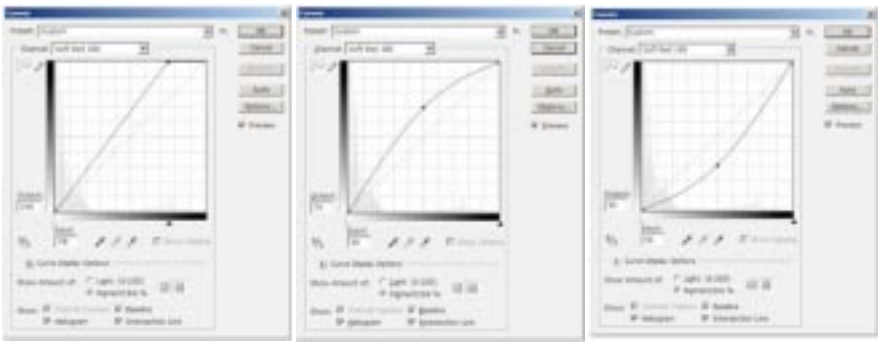
The result of running the Scratchy Grunge Filter.

To try another filter, go to Photoshop's History Panel and click the image at top. This will revert the file back to its original state and permit the distress action to run again using another filter.

To turn the distress effect on or off, Shift-Click the Layer Mask (circled). To modify the distress effect, click on the Layer Mask and use virtually any Photoshop Tool such as Levels, Curves, Rubber Stamp, Eraser, etc. to make changes to or intensify / fade the effect.

To make the distress effect permanent, drag the Layer Mask into the trash of the layers panel and click "Apply" when prompted. The "Color" layer can also be deleted.





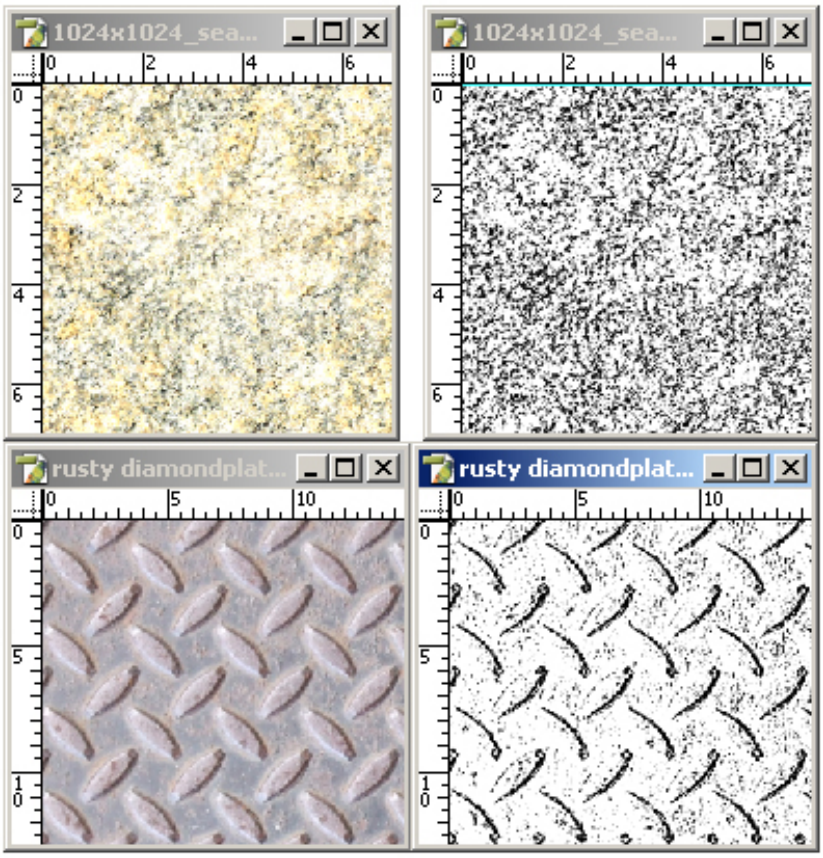
Click on the Layer Mask and use a Curve to adjust it!

The file can now be separated using whatever method desired. Remember this technique is also great for simple 1 color graphics. Our distress image action can be used with distress textures you may already own. All that's required is to save them as PDF or JPEG Files at 300 dpi.

Making You Own Distress Filters

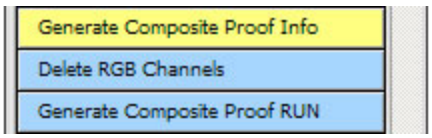
UltraSeps users can easily make their own distress filters with the help of QuikDraw. Just about any texture can be used and many free textures can be found by searching the internet.

Below are examples of running QuikDraw 2 on a few color textures. QuikDraw converted them to black and white art at 300 dpi. Now save in PDF or JPEG Format and you're ready to go! Just add your newly created custom textures to the UltraSeps Distress Textures Folder for easy access.

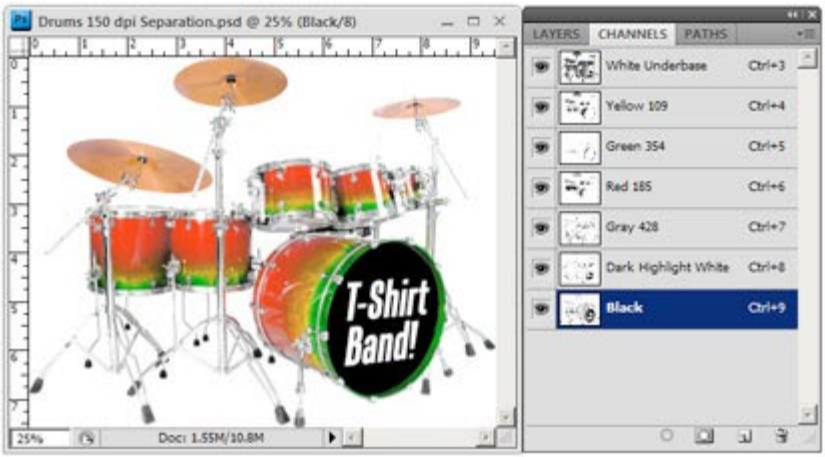


Generate Composite Proof

UltraSeps contains a simple action that generates a single layer RGB file from your multichannel separation (simulated, grayscale, index, process, etc.) to output on a color inkjet. This comes in handy as it better represents how the separation will print in most cases.



The Action is completely automated, one-click and the prooof is generated. If your separation still has the RGB channels, click the Delete RGB Channels action first!

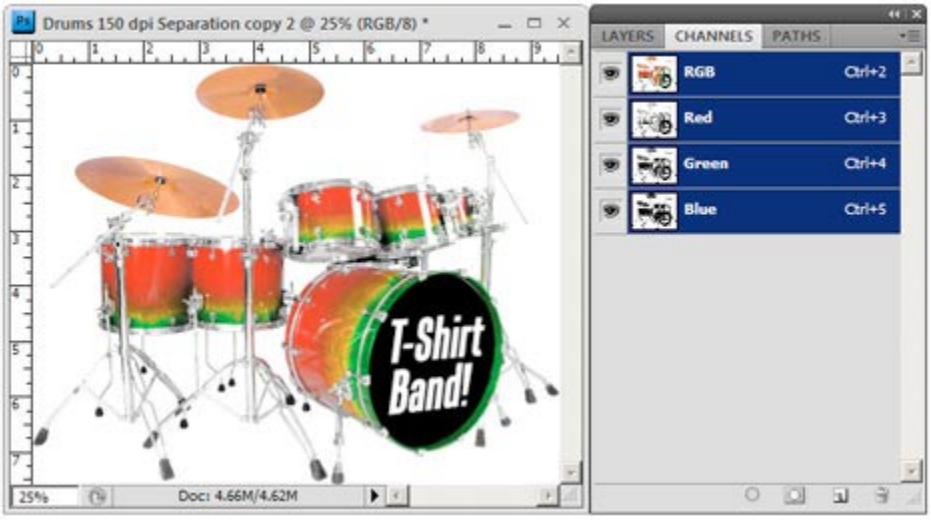


Separation as it should appear prior to running proof. Notice (No RGB's)

If the job is to be printed on darks, include the shirt background channel.

Sample here is a 5 top color, 2 Whites separation using the Sim #2 Action.

Finished Color Proof and the appearance of the Channels Panel.
All spot channels have been merged into a composite RGB image.



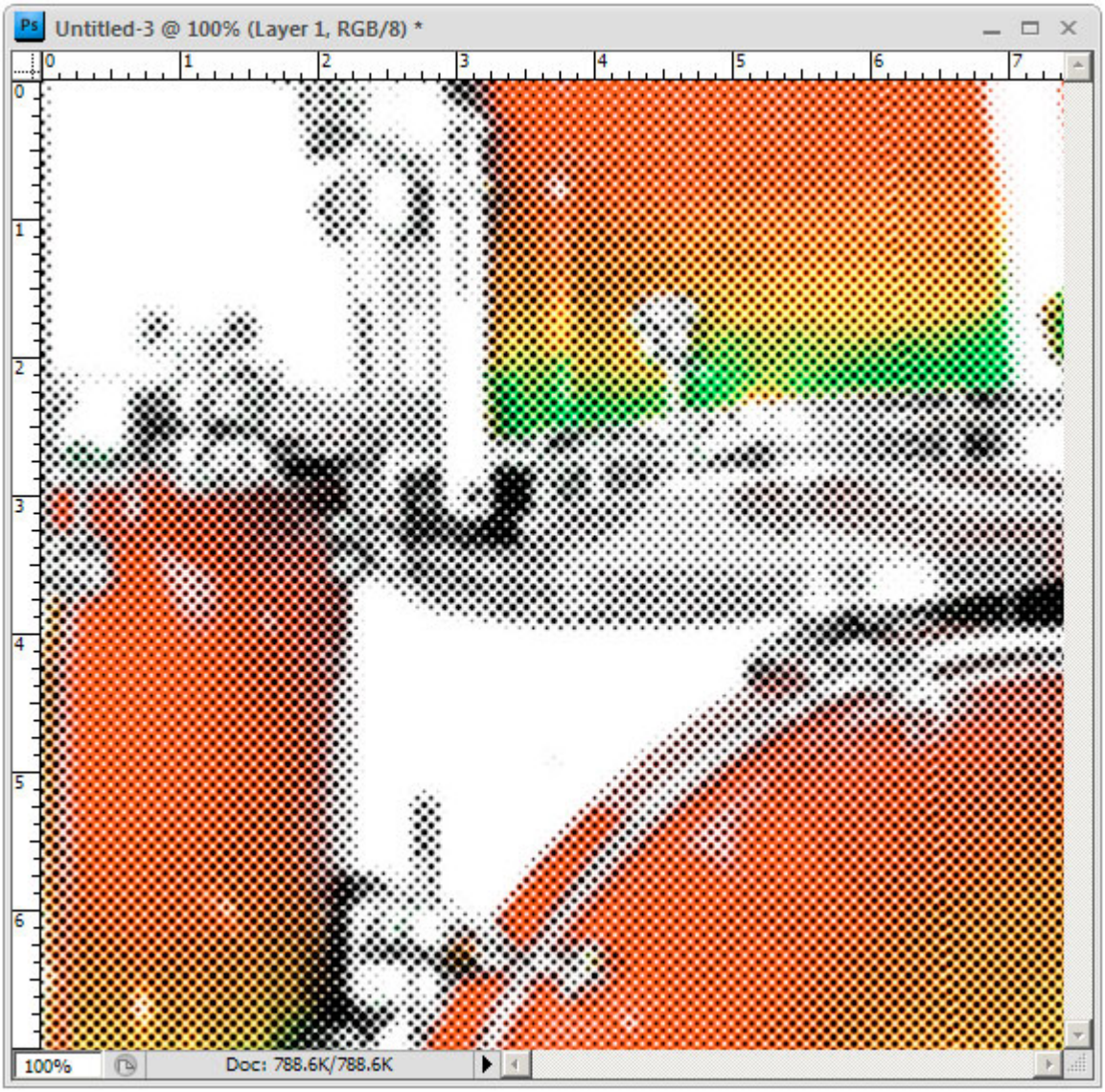
Output color proof to any inkjet printer or saved as a jpeg to email customer for approval.

Preview Halftone Screen

This is a silly little action that might be somewhat entertaining as it allows the viewing of the color proof on-screen as a halftone.

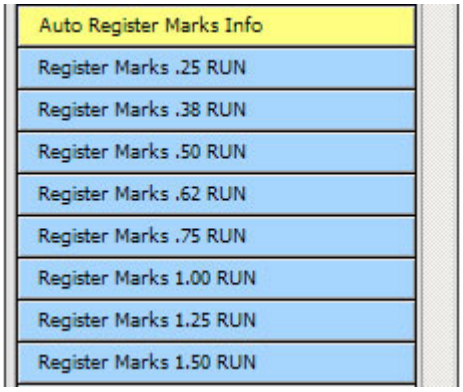
The action duplicates the target file, applies a halftone screen and increases the resolution to enhance the preview. Once complete, which takes from 5 to 30 seconds depending on computer speed and file size, simply zoom in until the half-tone becomes visible and clear. Do not use on index separations!

Low resolution screen shot here may not appear accurate.



Custom Register Marks

These Actions generate registration marks to avoid using the small default register marks at output. Most printers dislike the default register mark clusters used by Photoshop, Illustrator or CorelDraw as they're engineered offset printing.



This action are used after the color separation is complete. If a file still contains the composite RGB, CMYK or Index Channels, they should be deleted prior to running the desired Action.

The Canvas Size (Not Image Size) of the file might need to be increased to make room for the register marks if the artwork extends to the top and bottom of canvas.

The Actions automatically adjust the size of the canvas to allow room for the register marks. If after running you feel additional room between the marks and the image is needed, go to the History Panel of Photoshop and click the file name at the top. This reverts the file to its original state.

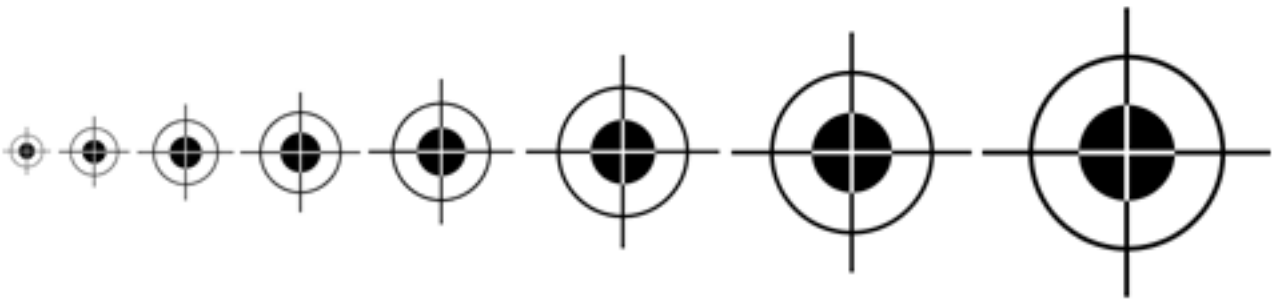
At this point increase the "Canvas Size" of the document and run the register marks action again.

All Actions place both corner and center marks on each channel of the separation. The entire process is automated, no end user channel selection is required. Just click the button and its done.

The smaller Registration Mark Actions of .50 or less do not function correctly on files with resolutions less than 200 dpi.

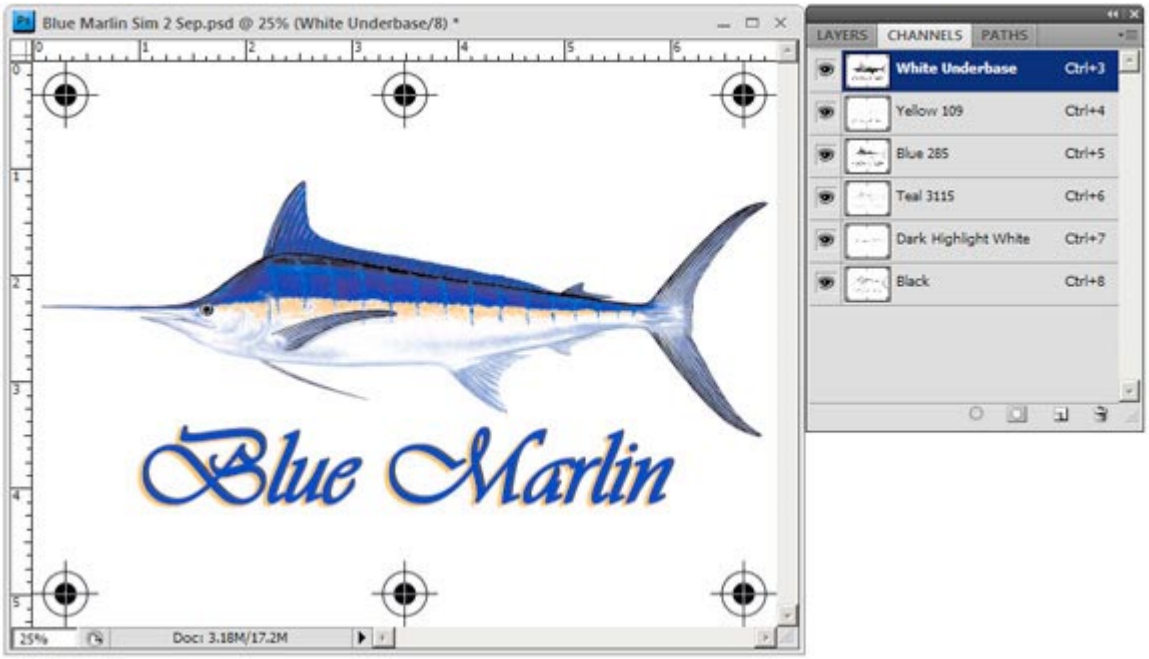
For those without a RIP and using UltraSeps to convert the separation to halftones, run the registration marks action AFTER converting the separation to halftones!

If the marks are placed before the halftone conversion, halftones will also be applied to the register marks thus making them choppy and possibly unusable.



Your choice of 8 different sizes of register marks are available.

The result of clicking the .62 Register Marks Action.



And that's it, the process is complete, precise and easy. Accurate corner and center registration marks have been added to each channel.

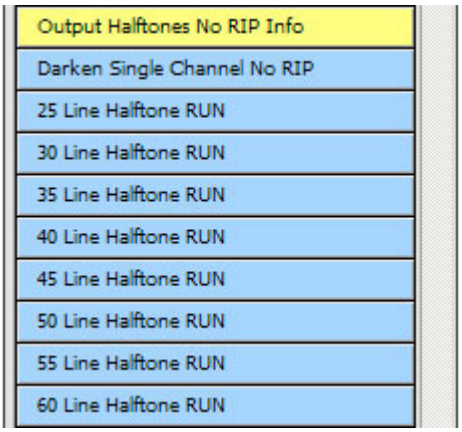
Note, the registration marks generated are resolution independent. A .75 mark will be .75 at 200 dpi, 250 dpi, 300 dpi, etc. The resolution of the art will not change the physical dimensions of the register marks. Its also important to note that since the marks are "part of the separation", higher resolution files (300 dpi) will provide optimum results.

When outputting the films within Photoshop or from another application, its no longer required to check "add register marks" since larger, easier to view register marks have been applied. About the only addition at output is to check Labels so each channel is labeled with its color.

If additional channels named Cyan, Magenta and Yellow are included upon completion of the process, this indicates the RGB Channels were not removed prior to running. If so, delete them.

These actions work on your original separation, not a duplicate. If not working on a duplicate and the marks need to be removed, go to the History Panel of Photoshop and click the file name at the top. This reverts the file to its original state.

Output Halftones No RIP



For those without a RIP, this method does a good job of applying a halftone screen within Photoshop for film output.

It's also a great safety net in the event of software problems or a new printer not being compatible with your software RIP.

By no means are these intended to replace the use of an actual software RIP program.

General Guidelines:

Once satisfied with the color separation, delete the RGB and shirt background channels leaving only the color channels required for film output and "SAVE IT".

A color separation with a maximum of 10 colors can be processed. The speed, age and condition of your computer has a great effect on how slowly or quickly the conversion process runs which can take as long as 3 minutes or as quickly as 30 seconds.

Even if your separation is only 2, 3 or 4 colors, these functions will assume the file contains 10 colors and cycle through. Once complete however, the channels panel will only contain the intended number of colors with no additional channels.

Do not attempt to resize the document following conversion as it will result in unacceptable output quality. Make sure the separation is the correct final dimensions prior to running the convert to halftone action!

To get an idea of how the image will actually print, zoom "out" on screen with all channels visible (make it smaller) to the first magnification level that appears normal.

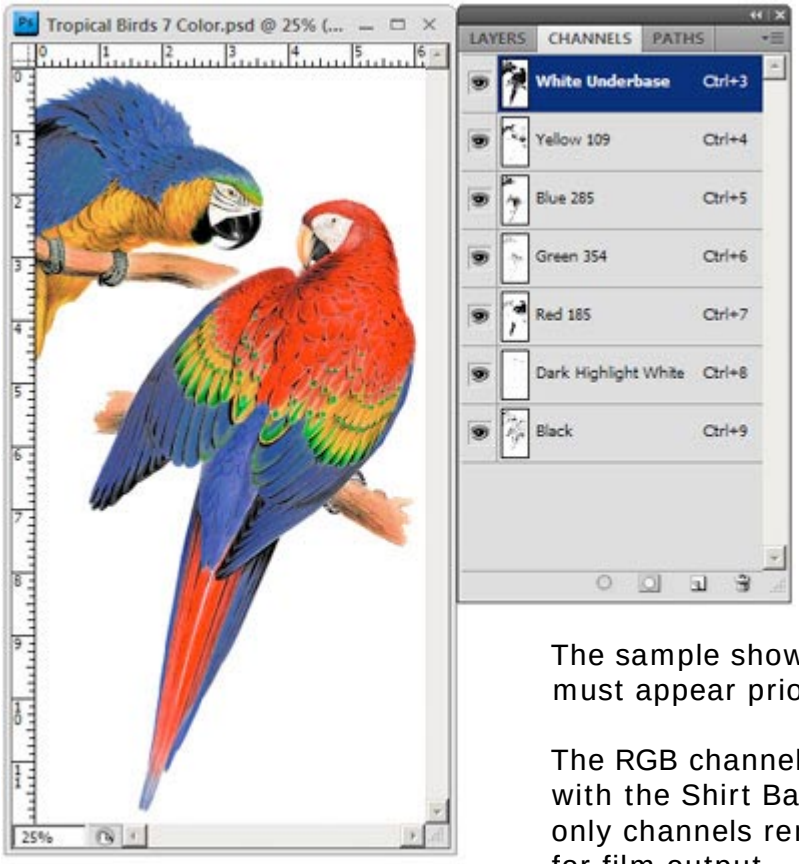
The resulting output is a multichannel bitmap file with an integrated screen angle, LPI and dot shape applied to all channels. **Do not attempt to set any screen angles or LPI settings prior to output. Just print out each channel to film using default settings.**

All converted channels retain their original color, names, etc. to allow normal preview and output. The final converted image is a single multichannel file with all color data and channel names intact.

Channels can not be adjusted (darkened - lightened) once converted to halftones.

If additional new channels named Cyan, Magenta and Yellow are included once the process is complete, this indicates the RGB Channels were not removed prior to running. Simply delete them.

Image Prior To Halftone Conversion



The sample shown is how the separation must appear prior to halftone conversion.

The RGB channels have been deleted along with the Shirt Background channel. The only channels remaining are those needed for film output,

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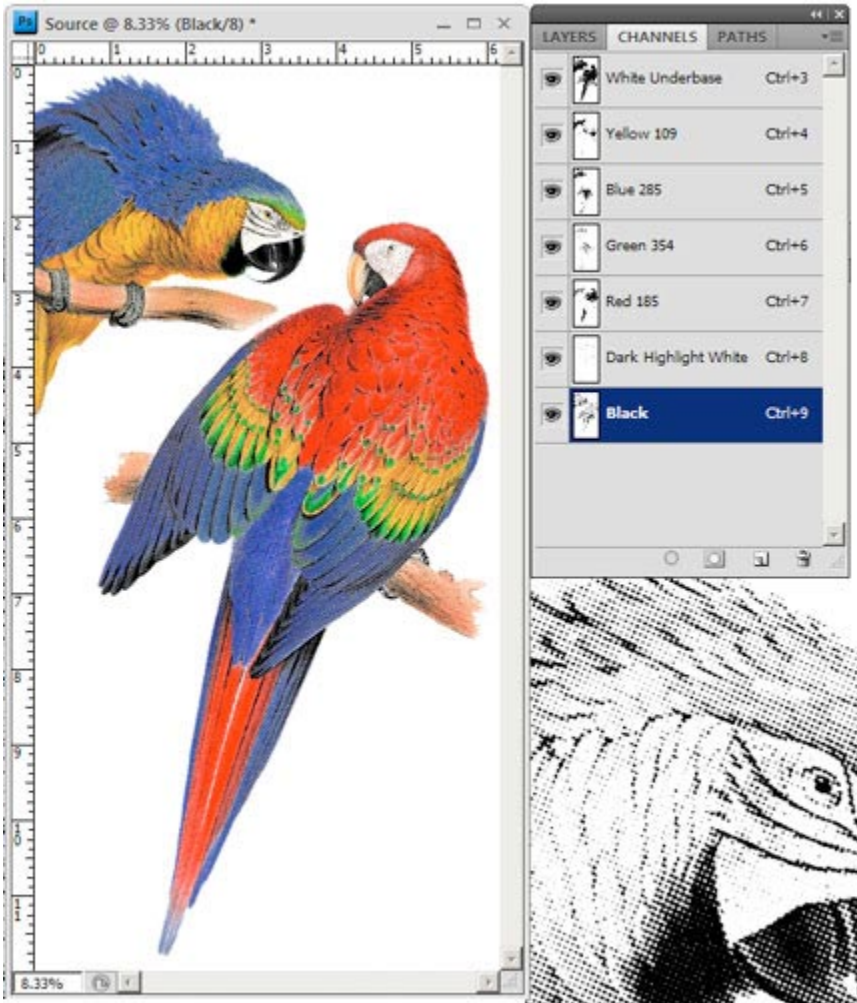
Converted File - Each Channel Is Now A Halftone



Once all on-screen activity stops and the contents of the channels panel displays only the colors in the separation, the process is complete.

The converted file has been named “Source” which can be changed by the end user.

No RGB channels are required since this type of separation can be printed directly from any version of Photoshop using the default output settings.

Magnified portion of Black Channel to reveal halftone conversion.

The converted separation above is a multichannel file with color information and channel color names intact.

Its worth repeating that since each channel is now a bitmap, any adjustments such as Curves or Levels have no effect. And since its a bitmap with embedded attributes such as line screen, angle, etc., it can not be resized. The resolution has also been increased to 600 dpi.

Using the above converted 50 LPI halftone as an example, we zoomed “out” to 8.33% or 12.5% to get an idea how the file will perform on press.

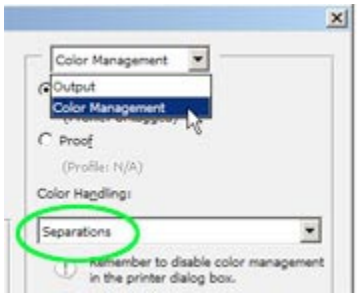
Higher magnification previews, 25%, 50%, etc., will render a preview that’s far too light due to many reasons. In fact, zooming in will lead most to believe there’s not enough ink within the channels and that dots are going to print exactly on top of other dots when this is simply not the case.

At this point, custom register marks can be added to the converted separation prior to output.

Printing A Separation Converted To Halftones Using Photoshop
Older Photoshop Versions • CS1-CS2-CS3-CS4-CS5

When outputting to film, do not attempt to specify a frequency, screen angle or dot shape as that information is already embedded within the file. Just output as you would line artwork at default printer resolution.

When printing the separations from Photoshop, make sure all channels are turned on with the “Eye” visible next to each.

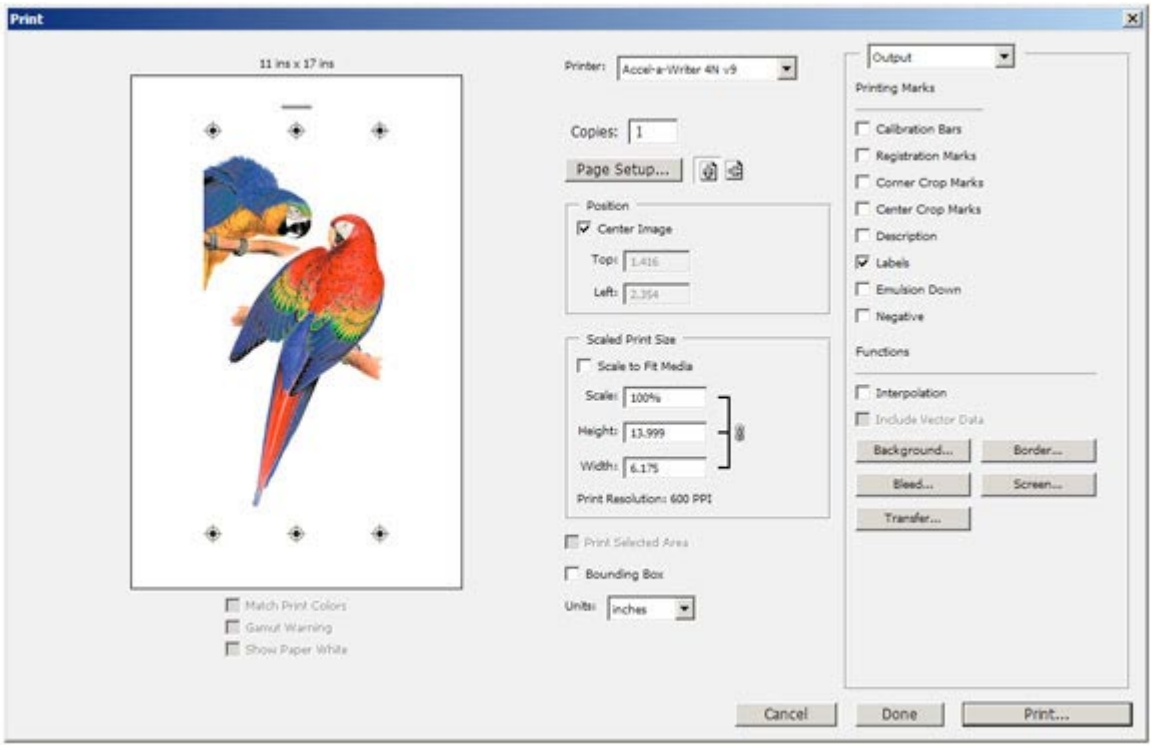


Next choose Print
(or in Photoshop versions CS1-CS2 “Print With Preview”).

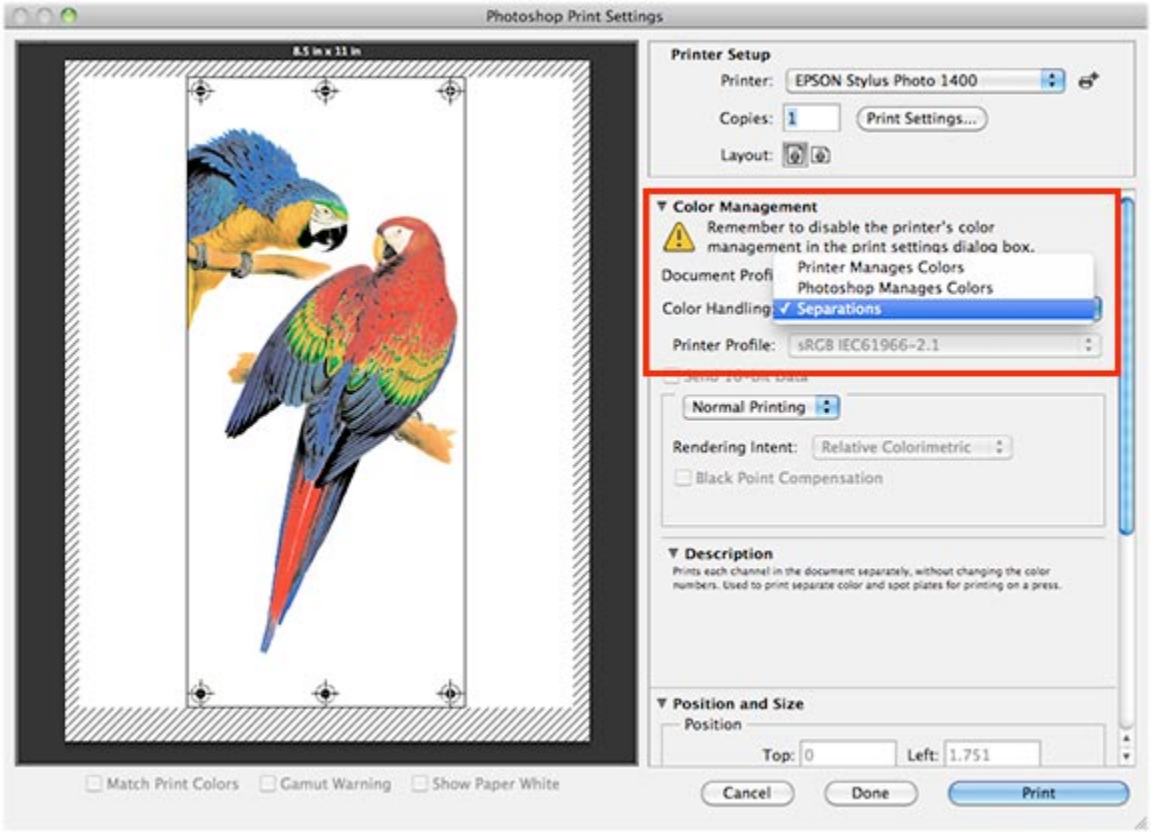
Select Color Management and make certain “Separations” is selected.

If Separations is not selected, the films will not print.

Now select Output within the print dialog box and check “Labels” so each film is marked with the appropriate ink color name and verify the correct printer and page size is selected. At this point there’s no other settings or adjustments to make, just click Print and each channel will image to film.



Printing A Separation Converted To Halftones Using Photoshop
Newer Photoshop Versions • CS6 - Creative Cloud



Above is a screen shot of the CS6 print window.

Printing a separation converted to halftones using Photoshop CS6 or higher is the same as with older versions although Adobe has changed the appearance of the Print screen. The primary thing that must be done is to select “Separations” within Color Management.

So after selecting your designated printer, page size, etc., the Color Management section is directly under it. Make sure to select Separations.

Scrolling further down within the Print window is where you’ll find other print options such as Labels, Register Marks, etc.

Once satisfied with the settings, just click Print and each channel will image to film.

Printing Films Directly From Photoshop CS1-CS4

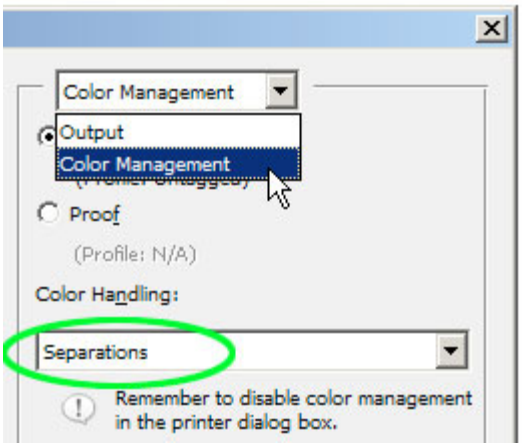
The ability to print films and apply specific Line Screens, Angles and Dot Shape to each Channel is essentially identical in Photoshop versions CS1 - CS4.

The only difference is the Print Dialog Box in CS1 and CS2 is different and having to select “Print With Preview” from the File Menu as opposed to “Print”.

Since CS1 and CS2 are very old and rarely used, all illustrations here are taken using CS4. We’ll make note where older versions of Photoshop differ.

Beginning with Photoshop CS5, its no longer possible to specify line screens, angles and dot shape from within Photoshop as the “Screen” button has been removed from the program. For those using Photoshop CS5 or higher, see our instructions on printing Photoshop channel separations using Adobe Illustrator or CorelDraw.

Prior to outputting any file to film from within Photoshop CS1 - CS4, its important to delete the RGB Channels or any other composite channel cluster above the channels of the color separation! This is the exact opposite of outputting Photoshop channel separations using Illustrator or CorelDraw as the RGB channels need to be retained.

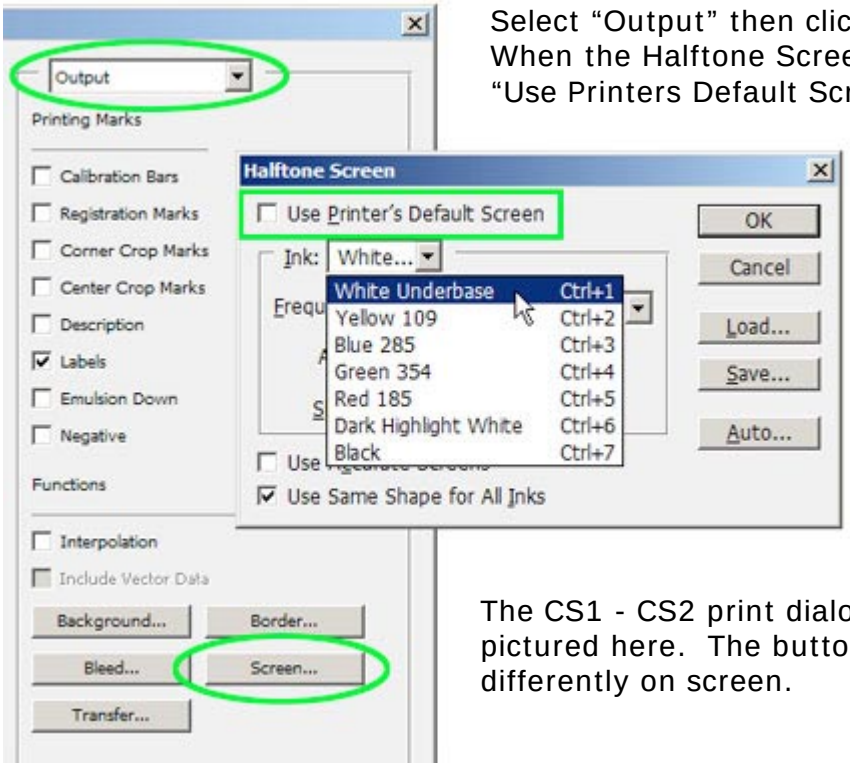


Make sure each channel needed is selected for output by turning on the “eye” next to the channel’s name.

CS3 - CS4: Select “Print” from the File Menu then select “Color Management” from the scrolling box in the upper right corner. Below under Color Handling make certain that “Separations” is chosen.

CS1 - CS2: Select “Print With Preview” from the File Menu and check “Show More Options” under the image preview window. Choose “Color Management” within the scrolling box below and make certain “Separations” is chosen as the “Profile”.

If “Separations” is grayed out and not selectable, the RGB Channels have not been deleted!

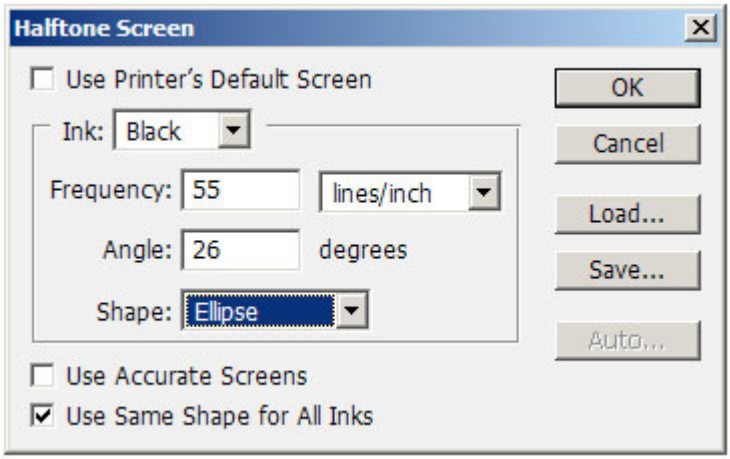


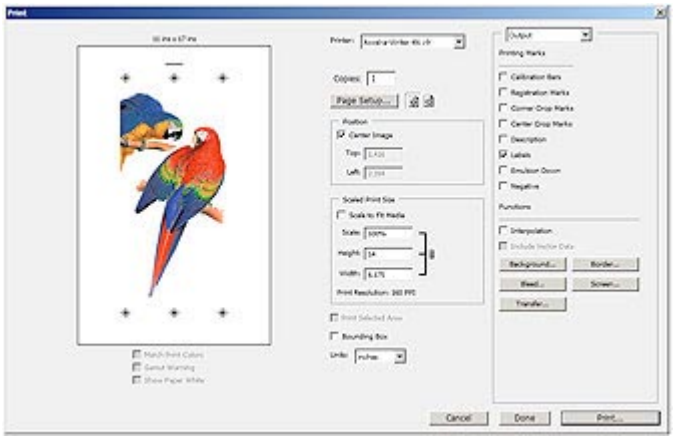
Select “Output” then click the “Screen” Button. When the Halftone Screen Box appears, UNCHECK “Use Printers Default Screen”.

The CS1 - CS2 print dialog box includes all functions pictured here. The buttons, etc. are just situated differently on screen.

In the Halftone Screen Box, each ink within the color separation needs to be chosen and applied the correct Frequency, Angle and Dot Shape. Once all have been set, click OK.

The example here depicts a standard setting for simulated process channels.





Assuming your Printer / RIP and the proper page size is chosen, the file is ready to be sent to the output device.

Always check Labels so the ink color is printed on each channel. If register marks were not added using UltraSeps, check Register Marks.

Printing With Photoshop CS5 Or Higher

For those using a newer version of Photoshop such as CS5, CS6 or Creative Cloud, I highly recommend using Illustrator or CorelDraw to print from as Adobe has removed the function from newer Photoshop versions which permits the assignment of LPI, Angle and Dot Shape for each channel.

The next few entries in the User Guide covers this:
Printing Films Using Adobe Illustrator
Printing Films Using CorelDraw

We provide simple instructions on correctly saving separations from Photoshop followed by using these illustration programs for film output.

I'd like to point out that it's possible to output halftone separations to film directly using newer versions of Photoshop. The downside being the films will be processed using the presets of your RIP and can't be changed or overridden through the print functions of Photoshop. This is the reasoning behind using Illustrator or CorelDraw as all output parameters can be changed easily.

Separations that don't require halftones such as Index or Hard Spot Color (files with no tints) can be printed from Photoshop CS5 or higher.

Separations that are converted to halftones using the No RIP functions of UltraSeps can also be printed directly from Photoshop CS5 or higher.

In a nutshell, there's different methods used to output multichannel Photoshop color separations to film.

If whatever you're doing now works, stick with it.

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Printing Films Using Adobe Illustrator

These instructions are for those using a RIP with an inkjet printer or a postscript laser printer. If a RIP is not available, see our instructions on printing separations from Photoshop without a RIP.

Illustrator CS3 or higher can open or place Photoshop (PSD) color separation files directly as native Photoshop files for film output. It can also use Photoshop color separations saved as a PDF.

Just save the color separation using Photoshop as you normally would and make sure to KEEP the RGB Channels! If the RGB Channels are deleted, you'll receive an unsupported color mode error and the file will not open or place into Illustrator.

If there's no RGB channels, then simply make 3 blank channels and move them to the top of the channels panel above all the colors of the separation.

Next in Photoshop go to Image > Mode > RGB Color. This converts the image to RGB format and retains the separation intact.

It doesn't matter if the RGB channels are blank as the external program just needs them to read and open the file.

An Action to automatically add RGB Channels to your image can be downloaded here: http://ultraseps.com/download/add-rgb-channels.zip

Delete all other channels not required for film output.

Now just **OPEN** this file using Illustrator or use the **PLACE** command to insert into an existing Illustrator document and follow instructions on the following pages to send the separation to film.

The sample below is exactly how the file needs to appear in Photoshop prior to saving with the RGB Channels included.

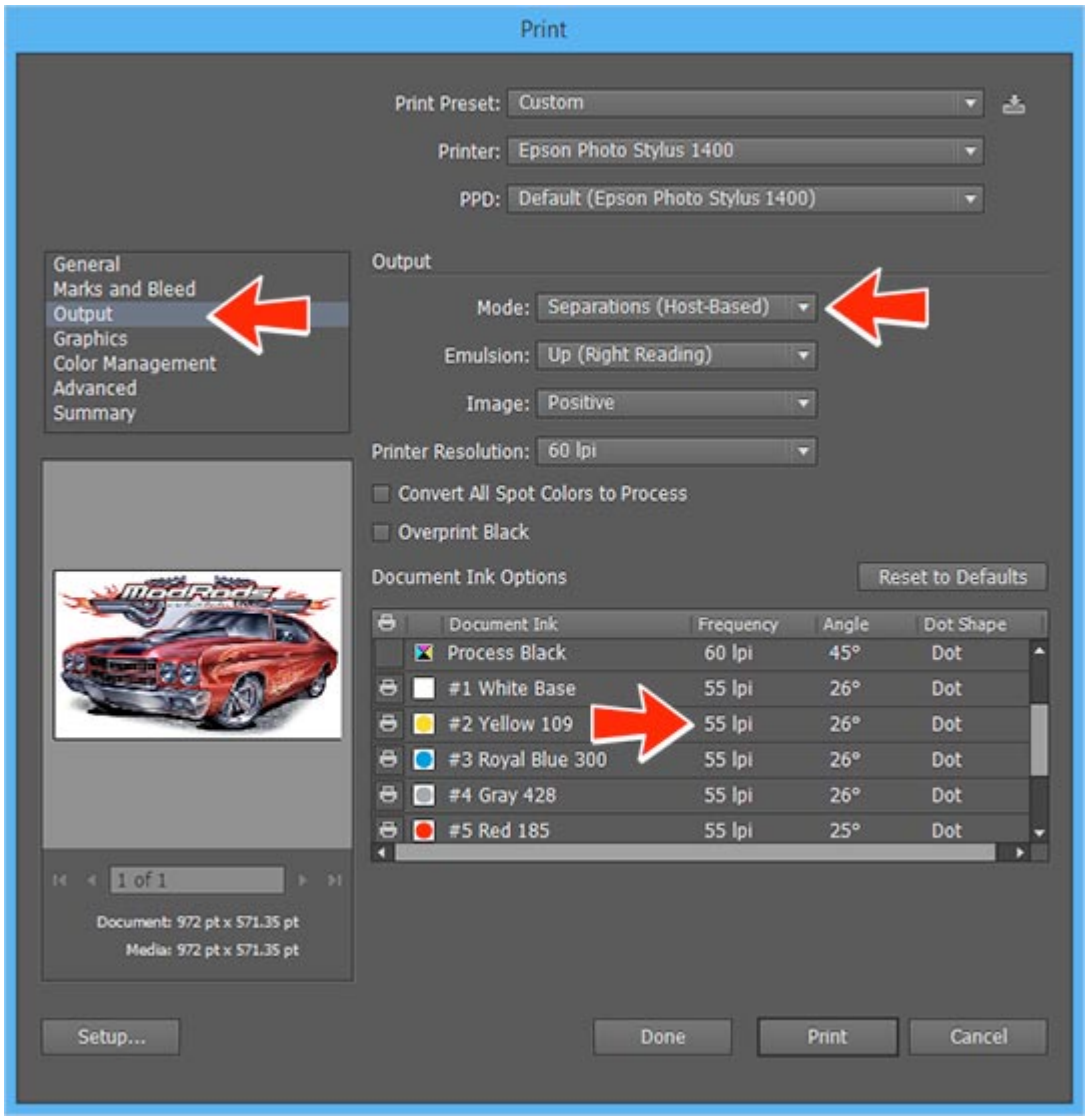
Never name any of the color channels “black, yellow, cyan or magenta” when saving a color separation in Photoshop that is to be printed from an external application.

Doing so will be confusing when printing the separations as multiple colors of the same name will be seen within the print dialog functions. Its also possible that printing errors will result or the file may refuse to open.

Therefore, when naming these common color channels, always label them “black ink” or “yellow ink” or just add something else to its name such as a PMS number.

Now within Illustrator, Go to File > Print and choose your Printer (RIP).
Click on Output and within “Mode” choose “Separations (Host Based)”.
All of the channels of the separation are now active in the Ink Options window.

Deselect all Process Colors and only select the channels required for film output.
Change the Frequency, Angle and Dot Shape of each channel to be output to film. The file is now ready to send to the printer.



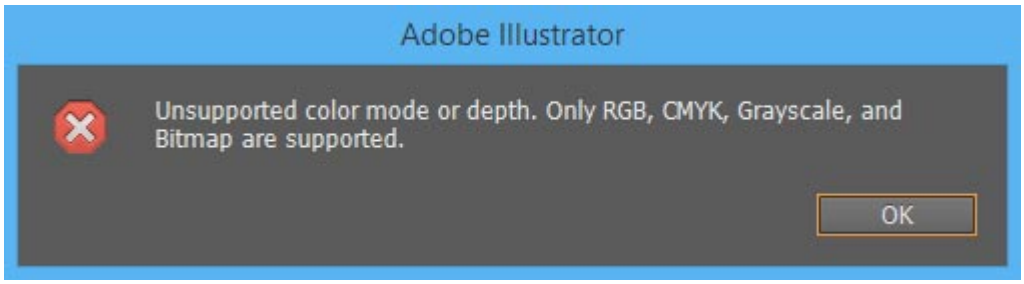
Register marks can be added by using Illustrator's standard marks, adding marks to the file using the UltraSeps Actions prior to saving the separation or creating your own custom vector register mark with Illustrator is a great idea.

Just design a register mark with Illustrator using the color "Registration". The mark can then be duplicated and placed exactly where you'd like them and they'll print on each channel.

Save the register mark created for use on all files printed from Illustrator or make a few templates of different film sizes with the marks added.

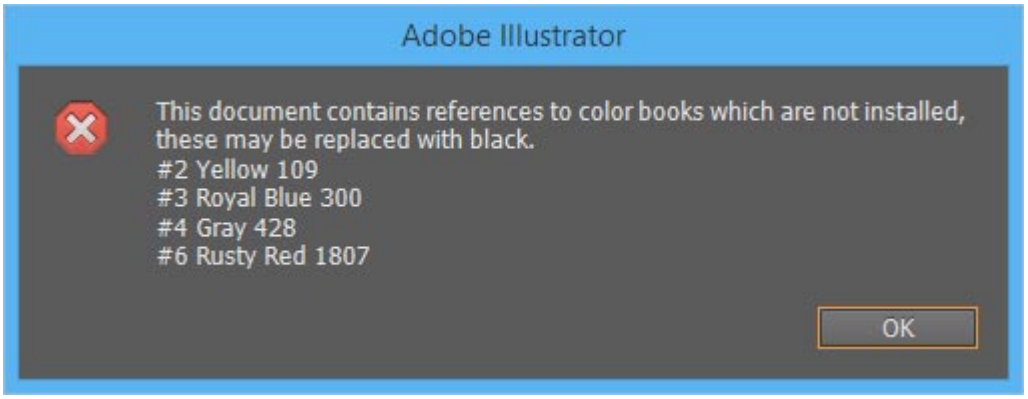
Potential Warnings When Opening A Photoshop Channel Separation With Illustrator:

Unsupported Color Mode Or Depth indicates the file doesn't include composite color mode information such as RGB Channels. If so, go back to Photoshop and add RGB channels. As discussed previously, the RGB can be void of any data. An Action to automatically add RGB Channels to your image can be downloaded here: http://ultraseps.com/download/add-rgb-channels.zip



The Color Book warning below I've only seen with Illustrator CS6 on a few occasions. It can be ignored and the file will still print correctly although the preview will look wrong.

To fix, go back to Photoshop and double-click one of the channels within the error followed by clicking the small color chip in the Spot Channel Options. Next in the Color Libraries window click the Picker button. In the color picker window, change one of the values of the R-G-B slightly such as changing the G (Green) from 132 to 133. Click OK and then OK again. Do this for each channel generating an error when opening with Illustrator to resolve the error.



Printing Films Using CorelDraw X5+

These instructions are for those using a RIP with an inkjet printer or using a postscript laser printer. If a RIP is not available, see our instructions on printing separations from Photoshop without a RIP.

If using CorelDraw to output your Photoshop channel color separations, the easiest method is to save the file in Photoshop as a PDF.

When saving the PDF from Photoshop, make sure the RGB channels have not been deleted as they are needed.

If there's no RGB channels, then simply make 3 blank channels and move them to the top of the channels panel above all the colors of the separation.

Next in Photoshop go to Image > Mode > RGB Color. This converts the image to RGB format and retains the separation intact.

It doesn't matter if the RGB channels are blank as the external program just needs them to read and open the file.

An Action to automatically add RGB Channels to your image can be downloaded here: http://ultraseps.com/download/add-rgb-channels.zip

The sample below is exactly how the file needs to appear in Photoshop prior to saving as a PDF with the RGB Channels included.

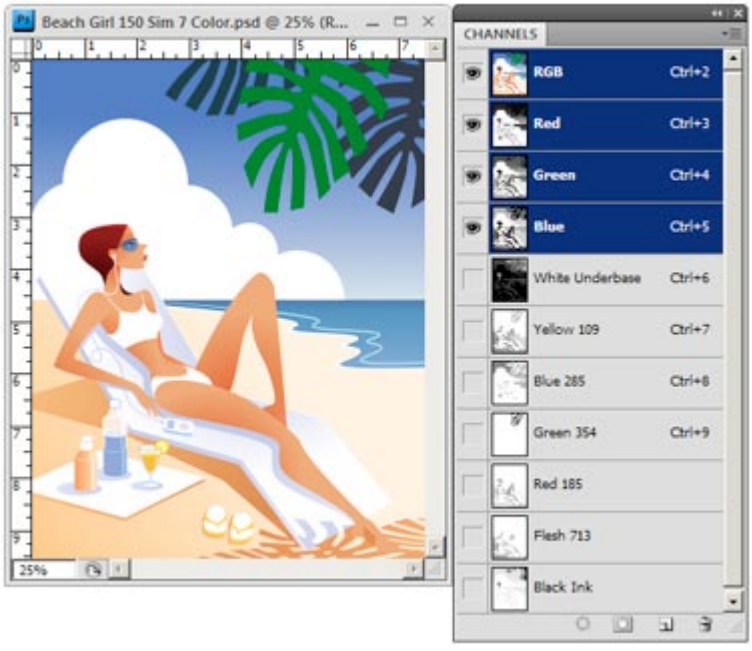
Never name any of the color channels "black, yellow, cyan or magenta" when saving a color separation in Photoshop that is to be printed from an external application.

Doing so will be confusing when printing the separations as multiple colors of the same name will be seen within the print dialog functions. Its also possible that printing errors will result or the file may refuse to open.

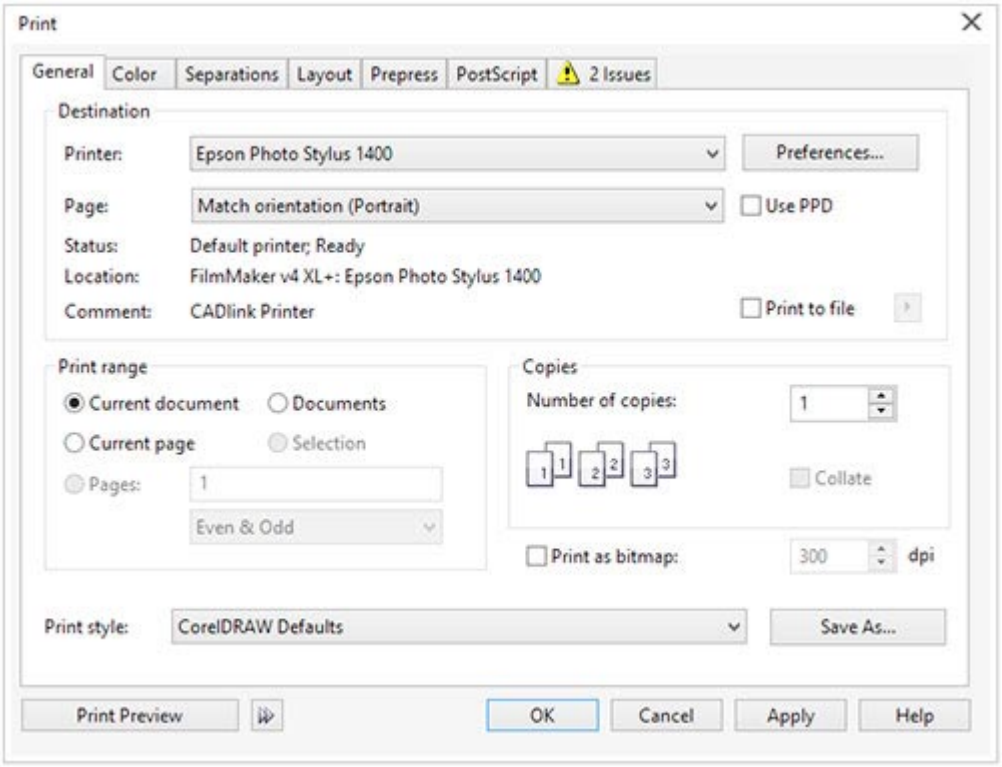
Therefore, when naming these common color channels, always label them "black ink" or "yellow ink" or just add something else to its name such as a PMS number.

File Ready To Be Saved As A PDF.

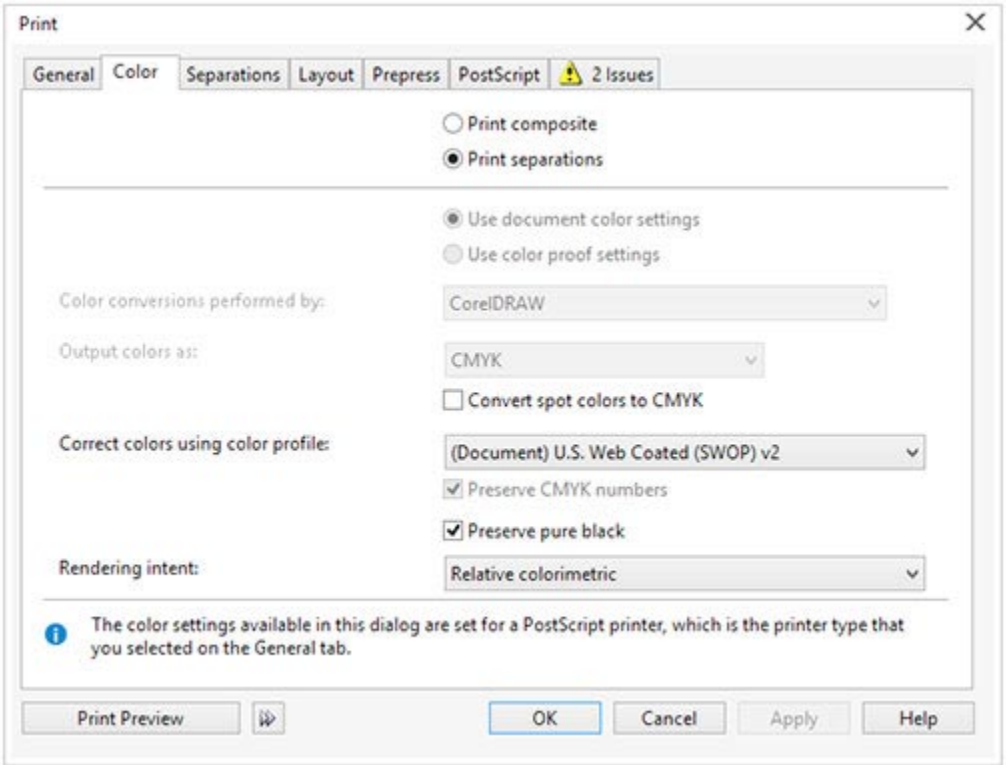
RGB Channels Intact



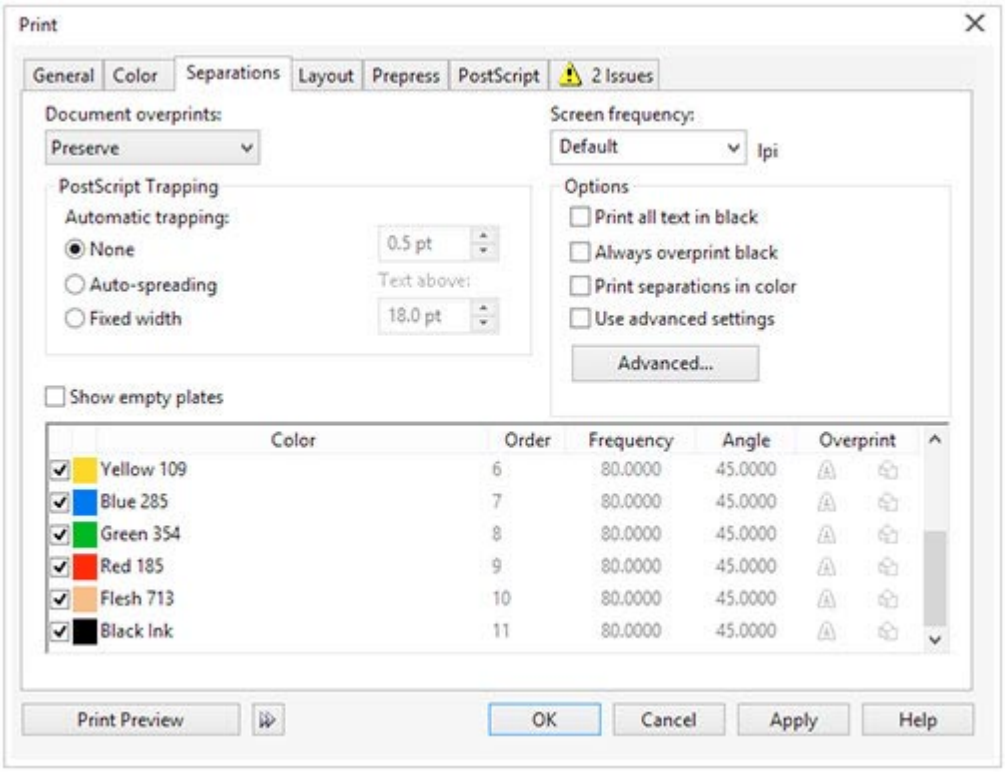
In CorelDraw go to File > Open and open your PDF file into CorelDraw.
Select Print from the File Menu.
In the General Window, select your RIP or Printer.



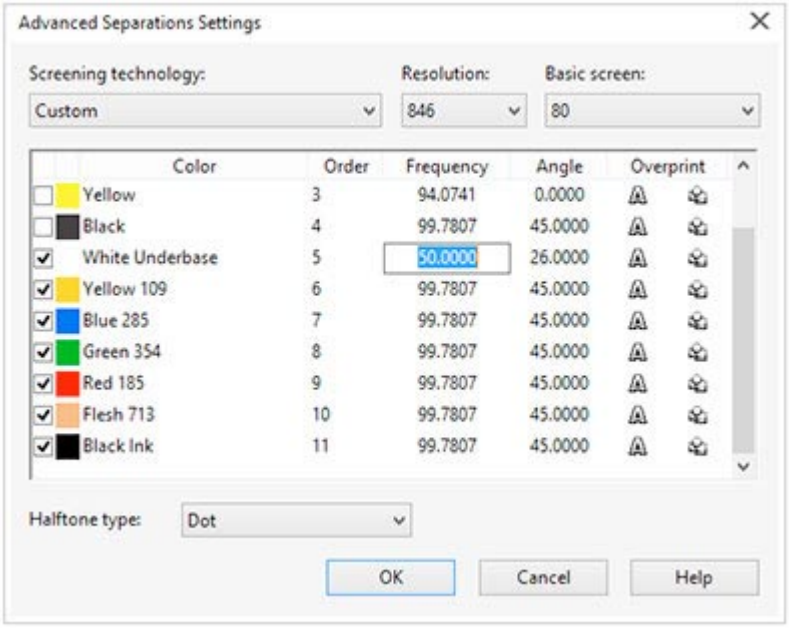
Next select the Color Tab and click the Print Separations button.



In the Separations Tab, deselect the process colors on the top of the list and make sure all the colors within the color separation are checked.



Next click the “Advanced” button in the Separations Tab in the window above which opens the Advanced Separations Settings window below. Set the appropriate LPI Frequency and angle for each color in the separation. The shape of the dot can also be selected next to Halftone Type. If the process colors are checked in this window, deselect them. When finished click OK.



Now just click OK in the Print window and the separation will be sent to your RIP or postscript printer for film output.

Printing Index Color Separations

Index Separations are bitmaps, so the easiest way to print this type of file is directly with Photoshop. And since we're not dealing with grayscale channels, a RIP isn't required if not available.

Prior to the following instructions on how to print Index separations to film, there's a few things that need to be known about Index separations.

Do not attempt to resize an Index separation as it will result in poor output quality.

Art that contains excessive gradients or fade off into the shirt are not good choices for Index.

Index separations "usually" require more colors to print accurately. Of course, this all depends on the art.

An Index separation is a multichannel bitmap file that doesn't use halftones. The color channels with Index are comprised of tiny squares. The higher the resolution of the original image, the smaller the squares will be. If the original file resolution is high such as 300 dpi, these squares will be far too small.

Work with images at 175 dpi - 200 dpi when generating Index separations. If needed, resample the file to the appropriate resolution.

Do not attempt to set any screen angles or LPI settings prior to output. Just print out each channel to film using default settings.

The channels can not be adjusted (darkened - lightened) with Index.

The only changes that can be made to the Index separation is changing the color and name of a channel.

If a change or adjustment is needed with an Index job, the entire separation usually needs to be done again from the beginning.

Index separations can appear grainy on screen, especially at higher zoom levels. This is normal.

Overall, Index separations print much better than its screen preview indicates.

Once on press, Index jobs sometimes require more time to blend correctly so its usually a good idea to run a few additional test prints.

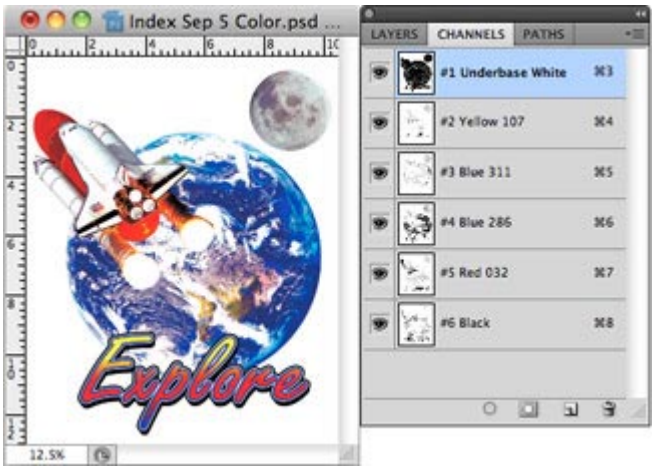
Index jobs are very forgiving and extremely easy to control on press.

Printing An Index Separation Using Photoshop
Older Photoshop Versions • CS1-CS2-CS3-CS4-CS5

Printing Index Separations to film is identical to printing halftone separations directly from earlier versions of Photoshop but without applying screens, angles and dot shape to each channel as its not required.

Make sure the RGB or any other composite channels above the separation are deleted.

Make sure all channels are turned on with the “Eye” visible next to each.

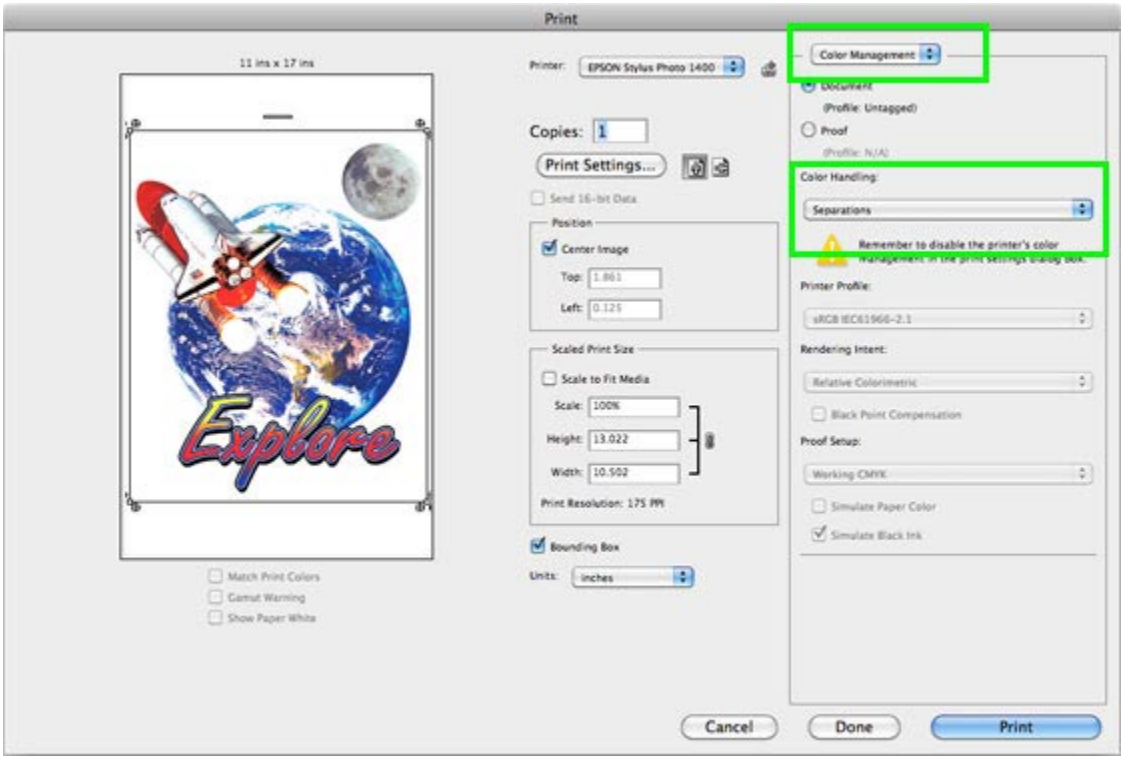


Next choose Print
(In Photoshop versions CS1-CS2 “Print With Preview”).

Select Color Management and make certain “Separations” is selected.

If Separations is not selected, the films will not print.

Within the Print Dialog Box, select “Color Management” in the upper right corner and then choose “Separations”.



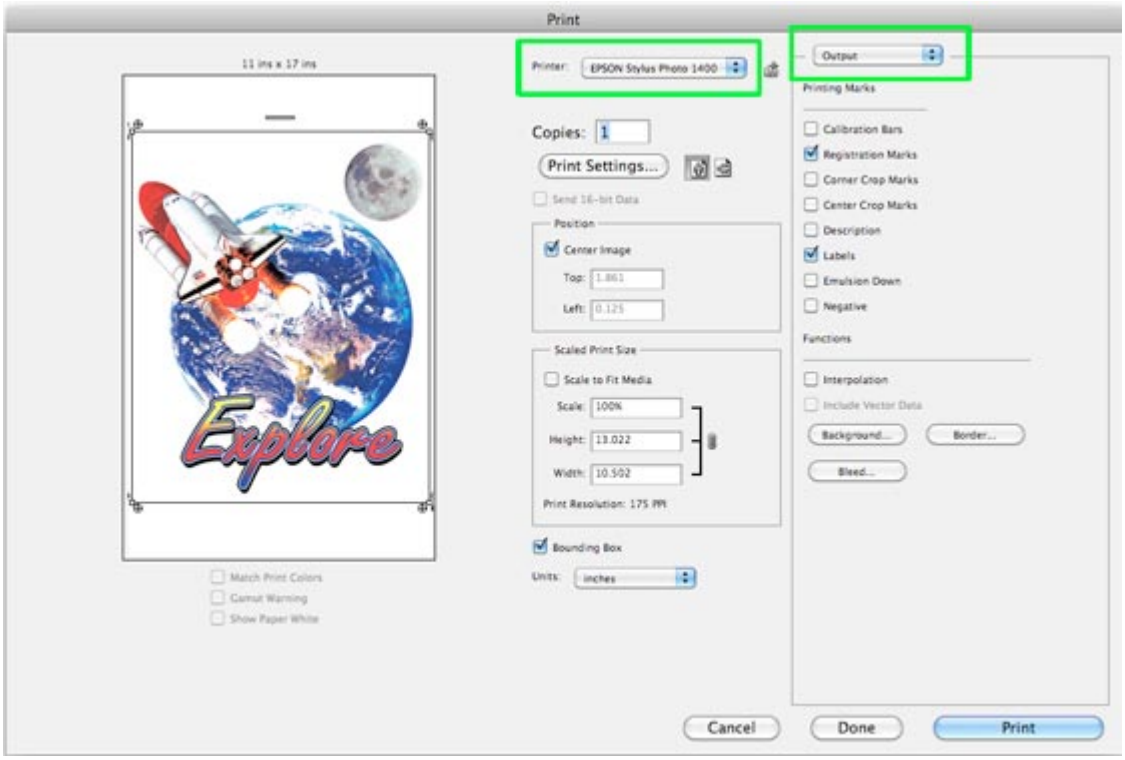
Next select “Output” in the upper right corner.

Make sure the correct Printer is selected along with the page size.

Check “Labels” so the color of each channel is listed on the film.

If register marks have not been added previously, check “Register Marks”.

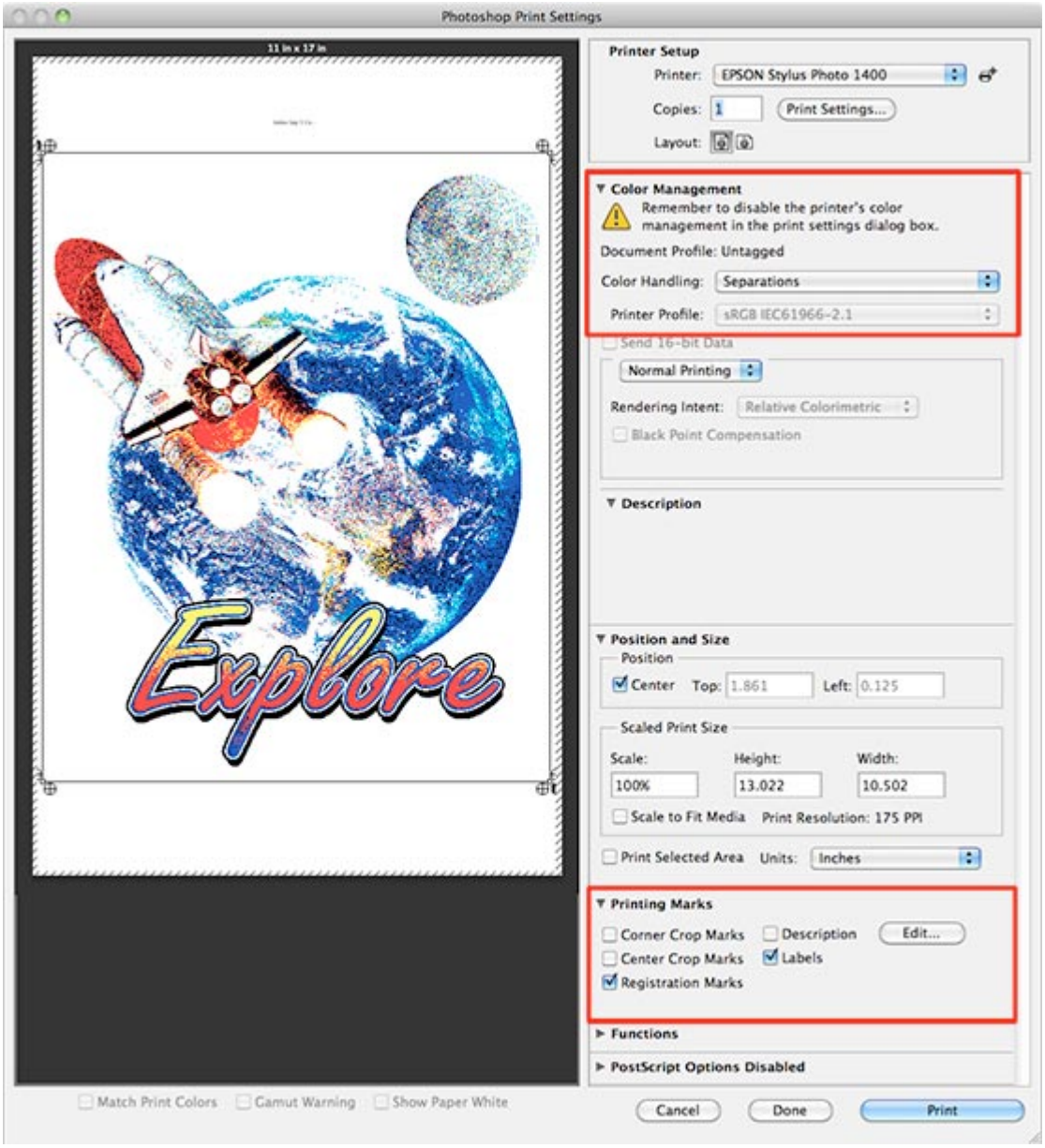
Click “Print”.



And that’s it. There’s nothing else to do.

Each channel will now print to film.

Printing An Index Separation Using Photoshop
Newer Photoshop Versions • CS6 - Creative Cloud



Above is a screen shot of the CS6 print window. The preview may appear very grainy as compared to earlier Photoshop versions. This is normal.

Printing an Index separation using Photoshop CS6 or higher is the same as with older versions discussed previously although Adobe has changed the appearance of the Print screen.

So after selecting your designated printer, page size, etc., the Color Management section is directly under it. Make sure to select Separations.

Scrolling further down within the Print window is where you'll find other print options such as Labels, Register Marks, etc.

Once satisfied with the settings, just click Print and each channel will image to film.

Suggested Film Output Settings

Simulated Process Separations:

Dot Shape - Elliptical

All films 26 Degrees at 55 LPI.

Mesh count 280 - 305 Top Colors.

Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

CMYK Separations:

Dot Shape - Elliptical

All films 22.5 Degrees at 55 or 60 LPI.
(26 Degrees can also be used)

Mesh count 305 - 330 Top Colors.

Mesh count 200 - 230 Underbase White.

Mesh count 230 Highlight White.

Print Order: White Base - Yellow - Magenta
Cyan - Highlight - Black

Grayscale Separations:

Dot Shape - Elliptical

All films 26 Degrees at 55 LPI.

Mesh count 280 - 305 Top Colors.

Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

Manual Printing Notes:

Some printers who print manually might want to experiment with using lower LPI settings and mesh for simulated process work. Such as 230 mesh for the top colors along with outputting films at 45 LPI - 50 -LPI at 26 degrees.

Duo-Tri-Quad Tone Separations:

Dot Shape - Elliptical

All films 26 Degrees at 55 LPI.

Mesh count 280 - 305 Top Colors.

Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

Basic Spot Color Separations:

Dot Shape - Elliptical

All films (No Tints - All Solid Colors) 26 Degrees at 300 LPI .

All films (With Tints And Gradients) 26 Degrees at 50 LPI .

Mesh count 156 - 200 (designs using no white base).

Mesh count 200- 305 Top Colors (designs with a white base).

Mesh count 156 - 200 Underbase White.

Index Separations:

No Frequency, Screen Angles or Dot Shape Required.

Mesh count: 280 - 305 Top Colors.

Mesh count: 156 - 230 Underbase White.

Mesh count: 200 - 230 Highlight White.

Index Separations With Halftone White Base & Highlight Channels:

(Settings For Underbase & Highlight Only)

Dot Shape - Elliptical

Underbase & Highlight - 26 Degrees at 50 LPI.

Mesh count 156 - 230 Underbase White.

Mesh count 200 - 230 Highlight White.

Troubleshooting - Questions

Since Photoshop and computer operating systems are constantly changing, I've decided its no longer plausible to include troubleshooting information within the user guide as the Support Page on our website is continually updated with new information.

The Support Page includes solutions to just about every question we've ever received.

Users of UltraSeps v3 should disregard any reference to unlocking or authorizing UltraSeps on the support page as this has been removed with Version 3. Also disregard any reference to QuickLicense and errors pertaining to it.

http://www.ultraseps.com/support.php

Technical Support

If your question cannot be resolved through the use of the support page, direct all technical support questions to:

support@ultraseps.com

Include the name or company the copy of UltraSeps is registered to. We'll respond to the question within 24 hours or usually the same day if received between 10:00 am - 6:00 pm (New York City Time).

We've found it far more effective to address technical support via email as our response can be precise along with directing you to links and information to resolve the issue easily. And since we have a global user base, its makes sense to address all support via email.

If your technical support issue is image specific, please email a low resolution copy to us. A 100 dpi jpeg is sufficient. Without seeing the file, its very difficult to offer assistance.

If UltraSeps is generating an error message that can't be resolved through the support page, please include a screen shot of the error attached to your email.

UltraSeps includes 1 year of free technical support. Although once the year has expired, we'll continue to address basic questions at no charge.

Thank You!

As the developer of UltraSeps Version 3, I'd like to convey my deepest thanks for your trust in my product. Hopefully it will enhance the capabilities of your artistic endeavors, streamline your art department and make your life a little easier.

Steve Roginski
Developer

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Thank You!