



Halftone Converter

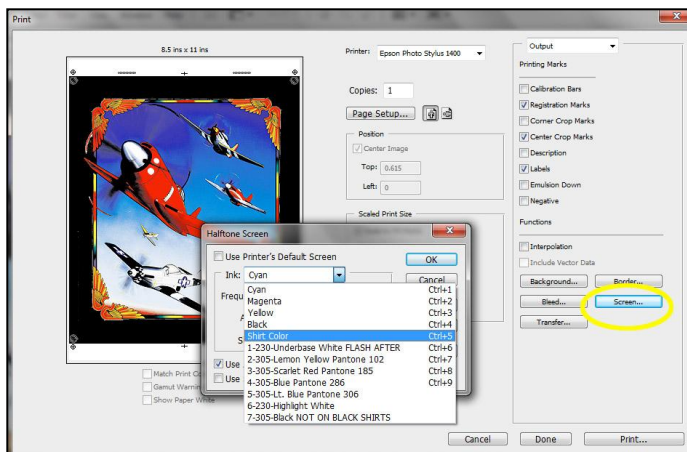
Photoshop Plug-in by Scott Fresener
Version 1.0 ©2011

General Overview

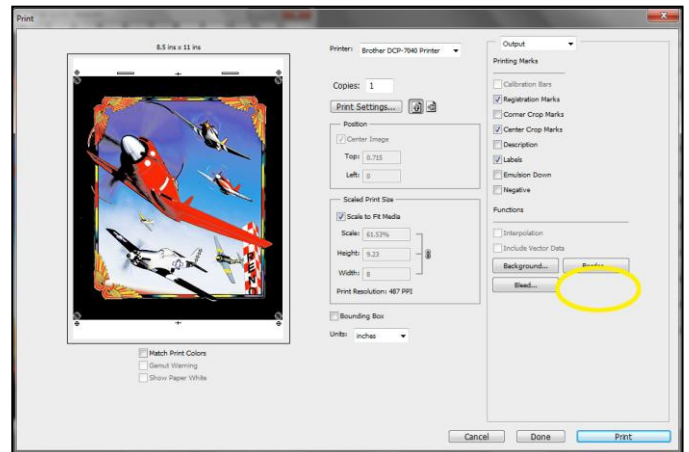
The *T-Seps Halftone Converter* is a Photoshop plug-in that converts a Photoshop file into halftones. It is also designed to replace the missing “Screen” button that Adobe removed from Photoshop CS5. This routine converts a typical Photoshop “channel separation” or grayscale file into individual files that are converted to halftone dots. The user has total control over the halftone frequency/LPI, angle, dot shape and resolution. The program is easy to use and very intuitive. With the *T-Seps Halftone Converter* it is easy to create halftoned files that can be output from any version of Adobe Photoshop, or vector programs like Corel Draw and Adobe Illustrator.

Where Did the Screen Button Go?

If you are a regular Photoshop user you know that since the beginning of time (almost...), Photoshop had a button called **Screen** in the print window. It was easy with this button to specify the correct halftone frequency, dot shape and halftone angle. For some unknown reason Adobe removed this button starting in CS5.0. Their “thinking” was that people don’t normally print out of Photoshop and they should print from Adobe Illustrator. Wow! Screen printers have been printing from Photoshop for years. The *T-Seps Halftone Converter* was born out of the need to once again easily set the frequency, angle and dot shape.



Photoshop CS4.0



Photoshop CS5.0

Although the *T-Seps Halftone Converter* creates halftoned files - it is not a software RIP (raster image processor) like *T-RIP*. Software RIPs convert files to halftone dots but also control the ink volumes in an inkjet printer. Software RIPs also allow you to print black ink from all ink slots, let you nest multiple images on one page, and more.

But, if you don’t have a software RIP or are printing to a printer that doesn’t have or can’t use a software RIP then this program is the next best thing. Simply convert the file to halftones with the *T-Seps Halftone Converter* and then print the file to an inkjet or laser printer. If printing to an inkjet printer, use the highest photo quality setting for a heavier deposit of black ink.

Even if you do have a software RIP, it is often a huge hassle to go into the RIP every time you print to set the correct frequency, angle and dot shape for that job. Simply run the *T-Seps Halftone Converter* and then print to your RIP. You get the best of both worlds – the ease of converting the file to halftone dots and the ink volume control of a RIP.

When the routine is done running you will have individual files open in Photoshop for each of the channel separations you created. Each file is now a grayscale black and white bitmap image. The program uses the *Channel Header* name as the file name. These files can now be simply printed out one-at-a-time in Photoshop, Adobe Illustrator or Corel Draw.

Photoshop Versions

T-Seps Halftone Converter works in Photoshop 7.0 all the way through CS5.5 and CS6.0 (when released in early 2012). It works on Mac or Windows/PC in any operating system.

File Formats Supported

The program works with ANY file you can open in Photoshop. But, if you open a standard RGB file that is not separated, there is no need to run the program. You can create a typical channel separation using *T-Seps* or ANY automated color separation program. You can also create channel separations manually. The program will also work on black and white grayscale one color images that have gradations.

Do You Need This Program?

If you are familiar with Photoshop you know that you can take a simple grayscale image and convert it to halftone dots using the *Image/Mode/Bitmap* menu. But, if you have a *Channel Separation* in Photoshop where you have put the key job information in the *Channel Header* (mesh count, print order, Pantone color, etc.), you hate to lose that information. To create halftone files “manually” in Photoshop you have to split the channels apart which loses the Channel Header information. You then have to individually convert each file to a halftone and then remember what color each file is and save it with that name.

The *T-Seps Halftone Converter* makes it VERY EASY. You simply push a button, answer a few questions, and your Channel Separation is now individual halftone files and the file name is the same as the Channel Header information. It greatly simplifies the process.

Installation

T-Seps Halftone Converter is a Java Script file called [TSEPS-HalftoneConverter.jsx](#). The download version is a standard ZIP file that contains the file *TSEPS-HalftoneConvert.jsx*, a *ReadME.pdf* file with the most current information, and the *Instructions* in a file called *TSHC-Instructions.pdf*. Once downloaded you need to “unzip” the file, read the ReadME.pdf file, and read and print out the Instructions and follow the Installation steps for either a Mac or Windows/PC computer.

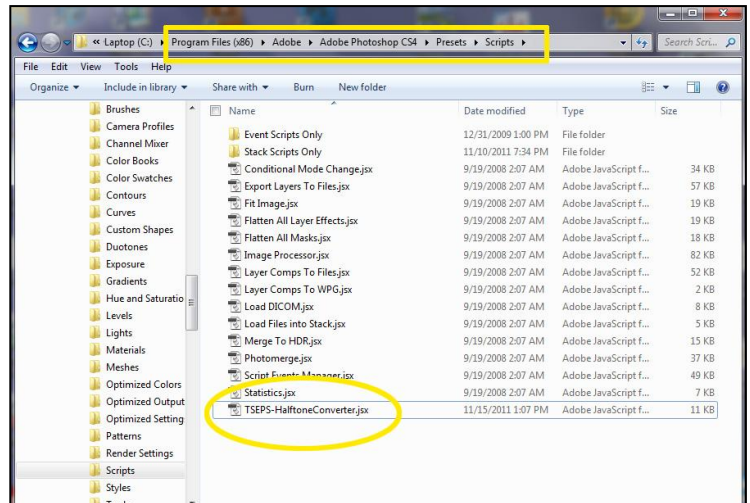
Because the program is small and only needs to be copied to a specific folder, there is no installer.

Installation Steps for Windows/PC

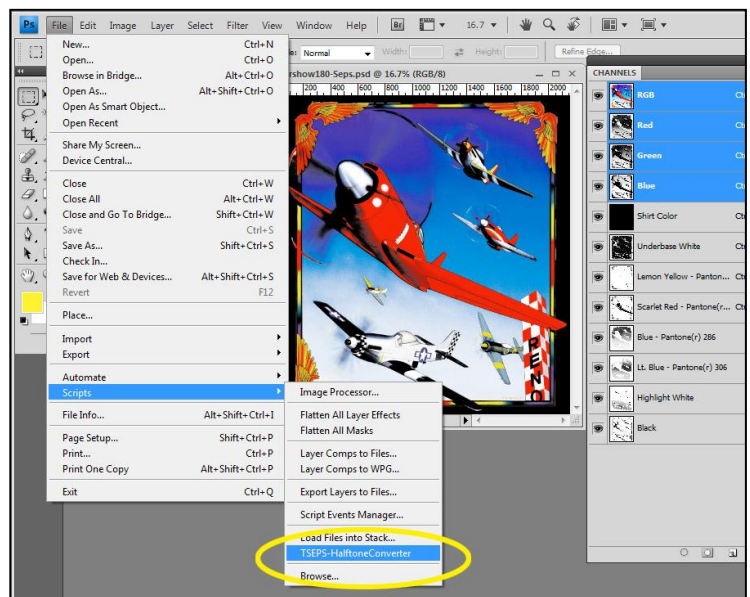
Depending on your version of Photoshop, you may have 32-bit and 64-bit versions – if you are running CS4 or CS5. If you look at your **C:** drive you will find a folder called *Program Files* (Windows XP), or *Program Files* and *Program Files (x86)* – in Windows Vista and Windows 7. In Windows Vista and Windows 7, 32-bit versions of programs go in the *Program Files (x86)* folder and 64-bit versions go in *Program Files*. If you are on Windows XP then all programs go in *Program Files*. The reason for this explanation is that you need to install *T-Seps Halftone Converter* in BOTH installations of Photoshop if you are going to run both the 32-bit and 64-bit versions of Photoshop.

1. Photoshop should be closed during this copy process. For Photoshop 32-bit - copy the file ***TSEPS-HalftoneConverter.jsx*** into the folder *C:/ProgramFiles (x86)/Adobe/Adobe Photoshop version/Presets/Scripts*

- For Photoshop 64-bit - copy the file **TSEPS-HalftoneConverter.jsx** into the folder *C:/ProgramFiles/Adobe/Adobe Photoshop version/Presets/Scripts*



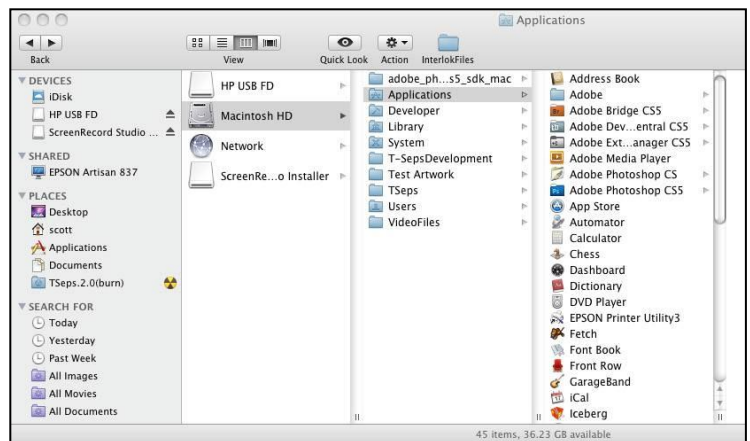
- Open Photoshop. In Photoshop verify the installation. Go to *File/Scripts* and see if you see *TSEPS-HalftoneConverter*. You run the program from this menu.



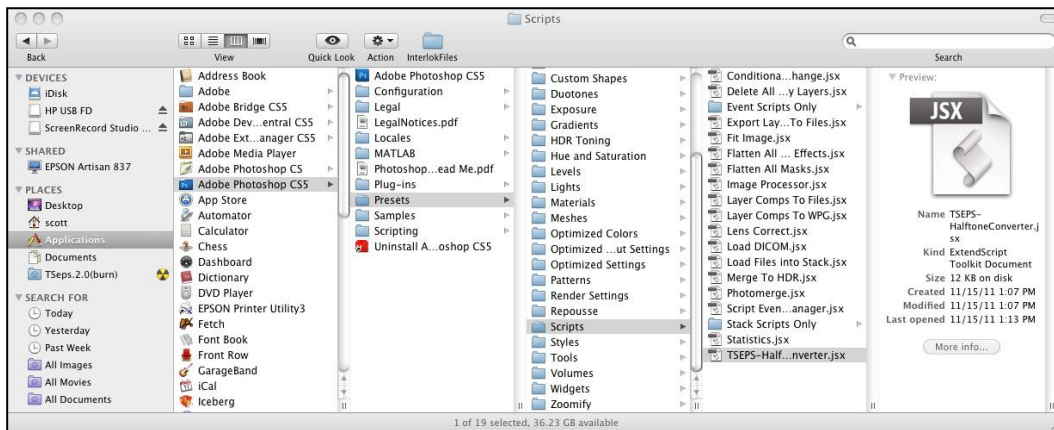
Installation Steps for MAC

The Mac installation is very similar to the Windows/PC installation. Photoshop must be closed before you copy the file.

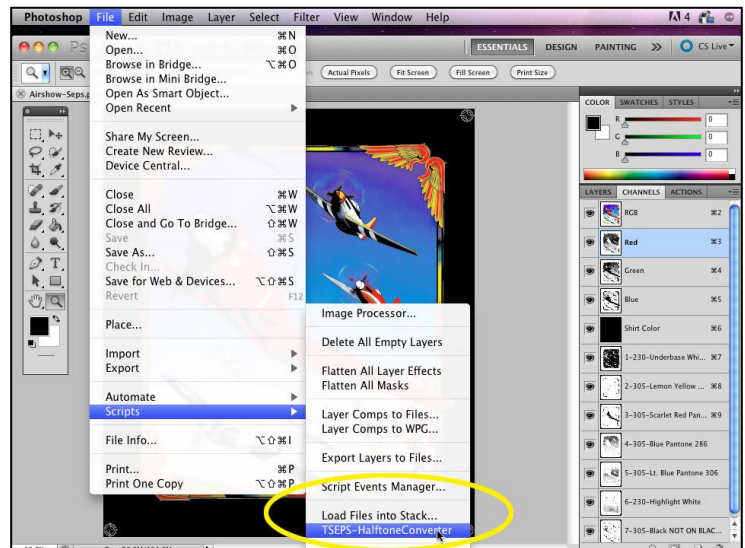
- Find your *Macintosh Hard Disk* and a folder called *Applications*.



- Copy the file *TSEPS-HalftoneConverter.jsx* into the *Adobe Photoshop your version/Presets/Scripts* folder.

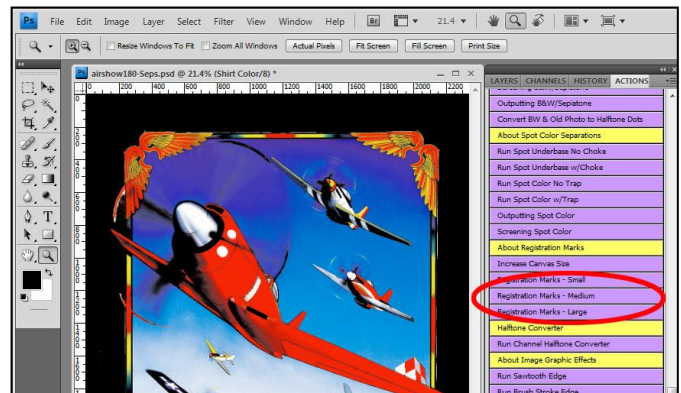
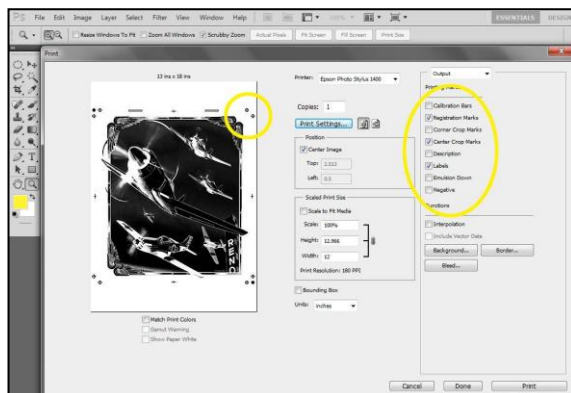


- Open Photoshop. In Photoshop verify the program is installed correctly. Go to *File/Scripts* and see if you see *TSEPS-Halftone Converter*. This is where you run the program from.



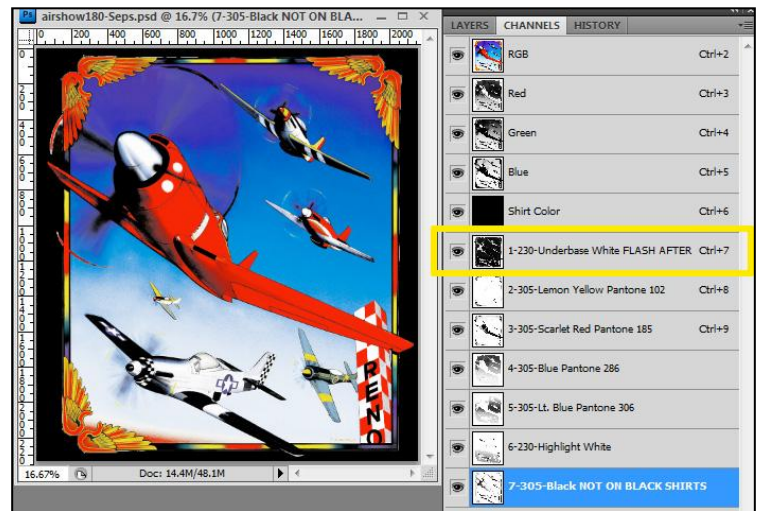
Registration Targets

Because this program is not a RIP, it will not place registration targets on the image. You can use the standard Photoshop targets from the *Print* menu in Photoshop or you can place targets on your separations (before running the program) using *T-Seps* or most automated separation programs.

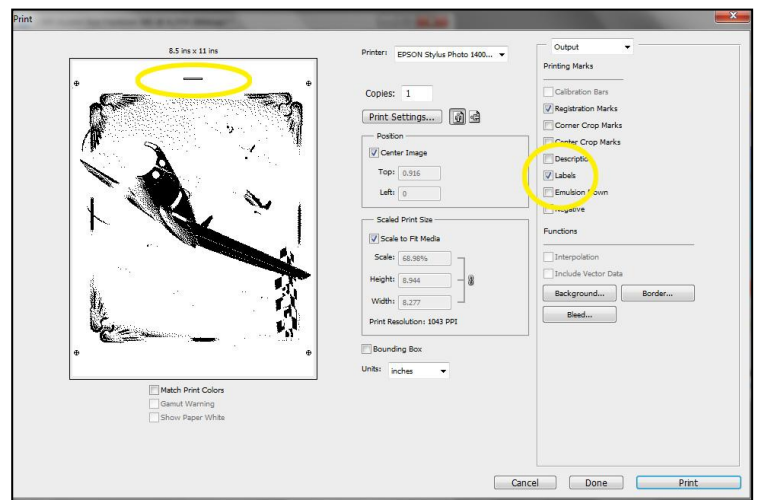


Channel Header Information

The beauty of the program is the fact that you can fill out the *Channel Header* information for the job and the program will use this information as the name of the file. Take time to put in the print order, mesh count, and color/job details in the Channel Header.



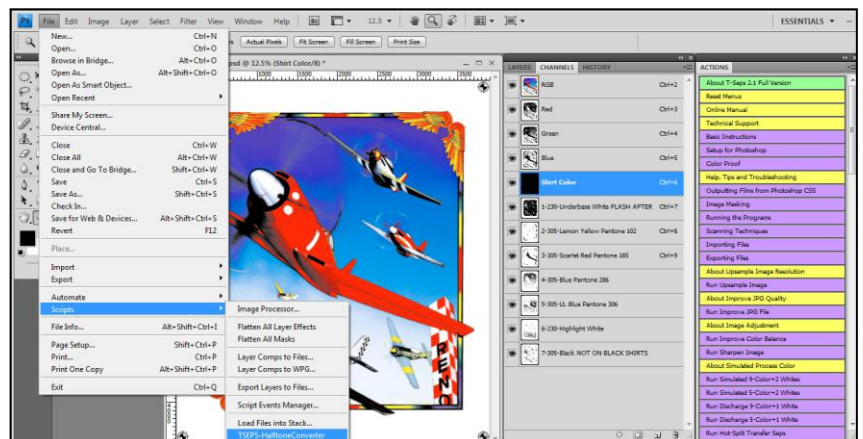
When you go to print films, the file name (that came from the Channel Header) will print on the film if you check the *Labels* box in the Photoshop print window. That way each film will have the job details.



Running the Converter

The program is very straight forward. It works with any channel separations in Photoshop or any black and white grayscale file. You do NOT need *T-Seps* to use this program. You can use any automated separation program or you can create the separations manually by pulling colors and making them channels.

The file to be converted MUST be open in Photoshop before running the halftone converter.

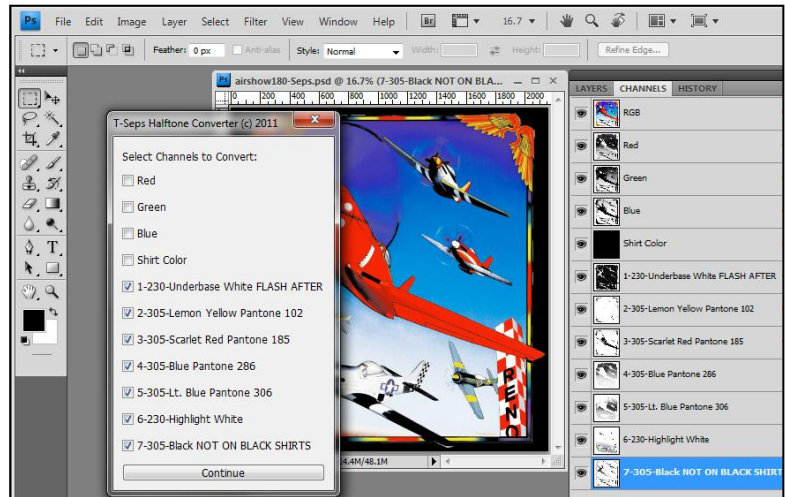


To run the program simply go to **File/Scripts** and click on **TSEPS Halftone Converter**. The program will pause for a few seconds and then give you a number of information screens to approve or change.

Select Channels to Convert

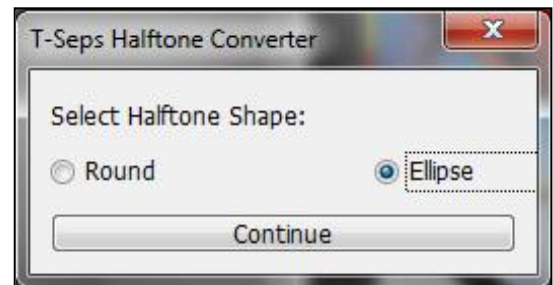
This is the first window you will see. It lists all the channels in the image including any RGB channels. The default setting has all the channels below the RGB channels checked. Check the channels you want to convert and press *Continue*.

Note: You can stop the routine at any time. For Windows/PC click the red **X** in the upper right corner of any window. For MAC press the **ESC** button on the keyboard.



Select Halftone Shape

You can print halftone dots that are **round** or **ellipse**. Although a round dot may seem more practical, an ellipse/elliptical dot actually is much better for screen printing. It is more of an egg shaped dot and gives a better transition in dots in the mid-tone 50% region. Choose *Ellipse* in this window and press *Continue*.

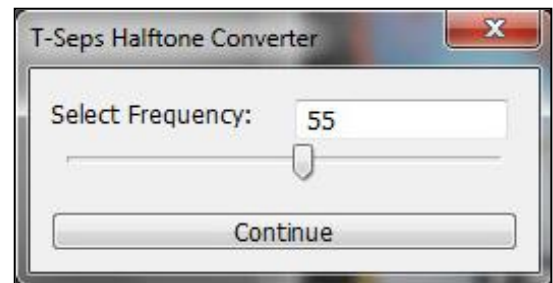


Select Frequency

The frequency of halftone dots is also known as the LPI or lines-per-inch.

Industry standard Frequency settings are:

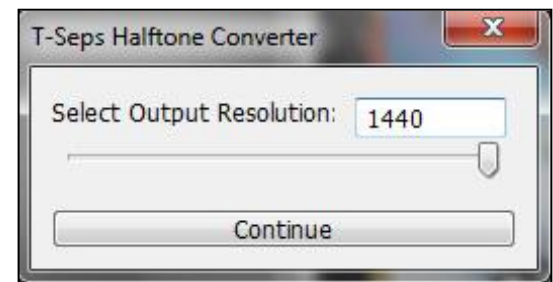
- **Basic cartoon style – non-critical work: 35 to 45**
- **Simple photorealistic images: 45**
- **More complex photorealistic images and CMYK: 55**
- **High-end photorealistic images: 55 to 65**
- **High-end photorealistic images on automatic press: 55 to 65**



The standard most often used frequency is 55. This is the default setting. Choose your *Frequency* with the slider or type the number in the window and press *Continue*.

Select Output Resolution

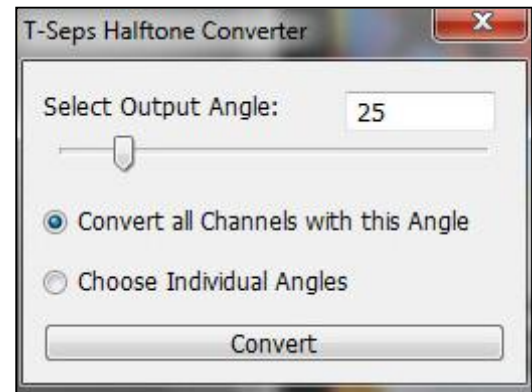
Images to be separated in Photoshop are generally 200 to 300 dpi. That resolution is the norm for graphic files. But, when you print a job to an inkjet printer, the printer resolution is usually 720 to 1440 dpi in order to give a sharp edge to the image. If you convert a file that is 300 dpi to a halftone and then print it out, the dot will be fairly pixilated. It is important to upsample the file to a higher inkjet resolution when converting it to halftone dots.



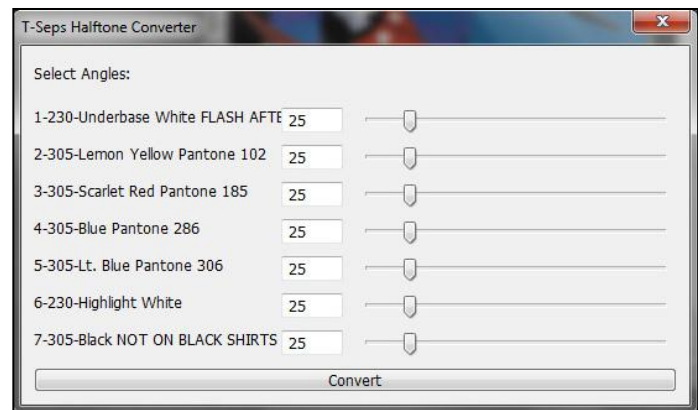
The default setting is 720 dpi. But, for more critical work, change this to 1440 dpi. Choose the *Output Resolution* with the slider or type in the window and press *Continue*.

Select Halftone Angle

The angle of a halftone dot is important for proper screen making. If the angle is wrong you will get an undesirable pattern on the screen called a moiré. Everyone has their favorite angles for screen printing. Angles you hear most often that give minimal or no moiré are **22.5** to **25** degrees. The *TSEPS Halftone Converter* will not let you use a decimal so if you need or like 22.5 degrees, use 23. **The default setting in this window is 25 and that is a great angle for ALL colors for ALL designs.** If you want to use the same angle for all colors choose the angle with the slider or type the angle in the window and then select *Convert All Channels with this Angle*. Choose *Convert*.



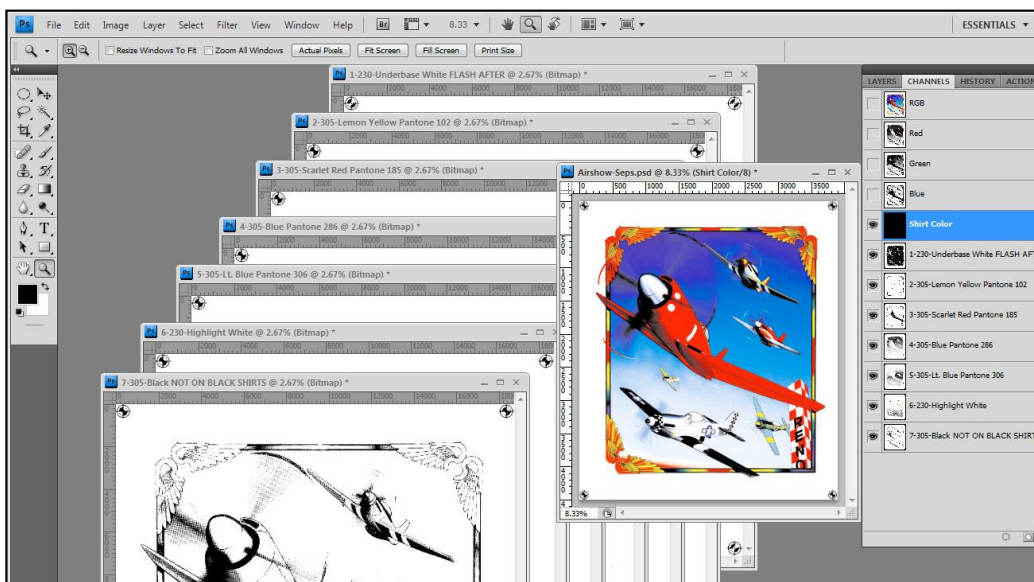
Some printers like to use different angles for different colors and it is not uncommon to use different angles for each color with a CMYK Process Color job. If that is your choice, then check *Choose Individual Angles* in the above window and press *Continue*. You will now be able to change the angles for each color. Although it is VERY common in T-Shirt screen printing to use the same angle for CMYK – some “experts” will disagree. And, these experts have their favorite angles. Here are the most common angles for CMYK – if you choose to not use 25 degrees. In the *Select Angles* window use the slider or type in the angles and press *Convert*.



Yellow 75 degrees
Magenta 45 degrees
Cyan 15 degrees
Black 75 degrees (the same as yellow)
Spot colors in CMYK jobs 15 degrees

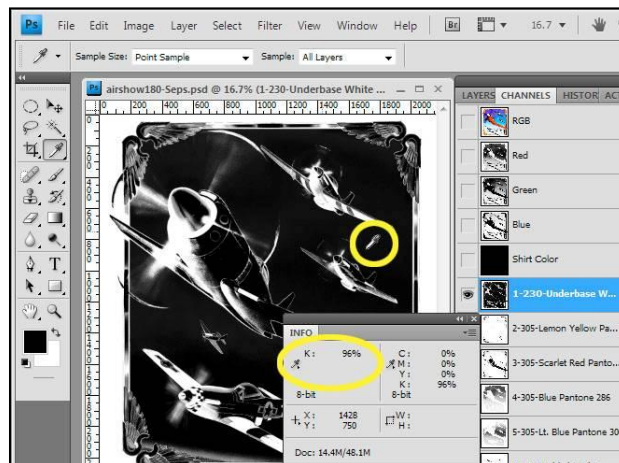
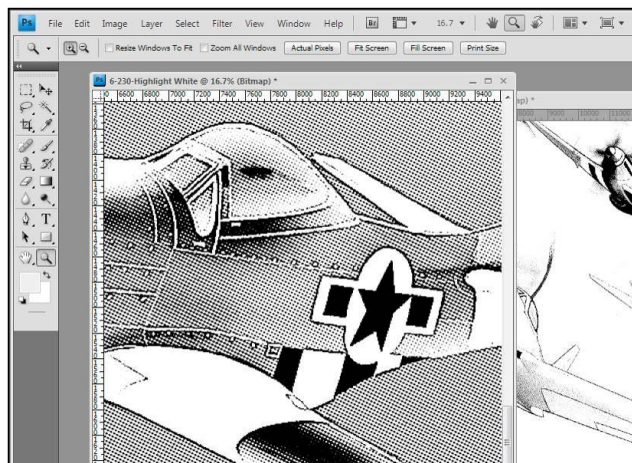
The Final Converted Files

The program will run and convert each channel you chose in the first window to individual halftoned files and it will use the Channel Header as the new name of the file.



If you zoom in on any one of the files you will see that it is converted to halftone dots.

Sometimes you will see flaws in your separations when the files are converted. It is not uncommon to see halftones in areas of the image that you thought were solid. In Photoshop you can use the *Info Palette* to read the gray level of a channel or file. Make sure areas that appear to be 100% solid color are in fact 100% by going to *Window/Info Palette* and use the *Eyedropper* tool to sample areas of the image in a particular channel. You can go to *Image/Adjustment/Curves* to boost these channels to make the solid areas 100%.



Save and Print Files

Once converted, you should save each file. You simply use the file name that came from the Channel Header. But, to be able to know what job this file goes to you might put a job name/number or reference at the beginning of the file name (keep the Channel Header information).

If you plan to print these files from another program like Corel Draw or Adobe Illustrator you can *Save As* any format that can be opened by other programs. This can be a PSD, EPS, JPG, PNG, etc. To print from these programs simply open a new page in Corel or Illustrator and then Import these files one-at-a-time and print them. If you are NOT going to print them from Photoshop you should put registration targets on the files before running the halftone converter in case you don't place them in the exact same location on the page when in another program.

You can print the files directly from Photoshop to an inkjet printer, laser printer or software rip like T-RIP. Remember, if you don't have a RIP for ink control, then use the highest photo quality setting in your inkjet printer driver or the blackest toner setting on a laser printer.

Support

Product support is available online from www.T-BizNetwork.com. Click on the *Support* tab.

You can also email for support to support@tbiznetwork.com.

Phone support is available. You can call 480-212-1078 or 888-801-1561 between the hours of 8:30am and 4:30pm Monday through Friday MST.

Copyright 2011

T-Biz Network International, LLC

Scottsdale, Arizona 85260 USA

www.T-BizNetwork.com

Phone: 480-212-1078 Toll Free 1/888-801-1561

Email: sales@tbiznetwork.com