

GRAPHIC TECHNIQUES

CEX1 HALFTONES

RESAMPLING AN IMAGE

In printing the common Dots Per Inch (dpi) for images is 300 dpi. Images taken with digital camera or downloaded from the web are commonly 72 dpi or a dpi that is not 300, it may be higher. In order to have the image print ready it should be converted to the correct dpi; resampling is the process of converting the pixels and the size of the image so that it is print ready.

1. Open document in Photoshop
2. Check Image Size; Menu Bar > Image Size
3. Deselect Resample Image; Note the bracket in the Document Size will now include the Width, Height and Resolution
4. Change the resolution to 300; Notice the width and height changed
5. Click OK
6. Save the file as a TIFF
7. Name file: Halftone-Lastname.tiff

The size of the file will change. If size of image is too small you must acquire a new image with a higher resolution or larger size.

CONVERTING A CMYK IMAGE TO GRAYSCALE

Sometimes a color image needs to be converted to grayscale to meet the specifications of a job. Although this is an easy task in Photoshop, realize that the image should be adjusted so that the tonal value of the image is balanced.

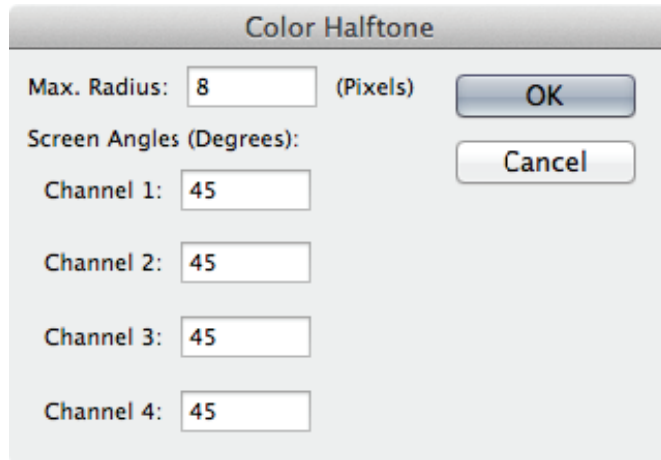
1. Open digital file in Photoshop regardless of file format or color mode.
2. Change the color mode from CMYK; Menu Bar > Image > Mode > Grayscale Color
3. Check Image Size; Menu Bar > Image Size
4. Resolution should be 300 dpi, if not the image needs to be resampled
5. Using the Levels or Curves palettes (Image > Adjustments) adjust the levels or curves of black (shadows), white (highlight) and gray (middle tones) so that the tonal values of image are balanced
6. Save the file as a TIFF
7. Name file: Halftone-Lastname-gray.tiff
8. Close Document

FYI: Color can be applied to an image that is saved as grayscale TIFF once it is place in a layout program like InDesign.

CREATING A HALFTONE PATTERN

The halftone pattern is the foundation to printing. It is used to print tinted colors as well as photos. Normally the prepress department of a printer will convert digital files into halftone patterns so this technique is often left for someone who is not the designer. There are times when a designer needs to provide a file to a screen printer or perhaps self-printing a document by either screen printing or letterpress that require the creation of a halftone through Photoshop, this is how to create a halftone in Photoshop.

1. Open: Halftone-Lastname-gray.tiff
2. Save as: Halftone-Lastname-half.tiff
3. Open the Filter Gallery; Menu Bar > Filter > Pixelate > Color Halftone
4. In the Color Halftone window change the fields to the following:



NOTE: The larger the number for Max Radius the larger the halftone dot.

5. Click OK
6. Notice the once continuous tone image is now a series of dots.
7. Save

VIGNETTE This technique is often used to give a soft edge to an image by feathering the edges.

1. Open: Halftone-Lastname-gray.tiff
2. Save as: Halftone-Lastname-vig.tiff
3. In the Layers Palette, check to see if the main image is on the Background Layer; if not move the next step, if it is the double click on the word "Background" in the Layers Palette and changed the name to Layer 0
4. Select the Marquee Tool; either the Elliptical or Rectangular
5. In the Photoshop tool bar make sure the Background Color is white, if is a black or grey please change the color to white; although the background color can be any color, in this exercise the effect is more visible with a white background
6. Create a shape with the Marquee tool leaving a nice margin around the selection; You do not want the selection too close to the edge of the image
7. Create a feather edge; Menu Bar > Select > Modify > Feather.
8. Set the Feather Radius to 50; the radius can be any number, just remember the higher the number the deeper the feather edge will be
9. Click Okay
10. Inverse the selection; Menu Bar > Select > Inverse; this will select the opposite of what was originally selected.
11. In order to show the feathered edge, the background needs to be deleted. Press the Delete Key on the keyboard. If the feathered edge is not appealing, and you wish to do more, continuing to hit the delete key. This will continue to reduce the area around the image.
12. Save
13. Close Document

SILHOUETTE This technique is used to separate a portion of an image from the rest of the photo to give the illusion that there is no background. This requires a sharp eye and precise use of the pen tool in Photoshop. For the purposes of this exercise, we will be creating an organic shape as a path.

1. Open: Halftone-Lastname-gray.tiff
2. Save as an EPS: Halftone-Lastname-silo.eps
3. In the Path Palette, under the palette option window, select New Path.
It is important to do this step first, failure to do so will result in the creation of an Alpha Channel.
4. Name the path: Organic
5. Click OK
6. In the Tool Box select the Pen Tool
7. Create a multi-point organic shape on image, and close the path of the object
8. Create a clipping path in the Path Palette option window;
Path Palette > Palette Options > Clipping Path
9. Path: Organic
10. Flatness: .2
11. Click OK
12. Save
13. Close Document

DUOTONE Although the following will show you how to create a duotone, it is not a true duotone unless it is printed professionally by a commercial printer. It is not a duotone if it has been printed from a ink jet or laser printer.

1. Open: Halftone-Lastname-gray.tiff
2. Save as an EPS: Halftone-Lastname-duo.eps
3. Change Color Mode to Duotone; Menu Bar > Image > Mode > Duotone.
4. In the Duotone Options Window change mode to Duotone
5. The Duotone Options window will appear displaying two color in wells;
The first well normally defaults to black and the second well is blank or another color
6. Select the square of Ink 2 (This will open the Color Swatch)
7. If the Color Swatch is not already in a Pantone Book, select Color Libraries and then select a Pantone spot color library (coated or uncoated)
8. Select a Pantone color (If you have a color in mind typing in the number will select that color or send the spectrum to the area of the color)
9. Click OK; this will close the Color Swatch window and return to the Duotone Options window
10. Click on the box with the diagonal line that is to the left of Ink 2's ink well; This is the histogram for that color; The Duotone Curve Window that appears will allow the adjustment of the tonal values (shadows, middle tones, and highlight) of the ink.
11. Optional: Ink 1 can also be changed if another color is preferred besides black.

If you would like to experiment with a second color please do so at this point, just realized that combining colors may give result in similar outcomes to mixing color. i.e. red and blue will make purple, and blue and yellow will make green, but majority of the time the result may mimic a sepia tone or a brown.

12. Select OK in the Duotone Options window when complete
13. Save
14. Close Document

HALFTONE DROPOUT This technique is used to show high contrast.

1. Open: Halftone-Lastname-gray.tiff
2. Save as: Halftone-Lastname-drop.tiff
3. Menu Bar > Image > Adjustments > Levels.

In this window there is a Histogram, that indicates the different levels of black, gray and white (shadow, middle tone, and highlight). These three levels are indicated by the appropriate arrows underneath the histogram. Sliding the black arrow, for the black ink, to the right will increase the ink density of black in a photo. Moving the black arrow to the left will do the opposite: decrease the ink density of the black in the image. The same will occur with the gray arrow, which controls the gray or middle tones. Moving the white arrow to the left will increase the white of a photo.

The dropout of the halftone occurs when the white arrow is moved to the left, all dots that are a low percentage of black will become white. As the white arrow is moved further left halftone dots will adjust to a lighter percentage of gray until it is white. Remember a dropout is an area that has no dots/halftone pattern.

4. Slide white arrow to the left of the histogram
5. Stop when there is a large area of white, but the photo is still recognizable
6. Click OK
7. Save
8. Close Document

TINTING IMAGES Although color can be applied to an image that is saved as grayscale TIFF, once it is placed in a layout program like InDesign, the tint of the color can be adjusted to give the image a faded look or a lighter hue.

1. Open InDesign
2. Set up a document that is 8.5 x 11
3. Place Halftone-Lastname-gray.tiff; File > Place or Command + D
4. Click the thumbnail image on the document page to view image; try not to occupy the entire page; you may need to resize image to fit
5. Select the Direct Select tool from the tool box
6. Select the image inside its picture box
7. Swatch Palette: select a color
8. Swatch Palette: change the percentage of the color to 70%
9. That is how a tint is made in InDesign.
10. Save as Halftones-Lastname.indd

CREATING THE FAKE DUOTONE 1. In the same document, copy the now tinted image, so that there are two on the page

2. Select the Direct Select tool from the tool box
3. Select the image inside its picture box
4. Swatch palette select a color different from the color of the tinted image
5. Select the Selection tool from the tool box
6. Deselect the image, by clicking on white space or the pasteboard
7. Select the picture box, change the fill to a color different than the image color

The image maybe unrecognizable. Adjusting the tint of the colors will help with the clarity of the image. This is a Fake Duotone. Notice the difference between the duotone. There is no white in a fake Duotone.

8. Save