Darkroom Printing Dodge and Burn

Almost every print (digital images or film) could benefit from selective lighting or darkening of one or more areas. This is called Dodging and Burning a print. This is such an important aspect of photography, it was considered a major feature of the early versions of Photoshop.

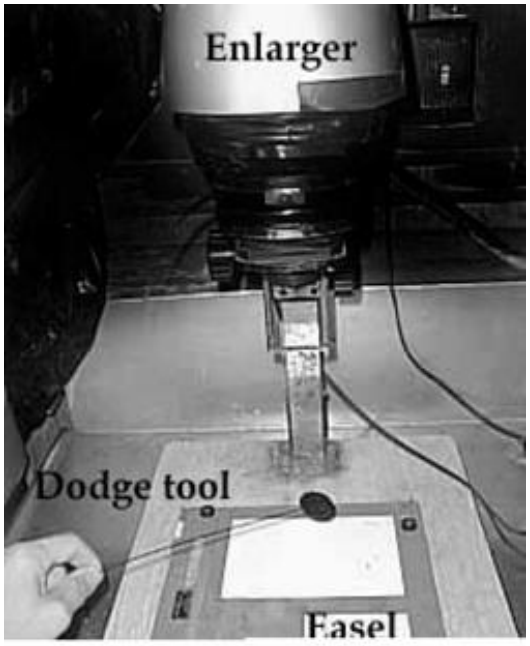
Dodge and Burn Project

When a photographer shoots a subject that has more contrast or a greater brightness range than the film can record the final print in the darkroom may lack detail in either the shadows or the highlights. In the darkroom the photographer must dodge or burn a print to fix it. MOST pictures need one or the other for best results.

DODGE
This is where a portion of a print is too dark in the shadows after the main exposure is made on the enlarger. To cure this a new exposure is made in the enlarger during which time the photographer holds back or shades the problem area using their hand or a piece of cardboard on the end of a paper clip. This may only be done for a few seconds during the enlarger exposure.

BURN
This is where a portion of a print is too white after the main exposure on the enlarger. The majority of the print looks good, so additional exposure would make it too dark. The cure, to add additional light ONLY to the white area. This will be adding additional exposure to an area that looks dark on the enlarger image as you view it in the paper. To do this you cut a hole in cardboard or use your hand in a cup shape to project a beam of light back onto the paper AFTER the main exposure.

For this assignment you need to find a negative that prints with a dark shadow or bright highlight that needs these techniques done to it. MAKE two prints...one where no additional work was done and one where EITHER dodge or burn was done to make the print good. This is a challenge assignment for students with good darkroom skills.

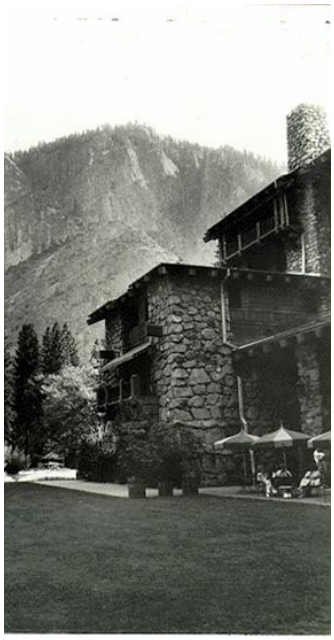


The **Burn in Mask** is always kept in motion while making an exposure. The light is painted on the photo to make a portion of the print darker.

The **dodge tool** is a piece of plastic or cardboard on the end of a metal wand. This tool is also kept in motion during exposure. It is used to hold back light from a portion of a print to make it lighter.

The print on the left (below) was exposed using a test strip placed in the shadow area on the building. The photo needs to be either dodged or burned to allow the shadows and the highlights on the mountain to print. The print on the right was exposed for the bright mountains. This is typical of a print that needs extra work in the darkroom. For this shot we decided to dodge the building, it was easier than burning in the mountain.

The Finished Print



To make the previous set of images a piece of cardboard was placed under the enlarger about 6 inches from the lens. The outline of the building and trees was drawn on the cardboard and then cut out with a knife. Test exposures showed that to make a good print of the shadows (print on left) it would take an exposure of 8 seconds on our enlarger. To make the print on the right with the same enlarger it would take 20 seconds. That is a difference of 12 seconds. The enlarger timer was set to 20 seconds. During the first 12 seconds of the exposure the "MASK" was held in place and moved around slightly to keep the image edge from showing. After 12 seconds the mask was removed and the rest of the print got the 8 seconds exposure it needed. It is possible to do both dodge and burn on the same print. Dodge work would be done during the main exposure and burn would be added to portions of the print AFTER the exposure.

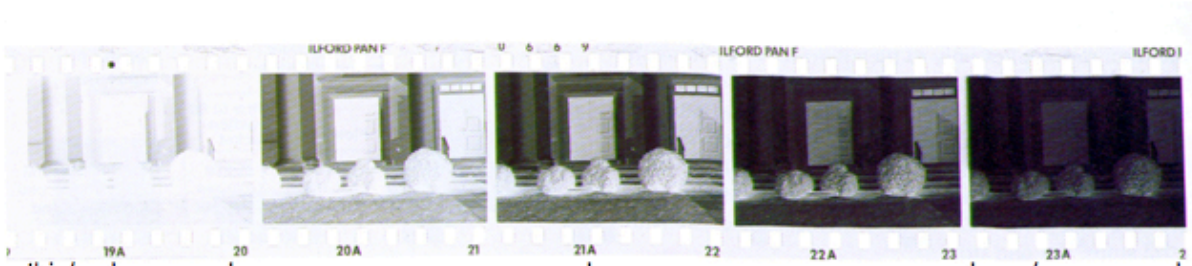
Here is what NOT to do. In the following example, the dodge tool was just placed on top of the are to make lighter. The idea is to keep the dodge tool moving to make the area blend well and NOT be noticeable.

How the filters work

- Contrast is the relative lightness (white) and darkness (black) of areas in a scene. **A photograph with good contrast has the full range of tones from rich blacks through many shades of gray to pure whites.**
- Filters enable you to get the best possible full range of tones at a proper exposure because you are not limited to the contrast of the negative.
- The filters are either built into the enlarger or physically placed between the light source and the paper being exposed.
    - Filters are numbered progressively, with **#2** being the normal contrast (the contrast of the paper), **#00** the least amount of contrast, and **#5** being the greatest possible contrast.
    - For the color heads use the corresponding color dial # (all dials at 0 = #2/normal contrast)

The Process

- Ideally, you can determine what filter to use based on the density of your negatives:
    - For "normal" negatives (properly exposed) use: 2 (no adjustment) or perhaps 2 ½
    - For thin negatives (not enough light) use the magenta filters to give the image more contrast: 2 ½, 3, 3 ½, 4, 4 ½, 5
    - For dense negatives (too much light) use the yellow filters: 00, 0, 1, 1 ½



thin/underexposed normal exposure dense/overexposed

- After choosing a contrast filter, create a print normally (test strip, determine exposure, full print at selected exposure, evaluate)
    - When you evaluate the test strip and the print, you should be looking for detail in the shadows and texture/some information in the highlights (look at your negative before printing—i.e., if you can see some detail in your shadows in the negative, you should see some detail in the print)
- Adjust the contrast and exposure time until you have an image with the full range of tones
    - You will likely have to adjust the exposure time each time you adjust the contrast, so plan on making another test strip as well.

Split Filter Printing

When printing black and white prints in the darkroom, you essentially have two controls at your disposal: brightness and contrast. Brightness is controlled by the aperture and density of the film and contrast is controlled with filters (numbered 0-5) and the photographic paper (graded or variable-contrast). That said, it may be difficult to achieve the best combination of highlights and shadows. When printing with variable-contrast (VC) photo paper, there is a process called split filter printing that allows you to have more control of the highlights and shadows using a combination of filters for a single print. In essence, you use the extreme filters of #0 and #5 to isolate the lower and higher values of the paper.

Steps to Split Filter Printing

1. Identify your highlights. Create a test-strip using the #0 filter in the enlarger. The #0 filter will provide the lowest contrast. Make a note of your test-strip for the section that begins to show detail and keep your exposure time.

2. Identify the best blacks. Place another strip of photographic paper to make a second test-strip. Expose the paper using the #0 filter for the amount of time determined in the first step. Without moving the enlarger or paper, remove the #0 filter and place the #5 filter in the enlarger. The #5 filter will provide the highest contrast. Create a test-strip using the #5 filter as you did in the first step. Once developed, determine the best exposure time to reach maximum black.

3. Use both filters to print the final image. Now print the entire negative with a full sheet of photographic paper. Expose the paper using the #0 filter for the amount of time discovered in the first step, then expose the paper using the #5 filter for the amount of time discovered in the second step without moving the enlarger or photographic paper.

Make Adjustments to the Exposure

While split filter printing using the above steps will typically give you a nicely exposed image, you may want to consider making adjustments depending on how detailed you want to be with the exposure. Here are a few adjustments you can do to fine tune the exposure and help make the image even better:

1. Using dodging and burning. Dodge shadows during the #0 filter exposure and burn light areas during the #5 filter exposure.

2. If the print needs more contrast, lower the exposure time for the #0 filter. If the print needs less contrast, lower the exposure time for the #5 filter.

3. If the contrast is fine but the print is too dark, reduce the exposure time equally for both filters. If too light, increase the exposure time equally for both filters.

More info here: http://www.shutterbug.com/content/darkroombran-enhanced-multicontrast-printing-technique-using-multiple-vc-filters-without-mas