

B A S I C   B L A C K   &   W H I T E  
P H O T O G R A P H Y

*S t e v e n   B e r k o w i t z*

PRINTING

©2000 Steven Berkowitz

Tyler School of Art  
U n i v e r s i t y  
D e p a r t m e n t o f  
A r t & A r t  
E d u c a t i o n  
T U C C  
P h o t o  
L a b

## PRINTING CHEMICALS

### DEVELOPER

Developers are alkaline solutions that change the silver bromide ions in the emulsion that have been struck by photons of light into solid metallic silver crystals.

A good standard developer for prints is Kodak Dektol which is mixed from a powder and stored as a stock solution and then and is diluted 1:2 with water for actual use. (One quart stock developer to two quarts water.) Straight developer will give higher contrast while more dilution will give less contrast. Other developers are made for varying results.

Developer is alkali and a few drops of acid stop bath or acid fixer will RUIN its quality. Do not stick your hands into the printing chemicals, and do not interchange tongs from one tray to another.

### STOP BATH

Glacial acetic acid in liquid form is diluted to make a 1% working solution. Immersing a print for fifteen seconds will neutralize the alkalinity of the developer, halting its activity. Stock Stop Bath is ready to use and does not get diluted. Stop Bath will turn violet or very dark when exhausted. Replace immediately if this happens. Always rinse your hands after touching any acid .

### FIX

Sodium thiosulfate or faster acting ammonium thiosulfate removes the unused silver salts from a developed print. This will make a print unaffected by light if washed properly. The stock Fixer is ready to use undiluted. If a print is left in the fixer too long it may bleach out. If a print is not fixed long enough it will quickly turn brown.

### WATER RINSE

RC prints can be washed in a tray with running water for 5 minutes to remove the Fix.

FIBER based paper absorbs much more fix into its uncoated paper stock and requires a much more rigorous procedure, as follows:

Prints are stored in a holding tray until enough are collected to process in a batch.

HYPO-CLEARING AGENT is a strong alkali that expedited the removal of the Fix from the fiber based paper. Prints are put in straight Hypo-Clear for 2-3 minutes.

If the Fixer is not totally removed your prints will bleach, yellow and stain.

SELENIUM or some other Toner may be used at this time to create a color change in the print.

FINAL WASH time runs for 60 minutes. Do not add prints to a Final Wash after it has begun.

You will just add more traces of Fix and prolong the duration of the Wash.

### DRYING

Prints can be dried in a dryer or they can be left to air dry on their own.

RC prints will air dry in 5-10 minutes and will stay flat.

Fiber based prints are usually put through a hot roll dryer which both dries and flattens them.

## CONTACT SHEETS

- Have negatives \_\_\_\_\_ in a plastic file sleeve, emulsion side down.  
A full roll of film will fit onto an 8" x 10" sheet of paper if cut into 7 strips of 5 frames each.
- Sign out \_\_\_\_\_ enlarger kit from Lab Monitor and set up to print.
- Set lens \_\_\_\_\_ to desired aperture.  
 $f/11$  is a good aperture on the Besseler enlargers.
- Set enlarger \_\_\_\_\_ height.  
This height should be constant for every contact sheet you make.  
Adjust the Besseler enlargers to the Red mark.  
Adjust the Omega enlargers to 30 cm.
- Pull focus \_\_\_\_\_ back to make a wide circle of light on enlarger base.
- Set timer \_\_\_\_\_ to desired amount of time.  
For the Besseler Enlargers - a suggested time / aperture / height setting is  
11 seconds at  $f/11$  with the enlarger set at the Red mark.
- Place photo paper \_\_\_\_\_ with your initials on back under enlarger.  
Make sure you center the paper in the circle of light coming from the enlarger, otherwise you  
will get an uneven exposure.
- Place negatives \_\_\_\_\_ in plastic file sleeve on top of paper, emulsion side down.  
Align the negatives with the lower right corner so you get all the numbers on the contact  
sheet and also have room to punch holes for your loose leaf book.
- Place glass \_\_\_\_\_ clean and dust free, over negatives and apply pressure to the glass to keep negatives  
flat and in direct contact with the photo paper.
- Make exposure \_\_\_\_\_ while continuing to apply pressure.
- Process \_\_\_\_\_ as you would a normal print.

Notes: For a contact sheet the best exposure is one where the area around the sprocket holes is almost as dark as the area inside the sprocket holes, and the writing on the edges of the film is quite visible. Do not go by the exposures of any individual frame on the roll as they are not constant.

The negatives will vary throughout the roll so do not use them to try to make a "perfect exposure".  
All subsequent contact sheets should be made at the same exposure (aperture / time / height combination). The point is to make all your contact sheets as consistent as possible so you can evaluate any negative on any roll of film and have a reasonable idea of what exposure it may require. This will give you a head start when you go to print any particular negative. There are times, however, when special contact sheets may have to be made.

## TEST STRIPS

- Set up \_\_\_\_\_ enlarger.
- Place negative \_\_\_\_\_ in the negative carrier.
- Set enlarger height \_\_\_\_\_ open the aperture and focus the image to the desired size.
- Close the lens \_\_\_\_\_ aperture back down to a good starting point for that enlarger.  
\_\_\_\_\_  $f/11$  is a good recommendation for a starting point.
- Set timer \_\_\_\_\_ for 30 seconds.
- Place \_\_\_\_\_ a small piece of photo paper under the enlarger, held by an easel, and  
Cover all but 1/4" of the paper with an opaque mask.  
A piece of opaque cardboard or exposed photo paper will do.  
Position the piece of photo paper so that it falls under both a highlight and shadow area.
- Start exposure \_\_\_\_\_ and, after 5 seconds, move the mask over 1/4" more to expose an even larger  
segment of the photo paper.
- Continue \_\_\_\_\_ this procedure until, for the last 5 seconds, the entire piece of photo paper is being  
exposed.
- Process \_\_\_\_\_ the print as normal.  
If using fiber based paper you may pull the strip from the fix early to save time.
- Examine \_\_\_\_\_ the test strip under white light.  
You now have a piece of paper with exposures of 30, 25, 20, 15, 10 and 5 seconds.  
The darkest area is from the longest exposure.  
You should be able to use this to determine the proper exposure needed for this print.

### Notes:

A new test strip will probably be needed for each enlargement print, as most negatives will vary.  
Your exposure time is determined by which time slice has the best looking whites.  
The contrast filter controls how saturated the shadows are in the slice that has the whites right.  
see *Prints - exposure and evaluation* page  
Getting a perfect print is a matter of balancing all the aspects mentioned above.  
It is not unusual to make several test strips to get it all right.

## ENLARGEMENT PRINTING

Sign out \_\_\_\_\_ enlarger kit from the Lab Monitor and set up to print.

Set condenser lens \_\_\_\_\_ to the right height for the negative size being used.

Adjust the knob at the top right on the Besseler enlarger, or

Adjust the moveable lens inside the head cover on the Omega enlarger.

Insert negative \_\_\_\_\_ in carrier with emulsion side down. Hold carrier with hinge toward you.

Dust off \_\_\_\_\_ negative with canned air or a soft brush.

Insert carrier \_\_\_\_\_ with negative into enlarger. Be sure you have no light leaks.

Place easel \_\_\_\_\_ under the enlarger.

Adjust height \_\_\_\_\_ of enlarger to give the desired full-frame print size.

Different types of edges can be achieved by how you set the easel.

Focus \_\_\_\_\_ using grain magnifier with the lens opened up all the way.

Stop down \_\_\_\_\_ several stops and make a test print.

Include the most important shadow and highlight areas if possible.

see *Test Strips* page for exact details

Process \_\_\_\_\_ the test print as normal.

Evaluate \_\_\_\_\_ the test strip under white light and determine the proper exposure for the print.

Try to use an exposure time of at least 10 seconds.

Try to use a smaller than maximum aperture if possible.

Adjust exposure \_\_\_\_\_ if the contrast is not satisfactory, and then make a new test strip.

Make exposure \_\_\_\_\_ on photo paper with your initials and exposure information on the back in pencil.

Process \_\_\_\_\_ as normal.

Make another \_\_\_\_\_ print and burn and/or dodge certain areas if the tonalities are not balanced to your satisfaction.

## PRINTS: Exposure & Evaluation

### EXPOSURE *Expose for the Highlights*

The overall brightness of a print is controlled by how much light hits the photo paper.

The amount of light reaching the print is controlled by three factors:

1. the aperture setting on the enlarging lens
2. the amount of time the enlarger stays on
3. the height of the enlarger

The highlight areas are used to judge the exposure.

Photo paper starts out white when it comes out of the box, and gets darker as more light hits it.

### CONTRAST *Adjust contrast for the Shadows*

The saturation of the shadows in a print is controlled by adjusting the contrast.

The contrast is controlled by placing a multigrade filter under the enlarging lens when using multigrade printing paper.

Normal contrast is achieved with a #2 filter.

Higher contrast is generated by filters #2 1/2 to #5

Lower contrast comes from using filters #1 1/2 to #0

Graded papers can be purchased in various levels of contrast which will not respond to filters.

### EVALUATION

- Look at the areas of the print where the highlights are the brightest.  
These regions should be almost, but not quite, as white as the photo paper itself.  
If the highlights in the print are as white as the photo paper,  
having no grains of silver whatsoever, the print is underexposed - not enough light.  
If the highlights are too grey,  
having too many grains of silver, the print is overexposed - too much light.
- Look at the shadows, considering your print is properly exposed in the highlight areas.  
The saturation of the shadow areas is controlled by adjusting the contrast.  
If the shadows in the print are not dark enough, the print needs more contrast.  
Make another test strip with a higher numbered contrast filter.  
Experience will tell you just how much more contrast you will need.  
If the shadows in the print are too dark, the print needs less contrast.  
Make another test strip with a lower numbered contrast filter.

### VARIATIONS

Changing the size of a print will affect both the exposure time and contrast of a print.

The larger the print the more light you will need.

The contrast will drop about 1/2 a filter grade when you go from 5 x 7" to 8 x 10".

## CONTRAST FILTERS

When printing: Expose for the highlights – Adjust contrast for the shadows. Contrast is defined as the range of tonality in a print. It is possible to expand or contract this range by using filters with special printing papers. The opening sentence equates to setting the exposure time according to the highlight density and then changing the contrast filter to achieve the proper saturation in the shadow areas.

## CONTRAST FILTERS

Multigrade printing paper has the ability to adjust its contrast through the use of colored filters. There are two layers of emulsion on the paper – one for the highlights and one for the shadows. Each layer is sensitive to changes in the color of the light hitting the paper. As the balance between the magenta and yellow components of each filter change, so does the balance of exposure between the highlights and the shadows.

Ilford filters come in 11 contrast grades and are made to be used with Ilford Multigrade III printing papers. They will also work with other brands of paper. Filter #2 produces normal contrast. Filters with lower numbers (00 to 1 1/2) produce less than normal contrast. Filters with higher numbers (2 1/2 to 5) produce higher than normal contrast.

*Do not ever touch the filter surfaces! Do not ever try to clean the filters.*

These are gelatin filters and the color will wash away if it gets wet!

Since the filter sits below the lens, the positioning is not critical.

Small dust spots on the filters will not appear on your photographs.

## USING FILTERS

Make \_\_\_\_\_ a new test strip every time you make a new print.

This is because the light levels and the tonal range will vary considerably from print to print.

Situate \_\_\_\_\_ the photo paper so it includes the brightest highlight and darkest shadow with detail.

Use long thin pieces of paper. Small squares will not show enough of the important areas.

Place \_\_\_\_\_ a #2 multigrade filter in the holder under the lens. This is a normal contrast filter.

Expose \_\_\_\_\_ the paper sequentially in 5 second steps down from 30 seconds.

Process \_\_\_\_\_ the test strip, dry, then take it out into white light to evaluate.

Find \_\_\_\_\_ the exposure which has the best white in the highlights.

Photo white should be bright but not as white as the paper itself,

i.e. there should be some grains silver even in the brightest highlights.

USE \_\_\_\_\_ *THE TONALITY OF THE HIGHLIGHTS TO DETERMINE THE EXPOSURE TIME*

Look at \_\_\_\_\_ how dark the shadows are in the selected slice.

Look at the edges of the frame also. If they are not dark enough, more contrast is needed.

If the shadows are too dark and have no detail then less contrast is required.

Usually one full grade in either direction will do.

USE \_\_\_\_\_ *THE TONALITY OF THE SHADOWS TO PICK THE BEST CONTRAST FILTER*

Change \_\_\_\_\_ the filter if necessary and make a print or another test strip.

It is not uncommon to make several test strips to get the print right.

WRITE DOWN \_\_\_\_\_ your exposure details on the back of each print and test strip!! Write the final print specifications on the back of the contact sheet also. Use pencil or permanent marker.

## EXPOSURE COMPENSATION

Ilford filters theoretically have consistent density from grade 0 thru 3 1/2, allowing the contrast to change without altering exposure time. Grades 4 to 5 have more density however, and require 1 stop more exposure (open the lens up 1 stop or double the exposure time).

Multigrade filters all add density to an exposure. The normal filter grades require 1 1/3 stops more light than if using no filter. It is recommended, therefore, that you always start with a #2 filter.

## BURNING and DODGING

There are times when areas of your picture will just not be the way you want them. Several tricks can be used to selectively alter these sections of your prints. In one case extra light is added to the print. In the other, light is kept from hitting the print.

### BURNING IN *adding light*

It is possible to expose certain areas of a print to more light, making them darker.

- determine which areas need more light
  - remember, the darkest areas of the negative will be the highlights
- expose the entire print as usual, according to the exposure determined by making test strips
- reset the timer for the amount of additional time you think is needed
- start the timer with your hand under the lens, blocking all light
- while making a *second* exposure -
- allow extra light to hit the parts of the print you want darker
  - while blocking the rest of the light striking the satisfactory parts of the print
- use opaque paper or your hands as a mask
- *wiggle* the mask so that no definite boundary line is made
- process the print as usual and check the results under white light

Notes: You will probably have to make several attempts to get the extra exposure and placement just the way you want it.

Overly light areas, like bright sky, can take several more stops of light than the overall print. You can also contrast change filters when burning to give different effects to different areas.

### DODGING *blocking light*

It is possible to keep certain areas of a print from getting as much exposure as the rest of the print.

These areas will come out lighter.

- determine which areas need less exposure than the rest of the print
  - remember, the brightest areas of the negative will be the shadows
- make the initial exposure and -
- use opaque paper or your hands as a mask to keep light from hitting selected areas of the print
  - opaque paper or cardboard on a wire is a common masking tool
- *wiggle* the mask so that no definite boundary line is made
- process the print and check the results under white light

Notes: It is easier to dodge when exposure times are longer. Closing the lens down one stop and doubling your exposure time will give you the same amount of light hitting the photo paper.

Sometimes it takes a combination of burning and dodging to make the image come out satisfactory.

It is a matter of experience knowing just how long to burn or dodge.

Different contrast filters can be used during different burns and dodges on the same print.

Completely different images can be combined if you become very proficient with these techniques.



## SPLIT FILTRATION

Variable contrast paper actually has two layers of emulsion. The top high-contrast emulsion is sensitive to blue light and handles the tonalities in the shadows. The other low-contrast layer is sensitive to yellow light and carries the information in the highlights to middle tones of the photo. The color of the multi-contrast filters alters the balance between the two layers to adjust the overall contrast and definition in the print.

It is possible to activate these layers separately to achieve a print with more apparent tonalities. The trick is to make two separate exposures onto a single piece of photo paper, each through a different filter. The first low-contrast exposure compresses the tonal range and renders the highlights as normal, the midtones thinner than normal, and pulls the shadow information into the lower midrange. The high-contrast then re-renders the shadow details where they should be. The result is some areas of the negative are printed twice and overlaid at different densities.

### PROCEDURE

- Make a normal test strip to determine the proper exposure for the highlights using the #0 filter.  
Find the exposure time that gives the best rendition of the highlight details.  
The brightest white should be just below paper white.  
Don't let the tonality of the shadows fool you into misinterpreting the exposure time.  
With a #0 filter there will be no dark blacks, let alone dark shadow tones.
- Use that time value to expose a second test sheet.
- Replace the low-contrast #0 filter with a high-contrast #5 filter.
- Make a series of second exposures onto the sheet.  
Systematically vary the time of exposure with the #5 filter to determine the best exposure time for the shadows.  
The optimum exposure is the one that produces the best shadow detail with out falling into the void of maximum black.
- Make a final print exposing the low-contrast emulsion layer first with the #0 filter, and then exposing the high-contrast layer with a #5 filter.
- Write down the results of the tests so the print can be reproduced.

### VARIATIONS

Subtle adjustments can be made by altering the balance between the two exposures. A reduced exposure with one filter should be met with a change of equal proportion of the exposure with the other filter.

e.g. a -5% reduction of the #5 filter exposure should be balanced by an increase in exposure by +5%.

An initial starting point is somewhere around a 2:1 ratio of high to low-contrast..

e.g. a 15 second print with a #2 filter will usually work with a 3 seconds with a #0 filter (20% low-contrast) followed by 12 seconds with a #5 filter *at the same aperture* (80% high-contrast / 2).

(Remember that a high-contrast filter (#4-#5) requires opening the lens up one stop. This means the 20%:80% time factor is really a 20%:40% exposure ratio, which is the same as 2:1).

A more efficient filter pack is to use specific gelatin filters.

The low-contrast filter can be a Kodak Wratten 8 yellow filter (K-2), or equivalent.

The high-contrast filter can be a Kodak Wratten 47-B blue filter, or equivalent.

## PRINTING PAPERS, Grades, Surfaces & Tonalities

### GRADED vs. MULTI-GRADED PAPER

The multi-grade paper we have been using up to now has the ability to alter its contrast by changing the color of the enlarger light with filters. Anything which is manufactured to work under a variety of conditions will necessarily be of compromised quality. Therefore, while very convenient to work with multi-grade paper does not offer the very best quality image.

Graded papers are manufactured that are optimized to print at one specific contrast grade only. They do not respond to contrast filters. They do, however, produce a superior image. The range of contrast grades varies from paper to paper, manufacturer to manufacturer. A grade 2 paper produces approximately the same contrast as a multi-grade paper with a number 2 filter, and so on.

Contrast can be fine tuned with graded papers by altering the dilution of your developer and by lengthening or shortening the developing time.

### SURFACES

Ilford's pearl surface was the suggested paper at the beginning of this class. There are, however, a range of surfaces available. Glossy is a favorite of the public relations people. There is also a very flat surface called either matte or semi-matte, depending on the manufacturer. The point is to avoid any surface that has too strong a presence. If you find yourself having to look "through" the surface of the paper, then it is obtrusive and should not be used. If the surface supports the content of a particular images without overriding it, then it is advisable to use this paper for this photograph.

There are also specialty papers with the surface of linen and charcoal paper. They can easily become a gimmick unless used carefully. The trick is to avoid that tacky "Wedding album" look.

### COLD vs. WARM TONALITY

Ilford multi-grade paper has a cold tone. Warmer tone papers are available that can go all the way to a brown to red to sepia tonality. A list of available papers is given on the following page. It is possible to enhance the warmth even further by using toners. A detailed explanation of toners is part of the photo II course.

### COLOR NEGATIVES and B&W PAPERS

Color negatives have an orange mask as part of the backing material. The clearest part of a color negative, then, is this relatively dense orange color. It is possible to print onto black & white printing papers with color negs if you boost the contrast. In fact, many interesting prints have been made here in just this way. Color negatives also have a tabular grain structure which has a considerably different look and is intended to be printed on diffusion enlargers rather than condenser enlargers that we have in the main darkroom. There are two diffusion color enlargers in the film loading rooms which can be used to soften up images printed from color negatives, or any negative for that matter.

There are, on the other hand, papers made especially to respond to the frequency range of color negatives. They give an accurate rendition of the tonalities of the original scene. The major problem is that they are intended to be used in total darkness or with dark red safelights. It can be possible to print with these papers in our darkroom if the wings of our safelights are closed down and you only have the paper out of the box for a limited amount of time. It is also suggested that you print at either the darkest Omega station or use one of the color enlargers in the film loading rooms.

## ADDITIONAL RC PAPERS

### SELECTED RESIN-COATED PAPERS

brand	name	grade	tone	surface
AGFA	Brovira-speed	1-5	cold	glossy, lustre, semi-matte
	Multicontrast RC-HS	var.		glossy, semi-matte
	Portrigo-speed	2-3	warm	glossy, semi-matte
FORTE	Fortespeed Polygrade	var.		neutral glossy, semi-matte
	Fortespeed Graded	1-3		neutral glossy, semi-matte
	Portrait RC	var.		Warm glossy, semi-matte
ILFORD	Multigrade III RC Rapid	var.	cold	glossy, pearl
	Multigrade III RC Deluxe	var.	cold	glossy, pearl, matte
	Ilfospeed Deluxe	0-5		glossy, pearl, semi-matte
KODAK	Polycontrast rapid III RC	var.	warm	glossy, lustre, semi-matte
	Polyprint RC		var.	neutral glossy, lustre, semi-matt
	Panalure select RC	L,M,H		for color negs
ORIENTAL	Seagull RP	0-5	cold, rich	glossy, matte
	Seagull Select VC-RP	var.	cold, rich	glossy, semi-matte
	Seagull Portrait RP-R	2-3	very warm	semi-matte
	Panchromatic F		neutral	glossy, for color negs (total darkness)

## PRINTING SIZES and ALIGNMENT

### STANDARD SIZES

Printing your photographs to several standard sizes makes things a whole lot more manageable. This may sound a bit compulsive, but it will be especially appreciated when it comes time to cut mats. These sizes are totally of your own choosing. If you are used to millimeters and decimals rather than inches and fractions, then by all means, use them.

### PROCEDURE

create a master template \_\_\_\_\_ on the back side of a piece of photo paper

you may want to use a piece that has been exposed to light, processed and then dried

this will give you a sheet that can be used as a mask when making test sheets

if the paper is not processed, it will eventually turn all sorts of funny colors

draw a set of rectangles \_\_\_\_\_ of the appropriate sizes and use these as your standard printing sizes

the aspect ratio of 35mm film is 2:3 which will produce sizes such as 4" x 6", 5" x 7.5", 6" x 9", or 10 cm x 15 cm, 12 cm x 18 cm, 15 cm x 22.5 cm

the aspect ratio of 8" x 10" photo paper is 2:2.5, which yields an interesting balance of space around a smaller than page size image

place the rectangles centered horizontally and slightly higher than centered vertically

draw 2 diagonal lines \_\_\_\_\_ on the photo paper

for horizontal photos:

from a mark 1/2" from the top to a mark 7/8" from the bottom of your 8" x 10" sheet

from a mark 1.5 cm from the top to a mark 2 cm from the bottom of your 8" x 10" sheet

for vertical photos:

from a mark 3/4" in from the sides on the top edge to a mark 5/8" in from the sides on the bottom edge of your 8" x 10" sheet

from a mark 2 cm in from the sides on the top edge to a mark 1.5 cm in from the sides on the bottom edge of your 8" x 10" sheet

set up to print \_\_\_\_\_ in the darkroom

adjust the enlarger \_\_\_\_\_ so that the projected negative image is the size you desire

use a rule to get the size exact

if you wish to include the black border in your final matted image, reduce the size of the image

so the white light around the negative image fits within the desired size

place the master template \_\_\_\_\_-to-be into an easel

position the easel \_\_\_\_\_ so that your image falls with all four corners exactly touching the diagonals

draw a rectangle \_\_\_\_\_ along the outside edge of the projected negative image

use a rule to get it exactly right

it pays to be compulsive this one time since all most of your prints for the rest of the semester

will depend on your accuracy in doing this now

repeat this procedure \_\_\_\_\_ for each printing size you are likely to use

make one sheet for all horizontal sizes and one sheet for all your vertical size images

### CONSISTENCY

Use this sheet as your master template for all your prints. This will add consistency to your images and bring a finished look even to your work prints. Using this technique will also provide formal support for printing sets, series, and/or sequences of images.

## MULTIPLE PRINTS

It is sometimes desirable to print more than one image on a single sheet of photo paper to establish a set of relationships for the viewer to contemplate. In this case it is usually important to position these images in specific locations. To do this it is easiest to draw a master template on a single sheet of paper and then size and align the negatives to this guide. The procedure is similar to that used to size and position single images to a personal standard as described in the Photo I Handbook. see: Standard Printing Sizes page. There are a couple of extra tricks, however. This procedure also assumes that you have already figured out exactly how to print each negative at this size enlargement so that it will complement all the other prints. This includes knowing all time and aperture settings, filter selection, and burning and dodging.

### PROCEDURE

draw rectangles \_\_\_\_\_ on your master template sheet  
    use a sheet the same size as your final photo paper  
    draw the rectangles to a standard 2:3 aspect ratio  
tape the template \_\_\_\_\_ to the easel along the bottom edge only  
    this allows you to flip the template out of the way easily  
    without losing exact alignment and registration  
set up to print \_\_\_\_\_ in the darkroom as usual  
flip the template \_\_\_\_\_ out of the way  
tape the photo paper \_\_\_\_\_ to the easel at all four corners  
    use drafting tape that is not too sticky,  
    or use regular masking tape and stick it to your jeans to make it less sticky  
flip the template \_\_\_\_\_ back over on top of the photo paper  
install a red filter \_\_\_\_\_ using either the unnumbered filter in the multigrade filter sets or,  
    on Beselers # 1-6, move the sliding filter tray above the lens into position  
place the negative \_\_\_\_\_ into the enlarger  
align the image \_\_\_\_\_ with the appropriate rectangle on your master template  
turn enlarger light off \_\_\_\_\_ putting it in expose mode rather than focus mode  
flip the template \_\_\_\_\_ out of the way  
expose the photo paper \_\_\_\_\_

replace the template \_\_\_\_\_  
replace the red filter \_\_\_\_\_  
set up the next negative \_\_\_\_\_ and align and print as described above

If you are making more than one copy, you may want to expose several sheets for each negative setup. If the darkroom is not too busy you may want to set up two negatives in separate adjacent enlargers.

### MATTING

You should consider how you are going to mat these multiple prints when you are calculating just where and how far apart you are going to place them on the photo paper. Be careful to consider the sizes of the borders (rarely less than 3") and the overall proportions (usually to some integer relationship).

A similar effect may be had by matting several individual prints in an oversize mat.  
see: other pages on split frames and multiple imaging