

Booklet #7: The Northern Virginia Alliance of Camera Clubs

**HOW TO STOP MAKING GOOD PRINTS AND
START MAKING GREAT PRINTS
(Silver-Gelatin Photography)**

by

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PREFACE

The Northern Virginia Alliance of Camera Clubs (NVACC) is an informal organization started in 1997 by Joseph Miller with the assistance of Dave Carter and Ed Funk. Our purpose is to promote communication and cooperation among camera clubs. We accomplish this by (a) publishing a monthly calendar of the member clubs' activities; (b) conducting training seminars for photographic judges; (c) maintaining a registry of trained judges who serve the clubs' monthly competitions and critiques; and (d) maintaining a directory of speakers who have been recommended by the various clubs. You can learn more about NVACC by going to our web site at www.NVACC.org.

This booklet is one of a series that was developed by NVACC during the period 1998-2008 to capture the considerable expertise of the many accomplished photographers in Northern Virginia and share it with others. Over recent years, we have seen significant change in the photographic art form and very rapid technical advance in both the media of photography (film and digital) and the tools (cameras, lenses, computers, and software). For that reason, the detail of some of these booklets may seem "dated", although the ideas and techniques presented transcend "progress" and the digital-film divide. Watch the NVACC web for new booklets as well as revisions that incorporate new technology and ideas into the existing ones.

Originally, our booklets were made available through member clubs for a small fee that covered the cost of reproduction. Now, however, the booklets are available on www.NVACC.com where individuals may download one machine-readable copy and one print copy per page for personal, noncommercial use only. Written permission from NVACC is required for any other use.

If you would like to know more about NVACC or have questions or suggestions concerning our booklets or services, please feel free to contact us at JoeMiller@NVACC.org.



How To Stop Making Good Prints and Start Making Great Prints

I am going to discuss a variety of topics that I hope will help you become better black and white printers than you are today. There is always room for improvement.

To be a great printer, you have to know what a "fine print" looks like. This is not as simple as it may seem. It is important to develop a sense of those qualities that combine to create the fine print. Usually this entails looking critically at many photographs. Study prints "in-the-flesh," not reproductions in a book.

To learn to discern the differences, carefully study all types of prints: great, good, bad, and ugly. I am not talking about content, but rather those factors that combine to create an image of technical perfection consistent with the subject matter. I say consistent with the subject matter since you cannot totally divorce technical characteristics from the effect they have on the vision expressed in the image. Not all "fine prints" have the same technical characteristics.

Let's look at some of the characteristics that are generally represented in a fine print.

- Fine prints usually exhibit a richness and depth in their tonality appropriate to their subject matter. Note that I do not say they have a maximum black and a paper-base white. More on that later.
- Fine prints tend to "glow." They have separation in important shadow areas and delicate subtlety in large significant highlights.
- Fine prints have a sense of being right. You don't look at them and have your gut telling you there is something wrong. They feel complete.

Some of these characteristics are rather quantitative and others are qualitative or subjective, but the way you learn to combine them to express your unique vision is what makes you an artist. There is no fine art without fine craft. Before you become an artist you must become a fine craftsman because craft is the language of the arts. Your vision will be limited by your ability to translate that image to the photographic medium. Photographers who do not want to hone their craft will never be the artists they could be.

Let's get to some of the tools and techniques that you can apply to your printing to make you a master.

To start with, you can't make a silk purse out of a sow's ear. To paraphrase, great prints are not from lousy negatives made!

Many fine prints are left at the starting gate simply because it is impossible to make the desired print from the available negative. This is particularly true with 35mm

negatives. Many 35mm photographers like thin negatives because they think it minimizes the grain. It may minimize the grain but it also minimizes the image. Besides, with the T-grain technology films that we have today, grain is not a problem.

Film should receive as much exposure as it can tolerate without blocking the highlights in the resulting negatives. For those familiar with the Zone System, place the brightest part of the picture that is not a specular highlight on Zone VIII. For those not familiar with the Zone System, meter the brightest area of the image that isn't a reflection of a light source off glass, metal, or something similar, and open up three (3) stops (or use a combination of f/stops and shutter speeds that results in three (3) stops more exposure).

To determine your personal exposure index for a particular camera/film/development combination, choose a scene with large significant highlight areas such as clouds on a bright sunny day. Place your camera on a tripod and take a series of pictures starting with an exposure index that is 1 /4 the manufacturer's rating. (For example, start with EI 100 for T-MAX 400.) For each exposure, meter the brightest part that is not a specular highlight (i.e. meter the sunlit cloud, not the reflection of the sun off a chrome bumper) and open up three (3) stops from the meter reading. Then progressively change the shutter speed/aperture setting to provide successive exposures at various EIs such as described in the table below. Keep notes on what you have done.

For example, with an ISO 400 film, make a series of exposures as follows:

Exposure 1	Set meter to ISO=100
Exposure 2	Set meter to ISO=200
Exposure 3	Set meter to ISO=300
Exposure 4	Set meter to ISO=400
Exposure 5	Set meter to ISO=600
Exposure 6	Set meter to ISO=800
Exposure 7	Set meter to ISO=1000
Exposure 8	Set meter to ISO=1200
Exposure 9	Set meter to ISO=1400
Exposure 10	Set meter to ISO=1600

When you have completed the test, develop the film as you usually do. Examine the negatives on a light box with a loupe to determine which one has the best highlights (that's the darkest part of the negative) without being blocked up. You

should see separated detail.

When you have located the best negative, refer to your notes to find out which EI gave you that negative. From then on that is your personal EI for that camera/film/development combination.

This system guarantees that you get as much usable information on the film as possible. Remember, if it's not on the negative, it won't be on the print.

How much negative contrast you can tolerate is a function of your enlarger light source. Diffusion enlargers (i.e., cold light heads and most color heads) can handle a higher contrast negative than a condenser head enlarger can.

One further comment on negative contrast: it is generally better to build your contrast into your negative than to use higher grade papers. If you find yourself frequently printing on grade 4 and 5 to print a normal scene, your negatives are too flat. The best papers are generally the lower grades.

If your negatives have too much contrast, reduce the development time. Conversely, if they need more contrast, increase the development time. I would suggest using the manufacturer's recommendations as starting points for expansion and contraction. T-Max films, in particular, are very sensitive to small changes in development times.

Now that you have a great negative, we can get on to making great prints.

Many fine papers are available today. I'll discuss more about them later, but would suggest starting with any of the glossy, fiber-based, graded or variable contrast (VC) papers available today (i.e., not RC papers). The VC papers that we have today are superb and allow more subtle manipulation of the contrasts than do graded papers.

All negatives have one thing in common, the blank film strip between the negatives or at the edge. On a print this represents the maximum black that could be rendered. Therefore, one way to determine how much exposure should be given to a print is to test strip the clear film base.

This is where you can get a lot of bad advice. Many books and articles have said that fine prints should have a black which is the maximum black the paper is capable of rendering. If you follow this advice, you will have bricks for prints.

What you want is the minimum exposure necessary to create a maximum practical black (MPB). This is usually slightly less than the maximum black which the paper is capable of rendering. If you go for the absolute maximum black, you usually will lose separation in the significant shadow areas.

This may take a little trial and error at first, but you will learn to recognize the MPB very quickly.

Once you have determined your MPB time, place a piece of paper in the easel where the projected image will fall on the highlight area and make a print at the exposure conditions for your MPB. Develop normally and examine the results dry and under a light that you will always use for judging work. Make sure the print is dry because different papers dry-down differently. With some papers, a wet print's beautiful highlight area will appear gray and dull when the paper is totally dry. A hair dryer or microwave oven can quickly dry the test print to speed up the process.

Let's take a look at how to judge these test prints. Viewing conditions for judging your prints are very important. If the light by which you judge the tests is too bright, your resulting prints will be too dark under normal viewing conditions. Conversely, if the light is too dim, you will leave them a little light and they will look weak when you view them under normal conditions. The light by which you judge your prints should be as close to your normal viewing conditions as you can practically get.

If the highlights look great with the MPB exposure, make a real print using that time. If there is insufficient highlight detail on the test print, you need a lower contrast paper. If the highlights are grayed-over, you need a higher contrast paper.

If you change paper or VC filter as a result of your test, retest to determine your new MPB time for the new paper or VC filter.

Small changes of about 1/2 grade can be made with graded paper without changing paper grades. To increase contrast, decrease the exposure time in the enlarger by 20% and double the development time (usually 4 minutes rather than 2 minutes). Be careful not to get safelight fog. Conversely, to lower the contrast, increase the exposure time by 20% and cut the development time in half (usually to 1 minute) with very good agitation in the developer and getting the print into the stop bath quickly at the end of the development. With VC paper it is only necessary to change the filter.

All of this is designed to help you make a technically perfect print from your negative. I would suggest that you make it technically perfect before making esthetic judgments about overall density, dodging, and burning. Also, don't be surprised if your technically-perfect print fails to excite you. Craft may be the language of the arts, but you still have to learn to speak the language to make a statement.

For optimum color, contrast, and presentation of prints on bromide papers, I would encourage you to always selenium tone. (Bromide papers are generally the cold tone B/W papers. Chlorobromide papers generally have the warm tones.) Toning provides a richness that is addictive. Once you start you will never again be satisfied

with an untuned print. Selenium toning deepens the blacks without blocking the shadows, takes the green out of the black and generally shifts it toward a colder black. By deepening the blacks, the whites appear whiter. Selenium toning also improves the archival qualities of the print.

Some papers tone better than others. For example, Oriental papers tone quickly and become very cold, Ilford papers tone less, but tend to become a little warmer. Portriga Rapid, a chlorobromide paper, becomes a rust brown and will split tone when selenium toner is used. Split toning occurs when the darker parts of the image start to tone more quickly than the lighter parts, giving the print a duo-tone quality. This process can be observed and can be quite striking in certain images. In time, the entire Portriga print will become a rich brown and white print.

After developing and fixing prints, I do a thorough washing, followed by a treatment with a washing aid, and rewashing. Then I tone my prints in selenium toner diluted 1:12 in either water or washing aid (e.g., Perma-Wash) for about 2 minutes. Since this is done in light, you can judge for yourself when you want to remove the print from the toner. The 1:12 dilution is stronger than many sources recommend, but I get tired of waiting and this dilution allows the toning to happen fairly rapidly. The toner can be reused until it no longer seems to work. When the prints have been toned, they should be rewashed.

Incidentally, one of the safest ways to intensify a weak negative is to selenium tone the negative. Refer to Ansel Adam's "The Negative" for complete instructions.

A word of caution, selenium is a metal, can be absorbed through the skin, and is toxic. You should never use bare hands in the toning solution and toning should be done in a well-ventilated area. Avoid mixing with acid solutions (stop bath, etc.) when using or disposing of selenium toner solutions.

Long wash times necessary for archival permanence remove the brighteners that are put in the papers by the manufacturers. If you wish, the brightener can be restored by using a final rinse in Sprint's End Run Brightener just prior to drying.

A few comments on some related topics might be in order.

We are blessed today with many fine papers, both graded and variable contrast. (The manufacturers finally got the message.) Each has its own special qualities. I would encourage you to explore the various papers and learn how to take advantage of their unique qualities to enhance your images. For example, Oriental papers tend to be cold when toned and lend themselves to landscapes, Ilford, being slightly warmer, may be better for portraits. Portriga Rapid, being extremely warm tones, is beautiful for portraits and nudes. (Note: Since I originally wrote this article, Oriental (Japan) has gone out of business. The paper is now being manufactured in Europe under the name Cachet and has different characteristics than the original. I

have not had time to do sufficient printing with the new Oriental to determine how it stacks up against the other fine papers.) Zone IV has recently introduced a new variable contrast paper, Brilliant VC III which is beautiful.

The image tone of the papers will also vary with the developer. Dektol tends to be neutral. Ethol LPD separates shadows and highlights beautifully and can be used at various dilutions to shift the image tone from neutral to warm. Sprint's Quicksilver is extremely cold and will cool off Portriga more than any developer I have ever used. There are many fine developers. Try them with the various papers to determine which combinations work best for you.

If you continually have a problem with highlights that appear a little dull, you may be getting safelight fog. Test the limits of your safelights by exposing a sheet of paper in the enlarger with enough exposure to give a very light gray when developed. (It is important to use exposed paper for the test since exposed paper is more sensitive to light.) After exposure, take the paper to the area where you develop your prints and cover part of the sheet with a piece of board. Every minute, move the board a little to cover more of the paper. Continue until you have made about five (5) strips. Develop, stop, fix, and dry the paper. Examine the test for signs of the strips. This will tell you how long you can leave your exposed paper exposed to the safelights without fogging.

Another possibility is "dry-down." Many papers dry down darker than they appear when wet. A good way to test for dry-down is to print two samples of a delicate highlight and then dry one with a hair dryer and compare it to the wet print. If it appears darker, you have dry-down. What you will then need to do is make a series of exposures reducing the exposure time in approximately 2% increments and compare the dried prints to the original wet print that looked correct. This will enable you to always compensate for dry-down when you compute your exposure. For example if the 4% print looks the same dry as the original print wet, then always reduce your exposure by 4% when making a final print if you are judging your test strip wet.

As I commented earlier, another safe way is to always dry your test strips with a hair dryer or microwave oven before evaluating.

Presentation is extremely important in how a print is perceived. Mounting and matting with generous borders on a good white or off-white acid-free board will greatly enhance the appearance of a fine print. After all, you have come this far, go the rest of the way. Frame the image in a simple frame (e.g., a Nielsen #15 profile in contrast gray) and you have completed the final step.

Now comes the hardest part, deciding what to point the camera at and when to click the shutter. Everything I've said before is only so that you can master the

craft to exploit your vision. The world is full of exquisitely printed boring images. Don't let yours be some of them. Craft is easy, vision is more difficult.