

KEEPING PACE

A Monthly Newsletter Devoted to the art of Darkroom Photography

Volume 56 Feb. 1992

Control, the Exciting Part of Photography

Control.

This is the most important phase of photography. Without control, all you have is a snapshot, not a photographic work of art. If we photographic enthusiasts want to be considered "artists," then we must be able to make an interesting image even more exciting.

From the early days of the first photographers who coated their own glass plates and developed them in a tent, knew that some kind of control had to be used in order to make a print that had artistic merit, and not just a captured image. In Edward Steichen's. early days he was a painter. His early work was quite artistic because he realized even then that the image on the sheet of paper had to have balance, composition, detail, and be able to force some

feeling of emotion from a viewer.

The main reason for collecting the signed works of the master photographers, is because you were able to see the little nuances that the artist used to convey his own emotional feelings. If a print were made by Ansel Adams, and the print was signed, you could be assured that the print was authentic and was made by the artist.

The amount of exposing and development manipulation needed to make a great print could range from the ridiculous to the sublime.

I have been led to believe that the famous "Moonrise" photo of Ansel Adams required a great deal of accurate dodging and burning in order to achieve the quality that he was after. The prints that were made by his staff

were also quite excellent, but the fact that Ansel Adams signed the ones he made, made them even more special.

I have see many prints of Ansel Adams negatives in shopping mall "galleries," made apparently by firms that did not have any of the Ansel Adams skills. Most of the prints were not accurate, or even repeatable at all. There may be as many as ten prints of the same image in the print bin, and I could not find two that looked alike.

This is truly a shame. The staff that has been printing his images, should be trained by a master printer before letting them loose on Adam's negatives. If you want an eye opener, visit the Friends of Photography Gallery, in San Francisco, and just look at the works of John Sexton, Bruce

Burnbaum, Jim Stimpson, and many other masters. You may or may not be aware of what has been done by the various controls but the prints will still grab you and will make you aware of what is possible.

There are plenty of books on the market that explain the different controls available for everyone. Dodging and burning is just the beginning.

The first commercial color prints known as "Carbro" were very easy to control for a limited degree of correction.

The system included a paper that had an incredible amount of silver in its emulsion. The blacks were outstanding. Besides the normal dodging and burning skills that were required, it was also possible to adjust the contrast of the bromides (black and white prints) by using various strengths of diluted developer.

The pigments were also able to be adjusted in contrast in either direction. The prints were also able to be rubbed with different abrasive compounds to eliminate some of the top colors in either the temporary support or the final support paper.

When the Dye Transfer system was unveiled in 1948, the response from the color printing community was overwhelming. The print could be adjusted in during the masking, making the

negatives, making the highlight masks, exposing the matrices, processing the matrices, running the print, and finally, working on the actual print with appropriate chemicals.

This was (and still is) the most inventive, purely photographic, printing system ever invented by man.

The early days of Dye Transfer were filled with problems. No one really knew how to use the correct bleaches in order to make the final print look little better.

Sometime, we would deliver a print to an art director at an advertising agency, and almost want to hide when he would say, "The face is too pink."

We did not know then how to remove a little pink from the flesh tones without making another print.

We knew very little about these different controls, but we learned from others and by accident.

We were once making a 20 x24 Dye Transfer color print of a food shot, photographed by one of New York City's top food photographers. It was an advertisement for "Chef Boy-Ar-Dee" brown gravy. The image consisted of a large meat loaf, smothered with this brown gravy. I was told by the art director that we had to match the

I purchased a can of the gravy and was using it to find the proper color balance.

I had made a few prints and was examining one of the prints when I spilled some of the gravy on the test print.

When I wiped the print, I removed a considerable amount of the Cyan dye, as well as the gravy.

What was in this solution of gravy that removed the Cyan? Who knows.

We eventually discovered Potassium Permanganate to reduce the cyan.

This was only used as a last resort. If the print was considered finished, and needed some help, a small amount of diluted Permanganate solution removed the cyan and saved the job from having to be made over.

We also discovered Foto flow by accident. We spilled some on some Dye Transfer prints over a weekend, and discovered Kelly Green images where the chemistry had done its work. It removed the magenta as if it were magic.

Even the yellow reducer was eventually discovered.

However, the professional retoucher has many more bits of chemistry at his disposal

But times have changed. Can you image a master printer, such as Ansel Adams, in the basement of his home, using his own

8x10 horizontal enlarger and projecting the famous "Moonrise" image.

The dodging and burning had to be performed precisely.

If a limited edition of prints were being made, it was even more of a task for the printer to match his every move to the split second, otherwise no two prints would ever really look alike.

With today's technology, the negative could be scanned, and the positive image could be manipulated through the computer with the results projected on a large screen. Without getting his hands wet, today's technician could easily duplicate what was done on "Moonrise" and preserve it by placing the image on a 400 line screen, which could then be used to produce black and white prints on quality rag bond paper or even rich black carbon prints. The best part of this feature is that all subsequent prints made from these negatives would produce **exact** duplicates. The screened negative is considered to be archival, and the Carbon print could last for one thousand years.

How fast will this new technology take over the commercial field?

It already has.

Will it eventually take over the fine art field? This is a tough question to answer.

Many of the fine photographers who make their own prints will continue to make their prints by hand. They won't need a scanner or a work station, and as a result, their work will survive.

But many fine color photographers are in a different kind of bind. Some of them do not want to make their own prints. This is understandable. It is tough enough to have to get out and lug the equipment, and travel, maybe even climb something, without having to learn a new and complicated process. In order to learn the Dye Transfer process so that you can achieve some excellence in printing, could take a few years.

Do you have this kind of time?

Elliot Porter did, and so are a number of new and young artists. The works of photographers like Vern Clevenger, and the soon to be seen works of Steve Solinsky will open your eyes.

Many dedicated men travel to distant places to get the images they need, and will have Dye Transfer prints-made that will move you. I know about this first hand. I have seen some of their work.

The main ingredient in producing excellent art photography is to make sure that you really understand the procedures for making accurate separation nega-

tives.

Unfortunately, this is the scientific part of the process

The separation negatives must be made to have a specific contrast range that will fit your enlargers capabilities, and they must have accurate balance and density. The shadows should be as open as possible without getting too extreme, and the highlights should separate and have brilliance.

I have always said that photography is a two edged sword. The taking of the picture is the first and most important phase of the process. The making of the print is the second part and is almost as important as the first part.

Making a Dye Transfer print is also divided into 2 parts. The first part is the making of the separation negatives, and the second part is fine tuning the image when making the matrices.

The ultimate balance, density and contrast is the result of the artists ability to do what he considers his creative talent.

This second part is most important. In fact, when I worked as a Carbro printer, we would receive glass separation negatives from a client and we were forced to "invent" the way it should look. The slightest change in contrast of only one color could make or break a print.

After the separation negatives are made, and examined for any glitches, they are analyzed by using a densitometer to make sure that the aim points we strived to meet are at least, in the ballpark.

The creative juices would begin to flow when the black and white prints are made from each separation negative in order to establish a color balance, contrast and a correct density. Making a test print from these first tests will get you even closer to making the final set of exposures.

It is during this portion of the print making process that most of the creation takes place. Dodging and burning during the making of a Dye Transfer print is more easily done using masks rather than hands or cardboard pieces. There are three layers to contend with. Dodging by hand is rarely done.

Once the test matrices are made, a "straight" print is pulled, and then this is examined before any further the final matrices are made.

Running the print.

The amount of corrections at this next point of the process is almost un-ending.

The print can be made lighter, darker, flatter, contrastier, (in any of the separate colors, and in any direction,) colors can be added by brush to the matrix,

highlights can be brightened, the mats can be made to have more color saturation, a dye withdrawal matrix can be used, and so on. This final set of techniques can fall under the guise of creative imagination.

This ability to manipulate the print is the main reason for it's popularity

Could any of these steps be done with today's new digitizing workstation equipment? **The answer is yes.**

Most people that I question say that the ability to hand correct an image is more valid than the ability of a work station to do the same thing. I don't quite agree with this viewpoint. One must remember, the creative imagination is in the mind of the artist. How the image is changed is not as important as the change itself.

The creative mind of the artist is still in charge of the final outcome regardless of the technique used.

The cost of any of the new workstations is still prohibitive for most of us. We will have to keep using our skills that we learned, and to do the best job possible.

Is the UltraStable Carbon process the only Carbon process around? No.

In fact there is plenty of information about the Tri Color Carbon process in the book called "Modern Car-

bon Printing" by Luis Nadeau.

He describes what the pigment materials are, where to obtain them, the methods used to coat your own pigments onto a sheet of plastic vinyl or polyester, and all of the formulas needed to make a real Tri-color carbon print.

The old process called Carbro used black and white prints called "Bromides" to initiate the combining of the pigments. The newer systems use pre-sensitized dry pigments which are susceptible to an Ultra Violet light source. This exposure from the ultra violet light source hardens the image and allows the pigments to be transferred and eventually washed off the plastic revealing the image.

There are a few people in the U.S.A. making Tri color carbon prints. One is Reece Vogel, in Los Angeles, and the other is Rene Pauli, of San Francisco.

Rene Pauli is an old hand at the field of color. He has many years experience as a Dye Transfer technician and his long time aim has been to make some of his own images in color and using a different technique other than Dye Transfer or Cibachrome.

He has succeeded. He is making his own tri-color Carbon prints with simple equipment but with a wealth of knowledge.

His prints have been exhibited throughout the states. He will soon have a one man show at the prestigious Ansel Adams Gallery in Yosemite Park.

His images are made at home. He uses his kitchen as a make shift lab.

Who says that you need to work in a professional environment in order to make professional prints?

He makes his three separation negatives to the size of the print, then uses a vacuum system and an ultra violet light source to expose the images onto his prepared sheets of color. He coats his own pigments.

There is no screen used with this process. The method used to get to the right color balance must be tricky. I am sure that he has used his Dye Transfer experience to enable him to get the kind of color balance that he wants.

I probably would use black and white prints as a means to establishing the correct exposure onto the pigments.

The registration automatically accomplished because it is on a pin system similar to the Condit systems. The use of a pin system eliminates all push and pull of the old temporary support paper. In fact, the temporary paper sheet no longer is needed. All he has to do is transfer

each sheet of pigment in it's turn to a receiver sheet and dry the print when done. The third dimensional effect caused by the relief image of the pigments helps to separate the image even more clearly.

The film used by Rene is Kodak's Separation # 2 . These are continuous tone negatives. Only three colors are needed. I was privileged to see one of his prints recently. It was a knock out.

When you consider the fact that the normal printing system required negatives that could be adjusted when making the final approach to the matrices, this Carbon system requires negatives that are complete. Dodging and burning is not easily accomplished with any tri-color exposing system.

In your own darkroom, repeatability of the correct time and temperature of your processing steps is critical. I don't really care if the thermometer is accurate or not, as long as it is reliably repeatable.

Your actions in agitation must also be repeatable. Time is the easiest element to adhere to.

What can you do to insure your own accuracy?

Time and temperature is one of the methods used to make sure that your film is properly processed after it

has been exposed.

How critical is it to have the temperature as repeatable as possible? Very.

The making of any negative is threatened to failure if it isn't monitored accurately. Years ago, Kodak, and all of the other film manufacturers used to put a sheet of printed matter in the box of film.

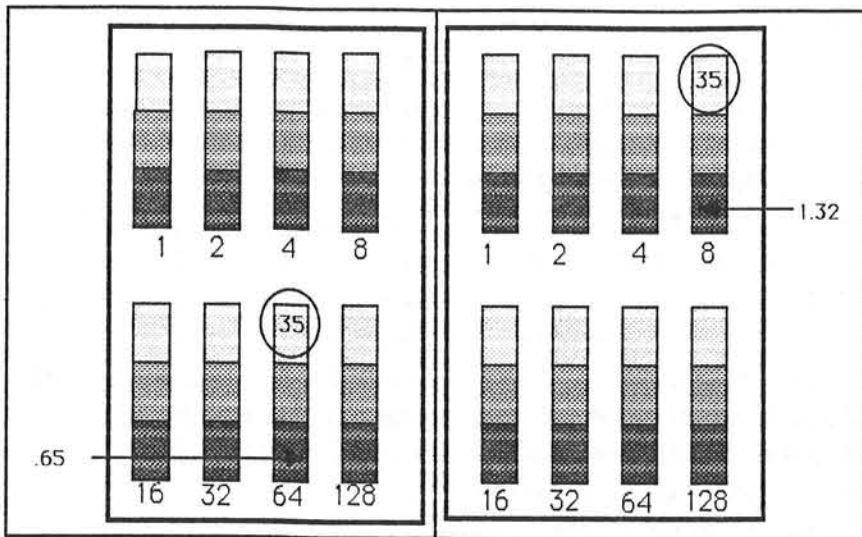
It showed the different developing times needed if the temperature varied. It also showed the different gamma's possible with different developing times.

In order to make your own darkroom more efficient you should actually make your own charts for your own procedure.

Remember, the age, temperature, and condition of the developer, as well as the temperature, the amount of agitation, the kind of water, and the accuracy of your shutter, or timer will have much to do with the kind of success you have in the darkroom area.

If you make the test that I have outlined in my books and in past newsletters, you can make a chart for your own darkroom that will be much more accurate than any printed sheet you could buy.

1. Make a series of identical exposures on two sheets of film.



2. Process these two sheets for radically different times, let us say 2:00 minutes and 5:00 minutes.
- 3 Find the grey scale that has a reading of approx. .35 in the lightest portion. Then find the gamma for that particular developing time by dividing the density range of the original three step grey scale in the results of the newly exposed and process grey scale.

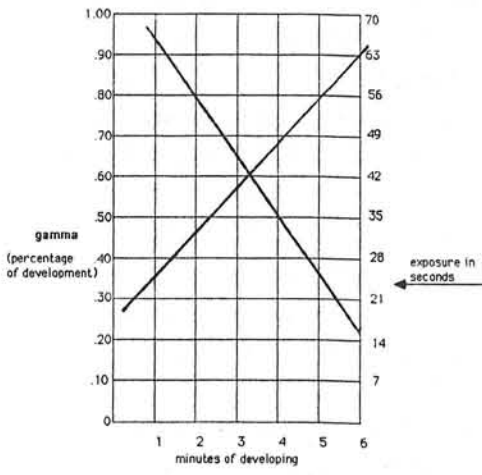
4. Any grey scale that has a reading of approx. .35 in it's lightest portion will be the correct exposure.

By placing dots on the chart in the preceding column, you will be able to find the correct exposure and developing time for any material or developer.

An X will appear on your chart. In order to find the developing time for any specific gamma, look at the left side of the chart, locate the gamma, look across to the right until you intersect the gamma line and the developing time will appear below.

Once you know the developing time, look at the developing times at the bottom of the chart, find the developing time, then look up until you intersect the time line, look to the right side to find the correct exposure.

This will allow you to make exposures with a camera,



with a contact printer, or with an enlarger. This technique will place your image on the straight line portion of the film's curve shape. This method will keep your work clean, colorful and crisp.

What about the new services being offered to anyone with a Macintosh 2 FX computer?

One company (Color Scan Service Co. in Los Angeles,) is offering to scan your original photo, whether it is a transparency or a color print, using a Hell scanner CP 345. The image is saved on a Syquest Removable disc, which will enable you to use your own computer as a workstation. The Macintosh system is not as fast as a high end computer, but will do the job accurately. The biggest problem is, just what are you going to do with a set of screened separations? If you plan to make a print, using the UltraStable materials, the screen size may be difficult to obtain. Only a small handful of scanner companies want to output their images to anything finer than 265 lines. The UltraStable system works best at 400 lines.

They recommend using Adobe Photoshop for retouching and Quark XPress to position the image on your page, if you wish, and after which, you send the corrected image back to the

company and they will furnish you with a complete set of screened negatives including a proof.

This service is intended for the lithographic field. Their fine screen line size is somewhere around 200 lines. The reason for this is that the printing presses normally apply much more pressure to the sheet of paper and if too fine a line is used, especially with absorbent paper, the dot size will be enlarged and may muddy the image. With the UltraStable process, the pressure on the sheet is far less and a finer screen should be used.

The world hasn't stood still while all of these new approaches to fine art printing are discovered and invented. The newest "discovery" in the field of fine art is the "Iris Proof Print," This is a dye spraying system that is used by most lithographers to show their clients before making the final set of screened negatives.

As far as I know, there are 3 sizes of Iris printers available. The one most used will make a print to 20" sq, the larger size is around 40" sq. The smaller size is around 11x17.

One litho service company here in Las Vegas will make very beautiful prints form transparencies or flat art, on any kind of paper you can think of. You can use Dye Transfer paper, and also fine watercolor paper. A set of

prints were made and exhibited here at a local museum and they looked great.

Graham Nash of the singing group, Crosby, Still, and Nash, owns a large Iris printer and has been making many fine images. He has been exhibiting them at Susan Spitus Galleries in Costa Mesa, Ca.

Alan Williams, a noted retoucher in N. Hollywood, Ca. has a 20" machine and makes proof prints for his clients after he has done some extensive retouching on a clients job. Once the image has satisfied the client, he outputs a color transparency output, which he then presents.

Look around you. Billboards are going to the scanner. Examine the accuracy of the new Marlboro ads. I wrote about one of these companies in the Los Angeles area.

They use a scanner to put the image on a disc. Then the disc operates the large drum processor. Spray guns spray long lasting dyes with the photographic information on a large drum that is wrapped with the material to be mounted around the billboard.

This has virtually signaled the end of hand painted billboards.

The latest edition of "Photo Electronic Imaging" magazine has exhibited an Iris

that was originally recorded on a Sony MVC 5000 SV camera, converted to digital form and manipulated by Adobe Photoshop. The image consisted of two separate images and were combined. The output was an Iris print. The results are absolutely excellent.

The Iris printer is a spray system that produces a variable dot. However, the spray system is soft enough so that the dot virtually disappears.

If quality dyes are used, the print will have long life. For the Iris owner and user, the prints can be mass produced with ease. A limited edition of any size can be accomplished and will make accurately repeatable prints. It also heralds the beginning of an era where photographic chemistry is not used at all.

Archival? It remains to be seen.

Electronic sources claim that the image saved on a disc will last longer than the actual print. This means that years down the line, a new print could be made with the same characteristics as the original.

For those of you who are interested in the new fangled electronic devices, visit the photographic shows that are bound to be held quite often around the country.

The interest in Cibachrome printing is gaining in strength every day.

One of my subscribers called to ask me what I thought of the Jobo processor for making Cibachrome prints. I told him that I thought it was the best processor for quality. The reason for this statement is the fact that one shot chemistry is used, and this alone will assure one of repeatability.

My experience has shown me that the Cap 40 and the new ICP 42 processors produced by Ilford are great for convenience, but the chemistry is not able to be replenished and as a result, the chemicals die rather quickly. At the end of a run, the prints may acquire a grey tone, which indicates that the bleach and fix are not doing their job. I saved a few prints by putting them through the bleach and fix again. This eliminated the grey color but also interfered with the color balance of the print.

The Fujimoto processor has replenishment capabilities, and is also quite convenient, but I still prefer the Jobo.

This same subscriber called a well know workshop person and asked the same question, and was told that the Jobo was the wrong device for making Ciba prints and that he had better use a tray. Can you imagine that?

Most Cibachrome print enthusiasts still try to make prints without masking.

This is a futile effort. Masks must be used to bring the material to it's best possible contrast.

The overall contrast cannot be hidden. Dodging and burning can be accomplished in very few instances. The majority of transparencies are much too contrasty for the process.

This means that you will have to make masks in order to make a pleasing print. Since every transparency is different, think of the possibilities. Every print, if masked properly will allow one to make a print with all of the nuances and details and still produce a print that has character.

If you want to try an experiment, purchase a small 4x5 box of Kodak's Pan Masking film. Using a simple contact frame, make an exposure of the combined films, using only white light from a 25 watt bulb about 3 feet from the frame. Make a 5 second exposure. Process the film in a solution of 25 cc of HC 110 developer per liter of water for 2:00 minutes, at 68°.

By eye, register the two images, place the sandwich in the enlarger with the transparency on the bottom, and don't worry about the emulsion direction. Make an exposure on a sheet of Cibachrome.

Process the sheet normally, and compare it to a print made with no mask.

I'll bet anything that the second masked print will look better than the first unmasked print.

You may even have overdone it, but the difference will be obvious. If this doesn't get you interested enough to try masking a bit more professionally, then forget about making Ciba prints.

Incidentally, when it comes to comparisons, the electronic images have had to take a back seat when compared to 35mm film. However, Kodak has just announced that their new Photo CD process has an identical resolution to a 35mm color negative.

I kind of knew this was about to happen.

Wait until next year when the Japanese come out with their Hi Definition TV system. This will undoubtedly have some impact on the digitizing systems.

In the meantime, life must go on. I still have literature and videos for sale.

If you are interested in any of my wares, contact me at:

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Thanks.