

KEEPING PACE

A Monthly Newsletter devoted to the art of Darkroom Photography

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Becoming a Creative Color Printer

Becoming a creative color printer can be the most exiting part of photography.

If you are a "fine" black and white printer, you know how much time it took to learn how to make high quality black and white prints which finally pay off when you are able to make a print that makes your senses awaken.

The art of printing is such an experience, that it becomes another part of photography.

I have always believed that photography is a two part process. Taking the picture demands that your creative juices work to the fullest so that what you see can be converted into what

you feel. This "feeling" is simply the fact that your emotions finally get a chance to participate in the art of photography.

When making a fine black and white print, you are constantly aware of the contrast and density of the image. You use the contrast and density to your advantage.

You also use techniques that will enhance the picture by dodging and burning in.

In fact, the entire object when making a black and white print is to use all of the necessary tools in order to make a print that stirs the soul.

I remember walking into a

photo gallery in Carmel, Ca. that was sponsored by "the Friends of Photography". The prints that were being displayed were fantastic. The range of densities and details were great.

I was about to leave the building when my eye caught a glimpse of another room in the back of the gallery. This was the Ansel Adams room.

I was stunned. The prints were incredible. The degree of black in the paper could only have been achieved by treating the paper in a Selenium toning solution in order to make the blacks even blacker. The whites had to have been bleached in order to achieve the brilliance that

they displayed.
 What I am trying to say is that any means that will improve the quality or impact of a print is fair.
Let us discuss Cibachrome for a moment.
 Most lab technicians realize that a transparency must be masked in order to meet the contrast requirements of the Cibachrome paper. If this fact isn't known by now, then prints are being made that look like color prints made with Kodalith films.

Making a Cibachrome print requires that some knowledge of the masking procedure is necessary. I mean real masking.

There are many devices and techniques on the market that will allow you to soften the overall contrast of the transparency with a simple glass, and even by manipulating the contrast of the chemistry. But if you are serious about the quality of your work, consider this. **If you need a mask with a 26% contrast** how in the world

could you make a mask with such accuracy.

The question could be, "Why" would you need a mask with such accuracy?"

My answer is this: If you are serious about achieving a specific affect in your work, the contrast accuracy of the mask is imperative. Just making a print "less contrasty" is not the answer.

The reason for a densitometer is not for show. It is a tool that the serious Dye Transfer color printer, or anyone else who is interested in the technical aspects of the photographic field, should be familiar with.

If you are unable to use a tool like a fine densitometer, how in the world can you make any valid calculations.

Its true, that in the old days we old timers made beautiful prints by the seat of our pants, so to speak. The Carbro man who knew from experience

what a good set of negatives looked like was the best technician around. He didn't know about H & D curves or anything about the sensitometry or densitometry of film. There were many scientists who could work with film and developers otherwise we wouldn't even have had that, but they never got involved with the art of making a color print.

The Carbro printer made black and white prints that represented the 3 primary colors and became the backbone of the whole color field.

This is before color transparencies were invented. No one could argue with the color printer if his print didn't quite match the original scene. Who could tell anyway ? We had no transparencies to chack against.

But now were in the age of fast color printing with all sorts of video analyzers to help even the least experienced to make acceptable color prints. Maybe not Carbro or even

Dye Transfers, but color , never the less.

The real problem about making dye transfer prints is that it is extremely complicated by comparison to any other type of color printing system ,except lithography.

In order to make a print we first have to know what the density range limits of our enlargers are. Without a densitometer how in the world could you read the gray scales and come up with any conclusions.

In fact , all of the calculations you will have to make to come up with your own conclusions, will have to be determined by first getting good readings and then figuring them out.

So, a densitometer is really a must.

The kind you get, really isn't too important. It must be accurate and repeatable. I have had success with the McBeth and also with the Speedmaster. Both of these are excellent.

There are many others on

the market. The prices are also very interesting. Some of these sophisticated units cost thousands of dollars, so beware when shopping for a good meter.

Kodak once made a small visual densitometer which actually was pretty good. It didn't read too accurately in the color scale past 1.50, but for black and white , it is a dandy little unit. I still have one. Not only is the **contrast of the mask in question**, but also the fact that the **color of the print may be enhanced** or improved by using a specific color filter when the mask is exposed. If the Cibachrome print is examined and just considered the same way a black and white print is examined, then, by making appropriate masks, we all could make great Cibachrome prints. We could all dodge and burn with much accuracy. However, we now have the **added problem of color.**

I called the addition of color a "problem". It really is.

This is a very important

factor in color printing. Most people believe that color is the most important thing in a color print. **It isn't.**

Color can be the most garrish and irritating element in color photography. The reason that fine black and white prints are sometimes fascinating is the fact that what you are looking at is a pure representation of a scene with density, contrast and definition. **Nothing else.** You eye isn't clouded with the addition of intrusive color.

Thus, begins the quest for making a quality print with just the right amount of color and not an ounce more.

The red hair of a young Irish girl need not be a flaming red. Nor should the green grass of Ireland be so green that people call it "Kelly green" Color should be natural. A good color print begins with these requirements, and in this order.

1. **Contrast.**
2. **density.**
3. **Open shadows.**
4. **Detailed highlights**

5. Color balance.

Did you notice that I placed color balance at the end of the list?

The least important thing in a color print is the color balance, and yet, this is the first place that people look to when lodging a complaint.

Now that I have confused you with the importance of contrast masking and the less troublesome problem with color balance, I am now going to explain just how color correction can improve the look at a Cibachrome print. In order to make this part of the newsletter work I am depending on you to use your imagination and try to "see" the print as I describe it.

We will be working with a photo of a racing car. The size of the transparency isn't important, so let us call it a 4x5 transparency. The car has a white body with **glistening highlights** and a red roof with a darker, almost **maroon**, windshield hood. The lettering on the side of the car is a dark muddy **green**.

There are details in the interior of the car and items can barely be seen near the drivers seat.

We will make a 16x20 print.

For this system, we will also need a registration carrier, and registration easel with pin systems such as those provided by Condit Mfg. in Sandy Hook, Conn.

For those of you who are not familiar with my method of determining the contrast range of the enlarger, let me just say this, By making specific tests I was able to determine the contrast requirements of my enlarger as it pertains to Cibachrome paper. In my case, I need a transparency with a density range if 1.85 in my enlarger in order to make a completely accurate Cibachrome print.

If my transparency doesn't have a density range of 1.85, then I must do something about it.

Here is my formula:

This transparency has a density range of 2.25. The enlarger requirement

is1.85
The difference is
.....40

Divide the difference .40 by the transparency **density range**
The answer is .40

The object here is to make a mask, by exposing the transparency onto a sheet of Kodak's Pan Masking film, in contact, through specific colored filters or a combination of colored filters. The challenge is to make sure that the exposure is correct and that you have achieved a mask of 40%.

If you haven't read my articles on masking in "Keeping Pace" volumes 3 and 4, read them and this masking procedure will be explained.

If you want to make sure that you have reached the necessary .40% mask strength, with a densitometer, read the darkest shadow area of the transparency and also the lightest area and determine the density range.

Then read the identical areas on the mask and determine its density

range,
Divide the original density range into the mask density range and the answer will be the gamma, or % of the mask. If you are within .02 of your mark, consider yourself accurate.

Since the car has an area that is important, namely, the red roof. I decided to make the mask through the green filter. This will allow the red roof become brighter, but at the expense of the green lettering. The mask will be open in the red areas and filled in in the green areas. This will affect the print in the same order.

A test print is made and found that the contrast is fine, but the mask has obliterated some of the sparkle in the white area of the car.

The object here is :

1. To make the red roof and the maroon windshield cover even brighter.
2. We also would like to make the green lettering on the car brighter.
3. Restore the glistening highlights in the white area of the car.

4. Pop the highlight out of the chrome wheels.
5. Make sure that we do not lose the detail in the car interior.

Let us begin by first making an exposure, by contact, onto a sheet of Kodalith Pan film through the **green filter, #61.**

Process this sheet in Kodalith A & B developer for 2:24 min. at 68 degrees. This mask will be blocked up in the whites and greens, but not in the red areas, such as the maroon and red areas of the car.

This is called an isolation mask.

In order to use **this mask** properly, first make an exposure on Cibachrome paper.

Use the contrast mask made earlier in contact with the transparency. Use the registration equipment on the easel as well as the carrier.

After the exposure is made, remove the paper from the pins on the easel and place it in a light tight safe box.

Remove the carrier, replace the contrast mask

with this new kodalith mask. Look at the film sandwich on a light box. You will notice that only the red or warm areas of the transparency are visible.

Replace the carrier, replace the Cibachrome paper on the pins and proceed to make a "bump" exposure through a red #29 filter (or any other warm filter you choose) You can use the same exposure or not. It depends on your taste. The result will be a brighter color in the areas that were blank in the kodalith mask.

Also make an isolation Kodalith Pan mask using a **Red #29 filter.** This mask will have a different coverage than the first mask. The reds and whites areas will be blocked up and the greens areas will be clear. Replace the former mask in the carrier with this new mask and also give this a bump exposure through The green # 61 filter, (or any other green filter you wish) and the greens will definitely be improved.

You may want to make

tests of these important color corrections before you commit yourself to a full size print.

The next step is to improve the glistening whites. This is done by exposing the original transparency in contact with a sheet of Kodak's LPD4 4 or Dupont's CRR4. These are reversal films, which means that you will get a positive if you expose a positive. The object here is to make a short exposure through white light. Process the film in either D11 or Kodalith A & B chemistry or any other litho type developer.

What you are trying to achieve is a very dark sheet of film with just the extreme highlights being visible. This may take more than one try. You can use a red safe light when making this last mask.

This mask is called a **highlight bump mask**.

Once again, replace any mask in the carrier with this new "bump mask" and re-expose the Cibachrome

sheet of paper with as much as 300% more time if necessary, using no other filter except what ever your filter pack must be.

This will bring back the sparkle that is lost any time a principal mask is made to curtail contrast.

The print exposure was right on target. The color corrections were made with a conscience, and the sparkle made the print almost third dimensional. I wish I could afford to make a color reproduction in this newsletter so that I could emphasize my ideas and conclusions about color printing.

Again, if this is a work of art. Don't overdo it. Be subtle. The garrish print belongs on a circus poster, not on the wall of a prestigious gallery.

I received a set of chemicals from Edgar Prauss, of Rochester N.Y. for testing the new Dye Chrome Co. method of making contrast changes with Cibachrome paper.

This chemistry is supposed to be able to alter the contrast of Cibachrome paper by using two bleaches and varying the processing times in a specific bleach. Again, I just received this. I will test it and give you my opinion.

For the Dye Transfer enthusiasts amongst us, we **have a dilemma**. Kodak has seen fit to stop the manufacturing of Kodalith Pan film for environmental reasons. They are planning to announce a replacement film very shortly. So, if you get the chance, order whatever Kodalith Pan is still in existence before it is gone forever.

My friend Bob DeSantis of North Hollywood, CA has informed me that Agfa has a film that makes a perfect replacement called P 911.

I haven't had the chance to test it, but I will, and tell you of its value.

Light sources for the Cibachrome process.

If you are really serious about quality, then masking is a must. But the addition of a mask to the

transparency will sometimes add so much exposure to the making of a print that one can easily be discouraged.

For example:

A normal density 4x5 transparency, with a fairly bright condenser light source can produce a print, with a lens stopped down to F11, in about 30 seconds.

Add a mask to this sheet of film, and depending on the strength of the mask, the exposure could easily go over one minute. The addition of filters to the filter pack can even further increase the exposure times.

But if we use a Dichroic color head (diffused) the exposure will be increased dramatically.

If we add a mask to this set up, only the lightest transparencies will print with shorter exposures.

The solution that I needed was a brilliant light source. I found one that was produced by Berkey Marketing, in New York City. This was called a "Xenon light source".

It was a pulsed xenon light source that burned at 1600

watts of light.

I decided to use a condenser enlarger. I purchased a surplus Omega D2 for \$150. I then added a variable condenser unit to the enlarger for \$90. I purchased a registration carrier and punch from Condit for \$350.

I then purchased a 20x24 By-Chrome vacuum easel for \$250. I added a set of register pins to the vacuum easel that matched the Matrix punch that I already owned, for \$18.

This enabled me to produce Cibachrome prints of the highest quality using a set of color filters from Ilford. The cost \$50.

To this enlarger I added a 50mm Apo Rodenstock lens for \$85.

Then I added a 90mm Apo Rodenstock lens for \$300.

The last lens I purchased was a 135mm Schneider Componon S. Cost. \$350. As you can see, the entire cost of making high quality prints (excluding processing) was under \$1500.

The only problem that I had was to make sure that I ended up with a clean, dirt and scratch free, print.

This I achieved by using an "oil" system.

Now I was ready to make any size print, up to 20x24 from any size original, up to 4x5 without worrying about the length of exposure.

I produced prints that were clean and with the ability to change the way a normal masked Cibachrome print would look.

One of my readers and friend, Keith Logan, of Alberta, Canada, is currently making fabulous Cibachrome prints using similar equipment.

Another of my students wanted to use the MINOLTA color head. The idea was fine except that the enlarger was too slow. The long exposures kept burning out the xenon bulbs. They cost around \$18 each.

The use of a dichroic light diffusion source is fine, but be prepared for long exposures.

One of the finest Cibachrome color printers in the country is Ted Stadle, formerly of Los Angeles.

He modified his durst enlarger using 4 quartz light bulbs just above the negative carrier with a

diffusion sheet separating the hot lights and the transparency. He used a very fast moving blower to keep his film plane cool.

He also used an upside down register carrier with the pins in the glass facing down.

By using a vacuum system he was able to place his mask and transparency in the carrier without resorting to the use of a second sheet of glass. This eliminated the refraction problem.

The last report that I received is that he may, or may not, join the DeSantis Company in North Hollywood, CA.

For any readers who want personal instruction in the Dye Transfer process, or Cibachrome, or Photo Composition, I am available. I do teach a course here in Victorville. It is a "one on one" set up.

The only time I would have more than one student at a time, is if a company or a group of friends wanted to get together and be taught.

On occasion, I will visit a

student in his own dark-room and teach the course there. This is a five day, 8 hours per day course. I do charge \$700, but this includes all of the materials and lunches.

If you want to visit Yosemite in the winter, Charles Cramer teaches the Dye Transfer course to a group of students at the Ansel Adams gallery in Yosemite.

The Kodak Co. also has courses or seminars throughout the country. If any of these courses interest you, look them up and take advantage of them.

Now for some good news.

We finally finished shooting the Video n Dye Transfer. The book is also finished, but in the final days of assembling the diagrams and photos that accompany the book.

My assesment is that we will begin to send out our announcements in less than two weeks.

For any of you who have not yet decided wether or not to buy this package of video and book, the price will be \$200 plus \$12 for shipping and handling.

For the first 200 customers whos send their checks in, the cover of the book and the cover of the Video will consist of an original Dye Transfer print.

I don't think you will want to hang it on your wall, but it should be unique.

It has taken over a year to complete the book and almost a year to complete the video.

Rick Warner, formerly of Esatman Kodak Co was gracious enough to act as my editor and advisor.

The Camera man, Lee Vierling doesn't want any credits, however, his work will speak for itself.

For those of you who want the monthly newsletter, the cost is \$60 per year.

My book "The Art of Photo Composition" is still \$50.

send a check or money order to:

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All my thanks,

Bob Pace