

Sample

KEEPING PACE

A monthly newsletter devoted to the art of darkroom photography

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The Withdrawal Matrix..

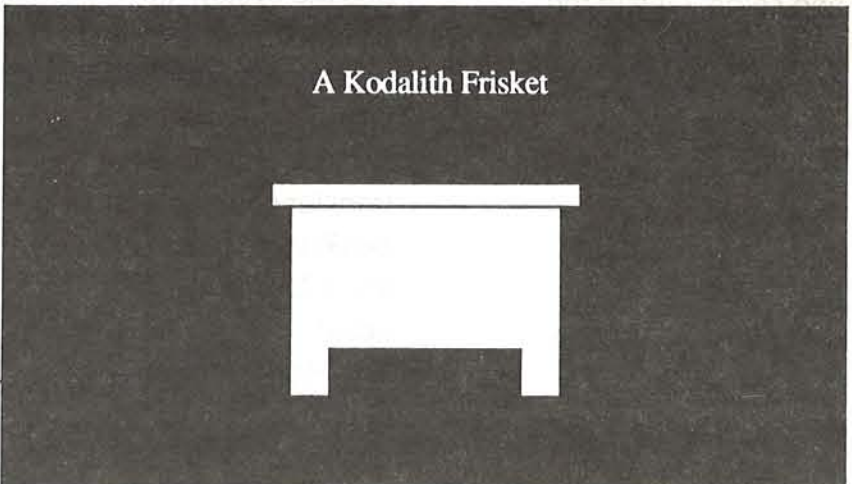
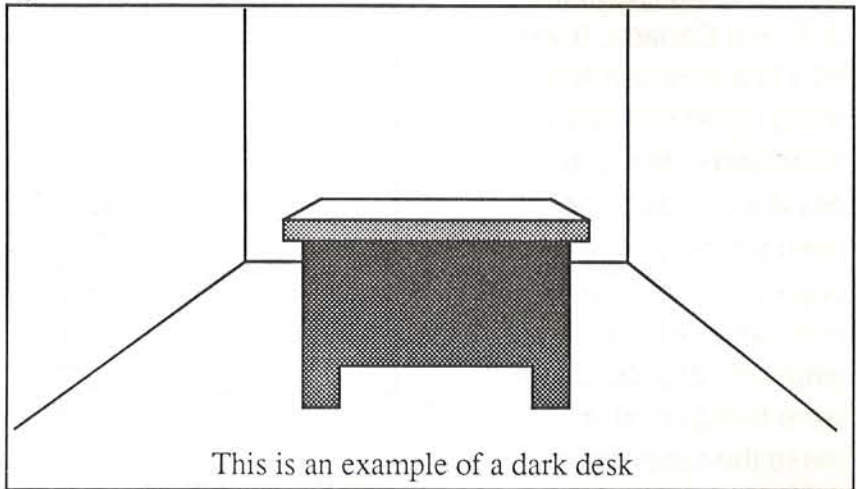
The proper way

About 15 years ago, Bob Speck, of the Eastman Kodak Co., "invented " a system for correcting Dye Transfer matrices that were not producing the best result because of over exposure.. His idea was to make a negative image on matrix film, by contact, from one of the three matrices that were being used to produce a Dye Transfer print. The "trick " was to expose the new matrix in such a way so that its emulsion would be in contact with the original positive matrix.

The method was to make the matrix that would have the exact image of the original matrix, but reversed to a negative and emulsion up. The object was to transfer the "good" matrix to this new sheet (let's call it a receiver). Some of the

image would actually transfer to the new receiver and therefore lighten the matrix and

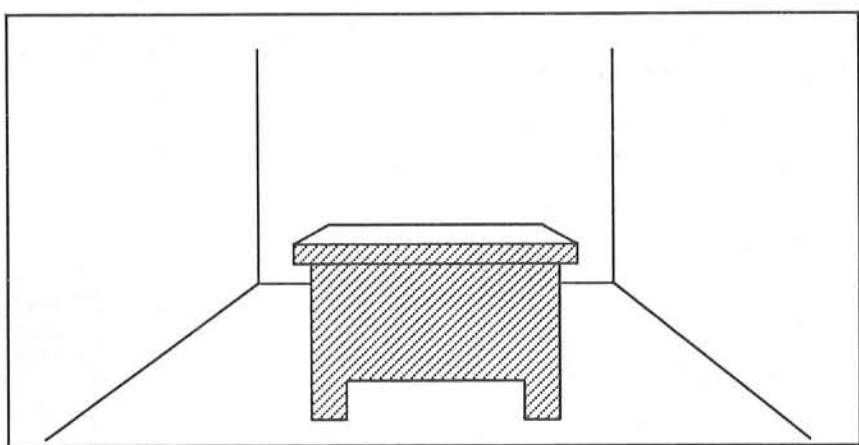
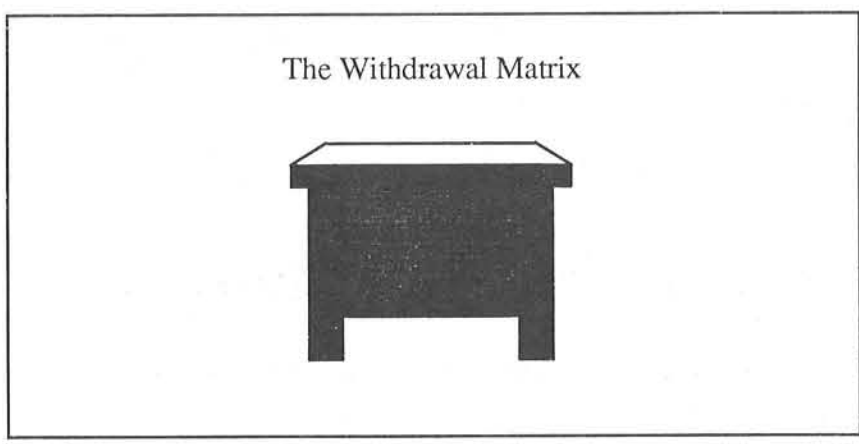
labs to consider, since most felt that it was easier to make the set of matrices over and



possibly save an over exposed set of matrices. The idea had some merit but was too unpredictable for most

correct the problem the proper way. In fact, most labs, including my own, felt that this was too complicated and inconvenient a method

for correcting a bad set of matrices. As a result the system never really was used by any of the professional labs. One of my former students, David Schrader, an instructor at Brooks Institute in California, sent out a questionnaire to all of the Dye Transfer labs that he could find in the U.S. and Canada. (over 90.) The survey asked many questions about what kind of film and developer was being used for making separation negatives and masks and also what kind of procedures were being used to make the separations, and so on. One of the questions dealt with the "withdrawal" matrix. Most labs reported that they never heard of it or that maybe they did, but couldn't find any reason to use it. Some labs even said that it was a waste of time to even consider it. Before I go on and explain to you how this system really should be used, lets examine what happens when you



The desk alone will be lighter

use the system as described by Kodak. If you have a **negative** image sitting on you transfer table and transfer your "good" **positive** matrix to it, the following will occur. The Highlights in the negative matrix will be heavy and have a thick emulsion and the thin parts of the positive matrix will be transferred out of the "good" matrix. Time the transfer for 30

seconds. Then separate the two sheets of matrix film and you will notice that some of the dye from the "good" matrix has indeed transferred to the withdrawal matrix. Place both sheets in separate trays containing 1% acetic acid rinse. At this time place a sheet of prepared dye transfer paper on the transfer table and continue to make your transfer of

the first "good" matrix . You will notice that the lightest parts of the image will have been lightened even further giving you the illusion that the image is lighter and since the shadow parts of the "good" matrix is represented by a light area on the withdrawal matrix the result will even look contrastier. This system must be repeated on all three transfers which makes one feel that he may need an additional transfer table complete with register pins. By this time, you too, must be saying to yourself that this system is loaded with all kinds of pitfalls and unknown results. The results are even more unpredictable if you decide to make a positive image against which to transfer some of the dye out of the original matrice. In this case, the image will lighten with a reversed effect. The shadows will be lightened while the highlights remain in the same general density.

However, there is a valid and perfect reason for using the withdrawal matrix. The system is different but will work with accuracy. Frankly, if I made a set of matrices that were too heavy, I would chuck them out and remake the matrices to the proper density. But, suppose that you had worked on a very complicated four piece strip-in and the exposures took a long time to complete in order to properly expose a set or two of matrices, and right in the middle of this print is a area that for some reason just came up too dark. Could you possibly just lighten up the offending area with just one piece of matrix film and save the job without remaking an entire four piece strip-in over again ? You can bet your life that you can.

Here's how;

This is a case history. While working on a complicated four piece strip-in of an office

scene with people at their desks, one of the desks right in the middle of the shot reproduced too dark. In the original transparency all of the detail in the wood grain was evident but was almost getting lost in the printed version. The rest of the print was very acceptable, but this one desk was an eyesore because it was too dark. I dried one of the matrices and placed it on pins over a light box. I made a cut out of the desk (very accurately) using Dico-Plast (an orange plastisized sheet of paper.)

I then placed this sheet of cut out Dico-Plast on my registration easel on pins and then punched a sheet of matrix film, emulsion up, and placed it on top of the cut out sheet of Dico-Plast. Make sure that the Dico-Plast is bigger than the matrix film. Tape them together so that they will remain in the proper position to each other. Then remove this

taped package from the register pins and turn it over. Turn on your vacuum system and the entire package should be sucked down to the easel. Using your enlarger as a light source, and with nothing in the carrier, make an exposure that will produce a medium gray tone. (pre-determine this in advance by making tests on small sheets of matrix material.) Process this sheet normally and dry it. The next step is to make sure that everything fits like a glove. Check the cut-out against the original by placing both sheets on a light table and on pins. If everything fits right, then proceed to make a transfer. The first thing to do is to rinse the first matrix (usually the Cyan) but instead of transferring the image to the sheet of paper, transfer it to the new sheet of matrix film. Time this transfer very carefully. (try 30 seconds). Next, remove the "good" matrix from

the other and proceed to transfer it to the sheet of paper. I found it convenient to have a second set of pins next to the ones needed to make the actual transfer. Do this for all three sets of matrices. Make sure to wash the withdrawal matrice each time you use it and dry it as well. If you roll out the withdrawal mat on a clean surface and get rid of most of the moisture by using a towel on the base side, you can dry the matrice very quickly. You will notice a remarkable difference in the image. It will have been lightened up without any side effects, such as increasing or decreasing contrast. In our case, the grain of the wood in the desk came to life and saved the whole job with just one piece of film. And the bonus here was that we could alter the color balance and density of the desk so that we could accurately portray the color and density to the clients

satisfaction. The final result took more than one attempt to find the right amount of transfer time for each of the colors but gave us the satisfaction of being able to control the whole effect. To have made the entire job over so that we could have improved the job would have taken another couple of hours and I doubt if it would have been any better.

Color Correction

Another example of how a system such as this can work is as follows; We once recieved a job from a client. What was needed was a 20x24 dye transfer color print from a 2 1/4 transparency. The ad was to be for Levi's trousers. The image consisted of three young boys who happened to be bicycle champions and were photographed from the knees to their necks, all wearing the same Levi's pants and red shirts and they were all holding helmets. The

A precise method for color correction

client thought it would be a good idea if all three helmets were the same color as the blue Levi's. Unfortunately, the photographers assistants and the advertising agency were unable to get all three helmets alike. Only the first boy on the left side of the layout had a matching blue helmet. The other two were black. We were asked to change the color of the two black helmets to match the blue one. We decided to use the withdrawal system instead of a frisketing system such as that we had used for years whenever we had to change the color of a car.

The first thing we did was to make the best possible print to match the transparency that we could, and then we proceeded to make a very accurate cut out of the two helmets at print size by using the matrix film as a guide.

At this point either Rubylith or orange Dico-Plast could be used. We used the register pins on a light table. Next, we placed this cut out of the two helmets on the easel, upside down. Then we placed the new and unexposed matrix film on top of the cut-out, emulsion up. We then taped the two sheets together. We turned the sandwich over and vacuumed it down tightly. Using the enlarger as a light source we then made an exposure that produced a pretty dark grey. (we made tests to determine the density that we wanted.) Once this was accomplished, we proceeded to make a transfer of the image. We transferred the cyan straight. We pre-transferred the magenta to this withdrawal sheet for 30 seconds prior to finally transferring it to the

sheet of paper. We then did the same thing with the yellow. What we did was to alter the amount of magenta and yellow that would transfer to the final print. The first print looked pretty good. All three helmets were blue. Not the correct blue, but close.

The next print needed a 40 second withdrawal from the magenta and a 60 second withdrawal from the yellow. By the time we made the third print, the color was just as close as one could get. So we delivered the job and all went well. I guess what I'm trying to say is that the print was successful because of the infinite amount of control that I had over the color of these two helmets.

Sparkling Highlights with Cibachrome

If you are in the business of making Cibachrome color prints you probably have heard some one, somewhere, saying that the material is too contrasty and will not allow one to make a good print. Well, that statement is not entirely wrong, however, if you have been making Cibachrome prints that are considered "professional" then you must be making masks to reduce the contrast of the original transparency. Some labs have even considered "flashing" as one way of reducing the overall contrast of the material.

There is really only one way to reduce the overall contrast of the Cibachrome material and that is by very select and controlled masking.

Just what is masking.

For those of you who are unaware of just what a mask is, let me give you a brief

explanation.

A mask is a very soft negative made by contacting the original with a low contrast film and exposing it to light, then processing it, and after washing and drying, place it in register with the original and use that combination to make your print. The result will be a less contrasty print.

That is basically what masking is and does. Actually, masking goes a lot further than that, but for simplicity's sake, let's all agree that what I just described is a mask. It's possible to actually make a mask to the exact percentage of contrast reduction and make superior prints as a matter of habit and fact. The methods are a little complicated to explain just now, but believe me, it is very possible to make outstanding Cibachrome prints if you know how. The main reason for this article is to correct some of the

highlight areas of the photograph that become affected when making contrast reducing masks. Remember, the mask is actually a negative and has darker areas in the highlight sections that anywhere else. This sometimes causes a loss of contrast and detail in the highlight areas of the photo and as a result could cause you to have many remakes.

How can this area be improved ?

The Solution is very simple. If your highlight areas are becoming too grey and lack snap and detail, try making a mask that is actually a positive that you will add to your original (positive). The object here is to make a mask on a specific material such as Kodak's LPD4 (a reversal film) by exposing the original by contact to this reversal material. By keeping the exposure deliberately short, the only detail that will be

visible will be the highlights.

Add this piece of film to your transparency in the following order:

1. Place contrast mask on transparency and place in enlarger carrier using registration pins.
2. Make your main exposure using vacuum and register pins on the easel.
3. Remove carrier from enlarger and replace contrast mask with this mask,. Let's call this a "**Bump**" mask.
4. Give an additional exposure on the same sheet of paper. (usually about 100% more.)

This is entirely a technique that requires eyes and taste so as not to abuse the highlight area by making it too detailed or too brilliant.

The results can be just the thing that will

make a difference between a good print and a spectacular one. This same technique can be used on any positive type material such as Cibachrome or Kodak's Type R or any duplicating color film. This technique can be used in many ways. *For instance*, if you wanted to increase the brilliance of stars in the sky or if you wanted to make the bright lights of the city in a night time exposure, stand out

even more than they do in the transparency, this technique works wonders.

Even a simple shot such as a white shirt with "white on white" designs will virtually "jump" off the page (so to speak).

The list is really endless. The trick here is not to over do it.

Once you try this

system, make sure that you don't end up "sparkling" everything in sight.



A print without the "bump" exposure



And with the "bump" exposure

If you don't mind travelling

This is just a few lines to let you know that I, Bob Pace, am involved in teaching and writing and occasionally making a professional color print for a client. I'm supposed to be retired, but I think I am more busy now than I have been for a long time.

My teaching is really involved. I teach a number of courses here at my lab in Victorville, Ca. I hold a five day workshop from 9 to 5 and it is intense. For example; The Dye Transfer course involves learning the **why** and **when** of

masking as well as the **how**. I explain and show students how to make separation negatives that will fit the enlarger they presently own and how to approach the problems of color printing from a professional viewpoint. I also teach a very serious course on Photo Composition. This involves the use of different masking techniques as well as materials. When you finish this course you will better understand just what it takes to make a professional

special effect. I also teach a course on Cibachrome printing. This course is primarily concerned with the proper masking technique and color correction ideas. Each of these courses lasts for five full days. The cost for any course is \$700. This includes all of the materials and all of the lunches. A phone call will reserve a time for you. If more than one employee from the same company would like to be included in my class, the cost for the second student is \$400.

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