

KEEPING PACE

A Monthly Newsletter Devoted to the Darkroom Arts

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Further reduction of Kodak's materials

Kodak is still at it. They have decided to curtail and even discontinue some of the basic materials that we have been using for years.

One major film was Super XX. It was a film used for many years by yours truly and many others. However, Separation # 1 is still available and so is T-Max 100 film, as well as other panchromatic films from different manufacturers.

They have also discontinued the production of my favorite item, the three step Grey Scale and color guide, known as the Q-6c.

However, the grey scale part of this little gem can be reproduced by making a series of exposures on a sheet of any continuous tone film and after processing normally, finding the steps .5--1,5--2.5.

These three steps are all that you will need to make

the necessary gamma charts.

I wonder what will be next?

Kodak has already quit making the Pan Kodalith film many years ago. I have recommended using either Agfa's P--911 or Fuji's 100 Pan Litho. Both of these films work great, in fact even better than Kodak's Pan Kodalith.

Most of you can't seem to find a company that will handle these materials. My advice is to locate a major lithographic film supplier and these items are usually easier for them to find them. In the Los Angeles area a company called ISE (Image, Supplies and Equipment) located in Glendale CA (310-608-3280) can find what you are looking for.

Look for such a supplier in any other major city.

I have received many calls concerning what kind of easel to purchase and how to keep it moving from it's place on the table beneath the enlarger.

There are a number of quality easels on the market. However, my choice for an easel may not be yours. I believe in using vacuum to keep my paper or film flat. There are a few vacuum easels that have scored lines running around the outside dimensions of the film size, and these work fine. But I prefer the kind of easel that has thousands of little holes in it's surface, and is center loaded. This means that no matter what size film or paper is placed on the easel, it will be sucked down tightly and will not move. One such easel is called "By-Chrome."

The ISE people in Glendale can get tit for you.

Another problem to consider is this. Do you plan to make multiple exposures on one sheet of material? If so, consider using registration pins on the easel to keep the paper or film in the exact place. For this I recommend either a Kodak Matrix punch (if they still make one) or the magnificent punches produced by Condit Mfg. in Sandy Hook, Ct.

The matching pins supplied by either Kodak or Condit can easily be placed into position on the easel, so that the paper or film can be removed during masking or filter changing and replaced when ready for the next step.

How would you keep your easel from moving on the table beneath the enlarger once you have decided on a permanent position for the print? You could use Gaffers tape to fasten the easel to the table, or you could use a series of metal bars and clamps to do the same thing. However, why not simply get a sheet of metal from a sheet metal shop, cut to the size of the table top, and contact cement the sheet to the table. Then simply purchase a few plastic magnetic pieces and using the same contact cement, fasten them to the bottom of the easel. The easel will not move unless you want it to. And if you want it to, it can be gently coaxed into an

exact position with ease.

I am assuming that you already realize the importance of a registration system for the carrier of your enlarger. This will include the film punch and exposure device for producing the masks and other films for use in the carrier.

One of my subscribers is concerned about getting the soft edge he needs for producing a realistic strip-in. Apparently he is using an enlarger to make the image to size on the easel. However, he has been using the masks that separate the two or more elements on the easel right on top of the unexposed film or paper material. This is wrong. The mask cannot be produced with a soft edge that matches the other soft edge of the second mask (or frisket,)

The two soft edges cannot be joined together in this fashion. Condit has produced an aerial masking device that places the masks above the image on the easel and it seems to work, but it forces you to expose through two sheets of glass.

Whenever an image is exposed through a piece of glass a specific amount of distortion is produced. This is especially true if the glass is somewhere between the image and the lens.

However most enlargers have glass carriers that hold the transparency between them, in tight contact. If the bottom glass is an anti-newton glass, then the image will be rendered diffused. If the anti-newton glass is above the film in the carrier, the image will remain sharp. The best solution to the glass effect was an idea that one of my competitors used when I was in California. The carrier was a vacuum carrier. The carrier had a vacuum tube running from it to a vacuum pump. The film was placed in the carrier on pins for registration, or simply just positioning. A vacuum sheet with the appropriate cut out was then placed over the image. Vacuum was engaged. The entire sandwich of one piece of glass, film and the vacuum sheet held the entire assembly in position. The carrier was then turned over and inserted into the carrier space. Needless to say, a special carrier was necessary. Guess who made the carrier? You are right. It was Condit Mfg. The advantage of this kind of carrier? There is nothing in the path of the image as it passes through the lens. Nothing.. Think about that for a minute.

If you ever made prints with a glassless carrier, you know how great it was to have 4 less surfaces with which to deal.

I used my old Omega D2 for years and many times I made prints without the need for any kind of glass at all.

But if you are interested in producing Cibachrome prints and want to include some sort of contrast masking, then the image must be held in an absolutely flat position. Two sheets of glass will do that, however, a vacuum carrier will also do that and not add the glass for the image to travel through. Refraction is the major cause of having unwelcome events screw up your printing session.

I once had trouble with a certain kind of image. I was making a Dye Transfer print from a 2 1/4 sq. image. I decided to use the enlarger to make the negatives to a size that would fit on a sheet of 8x10 film.

The image was of the grill of a Rolls Royce car. Included in the shot was the license plate and the very sharp details of the grill work.

When I produced the matrices, I noticed a ghost image of the grill work and the license plate off to one side of the print. Where in the world did that come from? I examined the separation negatives and nothing was amiss.

I noticed that a ghost image on the easel moved as I moved the carrier, but at a different rate. What was

happening was that the reflection of the image was bouncing back to the bottom glass in my carrier and it also reflected the image and reprinted it again. Sounds crazy? Maybe, but I knew what to do to eliminate the problem. I made a makeshift vacuum carrier and eliminated the problem. If there were a way to eliminate glass completely, it would make for a clearer image.

When making a Cibachrome print, or any other kind of reversible print, making a contrast mask is a simple chore. However, the first area that the contrast masks attack are the highlights. Instead of having sparkle and separation, the prints are usually dull and flat. How can one get away from this kind of distortion of the original?

Make a highlight mask first and add it back to your original when exposing the contrast mask.

In order to make any kind of mask that will eventually be used in the enlarger or any where, it is essential that a quality registration system be used.

Just what kind of registration tools are required.

There are 4 pieces of equipment.

1. A film punch for the size material you plan to use. This can be an exasperating

experience. Most of us refuse to pay a lot of money for something that seems so simple as a film punch. Actually, you can purchase top quality paper punches from quality stationary stores. You can also get the pins that fit these holes from any lithographic supplier. So why use an expensive company to make the parts you need?

The answer is accuracy. You must be within 1000th of an inch in fit to be serious about registration.

2. An exposing sheet of glass with the necessary pins built into it. This sheet of glass can be used in a contact frame or a vacuum frame. The question that arises is, what kind of glass? Sheet glass used for windows? Not on your life. The glass should be float plate glass. You glazier can explain how glass is manufactured. All plate glass has a flat surface on only one side of the glass. Is it imperative to have a flat piece of glass? What do you think? Condit knows the difference.

Even the glass is a problem. The better manufacturers of glass for photographic use usually produce a water light flat plate glass. You won't find this at your local glazier

What about the pins. How are they made and how are they inserted into the glass? The pins should be made

ever so slightly larger than the hole produced by the punch so that the fit is tight. The distance between the pins must be adjustable so that it will fit perfectly. If the pins do not have a concentric circle in their production, they will not work. The pins must also be hardened so that they will last.

3. An enlarger carrier with the same set of register pins built into it's glass. This means that an accurate match of the pin size and distance apart must be perfect. I used to check the distance apart every time I received a new pin glass.

In order to eliminate Newton's rings, I recommend using a sheet of anti-Newton ring glass as the top sheet.

4. A method of registering the carrier holder to the enlarger, and in turn, to the wall or other immovable object

With these relatively simple pieces of equipment, you can make very intricate prints that include contrast masking, highlight restoring color enhancement, and even complicated multiple exposure prints.

If you have a Durst enlarging system, they can provide you with all of the punches and pin systems that I have described.

If you don't have a Durst system, then call on any machine shop that can make the pieces for you. The reason I mention Condit so frequently is because I know of his work. There are others out there who can also make excellent equipment. Don Mitchell of Kansas City, MO. is one such person. However, Don usually only makes things for his own use.

If you own an Omega or any other enlarger that moves up and down in an incline, then a simple piece of angle iron purchased at any local hardware store can be mounted on a wall at the same angle. A second flat bar is attached to the enlarger and is used with a locking device to the angled iron piece to keep it rigid. A simple tool known as a "Vise Grip" will keep it from moving from left to right. The other options on any enlarger have locking devices for the up and down movements.

In effect, you can make your enlarger as tight as a drum and difficult to move in any direction. This is imperative if you are serious about accurate fit.

A word of caution for Durst owners. There is a simple slide locking system in the carrier that will move if any effort is used on the little locks on the side areas for holding down the glass.

Making a highlight masks seems to be a difficult job, but whether you have a densitometer or not, here is a tip. Make a gadget that will allow you to make many exposures on a single sheet of material. A simple highlight mask can be made using a simple orthochromatic film such as Kodalith Type 3 or any other ortho Litho film.

For a contrastier developer try using Kodak's D-11 undiluted at 70°. Make a series of short exposures by contact from any grey scale. The third lightest area is usually around the same degree of highlight coverage in most transparencies. (About .55) The result you want is of an area that reads .50 (approx.). When you find this area, and if you have a densitometer, read the original step.

The next time you want to preserve the highlight structure in your print, and the reading of the highlight area is the same, you will know the correct exposure. If the transparency's highlights are different, then either expose for more or less. With a densitometer, it is a snap.

An example.

.25	= a 2.9 sec exp
.30	= a 3.2 sec exp
.35	= a 3.6 sec exp
.40	= a 4.0 sec exp
.45	= a 4.5 sec exp
.50	= a 5.0 sec exp.
.55	= a 5.6 sec exp
.60	= a 6.3 sec exp

The production of a highlight chart is quite simple. It will allow you to determine what strength of highlight mask to produce. If your imagination is working, you will soon realize that the overall quality of the print has more to do with your ability to make things happen than what may be or not, in the original transparency. This is called being creative.

I recently had the pleasure of once again working with the Jobo ATL2. This ingenious little processor will allow you to make images or process films without being there to supervise the timing.

Joe Holmes of Northern California, uses the top of the line ATL 3 Jobo which has the capability of using one gallon (or larger) bottles behind the unit, and as the prints are being produced, the smaller bottles in the tempered water baths are constantly being filled and adjusted to temperature. This allows Joe to expose ten or more images in advance and then load ten or more tubes and each are replaced at the end of the processing cycle and this allows a series of prints to be processed without stopping. Joe is almost ready for the adaptation of his work to the UltraStable process.

He already has a machine that will allow him to use

UltraStable pigments and has recently purchased a new Power Macintosh called the 8100-80 which is the most powerful Mac yet made. The AV -VRam model sells for \$5700. The addition of the rest of the "tools can add up quickly.

The machine is capable of producing a file large enough so that an Iris Print can easily be produced and used as a proof prior to making expensive screened negatives.

The frightening part of this entire color printing time and of the equipment being purchased is the possibility of becoming outmoded soon after purchase.

For instance, The color printers now being offered by various manufacturers vary in price greatly.

The Iris 20x20 inch proofing printer costs around \$20,000. There are a number of new systems emerging that will shatter the prices. One such instrument is the Epson color machine. It will print a reasonable image on 8 1/2 x11 paper and if a really good print is needed, a special paper is provided and the quality of the print will compete with the Iris system. The price? Under \$800. Amazing.

In fact there is now a working system that will allow the lithographer to expose his new plates directly from computer files and bypass

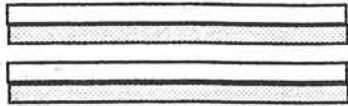
ing any necessity for making screened negatives. The future is even more unbelievable. Instead of using a printing press, a new machine which is currently in the works by Hewlett Packard will allow an ink jet printer to print the magazine page or even a fine art page with pigments that will be considered archival. No printing press, just a fast moving sheet of paper and a jet system.

Oh how I miss the days when black and white papers only came in single contrast numbers and color prints were produced by serious artists.

My thoughts about the new digitized systems are as follows:

Regardless of the corrections that can be made with the new computerized systems, a printer who has the experience of making images in the orthodox manner will have a better chance of seeing a better final print than the novice that only has digitized experience. There will be exceptions to this statement, but I will stand by my feelings from what I have already encountered. Many of the former photographic magazines have articles written and published showing new images as they have been produced by computers. Some of them look pretty bad.

One of the questions I get from my students and subscribers to my newsletter has to do with making a highlight mask for Cibachrome prints. I have suggested in my books and letters that there are only two ways in which to make a highlight mask. It can be either a pre-mask or a post-mask. A pre-mask means that before anything else is done, a highlight mask be made from the transparency by contact.



With the light source coming from below the work table and using a contact, vacuum platen or any other kind of device that will hold two sheets of film in place. The top sheet is the highlight mask film. In this case, if only one sheet is required a simple ortho Litho film (such as Kodalith Type 3) is all that is required. The bottom sheet is the transparency. Accurate registration and a tight fit is required here. A short exposure as indicated on page 4 is all that is required. I recommend using a stronger but still continuous tone developer such as D-11 developer to process the films . 2:15 at 70°.

This image should be contrasty but also very light. The highest density reading should not exceed .50. After drying, replace the highlight mask below the transparency on the same contact system and proceed to expose the principal mask. The result will be that a soft negative image (the contrast mask) will have already been exposed and the highlight area will be transformed into a positive image produced by the highlight mask.

As a result, the highlight portions of the full image will be enhanced by a more detailed and separated highlight area. What makes me specify that the density should not exceed .50? Experience. Anything more dense would produce bright highlights at the expense of the details that we are trying to hold. When a contrast mask is made with a built-in highlight mask, the results will be better and obvious.

My option for a better method of making some highlight masks is to produce a post-mask. This means that a mask is made using a different film and a different technique.

If a reversal material such as Kodak's LPD 4 or DuPonts CRR4 is used they will produce a positive image on contrasty litho film. This will be a very short exposure.

The only thing we want to record on this sheet of film are the positive highlights. The film will appear black with tiny clear areas where the highlights occur. This sheet of film is capable of producing brilliant whites without any problem. This method requires that a contrast reducing mask be made without the highlight mask added to the package. The print is exposed with the contrast mask alone. Then after exposure, the paper is either covered or removed from the easel. If removable is the option, then some sort of registration system will be needed for the easel. The carrier (which also must be a registration carrier) is removed and the new highlight mask (called a bump mask) replaces the contrast mask and the carrier is reinserted back into the enlarger. The paper is either unveiled or replaced onto the easel and re-exposed again to produce brilliant highlights.

No change in the color balance is necessary unless a special effect is wanted. How much to re-expose is a tough question. Testing will let you. Is this another method of producing a creative print? You can bet your life it is.

How many ways are there to skin a cat? Many.

If you are interested in making Type C prints from your transparencies and need to make accurate internegatives, here is a tip for you.

If you plot your own curve shapes you can find the correct exposure and color, pack for the internegative film. It will take time and will require a densitometer. However, almost all of the quality film processing labs that make internegatives have a special hook up with Kodak. All you need to do is to expose an 11 step gray scale and let the lab process the film. They will read the densities and provide you with the exact color balance of your light source and the correct exposure time. I suggest that you use the enlarger color head as a light source or a color head alone.

All you will need to do when making internegatives is to set the color filters and the timer and if necessary, the F stop.

The method then is to simply adjust the light source, timer and lens setting and use an easel meter to establish the correct light level

When making contact internegatives use a contact frame and place the images emulsion to emulsion.

If you are making enlarged images then first place the original in the carrier, size it up and after setting the filter

pack and timer, use the meter to establish the correct light level by adjusting the lens. It works

In fact, if you are considering making dupe transparencies the system works in the same fashion. Make a good image by trial and error. Record the important items such as color pack, time of exposure and light level That's it. Once you have established a good image for exposure and color you then have the option of becoming creative. You can add contrast reducing or contrast increasing masks to the image, as well as high-light "bump" masks. Working in the darkroom can be creative experience.

How about black and white printing? Is it simple? No it isn't.

Here is why.

I recently worked as a teaching senior in a local lab in Las Vegas. One of the clients was a fine arts black and white photographer. He was very unhappy with his prints. No one else in the city was prepared or experienced enough to make a quality print.

I was called into the office in the hopes that I would assure the client that this was about the best that could be done. When I saw his 2 1/4 negative of Boulder Dam and the resultant print, I was in sympathy with him.

I told him that I would make the print for him and not to worry.

The first thing I did was to get rid of the resin coated paper. There is noway that this kind of paper could compete with a good quality single contrast Kodak's Elite paper or Ilford's Gallerie, I got some fresh paper and proceeded to make a small 10 " print. After examining it I began to draw on the paper using black markers which I used to show where burning and dodging would occur. The image consisted of the face of Boulder Dam and the scenery around it. Part of the image was in bright sunlight. This area needed about a 350% increase in density. Another area was in bright light also but needed less burning, about 200%. Another area needed about 50% and a small area needed about 10% and another area needed to be dodged about 35%. This sheet of paper was my "map" for this particular job. The final print needed some fine tuning of my burns and worked out so well that the lab now has a steady customer. This sheet was also placed into his file in the event that he would come back for reprints.

All of this action was based on the fact that when I learned how to make professional prints I soon realized that there was never a print

that could be produced as a straight print. I doubt if Ansel Adams ever made a final straight print. Ed Weston made contact prints but I am sure that they had some sort of tissue between the light source and the image in order to make a better print. I can't prove this last statement, but based on my experience, once I learned what it took to make a great print, I never again made a straight print, except for proofing.

The great thing about the digitized systems is the ease required to do all of these steps. I have seen the curve shape distorted in such a way as to only bring out one area of density.

EverColor has introduced a new chromogenic color print called the Dye Print. It utilizes the scanner and the computer and does not need the enlarger at all. The results are extremely sharp and are supposed to have a life of 50 years. The samples that I have seen are encouraging.

The battle goes on between the different color processes. There is no winner or loser. In fact we are all winners. Some of the results I have seen indicate that there is room for more than one kind of print. The Carbon processes are rapidly closing the gap between themselves and Cibachrome. I am awaiting the announcement from Dr. Patterson on the

release of a news bulletin that will announce the rebirth of the Dye Transfer process. Kodak will be pleased that they no longer have to put up with a process that bore them little profit.

I should be getting a sample of the matrix film in a short time and I will personally examine the results.

The gallery business is rather tricky. Some galleries rely on sales of standard and old relics that are more of a historical value than that of an art connoisseur. Some old Mathew Brady prints are priceless only because of their time in history.

Recently a pile of old Carbro prints was discovered that belonged to one of the original pioneers in the business of making color prints. They were ballyhooed as the find of the year.

However, when I was an apprentice at Evans and Peterson labs in NY in 1948, this gentleman's work's were considered way below our standards of quality. Yet his work is being touted as works of art. They consisted mostly of nudes and the flesh tones were much too red and otherwise colorless, still they were regarded as fine art. It's all in the eyes of the beholder. Well, not really.

I have a habit of becoming incensed at the idea of incompetency valued even more incompetency. It's like having a plumber as an art

critic. Sorry about that. I should apologize to the plumber. The most disturbing news I have received lately is that Bob DeSantis Labs will be closing at the end of November. This is a crime. One of the finest Dye Transfer technicians in the business had to close his doors because of the change in direction of the advertising agencies in their choice of color correction and printing.

Bob could have changed direction as well, but his dedication to the fine print has taken its toll.

Good luck Bob. You and your son Robert have served the advertising community very well over the past 40 years. Even though we were competitors we were very good friends.

The fine art field is now the only refuge for the fine art printer. I have converted many young people to the use of the Dye Transfer and Cibachrome processes. Most of them only do it for themselves, which is right. The only true consideration is for the person who has the guts and gall to do the entire process from the very beginning.

Thanks,
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