

# KEEPING PACE

A Monthly Newsletter Devoted to the Darkroom Arts

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## It's Almost Like Music

Comparing Hi Fi audio to fine printing makes for great comparisons.

For instance:

The deep resonating tones of a symphony orchestra can be compared to the deep shadows of any photograph. The details are what make it accurate, not just a dark foreboding area with nothing there but dark blacks or greys. In sound, the deep areas are just as important. If the deep chords of a pipe organ are lost then some of the importance of the musical piece is lost.

Have you ever made a print and lost the shadows? Don't say no.

Holding the deep areas in sound are a result of the recording technicians and their recording equipment, and much know how. The same can be said for the fine art printer who knows the importance of the shadow areas, but more

important, knows how to produce them.

The knowledge of masking is a must, whether it is used to open up dark areas or the purposely cover them up.

This is what Hi Fidelity should be all about. It is not enough to just produce a print or an orchestral sound just as it may sound to a listener, no matter where he or she is sitting in the audience, or whether the print is viewed is bright sunlight or in moonlight.

How we listen or see is most important.

The middle tones of an orchestration can be compared to the middle portions of a print. Are we making a crisp image or are we making a smooth crackle free sound? The kind of recording equipment or the kind of enlarger can also make such a difference. If a condenser enlarger is used to make a print, the details in all parts of an image will contain crisp

detail, if a diffusion enlarger is used, then the image may be less crisp. It all depends on what kind of result you are after. The same goes for music. If the music audio is a large area with reverberating sounds then the music will have a muddy effect. If the room has much sound absorbing drapes and other sound dispersing materials, then the sound will be crisper.

It is in the highlight areas that the comparison is most pointed.

In an orchestra, the violins are an important part of the sound. If they are muffled, then the high area is lost. In a print, the high areas are at the top of the curve shape and are always lost unless something is done to maintain the highlights or they too will be lost.

The recording industry has many devices to hold the high end of sound, and the

printing community has the same ability to maintain the highlight areas or even improve upon them.

Let us concentrate of the actual sound of a piece by Rimsky Korsakov, a master at orchestration. He used his skills to make his music as if a painter were using his palette for color. If a poor recording of his "Flight of the Bumblebee" were produced, the separation of the sounds would be lost.

In making a print, the color and separation of the differences are important to the printer. The same criteria applies.

This is where the new digitized systems are gaining ground. They have the ability to capture an image and reproduce it within a straight line area. All films do not have a perfectly straight line. The curve shape bends at the top and bottom of the image. As a result, the highlight areas are always in danger of losing their details. And when a print is made, even more loss can be expected because the paper has an even more pronounced loss at the top and bottom of its own curve shape. So, who said that printing was easy? Making a simple black and white print is no longer a simple matter. If you are a serious black and white photographer and want to express yourself with the limited range of black and white paper, you must know

exactly what you are doing and why. The process seems simple enough. Just a few trays and some developer, fixer and wash water. But it is really a complex process.

The problem of contrast is of primary importance. The first thing you must look for is the contrast level of your image. It boils down to your own personal preference. Do you want an open airy image, or a deep contrasty startling image? You must make this determination before you even decide on what grade of paper you are about to use. If you use variable contrast papers, then the problem is somewhat diminished, but the quality of the RC papers (which most variable papers are coated on) can cause a problem. The rich deep blacks usually associated with the results produced by rag bond bases are lost with most of the RC papers. The convenience of the variable papers are of course excellent. You can print one part of the image with a # 2 grade and another part with a # 4 grade. The results can be spectacular.

Producing a deep rich black is done in a number of ways. The most obvious is to make sure that you develop your image to the optimum time in the developer. Don't cut the time short, or overextend the time either. If you overdevelop the paper, what will happen is that the shadows

will reach their maximum and not get any blacker, but the mid tones and the highlight areas will keep on developing until the entire print is spoiled. **Answer this.**

How long can you develop a sheet of paper? How long can you develop a sheet of film? The same problem exists. Somewhere the place is reached. It is a point of no return.

The production of a color print is considerably more complicated. Now there are layers of images to contend with. If you are making a relatively simple color print such as a Type R or even Cibachrome, the manufacturer has done about 90% of the work for you. The contrast range of the material has been built into the material so that the majority of images can be printed by the most simplistic production equipment and by the least knowledgeable of darkroom technicians. It is like going to a concert and bringing your own hand held recorder with you in order to capture the great sound of a symphony. Sure, it's possible to make a print in your bathroom with a simple enlarger (with or without a color head) and process the paper in a simple drum system. But if you are serious about the your work, you must learn about the options open to you.

In order to make a great print, you may have to resort to masking in order to bring the contrast of the print to your expectations. If you fail to recognize this option, then you are never going to get a print hung in any quality gallery.

As it was with Hi Fi music, the ability to bend and reconstruct the image so that it fits the straight line areas or is purposely distorted in order to make a great statement with your image, will be up to you, the artist. Knowing what to do, and how to do it is what life itself is all about.

**If you don't know, learn how it is done.**

There are a number of books about any of the color processes available (including mine.)

The more complicated processes such as Dye Transfer and Carbro require separation negatives. This is another world.

Hi Fi was never this good. Being able to change the way an image looks by using masks is the main method used to bring great images to life.

The brilliance of an image can be enhanced by the proper highlight masking and especially the great specular highlight masking efforts. The color balance is up to you, the darkroom magician.

Remember, you begin with a transparency.

That is all the help you will ever get. You must know the density requirements of your enlarger before you begin to analyze what must be done in order to make a great print.

You must know the limitations of the film to be used for separations.

Kodak has seen fit to eliminate most of the famous standby's such as Kodalith Pan, Super XX and many other films generally used for making separation negatives, but it is still possible to find the correct materials.

You will have to learn how to handle three sheets of film that are exposed through three different separation filters to have the same range in each sheet even though they are processed to three different exposing and development times. The knowledge required for this kind of printing insists that you know for sure, what the process is all about.

How does it work? Get an instructional book on the subject.

The only viable book on Dye Transfer is mine.

Making separations for the Carbro process (UltraStable) is just as complicated and with one additional hitch. The three pigments have speeds all their own. These three different speeds must be addressed before any additional changes are

made because of difference in the densities of the negatives. Complicated? You bet.

Is all of the effort to learn these complicated processes worth the trouble? You can bet your life on it.

**Incidentally, the Dye Transfer process is back. Thanks to the diligent work by Dr. Jay Patterson,** the matrix film mystery has been solved. The new matrix film works in the same way as did the old material. The new film is slightly slower, but unless you are actually comparing speeds, you won't know the difference. The chemistry will now longer be available through Kodak, but the formulas will be provided.

The Dyes are the best ever. They can finally be considered archival. The colors are exactly the same and can be retouched in the same fashion as before, with the addition of a new yellow that will produce a better and longer lasting image. The receiver sheets can be either paper or white polyester.

The announcement has yet to hit the magazines or the papers. But if you want more information about this project, give the good Dr. a call at 713-768-4581 or Fax him at 713-963-8650. He will be glad to hear from you.

Let him know of your needs and he will answer any possible questions about the coming announcement of the return of Dye Transfer.

A new group of technicians is in the Dye Transfer field.

### **The company is Digital Mask.**

This is a company located in New Hampshire and is using high end digital equipment and plan to offer to the public digitally separated Dye Transfer prints, possibly using their own Matrix type film for in-house use and possibly for sale to the public. They have tested dyes that are much more brilliant than Kodak's but have yet to conduct any "life" tests. They claim that their prints are much more beautiful than pigment prints. I don't know if they have seen the work of Rene Pauli, of San Francisco. His work is anything but dull. I have great respect for these young people that want to increase the awareness for quality work. Their claims have yet to be substantiated, but I know of them and I believe that they have much to offer.

Many of the former Dye Transfer labs have been toying with the UltraStable process because it allows them to make prints with their own original negatives.

**Frog prince Labs in San Francisco** is just one such lab. They are probably the last of the commercial Dye

Labs (and probably the best) and are experimenting with UltraStable.

They also make the best C prints anywhere.

If you are in business and are in danger of losing out, then the decision to join the fray is important. The chance for a slow transition is available and the loss of one part of the business won't be as dramatic a change as it could be.

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### **Newton Rings**

I received a call from a reader who wants to know how to get rid of Newton rings.

He is using a Saunders 4x5 color head enlarger with Condit's registration carrier. He uses anti Newton ring glass as the top sheet in the carrier. However, one of his images has a large expanse of sky and he still gets a rainbow effect caused by Newton rings. He wanted to know what to do.

Could he use anti Newton ring glass on the bottom layer as well as the top? I don't think that this was a good idea. The bottom sheet of fine grain of the anti Newton ring glass would do 2 things. First it would diffuse the image enough to make it too soft. Secondly, the actual grain of the glass would be visible in the print. The larger the print the more objectionable it would be.

My recommendation to him was this:

Purchase a can of Arid Extra Dry Deodorant (unscented) and shake the can, spray some into air, let some of the heavier particles of Aluminum Hydroxide fall then pass your glass or transparency into the remaining cloud of stuff. Some of the very fine particle will adhere to the glass. If the parts are small enough, then you can get a Newton free print.

Or:

Get a Ciba carrier from Condit. This carrier has pins built into the glass and the bottom glass is cemented in position and is leakproof and has reservoir all around the glass area. Then use an oil system to get rid of Newton rings, as well as dirt, scratches, and most importantly, **refraction**.

Are these good enough reasons to use some sort of an immersion oil? You bet. The oil is placed beneath the transparency and between the transparency and any mask and then between the mask and the top glass. Squeeze the glass together and all of any trapped air bubbles will flow out. Vacuum up any surplus oil out of the little reservoir that are built into the carrier. Clean the top of the top glass with Windex as well as the bottom of the bottom glass. The results will astound you.

If you have trouble finding where to get some silicon, let me know.

The use of any immersion oil (I prefer Silicon by Dow Corning # 200 -100 viscosity) will drastically eliminate any of the above problems.

Another way is to have Condit produce a vacuum carrier that will fit into your enlarger, upside down. To use this piece of equipment properly, place the mask into the carrier first, against anti Newton glass, emulsion up, then the transparency, also emulsion up. Place the outside mask in place and activate the vacuum, and everything should be vacuumed up and tight into the carrier then turn the carrier over and place the carrier into the enlarger. There is no bottom glass. As a result, there are 2 less surfaces to pick up dirt or Newton rings and now refraction. Think of it. One of my very successful competitors in Los Angeles used this system and made beautiful prints.

However, if dirt is embedded in the emulsion, then the simplest way is to wash the transparency. My good friend, Bob DeSantis used to wash every transparency that he received, in warm water and photo flow, then simply used diluted Photo Flow and hung to dry. The result was that every image he worked with was spar-

kling clean to begin with.

I once received a group of 35mm Kodachrome slides that had been in a plastic binder for almost 30 years. There were literally, tens of thousands of little pieces of dirt embedded into the emulsion. We were to make 16x20 prints of these images (25 of them)

I tried the DeSantis approach and even though I got rid of many little pieces of dirt, there were still thousands left in the emulsion. So I purchased a small jewelry cleaner, the kind that vibrate at high speeds (ultrasonic) and placed each transparency into this bath of warm water and Photo Flow and vibrated the daylights out of it for up to 30 minutes each. It finally worked.

The world of color is still reaching out to new frontiers. A new digital system such as Adobe Photoshop is fantastic. Ansel Adams would be amazed at what could be done to his images in a matter of minutes, and I am sure that he would be pleased to know that it could be done. What really counts in this business of making fine art prints is the final image, regardless of how it was done. The beauty of doing it by hand is still the best challenge one can ask for.

However, the ability of any amateur photographer to do

what has taken years to learn is overwhelming. To think that my 50 years of experience is being challenged by young upstarts fresh out of school, or training seminars is frightening. Then I realized that what I knew about photo composition is more than just placing images, but how the image should look and how to get rid of edges that are annoying.

I haven't given up the struggle yet.

Another complaint I receive constantly is. **"How can you accurately read the densities of a 35mm transparency with today's conventional densitometers?"**

Not too accurately, I am afraid.

The easy answer to this problem is to obtain an easel meter. There are 2 such meters on the market today. One is manufactured by ZBE. it accurately can read the density levels of the highlight and shadow areas of the image.



In addition to its many uses, it can be used to repeat a light level most accurately, and it can also be used to zero a white light source then simply enlarge the 35mm image to any convenient size and read the light density area of the transparency and then the low density and subtract the lower of the 2 densities from the other and *voile*, there is the density range.

This unit also has a range of 26F stops

It almost sounds too simple, but really, that is all there is to this problem. I used to recommend the Wallace Fisher unit, but they have decided to stop production of this great unit. There is a new unit on the market also. It is called Pixtronics. It uses a dilal and is very accurate and sells for \$219. I have tried this little gem. it is great.

**Pixtronics, 605 E. 59 th st. Brooklyn NY 11234**

**One of my readers has read Luis Nadeau's Encyclopedia of Printing, Photographic and Photomechanical Processes.**

Did you know that Luis Nadeau owns the only Fresson lab other than the one in France. For those of you who are unfamiliar with the Fresson process, it is an off shoot of the pigment processes.

In his book describing the Fresson process, he states that the process has serious

setbacks such as poor repeatability, registration, muted unsaturated colors due to lack of masking, and graininess due to the use of a pin point light source used to enlarge small original contact size separation negatives. My reader wants to know if Luis Nadeau is unaware of the fact that enlarged separation negatives can be produced with relative ease, thereby eliminating the grain?

And what about scanning the original image and producing a set of separation negatives which would eliminate the need for making large negatives by hand? Well, this problem is not easy to solve. In fact it may be impossible. The only other film recorder that does not use the conventional screen dot system is the Agfa Raster film recorder. It is not really a continuous system, but the closest to it. It might be better to have a set of fine screened separations made or just trust yourself. and make true continuous tone negatives. All you need to do this step is to have three trays, plenty of film, a serious attempt to make exposing and developing charts so that you can make enlarged negatives. (My book on Dye Transfer has the needed information.)

Most of you are familiar with my "magic box." This was a simple attempt to be able to look at a transparency and

see if there was anything else that I could do to it in reference to density and color balance.

My solution was not easy coming.

I received a transparency from a art director for CBS records in Los Angeles. It was a 35mm image of Mack Davis, the country singer. Unfortunately, the image was lacking any real color. It looked like it was mostly grey green. I was asked to improve the color. "Make it redder."

I took the image back to my lab. What to do? How could I properly and accurately produce a print the looked redder?

My window started the idea off.

I had a piece of pavement in front of my window that had once been painted red, but had faded somewhat. The color was perfect. As I looked through the transparency, I could see the difference. I made a print using my sidewalk as my color guide. After delivering the job and satisfying the client, I decided to do something about this problem.

The first thing I tried was to place the original transparency on a 5000K light box and add filters to it until it looked right. The idea was good, but the addition of filters to the light box added too much density to the image and spoiled any chance of seeing it properly.

Then it struck me. Why not use a color head from a small enlarger? I purchased a small 2 1/4 head from a supplier, took it apart and replaced all of the elements into a small carrying case so that I could visit a client when he or she had a job for me and place their transparency on my light box. All needed to do was to establish a quality of light on this little viewing screen that looked close to the actual 5000 k light box. I wrote down the new "zero" numbers and then placed the transparency on the little magic box. I would then ask the client if he liked what he saw or would he like to see it warmer or colder, lighter or darker or any of the aforementioned possibilities. Did it work? Wow. Did it.

The first time I used it was for an ad for Mexican Airlines and the image was a 35mm transparency of an old church shot from a slight height and it was shot late in the day and was quite warm from the sun's rays. However, he wanted it it even warmer. The headline on the ad read "Visit the warmth of Mexico." I adjusted the magenta and yellow dials until he said "stop." I remember that I had to add 40 magenta and 55 yellow to the information needed when I made the actual Matrix films. I used logarithm to find the corrections to the grey scale exposures.

The print was great. The client actually said "this box is magic."

I didn't think of it for a day or so when I received a call from a different agency and a different art director. He had a job for me and asked if I would bring my magic box. In a few weeks the entire advertising community in Los Angeles knew about this little box. Now that the subject has been explained, Condit Mfg. is in the process of making a magic box for one of my students in Germany. If you are interested, give him a call and get some details about price and availability. I don't yet know the cost or the size of the box. We have discussed the potential for any kind of process. It is ideal for any process. It takes one to a different plateau and allows you to see what could be possible if you wanted to make an improvement. I can say this, If Condit makes this unit, it will be right on the button.

**Image Quality**

I have been involved with producing photographic images for a very long time. I am very impressed with the digital wave and what it is capable of doing.

**However, image quality is not high on the list unless you are willing to spend big bucks** for the proper equipment. For instance: Making a scan at a very high

degree of resolution means that a rotary drum device be used. These machines come in all kinds of resolution. The better the resolution the higher the cost.

The least expensive and still regarded as a good resolution costs over \$40,000. The kind that **EverColor** uses is (Scitex) well over \$150,000. So where does that leave the rest of us?

If we insist on using digital solutions to getting a better image then here is a solution for you.

Let some one else scan your image for some money.

Then you, the artist, play with it on your screen until you are satisfied with the "look" of the image . Then go back to the scanner people and ask for a new transparency or color negative, which they can provide for some more money.

Or you can ask for an Iris print , which costs some more money, but is very sharp and detailed, with a limited life.

Then, and only then can you get an image that is continuous tone and as sharp as the original. But, you still have to go through the mechanics of producing either a set of separation negatives or a masked transparency for making a Cibachrome print. What a dilemma.

I suggest that those of us who are interested in producing gallery quality prints

stay on course and keep producing the best images possible. The rebirth of the Dye Transfer process should awaken the spirit of art amongst us all.

I ran into a problem recently at a place where I was asked to perform a few miracles. The job was a photocomp type. In consisted of white type against a purple background, and a logo consisting of type of a specific Pantone color, with a white hilitte and a black outline.

And .of course, a photo to be dropped in with a white rectangular outline frame , with the difficult part, an elbow sticking out from the frame. The enlarger I was using was not able to be locked into position, nor was the lens or carrier.

I taped the carrier housing into place using duct tape, but I couldn't manage to lock the lens as it was part of a multiple lens gadget.

Even the enlarger itself was unable to be locked tightly enough so that it wouldn't move. So what I did was to place a piece of wood, (dowel) and tape it against the carrier. Then I taped a piece of aluminum angle on the left wall at the same angle that the wooden dowel would move. Then I used tape to secure the lens bracket so that it wouldn't move.

So far so good.

Now came the interesting part.

The photographic image was a 4x5 transparency. In order to place the elbow out of the frame, I first sized the image containing the photograph and blew it up as large as possible on my available back lit easel. I produced a kodolith image which made a perfect shape of the elbow.

I then reversed this elbow image so that I had both the positive and negative elements needed for the strip-in.

In oder to make an accurate silhouette mask, I enlarged the image onto the 8x10 backlit easel.

This area was the problem I had to solve.



I made positive and negative silhouette masks at this larger size.

Then I copied both elements back up into the enlarger. Then when I had to make the actual insertion of the photograph, I made sure that the masks I made were [placed above the actual transparency using a couple of clear film spacers. This allowed me to obtain a soft edge without any problem. This was a fairly simple job to do. The hardest part was to keep things from moving or else all would be lost. This job could have been done with a computer, but as luck would have it, the computer was not working this particular day and I had to perform. The quality of the photograph was also in question.

A better image could have been manufactured through the computer as the curve shapes were off considerably.

I think I am getting a bit long in the tooth for this kind of work, however, I still enjoy the challenge

Thanks for your support.

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