

# KEEPING PACE

A Monthly Newsletter Devoted to the art of Darkroom Photography

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## Carbro Revisited, and it Looks Like a Winner

I can't help being torn between the old and new methods of producing fine art photography.

After spending almost 50 years in the field of quality darkroom printing, I am always intrigued by the beautiful prints made by individuals. It doesn't matter if the prints are in black and white or color, so long as the images are professionally printed and made with great taste.

Whenever I am in the vicinity of a gallery that specializes in photography, I manage to take the time to look at the new ideas and skills.

I have always divided the art of photography into two separate camps.

The original image that was carefully placed on a sheet or roll of film is where it all begins. I sometimes wonder where the new ideas come from.

I have seen the works of the masters for many years. The names of the famous are very familiar to me. I worked for many of them.

Then I saw the work of a newcomer to our business world. His name is **Jay C. Morgan**. A very young man still in his twenties.

If you haven't seen his work yet, watch for it. He has the most cleverest techniques for making outrageous images that I have ever seen. He can produce a picture showing people in mid-air, with a dog on a leash, also in mid-air and can convey the sense of motion and excitement as well or better than most people with many years in the commercial field.

There will always be new faces arriving on the photographic scene.

The darkroom scene is also

producing new and different ideas for making quality images.

**Charles Berger**, the inventor of the new UltraStable color pigments has enabled we darkroom enthusiasts the opportunity to recapture and old and almost extinct process once known as Carbro. I said that I would give it my attention and give my readers a review.

**Here it is.**

The process is fabulous. I received some test materials from Charles, along with a set of scanned 400 line screened separation negatives.

Charles also supplied a sample print that I could use to compare the difference with my output and his original print.

I made a test print from these very detailed negatives, and was almost blown away.

The image that I printed was very close to the example that was sent to me. Charles also informed me that there was a great deal of latitude in making exposure changes in order to creatively improve the over-all color balance.

After making my first print, I realized that the color balance could be improved just a bit. A simple proofing system is the next thing for me to improve on. The process requires attention to details, but requires little equipment. Here is what you would need if you ever decide to make these fabulous prints.

1. An ultra violet light source. You could purchase a used graphic arts plate maker for around \$500 or less. These units come equipped with their own vacuum systems. The book "Modern Carbon Printing" by Luis Nadeau, has detailed plans for building your own light source. (The book is available from Light Impressions, Rochester, N.Y)
2. If you decide to build your own light source then you would need a vacuum easel large enough to cover the size materials you plan to use.
3. A register pin system

and matching punch. I would recommend getting this kind of equipment directly from Condit, or a Carlson system from any graphic arts dealer.

However, the register holes can be produced by using a simple stationery store paper punch.

4. A roller and a squeegee, along with a flat surface used to make the transfers.
5. A sink with plenty of hot and cold water.
6. A simple light tight drying cabinet
7. A simple darkroom safelight system, using yellow "bug" bulbs.
8. A well lit color corrected viewing area for examining the final results.

**Let me fill you in on the procedures necessary to produce a good clean print.**

I began by testing the pigments speed and for the various exposure times necessary for the pigments. I did this as follows.

30	60	90	120
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I exposed each color as shown above. This was a strip test with no image. I made the four sheets at the same time, using an opaque sheet of film as the tool to hold back unexposed areas.

Charles supplied me with his density numbers for each color that we are required to match as closely as possible. These were clear film exposures with no image involved.

My goal was to establish proper exposure for each pigment as they would be different for each color. My density numbers were close to the numbers supplied by Charles. Exposures for the three colors and the black were:

- Cyan..... .90 seconds
- Magenta....35 seconds.
- Yellow.....40 seconds.
- Black..... 90 seconds

I made my first print using the exposures and times listed above, as these numbers were closely associated with these density numbers to the sample print supplied by Charles.

Working in a subdued yellow "bug" lamp light I made the first of the exposures from the separation negatives by contact, emulsion to emulsion, using the yellow pigment layer. I used the register pins and punched the negatives, the yellow pigment sheet and the receiver sheet.

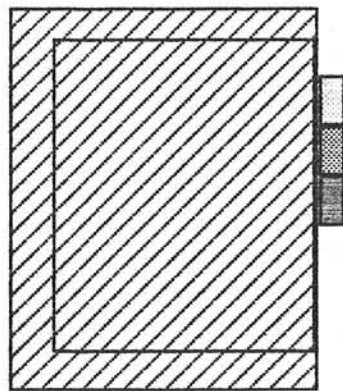
After exposing the yellow, I soaked the receiver sheet in cold water and did the same with the yellow pigment sheet.

I then placed the receiver

closely as possible to each other. This practice would insure the final outcome from straying too far from the original color balance. If you could change the color balance of the transparency without changing the color balance of the grey scale, then the change in color balance could easily be monitored and the results would be much more accurate.

**Here is how it can be done.**

If you are making contact separation negatives, place cc filters large enough to cover the transparency, but not covering the grey scale.



If your light source is from below, place the filters under the sandwich of the mask and transparency. Do not cover the grey scale with colored filters. It must remain unfiltered. The next step is to read the density of the combined additional filters and calculate the difference from your normal exposure. If you add a .15 density to the pack, use your log scale

of your scientific calculator to determine the new exposures.

Then add the same amount (approx) of neutral density to the grey scale in order to keep it from going off too far from it's original readings. Remember, the grey scale is only used as a guide. If you are in balance, the chances are that the resultant print will also be in close balance. If you are making enlarged separation negatives, add any color filters to the top of the glass of your negative carrier.

Then add the same amount of density to the grey scale area only. The amount of density differences would be great if they matched, but "approximate" will be close enough.

This technique will allow you to use your creative juices in improving the color balance of your final print while preserving the accuracy of the grey scale.

It works.

If you use a dichroic light source, you are in a jam. If the light source could be split into two separate areas, and only have the transparency area affected by the color filtration, but not the grey scale, then it would work. This would mean re-designing the light source. When I make direct screened negatives, I have been using this technique with much success. My clients did not know what I

was up to. The only thing they were seeing was a set of good separation negatives, that I proofed with the 3M color key system.

The use of a color head as a color correction tool has been used by myself and all of my staff for many years. This was done in self defense.

I was frustrated by the art director that insisted on looking at his transparency through the open window at a blue sky and then ask me to match the print.

Does this sound far fetched? Believe me, art directors can be the reason for my loss of hair.

I remember spending much time with a client. We were using my "magic box."

After almost burning out the bulb in the unit, we decided on a color balance.

However, when I delivered the print to this art director, he taped the transparency to the window pane in his office. We were facing north light. The Kelvin temperature must have been over 9000K°

The color balance on my "magic box" was around 3600k°

This drove me to me to such a point of dismay, that I refused to work with this person ever again.

However, the good news is this. For almost 3 years, every job that I delivered, stayed delivered.

**Have you ever made a copy transparency or negative from a work of art or another photograph?**

If you have, then you will realize how much trouble it is to do it properly and repeatedly.

The operation can be simplified if one takes the time to analyze the shortcomings of any method you are currently using.

A wall should be chosen for this task. The light should be spaced about 7 feet from the wall and placed at 45 degree angles, with each light pointing at the furthest side of the art wall.

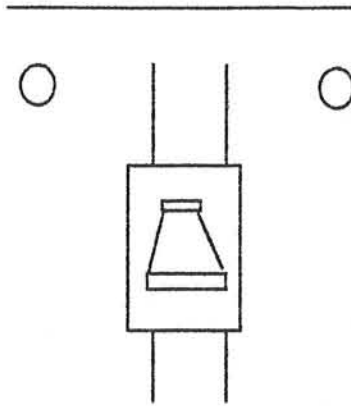
The camera should be a view camera. Should it be a Linhof?

Not necessarily. The camera need not be a sophisticated instrument, but a simple, square and solid camera. I used to use an 8x10 Ansco camera. It cost around \$400, including the case.

I didn't require the swings and tilts or even a lens front rise of an expensive camera. I cemented metal tracks on the floor.

I then built a box with grooved wheels which would then sit on those tracks. The camera would then sit on the box.

I was able to move the box closer to or further from the art wall with relative ease. The alignment stayed perfectly throughout the moving to and fro.



Something like this.

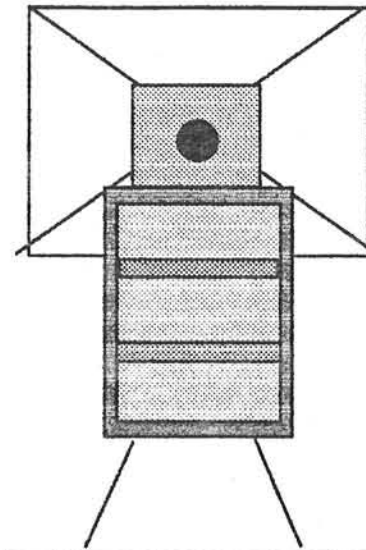
The box had a hollow back with shelves so film holders, filters, split backs, meters, and other items could be kept there.

The beauty of this kind of set up is that if you needed the room for another purpose, the box could have been shoved closer to the wall, or removed entirely and replaced at another time. The tracks would insure proper placement.

If you use polarizing filters on the lens and on the lights, the results from shooting a painting, with all of the reflective brush strokes and glossy areas, would be startling.

The only professional way to make quality art copies and to be able to capture the details and coverage of any painting is by polarizing. If the area surrounding the copy lighting area is painted dark grey or black, then the results will be even more professional.

Stray light caused by flare can be disastrous.



A back view of the system.

This method will keep your camera and art work centered and ready for action almost immediately.

The fixed lights will insure proper coverage without being handled.

I have always believed in systems. This has been the one thing that has made my career in darkroom work satisfying.

Incedently, when using polarizing filters, try hanging a shiny cylinder from a tack just above the art work. Use the shine on the cylinder to establish the proper filter position. When the shine is gone, but the cylinder remains, it is ready for shooting.

If any of you are interested in having a color carbon print made, let me know. I will be happy to accomodate you.

sheet on the transfer board, on the register pins, and rolled it down tightly.

I poured cold water onto the receiver sheet, removed the color pigment sheet from the cold water tray.

I placed it on the register pins, emulsion down and proceeded to roll out the print, much as I have done for many thousands of times with matrix film.

I squeegeed the yellow sheet to the receiver sheet as tightly as possible.

Then I carefully removed the sandwich from the transfer board and pins, being careful not to separate the two sheets.

I placed the combined sheets into a tray of hot water (110°) for one minute. Color began to ooze from the edge of the pigment sheet.

After a while, the edges were slowly and carefully lifted up and removed from the receiver sheet.

The remaining blob of color contained the image and the excess pigment.

As I used to do with matrix film, I kept rinsing the receiver sheet until all of the unhardened pigment was washed off and all that remained was the image. The yellow image is hard to see, especially when using the yellow bulb.

If you use a 47b blue filter to examine the results, you will be able to see the image.

Place this receiver sheet with the yellow image into a light tight gentle warm air drying cabinet.

While this is going on, the next color is readied. The exact steps are repeated for exposure except for the difference in exposure time.

When the receiver sheet is dry, repeat the transferring process again with this next color, (in this case, black.)

Keep doing this until all four colors are transferred.

Accuracy in handling, clean glass, tight vacuum and accurate exposure timing is essential in order to produce quality results.

The wet print is not an accurate image to examine for color balance. You must wait until it is dry.

When I examined the print, I decided to use my old tried and true system for changing balance.

Usually, a dot image is not capable of being changed in density to any great degree, however, Charles told me that there was great latitude with these pigments and that I could do some creative changes in exposure and that it would work.

I decided to add 22% to the magenta pigment and 24% to the yellow pigment.

It worked like a charm.

My next step is to find a capable separation house that will make the scanned screened negatives to the size screen that I want.

I would not make the screen size less than 300 lines.

I did find one company just one block from where I hang my hat. I will let you know what happens next.

The image that I worked with was a 400 line set of screened and scanned negatives. They were perfect. The fact that they were laser scanned presented no flare problems at all.

The big question is this, **What are the advantages with this process?**

The simple fact that an enlarger or even a conventional darkroom isn't even necessary. If you insist on producing your own screened color negatives, then you will need the conventional enlarger and darkroom.

Limited edition prints are easily made, and each print will exactly match the original print.

The entire process, once the exposures are determined can take less than 45 minutes.

You will be able to make prints of your own images and control the final outcome.

If the negatives are produced by a laser scanner, there will be no glitches in the screen, usually caused by dust or other problems.

**Where is the market for this kind of print.**

Every photographic gallery in the world would love to

make an exhibit of quality images produced in this fashion.

In the past, C prints were accepted, then Ciba prints were chosen, Dye transfer prints were almost always accepted, because the gallery owners felt that anyone who would spend time with such a lengthy process must have something worthwhile to say. Some of the best color prints that I have personally witnessed in galleries have been Cibachrome and Dye Transfers.

The UltraStable Color Carbon print has been seen on a very small scale as yet. The prints that have been seen have stopped the show.

Any quality image printed with such clarity and definition will find easy access to the gallery market.

The fine portrait artist should investigate this process. So should the museums and others interested in preserving quality photographic art. The pigments that Charles Berger has developed has been evaluated by Henry Wilhelm, who gives these pigments about a one thousand year life.

That's archival.

### **Is it easy to do?**

Like any kind of creative adventure, nothing is never always easy. This process demands that you have the taste required to distinguish

between good and bad design, color balance, photographic quality, and all of the things that make an image great, otherwise why bother making a print.

Who needs archival junk?

Unfortunately, Ansel Adams would never reveal the fact that he did shoot color, but was not interested in any process that he couldn't completely control.

But I'll wager, if he ever had the chance to produce one of his famous images in this new UltraStable Color Carbon, they would be priceless. He undoubtedly would insist that the separation negatives also be made by himself.

The only strange thing that separates the fields of painting and photography is the fact that every painting is an original and every print whether it is in color or black and white, is also an original.

How many originals can there be? Thousands. This is what reduces the value of photographic art. The only true originals in photography are the transparency or the negative, but every print made from the two original sources must also be considered an original.

That is why the "limited edition" was born. It was primarily aimed at keeping the price of the photographic art at it's highest.

**Here is some important information to those of you who are making separation negatives for the Dye Transfer process.**

How often have you made separation negatives from transparencies that were slightly off color and felt that you could correct the problem when actually making the matrices or running the print?

Well, here is a tip that will help you get to the final print with less trouble and loss of time.

Examine your transparency using a color corrected light source, such as a Macbeth light box.

Then if you felt that the transparency could be helped by adding filtration to the light source, or by adding actual filters to the transparency, do so.

I have spoken repeatedly about my "invention" of the variable light source that I call my "Magic Box."

I was able to transform any transparency into a color corrected image. In fact most transparencies can be helped by some modification of the light source.

Here is the method that I suggest.

If you place a grey scale along side the transparency during the production of separation negatives, the object was to get the grey scale in all three separation negatives to match as

**Photo composition** is a subject that I have written a book about, but have not yet elaborated about in this newsletter.

I think it is about time.

One wonders where the term "Photo Composition" comes from?

It really has little to do with the aesthetic merits of any photograph or painting, namely, composition.

It deals with the **composing** of the different elements required in most commercial advertising campaigns.

Some of the most fantastic ads that I had the pleasure of working on were incredible prints consisting of as much as 37 separate images in one print.

Almost every automobile ad that I worked on consisted of at least two or more elements, or had the image so chewed up and re-arranged that you would not recognize it from the original.

If you are a fine art photographer and feel that the knowledge of photo composition is not your cup of tea, consider this.

Is the famous "Moonrise" shot of Ansel Adams a straight print, or did the moon come from a different image.

Suppose that the original picture did not consist of a moon, would it be honest or legal to put a moon in the picture by a false method?

You can bet your life on it.

There are things that you could do in your own lab that can increase the value and artistic merits of your own work.

**The bottom line is this;**

Does the public appreciate the skill, and does the public appreciate the artistic taste required to produce such a venture.

In the long run, the public is moved by any kind of work that stimulates the senses.

Look at the old Marlboro ads made in the late 50's and early 60's. They were almost works of art. Today's art director would look at one of those old ads and decide to move the mountain and place the horse in a different position.

If you should produce a beautiful transparency and discover that moving something or adding something to the photo would make the picture even more interesting, then do it.

I remember the words from a world famous photographer who replied to my question of "Did you use a filter on this shot?"

The answer I received was, "I never use artificial means to get a good image."

I was stunned.

The only thing that counts is **the final image.**

I couldn't care if the print were made using orange juice for developer.

The art of the photograph rests in the sheet of paper

on which the image rests.

The next time you are out at night, place your camera on a tripod and shoot a couple of exposures of the moon. If you make a Cibachrome print of a scenic with a dark sky, try burning in the moon by itself.

You may have to silhouette the moon using Kodak's reversal films, but the results could be another "moonrise."

I once explained the torturous experience I had when I produced the 37 piece strip in for Ogilvy Mathers, in the 1970's.

I really didn't know if I could have pulled it off in the time frame that I was trapped into. Fortunately, it worked.

Actually, anytime you dodge or burn a photo is one form of photo composition.

Even the "pure" photo's of Ed Weston were dodged and burned, even though they were contact prints. The light sources used by the U.S. Army, in the 1940's consisted of many argon bulbs in a contact printer. These bulbs could be manipulated in such a fashion, that the image could be made into an correctly dodged print very quickly.

Otherwise, do resort to any kind of "trick" that will bring your photo to life.

## Creative control

If one is a painter, he has the choice of using his imagination in order to achieve a certain effect in his work.

Som painters simply copy life and make paintings that almost look photographic, and I have seen photographs that almost looked like paintings.

The skillful techniques sometimes hide the real message that the artist is trying to convey.

The old masters knew that the best painting was an exercise in eliminating much detail. The work of Rembrandt was so simple that the essence of what he was saying came through, loud and clear.

In photography, much of the same thinking must be used. Wouldn't it be great if some day we could see a video of a fine photographer in action and hear from his own lips the thought process that he uses as he engages in his photographic methods.

The legendary Tom Kelley once told me that he had to think in different categories. The first thing he had to be was a commercial salesman. His work had to say something to the viewing public, such as "buy this product because it is better."

Then he also had to say, "this image would look better if it had good composition, good color, the right

exposure, and so on.

And occasionally, his clients would let him loose and let him create an image that had beauty and taste. This is where he felt at home. His creative juices were always working when he was engaged in a project that he really enjoyed.

His photographs of a doll collection that he owned, was superb.

His meticulous attention to details and to be able to make the doll appear in the proper setting and almost look alive was uncanny.

This was because he could control the environment.

He was in charge of the lighting and color balance.

The outdoor photographer has a much more difficult job.

There are only a handful of true scenic artists. Most outdoor photographers simply wait for a scene to develop and capture it. However there are a few that know how to "fool Mother nature" and use other skills.

**They must know** composition. They must also know their cameras as if they were part of their body. The next time you see a copy of "Outdoor Photography" pay special attention to the works of masters like Galen Rowell. He constantly thinks, even when he is dangling from a rope.

**What I am trying to say is this:**

Keep your camera in it's camera bag and let your eyes do the work. If you are trying to say, "what a great sunset this is" make sure that you choose a perfect angle, use the viewfinder as a sheet of canvas. Force yourself to study composition either in an art school, or at least in a book.

I recently had the pleasure of seeing some new prints by Vern Clevenger. They were just great.

This young artist will be a name to reckon with.

One print in particular was of a stand of trees after a snow storm. The trees were depicted as dark and moody, and the snow, even though you knew it was snow, wasn't white at all. The mood and details were perfect.

### **My Cibachrome Video**

is in full production. I expect it to be finished soon.

I am expanding the course considerably by showing a few ways to enhance specific colors without looking garish or unreal.

I will let you all know when it is finished. The book will be modified to match the video. In the meantime, my wares are still available.

Thanks for your support.

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