

Booklet #19: The Northern Virginia Alliance of Camera Clubs

SPECIAL EFFECTS PHOTOGRAPHY

by

Dave Carter*

Joseph Miller



© 2009, Joseph Miller and the Northern Virginia Alliance of Camera Clubs (NVACC). This document is protected by United States copyright law and may not be reproduced, distributed, transmitted, displayed, published or broadcast without the prior written permission of the NVACC. You may not alter or remove any trademark, copyright or other notice from copies of the content. However, you may download material from NVACC on the Web (one machine-readable copy and one print copy per page) for your personal, noncommercial use only.

PREFACE

The Northern Virginia Alliance of Camera Clubs (NVACC) is an informal organization started in 1997 by Joseph Miller with the assistance of Dave Carter* and Ed Funk. Our purpose is to promote communication and cooperation among camera clubs. We accomplish this by (a) publishing a monthly calendar of the member clubs' activities; (b) conducting training seminars for photographic judges; (c) maintaining a registry of trained judges who serve the clubs' monthly competitions and critiques; and (d) maintaining a directory of speakers who have been recommended by the various clubs. You can learn more about NVACC by going to our web site at www.NVACC.org.

This booklet is one of a series that was developed by NVACC during the period 1998-2008 to capture the considerable expertise of the many accomplished photographers in Northern Virginia and share it with others. Over recent years, we have seen significant change in the photographic art form and very rapid technical advance in both the media of photography (film and digital) and the tools (cameras, lenses, computers, and software). For that reason, the detail of some of these booklets may seem "dated", although the ideas and techniques presented transcend "progress" and the digital-film divide. Watch the NVACC web for new booklets as well as revisions that incorporate new technology and ideas into the existing ones.

Originally, our booklets were made available through member clubs for a small fee that covered the cost of reproduction. Now, however, the booklets are available on www.NVACC.com where individuals may download one machine-readable copy and one print copy per page for personal, noncommercial use only. Written permission from NVACC is required for any other use.

If you would like to know more about NVACC or have questions or suggestions concerning our booklets or services, please feel free to contact us at JoeMiller@NVACC.org.

* Dave Carter, the creator of this booklet and a founding father of NVACC has passed but his photographic skill and artistic vision live on in the technique of all photographers who were fortunate enough to work with him.



Special Effects Photography

The purpose of this booklet is to pass along to you some tips we have found useful in trying to create special effects in our photography. We have touched upon only a few of the many possibilities in this booklet.

In our view, the camera is much more than a recording device. In the hands of an imaginative and skilled photographer the camera can produce amazing results. That is when photography really becomes fun. Some of us, most particularly the authors, are incapable of making good images with a brush or pencil. However, all of us can be imaginative with a camera. Creativity is a mind set. You must be open to new techniques. Your mind should be free of everything that restricts your creativity.

The Halo Effect

In shooting night pictures, it is sometimes interesting to produce a mysterious halo around the subject. This is done very simply. Begin by shooting a straight photograph of the subject in the aperture priority mode, always on a tripod, of course. Count the number of seconds the shutter is open. Assume for our purposes it is eight seconds and you have focused at infinity. Advance the film. Throw the image out of focus and make a second exposure, again counting the seconds. At about four seconds quickly refocus to infinity. The final image will appear to be in focus, but will have a halo around it. If the subject is not at infinity, you can use the same technique, but start the second exposure in focus and then throw the image out of focus halfway into the exposure. If you wish to shoot in the manual mode, you can use the same technique, but you will need to bracket to insure that you get a correct exposure.

As we have described this technique so far, it requires a long exposure. However, it can be done with short exposures provided you have the capability to make multiple exposures with your camera. Make one exposure in focus, and the other exposure out of focus on the same frame. Here it makes no difference whether the first or second exposure is in focus. Since we are taking two pictures on the same frame, it is necessary to underexpose each by one stop. If you wish to bracket, it is probably necessary to bracket in only one direction. Thus, repeat the process, underexposing $1/2$ or $2/3$ of a stop, depending on what calibration your camera permits. Experiment to determine what works best for you.

Flowers are often photographed this way. It does make a difference which way you turn the focusing ring to throw the image out of focus. Focusing too close magnifies the image. For best results, make the out-of-focus image larger than the in-focus image. In other words, your out-of-focus distance should be closer. This applies whenever the subject is not at infinity.

Multiple Exposures at Night

Some of the night pictures we see consist of two images on the same frame, one taken at dusk and the other after dark. Use this technique when you wish to allow the viewer to see some shadow detail. Of course, you must be very careful not to move the camera between exposures. Again you are putting two images on the same frame. As described above, you must compensate to obtain the desired exposure.

Using Multiple Exposures to Blur the Background

When we shoot small objects outdoors, we often want all the depth of field we can get on the subject. However, this may mean that the background will be intrusive because it is too sharp. Sometimes we can't throw the background out of focus without losing detail on part of the subject.

There may be an alternative way to blur the background. Let's assume you have a subject that won't move. Let's further assume the background consists of foliage blowing in the wind. With your camera on a tripod, photograph the subject using either nine or 16 exposures on the same frame of film. For nine exposures, compensate each exposure by underexposing three stops; for 16 exposures compensate each exposure by underexposing four stops. The more exposures the greater the blur. Keep in mind that this technique will not totally eliminate hot spots. Be careful not to move your camera between exposures. See Booklet No. 13 in this series, "Multiple Exposure Photography" by Ed Funk.

Photographing through a Glass Brick

Building supply companies often carry glass bricks. These are usually about 9 inches by 9 inches, but larger glass bricks are available. When the bricks are placed in front of the subject they distort the image in wild and unpredictable ways. This is one way of making abstracts. Try moving the brick around slightly. You will find that the smallest movement changes your image. Keep experimenting until you like what you see. Take the picture.

This technique works with small objects that can be covered entirely by the glass brick. A flower, a shell, a vase are good examples. The object you are photographing needs to be within a few inches of the brick. The closer the object is to the brick the less the distortion, and the farther away the greater the distortion. You may find that you don't want maximum distortion. Expose normally. Generally no special lighting is required for this technique.

Photographing through Textured Glass

There are several varieties of textured glass that can produce creative effects. One is

the wavy glass used for shower doors. Another is called pebble glass. Like the glass brick technique, the subject is placed behind the textured glass. An advantage of using textured glass is it comes in larger sizes so the subject may be bigger. Like the glass brick, the subject is more distorted when placed further away. Given your work environment, you will need to figure out how best to hold the textured glass in the vertical position.

Photographing through Ice

A related technique involves photographing through ice so that you get an unusual texture to the image. In the winter you may find a leaf frozen in ice. This is a perfect subject. Another way to do it is to freeze a small object in a block of ice in your freezer. We once froze an artificial white rose in ice and photographed it in black light so that the rose glowed with an eerie blue light around it.

When you use ice inside, the ice will melt and there may be a possible water problem. Be sure that the water from the melting ice will not damage anything of value, particularly your camera and lens.

Black Light as a Creative Light Source

When using black light, Judy Switt and Gordie Corbin primarily photograph objects that fluoresce. Black light can be a creative light source even when the subject does not fluoresce. Use reflectors outside the frame to control color as well as the direction of light. Red, pink and yellow reflectors provide warm light casting a warm glow over the subject. A white reflector will provide cool light. Use these light sources to create the ideal light for your photograph. See Booklet No. 9 in this series, "Black Light Photography" by Judy Switt and Gordie Corbin.

Mylar® Reflections

Mylar® is like thick aluminum foil which is highly reflective. It can be obtained from large art supply houses. Be careful using Mylar® as it pits very easily. Because of that problem, it must be replaced periodically. It also collects dust and fingerprints which are very difficult to remove.

One way to use Mylar® is to place an object such as a flower on or next to the Mylar® and photograph the object with its reflection. The reflections are distorted in unpredictable ways. You can, of course, photograph only the reflections. Some consider this the preferred way because the reflections are abstract in nature. By bending the Mylar®, even a little, entirely different reflections are created.

Another use of Mylar® is to use it as a tube wrapped around a lens. The tube must extend beyond the front of the lens. The necessary length of the Mylar® tube will vary

depending upon the focal length of the lens. We keep the Mylar® tube in place around the lens with rubber bands. The inside of the highly reflective Mylar® tube transmits its own reflections and distortions through the lens onto the image. By squeezing the tube we can alter the reflections that reach the film. The technique works particularly well using flowers as a subject. The flower is undistorted, but it is surrounded by interesting reflections.

The Mylar® we have been discussing comes in a silver color. However, it comes in other colors which we have not tried. Gold Mylar® is less reflective, but does make a good background. We have seen many award-winning photographs where Mylar® was used. Try this technique. It is great fun.

Slide Copying

Slide copying can produce special effects. There are many ways to copy slides. A number of camera manufacturers make dedicated slide copiers. They all involve holding the slide to be copied and the use of a macro lens. Often flash is used as a light source.

Slide copying using conventional films increases the contrast in the image. Sometimes this is desirable. There are special slide copying films designed not to increase contrast. Because they are such special purpose films, they are not easy to find, especially in small quantities.

There is a way to reduce contrast when you are copying a slide. This technique involves a multiple exposure. First, photograph a gray card, under exposing it by about three stops. Make sure you fill the frame. Then, on the same frame of film, photograph the slide as you would normally, exposing for highlights. This will result in an image with greater shadow detail without making the highlights overexposed.

An excellent way to achieve special effects is to copy a slide using rear projection. This set-up consists of a slide projector, the screen, and the camera and tripod on the other side of the screen. You don't need a macro lens for rear projection. The slide is projected onto a flat, vertical, translucent surface. The surface may be textured glass, white paper, art paper, etc. There are also commercial rear projection screens available. Since you will be photographing the back side of the screen, you will need to reverse the slide in the projector so that any identifiable objects don't appear reversed. Because the light source in the projector is a tungsten bulb, you probably will have to use tungsten film or, if you use daylight film, a corrective filter. We like the rear projection technique because of the interesting results that can be achieved using a variety of textures and materials as screens.

There are many ways of copying slides which can produce creative effects. You are limited only by your imagination.

Changing Contrast

High contrast is sometimes a problem when taking the original image because all films have a limited tonal range. The gray card technique described above in Slide Copying also works to reduce contrast when taking an original image if the contrast is high.

In a low contrast scene there are times when we may wish to increase contrast. This can be done by using high contrast film. These are available in color transparency films, color negative films and black and white films. Some are very dramatic and record only the extremes of the tonal range.

Extreme Macro Photography

The world when viewed close-up is fascinating. Many macro lenses allow us to shoot 1:1. This means the image on the film is the same size as the object we are photographing. For 35mm photography we can fill the frame with an area 24mm x 36mm, or approximately 1 inch by 1-1/2 inches. When printed onto paper or projected onto a screen, we see things the naked eye otherwise could not discern.

The fascination of that which is small is even more dramatic when extreme macro photography is used, that is, when the image size is greater than 1:1. There are some special purpose extreme macro lenses. They are very pricey. A rather inexpensive way to achieve extreme macro photography is to reverse a wide angle lens. In this technique, there is a simple reversing ring that attaches to the camera body. Then the wide angle lens is attached to that ring with the front of the lens facing the camera, and the rear of the lens facing the subject. The wider the angle of the lens, the greater the magnification. It is possible to achieve an image of 2:1 to 4:1 with this technique. What 2:1 means is we fill the frame with an image 1/2" by 3/4"; 4:1 means we fill the frame with an image 1/4" by 3/8". Imagine the effect of this image when printed onto a large piece of paper or projected onto a screen. Adding to the special effect of extreme macro photography is the virtual non-existence of any depth of field, which may or may not / be desirable. For more on the techniques of macro photography, see Booklet No. 8 in this series, "Photographing Wildflowers and Other Small Subjects" by Dave Carter.

Extreme Wide Angle Lenses

We consider extreme wide angle lenses to cover more area than a 35mm lens, which for years was the preferred wide angle focal length. We like lenses in the 15mm-24mm range because of their ability to produce special effects. Some of the most extreme wide angle lenses produce circular images and are called "fisheye" lenses. More about fisheye lenses later.

Wide angle lenses make foreground objects appear bigger in relation to the background. Consequently, they exaggerate the feeling of distance. No doubt you are

familiar with pictures of a person taken up close with a wide angle lens where if the arm is extended toward the camera, the hand appears very large in relation to the size of the head. Because of this extreme distortion, taking pictures up close of people and other recognizable objects will produce very different results, sometimes humorous, but often uncomplimentary.

Wide angle lenses must be perfectly level to avoid converging and diverging lines, especially at the edge of the picture frame. If you wish to have a building seem to fall over, make the tilt appear intentional and dramatic, not just a little tilt which may suggest carelessness. The further away the tilt is from the edge of the picture frame, the less obvious it is. For that reason, we usually avoid placing vertical lines close to the edge of the frame.

The fisheye lens is an extreme wide angle lens having certain distinctive characteristics. If the horizon of an ocean is placed exactly in the center of the picture space, it will appear to be flat; if it is located toward the top or bottom of the picture, it will appear to be curved. When combined with its very wide coverage, pictures taken by a fisheye lens are unusual, sometimes producing a circular image. We use this lens sparingly because a little bit of this special effect goes a long way.

Extreme Telephoto Lenses

We consider an extreme telephoto lens to be greater than 200mm. Optically speaking, many of the comments we made about the extreme wide angle lenses are reversed when we discuss extreme telephoto lenses. That is, distant objects appear larger in relation to foreground objects which results in a sense of the compression of distance. No doubt you have seen pictures taken with an extreme telephoto lens where the sun or moon appeared to be very large in relation to a building in the foreground. Also, depth of field is much more limited.

Extreme telephoto images often appear less sharp than one taken with a normal or wide angle lens when a lot of distance is included. This is because the haze in the air is compressed making it harder to see the elements in the picture. Using a teleconverter makes the problem worse.

An extreme telephoto lens magnifies what is in the picture space, and it also magnifies the effect of any camera movement. Thus, it is imperative that you use a sturdy tripod when using an extreme telephoto lens — and we would argue, with any lens.

The limited depth of field of extreme telephoto lenses can be advantageous as it becomes possible to throw the background out of focus so that background elements are not intrusive. This works very well, for example, with insect or flower photography. We find that extreme telephoto lenses allow us to isolate elements within the picture space.

Mirror lenses are extreme telephoto lenses which are lighter to carry and cheaper to buy. However, they usually have a fixed aperture, giving you no control over depth of field. They also produce small round circles of light when there are out-of-focus highlights. This can be an attractive special effect, especially if these "doughnuts" of light are spread uniformly throughout the picture space, as is often the case with pictures of water. However, more often than not, these "doughnuts" are obtrusive and should be avoided.

Suggesting Motion

Probably the most used technique to suggest motion is the choice of a slow shutter speed to blur waterfalls or other moving objects. There are times when you don't have any other choice in low light, particularly if you want any depth of field. Blurred motion often happens in night photography with moving traffic leaving streaks of light. The car might not even appear in the image. A moving ferris wheel taken at night with a slow shutter speed can produce interesting designs. Fireworks provide another example where a slow shutter speed can produce good results. With long time exposures, a man walking through the snow frequently does not appear, but his footprints will. The use of neutral density filters requires slower shutter speeds, sometimes for several minutes, which sometimes increases the sense of motion. But if the shutter speed is too long, you may lose the sense of motion entirely. For example, an exposure lasting several minutes of people on a boardwalk may yield an image with no one appearing in the picture at all.

Panning requires a lot of coordination by the photographer. Here, the photographer intentionally moves the camera at the exact speed of the subject, let's say a runner or a race car. A slow shutter speed must be chosen — too slow and everything is blurred, too fast and the background is too sharp. The idea is to have a relatively sharp subject and a blurred background. You will have to experiment to find the exact shutter speed that works for your application.

Zooming during the exposure is another way of suggesting motion. The results are unpredictable, unusual, and sometimes pleasing. There is some advantage in starting at the widest angle of view (shortest focal length) so be sure there are no unwanted elements at the edge of the picture frame.

What makes these images so much fun, and so frustrating, is you can't see the final results in the viewfinder.

Special Effects Filters

Polarizing Filter. Probably the most common special effects filter is the polarizer. When conditions are right, they can darken the sky and bring out cloud patterns. They also

may reduce unwanted reflections. Be careful. They may produce an effect that appears unnatural.

Sometimes a polarizer enhances a reflection. For example, consider a picture of a lake with a mountain on the opposite shore. If your polarizer darkens the sky, it will also darken the sky in the reflection. This makes the reflection more obvious. Since you can see the effect in the viewfinder, rotate the filter to get the result you want.

Often we use polarizers when the sun is very bright. However, the polarizer also may be effective on cloudy days or at dusk for a few minutes after the sun goes down.

A polarizer works best at 90 degrees to the sun. Don't feel you must use the maximum polarizing effect. You have to experiment with your polarizer to achieve the desired result. Less is often better than more.

Warming Filters. These pieces of glass warm the light that reaches the film; that is, they emphasize the red end of the spectrum. This often makes the image more attractive. Some people use strong warming filters in an effort to simulate the light of early morning or late afternoon. The simulation is not perfect because the shadows in the picture are not as long as they would be if taken in early morning or late afternoon. Some photographers, the authors included, leave a mild warming filter on the lens routinely. This is also an effective protection against damaging the front element of an expensive lens. In this case you do not need a haze filter or a skylight filter.

Keep in mind that, to some extent, any additional piece of glass will degrade the image. You may not want to use a polarizer and a warming filter together. In addition to degrading the image as more glass is added, the warming filter changes the light toward the warm end of the spectrum, while the polarizer often emphasizes the blue (cool) end of the spectrum. Together the effect may not be desirable.

Cooling Filters. These slightly bluish pieces of glass are not used often. They can, however, be useful to cool the colors where desired. One example might be a snow scene which has predominately cool light anyway, and the slight bluish color of the filter is consistent with the mood you are trying to produce. Be careful. Use a blue filter that it is not too strong.

The Enhancing Filter. This filter is popular because it greatly enhances the red end of the color spectrum. Reds become more red, and even orange colors may become red. This filter is commonly used on such subjects as fall foliage. The effects are sometimes pleasing, but often they are unnatural. Soil, snow and clouds may take on a pinkish cast. Use this filter sparingly; the results can be garish.

One combination of filters that is occasionally used together is the enhancing filter and the polarizing filter. Sometimes this effect works; sometimes it does not. The effect is not very realistic, but it may give a nice abstract quality to the image. We sometimes find this effective with water lilies and other aquatic flowers. Be particularly careful about

using enhancing filters with films that give enhanced colors. While the special effects can be dramatic, the results can be unappealing.

We like soft, muted, almost pastel images. Color enhanced films and enhancing filters do not permit us to achieve this effect. Subtle differences in color at the red end of the spectrum disappear, robbing images of the detail and texture that are really there.

Soft Focus Filters. Most photographers strive for very sharp images, as well they should. However, there are situations where a softer image will produce a more desirable result. For example, modern films and better lenses can be too sharp, particularly with a portrait where every skin imperfection is revealed. Portraits of women and children may take on a harsh quality that is unflattering. Soft focus filters reduce sharp detail that may be distracting. In portraits of men the harsh quality often is acceptable.

Sometimes soft focus is simulated by placing a woman's nose over the lens. This effect often works well. Different colored nose will produce slightly different effects.

Fog Filters. Fog filters are designed to simulate the hazy appearance of objects in fog. These filters come in different strengths. We use them very sparingly because the simulation is rarely realistic. The reason for this is that most scenes contain more than one object at varying distances from the camera. A picture of a lone tree in a field may look more or less realistic, but suppose that foreground elements are an important part of the picture. Foreground and background elements are equally hidden in "fog" created by the filter. This is not realistic because it reduces the impression of depth. We believe that most fog pictures which are successful are ones which give a distinct impression of distance. We could say, in fact, that to us most fog pictures are really studies in depth. Don't overuse these filters.

Graduated Neutral Density Filters. These filters can be useful when the tonal range is extreme, such as a bright sky and darker foreground. Given the limitations of film to record wide tonal ranges, if we expose correctly for the sky, the foreground would become too dark. Conversely, if we expose for the foreground, the sky would appear to be washed out, i.e., too light. A graduated neutral density filter provides a way of reducing the tonal range. Place the dark part of the filter over the sky and expose the picture. Sometimes you will get an acceptable image. Other times the foreground becomes too light to be realistic.

The use of these filters depends upon having the light and dark areas separated by a relatively straight line. If this is not the case, the image will be unacceptable.

Other Special Effects Filters. There is a large variety of special effects filters such as the star filter, motion filter, multiple image filter, etc. We rarely use them. Most camera stores usually can provide information about special effects filters.

Filter Quality. Quality filters should be used. It makes no sense to purchase an

expensive lens and attach a poor quality filter to the front of that lens. To some extent all filters degrade an image because it means another piece of glass through which the light must pass. Stacking filters, that is, using two or more filters together, compounds the problem and may cause vignetting in the corners.

Special Films

There are a number of films which will produce special effects. These include, among others, infrared film, both color and black and white, grainy films, and SO-279.

Infrared Films. These films can produce wonderful effects. For a detailed discussion see Booklet No. 15 in this series, "Black and White Infrared Photography" by Carla Steckley. We personally don't like color infrared photographs as well as black and white infrared photographs.

Grainy Films. Higher speed films produce grainy images with softer contrast. Grainy images often enhance the mood of the picture. When you want to capture mood in your images, especially in low light situations, give them a try. Trying grainy films is the only way you will learn about their potential.

SO-279 Film. With the appropriate filtration (85A and 85B filters used together) this film produces an image in which the colors are the compliment of those in the subject. If you do not use the 85A and 85B filters together the image may take on an orange or reddish hue. This film produces novel colors and some very striking effects can be obtained. Experimentation is the only way to get a feel for what SO-279 film can do.

Some people rate the film at ISO 2, while others rate it at ISO 3. This is an extremely slow film and very long exposures will be required. Few cameras have a film speed setting that low, so some adjustment will be required. If you choose ISO 3, and if ISO 12 is the lowest film speed setting on your camera body, you will be two stops underexposed from the meter reading. In the manual mode we suggest compensating by choosing a slower shutter speed rather than a larger aperture opening so as to retain depth of field. In the aperture priority mode use +2 stops on the compensation dial.

A Final Word

You can try these techniques close to home where there is the opportunity to return frequently when light and weather conditions are right to remake the images until you are fully satisfied. You usually can make the best images in areas with which you are the most familiar.

Many of these techniques listed in this booklet can be used in your home where you are in complete control of the photographic environment. Of particular importance is the opportunity to photograph at leisure throughout the year. All too often we believe we have to travel to exotic places in order to take memorable photographs. The exact

opposite is true. The home environment allows us to control all the conditions under which the photograph is taken.

There are many special effects techniques. We have hardly scratched the surface. What we have touched upon are those which we think will be most useful. Experiment with them and other techniques to introduce creativity into your photography. The rewards will be well worth the effort.

Recommended Readings

Carter, Dave. Photographing Wildflowers and Other Small Subjects. Northern Virginia Alliance of Camera Clubs. 1998.

Daye, David. Special Effects Photography. Watson-Guption Publications. New York. No date given.

Funk, Ed. Multiple Exposure Photography. Northern Virginia Alliance of Camera Clubs. 1999.

Hyypia, Jorma. The Complete Tiffen Filter Manual. New York. Amphoto. 1981.

Hennings, Heiner. Cokin Filter System for Photo and Video. Hove Photo Books. 1990.

Hunter, Fil and Fuqua, Paul. Illusion, The Art and Craft of Special Effects for Still Photographers. Stoneham, MA. Butterworth-Heinemann. 1992.

Kodak. Creating Special Effects. The Kodak Library of Creative Photography. 1984.

Kodak. More Joy of Photography, 100 Techniques for More Creative Photographs. The Eastman Kodak Company. 1981.

Steckley, Carla. Black and White Infrared Photography. Northern Virginia Alliance of Camera Clubs. 1999.

Switt, Judy and Corbin, Gordie. Black Light Photography. Northern Virginia Alliance of Camera Clubs. 1998.

Zuckerman, Jim. Special Effects Photography on a Limited Budget. Writers Digest Books. Cincinnati, OH. 1993.