

# EXTERIOR PAINTING WITH LIGHT

BY

SIMON RETIEF

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## INTRODUCTION

There are so many different fields of photography in which to specialise nowadays This is why I decided to go into a field that is still relatively unexplored and unexploited and still has a lot of room for research and experimentation and that allows one the opportunity to be creative. My field is night photography or rather night/paint-with-light photography.

Few people have ever stopped to think or realise how the night affects the everyday settings around them. Things that are ugly and unappealing in the daylight may in the absence of light become attractive.

The original cameramen were limited to existing light only, so the technique is not new , it has merely been rediscovered. It was during the "flashbulb seige" of the 1940's that photographers lost interest in existing light photography. With the advent of special chemicals and films, more and more people began to switch back to the use of natural lighting. The night photographer is almost totally dependent upon existing light (Woolley 1956:22).

It is with the use of these natural light long exposures combined with the use of a flash light, or any other form of portable artificial light, that allows the photographer to be as creative as possible, allowing him even to capture the elusive movement of the stars, causing them to make long streaks across the sky on the final image. This type of photography is created by using a double exposure, one for the sunset and another when it is dark, to allow enough time to paint with light and catch the movement of the stars.

With the use of a flash or a strong hunting spotlight the photographer's light sensitive material (i.e.the film) is in a way converted into the artist's canvas because one can literally paint, or create, the desired image using coloured gels to create new colours or to enhance the saturation of the already present colours.

The advantage in using a hunting spotlight over a flash is that the beam of the spotlight extends a distance of a few hundred meters so that one can paint the tops of trees and buildings and other inaccessible places. The beam of the spotlight is more easily directed than a flash, and thus the chance of getting a reflective image of the photographer in the photograph, which often happens when painting with flash, is greatly reduced when using a hunting spotlight.

One of the greatest advantages to painting with one's own spotlight is that one develops a feel for most of the exposure times. It also means that one does not have to rely on available light sources of unknown intensity like flood or spotlights lighting up a building.

One's own light source also means that one can go out of town where there are absolutely no lights on one's subject and still create an amazing shot. I would, in fact, say that this is when one can be most creative, since the exposure can be anywhere between 15 minutes and 8-10 hours, giving one as much time as is needed to create almost anything that the film will permit and that the lights battery can handle.

Most of the problems encountered during long exposures are in fact film emulsion orientated and therefore beyond the control to the photographer to a certain degree. Two of the main problems with these films are reciprocity failure and colour shifts, which will be discussed later in this script. These problems differ between negative and trannie film with the negative emulsion film being the more likely of the two to give problems.

We as photographers can help the manufacturers by sending them results of our experimentation and research so that they may better understand the limitations of their film emulsions under long exposures. Hopefully they will one day produce a film that will eliminate these problems. Push or pull processing can also be used as an alternative method in dealing with the problems connected to these films This will also be discussed later in this script.



I will also run through the list of basic equipment needed for exterior painting-with-light and exactly how everything works together. After that I will discuss six of my images and explain how they were achieved, with all the necessary log book references.

I will finally discuss the work of a professional photographer, Obie Oberholser who is a very respected and famous photographer both nationally and internationally. It is Obie who I think initiated the whole exterior painting-with-light field of photography.

An exterior photographer's possibilities do not end after sunset. Neither is he confined to the city limits or wherever else there are available light sources. Night time is a time that has been very neglected by photographers. I intend to change this by promoting this field and all its possibilities, since I feel that some interesting and beautiful images can be created in this low-light and no-light time of day.

## RECIPROCITY

Most of the time the response characteristics of photographic materials and processes are quite predictable. There are, however, certain conditions where the resulting photographic image does not have the characteristics that were anticipated.

The response properties of photographic materials are quite complex. An understanding of these unexpected results can be most beneficial in mastering the photographic process and thus lead to beautiful and unique imagery.

Two pieces of film can receive equal exposures that may result in different densities because the exposure times and illuminances are quite different. This situation is termed reciprocity failure, which simply means that the response in terms of density of a photographic material cannot be predicted solely from the total exposure a film has received, except over a small range of exposure times which will not affect the type of photography under discussion.

The range where reciprocity failure is negligible is from about 1/10 second to about 1/1000 second. Beyond these limits, reciprocal combinations of exposure time and illuminance, which give the same total exposure, will not give the same density response.

Reciprocity failure can change image density and contrast. The extent of these changes depends upon the combination of illuminance and exposure time and the characteristics of the emulsion.

Reciprocity failure is commonly encountered in low-light-level photography, and it is frequently the reason for thin and underexposed negatives.



There occurs a progressive loss in film speed and exposure time is increased, therefore additional exposure is required to obtain the expected image density. Adjustments need to be made in the development as well as the exposure times at low light levels to obtain the desired results.

Low intensity reciprocity failure affects the lower density areas more than the higher density areas, and there is thus an increase in contrast in this type of low light photography and so in order to obtain the expected image contrast in the negative, a reduction in development is necessary. Since altering the degree of development also affects density, the reciprocity failure exposure factor will be larger than it would be if the degree of development were not adjusted for the anticipated increase in contrast with long exposure times. Low-luminance reciprocity failure, therefore, requires an increase in exposure along with a decrease in development to adjust for contrast.

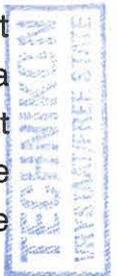
## EQUIPMENT

Choosing one's equipment is something that should be carefully thought through and thoroughly researched. It is better to buy right the first time and so one must know what to look for. It is not worth spending a lot of money on something that you don't really need or that is of below average quality. Although it may be the final image that counts it is the quality of the equipment that enhances it to give it the edge you are looking for.

The complete camera is the photographer's most important piece of equipment since it is the tool that records the image on the film emulsion. It is also probably the most expensive piece of equipment necessary besides the car's cigarette lighter into which the spotlight is plugged.

Using larger format cameras brings two advantages: first, you can use faster films, and second, you can get away with longer shutter speeds (Hicks 1991:21). I personally enjoy working with the 6 by 7 centimeter format camera. It is an easy camera to carry around or to put in the boot of a car. It is also an easy camera to work with in low light conditions, or in the dark, since focussing is easy especially with the production of focussing screens designed for easy focussing in low light conditions. The 6 by 7 cm format also produces a high quality print when enlarged even to a print of 12" by 16" dimensions. I would, however, like to start experimenting with the 4" by 5" as well as the 8" by 10" cameras since I feel that their quality is unmatched by any other camera. These cameras also have the ability to give full image focus by using an extensive range of camera movements to apply the Scheimflug theory.

I don't find it necessary to have lenses with high aperture settings as most night photography books say one should buy. All of my work is done with the camera securely on a tri-pod and therefore beyond hand held exposure times. I feel that any good quality lens will do fine. I prefer working with wide to extreme angle lenses so that I can get close to my subject and still include the background. Wide



angle lenses also provide better depth of field than longer lenses. I very rarely use any lens longer than a standard, although a long lens can be useful when one might need to exclude something like a street light from the frame, or to get "closer" to the subject when it is too far away.

A good sturdy tri-pod and a cable release are essential for long exposure work to eliminate any chance of camera shake which is especially important when taking double exposure day-night shots. It is also useful to buy a tri-pod with adjustable legs and a reversible head which can secure the camera just a few centimeters off the ground for the ultimate long exposure low angle.

A powerful hunting spotlight is also an important piece of the equipment. Most of the hunting spotlights available are dependent on the use of a car cigarette lighter for power. This can create problems as one can't always get the car positioned where one needs it, for example on the front lawn of the City Hall. Some of the newer models of hunting spotlights have portable battery packs of reasonable capacity, which means that one can get closer to the objects in the image so that they will need less paint with light exposure time. The power range of these lights differs from manufacturer to manufacturer but is usually somewhere between 500 000 and 1 000 000 candle power. The portable battery pack hunting lights are more expensive than the hunting lights dependent on the car to supply power but they are well worth the investment at around R500. Transparent coloured cellophane paper can be used as gels when held over the front of the light to create new colours or to enhance the colours already present. This type of paper will cost no more than R2 a roll from most stationery or art stores. It can also be useful to keep a portable flash handy for emergency light failures or for getting different effects with the different light sources when painting with light. A torch can also be useful to find a dropped lens cap, to find one's way back to the camera or to provide enough light to write down the log book entries.

It is important for research reasons to record all relevant information in a log book. The information that should be recorded is date, time started with both exposures, exposure readings and exposure settings, spotlight to subject



distance, compass direction and any other relevant information concerning weather conditions like lighting etc.

The reason for keeping track of compass settings is that one can plan to use the movement of the stars and moon as a compositional element in your image even well before sunset.

One should keep a stop watch to write down painting-with-light times of each object that is painted e.g. tree, f22, green filter folded three times, 7min 15sec, at 25meters. Having these times, f-stop and distance to object readings available at another shoot makes the shoot so much easier using them as references.

Colour transparency films are most popular with professionals, lecturers, authors and advanced amateurs, because they directly produce slides for projection, and are most suited to work for publication. They are very fine grained, with clear accurate colour for reproduction (Gibbons 1989:31).

I personally prefer the effects obtained with colour transparency film, as far as high quality colour reproduction is concerned, to the effects obtained from colour negative film. Colour negative film is not as suited for publication and its definition is not as good as transparency but it is more tolerant to under- or overexposure, actually about two stops over and one to one and a half underexposed. Transparency film also has a professional feel about it. A colour negative that has been over- or under exposed within these limits can still be saved during the printing stage, to produce an interesting image. I find Agfachrome RSX 100 720 roll film to give very satisfactory results when using transparency film and Agfa Optima 100 also 720 roll film using colour negative. I have also received satisfactory results when using Fujichrome Provia 100, but I still find Agfachrome RSX slightly superior in quality.

There are a range of correction filters which aim to correct the colour balance if the type of light is wrong, or to compensate for the failure of the film colour to respond evenly during long exposures (Gibbons 1989:32).

Filters that can be used to correct for colour temperature are:

Tungsten Daylight

Blue 80 A - 3200 K to 5500 K

80 B - 3400 K to 5500 K

Daylight Tungsten

Amber 85 - 5500 K to 3400 K

85 B - 5500 K to 3200 K

Graduated filters can also be used to change the colours of only part of the image giving the rest of the picture normal exposure. These filters can create some amazing effects on spectacular sunsets. Special effects filters, e.g. starburst filter, can also be used to give the image a different mood by diffracting the available light sources

I would like to close this chapter by mentioning the last and probably most useful piece of equipment which must surely be one's assistant, since one can't keep an eye on the camera the whole time. It is also useful to have someone sit at the cameras position to see how far the light reaches and how it effects the subject in the way that it falls on it.



## AUTHOR'S WORK

I would like in this chapter to discuss five of my images. All except the last in the discussion are taken on colour trannie film and not one of them is of an exposure of less than 25 minutes. I will include all the relevant log book entries, the location and all other information that I think is useful that I can remember from the shoot.

The first image was taken just outside Bloemfontein in one of the small holding suburbs, Bainsvlei, in early autumn. It was shot on Agfachrome RSX 100 - 120 roll film on the RB 6 by 7 centimeter camera.



Image 1

The first exposure reading was f22 at 5 sec, but to compensate for reciprocity failure I exposed it at f22 at 9 sec. This first exposure should be taken when the colours of the sunset are the richest. I then waited about 45 minutes before exposing for the second time. The second exposure lasted approximately 30 minutes at f16. The car wreck was painted for 15 minutes, with the brown cellophane gel folded three times over the hunting light. I gave the back left corner more exposure time to give it a bit of a glow. The grass was also painted for about

15 minutes with the red gel folded twice over the light. The camera moved slightly between the two exposures which is why there is a double image of the silhouetted tree branches. The car was in the heart of the silhouette which is why it did not make a double image. The short line in the sky is the recorded movement of a star.

The second image that I would like to discuss was taken in the centre of Bloemfontein in the nature reserve on Naval Hill. The subject was the old observatory that has now been turned into a theatre. The image was taken in late summer on Fujichrome Provia 100 - 120 roll film also on the RB 6 by 7 centimeter camera.

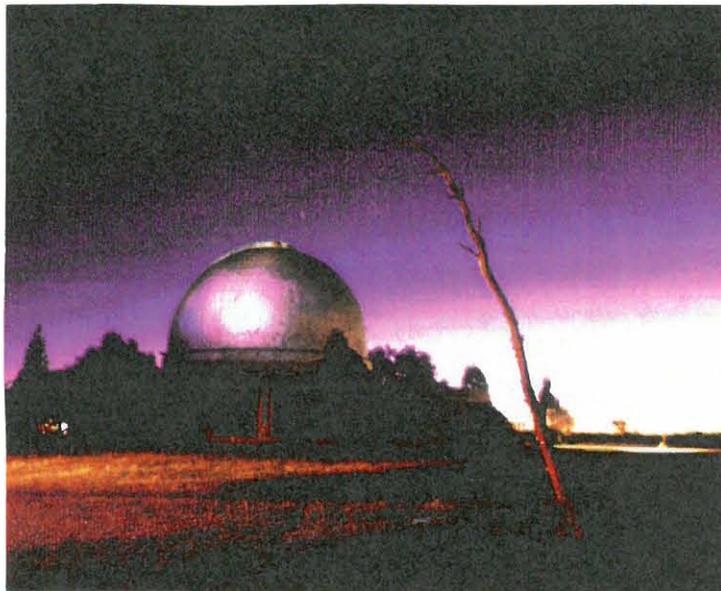


Image 2

The first exposure was taken at f22 at 10 sec from a 5 sec reading. Waiting for it to become darker in summer takes longer than in winter but it is a proven fact that sunsets are more beautiful and of richer colours because of the increased diffraction of the sun's light in winter. After waiting one hour the second exposure that lasted one and a half hours was started. The dome was painted for 30 minutes at f16 at about 70 meters distance away, with the blue gel folded four

times over the light. The blue gel, however, did not seem to have an effect on the colour of the dome, which is white

The trees in front of the observatory were painted with the green gel folded four times over the light for about 8 minutes to bring out just a little bit of detail. The yellow grass was painted for about 10 minutes with the yellow gel folded double over the light, while the red grass in the foreground was done simultaneously by keeping the car brake lights on for 10 minutes. The dead branch in the foreground was only painted for 5 minutes since it was only 5 meters away from the camera. It was a pity that my knowledge of the stars was not as good at this time as it is now, because I feel that this shot could have been improved if the stars were used as a compositional element.

The next image was recorded just outside Bloemfontein on the Petrusburg road at one of the old drive-in theaters that the municipality was in the process of demolishing. It was shot on Agfachrome RSX 100 - 120 roll film also on the RB camera. I found the whole composition quite interesting with the red star, as I call it, at the top of the image leading the eye straight down the middle of the picture to the horizon.

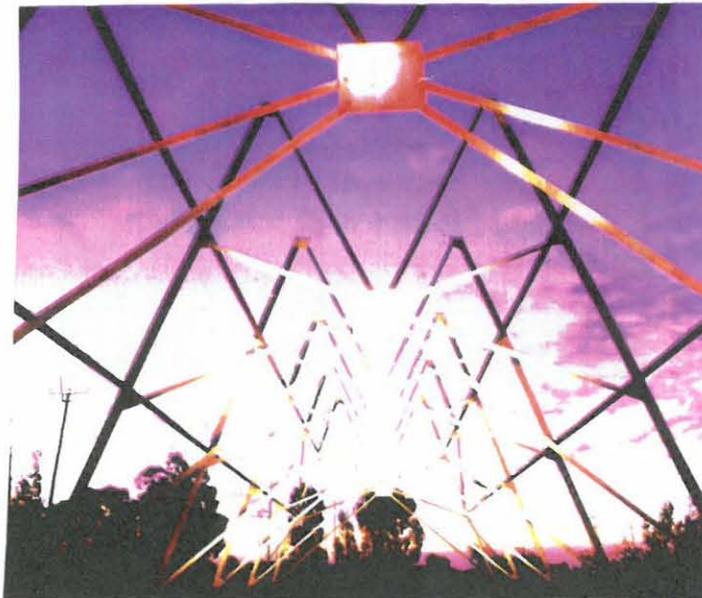


Image 3



The first exposure was 15 sec at f22 from a 8 sec reading. I was lucky enough to be able to get the car right under the poles next to the camera so that my painting with light times were greatly reduced. The second exposure lasted about 25 minutes at f16. I painted the red star for 5 minutes with the red gel folded four times over the light, to try and make it stand out as much as possible against the deep blue sky. The white poles were painted for 12 minutes with the light, more concentrated in the centre parts to make them glow.

The fourth image was taken in one of the newer suburbs of Bloemfontein, Langenhoven Park on an old abandoned plot. It was early autumn and the shot was recorded on Fujichrome Provia 100 - 120 roll film and was also recorded on the RB camera. There was lightening on the horizon, which is why the clouds were lit up to give them detail during this 40 minute exposure.

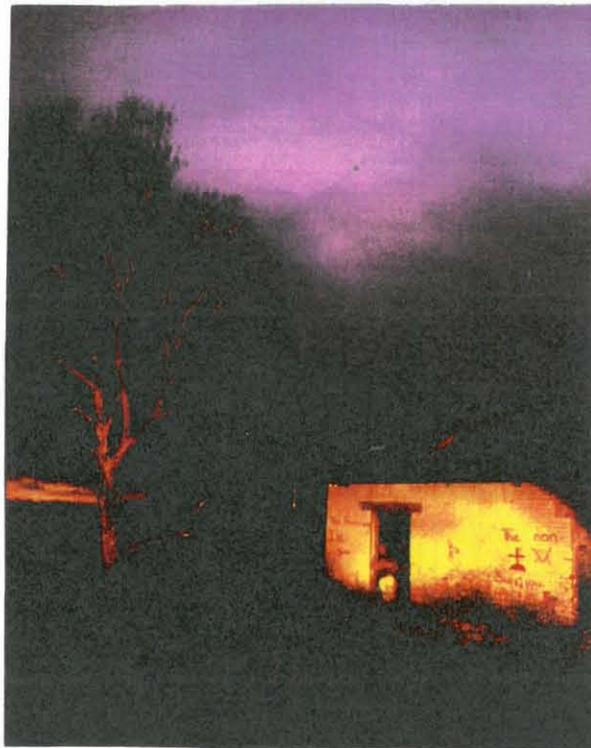
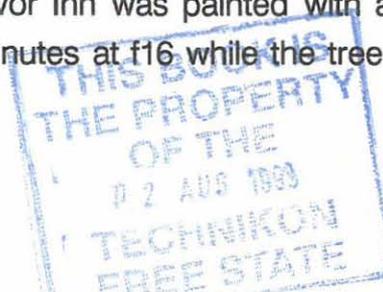


Image 4

The first exposure was f22 at 20 sec from a 8 sec reading. Because it was overcast that day I did not have to wait very long before it was dark to take the second exposure. The wall of the Survivor Inn was painted with a brown filter folded four times over the light for 12 minutes at f16 while the tree was painted



with the same brown gel for 20 minutes. A friend of mine was helping me with the shoot and I asked him to stand as still as possible in the doorway for 2 minutes, and the results turned out rather interestingly. I think that I would like to start experimenting more with live subjects to obtain different effects.

The fifth image that I would like to discuss was taken in a small town called Philopolis in the Free State. It is of the house where the famous South African author Sir Lourens van der Post was born and has now been turned into a guest house. It was taken in early winter on Agfa optima 100 - 120 roll film again using the RB camera.

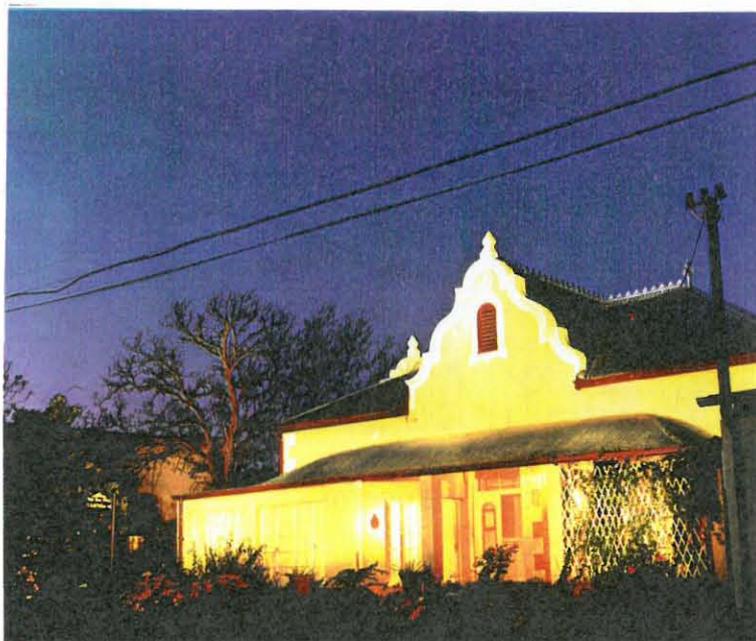


Image 5

The first exposure was f22 at 15 sec after getting a reading of 5 sec. The second exposure lasted about 40 minutes at f16. The house was painted for 12 minutes without any gels over the light. I left the lights in the house and the veranda on for about 6 minutes. The garden in the foreground was painted with a normal hand held torch with a yellow filter to try and bring out the bright yellow flowers in the garden for 12 minutes but without much effect. The tree and stables in the back left corner were painted with the hunting spotlight for 18 minutes also without any



gels. The negative was slightly overexposed on the house but I managed to save the image during the printing stage.

The sixth and final image that I would like to discuss was taken at the same house in Philopolis. It was also taken on optima 100 ASA 120 roll film with the 6 by 7 RB camera.

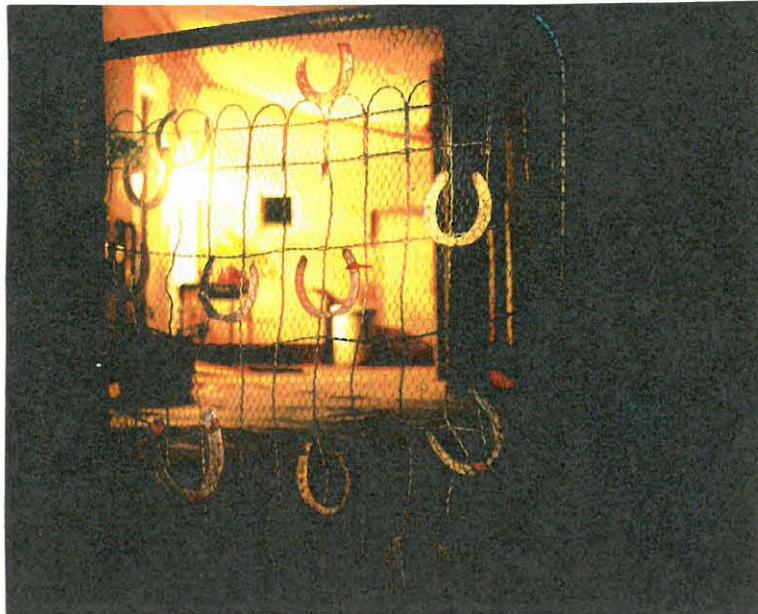


Image 6

The camera was set at f11, The background was lit entirely by the light inside the house shining through the window for 45 seconds while the gate was painted with a hand held torch with somewhat failing batteries for about 5 minutes. I enjoy the blown-out effect that the interior light provided because it creates a feeling of movement.

## OBIE OBEHOLSER

Mr Oberholser or Obie, as he prefers to be called, is certainly in my eyes - and much of the world's - the finest and most advanced photographer in the exterior paint-with-light field. He is internationally known for his work and is very much in demand. I was able to arrange a meeting with him so that he could "shed some light" on the subject.

Obie is a lecturer in photography at Rhodes University in Grahamstown. He also does work for other people not affiliated to the University, but this is mostly abroad. He has an agent working for him in Hamburg, Germany and she sells most of his exterior paint-with-light work at a 15% commission cost.

He also does work for many overseas travel magazines. He calls this type of work "a picture journey", where he will do a spread of an average of 20-25 publishable photographs of a town or area. Even though these so called picture journeys are mostly worked on in daylight rather than low light or night light, he still uses a lot of fill-flash to make his images more creative, eye-catching and unique.

He uses a 6 volt Coleman, 1 000 000 candela power, hunting light for most of his exterior work and a 500 000 candela power hunting spot light for his interior and still life work. The Coleman light works on a portable battery pack while the latter is an electrical mains and/or car lighter rechargeable light.

Because these spot lights are portable, it means that he can reach places that would be inaccessible to a car. It also allows him to do side lighting on a subject, which adds a very soft and natural light to his images. The beams of these lights are also focussable which allows him to concentrate on a small area at a time. He advised me to try and find an old Fresnel glass filter that can be placed over any standard lamp to focus the beam of light.

He uses a Pentax 6 by 7 camera because he says that Pentax manufactures good sharp lenses and that it is what works for him. He only uses AGFA colour negative film, from sponsorship, because of the lee way that negative film provides in exposure which is very important in this type of photography where reciprocity failure occurs. It also means that an image can be saved and manipulated during the printing stages, which is something at which Obie is very good.

Obie enjoys playing with warm and cool colours, which he combines on the same image to create contrast and mood. This he achieves by using a flash for cool colours and his tungsten hunting light for warm colours. He sometimes reverses the cool and warm colours through his printing technique. He does not use lens filters (only sometimes a polariser filter) or gels over his spot light but will sometimes use a filter over his flash, on which he has a snoot to focus its beam.

He believes in a high degree of depth of field and therefore uses an f-stop of f22. He uses an ambient light spot meter for his readings and has a reciprocity table stuck on the back of it to work out the necessary compensation. He also uses a fair degree of guess work for his exposure times which he refers to as the mmm-factor. It is difficult to know exactly how much time is necessary and one must develop a feel for it.

Looking at his work sometimes discourages me when I see how far I still have to go, but I find his images so captivating that they have also been the reason for my drive and motiation to try and master this field of photography.

Obie's philosophy is one that I feel all photographers should live by and that is "at least one good photograph per day". I enjoy his light-hearted approach to life and his warped sense of humour when he is "off duty" but when it comes to work time, he suddenly becomes very serious and focussed on his task and it is then that he produces his masterpieces.

## CONCLUSION

I have found this field very interesting and exciting in all the possibilities that it holds for creative expression. It has been a challenge from start to finish to try and master this field but I think, like most types of photography, it will take years to master.

It has not been very easy doing research in this field because there are no books that deal with this method of painting with light. I even checked the Inter-Net for information but came up dry. The Technikon library was kind enough to order me two books about night photography on inter-library loan to help me in my research.

I have mentioned everything of relevance that I can think of, namely the necessary equipment, the author's work, reciprocity and a discussion of the guru of this field of work, Obbie Obeholser.

I would definitely recommend this field to any photographer who enjoys working outdoors and has lots of patience when all one can do is wait for the right light.

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