

*Introducing the  
Creative World of  
Pinhole Photography!*

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A Quarterly Newsletter

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*Ken Neely*  
Agoura High School Teacher, CA

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Freestyle Photographic Supplies Presents  
**Freestylin'**  
A Quarterly Newsletter

*Your Value Leader...since 1946!*

**Introduction**

Freestyle Photographic Supplies has always been committed to the art and teaching of photography. Continuing with this tradition, we are providing this quarterly newsletter to you as a source of creative new ideas for your photography teaching program. Each issue we will spotlight a different aspect of photography and feature some of the important friends and resources we have been associated with over the years. In this issue of *Freestylin'* we spotlight Pinhole Photography.

Pinhole Photography not only embodies the essence of photography, but the very basics of optics. Pinhole images have been written about for over 2,000 years and were used by astronomers to study solar eclipses. Around 1610, J. Kepler coined the term camera obscura (literally "dark room") to describe a dark box or room with a hole that shines an image inside. Later, the camera obscura was instrumental in the invention of photography.

The simplest of all cameras, the pinhole provides an easy and alluring exercise in teaching fundamental photography. Your students will be surprised and captivated by the simplicity of pinhole photography as well as the creative outlet it provides.

This issue, Eric Renner, world renowned pinhole photographer and Co-Director of the Pinhole Resource, is our featured artist and the author of our featured book. We are also proud to bring to you, in our Classroom Spotlight, Peter Olpe of the Basel School of Design, Switzerland who, with his wife Andrea Bussiek Olpe, is the inventor of the famous 6x9 Pinhole Camera Kit (a.k.a. Beseler Pinhole Camera Kit.)

We hope that you enjoy reading this newsletter and that it helps you expand your photographic program offerings. Look forward to future issues where we explore other areas of creative photographic instruction, including B&W infrared photography, cyanotype, digital photography, and more!

Eric Joseph - Editor  
Vice President Merchandising & Product Development

**We want to hear from you!**

Please submit comments or suggestions to:  
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**Featured Artist**

*"The Renner Style"*

A Freestyle Interview with Art Photographer  
Eric Renner

by Stephanie Morey

Eric Renner is a well known art photographer and the author of the book *"Pinhole Photography: Rediscovering A Historic Technique (2nd Edition)"*. He is an avid pinhole photographer who builds all his own cameras. Some of his pinhole images are among the most recognizable of the 20th century. Mr. Renner is also the designer of the Leonardo pinhole camera.

**(FS) How did you get into pinhole photography?**

**(ER)** I have a bachelors and masters degree in product design. Back in the late 1960's I found that product design was just too impersonal, so I took up pinhole photography. I had made a pinhole camera in design school and knew that it could make a more panoramic image which was appealing to me. So I made another pinhole camera and taught myself photography. Since then I've taught students at all levels from elementary school through college.

**(FS) Do you think people are intimidated by the idea of pinhole cameras?**

**(ER)** No. It's just a different sensibility. Wedding photographers are using it now and the music industry is using it for CD covers.

**(FS) What important tip would you give to a beginning pinhole camera user?**

**(ER)** Remember that light leaks are a common problem. Be sure that your camera is sealed and that nothing is blocking the pinhole.

**(FS) Tell us about your most memorable pinhole photograph.**

**(ER)** I made plaster casts of my wife's, Nancy Spencer, and my face and put a pinhole in each the eye. Then we made self portraits. It represented the closeness, the personal-ness of our relationship.

**(FS) What is the most unusual thing you ever made a pinhole camera out of?**

**(ER)** In Arles, France, where Vincent VanGogh painted, I bought a black sweatshirt with a picture of VanGogh on it and cut a hole where his ear was. [I used] a Leonardo behind the ear hole [which] acted like a vignetting device. People probably thought I was crazy.

**(FS) What tips would you give to a teacher interested in pinhole photography?**

**(ER)** For kids, use paper negatives because you don't have to develop them in total darkness. They can watch the image appear which is the most exciting part. That's what kids love. It does not matter to them if the image is clear or not.

**(FS) What are some of the pitfalls to avoid when teaching pinhole photography?**

**(ER)** You need to be closer to [your subject] than with a lens camera. Also, the pinhole makes a very wide-angle image.

**(FS) On page 124 of your book you discuss a detailed formula for determining pinhole size. Is there an easier way?**

**(ER)** Pinhole can be easy. If your camera is 2 to 6 inches deep, twist a small sewing needle through (about 1/8" up the shaft) a piece of metal from a soft drink can. Sand both sides with 600 or 400 grit emery paper [found in most hardware stores]. Chances are that you will get a good image.

**(FS) Is there an easy way to calculate the exposure needed to register an image on film?**

**(ER)** You have to put aside the analytical part that needs to know "is it a 10 or 14 second exposure?" It is just not that important. 1 or 2 seconds in either direction won't make that much difference.

**(FS) What do you like about pinhole photographs?**

**(ER)** I love the mysterious dream-like quality of the photographs. They capture a whole other view of the world – not just a copy of the one we see. Pinhole photography brings me closer to the essence of photography. That doesn't make it a better way to photograph for everyone. It is just another perspective.



"Anne Frank" by Eric Renner

Read the complete interview with Eric Renner, plus an enhanced version of this newsletter on our website at [www.freestylecamera.com/newsletter.html](http://www.freestylecamera.com/newsletter.html)

## Classroom Spotlight

Professor Peter Olpe,  
Dept. Head, Freshman Department  
Basel School of Design, Switzerland

Pinhole photography is a regular part of Professor Olpe's life. Not just as an educator where it is an important tool in his curriculum, but as an inventor – he, with his wife Andrea, are the designers of the 6x9 and 6x6 "Wide-Angle" Pinhole Camera Kits.

Why pinhole photography in school? To Peter, the answer is simple. "In education the pinhole camera is a simple and wonderful tool to explain to students how a photo camera basically works. The 35mm cameras of today are packed with electronics and for most of their users it seems that photography must be something very complicated. The pinhole camera reminds us of the fact, that there is a simple little darkroom in the camera (the camera obscura) with a small round window on one side. And this is what all cameras have in common."

Peter recommends using both black & white and color film (print or slide) with pinhole cameras. Says Peter, "Most of the people relate pinhole images with black and white, because they believe it is an old kind of technique. But color opens a new dimension to pinhole images."

Here is a sample project based on instructional concepts Professor Olpe uses:

### Objective:

Using a pinhole camera, produce one 8x10 print to illustrate each of the following three concepts: a) Pinhole cameras' focus begins very close to the camera and extends out to the horizon. b) Pinhole cameras produce a fairly wide-angle picture with no line distortion. c) Pinhole photography defies precision/encourages experimentation.

### Tools:

- Pinhole Camera: 6x9 or 6x6 Wide-Angle Pinhole Camera Kits or other pinhole cameras
- Film: Arista Pro 400 or other fast B&W film.
- Darkroom: Traditional or Digital

### Options:

Let students build their own cameras. For film try color, negative or slide, ortho, infrared, paper negative, etc.

Students should attempt to capture the idea that pinhole cameras (or any camera) do not just imitate what people see. Their unique "eye" on the world notices things that we would otherwise overlook and provides a point of view we would not have otherwise considered.

Peter uses a digital darkroom (scanner/computer/inkjet printer) for clean and easy enlargements and will sometimes strip out the colors for a black and white effect.



"Breakfast in the morning after my 50th Birthday in Marseille, France"

Ektachrome 400 digitally scanned and made black and white. Close up shots can open a fresh perspective in to the world of everyday objects. Because everything is always in focus with pinhole, the cups and pots turn into strange monumental architecture.



"Me in the window of a skyscraper in Manhattan" Agfa Scala black and white slide film digitally scanned. The extreme angle of view of the 6x6 camera is responsible for the very strong foreshortening effect. Only pinhole cameras are capable of creating such extreme perspectives without distorting the lines.



"View out of the train in France"

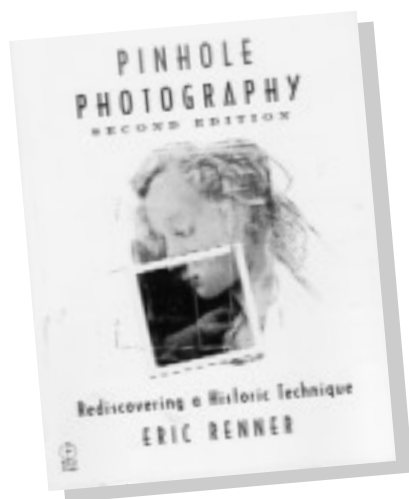
Ektachrome 400 digitally scanned and made black and white. Travelling with a long exposure is responsible for the "abstraction" of the landscape.

Photographs are from the collection of Peter Olpe.

Visit our website for additional projects at [www.freestylecamera.com/newsletter.html](http://www.freestylecamera.com/newsletter.html)

## Recommended Text

**Pinhole Photography**  
*Rediscovering a Historic Technique*  
Second Edition  
by Eric Renner



There is a big comeback these days in pinhole photography, and if you want a book that teaches you all about it...here it is.

Eric Renner has done his homework and his extensive research has paid off. From 330 B.C. to the present, find out how an insect hole in a leaf to a pinhole toilet (yes, a toilet) camera can create very unique and sometimes exaggerated images. Learn how to manipulate these images through various techniques and films in both black & white and color, print and slide.

Many pinhole photographers world-wide have contributed to this book giving simple-to-read details on materials to use, various exposure charts and sharing their beautiful creations through the use of pinhole cameras both hand-made and preassembled.

A highly recommended book for discovering or rediscovering the art of pinhole photography.

Other recommended books....

"The Beginner's Guide to Pinhole Photography" by Jim Shull

"The Keeper's of Light" by William Crawford

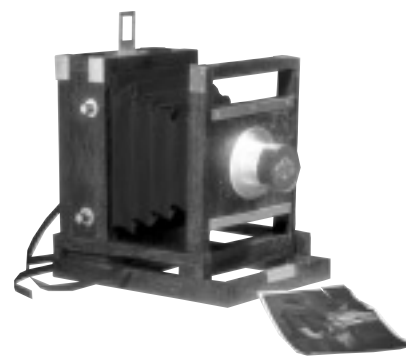
Kristina Loughery

Education Sales Supervisor

All products featured in our newsletter can be found on our website at [www.freestylecamera.com](http://www.freestylecamera.com)

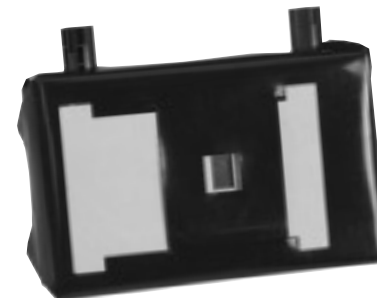
## Product Spotlight

**35mm All Paper Pinhole Camera**



This paper camera from Wrebbit has fast become one of our most popular items. Its design is inspired by an original 19th century model bellows camera. Though made entirely of paper, its classic design is historically accurate – down to the wonderful old-fashioned photographs it will allow you to take. The finished camera measures 6-3/4"x10-3/4"x9", takes rolls of 35mm film and actually works. Recommended for ages 12 and up. Truly a challenging project that includes up to 191 individual parts.

## 6x6 Wide-Angle by Olpe & Bussiek



Offering the same "build-it-yourself" experience as the 6x9 Pinhole Camera Kit we offer, this wide-angle version creates images with a wider view. The 6x6 Wide Angle Pinhole Camera is made of die-cut corrugated cardboard and vinyl-plastic for 120 (6x6cm) roll film. The camera (without viewfinder) has an angle of view of 109 degrees diagonally. The laser cut aperture opening is 0.2mm and has an f-stop of 1:140. All parts including instruction booklet, glue, tape, and a roll of B/W negative film are included. Basic daylight exposure is approximately 2 seconds when using ISO 400 film. The camera was designed by Peter Olpe in Basel, Switzerland, and manufactured in Switzerland.

## Tips & Tricks

### Pinhole Camera Aperture Chart

Calculating exposures for your pinhole camera can be difficult. The Lensless Camera Mfg. Co., has provided us with the following table of apertures and f-stops for their products. Please note that the format (4x5, 5x7, etc.) of the camera is irrelevant; only the working aperture and focal length determine the f-stop.

Focal Length (thousandths)	Pinhole dia. (fractions)	F-stop
675mm/27"	0.0156"	1/64" f/2000
450mm/18"	0.0156"	1/64" f/1200
300mm/12"	0.0156"	1/64" f/840
225mm/9"	0.0156"	1/64" f/630
200mm/8"	0.0156"	1/64" f/560
150mm/6"	0.0156"	1/64" f/420
100mm/4"	0.0156"	1/64" f/280
75mm/3"	0.013"	1/77" f/230
50mm/2"	0.013"	1/77" f/154

A relatively simple calculation will permit you to meter for a larger f/stop and convert the time given to one suitable for your pinhole camera. If you:

1. Set your light meter to f/stop A,
2. It returns time S, and
3. Your pinhole camera has aperture B,
4. You can find the correct exposure time X with the following formula:  $SB^2/A^2=X$

When exposure times are long, you may want to adjust for reciprocity failure. Learn more about it on our website at [www.freestylecamera.com](http://www.freestylecamera.com)

## Have A Question About Photography?

Send it in! The answer may appear in the next issue of the Freestylin' Newsletter.  
[newsletter@freestylecamera.com](mailto:newsletter@freestylecamera.com)

## "What Works For You Contest!"

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## Resource Center

### Websites of Interest:

<http://www.pinhole.com>  
<http://www.pinholeresource.com>  
<http://myweb.ns.net/~cbs/>  
<http://www.pinhole.org/>  
<http://www.savedge.com/pinhole/>  
<http://home.online.no/~gjon/pinhole.htm>

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