

PHOTOGRAPHING Architecture

■ Lighting, Composition, Postproduction,
and Marketing Techniques



Amherst Media®
PUBLISHER OF PHOTOGRAPHY BOOKS

John Siskin

DEDICATION

This book is dedicated to my father, Sheldon Siskin. He taught me to ski and surf and how to live on planet Earth. He got me my first camera and my first job in photography. Thanks, Dad. I love you!

Copyright © 2012 by John Siskin.

All photographs by the author unless otherwise noted.

All rights reserved.

Published by:

Amherst Media, Inc.

P.O. Box 586

Buffalo, N.Y. 14226

Fax: 716-874-4508

www.AmherstMedia.com

Publisher: Craig Alesse

Senior Editor/Production Manager: Michelle Perkins

Assistant Editor: Barbara A. Lynch-Johnt

Editorial assistance provided by John S. Loder.

ISBN-13: 978-1-60895-300-4

Library of Congress Control Number: 2011904397

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

No part of this publication may be reproduced, stored, or transmitted in any form or by any means, electronic, mechanical, photocopied, recorded or otherwise, without prior written consent from the publisher.

Notice of Disclaimer: The information contained in this book is based on the author's experience and opinions. The author and publisher will not be held liable for the use or misuse of the information in this book.

Check out Amherst Media's blogs at: <http://portrait-photographer.blogspot.com/>
<http://weddingphotographer-amherstmedia.blogspot.com/>

Contents

About the Author 6
Acknowledgments 7

PART ONE: THE ESSENTIALS

INTRODUCTION 8
The Importance of
Architectural Photography 8
Why Interiors? 9
Using This Book 10

1. PLANNING FOR THE SHOOT 11

Analyzing the Room 11
The Shooting Angle 11
The Key Players 12
The Existing Light 12
Image Usage 12
In Summary 13

2. CHOOSING THE RIGHT GEAR 14
Cameras 14
Lenses and Angle of View 14
Tripods 18
Lights 20





Light Modifiers	22	SIDEBAR: WORKING AROUND FULL SUN	41
Light Stands	28	SIDEBAR: THE FORECAST	42
Software	28	Developing the Lighting Strategy.	42
3. THE SHOOTING ANGLE	30	Positioning the First Light.	45
Positioning the Camera	30	SIDEBAR: DAYLIGHT, TUNGSTEN, AND	
Focal Length, Shooting Distance,		FLUORESCENT LIGHT	46
and Spatial Relationships	30	Balancing Mixed Lighting	46
Preventing and Eliminating Keystoning	33	<i>Fixing Color Imbalances in</i>	
Reviewing the Shot	38	<i>Photoshop</i>	47
In Summary.	38	<i>A Test Shot</i>	47
SIDEBAR: PHOTOSHOP'S		Additional Lighting	50
LENS CORRECTION FILTER	38	<i>Battery-Powered Strobes</i>	50
4. LIGHTING INTERIORS	40	<i>Umbrellas</i>	51
Special Challenges	40	<i>Bowl Reflectors and Cinefoil</i>	51
Analyzing the Existing Lighting.	40	SIDEBAR: A HELPFUL STRATEGY.	53
Identifying the Dominant		<i>Bare Bulbs</i>	53
Color Spectrum.	40	How Many Lights?	53
		Establishing Balanced Power	55
		In Summary.	56

4 Photographing Architecture

5. PHOTOGRAPHING EXTERIORS 58

- Waiting for the Right Light 58
- Changing Perspective. 59
- Black & White 61

6. POSTPRODUCTION ENHANCEMENTS . . 63

- Useful Tools 63
- A Case Study 64
 - Basic Editing 66
 - HDR Images 70
 - Layers 75
 - A Simple Fix 75

7. THE CLIENTS 77

- Ensure a Good Fit 77
- Potential Clients 79
- Passive Advertising. 81
 - The Yellow Pages. 81
 - Portfolio Sites 81
 - Bidding Sites 82
 - Craig’s List 82
- Active Advertising 82
 - HTML e-mail 82
 - Social Networking 82
 - Live Social Networking 82
 - Referrals 82
 - Postcards 83
 - Cold Calling 83
 - Visiting Clients 83
- Communicating with Clients 83
- The Details of the Job 84
- Pricing. 88
- SIDEBAR: SAMPLE ESTIMATE 89

PART TWO: THE PORTFOLIO

PRELUDE TO THE PORTFOLIO. 94

- RIDGE TOP 96**
- STAGE ROAD 100**
- STONE CREEK 105**
- THE CREST 110**
- OAKS 116**
- MAGNAVINO 120**
- WAREHOUSE 125**
- SOUND STUDIO 130**
- NIGHT SHOT 134**
- BIG WAVE DAVE 138**
- HOTEL 142**
- CATHEDRAL OF OUR LADY OF
THE ANGELS 146**
- CANYON EXTERIOR 151**

- Conclusion 154
- Index. 156





About the Author

John Siskin is a fine art and commercial photographer who often works with landscape and architectural images. He has done a large number of commercial jobs, including projects for General Motors, Disney, and AidsWalk. His portraits for AidsWalk have been displayed on the streets of Los Angeles, Atlanta, San Francisco, and New York City. He has taught photography for more than twenty years at colleges in Southern California and is currently teaching classes online at BetterPhoto.com.

John's work has been part of many exhibits. His photographs have been shown at the Brand

Library, 2nd City Art Gallery, Harold's Gallery, Farmani Gallery, and The Atelier. He has been a regular participant in the Valley Studio Tour.

John's first book, *Understanding and Controlling Strobe Lighting: A Guide for Digital Photographers*, was published by Amherst Media in 2011. His work has also appeared in a number of magazines, including *View Camera*, *Photo Technique*, *The New Yorker*, and *Shutterbug*.

More of John's work, and some of his magazine articles, can be seen at www.siskinphoto.com.

ACKNOWLEDGMENTS

This book wouldn't exist without the help of some truly wonderful people. First, my wife Susan Siskin, who has been endlessly supportive throughout this project. Thank you! Second, Tom Ferguson. Tom is the first, and sometimes only, person who reads my words before they go to the publisher. I wouldn't have the confidence to do this without him. All the mistakes are mine; the fact that there aren't more is because of Tom.

This book is also a product of the clients I've worked for. Without them, I wouldn't have taken most of these images. There's one client I want to single out: Terry Beeler and Son General Contractor, Inc. They do awesome work, and I get to photograph it. If you're in Southern California

and need to build a house or other building, call them at (661) 251-8435 or visit them online at www.beelerbuildsembetter.com. You can see thousands of my images there.

Finally, I want to thank Lance Gullickson. He has assisted me on many of the jobs that appear in this book, and he took the pictures of me that appear herein.

I would also like to thank the following for their help and lifestyle advice: Harlan Goldberg, Terry Pobirs, Jennifer Halsworth, Bob Cole, David Beeler, Maureen Levitt, Gretchen Haacker, Rico Mandel, Lem Johnson, Cris Pendarvis, Big Wave Dave, Melanie Zimmerman, Matt Ehrenberg Dodie, and C.J.

Part One

The Essentials

Architectural photography is typically client-driven. In other words, you are hired by an individual or business—be it an interior decorator, a builder, or a hotelier—who needs images of their space. To do the job effectively, you must master the technical and artistic aspects of the job—learning how to select and use the appropriate tools, solving problems, and fine-tuning the image. You must also handle the business aspects of the shoot—finding clients, writing a proposal, providing an estimate, etc.

The chapters in this section are devoted to the nuts and bolts of the business, from analyzing the room to finding and communicating with clients, to choosing the right gear, placing and modifying the light, and retouching/finishing the images in postproduction.

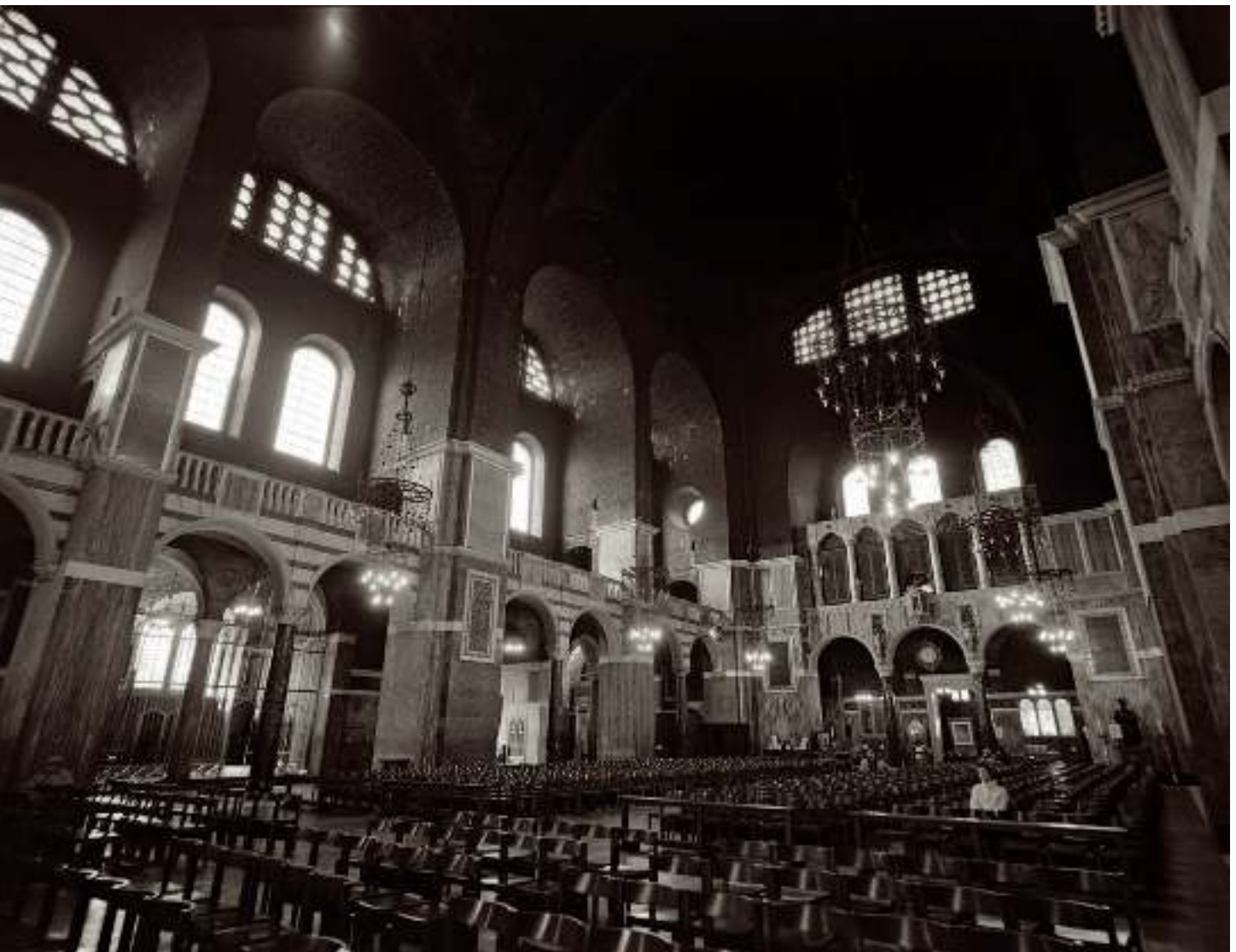
Introduction

THE IMPORTANCE OF ARCHITECTURAL PHOTOGRAPHY

Most people live the majority of their lives in buildings. We start life in a hospital, and then we go home. We spend our days in offices, factories, and shops. A home is the most expensive thing

that most families ever own. Buildings are important to people. There may be a science fiction story about technically sophisticated beings that live outside, but you'll find humans indoors. Our buildings are so important to us that we refer to them as *buildings* rather than *builts*. They are

BELOW—A cathedral in England. Buildings like this were often made over decades.



ongoing creations. People have been constructing buildings for thousands of years, and often they are our most lasting creations.

Making photographs of buildings is very important to photographers and to a lot of other people. We may take photographs of people working on a building, or a person working inside, or a photograph of the building. We may be taking photographs for a wedding, or we may take photographs for a contractor. Regardless, we will need to make the location part of the photograph, or it may be the whole shot.

Photographing interiors requires a specialized approach. There are many decisions that must be made before, during, and after the shoot that do not come into play when photographing most other subjects.

This book was written to teach you the skills you need to meet the challenges that photographing architecture presents, so that you can provide your clients with polished, high-quality images they can use to showcase their businesses.

WHY INTERIORS?

A photographer needs a variety of skills to be good at architectural photography. We need some of the same skills to shoot the exterior of a building that we'll need to shoot inside of it. We'll need more skills and also different tools to shoot inside. So, an interior shot requires lights, a tripod, and a wide-angle lens to do well. When you shoot outdoors, you don't have as much control over light. Often, the only thing you can do is be patient. For interiors and exteriors, a good sense of design, angle, and attention to detail will make you a better photographer.

Most of this book is concerned with shooting interiors, because the skills involved are



TOP—A plastic surgeon's office in Beverly Hills, California. BOTTOM—Balancing the light from the strobes with the window light in this image was difficult, but it worked out well.

complex. Learning to use lights effectively may require considerable attention and practice. The technical skills required can be transmitted via the pages of a book. In contrast, when it comes to shooting exteriors, I am not sure that I can teach you to wait patiently for a cloud to pass or dawn to come. Still, there is one thing I should say about photographing a building at dawn: dress warmly!

USING THIS BOOK

This book was created to help you understand how to build better images. It was written in two parts: in Part One, you'll find chapters devoted to finding and communicating with clients; selecting the proper equipment for the job; choosing the most effective camera position; placing lights, controlling light, ensuring proper lighting balance; and correcting the perspective issues that are prevalent in architectural photography.

I've also included information on how to fix problems in postproduction. Layers and other Photoshop features will help you to bring out the best qualities in any photograph. I'll explain how to work with Layers and teach you how to create High Dynamic Range (HDR) captures. HDRs are especially effective for situations where you don't have lights or can't light a location due to its size or other considerations.

In Part Two, I've provided a look at how I made selected images—from start to finish. I've discussed how the shot was done, what the problems of getting the shot were, and all the work that was done in Photoshop after the shot. I've included examples of homes, businesses, and public spaces in this section.

So, here it is: a book that can help you shoot buildings—from start to finish. Let's get started.

1. Planning for the Shoot

ANALYZING THE ROOM

Before you begin the shoot, it is important to take some time to analyze the space. What is your first impression of the room? For some, it will be color. Some will see the space. Others will be impressed by the room's contents. When you photograph a room, you effectively miniaturize it, so you need to pay attention to the original feel of a space or you'll lose the effect in the photograph. Architectural photography requires a great sensitivity to the feel of a place, in addition to an appreciation for the finer points. The details of the room—the physical space, the design and color of the existing light, the textures, and the decor—should be taken into consideration. You'll also need to determine how the client sees the room.

The Shooting Angle. Before you fully conceptualize your shot, walk all the way around the room. Don't assume that the entrance is the only good angle from which to take the shot. You'll also want to consider the point of view. A five-foot-tall photographer sees differently than a photographer who is six feet tall. The best angle might be from two feet or seven feet from the ground. Sometimes I wish I had stilts! When you choose a tripod, you should keep this in mind. You'll find more information on choosing the appropriate shooting angle in chapter 4.



ABOVE—This is a simple shot, but the light makes it work well. One strobe was used with a large umbrella.



LEFT—This shot advertised a winery. The goal was a lifestyle image.

the room. If you change the lighting radically, people may feel you haven't properly captured the room. When you consider your shooting options, you'll want to know how the room is lit and how the movement of the sun will affect the overall lighting at the time of the shoot—and your lighting strategy should be built around the qualities of the existing light you find.

Indoor scenes have a wider tonal range than outdoor scenes do, and capturing them requires adding more light or working a little magic in postproduction (more on this later). When you add light, it often has a different color temperature than the existing light does, and you must find a way to balance the lighting. Later in this book, there are tips and techniques for creating harmonious lighting while upholding the mood that the lighting creates.

The Key Players. Look at the furnishings in the room. Often, I have to repeatedly reposition a piece of furniture to get it to feel right. Keep in mind that anything that is near the edge of the frame is more likely to appear misshapen than an object in the center of the shot. So if an object is important to the shot, like a piece of exercise equipment in a gym, don't put it at the edge.

Sometimes, distortion issues must be solved by changing our perspective, using tilt/shift lenses, or manipulating the image in Photoshop (this is often the most effective option). You'll learn how this is done in forthcoming chapters.

The Existing Light. When looking at a room, it is important to pay attention to the existing light. The lighting in the room is part of its design, and it establishes how everyone sees

IMAGE USAGE

Another important point to consider before you begin to shoot is how the final image will be used and the size at which it will be viewed. Some of the aspects of the room may "read" better in a larger image shot for a two-page spread in a magazine than in a small image destined for your client's web site. Also, the amount of postproduction work that is required, and even the amount that you will bill your client, will depend upon the final image usage. After all, creating a web image doesn't require as much work as preparing an image for print.

Chapter 7 is devoted to the topic of working with clients. So, beginning on page 77, you'll read about a wide range of client-related topics—from identifying prospective clients to

communicating your expectations and requirements and more. As these client-related topics come into play when planning for your shoot, though, it seemed important to touch on the importance of communicating with your clients here.

IN SUMMARY

A successful shoot requires a well-thought-out and clearly defined approach. Before you select

your tools or place a single light, analyze the room and consult with your client to determine whether you are both on the same page regarding the mood the image should convey. Also, be sure you understand how the image will be used and what its final size should be. These are critical aspects of planning the image.

Once you've accomplished these tasks, you're ready to dig in and get to work.



LEFT—You can see how the basin is elongated in this shot. Shapes, especially near the edge of the frame, can get distorted. RIGHT—The client wanted to keep the ottoman and the basket in the shot. Clients get to make the decisions!

2. Choosing the Right Gear

When you shoot architectural interiors, the first thing most clients request is a very wide angle shot. All clients initially want too much space covered in a single shot. While this is not always a good idea for communicating anything about the actual character of a space, you will need to be able to do this. So, the first concern in picking a camera are the wide angle lenses available for that camera. Rather than discuss a specific focal length, because that is dependant on the size of the sensor or film, let's talk about the angle of coverage.

CAMERAS

I won't say that the camera doesn't matter, but it is the lens that makes the picture. So if you get a good camera and use the lens included in a camera kit, you probably won't make good architectural photos. As I mention below, you'll need to capture a very wide angle of view, which requires specialized lenses. Many dSLR cameras, but not all, have lenses that do this very well.

The camera you choose must also work with monolight strobes, not just dedicated strobes. It is nice to have a PC socket that will connect to strobes, but you can also connect via most hot shoes. Many fixed-lens cameras won't be wide enough, nor will they connect to strobes. There may be some advantage in using a dSLR camera

that captures the full area of 35mm film frame. However, as there are more and more very wide lenses manufactured for use with the smaller sensors, any advantage is limited.

You will want to capture a high number of pixels—at least 10 megapixels, but more would be better. There are medium format digital cameras that take wide lenses, but they are rather expensive. Unless your clients need very large prints, more than 16x20 inches, an investment in a medium format camera may not improve your images, even though it will be costly. Some of the images in this book were done with large format film cameras that used a piece of 4x5-inch film. Certainly this could still be done, but there would be problems with processing and previewing the image. I used to use a lot of Polaroid instant material to set up the images with my big camera, and this added a lot of expense. So I think that a good dSLR, probably from Canon or Nikon because they make more types of lenses, will be best for most people shooting architecture.

LENSES AND ANGLE OF VIEW

On a full-frame sensor, which is about 1x1.5 inches, a 20mm lens covers a 94 degree angle of view. This is about a quarter of a circle. If you were using an APS-size sensor, you would need a focal length of about 12mm to accomplish the



ABOVE—This is a shot made with my widest lens, which captures an angle of view of about 100 degrees from side to side. Still, there are times when my clients would like an even wider image.

same angle of view. If you used a 4x5 film camera, you would need a 75mm lens to achieve that angle of view. I commonly use a lens with a 100 degree angle of view, and I would occasionally like a wider angle. Of course, a zoom is very useful because it allows you to crop the image and do a better job of choosing your position. However, a zoom (a lens with a variable focal length) is not as important as how wide the angle of view is. So a lens that has a 100 degree angle of view is better than a lens with a 90 degree angle of view, even if the second lens can change the angle of view to just 75 degrees. You can crop the image, but you'd have trouble making it wider.

The longest lens I have ever used for an interior shot has an angle of view of about 50 degrees. This is called a normal lens. This lens is not very useful for photographing a room, but it

can work well for shooting architectural details. In addition, these are generally fast lenses ($f/1.8$ or faster), so they can be useful for shooting with ambient light. A more telephoto lens might occasionally be useful for shooting an exterior shot of a location.

Wide angle lenses all have certain peculiarities that are often interpreted, wrongly, as distortion. Probably the most obvious of these issues is keystoning. This term describes the way that parallel lines seem to come together as they recede from the camera. If you look at a train track going away from you, the same thing happens. Because a wide angle lens expands the view quickly, this effect is pronounced. If the camera is parallel to the subject, the image will appear natural, just as the train tracks would from directly above. However, the subject will appear increasingly



Above—This is a fisheye image. The camera shoots everything in front of the camera. Often the tripod legs are in the shot. Left—I custom made this fisheye camera, comprised of a Speed Graphic camera and a Ukrainian lens. It was one of my favorite film cameras.

distorted if the camera is pointed up or down. This effect can be adjusted in Photoshop and some other image-editing programs.

Using a wide angle lens can also change the shape of an object at the edge of the frame. A circular object can appear oval and a square can look like a trapezoid. Often this problem can be adjusted after the shoot, but it is best to be aware of it at and make adjustments in the placement of objects while shooting. Note that this distortion is caused by standing very close to the subject while using a wide angle lens; it is not a fault of the lens itself. This effect is not as important in landscape photographs. You also don't see the effect if you back up far enough to use a normal lens. But, of course, we can't always do that.

There are two distortions that result simply as a characteristic of wide angle lenses. The first is barrel distortion. This causes straight lines to bow outward, particularly at the edges of the frame. There are lenses that are corrected for this problem, but some of mine are not well corrected. Fortunately, this can be fixed in Photoshop.

There are some lenses, called fisheye lenses, that use a sort of extreme barrel distortion to add more coverage. Often these lenses will have coverage of 180 degrees—this is everything in front of the camera! Because they make any straight

line curve, and straight lines at the edge of the frame are actually circular, there is little use for these lenses commercially. They offer a unique view, and they are a lot of fun. Also I have had a few commercial clients who liked the look. I have a unique fisheye camera that shoots 4x5 film, but few of these cameras were made.

Some wide angle lenses produce color fringing. This appears as a sort of a color halo around the edges of objects positioned near the edges of the frame. This problem can be edited out in postproduction.

As all of the problems outlined above can be solved in postproduction (or, in the case of the shape distortions, during the shoot), there is no reason to avoid using a wide angle lens to get the angle your clients are after.

You can also take multiple images and stitch them together in postproduction. This can make a shot that is wider than the lens will allow in one image. I prefer not to do this. Unless you use a normal lens, there will be a lot of trouble with the way objects are distorted at the edge of the frame, and this won't match from shot to shot. So you can end up spending a long time fixing the image. This is not as much of a problem with a wide landscape shot because there is less important detail and you are much farther from

BELOW—I stitched this landscape image from several frames. Stitching works better for landscape photography than for interiors.





LEFT—This is a set of Gitzo legs and a Manfrotto head. This is the tripod I use most often with my dSLR camera. RIGHT—I have a lot of tripods. They are useful for getting into tight places or supporting heavy cameras. I use the small tripods as light stands as often as I use them for cameras.

the subject. The distance from the subject, as I mentioned, affects the distortion at the edge of the frame.

TRIPODS

When you do interior shots, the tripod is a very important tool. First, it gives you an opportunity to pay real attention to the way you compose your image. Second, it allows you to use long exposures so that the ambient light in a shot can be balanced to match the light you bring and also allows you to have enough depth of field. You get more depth of field by using an aperture setting that lets less light into your camera. $F/16$ gives you much more depth of field than $f/4$. I often use $f/8$ or $f/11$ when shooting architecture with my dSLR. Lastly, the tripod keeps your camera in position as you go about changing the setting and positions of your lights.

You want to get a very sturdy tripod that will keep your camera in *precisely* the same position.

As we'll discuss later, there are times when you want to make multiple captures of an image. You'll use these to perfect the image in post-production. Having a stable tripod is much more important than having a lightweight one. Shooting interiors is not a lightweight proposition, so the weight you can save with a light tripod won't make much difference. Set up your camera on your current tripod and see how much of a tap it takes to move it out of position. You might want to look at tripods in a good camera store and see if you can find something really stable. It is easier to choose a good tripod in person than shopping on the net. Keep in mind that the spikes that many tripods have cannot be used in most interior locations.

Many tripod manufacturers sell tripod heads (the part that positions the camera) separately from the legs. This is a really good thing, as it allows you to customize the tripod to your way of working. When I used a large view camera,

I used a geared tripod head because it made it much easier to precisely position the heavy camera. A geared head allows you to adjust the position by turning a crank or a wheel that slowly moves the camera. While it is slower, it doesn't slip out of position with a heavy camera. When I use my dSLR, I use a ball head, which allows the camera to move in all directions at the same time. The ball head clamps down with a single lever. I like to work with a ball head, as it allows me to position the camera as needed quickly and easily. I know other photographers who prefer pan/tilt heads, which they feel give them more precision. A pan-tilt head has a separate release for horizontal, tilt, and vertical movements. It is possible to move the camera in only one direction at a time. The problem, for me, is that I need to remember to clamp down the head in three places.

Your tripod is one place where it doesn't make sense to economize. Tripods last for decades and

never become outdated. I have tripods that are more than fifty years old and still work well. Carbon fiber is currently popular because of weight, but I have very fine tripods made out of metal and even wood. Actually, wood is a carbon fiber.

If you have a tripod that isn't quite up to architectural work, you can still use it. I use a lightweight tripod and a piece of plywood as a computer table. This is a big help in tethering the camera to the computer.

Start with a piece of plywood or paneling about the size of the bottom of your laptop. The next thing you need is a T-nut connector, size $\frac{1}{4} \times 20$ tpi (threads per inch). This is the size of a tripod screw. Drill a hole in the center of the plywood, just a little smaller than the center of the T-nut. Hammer the T nut into the wood. This needs to be tight, and the sharp ends of the T nut need to go into the wood. You now have a tabletop you can connect to a tripod. For added

LEFT—This is a set of tripod legs with a table attached to the top. I use this as a portable table for the laptop computer. **TOP RIGHT**—You can find T nuts at hardware and home improvement stores. **BOTTOM RIGHT**—You can see where the elastic is attached to the tabletop.





ABOVE—Monolights are probably the best lights for shooting interiors. You can connect them directly to a wall socket and they have a lot of power. **RIGHT**—This is a Norman 200B strobe. These strobes run off batteries contained in the pack. Powerful battery units can be extremely useful for any kind of location work.

security, you should put some elastic on the sides of the table to hold the computer.

LIGHTS

Making good light for an interior shot requires powerful lights, and generally quite a few of them. I have used strobes for most of the jobs I've done over the years, so I'm going to discuss them first. Strobes make light by running a spark through a tube filled with xenon gas. The light is instantaneous, with a duration that is generally less than $\frac{1}{1000}$ second. The flash built into your camera is actually a strobe, as is the flash that mounts into the hot shoe. There are much more powerful strobes that mount on stands, which are what I generally use for shooting interiors. I'm going to discuss a few of these, but first I'll point out some things about the dedicated strobes that mount onto the camera.

Strobes made to mount on the camera's hot shoe have become more efficient in the last few years, especially when you use them without any kind of light modifier. Light modifiers are things



like umbrellas and softboxes. So if you just want to get light into a room (e.g., if the room is the background for a shot of a bride and groom), a dedicated strobe can do the job. Both Canon and Nikon have automated systems for controlling exposure in situations like this. The biggest problem, as we'll discuss in another chapter, is that the light will be harsh with hard shadows. If you're in a small room, a dedicated strobe may be powerful enough to work with an umbrella, but not in a large room.

My favorite lights for interiors, as well as most other situations, are monolights. These strobes are powerful units that plug directly into AC power, so you can use them anywhere you have wall sockets. These lights give you control over

the amount of light you create and the quality of the light. You can also use the built-in modeling lights to help you predict where you will have reflections. Most monolights have a built-in slave that will trigger the strobe when another strobe fires. There are a number of good monolights on the market, but I have had good personal experience with AlienBees and Calumet Travelites. I generally start lighting with a 750 watt-second light and then use smaller lights for the rest of the shot.

Often, the secondary lights I use are battery-powered. While they don't have as much power

as the monolights, you don't need to look for a wall socket. There are battery packs that will give the same freedom to a monolight, so you can gain the flexibility from those lights also. I have a lot of battery-powered strobes, specifically the Norman 200B units. While these aren't made anymore, Norman does make a 200C and a 400B unit. These are 200 and 400 watt-seconds respectively. There are also very fine battery-powered units from Lume-dyne and Quantum. If you are going to do a lot of work in places where there is no power, you should look at this sort of light.



TOP LEFT—This is a Norman LH2400 head and a 2000 watt-second pack. While this gear is a little heavier than monolights, it can still be useful if you need a lot of power (e.g., if you are lighting a building from the outdoors at night). TOP RIGHT—I shot this bar with quartz lights so I could integrate a little more of the existing room light. BOTTOM RIGHT—This is a Smith-Victor quartz light. I have some of these that I have used for decades. They can extend your reach because you can use long exposures with them. A 30-second shot with a quartz light can give you a lot of light.



There is one other sort of strobe I should mention: studio strobes. Power packs must be plugged into the wall and then the strobe head, or several strobe heads, plug into the pack. That many cables can be hard to hide on location. Still, there are two good things about these units: First, used studio strobes are inexpensive. Second, you can get very powerful units. So if you are using strobes for exterior shots at night, which takes a lot of power, these units may be a good way to go. When I used large film cameras, I used these sorts of lights. It was the only way to get enough power.

There are a few times when quartz lights might be a good way to go. They are useful when the dominant light source in a room is tungsten (e.g., lightbulbs or halogen). If the room is extremely large, then you might have trouble getting enough light from strobes, but with quartz lights you can keep the shutter open longer to let in more light. However, most of the time I can use a strobe and filter it with a full CTO (Rosco 3407) gel to be a close match to tungsten lights, and get the power I need. Quartz lights might also be good if you are working at night, shooting both interior and exterior images. You can use the quartz light outside and the strobe inside. This means that the shutter can control the quartz lights, while you can use the aperture to control both the strobe and quartz. This can reduce the amount of going in and out that would be needed if both the exterior and interior were lit with strobes.

While I have used various kinds of fluorescent lights designed for photography, I haven't used anything I would recommend. Fluorescent lights don't have a continuous spectrum—that is, they don't make all the colors in a rainbow.

Most things will turn out the right color, but a few things, particularly fabrics, won't. Also, unless you use very large banks of tubes, you won't have enough light to give you control over other light sources. There are also HMI lights, but these are so expensive that I only see them on big-budget movie shoots. They are also heavy, so as still photographers, we are very lucky to be able to work with strobes.

LIGHT MODIFIERS

When photographing interiors, we typically want to make our light sources larger. When working with a larger light source, you light a subject from more angles, which is really important. You also spread the light, hopefully evenly, over a larger area. When you can light a subject from more angles, you reduce the size of the shadows and soften the transition from light to shadow.

The easiest tool for making a light source larger is an umbrella. I consider umbrellas to be the best tools for lighting interiors. While a softbox might provide a little more control, an umbrella spreads light and gives you a larger source easily and cheaply. The spread of the light, ease of setup, and price are really good reasons for getting umbrellas. I have several sizes and types of umbrellas.

Most of my umbrellas share certain characteristics. They have a white satin interior and a removable black back. This means that I can set them up as a bounce light source or a shoot-through source. I prefer to use umbrellas as bounce lights because there is less light spilled around the room, but there are times that using a shoot-through umbrella is advantageous. I often use umbrellas that are 60 inches in diameter (5 feet across). These produce very soft light.



TOP LEFT—I use a lot of umbrellas in different sizes and with different fabrics. Umbrellas are easy to take on location and easy to set up. However, they can be difficult to manage in a high wind. **TOP RIGHT**—I made a hole in the center of this umbrella. It enables me to bounce light off the ceiling and diffuse light from the side of the umbrella. It is a very useful tool. **BOTTOM**—This shot was made with just the modified umbrella and ambient light. The umbrella did a good job of reducing shadows and spreading light.



TOP—I shot this with the 60-inch umbrella. The light is even, and the shadows from the meter and the wig head are very soft. CENTER—This shot was made with the shoot-through umbrella. The light is still even, but the shadows are more defined. BOTTOM—This is the 84-inch parabolic umbrella. Although the umbrella is much bigger, the coverage is very tight. The shadows are softer than those made using the shoot-through umbrella, but not as soft as the 60-inch umbrella.

60-inch won't. I even have a couple of 30-inch umbrellas for tight spaces. I frequently use these as shoot-through umbrellas. A shoot-through umbrella often fits better in a tight space simply because the umbrella is in front of the strobe instead of behind it.

I have a couple of silver umbrellas that are a little more efficient, meaning that more of the light you put into the umbrella comes out. The problem is that the light isn't quite as soft. In addition, I have one gold umbrella, which will make light much warmer. I don't use this much; generally, I would rather use one of the Rosco CTO filters. I also have a 45-inch shoot-through umbrella with a hole in the center. This works like a lamp shade. You point the light at the ceiling and soft light comes out the sides and out the top. The light that goes through the center bounces off the ceiling. This can give you a fast single light that works in a lot of situations. This is a 360 degree light, so you get bounce fill from all over the room. You don't have a lot of control, but the quick setup can be nice.

Parabolic umbrellas have recently come on the market. They throw a spot of light onto the subject, with some fill light beyond the spot. This can be a wonderful tool if you want to project light down a long room, but it is less useful for spreading light over the room. Keep in mind that, with these parabolic umbrellas, the exact position of

I recently got an 86-inch parabolic umbrella that creates a surprisingly tight beam of light. I also have several 45-inch umbrellas that fit when a

- [read online *Theory and Applications of Computational Chemistry: The First Forty Years for free*](#)
- [read *Foundation: Redefine Your Core, Conquer Back Pain, and Move with Confidence* pdf, azw \(kindle\)](#)
- [Blank Verse: A Guide to Its History and Use here](#)
- [read online *Satran* for free](#)
- [**read Patti LuPone: A Memoir online**](#)

- <http://cavalldecartro.highlandagency.es/library/Theory-and-Applications-of-Computational-Chemistry--The-First-Forty-Years.pdf>
- <http://growingsomeroots.com/ebooks/Foundation--Redefine-Your-Core--Conquer-Back-Pain--and-Move-with-Confidence.pdf>
- <http://jaythebody.com/freebooks/Lee-Takes-Command--From-Seven-Days-to-Second-Bull-Run.pdf>
- <http://academialanguagebar.com/?ebooks/Satran--.pdf>
- <http://wind-in-herleshausen.de/?freebooks/Secrets-of-Longevity--Dr--Mao-s-8-Week-Program--Simple-Steps-That-Add-Years-to-Your-Life.pdf>