# LOCATION LICUTING LUCATION LIGHTING FOR THE OUTDOOR PHOTOGRAPHER



**MICHAEL CLARK** 



# LUCATION LIGHTING LUCATION LIGHTING FOR THE OUTDOOR PHOTOGRAPHER

**MICHAEL CLARK** 

#### LOCATION LIGHTING FOR THE OUTDOOR PHOTOGRAPHER

by Michael Clark

#### 2nd Edition

Michael Clark Photography Santa Fe, New Mexico USA info@michaelclarkphoto.com (505) 310-4571

Find me on the web at: www.michaelclarkphoto.com

To report errors, please send a note to info@michaelclarkphoto.com

All Material Copyright © 2017 Michael Clark

All Photography Copyright © Michael Clark Photography except Page viii: Eric Barth and all gear images used with permission.

Layout and Design: Michael Clark Cover Image: Michael Clark

#### **Notice of Rights**

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission by the author. For information on getting permission, reprints or excerpts please contact Michael Clark at info@michaelclarkphoto.com.

#### **Notice of Liability**

The information in this book is distributed on an "As is" basis without warranty. While every precaution has been taken in the preparation of the book, the author shall not have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the products described in it.

#### Trademarks

Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Michael Clark was not aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in an editorial fashion only and for the benefit of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or any other affiliation with this book.

Manufactured in the United States of America.

Dedicated to the lighting masters of the last 100 years who have shown us the possibilities of writing with light.

And to all those who have supported my e-books over the last decade, my sincere thanks as your patronage has made this e-book possible.

#### **ACKNOWLEDGMENTS**

In my life, I know that I wouldn't be where I am today without the help of those who have mentored me along the way. There have been numerous people including my family, teachers and professors, other pro photographers and close friends, not to mention all of the incredible athletes I have worked with over the years, who have given their time and talents to help me get this far and have helped foster my career. Because I have received so much from so many I am a firm believer in passing on that which is given to me. This book is a manifestation of that philosophy. On that note, I would be remiss if I did not give credit to those kind and generous folks who have helped me get to where I am today.

As a former physicist, I also have to credit all of my mentors and professors at the University of Texas at Austin who spurred on my sense of curiosity that has carried over into my career as a professional photographer. Optics, light and general relativity were a large part of my studies and as such give me a depth of understanding of photography and light far beyond the average photographer.

I would also be remiss if I didn't thank those who have had a profound effect on my photography career. My many thanks to Marc Romanelli, who took the time to check out my work and foster me in this wild profession when I was just a pup. Nevada Wier, who through her book <u>Adventure Travel Photography</u>, gave me reason to dream about being a pro photographer and later on became a close friend, and with whom I have taught a number of workshops. Joe McNally, whose knowledge and insight have helped me move my lighting skills and photography forward in leaps and bounds.

And finally, I need to thank a whole slew of folks that have been there as friends and colleagues to support me over the years: Jamey Stillings, Robert Reck, Reid Callanan, Rob Haggart, Peter Dennen, Zach Reynolds, Kurt and Elaina Smith,

Timy Fairfield, Katie Mast, Mike Tittel, Tony Hoare, Sara Stathas and so many others. And to all the photo editors, art directors and art buyers who edited and critiqued my work and commissioned me to shoot assignments for them—I wouldn't be in this profession without your input and trust.

Last but not least, I must give thanks to my God and Savior, Jesus Christ, for the talents he has imbued me with, for the dreams and passion he gave me and without whom I would have never made it so far.

#### LINKS

For up to date information on my whereabouts, my latest adventures and images here are several links, which I hope will help foster more learning and inspiration:

View Michael's work on his website at: www.michaelclarkphoto.com

Visit my blog and get the latest updates at: http://blog.michaelclarkphoto.com

Check out my other books on my website at: <a href="https://www.michaelclarkphoto.com/BOOKS/DIGITAL-WORKFLOW/1">https://www.michaelclarkphoto.com/BOOKS/DIGITAL-WORKFLOW/1</a>

Check out the upcoming photography workshops I will be teaching at: <a href="http://blog.michaelclarkphoto.com/?page">http://blog.michaelclarkphoto.com/?page</a> id=113

Download back issues of my Newsletter at: https://www.michaelclarkphoto.com/NEWSLETTER/BACK-ISSUES/1

To subscribe to my Newsletter send an email to info@michaelclarkphoto.com.

#### ABOUT THE AUTHOR

Michael Clark is an internationally published outdoor photographer specializing in adventure sports, travel, and landscape photography. He produces intense, raw images of athletes pushing their sports to the limit and has risked life and limb on a variety of assignments to bring back stunning images of rock climbers, mountaineers, kayakers, surfers and mountain bikers in remote locations around the world. He uses unique angles, bold colors, strong graphics and dramatic lighting to capture fleeting moments of passion, gusto, flair and bravado in the outdoors. Balancing extreme action with subtle details, striking portraits and wild landscapes, he creates images for the editorial and advertising markets world-wide.



As a former physicist Michael has worked on both sides of the technical revolution—helping refine the technology and using it for his current profession. Michael has worked as a professional photographer since 1996 and added digital photography to his repertoire in 2003. While Michael still shoots some film, the lion's share of his images are now produced with high-resolution digital cameras. He has

been featured in *Digital Photo Pro* (December 2011), *Outdoor Photographer* (September 2001), *Nikon World Magazine* (Summer 2006), *Digital Photographer* (UK, 2010), *Rangefinder Magazine* (Summer 2010) and *New Mexico Magazine* (2007) and many other magazines. Digital Photo Pro named Michael a *Master of Adventure Photography* in their December 2011 Master's Issue.

His editorial work has been featured in *National Geographic, Sports Illustrated, Outside, Men's Journal, Backpacker, Outdoor Photographer, Digital Photo Pro, Climbing, Bike, Surfer and The New York Times among many other magazines.* A sampling of Michael's advertising clients include Apple, Nike, Nikon, Adobe, Red Bull, Microsoft, Patagonia, Propel/Gatorade, Pfizer, DuPont, Elinchrom, Prana, Arc'teryx, and Camelbak.

#### **TESTIMONIALS ABOUT HIS WORK:**

"You have some fine images, no doubt about it. I especially like the way you portray the climber's on the face of the wall—the angles really give a feel for what it is like to be there. You have some fine work!"

- Kent Kobersteen, Renowned National Geographic Photo Editor

"Michael is an excellent example of a photographer who is not only amazingly talented, but one who also has the vision and foresight to embrace new technologies and apply them to his daily business workings. If I had to describe Michael in one sentence, it might be: "Michael Clark is the Indiana Jones of photography, that is, if Indiana Jones had been an internet savvy marketer, and a talented photographer." – Frederick Van Johnson, Adobe Systems, Inc.

Disclaimer: In the spirit of full disclosure I feel that I must tell the reader that I am sponsored by Elinchrom and the fine folks at MacGroup US here in the United States. They occasionally give me products for free and also give me wholesale discounts on other items. I also work with Nikon and have written for Nikon World magazine. I do not receive any Nikon products at a discount and buy all of my Nikon gear at the same prices everybody else pays. Regardless of my sponsors, in this e-book I will give my honest opinions about the gear I own and use as well as other brands that I have experience with.

### TABLE OF CONTENTS

Ackno	wledgements
Links	v
Abou <sup>-</sup>	the Author vi
	MBLE: INTRODUCTION AND OVERVIEW
	uction1
Overv	iew
СНА	PTER ONE: LIGHTING EQUIPMENT
Equip	ment Overview
A Glo	ssary of Technical Terms
Flashl	ghts
	tors and Diffusers
Speed	llights and Small Flashes4
Nil	con Lighting System
	non Lighting System
Th	e PocketWizard ControlTL System
Ra	dioPoppers
Light	Modifiers For Speedlights5
Сс	lor Gels
Gr	d Spots, Snoots and Flags
Un	nbrellas61
So	tboxes
Batter	y-Powered Strobes
Str	obe Specifications
Bro	oncolor
Dy	nalite
-	nchrom
He	nsel

Profoto	
Alien Bees	91
Paul C. Buff Einstein	93
Phottix, Godox, Impact, Interfit and Bowens	93
Strobe Recommendations	94
Light Modifiers For Strobes	100
Reflectors	100
Grid Spots and Snoots	101
Soft-Light Reflectors (a.k.a. The Beauty Dish)	103
Color Gels and Flags	104
Umbrellas	107
Softboxes	108
Flash Accessories	110
Wireless Transceivers	111
Light Meters	112
TTL Cords	114
Light Stands	114
Bags for transporting Lighting Gear	116
Choosing a Lighting System	119
CHAPTER TWO: THE ABC'S OF LIGHTING	
The Physics of Light	126
How a Flash Works	129
The Inverse Square Law (Light Fall Off)	130
Understanding Power Settings	132
The Light and the Subject	133
Shaping the Light	136
Feathering the Light	139
Aperture settings and Flash	143
Shutter Settings and Flash	145
Dragging the Shutter	149
Balancing the Light	150

Establishing Exposure Settings with Flash
Creating Dramatic Light
Positioning your Lights
What is "Good" Lighting?
CHAPTER THREE: LIGHTING TECHNIQUES
Shooting with one Light
Example 1: Skier Portriat
Example 2: Mountain Bike Action
Shooting with Multiple Lights
The Light Trap
Standard Three Light Portrait
Three Light Portrait with Ring Flash
Techniques for Shooting Action
Motion Blur
Isolating the Subject with Grid Spots
Using a long throw reflector
Creating a Light Trap
Taking the Studio Outdoors
Shooting on a White Background
Shooting on a Black Background
CHAPTER FOUR: WORKING WITH FLASHLIGHTS & REFLECTORS
Working with Flashlights
Example 1: Hikers
Example 2: Ski Touring
Example 3: Rock Climber
Example 4: Burmese Monk
Lightpainting
Example 1: Backcountry Hut
Example 2: Sailboat

Example 3: Shiprock
Working with Reflectors
Example 1: Portrait
Example 2: Monklet
CHAPTER FIVE: WORKING WITH SPEEDLIGHTS
When and where to use Speedlights
Basic Flash Settings
Shooting in iTTL (E-TTL) Mode
Shooting in Manual Mode236
Slow Sync
Rear Curtain Sync
Auto FP High-Speed Sync240
Zooming the Flash Head
Working with one Speedlight
Example 1: Backpacker
Example 2: Mountain Biker
Example 3: Yoga on the Dunes
Working with multiple Speedlights
Example 1: Cross-country Skier
Example 2: B&W Portrait
Example 3: Intha Fisherman
CHAPTER SIX: WORKING WITH BATTERY-POWERED STROBES
When and where to use Strobes
Example 1: Downhill Mountain Biker
Example 2: Céline Cousteau
Working with one Strobe
Example 1: Whitewater Kayaker
Example 2: BMX Dirt Jumps
Example 3: Surfer Portrait

Working with Multiple Strobes
Example 1: Camilo Villegas
Example 2: Mountain Biker in Aspens
Example 3: Helicopter Pilots
Example 4: Studio Portrait
Working with Flags
CHAPTER SEVEN: ADVANCED LIGHTING TECHNIQUES
Rear Curtain Sync with Strobes
TTL Strobes
High Speed Sync (HSS)
HyperSync with Strobes
Hi-Sync (HS)
Gearing Up for Hi-Sync (HS)
Setting Up the Camera for Hi-Sync. 322
Setting up for Hi-Sync (Nikon)
Setting up for Hi-Sync (Canon)
OverDrive Sync
Exposing with Hi-Sync
Hi-Sync (HS) Portraiture
Full Creative Control with HS
Medium Format Leaf Shutters
Wrapping Up
CHAPTER EIGHT: WRAPPING UP
The Road Ahead
APPENDIX
Lighting Terminology





#### **PREAMBLE**

## **INTRODUCTION & OVERVIEW**

'I am not interested in shooting new things. I am interested to see things new.'

— ERNST HAAS

#### INTRODUCTION

Thank you for purchasing the second edition of *Location Lighting for the Outdoor Photographer*. Your support is greatly appreciated! This e-book includes much of what I know when it comes to using artificial lighting. Because the use of artificial lighting is a massive topic, this book is not an exhaustive work, nor is it meant to be. I am sure some of you may have different methods and experiences using artificial lighting than those laid out here. Your methods are just as valid as mine. The end result is all that matters.

To start off with, let me say this: I do not consider myself to be a lighting "Master." That may sound like a strange statement to make at the beginning of a book on lighting, but I just want to make that point clear because there are very few photographers that I would consider to be lighting masters. In this day and age, the photographers I would consider to be lighting masters include Annie Leibovitz, Albert Watson, Marco Grob, Andrew Eccles, Gregory Heisler, Dan Winters, Jill Greenberg, Nadav Kander, Frank Ockenfels 3, Brigitte Lacombe and several others. You will notice that all of these photographers are portrait photographers for the most part, though most of them also shoot on location quite often. They are known for their lighting skills as much as they are for their images. For myself, I am known for my images, and some of those images happen to be lit. Hence, the distinction I am making here. Don't get me wrong, I feel that my lighting skills are excellent. Otherwise, I wouldn't take the time to write this book. As an adventure photographer, I use many of the same techniques that these lighting masters use and apply them in remote outdoor situations.

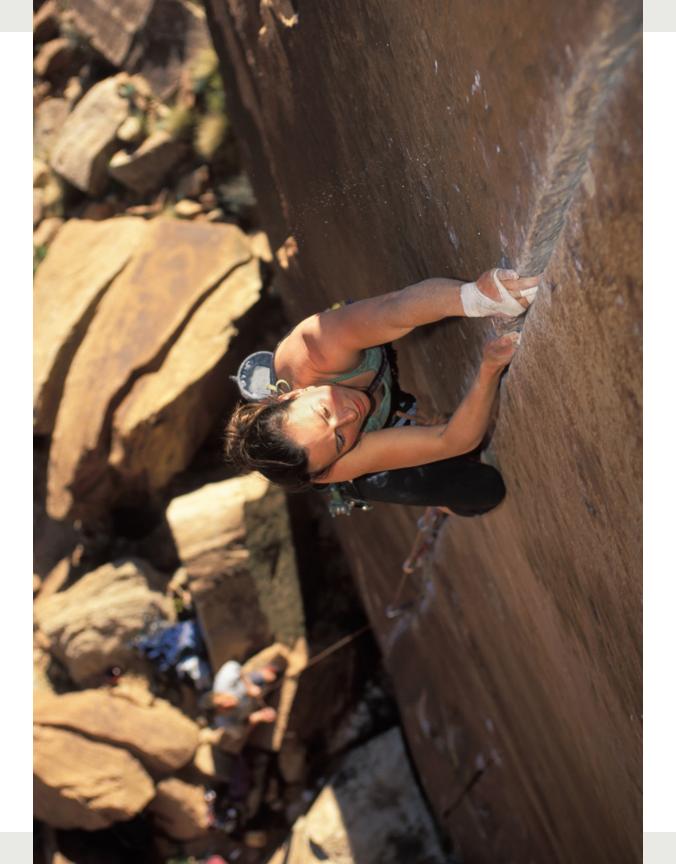
There are obviously a lot of books on location lighting, but most of them, if not all of them, are specific to using artificial lighting for portrait photography. In this book, I will discuss how I use artificial lighting to light adventure sports and outdoor lifestyle type images. Along the way, we will also discuss using artifi-

cial lighting on location to create portraits of those athletes in the outdoors as well. While there are a few images in this book that were created in an actual studio setting there are also some images that were shot on white or black backgrounds that have a studio look to them but were not created in a studio setting. This book is all about how to take your lighting gear into the outdoors and create amazing images no matter what the ambient conditions are. I will discuss the specific gear options available, which options I choose and why, some basic tenets of lighting, give some sample setups that I have used often and then show how to use one light or multiple lights to build an image. We will discuss the use of Speedlights as well as battery-powered strobes. We will also dive into advanced lighting techniques like High Speed Sync (HSS), Hi-Sync (HS) and HyperSync.

You might notice that I have been using the term "artificial lighting" instead of "flash." I have done this on purpose because for the outdoor and adventure photographer, flash is not the only light source we will use. In this book we will also talk about using reflectors, flashlights and headlamps to augment our lighting kit. In some situations, a simple reflector is all that is needed to augment the existing light. A flashlight can also be a powerful tool in the right situation.

Before moving on, let me give you a little background on how my career developed and why I chose to incorporate artificial lighting into my images. I started my career as a professional photographer in 1996, before the digital revolution. Back in those days, using lighting on location required a Polaroid back and a big production for consistent results. Hence, my use of artificial lighting was spotty at best for the first five years or more of my career—as it was for most of us in the adventure genre.

On occasion, between 2000 and 2004, I would meet with Rob Haggart, then the photo editor of *Outside* magazine, to discuss my work and possible assignments



with *Outside*. I remember quite clearly Rob saying that "none of us adventure photographers could light our way out of a paper bag." He said this to make a point. As a photo editor, he was trying to tell me why he would choose a portrait photographer to go out and shoot an article for them instead of an adventure photographer. His message was that none of us adventure guys could really create decent portraits and his advice to me (at that time) was to buy a medium format camera and start working with artificial lighting. He pointed out that if I could create excellent portraits and shoot the action then I would be a lot more valuable to him as a photographer. It was sage advice. As soon as I could afford it, I went out and bought a Hasselblad and some Dynalite strobes. It took me a few years to get to the point where I was even remotely comfortable using lights, especially in the film days. Back then, you had to know how to use a light meter, especially since I never used a Polaroid back to take test images.

Opposite Page: My early attempts at using artificial lighting while shooting 35mm slide film were nothing to write home about. Mostly, as in the case of this image, I used Speedlights to add fill light in contrasty situations. Here, Steph Davis is cranking up a steep crack climb named Sweden-Ringle (5.12c) at Indian Creek in southern Utah.

Thankfully, when digital cameras (with decent resolution) came along it radically advanced my ability to learn about using artificial lighting and my skills advanced quickly. With digital cameras, we now have an instant preview. With digital technology, I started to shoot more and more with artificial lighting to separate my work from the other adventure photographers I was competing with. Truth be told, there was a small group of us in the rock climbing genre that started experimenting with strobes on location back in 2002 and 2003. At that time, the skateboarding photographers had been using strobes for quite some time. A number of us climbing photographers, interested in doing something different, saw what the skateboarding photographers were doing and thought we could apply those same lighting principals to our work in the climbing genre. At about the same time, I started shooting a wide variety of adventure sports and looked to apply my lighting skills to those other adventure sports as well.

If you open any current climbing, skiing or mountain biking magazine you will find, at the very least, a few images that were lit using strobes or Speedlights.

It is now considered normal to light athletes in remote locations with battery-powered strobes—at least among professional photographers. The digital revolution, along with incredibly powerful, easy to use Speedlights and battery-powered strobes, have made it much easier to think about using artificial lighting in any situation. Artificial lighting might seem like a scary undertaking but with the new technology we now have there is a world of possibilities just waiting to be explored for the photographer willing to experiment.

There are links to online resources and equipment throughout this book. Please note that a link is designated with <u>underlined</u> text. Also, the items in the table of contents are linked to each section of the book. Hence, if you need to get to a certain section quickly click on any of the items in the table of contents. This PDF is also searchable using Adobe Acrobat.

I would very much appreciate it if you do not distribute this e-book to any one else without my permission—this took many hours, days and weeks to put together and represents over twenty years worth of hard work learning how to use artificial lighting. I appreciate your honesty and integrity regarding this book. This book is copyrighted and you can read the Notice of Rights in the opening pages of the book. With that said, as long as it is for your personal use please feel free to print it out and put it on as many computers or devices as you like.

As I am not perfect I apologize up front if there are any spelling or grammatical errors. If you have any corrections, comments or suggestions please e-mail me at <a href="mailto:info@michaelclarkphoto.com">info@michaelclarkphoto.com</a>.

It is my sincere hope that this e-book will give you the confidence to create images you have never created before using artificial lighting and that you can use the skills outlined here in the toughest shooting conditions and still come away with stellar images. Thanks again for your support!

#### **OVERVIEW**

As lighting is a complex topic, we will start out with the basics—including the range of gear available to the outdoor photographer. While it might be more fun to jump straight into the lighting techniques and how to set up a shot, without knowing the gear involved it would be hard to follow along. When I first started out I couldn't tell you the difference between a grid spot and a beauty dish. There are a crazy number of options these days when it comes to artificial lighting and light modifiers. Hence, we will start out with the gear involved, and in particular we will demystify the terminology. If you are already fairly adept with lighting gear feel free to skip over Chapter 1, though you might be interested to read about some of the gear that I use and recommend. For the adventure photographer, half the battle is just getting everyone and all the pertinent gear to the shooting location. Often, carrying a few hundred pounds of lighting gear just isn't possible. Luckily, there are a variety of solutions for every situation. At the end of Chapter 1, we will discuss which pieces of equipment are the best choices in terms of weight, light output, your budget, and the shooting situation.

In Chapter 2, we will dive in head first and discuss the fundamentals of lighting including the physics of light, the relationship of the flash to the subject, how to position your lights, how to shape the light, and finally how to build the image using one light and multiple lights. This chapter covers a ton of information and is a key chapter in the book for understanding how to control your lighting.

In Chapter 3, we will discuss and show in detail actual lighting set ups. For each set up, I will include a detailed lighting diagram where appropriate and the final image so that you can see exactly how the lighting was set up to create the images shown in each section. These lighting set ups are both standard and non-standard setups—and range from basic to advanced levels of lighting. In essence this Chapter is where the rubber meets the road. I'll be sure to discuss

every aspect of how I built the lighting for each image.

In Chapters 4, 5 and 6 we will discuss using reflectors and flashlights, Speedlights, and battery-powered strobes respectively. Each chapter will focus on one specific tool so that you can become comfortable using any and all of these artificial lighting options. All of these chapters will be filled with detailed lighting diagrams where needed to show how the final image was created.

In Chapter 7, we will discuss advanced flash techniques that are very specific and highly dependant on having the right equipment. Here we will dive into High Speed Sync (HSS), HyperSync, and Hi-Sync (HS), all of which are cutting edge technologies useful for the outdoor photographer. We will also discuss using strobes which have Through the Lens metering (TTL), which are useful for lighting moving subjects. Lastly, in Chapter 8 we will discuss the process of learning to use artificial lighting, and how to take this knowledge and put it into practice.

Throughout this book I will be sure to offer up my advice for the outdoor photographer, since this book is aimed at taking studio lighting set ups and adapting those for the outdoors. If you read through this book and are still foaming at the mouth for more information, I occasionally teach lighting workshops and always include some amount of lighting technique in all of my workshops. You can check out my blog to see the workshops I have coming up.

Of course, there are also a large number of other lighting workshops that can help you advance your lighting skills. I would suggest checking out the <u>Santa Fe Workshops</u> and the <u>Maine Media Workshops</u> as those are two of the biggest workshop facilities in the world and they often have top-notch instructors. Lighting workshops are especially helpful if you want to test out a variety of the expensive strobe options on the market. Without further ado, let's jump into the next chapter and discuss lighting equipment.



This image of Dawn Glanc climbing a steep ice pillar in the Ouray Ice Park in Ouray, Colorado is a prime example of how using some of the new portable battery-powered strobes, with advanced lighting techniques like Hypersync or the new Hi-Sync technology, can help to create dramatic and otherwise impossible looking images. I will discuss in detail how this image was created later in the book.