SPEEDLITER'S HANDBOOK

SECOND EDITION

LEARNING TO CRAFT LIGHT WITH CANON SPEEDLITES

SYL ARENA



New Edition Covers all current Canon Speedlites, including 600EX-RT radio-enabled Speedlite



SECOND EDITION

SYL ARENA



Speedliter's Handbook Learning to Craft Light with Canon Speedlites Second Edition

Syl Arena

Peachpit Press www.peachpit.com

To report errors, please send a note to errata@peachpit.com Peachpit Press is a division of Pearson Education.

Copyright © 2016 by Syl Arena All photography © Syl Arena except where noted

Editors: Ted Waitt, Nancy Peterson, and Valerie Witte Senior Production Editor: Lisa Brazieal Copyeditor: Darren Meiss Indexer: James Minkin Cover Design: Mimi Heft Interior Design: Syl Arena Cover Image: Syl Arena Back Cover Images: Syl Arena

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 the prior written permission of the publisher. For information on getting permission reprints and excerpts, contact permissions@peachpit.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, neither the author nor Peachpit shall 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 computer software and hardware products described in it.

Trademarks

All Canon products are trademarks or registered trademarks of Canon Inc. 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 Peachpit was 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 editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or other affiliation with this book.

ISBN-13 978-0-134-00791-5 ISBN-10 0-134-00791-3

987654321

Printed and bound in the United States of America

Dedicated to my dad, John Arena.

Thanks for supporting my addiction to photography for so many years during my youth.

Insights on this second edition.

We've made five laps around the sun since I wrote the original *Speedliter's Handbook*. In those five years, much has changed about the way I use Speedlites. Of course, Canon's introduction of the 600EX-RT system—with its built-in, two-way communication—was reason enough to update the book. Yet, this new edition is so much more. Virtually every word, photo, and diagram in the first edition has been evaluated and either polished or cut.

The biggest change between the first and second editions is my shift away from automated camera and flash modes. Much of the first edition was based on using Aperturepriority (Av) on my camera and E-TTL on my Speedlite, which required acrobatic moves of exposure compensation and flash exposure compensation. By teaching hundreds of students face-to-face over these five years, I've come to again believe that Manual mode, on both the camera and flash, is the best way to learn. I now share very clear guidelines on when to shoot in E-TTL and when to shoot in Manual mode.

Other additions/expansions in the second edition include:

- Buttons-and-dials coverage of every current Canon Speedlite from the 600EX-RT down to the 90EX along with tips on using older Canon Speedlites and models from other manufacturers
- A new chapter on maximizing the benefits of on-camera flash
- Expanded portfolios of portraits made with a single Speedlite and multiple Speedlites
- Complete updates to the chapters on light modifiers and gels
- Greater emphasis on step-by-step workflows
- Expanded discussions of how to use Canon's camera-based LCD menu system for Speedlite control
- And, of course, complete coverage of how to use the radio-enabled 600EX-RT system by itself and with earlier generations of Canon Speedlites.

Thanks are owed to so many. This book would not be going to press without the support of the following and so many others:

- Amy and our three lads: Tom, Vin and Tony—Thank you for serving as my models, assistants, and cheerleaders (even when you wanted to be somewhere else).
- Rudy Winston—My technical guru at Canon USA. Your detailed answers to my multiyear stream of questions make me look much smarter than I am.
- Ted Waitt—My long-suffering editor. Your admonition to "tell the reader what you do, not everything you know" still resonates every time I step up as a teacher.
- Gabe Biderman and my extended family at B&H Photo—By sharing the word about my events and online videos, you have brought Speedliting to literally hundreds of thousands of shooters around the globe.
- Joe McNally—You are still my sensei. I remain your humble and grateful student.
- Bobbi Lane—For sharing your joie de vie and letting me fib that you are my sister
- Zack Arias—For your evangelism that more-expensive gear does not necessarily make one a better photographer
- Peter Read Miller—For your friendship, calm inspiration, and encouragement
- JP Caponigro—For continuing to inspire the artist within
- Frederick Van Johnson—For making me laugh whenever we talk
- M.D. Welch—For introducing me to highspeed sync so many years ago
- Maine Media Workshops, Santa Fe Photographic Workshops, Gulf Photo Plus, and Rocky Mountain School of Photography—For providing the opportunities to teach in so many amazing places.

My light shines bright because of you!

avena

San Luis Obispo, California August, 2015



Welcome	Speedliter!	1
---------	-------------	---

CHAPTER ZERO

Quick Start Guide To Speedliting	
Essential Concepts For Speedliters	
Control Your Canon Speedlite Via The LCD On Your Camera	4
The Two Kinds Of Light In A Flash Photograph	6
Manage The Ambient Light First	7
Controlling The Brightness Of The Flash	9
A Simple Four-Step Workflow	11
The Limitations Of On-Camera Flash	
E-TTL Fill Flash: A Great Use For An On-Camera Speedlite	13

PART 1 Before Speedlites, There Was Light

CHAPTER ONE

Learn To See Light	16
The Poetry Of Light	
Character Of Light 18	
How You See Vs. How Your Camera Sees	

CHAPTER TWO

Exposure Exposed	
Connecting Exposure Settings: Aperture, Shutter Speed, And ISO	
Aperture: Controlling Depth Of Field	
Shutter Speed: Managing Motion Or Ambient Light	
ISO: Connecting The Aperture And Shutter Speed	
Equivalent Exposures	
Exposure Modes	
Metering, Metering Zones, And Metering Modes	
Exposure Evaluation For Flash Photography	
Your Vision Determines The Proper Exposure	41

CHAPTER THREE

Mechanics Of Light	42
Taking Color's Temperature	
White Balance	
Incidence Incidentally46	
Soft Light Proves That Size Is Relative	
Falling Off, Or How To Love The Inverse Square Law	
Thinking About Flash-To-Subject Distance As Stops	

CHAPTER FOUR

The Ambient Light 54
e Of Ambient Light
Speed: The Key To Controlling Ambient Light In Flash Exposures
ect Of Aperture And ISO On Ambient Light In Flash Photography
g Ambient And Flash

CHAPTER FIVE

Position Is Relative	64
The Lighting Compass	
On-Axis And Off-Axis Light	
Light From AboveAnd Below	

PART 2 Speedlites Fundamentally

CHAPTER SIX

Meet The Speedlites	74
Which Canon Speedlite Is Right For You?	
Speedlite 600EX-RT	76
Speedlite 600EX-RT Function Buttons In Non-Wireless Modes	78
Speedlite 580EX II	80
Speedlite 430EX II	82
Speedlite 320EX	
Speedlite 270EX II	
Speedlite 90EX	
Legacy Canon EX Speedlites	
Speedlite Transmitter ST-E3-RT	90
Speedlite Transmitter ST-E2	92
Macro Ring Lite MR-14EX II	94
Macro Twin Lite MT-24EX	
Third-Party Speedlites And Transmitters	

CHAPTER SEVEN

Control Your Speedlite	
Control Issues: How, When, And Where	
How—Setting The Flash Power Via Mode	
When—Using Sync To Specify When The Speedlite Fires	
Where, Part 1—Using Zoom As A Flash Modifier	104
Where, Part 2—Using Pan And Tilt To Aim The Speedlite	

CHAPTER EIGHT

Flashing Manually	
Manual Flash—Getting Started With The Most Versatile Flash Mode	11
When To Use Manual Flash1	12
The Numbers Of Manual Mode1	14
Setting Power Manually On The 600EX-RT1	15
Setting Power Manually On The 580EX/EX II1	16
Setting Power Manually On The 430EX/EX II1	17
Setting Power Manually On The 320EX, 270EX II, And 90EX	18
Setting Manual Power On The LCD Of 2012–Newer Camera Models1	18
Setting Manual Power On The LCD Of 2007–2011 Camera Models1	20
My Workflow: Using One Speedlite In Manual Mode1	22

110

CHAPTER NINE

E Is For Evaluative1	24
Deciding When To Set Your Speedlite To E-TTL	
The Mechanics Of E-TTL126	
Limitations Of E-TTL130	
E-TTL And Camera Modes131	
FEC-Flash Exposure Compensation132	
FEL–Flash Exposure Lock138	
Troubleshooting E-TTL141	

CHAPTER TEN

Specialty Flash Modes......142

Beyond Manual And E-TTL	143
Multi Mode: Flashing Again And Again	144
Single Speedlite Stroboscopic	146
Multi Speedlite Stroboscopic	147
Other Considerations For Stroboscopic	148
External Flash Metering: Think "ETTL Without The Preflash"	151
External Auto (Ext.A)—Talks With The Camera	152
External Manual (Ext.M)—Works Independently Of The Camera	154
Other Tips For External Flash Metering	155
The Basics Of Group (Gr) Mode	157

PART 3 Off-Camera Speedliting

CHAPTER ELEVEN

Triggers For Off-Camera Flash	
Choosing An Off-Camera Trigger Is Always A Matter Of Control	161
E-TTL Cords: Affordable And Versatile Control Of An Off-Camera Speedlite	162
Optical Slaves Eyes: Enable Canon Speedlites To Be Used With Other Brands	164
Canon's Built-In Optical Wireless System	165
Fire Now! Manual Radio Triggers	166
Power-Adjusting Manual Radio Triggers	167
E-TTL Radio Triggers: Compared To The 600EX-RT Radio-Enabled Speedlite	168
Comparison Of Trigger Systems	171

CHAPTER TWELVE

Canon's Optical And Radio Wireless Systems173 The Optical Slave: Worker Bee Of Wireless Flash......175 Master And Slave Settings For Optical Wireless176 Using A Pop-Up Flash As An Optical Master.....178 Activating A Speedlite As An Optical Master180 Moving Your Master Speedlite Off-Camera......182 Channels: Master and Slave Must Be The Same188 Adjusting E-TTL Flash Power In Optical Wireless......192 A:B Ratios: Two-Group E-TTL......194 A:B C Ratios: Three-Group E-TTL......198

CHAPTER THIRTEEN

Why The 600EX-RT Is A Revolutionary Speedlite	205
Canon Options For Radio Master And Slave	206
The 600EX-RT Interactive Menu System	207
Pre-2012 Cameras And Radio Wireless	208
Master And Slave Settings For Radio Wireless	210
Activating The 600EX-RT As A Radio Master	211
Activating The 600EX-RT As A Radio Slave	212
Channel: Master And Slaves Must Be The Same	213
Wireless ID: Master And Slaves Must Be The Same	214
Flash Groups: Assigning Jobs To Speedlites	215
The Link Light Confirms Master/Slave Communications	216
To Fire Or Not To Fire: The Master Wants To Know	217
Fine-Tuning E-TTL Flash Power In Radio Wireless	218
Setting Manual Flash Power In Radio Wireless	220
Multi Mode In Radio Wireless	221
Group Mode: An Exciting And New Way To Speedlite	
Remote Release And Linked Shot	225
Non-Canon Speedlites With Radio Built-In	227

PART 4 Gear For Speedliting

CHAPTER FOURTEEN

Ahead, Mod Your Speedlite	
Why Mod?	233
Built-In Modifiers	234
Options For Mounting Mods	235
Globe And Dome Diffusers	236
Bounce Reflectors	238
Softboxes That Attach To Speedlites	240
Ring Light Adapters	
Grids	244
Snoots	246
Projectors	247
Flags	248
Random Essentials	250
Deciding Which Mods Are Right For You	251

CHAPTER FIFTEEN

Those Big Modifiers Always Get In The Way 252

Why Mod In A Big Way	253
Umbrellas	254
Softboxes Made For Speedlites	262
Using Speedlites With Studio Softboxes	268
Beauty Dishes	270
Scrims And Diffuser Panels	272
Reflectors	274
Flags And Solids	275

CHAPTER SIXTEEN

Get A Grip	
• Mounting A Speedlite Anywhere	
Sometimes You Have To Take A Stand	
Reaching Out: Poles, Booms, And Boom Stands	
Rails And Other Multi-Lite Mounts	
Staying Flexible: Bungies, Straps, And Gaff	

CHAPTER SEVENTEEN

Keeping The Energy Up 288

289
290
291
292
293
294
296
297

PART 5 Speedliting In Action

CHAPTER EIGHTEEN

Getting The Most From On-Camera Flash 300

Pop-Up Flash Vs. Speedlite	.301
Fill Shadows With On-Camera Flash	.302
Create Soft Light By Bouncing On-Camera Flash	.304
Are Diffusers For On-Camera Flash Helpful?	.306
Other Tips For On-Camera Flash	.308

CHAPTER NINETEEN

Portraits With One Speedlite	
- Back To Basics, Quickly	
Shoot: Position Your Modifier With Intention	
Shoot: One Speedlite With Fill Reflector	
Shoot: Creating Soft Fill Light With A Big Umbrella	
Shoot: Broad And Short Lighting	
Shoot: Think Of The Shutter As A Light Modifier	
Shoot: Just A Slash Of Light	
Shoot: Ring The Lens With Light	
Shoot: Nose To The Gridded Light	
Shoot: One-Light White Seamless	
Shoot: Speedliting A Silhouette	
Shoot: Does Softbox Size Matter?	

CHAPTER TWENTY

Portraits With Multiple Speedlites334Opening Horizons With Multiple Speedlites335Shoot: Clamshell Lighting, Top To Bottom336Shoot: Classic Three-Light Portrait338Shoot: Multiple Softboxes For Fill Flash340Shoot: Three-Light Sports Portrait342Shoot: Crossfire Lighting344Shoot: Hard and Soft Light Outdoors346Shoot: Creating A Big Patch Of Soft Light350Shoot: Creating A Big Patch Of Soft Light352Shoot: Multiple Speedlites In A Softbox352Shoot: Multiple Speedlites In A Softbox354

CHAPTER TWENTY-ONE

Gelling For Effect	356
Gels Quickly	
If Color Correction Is Needed, Did Something Go Wrong?	
The Daylight Cycle Affects The Color Of Sunlight	
Think About White Balance As A Creative Tool	
Gel Systems	
How I Mount Gels	
Getting Dramatic With Color	
My Favorite Gels	
Shoot: Gelled Fill Flash At Sunset	
Shoot: Golden Hour At Any Time	
Shoot: Bluer Than Blue Skies	
Shoot: Coloring The Night	

CHAPTER TWENTY-TWO

Slicing Time With High-Speed Sync......374

High-Speed Sync Is A Game Changer For Flash Photographers	375
Activating High-Speed Sync	376
Syncing Flash Normally	378
High-Speed Sync Changes The Way Your Speedlite Fires	380
Workflow For Creating Dramatic Light With HSS	382
Alternatives To High-Speed Sync	383
Shoot: Flashing Wide Open In Full Sun	384
Shoot: Dimming The Sun	386
Shoot: Fill Flash With High-Speed Action	388
Shoot: When High-Speed Sync Is Not The Best Choice	.390

CHAPTER TWENTY-THREE

CHAFTER TWENTFINKEE	
Gang Lighting	392
Gang Lighting—A New Way To Light	

Shoot: Smashing Pumpkins	
Shoot: Hiding A Cluttered Background	
Shoot: Pushing Back Against The Desert Sun	402
shoot rushing back riganist the bescre surface and a	

PART 6 Appendixes

lex	2
-----	---

ONLINE SUPPLEMENT 430EX III-RT Speedlite

Canon announced their newest Speedlite, the 430EX III-RT, as this book was heading to press. Following the 600EX-RT, this new mid-level Speedlite provides another option for radio Speedliting, both as a radio master and as a slave. Further, the 430EX III-RT is fully compatible with Canon's previous generations of Speedlites that work in optical wireless. The news about the new flash came too late to include operational details in this edition of the *Handbook*. So, I compiled a brief online supplement that details how to use the 430EX III-RT as a solo flash and as a master or slave in both radio or optical wireless.

To access this bonus content, head to www.peachpit.com/store/register.aspx and just log in or join peachpit.com (it's free). Then enter 978-0-134-00791-5 as the book's ISBN. After you register the book, a link to the supplement will be listed on your Account page under Registered Products.

Beyond the specific buttons and dials operations, every other aspect of creating great light with the 430EX III-RT is covered throroughly thoughout the *Handbook*.

ONLINE RESOURCES

Look for more information about Speedliting from Syl Arena on these sites:

Syl's Blog—PixSylated.com Canon Digital Learning Center (Canon USA) Canon Pro Network (Canon Europe) B&H YouTube Channel KelbyOne Online Training

WELCOME SPEEDLITER!

If you shoot with a Canon camera and want to learn how to use Speedlites, then welcome to the *Speedliter's Handbook*. Since we're going to be spending a lot of time together, I want to share my perspective on the book.

This is a book about how I shoot.

The Handbook presents my approach to lighting with Canon Speedlites and the techniques I use in my photography. If you've been shooting for any length of time, don't be surprised if occasionally you think, "I'd do this differently." Ask any three experienced photographers how they would approach a situation and you'll likely get five answers. We're just this way.

The how and why of the Handbook.

The Handbook is a book you should have if you want to thoroughly explore the vast potential of Canon's Speedlite system. If you are looking for a quick read, I'm not your guy.

That said, it's best if you do not try to read the *Handbook* cover-to-cover. Rather, I encourage you to pick it up and put it down many times.

If you are a novice with Speedlites, then start with Chapter 0, *Quick Start Guide To Speedliting*, so that you can start shooting as you work your way through the book. If you know the basics and want to jump into a single topic, then dive right in to that specific chapter.

I am a photographer, not a retoucher.

The *Handbook* is a book about flash photography and not a book about lighting via Photoshop. Unless an image specifically states that it has been retouched in post-production, you can assume that it is as it came from my camera.

My view is that I am a photographer who happens to use Lightroom and Photoshop. I'm not really great at either—nor do I feel that I need to be great at driving software. I am a photographer. I hope you decide that you are, too.

Pay attention to the sidebars.

Throughout the *Handbook*, you will find bits of information tucked into sidebars. There are three main types of sidebars, which you can tell apart by their colors.

SPEEDLITER'S TIP

-Insights I Share With Friends-

I hope that you will read every Speedliter's Tip. My goal is to provide direct insights into how I shoot. When you are just flipping through the book, feel free to just stop at the red boxes.

SPEEDLITER'S JARGON

-The Lingo Every Speedliter Needs To Know-

Learning photography is like learning a foreign language. If you stick with it long enough, you will become fluent. Along the way, there are many words you need to know. I've placed the big concepts in the green boxes.

GEEK SPEAK

-Random Technical Bits-

A Geek Speak provides technical insights that you'll want to explore if you need to know every last detail. If you prefer to avoid technical jargon, then feel free to skip them.



CHAPTER 19 **PORTRAITS WITH ONE SPEEDLITE**

BACK TO BASICS, QUICKLY	. 311
SHOOT: POSITION YOUR MODIFIER WITH INTENTION	. 312
SHOOT: ONE SPEEDLITE WITH FILL REFLECTOR	. 314
SHOOT: CREATING SOFT FILL LIGHT WITH A BIG UMBRELLA	
SHOOT: BROAD AND SHORT LIGHTING SHOOT: THINK OF THE SHUTTER AS A LIGHT MODIFIER	
SHOOT: JUST A SLASH OF LIGHT	322
SHOOT: RING THE LENS WITH LIGHT	
SHOOT: ONE-LIGHT WHITE SEAMLESS	
SHOOT: DOES SOFTBOX SIZE MATTER?	332

The Short Version

When it comes to photographs, there is nothing in the world that we like to look at more than pictures of other people. So if you jumped straight here without reading the previous 300 pages, I understand completely. The quick answer is, "Yes, you can make great photographs of people with a single Speedlite."

This chapter will take you through many of—but certainly not all—the types of light you can create with a single Speedlite. Ultimately, it is your imagination and willingness to experiment that will be your guide.

Figure 19.1

A single Speedlite and some basic modifiers are all you need to get started creating great light for portraits. Left: My dear friend Gabe gets theatric with the globe diffuser used to light the shot at right. Right: This handsome shot was made with Gabe standing below and slightly behind the globe diffuser.

BACK TO BASICS, QUICKLY

To begin, think about whether you want hard or soft shadows and how you want to use those shadows to reveal depth and texture in your portraits. Then settle on the job that you want your Speedlite to perform.

One Speedlite, So Many Jobs

A single Speedlite can serve one of four main purposes:

- Key light—Provides the main light on your subject
- Fill light—Adds light to the shadows so that the viewer can see details that would otherwise be hidden
- Separation light—Lights your subject from behind so that the hair and shoulders will stand out from the background
- Background light—Lights the background either to reveal details about the environment or, when very bright, to put your subject into silhouette

Location, Location, Location

The quality of light you get from your Speedlite is largely determined by its location. As I've said many times in the *Handbook*, "If you want to create interesting light, you have to create interesting shadows." If you don't know what this means, take a close look at the information in Part 1: *Before Speedlites, There Was Light*.

For the greatest range of lighting options, get your Speedlite off the top of the camera. Seriously, pretend as if your Speedlite cannot connect to the hotshoe on top of your camera. Check out Chapter 11: *Triggers For Off-Camera Flash*, if you need ideas on how to do this.

Figure 19.2 The difference between these two photos is the position of the flash and the setting of the zoom. This shot was made with the Speedlite bolted into the camera's hotshoe. The zoom was set to Auto—resulting in a zoom of 35mm.

Figure 19.3 For this shot the Speedlite was manually zoomed to 105mm and held about 14" straight above the camera. I had my assistant aim it directly at Kaitlin's face. The vignette is created by the zoom of the Speedlite.





SHOOT: POSITION YOUR MODIFIER WITH INTENTION

One of the biggest questions that novice Speedliters struggle with is where to put a large modifier, such as an umbrella or softbox, in relation to the subject.

To Start, Raise The Modifier Slightly Above Your Subject's Head

In our world, light comes from above and shadows fall. (For a complete review, head to Chapter 5: *Position Is Relative.*) So, as a starting point, position your Speedlite slightly above your subject's head and angle it down 30° to 45°. Depending upon the modifier that you are using, you may have to step away from your shooting position and look at the modifier from the side to truly judge the angle.

In Figure 19.5, you can see the silhouette of my Speedlite and RoundFlash Dish in the upperleft corner. Imagine that a line bisects the Speedlite and softbox. Can you see that it extends directly towards Kailee's face? I choose this position so that the flash would light her face and fall off gently as it descended down her torso. Again, this is a starting point.

Lighting Details

Environment: Vintage bar Time of Day: Not a factor Ambient: Dim tungsten Speedlite: One 600EX-RT Mode: Manual Zoom: Zoomed to 20mm Modifier: RoundFlash Dish Distance: About 3' Height: About 6.5' Trigger: ST-E3-RT Transmitter

Camera Details

Camera: 5D Mark III Lens: 100mm f/2.8L Macro Distance to Subject: 8' Exposure Mode: Manual Exposure: ½00″, f/8, ISO 800 White Balance: Daylight

Push Your Mod In For Softer Light, Pull It Out For Crisper Shadows

The first part of the question "How near/far should the light stand be from the subject?" is answered by the view of your camera. If you want the softest light possible, then you push the modifier right to the edge of the camera's vision. For crisper shadow edges (aka harder light), you pull the modifier away from your subject until your test shots show that you have the desired shadow edges. Remember that, as you move your light stand in and out, you will have to adjust the height of the modifier to keep it centered on the subject's face.

Figure 19.6 (next page) The RoundFlash Dish unfolds from a compact pouch into an 18" softbox that straps onto the head of a Speedlite. As you can see, it creates beautiful light and shadow.

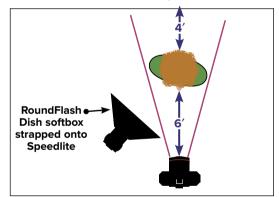


Figure 19.4 Lighting diagram



Figure 19.5 The RoundFlash Dish was angled down from the left.



SHOOT: ONE SPEEDLITE WITH FILL REFLECTOR

I've said it before: The range of bright and dark tones that can be recorded by our cameras is much narrower than the range of light we can see. With a single Speedlite, there is the great possibility that when you balance your exposure for the light on the bright side of your subject's face, the other side will fall into dark shadow. An easy fix, when using one Speedlite, is to fill the shadows with a reflector.

Fly A Bit Of Light Past Your Subject For Fill

The idea in using a reflector to fill shadows is that you capture the light that flies past your subject and bounce it back. It helps if you angle your Speedlite so that a bit of its light flies in front of your subject. This is the light that you will catch in the reflector and bounce back. When you angle a light away from your subject, you are feathering the light.

Get Your Fill Reflector In Close

I push my fill reflector in as tight to my subject as possible—meaning that the reflector comes in until I see it in the frame and then I back it out just enough so that I don't have to head into Photoshop later.

Figure 19.8 (next page) My friend Zack Arias (zarias.com, DedPxl.com), lit with a single Speedlite at camera right. The two keys to making this shot were to flag the flash from hitting the steel door directly behind Zack and to fill the shadowy side of his face. To flag the background, I strapped a large Rogue FlashBender to the side of the Speedlite and aimed it right behind Zack's shoulder. To fill the shadows, I angled a 42" gold/silver reflector disk so that the flash flying past Zack's nose would bounce back into the shadows.

Figure 19.9 (inset) The shot without the reflector.

Lighting Details

Environment: Indoors Time of Day: Late night Ambient: Very dim tungsten Speedlite: One 580EX II Mode: Manual Power Level: ¹/₄ Zoom: 70mm Modifier: Large Rogue FlashBender strapped to off-camera side of head Distance to Subject: 3' Height: Level with Zack's head

Camera Details

Camera: 5D Mark II Lens: 24–70mm f/2.8L Distance to Subject: 8' Exposure Mode: Manual Exposure: 1/60", f/8, ISO 400 White Balance: Flash

Trigger: Extra-long E-TTL cord

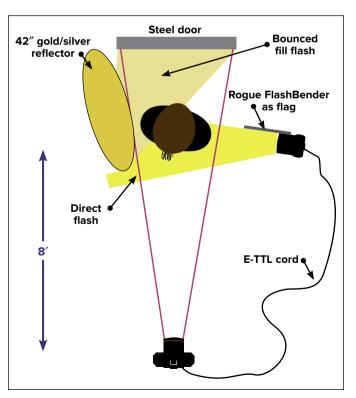


Figure 19.7 Lighting diagram



SHOOT: CREATING SOFT FILL LIGHT WITH A BIG UMBRELLA

An umbrella is an easy and relatively affordable way to significantly increase the apparent size of your Speedlite—which means that the edges of the shadows will soften as the light reaches around your subject.

Windowlight May Be Soft, But It Is Still Directional

For this shoot, a series of large (4' x 6') windows on the left side of the lens provided a huge swath of ambient light. An overcast sky softened the ambient light even further. Still, as you can see in the inset photo (Figure 19.12), there is a directional quality to the light. That is to say that since the windowlight crosses the model from the side, the soft light still casts shadows that the lens can see. Notice how her cheeks, nose, and jaw are sculpted by the shadows.

Blending Fill Flash Into Windowlight With A Large, White Umbrella

While I think that the windowlight-only shot is beautiful, I prefer the shot with the fill light for two reasons: the softening effect on the skin and the increased illumination on the hair. The softening of the skin happened because the flash fills the shadows and reduces the surface detail.

A key factor in making this fill light blend with the ambient windowlight is that I bounced my Speedlite into a 60" white umbrella that was positioned in as close as I could get it—literally just outside the frame on the right. The size of the umbrella and the softening effect of its white fabric created a large source of soft light that blends in naturally with the windowlight. Essentially, I mirrored the look of the windowlight with my fill flash.

Figure 19.11 (next page) A single Speedlite firing into large white umbrella just to the right of the camera's view blends naturally with the windowlight. Notice how the light fills the shadows and softens the appearance of the skin.

Figure 19.12 (inset) While beautiful, the shadows in this windowlight-only shot sculpt the facial structure and define the skin more sharply than the shot with fill flash.

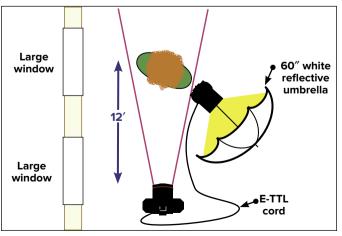


Figure 19.10 Lighting diagram

Lighting Details

Environment: Indoors, adjacent to large window Time of Day: Late morning Ambient: Overcast daylight Speedlite: One 600EX-RT Mode: Manual Zoom: Zoomed to 20mm Modifier: 6" white umbrella Distance to Subject: Just out of frame Height: Center at 6' and angled down Trigger: Extra-long E-TTL cord

Camera Details

Camera: 5D Mark III Lens: 24-105mm f/4L IS at 80mm Distance to Subject: 12' Exposure Mode: Manual Exposure: 1⁄30", f/8, ISO 400 White Balance: Daylight



SHOOT: BROAD AND SHORT LIGHTING

Broad and short lighting describes two styles of lighting that can be very useful when shooting headshots. Essentially, the difference is which side of the face is lit by the key (main) light.

Think About The Direction Of The Nose

When a subject is not facing the lens directly, the nose points to one side of the frame or the other. The direction of the nose—relative to the position of the key light—is what determines whether a shot is broad lit or short lit. In Figure 19.14, Max's nose is on the same side of the lens as the key light (a Speedlite in a Westcott Apollo Medium softbox). From the camera's viewpoint, the short side of Max's face (or the narrow side of his face) is lit—hence the term "short lighting."

In the inset shot (Figure 19.15), Max rotated so that his nose is on the opposite side of the lens from the key light. Now the broad side of his face is lit by the key light.

Rotate The Subject Or Move The Light

The difference between Figures 19.14 and 19.15 is that Max started the shoot with his body facing the light (Figure 19.14) and then rotated away from the light (Figure 19.15). In both shots, the key light stayed in the same position, specifically to the right of the lens.

If you need to keep your subject in the same position (for instance), facing to the right as in Figure 19.14, and you want to switch lighting styles (say from short to broad lighting), then you just need to move the key light to the other side of the subject's nose.

Figure 19.14 (next page) Short lighting is created when the position of the key light illuminates the narrow side of the face as seen by the camera.

Figure 19.15 (inset) Broad lighting is created when the position of the key light illuminates the wide side of the face. For this shot, Max rotated so that he was facing away from the softbox and then turned his nose towards the lens.

Lighting Details

Environment: Indoor studio Time of Day: Not a factor Ambient: None Speedlite: One 580EX II Mode: Manual Zoom: Zoomed to 20mm Modifier: Westcott Apollo Medium Distance to Subject: Just out of frame Height: Center at 6' and angled down Trigger: Extra-long E-TTL cord

Camera Details

Camera: 5D Lens: 70-200mm f/2.8L IS at 70mm Distance to Subject: 6' Exposure Mode: Manual Exposure: ½60", f/11, ISO 100 White Balance: Daylight

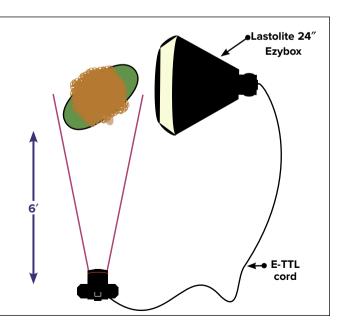


Figure 19.13 Lighting diagram



SHOOT: THINK OF THE SHUTTER AS A LIGHT MODIFIER

One advantage of flash over other sources of light is that you can use the shutter speed to dim the ambient light. This can be a valuable tool to guide your viewer's eye.

Directing Your Viewer's Focus

When we first encounter a new photo, the first spot that we look at is the brightest portion of the image. In portraits, an easy way to direct your viewer's eye to your subject is to dim the brightness of the background in your shots. This will make your subject's face stand out more prominently.

In Figures 19.17–19.20, I lit Kristen with a single Speedlite firing through an Impact 24" Quikbox. The difference through the series is that I increased the shutter speed in one-stop increments to show the effect of dimming the background.

Lighting Details

Environment: Outdoors Time of Day: Late afternoon Ambient: Golden hour sun behind Kristen Speedlite: One 600EX-RT Mode: E-TTL FEC: 0 FEC Zoom: Zoomed to 24mm Gel: ½ CTO Modifier: Impact 24" Quikbox Distance: About 4' to subject Height: Level with subject's head Trigger: ST-E3-RT Transmitter

Camera Details

Camera: 5D Mark II Lens: 100mm f/2.8L Macro IS Distance to Subject: 6' Exposure Mode: Manual Exposure Comp: As listed Exposure: Manual White Balance: Daylight In Figure 19.17, the $\frac{1}{200''}$ shutter creates a fill light that balances naturally with the late afternoon sun. Yet Kristin does not stand out clearly from the background. In the subsequent photos (shot at $\frac{1}{400''}$, $\frac{1}{800''}$, and $\frac{1}{1600''}$), the backgrounds get progressively darker. The choice of which frame is the best is a matter of personal taste. I favor Figure 19.19 ($\frac{1}{800''}$) because it still maintains the rimmed edge of sunlight on Kristen's hair.

Keep in mind that as your shutter speed exceeds the sync speed of your camera, you have to activate High-Speed Sync on your Speedlite. See Chapter 7: *Control Your Speedlite* for the basics on HSS and Chapter 22: *Slicing Time With High-Speed Sync* for a detailed discussion.

Figure 19.17 (next page, top left) ½00", f/5.6, ISO 400. Speedlite fired in E-TTL with 0 FEC.

Figure 19.18 (top right) 1/400", f/5.6, ISO 400. Speedlite fired in E-TTL with 0 FEC.

Figure 19.19 (bottom left) 1/800", f/5.6, ISO 400. Speedlite fired in E-TTL with 0 FEC.

Figure 19.20 (bottom right) 1/1600", f/5.6, ISO 400. Speedlite fired in E-TTL with 0 FEC.

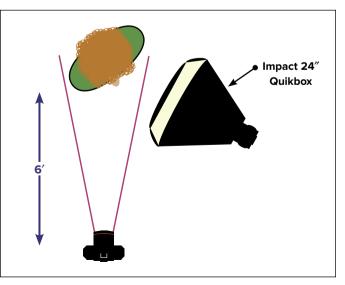


Figure 19.16 Lighting diagram



SHOOT: JUST A SLASH OF LIGHT

In addition to thinking about how you will light your subject, you should consider what will happen to the light that flies past your subject. When you are outdoors, the excess flash is typically not a problem. When you are indoors, the excess light may be undesirable—especially when your subject is close to the background.

Use A Narrow Softbox To Light The Subject, But Not The Background

For this shoot, we were shooting in an old warehouse. The layers of dust that accumulated on the nearby windows (top-right corner of Figure 19.22) created beautiful golden patches of light that angled down across the wall.

I wanted to light Isaac without having the excess flash fly past him onto the background. The go-to solution is a strip softbox. Strip boxes are much narrower than standard softboxes.

Lighting Details

Environment: Warehouse Time of Day: Mid-afternoon Ambient: Dusty glass windows, sunlight outside Speedlite: One 600EX-RT Mode: Manual Zoom: Zoomed to 20mm Modifier: Westcott Rapid Box Strip (10" x 24" softbox) Distance: About 4' Height: About 4' Trigger: ST-E3-RT Transmitter

Camera Details

Camera: 5D Mark III Lens: 24–105mm f/4L IS at 55mm Distance to Subject: 6' Exposure Mode: Manual Exposure: ½160", f/8, ISO 400 White Balance: Daylight In this case, the Westcott Rapid Box Strip, at $10'' \times 24''$, was the perfect solution. As you can see in Figure 19.22, the softbox was pushed in tight—right up to the edge of the camera's field of view.

This served two purposes:

- Being close enabled me to reduce the power to the minimum, which reduced the effect of the excess light flying past on the background wall.
- Being close increased the apparent size of the softbox (relative to Isaac), so the light appeared softer.

Figure 19.23 (next page) The narrow softbox enabled me to cast soft light onto Isaac without it spilling onto the wall behind.

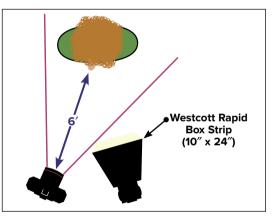


Figure 19.21 Lighting diagram



Figure 19.22 Our location for the shoot



SHOOT: RING THE LENS WITH LIGHT

As I covered in Chapter 14: *Go Ahead, Mod Your Speedlite*, ring light adapters are specialty modifiers that capture the light from your Speedlite and redirect it to a panel that encircles the lens.

The Distinctive Look Of A Ring Flash

Ring lights are often used by fashion and glamour photographers to create snappy, yet soft, light. When the subject is close to the background (as Brittany is in Figure 19.25), the geometry of the ring light around the lens casts a distinctive outline shadow that surrounds the subject. Circular catchlights in the center of the pupils are another tell-tale sign of ring lights.

The RoundFlash Is My Favorite Ring Light Adapter For Speedlites

Of the three ring light adapters that I reviewed in Chapter 14, my favorite was the RoundFlash. While it appears to be a cumbersome modifier (turn back to Figure 14.27), it adds very little weight to the camera. As importantly, it sets up quickly and, when not in use, folds up into a compact pouch that you can stuff into a corner of your camera bag. The other adapters that I featured are rigid plastic, which means that they take up more room in the bag and potentially could be damaged more easily. Another great advantage of the RoundFlash over the other adapters is the size of its diffuser panel. Measuring 20" in diameter, it creates beautiful, soft light, as you can see in Figure 19.25.

Lighting Details

Environment: Studio Time of Day: Not a factor Ambient: Not a factor Speedlite: One 600EX-RT Mode: E-TTL FEC: 0 Zoom: Zoomed to 35mm Modifier: RoundFlash ring light softbox Distance: About 4' Height: About 5' (camera-mounted) Trigger: Sitting in camera hotshoe

Camera Details

Camera: 5D Mark III Lens: 24–105mm f/4L IS at 45mm Distance to Subject: 4' Exposure Mode: Manual Exposure: ¹/125", f/8, ISO 400 White Balance: Daylight Figure 19.25 (next page) Ring light has a distinctive look. The clues that I used a ring light adapter are the circular catchlights in Brittany's eyes and the soft outline shadow on the wall.

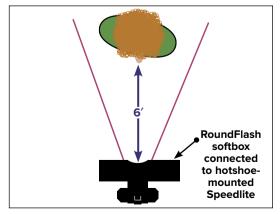


Figure 19.24 Lighting diagram



SHOOT: NOSE TO THE GRIDDED LIGHT

A great tip to remember when shooting portraits with hard light is that if you aim the flash directly at the subject's nose (or vice versa), the harshness of the hard shadows is minimized.

Grids Are A Favorite Modifier

As you can see in Figure 19.27, I placed a gridded Speedlite to the right side of my camera and aimed it straight at Arlan's nose. The purpose for the $\frac{1}{16}$ grid was to create a tight pool of light on his face and hat. My visual strategy was to reveal just enough of his environment and wardrobe so that you would get a sense of his persona and then encourage you to focus on his handsome face.

A Window Creates Rim Light

Take a close look at the left edge of the jacket, neck, and hat in Figure 19.28. See the edge of light that provides the critical separation between the subject and the background? It is ambient light that came from a window

Lighting Details

Environment: Old warehouse Time of Day: Early afternoon Ambient: Diffuse windowlight Speedlite: One 600EX-RT Mode: Manual Zoom: Zoomed to 200mm Modifier: Strobros Grid 1/16" Distance: About 5' Height: 7' (angled down) Trigger: ST-E3-RT Transmitter

Camera Details

Camera: 5D Mark III Lens: 24–105mm f/4L IS at 60mm Distance to Subject: 5' Exposure Mode: Manual Exposure: ½30", f/8, ISO 800 White Balance: Daylight about 45° to the left of and 8' behind the model. Without that edge of rim light, his jacket, neck, and hat would have merged into the background.

So my ambient exposure was based on two goals:

- Dim the background so that the viewer will focus on my subject's face.
- Maintain just enough of the ambient rim light to provide a clear separation between the subject and the background.

Figure 19.28 (next page) I dimmed the ambient light by two stops with my shutter speed and aimed the gridded flash directly at Arlan's nose. You will note that the nose and chin shadows are hard, but their placement accentuates his features.

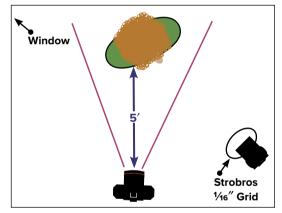


Figure 19.26 Lighting diagram



Figure 19.27 Our location for the shoot



SHOOT: ONE-LIGHT WHITE SEAMLESS

While it is easier to create a white seamless shot (one with a pure white background) using multiple flashes, it is possible to do it with a single Speedlite and a large diffuser.

Most Of The Flash Lights The Background

The key to getting a white background is to overexpose a light-colored wall, meaning that it must be flooded with flash. For this shoot, the Speedlite was zoomed moderately tight (105mm), positioned about 45° to the side, and aimed at the wall behind the model.

Then, as you can see in Figure 19.30, a large diffuser panel (in this case, a Lastolite TriGrip Diffuser) was held between Katie and the flash—just outside of the camera's view. The diffuser captures the outer rays of the flash and creates soft light on the subject. As always, the closer the diffuser is to the subject, the greater its apparent size becomes (relative to the size of the subject) and the softer the light becomes.

Lighting Details

Environment: Rustic exhibition hall Time of Day: Not a factor Ambient: Not a factor Speedlite: One 600EX-RT Mode: Manual Zoom: Zoomed to 80mm Modifier: Lastolite TriGrip Diffuser Distance: About 12' Height: 6' Trigger: ST-E3-RT Transmitter

Camera Details

Camera: 5D Mark III Lens: 24–105mm f/4L IS at 60mm Distance to Subject: 6' Exposure Mode: Manual Exposure: ½200", f/5.6, ISO 800 White Balance: Daylight

Maximize The Separation Between The Wall And The Subject

The distance between the wall and your subject is the key to creating a shot with sharp, contrasty edges. You want a gap of 5' or more. If your subject is too close to the background, then the bright wall will act like a giant reflector panel and wrap your subject in edge-softening light. If you find this to be an issue, then have your subject step farther from the background.

Figure 19.31 (next page) The key to getting a white background is to flood it with flash. The key to having a sharp contrast between the subject and the wall is to maximize the distance between them.

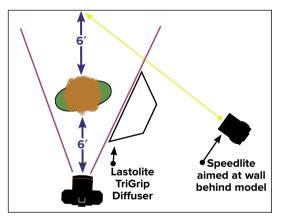


Figure 19.29 Lighting diagram



Figure 19.30 Our location for the shoot



SHOOT: SPEEDLITING A SILHOUETTE

Sometimes turning your Speedlite at the background can create more dramatic light than when you aim it at your subject. For this shoot, I actually underexposed Arian to such an extent that he turned into a silhouette.

Use Zoom To Create The Background Pattern

Even before Arian stepped into the frame, I experimented with different zoom settings on my Speedlite to see how they would illuminate the background. If you want a broad, even field of color, zoom your Speedlite out wide (to 24mm). If you want a spot of light that dramatically fades to black, zoom it in tight (to 105mm). The hero shot at right was made with the Speedlite zoomed to 70mm. The hotspot of color is the result of the Rosco medium red gel firing onto the deep yellow wall.

Hide The Flash

Pay attention to the details when shooting silhouettes. I had to hide the Speedlite behind Arian's leg and instruct him on exactly where to stand.

Sometimes Less Is More

When it comes to the intensity of the color from a gel, the more light you push through it, the lighter the color appears. So if you are looking for a deep, saturated color, remember to turn the power of your flash down rather than up. (I know this sounds backwards.)

Figure 19.33 (next page) My hero shot was made with the Speedlite power dialed manually to 1/8.

Figure 19.34 (inset) The set was two sheets of tile board pushed up to a yellow wall.

Wall Red gel Simple receiver 12' Simple radio receiver

Figure 19.32 Lighting diagram

fluorescent turned off during shoot

Lighting Details Environment: Empty store

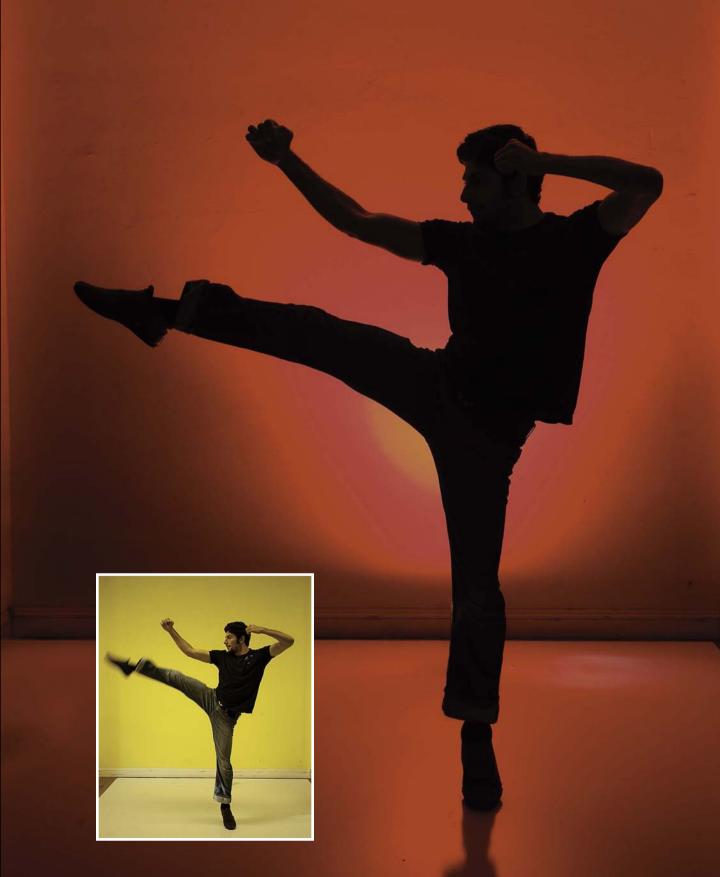
Time of Day: Not a factor

Ambient: Verv dim. overhead

Speedlites: One 580EX Mode: Manual Zoom: Zoomed to 70mm Tilt: Straight up Gel: Rosco Medium Red Modifier: None Distance: Pushed up to wall Height: Sitting on floor Trigger: Simple radio triggers

Camera Details

Camera: 5D Mark II Lens: EF 17–40mm f/4L Distance to Subject: 12' Exposure Mode: Manual Exposure: ½160″, f/8, ISO 400 White Balance: Flash



SHOOT: DOES SOFTBOX SIZE MATTER?

Is there a difference between light created by the various sizes of Lastolite's Ezyboxes— Speed-lite (about 10"), Hotshoe 24", and Hotshoe 30"? As these portraits of my friend Annette show, the answer is "no and yes."

All Three Ezyboxes Create Soft Light

Figure 19.36 is the ambient light as the camera wanted to record it in Av with 0 EC. Figure 19.37 is my manual exposure (ambient minus three stops). In Figure 19.38, I fired a bare Speedlite at Annette. You can tell it is bare because the shadows are hard, and the light does not reach around her face.

Now look at Figures 19.39–19.41. All were created by the three sizes of Ezyboxes. You can see in each that the light reaches around Annette's face and that the shadows are soft. To make a fair comparison, I moved the stand so that the diffuser of each softbox was the same distance from her face.

Lighting Details

Environment: Outdoors under eave Time of Day: Mid-afternoon Ambient: indirect sunlight Speedlite: One 580EX II Mode: E-TTL FEC: 0 FEC Zoom: 24mm Modifier: Lastolite Ezyboxes Distance to Subject: About 2' Height: Centered on subject's nose Trigger: Extra-long E-TTL cord

Camera Details

Camera: 5D Mark II Lens: 100mm f/2.8L Macro IS Distance to Subject: 8' Exposure Mode: Manual Exposure: ¹/125", f/8, ISO 100 White Balance: Daylight

The Difference Is The Reach Of The Light

I also centered the height of each softbox on Annette's nose. As you can see in Figure 19.39 (the largest frame), the small Speed-lite Ezybox did a fine job of creating soft light. The difference between the three—and you have to look close to see it—is that the larger softboxes also carried the soft light farther down on Annette's arms. If I had lowered the 30" so that the top was even with Annette's hat, the soft light at the bottom would be even more apparent.

Figure 19.36 (next page, top left) My 5D Mark II metered the ambient at 1/30", f/5.6, ISO 100.

Figure 19.37 (center left) I dimmed the ambient by manually dialing the exposure to $\frac{1}{125}$, f/8, ISO 100—a change of -3 stops.

Figure 19.38 (bottom left) Without a softbox, the bare flash creates hard shadows.

Figure 19.39 (upper right) Even the smallest of the softboxes, the Lastolite Speed-lite, created beautiful light.

Figure 19.40 (bottom center) The Ezybox 24" provides soft light with a slightly smaller vignette at the bottom.

Figure 19.41 (bottom right) The Ezybox 30" provides beautiful light from Annette's hat down to her hands.

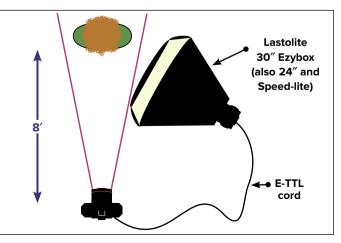


Figure 19.35 Lighting diagram













INDEX

1st-curtain sync, 100 2nd-curtain sync, 100–101, 354–355 18% grey, 36 35-zone meter, 37 63-zone meter, 36 252-zone meter, 36

Α

A:B ratios, 192, 194–197, 215, 218, 220 A:B C ratios, 192, 198-199, 215, 218 A:B:C ratios, 192, 200, 201, 202, 220 action photography field of light for, 350-351 gang lighting for, 397–399 High-Speed Sync for, 388-389, 390-391 Manual flash mode and, 113 stroboscopic flash and, 144, 150 See also motion adapters softbox, 269 swivel, 258, 278 umbrella, 258, 278 AE Lock button, 139 AF-Assist beam emitter on Speedlite flashes, 75, 76, 80, 82, 84, 86, 87 on Speedlite Transmitter ST-E2, 92 air-cushioned stand, 282 alkaline batteries, 290, 292 ambient light, 6, 54-63 blending flash and, 62–63 camera modes for managing, 58 clues provided by, 55 color of, 62, 361 determining the role of, 55 dimming, 57, 58 direction of, 63 dragging the shutter for, 60, 103 E-TTL flash mode and, 126 evaluating with your camera, 122 Exposure Compensation and, 8, 397 ISO setting and, 58, 61 managing for flash exposures, 7–8 Manual flash mode and, 122 methods of manipulating, 55 rim light created from, 326 shutter speed and, 7, 56-60, 320, 348, 372 sources of, 55 sports portraits and, 342 underexposing, 348

angle of light crossfire lighting and, 344 horizontal, 65 vertical, 70 aperture ambient light and, 61 choosing settings for, 32 depth of field and, 28, 32, 61 explanation of, 26 f/stops and, 26-27 flash exposures and, 61 increment settings for, 26-27 shutter speed and, 32 See also f/stops Aperture Priority (Av) mode, 34 E-TTL flash mode and, 131 example of shooting in, 35 Exposure Compensation in, 8 flash sync speed in, 131 managing ambient light in, 58 situations for using, 122 Apollo softbox, 263, 352 Arias, Zack, 314 Auto Power Off feature, 187, 416 Auto white balance (AWB), 44, 45, 359, 372 Auto Zoom option, 104 Av mode. See Aperture Priority (Av) mode Avenger products C-Stand, 283 grip gear, 282 Scissor Clamp, 280 Sparrow Plate, 280

В

backgrounds bouncing light to, 109 brightening ambient light in, 60 de-emphasizing with HSS, 382 dimming ambient light in, 57 gang lighting to hide, 400-401 single Speedlite for lighting, 311, 328 white seamless, 328-329 backlighting fill flash used with, 129 shooting foliage with, 340 batteries, 288-297 best AA. 292 buying, 293 carrying, 297 charging, 296-297 criteria for choosing, 289

how to manage, 293 problem with mixing, 293 rechargeable, 291, 292 single-use, 290 torture test of. 289 battery caddies, 297 battery chargers, 296–297 battery packs, 144, 294–295 beauty dishes, 270-271 collapsible, 271 paired Speedlites in, 348-349 rigid, 270-271 behind-the-scenes shots, 3 bia light modifiers, 253 black net, 272 blinking subjects, 130 blue hour. 360 blue-sky effect, 370-371 Bolt Battery Packs, 295 booms and boom stands, 285 bounce angle, 77, 81, 83, 84, 86 bounce diffusers, 237 bounce reflectors. 238-239 bouncing light, 108, 304-305 brackets. See flash brackets brightness controlling flash, 9-10 setting for LCD display, 38 zoom function and apparent, 106 broad lighting, 318–319 built-in modifiers. 234 Bulb (B) exposure mode, 34, 35, 58 bungies, 287

С

Cactus V5 transceiver, 166 Camera User Settings, 34 cameras. See digital cameras camera-to-subject distance, 128–129 Canon CP-E4 Compact Battery Pack, 295 Canon EOS M camera, 128 Canon Speedlites. See Speedlites Cardellini Clamp, 279 catchlight panel, 76, 80, 234, 309 ceiling-bounced flash, 305 Center-Weighted metering mode, 37 CFLs (compact fluorescent lamps), 43, 44, 365 channel scanner, 213 Channel select button, 93 channel setting optical wireless, 176, 177, 188-189 radio wireless, 213

character of light, 18–19 charging batteries, 296-297 chiaroscuro, 19 Chimera products Speed Ring, 269 Super Pro softboxes, 268 Cinch Strap, 235 Cinefoil. 250 clamps, 279, 280 clamshell lighting, 336–337 classic three-light portraits, 338-339 Cloudy white balance, 44, 45 coldshoe. 277 collapsible beauty dishes, 271 collapsible disk reflectors, 272 collapsible umbrellas, 257 color daylight cycle of, 360 limits to capturing, 22 metering luminance and, 127 theatrical, 357, 364 color balance, 357, 358, 359 See also white balance settings color cast, 44 color correction gels, 357, 358-359, 365 color effect gels, 357, 364, 365 color of light. 23 color temperature, 19, 43 gels for adjusting, 358-359 matching flash to ambient, 62 scale for measuring, 43 white balance and, 43, 44 Combi-Boom Stand, 285 composition checking in LCD display, 38 FEL feature for alternate, 140 compression, 29 condition charge mode, 297 configurable umbrellas, 257 consistency of light, 19 contrast, 19, 39 convertible umbrellas, 256 CP-E4 Compact Battery Pack, 295 Creative Auto (CA) mode, 34 crisp shadows, 308, 312 crossfire lighting, 334, 344-345 C-stands, 283, 286, 402 CTB gels, 357, 358, 365 CTO gels, 357, 359, 365, 366, 368, 370, 372 Custom Functions (C.Fn), 78, 416-421 Auto Power Off, 187, 416 external battery pack setup, 295 FEC button creation, 135

setting on Speedlites, 416–417, 418, 419–421 See also Personal Functions Custom white balance, 44, 45 CustWireless option, 179

D

daylight color cycle of, 360 dimming to night, 58-59 See also sunlight Daylight white balance, 44, 45, 359, 361, 372 depth of field (DOF), 28-29 aperture and, 28, 32, 61 lens focal length and, 29 tip for remembering, 28 diffuse reflections, 47 diffusers dish. 309 fabrics used as, 272 globe and dome, 236-237 on-camera flash using, 306-307 diffusion panels, 272–273, 328 digital cameras color range of, 22 dynamic range of, 21 E-TTL technology in, 128 evaluating ambient light with, 122 exposure modes on, 34-35 FEC adjustments via, 133–135 histogram in, 39-40 HSS activation on, 377 light seen by, 20-23 master setup on, 178–179 pop-up flash on, 301 radio wireless control by, 208–209, 348 Speedlite controls on, 4-5, 118-121 white balance of, 23 dimming the sun High-Speed Sync for, 386–387 shutter speed for, 58-59 direct reflections, 47 direction of light, 18, 63 dish diffusers, 309 distance background-to-subject, 328 camera-to-subject, 128–129 flash-to-subject, 52–53, 57, 112 distance scale, 156 dome diffusers, 237 double umbrella setup, 260, 261 dragging the shutter, 60, 103 drama of light, 19

dramatic color, 364 drop-ceiling scissor clamp, 280 dynamic range, 21

Ε

EasyWireless option, 179 Edison, Thomas, 292 Einstein monoliaht, 396 elastic bungies, 287 Elinchrom Ranger RX AS, 396 enabling/disabling optical masters, 176, 184-185 radio masters, 217 Eneloop batteries, 292 equipment. See gear equivalent exposures, 32-33 E-TTL cords, 13, 161, 162–163 extra-long, 148, 163, 335, 354 options for using, 162 triggering flash using, 335 E-TTL flash mode, 97, 124-141 digital cameras supporting, 128 Exposure Compensation and, 137 exposure modes and, 131 fill flash using, 13, 129, 303 Flash Exposure Compensation and, 10, 132–137 Flash Exposure Lock and, 138–140 High-Speed Sync and, 381 limitations of, 9, 125, 130 Manual flash mode vs., 9, 112, 141 mechanics of, 126-129 menus for controlling, 78, 406, 411, 414 metering zones and, 127 optical slave eyes and, 130 optical wireless settings in, 192-193, 411 preflash used in, 126 radio triggers used with, 161, 168-170, 335 radio wireless settings in, 218-219, 406 RGB-metering technology for, 127 situations for using, 9, 125 troubleshooting, 141 E-TTL radio triggers, 161, 168–170 ETTR (Expose To The Right), 40 Evaluative metering mode, 37 Evaluative Through-The-Lens mode. See E-TTL flash mode exposure, 24-41 aperture and, 26-29 camera modes for, 34–35 chart of settings for, 31 depth of field and, 28-29 determining proper, 41

equivalent values for, 32–33 evaluation for flash photography. 38–40 Exposure Compensation and, 36 flashmeters and, 41 ISO setting and, 31 LCD display and, 38 metering and, 36-37 shutter speed and, 30 stops related to, 25 white balance and, 44-45 Exposure Compensation (EC) ambient light and, 8, 397 FEC used with. 137 metered exposure and, 36 See also Flash Exposure Compensation exposure modes, 34-35 E-TTL flash mode and, 131 Manual flash mode and, 122 Exposure Settings Chart, 31 External Auto mode, 79, 98, 143, 152–154 external battery packs, 144, 294–295 External Flash Function Quick Menu. 5 external flash metering, 151–156 Canon's re-introduction of, 151 distance scale used with. 156 External Auto mode, 152–154 External Manual mode, 154–156 High-Speed Sync and, 156 situations for using, 152 External Manual mode, 79, 98, 143, 154–156 external metering sensor, 76, 80, 151 external power socket, 76, 80 extra-long E-TTL cords, 148, 163, 335, 354 eye socket shadows, 70 EZ Speedlites, 89 Ezybox softbox, 240, 265, 332-333

F

f/stops apertures and, 26–27 flash-to-subject distance and, 52–53 geometry of, 27 whole and partial, 26–27 *See also* aperture fabric reflectors, 274 Fast Flags, 272, 273 faux-sync speed, 383 feathering the light, 109 FEC. *See* Flash Exposure Compensation FEL. *See* Flash Exposure Lock fill flash E-TTL handling of, 13, 129, 303

gang lighting as, 402–403 aels used with. 366-367 hatchet lighting and, 342 High-Speed Sync and, 303, 340, 384–385 master function with, 342 multiple softboxes for, 340-341 off-camera masters as, 182 on-camera flash as, 13, 302–303 ratio of off-camera key light to, 196 reflector used for. 314 single Speedlite as, 311 three-light setup and, 338 windowlight blended with, 316-317 fill reflector. 314-315 filter sensors. 76 Fire-now radio triggers, 161, 166 first-curtain svnc. 100 fixed-distance shots, 112 flags, 248-249, 275 flash bouncing, 304-305 color of, 361 duration of. 390 fill, 13, 302-303 light created by, 6 managing brightness of, 9-10 off-camera, 65, 160-171 on- and off-axis. 68-69 on-camera, 300-309, 384 pop-up, 68, 301 ring, 242-243, 324-325 stroboscopic, 98, 143, 144-150 sync speed for, 99-103 flash brackets centering Speedlites using, 309 for multiple Speedlites, 260 off-camera cord with. 162 for softboxes, 269 Flash Control Menu, 135 Flash Exposure Bracketing (FEB), 141 Flash Exposure Compensation (FEC) camera setup for, 133–135 E-TTL flash mode and, 10, 132–137 Exposure Compensation used with, 137 External Auto mode and, 153, 154 group setup using, 192, 218, 224 increments for adjusting, 132 Manual flash mode and, 221 Speedlite setup for, 10, 136 See also Exposure Compensation flash exposure confirmation lamp on Speedlite Flashes, 77, 81, 83 on Speedlite transmitters, 90, 93

Flash Exposure Lock (FEL), 138–140 activating on cameras, 139 alternate compositions using, 140 situations for using, 138 flash exposures aperture and, 61 controlling ambient light in, 7-8 ISO setting and, 61 matching ambient light with, 62-63 positioning lights for, 64-71 power level of, 9, 61, 75, 141 shutter speed and, 56 flash groups explanation of, 157 FEC setup for, 192 optical wireless, 190-191 radio wireless, 202 ratios used for, 192, 193, 194–199 right/left setup for, 192, 218 three-group setup, 198–199 two-group setup, 194–197 flash menu button, 209 Flash Ready lamp/test button, 77 Flash white balance, 44, 45 FlashBender Large, 238, 239, 241, 246, 248, 342 flashhead, 76, 80, 82, 84, 86, 87 flashhead release button, 77, 81, 83 flashmeters, 41 flash-to-subject distance, 52–53 flashtube, 104, 174 Flex Arm. 281 flexible arms, 281 fluorescent lights, 44 Fluorescent white balance, 44, 45 foam core reflectors, 274 focal length. See lens focal length focus-and-recompose technique, 138 four-step Speedlite workflow, 11 frame rates, 209 Frio coldshoe, 277 F-Stop Measuring Stick, 52–53 Fstoppers Flash Disc, 13, 241, 307 Full Auto mode, 34 E-TTL flash mode and, 131 Manual flash mode and, 111

G

gaffer's tape, 250, 287, 363 gang lighting, 392–403 author's discovery of, 393 building rails for, 395

comparing alternatives to, 396 fill flash using, 402–403 freezing action using, 397-399 how to create, 393-394 HSS power loss and, 393 math for setting up, 394 mixing Speedlites for, 394 modifying light using, 393 mounting options for, 395 sharing lights for, 395 strip of soft light using, 400-401 triggering options for, 396 gear batteries. 288-297 grips, 276-287 modifiers, 232-275 gels. 250. 356-373 blue-sky effect with, 370-371 color correction, 357, 358-359, 365 color effect, 357, 364, 365 cutting your own, 361 fill light using, 366-367 flash power and color of, 330 golden-hour effect with, 368–369 major and minor groups of, 356 mounting on Speedlites, 363 neutral density, 357, 364 noir effect with, 372-373 polarizing, 357 primary uses for, 357 recommended by author, 365 stroboscopic flash and, 150 systems of, 362 tip on carrying, 365 white balance and, 359, 361 glare, 19 globe diffusers, 236 gold fabric reflectors, 274 gold reflective umbrellas, 255 golden hour creating the look of, 368-369 daylight cycle and, 360 Gorillapod, 281 "Green Box" mode, 34 grids, 244–245 creative use of, 244 single Speedlite with, 326-327 snoots vs., 245 grip gear, 276–287 booms/boom stands, 285 clamps, 279, 280 elastic bungies, 287

flexible arms, 281 gaffer's tape, 287 hot/cold shoes, 277 light stands, 282–283 multi-light mounts, 286 poles, 284-285 professional grade, 282 rails, 286, 395 swivel adapters, 278 Velcro straps, 287 Group ID setting, 176, 177 Group mode, 75, 143, 157, 202, 223-224 controlling flash groups in, 223, 224 global Flash Exposure Compensation in. 224 radio wireless menus in, 409 See also flash groups group photos, 53

Η

hair light, 66, 338 half-stops, 26 handheld Speedlites, 162 hands, as reflectors, 239 hard light modifier position for, 312 outdoor setup for soft light with, 346-347 ratios for portraits using, 194–195 shadows created by, 19, 20, 305, 308 hatchet lighting, 342, 386 Hertz (Hz) setting, 144, 145 hiding Speedlites, 346 high-capacity battery packs, 295 highlights, 19, 306 High-Speed Sync (HSS), 101-102, 374-391 action shots and, 388-389, 390-391 activation of, 376-377 alternatives to, 383 dimming the sun using, 386-387 dramatic light with, 382 explanation of, 374, 375, 380–381 external flash metering and, 156 fill flash using, 303, 340, 384-385 flash duration vs., 390 gang lighting and, 393, 402 normal sync mode vs., 378–379, 380 pop-up flash and, 301 power output in. 381, 393 radio wireless and, 209 situations for using, 375 sunlit portraits and, 384–385 weather changes with, 397 workflow for. 382

histograms, 39-40 HMI lights, 358-359 Hobby, David, 233 Honl, David, 235 Honl products gels, 358 arids. 245 snoots, 238, 246 Speed Strap, 235, 363 Hoodman loupe, 39 horizontal lighting Lighting Compass for, 65–67 on- and off-axis light, 68-69 hotshoe. 3. 277 HSS. See High-Speed Sync human vs. camera vision, 20-23 hyper-fast blinkers, 130

icon-based control menu, 181, 189 Imedion batteries, 292 Impact products beauty dishes, 271 Quikboxes, 240, 265 incandescent lights, 23, 43 incidence, angle of, 46 incident light, 37 Independent Slave activation, 202–203 Industrial Vapor gel, 365 intensity of light, 18, 50 intent, lighting with, 16 Inverse Square Law, 50–51, 52, 261 ISO setting ambient light and, 58, 61 ETTR guideline and, 40 explanation of, 31 flash exposures and, 61 noise related to, 209 when to change, 33

J

JPEG files, 45 Justin Clamp, 279

Κ

Kacey, Jerry, 270 Kacey Enterprises Beauty Reflector, 270, 348 Pole Adapter, 284, 285 Speedlight Brackets, 269 Kelvin temperature scale, 43 key light classic three-light setup and, 338 off-camera masters as, 182 on-camera fill light vs., 302 ratio of on-camera fill to, 196 single Speedlite as, 311

L

Lastolite products Brolly Grip Handle, 257 Extension Pole, 284 Ezybox softbox, 240, 265 globe diffuser, 236 grids, 245 Skylight panels, 272, 273 snoots. 246 Strobo Beauty Box, 265 Strobo Gobo, 247 TriFlash bracket, 260 TriGrip diffuser, 328 umbrellas, 257 LCD display on cameras brightness setting for, 38 controlling Speedlites from, 4-5, 75, 118-121 exposure evaluation using, 38 LCD panel on Speedlites backlight color changes for, 212 overview of, 77, 81, 83 LD-NiMH batteries, 291 LED lamp, 84 legacy Speedlites, 88-89 lens focal length aperture and, 26 depth of field and, 29 Zoom function and, 104 light ambient, 6, 7-8, 54-63 angle of, 65, 70, 344 bouncing, 108, 304–305 character of, 18–19 color of, 23 diffusing, 273 dimming, 58-59, 386-387 distance to, 50-53 feathering, 109 flash-created. 6 hair, 66, 338 incident, 37 intensity of, 18, 50

learning to see, 16-23 mechanics of. 42–53 metering, 36-37 on- and off-axis, 68-69 poetry of, 17 position of, 64-71 reflected, 37, 46-47 rim, 66, 326, 338 separation, 311 shaping, 335 source size, 48-49, 233 temperature of, 19, 43 window, 183, 316-317 Light Blaster, 247 light rails, 286 light stands, 282–283 C-stands, 283 E-TTL cord connection, 163 lightweight, 282 lighting background, 109, 311 broad, 318-319 clamshell, 336-337 crossfire, 334, 344-345 aana. 392-403 hatchet, 342, 386 horizontal, 65–69 with intent. 16 LCD for checking, 38 multiple-Speedlite, 334-355 short, 318-319 single-Speedlite, 310-333 vertical, 70-71 Lighting Compass, 65-67 Lighting Inclinometer, 70 Lightware FourSquare bracket. 260 softboxes, 264 lightweight stands, 282 line-of-sight requirement, 174 Link Light options, 216 Linked Shooting button, 91 Linked Shot feature, 226–227 lithium batteries, 290 location of light. See position of light loupe, Hoodman, 39 Lovegrove, Damien, 278 LumiQuest products ProMax Bounce System, 239 Softbox III, 241 LumoPro Double Flash bracket, 269

Μ

Macro Ring Lite MR-14EX II. 94 Macro Twin Lite MT-24EX. 94 Magic Arm, 281 Maha chargers, 296, 297 Manfrotto products Boom Assembly, 285 Combi-Boom Stand, 285 Flex Arm. 281 grip gear, 282 Magic Arm, 281 Nano Stand, 282 Suction Grip, 280 Super Clamp, 279 Swivel Adapter, 258, 278 Manual flash mode, 97, 110–123 ambient light and, 122 classic three-light setup and, 338 E-TTL flash mode vs., 9, 112, 141 exposure modes and, 122 fixed-distance shots and, 112 High-Speed Sync and, 381, 388 Manual exposure mode vs., 111 menus for controlling, 78, 407, 412 midpoint power setting in, 122 non-wireless menu in, 414 optical slave eyes and, 113 optical wireless groups and, 200-201 power level settings, 9, 114-118, 200-201 radio wireless groups and, 220-221 situations for using, 9, 112-113 starting with, 111 workflow for using, 122-123 Manual (M) exposure mode, 3, 34 E-TTL flash mode and, 131 example of shooting in, 35 managing ambient light in, 58 Manual flash mode vs., 9, 111 situations for using, 122 manual radio triggers, 166–168 Fire-now, 161, 166 multiple Speedlites and, 335 power-adjusting, 161, 167-168 Manual Zoom option, 104 master units. See optical masters; radio masters McNally, Joe, 183, 233, 279, 368, 395 menus 600EX-RT non-wireless, 414-415 600EX-RT optical wireless, 411-414 600EX-RT radio wireless, 406–410 ST-E3-RT transmitter, 406-410

metal coldshoes, 277 meterina liaht. 36–37 Flash Exposure Lock and, 138 flashmeters for, 41 histograms for, 39-40 patterns for, 37 zones for. 36-37. 127 modifiers for Speedlites, 232-275 beauty dishes, 270-271 bia liaht. 253 bounce reflectors, 238-239 built-in, 234 Cinefoil. 250 do-it-yourself, 233 dome diffusers, 237 flags, 248-249, 275 gaffer's tape, 250 gels, 250, 356-373 globe diffusers, 236 grids, 244-245 kits of essential, 251 options for mounting, 235 positioning, 312-313 projectors, 247 purposes of, 233, 253 reflectors, 274 ring lights. 242-243 scrims/diffusion panels, 272-273 snoots, 246 softboxes, 240-241, 262-269 solids. 275 testing, 267 umbrellas, 254-261 monoball swivel. 278 Monroe, Matt, 281 mood creation, 364 motion field of light for, 350-351, 388 shutter speed and, 32 stroboscopic flash and, 144, 150 sync speed and, 100-101 See also action photography mounting Speedlites, 277-281 clamps for, 279, 280 flexible arms for, 281 gang lighting and, 395 hot/cold shoes for, 277 multi-light mounts for, 286 swivel adapters for, 278

Multi flash mode, 79, 98, 143, 144–150 non-wireless menu in. 415 optical wireless menus in, 413 power adjustments in, 202, 221-222 radio wireless menus in. 408 See also stroboscopic flash multi-light mounts, 286 multiple-Speedlite setup, 334-355 advantages of using, 335 beauty dish used in, 348-349 choosing Speedlites for, 335 clamshell lighting with, 336–337 classic portraits with, 338-339 creating a field of soft light with. 350–351 crossfire lighting with, 344-345 fill flash from softboxes in, 340-341 hard and soft light outdoors with. 346–347 second-curtain sync with, 354-355 softboxes containing, 352-353 sports portraits with, 342-343 stroboscopic flash with, 149 See also single-Speedlite setup My Menu screen, 5

Ν

Nano Stand, 282 Nasty Clamp, 281 negative fill, 275 neutral density gels, 357, 364 neutral density (ND) filters, 383 night effects dimming the sun for, 58-59 noir portrait effect, 372-373 NiMH batteries, 291 NiZn batteries, 292 noir portrait effect, 372-373 noise, high ISO, 209 non-wireless menus, 414-415 nose of subjects aligning shadows with, 308 broad vs. short lighting and, 318 number-of-flashes setting, 144, 145

0

OCF Gear E-TTL cords, 13, 163 OCF Gear Smart Eye, 113, 165 off-axis light, 68–69 off-camera flash, 65, 160–171 built-in wireless for, 161, 165, 168 comparison of trigger systems for, 171 E-TTL cords for, 161, 162–163

E-TTL radio triggers for, 161, 168–170 handholding at arm's length, 162 manual radio triggers for, 161, 166-168 moving optical masters for, 182–183 optical slave eyes for, 161, 164-165 optical wireless triggers for, 161, 164–165 PC-Sync cords for, 161 radio wireless triggers for, 161, 166–170 reasons for using, 12, 160 ring light adapters and, 243 on-axis light, 68–69 on-camera flash, 300-309 bouncing, 304-305 diffusers for. 306-307 E-TTL mode and, 130 fill flash using, 13, 301, 302-303, 384 aood uses for. 3, 68, 301 limitations of, 12, 160, 301 master function and, 342 tips for using, 308-309 See also pop-up flash one-Speedlite setup. See single-Speedlite setup open-sided frames, 273 optical masters channel selection for. 188–189 enabling/disabling, 176, 184-185 equipment usable as, 173 explanatory overview of, 174 line-of-sight requirement for, 174 menus for setting up, 411-413 moving off-camera, 182–183 pop-up flash used as, 178–179 ready light for, 187 settings required for, 176 softbox setup for, 183 Speedlites used as, 180-181 third-party flashes as, 184 Zoom setting and, 175, 176 optical slave eyes, 164–165 advantages/disadvantages of, 164 Canon-compatible, 164–165 E-TTL preflash and, 130 Manual flash mode and, 113 second-curtain sync using, 354 third-party units and, 95 optical slaves Auto Power Off timer on, 187 channel selection for, 188 equipment usable as, 173 explanatory overview of, 175 group settings for, 190-191, 199 Independent Slave activation, 202–203 line-of-sight requirement for, 174

menus for setting up, 414 pop-up flash for controlling, 301 ready light for, 187 settings required for, 177 softbox setup for, 183 stroboscopic flash configuration, 149 third-party flashes as, 95 Zoom setting and, 175, 177 optical transmitter, 76, 80, 87 optical wireless, 113, 172–203 Canon's built-in, 161, 165, 168 channel selection for, 188–189 clamshell lighting with, 336 enabling/disabling masters in. 184–185 E-TTL power adjustments in, 192–193 full sunlight and, 388 gang lighting and, 397 group settings for, 190–199 line-of-sight requirement for, 174 Manual flash power in. 200–201. 338 master unit for, 174, 176, 178-185 Multi mode power adjustments, 202 overview of devices for, 173 panning/tilting for, 109 pop-up flash used in, 178-179 power level ratios in, 192–199 radio wireless advantages over, 205 slave units for, 175, 177, 186-187 Speedlites used in. 180–181 triggers used in, 161, 164–165, 335 umbrella with Speedlites using, 350 See also radio wireless optical wireless sensor, 76, 80, 82 optical wireless triggers, 161, 164–165 Canon optical wireless system, 161, 165 optical slave eyes, 161, 164–165 Orbis ring light, 243 outdoor portraits beauty dish for, 348-349 crossfire lighting in, 344–345 hard and soft light in, 346-347 softboxes for fill flash in, 340-341 sports portraits as, 342-343 overexposed images, 39, 141 overheating risk, 294–295

Ρ

panning Speedlites, 108–109 modifying light by, 234 range available for, 108 parabolic umbrellas, 261

Partial metering mode, 37 path of light, 18 patterns, metering, 37 PC-Sync cords, 161 Personal Functions (P.Fn.), 78, 180, 416 600EX-RT settings for, 418 ST-E3-RT settings for. 419 See also Custom Functions Photoshop retouching, 340, 402 Phottix Mitros+ flash, 169, 228–229 Phottix Odin II controller, 169 pilot lamp/button on Speedlite flashes, 81, 83 on Speedlite Transmitter ST-E2, 93 pistol grip for umbrellas, 257 PixSylated.com blog, 31 Plusareen aels. 365 PocketWizard radio triggers, 166, 168, 170 poetry of light, 17 polarizing gels, 357 poles, 284-285 pop-up flash channel setting for, 189 fill flash using, 301 good uses for, 3, 68, 301 limitations of, 301 optical master setup, 178–179, 185 Speedlites vs., 301 See also on-camera flash portraits classical lighting for, 338-339 hard light setup for, 194–195 multiple-Speedlite setup for, 334-355 single-Speedlite setup for, 310-333 soft light setup for, 194–195 sports, 342-343 position of light, 64-71 crossfire lighting, 344 horizontal lighting, 65-69 Lighting Compass and, 65–67 Lighting Inclinometer and, 70 on- and off-axis light, 68-69 quality of light based on, 311 vertical lighting, 70–71 position of modifiers, 312-313 power level settings, 9 duration of flash and, 390 gel color intensity and, 330 increments used for. 114 Manual flash mode, 114–118 midpoint used for, 122 optical wireless groups and, 192-199

radio wireless groups and, 218-222 stroboscopic flash and, 144, 145 troubleshooting E-TTL, 141 power zoom features, 75 power-adjusting radio triggers, 167–168 Powerex batteries, 292 PowerGenix batteries, 292 preflash E-TTL metering, 126 hyper-fast blinkers and, 130 optical slave eyes and, 130 steps for seeing, 126 preset zone shots, 112-113 Program (P) mode, 34, 131 projectors, 247 ProMax Bounce System, 239 pull-out diffuser. 104

Q

Quick Control Screen, 134

R

radio masters activation of, 211 channel selection for, 213 enabling/disabling, 217 equipment usable as, 206 Link Light indications, 216 menus for setting up, 406-409 Multi mode settings on, 221–222 ratio settings for, 215, 219 settings table for, 210 shooting with multiple, 216 wireless ID setting, 214 radio slaves activation of. 212 channel selection for, 213 equipment usable as, 206 group settings for, 215 Link Light indications, 216 menus for setting up, 410 settings table for, 210 wireless ID setting, 214 radio triggers, 161, 166-170 E-TTL mode, 168–170 manual, 166-168, 335 radio wireless, 173, 204-229 activation process, 211–212 advantages provided by, 205 beauty dish setup using, 348

channel selection for. 213 enabling/disabling masters in. 217 external flash metering and, 156 group assignments in, 215 Group mode feature, 223-224 interactive menu system, 206, 207 Link Light indications in, 216 Linked Shot feature, 226–227 Manual flash power in, 220–221, 338 master units for, 206, 210, 211 menus for setting up, 406-410 Multi mode power adjustments, 221-222 older cameras and, 348 power level ratios in. 218–222 pre-2012 cameras and, 208–209 ratio settings for, 215, 218-222 Remote Release feature, 225–226 slave unit for, 206, 210 Speedlite 600EX-RT flash, 76, 95, 173 Speedlite ST-E3-RT transmitter, 90–91, 173 third-party equipment for, 227–229 triggers used in. 161. 166-170. 335 wireless ID codes for, 214 See also optical wireless RadioPopper products, 168, 170 rails, 286, 395 Rapid Boxes, 266, 271, 322 ratios clamshell lighting, 336 converting to stops, 193, 218 hard light setups using, 194–195 on-camera fill to off-camera key, 196 opposing off-camera Speedlite, 197 optical wireless, 192-199 radio wireless, 215, 218-222 right/left settings for, 192, 218 soft light setup using, 194–195 RAW files, 45 Ray Flash 2 modifier, 243 Raya Reflector Adapter, 269 ready light, 86, 87, 91 Really Right Stuff flash bracket, 309 rechargeable batteries, 291, 292 recomposing images, 138, 140 recycle time, 75, 293, 335, 352 redundancy, 335 reflected light, 37 reflections angle of, 46 direct vs. diffuse, 47 reflective umbrellas, 254-255, 316

reflectors, 274 beauty, 270 bounce, 238-239 collapsible disk, 272 fabric. 274 fill, 314-315 foam core. 274 remote control transmitter, 84, 86 Remote Release feature, 84, 86, 225-226 RGB-metering technology, 36, 127 ribbon shadows, 308 right/left setup, 192, 218 rigid beauty dishes, 270-271 rim liaht. 66. 326. 338 ring lights, 242-243 distinctive look of, 324 single Speedlight and, 324–325 Roque products 3-in-1 honeycomb grid, 245 FlashBender Large, 238, 239, 241, 246, 342 lighting filter kits, 362 Rosco products Cinefoil. 250 gels, 357, 362, 364, 365 Roscolux color gels, 365 RoundFlash products beauty dish, 271, 312 magnetic ringflash, 242, 324

S

sandbags, 283 Sanyo 2700 battery, 291, 292 scissor clamp, 280 screwlock PC terminal, 76, 80 scrims. 272-273 second-curtain sync, 100-101 multiple Speedlites and, 354–355 portraying motion using, 100–101 wireless workarounds for, 354 Sekonic L-308S Flashmate, 41 separation light, 311 Shade white balance, 44, 45 shadows edges of, 19, 48 fill flash and, 129 hard vs. soft light and, 19, 20 modifier position related to, 312 on-camera flash and, 304-305, 308 position of, 70, 308 ribbon, 308 tinting, 364

shaping light, 335 shoot-through umbrellas, 254 short lighting, 318-319 Shur-Line Easy Reach, 284 Shutter Priority (Tv) mode, 34 E-TTL flash mode and, 131 example of shooting in, 35 managing ambient light in, 58 Manual flash mode and, 122 shutter release. 144 shutter speed ambient light and, 7, 56-60, 320, 348, 372 aperture and, 32 background light and, 57 choosing settings for, 32 dimming the sun using, 58-59 dragging the shutter, 60, 103 explanation of, 30 flash exposures and, 56 single-Speedlite setup and, 320-321 stroboscopic flash and, 98, 145 sync speed and, 56, 99, 100, 378-379 silhouettes, 330-331 silk scrims, 272 silver fabric reflectors. 274 silver reflective umbrellas, 255 silver softboxes, 262 Singh-Ray Vari-ND filter, 383 single-Speedlite setup, 310-333 broad lighting with, 318–319 clamshell lighting with, 336 crossfire lighting with, 344 fill reflector with, 314-315 gel color and, 330 grids used in, 326-327 location of light in, 311 positioning modifiers for, 312-313 purposes served by, 311 ring flash with, 324-325 short lighting with, 318-319 shutter speed and, 320-321 silhouettes created with, 330-331 softbox size and, 332-333 strip softbox with, 322–323 stroboscopic flash with, 148 umbrellas with, 316-317 white seamless and, 328-329 See also multiple-Speedlite setup single-use batteries, 290 skies, dramatic, 397 slave ID Groups, 157, 190 See also flash groups

slave units. See optical slaves; radio slaves Slow-Speed Svnc. 103 smart chargers, 296 snoots, 246 arids vs., 245 used as reflectors, 238, 239 soft charge mode. 297 soft light bouncing on-camera flash for, 304–305 creating a big field of, 350-351 modifier position for, 312 outdoor setup for hard light with, 346-347 ratios for portraits using, 194-195 shadows created by, 19, 20 softbox for creating, 240-241 umbrella for creating, 316-317 softboxes, 240-241, 262-269 adapters for, 269 anatomy of, 262 buying considerations, 264 Ezybox, 240, 265, 332 fill flash using, 340-341 FourSquare, 264 multiple Speedlites in, 352-353 narrow or strip, 322–323 optical wireless using, 183 placing close to subjects, 241 Quikbox, 240, 265 single Speedlite in, 322, 332 size effects using, 332-333 Speedlite-mounted, 240-241 studio, with Speedlites, 268-269 umbrellas vs., 352 Westcott, 263, 266 solids, 275 Sonia optical slaves, 164 Sparrow Plate, 280 specialty flash modes, 142–157 External Auto mode, 143, 152–154 External Manual mode, 143, 154–156 Group mode, 143, 157 multi mode, 143, 144-150 Specific white balance, 44, 45 specular highlights, 19 Speed Strap, 235, 363 Speedlite 90EX, 87, 118 Speedlite 220EX, 89 Speedlite 270EX, 89, 421 Speedlite 270EX II, 86 channel selection, 188 Custom Functions, 421 features overview, 86

group setup, 191 Manual mode options, 118 optical slave settings, 187, 191 triggering cameras using, 85 Speedlite 320EX, 84-85 channel selection, 188 Custom Functions, 421 features overview, 84-85 group setup, 191 Manual mode options, 118 optical slave settings, 187, 191 triggering cameras using, 85 Speedlite 380EX, 89 Speedlite 420EX, 89 Speedlite 430EX, 88 channel selection. 188 Custom Functions, 421 FEC settings, 10 group setup, 191 Independent Slave setup, 203 Manual power settings, 117 Multi mode option, 144 optical slave settings, 187, 191 Speedlite 430EX II, 82-83 channel selection. 188 comparison to 600EX-RT, 82 Custom Functions, 421 features overview. 82 FEC settings, 10, 136 group setup, 191 Independent Slave setup, 203 Manual power settings, 117 optical slave settings, 186, 191 Speedlite 550EX, 88 channel selection, 188 Custom Functions, 420 group setup, 191 Independent Slave setup, 203 Manual power settings, 201 optical master settings, 181, 185 optical slave settings, 186, 191 Speedlite 580EX, 88 Custom Functions, 420 FEC settings, 10 group setup, 191, 199 Independent Slave setup, 203 Manual power settings, 116, 201 Multi mode settings, 147 optical master settings, 185 optical slave settings, 186, 191

Speedlite 580EX II, 80-81 channel selection. 188 Custom Functions, 419 external metering modes, 151, 154, 155–156 features overview. 80–81 FEC settings, 10, 136 group setup, 190, 198-199 Independent Slave setup, 203 Manual power settings, 114, 116, 201 optical master settings, 180, 185 optical slave settings, 186, 190 Speedlite 600EX-RT, 76-79 channel selection, 188 comparison to 430EX II. 82 Custom Functions, 78, 417 external metering modes, 151, 153, 155, 165 features overview. 76–77 FEC settings, 10, 136 function buttons, 78-79 ael holder. 362 group setup, 190, 409 HSS activation, 376 Independent Slave setup, 203 interactive menu system, 207 Manual power settings, 114, 115, 200 menus for radio wireless, 406-410 Multi mode settings, 146 non-wireless mode menus, 414-415 optical master settings, 180, 184, 188 optical slave settings, 186, 188, 190 Personal Functions, 78, 180, 418 radio wireless system, 76, 168, 173, 204-229 ST-E3-RT Transmitter vs., 91 Speedlite Transmitter ST-E2, 91, 92–93 Speedlite Transmitter ST-E3-RT. 90–91 Custom Functions, 418 menus overview. 406-410 Personal Functions, 419 radio wireless system, 204–229 Speedlites Auto Power Off feature, 187, 416 batteries for, 288-297 buying considerations for, 75, 93 camera-based control of, 4–5, 118–121 color balance of, 357 Custom Functions for, 416-417, 418, 419-421 essential ideas for using, 3 external power ports on, 294 EZ series of. 89 features overview for, 75, 76-87 FEC setup using, 136 gels used with, 356-373

grip gear for, 276–287 aroup setup on, 190-191 handholding, 162 hiding in scenes, 346 HSS activation on, 376 Independent Slave activation, 202-203 legacy, 88-89 modes for controlling, 97-98 modifiers for, 232-275 multiple-light setup using, 334-355 off-camera control of, 160-171 optical master setup on, 180-181, 185 optical slave setup on, 186–187 panning and tilting, 108–109 Personal Functions for, 78, 180, 416, 418, 419 pop-up flash vs., 301 positioning of, 64-71 power level settings on, 9, 114-118 recycle time of, 75, 293, 335, 352 role decisions for, 122 single-light setup using, 310-333 softboxes for. 240-241. 263-266 specialty modes on, 142-157 stroboscopic flash with, 98, 143, 144–150 svnc settings for. 99–103 tasks for controlling, 97 third-party alternatives to, 95 zoom function on, 104-107, 234 Spiffy Gear Light Blaster, 247 spigots, 278, 285 sports photography High Speed Sync and, 388–389 Manual flash mode and, 113 stroboscopic flash and, 144, 150 See also action photography sports portraits, 342-343 Spot metering mode, 37 Stailey, Justin, 279 stands. See light stands ST-E2 transmitter. See Speedlite transmitter ST-E2 ST-E3-RT transmitter. See Speedlite transmitter ST-E3-RT Sto-Fen Omni-Bounce, 237 stops converting ratios to, 193, 218 stopping down/opening up, 26 use of term, 25 See also aperture; f/stops StoraCell battery caddies, 297 strip softbox, 322–323 strobes. See studio strobes

stroboscopic flash, 143, 144–150 action photos and, 144, 150 considerations for using, 150 High-Speed Sync as, 374, 380 motion captured with, 144, 150 Multi flash mode for, 79, 98, 143, 144-150 multiple-Speedlite setup for, 149 requirements for using, 144 setting Speedlites for, 144-147 shutter speed and, 145 single-Speedlite setup for, 148 slave configuration for, 149 See also Multi flash mode Strobros Globe Diffuser, 236 Strobros Snoot, 246 studio softboxes, 268-269 studio strobes, 41, 130, 220, 236, 268, 396 subject-to-light distance, 51, 52 Suction Grip, 280 sunlight color cycle of, 360 dimming, 58-59, 386-387 fill flash and, 366 gang lighting and, 402-403 High-Speed Sync and, 384–385 shadows created by, 48, 70 See also ambient light sunset portraits gelled fill flash for, 366-367 golden-hour effect for, 368-369 Super Clamp, 279 swivel adapters, 258, 278 sync speed, 99-103 1st-curtain sync, 100 2nd-curtain sync, 100-101, 354-355 explanation of, 99-100, 378 High-Speed Sync, 101-102, 375, 380-381 how to change, 102 mechanics of, 56 normal. 378-379 radio wireless and, 209 shutter speed and, 56, 99, 100, 131, 378-379 Slow-Speed Sync, 103 X-sync speed, 378

T

telephoto lenses, 29 temperature of light, 19, 43, 44 *See also* color temperature testing modifiers, 267 text-based control menu, 181, 189

theatrical gels, 357, 364 thermal cut-out circuit. 294–295 third-party gear for optical wireless, 95, 184 for radio wireless. 227–229 third-stops, 26 three-group setup, 198-199 three-Speedlite setup classic portraits using, 338-339 sports portraits using, 342-343 See also multiple-Speedlite setup tilting Speedlites, 108–109 modifying light by, 234 range available for, 108 timer-based chargers, 296 tinting shadows, 364 transceivers. 167 transmitters, 167, 301 TriFlash bracket, 260 trigger systems, 160–171 comparison of, 171 E-TTL cords. 161. 162–163 E-TTL radio triggers, 168–170 gang lighting, 396 manual radio, 166–168 optical wireless, 161, 164-165 PC-Sync cords, 161 radio wireless, 161 Triple Threat bracket, 260 tripods, 144 tungsten lights, 23, 43, 358 Tungsten white balance, 44, 45, 359, 361, 370 Tv mode. See Shutter Priority (Tv) mode twin-Speedlite setup clamshell lighting with, 336-337 crossfire lighting with, 344-345 See also multiple-Speedlite setup two-group setup, 194-197

U

umbrellas, 254–261 adapters for, 258, 278 collapsible, 257 configurable, 257 double setup for, 260, 261 fabrics used for, 254–255 large parabolic, 261 mounting Speedlites to, 260 multiple Speedlites in, 350–351 pistol grip for, 257 positioning on the set, 259 pros and cons of, 255 reflective, 254–255, 316 shoot-through, 254 single Speedlite with, 316 sizes available for, 256 soft fill light created with, 316–317 softboxes compared to, 352 underexposed images, 39

V

VAL Spigot, 285 van Niekirk, Neil, 249 Vari-ND filter, 383 Velcro straps, 235, 287, 363 Vello products Cinch Strap, 235 Coldshoe Mount, 277 FreeWave Fusion Pro, 166 grids for Beauty Dish II, 244 snoot/reflector, 239 Universal Bounce Diffuser, 237 Universal Softbox, 241 vertical lighting, 70–71 vision, human vs. camera, 20–23

W

wall-bounced flash. 304–305 weather sealing, 76, 81 wedding photography, 112 Welch, MD, 402 Westcott products Apollo softbox, 263, 352 Fast Flags, 273 Pocket Box kit. 240 Rapid Boxes, 266, 271, 322 Scrim Jim panels, 272, 273 Triple Threat bracket, 260 umbrellas, 257, 261 WhiBal card, 45 white balance settings, 23, 44-45 color temperature and, 43, 359 creative use of, 361 gels used with, 359, 361 how to choose, 45 list of available, 44 white fabric reflectors, 274 White Fluorescent setting, 44 white reflective umbrellas, 255, 316 white seamless, 328-329

white softboxes, 262 wide-angle diffuser panel, 76, 80, 82, 104, 234 wide-angle lenses, 29 windowlight blending fill flash into, 316-317 golden hour look through, 368-369 optical wireless setup for, 183 rim light created from, 326–327 wireless channel switch, 84 wireless flash. See optical wireless; radio wireless wireless ID codes, 214 wireless master capability, 75 wireless mode menus, 79 wireless sensor, 84, 86 wireless slave capability, 75 Wizard Dual-Flash bracket, 286 workflows High-Speed Sync mode, 382 Manual flash mode, 122–123 Speedlite four-step, 11 WPF-1 Flash Bracket, 162

Х

X-Rite ColorChecker, 44 X-sync speed, 378

Υ

Yongnuo equipment E-TTL radio triggers, 169 manual radio triggers, 166, 167 radio transmitters, 227, 228, 229 Speedlites, 95, 167, 227–228, 229

Ζ

Zacuto Z-finder, 402 zones, metering, 36–37 Zoom function on Speedlites, 104–107 apparent brightness and, 104, 106 automatic vs. manual zoom, 104 background patterns related to, 330 creating dramatic light with, 106–107 modifying light using, 234 optical slaves and, 175 views illustrating, 105 Zoom/wireless button, 81, 83