

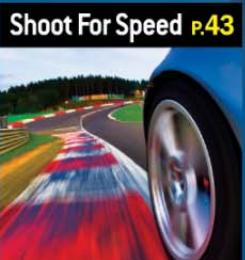
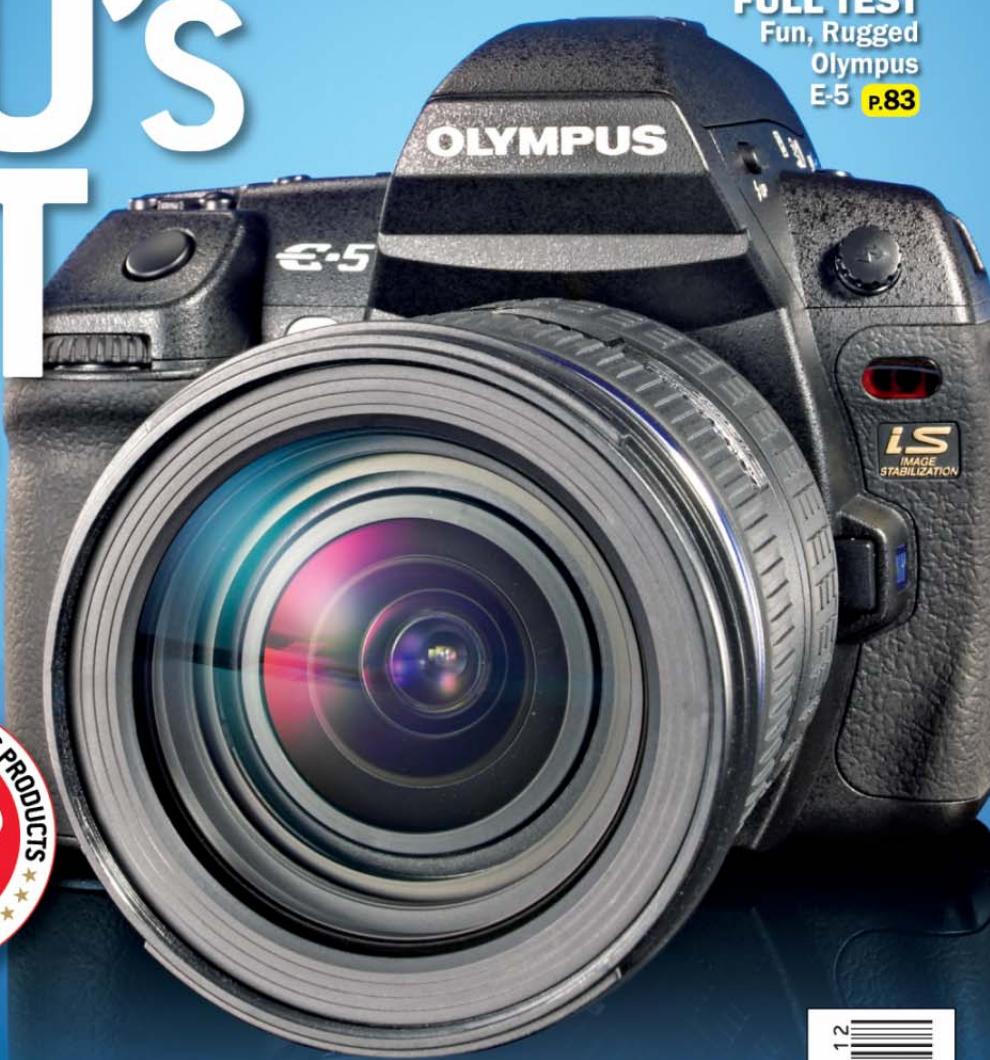
NATURE ROAD TRIPS ^{P.50} **POPULAR** ^{P.50} **PHOTOGRAPHY** ^{P.56} **PHOTOSHOP** **RAW** ^{6 EASY STEPS} **P.56**

HOW TO MAKE GREAT PICTURES

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CAMERAS
LENSSES
TRIPODS
AND MORE! ^{P.65}



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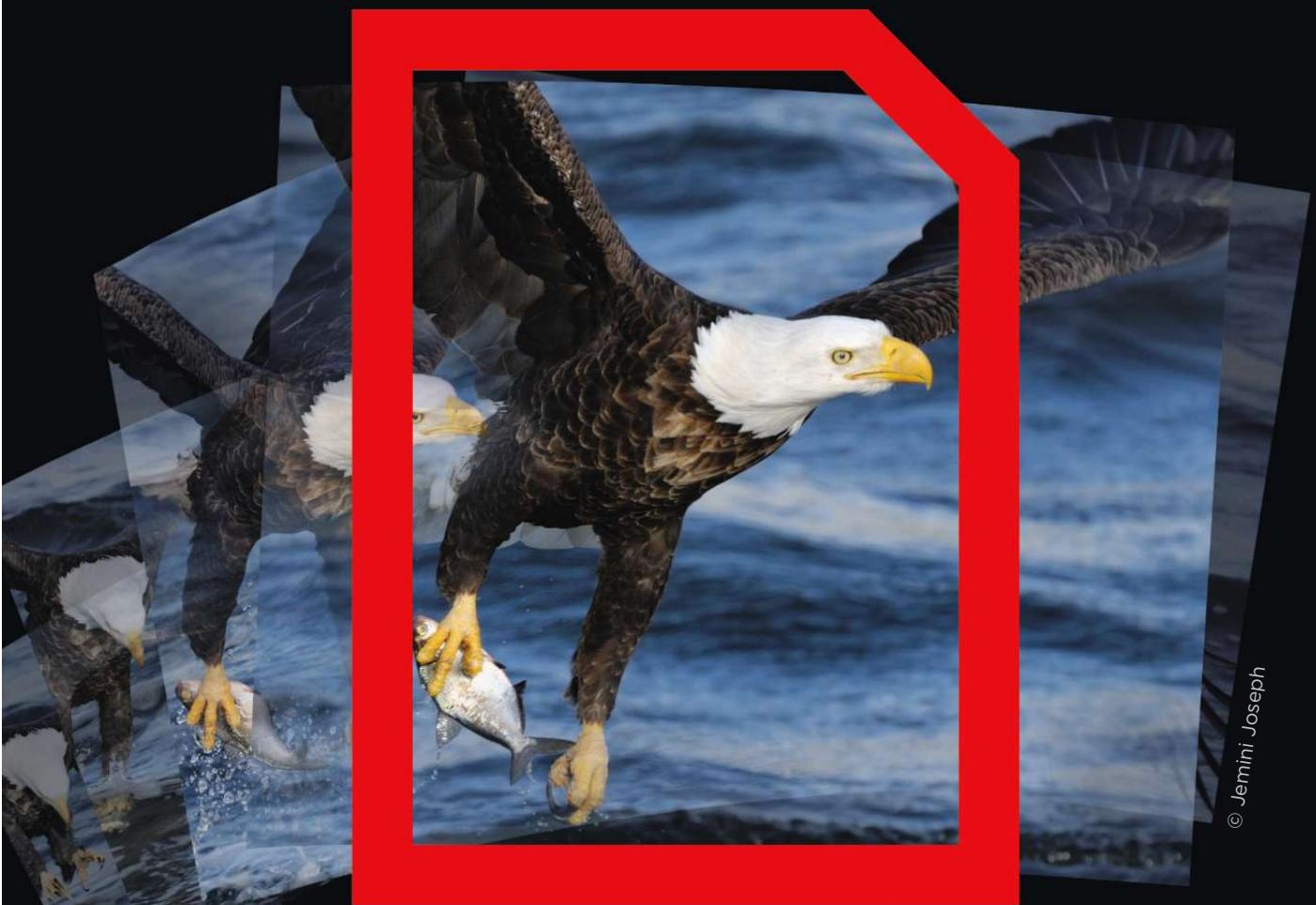
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DECEMBER 2010

VOLUME 74, NO. 12



FEATURES

65 BEST OF THE BEST In our annual POP Awards for Photography's Outstanding Products, we've honored the most innovative, most useful, and hands-down coolest new gear that we tried—and loved—in 2010.

By the Editors



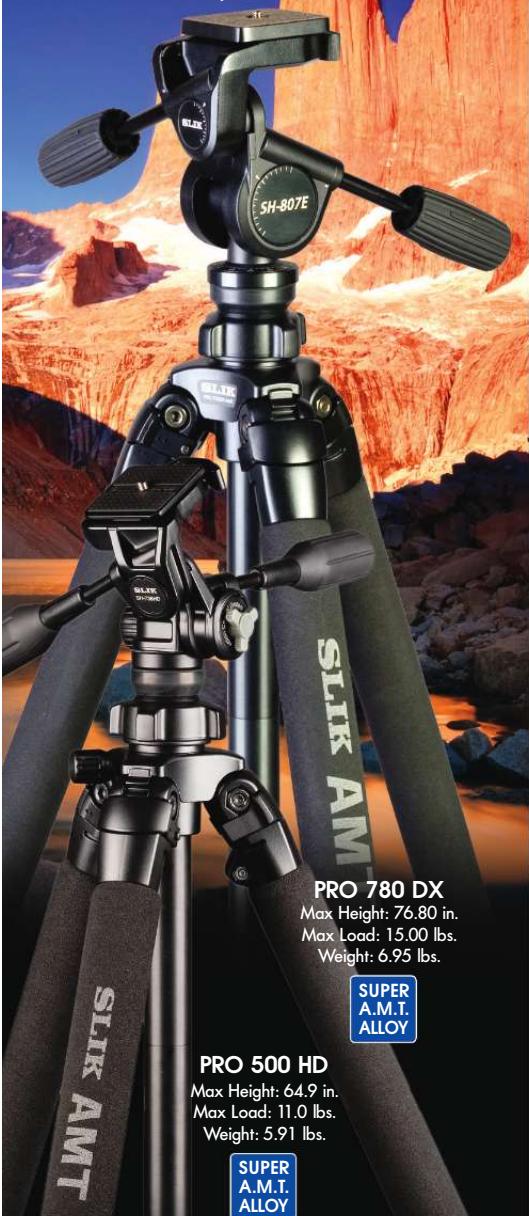
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By Tim Fitzharris

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POPULAR PHOTOGRAPHY (ISSN 1542-0337) (USPS 504-890), December 2010, Volume 74, Issue 12, is published monthly by Bonnier Corporation, 2 Park Ave., New York, NY 10016. Periodicals postage paid at New York, NY and additional mailing offices. Authorized periodicals postage by the Post Office Department, Ottawa, Canada, and for payment in cash. POSTMASTER: Send address changes to Popular Photography, P.O. Box 420235, Palm Coast, FL 32142-0235; www.PopPhoto.com/cs. If the postal service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within one year.

Publications Mail Agreement No. 40052054, Canadian Registration Number 126018209RT0001.

Return undeliverable Canadian addresses to: Pitney Bowes, P.O. Box 25542, London, ON N6C 6B2.

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Tokina

PICTURES STOP TIME



Photograph by: Michael Burnham

Taken with Canon EOS Rebel and Tokina AT-X 16.5-135 DX lens



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EDITOR'S LETTER



Get Me That Gizmo

Photographers are gadget hounds, no question about it. From basic clamps to high-precision tripod heads, cable releases to robotic camera mounts, we'll find a reason to need it, even if just for one type of shot. Screen protectors, viewfinder hoods, filter holders (you can never have too many filters), dust blowers—no wonder our camera bags are bulging. Which means it's time to get a new bag...

That's one reason that the editors of Popular Photography included so many accessories in our fifth annual POP Awards for Photography's Outstanding Products (page 65)—more than a dozen of them, if you include everything that's not a camera, lens, or software.

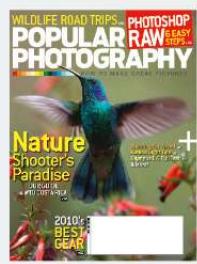
And there were plenty of handy items we discovered this year that didn't win POP Awards. Take, for example, the Flipbac, a hinged mirror that attaches to the back of a camera to allow off-angle viewing of a fixed LCD screen, then flips up to protect it. Another example: Cocoon's Grid-It system, a panel made of woven elastic straps to hold smaller accessories snug and organized—you can see at a glance all the stuff that used to just float loose in your bag.

Many of the gadgets we see represent variations on other gadgets, invented by both pro and amateur photographers who weren't satisfied with the gear they had. Todd Wallis, an avid hunter from Ogden, UT, sent me a camera strap that he's now producing commercially: The Wallis Tactical Sling lets you hang your DSLR snugly across your body and then swing it rapidly to eye level when you shoot. BlackRapid and Sun-Sniper make similar straps—each one is designed slightly differently and offers distinct benefits. The Wallis sling has a spring-loaded metal clamp that lets you adjust the length of the strap itself very quickly and easily.

Some entrepreneurial photographers have built sizeable businesses creating and marketing their innovative gadgets. Witness Gary Fong, whose lighting modifiers for hot-shoe flash have scored big among his fellow wedding and event photographers. Or Craig Strong, the inventor of the Lensbaby, whose frustration with the creative limitations of conventional SLR lenses has led to an entirely new optical category and even, I'd argue, contributed to an aesthetic shift in photography.

Now don't forget to pack the gaffer's tape.

Miriam Leuchter



NEWSSTAND Olympus returns to DSLRs with the fast and rugged E-5, photographed by Tony Cordoza. Read our full test report on **page 83**.

SUBSCRIBER For an incredible diversity of birds, wildlife, and landscapes, head to Costa Rica. Photographer Tim Fitzharris shares his tips on **page 76**.



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SIGMA



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F1.4
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SHOWCASE * OLYMPUS E-5 AND ZUIKO 14-35MM F/2 LENS

PHILIP RYAN

REFLECTIONS TUMBLE IN

Technical Editor Philip Ryan juxtaposed the lines and curves of Frank Gehry's IAC Building's warped, fritted glass walls with the distorted reflection of its geometrically patterned neighbor. Shot using the Olympus E-5 at ISO 200, 1/100 sec at f/8, with an Olympus Zuiko Digital ED 14-35mm f/2 SWD zoom at 35mm. See our **DSLR** and **lens** tests on pages 83 and 92, respectively.

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NEXT

THE HOTTEST NEW STUFF AND THE TECHNOLOGY TRENDS BEHIND IT



WE WANT THIS

WEATHER BEATER

Sensor and autofocus upgrades make a more special K

PENTAX CALLS the K-5 "a refinement" of the K-7, which is fine by us, given the solid performance and rugged, weather-resistant build of that camera.

Enhancements include a 16.3MP CMOS sensor, up from 14.6MP; burst rate of 7 fps, up from 5.2 fps; ISOs topping out at 51,200, not 6400; 14-bit RAW file bit depth, rather than 12-bit; automatic alignment of images for handheld HDR shooting; and HD video recording at 1920x1080p at 25 fps instead of the K-7's oddball top resolution of 1536x1024p.

The camera body is magnesium alloy over a stainless-steel chassis. As with all Pentax DSLR bodies, built-in motion detectors and a shifting sensor provide image stabilization with any lens that you can put on the body.

While the K-5's 11-point

autofocus array looks like that of the K-7's, a new AF module promises faster focusing than the old system, a claim we'll test as soon as we get a production model of the K-5.

PENTAX K-5

16.3MP CMOS sensor 1080p video ISOs to 51,200 \$1,600 street, body only www.pentax.com



THE PENTAX K-5 continues the family tradition of heavy environmental sealing throughout the camera body.

NEXT * JUST OUT

VIDEO AND MORE

Canon's latest top compact seems its most DSLR-like yet

CERTAINLY HD VIDEO capture (720p at 30 fps, with stereo sound) is a welcome new feature in Canon's PowerShot G12, but we were just as impressed with one subtle addition: a second command wheel near the shutter

Canon PowerShot G12

\$500, street

www.usa.canon.com



button, which makes it much easier to shoot in manual mode and helps when using aperture- or shutter-priority, too. Users of enthusiast-level DSLRs will appreciate the convenient control this little wheel affords.

Other notable upgrades: tracking autofocus, automated three-

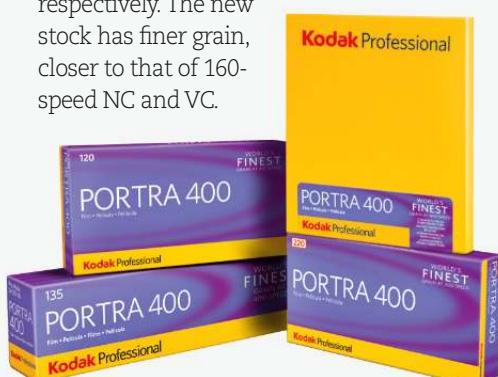
shot HDR imaging, and hybrid image stabilization that compensates for both angular and side-to-side movement. An electronic level will help keep your horizons horizontal. And it still has all the good stuff from its predecessor, the G11, including the 10MP sensor with larger-than-usual pixels.

NEGATIVE-POSITIVE

Color print film from Kodak is made for a digital world

YES FOLKS, there are still film loyalists out there, and we're glad Kodak still caters to them.

Its newest film, Professional Portra 400, will replace Portra 400NC and 400VC, whose colors were less and more saturated, respectively. The new stock has finer grain, closer to that of 160-speed NC and VC.



Kodak Professional Portra 400

\$6-8, est. street, per 35mm/120 roll

www.kodak.com

The biggest news about the new Portra? It's made for scanning and enlargements. Kodak says it reproduces natural-looking skin tones without compromising saturation and contrast. We have to wonder if the switch to a single, more midrange color tone and saturation

is an acknowledgement of the ease with which most photographers adjust those factors during postproduction.

INSIDE TECH

Scan It

While Portra 400 remains excellent for old-fashioned optical printing, Antenna Dye Sensitization (ADS) in the cyan and magenta layers of this film's emulsion optimizes it for scanning. ADS means that more light can reach deeper into the film, and the silver halide crystals are more sensitive, too. So the image structure improves overall.

NEWS FEED

>Panasonic has introduced a 13.2MP Lumix phone; it's Japan-only for now.

>Speaking of phones, Nokia's N8 smartphone with a 12MP camera built in is now available stateside.

>One of the coolest prototypes we saw at Photokina this year was Fujifilm's FinePix X100. Almost the spitting image of a film rangefinder, it has an APS-C sensor, a fixed lens, and analog controls.

>Unemployed Philosophers Guild has the photo geek's timepiece: a watch that shows f-stops in place of the hours.

>Leica has a new way to lux it up. Its M9 is available covered in ostrich leather, a \$17,500 exclusive for the Neiman Marcus Christmas book.

HOT LIGHT

A smaller Nikon flash is packed with features

NIKONIANS who long for the high-end features of the SB-900 flagship flash but balk at its \$460 street price have a new option: the SB-700 Speedlight. It delivers many SB-900 features, but costs \$130 less.

Like its big brother, it can wirelessly control other, off-camera Speedlights, offers multiple light-distribution patterns, and automatically recognizes FX and DX bodies

Nikon SB-700 Speedlight

\$330, street

www.nikonusa.com

to set appropriate flash output. But the SB-700 is noticeably smaller, and less powerful—the 900 is a full stop brighter.

What else is new? Nikon claims that it uses batteries more efficiently than the SB-900, for more pops per battery set and faster recycle times. And a Quick Wireless Mode makes wireless flash setups easier to configure and use.



PIXEL POWER

Panasonic's GH2 has the most pixels of any ILC yet

WE LOVED the touchscreen that Panasonic put in its Lumix DMC-G2 Micro Four Thirds camera, so we were happy to see that its new flagship interchangeable-lens compact, the GH2, also has a 3-inch, 460,000-dot, articulated touchscreen LCD.

It boasts the highest pixel count—16.05MP—of any ILC so far, sensitivity up to ISO 12,800, and the same high-res EVF as its predecessor, the GH1. Again, video recording tops out at 1920x1080 pixels and 60 interlaced frames per second.

Still bursts have been boosted to 5 fps (from 3 in the GH1) for up to 7 RAW shots or unlimited JPEGs. HDR buffs will like that it can bracket as many as 7 frames at

Panasonic Lumix DMC-GH2

\$1,000 street, with 14-42mm lens

www.panasonic.com

up to +/-3 EV, and all will appreciate the GH2's well-designed body.



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Sometimes, less is more...

FINEPIX F300EXR

12MP EXR SUPER CCD | HYBRID HIGH-SPEED AUTO FOCUS



The **FinePix F300EXR** is a stylish digital camera with a 15x optical zoom, from 24mm to 360mm, found in a chassis so compact it can slip into your pocket. The F300EXR also features Fujifilm's award-winning EXR technology, and boasts two new features for combating camera shake and adjusting for high-contrast shots.

[15x]
OPTICAL ZOOM

Simulated representation of zoom capabilities.



5x

15x

HYBRID HIGH-SPEED AUTO FOCUS: With Phase Detection pixels built into the EXR sensor, the F300EXR intelligently selects between two auto-focus systems, for an incredible 0.158 second AF speed—as fast as you can blink! Hybrid High-speed Auto Focus also allows for enhanced accuracy when shooting high-contrast subjects—even a moving subject with 15x zoom.

INTELLIGENT IMAGE STABILIZATION: This new system corrects blur caused by small vibrations and larger movement to enable shooting, even night scenes with 15x zoom, at slower shutter speeds and lower sensitivity for smoother gradations and lower noise.

everypicturematters.com/f300exr



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and other times, more is more.



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[30x]

MANUAL
OPTICAL ZOOM

Simulated representation of zoom capabilities.



5x

30x

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The HS10's new BSI CMOS sensor captures images that not even your eyes can see. Keep up with the action, capturing stunning detail, with the HS10's continuous 7-frame shooting mode at an amazing 10fps, at the full 10 megapixel resolution.



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everypicturematters.com/hs10

BRAND NEW BAGS



The latest ways to haul your gear

CAMERA AND COMPUTER bags keep getting cooler, smarter, and better looking. With those qualities in mind, we picked some of the best new DSLR haulers we've seen lately.

\$100 **Tamrac Evolution Messenger 2**

A smaller version of the very cool

Messenger 4, this compact, lightweight bag holds a DSLR with a lens attached and one or two more lenses (including a big 70–200mm f/2.8) or a flash, as well as an iPad, netbook, or 11.6-inch laptop. Best feature: The top zips open away from your body so you can grab your camera fast.



\$190 **Jill-e Small Jack Messenger**

Lighter and more casual than Jill-e's leather Jack bags, this nylon and leather-trimmed model, due in January, still has style. It holds a DSLR, a couple of small lenses, flash, and iPad. And it has two outer pockets for accessories and a zipper to slide it over a luggage trolley.



\$289 **Vanguard Skyborne 48**

The largest in Vanguard's new backpack line holds a DSLR with 70–200mm f/2.8 lens, plus up to four other lenses, flash, accessories, and (on the outside) a tripod. The laptop sleeve, for a 14-incher, has handles and a shoulder strap to speed you through airport security.



\$300 **Lowepro Pro Roller Attaché x50**

Roomy enough for a pro DSLR, four lenses, accessories, and 14-inch laptop, yet small enough for any carry-on. A threaded mount in the trolley lets it sub for a tripod or lightstand. And you can remove the inner shoulder bag with your gear to use the x50 as a suitcase.



\$325 **Kata Ultra-Light Bug-255 UL**

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NEWS FEED

>Joby, maker of the famous Gorillapod with the rubberized, jointed legs, has a new tripod—this time for video. It supports small, portable video cameras like the Flip, and has an arm to allow for smooth 360-degree panning and 135-degree tilt.

>Perhaps to compete with the X-Rite's ColorChecker Passport (a POP Award winner, page 75), Datacolor has announced its own portable chart, the Spyder Checkr. It also helps RAW shooters perfect white balance and profile their cameras.

>Nik's Color Efex Pro and Silver Efex Pro have both gone 64-bit. Owners of the programs can download a free update at niksoftware.com.

DxO HDR

PLUG-IN

DxO HDR

Plug-in for DxO Optics Pro



New Software

DxO HDR

High-dynamic-range photography just keeps getting bigger, and now the French imaging expert DxO has announced its own HDR plug-in (under \$100, estimated; www.dxo.com). It does de-ghosting and automatic alignment. And with DxO's RAW expertise, particularly in shadow and highlight detail, we're excited to see the HDR images this new plug-in can make. Our lone gripe? It doesn't come in a stand-alone version, so you'll need DxO Optics Pro to run it.

THE LOWDOWN

SIGMA'S BOMBSHELL DSLR

The biggest surprise at this fall's Photokina? Sigma's new 46MP DSLR, the SD1, with a three-layered Foveon sensor boasting 15.3 megapixels (up from the current 4.8) on each layer. It will be standard APS-C-size, with a 1.5X crop factor, not the smaller 1.7X Foveon in the SD15. Due out in early 2011, the SD1 bodes well for Foveon fans: Not only should resolution and noise improve dramatically, but the body is rugged and well balanced.

Ocean Traveler

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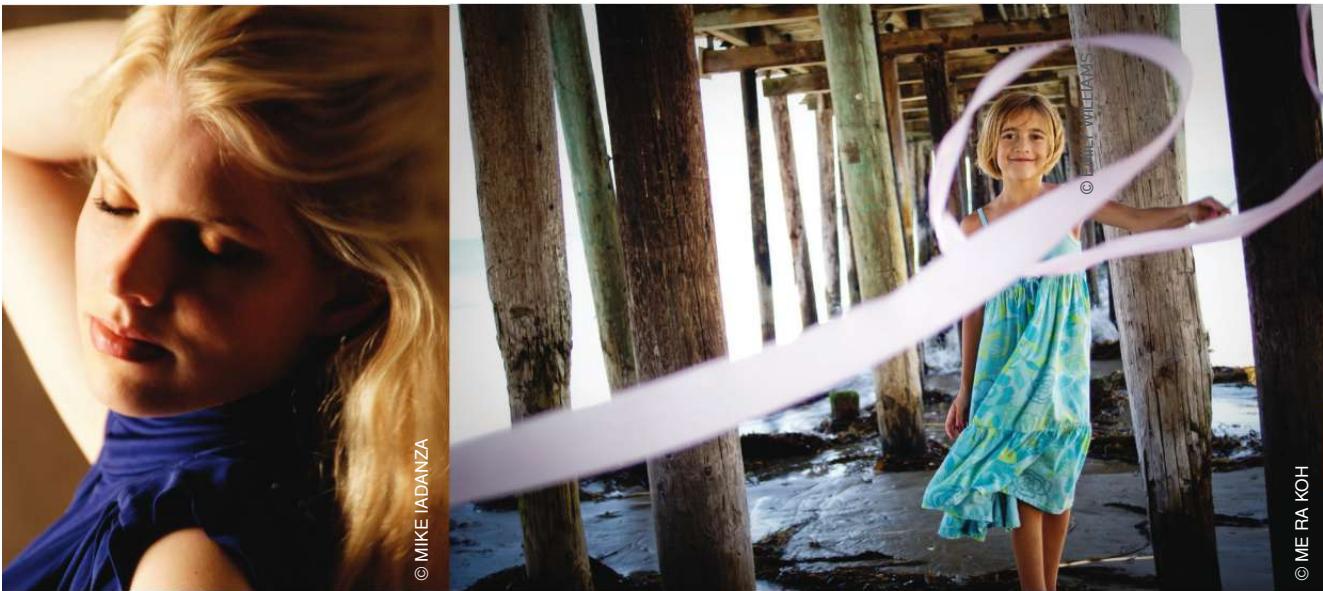
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PHOTO CHALLENGE

DEEP VIEW

Capturing a big view through a small camera



DAVE STOETZEL



AN AVID photographer since high school, Dave Stoetzel, 57 (www.davestoetzel.com), resisted trading film for digital. But, having fallen for the versatility of DSLRs, the painting contractor from Buffalo, WY, got his first compact—a Canon PowerShot G11—earlier this year. One of the first landscapes he shot with it won our September Photo Challenge.

On a trip to San Francisco last spring, he left his Canon EOS 5D at home in favor of his new G11. “I wanted to be forced to use it and try out the different features,” he says.

Stoetzel’s first test run? A drive down the San Mateo coast. Shooting blooming ice plants on the side of the road, “I found that you can shoot from crazy angles using the swiveling LCD,” he says. “But even better was the super depth of field.”

When he noticed the fog rising over the cliffs in the background, a few shots revealed he could keep both the cliffs and nearby flowers in focus, thanks to the compact’s tiny sensor. “The flowers were just 6 feet away, and the background miles away,” Stoetzel says. “I was amazed by what this little camera could do.”

—Lori Fredrickson

With a Canon G11 set to 1/100 sec at f/8, ISO 200, and its zoom at its widest, Stoetzel got great depth of field.

NEXT PHOTO CHALLENGE

Shoot from a moving vehicle as Regis Lefebvre did in on page 43. The best photo we get by Dec. 31 earns \$100 and your story here. Read all the rules at PopPhoto.com/PhotoChallenge.



Star Stalker

Making his name shooting boldface names

What's a paparazzo's day like?

It's a lot of time in a car or standing on a sidewalk, waiting for a celebrity to come out of the house or out of a restaurant.

How did you get started?

You have to know someone who can show you what to do and get you in at an agency. Four years ago, my cousin was at an agency, X-17, and invited me to work with him. I didn't have photo experience, but I taught myself everything in a few months.

How do you know where to shoot?

By exchanging stories with other photographers. If you call them with tips, they'll

call you, too. With bigger stories, photographers can be more competitive. I keep up to date on what's going on with celebrities by checking websites each night.

Where do you sell your photos?

I get assignments from the different agencies that I work for. If I know a big story is happening—like Lindsay Lohan getting out of rehab—then I just go shoot.

What gear do you use?

I have more than \$30,000 of equipment: a Canon EOS-1D Mark IV, Mark III, and 5D Mark II. Canon lenses—a 500mm f/4, a 300mm f/2.8, a 70–200mm f/2.8 with a stabilizer, which I use the

Vinicius Poersch, 24, spends his days following Hollywood's A-list stars as a Los Angeles paparazzo.

most. A 24–70mm f/2.8 for short-distance shots, the only time I use a flash. I have laptops to send the shots in immediately—I send them to agencies around world.

What's your biggest story?

The most I've ever earned was when Kate Hudson went house-hunting with A-Rod and his kids.

Are you ever starstruck?

No, but some celebrities are really nice—Jessica Simpson and her whole family, and Pete Wentz. Others, like Jake Gyllenhaal and Leonardo DiCaprio, aren't very nice to the photographers.

What if they want some privacy?

Most paparazzi will leave them alone if they ask nicely not to be photographed some times, then give good shots other times.

Have you ever been threatened?

No. I do mostly "old school" paparazzi photos, shooting from a distance so that celebrities don't know they're being photographed. It makes a more natural picture, and it's more respectful. Getting in people's faces gives paparazzi a bad name.

Will California's proposed anti-paparazzi law change things?

I think it's almost impossible that they'll give paparazzi those big fines—maybe in very special cases involving high-speed chases and people getting hurt.

What about public opinion?

People who speak badly about the paparazzi also buy the magazines, and ask me on the street who I'm waiting for so they can get a look. Who doesn't want to know about Jennifer Aniston's new boyfriend? They talk badly about us because they're jealous.

—Interview by Kathleen Davis



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Ghost Tale

**Photos with subjects
you can't quite see**

CORINNE MAY BOTZ'S "Haunted Houses" series began more as road-trip photography than a ghost hunt. "I've always been interested in domestic interiors, and the connections that people have with their homes," she says. "Photographing homes with ghosts seemed a unique way to explore that interest."

So for the past 10 years, the 33-year-old New York-based photographer and photo instructor has spent her free time shooting haunted houses. From legendary Civil War mansions in Gettysburg to remote log cabins in Harlan,

KY, she has photographed in more than 100 homes in 85 locations, reaching from New England to the South to California. Some of them are famous—like the Edgar Allan Poe house in Baltimore. But most are just ordinary people's homes, with an additional, invisible resident.

"I wanted to show a variety in terms of class, location and the way that people live," Botz explains. "Sometimes I would research a famous haunted house and travel there specifically. But more often than not, it was just exploring small towns, and learning their secrets."

Libraries and historic societies in many small towns often



CORINNE MAY BOTZ (7)

had records of local legends, or a friendly historian or old-timer would pass on an address or phone number.

Knocking on a door, she found that haunted-home owners were almost always excited to share stories. Often they told of a violent crime in the home, but they also described inexplicable events—doors opening and closing, and footsteps late at night. “Some people would talk about their ghosts as if they were living people,” Botz says. “They integrate a haunting into their lives.”

Botz often found herself exploring people’s homes at will, searching for a haunted vibe. “The owners were intrigued by what I decided to photograph,” she says. Occasionally she’d tripod-mount her Speed Graphic loaded with Fujifilm 160NC daylight film in a parlor or attic

known for ghostly sightings. It was an intuitive process, imagining where a ghost might be and how it would appear.

The final collection of images—and ghost stories—has been published in *Haunted Houses* (2010, Monacelli Press). And though her work hasn’t captured any paranormal activity, Botz says, “It was intriguing to see people living their lives with ghosts about.”

But did she see any ghosts? “Just once,” she says, “at the Farnsworth House in Gettysburg. A door opened and closed, and no one was there.”

—Lori Fredrickson



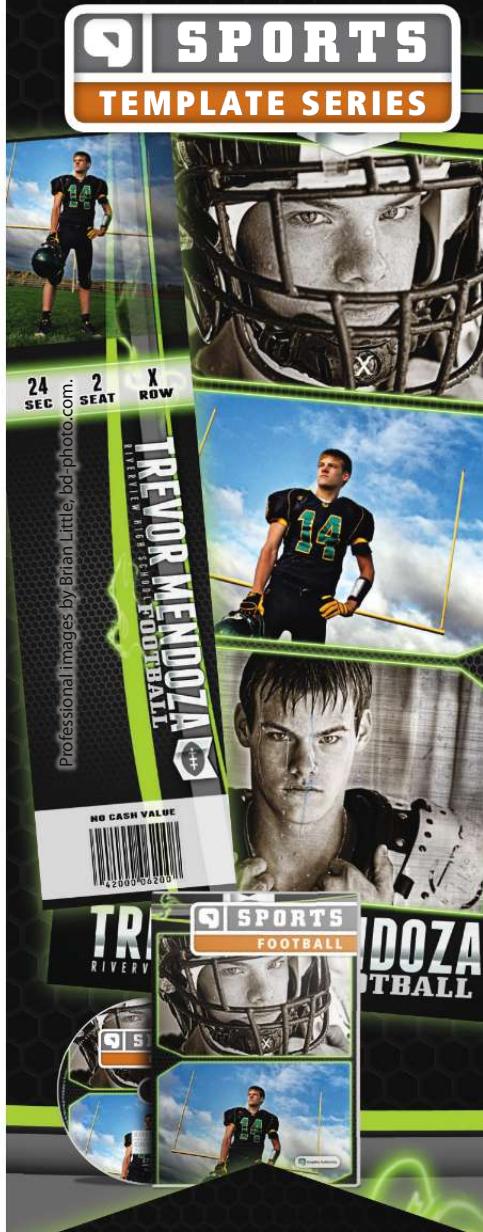
See more of Corinne May Botz’s supernatural locales and other work at www.corinnebotz.com.



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SHARE * LETTERS



Rock On

I read with great interest "Rock Star," your interview with Jeremy Harris [October 2010]. One issue that I've not seen addressed anywhere is the policy of many venues banning cameras with removable lenses. DSLRs are not allowed in, but point-and-shoots are.

This leads to flashes going off all over the place. I especially like the point-and-shoot flashing from the far reaches of the venue, knowing that someone just got a great shot of the head in front of them. All this while my DSLR with its fast telephoto lens and ability to shoot without flash in low-light situations is in my car! This makes no sense to me.

Many people who aren't pro photographers have high-quality camera equipment, and I think given the price we must pay for concert tickets these days, unless someone can give me a good reason for this rule, we should be allowed to bring in our SLRs. **Mike Ketchum**
Urbandale, IA

I READ your article "Rock Star" closely because this is something a good friend of mine, Mark Applegate, and I do down here in southern Texas. However, unlike this article, where the photographer generally has great lighting to work with at bigger rock concerts, we are working in small honky-tonk bars, shooting local and regional Texas Country acts.

We've shot in such places as the legendary Gruene Hall (the oldest dance hall in Texas, where people like George Strait got his start and performers like Lyle Lovett still play) and the incomparable Floore's Country Store where Elvis and Willie have played. These places are fairly small, the lighting is poor, but the music is great and the crowd gets into the music.

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SHARE * LETTERS **SOMETHING TO SAY?**

WRITE TO US: POPPHOTO@BONNIERCORP.COM

We do not use any flashes, as we do not want to distract the performers. Mark shoots using a Nikon D50, primarily with a Nikon 80–200mm f/2.8, while I use a D90 and the 80–200mm. By using this lens we get the speed we need, but also a wide enough angle to shoot in the smaller places and still get the action. The less-than-ideal lighting forces us to be creative, allowing us to get some really unique shots. Much of Mark's work now resides in the Center for Texas Music History at Texas State University, and I will soon be donating work to it, as well.

Michael J. Frederick

San Antonio, TX

I ENJOYED your article on waterfalls in the September issue {Traveling Photographer}. There were a couple of surprises, though: You did not mention polarizers. I keep one on my lenses for almost all waterfall shots—if there is any sun at all this is essential. And you failed to mention the great waterfalls in Eastern North Carolina and Western Tennessee. Transylvania County, NC, has well over 100 named waterfalls.

In the last two to three years I have dragged my 85-year-old body to photograph 57 waterfalls in North Carolina, 52 in Tennessee, and about a dozen in Virginia. Many of these can be viewed from

the roadside so my wife has been able to share over half of them with me.

Bill Vickrey
Burlington, NC

IN REGARDS to the question about long-term storage on memory cards (Tech Support, November), the suggestion to use the hard drive for speed and convenience is a good one. But, for long-term security of your photographs, neither memory cards nor hard drives are reliable.

I would burn the images to fast DVD media. Dual-layer DVDs are very inexpensive and hold about 8.5GB. In the writing process, be sure to use Verify. Once the disk is made, open several files from it to ensure it performs properly, then file it in a safe in case of fire.

Joseph Massimino
Jensen Beach, FL

RE: CONTENTS (October) about "The Future of Photography," how nice it would be at the end of a long day to be able to eat your camera! I am sure the future of photography is enticing, but edible cameras?

Fred MacDowell
Edinburg, TX

CORRECTION

In "Friends & Family" (November 2010), several people in photos by Joshua Drake were misidentified in captions. We regret these editing errors.

POPULAR PHOTOGRAPHY

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Raw Menu

Q I was always under the impression that the white-balance setting does not have any effect on shooting RAW. But every now and then I hear photographers ask each other about their WB settings even though they are shooting RAW. So should I be concerned with this setting?

A The beauty of RAW capture is that you can make adjustments such as white balance after the fact, as well as create different renditions from the same picture file (see this month's Software Workshop for a primer on RAW). Where the camera settings come into play is on the LCD monitor: To display a RAW image, the camera makes a small JPEG from the RAW file, using the camera settings for image

adjustments. Some cameras let you see what different settings will do to the same file. And, if you use a camera manufacturer's software to "cook" the RAW file, most of those programs will use the camera settings as the default—but you can always change them to your liking.

*Ershun Lee
San Diego, CA*

Q **YESTERDAY'S PAPERS**
I have some Ilford Multi-grade Pearl enlarging paper that

I had used when making b&w prints in a darkroom. In theory, could this paper be used to make prints in an inkjet printer? (The paper has been stored light-tight but is over 10 years old.)

*David Gustafson
via e-mail*

A There are numerous reasons why this would be unworkable, but let's give the biggest one: Darkroom paper is not designed to absorb inkjet ink, so you would be lucky to get an image at all. Underdeveloped photo paper stock is also unstable—you'd need to fix it, and wash it, and dry it, or it would darken over time once exposed to light.

Q **BURST OR BUST?**
I recently purchased a Canon EOS Rebel T2i. Would an



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What Should I Buy?

Canon EOS Rebel XTi user Nelson Teran of Hemet, CA, wants to shoot indoor events such as volleyball, and prefers a fast lens to boosting the ISO. He asked us if the 85mm f/1.8 Canon EF lens would be suitable. Our answer: Yes. It's sharp, well made, quiet, and a bargain at \$370 (street). Its equivalent focal length of 135mm means he'll be able to get pretty tight shots of players if he's reasonably close to the sidelines.

older Canon Speedlite 430EZ damage my camera or could I use it normally? **Felipe Rodriguez**
Euless, TX

A The 430EZ won't harm your camera, but it would have limited functionality on the T2i. It will fire on manual only, with no automatic control of the flash duration. You'd need to put your camera in manual (M) or aperture-priority (Av) to adjust flash exposure by varying the f-stop. You could also set the flash to fractional output settings (1/2 power, 1/4, and so on). For full TTL automation, you'll need the Speedlite 430EX II.

A note to Canon, Nikon, Olympus, Pentax, and Sony DSLR shooters: Information about the compatibility of manufacturers' older flash units with newer cameras can almost always be found in the camera manual.

misplaced your manual? Go to the camera maker's website, and download a PDF of the manual for free. This service is usually listed under Support, although sometimes under Drivers and Downloads.

Thinking of buying a new camera maker's flash for your older DSLR? Download the PDF manual for the new flash. It will most likely have a guide to compatibility with older camera models.

TIP FROM A READER

Can't remember exactly what all the custom functions do on your DSLR? Do what I do and take close-up shots of the pages of the instruction manual explaining these settings, and store them on a memory card to take with you when shooting. If you zoom in with the magnifier function in playback, the text is pretty readable. And you can do this for any other operation you're not sure of—I never remember the procedure for making a custom white balance reading, so I store those instructions, too. **Alex Kalanusky**
Staten Island, NY

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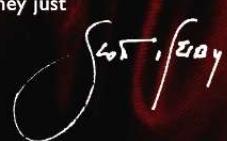
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I especially love the BXRi's built-in Skyport wireless control and triggering system, because it lets me change power and lighting ratios right from the top of my camera (no more climbing up ladders, or pulling down booms, or getting out of "the zone" just to make a simple adjustment). I do all right from my camera position, and it saves a ton of time, frustration, and money.

Skyport has saved my butt on more than one occasion and honestly, now that I have this type of control I just couldn't go back just being able to pop the lights. The BXRi's with the built-in Skyports have changed everything, and that's why I tell all my friends who are photographers - you gotta go Elinchrom. I love my BXRi's, they just flat out rock!


Photoshop was not used to place any elements in this image. Learn more about cameras, photography, Photoshop, Lightroom and many other photography related topics at www.scottkelby.com info@elinchrom.us www.elinchrom.us

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YOUR
ANGLE?

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Family Portraits

Parental figures in the animal kingdom



3rd Place \$100 Prize

**NICKY BAY, 32, GAME STUDIO
MANAGER, SINGAPORE**

“Another photographer told me about this shield-backed bug, protecting her eggs in a mangrove park. When I found them, they'd just hatched. I touched the leaf, and a few babies scampered away, then slowly moved back as if they'd gone to play and Mom was calling them home.”
(sgmacro.blogspot.com)

TECH SPECS: Nikon D80 with 180mm f/3.5 Tamron Macro lens; 1/100 sec at f/20, ISO 320. Minor adjustments in Adobe Photoshop CS4.



2nd Place \$200 Prize

**MARK ROSENBAUM, 52,
MARKETING DIRECTOR,
GLEN ELLYN, IL**

“At Brookfield Zoo, where I drag my daughters about 25 times a year, they house the giraffes inside during winter—you can get close enough to almost pet them. I was photographing this calf when its mother came to nuzzle up against it. This photo was later published in the zoo magazine.”
(www.weshootmemories.com)

TECH SPECS: Nikon D80 with 24-120mm f/3.5-5.6 Nikkor lens; 1/120 sec at f/8, ISO 800. Converted to b&w in iPhoto.

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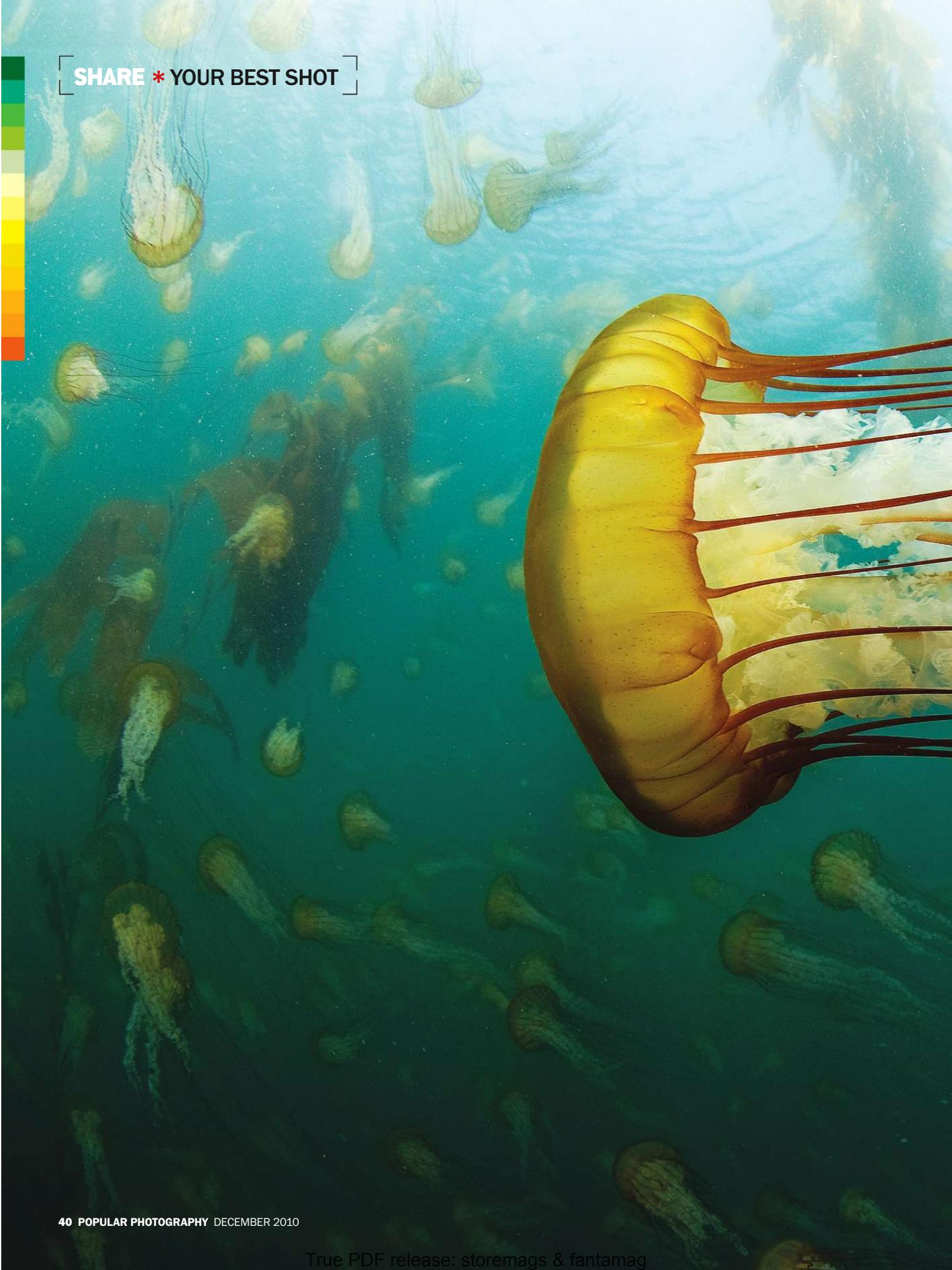
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1st Place \$300 Prize

JIM PATTERSON, 36, SALES MANAGER, SANTA CRUZ, CA

"This image was taken in Monterey Bay near Carmel, CA, in the kelp forests bordering Point Lobos State Reserve. I'd heard reports of sea nettles down there, so one day I took my kayak out and anchored it to some kelp to dive. For the first 30 minutes, I barely saw any jellies—and then more and more arrived. I began shooting, using two Sea & Sea strobes for fill light. Soon, I was completely surrounded by jellies, but my fisheye lens let me find and close in on this individual." (www.jimpattersonphotography.com)

TECH SPECS: Nikon D300 with 10-17mm f/3.5-4.5 Tokina fisheye lens, in Aquatica housing; 1/160 sec at f/6.3, ISO 200. Adjustments in Adobe Photoshop CS3.



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HOW

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CREATIVE THINKING



A SENSE OF SPEED

Regis Lefebure captures the excitement of driving fast

EVER TRIED getting a good shot out the window of a car that's going 80 miles per hour? It gets a little bit easier when you're in the

left-hand front passenger seat of a British Audi RS6 sedan, riding with Formula 1 racing star Allan McNish.

This was how Washington,

Exposure:
1/80 sec at
f/10, ISO
200. See
text for
camera and
lens info.

DC-based motorsports photographer Regis Lefebure managed to capture the speed and drama of Eau Rouge, a famous segment of the twisty Circuit de Spa-Francorchamps racetrack in Belgium, while working on a promotional project for Audi in 2004.

As the car dropped downhill

approaching the famous turn, Lefebure saw his chance to combine all the visual elements of the track's landscape into a signature image for his client. "The left side was perfect for photographing the down-and-up, left-then-right progression of the curve," he says.

The photo appears to have been taken with a camera mounted to the side of the car, but Lefebure uses external camera rigs only at slower speeds, where the risk of losing the camera is low. Instead, leaning his head and left shoulder out the window, he was able to two-handedly hold his Canon EOS-1D Mark II away from the car with the camera strap wrapped around his arm.

Because finessing composition under the circumstances was impossible, Lefebure chose a 15mm f/2.8 Canon fisheye lens and focused it manually to hyperfocal distance using the depth-of-field scale on the lens barrel. By stopping down to f/10, the depth of field would be adequately deep to render everything from the front wheel to the background relatively sharp. He particularly wanted the RS logo on the wheel's brake caliper in focus—important for identifying the car as an Audi.

To ensure some motion blur in the wheel and foreground, conveying a sense of forward motion and speed, Lefebure set the camera to ISO 200 and 1/80 sec in shutter-priority mode. During races, "this turn is usually taken at 160 mph. It's very impressive and I wanted to convey that sensation," he says.

To make sure he got his shot, Lefebure used the high-speed continuous shooting mode, capturing several frames in rapid succession. Only this one was a keeper. —*Laurence Chen*

FIX IT FAST

Dark Alley

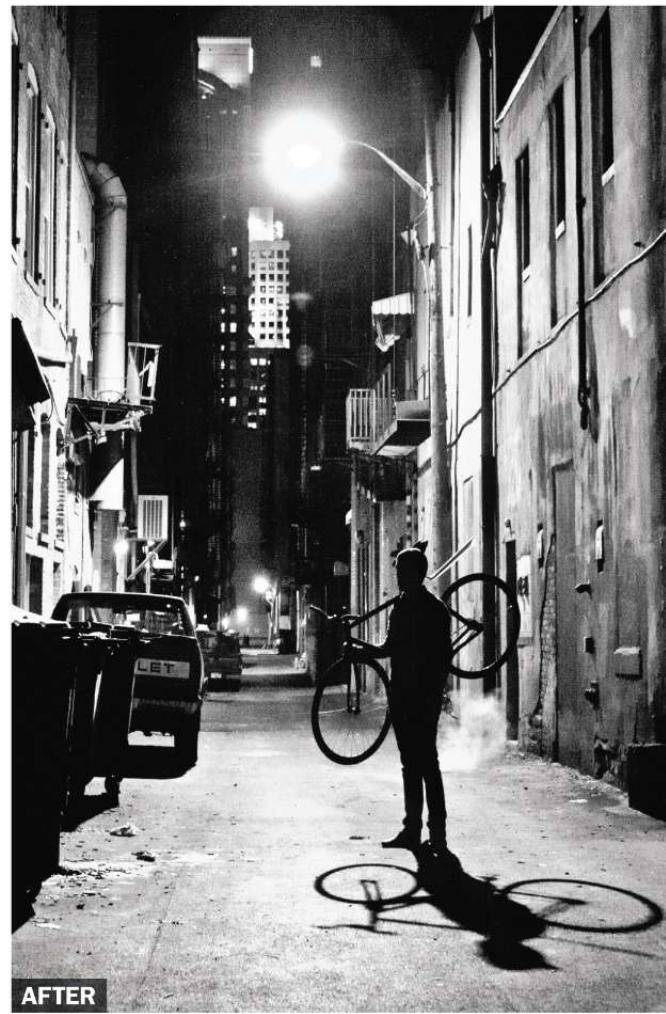
Getting a little light in the dark

SILHOUETTES AND shadows make great graphic elements, but there is such a thing as too much darkness. So we decided to get more light into Pittsburgh-based Ian Momyer's shot. Starting in Adobe Camera Raw with his original file, we stayed with a b&w conversion, since the original color image was nearly monochromatic.

In the HSL/Grayscale tab, we pushed the color balance toward yellow (predominant in the original), which brightened the photo. We added Fill Light for more detail, and Clarity to up the midtone contrast.

Now the photo looked cluttered, and we realized it should be a vertical. We cropped, taking out a lot of distractions. Time fixing: 10 minutes.

Momyer shot with a Canon EOS 7D with 28-135mm f/3.5-5.6 EF IS lens; 1/60 sec at f/3.7, ISO 2000.



AFTER



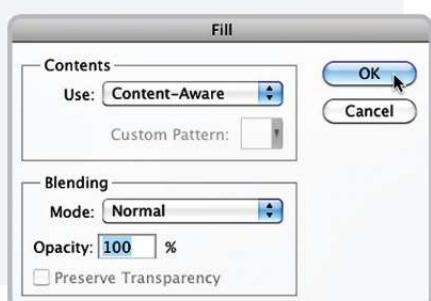
BEFORE

IAN MOMYER/WWW.GOVISUALNOW.COM

30-SECOND SOFTWARE

HOW TO USE CONTENT-AWARE FILL

ONE OF THE MOST TALKED-ABOUT FEATURES IN ADOBE PHOTOSHOP CS5 is Content-Aware Fill, which can intelligently, and almost magically, replace image data you don't want with image data you want. The Healing Brush now uses Content-Aware Fill's algorithm by default. But for areas too big to correct with the Healing Brush, try using it with the Fill command. To do so, grab the Lasso tool. Roughly encircle the offending element—say, a piece of garbage on an otherwise-pristine beach—and go to Edit > Fill. Use the pulldown menu to select Use: Content-Aware. Leave the Blending Mode at Normal, and click OK. Then watch as the garbage disappears, replaced by clean sand. Too bad it works only on images.



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"My underlying goal is to convey the sensual aspect of whatever I photograph, to capture its visceral presence so the viewer experiences what it feels like."

— Katz

© Andy Katz

ANDY KATZ

A FINE-ART PHOTOGRAPHER WHO TRANSCENDS GENRES TO CAPTURE AN INDELIBLE SENSE OF PLACE, TIME, AND PASSION



Based in Sonoma, California, Andy Katz has traversed the globe, creating compelling images as diverse as his adventures. Acclaimed for iconic American landscapes, revealing portfolios of people and places in Africa, Asia, India, and Japan, and intimate and engaging books on wine-producing regions, he has also documented such emotionally charged subjects as the vanishing Jewish communities of Eastern Europe—all with an artist's empathetic and incisive eye. "I knew I was going to be a photographer since I was 11 years old," says Katz, who attended the Art Center College of Design in L.A. and has been a full-time pro for over 30 years. "My underlying goal is to convey the sensual aspect of whatever I photograph, to capture its visceral presence so the viewer experiences what it feels like."

Critics and top photographers have described Katz's photo books as "breathtaking" and his mastery of genres from travel to fine-art nudes to documentary photojournalism is legendary

among his peers. His evocative works have been published in leading American and European magazines and exhibited in museums and galleries worldwide, including the esteemed Klutznik National Jewish Museum in Washington D.C. As a testament to his versatility, Katz has shot memorable album covers for the Doobie Brothers and Dan Fogelberg, and he's working on an offbeat travel project, "Hidden Gems of America."

Andy Katz is a dedicated Sony Artisan, and he's "ecstatic" about his Sony Alpha 900. "The lenses are phenomenal," he exults. "The Sony 70-400mm f/4.5-5.6 G is the best-ever ultra-zoom, the 24-70mm f/2.8 Zeiss Vario-Sonnar is the best lens I've ever used period, and the 16mm-35mm f/2.8 is superb. The Alpha 900 is the smallest, lightest, most ergonomic pro DSLR, and it's absolutely bulletproof—even in the bitter temperatures and extreme weather I encountered in South Africa. Sony's SteadyShot INSIDE image stabilization works brilliantly with all lenses, allowing you to capture crisp images that would otherwise be impossible. To cut to the chase, the Alpha 900 system delivers absolutely magnificent image quality. It's the Sony 24.6 MP sensor, it's the tech, it's the build—and there's no better glass on earth."



What is a Sony Artisan of Imagery? The Sony Artisan of Imagery program includes some of the most respected professional photographers worldwide. Each Artisan has a unique style and vision with their photography but they all rely on one product, the Sony Alpha.

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Nature's Filter

Wait for mist to roll in

LANDSCAPE photographers who respond to saturated color and sharpness will often pack up and leave if fog, mist, smoke, or haze moves in. Whoops! They miss a lot. Atmospheric conditions in which dry particles or water droplets are visibly suspended in air can add a lot to a landscape. What you'll get:

An exaggerated sense of depth. As mist or haze recedes into the distance, it takes on darker tonalities that strongly convey a scene's depth and dimensionality.

More details. You can easily tweak the shadows and

midtones in low-contrast landscapes, such as those shot in light fog, until you find a suitable look for the scene. Low-contrast landscapes are much easier to work with than the black-shadowed, high-contrast scenes shot under a naked sun.

Light made manifest. As sunlight streams through airborne water vapor, the tiny illuminated droplets make it visible. In shots like this mist-enveloped Washington state pine forest by Ethan Welty, the strikingly evident sunbeams take on an otherworldly, mystical look that transforms the landscape into something almost spiritual.

—Peter Kolonia

ETHAN WELTY



DID YOU KNOW? LIGHTING RATIOS

A COMMON WAY to describe both quantity and quality of light is the lighting ratio. It indicates the amount of light (in stops) that illuminates the highlights compared with the shadows. The first number in the ratio refers to the key- or mainlight; the second to the shadows or fill light. The closer the two numbers are to each other (e.g., 1:1), the flatter the overall lighting. The more they vary (e.g., 4:1), the higher the overall contrast. Lighting ratios can help you retain detail. If your camera's sensor can capture a 6-stop range of highlight-to-shadow detail, and your scene has a lighting ratio of 7:1, you must drop light levels in the highlights or add light to the shadows until you reach a 6:1 ratio.

Ratios can be determined with in-camera spotmeters, but handheld flash meters such as Sekonic's L-358 (left) can be easier—their manuals explain how in step-by-step instructions.

What's This?



Second-Curtain Sync

Electronic flash is ordinarily synchronized to fire as soon as the first curtain of your shutter opens. This is usually the safest bet—you get the flash to fire quickly to catch a fleeting expression or peak action. But with slow shutter speeds, this can cause motion blur to go in the wrong way—in front of your subject. Trailing sync (a.k.a. second-curtain or rear-curtain sync) fixes it.

►**How it works:** Trailing sync triggers the flash near the end of the exposure rather than at the beginning. You set it via a menu or flash-mode control—a typical icon is shown above. Most cameras have it.

►**When to use it:** To convey a sense of motion in a runner, cyclist, or other moving subject, set a slow shutter speed (1/15 sec or longer) with trailing sync flash. You get a sharp image of your subject with blur trailing behind.

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THE EXPLAINER

Talking Resolution

Not just counting dots

RESOLUTION, AT its most basic, means the ability to show fine detail. But because the word is used in a variety of ways, it can be confusing.

These days resolution is commonly used as a stand-in for pixel count. We talk about a sensor having a resolution of 3000x2000 pixels, or, doing the multiplication, of 6-million pixel or 6-megapixel resolution. Strictly speaking, this is not an accurate use of the term (and we stand guilty as charged). Because digital images are made up of dots, and dots are recorded by pixels, the broad

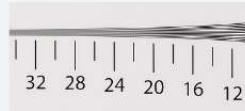
assumption is made that the more pixels, the higher can be the resolution, and the sharper the picture.

But as we've seen, many other factors can influence image quality. Notably, bigger individual pixels often make for better image resolution. The camera's processor, and processor firmware, have an influence, too—we often see two cameras of different makes that use the same digital sensor but which test out with significantly different resolutions (see box, below). We've seen that 12MP cameras can test out with the resolution of a typical 10MP camera, and vice versa.

PETER KOLONIA

INSIDE SCOOP HOW WE TEST RESOLUTION

THE POPULAR PHOTOGRAPHY Test Lab uses a resolution test target to measure how well digital cameras render fine detail. It has several arrays of lines—arranged vertically, horizontally, and diagonally—that get progressively thinner and closer together along their length. We photograph the target, making sure it fits the picture frame exactly, and then evaluate the lines. We note the last point at which they can clearly be discerned. The chart's numbers (in hundreds) tell us the equivalent resolution in lines per picture height (the short side of the frame): A res score of 2000 means the camera can clearly picture 2000 horizontal lines stacked on top of each other vertically.



So pixel count is really an indicator of potential resolution. As such, it provides a handy, if loose, rule of thumb for the enlargeability of images. The point of having lots of dots in an image is that you can stuff them together tightly to make what can look like a continuous-tone image. We consider 240 dots per inch (dpi) the minimum necessary for a "photo quality" enlargement. So, if you were using that 3000x2000-pixel camera, just divide those numbers by 240 and you get maximum enlargement size: about 12.5x8.5 inches.

Keep in mind, though, that just because a sensor has 6 million pixels it doesn't have to produce a picture with 6 million dots. Some of the pixels may be used for other purposes. Pixels come in red-, green-, and blue-recording varieties, so several pixels may be used to produce one picture dot. And some pixels are simply dead.

—Dan Richards

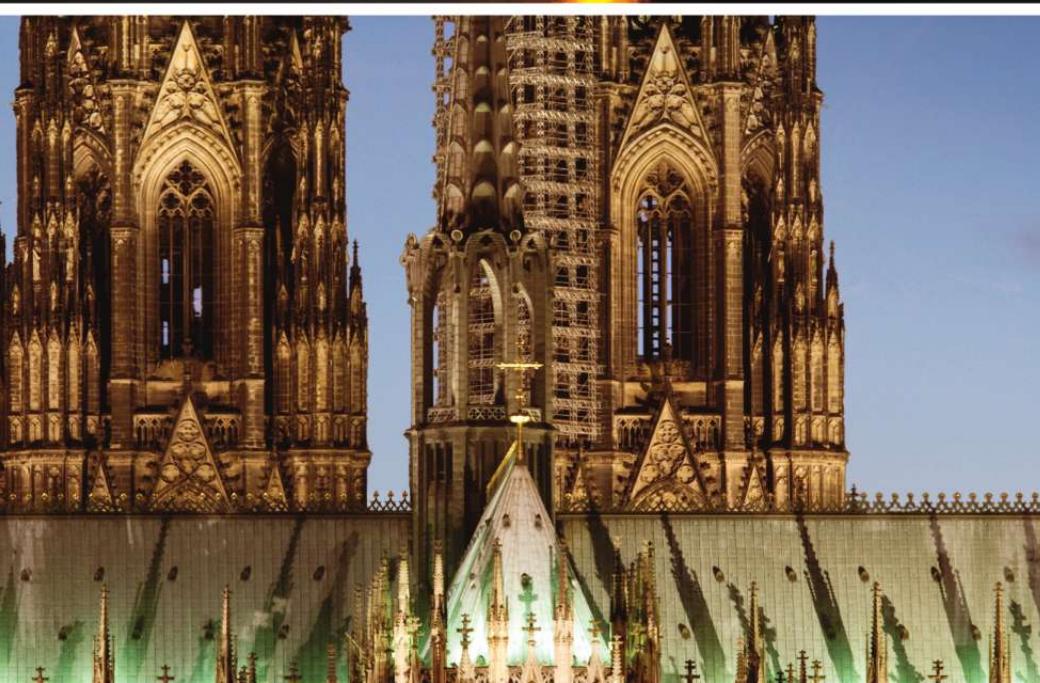


723 x 480

MORE DOTS, SHARPER PICTURE
We shot this scene with a 12.2MP camera, and opened the file in Adobe Photoshop CS3. We then reduced the file three times to three different pixel counts, ranging from the camera's top 4288x2844 resolution to approximately VGA quality. (Details above.) In the sidebar, a detail of our resolution test target.

Zoomed. Not Shaken.

Tamron 18-270 VC 15x Zoom
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Top: shot at 18mm; Bottom: shot at 270mm from same position



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Wildlife Drives

Discover nature from your car

IT MAY BE the easiest way of getting close to nature: taking a wildlife drive through a wildlife refuge. These routes, designed for the best views of birds and beasts, also provide one of the best ways to photograph them.

The benefits? Being able to cover miles of terrain without hauling your camera gear on foot, and gaining quick access as you go from one photo destination to another. Staying in your car protects you from weather and mosquitoes, allowing you a more comfortable shooting experience, and keeps you safe from any wildlife threats. And because birds and animals tend to ignore cars, your vehicle works as a rolling blind.

Many wildlife drives have designated viewing areas and plenty of pull-off room that allows you to stop and photograph at will.

But although it's acceptable to get out of the car at many sanctuaries, staying inside puts a lot less stress on wildlife. Steady the camera with a sandbag or rolled-up sweater in the window frame, or use a specially made window tripod. My Leonard Lee Rue Groofwin 'pod (\$259; www.rue.com) easily handles my 400mm lens with a 2X tele-extender.

On your first visit, grab a sanctuary map on the way in, and do a drive-through to get the lay of the land and scope out hot spots. Look for active feeding stations—tidal pools if you're shooting egrets, for example. Then settle in one place with your engine off, and let the critters come to you. Shooting from the back seat will give you more elbow room.

The same rules apply to drive-by shooting as any wildlife outing: Arrive early and stay until twilight, when lighting is better and the residents more active. Finally,

SCENIC ROUTES
Wildlife drives can get you surprisingly close to scenes like Jon McRay's of two foxes fighting in Bombay Hook NWR. Photographed with a Nikon D300 and 80-400mm f/4.5-5.6 VR Nikkor lens; 1/800 sec at f/7.1, ISO 500.

keep in mind that many refuges (oddly enough) have a hunting season that may temporarily close wildlife drives—be sure to check the refuge calendar. —Jeff Wignall

WHERE TO GO

Winter is prime viewing time at many refuges, particularly for bird migration routes. Here are notable wildlife drives:

- **Cibola National Wildlife Refuge, Cibola, AZ:** Also called Canada Goose Drive, it's a 3-mile auto-tour.
- **Bombay Hook National Wildlife Refuge, Smyrna, DE:** A 12-mile loop.
- **Neil Smith National Wildlife Refuge, Prairie City, IA:** 740-acre drive-through bison and elk sanctuary.
- **J. N. "Ding" Darling Wildlife Drive, Sanibel, FL:** 5 miles; closed Fridays.
- **Black Point Wildlife Drive, Titusville, FL:** 7 miles of birding ops.
- **Edwin B. Forsythe National Wildlife Refuge, Oceanville, NJ:** 8 miles of coastal habitats.
- **Bosque del Apache National Wildlife Drive, San Antonio, NM:** 12 miles in two loops—marsh and farm.

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A LIGHTWEIGHT HEAVYWEIGHT

PANASONIC'S NEW LUMIX GH2 LOADS UP ON PROFESSIONAL FEATURES, YET IS COMPACT AND POINT-TO-SHOOT SIMPLE

Looking for a small, lightweight camera that takes stunning professional-level 2D and 3D still photos and records professional-quality video in full HD? Hard to find all that, isn't it? Not now. Panasonic's new Digital Single Lens Micro (DSLM) camera, the LUMIX GH2 offers it all, and more. You probably expect the LUMIX GH2 to include features loved in its successful predecessor, the LUMIX GH1: interchangeable lenses, impressive HD video, manual controls and fast auto focus (AF). But what makes the LUMIX GH2 really stand out from traditional DSLRs on the market is its easy-to-use 3.0-inch touch-to-shoot LCD screen and full HD 1920 x 1080 video recording in smooth 60i or cinematic quality 24p with stereo sound—all while fitting in the palm of your hand.

Compatible with the Micro Four Thirds System standard, the LUMIX

GH2 is the most advanced camera yet in Panasonic's popular LUMIX G Series. What makes it so advanced? Speed, for starters. The LUMIX GH2 is newly designed with a 16.05-megapixel multi-aspect LIVE MOS sensor and a refined image processing engine, the new Venus Engine FHD. Together, they deliver fast, sharp photos, full HD video recording and the ability to take 3D photos with Panasonic's world's first¹ interchangeable 3D still lens. The LUMIX GH2 also features faster professional DSLR level "Light Speed" AF, reducing detection time for focusing to approximately 0.1 second by doubling the AF drive speed from 60 frames per second to 120 frames per second.

Sure the technology is important, but is it fun? The LUMIX GH2 gives new meaning to multitasking. This true hybrid digital camera not only takes stunning 14 MP (16:9) photos dur-

ing video recording but it also ups the ante with full AVCHD DVD-ready video recording. To make it easy, the dedicated button on the top of the camera lets you instantly record videos while shooting photos. And for the creative bunch, the LUMIX GH2 features new modes for cinematic effects: the new Cinema mode (1080/24p AVCHD 24Mbps), which records video with rich cinema-like gradation, and the new Variable Movie mode, which records video in variable frame rates—80, 160, 200 and 300 percent—for speeding up or slowing frames. It even supports cinema "pull focus" effects simply by touching the subject you want to change focus to on the Touch LCD. The Dolby® Digital Stereo Creator and optional accessory Stereo Microphone improve sound for truly impressive videos.

The LUMIX GH2 also features intuitive touch-control operation, made popular



with the LUMIX G2 for its outstanding usability in menu simplicity, touch-to-shoot shutter control, and swipe playback feature. The LUMIX GH2 combines a 460,000-dot high-resolution Intelligent LCD with the newly developed Multi Aspect Wide Screen LVF (Live View Finder) for more comfortable shooting and 100 percent field of view. You can touch and view the 3.0-inch LCD screen from any angle, rotating it 180° side to side and tilting it 270° vertically. And then literally point and shoot. With just a touch of the screen you can adjust AF and bring your subject into focus against the background. It even tracks a moving subject simply by touch, so you can concentrate on composing instead of worrying about focus. Touch the screen again to change the mode, or simply drag the image on the screen to enlarge it up to 10x. You can even touch thumbnails to play back images or touch the screen to change menu settings quickly.

The new large, bright 1,530,000-dot resolution Multi Aspect Wide Screen LVF features Live View at popular aspect ratios of 4:3, 3:2, 16:9, and even 1:1, letting you check the framing accurately from corner to corner when composing a shot. Or simply capture all four image aspect ratios in one shot with the new Multi Aspect Bracket mode.

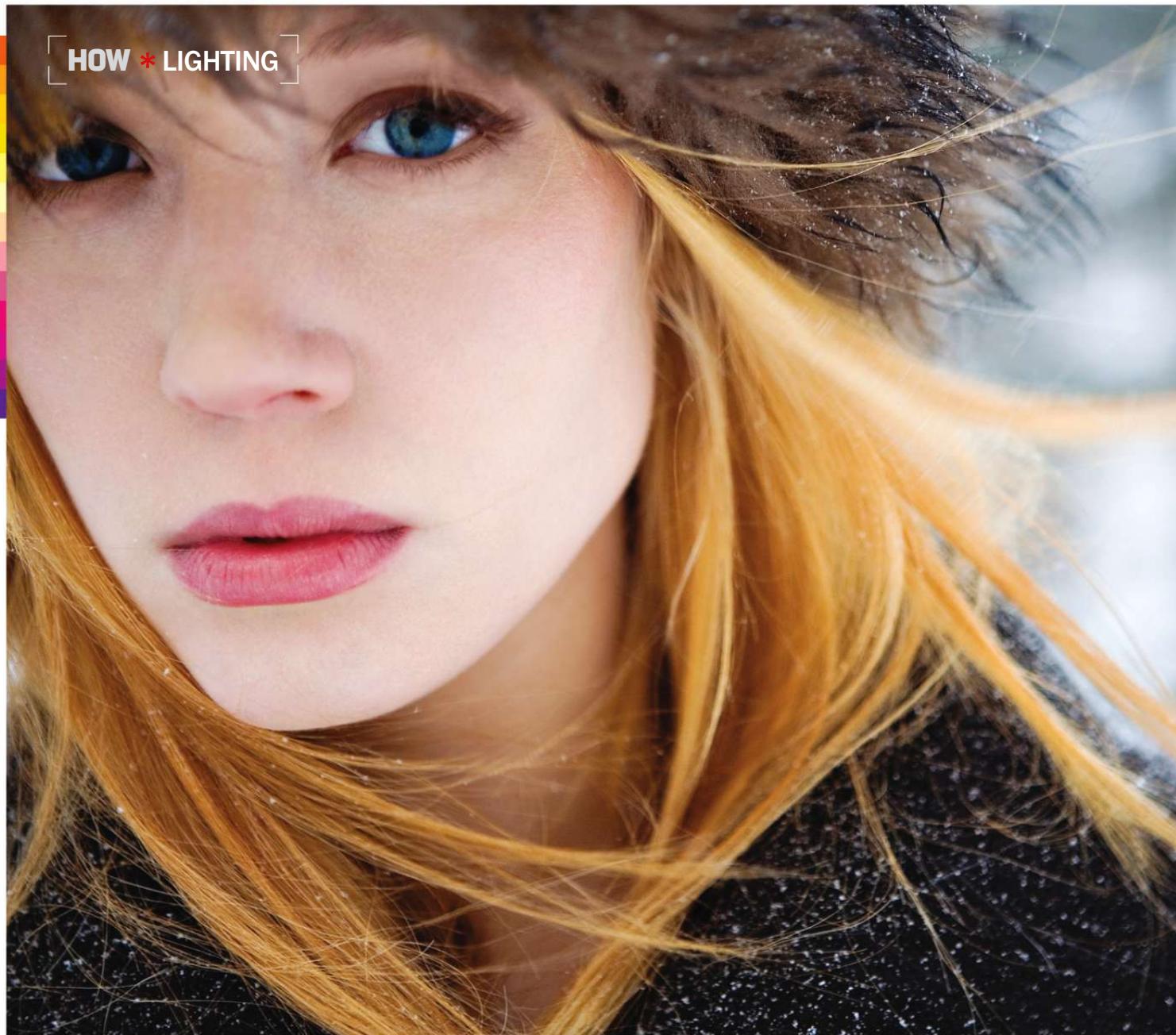
THE LUMIX GH2 GIVES NEW MEANING TO MULTITASKING

The LUMIX GH2 features 22 different shooting modes for creative shooting options, including 10 different video modes. Even beginners can take stunning photos with the LUMIX GH2, thanks to Panasonic's iA (Intelligent Auto) mode, a popular setting in the LUMIX point-and-shoots that automatically engages features and settings to optimal image quality by detecting the shooting environment. New additions

to the iA mode include Intelligent D-Range Control for optimized exposure of an image and Intelligent Resolution for better-balanced sharpness in images should you want to print them at a larger size. And with more shortcut buttons on the LUMIX GH2, you can now find your frequently used settings more easily.

For more information on Panasonic's latest LUMIX digital cameras, lenses and accessories, please visit www.panasonic.com/lumix. To see how others, like you, are enjoying their LUMIX cameras, visit us on Flickr: <http://www.flickr.com/groups/lumixlovers/>

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Snow Light

The best tools can also be the simplest

GREAT LIGHTING often calls little or no attention to itself. Rhea Anna's portrait of a professional model, above, appears lit by simple ambient light. A casual viewer wouldn't guess that the Buffalo, NY-based pro photographer actually used three different reflectors (one, the snow) to punch up and warm

up the thin, wintry light that fell softly from the overcast sky above.

Examine the picture closely, though, and you will see evidence of Anna's reflector-based strategy—for example, the shadows typical of a top-lit portrait are absent. The chin, nose, the ridge above the left eye, and the hat would normally have cast shadows if lit solely from above,

For more of Anna's work, including the striking photo essay containing this image, visit www.rheaanna.com.

but here they're shadow-free.

"I love the soft, even lighting you can get by combining ambient light with reflectors. I couldn't have made this without that combination," she says. "The knee-deep snow helped, too."

Her lighting strategy was actually comprised of four different components, each serving a unique purpose:

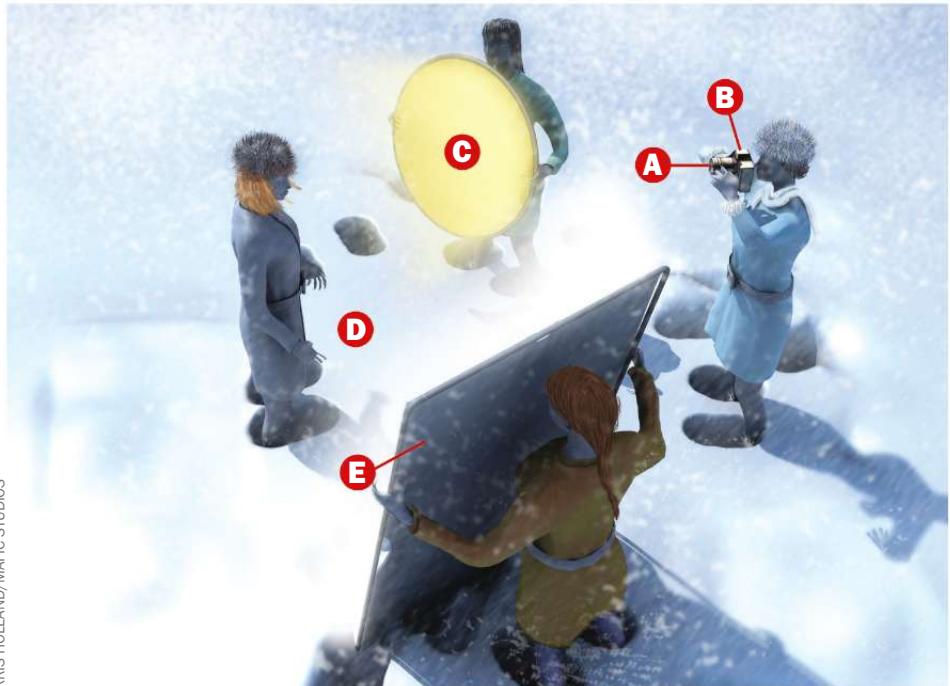
• **Overcast sky.** This was Anna's main light, and its dense cloud cover provided a softbox-like source that was large, bright, and very diffuse.

HOW TO LIGHT WITH REFLECTORS

SIMPLE  COMPLEX

To light a model in 2 feet of snow on a farm in Orchard Park, NY, pro photographer Rhea Anna relied solely on reflectors. She started by mounting a Canon 24-70mm f/2.8L EF lens (A) on her Canon EOS 5D (B). Her main light was the overcast sky above, and her fill light was cast mostly by the snow below (D). To add punch and directionality to the lighting, she placed a white, 42x72-inch F.J. Westcott Scrim Jim reflector (E) to one side of the model, and to warm up the ambient light's heavy blue cast, a 32-inch gold Photoflex LiteDisc (C) on the opposite side. Nonelectrical reflectors are perhaps the best, safest, and often only lighting tool for photographers working in and around snow or water in all its forms.

THE GEAR



KRIS HOLLAND/MAFIC STUDIOS

Snow. Opposite the sky, the blanket of white snow on the ground served as a similarly large panel of light, a natural reflector. Notice how the model's chin appears lighter than her cheekbones? It's the rapidly falling-off fill light cast up by the reflective snow.

White Reflector. Anna's large, soft, natural light sources were a little too diffuse, flat, and lacking in contrast. "To add some life, I used a white reflector, but not positioned too close. It gave the scene a brightness and the light

Exposure data:
1/60 sec
at f/2.8,
ISO 100.

a directionality," she explains. "What would have been flat and lusterless now had a slight contrast and punch."

Gold Reflector. Another problem with using an overcast, winter sky as your main light? Its typically blue color temperature. Cool-toned light can be lifeless, wan, and unflattering to portrait subjects. Anna warmed hers up with a soft, nonmetallic, gold reflector. Its warmth contrasted nicely (and subtly) with

the cool, blue-toned background, and it goosed color saturation, particularly of the model's strawberry blond hair.

The best thing about reflectors? They're easy to use. "We had an ambitious shot list that day. I didn't have time to deal with lightstands and artificial sources," Anna says. "I handed my assistant and stylist each a reflector, and in less than 15 minutes we were done and on to the next shot." —Peter Kolonia



AFTER

RAW 101

How to process and save your RAW files, from start to finish

SHOOTING RAW can be daunting, especially if you don't know what to do with the files when you get them out of the camera. Unlike JPEGs, which are "cooked," RAW files contain a ton of data that must be manipulated before you can edit your image and make it small enough to be e-mailed and viewed by family and friends.

Despite the extra work, RAW files are worth it. They let you control white balance, saturation, and contrast as if you were doing so while shooting. Because RAW files utilize lossless compression, you should be able to get better detail and sharpness, without artifacts, when you enlarge them. Finally, you'll have more of a

chance of recovering what seems like lost shadow and highlight detail in your picture.

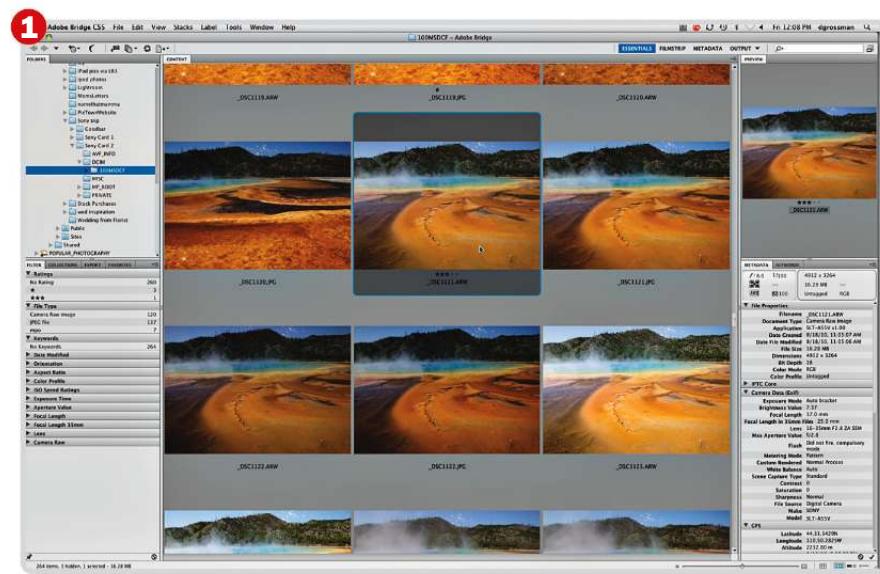
Here are the basics on how to open, convert, and save your RAW files, from start to finish. These instructions are for Adobe Photoshop CS5, but will work similarly in previous versions and in Elements. —*Debbie Grossman*



F.Y.I.

MOST CAMERAS GIVE YOU THE OPTION OF SHOOTING RAW + JPEG. Doing so is not a bad idea if you have lots of pictures you'll want to share quickly online. Because RAW files are larger, shooting both uses up memory card and hard drive space faster. Devotees of RAW often opt to forego the JPEGs and instead use a program dedicated to RAW, such as Apple Aperture or Adobe Lightroom, to quickly process their RAW files into JPEGs.

Click the word **Auto** to see if you like what ACR does with your image automatically.



Step 1

BECAUSE RAW FILES must be converted before you can edit them, opening a RAW file from Adobe Bridge automatically brings up Adobe Camera Raw (ACR), the conversion plug-in that comes with Photoshop. **To start the process, simply find your image in Bridge and double-click on it.**



Step 2

THE MOST IMPORTANT tools for conversion are in the Basic tab of Adobe Camera Raw, which appears by default on the right side of your screen. **Adjust the sliders to get the look you want. Start by adjusting Exposure to set the white point and Blacks to set the black point.** If you don't like your image's white balance, use the pulldown menu to choose a preset or adjust the Temperature and Tint sliders. Then add Clarity for more midtone contrast, and Vibrance if you want more intense colors.

Step 3

NOW GO TO the Detail tab.

Although JPEG sharpening happens in the camera, RAW files need sharpening applied during conversion.

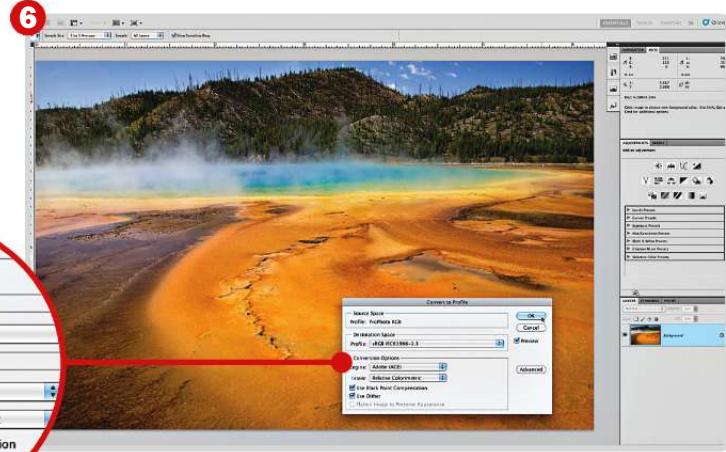
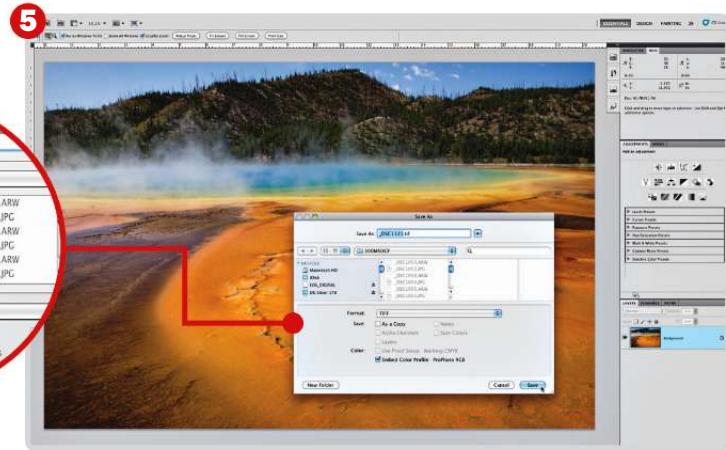
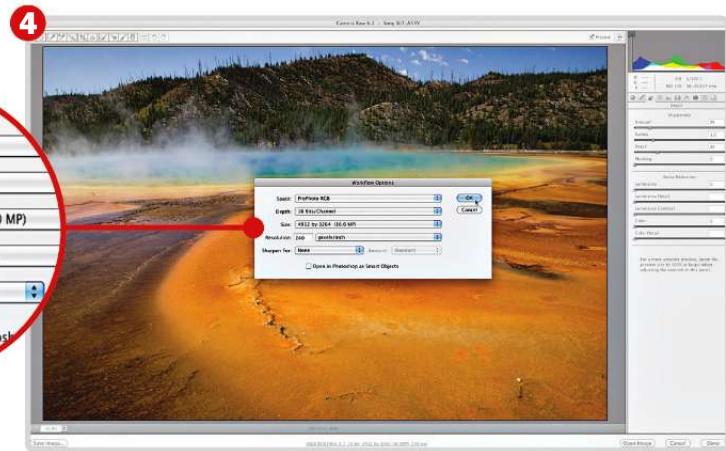
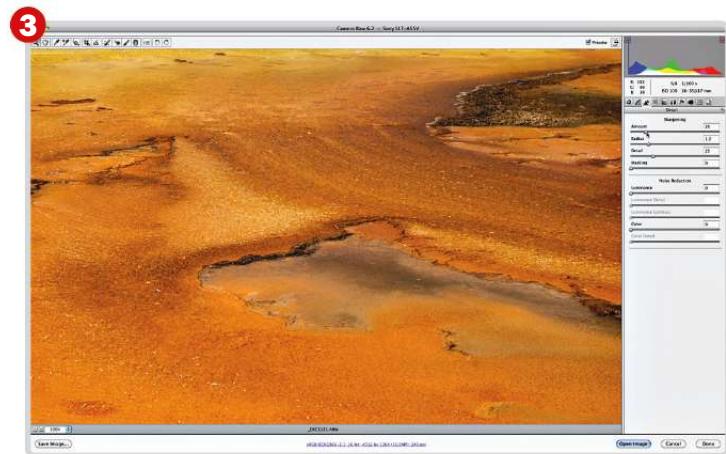
ACR automatically adds a little sharpening—adjust it as needed. The program also does a little noise reduction by default. Images like this one, shot at ISO 100 in bright daylight, typically need no noise reduction, so it's turned off here.

For more on sharpening in ACR, see Software Workshop, September 2010.

Step 4

TO CHOOSE the settings with which you'll open your file, click on the link running along the bottom of the screen: it will bring up a dialogue box. Because you want to create the highest quality file possible, with the most information contained in it, **choose the ProPhoto RGB color space, a bit depth of 16 Bits/Channel, and your camera's maximum megapixel amount.**

Click OK. Then hit the Open Image button to bring the file into Photoshop.



Step 5

NOW SAVE YOUR FILE—this will be your master file. **Go to File > Save As, and choose Format:**

TIFF. The default TIFF options are fine. Do all of your image editing and retouching, and continue to save as you work.

You'll lose your layers when you save your file as a JPEG, so do so only when you're finished editing.

Final Step

WHEN YOU WANT TO print or share your file, prep your master file first.

For printing, resize it to the print size and then sharpen. For e-mailing, shrink it and then sharpen. Finally, before you e-mail, change the color space to sRGB by going to Edit > Convert to Profile. Choose sRGB as your Destination Space and click OK.

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Surf's Up

Treat surfing imagery like a seascape



CONVENTIONAL SURFING photography is neither easy nor inexpensive. Photographers who shoot from the water deal with clumsy underwater housings while fighting buffeting waves; those who set up on the beach require heavy and expensive tripod-mounted tele rigs.

To counter back-lighting, Harris dialed in +1.33 stops of exposure comp. Final exposure: 1/6400 sec at f/1.4, ISO 100.

Charles Harris, a travel photographer based in Raleigh, NC (www.charlesharris.com), uses a different approach. His photo of a surfer at Luffenholtz Beach in northern California shows that by combining elements of landscape, portrait, and sports photography, you can capture surfing's man-versus-

nature ambience with a simple standard focal-length lens, while not getting your feet too wet.

The hardest part? Locating a beach as stunningly beautiful as Luffenholtz. To find his, Harris did the obvious: He asked a surfer. Derek Bond, pictured here, suggested several beautiful beaches



near his Trinidad, CA, home, and this picture is the result. Surfers can also tell you when to expect the largest waves, when the beach won't be crowded with other surfing buffs, and even when the quality and direction of the light is best.

To effectively combine the

figure and landscape, Harris also had to find an appropriate vantage point. "I scrambled up a slippery rock ledge in order to get an overhead view," he says. "It didn't hurt that at just about that moment, storm clouds came rolling in off the Pacific."

—Peter Kola

Step 1

Scout locations. Ask surfers, or search Flickr and other online imaging resources, for beautiful beaches near you. The best light is usually early or late in the day. "Some of the best photo opportunities are during the brief periods between changes in weather," Harris suggests.

Step 2

Gather your gear. To capture an expansive seascape, you'll need a wide-angle lens. As always when shooting near sand and surf, protect your rig from both with, at the minimum, zipped plastic bags. Bring lens cloths and towels to dry camera body and lens surfaces.

Step 3

Pose your model. Don't have a rock for your subject to pose on? Get a different dramatic effect by placing your camera as low as possible and shooting up at your model, while including wide swaths of dramatic background.

Step 4

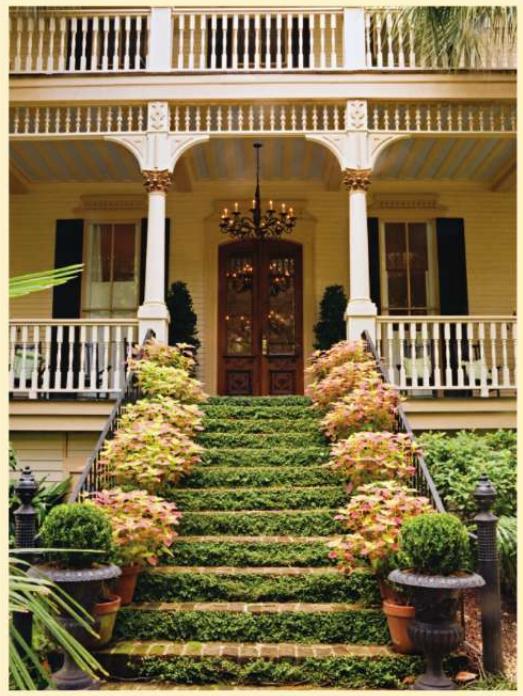
Shoot a lot. Change angles and composition by moving between shots. For this image, Harris shot 100 pictures, each different, across a very brief 12-minute period.

Final Step

Tweak the image in postproduction. Harris gave this an abstract, metaphorical twist with a sepia-like desaturation done in Lightroom. He also emphasized depth by selectively darkening the shadows and lightening the highlights of the rolling waves and cloud formations. A final vignetting of the corners helped focus attention on the surfer (be careful not to overdo this).

SAVANNAH, GEORGIA

MAY 20-22, 2011



© Alan Tobe



© Bill Durrence

Under the live oaks, from park benches in wrought iron-lined city squares to the shore that laps Tybee Island beach, Savannah welcomes you with the hospitality of an old friend. With camera in hand and Nikon professional photographers Bill Durrence and Dave Black at your side, you will capture the charm and natural beauty of this great American treasure. With its century-old architecture, low-country landscape, and historic sites and waterfront, Savannah offers something for every inspired photographer.

Savannah is a city of surprises, and this trek will not disappoint. Keep your eyes peeled for American alligators that lurk in the tidal rivers at a wildlife refuge but also keep your lens pointed upward as osprey, great horned owls, and even bald eagles fly above the marsh.

We will journey back in time at Bonaventure Cemetery, built on the grounds of an old plantation and once considered America's most haunted. Capture the remarkable moss-covered graves which date back over two centuries. Fill your lens with the majestic oaks draped in Spanish moss, and take shot after shot of the afternoon light as it filters through the branches. As your imagination runs wild, let your creativity do the same.

Frame the sights of the city's historic district as night falls. The mentors will share their expert advice on evening

photography and assist you in capturing those quintessential Savannah images.

Take to the beach and the Tybee Island Lighthouse. Striped in black and white, the lighthouse will make a striking focal point in your photos as the sun rises over the Atlantic.

It is hard to escape history in Savannah, especially at Fort Pulaski, which protected this port city for more than a century. This historic fort begs to be photographed. Use it as a backdrop for our model shoot or just wander the grounds to capture the signature brick architecture. Look for sunlight filtering through the prison's iron bars, or the reflection of the fortress in the moat.

Enjoy an evening ride on a riverboat and photograph the enchanting southern city from the water. The highlight of your trek will likely take place after dark as mentor Dave Black instructs you on the art of light painting. This is a technique that will clearly set your portfolio apart.

One of America's most treasured cities, Savannah offers something for the novice as well as the seasoned photographer. You will leave more polished and eager to bring your new skills to every image you take. Join the Mentor Series in Savannah for an experience you will value for a lifetime!

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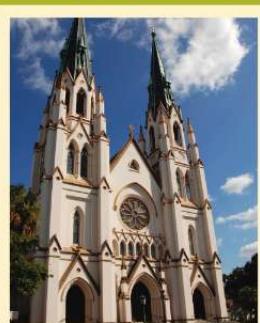
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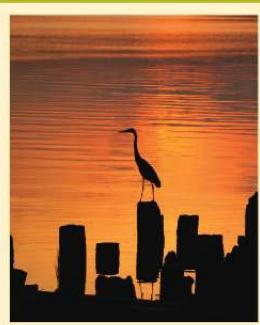
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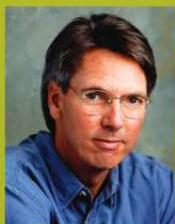
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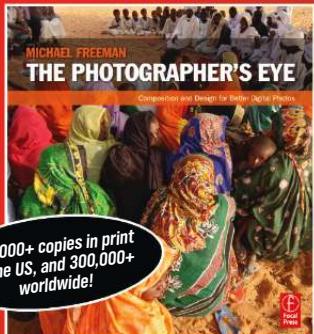


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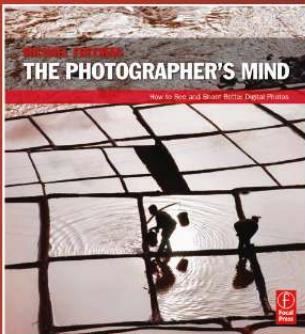


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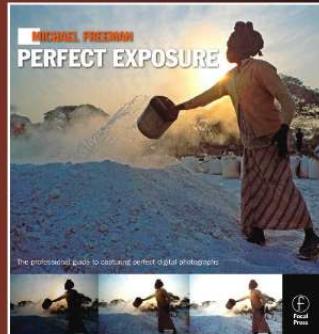
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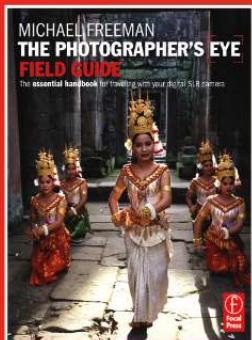
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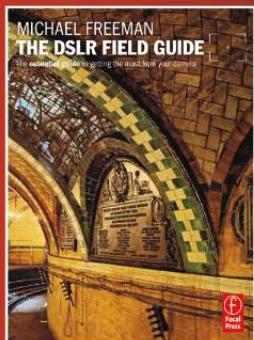
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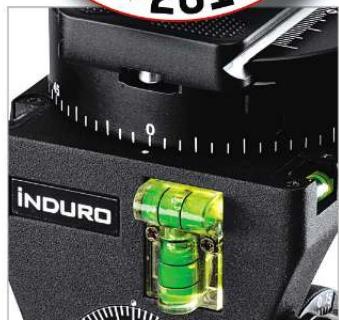
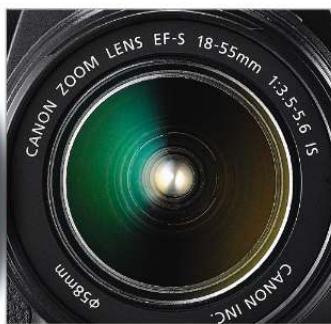
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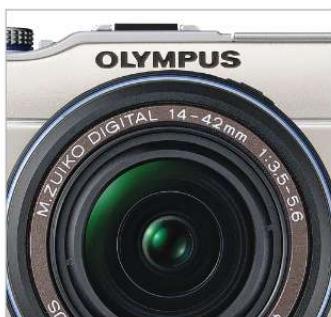
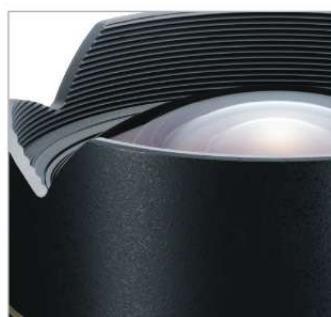
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THE MOST INNOVATIVE, MOST USEFUL, AND HANDS-DOWN COOLEST NEW GEAR WE'VE TRIED THIS YEAR. PLUS, NOMINEES FOR CAMERA OF THE YEAR—TO BE AWARDED IN JANUARY 2011.

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CAMERA
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CANON EOS REBEL T2i

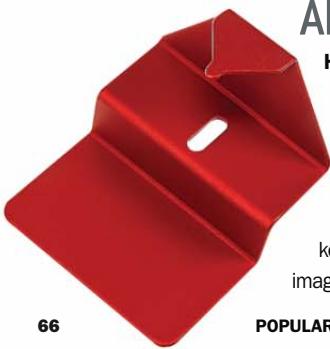
NO INDIVIDUAL SPEC of the EOS T2i represents a breakthrough. But put all the specs together—18MP capture, 1080p HD video with stereo sound input, top ISO of 12,800, very fast autofocus at all light levels—and slap a sub-\$900 price tag on it (with image-stabilized kit lens), and you have what might be considered the breakthrough digital camera of the past decade. Who'd

have thought that we would see the T2i's level of imaging power in a camera priced less than the original 6MP EOS Digital Rebel of 2003? The T2i's Excellent overall Image Quality rating from the Popular Photography Test Lab sealed its nomination as 2010 Camera of the Year.

\$900, street, with 18-55mm f/3.5-5.6 Canon EF IS lens; www.usa.canon.com

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ACRATECH VIEWING ANGLE GAUGE



How's this for low-tech: No moving parts, no electronic components, doesn't take a battery. The Viewing Angle Gauge simply attaches to the screen of a laptop and works something like a gun sight: Line up the tab with the hole and your screen is now perpendicular to your line of sight. This helps keep screen brightness uniform for more accurate image editing on the go. **\$15, street; www.acratech.net**

THE BIG EDITOR GETS BETTER

ADOBE PHOTOSHOP CS5

We couldn't resist giving Photoshop's latest edition a POP Award.

With loads of little improvements that make everyday tasks easier, such as the ability to select multiple layers

at once and the addition of the Paste in Place command, it just works better. Add the new Content-Aware Fill that makes the Healing Brush really sing, plus a truly serious new HDR creator, and this upgrade's clearly worth it. **\$660 (\$190 for upgrade), street; www.adobe.com**



MAGIC'S BACK AT THE MIDLEVEL**CANON EOS 60D**

Canon's midrange EOS models often seem to get upstaged by the affordable Rebels on one end and the awesome 1D-series supercameras on the other. Not this time around. The 60D, not tested at press time, has 18MP capture, 1080p/30-fps HD video with stereo sound input, fast-for-the-category 5.3-fps burst rate, robust battery capacity, wireless control of external flash units via the pop-up unit, and a built-tough body.

But we particularly like the fully articulating 3-inch LCD screen, a feature that should be on more cameras in this class.

\$1,100, street, body only;
www.usa.canon.com

**LITTLE BIG LIGHT****BRONCOLOR MINICOM 160**

One of the most compact monolights to put out 1200 watt-seconds, it weighs less than 10 pounds, has one of the industry's brightest modeling lights (650 watts) and is compatible with a large range of Broncolor accessories, including portable power packs. The RFS version offers a built-in radio-remote receiver that can be triggered by Broncolor transmitters. You can also set power levels via Mac- or PC-based studio software. **\$2,280, street;** www.bronimaging.com

**RAW POWER SPECIALIST****APPLE APERTURE 3**

With facile RAW processing and organizing, Aperture is unique among RAW workflow software in that it also has great features for everyday sharing. It lets you upload to Facebook or Flickr easily,

sports some of the best face-recognition and geotagging tools, and has built-in book-creation software that's a pleasure to use. Best of all, not only does it organize your video clips, but it also lets you trim and add them to multimedia slide shows. **\$160, street;** www.apple.com

**LENS DISTORTION WE LOVE****CANON EF 8-15MM F/4L FISHEYE USM**

If you're ready to cast straight lines to the winds in favor of a wildly wide-angle view, here's your lens. Currently the world's widest-angle fisheye zoom, this lens produces a 180-degree field of view in a circular image at 8mm when used on a full-frame EOS model, making it a tricky proposition to keep your feet out of the picture. (On APS-C-sensor models, you can use it as a corner-to-corner full-field fisheye.) The L designation signifies pro-level optics and construction. **\$1,400, est. street;** www.usa.canon.com

**SIMPLY SOPHISTICATED COMPACT****CANON POWERSHOT S95**

The S95 is like an advanced compact disguised as a family point-and-shoot. It has lots of subject modes, including Smart Auto (which decides what auto mode to use), face and blink detection—all the usual consumer-type features. But it also has the bigger-than-usual 10.1MP sensor and fast processor of big brother G12, RAW + JPEG capture, and control ring for full manual-exposure control. And the lens opens up to f/2 on the wide end. **\$400, street;** www.usa.canon.com



THE BEST OF THE BEST

HIGH-PRECISION HEAD



INDURO PHQ TRIPOD HEADS

COMBINING THE anything-goes freedom of a ball head with the calibrated repeatability of a pan/tilt type, Induro's PHQ1 and larger PHQ3 tripod heads are entirely new beasts. Precisely adjustable across five different axes, they simultaneously offer unusual freedom and unusual control: five spirit levels

and seven scales, including a calibrated quick release cleat. Their pan/tilt levers fold down for compact transport, and both heads are lightweight and compact, especially given their maximum loads of 25 and 35 pounds. PHQ? It stands for Pan Head Quintaxial, of course.

\$315 and \$395, street; www.indurogear.com

STUDIO LIGHTING TO GO

ELINCHROM QUADRA RANGER

This battery-powered location or studio strobe offers both convenience and power. The heads and battery packs are small, but they pump out a lot of light (to 400 Ws), come in standard or high-speed flash durations, take a number of light modifiers and accessories, and, with an adapter, accept the full line of Elinchrom Ranger lighting tools. A built-in EL-Skyport radio receiver can fire the Quadra head wirelessly and even let you set flash output from the camera. **\$2,200, street** (**S Pro Set**); www.elinchrom.com



A NINJA DIFFUSER

LIGHTSPHERE COLLAPSIBLE

Gary Fong's original Lightsphere is one of the best known diffusers for shoe-mount flashes. Lightweight and easily attached, it has one glaring flaw: With rigid side walls, it eats up too much camera bag space. So Fong created the Lightsphere Collapsible, which does everything the original did, but, soft-walled, folds down down to 1.5 inches. It can also be collapsed around the flash head for harder, direct flash. **\$58, street; www.garyfongstore.com**



ADAPTABLE BABY**LENSBABY COMPOSER WITH TILT TRANSFORMER**

We expected Lensbaby to offer its Composer Creative Effects lens for ILCs, but we didn't expect that you'd be able to swap out the optics for any Nikon F-mount lens. You can even manually adjust the aperture on G-series lenses. So far, it's available in Micro Four Thirds and Sony NEX mounts. **\$350, street, with Focus Front, or \$250, street, Tilt Transformer only; www.lensbaby.com**

**WHEELY EASY TO HAUL****KATA PRO-LIGHT FLYBY-76 PHOTO ORGANIZER**

This big soft-sided case, clearly aimed at pros, can fit up to four DSLR bodies, 10 lenses (even a 600mm), and other accessories. There's a compartment for your bulkiest laptop and straps for a tripod. What we like most: You can slip it off its wheeled trolley (included) and carry it over your shoulder. And it doesn't weigh much—completely empty, and without the trolley, about 5 pounds. **\$285, street; www.kata-bags.com**

**THROUGH A GLASS, LESS DARKLY****HOYA HRT POLARIZER**

Polarizers, in addition to controlling reflections and darkening blue skies, also act as neutral-density filters—which some shooters like for slowing down exposures (think moving water). For those not as thrilled by this side effect, the Hoya HRT provides more

light transmission than the usual polarizer, about 1/3-stop, for a little more speed. The filter also uses UV-absorbing glass, so it's like getting two filters in one.

\$60-\$225, street, depending on size; www.thkphoto.com

**SUPERPAN CAM STAND****GIGAPAN EPIC PRO**

We like a big picture, and with the GigaPan you can make really big pictures. Essentially a smart, robotic version of a panoramic tripod head, it shoots and stitches giant multi-shot images. The original version, made famous by that super-high-resolution photo of President Obama's inauguration, could hold only a compact, but this one handles a DSLR and lens combo weighing up to 10 pounds. **\$895, street; www.gigapansystems.com**

**A HANDY HANDLE****MANFROTTO 324RC2 & 327RC2 JOYSTICK TRIPOD HEADS**

These tripod heads place the camera closer to the ball than conventional pistol-grip style ballheads. The result is much easier aiming, with just slight wrist motions. In two sizes capable of supporting from 7.7 to 12.1-pound loads, the heads' joystick handles release the locking mechanism much more easily than other pistol grips. They also offer a drag control, left- or right-handed operation, and a bubble level. **\$125 and \$190, street; www.manfrotto.com**



THE BEST OF THE BEST

FINE EXAMPLE OF ITS ILC



CAMERA
OF THE
YEAR

AWARD
NOMINEE

PANASONIC LUMIX DMC-G2

THE G2 ACED our three-way interchangeable-lens compact shootout back in July 2010 on the strength of well-balanced performance across the board: In our Test Lab it out-resolved all other ILCs, delivered amazingly accurate colors, and provided the speediest contrast AF we've seen, making it the best bet for continuous AF while recording 720p video. Though some might not

take to the G2's touchscreen controls (such as touch shutter, which fires when you tap the subject on the LCD screen), you still have to love the camera's dedicated control buttons and dials. Representing a distinct maturing of the ILC concept, it truly deserves nomination for 2010 Camera of the Year. **\$650, street, with 14-42mm f/3.5-5.6 lens; www.panasonic.com**

CLASSIC GLASS UPDATE

NIKON AF-S 70-200MM F/2.8G ED VR II

Nikon's 70-200mm f/2.8

full-frame VR lens of 2003 was going to be a tough act to follow, but this new G version with VR II upstaged it handily. With two more elements of ED glass, plus Nano Crystal Coating, the new optic achieved superior SQF scores at all focal lengths except 200mm, where it was only slightly lower than the older one. Distortion was very tightly controlled, and the VR II delivered 3 to 4 stops of extra handholdability. Worth the price? You bet.

\$2,170, street; www.nikonusa.com



FAST. WIDE. SHARP.

NIKON AF-S 24MM F/1.4G ED

Speed demons, rejoice. This full-frame extrawide proved sharp (Excellent SQF scores), with little distortion (Slight barrel), and close focusing (to 9 1/4 inches). The M/A focus mode lets you manually

touch up the focus while in AF. Beautifully made, well sealed, with silent autofocus, it should last a lifetime, barring dropping it in the lake. Use a Nikon DX-sensor (APS-C) camera? Here's a nice 36mm-equivalent superspeed wide-angle for you.

\$2,200, street; www.nikonusa.com



POCKETABLE BUT POWERFUL

PANASONIC LUMIX DMC-LX5

Rumors of the demise of the advanced compact are quite exaggerated—witness the LX5. It uses a big-pixel 10.1MP sensor, has a wide (24–90mm equivalent) and fast (f/2–3.3) zoom lens, and employs a new souped-up autofocus system for noticeably less shutter lag. And, should you want to view at eye-level rather than compose on the 3-inch LCD, the LX5's hot-shoe accepts the electronic viewfinder of the interchangeable-lens compact GF1. **\$445, street; www.panasonic.com**



FOCUS FINAGLER

ONONE FOCALPOINT 2

Adding realistic-looking lens blur is a complicated project in Adobe Photoshop, so we love OnOne FocalPoint 2. Whether you're simulating selective-focus, fast-aperture, or tilt-shift lenses, it lets you create looks that you didn't or couldn't make in the camera. How? With a unique tool called the Focus Bug, which can quickly adjust all of the blur's characteristics. This newest version also lets you control highlight bloom and even has a lens simulator that imitates bokeh. **\$140, street; www.ononesoftware.com**



AFFORDABLE PEN PAL

OLYMPUS PEN E-PL1

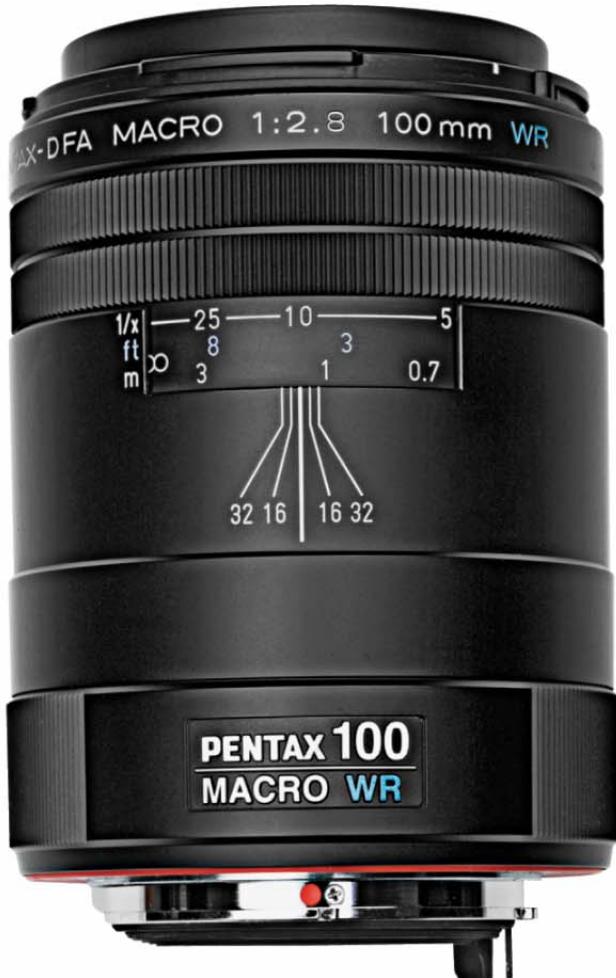
With its noise ratings of Low or better up to ISO 1600, respectable resolving power for a 12.3MP sensor, and Excellent color accuracy, the E-PL1 is the best bang for the buck you can get from the Olympus Micro Four Thirds line. It's also the only one with a pop-up flash. We love its rangefinder-like body design, while beginners should like the easy-to-use Live Guide mode and fun Art Filters. **\$600, street, with 14–42mm f/3.5–5.6 lens; www.olympusamerica.com**



FOR CLOSER CRITTER SHOTS

PENTAX-D FA 100MM F/2.8 WR MACRO

Nature shooters who, whether they like it or not, find themselves working in rain or mist or just plain damp will appreciate this Pentax macro tele, with WR weather-resistant sealing in its metal construction. Photos of tiny critters and baby blossoms will be sharp, too, as the lens posted Excellent SQF ratings to 16x20, and actually focused a bit tighter than the advertised 1:1. Manual focusing was as smooth as silk—important in close-up work, where autofocus isn't necessarily your friend. **\$620, street; www.pentaximaging.com**



FOR A NEW YEAR, RESOLUTION!

PENTAX 645D

We were starting to think it was vaporware, but Pentax has finally gone into production with its 40MP medium-format camera, and it's coming to the U.S. Its 3.3x4.4cm Kodak CCD sensor, with 1.7 times the area of a full-frame DSLR sensor, promises both huge resolution and wide dynamic range. The heavily sealed body accepts most existing Pentax 645 lenses, with something like a 1.4X lens factor. And yes, we hope to get a testable model soon. **\$10,000, street, body only; www.pentaximaging.com**



THE BEST OF THE BEST

UNIQUE CAMERA-SWAP SYSTEM



RICOH GXR

RICOH HAS ALWAYS been known to follow its own path with its digital cameras. So we weren't shocked when the company introduced the GXR interchangeable camera-unit system this year. While each of the units we tried so far has its quirks, the system has plenty of potential, and Ricoh continues to introduce new modules for it. The system also

allows the use of multiple sensor formats—compact up to APS-C. We love the camera body and Ricoh's straightforward yet sophisticated controls and menu system, which should be a model for other makers of ILCs and compacts.

\$500-\$947, street, depending on camera unit purchased with the camera body; www.ricoh.com

BEGINNER'S LUCK

PENTAX K-x

The K-x does almost everything a little bit better than the competition in this cutthroat price category: good noise suppression at higher ISOs, burst rate of 4.7 fps (the best in its class), 720p HD video. Its Pentax K-mount can accept decades of lenses, including some inexpensive optics—nice for the student or budding hobbyist. And, with any lens, you get image stabilization via the sensor-shift system. **\$530, street, with 18-55mm f/3.5-5.6 Pentax lens; www.pentaximaging.com**



WET-WEATHER FRIEND

PENTAX OPTIO W90

The umpteenth generation of Optio underwater compacts (forgive us for losing count) again shows why Pentax is the perennial leader in this category. Submersible (to 20 feet) freeze proof (to 14 degrees F) and droppable (up to 4 feet), the W90 also has a unique

array of three LED lamps around the lens that let you take shadow-free macro shots down to 1cm from the lens. **\$220, street; www.pentaximaging.com**





ATTENTION GRABBER

SHUTTERBUDDY

The hard part of shooting infants? Getting eye contact. Snaring and holding a baby's attention for longer than a second or two can often be impossible. That's why we like the ShutterBuddy. Like an oversized lens shade, it attaches to the front of your camera (or camcorder) where its checkerboard surface grabs and holds an infant's attention long enough for you to get some shots. Relying on the latest in infant vision research, the ShutterBuddy lets you walk around the room, with Junior watching you. Now, if only he would smile. **\$15, direct; www.shutter-buddy.com**

MULTITASKING MODIFIER

ROGUE FLASHBENDER

Conventional shoe-mount flash modifiers tend to be one-trick ponies. They either soften, aim, bounce, shape, or block light. Expolmaging's Rogue FlashBender positionable reflectors do all these things and more. Attach a single FlashBender to a shoe-mount flash head and bend, roll, twist, or fold it to act as a bounce card, snoot, barn door, or gobo. Available in three sizes, FlashBenders will easily wipe clean when smudged, fit in your bag's smallest pocket, and weigh next to nothing. **\$30-\$40, street, depending on size; www.expolmaging.com**



FLASH POWER BROKER

QUANTUM INSTRUMENTS TURBO BLADE

Quantum's latest Turbo external flash battery is its smallest yet, weighing less than a pound and measuring just 1.4 inches high. But the Blade can provide up

to 400 full-power pops per 1.5-hour charging cycle, or thousands at fractional power, with extremely fast recycle times. And it incorporates an LED "fuel gauge" that shows how much power you have left in 25% increments.

\$444, street; www.qtm.com



HORIZON EXPANDER

SIGMA 8-16MM F/4.5-5.6 DC HSM

The widest orthoscopic (non-fisheye) zoom yet made, this 12-24mm equivalent for APS-C sensor DSLRs also focuses to 9.4 inches for some wild and crazy near/far perspective effects. Weighing surprisingly little (1.3 pounds) for this type of optic, the lens has a permanently affixed petal lenshood for protection against stray light—and fingerprints on that curvy front element. **\$700, street; www.sigmaphoto.com**



FAB FOR FILMMAKING

SLIK PRO 500 HD TRIPOD

If the **HD** in its name reminds you of video video, it's no accident. This tripod/head combo is designed for DSLRs with HD video capability. Its legs are a superlight aluminum-magnesium-titanium alloy, with foam collars for easy handling, and our favorite leg locks, the quick-action, flip-tab type. It's the SH-736HD head that makes this a POP Award winner, though. Its pan and tilt actions have separately adjustable drag controls, for movements that are loose and quick, or achingly slow. Either way, thanks to the head's fluid effect action, the movements are ultra smooth. **\$150, street; www.thkphoto.com**



THE BEST OF THE BEST

TECH TRICK DONE WITH MIRROR



**CAMERA
OF THE
YEAR**

**AWARD
NOMINEE**

SONY ALPHA 55

VIDEO CAPTURE in DSLRs is a really cool idea—until you try to focus while shooting it. The footage may be fine, but there's that mirror in the way of the sensor. Flip

the mirror up for video, and you lose better-performing phase-detection autofocus. So Sony adapted some old tech—a nonmoving, semitransparent mirror—to allow some light

to go to the AF sensor during shooting. It's a workaround that works, and it also gives you up to 10-fps still shooting.

\$750, street, body only; www.sonystyle.com

A BETTER FAST TELEZOOM



SIGMA 70–200MM F/2.8 EX DG OS HSM

Sigma's new fast, constant-aperture, full-frame telezoom workhorse adds more than Optical Stabilization. A whole new design from the older non-OS version, it features two elements of Sigma's FLD glass that mimics the aberration-taming qualities of fluorite glass. For all that, the new lens is more compact than the older one. Stay tuned for a full test report soon.

\$1,700, street; www.sigmaphoto.com

PRO LOADED BAG



TAMRAC ULTRA PRO 17

Considering all the gear you can fit in this shoulder bag, it's surprisingly slim. It will appeal to pros and enthusiasts who routinely carry two outfits—it fits two pro DSLR bodies with zooms attached, additional lenses and other accessories, and a 15.4-inch laptop. Lots of padding, a great organization system, and a removable rain cover add to its charms. Want to get your camera fast? A zipper at the top lets you open the bag away from your body for a quick draw. **\$150, street; www.tamrac.com**

STEADY BARGAIN

TAMRON SP 70–300MM F/4–5.6 DI VC USD

It's awfully hard to find fault with this lens, which is why our test report didn't. A full-framer, it scales up to a 105–450mm equivalent on APS-C sensor DSLRs. Distortion was very well controlled, AF was nearly silent, and Vibration Compensation gave testers an average of 4 extra stops of handholdability—super. **\$450, street; www.tamron-usa.com**

NEW CHOICE IN FAST ULTRAWIDES

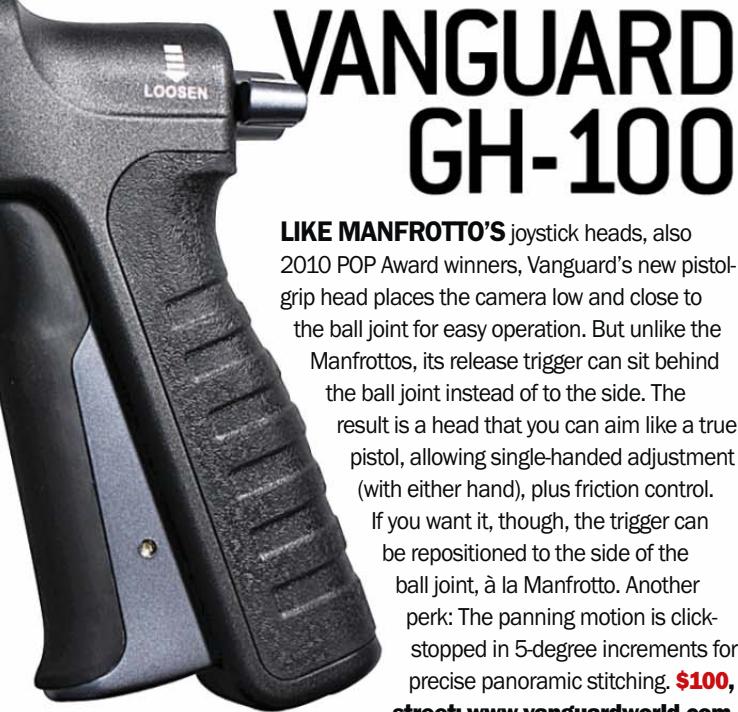
TOKINA AT-X 16–28MM F/2.8 PRO FX

Constant-aperture f/2.8 ultrawide-angle zooms are workhorses for pro and enthusiast shooters alike, so this brand-new Tokina full-framer is big news. It has a silent, high-speed DC autofocus motor and overall fine construction. But the bigger news is its remarkable lack of distortion and light falloff. Read all about it in our test on page 94. **\$850, street; www.thkphoto.com**





PISTOL-PACKING TRIPOD HEAD



VANGUARD GH-100

LIKE MANFROTTO'S joystick heads, also 2010 POP Award winners, Vanguard's new pistol-grip head places the camera low and close to the ball joint for easy operation. But unlike the Manfrottos, its release trigger can sit behind the ball joint instead of to the side. The result is a head that you can aim like a true pistol, allowing single-handed adjustment (with either hand), plus friction control. If you want it, though, the trigger can be repositioned to the side of the ball joint, à la Manfrotto. Another perk: The panning motion is click-stopped in 5-degree increments for precise panoramic stitching. **\$100, street; www.vanguardworld.com**

DYNAMIC RANGER

UNIFIED COLOR 32FLOAT

Unified Color does the best job creating high-dynamic-range images that we've seen yet. And with its 32Float plug-in, you can use all those tools from within Photoshop. That means you get to take advantage of Photoshop's built-in tools to merge your files, then stay in 32-bit mode and use the plug-in to convert your file. It's the best of both worlds, and a money-saver, too. **\$100, direct; www.unifiedcolor.com**



CLEVER COLOR BALANCER

X-RITE COLORCHECKER PASSPORT

We love the ColorChecker for taking the guesswork out of color correction. Shoot this pocket-sized target, then use its included software to copy its color corrections automatically across all of your images.

You can choose the relative temperature of your white balances, and the standard 24-patch color chart helps you create DNG profiles of your camera in any light source—particularly useful if you do a lot of studio shooting. **\$99, street; xritephoto.com**



A 2009 POP AWARD WINNER, BACK FOR MORE

CAMERA OF THE YEAR
AWARD NOMINEE

NIKON D3s

When the D3s was introduced at the very end of 2009, we took the rare step of giving it a POP award before running it through our Test Lab. The reason: The D3s was the first camera to break through the ISO 100,000

barrier. Combined with the proven low-light autofocus it inherited from its predecessor, the D3, we knew this would be the ultimate rig for the low-light shooter, not to mention the action shooter craving its 9-fps burst rate for highest-quality JPEGs. In our February 2010 test, it proved to be everything we expected, and more. Its nomination for 2010 Camera of the Year was a no-brainer. **\$5,200, street, body only; [www.nikonusa.com](http://nikonusa.com)**



COSTA RICA

Pura vida is the Costa Rican all-purpose greeting for hello, goodbye, and something like "This is living!" And *pura vida* is just what North American nature photographers interested in an exotic, offshore destination should say to Costa Rica.

IT OFFERS no-jetlag access, lots of drive-yourself or guided shooting junkets, eco-lodges galore, mild weather year-round, and a nonstop variety of subjects in great light. The country's mountainous terrain makes for a plethora of photo opportunities—cloud forest, steamy coastal jungle, pine forest, and semi-desert scrub land, to mention a few.

Follow the Big Four

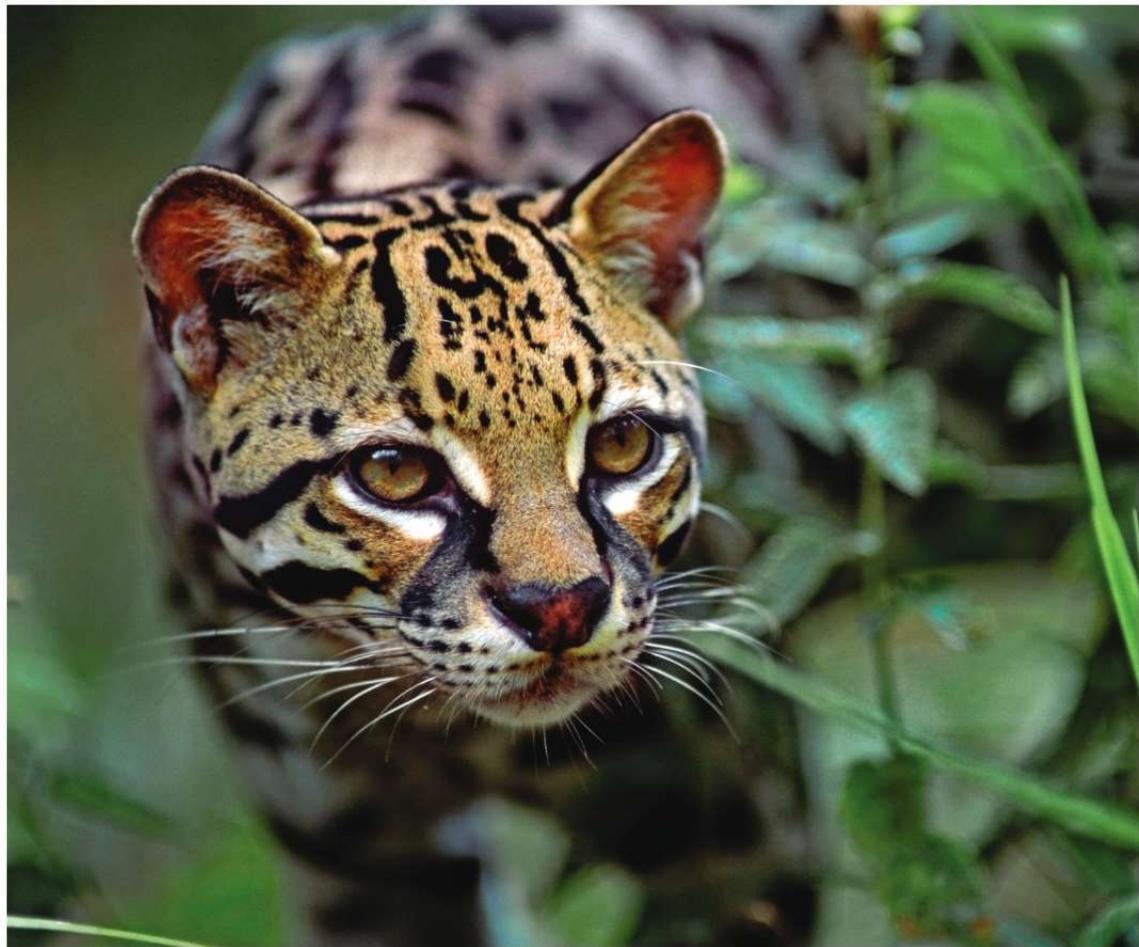
Organize your tour to capture birds, beaches, wildlife, and volcanoes by leapfrogging from one nature lodge to the next. Follow this strategy over a selected itinerary, and you'll return with memory cards stuffed full of rewarding photographs.

The best lodges have websites describing their photo attractions (see sidebar, page 149), including species lists, weather, and even

**SCARLET
MACAWS,
OSA
PENINSULA**
Fitzharris
followed
birds by
panning his
Canon EOS
5D with
500mm f/4L
Canon EF IS,
on a tripod
with gimbal
head.
Exposure:
f/8 at 1/250
sec, ISO 640.

Text and photos by Tim Fitzharris







**CAPTIVE
OCELOT, ZOO
AVE NEAR
ALAJUELA**
**Fitzharris
shot with a
Canon EOS 3
and 500mm
f/4L Canon
EF IS lens
on a tripod;
f/5.6 at
1/60 sec on
Fujichrome
100.**

**PLAYA
CARILLO,
GUANACASTE**

**Fitzharris
used a split
neutral-
density filter
to balance
exposure of
the sky and
beach.
Canon EOS
5D and
24-105mm
f/4 Canon EF
lens on a
tripod; 1/20
sec at f/20,
ISO 200.**

**BOAT AT
PLAYA
PELADA**
**Fitzharris
used the
same gear
as the
other beach
shot, with
exposure of
f/16 at
1/250 sec,
ISO 400.**

**GREEN
VIOLET-EAR
HUMMING-
BIRD NEAR
SAVEGRE**

**Shot with
hummingbird
feeder
repositioned
near blooms.
Same rig as
used for the
ocelot but
with EOS 5D;
f/8 at 1/500
sec, ISO
1000.**



blogs of recent wildlife activity. Make it easy for yourself by signing up with one of the many guided nature, birding, or hummingbird photo tours, some conducted by U.S. operators.

If you want flexibility to react to weather conditions and subject dynamics, a you-drive safari is best. Study the itineraries of tour companies and modify yours to suit. Driving Costa Rica is not difficult if you plan well and travel during daylight. Buy a decent map, learn a few words of Spanish, and you won't get too lost.

Paradise Beaches

Oceanside shooting requires sunshine—strong, directional light that can tint the landscape in fiery hues at sunrise and sunset, or carve out the shapes of beach boulders and impart cyan tints to open sea at mid-day.

Many of the prettiest beaches are in Guanacaste and northern Puntarenas along the dry Pacific coast, where open skies are the norm. Look for shorelines with boulders, rocky headlands, overhanging palms, lagoons, river mouths, sand bars, tide pools, and breaking surf. Nesting sea turtles provide an added attraction in their peak seasons.

■ BEACH TIPS: Scout for compositions at midday. Look for strong foregrounds with a view to the rising or setting sun (carry a compass). That way you'll be ready for the magic light of sunset/sunrise—in the tropics it's all over in a few minutes.

Avian Bedazzlement

Tiny Costa Rica supports nearly 900 bird species, including some of the planet's most exotic: scarlet macaw, resplendent quetzal, and jabiru stork.

For photographers, hummingbirds are the headliners (40-plus species) and numerous lodges are set up to attract them. The





**PLAYA
PELADA
NEAR
NOSARA**
Fitzharris
took this
north Pacific
coast scene
with a Canon
EOS 5D and
24-105mm
f/4 EF lens
on tripod;
f/16 at 1/30
sec, ISO 400.

best lodges (inquire by e-mail) also maintain fruit feeders that attract parrots, toucans, and other neotropical varieties. Hummingbirds are mostly denizens of the cloud forest, so be prepared for damp days, chilly nights, and lovely soft light.

HUMMINGBIRD TIPS: Arm yourself with a 500mm (or equivalent) telephoto and 50mm worth of close-up extension tubes. Shoot under bright overcast skies. Build a better background by repositioning a feeder near flowers or by setting up your own bouquet. Focus manually and make hundreds, even thousands, of in-flight exposures (scores of hummers hover about a feeding station at one time). Trash the preponderance of misfires and save only the prizewinners.

Volcano Country

Costa Rica's volcanoes are irresistible to photographers bent on making long exposures of red-hot rock streaming down a mountainside or exploding into a night sky.

Arenal Volcano near the town of La Fortuna offers the best opportunities for iconic imagery, but you'll need luck to capture the dramatic eruptions, normally obscured by cloud and fog.

Luckily, you won't have downtime waiting for skies to clear. You can spend days shooting waterfalls, jungles, cloud forests, and a Noah's ark of butterflies and frogs at mom-and-pop vivariums and ponds while keeping your eye on the mountain.

VOLCANO TIPS: Oddly, your chances of getting a clear shot of the volcano improve during the rainy season (May

CONTINUES ON PAGE 148

ROGUE FLASHBENDERS

Control. Create.



What can you do with a single
FLASHBENDER positionable reflector?

Rogue FlashBenders are patent pending



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LAB

AUTHORITATIVE TESTS, REVIEWS, AND BUYING ADVICE

CAMERA TEST

TOUGH BUT SENSITIVE

Olympus's rugged flagship DSLR serves up beautiful images

FOR THE PAST couple of years, Olympus has focused mostly on its Micro Four Thirds line. But, as the new E-5 (\$1,700, street, body only) shows, the company hasn't forgotten about regular Four Thirds at all. The latest update of its flagship DSLR steps up to a 12.3MP Live MOS sensor (from 10.1MP in the E-3), adds a stop of sensitivity for a top of ISO 6400, and adds 1280x720-

pixel 30-fps HD video capture. Meanwhile, it keeps the super-rugged magnesium-alloy body with weathersealing that is the top of its class.



TONY CORDOZA

LENS TESTS: OLYMPUS AND TOKINA'S TERRIFIC NEW ZOOMS



94

REVIEW: PHOTOSHOP ELEMENTS 9

92

96

OLYMPUS E-5

12.3MP
Live MOS
Four Thirds
720p 30-fps
HD video
5 fps burst
shooting
Wireless flash
control from
pop-up flash
\$1,700,
body only

In the Lab

Though the E-5 finds itself on the lower end of pixel counts for cameras in its price range, it still easily managed to score an Extremely High in overall image quality from ISO 100 through ISO 1600 in the Popular Photography Test Lab. Its resolution is the only thing holding it back



PHILIP RYAN (LCD IMAGE)

OLYMPUS E-5**WHAT'S HOT**

Rugged build, good noise control.

WHAT'S NOT

Sluggish autofocus in low light.

WHO IT'S FOR

Shooters who value solid build quality and weathersealing over extremely fast bursts.

from reaching an Excellent rating. In the wake of sensors in excess of 20MP in 2008, we were forced to raise the bar in our resolution test, pushing the threshold for an Excellent rating up to 2500 lines per picture height.

The E-5 turned in a very impressive 2270 lines in our test, which is a significant jump from the E-3's score of 2020 lines. Sure, it trails Canon's EOS 7D, which achieved 2610 lines, but considering that the 7D has an 18MP sensor, you might expect a bigger difference. Nikon's D300s, another 12.3MP camera in this price range, managed 2340 lines but also trailed the E-5 in noise performance.

At all sensitivity levels save their shared maximum of ISO 6400, this Olympus had lower noise than the D300s—which says a lot, given that Nikon has been a league leader in noise control in recent years. Both the E-5 and the Nikon D300s had Unacceptable noise levels in our test at ISO 6400, though Canon's 7D managed to keep noise in the acceptable range at ISO 6400. Still, the E-5 outperformed the Canon in noise control from ISO 100 through ISO 1600.

In our autofocus test, the Olympus displayed a split personality: extremely fast in bright light, but slowing considerably as the light grew dimmer. This may be partially due to the lens we used in the test. Ordinarily, we use an f/1.4 normal lens from the camera's manufacturer to test AF. But since Olympus doesn't make a fast normal with a Supersonic Wave Drive (SWD) AF motor, we used the Zuiko Digital 12-60mm

DELIVERING THE ULTIMATE IN IMAGING PERFORMANCE

The New Tamron SP 70-300mm Di VC USD



This brilliant new extended-range telephoto zoom lens takes the real-world performance of today's top full-frame and APS-C-format DSLR cameras to an unprecedented new level, earning it our coveted Superior Performance (SP) designation. With superb definition over its entire 4.3X zoom range, advanced Vibration Compensation (VC) for shake-free imaging, swift, Ultrasonic Silent Drive (USD), macro focusing down to 1:4, and a sophisticated, cutting-edge optical design incorporating premium Low Dispersion (LD) and Extra Low Dispersion (XLD) glass, it sets a new class standard for imaging excellence, precision, and innovation. Surprisingly compact for its speed and elegantly styled it captures your world in breathtaking detail!



BLAZING SPEED

There's only one way to capture the high-speed action of a motorcycle race with the consistency of a real pro—know your sport, and use a lens that's as fast as your camera—like the Tamron SP 70-300mm Di VC USD. Its energy-efficient Ultrasonic Silent Drive maximizes autofocus speed and accuracy, and its long reach (109-465mm with APS-C format DSLRs) lets you freeze all kinds of high-speed action from a considerable distance.

PERFECT PORTRAITS

Capturing a compelling close-up of a charming young boy is easy when your lens zooms to ultra telephoto and it's equipped with Vibration Compensation (VC), Tamron's cutting-edge image stabilization system that virtually eliminates the blur-inducing effects of handheld camera shake at all focal lengths to deliver superb detail at the point of focus. It also helps to have a lens with a wide aperture to create shallow depth of field so your subject seems to pop off the page. You can count on the Tamron SP 70-300mm VC to deliver the goods on all counts.

EXQUISITE DETAIL

Capturing the image of an architectural landmark like New York's iconic Flatiron Building with all its astonishing textures and details requires a lens that provides outstanding definition plus ultra-high resolution and contrast across the entire imaging field. And only a lens having extraordinary color correction can render a nearly white building side-lit by brilliant sunshine without the slightest trace of color fringing. The Tamron SP 70-300mm Di VC USD incorporates the full array of advanced optical technologies Tamron has developed over 60 years to deliver this unsurpassed level of imaging excellence.

**\$100
MAIL-IN REBATE**

when purchased simultaneously with any camera body or camera kit;
\$50 Mail-in rebate for lens only purchase. Through 12/31/10.
VISIT WWW.TAMRON-USA.COM

TAMRON

f/2.8-4 SWD lens in this test. We considered using the 14-35mm f/2 SWD, but moving its extremely large lens elements can slow down AF, despite being faster glass.

That said, the E-5's AF proved faster than that of the EOS 7D and the D300s from EV 12, the brightest part of our test, through EV 6, which is about the light level of a well-lit kitchen. Only at levels reaching the equivalent of moonlit darkness did the Olympus fall far behind the competition.

The ISO, exposure comp, and white balance controls behind the shutter button are well placed and came in handy in our field tests.

In the Field

Like all the DSLRs in this price range, the E-5 is on the larger side of bodies without an integrated vertical grip. (If you plan to shoot a lot of verticals, Olympus offers the HLD-4 battery grip, which holds either six AA or two Li-ion batteries.)

Though the comfort of camera grips might not seem like a big deal, ergonomics are a key factor in performance. A good grip makes the camera feel secure without forcing you to clamp down too tightly, which can be essential for accessing buttons, switches, and dials when shooting. The E-5's grip has a nice shape, arcing inward toward the top of the camera, with a nook for your middle finger below the shutter button that makes it easier to angle the camera up and down.

“Changing settings on the E-5 is quick and easy”



TEST RESULTS

IMAGE QUALITY ISO 100-1600

EXTREMELY HIGH

POOR

EXCELLENT

RESOLUTION ISO 100

2270 EXTREMELY HIGH

POOR

EXCELLENT

COLOR ACCURACY

EXCELLENT 7.2

HIGH

EXCELLENT

NOISE

AT ISO

EXTREMELY LOW 1.0 100

VERY LOW 1.2 200

VERY LOW 1.4 400

VERY LOW 1.3 800

LOW 1.8 1600

MODERATE 2.7 3200

UNACCEPTABLE 4.2 6400

3.0 2.5 2.0 1.5 1.0 0.5

UNACCEPTABLE EXTREMELY LOW

HIGHLIGHT/SHADOW DETAIL

VERY HIGH

LOW

EXTREMELY HIGH

CONTRAST

HIGH

LOW

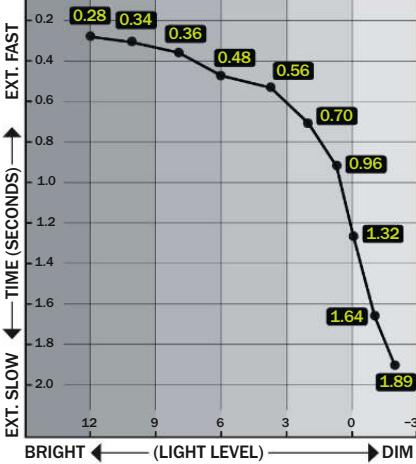
EXTREMELY HIGH

IMAGE STABILIZATION

3 STOPS

1 2 3 4 5 6

AF SPEED



2010
Holiday Promotion

Season's Greetings, Happy Hanukkah, Feliz Navidad, Happy Kwanza...

it's the 12 Weeks of Christmas!



Speedlite Accessory Gift Pack

Part #650H

Kit Contents:

- (1) 43" Collapsible White Umbrella
- (1) Adjustable Shoe Mount Bracket
- (1) Micro Apollo
- (1) 14" Silver/White Reflector
- (1) 14" Diffuser

Retail: \$150.05

HOLIDAY SPECIAL:

\$75.00



North Pole #831
rentscenicbackgrounds.com

uLite 2-Light Kit

Part #651H

Kit Contents:

- (2) uLite Constant Lights
- (2) 20" Collapsible Softboxes
- (2) 6.5' Light Stands
- (2) 500-watt Photofloods
- (1) **FREE 5' x 6' Scenic Background Rental**
- (1) **FREE 5' x 8' Slate Background**

Retail: \$289.80

HOLIDAY SPECIAL:

\$199.90



Spiderlite TD5 Holiday Kit

Part #652H

Kit Contents:

- (2) Spiderlite TD5s
- (2) 900-watt 5-pack Fluorescents
- (1) 36" x 48" Shallow Softbox
- (1) 12" x 36" Stripbank

Retail: \$1,600.00

HOLIDAY SPECIAL:

\$990.00

Specials announced every Monday thru 2010!

Visit fjwestcott.com for details and participating dealers.

 **westcott**®

LAB * DSLR TEST OLYMPUS E-5

With two command wheels and plenty of dedicated control buttons, changing settings on the E-5 is quick and easy once you familiarize yourself with the body. Exposure compensation, white balance, and ISO all get their own buttons near the shutter. The less-commonly changed settings, such as shooting and AF modes,

drive mode, metering, and flash settings, all get buttons to the left of the pop-up flash.

Our biggest complaint on the controls? The three buttons to the left of the flash, which each serve multiple purposes, have labels on the left of the flash/finder hump. These proved hard to see when shooting without tilting and

SPECIFICATIONS

IMAGING: 12.3MP effective, Four Thirds-sized LiveMOS sensor captures images at 4032x3024 pixels with 12 bits/color in RAW mode.

STORAGE: Compact Flash, SD, SDHC, SDXC. Stores JPEG, ORF RAW, and RAW + JPEG files.

VIDEO: Up to 1280x720, 30-fps, AVI Motion JPEG; built-in mono mic with optional stereo mic input; contrast-detection AF.

BURST RATE: Full-sized JPEGs (Fine mode): 5 fps up to card capacity. RAW (12-bit): 5 fps up to 16 shots.

AF SYSTEM: TTL phase detection with 11 illuminated focus points (all twin crosstype). Single-shot and continuous with tracking. Tested sensitivity down to -2 EV (manufacturer's rating) at ISO 100, f/2.

SHUTTER SPEEDS: 1/8000 to 60 sec plus B (1/3-EV increments). Shutter rated to 150,000 cycles.

METERING: TTL metering using 49-point evaluative, centerweighted, and spotmetering (approx. 2% of frame). 1-20 EV (at ISO 100).

ISO RANGE: ISO 100-6400 (in 1/3- or 1-EV increments).

FLASH: Built-in pop-up with TTL autoflash with +/-3-EV exposure compensation (1/3, 1/2, or 1-EV increments), GN 43 (ISO 100, feet), covers 14mm lens field of view. Flash sync to 1/250 sec. Dedicated Olympus hot-shoe and wireless control of optional flash.

VIEWFINDER: Fixed eye-level pentaprism.

LCD: Tilting, swiveling 3-in. TFT with 920,000-dot resolution.

OUTPUT: Hi-Speed USB 2.0, mini HDMI video, composite video.

BATTERY: Rechargeable BLM-5 Li-ion, CIPA rating, 870 shots with optical finder.

SIZE/WEIGHT: 5.6x4.6x2.9 in., 2.0 lb with card and battery.

STREET PRICE: \$1,700, body only.

FOR INFO: www.olympusamerica.com

Great Gear, #3.

Novoflex: MFT Adapters - enable MicroFourThirds camera bodies to accept lenses from most camera manufacturers. Made in Germany.

Ansmann: DigiCharger Vario - rapidly recharges 100+ battery types for cameras, MP3's, PDA's, flashlights. Made in Germany.

Giotto: Red Rocket powerfully air blows dust from lenses, computers. No harmful propellents. 3 sizes.

Helipan: Polarizer lens filters eliminate up to 99.9% of reflections, improve color saturation, perfect for scenic shots. Made in Germany.



Braun: Multitray Digital Slide Scanner - scans up to 100 slides automatically into MAC or PC. 6 tray types, USB. Made in Germany.



Gepe: Card Safe Extreme - the better memory card protector. Holds any combo of 4 CF, SM, SD & MS cards.



VIEWFINDER TEST: Accuracy, 100% (Excellent); Magnification, 1.15X (Excellent).

angling the camera. Over time, you'll likely remember which ones do what, but until then it can cause some minor confusion.

Olympus has more than tripled the pixel resolution on the fully articulated LCD that graces the back of the E-5, bringing it to 920,000 dots. One of the more rugged-feeling articulated screens out there, its monitor makes it very easy to shoot with the camera held high above your head, down low to the ground, or even stealthily around corners.

While current fixed LCDs have wider viewing angles that make off-angle shooting easier than it used to be, those that tilt and rotate make precise framing simpler. More important, you can change menu items without moving the camera from its position, making tripod-mounted shooting more convenient.

The increased screen resolution comes in handy for live view and video shooting. The E-5 captures HD footage at up to 1280x720p at 30 frames per second, storing video as AVI files using Motion JPEG encoding, and in our test evinced quality on par with consumer HD camcorders. The AVI file type limits files to 2GB, for about 7 minutes of footage—if you dial the camera back to standard definition, you'll capture 640x480 at 30 fps for up to 14 minutes.

The E-5 can record CD-quality stereo audio, but you'll have to add a stereo mic through the minijack input if you want the binaural experience. Otherwise, its built-in mic will give you mono recording with your video.

You can store both video and still capture with CompactFlash or SD (including SDHC or SDXC) cards, thanks to the camera's

While it's become standard in cameras at this level, Olympus was one of the first to popularize wireless flash control, putting it in all its DSLRs, including the E-5.

dual card slots. It would be nice to write information to both cards simultaneously, or let the camera automatically switch to the second card once the first one is full, but so far that's not the case. (We wouldn't be surprised to see this updated through firmware.)

If the E-5 trails the competition in any big way, it's in burst speed. The E-5 retains the 5-fps burst of the E-3, compared with the 7-fps native rate of the Nikon D300s and the 8-fps of the Canon 7D.

The E-5's buffer maxes out at 16 12-bit RAW frames, while the D300s can swallow 18 12-bit RAW files in a burst, and the 7D can manage 15 (although these are larger 14-bit RAW files).

But shooting highest-quality JPEGs, the E-5 will let you shoot until your memory card is full, where the Nikon caps out at 44

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LAB * DSLR TEST **OLYMPUS E-5**

frames and the Canon at 126 frames when using a UDMA card. We'd consider 5 fps the lower limit for serious sports shooting, so if this is fast enough for you, you won't mind it on the E-5.

The Olympus Art Filters, which apply effects as you shoot, might seem silly, but they can also be fun and even useful. When you're shooting RAW and JPEG images simultaneously, you can experiment with different looks on the spot, and you always have the RAW file as an untouched backup.

There are 10 Art Filters to choose from, such as Pop Art for high-contrast coupled with high-saturation, the self-explanatory Gentle Sepia, and the new Dramatic Tone, which increases contrast locally in portions of the image for an unrealistic-yet-intense look. And you can even

use any of these while shooting video, though some will slow the video frame rate.

Bottom Line

Comparing cameras in this price range is tough. People interested in a body at this level may already be invested in a particular system. If you already own an entry-level or midlevel Olympus body and are looking to step up, the E-5 offers a very solidly built, well-thought-out design that can provide a high level of image quality.

Olympus E-3 owners face a harder decision, but given the E-5's increase in resolution, added stop of sensitivity, new HD video capture, and Art Filters, we think there's a compelling enough argument to switch, especially if your E-3 has seen heavy use.

Against equivalent Canon and Nikon bodies, it's a different game.

One of the less obvious benefits of a higher-end DSLR is a 100% accurate optical viewfinder such as the one found in the E-5.

Both the 7D and D300s have certain performance and image-quality advantages over the E-5, but the Olympus has features these two lack—a major example is its sensor-shift image stabilization, which works with any mountable lens and which gave our testers 3 stops of shutter speed leeway when shooting at 200mm.

The E-5's rugged construction and weathersealing are also a notch better than those of its competitors. And, finally, unlike the 7D and the D300s, the Olympus has an articulated LCD. Even though the Canon offers 1080p video recording, recording video with the E-5 is less tricky to do.

For DSLRs in this price bracket, if you're looking for a powerful imaging tool with rugged construction and a lot of versatility, the Olympus E-5 may be your match.

—Philip Ryan

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photo by tyson robichaud

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Fast Glass

THIS FOUR THIRDS LENS SETS A SPEED RECORD

WITH THE NEW E-5, tested in this issue, Olympus turns back to the Four Thirds DSLR format after a two-year push for interchangeable-lens compacts (ILCs). A fitting example of Oly's commitment to the format, this 14-35mm f/2 (a 28-70mm equivalent) is the world's fastest standard-range zoom for DSLRs and well paired with the company's 35-100mm f/2 speedster. Among its strengths: a Supersonic Wave Drive (SWD) autofocus motor, dust and moisture seals, extra-low dispersion glass, and updateable firmware. But it comes at a hefty street price: \$2,300.

The lens is heavier than Sigma's comparable f/2.8 full-frame lens, and it's long enough to cast a shadow when used at the widest focal lengths with the E-5's built-in flash. In the field, we liked its full-time manual focus with a long, 200-degree turn that practically forces precision focusing. The AF motor is very quiet, though not completely silent. Really nice? The lens shade's finger port, which lets you adjust filter positions without removing the hood.

On our optical bench in the Popular Photography Test Lab, it produced uniformly Excellent-

range sharpness and contrast—a slightly better performance than the Canon, Nikon, and Sigma 24-70mm f/2.8 full-framers. Among recently tested glass, the Zuiko took a back seat only to Sony's 24-70mm f/2.8, a Carl Zeiss design. In DxO Analyzer 3.2 tests of distortion control, its numbers were stellar: Visible-range barreling at 14mm (0.34%) that compared very favorably to the Canon's 1.7% Very Visible barrel distortion at 24mm. The imperceptible pincushioning at 25mm and 35mm (0.04% and 0.03%, respectively) were remarkable and a tribute to Olympus' nearly unsurpassed optical expertise.

In short, the lens is another fabulous Zuiko that could ultimately help draw a greater number of serious photographers to the Four Thirds format. —Julia Silber

SPECIFICATIONS

14-35MM (14.18-34.39mm tested), f/2.0 (1.83-2.00 tested), 18 elements in 17 groups. Focus ring turns 200°. Zoom ring turns 80°. Focal lengths marked at 14, 18, 25, and 35mm.

DIAGONAL VIEW ANGLE: 75-34 degrees.

WEIGHT: 2.05 lb.

FILTER SIZE: 77mm.

MOUNTS: Four Thirds.

INCLUDED: Lenshood, soft case.

STREET PRICE: \$2,300.

TEST RESULTS

DISTORTION: At 14mm, 0.34% (Visible) barrel. At 25mm, 0.04% (Imperceptible) pincushion. At 35mm, 0.03% (Imperceptible) pincushion.

LIGHT FALLOFF: At 14mm, gone by f/2.5. At 25mm, none. At 35mm, gone by f/2.5.

CLOSE-FOCUSING DISTANCE: 12.43 inches.

MAXIMUM MAGNIFICATION RATIO: At 14mm, 1:12.47. At 25mm, 1:8.25. At 35mm, 1:7.35.



It has both the hefty length and girth you would expect of an f/2 pro zoom—the prices you pay for speed.

SUBJECTIVE QUALITY FACTOR

Our standard lens test, SQF rates sharpness by print size.

Size	5x7	8x10	11x14	16x20	20x24
2.0	98.7	95.7	93.3	88.4	82.4
2.8	97.0	98.1	94.0	89.7	84.6
4.0	97.2	98.4	94.4	90.6	85.9
5.6	97.2	98.3	94.3	90.4	85.7
8.0	97.1	98.2	94.0	89.9	84.9
11.0	96.8	95.6	93.5	89.1	83.5
16.0	96.4	95.4	92.8	87.6	81.2
22.0	95.6	94.3	91.0	84.3	75.8

Size	5x7	8x10	11x14	16x20	20x24
2.0	97.2	95.2	94.2	90.3	85.4
2.8	97.5	98.7	94.9	91.6	87.6
4.0	97.7	98.9	95.3	92.2	88.6
5.6	97.7	97.0	96.3	92.3	88.7
8.0	97.5	98.7	95.0	91.7	87.8
11.0	97.1	98.2	94.0	90.0	85.2
16.0	96.6	95.6	92.9	88.0	81.9
22.0	96.2	94.6	91.4	85.1	77.2

Size	5x7	8x10	11x14	16x20	20x24
2.0	97.3	96.5	94.6	90.9	86.4
2.8	97.5	96.7	95.0	91.7	87.7
4.0	97.6	96.8	95.1	91.8	87.9
5.6	97.6	96.9	95.2	92.0	88.2
8.0	97.4	96.5	94.6	91.1	86.7
11.0	97.0	96.1	93.9	89.7	84.5
16.0	96.3	95.7	92.4	86.9	80.0
22.0	95.6	94.2	90.9	84.0	75.3

KEY A+ A B+ B C+ C D F

OLYMPUS ZUIKO DIGITAL ED 14-35MM F/2 SWD

WHAT'S HOT

Speedy, sharp, and fast-focusing.

WHAT'S NOT

¡Muy costoso!

WHO IT'S FOR

Pro and semi-pro Four Thirds fans.

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create your own vantage point

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LAB * LENS TEST TOKINA AT-X 16-28MM F/2.8 PRO FX AF

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Wow Debut

A NEW ULTRAWIDE
THAT'S ALSO
ULTRAGOOD

THE FIRST in a promised line of AT-X Pro FX full-frame Tokinas, this is also the company's first with a highly refined, micro AF motor that's both silent and fast-focusing. Approximately a 26–45mm equivalent on Canon's APS-C bodies and 24–42mm on Nikon's—the only mounts in which it's available—this \$850 (street) lens zooms and focuses internally for a completely stationary barrel.

This barrel is large and quite heavy. (To compare, in 2008 we called Canon's 16–35mm f/2.8L II, which is 12 ounces lighter, "tank-like.") It's nicely finished with gold accents and a fixed hood.

Unlike most internal-focusing lenses, this Tokina doesn't offer full-time manual focus. But in use it feels close to that norm, thanks to the smooth-turning MF ring, which doubles as a push/pull-type MF/AF switch. The zoom turn, although even, feels stiff, and the new DC motor makes the AF action fast and very close to silent.

CONTINUES ON PAGE 140

TOKINA AT-X 16-28MM F/2.8 PRO FX

WHAT'S HOT

Optically best in class.

WHAT'S NOT

No image stabilization or filter compatibility.

WHO IT'S FOR

Any photographer who's into distortion-free, wide-angle shooting.



SPECIFICATIONS

16-28MM (16.47–27.32mm tested), f/2.8 (2.55–2.94 tested), 15 elements in 13 groups. Focus ring turns 80°. Zoom ring turns 60°. Focal lengths marked at 16, 20, 24, and 28mm.

DIAGONAL VIEW ANGLE: 107–76 degrees.

WEIGHT: 2.21 lb.

FILTER SIZE: Doesn't accept threaded filters.

MOUNTS: Canon AF, Nikon AF.

STREET PRICE: \$850.

TEST RESULTS

DISTORTION: At 16mm, 0.04% (Imperceptible) barrel. At 24mm, 0.02% (Imperceptible) pincushion. At 28mm, 0.02% (Imperceptible) pincushion.

LIGHT FALLOFF: At 16mm, none. At 24mm, none. At 28mm, none.

CLOSE-FOCUSING DISTANCE: 10.16 inches.

MAXIMUM MAGNIFICATION RATIO: At 16mm, 1:7.18. At 24mm, 1:4.89. At 28mm, 1:4.25.

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IN THE LATEST ELEMENTS,
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ONE OF THE BEST programs available to hobbyists for organizing photos and fairly significant retouching, Adobe Photoshop Elements has always been great at what it's capable of. And now it's capable of more.

The new version, Elements 9 (\$100, direct), adds a few useful new editing tools, makes sharing a bit easier, and simplifies retouching for beginners. This upgrade is big news for Apple users, bringing the Mac version in sync with Elements for PC.

Editing and Retouching

Elements comes in two parts: The Organizer and the Editor.

The Organizer is the hub where you import, tag, share, and make projects with your pictures. Editing happens, of course, in the Editor, though there are some quick edits available for JPEGs in the Organizer, as well.

The more exciting upgrades this go-round are in the Editor. We were happily surprised that two of Photoshop's best tools are now available in Elements: the Content-Aware Healing Brush (which recently made its debut in Photoshop CS5) and Masks.

The old Healing Brush was great for removing spots on areas of consistent tone or texture, but would flub near edges. Now, turn

The Guided Edit mode helps you learn to use the tools. Above, it explains the histogram and the Levels tool while fixing a picture.

Content Aware on while in the tool, and you can remove spots that are near or even covering edges or in multiple textures.

Masks in Elements is a bigger deal yet. Up until now, Masks have only been enabled when using Adjustment Layers. But with this version, you can do really sophisticated retouching and compositing previously

SPECIFICATIONS

MINIMUM SYSTEM REQUIREMENTS

Windows: XP or newer, 1.6GHz processor, 1GB RAM, 3GB HD space.

Mac: OS 10.5.8 or newer, multicore Intel processor, 1GB RAM, 3.4GB HD space.

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ADobe PHOTOSHOP ELEMENTS 9

WHAT'S HOT

Full masking capabilities in the Editor.

WHAT'S NOT

RAW file handling is clunky at best.

WHO IT'S FOR

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Tripod F-1128	2.64lbs	9.9lbs	55-1/4"	18.5"	\$139.95
Tripod F-1128 w/Head	9.9lbs	55-1/4"	18.5"	18.5"	\$179.95
Tripod F-1228	3.30lbs	17.6lbs	60-1/4"	20.1"	\$169.95
Tripod F-1328	3.96lbs	24.2lbs	63-3/4"	21.65"	\$259.95
Tripod F-1428	5.72lbs	26.4lbs	72"	24"	\$324.95

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Ball Head F-4	30 oz.	40lbs	4.92"	\$114.95
Ball Head F-9	5 oz.	33lbs	3.0"	\$59.95
Gimbal Head 1	2.2lbs	15.4lbs	8.26"	\$239.95
Gimbal Head 2	2.0lbs	6.5lbs	7"	\$199.95



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FLASHPOINT

possible only in the much more expensive Photoshop.

Elements 9 also contains some new stuff for casual users and those new to image editing. There's the new Guided Edit mode, which hides the toolbar and provides a list of possible tasks, walking you through each of them.

When you're finished, you can go back to Full Edit mode to see the layers that were created.

There are also some new cute and fun effects, like those that create a "Lomo" (plastic camera) or pop-art look. But with so many of these available in compact cameras or cellphone apps,

we're curious about whether Elements users are actually clamoring for them.

Organizing and Sharing

Until now, Mac users didn't have the Organizer—instead, the Mac edition of Elements 8 came with Bridge. We suspect that most of Adobe's efforts this round went into achieving parity between the Mac and PC editions, because there aren't too many earth-shaking improvements to the Organizer.

That's fine: We didn't have much to complain about in the last version. You can view your images in a typical grid or see them as thumbnails arranged on a calendar. You can create tags and label your pictures singly or in batches. And you can use People Recognition to find and tag faces of friends and family.

With Elements 8, we complained that, while it was easy enough to share to Adobe's Photoshop.com online service, sharing to Facebook was impossible. That's been fixed with this upgrade, and now it's also easy to share to Flickr or Kodak Gallery.

Having just tried out 10 photo-book services in our November issue, we were looking forward to giving Elements' revamped book-creation process a spin. Unfortunately, it let us down somewhat.

The positive includes the ability to lay out your book and then send it to Kodak Gallery or Shutterfly for printing—you can also print it yourself, along with other creative projects such as collages. It's a definite improvement over Elements 8, since you can choose the layouts you want and add images with ease.

But the process is otherwise a bit frustrating. If you use lots of high-resolution images, switch-

CONTINUES ON PAGE 150

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D3100 NEW! Beautiful Pictures. Amazing Movies. Incredibly Easy.

The 14.2-megapixel D3100 has powerful features, such as the enhanced Guide Mode that makes it easy to unleash creative potential and capture memories with still images and full HD video. It is also the world's first D-SLR to introduce full time auto focus (AF) in Live View and D-Movie mode to effortlessly achieve the critical focus needed when shooting Full HD 1080p video. Nikon, Inc. limited warranty included 2010 Nikon Inc.



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The Journey Continues

The EOS 60D DSLR features an improved APS-C sized 18MP CMOS sensor, a new DIGIC 4 Image Processor for finer detail and excellent color reproduction, and improved ISO capabilities from 100 - 6400 (expandable to 12800) for uncompromised shooting even in the dimmest situations. The new Multi-Control Dial enables users to conveniently operate menus and enter settings with a simple touch.

OLYMPUS



PEN E-PL1 Powerfully Simple

The new Olympus PEN E-PL1 is truly greater than the sum of its parts. This surprisingly small camera body is packed with technology normally found in bigger, bulkier cameras and High Definition (HD) camcorders. With features like interchangeable lenses, the new Live Guide and one-touch HD video - the E-PL1 is an easy-to-use and portable all-in-one package that travels with you to capture all the details of your life.

PENTAX



K-r NEW! Brilliantly Colorful

The colorful PENTAX K-r DSLR camera offers advanced yet simple features at an attractive price. It is easy to use with Auto Picture, Scene, and Custom Image Processing modes that take the guesswork out of shooting stunning images while still offering a high degree of manual and priority control. The K-r offers a variety of new and improved features including a fast framerate, high ISO sensitivity, 3-inch LCD, responsive autofocus, an improved 12.4 megapixel low-noise sensor and widescreen HD video capture that take it a step above any entry-level DSLR camera.

TAMRON



\$80 Mail-In Rebate
thru 12/31/10

AF18-270mm F/3.5-6.3 Di II VC (Vibration Compensation) LD Aspherical (IF) Macro

The Longest Steadiest Lens on Earth

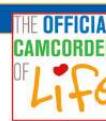
The AF 18-270 covers an angle of view equivalent to that of a 28mm wideangle to a 419mm ultra telephoto with just one lens, letting the user capture once-in-a-lifetime images of panoramic landscape images or close-up pictures of children smiling, without having to get too close to the subject and without having to change lenses.

Camcorders

Canon Vixia HF M300 imageANYWARE

A brilliant blend of capability and convenience.

Canon's VIXIA HF M300 Flash Memory Camcorder records directly to an SD memory card. A Genuine Canon 15x HD Video Lens and 3.89-megapixel Full HD CMOS Image Sensor help to deliver high definition video and 3.3 MP photos with incredible detail and lifelike color. Smart Auto "reads" the visual components of the scene you're shooting and chooses the best settings. Touch & Track allows you to achieve sharp focus and precise exposure for any subject, simply by touching the 2.7" Touch Panel LCD.



FS300

Fast, Flexible, Flash Memory

Adding to the usefulness of the Canon F300 flash memory camcorder is Quick Charge - which reduces the recharge time for the FS300's battery and Pre-Record which gives you a head start on capturing the action. With the FS300's Canon Exclusive features such as Canon 41x Advanced Zoom and DIGIC DV Image Processor, combined with a 2.7" Widescreen LCD, Quick Charge and our new Dynamic IS - you've got a flash memory camcorder that's both hard to beat and unmistakably Canon.



Vixia HF R11

HD Dual Flash Memory Camcorder

With the Canon VIXIA HF R11 Dual Flash Memory Camcorder, you'll find that high definition video has hit new levels of convenience, ease, performance- and value. The VIXIA HF R11 has a 32GB internal flash drive, together with an SD memory card slot, Canon's Relay Recording and Smart Auto. A Genuine Canon 20x HD Video Lens and Dynamic IS works in combination with Canon's sophisticated HD image processing to deliver the sharp, vivid, lifelike video you want to see on your HDTV. Advanced Video Snapshot lets you create 2-, 4- or 8-second movie clips, with music, that are perfect for sharing.



Vixia HF S200

Shoot. Capture. See. Be HD.

Canon's VIXIA HF S200 Flash Memory Camcorder, with two SD memory card slots, offers Canon's most sophisticated feature set to date - blurring the line between consumer and professional. Canon's superlative proprietary imaging technologies help deliver video and 8.0 megapixel photos with incredible detail and lifelike color. Touch & Track allows you to achieve sharp focus and precise exposure for any subject, simply by touching the generous 3.5 inch High Resolution (922,000 dot) Touch Panel LCD. Native 24p Mode perfectly matches the frame rate of film.



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THE GUIDE

OUR OPINIONATED TAKE ON THE CAMERAS AND LENSES WE'VE TESTED

CANON EOS-1D MARK IV

★★★★★ 1/2

AMATEUR

APS-H

PRO

\$5,000, street, body only

Canon's premier speedster (in terms of JPEG and RAW burst rates) earns a half-star more in the rating due to increased resolution and ISOs in the stratospheric (102,400) range, but could have gained more with faster low-light AF. **STANDOUT SPEC** 10 fps at full resolution—with metering and autofocus on all. **SENSOR** 16.1MP CMOS,



14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO RES/FRAME RATE 1080p/30 fps, 720p/60 fps

LCD 3-in., 920,000-dot

CANON EOS 7D

★★★★★

AMATEUR

APS-C

PRO

\$1,545, street, body only

Canon's top APS-C body is also its first with wireless flash control through the pop-up. Solid, weathersealed build is bolstered by high-res images with low noise at high ISOs. **STANDOUT SPEC** Its 8-fps native burst rate is the fastest of any APS-C format body, just beating out Nikon's D300s. **SENSOR** 18MP CMOS, 14-bit



RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO RES/FRAME RATE 1080p/30 fps, 720p/60 fps

LCD 3-in., 920,000-dot

CANON EOS REBEL T2i

★★★★★

AMATEUR

APS-C

PRO

\$900, street, with 18-55mm f/3.5-5.6 EF-S IS lens

With better video and more resolving power than we've ever seen at its price level, this Canon delivers enthusiast-level image quality in an "entry-level" Rebel body.

STANDOUT SPEC Best video you can find for under \$1,000, and have you seen that LCD?

SENSOR 18MP CMOS,



14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO RES/FRAME RATE 1080p/30 fps, 720p/60 fps

LCD 3-in., 1.04 million-dot

Nikon D3s

★★★★★ 1/2

AMATEUR

FULL-FRAME

PRO

\$5,200, street, body only

Update of the D3 was the first DSLR to break the ISO 100,000 barrier, and adds video capture. If 12.1MP sounds low, superb color accuracy and clean images up to ISO 6400 make up for it.

STANDOUT SPEC Noise control—essentially the best in the business.

SENSOR 12.1MP CMOS, 14-bit RAW capture



IMAGE STABILIZATION

Lens-based

VIDEO RES/FRAME RATE 720p/24 fps

LCD 3-in., 921,000-dot

CANON EOS-1Ds MARK III

★★★★★ 1/2

AMATEUR

FULL-FRAME

PRO

\$6,114, street, body only

Once Canon's megapixel king, it now shares that throne with the newer, and far less expensive, EOS 5D Mark II. Awesome image quality in a bulletproof body—at a high cost in both weight and dollars. A favorite of nature and studio shooters both. **STANDOUT SPEC** Medium-format-caliber imaging from a (sort of) 35mm body.



21.1MP CMOS, 14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO None

LCD 3-in., 230,000-dot

CANON EOS 5D MARK II

★★★★★ 1/2

AMATEUR

PRO

\$2,500, street, body only

Long-awaited update of the original full-frame workhorse, the Mark II impressed us with stellar image quality, HD video, rugged construction—but not the older autofocus system recycled from the Mark I. Film students—and cine pros—have taken to its video big time.



21.1MP CMOS, 14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO RES/FRAME RATE 1080p/30 fps, 720p/60 fps

LCD 3-in., 920,000-dot

CANON EOS 50D

★★★★★

AMATEUR

APS-C

PRO

\$966, street, body only

Facing retirement with the introduction of the EOS 60D, it's still a goodie thanks to standout image quality, great build, and speedy shooting. But no video: For that, you'll need a 7D, 60D, or a Rebel. **STANDOUT SPEC** 6.3-fps burst rate still quite good in this class—but no longer the fastest of the fast.



15.1MP CMOS, 14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO None

LCD 3-in., 920,000-dot

CANON EOS REBEL T1i

★★★★★

AMATEUR

APS-C

PRO

\$700, street, with 18-55mm f/3.5-5.6 EF-S IS lens

As far from a "starter" camera as any Rebel has ever come (up until the T2i), it has the same sensor and nearly the same processing power as pricier big brother EOS 50D. **STANDOUT SPEC** Sheer imaging power—both still and video—ranks best for this price.



14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO RES/FRAME RATE 1080i/20 fps, 720p/30 fps

LCD 3-in., 920,000-dot

CANON EOS REBEL XS

★★★★★ 1/2

AMATEUR

APS-C

PRO

\$520, street, with 18-55mm f/3.5-5.6 EF-S IS lens

Inheriting the sensor of the former "top Rebel" XTi, the XS adds live view to round out Canon's most economical DSLR. And it comes with an IS kit lens, standard.



10MP CMOS, 12-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO None

LCD 2.5-in., 230,000-dot

LEICA M9

★★★★★ 1/2

AMATEUR

FULL-FRAME

PRO

\$6,995, street, body only

Leica finally serves up a full-frame M-series body, and in our lab tests it produced Excellent image quality through ISO 800. Outside the lab, we loved the classic Leica style and good old-fashioned simplicity of operation. But what's with the maximum ISO of 2500?



that delivers all the quality Leica lenses can provide.

SENSOR 18MP CCD, 14-bit RAW capture **IMAGE STABILIZATION** None **VIDEO** None **STANDOUT SPEC** A sensor

Nikon D3X

★★★★★

AMATEUR

FULL-FRAME

PRO

\$7,400, street, body only

Our 2009 Camera of the Year, it's the image-quality champ of current DSLRs—and should be for a while. Built like a tank, heavy and expensive, but those who love it don't care. Has the fastest AF in low light.



14-bit RAW capture

IMAGE STABILIZATION

Lens-based

VIDEO None

LCD 3-in., 920,000-dot

Nikon D90

★★★★★ 1/2

AMATEUR

APS-C

PRO

\$870, street, body only

The first DSLR with video, it remains Nikon's main midlevel model, with great resolution, HD movie-making, and near-perfect layout. Unlike lesser Nikons, it accepts lenses without AF motors. **STANDOUT SPEC** The pop-up flash that supports wireless flash control. You won't find that on the D5000.



SENSOR 12.3MP CMOS, 12-bit RAW capture **IMAGE STABILIZATION** Lens-based **VIDEO** RES/FRAME RATE 720p/24 fps **STANDOUT SPEC**

GUIDE TO THE GUIDE

In these three pages, we rate all of the current DSLRs (and one rangefinder), plus all of the current lenses within a given focal range, that we've tested. The star ratings reflect:

CAMERAS

- **Image quality:** Includes resolution, noise, and color accuracy
- **Performance/capabilities:** Includes autofocus, metering, and burst rate
- **Usability:** Includes ergonomics, controls, and customization

LENSES

- **Optics:** Such as sharpness, distortion, light falloff
- **Barrel design:** Includes focus and zoom rings, markings, and AF motor

To match cameras and lenses, look for the labels.

APS-C
FOUR THIRDS
FULL-FRAME

BEST IN CLASS
GETTING OLD
NEW MODEL

STEAL
PRICEY

Is it worth the dough? Look for:

THE GUIDE * DSLRs

GUIDE TO THE GUIDE

In these three pages, we rate all of the current DSLRs, plus all of the current lenses within a given focal length range, that we've tested. The star ratings reflect:

CAMERAS

- **Image quality:** Includes resolution, noise, and color accuracy
- **Performance/capabilities:** Includes autofocus, metering, and burst rate
- **Usability:** Includes ergonomics, controls, and customization

LENSSES

- **Optics:** Includes sharpness, distortion, and light falloff
- **Barrel design:** Includes focus and zoom rings, markings, and AF motor

To match cameras and lenses, look for the labels below.

APS-C FOUR THIRDS FULL-FRAME BEST IN CLASS GETTING OLD NEW MODEL STEAL PRICEY

NIKON D300S

AMATEUR

APS-C PRO

\$1,545, street, body only
Thoughtful major tweak of the well-regarded D300 adds video (we wish it did 1080p at 30 fps) and increases native burst rate to 7fps. Very competitive with the current state of the midrange art, but that battle keeps on smokin'.

STANDOUT SPEC Color-and-shape-sensing AF tracking a standout shooting tool.



NIKON D5000

AMATEUR

APS-C PRO

\$750, street, with 18-55mm f/3.5-5.6 DX Nikkor VR lens

For Nikonians who want a hinged and tilting LCD, the D5000 is the only option. Plus you get video, 4-fps burst shooting, speedy AF, and sensitivity out to ISO 6400.

STANDOUT SPEC The price—it offers (almost) everything the D90 has but costs a bit less.



OLYMPUS E-620

AMATEUR

FOUR THIRDS PRO

\$550, street, with 14-42mm f/3.5-5.6 Zuiko Digital lens

For arty amateurs, the E-620 offers the still-new seeming Art Filters, special effects that invite experimentation. Plus: its small, light build, and body-based, sensor-shift IS.

STANDOUT SPEC A super-articulated swiveling/



SONY ALPHA 33

AMATEUR

APS-C PRO

\$700, street, with 18-55mm f/3.5-5.6 Sony DT SAM lens

Little sister to the A55, the A33 uses the same semi-transparent mirror for continuous AF during video capture, as well as a 6-fps burst rate and super-fast AF. Its imaging proved noisier than the A55 in our tests, though.

STANDOUT SPEC Fast AF, even in video, with tracking.



SONY ALPHA 55

AMATEUR

APS-C PRO

\$850, with 18-55mm f/3.5-5.6 Sony DT SAM lens

Thanks to its semi-transparent mirror, the A55 can autofocus continuously while capturing video at up to 1920x1080, 30fps. It also has the fastest burst speed for its price range, and extremely fast AF, for the best DSLR live view yet.

STANDOUT SPEC Fast AF, even in video, with tracking.



without tears.

SENSOR 14.2MP CMOS, 12-bit RAW capture
IMAGE STABILIZATION 2.5 stops
VIDEO RES/FRAME RATE 1080p/30fps
LCD 3-inch, 921,600-dot

NIKON D700

AMATEUR

FULL-FRAME PRO

\$2,400, street, body only

For the enthusiast craving pro-grade features, the D700 offers a full-frame sensor borrowed from the D3 supercamera, sensitivity to ISO 25,600, 51-zone AF, and a pop-up flash with wireless flash control.

STANDOUT SPEC That big, juicy full-frame sensor in an enthusiast's \$2,400 body, for great low-noise shooting from



ISO 100 through 6400.
SENSOR 12.1MP CMOS, 14-bit RAW capture
IMAGE STABILIZATION Lens-based
VIDEO None
LCD 3-in., 921,000-dot

NIKON D3000

AMATEUR

APS-C PRO

\$450, street, with 18-55mm f/3.5-5.6 DX Nikkor VR lens

Another model facing retirement, this low-cost entry-level DSLR provides very high image quality for its class, but disappointing AF speed, odd feature omissions, and no video—items remedied on its replacement, the new D3100, to be tested soon.

STANDOUT SPEC 420-zone



Matrix metering system.
SENSOR 10.2MP CCD, 12-bit RAW capture
IMAGE STABILIZATION Lens-based
VIDEO None
LCD 3-in., 230,000-dot

OLYMPUS E-5

AMATEUR

FOUR THIRDS PRO

\$1,700, street, body only

With class-leading weather-sealing, extremely fast AF in bright light, and impressive noise control, the E-5 offers an exciting alternative to competing models. Add wireless flash control and Oly's stunning lenses to the mix, and you've got one heck of a go-anywhere shooting machine.

STANDOUT SPEC That extensive weathersealing and super-tough magnesium-



alloy body construction.
SENSOR 12.3MP LiveMOS, 12-bit RAW capture
IMAGE STABILIZATION 3 stops
VIDEO RES/FRAME RATE 720p/30fps
LCD 3-in., 920,000-dot



the screen from harm if you turn it inward.
SENSOR 12.3MP LiveMOS, 12-bit RAW capture
IMAGE STABILIZATION 2.5-3 stops
VIDEO None
LCD 2.7-in., 230,000-dot

PENTAX K-7

AMATEUR

APS-C PRO

\$870, street, body only

Built like a tank, Pentax's flagship DSLR has a well-designed body and records pleasing video, but its image quality and AF speed fall short of similarly-priced competitors.

STANDOUT SPEC 77 weather seals let you shoot in 14°F temperatures.
SENSOR 14.6MP CMOS, 12-bit RAW capture



IMAGE STABILIZATION 2.5-3 stops
VIDEO RES/FRAME RATE 1536x1024/30fps, 720p/30fps
LCD 3-in., 921,000-dot



bit RAW capture
IMAGE STABILIZATION 1.5 stops
VIDEO RES/FRAME RATE 720p/24fps
LCD 2.7-in., 230,000-dot

SONY ALPHA 550

AMATEUR

APS-C PRO

\$600, street, with 18-55mm f/3.5-5.6 Sony DT SAM lens

Thanks to its semi-transparent mirror, the A55 can autofocus continuously while capturing video at up to 1920x1080, 30fps. It also has the fastest burst speed for its price range, and extremely fast AF, for the best DSLR live view yet.

STANDOUT SPEC Fast AF and the 10fps burst rate.



SENSOR 16.2MP CMOS, 12-bit RAW capture
IMAGE STABILIZATION 2.5 stops
VIDEO RES/FRAME RATE 1080p/30fps
LCD 3-inch, 921,600-dot



than 100% of the scene.
SENSOR 14.2MP CCD, 12-bit RAW capture
IMAGE STABILIZATION 2.5-3 stops
VIDEO None
LCD 2.7-in., 230,400-dot

SONY ALPHA 850

AMATEUR

FULL-FRAME PRO

\$2,000, street, body only

Minor change of the A900 drops viewfinder accuracy to 98%, slows burst rate to 3fps, and forgoes a wireless remote control. It kept the impressive image quality, top ergonomics, and superfast AF, though—so much so that it achieved an equal rating to the A900.

STANDOUT SPEC The most full-frame bang for the buck



you can get today.
SENSOR 24.6MP CMOS, 14-bit RAW capture
IMAGE STABILIZATION 2.2-2.5 stops
VIDEO None
LCD 3-in., 921,600-dot



realize why you prefer SLRs.
SENSOR 24.6MP CMOS, 14-bit RAW capture
IMAGE STABILIZATION 2.2-2.5 stops
VIDEO None
LCD 3-in., 921,600-dot

Canon Nikon SONY Panasonic FUJIFILM HENSEL Mamiya Lexar hp Profoto EPSON

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THE GUIDE * WIDE TO TELEPHOTO NON-KIT ZOOMS

CANON EF-S 17-55MM F/2.8 IS USM
★ ★ ★ ★ **APS-C**
AMATEUR **PRO**



\$1,060, street Its solid construction, aspheric elements, and UD glass suggest that if this were full-frame, it would rate L-series status. Performance should be perfect for those photographers who like to work low ambient light.
STANDOUT SPEC SQF tests

NIKON AF-S DX ZOOM-NIKKOR 17-55MM F/2.8G ED
★ ★ ★ ★ 1/2 **APS-C**
AMATEUR **PRO**



\$1,360, street, with hood and case This fast constant-aperture wide zoom, a 25.5-82.5mm equivalent, mimics the full-frame pro lenses of yore but with vastly improved control of distortion and light falloff.
STANDOUT SPEC Slight tested distortion through the range,

PANASONIC LEICA D VARIO-ELMAR 14-50MM F/3.8-5.6
★ ★ ★ 1/2 **FOUR THIRDS**
AMATEUR **PRO**



\$700, street, with hood and case Smaller and lighter than the 14-50mm f/2.8-3.5, with nearly identical test results. Its magnification at 50mm (1:4.75) trumped that of the more expensive lens (1:5.4).
STANDOUT SPEC Price: \$700

SIGMA 17-50MM F/2.8 EX DC OS HSM
★ ★ ★ ★ **APS-C**
AMATEUR **PRO**



\$670, street, with hood Distortion control, edge falloff, and close-up performance were first class, as were cosmetics with matte-black finish and gold accents. Stabilization, more like third class.
STANDOUT SPEC Petite

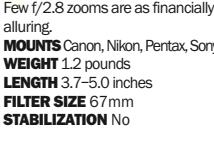
SIGMA 24-70MM F/2.8 EX DG HSM
★ ★ ★ ★ **FULL-FRAME**
AMATEUR **PRO**



\$900, street, with hood and case One of Sigma's top-tier EX-series pro lenses, this fast, solid-feeling zoom offers rapid, near-silent AF, excellent sharpness and contrast, and superior distortion control.
STANDOUT SPEC That weight. Though hefty, for this class this



TAMRON 28-75MM F/2.8 XR Di
★ ★ ★ ★ **FULL-FRAME**
AMATEUR **PRO**



\$500, street, with hood This oldie but goodie is very sharp, although tested distortion control is relatively weak by today's standards. Close-up performance (1:3.7) and vignetting (falloff gone by f/4) are undeniable perks.
STANDOUT SPEC The price.

CANON EF 24-70MM F/2.8L USM
★ ★ ★ ★ **FULL-FRAME**
AMATEUR **PRO**



\$1,350, street, with hood and case This L-series zoom has seals and gaskets galore against dust and moisture. Our tests found super-sharp optics, but with relatively high distortion numbers by current standards.
STANDOUT SPEC Sharp-

PRICEY

ness throughout the focal range, even at its widest.
MOUNTS Canon EF
WEIGHT 2.0 pounds
LENGTH 4.9-6.1 inches
FILTER SIZE 77mm
STABILIZATION No

NIKON AF-S ZOOM-NIKKOR 24-70MM F/2.8G ED
★ ★ ★ ★ 1/2 **APS-C**
AMATEUR **PRO**



\$1,720, street, with hood and case Pro-grade dust and moisture resistance, fast f/2.8 aperture, and the latest optics put this lens near the top of Nikon's lineup. The large, gold "N" on its barrel indicates Nano Crystal Coat for reduced flare and ghosting.

PRICEY

STANDOUT SPEC Construction. Built to last a career.
MOUNTS Nikon AF-S
WEIGHT 2.0 pounds
LENGTH 5.3-6.05 inches
FILTER SIZE 77mm
STABILIZATION No

PENTAX 16-50MM F/2.8 DA* SDM
★ ★ ★ ★ 1/2 **APS-C**
AMATEUR **PRO**



\$1,030, street, with hood and case A DA* lens, the 16-50mm is pro-level and fast, with extra weather and dust resistance. The SDM system provides for smoother and quieter AF. SQF tested Excellent at all focal lengths.
STANDOUT SPEC Last-

PRICEY

forever build, superior construction.
MOUNTS Pentax KAF2
WEIGHT 1.3 pounds
LENGTH 3.85-5.3 inches
FILTER SIZE 77mm
STABILIZATION In the camera

SIGMA 17-70MM F/2.8-4 DC OS MACRO HSM
★ ★ ★ 1/2 **APS-C**
AMATEUR **PRO**



\$450, street, with hood An everyday utility zoom, with image stabilization, and 1:2.2 magnification for close-ups, it weighs less than most f/2.8 lenses.
STANDOUT SPEC Image stabilization: Our test showed up to 4 extra stops of

STEAL

handholdability.
MOUNTS Canon, Nikon, Pentax, Sigma, Sony AF
WEIGHT 1.25 pounds
LENGTH 3.5-5.15 inches
FILTER SIZE 72mm
STABILIZATION 2-4 stops

SONY ZEISS 24-70MM F/2.8 VARIO-SONAR T* ZA SSM
★ ★ ★ 1/2 **FULL-FRAME**
AMATEUR **PRO**



\$1,600, street, with hood and case A 36-105mm equivalent on most Alphas, this pro-quality zoom of Zeiss design delivers superior sharpness, extremely well-controlled distortion, virtually no edge falloff, nice magnification, and a

PRICEY

very solid build.
STANDOUT SPEC That weight. Ugh!
MOUNTS Sony AF
WEIGHT 2.2 pounds
LENGTH 4.3-5.6 inches
FILTER SIZE 77mm
STABILIZATION In the camera

TAMRON AF 28-80MM F/3.5-5.6
★ ★ ★ **FULL-FRAME**
AMATEUR **PRO**



\$70, street, with hood Despite its plastic barrel and lensmount, given its price, the lens remains attractive. Also nice? Excellent SQF numbers at most apertures and focal lengths. A cheap-skate's dream come true.
STANDOUT SPEC Wow, what a

STEAL

price! And it has very well-controlled edge falloff.
MOUNTS Canon, Nikon, Sony
WEIGHT 0.6 pound
LENGTH 2.8-3.2 inches
FILTER SIZE 58mm
STABILIZATION No

NIKON AF-S DX VR ZOOM-NIKKOR 16-85MM F/3.5-5.6G ED
★ ★ ★ **APS-C**
AMATEUR **PRO**



\$620, street, with hood and case Looking for something more challenging than your 18-55mm kit lens? This lens gives you VR, more wide-angle and more tele reach, but at a price significantly less than a pro-grade optic.
STANDOUT SPEC Pretty good shake control, although the

latest VR Nikkors do better.

MOUNTS Nikon AF-S
WEIGHT 1.2 pounds
LENGTH 3.4-5.1 inches
FILTER SIZE 67mm
STABILIZATION 2-2.5 stops

OLYMPUS ZUIKO DIGITAL 14-35MM F/2.0 ED SWD
★ ★ ★ ★ 1/2 **FOUR THIRDS**
AMATEUR **PRO**



\$2,300, street, with hood and case This lens certainly lives up to high Zuiko standards: Excellent-range sharpness and contrast, and nearly perfect distortion and vignetting control. Standard high Zuiko price, too.
STANDOUT SPEC Fast constant f/2 speed for a standard range

zoom lens—the brightest optic in this class, in fact.
MOUNTS Four Thirds
WEIGHT 2.05 lbs
LENGTH 4.8-5.4 inches
FILTER SIZE 77mm
STABILIZATION In the camera

PENTAX 17-70MM F/4 DA AL SDM
★ ★ ★ 1/2 **APS-C**
AMATEUR **PRO**



\$480, street, with hood Its zoom range covers wide to moderate tele, and its constant f/4 aperture is sort of fast. But optical performance at the 35mm focal length is excellent, with no vignetting at all.
STANDOUT SPEC Useful focal-length range. You can shoot

scenery, interiors, portraits, and snapshots.
MOUNTS Pentax KAF3
WEIGHT 1.1 pounds
LENGTH 3.7-5.4 inches
FILTER SIZE 67mm
STABILIZATION In the camera

SIGMA 18-50MM F/2.8 EX DC MACRO
★ ★ ★ ★ 1/2 **APS-C**
AMATEUR **PRO**



\$420, street, with hood and case With close-focusing to 7.25 inches and magnification at 1:2.6, it's perfect for tabletop shooters. Our tests found it optically superior to some pricier glass.
STANDOUT SPEC Distortion control. Visible at 18mm, but

imperceptible at 28mm and 50mm focal lengths.
MOUNTS Canon, Nikon, Four Thirds, Pentax, Sigma, Sony
WEIGHT 1.1 pounds
LENGTH 3.4-4.4 inches
FILTER SIZE 72mm
STABILIZATION No

TAMRON 17-50MM F/2.8 XR DI II VC
★ ★ ★ ★ **APS-C**
AMATEUR **PRO**



\$650, street, with hood Rated in the 90th percentile across the aperture range on our SQF charts at 11x14—Excellent. Distortion and vignetting very well controlled.
STANDOUT SPEC Distortion control. Visible at 18mm, but

stabilization, once rare for a wide angle zoom, now trendy.
MOUNTS Canon EF, Nikon AF-S
WEIGHT 1.3 pound
LENGTH 3.75-4.9 inches
FILTER SIZE 72mm
STABILIZATION 2 stops

TOKINA AT-X 16.5-135MM F/3.5-5.6 DX AF
★ ★ ★ **APS-C**
AMATEUR **PRO**



\$450, street, with hood Very useful 8X zoom range for most shooting: sceneries, travel, portraits, interiors and many more. Slightly above average optics.
STANDOUT SPEC Distortion numbers better than

competitors.
MOUNTS Canon, Nikon
WEIGHT 1.4 pounds
LENGTH 3.2-5.2 inches
FILTER SIZE 77mm
STABILIZATION No

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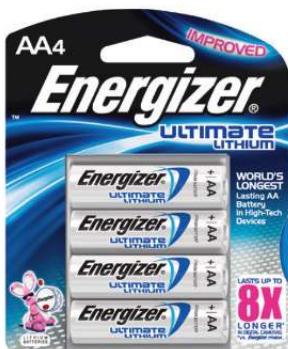
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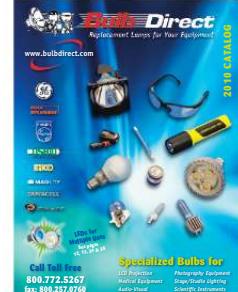
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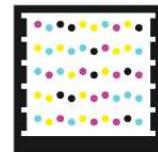
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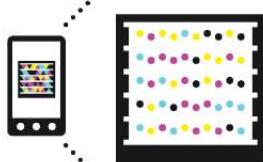
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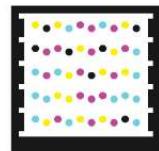


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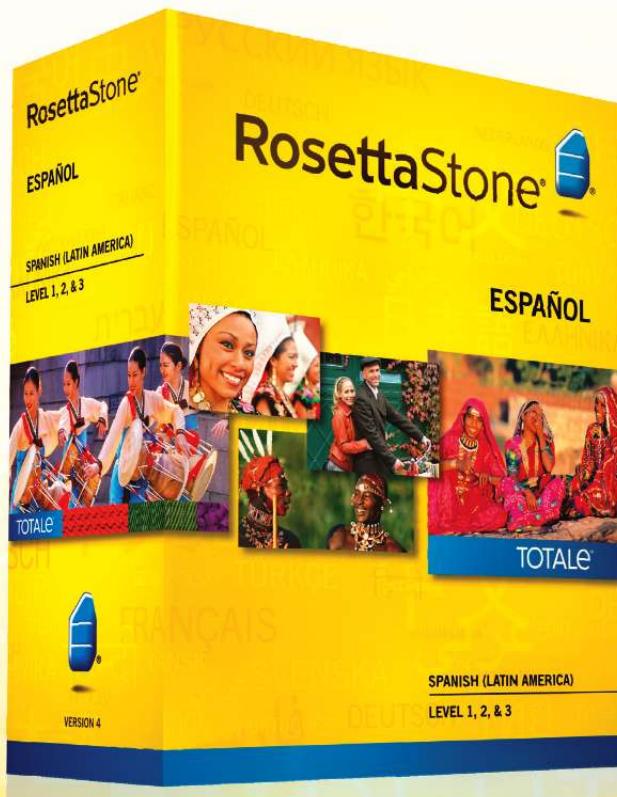
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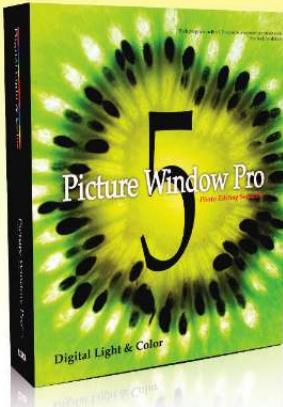


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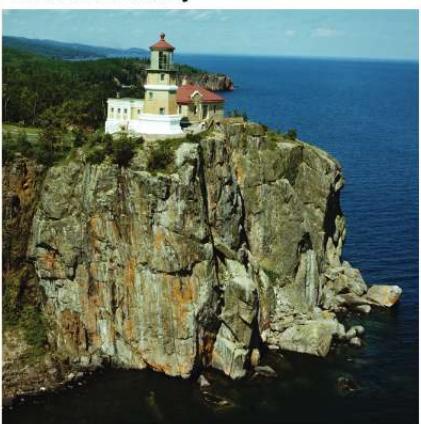
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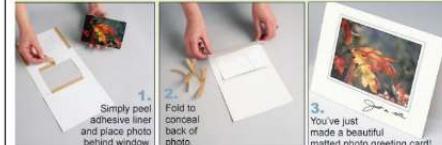
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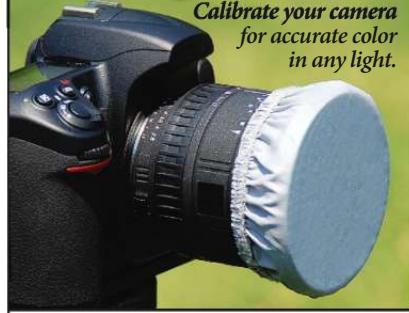


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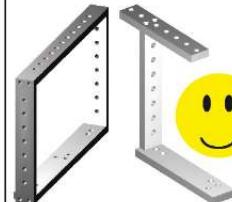
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SPECIAL CONTEST ISSUE

DECEMBER 1950

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Featuring
PRIZE-WINNING
PHOTOGRAPHS
OF OUR 1950
PICTURE CONTEST
in Color and Gravure

A Prize Winner
by L. WILLINGER

▲ Good Night Girl

The December issue may have been the most popular one of the year. Featuring our annual Picture Contest, it was packed with photos from readers competing for substantial prizes. This cover photo, a 1950 prizewinner, was of Kerry Donnelly by L. Willinger of Los Angeles. Titled "Good Night, Everybody," it was taken with a 5x7 Ansco view camera and an 18-inch f/4.5 Zeiss Tessar lens on Kodak Ektachrome Type B sheet

60 YEARS AGO

Maurice Ducharme wrote about the practicalities of a low-cost, sound-on-film movie camera.

film. The exposure was open flash at f/26 with a Wratten 2A (mild warming) filter. Six GE No. 22 flashbulbs supplied the lighting.



◀ Jack of All Trades

Max Jaikin, a photo assistant for top-flight illustrator Alan Fontaine, wrote a light-

hearted account that revealed all of the ways he helped his boss photograph beautiful women in glamorous poses. For assistants then and now, this work provided an entry into the world of professional photography.

Contest Winner

This powerful photo by W. Starr Suydam, of Madison, NJ, our first-place Black and White



winner of the Picture Contest, was taken to portray the task of sightless children learning to read Braille. In his basement studio, Suydam posed his son Stuart (who was not blind), after having him coached in proper hand position and for the right expression. He used a 4x5 Anniversary Speed Graphic and a 135mm f/4.7 Optar lens. A 500-watt spot and #1 Photoflood created dramatic lighting. Exposure on Kodak Super Panachro Press Type film was 1/2 sec at f/16. Our judges awarded Suydam a \$2,000 U.S. Savings Bond, plus a trophy.

▼ Tiny Novelty

The latest pocket camera? This 16mm Mikroma from Czechoslovakia. Billed as the "Miniature That Gives Professional Results," the camera used 16mm film in either color or black-and-white. It sported a 20mm f/3.5 Mirar lens and boasted a top shutter speed of 1/100 sec. Price was \$49.90.

—Harold Martin



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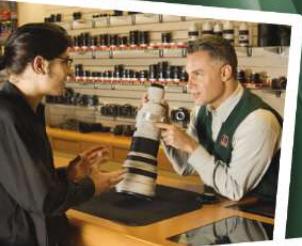
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14 Mega Pixels

Canon Powershot S95

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#CAPSS95*



10 Mega Pixels

Canon Powershot G12

- 2.8" Vari-Angle LCD • 1280 x 720p HD Video Capture • Stereo Sound for Video
- 5x Optical Zoom • 4x Digital Zoom
- 6.1-30.5mm f/2.8-4.5 (35mm equiv: 28-140mm) • SD/SDHC/SDXC Card Slot
- RAW File Mode • Dim.: 4.41 x 3 x 1.9"

#CAPSG12*



10 Mega Pixels

FUJIFILM Finepix HS10

- 3" LCD Monitor • HD Video 1080p with Stereo Sound • 30x Optical Zoom
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#FUFPHS10*



10 Mega Pixels

Nikon Coolpix L110

- 3" High Res. LCD • 15x Optical Zoom
- 5-75mm f/5.5-5.4 (35mm equiv: 28-420mm) • SD/SDHC Card Slot
- 5-Way VR Image Stabilization • 720p HD Video • Sports Continuous Shooting
- Dimensions: 4.3 x 3.1 x 3"

#NICPL110*



12 Mega Pixels

Nikon Coolpix P100

- 3" Vari-Angle LCD • 26x Optical Zoom
- 4.6-120mm f/2.8-5 (35mm equiv: 26-678mm) • SD/SDHC Card Slot
- 5-Way VR Image Stabilization
- Full 1080p HD Video @ 30 fps with Stereo
- Dimensions: 4.5 x 3.3 x 3.9"

#NICPP100*



10 Mega Pixels

► MEMORY CARDS

CF Compact Flash

Delkin				Kingston				Lexar				Sandisk				Lexar				Sandisk				Sony				
Std	Pro	91 MB/s	Std	Elite Pro 133x	Ultimate 266x	Platinum II 200x	400x	600x	Ultra II 60 MB/s	Extreme 90 MB/s	Extreme Pro	1GB	—	—	2GB	14.99	—	—	4GB	—	—	—	16GB	26.55	41.39	—	29.99	37.29
2GB	12.99	22.95	—	—	—	—	—	—	16.49	—	—	1GB	—	—	2GB	14.99	—	—	4GB	—	—	—	16GB	26.55	41.39	—	29.99	37.29
4GB	17.51	27.50	59.99	11.95	15.95	—	26.09	—	27.95	—	—	2GB	14.99	—	4GB	—	—	—	8GB	—	—	—	16GB	26.55	41.39	—	29.99	37.29
8GB	29.49	49.95	89.99	18.50	24.95	—	33.20	79.95	38.95	69.95	—	4GB	—	—	8GB	—	—	—	16GB	—	—	—	32GB	—	—	—	59.99	74.49
16GB	47.50	89.95	CALL	—	39.95	79.95	50.99	117.64	77.95	124.95	219.99	8GB	—	—	16GB	—	—	—	32GB	—	—	—	64GB	—	—	—	69.99	89.99
32GB	97.50	139.99	269.95	—	72.95	116.95	—	178.02	189.95	389.99	32GB	—	—	32GB	—	—	—	64GB	—	—	—	128GB	—	—	—	169.95	216.95	248.99
64GB	—	299.99	—	—	—	—	—	—	—	—	69.99	—	—	32GB	—	—	—	64GB	—	—	—	128GB	—	—	—	169.95	216.95	248.99

SD Secure Digital

Delkin				Kingston				Lexar				Panasonic				Sandisk				Sony						
Std	Micro	Micro	Micro	5MBs Class 4	Std Class 4	Micro	Std Class 4	Micro	Std Class 2	Platinum II 100x	Professional 133x	Standard Class 6 200x	Class 10 22 MBs	Std	Ultra Class 4 15MBs	Class 6 20MBs	Ultra Class 4 15MBs	Extreme Class 6 30MBs	Class 10 30MBs	Micro	Std Class 4	Micro Class 4				
1GB	—	—	—	—	—	—	—	—	—	48GB	—	—	359.95	—	—	359.95	—	—	—	1GB	—	—	—	14.99	—	—
2GB	7.95	6.95	6.95	7.50	9.92	8.95	8.95	—	—	64GB	352.95	479.95	210.99	—	—	352.95	479.95	210.99	—	2GB	—	—	—	14.95	—	—

OLYMPUS Stylus Tough-8010

- Shockproof, Waterproof, Freezeproof, Crushproof • 2.7" LCD
- 5x Optical Zoom • 5x Digital Zoom
- 5-25mm f/3.5-5.1 (35mm equiv: 28-140mm) • SD/SDHC Card Slot
- Dimensions: 3.9 x 2.5 x 0.94"

#OLST8010* Black, Silver



12 Mega Pixels

Panasonic Lumix DMC-ZS7

- 3" LCD • HD Video Recording
- 12x Optical Zoom • 4x Digital Zoom
- 4.1-49.2mm f/3.3-4.9 (35mm equiv: 25-200mm) Leica DC Vario-Elmarit
- SD/SDHC Card Slot • GPS Geotagging
- Dimensions: 4.07 x 2.35 x 1.28"

#PADMCZS7* Black, Blue, Red, Silver



12 Mega Pixels

PENTAX Optio W90

- 2.7" LCD • SD/SDHC Card Slot
- 5x Optical Zoom • 6.25x Digital Zoom
- 5-25mm f/3.5-5.5 (35mm equiv: 28-140mm)
- Waterproof, Shockproof, Coldproof
- Dustproof • HD Movie HD Video Recording
- Dimensions: 4.2 x 2.3 x 1.0"

#PEOW90* Black, Green



12 Mega Pixels

SONY CyberShot DSC-W310

- 2.7" LCD • SD/SDHC Card Slot
- 5x Optical Zoom • 6.25x Digital Zoom
- 5-25mm f/3.5-5.8 (35mm equiv: 28-112mm)
- MS Duo/Pro Duo and SD/SDHC Dual Card Slot • Smile Shutter Technology
- Dimensions: 3.75 x 2.17 x 0.74"

#SDSCW310* Black, Pink, Silver



12 Mega Pixels

SONY CyberShot DSC-HX5V

- 3" LCD • 1080i AVCHD HD Movies
- 10x Optical Zoom • 14x Digital Zoom
- 4.2-45.2mm f/3.5-5.5 (35mm equiv: 25-250mm)
- MS Duo, MS PRO Duo, SD/SDHC Card Slot
- Dimensions: 4.05 x 2.27 x 1.14"

#SDSCHX5V*



10 Mega Pixels

SONY CyberShot DSC-HX1

- 3" LCD Monitor • HD Video Recording
- 20x Optical Zoom • 26x Digital Zoom
- 5-100mm f/2.5-5.6 (35mm equiv: 28-560mm) G-Lens • Handheld Twilight Mode • MS Duo/Pro Duo Card Slot
- Dimensions: 4.63 x 3.38 x 3.63"

#SDSCHX1*



9 Mega Pixels

Panasonic Lumix DMC-GF1 DSLR

- HD 720p Video Capture with Exposure Control
- Capture in JPEG or RAW
- 3" Live View LCD
- Compact Micro 4/3 Design
- SD/SDHC Card Slot
- My Color + Film Mode
- Intelligent Exposure (iA) Mode
- Optional Electronic Viewfinder
- Advanced Dust Reduction Technology



12 Mega Pixels

Kit with 14-45mm.....#PADMCGF11445*

OLYMPUS EP-2 DSLR

- Capture in JPEG or RAW
- HD Stills and Video with Live View
- 3" HyperCrystal LCD
- ISO 100-6400
- 4/3 Full Frame Zuike Specific Lenses
- Advanced Dust Reduction
- SD/SDHC Card Slot



Black Kit with 14-42mm Zuike Lens.....#OLEP21442B

Black Kit with 17mm f/2.8 Zuike Lens.....#OLEP217B

12 Mega Pixels

OLYMPUS E-30 DSLR

- Capture in JPEG or RAW
- 2.7" Live View LCD
- 4/3 Full Frame Zuike Specific Lenses
- Supersonic Wave Filter Anti-dust System
- CF & XD Dual Card Slots
- Scene Select Modes
- Art Filters & Multiple Exposure
- Shadow Adjustment • ISO 100-3200

Body Only.....#OLE30

Kit with 14-42mm Zuike Lens.....#OLE301442



12 Mega Pixels

OLYMPUS**Flash System**

FL-20 Flash.....\$149.95 FL-36R Flash.....\$229.95

FL-50R Flash.....\$499.95 RF-11 Ring Flash.....\$249.95

SRF-11 Ring Flash Set.....\$559.95

TF-22 Twin Flash.....\$449.95

STF-22 Twin Flash Set.....\$739.95

Zuiko 4/3 System Digital Lenses

8/3.5 Fish-eye ED.....\$799.95

35/3.5 Macro ED (52o).....\$229.95

50/2.0 Macro ED (77o).....\$499.95

150/2.0 ED (82o).....\$2,499.95

300/2.8 ED.....\$6,999.95

7-14/4.0 ED (72o).....\$1,799.95

11-22/2.8-3.5 ED (72o).....\$799.95

12-60/2.8-4 ED SWD (72o).....\$999.95

14-42/3.5-5.6 ED (58o).....\$249.95

18-100/3.5-6.3 ED (62o).....\$499.95

35-100/2.0 ED (77o).....\$2,499.95

40-150/4-5.6 ED (58o).....\$279.95

50-200/2.8-3.2 ED SWD (67o).....\$1,199.95

90-250/2.8 ED (105o).....\$5,999.95

EC-14 1.4x Teleconverter.....\$439.95

EC-20 2x Teleconverter.....\$479.95

MF-1 OM Lens Adapter.....\$99.95

PENTAX**AF Flash System**

AF-360FGZ.....AF-540FGZ.....

SMCP-DA Digital AF Lenses

14/2.8 ED IF (77o).....15/4.0 ED AL (49o).....

35/2.8 Macro Limited (49o).....55/1.4 Limited (58o).....

21/3.2 AL Limited "Pancake" (49o).....

40/2.8 Limited "Pancake" (49o).....

70/2.4 Limited "Pancake" (49o).....

200/2.8 ED IF.....300/4.0 ED IF SDM (77o).....

10-17/3.5-4.5 ED IF (77o).....12-24/4 ED AL IF (77o).....

16-50/2.8 ED AL IF SDM (77o).....

17-70/4.0 AL IF SDM (67o).....

18-55/3.5-5.6 AL II (52o).....

50-135/2.8 ED IF SDM (67o).....

50-200/4-5.6 ED WR (52o).....

55-300/4-5.8 ED (58o).....

60-250/4.0 ED IF SDM (67o).....

AF Lenses for 35mm & Digital SLRs

31/1.8 Limited (58o).....50/1.4 (49o).....

43/1.9 Limited "Pancake" (49o).....

50/2.8 Macro (52o) with Case.....

77/1.8 Limited (49o).....

100/2.8 FA DA Macro (49o).....

**Digital White Balance Filters**

ExpoDisc is an easy to use custom white balance solution that eliminates the inconvenience and inconsistencies of other methods.

- Use in Ambient, Studio or Mixed Light
- Easy to Use, Durable, Compact

OLYMPUS**50mm f/2 Macro ED Zuike Digital Lens**

- **Designed exclusively for Digital SLRs**
- Ideal for macro photography and also as a portrait lens
- Magnification 1:2
- ED glass element
- Min. focus: 9.45"
- 52mm filter diameter
- Weight: 10.6 oz

**PENTAX****50-200mm f/4-5.6 SMCP-DA ED WR AF Digital Lens**

- **Designed exclusively for Digital SLRs**
- Ideal for portraiture, sports, and scenery
- Weather resistant
- Quick-Shift Focus System
- Min. focus: 3.6"
- 52mm filter diameter
- Weight: 9 oz

**PENTAX K-r DSLR**

- 720p HD Video
- 11 Point SAFOX IX Autofocus System
- In-Camera HDR Image Capture
- IrSimple Infrared Data Transfer
- 3" LCD monitor with Live View
- Uses Pentax AF Lenses (1.5x factor)
- SD/SDHC Card Slot
- 6 FPS Frame Rate
- ISO 100-25,600



12 Mega Pixels

Body Only.....#PPEKR*

SONY Alpha NEX-3 DSLR

- Extremely Compact HD Imaging System
- Tilted 3" LCD with Live View
- Uses Sony E-mount series Lenses
- MS PRO Duo or SD/SDHC Card Slots • Up to 7 fps
- Up to ISO 12800
- Auto HDR capture / DRO Optimizer
- 720p HD / MP4 with MPEG-4 AAC-LC Audio
- Available in Black, Red or Silver



14 Mega Pixels

with 16mm Lens.....#SODSLRNEX3A*

with 18-55mm.....#SODSLRNEX3K*



14 Mega Pixels

SONY Alpha A390 DSLR

- RAW & JPEG File Formats
- 2.7" Tilted TFT Photo Clear LCD
- Live View with Quick Auto Focus
- Uses Sony Alpha (compatible with Minolta) Lenses (1.5x factor)
- MS PRO Duo and SDHC Dual Card Slots
- Anti-dust Technology
- Creative Style settings
- 2.5 fps Continuous Shooting
- High Sensitivity (ISO 3200)



14 Mega Pixels

Body Only.....#SODSLRA390



14 Mega Pixels



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 Friday 9-1 • Saturday Closed



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52mm - Neutral or Portrait #EXWB52*.....\$69.95
 58mm - Neutral or Portrait #EXWB58*.....\$79.95
 62mm - Neutral or Portrait #EXWB62*.....\$84.95
 67mm - Neutral or Portrait #EXWB67*.....\$89.95
 72mm - Neutral or Portrait #EXWB72*.....\$94.95
 77mm - Neutral or Portrait #EXWB77*.....\$99.95
 82mm - Neutral or Portrait #EXWB82*.....\$104.95

**SONY 16-80mm f/3.5-4.5 Carl Zeiss T* DT Digital Lens**

- **Designed exclusively for Digital SLRs**
- Ideal for snapshots, portraits, interiors, or outdoor scenery
- 35mm equiv: 24-120mm
- Min. focus: 13.8"
- 62mm filter diameter
- Weight: 15.5 oz

**OLYMPUS****50mm f/2 Macro ED Zuike Digital Lens**

- Ideal for macro photography and also as a portrait lens
- Magnification 1:2
- ED glass element
- Min. focus: 9.45"
- 52mm filter diameter
- Weight: 10.6 oz

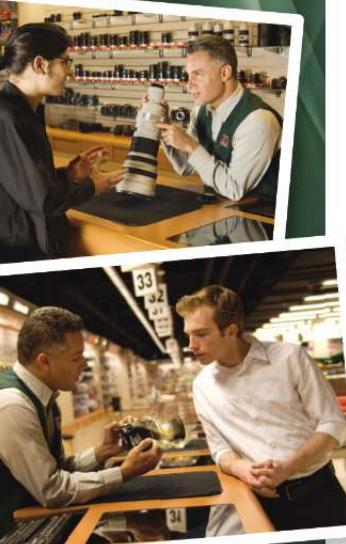




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Canon Digital Rebel XS DSLR

- 2.5" LCD Monitor
- Live View Function
- Uses Canon EF Lenses (1.6x factor)
- SD/SDHC Card Slot
- Auto Lighting Optimizer
- ISO 100-1600
- USB 2.0
- Picture Style Settings
- Integrated Cleaning System
- 3 fps Continuous Shooting



Kit with 18-55mm #CAEDRXSKB

10 Mega Pixels

Canon Digital Rebel T2i DSLR

- 3" Clear View LCD with Advanced Live View
- Uses Canon EF Lenses (1.6x factor)
- SD/SDHC/SDXC Card Slot
- 3.7 fps Continuous Shooting
- ISO Expandable to 12,800
- RAW and/or JPEG
- Eye-Fi Menu Status Indicator Support



Body Only #CAEDRT2I

Kit with 18-55mm IS #CAEDRT2K

18 Mega Pixels

Canon EOS-60D DSLR

- 1920 x 1080 HD Video Capture
- DIGIC 4 Image Processor
- SD/SDHC/SDXC Card Slot
- Works with all Canon EF & EF-S Lenses
- Vari-Angle Clear View 3.0" Flip-Out LCD
- HDMI Output to HDTV
- 5.3 fps Continuous Shooting
- ISO 6400 - Expandable to 12800



Body Only #CAE60D

18 Mega Pixels

► Canon SLR Lenses and Flashes

IMP USA

EOS Flash System (USA)	
270EX.....	\$144.00
430EX II.....	\$280.00
580EX II.....	\$445.00
MR-14EX Ringlight.....	\$494.00
MT-24EX Twin Flash.....	\$726.95

EF-S Lenses for Digital Only

Compatible with the 20D, 30D, 40D, 50D

& Digital Rebel only

60/2.8 USM Macro (52o).....	\$399.00	\$422.00
10-22/3.5-4.5 USM (77o).....	\$739.00	\$770.00
15-85/3.5-5.6 IS (72o).....	\$720.00	
17-55/2.8 IS USM (67o).....	\$1,040.00	\$1,060.00
17-85/4.5-5.6 IS USM (67o).....	CALL	CALL
18-55/3.5-5.6 IS (58o).....	\$159.95	\$170.00
18-135/3.5-5.6 IS (67o).....	\$429.95	\$450.00
18-200/3.5-5.6 IS (72o).....	\$574.95	\$595.00
55-250/4.0-5.6 IS USM (58o).....	CALL	CALL

EF Lenses		
15/2.8.....	CALL	CALL
20/2.8 USM (72o).....	\$459.95	\$469.95
24/2.8 (58o).....	\$319.95	\$329.95
28/2.8 (52o).....	\$244.95	\$249.00
28/1.8 USM (58o).....	\$449.00	\$459.00

USA = Imported & Warrantied by Canon USA

IMP = Imported & Warrantied by B&H (not qualified for Canon USA Rebates & Warranties)

CALL FOR AVAILABLE REBATES

IMP USA

EF "L" Lenses	
85/1.2 USM II (72o).....	\$1,949.00
100/2.8 IS USM Macro (67o).....	\$944.00
135/2.0 USM (72o).....	\$980.00
180/3.5 USM Macro (72o).....	\$1,360.00
200/2.8 USM (72o).....	\$749.00
200/2.0 IS USM (52o).....	\$5,199.00
300/4.0 IS USM (77o).....	\$1,259.00
300/2.8 IS USM (52o rear).....	CALL
400/5.6 USM (77o).....	\$1,199.00
400/2.8 IS (52o rear).....	CALL
500/4.0 IS USM (52o rear).....	\$6,049.00
600/4.0 IS (52o rear).....	\$7,900.00
16-35/2.8 USM II (62o).....	\$1,499.00
17-40/4.0 USM (77o).....	\$729.00
24-70/2.8 USM (77o).....	\$1,329.00
24-105/4 IS USM (77o).....	\$1,049.00
28-300/3.5-5.6 IS USM (77o).....	\$2,399.00
70-200/4.0 USM (67o).....	\$639.00
70-200/4.0 IS USM (77o).....	\$1,189.00
70-200/2.8 USM (77o).....	\$1,289.00
70-200/2.8 IS USM (77o).....	CALL
100-400/4.5-5.6 IS USM (77o).....	\$1,589.00
1.4x II Teleconverter.....	\$299.00
2x II Teleconverter.....	\$299.00

Canon

580 EX II
Shoe Mount Flash

- Dust- & water-resistance
- Guide No. 190'
- Metal Hot Shoe
- E-TTL II, E-TTL, TTL & Manual
- Bounce & Swivel Head
- Zoom Head (24-105mm)
- Weight 13.2 oz



Canon

10-22mm f/3.5-4.5 EF-S USM
Digital Lens

- Designed exclusively for Digital SLRs
- 35mm equivalent 16-35mm
- Min. Focus 9.5"
- 3 aspherical lens elements
- 3.27-27 f/Stop Range
- 77mm filter diameter
- Weight 13.6 oz



Canon EOS-5D Mark II DSLR

- Record HD Video
- Full-Frame Sensor
- Live View Mode
- 3" High Resolution LCD Screen
- Uses Canon EF Lenses
- CF, MD Card Slot
- Dust and Weather Resistant
- Self-Cleaning Sensor
- 3.9 fps Burst Mode
- 9-point AF Sensor Array
- ISO Range 50-25600



Body Only #CAE5D2

Kit with 24-105mm IS #CAE5D224105

21 Mega Pixels

Canon EOS-7D DSLR

- Record HD Video
- 3" LCD
- Uses Canon EF Lenses
- CF, MD Card Slot
- Dust and Weather Resistant
- Selectable Video Exposure and Frame Rates
- 19-Point, All Cross-Type AF System
- ISO 100-6400 (expandable to 12800)
- 8 fps Burst Mode



Body Only #CAE7D

Kit with 28-135mm IS #CAE7D28135

18 Mega Pixels

Canon EOS-1D Mark IV DSLR

- HD Video Recording
- Selectable Video Exposure + Frame Rates
- Self-Cleaning Sensor
- 3" LCD Monitor
- Uses Canon EF Lenses
- SD/SDHC & CF card slots
- 10 fps Burst Mode
- Dust and Weather Resistant
- 45 Point AF System
- High Sensitivity (ISO 102,400)



Body Only #CAE1D4*

16 Mega Pixels

Nikon. D3000 DSLR

- Self-Cleaning Sensor
- 3" LCD Monitor
- Accepts Nikon AF Lenses (1.5x factor)
- ISO 100-1600
- Fast Shutter Response
- SD, SDHC Card Slot
- In-camera Editing
- 3 fps Burst Mode
- 11-point Autofocus System
- Nikon Inc. limited warranty included

Kit with 18-55mm VR DX #NID30001855



10 Mega Pixels

Nikon. D3100 DSLR

- HD 1080p Video w/ Sound & Autofocus
- 3" LCD • Live View
- Uses Nikon AF Lenses (1.5x factor)
- SD/SDHC Card Slot
- 11-point Autofocus
- 3 Frames per Second Shooting
- ISO 100 to 3200
- (Expand to 12800-Hi2)
- Self Cleaning Sensor
- Nikon Inc. limited warranty included

Kit with 18-55mm VR #NID31001855



14 Mega Pixels

Nikon. D90 DSLR

- D-Movie mode record
- 720p HD movie clips
- 3" LCD Monitor • Active D-Lighting
- Uses Nikon AF Lenses (1.5x factor)
- SD/SDHC Card Slot
- In-Camera Image Editing
- Scene Recognition System
- GPS geo-tagging • ISO 100-3200
- Self-Cleaning Sensor • 4.5 fps Burst
- Nikon Inc. limited warranty included

Body Only #NID90
Kit with 18-105mm VR #NID9018105

12 Mega Pixels

Nikon. D300s DSLR

- Dust and Weather Resistant
- Self-Cleaning Sensor • 6 fps Burst
- HD Video Recording
- 3" LCD Monitor • Live View
- Accepts Nikon AF Lenses (1.5x factor) • Stereo Audio Input
- CF and SD/SDHC Card Slots
- 51-point AF with 3D focus tracking
- ISO Sensitivity from 200 to 3200
- Nikon Inc. limited warranty included

Body Only #NID300S
Kit with 18-200mm VR II #NID300S18200

12 Mega Pixels

Nikon. D700 DSLR

- Self Cleaning Sensor • 5 fps Burst
- FX-format CMOS (full frame)
- 3" VGA LCD Monitor • Live View
- 51-point AF System
- Uses Nikon AF Lenses
- CompactFlash Card Slot
- Dust and Water Resistant
- Active D-Lighting Mode
- HDMI Video Out • ISO 6400
- Nikon Inc. limited warranty included

Body Only #NID700
Kit with 24-120mm VR #NID70024120

12 Mega Pixels

Nikon. D3s DSLR

- RAW/JPEGs & 720p HD Video @ 24fps
- FX-format (full-frame) CMOS Sensor
- In-Camera RAW Processing
- 3" 920,000-Dot LCD with Live View
- Compatible with Most Nikkor Optics
- Built Tough, Fully Weathersealed
- ISO Sensitivity up to 102,400
- Buffers Up to 48 RAW or 130 large JPEGs
- Dual CF Card Slots
- Nikon Inc. limited warranty included

Body Only #NID3S



12 Mega Pixels

Nikon. SLR Lenses and Flashes

	IMP	USA		IMP	USA		IMP	USA
AF Flashes			D-Type AF Lenses			D-Type AF Lenses		
SB-400	CALL	CALL	14/2.8 D ED	CALL	\$1,649.95	300/4.0 D AF-S ED-IF (770)	.....	\$1,199.95
SB-600	CALL	CALL	16/2.8 D (39) with Hood	CALL	\$824.95	300/2.8 G AF-S VR (520-R)	.....	\$1,349.95
SB-900	CALL	CALL	20/2.8 D (620)	CALL	\$529.00	400/2.8 G AF-S VR ED (520)	.....	CALL
R1 Wireless Twin Flash	CALL	CALL	24/2.8 D (520)	CALL	\$344.95	500/4.0 G AF-S VR ED (520)	.....	CALL
R1C1 Wireless Twin Flash System	CALL	CALL	24/1.4 G AF-S ED (770)	CALL	\$2,129.95	600/4.0 G AF-S VR ED (520)	.....	CALL
DX ED-IF Lenses for Digital Only			24/3.5 D ED PC-E (770)	CALL	\$1,929.95	14/2.8 D G AF-S ED-IF	.....	\$1,784.95
10.5/2.8 Fish-Eye	\$634.95	\$679.95	28/2.8 D (520)	CALL	\$239.95	14-35/4.0 G AF-S ED-IF	.....	\$1,559.95
35/1.8 G AF-S (520)	\$184.95	\$194.95	35/2.0 D (520)	CALL	\$309.95	16-35/4.0 G AF-S ED VR (770)	.....	\$1,784.95
85/3.5 G ED VR Micro (520)	\$479.95	\$489.95	45/2.8 D ED PC-E Micro (770)	CALL	\$1,799.95	17-35/2.8 D AF-S ED-IF (770)	.....	\$1,759.95
10-24/3.5-4.5 G AF-S (770)	\$779.95	\$799.95	50/1.8 D (520)	CALL	\$109.95	24-70/2.8 G AF-S ED-IF (770)	.....	\$1,719.95
12-24/4.0 G AF-S (770)	\$929.95	\$949.95	50/1.4 D (520)	CALL	\$274.95	24-85/2.8-4.0 D IF (720)	.....	\$659.95
16-85/3.5-5.6 G AF-S VR (670)	\$579.95	\$629.95	50/1.4 G AF-S (580)	CALL	CALL	24-120/4.0 G AF-S ED VR (770)	.....	\$1,299.95
17-55/2.8 G AF-S (770)	\$1,349.95	\$1,359.95	60/2.8 D Micro (620) (1:1)	CALL	\$419.95	28-300/3.5-5.6 G AF-S ED VR (770)	.....	\$1,049.95
18-55/3.5-5.6 G AF-S II (520)	\$99.95	\$109.95	60/2.8 G AF-S ED Micro (620)	CALL	\$519.95	70-200/2.8 G AF-S ED-IF VR II (770)	.....	CALL
18-55/3.5-5.6 G AF-S VR (520)	\$129.95	\$179.95	85/1.8 D (620) with Hood	CALL	\$399.95	70-300/4.0-5.6 G (620)	.....	\$129.95
18-105/3.5-5.6 G AF-S VR (670)	CALL	\$359.95	85/1.4 D IF (770)	CALL	\$1,054.95	70-300/4.5-5.6 G AF-S VR (670)	.....	\$474.95
18-200/3.5-5.6 G AF-S VR II (720)	CALL	\$759.95	85/1.4 G AF-S (770)	CALL	CALL	80-200/2.8 D with Collar (770)	.....	\$1,099.95
55-200/4-5.6 G AF-S (670)	\$164.95	\$179.95	85/2.8 PC-E Micro (770)	CALL	\$1,769.95	80-400/4.5-5.6 D VR (770)	\$1,449.95
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USA = Imported & Warrantied by Nikon USA (AF lenses include 1 year warranty plus 4 years extended service coverage)

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Nikon**24-70mm f/2.8 G AF-S ED-IF**

Zoom Lens

- Optimized for edge-to-edge sharpness on both the Nikon FX (full-frame) and DX-format image sensors
- Rugged construction, dust and moisture resistance
- Minimum focus 1.2'
- 77mm filter diameter
- Weight 32 oz

**Nikon****18-200/3.5-5.6 DX G VR II**

AF-S ED-IF Digital Lens

- **Designed exclusively for Digital SLRs**
- 35mm equiv. 27-300mm
- VR II Vibration Reduction
- SWM (Silent Wave Motor)
- 3.5-22 f/Stop Range
- Focus 1.6' to Infinity
- 72mm filter diameter
- Weight 19.8 oz

**Nikon****70-200/2.8 G AF-S ED-IF VR II**

Telephoto-Zoom Lens

- VR II Vibration Reduction
- 3.5-22 f/Stop Range
- SWM (Silent Wave Motor)
- Close Focusing to 4.6'
- 77mm filter diameter
- Weight 3.2 lbs

**Nikon****SB-900 Speedlight i-TTL**

Shoe Mount Flash

- Guide No. 131'
- Recycling Time 4.5 Secs
- Bounce & Swivel Head
- Zoom Head (17-200mm)
- Stroboscopic Effect
- AF-Assist Illuminator
- Safety lock on flash shoe
- Weight 14.6 oz



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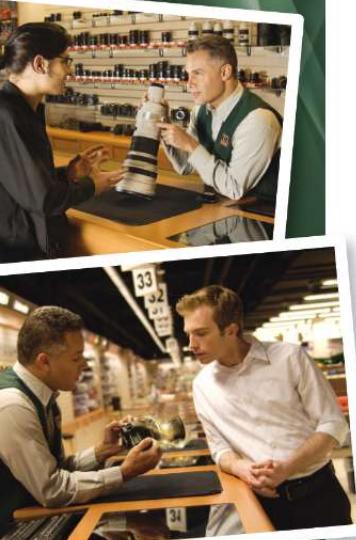
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C = Canon N = Nikon P = Pentax SM = Sony/Minolta

** Price After Rebate

	SKU #	Available for	Rebate	Price
Di-II	#TA602D*	C, N, SM	\$50	\$474.00**
Di	#TA9028M*	C, N, P, SM	\$50	\$449.00**
Di	#TA18035*	C, N, SM	\$50	\$689.00**
Di-II	#TA102435*	C, N, P, SM	\$50	\$449.00**
Di-II	#TA175028*	C, N, P, SM	\$45	\$454.00**
Di-II	#TA175028Q	C, N	\$70	\$579.00**
Di-II	#TA1820035*	C, N, P, SM	\$60	\$239.00**
Di-II	#TA1825035*	C, N	—	\$299.00
Di	#TA1827035*	C, N	\$80	\$549.00**
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Di	#TA288038*	C, N, P, SM	\$50	\$249.00**
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PZ-40X II AF TTL Shoe Mount for Canon or Nikon	\$148.95
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DX	#T011628PDXC	#T011628PDXN	\$599.95
DX	#T012244DXC	#T012244DXN	\$499.95
DX	#T016513535C	#T016513535N	\$549.00
DX			\$449.00

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DG 300/2.8 EX APO HSM	#SI30028DGFCA	#SI30028DGNAF	—	#SI30028DGPFA	#SI30028DGS0	\$2,999.00	
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DC 70-300/4.5-6.0 APO Macro Super II (580)	#SI7030045DCA	#SI70300456AN	—	#SI7030044GPA	#SI7030044GMA	\$209.00	
DC 70-300/4.5-6.0 OS (620)	#SI7030045C	#SI7030045N	—	#SI7030045P	#SI7030045SS	\$399.00	
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EF-530 Super Flash	#SIEF530C	#SIEF530N	—	#SIEF530P	#SIEF530S	\$219.00	
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SIGMA

18-200mm f/3.5-6.3 DC OS

Digital Lens

- Designed exclusively for Digital SLRs
- Focus 1.5° to Infinity
- Mag. ratio 1:3.9
- 72mm filter diameter
- Weight 21.6 oz



SIGMA

18-50mm f/2.8 EX Macro DC

Digital Lens

- Designed exclusively for Digital SLRs
- Minimum focus 7.9"
- Super Multi Layer (SML)
- 72mm filter diameter
- Weight 15.9 oz



TAMRON

60mm f/2.0 LD IF Macro Di-II

Digital Lens

- Designed exclusively for Digital SLRs
- Minimum Focus 9.1"
- 55mm filter diameter
- Weight 14.1 oz



Tokina

11-16mm f/2.8 Pro DX AT-X

Fisheye Digital Lens

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- WR (Water Repellent) coating
- Minimum Focus 1"
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Lens/Flash	2	4	6
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Lens/Flash	3	4	4
Laptop	No	15.4"	17.4"
Price	\$74.95	\$89.95	\$112.95



► tamrac Aero Backpacks

Speed Pack's Dual Entry System allows camera access via side door or front panel. Weatherproof exterior and foam padded interior compartments for a custom equipment fit.

	Speed Pack 75	Speed Pack 85
SKU #	#TA3375*	#TA3385*
Color	Black, Rust	
SLRs	1	1
Lens/Flash	3	4
Laptop	No	17"
Price	\$99.99	\$129.99



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TMX

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400

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3.99

TMX

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TMZ

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RTP T64

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RTP T64

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RTP T64

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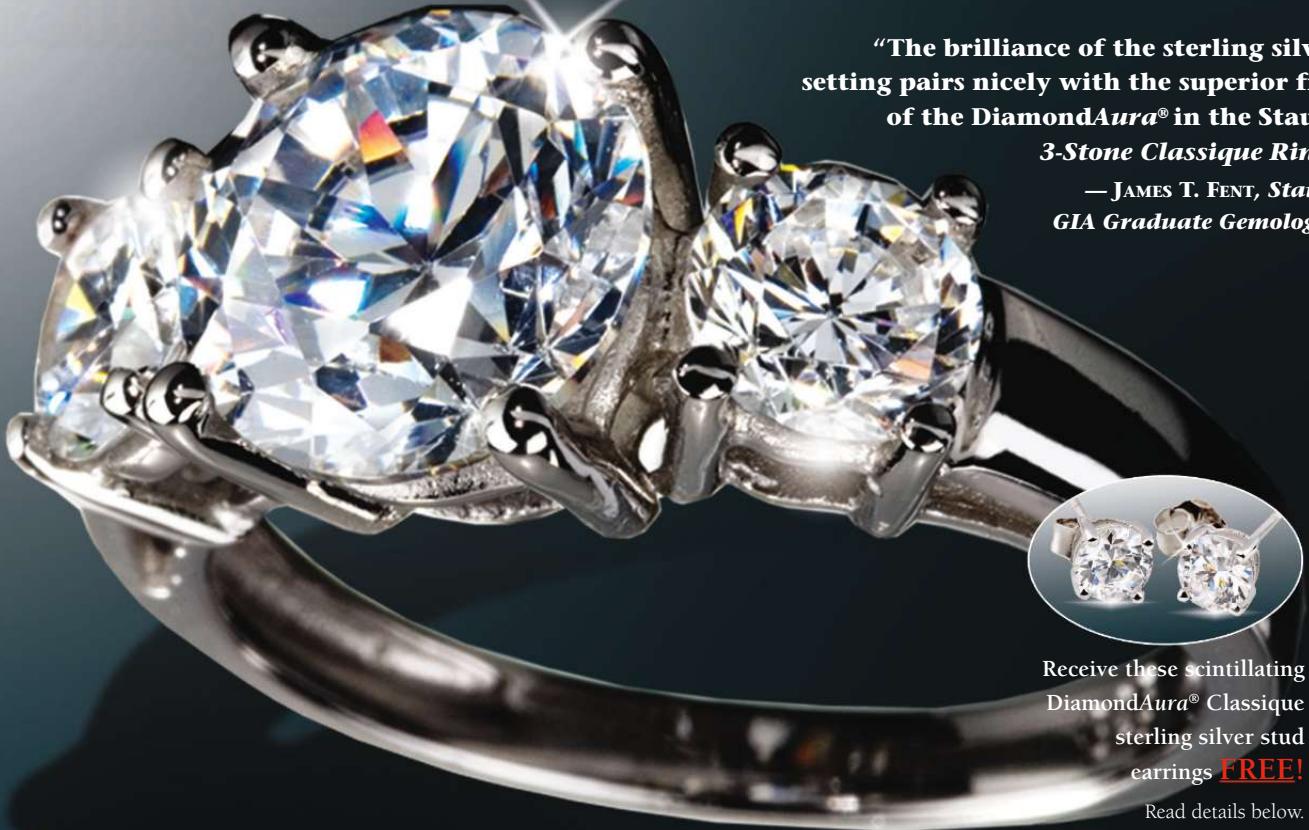
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Perfection from the laboratory.

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Hardness	Cuts Glass	Cuts Glass
Cut (58 facets)	Brilliant	Brilliant
Color	"D" Colorless	"D" Colorless
Clarity	"IF"	Clear
Dispersion/Fire	0.044	0.066
2 ½ c.t.w. ring	\$60,000+	\$145

but will only say that it involves the use of rare minerals heated to an incredibly high temperature of nearly 5000°F. This can only be accomplished inside some very modern and expensive laboratory equipment. After several additional steps, scientists finally created a clear marvel that looks even better than the vast majority of mined diamonds. According to the book *Jewelry and Gems—the Buying Guide*, the technique used in DiamondAura offers, "The best diamond simulation to date, and even some jewelers have mistaken these stones for mined diamonds."

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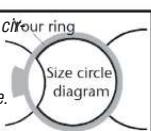
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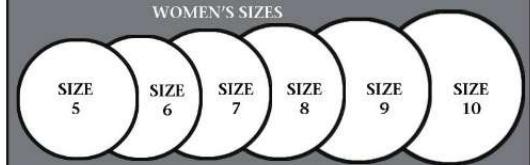
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EF 15mm f/2.8 Fisheye	CA4040	\$719.99
EF 50mm f/1.2L USM	CA40450	\$1,619.00
EF 50mm f/1.4 USM	CA4046	\$389.95
EF 85mm f/1.2L II USM	CA40512	\$2,199.00
EF 85mm f/1.8 USM	CA40515	\$419.95
EF 100mm f/2 USM	CA4049	\$479.99
EF 100mm f/2.8L IS Macro USM	CA40529	\$1,049.00
EF 200mm f/2.0L IS USM	CA40544	\$5,999.00



Full Frame Zoom Lenses

Description	Part No.	Price
EF 16-35mm f/2.8L II USM	CA406091	\$1,699.00
EF 17-40mm f/4.0 L USM ZOOM	CA40611	\$839.99
EF 24-70mm f/2.8L USM ZOOM	CA40644	\$1,449.00
EF 24-105mm f/4L IS USM	CA40646	\$1,249.00
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EF 70-200mm f/2.8 L USM	CA40782	\$2,499.00
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EF 70-200mm f/4L IS USM	CA40792	\$1,349.00
EF 70-300mm f/4-5.6 IS USM	CA40861	\$649.99
EF 75-300mm f/4-5.6 III	CA4088	\$199.99
EF 100-400mm f/4.5-5.6L IS USM	CA4084	\$1,799.00



APS-C Sensor Lenses

Description	Part No.	Price
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EF-S 10-22mm f/3.5-4.5 USM	CA40606	\$859.99
EF-S 15-85mm f/3.5-5.6 IS USM	CA40608	\$799.99
EF-S 17-55mm f/2.8 IS USM	CA40617	\$1,199.00
EF-S 18-55mm f/3.5-5.6 IS	CA406142	\$199.99
EF-S 18-135mm f/3.5-5.6 IS USM	CA40619	\$499.99
EF-S 18-200mm f/3.5-5.6 IS	CA40621	\$699.99
EF-S 55-250mm f/4-5.6 IS	CA40737	\$299.00

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Prime Lenses

Description	Part No.	Price
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35mm f/1.4G AF-S	NT21134	\$1,799.95
35mm f/2.0D AF	NT2114	\$389.95
50mm f/1.8D AF	NT2116	\$134.95
50mm f/1.4G AF-S	NT21157	\$484.95
60mm f/2.8G ED AF-S MICRO	NT21165	\$599.95
85mm f/1.4G AF-S	NT21171	\$1699.95
85mm f/1.8D AF	NT2119	\$489.95
105mm f/2.8G VR MICRO-NIKKOR	NT21232	\$984.95



Full Frame Zoom Lenses

Description	Part No.	Price
14-24mm f/2.8G ED AF-S	NT21394	\$1,999.95
16-35mm f/4G ED VR AF-S	NT21395	\$1,259.95
24-120mm f/3.5-5.6G ED-IF VR	NT21201	\$669.95
24-120mm f/4G VR AF-S	NT21198	\$1,299.95
24-70mm f/2.8G ED AF-S	NT21202	\$1,889.95
24-85mm f/2.8-4D IF AF	NT21265	\$744.95
28-300mm f/3.5-5.6G ED VR AF-S	NT21226	\$1,049.95
70-200mm f/2.8G ED-IF AF-S VR II	NT21276	\$2,399.95
70-300mm f/4.5-5.6G AF-S VR	NT21415	\$589.95
80-200mm f/2.8D ED AF	NT2140	\$1,224.95

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Prime Lenses

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SP 180mm f/3.5 Di MACRO	TR1105	TR1100	\$739.00

Full Frame Zoom Lenses

Description	Canon	Nikon	Price
SP 28-75mm f/2.8 XR Di LD	TR2715	TR27101	\$499.99
28-200mm f/3.8-5.6 XR Di	TR35170	TR35173	\$299.99
28-300mm XR Di LD ASP(IF)	TR3821	TR3822	\$419.99
28-300mm f/3.5-6.3 XR VC Di	TR38251	TR38261	\$629.99
SP 70-200mm f/2.8 Di	TR39500	TR39502	\$769.99
70-300mm f/4-5.6 Di	TR35910	TR35913	\$199.99
SP 70-300mm f/4-5.6 VC	TR39550	TR39551	\$449.99
SP 200-500mm f/5-6.3 Di LD IF	TR4000	TR4005	\$949.99

APS-C Sensor Lenses

Description	Canon	Nikon	Price
SP 60mm f/2 Di II 1:1 MACRO	TR10650	TR10651	\$524.99
SP 10-24mm f/3.5-4.5 Di-II	TR20090	TR20091	\$499.99
SP 17-50mm f/2.8XR Di II	TR20300	TR20303	\$499.99
SP 17-50mm f/2.8 VC Di II	TR20290	TR20293	\$649.99
18-200mm f/3.5-6.3 XR Di II	TR20310	TR20316	\$289.99
18-250mm f/3.5-6.3 XR Di-II	TR20320	TR203260	\$329.99
18-270mm f/3.5-6.3 Di-II VC	TR20330	TR20331	\$629.99

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Olympus E-PL1 (Slate Blue) w/14-42mm	OM05016	\$599.99
Olympus E-P2 (Black)	OM05020	\$849.99
Olympus E-P2 (Black) w/14-42mm	OM05022	\$899.99
Olympus E-P2 (Black) w/17mm	OM05024	\$899.99
Pen 17mm f/2.8	OM0600	\$299.99
Pen 9-18mm f/4.0-5.6	OM0640	\$699.99
Pen ED 14-42mm f/3.5-5.6	OM0650	\$299.99
Pen ED 14-150mm f/4.0-5.6	OM0660	\$599.99
FL-14 Flash	OM0700	\$199.99
SEMA-1 External Mic Set	OM0740	\$89.99
VF-2 E-P2 Electronic Viewfinder	OM0732	\$249.99

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DX 35mm f/1.8G AF-S	NT20192	\$199.95
DX 10-24mm f/3.5-4.5G AF-S	NT21388	\$899.95
DX 16-85mm f/3.5-5.6G ED VR AF-S	NT21362	\$699.95
DX 17-55mm f/2.8G ED AF-S	NT21374	\$1,539.95
DX 18-105mm f/3.5-5.6G VR AF-S	NT21377	\$399.95
DX 18-200mm f/3.5-5.6G VR II	NT21379	\$849.95
DX 22-200mm f/4-5.6G ED AF-S	NT21267	\$199.95
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Lustre 17"x100' roll	BP1565	\$62.99
Lustre 24"x100' roll	BP1570	\$87.99
Lustre 44"x100' roll	BP1575	\$119.99
C2S Matte 8.5x11" 25 sheets	BP1642	\$7.99
C2S Matte 8.5x11" 100 sheets	BP1644	\$26.99
C2S Matte 11x17" 25 sheets	BP1646	\$16.99
C2S Matte 13x19" 25 sheets	BP1647	\$19.99
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Satin Matte White 17x22 25	BP2540	\$96.99
Satin Matte White 17"x39" ROLL	BP2550	\$76.99
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Satin Matte White 44"x39" ROLL	BP2570	\$189.99
Satin Matte Natural 8.5x11 25	BP2610	\$26.99
Satin Matte Natural 11x17 25	BP2620	\$53.99
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SDHC 8GB	IM18618
SDHC 16GB	IM18619
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Kit contains: Two 750w/s Travelites, two light stands, two umbrellas and one rolling case, one LiteLink Radio Card and one LiteLink Transceiver.

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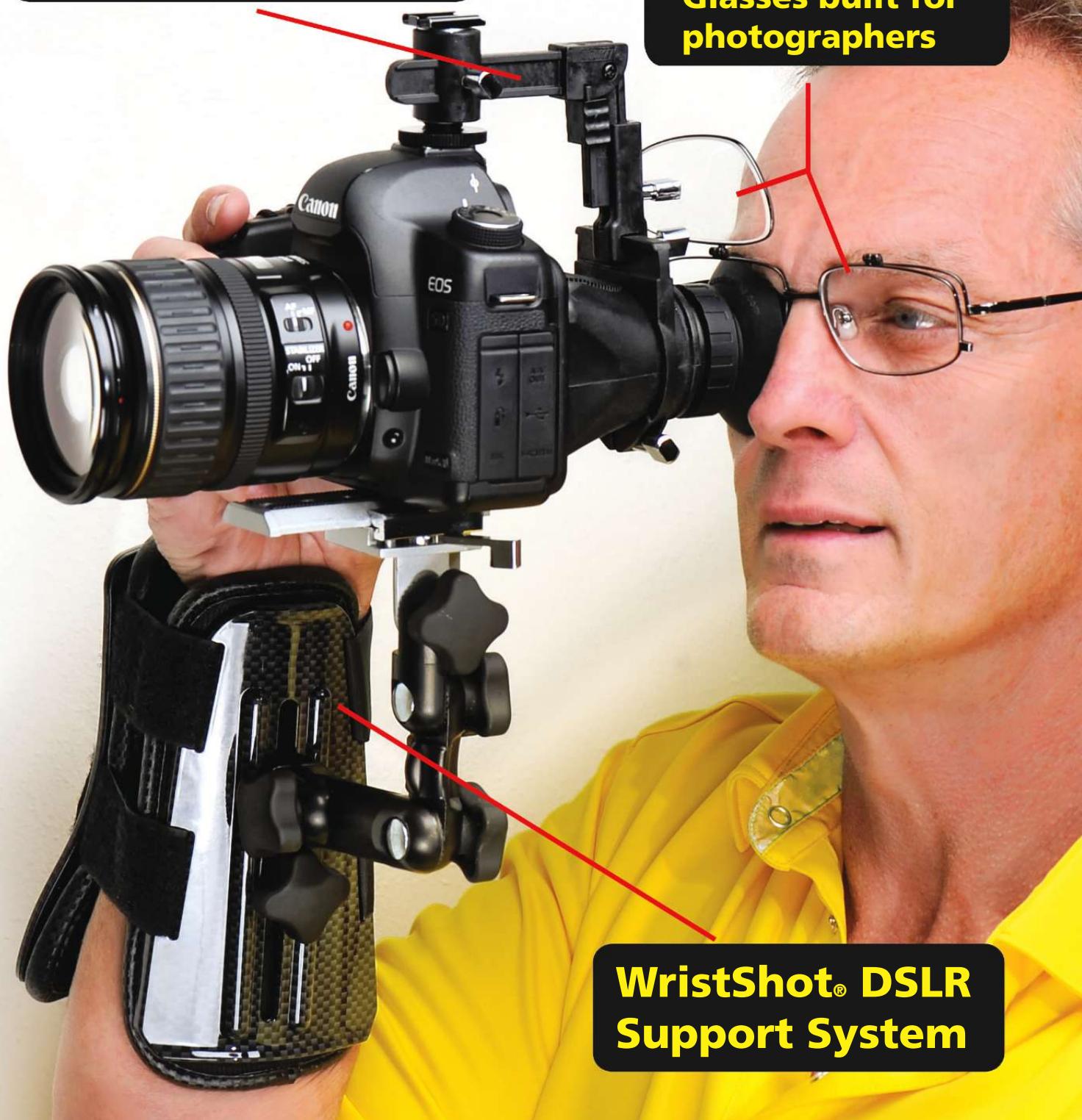
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number of 174
Covers a focal
length from 24mm
to 105mm.
Autozoom function

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number of 174
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24mm-105mm.
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18-50mm F2.8 EX DC

DC Series for Digital cameras
IF (Inner Focus) EX-finished
ASP Aspherical Lens

10-20mm F4-5.6 EX DC HSM

DC Series for Digital cameras
HSM (Hyper Sonic Motor)
EX-finished

17-70mm f/2.8-4.5

DC Macro AutoFocus Wide Angle
Zoom Lens for Sigma Cameras

30mm F1.4 EX DC HSM

The most appropriate coating
for digital SLR cameras Equipped with
HSM (Hyper Sonic Motor) system

AUTO FOCUS FLASHES

EF 530 DG Super

EF 530 DG ST

EM 140 DG

✓ Available

— Not Available

✓ Available

— Not Available

LAB * LENS TEST

TOKINA AT-X 16-28MM F/2.8 PRO FX AF

CONTINUED FROM PAGE 94

On our Test Lab's optical bench, the lens produced Excellent-range sharpness and contrast. Its SQF numbers were significantly stronger than those of the 16-35mm f/4 VR Nikkor, especially in the middle of the zoom range.

Its most remarkable strength? An unparalleled ability to control distortion. DxO Analyzer 3.2 tests found only Imperceptible distortion across the focal lengths. (See test scores on page 94.) No lens this wide has come this close to distortion-free imaging in recent memory—the comparable Canon's distortion was Slight to Visible at the wide end. Equally remarkable: The Tokina produced no edge falloff at any focal length.

Its 1.75X zoom range is a bit stingy, and the lens is not image-stabilized—significant because neither Canon nor Nikon offers sensor-based stabilization in their DSLR bodies.

Nonetheless, with nearly flawless optics, this lens is in a lofty class by itself. Here's hoping all the future AT-X Pro FX glass is as strong. —Julia Silber

SUBJECTIVE QUALITY FACTOR

Our standard lens test, SQF rates sharpness by print size.

Size	5x7	8x10	11x14	16x20	20x24
2.8	95.8	95.9	93.5	89.1	83.7
4.0	97.1	96.2	94.1	90.2	85.6
5.6	95.9	95.9	93.7	89.4	84.2
8.0	95.8	96.0	93.8	89.7	84.8
11.0	96.6	95.8	93.6	89.3	84.1
16.0	96.4	95.3	92.7	87.8	81.8
22.0	95.8	94.5	91.4	85.4	78.1

Size	5x7	8x10	11x14	16x20	20x24
2.8	97.1	96.2	94.1	90.3	85.9
4.0	97.1	96.2	94.1	90.2	85.6
5.6	97.2	96.3	94.4	90.9	86.9
8.0	97.2	96.3	94.3	90.7	86.5
11.0	96.9	95.9	93.7	89.6	84.6
16.0	96.5	95.4	92.9	88.2	82.5
22.0	95.9	94.7	91.8	86.1	79.2

Size	5x7	8x10	11x14	16x20	20x24
2.8	96.4	95.3	92.7	87.7	81.7
4.0	96.8	95.8	93.5	89.1	83.8
5.6	97.0	96.0	93.9	89.8	85.0
8.0	97.0	96.0	93.9	89.9	85.2
11.0	96.8	95.9	93.6	89.3	84.3
16.0	96.5	95.4	92.9	88.2	82.5
22.0	95.9	94.7	91.7	86.0	79.1

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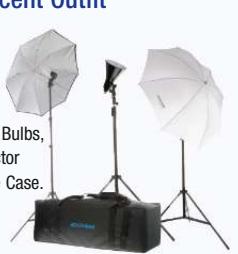
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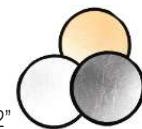
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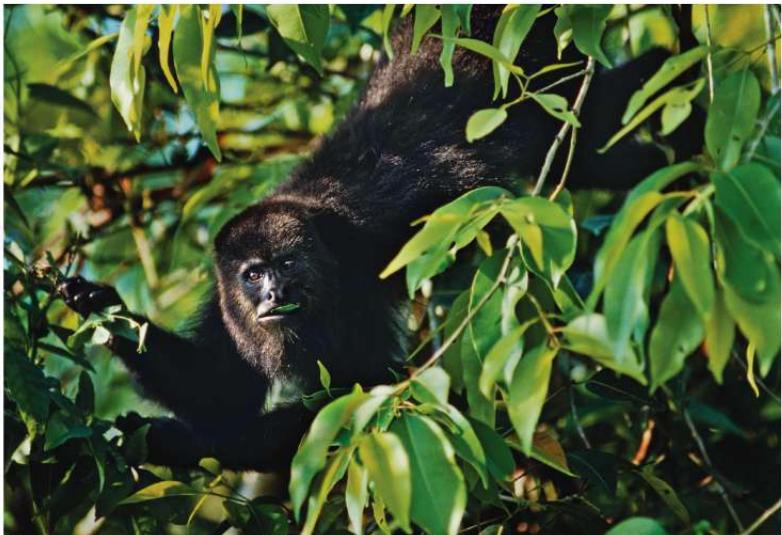
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COSTA RICA

CONTINUED FROM PAGE 81



through November). Scout tripod holes beforehand (best views are on the way to Tabacón hot springs from La Fortuna), as skies may clear only very briefly. Look for a foreground—tree groupings most commonly—that can be used to frame the volcano and give scale to the scene. If you're

blessed with a clear view, chimp your LCD histogram for the best-looking exposure, especially if shooting at night.

Wildlife, Free and Captive

You'll encounter plenty of wildlife as you motor from lodge to lodge. You may get good photos of coatiundi, deer, armadillo, sloth,

GLIDING LEAF FROG NEAR JACO
Tim Fitzharris used image stabilization to shoot handheld with a Canon EOS 5D and 70-200mm f/4L Canon EF IS lens with 25mm extension tube; f/8 at 1/125 sec, ISO 640.

HOWLER MONKEY, OSA PENINSULA
Fitzharris had his EOS 3 with 500mm f/4L lens on a tripod with gimbal head; 1/500 sec at f/5.6 on Fujichrome 100.

anteater, and giant iguanas.

Visit the numerous *ranarios* (for frogs and snakes) and *mariposarios* (for butterflies), advertised in tourist centers (Arenal Volcano, Manuel Antonio National Park). The creatures often are in natural walk-through enclosures. In private *ranarios*, for a small fee handlers will place specimens in settings of your choice.

■ WILDLIFE ON-THE-RUN TIPS:

Keep your camera ready to use by leaving it turned on, setting controls for autofocus and aperture-priority autoexposure at maximum aperture, activating image stabilization, and mounting a moderate telephoto or telezoom lens (300mm) with lenshood.

Costa Rica protects more than 25 percent of its land in parks and preserves, making it a vast playground for nature photographers. Do your research and start packing!

WHERE TO GO

For an overview of Costa Rican travel, visit www.costaricabureau.com. Here are some of my favorite stops, all in beautiful settings.

WILDLIFE LODGES

■ Rancho Naturalista

Two hummingbird photo locales, a fruit feeder (refilled each morning) and a unique hummingbird bathing site lure a variety of subjects, including the rare snow-capped hummingbird. (www.ranchonaturalista.net)

■ Savegre Mountain Lodge

Nestled in a secluded pocket valley beside a trout stream, these hummingbird feeders literally swarm all day long. Just down the road is a photo-dependable hangout for the highly-sought resplendent quetzal. (www.savegre.co.cr)

■ Lookout Inn Lodge

High on a hill above the Pacific next to Corcovado National Park on the Osa Peninsula, this wilderness site is the place to shoot scarlet macaws in flight. Best time is when they are feeding in the date grove below the lodge. (www.lookout-inn.com)

BEACH SITES

■ Playa Carillo

Near the laid-back town of Samara in Guanacaste, this beach boasts excellent sunrise/sunset orientation, sand, rocks, and palm groves, plus large undeveloped sweeps of sand.

■ Manuel Antonio National Park

Costa Rica's top tourist destination, this compact collection of beaches offers all-natural settings with boulder-, sand-, lagoon-, and palm-fringed forests, accessorized with tame monkeys.

■ Mal Pais

This surfer-friendly outpost on the Nicoya Peninsula is a gateway to off-the-beaten-path beaches (Santa Teresa, Hermosa, Playa Carmen) best accessed by four-wheel drive along the primitive coastal route.

Nature photographer and filmmaker Tim Fitzharris is author of the best-selling National Audubon Society series of photography guides and producer/director of the feature film, *A Far Away Life* (www.afarawaylifemovie.com). See lots of his images at www.timfitzharris.com.

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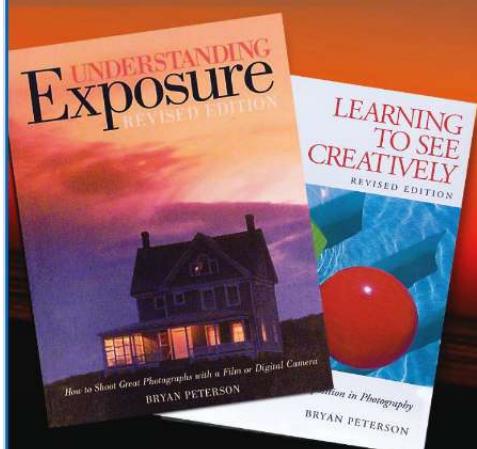
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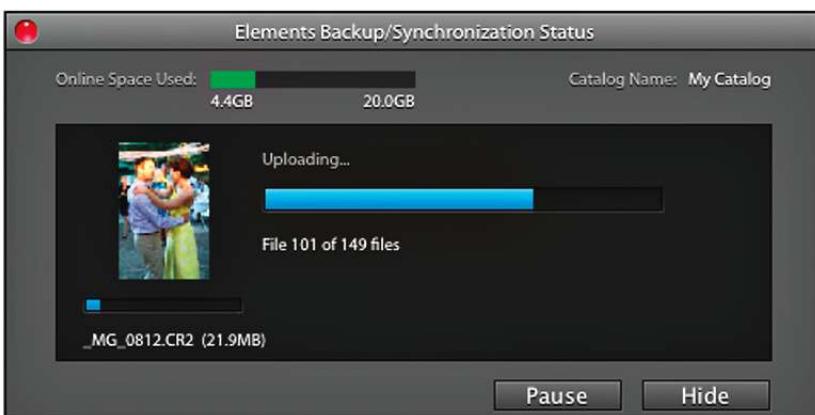
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LAB * SOFTWARE REVIEW ADOBE PHOTOSHOP ELEMENTS 9



CONTINUED FROM PAGE 98

ing between pages is fairly slow. You can't move images from one page to another, and if you choose more pictures than the layouts can fit, whatever's left over is unceremoniously excised. For shorter books made from medium-resolution photos, though, it's just fine.

Online Backup

The Photoshop.com service is becoming an even bigger part of Elements. Sign up for free, and you get 2GB of online storage. To facilitate automatic online backup, toss your photos into an album and check the box for Backup/Sync. Elements will automatically back them up to Photoshop.com behind the scenes, and keep you apprised of its progress in a small pop-up window. If you run Elements on multiple computers, you can use Photoshop.com to sync their photo libraries. Either way, your pictures will be available anywhere online.

And if you share to Photoshop.com via an online album, you'll be able to show what's synced to your family and friends. The viewing interface is well-designed and, if you permit it, your viewers will be able to download high-res files and either print them at home or order prints via Shutterfly. It's much more elegant, less cluttered, and slightly more private than many photo-sharing sites, and a great choice if lots of people are itching to see your pictures.

Backup and Sync runs in the background, uploading while you work on other things. Check the status window (above) to see how it's going.

tered, and slightly more private than many photo-sharing sites, and a great choice if lots of people are itching to see your pictures.

If you shoot mostly JPEGs and share a lot of pictures, you should consider an upgraded membership: For \$50 per year, you'll get 20GB of online storage. Note, though, that if you shoot a lot of RAW, or want to back up edited TIFF files, you'll likely run out of this expanded space in short order. But lovers of slideshow, collage, and greeting-card graphic themes will enjoy the extra, seasonal content that also comes with the upgrade to Photoshop.com Plus.

Is Elements for You?

Despite the happy addition of some sophisticated editing tools, Elements remains a program best for hobbyists rather than truly committed photographers.

The biggest reason? Its handling of RAW files. Sure, a version of Adobe Camera Raw is included, but ACR's tools are slight compared with those in Lightroom or Photoshop. For instance, there's no syncing settings between shots, no built-in lens correction or retouching tools, and no exporting in batches.

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Once you open your file, you're stuck converting down to the sRGB color space (Elements doesn't support others, not even Adobe RGB) if you want to retouch it in the Editor. And while sharing RAW files or adding them to a slideshow is possible, the process takes forever compared with doing this using JPEGs.

So if you have a DSLR and plan to get into shooting RAW, Lightroom or Apple Aperture is probably a better purchase. On the other hand, if you already use one of those programs but are looking for a way to do retouching with layers without breaking the bank, Elements will work as your external editor—that is, as long as you don't mind working in sRGB and 8-bit instead of 16-bit color.

Rival Corel PaintShop Photo Pro X3 has very similar strengths and weaknesses—its edits are also limited to the sRGB color space, and it also excels at organizing and sharing. Corel has Curves, which Elements lacks, but Elements has the benefit of some more elegant algorithms inherited from Photoshop, making for often comparatively smoother and speedier fixes. PC users who are on the fence may be equally happy with either, but, because Corel is PC-only, Mac users won't have that choice.

Elements doesn't offer an upgrade option, so it will only be worth trading up to this version if you're currently using versions 6 or 7. The transition from 8 to 9 is too subtle to make a repurchase advisable, unless you are a Mac user clamoring for the Organizer.

Still, for photographers who don't have a robust image editor yet, and who shoot mostly JPEGs and want a quick way to organize, share, and fix their photos, Elements remains one of the best—and most economical—options out there.

—Debbie Grossman

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Sun Blessing

Robert Hooman shoots Brooklyn's enclaves

I MOVED TO New York City in 1996, and for the past five or six years I've spent a lot of time photographing Brooklyn. I'm interested most in the differ-

ent communities in various neighborhoods. Though I've been interested in the Hasidim in South Williamsburg, I haven't had many opportunities so far to

See more of
Robert
Hooman's
work at
[www.robert
hooman.com](http://www.roberthooman.com).

photograph them. Many of their events are memorial, and many exclude film or video equipment.

One spring weekend in 2009, I woke very early and heard a news report about the Sun Blessing, an event that's very significant to the community. It only takes place once every 28 years—it's based on a cycle recorded in the Talmudic calendar, and according to their faith it signifies the solar anniversary of the beginning of the world. Seeing that it was very near to where I live, I jumped on my bike with my Nikon D200 and 17-55mm f/2.8 Nikkor lens and headed over.

I arrived near 5 a.m., just before the gathering started. For the first couple of hours I just spoke to the people who were arriving, asking them questions. No one minded me being there, and I think that it helped that it was a celebratory event—they were mainly waiting for the Grand Rebbe to arrive and hear him speak.

They'd erected a platform for him, about 10 feet above the crowd, and at some point someone said to me, "Do you want to go up there? He's not here yet, so you can take some pictures."

The men helped me climb up. It was an ideal vantage point, and it was an overcast day, which made it easier to shoot with just available light.

But soon it got crowded and, since I didn't have any other way to exit, I climbed down to a flatbed truck that was supporting the platform, and that's where I took this photo—right before the Grand Rebbe appeared to speak to them about the Sun Blessing.

I like photographing in Brooklyn because I like learning about the different people who live there, but also because I like having the opportunity to interact with them.

—As told to Lori Fredrickson

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