

311 SUMMER CAMPING SKILLS BACKPACKER

THE OUTDOORS AT YOUR DOORSTEP

The Ultimate Hike

How to plan it and pull it off

A COMPLETE GUIDE TO
GOOGLE EARTH, GPS &
3D TRIP PLANNING

A PERFECT WEEK IN THE TETONS

35 Trips in the Rockies, Cascades,
Boundary Waters & Northeast

AMERICA'S NEXT GREAT LONG TRAIL

JUNE 2008

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HOW TO GET UN-LOST

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Ultralight
Survival Kits
All-Terrain Boots
Quietest Campsites

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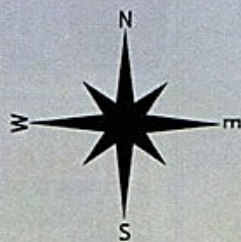
Plan It

Document It

Organize It

Share It

Hike It



iHike

A COMPLETE GUIDE TO THE DIGITAL REVOLUTION—AND HOW TO JOIN IT

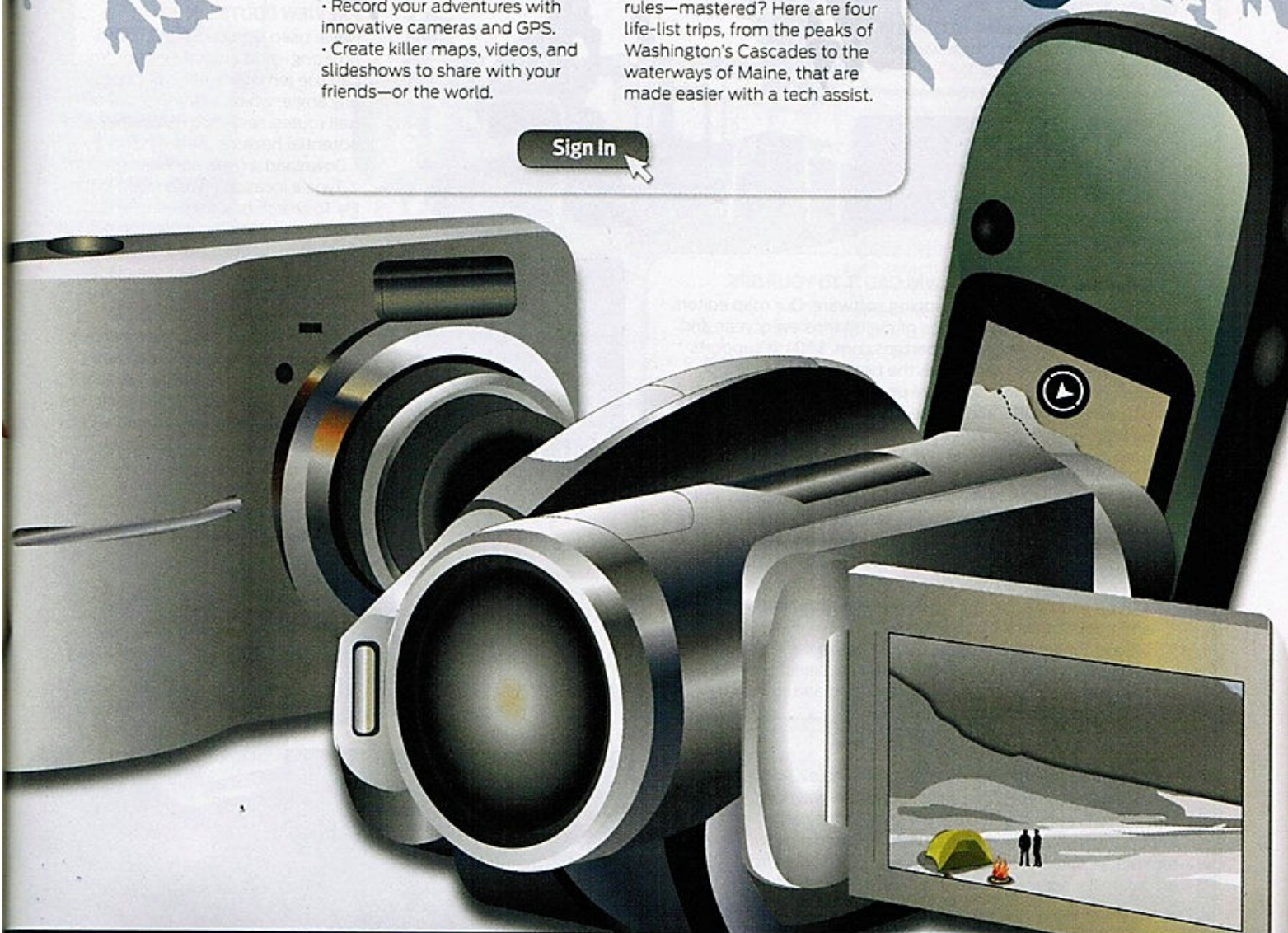
LEARN NEW SKILLS

- Plan your trips online—in 3D!
- Record your adventures with innovative cameras and GPS.
- Create killer maps, videos, and slideshows to share with your friends—or the world.

TAKE BIGGER TRIPS

Got all the new tools—and new rules—mastered? Here are four life-list trips, from the peaks of Washington's Cascades to the waterways of Maine, that are made easier with a tech assist.

Sign In



TEXT BY Evelyn Spence, Jason Stevenson, and Kris Wagner

ILLUSTRATIONS BY Jackie McCaffrey

New Tools, New Rules

Every great trip boils down to this: Picking an ideal location, capturing memorable moments, and bragging about it. Here's how to get started the high-tech way.

1

Plan the Perfect Trip

FIND A HIKE

>> **Search trip reports**, view photos, and consult maps and GPS **tracks** at backpacker.com, summitpost.com, topo.com, and trails.com.

>> **Browse national park highlights** at nps.gov/findapark.

>> **Google the web's wisdom** by typing in exactly what you want ("best water-fall hikes in the Olympics").

1. TRACKS A log of location-based electronic breadcrumbs recorded by your GPS. Most devices can save multiple tracks.

CREATE A ROUTE AND DOWNLOAD IT TO YOUR GPS

First, you need the best mapping software. Our map editors create and review thousands of digital trips every year, and they rely on ExpertGPS (expertgps.com, \$50). It supports nine leading GPS brands, has the best track-editing tool, and comes with free software updates. Here's how to use it.

1. Open ExpertGPS and create a new file. You can start with no data, or download existing GPS info from backpacker.com or another mapping site.
2. **Bombsite** waypoints on key spots like trailheads, campsites, and hard-to-find passes. Switch between topo and aerial views to determine the best locations for your points.
3. Use the track tool to draw routes between your saved waypoints and to estimate mileage. Tip: Merge your tracks to save memory on your GPS.
4. Type short descriptions (20 words or less) into waypoints and tracks by clicking on them.
5. Save the file, then connect your GPS to the computer.
6. Under the GPS menu in the software, select Send to GPS, then pick waypoints and tracks to download to your device.

MANUALLY ENTER KEY WAYPOINTS

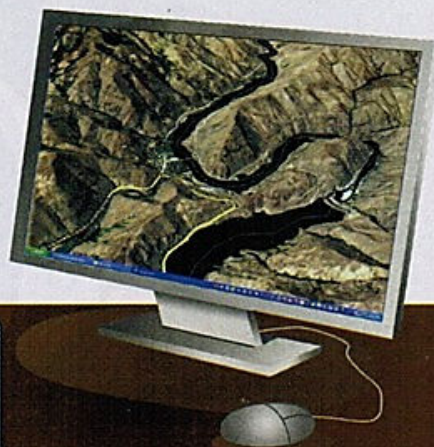
Scored the coordinates for a secret fishing hole? Add it to your GPS by typing the digits into a new waypoint. The icon will appear at the correct spot on the map. Important: Match your map **datum** and coordinate system before entering any point. Confirm coordinates from an unfamiliar source by checking them in Google Maps.

3. DATUM The terrain survey used to match features on the ground to coordinates on the map. Two most common datum: NAD 27 and WGS 84.

PREVIEW ROUTES IN 3D

Never used Google Earth? It's an amazing—and addictive—tool. You can see remote terrain up-close at any angle, which lets you scout off-trail routes, secluded campsites, and potential hazards. Here's how:

1. Download it (free, earth.google.com).
2. Type a location ("Yosemite") in the Fly To search box, then use the tilt, rotate, and zoom controls (top right of screen) to create different views.
3. Turn on extra layers to see place names, park highlights, photos, real-time weather, and nearby roads.
4. Mark potential campsites and crux passes by dropping points (yellow pins) with your cursor. See "Manually Enter Key Waypoints" (below) on how to enter those coordinates into a GPS.



GET COORDINATED Match your GPS to your map's datum (check map key) to avoid nav errors. **JUICED** Lithium cells last 2x longer than

Get Maps and Go

1. Launch your mapping software. If it's ExpertGPS and you've already created a route, go to Print under the File menu. Otherwise, see "Create a Route" (left). To print maps for free, we like Gmaps Pedometer (gmap-pedometer.com), which supports satellite and topo layers and generates elevation profiles.
2. Find the trailhead by searching for geographic points, park names, or cities. For help finding names, tap into the USGS database (geonames.usgs.gov/pls/gnispublic). Use the map resource box to confirm it's the right place.
3. Drop a waypoint with the trailhead coordinates into your mapping software.
4. Add more points for the rest of the route, such as junctions and campsites.
5. When picking topo scale, 1:100K is okay for general navigation, but the extra detail and clarity of 1:24K maps are best for tricky routefinding. Some programs allow you to build elevation profiles, including gmap-pedometer.com.
6. Print your map on National Geographic's waterproof and tear-resistant Adventure Paper (\$20, sheets up to 11"x17", shop.nationalgeographic.com). If your mapping software won't let you print topos, capture a [screen grab](#) and paste it into your photo-editing program. Then print it. Then get new software.

An image that's an exact copy of what's on your computer screen. To make one: PC: "Ctrl Print Scrn"; Mac: "Command-Shift-3"



1. Open an account at gpxchange.com.
2. Start a new file with the site's interactive map or by importing a .gpx file (see "Create A Route" at left).
3. Zoom in on your trip location, then plot waypoints, draw routes, pick map icons, and add notes.
4. When your personal map overlays are done, write down their GPXchange ID number. Then click "order map," which leads you to offroute.com (parent site).
5. Choose from a selection of map types. We suggest the USGS 7.5 Minute Topo with Roadways and Hillshading.
6. Type in the GPXchange ID for the map overlays you created in steps 1-3.

7. Pick your map size (up to 42" x 72") and scale (down to 1:24K). Blue borders show the printable map's edges. Click on the map to re-center it over your route.
8. Preview the print version and make changes to scale or route as needed.
9. Pick a grid overlay (we prefer UTM over lat/long for its accuracy), select waterproof paper, and name your map.
10. Copy the web address to view this custom map online at any time.
11. If your route requires more than one topo, repeat steps 5-9 to build the adjacent maps. Cost is \$8 and up per map.
12. Follow the checkout process, and allow a few days for delivery.

>> Check the forecast At NOAA's weather.gov, click on your state and region, then pick a spot on the "Detailed Point Forecast" map to get current conditions and a seven-day prediction for specific elevations and backcountry lat/long coordinates.

- >> Find your trailhead** Use Google Maps to print turn-by-turn driving directions by entering your address and the trailhead's lat/long digits. Don't know the exact coordinates? Bombsite them with a waypoint on Google Earth and copy the details.

The best places to scout, research, and map out new hiking routes



BACKPACKER.COM Our (completely) unbiased pick to browse thousands of editor-approved hikes on Google Maps, skim reader trips, post your own treks, send waypoints to your GPS or phone, and get free GPS software.

TRAILS.COM This pay-to-play site turns guidebooks and USGS quads into printable PDFs. A \$50 annual fee gives you unlimited access to scanned pages and seamless maps.

Launched in April, NatGeo's new mapping home meshes USGS maps, aerial imagery, detailed points of interest, and elevation modeling into a single downloadable SuperQuad. (\$25 for the software, plus \$1 per download, topo.com)

GOOGLE EARTH Your one-stop shop for viewing interactive 3D maps, scouting unfamiliar terrain, or just zooming around a digitally miniaturized globe. It's *the* indispensable tool for planning (and later, sharing) a digital hike. (free, earth.google.com)

3 sweet upgrades for trail gadgets



BRUNTON SOLIO 7.5 This 12-oz. portable battery (\$65) stores extra power for USB-chargeable gadgets. Add the Inverter (\$49) to juice up with a wall charger. brunton.com



This natural cleaner leaves your optics streak-free, and it comes with a non-abrasive microfiber cloth. \$10. 1 oz.; purosol.com



SD/SDHC MEMORY These wafer-like camera cards store photos and video. SDHC cards hold 4GB and up. Pack 512MB per day for photos, and 2GB a day for videos. (\$20, amazon.com)

FIELD SCHOOL

Take your new tools to the trail to master the skills you'll need to navigate, record, and share your best adventures.



Capture Classic Images

- 1. Action** Shutter lag is the bane of digital cameras. Compensate by clicking a second or two ahead of the action. Also: Select a high ISO (the digital equivalent of film speed and a measure of a camera's sensitivity to light) to allow for quicker shutter action. If your camera has a "burst" or multishot mode, use it; the rapid-fire shooting will boost your chances of catching that loping wolf.
- 2. Summits** You usually hit your high point around noon to 2 p.m.—which, because of harsh shadows, bright glare, and huge contrast, is the worst time to take photos. Easy tweak: Switch to the "force flash" setting, which keeps the flash on for every shot. The pop of light will fill in the dark spaces in summit poses.
- 3. Rich colors** Shooting a sweet side canyon in the Southwest? Use the cloudy mode, not the sunny one, to draw out the red in rocks.
- 4. Sunsets** Your camera's auto settings will generally preserve the glowing orb's warm colors. But if things don't look right when you preview, try bracketing up and down one stop. No manual metering? Use the contrast or saturation modes to adjust exposure.
- 5. Scenics and close-ups** The landscape and flower icons on your camera's menu do work—better than auto—so use them. They change depth of field, aka the area in front of and behind a focused object that is also in focus. Landscape mode makes more of your scene sharp, from the foreground on back; flower setting pulls nearby objects into focus and blurs distracting background.
- 6. Wildlife** To avoid a pea-size blob of bear, make sure you buy a camera with an optical, not digital, zoom. Or shoot wide-angle, and use the tiny animal to give the scene a sense of scale.
- 7. Snow** Blue tint? Blame the **auto white balance** function, which isn't always accurate. The fix: Shoot one photo in AWB, then switch to manual white balance and take shots using several settings (you can preview the difference on the LCD screen).

1. AUTO WHITE BALANCE

How your digital camera determines what's white—a measure it then uses to set overall exposure for the image

Off-Trail

- 1. Mark your route** Drop a waypoint where you leave the trail and at any critical navigational points along the way.
- 2. Team up** When routefinding gets tricky, consult your map, compass, and GPS.
- 3. Keep shooting** The best storylines occur off the beaten path. Capture bushwhacks, steep climbs, and cursing partners with your cameras.



Record Your Hike

- 1. Get oriented** Before you hit the trail, make sure your GPS datum matches the map's datum: either WGS 84 or NAD 27.
 - 2. Clear the odometer** Create a new track each morning so you can consult the odometer as you walk. Use it to add details to your video clips ("We're five miles in...") or estimate distance to camp.
 - 3. Sync up** Match the clocks on your camera and GPS so you can **geotag** photos later.
 - 4. Create a tracklog** Set your GPS to collect an electronic breadcrumb trail (or track) every 0.01 mile. This setting picks up every bump and switchback on the route and allows you to overlay your trip onto a map.
 - 5. Measure distances** Use the scroll function on the map screen to estimate "as the crow flies" mileage from your current location to a known spot (like a hot spring).
 - 6. Find altitude** Use the current elevation reading on the GPS to calculate the climbing left to reach the summit.
 - 7. Drop points** Mark trailheads, junctions, campsites, and other interesting points (waterfalls, overlooks). Write abbreviated trail details in a small notebook; it's faster than keying them into your GPS.
- FREE FIELD GUIDES:** Download step-by-step directions for more than 40 GPS devices at backpacker.com/hikes/usinggps.

In Camp

- 1. Juice up** Lash solar panels (we like Brunton's SolarRolls, \$220) to the sunny side of your tent to power up batteries.
- 2. Watch the weather** Your GPS's altimeter doubles as a barometer. Rising pressure decreases altitude (good weather); falling pressure increases it (storm ahead).
- 3. Save the tracklog** Back up the day's track to your GPS unit's onboard memory.

2. GEOTAG To link media such as photos to geographical data—typically GPS coordinates—for placement on a map

FREEZE FRAME Video cameras take poor photos. Bring a good still camera. **CLIP IN** Metal carabiners interfere with GPS reception. Use



Make a Movie

- 1. Create action** Don't treat your video camera like a still camera: Physically moving it (while walking) rather than zooming or panning makes your shots more dynamic.
- 2. Shoot B-roll** You'll want footage that adds texture. Film people chatting at breaks—and bugs crawling on a rainfly, boots slopping through mud, streams gurgling, even food prep.
- 3. Get variety** Approach subjects from different angles and distances, and vary how you frame and zoom them. Note: It takes about an hour of raw footage to create a good 5-minute movie.
- 4. Capture motion** Lead the action a bit—it's aesthetically pleasing to see where someone is going. Want a frenetic feel? Let the action leave the frame for a few seconds.
- 5. Establish scale** Create ooh-ahh scenes by panning from an object (your tent) to an epic view (the Grand Canyon), or by slowly zooming out from a tight shot of a distant peak.
- 6. Improve sound** For crisp audio, you need to invade personal space: Get close, and try your camera's wind reduction or sound sensitivity modes. Or invest in a wireless mic like Audio-Technica's ATR288W (\$130 on amazon.com).
- 7. Make peaks pop** Video has a low contrast ratio—which means it can't capture extreme light (sky) and dark (mountains) at the same time. Your best bets: Bring a low-contrast filter, or expose for a person or object closer in.
- 8. Dial in color** Improve exposure by adjusting white balance for your light conditions: Select the custom white balance setting, put a true white object in the field of view, and click to calibrate (some cameras adjust manually).
- 9. Get narration** Ask friends to recap highlights each night for voice-over material when editing.

Up High

- 1. Mark the summit** You tagged it. Don't forget to waypoint it.
- 2. Shoot the sky** If it's bluebird, include at least two-thirds mountains, one-third air. Neat clouds? Do the opposite.
- 3. Get unscripted audio** Film your buddies when they're elated, spent, even scared.
- 4. Cut wind noise** Get footage of the bluster, then stick a Band-Aid on your mic to reduce static during interviews.

3. B-ROLL Extra video footage—landscapes, second takes, alternate angles—that you can later weave into the action

On-Trail

- 1. Anticipate shots** Run ahead so you can get footage of people walking toward you.
- 2. Improve reception** Keep your GPS in a cell phone pocket on your pack's shoulder strap.
- 3. Photograph key waypoints** If the clocks on your camera and GPS match, it makes geotagging—and recalling trip details—a snap.
- 4. Shoot your friends** Nature pics are great, but use people to add scale and context.

Trail-Tested Tech

The best new digital tools for every budget and skill level



CAMERA

GEO-READY The Nikon D300's 10-pin connector attaches to a GPS and geotags your images. Frame up to six shots per second on the 3-inch LCD screen. \$1,800, 1 lb. 13 oz.; nikonusa.com



WATERPROOF Drop it or dunk it: The 10MP Olympus Stylus 1030 SW handles almost any electronic-killing conditions (dust, rain, snow). Menus guide you through tough shots like backlit summit poses and cloudy days. \$400, 6.3 oz.; olympusamerica.com



GPS

BEST MAPS View preloaded USGS maps in topo relief or 3D on the Garmin Colorado 400t—and wirelessly share data with other Colorado users. \$640, 7.3 oz.; garmin.com



BEGINNER The Garmin eTrex Legend HCx is a perfect sidekick to your map and compass: This workhorse is super intuitive to operate, records tracks and waypoints, has an expandable memory slot, and works with both PCs and Macs. \$268, 5.5 oz.



VIDEO

HI-DEF The Sony HDR-CX7 has a 3.2MP sensor and image stabilization, and it can take infrared night shots and catch action scenes at a triple-frame rate. \$900, 15 oz.; sonystyle.com



ULTRALIGHT The AA-powered Flip Video Ultra Series is best for sharing unedited video on the web. The memory holds an hour of footage and the body only has four buttons—so even your Luddite friends will get it. It plugs into Macs and PCs. \$180, 5 oz.; theflip.com

Finder File Edit View Go Window Help

THE CUTTING ROOM

Here's how to turn raw data into finished files that will wow your friends and preserve trip memories better than any photo album.

MyEpic.doc @ 120%



GPS

>> EDIT TRIP DATA

Using your mapping software or website of choice, rename waypoints, delete tracklogs from unwanted detours, and add descriptive comments (e.g. "last water for 6 miles"). Review trip photos to recall details about key locations and waypoints.

>> CONVERT GPS FILES

Download GPSTabel (free, gpsbabel.org) to translate your trip data into .gpx, a universal file format that enables you to share routes with friends and upload to mapping websites.



PHOTOS

>> ORGANIZE IMAGES

Trust us, your camera's proprietary software stinks. Download Picasa (see "Make Your Masterpiece," at right) to arrange photos by trip and date, add keywords, and write captions. Use the Batch Edit tool to rename hundreds of images in seconds, and Export to shrink them for web albums and slideshows.

>> 5 EASY PHOTO FIXES

Kill clutter Remove distracting branches, shadows, and dead space with the Cropping tool.
Clean up The Sharpen tool makes blurry figures, objects, or backgrounds better defined.
Create depth Boost highlights and deepen shadows with one-click Auto Contrast.
Remove hotspots Soften harsh sunlight on faces by adjusting color levels and saturation.
Undo redeye Instead of adjusting pixels, use the Auto-fix tool to eliminate devilish stares.

>> SIZE YOUR IMAGES CORRECTLY

Quality	Pixels	Size	Display
Low	640x420	<200k	Web
Medium	1024x800	1-2MB	Slideshow
High	2048x1600	2-3MB	5x7 print
Best	Max	>5MB	Poster

>> BUILD YOUR PERFECT VIDEO SYSTEM

I WANT TO...	BEST FORMAT	SOFTWARE PICKS
Post unedited video online	MPEG-4, AVI	Your camera's program
Add titles, combine clips	MPEG-4, MPEG-2	Your camera's program, iMovie
Edit high-quality movies	HDV, AVCHD	Final Cut, iMovie (Mac), Pinnacle (PC)
Burn a DVD	miniDVD, DVD, MPEG-4	Basic: iDVD, Nero 8 Advanced: Adobe Premiere, Pinnacle



VIDEO

1. AVCHD High-definition video format used by newer, high-end camcorders from Sony and Canon. Check compatibility: It's not supported by all video editing programs.

>> VIDEO EDITING 101

1. Organize and name all clips before importing them to editing software.
2. Use the Trim tool to cut clips to 4 seconds or less to keep viewers' attention. Focus on the key action.
3. Insert clips into your movie.
4. Add transitions to connect clips—but stick with basic black-and-white fades.

100% 116 Open

Thu 3:09 AM

>> GEOTAG YOUR PHOTOS

Download GPicSync (free, code.google.com/p/gpicsync/), which matches the GPS coordinates from your tracklog to your photos using identical timestamps from both devices. Now you can add location-specific images to digital maps on backpacker.com or Google Earth.

>> FLY YOUR HIKE

Upload your edited GPS data to Google Earth. Your tracks and waypoints will appear under the Places menu. Double-click them to retrace your route.

2. NOISE Colored dots that appear in digital images when shooting high ISOs and long exposures in low-light conditions

>> 6 EXPERT TRICKS

Clone Copy and paste more sky or trees to enhance or expand a background, or to cover up digital noise.

Lasso Select part of an image (like a bear) to move it within a photo or between two different photos.

Blend Smooth edges on transplanted lassoed objects.

Saturate color Deepen canyon reds and bring out sunset pinks.

Add text Create titles for slideshows or credits for movies.

Straighten Correct off-kilter horizons with the rotation tool by shifting the image one degree at a time.

>> CHOOSE SETTINGS AND SAVE

1. Save finished movies as .mov or .mpeg4 files, which can be viewed on Apple's QuickTime player (apple.com/quicktime/) on both Macs and PCs, and are easily uploaded to the web.
2. Preserve a master copy by choosing the highest-possible video quality and size settings in your editing software.
3. Downgrade video resolution to create lower-res copies to show on a computer screen (640x480) or share on the web (320x240). Note that YouTube limits clip uploads to 100MB and 10 minutes.

>> VIDEO EDITING 201

Add sound Open the audio toolbar to manipulate dialogue and music tracks. You can raise or lower volume at specific spots, remove distortion, and add voice-overs. **Create captions** Use the Title tool to overlay text on your clips, such as location, names, times/dates, and credits.

>> 4 ELEMENTS OF A GREAT MOVIE

Timing Begin near the story's climax; mix up chronology. **Dialogue** Replace bad audio with voice-over. **Mood** Build tension with short clips, jerky transitions, and close-ups. **Humor** End with blooper outtakes or extra B-roll.

Make Your Masterpiece

5 editing programs for every level



PICASA
Best for All photo enthusiasts
Organize, edit, resize, and export your digital photos to make prints, posters, and

slideshows. This website also allows one-click manual geotagging in Google Earth. Mac/PC. Free, picasa.google.com

ADOBE PHOTOSHOP ELEMENTS 6

Best for Serious photographers

Upgrade to advanced editing tools to fix errors, adjust skin tones, and change backgrounds. This software also saves images in multiple formats. Mac/PC. \$100, adobe.com

IMOVIE '08

Best for All video enthusiasts

Simple interface helps you find, cut, and splice clips, create transitions, and write titles. Add a soundtrack from your iTunes library. Supports HD formats like AVCHD. Mac. \$80, apple.com/imovie

PINNACLE STUDIO PLUS 11

Best for Serious videographers

Add titles, combine clips and photos, and overlay music tracks. Imports HD and AVCHD footage, and exports to DVD and multiple file formats. PC only. \$100, pinnaclesys.com

FINAL CUT EXPRESS 4

Best for Serious videographers

Upgrade from iMovie to more editing tools, 200 special effects, and multiple video and audio tracks. Works with HD and AVCHD. Mac. \$200, apple.com/finalcut

Asset Management

2 smart solutions for data storage

SANDISK IMAGEMATE 5-IN-1 READER/WRI

Eliminate camera-cord tangles. This universal tool downloads photo and video files from SDHC, SD, and Memory Stick PRO cards to your computer. Mac/PC. \$20, sandisk.com



SIMPLE DRIVE EXTERNAL HARD DRIVE (750 GB)

Free up space on your computer by storing up to 200,000 high-quality photos or 375 hours of SD video on this sleek desktop hard drive. Mac/PC. \$210, simpletech.com

times reduces image quality. **MIX 'N' MATCH** Keep all of your video files—even the bad ones—so you can mine them for dialogue or sound effects.

ALL THE WORLD'S A (CYBER) STAGE

Your adventure is ready for primetime. Here are 19 ways to reach the audience in your living room—or around the world.



MAKE AN INTERACTIVE MAP

Backpacker.com has all the tools to create a complete trip report.

- 1. Get the software** Download our free program to your PC.
- 2. Import map data** Import your .gpx file (see Organize It, page 70) from your desktop—or upload files directly from your GPS or GPS-enabled cell phone. Select topo or aerial maps to view.
- 3. Add photos** Drag and drop edited images onto the seamless topo. Geotagged shots automatically go to the assigned coordinates. Bombsite other pics to locate them where you took them.
- 4. Attach videos** Bombsite your Quicktime clips onto the map (you can't geotag videos with video-editing software).
- 5. Enter trail details** Add notes to your waypoints, photos, sound files, and video clips. To do this, right-click on your points or media objects and select Edit.
- 6. Build an elevation profile** Click on the Elevation icon.
- 7. Prep for publication** In the Trip menu, select Properties, then assign activity, state, and difficulty. "Public" trips go live on our site. Optional: Click on Submit To Group to be considered for publication in the magazine.
- 8. Save it** Your file is now stored on our web servers.
- 9. Go online** Check out the Your Profile page on our website. Click on your trip—which will be listed under Your Trip Reports.
- 10. Browse it** See your multimedia map on Google Maps or click on the Google Earth link to view it in 3D. Users can download any public trip to their GPS or GPS-enabled cell phone.

1. TAGS Keywords used to index pages in search engine results



POST VIDEO TO YOUTUBE

- 1. Upload your flick.** YouTube accepts a range of formats (wmv, avi, mpeg). Enter **tags** and titles, and choose public or private.
- 2. Create your own personal channel** where viewers can find your videos and post comments. BACKPACKER's channel: youtube.com/backpackermagazine
- 3. Tell your friends:** Create a group with a theme ("hiking bloopers"), share the link by email, post a bulletin on your channel, or enter a "Stream" room to chat it up.
- 4. Embed² your video** into your website or blog: Open the clip, copy the embed code (from a link in the screen's top right corner), paste the code in your site, and publish.



5 WAYS TO SHOW OFF YOUR MAP

- 1. Email It** Save a screen grab as a jpeg.
- 2. Embed It** Place a map jpeg in your blog or favorite forum using the site's Import command; follow the steps you'd use for any other photo.
- 3. Hang it on the wall** Send your GPS file to offroute.com or mytopo.com and pick out the type (aerial, topo) and size of the map you want. They'll print it and mail it (from \$8).
- 4. Add it to PowerPoint** Use the Import Image command.
- 5. Share the GPS data** Email your map's underlying .gpx file; your friends can open it in their software, translate it with GPSTabel, make a map, download it to a GPS—and hike it.

2. EMBED To place media objects (video and sound files, for example) on webpages. No long-distance calls to Bangalore required.



BURN VISUALS TO A CD OR DVD

Easy ways to (physically) share: CDs (700 MB memory, cheap, can't store video) or DVDs (4.7 GB, more flexible in terms of playback). Remember: Saving your photos onto a disc doesn't automatically create a slideshow—it just saves a collection of images. You actually need to save it as video (compatible with, say, QuickTime), then burn it. And for that, you need software like PictureShow Deluxe (\$40) or Photo Slide Show (downloadable, \$35).

ADD MOTION Use the Ken Burns effect to add motion to still photos in slideshows. **PICK YOUR PAPER** Glossy is usually better for color

MAKE HARD COPIES OF YOUR PHOTOS

- Get your glossies printed through various photo-sharing websites (see right).
- Send a CD to a high-end processor like Photocraft (pcraft.com) for professional color correction.
- Use an inkjet printer like Epson's Stylus R380 (\$130, epson.com).
- Get a custom photo book made at blurb.com (\$12 and up).

3. WEB BUG A link or photo dropped on a public-sharing website to tease people to your personal webpage or blog.



TAP A SOCIAL NETWORK

Looking for viral exposure—or ease-of-sharing with friends? Post your pics or a [web bug](#) on a social networking site like Facebook or MySpace. These sites typically offer privacy settings that let you choose who gets to see what. And you can upload your images and video clips with a few clicks.



TURN PRO (SORT OF)

- [jpgmagazine.com](#) Submit pics, and fellow photogs vote to publish the best in a national magazine.
- [photrade.com](#) Upload your images and get a share of advertising revenue when they're viewed.
- [istockphoto.com](#), [dreamstime.com](#) Contribute to these "agencies," and your work could be bought by graphic designers.



PRODUCE A SLIDESHOW

- **Import your pics** Upload your images into PowerPoint or iPhoto, or use Picasa's "Create Slideshow" function.
- **Go easy on the transitions** No need to go overboard with psychedelic effects. A simple fade in/fade out is best.
- **Give them a few seconds** Like 2 to 6. Some pics need more explanation, and others speak for themselves.
- **Tell your audience where you were—exactly** Take a screen grab of your map and add it to your slideshow like you would any other image.
- **Choose your tunes** YouTube's AudioSwap tool lets you add music to your videos for free.
- **Make it portable** You can share slideshows on some photo sites. But if you want effects and personalized audio—or the ability to embed your slideshow into your blog—drop your photos into a video-editing program (see "Make Your Masterpiece," page 71), create a file, and upload it to YouTube.

POST YOUR TRIP ON GOOGLE EARTH

1. Upload your .gpx files into Google Earth.
2. Add geotagged photos, then pick the 3D view you want for each waypoint in Snapshot view. Hit the Play icon and watch Google Earth fly from one coordinate to another.
3. Save your digital tour as a .kml file and email the route to your friends to watch in Google Earth.
4. Expert upgrade: Record your flyover as a video using Windows Media Encoder (free, microsoft.com) or Google Earth Pro (\$400/year, earth.google.com). Then upload the clip to YouTube or splice it into your trip or map video.

4. KML Short for Keyhole Markup Language, it's a file format used to display geographic data in 3D Earth browsers.

Share and Share Alike?

Web-based photo sites aren't all created equal. Here are our top 5.

FLICKR	Space	Edit	Print	Geotag
	100 MB	N	Y	Y

Pros: A strong community—you can form or join groups (like "Yosemite," with 1,400 members). **Cons:** Flickr limits uploads by bandwidth, not storage space on a server per se; deleting photos won't help.

KODAK GALLERY	Space	Edit	Print	Geotag
	Unlimited	Y	Y	N

Pros: Prints are cheap (15 cents) and you can password-protect your pics. **Cons:** Prints look cheap. And the site has no community feature—only the option to share one-way.

PICASA	Space	Edit	Print	Geotag
	1GB	Y	Y	Y

Pros: You can create a portable slideshow for your website or Facebook page. **Cons:** The search and organizational features are limited.

SHUTTERFLY	Space	Edit	Print	Geotag
	Unlimited	Y	Y	N

Pros: Super-intuitive to use. You can order photo books, cards, even tote bags. **Cons:** You get charged to download a high-res version of your own photo (\$40 per CD).

SMUGMUG	Space	Edit	Print	Geotag
	Unlimited	Y	Y	Y

Pros: Display is elegant and dynamic. Pro Users (\$150/year) can create customized pages and sell images. **Cons:** Everyone has to pay (basic membership: \$40/year).

Photo Assistants

Three innovative websites with bonus features.

OUTDOOREYES.COM

Share wildlife and landscape photos with other outdoor photographers.

PHOTOSHELTER.COM

Upload your images here, and they're automatically archived in two different data centers for backup security—at no charge.

PANORAMIO.COM

This community-based photo-sharing site (recently acquired by Google) geotags images onto Google Earth.

prints; matte works best for black and white. **TUNE UP** You can use iTunes to share videos with your friends, not just buy and play music.