



TAKE CONTROL OF

YOUR DIGITAL PHOTOS

**COVERS MAC
AND WINDOWS**

by **JEFF CARLSON**

\$14.99

**3RD
EDITION**

Table of Contents

Read Me First.....	4
Updates and More	4
What's New in the Third Edition.....	5
Introduction	7
Digital Photos Quick Start.....	9
Shoot Smart	12
Check and Set the Clock	12
Clear the Memory Card	14
Choose a Format	15
Geotag Your Photos	20
Choose a Photo Management Workflow	24
Integrated Catalog and Photo Editing	24
Photo Management and External Editors	25
A Keyword-First Workflow Option	29
Mobile Workflow Considerations	30
Choose the Right Photo-Management Application	31
Apple's Photos for macOS	34
Photoshop Lightroom Classic	37
Photoshop Lightroom Desktop	41
Exposure X7	44
Jeff's Recommended Applications.....	46
Import Your Photos the Smart Way	48
Apply Metadata at Import	49
Choose Where Files Will End Up.....	55
Judge Your Photos	64
Develop a Consistent Rating System	65
Cull Bad Photos	71

Assign Keywords and Other Metadata	75
Assign Metadata	76
Scan for Metadata	83
Apply Geotags	90
Use Facial Recognition	99
Find Your Photos Quickly	106
Locate Your Photos Using Search	106
Get Smart About Albums	113
Remove Duplicate Photos	120
Take Advantage of Software Intelligence	126
AI in Photos for macOS, iOS, and iPadOS	128
AI in Lightroom Desktop	133
AI in Google Photos	135
Go Mobile with Online Photo Services	140
Set Online Photo Goals	141
Choose an Online Service	142
Work with Multiple Photo Libraries	157
Open Other Libraries	157
Migrate Libraries	164
Back Up and Archive	168
Back Up Your Photos	169
Archive Photos for the Future	177
About This Book	181
Ebook Extras	181
About the Author	181
About the Publisher	183
Copyright and Fine Print	184

Read Me First

Welcome to *Take Control of Your Digital Photos, Third Edition*, version 3.0, published in August 2023 by alt concepts. This book was written by Jeff Carlson and edited by Glenn Fleishman.

This book gives you the information you need to build and maintain a digital photo workflow that makes it easy to import, tag, rate, and store photos to find them quickly and easily later. It primarily covers macOS 13 Ventura and later, Windows 10 and later, and iOS 15 and iPadOS 15 and later. It helps you spend more time on the enjoyable aspects of photography—shooting and viewing your photos—and less on the mundane but essential task of managing all your photos.

If you want to share this ebook with a friend, we ask that you do so as you would with a physical book: “lend” it for a quick look, but ask your friend to buy a copy for careful reading or reference. Discounted [classroom and Mac user group copies](#) are available.

Copyright © 2023, Jeff Carlson. All rights reserved.

Updates and More

You can access extras related to this ebook on the web (use the link in [Ebook Extras](#), near the end; it’s available only to purchasers). On the ebook’s Take Control Extras page, you can:

- Download any available new version of the ebook for free, or buy any subsequent edition at a discount.
- Access the book in both PDF and EPUB formats. (Learn about reading on mobile devices on our [Device Advice](#) page.)
- Read the ebook’s blog. You may find new tips or information, as well as a link to an author interview.

If you bought this ebook from the Take Control website, it has been added to your account, where you can download it in other formats and access any future updates.

What's New in the Third Edition

When I wrote the first edition of this book, the number of photo apps available was relatively small and a few major players dominated the category. The second edition, released in 2019, included several changes to account for many more applications and approaches for managing photos. Now, this third edition incorporates a whole slew of updates due to how the field has expanded.

Oh, and have you heard of this new thing called AI? Although *generative AI* is getting all the press for creating photorealistic images out of a few lines of text, machine learning (ML) technologies are also being employed for organizing, such as auto-tagging images in a library or allowing searches based on ML-based recognized objects.

Here's how these changes are reflected in this edition:

- **Geotagging:** I added a section on how to [Geotag with Help from an App](#) while you're out making photos so location data gets added to images.
- **Workflow management:** To help visualize the options you need to consider when choosing apps, I wrote an entirely new chapter, [Choose a Photo Management Workflow](#).
- **Machine learning for keywords:** A lot of people get hung up applying keywords when organizing their photos. But now machine learning can help by generating them for you. I added the app ON1 Photo Keyword AI to the options in [Import Your Photos the Smart Way](#). That turned out to be a tease for a larger discussion of using ML apps like ON1 Photo Keyword AI and Excire Foto to create keywords and other data in a new section called [Scan for Metadata](#).
- **Photos scans for duplicates:** The Photos for macOS app finally has a built-in way to scan for duplicates!

- **Added AI/ML explanations:** All this talk of artificial intelligence and machine learning is no doubt making experts in those fields grind their teeth because people often use the terms incorrectly. I wrote a new sidebar to clear things up: [AI and ML Terminology](#).
- **Memories changes:** I updated the section [AI in Photos for macOS, iOS, and iPadOS](#) to account for new ways that Photos handles the Memories feature.
- **Managing multiple libraries:** As we accumulate photos (and photo apps), it's inevitable that they get scattered across various libraries. But we're looking to take control of our photos, and some new technologies have arisen to help, so I've written an entirely new chapter that's all about how to [Work with Multiple Photo Libraries](#).

Other, more minor changes, including some deletions include:

- Google Photos has changed how it works since the last edition, so [AI in Google Photos](#) has been updated.
- In the last edition, I removed Mylio from the lineup for various reasons. Although I still can't wholeheartedly endorse it, the new version ticks a lot of boxes. I explain why in the sidebar [Consider Mylio Photos](#).
- Apple broke or removed a Siri feature that let you perform searches by saying them for Photos for macOS. At some point the feature just...stopped working, so I've removed the explanation.
- Thanks to new and better tools (namely Avalanche from CYME), I retired the chapter on migrating from iPhoto or Aperture to Lightroom Classic.

Introduction

You probably have a story like this. My mother took it upon herself to organize and digitize the family's long-neglected stash of photo prints. Pictures were pulled from literal shoeboxes, as well as albums and envelopes tucked in the backs of drawers. Black and white, sepia tone, color; yellowed by age and old chemical processes; worn at the edges and vignetted in ways that today's apps try so hard to emulate digitally.

Most details of the people and places in the pictures were lost or had changed over time, but she had an advantage: flipping the photos over often revealed valuable information about the shots, usually scribbled in pencil as an afterthought because the photographer or family member at the time knew who and what was depicted.

As we've embraced the digital photography revolution, there is nothing to flip over. The shots we capture are saved to memory cards and hard drives, and are infrequently printed.

And we're shooting more. It's now far easier to take photos because decent-quality cameras are inexpensive and pocketable. Top-rate camera technology is embedded into cell phones; the iPhone remains the most popular camera at the photo-sharing site Flickr after many years.

As a result, we're drowning. No longer restricted by the number of frames on a film roll or the expense of developing the bad shots along with the good, we capture many more photos.

But then what? Too often, the shots are dumped into a computer with the best of intentions for sorting and organizing, but are then left scarcely examined or enjoyed. Life intrudes, more photos are captured, and time passes until you need to locate some images that you vaguely remember taking.

This is the point where you ask yourself, often in exasperation, "Why didn't I organize these better? This shouldn't be so difficult!"

And here's where the new story begins.

Taking control of your digital photos isn't impossible. Although we have more photos to deal with, we also have much better tools to describe and organize them. In fact, your camera and photo-management software can do some of the heavy lifting for you—and ever more in recent years, if you let it. By taking some deliberate steps before you go out shooting and when you import images, you can streamline what is normally a time-consuming task—making it more likely that you'll do it. Best of all, you'll be able to find images later without having to scan through every shot in your library—you'll be able to “flip” the photos over and get the information you need.

Some folks don't want to go to any trouble organizing their digital photos and videos, and that's okay. Modern applications and online photo-hosting services automatically analyze your images for recognizable objects and scenes, requiring no work on your part. Then again, if that feature was sufficient, you probably wouldn't be looking to take control of your photos.

The process I describe stakes out the middle ground between a completely hands-off approach and the labor-intensive, detail-oriented workflow relied on by some professional photographers. Although my recommended method embraces keywords and other metadata, it also emphasizes efficiency to save time and reduce complexity, and ensure you develop a system you'll really follow *each time*. I also recommend in this edition machine-learning tools that remove lots of the manual effort of organization in exchange for a modest amount of human review of the results. For those who would like to spend even less time managing photos, I offer some suggestions for modifying the process throughout the book.

The other component of any modern photo-organization scheme is cloud services. As mobile devices have become constant companions, we've come to expect all of our data—from photos to calendars and contacts—to always be available. With services such as iCloud Photos and Google Photos, you really can access nearly every digital photo you've captured on every device you own—provided you're aware of some important tradeoffs.

Digital Photos Quick Start

Here's a quick overview of my recommended strategy, complete with links to different topics in the ebook, so you can jump to them quickly.

Get started with the minimum amount of work:

- Jump right in by reviewing [Choose a Photo Management Workflow](#), and then learn how to [Take Advantage of Software Intelligence](#). Modern apps and cloud services analyze your photos and identify objects and scenes, automatically categorizing them.
- Check out the ideas under [The harried photographer](#).

Prep your camera:

A bit of preparation before you head out the door will make things easier after you return with new pictures. In [Shoot Smart](#), learn four quick actions to get started on the right footing.

Get your app together:

- Start with the top-down view of the process a [Choose a Photo Management Workflow](#).
- Decide which application you'll use to organize your digital photos in [Choose the Right Photo-Management Application](#).
- Compare four common choices, and find out about [Jeff's Recommended Applications](#).

Let AI and machine learning do the work:

AI technologies are profoundly changing not only how we edit photos, but how we organize them, too. To discover the latest features based on machine learning, learn how to [Scan for Metadata](#), [Take Advantage of Software Intelligence](#) using AI-based tools in several apps, and search for images across all images in Peakto when you [Work with Multiple Photo Libraries](#).

Import the right way:

Don't rush through importing photos from a camera or memory card into a computer. Instead develop a strategy to [Apply Metadata at Import](#), assigning valuable information to all images that come in during the import stage in one batch.

Pick winners and losers:

- Not every photo you take can be a winner. The next step to a more manageable library is to [Judge Your Photos](#) and assign ratings.
- Just as important: take a deep breath and [Cull Bad Photos](#) by removing or hiding them.

Apply keywords and metadata:

- After assigning metadata during the import process, take a second pass to choose specific keywords for each shot. See [Assign Keywords and Other Metadata](#), and don't miss [Choose Good Keywords](#).
- Does that sound like too much work? Apps using machine-learning technologies can sometimes tag media faster and more thoroughly when you [Scan for Metadata](#).
- If you used an external device such as an iPhone or standalone GPS receiver to collect location data while shooting, [Apply Geotags](#) shows how to merge that information with your photos.
- We often want to find people in our photos. Learn how to [Use Facial Recognition](#) in which the software pulls together shots of friends and family members you identify.

Find what you're looking for:

- Beyond search tools—see [Find Your Photos Quickly](#)—add smart albums, containers that look like regular photo albums, but the contents of which change depending on a list of criteria.
- While searching your library, learn how to [Remove Duplicate Photos](#).

- Discovering photos isn't always an action you direct. In [Take Advantage of Software Intelligence](#), learn how machine-learning features in apps surface memories and make it easier to find photos.

Go mobile:

- Making photos available on mobile devices involves choices and tradeoffs. To find the right service for you, first [Set Online Photo Goals](#) to compare features.
- The service you choose can also depend on which ecosystem your desktop photo-management app is part of. [Choose an Online Service](#) by looking at five of my top contenders.

Bring them all together:

- If you have several photo libraries from different apps and ecosystems knocking around your storage, use apps like PowerPhotos and Peakto to [Work with Multiple Photo Libraries](#).
- Or, learn how to consolidate Photos for macOS and Lightroom Classic libraries, or convert from other app formats, in [Migrate Libraries](#).

Protect your photos:

- All this work is for nothing if a failing hard drive wipes out the one and only copy of your photo library. You *absolutely, without question* need to [Back Up Your Photos](#) with a strategy that backs up all your data, not just your photos.
- Since there's no guarantee the software you use today will function in 10 or 20 years, I talk about how to [Archive Photos for the Future](#).

The harried photographer:

You might not be able to hit every step in my recommended system. Instead of facing paralysis, turn to my quick summaries of the bare minimum of how to get organized in a hurry. See [The Harried Photographer: Keywords and Metadata](#), [The Harried Photographer: Rating Photos](#), and [The Harried Photographer: Organization](#).

Shoot Smart

It's easy to think that taking control of digital photos begins when you import the images into your computer, but the truth is that the process starts before you capture your first shot. For example, time stamps are the foundation of photo-management software, making it essential that your camera records the correct time. It is possible to fix errant time stamps later, but that throws a roadblock into your workflow. (And if enough roadblocks appear, you may decide to turn around and abandon the endeavor altogether.)

The advice in this section isn't complicated, but it goes a long way toward ensuring the photos you shoot will be cleanly imported.

Check and Set the Clock

How many digital clocks do you set on a regular basis? These days the number is small because our devices—computers, smartphones, iPads, even some televisions—configure the date and time automatically by getting the info from the internet. When Daylight Saving Time (DST) switches over, I need to change only a few holdovers such as the clock on my oven and an analog clock above the fireplace.

Oh, and my cameras. Although they include options for indicating whether DST is on or off, I mistakenly assume that because they're also computers (specialized computers, that is) they inherit the correct time when it changes. And every spring and autumn I invariably forget to change one, resulting in imported photos that appear in my library shifted by one hour. That may not seem like a big deal, but if you then also import images from a properly set camera, you'll end up with photos jumbled out of order.

Tip: If you shoot only with an iPhone or iPad, the clock is set automatically, so you don't have to worry about it.

Time and date stamps are the most crucial methods of organizing photos, so it's important to get that information correct before you start shooting. When you travel to a new time zone, make a point of updating the time-zone setting in your camera so you don't end up with daytime shots marked as captured in the middle of the night.

It's even more important to make sure the time is correct if your camera lacks a GPS—not a typical feature—and you rely on a GPS device or app to track your location. You need the camera's and the device's clocks to match for accurate matching.

Setting the time varies by camera model, but the basics are the same. Go to the camera's settings menu, and look for a Setup or Tools category. Choose Set Clock or World Time or similar, and use the camera's controls to set the correct time (**Figure 1**). I use my computer or iPhone as the basis for “real” time, since they're automatically updated via the internet, ostensibly set from synchronized “atomic time.”

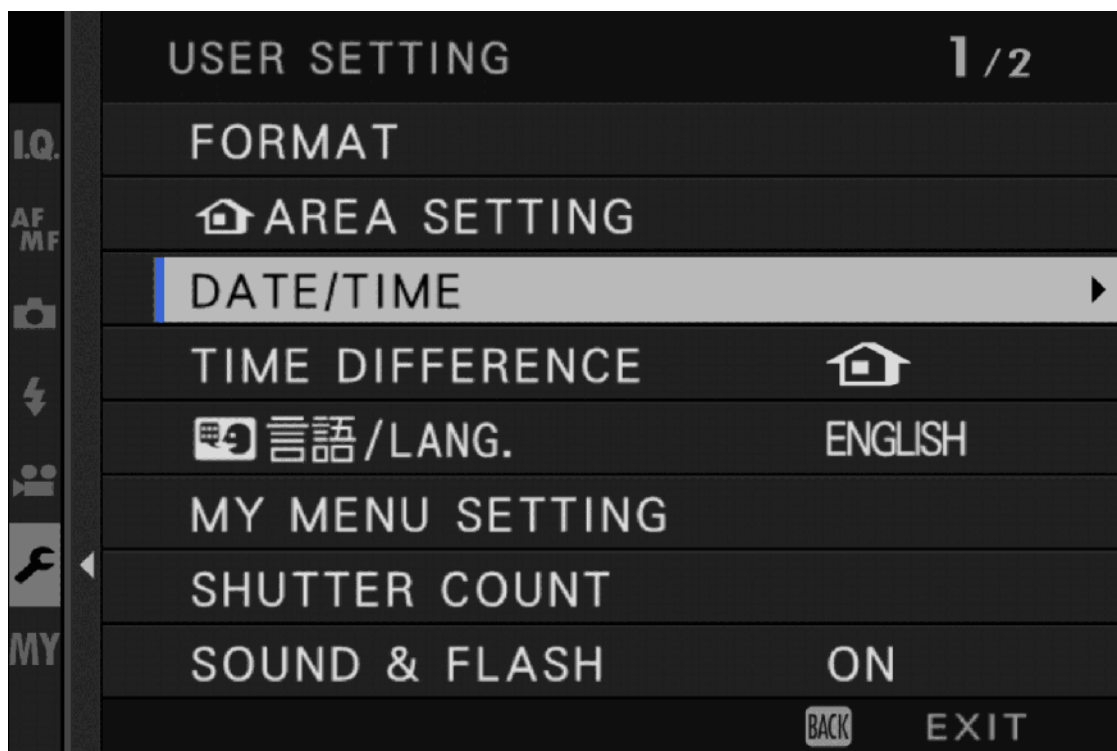


Figure 1: Set the correct time on your camera (Fujifilm X100V menu shown here).

Don't forget to check the Daylight Saving Time setting! (It's known by other terms outside the United States, such as Summer Time in Europe.) Most cameras offer an On/Off toggle. Having trouble remem-

Choose a Photo Management Workflow

Although it's possible to dump photos into a folder on your computer and call that "organization," this is one case where I don't recommend a do-it-yourself approach. My photo-management strategy relies heavily on software to organize images and apply essential metadata. The time you save by letting apps handle the organization, and tagging and searching for images, in my opinion, justifies the price of a good photo-management program.

The way I see it, there are two high-level approaches, which depend on the photo software you prefer: an integrated app that does both photo management and editing, or a dedicated management app that is the springboard for launching other editing utilities.

Integrated Catalog and Photo Editing

The advantage to the integrated approach is that you can do everything (or nearly everything) in one place. Examples include Lightroom (both Classic and desktop versions), Photos for macOS, Capture One, and ON1 Photo RAW.

You import photos from the camera or a memory card directly into the app, and then perform all the metadata edits and photo adjustments in the same app (**Figure 3**). Typically, the app acts like a database that tracks the locations of image files on disk as well as any edits you've made, while leaving the original files untouched. When you've finished editing, you export or share online a new finished file.

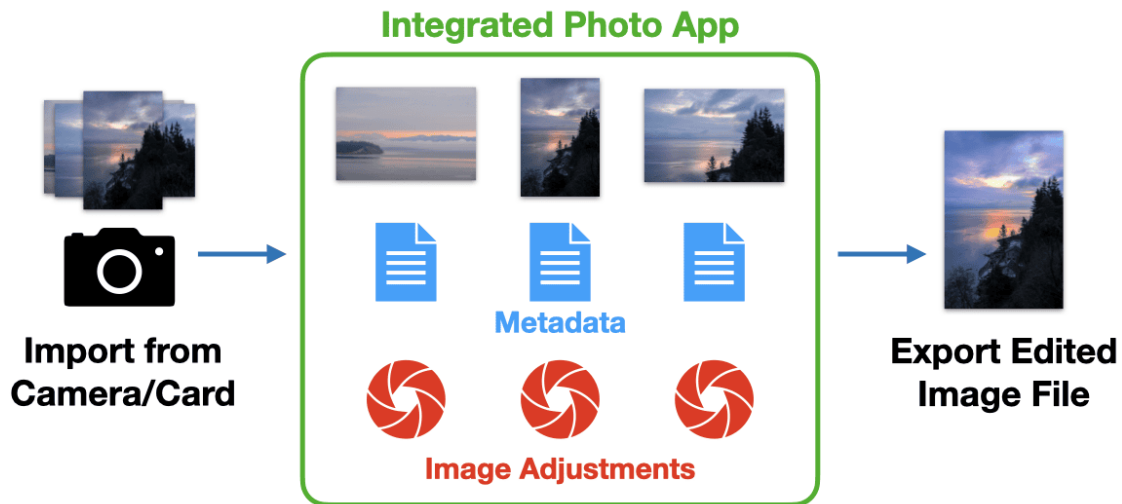


Figure 3: Using an integrated app that handles metadata and image adjustments is the most straightforward approach.

This is the approach I take for my photos. Partly that’s because Lightroom Classic is my primary app and ecosystem of choice, but mostly because it’s uncomplicated. The apps keep tabs on images, so it doesn’t matter where images are located on disk; for example, most of my library exists on a large external drive. Lightroom’s image adjustment tools (editing for tone, color, and so on) are also great, so nearly all of my work happens in the app. Photos for macOS is another example; see [Choose the Right Photo-Management Application](#).

Photo Management and External Editors

What if you don’t want to be wed to a single app? Another approach is to use a dedicated app for handling the file and metadata management of your library, and then send images to an editor (or editors) of your choice. (**Figure 4**).

Choose the Right Photo-Management Application

I'd love to say, "Go get this one program and you'll be set," but that's not realistic: your photo library may already be stored in an application that makes it difficult to transition; or you may need something with more image-editing features than a similar program.

Focus on the Concepts, not the Applications

Photography apps vary widely: Some are designed to speed through the import process. Some offer a photo-focused view of folders on your volume. Some try to do everything, from managing libraries to editing images.

Because it's impractical for me to list every program out there, I've focused on the features that I consider essential for effectively managing a photo collection and used those criteria to select the applications I included in this book.

If you use a program other than the ones I mention, remember that the concepts are more important than the particular app.

As you evaluate photo applications, keep this feature list in mind:

- **File management:** My preference is an application that handles where your image files are stored starting at the point when you import photos. What you do *not* want is a situation where you have to copy image files and manually sort them into folders in the macOS Finder or Windows Explorer. That approach is fine when dealing with word-processing documents and spreadsheets, but doesn't scale well to tens of thousands of digital images.

In earlier editions of this book, I chose applications that manage everything for you, but there's also a middle ground. Many programs read existing folders on a volume instead of storing media in a central location. That approach is good for people who prefer to set up folders based on dates, projects, vacations, or some other

scheme, or who already have a system like that in place that they don't want to disrupt going forward. It can also be easier with this method to manage photos stored on network-attached storage (NAS).

- **Ratings:** The ability to quickly identify which photos are better than others, without having to scan through them every time, is key. Most applications offer a scale of zero to five stars, plus an easy way to assign the rating, such as pressing a number key (4) or shortcut key combination (⌘-4 or Ctrl-4). Some applications offer additional ways to differentiate photos, such as applying a flag, marking an image as a favorite, or applying colored labels. Others go in the opposite direction, offering just the option to mark an image as a Favorite, as is the case with Apple's Photos app.
- **Keywords:** If you reflexively roll your eyes at the mention of keywords, give the idea a chance! Tagging photos with keywords lets you provide context to photos and helps locate related images later. The important part is applying and creating keywords *quickly and easily*; if too many steps are involved, you're less likely to use keywords. See [Scan for Metadata](#) for ways to auto-generate relevant keywords. If you're still keyword averse, be sure to check out [Take Advantage of Software Intelligence](#) for alternatives.
- **Metadata at import:** Just as important as having keywords is adding them to photos during the import process. As you'll see in [Import Your Photos the Smart Way](#), you can save a lot of time by making the software assign keywords and other metadata while it's ingesting images, so you don't have to remember to do it later.
- **Smart albums:** I firmly believe the computer should do most of the grunt work while I enjoy my photos, which is why I like to use *smart albums*—saved searches that locate and display photos based on criteria I specify—instead of having to manually sort photos into standard albums. Similarly, I'm a fan of AI features in apps and services that automatically identify objects and scenes in your photos.

Import Your Photos the Smart Way

Moving photos from a camera or memory card to the computer seems like mere transportation: bits captured and stored in one location are copied and saved to a new location. That sounds about as exciting as bringing groceries home from the market.

But what if those groceries could assemble themselves into prepared meals by the time you delivered them to your kitchen? And what if your photos could organize themselves on the way to your drive by detailing what's in each image, where it was shot, and by whom?

Your computer can offer more than just shuttling files from one location to another. By taking advantage of software's capability to assign metadata during the import stage, much of the drudgery of organizing photos is handled upfront with minimal interaction required by you. And, you may also be able to set up your import such that you [Choose Where Files Will End Up](#).

The Harried Photographer: Keywords and Metadata

I believe good metadata pays dividends later, which is why I suggest applying it during the import stage—even if you are in a hurry. This takes advantage of the software's capability to tag images as it copies them to the computer.

If your program doesn't support this feature, add keywords right after import: in Photos for macOS, for example, go to the Last Import album (though it's automatically selected after import), select all the photos you just added in the Last Import album, and type keywords into the Info window that are related to the entire batch.

But stop there—you can always add more-specific keywords later when you review the shots. (And if you're using Photos for macOS, Lightroom desktop, or Google Photos, you can also take advantage of the automatic keywords they generate; see [Take Advantage of Software Intelligence](#).)

Apply Metadata at Import

Computers were designed for grunt work, whether that's decrypting World War II ciphers or batch-applying keywords to hundreds of photo files in one go. Yes, you can always manually add metadata later, but will you, really? Maybe for a few terms here and there—which is inevitable, and useful, as I cover in [Assign Keywords and Other Metadata](#)—but perhaps not for all the images in a shoot.

Spending a tiny amount of time optimizing the import process gives you a tremendous advantage when locating photos down the line after you've moved on to the next batch of shots. This is especially the case in applications that support metadata templates.

Which items are we talking about? In Lightroom Classic, you can apply the following metadata during import:

- **Keywords:** Apply any descriptive terms for this set of photos that you are likely to search for later, such as the name of an event or landmarks that appear. For accuracy, include only keywords that apply to *all* the images being imported.

For example, if I'm importing 100 photos of trains and my friend Mark Smith appears in 30 of them, I would not include the keyword `mark smith` during the import process. It's better to add the tag to those 30 shots later than to do a search for "mark smith" at some point and turn up 70 images that don't contain Mark. It's also easier to add new terms later than to dig out errant ones.

- **IPTC metadata:** If IPTC presets didn't make it so easy, I'd likely never assign this identifying information to my photos. Many of the fields are specific to industries or projects (IPTC Subject Code, Intellectual Genre) but basic fields such as Creator, Contact Email, and Copyright Notice are useful to anyone. If you need to submit the file somewhere, such as a file-sharing site, that information stays with the file—and can be useful for identifying ownership if someone swipes it.

Judge Your Photos

The title of this chapter was originally “Rate Your Photos,” but that just wasn’t the right term. Rating implies something casual, like comparing pears to see which ones are the most ripe. Your photos are more important than that.

Instead, you need to be judgmental about your images. That means scrutinizing them with specific quality levels in mind. It’s easy enough to say one photo is okay and another isn’t so hot—but where does that leave you? With a lot of gray area. And in your mission to take control of your digital photos, you don’t want gray areas. You want to invoke specific actions that make working with your library better and easier.

Judging your photos achieves two goals. It sets up a practical workflow for later, so you know right away which shots you want to share with others and which ones need work in an image editor before being ready to be made public (and which should be deleted or hidden). Judging also helps you become a better photographer, because you look at your shots critically to determine what you’re doing right or wrong, and in what areas you excel or need to improve.

In this chapter, I offer a system for judging and flagging your photos to make them most useful in your library. I also discuss how to [Cull Bad Photos](#) that don’t make the cut.

The Harried Photographer: Rating Photos

Even if you’re pressed for time, I recommend rating your photos immediately after importing them. This is the absolute best way to quickly mark those photos you’ll want to use for projects, share with others, and spend time editing later. But you can simplify the rating process to save time. Stick to a binary system: a photo is either acceptable or it’s not. Flag it as a pick or favorite so you don’t need to feel overwhelmed at choosing between one and five stars.

Develop a Consistent Rating System

Despite my encouragement to be a ruthless editor of your imported photos, this step is usually a lot of fun. You get to study the images you shot and experience the sense memories of capturing them.

In Lightroom Classic, Lightroom desktop, and Exposure X7, you can assign ratings—typically a scale of zero to five stars—by pressing a number key: 2 for two stars, 3 for three stars, and so on. You can also click rating buttons that appear under the image thumbnail, in an information sidebar or panel, or both (**Figure 21**).

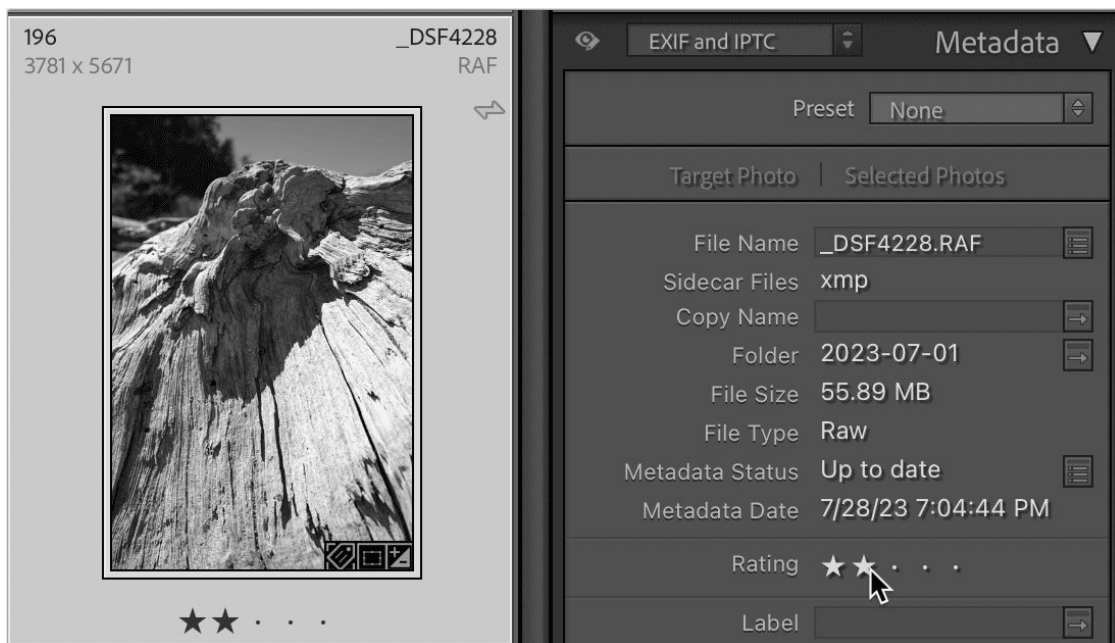


Figure 21: Rate a selected photo in Lightroom Classic using the mouse.

I prefer using the keyboard to apply ratings, as that allows me to tap a number key and then tap the right arrow key to switch to the next photo. I can move quickly without touching the mouse or trackpad.

In Photos for macOS, Apple offers a simple Favorite label, which appears as a heart. You can click the button or press the period key to mark or remove the Favorite label, the only two states, much like using a flag. (For more options, see [Apply Labels, Flags, and Favorites](#), just ahead, or see the next sidebar, [Use Star Ratings in Photos for macOS](#), for a way to use star ratings in Photos).

Assign Keywords and Other Metadata

When my wife and I moved into our house, we repainted most of the interior walls. It was a time-consuming task, but not because of how much wall space needed covering. Splashing color on the wall was the easy part. Taping around windows, preparing the room, and then touching up the edges and corners took much more time.

In [Import Your Photos the Smart Way](#) I talked about adding metadata during the import process because, to me, that's the easiest way to apply it. Assigning keywords and other information during that initial stage takes some prep time, but when you click the Import button, the metadata is applied with a broad brush across all your incoming photos. (It's like handing a paint roller to a capable assistant while you supervise, preferably with a beverage in hand.)

After import, though, you have touch-up work to do. To make your photos easily searchable later—the ultimate goal in our organization project—you need to apply metadata to individual photos that is more specific. This might include identifying people and landmarks, or describing shots.

In this chapter, I look at how to choose good keywords and how to apply them smartly. I also discuss how to fix incorrect dates and times, apply geolocation information, and use facial-recognition tools.

The Harried Photographer: Assigning Keywords

I'm not here to undercut my own advice, but let's be realistic: this is the area most people ignore. I find keywords to be helpful, but you can also rely on alternatives. I recommend you at least apply some keywords during import or directly after (see [Import Your Photos the Smart Way](#) and [Scan for Metadata](#)). You can then fall back on the machine-learning features in some applications and services (described in [Take Advantage of Software Intelligence](#)).

Assign Metadata

Your camera embeds all sorts of metadata into photos, such as the shutter speed, aperture, and focal length. You'll rarely search for photos based on those criteria, though. What your photos really need is a sense of context—and only you can provide that.

While you can add descriptive information in several ways—including image titles and captions—I focus on keywords here to streamline the process. Writing a title and caption for every image would slow your progress and increase the chance that you'd abandon the effort altogether, because you end up writing original content for each photo.

By focusing on keywords at this stage, you can refine the metadata in batches as you work, so you save time. Think of it as building a pyramid of image information (**Figure 24**).

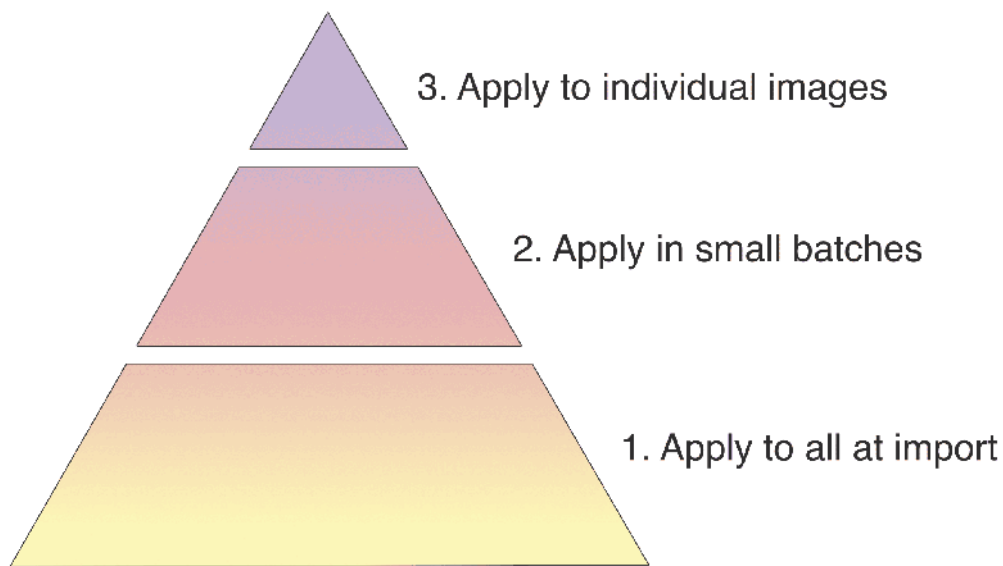


Figure 24: Build up metadata in stages for efficiency.

Build upward, starting with keywords that apply in general, and then proceed to more specific keywords:

1. During the import stage, assign keywords that apply to every photo in a set, laying down a foundation of metadata.

Find Your Photos Quickly

So much of the information about photography out there focuses (pun intended) on the art and practice of capturing images, but very little addresses what to do with the shots once they're in captivity. The whole point of taking control of your digital photos is not just to find a place for them on your disk, but to work with them later—whether that's editing a group of promising images the day they're shot or assembling a slideshow after three years has passed.

This is where the work you've done so far pays off. Armed with a photo library chock-full of metadata, you can locate images in a fraction of the time it would take to scan through them visually.

I'll show you how to search for specific metadata—such as keywords and ratings, and camera-generated data such as aperture, shutter speed, and camera model—to track down shots. Then I'll cover how to make that search capability work in your favor by building smart albums whose contents can change based on criteria you specify.

The Harried Photographer: Organization

No time to build smart albums? Stick with scrolling through your library by date or organizing by event (if the software supports it), and create just one or two smart albums, such as one that collects flagged or favorited photos from the past six months. Also take advantage of automatic identification features in Photos for macOS, Lightroom, and Google Photos (see [Take Advantage of Software Intelligence](#)).

Locate Your Photos Using Search

When I want to track down photos, I usually start by performing a text search to locate keywords or other data, and then refine the results by specifying star ratings, labels, or flags. Knowing, for instance, that I tagged my Disneyland vacation photos with keywords, I would do a

text search for **Disneyland** and then filter the results to reveal only images rated three stars or higher.

Sometimes I look for specific metadata, such as the camera type or a range of shutter speeds. That enables me to revisit only images shot on my iPhone, for example.

Here's how to take advantage of some of the most useful search features in your photo-management software.

Find Text

To perform a basic search for text that appears in nearly any metadata field (including keywords, titles, and captions), type a term into the program's Search field.

Lightroom Classic also offers advanced constructions for performing text searches. You can exclude terms from a search by putting an exclamation point (!) before them. Typing **pastry berry** brings up all photos tagged with both “pastry” and “berry,” but typing **pastry !berry** displays photos tagged with “pastry” and hides those that also contain “berry.”

Similarly, add a plus sign (+) before a word to search for text that starts with that word, or append the plus sign after a word to locate text strings that end in those characters.

Note: Lightroom desktop doesn't understand advanced syntax the way Lightroom Classic does, as shown above. In fact, there's another gotcha: you must be connected to the internet to perform a text search in the first place. Adobe has wired the search function to their Sensei service—which has definite benefits—but doesn't work at all without a trip to Adobe's servers.

You can also control how the terms are handled by choosing from the second pop-up menu in the Text filter bar (see **Figure 50**). For example, to find photos that contain “pastry” or “berry,” you choose Contains—instead of Contains All—from the menu.

Take Advantage of Software Intelligence

The system I describe in this book is designed to give you the most control over your organized photos, enabling you to easily locate particular images whenever you need them.

Sometimes, though, even this minimal system of tagging and rating photos is too much. The simple truth is that most people don't organize their photo libraries beyond perhaps making an album or two.

And that's okay.

Even I fall into this camp at times, not always properly tagging my photos after I import them due to lack of time or energy. (However, as I describe in [Apply Metadata at Import](#), I do take advantage of import settings that perform a lot of the work for me.)

Clearly, I'm not alone, because the biggest push over the last few years in photo organization has been using machine learning (ML)—a sub-category of loosely defined artificial intelligence (AI)—to identify the contents of photos. We've seen this already with facial-recognition features that find specific people in images.

But ML-based features go even further, recognizing things like trees, snow, animals, and many other objects and scenes. Instead of trying to remember when you took a ski trip years ago, for example, you can quickly narrow the search by finding all photos with snow in them.

In this chapter, I show you how to use these features to locate your photos without relying on edited metadata. They don't eliminate the benefit of other organization strategies—judging, assigning keywords, and organizing your photos yields better results—but ML can give your searches an additional boost.

AI and ML Terminology

Before going forward, we need to sort out some terminology. *AI* has become quick shorthand for features that recognize the contents of photos and take actions such as identifying objects or applying tone and color adjustments based on similar images. It's also prevalent in the context of *generative AI*, which is when the software creates images based on a text prompt or nearby pixels (such as erasing large areas of a photo and replacing them or extending photos beyond their actual borders).

However, the more accurate term for all of this is *machine learning*. That refers to the process of feeding massive numbers of images into a training system in which human beings categorize what's in an image. You're absolutely one of these people: every time you solve a Google image CAPTCHA, you're helping train their systems. Companies also farm the work out in vast quantities as low-paid labor through systems like Amazon's Mechanical Turk. (AI outfits are trying to get people out of the equation using ML approaches that let machines teach themselves or each other, such as [unsupervised learning](#) or [generative learning](#).)

The results of this training produce a machine-learning algorithm that can evaluate new images they've never seen before and, to a surprisingly high degree of accuracy, identify objects they were trained on. For instance, a computer doesn't know that a photo of a cat is a cat; it's just a group of colored pixels. But a training model can be honed by people such that the ML algorithm can generally recognize pixels that resemble the characteristics of a cat and then, looking at similar groups of pixels, identify what are also likely cats.

Actual AI, or *artificial intelligence*, describes software that is sentient and "thinks" on its own. What we often perceive as AI is actually machine learning making highly-informed guesses and coming up with results that simulate intelligence. (The latest fad, large learning models (LLMs), like ChatGPT, are more fancy autocorrect than AI.) As you might imagine, academic AI researchers can get justifiably prickly when people throw their term around.

That said, AI is the term being used by companies creating ML features and in the greater popular consciousness. I use it as more of an umbrella term to describe technologies mostly based on ML.

Go Mobile with Online Photo Services

When we talk about phone cameras, it's usually in the context of having capable—and in some cases quite powerful—photo-creation tools always at the ready. It's rare to chide ourselves for leaving a camera at home when one is always in a pocket or bag. And the technological achievements to make great images from those tiny lenses and sensors is truly stunning.

But the cameras are only half of the story. What we often take for granted is the rest of the device, which is nearly always connected to a cellular or Wi-Fi connection. Photos we capture on our phones can be immediately shared and synchronized. That works the other way, too: our photos don't have to be locked inside a computer at home or a tablet in the other part of the house. It's perfectly reasonable to want access to all of our photos, all of the time, wherever we are.

That's still a tall order. Photos and videos occupy a vast amount of storage, and the capacities of mobile devices are still relatively small compared to the size of even the average photo library for anyone serious enough about taking pictures to read this book. Now, online services fill the gaps between devices. It's now possible to carry a representation of your entire photo library in your pocket (with some limitations). This means you can bring up nearly any photo in your library, no matter where you are—or which device took the photo.

Notice the qualifiers in that paragraph: *possible*, *representation of*, *nearly*. There's no way to transport the entirety of an average library at full quality on a mobile device; tradeoffs are involved, which I cover in this chapter.

Note: Techniques designed for the limited storage available on mobile devices, like smartphones, can also work for laptop and desktop computers. You may want to access your library on a laptop that has a small capacity SSD, or on a computer that lives at a different location from your primary library, such as at an office.

As much as I'd like to, I can't recommend a single service as the gold-star solution for mobile photography. Some, like iCloud Photos and Lightroom's mobile apps, are tied to ecosystems, while others, like Google Photos, stand on their own. So before we delve into the specifics of each service I'm comfortable recommending, let's revisit our Take Control goals and apply them to mobile photography.

Set Online Photo Goals

Using the guidelines I set forth earlier for choosing software on the desktop, here's what I think are important criteria for any service that offers mobile photo management:

- It should provide access to your entire photo library; failing that, it must offer a useful subset of it without a lot of extra work.
- The service should let you view important metadata and, even better, allow you to edit the data.
- It must let you find photos easily. Just having photos in the cloud doesn't make them easy to access.
- Photos you capture using a mobile device should be incorporated into your main library.
- If possible, the service should serve as an offline backup of your images. (I talk more about backups in [Back Up and Archive.](#))

That's a tall order. And not every service meets all of these goals.

Work with Multiple Photo Libraries

As you know, my recommendation is to manage one central photo library so you know exactly where to access all your images. That's not always possible or practical, though. You may have one library for photos taken with your mobile devices, stored in the Photos app, and a Lightroom Classic library containing photos from your other cameras. Or you might create multiple Lightroom Classic catalogs to keep work photos from intermingling with personal ones.

Or, you might be like me, with several old libraries still littering your hard drives and catalogs from multiple applications you've tried. Suddenly the notion of one shining photo library on the hill gets muddled, or the others just fall by the wayside.

You don't need to resign yourself to that chaos.

Open Other Libraries

In this section I'm going to cover a couple of my software picks that can manage multiple libraries—Photos for macOS and Lightroom Classic—and also look at what I think is the holy grail of library management on macOS, Peakto.

Open Other Libraries in Photos for macOS

It's possible to work with more than one library in Photos for macOS, opening them one at a time. The important proviso, though, is that only one library can be designated as the System Photo Library, which is the sole library that can sync with iCloud Photos.

In my eyes, that means Photos can work in practice with just one library, because much of the point of the Photos app is to synchronize my images among all my devices. But if you have reasons for maintain-

ing several libraries—such as for separating work from personal photos, here’s how to access them:

1. Close the Photos app if it’s currently running.
2. Launch the app and immediately hold the Option key until you see the Choose Library dialog (**Figure 77**).

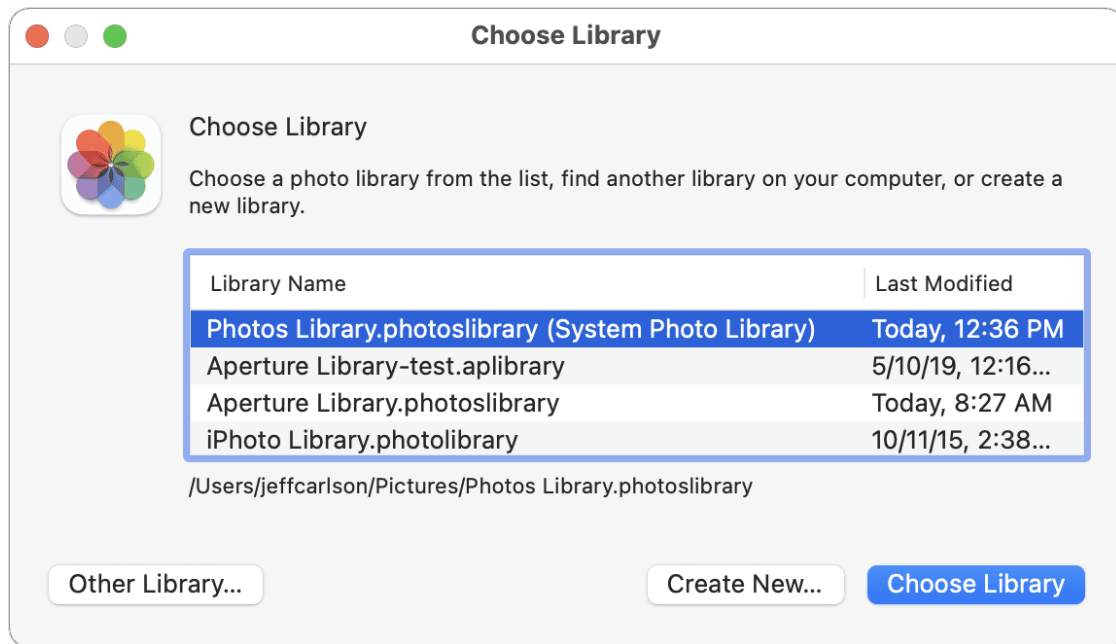


Figure 77: Open other libraries in Photos for macOS.

3. From the list of libraries the app has discovered on disk, select the one you wish to open and click Choose Library. Or, if the one you want isn’t listed, click Other Library and locate it on disk.

Alternately, you can double-click a library in the Finder to launch the Photos app.

Tip: Speaking of using the Option key at startup, holding ⌘ and Option when launching Photos gives you the option to repair the library. Use this if you’re seeing unexpected behavior or missing images.

To make a new, empty Photos library, click Create New and pick a location for it.

Back Up and Archive

An old printed photo is often precious because it's the only copy that exists. But the print might be in bad shape. If you have the photo's negative, you may be able to make a new print—but what if the negative is no longer available? And if the prints and negatives are accidentally thrown away or damaged, that particular image is gone forever.

In the digital age, that type of scarcity isn't as much of a problem. You can easily make hundreds of digital copies of a photo, transmit the image around the world with a click, or send the file to a drugstore and have inexpensive prints made.

And yet, digital photos suffer from a different type of scarcity: no matter how easily they can be reproduced, bits are fragile in a way that paper or film isn't. One drive failure can wipe out your photos—*all* of your photos—in an instant. If the read/write head of a hard disk starts chopping into the physical surface of its platters, or the bits on a solid state drive (SSD) get scrambled, those photos are toast.

The solution is to ensure you have a solid backup system in place—not just for your photos, but for all your important data. You want multiple copies that you can access easily and reliably.

You also want to make sure you can read the image files in the future. Unfortunately, as I discuss at the end of the chapter, it's hard to guarantee that, given the change in software and hardware over the years.

Rescue Your Data

If something happens to your data *before* you could make a backup, there may be one final line of rescue. Data-recovery companies such as [DriveSavers](#) can crack open a hard disk or solid-state drive and read data that may otherwise be lost.

There's no guarantee, and it's expensive—it can cost up to thousands of dollars for a single drive—but if the only alternative is to lose your photos forever, it's worth it. DriveSavers even employs trained crisis counselors who can talk you through the initial shock.

Back Up Your Photos

As a photographer, you probably view your photo files as special collections of bits, but the truth is your computer sees them as just more data. That's why it's important that you have a system in place that backs up *all* your data, including photos.

I can't cover all the ramifications of a good backup scheme for desktop and laptop computer users here, but if you use a Mac, you're in luck: Joe Kissell has already done that work. I highly recommend his ebook [*Take Control of Backing Up Your Mac*](#). If you use Windows, the advice below applies to either platform.

Joe goes into much more detail, but here are the components of a solid backup system that you should be working with today:

- **Versioned backup:** This backup scheme doesn't just make a copy of your data, it also retains several past versions so you can go back and recover one saved earlier than the most recent version. For example, if you needed a paragraph in a document from last week that you accidentally overwrote yesterday, you could pull up the version that contains it. The Time Machine feature in macOS is a versioned backup; it scans your computer every hour and makes a copy of files that have changed since the last time it ran. Another example is Dropbox, which stores a copy each time you save a file in your Dropbox folder.

Note: Versioned-backup systems have a limit of how many versions or for how long they retain previous iterations of a file. For instance, some might have a rolling deletion of 30 days, and all versions more than 30 days old are automatically thrown into the hopper. However, many backup and cloud-sync services offer a paid add-on package that lets you retain versions for a year or longer.

- **Clone:** If your hard disk decides to head for the great spinning platter in the sky or your SSD starts spitting memory errors, how long will it take for you to get back to work? A clone mirrors the exact contents of your drive, allowing you ready access to data.

About This Book

Thank you for purchasing this Take Control book. We hope you find it both useful and enjoyable to read. We welcome your [comments](#).

Ebook Extras

You can [access extras related to this ebook](#) on the web. Once you're on the ebook's Take Control Extras page, you can:

- Download any available new version of the ebook for free, or buy a subsequent edition at a discount.
- Access the book in both PDF and EPUB formats. (Learn about reading on mobile devices on our [Device Advice](#) page.)
- Read the ebook's blog. You may find new tips or information, as well as a link to an author interview.
- Find out if we have any update plans for the ebook.

If you bought this ebook from the Take Control website, it has been automatically added to your account, where you can download it in other formats and access any future updates.

About the Author



Author and photographer Jeff Carlson (@jeffcarlson@twit.social on [Mastodon](#), [@jeffcarlson](#) on [Instagram](#), jeff@jeffcarlson.com) is a

contributing editor at [TidBITS](#), plus he writes for publications such as DPReview, Macworld, and CreativePro. He is the author of [Take Control of Apple Watch](#), [Take Control of Your Digital Storage](#), and [Take Control of Managing your Files](#), among many other books, including [Adobe Lightroom: A Complete Course and Compendium of Features](#) (Rocky Nook). He believes there's never enough coffee and does his best to test that theory.

Acknowledgments

I've had the great pleasure of being involved with Take Control since its inception, and have enjoyed working with Adam and Tonya Engst as the original publishers of this work, and as editors and friends. I'm thrilled that when the idea of this book first came up, I was their choice to write it.

Many thanks go to Joe Kissell and Morgen Jahnke, the current Take Control publishers, for their encouragement, patience, and steady hands directing this wonderful publishing house.

Glenn Fleishman, who is not only a brilliant wordsmith but also a fine fellow to accompany with camera in hand, edited this and previous versions of the book. I want to thank him for jumping in and being occasionally merciless about my prose where it deserved to be.

I also want to thank the many Take Control and TidBITS readers who have supported this book with feedback and purchases of earlier editions.

And no project is complete without the support of my family, who endure this late-night writer's schedule and frequent requests to jump in front of the camera.

Shameless Plug

I produce a lot of creative material—something which I'm honored to be able to do—including photos, books for Take Control and Rocky Nook, the [PhotoActive](#) and [Photocombobulate](#) podcasts, and articles for DPReview, CreativePro, and other outlets. Find my work at [jeffcarl-](#)

[son.com](#) and sign up for my [low-volume newsletter](#) to learn about new projects and occasional deals and giveaways. Thank you!

About the Publisher

alt concepts, publisher of Take Control Books, is operated by [Joe Kissell](#) and [Morgen Jahnke](#), who acquired the ebook series from TidBITS Publishing Inc. in 2017. Joe brings his decades of experience as author of more than 60 books on tech topics (including many popular Take Control titles) to his role as Publisher. Morgen's professional background is in development work for nonprofit organizations, and she employs those skills as Director of Marketing and Publicity. Joe and Morgen live in Saskatoon, Saskatchewan, Canada, with their two children.

Credits

- Publisher: Joe Kissell
- Editors: Kelly Turner (first edition), Glenn Fleishman (second edition)
- Cover design: Sam Schick of [Neversink](#)
- Logo design: Geoff Allen of [FUN is OK](#)

More Take Control Books

This is but one of many Take Control titles! We have books that cover a wide range of technology topics, with extra emphasis on Macs and other Apple products.

You can buy Take Control books from the [Take Control online catalog](#) as well as from venues such as Amazon and the Apple Book Store. But it's a better user experience and our authors earn more when you buy directly from us. Just saying...

Our ebooks are available in two formats, PDF and EPUB, which are viewable on any computer, smartphone, tablet, or e-reader. All are DRM-free.

Copyright and Fine Print

Take Control of Your Digital Photos, Third Edition

ISBN: 978-1-990783-35-7

Copyright © 2023, Jeff Carlson. All rights reserved.

[alt concepts](#), 419 8B-3110 8th St. East, Saskatoon, SK S7H 0W2 Canada

Why Take Control? We designed Take Control electronic books to help readers regain a measure of control in an oftentimes out-of-control universe. With Take Control, we also work to streamline the publication process so that information about quickly changing technical topics can be published while it's still relevant and accurate.

Our books are DRM-free: This ebook doesn't use digital rights management in any way because DRM makes life harder for everyone. So we ask a favor of our readers. If you want to share your copy of this ebook with a friend, please do so as you would a physical book, meaning that if your friend uses it regularly, they should buy a copy. Your support makes it possible for future Take Control ebooks to hit the internet long before you'd find the same information in a printed book. Plus, if you buy the ebook, you're entitled to any free updates that become available.

Remember the trees! You have our permission to make a single print copy of this ebook for personal use, if you must. Please reference this page if a print service refuses to print the ebook for copyright reasons.

Caveat lector: Although the author and alt concepts have made a reasonable effort to ensure the accuracy of the information herein, they assume no responsibility for errors or omissions. The information in this book is distributed "As Is," without warranty of any kind. Neither alt concepts nor the author shall be liable to any person or entity for any special, indirect, incidental, or consequential damages, including without limitation lost revenues or lost profits, that may result (or that are alleged to result) from the use of these materials. In other words, use this information at your own risk.

It's just a name: Many of the designations in this ebook used to distinguish products and services are claimed as trademarks or service marks. Any trademarks, service marks, product names, or named features that appear in this title are assumed to be the property of their respective owners. All product names and services are used in an editorial fashion only, with no intention of infringement. No such use, or the use of any trade name, is meant to convey endorsement or other affiliation with this title.

We aren't Apple: This title is an independent publication and has not been authorized, sponsored, or otherwise approved by Apple Inc. Because of the nature of this title, it uses terms that are registered trademarks or service marks of Apple Inc. If you're into that sort of thing, you can view a [complete list](#) of Apple Inc.'s registered trademarks and service marks.