Photo Scanning

Digital pictures are marvelous. If you have a smart phone you can take pictures any time, any place, and get memories of events you would never have thought to photograph in the past.

But what about all those old pictures you took in the 60s and 70s or inherited from your parents and grandparents. If you want to share those pictures, you will need to create digital images from your photos, slides, or film negatives.

If you have a scanner and a lot of free time, you can do this yourself! It's not difficult, but it is boring.

If the idea of scanning your pictures seems overwhelming, there are services that will do all this scanning for you. But you will still need to go through all the files to name and label the images.

Equipment

What do you need to scan your old photos?

- Scanner
- Computer
- Photo editing software
- Time

What else can be helpful?

- Second Monitor
- File renaming software
- Slide / film trays
- Photo organization software

If you want to scan slides or film strips, you can purchase slide (or negative) trays—usually plastic trays with slide (or negative) sized slots—to keep your slides square to the scanner and make the task of scanning slides *slightly* easier.

Clean your Scanner Bed

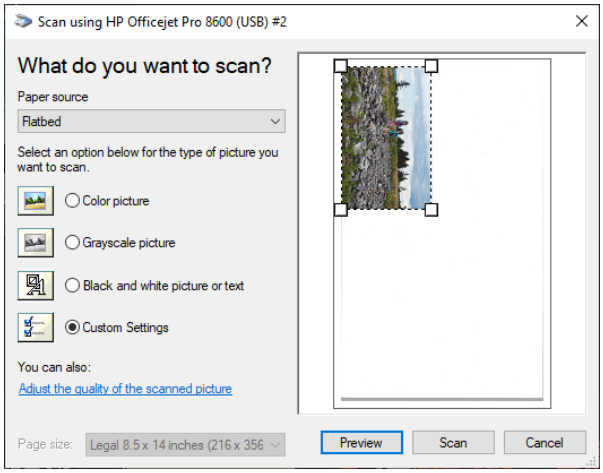
You want to make sure the glass of your scanner is completely clean before you start scanning. You don't want to scan 50 pictures only to realize later there is a giant piece of lint in the center of every image.

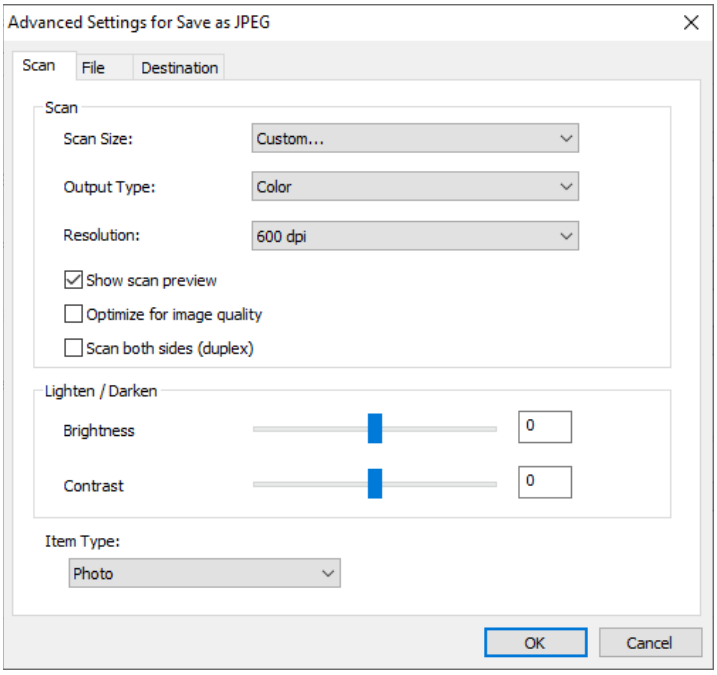
You can buy screen cleaner, or you can use filtered water and a microfiber or other soft cloth. Just make sure whatever you use does not leave a residue. You can test this by scanning a white piece of paper and seeing if anything unexpected shows up in your image.

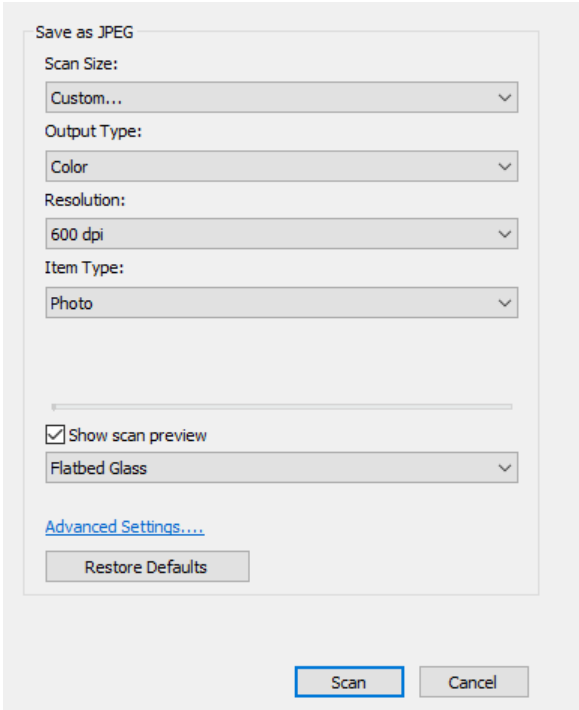
Learn Your Scanner Options

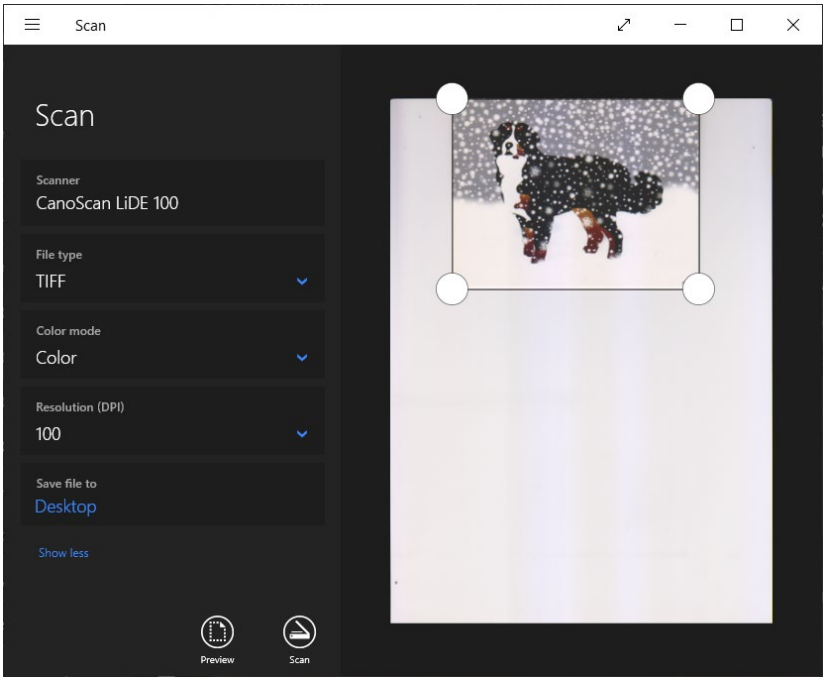
Most scanners come with software to help you with the process. Most photo editing software can add a link to your scanner, so your scanned images open directly in that program.

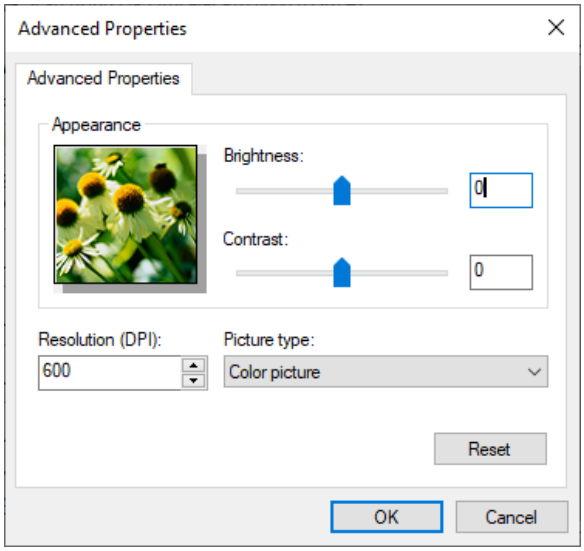
I recommend doing some practice scans before you get started, to make sure everything is as you want it. Scan an image, then view it in your photo software zoomed to 100%.











Lossy vs Lossless

The *format* in which you save your scanned pictures is important.

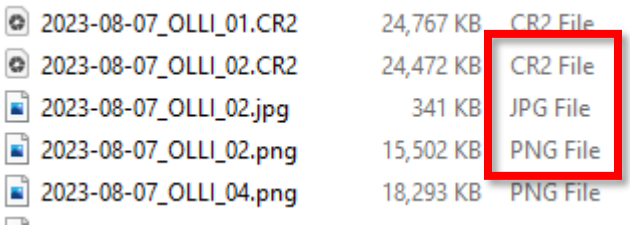


Image files use one of two types of compression: lossy or lossless. Lossy means you lose data when you save the file, lossless means you don't.

One of the most common image types you'll see on the web is jpg (or jpeg), because this file type has a smaller file *size*. However, jpgs are "lossy" so every time you save a jpg you are losing a bit of fidelity and detail.

	Lossy	**Lossless**
What it does	Permanently removes file data	Restores and rebuilds compressed data
File types	Images: JPEG	Images: RAW, BMP, PNG
File Size	Smaller	Larger

The gist is if you are scanning pictures to archive them, they should higher resolution, and saved as a lossless file type. When you need to share images, you can export a copy as a jpg.

Resolution

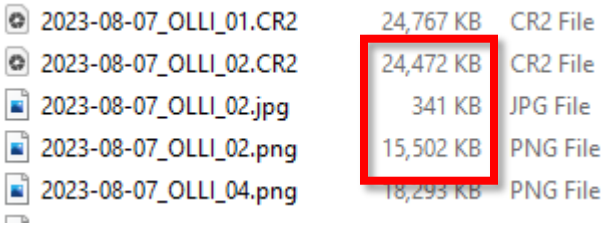
What is resolution?

> a measure of the sharpness of an image or of the fineness with which a device (such as a video display, printer, or scanner) can produce or record such an image usually expressed as the total number or density of pixels in the image (*Merriam-Webster*)

Why is resolution important?

Resolution determines the amount of detail you can see in your picture, and how much pixelation you get when you enlarge / zoom in. If your resolution is too low, you will never be able to see the details of the picture when you enlarge it.

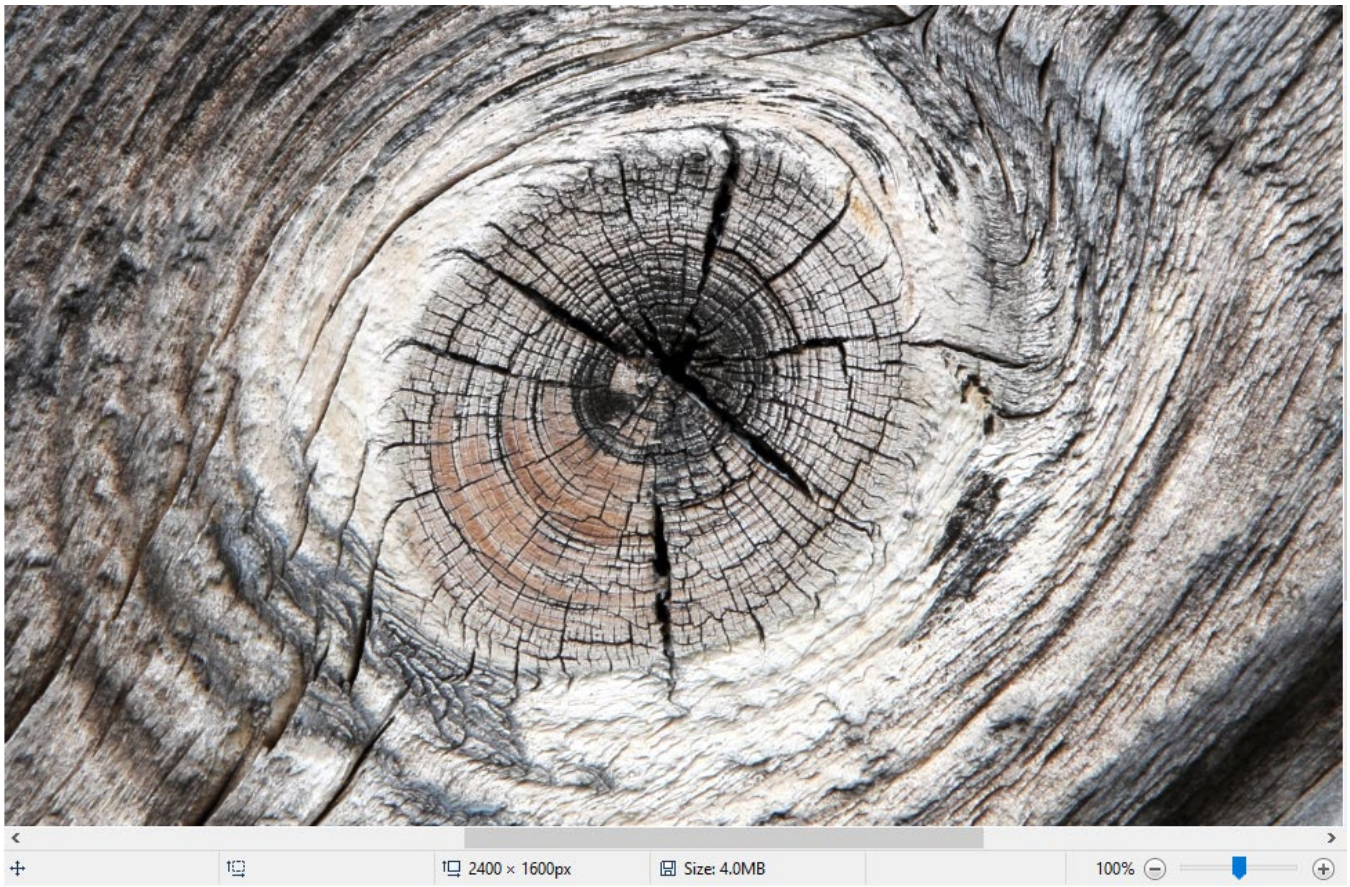
A problem with high resolution pictures is that the file size is *very* large and can quickly fill up a small hard drive and the images will be too large to share via email.



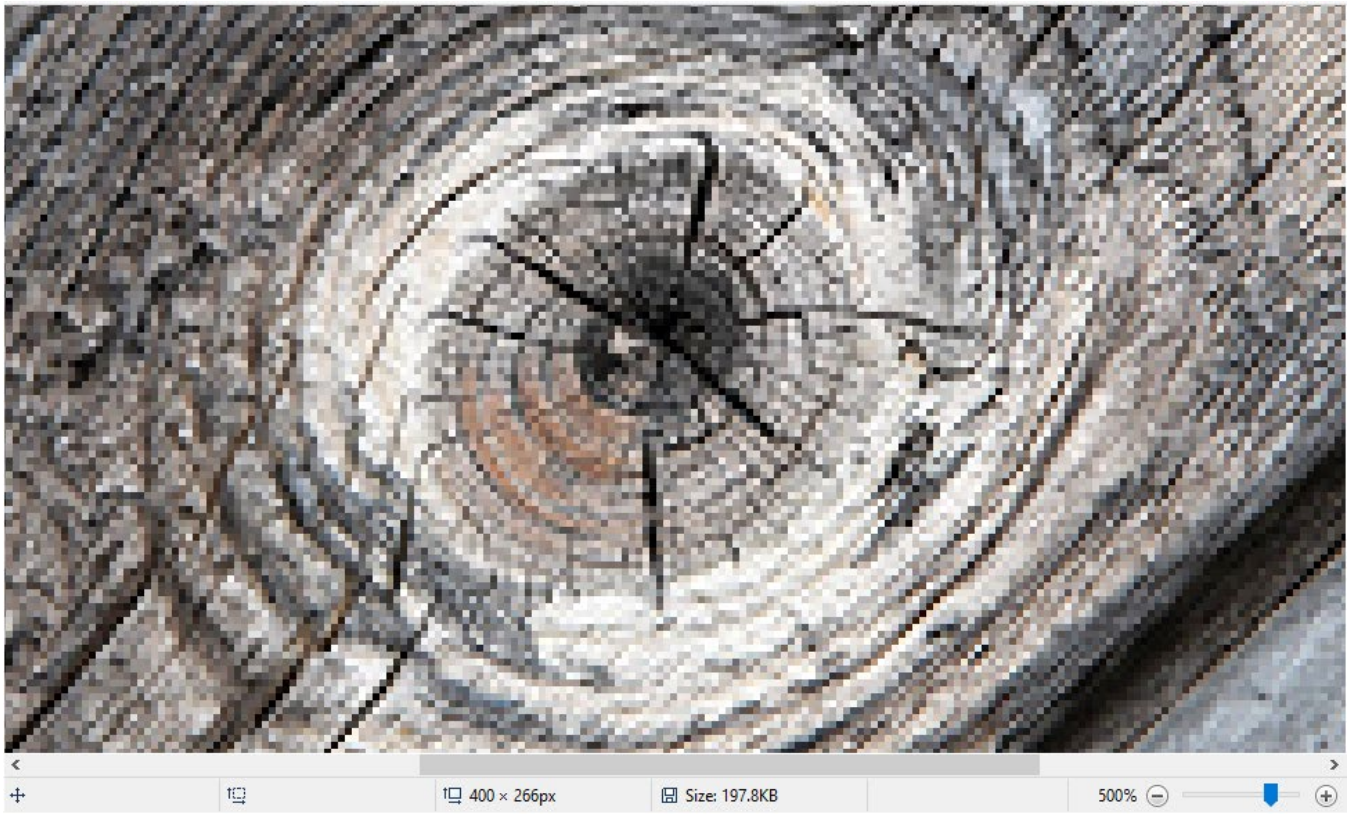
The same image saved with different file types and resolutions has a size ranging from 341 to 24,472 KB.

- To create the best archives, scan at the highest optical resolution the scanner offers.
- To create good archives, scan at 600dpi to TIFF
- To share photos online, scan them as you would any other image at high quality to make an archive copy, and then export them to 200dpi JPGs

Below you can see why it is important to scan your pictures at a high enough resolution. The same image, zoomed to the same size on the screen, but one copy is high resolution, the other is low resolution.



Zoom 100% | Resolution 2400 x 1600 px | Crisp image, with lots of clear detail.



Zoom 500% | Resolution 400 x 266 px | Blurry, pixelated image, with no detail.

File Organization & Labeling

It's important to give your scanned pictures descriptive names. I find it best to including the date (as much as you know), location (if you know it), and event in the file name to make it easier to tell at a glance what a picture might be.

Things people will want to know:

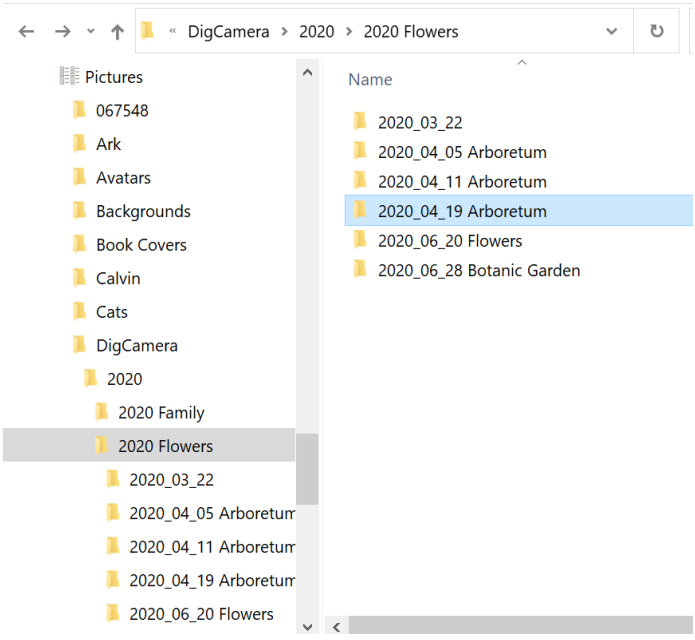
- *When* was this photo taken?
- *Where* was this photo taken?
- *Who* is in the photo?

I highly recommend you create a file (a spreadsheet or table is best) with the name of the image and as many descriptors as you can think of.

File Name	Year	Event	Location	People	Misc
1972-12-Luke-27	1972	Christmas	Luke MD	Jane Smith, Mark Smith, John Jones, Mary Adams	Mary's first Christmas with grandma and grandpa and Grandpa's dog (sheltie?) Muffles
196x-Frida-15	1967 or 68	Memorial day party	Frida's house in Flatwoods	(left to right), Harold White, Margaret Black, Julius Orange	Memorial day party, Aunt Frida's house and giant oak in the background

More information can be filled in or added to later, but having *something* is imperative. In my experience, you can never have too much information for pictures.

You will also want to organize the pictures in a way that will allow you to easily find specific pictures. That could mean organizing by decade or by year or by family or a combination of all of those.



One organization structure could be

Decade > Year > Event

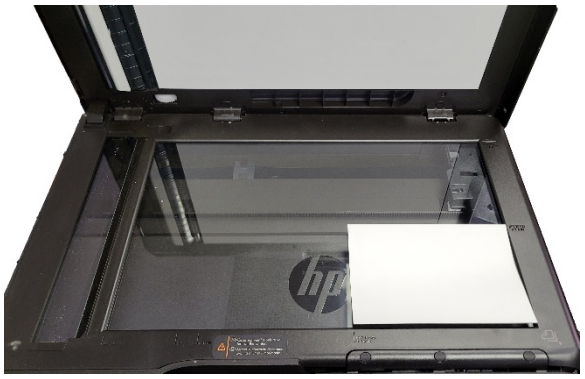
Another could be

Family > Decade > Person

You may also want to take advantage of "tags" which are bits of data you can associate with an image.

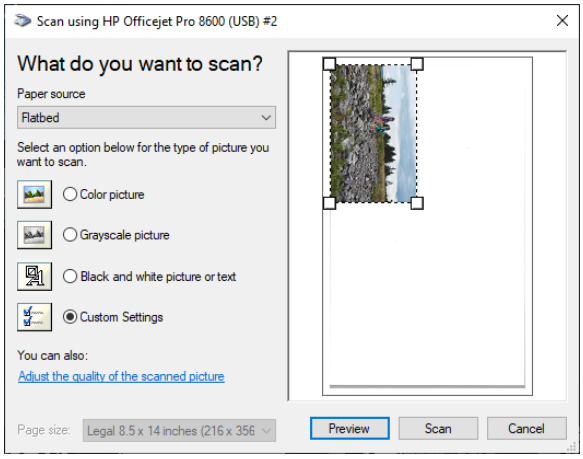
Scanning

Do ***not*** scan different types of films (Color negative film, B&W negative film, Color positive film) at the same time.



You can scan as many pictures as will fit on your scanner bed at once, but at some point you're going to want to make each image and individual file. There are programs that will do this automatically for you, however, that would add additional costs to your project.

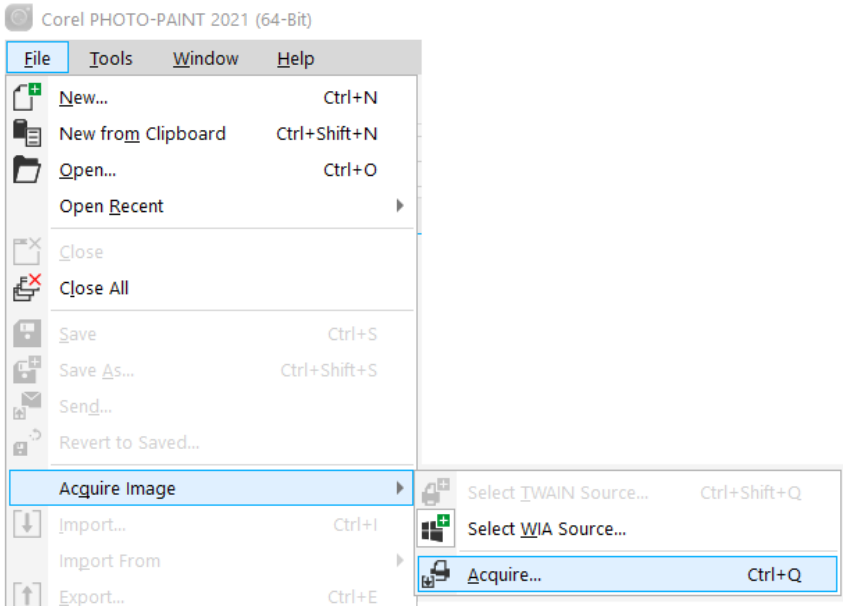
Whether you scan one picture at a time or many is up to you, just know that at some point you're going to need separate images that are named and labeled.

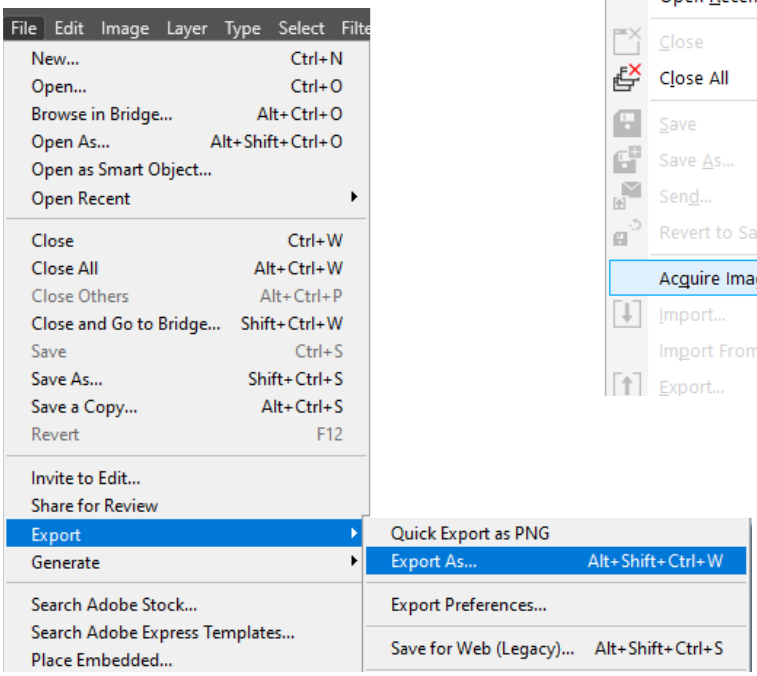


Your scanner should have come with scanning software—if you don't have it, search for the name of your scanner and software. (ie CanoScan LiDe 100 software) or go to the website of the company that made your scanner (Canon, Epson, Kodak) and on the company website search for the model of your scanner.

Some photo editing software supports scanning directly. Scanning options are usually available from the file menu, the options from there will vary by product.

One protocol for connecting scanners is called TWAIN. Unlike most other things having to do with computers, it is not an acronym, but a backronym. Referring to Kipling's poem and the line, "never the twain shall meet".





Things have gotten better since then.

Photo Editing Programs

Both Mac and Windows computers come with a basic photo editing program, each called Photos.

Each program allows you to do basic photo editing, which is all you should need to most tasks: Crop, Brightness, Contrast, Color.

If you want to do more than the basics, you will need a photo editing program. In general, these programs are not cheap, and most of them require a subscription (which may be non-refundable even if you are no longer using the program). But if you have damaged photos you would like to try to repair, you are going to need a program to do that.

There are free, open-source programs available, but they are NOT user friendly, and you will need to take a great deal of time getting up to speed on how to do things.

Some software programs will allow you to do multiple things, such as scan *and* edit photos, or edit *and* organize photos. If you decide to purchase software for your project, think about what elements are going to be most important to you.

Resources

How to Scan Your Old Photos
https://www.pcmag.com/news/get-organized-how-to-scan-your-old-photos

How to Convert Old Slides to Digital
https://familytreemagazine.com/preservation/how-to-convert-old-slides-to-digital

A Practical Guide to Scanning Old Photos
https://www.artifactuprising.com/tips-for-scanning-old-photos

All About Images
https://guides.lib.umich.edu/c.php?g=282942&p=1885349

10 Tips for Scanning Old Photos
https://electronics.howstuffworks.com/cameras-photography/tips/5-tips-for-scanning-old-photos.htm

Best Practices for Scanning Slides, Negatives and Old Prints
https://www.thephotovideoguy.ca/blog/best-practices-for-scanning-slides

Editing basics in Photos on Mac
https://support.apple.com/guide/photos/editing-basics-pht304c2ace6/mac

Edit photos and videos in Windows
https://support.microsoft.com/en-us/windows/edit-photos-and-videos-in-windows-a3a6e711-1b70-250a-93fa-ef99048a2c86

Websites for scanner support

Canon: https://www.usa.canon.com/support/software-and-drivers
Epson: https://epson.com/Support/sl/s

Fujitsu: https://www.pfu-us.ricoh.com/support
Kodak: https://www.kodakphotoplus.com/pages/support
HP: https://support.hp.com/us-en/products/scanners-fax/scanners

Photo scanning software
VueScan
SilverFast
ScanSpeeder
AutoSplitter
Corel PaintShop Pro
GIMP
Adobe (PhotoShop. Elements)

Phot organizing software
FastStone Image Viewer
PhotoDirector 365
Luminar Neo
Lightroom
Corel PaintShop Pro

Photo editing software
GIMP: https://www.gimp.org
Affinity: https://affinity.serif.com/en-us/photo
Corel PaintShop Pro: https://www.paintshoppro.com
DxO PhotoLab: https://www.dxo.com/dxo-photolab
Luminar Neo: https://skylum.com/luminar
Adobe (PhotoShop. Lightroom, Elements): https://www.adobe.com/products/catalog.html