



# iCloud Photos Organizer

## USER-GUIDE

# Table of Contents

Welcome to <b>iCloud Photos Organizer</b> .....	3
Why would I want to organize? .....	4
The process .....	5
Step 1 - Searching .....	5
Step 2 – De-duplicating .....	5
Step 3 - Sanitize .....	5
Step 4 - Organize.....	5
Step 5 - Standardize .....	5
Step 6 - Tidy-up .....	5
A quick note about Organizing and De-duplicating .....	6
Quick Start .....	7
iCloud for Windows App .....	7
iCloud Photos Organizer .....	8
Overview of the user interface .....	9
Organize Options .....	10
De-duplication Options.....	11
Sanitize Options.....	12
Standardizations Options.....	14
iCloud Photos Download folder and Settings .....	16
Settings .....	16
Logging .....	18
Go! .....	19
Like iCloud Photos Organizer? .....	20
Technical.....	21
Date Taken .....	21
Logfile .....	22
Roadmap – Be Part of the Journey .....	23
What’s New.....	24
Final Thoughts .....	25

# WELCOME TO ICLOUD PHOTOS ORGANIZER

iCloud Photos Downloads are a mess! Organize them now with iCloud Photos Organizer.

Apple's downloader saves your photos, videos, live photos, and photo stream into a simple "year" based folder hierarchy, or not at all if you use "my photo stream". Unfortunately, having thousands of photos in each folder doesn't make life easy when it comes to finding anything, especially when Windows doesn't support Apple's HEIC photo format or live photos; add to that the potential for duplicates caused by multiple restarts from failed downloads, and it just makes life hard and eats your disk space.

**Saving you time and helping you find those precious moments is what we do!**

iCloud Photos Organizer does all the hard work for you by physically organizing your downloaded photos and videos into the structure **you** want, not the "by year" Apple forces on you and removes duplicates. It also, optionally removes duplicates, live photo video shorts, heic or jpeg duplicates of photos, hevc or mov duplicates of videos, and can standardize your file extensions and casing.

There is built-in support for HEIC and HEVC photo and video formats, so it'll work even though Windows doesn't understand those files.

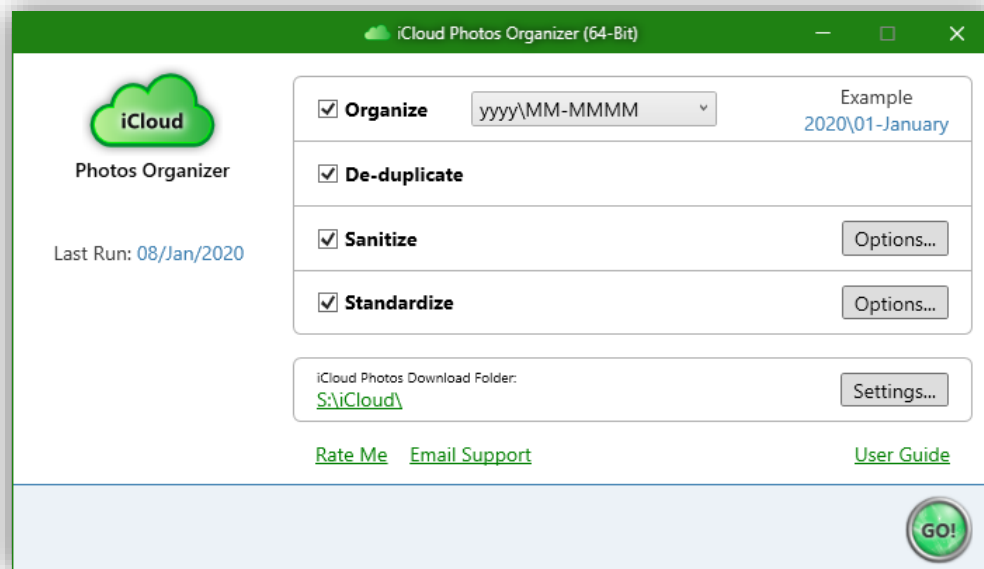
All this is 100% safe, any changes made to the downloaded files are never uploaded to Apple, so your iCloud photos and videos are perfectly safe and protected in the cloud. As you add more from your iPhone, iPad, or Imports, they're downloaded by Apple's iCloud app and then organized into the format you chose.

iCloud Photos Organizer has been developed specifically for iCloud - It understands Apple's files and download process including "Live Photos" and the jpeg/heic versions of the same files.

## WHY WOULD I WANT TO ORGANIZE?

Why you might want to organize all your photos and videos

- So you can actually find memories, for example, finding Halloween photos for all years.
- Removing all the trash that can get downloaded such as heic versions of jpg files.
- Preparing them for archiving to a NAS server, DVD, USB stick, or other cloud solution.
- If you're running out of iCloud storage. Just Organize, Archive, and then Delete in iCloud.
- Save space on your Windows disk, NAS, etc.
- Sending photos from a trip to friends.
- Creating printed calendars and albums from anniversaries, from easy to find photos.



## THE PROCESS

iCloud Photos Organizer performs many stages while organizing your downloaded files, depending on the options you've set.

### STEP 1 - SEARCHING

The first thing that needs to happen is a search for all the files in the iCloud Photos Download folder. This step finds all your photos and videos, even if the folder has been organized before or had more files downloaded by the iCloud app.

### STEP 2 – DE-DUPLICATING

Next, if the option to de-duplicate is set, photos and videos are compared, and duplicates are removed.

### STEP 3 - SANITIZE

iCloud can download a lot of files that you may not benefit from, for example, iPhone and iPad can create “live photos”, which Apple downloads as a short movie. These and other files can be removed in this process.

### STEP 4 - ORGANIZE

Based on your settings, all the remaining files are organized into the folder structure you chose.

### STEP 5 - STANDARDIZE

Renames file case (e.g. all lowercase extensions) and allows the standardization of extension names, for example, jpeg instead of jpg.

### STEP 6 - TIDY-UP

The final process is to remove empty folders, hidden files that are not required, etc.

## A QUICK NOTE ABOUT ORGANIZING AND DE-DUPLICATING

The process is 100% safe, even when files are sent to the recycle bin. Changes are never uploaded to iCloud, meaning you can just re-download all your files if you wanted to reset everything.

**De-duplicate.** The process of finding duplicates is very intensive as each photo and video must be opened and compared to every other photo and video. For the technically minded, we use a cryptographic hashing method to accomplish this.

**Organizing.** To calculate where each file should go within the folder structure, each file must be decoded and the “Date Taken” read from the photo or video. Normally Windows would fail at this because it doesn’t understand Apple’s HEIC, HEVC or Apple’s hidden metadata - do not worry though, iCloud Photo Organizer contains its own decoders for accomplishing this, so it just works :)

**Live Photo Videos.** A name comparison is used to determine these files, and for extra safety, the duration of the video is also checked to ensure it is less than 3 seconds long.

In all the above cases, they’re very disk and processor intensive tasks and it may take some time to complete. To ensure your computer doesn’t slow down, this is performed in the background as a low-priority task. This allows you to continue to work as normal while the app gets on with it.

## QUICK START

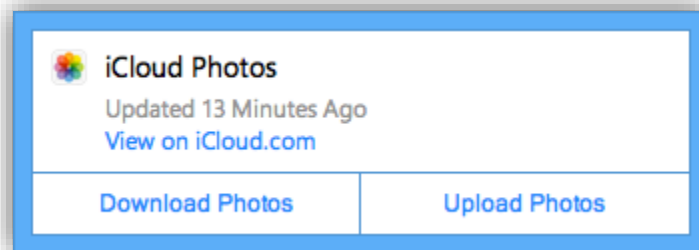
Okay, lets jump in and organize your iCloud Photo Downloads.

### ICLOUD FOR WINDOWS APP

Before your photos can be organized, they must be downloaded from your iCloud account. This is performed through Apple's iCloud app and must be configured and synced before using iCloud Photos Organizer.

From a security perspective, iCloud Photos Organizer does not have any access to your iCloud account and we (Duckhead Software) will never ask you for access or account details or passwords.

Apple's iCloud for Windows app is available through the Windows 10 App Store, just search for "iCloud", install, and setup the downloads. Apple's support page for it is [here](#).

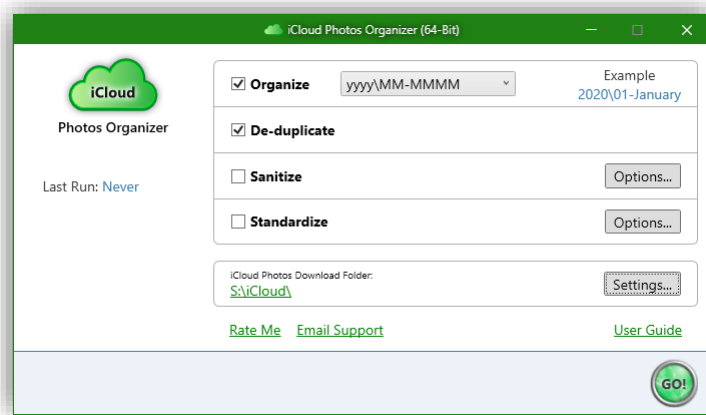


## ICLOUD PHOTOS ORGANIZER

Run the iCloud Photos Organizer app. In most instances you should just be able to click the big green button marked “GO!” and the organization will start. It’s designed to be that easy 😊

By default, the iCloud Photos Organizer app will detect where your photos have been downloaded to, if not, you’ll be prompted to pick the folder.

By default, it will only organize and deduplicate your files.



Your iCloud Photos Downloads folder will be transformed to something similar to this:-

Name	Size	Type
2014		File folder
2014 (2)		File folder
2015		File folder
2015 (2)		File folder
2016		File folder
2016 (2)		File folder
2017		File folder
2017 (2)		File folder
2018		File folder
2018 (2)		File folder
2019		File folder
2019 (2)		File folder
2019 (3)		File folder
2AB28101-D1D2-4161-B7D3-D5F17532370F.jpg	1,747 KB	JPG File
48D0984B-61E6-47DE-B266-4452C7507D94.jpg	3,523 KB	JPG File
5C72BA58-F9CC-42FF-A3C2-02E36E413622.jpg	720 KB	JPG File
9DA4B800-3D2E-4883-9682-9BD3A1776C8D.jpg	2,240 KB	JPG File
26A3E721-BE60-406E-95D2-84CD16C3B881.jpg	1,976 KB	JPG File
422CE5B0-8385-4AD6-9E16-DAF67884F0E7.jpg	5,039 KB	JPG File
2117F62A-09EB-4DA2-8BAD-9C7B859BC1EB.jpg	3,535 KB	JPG File
59380020462_53CCB3F6-289C-4FT7-A68E-7ABABAE4C32A.JPG	2,831 KB	JPG File
59380020462_53CCB3F6-289C-4FT7-A68E-7ABABAE4C32A.MOV	2,041 KB	MOV File

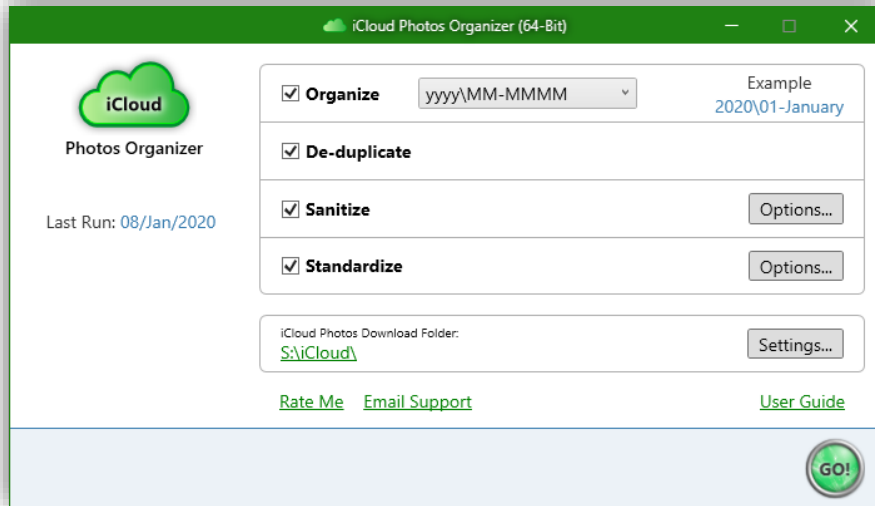
TO

Name	Size	Type
1980		File folder
2000		File folder
2001		File folder
2002		File folder
2003		File folder
2004		File folder
2005		File folder
2006		File folder
2007		File folder
2008		File folder
2009		File folder
2010		File folder
2011		File folder
2012		File folder
2013		File folder
2014		File folder
2015		File folder
2016		File folder
2017		File folder
2018		File folder
2019		File folder
2020		File folder

Name	Size	Type
01-January		File folder
02-February		File folder
03-March		File folder
04-April		File folder
05-May		File folder
06-June		File folder
07-July		File folder
08-August		File folder
09-September		File folder
10-October		File folder
11-November		File folder
12-December		File folder



## OVERVIEW OF THE USER INTERFACE



iCloud Photos Organizer is designed to be as easy as possible to use. It takes its design hues from Apple's iCloud for Windows app to ensure you feel as comfortable as possible from the outset while hiding the complexity of organizing.

**Tip.** You can reset everything back to default by holding the 'shift' key down on your keyboard when you launch the app.

## ORGANIZE OPTIONS

Selecting this checkbox will enable the organization of all your photos and videos. The structure is determined by the dropdown box of date formats. These formats correspond to the “Date Taken” of your photos and videos. When you select a format, an example folder structure is displayed just to the right.

If you were to use the example shown above, your downloads folder would be changed as shown to the right and all your photos and videos would be moved into their respective sub-folders.

Don't worry, nothing happens until you press the Go! button.

Selecting different date formats produces different results, and if you're not satisfied with the output or just change your mind and want something else, you can simply select a different format and run the organizer again. In fact, you can run it as many times as you want, and everything gets re-organizing as needed.

As iCloud downloads more photos and video you take from day to day, just re-run the application as needed and it'll move the newly downloaded files into the correct folder, creating the structure as needed.

During an organize, empty folders are removed to keep things nice and tidy. Empty folders can appear when you change the organize format, but don't worry, it's all taken care of for you.

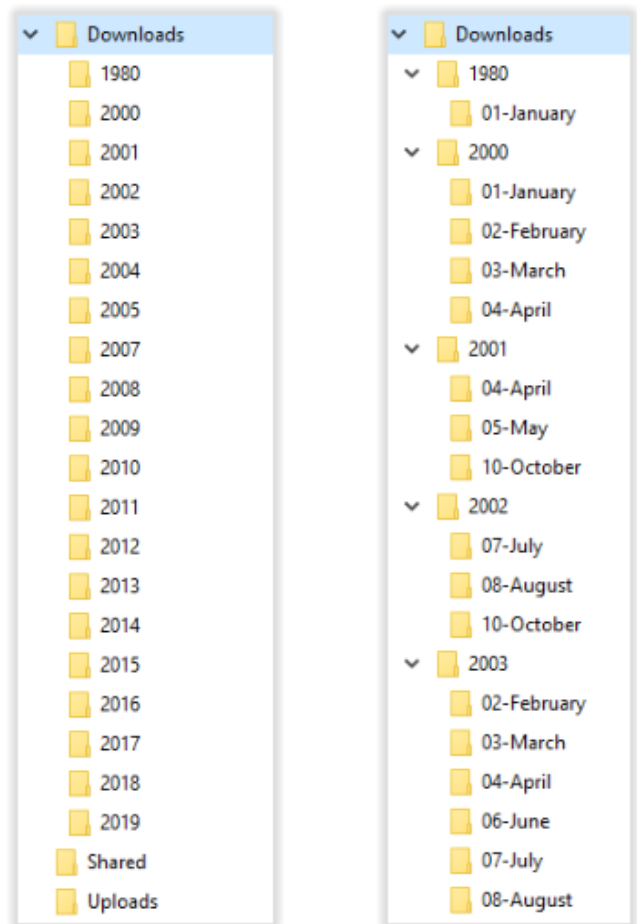


Figure 1 - Before and After

## DE-DUPLICATION OPTIONS

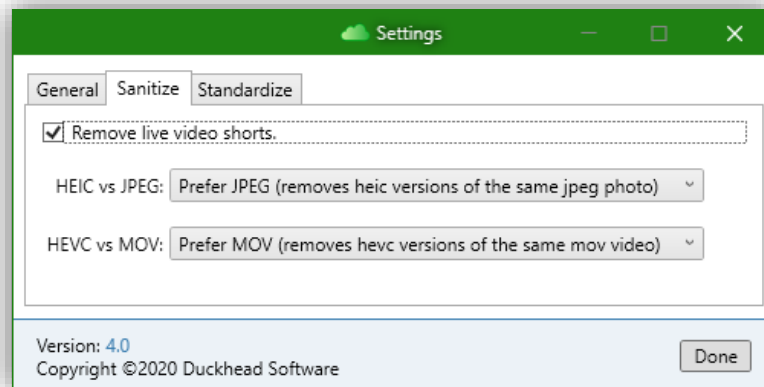
Selecting this checkbox will enable the de-duplication of your photos and videos. You can get duplicate files in several ways; you may have imported photos into iCloud or tried to get iCloud to re-download your photos because it was stuck.

When iCloud Photo Organizer analyses your files, it compares them to each other, looking for identical files and if found, decides which is the original and which is the duplicate.

The decision on which is the original and which are duplicates is calculated through a ranking engine, for example, if two files are the same, but one has “copy” in the name, it is down-ranked, making it more likely to be a copy than one that is called “IMG\_0252”. There are around eight ranking rules applied during this process and the original is organized as normal, while the duplicates are sent to the Recycle Bin.

## SANITIZE OPTIONS

Selecting this checkbox will enable the file sanitation of your photos and videos. The options button shows the options available.



Apple's iCloud app can download a lot of files, some are useful, some not; that will depend on your personal setup of Windows or what you're doing with the files. iCloud Photos Organizer understands this and enables the removal (sanitization) of the superfluous.

**Remove live video shorts** instructs the app to remove the "live photo" additional files. When you take "live photos", they're stored as a photo and a short video, it's this short video that enables the "cool" effects and Apple devices understand the correlation between the two. Windows does not understand this correlation and you simply get two files, the photo and the video.

Setting this option removes the video files from your downloads folder.

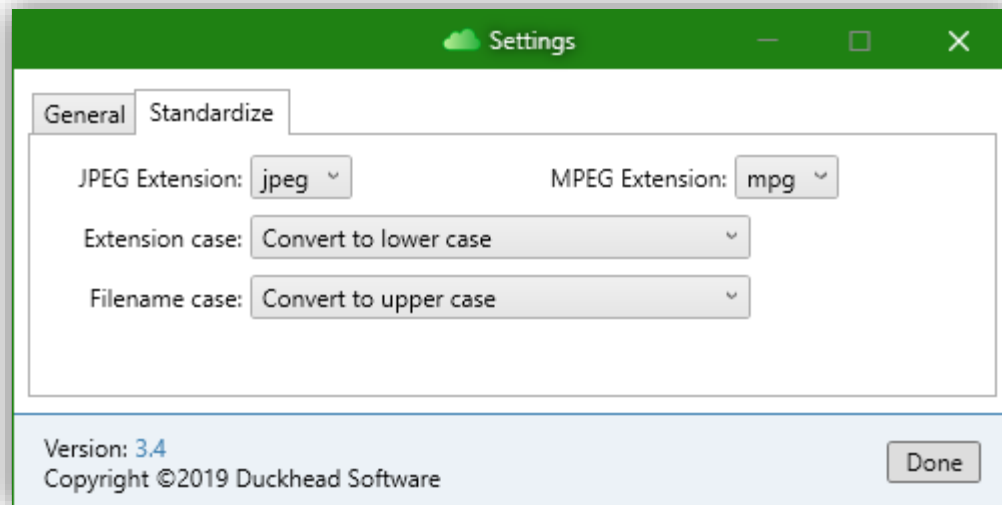
Distinguishing "live photo" video shorts from normal videos is a computational and disk intensive analysis and can take some time.

**HEIC vs JPEG** instructs the app to remove one of the duplicate versions of a video, if it exists. Newer Apple devices save videos in a new format called “hevc”. There are reasons for using this new format, they’re smaller than the industry standard “mov” and have a better color depth. However, Windows and other operating systems don’t natively support hevc video and so Apple download an mov version of each video as well. If you only want the hevc files or only want the mov version, setting this option will allow you select your preference.

You can download a “codec” from Microsoft, from the Windows 10 app store that enables support for hevc files in Windows. However, like heic support, it’s not very good.

## STANDARDIZATIONS OPTIONS

Selecting this checkbox will enable the naming standardizations of your photos and videos. The options button shows the options available.



Photos, Videos, and other files downloaded from iCloud can be a mixture of upper and lower case, or files with “jpg” extensions when others have “jpeg”. These options allow you to standardize on the naming and casing for all your files.

**JPEG Extension** instructs the app to change jpeg file extensions to one of the following: -

- **Do not change** – makes no changes to the jpg/jpeg file extensions.
- **Jpg** – ensures all jpg/jpeg files have the extension “jpg”
- **Jpeg** – ensures all jpg/jpeg files have the extension “jpeg”

**MPEG Extension** instructs the app to change mpeg file extensions to one of the following: -

- **Do not change** – makes no changes to the mpg/mpeg file extensions.
- **Mpg** – ensures all mpg/mpeg files have the extension “mpg”
- **Mpeg** – ensures all mpg/mpeg files have the extension “mpeg”

**Extension case** instructs the app to re-case the file extensions to one of the following: -

- **No changes** – makes no changes to the file extensions.
- **Convert to lower case** – ensures all file extensions are lowercase.
- **Convert to upper case** – ensures all file extensions are UPPERCASE.
- **Convert to capitalized case** – ensures all file extensions are Title Case.

**Filename case** instructs the app to re-case the file names to one of the following: -

- **No changes** – makes no changes to the file names.
- **Convert to lower case** – ensures all file names are lowercase.
- **Convert to upper case** – ensures all file names are UPPERCASE.
- **Convert to capitalized case** – ensures all file names are Title Case.

**Tip.** You don't have to select all the options (Organize, Deduplicate, Standardize) to run the app, you could, for example, just select Standardize, which will then re-case and rename extensions only without organizing or deduplicating.

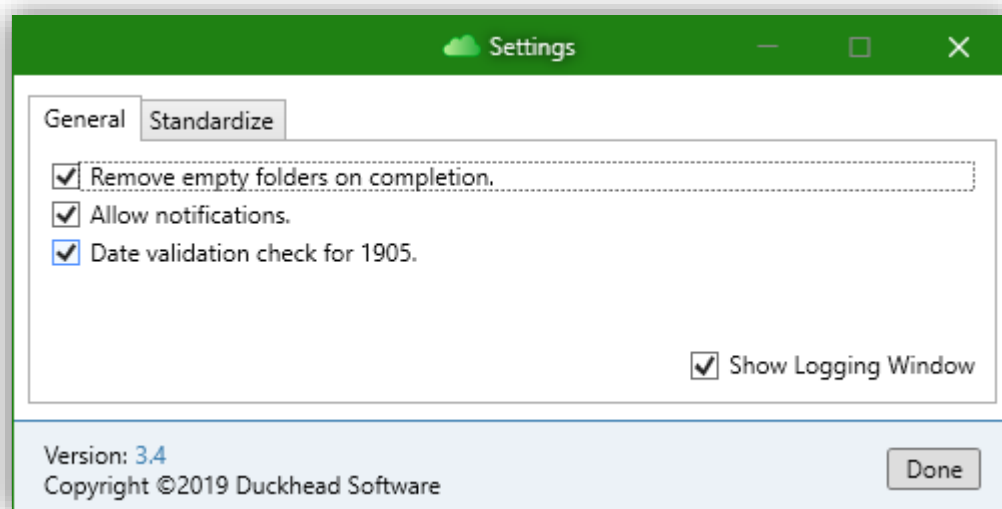
## ICLOUD PHOTOS DOWNLOAD FOLDER AND SETTINGS

Of course, to organize your iCloud Photos Download folder, we need to know where it is; we'll try our best to automatically find it, however, it can depend on the version of iCloud you're using. Apple and Microsoft can hide the folder location, especially if you're using the version from the Microsoft Store.

If we can't find it, or it's wrong, just click the folder link and select the correct folder.

### SETTINGS

When you click the settings button, a new window opens as shown below.



**Remove empty folders on completion** instructs the app, that on completion, to find any empty folders and remove them.

**Allow notifications** instructs the app, that on completion, to show a popup in the Windows notification area (if the app is minimized, hidden, or does not have the focus).

**Date validation check for 1905** alters the handling of corrupt "Date Taken" metadata in photos and videos. When the date taken data is read from a file, while it can look correct, some



imported files can have a valid date, but one that's obviously wrong, for example, a "Date Taken" from before the year 1905 (Digital photography was introduced in 1975). If you have photos or videos that are purposely dated before 1905, switching this off will prevent that date check – see "Date Taken" in the technical section of this document near the end.

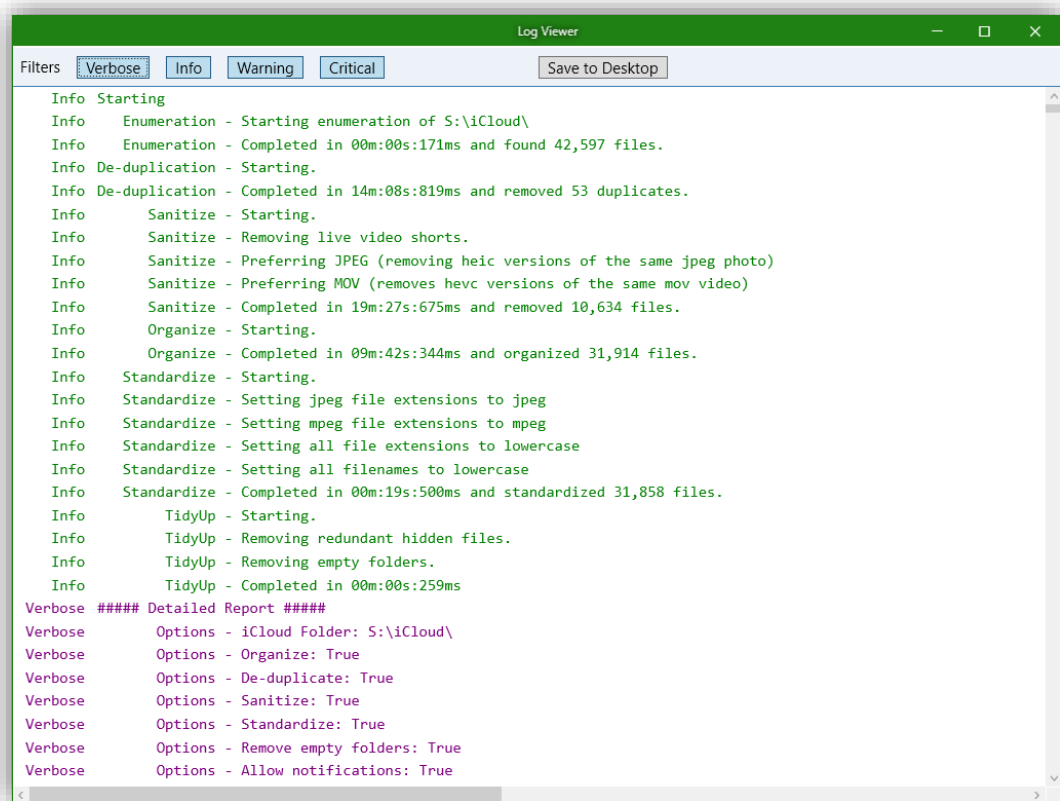
**Show Logging Window** will open a new "Log Viewer" window when you click the "Go!" button to start organizing.

# LOGGING

All calculations, comparisons and actions in iCloud Photos Organizer are recorded, this has several purposes.

1. You can see exactly what the application is doing, should you be so inclined.
2. If you think something is not doing things the way you think they should, the log can be saved to a file and you can email it [support@DuckheadSoftware.com](mailto:support@DuckheadSoftware.com)
3. Future roadmap. We're planning on a 'preview' mode that will show what will happen and allow you to validate it before performing the actions.

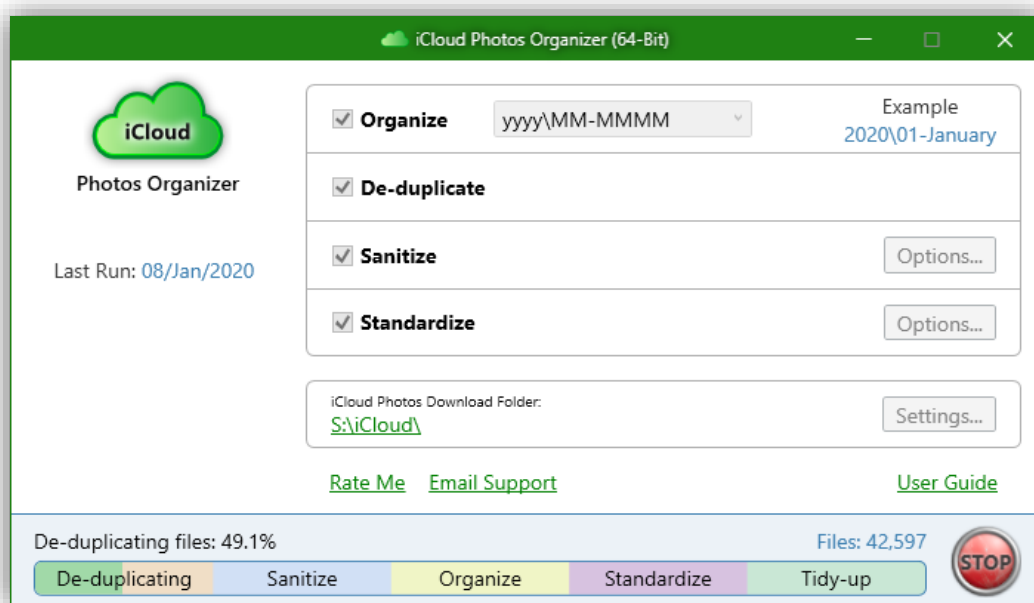
Below is an example 'logging' window. You can filter the view using the toggle buttons at the top.



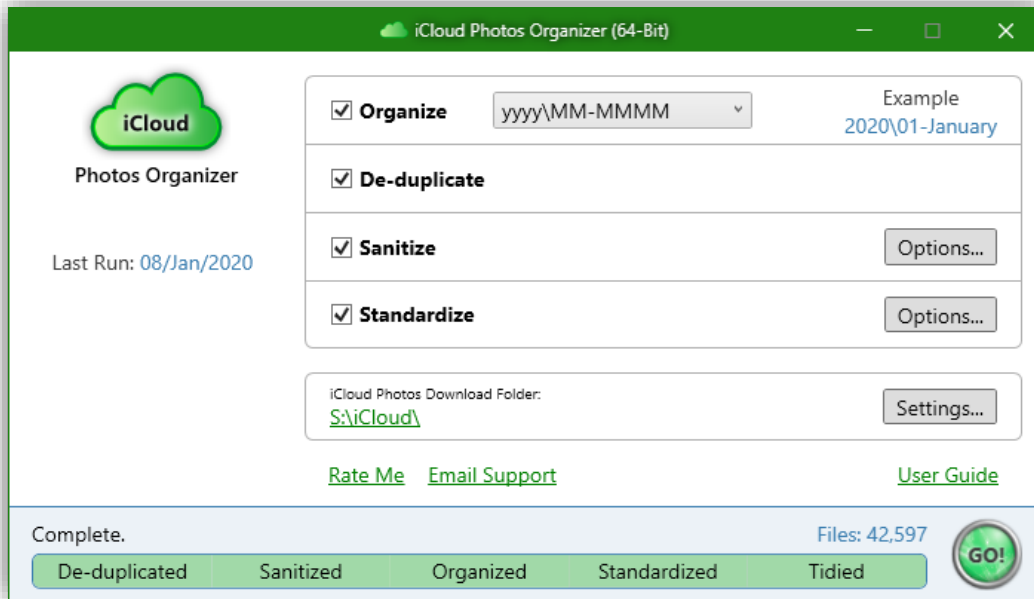
## GO!

When you're happy with your selections, click the Go! button and the process starts. Again, don't worry, nothing can go wrong as changes here are never uploaded to iCloud, so if you were unhappy with the results and wanted to reset everything, simply delete your download folder contents and have Apple's iCloud app re-download everything.

iCloud Photos Organizer will now find all your files, analyze them and, depending on the options you've selected, organize and remove duplicates.



As you can see from the screenshot above, there are many main parts to the process.



That's it, all done. Enjoy your new folder structure and easier ways to find those precious memories. You can run the app as many times as you want.

### LIKE ICLOUD PHOTOS ORGANIZER?

When you close the app, you may be asked to rate it; we get very encouraged by feedback and it drives us to add more value and features, more regularly 🙏



## TECHNICAL

For those interested, this section discusses in more detail some of the capabilities and features of iCloud Photos Organizer.

### DATE TAKEN

Currently the organization is based on the date taken of each video, photo, etc. That will be expanded in future releases to include metadata like the camera model. Getting the date taken out of the files is a complex process, partly because Windows doesn't support all the file formats (heic and hevc mov files) and also because it even when you download the Microsoft 'codecs' to support them, they are very weak and do not allow deep access into the internals of the files. For example, Windows will often display the incorrect Date Taken for the new iPhone videos.

The reason behind this is the case is twofold. 1. There are over 7,200 patents on the new iPhone photo and video formats, not from Apple, but from MPEG, the actual owners of the format. MPEG requires licensing, at a cost, to use their new format, hence you must pay Microsoft if you want to download their codecs to support them. 2. Apple are a hardware and services company, they have no interest in making your experience on Windows a great one; if you don't like it, good, you're more inclined to buy a Mac.

With that said, iCloud Photos Organizer has built in decoders for all the required formats and can get deeper into these files than the Windows codecs.

To do that, we need to 'decode' each file to get the date created. But your photos may not just come from the iPhone camera, they can come from imported, airdropped, copied from Android, WhatsApp, saved from emails etc. We try and handle all these possibilities, and to help understand the logging information we produce, here's a brief on what we've found in the files: -

- **Created Date** - This is the date the file was created in Windows and has nothing to do with the “Date Taken”
- **Last Modified Date** - This is the date the file was last modified, for example it opened and resized, or cropped. It has nothing to do with the “Date Taken”
- **PNG files** - These files are usually Screenshots, however, PNG files do not support “Date Taken”, in this instance, the “Last Modified” date is used.
- **Imported** - Any file that is imported into iCloud or transferred to your phone that doesn’t come directly from the camera may not have a “Date Taken”, examples are pictures from WhatsApp, Instagram, Animated Meme’s, and other software. Those files may have a “Date Taken” in which case they will be used, however, if missing, iCloud Photos Organizer will fall back to their “**Last Modified Date**”
- **Non Standard** - Some cameras and software save the created date in a non-standard format, and as file formats like JPG do not specify the actual format to use, or define a time zone approach, sometimes, we can’t decipher the dates. We do have 13 different formats we check for though.
- **Corrupted** - We’ve seen files with corrupted dates and formats, or just randomly weird ways to save the date. In these scenarios we fall back to the last modified date.

## LOGFILE

We do not store any personally identifiable information in the logfile, neither do we store any of your photos, videos, or content of any of your files.

To help with this transparency, you can save the log file to your desktop. Technically it’s a ‘txt’ file inside a ‘zip’ file that’s renamed to a ‘log’ file. This allows you to send the ‘log’ file through email (zip files are often blocked) and compresses it to be as small as possible.

If you want to view the contents of the logfile, simply rename it from a ‘log’ file to a ‘zip’ file and open it.

## ROADMAP – BE PART OF THE JOURNEY

It's unusual to show a roadmap of a product, but we want you to be part of the journey. iCloud Photos Organizer is being constantly updated and we want to make sure we're prioritizing the features and value you need. To enable THIS, we ask that if you have an idea, a feature request, or just think of a change that would make the app better, to email us at [support@duckheadsoftware.com](mailto:support@duckheadsoftware.com) - you can do this in the app as well.

There are several 'foundation pillars' we work against, each of these is revisited and development moves between all of them, they are: -

- **Refinements** – Changes that make life easier, for example, different languages and interface updates,
- **Organize** – Capabilities of the Organization capability, for example, a custom format builder.
- **De-duplication** – Capabilities of the de-duplication, for example, comparison of similar photos, edited, and jpg copies of heic files.
- **Standardization** – making all photos jpg (jpg, JPG, heic) by renaming or converting.
- **Tidy** – Removal of the short videos associated with live photos, removal of screen shots, etc.
- **Performance** – Currently, all actions are run in the background and use a single 'thread', this will be expanded to use 4 to 8 threads for improved performance. A cache model is also being looked at, so we don't have to examine a file more than once.
- **GeoTagging** – The ability to organize via GPS and location names.
- **Logging** – More advanced logging.
- **Preview** – The ability to preview the changes before they're made.
- **Futures** - Secret, but we have a list 🤫

## WHAT'S NEW

What's new in each version? These are the highlights only: -

- **Version 4.0**, Sanitize options, instant updates to the filesystem, and log system.
- **Version 3.4**, Standardization options, New general options, UI consistency.
- **Version 3.3**, 64-bit performance optimizations. Windows notifications on completion. Reset to default on launch using the 'shift' key. Last run display text. Title bar now uses the accent color.
- **Version 3.2**, New logging system and Viewer. Moved the user guide from online to built-in offline.
- **Version 3.1**, New progress indicator and taskbar progress integrations.
- **Version 3.0**, This was the first release, it is based on a code library we've created over several years which is now in its 3<sup>rd</sup> iteration, hence, we started at 3.0



## FINAL THOUGHTS

Our aim at Duckhead Software is to make our software as easy as possible to use but allow customization for those people who are more experienced. We constantly develop our software and our priorities go to the feedback we receive.

To that end, we would be grateful if you'd rate our app using the in-app 'rate me' button or feedback to us any issues or new features you'd like via the same button.

Thank you for purchasing.

Team Duckheads.