

Managing Your Family Photos (revised November 2017)

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1: Storing your photographs for future generations can be an expensive and time consuming task. Decide which images you really need to keep and put the less interesting ones aside. For those you keep, write the details of the subject on the back of the print or slide frame (2B pencil recommended). For digital images, rename the file with such details. The details should include the year, place and persons. If you don't know who and/or what is in the photo then it is probably not worth keeping.

2: PAPER PRINTS: Photographs are subject to decay and/or fading over long periods of time. Paper prints have a surface coating of gelatine which contains silver particles (black & white) or coloured dyes. The gelatine is liable to fungal attack and the dyes can fade on exposure to light. The practical advice is, therefore, to store prints, albums and photobooks in a cool, dry, dark place. Ideally, prints should be stuck into a good quality album with photocorners (**Paperchase on Market Square**) or double sided sticky patches (at **Boots**; or **Scotch Photo Splits** or **Herma Photo Stickers**, both available on-line). Each print should be titled on the back and on the album page with details of date, place and persons. Or put them in a card-index type box with separators for years, topics, or eras such as photos covering the period you lived at a particular place. You can store hundreds of 6x4 inch prints in modest "shoe-box". For large prints at least put them in envelopes covering periods of years or topics, and store the envelopes in a box file. You should consider making, or paying to have made, digital copies of prints worth keeping. (see section 3).

3: COLOUR SLIDES: As above, decide which ones are really worth keeping. If possible, you should write (with a 2B pencil) on the cardboard or the plastic frame of the actual slide the date, place and persons on the slide. If you cannot write a good title on the frame (because of lack of space) you could number the slides and store them in a box or slide tray with a written index. You can still get prints made from your slides through, e.g. **Boots, Jessops, Snappy Snaps or AVMG** (all in central Cambridge).

Digital copies of slides can be made by the firms mentioned in the previous paragraph. The highly recommended **AVMG** (Univ. of Cambridge) is in the Anatomy Building on the Downing Site. AVMG stand for Anatomy Visual media Group. <http://avmg.pdn.cam.ac.uk/>. The charge for digitising single slide is 50p, but a batch of, say 100 slides, can probably be negotiated but should be under £50. You get a CD or memory stick with your photos on it as jpeg files. If you have the time and interest to digitise your slides yourself, the simplest device you can use is what I would call a "Snapshot Scanner". These are really close-up cameras rather than true scanners. You may find their results acceptable for small prints and viewing on a computer screen. The model I have, and demonstrate, is the **VEHO VFS-008**, recently offered for £70 in *Radio Times*. The later model is the **VEHO-014-SF** (£90 in *Radio Times*) which has a much better specification – 14Mp files rather than 5Mp. Both "scan" colour and B&W negatives (35mm) and slides (35mm or 110). Some such scanners also digitise prints. I would recommend, however, a Photo Flatbed Scanner, e.g. the **Epson V370 Photo** (for 35mm slides and negatives also for prints). This is like an ordinary scanner but with the option of shining light through the slides from the light box in the lid. You can scan in black and white and colour prints, too. The V370 costs from about £100 (Amazon). The version I have is the **Epson V550 Photo** which can also be used for larger negatives, e.g. 120 roll film. It costs about £180 (Amazon).

4: BLACK & WHITE AND COLOUR NEGATIVES.

These should, ideally, be put into clear archival sleeved pages (available on-line) which can be stored in a ring binder in a cool, dry, dark place. Write the date, subject etc on the sleeved page with a permanent marker pen (space is limited). When we used darkrooms we could also make contact sheets. Details of the subjects can be written on a sheet of ordinary paper which can be hole punched and filed next to that particular sleeved page. Digital copies of the negatives can be made in the same way as for colour slides (section 3) or by using the commercial services mentioned. Failing all else, the negatives should be stored in a cool, dry and dark place in the sleeves or packets in which they were returned from the processor with their corresponding prints. Write the date, subject etc on the cover of the packet and include a more detailed index sheet if possible.

5: FILING DIGITAL IMAGES

I make annual folders (e.g. 1975, 2016...) within a "Photographs" folder on my computer. Drag the digital image files for each year into their corresponding annual folder and give each one as full a title as possible. Precede the titles with a number in the order you would wish to view them (e.g. "024-Auntie Joan & Susan"). You may wish to make sub-folder in a particular year for special events, e.g. "Grandad's 80th Birthday Party".

6: IMPROVING THE DIGITAL IMAGES: If you decide to edit your photo you may make a mistake and want to start again from the unedited original. Therefore, make a copy of the original before you start and work on the copy. Photo-editing programs can be used to crop, remove scratches, restore faded colours and improve the perceived brightness and contrast of each image. This is a very time consuming process. However, there are "auto-correct" features on most programs and these sometimes work well. If they do not, you can undo their action and continue manually. Free basic photo-editing software is provided with most scanners. If more advanced editing is needed, **Adobe Photoshop Elements** is often recommended. I have a very old "Limited Edition" version of this which is perfectly adequate. **GIMP** is a fully featured free download. **Photo Gallery** comes installed on Windows computers.

7: STORING DIGITAL IMAGES: It is very important to back-up any sort of work you do on a computer. Hard drives on computers can, and do, suddenly fail and your files may not be recoverable, even by experts. The first thing to do is to copy your files regularly onto a portable hard disc drive (HDD) (from £40 for 500 GB at **Maplins** in Cambridge) or, much better, a solid state drive (SSD) (from £110 for 500 GB at **Curry's**, or 250 GB at **Maplins**). Also onto a USB thumb (flash) drive (from about £20 for 128GB at e.g. www.7dayshop.com), though such drives are not considered to be a "archivally secure" as HDDs. I also copy mine onto "archival gold" CDs and DVDs (e.g. www.totalblankmedia.com). I would also recommend storing your photos in the "cloud". I use **Microsoft's "OneDrive"** (£1.99 per month for 50GB of storage), but there are several others. You can then view your photos on a computer or smart phone, anywhere in the world. Make sure that at least one type of your storage device is not kept in the same location as your computer, in case of fire, theft, flooding etc. You should also give a copy, probably on a USB flash drive, to another member of your family. These USB flash drives are so small that they will probably get lost unless they tagged with a big item such as you might use on a key ring.

8: HOW LONG WILL MY IMAGES LAST? With a little care any of the methods noted above will probably "see us out". That is, apart from hard drives in computers, and portable ones, which use a disc spinning at over 5000 rpm and these are given a life of from 5 to 10 years in constant use. Regarding the other options, paper albums, CDs/DVDs, and USB flash drives should be stored in a cool, dry and dark place in which case: "Archival Gold" CDs claim to be readable for 200 years, DVDs for 100 years. USB thumb (flash) drives are not regarded as a long term storage medium. The literature suggests that you should not expect them to be error free beyond 10 years. Solid State Drives (SSDs) do not have moving parts and would seem, to me, to be a more satisfactory medium for long-term photo storage. For "Cloud Storage", that rather depends on the continued existence of the hosting company. Will Microsoft be in business in 10, 20, 100.... years time? Also, will anyone have your password after you die? Whether or not the storage media remain in good order, the original file formats may become obsolete and thus make the images inaccessible. This has happened, for example, to the Kodak Photo CD format of the 1980s, which not all photo-editing programs can now open. Some programs can still open these files and they can then be stored as jpegs, or some other current format. However, to do this sort of thing for generations to come will require somebody to keep an eye on such developments and "migrate" the files to a new format. The conservationists at the University Library make very high resolution copies of precious documents. They told me that they plan to re-write, or migrate, the files every five years.

9: PHOTOBOKS: Rather than sticking prints into paper albums, "Photobooks" are, in my opinion, a better option. Since such images are in a closed book they should not fade to light, and if stored in a cool, dry place there seems to be agreement that they should look good for 200 years. I have become a great fan of Photobooks. As a "one-off" they are expensive, but the service I use (<https://www.photobox.co.uk/>) bombard me with special offers for multiple copies of the book and the cost can then be shared between those in the family who might also wish to have a their own copy. **Jessops**, in the Grafton Centre, have a display of the actual types of Photobooks they offer and they can scan your slides on site and you can scan paper prints in with flatbed scanners sitting next to the computer screens where you make up your Photobook. They are very helpful.

10: CONCLUSION: For availability to future generations I would recommend getting your photos printed as prints to stick in an album or printed in a Photobook. Meanwhile, store them digitally across several types of media and at more than one location. Keep a watchful eye as new formats become popular and, in any case, plan to re-write (or migrate) your files every 5 years or so, or if you notice that errors are creeping in after a period of storage.

Useful pages re archiving family photos.

1: GENERAL - Useful general discussion of the matter for digital images (USA)

<http://www.npr.org/sections/alltechconsidered/2013/07/25/205425676/preserving-family-photos-in-digital-age>

Useful general discussion of the matter for digital images into photobooks (USA)

http://ohjoy.blogs.com/my_weblog/2015/02/archiving-digital-memories.html

Why you should make prints of (some) of your digital images

<http://www.your-digital-life.com/the-case-for-printing-your-digital-photos/>

2: Preserving paper prints, photobooks and colour slides

National Media Museum Factsheets for photographic prints(UK)

See especially the section on “Photographic and Conservation” (second link up from bottom).

<http://www.nationalmediamuseum.org.uk/collection/Photography/PhotographyArticlesFactSheets>

WIR Home page (USA). Index sheet for reports from this research institute for image conservation.

<http://www.wilhelm-research.com/index.html>

WIR magnum opus, 2013 edition. For specilaists – but it contains all the data.

http://www.wilhelm-research.com/book_toc.html

Table incl. Predicted effective years life for ink jet and traditional colour prints (WIR)

http://cool.conservation-us.org/coolaic/sg/emg/library/pdf/wilhelm/wilhelm_paper_feb_2002.pdf

How long will photobooks last: comment on WIR findings with links.

<http://www.your-digital-life.com/how-long-will-photo-books-last/>

How to print long lasting prints at home: link from above refs WIR.

<http://www.your-digital-life.com/how-to-print-long-lasting-photos-at-home/>

Table of HP Indigo Press performance, and others incl. trad papers (WIR)

<http://www.wilhelm-research.com/HPIndigo/HPIndigoDigitalPresses.html>

Photobox/HP flyer re their use of Indigo presses

<http://www8.hp.com/h20195/v2/GetPDF.aspx/4AA5-4152EEW.pdf>

HP Indigo printing process for photobooks. Uses pigmented inks. – claimed >200 years stability.

http://www.wilhelm-research.com/hp/HP-WIR_Indigo_Print_Permanence_April_2012.pdf

Article on the stability of photobook images (digital and traditional photographic).

<http://www.photobookgirl.com/blog/how-to-choose-the-best-paper-for-your-photo-book-part-2-of-2/> (USA)

3: ORGANISATIONS OFFERING SCANNING AND PRINTING SERVICES

Anatomy Visual and Media Group, part of the University, open to non-university customers. Highly recommended for digitising slides, prints, negatives, albums, movies etc.

<http://avmg.pdn.cam.ac.uk/digital.html>

On-line printing and photobook services (Photobox UK)

<https://www.photobox.co.uk/a/>

Snappy Snaps Archiving Section (UK). Knowledgeable and helpful staff – shop in Petty Cury. Can do slides, prints and negatives.

<http://www.snappysnaps.co.uk/services/archiving/index.php>

Jessops – on-line or can visit shop in Grafton Centre. Can do slides, prints and negatives.

https://photo.jessops.com/jessops-photo-books/?cref=ref_sem_goo_K6103001_30607_x

Boots – on-line and local stores. Can do slides, prints and negatives.

<https://www.bootsphoto.com/photo-gift/Photobooks>

Fujifilm photobooks – using silver halide photographic paper (UK).

<http://www.fujifilmcreate.co.uk/asp/index.asp>

Or, if you insist on buying your own scanner:

<http://www.bhphotovideo.com/explora/photography/buying-guide/film-scanners>

4: ARTICLES (MOSTLY) ABOUT TRADITIONAL FILMS AND PAPER

Article (1981) about paper decomposition (USA – New York Times)

<http://www.nytimes.com/1981/12/01/science/an-acid-devours-many-old-books-chemists-race-to-stop-decay.html?pagewanted=all>

Wiki article about Acid-Free Paper

https://en.wikipedia.org/wiki/Acid-free_paper

Notes on chemical and inkjet print stability – commercial brochure (UK)

<http://www.metroimaging.co.uk/faqs/how-long-will-my-print-last>

Wiki article about chemical photographic papers

https://en.wikipedia.org/wiki/Photographic_paper

Wiki article about print permanence

https://en.wikipedia.org/wiki/Print_permanence

5: ARTICLES (MOSTLY) ABOUT DIGITAL IMAGES

General tutorial on Digital Images (Cornell, USA)

<https://www.library.cornell.edu/preservation/tutorial/intro/intro-01.html>

How do digital cameras work?

<http://www.explainthatstuff.com/digitalcameras.html>

BBC GCSE notes on encoding digital images etc

<http://www.bbc.co.uk/education/guides/zqyrq6f/revision/2>

Wiki article on (digital) data degradation

https://en.wikipedia.org/wiki/Data_degradation

Wiki article on Flash Drives (v.technical)

https://en.wikipedia.org/wiki/Flash_memory

Wiki article on Hard Drives (V.technical)

https://en.wikipedia.org/wiki/Hard_disk_drive

Wiki article on Optical Storage media (e.g. CD and DVD)

https://en.wikipedia.org/wiki/Optical_disc

6: ARCHIVAL DVDs and CDs. PORTABLE (EXTERNAL) DRIVES.

RITEX M-disc brochure. Claim 1000 year stability

<http://www.ritek.com/m-disc/eng/index.asp>

London firm where I bought archival CDs and DVDs. They offer Traxdata M-discs (1000 y stability claimed); and Verbatim gold archival DVDs (100 y stability claimed); and Kodak gold archival CDs (200y stability claimed – type archive into the search slot). Also sell 512 GB Kingston flash drives (£175).

http://www.totalblankmedia.com/advanced_search_result.php?keywords=archival

FUJIFILM DVD-RWs based on phase change in recording layer – not dye bleaching

Claimed you can re-write 1000 times. Implied longer term stability than dye based DVDs.

<http://www.fujifilm.com/products/storage/dvdr.html>

8: Supplies and gadgets: (USB memory sticks, DVDs, batteries, portable hard drives, scanners etc)

<https://www.7dayshop.com/>

9: External Solid State Drives (SSD) vs. Hard Disc Drives

SSDs are more expensive per GB of storage than HDDs, but they are more modern technically and are likely to be a better bet for long term data storage:

<https://www.computershopper.com/feature/2017-guide-the-best-external-ssds>

A 128 GB SSD can be bought for £45: [https://www.scan.co.uk/products/128gb-verbatim-vx450-portable-external-ssd-read-upto-450-mb-s-write-upto-295-mb-s-msata-usb-30-super?](https://www.scan.co.uk/products/128gb-verbatim-vx450-portable-external-ssd-read-upto-450-mb-s-write-upto-295-mb-s-msata-usb-30-super?utm_source=google%20shopping&utm_medium=cpc&gclid=CLKgo9zKodICFY4V0wodYVMPSA)

[utm_source=google%20shopping&utm_medium=cpc&gclid=CLKgo9zKodICFY4V0wodYVMPSA](https://www.scan.co.uk/products/128gb-verbatim-vx450-portable-external-ssd-read-upto-450-mb-s-write-upto-295-mb-s-msata-usb-30-super?utm_source=google%20shopping&utm_medium=cpc&gclid=CLKgo9zKodICFY4V0wodYVMPSA)

A 250 GB SSD is available at Maplins for £110.

<http://www.maplin.co.uk/p/samsung-t3-250gb-usb-31-external-portable-ssd-a90uu>