

~ **Preserving Photographic Images** ~  
**Why Scanning and CD Storage may be the Worst Options**

Neither CDs, magnetic media nor even conventional photographic film can be trusted to last!

## Scans

The *first* failing when scanning original images is not properly cleaning and preparing the image before scanning, since the scan will also record all the dirt and residue hiding the image.

*Second*, although the quality of scanning hardware is constantly improving, the technique and methods used to scan images are the catastrophic weak link! A typical "scan" often fails to capture all of the subtle highlight & shadow detail available in the original image. It is these beautiful tonal nuances which make the old images so distinctive and captivating. If this tonal detail is not totally captured by the original scan, it will never, ever be recovered by any subsequent manipulation or enhancements! – Guaranteed!

*Third*, a vast majority of older photographs have an undesirable bluish sheen on the surface of the darker areas. This common effect is called "mirroring" or "silvering" and is a result of depleting silver into oxides. Many older photographs also have a very distinct pebble or embossed surface texture, intended as signature of quality. When these images are scanned, both the "mirroring" and the surface textured are exaggerated by the scanning process, resulting in demonstrably poor, often unacceptable image quality. ONLY specialized photographic copy techniques can overcome these scanning barriers and provide the exceptional detail and tonal values, otherwise hidden, in the original image!

*Forth*, there is a tendency to save black & white images as a "grayscale" rather than a color (RGB) file, to reduce the file size. This both dramatically increases the potential for losing subtle image detail and completely eliminates any possibility of applying restoration techniques which rely on color differentials!

*Fifth*, scanning resolution is critical in preserving necessary detail. Yet most scans are done at insufficient resolutions which both destroy essential detail and lose any potential for future quality restoration. Although an image may be interpolated, "upsampled" or otherwise increased in file size resolution, the original detail can never be recovered! Interpolation can only duplicate adjacent data. A low resolution scan can NOT capture detail and interpolating a low resolution scan merely duplicates lack of detail!

*Sixth*, too many images are saved and stored in the potentially destructive JPEG file format! This "lossy" format discards needed image information data in order to compress the file size. If the image is ever saved more than once as a JPEG, the image quality is progressively and irrecoverably destroyed!

*Seventh*, saving properly scanned high resolution files in the preferred "TIFF" format can require an enormous amount of storage (potentially getting as few as two or three files on a CD). These larger files demand more time to manipulate and save, and much more sophisticated computer & software systems.

*Eighth*, although to the untrained eye, a typical "enhanced" scanned image may appear more attractive, in reality, it may be irrevocably crippled & crucial image detail forever lost! And so is your time & money!

*Lastly*, scans to CD (or other media) offer a precariously false sense of security! Dangerously increasing the risk of losing everything and not knowing it – until it's too late!

## CDs

Although there have been innumerable tests attempting to determine image stability, some quite extensive, none of the current methods of image preservation, absolutely none, have actually withstood the real test of time! All the image longevity projections are merely theory, and manufacture's hype.

More and more evidence indicates the digital CD (contrary to previous speculations) has a shorter and shorter dependable life span. Some reports now caution a safe life span of less than a year! The stability of the digital information captured on a CD is also directly conditioned on the quality of the individual CD, as well as the hardware/software used to "burn" the disc. (Did you know a CD is like a regular photograph which can significantly deteriorate when exposed to extensive light?)

Another flaw is most CDs are never verified once the data is "burned" onto the disc. It is not uncommon to have a "bad sector" during the original "burn", and without verifying, corrupted discs could go undetected – while the original data is purged – making any recovery impossible (even on the first day)!

Finally, there is absolutely no assurance there will even be an effective method to read or retrieve image data in the next few decades. Right now, billions of computer files have already been lost because of extinct technology. (Consider: its been less than 30 years since 8-Track tapes were in practically every car in the U.S.! Now, even with the latest technology, it is nearly impossible to find a machine to play them!)

### **Photographic Film**

The most important stage is to create an optimum image on film. Critical is proper cleaning & preparing the image before copying, since the copy negative will also record all the dirt & residue hiding the image.

The camera must be properly aligned to provide a square (rectilinear) reproduction and establish uniform light dispersion over a totally flat image. For uniform sharpness, a specific "flat field" lens must be used. Special filters are needed to eliminate glare as well as the application of narrow spectrum attenuation to minimize or eliminate spots and stains. Exposure must be compensated for not only the various filtration methods but also for varying magnification ratios and reciprocity failure. The proper film choice is a vital factor in preserving the final image quality, tonal values and sharpness. Specific chemical choices must be defined, as well as dilutions, times, temperature & other techniques required to optimize film processing.

Practically all films nowadays are processed by machines, which precluding any possibility of achieving archival standards. There are a few, very few, labs who still hand process film, at a proportionately high costs. Although hand processing will achieve a higher image quality, without specific archival criteria compliance, there is no assurance the films will be preserved any longer than those done by a machine.

There are also black & white "chromagenic" films, which are actually color films (with only one color: black) and require "color" processing. These films can produce very high image quality, but have substantially less image permanence than even a nominal grade B&W film with marginal processing.

### **Prints: Photographic or Digital**

We also know that currently created images are highly susceptible to fading and deterioration. We know this as a fact, because they are fading and deteriorating within our lifetime and right before our eyes!

All of the weaknesses and short comings listed above for scans, CDs and standard negatives also applies to all printed images (except those specifically processed to meet ANSI archival standards). In addition, prints also generate the collateral problems of extra expenses and additional storage requirements.

### **Properly Prepared Archival Negatives Are Ideal For Historic Permanence**

Creating a true Museum Grade Archival Negative has become a near lost art! ~ *Don't accept substitutes!*

Preserve your images *now* with meticulously prepared, processed, tested & certified Museum services!

- Museum grade archival negatives provide far superior quality to most scans or commercial copies!
- Hundreds of images can be safely & economically preserved within just a few cubic inches!
- Images can be easily identified and sorted just by viewing the negative (no computer needed)
- Versatile -Negatives offer a vast multitude of print sizes and quality options
- Enlargements are easily available, fast and economical
- Film is a simple, proven, stable media, and will remain a "standard" for a long foreseeable future.

### **Where to Acquire Museum Grade Archival Negatives**

Expressive/Wendt Studio — (608) 873-6934 — 183 East Main Street, Stoughton, WI 53589

### **Benefits of their studio hand processed Museum Grade Archival Negatives**

1. Every image is personally inspected for quality assurance
2. Each image is delicately hand cleaned at no cost (with written authorization).
3. Each image is individually optimized using narrow spectrum attenuation to minimize spots and stains then carefully exposed for total tonal detail and sharpness (also at no cost).
4. Images can be cropped to optimize subject definition and provide both easy, economical reprints and standardized framing (cropping is also offered at no cost).
5. Only fresh, premium film & chemicals are used (i.e. Kodak).
6. Film is hand processed to strict international archival standards.
7. Three (3) negatives are provided of every image (with intentional slight exposure variation)
8. Negatives are delivered in safe archival sleeves.
9. Fast in-house service and priority return.

*For more information, contact Expressive Images or visit their web site at: [www.expressiveimage.com](http://www.expressiveimage.com)*