

# MadisonPhotoPlus the Photo Summit **e-Photo Newsletter**

April, 2006

## **CD or Not CD**

As promised, this writer has done a lot of research on the longevity of your images on CD. There seems to be no clear-cut answer to the longevity question, but it is certain that not all CDs are created equal. An outstanding article is included in this month's newsletter so that those of you who don't particularly care won't be forced to wade through the science. In short, however, there does not appear to be any longer lasting solution than a high quality CD for preserving your memories.

## **Flower Photos 101**

It's the time of year for flower pictures. Most of you grow some, and many of you like to take pictures of them. Here are a few inexpensive or free hints...

Whenever possible, use your flash. Most cameras have an auto flash default, so do what you need to make it fire. Why? Because (1) it will stop the action of the flower as it moves about in the wind, and (2) will darken an otherwise distracting background.

Make a simple reflector out of cardboard and aluminum foil by stretching the foil over the board's surface. Use this reflector to bounce the sun's light from a side of the flower which isn't giving any other illumination. This will help fill in dark shadows and add detail to the picture.

There are VERY few black flowers, so cut a piece of black velour and support it behind the flowers to add contrast and totally eliminate all background distraction.

If you are a digital photographer and want to make collages of your flower photos, a solid black background is very simple to remove in most photo editing software, giving you great artistic freedom.

## **HD Video**

High Definition camcorders are here, and as if you hadn't guessed yet, they are digital. And, by the way, they fit very neatly in your shirt or hip pocket. No tape used here, they record on SD memory cards, and take high quality, printable still pictures as well. The quality is incredibly good; the price is quite reasonable.

## **Scrapbooking News**

Even scapbooks are becoming digital. New products shown at the PMA show included scrapbooking on CD. A \$20 (prox.) CD will include virtual papers, borders, type, embellishments, etc. to design your own 5", 8", or 12" square scrapbook pages. The expressive freedom equals that of working with paper, ink, etc.

There is one BIG difference between the output made from this software and a traditional scrapbook, the weight. Instead of sitting with a 10-15 lb. tome on your lap, you're down to just a couple of pounds. The covers and sleeves (page protectors) are the same as usual, but the piece of paper is just the thickness of a piece of paper, and it always lies flat.

This digital scrapbooking development should become available during mid April.

## **Canon News**

Usually we are not very product specific, but there is now a class action suit against Canon. Many dealers are having their repair records for Canon compact digital cameras subpoenaed to discover the number of E18 errors that appeared on select models about 14 months after initial use. It seems that many camera owners have experienced either a major inconvenience and/or an expensive repair.

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just after the manufacturer's warranty liability ends. It is unknown if there are sufficient instances to sue, but Madison PhotoPlus and the Photo Summit have had to send cameras to Canon for this very issue.

## **Thunder Air Show Louisville, KY**

Rated as one of the top 100 events in North America, the Derby Festival's Opening Ceremonies are truly sights to behold. And each year, more than 500,000 eager thrill-seekers do just that.

The day-long event kicks off the two exciting weeks of events that are part of the annual Kentucky Derby Festival. The Thunder Air Show dazzles the crowd with more than 100 planes, aerobatics teams, daring sky diving teams and breathtaking stunts.

When it gets dark, the Thunder rolls. The fireworks will feature the latest in pyrotechnic power from Zambelli Internationale, America's "first family of fireworks". Eight 400-foot barges assemble on both sides of the 2nd Street Bridge to form the stage from which the fireworks spectacular ignites.

The breathtaking and mind-numbing 28-minute show includes Thunder's signature one-mile "waterfall" effect off the bridge, making the fireworks seem to rain down forever. And in the crowd's memory of the show, it does!

After more than a decade, the show remains the largest annual pyrotechnic display in North America. Seen by millions worldwide via a July 4th rebroadcast on the Armed Forces Network to more than 150 countries, it is the state's pride. A Discovery Channel documentary on fireworks shows says it best, "Thunder is the Grand-daddy of them all!"

This seems like a great event to photograph. If you go and take pictures, please send them in for publication in an upcoming newsletter!

## **Newsletter Special**

Some readers have known Lynne & Jerry's son Bret, who was married in late March. Instead of taking pictures, playing with products, etc., Lynne & Jerry were working towards the wedding. SOooo, please excuse this shorter than usual newsletter. Instead of starting some babble, we'll show you some first rate photos instead.

Have a wonderful April. Take Pictures (it's fun, you know)!

Jerry & Lynne

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Getty Images



Robert Ganz



Erlendur Konradsson

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Peco Grozdanovski

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7 May 2004

## DVD And CD Longevity Examined

Remember the introduction of the Compact Disc? We were told they would never wear out and couldn't be damaged in normal use. It's a pity they forgot to tell us that a small scratch in the wrong place could render them unplayable. The longevity and robustness of optical discs - CDs and DVDs - has again come into question as the rush to digitize all sorts of material and transfer it to DVD and CD gathers momentum.

Recently, scientists at the National Institute of Standards and Technology (NIST) looked at CDs and DVDs to see how long digital information recorded on to them would survive. They concluded that most CDs and DVDs will last 30 years or more if handled with care, but many factors can slash their longevity. Direct exposure to sunlight can do a great deal of damage both from the sun's ultraviolet rays and the heat. Indeed, any rapid significant change in temperature or humidity can stress the materials. Discs last longest when stored in plastic cases in a cool, dark, dry environment. Because gravity can gradually bend the disc, storing it upright like a book is best for long-term storage. The study also found that fingerprints and smudges frequently do more damage than scratches, and recommends handling discs by the outer edge or the center hole.

NIST has compiled a list of Do's and Don'ts to help users get the maximum life out of their digital discs.

### Do

1. Handle discs by the outer edge or the center hole.
2. Use a non solvent-based felt-tip permanent marker to mark the label side of the disc.
3. Keep dirt or other foreign matter from the disc.
4. Store discs upright (book style) in plastic cases specified for CDs and DVDs.
5. Return discs to storage cases immediately after use.
6. Leave discs in their packaging (or cases) to minimize the effects of environmental changes.
7. Open a recordable disc package only when you are ready to record data on that disc.
8. Store in a cool, dry, dark environment in which the air is clean.
9. Remove dirt, foreign material, fingerprints, smudges, and liquids by wiping with a clean cotton fabric in a straight line from the center of the disc toward the outer edge.
10. Use CD/DVD cleaning detergent, isopropyl alcohol or methanol to remove stubborn dirt or material.
11. Check the disc surface before recording.

(RH) and temperature should be in the range 4°C - 20°C.

### Do not

1. Touch the surface of the disc.
2. Bend the disc
3. Use adhesive labels.
4. Store discs horizontally for a long time (years).
5. Open a recordable optical disc package if you are not ready to record.
6. Expose discs to extreme heat or high humidity.
7. Expose discs to extreme rapid temperature or humidity changes.
8. Expose recordable discs to prolonged sunlight or other sources of UV light.
9. Write or mark in the data area of the disc (area where the laser "reads").
10. Clean in a circular direction around the disc.

NIST also recommends that for CDs and DVDs, relative humidity should be in the range 20% - 50%

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Silverace

Issue 12: Which Brands of CD-R discs are Best for Long-Term Data and Photo Storage?

10 May 2001

This issue contains advice on selecting quality CD-R discs to use when recording/storing important data and photos for long-term storage.

0. Don't use CD-RW discs! They're only designed for short-term storage, and are erasable. Don't go putting your important photos on these!

1. The dye used is probably the most important for long-term stability and lifespan.

There are three dyes used today in CD-Rs, in order of preference.

A. Phthalocyanine - inherently stable unlike cyanine dye which must be stabilized by the addition of other metals, etc. Longest lasting under testing. Expected lifespans exceeding 200+ years when coupled with gold reflective layers in cold storage.

(color, light green on silver reflective surface; light yellow/green on gold reflective surface)

B. Azo. Only Mitsubishi/Verbatim makes this. Up to 100 years, less stable than Phthalocyanine dye, but more so than cyanine dye.

(color, very deep blue on silver reflective surface)

C. Cyanine dye. Chemically unstable alone, and must be stabilized. Still, less stable than the other dyes in long-term simulation tests. However, the first made consumer CD-Rs used this and is part of the 'standard' all CD-RW drives must be compatible with.

(color, green-blue/blue on silver)

2. You can use CDRIdentifier to read the dye information stored on the CD-Rs you buy as well, which is more reliable if you don't know which bottom colors represent which combinations.

CDRIdentifier: <http://www.gum.de/it/download/english.htm>

3. Besides dye, the reflective layer used affects long-term storage lifespans.

There are three known types used today, in order of preference:

A. Gold - yep, expensive, but from the bottom, it'll look like real gold.

B. Gold + Silver - Only Kodak Ultima Silver+Gold CD-Rs use this. Their tests suggest this combination lasts longer than silver-looking only discs.

C. silver. - not true silver, but silver looking. Most discs produced today use this. However, given that metals except gold corrode, corrosion of such surfaces (when the top laquer layer has been removed/scratched) can and will occur.

4. Do not look at the top when trying to determine reflective layer type! Look at the bottom in particular, the exposed areas around the rim and inner hub. The fake 'gold' layer they put on top of some CD-Rs are not true gold at all, and only there to 'fake' the customers.

5. The longest lasting CD-Rs, based on longevity testing, use Phthalocyanine dye and Gold reflective layers. Phthalocyanine with Gold&Silver reflective layers next, followed by Phthalocyanine and Silver and Azo and Silver. Cyanine on anything (only silver today) is the worst performing disc.

6. Typically, Japanese made CD-Rs tend to have better quality control, IMO. Once they move production to Taiwan/Mexico, forget em.

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Top Quality Name-Brands, in order of preference:

- A. Mitsui Gold CD-R & Kodak Gold Ultima - Phthalocyanine dye + Gold.
- B. Kodak Gold Silver+Gold - Phthalocyanine dye + Silver & Gold.
- C. Mitsui Silver, Ricoh Platinum - Phthalocyanine dye + Silver.
- D. Mitsubishi/Verbatim - Azo + Silver.
- E. Taiyo Yuden - Cyanine + Silver.

7. You can get these at [www.cdrexpress.com](http://www.cdrexpress.com) and [www.memorymedia.com](http://www.memorymedia.com).

8. All the other 'cheapies' not mentioned above are generally of poorer & more variable quality. eg. those \$15 / 100pk of no-name CD-Rs at [www.microcenter.com](http://www.microcenter.com) and [www.compusa.com](http://www.compusa.com) are the worst in long-term longevity.

However, even the quality of cheapies today will last a few years before deteriorating (assuming no long sunlight exposure; a few hours in the sun will kill discs) and will work fine. Great for disposable burns, music, and stuff you don't care if they fade away soon.

The poorest performing brand-name disc above, 6-#E, will still last 10-20 years in cold storage w/o any problems at all!

Remember to keep them away from sunlight/UV, and that most likely, you'll be moving all of the data off CD-Rs onto newer storage medium (maybe DVD-R? Holographic?) in 10-20 years. Why? Not one storage medium has lived that long, and realistically, you'll want to move the data off obsolete storage media =before= they stop making the drives!!

Just like nobody has 5 1/4" (or 8/12") floppy drives anymore, expect only to need at the minimum discs that'll last until you migrate the data off them in 10-20 years from now. Of course, higher quality, longer lasting discs 6-#A-#D will only help your peace-of-mind.

9. Burn at least two copies of every important piece of data. Preferably, to two different brands of discs, and preferably two difference types (eg. Picking #A always is a good #1 pick, anything from 6-#B-#E as your #2). Although simulated longevity tests suggest #A has the best life span, nobody has ever sat around long enough yet to see if that's true (in fact, CD-Rs have been out only about 10-15

9. Burn at least two copies of every important piece of data. Preferably, to two different brands of discs, and preferably two difference types (eg. Picking #A always is a good #1 pick, anything from 6-#B-#E as your #2). Although simulated longevity tests suggest #A has the best life span, nobody has ever sat around long enough yet to see if that's true (in fact, CD-Rs have been out only about 10-15 years!). Best to make sure you use two different brands and types to keep bad-batches and combos of dyes/layers from ruining your data years from now.

10. Double-check all important discs after each burn - make sure they match the original files 100% before putting them away and assuming they're good burns. Use the CD-R program's 'verify-after-write' feature, available in only some programs, or CDCheck: <http://fusion.zejn.si/> to do this.

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Editor's note:

Promaster Gold CD-R discs are manufactured by Hotan Corporation in Taiwan. Hotan uses phthalocyanine dye + gold and is the longest rated life available today. Hotan Corporation did not export CD-R discs or DVD-R discs at the time the above article was written.

**They are the best: that's why Madison PhotoPlus and the Photo Summit sell them.**