

# NEWSLETTER

September 2012



## Speed Reading

Speed reading isn't something we need to do as we get older but I found this small test interesting. Staples, the office supply people has a quick, fun reading speed test on its website. Just read the provided text as fast as you can, and then answer 3 comprehension questions after. Here's the [link](#). If you are interested I scored 320 words per minute!

## Freesizer

Ever receive an email full of gigantic photos from a friend or family member? Or maybe you've sent one! You know that a high-resolution photo can take a while to upload or download. In many cases, you don't even need to send pictures that big. Of course, you also don't want to resize each photo by hand. FreeSizer can shrink the size of an unlimited number of photos at once quickly and easily.

Just drag the files you want resized into the queue. Then set the maximum dimensions by width or height. Voila! All your pictures will be resized. FreeSizer doesn't delete or alter the original files. It also comes with five presets like email, iPhone, and social networks to cater to your method of photo sharing. [www.freesizer.com](http://www.freesizer.com)

## Windows 7 Reinstall

I know this has nothing to do with Photoshop Elements but recently I had a call from an old friend of mine with computer problems. He has a habit of opening everything that people send him and finally it caught up with him and his computer went AWOL! To make things worse he had "lost" the recovery disk that came with his machine (a generic unit purchased on line) but fortunately he had kept a copy of the Belarc Advisor printout I had made for him a few months previously and we knew the license key for his copy of Windows 7. I downloaded a generic version of his Windows 7 (Home Premium), burnt it to a disc and reloaded it onto his machine. When I entered the original key

everything went fine and we were able to reinstall Windows. Of course he had never made any backups of his drive so he lost all his documents and files but we were able to reinstall the lost software from the discs he had and get the machine somewhat back to normal. If you or anyone you know doesn't have a copy of the original Windows 7 installation disc you can download the "generic" version from Microsoft [here](#), burn a disc and hopefully be prepared should disaster strike. However remember this download is an ISO file and you need a disc burning software program capable of reading and burning this format. If you don't have such a program I recommend a free program ImgBurn which I have mentioned many times in the past. You can download it on Cnet [here](#). I also still have a couple of ImgBurn instruction pamphlets, neatly bound in a durable plastic cover which I made up for the Elements group and I will bring them to the September meeting.

## CDs Are Not Forever: The Truth About CD/DVD Longevity, "Mold" & "Rot"



The digital age has revolutionized the way we handle information. Never before could humankind record and store so much information and in such diversity. While the amount of data has increased exponentially, the predicted life span of the storage media hardly exceeds the lifetime of a human. For humans who love to collect and leave a legacy to their descendants, as well as human kind who so much depends on information, this poses a huge challenge.

Optical discs have been commercially available since the 1980s. After merely 30 years, a solid amount of information has been collected on what causes CDs and DVDs to break and much progress has been made in the development of material that will last longer. While estimations predict a life time of up to 200 years for optical discs, we can never be sure when they are really going to break. However, by being aware of what determines the life span of optical discs and what causes them to break, you can make choices and significantly increase the survival time of your stored data.

Let's examine this case in detail...

### What Determines The Life Span Of Different Optical Discs?

To understand what limits the life span of optical discs, let's look at how they are built-up. What all optical discs have in common is the presence of three key layers:

- coating layer that protects the reflective layer.
- shiny layer that reflects the laser.
- polycarbonate disc layer that stores the data.

In addition, a label is applied above the coating layer and re-writable discs contain a dye layer between the reflective and protective layers.

One factor that determines the maximum life span of an optical disc is the type of reflective layer. Other factors include the overall quality of the raw material and manufacturing and most importantly the way the medium is treated by the user. The handling of an optical disc probably has the most significant impact on its longevity hence we will re-visit this theme in a moment.

It is hard to predict exactly how long an optical disc will last since it depends on so many different factors. Nevertheless, estimations are floating around that predict a life span of up to 200 years for recorded CD-Rs and Blu-Ray discs. The shortest life span with 5-10 years is predicted for unrecorded CD-Rs and CD-RWs, followed by recorded DVD-RWs with up to 30 years. Recorded CD-RWs and DVD-Rs have a predicted lifetime of 20-100 years. In other words, you should not rely on any of these media for lifelong storage of your precious data, as they are likely to fail sooner rather than later.

### **How Do CDs or DVDs Rot?**

As mentioned above, different types of optical discs contain different layers and particularly the reflective layer is susceptible to damage. Standard compact discs typically have a reflective layer made from aluminum. When exposed to air, aluminum oxidizes, which naturally happens around the edges of the CD. However, degradation of the reflective layer is not the only cause of disc rot.

The causes of disc rot are manifold and can include one of the following:

- oxidation or corrosion of reflective layer
- physical damage to disc surfaces or edges
- galvanic reaction between layers and coatings
- chemical reactions with contaminants
- ultra-violet light damage
- breaking down of disc materials, e.g. de-bonding of adhesives between layers

Interestingly, while most types of disc rot are caused by inappropriate use and/or storage, there is one in particular, i.e. CD bronzing which is caused by a fault in manufacturing.

### **How Can I Check Whether My Optical Discs Are OK?**

You can do a simple visual check. If you see light shining through tiny little holes when you hold a disc against light, then the reflective layer has started to disintegrate. Also check your CDs for discoloring, especially around the edges. See whether the different layers are still tightly together or have started to de-laminate. Finally, you can try to copy the optical discs to a hard drive or scan them for data integrity using different software, e.g. [CDCheck](#) or [dvddisaster](#).

## How Can I Increase The Lifetime Of My CDs & DVDs?

There are many ways you can increase the likelihood that your CDs and DVDs will last you a long time. Here is a selection of the most important ones:

- Choose a high quality medium from a good brand.
- If you want to maximize CD longevity, go for gold as a reflective layer.
- Treat your CDs and DVDs with care, i.e. hold them by the outer edges or the hole in the center, don't touch the surface, avoid scratches, and keep dirt from the disc.
- Keep them in a dry, dark, and cool place since humidity, sunlight, high temperatures, and pollutants can damage the different layers.
- Store them in jewel cases rather than paper slips.
- Use non solvent-based felt-tip permanent markers, suitable for writing on CD or DVD labels.
- Rewrite your rewritable discs as little as possible.
- Choose slow writing speeds to reduce errors and increase quality.

## What Can I Do When My Disc Won't Read?

A disc that can no longer be read by your player or shows errors is not necessarily a lost case. Here are a few tips for what you can do to:

- Make sure you didn't accidentally insert the CD or DVD upside down.
- Carefully clean the bottom layer with alcohol to remove grease from fingerprints and dust.
- Try to read the CD or DVD in a different player. Chances are that the laser in your player is faulty or that a different player can still read your CD or DVD.

## Conclusion

Always have a backup of your data and check all your backups regularly to make sure none of the copies have broken in the meantime, regardless of whether you store your data on a CD, DVD, or hard drive.

Article summarized from "[Makeuseof](#)", special thanks to Tina Seiber.

## Zoner Photo Studio

I know this group is all about Photoshop Elements but occasionally I come across a free program that is interesting and worth a look. Not everyone wants to spend \$70 on a photo editing program so if you know someone who is like that here is another program that can do basic editing and is free. Actually it is quite a comprehensive editor with a great selection of tools and image effects. I was quite surprised at the versatility of the program and there are numerous video tutorials available on the website.

Take a look at “Zoner Photo Studio 14 free” [here](#). Of course there is also a paid version which has more features for \$34 (home edition, \$69 Pro edition) but the free version is sufficient for most cheapskates!