

Airport X-Rays, Scanners, and Images

Controversy is one thing a person can expect to find when researching the comparison between conventional silver (film/analog) and digital imaging. Everyone has an opinion about something. When comparing the relatively new digital technology to the older and more established conventional technology, a great deal is published on subjects including acceptability in court, archival characteristics, resolution, quality, cost, ease of manipulation, versatility, reliability and durability of cameras, and the susceptibility of images to airport scanners and X-rays.

Over the years, it is certain that airport security has been detrimental to exposed and unexposed, unprocessed camera film. Depending upon the generation of X-ray machine, the level to which it has been set, the number of passes through, the degree of protection of the film, and the factory set light sensitivity (ASA) of the film, X-rays have been the culprit for fogging, lowering the contrast of exposed/unprocessed film, and raising the ASA of unexposed unprocessed film. These effects have not been consistent from airport to airport, country to country, or carry-on to checked luggage. But, The International Imaging Industry Association (I³A) and the Transportation Security Administration (TSA) report that the latest high-intensity X-ray scanners **will** damage unprocessed film. A few years ago, photographers carried their film in lead-foil pouches to protect it from X-rays. Those pouches are no longer recommended. In fact, they may cause more severe damage to film, in carry-on as well as checked baggage, because the inspector will turn up the X-ray intensity when inspecting the baggage to see the contents of the pouch.

The FAA's decision to install new, more powerful x-ray scanning equipment at United States airports is intended to make air travel safer for all of us, but it also means anyone carrying unprocessed film must

take steps to safeguard their film when traveling by air.

Is airport scanning and X-ray inspection as harmful to digital equipment and image files as it is to unprocessed film? According to most authorities, digital cameras, memory cards, and exposed images, will not be adversely affected by airport scanners or X-rays. But, even the authorities leave room for doubt. San-Disk, a major manufacturer of digital memory, stated in 2003 that a possible cause of damaged digital files could be, "Airport X-ray machines (we recommend carrying cards on your person)". Then in 2004 they stated, "None of the airport scanning machines will damage your cards. So, you're safe whether the cards are in your checked baggage or not". Kodak is more noncommittal than San Disk. According to Kodak, "It is not certain how the newer security screening devices

will affect your (digital) camera or the memory cards. For this reason, it is best to request that these items be hand inspected to avoid any possibility of damage to the images they contain."

It seems the best thing to do would be to avoid controversial issues and use established and accepted protocols. There can be no arguments with dogma. We know for sure a study for the Transportation Security Administration found "radiation exposures in repeated doses can visibly fog unexposed camera film". I³A's Committee for Integrity in Transportation of Imaging states, "X-ray exposures and the new high-intensity scanning devices pose a considerable risk to film. The scanners are now being used on checked luggage and randomly selected carry-on items. The tests showed damaging streaks and fogging of film." It would be best practice

with unprocessed film, to keep scans and X-rays to a minimum. If you have leftover film in your kit, not used on one trip, don't take it on another. Use that film when traveling by car and take



fresh film through the next airport.

“The CompactFlash Association (CFA) announced 2-years ago that semiconductors used in electronic systems, including CompactFlash™ (and other memory), would be irreparably damaged if subjected to the irradiation process being used by the U.S. Postal Service (USPS) to sanitize the mail (during anthrax inspections). Such damage will not only cause loss of data stored on the cards, but the cards will no longer be operable.” It may be best not to send image media by US Mail because carriers including UPS and Fed-X would be safer.

There are many articles and discussion forums covering the X-ray and scanner subject for digital memory and hardware. Some people claim to have sustained damage to their cameras and memory through X-ray exposure. The only thing all the claims have in common is the lack of substantiated proof.

You may ask, what is the bottom line? Should I worry? To this question I can respond, GO AMTRAK, they don't X-ray or scan and they could use the business.