

## Avoiding and Detecting Dust on Digital Sensors

### Avoiding Dust

Digital cameras without removable lenses should be dust resistant. Dust normally gets into your camera's chamber when changing lenses. These tips will help minimize dust.

- Turn off your camera when changing lenses so the sensor does not have an electric charge.
- Use gravity – hold the camera body with the opening facing downward when changing lenses.
- Change lenses as quickly as possible.
- Avoid changing lenses in dusty or windy environments – at least look for ways to block the wind when changing lenses (there may be more dust floating around inside your car than outside, though).
- Use a tripod, a friend, your mouth, etc., to give yourself extra hands and speed up the lens change.
- Keep your lenses clean.
- Keep your lens caps and body caps clean – according to some, this is the number one source of dust on the sensor.
- Vacuum your camera bag once a month if you shoot frequently or at least regularly.

### Detecting Dust

You can use a sensor loupe, which has a magnifying glass and LED lights to examine the sensor, but these cost upwards of \$75.

Instructions for taking a dust reference photo:

1. Set your camera on manual focus.
2. Set your camera to aperture priority.
3. Set your exposure compensation to +1.5 to +2.
4. Focus the lens to infinity.
5. If using a zoom lens, zoom the lens to its longest focal length.
6. Set the lens aperture to its smallest setting (largest number) such as f/22.
7. Take a plain white piece of paper or use a white background on your computer monitor.
8. Handhold the camera so the lens is approximately four inches from the white object.
9. Depress the shutter.
10. Look at the picture on your computer (not the camera's LCD screen) – make sure you zoom to 100% and scroll around the entire image. If you see any spots, usually with fuzzy edges, these are specs of dust on your sensor and you may consider cleaning.

There are variations on this theme. Some may prefer using manual mode and some like to photograph a featureless sky or a gray card, but I've found that this is the fastest as I try to clean and reevaluate.

### Cleaning Your Sensor

Your sensor has a filter protecting it, which in reality is where the dust is. This filter is very fragile and should only be cleaned with the right materials and with the correct technique. **A scratched filter could cost you almost as much as a new camera!** You can have it cleaned professionally but if you decide to do it yourself, you should learn how to do it first. Here are a couple of helpful web sites:

[www.cleaningdigitalcameras.com](http://www.cleaningdigitalcameras.com)

[www.photosol.com/swabproduct.htm](http://www.photosol.com/swabproduct.htm) (Look for "Play Swab Demo" 3/4 of the way down the page for a video showing how to clean using their system)