

Through The Lens

*A guide to digital photography for computer enthusiasts.
After the click of your camera, you're only half done!*

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Cleaning your camera sensor

by Lynda Buske

Sensor spots in digital photography occur when something like a spec of dust sticks on your sensor, blocking light from getting to that area of the sensor, resulting in a dark spot on your photograph. Sensor spots tend to be most visible when you are shooting with a small aperture. If you discover what you believe are sensor spots on your image, you can remove them with functions in photo editing software such as spot remover, healing brush, perfect eraser, etc. (depending on the software). In the free Photoscape X, use *Tools/Spot healing brush*. You can also use a clone brush to copy over some pixels from beside the sensor spot. [Note: clone tools are not usually available in free versions of photo editing software]

To make sure it doesn't happen the next time you shoot, check first that your lens is clean. Then take a photo of a plain surface (like a wall) and even better try to shoot it out of focus. Then examine your image and see if there are spots that weren't on the wall. If there are, it means your sensor needs a clean. More advanced software such as Adobe Lightroom or ON1 Photo RAW can give you the option to home in even further (see images below). In Adobe Lightroom, use *Develop Module > Spot Removal tool > checkbox Visualize Spots*.

Dirty – Some sensor spots visible



Really dirty – more sensor spots visible



Visual dust feature in ON1 Photo RAW

To clean your sensor, make sure you are indoors in a relatively dust-free environment. The least expensive option is a hand blower (less than \$15). However, spending a little more (\$30- \$130) means you can get a filter on the air intake which is a great feature. This means you prevent the possibility of the blower pushing dust onto your sensor from the air in your room. I highly recommend this second option.

\$12 – not recommended



\$30 – blower has filter



\$130 – blower has filter



If there are still sensor spots appearing on your images, you may require a wet clean. This can be done by purchasing wet sensor swabs (\$1-\$2 per swab) but make sure to get the size that matches your sensor (i.e. full frame, APS-C, micro 4/3).



Other options that I have not tried are sensor brushes (\$25-\$45) and sensor gel sticks (\$20-\$70).

Sensor brush (\$25-\$45)



Sensor gel sticks (\$20-\$70)



To minimize sensor spot accumulation:

- Change lenses in dust-free environments
- If available, use camera's sensor shield (e.g. Nikon Z8, Z9)
- Aim opening downwards when changing lenses since dust more likely to fall down than up
- Use built-in camera sensor cleaning function which vibrates the sensor to shake off dust