Vacuum Vigour

Simon Stafford takes a look at the innovative Green Clean sensor cleaning system

Photography with a digital SLR type camera has many advantages over a film camera but one issue remains as vexatious as ever – keeping the digital camera's sensor free from dust and other unwanted material, and more importantly cleaning it once dust accumulates on its surface, as it will inevitably.

I say inevitably because no matter how careful you may be about protecting your camera from the ingress of dust and dirt it will find its way in eventually. The simple actions of focusing and/or zooming cause small changes of air pressure within a lens that draws air in to the camera bringing with it unwanted particles. So, even if you only ever use a single lens on your camera you will not be immune from the problem.

Once the first few dust spots appear in your pictures you can still put off the decision about if and how to clean the sensor by brushing up on you cloning skills in your digital imaging software to remove their effect.

However, for most users there will come a point, as more dust spots appear, when such remedial action is just too time consuming to be viable, and cleaning the sensor, or in the case of all Nikon digital SLR camera models to date the surface of the low-pass filter located immediately in front of the sensor, is the only solution.

Essentially there are two options: have the camera cleaned professionally, or do it yourself. Cleaning the low-pass filter is not something to be undertaken lightly – any damage caused to the filter surface during the process will result in a costly repair!

PLEASE NOTE YOU CLEAN THE LOW-PASS FILTER OF YOUR CAMERA ENTIRELY AT YOUR OWN RISK

Therefore, it is not surprising that Nikon recommend sending your camera to an authorised workshop to be cleaned professionally. However, Nikon does acknowledge that this is not always going to be practicable, so the instruction books of Nikon digital SLR cameras provide users with directions and advice on how to clean the low-pass filter. The only method Nikon recommend is the use of a blower bulb pointed in to the camera, through the lens mount throat, to blow air across the filter's surface. As a quick fix "in the field" this can work but there is a risk of causing more harm than good, because often all you succeed in doing is moving the dust and dirt around inside the camera without any guarantee that it will be removed. Therefore, it is possible that eventually it will migrate on to the low-pass filter again, and you are back to square one!

If you feel confident and competent of your own ability to clean the low-pass filter there are a plethora of products available including gas propelled

cleaners, swabs, fluids, and brushes. One of the most recent additions to this range of products from an Austrian company called Green Clean.
The standard Green Clean digital camera sensor cleaning kit contains a 400ml aerosol can filled with an inert and environmentally friendly gas, a “Mini Vac” head and filtered collecting canister, three pick up tubes, and three pairs of wet and dry swabs. With the exception of the aerosol can all components are supplied in sterile packaging. The “Mini Vac” head and filtered collecting canister is connected to the interchangeable pick up tube, which has a trumpet shaped end, via a 28 cm long flexible hose. The pick up tube is made from non-conductive and abrasion-free plastic that will not damage the low-pass filter surface should it come in to contact with it. To clean the low-pass filter you hold the end of pick up tube just above its surface. Using short bursts from the aerosol can, which can positioned well away from the camera to prevent it from interfering with the cleaning process, a suction force is created, so as you sweep the pick up head across the filter surface any loose material is lifted away and deposited in the collecting canister.

For those who wish to travel light there is also the Green Clean “Traveller Kit” that comprises a 150 ml aerosol can, a “Mini Vac” head and filtered collecting canister, and three pick up tubes (it does not contain the wet & dry swabs).

This innovative system has two distinct advantages; first, unlike other the brush or swab cleaning methods, Green Clean uses a non-contact process, and second as a vacuum system the offending particles are removed from the camera without the risk that they might be merely redistributed inside the camera, as can happen with a brush or blower based cleaning method. In addition to cleaning the low-pass filter the Green Clean vacuum device is just as effective at cleaning the mirror box, surface of the reflex mirror, and the back of any lens. In fact I recommend, most strongly, that you spend a little extra time to clean these areas whenever you clean the low-pass filter.

Particulate matter on the surface of the low-pass filter is probably the most common cause of problems. However, the filter is also susceptible to the effects of condensation that can leave more tenacious deposits such as watermarks adhering to it. The action of the Green Clean vacuum cleaner will not be effective in these circumstances, so the kit includes both wet and dry swabs that are used in tandem. The wet swab, which has a foam tip pre-soaked in a non-toxic solvent, is used first followed by the dry swab that is made from a very cohesive and highly absorbent fabric that soaks up any dissolved residue from the filter’s surface without leaving any fibres behind. The edge of the fabric projects slightly beyond the edge of the swab handle so you can clean right in to the corners of the low-pass filter.

Summary

Of course prevention is far better than cure; not only does it reduce the amount of dust and dirt that collects on the surface of the low-pass filter but it will reduce the frequency of cleaning.

If you decide to clean the low-pass filter for yourself I recommend you do so only when absolutely necessary. When that necessity arises the innovative Green Clean system offers a progressive cleaning regime that is both very effective and very efficient, and is only dependent on physical contact when dealing with the most stubborn marks.

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