

# THE Camera SHOP

*Cameras, Prints, Repair and Knowledge*

## **Sensor Cleaning**

They get dirty eventually, no matter what. You'll start to spot some black shapes in the skies of your landscape photos, or anywhere your lens is stopped down. The reason or course is that at  $f/16$ , the depth of field is larger, bringing into focus things as close to you as scratches on your lens, or even bits of dirt inside the camera.

Despite what is said, CCD's are not as sensitive as you would think. They have a hard clear plastic coating which prevents scratches from most common materials, including other plastic or even the accidental fingernail. What is more likely to break is your camera's shutter. Unlike film cameras, we can't reach behind the shutter to put it back into place after accidental "finger poisoning". You just send it in for a fix, and 6 weeks later you pay someone for fixing it.

To know if your camera has dust, try this test:

--Stop the lens down all the way (most often  $f/22$  or higher).

--Overexpose the meter by  $1\frac{2}{3}$  stops

--Use 1600 ISO

--Put the camera on manual focus

--Shoot a clean white piece of paper, and look for spots in the resulting photograph. Sometimes you even spot entire hairs standing out on the white. Don't worry about a not-handholdable shutter speed, like  $1/8^{\text{th}}$  of a second. Because the dirt is inside your camera, it moves with your shakes. You can tripod it if you like.

## How to clean your camera's light sensor

### Method one:

Use a RocketAir blower to knock the dust out. Use "bulb" or "mirror lock up" to lift the mirror or open the shutter. *Hold the camera facing down*, and blow clean air into the open camera.

DO NOT use canned air. If liquid nitrogen stings your fingers, it's worse on your sensor.

DO NOT use an air compressor that does have a filter in the line.

DO NOT stick the blower past the shutter. If the battery dies, or your finger slips off the shutter during "bulb," a broken shutter is \$300.00+ to fix.

The RocketAir blowers have a filter built into the back, which makes for clean air. The input on the back also means they recycle faster.

DO NOT use a negative blower (the ones with bristles). It's just more outside dust being blown into the camera. They're also very weak.

The blower is your first line of defense, and you should have one in your extended camera bag.

### Method two:

#### Sensor swabs

Follow the directions on package. Use an AC adapter, to make sure the batteries do not die during use. Again, the shutter is more sensitive than the sensor.

Do this in a clean environment, with lots of light. It helps to have an LED light sensor scope.

The advantage of swabs is that they also can get the occasional smudge off your sensor.

### Method three:

Arctic Butterfly, or charged brush cleaning tool.

This works surprisingly well. They're expensive, but worth it for the long haul. And if the shutter closes during cleaning, it probably won't break, since it's just thin fibers reaching past the shutter plane.

DO NOT spin the charged brush while it is touching the CCD.

**Method four:**

## Professional cleaning

Most repair centers, like Midwest Camera Repair in Wyandotte, Michigan, or the manufacturer's factory service centers on the east coast will clean your sensor for a price. Honestly though, it's just going to get dirty again. So find a practical solution that works for you.

**How to prevent dirt in your camera:**

--Do not take it to the beach. Seriously. Take your backup camera.

--Don't change lenses in a windstorm.

--When you change lenses, hold the camera facing down. Most dust in cameras comes off of our clothing and skin. Little bits of hair and skin fall right inside and get thrown around by the mirror. Just make it a habit of facing your camera down on the table when no lens is attached.

--Shoot wide open. If you know your sensor is dirty, try  $f/2.8$ . The light will focus right around the dirt, and at least you'll get a shot that you don't have to spend hours clone-stamping, even if less is in focus. Also, I think wide-open impressionistic photography is an art that's been lost, now that everyone can layer photo over photo on the computer. Try some  $f/1.8$  or  $f/1.4$  lenses for the most dramatic effect.

If you would like The Camera Shop to clean your sensor, bring it by. We can usually have it for you the next day.

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