

Title Option 1

Addressing Excessive Heat and Noise in DVR/NVR Systems

Tips on how to troubleshoot your surveillance system

Title Option 2

Why is My DVR/NVR so Hot and Noisy?

Addressing Excessive Heat and Noise in DVR/NVR Systems

Heat and noise can be a result of many factors in a DVR or NVR system, but the main culprits are usually friction and vibration caused by the constant inner workings of the main unit. In multi-bay systems, the problem can get worse if ordinary desktop drives are used, because they can easily fry in a unit designed for surveillance-tuned drives. And the vibration caused by an array of ordinary drives can increase noise and vibration to the point of compromising data read/write performance.

Let's take a look at some of the factors that can cause heat and noise in a surveillance system, and some remedies and precautions to help keep you from experiencing a failure.

Keep Your Device Cool

All too often, a DVR or NVR is cooped-up in a confined place like an unventilated office or on a shelf butted-up against the wall, which can cause it to overheat and draw in and retain excessive dirt into the interior. If this is the case with your overheated machine, and it feels hot to the touch, immediately power-down and move it to a well-ventilated space with at least a foot of clearance behind and over the unit.

Proper ventilation is key to keeping a busy NVR cool and operating efficiently. Place your unit in an air-conditioned area if possible, and definitely keep it out of direct sunlight. Use a backup power supply to prevent accidental outages and power surges. Heat monitors are now compact and can be mounted near the unit and monitored wireless through a smart device.

Dust, Dirt, and Dander

Keeping your DVR or NVR system clean and dust-free is the most basic maintenance for keeping internal temperatures in check. Most older DVRs rely on vents in the chassis to dissipate heat, and in most cases, the only fan is over the CPU.

Periodically shut down during an off-peak time and perform maintenance on your device – video surveillance is an always-on task that produces heat and vibration – make sure fan vents and blades are clean and free of debris. Use compressed air to clear out any cobwebs or dust bunnies inside the unit, monitor your fans to make sure they are cooling the unit adequately, and replace when necessary.

You're Using the Wrong Drives

Surveillance drives are unlike standard desktop drives. They feature cache optimization for the continuous stream of data, larger read/write allocations, and firmware support for high-definition cameras.

Because modern multi-bay NVRs can look like a typical NAS box, many people think that standard or NAS-tuned drives will perform best. This is not the case – a standard desktop drive's overall work load is designed to be, at the most, 10%-20% that of a surveillance drive. And NAS drives are not optimized for the 90% write/10% read average of a typical surveillance drive.

The surveillance hard drive forms the central component to the digital storage of surveillance video. It is specifically designed to be used in a DVR or NVR that is on 24 hours a day, 7 days week. Generally, a surveillance hard drive usage will be moderate to high and any kind of hard drive disruption will affect multiple users, and one can expect these drives to offer high mean time between failure ability.

Closing Thoughts

When your surveillance system starts heating up, or making excessive noise, make sure to take steps to assure your investment is working at peak efficiency. Remember the following points:

- **Clean and maintain the main unit periodically** – shut down, open the chassis and carefully clean any dust or debris within the machine. Also check all fans and to make sure they're not blocked or broken.
- **Use the right drives** – ordinary desktop drives simply can't cut it in the harsh, always-on environment of the DVR or NVR – they heat up more easily and can cause excessive vibration, that can lead to footage degradation or loss.
- **Keep your device in a well-ventilated area** – dedicate an open-backed shelf or place your device among other electronic equipment being cooled.