

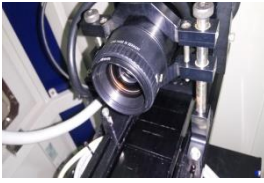


How To Clean Your Conventional/Telecentric/Projectors Lens? V510 AOI SYSTEM

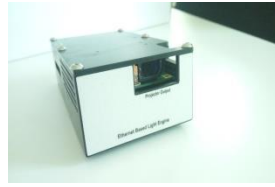
Cleaning Lens Procedure



4 areas which need to give attention on the lens care & cleaning.



Conventional Lens



4MP Projector



12MP Projector



12MP Telecentric Lens

1. When to perform?

- Anytime when found abnormality on brightness/color from the camera view V510 GUI display even lighting calibration had done. – Camera lens
- Whenever found 3D model images couldn't form well as normal even though 3D calibration and all related things has been checked. – Projectors lens
- When facing hard time to get pass result during perform 3D calibration (3D fringe snapping image affected because of projectors lens dirty/oily/dusty/blurry)

2. Why to perform?

- Dirty optics camera lens can and will impact the display result.
- Incorrect image fringe snapping from projectors contribute to having bad 3D model constructed and fail to inspect/measure the height correctly.
- Sustained the good result and better machine performance.
- Maintained the life-time of the lens.

3. Who can perform?

- Certified Technical Support from ViTrox.
- Certified Technical Support SCP which completed trained by ViTrox trainer in Software & Hardware training.
- Customers which attended the training conducted by ViTrox/SCP (Sales Channel Partner appointed by ViTrox)

4. Where to perform?

- In-line machine in production.
- Offline machine.
- Customer site.
- ViTrox HQ.

5. How to perform?

- Follow the "Three-step process" state in this document accordingly.
- Using the proper tools and equipment as recommended.
- Ensure all the safety lock-out & take-out tag applied.
- Shutdown the machine and switch off the power source.
- Wearing proper ESD shoes and gloves.

REMINDER: DO NOT take out or remove the lens/projectors if not necessary.

Please contact ViTrox Technical Support at aoi-sns@vitrox.com for further assistance requires.

Rule #1: Avoid unnecessary cleaning of your lens

Glass is relatively hard and durable. However, when advanced coatings and other chemicals are added to the lens, it becomes a surface that's more vulnerable to scratches and damage from chemicals and contact. Because of this, we want to try to keep our lenses free of fingerprints and dirt, and avoid repeated physical interaction—this includes touching the lenses and cleaning.

Rule #2: Dust happens

Dust is everywhere and everywhere is dust. It will get on and inside your lens. Lenses are manufactured in extremely clean factories, where manufacturers go to great lengths to try to eliminate dust from the environment. Even then, brand-new lenses may have dust between the lens elements.

Trying to keep your lenses dust free through continual cleaning may serve to shorten the life of your lens, as you run the risk of scratching the lens surfaces every time you clean the glass.

Cleaning your optics is easy to do, even in the field

Here is a simple, three-step process for effective lens cleaning:

1. Remove as much dust and dirt as possible from the lens with a blower or soft-bristled brush.
2. Apply a few drops of lens cleaning solution liquid to a lens tissue or cleaning cloth.
3. Using a circular motion, gently remove oil, fingerprints, and grime from the lens surface, working from the center outward.



Analysis

Remember, you can perform those three easy steps in the field when needed but, unless there are greasy fingerprints or oily smudges on your lens, avoid unnecessary cleaning.

A dirty lens barrel will not degrade image quality, but keeping the lens barrel clean may help avoid potential issues with the mechanics of the focus and zoom mechanisms. Use a lens cloth or tissue and lens-cleaning solution to keep your lens barrel clean.

Blowers

When it comes to dust removal by air, the best method is to use a blower, and to avoid using compressed air.



Brushes

There is a multitude of lens-cleaning brushes on the market. A high-quality one is recommended. Also, do not touch the brush bristles with your oily fingers.



Cloth, Tissues, and Cleaners

Lens tissue is relatively inexpensive. One use only, please. Discard the tissue after cleaning your lens.

Microfiber cleaning cloths are popular as well. There are a few precautions to help ensure their beneficial use. Keep them clean, as they will likely be used for multiple cleanings, and you do not want to re-apply dirt and grime or particles that may scratch your lens. If you wash the cloth, avoid using liquid fabric softeners, as they may leave a chemical residue on the cloth and create streaks on your lens.

Use your cotton t-shirt at your own risk. Again, if the lens does not need cleaning, do not clean it, but if you find yourself separated from your lens-cleaning gear and need to remove a smudge, using a clean 100% cotton t-shirt and warm breath is not the end of the world. Again, avoid liquid fabric softeners. You will find better (and safer) results with dedicated lens-cleaning tissues and cloths.

Cotton swabs are a good option for cleaning, and can be especially effective for cleaning the edges of a lens.

Facial tissue is not recommended, as some brands are abrasive and others contain oils and lotions that can streak your lenses.



Lens Cleaning Solution

Many lens manufacturers market specially formulated lens-cleaning solutions designed to accommodate optical coatings.

Apply the cleaning solution to the tissue or cloth, instead of directly to the lens. There are several reasons to do so. You want to avoid having beads of liquid running to the edge of the lens element and then entering the lens body



Cleaning Technique

Wiping in concentric circles will reduce the occurrences of streaking more than working across the lens.

Working from the center to the edge will move debris to the edges of the lens, away from the center of the image circle, in the event the objects do not get removed.

When wiping, apply only enough pressure to remove the offending smudge.