

SILENT SENTINEL ARE SPECIALISTS IN LONG RANGE
OPTICAL SENSORS INCLUDING BOTH COOLED AND
UNCOOLED THERMAL CAMERAS

Silent Sentinel AERON MAINTENANCE PROCEDURE

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If you need the latest version of this manual, please contact us. Silent Sentinel recommends that you use this manual under the guidance of professionals.

Version Control

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Introduction

The Silent Sentinel Aeron Cameras are state-of-the-art surveillance cameras designed for use in a wide range of environments. This manual outlines the suggested service and maintenance procedures to ensure optimal performance and longevity of the cameras.



A typical Aeron camera

Safety Precautions

Before performing any service or maintenance on the camera, please take note of the following safety precautions:

Always disconnect power from the camera before performing any maintenance.

Do not expose the power supply internals to water or moisture.

Use only approved accessories.

Do not attempt to service or repair the camera if you are not qualified to do so.

Always wear protective gloves when handling the camera.

Required Equipment

RA-WAA3 wiper blade

Anti-corrosion lubricant aerosol spray (GT85 or ACF50 or equivalent)

Duralac Anti Corrosive Jointing Compound (or equivalent)

Basic hand tools

General Maintenance

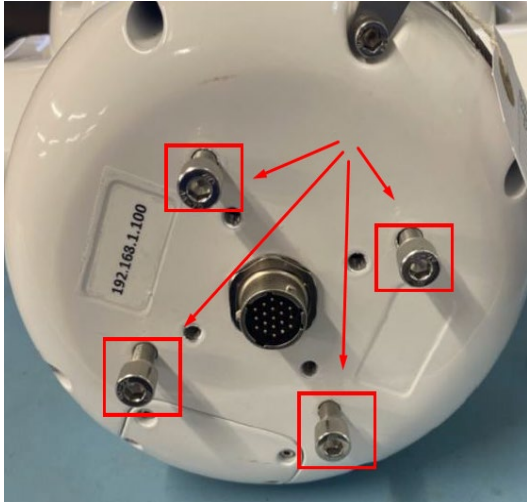
1. Inspect the camera and its accessories regularly for signs of wear and damage. If you notice any damage, discontinue use immediately and contact Silent Sentinel customer service for assistance.
2. Perform a function test to ensure everything is working as intended.
3. Clean the camera housing and lens regularly using a soft, lint-free cloth. Do not use abrasive materials or cleaning solutions as they may damage the camera or affect its performance (refer to the service procedures below)
4. Check the mounting hardware and ensure it is secure and free from damage.

Service Procedures

The Aeron cameras are non-serviceable in the field and therefore no caps or covers should be removed without the risk of moisture ingress.

1. Units fitted with wipers should have the wiper blade inspected for wear and potential damage and replaced every 3-6 months minimum using part number RA-WAA3 for the Aeron. Please refer to the wiper blade installation procedure on page 10.
2. The main installation cables are composed of a Polyurethane (PUR) jacket that is resistant to water and ultraviolet light and so suitable for use out of doors. Cables shall be regularly inspected to ensure there is no damage to the glands or the cable protective sleeving. Cables and connectors should be inspected to ensure that they remain correctly routed, tightened or secured, and are not contaminated with chemicals that may cause damage to the insulating material.
3. Ensure the cable gland nut (to the PSU) is securely tightened without cross-threading.
4. All connectors fitted to the Aeron are IP67 rated and therefore should not be removed if damaged on-site without the potential to lead to moisture ingress.
5. Connectors should be visually inspected for damage and corrosion.
6. Periodic removal and reconnection of the connector will exercise the locking mechanism and reduce the possibility of seizure.

7. It may be necessary to occasionally refresh the Duralac coating on the supplied treated aluminium fixing bolts, this will aid you for any removal of camera in the future and help reduce the decomposition of the camera by isolating it from any steel structure it may be affixed to. The aluminium bolts would need to be removed, coated and replaced one by one.



(Duralac Green is a chromate-free jointing compound designed to inhibit electrolytic decomposition between dissimilar metals.)

We are not affiliated or have any commercial gains from the Duralac product, our recommendation is purely on experience gained in providing camera systems, other brands maybe available for this application.

8. Annual inspection of the galvanic mounting kit including the rubber mat are required to verify its integrity. This may need replacing if it is showing signs of damage or deterioration.



9. For IR/Thermal imaging Aeron cameras, do not brush or rub the thermal window 'glass.' The Germanium material can be susceptible to scratching and abrasions which will degrade the optical performance. Wash with clean water only. Use a non-abrasive cloth to remove any deposits from the Daylight (glass) window.

Germanium Lens General Precautions:

Although the external side of the germanium lens is coated with a durable / erosion resistant coating (according to MIL standards), cleaning dust, sand and other particles might scratch the coating and eventually degrade the performance of the lens.

Cleaning:

Do not use tools or sharp objects when cleaning the lens.

A. Removal of hard particles and contaminants

- 1) In a clean room: Use compressed nitrogen to blow off dust and other particles.
- 2) In field conditions: Rinse lens with running water or use a wet cloth in order to remove sand, salt and other contaminants (do not apply pressure).
- 3) Wipe the lens using a soft tissue paper or lens tissue.

B. Cleaning with solvent

Usage of different solvents:

Acetone – removal of grease

Ethanol – removal of fingerprints and other contaminants

Alcohol – final cleaning (before use)

Harsh chemicals and abrasive cleaning materials should be avoided.

- 1) Immerse tissue paper in Alcohol / Propanol / Acetone or Ethanol (reagent grade).
- 2) Wipe the Germanium lens in "S" motion (so that each area of the lens will not be wiped more than once).
- 3) Repeat stage 2 until the lens is clean. Use a new tissue each time.

10. The Aeron should be periodically washed down with fresh water to reduce the build-up of dirt, debris, and organic deposits on the surfaces of the housing and sensor windows. Abrasive cloths, utensils, or chemicals such as strong solvents alkaline or acid cleaners should not be used to clean the equipment as they will permanently scratch the coated surface. The use of hard water for cleaning is not recommended due to its mineral content, as it can cause staining of the coating and may lead to long-term failures. Do not clean the surface if it is hot due to being in direct sunlight.

11. Any loose deposits which remain, remove with a wet sponge (water). If it is not possible to clean the surface as described above, use a light (non-metallic) brush or cloths, which may be used on paintwork areas along with a neutral mild household or neutral car wash detergent (following the supplier's instructions). After cleaning, rinse the surface thoroughly with fresh water.
12. In harsher environments, (such as highways, coastlines, power stations etc.), the conditions may be harsher with corrosive atmospheric content, (e.g. Salt, Sulphur, Nitrates).

In these locations, washing should be undertaken more frequently, and the housing thoroughly rinsed with clean, fresh water. Failure to remove these materials at this early stage will require the use of more aggressive cleaning materials and techniques that may result in damage to the coated surface. Therefore, it is strongly recommended to first test a small, inconspicuous test area to ensure that no colour change or damage arises.

Cleaning of Different Finishes

1. For gloss coatings follow above steps. It is highly recommended to use anti-corrosion lubricant aerosol spray (GT85 or ACF50) as a protective coating on surfaces after washing, avoiding contact/overspray on windows/lenses.
2. Metallic coatings contain mica or metallic flakes. Particular care must be taken when cleaning this kind of special finish. For routine cleaning, periodic washing with mild detergent is recommended. Any cleaning or repair by rubbing or polishing must be avoided as it may result in discolouration, colour change and irreversible damage to the coating.
3. Matt finishes: for cleaning, washing with a mild detergent is recommended. If repair or restoration is required, rubbing or polishing should be avoided since the gloss level of the coating could be affected.

Note:

Although the Aeron is designed for prolonged, outdoor use with minimal in-field servicing requirements. The frequency of the maintenance schedule should be determined by the end-user depending on the conditions in the environment of the installation.

As a general rule, the coated surface should be cleaned at least once a year in a normal environment. However, in areas where pollutants are more prevalent, especially in coastal or industrial areas, a more frequent cleaning programme should be carried out. Please see the following recommendations:

- **Normal environment - clean every 12 months**
- **Marine and/or industrial environment - clean every 3 months**
- **Wet & humid conditions - clean every 3 months**

Troubleshooting

In the event of a malfunction, first check the camera's power source and connections. Ensure that power is being supplied to the camera and that all connections are secure.

If the camera still fails to function correctly, contact Silent Sentinel customer service for assistance.

If the camera requires repair or replacement of components, do not attempt to perform these procedures yourself. Contact Silent Sentinel customer service to arrange for repair or replacement.

Conclusion

Proper service and maintenance of the Silent Sentinel Aeron Cameras is essential to ensure optimal performance and longevity of the camera. Regular inspection, cleaning, and adjustment of the camera's components are critical to maintain the camera's performance. If you encounter any issues or have any questions regarding the camera's operation, please contact Silent Sentinel customer service for assistance.

Wiper Blade Installation

This guide details the steps involved to removed and install a new replacement wiper blade onto a Aeron PTZ camera.

Installation Procedure

1. Ensure the existing camera wiper is in the parked position.



2. Power unit down the camera.

3. Remove the existing wiper by loosening the screw at the bottom of the wiper blade, then carefully remove the wiper and spring (note there should also be a spring with the replacement wiper blade and this should be used). **DO NOT ROTATE THE WIPER SHAFT**



4. Attach the new replacement wiper blade by putting it back onto the shaft. Ensure the spring is in place.



5. Carefully align the wiper so it is in the same wiper position as the removed wiper. Then push the wiper down (spring end) and tighten the screw.



6. Once complete, turn on the Aeron and test the wiper.
7. Should the wiper need realigning, then ensure the wiper is in the parked position (do not manually push the wiper to the parked position), power down the Aeron, adjust the wiper position using the above procedure, and then power up and retest the wiper. **DO NOT EXCEED THE PARKED POSITION WHEN REATTACHING.**

**** IMPORTANT NOTE****

DO NOT FORCE THE WIPER TO A NEW POSITION WHEN THE BOTTOM FIXING SCREW IS TIGHTENED – ALWAYS LOOSEN THIS SCREW TO ADJUST.