**WARNING!**
Do not operate this device until you are familiar with the contents of this manual. Keep this manual in a safe place for future reference. This Night Vision Device should only be used during night or low light conditions. It contains a light-sensitive image intensifier tube that can be damaged if exposed to excessive light. To prolong tube life and avoid damage, do not turn the unit on in daylight without the protective cover.

This Night Vision Device is equipped with a built-in IR illuminator that can be seen by other Night Vision Devices when it is turned on. Use this feature with caution.

This device will not show the difference between colored lights. It produces only a green viewing image. When color differentiation is needed, verification with unaided eyes is recommended.

All Image Intensified Devices require some light to operate such as moonlight or ambient starlight. Night vision devices will not penetrate smoke, fog, rain, or heavy snowfall. Cloud cover and tree shadows will reduce the effectiveness of this device.

Do not operate this Night Vision Device in a potentially explosive environment near gasoline fumes or other volatile materials. This is a high voltage electrical device.

Do not disassemble, puncture, recharge, or expose the battery to fire or high temperature. Doing so may result in an explosion and resulting chemical burns. When the device is not in operation for a prolonged period, remove the battery from the device and keep it separately in a cool and dry place.

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**Technical Specifications**

- **Image Intensifier**: Generation 2+3 US
- **Resolution**: 28-38 lp/mm (G2+)
- **Magnification**: 1x (3x or C mount optional)
- **Lens System**: 25 mm f1.1
- **FOV**: 40° @1000 yards
- **Range of Focus**: 10” to infinity 25 cm to infinity
- **Detection Range**: 656’ (G2+) 975’ (G3) 200 m (G2+) 300 m (G3)
- **Recognition Range**: 495’ (G2+) 775’ (G3) 150 m (G2+) 250 m (G3)
- **Diopter Adjustment**: +2 to -4
- **Weather Resistant**: Yes
- **Camera/Camcorder Adaptable**: Yes
- **IR Illuminator**: Yes
- **Battery Type/Life**: CR123/40 hours
- **Dimensions**: 5.5” x 1.8” x 2.0”
- **Operating Temperature**: -4°F to 113°F
- **Weight**: 16 oz / 454 grams
- **Warranty**: 2 years

**Description of D-300**

D-300 can be configured with variety of image intensifiers and is the most versatile night vision system in our product line. The long list of standard features such as Mil. Spec. optics, high-power multi-stage infrared illuminator, and internal low battery and infrared indicators are packaged into a compact and rugged housing. With an extensive variety of optional accessories such as the P-500 weapon module, headgear, magnification objectives and camera/camcorder adapter, D-300 can be easily configured for any mission requirements.
OPERATION

1. Battery Installation

- Remove the battery compartment cover
- Insert battery
- Replace the battery compartment cover

**WARNING!**
Prior to installing the battery make sure that day time protective cover is fitted over the lens. Excessive light can damage intensifier module and void warranty.

2. Controls

a. ON/OFF Switch (10). Turn this switch clockwise once to turn the unit ON. Turn it counterclockwise to turn the unit OFF. Check the battery for the required 3V current if the unit fails to turn on.

b. IR illuminator operation (10). IR illuminator is intended for providing additional illumination in especially dark conditions. Use this feature with caution since active IR illuminator can be seen by other night vision devices. Turn switch clockwise to the ON position to turn the IR illuminator OFF. IR illuminator cannot be turned ON when the main unit is turned OFF.

c. Focusing the image. Looking at the object, rotate the eyepiece focusing ring (5) until the sharpest image is achieved. Adjust the front objective (3) to achieve the sharpest image for varying distances. Adjust the eyepiece focus again if needed. Once the eyepiece is set for your eyesight it does not need to be refocused for differences in distance. Only front objective has to be adjusted in order to achieve maximum resolution.

**NOTE:** The image will be seen only when the objective lens and eyepiece are properly focused. The objective focus lens focuses on the objects at varying distances and eyepiece focus adjusts to the individual eyesight. These adjustments operate independently and must be made separately.

3. Head Mount Attachment (optional)

Press locking lever and insert the Viewer adapter into the head mount adapter and release the lever.

4. Head Mount Controls

- Release the thumb screw, rotate the Viewer to Your left or right eye and tighten the thumb screw.
- Press the button to move the Viewer along the bracket horizontally.

The head mask rotary adapter design makes it possible for you to operate using right or left eye on your choice. To move the PREDATOR to the most comfortable position:
ALTERNATIVE LENS INSTALLATION (OPTIONAL)

Optional 1” C-mount adapter allows for installation of alternative lenses that are common with 35 mm SLR cameras for increased magnification or field of view.

NOTE: There may be noticeable device performance degradation or problems with focusing when using alternative lens systems that are not supplied with the D-300.

ATTACHMENT TO 35MM SLR CAMERA (OPTIONAL)

Color Sensitivity
Night Vision Devices are more responsive to red and white lights than green and blue lights. Because of this, distant red and white lights may appear closer than green or blue lights. Exercise extreme caution when using these lights for navigation. Periodically verify the distances to these lights with your unaided eyes.

Extreme Darkness
Night Vision Devices are effective under most dark conditions including overcast starlight. They are not practical in an extremely dark environment such as in a tunnel where there is no natural ambient light. Without sufficient ambient light, the operator may notice pinpoint-size sparkles (scintillation or noise) in the image area. These sparkles are small amounts of energy generated inside the image intensifier that strike the phosphor screen and are an indication that the device is working.

Contrast Reversal
Night Vision Devices detect light that cannot be seen by the human eye. This light is often referred to as being in the near-infrared light spectrum. The existence of this light and the manner in which it reflects is not normally visible to the naked eye. For this reason, objects that normally appear lighter than their surroundings may appear dark against a light background. In addition, the output image of the Night Vision Device is dependent on the reflective quality of the objects the operator sees in the viewing area. Objects that appear light during the day but have a dull surface may appear duller when viewed through a Night Vision Device. All of these factors must be taken into account when utilizing a Night Vision Device for observation or navigation purposes.

Depth Perception
Night Vision does not present normal depth perception. Use extreme caution when using a Night Vision Device where reliance upon depth perception is important.

Fog and Rain
Night Vision Devices are very responsive to reflected ambient light; therefore, fog or heavy rain can reflect too much light toward the Night Vision Device and may seriously degrade its performance.

Honeycomb
This is a faint hexagonal pattern throughout the image area. This effect is more noticeable under high light conditions. Do not be concerned - the honeycomb effect is an inherent characteristic of all high-amplification night vision systems that incorporate a microchannel plate in the intensifier.

Black Spots
These are cosmetic blemishes in the image intensifier. They do not affect the performance or reliability of a night vision device and a number of sizes are inherent in the manufacturing process.

Image Intensifier Life
Night Vision Devices are designed to be robust. The image intensifier tube, however, does not have an unlimited lifetime. The life of the image intensifier is dependent upon the amount of use. Under normal operating conditions, it will provide reliable performance for an extended period of time.

NIGHT VISION CHARACTERISTICS

Monochromatic Image
Night Vision Devices produce a monochromatic image. You will not be able to see any differentiation between colors. In particular, red and green lights will both appear green. Take care to verify color differences with unaided vision. Exercise extreme caution when operating aircraft, ground vehicles, or marine vessels while using night vision equipment.

ATTACHMENT TO CAMCORDER (OPTIONAL)

NOTE: In order to achieve proper focusing turn off camcorder’s automatic focusing and use manual setting in macro function.
### MAINTENANCE

**Optics**
Always clean the optics with a suitable optical cleaning cloth. Do not use detergents or excessive moisture to clean any part of the Night Vision Device.

**Battery/Battery Compartment**
Any Night Vision Device that is to be stored for a long or undetermined amount of time must have the batteries removed.

**Moisture**
The Night Vision Device is water resistant. No warranties or guarantees apply to a Night Vision Device that has been submerged in water. Take great care when using any night vision in a wet environment as the image intensifier tube is sensitive to moisture.

**Salt Water**
If the Night Vision Device is exposed to a salt water environment, wipe it off with a clean cloth slightly dampened with fresh water and dry it thoroughly. Take special care of the optics as noted above.

### Sunlight
Night Vision is sensitive to light and must be stored away from direct contact with bright light sources of any kind.

**WARNING!**
Improper care or unauthorized maintenance can damage device and may result in warranty nullification.

### TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>No visible image</td>
<td>a. Objective lens cap not been removed.</td>
<td>a. Remove cap</td>
</tr>
<tr>
<td></td>
<td>b. Battery cover is loose.</td>
<td>b. Tighten cover</td>
</tr>
<tr>
<td></td>
<td>c. Incorrect battery polarity</td>
<td>c. Re-insert battery</td>
</tr>
<tr>
<td></td>
<td>d. Weak battery</td>
<td>d. Replace battery</td>
</tr>
<tr>
<td>Image flickers, flashes, or clicking is heard</td>
<td>a. Normal for new battery to cause this for first five minutes.</td>
<td>a. If condition continues contact manufacturer for service instructions</td>
</tr>
<tr>
<td>Dark spots on screen</td>
<td>a. Cosmetic blemishes. Normal for this technology.</td>
<td>a. Acceptable as long as it does not interfere with operation of the device</td>
</tr>
<tr>
<td>Image not clear</td>
<td>a. Focus is not adjusted.</td>
<td>a. Adjust focus</td>
</tr>
<tr>
<td></td>
<td>b. Too close to object</td>
<td>b. Increase viewing distance.</td>
</tr>
<tr>
<td>Fixed pattern noise. (honeycomb)</td>
<td>a. Cosmetic blemishes caused by too much illumination.</td>
<td>a. Acceptable as long as target resolution can be resolved.</td>
</tr>
<tr>
<td>Pattern of dark thin lines (chicken wire)</td>
<td>a. Normal under worst conditions. These lines will form hexagonal or square wave-shaved lines.</td>
<td>a. Acceptable as long as it does not interfere with operation of the device</td>
</tr>
<tr>
<td>Image dimmer than usual</td>
<td>a. Weak batteries</td>
<td>a. Replace the batteries.</td>
</tr>
<tr>
<td></td>
<td>b. Low natural illumination level.</td>
<td>b. Turn on IR Illuminator.</td>
</tr>
</tbody>
</table>

### WARRANTY
The D-300 is covered by a limited 2 year warranty from time of sale. The warranty is valid only for the original purchaser. The manufacturer warrants its products to be free from defects in material and workmanship during the warranty period. If the product proves to be defective during this period, the manufacturer will repair the original product or replace it with a like product at the sole discretion of the manufacturer. This limited warranty does not cover:
1. Any product on which the serial number has been defaced, modified, or removed.
2. Any product that has experienced deterioration or a malfunction from: accidents, misuse, neglect, fire, water, lighting or other acts of nature, unauthorized product modification or failure to follow instructions supplied with the product, repair or attempted repair by anyone not authorized to do so, use of supplies or parts not meeting manufacturer’s specifications, normal wear and tear, and/or extreme wear and tear caused by battlefield conditions or other extreme environments.

Customer is hereby notified that operation of this device during daylight hours or under excessive light conditions may permanently damage internal components and said damage will not be covered under this warranty.

No other warranties, expressed or implied, are valid without an agreement in writing provided by the manufacturer.

All shipping involved in warranty work/replacement is the sole responsibility of the purchaser.

**LIMITATIONS OF LIABILITY**
Night Optics USA, Inc. will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. Operation and use of this product are the sole responsibility of the Customer. Night Optics USA, Inc.’s sole responsibility is limited to providing the products and service outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by Night Optics USA, Inc. to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit or creating any obligation toward any third party of legal entity outside Night Optics USA, Inc. and Customer. Night Optics USA, Inc.’s obligations under this Agreement extend solely to the Customer. Night Optics USA, Inc.’s liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to Night Optics USA, Inc. by the Customer or the Customer’s dealer. Night Optics USA, Inc. shall not, in any event, be liable for special, indirect, incidental, or consequential damages, including, but not limited to, lost income, lost revenue, or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of breach of warranty, breach of agreement, negligence, strict liability, or any other theory of liability.

### ACCEPTANCE CERTIFICATE
Night Vision Device D-300 conforms to manufacturer’s specifications.

**Serial #**
________________________

**Date of Sale**
________________________

**Signature:**
________________________

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