



# VEGA

## Night Vision Goggles



## USER'S MANUAL

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## PARTS OF THE GOGGLES



### CAUTION:

**This product contains natural rubber latex which may cause allergic reactions!** FDA has noted an increase in the number of deaths reported to the agency that are associated with an apparent sensitivity to natural latex proteins. If you are allergic to latex, it is a good idea to learn which products contain it and strictly avoid exposure.

We provide the information in this manual for familiarization purposes only; the contents may undergo further changes with no commitment by Armasight to keep customers notified about any updates.

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# 1. DESCRIPTION AND DATA

## DESCRIPTION

If low-cost, high quality head-mounted night vision is what you need, the Armasight Vega is the best choice for you! The Generation 1 Vega comes complete with a head mount that allows the unit to be positioned over either eye, and is the perfect inexpensive, hands-free option for air soft games, paintball, hunting or security at night, where the Armasight Vega will give you the edge. A built-in, short-range IR illuminator allows the Vega to work exceptionally well even in complete darkness, and an optional Armasight long-range infrared illuminator will dramatically boost your viewing range when required. The Armasight Vega features all-glass optics, a single, push-button control, and durable, reinforced composite housing.

## FEATURES

- Compact and Lightweight
- Designed for Hand-Free operations
- High resolution Gen. 1+ Image Intensifier Tube
- Built-in Flood infrared illuminator
- Fully adjustable headgear for ultimate comfort
- Flip-Up headgear
- Special design which allows the unit to be positioned over either eye
- Can be used in conjunction with long-range IR Illuminator
- Water and fog resistant
- Limited Two-Year Warranty

## SPECIFICATIONS \*

Generation	1+
Magnification	1x
Objective lens diameter (mm)	20.6
Lens system	35 mm; F/1.7
Field of view (°)	35
Focus range (m)	0.2 to infinity
Exit pupil diameter (mm)	8
Eye relief (mm)	20
Power Supply	CR-123 Lithium (1) 3V
Battery life IR On (hour)	up to 12
Battery life IR Off (hour)	up to 58
Body material	Glass-fiber reinforced composite
Lens material/type	Multicoated heavy glass
Operating temperature (°C)	-30 to +45
Dimensions (LxWxH, mm/in)	147 x 82 x 46 / 5.8 x 3.2 x 1.8
Weight (kg/lbs)	0.25 / 0.54

\* Armasight© reserves the right to modify these specifications at any time without notice.

## STANDARD COMPONENTS AND OPTIONAL EQUIPMENT

### 1) Armasight Vega Goggles

Night vision goggles with 1x magnification.

### 2) Objective Lens Cap

The Objective Lens Cap is designed to protect the objective lens from physical damage, as well as allow the testing of the device's operation in daylight.

### 3) Eye Cup

The rubber eye cup is designed to protect the eyepiece and to provide comfort of use for the user.

### 4) CR123A Lithium Battery

3V CR123A lithium batteries are used to supply power to the unit.

### 5) Head Mount

Adjustable universal assembly that secures the goggles to the user's head, providing hands-free operation.

### 6) User Manual

The user manual contains a full description of the device and accessories, information about controls, installation, maintenance and troubleshooting procedures.

### 7) Carrying Case

The carrying case is used to store and carry the Vega goggles and accessories.

### 8) Optional IR810 Detachable Long Range IR illuminator (Part# ANKI000016)

Extra long-range infrared illuminator. Provides greater viewing capabilities when the environment has little or no ambient light. Dovetail to Weaver Transfer Piece #21 is included.

## 2. PREPARATIONS FOR OPERATION

### WARNING:

The Vega night vision goggles are designed for several years of reliable service. To ensure trouble-free performance, please observe the following instructions:

- Do not activate the device in daylight unless the protective lens cover is fitted securely over the lens. If the device is ON, do not direct the device at bright light sources, such as car headlights, camp fires, street lights, etc., as this will cause damage to the device.
- Do not check the device operation in daylight unless the front lens cap is fitted securely over the lens, and even then, the device should only be ON for the few seconds it takes to establish correct operation.
- Do not open the body of the device or otherwise disassemble it.
- Avoid dropping or otherwise impacting the device.
- Do not expose the device to moisture or extreme temperatures.
- Do not touch the lenses. Clean optical parts with a clean, soft cloth, and only use professional lens cleaners designed for use with optics.
- Do not forget to remove the battery from the battery compartment if the device is to be stored for **more than 3 days**.
- Do not forget to turn the device OFF during periods of non-operation.

### **WARNING:**

Take into consideration the following information and restrictions in order to avoid damaging the device and to ensure a long service life and failure-free operation:

- Performance of the device in nighttime conditions depends on the level of ambient light in the environment. Some light (moonlight, starlight, etc.) is required for the device to provide an image.

- Ambient light level is reduced by the presence of clouds, shade, or objects that block natural light (buildings, trees, etc.).
- The device loses its effectiveness when operated in shadowed areas.
- The effectiveness of the device is adversely affected by weather conditions such as rain, snow, sleet, or fog, and environmental conditions such as smoke or dust.
- The device resolution level is reduced in environments with very low light sources. The visibility will degrade significantly under starlit conditions, particularly in low contrast environments such as deserts, large areas of uniform vegetation, etc.
- The device is equipped with a protection system that will automatically disable the image intensifier tube when the illuminance level stays above 40 lux for over 10 seconds.

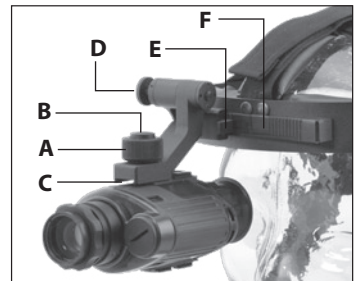
## **BATTERY INSTALLATION**

- 1) Unscrew the battery compartment cap on the front side of the goggles body.
- 2) Insert the CR123A battery into the battery compartment in accordance with polarity markings.
- 3) Screw the cap onto the place.

## **ATTACHING THE VEGA TO A HEAD MOUNT**

To attach your Vega to a head mount perform the following steps:

- 1) Loosen the screw (A), press the button (B); put the monocular rail into the headset socket (C).
- 2) Put the head mount, with the Vega attached, on your head.
- 3) Loosen the screw (A) and perform an eye relief adjustment by moving the monocular on the rail.
- 4) The head mount intended for use with the Vega is fitted with a flip-up mechanism. Press the button (D) from the head mount side and lift the monocular to the top position.
- 5) To return the unit back to the operating position, press the button (D) again and lower the monocular.
- 6) The unit can be accommodated for observation with either the left or the right eye. To switch the unit position for observation from one eye to the other, remove the unit from the adapter, turn the unit to 180 and attach it to the headset over the desired eye.
- 7) Press the button (E) and move the monocular on the rail (F) to reach the most comfortable position for observation.



## 3. OPERATION INSTRUCTIONS

### CONTROLS

The Vega is designed to meet the needs and requirements of various users. Each user can individually set the unit to the most desirable and effective position with the help of the controls. The Vega unit controls and indicators are shown and detailed further, below:

**Operation Button.** Press the button to turn the unit **ON**. Press the button again to turn the built-in IR illuminator on. Press the button a third time to turn the unit **OFF**. The IR will also turn off automatically.

**Lens Focus.** Focuses the objective lens. Adjust the lens for sharpest image of viewed object.

**Diopter Adjustment.** Focuses the eyepieces. Focus the eyepieces to get a clear image on the IIT screen.

**Power/IR ON Indicator.** The LED indicator located near the ocular will light up **green** when unit is on, and will change to **red** when built-in IR illuminator is activated.

**Low Battery Indicator.** The **flashing red** LED indicates that the battery is low.

### FOCUSING

1) Adjust the diopter. For the best possible image resolution, you must first adjust the eyepiece (diopter). Turn the diopter adjustment ring clockwise until it stops. While looking through the eyepiece, observe the scene and slowly begin turning the diopter adjustment ring counterclockwise until the image becomes clear and sharp.

2) Adjust the lens focus. To focus your Vega at different distances, simply rotate the objective lens focus ring.

### TESTING PROCEDURES

#### CAUTION:

Do not test the scope in daylight conditions for more than 10 minutes, even with lens protective cap on.

To check device operation in daylight or in an illuminated room observe the following procedures:

- 1) Verify that the battery is inserted into the battery compartment in accordance with polarity markings on the goggles' body.
- 2) Verify that the objective lens is closed securely.
- 3) Activate the unit by pushing the operation button, but without removing the protective caps. While looking through the eyepiece of your Vega, observe the scene. Verify whether or not the green light is indicating that correct IIT operation is occurring.

### OPERATION IN NIGHTTIME CONDITIONS

#### CAUTION:

Avoid exposing the goggles to bright light sources. Bright light emitted by fires, automobile headlights, lanterns, projectors, etc. will cause serious damage your Vega.

- 1) Visually estimate the illuminance level in the viewing area. Operation with the objective lens cap off is safe when the illuminance level is less than 1 lux; at an illuminance level of 1 lux, you will barely be able to read a newspaper, even after your eyes have adapted to the low light conditions.
- 2) Verify that the battery is inserted into the battery compartment in accordance with the polarity markings on the goggles' body.

- 3) Remove the front lens cap.
- 4) Activate the unit by pushing the operation button. A green light indicating correct IIT operation will appear after a momentary delay.
- 5) Observe the scene and focus your Vega.
- 6) Turn the unit off after completing your operations. The green glow will disappear from the eye-piece.
- 7) Securely place the objective lens cap over the objective lens.

## IR ILLUMINATOR OPERATION

### CAUTION:

Do not forget that light emitted from the IR illuminator is invisible to the naked eye; however, it can be easily detected when using night vision devices.

Infrared illuminators are used in areas where the level of light is not sufficient for surveillance. An IR illuminator can provide an extra source of infrared light, which, although invisible to a naked eye, can greatly enhance the performance of night vision devices. Turn on the IR illuminator when working in total darkness. Please remember that the beam emitted by your IR illuminator will lose its brightness over distance. The built-in IR illuminator is designed to provide additional source of light for reading maps or other basic, short-range applications; the viewing distance is up to 3m.

You can activate the IR illuminator of your goggles by pushing the operation button a second time after you've turned the unit on. A green LED light will appear when the IR illumination is turned on.

### NOTE:

The IR will automatically turn off when the unit's main power is turned OFF.

## OPTIONAL IR810 ILLUMINATOR

IR810 long-range infrared illuminator provides greater viewing capabilities when the environment has little or no ambient light.

To mount an IR810 Long Range Infrared Illuminator to the Vega, use the optional Dovetail to Weaver Transfer Piece. Perform the following steps:

- 1) Install the transfer piece onto one of the Vega rails.
- 2) Tighten the two fixing screws on the transfer piece.
- 3) Loosen the IR illuminator fixing screw.
- 4) Mount the IR illuminator on the Weaver rail of transfer piece and tighten the fixing screw.

## 4. MAINTENANCE PROCEDURES

The Vega should always be stored in the supplied packaging, particularly in heated and ventilated rooms. To keep the device operational, please follow the instructions listed previously regarding preparations for storage. The battery should be stored separately from the device and be inserted into the battery compartment **only** when the device is being prepared for use. The presence of both acids and alkalis near the goggles is not recommended.

When stored, your Vega should be protected from exposure to direct sunlight or extreme temperatures.

## GOGGLES CLEANING PROCEDURES

- 1) Gently remove any dirt from the goggles using a clean, soft cloth.
- 2) Wipe external surfaces down (with the **exception** of optical surfaces) with a clean cloth moistened with pure water.
- 3) Dry all wet surfaces with a different clean, dry cloth.
- 4) Carefully remove any dirt from the optical surfaces using a lens brush.
- 5) To avoid scratches, optical surfaces must be cleaned using a clean cotton swab that has been slightly dampened with pure alcohol. The glass should be wiped in circular motions starting from the center and moving out towards the edge, without touching the barrel. Change the cotton swab as soon as it becomes dirty.

## PREPARATION FOR STORAGE

When preparing your Vega for storage, perform the following steps:

- 1) Verify that the goggles are operating in accordance with all previously specified procedures.
- 2) Remove the battery from the battery compartment.
- 3) Clean the goggles and all accessories.
- 4) Place all components into the storage case.

## 5. TROUBLESHOOTING

Common problems that may occur with your goggles or the detection and viewing tests, as well as actions you can take to correct them, are listed in the Troubleshooting Table, below. **This table does not list all of the malfunctions that may occur with your device.** If you experience a malfunction of the device that is not listed in this table, please contact Armasight or your Vega retailer.

### NOTE:

Before you use this table, be sure you have performed all normal operational safety, care and handling checks and procedures. If your device malfunctions in a way not listed in this table, contact Armasight or your Vega retailer.

### Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	ACTION
The goggles do not turn on	Press operation button.	Press the operation button repeatedly.
	Inspect for a missing, defective or improperly installed battery.	Replace the battery or install it properly
<i>If these actions fail, submit the device for unit level maintenance.</i>		
Poor image quality	Check if the goggles are focused.	Focus the ocular and objective.
	Check if the lenses are greasy, fogged or dirty.	Thoroughly clean the surfaces of each lens.
<i>If the problem persists, contact your service center.</i>		
Light visible through the eyecups	Check the exit pupil distance value.	Press the eyecup to your face.
	Check the eyepiece resilience.	If the eyecup is defective, contact your service center.
Diopter adjustment cannot be performed	Check to see if the diopter adjustment ring is deformed or broken.	If the diopter adjustment ring is damaged, contact your service center.
Lens focus cannot be performed	Check to see if the lens focus adjustment ring is deformed or broken.	If the lens focus adjustment ring is damaged, contact your service center.
IR illuminator does not switch on	Turn the IR illuminator on in dark area. Visually estimate if the observed scene is properly lighted.	If the IR illuminator does not turn on, contact your service center.



## 6. WARRANTY INFORMATION

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of two (2) years from the date of purchase. In the event that a defect covered by the below warranty occurs during the applicable period stated above, Armasight, at its discretion, will either repair or replace the product; such action on the part of Armasight shall be the full extent of Armasight's liability, and the Customer's sole and exclusive repair. This warranty does not cover a product if it has (a) been used in ways other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications or repairs by the Customer or by any party other than Armasight without prior written consent of Armasight; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either Armasight or the Armasight dealer; or (e) merchandise that has been discontinued by the manufacturer and either parts or replacement units are not available due to reasons beyond the control of Armasight. Armasight shall not be responsible for any defects or damage that in Armasight's view are a result from the mishandling, abuse, misuse, improper storage or improper operation of the device, including use in conjunction with equipment that is electrically or mechanically incompatible with, or of inferior quality to, the product, as well as failure to maintain the environmental conditions specified by the manufacturer. CUSTOMER IS HEREBY NOTIFIED THAT OPERATION OF THE EQUIPMENT DURING DAYLIGHT HOURS OR UNDER ANY EXCESSIVE LIGHT CONDITIONS MAY PERMANENTLY DAMAGE THE INTERNAL COMPONENTS OF THE UNIT AND SAID DAMAGE WILL NOT BE COVERED UNDER THIS WARRANTY. This warranty is extended only to the original purchaser. Any breach of this warranty shall be enforced unless the customer notifies Armasight at the address noted below within the applicable warranty period.

The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

### LIMITATION OF LIABILITY

Armasight 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 the product are the sole responsibility of the Customer. Armasight's sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by Armasight to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside Armasight and the Customer; Armasight's obligations under this Agreement extend solely to the Customer. Armasight's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to Armasight by the customer or customer's dealer. Armasight 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 a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.

**PRODUCT WARRANTY REGISTRATION**

In order to validate the warranty on your product, Armasight must receive a completed Product Warranty Registration Card for each unit, or the Customer can complete a warranty registration on our website, at [www.armsight.com](http://www.armsight.com). Please complete the included form and immediately mail it to our Service Center:

Armasight Inc.  
815 Dubuque Avenue  
South San Francisco  
CA 94080  
United States of America.

**OBTAINING WARRANTY SERVICE**

To obtain warranty service on your unit, the End-user (Customer) must notify the Armasight service department via email. Send any requests to [service@armsight.com](mailto:service@armsight.com) to receive a Return Merchandise Authorization number (RMA). When returning any device, please take in the product to your retailer, or send the product, postage paid and with a copy of your sales receipt, to Armasight Corporation's service center at the address listed above. All merchandise must be fully insured with the correct postage; Armasight will not be responsible for improper postage or merchandise that becomes lost or damaged during shipment. When sending product back, please clearly write the RMA# on the outside of the shipping box. Please include a letter that indicates your RMA#, the Customer's Name, a Return Address, reason for the return, Contact information (valid telephone numbers and/or an e-mail address), and proof of purchase that will help us to establish the valid start date of the warranty. Product merchandise returns that do not have an RMA# listed may be refused, or a significant delay in processing may occur. Estimated Warranty service time is 10-20 business days. The End-user/ Customer is responsible for postage to Armasight for warranty service. Armasight will cover return postage/ shipping after warranty repair to the End-user/ Customer only if the product is covered by the aforementioned warranty. Armasight will return the product after warranty service by domestic UPS Ground service and/ or domestic mail. Should any other requested, required or international shipping methods be necessary, the postage/ shipping fee will be the responsibility of the End-user/ Customer.

**ARMASIGHT PRODUCT WARRANTY REGISTRATION CARD**

**PRODUCT INFORMATION**

Product Name \_\_\_\_\_ Purchased Form \_\_\_\_\_

Purchase Date \_\_\_\_\_ Product Serial # \_\_\_\_\_

**CUSTOMER INFORMATION**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Country \_\_\_\_\_ Zip \_\_\_\_\_

Day Phone # \_\_\_\_\_ Home Phone # \_\_\_\_\_

E-mail address \_\_\_\_\_

.....  
Customer Signature Required

## FOR NOTE



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[www.armasight.com](http://www.armasight.com)