

12UN41294194111

AGM Global Vision UNVG 3APW Ultralight Night Vision Goggle/Binocular User Manual

Model: 12UN41294194111

1. INTRODUCTION

This user manual provides comprehensive instructions for the safe and effective operation, maintenance, and troubleshooting of your AGM Global Vision UNVG 3APW Ultralight Night Vision Goggle/Binocular. This advanced optical device is designed for enhanced visibility in low-light and total darkness conditions, featuring Gen 3 Auto-Gated, P45-White Phosphor Image Intensifier Tubes (IIT).

Please read this manual thoroughly before using the device to ensure optimal performance and longevity.

2. KEY FEATURES

- **Low Power Consumption Design:** Utilizes a single AA battery or an external battery pack for extended operational periods.
- **Flip-Up Auto Off Feature:** Each image intensifier tube automatically deactivates when the goggle is flipped up, conserving battery life.
- **Corrosion and Impact-Resistant Housing:** Constructed with PEEK+Glass fiber material and a matte black finish for durability and longevity in various environments.
- **Quick Attachment Design:** Features a dovetail base support for strong compatibility and secure mounting.
- **PVS-14-style Compatible:** Objective and eyepiece lenses are designed for compatibility with PVS-14 style components and attachments.
- **Independent Pod Movement:** Individual optical pods can roll up and down, allowing for quick configuration changes and improved operational flexibility.
- **Single/Double Eye Configuration:** Pods are independently adjustable, enabling use in either monocular or binocular modes.
- **IR Complement Function:** Integrated infrared illuminator enhances visibility in complete darkness and close-quarters environments.
- **Manual Gain Control:** Allows the user to adjust the image intensifier gain for optimal vision preferences based on ambient light conditions.
- **New Simplified IP Stop Design:** Improved interpupillary (IP) stop design allows for comfortable and

precise adjustment of tube positions.

3. COMPONENTS AND CONTROLS

Familiarize yourself with the various components and controls of your night vision goggle for proper operation.



Figure 3.1: Front-left view of the UNVG 3APW Night Vision Goggle, showing the objective lenses and eyepiece assemblies.



Figure 3.2: Side view of the UNVG 3APW, highlighting the compact profile and mounting interface.



Figure 3.3: Front view of the UNVG 3APW, showing the objective lenses and the central bridge.



Figure 3.4: The UNVG 3APW Night Vision Goggle displayed alongside its carrying case and external battery pack.

Key Controls:

- **Power/Gain Control Knob:** Used to turn the device on/off and adjust image brightness.
- **Diopter Adjustment Ring:** Located on the eyepiece, used to adjust focus for individual eye sight.
- **Objective Lens Focus Ring:** Used to focus the image for varying distances.
- **IR Illuminator Button:** Activates the built-in infrared illuminator.
- **Interpupillary Distance (IPD) Adjustment:** Allows adjustment of the distance between the two optical pods to match the user's eye spacing.

4. SETUP AND INITIAL USE

4.1 Battery Installation

1. Locate the battery compartment on the device.
2. Open the battery compartment cover.
3. Insert one AA (1.5V) battery, ensuring correct polarity (+/-). Alternatively, connect the external battery pack (four AA or two CR123A batteries) if desired.
4. Securely close the battery compartment cover.

4.2 Mounting

The UNVG 3APW features a dovetail base for quick and secure attachment to compatible helmet mounts or head harnesses.

1. Align the dovetail base of the goggle with the corresponding slot on your mounting system.
2. Slide the goggle into place until it clicks securely.
3. Ensure the goggle is firmly attached and does not wobble.

4.3 Adjustments

- **Interpupillary Distance (IPD):** Adjust the distance between the two optical pods (56 to 72 mm) until you see a single, clear circular image. Use the simplified IP stop design to set your preferred tube positions.
- **Diopter Adjustment:** While looking through the eyepiece, rotate the diopter adjustment ring (-6 to +2 diopters) until the reticle or image appears sharp for your individual eyesight.
- **Objective Lens Focus:** Rotate the objective lens focus ring to bring distant or close objects into sharp focus (focus range: 0.25m to Infinity).

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- To power on the device, rotate the Power/Gain Control Knob clockwise from the OFF position.
- To power off, rotate the knob counter-clockwise to the OFF position.
- The device features a **Flip-Up Auto Off** function: when the goggle is flipped up and out of the line of sight on a compatible mount, the image intensifier tubes will automatically turn off to conserve battery. Flipping it back down will reactivate the tubes.

5.2 Manual Gain Control

After powering on, continue rotating the Power/Gain Control Knob to adjust the brightness (gain) of the image. Increase gain in very dark conditions and decrease it in brighter low-light environments to achieve optimal image clarity and contrast.

5.3 IR Illuminator Use

The built-in IR illuminator provides additional illumination in conditions of absolute darkness or when observing objects at very close range.

- Press the IR Illuminator Button to activate the infrared illuminator.
- Press the button again to deactivate it.
- *Note: The IR illuminator is invisible to the naked eye but can be detected by other night vision devices. Use judiciously.*

6. MAINTENANCE AND CARE

Proper maintenance ensures the longevity and optimal performance of your night vision goggle.

6.1 Cleaning

- **Lenses:** Use a soft, lint-free cloth specifically designed for optical lenses. Gently wipe the lens surfaces. For stubborn smudges, use a small amount of lens cleaning solution applied to the cloth, not directly to the lens.
- **Housing:** Wipe the exterior housing with a soft, damp cloth. Avoid abrasive cleaners or solvents.
- Do not immerse the device in water, despite its IP67 rating, unless specifically instructed for cleaning.

6.2 Storage

- Remove batteries if storing the device for extended periods to prevent leakage and damage.
- Store the goggle in its protective carrying case in a cool, dry place, away from direct sunlight and extreme temperatures.
- Avoid storing in areas with high humidity.

7. TROUBLESHOOTING

If you encounter issues with your night vision goggle, refer to the table below for common problems and their solutions.

Problem	Possible Cause	Solution
Device does not power on.	Batteries are dead or incorrectly installed.	Replace batteries or ensure correct polarity. Check external battery pack connection if used.
Image is dim or dark.	Gain control set too low; insufficient ambient light; bright light cut-off activated.	Increase gain using the control knob. If in extremely dark conditions, activate IR illuminator. Move away from bright light sources.
Image is blurry or out of focus.	Diopter or objective lens focus not adjusted correctly.	Adjust the diopter ring for your eyesight and the objective lens focus ring for the viewing distance.
IR Illuminator not working.	IR illuminator not activated; low battery.	Press the IR illuminator button. Ensure batteries have sufficient charge.
Device powers off when flipped up.	This is the intended "Flip-Up Auto Off" feature.	No action required. Flip the device back down to reactivate.

8. TECHNICAL SPECIFICATIONS

Parameter	Value
Interpupillary Distance	56 to 72 mm
Image Intensifier Tube	Gen 3 Auto-Gated "White Phosphor 3APW"
Resolution	64-72 lp/mm
Magnification	1x

Parameter	Value
Lens System	25 mm; F/1.23
Field of View (FOV)	40°
Focus Range	0.25m to Infinity
Diopter Adjustment	-6 to +2 diopters
Infrared Illuminator	Yes (Built-in)
Bright Light Cut-Off	Yes
Battery Type	One AA (1.5V) or External Battery Pack (four AA or two CR123A)
Exit Pupil Diameter	14 mm
Environment Rating	IP67
Operating Temperature Range	-40°C to +50°C
Storage Temperature Range	-50°C to +70°C
Dimensions	4" x 4.6" x 3.3"
Weight	1.1 lb
Material	PEEK+Glass fiber
Color	Black

9. WARRANTY AND SUPPORT

Information regarding a specific warranty for this product is not provided in the product details. For any warranty claims, technical support, or service inquiries, please contact the manufacturer or your point of purchase directly.

Always refer to the official manufacturer's website or contact their customer service for the most up-to-date support information.