

ATN PS-14

MULTI-USE NIGHT VISION MONOCULAR



u s e r ' s g u i d e

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**AMERICAN
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CORP.**



CAUTION:

THIS PRODUCT CONTAINS NATURAL RUBBER LATEX WHICH MAY CAUSE ALLERGIC REACTIONS.

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FEATURES

- High Quality light intensifier tube
- Super fast lens system provides the user with a clear and sharp image
- Built-in Infra-Red illuminator lets you see even in total darkness
- Interchangeable lenses for different magnification
- Adjustable Flip-up head mount for hands free use
- Automatic brightness control for high-light protection
- IR-on and Low Battery indicators
- Rugged and versatile design
- Single switch knob operation
- Camera/camcorder-adaptable
- Helmet-mountable
- Weapon-mountable
- Flexible carrying case
- Uses one AA or CR123A battery
- Waterproof 20 meters for 1 hour

SPECIFICATIONS

Magnification	1X (optional 3X, 5X)
Lens System	24 mm; F1:1.2
Field of view	40°
Range of Focus	0.25m to ∞
Power Supply	1.5V AA battery or 3V CR123A Lithium battery
Battery Life (AA type)	30 hours (15 hours w/IR illuminator)- Gen.2+; 25 hours (12 hours w/IR illuminator)- Gen.3 and Gen. 4
Battery Life (CR123A type)	60 hours (20 hours w/IR illuminator)- Gen.2+; 50 hours (17 hours w/IR illuminator)- Gen.3 and Gen. 4
Operating Temperature	-40°C to +50°C
Storage Temperature	-50°C to +70°C
Waterproof	20 m for 1 hour
Dimensions	151x80x55 mm (6.7" x 2.5" x 4")
Weight	0.32kg (0.7 lb)

* ATN reserves the right to change the above specifications at any time without notice

APPLICATION

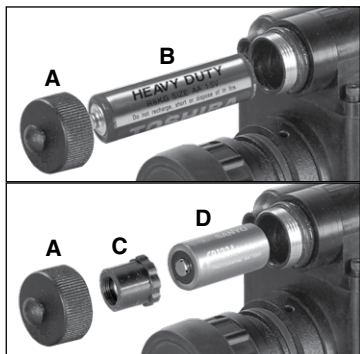
The PS-14 Multi-Use Night Vision monocular is one of the most versatile night vision devices available. This unit can be handheld, head- or helmet mounted for hands free usage, it is camera/cam-corder adaptable, and can be transformed into a 4x or 6.5x bioculars. This unit can also be weapon-mounted. Built-in IR illuminator enhances the ability of the user to read maps and operate in confined, zero light areas. The PS14 is available with several image intensifier options to meet a wide array of specification requirements.

The PS-14 night vision monocular is a complex optoelectronic system for individual use. The device consists of the objective lens assembly, eyepiece and the body. The body contains an image intensifier tube assembly with an integrated high voltage power source and the battery housing.

Objective lens protective cover is intended to protect the objective lens from dust and scratches. It also acts as a daylight filter, allowing you to test the scope in daylight or other bright light situations. The pinhole in the center of the protective cover allows the user to check the operation ability of the device in daylight conditions.

NOTE: Do not test the scope in daylight conditions even with the daylight filter/lens cap on for more than ten (10) minutes.

BATTERY INSTALLATION



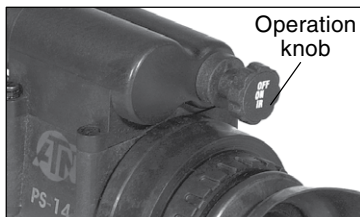
Install standard AA batteries as follows:

1. Unscrew the battery cap(A).
2. Insert AA battery(B), observing the polarity as indicated.
3. Replace the battery cap and screw cap hand tight.

Install CR123A batteries as follows:

1. Unscrew the battery cap(A).
2. Screw the CR123 battery adapter(C) in to the cap.
3. Insert the battery(D), observing the polarity as indicated.
4. Replace the battery cap and screw cap hand tight.

OPERATION



- Take the monocular out of the case.
- Rotate the operation knob from “OFF” position to “ON” position to turn the unit on. The protective lens cover shall be attached to the lens. **Do not turn the unit on in daytime without the protective lens cap on.** You should see green glow in the eyepiece.
- Observe the scene and adjust the diopter for optimal image clarity.

- You may now enter a dark environment or simply shut the lights off in order to darken the room.
- Next, remove the lens cap/daylight filter. Adjust the front lens focusing. You should not have to readjust the diopter. Remember that focusing range starts from 0.24m.
- To turn the unit off, rotate the operation knob from “ON” to “OFF” position.

FOCUSING

To focus the PS-14 first you will need to adjust the diopter. Simply turn the diopter clockwise until it stops. Then, while looking through the diopter at an object, slowly turn the diopter back counter clockwise until the grain on the image becomes sharp.

NOTE: We suggest that you focus the diopter during daylight with the filter on.

Next focus the front lens until the image and the grain become both sharp. When you are in low-light conditions and the daylight filter is off, you may focus the front lens to receive sharp image, the diopter should not be adjusted.

NOTE: The front lens should be readjusted as you view objects at different distances.

BUILT-IN INFRA-RED ILLUMINATOR

Infra-red illuminators, or IR illuminators, are common to night vision. The IR light greatly enhances the performance of the PS-14 while remaining almost invisible to a naked eye.

To turn the built-in IR on, draw and rotate the operation knob to “IR” position.

It is important to remember that the IR illuminator is simply an infra-red light source, and like any light source, it may lose its effectiveness over a great distance.



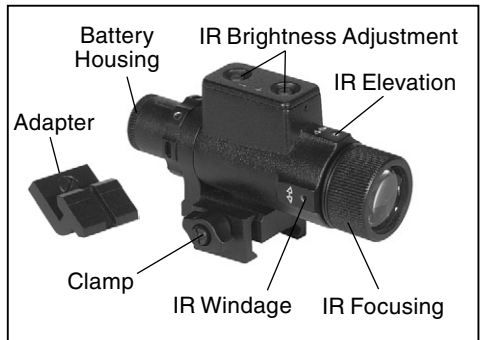
450 mW INFRA-RED ILLUMINATOR

The 450 mW IR Illuminator is powered by a separate from the main unit battery. To install the battery unscrew the cap and insert a battery the way shown at the diagram on the IR. To install the 450mW IR Illuminator onto the monocular screw the adapter into the thread on the monocular. Install IR into the adapter's rail and fix the clamp.

The IR illuminator control buttons are located on its side. To switch the Digital IR illuminator on/off press "+" and "-" buttons simultaneously. When the IR illuminator is switched on you can see the green LED lit. By pushing the buttons "+" and "-" you may adjust the IR brightness.

The IR beam is focusable to change the field of coverage. To change the beam width slightly turn the IR lens.

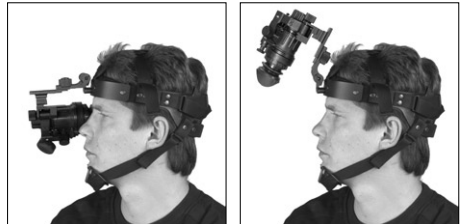
You could change the IR control panel fitting your needs. The screw-tool from the kit should be used for weakening the clamp located on the IR. Rotate the IR placing it in the most convenient position. Tighten the clamp with the screw-tool to fix the new position.



FLIP-UP HEADSET

PART I

- 1) The first step you have to take is to fit the headgear to your head size. Adjust the headgear first before attaching the PS-14 to it.
- 2) Loosen all the straps and place the headgear on your head.
- 3) Tighten all the straps.

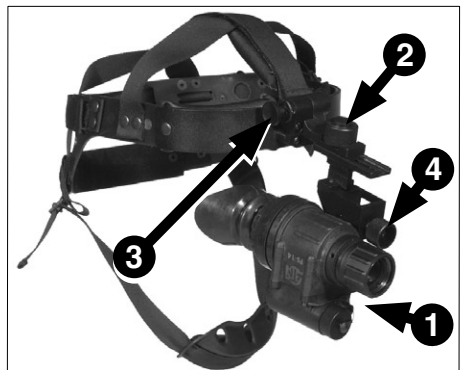


PART II

Now you are ready to mount the PS-14 onto your headgear.

- 1) Remove the already adjusted headgear from your head.
- 2) Screw the thumb screw [1] to the mounting thread at the PS-14 body. Use one of the treads to provide approximate eye relief.
- 3) Put the headgear with PS-14 onto your head.
- 4) Loosen the screw [2] and move the unit along the rail for eye relief adjustment.

The PS-14 headset has a flip-up mechanism. Push the button [3] on the mount side and lift the unit up until it fixes at the top position.



INTERCHANGEABLE LENSES (OPTIONAL)

The additional 3X Afocal Lens and 5X F112 Lens for PS-14 transform it to 3X or 5X night vision monocular.

To install 3X Afocal Lens simply screw it onto the front lens of PS-14.

To install 5X lens unscrew the objective lens of PS-14 and screw F112 Lens instead of it.



5X F112 Lens



3X Afocal Lens

BIOCULAR KIT (OPTIONAL)

With the biocular eyepiece and 3X or 5X lens the ATN PS-14 can be made into a 4x or 6.5x binoculars.

To replace an eyepiece with a biocular eyepiece unscrew the joint ring and take the eyepiece off. Set up the biocular eyepiece and screw its joint ring.



6.5X Bioculars



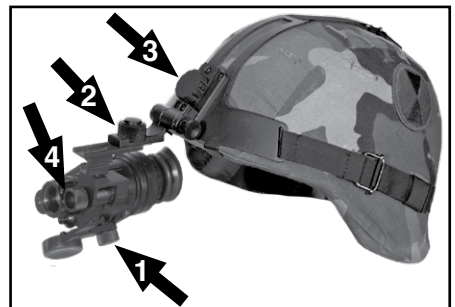
4X Bioculars

HELMET MOUNT (OPTIONAL)

Helmet mount serves for attachment of ATN's PS-14 to a standard PASGT helmet. Helmet mount fits securely onto helmet via a rugged strapping device and grooved hooks. With helmet mount, PS-14 can be positioned directly in front of user's eyes or flipped-up.

INSTALLATION

- 1) Install the mount onto helmet (loosening all the straps first).
- 2) Tighten and fix the strap.
- 3) Attach the monocular to the mount with the screw [1]. Use one of the treads to provide approximate eye relief.
- 4) Place the helmet onto your head.



ADJUSTING

1) Loosen the tightening knob [2] to slide the unit along the rail to adjust the eye relief. Tighten the knob.

2) Loosen the top horizontal fixation knob [3]. Adjust monocular horizontal position. Tighten horizontal fixation knob.

3) Loosen the angular fixation knob [4]. Adjust monocular angular position. Tighten the fixation knob.

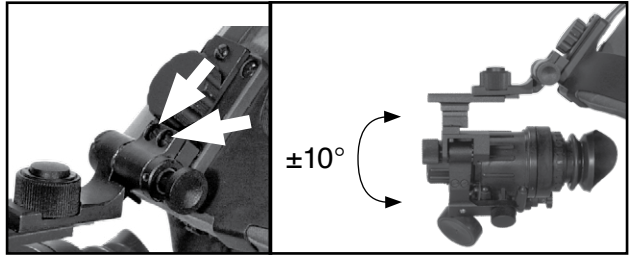
The PS-14 head mount has a flip-up mechanism. Push the button [5] on the mount side and lift the unit up until it fixes at the top position.

NOTE: The helmet mount has an additional ability of angular adjustment in relation to the line of view.

1) Loosen two set screws at the front of the flip-up mechanism.

2) Turn the device around flip-up mechanism axis to provide position you need.

3) Tighten the two set screws.



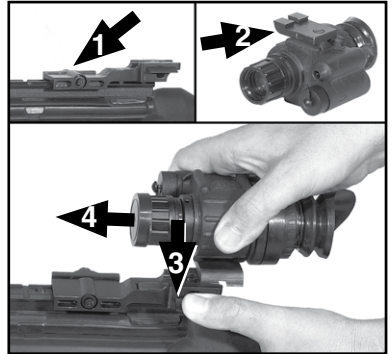
WEAPON MOUNT (OPTIONAL)

Weapon mount adapter allows the system to be mounted onto the M16/M4 Picatinny style rail.

1) Install the Picatinny weapon mount adapter [1] onto the rail.

2) Mount the cleat [2] to the body of PS-14.

3) Push the fixation lever [3] and move PS-14 ahead to the slot of weapon adapter [4] until it fixes .



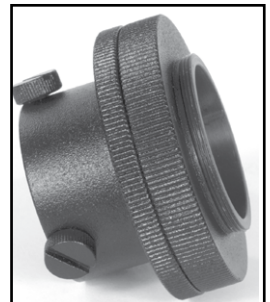
CAMERA ADAPTER (OPTIONAL)

To use your PS-14 with a 35mm camera or camcorder you will need the following:

1) If you plan to use a camcorder then your camcorder must have a MACRO feature. Most modern camcorders today have a MACRO feature built-in.

2) If you plan to use a 35mm camera, you will need a MACRO lens. If you don't have one, we advise that you contact your local camera store.

3) You may or may not need a STEP-UP or STEP-DOWN ring in order to adapt the camera adapter to your lens. NOTE: The camera



adapter comes with 37mm and 52mm threads. If you need other sizes your local camera store should be able to help.

- Remove the rubber eyecup from the PS-14
- Screw the camera adapter onto the front of the lens on your Video camera's lens or your 35mm camera's lens.
- Loosen the three set screws on the camera adapter.
- Place the camera adapter over the PS-14's eyepiece.
- Tighten the three set screws to fit snugly to the PS-14's eyepiece
- You may need to focus the 35mm camera or video camera in combination with the PS-14 in order to get the sharpest possible image.
- We suggest that you find an open space to work in. Focus the PS-14 so that the scene is at its sharpest. For best results you should disable the auto focus (if any) on either the 35mm camera or the video camera and manually focus the 35mm camera or the video camera. Once the image is sharp, then simply adjust the PS-14's front lens to change focus.

**An important part to remember is that you are not taking a picture of an object that is far away from you, but you are actually taking a picture of a phosphorous screen of the PS-14 that is only 2-3 inches away.*

STORAGE AND CARE

- If the device will not be in use for extended period of time (more than 10 days) remove the battery.
- Avoid touching of lenses. If fingerprints or traces of dirt or dust appear, clean their surface with a Photographic lens cleaning tissue.
- Keep lens cap/daylight filter on when not in use.
- The PS-14 is not harmful to the user or the environment.
- Do not disassemble except to clean the front lens and eyepiece: **it will void your warranty.**
- Evaluate the scope functionality by looking through it in a lit environment **with the daylight filter lens cap on. Never use in daylight without the daylight filter lens cap on.**
- **Never point the PS-14 at a bright light source.**
- Adverse atmospheric conditions such as fog, smog, or haze and a lack of ambient light (moon or starlight) may diminish the effective viewing distance.
- If you use the rubber eyecaps for a long period of time, you may suffer skin inflammation. If you develop any symptoms, consult a doctor immediately.

TROUBLESHOOTING

Q: Flashes, flickers, or clicking occur while operating

S: If it occurs within the first five minutes of inserting new batteries, it is normal and the device will resume normal operation soon thereafter. If it occurs for more than 10 minutes, contact for service instructions.

Q: Dark spots on screen.

S: These are either cosmetic blemishes in the intensifier tube or dust particles.

Q: Screen becomes darker than at previous use.

S: Replace batteries. If problem persists, contact your dealer or other authorized service representative for service instructions.

Q: Image not clear.

S: Adjust objective lens, and/or the eyepiece.

ACCESSORY PACKAGES

STANDARD ACCESSORIES:

- MONOCULAR
- NECK CORD
- SOFT CARRY CASE

GOGGLE KIT 1:

- ATN HEADSET ASSEMBLY
- ATN HELMET MOUNT (OPTIONAL)

GOGGLE KIT 2:

- PVS-7 STYLE HEADSET
- HELMET MOUNT ADAPTER
- PVS-7 STYLE HELMET MOUNT (OPTIONAL)

4X BIOOCULAR KIT:

- BIOOCULAR EYEPIECE
- AFOCAL TELESCOPIIC F1:1.2
- IR-450

6.5X BIOOCULAR KIT:

- BIOOCULAR EYEPIECE
- F112 LENS F1:1.5
- IR-450

ADVANCED PACKAGE 1:

- CAMERA ADAPTER
- 3X AFOCAL LENS
- HARD SHIPPING/STORAGE CASE
- HEADSET ASSEMBLY
- HEAD/HELMET MOUNT ADAPTER
- BROW PADS (2)
- LENS CLEANING KIT
- SACRIFICIAL WINDOW
- DEMIST SHIELD

ADVANCED PACKAGE 2:

- PICATINNY WEAPON MOUNT ADAPTER
- CAMERA ADAPTER
- 3X AFOCAL LENS
- HARD SHIPPING/STORAGE CASE
- HEADSET ASSEMBLY
- HEAD/HELMET MOUNT ADAPTER
- BROW PADS (2)
- LENS CLEANING KIT
- SACRIFICIAL WINDOW
- DEMIST SHIELD

SELECT PACKAGE 1:

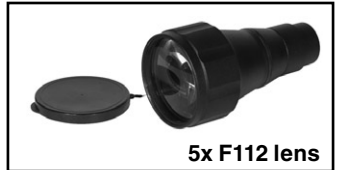
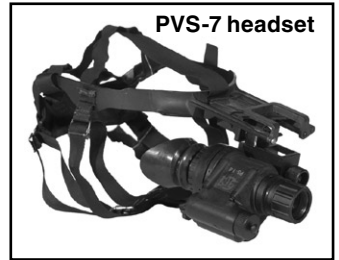
- HEADSET ASSEMBLY
- HEAD/HELMET MOUNT ADAPTER
- BROW PADS (2)
- LENS CLEANING KIT
- SACRIFICIAL WINDOW
- DEMIST SHIELD

SELECT PACKAGE 2:

- PICATINNY WEAPON MOUNT ADAPTER
- HEADSET ASSEMBLY
- HEAD/HELMET MOUNT ADAPTER
- BROW PADS (2)
- LENS CLEANING KIT
- SACRIFICIAL WINDOW
- DEMIST SHIELD

OPTIONAL ACCESSORIES:

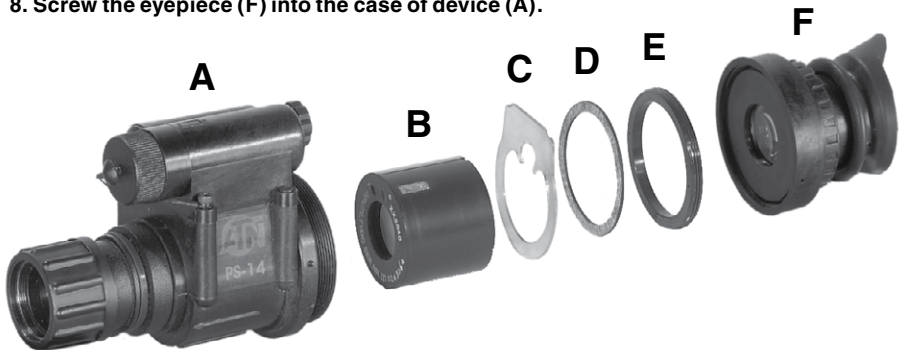
- IR-450 IR ILLUMINATOR
- HELMET MOUNT
- HARD SHIPPING/STORAGE CASE
- CAMERA/CAMCORDER ADAPTER
- 3X AFOCAL LENS
- 5X F112 LENS



TUBE MAINTENANCE/REPLACEMENT

Tube maintenance/replacement is to be performed by qualified technicians only. These procedures attempted by non-qualified personnel will void warranty.

1. Unscrew the eyepiece (F) from the case of device (A).
2. Unscrew the lock ring (E) from the case of device.
3. Extract the ring (D) from the case of device.
3. Extract the light guide (C) from the case of device.
4. Extract the tube (B) to be replaced from the case of device (A).
5. Introduce the new tube (B) into the case of device (A).
6. Set the light guide (C) onto the place in the case.
6. Set the ring (D) onto the place in the case.
7. Screw the lock ring (E) into the case of device.
8. Screw the eyepiece (F) into the case of device (A).



2 YEARS PRODUCT WARRANTY

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of 2 (two) years from the date of purchase. In the event a defect that is covered by the foregoing warranty occurs during the applicable period stated above, ATN, at its option, will either repair or replace the product, and such action on the part of ATN shall be the full extent of ATN's liability, and the Customer's sole and exclusive remedy. This warranty does not cover a product (a) used in 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 ATN without prior written consent of ATN; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either ATN or the ATN 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 ATN. ATN shall not be responsible for any defects or damage that in ATN's opinion is a result from the mishandling, abuse, misuse, improper storage or improper operation, including use in conjunction with equipment which 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 waived unless the customer notifies ATN 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

ATN 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. ATN'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 ATN 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 ATN and the Customer; ATN's obligations under this Agreement extend solely to the Customer. **ATN's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to ATN by the customer or customer's dealer. ATN 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, ATN must receive a completed Product Warranty Registration Card for each unit or complete warranty registration on our website at www.atncorp.com. Please complete the included form and immediately mail it to our Service Center: ATN Corporation, 1341 San Mateo Avenue, South San Francisco, CA 94080.

OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, please contact our Customer Service department and request an RMA number. Once you have received your RMA # please mark this # on the outside of the shipping box and take or send the product, postage paid, with a copy of your sales receipt to our service center, ATN Corporation at the address noted above. All merchandise must be fully insured with the correct postage; ATN will not be responsible for improper postage or missing or damaged merchandise during shipment. Packages that do not have an RMA # clearly marked on the outside of the package will be delayed in being processed.

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For customer service and technical support, please contact
American Technologies Network Corp.

North American Office

1341 San Mateo Avenue, South San Francisco, CA 94080
phone: 800-910-2862, 650-989-5100; fax: 650-875-0129

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toll free number 00 800 9102-8620

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