

ATN PS-14/ Night Spirit

MULTI-USE NIGHT VISION MONOCULAR

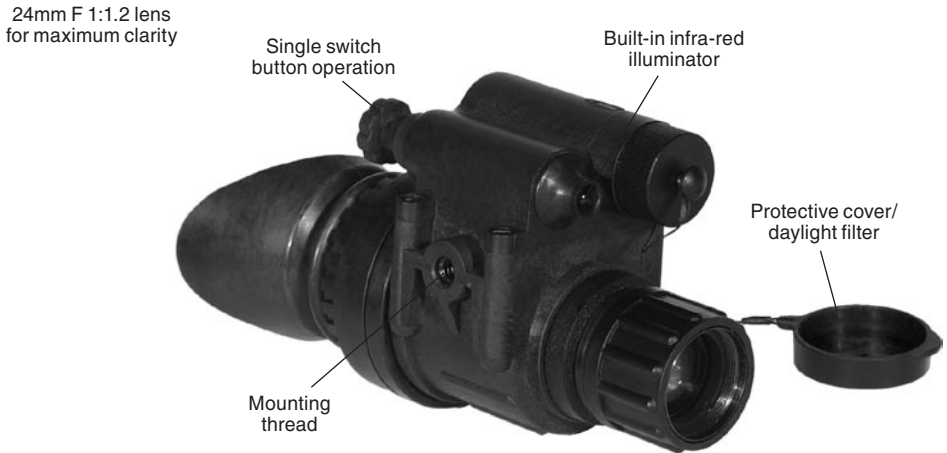


u s e r ` s g u i d e

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**AMERICAN
TECHNOLOGIES
NETWORK
CORP.**



The following image intensifier tube configurations are available for this unit:

Model Number	Tube configuration
PS-14-4	64-72lp/mm Filmless Autogated (4th gen)
PS-14-XR5	64-72lp/mm DEP
PS-14-3	64lp/mm Generation 3
PS-14-XD4	55-64lp/mm DEP XD4
PS-14-CGT	51-62lp/mm DEP
PS-14-2	32-45lp/mm Generation 2

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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 headmount 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 battery
- Waterproof 20 meters for 1 hour
- Two-year factory warranty

SPECIFICATIONS

Magnification	1X (optional 3X, 5X)
Detection range	250(Gen.2) or 300(Gen.3) or 340(Gen.4)m/y
Recognition range	175(Gen.2) or 225(Gen.3) or 300(Gen.4)m/y
Lens System	24 mm; F1:1.2
Field of view	40°
Range of Focus.....	0.25m to ∞
Power Supply.....	1.5 volt AA size battery
Battery Life	60 hours (20 hours with IR illuminator)
Operating Temp.	-51°C to +49°C (-60°F to +120°F)
Operating Temp.	-51°C to +85°C (-60°F to +185°F)
Waterproof.	20 m for 1 hour
Dimensions.....	151x80x55 mm (6.7" x 2.5" x 4")
Weight.....	0.32kg (0.7 lb)

APPLICATION

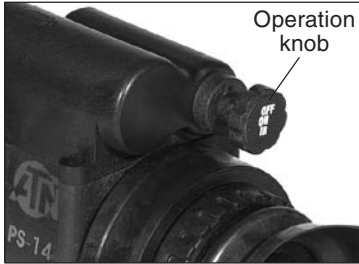
The PS-14 Multi-use Night Vision monocular is one of the most versatile night vision devices available. This unit can be handheld, head-mounted for hands free usage, it is camera/ camcorder adaptable, and can be made into a 4x or 6.5x bi-ocular. This unit can also be weapon-mounted. The integrated IR 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 will act 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.

OPERATION



- Take the monocular out of the case.
 - Install the battery into the housing with the polarity order as shown on the scope. Battery Type: 1.5 Volt, AA size .
 - Rotate the operation knob from “OFF” position to “ON” position to turn the unit on. The protective lens cover still attached to the lens. **Do not turn the unit on in the 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 for the distance of the focus. You should not have to readjust the diopter.
 - To turn the unit off, rotate the operation knob from “ON” position 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 in the image is 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 are 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.*

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 totally invisible to the naked eye.

To turn the 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 loose its effectiveness over a great distance.

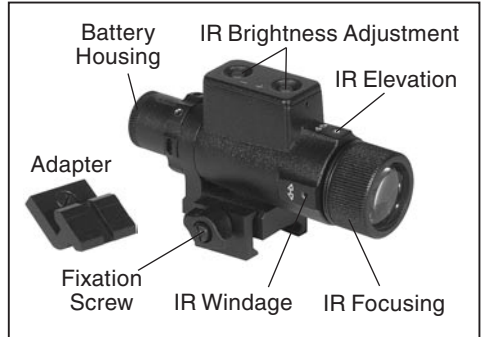
450 MW INFRA-RED ILLUMINATOR

The 450 mW IR Illuminator works on a separate battery from the main unit. To install the battery unscrew cap and insert battery in the same direction as depicted by the diagram on the IR. To install the 450mW IR Illuminator to the scope screw the adapter into the thread on the scope. Install IR to the rail of adapter and screw fixator.

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 included into the set should be used for weakening the fixing screw located on the IR. Rotate the IR placing it in the most convenient position. Tighten the screw with the screw-tool to fix the new position.



FLIP-UP HEADSET

PART I

- 1) The first step that you want to take in mounting PS-14 on your head is to fit the headgear to your size. Adjust the headgear fist before attaching the PS-14 to it.
- 2) Loosen all the straps and place the headgear on your head.
- 3) You will want to tighten the straps.



PART II

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

- 1) Remove the already adjusted headgear from your head.
 - 2) Screw the thumb screw [1] to the mounting thread in the body of PS-14.
 - 3) Get the headgear on with PS-14 onto the head.
 - 4) Loosen the screw [2] and move the unit along the rail for eye relief adjusting .
- The PS-14 headset has a flip-up mechanism. Push a button [3] on the side of mount and lift the unit up till a fixation in the top position. You can use PS-14 for left eye. Loosen the screw [4] and rotate unit to new position.



INTERCHANGEABLE LENS (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 screw it on the front lens of PS-14.

To install 5X lens unscrew the objective lens of PS-14 and screw F112 Lens to the free place.



BI-OCULAR KIT (OPTIONAL)

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

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



HELMET MOUNT (OPTIONAL)

Helmet mount 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.

INSTALLATION

- 1) Mount the strap onto helmet.
- 2) Tighten and fixate the strap.
- 3) Install the mount as shown on the picture.
- 4) Attach goggles to the rail.
- 5) Place the helmet on your head by screw the knob [1].

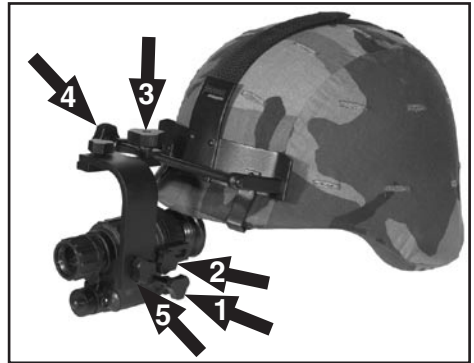
ADJUSTING

1) Loosen the tightening knob [2] on the rail to enable you to easily slide the unit on. Don't retighten the knob yet.

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

3) Loosen the side vertical fixation knob [4]. Adjust goggle vertical position. Tighten vertical fixation knob.

NOTE: The helmet mount has the additional ability for vertical adjustment. You can displace the rail to another vertical position if need be [5].



4) Adjust Eye Relief by sliding the PS-14 on the rail toward or away from eyes. Then tighten the fixation knob [2] on the rail.

5) Goggles can be flipped up when not in use. Loosen the side vertical fixation knob [4]. Upright the unit and fix in this position with fixation knob.

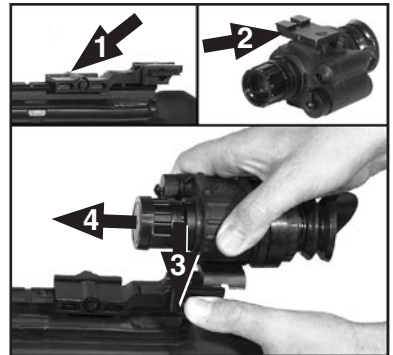
WEAPON MOUNT (OPTIONAL)

Weapon mount adapter allow the system to be mounted on the M16/M4 Picatinny style rail.

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

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

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



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 is not to be used for extended period of time (more than 10 days) remove the battery.
- Avoid touching 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 function 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.

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 BIOCLULAR KIT:

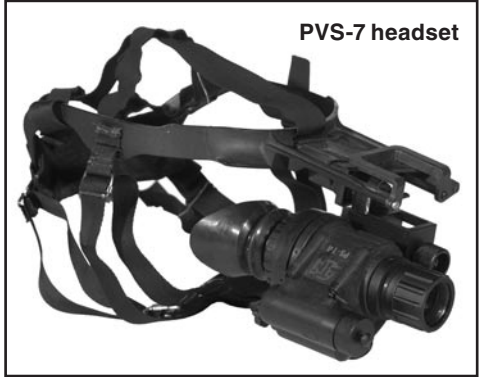
- BIOCLULAR EYEPIECE
- AFOCAL TELESCOPIC F/1.2
- IR-450

6.5X BIOCLULAR KIT:

- BIOCLULAR EYEPIECE
- F112 LENS F/1.5
- IR-450

ADVANCED PACKAGE 1:

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



ADVANCED PACKAGE 2:

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

SELECT PACKAGE 1:

- HEAD MOUNT ASSEMBLY
- BROW PADS (2)
- LENS CLEANING KIT
- SHOULDER STRAP
- SACRIFICIAL WINDOW
- DEMIST SHIELD

SELECT PACKAGE 2:

- PICATINNY WEAPON MOUNT ADAPTER
- HEAD MOUNT ASSEMBLY
- BROW PADS (2)
- LENS CLEANING KIT
- SHOULDER STRAP
- SACRIFICIAL WINDOW
- DEMIST SHIELD

OPTIONAL ACCESSORIES:

- IR-450 IR ILLUMINATOR
- HELMET MOUNT ASSEMBLY
- DUAL BRIDGE ASSEMBLY
- MAGNETIC COMPASS
- HARD SHIPPING/STORAGE CASE
- IR SPOT / FLOOD LENS
- CAMERA/CAMCORDER ADAPTER
- 3X AFOCAL LENS
- 5X F112 LENS



2 YEAR 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. Please complete the form below and immediately mail it to our Service Center: ATN Corporation, 20 South Linden Ave., Suite 1B, South San Francisco CA 94080. Products qualifying for warranty repair will be either repaired or replaced within 10 business days of receipt of merchandise unless the customer is notified otherwise.

OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, 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.



For customer service and technical support, please contact
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