

MO 2-1



u s e r ' s g u i d e

**AMERICAN
TECHNOLOGIES
NETWORK
CORP.**





Built-in IR illuminator

90 mm F 1.7 lens

Battery housing



Main power switch

IR power switch



Camera adapter (optional)



Doubler (optional)

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APPLICATION

The AMT MO 2-1 Night Vision Monocular is designed for observation and identification of objects at low light levels (less than 1.0 lux) in the temperature range from -30°F up to +110°F.

The AMT MO 2-1 Night Vision Monocular is a complex optico-electronic system for individual use. The device consists of the objective lens assembly, ocular lens assembly, IR illuminator, and the body. The body contains the image intensifier tube assembly with the integrated high voltage power source and the battery housing. The battery housing cover is near to the lens for the IR illuminator. Objective lens protective cover (not shown) is designed to protect the MO 2-1 from high-level illumination. The pinhole in the center of the protective cover allows the user to check the operation ability of the device in daylight conditions.

MASTER POWER SWITCH

The device is switched on by turning the main switch located on the rear side of the scope. The MO 2-1 is controlled by a built-in computer that regulates the functions of the scope.

INFRARED ILLUMINATOR

Infra-red (IR) illuminators are common for night vision technology. The IR light greatly enhances the performance of your scope, while remaining almost totally invisible to the naked eye. In dark environment, power up the scope. Now, find a scene and examine it without the IR on then with IR powered up. Note the difference in illumination. 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.

The IR illuminator on the MO 2-1 is the AMT100M and is located near the battery compartment. You may desire a different field of coverage from the IR illuminator, if so the beam is focusable. By turning the lens on the IR you will change the beam width slightly.

NOTE: The IR automatically turn off when the unit's main power switch is turned off.

FOCUSING

- Observe the scene and adjust the diopter for optimal image clarity. Focus the front lens until the image and the grain are both sharp.
- 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 distance of the focus. You should not have to readjust the diopter.

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

- 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 front lens for distance of the focus. You should not have to readjust the diopter.

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

PREPARATION FOR OPERATION

Before getting started make sure to follow these steps:

- Take the monocular out of the case.
- Install the battery into the housing with the polarity order shown on imprint on the body. Battery type: 3 Volt Lithium, #CR123A
- Switch on the monocular **with the protective lens cover still attached to the lens.**
- Make sure that the green luminance of the light intensifier tube is present.
- 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 surface with a soft dust cloth and glass cleaner.
- **Keep lens cap/daylight filter on when not in use.**
- Avoid contact with dust, steam, and gas.
- The MO 2-1 is not harmful to the user or the environment.
- Do not disassemble except to clean the front lens and the eyepiece: **it will void your warranty.**
- Evaluate the scopes 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.**

CAMERA ADAPTER

To use your MO 2-1 scope with a 35-mm 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 35-mm 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 37-mm and 52-mm threads. If you need other sizes your local camera store should be able to help.*

- Remove the rubber eyecup from the scope.
- Screw the camera adapter onto the front of the lens on your Video camera lens or your 35-mm camera lens.
- Loosen the three set screws on the camera adapter.
- Place the camera adapter over the scope's eyepiece.
- Tighten the three set screws to fit snugly to the scope's eyepiece

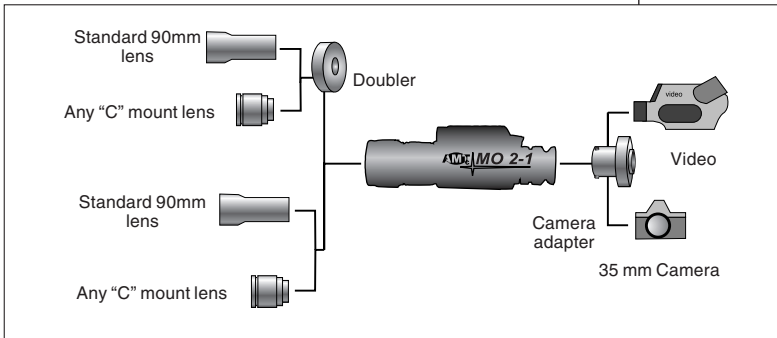


- You may need to focus the 35-mm camera or video camera in combination with the rifle scope in order to get the sharpest possible image.
- We suggest that you find an open space to work in. Focus the NV scope so that the scene is at its sharpest. For the best results you should disable the auto focus (if any) on either the 35-mm camera or the video camera and manually focus the 35-mm camera or the video camera. Once the image is sharp simply adjust the scope's front lens to change the focus.
- An important thing 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 the phosphorous screen of the AMT MO 2-1 that is only 2-3 inches away.

DOUBLER

Unscrew 90 mm lens off the body of the MO 2-1 (make sure that the unit is turned off). Screw the doubler into the body of the MO 2-1 where the 90 mm lens was removed. Screw the 90 mm lens into the doubler.

NOTE: When attaching the doubler do not be afraid to use a little force.



CLEANING THE EYEPIECE

You may need to clean the eyepiece of the MO 2-1 from time to time in order to guarantee top performance. When you receive your MO 2-1 you should check for dust on the eyepiece of the unit.

First you will need to remove the eyepiece. To do that you will need to initially loosen the 2 set screws that can be found on the base. Then unscrew the eyepiece counter-clockwise to remove it.

NOTE: You do not have to remove the set screws completely, they are very small and easy to misplace.

CAUTION: Use only Photographic lens cleaning tissue on these surfaces. Be careful not to scratch or smudge any of these surfaces. When using compressed air to blow dust away, make sure to avoid inverting the can while spraying. This can cause frozen propellant to exit the can, which can cause serious problems with the glass and phosphor screen.

FEATURES

- Automatic brightness control
- Built-in IR illuminator
- Total darkness technology
- Camera/Camcorder adaptable
- Manual focus
- Rugged and versatile design
- Adjustable eyepiece
- High res. 1st Gen.+ intensifier tube
- Water and dust resistant
- Superb 3X lens system
- Daylight filters

SPECIFICATIONS

Magnification	3X
Intensifier Tube	1 st Gen.; high res.
Lens System	90 mm; F1.7
Field of View	15°
Resolution	40 lp/mm
Minimum Light Req.....	5x10 ⁻³ lux
Range of Focus.....	1.5m to ∞
Power Supply.....	3V Battery
Battery Life	12 hours
Dimensions.....	200 x 60 x 60 mm; 8" x 2.5" x 2.5"
Weight.....	0.6kg; 1.3 lbs
Diopter Adjustment	±5
Operating temperature	-40°C - +40°C

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 your dealer or other authorized representative for instructions.

Q: Dark spots on screen.

S: These are cosmetic blemishes in the intensifier tube or dust particles accumulated on the screen. Just like a TV, night vision intensifier tubes attract dust particles. These are easily cleaned using photo-type cleaning equipment.

Q: Image not clear.

S: Adjust front lens at night. If problem persists, turn on IR.

Q: Fixed-pattern noise in a honeycomb shape.

S: Usually a cosmetic blemish characterized by a faint honeycomb-type pattern. It usually occurs when viewing very bright lights. Adjust the brightness of the unit to reduce noise.

Q: LED's keep turning off after a few moments.

S: This is the normal mode of operation. It will increase your scope batteries life and make you harder to detect

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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