

# ATN MARS X4

# ATN MARS X6

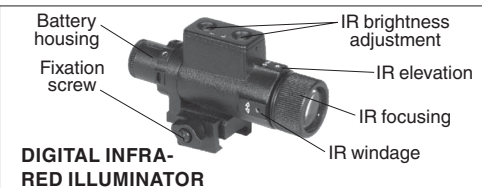
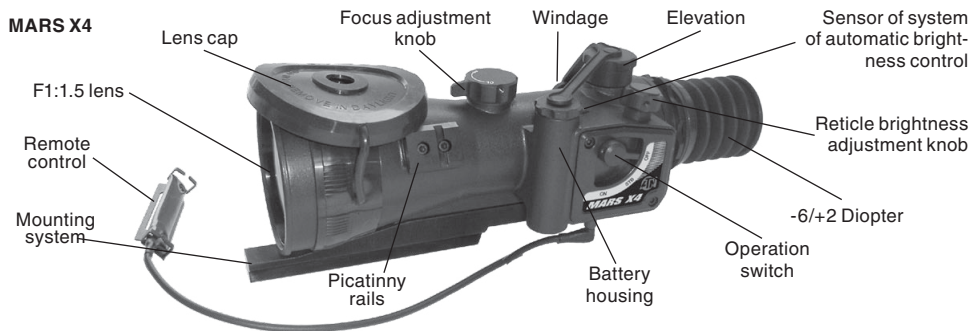


## *u s e r ' s   g u i d e*

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**AMERICAN  
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CORP.**



## FEATURES

- POWERFUL 4X OR 6X MAGNIFICATION
- SUPERIOR QUALITY MULTI-COATED ALL GLASS OPTICS
- “SINGLE-ELEMENT” ADJUSTABLE FRONT FOCUS
- NITROGEN-PURGED FOR RESISTANCE TO INTERNAL FOGGING
- MIL-DOT RETICLE
- CRISP-CLICK PRECISION WINDAGE AND ELEVATION ADJUSTMENTS
- TARGET TURRETS
- AUTOMATIC BRIGHTNESS CONTROL
- TACTICAL RAIL ENABLING MOUNTING OF IR ILLUMINATOR OR IR LASER
- LOW BATTERY INDICATOR
- TACTICAL DIGITAL REMOTE CONTROL
- WATERPROOF AND SUBMERSIBLE TO 66 FEET FOR 1 HOUR
- PELICAN HARD CASE, BATTERIES, USER GUIDE, NV INSTRUCTIONAL VIDEO AND ALL NECESSARY MOUNTING HARDWARE ARE INCLUDED
- INCLUDED MOUNT FOR PICCATINNY OR 7/8” WEAVER-STYLE RAIL (M4/M16/AR-15 CARRY HANDLE MOUNT – OPTIONAL)
- UNIT ACCEPTS EITHER, (1) 3V CR123A OR (1) AA BATTERY
- DAY TIME COVER WITH IR FILTER
- LIMITED LIFETIME WARRANTY

## APPLICATION

ATN Mars Night Vision Weapon scopes - the world's largest line of professional night vision sights – has a new flagship – the ATN MARS X4 and ATN MARS X6. Inspired by ATN's quest for technical perfection and named after the Roman God of War, the ATN MARS NV rifle-scopes represent the absolute latest in the world of night vision equipment. Similar to all ATN Aries scopes the ATN MARS features only the purest grades of heavy glass and computer-aided optical designs to create multi-element, high-speed, multi-coated lenses for ultra-fast light transmission and resolution beyond current military standards. All optical lenses on the MARS scopes are individually fitted and calibrated to achieve optimum performance.

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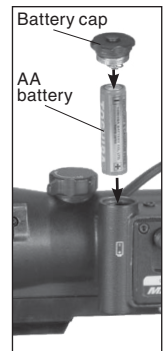
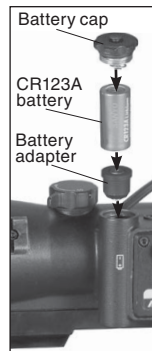
# SPECIFICATIONS

	<b>MARS X4</b>	<b>MARS X6</b>
Generation .....	2nd, 2nd+, 3rd, 4th	2nd, 2nd+, 3rd, 4th
Lens of system .....	F1:1.5	F1:2.0
Magnification .....	4X	6X
FOV .....	9 deg.	6 deg.
Range of focus .....	10 m to ∞	25 m to ∞
Eye relief .....	45mm	45mm
Exit pupil .....	7mm	7mm
Diopter adjustment .....	-6/+2	-6/+2
Windage & elevation .....	120MOA	80MOA
Adjustment step size .....	1/4MOA	1/6MOA
Power supply .....	one 3V (CR123A) or 1.5V (AA)	one 3V (CR123A) or 1.5V (AA)
IR illuminator .....	Super 450mW	Super 450mW
Operating temperature .....	-51°C to +45°C	-51°C to +45°C
Battery life.....	55 (3V)/ 40 (1.5V )hours	55 (3V)/ 40 (1.5V )hours
Waterproof .....	20m for 1 hour	20m for 1 hour
Reticle .....	Red or Amber On Green	Red or Amber On Green
Dimensions .....	235x90x95mm	295x95x100mm
Weight .....	1.3kg	1.55 kg

## PREPARATION FOR OPERATION

Before getting started make sure to follow these steps:

- Install the battery into its housing with the polarity order shown on the main body of the unit. The CR123A battery used with adapter. Install adapter first, then CR123A . AA battery used without adapter.
- Switch on the scope with the protective lens cover still attached to the lens.
- Make sure that the green luminance of the light intensifier tube is present.
- Observe the scene, and adjust the diopter and/or lens 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.



## OPERATING

### MOUNTING

1. Mount the PS-22 with Adapter onto the A.R.M.S.#10 or A.R.M.S.#19 ACOG with 2 screws M5x8.
2. Unscrew the protective back cap from PS-22.
3. Screw the Light Screen into the thread in back side of unit.
4. Slightly loosen the fixing screws or levers of mount.
5. Place the PS-22 on the weaver rail of the fire arm before objective of daytime scope on the minimal distance from it. The optical axes of PS-22 and daytime scope must have diver-

gence not more than 3mm. High of optical axe of the PS-22 under weaver rail is 49mm with A.R.M.S.#19 ACOG.

6. Tighten the fixing screws or levers of mount.

**NOTE:** Fixing screws may need to be tightened after continuous shooting.

## CONTROL

To turn the device on, rotate the Operation Switch from the OFF position to the desired operation mode.

Operation Switch has following positions/modes:

OFF - the device is off;

ON – the device is on;

STB - the device can be used with the Remote Control.



## FOCUSING

To focus the scope you need to adjust the diopter first. Simply turn the diopter clockwise until it stops. Then concentrate on any object and slowly turn the diopter back counter clockwise until the grain in the image is sharp.

You scope has ability to focus either long range or short.

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



**NOTE:** The front lens should be readjusted for viewing objects at different distances.

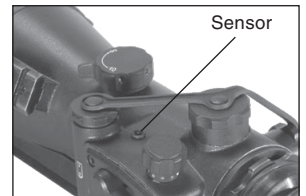
## AUTOMATIC BRIGHTNESS CONTROL SYSTEM

The device has a built in Automatic brightness control. This control automatically adjusts the brightness of Image Intensifier Tube to the optimal level.

## PROTECTIVE SYSTEM

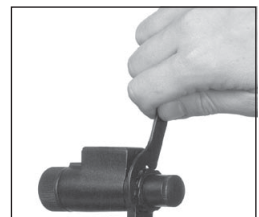
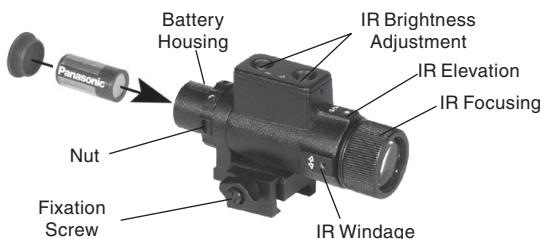
The automatic highlight protective system analyzes light exposure with the sensor. If the level of light exposure exceeds allowable the red indicator will lights on. If high light exposure is kept more than 10 seconds the device automatically will off.

**NOTE:** The automatic highlight protective system and automatic brightness control system do not protect a sight from damage by bright light sources (a fire, headlights of the automobile, lanterns, etc.). Do not point the device at a bright light source.



## IR ILLUMINATION

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.

To fix the IR illuminator to the rifle scope use the picatinny rail of the scope.

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.

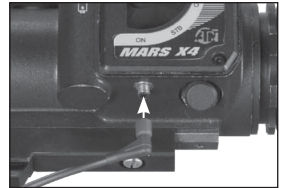
The IR beam is focusable to change the field of coverage. To change the beam width slightly turn the IR lens.

You could change the IR control panel fitting your needs. The wrench included into the set should be used for weakening the fixing nut located on the IR. Rotate the IR placing it in the most convenient position. Tighten the nut with the wrench to fix the new position.

## REMOTE CONTROL

Attach the Remote Control cable to connector on the bottom of the body of device. Place the Remote Control on the weapon, suiting your shooting style best and grip. Fix the Remote Control in this position with a montage strap.

To turn the scope on push the button of remote control. Keep pressed button when observing scene. The scope is turned off immediately after releasing remote control button.



## LOW BATTERY INDICATOR

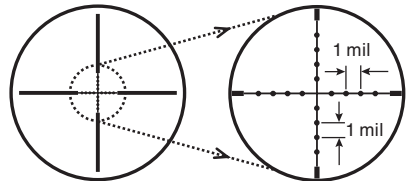
When red LED on left side of the field of view starts blinking it is time to change your battery.

## RETICLE

Your scope has an Electronic reticle with two color and 5 degrees of brightness of illumination for each color. The knob of brightness adjustment reticle and color select is located on the top of the body of the scope. On the knob there are markings with color of illumination of reticle.

Mil dot reticle is a reliable means of determining distances to targets, establishing leads for moving targets, and for alternate aiming points for windage and elevation holds.

Dots are spaced in one mil (milliradian) increments on the crosshair. A distance to target can be calculated using the mil formula, that is based on the size of the object being targeted.



Look through the scope, and bracket the object between dots.

The space between dot centers subtends one milliradian (mil). One mil. subtends 3.6 inches at 100 yards or 36 inches at 1,000 yards. To use this system effectively you must know the size of the target.

By measuring the height or width of a known (or approximately known target size) in mil-radians using the reticles, the target distance can be calculated as follows.

R = range in meters, H = target size in meters, M = mil-radians of the image size:

$$R = 1000 * H / M$$

Military shooters are trained to know that the common male torso is 39 inches from crotch to top of head. This is very close to exactly one meter.

This formula then becomes  $R = 1000 / M$  for a one meter target size.

All of the following formulae are equivalent to the one above for estimating range.

R = range in meters, H = target size in inches, M = mil-radians of the image:  $R = 25.4 * H / M$

R = range in yards, H = target size in inches,

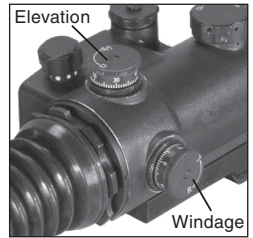
M = mil-radians of the image:  $R = 27.78 * H / M$

R = range in yards, H = target size in feet,

M = mil-radians of the image:  $R = 333.3 * H / M$

## WINDAGE AND ELEVATION

The vertical and horizontal adjustments for the scope can be achieved by turning the elevation and windage adjustment mechanisms (remove dust caps first). Each click equals 1/4 inch at 100 yards (Mars x4) or 1/6 inch at 100 yards (Mars x6). When reaching the maximum range of rotation do not use force.



## WARNINGS AND CAUTIONS

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- Always remember to turn off the scope when it is not in use. If you do not plan on using your scope for a period of more than 10 days, you should remove the batteries.
- Keep lens cap on when not in use.
- Avoid contact with dust, steam, and gas.
- The scope are not harmful to the user or the environment.
- Do not disassemble: **it will void your warranty.**
- Evaluate the scopes function by looking through it in a lit environment with the lens cap put on. Never use in daylight without the daylight filter lens cap on. Do not surpass ten minutes of testing.
- Never point the scope 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. All technical data for this unit was compiled in a controlled environment.
- 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

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**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 service representative for service instructions.

**Q:** Dark spots on screen.

**S:** This may be dust on the lens, please clean according to instructions. They may also be Cosmetic blemishes in the intensifier tube which are a by-product of the manufacturing process. This is normal and will not affect the life or performance of the unit.

**Q:** Image not clear.

**S:** Adjust diopter ring. If problem persists, increase viewing distance

**Q:** Fixed-pattern noise in a honeycomb shape.

**S:** Usually a cosmetic blemish characterized by a faint honeycomb-type pattern. This usually occurs when viewing very bright lights.

**Q:** A pattern of dark thin lines which look like chicken wire.

**S:** Turn on illuminator, if purchased. If illuminator doesn't brighten image, replace batteries. If problem persists, contact ATN for service instructions.

# WARRANTY

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## LIFETIME LIMITED PRODUCT WARRANTY

This product comes with a Lifetime Guarantee against defects in both materials and workmanship. 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. 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 in the applicable warranty period.

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## 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 Centre: 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 our sales receipt to our service centre, 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  
American Technologies Network Corp.

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