

# NIGHT VISION SIGHT

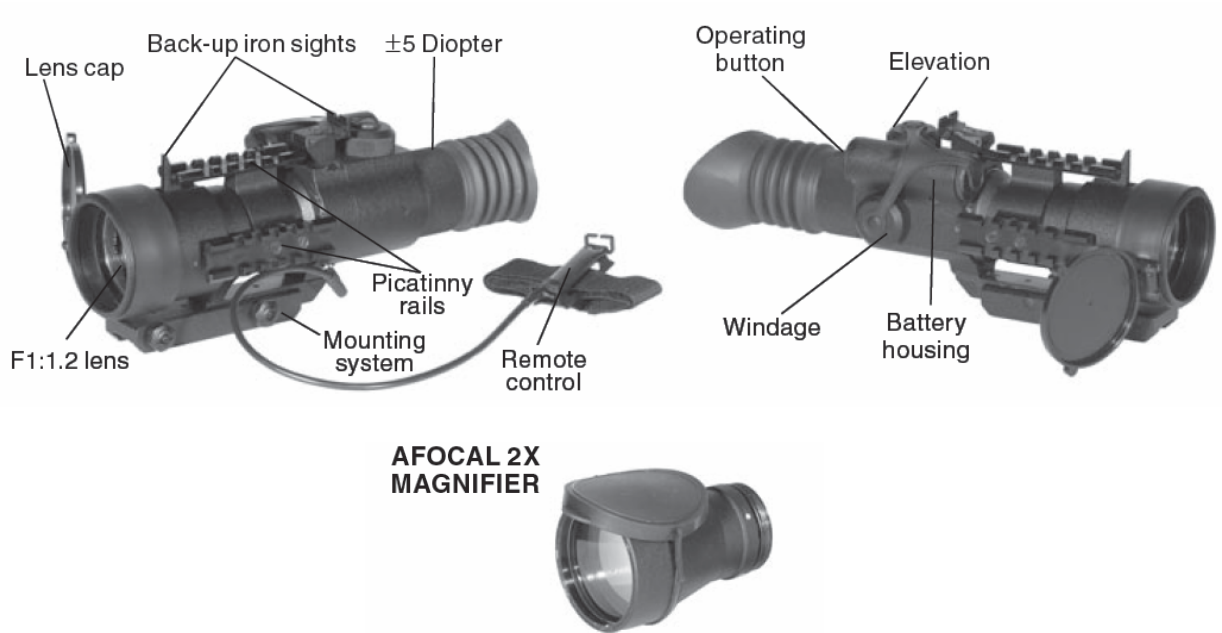
## COTX2-4



*u s e r ` s g u i d e*



Modern Optical Technologies



## Features

- LIGHT AND COMPACT DESIGN
- TOP-NOTCH PERFORMANCE WITH PRO-ORIENTED DESIGN
- 2X MAGNIFICATION WITH NEW F1:1.2 LENS, 50 MM
- AFOCAL 2X MAGNIFIER
- ALL EXTERNAL SURFACES ARE A NON-REFLECTIVE MATTE BLACK FINISH (EXCEPT FOR THE OPTICAL ELEMENTS)
- BACK-UP IRON SIGHTS
- “RED ON GREEN” RETICLE SYSTEM WITH 1/2 MOA ADJUSTMENT
- ILLUMINATED CENTER RED RETICLE FOR OPTIMAL CONTRAST AGAINST A DARK OR LIGHT TARGET
- AUTOMATIC BRIGHTNESS CONTROL (ABC) FOR TUBE PROTECTION
- ONE BUTTON OPERATION. CONTROLS AND ADJUSTMENTS ARE SIMPLE AND EASY TO OPERATE. PUSH BUTTON POWER ON/OFF. THE RETICLE BRIGHTNESS VARIES FROM OFF TO FULL BRIGHT WITH A PUSH OF A BUTTON.
- WATERPROOF AND SUBMERSIBLE TO 1M FOR 30 MIN
- NITROGEN-PURGED FOR RESISTANCE TO INTERNAL FOGGING
- MOUNTS TO STANDARD WEAVER RAILS
- TACTICAL RAIL ENABLING MOUNTING OF IR ILLUMINATOR OR IR LASER
- TACTICAL DIGITAL REMOTE CONTROL
- LIMITED LIFETIME WARRANTY

## APPLICATION

The COTX2-4 is a rugged, 2X night vision weapon sight with A-focal doubler (in set) that increases magnification from 2 up to 4 times and provides excellent observation, target acquisition and aiming capabilities for the demanding sports shooter or varmint hunter. The best optics, tubes and performance make the COTX2-4 one of the best commercial night vision sights there is!

## SPECIFICATIONS

Intensifier tube	Gen 2 +
Magnification	2 - 4X
Lens system	F1.2, 50 mm
Eye relief distance	46 mm
FOV	17 deg.
Range of focus	from 1 m to $\infty$
Reticle system - "Duplex"	red on green
Click value	1/2 MOA
Total darkness tech.	100 mW IR illuminator (optional)
Diopter adjustment	$\pm 5$
Battery life	40 hours
Operating temperature	from -40°C to 50°C
Dimensions	275x95x85 mm
Weight	1 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.
- 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. Slightly loosen the fixing screws on the 7/8" weaver mount built into the scope.
2. Place the scope on the weaver rail of the fire arm.
3. Tighten the fixing screws.

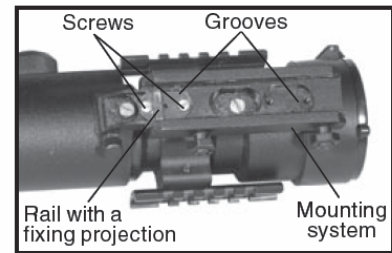
**NOTE:** Fixing screws may need to be tightened after continuous shooting.

## Mounting System

The Mounting System allows changing the position of the riflescope flexibly on the weapon in relation to a shooter in combination with the fixed positions already available on the weaver rail. For this purpose in the base of the mounting bracket there is a rail with a fixing projection. There are two grooves in the mounting bracket for mounting this rail. Besides it is possible to change the position of the riflescope additionally by 1/3 of inch. For doing this one needs to about-face the rail.

To change the position of the riflescope on the weaver rail additionally follow the steps mentioned below:

1. Unscrew the two screws, which attach the rail to the mounting bracket.
2. Take the rail out of the groove.
3. About-face the rail in case of necessity.
4. Place the rail into another groove.
5. Fix the rail with the two screws.



**NOTE:** If the rail does not come out easily, tighten one of the removed screws into the threaded aperture in the middle of the fixing projection of the rail. Rotate this screw, which will in turn push the rail out from the groove.

## Digital Control

The COTX2-4 has a simple and easy to operate one-button control and adjustment.

To turn on: Press the operation button by one short push

To turn off: Press the operation button again by one short push

To adjust reticle brightness:

- 1) After turning scope on, press and hold operation button. Brightness will grow smoothly while the button is kept pressed. Release the button when necessary brightness is achieved.
- 2) Press and hold the button second time for smooth decrease of brightness. Adjustment could be easily seen if you look through the scope while adjustment. All functions of digital control are available with remote control also.

## Focusing

To focus your riflescope you will need to adjust the diopter first thing. Simply turn the diopter clockwise until it stops. Then, while looking through the diopter at a subject, slowly turn the diopter back counter clockwise until the grain in the image is sharp.

**NOTE:** We suggest that you focus the diopter in daylight with the cap on.

## Operation Extendibility

There are three detachable Picatinny rails on the body scope for additional lighting, laser and other mission tools. The rails fix with two screws as shown on the figure.



## Illumination

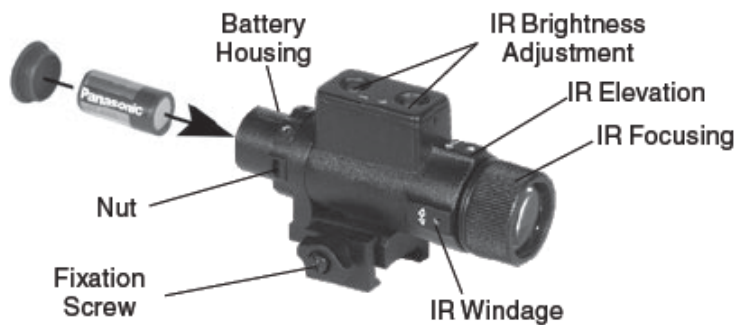
Infra-red (IR) Illuminators are common for night vision technology. The IR greatly enhances the performance of the COTX2-4 scope while remaining almost totally invisible to the naked eye. In dark environment power up the COTX2-4. Now find a scene and examine it without the IR on then with IR powered 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 riflescope 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.

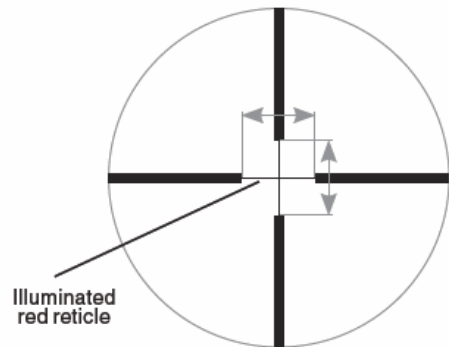
The IR beam is focusable to change the field of coverage. To change the beam width slightly turn the IR lens.

You can 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 at in the most convenient position. Tighten the nut with the wrench to fix the new position.



## Reticle

The COTX2-4 reticle gives a clearly aiming point even when hard-to-see game blends into the background. Posts and crosshairs center section covers a minimum of the target and allow for less target coverage, making precision shots on small target easy. The size of illuminated red reticle corresponds to 1 yard at 100 yards distance.



## Windage and Elevation

The vertical and horizontal adjustments for the COTX2-4 can be achieved by turning the elevation and windage adjustment mechanisms (remove dust caps first). Each click equals 1/2 inch at 100 yards. When reaching the maximum range of rotation do not use force.



## Cleaning the Eyepiece

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

**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.

## 2X Afocal Lens

The additional 2X afocal lens transform the 2X to 4X night vision rifle scope. For attaching 2X afocal lens screw it into the front lens of the scope.



## WARNINGS AND CAUTIONS

- Always remember to turn off the COTX2-4 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 is 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 eye caps 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 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 COT for service instructions.

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