

# NS-XD

## Night Vision Rifle Scope

### Operation Manual

#### 1. About the Scope

The NS-XD is our newest Gen1 night vision hunting rifle scope with built-in infra-red (IR) illumination. Using the industry's latest technological advancements, it provides for accurate target acquisition and aiming under 'total darkness' conditions. While the range of vision of a target depends on conditions including the level of star- or moon-light, the scope's characteristics are among the best of its class. Using the built-in IR illuminator, the scope provides precise shooting accuracy at distances of up to 200 yards, depending on ambient conditions. The scopes performance can be further enhanced by using in tandem with bolt-on IR lasers and/or illuminators. The scope fits all rifles capable of accepting a Weaver (7/8 inches) rail. It is fully crafted from advanced-strength metal alloys and features high-quality optics. It has a lit red MILDOT reticle with an adjustable brightness function. Using the standard MILDOT reticle, distance to target is easily estimated for increased accuracy. The device is designed to be extremely energy efficient providing for extended battery life. It additionally has an advanced variable-color reticle which smoothly changes amongst any shade of red, orange, yellow and green. This new color-changing technology significantly increases user comfort as each hunter's eyes interpret and react to individual sectors of the color spectrum differently with varying relative clarity and eye strain. You gain not only increased comfort and clarity per your specific vision capabilities but also increased clarity vis-à-vis your hunting environment. Choosing the reticle color to fit your conditions enhances shooting accuracy be it forest, field, or snow. The rifle scope includes a second tactical rail on the housing body for fastening an additional IR illuminator, microphone or other accessories and the electron-optical converter has a special fastening system which minimizes recoil impact on the night vision tube extending unit life. You have purchased the latest in night vision technology, shoot with confidence!

#### 2. Specifications:

ICT type	1st Gen
Magnification	2,5x
Factor of light amplification, times	900
Range of lens adjustment , m	10 ... ∞
Field of view, degrees	10
Eye Relief , mm	50
Range of eyepiece adjustment , dioptry	± 4
Range of zero adjustment / 1 click, MOA	± 36 / 0,5
IR illuminator power, mW	25
Battery type	CR123A
Battery life time, h	120(without illuminator)
Overall dimensions , mm	210x95x70
Weight , kg	0,95

#### 3. Your new rifle scope includes:

Rifle scope	1 pcs.
Rifle scope objective cover	1 pcs.
Rubber eyepiece	1 pcs.
Operation manual	1 pcs.
Rifle scope case	1 pcs.

#### 4. Scope operation

The rifle scope is shown in figure 1. The rifle scope body is a metal housing which covers the electron-optical converter (ICT) and the high-voltage power supply. The device has following basic parts: a lens, eyepiece, a mechanism of adjusting for zero, a control unit, and a mount. Located in the control unit (5) are the following: the battery pack (4), IR illumination (1), the indicators of operating modes and operating controls.

The CR123A battery is inserted into the pack located under the cover (4). Polarity is specified on the cover. The device is switched ON/OFF by rotation of the handle (6). Indicators of operating modes are the green and red light-emitting diodes located on the control unit over the eyepiece. The luminescence of green indicator confirms the device is switched 'ON'. The luminescence of red indicators confirms the IR illuminator is switched 'ON'. When the battery is near exhaustion, the green indicator will start blinking – time to change the battery.

The scope is secured on the rifle by the mount (9). For this purpose it is necessary to turn the mount's nuts counter-clockwise (8, 10) and install the sight so that the mount's clips have captured the Weaver rail of the weapon. One screw should sit across the cross-cut grooves of the rail. Then the clamp nuts (8, 10) should be tightened.

The cover (7) is intended to protect the objective lens when not in use or during user under high-illumination conditions such as daylight use. Focusing is accomplished by turning the rotation ring (12) of the eyepiece. The rubber eyepiece (11) is used for providing proper eye relief and alignment. Adjustment of z of the scope is carried out by rotating the turrets (windage and elevation) located under covers (13) and (14).

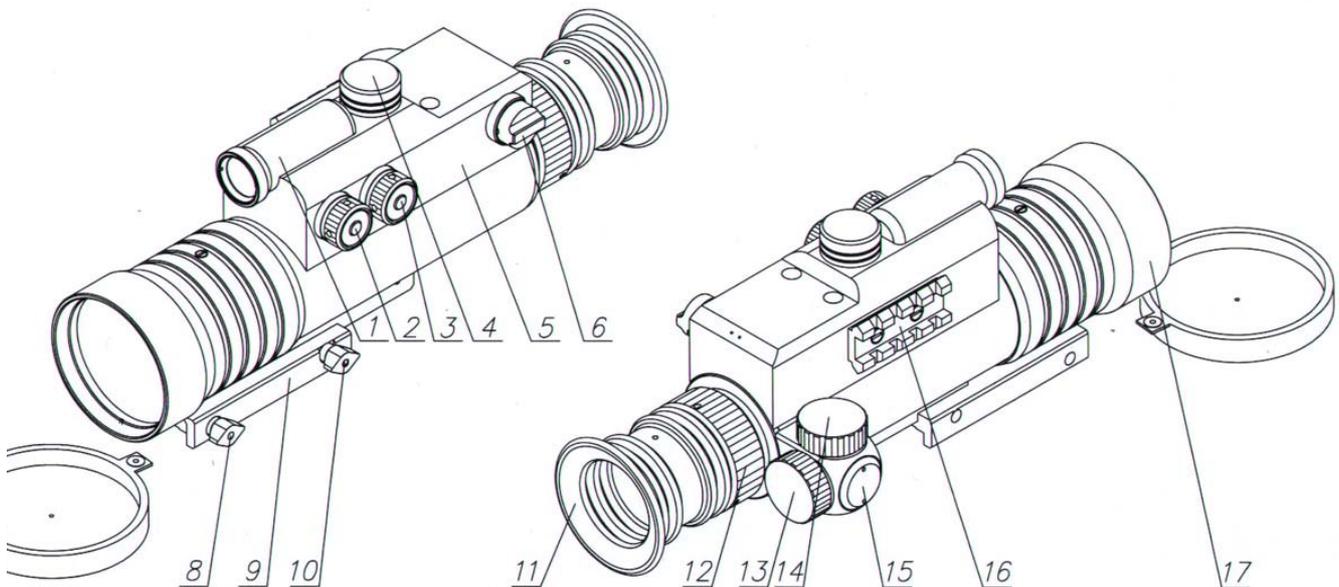


Fig. 1 The NS-ND night vision sight.

1 – IR illuminator ; 2 – ret brightness control; 3 – ret color control; 4 – battery cover; 5 – control unit; 6- ON/OFF control; 7- rubber lens cover; 8- mounting nut; 9 – weaver mount; 10 – mounting nut; 11 – rubber eyepiece; 12 - focus adjustment ring; 13 - windage adjustment turret cover; 14 - elevation adjustment turret ; 15 – zero adjustment; 16 - tactical weaver rail for additional accessories ; 17 – lens.

#### 5. Zero adjustment.

Using a rifle rest, sandbags or other method to provide a solid base for your rifle, mount the scope on the Weaver rail and tighten the clamp nuts. It is very important to tighten the clamp nuts by equal measures to avoid cocking the rifle scope in relation to the rail. To get perfect

alignment of your scope to the rifle's bore, hand tighten the clamp nuts. Then alternate quarter or eighth turns of the front, then back, then front, etc. Set up a target at your preferred distance (25 or 50 yards for night vision scopes is generally standard). Switch ON the scope. REMEMBER: If you operate in daylight or near bright light sources, do not remove the rubber cover of the objective. Remove covers (13) and (14). Focus the scope by rotating the eyepiece (the ring (12)). Set reticle brightness at the minimal setting that is still convenient for viewing by rotating the control knob (2). Set the reticle color by rotating the color control knob (3). Fine focus by adjusting the objective lens (17). Aim and fire. Adjust windage and elevation as necessary (1/2 MOA per click). Repeat as necessary.

**Attention! It is not recommended** to rotate the turrets more than 360 degrees from the central position installed at manufacturing of the device. Rotating the windage and elevation turrets more than one full turn may result in inaccurate adjustments (i.e. a click being equal to some other value than ½ MOA). If your initial round's point of impact is outside a 40 sqm coverage of the target then the mounting position or your Weaver rail in relation to your rifle needs to be adjusted. Your first step should be to re-mount the site on the Weaver rail by:

1. Remove the scope from the rifle.
2. Turn off the screws of the mount fastening by 1/3 turns.
3. Replace the scope on the weapon.
4. Horizontal adjustment is made by rotation of the small screws on the lateral surface of the mount.
5. Vertical adjustment is provided with installation of a lining (such as thin shim or foil) between the mount and the housing. If it is necessary to elevate the reticle, insert the liner near the first screw (closest to the objective). If it is necessary to lower the reticle, insert the liner near the back screw.
6. After adjustment remove the scope from the weapon and twirl the screws of the mount fastening.
7. Install the sight on the weapon and make realign to your target using the windage and elevation knobs.

After first zeroing the scope, fire 3-4 control shots in the center of the target to ensure zero. If impact does not provide an acceptable grouping, repeat the zeroing process.

## **6. Maintenance service.**

Troubleshooting:

1. Examine the device for detection of bad connections of its parts.
2. Check reliability of the fastening of the sight.
3. Clear lenses by flannel moistened by spirit or a glass cleaner.
4. Check the condition of the battery and the contacts in the battery pack. Oxidation and/or dirt should be absent. Switch ON the device. The indicator should not blink. Otherwise replace the battery.

In case of a significant malfunction, contact the manufacturer or retailer.

**Independent disassembly of the rifle scope will void the warranty.**

## **7. Warranty.**

This rifle scope is guaranteed from optical or mechanical defects for three years from purchase. The scope and the night vision tube is guaranteed from degradation, assuming proper use and handling, without a loss of sensitivity of not less than 1000 hours of operation.

Free-of-charge warranty service and repair is made within 12 months from the moment of sale. This obligation does not extend on products with internal and external mechanical, chemical, thermal damages due to other than normal external conditions or improper use or storage.