



**OPERATION MANUAL  
FOR**

**2-16x42  
FFP/0.1 mrad  
Tactical Scope**



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**MAINTENANCE**

The riflescope does not require a special maintenance. However the owner must ensure a general maintenance, following these steps:

- The lenses should be cleaned very carefully using a soft bristle and an optics-quality lens brush (for large particles removing), lens paper or cotton swabs and specials cleaning materials (liquid or non-liquid) for the final cleaning;
- The main tube should be wiped with a soft, clean and dry cloth;
- The moving parts should be cleaned to remove dust and other particles, using a soft bristle brush.

**WARRANTY**

Warranty does not include the defects resulted from improper or unauthorized handling of the scope.

***WARNING !***

**Repairs should only be carried out by authorized workshops.**

**DANGER! Unload firearms before installation to prevent shooting accidents!**

**Please protect your rifle scope against knocks.**

**TECHNICAL CHARACTERISTICS**

- Magnification: ..... 2 - 16 x
- Objective diameter: ..... 42 mm
- Field of view: angular:.....10° - 1.25°  
linear: .....17.5 - 2.2 m/100 m
- Exit pupil diameter: ..... 6.5 - 2.63 mm
- Eye relief:.....80 - 90 mm
- Dioptric adjustment: ..... ± 3 dpt
- Adjustment range: elevation .....125 MOA  
windage ..... ± 25 MOA
- Click value: ..... 0.1 MRAD
- Parallax correction: ..... 7m - infinity
- Reticle:.....FFP / illuminated
- Battery: ..... 3V CR 2032
- Tube diameter: ..... 35 mm
- Length: ..... 325 mm
- Weight: .....1 kg
- Accessories: ..... sunshield  
1.5mm box wrench  
2mm box wrench  
3mm box wrench  
protection caps  
cleaning cloth

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### WARNING !

*Never look at the sun with the riflescope.  
You risk to suffer lesions of the eyes !  
Protect the scope (mounted on the rifle) from jolts and jars.  
Any interventions on the scope should be made only by the specialized workshop staff.  
It is not allowed to act to the compensation mechanism.*

### CAUTION

#### Dusty or sandy areas

Operation in dusty or sandy areas can cause pitting and scratching of optical elements and damage to mechanical components.

The general precautions are:

- avoid pointing the scopes into the wind unless necessary for operation
- insure that all dust and sand is removed from the scope after operation.

#### Salt water areas

Operation in salt water areas can cause corrosion of the scope.

The general precautions are:

- after expose to salt water clean with fresh water.
- dry all parts completely (do NOT disassemble), use lense paper to clean the objective and eyepiece lens.

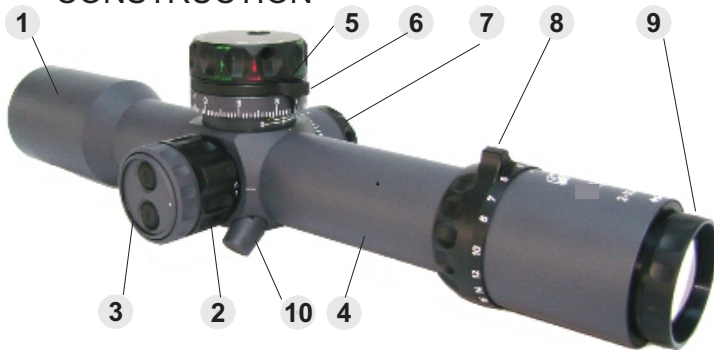
#### Rainy or humid conditions

Operation in rainy or humid conditions can cause corrosion and deterioration of scope.

The general precautions are:

- dry all parts after exposure to rain or high humidity.
- Do NOT store scope in a wet carrying case or wet storage case.

## CONSTRUCTION



1. Objective
2. Ring for parallax correction
3. Digital illumination system
4.  $\Phi$  35 mm Tube
5. Elevation adjustment turret
6. Index ring for zero position
7. Windage adjustment turret
8. Magnifications ring
9. Eyepiece
10. Compensation mechanism

-Firstly, fix the special mounts (rings) to the rifle; position the scope on the special mounts, so that to provide an optimum distance from the shooter's eye (in shooting position) to the eyepiece, so that to see the whole visual field of the scope.  
-after the preliminary fixing of the scope in the mounts (by tightening the superior semi-rings), check the position of the reticule center of scope to the rifle's barrel, to 100 m distance.  
-checking is made with "cold"/boresight adjustment devices ("cold" / boresight adjustment scope, laser pointer) mounted on the rifle's barrel;  
-the special mounts should be adjusted so that to make a correspondence between the reticule center of the scope and the reticule center of the "cold" adjustment scope or, center of laser fascicle. This coarse adjustment must be accomplished from the mounts (rings, bases, rails) and, the fine adjustment being accomplished from the mechanisms of the scope;  
-after making these adjustments, block definitely the tightening screws of the mounts on the rifle;  
-final adjustment shall be made in the polygon, by target shootings.

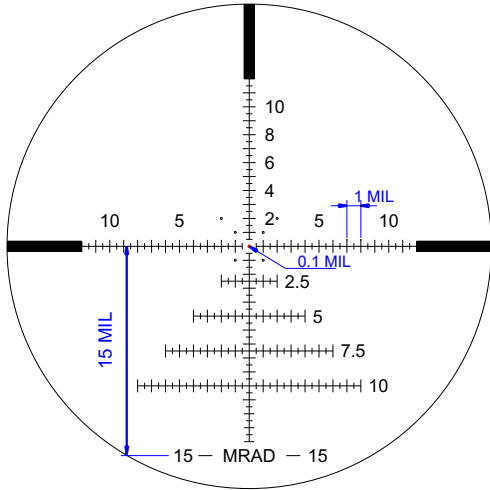
#### ATTENTION !

-Complying with the mounting and adjustment instructions of the attachment on rifle mounts is compulsory.  
-After adjusting the scope to "0", check its proper working, namely:  
-uniform movement of the magnification ring;  
-rotating the eyepiece ring, so that to get a clear reticule image;  
-making the complete run of the mechanisms on elevation and windage.

## RETICLE

The riflescope 2-16x42 is equipped with a reticle positioned in first focal plane FFP.

The reticle has an illuminated central point.



## MOUNTING THE SCOPE ON THE RIFLE

-Mounting and adjusting the aiming telescope on the rifle is done by armourers in a specialized workshop, provided with the necessary tools and devices.

-Attaching on the rifle is made with the help of special mounts with Ø35 mm diameter corresponding to the tube of the scope, which will be fixed on the attachment system specific to the utilized rifle.

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## BDC RINGS

-On demand, the scope can be delivered with BDC rings, instead of the base ones, from the production list of IOR company.

-After adjusting the scope on the rifle for "0" distance, specific to the calibre, proceed as follows:

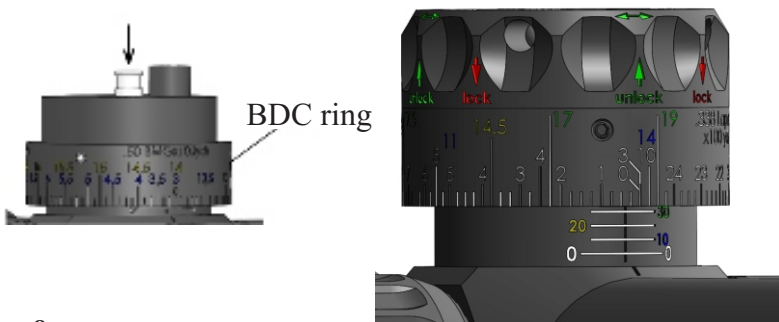
-loosen those 3 pins of the BDC ring; this will be positioned by unscrewing, with the inferior surface on the "0" line of the fix tambour;

-tighten those 3 pins of the BDC ring;

-loosen those 4 pins of the tambour; rotate the tambour to the coincidence "0" of the BDC ring with the vertical scratch of the fix tambour (without driving the mechanism axle);

-gradually and diagonally, tighten those 4 pins of the tambour, keeping its adjustment;

From this position choose the desired distances, correlating the colors between the BDC ring and the fix tambour.



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## INSTALL RECOMMENDATIONS

- **Very important:** ensure that the rifle is unloaded and the bolt is removed from the action;
- Use only the proper tools, to not damage the riflescope, the rings and the base;
- Ensure mounts and a set of high-quality Ø35 mm rings, that are right for the application;
- Use the lowest possible ring height, for a stable firing position;
- Be sure that your scope contact only the mount rings and not interfere with firearm operations, when installed;
- Position your scope for an optimal eye relief;
- Check that the vertical line of the reticle is aligned with the vertical axis of the firearm;
- Tighten the ring screws evenly and securely, using the proper wrench:

-first tighten the ring cap screw, alternating sides until the screws are hand tight;

-ensure that there is an equal amount of space between the two halves of the rings;

The hexagonal 12 mm wrench is used for piercing the blocking nut of the clamping supports on the scope on the Picatinny rail of the weapon. The recommended piercing is of 60-65 inch pounds.

The 7/64 inch box wrench is used for piercing the fixing bolts of the upper bridles of the clamping supports of the scope.

The recommended clamping is a 12-15 inch pounds.

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## PARALLAX CORRECTION



ring for parallax correction

· The correction mechanism of the parallax allows focusing the image and the parallax elimination for the distance range between 7 m and infinity.

· The parallax is the apparent movement that is observed between the reticle and the target, when moving the eye from center and edge of the output pupil of the scope; this phenomenon takes place if the reticle and the target image are not in the same plane.

· To eliminate the parallax, firstly adjust the eyepiece, so that the reticle to be seen the most clearly.

· Then, move the eye slowly in the output pupil of the scope, from left to right and from upward to downward, so that to detect any apparent movement between the reticle and the edge of target. Rotate the correction ring of the parallax until no movement is observed anymore, and the reticle center remains overlapped just over the target.

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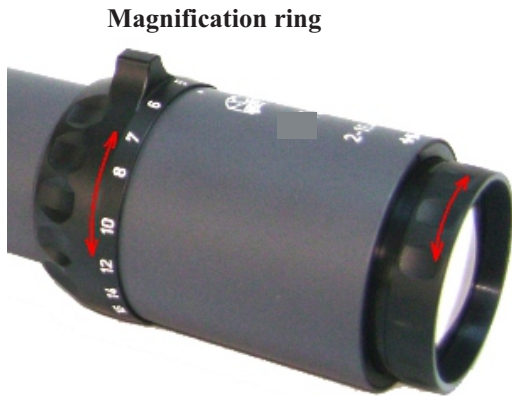
## BASIC OPERATIONS

### EYEPIECE ADJUSTMENT

- The eyepiece can be adjusted by diopters compensation.
- Look through the scope and rotate the eyepiece forward and backward, until obtaining the clearest image of reticule.
- There is an interior ring, for preventing the detachment of eyepiece from the scope body.

### MAGNIFICATION SELECTION

- Rotate the magnification ring until getting the desired magnification.



Magnification ring

eye piece adjustment

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### ELEVATION AND WINDAGE ADJUSTMENT

-Any deviation between the bullet impact point and the sighted point on the target, can be easily and precisely corrected, by the help of the adjustment turret on height and direction.

-The height and direction adjustments permit both the scope alignment with the rifle and corrections of the impact point, as well.

-The adjustment run on height is 125 MOA (minutes of arch), and the adjustment run on direction is  $\pm 25$  MOA, equal from left to right.

-The division value per click of the adjustment turret on height and direction is 0.1 mrad.

-Each click can be heard and felt when rotating, so that the shooter will not have to look to the turret scale.

The acting directions are marked on the caps of turrets with arrows. "UP" and "R" symbols are referring to the movement directions of the impact point, respectively upward and to the right.

—On the height adjustment turret, there is fixed an index ring for zero position. This is used to memorizes a certain setting or for marking the second impact point.

—The turrets of height adjustment are provided with a "stop zero" fixing system, that can be adjusted as follows:



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## DIGITAL ILLUMINATION SYSTEM

The scope is equipped with illuminated tactical reticule, commercially named MP-8-EXTREME X1, situated in the image plane of the objective (FFP) and having the central point illuminated in red.

The illumination system is digital type, with two acting buttons for increasing and decreasing the illumination level. Illumination starts by pressing any of those two buttons.

The last set level is saved for the next restart.

Stopping the illumination is done by simultaneously pressing of those two buttons



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1. With a hexagonal key of 3 mm, rotate in the arrow direction the piece with hexagonal groove, until blocking, so that to fixing the zero position when making the initial mount on rifle.
2. Loosen the pins from the index ring assembly and reposition it on "0".



pins

—The rosette for acting the tambours for adjustment on height, allows – by axial translation – to blocking the mechanism in any position of height adjustment, as follows:

1. Pull the tambour, thus, unblocking the "unlock" mechanism.
2. By rotating, adjust the mechanism.
3. After adjustment, press back the tambour for blocking in the "lock" adjusted position.



### ATTENTION !

Do not operate by rotating the mechanism for height adjustment when this is in the blocking position marked "lock". Operating in this position leads to internal mechanical damages as well as to decreasing or even cancelling the blocking effect.

- Tighten the 3 pins uneven without see point 3 generates distortions, uneven gait and even blocking mechanism.

- No action will be taken by rotating drum height adjustment mechanism when the lock is in position marked "lock" position. Operating in this position leads to internal mechanical damage and the decrease or even canceling the blocking effect.

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