

# M-223 Riflescope

## 3-12x42SF/4-16x42SF

Manufacturer: **NIKON VISION CO., LTD.**  
3-25, Futaba 1-chome, Shinagawa-ku, Tokyo 142-0043, Japan

Congratulations on your choice of a Nikon M-223 Riflescope. Your new scope is the finest example of Nikon's rugged and durable construction and precision bright optics; important qualities for a serious shooter's riflescope. Whether you use your scope for hunting or for target shooting, the procedure for mounting is identical. A set of high quality steel mounting rings which have a standard diameter of 1 inch (25.4 mm) are required to mount the scope. Follow the ring manufacturer's instructions for mounting procedures. After mounting the scope on your rifle, follow the procedures for reticle alignment. When setting the reticle for hunting, you should determine your standard range and then adjust the reticle based upon that target distance. For targets which vary from that standard distance, according to personal preference, you may simply adjust the position of the reticle in relation to your target, or you may wish to use the procedure for trajectory compensation. We hope that you will enjoy your new Nikon Riflescope for many years to come. Enjoy using it, and above all, always follow safe shooting procedures.

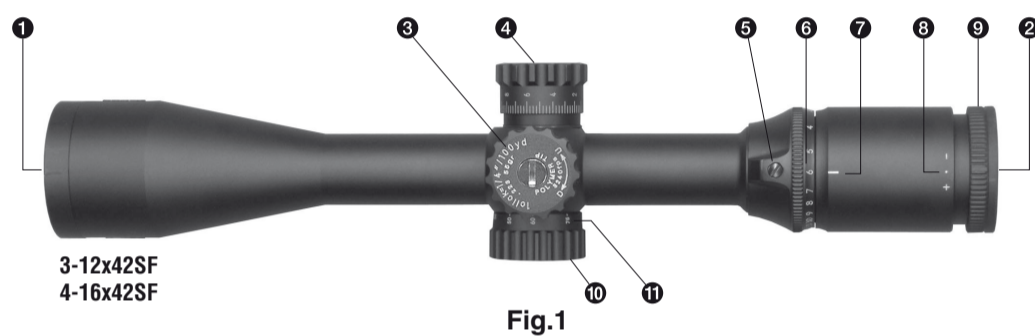
**Caution**

- (1) Do NOT look at the sun through the riflescope. It will permanently damage your eye. This precaution applies to all optical devices, such as cameras and binoculars.
- (2) The riflescope is effectively sealed against moisture and dust. You may use your scope safely either in the rain or in dusty climates. To preserve the appearance of the scope, we recommend that it be dried and cleaned prior to storage. Use a soft cloth for cleaning metal surfaces and use photographic lens tissue to clean the scope's lenses.

N.B. Export of the products\* in this manual may be controlled under the laws and relatives of the exporting country. Appropriate export procedures, such as obtaining export licenses, shall be required in case of export.

\* Products: Hardware and its technical information (including software)

## 1. Nomenclature



- 1 Objective lens
- 2 Eyepiece lens
- 3 Elevation adjustment turret
- 4 Windage adjustment turret
- 5 Power selector ring
- 6 Power scale
- 7 Power index dot
- 8 Diopter index dot
- 9 Eyepiece adjustment
- 10 Side focus adjustment turret
- 11 Distance scale

## 2. Specifications

Model	3-12x42SF	4-16x42SF
Actual Magnification	3-12x	4-16x
Objective Diameter (mm)	42	42
Exit Pupil (mm)	3.5 (@ 12x)	2.6 (@ 16x)
Eye Relief (mm) * (in)	101.6-94.0 4.0-3.7	101.6-94.0 4.0-3.7
Tube Diameter (mm) (in)	25.4 1	25.4 1
Objective Tube Diameter (mm) (in)	49.3 1.94	49.3 1.94
Outside Diameter of Eyepiece (mm) (in)	44 1.73	44 1.73
Adjustment Graduation (MOA)	1 click: 7 mm @ 100 m 1 click: 1/4 in @ 100 yd	1 click: 7 mm @ 100 m 1 click: 1/4 in @ 100 yd
Max Internal Adjustment (Elevation & Windage) ** (MOA)	60	40
Parallax Setting (m) (yd)	45.72 to ∞ 50 to ∞	45.72 to ∞ 50 to ∞
Field of View at 100m/100yd (m) * (ft)	11.2-2.8 33.6-8.4	8.4-2.1 25.2-6.3
Length (mm) (in)	333 13.11	344 13.54
Weight (g) (oz)	530 18.7	540 19.0
Structure	Waterproof (up to 1 m for 10 minutes) and nitrogen gas filled	

\* (at minimum magnification) - (at maximum magnification)

\*\* MOA = Minute of Angle

**SUPPLIED ITEM(S)**

- Body.....1 piece
- Eyepiece cap (flip-open).....1 piece
- Objective cap (flip-open).....1 piece

## Instruction manual



## 3. Instructions

### (1) Focusing

- Look through the eyepiece with your eye positioned about 4 inches (10 cm) away from the eyepiece lens to see the Nikoplex Reticle (Fig. 3-1) or the BDC 600 Reticle (Fig. 3-2) depending on your purchased product. Be sure your eye is positioned within proper alignment and proper eye relief, otherwise the view will "black out".
- Point the objective end of the scope at the sky (do not point at the sun) or at a plain unpatterned wall. Turn the eyepiece adjustment counter-clockwise and then turn it clockwise until the reticle appears sharp.

Nikoplex Reticle

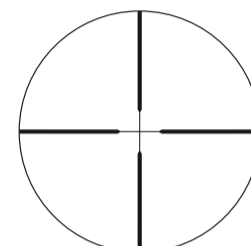


Fig.3-1

BDC 600 Reticle

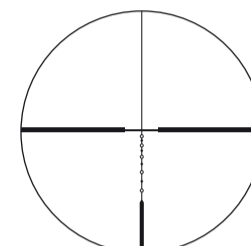


Fig.3-2

**BDC 600 Reticle**

Developed specifically for the trajectory of the .223 Rem./5.56 NATO round with 55-grain polymer tip bullet (3240 fps), the BDC 600 Reticle offers shooters unique open circle aiming points and hash marks from 100 to 600 yards. Refer to the BDC 600 section of "Guide to using the BDC Reticle".

### (2) Magnification

The M-223 Riflescope 3-12x42 has a variable magnification from 3 to 12x and 4-16x42 from 4 to 16x.

To change powers, just rotate the power selector ring until the desired magnification appears adjacent to the power index dot (Fig. 1).

### (3) Adjustment of the riflescope

Sighting through the riflescope, align the rifle with your aiming point on the target and shoot a trial round. If the bullet does not hit the aiming point, adjust the elevation and windage adjustment turrets as follows:

- If the bullet hits under the aiming point, turn the elevation adjustment (counter-clockwise) in the direction of the arrow marked "U" for up. If the bullet hits high, turn adjustment (clockwise) in the direction of the arrow marked "D" for down.
- If the bullet hits to the right of the aiming point, turn the windage adjustment (clockwise) in the direction of the arrow marked "L" for left. If the bullet hits to the left of the aiming point, turn adjustment (counter-clockwise) in the direction of the arrow marked "R" for right.

### (4) Adjustable Parallax Setting

The M-223 Riflescope 3-12x42SF and 4-16x42SF can be more precisely focused within the range of at least 50 yards (45.72 m) - infinity by rotating the side focus adjustment turret.

By adjusting the focus, parallax can be eliminated and sight alignment will become accurate.

Use the side focus adjustment turret's distance scale as a reference guide.

The adjusting ring has a lock system so that it will not move during shooting.

When adjusting the focus, pull out the adjusting ring. For lock push in the adjusting ring.

**Note:**

- The windage and elevation scales of the M-223 Riflescope are calibrated in divisions of 1/4 minute of angle, with a click at intervals of 1/4 minute of angle.
- When adjusting the reticle to the point of aim, remember that 1 minute of angle equals approximately 1 inch (2.54 cm) at 100 yards (91.44 m). Therefore, if the impact point is 2 inches (5.08 cm) low and 1 inch (2.54 cm) right at 100 yards (91.44 m), you should adjust 2 minutes of angle up 1 minute of angle left.

### (5) Zero setting of the Elevation and Windage Adjustment Turrets

The elevation/windage adjustment turrets have a pop-up adjusting system.

After the reticle has been adjusted to the point of impact, pull out the adjusting turret.

The adjusting turret can now be turned freely. Align the zero number to the index line to set the zero setting, and then push the turrets back in to set the current position.

### (6) Rapid Action Turret Technology (Nikoplex reticle model only)

This system, based on a .223/5.56 mm 55-grain polymer tipped bullet (3240 fps), simply and effectively allows you to dial in your elevation anywhere from 100 to 600 yards away in less than one revolution. Now you can stay in the middle of your Nikoplex crosshair at virtually any shooting distance with a quick turn of the turret.

## Maintenance

### (1) Lens Cleaning

To remove dirt or fingerprints, soak gauze or lens cleaning paper (silicone free paper sold at camera retailers) with a small quantity of absolute alcohol (available from drugstores) and lightly wipe off the affected areas. Wiping with handkerchief or leather may damage the lens surface and is not recommended.

Dust may scratch the lens surface or corrode the lens.

Brush dust off using a soft oil-free brush.

### (2) Scope Exterior

Use a soft dry cloth to wipe off any dirt or fingerprints that might accumulate.

It is not necessary to oil the scope's surface.

### (3) Windage/Elevation Adjustment Turrets

These adjustment turrets are permanently lubricated. Do not attempt to lubricate them.

### (4) Eyepiece Adjustment

This adjustment is permanently lubricated. Do not attempt to lubricate it.

### (5) Power Selector Ring

No lubrication is required for the power selector ring.

Do not pull up or remove the rubber covering on the zoom ring.

## Waterproof models:

The riflescope is waterproof, and will suffer no damage to the optical system if submerged or dropped in water to a maximum depth of 1 meter for up to 10 minutes.

**The riflescope offers the following advantages:**

- Can be used in conditions of high humidity, dust and rain without risk of damage.
- Nitrogen-filled design makes it resistant to condensation and mold.

**Observe the following precautions when using the riflescope:**

- The riflescope should not be operated nor held in running water.
- Any moisture should be wiped off before adjusting movable parts (adjustment turret, eyepiece, etc.) of the riflescope to prevent damage and for safety reasons.

To keep your riflescope in optimal condition, Nikon Vision recommends regular servicing by an authorized dealer.

\* Specifications and design are subject to change without notice.

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