ATHLON

RIDICULOUSLY GOOD OPTICS

USER MANUAL & CARE INSTRUCTIONS

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ATHLON ARES UHD | 22x65 - MIL RETICLE
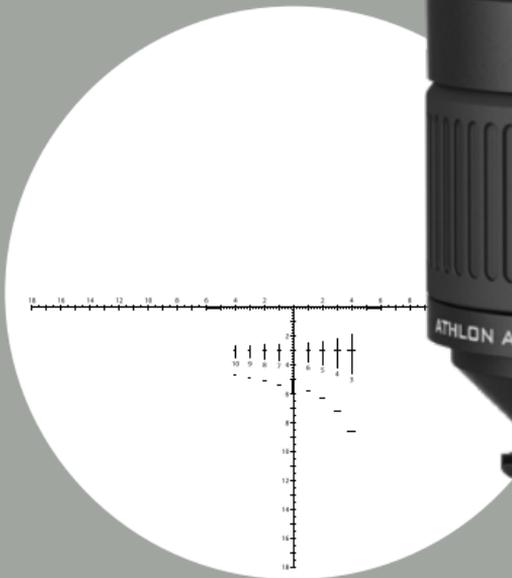
ARES G2 UHD SPOTTING SCOPE

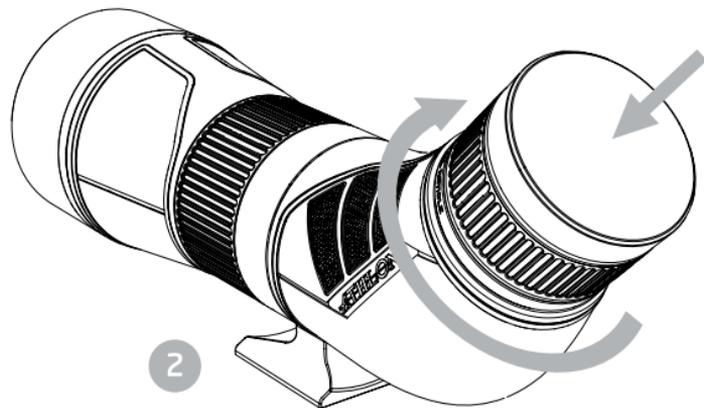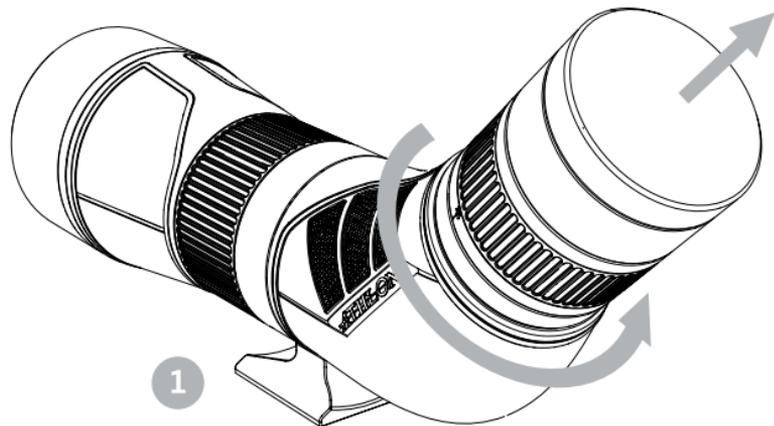# 22X EYEPIECE

[TSSR2 SFP MIL RETICLE]

REPLACING THE EYEPIECE ON YOUR
ARES G2 UHD SPOTTING SCOPE

The fixed 22 power eyepiece is interchangeable with the regular eyepiece on any Ares G2 UHD spotting scopes.

1. First, hold the spotting scope with eyepiece facing to you and rotate the regular eyepiece counterclockwise until it becomes loose.

2. Second, put the fixed power eyepiece in and rotate it clockwise until it can not be turned anymore.

THE ATHLON® TSSR2 SFP MIL RETICLE

TSSR2 SFP MIL Reticle in a fixed 22 power eyepiece is designed for Ares GEN2 UHD Spotting Scope for all types of ranging applications. The MIL based reticle has 0.2 MIL hash marks from the center extended into three directions. The "T" shape reticle with the horizontal base line 1 MIL below the center of the field of view doesn't block the spotter's view over his or her target. The unique design of quick ranging cross-hairs (12 inches above, 6 inches cross, 18 inches below) help you to range your shooting target from 300 yards to 1000 yards at a blink of your eyes. The 72 inch span from the top of the cross to the foot mark at the bottom gives you a quick reading of a standing person of average height at different distances. The 0.1 MIL hash mark between 5th MIL and the 6th MIL provides the finest measurement when you need that level of details.

APPLICATION: All Range
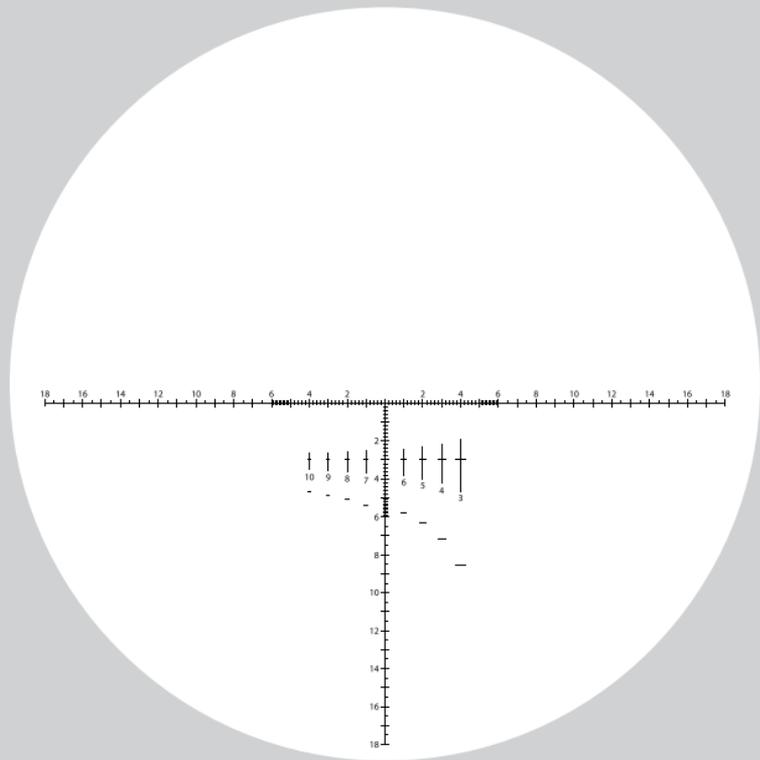
RETICLE SUBTENSIONS

The TSSR2 SFP MIL reticle is based on the milliradian, usually shortened to mrad or MIL. A "MIL" is defined as "one thousandth", or 1/1000. A MIL is 1/1000 of a radian (a unit of angular measurement). Since there are 6.2832 radians in a circle, and each radian is chopped up into a thousand pieces, there are 6.2832 x 1000 = 6,283.2 MIL in a circle. Since there are 360 degree in a circle, we can get 360 degree/6,283.2 MIL=0.573 degree/MIL. If the target is 100 yards (3600 inches) away, we can use 3600 Tan (.0573 degree) to get 3.6 inches which means 1 MIL equals to 3.6 inches at 100 yards.

NOTE: The crosses and the foot marks (see page 6) with numbers between them are the quick ranging guides. Those guides are uniquely calibrated so they represent the same dimensions at different distances. The number below the cross represents the yardage in hundreds. You can simply fit check the guides against a known size target. Once you identified a fit just read out the number below the cross in hundred yards, which are the distances between you and the target.
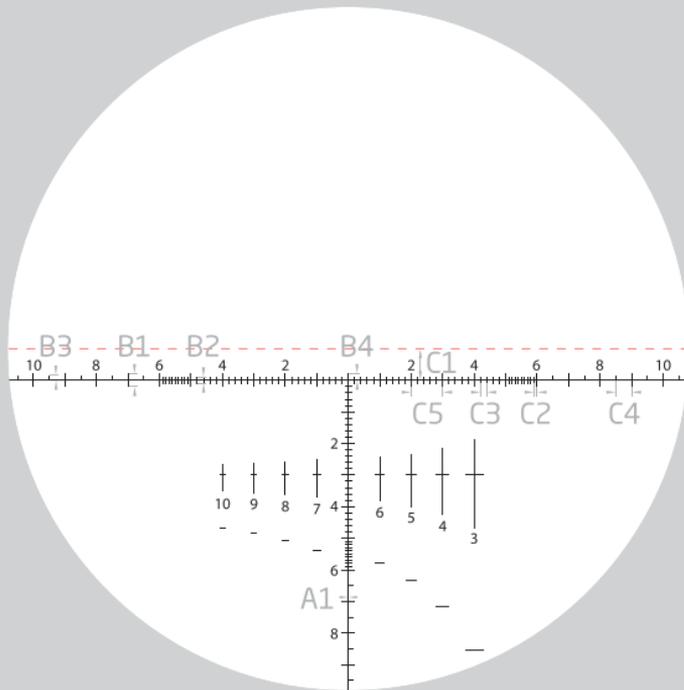
UNIT	A1	B1	B2	B3	B4	C1	C2	C3	C4	C5
Subtensions in MIL	0.028	0.4	0.2	0.15	0.2	1	0.1	0.2	0.5	1
in @ 1000 yds	0.1	1.44	0.72	0.54	0.72	3.6	0.36	0.72	1.8	3.6

NOTE: The reticle is 1 MIL below the virtual center line.
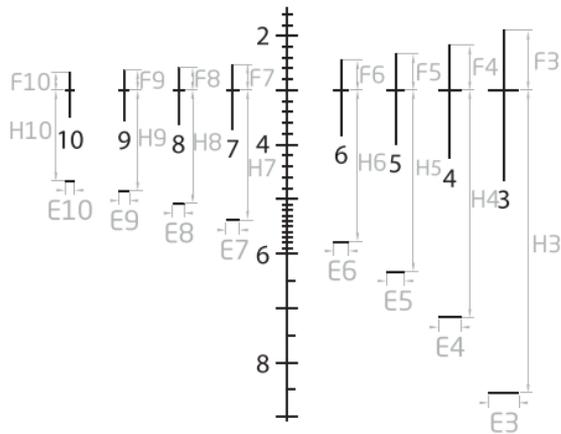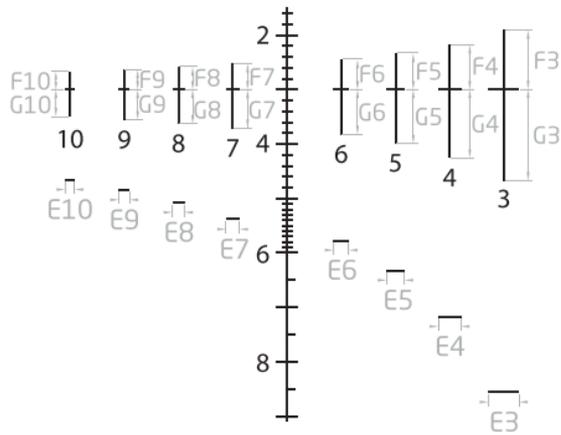
E = 6 inch target object

UNIT	E3	E4	E5	E6	E7	E8	E9	E10
Subtensions in MIL	0.56	0.42	0.33	0.28	0.24	0.21	0.19	0.17
distance in yds	300	400	500	600	700	800	900	1000

* if a quick ranging guide E6 fits a 6 inch wide target the distance is 600 yards.

F = 12 inch target object

UNIT	F3	F4	F5	F6	F7	F8	F9	F10
Subtensions in MIL	1.11	0.83	0.67	0.56	0.48	0.42	0.37	0.33
distance in yds	300	400	500	600	700	800	900	1000

* if a quick ranging guide F4 fits a 12 inch tall target the distance is 400 yards.

G = 18 inch target object

UNIT	G3	G4	G5	G6	G7	G8	G9	G10
Subtensions in MIL	1.67	1.25	1	0.83	0.71	0.63	0.56	0.5
distance in yds	300	400	500	600	700	800	900	1000

* if a quick ranging guide G8 fits a 18 inch tall target the distance is 800 yards.

H = 60 inch target object

UNIT	H3	H4	H5	H6	H7	H8	H9	H10
Subtensions in MIL	5.56	4.17	3.33	2.78	2.38	2.08	1.85	1.67
distance in yds	300	400	500	600	700	800	900	1000

* if a quick ranging guide H7 fits a 60 inch tall target the distance is 700 yards.

DISTANCE RANGING

Equations for ranging distance to a target using MIL

$$\frac{\text{Height of Target (Yards)} \times 1000}{\text{MIL Reading on Reticle}} = \text{Distance to Target (Yards)}$$

$$\frac{\text{Height of Target (Meters)} \times 1000}{\text{MIL Reading on Reticle}} = \text{Distance to Target (Meters)}$$

$$\frac{\text{Height of Target (Inches)} \times 27.8}{\text{MIL Reading on Reticle}} = \text{Distance to Target (Yards)}$$

Because the actual or at least closest estimate of the height of your target is the key part of above equations, you have to know the height of your target or heights of other objects nearby your target that are known to you.

As you can see the actual reading of your target is another key variable in those equations, you want to put your spotting scope on a steady rest or tripod as much as possible so you could get an accurate reading. If needed using the smallest measurement on the reticle to get the most accurate readings.
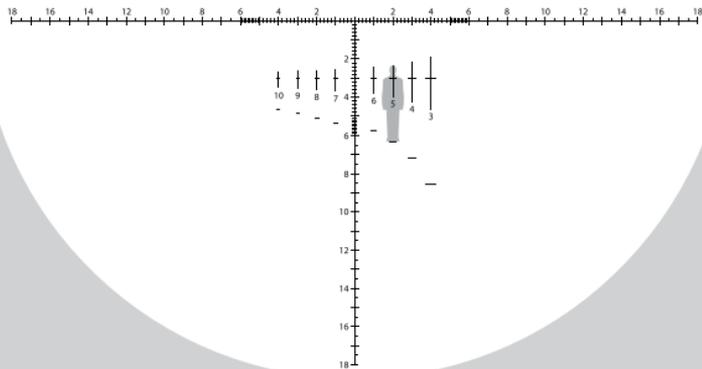
EXAMPLE 1
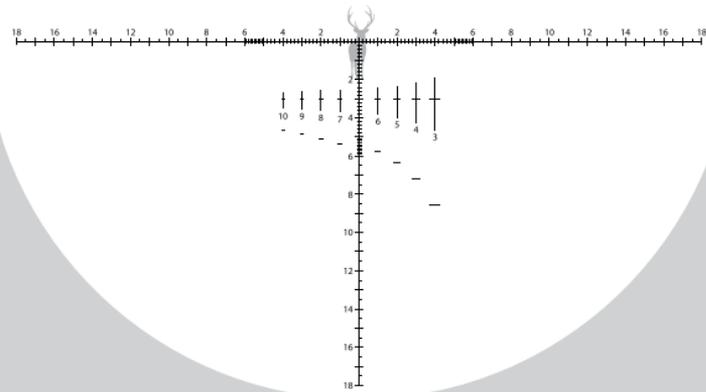
Reading a 5-foot target (1.667 yard) at 2 MIL gives 833.5 yards

$$\frac{1.667 \text{ yards} \times 1000}{2 \text{ MIL}} = 833.5 \text{ yards}$$

EXAMPLE 2

The distance between the top of the cross and the foot mark of any ranging guide is 72 inches. If you can fit a 72 inch tall target into the quick ranging guide, just read out the numbers under that guide in hundred yards. In this example the distance to the target is 500 yards.

EXAMPLE 3
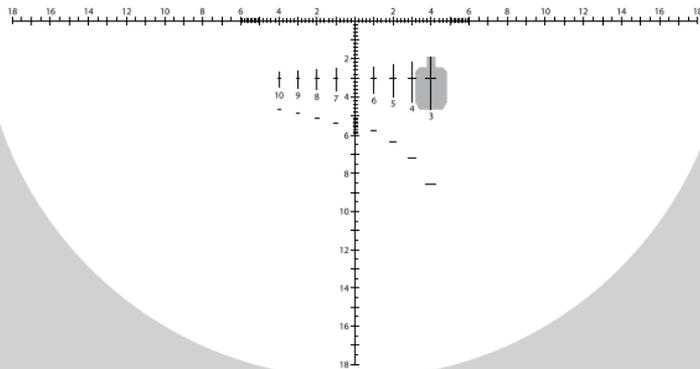
The height of the cross of the ranging guides is 30 inches. If you can fit a 30 inch tall target into any cross just read out the number under that praticular cross. In this example the distance to the target is 300 yards.

THE ATHLON
GOLD MEDAL LIFETIME WARRANTY*

Your Athlon product is not only warranted to be free of defects in materials and workmanship for the lifetime of the product. Athlon will also repair or replace, at no charge to you, your product if you should damage it through normal use. No receipt is needed, no registration is required. This is a commitment that Athlon Optics will be the best product you can buy for your money.

This warranty does not cover damages caused by deliberate damage, misuse, theft or maintenance provided by someone other than the Athlon Authorized Service Department.

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