

The ATN Adjustable Rings

ATN adjustable rings have rotatable inserts which allow for as much as 20 Minutes of Angle, or approximately 20 inches at 100 yards, mounting adjustment without touching the scopes internal windage and elevation mechanisms. This in turn allows the user to maintain the scopes center of optical axis when performing the initial installation of a new ATN rifle scope. This feature is extremely important in eliminating parallax and maintaining a centered reticle with application of these units, while offering greater overall zero range selectivity.

Each ATN scope is furnished with a set of non-offset rings useable with any Weaver or Picatinny style mount. These may also be reversed for more inter ring distance options or the recoil lug on the underside of each ring can be reversed (turned 180 degrees) by removing the two screws attaching it to the ring. Additionally, we offer an offset ring that when coupled with either standard or extended bases, will allow proper mounting on most any production or custom action. The rings provided with your scope have the correct height to allow for the necessary bell clearance required.



INSTALLATION

Select the appropriate bases for your application. These can be 2 piece, one piece or rail. When installing the bases be sure and use Loctite or an equivalent thread locker on the mounting screws. Most bases install with 6-48 screws and these should be torqued to about 22 inch/lbs. Generally all receiver/base combinations have some degree of misalignment. However, this is not a problem with the ATN rings as this is easily compensated for by the floating ring inserts, assuring a stress free scope/mount/receiver combination, another important accuracy consideration.

Attach the rings to the bases and determine if you have the right distance center to center.

The rings must not be closer than 1/8 inch to any place where the scope transitions from the 30 mm main tube including the turret area. Closer than 1/8 inch may cause turret or variable power adjustment binding. The available offset ring has 1 inch of distance from the center of the ring and used with or without extension base(s), if necessary, should easily cover all base mounting or eye relief problems. Tighten the ring securing side nuts finger tight.

Remove the tops of both rings and inserts and cradle the scope in their lower halves. Install the top halves and tighten each ring's four screws to finger tight (Figure 1). Do not over tighten or you will be unable to rotate the offset inserts. The use of a bore sight or collimator at this stage is very helpful setting the initial alignment of scope and bore. This can also be accomplished by placing a well-lit and defined bull's-eye target with at least a 6-inch black,

100 yards from a sand bagged and well supported rifle. Using the 100-yard distance to target will give a convenient zero but other distances can be used. It will, however, require more adjustment during live fire to achieve a 100 yd. zero. Sighting thru the bore with the action open center the black bull's-eye in your rifles bore. You would like the black circle of the bull's-eye centered in the scopes field of view with the crosshair in the center of the bull. If it is not, first use the side nuts that secure the rings to the bases



Figure 1

to adjust the scope to zero windage (Figure 2). Alternately loosening and tightening the side nuts while checking the bores alignment will move the scope crosshair accordingly:

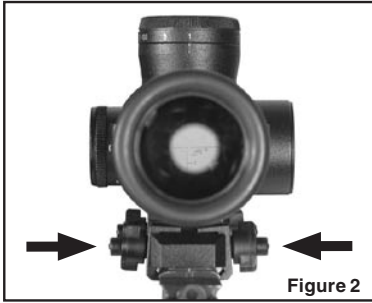


Figure 2

Looking from behind the scope in normal shooting position.

Loosening the rear rings left side nut and then retightening the right side will move the crosshair to the left. Reversing this procedure will move the crosshair to the right.

Adjustment using the front rings screws will result in the opposite.

Loosening the front rings left side nut and tightening the right will move the crosshair to the right.

Next check the elevation for zero. If the crosshair is not centered adjust it by rotating the a centric inserts via the following method:

Use the slot milled into the top half of each ring to access the holes drilled thru the insert(Figure 3). Move the inserts radially to achieve the above described scope picture by inserting a round rod into the holes drilled in the insert (Figure 4). The shank (blunt end) of a 9/64 drill works perfectly. When the reticle is centered, tighten the ring screws exerting torque on the short end of the supplied allen wrench. It is not necessary to use the leverage of the long arm to tighten the screws any more than an additional 1/8 turn.



Figure 3



Figure 4

SIGHT IN YOUR RIFLE

Chances are your rifle will not shoot to your bore sighted zero or to the zero you desire. This is primarily due to the rifles recoil impulse prior to the bullets departing the barrel. Recoil for RH twist barrels tends to carry the shot up and to the left. If you are more than 1 inch in any direction from the center of the bull or from your desired zero, adjust the scope using the rings insert mechanism or the rings side nuts as described above. It is always best to loosen the top halves of the ring just enough to allow free rotation or pivoting of the inserts so that stress is not introduced by any changes. Once you have zeroed your, windage retighten the side nuts and proceed to fine-tune the elevation. Both rings have 10 MOA adjustment via the insert. You will note that each insert has a thick and a thin side that allow a centric orientation of the scopes body in the rings. The scope's elevation may be adjusted as follows:

Placement of the thick side at 6 O'clock in the rear ring will result in raising the crosshair 10 inches at 100 yards. Conversely placing the thick side at 12 O'clock will lower it 10 inches. Again similar adjustments of the front ring's insert will have an opposite effect; the thick side at 6 O'clock will lower the impact 10 inches at 100 yards. Therefore, placement of the thick side of the rear ring at 6 O'clock and the front's at 12 O'clock will raise the impact a maximum of 20 inches at 100 yards. Any combination from 0 to 20 MOA is possible depending on the orientation of the inserts in tandem.

Note: Any orientation of the inserts such that the thick sides of the inserts are not vertical, i.e., not at 12 or 6 O'clock, will result in a windage change in addition to elevation. In this case, once elevation has been achieved a final windage adjustment must be carried out using the side nuts as described above.

Once your basic zero is set you can now use the scopes internal adjustments to fine tune impact to any shooting condition with the confidence that your optics are free of accuracy robbing parallax and stress.