



## THE RIFLE PLATFORM WE CHOSE

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There are quite a few bolt-action .50 BMG (12.7x99mm) rifles that have been on the market, but the new Auto Ordnance manufactured (Skip Patel from 21st Tec's design) TAO50 has a number of very intriguing features. To this author, one of the most important is the fact that it is a seriously accurate long-range rifle that can be readily changed from .50 BMG to .416 Barrett caliber. While the .50BMG cartridge is well-known and respected, the Barrett .416 cartridge has won 3 out of the last 10 "King of Two Miles" competition, and last year, the stock, issue Barrett MRAD-ELR in .416 Barrett took second place in a field of custom long-range specialty rifles. The cartridge is highly respected by long range shooters, and the dual caliber bolt action rifle from Thompson, the TAO50, is capable of taking full advantage at extremely long ranges. This was perfect for testing the HUXWRX FLOW 50. Barrett also has a new .416 cartridge with a .500 grain projectile, which we were able to test.



The rifle design requires an effective muzzle break- and the one on the TAO50 is one of the best this author has tried. Very little recoil! Everyone who has fired it remarks on the unexpectedly light recoil. While the muzzle break is made from 6061 T6 aluminum, it has steel inserts for the bullet path, made from 4140 steel, a low alloy chromium-molybdenum material that is perfect for the heat and pressure in this location. In the case of the HUXWRX FLOW 50, there is a special muzzle break to install for attaching the suppressor.



The receiver construction is interesting- Skip's design involves extruding 6061 T6 aluminum (7075 T6 does not lend itself to an extrusion) and cutting to length. It is then milled to lighten and gain form. The selector is ambidextrous, and the TAO50 uses the excellent Barrett M107A1 magazine. The extrusion of the receiver- the main reason, is because the design has a much-lightened bolt using rows of rollers to smooth the action- which it does very well. However, to do the machining, it's necessary to have the bottom of the extrusion open; the design has a block that is placed and bolted after the machining is done. Quite effective and a very smooth bolt pull. When changing barrels, there are 3 bolts, and a stainless pin (You will note two, one is for the lower, the other for the barrel). The bolts squeeze the split collet barrel to tighten after it's been installed, and they must be loosened in order- from the receiver; 1, 2, then 3. To install, it is the opposite; 3, 2, then 1. Before these are tightened, the stainless pin is installed to key the barrel into the proper position.

## TAO50 RIFLE

**Caliber:** .50BMG convertible to .416 Barrett

**Barrel:**

- .50BMG 29 inch with 1:15 inch twist

- .416 Barrett 29 inch with 1:12 inch twist

**Length:** 61 inches

**Weight:** 25.5 lbs

**Finish:** Rugged black or Flat Dark Earth anodizing

## RIFLE DESIGNS BY SKIP PATEL

- **BA50:** bolt-action, magazine-fed 50 BMG rifle.

- **MCR:** multi-caliber, auto-loading rifle (patented) that made it to phase 2 testing in SCAR trials.

- **Paratus:** 7.62 NATO (two patents for its internal recoil system and for its take down barrel system).

- **Aptus:** 5.56/300; uses the above two patents.

- **M762:** LR308-pattern 7.62 NATO; uses a barrel takedown mechanism similar to the Paratus.

- **CDR15:** AR15 pattern 5.56/300; uses same barrel take-down mechanism as Aptus.

- **Kivaari:** 338 Lapua semi-auto; same barrel take down.

- **PMG:** Paratus machine gun using G3 fire control.

- **AMG:** Aptus machine gun using G3 fire control.

Both PMG and AMG were sold to international military customers.

- **TEC-47:** AR-10 sized in 7.62x39mm direct gas impingement rifle.

- **TEC GIII:** AR-10 7.62x51 caliber rifle using HK G3 magazines

- **TAO50:** Bolt Action Caliber .50BMG and .416 Barrett Extreme Long Range rifle

## VORTEX RAZOR HD 4.5-27X56MM



**First Focal Plane**

**Eye Relief:** 3.7"

**Tube size:** 34mm

**Length:** 14.4"

**Weight:** 48.5 oz

**Field of view:** 25.3' - 4.4' @ 100 yds

We've used the Vortex RAZOR HD series in other tests in the past. In this case, we chose the Vortex RAZOR HD Gen II in 4.5-27x56. It's a superb scope. We chose the EBR-7C MRAD reticle, it's a flagship reticle for Vortex, and it was crisp and clear out past 1100 meters (and beyond, we just didn't have targets that far out.) The TAO50 has a 10-MIL rail, and there's technically 120 MOA built into the scope. So, going for the longer ranges made the choice for us. This is a first focal plane (FFP) scope, our preference for this type of shooting.



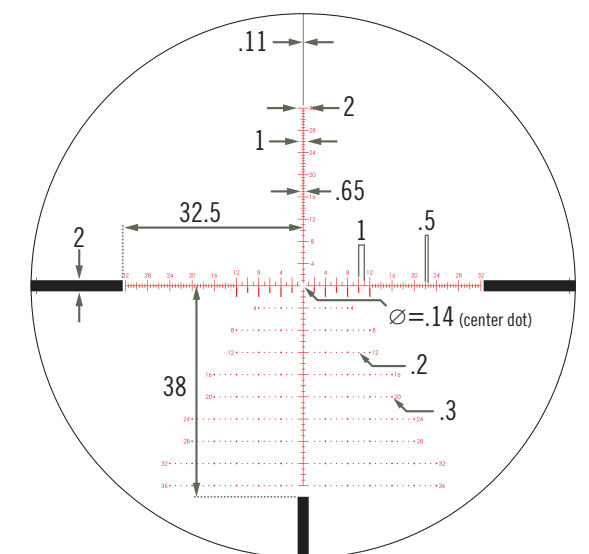
Notes from an end user: During this test, out in the desert, there is a significant amount of mirage. One of the reasons we wanted to try the 27x optic (and not go much higher) was some recent experiences at longer ranges where the mirage interfered with placement at high magnification. This has always been an issue with scopes, but the RAZOR HD Gen II's clarity was excellent. Second, seeing into shadow at range. When you get to 600 to 1000 meters, any tree line or shadow area on a mountainside becomes a problem. Many scopes I've used give a flat image of the darkness. The lens coatings used by Vortex, along with the quality of the glass, allow me to see into the shadows, giving a more three-dimensional view. There are many scope manufacturers, a few that I like, but for this type of shooting I tend to favor the Vortex RAZOR HD Series. It's also FFP, which I prefer, as well. It's got a great field of view, the hashmarks are fast for me to use at higher magnifications, and make my adjustments.

## RETICLES AVAILABLE FOR THE VORTEX RAZOR HD ARE:

- EBR-7C (MOA)
- EBR-7C (MRAD)
- Horus H59
- Horus Tremors 3

The reticle shown is the EBR-7C for MOA, the scope we used was the EBR-7C for MRAD- looks identical for the grid and for this purpose. On the chart, it shows the reticle subtensions as well for the MOA version, the MRAD will be slightly different. Reticles are the aiming system in a scope- when you look at the field of view, the grid will help position your shot using your dope. Subtensions are how much material is "Covered" by the reticle at specific distances. Knowing your subtensions is very handy in range-finding.

## RAZOR GEN II EBR-7C MOA Reticle Subtensions for 4.5-27x56



....[NOTES]....

Subtensions are measured in MOA and remain constant at all magnifications. Reticle image shown for representation only. Reticle image may vary between models, magnification, or reticle plane.

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