Nutrek Reaper 1-8×24 LPVO Review: A Practical Scope

Reposted from Precision Rifle, by Issac L

A few months ago I was given the opportunity to test out the new NUTREK REAPER 1-8×24 LVPO. I've had it on my Tikka T1x .22LR for a while now and put together my thoughts on this little optic. As the title suggests, this scope is a low power variable optic (LPVO) with 1x to 8x magnification, and a 24mm objective lens with an illuminated second focal plane reticle. I'll share my thoughts on its performance and what I think of it overall.

I'll look at all the parts of this scope from optical clarity and reticle design to turret feel, build quality, and the most important part, its value.

Optical Quality

This is my first Nutrek scope so I wasn't sure exactly what to expect but from that first handling out of the box, flipping up the scope caps and having a look, the glass clarity of the Reaper is pretty impressive given its price point. Looking through it for the first time, I was happy with how sharp and clear the image is across the mag range. At 1x its bright and with a wide view, almost like using a red dot sight. When I crank it up to 8x, the image holds its resolution and the detail remains. I can clearly see target details at 100 meters, and the resolution doesn't drop off noticeably at the edges either.

The edge to edge sharpness is pretty good and I don't see any significant blurriness or distortion around the perimeter of the sight picture which you used to expect from scopes made in some countries. This wide, clear field of view (39 meters at 100m on 1x, and 5m at 100m on 8x) gives you situational awareness. It doesn't feel like looking through a tunnel and at 1x you have almost the perspective of the naked eye with the benefit of a reticle.

Colour fidelity is natural to my eyes. I haven't noticed any strong tint or colour shift from my sessions at the range. Sometimes scopes on the lower end of the budget scale have a slight green or blue tint from their coatings, but if the Reaper has any, it's subtle enough that I cant see it.

Colours look true and contrast looks good, which helps when distinguishing targets from the background. Looking at high contrast scenes such as the stapled paper target on the white corflute, I only see minimal chromatic aberration. There's just a faint hint at the very edge of some objects at 8x, but it's so minor that I really had to look for it.

As the sun started dipping low in the afternoon the scope performed decently. With a 24mm objective, it's not a light-gathering monster like some of my long range euro scopes, but it holds its own. At lower magnifications (say 2x or 3x) during dusk, the exit pupil is larger and the view stays bright enough to pick out targets and game. Using it around sunset on the farm I could see my targets without much strain until it was nearly dark.

At the maximum 8x in very low light, the image does get a bit dimmer (as expected, since the exit pupil is only about 3mm at 8x). That's just a limitation of any 1-8×24 scope, when you zoom in, you trade some brightness. Still, I found that if I dialed back to around 6x or 4x, I got a brighter view for those last bits of twilight.

The Reaper's lenses are fully multi-coated, and that seems to pay off in reducing glare. Shooting on a bright Aus afternoon, I didn't get annoying glare or washed out images even with the sun lower in the sky. The scope handles direct sunlight and reflections well. I haven't noticed any internal reflections or "ghost" images, which speaks to the optical coatings working correctly. Overall, the optical quality has left me very satisfied, clear, bright, and distortion free for the most part.

Reticle

The REAPER 1-8×24 uses an etched glass reticle that's in the second focal plane (SFP). This means the reticle stays the same apparent size no matter what magnification you're on. I really like the reticle design, it features a half-ring and a central dot, along with standard crosshair hashmarks. At 1x power, this design lets you use the scope much like a red dot, the illuminated half-ring and dot are easy to pick up quickly. I just put the dot on target inside that circle, and it's bang on. Target acquisition is extremely fast at low magnification because the eye naturally centers the target in that glowing ring. It feels instinctive for shooting at close range.

As I zoom in to higher magnifications, the reticle's finer details become a little more useful. The horseshoe ring and dot remain the same size (since it's SFP), which means at 8x they appear relatively small and don't obstruct the view of the target. The center dot is fine enough to allow better aiming at a

distance. I've used it for 100m targets shooting with my .22LR, and I can aim at the small bullseyes accurately using that dot. Just around the dot, the reticle has some small hash marks and a crosshair. These subtension marks can act as holdover points. For example, there are a few tiny horizontal lines on the lower vertical post that you can use for estimating drop. In practice with my .22, I zeroed the scope at 50 meters. When shooting out at 100 meters, I found I could use one of the lower hash marks as an approximate holdover point for the bullet drop. It's not an exact calibrated ballistic reticle for .22LR, but it's helpful to have some reference points, especially for me as I like to stretch the .22 out. With a centrefire rifle (like a .223 or similar larger), those holdover marks would likely correspond to known distances if you worked it out and got some data but even if not exact, they serve as a useful guide.

The illumination is red and has 11 brightness settings. The adjustment is made via a dial on the side of the scope. In low light conditions or against dark backgrounds, lighting up that reticle makes a huge difference. On the lowest couple of settings, the illumination is very dim, these levels are meant for use with night vision devices or when your eyes are fully dark adapted. I tried the lower settings at dusk and they're faint, which is actually good because you don't want a bright glare in low light.

On moderate settings, the reticle glows comfortably for typical dawn or dusk hunting. And on the highest settings, I was happy to see that the reticle is daylight bright, it's visible in full sun. This isn't always the case with illuminated scopes in this price range, so it's a big plus that the Reaper's illumination can handle bright daylight. Essentially, when I'm at 1x during the day, I can use the illuminated dot like a true red dot sight.

Turrets

THE NUTREK REAPER 1-8×24 LPVO has low profile windage and elevation turrets. These turrets adjust in 0.5 MOA increments per click, which is about 0.5 inch at 100 yards (or 14mm at 100m) per click. The clicks feel positive and distinct. Even though they're small dials, each half-MOA click gives a nice tactile "snap" and an audible tick that's easy to count. When I sighted in the scope, I had no trouble making fine adjustments. Moving two clicks up or down was straightforward and the scope responded accurately to those adjustments.

One thing I always test is whether the turrets track properly. I did a basic tracking test by shooting a box, which is done by moving the turning a certain amount up, over, down, and back over to see if the point of impact returns to the starting zero. The Reaper's turrets performed well, the adjustments were true, and when I dialled back to my original zero settings, the shots landed back where they started, no issues there. This gives me confidence that if I do need to dial in elevation for a longer shot or adjust for wind on the fly, the scope will track and then return to zero without issues.

That said, in typical use (especially on a .22LR or for most hunting scenarios) I would likely set and forget these turrets, relying on the reticle for any holdover. The turrets being capped reinforces that idea, they're not meant for constant dialing like a target or tactical scope would be. Instead, the caps keep them protected and prevent any accidental movement. I've carried the rifle slung and knocked it around a bit; thanks to the caps, the zero hasn't shifted at all.

After zeroing the scope at my preferred distance (50m for my .22), I took advantage of the zero-reset feature. The turrets can be re-indexed to zero once you've sighted in. It required using a small flathead screwdriver to loosen the turret knob, then I rotated the dial back to the "0" mark and tightened it down. Now, if I choose to dial for a longer range shot, I know I can come back and set it exactly to my zero

without guessing. There isn't a true mechanical zero-stop (which is usually only found on higher-end scopes), but resetting the zero mark is simple and effective for my needs.

The total adjustment range is a generous 120 MOA both for elevation and windage (+ / – 60 MOA from center). This is more than enough for a scope of this type. On my rifle, I only needed a few MOA to zero, so I have tons of remaining adjustment travel for the little .22s. Even if you mounted this on something that required a big adjustment or if you wanted to take really long shots and dial for bullet drop, you likely have the vertical travel to do it. The windage turret similarly has plenty of range for any necessary correction (and honestly, you rarely need more than a few MOA windage unless something's very off).

The build of the turrets themselves feels solid. The caps screw on snugly with fine threads, and inside, the turret markings are clear and printed nicely. Each click on mine lines up exactly with the hash marks, which my detail oriented side appreciates. Overall, while these are not oversized tactical turrets, I find them well made and functional. They strike a good balance by providing reliable, precise adjustment when zeroing or occasional dialing, while staying out of the way and protected during regular use.

Magnification and Focus

The magnification range on this scope is one of its big selling points, going from 1x up to 8x gives a lot of versatility. Operating the magnification ring is smooth and straightforward. The ring has an integrated throw lever that is already attached in the box. With the throw lever installed, I can very quickly flick the magnification from one end to the other. For instance, during a target shooting session, I might scan around on 2x or 3x to find my target, then throw it straight to 8x to check my bullet holes or take a more precise shot.

The tension on the zoom ring is just about right, it’s firm enough that it won’t change magnification on its own (I haven’t had it creep or shift inadvertently), but it’s not so stiff that it’s hard to turn. Even without the lever, the ring has a textured surface that provides a pretty good grip. I do prefer having a lever, it allows me to go from minimum to maximum magnification with a quick 180-degree twist of my hand. If for some reason you don’t like the lever, as it is a little on the long side compared to most, you can easily unscrew it and use the ring on its own.

Every shooter's eyesight is different, so the Reaper has a diopter focus ring on the eyepiece to focus the reticle to your eye. I spent a minute when I first got the scope adjusting this. I just turned the eyepiece, which has a decent amount of resistance, until the reticle looked perfectly sharp to me when aiming at a blank background. The diopter adjustment range is more than enough, I wear glasses normally and I was able to dial in perfect focus for my vision. Once set, the eyepiece hasn't budged, it's tight enough to stay put. There's no locking mechanism on the diopter, but like many scopes, a firm setting is effectively locked by friction. It has stayed in focus over weeks of use without drifting.

One thing to note is that this scope does not have an adjustable parallax or side focus knob, its parallax is fixed at 100 yards (about 91 meters). This is completely normal for an LPVO of this type. At 1x to 8x, having a fixed parallax is a standard design, and 100 yards is a good compromise setting. In practical terms, this means targets at 100 yards will be in perfect focus with no parallax error (where the reticle might appear to shift if you move your eye). At closer or farther distances, there can be a tiny bit of parallax effect, but I found it to be negligible in use. The bottom line is that I never felt hindered by the fixed focus, it works great from the kind of point blank ranges you'd use 1x for, all the way out to the far end of what an 8x scope is generally used for.

Build Quality

THE NUTREK REAPER 1-8×24 LPVO is solidly built and seems designed to take a beating. It uses a 30mm one piece main tube made of aluminum. The one piece construction and relatively thick tube diameter contribute to its durability and help maintain zero under stress. The anodised matte black finish is smooth and looks good. It's not a glossy or cheap looking finish either, it's the kind of tough, low reflectivity anodising you see on higher end scopes.

One interesting feature is that the manual says it's rated to withstand 1000 G of recoil force. While my primary use has been on a .22LR, which doesn't offer much of a test in terms of recoil, that rating is pretty high. That 1000 G rating means it's built to handle recoil far beyond typical rifle loads covering everything from .223 to .30-06 hunting rifles and even 12-gauge slug guns. In short, it's designed for much heavier calibres than I've used it with so far. The scope is also fully waterproof and fog-proof. It's nitrogen purged internally and O-ring sealed. I haven't submerged it in water, but I have used it in the rain. It's reassuring to see water didn't get inside.

In terms of size and weight, the Reaper 1-8×24 is 265mm long (just over 10 inches) and weighs approximately 540 grams. When I mounted it on my Tikka T1x, I found the length to be really

manageable, it doesn't overhang the rifle's action excessively and left me enough room to work the bolt and load rounds without issue. The weight, around 19 ounces, gives it a bit of heft but it's on par with many other 1-8x scopes. It's a little heavier than some simpler 1-4x or 1-6x scopes, but you get the extended mag range in return.

All the controls and moving parts are good quality. The turrets, as mentioned, click firmly and the caps thread on securely with no cross threading or play. The mag ring and diopter ring both move smoothly, and there's no grinding or inconsistency when turning them. I also appreciate the little touches, for example, the LPVO came with a set of flip up lens caps. These caps are actually pretty good, they aren't those ultra cheap ones that fall apart. They snap on tightly and haven't fallen off on their own. The rear cap rotates freely so you can orient the opening direction how you like. It's nice when a scope includes these, as it saves a bit of money and they protect the glass when not in use.

The overall fit and finish of the Reaper scope is great. There are no rough edges or machining marks, and the branding (Nutrek) is cleanly applied. The scope's design is fairly sleek overall. It looks and feels like a piece of kit that could cost more than it does, to be honest. After using it on a few trips, I'm confident in its build, it's taken some casual abuse and held up without any issues.

Overall Price and Value

THE NUTREK REAPER 1-8x24 LPVO is a great little scope that won't break the bank. Many well known brands 1-8x scopes can cost a small fortune so the more budget friendly scopes have a place in the market. This Nutrek came in at a fraction of the price of those high end variants, and I have to say, it delivers good value for the money. You get a lot of scope for what you pay. With the Reaper, Nutrek has packed in an illuminated etched reticle, very solid build quality (shockproof, waterproof), and surprisingly good glass. It stands up well even against some mid-tier scopes I've used.

THE REAPER SERIES are covered under Nutrek's 'Core Warranty' which covers 5 Years for ordinary user, and 2 years for professionals or competition use against manufacturing defects. This contrasts with the lifetime, no questions asked warranties you often see from the top optics companies. That gave me a little pause initially, obviously a longer warranty is better to have. However, considering the scope's cost, I felt the risk was small. In the worst case, if it fails years down the line out of warranty, I could probably replace it and still have spent less overall than buying a single high end scope.

Overall the NUTREK REAPER 1-8x24 offers an awful lot of bang for your buck. It allows shooters on a budget (or those who simply want to spend wisely) to get a feature rich 1-8x LPVO that performs reliably in both target shooting and hunting roles. After using it extensively on my .22LR for target shooting, I can say I absolutely got my money's worth.