

# Shining DIAMOND

SCOPE REVIEW: NIKKO DIAMOND LR

Nikko Stirling have added a pair of new Long Range scopes to their popular Diamond Illuminated range – and **Thom Jarrino** finds out the 4-16x50 is quite a gem...



*Below: The HoldFast reticle's hanging centre can be illuminated in red or green*

I think Nikko may well have come up with the airgunner's ideal scope! The latest incarnation of the time-proven Diamond Illuminated model – the LR, or Long Range – has got *absolutely* everything you could ever wish for: sidewheel parallax down to 10 yards, foolproof and customisable BDC turrets, an 'airgun trajectory' reticle (the hanging centre of which can be variably illuminated in either red or green), quick focus and a stunning sight picture courtesy of its 30mm monocoque tube and 50mm Microlux-coated objective. Oh, and considering its high-mag zoom configuration, it's pretty compact, too!

My test sample is the £291.99 4-16x50 version, but there's also a 6-24x50 for £305.99. Expensive, yes – but those prices reflect the high quality of both the scope's build and lenses. Put simply, this is one of those items you invest in for your best hardware, and for life.

At 349mm, the 4-16x was no problem to mount onto any of my rifles – though I'd recommend sturdy 30mm rings as, at 784g, it's a weighty beast by virtue of its camera-quality lenses. Its 50mm objective may also require high mounts to clear the cylinder, though with no P/A collar 'up front', medium mounts should suffice on those PCs with a step between barrel and breech block.

The scope's finished in an anti-reflective matt silk, allowing the etched white markings on the turrets, rheostat and zoom ring to really stand out. There are scallops and knurled sections in all the right places, too, so you'll have no issues clicking around the ¼MOA turrets, adjusting the sidewheel parallax or setting the reticle illumination.







The knurled quick-focus eyepiece allows a positive grip. Note also the pointer on the zoom ring (at 8x)



For airgun use, the sidewheel's marked up for 10, 15, 20, 30 and 50 yards

The quick-focus eyepiece and battery cover cap are knurled to allow a positive grip, and the stepless zoom also sports a raised ridge to facilitate turning on those colder shoots when such operations can stiffen up. Unlike many scopes which have the magnification marked on the movable zoom ring, the powers are static on the eyepiece, while the pointer rotates with the zoom ring.

Once I'd focused the reticle to my eye, then fine-tuned the sight picture with the sidewheel P/A, the quality of the image was truly astounding – so much so that the new Diamond LR aced my usual lens resolution test (see chart below) across the board! No doubt such an optical performance is due to Nikko's Microlux ETE GEN III glass coatings which have been applied to the lenses.

This inherent sharpness also made it quite possible, when cranked up to full mag, to use the scope for range-finding – something that a top power of 16x usually isn't good enough for. But I could use the sidewheel parallax to get pretty much into the ballpark range on targets as far out as 45 yards. While the '30' and '50' yardage markings on the sidewheel are a little close to get a 'yard-perfect' reading, I could certainly tell the difference between a 40- and 45-yarder.

For airgun use, the sidewheel's marked up for 10, 15, 20, 30 and 50 yards. Knowing range allows pin-point shooting with this scope because it has a graduated reticle for holdover-style shooting, and external BDC turrets for those who prefer the 'dialling-in' method. When following the former, I opted to shoot on 10x magnification, and found Nikko's HoldFast Reticle very suitable for sub-12ft/lb air rifle trajectories.

The graduations on the 'hanging' central stadia – which can also be lit up to one of five intensities in either red or green to suit the sight picture's backdrop – equate to set minutes of angle (MOA) at 10x power. This standardised unit of measurement is useful because the linear relationship it gives across the spectrum of ranges makes for an easy ready reckoner to account for pellet drop (see panel right).

But if all that sounds a bit too complicated, then the Diamond LR also offers the option of 'dialling in' zero at individual ranges – you simply forget about the HoldFast Reticle's graduations, and click the BDC turret to the correct setting, which you'll have predetermined from your downrange tests.

**FIGURE 1: MINUTE OF ANGLE READY-RECKONER (10x)**

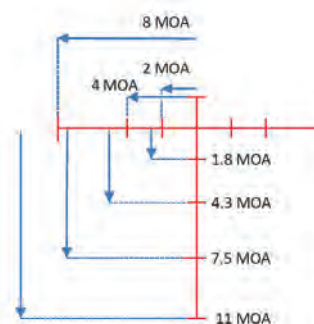
DISTANCE	1 MOA REPRESENTS
10 yards	2.54mm
15 yards	2.54mm
20 yards	5.08mm
25 yards	6.35mm
30 yards	7.62mm
35 yards	8.89mm
40 yards	10.16mm
45 yards	11.43mm
50 yards	12.7mm

#### READING THE HOLDFAST RETICLE

This table shows what 1MOA is roughly equivalent to over typical airgun distances. Knowing this helps you calculate the distance below the horizontal crosswire for each graduation of the HoldFast's crosshair, the MOA measurements (at 10x power) for which are shown on the reticle illustrated here. You simply multiply the relevant figure with the MOA factor shown for the HoldFast Reticle.

For example, if you're shooting on 10x power at 30 yards, then the first line below the central crosshair will represent a drop of around 14mm (7.62mm x 1.8MOA = 13.72mm).

At 40 yards, the fourth line down would represent a drop of around 112mm (10.16mm x 11MOA = 111.76mm).



#### RESOLUTION FACTOR NORMAL LIGHTING CONDITIONS

MAGNIFICATION	CENTRE	EDGE
4x	★★★★★★★★	Excellent
8x	★★★★★★★★	Excellent
10x	★★★★★★★★	Excellent
12x	★★★★★★★★	Excellent
16x	★★★★★★★★	Excellent

**NOTE:** Our standard scope lens resolution test is conducted in bright daylight over 12 yards using a bespoke lens resolution chart. The best definition value a scope can achieve is 8, the worst 1. Edge clarity is rated according to quality of focus, and assessed as poor, average, good or excellent

The 50mm Microlux-coated objective provides an astounding sight picture – it aced Thom's standard lens test (left)!







Pull up to dial  
your new setting...



...and push back down  
to lock it firmly in place

Of course, the Nikko's excellent range-finding facility makes this system especially practical – and as you're using the central crosshair, it doesn't matter what magnification you shoot on, either. What's more, the external BDC turrets have a push-pull locking system to avoid accidentally knocking them off zero – you simply pull up to dial, adjust, and push back down to lock the new setting firmly in place.

Things get even better still courtesy of the Diamond LR's RTZ (Return To Zero) turret system. The theory, explained in the panel opposite, is that you physically won't be able to dial the elevation turret 'down' further than your closest zero point because of a 'stop' in the turret. In practice, however, it means that because you'll need to 'zero' the turret at whatever distance your pellet's flightpath is at its highest, the turret will not be set to the '0' mark at the range you might normally associate zero with.

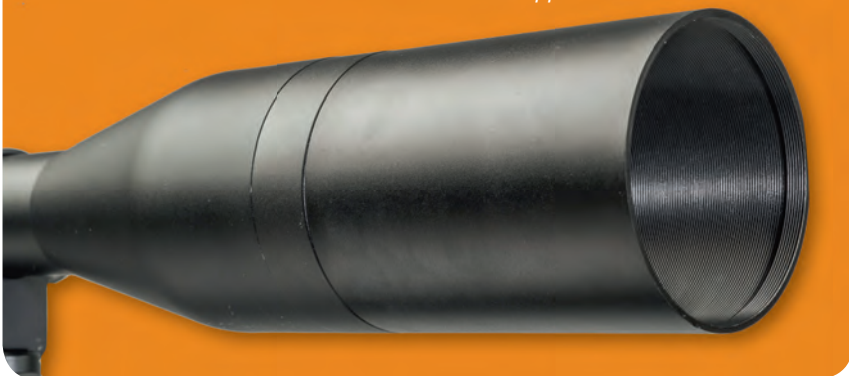
It's an unorthodox line of thinking, but one which I didn't find hard to get to grips with. For example, I normally zero my .22 air rifles at 28 yards. This means that the highest point my pellet flies above the crosshair is 20 yards. Conventionally, I'd set my scope's BDC turret to '0' at 28 yards, and then dial down to, say, '-1' for the 20-yard shot. For a 35-yarder, I'd dial the scope's turret up to, say, '+1'.

But with the Nikko's RTZ system, I'd set the scope's turret to '0' at 20 yards, and then dial to '+1' for a 28-yarder, and '+2' for a target at 35 yards. If you find that a little irksome, then you can simply undo the numerically numbered elevation turret and replace it with the 'blank' that Nikko also supply in the box, onto which you can then simply write the markings of your choice in indelible ink!

During my tests, I used both the HoldFast and RTZ systems and, to be honest, found each as good as the other. Importantly, the 1/4MOA adjustments always returned the pellet point of impact to the original mark, with no wandering.

With incredible low-light performance, too, this new Diamond LR has got all options covered and impressed me no end. It even comes with a special tool to set the BDC turrets, a 75mm sun shade and elasticated clear lens caps. And while I didn't feel the need to go for the optional large sidewheel on the 4-16x test model, it could be worthwhile investing in one for the 6-24x50 LR model, where the extra magnification would make range-finding even more precise. ●

The Diamond LR comes supplied with a 75mm sun shade



### THE RTZ SYSTEM

Undo the locking cap using the supplied tool [1] – it's been designed so as not to scratch the turret's anodised finish – and remove it [2]. You can then lift the BDC vernier assembly off the saddle [3]. Now zero up your scope at the closest range you anticipate shooting at. In practice, this means around 20 yards for airgun use – the range at which the pellet's POI is, typically, at its highest point above the sightline. Adjust the 'bare' elevation clicker (1/4MOA) using the special tool [4]. Once you've set your sights, replace the vernier to align the turret's '0' with the saddle's arrow pointer [5], put the locking cap back on and tighten it down [6].

You can then work out what numbers relate to the more distant ranges for your particular rifle/pellet combo. However, if this arrangement isn't to your liking, then simply swap the numbered turret with the blank spare [7]... and mark the vernier up how you like using a fine permanent pen [8].

