

Replica No32 MkII Scope

Introduction

Before I introduce this scope I might as well get straight to the point, if you are one of these people that frequent the Internet forums constantly muttering that you are a purist and would never touch one of these scopes and leave comments like "There otta be a law!!!!!!!!!!!!!!!!!!!!!! May their armpits be infested with the fleas of a million camels" then this article is not for you.

This article is an constructive Armourers report for the vast majority of mere mortals amongst us who would love a genuine No32 Scope but cant afford the large sums of money they command today.



Before we get into specific details about the various items shown above I just want to discuss a few general points. These replica scopes are supplied by Numrich Gunparts Corporation in the USA and whilst I do not know the manufacturer they definitely come from Taiwan as it is stamped all over the packaging.

If you are living outside the USA and certainly if you are residing in the UK you cannot buy one of these scopes direct from Gunparts because US law will not permit anything to be exported outside the US with a value exceeding \$100.00 without an export license. I notice these scope are also now on Ebay but if you look at the shipping details it is restricted to the US. Therefore if you want one of these scopes you have to either go to the US, purchase one, bring it back to the UK and pay the customs charges or go through the back door.

I purchased a kit as shown above at \$700.00, you can purchase the various parts separately but that is down to the buyer, as I intend to fit this scope to a rifle I saw no saving or point in purchasing the parts separately. With genuine scopes alone fetching £1000 and over with no guarantee they are fully functional, add mount, repair costs, pads, screws and cheek piece etc, you can see the attraction on these scopes for those of us on limited budgets.

Telescope Sighting No32 MkII

The first thing you notice about this scope when you handle it, is its weight, its heavy compared with modern designs and weighs in at 1lb 9oz or 725g, which is an obvious feature of the original.

Build quality appears good externally with no sharp edges, burrs or poorly fitted components. The tube is 1", steel, polished and neatly blued, but as I do not have a genuine scope to compare too, I am unsure if the original scope had a 1" diameter tube. Quality of blueing is very much down to metal surface preparation, the more polished, the more glossy the blueing, the poorer surface preparation, the

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more matt the finish. Therefore proof is in the pudding, this scope has a highly polished tube with no tooling marks and the blueing is good. However depth of blueing is unknown at this stage as I have no intention of testing it. As I try to look after my rifles and their scopes you will be waiting a long time before I will be able to report that subject. As far as I'm aware most later marks of No32 scope had a heavy paint finish so this is visually an obvious indicator that this scope is a reproduction. Having said that Laidlers book states early scopes were blued but then early scopes are not going to look like they are straight out of the factory.

The saddle is cast with no porosity or poor casting marks, finish is lightly mottled as one would expect from a decent casting. Poorly made castings have various levels of porosity and burrs. These burrs are ground off by the manufacturer leaving grinding or tooling marks. I can see no evidence of these tooling marks so therefore, externally the saddle appears to be a good casting. Saddle security on the tube is solid with no movement under hand pressure.

Elevation and windage drums are well made, no sharp edges and are clearly engraved and in-filled as shown in the pictures, however they do not have the solid feel of the original scope and I doubt they could withstand a heavy strike. When rotating the drums the detent is less positive and therefore potentially could be moved out of zero without the user noticing. Alignment between the indicator arrow and the graduations on the elevation drum are precise and not misaligned, however on the windage drum they are misaligned by half a click and at this stage I am unsure if this can be remedied.

Another fault I identified was with the elevation drum, the detent held the drum on 200, 300, 400 yards etc but it would not hold the detent at 100. This could be remedied by very gently removing some metal from the drum, just enough to let the detent engage.

Although not a issue I did notice the screw which secures the drum detent on the windage drum was loose which I simply tightened, it may be an assembly fault but if you lost it you are not going to get any spares, which would be very frustrating having just spent nearly £500 on this scope.

Whilst I have not stripped the drums and inspected underneath the very fact there is a gap would suggest you avoid getting any debris in this area as could induce problems. One other observation reference the drums you may notice from the picture is that the finish on the serrations is wearing off to reveal a brass coloration, which leads to the question could the drums be manufactured from brass or alloy as they are not magnetic.

The sleeve which protects the objective lens is an alloy, aluminium I guess and has been black anodised. Whilst it is secure and protects the lens I would have thought a slight knock will easily distort it.

Inspecting the object lens it appears clean, unscratched, secure with no debris or dust on the internal surfaces, looking through the object lens at the internal components shows good internal surfaces and well finished parts.

Moving back towards the rear of the scope we come to the locating ring, this is aluminium, anodised black with no obvious defects.



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Engraving is good, clear, no defects and with good in-fill. As this is a replica scope I believe the scopes title etc is correct but obviously the serial number is only relevant to the new manufacturer.

Upon inspection the ocular lens appears in as good a condition as the objective lens. Looking through the scope there is no distortion at all and picture quality appears clear and crisp.

Reticule as seen in the picture on the right is precise, with straight edges and with no dust. I am not experienced with the MkII scope so I cannot comment on whether this reticule is identical but I remember from the MkIII/L1A1 that the post is thicker with a more defined point. According to Laidler's No4T Sniper Rifle book the post should be 0.0008" thick. However if there is going to be any problems and to coin a phrase "it will all come out in the wash" when I range test the rifle.



Pads

Initially the pads appeared well made, they are steel and have been blued to a reasonable standard and are clearly replicas. These pads have been made on a CNC machine and certainly did not originate as castings as per the originals. As I do not have reference to any pad drawings or dimensions I cannot comment at this stage as to the pads manufacturing accuracy, any shortcomings will come to light when I have to align them and the scope to the bore. The kit doesn't supply any screws, as I am based in the UK, using and fitting the original BA screws is not a problem but obviously elsewhere in the world you may have to use an alternative.

On the rear pad one of the holes and its countersunk breaks an edge as you can see from the picture on the right, however this is minor and will not effect the operation of the pad as long as your screws is fitted correctly and do not sit proud. However it was at this point I encountered my first real fault. Unfortunately this fault cannot be seen from the picture; the thread in the front pad does not match the thread on the bracket and you can only screw the bracket screw in for a few threads before it binds. It may be the thread has been poorly tapped in which case I am hoping a simple solution will be to run a tap through the pad and clear the problem. I will report further on the pads after fitting to the rifle.



Scope Bracket

When picking up the bracket, quality appears good. It has been cast and then machined in the following key areas, pads, the eight screw holes and the internal faces of the rings. There are no sharp edges and no porosity, the eight screws clamping the rings are similar to the originals, the 1" rings fit well which might indicate they were machined in situ.

The pads fit well with the exception of the rear pad which only seats on two faces, rather than all three. However this can easily be remedied but I will wait until I can confirm the pads and bracket can be correctly aligned with the bore before I start to remove any metal.



The key issues with both the pads and the bracket is that they have been manufactured to a quality that will permit them to be aligned with the bore. Any failings at this point and I have serious issues.



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Rest Cheek

The sub title to use the correct terminology is the only thing that is correct about this cheek piece. It is completely the wrong profile and personally I think it looks hideous. You could put some time and effort into it and try and correct the profile. Personally I would not waste my time and would prefer to obtain a more accurate replica elsewhere but in my case I was fortunate and had one in stock.



Case sighting Telescope No8 Mk1

I have little experience of this item from a authenticity point of view, when I used them in the forces they worked or they didn't and to be honest I cannot recall ever finding one at fault so I can only describe this item as I find it.

The case was well made with a khaki green powder coated finish. It was not scratched and the paint finish was consistent both internally and externally throughout the case. The case was unmarked with the exception of the stencil which identified the case. This stencil was applied well and showed no signs of lifting.



The case did not come with a leather strap but when closed and re-opened the hinges and the clamps functioned without fault.

Unfortunately the two pillars which the scope bracket attached too were misaligned by 2-3mm which meant you could only attach the rear screw of the scope bracket. A fundamental fault which in my opinion should have been identified by both the manufacturer and by Gunparts and is unacceptable. In the US there is the opportunity to return the faulty product but from the UK or elsewhere in the world it is not cost effective.



Tool adjusting drum

As with the case I have little experience of this item from a authenticity point of view, they worked or they didn't. As you see from the picture the tool is made from steel, blued, has a brass insert and is well made with no defects and fits the drums.

When I used this tool to adjust the scope it function perfectly.



Instruction Manual

I'm afraid there isn't one, there are no instructions to tell you how to adjust the scope or how to fit the pads or the cheek rest and that is a serious problem. The No4 is the most difficult and requires the most precise and accurate machine work of all the classic military rifles to fit its scope correctly. That's why there are plenty of K98 or 1903 replica Sniper rifles about but there are not many replica No4T's.

The answer is two fold, to fit the scope find an Armourer or Gunsmith who is EXPERIENCED in fitting No32 Scopes, no other professional will do. For adjusting the scope purchase Laiders book "Telescope sighting No32".

Assembling the Rifle

The above is all very well but the scope ultimately has to compliment the rifle and function under shooting conditions. The donor rifle for this scope was to be a No4 Mk2, not technically correct but my aim was to build a rifle that was more accurate than the original, so therefore technically correct was not an issue for me and after all this was a replica scope.

The first process is setting the barrel/receiver up on the milling machine so it is square to the bore. The sides of the receiver where the pads go are then checked and if necessary machined to ensure the receiver wall is parallel to the bore.

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The picture to the left shows the machine work prior to fitting the pad and the picture below shows the pad in situ prior to blacking.

These pads were surprisingly good and in my opinion better than certain British replica pads that are currently on the market. The front pad needed no shimming at all but the rear pad did as you can see in the picture, below right.



The next process was to black the receiver and pads and then refit, loctiting the screws in place with Loctite 222.

At this stage I came across an unforeseen problem. I fitted the scope bracket and for the first time I fitted the scope and found the reticule was not vertical. The problem was the scope bracket; on the scope there is a key and this aligns with a corresponding key slot in the ring. The key slot was slightly misaligned and as a result the scope reticule sat at approximately 5 o'clock from the vertical. The solution was to machine out the key slot to allow the scope to rotate and allow the reticule to sit vertically.

Rearsight

No4T's have a slightly different MK1 rearsight. The battle sight is removed as this clashes with scope and a recess is machined so permitting the removal of the bolt without having to lift the rearsight. As original sights are no longer available I machined my own from a standard Mk1 rearsight.

The picture above shows the rifle pre-assembled with pads and rearsight fitted, trigger has been tuned and the receiver, pads, and their screws re-blackened. The picture to the right shows the modified rearsight fitted and having been re-blackened after the machining operations.



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Furniture

As this was a Mk2 the rifles woodwork was in beech as whilst a good wood not my first choice for good looking grain. My choice was therefore to apply a dark stain and refinish. The butt was fitted with a replica but accurate cheek piece and the correct sling swivel. The handguard was bedded but only around the chamber area as the recoil stops were already correctly fitted.

Assembled Rifle

The external appearance of the assembled rifle had come up well, the rifle sailed through the various inspection tests such as mechanical safety, headspace, firing pin protrusion, reliable feed and functioning.

The donor rifle was a Lee Enfield .303 No4 Mk2, a tried and tested infantry rifle and unless I had assembled it incorrectly it was unlikely to fail. However these notes are about the scope and it was going to be all rather superficial if the scope failed.



The ultimate test therefore was to be a field firing test. However two points I should mention, the first being that this is a modern replica scope from an unknown manufacturer and the owner should treat this replica scope with the same care as he would any other medium priced modern scope. If you drop the rifle or immerse the scope in water, then expect it to fail. The fact that this scope has come in via the back door so to speak means you have little chance of any warranty support, so be careful. Having said that the original scope is now 70 years old and if you own one you would have paid a pretty penny for it, there are no spares so both these scopes should be treated with respect.

This test was going to consist of the following and be treated as it would be in a civilian shooting environment:

1. The scope must remain secure in its rings.
2. The scope must remain intact with no lens or component failure.
3. The scope must retain its zero under a rapid fire scenario.
4. The lenses must not fog.

The test was carried out on a cold December morning on the edge of Salisbury plain. The rifle was taken from a warm vehicle and placed on the shooting bench for twenty minutes whilst the range and targets were set up and showed no signs of condensation forming on the lens.

Range Test

As per the test criteria I left the rifle in the cold for more nearly an hour before I actually starting firing and there was no sign of condensation or fogging. I ensured the scope drums were centralised and engaged the target at 100yds and missed. My fall of shot was not to bad for elevation but windage was 2ft to the left and off the target and there was not enough adjustment in the drum to accommodate this.

The solution was to unlock the locking ring, adjust the windage and slip the scale but just like the original scope this was a three handed job and very difficult.

This is why the setting up of your Pads is so critical and what makes scoping a No4 such precision work and where the "amateur experts and the back bench warriors" get it wrong. The pads must be clocked to the barrel otherwise you will never be able to zero or best the Post reticule will be at its maximum adjustment.

My adjustments brought the scope back on target and with adjustment of the windage drum I achieved a 1" group as shown on the target.

To my great relief during this zeroing exercise the scope did not loosen in it mounts or have any component failure. I shot another 10rds rapid and again with no loss of zero or any failure.



Summary

I cannot describe the joy at having a No4T, it may not be an original but I can live with that. I have wanted a No4T all my shooting career but its expense has always put it out of my reach.

As an Armourer I have worked on the No4T and L42A1 most of my military career and with the exceptions I have discussed in these notes this replica No32 MkII scope is very good. Whilst I wouldnt take it into a combat environment it is fine for the "Bisley" environment.

My principle concern all along with this scope was its quality and the fact it came from an unknown manufacturer. Compared with the original scope it doesn't have the craftsman type skills that was applied to its manufacture 60 years ago, but then that era has long gone.

With hindsight this is the scopes major failing, by today's standards and the price I paid for the scope, its quality is acceptable, if Numrich Gun parts Corporation were more open as to the manufacturer and focused their advertising on the build quality they would have buyers queuing up at the door.

One cynical point; I paid £500.00 for this scope, if it was formally imported into the UK you would be looking at a £1000.00 which is the approximate price for a original No32 Scope - enough said.

When I purchase a Leupold scope I am confident that the name will give me quality and that is really the only thing that is missing from this scope.

If anybody else has had any other experiences reference these replica scope it would be great if you could share them with me.

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