

ONGOING DEVELOPMENT

NIGEL GREENAWAY continues his study of the No.4(T) Sniper Rifle looking at distinguishing markings on scopes and rifles

LAST MONTH we discussed the various makers and types of No.4 (T) sniper rifle with their distinguishing features. This month's article covers the ongoing development of the No.4(T) with the introduction, in British service, of the three main marks (plus one hybrid version) of the No.32 scope. I'll also look at the associated scope tins, lens caps, wooden rifle chests and training literature.

No.32 Scopes

The original No.32 Mk1 scopes went into production in 1941 with a sliding brass*ocular sunshade, which seemed ideally designed to cut chunks out of your eyebrows. Mk1 scopes had elevation adjustments in 50yd increments and ranges marked in 100yd from 100-1,000yd to match the trajectory of the .303 MkVII round. Deflection or windage adjustments were in two minutes of angle increments (2" per 100yd) allowing for 16 minutes of windage left and right for 32 minutes in total. These adjustments are a bit crude, especially at the longer ranges, so a Mk2 scope was introduced in April 1943 which had one minute adjustments for both elevation and windage – much better!

Unfortunately both these early scopes were a pig to zero and you really needed three hands to do it. To overcome this problem a new Mk3 scope was introduced in October 1944, with slipping scale rings for both elevation and deflection. The scales had a raised projection, which enabled the tip of a round to be inserted to push or slip the scale round to the correct zero while holding the drum steady with the other hand. Once zeroed at a specific range, say 300yd, the elevation would read '3' and windage '0'. Thereafter the bullet drop compensating elevation scale would cater for all ranges up to 1,000yd. It worked well and many Mk2 scopes were retrofitted with the Mk3 drums, in a refurbishment programme authorised in November 1944 but implemented largely during the 1950s.

Officially this variation was designated as Mk2/1 and a few scopes were re-engraved, but many were not. There were about 1,000 Mk2/1 scopes manufactured from scratch by Vickers U.I.Co. in 1944. Production of the Mk1 amounted to about 8,620 with Mk2s reaching 7,880 and Mk3s reaching 12,500 for a grand total of

30,000 scopes. This number is greater than the number of rifles converted, but many Mk3 scopes were retrofitted to early rifles when the Mk1 scopes were withdrawn from front line service by September 1951. You can see how this official upgrading during Base Workshop overhaul begins to make a mockery of what is a 'correct' No.4(T) plus scope.

The Mk3 scope was so good that it, and a very few Mk2/1s, were converted into the L1A1 scope for fitting to the L42A1 sniper rifle introduced in 1970 – itself a conversion of the No.4(T). The No.32 Mk3 and Mk2/1 scopes have a reputation for the drums seizing up. This is because the grease inside eventually hardens like glue. Careful stripping and replacement of the grease will cure this. Do not try using penetrating oil – read Peter Laidler's book instead, which has full stripping instructions. The later scopes will have either have one or both markings of a red W (waterproof) or a blue B (bloomed to enhance light transmission) painted on the scope tube.

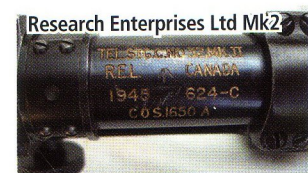
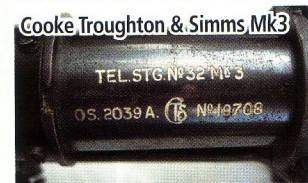
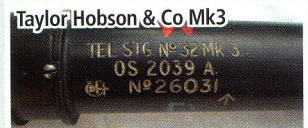
No.32 scope manufacturers

- UIC – United Instrument Company (Vickers)
- WW – William Watson
- H.B.M. Co – Houghton Butcher Manufacturing Company
- AK&S – Alex Kershaw & Son
- CT&S – Cooke Troughton & Simms
- TH&Co – Taylor Hobson & Co
- KL – Kodak Ltd
- REL – Research Enterprises Ltd

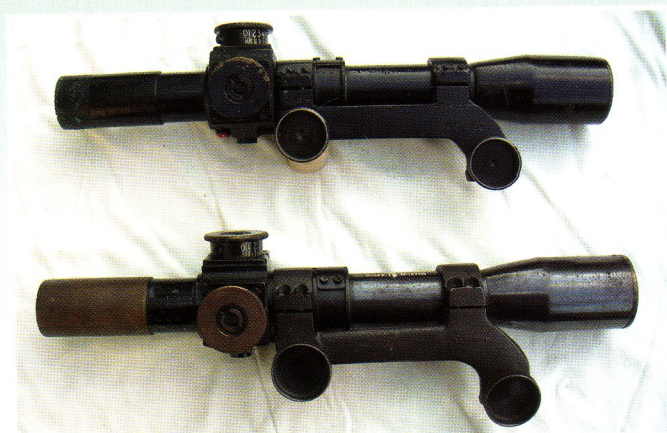
Each of the eight manufacturers had its own way of engraving the scopes, mostly (but not always) with their logo. All used the Government code of OS466A for the Mk1, OS1650A for the Mk2, OS2039A for the MK3 and the very rare OS1400GA for the Mk2/1



Three No.32 scopes: (top) a Mk1, (centre) a Mk2 and (bottom) a Mk3. It is easy to tell a Mk3 from the earlier scopes as its adjustment drums are in-line with each other while the drums on the earlier scopes are offset and require closer examination to tell them apart



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Top bracket is marked N92 for Dalglish – slightly thicker and more square compared to the lower bracket by Rose Brothers

Scope brackets

The brackets that held the scope to the rifle were manufactured by three companies, two British and one Canadian. Rose Brothers of Gainsborough in Lincolnshire marked its brackets with either JG or KD, and Dalglish of Glasgow marked its N92. Other markings will be successive numbers on the side of the cradle cramps (or scope rings as we would call them today), like 18 and 19 or 202 and 203. Some of the early scopes have single letter prefixes or suffixes. The reason for these numbers is to prevent the caps being put back on the wrong cradle. After 1950 the bracket had the rifle number stamped on it. Original brackets without a number will have been sold out of service before 1950. Sometimes you will find brackets with two or three different rifle numbers stamped on them with the previous numbers struck through. The Canadian REL-made brackets always had the rifle serial number engraved on them.

Roger Payne has, over the years, made batches of 100 brackets, cast out of malleable iron and machined

just like the originals. We are currently working together on the latest batch, which is almost ready. They are made to tight tolerances to ensure that they collimate within acceptable limits when fitted to genuine rifles. They are difficult to distinguish from an original and have helped pair up a scope with a suitable rifle that would otherwise have continued to gather dust in a corner. The value of a complete rifle, even with a mismatched scope, is far greater than the sum of its parts so the brackets are a great investment.

Scope tins and canvas cases

There were two types of tin or Case Sighting Telescope No.8. The early ones had rounded corners, which were quite expensive to make, so a simpler square-cornered version was introduced. Manufacturers were Belling & Co of Enfield, marked B&Co, and Berry's Electrical Company, marked B.E.Ltd. The Canadians also made round-cornered tins plus the canvas case. In November 1944 the Case Sighting Telescope No.8 Mk2 was introduced. Mills Equipment Co



One of Roger Payne's excellent reproduction brackets in the style of the Dalglish brackets

initially made this canvas case but there were five other manufacturers – they are quite scarce today. During the refurbishment of No.4(T)s in the 1950s, more of the rounded corner tins were made by S.G.C. and could be dated 1954, 1955 or 1956. During the conversions to the L42A1 sniper rifle in the 1970s and 1980s, Pressed Steel Metal Work Co (marked PSMW and dated 1973) and Cooke & Perkins (marked C&P and dated 1983) produced rounded tins.

Chest, Small-Arms, No.15 Mk1

Introduced in February 1942, the basic design was copied from the Bren Gun chest but with repositioned handles on the sides and new fixing blocks to hold the rifle and the scope tin plus the Scout Reg spotting scope. These chests are now very scarce.

Leather slings and lens caps

The American 1903A1 Springfield Rifle two part leather M1907 sling was used. These tend to be the early WW1-made ones with brass claws. Although it could be used as a single point sling, this method seems to have been taught in the early training literature but not the later publications. This explains why an additional sling swivel was fitted forward of the magazine so that it could be used as a two-point sling. Two types of leather lens cap were used, one with a retaining loop and the other without (see photograph).

Training literature

Several pamphlets and booklets were printed and these have become very collectable. Gale and Polden privately printed the first publications in 1940.



The evolution of the scope tins. Top to bottom: an early round cornered No.8 Mk1 which changed to the square cornered No.8 Mk1 and then the Canvas Cased No.8 Mk2, before reverting to the round cornered tin marked for the L1A1 scopes for the L42A1 sniper rifle of the 1970s and 1980s



The leather lens caps with the metal stud were used throughout the life of the No.32 scope. The one on the bottom scope has a NATO number on it. The very bottom set of caps is modified by moving the retaining ring on a set of No.42 or No.53 scope lens caps – a common modification and one way of not losing the lens caps

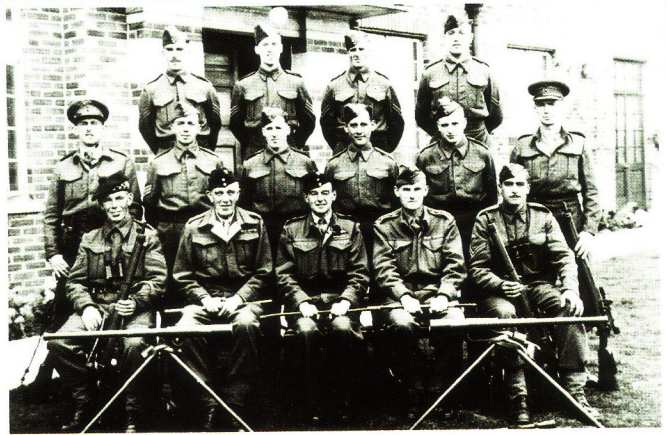
Lt-Colonel N A D Armstrong wrote *Fieldcraft Sniping and Intelligence*. A Canadian explorer and big game hunter, Armstrong got involved with sniping during the WW1 and ran one of the Canadian Sniping Schools. He later became an instructor at the Sniping Wing, Small Arms School Hythe and Bisley, 1940-42, and ultimately Commandant of the Royal Marine Sniper School (at which he is pictured in the group photograph, front row, second from the left). His book was obviously popular because it ran to five editions. A similar book, *Sniping, Scouting and Patrolling*, also by an ex-WW1 sniping officer, only ran to one edition.



Instruction No.9, "The Organization, Training and Employment of Snipers" was published – just in time to issue to troops for D-Day. It was not until 1946 that the first really comprehensive 65-page pamphlet was produced – *Small Arms Training Vol 1 Pamphlet No.28 SNIPING*. The last publication – *Infantry Platoon Weapons Pamphlet No. 10 SNIPING 1951* – was all of 142 pages and came in handy for the Korean War.

The first official pamphlet was Military Training pamphlet No.44 "Notes on the Training of Snipers", printed in 1940, which has a WW1 flavour and does not mention the No.4 (T). The next publication was Small Arms Training Vol 1 Pamphlet No.3 Rifle 1942 which does mention the No.4 (T), and the correct use of the M1907 sling, on the last seven pages. A rare set of amendments for this pamphlet was printed in June 1945, which, for the first time, gave instructions on how to zero the No.32 Mk3 scope. In April 1944, *Army Training*

Next month I will cover shooting the No.4 (T), zeroing the No.32 scope and reloading match quality .303 ammunition.



Above: 1st Snipers' Special Course, 1943. with N A D Armstrong
Above left: WW2 privately printed and official literature on sniping

Sources

The Armourer Militaria magazine Issue 57 May/June 2003, "WW2 Sniping Rifles" by Roger Payne.
International Arms & Militaria Collector, magazine No.20, 2002. A Roger Payne and David Tomkinson article on the No.4 (T).
An Armourer's Perspective .303 No.4 (T) Sniper Rifle. Peter Laidler's bible on the history of these rifles.
Telescope Sighting No.32. An Insider View of the Sniper's Rifle Telescope, by Peter Laidler, last reprinted in 1993. A very comprehensive booklet on these scopes and how to strip and reassemble them (if you are very brave).

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