



By David M. Fortier
Photography by Laura A. Fortier

Like to have a No. 4 Mk 1(T) sniper in your collection but the high prices of originals got you down? Perhaps you should build a clone like this one.

Due to this, many shooters have turned to building clones of period sniper rifles. Rather than trying to build forgeries to sell for a hefty profit, the intention here is to build a close copy for shooting. Something that looks good, with a historical flavor that they can shoot and enjoy. If they decide to sell it, it's sold for what it is, a clone. In many ways sniper rifle clones have many advantages over originals in well-preserved condition. You can shoot a clone to your heart's content, carry it in the woods, hunt with it and compete with it in local matches. Any wear and tear you put on it just adds character, rather than devalue an expensive and scarce piece of history.

Not everyone agrees with me on this. I know Peter Kokalis is very vocal in his dislike for sniper fakes as he feels they are sure to be passed off on some unsuspecting soul as the real thing. Even so, I do feel sniper reproductions have their place, and a couple reside in my collection. Not all of us can afford, or even want originals. For most of us a good quality reproduction is the better or only option.

The Lee-Enfield sniper seen on these pages is just such a critter. It started life as a mundane postwar No. 4 Mk 2 infantry rifle chambered in the traditional .303 British. It was never issued and eventually sold as surplus on the US market in the 1990s. I bought it new in the brown paper wrap from the local Western Auto in Lincolnville, Maine. I can remember my friend Don Grover—who writes for *Be Ready!*—purchased one at the same time. What we paid back then I cannot say, but I do remember we had great fun removing all the cosmoline from the pair while watching a “Magnum PI” rerun. I shot it a bit and was impressed by its accuracy considering it was a rack-grade infantry rifle. It was so pretty though I generally selected a lesser grade wartime gun for recreational shooting. Thus it spent most of the next two decades sitting in a rack.

It was dusted off though one day when I was bitten by a desire to build a nice sniper reproduction. Honest-to-God No. 4 Mk I and Mk I* (T) sniper rifles bring a righteous sum, especially for those in above average shape. So I had previously cobbled together a fun shooter based on



The No. 4 Mk 1(T) Sniper, seen here in the hands of Sergeant Harold A. Marshall of the Canadian Calgary Highlanders' Scout and Sniper Platoon, was perhaps the best sniper rifle of World War II. Note the Denison smock, Mills bomb and Kukri. Photo courtesy Canadian Defense Force.

a No. 4 Mk I Century Arms had modified with the addition of scope pads and a cheekpiece. I added a reproduction mount and a vintage steel tube Weaver K-10 10x target scope. While a fun shooter with the flavor of a (T), it just didn't look right, especially with the Allen head screws Century used in the build. What many others and I wanted was the chance to build a correct-looking clone. Unfortunately, the missing piece was a reproduction No. 32 scope. The chance to build a nice clone finally came a couple years back with the arrival of reproduction optics and mounts on the U.S. market. Building it on a 1955 dated No. 4 Mk 2 would ensure it could never be passed off as an original.

The No. 4(T)

For those of you unfamiliar with it, let's take a brief look at the No. 4(T) sniper rifle before delving into our build. As its name suggests the No. 4(T) sniper rifle was based upon the standard No. 4 Mk 1 and Mk 1* infan-

try rifles. The (T) stood for Telescope, a critical feature of any sniper rifle. Keep in mind that virtually all sniper rifles of this time period were little more than modified infantry rifles. Many were rack-grade rifles with an optic cobbled onto them. While some wartime German, Soviet and American World War II sniper rifles received accuracy enhancing modifications, the majority was actually rack grade. Typically, rifles were selected for conversion into sniper rifle configuration during their initial test firing. The wartime conversion from infantry rifle to sniper rifle usually consisted of nothing more than mounting an optic.

The British No. 4(T) was a different animal, however. After No. 4 Lee-Enfield rifles were selected for their accuracy, they were shipped to the world famous gunsmiths of Holland & Holland. There they were carefully rebedded to further improve accuracy. In addition, they were carefully fitted with scope pads, a wooden cheekrest, third sling swivel in front of the magazine and a 3.5x scope in a robust one-piece mount.

BUILDING A LEE-ENFIELD SNIPER CLONE

Want to start an argument on a web forum? Ask what the best sniper rifle of World War II was. Some will point to the vast numbers of Soviet produced Mosin M1891/30 PE and PU sniper rifles. Other will argue for Nazi Germany's various models of Mauser-based designs. Of course, someone will be sure to bring up the USMC Springfield M1903-A1 topped with an 8x Unertl. Plus there will be a champion or two for one of Imperial Japan's Arisaka based models. Me?

I would likely cast my vote for the British No. 4(T) Lee Enfield. I find all the sniper rifles of this conflict of great interest. Some were certainly better than others, but all grab the imagination.

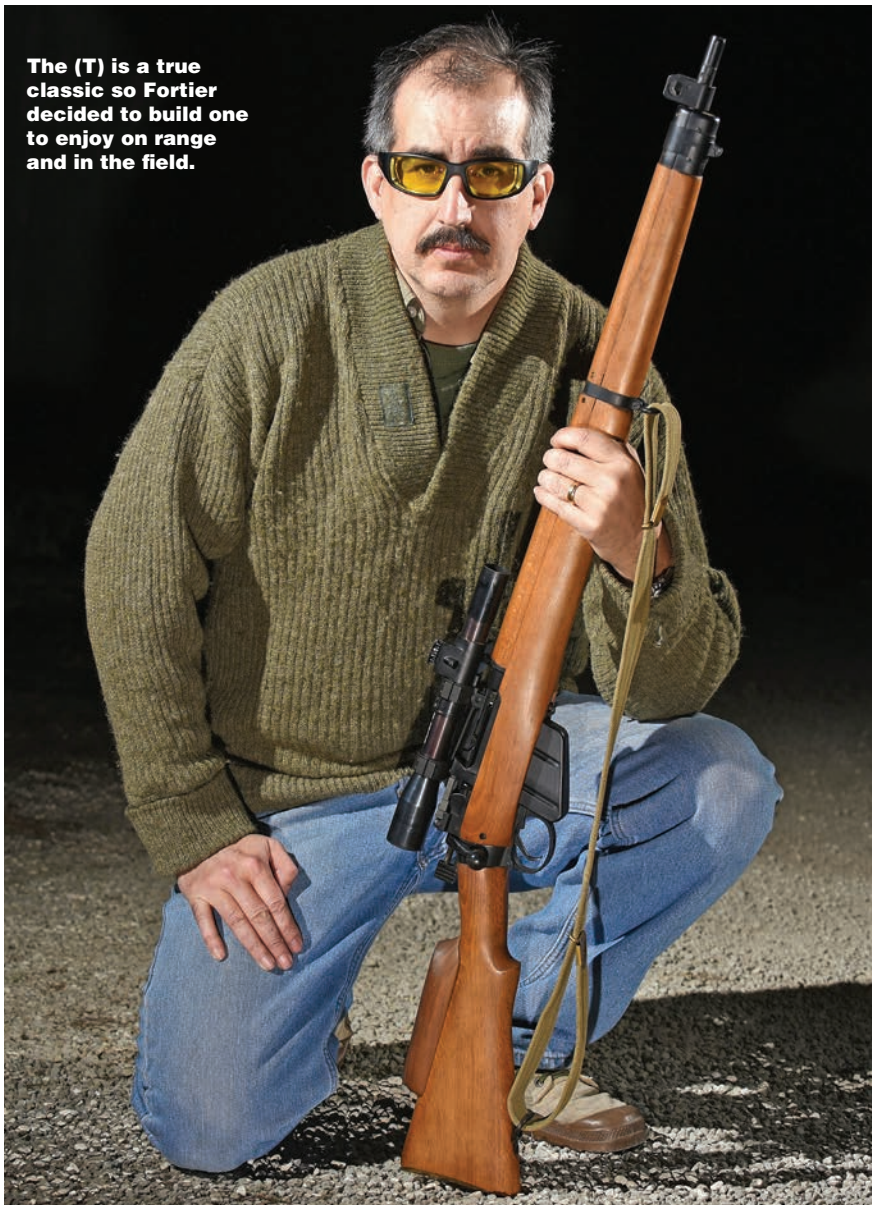
To Clone or Not to Clone?

Unfortunately, due to their value, many collectors will never have the chance to shoot an original sniper rifle from this time period. The only model produced in any

real quantity was the Soviet Mosin PU sniper, and even these are rising in value. The scarcer models are locked away in collections. I know many readers would relish the opportunity to shoot a piece of history. Who wouldn't want to put a World War II sniper to work on the range just see just how well they performed and how they stacked up to their peers. Or perhaps enjoy over a pleasant afternoon plinking with good friends. Unfortunately the high price of originals precludes this for most.

CLONE NEW WARS

The (T) is a true classic so Fortier decided to build one to enjoy on range and in the field.



A look at the different pieces Sarco offers for building your own No. 4 Mk 1 (T) sniper. They offer basically everything you need to get started.



A comparison between Numrich Gun Parts' No. 32 Mk II telescope (top) and Sarco's No. 32 Mk I. The Numrich optic quickly developed problems and was replaced.

The end result was perhaps the best sniper rifle of World War II, the Lee Enfield No. 4 Mk.1 (T). Why was the (T) a great rifle in its day? While the Lee Enfield action is often looked down upon for its rear locking lugs, it proved a tough and very reliable piece in actual combat. Not only that, but the combination of cock-on-closing, 60-degree bolt rotation, a short-bolt throw and a 10-round magazine provided a very high rate of fire. This ability to rapidly get off a follow-up shot or engage multiple targets was an advantage.

Unlike its American counterpart's off-the-shelf solutions, the (T) was fitted with a military grade scope. This, unlike its German adversaries, featured proper windage adjustments in the optic. Although the (T)'s mounting system wasn't as elaborate as some of the German systems, it was much better suited for hard military use. Plus, unlike all of its competition the (T) had a wooden cheekrest added to provide a proper cheekweld. While seemingly small, this was a very important addition to the design, which made the rifle easier to shoot consistently.

The only drawbacks to the No. 4 (T) was its rimmed .303 cartridge and low magnification optic. The cartridge was a holdover from the black powder days of the 19th Century. Even so, its 174-grain Mk VII ball load exhibited acceptable exterior ballistics, excellent penetration of intermediate barriers and very good terminal performance with an early yaw cycle. The 3.5x scope had a large exit pupil and fairly wide FOV but lacked magnification for target identification and engagement at longer distances. Even so, the Lee-Enfield No. 4 Mk. 1 (T) performed so

well it remained standard issue long after Japan's surrender. It was eventually rechambered to 7.62x51mm NATO and rebuilt into what became known as the L42A1 and soldiered on in the British Army until finally put out to pasture in the 1980s.

Collecting the Pieces

The continued interest in the (T) by shooters and collectors eventually led to the introduction of reproduction scope mounting pads, the steel one-piece mount, wooden cheekpiece and eventually even the No. 32 scope. I had the opportunity to examine complete kits from two different companies for this article, Sarco and Numrich Gun Parts Corporation. Sarco currently offers a complete kit for building a reproduction (T) for just \$595. This consists of a reproduction No. 32 Mk I scope, leather scope covers, metal scope transit chest, zeroing tool, one-piece mount, steel base pads, attaching screws, two drill bits and two taps. If you prefer, you can also purchase each item individually. To complete your build they offer a wooden cheekpiece for \$24.95. However, they do not offer the middle sling swivel.

My project began a couple of years ago with a kit from Numrich Gun Parts Corporation. Their kit consists of a later-style No. 32 Mk II scope, zeroing tool, leather scope covers, metal transit case, one-piece mount, scope pads plus a wooden cheekrest. This is priced at \$599 but no mounting hardware is included. The reproduction No. 32 Mk II scope resembled the real deal and featured decent optical performance. Mechanically, it seemed a bit rough

and the turrets felt sloppy. The mount and pads appeared adequate though and so with high hopes I boxed everything up and shipped it off to be assembled.

Selecting a Gunsmith

Properly fitting the base pads to a No. 4 is not a job for just anyone. The pads and mount have to be properly fitted and aligned for the optic to zero properly. So for this project I went with Richard Parker who has done a number of projects for these pages over the years. A graduate of Colorado School of Trades Gunsmithing Program, Rich apprenticed with Austin Behlert and Art Leckie. He eventually set up his own machine shop and began doing custom gunsmithing. He does this the old-fashioned way, one gun and customer at a time. Unlike the norm today, Parker doesn't have a chart with simple flat rate fees. You tell him what you want and he provides an exact price quote and delivery date. I've had Parker do work on a number of my own rifles over the years. His work has always stood out due to its consistent high quality and attention to detail. But Parker is more than just a gunsmith. He's also a Class "A" Toolmaker and an artist when it comes to machining steel. However, he's not a cheap date. He's also not the type to BS all day on the phone. Time spent on the phone is time away from his bench. However, his work is well worth the price and his turn around time is surprisingly quick. When it arrived at his shop he stripped, examined it and provided a detailed list of what I wanted done and what it would cost along with a delivery date. Then he got to work.

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A one-piece steel mount places the 3.5x optic directly over the bore and as low as possible. The optic is originally developed for use on the Bren Gun of all things.



The mount is easily removed providing access to the iron sights. Remember though, you'll also need to remove the cheekpiece.



A post-war No. 4 Mk 2 rifle in .303 British was used for the build. Note the large thumbwheels that lock the mount onto the base pads.



To provide a proper cheekweld, a wooden cheekpiece was developed for the (T). Reproductions like this one are readily available from Sarco.

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Building a Clone

Rich got started by machining a 45-degree chamber on the bottom edge of the rear base to match the receiver step and establish a proper Z-axis (vertical) location. The As supplied, the Numrich base was over-size and had a radius instead of a chamfer. He machined the top surface of the rear base flush with the top of the receiver (it was .031 over-size) and drilled and tapped for two 8-40 NS screws. He then machined the front base to properly position the optic over the bore axis (wind zero). This would normally be a straightforward procedure but in this instance it was greatly complicated by gross dimensional irregularities of the front pad and the one-piece mount. Either one or both of them were not properly machined to spec. The end result when the two parts were interfaced was the optic peering off to one side. Not good.

So Rich got to work and machined them to properly center the optic over the bore. Keep in mind, properly centering the optic over the bore is critical with classic optics like the No. 32, which feature non-centered reticles. If you are unfamiliar with early scopes with non-centered reticles, the reticles move in the field of view as you make adjustments. So if they are not properly centered over the

bore the reticle can end up off to one side and high/low in the field of view when zeroed.

To cut to the chase, getting everything properly fitted and aligned the way it should be was a good bit of work. Afterwards Rich had this to say, "I feel sorry for the poor schmuck who thinks he's just going to screw these bases onto an Enfield, give the front base spigot a few whacks with a file, and be done with it. He's in for a big surprise."

Next, Rich modified the rear sight assembly to back-sight, Mk I/1 (Modified) configuration. This includes refinishing it. The modification consists of removing the battle-sight aperture, which is required to mount the optic. If iron sights are needed, the adjustable ladder sight can be flipped up after the optic is removed. Plus, the sight is also modified to allow the bolt to be removed with the optic mounted.

After that, Rich fitted the cheekpiece to the comb. He found the cheekpiece to be over-size in some areas and under-sized in others. He fabricated two 1/4-28 NF brass stock bushings which he installed in the comb. Two machine screws allow the cheekpiece to be easily mounted or removed. Keep in mind, you must remove the cheekpiece if you wish to use the iron sights. I enjoy

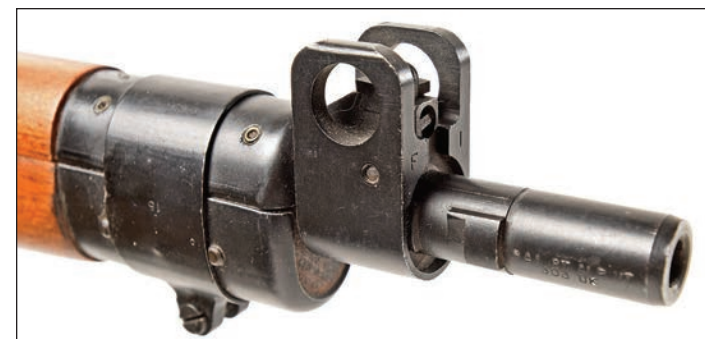
shooting with iron sights so I appreciated this. Finally, he refinished the cheekpiece with oak pigmented Danish oil to more closely match the blond beech stock.

While Peter Kokalis would not approve, Rich went ahead and added the correct markings to the rifle. He added the famous 'T' nomenclature marking on the receiver, Holland's 'S 51' mark to the buttstock knuckle, the rifle serial number to the buttstock tongue, the optic serial number to the top of the wrist and 'S' (iron sight zero) to the right side of the receiver.

Houston, We Have a Problem

When the rifle arrived back it looked great. I was very excited to get to work with it but soon noticed something was not quite right. Group size with the optic was noticeably larger than with the iron sights. Adjustments were not consistent either. In short order the reproduction Numrich No. 32 Mk II scope gave up the ghost with the reticle flopping about. Well, dang. My initial thought was perhaps I just got a bad one, but a quick search on the interweb revealed many others with similar problems from this batch of reproduction scopes. I considered (in no particular order) pounding it flat with a 2-pound

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The No. 4 Mk 2 features a 25.2-inch long barrel with five-groove 1-10 inch twist rifling.

The (T) was chambered for the standard British .303 cartridge which in its Mk VII ball loading drove a 174 grain flat base FMJ at approximately 2,440 fps.





Fortier's (T) clone proved both accurate and fun when topped with Sarco's 3.5x No. 32 Mk 1 scope. It shot well at 500 yards.

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hammer, replacing it with an old steel tube Weaver or perhaps looking for an original No. 32 scope.

Then I noticed Sarco was offering an early-pattern reproduction No. 32 Mk I scope kit. When it arrived it was much more to my liking than the Numrich kit. Unlike the Numrich offering, Sarco supplies not only the attaching hardware but even the required drill bits and taps. This is really handy. The leather scope covers were much nicer and the knurling on the scope mount thumbscrews was much more pronounced. Better still, the supplied No. 32 Mk I scope worked properly.

Sarco to the Rescue

With the Sarco No. 32 Mk I scope mounted up, I noted it provided a surprisingly sharp image. Putting it to work, I noticed the color rendition is a bit on the warm side. The optical system is actually quite good and unlike the originals it features lens coatings to improve the image quality. Resolution is very good in the center of the image and only degrades when you get to the outer 1/3 but it remains fairly clean to the edges. The reticle consists of a post with a leveling crosshair. You use the tip of the post for aiming while the horizontal stadia prevents canting. The elevation turret features bullet drop compensation from 100 to 1,000 yards in 50-yard increments. The windage turret features 2 MOA adjustments with 16 MOA of adjustment in either direction. The turrets feature audible and tactile adjustments. Sarco's Mk I scope has both a fixed sunshade at the objective as well as a retractable rain shade on the ocular.

The 1-inch tube fits into the steel one-piece mount. Four screws secure each ring half locking the scope tube securely in the mount. The mount attaches to the pads on the rifle by two large thumbscrews on the left side of the mount. These allow the optic to be removed for transportation, storage or for shooting with the iron sights.

On the Range

Opening the bolt, I began stuffing .303 cartridges into the No. 4 Mk 2 (T)'s 10-round magazine. It's not possible to use stripper clips with the scope mounted, so you have to put them in one at a time being careful to properly align the rims to prevent rim lock. Shoving the bolt forward, I loaded a cartridge into the chamber and the piece was ready to fire. The safety is located on the left rear of the receiver and I thumbed it back to place the piece on safe. Reaching up, I rotated the elevation turret four clicks clock-wise and settled into the gun. 300 yards distant was a lone steel silhouette. Thumbing the safety almost 180 degrees forward, I placed the post in the center of the chest and relaxed. The trigger is on the heavy side but it breaks cleanly. Recoil is relatively mild and I hear the impact of the 174-grain MatchKing on steel. Rapidly working the bolt sends the empty case flying and loads another round into the chamber. Bang THWAK. Too easy. Reaching up I dial in more elevation and move to the 500 yard silhouette. I pause for a second and glance at the wind, then move my hold from center to the left edge. Remembering how lazy the .303 is in the wind, I adjust my hold to 1/4 silhouette to the left and squeeze. I'm rewarded with a center hit low on the silhouette. I slap the bolt, breath in and out and squeeze. The next shot hits center but slightly high. My third shot at 500 yards hits next to my second. It's a good day on the range.

I found the No.4 Mk 2 (T) to be much more comfortable to shoot compared to a Mosin PU sniper thanks to its cheekpiece and longer eye-relief scope. I always feel like I am craning my neck with a PU while trying to maintain a consistent chinweld. With the (T), the scope is mounted low over the bore and the wooden cheekpiece makes a world of difference. Shooting the (T) from position is a lot of fun. You can easily shoot it offhand and it's very comfortable using a sling sitting, kneeling and

prone. My only real gripes are the buttplate wants to slide around and the safety is a bit of a reach.

Accuracy of this particular rifle is quite acceptable with one of my handloads using Winchester cases, Wolf primers, Varget and Sierra's 174-grain MatchKing averaging 1.2 inches at 100 yards for four five-shot groups. During testing I had a chance to try Wolf Performance Ammunition's new steel case .303 British. This economical load is topped with a 174-grain FMJBT and averaged 1.7 inches for four five-shot groups at 100 yards. I also tried some vintage K63 Mk8Z ball, which averaged 2 inches for four five-shot groups. All in all I was quite pleased with the end results. The rifle looks good, is a fun shooter and has proven acceptably accurate out to 500 yards. If you'd like to build your own (T) clone I suggest checking out what SARCO has to offer and giving Richard Parker a call. **FTI**

SOURCES

SARCO

610-250-3960 / www.e-sarcoinc.com

Parker Arms and Tool Works

215-541-1099

Numrich Gun Parts

866-NUMRICH / www.gunpartscorp.com

SPECIFICATIONS

LEE ENFIELD NO. 4 MK 2(T)

Action Type:	Manual rotating bolt with rear locking lugs
Caliber:	.303 British
Capacity:	10 round detachable box magazine
Barrel:	25.2 inches 1-10 inch twist
Overall Length:	44.5 inches
Weight:	9 pounds without optic
Stock:	Beech
Finish:	Enamel over phosphate
Trigger:	Standard military two-stage
Iron Sights:	Protected post front, micrometer rear graduated to 1,300 yards
Optical sight:	3.5x No. 32 Telescope Mk 1

ACCURACY AND VELOCITY CHART

Load	Velocity	100 yards
Handload 174-grain Sierra MatchKing	2,540	1.2 inches
Surplus K63 Mk8Z 175 grain FMJ	2,559	2 inches
Wolf 174 grain FMJ	2,470 fps	1.7 inches

Groups are an average of four 5 shot groups fired from the bench at 100 yards. Velocity readings were measured 12 feet from the muzzle using a Oehler 35P chronograph at an ambient temperature of 70 degrees F at 1,130 feet above sea level.