



Australian International Arms — A Rifle for all Reasons

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Whether it be for culling camels from a helicopter, competing in a Military Service match, shooting targets or collecting, AIA have produced a quick pointing, large magazine capacity and accurate rifle utilizing a vastly strengthened and improved Lee Enfield action. This bolt action has been proven to be the worlds fastest to operate and there is a model to suit your needs. The B2 model is certainly "tactical" as it emulates the L42A1 British Sniper rifle.

This story is about the continued evolution of a rifle design that was first approved in December of 1888. Lee's design was perennially brilliant in concept, it has since been developed into a significant sporting arm. The basis for development, the Short Magazine Lee-Enfield, whose original design was the work of a Scottish-American, James Paris Lee along with the Royal Small Arms Factory at Enfield Lock, about 16 kilometres north of London Bridge. Development of the Lee-Enfield never ceased; it continues with the tough, accurate and user friendly rifles now assembled 'down-under' by Australian International Arms Pty. Ltd. Some casual research revealed at least nine official variants or marks of the Lee-Enfield are manufactured. Australian International Arms have called its offering the Mark 10.

Recently I asked the very pointed question, "Why did you choose an action that is now more than 129 years old, in order to build a new series of rifles?" to the A.I.A. CEO in Brisbane. His abrupt reply was "You tell me one other rifle design that remains in action in regular military units from the late 1880's until today". Stopped in my tracks, I began researching the Australian International Arms offerings. The first notable discoveries were that when things get really tough only the Lee Enfield will do.

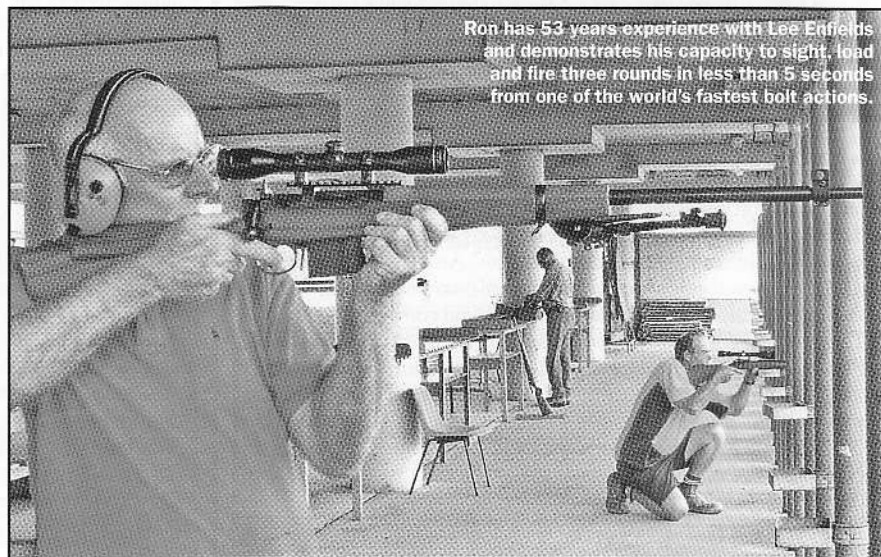
Apparently two notable organizations are still using Lee-Enfield rifles because of their rugged, unquestionable reliability. These are the Canadian Rangers operating in freezing conditions in their border region where iced-up modern self-loaders fail but the Lee Enfield remains undaunted. Indian security and police forces are still issued with the 7.62mm 2A rifle, an upgraded SMLE. The British Royal Marine Commandos reissued their snipers in the 1st Gulf War in Iraq with the Lee Enfield L42A1 7.62 x 51mm sniper rifle. The Lee Enfield action continues to function in the atrocious sandy conditions that prevail and where the current kit seized up.

Incidentally, I have been told that the British L42A1 in 7.62 x 51mm held until recently the longest range confirmed sniper hit at a distance of 1.6 kilometres. This occurred in Northern Ireland and while some good luck may have been involved, it happened nevertheless. This instance is recorded

TOP: Classic and timeless – after 120 years, the Enfield design remains one of the most functionally potent rifles of its era. This is the AIA M10 No. 4 which has a 50% heavier action and heavier barrel than the No. 4 SMLE.

in Martin Pegler's recent book on sniping, "Out of Nowhere".

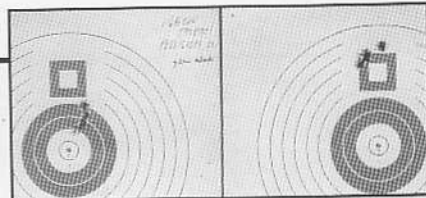
Having read a multitude of gun magazines since the 1950's, my mind was regrettably influenced by the negatives propagated over fifty-odd years concerning the SMLE. I specified the following to the A.I.A. boss: reported inaccuracy, cartridge cases subject to insipient separation, the springy and weak action, et cetera. Tiring of me, he introduced me to his Director of Quality Control, Kyle Hadley, with the instruction to sort out my misconceptions. I have since spent two days with Kyle and now have a much better appreciation of why the Australian International Arms offerings cannot really be compared with the .303 SMLE No.1 Mk 111. Firstly



Ron has 53 years experience with Lee Enfields and demonstrates his capacity to sight, load and fire three rounds in less than 5 seconds from one of the world's fastest bolt actions.

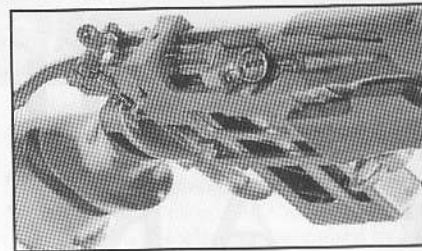


An AIA associate tests an AIA B2.



ABOVE: AIA test target shot at 100 m. Similar groups were shot by the author during the tests.

Cut-away M10 action demonstrating the heavy construction, flip-up sight and deeply recessed bolt head.



let's look at the perceived short-comings a SMLE may have, in the civilian or sporting context. We should remember that it was a brilliant design and that as a service weapon, it served extremely well through two World Wars, Korea, India, Malaya and Borneo.

Accuracy is task specific. Sporting applications today demand 1 MOA or better. The SMLE was adapted to a range rifle by fitting a heavier barrel and bedding it for most of its length in cork. This provided 1 MOA or better and was internationally competitive until replaced in Australia by the 7.62 x 51mm Omark.

Rifles in their military form were purposely manufactured with noticeably lightweight barrels featuring generous size chambers, long leads and oversize bores. Even so, the SMLE or No.1 Mk III in reasonable condition will shoot groups of less than 3 MOA. The requirement for larger tolerances was to accommodate rapid fire, mud, sand, ice, tropical storms et cetera. There are accounts that in warding off massed wave attacks in Korea, the Australians rifles became so hot that the wooden furniture charred. The barrel of the No. 1 Rifle is acknowledged as being the lightest ever fitted to a Service weapon.

When hand-loading for the SMLE, cases do suffer from insipient separation and this has been blamed on the springiness of the action. Personally I don't believe this to be so, the most probable cause would be a generously sized chamber which stretched cases and this process would continue with full length resizing until the case's failure.

While Australia and India continued to manufacture the Rifle No.1, the British, United States and Canadian arsenals began producing Rifle No.4 which also featured a heavier receiver and barrel. The No.4 action is stronger and well-capable of withstanding the pressures of the 7.62 x 51mm NATO cartridge. (Note: the specifications of dimensions for the Winchester .308 and the 7.62 NATO cartridge differ slightly but most rifles will safely chamber both.) When chambering their rifles, A.I.A. uses a 7.62 x 51mm reamer).

Don't be fooled when you look at an A.I.A. rifle into thinking you are considering a clone of an original Lee-Enfield action. It is not even close. The Lee Enfield was continuously modified during many generations of production on four different continents and universal service. A.I.A. took the latest variants as a starting point along with other desirable features from the different designers and factories. After making twenty-odd modifications and improvements to their own prototypes, we now have one seriously tough, accurate, efficient and competitive rifle.

The original concept was to manufacture three military calibres, 5.56 x 45mm, 7.62 x 39mm and 7.62 x 51mm. The 5.56mm did not get past the prototype stage, the 7.62 x 39mm was popular while Chinese dirt-cheap ammunition was available. However currently (late 2008) there are a few of these left in stock; they are the last and as the cheap ammo has now disappeared, all new production will be in 7.62 x 51mm NATO.

The two-piece furniture of the A.I.A. Mark 10 rifle or SMLE operates quite differently than on a one-piece stock. With a single billet,

the recoil is mainly transferred by a recoil lug slotted into the stock. In the AIA Mark 10 the socket into which the butt is screwed IS the recoil lug. Additionally, another notable difference with the Mark 10 is that the fully floated fore-end attempts to move forward under recoil.

The heart of the rifle of course is its action, which is made from forged high strength steel; it is also heat treated and hardened in critical areas. The action body is approximately 50% heavier than that of the Lee-Enfield No.4, additionally the steel quality is superior to the original which is now half-a-century old. This becomes evident in that the undue springiness sometimes criticized in the No.1 action body does not apply to the MK10. Sure, it has rear bolt-locking lugs, but it is quite likely that the concept of rear lockers not being as strong, could well be a fallacy. To name a few compatriots, we have the SAFN, FN FAL, the Australian SLR, Remington 788 and most interesting, the Steyr SSG 69 sniper rifle which has been in service with a number of military forces around the world, including Australia, without criticism.

On the SMLE No.1, the charger bridge was affixed with metal rivets. On the M10, the very wide and heavy bridge is machined integral with the body, which adds significantly to its stiffness. The bridge has a flat top and as with the front of the receiver, it is drilled and tapped to take a Picatinny rail which comes as a standard accessory from A.I.A. As scope mounting is expected to be the norm, there is no recess for a charger clip. The bolt is very similar to that of a No. 4, the major difference being that the removable bolt-head is deeply recessed, which helps to contain and disperse gas in the event of a case rupture. As with the .303, the bolt has two locking lugs. The major lug is a massive rib running most of the full-length of the bolt, while the other is a more conventional size that slots into a recess at the bottom of the action body. I did ask to what degree this new action had been tested. Kyle proudly informed me of progressive testing with ever stronger charges.

Blow up occurred at around 110,000psi, close to twice operating pressure. The action remained intact and it was the case head that failed rather than the action or bolt. Usually when a case fails, rifles are seriously damaged as gas is released under extreme pressure and having a large surface area on which to work, can destroy the rifle stock fore-end included. This did not happen here. Apart from the extractor going east, there was no visible damage to the barrel, action or bolt. Headspace was still well within specification and if the need had arisen, the rifle could still be fired after removing the remains of the case and replacing the extractor in the bolt-head. The components were sent away to the lab for crack and stress tests, and they were found still to be unaffected, in original condition.

Future production will be limited to three models. The AIA No. 4, similar to the SMLE No. 4 in appearance with full wood and the M10 B1 will have barrels heavier than the Lee Enfield No. 4 which itself was heavier than the Mk 1. The barrel in the No. 4 was heavy enough to meet the requirements of big-bore rifle shooters so the even heavier barrel in the AIA rifles are conducive to MOA accuracy c

This pretty rifle just begs to be given a workout from QWD's dirt bikes and on the ramparts of military rifle ranges and has proved its ruggedness for over 100 years.



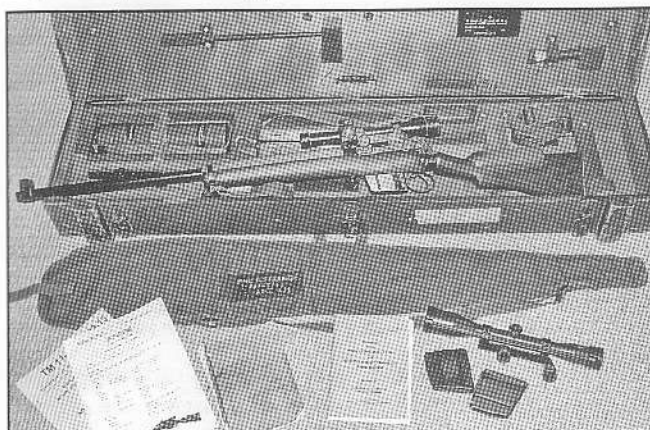
better. The third offering is the Mark 10 B2 which is the flagship of the range, similar to the B1 in appearance but with an even heavier barrel. It must be made perfectly clear that whilst the B1 and B2 are similar to the Jungle Carbine configuration they share nothing with the No.5 Jungle Carbine, different action, different bedding. The B1 and B2 models in fact emulate the lesser-known but end-of-the-line British Lee-Enfield sniper rifle, the 7.62mm L42A1, which was the most accurate of all the service Lee-Enfield series.

All of the A.I.A. barrels are chrome lined and give superior corrosion resistance. The major benefit of chromed bores is extended barrel life. A chromed barrel shooting 7.62 x 51mm ammunition will give an accurate life of between 10,000 and 15,000 rounds. This is a significant advantage over conventional barrels that are shot-out at only half of that.

The 7.62 x 51mm cartridge is relatively easy on barrels, but would generally need to be replaced somewhere between 5000 and 7000 rounds. Using the 7.62 x 51mm, barrel life expectancy, the cost per shot related to the cost of re-barreling is about 14 cents. The extreme life available to a match competitor or feral animal exterminator with the chrome bore is significant.

A.I.A. has another departure from the traditional Lee-Enfield in the way they fix their barrels onto the receiver. They have opted for the Brewer locking collar, very similar to that used on the current Savage rifles. This has the advantage that the 1-in-12 twist barrel can be screwed in and the head-space accurately set. The collar is then screwed tightly against the front of the action and the system is locked. A.I.A. have established a torque setting that is conducive to maintaining consistent barrel harmonics. The front sight is locked to the barrel with screws, elevation is achieved by winding a threaded post up and down, with the windage easily adjusted with screws.

The rear sight is mounted at the back of the action body to place the aperture close to the eye. This is the basic military flip-type back-sight which allows the shooter to set the elevation at two different zero points. There is also the advantage that the Picatinny rail is grooved so that the open sights may still be used in the event of a scope failure; this does happen sometimes.



L42A1 sniper rifle transit case with complete equipment schedule. This outfit closely approximates the commemorative offer currently being assembled by AIA.

Before delivery, all rifles are tested for accuracy, at first in a mechanical rest. Five-shot groups are shot and recorded, and an accuracy criteria applied. Those barreled actions that don't meet this standard are stripped and the receiver and barrel collar lapped.

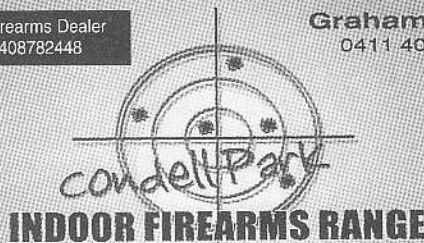
The rifle is re-tested and if it again fails the group standard criteria, the action body is rejected. This does not happen often, so buyers and shooters are guaranteed that each rifle has been individually tested for consistency. After testing in the machine rest, rifles are stocked up in test furniture, and shot again. Then the new furniture is hand-fitted and groups are again fired to check accuracy, usually resulting in the smallest grouping of all three sequences.

It is interesting to note, as befits a rifle with such heritage, that accuracy and function testing were carried out by a former SAS counter-sniper and Vietnam veteran who ultimately became a trainer of military and SWAT team marksmen. I have seen a number of targets shot by this accomplished rifleman, and good factory ball ammunition shot under 1 MOA, with imported military surplus fodder a little longer.

Two 10-shot magazines are supplied with each rifle. The release catch is large and user friendly, permitting a very reasonable rate of fire to be

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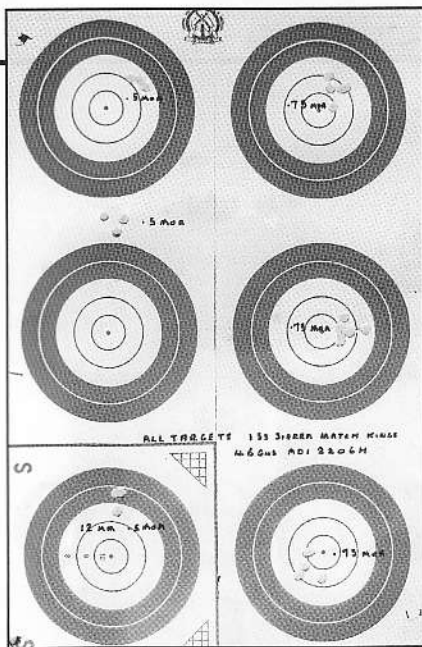
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The AIA was fitted with a 2X scope and bipod for the shooting tests. The low power of the scope and thick crosshairs were not ideal for shooting groups. Even with this limitation, the rifle averaged better than 20 mm groups at 100 metres, with many being around 12 mm.

delivered from the cock-on-closing action. Yes, the Lee-Enfield bolt action has the reputation of being the smoothest and fastest military action ever designed. The world record for aimed bolt action fire was set in 1914 by Sergeant Snoxall, a Musketry Instructor in the British Army. With a Lee-Enfield SMLE, he placed 38 rounds into a 12-inch circle at 300 yards in the space of sixty seconds. Nicknamed the 'Mad Minute', this was a requisite test for trained soldiers, to fire fifteen shots from the Lee-Enfield rifle, onto a 300-yd target, reloading with 5-round charger clips.

Rapid fire is facilitated by the two-stage trigger which is duplicated on the A.I.A. product range. Using this quickly becomes second nature after only a little practice. The first pull allows the finger to put pressure on the system. When sights are aligned slightly more pressure allows for a controlled second stage release. Sergeant York was also using an Enfield two-stage trigger when he won his Medal of Honour, dispatching German enemy with his .30 Model 1917 Enfield.

The M10-B1 is the most used rifle when helicopter feral culling is carried out. Very large numbers of camels, donkeys, brumbies, goats and pigs have fallen victim to its systematic accurate fire.

The very attractive stocks on the A.I.A. rifles are not the traditional walnut but the equally attractive and hardier teak. Teak is denser and harder than walnut and better suited to rigorous use. Remember teak was used for centuries as ship's decking because it was tough and did not split and it is also self preserving as the timber has high natural oil content. Teak was, until recently when it became scarce, much sought after for high quality furniture. A.I.A. finishes the stocks

to a lustrous golden matt glow using Birchwood Casey products to seal inside and out. This means that if a stock finish becomes damaged it can be easily user repaired.

The fore-end is free floating in the manner of target rifles. Accuracy is enhanced by a large metal bedding plate between the bedding screw and the fore-end. This is an adaptation of an idea originating in Canadian match rifles and adopted in the British sniper rifle L42A1. It works. Several butt types are featured. The No.4 MK4 full wood incorporates the SMLE type whereas the B1 and B2 models have Monte Carlo stocks with high combs and pistol grips and are scope friendly. To retain the sniper heritage, the B2 is also available with the Lee-Enfield butt incorporating two inbuilt fixing points allowing the time-honoured cheek piece to be attached by two brass screws. The SMLE butt and peep sights facilitate rapid fire, by adding the cheek piece and a 'scope, serious sniping work can be done. Left and right versions of the cheek piece are available. The B2 features a brass butt plate with blued steel being used on the MK4 and B1 models.


The A.I.A. rifles are approved by the Australian Service Rifle Association for use in Service rifle matches and are acquitting themselves with distinction. The availability of the A.I.A. variants has solved an emerging problem for military rifle shooters as the old bolt action rifles they are forced to use are now becoming rather weary. The supply of replacement spare parts is fast drying up too.

So, where do these masterpieces come from? They are built in Brisbane, Queensland, and they are assembled from quality steel and timber, without any plastic or aluminium like so many other offerings on the market today. Fine tolerance components are Australian-made with some other parts sourced from various countries. The criterion that generally determines where a part is made is which manufacturer has the best CNC machinery. All parts are hand-gauged and checked before assembly and yes, there are 800 gauges used in the checking. Each unit is hand assembled and accuracy tested to spec before being put on the dealer's rack. The appearance of the golden teak stock and a deep lustrous blue make for a very desirable and functional firearm.

Because of the quality specifications, test shooting, fitting and care taken in the total process, only 1,000-1,200 items are produced annually for the world market. Akin to the traditional British gun trade, these are hand-fitted and fine-tuned firearms rather than mass-produced supermarket items. So these offerings have the makings of a true collectable. Speaking of collectables, I have learned that an outstanding A.I.A. offering is being put together for release by mid-2009.

To commemorate the last Lee-Enfield derivative assembled by the Royal Small

Arms Factory at Enfield, the L42A1 sniper rifle in 7.62 x 51mm calibre, a "sniper's kit" is being put together. It will comprise a rifle transit chest with complete equipment schedule. The chest will accommodate an A.I.A. B2 rifle that has been deep engraved and will bear typical markings of the L42A1 and Enfield heritage that it reflects. The wooden chest, of replicate dimensions, will be stenciled in British Army style with weapon number and name of the purchaser, like some service sniper chests. It will pretty much capture the appearance and spirit of the original. The quantity is limited to little more than one hundred, for world-wide distribution.

The Lee-Enfield was, for a century, the backbone of British Empire and Commonwealth Forces, the prime issue in two World Wars, countless Colonial conflicts and recent United Nations actions, pivotal in shaping the world as we know it today. The A.I.A. B2 certainly qualifies as a tactical weapon. The firearm reviewed here features excellent metal and wood fit and finish. The individual hand-work is obvious to anyone lucky enough to use and shoot these new A.I.A. rifles. For the price today, this truly represents great value, for both the shooter, collector and investor. 

SPECS

Australian International Arms
M10 B2

CALIBRE

7.62 NATO (.308 Winchester)

BARREL LENGTH

640 mm

WEIGHT

4.97 kg

MAGAZINE

10 rounds

BARREL

Heavy profile chrome bore 1:12"
rifling twist

STOCK

Teak

PRICE

Approx. \$1300

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