How I set my sights for TR Long Range Shooting

I have been shooting with the Long Range Rimfire Club since 2017 but have been a smallbore target shooter for over 60 years, like many I think, having been introduced to the sport by my late father who was a lifelong rifle shooter.

The LRRFC has certainly been instrumental in developing .22 shooting over longer distances but they may not have been the first. My primary shooting club is Burgess Hill TSC. The vast majority of shooting is indoors at 25 yards with occasional outdoor shoots at a nearby 100 yard range. In the mid 1980s a suggestion was made that we attempt a club shoot at Bisley at 200 yards. My father and another member visited the range and made enquiries and it was decided this event could be made to work.

The two chaps were both engineers and set about machining a batch of simple solid raiser blocks that would allow regular rear sights to be mounted on them with the height being sufficient to give the required elevation for 200 yards.

The event went ahead with great success. We spilt the members into groups so we could do our own marking duties in the butts which we considered an enjoyable new experience. I sometimes think the current LRRFC members have it easy having all that work done for them! We probably used standard NRA targets and I know we placed what we referred to as an “egg bull” right in the centre. It was a small sticker no bigger than a ten pence piece and there was a prize for the person who hit it the most.

This competition became an annual event and was certainly my favourite date of our year. We were presented with an unusual piece of historic ammunition and this was made into a very distinctive trophy which was awarded to the winner of the days event.

Sadly like many clubs over the years the membership of BHTSC dwindled and it was not viable to continue the event. With the rules and regulations that now govern shooting at Bisley I don't think it would be possible for a club that predominantly shoots only at shorter small-bore ranges to turn up and do what we did all those years ago. As such for many years I was unable to enjoy this format. It was a chance meeting with a member of the LRRFC at another clubs' open shoot in 2016 which gave me the opportunity to start this style of shooting once again.

Now I was told that it would not be shooting at just 200 yards but out to as far as 500 yards. How was I going to set up a sight system to cope with these distances?

I realised I would require a means of raising the sights even further and a degree of flexibility would be needed if I was to shoot at varying distances. My searches led to the well known Intershoot website and a product called TEC-HRO System 2.0 Block. This simple yet effective item fulfilled my requirements. The block itself is a two piece item which fits between the sight and dovetail rail of the rifle. The two

halves of the block are separated by pins of varying length which can be changed. A full set of pins is available which allows the height adjustment to be made in 2mm increments.

I purchased the system and made up the zeroing chart, the details of which have often been given in many LRRFC communications, and spent time at the 25 yard range to work out what combination of pin height was required for each distance to be shot. I left the actual rear sight elevation setting near its mid point and adjusted the pin length accordingly. Subsequent shoots at Bisley proved that the system and my calculations worked.

I did stumble across a self inflicted problem a little later when a friend recommended I add a barrel extension tube to my rifle which is an Anschutz 1813 model. The extension tube increases the distance between the rear and front foresight. This can allow for an improved sight picture and is supposed to aid in better sighting accuracy. What I spectacularly failed to realise is that it also requires a significant increase in sight elevation. I had to rework all my calculations with the pin length settings in the raiser block and the increase was substantial. The extension tube has a dovetail rail on it so I experimented by sliding back the foresight on the rail as far as it would go which did limit the increase somewhat. I used this setup for several LRRFC events but overall I was not happy with it.

I needed to find an alternative setup and that turned out to be a fairly straightforward solution. I still had in my possession my late fathers' Anschutz 54 model which had been his only rifle since the mid 1950s. It was still in excellent condition and I still used it occasionally. I had changed the stock on it to one with variable butt length. I once again did a series of tests to ascertain the pin heights required on the TEC block. And now another little problem raised its head. I use a very nice Gehman 570 iris fitted to a regular Anschutz rear sight. When I first started to use this iris instead of a more basic one I immediately found that I had to increase the elevation to achieve the same point of impact. I have never found out why this should be. This iris has coloured filters built in as well as a 1.5X magnification facility and is thus slightly long in length. I found that by the time I had put sufficient height into the rear sight elevation to achieve a setting for 400 yards or more I could not see a normal sight picture due to the difference in height between the rear and front sight. The only solution I found was to use the older much simpler Anschutz iris for distances over 300 yards.

I continued with this setup for some time until I made another purchase. I treated myself to a very nice Centra Sight Base 10-50 rearsight. This lovely unit has a very large range of elevation within it and I can use it to shoot at any distance from 25 yards up to 300 yards. I do mount it on a small 4mm raiser block for one good reason. The overall construction of the sight is very different to the regular old Anschutz rear sight I had been using. In order to achieve the same eye relief distance I fit the 4mm block so it slightly overhangs on the dovetail rail and that allows me to mount the sight to achieve the correct relief. The sight has a very clear vernier gauge etched on it and this allows me to easily see what setting I

have made on it. I still use the older Anschutz sight as described above for 400 yards distance.

So that accounts for my eight years of sight settings and shooting with the Long Range Rimfire Club. I quite enjoy fiddling round and experimenting with these different setups so it has not been quite as painful an experience as you might think. I have learnt a lot through the whole process and I look forward to more years of long distance target rifle shooting.

Keith Ballard