

So, you want to try Long Range BPCR shooting?

Long Range Black Powder Cartridge Rifle Shooting (BPCR) is a niche sport in Australia, mainly due to a shortage of ranges capable of holding 1000yd matches.

It should not be confused with other black powder matches such as Silhouette or BPTR (paper targets) in that it uses steel plates (or gongs) and provides a lot of fun and continuing challenge to those that shoot it.

The central body for BPCR in Australia is the Buffalo Rifle Association of Australia (BRAA), a SSAA affiliate that came in to being in 2009 after a number of Aussies went to the Quigley Shoot in Montana that year and saw a need to get organised back home.

Matthew Quigley Buffalo Rifle Match

Named after the Quigley Down Under movie, the Quigley shoot is one big shoot. It attracts over 600 shooters to the line with six targets and 8 shots at each with no sighters. It is regarded as the unofficial world cup of Long Range BPCR shooting and has been going for some 25 years.

The organisation is well worth learning from. Shooters are divided into 'posses' of eight shooters and then the posse's are divided evenly between the six targets – 14 or 15 per target. As one posse shoots the next is getting set up so there is no delay between one posse finishing and the next starting. It is seamless.

Targets are on one side of a gorge and shooters on the other so all that is needed is to move along the edge 100yds or so to the next shooting position. Targets are set between 805yds and 350yds with the 350yds being shot offhand. To shoot a 'possible' at 350 offhand is almost impossible and, as such, it is the only possible badge that is presented at the main prize giving. At the time of writing it is believed that it has only been



Over 600 shooters on the line at the Quigley match in the USA.

done four times in 25 years – and two of those were only half a dozen shooters apart! Sighting in can be done in the days leading up to the two-day match.

If you don't like anything related to your shooting of the match, you are, of course, able to protest but it is not encouraged. The protest box is located at the top of a very tall hill some mile from the firing line. Not sure how often it is checked.

BRAA Matches-Australia

BRAA is essentially an NSW- based club and shoots its matches at Cooyal near Mudgee and Nioka near Tamworth.

There are other 1000yds ranges available, of course, Millmerran in Queensland, Monarto in SA, Wyalkatchem in WA and

the Canberra Rifle Club range in ACT to name a few but there is a shortage. Other Clubs shoot black powder at shorter distances. For example, black powder silhouette matches are shot at Rankin Springs. Also, Kariang near Gosford and Nowra ranges shoot BPCR matches. And there are others.

BRAA's typical match, shot over two days, is a four or five stage event with five sighters and 10 scoring shot at each target. For example, distances can be 1000,800,600,400 and 200yds with the 200yds being shot offhand.

Cross sticks are used for the rest and stools are allowed but not prone shooting. Stools must be seat only – no arms or back.

Targets are usually steel plates. The 'iconic' target is a steel buffalo with separate heart. They are, after all, buffalo rifles being used.



A Uberti copy of a Winchester High Wall in .45-70 fitted with a 6x MVA scope that is as long as the barrel.

Buffalo rifles – the Sharps

So, what is a buffalo rifle? It all goes back to the American West when buffalo hunters used, mainly, Sharps rifles to wipe out a few million buffalo (and the Indian way of life at the same time).

The Sharps had really come into 'popular' use in the American Civil War when it was used effectively by snipers and sharp shooters.

Not many were issued to soldiers in the line as there was a belief that they would waste ammunition if they got them – rather like not issuing parachutes to officers in spotting balloons in WW1 as it was thought they would bail out if attacked.

The first Sharps patent was actually issued in 1848 and went through many improvements, the most important being the transition from paper cartridge to brass.

It was and continues to be a big calibre rifle, mainly using 45-70 Government ammunition. Custer's men carried Sharps carbines in this calibre at Little Big Horn.

The most popular model was the 1874 model and that is the one most used by target shooters today.

Other rifles can be used as the rules for Long Range BPCR, agreed by SSAA and the NSW Firearms Registry, only stipulates a rifle with exposed hammer, designed before 1899, with a bore of .375 inch or larger. The full rules are on the BRAA website (buffalorifles.com.au).

Your choice of Sharps comes down to a US manufacturer or an Italian one, Pedersoli.

The US Manufacturers are led by Shiloh Sharps and C Sharps. These two-business used to be one company but they split and now manufacture at different ends of the same street in a small town (the size of Berrima) called Big Timber, Montana.

However, they are two very different companies in the way they work. Shiloh makes everything on site with its own foundry for casting and even makes its own barrels using

a tool originally used to produce machine gun barrels in WWII.

C Sharps on the other hand, buys in most of its parts and then assembles them. They used to use Badger barrels, for example, but I understand that has changed since Badger went in to making lots of barrels for government semi autos.

Both, however, make beautiful guns. If you want some fun, go to the Shiloh web site (shilohrifles.com) and use their order form to 'build your own' gun. They list all of the options from barrel length and engraving to checkering, butt plates, triggers and timber finish. A good quality gun with no special feature's costs \$US3-4000 but you can push that up to nearer \$10,000 with extras.

The C Sharps web site, incidentally is at csharpsarms.com. Its list of guns is well worth a look and the company has a newsletter that you can subscribe to, from the website, that carries some very good articles on BPCR shooting.



If you don't want to go to the hassle and delay (Shiloh can take up to a year to make a special-order rifle and then you have to arrange shipping) the easy solution is a Pedersoli rifle, readily available in Australia from Forbes Wholesale Pty Ltd (forbesws.com.au).

I think it is fair to say that Pedersoli were regarded by aficionados as a poor relation to the US manufacturers but this is no longer the case. They make rifles that are every bit as good as their US competitors and have a price and delivery advantage as well. The cost of an 1874 Sharps is around \$2500 or so.

Other options

Sharps rifles, called falling block rifles due to the whole breech block being lowered to allow a round to chamber, have two major competitors for BPCR shooting – copies of the Winchester High Wall or the Remington Rolling Block.

The High Wall is another falling block type of rifle which, like Sharps, has both US and Italian manufacturers. Uberti and Pedersoli both make excellent copies.

The main difference between the Sharps and the High Wall is that the hammer is offset in the Sharps (and some would argue that there is a delay after pulling the trigger) and behind the cartridge chamber in the High Wall. In both cases a lever is lowered and the block 'falls' opening the chamber and allowing a cartridge to be inserted.

The original High Wall was a John Browning design that went into manufacture in 1885. A similar rifle was made at the same time called a Low Wall. The High Wall takes heavy large calibre loads while the Low Wall was made for lighter loads, even 22 rimfire.

The Remington Rolling Block has a different mechanism to the others in that the breech block rotates on a pin rather than 'falls'. It was developed by Remington in the



ABOVE: The .45-70 in the centre is intimidated by the .45-90 and .45-100 cases.

LEFT: The windage and elevation adjustments are clearly marked on this MVA sight.

mid-1860s and proved particularly popular being very strong and able to handle the big .45 and .50 calibre cartridges.

It proved very popular with buffalo hunters and the military and was actually still in use at the time of WW1. The British Royal Navy purchased some 4500 at that time for issue to sailors in Q ships and the French had some 100,000 delivered in 8x50mmR Lebel calibre during 1916.

Again, the main manufacturer for Australians is Pedersoli whose 30-inch barrelled John Bodine rifle is particularly good for BPCR shooting. They market at around \$3000. Pedersoli also makes a range of other rolling block rifles including a Target model, Silhouette and Long-Range Creedmoor models. The Silhouette rifle markets in Australia for about \$2500. The Pedersoli website is at davide-pedersoli.com or you can link from the Forbes site.

Other rifles that are chambered for .45-70 are not really suitable for Long Range BPCR. Marlin copies of the Winchester lever rifles are fine guns but cannot really maintain accuracy at the long ranges. The same applies to the H&R 1871 which is, in any case, now only available now 2nd hand since production ceased in 2015



A Brocks .459 mould with cast bullet.

Ammunition

Having bought your rifle, you need something to put in it, so the next decision is calibre and barrel length. Probably 80% of BPCR shooters shoot .45-70 calibre. Next would come .45-90 with a few shooting calibres such as .38-55, .50-90 and others.

In .45-70, the 70 stands for the amount of black powder in grains that could be put in to the case. Personally, I have never been able to get that amount in and my 45-90 uses only 80gn not 90. .45 calibre bullets are 458-459" in diameter, unless paper patching.

The projectiles are cast with deep lube

grooves as excess fouling can be a problem and when shooting it is necessary to run a wet wad through after each round or to use a blow tube to keep powder residue moist in the barrel.

The alternative to lube is to paper patch and that is a whole new science in itself involving wrapping a slightly undersize projectile in paper which the bites into the rifling on firing. It was the method used by the buffalo hunters and has a number of followers.

The majority of BPCR shooters cast their own projectiles using dies of choice. The projectile is made of lead and tin in a 20:1 mix and weighs between 500gn and 550gn.

There are, as you would expect, many choices of bullet shape and a good place to look at a selection is at the Buffalo Arms web site (buffaloarms.com). They are the best known of the US suppliers of BPCR accessories although for us the value of the \$ and shipping costs can be very painful.

Lyman also makes some good moulds Their 457125 would be a good starting point.

Powder is either Swiss or Wano. Swiss 11/2 FG sells at up to \$130/kg and can be difficult to get with only one supplier, based in SA. Wano is easier to obtain and they have recently introduced a 'deluxe' powder which should be very competitive. It retails for about \$85 and is readily available in NSW from Combat Stimulation Systems (combatsim.com.au)

Both powders perform differently. For example, some shooters will argue that Wano needs more compression than Swiss. But the amount of compression needed is always in dispute.

After major shoots in the US the organisers publish the equipment used by the top 10 shooters – rifle, calibre, powder etc. And, as you would expect there is a lot of similarity, except for compression which varies from none to a lot. Bear in mind that you are filling the case with as much powder as you can and the decision is difficult – more powder equals more compression etc.

Typical barrel lengths are 30", 32" and 34".

My preference is for the 32" although the lighter weight of the 30" can be handy for a steady hold and the 32" is, perhaps, inclined to lead up more at the end of the barrel. 34" is unnecessarily long. Another weight saver

offered by some manufacturers is a part octagonal and part round barrel. BPCR barrels are always heavy and there does not seem to be a drop in performance by using a slighter lighter end piece.

What else is needed?

Almost as important as the rifle is the sight! Scopes are not allowed so tang sights on the back and a hooded front sight with interchangeable inserts go on the front. Some have a spirit level built in.

The fore sight insert that works the best is a ring slightly larger than the target (or bullseye) allowing you to see clearly the edge of the target and even it up. The exception being a post that works well for off hand shooting allowing easy target acquisition.

Most rifles come with tang sights fitted or at least drilled to take them, which makes life easy, but others require drilling to fit the bases. The sights have three basic adjustments – sight hole size, elevation and windage. Again, some sights come with an eye piece that can be rotated to bring different size holes in line (the larger the hole the more light gets through) but, if they do not, an after-market fitting is needed – a Hadley Eye Piece from Buffalo Arms is probably best.

Elevation is controlled on a scale on the side of the sight. They come in various heights to suit different ranges – taller sight/longer range – and are marked in minutes of angle. If you are not used to working with MoA I suggest YouTube which has a number of excellent videos on the subject but basically a Minute of Angle is one inch at

A range of cast .458 – .459 bullets ranging from 510gn to 550gn.



100yds. So, 10 MoA off point of impact elevation at 100yds or 50" at 500.

Windage is also graduated in MoA on a scale on the back of the sight. Here you need to be careful that the scale is easy to see. Some are poorly placed and difficult to adjust. Typically, one complete turn of the adjustment knob is 2.5MoA but it does vary.

My preferred sight is made by Montana Vintage Arms (MVA) and their web site is at montanavintagearms.com.

The ideal set up

Of course, there is no such thing. You set yourself up with what suits you best, but you have to start somewhere.

My starting point would be an 1874 Sharps or a Rolling block from Pedersoli in .45-70 calibre with a 32" barrel.

I would load Starline Brass or Remington (available from Cleavers at cleaverfirearms.com) with a Federal BR2 Bench Rest primer and Swiss 1 1/2 Fg powder or the Wano equivalent- probably their FFG or PP Precision Powder.

I would put a 'milk carton' wad by Circle Fly (available from Forbes) on the powder and a 535gn projectile using good quality BP lube.

SPG Lube is available from Cast Bullet Engineering (castbulletengineering.com.au) who, incidentally also make a range of bullet moulds to suit BPCR.

For that I would need a combined Sizer/Luber such as the RCBS Lube-a-matic available on eBay for \$200. Use .459 calibre sizing for .45-70 projectiles. My sight would be an MVA Mid or Long-Range Buffalo Soule.

I would use a heavy weight single stage loading press (Such as a Hornady Lock and Load Classic) and Dillon dies.

My powder would be measured using an MVA black powder thrower, starting perhaps at 55gn.

There are a few other bits and pieces such as X sticks, seating, loading trays and cleaning materials but the best way to decide what else is needed is to go to a BRAA shoot and see what everybody else does. Give them a call on 0448 586 272 or check their web site (buffalorifles.com.au) to find out when and where the next shoot will be. ■



A shooter with a .45-90 Sharps using cross sticks allowed in BRAA matches.