

# Thames Valley Guns Armourers Report

## Unique Alpine TPG 1 .308 Rifle

### Introduction

In 2015 I started to make plans to purchase my first modern top end sniper rifle, options were Accuracy International, RPA, Remington 700 clone, Steyr, AR15 clone, Sako TRG-22 and the CZ 750 and the principle reason for this selection was the availability of these rifles in the UK market place. The first to be discounted was the AR15 and Remington 700 clones as they simply didn't even come close to ticking the box. CZ was basically a Mauser design and based on earlier generation technology, I already owned



a Steyr SS69 and a SVD Tigr and somehow I managed to miss the Steyr SSG08. Historically I had experienced technical problems with the TRG-22 and its trigger mechanism which put me off and as a result this narrowed my final selection down to AI and RPA, with both of these companies interesting me because of their British heritage. My first contact was RPA Defence but they were relocating from Kent to Warwickshire and their sales follow up was poor. Prior to talking with Sporting Services Ltd who act as the agent for AI in the UK, it was business as normal and I was talking with York Guns Ltd ref some information concerning a scope purchase when they mentioned the Unique Alpine TPG-1. I hadn't considered the German TPG-1 because I had heard these rifles were very expensive and probably outside my budget, however York was the importer, were offering a deal, the rifles were available immediately and with all the "bells & whistles" should I want one.

My specification for this project was a sniper rifle that could shoot between 100 and 1000yds and I particularly wanted a rifle that could compete with the AI's in the McQueen's competition which ideally required a 10rd magazine. The TPG was limited to a 5rd magazine which meant two magazines and slick magazine change on my behalf if I was going to be able to compete effectively.

I have had no previous experience of these rifles, so there was an element of risk, however the chance to own an expensive rifle at a reasonable price was very tempting and therefore I decide to take the plunge, which meant the AI had to wait for another day.

### Specification

At the time of purchase there was only three calibres available to me, 5.56mm, .300 Winchester magnum and .308, only the .308 interested me but at the time of manufacture this rifle is available in a wide range of calibres. The rifle is a modular design, therefore it can be disassembled in modules and the barrel is completely interchangeable, providing it is with calibres that share the same bolt head. Barrel length on my particular model is 25.5" (650mm) and another 4.75" (123mm) Extends the overall length with the muzzle break, weight is 15.4lbs (7kg) unladen with no scope and empty magazine and overall length is 50" (1270mm)



Before I go on to discuss the rifles construction, operation and performance, I would like to mention that from a photographic point of view I have limited the stripping of the rifle and therefore the amount of pictures that I have taken, this is because I am currently using this rifle in competition and I don't want to have to re-zero. The image above is taken from the Alpine website and clearly shows the rifles modular construction.

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### Receiver

Its best to describe the two parts of the receiver as the upper and lower receiver. Both parts are manufactured from hard coated high tensile aluminium. The lower receiver is integral with the forend and supports the bipod rail, trigger guard, magazine well and butt assembly. The upper receiver supports the bolt assembly, trigger mechanism, barrel and picatinny rail. As this is a modular design, the upper and lower receivers are secured by four hex bolts and therefore can be dismantled with relative ease but have one unique feature that I have never seen on any firearm before - an oscillation damping gasket which sits between the two assemblies and reduces vibration.

The trigger guard is secured to the lower receiver at a single point but does not secure itself to the butt assembly, this permits the removal of the butt assembly by slackening off one hex bolt and sliding the butt assembly away. However any accidental impact at the rear of the guard would cause it to distort, jamming the trigger and making the gun inoperable. The lower receiver, including the forend is approximately 19.5" (500mm) long and supports a bipod using either Anschultz type rail or a versa pod type spigot. Either side of the forend are impact resistant, anti slip skins, which are available in different colours. On top of the forend there is provision for a equipment rail to accommodate an night sight, which is an option that I didn't opt for as it increases your scope height.

The upper receiver is 8.5" (215mm) long and seats neatly into the lower receiver. The front of upper receiver accommodates the removable barrel which is secured by three hex bolts and shown in the right image. Above the three hex bolts is a gas vent should there be a case failure.

Behind the gas vent there are three longitudinal lightening slots and behind this is the bolt release catch which also acts as the bolt stop. Fitted as standard is a 30 moa picatinny rail which permits most quality long range scopes to reach 1000yds with ease.

On the right side of the receiver is the corresponding gas vent and behind this is the ejection port and below, another lightening slot. If I am not mistaken the ejection port is "one size fits all" and therefore there is plenty of room to insert your finger should you need to clear any technical problem. The bolt handle slot is fairly unremarkable but I would like to highlight the steel insert at the top of the slot. This insert acts as a cam, levering the bolt to the rear, prevents impact damage from the steel bolt handle on the aluminium receiver and generates primary extraction. The ejection port lacks any form of dust cover.

Movement of the bolt assembly is very smooth within the receiver, with no bolt wobble and highlights the level of precision in this rifles manufacturing process. The trigger is a match type, single pull and can be adjusted for finger length. A double pull trigger is available as an alternative option should the customer request it. Markings on the right upper receiver are the Unique crest and on the left, the manufacturers details. However the master serial number which is on the lower receiver, underneath and parallel to the trigger guard. Serial numbers on the bolt and barrel are different and do not match. This is because the components are interchangeable but does present a problem for the UK licensing authority.

The trigger is adjustable and can be adjusted to release at 500g to 1000g which is a good range. The trigger bar is essential to accommodate different hand sizes as the pistol grip is quiet large. However the trigger bar indicates the heritage of a precision match trigger that may be ideal on a gallery range but less than suitable in a combat environment.



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### Bolt Assembly

The bolt assembly is an all steel affair with only the bolt knob being manufactured from impact resistant plastic. It is a substantial bolt with a three lug bolt head, plunger style ejector and a sliding extractor, rather than a typical pivot style. The bolt head and



bolt body are one piece and therefore rotate together with only the cocking piece head and firing pin rotating about its axis. The safety catch is mounted at the rear of the cocking piece head and is quite unique. At first glance it looks like the spur on a revolver's hammer, however when the firing pin is cocked, it levers upwards

and physically locks the firing pin in the cocked position. The bolt can still be cycled, therefore permitting the chamber to be cleared.

From a personal standpoint I am a strong believer that gun safety is completely in the hands of the operator, sophisticated safety mechanisms cannot improve poor user safety, therefore I favour this type of safety catch, it is simple, highly effective and there is little to go wrong.

Bolt lift is a typical 60° and like all modern bolt mechanisms this bolt cocks on opening and looks very similar to some modern target rifle bolts, whether this is accidental or coincidental, I am unsure. The bolt handle cants backward 35° which provides a natural movement from the pistol grip to the bolt handle, however a minor comment about the bolt handle is the 2" distance it protrudes from the receiver, which I think is a little excessive. The bolt is coated in Teflon to minimise bolt/receiver wear. Along the length of the bolt there is a series of grooves, as they are quite narrow I assume they are for the dispersion of debris, rather than the reduction in weight. The bolt has four gas vents should there be any form of cartridge blowback. If I have one minor criticism of this bolt, it is that it catches on the cheek pad when removing the bolt for cleaning. This is not the fault of the bolt, but a design fault of the cheek pad. A slight re-profiling of the pad would easily resolve this issue.

### Butt & Pistol Grip Assembly

The butt assembly is an ergonomic work of art and it is not often that I make such a bold statement. Most modern sniper rifles either have an aluminium frame with protective skins and an adjustable cheek pad and butt plate. The AI is a good example of this design concept. Alternatively the whole butt assembly is an all aluminium frame with various adjustable pads and butt pads, with the Steyr SSG08 being another example.



The Alpine butt assembly is an ergonomic synthetic resin moulded butt and pistol grip assembly called CrossTech. It is manufactured by Marti in Switzerland, is completely detachable by slackening one hex bolt and is available in a variety of colours.

The thumbhole pistol grip has an adjustable palm support and an anti-slip surface. The pistol grip is quite substantial and provides a very positive and solid controlling grip to the rifle. My hands are small and my finger just reaches the trigger, hence the need for trigger with an adjustable trigger bar.



The cheek pad can be removed if required and the cheek pad assembly can be raised and lowered without the need for tools. The butt plate on the other hand can be adjusted for tilt, vertical, lateral and length but adjustment requires a hex key.

Built into the butt assembly is a rear grip and a monopod which has both fine and course adjustment. On the left side of the butt is a sling swivel which I had to purchase as an optional extra.

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At £50 this is the most expensive sling swivel I have ever purchased but gives you an idea of the original asking price for these rifles. If I have one minor criticism, it is the overall depth of the butt assembly, with the cheek pad fully depressed from the monopod to the cheek pad is 8", add a scope and it become 12" or more depending on your scope type and ring height. Operationally if you require a quick elevated shot, there is no room to drop the butt, the only option is to elevate the rifle by using the bipod which is a slow and time consuming process. Storage wise you will require a very deep security cabinet and for transit purposes a wide gun case, all of which adds cost.

### Barrel Assembly

The barrel is precision quality free floating barrel and on this model is 25.5" long. Other barrel options are available, including various calibres and lengths. The barrel has eight 17.5" flutes which reduce the barrels weight but increases the surface area thereby improving heat dispersion.



The barrel screws into a bushing which permits the barrels interchangeability as it is the bushing that secures to the receiver and can be removed with relative ease. On this model the barrel retains its natural stainless steel finish but if the rifle was to be used in a tactical role then the barrel would require black cerakoting.



As the reader will note the muzzle break is substantial, measuring nearly 5" in length and 2" in width. The muzzle break is highly effective and noticeably tames the rifles recoil and due to its size and weight also minimises barrel harmonics. The breaks method of attachment and function is slightly unusual. Unlike most breaks that screw onto the barrel this break is located by two key ways and then clamps onto the barrel. In terms of operation, most breaks simply redirect the bullets gases out to one side using a series of baffles and normally at 90° to the bore. This break has a venturi or internal tube that sits approximately 0.75" from the muzzle. As the bullet leaves the bore, it passes across the 0.75" gap and enters the venturi and leaves the break, however the gases are deflected by the venturi into the baffles and are redirected backwards at approximately 80° angle, thereby counteracting the rifles recoil energy. The break can also be fitted with a stud to facilitate the fitting of a barrel mirage band should the operator wish.



### Magazine

The 5rd steel magazine is manufactured from traditional press steel stampings, built to a high standard but is unremarkable in terms of its design. It is a single stack magazine which in my opinion is more reliable than double stack and has the feed ramp built into the magazine. The magazine secures, utilising the standard lever style catch and there are observation ports to highlight the number of rounds in the magazine when loading.



In practice have found this magazine to be very reliable and easy to use when competing in competitions, however its 5rd capacity does have its limitations.

### Summary

I have been shooting this rifle for nearly a year at the time of writing this report and there isn't a range day where I haven't enjoyed shooting it. Being an ex-military Armourer, the tactical appearance appeals to me, its accuracy and faultless feed have served me well in a number of competitions. From a technical standpoint the TPG is an easy rifle to discuss because its construction and function are relatively simple, which is to the rifles credit. However from an operational aspect it is difficult rifle to summarize and therefore I think the best way to describe the rifles capabilities is to break it down into "pros & cons" as per its operational role.

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### **Civilian disciplines:**

This rifle is extremely accurate, its heavy weight is beneficial to absorbing recoil, especially when supplemented by a very effective muzzle break, this rifle can shoot 0.5 moa groups or better at 100yds with comfortable ease. Dimension wise it is a big rifle, which takes up a lot of space and isn't the easiest rifle to carry, but this is not a major hurdle for the civilian shooter who doesn't have to carry it far from his car to the firing point. Its modular construction makes it very popular with civilian shooter who want a multitude of calibres in a single package and therefore is at home on a gallery range, shooting at different ranges and with different courses of fire. As a multiple calibre package its excessive cost becomes more cost effective when compared to three or four rifles to complete the same courses of fire. Its tactical appearance will appeal to those in the civilian shooting world who like the military look but its excessive weight makes it unsuitable as a hunting rifle. For all but the fittest of users, shooting this rifle in the standing or kneeling position would be very tiring.



### **Police Marksman Rifle:**

I think this would make an excellent police rifle, its accuracy is without doubt and its weight is not an issue as the Police marksman would not need to carry it for great distances and in harsh climatic conditions. The availability of different butt and skin colours could be used to offset the military appearance and the five round magazine would not present a tactical disadvantage as the Police are unlikely to be in a "target rich" environment. I have shot this rifle in extremely wet conditions that one might encounter

in a Police operational environment and the rifle functioned without fault. My only comment was the upper and lower receivers did require stripping to remove the excessive rain water.

### **Military Sniper Rifle:**

In my honest opinion I do not think this rifle would make a good military sniper rifle, whilst its accuracy is without question, its weight, handling, five round magazine and the resilience of the aluminium receiver in a harsh military environment would be questionable. However its simplicity and calibre interchangeability would be beneficial from a logistical standpoint as spares and Armourer training would be minimised using a single chassis system.

I often think what the designer had in mind when designing this rifle, I cant help thinking that the designer aimed at one rifle that would tackle multiple tasks, however in practice this is rarely the case, in the UK we have a saying "jack of all trades, master of none" which I think sums up this rifle nicely. If you want to get the "master" the best out of this rifle, choose your preferred discipline and focus on it with the correct choice of calibre and scope and this rifle will happily and reliably produce the goods.

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