

# GALLERY RIFLE THE BASICS! PART 3



As a few people have asked me recently what the difference is between a single and two stage trigger unit here's a brief explanation! The Lever Action and Ruger 10/22 style rifles that we use in Gallery Rifle are fitted with single stage trigger units as standard. This means that they require a continuous pressure to be applied to the trigger throughout its travel to overcome the sear spring and mechanical resistance, until the hammer finally disengages and strikes the firing pin. Because of the design, this generally means that there can be quite a lot of "creep" (or "slack" as it is sometimes referred to) felt in some units and the standard Ruger one is no exception! They can however be modified internally to remove most of this problem and can be "tuned" to give around a 2½ - 3lb trigger release. The K.I.D 10/22 style two stage trigger units however distribute the "weight" needed to release the hammer into two distinct segments. As the trigger is pressed rearwards during the "take-up" (no "creep" or "slack" in this design) you will feel a "stop" point at the end of its (longish) travel and this is the end of the first stage. At this point (start of the second stage) the hammer and sear are engaged by about .001" which then takes only the slightest of movements to release the hammer forwards. The weight of both the first and second stage can be adjusted on the K.I.D from anywhere between 2lbs down to about 6 - 8oz.

Before actually starting to work on your trigger control, it's a good idea simply to sit down with your (empty) rifle and spend some time just cocking the action and cycling your trigger slowly all the way through its travel until it releases the hammer. The aim of this is to be able to "feel" everything from the amount of physical "movement" of the trigger, to any "flat" or "binding" points it may have, then eventually the "balance" or "hold" point just before the hammer is released. Gaining this "feel" for each of the individual triggers on your rifles will definitely help you to shoot them more accurately!

Obviously, acquiring a good trigger control is paramount to being a good shooter but this fact is often overlooked on many occasions by both novice and experienced competitors alike as it is rarely specifically practiced. Being honest, how many of you have just pulled on the trigger when the crosshair was somewhere near the 10 or X ring instead of making sure you simply released the shot correctly? I can't believe I'm the only one to have done this on the odd occasion, or am I the only one who will admit to it? Good hits and scores are achieved by perfect trigger control and not perfect sight alignment! For example, you could line up the sights perfectly on the centre of a target at 50m but yank on the trigger and you'll score an 8, a 7 or even worse. However, if the sights gently hover back and forth between the 9, 10 and X ring and you release the shot "correctly" then the worst you will do is drop one point. Remember, it doesn't matter who you are, no-one can hold a perfectly steady sight picture and you must accept this in order to progress!

Whether you refer to it as trigger pull, control, press, release or something entirely different it doesn't really matter as long as you physically operate it properly. Basically there are two types of "trigger control" that are used to fire a shot. The first is when the pressure on the trigger is continually increased in a slow and smooth manner to a point where a shot is eventually fired without that specific moment being determined by the shooter, and it is known as a "surprise" break (or release). The second



**Gripping too high or with too much pressure will make it impossible for you to achieve a good trigger control!**

is known as a “controlled” release where the shooter increases the pressure more quickly (but still remains smooth & consistent) so that the shot is released within a short time frame. Both the “surprise” and “controlled” break have their good points but I think that the method you should use will ultimately be determined by the type of shooting that you are doing at the time. For example, using the slower “surprise” release will turn out to be just that when you add up your Bianchi score card, as you will probably have less than half the required number of shots on the target because you would have shot far too slowly! Likewise, shooting 10 shots off in 3.5 seconds in a 50m precision match won’t get you the desired results either, so it’s important that you master both methods (or somewhere in between) then use the most appropriate one given the time restraints, weather conditions, size and number of targets that you are shooting at!



**Correct alignment and reach to the trigger blade is essential and will help to maximise your performance!**

using the pad of the finger as this will help you apply a more consistent pressure. Any bending or curling of the index finger to contact the trigger blade will decrease its capacity for a slow and controlled smooth movement, and will probably cause sideways pressure against the trigger blade causing the rifle to move as the shot is fired, with obvious results. Dragging the side of your finger along the side of a poorly contoured stock whilst applying pressure on the trigger blade will also have a very negative effect on accuracy and I had to relieve quite a bit of material from the side of mine in this area in order for it to fit me properly!

Whichever method you may use it is vitally important that your grip to trigger fit is perfect, so that your finger can extend naturally to the trigger blade! With the finger in this position, less movement is required from the tendons and muscles to produce movement nearer the finger tip and there is also greater sensitivity in this area. The pressure on the trigger blade must be applied smoothly and consistently in such a way as to not induce any movement other than straight back in line with the bore. In order to achieve a perfect trigger control you must learn how to isolate your trigger finger so that it moves totally independently from the rest of your hand, and this will take many, many hours for you to accomplish, but it will be well worth the effort in the end! Pulling the trigger with the finger joint should be avoided at all costs as this will produce a poor reaction against the trigger blade and give negative results on the target and for anyone using a trigger weight of around a 1½lbs or more you should try

It’s not something that usually springs to your attention doing everyday things like picking up a pen or holding a cup for example, but your index finger and thumb always work together as a team as it were and this action is usually referred to as “sympathetic movement.” In most cases, this means that the thumb will try to apply equal and opposite counter pressure in relation to the direction that is being exerted by the index finger. In shooting terms, this is not a good thing as any side pressure being applied to the stock by the thumb will usually result in the finger moving towards it which can result in lateral movement on the target. It can also insulate the feel of the trigger finger which will affect its movement and operation, resulting in poor control. Elevating or extending the thumb can usually help to avoid this natural instinct from occurring, but it takes practice! Applying the grip pressure with just the middle two fingers will allow the thumb and little finger to remain relaxed, but don’t grip too tightly as this will lead to an increase of tension in the forearm which will have a detrimental effect on stability. From a performance point of view, a good follow through after each shot is just as important as the trigger release, and once again this area will need plenty of work on. As soon as the shot is released, the trigger blade must continue to travel rearwards slightly, without it or your finger contacting the rear of the housing or part of the stock. If either of these points was to occur abruptly enough, it can cause the rifle to move before the bullet has exited the barrel, causing a pulled shot or a miss on the target. If you have an over travel stop fitted to your trigger blade, you must make sure that it is set up correctly to avoid causing you any similar problems.

Correct breathing is also an important part of good trigger control but because of the types of shooting that we do, it can present problems at times! We rarely fire just one shot, nor do we have plenty of time to prepare for each following shot either so we need to adapt to whichever situation we are in at the time. Whenever you breathe in or out your body and diaphragm will move so the best time to release a shot is during the natural “pause” between exhaling and inhaling which is



**Modifying your stock so that your trigger finger does not “drag” against it will help avoid any lateral deviation whilst increasing the pressure on the face of the trigger!**

matches such as the 1500 where there is a bit more time to spare at the longer distances, I will breathe after every 1 or 2 shots depending on the stability of the hold and the type of rifle I am using, as I tend to shoot slightly quicker with the smaller calibre. Again I make sure that I oxygenate as much as possible during each reload as the more oxygen you can get into your blood, the longer your respiratory pause will become. Correct breathing is another skill that will need time spending on it to get it right, but finding what works best for you will definitely help improve your overall score!

Here are few things to try that we use at my club that may help you regarding your sight picture and trigger control! First of all turn the magnification up to its maximum, and resting the fore end of your rifle on a bench simply aim at a target at either 25 or 50m and you should see that the crosshairs are still moving or bouncing around. If they aren't, then you are not looking at the sight! This movement is simply caused by the way your muscles work and there's little you can do about it, and the purpose of this exercise is to teach your brain what a good sight picture looks like, and not what you think it should be. A good sight picture is a semi controlled movement of the crosshairs that remain consistently within a pre determined area on the target, and NOT remaining perfectly still! The second practice is to dry fire from this position (using snap caps ideally) taking into account all of the techniques mentioned previously. If you look closely you should be able to see the crosshairs deviate on the target as the pressure on the trigger blade is increased and this is where your time and effort will eventually pay off. The aim is to acquire a technique which allows you to release the hammer smoothly without seeing any flinching movement of the crosshairs on the target.

Moving on next to live firing practice with a partner! To get the full benefit of this exercise your partner should load around half a dozen magazines with between 1 and 10 rounds in each, or have a good supply of dummy centre fire rounds in his pocket that have no primer or powder inside. On the firing line with the action forward and chamber empty, your partner should then insert either a magazine or a mixture of dummy and live rounds into the magazine tube so that you don't know what the content is. All that's left to do then is for you to practice everything you've previously worked on, and for your partner to closely watch the end of the barrel. Your goal should be to visualise shooting every shot “through the target” and follow through smoothly with the trigger. With enough practice you should eventually be able to “see” exactly where the sight was in relation to the target when the shot was released. Knowing where the point of impact will be on the target this way is known as “calling your shots.” The only thing your partner will be calling is whether or not the barrel remains stable, or if it drops or pulls to the side when the hammer falls on an empty chamber! It is a very simple drill but it's also very accurate as it will always reliably confirm whether or not you are using good trigger control or not! Next time we will take a look at the kneeling, sitting and weak shoulder positions that we use in Gallery Rifle along with some tips on reloading and the positioning of your ammunition during a competition!

usually around 3 – 5 seconds. One major cause of bad performance is either trying to hold in too much air, or simply not breathing at all because some people concentrate so hard on trying to achieve the perfect steady sight picture that they simply forget to breathe! If someone asked you, would you be able to tell them exactly which types of breathing patterns you use when you are shooting a particular match? Do you plan it or do you just take a big breath in and hope for the best? During a match, from when I take a sight picture and start loading, to when the targets turn to face I try to oxygenate as much as possible. On short multiple exposures of between 2 – 5 seconds I will take either 2 or 3 controlled breaths depending on the “away” times so that I am just at the end of the exhaling cycle as the targets return to face each time. When shooting at multiple targets I will usually take in a little more air during each transition as doing it at this point this will not upset the movement of the rifle. In