Rifle Marksmanship: A Basic Course

Forward:

Many of the folks looking to shoot better seem to think that all it takes is an accurate rifle. In reality, the single most important factor in accurate shooting is between the ears of the operator. Those who don’t bother to hone their skills and practice the fine art of marksmanship will never reap the benefit of having a fine accurate rifle. This Basic Marksmanship Course goes a long way to help achieve that goal. It covers the methods necessary to become an expert with the rifle. Something every man and boy should know.

This course includes information and instruction on safe gun handling and marksmanship fundamentals. It is designed around the handling of the M14 rifle (note that it is presented by the M14 Rifle Association), but is applicable to most any firearm.

Information contained in this manual is a must have when setting your goals to master the art of marksmanship.

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Overview of Course

This Basic Marksmanship Course was designed primarily to assist "NEW" shooters in acquiring basic knowledge related to marksmanship and firearms safety.

Upon completion of the course, the student will have a firm working knowledge of the basics of marksmanship.

Safe Handling of a Firearm

1. Always treat every firearm as if it were loaded. When you take charge of a firearm in any situation, you must treat that firearm as if it were loaded. You must determine its condition and apply all safety rules on a constant basis. (A list of Safety rules is provided at the end of this primer)

2. Never point a firearm at anything you do not intend to shoot. Muzzle awareness is a priority at all times.

3. Keep finger extended and away from the trigger until you are ready to fire. Before taking the firearm off of safe, you must identify your target and only then move your finger to the trigger.

4. Keep the firearm on safe until you are ready to fire. This is intended to eliminate the possibility of an accidental discharge.

Marksmanship: Definition

The idea or definition of “marksmanship” is an end result, acquired by systematic training, rote repetition, and critical (but caring) criticism, that allows one to quickly and deftly acquire and hit a target with a firearm. The second half of that definition is that they can do it repeatedly, time after time.
The marksman can then acquire better skills, enabling him or her to move up the success ladder to sharpshooter, expert, or even sniper level.

But we must always remember that it begins with a simple skill that owes its total success to muscle memory, attained through practice and repetition.

**Marksmanship (A Basic Course) Scope:**
The intent of this course is to give the student a foundation upon which to build, a beginning block of instruction that can be practiced, even in inclement weather on the family room floor or in the garage.

In addition to the basics of “Marksmanship” this course will also offer some directions as to shooting positions and postures as well as a general overview of the requirements of a Marksman.

**Course Requirements**
This course is designed primarily for a rifle shooter, although most of the techniques and exercises easily transcend to handguns and/or shotgun use.

The student should have a rifle, which can be a BB gun, or a pellet gun if that is all that is available. The pictures used will portray a typical AR type rifle, an M14 style rifle, and a 1911 style pistol.

Additionally, when it is time to go to the live fire range, the student will also need eye protection, ear protection, and a shooting mat if available. Some may elect to bring a shooting glove or any glove. It is highly recommended that everyone have a rifle data book in order to plot progress.
Building Blocks of Marksmanship
The fundamental building blocks of marksmanship are three simple items: Aiming, Breathing, and Controlling the Trigger. (or your A, B, C's) Other things will modify or regulate how well these building blocks are implemented and followed, but these are the simple three.

We will deal with each one separately at first, then come together, putting it all together to form a solid skill.

Block Number One: Aiming
Aiming is simple: aligning the sights to the target. Depending upon the type of sights found on the rifle, pistol, or shotgun; it amounts to learning which method is used for which type of sights. We will only deal in this course with typical rifle sights, pistol sights, and shotgun sights that are called “iron sights”.

Iron sights will have a rear aiming reference point, and a front aiming reference point. Aligning them together in relation to the target will produce hits or high scores. Not aligning them together in relation to the target will produce misses or low scores.

The most fundamental rule to remember in Aiming, is one that is often forgotten in the shooting sequence by beginning shooters. It is simply this: FOCUS YOUR AIMING EYE ON THE FRONT SIGHT.

Most shooters want to focus their aiming eye on the target. That is normal, and pretty predictable, but is also wrong if you want to become a good shooter or competent marksman.

The front sight should be clear, clean, and crisp in your vision. The rear sight should be slightly fuzzy. The target will be also fuzzy.

One question that almost always comes up: “Do I keep both eyes open, or do I close my non aiming eye?” Most instructors and most shooters shoot with only their aiming eye open. That is the method to begin with and learn first.

The next question will usually be: “How do I align the sights?”
The answer is not simple, but rather, “It depends”, as it depends upon what type of iron sights you have on the firearm used. Observe that there are many different sight patterns that are commonly found on rifles, shotguns and pistols.

Figure 1 is a commonly found rifle sight that was used on the M1 Garand, M14, M16, M4, and M1 Carbine, etc.

Figure 2 is a common peep rear sight with a hooded front bead sight, common to hunting rifles.

Figure 3 is also a common rifle sight found on most hunting rifles, using a leaf rear and a beaded front sight.

Figure 4, another common hunting rifle sight, a leaf rear and a post front sight.

Figures 5 and 6 are typical pistol sights: 6 being the usual standard, and 5 being a “three dot” sight arrangement. Fig 5 is the most common night sight arrangement.
Regardless of the type of sight, the objective is to place the front sight in the center of the target, and align the rear sight much as the drawings have shown. In figures 1 and 2, the post is shown in the center of the outer circle of the sight. That is proper sight alignment.

The second cardinal rule for sight alignment is: PLACE YOUR FRONT SIGHT IN THE CENTER OF THE SPOT YOU WANT TO HIT. Then simply bring the rear sight into alignment with the proper diagram, and you will be “on target” (see figures below).

A good and simple exercise is to simply sit on the floor of your basement, garage, or family room with your firearm (unloaded and in a safe condition); and practice aligning the sights on various targets within the room, both near and far.

You are practicing focusing your aiming eye ON THE FRONT SIGHT, and getting your body used to doing that as a practice and not as an exception.

Hoist the firearm up and take aim, checking where you focused. Put the firearm down. Hoist the firearm up again on a different target, check where you focused. Put the firearm down. Again, this is a very simple but effective drill for you to practice.

SAFETY NOTE: Double Check, Make Sure Firearm Is Unloaded, and KEEP YOUR FINGER OFF THE TRIGGER. YOU ARE SIGHTING, BUT YOU ARE NOT SHOOTING.

Shown on the next page, is a somewhat advanced sight alignment design, known as the “Six O’Clock Hold”. Here the sight is placed at
the very bottom of the target’s center circle. It is used primarily by target shooters. When shooting competition, it is a very practical and effective means of sighting the firearm, however, if you’re already proficient in the center hold, it may be a chore to make the transition. As always the more you practice, the easier the transition may be.

![Target Illustration]

**Block Number Two: Breathing**

The number one nemesis to good marksmanship is trigger control, something we will deal with later, but a very close second problem area is breathing. We do this breathing thing very naturally, normally, and of course quite often. If we are to become marksman, we must get this action fully under our own control in order to shoot well.

You can begin the proper breathing process without a firearm even in your presence. Notice that you have two processes that are involved in breathing: the inhale and the exhale. A typical adult will both inhale and exhale an average of 12 to 20 times per minute.

Usually the inhale event takes only a couple of seconds, with a very slight pause at the end of the inhale, and the exhale event takes over center stage. Again, as with the inhale, the exhale only takes a couple of seconds. What is different about the exhale event is that after we exhale, we typically wait several seconds before we inhale again.

The marksman wants to take advantage of the pause at the end of the exhale cycle to do the shooting. Why? Your body naturally moves all during the inhale and exhale events, but typically is not in motion during the pause.
Not being in motion, the firearm will be more steady, making for a more advantageous moment to fire the firearm for optimum accuracy.

The proper procedure that should be practiced is to align the sights upon the target while breathing normally. Once the target is “acquired” the shooter must abandon the normal breathing cycle, and adopt a shooters breathing cycle.

The marksman should practice taking only a slightly deeper breath in the inhale event, and then exhale “most” of the air. Do not forcefully exhale completely, as the body will then want to inhale almost immediately, making the firing window very short.

Instead, leave some of the originally inhaled air in the lungs, hold your breath, and when the body has quit moving, and the sights are aligned in the center mass of the desired target, take the shot.

Again, this is not a skill that can be acquired overnight, but it is one that can be acquired without a firearm, or with a firearm and only dry firing or using snap caps. It is not necessary to actually fire a round to work on this skill.

**Block Number Three: Trigger Control**

As previously mentioned, trigger control is by far the normal nemesis to one becoming an accomplished marksman. Much has been done in the past few years from a mechanical standpoint to offer excellent trigger platforms for shooters, but it will always come down to the individual shooter to perform or to fail.

Success depends far more on exact repetition, time in, time out, time and again, and again, and again. The idea is to move the mechanical firing arm of the firearm known as the trigger, to the rear of the trigger guard, without any disturbance of the sight picture. It also has to be done within the time frame of the breathing window previously discussed.
There are many different ideas of how to explain to a non-shooter exactly what is meant by “pulling the trigger” because if the shooter does exactly as the words imply, accuracy will be non-existent.

The trigger needs to be forced to the rear of the trigger guard in a controlled, choreographed move that **DOES NOT MOVE THE RIFLE OR THE SIGHT ALIGNMENT AT ALL**! Any movement that moves the firearm, also moves the impact point of the bullet, a condition that is not desired.

One of the most used techniques is to tell the shooter to squeeze the firearm with the thumb and all four fingers of the shooting hand, equally. Think in terms of squeezing an orange for juice or squeezing a tennis ball to develop a better grip. The pressure is applied equally by all 5 digits, in all directions. It is a good technique to begin marksmanship training with and will produce good results.

And again, as with other exercises we have offered, a firearm is not necessary, as a tennis ball, a rubber ball, or even an old sock full of rags can suffice to begin to develop muscle memory that tells the shooting hand: “**OK, everyone work together, all 5 digits at the same time, equal pressure.**”

As well as equal pressure, the marksman must also learn that the placement of his shooting hand on the firearm must always be at the very same place each time. Included in this is also the placement of the trigger finger on the trigger.

It is normally suggested for beginning purposes to place the center of the first pad on the center of the trigger. Most new shooters want to place the trigger in the fold between the first two digits, and this will almost always cause the shooters scores to suffer. The center of the first digit pad is the preferred position.
Block Number Four: Putting it all together

One of the most successful techniques that can begin to be employed here is simply dry firing of an unloaded and safe firearm. Depending on the firearm, snap caps may be advantageous to prevent damage, but many firearms do not need snap caps to be dry fired. You should check the firearm manufacturer’s handbook for recommendations.

A coach should be employed to assist the student marksman, walking through the steps of sight alignment, breathing, and trigger manipulation. The coach and student can trade off, each critiquing the other’s skills as they get ready to go to the range.

Start out with a regimen of simply acquiring targets: some near, some far, some so far away that the front sight covers the target or most of it anyway. Again, the desire is to KEEP THAT FOCUS ON THE FRONT SIGHT.

Next spend a few minutes practicing the overall shooting breathing cycle: inhale, exhale, pause, inhale slightly deeper, exhale most of your air, pause, shoot, finish exhaling. If you aren’t happy with your aim in the first few seconds, pause and repeat the process.

Ask most hunters or competitors what happens when you rush your shot. They will tell you that it may be the difference in wounding an animal rather than a quick kill or making a sometimes huge negative difference in your scores.

Finally, just before picking up your firearm for firing at the range, take a few moments to go through 15 or 20 “firing drills” where you simulate pulling the trigger by squeezing your tennis ball, sock of rags, or even your firearm (unloaded of course).
ADDENDUM: SHOOTING POSITIONS

There are four basic shooting positions: Standing, (or offhand) kneeling, sitting and prone. Ironically, that is the order in which the various positions are the least accurate.

Standing: as the pictures below show, there are different interpretations of the standing shooting position.

Figures # 1 and # 2 are good positions if you are using a shotgun for rabbits or pheasants, but do not lend themselves well to accurate rifle shooting.
Figures 3 and 4 are excellent standing positions as the rifle is supported by solid portions of the shooter's body, rather than by muscles alone. Muscle support tends to be far less rigid than the support given by the bony skeleton of the shooter.

**Kneeling:** the kneeling position uses “bone upon bone” contact to stabilize the hold and keep the firearm “on target”.

**Sitting:** as in the other positions, interpretations vary as to what constitutes a sitting position, as well as what constitutes a “good” or “solid” sitting position. Butt on the ground is the first sign of the sitting position, and any combination of firearm sitting on bony structure will give an advantageous edge to marksmanship.
Notice that in both of the sitting positions, the shooter has seriously tried to immobilize the movement of the firearm.

**Prone:** this is without a doubt, the single most accurate position one can get into. Again, using the forearm to stabilize the movement of the firearm is the goal, and here in the prone position, it is more or less natural. The best position is figure # 1.
GETTING “ON TARGET”:

Sight Adjustment
As soon as you begin live firing activities, you will need to know how to adjust your sights to place your shot groups in the middle of the target. This is known as "zeroing" your rifle.

Zeroing
This is the process of adjusting the sights on the rifle so shot groups fired by a shooter with that particular rifle are centered on the target.

There are two factors involved
- Windage – the left or right movement along a horizontal line
- Elevation – the up or down movement along a vertical line

Rifle Zero
The windage and elevation sight settings on a zeroed rifle, where shot groups are centered, is its zero.

Sight Adjustment Principle
The fundamental principle of sight adjustment that governs all zeroing procedures is that you must move the rear sight aperture in the same direction that you want to move the shot group on the target.

If you move the front sight, remember that the impact spot moves in the opposite direction of any movement of the front sight. Elevating the front sight, moves the impact point down.

Moving the front sight to the left, makes the impact point move to the right.
Moving a shot group up or down on a target is called making elevation adjustments. Moving a shot group left or right on a target is called making windage adjustments.

**Making The Sight Adjustment**
One of a shooter’s most important skills is to be able to adjust the sights to precisely zero the rifle so that the shot groups are in the center of the target. Sight adjustment and zeroing involves a logical, step-by-step process.

First, using the prone position fire a shot group—a group of 3 shots is recommended for new shooters. Find the center of the shot group.

The sights will then have to be adjusted to bring them to **ZERO**.

In the previous example, the rear sight will need to be moved somewhat to the right, and somewhat less upwards. This will adjust the impact point to the right and upward.
Fire another group of 2-3 shots, then calculate and make additional sight adjustments as required.

Consult your firearm's manual for instructions in how much movement should be made to achieve a particular result. As an example, most scope sights are set up so that each click of adjustment on the scope will move the impact point 1/4 inch at 100 yards. That also equates to 1/8 inch at 50 yards, and 1/16 inch at 25 yards.

**Note:** Make additional sight adjustments whenever your shot group is not centered. Make sure by first firing a group, you almost never adjust your sights because of the impact of one round.

**SHOOTERS LOG BOOK/DATA BOOK:**

One of the singularly most effective tools a new shooter can develop is that of a shooting log book, or data book.

In it, the new shooter needs to log things such as:

- Date
- Time of Day
- Overall Weather
- Number of rounds fired
- Caliber of rounds
- Manufacturer of rounds
- Scores
- Coach
- Course Type
- ID of firearm

There can be other items added if the shooter cares to add them, such as keeping a close eye on 3 shot group or 5 shot group sizes. By doing so, the shooter can easily track his/her performance especially as the different brands of ammunition are compared, weather compared, or even which firearm was used. All of these can affect the overall speed with which the new shooter progresses toward the goal of becoming a “Marksman”.

Carlos Hathcock, one of the more well known military instructors who came out of the Vietnam era, was reputed to only allow his new students to fire one round each day during the first phase of their training. It taught them the value of each shot, they logged every variable they
could find that could have a bearing on that shot, and after a number of trips to the range, they began to see an emerging pattern.

As an instructor, so did Carlos. As your own best critic, you will also be able to see emerging patterns. Use them to improve your shooting.

CLEANING AND MAINTENANCE

All firearms require proper cleaning and maintenance in order to continue to provide a safe and productive shooting experience for the shooter.

Your firearm’s manual should detail the requirements of that firearm.

Sufficient to say, the barrel, bore, and all internal moving parts need to be cleaned on a periodic basis; all exterior metal surfaces should have a light coat of oil to inhibit rust; the stock should be cleaned; and if using a sling, it too should receive cleaning and maintenance as required.

Keeping your firearm in a sleeve, zippered gun bag, or a more substantial gun case is also a good habit to develop. It keeps them from picking up dust, dirt, lint, bugs, and keeps fingerprints off that can produce rust.

FINAL SAFETY TIP: If anything seems wrong with the firearm, stop where you are, place the firearm on safe,(if possible) place the rifle down with the muzzle pointed in a safe direction and get a knowledgeable person to evaluate what you are seeing or experiencing. A broken firearm is a very dangerous firearm.

CONCLUSION:
Marksmanship is a fun goal, is an achievable goal for most people, and one that can be obtained with very little major expense. The lifelong results gained through marksmanship are immeasurable, though, in self esteem, confidence, and knowing that the marksman has indeed become an “achiever”. 
Anyone with a firearm and ammo can be a shooter, but one has to be at least a marksman before he or she can be truly confident in their ability and skill level.

**Safe Handling of a Firearm:**

Safe handling any firearm is critical. If proper firearms handling procedures are not followed, we risk our own safety as well as the safety of others. To ensure that only intended targets are engaged, we must all follow these few simple rules.

1. Treat every firearm as if it were loaded. When you take charge of a firearm in any situation, you must treat that firearm as if it were loaded. You must determine its condition and apply the other safety rules on a constant basis.

2. Never point a firearm at anything you do not intend to shoot. Muzzle awareness is a priority at all times.

3. Keep finger extended and away from the trigger until you are ready to fire. Before taking the firearm off of safe, you must identify your target and only then move your finger to the trigger.

4. Keep the firearm on safe until you are ready to fire. This is intended to eliminate the possibility of an accidental discharge.

5. Firearms are never to be handled on the firing line during a cease fire, line break or when anyone is down range. The firearm is to be grounded with an ECI (Empty Chamber Indicator) placed in the chamber.

Note: In addition to the above safety rules, we all should develop a regular habit of performing a safety check each and every time we remove or replace a firearm into its case.
Marksmanship: A Basic Course

We'd like to thank the following who submitted photographs or images for use in this manual.

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