

## TERMINOLOGY

CEASE FIRE	Stop shooting and clear your rifle IMMEDIATELY. Cease fire can be called by anyone who sees an unsafe act. This should be called out any time anyone extends any part of their body over or across the firing line, or commits an unsafe act.
CLEAR RIFLE	To clear your rifle, the bolt is opened, a round in the chamber is removed, the magazine is removed and the bolt is left open. Additionally the rifle should be placed on the ground pointing down range. This should be done any time CEASE FIRE is given.
FIRING LINE	An area designated to shoot from with numbered positions. More specifically, the line behind which you will shoot at the targets. This line separates the shooting points from the unsafe area out to the targets. You should never cross the firing line for any reason unless CEASE FIRE has been given AND the range has been declared clear.
FIRING POINT	A numbered position on the firing line at which a biathlete shoots at a correspondingly numbered target.
TARGET LINE	The area that targets are lined up at in order to assure proper distance from the firing line.
DOWN RANGE	Any area in front of the firing line or in the direction of the targets.
PRONE	A Shooting position lying down.
STANDING	A Shooting position standing up (Off-Hand).
ZERO	Adjustments of the sight setting that produces point of aim to match point of impact at the center of the target.
SHOT GROUP	The area of the target where a number of shots have struck. When a biathlete shoots a number of rounds at a target, most of the bullets should strike in roughly the same place.
SHOOT CLEAN	To hit all the targets, No penalties.
WIND FLAGS	Small flags placed at the firing line and down range that allow determination of wind direction and speed.
BOLT ACTION	Conventional type of rifle. The round is loaded and unloaded by rotating the handle upward, pulling back, then pressing forward and rotating down again to lock the bolt before firing.
FORTNER ACTION	An Anschütz bolt system that allows loading and unloading by pulling and pushing the bolt straight forward and back.

## USBA Rifle Safety Rules

YOU MUST KNOW THIS PART OF THE OUTLINE! IT WILL BE ON THE GRADED TEST AND YOU WILL BE EXPECTED TO FOLLOW THESE RULES AT ALL TIMES AT ANY RANGE!

These rules can be found at [www.teamusa.org/US-Biathlon/Resources/Biathlon-Safety](http://www.teamusa.org/US-Biathlon/Resources/Biathlon-Safety)

Understanding how a rifle functions, it is clear that by following three simple and logical rules, an accident cannot occur.

### **These Golden Rules of Safety are:**

1. Always point the muzzle in a safe direction.
2. Keep the action (bolt) open and rifle unloaded until ready to use.
3. Keep your finger off the trigger until ready to shoot.

**These rules for safe gun handling apply to all rifles, pistols, and shotguns.**

**There are additional rules and practices that should be followed by biathlon participants to insure your safety and that of others. They are:**

1. Always treat a rifle as if it were loaded until proven otherwise. If you pick up a rifle, the first thing you should do is clear it and assure it is unloaded.
2. Keep your rifle bolt open unless the rifle is on your back or you are in position and ready to shoot.
3. Never race with a loaded rifle.
4. Do not take your rifle off before you are at the shooting point.
5. Don't load your rifle until you are in position with the rifle pointed in the direction of the target.
6. On the command "**Cease Fire**", stop shooting and unload your rifle at once.
7. Never handle a rifle on the firing line when someone is down range. It also means no sight adjustments while posting or checking paper targets.
8. When dry firing only point the muzzle in a safe direction. Also remove the firing pin and never practice with a magazine.
9. If you see an unsafe act, call "**CEASE FIRE**" and bring it to the attention of the individual involved and a range official.
10. Store your rifle and ammunition separately out of reach of children.
11. Check the barrel and action of your rifle before using it. Keep all foreign matter out of your barrel and your bolt.

12. No horseplay on the range. An accidental discharge of a rifle is the most dangerous occurrence of any accident. NEVER fool around with any weapon.
13. Do not leave your rifle unattended in a public area.
14. **USBA Open Bolt Rule** - It is USBA policy for the rifle bolt to be open (bolt handle completely to the rear) once the rifle is removed from its carrying case or taken off the competitor's back. This includes anytime the rifle is left unattended in a rifle rack or lying on the ground or snow. (USBA strongly encourages the use of a rifle cover at all times other than in competition.) Competitors not abiding by the rule during competitions will be reported to the Chief of Competition.
15. Rifles must be unloaded after each shooting bout - that is, no round may be left in the chamber or in the inserted magazine. At the end of training, athletes must perform a safety check before leaving the shooting range by opening the bolt and removing the inserted magazine. Athletes must also remove all ammunition from both the stock and all the magazines before leaving the shooting range.
16. Always point the muzzle of the rifle up or down-range.

## **IBU INTERNATIONAL RULES**

EXCERPTS FROM IBU EVENT AND COMPETITION RULES as Adopted by the 1998 IBU Congress with amendments by the 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2019 and 2020 Congresses. The complete rulebook can be found at [www.biathlonworld.com/downloads](http://www.biathlonworld.com/downloads).

The IBU is the international governing body for biathlon. The IBU rules will apply to all races whenever possible. Some local and regional events will not be able to apply all rules due to facility and support constraints.

**All IBU rules that apply to rifle safety, the USBA open bolt policy, and any local/special safety rules will be followed by competitors at ALL races.**

### **8.4.2 Use of Magazine**

The five rounds required in each bout of shooting may be loaded with the use of a magazine. If, after the first shot is fired, rounds are lost from the magazine or fail to fire, a new magazine may not be inserted into the rifle. Such rounds must be loaded individually. However, if a magazine is lost or proves to be defective before the first shot is fired, it may be replaced with another magazine, provided no live round remains in the chamber.

*This rule insures that a competitor does not load another magazine and then ski off the range with a loaded rifle.*

### **8.5.2 Loading and Unloading**

After starting in a competition, it is forbidden to open the bolt or remove a magazine from the stock or magazine-well except when stopped on the shooting mat. Rifles may be loaded and unloaded only with the barrel pointing in the direction of the targets or up. Inserting a magazine containing bullets into the rifle is also part of the loading procedure. When moving from one shooting lane to another, competitors must first unload their rifle and place the rifle on their back in the normal carrying position.

#### **8.5.2.1 Safety Check after Shooting**

Rifles must be unloaded after each shooting bout – that is, no round may be left in the chamber or in the inserted magazine. However, competitors are permitted to leave the cartridge case in the chamber and the empty magazine in the rifle after the last shot. At the end of training and competitions, all rifles must be safety checked by opening the bolt and removing the inserted magazine, with the barrel pointed toward the target or upward. All ammunition must be removed from both the stock and the magazines.

*You must start a race without a magazine in the rifle or a round in the chamber. At the first firing bout you will get into firing position, open the bolt, then load the magazine, and fire. After the last round has been fired it is permissible to leave the spent casing in the chamber.*

*At the next firing bout, you will again get into firing position, open the bolt (ejecting the spent casing), unload the empty magazine, load a new magazine, close the bolt, and then fire.*

*After crossing the finish line an official (if available) will open the bolt of the rifle while the rifle is on the competitor's back. If live round(s) are found in the chamber or inserted magazine, the competitor will be disqualified. If no official is available to check the rifle, the competitor should take the rifle off of his/her back and perform this safety check as soon as possible after finishing the race.*

## **IBU DISCIPLINARY RULES**

### **11.3.1 Thirty-Second Penalty**

A thirty-second penalty will be imposed if: [...]

Exception: there will be no penalty for athletes shooting from a wrong lane if this mistake is initiated by another competitor or official.

d. having shot from a wrong shooting position, wrong shooting sequence and/or wrong position in the shooting lane.

### **11.3.3 Two-Minute Penalty**

A time penalty of two minutes will be imposed on athletes or teams for:

- a. every penalty loop, resulting from shot penalties, not done by an athlete immediately after each prone or standing shoot;
- b. every round not fired if athletes recommence skiing before they have fired all five shots in Individual, Sprint, Pursuit, Mass Start or Super Sprint competitions, or all eight shots in a Relay competition, having not hit all targets;

### **11.3.4 Disqualification**

Athletes or teams will be disqualified for: [...]

- j. not carrying their rifle while skiing during the competition, and for not carrying their rifle on the course, when it is not damaged, with the barrel pointing up;
- k. hindering another competitor on the course or at the shooting range by serious obstruction;
- o. firing more than five rounds in any shooting bout of Individual, Sprint, Pursuit, Mass Start and Super Sprint competitions or more than eight rounds in Relay competitions;
- p. using a second magazine instead of hand-loading lost rounds, replacement rounds for misfires, or spare rounds individually;

- q. violating any shooting safety regulations as defined in Article 8.5 of the IBU Event and Competition Rules;
- r. exchanging their rifle for another rifle, after starting, in any other location than the shooting range; [...]

## **ANNEXES TO THE IBU EVENT AND COMPETITION RULES**

### **ANNEX A 3.1.6.4 Specifications**

- (f) The trigger resistance must be a minimum of 0.5 kg (1.1 lbs);
- (i) Including all accessories – except magazines and ammunition – the minimum weight of the rifle must not be less than 3.5 kg (7.7 lbs);
- (j) The magazines must not permit the insertion of more than 5 rounds. For the relay competition, three spare rounds may be carried in a magazine installed for that purpose, or in a special quick release device. However, a spare round may not be carried in the chamber. The magazines may be carried in the forestock or the butt.

*When range personnel are available, these specifications will be checked prior to a competitor's start.*

The greatest potential danger in Biathlon is leaving cartridges in your magazine after you finish shooting. Let's say it again: your greatest chance of injuring another person results from carrying loaded magazines in your rifle. Then when dry firing, you might inadvertently insert a loaded magazine and shoot a hole through the hotel wall, or another guest. Always make sure your rifle and magazines are empty after each training session.

It bears repeating RULE 8.5.2.1 again:

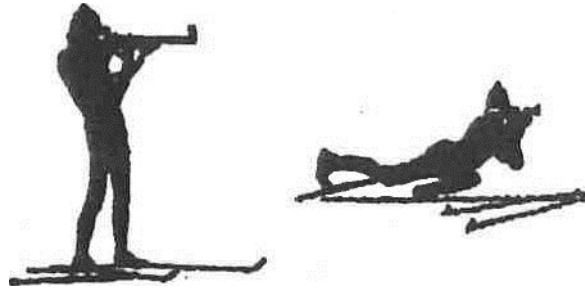
### **RULE 8.5.2.1 Safety Check on the Range after Shooting**

Rifles must be unloaded after each shooting bout – that is, no round may be left in the chamber or in the inserted magazine. However, competitors are permitted to leave the cartridge case in the chamber and the empty magazine in the rifle after the last shot. At the end of training, competitors must perform a safety check before leaving the shooting range by opening the bolt and removing the inserted magazine, with the barrel pointed toward the target or upward. Competitors must also remove all ammunition from both the stock and the magazines before leaving the shooting range.

*In short, **remove the magazine and open the bolt when the rifle is not on your back.***

## Biathlon Marksmanship

Integration of conflicting  
***Psychological***  
and  
***Physiological***  
factors



### **Position**

Establishment of a stable shooting position with respect to the support, center of gravity, immobility and the absence of unnecessary tension on the muscular apparatus provides favorable conditions for the other factors.

### **Sensory Perception**

The ability to provide an adequate degree of balance and equilibrium through "kinesthesia" and creating the best conditions for proper functioning of the sensory and internal organs is accomplished through one's senses.

### **Thought Control**

Avoiding errors caused by negative thoughts and diverted attention happens by recognizing them and then refocusing attention, replacing or centering it with success-oriented, positive ones.

### **Concentration (Focus)**

Limiting the attentional focus to the required and relevant sensory information and cues for successful results is correct concentration.

### **Sighting**

Sighting is establishing accurate target and sight alignment through the optical-motor process.

### **Hold**

Maintaining a steady and durable sight picture free from oscillation or Interference of pulse and respiration movements is a proper hold.

### **Trigger Squeeze**

Increased pressure on the trigger, releasing the shot without creating movement in the rifle is a correct trigger pull.

### **Follow-Through**

An immediate analysis of every aspect of the shot provides feedback and evaluation. Since shooting is "an act of judgment," evaluation and adjustment should be made constantly at every step in the processes of firing a shot or completing a stage of shooting.

## Aiming

Correct aiming, developed through proper sight alignment and a good sight picture is dependent upon a good stable position.

Proper *sight alignment* is achieved when the center of the front sight coincides with the center of the rear aperture. If the front sight occupies different positions in the rear sight, accuracy will vary from shot to shot. Accuracy depends upon consistent sight alignment.

A good *sight picture* places the target in the center of the front sight, forming a series of concentric circles. A good sight picture is also dependent upon the correct selection of the front and rear sights, as well as the correct "eye-relief".

*Good Sight Alignment*

*A good Sight Picture*





(Excerpts from letter following Joan's visit to CBC in March, 1996)

I suggest taking a full month off from shooting at the end of the season. Mental focus is key and it's important to start the new season pumped. There are five fundamentals to shooting:

1. Position
2. Sight Alignment
3. Breathing
4. Trigger Control
5. Follow Through

They are each very simple yet difficult to execute consistently together. That's what you need to train.

I start with fundamental #1 at the beginning of the season. This is done primarily through dry firing. It is important to get the same position every single time. It is extremely beneficial to have someone check your positions, preferably a coach, so you are working from a good base the rest of the year.

The dry fire practice should begin with just holding your position for one minute. Take a break and repeat. Check position and sight alignment by closing your eyes for 10 seconds and opening again. If you're to the right of the target, bring your left elbow under the rifle more or move your right elbow in a little. (for a right-handed shooter) To the left of the target, move your right elbow further out. Gradually increase your position time up to 5 minutes. You can also increase the time with eyes closed. These sessions can last from 10-30 minutes.

When you feel comfortable dry firing (just dry fire for a couple of weeks), you can begin slow fire training. I like to begin all shooting training with a dry fire session. This will continue throughout the year. I strongly recommend accuracy shooting over speed. My goal was to shoot dime size groups during slow fire prone and in the prone ring for standing.

Slow fire drills: Single load each shot, call its position, check it in the scope. Algis used to say "Every shot is very expensive." Get accustomed to making every single shot the one that really counts. You can work on fundamentals 3&4 by shooting on blank paper and checking the group. To group properly you really need to pull the trigger smoothly and follow through. By not having a black target, you aren't thinking about sight alignment.

Another way to check sight alignment is to shoot on vertical and horizontal bars about 2" wide and 7" long. If you have difficulty with one of the directions, work on your weakness.

There are target sequences I recommend trying. When shooting prone,

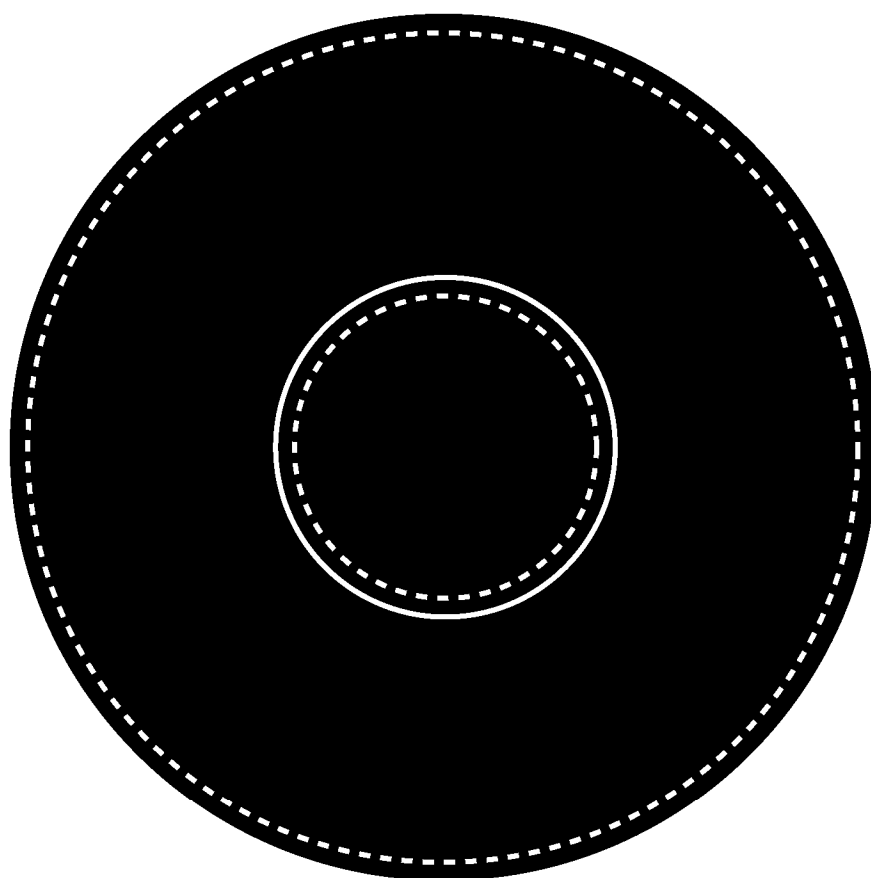
shoot from left to right. For standing shoot from right to left. The direction your barrel moves onto the target is also important. In prone, the barrel should come up onto the target from below as you exhale. I begin the trigger pull before I'm on the target. In standing, move the barrel onto the target from the right, beginning the trigger pull before getting onto the target. This is where a Fortner helps out. It's easier to move smoothly right to left if there is less position movement transmitted into the barrel. It took me two years before I could move onto targets swiftly and comfortably. It alleviates the barrel swinging around as you try getting a perfect picture, causing you to 'jump' the shot. You end up missing because the shot wasn't smooth (trigger squeeze and follow through). This is especially true in standing.

To practice this trigger pull technique in a dry fire drill: draw a sideways 'T' thick enough to see clearly. (1-) Start at the right end of the 'T' slowly moving your barrel towards the intersection. Stop when you get there. Now repeat beginning your trigger squeeze before you get to the intersection. Time it so you shoot at the intersection. For prone, use an upright 'T'. Start from the bottom, timing the shot at the intersection. You should focus on a smooth trigger squeeze and follow through. For off season I would divide slow fire and dry fire about 50/50.

Devote all your time to hitting all the targets prone and standing. When you consistently hit them all with a slow heartrate, practice with an increased heartrate before you increase your shooting cadence. My race heartrate for shooting is about 160. First increase your ski speed the last 100 meters into the range. When you can hit them all, start your speed further from the range. You increase this distance throughout the season. My feeling is that your cadence will increase naturally as your confidence grows.

In Lillehammer, I knew my skiing was just so-so from a medical setback. I only skied the course once to practice. After that I just did range loops hammering into the range. I missed one target the entire 10 days before the race. In the 15K, I had my best shooting ever with 19/20. Even though I walked the dog skiing, and didn't shoot that fast, I ended up 17th. Shooting is half the sport, and must be perfected.

My biggest suggestion is to get into incredible shape so you recover quickly. Next focus on range procedure itself. Make it as subconscious as possible.. We used to spend 15-30 min. a day just going through range procedure during dry fire practice. If you do it repeatedly, you don't think about it and your mind relaxes. When your mind is relaxed your body will follow. When you see the 100 meter to range sign, your mind and body should be on autopilot. The excitement and worries of the other athletes shouldn't affect you. Visualize yourself with your act together.



Solid circle diameters: 115mm, 45mm (dotted lines at 110mm, 40mm)