Georgia 4-H Project S.A.F.E. (Shooting Awareness, Fun and Education)

5 Meter BB Safety Guide



"Safety is Shooting's Most Important Rule"

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Shooting organizations promote a set of safe firearms handling rules, often called "The 10 Commandments of Shooting Safety." In their most basic form, the rules include **muzzle** control, keeping the **action** open except when prepared to fire and **trigger** control. All other rules are based on these three basic rules. For 4-H purposes, keep in mind **M.A.T. – Muzzle, Action, Trigger.**

Muzzle: Always keep the muzzle pointed in a safe direction. Whether you're shooting, hunting or just handling a firearm, you must always keep the muzzle under control. It should never be pointed at another human being or at anything you are not willing to shoot, destroy or kill. Your location and common sense will tell you which direction is safest under various conditions. It is usually safest to point the muzzle of an air rifle or firearm down range or straight up.

Action: Keep the rifle empty with the action open and exposed to view except when you're preparing to shoot. Any firearm with its action closed should be considered loaded and ready to fire. The first thing you should do after picking up a firearm is open the action and verify personally that the gun is unloaded in both the chamber(s) and the magazine. Be sure beyond all shadow of doubt. In order to keep the shooting range safe, all air rifles and firearms must have their actions open and exposed to view at all times except while you're actually firing.

There is no way to see if a BB gun is loaded unless it has a bolt. Therefore, it is more important to check to see if a BB gun is cocked. Spring-air BB guns such as the Daisy 499 are checked by trying to open the **cocking lever** to see if the spring has been cocked. If the lever is hard to open, the gun is uncocked. If it opens freely, it is cocked. For safety purposes, guns should remain in the **quarter-cocked** position with the safety on to demonstrate that they are not cocked.

Trigger: Keep your finger off the trigger until you are in the act of shooting. Although it is very tempting to place your finger on the trigger while handling a gun, this bad habit can be prevented by consciously avoiding it when you start handling firearms. The **trigger guard** is there to protect the trigger and to help prevent accidental **discharges**. Place your finger along the side of the trigger guard to reinforce this function. Placing your finger on the trigger of a rifle means the firing sequence has started. A sudden bump or startling noise could cause you to move and discharge the rifle without intending to. Be safe and stay clear of the trigger until you are ready to fire.

There are 10 gun safety rules that you are expected to know, understand and use. They apply to both hunters **in the field** and shooters on the range.

RULE 1: Treat every gun as if it is loaded.

A correct gun handler always checks to see if a gun is loaded. When picking up or accepting a gun, check to see if it is loaded. Don't just take someone's word — always check it yourself.

RULE 2: Always point the barrel in a safe direction.

Whether you are shooting or simply handling your gun, never point the muzzle at yourself or anyone else. Use common sense. Generally, the safest direction is upward or downward.

RULE 3: Never carry a loaded or cocked gun into your car, home, camp or public place.

When you are finished hunting or shooting and are ready to enter a car, your house or a camp, unload your gun. If possible, put your gun in a gun case and store it in a gun cabinet. Never carry a gun into a **public place**. When storing your gun, even for a few minutes, make sure your **ammunition** is locked in a strong box or cabinet.

RULE 4: Never climb a tree or fence or jump a ditch with a loaded gun.

When climbing a steep hill, a tree or crossing a stream or a ditch, unload your gun. If you slip or fall, be ready to control the muzzle.

Never run or jump with a loaded gun.

To safely cross a fence, unload your gun. Reach under the lowest wire and place the gun on the ground. Point the muzzle away from where you plan to cross. People break this rule more than any of the others because they feel it is too much trouble to unload their gun every time they come to a ditch or a fence. Accidents often happen from falls, a dropped gun or the trigger catching on something.

RULE 5: Never shoot at a flat or hard surface or water.

Bullets and BBs can bounce off rocks and other hard surfaces. This is called a **ricochet** (rick-o-shay). A ricochet can occur in any direction, even back at the shooter. Never shoot at water. Bullets can skip off of the water, just like a flat rock skips on the water.

RULE 6: Be sure of your backstop.

A **backstop** is something used to stop a bullet, pellet or BB. Hills, wood, a pile of sand or a man-made bullet trap can all be used to stop a bullet. Backstops should be free of any hard objects that would cause a ricochet.

RULE 7: Be sure of your target and what's beyond it.

Be sure you can see your target and be aware of the area beyond your target. Be certain that people, buildings, livestock, vehicles or equipment cannot be hit **downrange**.

RULE 8: Be sure your barrel is free of obstructions.

Be sure your gun is properly cared for and in good working condition. Clean it after each use, and always clean a new gun before using it for the first time.

Make sure the barrel is free of mud, snow and dirt. Be especially aware of this if you fall or lay the gun on the ground.

Never use BBs that are dirty or reuse BBs that have already been shot. This can cause the gun to **jam**.

RULE 9: Know your gun, ammunition and equipment.

You must know how a gun works before you shoot. Know what size ammunition your gun uses. Shotguns, rifles and BB guns all have the size of ammunition marked on the gun. Only carry the size ammunition your gun uses. Never carry different sizes of ammunition.

RULE 10: Respect people's property.

Out of respect for other shooters, do not touch or handle anyone else's guns or equipment without permission. This applies both on and off the range.

Remember: Most of the time, you are shooting or hunting on someone else's land. Treat property as if it is your own.

The Daisy / Avanti Champion 499 Gun

Although the Daisy 499 is not a firearm, it is a gun and should be treated with care and respect. Always remember that the first and most important safety component of any gun is the shooter. For your safety and the safety of others, it is important that you are familiar with how a gun operates before attempting to fire it. Guns differ in their operation and you are never ready to fire a gun until you are thoroughly familiar with it.

Parts of the Gun



How to Operate the Daisy 499

Step 1: Put the safety on "SAFE"

Push the safety back toward the stock so the word safe "SAFE" is showing and the word "FIRE" is covered. It is a good practice to get in the habit of keeping the trigger safety "ON" until you are ready to fire the gun. Remember, all safeties are mechanical devices and the shooter is the only part of



the system that can make a gun safe or unsafe. Don't depend on a mechanical device and always think ahead to avoid situations that could lead to an accident.



Step 2: Cock

When cocking, raise the muzzle with the **front sight** up. Firmly grasp the cocking lever and pull outward and upward until a click is heard. Close the cocking lever and the gun is ready to load. Always cock the gun prior to loading. If a BB is loaded first, the gun could accidentally discharge if your hand slips off the cocking lever. Always be careful to keep your fingers out of the cocking mechanism when you're closing the lever (see pinch points).

Step 3: Load BB

The Daisy 499 is a single shot muzzle-loading BB gun. To load the gun, point the muzzle up in a safe direction away from your face and body. Drop only one BB down the muzzle. Listen for the click of the BB seating itself as you load. If the BB does not seat, the shot will generally hit very low. If in doubt, simply point the barrel down and see if the BB drops out. If it doesn't, then the round has seated. Loading more than one BB can be extremely dangerous as all of the BBs will fire and fly off in various directions.



Warning: Never carry a cocked and/or loaded BB gun. Cock only when ready to fire. Even with the manual safety in the "SAFE" position, your gun is fully loaded and subject to fire.

Step 4: Aim at a Safe Target

Sight or point the gun in a safe direction with a proper **backstop**. Do not shoot at hard surfaces, tin cans or other objects, as the BBs will bounce back or ricochet.

The Daisy 499 is equipped with either an adjustable rear **peep sight** or with the model 5899 Precision Peep Sight. You should work with your coach or a parent for assistance in adjusting the sight and determining a proper sight picture. To be a consistent marksman, use the correct sight picture each time you fire the gun.

Step 5: Take off the Safety

When you are certain that the target, backstop and surrounding areas are safe, push the safety forward toward the muzzle until the word "FIRE" is showing.

Step 6: Fire

After completing steps 1 through 5, you may fire the gun by gently squeezing the trigger. A good rifleman squeezes the trigger when on target and does not jerk or pull the trigger.

What to do if the Gun Malfunctions or Misfires

If the Daisy 499 does not fire the BB after cocking, loading and squeezing the trigger, the gun is inoperable. This is a dangerous condition that requires immediate and careful attention. Malfunctions can result from reusing shot that has been damaged from hitting a hard surface, using ammunition not intended for your gun or using dirty BBs.

When a gun does not fire the BB, do not re-cock the gun. Work with your coach or another adult to correct the problem. The muzzle should be pointed downrange or in a safe direction at all times. Place the safety on "SAFE," unscrew the barrel assembly by turning the muzzle cap counter-clockwise until it is free and remove it from the gun. The BB can then be removed by running a smooth rod through the barrel. If you are unable to clear the barrel, a new shot tube will need to be installed. Do not fire the gun without the shot tube in the gun as this may damage or dislodge the magnet.

How to Determine whether the Gun is Loaded and How to Unload It

Unlike other traditional firearms and air rifles, the Daisy 499 does not have a breech or bolt that can be opened to determine whether the gun is loaded. For the Daisy 499, it is more important to determine whether the gun is cocked. To see if the gun is cocked, lift up slightly on the cocking lever. If the cocking lever moves freely and easily, the gun is cocked and you should assume that a BB is loaded. If resistance is felt when gently lifting the cocking lever, the gun is uncocked but may still be loaded with a BB.

To ensure that the gun is not loaded, place the gun on "SAFE," cock it and, without loading a BB, point downrange toward a safe backstop. Place the gun on "FIRE" and discharge downrange to ensure the gun is unloaded. At this point, the gun is unloaded and uncocked and can be safely **grounded**.

Range Safety Rules and Commands

Eye protection must be worn by everyone in the range area while rifles are being fired. This includes shooters, the range officers, coaches and others in the range area beyond the team area.

BB guns should remained cased or be placed in a gun rack at the team or **ready line**. Keep the gun pointed in a safe direction while going to the ready or firing line.

4-H'ers must maintain muzzle control and keep the gun pointed in a safe direction at all times when going from the team area to the ready line, the ready line to the firing line, or returning from the firing line. The gun should be in the quarter-cocked position with the safety on. The gun should be carried by the barrel using one hand to keep the muzzle pointed in an upward direction.

There will be no firing off-range during the course of a 4-H event. All firing for sighting purposes must be done at the firing line during a 4-H'ers assigned **relay**.

Closed-toe shoes that are **secured** to the feet by use of a heel strap or formed heel must be worn at all times while on the range. Flip flops and sandals are not allowed. Shoes must be worn at the firing line.

Range Commands: Range commands control the movement of people around the firing area and also control when you may start shooting. It is important to be able to hear the range officer or range master. Extra noise needs to be kept to a minimum.

Range commands are given by the range officer to everyone on the range. Shooters must **immediately** obey commands when they are given. You must know and understand the commands.

"RELAY NUMBER ___ TO THE FIRING LINE"

Shooters immediately go from the ready line to their assigned **firing points**. Only the shooter and the line coach are allowed on the firing line. Only the shooter, the line coach and one other team coach are allowed at the ready line per ready point. The team coach will only approach the

firing line with a range officer's permission to assist with gun malfunctions or other equipment adjustments. This will be done with the least disruption to shooters as possible.

"THE PREPARATION PERIOD STARTS NOW"

Shooters get into position and prepare to shoot. Shooters may **dry fire** the gun (cock and pull the trigger without loading a BB). BBs are not to be loaded during the preparation period.

"THE PREPARATION PERIOD IS OVER"

The preparation period has ended. **Cease firing**. Wait for instructions from the range officer.

"IS THE LINE READY?"

If you are not ready to start shooting, immediately raise your arm and call "Not ready."

"THE LINE IS NOT READY!"

Someone is not ready. Do not proceed with loading or shooting.

"THE LINE IS READY. COMMENCE FIRING"

BBs can now be loaded and shots made on the targets. No one may cock or load a rifle until the **"COMMENCE FIRING**" command has been given.

"CEASE FIRE"

On hearing the command "CEASE FIRE," all shooters must immediately place their rifles on "SAFE" and point them in an upward/safe direction until the range officer gives other instructions. Do not continue to squeeze the trigger or take another shot. Either time has expired for shooting or there is a safety problem that needs to be addressed. Shooting after a "CEASE FIRE" command has been called can result in your disqualification or injury to others.

"CLEAR ALL GUNS"

If a cease fire has been called and you have loaded a BB but have not shot it, you may do so with this command. Raise your hand to signify to the range officer that you need to clear your gun. Listen for instructions on discharging. Usually the range officer will instruct you to discharge into the target box or the backstop.

"GROUND ALL GUNS, MAKE ALL GUNS SAFE"

Put your gun on the ground next to you with the safety in the "ON" position, with the safety side up and with the cocking lever in the quarter-cock position.

"THE LINE IS SAFE" or "THE LINE IS NOT SAFE"

The range officer will look over the line and determine whether the shooting line is safe.

"COACHES CHANGE YOUR TARGETS"

Coaches may go downrange to change or retrieve the targets. Rifles must be pointed up if you're going to or from the firing line. Shooters arriving at the firing line must ground and make their rifles safe immediately.

Range Layout



Target Line: The line where target boxes are placed.

Firing Line: A line behind the target line from which the shooting distance is measured.

Firing Point or Lane: The part of the range provided for the shooter behind the firing line. Each firing point should have a minimum width of 4 feet.

Shooting Distance: 5 meters (16 feet, 4 ³/₄ inches).

Ready Line: A line behind the firing line with chairs reserved for coaches and shooters in the next relay.

Team Line or Area: A line behind the ready line for the team and public to gather.

Rifle shooting positions refer to the posture and attitude of the body and the rifle during shooting. Several characteristics are common to all sound shooting positions and form the foundation of good shooting. The body should be comfortable and relaxed. Most of the support for the rifle should come from the skeleton or bones, with minimum muscle activity and potential joint movement. The body should be aligned with the target so minimal muscular activity is needed to center the sights on the target.

The following position descriptions may need to be adjusted based on each shooter's physical characteristics. With the help of their coaches, shooters may have to modify rifle stock length and make minor adjustments to the advice given here in order to find the techniques that suit them best. The following descriptions are based on a right-handed shooter. A left-handed shooter should reverse these descriptions.

Sling Use

A **sling** can greatly improve a shooter's control and accuracy and can be used in the prone, sitting and kneeling positions. If used, the sling must be properly in place. To put the sling on, hold the rifle up and allow the sling to dangle from the rifle. Give it a half twist to the left and insert your left arm in the sling loop. Place the sling either high or low on the upper arm, but not around the middle or biceps. Placing the sling around the biceps tends to transmit the pulse to the gun. Tighten the loop around the arm as tight as possible without feeling a pulse under the sling. The length of the shooter's arm will determine where the sling is mounted on the forearm and may change from position to position so that several (up to four) mounting points may be needed. In any case, the shooter's left hand should rest against the sling swivel when the position is built. The supporting effect makes the rifle more stable and the sling keeps the rifle steady. The length of the sling is adjusted in such a way that the rifle is fully supported by the sling and is held securely and effortlessly. If the sling is too long, the firing position will be limp and too low. If it is too short, it will press the shoulder backward and cause cramps in the left arm and shoulder. Once the sling is in place, bring the **butt** of the rifle to the shoulder pocket (between the bone of the shoulder and the chest muscles). Don't place the butt of the rifle on the shoulder bone, and always set it in the same place.

Prone Position

The prone position is the most stable position due to the body's low center of gravity and large area of contact with the ground. For these reasons, it makes the best position to teach the fundamentals of sight alignment and trigger control.

The shooter lies on the left of the line of fire with his body forming a 5- to 15- degree angle to the line of fire. The body



is stretched out, relaxed and the back is straight. The left leg is parallel to the spine with toes pointed inward. The right leg, with toes pointed outward, is brought up to ease pressure on the stomach and make breathing easier. The left elbow should be just slightly to the left of the rifle.

This is very important because the further out the elbow gets, the more unstable the position becomes. The left arm should be relaxed with the sling supporting the rifle, and the left hand should be open and relaxed. If the left hand is closed or gripping the rifle, it can cause lateral movement. The right elbow is placed a comfortable distance from the body and supports very little weight. The right hand grips the stock with a comfortable pressure and the cheek lightly touches the stock. The rifle should always be brought to the cheek. Do not lay the head down on the stock. The shooter then determines the natural point of aim. During this and all positions, the rifle itself should be held as vertically as possible. Changing the angle from vertical changes the shot's point of impact. One of the keys to this and other positions is to always build the position and hold the rifle exactly the same way each time. To load the rifle, the shooter rolls over on his left side, points the rifle up and allows the coach to load.

Once the beginner shooter has gained confidence in his ability to master these and other fundamentals, he can then move on to the more difficult positions. It is not difficult for beginners to rapidly acquire the ability to place a shot "in the black," but for those who wish to perfect their accuracy, further training is needed.

Standing Position

The standing position is built on body stance alone. The feet should be placed about shoulder width apart with the toes lined up and parallel to the direction of firing. The legs should be straight but not locked, with weight evenly distributed on both feet. Shoes must be worn. Lean back slightly from the waist to compensate for the weight of the rifle. Hold the head erect with the rifle brought up to the cheek and the body twisted toward the target. This locks the lower back muscles and brings the rifle to the line of fire. The left elbow is tucked firmly into the hip and rib cage to support the left forearm. The position of the left hand largely determines the success of this position, the steadiness of the rifle, the final height of the rifle and the final



stance of the shooter. There are many combinations possible, but always consider the following factors: the height required, maximum stability, relaxing the arm muscles and preventing aching muscles. Below are some of the more common positions.

- The hand is made into a fist with the palm toward the shooter. The **fore end** of the rifle rests on the flat of the fist.
- The thumb supports the trigger guard and the first three fingers support the fore end of the rifle.
- The fore end of the rifle rests between the first and second fingers.

Whatever position the coach and shooter decide is best should always be used. The left hand must stay relaxed. The right arm should hang naturally and the right hand should grip the stock comfortably, pulling the rifle back into the pocket of the shoulder. A sling is not allowed in this position.

Sitting Position

In this position, the shooter sits at about a 30-degree angle to the target with legs crossed left over right. The body is bent forward with the back relaxed and all weight on the elbows. The elbows are placed in the pockets of the knees. If they are placed on the knee bone, they can slide or transmit movement or vibration to the rifle. The sling will be fairly short and usually mounted closer to the shooter. The rifle should be kept vertical and as high as possible to prevent tilting the head forward. The left



hand remains open and relaxed. The right hand comfortably grips the stock as the cheek rests lightly on the comb. The shooter then checks his natural point of aim.

Kneeling Position

In a correct kneeling position, the rifle should be very stable. However, beginning shooters will find it difficult at first to maintain this position. Aching occurs in the foot and leg, resulting in reduced concentration and a less effective shooting sequence. This can be overcome with practice and training. In this position, the body should be at about a 30-degree angle to the line of fire with the chest turned to face the target. The left foot and knee should be directly under the rifle with toes pointed slightly in. The left leg should be vertical. The right leg should be pointed away from the body at 90 degrees to the rifle. The right foot should be straight and resting on the toes. The instep may be supported by the kneeling roll and the bone of the right buttocks should rest directly on the heel. Weight should be evenly distributed between the left foot, right knee and right foot. The shooter's clothing should be loose enough to comfortably



build his position. The left elbow should rest in the hollow between the kneecap and the femur (upper leg bone). Resting the elbow directly on the knee causes rolling or wobbling. The left forearm, the left knee and the right knee should form a straight line when viewed from the side. The sling should be adjusted and the left hand should stay open and relaxed. The right arm should hang naturally and the head should be erect.

Glossary

- Action The mechanism that allows the gun to fire.
- **Ammunition** A bullet or shot with primer and powder that can be fired from guns.
- **Backstop** The last stopping point for a bullet or shot.
- Barrel The tube that contains and directs the bullet or shot.
- **Blinder** A flap attached to the rear sight to block the view of the non-aiming eye.
- Butt The shoulder end of a rifle or shotgun stock.
- **Cease Fire** To stop, to put an end to, discontinue.
- Cocking Lever A handle used to compress the spring and cock the BB gun.
- **Commence** To make a start, a starting point, to have a beginning, set to work, undertake.
- Course of Fire The number of shots at each distance and/or in each position that make up a match.
- Discharge Allowing air or gas to escape from a gun or releasing the main spring by pulling the trigger.
- **Downrange** Toward the target boxes.
- Dry Fire Aiming and pulling the trigger of a cocked but unloaded gun.
- **Exceptions** Changes other than what is said or printed.
- Firing Point A shooting station or location.
- Fore End (Fore Arm) The part of a gunstock under the barrel and forward of the trigger.
- Front Sight The front part of a gun that is used to assist aiming the eye and the muzzle at a target.
- Grounded To place or set on the ground.
- **Immediately** Without delay, at once.
- In the Field Out of doors or in a field or woods.
- Jam A block, congestion or clog that causes a gun to stop working.
- **Jury** A group of adult volunteers selected prior to the start of a match to settle questions and disputes or interpret the rules of a match.
- Leagues Teams or clubs that complete among themselves.
- **Metallic** Containing metal, looking like metal.
- **Muzzle** The end of the barrel opening from which the bullet or shot emerges.
- **Obstruction** Something that blocks, fills or becomes stuck in the barrel.

Peep Sight – A rear sight that has an eyepiece with a small opening through which the front sight and target can be seen.

Permitted – Can be allowed, to let happen, is legal.

Preparation Time – A period of time for a shooter on the firing line to get into firing position and get his equipment ready to shoot. Shooters may handle their rifles and dry fire.

Public Place – Any place where people go or gather (a store, buildings, towns, etc.).

Qualification – A value or condition that must be met; to be or become qualified.

Quarter Cock – The cocking lever on a BB gun is open slightly as a visual check that the rifle is not cocked.

Range Standard – The size and marked areas of the shooting range.

Ready Line – The location reserved for shooters and coaches who will be shooting in the next relay.

Rear Sight – The rear part of the gun that is used to assist aiming the eye and the muzzle at a target.

Recommended – Suggested that something be done.

Record Fire – Shots fired at the scoring surface of a target.

Relay – The group of shooters scheduled to shoot at the same time in a match.

Ricochet (rick-o-shay) – To bounce off a surface.

Scope – An instrument for viewing or observing.

Secure – Safe, not likely to fail or give way, well fastened.

Sighting Shots (Sighters) – Shots fired to adjust sight settings.

Sling – A strap used to steady a rifle in some shooting positions.

Sling Keeper – The buckle for adjusting the sling length and keeping the sling in place on the arm.

Sling Swivel – A metal loop and stud fastened to the fore end of the stock where the sling attaches.

Trigger – A lever used to fire a gun.

Trigger guard – A part around the trigger that protects it from being accidentally fired.

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